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MICRO PHOTO INC.
CLEVELAND, OHIO

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
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PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1960

Examiner affirmed	162
Examiner affirmed in part	34
Examiner reversed	52
Total	248

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

FEES AND CHARGES

The following amendments are made to take effect thirty days after publication in the Federal Register. Notice and public procedure are deemed unnecessary as the changes relate to minor adjustment of fee items.

1. In § 1.21 delete paragraph (c); amend paragraphs (a), (b) and (t); and add paragraphs (u) and (v), as follows:

§ 1.21 *Patent and miscellaneous fees and charges.*

* * * * * * *

(a) For typewritten copies of records, for each page produced (double-spaced) or fraction thereof--- $1.00

(b) For photocopies or other reproductions of records, drawings, or printed material, per page of material copied---------- .30

(c) [Deleted]

* * * * * * *

(t) For special service to expedite furnishing items or services ahead of regular order:

On orders for copies of U.S. patents and trademark registrations, in addition to the charge for the copies, for each copy ordered---------- .25

On all other orders or requests for which special service facilities are available, in addition to the regular charge, a special service charge equal to the amount of regular charge; minimum special service charge per order or request---------- 1.00

(u) For air mail delivery:

On "special service" orders to destinations to which U.S. domestic air mail postage rates apply, no additional charge.

On regular service orders to any destination and "special service" orders to destinations other than those specified in the preceding subparagraph, an additional charge equal to the amount of air mail postage. (Available only when the ordering party has, with the Patent Office, a deposit account. § 1.25.)

(v) For items and services, that the Commissioner finds may be supplied, for which fees are not specified by statute or by this section, such charges as may be determined by the Commissioner with respect to each such item or service.

(Sec. 1, 66 Stat. 793; 35 U.S.C. 6. Interprets or applies sec. 1, 66 Stat. 796; 35 U.S.C. 41)

2. In § 2.6 amend paragraph (b) and delete paragraph (c) as follows:

§ 2.6 *Trademark fees.*

* * * * * * *

(b) For photocopies or other reproductions of records, drawings, or printed material, per page of material copied---------- .30

(c) [Deleted]

(Sec. 41, 60 Stat. 440, sec. 1, 66 Stat. 793; 15 U.S.C. 1123, 35 U.S.C. 6. Interprets or applies sec. 1, 66 Stat. 796; 35 U.S.C. 41)

ROBERT C. WATSON,
Commissioner of Patents.

Approved: May 23, 1960.

FREDERICK H. MUELLER,
Secretary of Commerce.

[F.R. Doc. 60-4794; Filed, May 26, 1960; 8:48 a.m.]

Published in 25 F.R. 4679, May 27, 1960.

Adjudicated Patents

(C.A. Conn.) Spanel Patent No. 2,860,736 (128—521), for seamless dipped latex girdle. Claims 1 to 3 and 6 *Held* valid but not infringed. *International Latex Corp. v. Warner Bros. Co.*, 276 F.2d 557; 124 USPQ 479.

Disclaimers

2,475,497.—*Charles W. Harrold*, University Heights, and *Howard A. Pritchard*, Hiram, Ohio. PHOTOTYPOGRAPH FILM ADVANCING AND FLASH CONTROL MEANS. Patent dated July 5, 1949. Disclaimer filed May 31, 1960, by the assignee, *Harris-Intertype Corporation*.

Hereby enters this disclaimer to claim 1 of said patent.

2,819,442.—*Hunter C. Goodrich*, Collingswood, N.J. ELECTRICAL CIRCUIT. Patent dated Jan. 7, 1958. Disclaimer filed May 31, 1960, by the assignee, *Radio Corporation of America*.

Hereby enters this disclaimer to claims 1, 3, 7, and 8 of said patent.

New Applications Received During May 1960

Patents	7,228
Designs	419
Plant Pats	7
Reissues	24
Total	7,678

Issue

Patents	932	No. 2,943,327 to No. 2,944,258, incl.
Designs	62	No. 188,306 to No. 188,367, incl.
Plant Pats	1	No. 1,957
Total	995	

2,848,391.—*Frederick Fahnoe*, Morristown, and *James J. Magne*, Arlington, N.J. METHOD OF MAKING A MULTIPLE LAMINATION CONSTRUCTION. Patent dated Aug. 19, 1958. Disclaimer filed May 31, 1960, by the assignee, *Vitro Corporation of America*; the licensee, *United States Atomic Energy Commission of the Government of the United States of America*, consenting.

Hereby enters this disclaimer to the terminal part of the term of said patent subsequent to Mar. 25, 1975.

Patents Available for Licensing or Sale

2,934,396. Process for the Production of Tanning Extracts (From Vegetable Tanning Raw Materials). SVIT, narodni podnik, Gottwaldov, Czechoslovakia. Correspondence to Richard Low, 1060 Broad St., Newark 2, N.J.

2,935,184. Match Book. Kenneth E. Olson, 2408 Farnam St. (#709), Omaha, Nebr.

2,936,688. Photographic Reflex Camera. Alfred H. Myers, 4232 Leland St., Chevy Chase, Md.

Robert H. Collins, of Brownsville, Oreg., offers the following 2 patents. Correspondence concerning the patents should be directed to: Eugene M. Eckelman, 1108 Equitable Building, Portland 4, Oreg.

2,815,233. Twine Holder for Knotting Mechanism.

2,815,234. Knotter for Twine Balers.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following patent may be addressed to: Research Services, Legal Department, General Electric Company, P.O. Box 1088, Schenectady, N.Y.

2,806,961. Crystals With Small Apertures.

Applications for license under the following patent may be addressed to: Patent Counsel, Heavy Military Electronics Department, General Electric Company, Legal Section, Bldg. 1, Room 36, Court Street Plant, Syracuse, N.Y.

2,928,890. Solid Electrolyte Cells and Batteries.

Applications for license under the following 4 patents may be addressed to: General Electric Company, Housewares Division, 1285 Boston Ave., Bridgeport 2, Conn.

2,789,412. Electric Clock.

2,888,905. Electric Clock Cord Storage Device.

2,913,671. High Input Impedance Transistor Amplifier.

2,920,438. Alarm Control Mechanism.

Applications for license under the following 4 patents may be addressed to: General Electric Company, Transformer Division, 100 Woodlawn Ave., Pittsfield, Mass., Attention Patent Counsel.

2,922,255. Mold Apparatus for Casting Glass.

2,922,889. Resettable Demand Recorder.

2,922,938. Electric Capacitor and Stabilized Dielectric Material Therefor.

2,931,009. Electrical Connector.

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1960

Total number of pending applications (excluding Designs)	198,233
Total number of pending Design applications	6,108
Total number of applications awaiting action (excluding Designs)	81,125
Total number of Design applications awaiting action	1,400
Date of oldest new application	Feb. 2, 1959
Date of oldest amended application	Feb. 9, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 42, 46, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 65.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	11-5-59	10-26-59
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-2-59	11-17-59
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	11-20-59	11-20-59
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	10-5-59	10-7-59
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-3-59	8-5-59
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	10-19-59	10-19-59
7. (IV) ANDERSON, E. G., Optics	9-1-59	9-8-59
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	10-19-59	10-27-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-13-59	10-7-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-5-59	12-1-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	10-19-59	9-4-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-4-59	12-3-59
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-12-59	10-13-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-8-59	7-17-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-4-59	12-17-59
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	7-1-59	6-1-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-2-59	11-5-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-9-59	10-9-59
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-4-60	12-17-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-10-59	12-10-59
21. (III) MADER, R. C., Textiles	10-26-59	11-6-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-12-59	10-6-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	2-2-59	1-9-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	9-4-	9-2-59
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	9-3-59	9-1-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	9-29-59	8-13-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	11-2-59	10-20-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	10-26-59	11-4-59
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-6-59	11-10-59
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-8-59	12-10-59

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	12-21-59	12-22-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	11-16-59	11-17-59
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	9-4-59	9-8-59
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	3-31-59
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	11-6-59	11-6-59
36. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	9-28-59	9-23-59
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	9-29-59	9-18-59
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Aso, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-3-59	8-3-59
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	10-30-59	10-21-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-59	12-2-59
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television; Telegraphy (part)	11-23-59	10-22-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-1-59	10-1-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	9-14-59	9-24-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	6-22-59	6-8-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	11-16-59	11-13-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-12-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-16-59	11-18-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-9-59	8-19-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	7-6-59	7-13-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-2-59	8-17-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	10-1-59	10-1-59
52. (V) LE ROY, C. A., Supports and Racks	1-20-60	1-26-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	10-26-59	10-12-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	11-24-59	12-2-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	10-13-59	9-30-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-7-59	12-3-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-19-59	8-11-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	9-16-59	10-6-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-8-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	9-15-59	9-21-59
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	12-1-59	11-27-59
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	11-24-59	11-13-59
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	9-23-59	10-5-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	8-11-59	7-17-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	11-16-59	11-6-59
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	7-7-59	6-17-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	8-25-59	8-5-59
81. (III) MONCURE, J. A., Industrial Arts	3-4-60	3-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-14-60	3-15-60
91. BAILEY, J. S., Ornamentation	2-16-60	2-9-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	1-4-60	1-7-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	12-9-59	12-1-59
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	12-3-59	12-4-59
95. ANGEL, C. D., Masonry and Concrete Structures; Packed Rod Joints; Joint Packings	10-5-59	10-1-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes	12-2-59	11-9-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1959.*

Patents	Numbers 2,323,357 to 2,325,576, inclusive
Plant Patents	Numbers 504 to 506, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

GENERAL SHOE CORPORATION *v.* HOLLYWOOD-MAXWELL CO.

No. 6469. Decided April 18, 1960

[47 CCPA —; — F.2d —; 125 USPQ 443]

1. TRADEMARK—CONFUSING SIMILARITY—IDENTICAL MARKS—GOODS.

Held that when articles to which identical marks are applied have as much in common as shoes and brassieres, the likelihood of confusion is increased; and *Held* that "If we were dealing with the same mark on such widely different articles as, for example, a woman's eyebrow pencil and a farm tractor there would be no problem."

2. SAME—SAME—EVIDENCE.

Upon consideration of the statement below that "* * *, it is more or less a matter of common knowledge that manufacturers of shoes do not ordinarily manufacture other articles of apparel * * *," made in determining whether concurrent use of the identical mark, "Ingenue," on shoes and brassieres would be likely to result in confusion, *Held* that "* * *, if it were really a matter of common knowledge that shoe manufacturers do not ordinarily manufacture other items of apparel and vice versa, there would be no problem"; that "However there is no evidence to support that statement, and we hardly think it can be accepted as a fact"; and that "Indeed, in view of the current wave of industrial mergers and resultant diversification, it is difficult to know with certainty just who is manufacturing what."

APPEAL from the Patent Office, Opposition No. 34,795.

REVERSED.

Smith, Kilpatrick, Cody, Rogers & McClatchey (*Ernest P. Rogers* of counsel) for General Shoe Corporation.

John Flam for Hollywood-Maxwell Co.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, SMITH, and JOHNSON (retired), *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

Appellant owns and is the prior user of the trademark "Ingenue" on shoes and hosiery.[1] Appellee seeks seeks registration of the identical mark for use on brassieres. The Commissioner, through the Assistant Commissioner, overruled appellant's protest that concurrent use of the mark would be likely to result in confusion within the meaning of Section 2(d) of the Lanham Act (Trademark Act of 1946).[2]

The relevant facts are well summarized, and the grounds for overruling the protest are clearly stated in the decision below. We take the liberty of quoting at length therefrom.

From the record it appears that opposer uses the mark "Ingenue" only on women's shoes. It has so used it since 1930, and during the twenty-six year period of use more than five million dollars' worth of shoes bearing the mark have been sold and in excess of a half million dollars have been spent in advertising shoes under the mark.

In August of 1935 applicant commenced using "Ingenue" as a trademark for brassieres and has continuously used it since that time, having sold more than thirty-seven thousand brassieres under the mark during the two-year period preceding the execution of the stipulation. Applicant first registered "Ingenue" as a part of the composite mark "V-Ette Ingenue" in 1937.

Neither party knows of any instance in which, by reason of applicant's use of "Ingenue" on brassieres, purchaser confusion has resulted.

The Examiner of Interferences stated, and I agree, that,

It is manifest that shoes and brassieres have nothing whatever in common with respect to their essential characteristics and sales appeal, and while they are frequently found in the same stores, they are customarily sold in different departments thereof. Furthermore, it is more or less a matter of common knowledge that manufacturers of shoes do not ordinarily manufacture other articles of apparel * * *.

Appellant challenges the above reasoning, pointing out that both articles are women's apparel; that they are sold to the same class of purchasers; that they are commonly sold through the same channels of trade; and that under such circumstances the average purchaser would assume that when such articles bear the identical trademark they emanate from the same source.

Appellant also disputes the accuracy of what appears to be the second ground of the Commissioner's decision, stating that

The Assistant Commissioner indulges the further unsupported and unjustifiable conclusion that "It is more or less a matter of common knowledge that manufacturers of shoes do not ordinarily manufacture other articles of apparel and vice versa."

The ordinary citizen could not tell, if his life depended upon it, who manufactures the "Florsheim," "Jarman," "W. L. Douglas," "Thom McAnn," or "I. Miller" shoes. As a matter of fact, it is highly unlikely that either the Examiner of Interferences or the Honorable Assistant Commissioner of Patents would have any precise information or knowledge with respect thereto, even though their official duties tend to give them more extensive knowledge of such matters.

On the facts here, we are inclined to agree with appellant that concurrent use of "Ingenue" on the instant articles would likely result in the confusion contemplated by the statute.

[1] If we were dealing with the same mark on such widely different articles as, for example, a woman's eyebrow pencil and a farm tractor there would be no problem. But when the articles have as much in common as is the case here, the likelihood of confusion is increased.

The reasoning in *In re Keller, Heumann & Thompson Co., Inc.*, 28 CCPA 837, 81 F.2d 899, 28 USPQ 221, with respect to the relationship between men's shoes and clothing appears to be equally appropriate with respect to women's shoes and brassieres:

* * * Both are within the general class of wearing apparel. They are bought by the same class of people; it is a matter of common knowledge that both shoes and clothes are sold in country stores throughout the nation, and appellant's counsel admits that a similar sales policy exists to some extent in our cities, although he states, as no doubt the fact is, that in cities, generally speaking, clothing and shoes are sold in separate stores.

It seems clear to us that a purchaser of men's shoes bearing the trademark "TIMELY" would, upon seeing the same mark upon men's suits, topcoats or overcoats, for sale in the same store, conclude that they had the same origin as the shoes bearing said mark.

[2] Again, if it were really a matter of common knowledge that shoe manufacturers do not ordinarily manufacture other items of apparel and vice versa, there would be no problem. However there is no evidence to support that statement, and we hardly think it can be accepted as a fact. Indeed, in view of the current wave of industrial mergers and resultant

[1] Hosiery excluded here by stipulation.

[2] Sec. 2. Trademarks registrable on the principal register:

No trademark by which the goods of the applicant may be distinguished from the goods of others shall be refused registration on the principal register on account of its nature unless it—

* * * * * * *

(d) consists of or comprises a mark which so resembles a mark registered in the Patent Office or a mark or trade name previously used in the United States by another and not abandoned, as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers: * * *

diversification, it is difficult to know with certainty just who is manufacturing what.

For the reasons given the decision is reversed.

REVERSED.

JOHNSON, *J.* (retired), did not participate in the decision.

RICH *J.* (concurring):

I agree that the concurrent use of the identical mark on women's shoes and brassieres would be likely to confuse purchasers of the goods as to their commercial sponsorship, which is what I take to be the meaning of the expression "source." Under contemporary marketing practices, the manufacturer, in many cases, does not occupy his traditional role as the "source" because he has become a mere contractor for a merchandising unit which is the entity standing behind the merchandise. It, therefore, seems of little importance to me, if it be true, that shoes and brassieres are not made by the same manufacturers. They might very well be marketed by the same organization as its own wares. As stated in Vandenburgh, *Trademark Law and Procedure* (1959), § 1.23 at page 28,

> A literal reading of the words "indication of origin" can lead to a misunderstanding. When one says that a trademark must indicate origin of the goods to which it is applied, it is not intended to infer that a trademark can only be used by a *manufacturer* of the goods. It is a perfectly proper trademark although it indicates origin in a wholesaler, distributor or retailer. The origin to which reference is made is the party that introduces the goods on which the mark is used into commerce with the trademark on them and who primarily stands to gain or lose by the acceptable qualities of the goods. It is not even necessary that the public or purchasers know who is the manufacturer of the goods or who the party is in whom the "origin" is indicated. It is only infrequently that the public knows who the producer is; and it is more infrequently that it cares.

U.S. Court of Customs and Patent Appeals

IN RE SLAYTER

No. 6516. Decided March 30, 1960

[47 CCPA —; 276 F.2d 408; 125 USPQ 345]

1. WORDS AND PHRASES—"EXTENT."

In interpreting the statement: "These filaments are uniformly distributed throughout the extent of the glass wall of the article in a more or less close arrangement, depending on the degree of reenforcing desired," appearing in the specification of a reference patent, *Held* that "Since 'extent' is defined by Webster's New International Dictionary, 1957, as 'Space or amount to which a thing is extended,' the reasonable meaning of the quoted language is that the fibers are distributed into all portions of the glass wall," and *Held* that "We are unable to agree with appellant's contention that the use of the word 'extent' limits the disclosure to a layer of fibers."

2. PATENTABILITY—ANTICIPATION—CONSTRUCTION OF REFERENCE.

Where some of the claims of a reference patent were limited to the arrangement of metal fibers in a layer, while others merely stated that they were arranged in a haphazard manner, *Held* that the assertion of such claims clearly indicated that the invention of the reference was not limited to the use of a layer of fibers.

3. SAME—SAME—SAME.

In connection with appellant's argument that metal fibers were not spaced uniformly throughout the glass in the product disclosed by a reference, *Held* that, even if it could be conceded that the reference does not expressly disclose the distribution of metal fibers throughout all parts of a glass article, it is clear that such distribution would be obvious in view of the disclosure, with expression of the view that "The statement that the arrangement of fibers depends on the degree of reenforcing desired would clearly suggest the use of fibers dispersed throughout the glass where a high degree of reenforcing is required."

4. SAME—COMPOSITION OF MATTER—EVIDENCE OF PATENTABILITY.

"Some of the claims state that the fibers and the matrix have 'corresponding' or 'similar' fusion points or working temperatures. Aside from the fact that these expressions are somewhat indefinite and do not appear to distinguish clearly from Smith, there is nothing of record to show that such similarity of temperatures would produce a product patentably different from one in which the temperatures were not similar. Such similarity may make it easier to make the product, but the appealed claims are drawn to the product itself and not to a method of making it."

5. SAME—GENERIC CLAIM CANNOT BE ALLOWED OVER PRIOR ART SPECIES FALLING WITHIN THE CLAIMED GENUS.

"Appellant seems to place great reliance on the contention that he has a broad inventive concept involving the use of two classes of materials, which concept is lacking in Smith. Assuming that to be true, it would not justify allowance of claims which are readable on Smith's disclosure, which we think is the case here. It is well settled that a generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus; in other words, whatever would infringe if subsequent will anticipate if prior."

6. SAME—PARTICULAR SUBJECT MATTER—POLYPHASE MATERIALS.

Claims in an application on polyphase materials *Held* to define nothing patentable over the single reference cited.

APPEAL from the Patent Office. Serial No. 219,111.

AFFIRMED.

James H. Littlepage, Staelin & Overman, Ooms, McDougall, Williams & Hersh (*Herman Hersh* of counsel) for Slayter.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge C. WILLIAM KRAFT, *United States District Judge for the Eastern District of Pennsylvania*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office sustaining the rejection by the Primary Examiner of claims 1 to 4, inclusive, 6, 7, 11, 12, 13, 32, 33, and 34 of appellant's application for a patent on polyphase materials. Claims 1, 4, and 34 are representative and read:

> 1. A composite structure consisting of a heterogeneous system formed of a metallic phase uniformly dispersed in fibrous form throughout a continuous phase of a fused ceramic which differs from the fibrous phase in modulus of elasticity.
>
> 4. A composite structure in the form of a heterogeneous system consisting of a high modulus metallic phase in fibrous form dispersed uniformly and interbonded with a continuous matrix of ceramic material having a lower modulus of elasticity than the metal of the fibrous phase dispersed therewith and in which the ceramic had a temperature of fusion which corresponds to the melting point temperature for the metal.
>
> 34. A composite structure consisting essentially of a heterogeneous system formed of materials in different phases which have similar temperatures for plastic working but differing substantially in their moduli of elasticity and in their surface tensions, one material which has the higher modulus of elasticity being present in the heterogeneous system as a fibrous phase, the other material, having the lower modulus of elasticity being a fused phase forming a matrix in which the fibrous phase is dispersed.

The single reference relied on is

Smith, 1,556,364, October 6, 1925.

Appellant's application discloses the production of a composite structure of great strength and resistance to cracking. The basic concept involved is that of dispersing fibers of one material throughout a continuous phase of another, the dispersed material having a higher modulus of elasticity than that of the continuous phase, so that the load on the structure tends to be carried by the fibers and the extension of any cracks which may form is restricted. The application describes structures involving various combinations of materials, including metal in glass or a ceramic material, and one resin in another resin.

The Smith patent discloses a reinforced glass formed by incorporating short metal filaments in a glass matrix. It is stated that the filaments are preferably so close as to insure thorough overlapping or intersecting, so that a break at any point in the glass will necessarily intersect some of the fibers, whereby the extent of the break will be limited.

Some of the appealed claims are drawn broadly to the use of materials having different moduli of elasticity, while others are limited to the use of a metal and a ceramic material. It is stated in appellant's specification that the term "ceramic" as used in the specification and claims is to be understood as including glasses of the kind described in the application.

The Smith patent clearly discloses a composite structure formed of metal fibers dispersed in a continuous phase of glass. While Smith does not specify any particular kind of glass or metal except that he prefers a heat resistant metal alloy, we agree with the Patent Office that in the normal practice of the Smith invention the metal would have a higher modulus of elasticity than the glass. The brief for the Commissioner cites standard texts showing that typical heat resistant metal alloys have moduli of elasticity substantially higher than that of glass.

Appellant contends that the metal fibers in the Smith product are not spaced uniformly throughout the glass. It is true that the specific article illustrated by Smith is a lamp shade in which all the metal fibers are adjacent the inner surface of the glass. However, the patent specification makes it clear that this is only one embodiment of the invention, one particularly useful when opaque material is used, and when it is desired to conceal the metal fibers. Where those circumstances do not exist there would be no purpose in concentrating the fibers in one part of the glass.

[1] The specification of the Smith patent contains the following statement:

> These filaments are uniformly distributed throughout the extent of the glass wall of the article in a more or less close arrangement, depending on the degree of reenforcing desired.

Since "extent" is defined by Webster's New International Dictionary, 1957, as "Space or amount to which a thing is extended," the reasonable meaning of the quoted language is that the fibers are distributed into all portions of the glass wall. We are unable to agree with appellant's contention that the use of the word "extent" limits the disclosure to a layer of fibers. [2] It is also to be noted that some of the claims of the Smith patent are limited to the arrangement of the metal fibers in a layer, while others merely state that they are arranged in a haphazard manner. The assertion of such claims clearly indicates that Smith's invention was not limited to the use of a layer of fibers.

[3] Moreover, even if it could be conceded that Smith does not expressly disclose the distribution of metal fibers throughout all parts of a glass article, we think it clear that such distribution would be obvious in view of his disclosure. The statement that the arrangement of fibers depends on the degree of reenforcing desired would clearly suggest the use of fibers dispersed throughout the glass where a high degree of reenforcing is required.

For the reasons given, we agree with the Board that the references in the appealed claims to the manner and extent in which the fibers are dispersed in the matrix define nothing patentable in view of the Smith disclosure.

[4] Some of the claims state that the fibers and the matrix have "corresponding" or "similar" fusion points or working temperatures. Aside from the fact that these expressions are somewhat indefinite and do not appear to distinguish clearly from Smith, there is nothing of record to show that such similarity of temperatures would produce a product patentably different from one in which the temperatures were not similar. Such similarity may make it easier to make the product, but the appealed claims are drawn to the product itself and not to a method of making it.

The foregoing remarks are also applicable to the limitation in some of the claims to the effect that the fibers and matrix are dissimilar in surface tension. Moreover, we agree with the Patent Office that the metal and glass of Smith would have different surface tensions under the normal working conditions contemplated by the patentee.

We have given careful consideration to appellant's arguments, but in our opinion the appealed claims fail to define anything different from what is fairly disclosed by Smith.

Appellant urges that Smith's metal fibers merely serve to hold the glass together and prevent shattering, whereas appellant's fibers prevent cracking. That distinction is not brought out in the claims and, moreover, appears to involve, at best, only a matter of degree. It is stated in appellant's specification that "Since the fibrous phase having the higher modulus is quickly encountered, the crack will be arrested before it propagates very far into the composite structure." In our opinion, a similar action would take place in Smith's glass, the exact extent of cracking depending in each case on the size and arrangement of the fibers and the point at which the glass is subjected to a cracking force.

[5] Appellant seems to place great reliance on the contention that he has a broad inventive concept involving the use of two classes of materials, which concept is lacking in Smith. Assuming that to be true, it would not justify allowance of claims which are readable on Smith's disclosure, which we think is the case here. It is well settled that a generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus; in other words, whatever would infringe if subsequent will anticipate if prior. *Peters* v. *Active Manufacturing Co.*, 129 U.S. 530, 537; *Knapp* v. *Morss*, 150 U.S. 221; *Faries Mfg. Co.* v. *S. W. Farber Mfg. Co.*, 47 F.2d 571, 8 USPQ 323, and cases there cited.

[6] We agree with the Board that the claims define nothing patentable over the Smith patent. The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

THE SQUIRT COMPANY v. T. C. EVANS (THE SPRITE CORPORATION, ASSIGNEE, SUBSTITUTED)

No. 6530. Decided March 30, 1960

[47 CCPA —; 276 F.2d 415; 125 USPQ 350]

TRADEMARK—OPPOSITION—"SQUIRT" AND "SPRITE" ON SOFT DRINKS.

Held that there was no error in the dismissals below of oppositions by the registrant of "Squirt" for soft drinks to the registration of "Sprite" for "nonalcoholic, maltless soft drinks, namely, fruit flavored drinks, root beer and ginger ale" and to the registration of the same mark, for the same goods, displayed in an oval space on a background of diagonal stripes.

APPEAL from the Patent Office. Opposition Nos. 35,343 and 35,453.

AFFIRMED.

Beehler & Shanahan (*Edmond F. Shanahan* of counsel) for The Squirt Company.

Julius R. Lunsford, Jr., for T. C. Evans (The Sprite Corporation, Assignee, Substituted).

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

These are consolidated trademark oppositions, Nos. 35,343 and 35,453, wherein appellant appeals from the decision of Examiner-in-Chief Federico, acting for the Commissioner of Patents, affirming the dismissal of the oppositions by the Examiner of Interferences.

Appellee filed application Ser. No. 681,501 February 11, 1955, to register the word mark "Sprite" for "nonalcoholic, maltless soft drinks, namely, fruit flavored drinks, root beer and ginger ale." On the same day he filed application Ser. No. 681,502 to register for the same goods the same mark displayed in an oval space on a background of diagonal stripes. The specimens filed with both applications show a soft drink bottle of ordinary shape bearing both marks.

Opposer is the admitted prior user and prior registrant of the trademark "Squirt" for soft drinks which it has registered several different times in different forms. Opposer took testimony from which it appears that "Squirt" is used only on a drink of grapefruit flavor. Opposer also has a registration, No. 401,117, of a caricature of a small boy and has used this mark on its bottles and packages with the word mark. Both the sales of "Squirt" and the advertising expenditures to promote them have been large and the product is presumably widely known to those elements of the population addicted to soft drink.

After carefully considering the record and the arguments of the parties, we are unable to conclude that the concurring decisions below are in error. Having made it clear that we are aware of the extent of opposer's publicity and sales we have nothing further to say in support of our decision that has not already been clearly, competently and completely said in the opinion of the Examiner-in-Chief. That opinion has been published at 119 USPQ 102 and 49 T.M. Rep. 141 and it would serve no purpose to write or publish anything more.

Compare our decision in *The Squirt Co.* v. *Pola-Rona, Inc.*, 43 CCPA 764, 229 F.2d 463, 108 USPQ 333, wherein the dismissal of the present opposer's opposition to the registration of "Splurge" for soft drinks was sustained.

The decision dismissing the oppositions is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE AHMED PANAGROSSI AND RAY L. HAUSER

No. 6542. Decided April 6, 1960

[47 CCPA —; — F.2d —; 125 USPQ 410]

1. CLAIM—CONFORMANCE OF CLAIM TO INVENTION DESCRIBED IN SPECIFICATION—REISSUE LAW.

Reissue law *Held* to have no bearing on the issue, raised by the Examiner, that the appealed claims of appellants' reissue application do not define an invention which is described in appellants' specification.

2. APPLICATION—DISCLOSURE—CLAIM.

In connection with claims omitting the fluorine-substituted polyethylene, disclosed in appellants' specification as an essential ingredient of a priming composition, *Held* that "An applicant cannot describe one invention and claim another."

3. APPEAL TO THE COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE THE COURT—ARGUMENT NOT PRESENTED BELOW.

A contention not made before the Examiner or the Board of Appeals *Held* improperly raised in the Court of Customs and Patent Appeals.

4. APPLICATION — DISCLOSURE — CLAIM — CONSTRUCTION OF CLAIM.

"Appellants' * * * point is 'that the claims on appeal do not call for a priming composition containing rubber *alone*, but specify * * * a priming composition *containing rubber* (claim 5).' Too true! That is their defect. They read on the use as a primer for Teflon of any composition containing rubber and hence are not supported by the specification. They would read on rubber cement alone or a solution or dispersion of rubber alone in a solvent or liquid vehicle, yet an *essential* feature of the *disclosed* invention is the inclusion in the primer of a Teflon dispersion. Having taught this in the general statement of the invention and in all four examples, appellants' argument asks us to believe that Examples 1 and 4 disclose that 'a coating solution containing rubber alone is applied to the base film.' In Example 1 the 'base film' at the time of application of the rubber was already coated with a 50% Teflon dispersion and in Example 4 it was coated with a 50% Kel-F dispersion. These dispersions were 'brushed onto' the base film. They cannot now be brushed off so easily."

5. PATENTABILITY—PARTICULAR SUBJECT MATTER—METHOD OF RENDERING BONDABLE THE SURFACE OF A FLUORINE-SUBSTITUTED POLYETHYLENE AND PRODUCT—REISSUE CLAIMS NOT SUPPORTED BY DISCLOSURE.

Certain claims in a reissue application on the method of rendering bondable the surface of a fluorine-substituted polyethylene and product *Held* not supported by the disclosure, with expression of the view that "It is immaterial whether one looks to the disclosure of the instant application or of the original patent for they are the same."

APPEAL from the Patent Office. Serial No. 647,981.

AFFIRMED.

James M. Mason, Rockwell & Bartholow, Edmond M. Bartholow for Ahmed Panagrossi and Ray L. Hauser.

Clarence W. Moore (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*

RICH, *J.*, delivered the opinion of the court.

Appellants filed an application to reissue their Patent No. 2,705,691 on March 22, 1957, Ser. No. 647,981. The patent is not included in the record but it is understood that the application on appeal contains a specification identical with that of the patent. Numerous claims have been allowed, additional to the claims of the patent, and this appeal is from the refusal to allow three claims which read as follows:

5. A fluorine-substituted polyethylene body having fused to one of its surfaces a priming composition containing rubber.

6. A fluorine-substituted polyethylene body having fused to one of its surfaces a priming composition containing butyl rubber.

19. The method of rendering bondable the surface of a fluorine-substituted polyethylene, which comprises applying to the surface of the fluorine-substituted polyethylene a priming composition containing rubber and fusing said priming composition to the surface of the fluorine-substituted polyethylene.

"Fluorine-substituted polyethylene" is a generic term used by appellants to include certain materials also referred to as "fluorocarbon plastics." The only materials of this class specifically disclosed are polytetrafluoroethylene, known by the trademark "Teflon," and polytrifluorochloroethylene, known by the trademark "Kel-F." For the sake of clarity we shall talk about Teflon, it being understood that what we say applies equally to Kel-F which is a material of very similar characteristics presenting similar problems and having similar advantages.

Teflon, as appellants disclose, is a material which, when formed into solid bodies, has extraordinary toughness and resistance to heat, cold, erosion, abrasion, solvents, weathering, and chemical attack. It is also highly resistant to wetting by water, solvents, cements, and adhesives of every known kind in consequence of which it is difficult to get anything to stick to it or to stick it to anything else. Appellants addressed themselves to the problem of bonding Teflon to other things, such as rubber, so as to make laminates for various practical uses. Their own general statement of their invention in the specification is as follows:

> As will appear from the following description, the new method of bonding these plastics to other substances such as rubber comprises the step of applying to the surface of the plastic as *a priming coating* a coating or layer *which is a composite of the plastic and particles of uncured rubber*, then giving the coating a heat treatment which cures the rubber therein and fuses *the composite* to the * * * plastic in a manner to provide a strongly adherent layer having the necessary adhesive properties, after which uncured rubber is applied to the adhesive layer, and the uncured rubber cured or vulcanized. [Emphasis ours.]

It will be observed that adhesion to Teflon is secured by means of a priming coating fused to the Teflon and containing *two* ingredients, first, Teflon itself and second, particles of uncured rubber. The specification contains four specific examples of the production of such priming coatings.

Example 1 teaches coating a Teflon body *first* with a 50% disperson of Teflon particles in water and *then* with a solution of 14.5% "butyl" rubber in benzene. The Teflon dispersion was first brushed on and apparently dried at room temperature, though the specification does not say so. The implication is that the Teflon dispersion was dried as it is said that after the rubber solution was brushed on over it the sheets were "*again* dried at room temperature." [Our emphasis.] The thus doubly coated body was then put in an oven for three minutes to "cure the rubber particles and fuse the composite layer to the surface of the plastic."

In Example 2 a single *mixed* coating was used consisting of equal parts of 50% Teflon dispersion in water and 50% dispersion of butyl rubber cement in toluene, the mixture being thinned to brushing consistency with more toluene. Teflon film coated with this primer was fused in an oven. The rubber cement was about two-thirds rubber and one-third carbon black with small additions of certain vulcanization agents not important here.

Example 3 is a Kel-F example and the priming coating was again a *mixture*, this time of equal parts of a 50% solution of butyl rubber in toluene and a 50% dispersion of Kel-F in xylene, brushed on a film of Kel-F and fused.

Example 4 used the same dispersion of Kel-F in xylene but coated it on separately *first*, dried it at room temperature, and *then* coated on, by spraying, a 50% solution of butyl rubber in benzene.

The priming coating is referred to in Example 1 as "The composite layer containing particles of the two substances," in Example 2 as the "composite adhesive layer," in Example 3 as the "composite coating" and in Example 4 as "The composite layer containing particles of the two substances." Nowhere in the specification is there any further amplification, modification or variation of these teachings that the priming composition is a composite of the plastic polymer and rubber.

The one remaining ground of rejection which is the sole issue on this appeal has become somewhat confused as it has ascended to this court. It was first raised in the Examiner's Answer on the appeal to the Board. The final rejection was based solely on a prior art patent and the Board reversed it so that it is not before us. The Examiner repeated it in his Answer but in addition he said the following:

> * * * claims 5, 6, and 19 * * * omit the fluorine-substituted polyethylene, disclosed in the specification as an essential ingredient in the bonding layer. There is no disclosure in the original specification that this component can be omitted from the composition of the coating.

He said further:

> It is noted that in the disclosure herein the step of heating is applied to the coating *mixture* of the fluorine-substituted polyethylene and rubber *which is not claimed* in the rejected claims. On the top of page 4 of applicants' specification it is disclosed that the coating is heated
> "to cure the rubber and fuse the composite layer to the surface of the plastic[.]"
> There is no indication that fusing is necessary when such a coating merely contains rubber and does not necessarily contain the fluorine-substituted polyethylene plastic.
> * * * * * * * *
> * * * it is disclosed in the specification (1) that the priming coating includes a *mixture* of fluorine-substituted polyethylene and rubber (not recited in the rejected claims) * * *.

On the basis of one or another of these remarks appellants jumped to the conclusion that the Examiner, as they stated in their brief in reply to his Answer, had introduced the new ground of rejection that claims 5, 6, and 19 were directed to a *different invention* from the allowed claims because they do not specify a priming composition which is a *mixture* of rubber and plastic particles. We are unable to see that the Examiner made any such rejection but, be that as it may, appellants' argument led the Board into assuming that the claims on appeal were rejected as for an invention different from that disclosed in the original patent and this supposed rejection—which we think never was made—the Board affirmed.

The confusion in the Board understandably led the Patent Office Solicitor to say in his brief that the sole issue here is whether the appealed claims "are for

the same invention or a different invention than that of the original patent." Argument is then presented predicated on reissue law including 35 U.S.C. 251 and various cases dealing with the rule that in reissuing a patent the reissue claims must be for the same invention as that of the original patent.

[1] We deem reissue law to have no bearing on the present issue. The Solicitor for the Patent Office at the oral argument appeared to be of the same opinion. (Appellants submitted on brief and did not appear.) What this court has before it for review is the rejection made by the Patent Office. The Board did not itself intend to raise any new ground of rejection but affirmed a rejection it presumed to have been made by the Examiner. We, therefore, shall look to what the Examiner stated, as quoted above. Clearly his objection was that the appealed claims do not define an invention which is described in the specification. Clearly the Board was cognizant of the Examiner's position, as it said:

> After consideration of the specification we are constrained to agree with the Examiner that the fluorine-substituted polyethylene is an essential ingredient of the priming composition and that *there is no disclosure that this component may be omitted therefrom*. The portion * * * we have above quoted, clearly indicates that the problem * * * was solved by applying "as a priming coating a coating or layer which is a *composite* of the plastic and particles of uncured rubber, then giving the coating layer a heat treatment which cures the rubber therein and fuses the *composite* to the fluorine-substituted polyethylene plastic . . . after which uncured rubber is applied to the adhesive layer . . ." *There is no indication that rubber alone could be fused to the plastic base.* [Emphasis ours.]

This is also a clear indication of the reason the Board affirmed the rejection of the claims. [2] An applicant cannot describe one invention and claim another.

Appellants are frankly contending that on the basis of their disclosure they are entitled to claims "broad enough to contemplate rubber priming compositions both with and without particles of the fluorinated polyethylene base material." They so contended before the Examiner and the Board and failed to persuade them. They must fail here also. None of the arguments on which they seek to support this contention is valid.

Appellants' first point is that their Example 4 discloses "that a solution containing rubber alone may be applied to a *dry fluorinated polyethylene film* followed by fusion * * *." The assertion is not explained and is contrary to fact. When the rubber was coated on the film the film may have been "dry" but it had first been coated with "A 50% dispersion of 'Kel-F' particles in xylene" as a necessary part of the priming composition. Appellants' contention oversteps the boundary of proper argument in attempting to obscure the presence, as a part of the primer, of the Kel-F coating on the "film."

[3] Appellants' second point is that claim 1 of the patent discloses the concept of using a solution of rubber alone. Claim 1, repeated in the present reissue application, reads:

> 1. A *laminate of* fluorine-substituted polyethylene *plastic and* a cured *rubber* compound containing rubber selected from the group consisting of isobutylene-isoprene and isobutylene-butadiene, both members of the *laminate* being thin films. [Emphasis ours.]

This claim is directed to a laminate of two layers which cohere, presumably, by virtue of the "priming composition" referred to in the claims on appeal and under discussion here. Claim 1 makes no reference, however, to the priming composition or to any part of it. The "rubber compound" of claim 1 is a lamina, not a priming coating. Furthermore, it would appear that this contention was not made before the Examiner or the Board, in which case it is improperly raised here. *In re Herthel*, 36 CCPA 1095, 174 F.2d 985, 82 USPQ 55.

[4] Appellants' third point is "that the claims on appeal do not call for a priming composition containing rubber *alone*, but specify * * * a priming composition *containing rubber* (claim 5)." Too true! That is their defect. They read on the use as a primer for Teflon of any composition containing rubber and hence are not supported by the specification. They would read on rubber cement alone or a solution or dispersion of rubber alone in a solvent or liquid vehicle, yet an *essential* feature of the *disclosed* invention is the inclusion in the primer of a Teflon dispersion. Having taught this in the general statement of the invention and in all four examples, appellants' argument asks us to believe that Examples 1 and 4 disclose that "a coating solution containing rubber alone is applied to the base film." In Example 1 the "base film" at the time of application of the rubber was already coated with a 50% Teflon dispersion and in Example 4 it was coated with a 50% Kel-F dispersion. These dispersions were "brushed onto" the base film. They cannot now be brushed off so easily.

Finally, appellants make the argument, if it can thus be dignified, that the appealed claims "read on" the disclosure. So would a claim reading simply, "Primed Teflon." That is not persuasive of the contention that the claims are allowable.

[5] The rejection of claims 5, 6, and 19 as not supported by the disclosure is *affirmed*. It is immaterial whether one looks to the disclosure of the instant application or of the original patent for they are the same. There is no disclosure that Teflon can be successfully "primed" merely by fusing on its surface a composition containing rubber.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE LESHIN

No. 6554. Decided April 6, 1960

[47 CCPA —; — F.2d —; 125 USPQ 416]

1. CLAIMS—CONSTRUCTION OF CLAIMS—LIMITATIONS NOT EXPRESSED.

   In response to an argument that a cited reference did not disclose "applicant's molded plastic materials," *Held* that "As far as claim 13 is concerned, the material of which the device is made is not specified and patentability of that claim cannot be predicated on the use of plastic."

2. PATENTABILITY — INVENTION — MATERIALS SELECTED ON BASIS OF INTENDED USE.

   "As to those claims limited to plastic, * * *, Anderson [a reference] shows a similar container of molded plastic and applicant concedes that the plastics he uses are well known, 'but,' he says, 'applicant has had to select them for his particular purpose.' Mere selection of known plastics to make a container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious; and in view of 35 U.S.C. 103 it is a wonder that the point is even mentioned."

3. SAME—SAME—INSIDE AND OUTSIDE SEALING WASHERS.

   Where appellant's container-dispenser for cosmetics in solid stick form had a hole in the middle of the bottom through which a threaded stem passed, and to make an allegedly vapor tight seal where the stem passed through the bottom, a cork washer was placed on the inside, around the stem, and a felt washer was similarly placed on the outside, *Held* that "We see nothing unobvious to one of ordinary skill in this art in using both inside and outside sealing washers if he finds either one of them alone to be insufficient."

4. WORDS AND PHRASES—"SKELETON."

   "* * * 'skeleton' must be construed in the engineering sense in which appellant used it rather than according to the irrelevant terminology of zoology as related to the genus Chelonia."

5. CLAIMS—CONSTRUCTION OF CLAIMS—APPLICANT'S RIGHT TO CHOICE OF LANGUAGE.

   "Applicants have the long-recognized right to describe their structures in such language as they choose so long as ordinary meanings are not distorted and if they make themselves clear."

6. PATENTABILITY—DEPENDENT CLAIM.

   "As claim 18 is dependent on rejected claim 13 it can, of course, be allowed only in independent form. It is not our opinion that the patentability of such an independent claim would depend on the inclusion of the limitation now in claim 13 to two sealing washers, which we found not to impart patentability to claim 13."

7. PATENTABILITY — PARTICULAR SUBJECT MATTER — "CONTAINER-DISPENSER FOR COSMETICS IN SOLID STICK FORM."

   Certain claims in an application entitled "Container-Dispenser for Cosmetics in Solid Stick Form" *Held* unpatentable over the cited prior art, but another claim *Held* patentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 297,869.

MODIFIED.

Morrison, Kennedy & Campbell, Luther E. Morrison for Leshin.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*

RICH *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Appeals affirming the rejection of claims 13–21 of appellant's application Ser. No. 297,869, filed July 9, 1952 for "Container-Dispenser for Cosmetics in Solid Stick Form." No claims have been allowed. Claim 13 is the main claim, all others being dependent.

The references relied on are:

Root, 1,461,680, July 10, 1923.
Gleeson, 1,953,293, April 3, 1934.
Anderson, 2,506,984, May 9, 1950.
Mahruki, 2,629,123, February 24, 1953.
Gahide (French), 714,968, September 14, 1931.

Claim 13 reads:

> 13. A liquid-tight and air-tight container-dispenser for cosmetics in solid stick form and of the volatile variety comprising a tubular *body* with a bottom wall, an interiorly threaded *follower* arranged within the body and having a slidable but non-rotatable engagement therewith, an exteriorly *threaded stem* also arranged within the body and having cooperative engagement with the follower, said stem being rotatably mounted at its lower end on the bottom wall of the body, a *rotatable knob* arranged outside of the body at the base of the container-dispenser and secured non-rotatably to the stem, a sealing *washer within* the body positioned against the bottom wall of the body and through which the stem also rotatably extends, and a second sealing *washer outside* of the body, between the rotatable knob and the bottom wall of the body. [Emphasis ours.]

Appellant's invention is a combination of mechanical elements constituting a mechanism superficially resembling the common lipstick holder except that the cosmetic body of stick-like form has a follower embedded in its lower end and is moved by turning a knob attached to the threaded stem which is disposed axially of and inside the stick of cosmetic. The cosmetic can be a cologne or perfume stick, a deodorant stick, shaving stick, cream stick or the like. It is said that such cosmetics contain volatiles and an object is to provide a container which is sealed against their escape.

The sole issue is patentability over the above cited art and appellant's plea is that the claims should be allowed because they are not anticipated by any one reference, because they are of a very limited nature, and because they represent "some advance—even though it may be slight—in a very crowded art."

Appellant acknowledges that Root, which shows a metal lip stick container, "does disclose applicant's general structure but lacks applicant's double seal at the bottom of the container, as well as applicant's molded plastic materials."

[1] As far as claim 13 is concerned, the material of which the device is made is not specified and patentability of that claim cannot be predicated on the use of plastic. [2] As to those claims limited to plastic, dependent claims 14 and 15, Anderson shows a similar container of molded plastic and applicant concedes that the plastics he uses are well known, "but," he says, "applicant has had to select them for his particular purpose." Mere selection of known plastics to make a container-dispenser of a type made of plastics prior to the invention, the selection of the plastics being on the basis of suitability for the intended use, would be entirely obvious; and in view of 35 U.S.C. 103 it is a wonder that the point is even mentioned.

[3] We shall now consider the double seal which appellant urges as the feature which makes claim 13 patentable. The bottom of the container body is a thin circular wall with a hole in the middle through which the threaded stem passes. To make an allegedly vapor tight seal where the stem passes through the bottom, a cork washer is placed on the inside, around the stem, and a felt washer is similarly placed on the outside, between the body and the rotatable knob. The specification says as to each of these washers that it may be made of "other suitable material" than the one named and no claim says what they are made of. The stem has a boss that bears on the inside washer and when the threaded stem is swaged into the knob, the two washers are squeezed together with the bottom wall of the body sandwiched between them. Although the specification does not mention it, the outside felt washer is said in appellant's brief to reduce the friction between the body and the knob so that the knob turns freely and this would obviously be so if, indeed, that is not its primary function. But ignoring the latter function, the problem is simply one of sealing a shaft where it passes through a wall so that liquid or vapor will not escape around it. Root, to keep his container from leaking, provides a soft felt washer, around a threaded stem, and disposed on the inside of the container. Mahruki, provides a washer of rubber or like material around a rotating shaft between a corresponding body and knob, which may, incidentally, be made of plastic, to provide a seal on

the outside. We see nothing unobvious to one of ordinary skill in this art in using both inside and outside sealing washers if he finds either one of them alone to be insufficient.

Having disposed of the arguments based on the use of the double seals and the use of plastic materials, we have answered appellant's arguments as to the patentability of claim 13. We are not persuaded that there was error in its rejection for the reasons of record. We have also disposed of claims 14 and 15.

Claim 16 adds the feature of clamping the inside washer against the bottom wall of the body by a disc-like collar on the stem. The drawing shows it to be a flange or enlargement on the boss at the bottom of the threaded stem. Beside being of the view that it is an obvious and ancient mechanical expedient, we agree with the Board that it is taught by Gleeson to use a collar surrounding the stem to press a spring washer against the bottom of the case in a device of this type. Claim 17 calls for a recess in the body in which the outside sealing washer is positioned. The limitations of this claim are shown in Mahruki and are wanting in novelty.

Claim 18 reads:

A container-dispenser according to claim 13, wherein the follower is of skeleton form to embed itself in the stick when the stick material is poured in hot liquid state into the body for casting.

The Board accurately describes the "skeleton form" of the follower as "an annular ring secured to a screw threaded axial hub by two radial arms leaving passages between the rim and other parts." The corresponding part in Root is a cup to hold the base of the stick which he molds in his container and is quite unlike appellant's follower. [4] The Board made the limitation "skeleton form" read on a cup by the following reasoning:

We are * * * of the opinion that this expression does not require an apertured structure such as herein, since the carapace of turtles and other related animals is an exterior skeleton of cup form and thus Root meets the claims [sic] as drafted.

We will not approve this rejection. We feel that "skeleton" must be construed in the engineering sense in which appellant used it rather than according to the irrelevant terminology of zoology as related to the genus Chelonia. The claim does not reasonably convey the meaning the Board attempts to ascribe to it. [5] Applicants have the long-recognized right to describe their structures in such language as they choose so long as ordinary meanings are not distorted and if they make themselves clear. Appellant's specification makes the term "skeleton" entirely clear and it does not include cups. The Board's second ground of rejection is that Gahide shows an apertured lift plate in his shaving stick holder. While it is true he shows a plate having some small holes in it, he does not suggest the structure or the functioning of it as set forth in claim 18. The Solicitor says applicant's structure would result from substituting Gahide's follower in Root's container but there is nothing in either patent to suggest making such combination. On the contrary, to use an apertured or skeletonized follower in place of Root's cup would defeat his purpose in causing his soft felt washer under the cup to become soaked with hot liquid lip-stick. He wants no cosmetic below his cup if possible. The rejection of claim 18 will be reversed.

Claim 19 is another dependent claim calling for a boss on the lower end of the threaded stem to space the follower in its lowest position a substantial distance from the bottom of the body. This is provided, according to the specification, so that when the melted contents are poured in and around the skeleton follower the material will solidify around it and embed it above the end of the stick. Applicant says this is an important feature which insures the stick will be both propelled and repelled and the specification emphasizes this. The rejection is on Root in view of Gleeson. The Board admitted that Root does not anticipate but said that Gleeson shows the boss. He does show a boss about half the length of applicant's but not for applicant's purpose and not in combination with a skeleton follower. The inventive concept of using the combination of boss and skeleton follower, for use with a poured cosmetic stick is not to be found in either of these references but neither is it to be found in claim 19. The rejection of this claim is affirmed since the mere use of a boss at the end of a screw to stop the follower does not define anything patentable over Gleeson.

Claims 20 and 21 are directed to the mechanical expedients of swaging the stem into a hole in the knob and of making this joint of square cross-section. They were properly rejected on art showing recognized mechanical equivalents.

[6] As claim 18 is dependent on rejected claim 13 it can, of course, be allowed only in independent form. It is not our opinion that the patentability of such an independent claim would depend on the inclusion of the limitation now in claim 13 to two sealing washers, which we found not to impart patentability to claim 13.

[7] The decision of the Board is affirmed as to the rejection of claims 13–17 and 19–21 but is reversed as to claim 18.

MODIFIED.

KIRKPATRICK, *J.*, dissents as to claim 18 and concurs as to the remaining claims.

U.S. Court of Customs and Patent Appeals

IN RE CORNISH

No. 6547. Decided April 6, 1960

[47 CCPA —; — F.2d —; 125 USPQ 413]

1. CLAIMS—CONSTRUCTION OF CLAIMS—LIMITATIONS NOT EXPRESSED.

"Apparently appellant has misconstrued the significance of his specification itself as a determinant of the breadth of the claims on appeal. Although specific features disclosed in a specification may render claims patentable if recited in the claims in sufficiently limited language, this does not mean that their definition in broad terms necessarily makes claims embodying them allowable over the prior art."

2. PATENTABILITY—INVENTION—CORRESPONDING SYMBOLS ON MEANS OF CHANCE AND GAME BOARD.

In connection with an application on a game which may be played as a game of skill and also as a game of chance, *Held* that "symbols of playing card suits, Roman numerals, and various colors are a matter of choice, and having corresponding symbols on the means of chance is obvious if the means of chance is to have any determinative value in playing the game."

3. PATENTABILITY—PARTICULAR SUBJECT MATTER—"GAME APPARATUS."

Certain claims in an application entitled "Game Apparatus" *Held* unpatentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 271,080.

AFFIRMED.

Don Cornish, pro se, *Mason, Kolehmainen, Rathburn & Wyss, Walther E. Wyss*, for Cornish.

Clarence W. Moore (*S. Wm. Cochran* of counsel) for the Commissioner of Patents.

Before WORLEY *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals affirming the final rejection of claims 1, 3, 4 and 16 in application Serial No. 271,080, filed February 11, 1952 entitled "Game Apparatus." It is stated to be a continuation of application Serial No. 740,877, filed April 9, 1947. Several claims have been allowed.

Claims 1 and 16 are representative:

1. Amusement apparatus for playing games like tic-tac-toe with game pieces and comprising structure defining at least a three dimensional multiple group playing position playing board, said playing positions being arranged in lines extending in said dimensions and also in groups each containing a plurality of positions, and means of chance for determining a group of playing positions in which a play may be made by placement of a game piece.

16. Amusement apparatus comprising a structure movable into various angular positions during play and including a panel having apertures therein and game pieces adapted to be placed therein said game pieces being made of a readily and substantially deformable resilient material whereby they can be readily inserted into and removed from the apertures from either side of the panels, the game pieces being dimensioned so as to be deformed when inserted into the apertures whereby their resiliency holds them in the apertures.

The invention claimed in this case relates to a 3-dimensional game like tic-tac-toe. Instead of the 9 squares in which "X's" and "O's" are placed by competitors, the customary tic-tac-toe game with which most of us are familiar, the game of the invention is played with at least three parallel planes, preferably transparent pieces, spaced equally from each other and attached to a common base, each having at least 9 playing positions (3 x 3). Thus, in each of the planes it is possible to win by being the first to complete a horizontal, vertical or diagonal row of 3 squares. Additionally, it is possible to win by completing a row or diagonal row consisting of one position in each of the three planes. While such a game may be played as a game of skill by at least two participants, it may also be played as a game of chance, and it is to this that claims 1, 3 and 4 are directed.

As a game of chance, means such as dice are used. One die determines the plane, another a column in that plane, and a third, the row in that plane in which a game piece is to be placed. Each die, therefore, determines a "group of playing positions," the net result of the three dice determining but a single position within the three planes. Additionally, a player may be given a free choice of play within any of the three groups by appropriate markings upon the dice. The groups of playing positions are marked by appropriate symbols on the game board and the dice each have corresponding symbols thereon.

Additionally the specification discloses the combination of a game board having apertures therein and deformable resilient game pieces insertable therein so dimensioned that they are resiliently held in the apertures.

The references relied on by the Board of Appeals are:

Gaylor, 715,474, December 9, 1902.
D'Autremont, 1,141,909, June 1, 1915.
Abele, 1,421,656, July 4, 1922.
Barnard, 1,564,746, December 8, 1925.
Heacock et al., 2,313,473, March 9, 1943.
Hare et al., 2,453,907, November 16, 1948.

The Heacock et al. patent describes a game board having three parallel spaced planes attached to a common support each of the three being a playing board having apertures therein to receive game pieces. Each of the boards has nine playing positions arranged in a 3 x 3 array. The Heacock et al. board is used for playing a game "similar to the well-known game of tick-tack-toe."

The Gaylor reference shows a game utilizing dice to indicate the number of spaces which a player may move a game piece on a multi-position 2-dimensional game board. The direction (forward, to the right, or to the left) and the particular piece which is to be moved are determined by the player.

In one embodiment described in the Hare et al. patent, each player is provided with a game board of a different color having a plurality of playing positions. In addition thereto, each player receives an identical number of each of several different varieties of game pieces. To determine who is to move a piece, a deck of cards having an equal number of cards of each color (corresponding to the players' boards) is used. Each of the cards, besides having the color indicia thereon has a marking corresponding to a variety of game piece. Thus, for example, if a green card having the number 1 is turned up, the player having the green board may move any one of his number 1 pieces one space.

The Barnard game is like tic-tac-toe. It is played on a board having 25 sequentially numbered squares arranged in a 5 x 5 array. The first move for each player is determined by a draw of a card from a deck having a space number on it. Thereafter, the participants alternately place the game pieces according to choice on the game board until one gets 4 pieces in any row, column or diagonal.

The D'Autremont reference discloses a game quite like chess, having a game board which has each square thereon marked for identification so that moves made can be recorded.

The Abele specification discloses a game board having apertures therein and game pieces insertable in the apertures, the game pieces including spring means for resiliently retaining them in the apertures.

The Board of Appeals sustained the rejection of claims 1, 3 and 4 as unpatentable over Heacock et al. in view of each of Gaylor, Hare et al. and Barnard. Further relied upon were the D'Autremont patent and the games of Parcheesi and Backgammon. Since Gaylor, Hare et al., Barnard and the games of Parcheesi and Backgammon all show the use of chance means for determining a group of playing positions in 2-dimensional games, it was the Board's opinion that the utilization of such means in the 3-dimensional game of Heacock et al. was obvious. The term "group of playing positions" was felt to be broader than the meaning attributed to it by appellant, in that the games of the secondary references which offered a choice of moves when chance means were utilized

met the claimed limitation. As to claims 3 and 4 which recite "distinctive symbols" (claim 3) and "distinctive coordinate symbols" (claim 4) and means of chance having corresponding symbols thereon, they were not considered to patentably define over the combination of references.

The Board held claim 16 to be unpatentable over Abele, stating that the use of "conventional cork or rubber stoppers for the game pieces of Abele would involve a mere matter of choice between *obvious* alternatives." [Emphasis supplied.]

Appellant acknowledges that broadly all the parts of his game are old. It is his basic position, however, that the combination of references relied upon by the Board of Appeals would not suggest to the ordinarily skilled game designer the particular combination claimed. He also states that no reference shows his specific coordinate means for defining playing positions. It is also argued that the term "group of playing positions" means those positions lying along the coordinates, that is, the horizontal and vertical rows in each of the planes and the lines perpendicular to each of the planes through a set of corresponding playing positions in each of the planes. It is further stated that the claimed game wherein means of chance, instead of solely choice, are used to determine the playing positions has substantial "play value," especially for people who do not wish to overly exercise their minds when playing games for relaxation.

The Solicitor's position is that the claimed invention is obvious in view of the cited art and that the term "group" need not be given the restricted meaning which appellant has attributed to it for the reason stated by the Board of Appeals. He additionally points out that Hare et al. refers to the exceptional "play value" of games giving to each participant an equal chance of winning. The Solicitor also referred to appellant's failure in either his brief or at oral argument to discuss the rejection of claim 16 and stated that presumably claim 16 is no longer on appeal.

The issues simply stated are:

1. Does "groups of playing positions" have the especial significance attached to it by appellant?

2. Would it have been obvious to one of ordinary skill in the game art at the time appellant filed his application

   a. to utilize means of chance with the 3-dimensional game board of Heacock et al., and

   b. to add to the Heacock et al. game board coordinate symbols which, in conjunction with chance means having corresponding symbols thereon, would pinpoint a particular playing position?

3. Is the resilient game piece of claim 16 an obvious modification of the Abele game piece?

[1] Apparently appellant has misconstrued the significance of his specification itself as a determinant of the breadth of the claims on appeal. Although specific features disclosed in a specification may render claims patentable if recited in the claims in sufficiently limited language, this does not mean that their definition in broad terms necessarily makes claims embodying them allowable over the prior art.

This court in *In re Hooker*, 36 CCPA 1164, 175 F.2d 558, 82 USPQ 190, referred to by the Board, properly states the law in this connection:

> Not only will terms in claims be interpreted broadly, but also limitations not expressed in the claims, though adequately stated in the specification, will not be read into the claim in order to avoid anticipation in the prior art.

Appellant seems to predicate patentability upon his allegation "that *not one single* three-dimensional parlor game of chance was invented" before his appeared. He has drawn his claims here on appeal and has argued his case assuming that this bare concept would be unobvious from the teachings of the prior art. With that we do not agree.

Insofar is claim 1 is concerned, there is no question but that the game board recited therein reads upon the Heacock et al. device. Besides the "three dimensional multiple group playing position playing board," the Heacock et al. board also meets the claimed limitation of "said playing positions being arranged in lines extending in said dimensions and also in groups each containing a plurality of positions." The Heacock et al. specification states, inter alia, that the invention relates to a "three dimensional game device" for playing a game similar to tic-tac-toe and that

> Each of the shelves [playing boards] * * * is provided with a plurality of holding means defining playing positions to receive markers. * * * the holding means are simply holes 8 * * * of suitable size to receive balls 10 which serve as markers.
>
> * * * * * * * *
>
> The number of holes and balls may, of course, be varied, the above description being given merely by way of example. *The only essential is that the holes be arranged so that each will form an element of at least two lines in the same plane and at least one interplanar line.* [Emphasis ours.]

Although Heacock et al. does not disclose "means of chance," the secondary references, Gaylor, Hare et al. and Barnard, do. The means of chance vary but we do not believe it unobvious for one skilled in the art to apply the teachings of these references to the Heacock et al. game to meet the broad limitations of claim 1. We therefore affirm the rejection of this claim.

Claims 3 and 4 providing symbols on the game board and corresponding indicia on the means of chance do not define these limitations with sufficient certainty to patentably distinguish the claims from Heacock et al. in view of the secondary references. In the first place, [2] symbols of playing card suits, Roman numerals, and various colors are a matter of choice, and having corresponding symbols on the means of chance is obvious if the means of chance is to have any determinative value in playing the game. Furthermore, those particular symbols are not recited as limitations in the appealed claim.

The portions of claim 3 stating that:

> * * * certain of said positions being located in distinctive groups, distinctive symbols for indicating said groups and means of chance having corresponding symbols thereon for determining a group of positions in which a play is to be made.

and of claim 4, stating that:

> * * * each of the positions is located in space by three coordinates, distinctive coordinate symbols on said board for locating said positions, and three devices of chance having thereon symbols corresponding to said distinctive symbols for determining positions in which a game piece is to be played.

has made possible so many variations that they read directly upon or are fully suggested by the secondary references especially in view of the fact that Heacock et al. teaches that the playing positions are to be arranged so that they define the *same* three coordinates in space utilized by appellant. The crux of the matter is that the claims do not define the groups or playing positions with sufficient definiteness nor relate the symbols in sufficiently limiting language to the various game board sections. Under these circumstances we must sustain the rejection of claims 3 and 4.

Claim 16 is not patentably distinguishable over Abele since this reference shows "a panel having apertures therein and game pieces adapted to be placed therein." The requirement that the game pieces be "made of readily and substantially deformable resilient material" seems to us to be particularly obvious and as such does not involve patentable significance. Therefore, we sustain the Board's rejection of this claim.

[3] For the above reasons we affirm the decision of the Board of Appeals.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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1,941,069. (See 1,941,066.)

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2,903,747, R. Wucher, Apparatus for moulding plastic materials, filed May 16, 1960, D.C.P.R. (San Juan), Doc. 117/60, *Roland Wucher et al.* v. *Utrilon Industries (USA) Inc. et al.*

2,906,302, C. W. Mullis, Sr., Rotary debarker having pivotable bark-removing tools biased by fluid under pressure in an annular tank, filed May 16, 1960, D.C. Ala. (Birmingham), Doc. 9646, *Budow Machine & Manufacturing Company, Inc.* v. *Carl W. Mullis Engineering & Manufacturing Co., Inc. et al.*

2,909,040, M. L. Newell, Apparatus and method for freezing fish, filed May 13, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 559/60–HW, *Spray Refrigeration Company, Inc.* v. *Sea Spray Fishing, Inc.*

Re. 21,689. (See 1,941,066.)

Des. 173,281, R. B. Morrison, Laboratory table unit, filed Feb. 21, 1958, D.C., S.D. Ohio (Columbus), Doc. 2221, *R. H. Sheldon & Co.* v. *Miller Office Supply Co., Inc.* Patent held valid and infringed; injunction granted Mar. 16, 1960.

Des. 185,371, Klein and Bus, Table top or similar article, filed June 11, 1959, D.C., W.D. Va. (Roanoke), Doc. 997, *The Lane Company* v. *Bassett Furniture Industries, Inc.* Order of dismissal under Rule 41 (a) (1) (ii) F.R.C.P. May 18, 1960.

Des. 186,358, J. F. Fulton, Baby's play-yard, filed May 9, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 541/60–WM, *Acon Industries, Inc.* v. *Trimble, Inc.*

U.S. GOVERNMENT PRINTING OFFICE: 0—1960

PLANT PATENTS

GRANTED JULY 5, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,957

CHRYSANTHEMUM PLANT

Elizabeth B. Parker, Los Angeles, Calif.

Filed Oct. 5, 1959, Ser. No. 844,681

1 Claim. (Cl. 47—60)

A new and distinct variety of chrysanthemum plant, substantially as shown and described herein, characterized particularly as to novelty by the honey sweet fragrance of its flowers, the long duration of the fragrance, the cluster habit and large number of blooms, the distinctive two-tone coloration of the petals of the open flower, having in the proximal portion of the inside of the petals a Sulphur Yellow color tonality shading to Daphne Pink as the distal portion of the inside of the petals is approached, and in the proximal portion of the outside of the petals a Marguerite Yellow color tonality shading to Tourmaline Pink as the distal portion of the outside of the petals is approached, and the resistance to mildew of the plant.

PATENTS

GRANTED JULY 5, 1960

GENERAL AND MECHANICAL

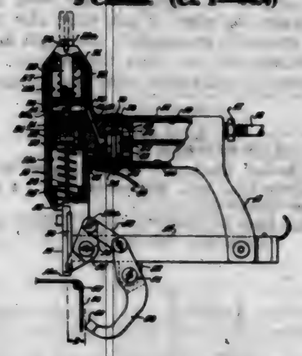
2,943,327

STAPLING PLIER

Albert G. Juilfs, Cincinnati, Ohio, assignor to Senco Products, Inc., Cincinnati, Ohio, a corporation of Ohio

Filed Mar. 8, 1957, Ser. No. 644,770

5 Claims. (Cl. 1—44.4)



1. In apparatus including a first cylinder, a first piston slidable in said first cylinder, a second cylinder and a second piston slidable in said second cylinder, improved valve mechanism for controlling the order of movement of said pistons which comprises: a partition between said pistons, said partition having an orifice therethrough, a valve seat around said orifice, means to urge said first piston against said valve seat, and means to introduce air under pressure between said partition and said second piston, the diameter of said orifice being substantially smaller than the diameter of said second piston, whereby said second piston will move under influence of said air under pressure before said first piston is moved by said air.

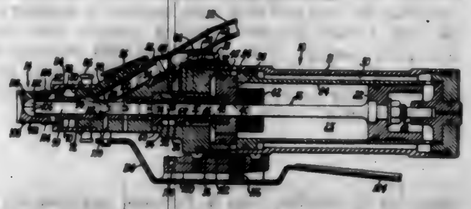
2,943,328

FASTENER INSERTING DEVICES

Keith H. Carpenter, Hamilton, Mass., and Frank W. Reinhold, Newmarket, N.H., assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey

Original application Nov. 15, 1956, Ser. No. 622,458. Divided and this application June 2, 1958, Ser. No. 739,223

1 Claim. (Cl. 1—44.4)



A fastener inserting tool having a substantially elongated cylindrical configuration and comprising a driver, a motor for operating the driver, a valve casing attached to the motor, a first bore in the valve casing, a sleeve slidable in the first bore toward and away from the motor, fastener positioning jaws on the end of the sleeve remote from the motor for releasably retaining a fastener in the path of movement of the driver, a second bore in the valve casing contiguous with the first bore, a valve slidable in the second bore for controlling the flow and pressure of air therein, the valve being engageable by the end of the sleeve opposite the jaws and movable by the sleeve, movement of the valve toward the motor causing actuation of the motor to propel the driver against a fastener in the jaws, a transverse bore formed in the sleeve intermediate its ends, a pin slidable in the valve casing and engageable with the transverse bore in the sleeve to cause positive locking of the sleeve in the valve casing to prevent its movement and thereby to prevent actuation of the motor, a lever extending substantially lengthwise of the tool between the first bore and the motor for controlling movement of the pin, means pivotally mounting the lever on the tool intermediate its ends, one end of the lever engaging the pin in the valve casing, spring means in engagement with the lever to urge the pin into engagement with the transverse bore, the opposite end of the lever comprising a handle adjacent the motor whereby the pin may be withdrawn from the transverse bore to unlock the sleeve when the tool is grasped by its motor portion.

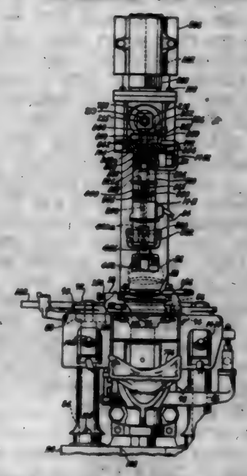
2,943,329

HEEL ATTACHING MACHINES

Frank W. Spencer, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed May 26, 1958, Ser. No. 737,842

15 Claims. (Cl. 1—141)



6. In a heel attaching machine, a jack for receiving a last which is provided with abutment faces, fluid pressure means for moving the jack between a loading and unloading station, in which the last bearing a shoe is mounted upon and removed from the jack, and a heel attaching station where a heel is attached to the shoe, and fluid pressure operated means which is operative in timed relation with said fluid pressure means and which is adapted to be forced against the abutment faces of the last for

orienting said last on and securing it to the jack, means for causing said fluid pressure operated means to be moved away from said faces of the last just before the last arrives at the loading and unloading station whereby to release the last and thus to allow it to be removed from the jack, and an ejector for positively forcing the last from the spindle of the jack after the last has been released from the jack.

2,943,330
GARMENT CONSTRUCTION PARTICULARLY DRESS SHIRTS
Joseph Clyne, Bronx, N.Y., assignor to Flexnleev, Inc., New York, N.Y., a corporation of New York
Filed Apr. 9, 1959, Ser. No. 805,293
4 Claims. (Cl. 2—125)



1. In a shirt-type garment construction including a body portion having a back section of fabric material, front sections of fabric material extending from the front respectively to the sides of the garment and respectively joined together and respectively secured in armholes and sleeves of fabric material having longitudinal edges joined together and respectively secured in the armholes in the body portion, the improvement comprising a single seam extending along the back portion of the lower part of each sleeve then inwardly along the underside of the sleeve to the armhole edge of the sleeve at the armpit of the garment and downwardly along the side of the garment, said single seam joining one of the longitudinal edges of the sleeve to the other longitudinal edge of the sleeve and joining the front and back sections of the garment together at the side of the garment from its armpit section down, said one-piece sleeve when laid out flat in pattern form having an irregularly-shaped attachment end edge including a convex curved portion substantially inwardly from the upper ends of both longitudinal edges of the sleeve, the attachment edge at one side of said convex curved portion extending substantially horizontally and meeting the longitudinal edge adjacent the back portion of the sleeve at an acute angle, the portion of the attachment edge extending from the other side of said convex curved portion including an adjacent concave curve merging into a convex curve extending to the other longitudinal edge, said longitudinal edge adjacent the back portion of the sleeve extending abruptly inwardly from the attachment edge then curving to provide a convex curve at the elbow part of the sleeve and finally extending from the convex curve in a substantially straight line to the free end edge of the sleeve, said other longitudinal edge including a substantially symmetrical convex bow with its center at the elbow part of the sleeve.

2,943,331
NECKTIES
John J. Toplansky, 545 Roosevelt Ave., Carteret, N.J.
Filed Nov. 7, 1958, Ser. No. 772,451
1 Claim. (Cl. 2—150)

In combination with a necktie, a simulated knot comprising a hollow member having substantially the form of a partly flattened funnel elliptical in cross-section including a wide open upper end and a narrow open lower end and a front wall and a rear wall, at least the outer surface of said member being coated with the same material as the necktie, the necktie including a neck loop and two legs extending from the loop and having one of said legs passed around the other leg to form a node, One of said walls having a boss integral therewith intermediate the height and width thereof extending part way into the member thus providing a clear space above the boss and a clear space below the boss, said member having said legs extending downward through the member, said member being positioned on said legs with said node normally registering in said last-named space, said boss serving to prevent slipping of said node into said first-named space, the other of said walls also having a boss integral therewith intermediate the height and width thereof extending part way into the member, the opposed extremities of the bosses being spaced apart.



2,943,332
BELT BUCKLE ASSEMBLY
William H. Mosher, Rochester, N.Y., assignor to Hickok Manufacturing Co., Inc., Rochester, N.Y., a corporation of New York
Filed June 26, 1958, Ser. No. 743,369
2 Claims. (Cl. 2—321)

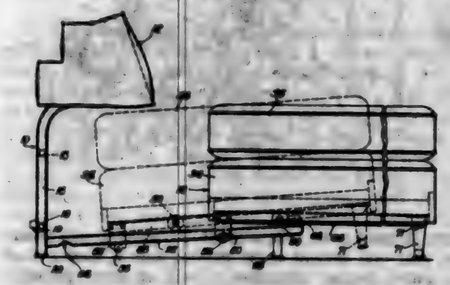


1. A belt buckle assembly comprising an elongated belt having a looped end portion and an opposite free end portion, said free end portion including an outer face normally presented to view and an inner face normally hidden from view when in operative position, a flattened back plate member disposed adjacent said inner face of said free end portion and spaced from the terminal end thereof, said back plate member having a first pair of spaced openings, and a second pair of spaced openings formed therein, said pairs of openings being spaced longitudinally of said back plate member, the openings of each pair being spaced transversely of the back plate member, said back plate member having a width no greater than that of the free end portion of the belt adjacent thereto so that the back plate member is hidden from view when in operative position, a pair of separable spaced bars each including an elongated body portion and opposite end portions, said bars being of substantially uniform width throughout the length thereof, said elongated body portions being spaced in substantially parallel relationship to said back plate member and defining channels receiving the free end portion of the belt, the opposite end portions of each of said bars being turned over the longitudinally extending edges of the belt and extending through said openings in the back plate member for mounting the bars and back plate member in position on the belt, a hook member extending laterally from said back plate member, an eye member slidably mounted on the looped end portion of the belt, said eye member having an opening formed therein for receiving said hook member therein.

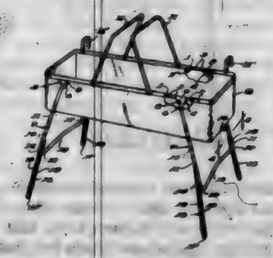
2,943,333
SOFA BED
Raymond H. Blecker, John S. Petersen, and Kenneth J. Unwin, Kenosha, Wis., assignors to Simmons Company, New York, N.Y., a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,279
2 Claims. (Cl. 5—18)

1. A sofa bed comprising a normally stationary sofa frame having a back rest and a base portion, and a bed

structure movably mounted on said base portion for movement between a rearward seat position disposed partially beneath said back rest and a sleeping position forwardly of said back rest, said bed structure having floor-engaging support legs at the front thereof, said base portion including a pair of spaced parallel track members extending forwardly from beneath said back rest, the movable mounting of said bed structure on said base portion comprising a pair of rollers journalled on its underside for engagement with each of said track members, said rollers of each pair being positioned rearwardly of the center of gravity of said bed structure and being offset from front to rear, the forward one of said rollers of each pair engaging the upper surface of its associated track member and the rearward one of said rollers engaging the under surface of said track member, said bed structure being supported entirely by said rollers in its movement between said positions and being canted upwardly at its front end during such movement with said support legs off the floor, each of said track members having rearward and forward depressions on its underside for receiving the rearward one of its associated rollers to determine respectively said seat and sleeping positions, the movement of said bed structure being arrested at said positions by the rocking of said bed structure downwardly by gravity about said forward rollers to position said rearward rollers in said depressions and to place said support legs on the floor.

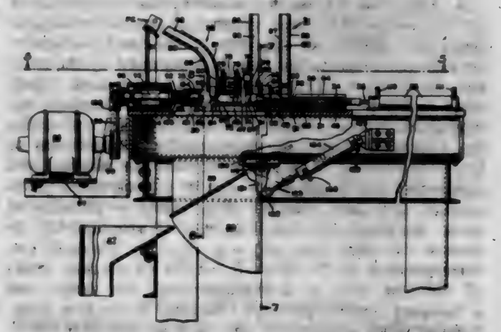


2,943,334
EXTENSIBLE LEG FOR FURNITURE
Fred E. Golding, Glendale, Calif., assignor to Aeon Industries, Inc., Glendale, Calif., a corporation of California
Filed June 9, 1958, Ser. No. 740,675
4 Claims. (Cl. 5—310)



4. In an extensible leg for furniture, a substantially vertical tubular leg member having the upper end thereof attached to the article of furniture and having a portion extending transversely thereto at the lower end thereof, said lower end being provided with an opening affording access to the interior of the leg member and said leg member above said transverse portion further carrying means for latching engagement with a leg extension element at a selected one of a plurality of positions of adjustment therealong, and an extensible element detachably and adjustably mounted on said leg member and comprising a pair of rigid, longitudinally inextensible members extending parallel to each other and united at one end thereof, one of said members having sliding engagement with the interior of said leg member above said transversely extending portion and the other of said pair of members extending exteriorly of said leg member and having a latching portion adapted to resiliently engage the latching means on said leg member with resultant capacity of said extensible element to be latchingly engaged on said leg member in a desired one of a plurality of extended positions therealong.

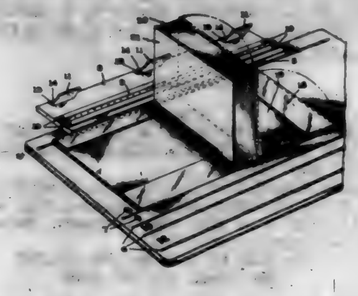
2,943,335
ELECTRICALLY OPERATED PNEUMATIC APPARATUS FOR AUTOMATICALLY ASSEMBLING NUTS AND BOLTS
Kenneth R. Daniel, Carl P. Farlow, Jr., James C. Lowery, and James O. Patton, Jr., Birmingham, Ala., assignors to American Cast Iron Pipe Company, Birmingham, Ala., a corporation of Georgia
Filed Mar. 13, 1956, Ser. No. 571,382
20 Claims. (Cl. 10—155)



1. A machine for automatically assembling nuts and bolts comprising means for holding and rotating a nut with its axis in a horizontal position for assembly with a non-rotating bolt, horizontally reciprocable bolt carrying means, a bolt magazine for feeding bolts to said bolt carrying means, pneumatic pressure actuated means for moving said bolt carrying means toward and away from said nut holding and rotating means, means for preventing movement of the bolt relative to the bolt carrying means while said bolt is being carried toward said nut holding and rotating means, a nut magazine for feeding nuts to a position in the path of movement of said bolt carrying means adjacent to but separated horizontally by an open space from said nut holding and rotating means, the distance between said position and said nut holding and rotating means exceeding the axial thickness of the nut and the speed of movement of said bolt carrying means toward said nut holding and rotating means being so related to said distance that a nut in said position is transferred from said nut magazine to said nut holding and rotating means by abutment against the nut by the threaded end of the bolt carried by said bolt carrying means, the nut being supported during said transfer solely by the threaded end of the bolt, means for so controlling said pneumatic pressure actuated means that said bolt carrying means is normally urged yieldably toward said nut holding and rotating means until the nut has been threaded onto the bolt a predetermined distance and is then reversed in its direction of movement to withdraw the assembled nut and bolt from said nut holding

and rotating means, and means for discharging the assembled nut and bolt from the machine along a predetermined path.

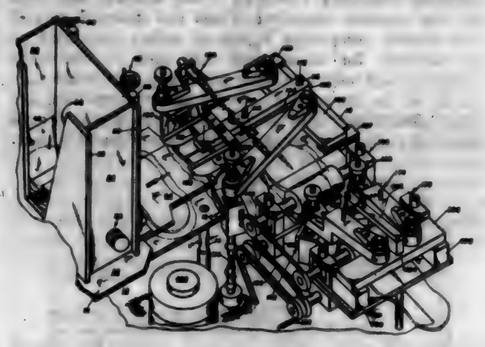
2,943,336
APPARATUS FOR USE IN ASSEMBLING AND APPLYING BOOK COVERS
Nelles Barrett, Kingston, and Chester A. Grant, Syracuse, N.Y., assignors to Gaylord Bros., Inc., Syracuse, N.Y., a corporation of New York
Filed June 15, 1959, Ser. No. 820,523
7 Claims. (Cl. 11—1)



1. Apparatus for use in assembling and applying book covers, comprising a base member of general rectangular form and defining on one face a flat work surface of an area somewhat larger than that occupied by the average book when lying thereon in an open-book condition, said base member having a raised abutment extended along one longitudinal edge thereof and defining a stop shoulder lying substantially perpendicular to the work surface of the base member for aligning and positioning one longitudinal edge of a book cover thereagainst, said base member also having a plurality of guide markings delineated thereon at progressively increased distances from the stop shoulder aforesaid and corresponding to the over-all heights of average books of different sizes in a predetermined size range, and a clamping member pivotally connected to the base member and freely shiftable to and from an operative cover-holding position, with the clamping member partially overlying the work surface of the base member when in its operative holding position and engageable with a book cover adjacent to one longitudinal edge of the latter when placed on the work surface aforesaid with one longitudinal edge of the cover against the stop shoulder, said clamping member serving to hold the book cover steady during assembly of component parts thereof such as dust jackets, and during folding of the free longitudinal edge of the cover assembly along a line determined by a selected guide marking corresponding to a predetermined book size, said clamping member also being shiftable to an out-of-the-way position permitting placement of a book on the cover assembly and in engagement with said stop shoulder to establish and maintain an aligned correlation of the book and cover assembly during application of the cover assembly to the book, and said clamping member being provided with resilient cover-engaging means extended from the free edge of the pivotal clamping member.

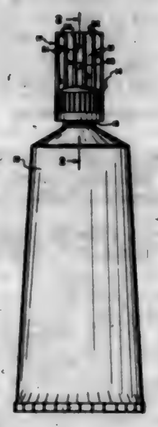
2,943,337
FLASH TRIMMING MACHINE
Frank B. Sweeney, Rochester, N.Y., assignor to Endicott Johnson Corporation, Endicott, N.Y., a corporation of New York
Filed Jan. 8, 1958, Ser. No. 707,804
10 Claims. (Cl. 12—86.7)

1. An automatic flash trimming machine for removing flashing from a workpiece comprising in combination: a support; a first cutter means coupled with said support and cooperable to remove portions of flashing from said workpiece; displacement means for passing said workpiece past said first cutter means; a second cutter means coupled with said support and cooperable to remove other portions of said flashing on said workpiece; displacement



means coupled with said support for passing said workpiece past said second cutter means; and at least one of said cutter means comprises a pair of arms pivotally mounted on said support, and rotatable cutting elements coupled with the free ends of said arms for removing flashes on said workpiece.

2,943,338
CONTAINER CLOSURE AND APPLICATOR
Stanley Lowen, 37 Huntington Drive, Yonkers, N.Y.
Filed Dec. 5, 1957, Ser. No. 700,905
2 Claims. (Cl. 15—105)



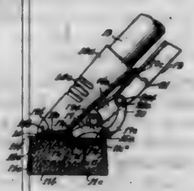
1. In the combination of a container for a commodity having an egress opening and a plastic closure member for said opening removably mounted on said container, an elongated, flexible, applicator blade integral with and extending outwardly from said closure member, a plurality of longitudinally extending, substantially parallel grooves on one face of said blade to provide the commodity with a beaded surface upon application of said blade face to the commodity, and beads disposed at the lateral edges of the other face of said blade to provide the commodity with a flat surface upon application of said latter blade face to the commodity.

2,943,339
WAXING AND POLISHING HEADS FOR MOPS
Peter S. Vosbikian and Thomas S. Vosbikian, Malvern, Pa. (both of 20th and Oxford Sts., Philadelphia, Pa.)
Filed Nov. 20, 1958, Ser. No. 775,241
2 Claims. (Cl. 15—119)



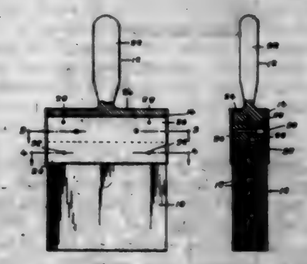
1. A waxing and polishing head, comprising a rectangular shaped body portion having a vertical hole and having a lateral hole opening through one side wall of the body portion and into the vertical hole, a coil spring in said vertical hole with adjacent coil portions adapted to interlock with a handle inserted into said holes, a flat rigid plate having opposite side portions deflected upwardly and inwardly to form spaced side flanges, a wool strip secured to the bottom of said plate and its side flanges to form seats for the bottom of the body portion, means to secure said plate to said body portion to clamp the wool strip between the body portions and the wool strip on said flanges, and a block of absorbent material covering the top wall of said body portion and secured thereto.

2,943,340
SELF-WRINGING SPONGE MOP
Charles Arthur Channell, Wilmette, Ill., assignor to American-Marietta Company, O'Cedar Division, Chicago, Ill., a corporation of Illinois
Filed Apr. 2, 1956, Ser. No. 575,616
3 Claims. (Cl. 15—119)



1. A mop device comprising: an elongated block of spongy material, divided into two substantially equal parts forming a front portion having a rectangular top surface and a rear portion having a rectangular top surface; a plate attached to said block at said front top surface; a socket attached to said plate and adapted to receive a handle; flexible reinforcing means across at least a portion of the rear top surface; roller means extending lengthwise of said block adjacent said rear top surface; a plurality of arms arranged to pivot about an axis extending lengthwise of said block and between said surfaces, with one end of each of said arms pivotally attached to said plate and the other end attached to said roller means to cause said roller means to bear against said rear top surface at the edge thereof most remote from said front top surface and to move circumferentially about said axis toward said front top surface and fold said block yieldingly on itself to urge said block compressingly against said plate; a link articulted to said roller means; and a lever articulated to said link with one end pivotally attached to said socket, said lever being movable toward and away from said roller means.

2,943,341
PAINT BRUSH
John E. Dent, Dent, Ky.
Filed Mar. 20, 1958, Ser. No. 722,709
4 Claims. (Cl. 15—202)



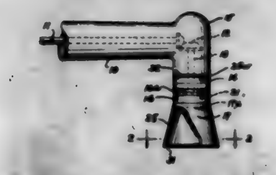
1. A brush comprising a handle portion, a widened portion of oblong formation having curved ends integral with one end of said handle portion and a longitudinally extending slot centrally of the bottom surface thereof, a plate anchored in the slot and extending from said widened portion in vertical relation thereto, a plurality of pins fixedly mounted on said plate and extending laterally therefrom, a brush section comprising a plurality of bristle units, each of said units comprising a number of bristles anchored in a rigid head member, that is of a length equal to the length of said widened portion and having curved ends conforming to the curved ends of said widened portion, said head member having a plurality of holes formed therein and extending therethrough, said pins extending through said holes whereby said bristle units are removably mounted on said plate, and means attached to said widened portion for preventing removal of said bristle units from said pins.

2,943,342
WINDSCREEN WIPERS
William Reed-Lethbridge, 47 Fowlds Ave., Sandringham, Auckland, New Zealand
Filed Feb. 7, 1958, Ser. No. 713,917
Claims priority, application New Zealand Mar. 11, 1957
5 Claims. (Cl. 15—250.19)



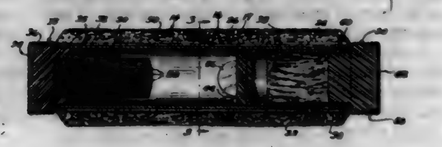
1. An improved windshield wiper comprising a central rotary stub shaft, rocker means extending transversely of said shaft and pivotally secured thereto by pivot means extending transversely of said shaft and said rocker means, rod means pivotally secured at diametrically opposed points relative to said shaft to said rocker means about pivots substantially parallel to said pivot means, said rod means extending radially outwardly on opposite sides of said shaft and having bent portions extending away from the windshield, counterweight means carried by the outer ends of said rod means, and a wiper blade pivotally secured to each of the rod means, said rocker means comprising a rocker member with a central hole therein through which the stub shaft passes, said pivot means comprising a fulcrum pin passing across said hole in the rocker member and through said stub shaft, said rocker member having arms extending on opposite sides thereof.

2,943,343
TOOTH POLISHING DEVICE
Bernard Jankelson, 652 Stimson Bldg., Seattle, Wash.
Filed Jan. 3, 1958, Ser. No. 706,988
7 Claims. (Cl. 15—256.5)



1. In combination, a dental hand piece including a chuck and means to revolve said chuck, an inverted resilient cup-shaped cleaning and polishing device, means for removably securing said polishing device to said chuck, a wiper device secured to said hand piece, and functionally associated with polishing device, said wiper device including means adapted for wiping engagement with the outside, inside and lower peripheral edge of said polishing device.

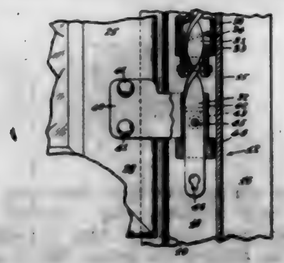
2,943,344
SHOE SHINE KIT
Norman H. Reed, Norwood Park Township, Cook County, Ill. (4541 N. Newland, Chicago 34, Ill.)
Filed Nov. 21, 1955, Ser. No. 548,110
1 Claim. (Cl. 15—258)



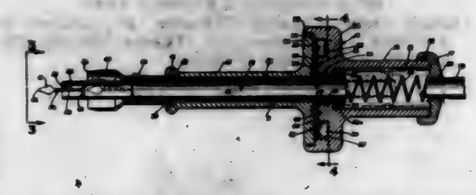
A shoe shine kit comprising a cylindrical tube having at least one open end, a cylindrical shoe polish receptacle member proportioned to be frictionally received within said one end of said tube, said receptacle member comprising a sleeve-like casing fixed at one end thereof to a plug element that closes said one end of said casing, the other end of said casing being formed with an internally screw threaded portion, a disc-like closure member having an externally screw threaded portion adapted to be turned into said internally screw threaded portion of said casing and including an annular shoulder that abuts the terminous of said other end of said casing when said closure member is turned into said screw threaded portion of said casing, said closure member being formed with an upstanding flange projecting externally of said casing and serving as a handle for said closure member, said plug element being formed with an annular shoulder proportioned to abut against said one end of said tube when said casing is received within said tube.

2,943,345
WINDOW STRUCTURE
John M. Ammerman, Indianapolis, Ind., assignor, by mesne assignments, to Splitdorf Industries, Inc., Indianapolis, Ind., a corporation of Indiana
Filed May 17, 1957, Ser. No. 659,905
5 Claims. (Cl. 16—197)

1. An attaching device for use in a window structure having a frame, a sash vertically slidable in said frame, and a sash-balancing device, said sash-balancing device comprising a vertical barrel secured to the window frame, a twisted strip slidable within said barrel, a member slidably connected to said twisted strip and rotated by movement thereof relative to the barrel, and a spring urging rotation of said member in a direction such as to apply an upward effort to said strip; said device comprising a bracket adapted to be secured to said sash and having a square socket through which said twisted strip extends, and a filler block secured to said strip and having a square shank slidably received in said socket and withdrawable therefrom by downward movement of said strip, said filler block also having an abutment engageable with said bracket to transmit upward effort from the strip to the bracket, said strip being of such transverse dimensions as to be rotatable within the socket when said filler block is withdrawn downwardly therefrom.



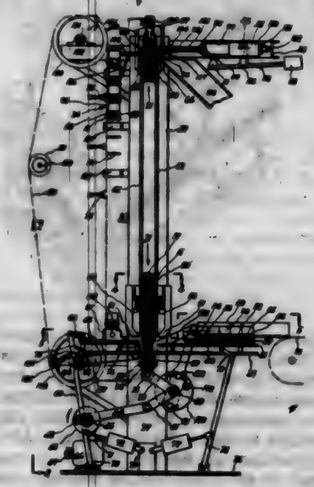
2,943,346
EVISCERATING TOOL
Melvin J. Jensen, 34 N. 7th St., Barron, Wis.
Filed Oct. 10, 1957, Ser. No. 689,334
3 Claims. (Cl. 17—11)



1. An eviscerating tool for fowl comprising, a housing having a chamber terminating forwardly in an opening and rearwardly in a vacuum duct, a rotor mounted for rotation within said housing and having a hollow elongated portion extending forwardly through the chamber opening and terminating in a cylindrical cutting edge, a tubular centering and guarding member mounted within the hollow elongated portion and axially slidable with respect thereto, said tubular centering and guarding member being normally biased forwardly of the cylindrical cutting edge and terminating in an air inlet nozzle, and vacuum means connecting with said vacuum duct and adapted to retract the tubular centering and guarding member upon contact of the air inlet nozzle with the skin surrounding the vent of a fowl whereby to bring the cylindrical cutting edge of the rotor into contact therewith and to cut in a predescribed circle therearound.

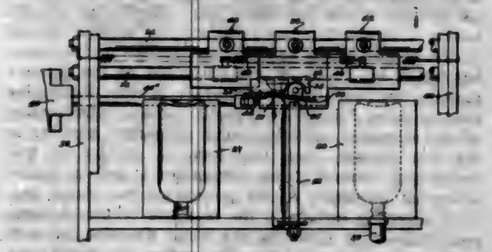
2,943,347
APPARATUS AND METHOD FOR SETTING AND CURING BRAKE LINING BLANKS
Ian Wilson Archibald, Sans Souci, near Sydney, New South Wales, Australia, assignor to James Hardie & Coy. Pty. Limited, Sydney, New South Wales, Australia, a company of Australia
Filed Apr. 29, 1957, Ser. No. 655,886
Claims priority, application Australia May 7, 1956
10 Claims. (Cl. 18—4)

1. Apparatus for the final forming and curing of brake lining blanks comprising, an upright stack race supported in a machine frame adapted to support a plurality of vertically stacked lunettes, said race having oppositely disposed slots extending the full height thereof, each of said lunettes provided with oppositely disposed lugs thereon which extend into said slots and permit the lunettes to move vertically in aligned relationship to said race and to each other, a vertically movable anvil directly below the bottom of said race, drive mechanism for intermittently moving said anvil towards and from said race, means at the lower end of said frame for maintaining said stack at each elevation to which it is raised by said anvil, first



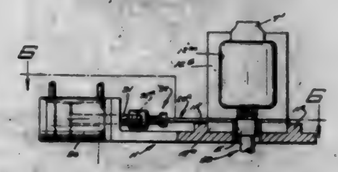
pusher means adapted to place a lunette on said anvil from one side thereof, second pusher means adapted to place a blank on a lunette supported by said anvil from the opposite side thereof, ejector means at the top of said frame, including a part for moving a top lunette and a part for removing a treated blank from the top of said stack, a conveyor adjacent said upright stack race adapted to receive lunettes from said ejector means and lower them to said first pusher means, and heating means adjacent said conveyor for heating lunettes while disassociated from blanks to be treated and while being lowered by said conveyor.

2,943,348
APPARATUS FOR FORMING HOLLOW PLASTIC ARTICLES
George V. Mumford and Orville B. Sherman, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 11, 1954, Ser. No. 403,178
13 Claims. (Cl. 18—5)



12. In an apparatus for forming hollow plastic articles having an opening at one end including an extrusion device for extruding heated plastic material downwardly from an orifice in the form of an unconfined hollow open-ended tube, a shear blade mounted exteriorly of said orifice for lateral movement to sever a length of extruded tubing therefrom, said severance leaving successive extrusions of tubing with open ends, and means to actuate said shear blade, the improvement of a partible mold at a molding station remote from the orifice and arranged for opening and closing movement, said mold having an open end portion and a body forming portion, transfer means engageable with a severed tube at the orifice and operable to transfer the severed tube to the molding station, means for closing said mold on said tube at said molding station with an open end portion of said tube confined in the open end portion of said mold, a combination positioning and blowing nozzle insertable into the open end of said tube after closure of the mold and cooperating with the mold to secure said tube in axial alignment with the cavity of said mold, and means to supply fluid under pressure through said nozzle to expand said tube in said mold.

2,943,349
APPARATUS FOR TRIMMING EXCESS PLASTIC FROM BLOWN PLASTIC ARTICLES
Elmer L. Adams and Richard C. Gaumer, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 26, 1959, Ser. No. 802,164
5 Claims. (Cl. 18—5)

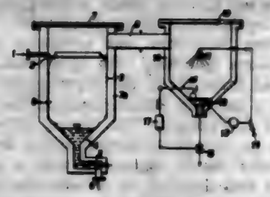


1. Apparatus for trimming excess thermoplastic projecting out of an aperture of a molding cavity defined by a partible mold having two mold sections relatively movable between open and closed positions, comprising a pair of shears having cutting edges, means for respectively slidably mounting said shears in said mold sections so that said shears are in juxtaposition and said cutting edges aligned when said partible mold is closed, the path of movement of said aligned cutting edges traversing said aperture, a reciprocable actuator and means for connecting both of said shears to said reciprocable actuator for concurrent actuation thereby only when said mold sections are in substantially closed position.

2,943,350
POLYAMIDE MELT SPINNING PROCESS AND APPARATUS
Wolf Rodemacher, Dormagen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Feb. 24, 1958, Ser. No. 717,161
Claims priority, application Germany Mar. 8, 1957
6 Claims. (Cl. 18—8)

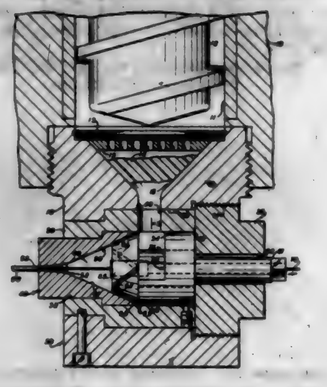
6. In a system comprising a spinneret for the extrusion of molten polyamide and a melt chamber which supplies molten polyamide to said spinneret, in combination, an air-conditioning chamber positioned adjacent said melt chamber, a conduit connecting said chambers, means for saturating nitrogen with water vapor within said air-conditioning chamber, the latter being maintained at a temperature lower than that in said melt chamber,

and means for circulating said saturated nitrogen through said conduit into said melt chamber so as to maintain



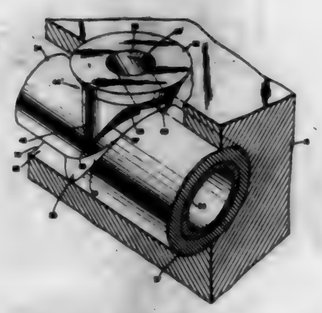
the ratio of the partial pressures of water vapor and nitrogen constant at the temperature of the melt.

2,943,351
METHODS OF AND APPARATUS FOR EXTRUDING PLASTIC MATERIALS
Alvin N. Gray, Edgewood, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 8, 1956, Ser. No. 583,467
5 Claims. (Cl. 18—13)



4. In apparatus for extruding plastic material including an extrusion cylinder having an extrusion bore formed therein, an extrusion head mounted at the discharge end of the extrusion cylinder and provided with a passage communicating with the extrusion bore and extending transversely with respect thereto, means for forcing the plastic material along the extrusion bore and into the passage, and an extrusion die having a forming throat therein positioned in one end of the passage, the improvement which comprises means for dividing the plastic material into two streams, a substantially conically shaped means defining in the extrusion passage a chamber having a relatively large volume and adjoining the forming throat of the extrusion die, the apex of the conically shaped chamber being adjacent to the forming throat of the extrusion die, and means for increasing the velocity of the streams and for injecting the streams into the chamber so that each stream has a forward component of velocity and a radially inward component of velocity, the resultant of said components being parallel to the slant height of the surface of the chamber and each stream having also a tangential component of velocity, said chamber being utilized for combining the streams to cause a cyclonic spiral flow of plastic material throughout the chamber, the spiral flow decreases in diameter as it moves toward the extrusion die so that the apex of the spiral is located substantially on the longitudinal axis of the forming throat and adjacent to the forming throat whereby the plastic material flows through the forming throat as a balanced unitary stream.

2,943,353
PLASTIC MATERIAL EXTRUSION HEAD
Jurian W. Van Riper, 288 Beechwood Road, Ridgewood, N.J.
Filed July 3, 1957, Ser. No. 669,724
9 Claims. (Cl. 18—13)



1. Mechanism for extruding plastic material in continuous tubular form, comprising means for delivering plastic material under pressure, a cross-head disposed on the mechanism and having a first, elongated circular cylindrical passage for receiving plastic material from the delivering means, a die at the forward, outer end of the first passage for shaping the plastic material as it passes out of the cross-head, a delivery passage interposed between the delivering means and the first passage, the axes of the first passage and the delivery passage lying in a common plane, the delivery passage having a diameter appreciably smaller than that of the first passage, an elongated circular cylindrical member extending axially within the first passage toward the die and forming with the first passage an elongated circumferentially continuous annular plastic material receiving chamber in the cross-head, means at the rear, inner end of the chamber for diverting the plastic material toward the die as it passes into the chamber from the delivery passage, said diverting means having an end surface facing and inclined toward the die in a direction away from the plastic material delivering means, and a distributing channel interposed between and connecting the inner end of the delivery passage and the rear end of the chamber, said distributing channel being generally saddle-shaped, symmetrical about the plane of the axes of the first passage and the delivery passage, and continuous through and for substantial distances on both sides of said plane, said distributing channel lying radially outwardly of the first elongated circular cylindrical passage in the cross-head, said distributing channel having a substantial portion of its rear surface formed by the portion of the diverting end surface of the chamber which lies closer to the inner end of the delivery passage, the radially inner surface of the distributing channel being formed by a portion of the outer surface of the elongated central circular cylindrical member in the first passage, and the forward surface of said distributing channel being formed by a surface spaced somewhat forwardly of the portion of the plastic material diverting surface at the rear end of the chamber and inclined in generally the same direction as such portion of said material diverting surface, the distributing channel communicating directly with the rear end of the chamber.

2,943,353
MOLDING PRESSES
William S. Frank, Ridgewood, and Walter J. Olsen, Pachanack Lake, N. J., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Mar. 5, 1957, Ser. No. 644,144
2 Claims. (Cl. 18—17)

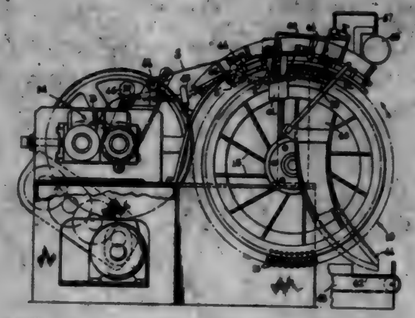


1. Apparatus for curing thermosetting compositions under heat and pressure comprising: a pair of heated platens of predetermined length supported in fixed parallel relation with respect to each other and separated by a predetermined inter-platen spacing; a plurality of drawer-type molds each including an open-ended mold box defining a mold cavity for receiving the composition material to be cured, comprising a base member, a pair of end members rigidly affixed thereto, and a pair of side members pivotally mounted thereon, and a die member adapted to be received in the open end of the mold box and to be forced thereinto under pressure, each of the molds having a given width, a minimum length very much smaller than the length of the platens and a height approximately equal to the inter-platen spacing, at least one of said side and die members having a plurality of pockets formed in the sides thereof adjacent the open end of the mold box to receive and contain composition material which may be extruded from the mold cavity during curing; a reaction block disposed at one end of the platens and spaced therefrom by a predetermined distance larger than the minimum mold length; longitudinal guide members disposed on opposite sides of the platens and spaced by a distance approximately equal to the width of the molds to prevent lateral expansion thereof; and a ram, arranged for movement longitudinally of the platens and having a stroke at least equal to the maximum length of the molds, for impelling the molds serially through said inter-platen space in abutting relation to each other and into engagement with the reaction block, the abutting relation of the molds permitting a force generated by the ram to be transmitted through the mold boxes and die members to the reaction block to force each die member into its respective mold box.

2,943,354
APPARATUS AND METHOD FOR MOLDING PLASTIC MATERIAL
Henry Z. Gora, Stratford, Conn., assignor, by mesne assignments, to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 13, 1954, Ser. No. 422,930
9 Claims. (Cl. 18—31)

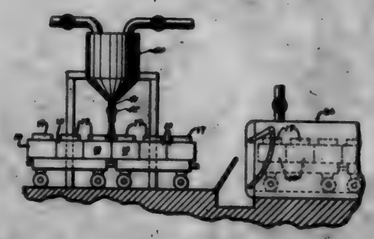
2. In apparatus for molding articles in continuous succession, having a base, a carrier having a series of article-forming units traveling in an endless path with each unit having a pair of coaxial cooperative dies together forming a molding cavity, means for causing said dies to open in succession at a discharge station and to be open at a loading station, means for guiding a continuous strip of molding material between said dies while the latter are respectively at said loading station, and means to close each pair of dies and blank out from said strip a quantity of molding material sufficient to fill the molding cavity: the improvement comprising cooperating cut-off surfaces on said dies respectively outlining the molding cavity, said means for closing the dies including resilient means for moving the dies of each pair into juxtaposed molding position, yielding means carried by the dies having a constant predetermined resilient force acting against the closing of the dies, and means for varying the force of said resilient means of said die closing means.

4. In the method of continuously molding articles of plastic material which includes the steps of guiding between a continuous succession of pairs of traveling, heated open cavity-forming cooperating die members a continuous strip of molding material having somewhat greater width than the width of the die members; closing the die members of each pair one after the other on successive portions of said strip to bring cavity defining cut-off surfaces thereon into juxtaposed cavity-closing position



to remove a portion of the material from said strip and confine it in the cavity to form an article, leaving the remainder of the strip continuous and impaled by the closed die members, the improvement which comprises the additional steps of: removing the remainder of the strip from its impalement on a pair of closed die members while the die members remain closed and continue to travel and while a next adjacent pair of die members is in closed position and another closely adjacent pair of die members is being moved to closed position on the strip; moving the strip away from the heated die members and returning the remainder of the strip to the place from whence it came; continuing to hold the die members closed for a predetermined time to cure the material contained in the cavity; and finally after a predetermined time opening the die members one after the other to discharge the molded articles from the cavities.

2,943,355
GLASS CONVEYING DEVICE AND METHOD OF MAKING SAME
Harold F. Zink, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Aug. 3, 1955, Ser. No. 526,183
5 Claims. (Cl. 18—47.5)



3. The method of forming gob guides which comprises providing a container for a body of reactable aqueous

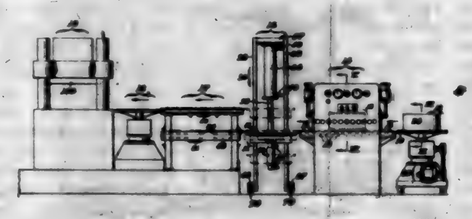
slurry, said slurry comprised of lime, silica and graphite, the graphite being present not in excess of 75% by weight of the dry solids of the slurry, the water to solids ratio being within the range of from 0.5:1 to 7:1 by weight, positioning an assembly of molding members within said container in such manner as to define a shaped body portion within said slurry body, filling said container with said slurry, indurating said body of slurry with the shaping members therein at a pressure and temperature in excess of 125 p.s.i. and 173° respectively to substantially completely react same, and separating said defined shaped portion from the reacted body.

2,943,356
METHOD OF MANUFACTURING A THIN BAND OF A HIGH MOLECULAR SUBSTANCE WHICH IS AXIALLY ORIENTATED IN ANOTHER DIRECTION THAN THE LENGTH DIRECTION
Ole-Bendt Rasmussen, P.O. Box 11, Klampenborg, Copenhagen, Denmark
Filed Sept. 30, 1955, Ser. No. 537,627
6 Claims. (Cl. 18—47.5)



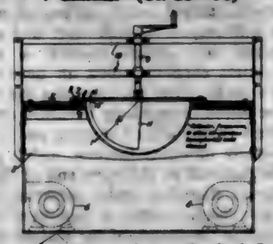
1. Method of manufacturing a thin continuous band consisting of thermoplastic material, which is uniaxially orientated in a direction that forms an angle to the longitudinal direction of the band, said method comprising the steps of giving a tubular foil a strong longitudinal orientation, and subsequently cutting said orientated tube to band form along substantially helical lines.

2,943,357
METHOD OF MAKING ABRASIVE ARTICLES
Harry Douglas MacMaster, Bryn Athyn, and Hans E. Bomer and Stanford A. Guthrie, Philadelphia, Pa., assignors to General Grinding Wheel Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 2, 1955, Ser. No. 550,726
3 Claims. (Cl. 18—55)



1. A method of forming a grinding wheel of the type described comprising placing a substantially dry predetermined mixture of abrasive particles and binder material in a substantially non-conductive and non-heating preliminary mold form having the shape of the article to be produced, subjecting said mixture in said mold form to electric current having a frequency in the range of 10–100 megacycles without the application of molding pressure for a length of time sufficient at least to partially set said binder material, then transferring said heated mixture to a final press mold while still possessing sufficient heat to effect final molding and then compressing said mixture by the application of molding pressure above, without the application of additional heat.

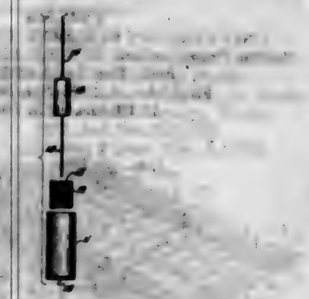
2,943,358
METHOD OF FABRICATING LUNEBERG LENSES
Samuel F. Hutchins, Decatur, and Glen P. Robinson, Jr., Atlanta, Ga., assignors, by mesne assignments, to Emerson & Cuming, Inc., Canton, Mass., a corporation of Massachusetts
Filed July 5, 1957, Ser. No. 669,968
7 Claims. (Cl. 18—59)



1. In the fabrication of a spherical Luneberg lens which comprises a plurality of nested spherical components having a common center and of various predetermined radii and dielectric constants, the method of successively producing such components in substantially complete shell-like hemispherical form and in nested arrangement for subsequent assembly into a substantially complete sphere, which comprises the steps of depositing in a hemispherical mold member of a radius equal to the predetermined external radius of the outermost component of the lens a predetermined quantity of a particulate distributable material having a predetermined dielectric constant, distributing such material in the mold member to full hemispherical form to provide within said mold member a lens component of shell form having a uniform radial thickness throughout its extent, and thereafter depositing and similarly distributing upon said first deposited and distributed material and upon each other, successively, within the mold member a plurality of predetermined quantities of material in amounts successively varying in relation to the radii of the successively formed shells and having various predetermined dielectric constants appropriate to the lens components to be formed therefrom as related to the dielectric constant of the first deposited material and to the dielectric constants of each other to thereby produce a substantially complete hemisphere.

2,943,359
METHOD OF ENCAPSULATING ELECTRONIC COMPONENTS OR OTHER ELEMENTS
Vincent Sussman, Brooklyn, N.Y., assignor to Joseph Waldmann & Sons, Irvington, N.J.
Filed Apr. 10, 1957, Ser. No. 651,965
9 Claims. (Cl. 18—59)

1. A method of encapsulating a component having a lead extending therefrom, said method comprising providing a shell molded of a thermosetting resin composition, said shell being open at one end and having an end wall at the opposite end, the internal dimensions of the shell being greater than the corresponding dimensions of the component to be encapsulated to permit the component to be fully contained in the shell and spaced from the shell wall, providing a solid preform of a thermosetting resin composition liquefiable and curable upon the application of heat alone, positioning the component and the preform in the shell so that the preform is located be-



tween said end wall and the component, heating the preform to cause it to liquefy and flow into the space between the shell and the component to encapsulate the component and cure, the liquefaction and curing of the resin supplied by the preform being accomplished in the absence of molding pressure.

2,943,360
COTTON CLEANER
Adolf Hergeth and Herbert Hergeth, Duelmen, Westphalia, Germany, assignors to Hergeth K.-G. Maschinenfabrik und Apparatebau, Duelmen, Westphalia, Germany
Filed June 7, 1957, Ser. No. 664,284
Claims priority, application Germany June 11, 1956
11 Claims. (Cl. 19—93)



1. A cleaner for fibrous materials and the like comprising, a casing having an inlet and an outlet and defining therebetween a path of travel for said materials, at least one rotatable beater drum disposed within said path of travel and supported within said casing, said beater drum being provided with radially extending spike means which, during rotation of said beater drum, force said material downwardly and describe a circle of predetermined diameter, screen means disposed on one side of said beater drum, baffle means supported by said casing and located on the opposite side of said beater drum and extending in the direction thereof, adjustable plate means situated adjacent said screen means remote from said baffle means and directed toward said spike means, whereby a superior separation of impurities carried by said materials is obtained due to impact of said materials with said baffle means and said adjustable plate means.

2,943,361
SPINNING FRAME APRON GUIDES
Louis M. Cotchett, Whitman, Mass., assignor, by mesne assignments, to Machinecraft, Inc., Whitman, Mass., a corporation of Massachusetts
Filed Apr. 15, 1957, Ser. No. 652,765
25 Claims. (Cl. 19—131)

1. In a spinning frame having a plurality of pairs of drawing rolls, in combination, a top drawing roll having rotating parts and a bearing, guiding and positioning means for the top roll holding the bearing, an apron



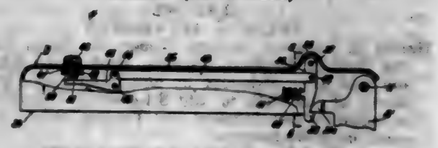
around the roll, and apron guiding and tensioning means mounted on and supported by the bearing alone.

2,943,362
SPINNING FRAME APRON GUIDES
Richard K. Butler, Whitman, Mass., assignor, by mesne assignments, to Machinecraft, Inc., Whitman, Mass., a corporation of Massachusetts
Filed June 24, 1958, Ser. No. 744,158
10 Claims. (Cl. 19—131)



1. In a spinning frame, in combination, pairs of drawing rolls, roll-guiding, positioning and weighting means, an apron running around a roll, and apron-tensioning and guiding means comprising a pivot within the apron and in fixed relation to the roll-guiding means, and a member pivotally mounted on such pivot having spaced portions engaging the edges of the apron and a web joining such portions and extending from the pivot toward the roll.

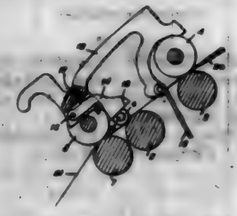
2,943,363
DRAWING MECHANISMS FOR SPINNING MACHINES
Erwin Dausch, Marktplatz 1, Esslingen, Germany
Filed Apr. 4, 1955, Ser. No. 499,160
Claims priority, application Germany Apr. 10, 1954
2 Claims. (Cl. 19—135)



1. In a drawing mechanism of a spinning machine, in combination, a top rolls carrying arm formed at a forward portion thereof which is located over the forward part of the drawing plane when said arm is in its operating position with an opening passing therethrough; support means supporting said arm for movement to and from an operating position; a stationary catch member carried by said support means adjacent a rear portion of said arm; a movable catch member movably carried by said arm adjacent said rear portion thereof for engagement with said stationary catch member to maintain said arm in its operative position; an elongated motion transmitting member having a rear end portion pivotally connected to said movable catch member; a bell crank turnably carried by said arm and having opposite free end portions one of which is pivotally connected to said motion transmitting member; and manually operable pressure means extending through said opening of said arm and engaging the other of said free ends of said bell crank, so that said pressure means may be pressed on by

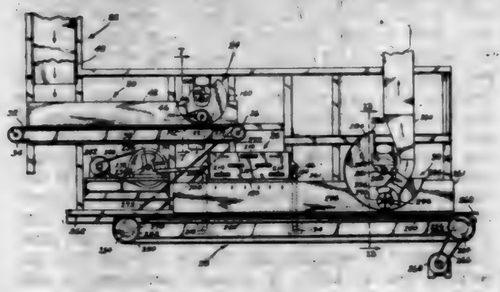
the operator to turn said bell crank and move said motion transmitting member to move said movable catch member out of engagement with said stationary catch member.

2,943,364
DRAWING MECHANISMS FOR TEXTILE ROVINGS
Ramon Balmes Solanas, Santa Coloma de Cervello, Spain, assignor to Estirajes Balmes, S.A., Barcelona, Spain
Filed May 20, 1957, Ser. No. 660,382
Claims priority, application Spain June 13, 1956
4 Claims. (Cl. 19—139)



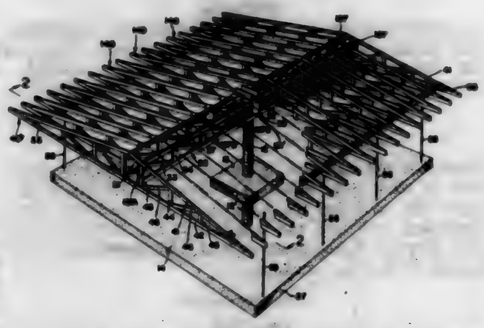
1. A drawing mechanism for textile rovings comprising a pair of delivery rollers, and a small diameter, undriven roller preceding said delivery rollers and spaced therefrom a distance less than the length of the fibers of the roving said small diameter, undriven roller having a center of rigid material and a peripheral layer of soft, resilient material, a driven roving conveying means against which said small diameter roller bears for conveying the roving between said small diameter roller and said roving conveying means, and delivery roller pressure applying means bearing on one of said delivery rollers and further pressure applying means mounted on said delivery roller pressure applying means and bearing on said small diameter roller and pressing on said small diameter roller with a force several times the weight of said small diameter roller and sufficient to cause said small diameter roller to contact said roving conveying means over an area having a dimension in the direction of movement of the roving substantially greater than the area of a line contact.

2,943,365
FELTING APPARATUS
Harold E. Erickson, Auburn, Robert W. Riley, Milton, and Dale L. Schubert, Tacoma, Wash.; said Erickson and said Riley assignors, by direct and mesne assignments, of one-sixth to said Schubert and three-sixths to Industrial Development Co., Tacoma, Wash., a corporation of Washington
Filed Dec. 3, 1956, Ser. No. 625,671
11 Claims. (Cl. 19—155)



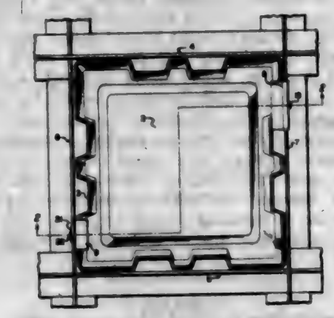
1. Felt leveling apparatus comprising conveyor means adapted to convey a felt, a torsion bar mounted above the conveyor means transversely thereof, a motor driven leveling roll supported by the torsion bar substantially parallel thereto and a spaced distance toward the felt therefrom and means for rotating the torsion bar by amounts predetermined to adjust the space between the leveling roll and the surface of the felt by desired increments.

2,943,366
UNIT COLUMN BUILDING CONSTRUCTION
Arthur Carol Sanford, 3070 NE. 12th Terrace, Oakland Park, Fort Lauderdale, Fla.
Filed Mar. 4, 1957, Ser. No. 643,598
15 Claims. (Cl. 20—1)



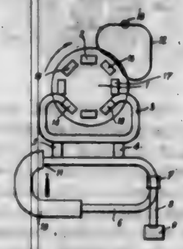
2. Building construction having a central supporting column, said column having a foundation footing and an elongated root portion depending therefrom in the ground, a roof structure comprising a longitudinal girder truss of rectangular cross section, means supporting said girder truss in a cantilevered condition on the top of said column, transverse roof trusses cantilevered on said girder truss at longitudinal intervals, said transverse trusses having central rectangular openings slidable over and fitting around said girder truss, and means spaced outwardly of said girder truss anchoring said roof structure to the ground.

2,943,367
CEILING STRUCTURE
Herbert K. Wong, San Francisco, Calif., assignor, by mesne assignments, to University of Illinois Foundation, Urbana, Ill., a non-profit organization of Illinois
Filed Dec. 2, 1955, Ser. No. 550,543
10 Claims. (Cl. 20—4)



1. A ceiling structure comprising a ceiling panel having a periphery containing a notch, a grid of runners having horizontal flanges and upstanding webs, said runner flanges underlying and supporting the periphery of said panel, and a retaining member attached to and movable lengthwise along the web of one of said runners, said retaining member having a flange overlying the periphery of said panel for holding the panel in place, said flange of the retaining member being smaller than said notch so that said panel can be removed when said member is moved to a position where said retaining member flange is alined with said notch.

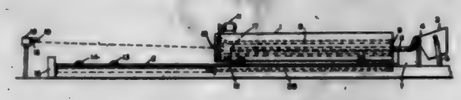
2,943,368
SEMI-AUTOMATIC MACHINE FOR THE CENTRIFUGAL CASTING OF CYLINDER LINERS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed Jan. 29, 1957, Ser. No. 636,909
Claims priority, application France Feb. 3, 1956
9 Claims. (Cl. 22—64)



1. A semi-automatic installation for the continuous manufacture of cylinder liners for internal combustion engines by the centrifugal-casting method, which comprises a revolving platform driven at a constant velocity and carrying a plurality of centrifugal casting machines each adapted to receive a casting die supported by a die-carrier, a plurality of fixed stations positioned in relation to said platform in such manner that each of said machines moves past each of said stations in succession upon rotation of said platform, said stations including a first station for loading an empty die with its die-carrier on a casting machine, a second station at which each die is centrifuged, a third station at which the liquid metal is cast, and a fourth station for unloading each die and its die-carrier, a first circuit adapted to deliver liquid metal to small casting ladles and to bring each ladle into position above a casting machine, a second circuit comprising means overlying said platform for removing the die-carriers supporting filled dies from said machines at said fourth station, means for removing the filled dies from their die-carriers, means for re-introducing empty dies into their die-carriers, and means overlying said platform for replacing die carriers supporting empty dies on said machines at said first station, and a third circuit adjacent said second circuit comprising means to receive the filled dies, means to transfer said filled dies to a cast-tube extraction means, means to transfer the empty dies to stations at which the die surfaces are conditioned and prepared for a further casting operation, and means for transferring said dies to said means for re-introducing the empty dies into their die-carriers.

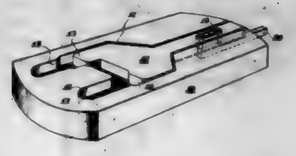
2,943,369
APPARATUS FOR CENTRIFUGAL CASTING OF PIPE
Victor A. Sweed, Burlington, N.J., assignor to United States Pipe and Foundry Company, Birmingham, Ala., a corporation of New Jersey
Filed June 1, 1959, Ser. No. 817,282
4 Claims. (Cl. 22—65)

1. In a centrifugal pipe casting machine having a pouring trough and a mold rotatably mounted on a carriage reciprocable with respect to said trough, the mold surrounding the trough into which molten metal is poured from a ladle and being retracted therefrom during reciprocation of the carriage, in combination therewith, a first limit switch positioned to be tripped by the mold carriage as it moves over the pouring trough, ladle tilting means responsive to the closing of said first limit switch, a photoelectric cell aimed at the spout end of the pouring trough for detection of molten metal pouring therefrom, means responsive to the signal from the photoelectric cell for starting retraction of the mold from the pouring



trough, a ladle reverse mechanism controlled by a timer actuated by the signal from the photoelectric cell, a second limit switch positioned to be tripped by the mold carriage at a predetermined position near the end of the retraction step, retraction slow down means adapted to operate in response to the second limit switch and controlled by a timer which is actuated by said second limit switch and which is adjusted to maintain retraction slow down for a predetermined time.

2,943,370
HOT METAL VALVE FOR LADLES AND THE LIKE
Lateef Murarshood, 1423 N. Gray St., Youngstown, Ohio
Filed May 9, 1958, Ser. No. 734,283
2 Claims. (Cl. 22—84)

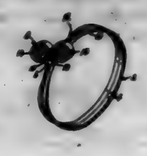


1. A hot metal valve comprising a body member of refractory material having a Y-shaped flat bottomed cavity therein open to the upper surface thereof, a flat Y-shaped valve element of refractory material including a stem portion and two arm portions slidably positioned in said cavity in said body member and movable into and away from the bifurcated portion of said Y-shaped cavity, said valve element having an opening in said stem portion thereof, a member disposed in said valve body and movable with respect thereto and engaged in said opening and extending exteriorly of said valve body, a flat top member of refractory material positioned on said valve body and forming a closure with respect to said cavity and having an opening therein directly above and communicating with one of the arm portions of said Y-shaped cavity, said valve body member having an opening therethrough directly below and communicating with the other of the arm portions of said Y-shaped cavity.

2,943,371
TYING AND FASTENING DEVICE
Herman W. Patterson, 7209 W. 65th St., Overland Park, Kans.
Filed Apr. 10, 1958, Ser. No. 727,700
7 Claims. (Cl. 24—16)

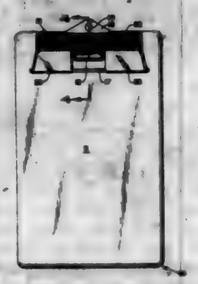
1. A tying and fastening device comprising an elongated strand of elastic material and an enlarged, generally planar head, both ends of said strand being secured directly to said head in closely adjacent relation, said head including a pair of knobs spaced apart respectively from the distal sides of the end portions of said strand at their points of attachment to said head, where-

by to form a pair of notches respectively between each of said knobs and the adjacent end portion of said strand, said notches opening outwardly from said head in the general direction of the extension of said loop therefrom, and said strand forming a loop lying in the plane



of the head and having a bight portion distal from said head, whereby when said enlarged head is inserted through the bight portion of said loop, the bight will engage the strand just below said head, and the enlargement of said head will prevent its pulling through said loop.

2,943,372
CLIPBOARD
Jack Fairchild Fleming, Summit, N.J., assignor to Sterling Plastics Co., Union, N.J., a corporation of New Jersey
Filed June 13, 1957, Ser. No. 665,514
2 Claims. (Cl. 24—66)



1. In a device for holding sheet material, a body having a surface to receive such material, a member extending upwardly from said body and forming a bearing spaced above and facing toward said surface, tabs extending outwardly from each of the sides of said upwardly extending member and upwardly from said surface, a clip member having a backward portion to receive pressure, a forward portion to bear against said surface and an axle between said portions, said axle being received and turnable in said bearing, resilient means compressed between said backward portion and said body to urge said axle upwardly against said bearing and bias said forward portion towards said surface, said clip member being turnable on said axle to lift said forward portion away from said surface by applying to said backward portion a pressure overcoming the force of said resilient means, and a U-shaped member having forwardly extending legs with notches in the inner surface of each of said legs engaged with said tabs, said member being mounted between said axle and said body to prevent removal of said axle from said bearing by such pressure.

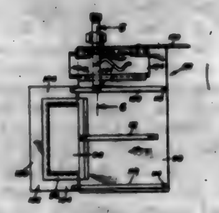
2,943,373
PLASTIC ANCHOR MEMBER
George M. Rapata, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Jan. 24, 1957, Ser. No. 636,131
6 Claims. (Cl. 24—216)

1. A one piece anchor member having a coextensive longitudinal axial bore and adapted to be applied to an apertured workpiece for quick detachable receipt and retention of a stud element comprising an enlarged peripherally continuous head portion having marginal portions larger than the aperture in the workpiece and a shank portion, said shank portion being characterized as of a deformed shape relative to said head portion and comprising at least two elongated inwardly directed C-shaped in transverse cross-section resilient spring portions forming a portion of a shank wall, at least two elongated intermediate portions adjoining the marginal edges of one of said C-shaped spring portions and disposed closer to the longitudinal axis than the latter and forming another



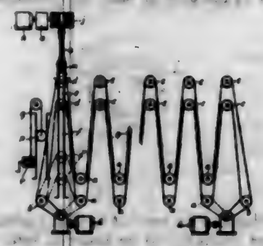
portion of the shank wall, said intermediate portions including means for quick detachable engagement of said stud element, said C-shaped spring portions flexing on ingress and egress of said stud element, and retaining means disposed on said shank portion in spaced relation to said head portion for retention of said anchor member in said aperture, said C-shaped portions and said retaining means being so arranged and configured on said shank portion whereby flexure of said C-shaped portions on ingress and egress of said stud element causes more agressive engagement of said retaining means with said workpiece.

2,943,374
TILE FORMING MACHINE
Roy Farren, 407 S. H St., Lake Worth, Fla.
Filed Aug. 30, 1955, Ser. No. 531,412
2 Claims. (Cl. 25—66)



1. In a tile forming machine including a rotary table, a plurality of circumferentially spaced mold boxes carried by said table, means for placing bottom plates in said mold boxes, said means including a housing having open upper and lower ends for receiving a stack of bottom plates, said housing overlying said rotary table and being alignable with said mold boxes, a dispensing plate at the bottom of said housing retaining bottom plates therein, said dispensing plate having an opening therein of a size to receive a bottom plate, bottom plate supporting members at opposite sides of said housing below said dispensing plate, a bottom plate disposed in said dispensing plate resting on said bottom plate supporting members, and means for reciprocating said dispensing plate to move first one end of a bottom plate off of one of said bottom plate supporting members and then the other end of the one bottom plate of the other of said bottom plate supporting members, the last mentioned means including a follower connected to said dispensing plate, a slide member having a cam track receiving said follower, and cam means for rendering said follower ineffective in one direction of movement of said slide member.

2,943,375
STRETCHING MACHINE FOR DRYER FELTS AND THE LIKE
Thomas Hindle, Blackburn, England, assignor to Scapa Dryers Inc., a corporation of Georgia
Filed May 23, 1956, Ser. No. 586,697
8 Claims. (Cl. 26—68)



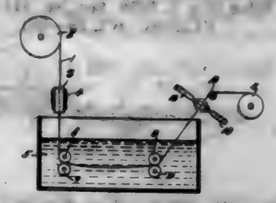
1. Method of treating a paper-makers' dryer-felt, including the application of longitudinal tension, after the felt has been woven, thereby to make the felt dimensionally stable while avoiding transverse sagging and the consequent formation of longitudinal creases, said method comprising as steps, draping the felt over a series of horizontally spaced elevated supports to form festoons whose legs are substantially vertical, joining the ends of the felt to form an endless band, restraining the closed lower end of each festoon from upward movement, applying stretching force to the felt of such intensity as to increase the length of the felt, and moving the felt in the direction of its length while the stretching force is being applied.

2,943,376
DETACHABLE WING FOR HALF COUCH CASKET
Peter Baskuk, % American Burial Cases Co., 1 Buxton St., Peabody, Mass.
Filed Feb. 6, 1959, Ser. No. 791,666
7 Claims. (Cl. 27—1)



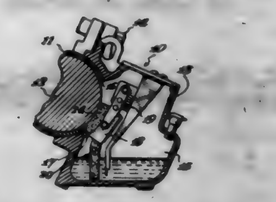
1. A wing attachment for horizontal upper edges of the front wall and head wall of a casket, said attachment comprising a horizontally elongated cushion member of flexible material having a normally straight form, a pair of horizontally elongated rigid members disposed longitudinally in the base of said cushion member and having spaced adjacent ends whereby an intermediate portion of the cushion member between the spaced adjacent ends of the rigid members may be bent so that the cushion member is of a substantially L-shaped horizontally disposed form, and means carried by said rigid members and projecting below the cushion member for engagement with upper edges of the front and head walls of a casket, whereby to retain the wing attachment in position.

2,943,377
METHOD AND APPARATUS FOR CRIMPING FILAMENTS
Herman Frolberger, Glen Rock, N.J., assignor to Elwood Research Company, a division of Andiger, Inc., Newark, N.J., a corporation of New Jersey
Filed June 29, 1959, Ser. No. 823,773
6 Claims. (Cl. 28—1)



5. Apparatus for crimping filaments of thermoplastic substances comprising first and second filament support members spaced from each other, heating means between said supports, first and second vibration producing means between said supports, vibration transmitting members operatively associated with said vibration producing means, one of said transmitting members positioned to vibrate said filaments transversely thereof, and the other transmitting member positioned to vibrate said filaments lineally thereof.

2,943,378
HIGH LIFT FABRIC FOR LAMINATED LUBRICATOR WICK
Robert J. Harbourider, Winona, Minn., Louis R. Mizell, Silver Spring, Md., and Julius Berch, Washington, D.C., assignors to Gladys D. Miller, Winona, Minn.
Filed Sept. 8, 1958, Ser. No. 833,126
14 Claims. (Cl. 28—78)

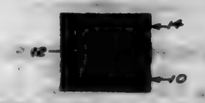


1. In a lubricator having high lift characteristics, a wicking material having a single yarn comprising spun fibers having a twist in turns per inch substantially in accordance with the formula

$$2.25\sqrt{N}$$

N being the yarn number in the woolen cut system.

2,943,379
PAPERMAKER'S FELT
Thomas R. Feltz, Jr., Newfane, N.Y., assignor to Lockport Felt Company, Inc., Newfane, N.Y.
Filed May 23, 1958, Ser. No. 737,271
7 Claims. (Cl. 28—79)



2. A papermaker's felt belt for supporting and draining paper making material, said felt belt comprising essentially only one array of substantially parallel yarns extending longitudinally of the structure and having felted fibre batts disposed at opposite sides of said array and

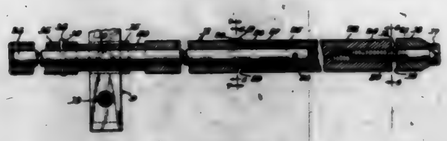
needled thereto with fibres of said batts punched through said yarns thereby laterally interlocking the assembly in fabric form.

2,943,380
DROPCLOTH
Jerome L. Suckle, % General Garment Co., SW. Cor. Amber and Hagert Sts., Philadelphia 25, Pa.
Filed May 7, 1959, Ser. No. 811,626
4 Claims. (Cl. 28—80)



1. A dropcloth comprising an absorbent woven fabric and an impervious plastic coating entirely covering the under surface of the fabric, the upper surface of the fabric being entirely free of any coating, the peripheral margin of said coated fabric being folded under to place the marginal plastic region in facing engagement with the adjacent coated fabric face and defining an elevated boundary region of double thickness, means securing said marginal plastic region in said facing engagement, and the folded fabric region and its plastic coating defining a barrier to the flow of liquid from said fabric.

2,943,381
ALIGNMENT ROD
Frank D. Cotterman, La Grange, Donald R. Sterba, Westchester, and Walter J. Knorowski and Arthur M. Olsen, Chicago, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Mar. 26, 1956, Ser. No. 574,044
12 Claims. (Cl. 29—1.1)



2. In an alignment rod for assembling a rifled liner with a rifled gun barrel or the like, the rod having an outer elongated casing consisting of a plurality of aligned sections, an inner rod extending within the said sections and being axially fixed relative to one of the sections, a plurality of radially extending pins mounted on the casing in spaced apart relation relative to the longitudinal axis of the said casing with at least one of the pins in engagement with the barrel and liner rifling in the assembled position of the latter members, means mounted on the inner rod for connecting the inner rod and casing and removable clamping means on the said casing for predeterminately supporting the liner while inserting the liner within the barrel.

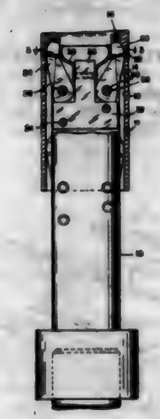
2,943,382
METHOD FOR PRODUCING TRAVELLING WAVE TUBES
Frederick William Harjes, Westbury, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 23, 1956, Ser. No. 617,744
3 Claims. (Cl. 29—25.13)

1. A method of mounting a first member within a second member, said first member being a conductor wound into a cylindrical helix, said second member being a hollow cylindrical tube envelope open at both ends, said method comprising the steps of temporarily deforming said helix radially at selected points to form regions of increased spacing between the selected points; securing a plurality of parallel spacer rods equal in number to said regions to the outer surface of said deformed helix at spaced apart locations, each rod extending in a direction parallel to the axis of said deformed helix, said rods



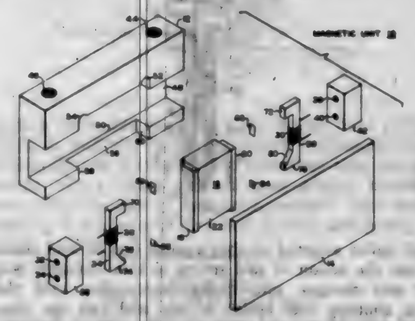
being so oriented with respect to said regions as to permit the helix-rod assembly to be inserted into said envelope, inserting said deformed helix and rod assembly into said envelope; and restoring said deformed helix to its original shape to clamp said rods between said envelope and said helix whereby an integral helix-envelope structure is formed with uniform circumferential spacing between said helix and envelope.

2,943,383
BROACH
Russel W. Anthony, Detroit, and George H. Rickard, East Detroit, Mich., assignors to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed June 17, 1957, Ser. No. 666,020
1 Claim. (Cl. 29—95.1)



A tool comprising a body having a slot formed therein, a pivot pin extending transversely of said slot, a cutting tooth pivotally mounted on said pin and having an enlarged pin receiving opening to provide for appreciable movement of said tooth transversely of said pin, a pair of angularly disposed abutment surfaces in said slot adjacent said pin, said tooth having surface portions engageable with both of said surfaces including a shoulder portion engageable with one of said surfaces to limit outward swinging movement of said tooth relative to said slot, said tooth having a cutting portion movable outwardly of said slot into cutting position, and resilient means engaging said tooth and effective to urge said tooth outwardly of the slot into cutting position.

2,943,384
METHOD OF MAKING MAGNETIC RECORDING UNITS
Kenneth R. Wimer, New York, N.Y., assignor, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Original application June 29, 1954, Ser. No. 439,961. Divided and this application Aug. 3, 1955, Ser. No. 526,289
5 Claims. (Cl. 29—155.59)



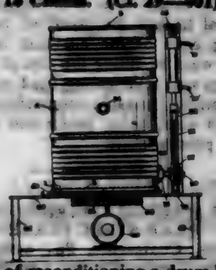
1. A method of preparing a magnetic unit comprising bonding a non-magnetic block between sheets of magnetic material to form a lamination, shaping the outer faces of said sheets of magnetic material to reduce said lamination to a desired thickness, spacing cores of magnetic material from the outer faces of said sheets of magnetic material by a film of non-magnetic material, forming a casing to contain said lamination and said cores and securing said lamination and said cores in said casing.

2,943,385
METHOD AND APPARATUS FOR REMOVING VALVE LIFTER UNITS FROM INTERNAL COMBUSTION ENGINES
Harry J. Miller, Napa, Calif., assignor to Lorelle M. Williams, Los Angeles, Calif.
Filed Feb. 24, 1956, Ser. No. 567,682
4 Claims. (Cl. 29—213)



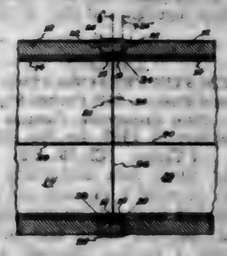
1. An extracting tool for removing a shell from a bore, said shell having a cylindrical bore with an inwardly-opening channel for normally receiving a ring, including, a cylindrical body adapted to enter the shell, a base at the lower end of the body and slidably engageable in the bore in the shell and having an upwardly facing inclined shoulder, a retractable split-ring carried on the body to be supported by the shoulder and adapted to be expanded to enter the channel in the shell, and a sleeve threadedly carried on the body and with a face opposed to the inclined shoulder and with the split-ring therebetween, said sleeve being rotatable and movable by means of said threaded engagement on the body to expand the split-ring into the channel thereby connecting the tool to the shell.

2,943,386
METHODS OF RECONDITIONING DRUMS
Jack I. Katz, Maplewood, N.J., assignor to Kingsland Drum & Barrel Co. Inc., Newark, N.J., a corporation of New Jersey
Filed Feb. 16, 1959, Ser. No. 793,586
13 Claims. (Cl. 29—401)



1. A method of reconditioning a drum having a hollow, cylindrical body and a cover connected to each end thereof, at least one of the covers being connected to the body by folded marginal flanges provided by the body and cover forming an external, circumferential bead adjacent the outer side of the body, the cover being recessed to provide an end wall and a circumferential side wall extending substantially at a right angle thereto, the side wall being located adjacent the inner side of the body and extending substantially parallel thereto, said cover flange extending from the cover side wall, having a length greater than the body flange and being folded about the body flange, said method comprising bending the head away from the body, severing the marginal flange of the body at its juncture with the body to provide a body having its original height and a cover having at least a portion of its marginal flange, the separation of the body and cover allowing access to the interior of the drum for cleaning and/or reshaping, inserting a cover separated from a body as aforesaid into the open end of the body, said marginal flange of a cover engaging the severed edge of a body and welding the interior surface of the body to the exterior surface of the side wall of the cover.

2,943,387
PROCESS OF CIRCUMFERENTIALLY WELDING STEEL PIPE
Lester K. Dawson, Coatesville, Pa., assignor to Lukens Steel Company, Coatesville, Pa., a corporation of Pennsylvania
Filed Oct. 24, 1957, Ser. No. 692,219
2 Claims. (Cl. 29—471.1)



1. The process of uniting the confronting ends of a pair of clad steel pipe sections wherein the outer layer con-

sists of carbon steel base metal and the inner layer consists of a cladding layer of corrosion resisting metal, comprising the steps of forming circumferential lands of at least ⅛" width adjacent the confronting ends of the pipe sections composed entirely of cladding metal, providing inclined circumferential portions in said base metal extending from said lands to the exterior peripheries of said pipe sections, laying a circumferential sealing weld bead from the outside of said sections with a filler rod of metal having a composition substantially the same as the metal of the cladding layer, and partially filling the trough formed by the inclined portions of said pipe sections until the corners formed by the junctures of said inclined portions and said lands have been entirely covered with welding material to seal the layers of base metal from the confronting ends of the cladding layers, and then completing the weld by filling the trough formed by said inclined portions and said sealing bead with welding material of substantially the same composition as that of said base metal, said steps being performed solely from the outside of said pipe sections.

2,943,388
METHOD OF MAKING CORROSION RESISTANT CLAD STEEL PLATE
Richard S. Rote, Centerville, Pa., assignor to Lukens Steel Company, Centerville, Pa., a corporation of Pennsylvania
Filed July 5, 1957, Ser. No. 670,451
1 Claim. (Cl. 29—471.3)



A method of making composite rectangular carbon steel plate comprising the steps of cutting a plurality of pairs of grooves, the grooves of each pair being parallel to each other, in the bottom face of a corrosion resistant cladding plate, the depth of the grooves being at least one-half the thickness of the cladding plate, extending each groove parallel to and in spaced relation with each side edge of said cladding plate, terminating the ends of each pair of grooves in curved surfaces and in planes perpendicular to said bottom face and short of the edges of said cladding plate and extending at least as far as the ends of another pair of grooves and at right angles thereto, assembling said cladding plate with its grooved surface in contacting face to face relation with a carbon steel backing plate having a different coefficient of expansion than said cladding plate, forming a welding groove in the edge of the assembly at the contacting faces of said cladding plate and backing plate, depositing weld metal in said welding groove to seal said cladding plate and said backing plate together, and heating the assembly to its welding temperature and then rolling the same to weld said surfaces together and also to the desired gauge.

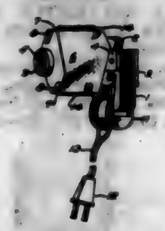
2,943,389
PUNCH FOR PERFORATING CANS
Joseph Gérard Dubois, 343 Forbes St., Fredericton, New Brunswick, Canada
Filed July 22, 1959, Ser. No. 828,781
1 Claim. (Cl. 30—16)

A punch for metal cans comprising a substantially cylindrical body bevelled at one end and having an axially extending through bore, two sleeves disposed in spaced relationship and secured within said bore to form two spaced shoulders, a plunger disposed within said bore and longitudinally slidable therein, said plunger having a pointed tip at one end and a weighted head at the other end, a spring surrounding said plunger disposed within said bore and urging said plunger to take a retracted position wherein said tip is completely within said bore, movement of said plunger against the action of said spring causing said plunger to take a projecting active position in which said tip projects outwardly from the bevelled end of said body, a collar secured to and surrounding said plunger and disposed intermediate said shoulders,



said collar adapted to abut against one of said shoulders under the action of said spring in said retracted position of said plunger, said spring surrounding said plunger and abutting said collar at one end and the other of said shoulders at the other end, one of said sleeves projecting from the bevelled end of said body to form an end portion of reduced diameter of a length greater than the upstanding bead of a can and having a circular free edge wholly lying in a flat plane.

2,943,390
ELECTRIC DRY SHAVER HAVING ROTARY OPERATING BLADE MEANS
Eugene Pezzin, 67 Avon Place, Springfield, Mass.
Filed Sept. 12, 1958, Ser. No. 760,633
2 Claims. (Cl. 30—43)

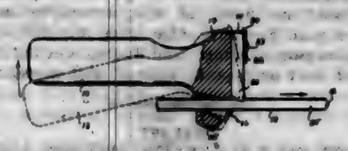


1. An electric shaver assembly having an electric motor, a rotating shaft operated by said motor, a symmetrical blade head mounted on said shaft and rotatable therewith, said head having extended portions, an elongated slot in each of said extended portions furthest away from said rotating shaft, a closure located at each end of each of said slots, said slot adapted to hold a cutting blade having spring members opposite its cutting edge for locking said blade within the said slot against the said closure at the slot ends, each of said slots being at an angle to the longitudinal axis of said shaft and a plurality of screen members one of each being mounted proximate one of each of said blades for assisting the blade in the shaving operation.

2,943,391
ELECTRICAL CABLE AND PROCESSING TOOL
Fred L. Shannon, 1443 Henderson Ave., Des Moines, Iowa
Filed Sept. 3, 1957, Ser. No. 681,784
1 Claim. (Cl. 30—91)

In an electrical cable end processing tool, a handle portion, a head portion on the forward end of said handle,

a hook member extending from said head portion first downwardly, then laterally and then upwardly, and providing with said head portion a passageway, the free end of said hook member being spaced apart from said head portion to provide between its end and said head



portion a cable side entrance, a slot in said head portion, a blade in said slot having its cutting portion extending downwardly and forwardly and extending into said passageway, and a flange on said head portion extending toward the free end of said hook member; said handle extending in the general direction of said passageway.

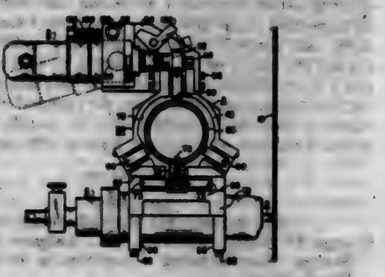
2,943,392
BEAM COMPASS TOOL
Richard B. Attridge, 669 Valencia St., Los Angeles, Calif.
Filed July 12, 1957, Ser. No. 671,648
2 Claims. (Cl. 30—361)



1. In a beam compass tool, a rigid elongate beam having a normally lower undersurface, an instrument supporting head on the beam, said head having a slot in a transverse plane of said beam and opening at its lower end through said undersurface of the beam and at its upper end through a face of said head, and a blade assembly including a blade holder, a cutting blade slideably supported in and extending beyond one end of said holder, and adjusting means connected to said blade and holder for adjusting the former into and out of the holder and retaining the blade in an adjusted position relative to the holder, said blade holder being removably insertable into the upper end of said slot to a position wherein said one end of the holder is spaced above said undersurface and said cutting blade projects below said undersurface, shoulder means on the wall of said slot engageable with the holder for limiting insertion of the latter to said position in the slot, and pivot means on said beam about which the latter is adapted to be rotated as a center on a workpiece with said undersurface of the beam resting on the surface of the workpiece.

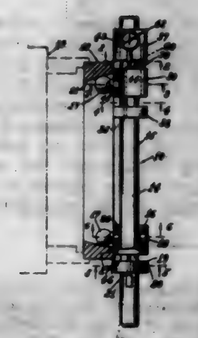
2,943,393
GLASS CUTTER TROLLEY UNIT
Thomas A. Incello, Jeannette, Pa., assignor to American Window Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 31, 1957, Ser. No. 662,831
18 Claims. (Cl. 33—32)

1. Cutter carriage structure in a glass cutting machine comprising a track, a concentric trolley surrounding the same and having a plurality of transverse wheel slots therein, and idler and torque transmitting traction wheel means gripping said track on which the pressure of contact of a single traction wheel is held in balance by a substantially equal and opposite clamping force created by at least one of said idler wheel means, said wheel means consisting of trolley rollers of a proportionate



number arranged in said plurality of slots to press inwardly on the track in a closely spaced pattern of points.

2,943,394
TAPERED HOLE GAGE
Bernard William Schabot, Royal Oak, Mich. (% A. A. Gage Company, 360 Fair St., Ferndale Station, Detroit 20, Mich.)
Filed Aug. 23, 1956, Ser. No. 605,799
1 Claim. (Cl. 33—147)



In a tapered hole gage, the combination comprising a shaft, said shaft having a circular cross section except for a flat area extending longitudinally of said shaft, a first collar on said shaft, a second collar on said shaft, each said collar having a circular opening therein having a diameter substantially equal to the diameter of said shaft, a plug extending radially inwardly from each said collar into contact with a portion of said flat area of said shaft thereby nonrotatably mounting said collars on said shaft, means for fixing said first collar on said shaft, means for mounting said second collar on said shaft for yielding movement longitudinally of said shaft toward and away from said first collar, a ball member mounted on each said collar with the ball portion thereof extending radially outwardly, each said collar having a flat surface adjacent its respective ball, said flat surfaces lying in a plane parallel to a line connecting the centers of said balls and disposed between the axis of said shaft and the line connecting the centers of said balls, a third collar nonrotatably mounted and fixed on said shaft adjacent said second collar with said second collar between said first and third collars, and a micrometer having a dial and a plunger movable to cause a reading on said dial, and means for mounting said micrometer on said third collar with said plunger in contact with said second collar whereby any longitudinal movement of said second collar on said shaft relative to said first collar causes a change in the dial reading, each said collar including an opening therein adjacent its respective flat surface, each said ball member including a stem ex-

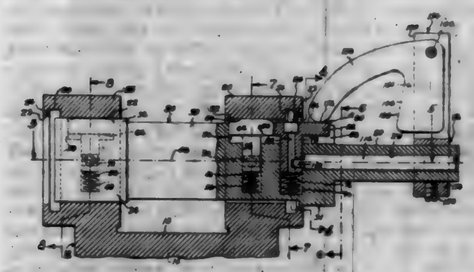
tending into the opening in its respective collar, and means for removably fixing said ball member on said collar, said means for removably mounting each ball member on its respective collar comprises an inclined surface on said stem, said surface extending generally radially inwardly toward the center of the ball portion of said ball member, and a screw threaded on said collar into contact with said inclined surface and preventing the removal of said collar, whereby said ball members can be readily changed to measure the size of a tapered hole at different depths.

2,943,395
MICROMETER SPINDLE CLAMP
George H. Soucy, Warwick, R.I., assignor to Brown & Sharpe Manufacturing Company, a corporation of Rhode Island
Filed Aug. 28, 1958, Ser. No. 757,770
3 Claims. (Cl. 33—164)



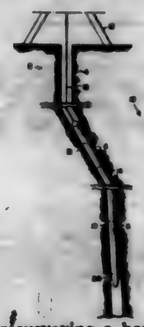
1. In a micrometer, a U frame, a spindle extending through one of the arms of the frame, a threaded member in said arm having its axis in a plane passing centrally through both arms of the U frame and on an axis at an angle to the axis of the spindle and movable upon rotation toward and from said spindle to engage it, said frame having a slot therein opening to said member, and a finger piece extending through said slot and engaging said member for rotation of the member to cause movement toward and from binding engagement with said spindle.

2,943,396
BORE CONCENTRICITY GAUGE
Andrew Eisele, 150 Cheyenne Ave., Detroit 27, Mich.
Filed Sept. 14, 1956, Ser. No. 609,964
2 Claims. (Cl. 33—174)



1. A bore concentricity gauge for use with a conventional dial indicator for measuring the concentricity of a stepped bore relatively to a main bore of different diameter, said gauge comprising a tubular support having a handle portion adapted to receive the dial indicator, a motion-transmitting member movably mounted in said tubular support and operatively engageable with the operating mechanism of said dial indicator, a measuring head mounted on said support and having a rectilinear guideway thereon disposed transversely to the axis of said support, a measuring plunger reciprocably mounted in said head in guided engagement with said guideway and operatively connected to said motion-transmitting member, said measuring plunger having a measuring tip thereon engageable with the stepped bore, and a measuring plunger depressor mounted on said support and having a plunger-depressing portion engageable with said measuring plunger and an operating portion disposed adjacent said handle portion, said measuring plunger having on the outer end thereof an interrupted arcuate ridge with a recessed gap therein disposed in line with the axis of said measuring plunger, said measuring tip being removably mounted in said recessed gap, said ridge being movable unitarily with said measuring plunger and directed circumferentially of said head on opposite sides of said measuring tip.

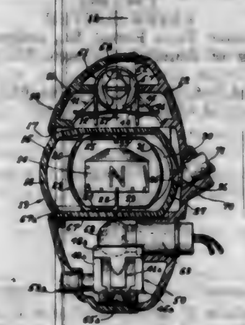
2,943,397
BORE HOLE SURVEYING METHOD AND APPARATUS
Roland Ring, Houston, Tex., assignor to Sperry-Sun Well Surveying Company, Philadelphia, Pa., a corporation of Delaware
Filed June 21, 1955, Ser. No. 516,811
4 Claims. (Cl. 33—205.5)



3. Apparatus for surveying a bore hole comprising a first instrument unit including a gyroscope, an inclinometer, and means for recording azimuthal direction indications of said gyroscope and inclination indications of said inclinometer, a second instrument unit axially aligned with said first instrument unit including an inclinometer, and means for recording inclination indications of said inclinometer, means interconnecting said instrument units and maintaining the same in fixed widely spaced relation to one another, means for actuating at the same time the two said means for recording, said instrument units being adapted for producing at successive depths in a bore hole pairs of recordings made at the same time and different pairs of recordings made at the same depth, and means for providing on each pair of recordings made at the same time indications for azimuthally orienting said pair of recordings to provide for progressively correcting the recorded azimuthal indications given by said gyroscope.

2,943,398
MAGNETIC COMPASS
Walter E. Hull, Cortland, Ohio
(1011 High St. NE., Warren, Ohio)
Filed Feb. 15, 1956, Ser. No. 565,639
6 Claims. (Cl. 33—225)

1. For use with a compass having a magnetic member adapted to rotate in a horizontal plane about a vertical axis for alignment with the earth's magnetic field, a compensating device for neutralizing the effect upon said member of horizontal magnetic lines of force of local magnetic fields, comprising a bar magnet spaced vertically of said member and rotatable in a vertical plane about a horizontal axis from a horizontal position wherein the lines of force of its magnetic field adjacent said magnetic member extend generally horizontally for maximum neutralization of said lines of force of said local magnetic field to a vertical position wherein the lines of force of its magnetic field adjacent said magnetic member extend generally vertically for minimum neutralization of said lines of force of said local magnetic field, and means for neutralizing the vertical lines of force of the magnetic field of said magnet when the latter is in a vertical position to prevent tilting of said magnetic member from its horizontal plane by such field, said means comprising a first magnetically permeable member having a portion adjacent the near pole of said vertically positioned magnet for diverting the lines of force from such near pole away from said magnetic member and a second magnetically permeable member having a portion adjacent



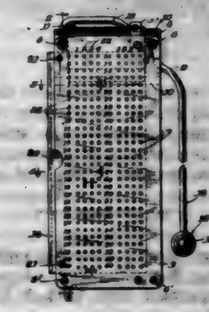
the far pole of said vertically positioned magnet for diverting the lines of force from such far pole toward said magnetic member, said member portions diverting the majority of the lines of force of said magnet when the latter is vertically positioned and said member portions having tapered extensions which project transversely of respective adjoining poles of said magnet when the latter is vertically positioned and which lie in the plane of magnet rotation so that the efficiency of said portions in diverting the lines of force of said magnet progressively decreases as the latter is rotated from its vertical position to reduce the rate at which the magnet's horizontal magnetic field is built up to thereby reduce the sensitivity of adjustment of said magnet.

2,943,399
POCKET QUIZ GAME
Wilbur M. Davis, 64 W. 36th St., Brooklyn, N.Y.
Filed Nov. 8, 1955, Ser. No. 545,601
2 Claims. (Cl. 35—9)



1. A pocket quiz game comprising a box-like rectangular plastic housing, said plastic housing having an open back receiving a back cardboard and having an open front receiving a plurality of superimposed answer and question cards, said open front having integrally molded inturned tabs to hold the sides of said question and answer cards in position, said housing receiving the following elements successively from front to back between said cards and said back cardboard, namely a plastic plate having frontwise projecting, yieldably and resiliently supported, push-buttons integrally formed therefrom with the cards having aligned holes through which said push-buttons project, metallic resilient conducting finger strips corresponding in position to and actuated by said push-buttons, an insulating card having a plurality of spaced openings corresponding in position to said push-buttons and metallic strips and a metallic conducting sheet having a plurality of conductor paths electrically separated from each other extending from a position at one point under a selected push-button to another point to under a second selected push-button, a circuit being established through one of said conductor paths by pressing down upon two selected buttons which will press down said finger strips through said insulating card openings onto said point of one of said paths, a battery and lamp mounting molded integrally with said housing, a battery and lamp mounted in series in said mounting and circuit connections to place said battery and lamp in series with one of said conductor paths through which a circuit is established by said selected two press-buttons.

2,943,400
TESTING AND TEST RECORDING DEVICE
Damon E. Griswold, P.O. Box 145, Princeville, Ill.
Filed Jan. 14, 1959, Ser. No. 786,846
2 Claims. (Cl. 35—9)

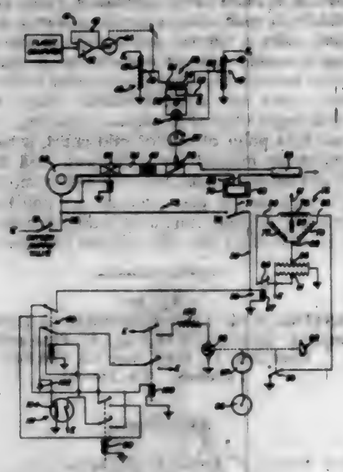


1. A testing and recording device, comprising electrically non-conductive sheet-like bodies arranged and secured in superposed and spaced relation forming area extending pockets therebetween, certain of said bodies having aligning openings therein and the remaining body being without openings therein, electrical contact means on said remaining body in and exposed to the pocket between the same and the adjacent sheet-like body and to the openings therein, a non-rupturable master sheet removably located within the pocket between said remaining body and adjacent non-conductive sheet-like body and over said contact means having openings therein alignable with certain of the openings in said certain bodies, a rupturable test sheet removably located within the pocket between said certain bodies and over the master sheet, an electric battery disposed transversely of the lower side of said remaining body in proximity to one end thereof and directly though removably connected thereto, one pole of which is connected to said electrical contact means, and an electric lamp carrying stylus connected to the remaining end of said battery.

2,943,401
SIMULATED OXYGEN REGULATOR SYSTEM
Robert M. Eisenberg, Rockville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Dec. 19, 1957, Ser. No. 703,853
14 Claims. (Cl. 35—12)

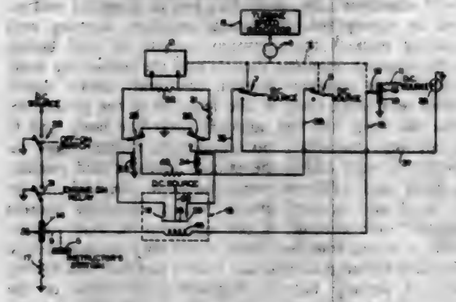
1. A simulated oxygen pressure breathing system for training aircraft personnel comprising a source of air

under pressure higher than ambient connected to a face mask worn by the trainee, deriving means responsive to variations in altitude of a simulated flight for deriving a voltage representing aircraft altitude, means responsive to said deriving means to control the air pressure delivered to the mask, an indicator for representing oxygen



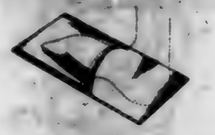
pressure, means responsive to trainee's demand for oxygen to periodically change the pressure representation in accordance with the frequency of the trainee's breathing, an indicator for representing oxygen quantity and means for modifying the position of the said oxygen quantity indicator.

2,943,483
TURBO COMPRESSOR TACHOMETER SIMULATOR
Clyde M. Whitby, Beltsville, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 3, 1958, Ser. No. 718,661
4 Claims. (Cl. 35—12)



1. In a grounded aircraft trainer a circuit for simulating to a student the behavior of a cockpit air heating system of the type using a turbine driven compressor comprising in combination an instrument to represent to a student the r.p.m. of the simulated turbine, a reversible motor to drive the moving element of said instrument, a servo system connected to said motor and including a member under the control of an instructor to energize the motor and bring about rotation thereof in accordance with the sense and magnitude of motion of said member, said servo system comprising a potentiometer having the resistance winding thereof connected to a source of energy and the wiper arm mechanically connected to the said member, a polarized relay connected to the potentiometer wiper arm and an electrical circuit between the said relay and the said motor to energize the motor in sense and magnitude in accordance with the position of the arm, and a second potentiometer having a resistance winding connected to a source of energy and the wiper arm mechanically connected to said motor and electrically connected to said relay whereby rotation of the motor responsive to the instructor's moving of the first recited potentiometer arm develops an answering voltage on the second recited potentiometer to balance the polarized relay and terminate motor rotation.

2,943,483
PAPER SLIPPER
Albert A. Meister, River Forest, Ill., assignor to Bagcraft Corporation of America, Chicago, Ill., a corporation of Illinois
Filed Oct. 11, 1956, Ser. No. 615,311
2 Claims. (Cl. 36—9)



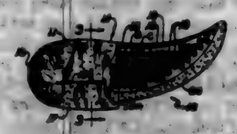
1. In a disposable slipper having a paper sole and a flat upper portion of paper integral with and overlying said sole and joined thereto at its longitudinal edges, said upper portion having a straight transverse edge extending directly between said longitudinal edges and disposed to be adjacent to the instep of the wearer, the improvement of a continuous narrow paper instep band both coextensive with and integral with said transverse edge and disposed in flatwise abutting relation throughout the transverse length of said instep band against said upper portion, whereby said transverse edge is dull to preclude cutting the instep of the wearer.

3,943,484
REPLACEABLE HEEL CONSTRUCTION
Robert Sultan, Westbury, N.Y. (% Cangen Mach. & Steel Shank Co., 1001 Pacific St., Brooklyn, N.Y.)
Filed Oct. 19, 1956, Ser. No. 617,043
1 Claim. (Cl. 36—42)



In a shoe having an upper and a replaceable heel, means for removably mounting said heel on said upper, said means including a shank in said shoe upper, a plate fixed to said shank, said shank and said plate each having an opening aligned with each other, a rotatable cam, having a locking shoulder, extending through said aligned openings, means on said plate for holding said cam in operative position, said cam holding means including a handle, a second plate mounted in said heel, said heel plate having an opening therein, adapted to be aligned with the openings in said first-mentioned plate and said shank, adapted to receive said cam, and a locking member in said heel adapted to cooperate with said shoulder of said cam to hold said cam in locked position, said shoulder adapted to be moved into and out of contact with said locking member to hold said heel in position on the shoe or to permit the removal thereof, respectively, by turning said handle of said cam holding means.

2,943,485
ARCH SUPPORT
Frederick F. Olsen, Sudbury, and James J. Calvas, Belmont, Mass., assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Jan. 18, 1960, Ser. No. 3,009
3 Claims. (Cl. 36—71)



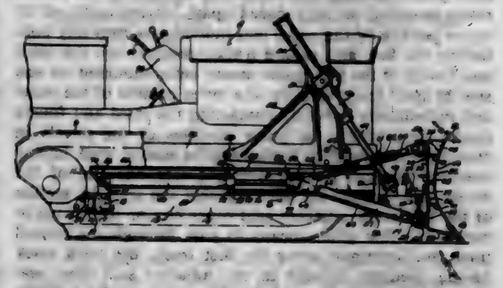
1. An arch support of one-piece construction made of a flexible resilient material, said arch support comprising a heel portion underlying the calcaneous and talus bones of the foot and a cushioning portion positioned forward of said heel portion and underlying the longitudinal arch of the foot forward of the calcaneus bone of the foot, said heel portion having its thickest portion along the inner edge of the arch support and being feathered toward the central portion of said heel portion whereby said heel portion tends to rotate the calcaneus, talus and navicular bones of the foot upwardly and outwardly, said cushioning portion having a downwardly depending supporting wall along the inner edge of the arch support which supporting wall decreases in height as it extends forwardly from a point opposite the point directly below the center of weight distribution of the body, said cushioning portion having downwardly depending protuberances underlying the longitudinal arch of the foot forward of the calcaneus bone of the foot, the length of said protuberances progressively diminishing as said protuberances digress from the inner edge of the arch support toward the outer edge of the arch support and as said protuberances digress forwardly and rearwardly from said point directly below the center of weight distribution of the body to form a cushioning element conforming generally to the shape of the longitudinal arch of the foot.

2,943,486
TREE-UPROOTING ATTACHMENT FOR AGRICULTURAL TRACTORS
William Robert Suckling, The Ancient House, Steeple Bumpstead, near Haverhill, England
Filed May 7, 1956, Ser. No. 583,349
6 Claims. (Cl. 37—2)



1. In combination with a tractor having a body, a tree-uprooting attachment comprising a digging beam having a digging blade at the forward end thereof and extending forwardly from the front of the tractor body, a pivotal mounting for the rear end of the beam on the underside of the tractor body located between the front and rear ends of said body, said pivotal mounting being adapted and the beam being arranged so as to permit free lateral swinging movement of the said beam when the tractor is driven to engage the digging blade with the ground, the arrangement also permitting free vertical swinging movement of the beam at least below the horizontal to permit the digging blade to enter the ground at an inclination thereto, said digging blade being downwardly inclined relatively to the longitudinal axis of the beam and including a central recess affording a pair of laterally spaced digging portions, the spacing of said pivotal mounting above the ground being such that it takes the digging thrust strutwise through the beam, and adjustable means operable for raising and lowering the beam and limiting downward swinging movement thereof.

2,943,487
BULLDOZER BLADE MOUNTING
Elton B. Long, Haskell, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Feb. 27, 1958, Ser. No. 717,884
6 Claims. (Cl. 37—144)



1. In a bulldozer, the combination comprising a frame adapted to extend along each side of a tractor and be swingably attached thereto, a blade pivoted to said frame for angular adjustment relative thereto, a hydraulic cylinder assembly carried by said frame at each side of said tractor and connected with said blade for angling thereof, a first bracket secured adjacent the rear end of said frame, said assembly having attaching means registerable with said bracket, a second bracket secured to said frame and spaced from said first bracket, said assembly adapted to be inserted into said second bracket and be held captive therein, a generally channel-shaped elongated cover extending over said assembly, means for securing said cover to said second bracket, said cover having an attaching means registerable with said first bracket, and removable means engageable with said first bracket, said assembly attaching means and said cover attaching means when in registry with one another for detachably securing said cover and said assembly to said frame.

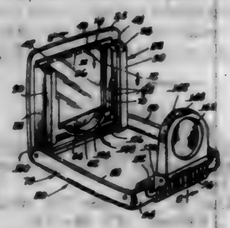
2,943,488
DISPLAY DEVICES
William J. Downs, Cincinnati, Ohio, assignor of one-half to John J. Kebbe, Queens Village, and one-half to John A. Paterecki, Jr., Rye, N.Y.
Filed Dec. 20, 1957, Ser. No. 704,046
3 Claims. (Cl. 40—32)



1. A display device comprising an endless flexible drive member having a pair of parallel runs disposed in a common horizontal plane, means for circulating the drive member, a plurality of vertically disposed display panels each having a point of swingable interconnection with the drive member, four horizontal tracks disposed one above the other and each defining an elongated closed path

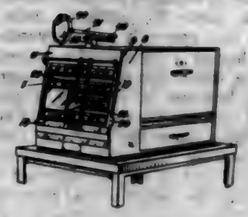
having a pair of runs parallel to each other and to the runs of the drive member and interconnected at their ends by transfer track sections, the first and second of said four tracks being disposed above the display panels and the third and fourth of said four tracks being disposed below the display panels, the first track being the uppermost of the four and the fourth track being the lowermost of the four, the first and second tracks being longitudinally offset from each other and the third and fourth tracks being longitudinally offset from each other, the first and third tracks being in vertical alignment and the second and fourth tracks being in vertical alignment, the first and third tracks extending beyond the second and fourth tracks at one end of the device, and the second and fourth tracks extending beyond the first and third tracks at the other end of the device, four spaced guide means mounted on each panel, the first and second of the four guide means being mounted on and spaced apart longitudinally of an upper portion of the panel and individually movably contacting the first and second tracks, respectively, the third and fourth of the four guide means being mounted on and spaced apart longitudinally of a lower portion of the panel and individually movably contacting the third and fourth tracks, respectively, to guide portions of the panels in closed paths defined by the tracks, the second track having openings through its end adjacent said one end of the device and through its sides adjacent the transfer section of the first track adjacent said other end of the device to permit the first guide means to pass through the second track and continue along the first track, the third track having openings through its end adjacent said other end of the device and through its sides adjacent the transfer section of the fourth track adjacent said one end of the device to permit the fourth guide means to pass through the third track and continue along the fourth track, the second and third guide means having portions too large to pass through the said openings through second and third tracks thereby to prevent the second and third guide means from leaving the second and third tracks, respectively.

2,943,409
SLIDE VIEWER
Karl M. Maiersbofer, Norridge, Ill., assignor to G-M Laboratories Inc., Chicago, Ill., a corporation of Illinois
Filed July 5, 1957, Ser. No. 670,030
6 Claims. (Cl. 40—63)



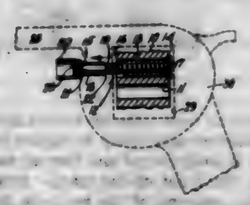
1. A collapsible slide viewer comprising a base, a light-diffusing screen, means supporting said light-diffusing screen and providing for supporting a slide in the vicinity of said screen, means pivotally mounting said supporting means on said base for pivotal movement between confronting folded position and erected position upstanding therefrom, a viewing lens, a holder for said lens, a bracket, means pivotally mounting said lens holder on said bracket, means pivotally mounting said bracket on said base, cooperating stop means on said bracket and said holder limiting said lens holder to an upstanding position relative to said bracket and parallel to said screen, said lens holder thus being in erected position, said lens holder being movable to folded position substantially parallel to and extending away from said bracket, means releasably holding said lens holder and bracket with said stop means in limiting position, said bracket and said base having cooperating stop means thereon, said stop means limiting said bracket in erected position with said bracket projecting rearwardly of said base and holding said lens holder rearwardly beyond the confines of said base, said bracket being pivotal in folded position into proximity with said base between said base and said screen, and means releasably holding said bracket in erected position with said stop means in engagement, the means releasably holding the lens holder in erected position and the means releasably holding the bracket in erected position comprising a single spring.

2,943,410
COMBINED FILING CABINET AND VIEWING ARRANGEMENT FOR PHOTOGRAPHIC TRANSPARENCIES
Robert W. Hagger, 211 Geraldo Ave. South, Hamilton, Ontario, Canada
Filed Dec. 13, 1956, Ser. No. 628,195
2 Claims. (Cl. 40—106.1)



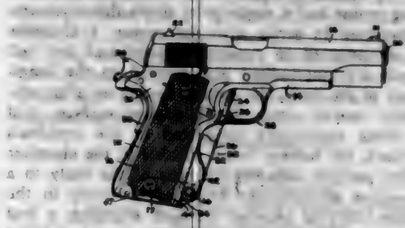
1. In a device for selectively viewing a plurality of photographic transparencies which are pre-arranged in fixed position in a movable holding frame, said device including a cabinet, an interiorally illuminated casing having a translucent front face portion of substantially the same area as the frame, said cabinet being formed with forwardly projecting side extensions which form in conjunction with a front face of the cabinet a recess in which the casing is removably contained in an inclined manner, and a stop member carried upon the front of the casing for retaining the frame against sliding down the front face of the casing when the latter is positioned in the recess.

2,943,411
SAFETY LOCK FOR REVOLVERS
John Salva, 118 Cathay Road, Clifton, N.J.
Filed July 7, 1959, Ser. No. 825,567
2 Claims. (Cl. 42—66)



1. A safety device for use with a revolver having a barrel and a revolving cylinder having two ends and a series of cartridge chambers intermediate said ends, said cylinder being adapted for selective movement into and out of alignment with the revolver barrel, said device comprising a casing proportioned to fit into a chamber of the cylinder and against one end of said cylinder, an elongated pin in said casing of greater length than the length of the cylinder chamber projecting from the opposite end of the chamber when said device is so positioned against said one end of said cylinder, a tubular member having a portion of greater diameter than the diameter of the cylinder chamber and a portion of smaller diameter than the diameter of the casing slidably engaging said casing and means engaging said tubular member and said pin to removably secure said tubular member to said pin.

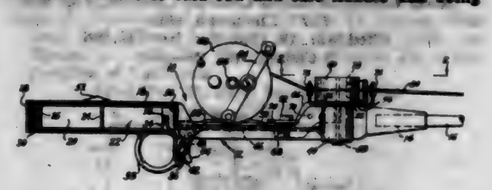
2,943,412
TRIGGER OPERATING MEANS FOR A PISTOL
John M. McNally, Newington, Conn., assignor, by mesne assignments, to Colt's Patent Fire Arms Manufacturing Company, Incorporated, Hartford, Conn., a corporation of Arizona
Filed Sept. 18, 1953, Ser. No. 381,042
8 Claims. (Cl. 42—69)



1. A trigger operating attachment for use with a pistol including a frame having a grip portion and including a rearwardly movable trigger located near the front of the upper part of said portion, said attachment comprising: two pivot plates connected to the lower part of said portion, at opposite sides thereof and projecting forwardly therefrom, and having transversely aligned holes in front of the said portion; a transverse pivot pin extending through said holes, a trigger operating member transversely apertured to receive said pivot pin so that said member is connected to said plates for movement about a transverse pivotal axis in front of said grip portion when the plates are connected as aforesaid; said operating member including a lug near the top thereof which is engageable with the front of said trigger, and a forwardly exposed portion, located between said pivotal axis and said lug, which exposed portion is engageable at the front thereof by fingers of the user positioned below the said lug and is thereby movable rearwardly so as to cause the said lug to move said trigger rearwardly for firing; said operating member being formed of sheet metal, channel-shaped in horizontal section and having a front wall and transversely spaced side walls, the metal of said front wall being cut and bent to provide an integral spring which is above said pivotal axis and which extends rearwardly from said front wall and is engageable with the front face of the grip portion of the pistol for biasing said member for forward pivotal movement.

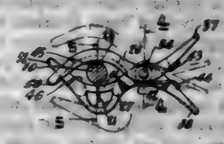
2,943,413
FISHING ROD AND REEL ASSEMBLY
Otto A. Koehler, P.O. Box 1661, San Antonio 6, Tex.
Filed Mar. 25, 1958, Ser. No. 723,809
14 Claims. (Cl. 43—21)

1. A fishing rod and reel assembly comprising a handle, a rod connected to one end of the handle, a battery housing in the opposite end of the handle containing batteries, an electric motor on the handle, an electric circuit connecting said motor to the batteries in said housing, switch means for interrupting or completing said circuit, roller means operatively connected to said motor, said roller means being drivingly engaged with a fishing line positioned on said rod, said fishing line being longitudinally movable relative to said rod and said handle and being



connected to a reel on said handle independent of said motor, said reel being connected to said motor solely through said fishing line.

2,943,414
FISHING POLE ATTACHMENT
Denton E. Tussing, 705 Eton Road, Toledo, Ohio
Filed Apr. 10, 1956, Ser. No. 577,249
6 Claims. (Cl. 43—25.2)



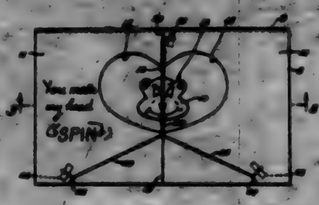
1. An attachment for fishing poles including, in combination, a pair of members formed of nonmetallic material pivotally connected together intermediate their ends, said members having curved portions adapted to straddle a fishing pole, the curvature of said portions being greater than the curvature of the fishing pole resilient means biasing the curved portions toward each other, said curved portions being arranged to engage respectively a fishing line carried by the pole and a fishing hook carried by the fishing line when the curved portions are astraddle the pole, at least one of said curved portions being formed with a laterally extending loop portion defining a recess adapted to receive the barb of the fishing hook, said curved portions terminating in projections arranged for overlapping interengaging relation when said curved portions are astraddle a fishing pole.

2,943,415
TOY CONSTRUCTION
Reidar Vikøy, Aaslandsgate, Kongsberg, Norway
Filed Dec. 26, 1957, Ser. No. 705,293
2 Claims. (Cl. 46—28)



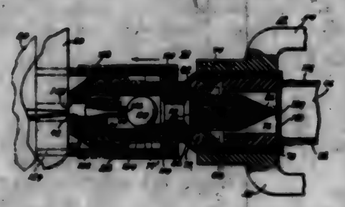
1. A toy construction member comprising a strip provided on one of its faces with a plurality of projecting stud members, each of said stud members being provided with a relatively large diameter base portion and a cylindrical reduced-diameter end, said reduced diameter end constituting the male member of a snap fastener, each of the stud members being provided with a recess extending partly through its base portion, said recess opening at the back of the strip and being of a size to receive the reduced diameter portion to thereby constitute the female member of a snap fastener, whereby the male member is located on one face of the strip and the female member is directly behind the male member and is accessible from the opposite face thereof.

2,943,416
GREETING CARD OR FOLDER
Alvin Barker, % Barker Greeting Card Co., P.O. Box 2177, Cincinnati, Ohio
Filed Mar. 19, 1958, Ser. No. 722,898
5 Claims. (Cl. 46—34)



1. A greeting card or folder having a front and a back section secured together along adjacent ends on a common fold line and swingable therearound toward and away from each other, a spinner element disposed between the sections, a resilient, twisted band fastened to one end of the spinner element and having its other end anchored to a side portion of one of the sections, a pair of flexible strands fastened to the opposed end of the spinner element, said strands being twisted together adjacent the element and each having a straight portion projecting beyond the twisted portion, and an anchor means fastening the ends of the straight portions, one to a back section and the other to a front section on the side portions of the sections opposed to the side portion to which the twisted band is fastened.

2,943,417
JET PROPULSION DEVICE
Alvin T. Greenspan, 1614 Middleton St., Philadelphia 38, Pa., and William L. Brown 4th, Pine Grove Mills, Pa.
Filed Apr. 14, 1958, Ser. No. 728,383
5 Claims. (Cl. 46—76)



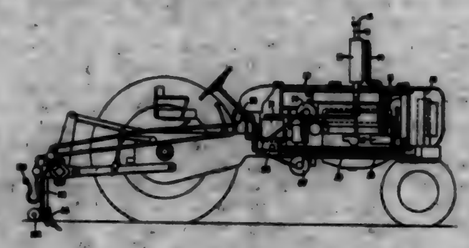
2. A jet propulsion apparatus comprising a main body having a charge receiving cavity of constant volume, a charging and discharging tube having a front end communicating with the interior of said cavity and a second end extending outwardly of said main body, a charging device frictionally receiving said second end of said tube for charging said cavity with a propulsion fluid under pressure, a launching member slidably supported upon said charging device for reciprocating longitudinal movement between retracted and extended positions, said launching member in said retracted position accommodating frictional engagement of said charging device and second end of said tube for charging said cavity, and said launching member being displaced toward said extended position to release said main body from said launching member and to release said second end of said tube from said charging device to vent said second end of said tube to the atmosphere.

2,943,418
REVERSING MECHANISM FOR TOY CARS
Walter Smith, 27 Homewood Ave., Toronto, Ontario, Canada
Filed May 26, 1958, Ser. No. 737,899
4 Claims. (Cl. 46—244)



1. In a toy vehicle having a body, a direct current electric driving motor and a single pole, single throw electric switch connected in series with the motor, a chamber in the body adapted to receive a cylindrical dry cell battery with its longitudinal axis normal to the longitudinal axis of the body, the battery having annular contacts axially spaced along its cylindrical surface, said contacts being electrically connected to the terminals of the battery, the battery being rollable in the chamber from a first position adjacent the rear of the body to a second position adjacent the front of the body in the first position its two annular contacts engaging a first pair of contacts in the floor of the chamber and being thereby electrically connected in series with the electric motor to drive the vehicle forwardly, and in the second position adjacent the front of the body, its two annular contacts engaging a second pair of contacts in the floor of the chamber and being thereby connected in series with the electric motor with its polarity reversed from that of the first position to drive the vehicle in reverse.

2,943,419
AGRICULTURAL PROCESS AND APPARATUS FOR CARRYING OUT THE SAME
Martin J. Harris, Jr., Autauga County, Ala. (12492 Joy Road, Garden City, Mich.)
Filed Mar. 29, 1955, Ser. No. 497,165
13 Claims. (Cl. 47—58)



1. An agricultural process intended to aid in production of plant crops growing in the open air, said process including the steps of continuously retrieving exhaust gases from the engine of a tractor while the engine of said tractor is operating for conventional agricultural purposes, preliminarily cooling said gases down from their exhaust temperature, compressing the cooled exhaust gases, cooling the compressed gases down from their compression temperature, continuously separating out of the cooled compressed gases at least one of their constituents for application in crop production with the aid of the tractor.

2,943,420
GLASS BENDING MOLD
Andy H. Kostic, Rossford, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed July 30, 1954, Ser. No. 446,897
7 Claims. (Cl. 49—67)



7. In apparatus for bending glass sheets, a frame, a pair of spaced curved shaping strips mounted above said frame, tie strips mounted above said frame and extending between said curved shaping strips, arcuate sheet supporting plates extending between said curved shaping strips, and means movably connecting said arcuate sheet supporting plates to said tie strips.

2,943,421
EAVES TROUGH
Eugene B. Squires, 16125 Parkland Drive, Shaker Heights, Ohio
Filed Apr. 2, 1958, Ser. No. 725,815
4 Claims. (Cl. 50—4)

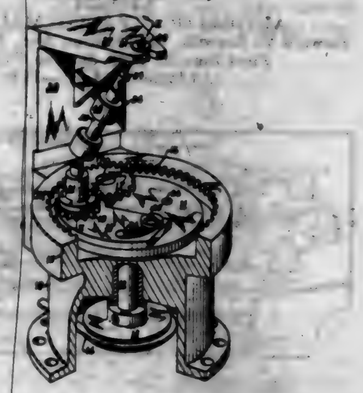


1. In a building construction having a plurality of rafters ending in roof line, an ice and snow controlling eaves trough assembly carried along said roof line to carry away water shed from a roof surface supported by said rafters, said assembly comprising, an elongated trough defining a water conducting path, the trough having a longitudinally extending front wall with a trough outer edge defining one transverse extremity of the path, the trough also having a longitudinally extending building contacting wall defining the other transverse extremity of the path, said building contacting wall adapted to extend along and be supported by said plurality of rafters, said walls defining an elongated water conducting trough, and an ice and snow diverter means in the form of a longitudinal top lip configuration extending from the building contacting wall outwardly over the trough, and overlapped in a return bend back and over said building contacting wall and ending in a roof overlayment strip interfittable with the associated building roofing, and adapted to overlap the roof area to a position over said rafters, and lip extending to a lip outer edge, said lip outer edge and the trough outer edge defining a longitudinally extending opening for the ingress of water to the trough, said opening having a transverse dimension within the range of one to three times the transverse dimension of the lip, and the lip outer edge being above the front wall of the trough.

ERRATUM

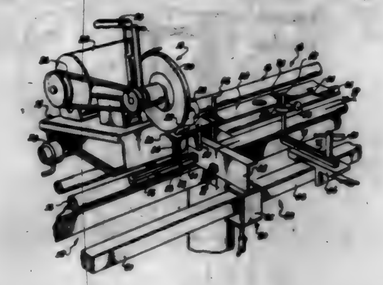
For Class 50—13 see:
Patent No. 2,943,582

2,943,422
VALVE LAPPING MACHINE
Jules H. Geniet, San Lorenzo, Stanley G. Dawes, Oakland, and Alfred J. Smith, San Leandro, Calif., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Dec. 29, 1958, Ser. No. 783,214
2 Claims. (Cl. 51—37)



1. A machine to lap complementary spherical portions of two valve elements comprising a turntable, an internally toothed ring gear concentric to said table, a gear on the table meshing with the ring gear, a second gear on the table meshing with the first gear, a work holder carried by said second gear to support one valve element, a support for the other valve element disposed in axial alignment with and spaced from the table, and means to rotate the table whereby the second gear and work holder will be rotated and revolved simultaneously with the valve elements contacting each other, said second gear being mounted for adjustment about the axis of the other gear on the table and for movement toward and away from the center of the table.

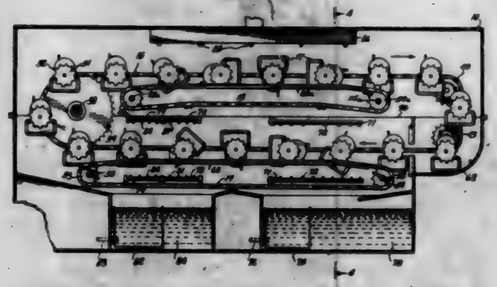
2,943,423
SHARPENER FOR ROTARY LAWN MOWER BLADE
Fred J. Machovec, 160 N. Fair Oaks Ave., Pasadena, Calif.
Filed Feb. 7, 1958, Ser. No. 713,995
9 Claims. (Cl. 51—34)



3. In an apparatus for positioning a rotary lawn mower blade adjacent and parallel to the path of movement of a movable sharpening means, the combination of: supporting means; a first seat engageable by one side of said blade and carried by said supporting means; a second seat engageable by said side of said blade and carried by said supporting means and spaced from said first seat longitudinally of said supporting means; a first locating element carried by said supporting means and engageable by one edge of said blade; a second locating element car-

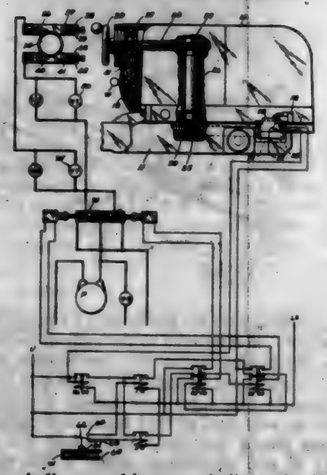
ried by said supporting means and engageable by the other edge of said blade and spaced from said first locating element longitudinally and laterally of said supporting means; and a third locating element carried by said supporting means and engageable by an end of said blade.

2,943,424
AUTOMATIC CLEANING MACHINE
Howard M. Sadwith, 982 Madison Ave., Plainfield, N.J.
Filed June 30, 1958, Ser. No. 745,565
13 Claims. (Cl. 51—164)



1. An automatic cleaning machine for removing oil, grease or like impurities from open tote pans and from industrial parts carried therein, said machine comprising a pair of conveyor means displaced in parallel relation, a plurality of work stations displaced at spaced positions along said conveyor means, a series of container assemblies pivotally mounted between said conveyor means at spaced positions thereon and conveyed thereby successively through said work stations, each assembly including a foraminated basket portion and a frame portion adapted to receive a tote pan to combine with said basket portion so as to define a barrel entrapping the parts within said pan, said barrels being carried by said conveyor means through said work stations to effect the desired cleaning operations.

2,943,425
FEED CORRECTION MECHANISM
Harold E. Balsiger, Waynesboro, Pa., assignor to Landis Tool Company, Waynesboro, Pa.
Filed May 2, 1957, Ser. No. 656,530
5 Claims. (Cl. 51—165)



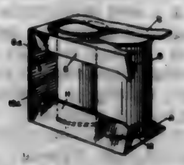
1. In a grinding machine, a grinding wheel support, a grinding wheel rotatably mounted thereon, mechanism for feeding said grinding wheel toward and from operative position including a feed screw, means for effecting a continuous feeding movement of said feed screw and said grinding wheel, adjusting means for actuating said feed mechanism in either direction, a gauge for measuring workpieces after they have been ground, said gauge having means for providing a signal in accordance with variations of workpieces from the desired size, means operable in response to the signal to adjust said feed mechanism in accordance with the condition of the work as reflected by the signal, and means operable during said continuous feeding movement for actuating said adjusting means to correct the setting of the feed mechanism for the next piece to be ground.

2,943,426
BUFFING WHEEL
Carl F. Schlegel, Rochester, N.Y., assignor to The Schlegel Manufacturing Company, Rochester, N.Y., a corporation of New York
Filed Nov. 25, 1957, Ser. No. 698,744
6 Claims. (Cl. 51—193)



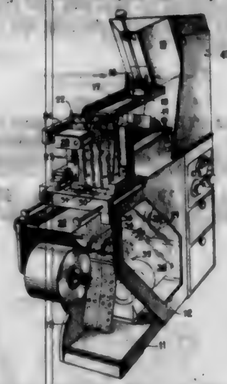
6. A buffing wheel comprising a plurality of superimposed helically wound layers of flexible fabric-like material each having an inner edge adapted to be received on a core and an outer working edge, said material being composed of alternating radial thick and thin bands, said bands extending from said inner edge to said outer edge and each being substantially homogeneous, said layers lying flat at their inner edges and being pleated at their central and outer portions whereby said outer edge is shirred, and means for fastening together the flat portions of said layers, the superimposed layers of thick and thin bands and the pleated central and outer portions providing ventilating spaces extending from said outer edge all the way to said inner edge.

2,943,427
METHOD OF FORMING A CARTON
John V. Fisher, Chicago, Ill.; Constance M. Fisher, administratrix of said John V. Fisher, deceased
Filed Sept. 9, 1954, Ser. No. 454,975
2 Claims. (Cl. 53—29)



1. In the method of high speed formation of cartons one-by-one from a pile of substantially flat blanks and filling each carton as formed with a plurality of substantially identical containers, the said blanks being prescored to define two side panels, a floor panel and a closing panel to extend across one end of the formed carton, the improvement which consists in forming the closing panel of each carton blank with an ear at each end projecting, in the unfolded blank, adjacent one end of a side panel, folding each said ear on to its said adjacent side panel and anchoring the ear thereto whereby when the carton is formed the closing panel will be automatically moved partially toward its final closing portion in the completed carton, and then feeding the containers into the carton from the opposite end whereby the foremost containers engage the said closing panel and move it into its final closing position.

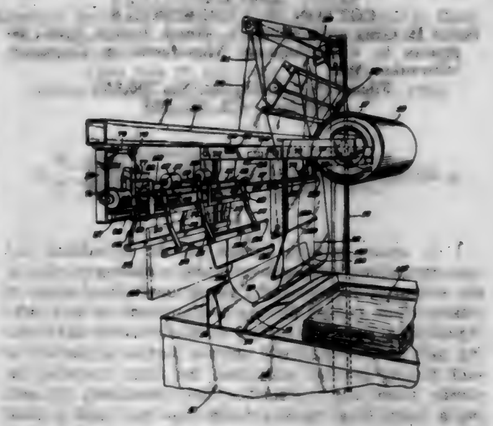
2,943,428
HIGH SPEED PACKAGING MACHINE
John H. Stroop, New York, N.Y., assignor to Vol-Pak, Inc., New York, N.Y., a corporation of New York
Filed Nov. 1, 1956, Ser. No. 619,877
6 Claims. (Cl. 53—59)



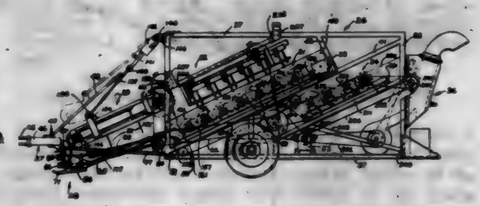
1. In a high speed packaging machine having a pair of webs brought together and sealed around each object packaged, wherein said webs are subjected to a timed preforming pocket deformation means, and wherein said objects are fed into the pocket thus formed in predetermined quantities from an upstanding chute, automatic controlled-rate feed means comprising means for feeding said objects to the entrance of said chute at a rate exceeding the rate of packaging said objects, said chute having transverse dimensions adapted for holding a column of said objects with the lowest object just above the pockets as formed, the entrance to said chute having one transverse dimension substantially equal to the corresponding transverse dimension of the chute so that the objects are oriented with one transverse dimension of each parallel to one another, agitator means alternately moveable at the entrance to said chute for preventing the formation and maintenance thereacross of a bridge formed by two or more of said objects, means for controlling the interruption of said feeding means whenever a predetermined quantity of objects is located at the entrance of said chute awaiting entrance therein, in order to control the total feed so as to maintain an adequate supply without overflow, and escapement means responsive to the preforming pocket deformation means for feeding at least one object into each pocket as the webs progress.

2,943,429
LOADING DEVICE FOR A PACKAGING MACHINE
Albertus O. Van Vactor, R.R. 1, Box 207, Rolling Prairie, Ind., and Eugene C. Lash, 3323 S. Fellows Ave., South Bend, Ind.
Filed July 29, 1959, Ser. No. 830,334
9 Claims. (Cl. 53—182)

8. A packaging machine for forming a bag of a heat sealable film about an item to be packaged, said device including: a sealing head; means to feed two sheets of said film joined along one edge of each sheet in a vertical direction with said edges generally vertical into said head; a plurality of fingers extending between said sheets from adjacent the other vertical edges of said sheets to space said sheets apart and define an opening defined by said other edges for the space between the sheets; and a carrier movable into and out of said space through said opening, said carrier including a first gripping member and a second gripping member, said second member being movable toward and away from said first gripping member to engage said item therebetween, power means operatively connected to said second member to hold said second member in a first position against an item between said members and to release said second member from against said item when said carrier is positioned in said space, a latch mean operatively connecting said second member and said power means to hold said second member in said first position.



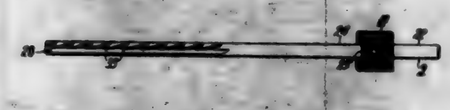
2,943,430
MACHINE FOR HARVESTING POD TYPE VEGETABLES
Eben H. Carruthers, Warrenton, Oreg., assignor to Chisholm Ryder Co. Inc., Niagara Falls, N.Y., a corporation of New York
Original application Apr. 14, 1954, Ser. No. 423,136, now Patent No. 2,763,114, dated Sept. 18, 1956. Divided and this application July 13, 1955, Ser. No. 521,747
16 Claims. (Cl. 56—1)



1. A machine for harvesting pod type vegetables comprising, in combination, a mobile conveyance movable through the fields in which the vegetables are grown, said conveyance having mounted thereon: means for removing the vines, leaves and pods and at least part of the stems from the fields in a substantially continuous manner; means operatively associated with and adapted to receive vines, leaves and pods from said removing means and severing the vines by successive and rapidly

repeated severing actions until the vines are in a relatively finely divided state and the pods are substantially free of vines and leaves with the edible seeds sealed therein and protected against dust and dirt and substantial loss of moisture; and means operatively associated with said severing means for separating the vines and leaves from the pods after they have been cut.

2,943,431
COTTON PICKING SPINDLE
James H. Gray and William L. Wood, Tupelo, Miss., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 3, 1959, Ser. No. 790,859
7 Claims. (Cl. 56—50)



1. A cotton picking spindle of the cylindrical rod type comprising an elongated body, a picking portion at one end of said body, and a single longitudinal series of picking teeth on said picking portion; each of said picking teeth having a top surface continuous with and forming part of a cylindrically arcuate peripheral surface of said picking portion, and three flat faces extending inwardly from said top surface and respectively presenting a tooth front face, a tooth rear face and a tooth side face; the respective side faces of said picking teeth lying in a common plane extending longitudinally of said spindle, and said tooth front and rear faces being inclined relative to each other so as to form dihedral notches between pairs of said teeth and a straight axial edge portion of predetermined length on each of said teeth along the intersection of said common plane with said cylindrically arcuate peripheral surface; said picking portion also having a longitudinally extending recessed plane surface extending from said tooth side faces to said cylindrically arcuate peripheral surface of said picking portion.

2,943,433
FRUIT GATHERING DEVICE
Ernesto F. Colon, College Stn. Colegio Agricultura, Mayaguez, Puerto Rico
Filed May 6, 1958, Ser. No. 733,433
1 Claim. (Cl. 56—328)



In a device of the character described, a belt provided with a plurality of spaced apart openings therein, a plurality of spaced apart brackets connected to said belt, each of said brackets including a first portion, second portions extending at right angles from said first portion, said second portions extending through said belt and terminating in transverse third portions, an elongated rod having a hook member on its outer end for engagement with a branch of a tree having fruit thereon, a plurality of spaced apart clamps connected to the other end of said rod, each of said clamps including first and second sections interconnected together by a curved section, a transverse finger extending from said second section and said finger being secured to said rod, bands surrounding said rod and engaging said second sections, the first section of each of said clamps being adapted to selectively engage the first portion of each of said brackets so that said rod can be arranged at different positions with regard to said belt, a support member connected to said belt, a flexible conduit connected to said support member, a funnel-shaped member connected to the upper end of said conduit, a filter arranged in the lower portion of said funnel-shaped member, a receptacle connected to the other end of said conduit, hook members secured to said receptacle for connecting the receptacle to the openings in said belt, a discharge spout connected to the bottom of the receptacle, and a hook assembly cooperatively mounted on said bag and the discharge end of said spout for selectively retaining the discharge spout in raised position.

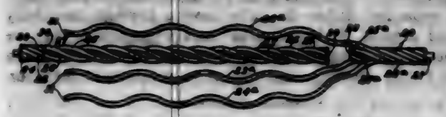
2,943,433
CRIMPING OR CURLING OF YARNS OR THREADS
Pieter van Dijk, Velp, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Feb. 29, 1956, Ser. No. 568,666
Claims priority, application Netherlands Mar. 4, 1955
9 Claims. (Cl. 57—34)



1. Apparatus for curling thermoplastic yarns that comprises yarn draw off means, yarn delivery means, heating means in the yarn path between said delivery and draw off means, and a pair of driven rollers in the yarn path between said heating means and said draw off means, said rollers being in the form of hyperboloids disposed in mutual surface contact with their axes crossing at an angle equal to twice the angle between the hyperboloid axis and the line constituting its generatrix.

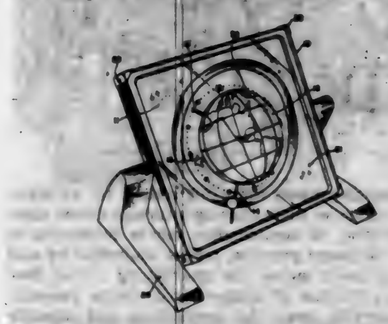
2,943,434
SPLICE AND METHOD OF MAKING THE SAME
Robert F. Joy and Carl W. Smellinger, Bethlehem, Pa., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Filed Mar. 16, 1956, Ser. No. 571,990
11 Claims. (Cl. 57—142)

2. Method of splicing two wire ropes having a metallic core which comprises establishing a splice length, severing alternate strands of the first rope at a distance from the end thereof equal to the splice length, severing alternate strands of the second rope at a distance from the end thereof equal to the splice length, removing the core from said ropes in a total amount equal to the splice length, laying said ropes together with their cores abutting and with the unsevered strands of each rope lying in the spaces left by the severed strands of the other rope, and compressing sleeves on said rope at the points at which said strands abut.



8. A splice for two wire rope ends having metallic cores in which alternate strands of each of said ends are laid into voids from which corresponding strands of the opposite ends have been severed at a like distance from each rope end, sleeves pressed upon said rope at each of the two severance points thus forming an endless element having a rope body of the same cross sectional area throughout and in which all strand ends are confined within said sleeves.

2,943,435
INDICATING DEVICE
John T. Gorsuch, Baltimore, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland
Filed Sept. 7, 1956, Ser. No. 608,453
3 Claims. (Cl. 58—3)



1. A clock having a face and a seconds hand movable about said face, a member slidably and rotatably mounted upon said seconds hand near the end thereof, said member being in substantially continuous contact with said face, and caused to roll across said face in a generally circumferential manner as said seconds hand moves thereabout, and means to cause said member to move back and forth upon a portion of said seconds hand so as to describe an elliptical path about said clock face as said hand moves to indicate the passage of time.

2,943,436
STAPLE BLANK
Henry F. Peterson, Westerly, R.I., assignor to Bostitch, Inc., Stonington, Conn., a corporation of Rhode Island
Filed Apr. 1, 1957, Ser. No. 649,736
2 Claims. (Cl. 59—77)



1. A blank for the construction of U-shaped staples consisting in a length of fastener material having an intermediate crown portion with integral leg portions bent downwardly at the opposite ends of said crown portion to extend therefrom in portions inclined obliquely to said crown portion and continued outwardly therebeyond in a plane slightly below the parallel to the plane of said crown portion.

2,943,437
EXPANSIBLE LINK STRAP
Gerhard Ehringer, Pforzheim, Germany, assignor to Rodi & Wienenberger Aktiengesellschaft, Pforzheim, Germany, a firm
Filed July 19, 1957, Ser. No. 672,958
Claims priority, application Germany Aug. 9, 1956
2 Claims. (Cl. 59—79)

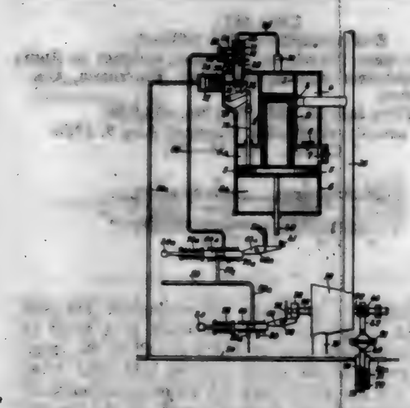


1. An expansible link strap for ornamental bracelets and the like comprising the combination of a series of links the longitudinal axes of which extend in the longitudinal direction of the strap, each of said links being comprised of a pair of box-like link elements including an outer sleeve-shaped link element closed on the longitudinal top, bottom and sides thereof and a similar intermediate link element slidably telescoped within said outer sleeve-shaped link element, each of said links having one of said elements hingedly connected to the other of said elements of the next adjacent link at adjacent end portions, at least two adjacent links having their respective elements detachably connected, each of said two links having spring strip abutment means removably connecting the link elements making up the said link and a biasing spring with its respective intermediate link element, each, said spring strip abutment means having a middle portion extending between the bottom of the intermediate link element and the biasing spring, an inner hook-shaped end portion engageable with one extremity of the biasing spring and an outer hook-shaped end portion which extends through an end wall of the respective intermediate link element and projects downwardly to releasably engage an end of the bottom of the respective outer sleeve-shaped link element, said end wall also being engaged by the other extremity of said biasing spring.

2,943,438
IMPROVEMENTS IN FREE PISTON ENGINE AND GAS TURBINE POWER PLANT
Robert Huber, Belleyue, France, assignor to Societe d'Etudes et de Participations, Eau, Gaz, Electricite, Energie, S.A., Geneva, Switzerland, a society of Switzerland
Filed Jan. 21, 1955, Ser. No. 483,376
Claims priority, application France July 5, 1950
2 Claims. (Cl. 60—13)

1. A power plant which comprises, in combination, a free piston machine for supplying a stream of fluid under pressure, said machine including a power portion of the internal combustion engine type having an air intake and an exhaust output and a compressor portion operated by said power portion and arranged to supply compressed air to take air intake, a fuel pump for feeding fuel to said power portion, fluid operated means for controlling said fuel pump, said fluid operated means including a fluid conduit interposed between said pump and a source of fluid under pressure and two valves mounted in series with each other in said conduit so that shifting of either of said valves from a normal position thereof to an emergency position thereof makes said fuel pump inoperative, a turbine having its input connected with

said exhaust output of said free piston machine power portion, governor means mounted on the shaft of said turbine and connected with one of said valves, said governor means being responsive to a rise of the speed of operation of said turbine above a predetermined limit value for stopping the supply of said fluid from said free piston machine to said turbine as soon as such



limit speed is reached exclusively by moving said last mentioned valve from the normal position thereof to the emergency position thereof, and means responsive to variations of the length of stroke of the piston of said free piston machine for shifting the other of said valves from the normal position thereof to the emergency position thereof in response to an increase of said length of stroke beyond a predetermined limit value.

2,943,439
METHOD OF PROPELLING ROCKETS AND ROCKET FUELS
Cleveland R. Scott, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 19, 1952, Ser. No. 288,751
34 Claims. (Cl. 60—35.4)

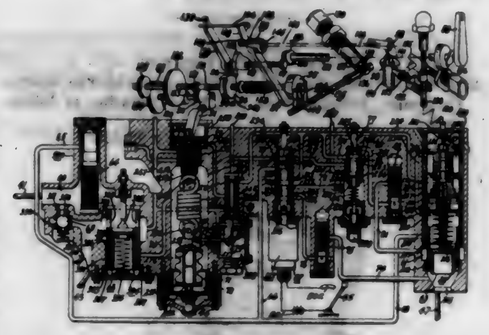
1. A method for applying immediate thrust to a mass, comprising introducing separate streams of an oxidant and fuel components of a bipropellant into contact with each other in a combustion chamber of a reaction motor in such proportions as to produce spontaneous ignition, said fuel component comprising a mixture of from 10 to 90 mol percent of a 5-membered heterocyclic compound containing one nitrogen and four carbon atoms in the ring and having not more than 16 carbon atoms per molecule, and from 90 to 10 mol percent of a mercaptan selected from the group consisting of tert-butyl mercaptan, tert-hexyl mercaptan, and tert-octyl mercaptan.

2,943,440
PROPULSION OF BOATS OR THE LIKE
Julius Andreu, 1716 I St. NW., Washington, D.C.
Filed Aug. 27, 1959, Ser. No. 836,482
11 Claims. (Cl. 60—35.5)



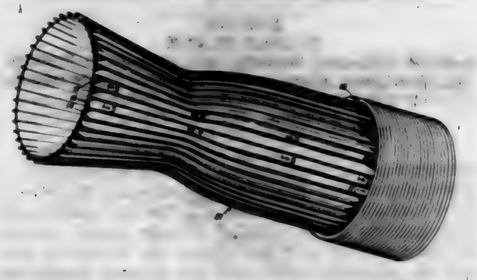
1. Boat propulsion mechanism comprising a tube mounted on the boat below the water line and having an open rear end and a closed front end, said tube having at least one elongated opening in its longitudinal wall, a source of gas under pressure, means connecting said gas source to the interior of said tube at a point spaced from the rear end thereof and located forwardly of at least the greater part of said opening, an elongated member turnably mounted within the tube having portions angularly spaced around its longitudinal axis engageable with the inside of the longitudinal wall of the tube on opposite sides of the opening, and means to rotate said member.

2,943,441
AFTERBURNER FUEL SCHEDULING CONTROL WITH ENRICHMENT AT LOW COMPRESSOR DISCHARGE PRESSURE
Howard H. Dietrich, John D. Hiller, Robert Lay, Mark R. Rowe, and Harry C. Zeisloft, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 1, 1955, Ser. No. 498,682
17 Claims. (Cl. 60—35.6)



1. A scheduling means for a fuel control for an afterburner of a turbo jet engine having a turbine driven compressor including, in combination, means responsive to compressor discharge pressure, means controlled by said pressure responsive means for establishing a fuel flow schedule as a function of compressor discharge pressure, manually operable means for modulating said schedule between predetermined limits, and means responsive to manually operative means when the compressor discharge compressor discharge pressure effective to disable the pressure is below a preselected value.

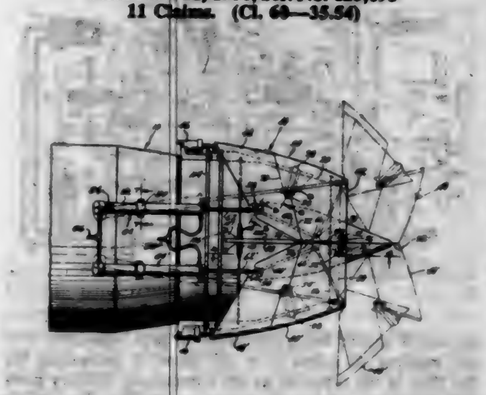
2,943,442
ROCKET THRUST CHAMBER CONSTRUCTION
Edward F. Bachr, 494 Fair St., Berea, Ohio
Filed Jan. 9, 1959, Ser. No. 785,990
6 Claims. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A regeneratively cooled combustion chamber able to withstand high flux rates, said chamber comprising a

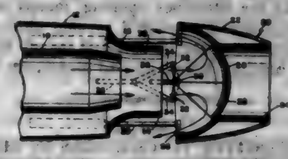
plurality of channels secured together to form a hollow elongated enclosure with the ribs of said channels extending radially outwardly, rod-like binding means encircling the exterior of said enclosure and secured to said ribs to form a skin defining thereby with said channels a series of coolant passages surrounding said enclosure and extending longitudinally thereof, means for admitting propellant coolant to one end of said coolant passages, means at the opposite end of said coolant passages for conducting said propellant coolant from said coolant passages into the interior of said chamber and means at said opposite end for injecting propellant oxidant into said chamber to react therein with propellant coolant from said coolant passages.

2,943,443
THRUST REVERSERS
James S. Voymas, Natick, and Arthur J. Ambuter, Canton, Mass., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Nov. 21, 1956, Ser. No. 623,693
11 Claims. (Cl. 60—35.54)



1. A discharge duct having an axis and an exhaust outlet through which exhaust gases are discharged, in combination with a thrust reverser unit which forms a smooth fairing surrounding and spaced from said duct when in its retracted position and which forms a W-shaped wall downstream of said exhaust outlet to smoothly divert and substantially reverse the flow of said exhaust gases when in its operating position, said thrust reverser unit comprising two similar pivotable units located on opposite sides of said duct, each of said pivotable units being of two-piece construction comprising a downstream piece which is pivotally attached to said exhaust outlet at a pair of first points and which forms the downstream portion of said fairing and which further culminates in a circular outlet substantially concentric with said exhaust outlet when said thrust reverser unit is in its retracted position and further comprising an upstream piece pivotally attached to said downstream piece at a pair of second points and which forms the upstream portion of said fairing when said thrust reverser unit is in its retracted position, actuating means pivotally attached to said upstream pieces at a pair of third points to cause said pivotable units to pivot outwardly and rearwardly about said exhaust outlet to form two oppositely directed abutting gas flow reversing gas passages downstream of said exhaust outlet with all of said first and third points in substantial radial alignment in a plane normal to said axis or to pivot forwardly and inwardly to their retracted positions.

2,943,444
COMBINATION THRUST AUGMENTER, SOUND SUPPRESSOR AND THRUST REVERSER FOR JET ENGINES
John W. Baxter, San Diego, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Filed Apr. 28, 1958, Ser. No. 731,169
1 Claim. (Cl. 60—35.54)



In a jet engine installation: a jet engine and an enclosing structure surrounding said engine; a thrust control assembly mounted rearwardly of said jet engine and substantially coextensive with said enclosing structure, said assembly including a nozzle coaxial with said jet engine; said nozzle having a generally spheroidal, forwardly concave mouth portion; means for moving said assembly axially rearwardly to define an opening between said enclosing structure and said mouth portion to admit air to said nozzle for mixture with an augmentation of the jet engine exhaust; a pair of generally spheroidal shell segments mounted in said mouth portion in overlapping concentric relation therewith and pivotally connected at their apices on an axis substantially diametrical to said assembly; said shell segments, when swung inwardly together, constituting a continuation and central complement of said mouth portion in defining a composite, concave thrust reversing baffle having the general form of a hollow hemisphere; means for swinging said shell segments to block said nozzle, whereby the exhaust is deflected forwardly through said mouth portion; said shell segments being each asymmetric with respect to said axis so that the exhaust gas stream tends to separate the segments and clear the nozzle for normal thrust.

2,943,445
MISSILE SAFETY CLOSURE
Jack H. Rittershaus, Topanga, and Carl A. Weise, Pacific Palisades, Calif., assignors to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed June 27, 1955, Ser. No. 518,092
5 Claims. (Cl. 60—39.09)



1. An assembly of the type described comprising: a container having an opening at one end thereof and having a peripheral groove extending about said opening, said container being adapted to receive a propellant

charge and igniter; a plug type closure adapted to engage within said opening; means for maintaining the closure in said opening including a pivot post, a hub rotatably mounted on the post, a series of sheer members each being affixed at its inner end to the hub to be rotated thereby and each being constrained at its outer end to move generally radially of the closure into the peripheral groove about the container opening; means to rotate the hub; a circuit breaker secured to said closure for controlling operation of the igniter; and means for operating said circuit breaker in response to movement of the hub.

2,943,446

MEANS SENSITIVE TO CHANGES IN THE EFFECTIVE RESTRICTION OF A RESTRICTIVE ELEMENT IN A FLOW CONDUIT

Donald George Goodall, Hucknall, and John Charles Chicken, Sherwood, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Filed Oct. 4, 1956, Ser. No. 614,013
Claims priority, application Great Britain Oct. 7, 1955
12 Claims. (Cl. 60—39.09)



1. In combination a conduit having a flow restricting element therein, pressure-sensitive means for measuring the degree of restriction afforded by said element including a venturi in said conduit upstream of said element and a pressure-sensitive element subjected to the difference between the pressure at the throat of the venturi and the pressure downstream of said element, said pressure-sensitive means being adapted to provide a signal indicative of the degree of restriction of said restricting element, which signal is substantially independent of rate of flow in said conduit.

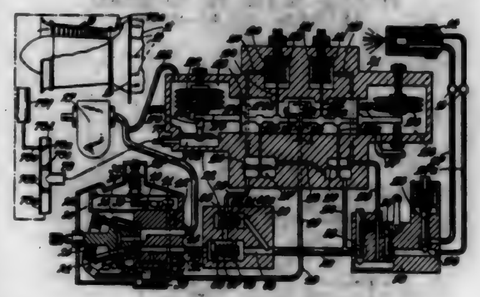
2,943,447

ENGINE ACCELERATION FUEL CONTROL RESPONSIVE TO SPEED SCHEDULED COMPRESSOR PRESSURE RATIO

David Onuri Davies, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed June 8, 1953, Ser. No. 360,180
Claims priority, application Great Britain June 17, 1952
23 Claims. (Cl. 60—39.28)

1. For use with a gas-turbine engine which comprises a compressor, main combustion equipment connected to the outlet end of the compressor and a turbine connected to receive combustion gases from the main combustion equipment, a fuel system for delivering fuel to the main combustion equipment comprising a fuel pump, fuel injectors adapted to deliver fuel into the combustion equipment and a pipe-line connecting the fuel pump and the fuel injectors, and control means controlling the fuel flow from the pump through the pipe-line to the injectors during acceleration of the engine, which control means comprises flow-restricting means located in the pipe-line, the actual fuel-flow to the injectors passing through the flow-restricting means whereby a pressure difference which varies with the rate of fuel flow is produced across said flow-restricting means, an adjustable control member adapted on adjustment to vary the rate of fuel flow to the injectors, first pressure-responsive means, pressure connections leading from said pipe-line on each side of said flow-restricting means and connected to said first pressure-responsive means to subject said first pressure-responsive means to a load which varies with said pressure difference, said first pressure-responsive means being connected to load said adjustable control member to adjust it in the sense to reduce the fuel flow in the pipe-line as said pressure difference increases, second pressure-responsive means, a first conduit adapted to lead from the delivery end of said compressor to a point of lower pressure associated with the compressor, first and second restricting means arranged in series in said first conduit, a second conduit connected to said first conduit between said first and second restricting means and connected to said second pressure-responsive device to load it in accordance with the pressure produced in said first conduit between said first and second restricting means by the compressor delivery pressure, said second pressure-



responsive means being connected to said adjustable control member to adjust it in the sense of increasing the fuel flow in the pipe-line as the compressor delivery pressure increases, adjustable means controlling flow of air in said first conduit from the compressor delivery through said first and second restricting means to the point of lower pressure thereby on adjustment to vary the pressure in the first conduit between the first and second restricting means and the ratio of the pressure acting on the second pressure-responsive means to the instantaneous compressor delivery pressure to modify the control effect of compressor delivery pressure, and engine-parameter-responsive means responsive to an engine operating parameter which varies with engine rotational speed throughout the speed range thereof, said engine parameter-responsive means being connected to adjust the adjustable means in a sense to increase said ratio as the engine accelerates from a lower to a higher speed at least in a range of speeds between a low speed range and a high speed range.

2,943,448

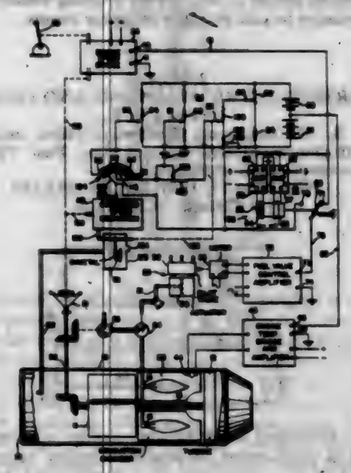
JET ENGINE CONTROL APPARATUS

Lloyd E. Berggren, Minneapolis, Gordon B. Schneider, Moundsview Township, Ramsey County, and Harold P. Sorensen, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Aug. 20, 1954, Ser. No. 451,176
4 Claims. (Cl. 60—39.28)

4. In control apparatus for an engine of the gas turbine type, means responsive to a condition indicative of combustion chamber temperature, means responsive to engine speed, means responsive to engine inlet temperature, means for varying the supply of fuel to said engine, switching means, means including said switching means

connecting said speed responsive means to control said fuel supply varying means, means including said switching means connecting said means indicative of combustion chamber temperature to control said fuel varying means, said switching means permitting one or the other of said speed responsive means or said means responsive to a condition indicative of combustion chamber temperature to control said fuel supply varying means, means biasing said switching means so that said speed responsive means normally controls said fuel supply varying means, and means operating said switching means in accordance with the joint effect of said speed responsive means, said inlet temperature responsive means and said



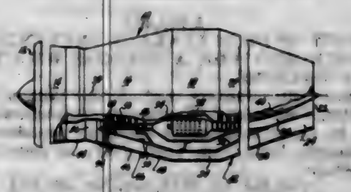
means responsive to a condition indicative of combustion chamber temperature so that said means indicative of combustion chamber temperature controls said fuel varying means, said inlet temperature responsive means cooperating with said speed responsive means and said means responsive to a condition indicative of combustion chamber temperature to vary the value of combustion chamber temperature at which said means responsive to a condition indicative of combustion chamber temperature is able to overcome the effect of said speed responsive means and said biasing means and cause said switching means to operate in a manner causing said means indicative of combustion chamber temperature to control said fuel supply varying means.

2,943,449

BYPASS ENGINE WITH FLEXIBLE DUCT STRUCTURE

Alexander Kurti, Wethersfield, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Filed July 7, 1958, Ser. No. 746,971
3 Claims. (Cl. 60—39.32)



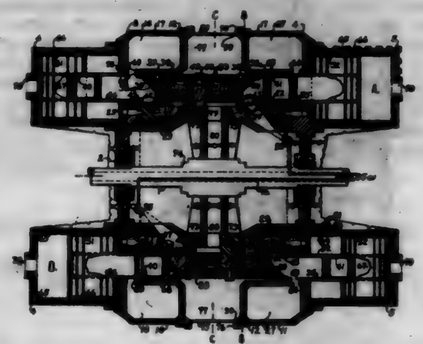
1. A bypass engine having an axis and a bypass ducting structure comprising an outer case of circular cross section concentric about said engine axis and comprising a plurality of abutting and solidly joined case sections including a frusto-conical portion, an inner case of circular cross section concentric with and enveloped by said outer case and cooperating therewith to form an annular bypass passage and comprising a rigid case including a frusto-conical portion radially aligned with the frusto-conical portion of said outer case to form a frusto-conical annular passage therebetween, said frusto-conical portion of said inner case being interrupted and presenting axially and radially spaced cylindrical end surfaces and axially and radially spaced radially extending end surfaces, and a floating sleeve of frusto-conical shape having axially and radially spaced cylindrical end surfaces mating with and received for axial and radial movement by said cylindrical end surfaces of said inner case frusto-conical portion and further having axially and radially spaced radially extending end surfaces cooperating with said frusto-conical portion radially extending end surfaces to define the limits of axial movement of said sleeve, said sleeve being supported solely by said frusto-conical portion cylindrical end surfaces and therefor being free to move and expand radially and axially.

2,943,450

CHEMO-KINETIC ENGINES

Corwin D. Willson, 625 Goldengate St., Lake Orion, Mich.

Filed July 20, 1959, Ser. No. 828,144
26 Claims. (Cl. 60—39.34)



1. As a new product of commerce, a chemo-kinetic external combustion engine combining in a stator a cam having a central shaft, a compressor having a compartmented cylinder enclosed at opposite ends, a piston operative in the cylinder to blend and compress in stages two strongly chemically reactive portions of a fuel charge, a combustor having a two-stage combustion chamber made up of two enclosures, one turning with said shaft and the other reciprocating with said piston, the cam having a follower making the two enclosures temporarily conjunctive and each enclosure exploding a different part of said charge: combustion of part of said charge in and discharge from the rotative enclosure directly powering said shaft by recoil of said rotative enclosure, and combustion of the balance of said charge in the reciprocative enclosure indirectly powering said shaft by pushing said piston and follower to turn said cam.

2,943,451

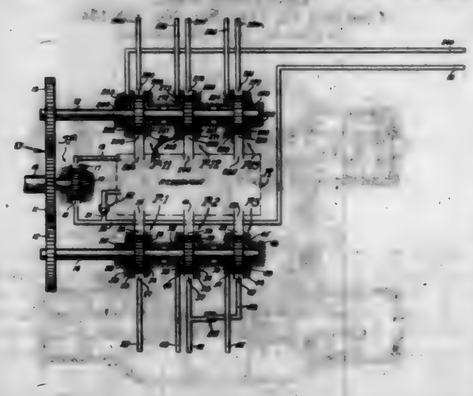
HYDRAULIC TRANSMISSION

John A. Lauck, Shaker Heights, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed May 24, 1957, Ser. No. 661,462
1 Claim. (Cl. 60—53)

In a hydraulic transmission, a combination comprising: a source of fluid; drive means; a plurality of sets of

pump means, each pump means having inlet means in fluid communication with said source, a pumping chamber, and outlet means; pumping elements disposed in each pumping chamber and operatively interconnected with said drive means whereby said pumping elements when driven by said drive means are adapted to receive fluid from said inlet means and deliver the same under pressure to said outlet means; means defining pressure chamber means in each pump means adjacent the respective pumping elements; movable end plate means disposed in each chamber means and each having a loaded position whereby the associated pumping elements are adapted to deliver fluid pressure to the respective outlet means and an unloaded position whereby the associated pumping elements are prevented from delivering fluid pressure to the respective outlet means; means communicating fluid pressure from said pump means to said chamber means whereby the respective end plate means are adapted to be moved to said loaded position by the force of the fluid pressure in the respective chamber means; a plurality of hydraulic motor means each having output shaft means subject to varying loads; means defining a plurality of passage means each fluidly interconnecting said outlet means of one set of pump means with one of said motor means whereby the fluid

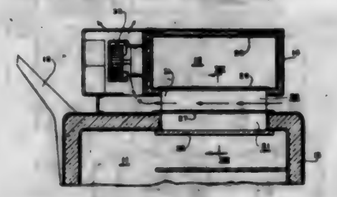


pressure delivered to each said passage means drives the respective said motor means, each set of pump means including communicating means fluidly interconnected with each chamber means of certain of said plurality of pump means thereof and said source, movable valve means disposed in said communicating means and normally in a position preventing fluid communication between said source and said chamber means whereby the end plate means of said certain pump means are adapted to be in said loaded position, said valve means having motive surface means subject to the force of the fluid pressure in the outlet means of the remainder of said plurality of pump means whereby said valve means is moved to other positions when the force exerted by the pressure fluid in the outlet means of said remainder of pump means exceeds a first set of predetermined values and thus permits communication between said source and at least one of said chambers causing the respective end plate means to move to said unloaded position rendering the associated pump means ineffective to deliver fluid pressure to the respective outlet means, said force exerted by the pressure fluid in the outlet means of said remainder of pump means being related to the load on the output shaft means of the respective said motor means whereby the load on said output shaft means determines the speed thereof; bypass means fluidly interconnecting said passage means together; second movable valve means disposed in said bypass means and normally preventing communication between said passage means, said second valve means having motive surface means subject to the force of the pressure fluid in the passage means of one set of pump means whereby said second valve means is moved to another position when said force exerted by the pressure fluid in said one passage means exceeds said first set of predetermined values, said second valve means when in said another position causing said end plate means of the remainder of pump means of the remainder of sets of pump means to move to said unloaded position and permits fluid communication between said passage means through said bypass means whereby said remainder of pump means of said one set of pump means delivers fluid pressure to said plurality of motor means.

2,943,452
THERMOELECTRIC WARMING AND COOLING APPLIANCE

Leslie B. M. Buchanan, Galloway, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed May 14, 1959, Ser. No. 813,187
4 Claims. (Cl. 62—3)



1. A combined warming and cooling appliance comprising in combination, an insulated cooling compartment adapted to be maintained at a temperature below the temperature of ambinet air, an insulated warming compartment adapted to be maintained at a temperature above the temperature of ambient air, a thermoelectric heat pump for transferring heat from said cooling compartment to said warming compartment, said pump comprising an array of thermoelectric elements formed of dissimilar thermomotive materials and arranged to provide a plurality of cold junctions and a plurality of hot junctions, means for conveying heat from said cooling compartment to said cold junctions, means for conveying heat from said hot junctions to said warming compartment, said last-named means comprising a structure formed of good heat conducting material and having a portion thereof in thermal transfer relationship with said warming compartment, said structure being further provided with an extended heat transfer surface which is isolated from the contents of said compartments, and means for conveying ambient air in thermal transfer relationship with said extended heat transfer surface for removing from said structure heat in excess of that required to maintain said warming compartment at a predetermined temperature.

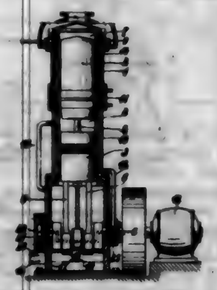
2,943,453
GASEOUS MEDIUM LEAKAGE PREVENTION ARRANGEMENT FOR A HOT-GAS RECIPROCATING MACHINE

Cornelius Otto Jonkers and Jacob Willem Laurens Köhler, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 14, 1955, Ser. No. 481,872
Claims priority, application Netherlands Jan. 22, 1954
6 Claims. (Cl. 62—6)

1. A closed lubricating oil system for a hot-gas reciprocating apparatus having a cylinder containing a gaseous medium therein, a piston adapted for reciprocation in

said cylinder and forming two spaces therewith, a freezer, regenerator and cooler in series and interconnecting said two spaces, a sealed crankcase having a crank and a crankshaft therein, a pump supplying lubricant from the crankcase to areas to be lubricated, conduit means and oil passages in said crankshaft connected to said pump and for transporting lubricant from one end of said crankshaft through the other end thereof, a cooling chamber surrounding one of said spaces, pipe means operatively connecting said cooling chamber with said passages

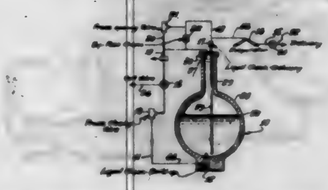


in said crankshaft whereby when said lubricant is in said cooling chamber the former is in thermal contact with said cylinder to act as a coolant therefor, a discharge duct for conducting lubricant from said cooling chamber back to said crankcase, said lubricant in said pipe means forming a liquid seal between the crankshaft and its bearing in the crankcase, said cooling chamber being located over said liquid seal whereby said lubricant maintains a hydrostatic pressure on the liquid seal when the apparatus is inoperative thereby preventing lubricant leakage through said liquid seal.

2,943,454
LIQUID OXYGEN CONVERTER

Howard B. Lewis, deceased, late of Newport Beach, Calif., by Bank of America National Trust & Savings Association, executor, Santa Ana, Calif., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 30, 1958, Ser. No. 745,650
9 Claims. (Cl. 62—51)



4. In a converter of the character described, the combination of: an insulated flask having liquid and gas phase sections; a pressure build-up circuit connecting the liquid and gas phase sections of said flask; a build-up check valve in said pressure build-up circuit and immediately adjacent to said liquid phase section, said build-up check valve permitting a flow of fluid from said liquid phase section into said build-up circuit but preventing any sudden reverse flow of fluid; a supply circuit communicating between said liquid phase section and a point of delivery independent of said build-up circuit; an evaporator in said supply circuit and adapted to vaporize liquid supplied thereto by said supply circuit; and a delivery check valve in said supply circuit between said evaporator and said liquid phase section.

2,943,455
REFRIGERATOR CABINET

George H. Reverman, Jr., Columbus, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 26, 1957, Ser. No. 674,517
5 Claims. (Cl. 62—77)

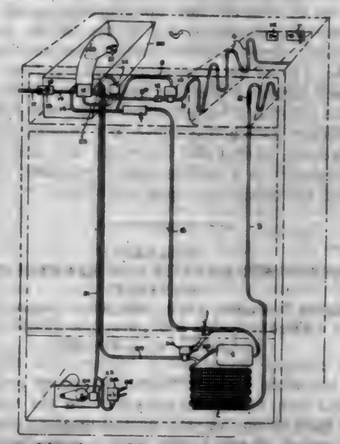


1. A structural wall unit for refrigerator cabinets comprising an insulating core member of discrete closed cell structure having the ability to resist passage of water and water vapor therethrough, impact resistant skin sheets secured to opposite faces of said core member and cooperating with said core member to form a rigid panel structure, one of said sheets having an opening therein, said core having a recess therein coextensive with the opening in said one sheet, said recess extending partially through said core member, a refrigerating system including a cooling unit and a refrigerant circulating unit, said cooling unit being disposed in the said recess in said core member, and means for supporting said refrigerant circulating unit on said panel structure in spaced relation to said cooling unit, the construction and arrangement being such that said cooling unit and said refrigerant circulating unit can be transported in fixed, spaced relation by said panel structure.

2,943,456
ICE CUBE MAKING ADDITION TO DOMESTIC REFRIGERATORS

Aaron Lee, 535 Fairway Drive, Miami Beach, Fla.

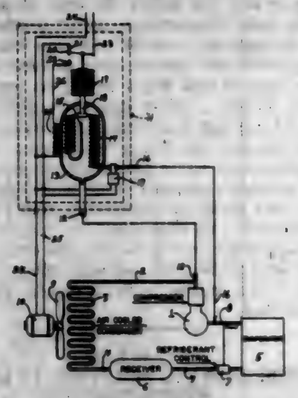
Filed Apr. 23, 1957, Ser. No. 654,566
4 Claims. (Cl. 62—138)



1. The combination with a domestic type refrigerator comprising a conventional compressor, condenser, evaporator, main refrigerant line from the compressor to the evaporator, return suction line from evaporator to compressor and hot gas line from compressor to condenser, of an ice cube freezing cup having a jacket therearound, means for feeding water into said cup to a determined

level, a valve casing, an auxiliary refrigerant conducting line leading from said valve casing to said jacket, said valve casing being included in the return suction line, a two position valve movable in the valve casing which in one position establishes communication between the evaporator and the return suction line and closes communication between the evaporator and the auxiliary refrigerant line to the jacket and in the other position shuts off communication between the evaporator and the return suction line and establishes communication between the evaporator and the auxiliary refrigerant line to the jacket, to thereby set up a freezing cycle therein.

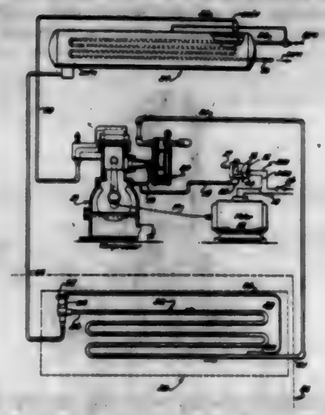
2,943,457
CONTROL SYSTEM FOR WINTER OPERATION OF AIR-COOLED CONDENSERS
Daniel D. Wile, Whittier, and David S. Brainard, Altadena, Calif., assignors to Recold Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 13, 1959, Ser. No. 799,317
7 Claims. (Cl. 62—184)



3. In a refrigerating system involving a compressor having an intake and a discharge side, an air-cooled condenser connected with the discharge side of the compressor, a fan for forcing air through said condenser, and a motor for driving the fan, the combination of: a bypass line from the discharge end to the intake end of said compressor; flow-resistance means interposed in said bypass line; a valve for controlling discharge from said flow-resistance means; a pressure switch communicating with said flow-resistance means intermediate the ends thereof; said pressure switch responsive to a predetermined minimum pressure to stop said fan motor and close said valve, and responsive to a predetermined maximum pressure to start said fan motor and open said valve.

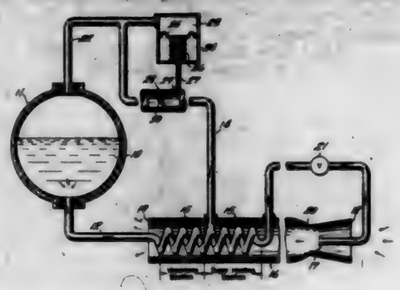
2,943,458
CONTROL APPARATUS FOR REFRIGERATION SYSTEM
James T. Cohen, 1410 10th Ave., Yuma, Ariz.
Filed May 20, 1955, Ser. No. 509,817
11 Claims. (Cl. 62—204)

1. A control device for a refrigeration system, said device including pressure-responsive means responsive to high and low refrigerant pressures on the low-pressure side of such system for starting and stopping, respectively, the operation of said system, and a temperature-responsive element cooperating with said pressure-responsive means to reduce the high pressure at which said system starts, without, however, reducing the low pressure at which said system stops when the temperature of the ambient air surrounding said control device drops to a value otherwise rendering said pressure-responsive means ineffective for starting said system, said pressure-responsive means including bellows connected to said system, a range spring normally exerting a pressure on said bellows, a differential spring acting in the opposite direction to said range spring, a common element interconnecting said range and differential springs, an electric switch closed and opened by said common element in



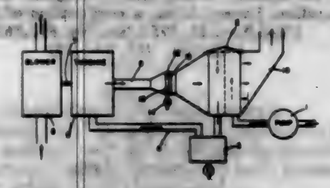
response to said high and low pressures, respectively, said temperature-responsive element being loaded with one end on said common element and having the other end free to aid said common element to close said switch when said temperature drops to said above mentioned value without, however, opposing the opening of said switch.

2,943,459
AIR CONDITIONING SYSTEM
Harold Rind, Syosset, N.Y., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland
Filed Apr. 7, 1958, Ser. No. 726,871
5 Claims. (Cl. 62—217)



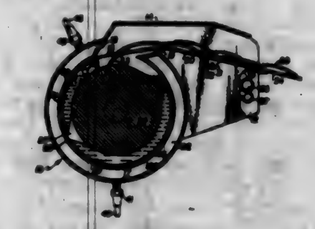
1. An air conditioning system comprising a first passage communicating at both ends with the air to be conditioned, said first passage having an inlet end into which air to be conditioned is introduced and an outlet end from which conditioned air is discharged, a source of liquefied gas, and a second passage connecting the source of liquefied gas with the first passage, the said second passage including a portion thereof in heat exchange relationship with the first passage in which the liquefied gas is vaporized, and a discharge opening for the second passage within the first passage and directed toward the outlet end thereof to discharge the vapor from the second passage into the first passage, thereby inducing a flow of air through the first passage.

2,943,460
ICE PREVENTION IN AIR CONDITIONING SYSTEMS
Kenneth Brown, Los Angeles, Calif., assignor to North American Aviation, Inc.
Filed July 5, 1956, Ser. No. 598,023
6 Claims. (Cl. 62—372)



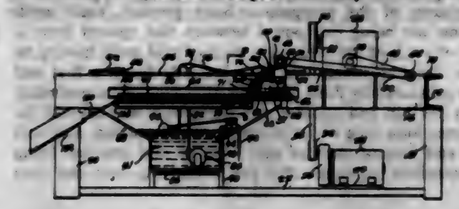
1. A substantially constant discharge-temperature air expansion refrigeration device comprising means for expanding moisture-laden, high-pressure, high-temperature air to a lower pressure and a temperature below the freezing point of water; and means for automatically regulating the pressure drop across said expansion means to prevent the outlet air temperature from said expansion means from falling below the freezing point of water, said means comprising a foraminous member having openings which allow substantially unimpeded flow of all of the discharge air therethrough and which presents a large surface area surrounding said openings for the reception of moisture-laden particles thereon whereby said particles are frozen to restrict the openings through the foraminous member when the air discharge temperature drops below the moisture freezing temperature, thereby reducing the pressure drop across said expansion device and increasing the outlet temperature to maintain a substantially constant outlet temperature of not less than the moisture freezing temperature downstream of said foraminous member.

2,943,461
ICE MAKING MACHINE
Virgil A. Davis, 2005 W. Lotus, Fort Worth, Tex.
Filed July 8, 1958, Ser. No. 749,713
2 Claims. (Cl. 62—354)



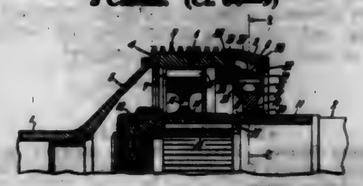
1. In an ice making machine, the combination of an evaporator having a horizontal cylindrical inner wall and having an ice discharge opening in the top and extending the length of said cylinder and said inner wall, a cylindrical rotor axially mounted in said evaporator and spaced from the inner wall thereof, horizontal rigid scrapers projecting from said rotor and extending to said inner wall of said evaporator, said scrapers having tapered forward and rear outer surfaces defined by the direction of rotation of said rotor, and a pivotally mounted ejector plate extending into and outwardly of said ice discharge opening, one side edge of said ejector plate being in sliding contact with said rotor and said scrapers.

2,943,462
ICE CHIPPING MACHINE
Raymond E. Wolfermann, Millard, Ind., assignor of fifteen percent to Carl Ford Bender and Janice Dean, both of New Paris, Ind.
Filed June 24, 1955, Ser. No. 744,146
7 Claims. (Cl. 62—354)



1. An ice chip machine comprising: a frame; an evaporator thereon including a tray having longitudinally extending corrugations forming alternating ribs and recesses, and means for refrigerating the tray; a knife assembly reciprocating on said tray in a path parallel to the several corrugations, said assembly having a shearing stroke and a return stroke when reciprocated, and including a knife in the form of a blade the length of which extends transversely of the several corrugations, said blade being mounted in the assembly for retention at a predetermined angularity to the tray in juxtaposition thereto throughout the shearing stroke, and being formed with a longitudinal series of cutting teeth alternating with the ribs to extend into said recesses for shearing from the tray ice forming in the recesses; and means overlying the tray adapted for depositing water upon said tray.

2,943,463
GREASE SEAL FOR HIGH SPEED FLEXIBLE COUPLING
Eugene E. Shipley, Middleton, Mass., assignor to General Electric Company, a corporation of New York
Filed Nov. 23, 1959, Ser. No. 854,856
5 Claims. (Cl. 64—9)

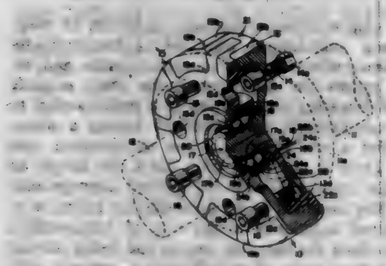


1. A high speed flexible coupling comprising a first rotatably mounted shaft including an enlarged hollow end portion defining torque-transmitting means therein, a second rotatably mounted shaft including a male end portion substantially coaxially disposed within said hollow end portion and defining second torque-transmitting means engaged with said first torque-transmitting means, an axially slidable lubricant retaining ring disposed in sealing relationship with said first shaft hollow end portion to define an annular lubricant chamber therewith containing the first and second torque-transmitting means, and means responsive to centrifugal force urging said retaining ring axially in the direction of the first shaft so as to reduce the volume of said lubricant chamber.

2,943,464
ALIGNING FLEXIBLE COUPLING
Fred W. Voges, 234 N. Woods Road, Flower Hill, Manhasset, N.Y.
Filed Apr. 9, 1958, Ser. No. 727,421
7 Claims. (Cl. 64—14)

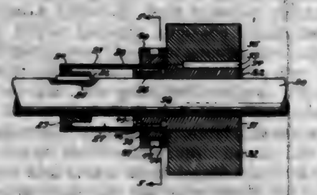
1. An aligning flexible pancake-type coupling for a driven shaft and a driving shaft comprising in combina-

tion: a first jaw for connection with a driven shaft; a second jaw adjacent said first jaw for connection with a driving shaft; each of said jaws including a substantially circular disc-shaped body portion having opposed side faces and a plurality of spaced longitudinally extending teeth, said teeth of each jaw being integral radial extensions of the companion body portion, each tooth of one jaw being interposed between and spaced from a pair of teeth of the other jaw, each of said teeth having an outer face, an inner face, opposed side faces, a first end face substantially flush with one side face of its mounting body portion and another end face projecting beyond the opposed side face of its mounting body portion, and said first end face of each of said teeth of said one jaw being substantially coplanar and parallel to the first end face



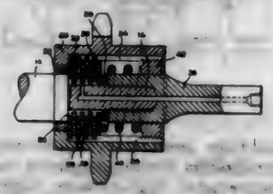
of each of said teeth of said other jaw; and an integral mold of resilient material, said mold having portions thereof interposed between opposed side faces of adjacent teeth to mechanically isolate the teeth of one jaw from those of the other, said mold having portions embracing the inner face of the teeth of each jaw for limiting radial outward movement of said mold, said mold having portions embracing the inner face of each jaw and said another end face to respectively mechanically isolate the teeth of one jaw from the body portion of the other jaw and the body portions from one another whereby optimum torque transmission is obtained by said coupling, and said mold being interposed between the planes of said first end face of both jaws.

2,943,463
ADJUSTABLE SPLINE
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Dec. 16, 1957, Ser. No. 703,199
4 Claims. (Cl. 64—24)



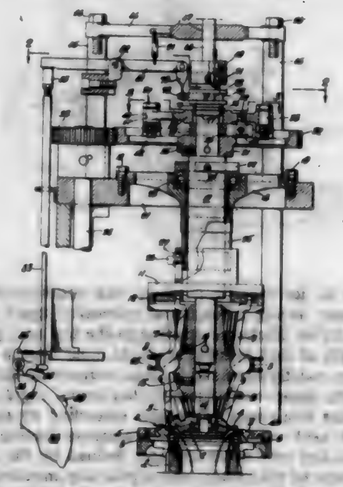
1. In an adjustable spline, a first collar, a second collar having a portion extending into telescoping relation with the first collar, inner and outer sets of cooperating gear teeth, one set on the first collar and the other set on the second collar, the gear teeth having the same tooth form and meshing and contacting at a plurality of spaced areas with intermediate areas where the teeth are nonmeshing and noncontacting, there being a difference in the number of teeth of the two sets which conforms to the number of meshing and contacting areas or a multiple thereof, and a wave generator deflecting the gear teeth on one of the collars into meshing and contacting engagement with the gear teeth on the other collar and frictionally engaging with respect to one of the collars in a self-locking relationship.

2,943,466
FRICTION CLUTCH SPROCKET
Jarrell N. Elliott, Ukiah, Calif., assignor to Masonite Corporation, Laurel, Miss., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,861
2 Claims. (Cl. 64—30)



1. A friction clutch sprocket assembly comprising in combination a sprocket-carrying housing together with a centrally disposed shaft extending therethrough, alternately arranged drive and driven friction discs positioned over said shaft, each of said driven friction discs carrying a pair of opposed centrally-extending projections adapted to engage corresponding keyways in said shaft, each of said drive friction discs carrying a pair of opposed outwardly-extending projections adapted to engage corresponding keyways in the inner surface of said housing, a threaded plug engaging threads in the inner surface of said housing, and a compressible coil spring positioned around said shaft between said friction discs and said threaded plug, said plug adapted to apply torque to said discs by means of said coil spring.

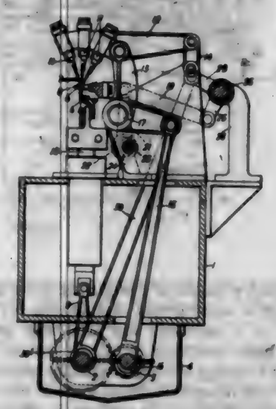
2,943,467
DIAL SHOGGING MECHANISM FOR CIRCULAR KNITTING MACHINES
Thomas J. Thore, Philadelphia, Pa., assignor to Fidelity Machine Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 26, 1957, Ser. No. 655,256
8 Claims. (Cl. 66—15)



1. In a knitting machine comprising cylinder and dial elements, and mechanism for synchronized rotation of said elements, such mechanism including a dial shaft,

a driven member journaled on said shaft, a first member secured to the shaft, a second member attached to and relatively movable with respect to the said driven member and operatively connected to the said first member and means including an actuating member moving in synchronism with the said cylinder for relatively adjusting said second member with respect to the driven member to relatively adjust the shaft angularly with respect to the driven member about the common axis.

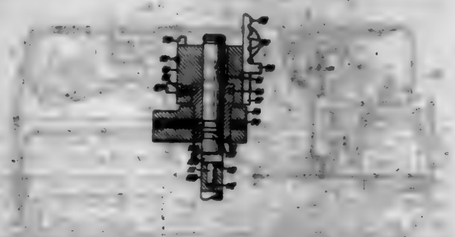
2,943,468
WARP KNITTING MACHINES
Ralph Woollett and Gordon Bond, Burton-on-Trent, England, assignors to F. N. F. Machinery Manufacturing Company Limited, Burton-on-Trent, England, a British company
Filed Oct. 21, 1957, Ser. No. 691,201
Claims priority, application Great Britain Nov. 14, 1956
4 Claims. (Cl. 66—86)



1. In a flat warp knitting machine including a row of needles each with a shank and a hook, driving means for reciprocating said needles along the line of said shanks, a row of sinkers and driving means for reciprocating said sinkers in a direction transversely of said row of needles, the improvement which comprises a sinker position adjusting member having a first cylindrical surface and a second cylindrical surface eccentric to said first surface, a support carrying said member for angular movement about said first cylindrical surface, a link extending in the direction of movement of said needles, one end of said link being mounted for rocking movement on said second cylindrical surface, a sinker bar carrying said sinkers and fixed to the other end of said link, manually-operated means for adjusting the angular position of said member on said support and thereby adjusting the position of said link and said sinkers in the direction of movement of said needles and locking means for holding said member in any of a plurality of adjusted positions.

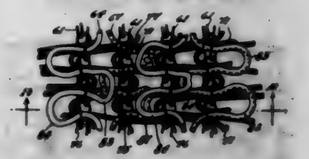
2,943,469
PATTERN MECHANISM
Julius Sirmay, Philadelphia, and David Bird Brinton, Merion Station, Pa., assignors to Scott and Williams, Inc., Laconia, N.H., a corporation of Massachusetts
Original application June 21, 1954, Ser. No. 438,030, now Patent No. 2,854,834, dated Oct. 7, 1958. Divided and this application Aug. 12, 1957, Ser. No. 677,670
2 Claims. (Cl. 66—156)

1. A trick wheel adapted to selectively control instrumentalities of a knitting machine in accordance with selecting data of said trick wheel, said trick wheel comprising a cylindrical member having a plurality of like manually positionable jacks associated therewith, like portions of said jacks providing said selecting data, and a garter spring encircling said member to secure said jacks in each of a plurality of fixed positions relative to said member to thereby provide the selecting data of said trick



wheel, said spring being located in a peripherally formed groove in said member and said jacks having a plurality of grooves each of which is adapted to be placed in registry with said peripheral groove, said plurality of grooves being equal in number to said plurality of fixed positions, the said spring permitting said jacks to be selectively and manually moved to each of said fixed positions.

2,943,470
WARP KNITTED PILE FABRIC HAVING EACH PILE END BOUND ENTIRELY IN ONE WALE
Rex S. MacCaffray, Jr., Boiling Springs, Pa., assignor to C. H. Masland and Sons, Carlisle, Pa., a corporation of Pennsylvania
Original application Nov. 8, 1957, Ser. No. 695,325. Divided and this application Dec. 30, 1958, Ser. No. 783,745
2 Claims. (Cl. 66—191)

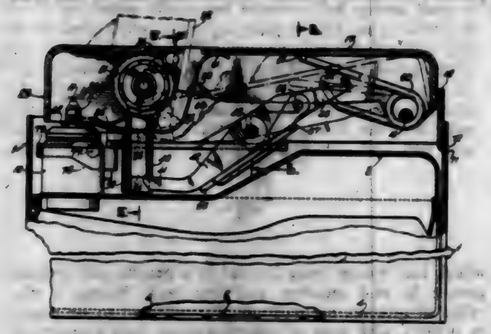


1. A warp knitted pile fabric comprising walewise extending parallel chains of knitted stitches, in-laid backing weft yarn ends extending walewise but each undulating sinuously across and bound into the stitches of at least three of the knitted chains, and pile warp ends extending walewise, each undulating sinuously across and anchored in successive stitches of only one of the said knitted chains so as to form pile loops projecting outwardly from the fabric and leaning alternately rightwardly and leftwardly from its anchoring chain, the pile loops anchored in successive chains along any particular course leaning alternately rightwardly and leftwardly from their anchoring chains into mutual supporting engagement so that each rightwardly leaning loop receives support from a leftwardly leaning loop and vice versa.

2,943,471
CIGARETTE LIGHTER
Stanley H. Newman, Paris, France, assignor to Schick Incorporated, Lancaster, Pa., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,783
Claims priority, application France June 29, 1956
2 Claims. (Cl. 67—7.1)

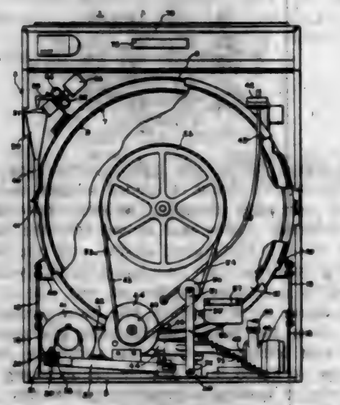
1. A cigarette lighter comprising the combination with an open top case of a mechanism head unit dimensioned to telescope into the open top of the case and incorporat-

ing a stuffer adjacent its forward end and a valve lifter having a forked end disposed beneath the stuffer, a fuel supply in the case having an upstanding lifter type valve at said forward end of the case, stop means for limiting the entry of the forward end of the head unit into the case



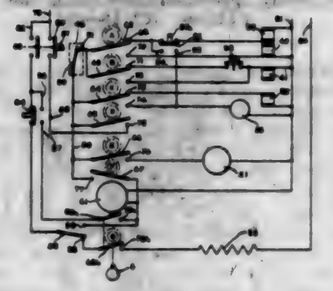
to a depth to position the valve lifter for engagement with the valve when the said forward end of the head unit is inserted into the case to said depth and slid endwise in the direction of its forward end, and latch means for interlocking the head unit and case.

2,943,472
UNBALANCE SENSING ARRANGEMENT FOR MACHINES HAVING A CENTRIFUGAL LIQUID EXTRACTION STEP
Delbert J. Painter, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 18, 1959, Ser. No. 814,063
9 Claims. (Cl. 68—12)



1. In a laundry machine, a clothes basket rotatable on a substantially non-vertical axis; multi-speed drive means for rotating said clothes basket including a driving pulley, a driven pulley connected to said basket so that rotation of said driven pulley causes rotation of said basket, and an endless belt looped over both said pulleys in driven relation to said driving pulley and in driving relation to said driven pulley; said basket being responsive to the force of gravity acting on an unbalanced plastered distribution of clothes within said basket to provide a torque feed-back to said belt modifying the tension thereof; idler means resiliently engaging said belt between said pulleys and movable in response to variations in belt tension; electric speed control means having an energized condition and an unenergized condition, said control means being effective in one of said conditions to raise the speed transmitted to said basket, said drive means rotating said basket at a relatively low speed for tumbling clothes therein when said speed control means is in the other of said conditions; and means providing the other of said conditions in said speed control means in response to a predetermined magnitude of motion of said idler means to decrease the basket speed sufficiently to effect a redistribution of the clothes.

2,943,473
COMBINATION WASHER-DRYER
Joseph C. Worst, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Sept. 18, 1959, Ser. No. 840,838
4 Claims. (Cl. 68—12)

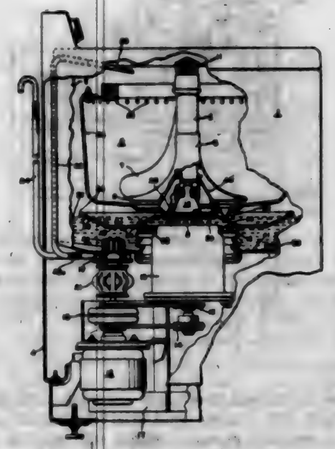


1. A laundry machine comprising a clothes receptacle rotatable on a non-vertical axis; means for rotating said receptacle at a relatively low tumbling speed and at a relatively high centrifuging speed; means for effecting washing and rinsing in said receptacle; means for effecting heating in said receptacle; timer control means controlling all the aforesaid means to provide in sequence first, second and third operations, said timer control means being arranged to operate for at least a minimum predetermined period during said third operation; said timer control means in said first operation causing during at least part thereof said washing and rinsing means to be operated and said receptacle to be rotated at tumbling speed; said timer control means in said second operation causing during at least part thereof said receptacle to be rotated at centrifuging speed; said timer control means in said third operation causing during at least part thereof said heating means to operate and said receptacle to rotate at tumbling speed; and manually operable means arranged in cooperative relation to said control means and having two positions, said manually operable means in one of said positions selecting a sequence including all three said operations and in the other of said positions selecting a sequence including only said first and second operations, said manually operable means when in said other position causing said timer control means to extend said second operation through said minimum predetermined period that said timer control means would have operated in said third operation if it had been provided.

2,943,474
WASHING MACHINE RECIRCULATION SYSTEM
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed June 28, 1957, Ser. No. 666,905
3 Claims. (Cl. 68—18)

1. In a clothes washing machine, a rotatable clothes basket having side wall means and a bottom, means for washing clothes in said basket and means for subsequently rotating said basket to extract liquid from said

clothes, an outer imperforate tub having a bottom and enclosing said basket, means including a pump for circulating liquid from said tub into said basket during the washing operation and for overflowing liquid from said basket into said tub, a filter having a filtering surface for removing lint from said liquid passing from said basket into said tub, said filter being positioned beneath the bottom of said basket and spaced above said bottom of the tub and extending in a plane generally perpendicular to the basket axis of rotation with a diameter greater

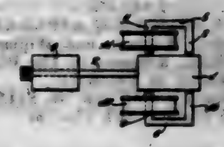


than the basket diameter whereby the liquid overflowing from said basket during the washing operation is intercepted to pass through said filter, the outer rim of said filter being upwardly inclined, means maintaining a liquid level in said tub covering said filtering surface during said washing operation to prevent said filter from being clogged with lint, and said filter being mounted for movement with said basket to discharge the lint collected therein centrifugally into said tub during the rotation of said basket following said washing operation.

2,943,475
PROCESS FOR VISIBLY DETECTING REACTOR INSULATION FAILURE BY MEANS OF COLOR CHANGE IN TEMPERATURE INDICATING PAINT APPLIED TO EXTERIOR WALL THEREOF
Jacques Benveniste, Union, and Charles P. West, Metuchen, N.J., and Harvey N. Lieberman, Bronx, N.Y., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 23, 1957, Ser. No. 661,010
6 Claims. (Cl. 73—15)

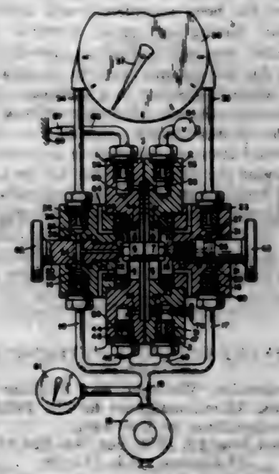
1. A process for visibly detecting insulation failure on the exterior wall of an interiorly insulated high temperature carbon steel reactor, said reactor being insulated interiorly to maintain the temperature during operation of said exterior wall below about 510° F., which process comprises applying a colored coating to the exterior wall of said reactor, said coating consisting essentially of 15 to 40 parts by weight of a pigment selected from the group consisting of copper phthalo cyanine and monochlorinated copper phthalo cyanine and 80 to 130 parts by weight of a carrier comprising a silicone-alkyd resin, the ratio of silicone to alkyd resin being from 5 to 0.5:1.0; subjecting the interior of said reactor to temperatures in excess of about 510° F.; and reducing said interior reactor temperature promptly after any portion of said colored coating changes to a white color and thereby indicates failure of said interior insulation.

2,943,476
LIQUID DENSITOMETERS
Harold A. Bernstein, Cardiff, Wales, assignor to Sunvic Aerocessories Limited, Glamorganshire, Wales
Filed Sept. 3, 1957, Ser. No. 681,545
9 Claims. (Cl. 73—32)



1. A liquid densitometer comprising a support, a substantially nondeformable hollow member, at least one supporting element resilient at least in part and connected at spaced points to the support and to the hollow member, said supporting element being composed of an alloy containing iron, chromium, nickel and titanium and having a modulus of elasticity rising with temperature increase, means maintaining a continuous flow of liquid into and out of the hollow member whereby to keep said member filled with liquid during operation of the densitometer, means imparting to the supporting element periodically varying forces to cause the hollow member to vibrate with respect to the support at the natural frequency of vibration and means responsive to vibration of said hollow member for producing an electrical signal having a characteristic dependent on the frequency of said vibration and thereby on the density of the liquid.

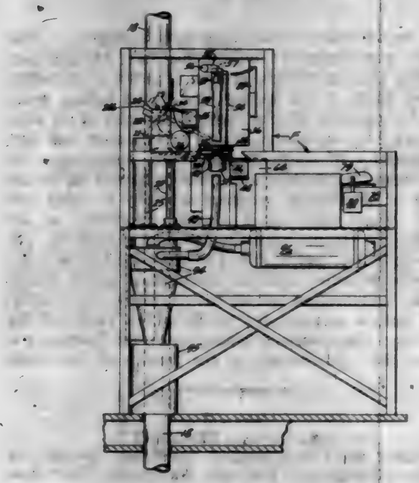
2,943,477
MEASURING APPARATUS
Carl Gustaf Hård af Segerstad, Sandviken, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a Swedish joint-stock company
Filed Apr. 24, 1958, Ser. No. 730,645
4 Claims. (Cl. 73—37.5)



1. A measuring apparatus comprising a two-part body, two opposing central chambers in the parts of the body, a compartment adjacent each central chamber, a common resilient diaphragm separating the central chambers, a valve member mounted centrally in the diaphragm having opposite ends, one in each compartment, a jet in each compartment opposite each end of the valve member, a common supply of pressure fluid to both central chambers and to both jets, a differential pressure gauge, a by-pass from each jet to the opposite sides

of said gauge, a pressure relief valve of predetermined value from one central chamber and a discharge nozzle from the other central chamber responsive to the proximity of the article being measured.

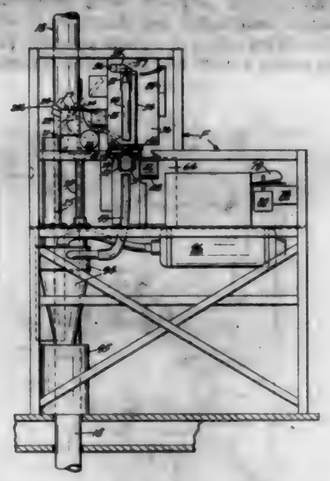
2,943,478
SAMPLE REMOVING APPARATUS
Carl W. Brabender, Wayzata, and William R. Coyne, Minneapolis, Minn., assignors to The Pillsbury Company, a corporation of Delaware
Filed June 13, 1955, Ser. No. 514,946
5 Claims. (Cl. 73—76)



3. A device for removing samples from the sample pan of moisture content determining apparatus after the determination has been completed, said device comprising a conduit having an intake terminal and a discharge terminal, mounting structure movably supporting said conduit for movement to bring its intake terminal from a non-adjacent position to a position in close proximity to and above the sample pan and back again, time regulated control mechanism connected to said conduit and the moisture content determining apparatus for automatically moving the intake terminal of the same to said position and back again at the close of each determination, and means for inducing a negative pressure within said conduit to cause the contents of the sample pan to be withdrawn therefrom and to pass through said conduit when its intake terminal is swung to such position.

2,943,479
MOISTURE CONTENT DETERMINING APPARATUS
Carl W. Brabender, Wayzata, and William R. Coyne, Minneapolis, Minn., assignors to The Pillsbury Company, a corporation of Delaware
Filed June 13, 1955, Ser. No. 514,947
19 Claims. (Cl. 73—76)

1. Moisture-content determining apparatus comprising a sample pan, a balance supporting said sample pan and indicating the weight of the same and its contents, dryer mechanism mounted adjacent to and above said pan and directed into the interior of said pan to dry its contents, a suction conduit mounted adjacent said balance and having a movable intake terminal and a discharge terminal, said intake terminal being movable to a position adjacent to and above said sample pan, suction means connected to said conduit for inducing a negative pressure within said conduit and thereby causing the contents of said sample pan to be withdrawn therefrom and to pass through said conduit when its intake terminal is swung to such position, and control means including timer mechanism, said control means being connected to said first mentioned means and to the intake terminal of said suction conduit for moving the latter into such posi-



tion and correlated with said balance and said dryer mechanism for causing said first mentioned means to induce a negative pressure within said conduit after the sample has been dried and weighed by said dryer mechanism and said balance respectively, to thereby automatically empty said sample pan.

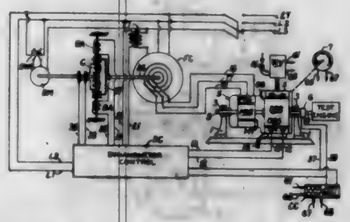
2,943,480
ARRANGEMENT FOR CHECKING THE ZERO CONSTANCY OF WHEATSTONE IMPEDANCE MEASURING BRIDGES
Heinz Netting, Hamburg, Germany, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 21, 1956, Ser. No. 623,622
Claims priority, application Germany Feb. 22, 1956
4 Claims. (Cl. 73—88.5)



1. A circuit arrangement comprising a plurality of electrical elements adapted to vary in electrical impedance in accordance with mechanical deformation thereof, means for connecting said elements in a first bridge arrangement, said bridge arrangement having input and output terminals, means mounting said elements on a member, means for applying a supply voltage to said input terminals, said elements being positioned on said member in a manner whereby the voltage across said output terminals is responsive to mechanical deformation of said member, the said elements being positioned in a manner whereby at least one of the said elements is deformed differently from the other of the said elements, and means for altering the connection of said elements during deformation of said member to form a second bridge arrangement having the same input and output terminals as said first bridge arrangement but

with the said elements rearranged to cause the bridge output voltage to be independent of mechanical deformation of said member.

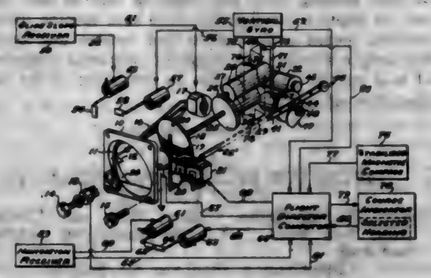
2,943,481
DYNAMOMETER
Jerreld B. Winther, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed July 17, 1957, Ser. No. 672,510
12 Claims. (Cl. 73—116)



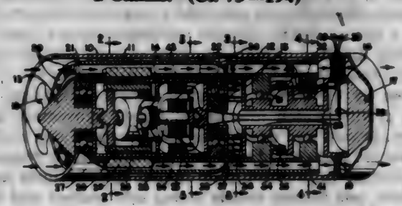
1. A motoring dynamometer comprising a rocking case adapted for torque measurement, a rotary shaft in the case adapted for attachment to an engine under test, an A.C. induction motor having a stator attached to said case and a rotor attached to said shaft, an electric generator responsive to the speed of said shaft to produce an electrical control signal, an induction frequency converter having a stator electrically connected to a source of A.C. power of fixed predetermined frequency and a rotor electrically connected to said induction motor, a second A.C. motor adapted to drive said converter rotor through an electric clutch, a first D.C. field means for said clutch adapted to control the degree of coupling between said second motor and said converter rotor, an electric brake including a second D.C. field means adapted to apply a variable braking action to said converter rotor, and electric control means responsive to said control signal to selectively and variably energize said first and second D.C. field means to maintain the speed of said dynamometer shaft at any preselected value whereby A.C. power at frequencies greater and less than said predetermined frequency may be transmitted by said induction motor to said converter rotor and be converted into A.C. power at said predetermined frequency and thereby be absorbed by said A.C. power source in an absorbing dynamometer mode, and whereby A.C. power at frequencies greater and less than said predetermined frequency may be transmitted by said converter rotor to said induction motor in a motoring dynamometer mode.

2,943,482
FLIGHT DIRECTOR AIRCRAFT INSTRUMENT
Edgar H. Fritze and Horst M. Schweighofer, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Oct. 23, 1956, Ser. No. 617,756
2 Claims. (Cl. 73—178)

1. A flight director horizon indicator for an aircraft comprising a front supporting member formed with a circular opening therein, a horizon indicating disk member rotatably mounted with respect to the axis of said circular opening and concentrically mounted within said opening, a horizon indicating bar diametrically bisecting said disk and a bank reference mark positioned on the periphery of the disk on a perpendicular diameter to said horizon bar, a plurality of fixed reference marks, said fixed reference marks cooperating with said bank reference mark to indicate degree of bank, a pitch indicator bar mounted in front of said disk member, further fixed reference marks cooperating with said pitch indicator bar to indicate degree of pitch and including a zero pitch indicating reference mark, said bar adapted for vertical displacement above and below said zero pitch indicating reference mark to indicate pitch up and pitch down attitudes respectively, said bar having one free end and one end connected at right angles to a first pivot arm, a glide-slope pointer fixed at right angles to a second pivot arm, said pointer being adapted for vertical displacement above and below said zero pitch indicating reference mark in response to corresponding glide-slope position with respect to said aircraft, the extremity of said pointer describing a vertical path adjacent to that described by the free end of said pitch indicator bar, a steering indicator needle, said needle mounted in front of said horizon bar and glide-slope pointer and pivoted about an axis perpendicular to and at the bottom of said front supporting member, activating means responsive to signals indicative of roll attitude connected to said horizon disk to rotate said disk about its axis, activating means responsive to glide-slope displacement connected to said glide-slope pointer, activating means responsive to pitch attitude connected to displace said pitch bar, and activating means responsive to steering command signals connected to displace said steering pointer.



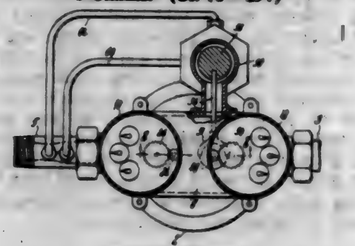
2,943,483
MASS FLOW METER
Robert M. Benson, Pacific Palisades, Calif., assignor to Inertial Instruments, Inc., a corporation of California
Filed Dec. 21, 1955, Ser. No. 554,509
2 Claims. (Cl. 73—194)



1. A mass flow meter comprising, in combination: an impeller unit having a hollow hub portion; a turbine unit in axial alignment with said impeller unit, said impeller and turbine units being mounted for independent turning about their common axis and including enclosed longitudinal passages having inlet and outlet ends for passing fluid; a motor disposed within said hollow hub portion; a plurality of actuating magnets within said hollow hub portion positioned for rotation adjacent to the inside annular wall of said hub portion; speed reduction gears connected between said motor and said actuating magnets so that said magnets are rotated at a reduced speed upon energization of said motor; a speed controlling governor within said hollow hub portion connected to said motor for rotation therewith, said speed controlling governor including means electrically connected to said motor and responsive to a change in centrifugal force resulting from

a change in speed of said motor from a predetermined constant speed, for maintaining said motor at said constant speed; a plurality of magnetic responsive bars, equal in number to said plurality of magnets, secured to the outside annular wall of said hub portion, said bars being respectively magnetically coupled to said actuating magnets to rotate said impeller when said actuating magnets are rotated; a fluid tight housing within said hollow hub portion, said housing surrounding said motor, speed controlling governor, actuating magnets, and speed reduction gears, to isolate the same from fluid passing through said passages of said impeller and turbine units, rotation of said impeller unit imparting an angular momentum to fluid passing from said impeller unit to said turbine unit to apply a turning torque to said turbine unit; and resilient means connected to said turbine unit opposing said torque whereby the degree of rotational displacement of said turbine unit provides an indication of the rate of mass flow of said fluid.

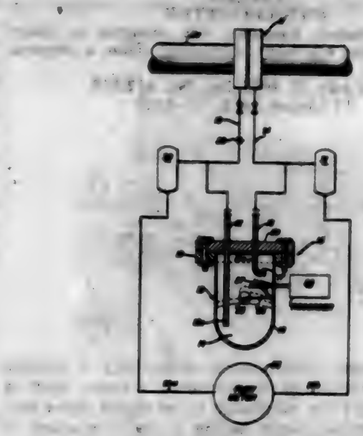
2,943,484
METER FOR REGISTERING HIGH-RATE FLOW VOLUME
George H. Harrington, Quincy, Mass., and Charles F. Ruff, New York, N.Y.; said Harrington assignor to said Ruff
Filed May 4, 1956, Ser. No. 582,707
6 Claims. (Cl. 73—197)



2. In a liquid flow volume meter for registering volume of flow taking place at rates above a predetermined minimum flow rate and including measuring mechanism which imparts rotation to a spindle directly proportionate to the total volume of flow, the combination which comprises a driving clutch member slidably mounted and operatively connected with said spindle for rotation thereby, a driven clutch member normally spaced from said driving member, a high-rate flow volume register operatively connected with said driven member to be in turn driven by the same, a movable plunger connected with said driving clutch member to impart movement to the latter, toward and away from said driven clutch member, means for correspondingly moving said plunger responsive to changes in pressure drop caused by variations in rate of flow, and biasing means urging said plunger and therewith said driving clutch member away from said driven clutch member with a total force such that the plunger is urged by pressure differential to engage the said driven clutch member with the said driving clutch member only when the flow rate is above said predetermined minimum.

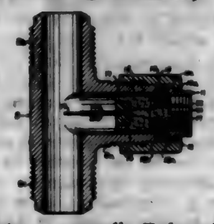
2,943,485
AUTOMATIC OVERLOAD PROTECTION FOR FLOW METERS
Thomas J. Byrne, El Dorado, Ark., assignor, by mesne assignments, to The American Oil Company, a corporation of Maryland
Filed Feb. 29, 1956, Ser. No. 568,685
4 Claims. (Cl. 73—199)

1. An automatic overload protection means for flow meters adapted to be connected across a pair of meter leads comprising in combination a reservoir chamber, a pool of mercury within said chamber, a first inlet conduit extending from a first of said meter leads into said reservoir chamber with an open end below the level of the pool therein, a choke in the lead to said inlet conduit, a second outlet conduit means communicating with



a second of said meter leads and with the said reservoir chamber at a point substantially above the level of the pool therein, said first and second conduit means being of small flow capacity compared to the large storage capacity of said chamber, and an elbow at the lower end of said second outlet conduit having its inlet end disposed toward the wall of said reservoir chamber.

2,943,486
HIGH RESPONSE FLOW-METER
Richard E. Osgood, 2818 240th SW., Edmonds, Wash.
Filed Feb. 18, 1957, Ser. No. 640,949
3 Claims. (Cl. 73—228)

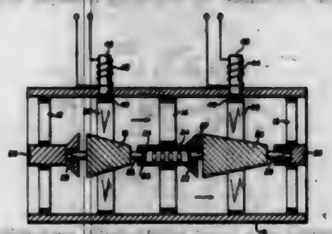


1. In a flow-meter, a generally T-shaped tubular body having two open-ended arms serving as a flow path intersected by the center leg of the body, a plug assembly shouldering against the free end of said leg and having a core of an electrically insulating material fitting within the latter, said plug assembly presenting four externally exposed terminals, cantilevered flow sensing means anchored at its root end within said core and projecting by its free end into flow restricting position within said flow path, two pairs of strain gauge elements on said sensing means with one pair being on the upstream side of the sensing means and the other pair being on the downstream side thereof, and leads within said core electrically connecting said strain gauge elements to said terminals in a Wheatstone bridge arrangement.

2,943,487
MASS FLOW METER USING TANDEM ROTORS
David M. Potter, Town of Far Hills, Warren Township, N.J.
Filed Nov. 1, 1957, Ser. No. 693,988
6 Claims. (Cl. 73—231)

1. A fluid flow sensing device comprising, in combination, a conduit segment for conducting a confined stream

of fluid, a pair of fluid actuated rotors mounted coaxially in said conduit one behind the other, and having a substantially predetermined or in phase relationship with one another at a minimum flow of the stream, one of said rotors being differently geared to the fluid stream from the other, so that one rotor tends to turn faster than the other, torsion spring means connecting the rotors to one another and yieldingly compelling them to turn substantially in unison subject to a phase difference whose magnitude is a function of the momentum of the flowing fluid,



and means causing said out of phase rotors to generate signal impulses each at uniform, predetermined equal angular intervals such that the phase difference between the signal impulses from the two rotors corresponds to the fluid-flow-caused phase displacement of the rotors and the period between impulses from the two rotors corresponds to the mass rate of flow of the fluid stream, whereby a measure of the out of phase period of the rotors may be secured and made available for indicating the rate of mass flow.

2,943,488
HUMIDISTAT
Charles K. Strobel, Pittsburgh, Robert G. McMichael, Irwin, and Richard T. Kimmell, Hunker, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed May 27, 1957, Ser. No. 661,923
4 Claims. (Cl. 73—336.5)



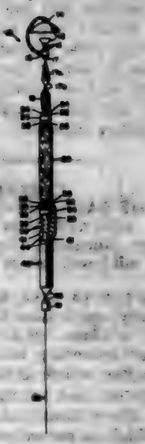
1. A humidistat comprising a casing, a capacitance sensitive relay disposed within said casing, a humidity sensitive condenser comprising an inner metallic core as one plate having a central axis, an outer metallic helix as the other plate disposed with its longitudinal axis substantially coincident with the central axis of said inner core, a humidity sensitive dielectric disposed between said plates and being responsive to changes in humidity for varying the capacitance between said plates, an outer shell connected to said helical plate, said inner plate extending through said shell and forming a plug portion at one end thereof, mounting means connected to said casing for removably mounting said condenser thereon, said mounting means being adapted to receive said outer shell and said plug portion of said inner core, and means for electrically connecting said condenser to said relay means for actuation thereof in response to capacitance changes.

2,943,489
PRESSURE OR TEMPERATURE RESPONSIVE MECHANISM
Edmund D. Haigler, Hatboro, Pa., assignor to Fischer & Porter Company, Hatboro, Pa., a corporation of Pennsylvania
Filed Sept. 8, 1953, Ser. No. 378,943
13 Claims. (Cl. 73—418)



13. A Bourdon tube-and-mounting construction including a base, a post secured thereto, a Bourdon tube anchorage adjustably secured above said base, a Bourdon tube spring having one end thereof operatively secured in said anchorage, a stationary bearing-pin carried by and extending from the end of said post generally in coaxial relation to the convolution of said Bourdon tube spring and with one end of said pin fixed on said post, a generally elongated tubular member revolubly mounted on said bearing-pin on top of said post and having a bearing of relatively short axial dimension in the end thereof nearest said post and disposed in close proximity to the fixed end of said pin, said tubular member running sufficiently free of said pin to run without appreciably contacting said pin but close enough to prevent substantial cocking of said bearing due to any temporary cocking force applied to the tubular member, a driven lever fixed to said tubular member, said driven lever having the movable tip of the Bourdon tube affixed thereto and having a stop portion, a stop-supporting member carried by said post, a stop carried by said stop-supporting member adjustable in relation to said post and in relation to said lever.

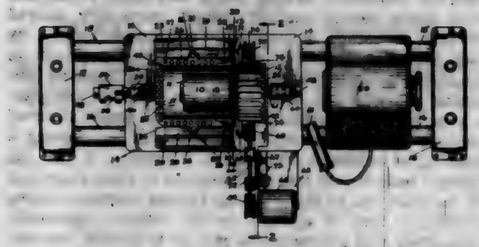
2,943,490
AIR SAMPLING DEVICE
Donald F. Mellan, Minneapolis, Minn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 17, 1959, Ser. No. 793,949
16 Claims. (Cl. 73—421.5)



1. Apparatus for capturing a sample of high altitude atmospheric air, comprising an exhausted receptacle hav-

ing a small compartment and a relatively large compartment, the large compartment having a closed inlet, means for carrying the receptacle from the ground to a predetermined high altitude, maintaining it at that altitude, and carrying it back to the ground, means for opening the inlet when the receptacle is at the high altitude, means for inflating the large compartment with a sample of atmospheric air at the high altitude, means for closing the inlet when the sample is in the large compartment, means for transferring the sample to the small compartment at predetermined low altitude, and means for sealing the small compartment from the large compartment when the transfer is substantially complete.

2,943,491
UNDER DRIVE BALANCING MACHINE
Robert B. Annis, 1101 N. Delaware St., Indianapolis, Ind.
Filed Mar. 29, 1955, Ser. No. 497,531
3 Claims. (Cl. 73—477)



1. A machine for indicating balance of a unit having a rotatable member carried thereby and extending from the unit, comprising a fixed base; a unit carrying fixture; spaced apart flexible rods supporting the fixture from and above said base permitting horizontal movement of the fixture; fixture carried means detachably receiving and holding said unit in fixed position relative to said fixture; a bar fixed to said fixture and extending therealong in a direction substantially parallel to the axis of said rotatable member; a vibration detector carried by said base and coupled to said bar; a drive belt having a flight extending transversely of said axis adjacent said fixture and against which said rotatable member bears when held by said fixture; means driving the belt; said unit having a stationary portion and a mounting flange between said portion and said rotatable member in a plane normal to said axis; said fixture carried means comprising a base plate extending substantially vertically of the fixture, a pair of spaced apart posts extending from said plate and on which said flange bears by a lower portion; and means retaining said flange on said posts against sliding thereoff.

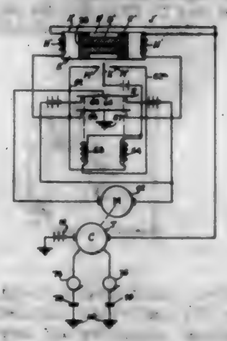
2,943,492
METHOD OF BALANCING OSCILLATING OR ROTATING MEMBERS
Siegfried Huber, Nuremberg, Germany, assignor to Diehl Gesellschaft mit beschrankter Haftung, Nurnberg, Germany
Filed Feb. 14, 1956, Ser. No. 565,493
Claims priority, application Germany Feb. 19, 1955
1 Claim. (Cl. 73—488)

A method of balancing balance wheels of watches, clocks and the like, which includes the steps of: freely rotatably supporting said balance wheel and allowing the same to swing about its axis of rotation so as to assume a position in which its natural center of gravity is located below said axis of rotation, creating a first artificial unbalance by removing material from said balance wheel at a point substantially perpendicular to the line passing through said axis of rotation and through said center of gravity, again allowing the balance wheel to swing about its axis of rotation so as to assume a new position in which its new center of gravity is located below said axis of rotation, providing a compensating unbalance by removing material from said balance wheel at a point located on the line passing through the axis of rotation and said new center of gravity and below said axis of rotation, employing said compensating unbalance as reference point for the repetition of the method by providing a second artificial unbalance by removing material from said bal-



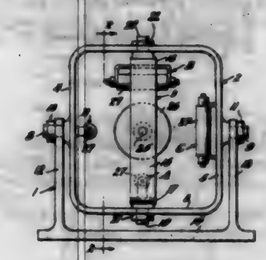
ance wheel at a point substantially perpendicular to the line passing through the axis of rotation of said balance wheel and said compensating unbalance, again allowing said balance wheel to swing about its axis of rotation so as to assume a position in which its center of gravity changed by said last unbalance is located below said axis of rotation, and providing a further compensating unbalance along the thus resulting line of the center of gravity by removing the same amount of material from said balance wheel as was removed by the preceding provision of said second artificial unbalance.

2,943,493
ACCELEROMETER
Maurits ten Bosch, White Plains, and Joseph F. Kiebel, Pleasantville, N.Y., assignors to M. ten Bosch, Inc., a corporation of New York
Filed Feb. 23, 1954, Ser. No. 411,846
20 Claims. (Cl. 73—503)



1. A velocity meter instrument of the type having a frictionless floating piston member displaced against an oil body by acceleration forces acting in an axial direction, said instrument having a cylinder with its longitudinal axis in the direction in which velocity and acceleration is to be measured, a floating piston encircled by and displacing its weight in an annular pool of mercury held in position between end enlargements on said piston balanced in the direction transverse to the axis so that it will not touch or frictionally contact the walls of the cylinder, said piston being susceptible to movement in the direction of the longitudinal axis means to restore the piston and means to measure said piston restoration force upon restoration after it has been initially displaced by forces acting thereon.

2,943,494
ELECTROLYTIC MASS SHIFT COMPENSATOR FOR GYROS
George F. Schroeder, Pines Lake, N.J., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Nov. 12, 1959, Ser. No. 852,528
16 Claims. (Cl. 74—5.4)



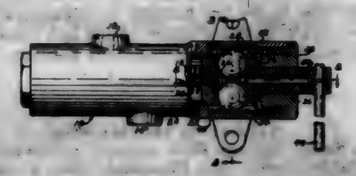
1. A gyro mechanism comprising a rotatably mounted gimbal, a gyro wheel rotatably mounted in said gimbal and a mass shift compensating and counterbalancing element mounted in fixed position on said gimbal, said counterbalancing element comprising a closed container, a plurality of spaced anodes mounted in fixed position in said container, means by which a direct current is selectively passed in either direction through said solution from one anode to another anode thereby deplating the said one anode and plating the said another anode to effect a longitudinal shifting of the center of mass of said counterbalancing element.

2,943,495
MEANS FOR PRODUCING MOTION THROUGH SEALED WALL
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Mar. 31, 1958, Ser. No. 725,216
3 Claims. (Cl. 74—17.5)



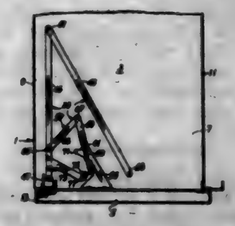
1. In a motion transmitting device, a radially flexible tubular wall having a contour which generally conforms to a circle on which are superimposed two wave lengths in 360°, a wave generator telescoping with respect to the tubular wall and having a surface which engages one side of the tubular wall and likewise conforms to the shape of a circle on which are superimposed two wave lengths in 360°, said waves on the wave generator being in phase with the waves on the tubular wall, a follower on the other side of the tubular wall telescoping with respect to the tubular wall, having a surface which engages the tubular wall and which also conforms to the shape of a circle on which are superimposed two wave lengths in 360°, said waves on the follower being in phase with the waves on the tubular wall, the tubular wall, the wave generator and the follower all being and remaining coaxial, and means for turning the wave generator and thereby propagating a wave around the tubular wall and turning the follower on the other side of the tubular wall about the common axis.

2,943,496
MOTION TRANSLATING DEVICE
Harry M. Valentine, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Filed Sept. 25, 1958, Ser. No. 763,235
6 Claims. (Cl. 74—56)



1. Rotary to linear motion translating mechanism comprising a body member having a hollow interior, a rotatable member in said body member, a linearly movable member spring urged in the direction of said rotatable member, said rotatable and linearly movable members having opposed transverse faces, a pair of diametrically opposed grooves in the internal wall of said body member extending longitudinally in parallel relationship with respect to the axis of rotation of said rotatable member, a groove in the transverse face of said rotatable member, a pair of spherical elements each having a portion received in the groove of the transverse face of said rotatable member, the combined transverse diameters of said elements being greater than the length of said groove in said rotatable member so that said elements extend beyond said groove and into the longitudinal grooves in the internal wall of said body member, said linearly movable member bearing on said spherical elements and being retained by said elements in spaced relationship with respect to the rotatable member, said elements being cammed out of said transverse groove in the face of said rotatable member upon rotation thereof to impart linear movement to said second member at least equal to the depth of said transverse groove.

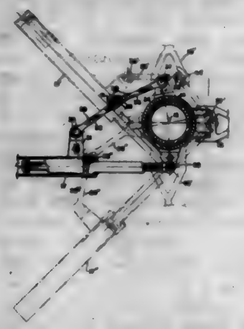
2,943,497
TOGGLE LINKAGE
Elmer H. Meisinger and Vincent J. Merle, St. Louis, Mo., assignors, by mesne assignments, to Dixie Products, Inc.
Filed Mar. 7, 1956, Ser. No. 569,995
7 Claims. (Cl. 74—100)



5. Mechanism for connecting a first member movable between a first position and a second position and a second member movable between a retracted position and an extended position, comprising a toggle operatively connecting said members adapted to move the second member from its retracted to its extended position only in response to movement of the first member from an intermediate position to its second position, the second member remaining in retracted position upon movement of the first member to said intermediate position, said toggle comprising two links pivotally connected together at the knee of the toggle, means pivotally connecting one link to the first member, and operating means operatively con-

necting the other link to the second member, said toggle being broken when the first member is in its first position, said toggle straightening out when the first member is moved from its first to its said intermediate position, and said toggle being straight when the first member is moved between its said intermediate position and its said second position, and means connected to said operating means and movable by the first member for engaging and breaking the toggle upon movement of the first member from its said second to its said intermediate position.

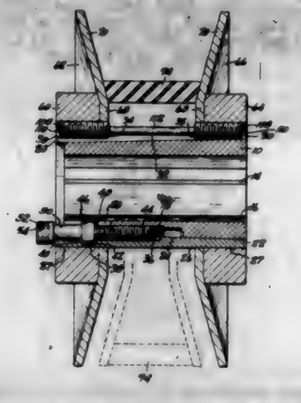
2,943,498
STEERING MECHANISM
Ira D. Smith, Bedford, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 25, 1957, Ser. No. 642,146
5 Claims. (Cl. 74—106)



1. An aircraft steering mechanism comprising a fixed element, a rotatable element mounted on said fixed element for rotation about a first axis in either direction from a first position, fluid activated co-operating cylinder and piston members capable of relative axial displacement, pivot means mounting one of said members on said fixed element for rotation relative thereto around a second axis and the other of said members on said rotatable element for rotation relative thereto around a third axis, said second and third axes being co-axial when said rotatable element is in said first position, and stabilizing means including a pair of links pivoted together for rotation relative to each other with one link pivoted on one said member and the other pivoted on said rotatable element, and means operatively connected to said links resiliently retaining said links in a fixed position relative to each other thereby preventing uncontrolled movement of said members relative to said elements when said second and third axes are co-axial.

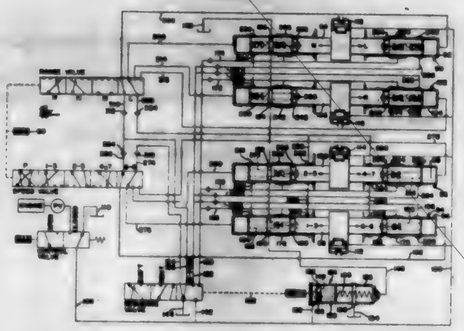
2,943,499
VARIABLE PITCH SHEAVE
David Firth, South Bend, Ind., assignor to Dodge Manufacturing Corporation, Mishawaka, Ind., a corporation of Indiana
Filed Mar. 3, 1958, Ser. No. 718,539
6 Claims. (Cl. 74—230.17)

1. A variable pitch sheave comprising a hub having a cylindrical exterior surface, a pair of confronting conical belt-engaging annular flange units slidably fitting on said hub, means for sliding said flange units on said hub to selected spaced relation, means for locking said flange units in frictional drive-transmitting engagement with said hub, at least one of said flange units including a rigid collar and a disk carried by and having a drive-transmitting connection with said collar, and means interconnecting said disk and collar and including a plurality of substantially equispaced and equiangularly disposed resilient means normally positioning said disk in continuous abutment with said collar, said resilient means yielding under



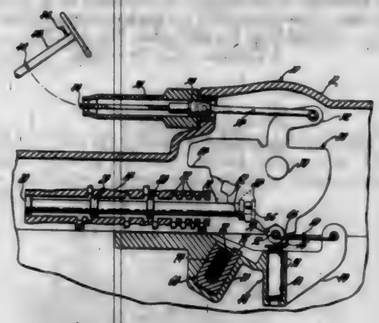
loads to accommodate wobbling of said disk relative to said collar to accommodate increased spacing of the portions of said disks engaging said belt.

2,943,560
HYDRAULIC CONTROL SYSTEM
Richard A. Wittren, Waterloo, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Feb. 18, 1958, Ser. No. 715,961
15 Claims. (Cl. 74—334)



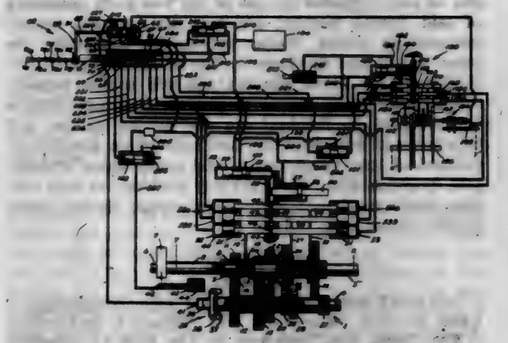
1. A fluid-pressure control system for a transmission and the like, comprising: a pressure source; first and second fluid motors, each having a piston shiftable to either of two active positions at opposite sides of a neutral position; a neutralizing circuit connected to the motors and pressurizible to shift the pistons to their respective neutral positions; a pair of first motor lines connected to opposite ends of the first motor and alternately pressurizible to selectively shift the first motor piston to an active position; a first shift line; a first selector valve selectively settable in either of two positions to connect either first motor line to the shift line; a pressure input line; a control valve having open and closed positions to connect and disconnect the input line respectively to and from the pressure source; a sequence valve selectively settable in a neutral position to connect the input line exclusively to the neutralizing circuit for shifting both pistons to their neutral positions when the control valve is open and settable in a shift position, after both pistons attain their neutral positions, to connect the shift line to the input line exclusively of the neutralizing line for pressurizing the shift line and whichever motor line is selected by said first selector valve when the control valve is open; a second shift line; connector valve means operative when the first piston attains either active position for pressurizing said second shift line from the pressurized first motor line; a pair of second motor lines connected respectively to opposite ends of the second motor and selectively pressurizible to shift the second motor piston selectively to an active position; and a second selector valve settable in either of two positions to connect either second motor line to the second shift line.

2,943,501
TRANSMISSION CONTROL
Robert W. Stapleton, Ann Arbor, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 10, 1957, Ser. No. 689,321
2 Claims. (Cl. 74—335)



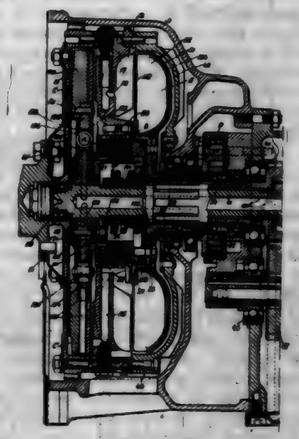
1. In a transmission shifter control; the combination of a manually operable selector member positionable in a series of settings corresponding to different transmission operating statuses; a transmission control member for causing the transmission to be conditioned for each transmission status; a rotatable sector element joined to the transmission control member; the rotatable sector element including a control surface provided with a series of notches corresponding to each of the transmission settings and a projection at the end of the control surface and adjacent one of the notches; a cable interconnecting the sector element and the selector member; and a detent mechanism for releasably holding the sector element in a selected setting, the detent mechanism including a support bracket, a carrier mounted on the bracket for pivotal movement in a plane substantially parallel to the plane of rotation of the sector element, the carrier including spaced substantially parallel bifurcated and stop arms, a roller having reduced diameter ends adapted to be revolvably supported at the reduced diameter ends by the bifurcated arm, and a compression spring supported by the bracket and so positioned as to engage the stop arm and urge the roller into engagement with the selected notch, the carrier being so positioned relative to the bracket that the stop arm is forced into engagement with the bracket when the sector element is revolved far enough to cause the projection to engage the roller thereby preventing further rotatable movement of the sector element.

2,943,502
APPARATUS FOR THE SYNCHRONIZING AND SHIFTING OF ROTATING SHIFTABLE TOOTHED ELEMENTS
Charles M. Perkins and Thomas V. McNamara, Kalamazoo, Mich., assignors, by mesne assignments, to Fuller Manufacturing Company, a corporation of Delaware
Filed Mar. 5, 1956, Ser. No. 569,583
57 Claims. (Cl. 74—339)



1. In a transmission, the combination comprising: a change speed gear system including shiftable, interengageable, toothed elements; means detecting the relative speeds of a given interengageable group of said toothed elements, said detecting means including means for delivering a signal at a predetermined time before said given group of toothed elements attains exact synchronization on either an upshift or a downshift; means responsive to said given signal for effecting interengagement of said group of toothed elements.

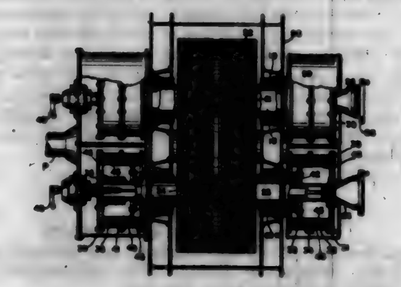
2,943,503
AUTOMOBILE TRANSMISSION
Hans-Joachim M. Förster, Stuttgart-Bad Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed June 17, 1953, Ser. No. 362,359
Claims priority, application Germany June 20, 1952
22 Claims. (Cl. 74—359)



1. In an automobile transmission, the combination comprising input means, output means, a plurality of sets

of gears and at least one friction clutch engageable for transmitting driving torque and coordinated to one of said sets of gears and adapted to be engaged and disengaged to thereby determine the ratio of transmission, said friction clutch being composed of a rotary driving member and of a rotary driven member, first inelastic torque-transmitting means connecting said input means to said driving member, second inelastic torque-transmitting means connecting said driven member to said output means, a pair of flywheels, means operatively connecting one of said flywheels to one of the two parts consisting of said driving member and said first inelastic torque-transmitting means, means operatively connecting the other one of said flywheels to one of the two parts consisting of said driven member and said second inelastic torque-transmitting means to provide common rotation between said one flywheel and said driving member and between said other flywheel and said driven member regardless of load conditions in said transmission whereby said flywheels will counteract any tendency of said friction clutch to chatter during engagement thereof under driving torque load.

2,943,504
MARINE REDUCTION GEAR TRANSMISSION
Louis W. Falk, Shorewood, and William S. Richardson, Fox Point, Wis., assignors to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 3, 1957, Ser. No. 681,613
3 Claims. (Cl. 74—361)



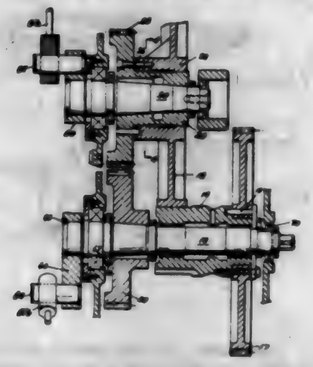
1. In a marine reduction gearing, the combination of a primary gear reduction unit, including a pair of intermeshing gears adapted for arrangement in athwartship spaced relation and having shaft extensions disposed in parallel, and a unidirectional prime-mover-driven pinion meshing with one of said gears, a secondary gear reduction unit including a pair of spaced pinions aligned repectively with said shaft extensions, said pair of pinions each having a hollow pinion shaft and each being journalled at its ends in a fixed housing and having extended ends, a quill shaft directly connected to one of the shaft extensions of the primary unit and extending through and outwardly from opposite ends of said hollow pinion shaft, and selective drive connections between said primary and secondary unit comprising sets of clutches each respectively comprising a hollow drum disposed at each extended end of said hollow pinion shaft and arranged to rotate therewith, clutch elements mounted on the outer exposed ends of said quill shaft and interiorly of a respective hollow drum, and radially expansible-contractible means arranged to concurrently connect and disconnect the respective clutch elements of a respective set of clutches with their associated drum, whereby said clutches may be operated in tandem to simultaneously drive a respective one of said pinions from opposite ends of its associated hollow shaft.

2,943,585
COMBINED SINUSOIDAL DRIVE MECHANISM
Herman D. Parks, Norwalk, Conn., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 11, 1957, Ser. No. 652,175
9 Claims. (Cl. 74—394)



4. Apparatus for driving a load from one position to another comprising a source of constant velocity rotation, a pair of variable velocity motion generators connected thereto each adapted to produce continuous rotary motion varying from zero to a maximum velocity in 180° out-of-phase relation to the other, differential means for adding the two rotary motions, and clutch means interposed between each of the generators and the differential means.

2,943,586
CRANK DRIVE FOR PAPER CUTTER KNIVES
Carl Thunsin, Westbury, N.Y., assignor to E. P. Lawson Co., Inc., New York, N.Y., a corporation of New York
Filed May 24, 1957, Ser. No. 661,534
2 Claims. (Cl. 74—414)

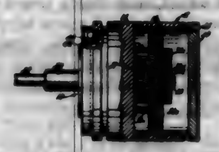


1. In a mechanism for driving the ends of a knife bar at a uniformly proportional rate comprising a pair of crank shafts in parallel relationship, a gear keyed to each shaft, said gears being identical, a power driven pinion on one of said shafts and rotative with respect thereto, a gear on the other of said shafts meshed with said power driven pinion and secured to the gear on said other shaft, an idler gear in mesh with said latter gear and with the gear on said one crank shaft and a crank pin carried for rotation by each of said crank shafts.

2,943,587
PRECISION GEAR TRAIN
Rudolph E. Bachman, Port Washington, N.Y., assignor to Sterling Precision Corporation, Flushing, N.Y.
Original application Oct. 21, 1957, Ser. No. 692,432. Divided and this application Aug. 25, 1958, Ser. No. 756,889
2 Claims. (Cl. 74—431)

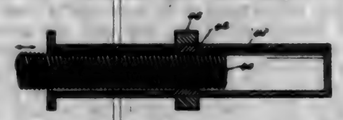
1. A gear ratio reducing mechanism adapted to be used in combination with miniature motors and the like, comprising in combination: a relatively thick mounting plate provided with a centrally located bearing means and with a plurality of spaced bearing means radially deployed with respect to said centrally located bearing means; a plurality of cantilevered shafts having one end rotatably positioned in each of said spaced bearing means

and one end extending outwardly of said mounting plate; means to prevent axial movement of said cantilevered shafts; a pair of gears mounted on each of said outwardly extending ends of said cantilevered shafts, each of said gears being arranged to engage an adjacent gear so as to form a cascaded gear train; a hollow input shaft rotatbly supported by said centrally located bearing means and having a free end and a geared end; an output shaft extending through and being rotatably supported by said hollow shaft, said output shaft having a free portion



and a geared end; means to prevent axial movement of said output shaft, and the gear end of said output shaft being arranged to engage said cascaded gear train; the geared end of said input shaft, the geared end of said output shaft and the gears of said cascaded gear train being disposed on one side of said mounting plate and the free end of said hollow shaft and the free end of the shaft supported in said hollow shaft being arranged to extend concentrically outwardly on the other side of said mounting plate.

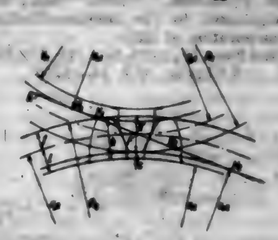
2,943,588
STRAIN WAVE GEARING-LINEAR MOTION
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Jan. 9, 1957, Ser. No. 633,254
32 Claims. (Cl. 74—424.8)



1. In a linear actuator, a first cylindrical strain tube having a deflectable wall and having first circumferential grooves on one periphery, a second member of different diameter than the strain tube having second circumferential grooves on one periphery concentric with and cooperating with the first circumferential grooves, the groove forms of the first and second circumferential grooves being the same, the first and second circumferential grooves having a difference in helix angle, a strain induced element operative to deflect the strain tube and maintaining the strain tube deflected into mating engagement between the first and second circumferential grooves at a plurality of circumferentially spaced lobe positions interspaced by nonmating positions, the difference in helix angle being a function of the number of lobes, and means for moving the operative relationship of the strain inducing element to the periphery of the strain tube and thereby propagating a strain wave around the periphery of the strain tube and causing relative linear motion of the strain tube with respect to the second member.

2,943,589
GEARING SYSTEM FOR GEAR WHEELS GENERATED OF CYLINDRICAL BLANKS
Imre Botka, Budapest, Hungary, assignor to Ganz Vagon- és Gépgyár, Budapest, Hungary
Filed June 1, 1955, Ser. No. 512,542
2 Claims. (Cl. 74—462)

1. A pair of involute gear wheels the pinion (1) and wheel (2) of which are mated so as to have tooth addenda of magnitudes $f_1=(1-q_2)h'$ and $f_2=q_2h'$, respectively, depending on the partition coefficient q_2 to be determined,



inclusive a tolerance not exceeding ±3%, from the condition

$$(i^2-1)\cdot\zeta_1''\zeta_2'=a\sin\epsilon\cdot(i^2\zeta_1''-\zeta_2')$$

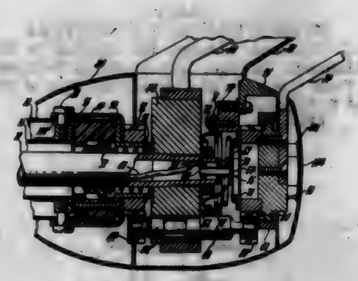
wherein $h'=f_1+f_2$ means the working depth of the mating teeth, i the gear ratio, a the center distance, ϵ the pressure angle of mating gears, whilst ζ_1'' and ζ_2' denote, for two points of contact P' and P'' distinguished on the contact line by the actually highest top values of the momentary local temperature increases (the so-called Blok increases of temperature) arising between contacting teeth, the radii of curvature of the individually corresponding pinion and gear tooth profiles, these radii of curvature being given by gearing-geometrically derivable expressions of the outer radii

$$R_1=\frac{a}{i+1}+(1-q_2)h'$$

and

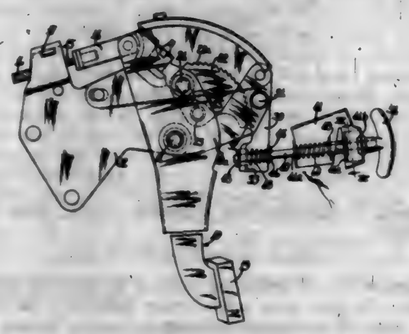
$$R_2=\frac{ai}{i+1}+q_2h', \text{ respectively}$$

2,943,510
TRANSMISSION CONTROL
Arthur F. Bohnhoff, Saginaw, Mich., and Stanley J. Skarl, Johnstown, Pa., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 18, 1957, Ser. No. 653,611
7 Claims. (Cl. 74—485)



1. In combination with a steering column, transmission control and steering shafts rotatably supported by the steering column, a transmission control member positionable in a plurality of transmission settings, a steering wheel including a hub portion secured to the steering shaft between an end of the steering shaft and the transmission control member, and planetary gearing means for drive connecting the transmission control shaft and the transmission control member through the steering wheel to permit independent movement of both the steering shaft and the transmission control shaft.

2,943,511
PARKING BRAKE ASSEMBLY
Theodore H. Johnstone, Detroit, Mich., assignor, by mesne assignments, to The Bingham-Herbrand Corporation, a corporation of Ohio
Filed Nov. 25, 1955, Ser. No. 549,054
8 Claims. (Cl. 74—529)



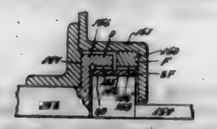
1. A lever structure comprising bracket means, a lever arm pivotally mounted by said bracket means for swinging movement to apply an actuating force, ratchet and pawl means operably connected between said lever arm and said bracket means for retaining said lever arm in an actuating position to which it is moved when the ratchet and pawl means for said ratchet and pawl means are in engageable relation, control means in one position maintaining said ratchet and pawl means in said engageable relation and in a second position maintaining said ratchet and pawl means out of engageable relation, resilient means arranged to normally maintain said control means in said second position, a member connected to said control means for moving the same to said first position to cause said lever arm to be retained in force applying position to which moved, and means for retaining said control means in said first position, said retaining means being releasable by manipulation of said member, said retaining means comprising self-locking teeth of said ratchet and pawl means which maintain said control means in said first position by friction resulting from the tension on the lever arm.

2,943,512
SWITCH RATCHET STRUCTURE
Frank G. Nicolaus, Chicago, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased
Filed July 30, 1956, Ser. No. 601,078
3 Claims. (Cl. 74—575)



1. A unitary ratchet wheel, spindle, and keying structure of molded plastic construction comprising: a ratchet wheel with toothed periphery; a large spring-carrying hub coaxially centered on one face of said wheel and having a washer-seating ledge at the free end thereof to receive a retaining washer for a coil type spring to be mounted on said hub; said wheel having another hub portion constituting a spindle projecting coaxially of the wheel and first hub from the opposite face of the wheel, said spindle having coaxially projected therefrom an integral keying extension of approximately rectangular cross section with a pair of flat opposite side walls and a pair of respectively adjoining rounded opposite end walls and having a screw bore communicating into the same from the free axial end thereof, said keying extension having an axially-extending slot extending laterally through the width of the same and extending longitudinally from said free axial end in communication with said screw bore a predetermined distance inwardly toward said wheel, such that a screw of predetermined diameter threaded into said screw bore will spread said keying extension laterally of the rotative axis of the spindle and wheel to expansively secure a hub member to be carried upon said keying extension.

2,943,513
DUAL STRAIN WAVE GEARING
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Original application Mar. 21, 1955, Ser. No. 495,479, now Patent No. 2,906,143, dated Sept. 29, 1959. Divided and this application May 2, 1957, Ser. No. 656,572
18 Claims. (Cl. 74—640)



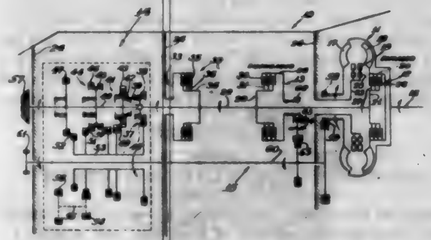
1. In a device for transmitting motion, a train of two sets of gearing each including a first gear having teeth, a strain gear having teeth of the same size as those on the first gear interconnecting the two sets, the strain gear being of different diameter from the first gear, concentric therewith and having a deflectable wall, a strain inducing element operative to deflect the strain gear and maintaining the strain gear deflected into mating relation with the first gear on the concentric axis at a plurality of circumferentially spaced positions interspaced by non-mating positions, and means for moving the operative relationship of the strain inducing element for each gearing set of the train relative to the periphery of the strain gear and thereby propagating a strain wave around the periphery of the strain gear and causing relative rotation of the strain gear with respect to the first gear.

2,943,514
DEVICES FOR CAUSING TWO LONGITUDINALLY-EXTENDING MEMBERS TO MOVE LENGTHWISE IN OPPOSITE DIRECTIONS
Hans Golde, 338 Hanauer Landstrasse, Frankfurt am Main, Germany
Filed Dec. 31, 1958, Ser. No. 784,172
Claims priority, application Germany Jan. 9, 1958
9 Claims. (Cl. 74—665)



1. A device for axially adjusting two longitudinally-extending members movable lengthwise in opposite directions, said device comprising a housing, driving wheel means disposed within said housing, a shaft connected to said driving wheel means for driving the same, means for guiding one longitudinally-extending member past one side of said driving wheel means in driving engagement therewith, further means for guiding the other longitudinally-extending member past the other side of said driving wheel means in driving engagement therewith, and means operable to release at least one of said longitudinally-extending members from driving connection with the shaft whereby driving connection of the said one member with the shaft can be adjusted.

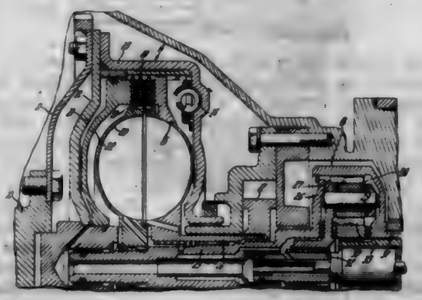
2,943,515
POWER TRANSMITTING APPARATUS
Jerrold Anselm Isaacson, Lombard, Ill., and Henry Anthony Ferguson, Waterloo, Iowa, assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 12, 1959, Ser. No. 792,732
7 Claims. (Cl. 74—730)

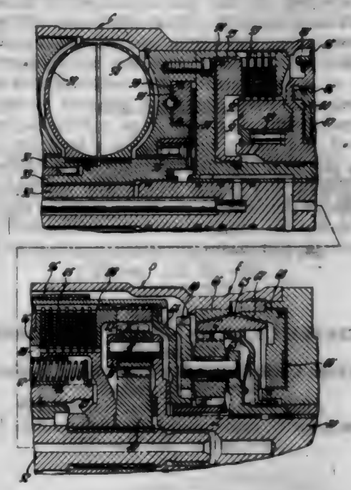


1. A drive transmitting device comprising in combination, a first power shaft, a second power shaft, a hydrokinetic torque converter including a driving element and a driven element and having said driving element connected to said first power shaft for rotation therewith, means connecting said first power shaft to said second power shaft including a plurality of alternatively operable clutch means and direction of rotation reversing means interconnecting one of the plurality of clutch means with the driving element of said torque converter and operative to reverse the direction of drive transmitted therebetween, said torque converter driven element being drivingly connected to the other one of said plurality of clutch means, said plurality of clutch means being disposed so that engagement of one of said clutch means effects the transmission of drive from the first power shaft to the second power shaft so as to cause said second shaft to rotate in the same direction as said first power shaft and engagement of another of said clutch means effects the rotation of said second power shaft in a direction reverse to that of said first power shaft, and braking means operable for braking said second power shaft when said plurality of clutch means are disengaged.

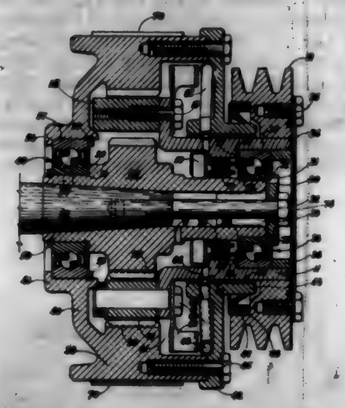
2,943,516
TRANSMISSION
Walter B. Heraden, Ann Arbor, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 5, 1957, Ser. No. 670,090
4 Claims. (Cl. 74—732)

1. In a transmission, a power input shaft, a power output shaft, means for transmitting torque from said input shaft to said output shaft including first and second fluid coupling devices and first and second planetary gearing units, each of said fluid coupling devices comprising an impeller and a turbine, each of said gearing units comprising a planet carrier supporting a plurality of planet gears in mesh with a sun gear and a ring gear, respectively, a selectively operable clutch for locking the turbine of said first fluid coupling device to the impeller of said device, a drive connection between said power input shaft and the impeller of said first coupling device, a drive connection between the turbine of said first coupling device and the ring gear of the first gear unit and the impeller of said second coupling device, said drive connection comprising a hollow sleeve shaft driven by said impeller of said first coupling device and having a drive flange connected to said first gear unit ring gear, a drive connection between said second fluid coupling unit impeller and said first gear unit ring gear comprising a second hollow sleeve shaft having a flange thereon connected to said ring gear, a drive connection between the sun gear of said first gear unit and the turbine of said second fluid coupling device, said drive connection comprising a third hollow sleeve shaft extending through said second hollow sleeve shaft, one-way brake means for preventing rotation of said first gear unit sun gear in one direction and for permitting rotation of said sun gear in the opposite direction, said second fluid coupling unit being adapted to be alternately filled with working fluid and emptied of the same, a drive connection between said first gear unit planet carrier and said second gear unit sun gear, said last-mentioned drive connection comprising a shaft extending through said third hollow sleeve shaft and piloted for rotation in said first hollow sleeve shaft and said output shaft, one-way brake means for preventing rotation of said second gear unit ring gear in one direction and for permitting rotation of said ring gear in the opposite direction, said second gear unit planet carrier being connected to said output shaft, and a selectively operable clutch for locking said second gear unit ring gear and sun gear to each other.



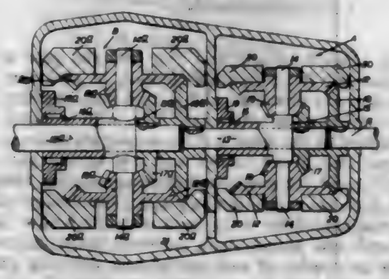


2,943,517
TWO-SPEED DRIVE
William F. Markley, Holland, and Henri A. Brymelbout, York, Pa., and Richard L. Seidel, La Grange Park, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 17, 1958, Ser. No. 781,157
5 Claims. (Cl. 74—750)



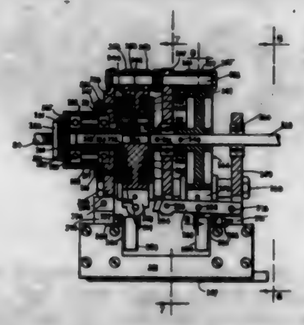
3. A two-speed drive comprising, an input power pulley, an elongated sleeve attached thereto and extending therefrom, a planet gear carrier attached to said sleeve on an end remote from said pulley, a plurality of planet gears attached to said planet carrier, a driven shaft mounted concentrically within said sleeve and extending therefrom, a one-way clutch encircling said driven shaft and within said sleeve whereby said driven shaft may be rotated at a speed greater than said sleeve, a sun gear encircling said driven shaft and attached thereto and in engagement with said planet gears, a drum enclosing said gears and said sleeve and forming a lubricant receiving sump, a ring gear mounted internally in said drum and attached thereto and in engagement with said planet gears, a plurality of bearings supporting said driven shaft for rotation, means for supplying lubricant from said sump to said bearings, and means for arresting the rotation of said drum.

2,943,518
VARIABLE GEAR UNITS FOR USE IN MOTOR VEHICLES
Hugh Cecil Reid, 147 Malone Road, Belfast, Northern Ireland
Filed June 3, 1957, Ser. No. 663,259
Claims priority, application Great Britain June 9, 1956
25 Claims. (Cl. 74—751)



1. A variable gear unit comprising coaxial driving and driven shafts, a gear fixed on each of said shafts, a carrier rotatable coaxially with said shafts, means permitting said carrier to rotate and holding said carrier against counter rotation, gear means carried by said carrier with the axis thereof perpendicular to the axis of said shaft and operatively connecting said gears, and weight means carried by and rotatable with said gear means, said weight means being spaced from the axis of said gear means, whereby said weight means may rotate about the axis perpendicular to said shafts when said unit is in low gear and said weight means and cage may rotate about the axis of said shafts when said unit is in high gear.

2,943,519
TRANSMISSIONS AND THE LIKE
Thomas A. Banning, Jr., 5520 South Shore Drive, Chicago, Ill.
Original application Apr. 21, 1956, Ser. No. 582,947, now Patent No. 2,856,692, dated Oct. 21, 1958. Divided and this application Oct. 15, 1958, Ser. No. 767,333
5 Claims. (Cl. 74—789)



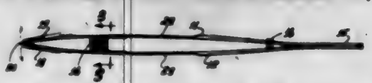
1. In a transmission unit, the combination of aligned input and output shafts, means to journal said shafts in alignment with each other and with their proximate ends adjacent to each other, a gear secured to the end portion of each shaft, both gears being of substantially the same pitch diameter, a cage element journalled between the two gears co-axially with the shafts and gears, sprocket means journalled in the cage and intermeshing with both gears, a first brake surface element connected to the cage, a second brake surface element connected to the output shaft, a first brake element proximate to the cage brake surface element, means to move said first brake element against and away from braking engagement with the cage brake surface, a second brake element proximate to the output shaft brake surface element, means to move said second brake element against and away from braking engagement with the output shaft brake surface element, and means to simultaneously move one of said brake elements into braking engagement with the brake surface proximate thereto and the other brake element into non-braking relation to the brake surface proximate thereto, wherein the first brake element comprises at least one brake shoe and means to pivot said brake shoe in proximity to the cage brake surface for rocking movement into braking engagement with the cage brake surface or disengagement from such surface, and wherein the second brake element comprises at least one brake shoe and means to pivot said brake shoe in proximity to the output shaft brake surface for rocking movement into braking engagement with the output shaft brake surface or disengagement from such surface, and wherein there is spring means urging engagement of the first mentioned brake shoe with the cage braking surface and spring means urging engagement of the second mentioned brake shoe with the output shaft braking surface, together with a toggle means in connection with each such brake shoe, each such toggle means having a first shoe disengaging position and a second shoe braking position, and being constituted to rock the corresponding brake shoe away from braking engagement with the corresponding braking surface against the urge of the corresponding spring means when such toggle means is in its first toggle position, and to permit movement of such brake shoe into braking engagement with the corresponding braking surface under the urge of the corresponding spring means when such toggle means is in its second position, together with means to simultaneously shift both of the toggle means from one toggle position to the other toggle position, and wherein said means to simultaneously shift both of the toggle means from one toggle position to the other toggle position comprises a rock arm, means to pivot said rock arm for rocking movement about a pivotal point between the two toggle means for simultaneous raising of one end portion of such rock arm and lowering of the other end portion of such rock arm, together with connections between the end portions of such rock arm and the proximate toggle means, each such connection being constituted to move the corresponding toggle means to its first defined brake shoe disengaging position when the corresponding end portion of the rock arm is in its lowered position, and to move such toggle means to its second defined brake shoe engagement permitting position when the corresponding end portion of the rock arm is in its raised position.

2,943,520
FABRIC-COVERED GARMENT-BUTTON ASSEMBLING DEVICE
William H. Decker, Roy J. Rieck, and Leslie H. Bennett, Chicago, Ill., assignors to Maxant Button and Supply Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 27, 1958, Ser. No. 769,689
3 Claims. (Cl. 79—5)



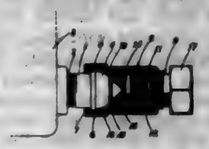
1. A device for assembling a pair of flanged disks and a piece of fabric in superimposed relationship to form a fabric-covered garment-button, the device comprising an elastic material element recessed inwardly from one face to form an annular cavity of a diameter slightly greater than the outside diameter of the outer disk and having an inwardly-extending rib intermediate the base of the cavity and the one face of the element with the inside diameter of the rib approximating the outside diameter of the outer disk.

2,943,521
TWEEZERS
Arnold L. Bettos, 2851 Cochran St., Los Angeles 16, Calif.
Filed Feb. 28, 1957, Ser. No. 649,274
8 Claims. (Cl. 81—43)



1. A reverse action tweezer comprising: a pair of resilient arms connected at one end and terminating in gripping jaws at the other end, each of said arms having a first predetermined thickness from said connected end to a first point approximately midway between said connected end and said other end, each of said arms having a second and lesser thickness commencing from said first point and terminating at a second point, said second point being located intermediate said first point and said gripping jaws, and an accordionlike spring connected between the inner surfaces of said arms in the vicinity of said second point.

2,943,522
WRENCH FOR INSERTING OR REMOVING PIPE UNION NIPPLES
George Brase, San Francisco, Calif., assignor of twenty percent to Alice F. Jones, San Francisco, Calif.
Filed Aug. 24, 1959, Ser. No. 835,542
3 Claims. (Cl. 81—53)



1. A wrench for inserting and removing a male pipe-union nipple having a sloping-sided nose, an enlarged flange at the base of the nose, and a nut overhanging the nose and having an inturned flange at its back end to engage the nose flange and limit advance of the nut; the wrench comprising a tubular open-ended member threaded on the outside at one end for engagement by the nut and provided at said end with an internal seat shaped to match and fit on the nose and at the other end being tapped with threads cut in the direction opposite those on the outside, said member back of said outside threads being adapted for other wrench engagement, and another member having a body externally threaded intermediate its ends to engage the tapped threads on the one member, one end of said other member being adapted for other wrench engagement and the other end being arranged for engagement with the end of the nipple nose.

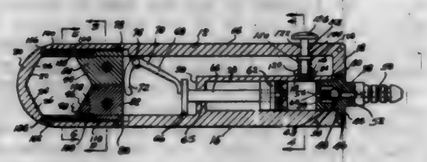
2,943,523
REVERSIBLE RATCHET WRENCH
Abe L. Gray, Blairsville, and Henry E. Duchnowski, Johnstown, Pa., assignors to North American Machine Company, Blairsville, Pa., a corporation of Pennsylvania
Filed Jan. 13, 1959, Ser. No. 786,561
1 Claim. (Cl. 81—63)



A reversible ratchet wrench comprising a hollow flat head having axially aligned circular openings in its opposite sides, a handle projecting from one end of the head, a circular socket member inside the head journaled

in said openings and encircled by integral ratchet teeth, a pawl disposed in the head between said socket member and handle, a pin rigidly mounted in said pawl and projecting from its opposite sides, one side of said head having a cover plate provided with an opening receiving one end of the pin, the opposite end of the pin being rotatably mounted in the side of the head opposite the cover plate, spring-pressed means mounted in the head and pressing against the side of the pawl opposite to the socket to hold an end of the pawl against the socket teeth, and a knob on said opposite end of the pin for turning it and the pawl to swing the opposite end of the pawl against the socket teeth, said ends of the pawl having integral teeth for registering with the socket teeth, the side of the pawl adjacent the cover plate being provided with a recess around the pin, the portion of the pin in said pawl recess having a peripheral groove, and a spring clip in said groove projecting out into said pawl recess to hold the pin and pawl together when the cover plate is removed from the head.

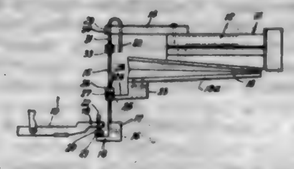
2,943,524
PNEUMATICALLY-OPERATED, SLIDABLE INNER JAW WRENCH
John A. Bourne, Box 88, Hamilton, Bermuda
Filed Jan. 2, 1959, Ser. No. 784,559
6 Claims. (Cl. 81—129)



1. In a fluid operated tool, an elongated open body portion having opposing end walls and opposing side walls, one of said end walls defining a fixed jaw and having a jaw face on its inner surface, the other end wall and the adjoining portions of the side walls defining a handle, a cylinder formed integrally with the inner surface of one side wall and extending from the other end wall to a point spaced from the fixed jaw, said cylinder having an end wall spaced from the fixed jaw, a piston working in the cylinder and having a piston rod slidable through the end wall, a crank type lever having a long first arm and a short second arm, said lever being pivoted intermediate its arms to the other side wall, means connecting the piston rod to the first lever arm, a movable jaw assembly, means mounting the movable jaw assembly for movement relative to the fixed jaw, said second lever arm being engaged with the movable jaw assembly for moving the movable jaw assembly toward the fixed jaw, means provided at the other end wall of the body portion for connecting an air hose in communication with the interior of the cylinder, and valve means operatively mounted in the body portion in communication with the cylinder to vent the cyclinder to the atmosphere.

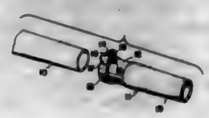
2,943,525
PNEUMATIC ACTION FOR PLAYER PIANOS
Joseph Sanerland, West New York, N.J., assignor to Hardman, Peck & Co., New York, N.Y., a corporation of New York
Filed Mar. 7, 1956, Ser. No. 570,884
5 Claims. (Cl. 84—25)

1. In a player piano, a wippen having a projecting portion, a pneumatic, means above said wippen for mounting said pneumatic, wire guide means formed with an opening on said mounting means, a wire element arranged for free movement relative to said guide means and said wippen, means on one end of said wire element extending freely toward said wippen for abutting the projecting portion of said wippen for actuating said wippen upon movement of said wire element, cooperating means on said pneumatic and said wire element for



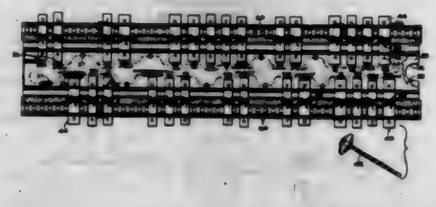
moving said wire element in response to operation of said pneumatic, and means on the other end of said wire element within the opening of said guide means for preventing rotation of said wire element about its axis and concurrent rotation of said abutment means upon movement of said wire element.

2,943,526
DETACHABLE UNION AND TUNING JOINT FOR MUSICAL INSTRUMENTS
Bernard L. Van Caster, 219 Standish Drive SE., Washington 21, D.C.
Filed Mar. 3, 1958, Ser. No. 718,542
5 Claims. (Cl. 84—386)



1. A detachable union for the tubular end of a wind musical instrument comprising a cylindrical tube having unbroken outer and inner surfaces for slidably surrounding said tubular end, means for clamping said tube to said tubular end, and a cork sleeve fixedly secured along its longitudinal length to at least a part of said outer surface of said tube adjacent its free end, said sleeve having a diameter slightly smaller than the bore diameter of a mouthpiece used therewith.

2,943,527
ADJUSTABLE TUNE PRODUCING INSTRUMENTALITY
John M. Hanert, 386 Stratford Road, Des Plaines, Ill.
Filed Sept. 16, 1957, Ser. No. 684,945
11 Claims. (Cl. 84—403)



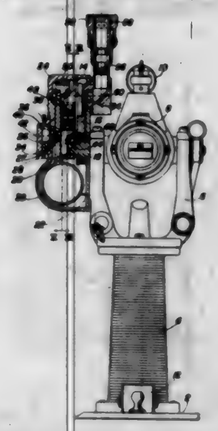
1. A musical instrument of the rigid vibrator bar type, a pair of elongated substantially parallel supports, a plurality of vibrator bars on said supports corresponding to notes of a musical scale, each of said vibrator bars having a tone designation thereon, and a tune chart adjacent said supports with designations therealong identifying the notes of the indicated tune, whereby when the proper bars are placed adjacent their respective tone designations and vibrated in sequence they will play the said tune.

2,943,528
MINE ROOF STRESS INDICATING BOLT
Virgil A. Curry, Delbarton, W. Va.
Filed Oct. 29, 1957, Ser. No. 693,962
3 Claims. (Cl. 85—62)



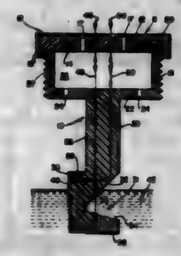
1. A mine roof stress indicating bolt comprising a shank threaded adjacent one end for cooperation with an internally threaded nut seating in a bore in a mine roof, a head at the other end of the shank and integral therewith for reception of a wrench for turning the bolt, said head having a flat face proximate the shank, and a flash integral with the head projecting normal to the shank beyond the periphery of the head having a flat roof plate engaging face coplanar with the flat face of the head except for portions in diametrically opposed areas indented in its face remote from the shank to provide in its roof plate engaging face generally radially directed projections extending from its edge and terminating short of the shank adapted to engage a mine roof plate when disposed about the shank between the flash and said nut and as the bolt is turned into the latter when drawing the plate against the mine roof to ultimately permanently recede into and remain in the plane of the flash to thereby afford visible indication that a predetermined tension has been imposed on the bolt.

2,943,529
ALIDADE WITH PENDULOUSLY STABILIZED RETICLE
Allister L. Baker, Denville, N.J., assignor to Keuffel & Esser Company, Hoboken, N.J., a corporation of New Jersey
Filed Jan. 12, 1956, Ser. No. 558,735
6 Claims. (Cl. 88—1)



1. An optical instrument comprising a support provided with horizontal bearing means, a horizontal axle pivoted in said bearing means, a telescope carried on said horizontal axle having its line of sight perpendicular to the axis of said horizontal axle, a protractor scale mounted on said horizontal axle and at least a portion of which is mounted above said horizontal axle, said protractor scale pivoted with said telescope and centered on the axis of said horizontal axle, a pendulum carrying an index mark, pivot means pivoting said pendulum with respect to said support in a plane perpendicular to said axis of said horizontal axle and an optical system carried by said support imaging said index mark against a portion of said protractor scale above said horizontal axle so that the reading of said protractor scale indicates the true elevation angle of the line of sight of said telescope with respect to gravity even if said support is not perfectly level.

2,943,530
OPTICAL INDICATOR FOR LIQUID LEVEL
Robert I. Nagel, Skokie, Ill., assignor to Elastic Stop Nut Corporation of America, Union, N.J., a corporation of New Jersey
Filed Oct. 26, 1956, Ser. No. 618,629
3 Claims. (Cl. 88—1)

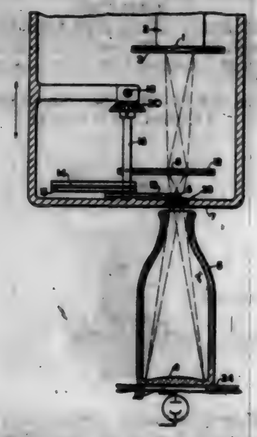


1. A liquid level indicator comprising a post of light transmitting material having an observation end, a cylindrical portion adapted to be normal to said level, said cylindrical portion providing a first light path lengthwise of and in said post, a notch in one side of said post and partly defined by a polished first surface adapted for immersion in said liquid disposed at 45 degrees to said first path and terminating said first path, the depth of said notch in a direction transverse to the lengthwise dimension of said first path being substantially equal to the diameter of said cylindrical portion, said notch being further defined by a second surface disposed at more than 45 degrees to said first surface and a third surface substantially parallel to the axis of said cylindrical portion and joining said first and second surfaces where the latter are closest to each other, said post further having an end providing a fourth surface further from said observation end than said notch, said post also having a lateral extension opposite said notch and providing a second light path commencing at said first surface and perpendicular to said first path, a first signal terminating said second path, so that with said first surface not immersed in said liquid light passing along said first path will be reflected by total internal reflection at said first surface into said second path and said light will be reflected by said first signal back along said second and first paths to render said first signal visible at said observation end, and when said liquid fills said notch light passing along said first path will be transmitted substantially straight through said first surface in a continuation of said first path, and a second signal on one of said second and fourth surfaces terminating said continuation path to reflect said light back along said continuation and first paths to render said second signal visible at said observation end.

2,943,531
PHOTOELECTRIC INSPECTION APPARATUS
Lawrence Cranmer Bentley, Keston, England, assignor to U. D. Engineering Company Limited, London, England, a corporation of Great Britain
Filed Feb. 14, 1958, Ser. No. 715,439
Claims priority, application Great Britain Feb. 20, 1957
8 Claims. (Cl. 88—14)

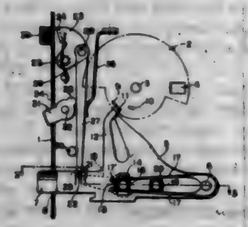
1. A photoelectric inspection apparatus for examining transparent containers having open mouths comprising

means for generating and moving a light beam to scan the total area of the container bottom, an optical device for focusing the light beam through the open mouth and on the transparent bottom of the container, a light sensitive device disposed to intercept the light beam passing axially through said container and the transparent bottom thereof, said optical device including a first lens disposed closely adjacent the open mouth of the con-



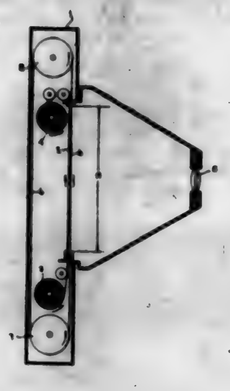
tainer so that the focused light beam passes through the container bottom only, whereby the light beam passing through the bottom is free from distortion from the container sides, and a plurality of auxiliary lenses each arranged to be selectively introduced into the light beam path so that the size of the focused beam image and its distance from said first lens may be varied in accordance with the size of the container to be examined.

2,943,532
SHUTTER RELEASING DEVICE FOR MOTION PICTURE CAMERAS
Teiji Hashimoto, Kawasaki City, Japan, assignor to Canon Camera Company, Inc., Tokyo, Japan, a corporation of Japan
Filed Sept. 19, 1958, Ser. No. 762,018
1 Claim. (Cl. 88—16)



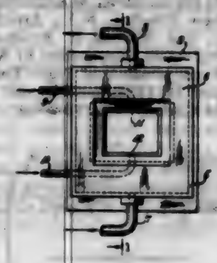
A shutter release for motion picture cameras comprising a rotatable sector shutter having a first and a second projection, a shutter release lever pivoted to the camera frame with its free end projecting outside the camera housing for manually swinging the release lever selectively upward and downward, the release lever having a transversely elongated aperture at substantially its mid-length region and a longitudinally elongated aperture in its region between the transversely elongated aperture and its pivoted end, a formed ear on the release lever, a projection integral with the release lever near the free end thereof, a stub shaft secured in the camera frame and projecting through the transversely elongated aperture, an auxiliary lever pivoted on the stub shaft, a pin on a free end of the auxiliary lever extending into the longitudinally elongated aperture, a bent ear formed on the release lever adjacent the stub shaft, a hair pin type spring on the camera frame embracing between its tines both the stub shaft and the bent ear, a stop on the release lever for engaging the shutter first projection in the normal position of the lever for continuous exposure and for engaging the shutter second projection when the release lever free end is lifted for single frame exposure, a switch lever pivoted on the camera frame, a boss integral with the switch lever, a spring-pressed self-restoring rotatable segment pivoted on the frame, a bent-over end portion on the segment, a threaded bushing in the camera frame for attaching a cable release, the bushing being aligned with the bent-over portion with the segment in its restored position, an elongated lever pivoted at an end region on the segment and extending to the release lever projection, a guide pin fixed in the camera frame, and a spring pressing the elongated lever against the guide pin and in the direction of the boss such that with the free end of the switch lever in its lower position the free end of the elongated lever is aligned with the projection of the release lever and the free end region of the release lever may be selectively lowered from the normal position manually and by actuation of the cable release to the continuous exposure position and can be lifted up to the single frame exposure position only by actuation of the cable release, while with the free end of the switch lever in its upper position the boss deflects the elongated lever to engage the free end of the auxiliary lever to prevent continuous exposure as long as the free end of the switch lever remains in its upper position and permits only single frame exposure.

2,943,533
APPARATUS FOR PHOTOGRAPHING AND EXHIBITING A SUCCESSION OF PICTURES
Isaac Goodber, 420 Riverside Drive, Apt. 2G, New York 25, N.Y.
Filed Oct. 3, 1958, Ser. No. 765,134
10 Claims. (Cl. 88—16)



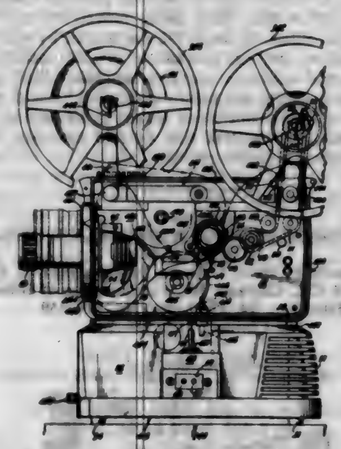
3. An apparatus for photographing a succession of pictures comprising a camera-like enclosure, a lens disposed in one wall of said enclosure, an image aperture formed within said enclosure spaced from the lens, means for supporting a film having a length substantially greater than its width, a perforated scanning mask, said film and scanning mask disposed with a portion of their lengths in juxtaposition to each other across said image aperture and a means for moving said film and scanning mask across said image aperture with relative motion between them.

2,943,534
FILM PROJECTOR DEVICE
Gerhard Pierschel, Dresden, Germany, assignor to VEB Kamera- und Kinowerke Dresden
Filed June 11, 1957, Ser. No. 664,919
Claims priority, application Germany Aug. 18, 1956
1 Claim. (Cl. 88—17)



Cooling system for film-guide means in projectors, which comprises in combination a jacket for cooling water in the shape of a closed tubular loop in juxtaposed position to said film-guide means, said loop defining a light aperture, inlet and outlet conduits for continuous supply and discharge of said cooling water to and from said jacket, respectively, and ducts for compressed air extending through said jacket and having nozzles opening at opposite sides of said aperture for projecting the water-cooled, compressed air at a film to be cooled.

2,943,535
COMBINED CAMERA AND PROJECTOR
John W. Oxberry, New Rochelle, N.Y., assignor, by direct and mesne assignments, of one-half to A. Kip Livingston, West Hempstead, N.Y., and one-half to Longines-Wittnauer Watch Co., Inc., New York, N.Y., a corporation of New York
Filed Jan. 16, 1958, Ser. No. 709,248
5 Claims. (Cl. 88—17)



1. In a motion picture camera-projector apparatus adapted to handle unexposed film for taking pictures and developed film for projecting pictures, the combination comprising a manually portable camera-projector unit having casing means housing camera and projector film translating and shutter mechanism, said casing means having a wall portion, a power source housed in said casing means to drive said mechanism on camera operation, a ventilated compartment in said casing means to carry an A.C. light source for projection operation and having an air inlet opening in said casing means wall portion and an external air outlet, A.C. electrical wiring in said casing means leading to said compartment, circuit connector means on said casing means electrically connected to said wiring, mechanical driving means in said casing means connected to said mechanism for drive thereof on projection operation, clutch means for said mechanical driving means having a driven element connected thereto and mounted at a fixed location on said casing means wall portion in an exteriorly accessible position, a base unit for removable support of said casing means thereon and having a wall portion for juxtaposition to said casing means wall portion when said casing means unit is mounted on said base unit in predetermined aligned manner, a driving element complementary to said driven element mounted at a fixed location on said base unit wall portion for automatic driving engagement of said driven element when said units are mounted together in the predetermined aligned manner for demountable structural connection therebetween, an A.C. motor mounted in said base unit, A.C. electrical wiring in said base unit electrically connected to said motor, means on said base unit electrically to connect the A.C. wiring of the latter to a household A.C. supply circuit as a source of power, connecting wiring means electrically connected to said base unit wiring having circuit connector means removably to be engaged with said first circuit connector means when said units are mounted together electrically to connect the A.C. wiring in said casing means to the power source, blower means carried by said base unit having an outlet duct terminating in an outlet opening in said base unit wall portion disconnectably connectable in flow communicating manner to the air inlet opening in said casing means wall portion when said units are mounted together in the predetermined aligned manner, and driving means connecting said A.C. motor to said driving element and said blower.

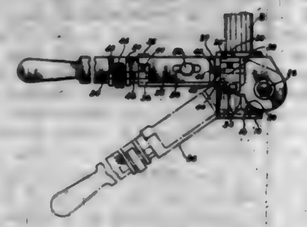
2,943,536
TILTABLE MIRROR SUPPORTS
Clifford L. Stafford, Jamestown, N.Y., assignor to Chautauqua Hardware Corporation, Jamestown, N.Y., a corporation of New York
Filed May 21, 1958, Ser. No. 736,884
4 Claims. (Cl. 88—97)



1. A mirror support comprising a channel member having lengthwise slots adjacent the ends thereof, extendable bars mounted in the ends of said member, screws projecting through said slots into engagement with said bars and serving to secure said bars in any extended position within the limits defined by said slots, a flange integral with and extending across the end of each of said bars to provide an enclosure, a mirror engaging clip, a return bent flange of said clip engaging and enclosing said bar flange, the other flange of said clip being within said enclosure, means loosely securing said

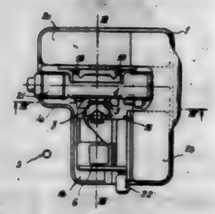
clip to said flange whereby to enable adjustment of said clip into full engagement with the edge of a mirror, and a mounting bracket for said support, the connection between said support and said bracket including means enabling swinging said support and a mirror carried thereby.

2,943,537
CUTTING TOOL
Albert M. Reusing and John H. Eberly, Lancaster, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Feb. 28, 1958, Ser. No. 718,359
6 Claims. (Cl. 90—1.4)



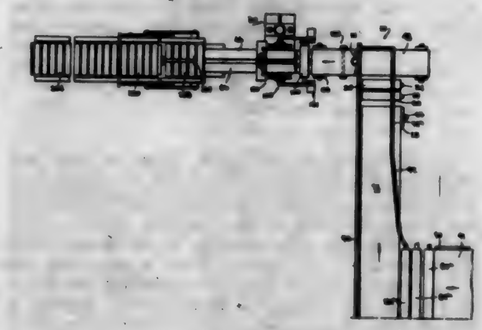
1. A manually operable spline cutting and shaping tool operable to cut radii on the side walls of splines extending inward from the outer end of a splined shaft and comprising in combination, a base arranged to receive a splined shaft and be positioned thereon in predetermined relationship relative to the splines in the outer end of said shaft, handle means pivotally connected at one end to said base for movement about an axis transverse to the axis of the shaft and parallel to the side wall of a spline upon which a radius is desired to be cut, and cutter means adjustably carried by said handle means and movable directly therewith arcuately about the axis of the pivotal connection of said handle with said base, said cutter means also being engageable with the outer end of one of the side walls of one of said splines of said shaft, whereby when said handle is moved pivotally in one direction relative to said base said cutter will cut one of the side walls of the spline of said shaft generally to taper the same.

2,943,538
GEAR CUTTING MACHINE
Pierre Pegard, Courbevoie, France, assignor to Ateliers G.S.P., Courbevoie, France, a French society
Filed May 11, 1956, Ser. No. 584,365
Claims priority, application France May 14, 1955
6 Claims. (Cl. 90—4)



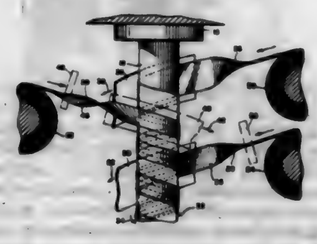
1. In a gear cutting machine, a frame comprising a base portion and two stationary upstanding frame sections substantially at right angles, first and second slideway means respectively provided on inwardly directed surfaces of said frame sections, a work carrier assembly slidably mounted on said first slideway means and a cutter carrier assembly slidably mounted on the said second slideway means, drive means connected with said assemblies and operable for cutting gear teeth on said work, and controls for operating said drive means positioned for convenient actuation from an operator's station within the angle defined by said frame sections.

2,943,539
TILE ACCUMULATING, COUNTING, STACKING, AND SQUARING MACHINE
Gene S. Lytle, New Windsor, N.Y., Arnold A. Wilcox, Whittier, Calif., and William R. Beshmer, Joliet, Ill., assignors to Mastic Tile Corporation of America, Newburgh, N.Y., a corporation of New York
Filed Aug. 31, 1956, Ser. No. 607,454
24 Claims. (Cl. 93—93)



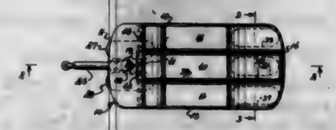
1. In combination, conveyor means, means to continuously feed tile to a level above the conveyor means to allow said tiles to drop onto said conveyor means at an accumulator station to form a stack, means to hold back all the tile in the stack at the accumulator station, except one or more lowermost tile or tiles, so that the conveyor may move said lowermost tile or tiles from under the stack allowing the remainder of the tiles in the stack to drop onto said conveyor means, block means adapted, in one position thereof, to permit the lowermost tile or tiles to be moved out from the bottom of the stack on said conveyor means, and in another position thereof to block the tile or tiles from being moved by said conveyor means, means to count the tile moved by said conveyor means as they are moved out of said accumulator station by said conveyor means when said block means is in its first position, and means controlled by said counting means to move said block means to its second position to block movement of tiles by said conveyor, when a predetermined count is reached.

2,943,540
METHOD OF MAKING A SPIRALLY WOUND CONTAINER
John Kenneth McBain, Chicago, Ill., assignor to W. C. Ritchie & Co., Chicago, Ill., a corporation of Illinois
Filed Jan. 24, 1958, Ser. No. 710,939
14 Claims. (Cl. 93—94)



1. The method of producing a spirally wound container from at least two strips of flexible material in a substantially continuous process and the container is characterized by a cylindrical wall having major portions thereof transparent; unwinding one of said strips under tension and at uniform speed from a reel supported laterally spaced from the axis of a mandrel arranged horizontally and engaging the strip on a surface of the mandrel in a spiral movement, unwinding the second strip under tension and at a uniform speed from a reel supported laterally spaced from the axis of the mandrel on a side thereof opposite to that of the first mentioned reel and engaging the second strip on the exterior of the first strip overlapping the marginal edges of adjacent turns of the first strip, said one strip being of a flexible transparent material greater in width than the second strip and the second strip having the surface thereof next adjacent the first strip adhesive coated, said strips being engaged upon the mandrel respectively from below and above the same in a spiral of substantially identical pitch.

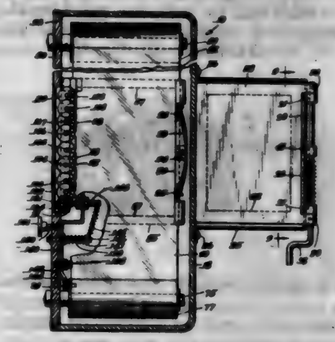
2,943,541
COMPACTION ROLLER
Michael J. Dunn and Donald M. Dunn, both of 2135 Knapp St., St. Paul, Minn.
Filed May 18, 1954, Ser. No. 428,722
2 Claims. (Cl. 94—50)



1. A road rolling apparatus comprising, a rigid, U-shaped frame having a forward apex and rearwardly extending legs, said forward apex providing a suspension point and the rearward ends of each of said legs also providing symmetrical trailing suspension points, a plurality of constantly spaced roller wheels supporting the forward suspension point, means journalling the wheels for free pivotal movement on the frame at the forward suspension point, roller wheel means supporting each of said trailing suspension points and journalled for rotation about fixed horizontal axes on the frame, an oscillable frame hingedly connected adjacent the forward apex of said rigid frame and lying in medial relation with respect to the side legs of said rigid frame, roller wheel means journalled for rotation about a fixed horizontal axis in supporting relation on the oscillable frame at the trailing end thereof and bearing means mounted between the rigid frame and said oscillable frame at each side thereof to permit vertical movement of the oscillable frame while rigidly supporting against relative lateral movement with respect to the rigid frame.

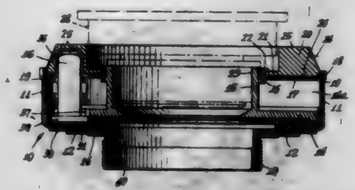
2,943,542
ROLL FILM ADAPTER
Irwin M. Bloomfield, 6210 N. Sacramento Ave., Chicago, Ill.
Filed May 14, 1956, Ser. No. 584,529
8 Claims. (Cl. 95—1.1)

1. In a roll film adapter for a camera, a film magazine housing having an exposure opening therein, a film guide in the housing adjacent the exposure opening and consisting of spaced apart and facing channel guides for receiving and engaging and guiding the edges of the film against sidewise movement, means for feeding the film through the film guide, one of said channel guides having a plurality of notches therein for exposing the film in that channel guide at said notches, a plurality of transparent discs having opaque indicia thereon located outside of the film guide between the respective notches in said one channel guide and the exposure opening for photographically applying the indicia to the edge of the



film, and means for adjustably positioning the transparent disc for aligning selected indicia thereon with the notches in said one channel guide.

2,943,543
PHOTOGRAPHIC SHUTTER HOUSING CONSTRUCTION
Karl F. Reutschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Nov. 29, 1955, Ser. No. 549,784
Claims priority, application Germany Dec. 3, 1954
1 Claim. (Cl. 95—10)



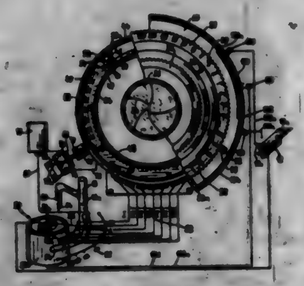
In a photographic intra-lens shutter housing construction, in combination, an intra-lens shutter housing, said housing having a bottom wall and outer peripheral side wall, a shutter base plate mounted against said bottom wall, said housing being adaptable for an incorporated electric exposure regulator, an adjustable speed setting ring resting on said peripheral wall, a front cover member for said housing comprising a thick annulus located at the front of said housing and bearing against said ring, said annulus having a tapered outside wall of appreciable height and an inside wall disposed an appreciable distance inwardly of said outside wall, and also having front and back walls between which said outside and inside walls extend, and further having a rearwardly opening recess in said back wall, said recess at its bottom extending close to said front wall, said recess extending from said back wall through said ring through an unoccupied portion of the shutter housing and through said base plate, and an electric measuring device disposed in the shutter housing and extending from the front to the rear thereof, and through said ring and said base plate, said device at its front portion projecting into said recess of the cover annulus, and means fixedly securing said measuring device to said bottom wall of the shutter housing.

2,943,544
ROTATABLE DETACHABLE PHOTOMETER ON CAMERA
Einar Cronholm, Goteborg, Sweden, assignor to Fritz Victor Hasselblad, Goteborg, Sweden
Filed Feb. 14, 1957, Ser. No. 640,267
Claims priority, application Sweden Feb. 18, 1956
3 Claims. (Cl. 95—10)



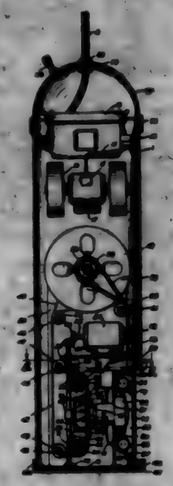
1. In a camera assembly having an objective lens and a spring driven shutter for said lens, a photometer assembly comprising a shaft for setting said shutter spring, a photometer knob, means for lockingly engaging said knob to said shaft, said photometer knob including photometer measuring and indicating elements and a knob light opening for said elements arranged for being positioned in the same direction as said lens upon the rotation of said shaft to its spring setting position.

2,943,545
PHOTOGRAPHIC CAMERA WITH AUTOMATIC EXPOSURE SETTING
Paul Fahlenberg, Baierbrunn, near Munich, Germany, assignor to Compur-Werk Friedrich Deckel O.H.G., Munich, Germany, a German firm
Filed Feb. 20, 1958, Ser. No. 716,413
Claims priority, application Germany Feb. 22, 1957
6 Claims. (Cl. 95—10)



1. A photographic camera having at least two adjustable members movable through predetermined ranges to set the camera for making an exposure, means for moving one of said adjustable members to and latching it in an extreme position at one end of its range of travel, springs means tending to move said one of said members through a return movement back to the opposite end of its range of travel, and a built-in exposure meter having a pointer assuming various positions in accordance with the incident illumination, characterized by a locking member for stopping said return movement of said one adjustable member at an intermediate point, a magnet for holding said locking member in an ineffective position, and electrical circuit means including said magnet and said pointer of said exposure meter and further including a contact member carried by said one adjustable member for closing said circuit means at a point in said return movement dependent on the position of said pointer, said locking member being released from said magnet when said circuit means is closed.

2,943,546
SHUTTERLESS CAMERA FOR TAKING PICTURES OF THE WALL OF A WELL OR THE LIKE
John L. Gafford, 3535 Second, Riverside, Calif.
Filed Dec. 29, 1955, Ser. No. 556,323
2 Claims. (Cl. 95—11)

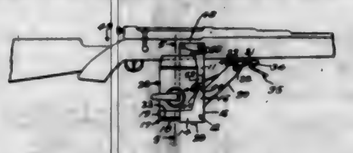


1. A housing for a shutterless camera having a film for photographing underground strata of a well hole and being adapted to be lowered into a well hole at a predetermined rate of speed and having a port hole having a transparent cover in the lower sidewall thereof and having a wall provided with an opening spaced from the sidewall of the housing forming with said port hole an enclosed chamber, continuous light means in said chamber, a lens in said opening for focusing an image at a point outside said chamber in the housing, a frame having spaced plates removably mounted in said housing, a shaft in the upper portion of the frame, reels for film spaced on said shaft, a vertical shaft rotatable in said frame, a bracket mounted in said frame having a sleeve through which the vertical shaft extends, a vertical plate in the housing spaced from the chamber wall and having a slit therein opposite the opening in the chamber wall, said lens focusing through said slit, a pressure plate on said bracket, resilient means urging said pressure plate into face to face engagement with the first-named plate, shafts mounted in said frame transversely of the housing, one below and one above said pressure plate, gears on said transverse shafts, sprockets on said transverse shafts having teeth for engaging said film, means on said vertical shaft cooperating with said gears for rotating the transverse shafts, and synchronous motor means having continuous driving connection with said film reels and with said vertical shaft whereby said film will move continuously off of one reel and downwardly between the apertured plate and the pressure plate and on to the other reel at a predetermined rate with respect to rate of descent of the camera housing and character of said lens to properly focus the image on the film.

2,943,547
FIREARM SUPPORTED CAMERA MOUNT
Marion S. Marth, 6024 Linden Lane, Amarillo, Tex.
Filed Nov. 3, 1958, Ser. No. 771,569
4 Claims. (Cl. 95—12)

1. A camera mount comprising a hanger support including a hanger bar, means adapted to secure an upper end of said hanger bar to a part of a firearm, forwardly of the firearm trigger, means for detachably securing

a camera in said hanger support for mounting the camera beneath and to one side of the firearm, an arm fixed to and extending from a part of the hanger support and disposed to one side thereof and of the camera, a trigger, means pivotally mounting said trigger on said arm for swinging movement about a horizontal axis, a shaft journaled in said hanger support, a finger fixed to said shaft and having a free end portion adapted to overlie an oper-



ating lever of the camera, and link and lever means connecting said shaft and trigger for swinging the finger downwardly to depress the camera operating lever when the trigger is swung upwardly, said trigger being supported by the arm at a point spaced longitudinally relative to the firearm from said hanger support and in a position to be engaged and actuated by the fingers of the hand supporting the firearm forwardly of the trigger.

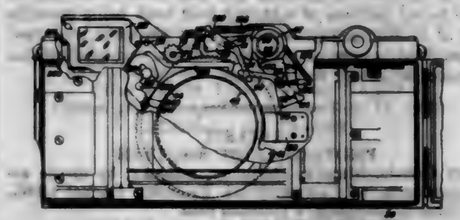
2,943,548
PANORAMIC CAMERA
Karl Wolfgang Thalhammer, 10219 Eldora Ave., Sunland, Calif.
Filed Dec. 23, 1957, Ser. No. 704,807
5 Claims. (Cl. 95—16)



1. In a panoramic camera, the combination of: a camera housing including a cylindrical wall means provided with a curvilinear light-admitting opening and a diametrically oppositely disposed curvilinear film path means; a cylindrical lens mounting casing coaxially mounted within said housing portion for oscillatable rotation therein, said casing being provided with diametrically opposed light-transmitting slots; and oscillatable means carried by the camera housing for reciprocating the lens casing between light-admitting and non-light-admitting positions, said oscillatable means including a spur gear coaxially mounted on the lens casing; a segment gear pivoted on the housing, a yoke-like member provided with spaced arms and pivotally and slidably connected to the segment gear and pivoted for rotation about the axis of said spur gear; a crank means mounted for rotation about said axis; spring means connecting said crank means and the arms of said yoke-like member; a releasable latch member pivoted at one end to the housing, having a positioning element releasably and selectively engaging the yoke member, and having a latch portion; and a release pin engageable with said latch portion.

2,943,549
PHOTOGRAPHIC CAMERA
Hubert Nerwin, Rochester, N.Y., assignor to Graflex, Inc., Rochester, N.Y., a corporation of Delaware
Original application Nov. 1, 1952, Ser. No. 318,231. Divided and this application May 4, 1953, Ser. No. 352,768
2 Claims. (Cl. 95—44)

1. A photographic camera having a viewfinding system, means for detachably securing to said camera any one of a number of interchangeable focusing mounts for photographic objectives of different focal lengths, adjustable optical means for varying the magnification of the image seen in said system, adjustable means for framing the image seen in said system, a gear for adjusting said optical means, said gear being rotatable different amounts on attachment of the different objective focusing mounts to said camera, thereby to vary automatically the mag-



nification of said image in accordance with the focal lengths of the different objective focusing mounts, respectively, and a cam secured to said gear to rotate therewith and operatively connected to said framing means to adjust said framing means automatically also and simultaneously with the adjustment of said optical means and also in accordance with the different focal lengths of said different objective focusing mounts.

2,943,550
PHOTOGRAPHIC INTRA-LENS SHUTTER
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed July 28, 1956, Ser. No. 599,169
Claims priority, application Germany July 25, 1955
2 Claims. (Cl. 95—63)



1. A photographic shutter comprising a housing, a shutter operating mechanism, said mechanism including a shutter speed setting ring rotatable with respect to said housing, said ring being adapted to have indicia affixed thereto, said housing being adapted to have means cooperable with said indicia for indicating the shutter speed setting, said ring having means attached thereto extending exteriorly of said housing for manual manipulation thereof, said shutter operating mechanism including a shutter release member, a detent means cooperable with said ring for releasably securing said ring in pre-selected set positions corresponding to pre-selected speeds of said shutter, said detent means comprising a series of spaced indentations formed on said ring, and a pawl cooperable therewith, a detent lever pivotally mounted on said housing, said pawl being connected to said lever, means normally urging said lever and pawl into bearing relationship with said ring with said pawl being receivable in said indentations, said ring and indentations thereof being movable past said pawl and said ring comprising raised portions with respect to the base of said indentations operable to move said lever in alternate pivotal movements as said pawl moves in and out of said indentations during movement of said ring with respect to the pivotal

axis of said detent lever, said shutter release member being provided with a pin affixed thereto, said detent lever having a locking hook, said shutter release member having a normal rest position, said locking hook extending substantially tangentially with respect to said pin and said pin being received intermediate said hook and said detent lever pivot axis in locking engagement with said hook of the latter lever when said shutter release member is in said rest position and said pawl is on one of said raised portions of said ring, said hook being movable out of locking engagement with said pin when said pawl is received in one of said indentations and said release member is in said rest position.

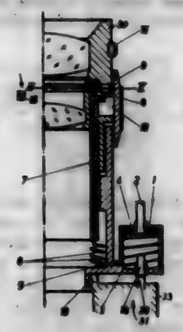
2,943,551
PHOTOGRAPHIC SHUTTER
Kurt Gebele, Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a German firm
Filed May 20, 1955, Ser. No. 509,929
Claims priority, application Germany May 28, 1954
7 Claims. (Cl. 95—64)



1. A photographic shutter including a casing, a blade driving ring, a blade holding ring, a diaphragm adjusting ring, and a control ring all rotatably carried by said casing, shutter blades each having one pivotal connection to said blade driving ring and another pivotal connection to said blade holding ring, diaphragm leaves each having a pivotal connection to said diaphragm adjusting ring, a master member mounted for movement between a rest position and a tensioned position and operatively connected to said blade driving ring to move the same first to open and then to close the blades upon a running-down movement of said master member from tensioned position to rest position, a tensioning member including a rotary shaft coaxial with said master member and operable to move said master member from rest position to tensioned position, an operative connection including gear teeth mounted on and turning with said rotary shaft and other gear teeth meshing therewith on said control ring for turning said control ring upon tensioning operation of said tensioning member, and an operative connection between said control ring and said blade holding and diaphragm adjusting rings to shift both of said last two rings to open the shutter blades and the diaphragm leaves upon predetermined movement of said control ring by said tensioning member without movement of said blade driving ring.

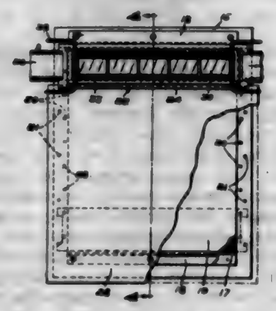
2,943,552
PHOTOGRAPHIC CAMERA
Albert Schilz, Munich-Obermenzing, Germany, assignor to Optische Werke C. A. Steinheil Sohn G.m.b.H., Munich, Germany, a firm
Filed Feb. 20, 1956, Ser. No. 566,656
Claims priority, application Germany Mar. 24, 1955
5 Claims. (Cl. 95—64)

1. In a photographic camera having a diaphragm, a ring for setting the diaphragm to a predetermined position, a cylinder adjacent to said ring, and a shutter release having a releasing pin; a cylinder located opposite said releasing pin, a piston within the second-mentioned cylinder, resilient means located within the second-mentioned cylinder and engaging said piston, resilient means located within the second-mentioned cylinder and engaging said piston, an actuating member carried by



the second-mentioned cylinder and adapted to be engaged by said piston and to engage said releasing pin, whereby the shutter release is actuated, a conduit for pressure fluid connected with said two cylinders, a piston within the first-mentioned cylinder, and an actuating member connected with the second-mentioned piston and actuating said ring.

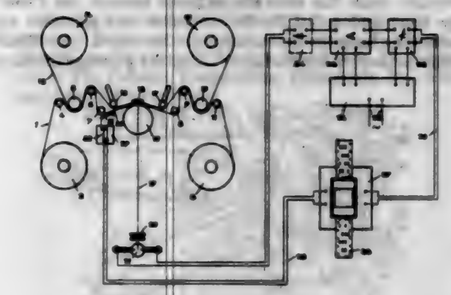
2,943,553
PRINTING APPARATUS
Harold I. Drewett, R.F.D. 2, Warren, Maine
Filed July 22, 1953, Ser. No. 369,658
12 Claims. (Cl. 95—75)



1. In apparatus for use in simultaneously contact printing the negatives of a predetermined length of film on a sheet of photographic paper dimensioned to permit at least one row of prints of that length to be printed thereon, a base on whose upper surface the sheet rests and to which it is anchored, a film holder including a first frame member disposed on said sheet and anchored to said base in loose engagement with the edges of the film to define a slideway therefor and dimensioned to expose within it said length of film, and means to mask the margins of the framed film and the space between each of its negatives to provide a white frame for each of the pictures printed on said sheet, said means including a transparent film contacting member provided with portions effecting at least the masking of said spaces and a pressure member in engagement with the margins of said transparent member, said pressure member being in the form of a second frame within said first frame and vertically movable relative thereto and in light-tight

relation therewith, and means to connect said pressure member to said base to press said film against said sheet.

2,943,554
FILM PRINTING MACHINE
Erich Kästner, 91 Turkenstrasse, Munich, Germany
Filed Apr. 22, 1957, Ser. No. 654,426
1 Claim. (Cl. 95—75)



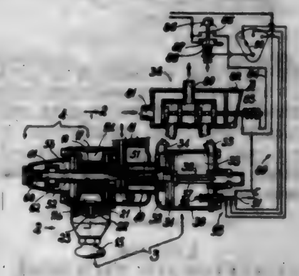
In a film printing machine in which a negative film and a positive film to be printed are caused to travel together, a printing drum for supporting said portion of the negative which is being printed, a pressure shoe for bringing the positive and the negative into intimate contact on the printing portion, a pulse generator scanning the negative film for signal means and applying a pulse according to the signal means by conductors to an automatic printing controller, a program control tape mounted to be shifted forward step-by-step, the shifting movement causing a control pulse according to the program on said control tape at the respective step to be applied by way of wires to an electronic control amplifier, a gas discharge tube disposed to effect the exposure by way of a condenser, said discharge tube being supplied via said control amplifier from a power amplifier and a power pack connected to a power supply by wires, said amplifiers varying the intensity of said discharge tube, said discharge tube being supplied with non-controlled energy at a level corresponding to the lowest level of effective printing light, said discharge tube being additionally supplied during printing with that amount of energy only which corresponds to the range of controlling action.

2,943,555
DEVELOPING APPARATUS FOR SENSITIZED MATERIALS
John H. Hill, 30 Pine St., Mount Clemens, Mich.
Filed Mar. 21, 1956, Ser. No. 572,938
4 Claims. (Cl. 95—89)



4. Apparatus for developing light sensitive sheet material comprising, means forming a vessel for a fluid developing agent with which said apparatus is adapted to be used, a holder for the material to be developed, said holder being removably positioned in said vessel, said holder being formed of a generally flat flexible screen which can be placed in laminar relation with the sheet material to be developed and rolled up therewith, said screen having a series of generally parallel corrugations extending throughout its length with each corrugation extending substantially throughout the width of said screen so that sheets of random sizes can be rolled up with said screen with the crest portions of said corrugations engaging the sheet material and spacing adjacent layers thereof apart, said screen including said crest portions being foraminous throughout its area to facilitate circulation of developing agent around the sheet material and to minimize the area of contact between said crest portions and sheet material.

2,943,556
COFFEE-MAKING APPARATUS
Mario Egi, 1 Via Montefeltro, and Andrea Ivo Novi, 63 Corso Buenos Aires, both of Milan, Italy
Filed Feb. 19, 1958, Ser. No. 716,207
Claims priority, application Italy Feb. 19, 1957
3 Claims. (Cl. 99—289)

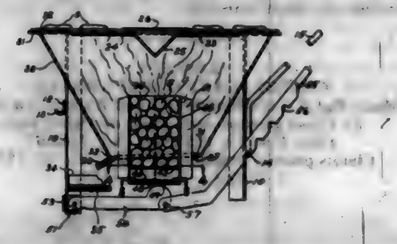


2. In an automatic coffee-making machine having a plurality of work stations, in combination, a rotatable drum formed with a plurality of coffee-making cavities circumferentially spaced on said drum for consecutive indexing alignment with said plurality of work stations, at least one of said work stations being arranged for coffee making; a pump cylinder; passage means connecting said pump cylinder with said coffee-making work station: a piston member axially reciprocable in said cylinder for supplying water to a coffee-making cavity in alignment with said coffee-making work station; a reciprocably rotatable drive member; connecting means for engaging said drum to said drive member for joint movement during rotation of said drive member in one direction, and for disengaging said drive member from said drum during rotation of said drive member in the other direction of the reciproacting rotation thereof; cam means on one of said piston and drive members and extending on said one member in the axial direction of said piston member over at least the length of the stroke thereof, said cam means having a helical portion and a terminal straight portion extending axially, and cam follower means on the other one of said members and engaging said cam means for actuating reciprocating rotation of said drive member synchronous with the axial reciprocating movement of said piston member; and adjusting means for adjusting the stroke of said piston member for varying the length of movement of said cam follower means in engagement with said straight cam means portion, whereby the quantity of water supplied from said cylinder to a coffee-making cavity may be adjusted without varying the angular displacement of said drum while the same is rotated in one direction during one of the strokes of said piston member, said drum standing still during the other stroke of said piston member.

2,943,557
BARBECUE GRILL
Herman W. Suehlsen, 1212 Main St., Milwaukie, Oreg.
Filed Dec. 23, 1957, Ser. No. 704,517
14 Claims. (Cl. 99—421)

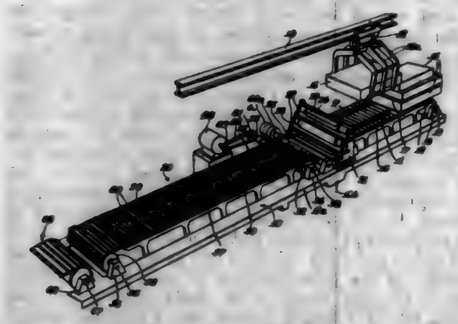
9. A barbecue apparatus comprising a horizontal open grill for supporting food to be broiled, a firebox under the

center of said grill, a plate in the center of said grill above and coextensive with the plan area of said firebox to prevent juices from material on said grill from dropping into said firebox, a reflector extending outwardly and upwardly from said firebox substantially to the periphery of said grill at an angle to reflect heat radiated



laterally from said firebox upwardly against said grill said grill having an annular broiling surface extending around said center plate, all parts of said broiling surface being disposed vertically above said reflector, and an annular grease gutter on said reflector extending around said firebox at a distance therefrom arranged to collect all drippings from said grill.

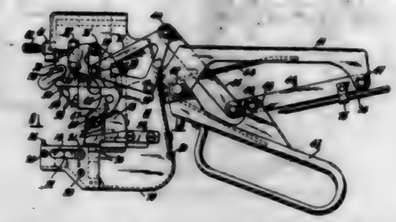
2,943,558
CONVEYOR FOR PACKAGES
Marchand B. Hall and Alvin L. Winkler, Chicago, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed June 2, 1955, Ser. No. 512,629
5 Claims. (Cl. 198—1)



1. Apparatus for use in the binding of objects of varying width comprising, a conveyor, means for actuating said conveyor, a series of guide members mounted on said conveyor to extend transversely thereof, said guide members being hollow and having longitudinal slots in their upper sides, supports mounted on said guide members, said supports having parts extending through said slots and slidably engaging said guide members and having upwardly extending pedestals adapted to support on their upper sides an object to be bound, and means for adjusting certain of said supports longitudinally of said guide members.

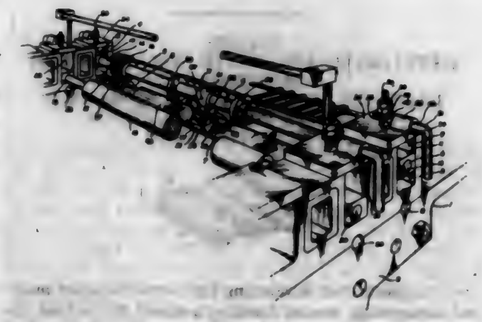
2,943,559
HAND REMARKER
Harry E. Rothmann, Valhalla, N.Y., assignor to A. Kimball Company, New York, N.Y., a corporation of New York
Filed Apr. 8, 1953, Ser. No. 347,511
10 Claims. (Cl. 101—19)

1. A hand tool for remarking price tickets by printing a price on the tickets and simultaneously punching the tickets with perforations coded to correspond to the price so printed comprising, in combination, a frame, ticket supporting means mounted on the frame, a printer carriage mounted in the frame and movable relatively toward and away from the ticket supporting means, a row of coaxially mounted marking wheels in the printer carriage, each marking wheel having a plurality of similar equally spaced flat surfaces around its periphery, raised type faces on the said flat surfaces, punches projecting normally from the said flat surfaces beyond the raised type faces and coded by their number and positions on the flat surfaces to correspond to the raised type faces on the respective flat surfaces, all of the punches on each



marking wheel being circumferentially aligned and being offset relative to the raised type faces in the direction of the marking wheel axis, so that perforations made in the ticket will lie between characters simultaneously printed thereon, the ticket supporting means including a die and printer platen mounted under the marking wheels providing flat surfaces opposite the raised type faces and die openings opposite the punches, means for moving the printer carriage toward the die and printer platen to cause a ticket supported thereby to be simultaneously printed and punched, and means for holding the printer carriage away from the die and printer platen at other times.

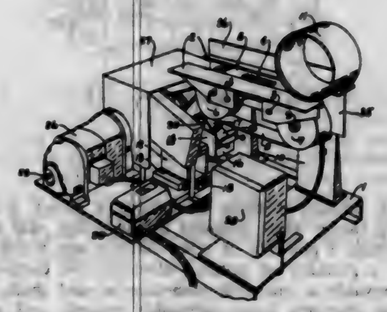
2,943,560
EMBOSSING APPARATUS
Ronald M. Wrob, Drexel T. Carlson, and Frederick N. Stephens, Kansas City, Mo., assignors to Hallmark Cards, Incorporated, Kansas City, Mo., a corporation of Missouri
Filed Nov. 19, 1958, Ser. No. 775,075
8 Claims. (Cl. 101—23)



1. Embossing apparatus for envelope making machines having a lower roller and a pressure roller thereabove, said lower roller having an enlarged portion at one end, a sleeve on the roller spaced from the enlarged portion, a two-piece removable collar on the lower roller between the sleeve and said enlarged portion having an engraved recess therein, a collar on the pressure roller, said second roller having a boss thereon, and means on said second collar for adjusting the same circumferentially

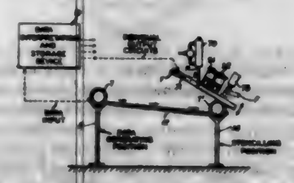
on said pressure roller to align said boss with the recess on the first collar as the rollers are rotated, and a U-shaped removable clip on said boss, said clip having a lining adhesively secured thereto and a resilient rubber face adhesively secured to said lining and clip for engaging in said recess on the first collar as the envelope material passes between said rollers.

2,943,561
MARKER FOR CYLINDRICAL ARTICLES
Ralph A. Pannier, McCandless Township, Allegheny County, and George E. Martin, Pittsburgh, Pa., assignors to The Pannier Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 5, 1957, Ser. No. 676,182
1 Claim. (Cl. 101—40)



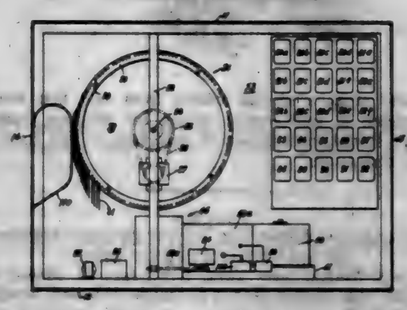
A device for marking cylindrical articles rolling along a table comprising a printing station on said table, support means at said printing station, an endless belt mounted on spaced wheels carried by said support means, a shoe to support said belt between said wheels, a printing die carried on said belt and to rest over said shoe when engaged by a cylindrical article rolling over said die at the printing station, drive means for said belt to present and stop said die on said shoe at said printing station, an inking roller mounted to apply ink to said die when said belt is driven, and means actuated by the movement of each article across said table to operate said drive means to drive said belt to contact said printing die with said inking roller to apply ink to said die and stop it on said shoe before the same article reaches the die at the printing station.

2,943,562
STENCILLING MACHINE
Adrian Phillips, Bronx, and Leo Robbins, Brooklyn, N.Y., assignors, by mesne assignments, to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 16, 1955, Ser. No. 553,474
5 Claims. (Cl. 101—42)



1. A stencilling device including a frame having a stencilling station, a plurality of carrier elements slidably mounted in the frame for rectilinear movement, each of said elements comprising a plurality of individual data stencils, signal responsive means actuated as a function of the data to be stencilled, the signals being in the form of voltages, said signal responsive means comprising servo-motors mounted on the frame and operated as a function of said voltages, a gear connection between each motor and one of said respective carrier elements, a plurality of input circuits for each motor corresponding to a plurality of data, means for selectively rendering one of said circuits effective by said data to energize the respective motor, a cam releasably connected to each of said carrier elements, and a plurality of pairs of contacts controlled by each of said cams, said plurality of pairs of contacts including two pairs for each stencil position, one of said pairs being normally open and the other pair normally closed, said selected circuit being rendered ineffective and its motor being deenergized when the respective cam causes both pairs of contacts of any stencilling position to be open.

2,943,563
PRINTING DEVICE
Murray Schildhaus, Revere, Mass., assignor, by mesne assignments, to Directomat, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 17, 1958, Ser. No. 768,829
22 Claims. (Cl. 101—93)

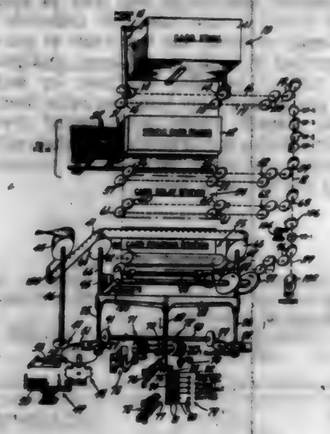


1. A printing device comprising a magazine rotatable about a horizontal axis, a plurality of printing plates, means on said magazine engaging an edge portion of each plate for swingably and slidably mounting each plate on the periphery of said magazine, said plates being swingable about axes parallel to the rotational axis of the magazine, and further, being slidable on said mounting means between advanced and retracted positions, printing means located adjacent a peripheral portion of said magazine and having a throat for receiving a single printing plate in its advanced position, electric motor means for rotating said magazine, a plurality of circumferentially spaced stop means on peripheral portions of said magazine, electrically operated movable means engageable with a selected stop means for stopping the rotating magazine in a predetermined angular position thereof to locate a selected printing plate while in its retracted position and depending from its mounting means on the magazine, in alignment with the throat of the printing means, electrically operated means engageable with said selected printing plate for moving said plate from its retracted position to the advanced position thereof within the throat of said printing means, and circuit means for controlling the operation of said motor means, said stop engaging means and plate moving means.

2,943,564
PRINTED DATA STORAGE INTERPRETER
Frederick M. Demer, Johnson City, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1957, Ser. No. 704,939
9 Claims. (Cl. 101—93)

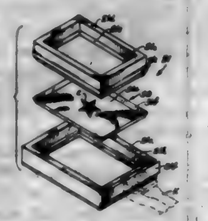
1. In interpreter apparatus for printing information sensed from coded data on cards the combination of

means at a first station for sensing coded data on a card, means responsive to said sensing means for temporarily storing the information represented by said sensed coded data in the form of transferable printed characters on



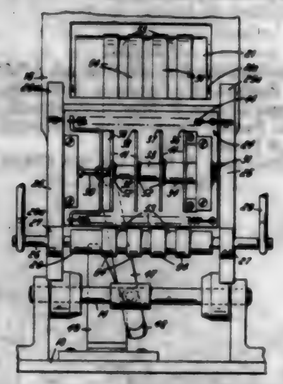
a record strip, a second station from said first station and means at said second station for effecting transfer of said stored information to said card in the form of visible characters.

2,943,565
SILK SCREEN PRINTING DEVICES AND METHOD OF MANUFACTURING SAME
Morris S. Malek, New York, N.Y.; Jack H. Malek, administrator of said Morris S. Malek, deceased, assignor to himself
Filed May 21, 1953, Ser. No. 356,390
2 Claims. (Cl. 101—127.1)



1. A stencil carrier unit supporting frame assembly of the character described comprising an outer box frame having a bottom side for resting on a horizontal table top formed with a through-opening extending upwardly to a top side, a flange extending inwardly into the opening of the outer box frame bottom side and being formed with an upwardly facing chamfered surface forming a seat, an inner box frame sized for nesting in the through-opening of said outer box frame, an interchangeable dish-shaped silk screen stencil unit having a peripheral border member thereof forming sloping dish sides conforming to said chamfered surface for seating thereon between said outer and inner box frames, said inner box frame having a bottom sealing means for contacting the upper surfaces of the peripheral border member to form a tight joint therebetween so that the silk screen stencil unit serves as a receptacle bottom closure wherethrough a print coloring material is forced, and releasable means for retaining said outer box frame, stencil unit and inner box frame in nested assembly.

2,943,566
PRINTING
Alfred William Simpson, London, England, assignor to Rejafix Limited, London, England, a British company
Filed Jan. 21, 1958, Ser. No. 710,247
Claims priority, application Great Britain Jan. 23, 1957
3 Claims. (Cl. 101—195)



1. A printing machine comprising a galley, a telescoping carrier shaft mounted in the galley, said shaft comprising a plurality of tubes slidable one within the other, a plurality of printing elements one carried by and movable as one with each tube of said shaft, said printing elements being adjustable towards and away from each other along the axis of said shaft by sliding of said tubes, each of said printing elements comprising a rule having a printing edge for receiving ink, said printing edges being co-planar, said machine further comprising cam operated means for moving said rules from an open position, when said rules are at an inking station, to a closed position, when said rules are at a printing station.

2,943,567
FLEXIBLE SNAP-ON ELASTOMER DIE
Ralph A. Pannier, McCandless Township, Allegheny County, Pa., assignor to The Pannier Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 5, 1957, Ser. No. 676,291
14 Claims. (Cl. 101—377)



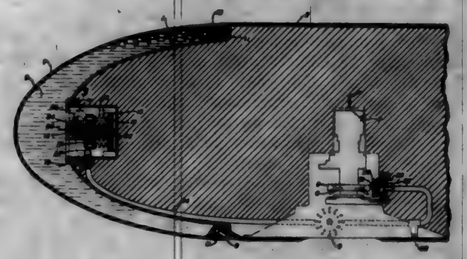
1. An integral manual snap-on flexible elastomer die made of incompressible material and having a flat background section with raised characters along its top face and a longitudinal mounting body section along its bottom face for insertion into a dovetailed groove in a rigid die holder, said groove having opposed acutely shaped marginal edges, characterized in that said longitudinal mounting body section is incompressible and dovetailed but smaller in cross section than said groove and has a selected wider dimension than the gap between said opposed acutely shaped marginal edges, said selected wider dimension permitting the longitudinal mounting body section to dish and freely enter between the edges defining said groove when the elastomer is flexed and folded back over its top face and rolled forward directly into place in the groove.

2,943,568
STABILIZING DEVICE
Henry C. Favian, United States Navy, Newport, R.I., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 18, 1944, Ser. No. 568,739
7 Claims. (Cl. 102—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with an item of ordnance adapted to travel successively through air and water, means for controlling the attitude of such item in flight and resultantly the manner of its entry into the water, comprising a substantially cylindrical blunt-noced assembly, adapted to encircle the forward end of said item of ordnance and constructed of material frangible by impact with the water to permit separation of the assembly from said item of ordnance.

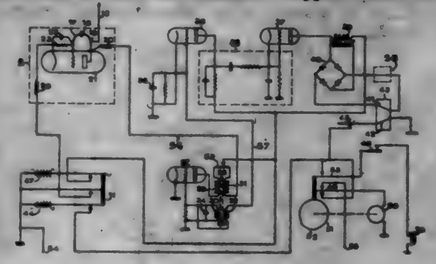
2,943,569
ORDNANCE EXPLODING MECHANISM
Richard C. Wolfe, United States Navy, Los Angeles, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 19, 1945, Ser. No. 629,686
15 Claims. (Cl. 102—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A torpedo containing a warhead, an auxiliary shell spaced from the said warhead, and a pressure-transmitting relatively insensitive explosive in the space between the said warhead and the said auxiliary shell.

2,943,570
MINE DEVICE WITH DOPPLER EFFECT CONTINUOUS WAVE RADAR
Lucien P. Pouchkarty, Paris, France, assignor to Societe de Fabrication d'Instruments de Mesure, Massy, France, a French company
Filed May 14, 1956, Ser. No. 725,223
Claims priority, application France May 14, 1957
4 Claims. (Cl. 102—19.2)

1. An explosive mine detonatable by electromagnetic energy which is adapted to explode by responding to the Doppler effect frequency reflected by objects of low velocity entering the electromagnetic field of action of said mine comprising a detonator, a detonator energizing circuit adapted to fire the detonator, a firing relay which controls said detonator energizing circuit, an antenna for transmitting and receiving electromagnetic energy, a radio-frequency oscillator including an inductance connected to said antenna, said oscillator consisting of a single triode operating as both transmitter and receiver whose anode and grid are coupled to said inductance with said anode being connected through a choke to a low frequency signal source whereby as a transmitter said triode generates a carrier signal modulated by said low frequency signal and whereby said triode functions as a super-regenerative detector having a quench frequency which is the frequency of said low frequency signal, said low signal frequency source being constituted by an audio-frequency oscillator generating a signal of a frequency which is higher than the estimated Doppler effect frequency induced by objects of low velocity entering the electromagnetic field of action of said mine, a pass band amplifier and detector network in series with each other, the output of said detector network being connected to said firing relay and duplexer means having three terminals connected respectively to the output of said audio-frequency oscillator, to the input of said radio-frequency oscillator to modulate the carrier signal thereof in accordance with the low frequency signal generated by said audio-frequency oscillator and to the input of said pass band amplifier whereby the reflection of radiated radio-frequency signals by mobile objects produces a Doppler effect modulation of audio-frequency oscillations in said pass band amplifier to consecutively vary the output of said detector network and trigger said firing relay to thereby explode said mine.



2,943,571
EXPLOSIVE DEVICE
David L. Courson, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 18, 1958, Ser. No. 722,329
6 Claims. (Cl. 102—22)



1. A line wave generator wherein the natural detonation front generated at one initiation point is distorted to arrive simultaneously at a plurality of finish points along

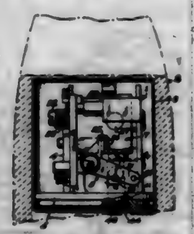
a straight line which consists of a continuous sheet-like matrix of a high-velocity detonating explosive, said matrix being defined by a plurality of apertures of dimensions sufficient to prevent the propagation of the detonation wave across the aperture, said apertures delimiting a series of paths from the said initiation point to each of a plurality of said finish points delineating said straight line, all of said paths being of sufficient cross-sectional area to support the detonation wave, the shortest such path from said initiation point to all of said finish points being equal.

2,943,572
FUZE
William J. Flett, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 5, 1944, Ser. No. 521,378
6 Claims. (Cl. 102—70)



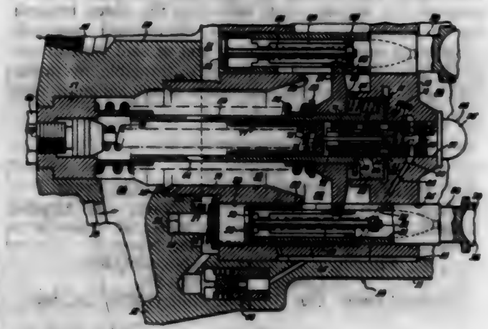
1. In a photoelectric proximity fuze for a projectile, a hollow body open at one end, a lens mounted in the open end of the body and projecting from said end, the lens having a recess in the end of the lens disposed in the body, a photoelectric cell fitted closely in the recess, and a nose cap secured to the body over the lens for holding the lens in the body and having a plurality of slits spaced circumferentially around the cap to admit light to the lens and the cell.

2,943,573
SELF DESTRUCTION DEVICE
Gilbert E. Grauer, Des Plaines, Ill., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 5, 1959, Ser. No. 785,100
3 Claims. (Cl. 102—75)



1. In a graze fuze for a projectile comprising a fuze body, a cylindrical spring-wound rotor rotatably mounted in said body for rotation from armed to unarmed positions, a detonator element carried by said rotor, a pin fixed to one end of said rotor, an acceleration operated arming means for said fuze comprising a first spring loaded lever pivotally mounted to said body and defining a nose at its free end, a second spring loaded lever pivotally mounted to said body and defining a nose portion and a notch at its free end thereof, said nose on said first lever adapted to engage said notch in said second lever, a third lever pivoted to said body defining a rounded edge at its free end, adapted to engage said pin on said rotor, said nose on said second lever adapted to engage the under edge of said third lever, said first, second and third levers adapted to move rearwardly and out of their engaged relation upon acceleration overcoming inertia of said projectile and release said rotor to rotate to said armed position, a spring biased firing pin slidably mounted in said body, and firing means operable upon target impact of said fuze to release said firing pin to fire said detonator in said fuze.

2,943,574
PUMP
Francis E. Norlin, Chesterland, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 28, 1957, Ser. No. 663,830
2 Claims. (Cl. 103—37)

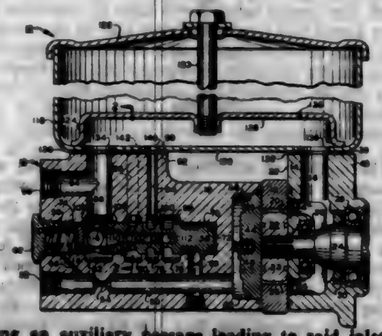


1. In a pump of the type having a plurality of circularly arranged parallel pistons reciprocated within cylindrical bores by means of a swash plate so as to each have a suction and a discharge stroke, the improvement comprising, an open-ended cavity in each piston, means to vary the effective discharge stroke of each piston, said means comprising a valve, a stem for said valve, an axially movable sleeve disposed in each piston and surrounding said valve stem, stop means on said stem axially disposed and spaced from said valve, resilient means disposed between said sleeve and said stop means, a fluid motor having an axially movable piston, means adapted to vary the loading of said resilient means to thereby seat and unseat each valve during its stroke, said last-named means including a substantially circular plate operatively associated with said motor piston and engaging said sleeve, and means connecting said fluid motor to a source of fluid pressure so as to be responsive thereto, said effective stroke varying means being effective to vary the displacement of said pump.

2,943,575
POWER TRANSMISSION
Raymond B. Pantleone, Detroit, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Filed Jan. 23, 1954, Ser. No. 406,634
8 Claims. (Cl. 103—41)

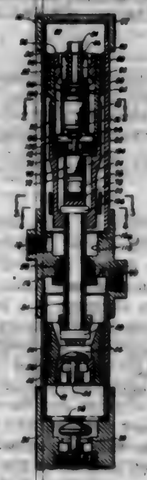
1. A fluid distributing system for use with fluid pumping mechanism having inlet and outlet zones, comprising: means forming a delivery passage extending from said outlet zone; means forming a return passage extending to said inlet zone; means forming a by-pass passage

extending from said outlet zone to said inlet zone; first valve means responsive to flow in said delivery passage controlling flow in said by-pass passage; a source of replenishing fluid; means in said by-pass passage for utilizing the velocity effect of flow therein to entrain said replenishing fluid and supercharge said inlet zone; means



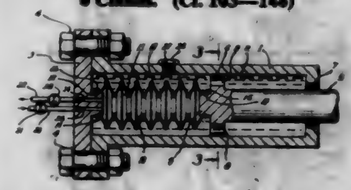
forming an auxiliary passage leading to said inlet zone and having a juncture with said by-pass passage upstream from said means in said by-pass passage; and second valve means for controlling flow in said auxiliary passage to divert flow from said by-pass passage, whereby the amount of supercharge can be limited.

2,943,576
OIL WELL PUMP
Charles L. English, 2204 E. 25th Place, Tulsa, Okla.
Filed Oct. 9, 1959, Ser. No. 845,571
32 Claims. (Cl. 103—46)



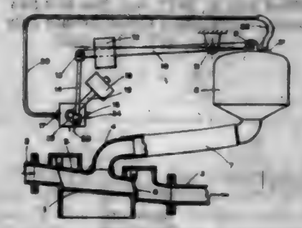
1. In a fluid operated pump unit including a single acting pump operated by a reciprocating fluid motor having a motor piston and a motor cylinder and a fluid passageway through the motor piston having a valve means therein for directing high pressure fluid to one end of the motor piston for the return stroke of the pump, the improvement which comprises a sleeve slidingly secured in said passageway downstream of the valve means providing an effective cross-sectional area for the passageway downstream of the valve substantially less than the effective cross-sectional area of the passageway upstream of the valve means, and means supporting said sleeve for movement to contact and unseat the valve means at the end of the power stroke of the pumping unit.

2,943,577
PUMP
Woodrow F. Barker, 8402 Bluegate, Houston, Tex.
Filed Sept. 16, 1957, Ser. No. 684,157
6 Claims. (Cl. 103—148)



1. In a pump, a cylinder having a cylinder head, a reciprocating piston in the cylinder abutting the cylinder wall, a reciprocating piston rod connected at one end to said piston and extending through one end of said cylinder, flexible bellows of the same mean cross sectional diameter as the cross sectional diameter of the rod secured at one end to the piston and at the other end to the cylinder head, passageways through said piston, and an inlet and outlet passageway through said cylinder head into said bellows.

2,943,578
PUMPS OF THE AIR DISPLACEMENT TYPE
Frederick Walter McCombie, London, England, assignor to Megator Pumps and Compressors Limited, London, England
Filed Dec. 10, 1957, Ser. No. 701,768
Claims priority, application Great Britain Dec. 13, 1956
2 Claims. (Cl. 103—242)

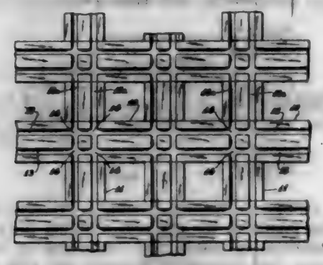


1. A pump of the air displacement type comprising a helical tube defining a chamber, the lower end of said tube being fixed, said tube being flexible with the upper end thereof being movable in accordance with the weight of a liquid contained within the coils thereof, a pipe in communication with the upper end of said tube for evacuating air therefrom and admitting air thereinto, a valve connected to said pipe and controlling the evacuation and admission of air to the chamber, means operatively connected with the upper end of said tube for controlling said valve to evacuate air when said end is in the upper position and admit air when it is in a lower position, and liquid connection means in communication with the lower end of said tube.

2,943,579
TRANSIT GRID
Norman Bel Geddes, New York, N.Y.; Edith Bel Geddes, 350 Park Ave., New York 22, N.Y., executrix of said Norman Bel Geddes, deceased
Filed Apr. 2, 1957, Ser. No. 650,187
5 Claims. (Cl. 104—94)

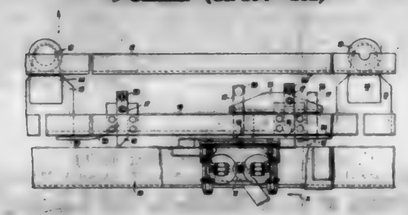
1. Means for handling equipment of the character described having, in combination: two groups of equally

spaced parallel rails, the rails of one group intersecting the rails of the other group at a plurality of switching points and forming a plurality of openings between adjacent rails, the rails being supported in a plane intermediate the floor and ceiling of the studio, the rails including upper tracks for guiding and supporting a carriage, a carriage movably supported above the plane



of the tracks and rails by movable means in the tracks, a studio instrument supported by the carriage, means included in the carriage for lowering and raising the instrument through one of said openings when said carriage is in a fixed position over said opening, the carriage being movable to any such opening and transferable from one rail track to another through a switch point formed at the intersection of the tracks.

2,943,580
CONVEYOR SYSTEMS
Arthur Thomas Charles Burrows, Argyle Works, Stevenage, England, assignor to Geo. W. King Limited, Hertfordshire, England, a British company
Filed July 8, 1957, Ser. No. 670,583
Claims priority, application Great Britain July 16, 1956
9 Claims. (Cl. 104—162)



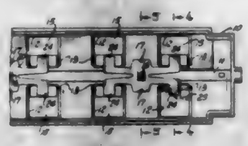
1. In a conveyor system wherein load carrying trolleys are propelled along a fixed track by virtue of the engagement therewith of depending pusher dogs which are caused to move along a path parallel to said track while being capable of individual upward displacement, the provision at a selected point along the conveyor path of a first holding station comprising means for stopping a selected load carrying trolley at such station, means for causing the pusher dogs rearwardly of said station to be lifted clear of any trolley held thereat and a hinged member adapted to be displaced angularly and to be held in such position of angular displacement by any trolley approaching and held at said station, there being cam means disposed at a second station located at a point along the conveyor path preceding said first station and means interconnecting the hinged member at the first station to the cam means at the second station so that on angular movement of said hinged member resultant upon the arrival of a trolley at said first station the cam means will be moved into an operative position to cause the pusher dogs in the region of the second station to be lifted clear of any trolley.

2,943,581
STEADYING DEVICE
Stephen J. Bandik, 153 Penn Ave. N.W., Warren, Ohio
Filed May 16, 1955, Ser. No. 507,243
2 Claims. (Cl. 105—150)



1. The method of attaching a heavy and bulky object into hanging engagement with a depending swingable hook by a person and which normally requires the use of both hands of the person in lifting the object, comprising the steps of first attaching one end of a readily detachable elongated element to the swingable hook, secondly placing one foot of the aforesaid person on a foot receiving portion located at the other end of said element, thirdly forcing the foot downwardly against the foot receiving portion to exert a downward force on said element whereby the swingable hook is held comparatively stationary, and fourthly attaching the bulky object to the depending swingable hook.

2,943,582
DOOR CONSTRUCTION FOR TOY CAR ROOFS AND THE LIKE
Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed Nov. 4, 1955, Ser. No. 545,906
3 Claims. (Cl. 50—13)

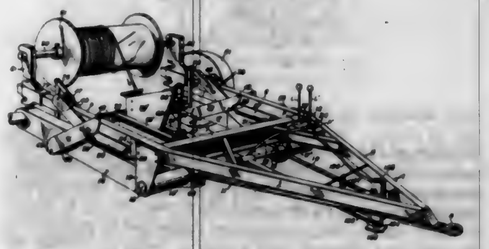


1. In a roof structure for a toy including a rectangular body member having a row of door openings on each side of a center line thereof including pairs of such openings opposite one another and a door pivotally mounted in each of said door openings at a location close to one end thereof, the improvement comprising a unitary leaf spring member secured to the underface of said body member and having portions thereof biased against at least two of said doors along an area of said doors between the pivot and the adjacent end thereof, said area comprising marginal door portions and adjacent edge door portions, said spring being in contact with said marginal portions in the closed position of the doors and said edge portions in the open position of said doors whereby said spring biases the door in either extreme opened or closed position.

2,943,583
REEL TRAILER AND CABLE LAYER
Francis B. Ryan, Charlton, Iowa, assignor to F. B. Ryan Manufacturing Company, Charlton, Iowa, a corporation of Iowa
Filed Apr. 30, 1958, Ser. No. 732,612
6 Claims. (Cl. 111—5)

1. In an improved reel trailer and cable layer, a main frame comprising an angular forward section and parallel rear beams, a central bracing beam joining said frame

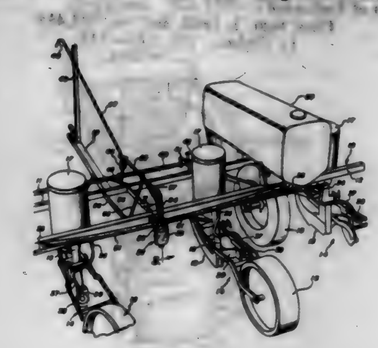
sections, brackets depending below said frame at the extremities of said bracing beam, a lateral axle supported beneath said frame in said brackets, rearwardly extending wheel arms disposed beneath said parallel rear beams of said frame and pivotally mounted on said lateral axle at their forward extremities, a wheel rotatably mounted in a vertical plane at the rear, outer extremity of each of said wheel arms, an hydraulic cylinder pivotally affixed at its forward extremity in a bracket depending from the forward extremity of each of said rear beams and disposed between each of said rear beams and said wheel arms, a set of upper and lower paired links between each of said rear beams and said wheel arms pivotally affixed together at their forward extremities and pivotally affixed, respectively, to the extremities of the piston rods of said hydraulic cylinders, a pin through the upper extremities of each of said upper links pivotally affixing them to the



upper surface of said rear beams, a slotted bracket beneath each of said wheel arms, a pin through the lower extremities of each of said paired lower links slidably engaging the slot in one of said slotted brackets, a manual hydraulic pump and valve on said main frame for each of said cylinders, a line from each of said pumps to one of said cylinders, a ditching blade bracket pivotally mounted at its forward extremity beneath said lateral axle, a ditching blade pivotally supported in said bracket and extending downwardly beneath the rear extremity of said frame, a lateral bar pivotally mounted at its center at the rear extremity of said ditching blade bracket, auxiliary linkage pivotally connecting the extremities of said lateral bar with the upper links of said paired links whereby the positions of said wheel arms with respect to said frame may be varied at will and the relative position of the ditching blade may be controlled through said hydraulic cylinders and linkages.

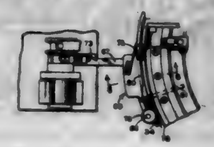
2,943,584
IMPLEMENT CONTROL MEANS
John S. Palmer, East Moline, and Bernice J. Shager and Joseph N. Segura, Moline, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 23, 1958, Ser. No. 737,248
7 Claims. (Cl. 111—67)

1. The combination with an implement having a frame and a tool adapted to be raised and lowered and a rock arm connected to said tool for raising and lowering the latter in response to the rocking of said rock arm, of a dispenser for liquid fertilizer and the like, a control valve therefor and means for actuating the control valve including a movable member mounted on the frame operatively connected to the valve, said member being movable between two positions for opening and closing the valve, connecting link means between said rock arm and said movable member for actuating the latter in response to the rocking of said rock arm, said connecting link means being effective automatically, upon rocking of said rock arm in a direction to raise said tool, to actuate said movable member to close the valve, and to actuate said movable member to open said valve upon rocking the rock arm in a direction to lower said tool, and means operatively connected to said connecting link means for



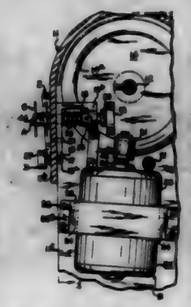
shifting the latter to a position relative to said rock arm and said movable member in which the rock arm is ineffective, upon raising and lowering said tool, to actuate the movable member.

2,943,585
LOOP GUIDE FOR DIAL LOOPER
George R. Crocker, 2918 W. 31st St., Brooklyn, N.Y., and Emile J. De Leo, Garrabrant Ave., Bloomfield, N.J.
Filed Jan. 18, 1957, Ser. No. 634,980
5 Claims. (Cl. 112—26)



1. In combination with a dial looper having a base and a sewing needle, with the base movably supporting index means having an outer surface and carrying a plurality of points projecting from its outer surface and arranged to have terminal loops of knitted fabric pieces placed thereon, the index means carrying the points progressively past the sewing needle for stitching the loops to each other, and a fabric guard in the form of an elongated member extending along and parallel to the outer surface of said index means and having a leading end substantially in advance of the needle, relative to the direction of movement of the index means, and a trailing end beyond the needle in such direction of movement, said guard engaging the fabric below the points to push the fabric toward the outer surface of the index means; a loop positioning guide comprising an element mounted on the leading end of said fabric guard in slightly spaced relation to the outer surface of said index means in a position in advance of the sewing needle; said element having a lower surface substantially parallel to the general plane of the points and engageable with the upper surfaces of the points, and said element having a surface perpendicular to said lower surface facing the outer surface of said index means and sloping inwardly toward the outer surface of said index means in the direction of movement of the points to engage the loops above the points and move the loops inwardly along the points in advance of the sewing needle.

2,943,586
BOBBIN WINDING MECHANISM
Sidney J. Hamlett, Parma, Ohio, assignor to White Sewing Machine Corporation, Lakewood, Ohio, a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,455
11 Claims. (Cl. 112—218)



1. In a sewing machine, a frame member, motor means pivotally supported by said frame member, spindle means rotatably supported by said frame member and for supporting and driving a bobbin, and means connected to said spindle means for selectively pivoting said motor means into and out of driving engagement with said spindle means.

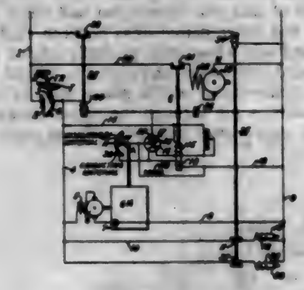
2,943,587
METHOD OF FORMING SHEET METAL ARTICLES HAVING COMPOUND CURVES
John H. S. Samuelsson, Linkoping, Sweden, assignor to Svenska Aeroplan Aktiebolaget, Linkoping, Sweden, a corporation of Sweden
Filed Oct. 23, 1956, Ser. No. 617,784
Claims priority, application Sweden Oct. 25, 1955
3 Claims. (Cl. 113—51)



3. The method of cancelling the effect of distorting stresses from a sheet metal article of the type having a substantially planar body portion and an unwrinkled lengthwise curved integral flange connected to the body portion by a bend curved in the plane of the body portion, which article is warpedly distorted from its desired form by reason of stresses in its flange acting in directions lengthwise thereof and generated during the formation of the flange, which method comprises: holding the body portion of the article against deformation and displacement while applying to the flange forces distributed substantially evenly over its entire surface and acting in a direction away from the body portion along lines that are parallel with the plane of the body portion to bodily move the entire flange and the bend substantially along said lines outwardly with respect to the body portion and generate new internal stresses in the flange which are opposite in direction and substantially equal in magnitude to the stresses originally present in the flange so that the effects of the stresses in the article cancel one another.

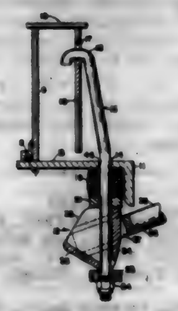
2,943,588
CONTROL SYSTEM FOR TORPEDO
Martin G. Sateren, Sharon, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 22, 1946, Ser. No. 663,287
3 Claims. (Cl. 114—23)

1. In a system of control for the steering system of a torpedo, in combination, a pair of supply terminals, a circuit including an electromagnetic device and an electronic device, said electronic device including a plate and a cathode, connected in series with said electromagnetic device, and including a control grid, a steering control gyro for the torpedo having a light contact wheel, a pivoted arm carrying the wheel, resilient mounting means for the wheel in said arm, movable arcuate torpedo course-setting segments disposed about the pivot of the arm to contact said wheel, said wheel and mounting being subject to the



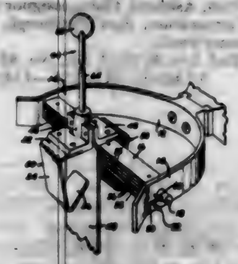
vibration of the torpedo to thus normally make chattering contact with said segments, said grid being electrically connected to said wheel and thus being subject to intermittent biasing operation so that said electronic device is intermittently conducting, a capacitor connected in parallel to the plate and filament, said capacitor being so chosen in capacity that the electromagnetic device remains energized during the intervals the electronic device is non-conducting.

2,943,589
SECURING LATCH FOR HATCH COVERS
Jack Lovell and Wallace Hamilton, Chagrin Falls, Ohio, assignors to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 2, 1958, Ser. No. 764,881
4 Claims. (Cl. 114—203)



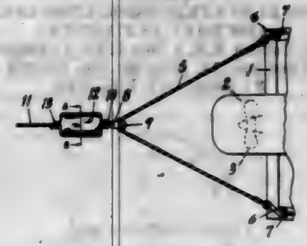
1. In combination, a coaming around a hatchway, a movable hatch cover on said coaming closing said hatchway, a lateral apertured flange on said coaming, a rod extending through the aperture of said flange formed with an upper hook releasably connected to said hatch cover, a lower thrust member on said rod below said flange, and a latch assembly on said rod between said flange and lower thrust member, said assembly including a cam on said rod movable from a first position wherein said assembly engages said thrust member and the underside of said flange producing a force urging said rod downward and clamping said hatch cover to said coaming and a second position wherein said assembly moves out of engagement with the underside of said flange, said cam including similar side walls on opposite sides of said rod and diverging lateral walls connecting said side walls, one of said lateral walls adapted to engage said rod to limit movement of said cam to said first position.

2,943,590
BOAT MOORING
Harold W. Anderson, 532 Manhasset Woods Road, Manhasset, N.Y.
Filed Mar. 28, 1958, Ser. No. 723,782
13 Claims. (Cl. 114—230)



1. A boat mooring comprising a rod of magnetic material to be buoyantly supported generally upright in the water, and having a hasp near its upper end, a horizontal magnet bar adapted to be carried by a boat to be moored and adapted to slide along said rod and into locking engagement with said hasp, whereby the boat is moored by engagement of the bar with said hasp.

2,943,591
TOW FOR MOTOR BOATS
Lawrence E. Schneider, 806 E. Britain Ave., Benton Harbor, Mich.
Filed Mar. 21, 1956, Ser. No. 572,967
3 Claims. (Cl. 114—235)



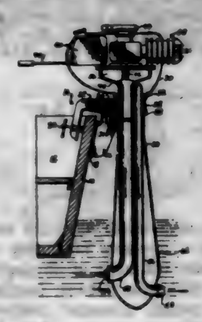
1. The combination with a boat having an outboard motor propelling means disposed centrally at the rear end thereof, said boat having tow attaching means disposed one at each side of and spaced laterally from said outboard motor, of a tow device comprising a hitch rope, the ends of which are attached to said attaching means so that the hitch rope is in the form of a loop extending rearwardly from the boat when under load stress, the hitch rope being freely flexed and of such length that the bight thereof is substantially spaced from the boat when under such load stress, a pulley block through which said hitch rope is roved with its pulley within the loop thereof, said pulley block having an eye at its rear end, a float having a tie member engaged with said eye of said pulley block, and a tow line secured to the rear end of said tie member so that the pull of the tow line is sustained by said tie member, said float being of such buoyancy so as to support said pulley and the rear end of the looped hitch rope and constituting a drag keeping said hitch rope substantially taut when the float is in contact with the water with the boat moving forwardly.

2,943,592
AIR-COOLED OUTBOARD MOTOR
Carl B. Benson, 636 W. 116th, and Clayton G. Carlson, 234 W. 49th, Seattle, Wash.
Filed May 2, 1958, Ser. No. 732,469
13 Claims. (Cl. 115—17)



1. In an outboard motor, a power head providing an air-cooled internal combustion engine with a vertical extension of the engine's crank shaft exposed below said head, a hollow power leg carrying a propeller at the bottom end and having a drive shaft for said wheel extending upwardly through the interior with its upper end exposed, the hollow interior of said leg leading to an underwater exhaust opening, a blower housing rigid with the power leg and the power head in an intervening position between the same, a rotary blower in said housing, and means for passing the drive from said crank extension to the blower and to the upper end of the drive shaft, said blower being arranged and adapted to blow cooling air downwardly over said power leg, means being provided for delivering exhaust gases from the engine to the interior of the power leg.

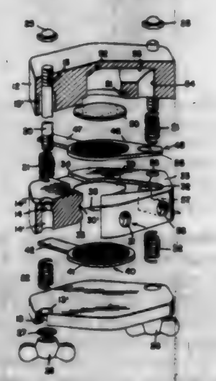
2,943,593
OUTBOARD MOTOR
Karl A. Megert, Jr., and Joe V. Line, Lubbock, Tex., assignors of one-fourth to Wendell Coffee, Lubbock, Tex.
Filed Apr. 22, 1957, Ser. No. 654,366
6 Claims. (Cl. 115—18)



6. An outboard motor for small marine craft comprising: a housing; said housing being mounted for rotation within a bearing ring; clamp means attached to said

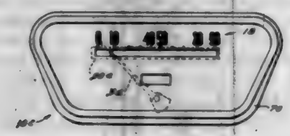
bearing ring for clamping the bearing ring onto a boat; means for pumping water mounted on the housing above the bearing ring; and a tube portion depending from said means for pumping; said portion including tubes; one of said tubes connected to the inlet of the means for pumping and one of said tubes connected to the outlet of the means for pumping; opening in said tubes facing a direction normal to the axis of the bearing ring, and facing 180 degrees from each other.

2,943,594
CELL FOR TESTING HYDROCARBON FUEL
Harold A. Price, Lafayette, Calif., assignor to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California
Filed Nov. 19, 1958, Ser. No. 774,963
13 Claims. (Cl. 116—114)



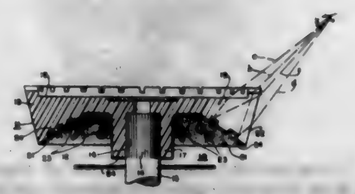
1. A cell for testing hydrocarbon fuels comprising a body means having a cavity formed therein, said body means having inlet and outlet means formed therein and in communication with said cavity, water indicating means mounted in said body means and in communication with said cavity, said water indicating means being readily wettable and having one surface thereof impregnated with a water soluble dye substantially completely inert to hydrocarbon, said one surface facing away from said cavity, and a hydrophobic filter medium spaced from said water indicating means and mounted in said body means and in communication with said cavity and said outlet means.

2,943,595
SPEEDOMETER
Smith B. Atwood, Jr., Ann Arbor, Mich., assignor to King-Seeley Corporation, a corporation of Michigan
Filed May 13, 1958, Ser. No. 734,939
5 Claims. (Cl. 116—116)



1. In an indicating device having a substantially horizontal scale and a movable indicating means arranged so that it intersects the scale at an angle in one moved position of the indicating means; longitudinally curved horizontal lens means arranged relative to said indicating means so that observation of the indicating means is through said lens means, said lens means being tapered so that the locus of the focal points for all vertical planar portions thereof is a substantially straight line, and means including a translucent plate located on said straight line, a mirror, and a light source cooperating with said mirror providing an image of said indicating means on said straight line so that when said indicating means is vewed through said lens it appears to be at substantially right angles to said scale in said one position of the indicating means.

2,943,596
BLANKET CONTROL
George H. Frost, Ashland, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 6, 1959, Ser. No. 804,361
3 Claims. (Cl. 116—124)



1. In a control assembly, a housing having a flat wall, a rotatable control shaft extending through, and normal to, said wall, a control knob mounted on said shaft adjacent said wall, said knob including a rim portion of transparent material having top and bottom surfaces joined by an outer peripheral surface, said bottom surface being inclined upwardly and inwardly from said peripheral surface, and an annular series of indicia carried by said bottom surface and visible through both said top surface and said peripheral surface.

2,943,597
GROUND ELEVATION INDICATOR DIAL FOR AIRCRAFT ALTIMETER
James R. Colling, R.R. 2, Box 158D, Covington, Ind.
Filed Apr. 14, 1958, Ser. No. 728,298
8 Claims. (Cl. 116—131)



1. A ground elevation indicator for use with a sensitive aircraft altimeter having elevation indicia disposed circumferentially on a dial and a transparent front window for viewing said elevation indicia, which ground elevation indicator comprises a transparent disc member having inner and outer essentially parallel faces and characterized by an adjustment knob at the center of said outer face and a circular opening in the center of said inner face, said knob defined a fluid reservoir interiorly thereof extending through said disc member to said opening in said inner face, and numerical indicia reading 0 through 9 on 36° spacing disposed circumferentially on one face of said transparent disc member, said disc member being adapted for close contact positioning on said front window of said sensitive altimeter, whereby a film of viscous fluid material deposited in said reservoir and on said inner face will hold said indicator in fluid-seal attachment to the associated sensitive altimeter window and permit

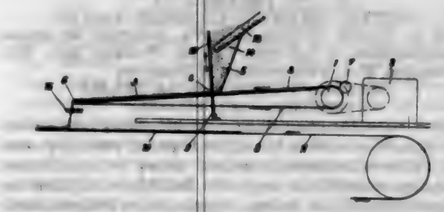
rotation to various station elevations on said altimeter to thereby read directly the altitude above the preselected stations.

2,943,598
WIRE COATING APPARATUS
Walter H. Newton, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed Oct. 8, 1956, Ser. No. 614,672
2 Claims. (Cl. 118—67)



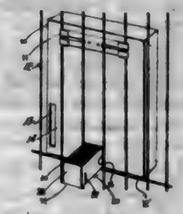
1. In apparatus for coating filamentary material including upper and lower guides between which the material to be coated is adapted to be drawn in a straight line and a container between the guides adapted to hold a coating solution, the combination of an upstanding sidewall on the container, the top edge of said sidewall having a downwardly extending notch through which coating solution in the container is adapted to flow continuously therefrom, said notch forming a stream extending freely outwardly and downwardly therefrom whereby said coating solution flowing through said notch is continuously agitated thereby, said notch being positioned relative to said guides such that filamentary material passing in a straight line between the guides is drawn through said notch in spaced relation with the sides of said notch and is completely immersed in only the portion of the coating solution flowing through said notch, said notch being dimensioned to have a flow cross-section larger than that of filamentary material passing therethrough so that the immersed portion of filamentary material passes freely therethrough without contacting the edges of said notch, the thickness of the container sidewall forming the sides of said notch being substantially less than the length of the portion of the path of filamentary material immersed in said coating solution whereby contact between the filamentary material and sides of said notch is minimized, and only drying means positioned between the notch and the guide toward which the coated filamentary material is drawn for drying an applied coating on the filamentary material before it contacts said latter guide.

2,943,599
APPARATUS FOR APPLYING PULVERULENT SUBSTANCE TO A BASE
Friedrich Heck, 16 Huttenstrasse, Hemer-Sundwig, Germany
Filed Nov. 15, 1954, Ser. No. 468,961
Claims priority, application Germany Nov. 26, 1953
7 Claims. (Cl. 118—308)



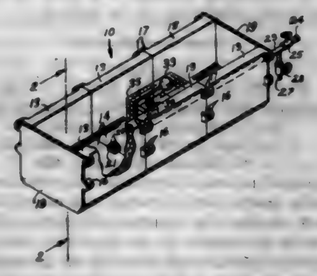
1. Means for applying pulverulent substances to metallic bases for the purpose of plating, comprising: a driving roller, a very thin and flexible conveyor band having upper and lower runs passing about the driving roller, a deflecting element having a very small radius of curvature about which the conveyor band also passes, a rigid table supporting the upper run of the conveyor band, the said table and the said upper run having a slight downward inclination in the direction of conveyance, and a hopper immediately above the upper run of the conveyor band, so located that the upper run of the conveyor band itself forms the bottom of the hopper, and a narrow gap being left between the upper run of the conveyor band and the front wall of the hopper.

2,943,600
FEED CONTAINER-DISPENSER
Arthur M. Rosoff, 8 Silver St., Elmont, N.Y.
Filed July 10, 1957, Ser. No. 671,022
1 Claim. (Cl. 119—18)



The combination with a sealed feed container adapted for attachment to a bird cage to serve automatically as a feeder, said container having an aperture in its front wall substantially at the bottom thereof; of a feeding trough therefor permanently retained by the container and comprising an open-top, open-back, elongated and flat-bottomed dish fitting through said aperture and slidable therein over the bottom of the container, said dish having flexible side walls and its bottom extending beyond the respective vertical edges of its side walls and, when the dish is fully inserted, substantially to the inner face of the wall opposite the front wall of said container, and respective ears integral with said side walls turned outwardly from said vertical edges at their upper portions to afford stops preventing complete withdrawal normally of the dish when mounted within the container, together with an upwardly directed manipulating lip extending from the top of the front wall of the dish and acting as a stop to limit the extent of insertion of the dish into the container by contact with the front wall thereof.

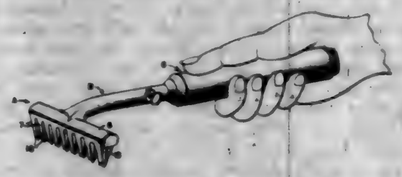
2,943,601
EXTENSIBLE CEMENT HOG TROUGH
Howard C. Shank, Route 1, Box 149, Tiro, Ohio
Filed May 8, 1958, Ser. No. 733,887
1 Claim. (Cl. 119—78)



An extensible hog trough of the character described for keeping a suitable supply of water in the trough, the

supply controlled by float valve means comprising, in combination, a plurality of substantially identical U-shaped sections, two end plates, suitable clamping means for securing said sections together and for securing said end plates at the terminal ends of the end sections secured together to form a water-tight trough, a float-control water supply valve, a float member, a water line connected to a supply line having manually operable inlet and outlet valves extending into the interior of the trough and formed with an upwardly extending portion providing a standpipe intermediate the ends of the trough, said float-control water supply valve interposed in said standpipe and responsive to the movement of said float member whereby a suitable supply of water is maintained when desired, said U-shaped sections having bolt ears at their upper edge portions contiguous with the opposite ends thereof for abutting engagement with the identical bolt ears on next adjacent sections, said bolt ears having horizontal central bores therein for receiving suitable clamping means therethrough, said U-shape sections having clamp ears extending outwardly therefrom intermediate the base and upper edge portions thereof to receive suitable clamping means when desired, each U-shaped section having an upstanding bolt ear at each end of the base portion with longitudinal bores therein to receive suitable clamping means, and a cage enclosing said float-valve, the standpipe and associated movable parts to prevent damage thereto by the cattle drinking water from the trough.

2,943,682
TOOTHED APPLICATOR
George W. Rundle, 14603 S. Vermont Ave., Gardena, Calif.
Substituted for abandoned application Ser. No. 629,621, Dec. 20, 1956. This application Jan. 12, 1959, Ser. No. 786,353
4 Claims. (Cl. 119—156)



1. In an applicator of the character described, a back member having a longitudinal bore closed at its ends, a series of tubular teeth arranged in a row on said back member having open outer ends and having their inner ends open to said bore, said teeth having front and back sides, each of said teeth having on the back side thereof an opening leading from the open outer end thereof, a tubular shank affixed to said head intermediate its ends having a bore opening to the bore in said head, and means for delivering through the bores in said shank head and teeth substances to be applied.

2,943,683
FLUID ACTUATED IMPACT TOOL
Ross Bassinger, New Braunfels, Tex., assignor to Bassinger Tool Company, San Antonio, Tex.
Filed Sept. 16, 1954, Ser. No. 456,437
44 Claims. (Cl. 121—30)

1. In a fluid actuated impact tool wherein an anvil and a relatively reciprocable hammer are provided relatively positioned so that the hammer will strike the anvil on reciprocating movement in one direction, the tool having a passageway therethrough for flow of an actuating fluid, said hammer having a fluid pressure actuatable area facing toward the direction of movement of the hammer to strike the anvil and exposed to the pressure of an actuating fluid flowing in said passageway to be urged thereby away from the position in which it strikes the anvil, and wherein means are provided to alternately restrict and release the flow of such fluid downstream from said area to respectively increase and decrease the pressure of such fluid acting on said area to move the hammer away from striking engagement with said anvil and permit it to move toward striking engagement with said anvil, the improvement which comprises improved means for alternately so restricting and releasing such flow comprising first and second valve members located in said passageway and arranged to seat together to so restrict flow through the tool, said first valve member being carried by the anvil, means slidably mounting the second valve member on the hammer to permit the second valve member to remain seated with the first valve member during at least a portion of the return stroke of the hammer and then

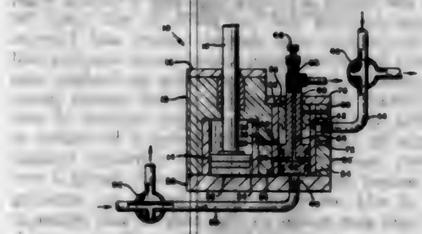


unseating the second valve member, said mounting means including a shuttle connection between the second valve member and the hammer permitting the second valve member to move relative to the hammer to a first position before the hammer completes its power stroke and then to a second position upon the hammer striking the anvil, the second valve member when in said first position and with the hammer in anvil striking position being spaced from the first valve member sufficiently that any restriction of fluid flow therebetween is insufficient to materially reduce the velocity of the hammer before it strikes the anvil and upon movement of the second valve member to said second position, such spacing is decreased sufficiently that fluid flow is restricted so as to urge the second valve member toward and maintain it seated with the first valve member until unseated by said mounting means.

2,943,684
MOTOR VELOCITY CONTROL VALVE
Dale L. Chubb, Williamsport, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed May 17, 1956, Ser. No. 585,413
4 Claims. (Cl. 121—38)

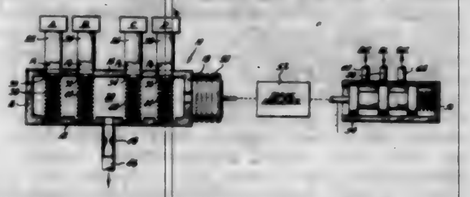
1. A valve for controlling a double acting motor comprising a valve casing having two spaced ports for communication with opposite ends of the motor, a third port near one end of the casing and a fourth port adjacent the opposite end of the casing, a piston valve reciprocatable in said casing and having a valve piston rod extending to the exterior of the casing, a bore within the piston valve in position to engage one or the other of the first two ports in shifted positions, said bore extending along

the length of and through the valve piston rod to the exterior thereof, and a needle valve on the valve piston rod at the end of the bore to control the exhaust of fluid through said bore, one of the third and fourth ports



communicating alternatively with that one of the first two ports which is out of communication with the bore in the piston valve and the other of the third and fourth ports communicating with a space in the valve casing of which the piston valve forms a movable wall.

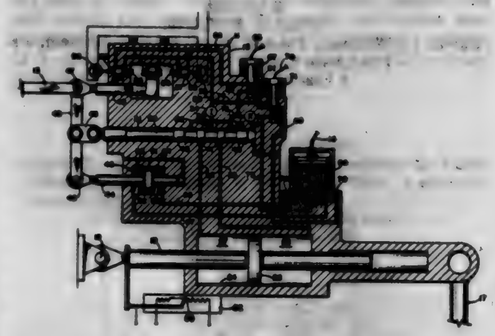
2,943,685
MAXIMUM PRESSURE SELECTOR
Claude O. Broders, Simsbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed July 28, 1958, Ser. No. 751,554
5 Claims. (Cl. 121—38)



1. A maximum pressure selector comprising a chamber, a plurality of passages each communicating with said chamber and adapted to communicate with a different pressure source, flow blockage means actuatable at a selected pressure differential blocking communication between each of said passages and said chamber, and pressure responsive means communicating with said chamber and responding to the pressure therein.

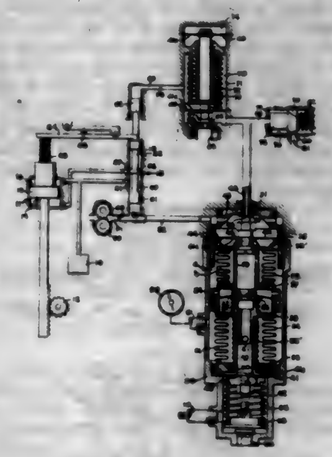
2,943,606
SERVO ACTUATOR ADAPTED TO BE OPERATED BY A PLURALITY OF CONTROL SIGNALS
Clifford E. Willis, Robert J. McWeeney, and Charles H. Nichols, Jr., Kalamazoo, Mich., assignors to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 3, 1956, Serial No. 625,870
8 Claims. (Cl. 121—41)

1. A servo mechanism comprising a power translating device having power input means and a mechanical output element, an energy input control for said power translating device arranged to move from a predetermined position to control the speed and operation of said mechanical output element, manual control means connected to said input control effecting movement thereof, automatic control means connected for the actuation of said energy input control, first feed back means operating to restore said energy input control to said predetermined position in response to all movements of said output element by said manual control means and operating to restore said energy input control to said predetermined position in response to movement of said output element initiated by said automatic control means which are less than a predetermined amount, and second feed back means operating to return said input control to said pre-



determined position in response to movements of said output element initiated by said automatic control means which are greater than said predetermined amount.

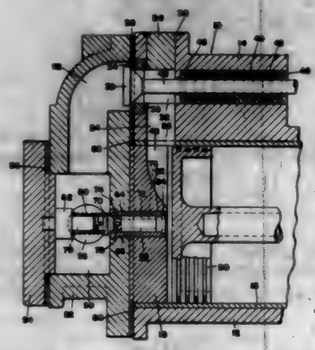
2,943,607
POWER ACTUATED PRESSURE MEASURING AND INDICATING DEVICE
Harland C. Flemmer, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois
Filed Mar. 25, 1957, Ser. No. 648,412
8 Claims. (Cl. 121—41)



7. In a device for measuring changes in the pressure of a gas, the combination of, means defining a passage continuously supplied with liquid under pressure, a valve adapted when open to permit the escape of liquid out of said passage and opened and closed automatically as the pressure of the liquid rises above and falls below a predetermined value corresponding to the prevailing pressure of said gas, a control device having a member movable back and forth with pressure changes in the passage, a reversible power servo having a driven element and energized selectively in response to movements of said device in opposite directions out of a predetermined centered position, means exerting on said member a constant force acting in a direction opposing the pressure in said passage, a feed back spring urging said member in said direction, means actuated by said servo ele-

ment and variably stressing said spring to supplement said constant force and rebalance the opposing forces acting on said device.

2,943,608
STEAM ENGINE
Calvin C. Williams, Fairhill Road, R.D. 1, Hatfield, Pa.
Filed June 8, 1959, Ser. No. 818,993
8 Claims. (Cl. 121—132)



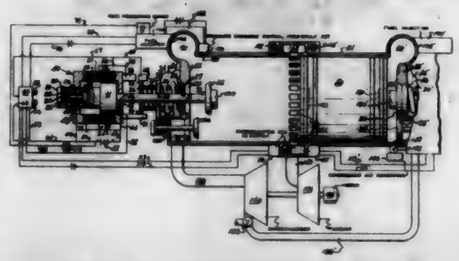
6. A steam engine comprising a cylinder, a piston slidably disposed within said cylinder, a plate secured within the top end of said cylinder, a cylinder head secured across the top end of said cylinder, a steam chamber within said cylinder head, means providing communication between said steam chamber and said cylinder to permit flow of steam from said steam chamber to said cylinder, a steam feed valve within said communication means controlling the flow of steam to said cylinder, said plate having a central hole therethrough, said cylinder head having a hole therethrough extending between the steam chamber and the hole in said plate, and a relief valve in said holes in the plate and cylinder head, said relief valve being normally closed and being opened when the compression pressure of said engine becomes greater than the operating of the steam in said steam chamber.

2,943,609
ROTARY ENGINE
Gustav Adolf Griem, 2986 Belden Drive, Los Angeles, Calif.
Filed Sept. 28, 1959, Ser. No. 842,965
7 Claims. (Cl. 123—11)



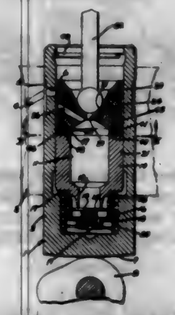
5. In a rotary engine, the combination of: a cylindrical housing having first and second fuel inlet openings, fuel ignition openings and exhaust openings; a rotor journaled in said housing for rotation therein, said rotor having first and second arcuate piston spaces disposed on opposite sides thereof, each of said spaces having a forward end and a rear end, with each of said spaces moving past the corresponding inlet, ignition and exhaust openings in sequence as said rotor rotates; a first arcuate piston positioned in said first piston space for rotation relative to said housing, said first piston occupying a lesser arc than said first piston space for oscillation therein, and having a leading edge and a trailing edge; a second arcuate piston positioned in said second piston space for rotation relative to said housing, said second piston occupying a lesser arc than said second piston space for oscillation therein, and having a leading edge and a trailing edge; first means coupling said first piston to said rotor for urging the leading edge thereof toward said forward end of said first piston space; second means coupling said second piston to said rotor for urging the leading edge thereof toward said forward end of said second piston space; first stop means for restricting rotation of said first piston at selected intervals during a revolution of said rotor; second stop means for restricting rotation of said second piston at selected intervals during a revolution of said rotor; and timing means for actuating each of said stop means so that each of said pistons is stopped when its trailing edge is adjacent the corresponding ignition opening while the fuel is being compressed into such ignition opening and is stopped with its leading edge adjacent its corresponding ignition opening when the fuel is ignited.

2,943,618
FREE PISTON COMPRESSED GAS GENERATOR
Berry W. Foster, 1147 10th St., Santa Monica, Calif.
Filed June 30, 1958, Ser. No. 745,643
14 Claims. (Cl. 123—46)



1. A double acting free piston engine and compressor, including in combination a cylinder having an intake port at each end and an exhaust sleeve port adjacent the center thereof; piston means reciprocable in said cylinder and acting to open and close said exhaust sleeve port; means defining a compressor output chamber adjacent each end of said cylinder and connected therewith by a separating port; separating valve means normallly closing each said separating port; means for moving said separating valve means to open said separating port only after said piston means has moved in the direction toward that said separating port and has compressed the gas in said cylinder to a prescribed value so that a large portion of said gas flows through said separating port into said compressor output chamber; means for closing said separating valve against said separating port as said piston means approaches the limit of its stroke, so that the compressed gas is separated into two portions, one in said output chamber and the other in communication with said piston; and means controlled by said separating valve means for injecting and exploding fuel in said gas in the portion that communicates with said piston so that it drives said piston in the direction away from said port; means for holding said separating valve means closed against the explosion pressures in said engine cylinder; means for supplying air under supercharged pressure to said intake port; and check valve means for normally closing said intake port and holding it closed until the supercharged pressure is greater than the pressure in said cylinder.

2,943,611
HYDRAULIC TAPPETS
Morris V. Dodd, Ada, Mich., assignor to Johnson Products Incorporated, Muskegon, Mich., a corporation of Michigan
Filed Jan. 22, 1958, Ser. No. 710,529
11 Claims. (Cl. 123—90)



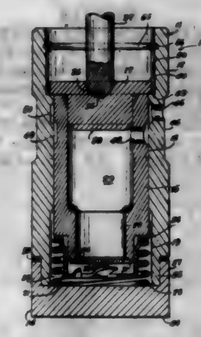
1. A hydraulic tappet comprising: a hollow tappet body member having a closed end and an open end; a hollow plunger member slidably disposed within said hollow tappet body and having an open end and a closed end, the interior of said plunger member compriaing a hydraulic fluid reservoir, said closed end being disposed in the region of the closed end of said hollow tappet body member and displaced therefrom, whereby a pressure chamber is formed, said closed end comprising a passageway from said reservoir to said pressure chamber; spring means in said pressure chamber urging said plunger member towards said open end of said tappet body member; check valve means in combination with said passageway for permitting flow of hydraulic fluid only from said reservoir to said pressure chamber whenever the hydraulic pressure in said pressure chamber falls below the hydraulic pressure in said reservoir by a predetermined difference; a rod seat member slidably disposed in said hollow tappet body member between said plunger member and said open end of said tappet body member with one end thereof normally abutting only an inner peripheral portion of the end of the peripheral wall of said hollow plunger member; a peripheral seal between said rod seat member and said hollow tappet body member in the region of the end of the rod seat member adjacent the hollow plunger member; and means for retaining said rod seat member in said tappet body member.

2,943,612
VALVE GEAR
Alexander G. Middler, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Feb. 21, 1958, Ser. No. 716,584
3 Claims. (Cl. 123—90)



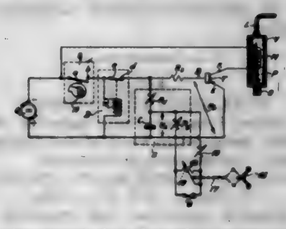
1. In an internal combustion engine, a stationary support, a rocker arm, said rocker arm having a web portion and a pair of side portions depending from said web portion, said web portion having its upperside in rolling contact with the underside of said stationary support, said rocker arm having at least one guiding projection extending upwardly beyond the web portion, said stationary support having at least one guiding projection receiving depression in the underside to receive said guiding projection, one of said stationary supports and said rocker arm web portions having an arcuate form in the area of contact between said stationary support and said rocker arm web portion whereby said rocker arm web portion rolls on the surface of said stationary support in a path determined by the movement of said guiding projection.

2,943,613
HYDRAULIC TAPPET
Gerald D. Lisa, Royal Oak, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 19, 1959, Ser. No. 800,447
7 Claims. (Cl. 123—90)



1. A hydraulic tappet comprising a hollow generally cylindrical body including an open ended tubular portion having a bore and a counterbore at one end and having a closure member at the other end thereof, a piston reciprocably mounted in said bore and having a reservoir therein, said piston defining a chamber between one end thereof and said closure member, and a socket member in axial engagement with the other end of said piston and being movable in said counterbore, said piston having a passage therein providing communication between said reservoir and said chamber, said closure member being mounted in sealing engagement with said tubular portion and said socket member being larger in diameter than said bore and overhanging said piston so as to be adapted to abut said tubular portion between said bore and said counterbore.

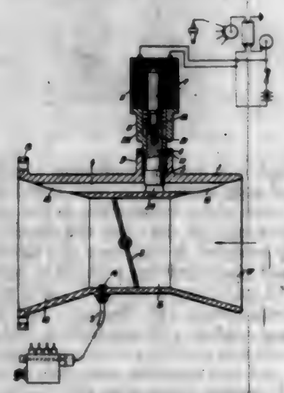
2,943,614
FUEL INJECTION ARRANGEMENT
Robert Bosch, Gerlingen, near Stuttgart, Schloasberg, Germany; Ulrich Aldinger, Stuttgart, Birkenwaldstrasse 207, Germany; and Karl Volk, Stuttgart O, Heidehofstr. 43, Germany
Filed May 1, 1958, Ser. No. 732,232
Claims priority, application Germany May 2, 1957
20 Claims. (Cl. 123—139)



1. In an improved fuel injection arrangement for an internal combustion engine, in combination, valve means

for controlling the flow of fuel to the internal combustion engine; and control means operatively associated with the engine and with said valve means for opening the latter at a predetermined instant during a cycle of operation of the engine and for closing said valve means after the elapse of a time interval the duration of which is predeterminable independently of said instant at which said valve means are opened, said control means including a control circuit controlling the closing of said valve means and comprising heat-sensitive resistor means installed in the air supply stream of said engine and connected in said circuit for determining said time interval, heating means being mounted adjacent to said resistor means for heating the latter, the temperature and therefore the resistance thereof depending upon the amount of air drawn into the cylinder means of said engine per operational cycle.

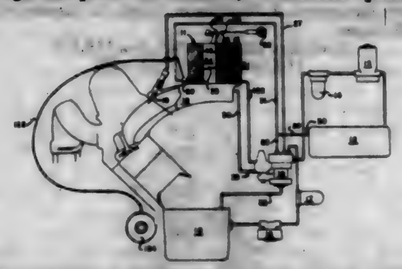
2,943,615
AIR INLET CONTROL MECHANISM FOR AN INTERNAL COMBUSTION ENGINE
Kurt Helmut Kainz, Stuttgart-Feuerbach, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 15, 1956, Ser. No. 571,624
Claims priority, application Germany Mar. 23, 1955
10 Claims. (Cl. 123—140)



1. In an internal combustion engine having an electrical ignition system of the type in which fuel is injected into the air charge in the cylinder and is ignited upon subsequent compression of the air charge by a spark plug, the combination comprising a main air inlet duct provided with a throttle valve adapted to control said air charge and to completely close said main duct for idling operation, an auxiliary air inlet duct bypassing said main air inlet duct and dimensioned to admit a quantity of air sufficient to sustain combustion for idling power when said valve is closed, an auxiliary valve for restricting said auxiliary duct, means urging said auxiliary valve to its closing position, and means effective to keep said auxiliary valve open for operation of the engine and adapted to be optionally rendered ineffective for stopping the engine.

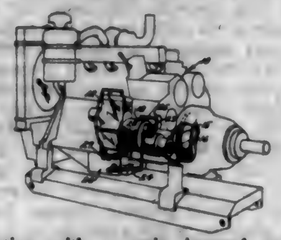
2,943,616
FUEL INJECTION SYSTEM
Watson F. Boyer, Dearborn, and James W. Fosley, Oak Park, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 9, 1957, Ser. No. 701,542
7 Claims. (Cl. 123—140)

1. In a pressure controlled fuel injection system for internal combustion engines that improvement comprising a pressure responsive chamber operable to control the quantity of the injected fuel, a pressure restriction, said chamber connected to a source of intake manifold pressure through said pressure restriction, a fixed bleed path con-



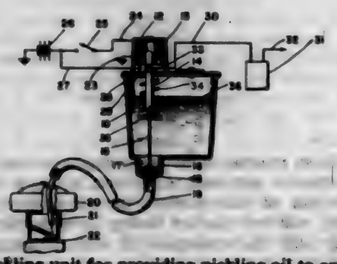
necting said chamber to a source of atmospheric pressure, and an engine temperature variable bleed path connecting said chamber to a source of atmospheric pressure by an amount which increases with decreasing temperature.

2,943,617
STARTING ENGINE WITH HYDRAULIC DRIVE AND MEANS TO PREHEAT MAIN ENGINE
Arthur A. Zahn, East Peoria, Ill., assignor to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Feb. 4, 1959, Ser. No. 791,157
1 Claim. (Cl. 123—179)



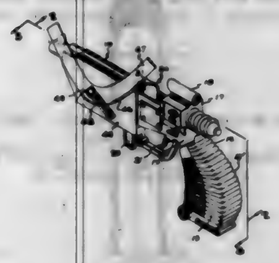
In combination with a main internal combustion engine, a starting engine therefor, and a hydraulic drive means between said engines, pump means for withdrawing lubricating oil from the main engine to supply the hydraulic drive means, a return line from the hydraulic drive means to the main engine, whereby heat in the drive means will be dissipated and acquired by the main engine prior to starting thereof, and a check valve in said return line to close said line when less than a predetermined torque is required to motor the main engine.

2,943,618
PICKLING UNIT FOR INTERNAL COMBUSTION ENGINES
William M. Schoenfeldt, 1816 Benedict Canyon, Beverly Hills, Calif.
Filed May 8, 1959, Ser. No. 811,839
7 Claims. (Cl. 123—198)



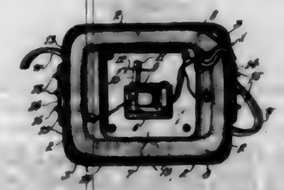
1. A pickling unit for providing pickling oil to an internal combustion engine, comprising, in combination: a reservoir for said pickling oil; a pump means responsive to shutting off of said engine for delivering a metered portion of pickling oil from said reservoir to said engine; and a time delay means for maintaining the turning over of said engine for a given period of time upon actuation of said pump means.

2,943,619
TOY BOOMERANG PROJECTING GUN
George W. Dunbar, Nashville, Tenn., assignor to Knaus Incorporated, Nashville, Tenn.
Filed May 27, 1959, Ser. No. 816,168
4 Claims. (Cl. 124—16)



1. A toy for projecting a boomerang comprising an elongated body member simulating a gun and having a barrel and hand grip, said barrel having opposed upper and lower spaced flanges interiorly thereof, a carriage slidably supported upon and between said flanges, a helical spring seated at the rear end of said flanges and in contacting engagement with the rear end of said carriage to urge said carriage forwardly along said flanges, detent means operatively associated with said carriage to retain said spring under tension, said grip having release means for the detent, a cradle for support of a boomerang positioned upon one side of the barrel forwardly of said grip, said cradle having an arcuate seat for reception of the bight portion of the boomerang, said seat including an upward extension terminating adjacent the upper edge of the barrel for support of an arm of the boomerang when placed in said seat, a spring retainer strip on said cradle extended diagonally forward of the barrel, for releasable retention of a boomerang and said carriage having an upright head for contacting engagement with the arm supported by the extension of said cradle.

2,943,620
PILLOW OR CUSHION TYPE VIBRATOR
Frank J. Sibert, 186 William St., East Orange, N.J.
Filed Feb. 24, 1958, Ser. No. 717,099
4 Claims. (Cl. 128—24.1)



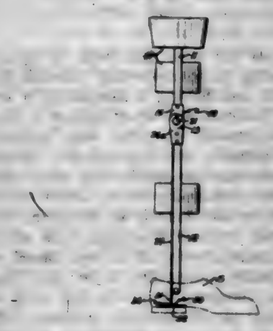
1. A device of the character described, composed of a plurality of ventilated flexible box-like containers coupled together by means of male and female snap fasteners associated with hand grips attached to each individual ventilated flexible box-like container, a plurality of vibrating units one of which is contained within each individual ventilated flexible box-like container, means for activating each individual vibratory unit independently of any other vibratory unit, means for adjusting the vibratory power of each vibratory unit independently of another vibratory unit, a plurality of infra-red heating pads, one of which is contained within each individual ventilated flexible box-like container, means for activating each individual infra-red heating pad independently of any other infra-red heating pad, and means for controlling each individual infra-red heating pad consisting of a rheostat and thermostat, said vibrating unit comprising a core and a coil for magnetizing the core and also comprising a biased clapper in operative relation to the core, a spring connecting the clapper, at one end, to the core, an adjustable weight on the other end of the clapper, and fan means carried by said weight for ventilating purposes.

2,943,621
VIBRATING PILLOW
Sam J. Phillips, New York, and Warren J. Oestreicher, Queens, N.Y., assignors to Modern Aids, Inc., New York, N.Y., a corporation of New York
Filed Aug. 26, 1958, Ser. No. 757,332
2 Claims. (Cl. 128—33)



2. An improved vibration device comprising an outer flexible envelope having formed in opposite walls thereof aligned openings surrounded by peripheral borders, a tubular casing located in said envelope and having open ends aligned with and abutting the inner faces of said opening borders, said open ends terminating in radially inwardly directed annular flanges, perforated caps engaging said casing open ends and provided with outwardly directed flanges abutting the outer faces of said annular flanges to embrace said opening borders between the confronting faces of said annular flanges and said cap flanges, an electrical vibrator disposed in said casing and having a vibratory element secured to the wall of said casing and a stuffing material disposed in said envelope and surrounding said casing.

2,943,622
LEG BRACE ORTHOPEDIC APPLIANCE
Kurt B. Nelson, 6112 Station St., Monroeville, Pa.
Filed Oct. 5, 1959, Ser. No. 844,537
1 Claim. (Cl. 128—80)



In a leg brace including upper and lower bars pivoted together and a shoe pivoted to the lower end of the

lower bar, the combination therewith of a ratchet disc rigid with one of said bars and a pawl pivoted to the other adapted to engage said disc, a heel plate yieldably tiltable in said shoe under the wearer's weight, a crank pivoted in said shoe operable by tilting of said plate, a control wire connected to said pawl and extending downwardly to said crank, a spring tending to seat said pawl against said ratchet, and a spring urging said wire downwardly to unseat the pawl, said crank acting to overcome said last-mentioned spring when weight is applied to said plate.

2,943,623
SKIN PLASTER
Thelmer J. Thompson, 391 Lexington Ave., Burlingame, Calif.
Filed Oct. 4, 1957, Ser. No. 688,325
4 Claims. (Cl. 128—153)



2. In a skin plaster the combination including at least one member composed of polymerized tetrafluoroethylene, at least one tape member, a marginal edge of said polymerized tetrafluoroethylene member joined to one end of said tape member whereby said marginal edge only of said polymerized tetrafluoroethylene member opposes said tape member, each of said members provided with an adhesive on one face thereof.

2,943,624
QUANTITATIVE INDICATOR FOR SYRINGES
Mavis M. Alquist, 1104 E. 15th St., Apt. 2, Minneapolis, Minn.
Filed Apr. 17, 1958, Ser. No. 729,205
2 Claims. (Cl. 128—218)



1. In a device of the class described, an open ended barrel, a cooperating plunger working through the open end of said barrel and having a diametrically enlarged circular head on its outer end which defines a circumferentially extended tapered marginal edge portion, said barrel having a plurality of longitudinally spaced volumetric graduations thereon and having stop means adjacent its open end, a clamping band element frictionally slidably mounted on said barrel, an elongated metering bar element carried by said clamping band element in generally spaced parallel relation to said barrel and extending longitudinally outwardly from the open end thereof when said clamping band element is in engagement with said stop means, said bar element defining a plurality of spaced notches corresponding in spacing to the spacing between given ones of said graduations on said barrel, said notches being so oriented on said bar element that when said clamping band element is moved into engagement with said stop means and said plunger is in engagement with the bottom of said barrel the peripheral edge portion of said head is received within one of the innermost of said notches.

2,943,625
CATAMENIAL DEVICE
Delbert L. Lotts, 103 N. Talley Ave., Muncie, Ind.
Filed Apr. 1, 1957, Ser. No. 649,910
5 Claims. (Cl. 128—285)



1. In a catamenial device, a tube-like member, and means operatively associated with said tube-like member for retaining a vacuum therein, said vacuum retaining means including cap means normally sealing one end of said member when dry but deteriorative when exposed to moisture of a human body at body temperature, said vacuum retaining means also including a plug of resilient soft sponge material.

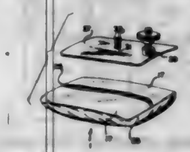
2,943,626
INSTRUMENTS FOR THE EXTRACTION OF FOREIGN BODIES
Enrico Dormia, 8 Via Polizziano, Milan, Italy
Filed Jan. 28, 1958, Ser. No. 711,585
Claims priority, application Italy Jan. 31, 1957
8 Claims. (Cl. 128—329)



1. A surgical instrument for extracting substances from a passage of a body, having an expansible portion comprising a plurality of flexible elements of helical form, means controlling the expansion of said expansible portion comprising a flexible tube containing operating means for said expansible portion, said operating means including a cylinder slidable to different positions within said flexible tube, said plurality of flexible elements being fixed to said cylinder, said flexible elements in one position of said cylinder being confined within said tube and being free of said tube when said cylinder is moved to another position.

3. A surgical instrument for extracting substances from a passage of a body, having an expansible portion comprising a plurality of flexible elements and means controlling the expansion of said expansible portion including a flexible tube containing operating means for said expansible portion, said operating means including a cylinder slidable to different positions within said flexible tube, said plurality of flexible elements being fixed to said cylinder and being composed of metal having a coating of plastic material resistant to sterilization temperature, said flexible elements in one position of said cylinder being confined within said tube and being free of said tube when said cylinder is moved to another position.

2,943,627
ELECTRODE
William L. Howell, 3562 Macomb St. NW., Washington, D.C.
Filed Apr. 5, 1957, Ser. No. 650,897
2 Claims. (Cl. 128—416)



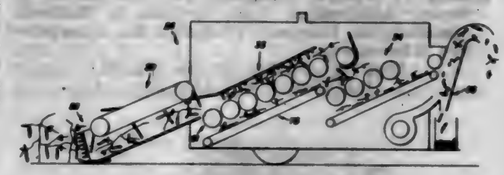
1. A pad for use as a component of an electrode adapted to make electrical contact with the human body, comprising a pliant and absorbent body element, a casing enveloping said body element and in contact therewith, said casing being formed of a water pervious flexible metallized fabric, a pair of spaced apart flaps of metallized fabric extending over said casing and fixed thereto at their ends and adapted to removably receive thereunder a conductor plate.

2,943,628
ELECTRODE ASSEMBLY
William L. Howell, 3562 Macomb St. NW., Washington, D.C.
Filed Feb. 27, 1957, Ser. No. 642,706
8 Claims. (Cl. 128—418)



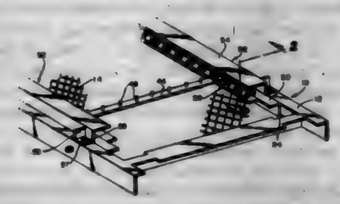
1. An electrode assembly including, in combination, an elongated flexible supporting base having an adhesive coating on one face thereof, said supporting base and coating having a plurality of longitudinally spaced openings therethrough, a plurality of separate electrodes being affixed to said supporting base by said adhesive coating, each of said electrodes being affixed to said supporting base in position covering an opening and comprising a metal foil unitary section having a surface adapted to engage the skin of a patient and an opposite surface adapted to be engaged by means for connecting an electric lead to the electrode, and means loosely and removably extended through each opening for connecting an electrical lead to each of said electrodes.

2,943,629
CUTTER BANK FOR HARVESTING MACHINES
Eben H. Carruthers, Warrenton, Oreg., assignor to Chisholm Ryder Co., Inc., Niagara Falls, N.Y., a corporation of New York
Original application July 13, 1955, Ser. No. 521,747. Divided and this application Sept. 17, 1956, Ser. No. 610,186
20 Claims. (Cl. 130—30)



1. A machine for removing the vines and leaves from the pods of pod type vegetables comprising, in combination, a rotatable cutter disc having peripheral slots therein into which vines are caught as the cutter rotates, means for rotating said cutter disc, at least one stationary cutter in shearing relation to which said cutter disc rotates, a support for said stationary cutter and yielding means between said support and said stationary cutter for maintaining said stationary cutter in yielding shearing relation to said cutter disc.

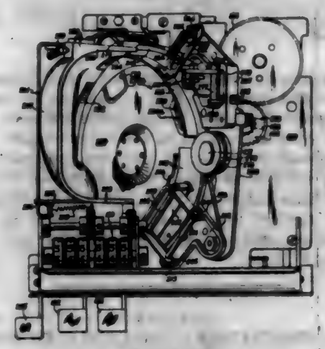
2,943,630
CHAIN PROTECTOR FOR PEANUT PICKING MACHINE
John D. Mitchell, Woodville, N.C., assignor to Harrington Manufacturing Company, Inc., Lewiston, N.C., a corporation of North Carolina
Filed Aug. 1, 1958, Ser. No. 752,495
3 Claims. (Cl. 130—30)



1. In a peanut picking device, a frame, a picking screen, said screen having peanut receiving openings, said openings being defined in part by stem severing members, said screen being disposed substantially in a single plane, an angle member extending along one of the edges of said screen, said screen being connected to said angle member with one leg of said angle member extending over and parallel to an edge of said screen, means on said angle member for tensioning said screen, a slide member removably connected to said screen and abutting the upper surface of said screen, said slide member also abutting said one leg of said angle member, a picking chain slidably engaging the upper surface of said slide, picking bars extending horizontally over said screen and attached to said chain, picking bar pins or fingers extending vertically above said bars and adapted to urge peanut vines along said screen, spring fingers positioned above said bars and attached to said harvester frame, said spring fingers extending downwardly toward said screen and being adapted to urge said vines and said bars and connected chains downwardly toward said screen, a chain protector for regulating the movement of said chain laterally of the chain contacting surface of said slide comprising a second angle member connected to said first mentioned angle member, said second angle member having a first leg

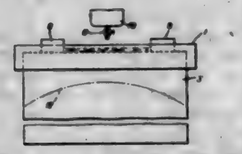
extending substantially parallel to the vertical leg of the first mentioned angle member, and a second leg extending over the horizontal leg of the first mentioned angle member and said slide, the latter leg of said second angle member being positioned above and immediately adjacent said chain.

2,943,631
FARE BOX
Edward C. Warrick, Pittsburgh, Pa., and Donald L. Brown, Bellefontaine, Ohio, assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 15, 1953, Ser. No. 386,251
15 Claims. (Cl. 133—3)



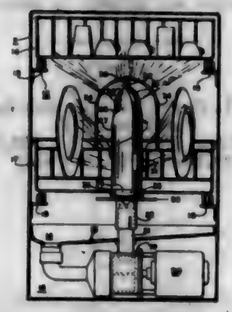
1. In a fare handling device, a fixed base plate; a movable element mounted adjacent said plate and having recesses along one edge to receive fares, the edges of said recesses being of such thickness that bent and mutilated portions of mutilated fares extend above the top surface of the recess edges; a device for ejecting bent or mutilated fares from said recesses comprising a body having a surface facing the recessed edge of said element, said surface having a large coefficient of friction with fares in the recesses of said movable element, and said body being so constructed and arranged as to resiliently press fares against said recesses and rotate them in the plane of said movable element, whereby deformed fares will cooperate with said recess edges and be ejected from said recesses during movement of said movable element in one direction.

2,943,632
APPARATUS FOR WASHING POROUS MATERIALS
Ian Elcock Bush, Radcliffe Infirmary, Oxford, England
Filed Oct. 8, 1957, Ser. No. 688,849
Claims priority, application Great Britain, Oct. 19, 1956
6 Claims. (Cl. 134—156)



1. Apparatus for supporting sheets of porous material for treating the material with liquid comprising a pair of parallel side plates spaced apart from one another and of a length not less than the width of the material, means for urging the plates towards one another to grip the upper part of the material with the upper parts of the plates lying above the material, and a pair of expandable filler elements capable of substantially filling the gap between the plates at two spaced points along the length of the plates while allowing limited leakage past said elements, thus forming a distributing trough above the central part of the material.

2,943,633
DISHWASHING APPARATUS
Anthony R. Marino, Mansfield, and Vinal D. Thurston, Columbus, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 27, 1957, Ser. No. 680,461
6 Claims. (Cl. 134—174)



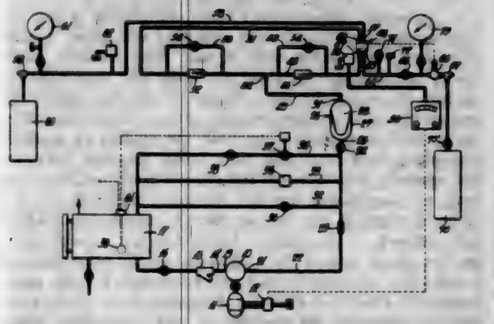
1. In a dishwashing machine, the combination of a cabinet having a washing chamber formed therein and a bottom wall defining a sump at the bottom of the chamber, movable upper and lower dish storage racks within said chamber, a washing fluid distributor centrally located within said chamber and including a base portion, said distributor comprising a hollow elongated shell having internally smooth side walls formed generally about a vertical axis, said distributor having radially extending discharge passages formed in the side walls for directing washing fluid to the upper and lower racks, means for supporting said distributor on one of said racks for free rotation about said axis, said base portion having an axial opening formed therein, means for delivering a jet of washing fluid into said opening including a pump, said pump having an inlet connected to the sump and an outlet conduit extending through the bottom wall into said chamber and terminating adjacent the lower rack, and a nozzle having generally helical passages formed therein, said nozzle being stationarily supported at the end of said conduit for directing a jet of washing fluid from said conduit toward said opening, the construction and arrangement being such that said distributor is capable of being rotated solely by the force of said fluid jet.

2,943,634
INSECT-PROOF ENCLOSURES
George H. Morgan, 7320 Idamor Lane, St. Louis 23, Mo.
Filed June 24, 1957, Ser. No. 668,014
1 Claim. (Cl. 135—1)



In combination with an umbrella having a collapsible, covered frame capable of assuming an inverted saucer shape when open and means under said umbrella for sustaining same spacedly above a base support, an insect-impervious enclosure comprising a headpiece, said headpiece being of relatively heavy fabric and in the form of an annular ring having an outside circumference which approximates the periphery of said umbrella and having an inside diameter which is at least one-half of its outside diameter, and a plurality of panels of flexible netting secured to each other along their side edges and secured at their upper ends to said headpiece for suspension therefrom downwardly from said umbrella when said headpiece is in supported disposition thereon, said panels being of such length as to extend to the base support when so suspended.

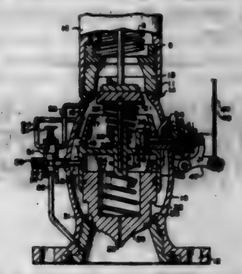
2,943,635
GAS PRESSURE BOOSTER SYSTEM
Edward M. Greer, Great Neck, Julius Kendall, Garden City, and Larry S. Winston, Plainville, N.Y., assignors to Greer Hydraulics, Inc., Jamaica, N.Y., a corporation of New York
Filed Aug. 6, 1956, Ser. No. 602,322
6 Claims. (Cl. 137—154)



1. In a system of the type comprising a fluid transfer unit having a container with a pair of ports and a movable partition interposed between said ports, one of said ports defining a gas port and the other a liquid port, a reservoir for liquid, a pump, a line connecting the inlet of said pump to the reservoir, a line connecting the outlet of said pump to the liquid port of said fluid transfer unit for flow of liquid under pressure from said reservoir into said fluid transfer unit, a discharge line from said liquid port to said reservoir, a normally closed discharge valve in said line, a source of gas, a line connecting said source to the gas port of said fluid transfer unit, a one-way valve in said line permitting flow toward said fluid transfer unit, a gas outlet port, a line connecting said gas port of said fluid transfer unit to said gas outlet port, a oneway valve in said line permitting flow toward said gas outlet port; the combination therewith of means controlled by the quantity of liquid in said reservoir intermittently to actuate said discharge valve to correspondingly intermittently compress the gas in said fluid transfer unit, thereby to boost the pressure of the gas applied to said gas outlet port to a value above the pressure of the gas applied to said gas port of the fluid transfer unit.

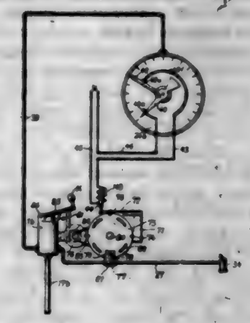
2,943,636
FLUID HANDLING STRUCTURE
Edwin E. Reed and Harold E. La Rue, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 703,083
15 Claims. (Cl. 137—329)

1. A fluid handling structure comprising: a tubular housing with a first end serving at least as an inlet and an opposite second end serving at least as an outlet, said ends being operable to be connected with fluid handling conduits; a baffle structure supported within said housing intermediate said ends so as to form an annular space between said baffle structure and said housing; a poppet valve supported by said baffle structure and seatable in a valve seat at said second end of said housing; a piston valve having a wall slidably engaged in a piston chamber formed within the end portion of said baffle structure which is adjacent said first end of said housing and seatable against an internal shoulder on the inner wall of said housing and adjacent said first end of said housing; a starter valve in a valve body which extends into a valve chamber formed by wall means within the other end portion of said baffle structure which is adjacent said poppet



valve and said second end of said housing; means for biasing said starter valve to a closed position; first conduit means, including said starter valve and a passageway connecting said piston chamber with a region within said housing between said internal shoulder and said first end of said housing, for providing communication via said piston chamber between said ends of said housing, said starter valve blocking said first conduit means until opened; means for opening said starter valve so as to provide said communication; and excess flow means without said housing, operatively connected to said region within said housing, said piston chamber, and a second region adjacent said second end and operable to stop fluid flow at a predetermined maximum pressure drop between said first and said second ends of said housing.

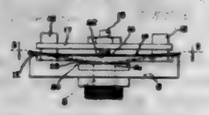
2,943,637
TIRE INFLATING AND TESTING DEVICE
Rudolf Eichenauer, Allerheiligenstrasse 77, Frankfurt am Main, Germany
Filed Oct. 1, 1956, Ser. No. 613,041
Claims priority, application Germany Oct. 4, 1955
7 Claims. (Cl. 137—224)



1. Venting apparatus for compressed air, especially for motor vehicle tires, comprising a conduit for conduct-

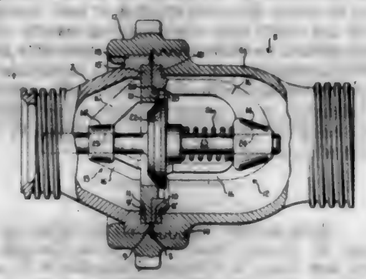
ing compressed air to and from a tire, a manometer connected to said conduit to measure the pressure of air in said conduit, a duct also connected to said conduit, a rotary member for closing said duct to prevent escape of air from said conduit through said duct, said member having a plurality of ports communicating with atmosphere and spaced equi-angularly about its axis of rotation, said member also having a plurality of recesses spaced equi-angularly about its axis, said recesses alternating with said ports, means for rotating said member to bring a port into registry with said duct to permit venting of air from said conduit, a locking member adapted to engage in said recesses to lock said rotary member against rotation with said rotary member closing said duct, and means operated by said manometer, when a pressure in excess of a predetermined pressure is recorded in said conduit, for moving said locking member to released position.

2,943,638
FLOW RESTRICTING DEVICE
Richard V. Prucha, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed May 28, 1957, Ser. No. 660,184
2 Claims. (Cl. 137—498)



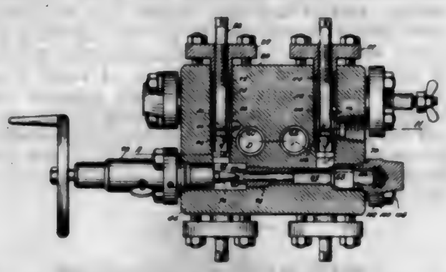
1. A flow restricting device for limiting the flow of gas therethrough comprising a body having a gas passage extending therethrough and terminating in a port located on a surface of said body, an elongated resiliently flexible member for limiting the flow of gas through said port, first support means on said body engaging the end portions of said member for supporting said member in a normal position in a plane spaced from the surface plane of said body, said member having a central portion located in the path of gas flowing to said port, retaining means for loosely positioning said member on said first support means, said central portion having a flow restricting orifice therein, said member being capable of flexing movement in accordance with variations in the pressure of gas flowing to said port between said normal position in spaced relation with said port at normal gas pressures and a port restricting position in which said central portion contacts said port and restricts the flow of gas through said port at abnormally high gas pressures, the resiliency of the unsupported length of said member between said supports in said normal position being such that at a predetermined abnormal pressure of the gas flowing to said port said member moves to said port restricting position, and second support means on said body disposed between said first support means and laterally spaced from and on opposite sides of said port in a plane intermediate the surface plane of said body and the plane of said first support means, the plane of said second support means being spaced above the plane of said body a sufficient distance whereby said second support means engage said member intermediate said end portions and said central portion before said central portion contacts said port as said member moves to said port restricting position so as to decrease the unsupported length of said member and thereby increase the effective resiliency of said member when in said port restricting position for returning said member to said normal position at a gas pressure between said normal and abnormal gas pressures.

2,943,639
READILY ASSEMBLED CHECK VALVE
George L. Smith, 4618 W. Carter Place, Milwaukee, Wis.
Filed Aug. 9, 1956, Ser. No. 603,899
2 Claims. (Cl. 137—515.7)



1. A readily disassembled valve comprising; a pair of tubular body sections having opposing end faces; a pair of spiders, one within each of said body sections, each spider comprising a hub and a circular rim connected to its hub by arms; the rims of the two spiders overlying one another and having coacting annular shoulders interfitting with one another to hold the spiders in coaxial alignment; said overlying rims being received between the opposing end faces on the tubular body sections; the body sections having annular shoulders engaging the peripheral edges of the rims to thereby center the spiders with respect to the tubular body sections; a valve seat on the rim of one of the spiders facing the other spider; a valve disc cooperable with said valve seat; a valve stem projecting axially in opposite directions from said valve disc, the opposite end portions of said valve stem being slidably and removably received in the hubs of the spiders; and a coupling member removably engaged with the flanges on said tubular body sections to draw the same together, detachment of said coupling member enabling complete disassembly of all parts of the valve.

2,943,640
MANIFOLD FOR DUAL ZONE WELL
Gordon James, Houston, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 11, 1956, Ser. No. 609,320
2 Claims. (Cl. 137—594)



1. A dual zone manifold for separate control of fluid streams from a dual zone well comprising unitary manifold housing having a first end, a second end opposite the first end, a first side, and a second side opposite the first side; a first passage extending upwardly through the manifold housing near the center thereof; a second passage extending upwardly through the manifold housing adjacent the first passage; the first passage being positioned nearer than the second passage to the first end of the manifold housing; a first port extending from the first passage toward the first end of the manifold housing; a first duct extending into the manifold housing from the first side of the manifold housing between the first passage and the first end; said first duct intersecting the first port and continuing past the first port to a position closer than the first passage to the second side of the manifold housing; a first bore extending from the first side of the manifold housing into the manifold housing between the second passage and the second end of the manifold housing to a position closer than the second passage to the second side of the manifold housing; a first conduit extending through the manifold housing from the first end to the second end between the passages and the second side of the housing; said first conduit intersecting the inner end of the first duct and the inner end of the first bore; means for closing the ends of the first conduit; a first outlet extending inwardly from the second end of the manifold housing and intersecting the first bore; valve means in the first duct between the intersection with the first port and the intersection with the first conduit; valve means in the first bore between the intersection with the first outlet and the intersection with the first conduit; a choke in the first conduit between the intersection of the first conduit with the first duct and the intersection of the first conduit with the first bore; a second port extending from the second passage toward the second end of the manifold housing at a lower elevation in the manifold housing than the first port; a second duct between the second passage and the second end of the manifold housing extending inwardly from the second side of the manifold housing below the first bore; said second duct intersecting the second port and continuing past the second port to a position closer than the second passage to the first side of the manifold housing; a second bore below the first duct extending from the second side of the manifold housing into the manifold housing between the first passage and the first end of the manifold housing; a second conduit extending through the manifold housing from the first end to the second end between the passages and the first side of the housing; said second conduit intersecting the inner end of the second duct and the inner end of the second bore; means for closing the ends of the second conduit; a second outlet extending inwardly from the first end of the manifold housing and intersecting the second bore; valve means in the second duct between the intersection with the second port and the intersection with the second conduit; valve means in the second bore between the intersection with the second outlet and the intersection with the second conduit; a choke in the second conduit between the intersection of the second conduit with the second duct and the intersection of the second conduit with the second bore; means closing the ends of the first and second ducts and the first and second bores to prevent flow through them out of the housing; and means for closing the upper ends of the first and second passages.

2,943,641
DEVICE FOR ATTENUATING PULSATIVE FLOW IN GASES
Marion L. Arnold, Downey, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
Filed Jan. 30, 1956, Ser. No. 562,155
22 Claims. (Cl. 138—26)

12. A volume-current attenuator device for attenuating periodic pressure and current waves of a gas flowing therethrough which comprises an elongated cylindrical shell having an inlet fixture at one end and an outlet fixture at the opposite end, a first, second and third transverse partitions disposed within said shell in order along the length thereof, thereby subdividing the interior of said shell in order into a first, second, third and fourth successive chambers, a pipe passing through the first and second of said transverse partitions intercommunicating the first and third chambers, a second pipe passing through the second and third of said transverse partitions intercommunicating the second and fourth of said cham-

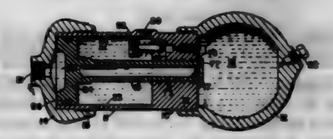


bers, and a third pipe passing through the second of said transverse partitions intercommunicating the second and third of said chambers, each of said pipes possessing an acoustical inductance M_1, said first and fourth chambers each possessing an acoustical capacitance of $\frac{1}{2}C_2$ and said second and third chambers each possessing an acoustical capacitance of C_2, each with reference to the physical dimensions of the chambers and the physical properties of the gas flowing therethrough as defined in the equation

$$f_c = \frac{1}{\pi\sqrt{M_1 C_2}}$$

in which f_c is a frequency lower than the frequency of said periodic pressure and current waves which is to be attenuated.

2,943,642
LIQUID SPRING ACCUMULATOR
William B. Westcott, Jr., Cleveland Heights, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 7, 1958, Ser. No. 746,917
2 Claims. (Cl. 138—31)

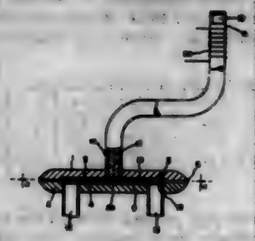


1. An accumulator comprising a hollow body, a partition in said body dividing it into a spring chamber and an accumulator cavity, a movable plunger extending through said partition, a head on said plunger in said cavity dividing it into an accumulator chamber and a reservoir chamber, liquid filling said chambers, and a pump in said partition connecting said reservoir chamber and spring chamber, said head engaging and operating said pump to transfer liquid from said reservoir chamber to said spring chamber upon movement of said plunger to a predetermined position.

2,943,643
FLOW MODULATING DEVICE
George Pinter, Irvington, and Anthony F. Chereih, East Orange, N.J., assignors to General Electric Company, a corporation of New York
Filed Dec. 21, 1956, Ser. No. 629,939
2 Claims. (Cl. 138—46)

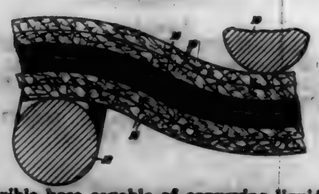
1. A flow control device consisting essentially of a pair of relatively rigid body members and a flexible metal diaphragm sandwiched between said members, each of said members having side and flat bottom walls defining a circular depression in the surface thereof facing said diaphragm, one of said members having diametrically spaced fluid inlet and outlet connections terminat-

ing in and adjacent the periphery of the depression in said one of said members, said depressions being substantially coextensive and of an area sufficient to provide for flexing of the unsupported central portion of the diaphragm between said depressions into contact with



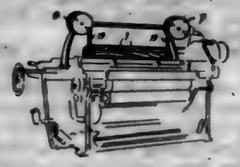
the bottom wall of the depression in said one of said members to restrict the flow of fluid from between said inlet and outlet connections to paths extending only along the periphery of the depression in said one of said members.

2,943,644
FLEXIBLE HOSE
John Moseley, South Wimbledon, London, England, assignor to Compoflex Company Limited, London, England
Filed Feb. 1, 1957, Ser. No. 637,679
6 Claims. (Cl. 138—56)



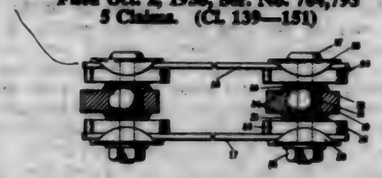
1. A flexible hose capable of conveying liquid oxygen without loss of flexibility or embrittlement and consisting of a tubular body of polyethylene terephthalate constituted by at least one inner layer of cloth woven from polyethylene terephthalate yarn and wound in overlapping helical coils, a number of intermediate layers of polyethylene terephthalate film wound in overlapping helical coils and at least one outer layer of cloth woven from polyethylene terephthalate yarn and wound in overlapping helical coils, and external and internal armourings of metal wire fitted closely to said body and holding the constituent layers thereof together.

2,943,645
HEDDLE FRAME RETURN MOTION DEVICE FOR BROAD WEAVING LOOMS
Jaime Picanol, Casa Pairal Catalunya, Zillebeke-lez-Ypres, Belgium
Filed Nov. 1, 1956, Ser. No. 619,723
Claims priority, application Belgium Dec. 17, 1955
1 Claim. (Cl. 139—89)



Resilient means for the return motion of heddle frames of looms, said means comprising at least one separate resilient return motion device upon each side of a heddle frame, each device comprising a hollow drum located substantially above and connected with an upper corner of the heddle frame, a central shaft rotatably supporting said drum, a spiral spring having outer and inner ends and disposed between said shaft and said drum, a hub secured to said shaft and having a notch for receiving the inner end of said spiral spring, said notch being so shaped as to hold the inner end of said spiral spring when said spiral spring is wound in either direction around the hub, said drum having two interior notches, one of said drum notches receiving said outer spring end when the spring is wound in one direction and the other one of said drum notches receiving said outer spring end when the spring is wound in the other direction, a driven element operatively connected with said shaft, a driving element meshing with said driven element, and manual driving means operatively connected with said driving element and extending beyond said drum.

2,943,646
PICKER STICK CONNECTING MEANS
Harry William Thatcher, Mendon, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Oct. 2, 1958, Ser. No. 764,793
5 Claims. (Cl. 139—151)



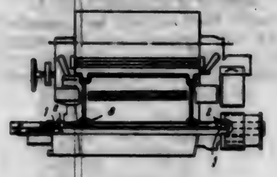
1. In a pick motion for the picker stick of a loom, a lug connection comprising a pair of substantially rigid parallel lug link side members having a connection at one end thereof to a pick arm and at the other end to a positioning means at the stick, each said connection including a ball and socket type universal connecting means and means for stabilizing said lug connection which comprises resilient cup-shaped members, one at each side of each connecting means, each of said cup-shaped members defining an enclosed pocket adjacent said ball and socket connecting means.

2,943,647
LOOM PICKER
Joseph M. Budzyna, East Douglas, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Sept. 22, 1958, Ser. No. 762,430
3 Claims. (Cl. 139—159)



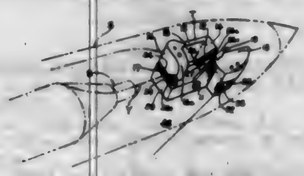
3. In combination with a picker stick of a loom and a loop picker operatively mounted adjacent an end of said stick, a picker locking tongue comprising an elongate, generally flat, strip-like member wedged between an inner face of the loop picker and stick, said member having a series of unidirectionally inclined serrations formed as rectangular projections extending laterally of the tongue and twisted to incline for indenting both the picker and the stick to prevent removal of the picker from the stick.

2,943,648
TONGUE FOR SHUTTLE BOXES IN WEAVING LOOMS
Jaime Picanol, Casa Pairal Catalunya, Zillebeke-lez-Ypres, Belgium
Filed Nov. 1, 1956, Ser. No. 619,787
Claims priority, application Belgium Dec. 17, 1955
4 Claims. (Cl. 139—185)



1. In a weaving loom having a batten, a shuttle race mounted on said batten, a shuttle box at either side of said batten each at an end of said shuttle race, means for projecting a shuttle along said shuttle race from one of said shuttle boxes into the other and vice versa, a tongue, means pivotally supporting said tongue sideways at the entrance of each of said shuttle boxes so as to cause said tongue to partially project into the path of said shuttle when the latter is entering into said shuttle box and to brake the speed of said shuttle while yielding sideways thereto, while said shuttle is penetrating into said shuttle box, the pivoting centre of said tongue being disposed on a line substantially perpendicular to said shuttle race and extending through that point of said tongue which will be first met by the shuttle, when the latter enters into said shuttle box.

2,943,649
FILLING CONTROL DEVICE
Robert F. Paris, University Ridge Apartments, Apt. 39, Greenville, S.C.
Filed Dec. 31, 1956, Ser. No. 631,529
5 Claims. (Cl. 139—217)



1. A filling control device for shuttles including, a threading block, substantially vertical tension pads carried by said threading block, and horizontal tension pads transversely disposed with respect to the threading block carried by said threading block spaced rearwardly of said vertical tension pads, said substantially vertical tension pads being inclined and so positioned as to prevent substantial lateral movement of the filling within the horizontal tension pads during weaving.

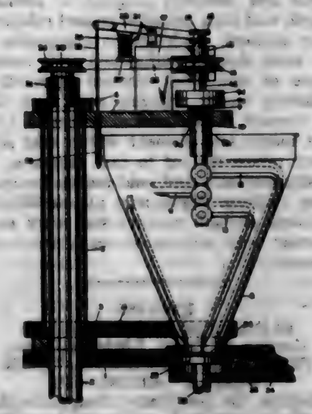
2,943,650
DEVICE FOR TENSING, TWISTING, AND SEVERING WIRE
Paul S. Rubin, Baltimore, Md. (910 S. Fairfax Ave., Los Angeles 36, Calif.)
Filed July 19, 1956, Ser. No. 598,957
6 Claims. (Cl. 140—119)

1. A device for forming and closing a tight loop of wire about an object, comprising a tip having a passage into which the free ends of a piece of wire encircling said object may be passed, said tip being adapted to fit snugly against the wire at said object, a wire grip for gripping the free ends of the wire extending from said object, said grip being spaced from said tip in alignment therewith and movable toward and away from said tip, a compression coil spring having its respective ends coupled to said tip and said grip and resiliently biasing said grip away from said tip, a wire twisting element supported between said tip and said grip and slidably engaging the lengths of wire extending from said object, said wire twisting element and said grip being coupled for unitary rotary movement, a spring compressing mechanism coupled to one end of said spring and having a hand engaging element arranged to move said grip toward or away from said tip and vary the compression of said spring and the tension of said wire,



and said grip having a hand engaging element separate from the hand engaging element of said spring compressing mechanism, permitting the grip to be rotated along with the wire twisting element to twist the wire between said tip and the wire twisting element and form a pair of intertwined helices extending in opposite directions from a point intermediate said tip and said twisting element, wire being drawn into said helices from between said twisting element and said grip, compressing said spring, whereby maximum twisting and tension is produced at said point, ensuring that breakage of the wire occurs predictably at said point to leave a length of twisted wire attached to the loop.

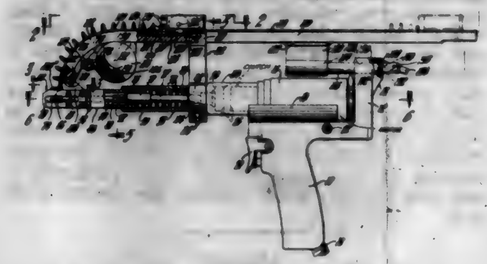
2,943,651
POWDER-COMPRESSING MACHINES
Kenneth Brierley, 104 Willsey Road, Letchworth, Hertfordshire, England
Filed July 3, 1957, Ser. No. 669,869
2 Claims. (Cl. 141—74)



1. In a machine for compressing measured quantities of cosmetic powder into a cake, a machine frame, a gravity feed hopper thereon to contain a bulk supply of the powder in freely flowing state, said hopper having an outlet opening at its lower end, a platform mounted on the frame and slidably movable across the outlet opening of the hopper and having portions of its upper surface

serving as a closure for said opening, said platform having a plurality of chambers opening at its upper face between said portions to receive receptacles to be filled, said chambers being positioned so as to be brought selectively into alignment with the hopper outlet thereby to cause the selected chamber to be gravity-filled with powder from the hopper, a plurality of agitator fingers, and means mounting said fingers on the frame so as to be spaced radially from and rotatable about an axis coincident with the axis of the selected chamber and so as to be movable vertically between a raised and inoperative position in which they lie within the hopper above the upper surface of the platform, and a lowered and operative position in which they lie within and describe circles within the powder contained in the selected chamber, for the purpose of agitating and stirring said powder while the chamber is still in free communication with the bulk supply in the hopper.

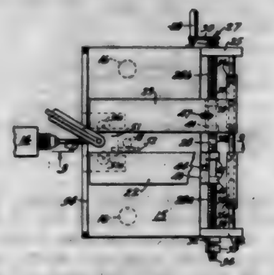
2,943,652
POWER OPERATED TOOL FOR FEEDING AND DRIVING HEADED FASTENERS
William D. Chilton, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 6, 1955, Serial No. 551,394
8 Claims. (Cl. 144—32)



1. In a power operated tool, the combination comprising, a housing having a driver element therein, slide means supported by said housing for sliding movement relative thereto and adapted to receive said driver upon sliding movement thereof, a magazine supported on said slide means and normally adapted to discharge work elements into said slide means in spaced relationship with said driver element, latch means engageable with the particular work element within said slide means to prevent release of said work element outwardly thereof, positive biasing means engaging said work element to hold said element in engagement with said latch means to thereby locate said element within said slide means and prevent return thereof to said magazine regardless of the position of said tool, and means for moving said slide means to cause engagement of said driver element with said work element to drive said work element out of engagement with said latch means and said positive biasing means.

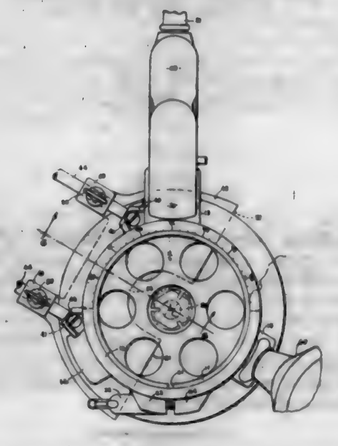
2,943,653
BLIND DOWELING DRILLER
Gordon A. Crider, Litchfield, Minn.
Filed Mar. 31, 1958, Ser. No. 725,250
4 Claims. (Cl. 144—92)

1. Mechanism for positioning elongate workpieces to be drilled for doweling, comprising a supporting structure having a worktable and also having means positioning a drill horizontally above the worktable, a pair of elongate and juxtaposed clamping jaws above the table and on opposite sides of the drill axis, jaw-positioning apparatus on the supporting structure and below the top of the worktable for moving the jaws toward and away from each other, interconnecting means below the top of the worktable and between the jaws and the jaw-positioning apparatus and including releasably interlocking elements on one of the jaws and the jaw-positioning apparatus respectively and permitting said one jaw to be lifted upwardly from the table whereby to permit a workpiece to be laid transversely of and endwise against the other



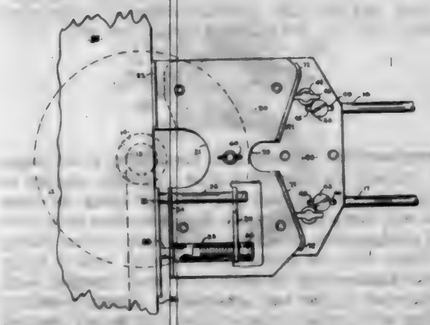
jaw and mounting means on the supporting structure and below the top of the worktable adjacent one edge of the worktable, said mounting means swingably supporting said one jaw at one end thereof and permitting said one jaw to be lifted off the worktable and be swung completely below the top of the worktable to be out of obstructing relation with the workpiece on the worktable.

2,943,654
PORTABLE POWER OPERATED ROUTER
Arthur N. Emmons, Nedrow, N.Y., assignor to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of New York
Filed Sept. 18, 1957, Ser. No. 684,760
2 Claims. (Cl. 144—134)



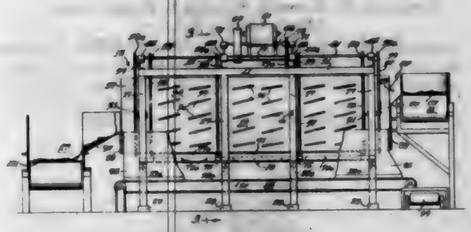
1. A portable power operated router comprising a motor supporting base having a bottom plate for engaging the surface of the work piece, a motor disposed in vertical position and detachably secured in said base, a hand grip handle secured to said base and extending radially therefrom, means for supporting an edge guide on the under side of said bottom plate, said guide having a straight edge for engaging the side edge of the work piece, said straight edge of said guide extending transversely of said bottom plate in angular relation of substantially less than 90 degrees to said hand grip handle, and a hand knob fixed to said base, said knob being located in circumferentially spaced relation to said hand grip handle on a radius extending at an angle not in excess of 90° to the plane of said straight edge.

2,943,655
REVERSIBLE ROUTER GUIDE FOR STRAIGHT AND CIRCULAR WORK
Dane H. Pedersen and Joseph Paul Nicotra, Syracuse, N.Y., assignors to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of New York
Filed Mar. 12, 1959, Ser. No. 798,915
7 Claims. (Cl. 144—136)



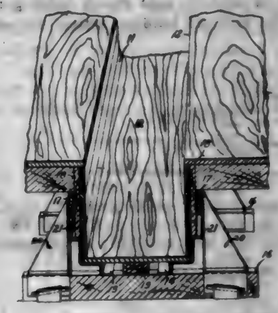
6. A router guide for use in effecting parallel grooves in work pieces comprising a pair of support rods extending outwardly from the router base in a direction normal to the axis of the router cutter, a support plate, means detachably securing said plate to said rods for adjustment toward and from the router cutter with said plate extending in parallel relation to said rods, and a guide bar detachably secured to said plate and depending therefrom for sliding movement in a previously formed groove in the work piece.

2,943,656
PULPWOOD-DEBARKING DRUM HAVING ANGULARLY SLOTTED WALL AND STATIONARY SHEARING BARS
Arthur G. Wakeman, Coosa Pines, Ala., assignor to Coosa River News Print Company, a corporation of Alabama
Filed Aug. 24, 1956, Ser. No. 606,043
13 Claims. (Cl. 144—208)



1. In an apparatus of the class described adapted for use in barking slabs of the wood, an elongated cylindrical shell having an inlet at one end for bark-bearing wood and an outlet at the other end thereof for barked wood, said shell having a plurality of circumferentially spaced, narrow, elongated, generally longitudinally extending openings in the surface of said cylinder through which bark may pass outwardly from the interior of said cylinder, said openings having a width of from about ⅜ to ½ inch, and means for rotating said shell about its longitudinal axis.

2,943,657
CONCRETE BEAM MOULD CLAMP
Klaas Engbert Ten Broeke, 9700 Clark St., Montreal, Quebec, Canada
Filed Mar. 24, 1958, Ser. No. 723,468
3 Claims. (Cl. 144—291)



3. A clamp for use with concrete moulds comprising in combination; a beam, a pair of opposed clamping elements each having a substantially channel-like beam engaging member, a clamping face extending outwardly from the web thereof substantially at right angles thereto; and a wedging element for each of said clamping elements, each said wedging element having a substantially U-shaped cross-section, inclined wedging surfaces arranged on the side members of the beam engaging member and on the side members of the wedging element and adapted to cooperate with each other in relative wedging movement between the elements when erected on the beam to draw the webs of the said elements toward each other into locking engagement with the beam.

2,943,658
SCREW-TAPER DRILL WITH A DEPTH GAUGE
Joseph A. Labbee, Jr., Providence, R.I.; Katherine G. Labbee, Box 63, Edgewood 5, R.I., administratrix of said Joseph A. Labbee, Jr., deceased
Filed July 26, 1954, Ser. No. 445,714
1 Claim. (Cl. 145—125)

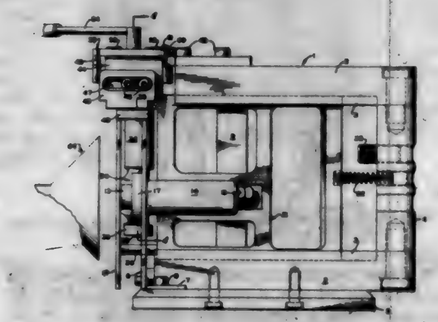


A drill attachment including a drill element of flat sheet stock with a tang, an upper countersink portion, an intermediate linear portion, and a lower twisted tapered portion conforming to the contour of a screw, a stop washer of extended area rotatably mounted on the tang and engaging the countersink portion, and a butt secured to the tang in spaced relation to the stop washer.

2,943,659
PEACH HALF PITTER
Earl R. Anderson, Campbell, Calif., assignor to Filper Corporation, Richmond, Calif.
Filed Aug. 6, 1956, Ser. No. 602,097
9 Claims. (Cl. 146—28)

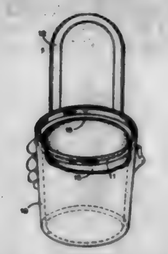
1. A clingstone peach pitter for removing the half pit adhered to the walls of the pit cavity in a clingstone peach that has been bisected to provide a half peach having a planar cut face around said pit, comprising; peach holding means movable into holding relation with the

outer surface of the flesh of such half peach, pit holding means adjacent to said peach holding means movable into pit holding relation with said pit in a half peach when the latter is held by said peach holding means, means connected with said peach holding means for rotating the latter relative to said pit holding means when a peach half is held by said peach holding means with its pit held by said pit holding means for shearing the



connection between said pit and the pit cavity of said peach half, and cutting means stationary relative to said peach holding means having a cutting edge facing substantially in the direction of the outline of the said pit cavity along the cut face of the peach half and extending into said peach half along and transversely across the edge of said pit when said peach holding means is so rotated for trimming off the portion of said peach half around said pit and along the edge of said pit cavity.

2,943,660
DISPOSAL SANITARY RECEPTACLE
Beverly Seeger, 28 Babcock Place, Lynbrook, N.Y.
Filed May 8, 1959, Ser. No. 811,974
1 Claim. (Cl. 150—3)



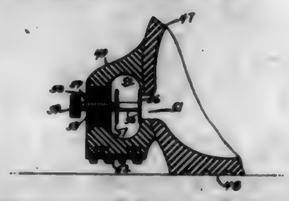
A sanitary device for containing, for disposal, unsanitary and malodorous articles and substances, comprising in combination a relatively permanent normally flat outer container of plastic composition closed at one end and having an openable neck, a normally closed elongated self-closing spring embracing said neck and secured thereto whereby finger pressure on the ends of said spring opens said spring and hence said neck, a contents-receiving disposable container of plastic material closed at one end and having an open end, said receiving container being positioned completely within said outer container in lining relation therewith, deodorizing means operatively associated with said contents-receiving container to deodorize the ambient atmosphere during filling of said contents-receiving container, draw string means on said contents-receiving container for closing the tops thereof after filling, spaced snap fastener elemeats on one side only of said flat outer container, a looped band adapted to extend around the neck of a user, and cooperating snap fastener elements on the ends of said band cooperating with said first mentioned snap fastener elements detachably securing said band to one side of said outer container.

2,943,661
NUT AND SEALING WASHER ASSEMBLY WITH INCLINED SECURING TONGUES
William Stern, Park Ridge, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed July 17, 1953, Ser. No. 368,776
1 Claim. (Cl. 151—36)



A preassembled fastener unit comprising a nut member, a resilient sheet metal washer rotatably coupled to the clamping face of said nut member along its inner margin and being of generally dished configuration, said dished configuration presenting a concave surface facing away from said nut member, said metal washer being provided intermediate its inner and outer margins with a plurality of spaced and substantially circumferentially extending substantially planar elongated fingers sheared from and deflected out of the surface of the washer and being inclined in a direction away from the said nut member and in the tightening direction of the nut member, the free end portions of each of said elongated fingers lying on a line which traverses both the inner and outer margins of the metal washer and falling in the space formed by the concave surface of said washer and a plane passing through its outer margin, the side margins of said fingers being circumferentially disposed, and a discrete sealing washer element of flowable material of greater thickness than the axial depth of the concave washer mounted on the concave side of said washer by embedment of the said inclined substantially planar finger portions in said sealing washer element intermediate upper and lower surfaces of said sealing washer element as incident to rotation of said sealing washer element relative to said metal washer.

2,943,662
ANTISKID DEVICE
Frederick W. Renwick, Sr., 156 S. Poplar Ave., Maple Shade, N.J.
Filed Apr. 25, 1957, Ser. No. 655,135
3 Claims. (Cl. 152—208)



1. In a tire having an antiskid device built thereinto, a main casing defining an air chamber and having a tread surface and a side wall, an auxiliary tube molded into said side wall and having an air chamber, said casing and tube being formed with an opening communicating between said air chambers, said tube having a tread surface provided with antiskid members and which tread surface normally lies within the tread surface of said casing when said tube is deflated, said tube being formed with air passages, and a valve assembly normally restricting communication between said air chambers and having said air passages open but which may be adjusted to establish communication between said air chambers and close said air passages whereby said casing is partially deflated and said tube inflated to render said antiskid members effective.

2,943,663
TIRE CONSTRUCTION
John O. Antonson, Tallmadge, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Continuation of application Ser. No. 245,340, Sept. 6, 1951. This application Jan. 4, 1960, Ser. No. 2,090
6 Claims. (Cl. 152—356)



1. A high speed generally toroidal pneumatic tire having laterally spaced radially inward bead portions, a generally toroidal carcass portion connecting said bead portions, and a peripheral tread portion, said carcass portion comprising a plurality of crossing bias-laid plies of cord material extending from bead to bead and embedded in rubber, said tread portion comprising a body of tread rubber bonded to said carcass portion, said tread rubber having embedded therein radially outward of said carcass plies at least three tread plies, said tread plies each comprising a layer of elongated generally parallel cords embedded in rubber with the individual cords in each ply extending generally transversely of the tire at an acute longitudinal bias angle to the circumferential centerline of the ply, and with each tread ply extending circumferentially of the tire, and stopping a substantial distance short of said beads in the lateral extent of the ply, said tread plies being radially spaced from one another by distances greater than the spacing between the plies in the carcass portion with the outermost tread ply disposed adjacent the periphery of the tread and with the innermost tread ply spaced from said carcass plies.

2,943,664
PNEUMATIC TIRE
Francis P. Baldwin, Colonia, Alfred L. Miller, Cranford, and Samuel B. Robison, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed July 9, 1956, Ser. No. 596,531
4 Claims. (Cl. 152—359)



3. A rubber tire which contains in its carcass a plurality of cords imbedded in rubber, said cords having been coated with a mixture of a water soluble thermosetting phenolic-aldehyde resin, said resin being prepared in the presence of an alkali metal-containing catalyst with a phenol aldehyde ratio between 1.4 and 4.0 at a pH between 7.5 and 9 and a latex of a chlorinated copolymer containing at least 0.5 wt. percent of combined chlorine but no more than 1 atom of combined chlorine per double bond, said copolymer being composed of 85 to 99.5 wt. percent of an isoolefin having 4 to 8 carbon atoms and 0.5 to 15 wt. percent of a multiolefin having 4 to 10 carbon atoms, to improve the adhesion of said cords to the rubber in which they are imbedded.

2,943,665
VALVE LOCK CAP
Walter H. Cincel, Dayton, Ohio, assignor, by mesne assignments, to Joseph W. Gottschlich, Brookville, Ohio
Filed Oct. 30, 1956, Ser. No. 619,238
17 Claims. (Cl. 152—431)

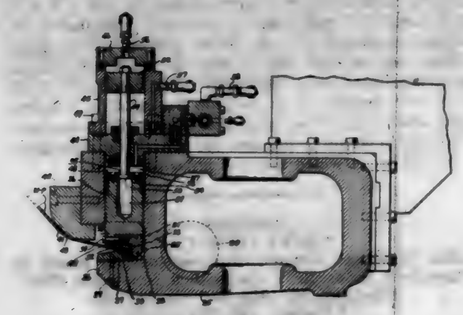


4. A valve lock cap in combination with an inflation valve including a housing assembly consisting of an outer shell of fixed dimension and an inner shell rotatably mounted within said outer shell and axially adjustable relative thereto, said shells having coaxial valve engaging means in conjoint locking engagement with said valve, movable valve capping means within said shells, and cover means freely rotatably attached to said shells, said outer shell and said cover means completely enclosing said inner shell.

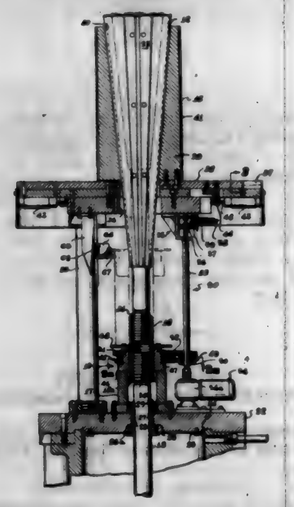
2,943,666
GRIPPER DEVICES
Thomas Blair Hawkes, 315 Trumbull Road, Manhasset, N.Y.
Original application Apr. 1, 1953, Ser. No. 346,164. Divided and this application Sept. 27, 1956, Ser. No. 612,536
3 Claims. (Cl. 153—48)

1. In a power press for stretch forming metal blanks of widely varying shape and size, a gripper device for clamping one edge of said blank and comprising a pair of cooperating jaw structures for holding the blank therebetween, one of said structures being movable relative to the other and being constituted by a continuous rectilinear bar of resilient material adapted when clamped on the metal blank to flex so as to assume a profile conforming to the surface of the blank engaged thereby, said movable jaw structure being provided at its rear side with a depending lip portion adapted to set down in back of the other structure to resist displacement of said jaws when said blank is subjected to stretching forces; and apparatus for applying gripping pressure to said movable structure comprising a row of independent power units formed by hydraulic mechanisms and extend-

ing along said movable jaw structure, and means loosely coupling each unit to said movable jaw structure to permit said structure to assume the desired profile when pressure is applied thereto.



2,943,667
EXPANDING MANDREL HYDRO-PRESS
Wayne Ewing, Los Angeles, and Lester B. Backus, Jr., Inglewood, Calif., assignors to Arrowsmith Tool & Die Corp., Los Angeles, Calif., a corporation of California
Filed Oct. 14, 1957, Ser. No. 689,944
11 Claims. (Cl. 153—30)



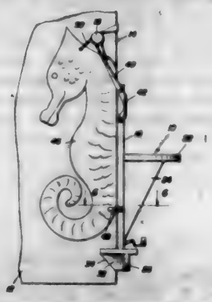
1. An expanding mandrel press comprising: a work table having a central opening therethrough; a plurality of expander jaws grouped around the opening of said work table and radially movably mounted on said table; a longitudinally reciprocable mandrel extending through said work table opening, said mandrel and said jaws being formed with means to translate movement of said mandrel in one direction into radially outward movement of said jaws in order to expand a tubular part placed around said jaws; power means connected to said mandrel to reciprocally move said mandrel; means operatively associated with said mandrel to define an adjustable positive stop for the expansion stroke of said mandrel; and means responsive to adjusting movement of said stop means to indicate the length of said expansion stroke.

2,943,668
TIRE BUILDING APPARATUS
Henry William Trevaskis, Point Pleasant, Blackdown, near Leamington Spa, and Jack Milner Lowe, Sutton Coldfield, England, assignors to Dunlop Rubber Company Limited, London County, England, a British company
Filed Nov. 13, 1957, Ser. No. 696,156
Claims priority, application Great Britain Nov. 17, 1956
7 Claims. (Cl. 154—10)



1. Tire building apparatus comprising an expansible building drum, cylindrical supporting members located coaxially of said drum, one at each end of the drum to support the side portions of tire building fabric extending beyond bead wire emplacements; each supporting member comprising a series of rigid elements extending side by side in a cylindrical formation co-axial with the drum, means to move said elements to a conical structure tapering radially inwardly toward the drum, a sleeve of larger diameter than that of said drum co-axial with and spaced radially outwardly from said drum and movable axially from a position overlying said supporting elements to a position overlying said drum, and annular air bags, one mounted on each of said supports and overlying said elements within said sleeve and inflatable to move over said drum and to move said sleeve over said drum.

2,943,669
DOOR ATTACHED RIDING TOY
Harry L. Van Haam, Jefferson Road, Whitefield, N.H.
Filed Sept. 26, 1958, Ser. No. 763,554
7 Claims. (Cl. 155—3)



1. The combination of a horizontally swinging door having a free outer vertical edge and a pair of door knobs at opposite sides of the door adjacent said outer edge, and a riding toy comprising a vertically elongated member disposed in abutment with said outer edge of said door, a horizontal seat and a pair of foot rests secured to said member, and means provided on said member and removably engaging said door knobs whereby to detachably retain the riding toy on said door for swinging movement therewith.

2,943,670
RECLINING CHAIR
Frank D. Hoffman, Jr., High Point, N.C., assignor to General Steel Products Company, Inc., High Point, N.C., a corporation of North Carolina
Filed June 25, 1954, Ser. No. 439,425
1 Claim. (Cl. 155—106)

A reclining chair comprising a stationary member, a reclining member pivotally supported on said stationary member for movement between a normal position and a reclining position, a footrest, linkage means interconnected between said members and said footrest to extend said linkage means to locate said footrest in an upwardly facing position spaced outwardly from the front of said chair when said reclining member is in said reclining position and to contract said linkage means to locate said footrest in a downwardly facing position beneath said chair when said reclining member is in said normal position, said linkage means comprising a first closed quadric linkage having one side defined by a portion of one of said members, a pair of spaced pivots on said one member respectively located at opposite ends of said one side, a pair of links each pivotally connnected at one end to one of said pair of pivots to define opposite sides of said first quadric linkage, a third pivot at the other end of one of said pair of links, a cross link pivotally connected at one end to said third pivot and pivotally connected by a fourth pivot to the other of



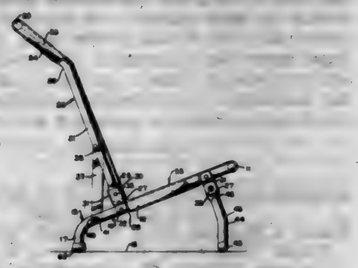
said pair of links, the portion of said cross link between the third and fourth pivots defining the fourth side of said first quadric linkage, said cross link and said other of said pair of links being extended beyond said fourth pivot to define adjacent sides of a second closed quadric linkage with said fourth pivot being common to said first and said second quadric linkages, the side of said second quadric linkage pivotally connected at the other end of said cross link being rigidly connnected to said footrest, actuating link means connnencted between the other of said members and said first quadric linkage to drive said one of said pair of links about its pivot on said one of said members through an arc of substantially 180° when said reclining member is moved from said reclining position to said normal position and to swing said third pivot across a line passing through said pair of pivots as said reclining member approaches said normal position whereby said linkage means may be locked in an overcenter relationship beneath said chair when said reclining member is in said normal position.

2,943,671
ARTICLE OF FURNITURE
Bertis F. Hamilton, deceased, late of Columbus, Ind., by William S. Hamilton, executor, Earl F. Hamilton and William S. Hamilton, Columbus, Ind., assignors to Hamilton Manufacturing Corporation, Columbus, Ind., a corporation of Indiana
Filed July 31, 1956, Ser. No. 601,188
8 Claims. (Cl. 155—112)

1. In a settee or the like, a generally rectangular seat frame formed from metal tubing and having front, rear, and end members, legs supporting said seat frame, a back frame formed from metal tubing and having top, bottom, and end members, the end members of the seat frame extending rearwardly past said rear member and being bent to project generally upwardly, means providing telescoping joints between said up-bent ends and the end members of the back frame, said bottom member having transversely projecting ends extending along the end members of the back frame and the up-bent ends of the end members of the seat frame, means connecting the projecting ends of said bottom member to the end members of both the seat and back frame, a plurality of cushion-supporting slats on said seat and back frames.



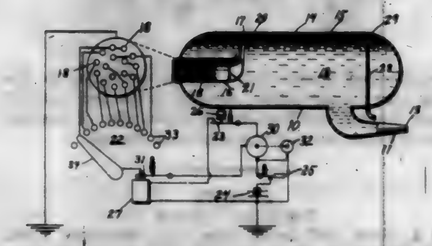
2,943,672
FOLDING CHAIR
John T. Hook, 887 Ocean View Ave., Monterey, Calif., and Richard G. Mack, Box 305, Dolores St. and Franciscan Way, Carmel, Calif.; said John T. Hook, assignor to Richard G. Mack
Filed Oct. 31, 1957, Ser. No. 693,778
1 Claim. (Cl. 155—139)



A lightweight collapsible chair comprising in combination a continuously formed tubular U-shaped seat frame, the closed portion of which forms the front of the seat, said frame ends being turned downwardly at an angle less than 90° to form the back legs of said chair having axes perpendicular to the supporting surface for said chair, a continuously formed tubular U-shaped back frame the closed portion of which forms the top of the back, said frame ends being pivotally mounted for independent movement on said seat frame above the horizontal center line thereof, said back frame also being bent rearwardly adjacent the top thereof, brackets secured to the seat frame adjacent the said back legs pivotally mounting the ends of said back frame with restricted movement of 90° forward toward the front of the seat to the collapsed position said brackets having a supported stop for said back frame in the operative position, releasable brace members associated with said back frame and said seat frame for additionally securing the chair in the open, functional position, a pair of separately pivotally mounted front leg supports, said legs each being bent rearwardly so that the axes of the lower portions thereof will be perpendicular to the supporting surface for said chair, said front leg supports being greater in height than the back supports to incline the seat rearwardly downward, brackets secured to the seat frame adjacent the front thereof pivotally mounting the said front leg supports below the horizontal center line of said seat, with restricted movement of 90° rearwardly to the collapsed position said brackets having a supported stop in the

operative position, and readily removable single cover means associated with and covering a substantial portion of said back frame and seat frame forming the back and seat for said chair.

2,943,673
FLAME THROWER
Clarence N. Hickman, Jackson Heights, N.Y., assignor to the United States of America as represented by the Secretary of War
Filed Mar. 27, 1945, Ser. No. 583,183
5 Claims. (Cl. 158—28)



1. In a pressure generating assembly for use in expelling fluid from a reservoir, the combination comprising a housing having an outlet adapted to be positioned in said reservoir, a plurality of rocket motors having outlet nozzles and being charged with combustible powder within said housing, an igniter adapted to be energized by an electric current for each of said powder units, and an electric circuit system for progressively firing each of said igniters by passing an electric current through said igniters and including a circuit breaker adapted to be opened and closed by changes in pressure in said reservoir.

2,943,674
BURNER STRUCTURE FOR HIGH TEMPERATURE GAS GENERATORS
Harold A. Birkness, Pryor N. Randall, and Lawrence T. Wright, Homewood, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Oct. 2, 1956, Ser. No. 613,562
2 Claims. (Cl. 158—109)



2. A gas generator burner assembly for effecting partial combustion of a hydrocarbon gas such as methane with oxygen at temperatures above 2500° F. for the production of a carbon monoxide-hydrogen gas mixture, which burner assembly comprises a methane plenum chamber, a plurality of methane discharge tubes communicating with said plenum chamber and extending upwardly therefrom at spaced intervals, a vertical tubular water jacket surrounding and slightly spaced from each methane tube and extending slightly beyond the discharge end thereof without being in physical contact with any part thereof, a horizontal water jacket communicating with the upper end of the vertical tubular water jacket, a first water plenum chamber, a second water plenum chamber, connections for flowing a stream of water rapidly in series from one water plenum chamber to the other through the horizontal and vertical water jackets, an oxygen plenum chamber, an annular oxygen distributor surrounding each tubular water jacket and below the corresponding horizontal water jacket conduits extending from said oxygen plenum chamber to said annular oxygen distributor, and a group of oxygen nozzles extending from each oxygen distributor in heat exchange relationship with water in the horizontal water jacket for directing oxygen streams against the methane stream discharged from each methane discharge tube.

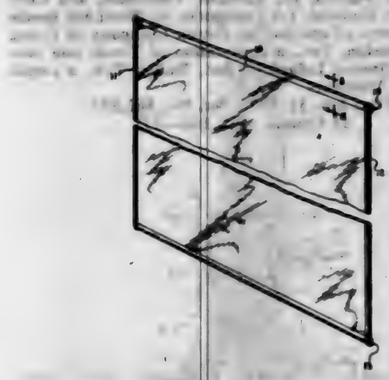
2,943,675
DOOR
Ralph E. Ford, Harper Woods, Mich., assignor to William A. Turner
Filed Aug. 5, 1957, Ser. No. 676,975
4 Claims. (Cl. 160—236)



1. In a folding door construction, a pair of door panels hinged together along an axis, means on the outer edge of one of the door panels providing a pivot for the pair of door panels, means on the other door panel providing a guide pin, track means providing a channel to receive and guide said guide pin, said panels being actuable into a closed position flush with each other, said hinge axis being offset from a straight line between said pivot and said guide pin and movable thereover in the closing movements of the door panels, and a compressible rubber element engageable by said guide pin in the closing movements of the door panels to exert a reaction against the panels yieldably resisting the movement of said hinge axis over said line and retaining it in an overcenter position with respect thereto, said compressible rubber element comprising a rubber block fitted in said track channel and held in position solely by frictional engagement with said track.

2,943,676
PLASTIC WINDOW COVERING AND METHOD OF MAKING THE SAME
Dominic A. Grenci, Canandaigua, N.Y., assignor, by mesne assignments, to National Distillers and Chemical Corporation, a corporation of Virginia
Filed July 11, 1957, Ser. No. 671,241
4 Claims. (Cl. 160—368)

3. The method of covering a rectangular opening with the sheet of thermoplastic embodying a bead of such thermoplastic along one edge, said bead being a continuation of said sheet and having substantially greater thickness than said sheet and embodying on the opposite edge of said sheet, parallel to said bead, a pair of parallel, coextensive beads of said thermoplastic which comprises severing the outer bead of the pair of parallel, coextensive beads, cutting the severed bead into two lengths approximately the width of the opening to be covered, wrapping a portion of each of the non-beaded ends of said sheet around a length of said severed bead and affixing the sheet to edges of the opening to be covered by



driving fastening means through the beads along the four sides of said sheet.

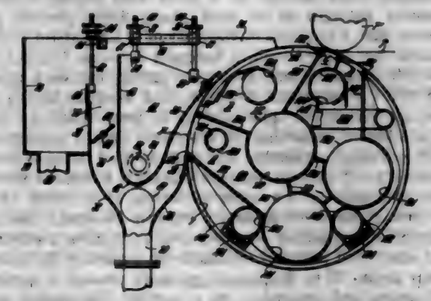
2,943,677
PAPER MAKING AND THE LIKE MACHINES
Francis William Joseph Leek, 167 Wavendene Ave., Thorpe Lea, Egham, Surrey, England
Filed Mar. 3, 1958, Ser. No. 718,808
Claims priority, application Great Britain Mar. 6, 1957
20 Claims. (Cl. 162—319)



1. A paper making machine comprising a vat for containing stock, means for feeding stock to said vat, a plurality of horizontal tubes extending longitudinally into said vat and secured to said vat, a substantially tubular horizontal framework arranged in said vat surrounding said tubes and extending into said stock, said framework including a pair of spaced end plates non rotatably supported by said tubes forming the ends of said framework and a plurality of parallel freely rotatable rollers supported at peripherally spaced locations on said end plates and extending longitudinally between said end plates, a continuous paper-forming wire band extending around said framework adapted to be guided through the stock in said vat, means adapted to move said band over said rollers, and means adapted to apply suction through at least one of said tubes to a part of the interior of said framework whereby liquid is removed from the stock collected on said band.

2,943,678
PAPER MAKING APPARATUS
Paul A. Fasoli, Hudson Falls, N.Y., assignor to The Sandy Hill Iron & Brass Works, Hudson Falls, N.Y., a corporation
Filed May 17, 1957, Ser. No. 659,947
4 Claims. (Cl. 162—321)

1. In paper making apparatus having transversely spaced open ended opposite end frames supporting an open ended elongated tubular cylinder having a foraminous surface for rotation on a horizontal axis and a pond chamber having an outlet onto the upper quadrant of the ascending side of the cylinder, the improvement in unitary dewatering means for dewatering a web of paper making stock formed on the surface of the cylinder comprising, a pair of opposite end plates, mounting means mounting said end plates relative to the end frames and in the open ends of the cylinder, said end plates being held in transversely spaced relation by a plurality of separate elongated water and air tubes extending longitudinally through the cylinder and having opposite ends thereof secured to said plates in openings provided through said plates, each said tube provided with a longitudinally extending inlet opening in a side thereof, first wall members extending between and connected at opposite ends to said end plates and extending outwardly from certain sides of the openings of the water tubes to



the inner side of the surface of the cylinder, second wall members extending between and connected at opposite ends to said end plates and extending from other sides of the openings of certain water tubes to an adjacent water tube, said first and second wall members arranged in conjunction with said water tubes to form a plurality of separate compartments each having a water tube and an air tube extending therealong with the openings thereof in communication therewith and providing side by side openings into said compartments adjacent the inner side of the surface of the cylinder, said mounting means arranged for movements of said dewatering means in opposite directions circumferentially relative to the axis of rotation of the cylinder to adjusted positions.

2,943,679
WELL-SERVICING COMPOSITIONS AND METHODS
Plathe P. Scott, Jr., Tulsa, Okla., and Alfred O. Fischer, Alice, Tex., assignors to Pan American Petroleum Corporation, a corporation of Delaware
No Drawing. Filed July 15, 1955, Ser. No. 522,364
12 Claims. (Cl. 166—31)

7. A method of servicing a well comprising circulating in said well a composition comprising a slurry and from about 2 to 60 pounds of an additive per barrel of said slurry, said slurry being of the class consisting of aqueous drilling fluids, non-aqueous drilling fluids and Portland cement slurries, and said additive consisting essentially of granular particles of a water-resistant, oil-resistant material having a compressive strength of at least about 5,000 pounds per square inch, a modulus of elasticity of at least about 10,000 pounds per square inch, a hardness between about 2 and 5 on the Mohs scale, a specific gravity between about 0.8 and 2.0 compared to water, and a melting point of at least about 120° F., said particles having an average Krumbein sphericity of at least about 0.4, and said additive consisting of from about 20 to 90 percent particles passing a number 30 screen and retainable on a number 40 screen, from about 10 to 80 percent particles passing a number 40 screen, and retainable on a number 100 screen, and not more than about 10 percent particles passing a number 100 screen, all percentages being by weight.

2,943,680
HARD PLANT SEEDS IN WELL-SERVICING COMPOSITIONS AND METHODS
Platho P. Scott, Jr., Tulsa, Okla., and Alfred O. Fischer, Alice, Tex., assignors to Pan American Petroleum Corporation, a corporation of Delaware
No Drawing. Filed July 15, 1955, Ser. No. 522,365
29 Claims. (Cl. 166—21)

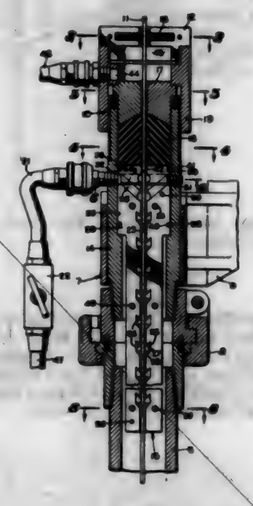
8. A well-servicing composition comprising a slurry, and from about 2 to 60 pounds of an additive per barrel of said slurry, said slurry being of the class consisting of aqueous drilling fluids, non-aqueous drilling fluids and Portland cement slurries, and said additive consisting essentially of granular particles of a water-resistant, oil-resistant, hard portion of a plant seed having a compressive strength of at least about 5,000 pounds per square inch, a modulus of elasticity of at least about 10,000 pounds per square inch, a hardness between 2 and 5 on the Mohs' scale, and a specific gravity between about 0.8 and 2.0 compared to water, said particles having an average Krumbein sphericity of at least about 0.4 and said additive consisting of not more than 1 percent of said particles retainable on a number 4 screen, from about 0 to 75 percent particles passing a number 4 screen and retainable on a number 10 screen, from about 15 to 90 percent particles passing a number 10 screen and retainable on a number 40 screen and containing a substantial amount of particles retainable on a number 30 screen, from about 10 to 80 percent particles passing a number 40 screen and retainable on a number 100 screen, and not more than about 10 percent particles passing a number 100 screen, all percentages being by weight.

2,943,681
FRACTURING USING CALCIUM CARBIDE
Michael W. Barrett, 544 W. College, Seminole, Okla.
Filed Apr. 29, 1957, Ser. No. 655,629
4 Claims. (Cl. 166—38)



1. In a method of fracturing a well, the steps of:
(*a*) Setting packers above and below the zone of the well to be fractured,
(*b*) Extending a tubing from the top of the well downwardly through the upper packer into said zone,
(*c*) Pumping calcium carbide in a liquid hydrocarbon carrier through said tubing into said zone,
(*d*) Pumping water through said tubing into said zone to react with the calcium carbide, said calcium carbide and water being sufficient in amounts to generate a force in the carrier of a magnitude to fracture the strata around said zone, and
(*e*) Closing off said tubing against the escape of fluids upwardly through the well during said reaction.

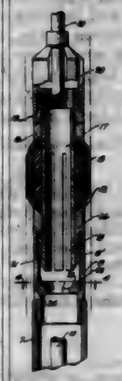
2,943,682
WIRELINE CONTROL HEAD
William H. Ingram, Jr., Caracas, Venezuela, and Cecil B. Greer, Houston, Tex., assignors, by direct and mesne assignments, of one-half to Bowen Company of Texas, Inc., Houston, Tex., a corporation of Texas, and one-half to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Jan. 31, 1956, Ser. No. 562,551
15 Claims. (Cl. 166—77)



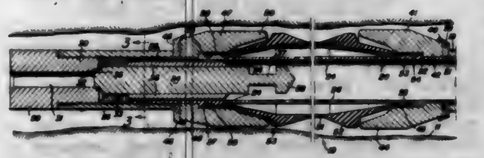
12. A control device for use with an elongated element that is to be inserted into or removed from a zone of higher fluid pressure, comprising: a housing formed with a longitudinal passage therethrough, adapted to be connected at one end to said zone, said elongated element being thereby adapted to extend through said passage into said zone; a rigid flow member longitudinally disposed in said passage and having an elongated, longitudinally extending bore formed therethrough having an inside diameter adapted to make a close but substantially frictionless fit around such elongated element, said fit and the length of said bore being such as to permit a restricted, limited flow of fluid therethrough past said elongated element from said zone when said elongated element is in said bore and said housing is connected to said zone; and fluid discharge passage means communicating laterally with the portion of said bore remote from said zone for connection with a region normally of lower pressure than said zone.

2,943,683
TOP SEAL FOR BOTTOM LOCK PUMPS
Nick R. Dirksen, 10811 Norlain Ave., Downey, Calif.
Filed May 31, 1957, Ser. No. 662,622
5 Claims. (Cl. 166—106)

1. A top seal for reciprocating pumps having a barrel, said top seal being positioned at the upper end of said barrel, said top seal consisting of a tubular coupling, means securing the coupling to the upper end of said barrel, a lower seat, means securing the lower seat to said coupling, an upper seat spaced from the lower seat, a compressible seal arranged between said seats and resting thereon, a tubular latch slidably extending through said seats and seal, spring fingers on said latch and compressing means within said coupling engageable by the spring fingers in the lowered position of the latch, said spring fingers being disengaged from the compressing means in the raised position of the latch.



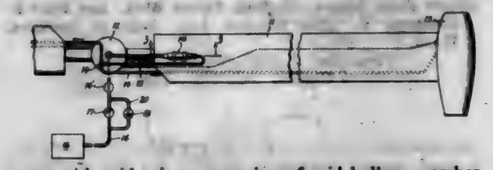
2,943,684
SELECTIVE HYDROFRACTING APPARATUS
Ramsey Smith, 6509 N. Lamar, Austin, Tex.
Filed Feb. 13, 1958, Ser. No. 715,116
2 Claims. (Cl. 166—187)



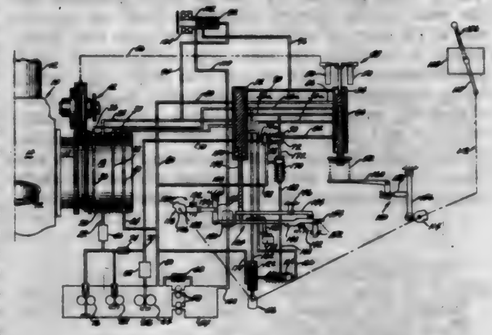
1. A selective hydrofracting structure comprising a tube, two pairs of annular flanges integrally formed adjacent each end of said tube and extending radially outwardly therefrom, the members of each pair being spaced axially of the tube to form an annular recess, said tube being perforated between said pairs of flanges, an elongated flexible tubular member encompassing said tube, inwardly projecting annular beads formed on opposite ends of said member engaging respectively between the flanges at each end of said tube, said annular recess being adopted for the reception of a bead, a flexible resilient internally conical packer cup slidably mounted on said tube at each end thereon, each of said cups having a bore, a pair of generaly circular packer cup seat boxes engaged over opposite ends of said tube in contact with the opposite ends of said packer cups, and a jam sleeve threaded on each end of said tube engaging said seat boxes securing said seat boxes thereon in engagement with said packer cups to clamp said packer cups in member securing position, the outermost diameter of the outermost flange of each pair and the outer diameter of the elongated tubular member when in engagement with the innermost flange of each pair forming a close fit with the bore of each cup when the cup is positioned thereover.

2,943,685
FUEL SUPPLY CONTROL FOR ROTARY WING AIRCRAFT
Elbert R. Sargent, Menlo Park, and Harold H. Sigler, San Carlos, Calif., assignors to Hiller Aircraft Corporation, Palo Alto, Calif., a corporation of California
Filed Feb. 21, 1956, Ser. No. 566,812
7 Claims. (Cl. 170—135.4)

1. In combination with a helicopter blade mounted for rotation, a jet engine mounted on the blade for driving thereof, a fuel supply conduit for supplying fuel to said engine, and a governor mounted in said conduit and rotating with said blade for controlling automatically the supply of fuel to said engine in response to variations in centrifugal force whereby the need for manual fuel control is precluded, said governor comprising a housing through which fuel is adapted to flow, a hollow member within said housing having a primary opening through which fuel flowing through said housing is adapted to flow, a spring loaded valve member slidably mounted in said housing in contact with said hollow member and in alignment with said primary opening of said hollow member, said valve member being slidably responsive to centrifugal force and being movable under urge of such force to effect restriction of fuel flow through said primary opening, and a relatively smaller auxiliary opening in said hollow member spaced from said primary opening for permitting fuel flow through said housing to said engine when said primary opening is closed by said valve member whereby operation of said engine may be maintained continuous under substantially all conditions during flight.



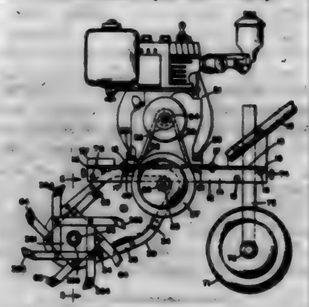
2,943,686
HYDRAULIC CONTROL SYSTEM FOR AN AERONAUTICAL PROPELLER
Edward A. Lulz, Springfield, Mass., and Marshall B. Thornton, Granby, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 18, 1956, Ser. No. 629,099
7 Claims. (Cl. 170—135.72)



1. A control system for an aeronautical propeller having hydraulic pitch changing mechanism and comprising, a feathering valve and a control valve connected with the pitch changing mechanism and connected with a source of hydraulic fluid under pressure, the feathering valve being selectively movable to open position whereby to supply fluid to the pitch changing mechanism for propeller feathering and the control valve being selectively movable to open position whereby to supply fluid to the pitch changing mechanism for propeller reversing, a three position motion transmitting means engaging the feathering valve and movable between a first and a second position without opening the feathering valve and movable from its second to a third position to open the feathering valve, a plunger engageable with said motion transmitting means in its second position only to move it to its said third position, actuating means engaging said control valve and operable to open the control valve, and

manual operating means for said actuating means including positioning means engaging said motion transmitting means and adapted to place the motion transmitting means in its first position while said control valve is open for propeller reversing.

2,943,687
REVERSIBLE EARTH WORKING TILLER
Albert Berle Merry, N. 5608 Forest Blvd., and Paul F. Hastings, E. 1206 Gordon Ave., both of Spokane, Wash.
Filed May 2, 1957, Ser. No. 656,687
6 Claims. (Cl. 172—125)



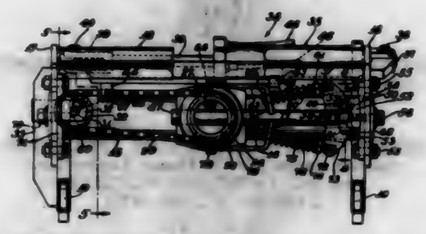
1. In earth working apparatus, a transmission case, two coaxial driven stub shafts rotatably supported one on each side of said case and accessible exteriorly of the case, a pair of rotatable earth working implements each performing one type of earth working operation when rotated in one direction and another type of earth working operation when rotated in the opposite direction, hubs on said implements having axially extending sockets receiving said stub shafts, one of said sockets opening outwardly from one end of one of said implements and the other socket opening outwardly from the opposite end of the other of said implements to cause both implements to perform the same type of operation when simultaneously attached to said stub shafts, said sockets being applicable to either of said stub shafts to interchangeably support said implements on said rotatable members and cause said implements to perform either of said earth working operations, each of said hubs having a T-shaped slot therein, and each of said stub shafts having a pin received in the slot of either of said hubs.

2,943,688
REVERSIBLE PLOW AND GAUGE WHEELS
Robert E. Cox, Moline, and James F. Sullivan, East Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,566
11 Claims. (Cl. 172—212)



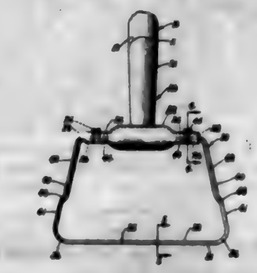
1. In a tractor mounted two-way plow, a plow frame adapted to be raised, reversed and lowered, a pair of gauge wheels carried by said frame and reversed when said frame is reversed, a pair of arms separately pivoted to said plow frame and carrying said gauge wheels, said arms lying in a common plane, and stop means acting between said arms to prevent one gauge wheel from coming into engagement with the other, said stop means comprising a pair of mutually engageable abutments, one fixed to the adjacent edge of each arm.

2,943,689
LATCH MEANS FOR TWO-WAY PLOW
James Morlock, Des Plaines, Arthur G. Evans, Canton, and Elden A. Hardee, Fairview, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 12, 1958, Ser. No. 780,118
7 Claims. (Cl. 172—227)



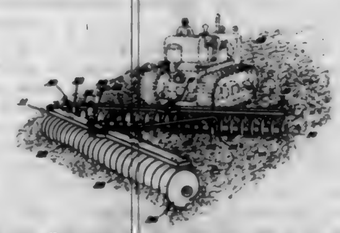
1. In a two-way plow including a relatively stationary frame having a central longitudinally extending beam portion and a plow carrier mounted on said beam and having right and left-hand plow bottoms thereon alternately movable into operating position by rotation of the plow carrier, power means operatively connected to the carrier for rotating the latter and latching means affixed to the carrier including a member movable with respect to the carrier, and a stop on the relatively stationary frame engageable with said movable member to hold the carrier against rotation, said member being yieldable to the pressure thereof against said stop upon rotation of the carrier to a position out of engagement with said stop.

2,943,690
PENDULUM CULTIVATING TOOL
Donald G. Towt, 1601 19th St., Kingsburg, Calif.
Filed Dec. 13, 1957, Ser. No. 702,656
1 Claim. (Cl. 172—376)



A pendulum action cultivating tool comprising an elongated handle having a lower end; a blade mounting member including an elongated sleeve having opposite end portions of substantially rectangular cross section providing substantially parallel spaced upper and lower walls and being transversely mounted on the lower end of the handle, the end portions of the sleeve constituting sockets laterally disposed from the handle; a substantially U-shaped blade having a pair of opposed side portions, a longitudinally substantially straight lower earth working central portion interconnecting the side portions, and male ends individually angularly extended from the side portions inwardly toward each other in spaced substantially parallel relation to the central portion, the male ends being releasably individually loosely fitted in the sockets of the sleeve and having lower convex surfaces constituting longitudinal segments of a cylinder rollably engaging the lower wall of the sleeve for oscillating movement of the blade relative to the handle, said male ends also having openings therein located within the sockets; and bolts extended between the upper and lower walls at opposite end portions of the sleeves and loosely extended through the openings in the male ends for releasably holding said male ends in the sockets and for accommodating said rollable movement, the distance between the openings in the male ends of the blade and the side portions respectively adjacent to their male end portions being greater than the distance between said bolts and their respective adjacent ends of the sleeve whereby the side portions of the blade are maintained in spaced relation to the opposite end portions of the sleeve.

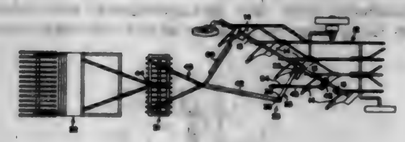
2,943,691
DISK HARROW AND CONTROL MEANS
Richard W. Kramer, Modesto, Calif., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 7, 1957, Ser. No. 695,101
9 Claims. (Cl. 172—572)



1. In an offset disk harrow having front and rear disk gangs pivotally connected at their inner ends for horizontal swinging from a parallel transport to a relatively angled operation position, wherein the action of the soil on the disks of said front and rear gangs imposes twisting stresses between the gangs tending to force the outer end of the front gang down and the outer end of the rear gang up, means connecting the outer ends of said gangs including a horizontal torsion bar having means serving as spindles at its ends extending at right angles thereto, one of said spindles being angularly displaced relative to the other, means serving as parallel vertical bearings carried by said gangs to rotatably receive said spindles and adapted to bias said spindles toward a parallel relation, the torsional stress thereby imposed on said bar exerting a force to oppose the said action of the soil on said gangs.

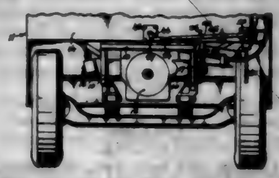
2,943,692
HITCH DEVICES—BACK-UP HITCH FOR PLOW
William A. Hyland and Arnold E. Welck, Horicon, Wis., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Dec. 26, 1957, Ser. No. 704,630
1 Claim. (Cl. 172—657)

In a plow and trailing implement, wherein the plow is of the type having a plurality of plow bottoms, each provided with a safety trip standard adapted to swing rearwardly under overload conditions, the combination therewith of a hitch connecting the implement with said plow, said hitch comprising a transverse arm pivotally connected adjacent one end with the plow, rigid link means connected at its forward end with said plow, draft transmitting means connecting the rear portion of said link means with said transverse arm, said draft transmitting means including means accommodating permissive forward swinging of said transverse arm relative to said link means, and



transport lock means comprising a member releasably attachable to said link means and shiftable thereon from a position immediately forward of said transverse arm so as to prevent forward swinging of the latter relative to said link means to a position forwardly toward the forward end of said link means so as to accommodate the aforesaid permissive forward swinging.

2,943,693
LATCHING MECHANISM FOR TILTING CAB VEHICLE
Robert C. Norris, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington
Filed Mar. 11, 1958, Ser. No. 720,627
3 Claims. (Cl. 180—89)



2. A tilting-cab vehicle comprising a vehicle main frame, a cab pivoted thereto for forward tilting movement, two hold-down connections each comprising a latch and a complementing catch with one complement of each connection carried by the cab and the other complement carried by the frame, both of said latches being hook latches vertically disposed and one being a safety latch mounted for simple swing action and the other being a locking latch mounted for compound swing and lift action, a spring yieldingly urging the safety latch into hooking engagement with its catch, and a manually operable means for moving the locking latch into and out of engagement with its catch and acting automatically to disengage the safety latch against the yielding force of said spring simultaneously with the disengagement of the locking latch, said manually operable means including a rod movable in a direction generally endwise to its axis, the safety latch being formed as a lever fulcrumed intermediate its ends with the hooking element formed at the free end of one lever arm and having the other lever arm engaged by a pin carried by said rod.

2,943,694
METHOD AND APPARATUS FOR EXPLORING BOREHOLES
Clark Goodman, Boston, Mass., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed May 17, 1954, Ser. No. 430,136
7 Claims. (Cl. 181—.5)

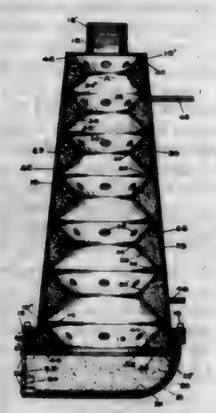
7. Apparatus for exploring earth formations traversed by a borehole, comprising a first acoustic transducer for

developing acoustic signals at a first location in a borehole, means coupled to said first transducer for actuating said first transducer to develop an acoustic signal of a given reference frequency and phase in the earth formations adjacent thereto, a second acoustic transducer for detecting acoustic signals transmitted through the earth formations and being disposed at a second location spaced longitudinally from said first transducer, said acoustic signals being comprised of shear energy and compressional



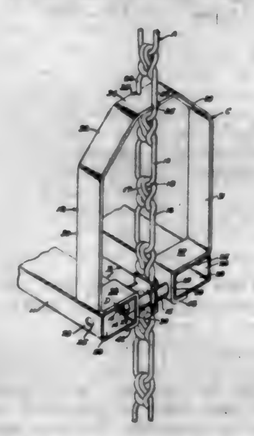
wave energy, means for spacing said transducers at a given distance from one another, said given distance being such that a phase difference of 90° exists between the signals due to shear wave energy and compressional wave energy, and means coupled to said first and second transducer means including means responsive to a selected difference in phase between the signal developed at the first location and the signal detected at the second location to provide indications of the presence of a crack or fissure located between said first and second locations.

2,943,695
SILENCER
Joseph Jeffords, 700 Park Ave., Baltimore, Md.
Filed Oct. 23, 1957, Ser. No. 691,863
3 Claims. (Cl. 181—56)



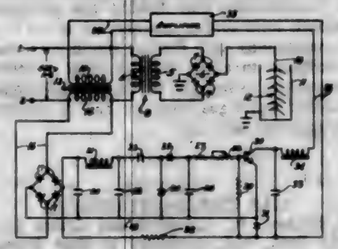
1. A silencer for absorbing and dissipating the sound of high pressure exhaust gases from fluid actuated apparatus comprising, means for attaching the silencer to the said apparatus, the silencer having an outer elongated rigid continuous side wall and a gas inlet opening at one end for receiving the high pressure gases and a gas outlet opening in the opposite end of the housing from which the gases are exhausted from the silencer under low pressure to the atmosphere, the housing being of smaller diameter at the end of the housing adjacent the gas inlet opening and of larger diameter at the end adjacent the gas outlet opening, the housing increasing progressively in diameter from the end adjacent the inlet opening to the end adjacent the outlet opening for gradually increasing the cubic area of the housing to provide space for the expanding gases as their pressure is lowered, an elongated separate insertable disposable inner element of substantially the same length and adjacent the inside surface of the housing and form-fitting with respect to said housing surface, said insertable element having a continuous bellows shaped side wall in which half of the inner surfaces of the bellows wall are angled toward the gas inlet and the other half are angled toward the gas outlet providing a plurality of communicating sound receptacle therein, the diameter of the bellows insert increasing in diameter from the gas intake end of the silencer to the gas outlet end thereof, a resilient cushion surrounding the bellows wall element and means removably engageable with the exhaust end of the silencer housing for retaining the same within the housing.

2,943,696
PILOT'S LADDER AND THE LIKE
George G. Roberts, 4152 Jefferson St., Redwood City, Calif.
Filed Jan. 31, 1957, Ser. No. 637,536
8 Claims. (Cl. 182—196)



1. A pilot's ladder or the like including in combination a pair of lock-link chain stiles, each link having a bar portion at one end pivoted in a locking loop of the succeeding link; a plurality of stirrups secured to each stile, each stirrup having a pair of parallel vertical side portions, an upper end portion joining said vertical portions at the top and provided with a pair of slots in opposite edges engaging side members of a chain link, a pair of base portions extending in toward each other from the lower ends of the vertical portions, a pair of vertically depending portions extending down from the inner ends of said base portions, and a pair of outwardly-turned flanges extending out from the lower end of said depending portions; a series of pairs of narrow tread members supported at opposite ends by said stirrups, each nested in the three-sided support provided by said base portions, said depending portions, and said outwardly-turned flanges; clip means each secured to a chain link and having a bolt opening therethrough and spacing arms bearing against said depending portions; and bolts each extending through one end of a pair of said tread members, both said depending portions, a said clip means, and a link of said chain.

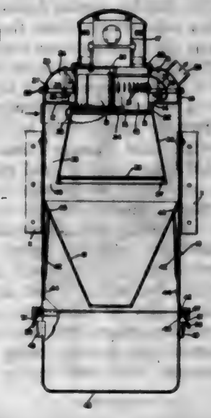
2,943,697
AUTOMATIC FIELD STRENGTH CONTROL FOR PRECIPITATORS
Larry L. Little, Los Angeles, Calif., assignor, by mesne assignments, to Joy Manufacturing Company, a corporation of Pennsylvania
Filed July 22, 1957, Ser. No. 673,528
14 Claims. (Cl. 183—7)



14. An automatic field strength control device for use in combination with an electrical precipitator wherein an electrical field is maintained between opposing electrodes by means of an A.-C. power source connected through a transformer and rectifier to said opposing electrodes, said control device comprising: a saturable reactor having a control winding and a load winding, said load winding being connected in series with the primary winding of said transformer; a filter-integrator circuit responsive to changes in the current flowing in said load winding to said transformer primary, said filter-integrator circuit producing a continuous D.-C. output signal corresponding to the integral of transient changes in the current flowing through said load winding; and an amplifier with input terminals connected to the output terminals of said filter-integrator circuit, and with output terminals connected to the control winding of said saturable reactor; said filter-integrator circuit comprising a rectifier having input terminals that are the input terminals of said filter-integrator circuit and output terminals, of which one is common, that are connected to a first filter circuit, said first filter circuit adapted to block the frequency of said A.-C. power source; a D.-C. blocking capacitor connected to the non-common output terminal of said first filter circuit; an integrating circuit with input terminals connected between the output terminal of said D.-C. blocking capacitor and the common terminal of said first filter circuit; a second filter circuit connected between the output terminals of said integrating circuit, said second filter circuit adapted to block the frequency of said A.-C. power source; and the output terminals of said second filter circuit comprising the output terminals of said filter-integrator circuit; whereby the field strength between said opposing electrodes is continuously maintained at some value related to the average spark current flowing between said opposing electrodes independent of the total corona current flowing between said opposing electrodes.

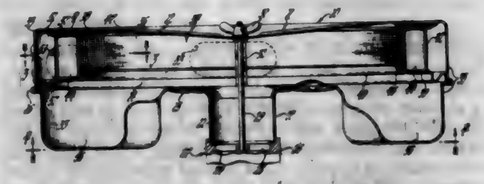
2,943,698
CYCLONE-TYPE SEPARATOR
Harold P. Bishop, 510 W. Broad St., Louisville, Ohio
Filed Mar. 10, 1958, Ser. No. 720,145
2 Claims. (Cl. 183—37)

1. A cyclone-type separator comprising a vertical cylindrical casing, an annular support plate in the upper end of the casing, a downwardly offset annular support flange depending from the inner perimeter of the annular support plate, a suction fan mounted upon said annular support flange, said fan having an inlet opening at its lower side and having peripheral outlets, a dome connected to the top of the cylindrical casing and enclosing the fan, an exhaust outlet on the dome, a downwardly flared cyclone tube spaced inwardly from the cylindrical casing and connected at its upper end to said annular support flange, the open upper end of the cyclone tube communicating directly with the inlet opening of the fan, said cyclone tube and the adjacent portion of said cylindrical casing forming therebetween a downwardly tapered tubu-



lar air passage with a restricted lower end, a downwardly tapered hollow cone within the cylindrical casing and connected at its upper end to the inner walls of the casing directly below said cyclone tube, a dust collector directly below said hollow cone, and a tangentially located air inlet in the upper end of said tubular air passage.

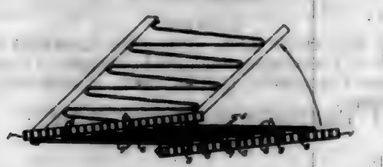
2,943,699
AIR CLEANER AND SILENCER ASSEMBLY
William F. Thornburgh, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 13, 1957, Ser. No. 639,960
1 Claim. (Cl. 183—71)



A cleaner silencer assembly for internal combustion engines and the like and comprising, a casing having an upper wall and a lower wall and an intermediate wall, said walls being spaced to provide an air distribution and acoustical capacitance chamber therein, said walls at the outer edges embracing laterally extending side walls having flanges forming a seam securing said walls together, said intermediate wall being formed to provide a centrally disposed opening and forming an annular shelf around and within said chamber, said lower wall being formed on opposite sides of said casing and beneath said intermediate wall to extend downwardly to provide oppositely disposed cavities enlarging and forming extensions within said lower wall of said air distribution and acoustical capacitance chambers, an annular filter element having end seals and being supported on one of said end seals on said annular shelf, said annular filter element being adjacent said side walls but spaced from said side walls to divide said chamber into an outer air inlet chamber and an inner air outlet chamber, a centrally disposed opening formed in said

upper wall and through which said annular filter element may be inserted into and removed from said air distribution and acoustical capacitance chamber, a cover engaging another end seal of said filter element and closing said opening, said another end seal also being disposed between said cover and said upper wall and forming a seal between said cover and said upper wall, air outlet and acoustical inlet passage means formed in said lower wall and extending downwardly from the central part of said lower wall and the space between said cavities in said lower wall and providing communication between said air distribution and acoustical capacitance chamber and the induction system of an internal combustion engine or the like, said space between said cavities and around said air outlet and acoustical inlet passage means providing an open recess in said lower wall of said casing, said open recess extending upwardly in radially inwardly spaced relation to said filter element and said intermediate wall and around said air outlet and acoustical inlet passage means, an air inlet and acoustical outlet and impedance passage means formed in another of said casing walls and providing communication between said air inlet chamber and the atmosphere, said air inlet and acoustical outlet and impedance passage means and said air distribution and acoustical capacitance chamber being tuned to attenuate sounds emanating from said engine or the like.

2,943,700
ZIGZAG FILTER BLANK AND METHOD OF MAKING A FILTER
Robert A. Bub, Penn Hills, Pa., assignor to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1959, Ser. No. 809,290
2 Claims. (Cl. 183—71)

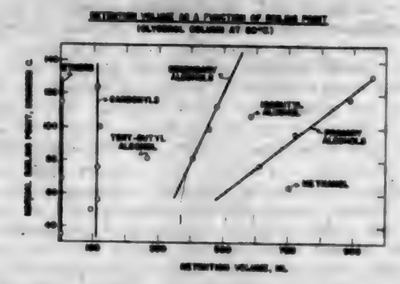


2 A filter blank comprising a filter strip folded back and forth upon itself and forming a stack of rectangular layers, alternate layers having the same length and arranged in stepped relation, the intermediate layers having a uniform but shorter length, grids inclined to said layers in parallel planes and extending across the ends of the layers, and fastening means extending across said strip alternately on opposite sides thereof at uniformly spaced intervals and securing it to said grids along parallel lines, said fastening means being located only on each long layer near its opposite ends, at least one of said fastening means on each long layer being spaced from the adjacent end of that layer, whereby the grids can be swung into parallel position opposite each other to spread said layers apart to form a zigzag filter element composed of sheets all having substantially the same length.

2,943,701
PROCESS FOR PURIFICATION OF GASEOUS FORMALDEHYDE
Dennis Light Funck, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 4, 1957, Ser. No. 650,571
17 Claims. (Cl. 183—115)

1. A process for the purification of gaseous formaldehyde, containing from 0.04% to 5% by weight of normally liquid impurities, which comprises forming a flowing liquid-gas interface by passing a stream of said impure gaseous formaldehyde into contact with a flowing surface of a liquid hemiformal solution containing initially from 8 to 73 mole percent of combined plus dissolved formaldehyde and from 92 to 27 mole percent of an alcohol chosen from the group consisting of primary and secondary alcohols containing 5 to 12 carbon atoms per molecule, said liquid hemiformal solution being in the form of a continuous film flowing over an inert continuous, smooth solid surface maintained at —15° to +20° C. and maintaining said flowing liquid-gas interface for a time sufficient to allow 60% to 98% of the normally liquid impurities originally in the formaldehyde gas to diffuse to the liquid-gas interface and to dissolve in the liquid hemiformal solution.

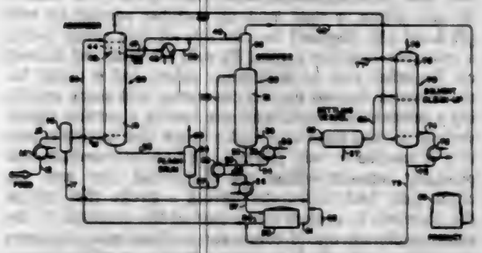
2,943,702
GAS CHROMATOGRAPHY
Boyd E. Hudson, Jr., Cranford, and Arthur E. Messner, Roselle Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed May 17, 1957, Ser. No. 659,786
8 Claims. (Cl. 183—115)



1. A method of separating oxygenated compounds from a mixture containing at least 2 volatile oxygenated organic compounds selected from the group consisting of ethers, carbonyls, primary, secondary and tertiary alcohols which comprises passing said mixture in a vapor phase with an inert carrier gas through a liquid partition zone containing a substrate comprising a film of a liquid non-volatile organic polyhydroxy compound, containing at least 1 hydroxyl group per 3 carbon atoms and having a molecular weight between 62 and 182, supported on a finely divided porous inert carrier at a temperature between the freezing point of the substrate and 150° C. at an inlet pressure of 0 to 50 p.s.i.g., whereby said substrate retains the individual oxygenated components of said mixture for different periods of time and whereby said components emerge sequentially in the following order: ethers, carbonyls, tertiary alcohols, secondary alcohols and primary alcohols.

2,943,703
ACETYLENE RECOVERY
David S. Thayer, Torrance, Calif., assignor to Shell Oil Company, a corporation of Delaware
Filed Dec. 3, 1957, Ser. No. 700,458
3 Claims. (Cl. 183—115)

1. In a process for the separation of acetylene from a gas mixture containing acetylene and trace amounts of higher acetylenes, the improvement which comprises contacting the gas mixture in an absorption zone with a substantially water free, high boiling liquid absorbent and dissolving therein the acetylene and higher acetylenes with the undissolved portion of the mixture leaving the zone as an off gas, said absorbent having a high solubility for the various acetylene compounds with its solubility being appreciably decreased with an increase in the amount of water present and said absorbent having a boiling temperature much in excess of the boiling temperatures of the acetylene and of water, releasing the acetylene from the absorbent by heating while retaining substantially all of the higher acetylenes in solution therewith, diluting at least a portion of the higher acetylenes rich absorbent with water to form a precipitate containing the higher acetylenes, separating the precipitate



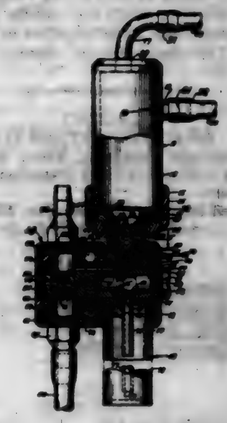
from the water diluted absorbent, stripping the absorbent with the off gas at an elevated temperature to remove the water therefrom to obtain a lean absorbent having a somewhat elevated temperature relative to that of the absorbent within the absorption zone, passing the lean absorbent into direct heat exchange relationship to the off gas, said off gas in said direct heat exchange having a relatively lower temperature than the lean absorbent, and thereafter recirculating the lean absorbent to the absorption zone.

2,943,704
DISCHARGE OF SOLIDS PRECIPITATED FROM CHLORINATION GASES
William Henry Coates, Holmedene, Eaglescliffe, Stockton-on-Tees, and John Hayden, Middlesbrough, England, assignors to British Titan Products Company Limited, a British company
Filed Nov. 23, 1956, Ser. No. 624,001
Claims priority, application Great Britain Nov. 28, 1955
6 Claims. (Cl. 183—119)



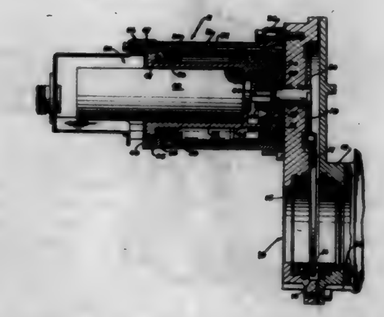
1. In a method of preparing a normally solid metal chloride by chlorination of a metal bearing material in a chlorination zone whereby to form the metal chloride in vapor state dispersed in the gases produced by the chlorination, the improvement which comprises condensing the metal chloride to solid state in a condensing zone to form a suspension of solids comprising solid metal chloride in the chlorination gases, precipitating the suspended solids from the suspension, forming a porous bed of said solids adjacent the condensing zone, conducting the solids precipitated from the suspension to one portion of the bed, passing inert gas through the bed so as to purge a major portion of said solids of chlorination gases while keeping the bed temperature high enough to prevent liquid condensation of gases in the bed, and withdrawing solids from another portion of bed which has been purged of chlorination gases.

2,943,705
LUBRICATING APPARATUS
Martin Stumpf, Des Plaines, Ill. (4439 W. Rice St., Chicago 51, Ill.)
Filed Aug. 25, 1953, Ser. No. 757,062
20 Claims. (Cl. 184—55)



1. A lubricating apparatus comprising a source of air under pressure, an atomizer body having an air inlet connected to said source, and having a lubricant mist outlet, in alignment with said inlet, said body having a longitudinal cylindrical bore at right angles to the axis of said inlet and outlet, a cylindrical metal plug secured in said longitudinal bore, said body having a transverse cylindrical bore communicating with said inlet and said outlet and located on the said axis, said plug having an end cylindrical portion in said transverse bore and provided with a Venturi insert comprising a plug having a radial conduit leading to an axial nozzle conduit discharging toward said outlet, said end cylindrical portion being cut away at its opposite sides to form a through conduit from inlet to outlet, and said Venturi insert plug having flattened sides providing restricted high speed conduits extending past said nozzle and providing a suction on said nozzle.

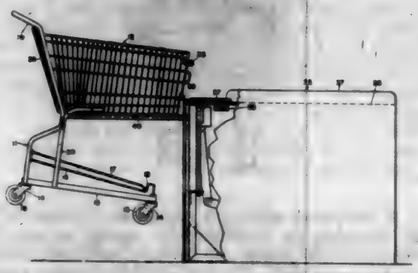
2,943,706
QUICK ACTING VALVE OPERATING MECHANISM
Carrel B. Morgan, Packanack Lake, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Feb. 10, 1956, Ser. No. 564,734
13 Claims. (Cl. 185—40)



1. Mechanism for operating a valve comprising a body, a shaft mounted in said body, means including spring

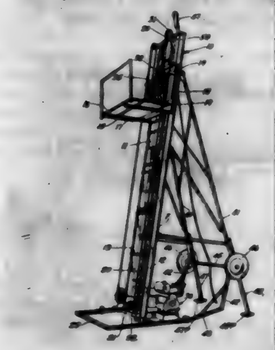
means for normally storing energy for rotating said shaft, means including a motor for loading said spring means, latch means mounted in said body for rendering said means for rotating said shaft ineffective, means for rendering said latch means ineffective and means responsive to the degree of loading of said spring means for rendering said motor ineffective when said spring means is loaded and for rendering, said motor effective to load said spring means when the stored energy therein is partially expended.

2,943,707
SHOPPING APPARATUS
George A. Ramlose, Hingham, Mass., assignor to H. L. Sides, doing business as Sides Manufacturing Company, Jackson, Mich.
Filed May 9, 1956, Ser. No. 583,414
4 Claims. (Cl. 186—1)



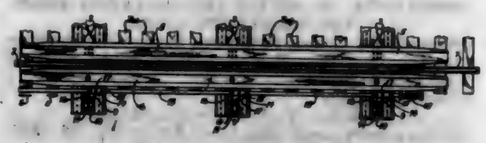
3. Apparatus for facilitating self service market shopping, said apparatus comprising: an article receiving counter; an elevating structure carried by and extending out of said counter; a wheeled chassis; a merchandise receptacle on said chassis adapted for engagement by said elevating structure; a discharge wall hingedly mounted on said receptacle; and a latch mechanism on said wall to maintain said wall in upright position to permit storage of merchandise in said receptacle and adapted, when unlatched, to release said wall to facilitate removal of merchandise from the receptacle.

2,943,708
HOISTING EQUIPMENT
Matthias F. Saagen, River Forest, Ill., assignor to Saagen Derrick Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 9, 1959, Ser. No. 792,154
2 Claims. (Cl. 187—85)



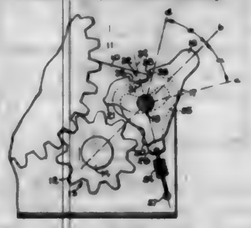
1. In hoisting apparatus of the kind described, means affording a frame adapted to be disposed in a substantially upright attitude, a platform mounted on the frame for up and down movement, said platform including a lift head, means to raise and lower said platform including a flexible lift element, a connector joined to said lift element to be lifted thereby, a coil spring having one end backed up by said lift head and having the other end thereof joined to said connector whereby lifting forces are imparted to said lift head by lost motion through said spring causing compression of the spring, a safety cable having an upper end anchored near the top of said frame and said cable extending downward toward the bottom of said frame, a rigid back-up member carried by said lift head and disposed on one side of said safety cable, a rotatable eccentric carried by said lift head and located on the other side of said safety cable, and a crank for the eccentric carried by said connector, said crank including a substantially horizontal arm having a portion rigidly secured to said connector and a crank link having a portion connected to said eccentric and an intermediate link pivotally interconnecting the horizontal arm and the crank link, and said crank having a stroke that rotates the eccentric to present a low part of the eccentric to the safety cable when said connector is effective to compress said spring and which presents a high part of the eccentric to the safety cable, pressing the safety cable against said back-up member, when said spring expands.

2,943,709
BAR-SHAPED CAR RETARDER OF THE DIRECT-CONTROL TYPE
Paul Schödo, Wuppertal-Barmen, Bogenstrasse 60, Germany
Filed Mar. 9, 1955, Ser. No. 493,200
Claims priority, application Germany Mar. 10, 1954
6 Claims. (Cl. 188—62)



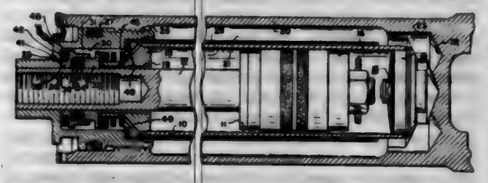
1. Apparatus for braking a railway wheel as it moves along a track rail, comprising movable supporting means arranged to be moved beneath said rail to braking and non-braking positions in a direction transverse to the longitudinal axis of the rail, a first brake shoe, a second brake shoe each extending parallel to the rail and disposed respectively on opposite sides thereof, said first brake shoe being fixedly attached to said supporting means, said second brake shoe being attached to said supporting means through first pivoted link means, means coacting with said supporting means to cause said first link means to pivot during the movement of said supporting means to braking position to cause said second brake shoe to move in two components of direction one of which is in said transverse direction and the other of which is inclined to said transverse direction whereby said second brake shoe is raised with respect to the rail and with respect to the first brake shoe during braking, actuating means extending substantially parallel to said rail and arranged to be moved in a direction which is substantially normal to said transverse direction, second pivoted link means interconnecting said actuating means with said supporting means and arranged to move said supporting means in said transverse direction, and roller means coupled to said second link means whereby movement of said actuating means in a direction substantially parallel to said rail causes said first and second link means to describe arcs in respectively normal directions to each other and thereby to move said supporting means in said transverse direction to bring said first brake shoe into braking contact with one side of the vehicle wheel riding on said rail wheel urging said second brake shoe into braking contact with the other side of the vehicle wheel but at a different level with respect to the first brake shoe.

2,943,710
REVERSIBLE RATCHET
Howard C. Lindmark, % Howard Engineering Inc., 1206 Kishwaukee St., Rockford, Ill.
Filed Mar. 27, 1959, Ser. No. 802,476
4 Claims. (Cl. 188—82.2)



1. A reversible ratchet having, in combination, a toothed pinion rotatable about a fixed axis, a fixed pin paralleling said axis and spaced outwardly from the periphery of said pinion, a pawl fulcrumed on said pin to swing back and forth in the plane of the pinion between two limit positions through an intermediate dead center position, laterally spaced teeth on said pawl facing toward the periphery of said pinion and both disposed out of engagement with the pinion teeth when said pawl is in said intermediate position, said teeth meshing with said pinion one in one of said limit positions and the other in the other limit position, a latch plate lying adjacent said pawl and having an elongated transverse slot therein receiving said pin, a tension spring attached to one end of said latch plate and urging the same endwise to hold one wall of said slot against said pin, a squared lug upstanding from the other end of said latch plate into the plane of said pawl, a square sided notch in said pawl substantially wider than said lug and receiving the latter, a second squared notch narrower and shallower than said first notch and formed in the bottom of the latter to receive said lug, and two V-shaped projections formed on said slot wall intermediate the ends thereof and laterally spaced along the latter for bearing of the tips thereof against said pin in said intermediate position of said pawl and with said lug seated in said notch under the action of said spring, one end wall of said second notch acting on said lug in the initial tipping of said pawl out of said intermediate position to shift said latch plate and carry one of said tips across and over-center relative to said pin and also to shift said lug laterally toward and against the end wall of said first notch.

2,943,711
ROD SEAL FOR SHOCK ABSORBER
Edwin F. Roesman, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,101
3 Claims. (Cl. 188—100)



1. In a shock absorber, a rod seal for the same, comprising in combination, a cylinder having a piston reciprocable therein, said piston being attached on one end of an actuating rod extending through one end of said cylinder, said cylinder having an end wall closing the rod end of said cylinder and providing a bearing support for said rod in which it is slidable, an end cap member on said rod end of said cylinder on the outboard side of said end wall cooperating with said end wall to provide an annular seal chamber around said rod on the outboard side of said end wall through which said rod extends, an annular seal body member within said chamber and on said rod, said body member having an annular recess radially adjacent said rod and forming with said rod a seal confining chamber, a seal structure positioned within said confining chamber and consisting of an annular ring of polytetrafluoroethylene held under compression within said chamber by an annular ring of elastic rubber-like material whereby to seal upon said rod, said body member having a radially disposed planar flange surface in spaced parallel relationship to a corresponding radially disposed annular planar face on said end cap, and an elastic rubber-like seal member between said flange surface and said face sealingly engaging both faces and providing for relative movement therebetween.

2,943,712
BRAKE LINING
Raymond Howard Curtiss, Trumbull, and Malcolm James Ford, Milford, Conn., assignors to Raybestos-Manhattan, Inc., Passaic, N.J., a corporation of New Jersey
Filed May 16, 1957, Ser. No. 659,631
6 Claims. (Cl. 188—234)



1. Brake lining adapted to be adhesively bonded under heat and pressure to a metallic brake shoe rim, comprising an arcuate strip of friction material, the concave surface thereof being formed with longitudinally extending grooves adjacent to but spaced from and not opening to the side edges of the strip, the outboard sides of said grooves and the edges of the lining defining longitudinally extending relatively narrow edge dam portions, and normally dry but heat flowable and hardenable adhesive disposed on the concave face of said strip only between said grooves.

2,943,713
BRAKE SHOES
Michael Salak, Spring Valley, N.Y., and Charles R. Keating, Jr., Emerson, and Rosser L. Wilson, Mahwah, N.J., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Feb. 26, 1957, Ser. No. 642,446
3 Claims. (Cl. 188—251)

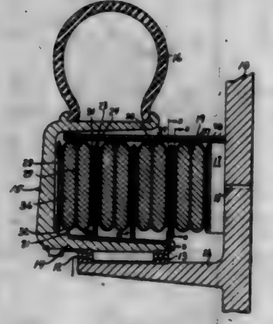
1. A brake unit for engaging a radial surface of a brake rotor in frictional braking contact comprising: a brake head of substantially arcuate configuration adapted to be supported with one face thereof in juxtaposition to the radial surface of a brake rotor, said one face of the brake head having a plurality of individual recesses of substantially uniform depth formed therein; a corresponding plurality of resilient pads individually disposed in the brake head recesses, each pad having a height greater than the depth of said recesses; a sheet metal carrier member of arcuate configuration substantially corresponding to the

configuration of said brake head face; a plurality of friction elements engaged by said carrier member and maintained thereby in effective shock-absorbing contact with respective ones of said resilient pads; a series of studs affixed to the brake head and extending from said one face thereof through a corresponding series of apertures in said carrier member, each of the studs having a slot therein located above the plane of the exposed surfaces of said



resilient pads; and means comprising a pair of elongated unitary arcuate sheet metal strips each extending across a major portion of one arcuate edge of said carrier member and including a plurality of integral retaining elements, said retaining elements each including at least one segment engageable in the slot of one of said studs, for retaining said carrier member in predetermined position upon said brake head.

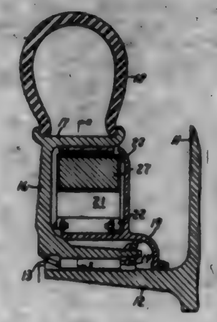
2,943,714
HEAT ABSORBING UNIT USING SOLID MATERIAL OF HIGH SPECIFIC HEAT
Clare Aaron Aldrich and James P. Jacob, Dayton, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed May 31, 1956, Ser. No. 588,326
6 Claims. (Cl. 188—264)



1. A heat absorbing frictional unit comprising an expansible container, and a normally solid heat absorbing material within said container filling said container when in a liquid state, said material changing from a solid to a liquid state in response to absorption of heat, said unit sustaining and transmitting pressures applied thereto in a substantially incompressible manner in either the liquid or solid state of said material.

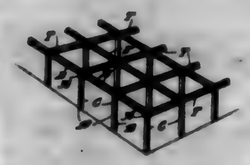
2,943,715
CAPACITANCE SYSTEM OF HEAT TRANSFER
Clare Aaron Aldrich and James P. Jacob, Dayton, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed May 31, 1956, Ser. No. 588,327
7 Claims. (Cl. 188—264)

7. A heat generating assembly wherein relatively movable elements are pressed frictionally together; characterized in that at least one of said elements comprises a thin shell of a first metal and a solid filler metal within said shell and lightly encased thereby, the combination of said shell and said filler metal defining a unit relatively



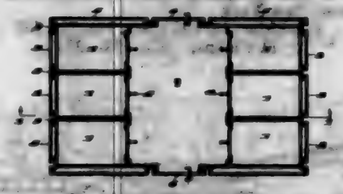
rigid to sustain and to transfer applied pressures, said filler metal having the properties of high conductance, high specific heat and high melting point, the unit comprising said filler metal performing an operational function while said filler metal absorbs created heat.

2,943,716
BUILDING CONSTRUCTION
Henry Nash Babcock, 8 Middle Way, Old Greenwich, Conn.
Filed Dec. 9, 1955, Ser. No. 552,607
2 Claims. (Cl. 189—1)



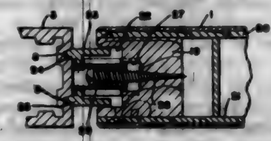
1. In a building construction, a plurality of load bearing and structurally continuous beams, supporting means for each of said beams including at least three vertical columns, means connecting said columns in supporting relation with said beams with at least three columns supporting each of said beams and each end of a beam being rigidly connected to a column, each of said continuous beams with said columns connected in supporting relation thereto being adapted to support its load while spanning a distance greater than half the distance between alternate columns connected thereto, said beams each having bending moments and internal stresses developed therein in the region immediately adjacent to each of the columns supporting the same with the bending moments and internal stresses developed in each of the beams over and adjacent to the intermediate one of the columns supporting the same being in offsetting and opposed relation respectively to bending moments and stresses developed in the portions of each of said beams extending on opposite sides of the intermediate column associated therewith, and at least said intermediate columns being removably supported and connected to said beams, whereby an additional column may be inserted in the space between two adjacent columns and connected to the beam in supporting relation thereto and one of said adjacent columns may be removed thereby increasing the clear span of the pre-existing structure.

2,943,717
ENCLOSED SWITCHGEAR ASSEMBLIES FOR OUTDOOR ERECTION
John Alexander Latzko, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland
Filed Dec. 30, 1955, Ser. No. 556,739
Claims priority, application Australia Jan. 5, 1955
2 Claims. (Cl. 189—1)



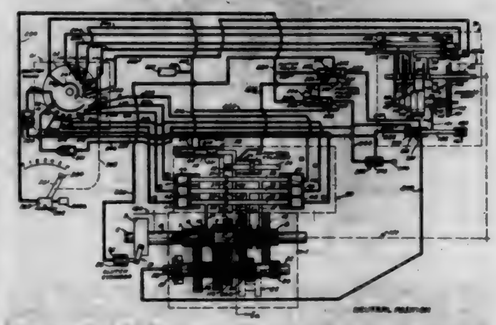
1. A plurality of normally indoor switchgear cubicles arranged for outdoor use comprising a plurality of said cubicles arranged in two parallel rows in confronting relation, a service passageway extending between said rows of cubicles, a roof covering said rows of cubicles, said roof being supported by the back edges of said rows of cubicles, protective weatherproofing wall means extending from said roof to the bottoms of said cubicles and secured to said cubicles along the backs thereof at least over the junctions between adjacent cubicles and other protective wall means extending along the sides of said cubicles at the ends of said rows and passageway, and an access door in said wall means at the end of said passageway.

2,943,718
MOVABLE PANEL ASSEMBLY
Gordon J. Pollock, Parma, Ohio, assignor to The E. F. Hauserman Company, Cleveland, Ohio, a corporation of Ohio
Filed May 27, 1957, Ser. No. 661,669
5 Claims. (Cl. 189—34)



1. A movable panel assembly adapted for quick assembly and disassembly including in combination: vertically-disposed spaced-apart posts, a panel comprising a rectangular body portion having vertically extending grooves in the respective side edges thereof, separate elongated vertically extending side edge margin portions fitting in said grooves and protruding laterally therefrom into engagement with said posts, retainer means securing said margin portions in said grooves for reciprocation longitudinally thereof and also for limited movement laterally outwardly of said body portion, said retainer means comprising plungers passing through vertically elongated slots in said margin portions and extending normal to the bottoms of said grooves, said plungers having outwardly flanged lip portions engaging said margin portions, compression coil springs secured within said plungers, screws extending through said plungers and secured in the bottoms of said grooves, said compression springs being held between the heads of said screws and the inner ends of said plungers, the overall horizontal dimension of said body portion and said margin portions in retracted lateral position being less than the distance between the spaced-apart posts permitting insertion of said body and margin portions therebetween, the overall horizontal dimension of said body and margin portions in lateral outward position being somewhat greater than said distance between the posts, yielding cam means secured to said margin portions and urging the latter laterally outwardly by engagement with the bottoms of said grooves during said longitudinal reciprocation of said margin portions and panel, said cam means being less yielding than said compression springs.

2,943,719
CHANGE GEAR SYSTEM
Thomas V. McNamara, Cooper Township, Kalamazoo County, and Charles M. Perkins, Oshtemo Township, Kalamazoo County, Mich., assignors, by mesne assignments, to Fuller Manufacturing Company, a corporation of Delaware
Filed Feb. 18, 1958, Ser. No. 714,191
24 Claims. (Cl. 192—3.5)

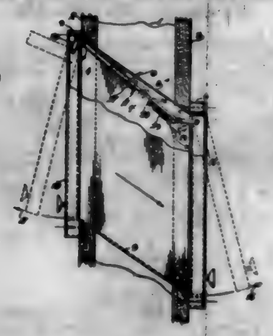


2. In a transmission having input and output shafts, a device for signaling a condition of relative speeds between first and second relatively rotating, interchangeable, toothed parts approaching synchronism and giving an interpretable signal slightly before synchronism is attained regardless of whether the relative speed of the first part is approaching equality with the speed of said second part from a greater or lesser rate of rotation, the apparatus comprising: a first signaling shaft operatively connected to one of the input and output shafts of said transmission; a second signaling shaft operatively connected to the other of the input and output shafts of said transmission; means maintaining speed relationships between said first and second signaling shafts proportional to the speed relationships between said input and output shafts; speed sensitive means between said first and second signaling shafts movable between three positions and occupying a first position when said first signaling shaft is reducing its speed with respect to said second signaling shaft and occupying a second signaling position when said first signaling shaft is increasing its speed with respect to said second signaling shaft and occupying a third position when said first and second signaling shafts are rotating at speeds proportional to the speeds at which the input and output shafts of the transmission will rotate when said first and second parts are interengaged; a signaling unit responsive to the position of said speed sensitive means for being prevented from giving a signal when said speed sensitive means is in either its first or its second position and for giving a signal when said speed sensitive means is in its third position to cause said first and second parts to be interengaged.

2,943,720
MAILING CHUTE
James R. Boyd, 2015 Briar Crescent, Calgary, Alberta, Canada
Filed Oct. 13, 1958, Ser. No. 767,824
2 Claims. (Cl. 193—6)

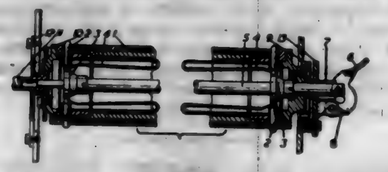
1. A mailing chute for installation in the walls, doors or the like, including inner and outer vertical panels,

comprising in combination a hollow boxing extending through said wall, said boxing including side walls and upper and lower walls, said upper and lower walls sloping downwardly from the outer end to the inner end of said boxing, said outer and inner ends being open to the interior of said boxing, an open rectangular frame at each end of said boxing and secured to said inner and outer panels bounding said outer and inner ends of said boxing, an outer closure hingedly secured via the upper edge thereof to adjacent the upper ends of the sides of one of said rectangular frames, an inner closure hingedly secured via the upper edge thereof to adjacent the upper end of the sides of the other of said frames, said outer and inner closures adapted to swing upwardly away from



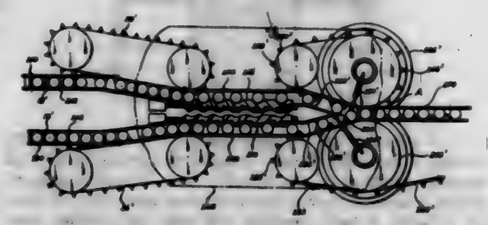
said boxing, and linkage means extending between said outer and inner closures whereby when said outer closure is opened and closed, said inner closure is also opened and closed, concurrently, said linkage means including a right angled extension of the hinged pin of said outer closure, said extension extending upwardly of the outer end of said boxing when said outer closure is closed, a right angled extension on the hinged pin of said inner closure, said last mentioned extension extending toward the outer closure when said inner closure is closed, adjustably clampable telescopical rod means joining the ends of said extensions, and spring means between said telescopical rod means and one of said extensions, adapted normally to maintain both of said closures in the closed position.

2,943,721
PLATEN ARRANGEMENTS FOR TELEPRINTERS AND THE LIKE
Reginald Dennis Selmon and Leslie Thomas Tedham, Croydon, England, assignors to Creed & Company Limited, Surrey, England, a British company
Filed Sept. 19, 1958, Ser. No. 762,900
Claims priority, application Great Britain Nov. 1, 1957
5 Claims. (Cl. 197—133)



1. A platen for a teleprinter or the like comprising two series of pins arranged around the platen near respective ends thereof, spring pressure means for retracting said pins, two interconnected cam members within the interior of the platen and means operable to move both cam members together longitudinally of the platen into or out of engagement with respective series of pins to press the pins outwards of the platen or to allow said pins to remain retracted.

2,943,722
ARTICLE FEEDING MECHANISM
Frederick E. Fauth, Baltimore, Md., assignor to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York
Filed Mar. 28, 1958, Ser. No. 724,769
11 Claims. (Cl. 198—32)

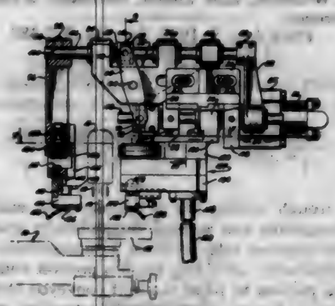


1. In a mechanism for feeding articles: a first conveyor means including two article supporting and conveying elements; a second conveyor means including an article supporting element for supporting articles in a row; and means to transfer and combine articles alternately from the article conveying elements of the first conveyor means to the article supporting element of said second conveyor means, said transfer means including a pair of endless conveying elements each having a plurality of flights defining article receiving pockets, one of said endless conveying elements being arranged to receive articles from one of said article conveying elements of said first conveyor means in alternate pockets thereof and the other of said endless conveying elements being arranged to receive articles from the other of said article conveying elements of said first conveying means in alternate pockets thereof, said endless conveying elements being further arragged to have an article free pocket of one of said elements move during a portion of its travel in registry with an article filled pocket of the other of said endless conveying elements so as to substantially encompass an article, and movable plunger means extending into article free pockets of each of said endless conveyor elements at least during a portion of their travel, said movable plunger means engaging an article traveling in a pocket of an opposed endless conveying element and maintaining the article in the pocket until the pocket is in registery with the article free pocket of the other endless conveying element.

2,943,723
TUBE-ORIENTATOR
Alton L. Crosby, Austin, and Kenneth M. Stoll, McKean, Pa., assignors, by mesne assignments, to Sylvania Electric Products, Inc., Wilmington, Del., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,944
5 Claims. (Cl. 198—33)

2. A mechanism for orientating an article having external leads and an electrical connection between the leads, said mechanism comprising a fixed support, a shaft slidable in said support, a jaw fixedly carried by said shaft, an article engaging member carried by said jaw, a guide fixedly mounted on said support, a plate slidable on said guide, a second jaw carried by said plate, a lever mounted on said support intermediate of the ends of the lever and operatively connected at each end respectively with said shaft and with said plate, means connected to the plate to drive the same, a backing roller carried by one jaw to engage the article between the jaws, a driving roller

carried by the other jaw to engage and rotate the article, means to drive the driving roller, a contact carried by each jaw in position to engage the leads on the article



as it is rotated, and means, under control of said contacts, to control the motor to cause it to effect separation of the jaws.

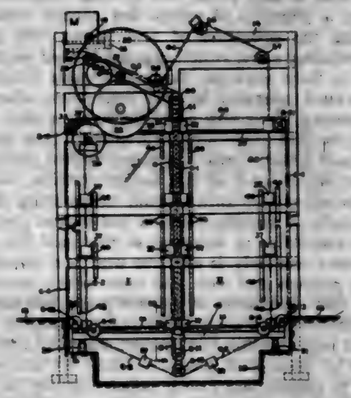
2,943,724
FEED CONTROL MECHANISM FOR ARTICLE CONVEYORS
Thomas A. McCoy, Stockton, Calif., assignor to Caruana Machine Works, Stockton, Calif., a partnership
Filed Oct. 30, 1958, Ser. No. 770,690
9 Claims. (Cl. 198—34)



1. A feed control mechanism for a conveyor unit which includes a frame and a longitudinal conveyor on the frame adapted to support and advance a row of articles, the conveyor being operative to slip beneath each article upon arrest of the forward travel of the latter; said mechanism comprising a stop member, means mounting the stop member on the frame for movement between an initial position in the path of travel of said articles and another position clear of said path, the articles as advanced on the conveyor being individually and successively engaged and arrested by said stop member in said initial position, timed means operative to recurringly oscillate the stop member between said positions whereby to successively release the arrested articles so as to impart predetermined spacing therebetween upon continued forward travel on the conveyor, and means operative by an article to be engaged and arrested to prevent such oscillation of the stop member until such article occupies a closely adjacent position on the conveyor.

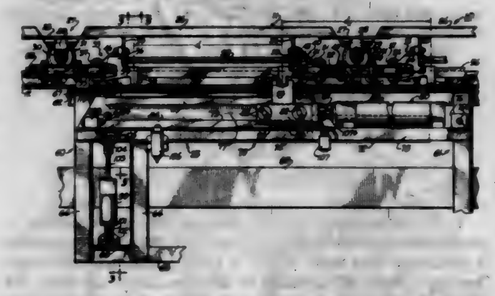
2,943,725
AUTOMOBILE PARKING AND STORAGE TOWERS
Harry A. Heimann, 4 Beverly Road, Newton Highlands 61, Mass.
Filed Oct. 22, 1958, Ser. No. 768,868
7 Claims. (Cl. 198—35)

1. An automobile parking and storage machine comprising a skeleton tower, a plurality of endless vertically arranged chains at two opposite sides of the tower, two vertical columns of wheeled car receiving platforms disposed horizontally and detachably mounted on said chains, horizontally disposed track means permitting the transfer and movement of the platforms laterally from one column to the other at the upper end of the tower, and self-adjusting take-up means at the lower end of each side of the tower at which is disposed said endless chains effective to maintain their vertical runs taut at all times,



each of said take-up means comprising a horizontally disposed structure carrying sprockets around which the bottom turns and lower runs of said endless chains at such location are guided and by which the said associated structure is suspended in a floating fashion in the tower, and track means disposed horizontally on each of said floating structures permitting the transfer and movement of the platforms laterally from one column to the other at the lower end of the tower.

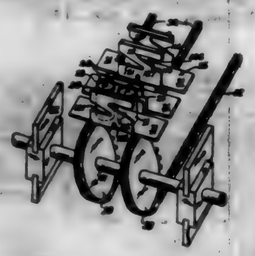
2,943,726
DRIVE FOR MOLD CONVEYOR SYSTEMS
Axel G. Granath, Chicago, Ill., assignor to Herbert Simpson Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 12, 1957, Ser. No. 695,571
12 Claims. (Cl. 198—135)



1. In combination, a mold conveying train having a series of equally spaced drive receiving elements thereon and drive means for advancing said train in step-by-step fashion by successively engaging said elements, said drive means comprising a guide structure extending beneath and generally parallel to the path of movement of the train, a mechanism engageable with said drive receiving elements and movable along said guide structure, a first piston and cylinder assembly mounted on said guide structure for advancing and retracting said mechanism

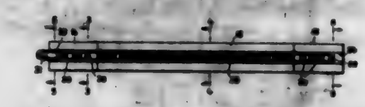
along said guide structure, means mounting said guide structure for pivotal movement in a vertical plane so that said structure is pivoted from a first upper position wherein said mechanism engages one of said drive receiving elements to a second lower position wherein said mechanism is moved out of the path of movement of said train and its drive receiving elements, a second piston and cylinder assembly for controlling the pivotal movement of said guide structure, fluid supply means for delivering fluid to said piston and cylinder assemblies and including a plurality of valves and control means for controlling the operation of said valves, said control means including a first switch engaged by said mechanism when it is fully retracted along said guide structure, a second switch operated by said mechanism when it is fully extended along said guide structure, a third switch operated by said guide structure when it is in said first position and a fourth switch operated by said guide structure when the latter is in said second position, said fluid supply means and its switches and valves being effective automatically to operate said first and second piston and cylinder assemblies in sequence so that said first piston and cylinder assembly is effective with said structure in said first position and with said third switch operated to advance said mechanism along said guide structure until said second switch is engaged by said mechanism whereupon said second piston and cylinder assembly is rendered effective to pivot said guide structure to said second position to engage said fourth switch, thereby to render the first piston and cylinder assembly effective to retract said mechanism along said guide structure until said mechanism engages said first switch and renders said second piston and cylinder assembly effective to return said guide structure to said first position.

2,943,727
CARRIER FOR GLASS JAR HANDLING MACHINE
Robert F. Krupp and Jan K. Wagner, Oakland, Calif., assignors to Gerber Products Company, Fremont, Mich., a corporation of Michigan
Original application July 1, 1955, Ser. No. 519,318. Divided and this application Feb. 11, 1957, Ser. No. 639,523
3 Claims. (Cl. 198—188)



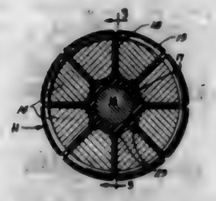
1. A carrier for a container of the type having a peripheral groove adjacent one end thereof comprising a relatively thin body which is U-shaped in side elevation having a base of a width at least as great as twice the diameter of said container and arranged to support two containers in a single carrier and sides at least as high as the height of said container, protuberances extending inward from each said side positioned and dimensioned to fit within said groove and support a container thereby, and separating means to separate adjacent containers in said carrier, said carrier being formed with a longitudinal slot the width of said base and a pair of notches in said sides adjacent said base and constituting extensions of said slot, said slots and notches being formed and positioned to receive said separating means.

2,943,728
MINING CONVEYORS
Günther Dommann, Wetter, near Lunen/Westphalia, Germany, assignor to Gewerkschaft Eisenhütte Westfalia, Wetter, near Lunen, Germany, a corporation of Germany
Filed Aug. 9, 1955, Ser. No. 527,387
9 Claims. (Cl. 198—204)



1. A trough section for a double-chain mining conveyor comprising two vertical longitudinally spaced apart parallelly opposed side portions, a substantially horizontal longitudinally extending bottom portion connected to each side portion to form the said conveyor trough, said side portions having longitudinally extending removable end portions, said end portions being removably connected to said bottom portion for replacement.

2,943,729
CONTRACTABLE RAM MANDRELS
George H. Dalrymple, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed May 18, 1956, Ser. No. 585,778
6 Claims. (Cl. 285—7)



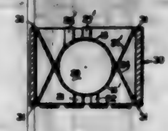
1. A mandrel comprising a shank, a spider of resiliently deformable elastomer material supported by said shank and including a central portion and fins integral with and radiating from said central portion, and a segmented head including a plurality of segments received respectively between the fins of said spider and yieldingly movable toward the central portion of said spider against the resistance of said central portion and fins of said spider deformed thereby.

2,943,730
PILL DISPENSER
Harold R. Treglgas, 395 5th Ave., South St. Paul, Minn.
Filed July 29, 1958, Ser. No. 751,719
10 Claims. (Cl. 206—42)



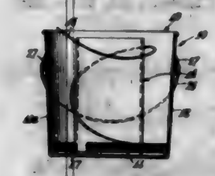
1. A pill dispenser comprising an outer case, a discharge chute formed integrally on said case, a hollow cylindrical axle extending inwardly into said case, a ratchet wheel having a central hub formed thereon rotatable about said axle in said case, a plurality of pill compartments disposed on the upper surface of said wheel around its outer periphery, actuator means positioned within said case engageable with ratchet means on said wheel to cause rotation thereof when said actuator is depressed, spring means cooperable with said actuator to bias said actuator into a normally outward position, a transparent cover adapted to be positioned upon said case, and bifurcated latch means adapted to retain said cover on said case.

2,943,731
PROTECTIVE PACKAGING
Alfred D. Brown, Clifton, N.J., assignor to Fellowcraft Engineering, Inc., Newark, N.J., a corporation of New Jersey
Filed Oct. 1, 1959, Ser. No. 843,855
14 Claims. (Cl. 206—46)



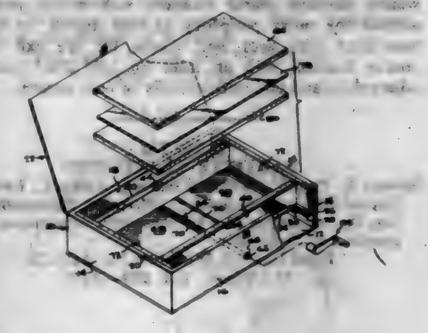
1. Means for suspending an article within a container, comprising a pair of pliable sheet members, each having a central section for holding an article between them; each of said central sections having a series of tapes integral therewith and extending respectively in opposite directions from its perimeter for attachment to the walls of the container; the tapes of one sheet member extending substantially in the same directions respectively as the tapes of the other sheet member; all the tapes of each sheet member being arranged so that those extending in one direction are in spaced relation and those extending in the opposite direction being in spaced relation with each other and in staggered relation with respect to the former tapes whereby when the sheets are set with their central sections opposite each other and one of the sheets turned over, the tapes of one sheet will lie between the tapes of the other sheet.

2,943,732
PACKAGE AND CONTAINER FORMING PART THEREOF
Joseph J. Kovaleski and Thomas E. Lewis, Jr., Trumbull, Conn., assignors to The Conlier & McKenzie Machine Co., Inc., Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 9, 1956, Ser. No. 577,123
2 Claims. (Cl. 206—59)



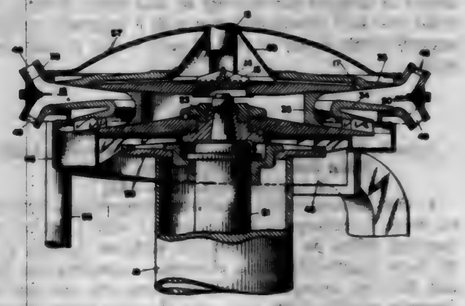
1. A package of coiled metal strand adapted to be payed out from the package comprising a container having a bottom and side walls and having an insertable strand-engaging core therein provided with a single radial flange means located solely at the bottom of said core and adapted to overlie and rest upon the bottom of the container, said radial flange means engaging the inner walls to properly center the core in the container to provide a substantially annular space to receive and hold coiled metal strand, and coiled metal strand disposed in said annular space and resting upon and thereby frictionally holding said radial flange means against rotation on said bottom.

2,943,733
SHIPPING CONTAINER FOR MIRRORS AND THE LIKE
Ernest Poeschl and Annalore Poeschl, both of 1123 E. 63rd St., Cleveland, Ohio
Filed Oct. 9, 1959, Ser. No. 845,589
5 Claims. (Cl. 206—62)



1. In a shipping container for mirrors, a rigid flat box having a bottom wall and first and second opposed walls upstanding from the bottom wall and having a common upper edge defining an open top, a removable cover engageable on the box to close the open top, horizontal slideways fixed on said first walls on a level above the bottom wall, resilient and compressible liners secured on the inward sides of said first walls above the slideways, a pair of clamping assemblies extending between said liners, each assembly comprising a horizontal bar having slide blocks on its ends slidably confined in related slideways, upstanding rigid pressure plates fixed on and extending along the bars, said pressure plates having facing sides, resilient and compressible pads on said facing sides, and means connected to the said bars for moving the assemblies toward and away from each other for edge clamping horizontally disposed mirrors between the pads.

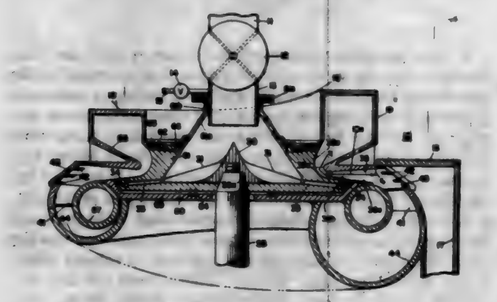
2,943,734
AIR DIRECTING AND PARTICLE REMOVING STRUCTURE FOR PARTICLE CLASSIFIERS
Robert E. Payne, Newtown Square, and Andre C. Lavanchy, Drexel Hill, Pa., assignors to The Sharples Corporation, a corporation of Delaware
Original application May 9, 1955, Ser. No. 506,836, now Patent No. 2,796,173, dated June 18, 1957. Divided and this application May 6, 1957, Ser. No. 657,213
10 Claims. (Cl. 209—144)



1. The combination with a particle classifier having an annular classification zone adapted for vortex flow of a fluid inwardly therethrough, said classification zone being comprised of spaced end walls, and an outlet for the exit of said fluid together with a fine fraction positioned cen-

trally of said classification zone, of means surrounding said classification zone for directing the inward flow of said fluid and the outward flow of a coarse fraction, said last-mentioned means comprising a plurality of laterally spaced disc-shaped annuli surrounding the outer periphery of said annular classification zone and positioned in the path of said inwardly flowing fluid and of said outwardly flowing coarse fraction, wall means positioned around the outer periphery of said annuli, an opening associated with said wall means for the exit of said coarse fraction, and an inlet for said fluid positioned adjacent to and circumferentially of said annuli.

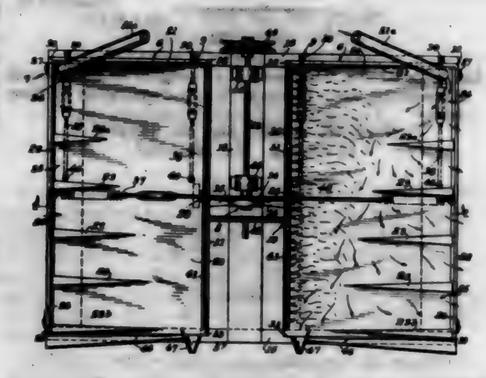
2,943,735
PARTICLE CLASSIFIERS
Robert E. Payne, Newtown Square, Andre C. Lavanchy, Drexel Hill, and Thomas D. Sharples, Plymouth Meeting, Pa., assignors to The Sharples Corporation, a corporation of Delaware
Filed June 13, 1957, Ser. No. 665,426
20 Claims. (Cl. 209—144)



1. A classifier for finely divided material comprising boundary means including first and second opposing wall structures forming between them an annular classifying zone, means including fluid-directing members adjacent the outer limit of said zone for producing within said zone an inwardly spiraling vortex, inlet means carried by at least one of said wall structures and extending into communication with said zone at a feedpoint intermediate its inner and outer limits, said boundary means being in part stationary and in part rotatable, said rotatable part including said inlet means, said stationary part including at least a part of both said wall structures and extending inwardly from said outer limit of said zone, means for feeding finely divided material to said inlet means, and means for driving said rotatable part including said inlet means at a speed for delivery of said finely divided material into said classifying zone with a tangential velocity approximately equal to that of said vortex at said feedpoint.

2,943,736
CONCENTRATING TABLE
John A. Manning, 3517 E. 57th St., Maywood, Calif.
Filed Feb. 16, 1959, Ser. No. 793,608
2 Claims. (Cl. 209—141)

1. Ore concentrating apparatus comprising a horizontal base, a rectangular tray provided with a set of ore-trapping riffles on the upper flat surfaces thereof, a set of three length-adjustable elements connecting the base and the two corners of the tray along one side and the opposite middle of the tray, said elements being adjusted to support the tray with said one side lower than the opposite side and one end lower than the opposite end whereby the four corners of the tray are differently elevated relative to the base, means to move the tray bodily in a direction toward its lower side edge and to suddenly release the same to jar its higher side edge so that particles of ore deposited on said tray surface are intermittently advanced toward the tray corner defined by the higher side edge and the lower end edge, and tray-

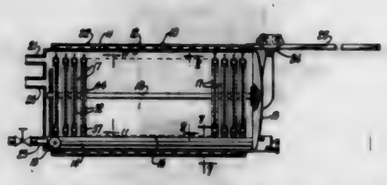


steadying means interconnecting the base and tray to hold the latter in a manner to move bodily and uniformly throughout, the latter means comprising a pair of horizontally disposed links arranged in parallelism beneath and connected to the tray.

2,943,737
FILTER AND METHOD FOR PURIFYING OIL
James A. Norton, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed July 24, 1957, Ser. No. 673,769
15 Claims. (Cl. 210—75)

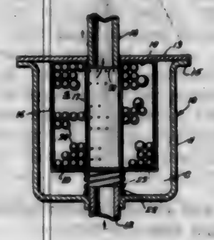
12. A method for purifying lubricating oils by filtration which comprises passing the oil to be filtered through a filter medium having deposited thereon a polyglycol selected from the group consisting of polyethylene glycol, polypropylene glycol, polyethylene-polypropylene glycol and mixtures thereof.

2,943,738
FILTRATION APPARATUS
Henry Schmidt, Jr., Hinsdale, Ill., assignor to Industrial Filter & Pump Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed June 6, 1958, Ser. No. 740,237
12 Claims. (Cl. 210—185)



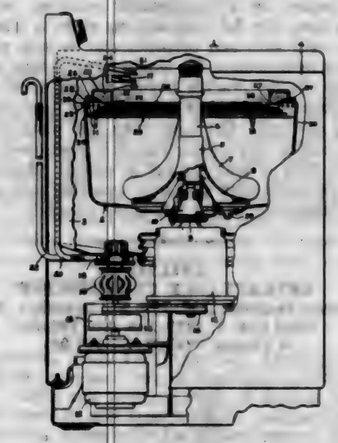
1. A filter for use in removing stearin from vegetable oil comprising means defining a filter chamber, an inlet duct to said chamber, an outlet manifold extending into said chamber, a plurality of filter leaves mounted in said chamber and having the effluent outlets thereof connected to said manifold, each of said filter leaves comprising a rigid, unitary, metal core, a heat conducting tube secured to said core adjacent the surface thereof, and a porous, flexible covering member enclosing said core and said tube, both ends of said tube effectively extending outside of said covering member and out of communication with both said chamber and said outlet manifold.

2,943,739
MAGNETIC FILTER
Charles A. Maynard, Valparaiso, Ind., assignor to Indiana General Corporation
Filed Aug. 14, 1956, Ser. No. 603,982
4 Claims. (Cl. 210—223)



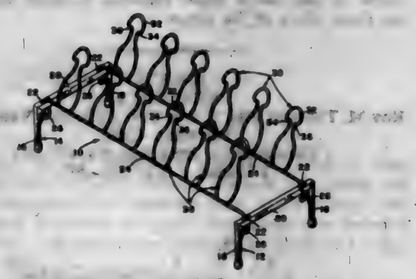
2. In a magnetic filter including a container having spaced inlet and discharge passages connected thereto for fluid flow therethrough, a perforated removable cartridge within said container in the path of fluid flow between said passages, a spring spacing said cartridge from said inlet and holding the same against said discharge passage whereby fluid by-pass flow about said cartridge is precluded at all times, and a plurality of permanently magnetized balls comprising ferromagnetic hexagonal iron oxide compound contained in said cartridge and substantially filling the same, said balls having poles randomly disposed with respect to each other.

2,943,740
CLOTHES RETAINING ARRANGEMENT FOR WASHING MACHINES
Philip H. Houser, Louisville, Ky., and Harlan F. Besse, Palatine, Ill., assignors to General Electric Company, a corporation of New York
Filed Feb. 2, 1959, Ser. No. 790,536
6 Claims. (Cl. 210—382)



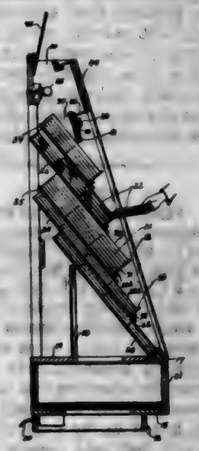
1. In a washing machine, an open clothes basket rotatable on a vertical axis, said basket having a plurality of relatively small openings formed therein adjacent its upper edge and being otherwise substantially imperforate, annular apertured clothes retaining means secured to said basket extending inwardly and upwardly from the sides thereof, the outer edge of said retaining means being adjacent said basket below the level of a substantial number of said small openings, the inner edge of said retaining means being formed above the level of a substantial number of said small openings, below the level of the upper edge of said basket, and inwardly spaced from any adjacent part of said basket.

2,943,741
SHOE RACK
Truman L. Atkinson, Ludington, Mich., assignor to Atkinson Manufacturing Company, Inc., Ludington, Mich., a corporation of Michigan
Filed June 23, 1958, Ser. No. 743,742
5 Claims. (Cl. 211—37)



2. A shoe rack, comprising; the combination of a standard having a plurality of separate shoe receiving supports thereon and each disposed at an inclined angle to the vertical plane, said supports each including a wire member formed to include an elongated loop having the bight thereof disposed uppermost, shoulder portions formed from said wire member and within said loop near the bights thereof, said shoulder portions and said bight forming a partially closed wire loop of a size and shape receptive of the heel of a shoe therein, and said bight being of a size and shape adapted to receive the toe of a shoe thereover, the lower portion of said supports affording support thereon for the soles of shoes having the heels received in said partially closed wire loops, and free hanging support for shoes having their toes received thereover.

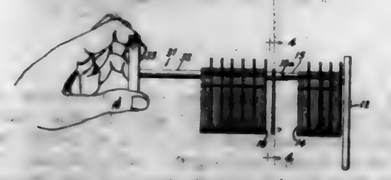
2,943,742
SELF-SERVICE MERCHANDISE DISPLAY RACK FOR BOXES
Russell H. Colley, 5 Holley Lane, Darien, Conn.
Filed June 25, 1958, Ser. No. 744,397
3 Claims. (Cl. 211—49)



1. A self-service merchandise display rack for boxes of articles comprising a pair of end walls whose front

edges are inclined upwardly and rearwardly and provided with a plurality of spaced, diagonally inclined shelves extending between the end walls, said shelves being of progressively decreasing depth as they proceed upwardly and terminating at their front edges adjacent the inclined front edges of the end walls, vertical partitions extending from each shelf upwardly to the lower face of the next upper shelf, each pair of adjoining partitions forming end guides for lateral rows of boxes carried therein in superimposed relation, narrow stop plates at the forward end of each partition limiting downward and forward travel of the boxes while exposing a major portion of the front edges of the boxes.

2,943,743
KEY RACK
Roy M. Thorson, Rte. 2, Box 279, Allenbrae Valley Road, Martinez, Calif.
Filed July 11, 1956, Ser. No. 597,194
2 Claims. (Cl. 211—69)



1. Apparatus of the character described comprising a frame and a closely packed array of key suspension rods each having a base end supported by said frame and a free end which is unsupported, said rods being arranged in substantial parallelism to one another and being closely packed to provide a large number of rods in a small space, a substantial proportion of said rods being located in interior positions within the array such that they are less accessible than the exterior rods, each rod having a length great enough to enable it to suspend a large number of keys and having a substantially uniform diameter throughout substantially its entire length such that a tubular member of inside diameter slightly greater than the outside diameter of said rods can telescope with any of said rods and thereby reach substantially to the base end of the rod; said apparatus also comprising a substantial number of keys suspended from each rod, each key having a head portion formed with a suspension hole of greater diameter than said rods, said keys being suspended from said rods by means of said suspension holes; said apparatus also comprising a selector member in the form of a tube, which is open at one end, said tube having an inside diameter greater than the diameter of said rods and having an outside diameter less than the diameter of the suspension holes of the suspended keys.

2,943,744
FIREPLACE FIXTURE
Truman L. Atkinson, Sr., Ludington, Mich., assignor to Truman L. Atkinson, Jr., Arwigsburg, Pa.
Filed May 19, 1958, Ser. No. 736,271
2 Claims. (Cl. 211—60)

1. A storage standard for fireplace tools, said standard comprising: a single rod-like element forming leg members, upright members and a cross member joining the tops of said upright members; said leg members each having a downwardly extending foot at one end and being inclined downwardly away from said foot; said upright members being joined to the ends of said leg members opposite from said feet; said upright members being inclined toward said feet over said leg members whereby said cross member is disposed directly above the space between said leg members; said cross member having depressions therein for seating and suspending tools therefrom in a fore and aft relationship between said upright members and said feet.

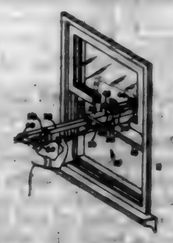


2,943,745
THERMOMETER HOLDER
Beatrice F. Bjornson, 420 Terry Ave., Apt. 310, Seattle 4, Wash.
Filed Jan. 20, 1959, Ser. No. 787,882
6 Claims. (Cl. 211—60)



1. A holder for a thermometer receiving tube comprising a long thin flat ring-carrying plate; a tube receiving ring rigid with and perpendicular to said plate and positioned intermediate the length of the plate; a fixedly supported upright bracket having spaced apart opposed guide channels capable of telescopically and removably receiving said plate and supporting said plate in upright position; and a tube supporting shelf positioned adjacent the lower end of said bracket in spaced relation below and in alignment with said tube receiving ring when the plate is supported within the guide channels.

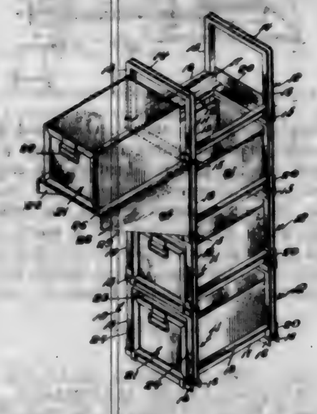
2,943,746
RETRACTABLE CLOTHESLINE
Charles Jacobson, 338 75th St., Brooklyn, N.Y.
Filed Feb. 9, 1959, Ser. No. 792,066
4 Claims. (Cl. 211—119.05)



2. A retractable clothes line comprising, in combination, a bracket having a sleeve, means for securing said

bracket upon a window frame, a rigid shaft slidably supported within said sleeve for reciprocating longitudinal movement, a first pulley carried upon one inner end of said shaft, a second pulley, a flexible line trained about said first and second pulleys, a third pulley having means for supported engagement upon an outer support pole, a control cable secured at one end to said second pulley and trained about said third pulley, the opposite end of said control cable being secured to the outer end of said shaft, manually operated means carried by said bracket windingly engaging an intermediate portion of said control cable for adjusting the position of said shaft longitudinally relative to said bracket, said manually operated means comprising a hand operating winding reel secured upon said sleeve, and said bracket means including protractor means for angularly adjusting the position of said sleeve relative to said bracket.

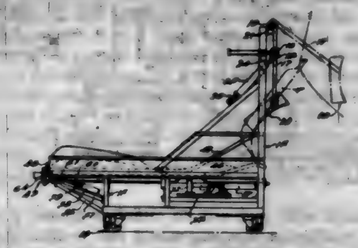
2,943,747
RACK LOADING AND UNLOADING SHELF
Richard A. Shaw, Scituate, R.I., assignor to Stackbin Corporation, a corporation of Rhode Island
Filed Aug. 1, 1958, Ser. No. 753,668
4 Claims. (Cl. 211—153)



1. A shelf for use with a stack of storage rack units providing a framework for receiving storage bins, comprising a top wall, terminating at its rear in an upwardly open hook of a size to receive a horizontally extending portion of the framework of a storage rack, rear wall portions extending at right angles to said top wall to engage the face of the rack and flanges extending rearwardly from said rear wall beneath said hook, the lower edges of which are adapted to engage the upper surface of a portion of the framework below that portion engaged by said hook.

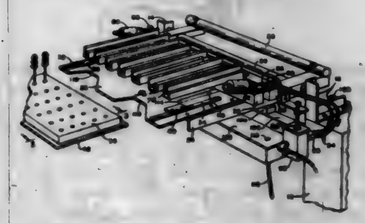
2,943,748
LOADING AND UNLOADING APPARATUS
Henry Sahlin, deceased, late of Birmingham, Mich.; Richard T. Sahlin and National Bank of Detroit, executors of the estate of said Henry Sahlin, assignors to Sahlin Engineering Company, Inc., Birmingham, Mich., a corporation of Michigan
Filed May 9, 1955, Ser. No. 506,755
10 Claims. (Cl. 214—1)

1. A material handling apparatus comprising a loading stand, a swinging unloader arm from which a work sheet is suspended after transfer thereof from an adjacent press, a turn-over device having lower swinging panel guide means and an upper portion pivotally mounted on said stand to swing said guide means upwardly and downwardly about an axis located above said sheet when the latter is suspended from said unloader arm, control means for initially swinging said device upwardly to a position enabling the suspended sheet to pass beneath and forwardly of said panel guide means, said control means being thereafter effective to swing said device downwardly to engage said guide means with the



lower edge of the suspended work sheet and to urge said sheet into partially inverted position, and guide rail means declining from adjacent said guide means and cooperating therewith to guide said sheet into inverted position on said stand upon release of said sheet by said unloader arm.

2,943,749
MULTIPLE CLAMPING OF MOUNT STEMS
Elmer E. Dotterer, Mill Hall, Donald J. Kantner, Woolrich, Howard P. Sprankle, Lock Haven, and Wilbert E. Van Gorder, Mill Hall, Pa., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 18, 1956, Ser. No. 616,812
5 Claims. (Cl. 214—1)

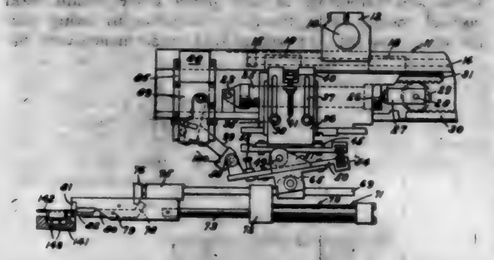


1. A tray holder and article clamping mechanism comprising a frame having a trackway for receiving a tray loaded with straight rows of articles, a bar fixed on said frame transversely of the trackway and fixedly carrying a number of spaced parallel fingers parallel with the trackway, a second bar parallel to said first bar fixedly carrying a second set of fingers alternating with and parallel to the fingers on the first bar, means for diagonally moving one bar toward and from the other, and means for supporting the frame for pivotal movement about an axis perpendicular to the fingers.

2,943,750
MATERIAL HANDLING DEVICE
Francis J. Sehn, Detroit, and Maurice M. Clemons, Birmingham, Mich.; said Clemons assignor to said Sehn
Filed Jan. 28, 1957, Ser. No. 636,826
3 Claims. (Cl. 214—1)

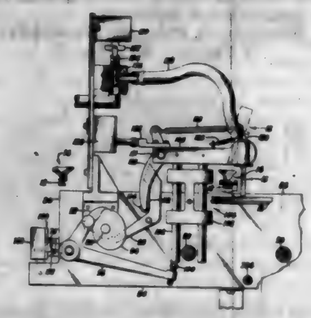
1. In a material handling apparatus for a press, a first fixed supporting frame, a second movable frame carried by said first frame for longitudinal movement in a single plane, actuating means for said second frame, means on said second frame defining a pivot axis, workpiece-engaging means including gripping jaws disposed on said pivot axis for pivotal movement relative to said second frame and for longitudinal displacement therewith, a swing-

able arm on said first frame disposed in the path of movement of said workpiece-engaging means, and abuttable means carried by said workpiece-engaging means



for contact with said arm to establish pivotal movement of said workpiece-engaging means and vertical movement of said gripping jaws during a predetermined portion of the relative longitudinal movement between said frames.

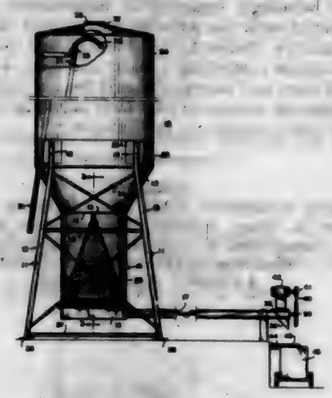
2,943,751
GRID TRANSFER MECHANISM
Stanley J. Gartner, Emporium, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application Feb. 15, 1957, Ser. No. 640,444, which is a division of application Ser. No. 423,391, Apr. 15, 1954, now Patent No. 2,821,825, dated Feb. 4, 1958. Divided and this application July 8, 1958, Ser. No. 747,383
1 Claim. (Cl. 214—1)



Means for transferring an article from a supply element at one elevation to a receiver at another elevation comprising a suction nozzle, and means for moving said suction nozzle comprising a pair of cams, a bell crank lever operated by one of said cams, a nozzle carrying frame elevatable by said lever, said frame pivotally mounting the nozzle, a second bell crank lever operated by the other of said cams, a cam surface on said second bell crank lever, a third lever, a connection between said third lever and the nozzle to swing the nozzle on swinging of the lever, and a cam follower on said third lever riding on the cam surface of the second lever, all whereby the movement of the nozzle is controlled by the two cams and the riding of the cam follower of the third lever on the cam surface of the second lever.

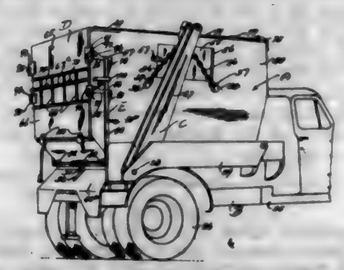
2,943,752
BULK FEED BIN
Donald D. Platt, Orlando, Fla., assignor to Farmers Cooperative Exchange, Pinecastle, Fla., a corporation of Florida
Filed June 30, 1959, Ser. No. 824,818
3 Claims. (Cl. 214—17)

1. A bulk feed bin comprising an upright cylinder of a length substantially greater than its diameter and with an inverted frusto-conical reducing collar depending from its lower end, said reducing collar being disposed axially of said cylinder with its wall at an angle of 60° and terminating in a circular opening, a discharge funnel depending from the circular opening in said reducing collar and terminating in an offset rectangular lower discharge end the length of which corresponds substantially to the diameter of the upper end of said discharge funnel and with the side of the rectangular opening in a vertical



line extending through the upper end of said discharge funnel whereby material within the bin will provide a pressure head and the material forming the core of the cylinder will move downwardly by gravity and subsequently the adjacent material around the wall of the cylinder will move downwardly, and a screw conveyor beneath said discharge opening for moving material laterally to a place of discharge, power means for driving said screw conveyor and control means for said power means.

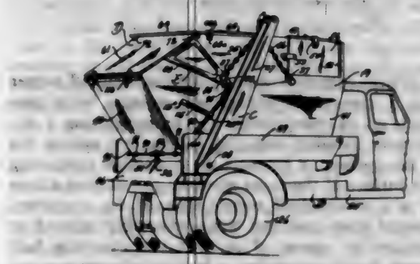
2,943,753
EQUIPMENT FOR LOADING, HAULING AND DUMPING LOOSE MATERIALS
Conrad R. Keys, 702 Ridge St., Newark, N.J.
Filed Apr. 18, 1956, Ser. No. 579,030
12 Claims. (Cl. 214—317)



1. In loading, hauling and dumping equipment the combination of a vehicle having a frame with means thereon operable to hoist objects at the rear of the vehicle and over the vehicle, a receptacle means having means thereon to enable the receptacle to be lifted by the hoist means upon the vehicle or off of it to the rear, a receptacle tilting member mounted upon the frame, said receptacle having a rear discharge opening therein, a closure mounted upon the receptacle for the rear opening, latch means mounted on the receptacle for holding the closure shut, a transverse dumping shaft pivoted upon the rear lower portion of the receptacle having a crank

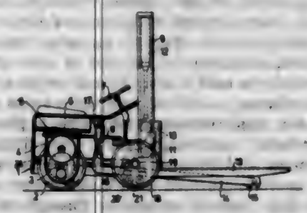
in position to be engaged by the tilting member of the frame as the hoist moves the receptacle from the vehicle to a rear dumping position, said shaft having a connection with the latch means for releasing the latch means upon tilting movement of the receptacle to a dumping position whereby to enable the push of the material in the receptacle to open the closure means.

2,943,754
VEHICULAR DUMPING RECEPTACLE
Conrad R. Keys, 702 Ridge St., Newark, N.J.
Filed Apr. 27, 1956, Ser. No. 581,230
4 Claims. (Cl. 214—317)



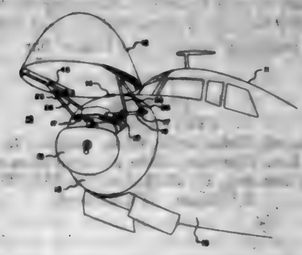
1. In combination with a support having a trip hook thereon, a removable receptacle comprising a casing having bottom, side, top, front and rear walls, said walls defining a chamber within the receptacle, the rear wall having a discharge opening therein facing rearwardly, and the rear portion of the top wall having a discharge opening therein facing upwardly, a closure movably connected upon the top wall to close and open said top wall discharge opening, a second closure movably mounted upon the receptacle and movably contacting said first mentioned closure for the rearwardly facing opening in the rear wall, means upon said receptacle for engaging said support trip hook as the receptacle is lifted and rearwardly moved for tilting the receptacle for discharging the contents of the receptacle through said rear wall and top wall openings including a lever which moves relative to the receptacle as it is tilted, and means connected with the said lever for opening both of said closures simultaneously as the receptacle is tilted to the rear for dumping.

2,943,755
LIFTING FORK VEHICLES
Anders Ivar Bryntse, Mjolby, Sweden, assignor to Aktiebolaget Bygg-och Transportekonomi, Stockholm, Sweden, a corporation of Sweden
Filed Sept. 16, 1958, Ser. No. 761,415
7 Claims. (Cl. 214—672)



1. A lifting truck comprising a truck body, at least one lifting fork, substantially horizontal rail-like supporting legs projecting from the forward end of the truck, first wheel means carried at a forward portion of said supporting legs, second wheel means, means for mounting said second wheel means for displacement along said supporting legs, means for displacing said second wheel means along said supporting legs from a rear position adjacent to the forward end of said truck body to a forward position at the forward end of said supporting legs, means for lifting the forward ends of said supporting legs with said first wheel means when said second wheel means is moved into said forward position and for lowering said forward end of said supporting legs and first wheel means to enable said first wheel means to engage the ground when said second wheel means are moved into said rear position, said second wheel means supporting the forward end of the truck during transport of the same and said first wheel means supporting the forward end of the truck during the lifting of the load, said first wheel means being considerably smaller than said second wheel means.

2,943,756
HINGE STRUCTURE
Philip F. White, La Mesa, Calif., assignor to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
Filed May 24, 1956, Ser. No. 587,134
6 Claims. (Cl. 217—60)

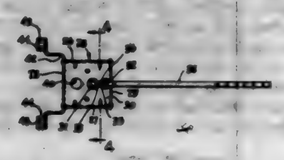


6. In combination, a cover member, hinge means for pivotally connecting said cover member at one point to supporting structure for movement between opened and closed positions, stabilizing means for said cover member in its opened position comprising a torque member journalled on said supporting structure for rotative movement, a pair of generally V-shaped brace means having the ends of their leg portions fixedly secured to said torque member for common movement therewith, means for restraining movement of said torque member relative to said supporting structure along its axis of rotative movement, a pair of elongated track members mounted on said cover member in laterally spaced relationship, one on each side of said hinge member, a track engaging member slidably positioned on each of said track members for reciprocal movement thereon, means pivotally connecting each of said V-shaped brace members at its apex to one of the track engaging members, and means for locking said track engaging members against movement on said track members to hold said cover member in its opened position.

2,943,757
MULTI-GANG SWITCH BOX
Harry E. Kaden, 3247 Cedar Brook Road, Cleveland Heights, Ohio
Filed Oct. 26, 1959, Ser. No. 848,814
2 Claims. (Cl. 220—3.9)

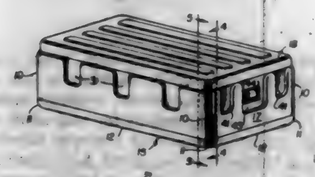
1. In combination with two spaced wall studs, a multi-gang switch box, comprising a case member having top, bottom, side and rear walls, defining a switch supporting housing open to the front, one of said side walls having a stud engaging bracket formed integral therewith, the rear wall having a socket element struck from the face thereof, closed toward the first of said side walls and faced

toward the second of said side walls, a support strap struck from the rear wall between the socket and the second side wall in alignment with the socket, a lock pin positioned on the rear wall between the socket and strap, and a hanger bar mounted in the socket over the locking pin and through the support strap, having a cavity therein to receive the pin in interlocked engagement when so seated in the socket, to restrain the bar against removal



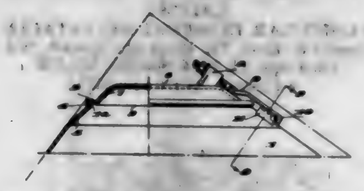
therefrom, the support bar being offset at its socket engaging end toward the front of the case, parallel to the second side wall thereof, and then extended normal to said side wall to lie across the face of a second stud spaced from the first stud, the stud engaging end of said bar having a plurality of spaced holes therethrough, and screws seated in said holes for anchoring the bar to said stud, whereby the case is supported between the two studs by its stud engaging bracket and hanger bar.

2,943,758
CONTAINERS
Thomas Harris, Gates Mills, Ohio, assignor to Structural Fibers, Inc., Chardon, Ohio, a corporation of Ohio
Filed Aug. 19, 1958, Ser. No. 755,928
9 Claims. (Cl. 220—4)



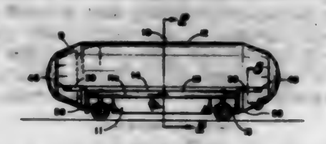
1. A container comprising an assembly of a generally rectangular bottom panel and four generally rectangular, adjoining side wall panels, said bottom panel including an upwardly directed continuous, peripheral flange integrally joined thereto by a fillet portion of substantial radius, and each of said side wall panels including inwardly turned side and bottom flanges integrally joined thereto and one to another by fillet portions of substantial radius, each side wall panel having its end portions in the region of the associated flanges and fillets disposed in overlapped relationship with the adjacent corresponding end portions of adjoining side wall panels to provide two ply vertical corner edges of the container, one of said plies along each such corner edge being offset relative to its panel to dispose its panel in coplanar alignment with the flange part of the other ply along that corner edge, each side wall panel having its bottom edge in the region of its associated flange and fillet portion disposed in overlapped relationship with the bottom panel in the region of its flange and fillet portion to provide two ply horizontal bottom edges of the container, one of said plies along each such bottom edge being offset relative to its panel to dispose its panel in coplanar alignment with the flange part of the other ply along that bottom edge, and the two ply overlapped junction of each pair of adjoining side wall panels extending into overlapped relationship with the flange and fillet portion of the bottom panel to provide three ply bottom corners of the container.

2,943,759
CONTAINER FOR STORING AND TRANSPORT
Yngve Anders Fredrik Fagerlund and Bengt Olof Blomqvist, Stockviksverken, Sweden, assignors to Stockholms Superfosfat Fabriks Aktiebolaget, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 23, 1956, Ser. No. 623,975
Claims priority, application Sweden June 7, 1956
4 Claims. (Cl. 220—68)



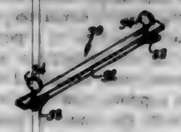
1. A cubical container with an obliquely cut-off corner providing a triangular opening, said opening being provided with an exterior closing means comprising a triangular cover member engaging and sealing against the edge of the opening, a pressure plate member contacting the outer surface of the cover member, at least one clamp secured to a rounded-off corner edge of the container, said pressure plate member being releasably secured to the container by means of at least one clamping bolt device each device comprising a bolt attachment secured to the pressure plate member adjacent a corner of the latter and a cooperating clamping bolt one end of which clamping bolt is provided with a terminal hook portion engaging said clamp, said exterior closing and clamping means being substantially included within the container piling profile.

2,943,760
SEALING CONNECTOR
Wallace Hamilton, Bentleyville, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 14, 1957, Ser. No. 634,872
1 Claim. (Cl. 220—75)



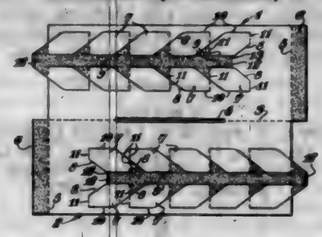
A container mounted on a frame for enclosing a load carried by said frame and extending beyond the ends thereof comprising a first container portion mounted on said frame, rigid main strips mounted along the edges of said first container portion each formed with a recess extending along the length thereof and a throat open along the length of said recesses, a strip extension with one end mounted on said frame extending beyond the end of said frame formed with opposed similar recesses each of which is open through an associated throat, a terminal piece mounted on the end of said strip extension remote from said frame formed with a U-shaped recess open through a throat, said main strips co-operating with said strip extension and terminal piece to provide a connected continuous recess open throughout its length through said throats, a second container portion of flexible material formed with a continuous male portion of flexible material extending through said throats and a continuous flexible non-elastic tube positioned in said recess, liquid filling said tube so that it completely fills said recess and provides a fluid tight engagement with the wall thereof whereby said container portions are connected together and co-operate to form a fluid tight container.

2,943,761
PAINT BRUSH SCRAPER
Theodore L. Mosier, New Hartford, Conn.
Filed Apr. 30, 1958, Ser. No. 732,896
1 Claim. (Cl. 220—90)



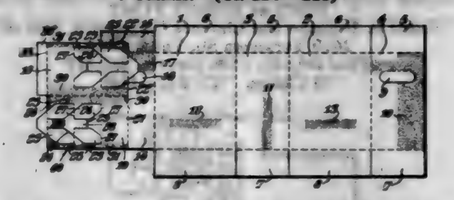
A brush wiper attachment for cylindrical paint cans having a radially inwardly directed lip comprising, in combination, a rigid member having a wiping edge, means for securing said rigid member transversely of said paint can along a line coincident with a chord of a circle common to the periphery of the lip of the can, said rigid member comprising a substantially flat bar of rectangular cross sectional configuration having bifurcated ends, said bifurcated ends of said bar each including a portion of said bar and a depending lip, each bifurcated end of said bar receiving circumferentially spaced apart portions of the radially inwardly directed lip of the can to support said bar in a plane normal to the longitudinal axis of said can and partly disposed within the interior thereof, said depending lips of said bar underlying said radially inwardly directed lip of the paint can, and the opposite ends of said bar overlying said inwardly directed lip of the paint can, and said securing means comprising a thumb screw threadedly carried at each end of said bar extending substantially normal to the general plan thereof in a direction toward said depending lips of said respective ends.

2,943,762
CARTONS
James A. Richardson, Burnaby, British Columbia, Canada, assignor to Unipak Cartons Ltd., Vancouver, British Columbia, Canada, a corporation of British Columbia
Filed Feb. 18, 1958, Ser. No. 715,932
Claims priority, application Canada Jan. 22, 1958
12 Claims. (Cl. 220—105)



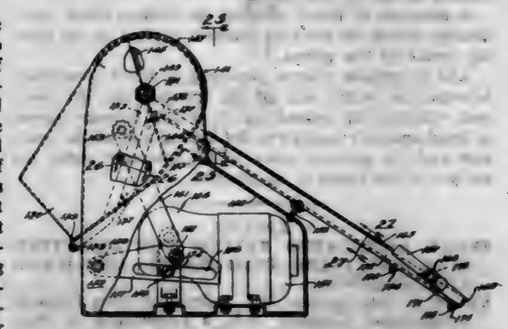
1. A carton having a wall structure comprising side and end walls and a bottom, an interior assembly fixed to said wall structure defining adjacent longitudinal rows of article receiving compartments, said interior assembly including a unitary member, constituted by a main panel portion extending along the entire longitudinal axis of the carton to form a longitudinal partition, said longitudinal partition having at least upper and lower portions thereof preventing contact of upper and lower portions of articles in a row with similar portions of articles in an adjacent row; a plurality of transverse partitions each formed of at least a pair of vertically spaced panels disposed in a common plane, each of said vertically spaced panels being integrally connected, at one end thereof, with said longitudinal partition and extending therefrom to prevent contact between at least upper and lower portions of a pair of adjacent articles in the same row; and a tertiary panel integrally connecting the ends, remote from the longitudinal partition, of said vertically spaced panels in each of said pairs thereof with one another and also connecting the said remote ends of each pair of vertically spaced panels with the remote ends of an adjacent pair of such panels, said tertiary panel being fixed to an adjacent side wall of said wall structure thereby fixing said unitary member to said wall structure and bracing the latter.

2,943,763
CARTONS
James A. Richardson, Burnaby, British Columbia, Canada, assignor to Unipak Cartons Ltd., Vancouver, British Columbia, Canada, a corporation of British Columbia
Filed Feb. 18, 1958, Ser. No. 715,939
Claims priority, application Canada Jan. 22, 1958
8 Claims. (Cl. 220—115)



1. A multi-cell carton formed from a one-piece blank having a plurality of panels disposed in seriatim side-by-side relation, said carton having a wall structure formed by selected ones of said panels to define side and end walls and a bottom, an extension on one of said side walls, said extension being defined by the remaining panels of said blank, a predetermined portion of said extension forming an interior assembly including a unitary member the main portion of which serves as a longitudinal partition, secondary portions of said unitary member serving as a plurality of transverse partitions, each transverse partition being formed of at least two secondary portions of said unitary member disposed in a common plane and having inner and outer ends, a tertiary portion of said unitary member connecting the outer ends of said secondary portions and being fixed to an adjacent side wall of said wall structure, said longitudinal partition and transverse partitions defining article receiving compartments in said carton, the remaining portion of said extension serving as a means to fix the interior assembly to the wall structure of the carton.

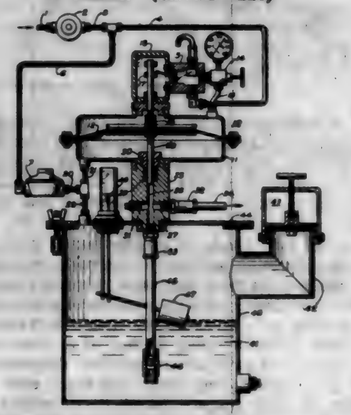
2,943,764
ARTICLE ARRANGING AND COLLECTING DEVICE
Alfred H. Haberstump, Detroit, Mich., assignor to Haberstump-Harris, Inc., Detroit, Mich., a corporation of Michigan
Filed Dec. 15, 1952, Ser. No. 325,943
13 Claims. (Cl. 221—68)



1. An article arranging and delivering device including, in combination, a standard, a hopper having rear and side walls and a substantially semicylindrical front wall, pivot means disposed substantially on the center from

which the semicylindrical front wall was struck for supporting the hopper on the standard, a U-shaped element in said front wall, forming an outwardly presenting slot and pockets each side thereof in the front portion of the hopper, means for oscillating said hopper between raised and lowered positions, and a pair of article collecting tracks one within the hopper the other having one end within the slot, the adjacent ends of said tracks being disposed in article delivering and receiving relationship when said hopper is in raised position.

2,943,765
CONTAINER MOUNTED FLUID PRESSURE DISPLACEMENT PUMP
Edsel R. Glasgow and Clarence O. Glasgow, both of 2620 Yorktown St., Tulsa, Okla.
Filed July 20, 1959, Ser. No. 828,219
10 Claims. (Cl. 222—110)



1. In a constant volume displacement pump having a working piston and chamber with a loading check valve through which liquid is drawn into the working chamber and a working check valve through which the liquid drawn into the working chamber is discharged, including,

A power operator attached to the working piston having two sides on which power is developed to reciprocate the piston,

Means developing power on the first side of the operator from a first fluid pressure source for the working stroke of the piston,

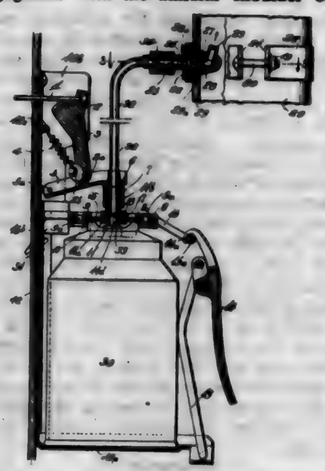
Means developing power on the second side of the operator from a second fluid pressure source for the loading stroke of the piston,

A reservoir of liquid supplied the loading check valve through which the working chamber is filled on the loading stroke of the piston,

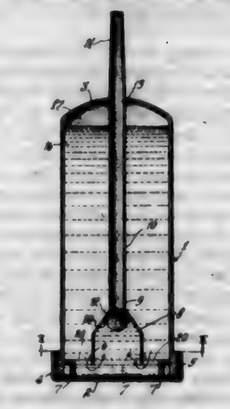
And a conduit system providing a direct connection between the second side of the operator and the reservoir, whereby the second source of fluid pressure power is simultaneously applied to the second side of the operator and the gaseous space in the reservoir above the surface of the liquid to be pumped.

2,943,766
SPRAY APPLICATOR SYSTEM FOR INJECTING STARTING FLUID INTO DIESEL AND GASOLINE ENGINES
Charles P. Orr, Camden, N.J., assignor to Spray Products Corporation, Camden, N.J., a corporation of New Jersey
Filed Dec. 30, 1957, Ser. No. 706,057
6 Claims. (Cl. 222—180)

1. Mounting means for a pressurized fluid container of the type containing an annular shoulder disposed concentrically therearound and a central fluid discharge valve and valve actuator in one end of the container adapted to discharge fluid contents from the pressurized container by the pressure within the container upon actuation of said fluid discharge valve, comprising a support for receiving a pressurized container, a member pivoted on said support and movable to a position engaging the annular shoulder of said container and the said valve actuator of the pressurized container when the container is mounted in the support, said member including a seal-cap engageable with the annular shoulder of the container, a flexible diaphragm supported by said seal-cap and carrying a nipple discharge member engageable over the discharge valve actuator of the container, a fluid delivery tube connected with said nipple discharge member and displaceable bodily with said nipple discharge member and with the flexing of said diaphragm and the movement of said discharge valve actuator and remote control means for actuating said nipple discharge member for correspondingly actuating said discharge valve actuator and effecting the discharge of the pressurized contents of said container through said fluid delivery tube.

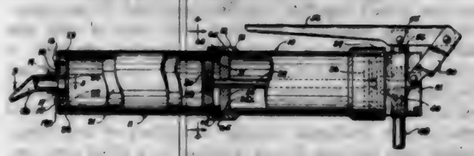


2,943,767
CONSTANT PORTION LIQUID DISPENSER
Joseph J. Moro-Lin, 12—94 Plaza Road, Fair Lawn, N.J.
Filed Jan. 30, 1959, Ser. No. 790,284
2 Claims. (Cl. 222—207)



1. A constant portion liquid dispenser comprising a squeeze container having a flexible side wall, a top and a bottom attached to said wall, a funnel-shaped measuring cup having a wide diameter end and a narrow diameter end and having a predetermined volume of the portion to be dispensed and having its wide diameter end disposed adjacent said bottom, a ball valve disposed in said cup and of density less than said liquid and designed to seal against the narrow diameter end of said cup, and a rigid tube having one end attached to the narrow diameter end of said cup and its other end protruding in sealing relation through the container, in a manner such that when the container is set on its bottom, the liquid from the container rises in and fills the cup and the ball seals the cup against further rise of liquid, and, when the container is inverted and the side squeezed, the contents of the cup are discharged as the ball rises through the liquid.

2,943,768
AIR OPERATED SEALANT DISPENSER
Myles W. Lindsay, Rte. 1, Box 4560, Issaquah, Wash.
Filed May 27, 1958, Ser. No. 738,197
7 Claims. (Cl. 222—327)



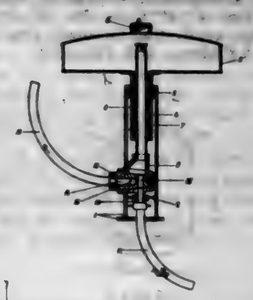
1. A sealant dispenser of the character described comprising, in combination, a cylindrical container that is open to its full diameter at its inner end and is equipped at its outer end with a closure member formed with a central discharge opening, a cylindrical sealant containing cartridge slidably fitted within said cylindrical container coaxially thereof, said cartridge extending substantially the full length of the cylindrical container and having an outer end wall formed with a discharge port seated in a non-leaking connection against the closure member with its discharge opening in registration with the discharge opening of said closure member, an air cylinder equipped with means at its inner end whereby it is releasably fixed at that end to the open inner end of said cylindrical container, in coaxial alignment therewith, a piston contained in said air cylinder, a rod extending from the piston, a plunger fitted within the adjacent end of said sealant containing cartridge for advancement by said piston rod, an air valve at the outer end of the air cylinder, equipped for connection with a source of supply of air under pressure, and a handle for adjusting said air valve for controlled admittance of air under pressure to the cylinder to effect the movement of said piston and extending of said rod for the advancement of the plunger into said cartridge and a forcible ejection of sealant from the cartridge through said registered end openings of cartridge and container closure member.

2,943,769
COMBINED CONTAINER AND MEASURING SPOUT
Milton H. Klausmann, Summit, Henry J. Brucker, Springfield, and Raymond P. Von Culin, Far Hills, N.J., assignors to Seal-Spout Corporation, a corporation of New Jersey
Filed Mar. 15, 1957, Ser. No. 646,341
2 Claims. (Cl. 222—364)

2. The combination of a container having a substantially rectangular discharge aperture in one wall thereof, and a tongue that comprises the part of said wall that was displaced to form said aperture and is integrally hingedly connected at one end to said wall at one end of the aperture for swinging movement into and out of said aperture and has a free end edge and opposite side edges, a spout comprising a body portion overlying the outer side of said tongue hingedly connected at one end to said wall adjacent the hinging of said tongue to open and close said aperture and with one end portion adapted to project beyond said free end edge of said tongue and the other end of said aperture for engagement with said wall in the closed position of the spout to limit closing movement of the spout and to seal said outer end of said aperture, sector-shaped side walls on said body portion having their outer faces frictionally engaging the side edges of said aperture to seal said edges in the closed position of said spout and whose arcuate edges are concentric with said axis of hinging of said body portion with free space between them, said tongue being disposed in said free space between said side walls with each of its opposite side edges in relatively slidable abutting relation to one side wall, and means releasably connecting said tongue to said side walls in angular relation to said body portion with the free end of the tongue in spaced relation to said body portion, thereby providing a measuring pocket whose walls constitute said tongue, said side walls and said body portion of the spout, and means to releasably connect said tongue to said side walls in flatwise abutting relation to said body portion of the spout, whereby said tongue selectively may be disposed in angular relation to said body portion of the spout to provide a measuring pocket or may be held in flatwise abutting relation to said body portion to provide for pouring of a continuous stream of the package contents through the spout.



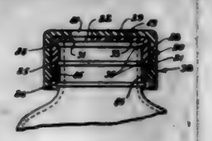
2,943,770
MEASURING DEVICES FOR FLUIDS
Leonhard Schmid, 5 Kilianstrasse, Augsburg, Germany
Filed June 25, 1958, Ser. No. 744,444
Claims priority, application Germany July 8, 1957
2 Claims. (Cl. 222—449)



1. Apparatus for supplying fluid to a concrete mixing machine, comprising a dipping tube restrained from vertical movements, a measuring container vertically adjustable on the upper end of the dipping tube, a valve housing at the lower end of the dipping tube, fluid supply means entering the lower side of the valve housing, a rotatable two-way valve core in the valve housing with the axis of rotation of the valve core being normal to

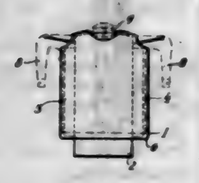
the longitudinal axis of the dipping tube, an arcuate delivery pipe having one end connected to the two-way valve core and acting as a handle for the operation of said valve core, and said valve core being rotatable selectively to form communication between the fluid supply means and the dipping tube, and the dipping tube and the arcuate delivery pipe.

2,943,771
CAM OPERATED CLOSURE
Anthony F. Driscoll, Middle Village, N.Y., assignor of one-half to Jean Maebach, Stamford, Conn.
Filed Jan. 15, 1957, Ser. No. 634,216
5 Claims. (Cl. 222—512)



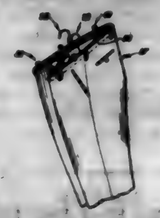
1. A container having a neck with a mouth at one end, the neck including an inner cap secured to the container and having a top wall with an opening therethrough of less area than the mouth of the container, the inner cap terminating at a bottom edge face, portions of which slope to provide cam surfaces, an outer cap that fits over the inner cap and that has a top wall with an opening therein which registers with the opening in the inner cap when the outer cap is in a first position, the opening in the outer cap being located over an imperforate area of the inner cap when the outer cap is in a second position, the outer cap being longer than the inner cap and extending downwardly below the cam surfaces of the inner cap, and cam elements comprising projections extending inwardly from the outer cap and under the cam surfaces of the inner cap and contacting with said cam surfaces, the projections being correlated with the slope of the cam surfaces and the positions of the openings in the caps to hold the outer cap down most firmly when in open and in closed positions.

2,943,772
PRESSING DEVICE
Engelbert Wellmayr, Augsburg-Oberhausen, Germany, assignor to Kleindienst & Co. Maschinenfabrik und Eisengiesserei, Argonstrabe, Bavaria, Germany
Filed Dec. 17, 1958, Ser. No. 781,001
Claims priority, application Germany Jan. 31, 1958
8 Claims. (Cl. 223—57)



1. In a garment press, two relatively displaceable pressing plates adapted to be heated, an inflatable elastic envelope of thin, deformable air-tight material movable between said plates and adapted to have an article of wearing apparel fitted thereover, supporting means for said envelope, means for progressively inflating said envelope, and means for controllably displacing at least one of said pressing plates so as to exert an adequate force on the article when disposed between said plates without overstressing the inflatable envelope.

2,943,773
COMBINATION HANGER, STRETCHER, AND CREASER FOR A WAISTBAND OF A PAIR OF PANTS
Emil M. Babulk, 1749½ W. Santa Barbara, Los Angeles, Calif.
Filed Apr. 3, 1959, Ser. No. 803,973
4 Claims. (Cl. 223—63)



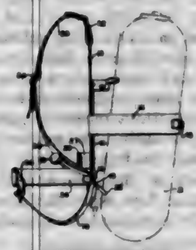
1. A combination stretcher, and creaser for a waistband of a pair of pants, comprising: a first substantially V-shaped member consisting of two longitudinal side portions joined together at a first apex and having opposite laterally separated free ends with each of said side portions including a longitudinal interior channel; a second substantially V-shaped member consisting of two longitudinal side portions joined together at a second apex and having opposite laterally separated free ends; a third substantially V-shaped member consisting of two longitudinal side portions joined together at a third apex and having opposite laterally separated free ends, an outer one of said free ends of said second V-shaped member being telescopically slidably engaged within the longitudinal channel in a corresponding one of the free ends of said first V-shaped member, with said first apex being oppositely directed from said second apex, an outer one of said free ends of said third V-shaped member being telescopically slidably engaged within the longitudinal channel in the other of the free ends of said first V-shaped member, with said first apex being oppositely directed from said third apex, said V-shaped elements being provided with a plurality of controllably operable pants waistband-engageable clamp means for fastening the waistband portion of a pair of pants around the exteriors of the telescopically engaged first, second, and third V-shaped members in a taut manner for effectively stretching and creasing said waistband portion while maintaining same in open position to facilitate airing and drying of the interior thereof; and controllably operable locking means carried by the telescopically engaged portions of the second and third V-shaped members with respect to the first V-shaped member and operable to allow telescopic extension and retraction and operable to prevent same.

2,943,774
COMBINATION COAT AND PANTS HANGER
Harold Hansen, R.F.D. 1, Box 128, Stafford Springs, Conn.
Filed Feb. 21, 1958, Ser. No. 716,698
1 Claim. (Cl. 223—88)



A combination coat and pants hanger, said coat hanger comprising a pair of downwardly diverging elongated supporting arms carrying a medially positioned supporting hook, said pants hanger comprising a pair of vertically disposed parallel wire spring members that are coiled at their medial points and have the upper ends thereof secured to said arms on opposite sides of said supporting hook and within the outer ends of said arms, a pair of telescoping tubes with one tube secured to the lower end of one of said spring members and the other of said tubes secured to the lower end of the other of said spring members, the outer ends of said tubes being flattened, a pair of inverted U-shaped pants engaging elements, each of said elements having a bight portion formed of spaced parallel portions joined by an arcuate portion, and said bight portions are positioned within the flattened ends of said tubes and the outer edges of said elements being notched to firmly grip the pants to retain the same on said elements.

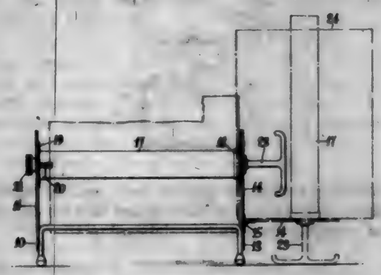
2,943,775
BACK PACK AND HARNESS FOR CARRYING COMPRESSED GAS CYLINDERS
Richard G. Mack, Dolores Street and Franciscan Way, Carmel, Calif.
Filed Jan. 27, 1958, Ser. No. 711,429
5 Claims. (Cl. 224—5)



1. In supporting equipment for gas cylinders and the like carried on the back of the user, the combination of an hour-glass shaped base frame, said frame having its lower marginal edge bent outwardly and symmetrically scalloped to cradle one gas cylinder centrally, or two placed side by side, a transverse support secured to said base frame above the waist thereof, said transverse support being correspondingly symmetrically scalloped forming the upper end of said cradle, means attached to said base frame for removably securing cylinders in said cradle, means adjacent the lower portion for resiliently spacing said frame from the user, chest crossing harness straps removably secured to the upper portion of said base frame, belt and lower harness straps for engagement with said crossing straps releasably secured to said lower base frame, rip cord means secured to the juncture of one of said lower harness straps and belt straps for instantly releasing said belt and lower harness straps from said base frame, and fastening means for joining said chest crossing harness straps and lower harness straps for instantaneous adjustment of the fit or instantaneous release.

2,943,776
PHONOGRAPH RECORD CARRY STAND
Michael F. Ford, 130 Cambridge Ave., Buffalo, N.Y.
Filed July 6, 1959, Ser. No. 825,289
6 Claims. (Cl. 224—46)

5. A phonograph record carry stand comprising elongate base means having a rigid upstanding wall at one end thereof and an opposed movable upstanding wall at the other end thereof hinged to said base means along its lower edge for swinging movement outwardly of said base means, elongate post means fixed securely to the inner face of said hinged wall to project perpendicularly therefrom to said rigid wall and adapted to receive phonograph records thereon, means for releasably locking the outer end of said post means to said rigid upstanding wall, and a handle member at the outer side of said hinged wall in general alignment with said post means and extending from said hinged wall a distance



substantially equal to the height of said hinged lower edge of said hinged wall to support the latter in a horizontal plane when the same is swung to open position with the record holding post means extending upwardly therefrom.

2,943,777
COMBINATION TOWEL AND WRAP DISPENSER
Frank Dvoracek, Burbank, Calif., assignor to Burroughs Manufacturing Corp., Los Angeles, Calif., a corporation of California
Filed Feb. 28, 1959, Ser. No. 794,554
6 Claims. (Cl. 225—38)

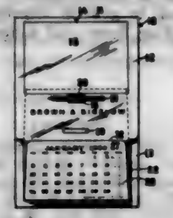


1. A combination towel and wrap dispenser, comprising: a cabinet having spaced side walls, a bottom wall, and a relatively short front wall with an upper edge; flange members extending upwardly from said bottom wall adjacent the side walls for maintaining a roll of towel material in the cabinet positioned away from said side walls; a plurality of spaced ridges extending upwardly from said bottom wall between the flange members and adjacent the front wall, the upper surfaces of said ridges maintaining the roll of towel material out of contact with the upper edge of the front wall; means associated with said upper edge for severing a section of towel material from said roll; a tray removably fastened to said cabinet below the bottom wall thereof; and means within the tray for supporting at least one roll of wrapping material in dispensing position.

3,943,778
DEPOSITORY CALENDAR
Henry A. Paulsen, St. Paul, Minn., assignor to Brown & Bigelow, St. Paul, Minn., a corporation of Minnesota
Filed July 27, 1959, Ser. No. 829,585
6 Claims. (Cl. 229—8.5)

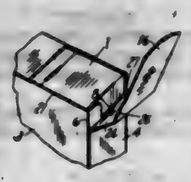
1. A savings device comprising a blank transversely folded to form two substantially equal sides, one of the sides having means therein for depositing coins and currency; a planar tongue integrally formed along the lower portion of one of the sides; a coin receiving envelope,

the pocket of which is disposed to contain said tongue, said envelope having a closure flap positioned behind the



coin depositing means for guiding coins and currency into the pocket; and means for holding the side of said blank and said envelope in parallel relationship.

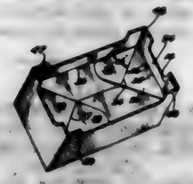
2,943,779
DISPENSING CARTON
Kenneth T. Buttery, Kalamazoo, Mich., assignor, by mesne assignments, to KVP Sutherland Paper Company, a corporation of Delaware
Filed Dec. 23, 1957, Ser. No. 704,634
6 Claims. (Cl. 229—17)



1. A dispensing carton formed of an integral blank and comprising side walls and end walls provided with coacting bottom closure members, the side walls having overlapping side top closure members, one end wall having a top flap disposed on the inner side of said side top closure members, the inner of said side top closure members terminating in spaced relation to the other end wall, the outer of said side top closure members having a finger piece projecting beyond the end edge of the inner of the side top closure members, said side top closure members having aligned transverse weakened severing zones spaced from said end edge of said inner side top closure member and severing connections to their respective side walls terminating at such transverse weakened zones facilitating the removal of a portion of the top closure to provide a discharge opening for the carton by grasping said finger piece the adjacent end wall having a transverse score adjacent its upper end providing a swingable section, said swingable section having a top closure flap on its swinging edge initially disposed on the inner side of said side top closure members and being of such length as to project beyond the said transverse severing zone thereof, whereby when said severable portion of said side top closure is removed said top closure flap may be adjusted by manipulation of said swingable end wall section.

2,943,780
RECESSED AUTOMATIC BOTTOM CARTON
Hubert V. Bolding, Clarksville, Ind., assignor to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia
Original application Mar. 23, 1955, Ser. No. 496,111. Divided and this application Feb. 26, 1958, Ser. No. 717,787
3 Claims. (Cl. 229—39)

1. A single-blank collapsible carton comprising four outer walls permanently hingedly connected together to provide a continuous and collapsible outer wall structure, all of said hinge lines between adjacent walls being parallel, two of the walls lying in one plane and the other two lying in another plane in the collapsed condition of the carton, four bottom recessing panels, each hingedly connected to the bottom edge of one of said outer walls and extending upwardly from the bottom edge in fixed face-to-face relation to the inner face of the corresponding outer wall to provide a double thickness leg at the base of each of the said four outer walls, and four bottom flaps each hingedly connected to the upper edge of a bottom recessing panel, each of an opposed



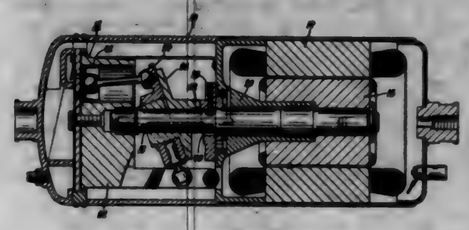
pair of said bottom flaps having a diagonal fold line which divides the flap into a part which is hinged to the respective bottom recessing panel and a motion-transmitting tab affixed in face-to-face relation with an adjacent bottom flap, the diagonal fold lines of each of the opposed pair of said bottom flaps being at an angle of 45 degrees to the hinge connecting the bottom flap and the corresponding bottom recessing panel, said motion-transmitting tab permitting the motion-transmitting flap to be folded against the flap to which it is hinged in the collapsed condition of the carton serving to erect the two adjacent bottom flaps when the corresponding outer walls are pivotally separated from collapsed condition.

2,943,781
MULTIWALL BAG TEAR STRIPS
John J. Goodrich, Pensacola, Fla., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed May 1, 1956, Ser. No. 582,020
4 Claims. (Cl. 229—66)



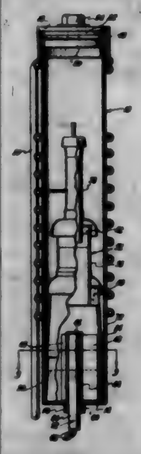
1. A multi-ply paper bag of the type having an end closure formed of pasted flaps including one or more underlying and overlying flaps, an overlying flap comprising a closure flap, and with a pull tab protruding from the edge of the overlying closure flap, the construction being characterized in that the outer surface of the inner ply is adhered to the inner surface of the next ply by a narrow band of adhesive which extends from within said tab at one end of the bag across said overlying flap and thence longitudinally along within a wall of the bag to the other end of the bag, such adhesive band and the paper of the plies adhered thereto forming a laminated tear strip which by grasping said tab may be torn out along tear lines at each side of the band, to open the bag, said inner ply and next ply being otherwise disconnected along said band of adhesive.

2,943,782
REFRIGERATING APPARATUS
Ralph McGregor, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 29, 1957, Ser. No. 662,515
3 Claims. (Cl. 230—20)



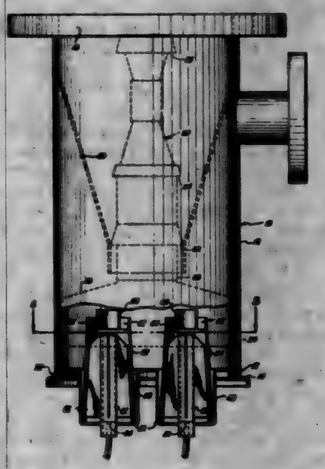
1. In combination, a pump including a drive shaft having an offset crank portion, a wobble plate assembly disposed on said crank portion, a cylinder block having a plurality of cylinders parallel to the axis of rotation of said shaft, piston means operating in said cylinders and driven by said wobble plate assembly, said assembly comprising a pair of relatively rotatable elements, means for securing one of said elements to said shaft, and means responsive to relative rotation of said elements for shifting the other of said elements axially on said shaft, said last named means comprising an inclined cam surface on one of said elements and a cam follower on the other of said elements slidably engaging said cam surface.

2,943,783
HEATER FOR A DIFFUSION PUMP
George H. Bancroft and Gordon F. Gerow, Rochester, and Donald L. Stevenson, Albion, N.Y., assignors, by mesne assignments, to Consolidated Vacuum Corporation, Rochester, N.Y., a corporation of New York
Filed Apr. 1, 1957, Ser. No. 649,898
2 Claims. (Cl. 230—101)



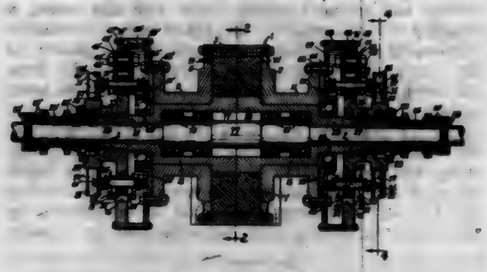
1. A diffusion pump having a cylindrical housing and a bottom wall, and a jet element positioned vertically and concentrically within the housing wall of the pump comprising heater means for boiling the diffusion liquid of the pump which normally collects in the region of the bottom wall, said heater means including a hollow cylindrical casing projecting up from the bottom wall of the pump, the casing being joined to the bottom wall in a hermetically sealed joint, the projecting upper end of the casing being closed off and hermetically sealed, a heating element positioned in the casing, a cylindrical wall encircling and arranged concentrically with said casing, a plurality of heat-conductive fins joined in heat conductive relationship to the casing, and extending lengthwise of the casing, the fins projecting radially outwardly from the casing within and extending substantially to the inner surface of said cylindrical wall to form a compartmented region for the liquid, the casing and fins projecting above the bottom wall of the pump and extending vertically partly below and partly above the level of the liquid charge in the pump, whereby the vapors from the boiling liquid in said compartmented region are superheated by the casing and fins as they rise within the jet element.

2,943,784
HEATER FOR A DIFFUSION PUMP
Donald L. Stevenson, Albion, and John L. Gallagher, Rochester, N.Y., assignors, by mesne assignments, to Consolidated Vacuum Corporation, Rochester, N.Y., a corporation of New York
Filed Apr. 16, 1959, Ser. No. 806,924
8 Claims. (Cl. 230—101)



1. A diffusion pump comprising an outer sealed housing having input and output conduit connections thereto, a hollow nozzle assembly positioned vertically in the housing and open at the lower end thereof; a liquid charge in the housing; and means for boiling the liquid to continuously generate vapor within the nozzle assembly including a plurality of hollow casings projecting upwardly through the liquid from the bottom of the housing, a plurality of heat conductive fins joined to each of the casings and projecting radially outwardly from the casings, the fins extending above the surface of the liquid, and a cartridge-type heater within each of the hollow casings; and a plurality of hollow cylindrical members, one of said members surrounding each of the casings and associated fins, the cylindrical members projecting above the liquid surface and being formed with an opening in the wall thereof below the surface.

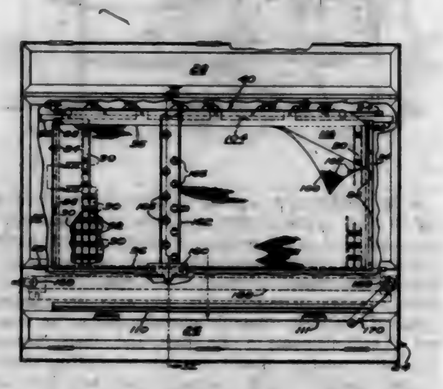
2,943,785
INTERNALLY POWERED COMPRESSOR
George E. Mallinckrodt, St. Louis, Mo., assignor to Elliot Enterprises, Incorporated, St. Louis, Mo., a corporation of Missouri
Filed Jan. 25, 1957, Ser. No. 636,415
6 Claims. (Cl. 230—139)



1. A rotary internally powered compressor comprising an annular cylinder having fuel inlet and exhaust ports positioned substantially to subtend therein a power sector of one angle and having respectively adjacent air exhaust and inlet ports positioned substantially to subtend a compressor sector of a substantially complementary angle completing a circle, piston-carrying rotors mounted for rotation relative to the cylinder and for free rotation relative to one another whereby either one of the rotors may rotate in a forward direction at any one of various angular velocities while the other remains stationary, each rotor having at least one pair of pistons interdigitated in the cylinder with pistons of the other rotor, the members of each such pair being so angled on their respective rotor that the angle therebetween substantially equals said complementary angle, whereby said power and compressor sectors may thereby be separated by a pair of pistons at intervals during rotor movements, each rotor having additionally at least one other piston bisecting the power sector when its said other pair of pistons is in a sector-separating position, reverse-locking means for each rotor adapted to lock it against rotation in reverse direction and in response to reverse-acting torque on the rotor to hold it stationary in a position wherein a said additional piston is in said bisecting position, whereby suction, compression, explosion and exhaust events may occur in said power sector when a pair of said angled pistons of the other rotor move therein, firing means adapted to initiate an explosion event to motivate a reverse-locking event and a compression event adapted thereafter to terminate said reverse-locking event, a said additional piston of the other rotor during power events in the power sector being located for movement in the compressor sector to perform air suction and exhaust events therein.

2,943,786
VOTING MACHINE RECORD PRINTING MEANS
Oscar F. Swanson, Jamestown, N.Y., assignor to Automatic Voting Machine Corporation, Jamestown, N.Y.
Filed July 19, 1957, Ser. No. 672,984
8 Claims. (Cl. 235—58)

1. In a voting machine having a counter column with the counterwheels thereof protruding rearwardly beyond adjacent structure of the voting machine, a voting return printing device comprising, in combination, a composite bar assembly mounted upon said voting machine across the top of said counter column and including a bar element arranged to be vertically shiftable relative thereto, a return sheet pack comprising a return sheet and a carbon sheet in face-to-face relation, a cloth panel carried by the machine externally of said return sheet pack and extending beyond the opposite side edges thereof to protect the latter, means mounting said return sheet pack upon said bar to cover the rear surfaces of said protruding counterwheels, a printing platen comprising a member mounting a series of rollers, said platen being mounted upon said machine so as to be shiftable from end-to-end thereof across the rear faces of said counterwheels, said rollers being dimensioned and arranged upon said platen so as to be carried thereby in horizontally traveling directions and pressed firmly against the protruding segment portions of said counterwheels whereby

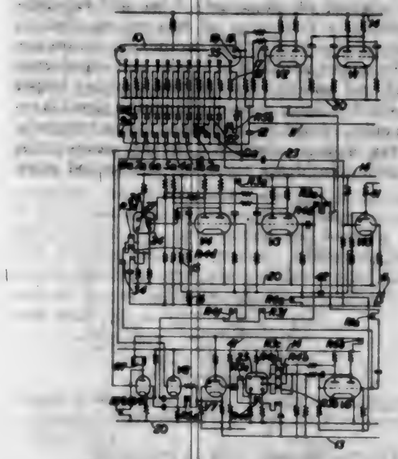


to press said return sheet pack against the exposed segment portions of said counterwheels thereby impressing upon said return sheet facsimiles of the readings of said counterwheels, cam means carried by said machine and operable automatically upon arrival of said platen at one end of said machine to cam said bar vertically whereby to cause said return sheet pack to be positioned at one elevation during travel of said platen from one end of said machine to another while being disposed at a different elevation during travel of said platen from said other end of the machine to the first mentioned end thereof, and means connected with said means mounting the return sheet pack upon the bar operable automatically upon arrival of said platen at one end of the machine to release said return sheet to fall by gravity out of the machine.

2,943,787
DATA CHECKING APPARATUS
John Robert Cartwright, Letchworth, England, assignor to International Computers and Tabulators Limited, a British company
Filed Apr. 2, 1954, Ser. No. 420,703
Claims priority, application Great Britain May 20, 1953
11 Claims. (Cl. 235—61.7)

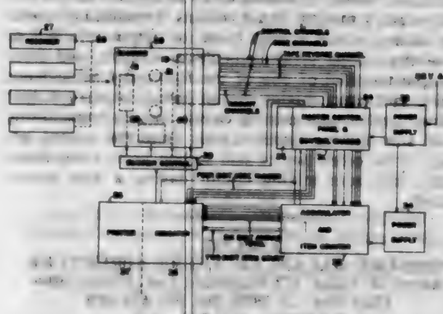
1. An apparatus for checking the accuracy of data recorded by punching a card or tape, comprising a keyboard for entering a data item and a check code having a predetermined relation to said item, a punching mechanism for recording the data item under control of the keyboard, separate counter means for calculating a check code, said counter means being operated under the direct control of the keyboard, said keyboard being connected to enter the check code through the keyboard under the control of the punching mechanism, means automatically

connecting said keyboard to control the punching mechanism and the check code calculating means respectively,



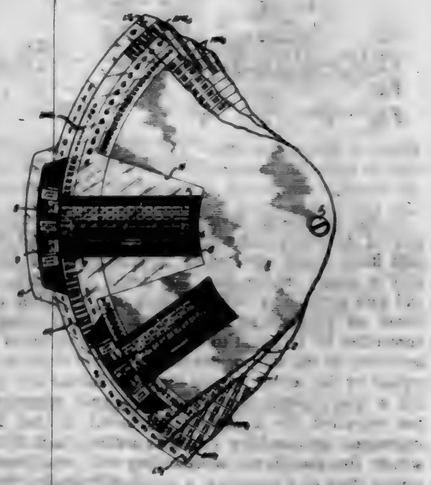
and means for determining whether the entered and the calculated check codes are in agreement.

2,943,788
DATA ANALYZING APPARATUS
Desmond R. Hearnsen, Spring Valley, and Ernest V. Gulden, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Apr. 16, 1953, Ser. No. 349,297
42 Claims. (Cl. 235—61.9)



2. In an apparatus for analyzing a tape during successive passes of the tape back and forth past a sensing means, the tape containing control signals and a plurality of entries, each of which entries includes amount identification data and a related amount, the combination of a sensing means for sensing the control signals, identification data, and amounts on the tape; an accumulator; analysis control means settable to an amount identification data to be used in selecting amounts to be accumulated in a pass of the tape; selecting means controlled by the sensing means which senses amount identification data and by the analysis control means for enabling amounts related to the identification data set on the analysis control means to be entered into the accumulator under control of the amount sensing means; recording means settable from the accumulator and the analysis control means and operable to record the identification data and the total of related amounts which were accumulated during a pass; means to feed the tape back and forth past the sensing means, each pass consisting of a complete, continuous feed of all the entries on the tape past the sensing means; turn-around control means operated by certain control signals on the tape for controlling the tape feeding means to reverse the direction of tape feed at the end of a pass and to arrest further feed as soon as the direction of feed has been reversed; means controlled by the turn-around control means for causing a setting of the recorder from the accumulator and the analysis control means and for preparing a control means to initiate a recording operation of the recorder automatically upon the completion of the setting of the total and the item identification data therein; and means controlled by the recorder, when the total and identification data have been set therein, and by the turn-around control means, to initiate a further operation of the feeding means to cause the next pass of the tape to be made and to operate the analysis control means to set new identification data therein to be used in selecting amounts in the next pass of the tape.

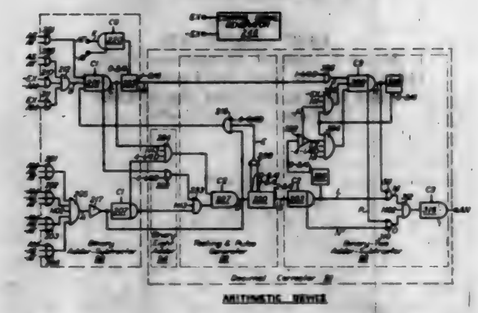
2,943,789
DISC COMPUTER
Harry T. Fairchild, Sacramento, Calif. (1822 Lawndale Ave., San Leandro, Calif.)
Filed July 26, 1957, Ser. No. 674,414
1 Claim. (Cl. 235—88)



A computer comprising: a disc; a sweep mounted on said disc coaxially therewith for rotation relative thereto, said sweep being provided with a radial row of windows and with a pair of circularly spaced windows located at one end of said radial row of windows and designated on said sweep as lead time windows, one of said windows of said radial row of windows being designated on said sweep as an average monthly consumption window and the remaining windows of said radial row of windows being designated on said sweep as unit price windows, said sweep being imprinted along said unit price windows with a plurality of pairs of circularly spaced figures arranged in radial rows, each of said pairs of figures indicating a price range, said disc being imprinted with a circular row of lead time figures in radial alignment with the said lead time windows of said sweep, said lead time figures being arranged in a plurality of groups wherein the figures of each group are all identical but are arranged in arithmetic progression from group to group, said disc being imprinted in radial alignment with the said average monthly consumption window of said sweep, with a plurality of groups of average monthly consumption fig-

ures, there being one such group for each of said groups of lead time figures, the said average monthly consumption figures of each of said groups being arranged in pairs and in a mathematical progression, said disc having also imprinted thereon a plurality of groups of circularly spaced pairs of radial rows of minimum and maximum figures in radial alignment with the said unit price windows of said sweep, and said latter pairs of figures being arranged in a mathematical progression, there being one such group of minimum and maximum figures for each said group of lead time figures.

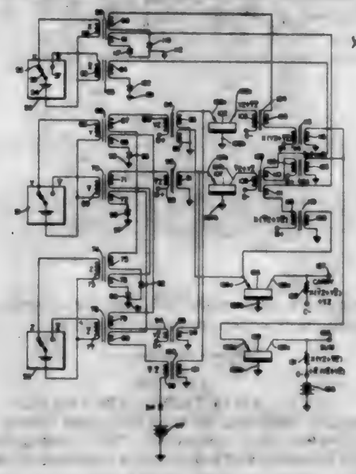
2,943,790
ARITHMETIC DEVICE
Evelyn Berezin, New York, N.Y., and Phyllis Hersh, West Englewood, N.J., assignors, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Filed Jan. 10, 1956, Ser. No. 553,270
9 Claims. (Cl. 235—170)



1. An arithmetic device for adding or subtracting a pair of decimally expressed items, each decimal digit of said items being represented by a sequence of four signals in binary relationship, said device comprising a control unit settable to cause addition or subtraction of said items, an add-subtract means receiving said signals and controlled by said unit to provide an output signal representative of the sum or difference of said items as determined by the setting of said unit, said means also providing a tens transfer signal when a signal sequence does not represent the arithmetically correct decimal digit, a converter activated by said tens transfer signal to substitute for the signal representing the most significant binary digit of a sequence, a signal representing the complement of said digit and a second add-subtract means settable by said control unit for an arithmetic state opposite to the state of said first unit and rendered effective by said tens transfer signal to arithmetically combine a signal representing a binary two to each non-arithmetically correct decimal digit sequence of said output signal.

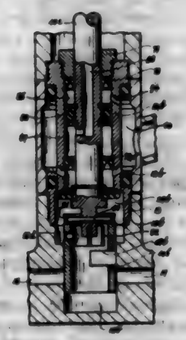
2,943,791
BINARY ADDER USING TRANSFORMER LOGICAL CIRCUITS
Robert A. Henle, Hyde Park, and Marion L. Wood, Highland, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 28, 1954, Ser. No. 478,894
9 Claims. (Cl. 235—176)

4. A binary adder comprising three signal sources, each adapted to produce at all times direct and inverse binary signals, each said source having a direct signal terminal and an inverse signal terminal at which said direct and inverse signals respectively appear, a first array of four coincidence circuits, means transmitting to each of said four coincidence circuits signals from one terminal of each of two of said sources, each said coincidence circuit having an output terminal at which a signal appears only when signals are received simultaneously from said last-mentioned terminals, a first array of two mixing circuits, means transmitting to each of said two mixing circuits signals from the output terminals of two of said coincidence circuits, each said mixing circuit having a mixing output terminal at which a signal appears whenever a signal is received from either of said last-mentioned output terminals, a second array of three coincidence circuits, means transmitting to each coincidence circuit of said second array



signals from one terminal of the third of said three sources and from one of said mixing output terminals, each said coincidence circuit of second array having an output terminal, a carry mixing circuit, means transmitting to said carry mixing circuit signals from an output terminal of one of the second array coincidence circuits, and from an output terminal of one of the first array coincidence circuits, said carry mixing circuit having a carry output terminal, and a sum mixing circuit, means transmitting to said sum mixing circuit signals from the output terminals of the other two of said second array coincidence circuits, said sum mixing circuit having a sum output terminal.

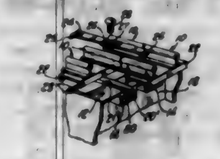
2,943,792
PRESSURE BALANCED VALVE STRUCTURE
Alfred M. Moen, 377 Woodland Ave., Elyria, Ohio
Filed Nov. 13, 1956, Ser. No. 621,880
5 Claims. (Cl. 236—12)



1. A mixing valve structure comprising a valve housing having an outlet chamber therein, a mixing valve member

mounted in the chamber, the mixing valve member being reciprocably and rotatably movable to control the volume, selection and mixture of the fluids passing through the housing, the mixing valve member including a stem portion extending therefrom so that at least a part of the same is exposed to the atmosphere, a discharge passage leading from the outlet chamber, the housing having inlets terminating in ports controlled by the mixing valve member; and pressure balancing means in the valve housing which maintain the stem portion in balanced condition and comprising a fluid pressure chamber and an atmospheric pressure chamber in communication with the atmosphere, means connecting said fluid pressure chamber to the outlet chamber, separating means carried by and movable with the stem portion and forming a common wall between the two pressure chambers, and sealing means about the stem portion and sealing the opposite ends of the two pressure chambers opposed to said common wall.

2,943,793
TRESTLES
Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed Oct. 31, 1956, Ser. No. 619,610
8 Claims. (Cl. 238—10)



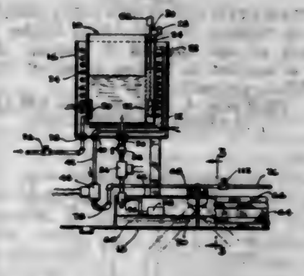
8. A trestle pier for model railroad track including track sections having end cross ties comprising a track section supporting pier adapted to be disposed transversely to said track and having at least two substantially parallel spaced channels in the top thereof, and track section fastening means positionable in said channels and spanning said cross ties of adjacent track sections, said fastening means including a threaded member positioned in said channels and screw means connecting said abutting end cross ties to said threaded member.

2,943,794
LIQUID AERATING DRINKING STRAW
Martin V. Sussman, 9 Thomas Drive, Monroe Park, Wilmington, Del.
Filed Nov. 29, 1957, Ser. No. 699,752
9 Claims. (Cl. 239—33)



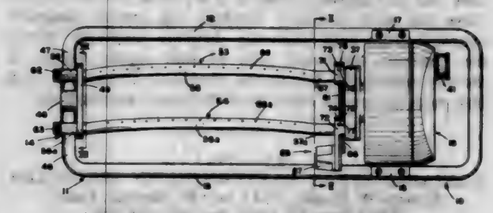
1. A drinking tube having a tube wall, said tube having a plurality of air admission apertures, each defined solely by a portion of the tube wall and by an adjacent portion of the tube wall located inwardly and spaced from the adjacent outer portion of the tube wall, said portions cooperatively defining a check valve to permit air to enter the tube when liquid is drawn through the tube from the receptacle and to prevent egress of liquid through the apertures, each aperture in the tube wall having an effective area equivalent to that of a circular orifice of from 0.001 inch to 0.035 inch in diameter.

2,943,795
SPRAYING DEVICE
James G. Yahnke, deceased, late of Libertyville, Ill., by Grace Yahnke, executrix, 306 Meadow Lane, Libertyville, Ill.
Original application June 7, 1955, Ser. No. 513,688, now Patent No. 2,817,600, dated Dec. 24, 1957. Divided and this application Aug. 16, 1957, Ser. No. 678,658
1 Claim. (Cl. 239—128)



A device for spraying hot liquid comprising a supply tank for said liquid, a heating element attached to said tank, an elongated container for hot liquid, a heater attached to said container, conduit means connecting said tank with said container, siphon spray means comprising concentric conduits the inner of which is connected with said container and adapted to withdraw liquid therefrom in response to the passage of compressed air through the outer of said conduits, and a supply of air under pressure connected to said outer conduit.

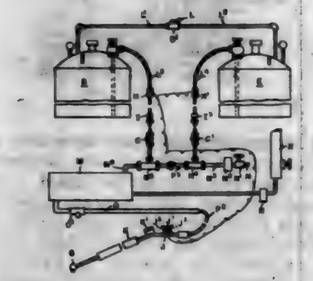
2,943,796
DOUBLE TUBE OSCILLATING LAWN SPRINKLER
Edwin W. Smith, Climax, Mich., assignor, by mesne assignments, to Turner Corporation, Sycamore, Ill., a corporation of Illinois
Filed Mar. 15, 1957, Ser. No. 646,239
3 Claims. (Cl. 239—242)



2. An oscillating lawn sprinkler construction comprising: a ground engaging frame; a housing mounted on said frame adjacent one end thereof, said housing having a water inlet connection; an arcuately movable drive crank mounted on said housing; a header structure mounted on said housing and having a passageway therein communicating with the interior of said housing and with the path of movement of water therethrough so that the water as it exits from said housing enters said passageway, said

header structure having two oppositely extending conduits therein communicating with said passageway; a pair of elongated, substantially parallel, tubular sprinkler heads transversely spaced from each other and each thereof communicating at one end thereof with one of said conduits, means in said header structure rotatably supporting said one end of said sprinkler heads; a fixture mounted on said frame adjacent the other end thereof and extending upwardly therefrom; means on said fixture spaced upwardly from said frame rotatably supporting the other end of said sprinkler heads; a driven crank rigidly secured to each of said sprinkler heads adjacent said one end thereof; a link bar extending between and pivotally connected at its respective ends to said driven cranks and means connecting said drive crank to one of said driven cranks whereby arcuate movement of said drive crank will effect oscillation of said sprinkler heads.

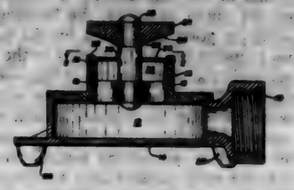
2,943,797
APPARATUS FOR TREATING SURFACES
Howard R. Neilson, Detroit, Mich.; Shirley W. Neilson, executrix of said Howard R. Neilson, deceased, assignor of one-half to Neilson Chemical Company, Detroit, Mich., a copartnership
Filed June 4, 1956, Ser. No. 589,112
4 Claims. (Cl. 239—365)



1. Apparatus for chemically treating metal surfaces to apply an adherent phosphate coating which comprises a delivery conduit terminating in a manually dirigible discharge nozzle for directing the stream flowing therefrom against and over the surface of the metal, a steam supply conduit connected to said delivery conduit for introducing a constant uniform flow of steam, a plurality of auxiliary supply conduits connected to said delivery conduit between said steam supply and said nozzle, a separate chemical-containing tank for each auxiliary conduit, a pre-set metering device between each chemical tank and said delivery conduit, a separate closable supply valve for each auxiliary conduit and means manually operable from said manually dirigible discharge nozzle for remotely operating each of said supply valves to thereby selectively deliver the chemicals from each tank into said stream in exact predetermined proportions.

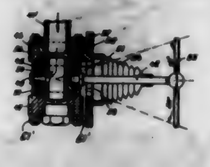
2,943,798
VARIABLE SPRAY PATTERN LAWN SPRINKLER
George W. Rizuka, 734 Cook St., Denver, Colo.
Filed Sept. 13, 1954, Ser. No. 455,488
2 Claims. (Cl. 239—520)

1. A water sprinkler comprising a hollow body having means for its attachment to a supply line and having a plurality of upright passages interiorly of the body for directing circulating water in linear streams to an elevated discharge outlet, said outlet comprising a four-sided opening adjacent the top of said hollow body and a member interiorly of said opening extending upwardly therethrough and defining therewith a restricted annular discharge passage for the elevated linear streams, and a head mounted on said upright member above said outlet and providing an overhang of substantial extent laterally beyond said passage, the under surface of said head having two angularly disposed surfaces at a low angle



to the horizontal, the innermost being at a greater angle to the horizontal than the outermost, whereby the non-rotational discharge is directed outwardly to form a spray pattern similar to the shape of the outer circumference of said outlet.

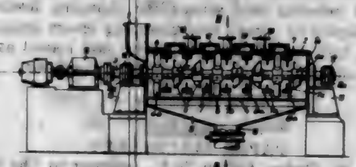
2,943,799
VALVE AND NOZZLE FOR A WASHING UNIT
Hans Bodmer, Rütlistrasse 21, Winterthur, Switzerland
Filed Mar. 11, 1957, Ser. No. 645,135
Claims priority, application Switzerland Mar. 15, 1956
1 Claim. (Cl. 239—569)



A spray nozzle arrangement, comprising in combination, a valve housing having an inlet opening, an outlet aperture at one side, and an access aperture at the other side of said inlet opening and opposite to said outlet aperture, said housing including a pair of complementary swivel bearing portions having their meeting faces disposed in a plane transversal of the planes of said apertures, and having said inlet opening provided in one of said bearing portions; connecting means for detachably fastening said bearing portions to each other; a supporting bracket portion extending from one of said swivel bearing portions in a plane adjacent to and substantially parallel to the plane of said access aperture and having an opening substantially registering with said access aperture; a valve body fitting into said valve housing and having a passage therethrough with an inlet end and a spray discharge end, said valve body arranged swivelably in said valve housing between a closing position in which said inlet opening of said valve housing and said inlet end of said passage in said valve body are out of communication with each other and a plurality of open positions corresponding to respective swivel positions in each of which positions said spray end of said passage in said valve body is located within the area of the outlet aperture of said valve housing; sealing means effectively sealing the space between said valve housing and said valve body around said inlet opening in said valve housing and said inlet end of said passage in said valve body in any swivel position thereof relative to the valve housing; an actuating member extending from said valve body through said access aperture in the valve housing and through said registering opening in said bracket portion operable to position said valve member in any desired swivel position as well as to control communication between said passage in the valve member and said opening and said inlet opening in the housing; and a bellows

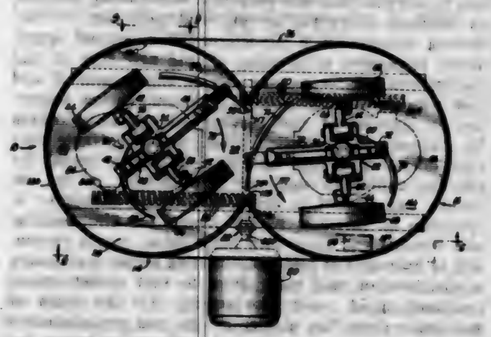
surrounding said actuating member and operatively connecting the same with the edge portion of said registering opening.

2,943,800
HIGHLY EFFECTIVE DEVICE FOR WET-SEPARATION
Ferdinand Wolesch, Am Andritzbach 20, Graz-Andritz, Austria
Filed Mar. 2, 1955, Ser. No. 491,637
Claims priority, application Austria Nov. 13, 1954
2 Claims. (Cl. 241—42)



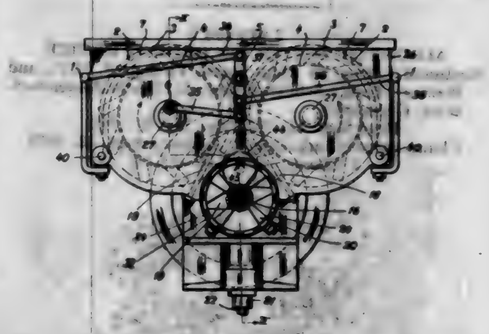
1. In an apparatus for the wet separation of wood pulp, a tubular vat, a rotatable shaft extending longitudinally of the vat, a plurality of propeller-like blades on the shaft and arranged helically and adjustably on the shaft, a sieve forming the bottom of the tubular vat, a plurality of rigid, interchangeable beater elements within the vat and in spaced relationship to said blades on the shaft, means to vary the speed of rotation of the shaft, a plurality of adjustable damming plates arranged in parallelism within the vat and dividing the sieve into zones, adjustable water inlets for the vat and a slide valve for controlling the outlet of tailings from the vat.

2,943,801
MULTIPLE STAGE MIXING APPARATUS
Robert L. McIlvaine, Winnetka, and Axel G. Granath, Chicago, Ill., assignors to Herbert Simpson Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 23, 1957, Ser. No. 704,767
7 Claims. (Cl. 241—124)



4. In a mixer for granulated material the combination of a first crib, a second crib in communication with said first crib, first and second plows respectively located within said first and second cribs for movement therein, inlet means for admitting granular material to the first crib, outlet means in said second crib for discharging granular material, and means for rotating said plows, so that said first plow causes material to be transferred from said first crib to said second crib, said second plow being positioned relative to said first plow to pass immediately behind said first plow so that material adjacent to the second plow is prevented from flowing from the first crib to the second crib, whereby the material progresses continuously through the mixer through the inlet means, the first crib, the second crib and the outlet means.

2,943,802
MACHINE FOR THE CHOPPING OF STABLE MANURE
Christian Sigvard Jensen, Solvang 31 Bredgade, Lem Station, Denmark
Filed July 29, 1957, Ser. No. 674,760
1 Claim. (Cl. 241—186)



In a machine designed for the chopping of stable manure, a feeding container arranged underneath said machine, a rotating conveyor worm in said container adapted to convey the stable manure to a rotating chopping member, rigid chopping members cooperating with the latter, two drums provided with off-set feeding barbs and being mounted in the feeding container above the conveyor worm, feeding barbs of a grate arranged above each of the drums, said off-set feeding barbs being adapted during rotation of the drums to beat between the barbs of said grate, said drums being rotatable in opposite directions of rotation, whereby the sides of the drums lying nearest each other will move downwards towards the conveyor worm, the ends of the grate lying at the greatest distance from each other being rotatably mounted on the shafts, said shafts being through intermediary connecting rods and linked rod actuated by an eccentric arranged on one of the drum shafts, whereby said grates are alternately lifted and lowered simultaneously.

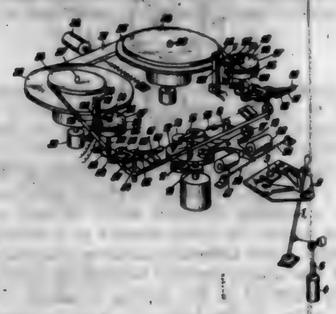
2,943,803
TRAVERSING ROLL
William V. Henry, Candler, N.C., assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Nov. 7, 1956, Ser. No. 620,975
5 Claims. (Cl. 242—43.2)



1. A yarn traversing roll comprising a rotatable cylinder having a helical cam groove in the outer surface there-

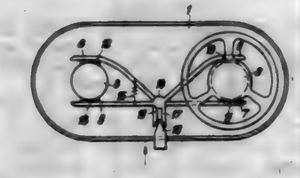
of, said groove having two rapid reversing sections, and a wear-resistant member embedded in the outer edge of said groove and extending from a trailing edge of one rapid reversing section through the other rapid reversing section, said wear-resistant member projecting from said outer edge into yarn-contacting position.

2,943,804
MAGNETIC SOUND RECORDING DEVICE
Siegmund Loewe, 68 Ridge Road, Yonkers 5, N.Y., and Werner Zorn, Schillerstrasse 5, Berlin-Zehlendorf-West, Germany
Filed Sept. 24, 1956, Ser. No. 611,792
Claims priority, application Germany Sept. 28, 1955
2 Claims. (Cl. 242—55.12)



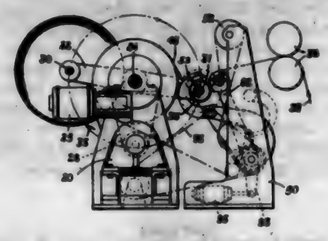
1. A magnetic sound recording device of the type having a pair of reels for the winding and storage thereon of a tape on which sound impulses may be impressed, and comprising driving means for rotating said reels and thereby moving said tape, an indicating device driven by the tape including a dial and a pointer for indicating at any time the length of said tape run-off, coupling means between said pointer and said driving means, a contact device shiftably and selectively adjustably arranged on said indicating device and, when contacting the pointer of said device, performing a control of said driving means, said contact device consisting of a main spring contact and two repelling guard springs each arranged at either side of said main spring contact, said two repelling guard springs being so dimensioned with reference to their spring force as to be adapted for giving contact between said pointer and said main spring contact only when said pointer is driven from the tape movement by means of said coupling means.

2,943,805
CLAMPING DEVICE FOR TAPE SPOOLS OF MAGNETIC TAPE RECORDERS
Siegmund Loewe, 68 Ridge Road, Yonkers 5, N.Y.
Filed July 18, 1955, Ser. No. 522,508
Claims priority, application Germany Aug. 5, 1954
3 Claims. (Cl. 242—55.13)



1. A clamping device for locking the winding spools within a magazine arrangement insertable into magnetic recording apparatus, comprising a magazine casing, a pair of winding spools within said casing, a pair of clamping levers within said casing, a tension spring attached with both its ends to said clamping levers, friction coatings on said clamping levers, and a control member for operating said clamping levers which are to be pivotally spread apart for the unlocked condition of said spools, said pair of clamping levers consisting of two scissor-like arms rotatable round and pivotally mounted at a common centre point, the ends of said clamping levers being supplied with said friction coatings and locking said winding spools by being pressed by said tension spring against the outer surfaces of said spools when the magazine is in inoperative position, said control member being shiftably arranged between said scissor-like clamping levers and being adapted to spread said clamping levers against the force of said spring, thus unlocking said spools as soon as said magazine casing is in operative condition.

2,943,806
PAPER MACHINERY
Richard W. Phelps, Fulton, N.Y., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed July 5, 1956, Ser. No. 595,983
9 Claims. (Cl. 242—56)

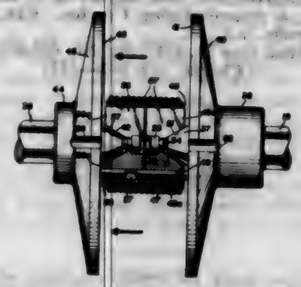


1. Continuous winding apparatus for web material comprising a reel for simultaneously supporting a winding roll and a new core, a main drive for selectively driving said roll and core, an indexing drive for said reel to advance said new core to a roll starting position, an auxiliary drive for driving said new core in said starting position at a predetermined rotational speed, means responsive to indexing of said new core to said starting position for causing driving engagement of said core with said auxiliary drive, additional means responsive to indexing of said core to said starting position for stopping said indexing drive, means operable only after operation of said additional responsive means for effecting cutting of said web and transfer of the cut leading end thereof to said core, means responsive to operation of said last named means for disconnecting said winding roll from said main drive, means responsive to operation of said disconnecting means for causing acceleration of said main drive to said predetermined rotational speed, means for sensing that the speed of said main drive has accelerated to said predetermined speed, and means responsive to said sensing means for simultaneously disconnecting said auxiliary drive from said new core and for effecting engagement of said core with said main drive.

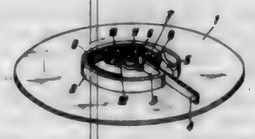
2,943,807
SPOOL MECHANISM
James P. Loop, Kokomo, Ind., assignor to Continental Steel Corporation, Kokomo, Ind., a corporation of Indiana
Filed Apr. 15, 1955, Ser. No. 501,537
10 Claims. (Cl. 242—72.1)

1. An expansible and collapsible spool mechanism for winding or unwinding coils of wire and the like comprising, a pair of separate rotatably mounted axially aligned

spool ends, a cone on each spool end extending axially toward the other spool end, a pair of separate substantially cylindrical core-halves disposed respectively about said cones, each core-half being comprised of a plurality of arcuate core segments having inner surfaces slidable on the conical surface of that cone about which the core-half is disposed, said segments being displaced radially on said cones when moved axially thereon, means including a stop member fixed upon the apex end of each cone for retaining the segments of said core-halves about their respective cones when said spool ends are separated, and means for moving one of said spool ends toward the other to bring the ends of the segments of one of said core-halves forcefully against the corresponding ends of the segments of the other core-half, thereby moving the segments of both of said core-halves axially upon said cones and displacing said segments radially to increase the diameters of said core-halves.

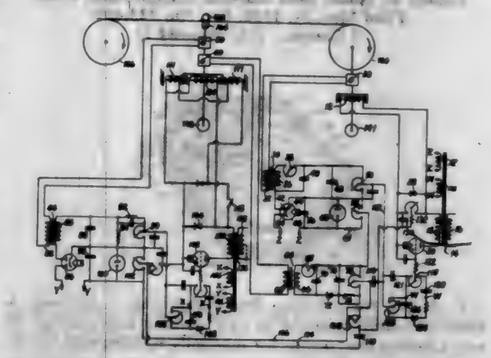


2,943,808
MAGNETIC TAPE REEL
Siegmund Loewe, 68 Ridge Road, Yonkers 5, N.Y., and Werner Zorn, Schillerstrasse 5, Berlin-Zehlendorf-West, Germany
Filed Oct. 8, 1956, Ser. No. 614,766
Claims priority, application Germany Oct. 11, 1955
5 Claims. (Cl. 242—74.1)



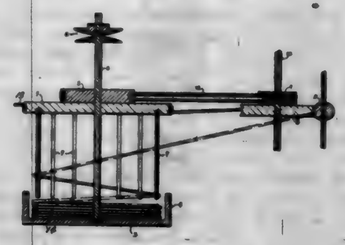
1. A magnetic tape reel containing a core with a slot parallel to the reel axis, a bearing surface for the tape end introduced through said slot, and a slanting surface for a clamping member arranged on both margins of said slot, both surfaces being directed into the interior of said core, a clamping member being arranged between said surfaces and shiftable into one of two positions in the first of which said clamping member is removed from said bearing surface for introducing said tape end, and in the second of which said clamping member is pressed between said surfaces thereby arresting said tape end, said clamping member being secured on a carrier arranged in said reel core and shiftable into two positions corresponding with the positions of said clamping member, said carrier containing a stop means, said core provided with a second stop means, both said stop means being adapted to engage with one another in such a manner that said clamping member is fixed in each of its two positions.

2,943,809
TENSION CONTROL APPARATUS
Roscoe H. Garrett, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 21, 1954, Ser. No. 463,745
10 Claims. (Cl. 242—75.51)



1. In material reeling apparatus which includes a rotary reel on which material is wound, a motor, an electric clutch connecting said motor with said reel, and a field coil for varying the coupling between said motor and said reel; a tension control system comprising a generator driven by said reel and adapted to produce an A.C. voltage having an amplitude and frequency which are proportional to said reel speed, an RC circuit across which said voltage is impressed, said RC circuit comprising a resistor series-connected with a condenser, a rectifier connected across one of said components of said RC circuit and adapted to produce a first D.C. voltage signal nonlinear in relation to reel speed, a circuit providing a second control signal including a resistor and a condenser serially connected across an adjustable D.C. potential source, and means for controlling the energization of said field coil in response to a composite of said first and second signals whereby the tension of the material being wound on the reel is controlled in a predetermined fashion over a wide range of material winding speeds.

2,943,810
TAKE-UP MECHANISM
Frederick R. Seavey, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Apr. 10, 1959, Ser. No. 805,448
4 Claims. (Cl. 242—83)



1. Apparatus for pulling and coiling elongate flexible material comprising a rotatable main shaft, means for rotating the shaft, a capstan, pulley, and material receiver mounted on the shaft, a second shaft having a capstan and a pulley mounted thereon, a separately mounted pinch roll in association with the capstan on

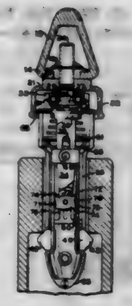
the second shaft, and means for driving the capstan on the second shaft at a higher peripheral speed than the capstan on the main shaft.

2,943,811
FISHING REEL
Aubrey D. Isbell, 1005 Garfield St., Loveland, Colo.
Filed Mar. 24, 1958, Ser. No. 723,402
4 Claims. (Cl. 242—84.1)



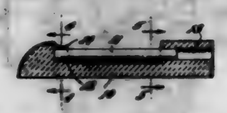
1. A reel for a fishing line comprising: a housing; a spool rotatably mounted in said housing and adapted to reel a fishing line; means for manually rotating said spool; a roller block pivotally mounted at its one extremity in said housing in the plane of and adjacent said spool; a traction roller rotatably mounted in and adjacent the other extremity of said block and axially parallel to said spool; a pressure roller rotatably mounted in said block; resilient means urging said pressure roller toward said traction roller to engage the fishing line as it passes from said spool between said rollers and thence from said housing; a spring urging said block to rotate about its pivot to bring said traction roller into contact with the spool so that rotation of the spool will impart rotation to both rollers; an opening in said housing over said roller block; a hinged lid flap pivotally mounted at its rearward extremity axially parallel to said spool and closing said opening, said spring being mounted on said block in a position to be contacted by said lid flap as the latter is closed so as to resiliently maintain said block in said housing; and latch means for latching said lid flap closed.

2,943,812
BOBBIN HOLDER
Richard K. Whitehead, Sr., and Richard K. Whitehead, Jr., both of 2001 N. Gatewood Road, Emory University, Ga.
Filed Jan. 6, 1958, Ser. No. 707,135
9 Claims. (Cl. 242—130.2)



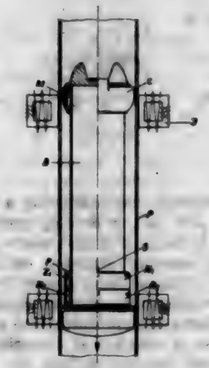
1. A bobbin holder including a rotary bearing, a rotary element supported by said bearing, a pair of arms pivotally mounted on said element for sliding movement with respect thereto, bobbin engaging fingers carried by said arms, means for pivotally moving said arms in response to sliding movement thereof with respect to said element, said means including a cam mounted on said element, said cam being rotatable on a transverse axis fixed with respect to said element and engageable by said arms for rotation in step by step movement as said arms slide with respect to said element.

2,943,813
THREAD GUIDES FOR TEXTILE MACHINES
Freeman Richard Cass, New Hope, Pa., % Lambertville Ceramic & Manufacturing Co. Inc., P.O. Box 118, Lambertville, N.J.
Filed June 14, 1957, Ser. No. 665,852
2 Claims. (Cl. 242—157)



1. A thread guide for textile machines and the like comprising a holder made of a single integral piece of molded material, and an insert in said holder over which the thread is adapted to pass comprising a straight rod of harder material seated at one end in a portion of the holder and permanently secured thereto by a fired glaze, and the other end of said rod being supported against lateral movement but free to move longitudinally in a hole in another portion of the holder which hole is in alignment with the seat in which the first mentioned end of the rod is secured.

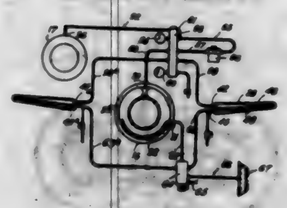
2,943,814
DATA SENSING ARRANGEMENT
Fritz Mittag, Berlin-Friedenau, and Horst Ringhandt, Berlin-Reinickendorf, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,723
Claims priority, application Germany Aug. 9, 1956
13 Claims. (Cl. 243—16)



1. An arrangement for sensing recorded data on a movable article which travels along a path comprising in combination, a fixed magnetic index disposed on said article, movable magnetic means disposed on said article longitudinally spaced from and angularly displaceable with respect to said index, a first group of magnetic sensing means circumjacently fixed with respect to said path, and adapted to sense the angular position of said

index with respect to said path, a second group of magnetic sensing means circumjacently fixed with respect to said path and spaced from said first sensing means a distance substantially equal to the spacing between said index and said movable magnetic means on said article, said second sensing means adapted to sense the angular position of said movable means with respect to said index, two groups of electromagnetic relays, each relay having a plurality of contacts, the relays of the first of said groups under control of a different one of said first sensing means, respectively, and the relays of the other of said groups under control of a different one of said second sensing means, respectively, a plurality of electromagnetic switch means for controlling the destination of said article along said path, a circuit for operating said electromagnetic switch means including a network of contacts associated with relays of both said groups whereby the angular position of said movable magnetic means controls operation of said switch means in a predetermined manner and independent of the angular position of said article in said path.

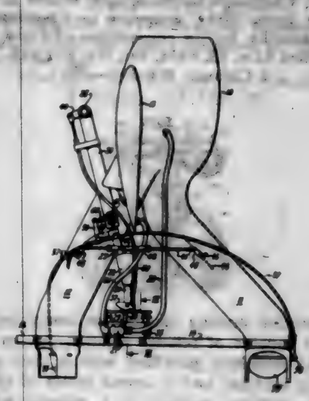
2,943,815
AERODYNES, MORE PARTICULARLY PILOTLESS AERODYNES
Louis Besson, Le Cannet, France, assignor to Sud-Aviation Societe Nationale de Constructions Aeronautiques, Paris, France
Filed Nov. 10, 1955, Ser. No. 546,081
Claims priority, application France Nov. 19, 1954
20 Claims. (Cl. 244—14)



1. Fuel storage means, notably for a pilotless aircraft more particularly utilized as a missile, comprising a rigid hollow tank, a flexible fuel cell freely housed in said tank and independent of the walls thereof and having when filled with fuel substantially the same shape and dimensions as the inner cavity of said tank, a pipe connecting said tank to a source of gaseous fluid under pressure, and a perforated discharge pipe housed in said cell throughout the length of said cell and disposed in the central part of said tank.

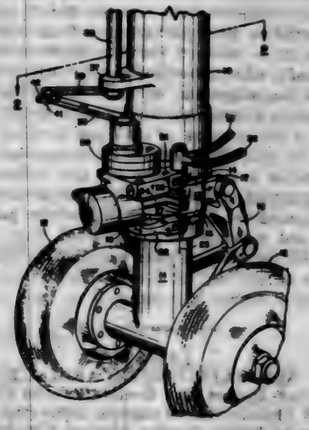
2,943,816
VERTICAL TAKE-OFF HIGH-SPEED AIRCRAFT
Stanley Hiller, Jr., Atherton, Calif., assignor to Hiller Aircraft Corporation, Palo Alto, Calif., a corporation of California
Filed July 6, 1954, Ser. No. 441,353
14 Claims. (Cl. 244—23)

1. A jet propelled aircraft comprising an immovable housing for a jet-type engine, three thrust pipes leading from the housing to spaced exhaust points, dampers in the thrust pipes for varying the flow quantity of gases therethrough to control flight direction, an adjustable flap movably mounted adjacent the end of each thrust pipe to insure stable flight, means to control flow of fuel to the engine, a pilot supporting platform positioned between a pair of adjacent pipes and secured thereto, a movable control column manually operable by a pilot supported on said platform, and connections between the control col-



umn and the dampers, flaps and fuel control means to enable adjustment thereof.

2,943,817
AIRCRAFT GROUND STEERING MECHANISM
Walter H. Hogan, Olmsted Falls, Ohio, assignor to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
Filed Sept. 16, 1955, Ser. No. 534,664
6 Claims. (Cl. 244—50)



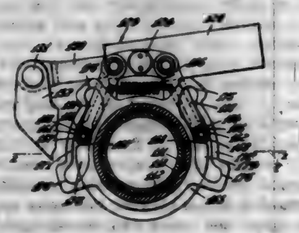
1. An aircraft steering mechanism comprising a first member and a second member rotatable relative to said first member, fluid actuated piston and cylinder elements capable of relative axial motion wherein one of said elements is pivotally connected to said first member and the other is pivotally connected to said second member whereby relative axial motion between said elements produces relative rotary motion between said members and relative rotation between said one element and said first member, a valve mounted on the said one element connected between said elements and a source of fluid pressure operable to control fluid flow to said elements and thereby control said relative axial motion, an operator mounted on said first member rotatable relative thereto, connected means between said valve and operator operable to open said valve and connect said elements to said source in response to rotation of said operator and close said valve in response to movement of said valve with said one element.

2,943,818
STEERING MECHANISM
Anthony V. Camino, Cleveland, and Walter H. Hogan, Olmstead Falls, Ohio, assignors to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
Filed Mar. 15, 1956, Ser. No. 571,842
6 Claims. (Cl. 244—50)



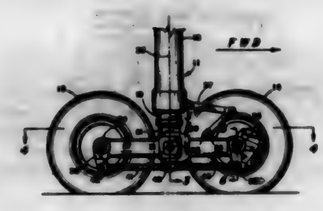
1. An aircraft steering mechanism comprising a pair of members capable of relative rotation, a cam fixed on one of said members provided with a first group of spaced ramp surfaces and a second group of spaced opposed ramp surfaces inclined in a manner whereby a linear force supplied successively to one group of surfaces causes rotation of said one member, a plurality of fluid motors mounted on the other of said members each including an element movable under the influence of pressure fluid, a source of pressure fluid connected to a first pressure line, a fluid reservoir connected to a second pressure line, a cam follower carried by each element engaging said cam adapted to exert said linear force by virtue of movement of said element, said cam and fluid motors being proportioned so that at least one cam follower always engages one of said first group of surfaces and at least another always engages one of said second group of surfaces, all of said ramp surfaces being formed so that the ratio between the magnitude of linear displacement of a cam follower engaging any ramp surface relative to the magnitude of the annular displacement of said cam is a constant, and control means operated by virtue of the rotation of said one member operably connected to said fluid motors to successively connect the fluid motor associated with the cam follower engaging one group of surfaces to said first pressure line as each surface of the group moves into the path of the followers and successively connects the fluid motor associated with the cam follower engaging the other group of surfaces to said second pressure line as each surface of such group moves into the path of each follower.

2,943,819
AIRCRAFT UNDERCARRIAGE
George Orloff, Robert Roy, Bernard Edward Cooper, and Kenneth Thomas Peers Langdon, Gloucester, England, assignors to British Messier Limited, Gloucester, England, a British company
Filed July 18, 1956, Ser. No. 598,607
Claims priority, application Great Britain July 20, 1955
2 Claims. (Cl. 244—50)



1. An aircraft undercarriage leg comprising a fixed member, a driven member mounted for rotation in said fixed member, rotator means connected between said fixed and driven members for rotating said driven member relatively to said fixed member, a pair of operative connections between said rotator means and said driven member, each of which operative connections incorporates a first abutment and a second abutment cooperating with said first abutment, one of which abutments is connected to said rotator means and the other of which abutments is connected to said driven member, one of said pair of operative connections being provided for transmitting drive in each direction of rotation of said driven member relatively to said fixed member, said leg being characterized in that each of said operative connections comprises a detent arm angularly movable with respect to its second abutment, in that its first abutment is constituted by a roller rotatably carried by said detent arm and its second abutment is constituted by a step, and in that engaging and disengaging means are provided for holding said roller and step positively in engagement and for positively moving said roller and step out of engagement in dependence upon the relative angular positions of said fixed and driven members, said engaging and disengaging means comprising a cam track nonrotatably connected to said fixed member and a cam follower connected to said detent arm to move it angularly.

2,943,820
TANDEM LANDING GEAR
William B. Westcott, Jr., Cleveland Heights, Ohio, assignor to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
Filed Sept. 18, 1956, Ser. No. 610,471
8 Claims. (Cl. 244—50)



5. A landing gear comprising a pair of telescoping members capable of relative rotation about an axis one of which is adapted to be mounted on the frame of an aircraft, first axle beam mounted on the other of said members fixed against rotation relative thereto in a plane perpendicular to said axis, a second axle beam supported by said other member for relative rotation therebetween in said plane, means connected between said second axle beam and said other member normally maintaining said axle beams in a predetermined relative position and releasable to permit pivotal motion in only one direction from said predetermined position, and torque means connected to one of said axle beams controlling the rotational position thereof around said axis.

2,943,821
DIRECTIONAL CONTROL MEANS FOR A SUPERSONIC VEHICLE
Arthur E. Wetherbee, Jr., Newington, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 30, 1958, Ser. No. 283,641
13 Claims. (Cl. 244—52)

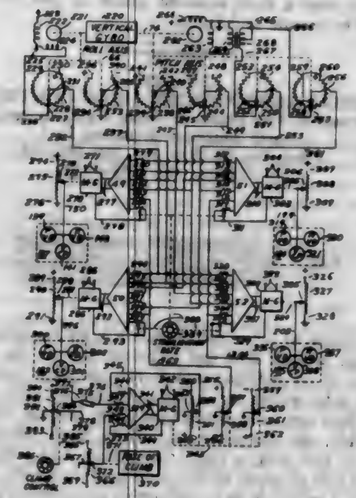
4. In a vehicle having a power plant including a combustion chamber, means for conducting combustion charging elements to said chamber, a propulsion nozzle receiving gases from said chamber including means for discharging said fluid at supersonic velocity, passage means in the wall of said nozzle comprising a plurality of peripherally spaced openings positioned along the nozzle axes adjacent the point where the flow is supersonic, a source of gas under pressure, means for conducting gas under pressure from said source to said passage



means, and valve means for selectively directing said gas under pressure to separate openings and creating shock waves in said nozzle.

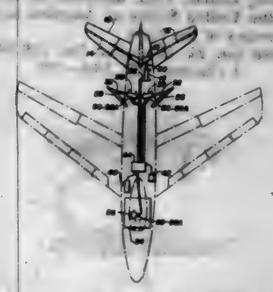
5. In a vehicle according to claim 4 wherein said valve means is operated by a mechanism responsive to the direction of movement of said vehicle.

2,943,822
AIRCRAFT CONTROL BY THRUST PRODUCERS
Sanborn Hamilton, Sunnyvale, Calif. (22 W. 58th St., Kansas City, Mo.)
Filed Apr. 22, 1953, Ser. No. 350,378
34 Claims. (Cl. 244—77)



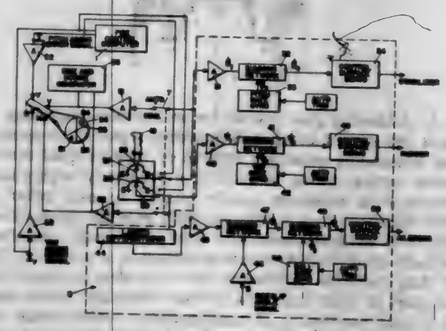
1. Control equipment for a flight vehicle, comprising a plurality of vertical-thrust generating units distributed about the center of gravity of the vehicle, thrust control means connected to each vertical-thrust generating unit for controlling the amount of the thrust, vehicle stability sensing means responsive to displacement of the vehicle about the roll and pitch axes, the vehicle stability sensing means including an electrical circuit having roll sensing means for producing signals in the circuit the magnitude of which are proportional to the deviation from the roll axis reference angle, and computer means in said circuit responsive to said signals, the computer means being operatively connected to said thrust control means to determine a proportional thrust change of said thrust control means to control the amount of thrust of said vertical-thrust generating units to stabilize the vehicle about said roll axis.

2,943,823
TRIM CORRECTION SYSTEM FOR HIGH SPEED VEHICLES
William D. Mullin, Jr., Downey, and Frederick W. Morgenthaler, Whittier, Calif., assignors to North American Aviation, Inc.
Filed June 22, 1954, Ser. No. 438,402
4 Claims. (Cl. 244—77)



1. In a variable speed aircraft, the combination of an autopilot, a trim control surface, actuating means respectively operatively connected to the autopilot and trim control surface for translating control impulses originated by the autopilot into angular displacements of the control surface, adjustable equipment mounted on the aircraft which as an incident to its intended function develops drag and trim changing force moments, a speed sensitive device, means for generating a signal in accordance with the position of said equipment, means for modifying said signal in response to the output of said device, and mixing means for superimposing said modified signal on said control impulses to effect a change in the trim of said aircraft in compensation for changing drag force moments derived either from changes of speed of the air craft or from changes of position of the equipment.

2,943,824
TRACKING DISPLAY FOR AIRCRAFT
Mark E. Campbell, Whittier, Calif., assignor to North American Aviation, Inc.
Filed Oct. 18, 1955, Ser. No. 541,151
10 Claims. (Cl. 244—77)



1. In a device for guiding an airplane, the combination, with an autopilot arranged to guide said airplane in accordance with received command signals and a fire control computer arranged to furnish computed command signals to said autopilot to direct said plane along a computed course, of manual means effective selectively to supply said manual command signals to said autopilot, and means for displaying said manually supplied command signals simultaneously with computed command

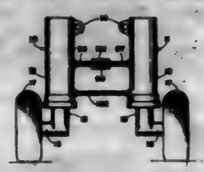
signals from said fire control computer, whereby a visual comparison of said manually commanded and said computed signals may be made.

2,943,825
AERODYNAMIC SEAL
Frank L. Lane, Dallas, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 22, 1958, Ser. No. 710,592
3 Claims. (Cl. 244—90)



1. An aerodynamic seal for an opening between relative slidable airfoils comprising a bracket having one leg adapted to be secured to one of said airfoils, another leg of said bracket providing a resilient support for a seal assembly, said assembly including a mounting plate, a pad of resilient material bonded within a fabric envelope positioned adjacent one side of said mounting plate, an outer covering of a thin, tough, flexible sheet of plastic material extended around said enclosed pad and terminating on the other side of said mounting plate, and mechanical means for mechanically securing said mounting plate to said supporting leg.

2,943,826
LANDING GEAR SHOCK ABSORBER SYSTEM
Benjamin E. Nye, Parma, and Ira D. Smith, Bedford, Ohio, assignors to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
Filed Apr. 14, 1955, Ser. No. 501,397
4 Claims. (Cl. 244—104)



1. A landing gear system for an aircraft comprising at least two spaced struts each including a pair of co-operating telescoping members capable of relative axial movement, spring means in each strut resiliently urging said co-operating members axially relative to each other in one direction, wall means on each pair of co-operating members defining associated first and second chambers in each strut, said wall means including a piston on one of said members separating said chambers to cause the volumes of said chambers to vary inversely during relative axial movement of said members, valve means on each strut connected between said associated first and second chambers being normally closed isolating said associated chambers, a first fluid conducting means connecting said first chambers, a second fluid conducting means connecting said second chambers, and substantially incompressible liquid filling said chambers and conducting means normally maintaining the total volume of said first chambers constant and the total volume of the second chambers constant during relative axial movement of said members.

2,943,827
LANDING GEAR CONSTRUCTION
Erwin H. Hurtel, Cleveland, and William R. Westcott, Jr., Cleveland Heights, Ohio, assignors to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
Filed June 24, 1955, Ser. No. 516,434
1 Claim. (Cl. 244—111)



An aircraft landing gear comprising an oleo shock strut, means adapted to connect said oleo shock strut to an aircraft, a laterally extending mounting portion formed integrally with said oleo shock strut, an outer bearing support having a cross section substantially less than the cross section of said mounting portion supported by said mounting portion, an inner bearing on said mounting portion, an outer bearing on said bearing support, a wheel mounted on said bearings journalled for rotation relative to said oleo shock strut, a brake operably connected between said mounting portion and wheel operable to resist relative rotation therebetween, said mounting portion being formed with a laterally extending bore within the inner circumference of said inner bearing, and a fluid actuated piston in said bore connected to operate said brake.

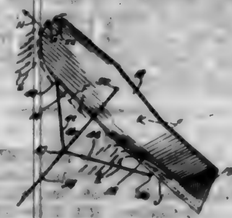
2,943,828
THERMAL AERODYNAMIC DRAG CONTROLLER
Edward R. Van Driest, Whittier, Calif., assignor to North American Aviation, Inc.
Filed Aug. 7, 1956, Ser. No. 602,628
13 Claims. (Cl. 244—117)



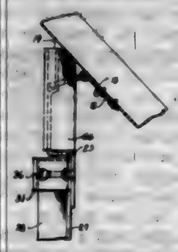
1. Means to move the boundary layer transition point between laminar flow and turbulent flow on the exterior surface of an airframe skin in forward flight comprising a fuel tank within an airframe formed by said airframe skin, duct means in contact with the interior surface of said skin and extending rearwardly from forward portions of said skin, a liquid fuel within said tank, means within said airframe to flow said fuel rearwardly through said duct means in heat exchanging relationship with said skin and control means connected to said last-mentioned means to vary the rate of flow of said fuel to keep the ratio of the temperature of the skin wall-to-the-free-stream temperature at the edge of the boundary layer in a predetermined range, said control means being variable as a function of skin temperature and Mach number during said forward flight.

2,943,829
KITE
Jack A. Chapman, 1014 N. Bagley, Dallas 11, Tex.
Filed Jan. 17, 1958, Ser. No. 709,489
9 Claims. (Cl. 244—153)

1. A kite comprising a shell-like body having at its front a main part disposed in a generally central position and having a shallowly conical shape, the convex surface of said main part defining said front of the body, said body having a lower flange portion projecting rearwardly from one segment of the periphery of said main part and having a generally frusto-conical shape, the body having an upper flange portion projecting rearwardly from the remaining segment of said periphery of the main part and arcuately bowed outwardly from the body.



2,943,830
MIRROR SUPPORT
Ernest H. Anderson, 225 Bowen St., Jamestown, N.Y.
Filed Mar. 27, 1959, Ser. No. 802,487
8 Claims. (Cl. 248—28)



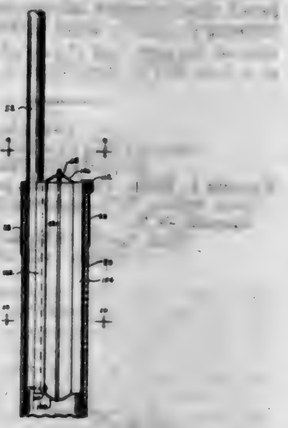
5. A support for mounting a mirror in an upright position above an article of furniture, said support comprising a bail-like hanger attached to said mirror in combination with a mounting member consisting of an elongated rigid bar, a channel member at one end of said bar extending in the direction of the bar length and forming an end continuation, the cross sectional proportions of said bar being no greater than those of said channel member, a plate secured to the base wall of said member having a laterally offset upwardly opening hook, substantially uniformly curved portions terminating the upper ends of the side walls of said member, the free end of said hook being within the limits of said portions, said mirror, when said hanger is engaged with said hook, resting against said curved portions which serve as a contact path over which said mirror moves from the point of initial hook and hanger engagement to abutment of said mirror with the edges of said side walls, and means for securing said bar in an upright position on said article.

2,943,831
BRACKET FOR HANGING PICTURES AND THE LIKE
James W. Goss, 410 South St. SW., Warren, Ohio
Filed May 5, 1958, Ser. No. 732,850
5 Claims. (Cl. 248—31)

1. A device for hanging framed pictures and the like upon a wall, said device comprising a bracket, said bracket including a back wall, means for connecting the back wall to a picture and the like, a housing mounted upon the back wall, said housing comprising a front wall, vertically spaced top and bottom walls and a side wall at one side of the housing, there being an opening in said side wall and aligned openings in said top and bottom walls, a rod member slidably located through said aligned openings, means at the upper end of the rod for attachment to a wall, a locking lever located transversely through the housing and having one end portion fulcrumed through the opening in said side wall and extending outwardly therebeyond, said locking lever having an opening therein of larger cross-sectional area than the rod, said rod being located through said opening in the locking lever, and a coil spring surrounding said rod between said bottom wall and the locking lever for normally preventing downward movement of the bracket relative to the rod member.



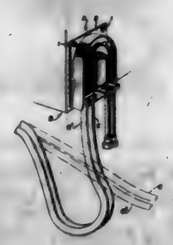
2,943,832
ANTENNA MOUNTING BASE
Irvine H. Bouchard, % Radio Distributing Co., 1212 High St., South Bend, Ind.
Filed Feb. 19, 1958, Ser. No. 716,168
17 Claims. (Cl. 248—43)



8. A base for mounting an antenna mast on the upper end of a vent pipe, comprising two vertical channel iron members with the flanges of one member facing away from the flanges of the other member, one of said members being adapted to receive the lower end of the mast, a cross member connecting said vertical members adjacent the top thereof and projecting upwardly above the point of juncture between said cross member and said vertical members, a cross member connecting said vertical members adjacent the bottom thereof and projecting downwardly below the point of juncture between said last mentioned cross member and said vertical members, a rod secured to said lower cross member and projecting above the upper cross member, a nut on said rod above said upper cross member for forcing said cross members toward one another to move said vertical mem-

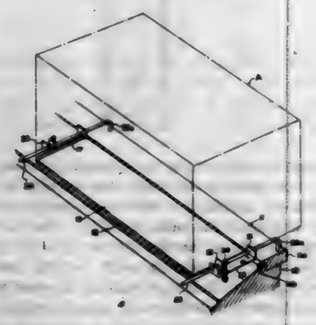
bers outwardly, one of said vertical members being forced against the internal surface of the pipe and the other vertical member against the lower end of the mast to clamp the mast in the upper end of the pipe, a lug at the top of one of said vertical members for positioning said base in the pipe, and a member near the bottom of the vertical member contacting the mast for supporting and positioning said mast in the pipe.

2,943,833
HOSE HOLDER
Lester J. Ramse, Rural Route, Bricelyn, Minn.
Filed June 1, 1959, Ser. No. 817,135
8 Claims. (Cl. 248—89)



1. In a hose holder, a base attachable to a support; inner and outer arcuate wall portions on and extending outwardly away from said base in spaced concentric relation and providing between said wall portions an open face hose receiving groove closed at its root by said base; and a member mounted for movements relative to said wall portions to a retaining position in which said member extends across said groove for retaining a hose received therein against displacement therefrom and to a releasing position in which said member is substantially clear of the open face of said groove to enable insertion of a hose into or removal of a hose from said groove.

2,943,834
MOUNTING PLATFORM FOR AIR CONDITIONING UNITS
Kenneth L. Kelly, Tonawanda, and Donald E. Hoffman, West Seneca, N.Y., assignors to Fedders Corporation, Maspeth, N.Y.
Filed Apr. 8, 1958, Ser. No. 727,091
7 Claims. (Cl. 248—288)



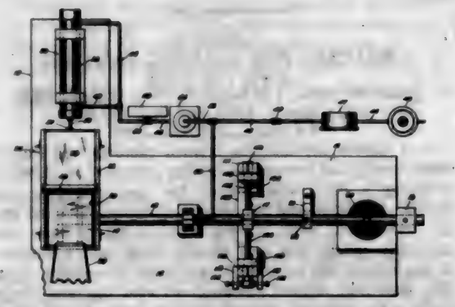
1. For use with a window structure having a sill including a stool portion, a mounting platform for an air conditioning unit comprising a base for receiving said unit, said base being a planar sheet metal structure to be disposed in supporting relation beneath said unit for the entire width thereof and having an elongated edge portion adapted to be brought in contact with the outside edge of a window stool, spaced levelling screws mounted for vertical adjustment in said base for contact with the sill of a window, a pair of spaced rods mounted for lateral sliding movement in said base in parallelism to said base, said rods being adapted to be positioned on the surface of the stool and including means for engaging the remaining vertical edge of a window stool, and means for locking said rods with said base.

2,943,835
PEG BOARD BRACKET
Marcus M. Tierney, 1911 Iglehart Ave., St. Paul, Minn.
Filed Dec. 20, 1956, Ser. No. 629,548
2 Claims. (Cl. 248—216)



1. A bracket for supporting a container having a horizontally disposed slit therein for use in connection with a peg board comprising an open top trough-shaped member having uniform width substantially throughout the length thereof and adapted to be disposed through an opening in said peg board, said width being such as to frictionally engage the sides of said opening, said member having a semi-cylindrical portion of a dimension to frictionally engage the adjacent side portions of said opening, an intermediate portion of reduced depth having an offset bottom portion in relation to said semi-cylindrical portion and a substantially flat terminal portion, said member having a concave curvature along the upper edge portions of said semi-cylindrical portion with said concave portion extending through said opening to form a shoulder adjacent said intermediate portion whereby when said bracket supports a weight it will be tipped forwardly and downwardly with said shoulders biting into the adjacent portions of said opening at the rear outer side thereof for positively holding said bracket secured in position and a plate member integral with said member at right-angles thereto having an upper offset portion whereby said offset portion may be disposed through said slit for supporting said container.

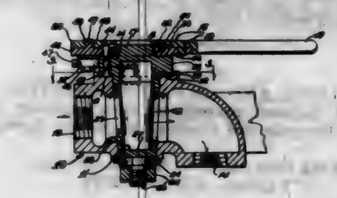
2,943,836
AUTOMATIC WEIGHING APPARATUS
Horace L. Smith, Jr., Richmond, Va., assignor to Horace L. Smith, Jr., Inc., Richmond, Va., a corporation of Virginia
Filed Oct. 29, 1956, Ser. No. 618,840
6 Claims. (Cl. 249—9)



1. In an automatic weigher, the combination of a fulcrumed scale beam provided with means for receiving

a substance to be segregated into batches of uniform predetermined weight; means for biasing said beam for the exact batch weight desired; means for feeding such substance to said receiving means; means movable into and out of the path of the feed stream to intercept the same; a loop-like shuttle disposed between and in proximity to said intercepting means and said receiving means, and movable horizontally from and to a position over the latter in which it perimetrically confines the substance batch thereto during weighing; and fluid-pressure operated means controlled by movements of the scale beam and arranged to actuate said feed intercepting means and said shuttle when a predetermined mass of the substance has been deposited on the receiving means, whereby to cause said intercepting means to substantially instantaneously completely interrupt the feed stream and said shuttle to concomitantly discharge the weighed batch from the receiving means.

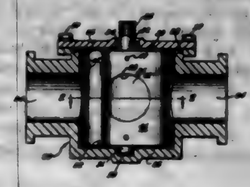
2,943,837
VALVE AND MAGNETIC ACTUATING TOOL
John Noble, 3321 W. Pierce St., Chicago, Ill.
Filed May 14, 1958, Ser. No. 735,774
8 Claims. (Cl. 251—110)



1. A flow controlling device comprising a valve casing, a rotary valve in said valve casing, a tool to rotate said valve, a head upon said valve, said tool embodying a handle portion on one end and a hub portion on its other end, an aperture in the hub of said tool of the same configuration as the configuration of said head on said valve, a permanent magnet embodied within said tool, said valve embodying an upper hub portion, a vertical bore in said valve hub portion open to its lower end, a pin, said pin movably mounted within said bore, the lower end of said pin in sliding contact with an upper surface of said valve casing in its normal first position while in use, an arcuate recess in the upper surface of said valve casing, said pin movable into said arcuate recess for holding said valve against rotary movement when said valve is rotated to a second position of non-use by a non-magnetic tool, and said permanent magnet in said tool arranged with its poles to move above the path of travel of said pin, said poles embodying a lifting force to lift said pin upwardly out of said recess to release said valve whereby said valve can be turned from said second position to the first position.

2,943,838
SEAL FOR PLUG-TYPE VALVES
Edward C. Skei, Van Nuys, Calif., assignor to Telecomputing Corporation, Los Angeles, Calif., a corporation of California
Filed June 25, 1959, Ser. No. 822,835
12 Claims. (Cl. 251—317)

1. In a valve of the type wherein an outer body member forms a cavity of circular cross section with at least one peripheral port and a valve member of circular cross section having at least one peripheral port is mounted in said cavity for rotation to move its peripheral port into and out of register with the peripheral port of the outer body member, sealing means effective between said two members comprising: an annulus of flexible plastic material mounted on one of said two members for sealing contact with the other of said two members, said plastic material having a low coefficient of friction with respect to metal, said annulus having two spaced opposite circumferential side walls for contact with said two members respectively, said two side walls being interconnected in a radially outward circumferential region to form a radially inwardly opening annular slot; a stiff reinforcement ring bowed in two respects to conform to the periphery of said valve member around the peripheral port in the valve member, said reinforcement ring being



seated edgewise in said slot to hold said annulus to the same double-bowed configuration; and a resiliently deformable ring of rubber-like material bonded to said reinforcement ring and extending radially inward therefrom in contact with the circumferential side wall of the annulus that contacts said other of said two members, said rubber-like ring being axially dimensioned for axial compression by confinement of the sealing means between said two members whereby the rubber-like ring presses said last-mentioned side wall of the annulus into sealing contact with said other of the two members.

2,943,839
ELASTIC FLUID MECHANISM
Rudolph Birmann, Newtown, Pa., assignor to De Laval Steam Turbine Company, Trenton, N.J., a corporation of New Jersey
Filed May 10, 1954, Ser. No. 428,627
20 Claims. (Cl. 253—39)

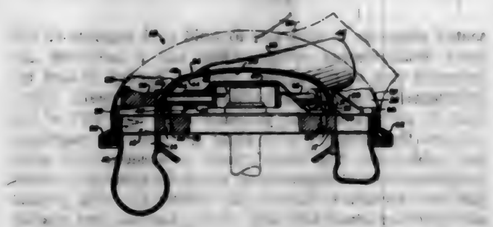


1. An elastic fluid mechanism including a rotor comprising a hub member and vanes carried thereby, said hub member including a substantially rigid inner portion, said inner portion comprising a pair of radial end discs joined and held spaced at their peripheries by rigid strut means capable of sustaining axial compression stresses, and a hollow and relatively flexible shell having as its mean surface a surface of revolution which is throughout its extent outwardly convex, said shell being integral with said radial end discs and having a thickness increasing from its maximum diameter to its junctions with said radial end discs, said shell carrying the vanes and being shaped so that its walls are subtantially only under tension under the action of centrifugal forces.

2,943,840
TURBINE COOLING CAP STRUCTURE
Joseph N. Marone, Hawthorne, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 3, 1956, Ser. No. 557,050
1 Claim. (Cl. 253—39.15)

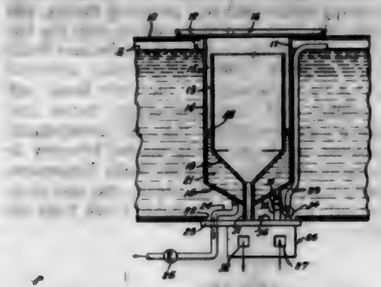
A gas turbine comprising a turbine rotor having a rim portion and having a plurality of circumferentially-

spaced blades extending from said rotor rim portion; a stator structure including means for supplying hot gases to said blades for driving said rotor and an exhaust duct for receiving the exhaust gases discharging from said blades during turbine operation; a cup-shaped hollow double-walled cooling cap having spaced-apart inner and outer walls each having an annular rim portion; means supporting said cup-shaped cap in said duct over the exhaust face of said rotor with the rim portion of said cap double wall disposed adjacent, but in clearance space relation, to said rotor rim portion so that the bottom of the inner wall of the cup-shaped cap is spaced from said rotor exhaust face to form a chamber over said side and with the outer wall of said cap being spaced from the exhaust duct to form an annular exhaust passage therebetween, the hollow space between the cap double walls opening at the cap rim portion to the clearance space between said rim portion and the rotor rim portion; said cap supporting means comprising a plurality of circumferentially-spaced spokes secured to said stator structure and extending radially inwardly across said annular passage; a pair of adjacent but independently slidable sleeves on each spoke with the radially outer sleeve of each pair being connected to said cap outer wall and the radially inner sleeve of each pair being connected to said cap inner wall; means for supplying cooling air to said cap chamber; and a hollow double-walled cooling air discharge conduit having spaced-apart inner and outer walls, said conduit extending from the bottom of said cooling cap with the inner wall of said conduit opening through the inner wall of said cap to provide fluid communication between said cap chamber and the interior of said conduit inner wall, the discharge end of said conduit terminating within said exhaust duct for discharging said cap cooling air into said duct and the hollow space between the conduit double walls communicating at one end with the hollow space between said cap double walls and at its other end opening into said exhaust duct.

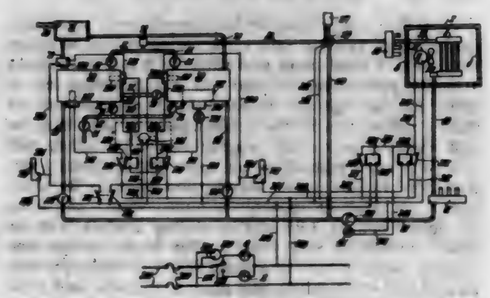


2,943,841
STORAGE TANK FOR LIQUID CIRCULATING SYSTEM
Paul R. Hughes, Englewood, and Walter C. Klank, Jr., Dayton, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Filed May 6, 1958, Ser. No. 733,347
2 Claims. (Cl. 257—195)

1. In a storage tank of an engine lubrication system, a hopper adapted to be vertically positioned in said tank to provide a flow path for heated oil in heat exchange relation with a main body of oil in said tank, said hopper including closely spaced concentric cylindrical inner and outer shells defining an annular path for flow of oil therebetween and being in interior communication with one another at their upper ends, each of said shells having a conical bottom and said conical bottoms of said inner and outer shells being spaced apart to define a relatively deep space at the bottom of the hopper communicating at its upper periphery with said annular path, the conical bottom of said inner shell being provided with a discharge connection communicating with the interior of said inner shell and extending through said deep space and the bottom of said outer shell to the exterior of said hopper, and the bottom of said outer shell being formed with separate inlet and outlet connections, the latter providing for selective use of said deep space as a reservoir of hydraulic fluid, said inner shell having an opening intermediate its top and bottom and above said deep space providing for limited flow to said space from the interior of said inner shell.

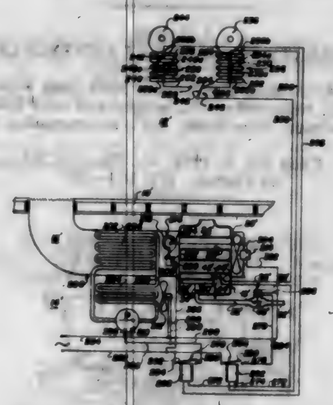


2,943,842
HEATING AND/OR COOLING SYSTEM
Edward M. Sullivan, Springfield, Mass., assignor to Alfred W. Bettigole and Oscar H. Sternbaum, Springfield, Mass.
Filed June 26, 1959, Ser. No. 823,033
1 Claim. (Cl. 257—279)



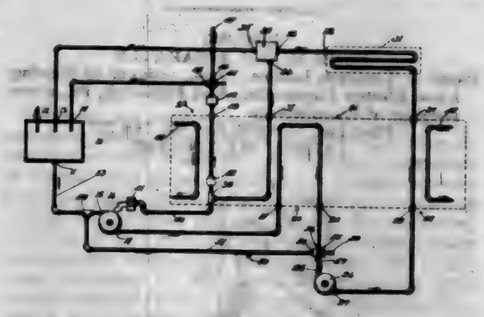
In an automatically-controlled and selectively operable combination and alternating heating and cooling system for controlling the temperature of a space through which a fluid mass of a heat/cold exchange medium is circulated and based upon the storage of fluid masses being heated or cooled electrically during an off-peak period and being circulated as required comprising, a pair of storage chambers for simultaneous storage of portions of the fluid mass, an electric heater for heating a portion of the fluid mass and disposed within one of the storage chambers of said pair thereof, an electric cooler for cooling a portion of the fluid mass and disposed within the other of the storage chambers of said pair thereof, an air handling unit including a heat exchange radiator and an electrically operated blower, fluid supply and return lines selectively connecting between the storage chambers of said pair thereof and the radiator of said air handling unit for circulating the selected conditioned fluid mass for operational use, an electric motor driven circulating pump for forcing the circulation of the selected conditioned fluid mass from the respective storage chamber of said pair thereof through said fluid supply and return lines and the radiator of said air handling unit, inlet and outlet connections between said cooler and said fluid return line for selectively distributing the used fluid mass to said cooler for cooling treatment, an automatic time switch mechanism for selectively connecting said heater and cooler to an electric power distribution system for operational use during predetermined off-peak load periods for the energizing of the respective heater and cooler and the heating and cooling of the respective fluid mass, and thermostatic means responsive to the differential of temperature in the space being regulated for controlling the operation of the blower of said air handling unit to draw upon the supply of the conditioned fluid mass in said storage chamber for maintaining the temperature in the space being regulated within predetermined limits, and an electric circuit controlled by said thermostatic means and connected to said thermostatic means and said time switch mechanism and said pump and the blower of said air handling unit and said heater and said cooler whereby said heater and cooler are selectively operated to maintain the temperature of the space within certain predetermined limits.

2,943,843
TEMPERATURE CONTROL APPARATUS
Russell B. Matthews, Wauwatosa, Wis., assignor to Basso Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 12, 1957, Ser. No. 639,749
2 Claims. (Cl. 257—286)



1. In temperature control apparatus including temperature varying means comprising heating and cooling means, said heating means comprising a main burner and an ignition burner therefor, fuel supply means for said main burner comprising electroresponsive control means energizable to afford fuel flow to said main burner and deenergizable to prevent fuel flow thereto, electrically driven fan means energizable to circulate the air at said temperature varying means, and operating means for said fan means including means responsive to either one of a predetermined high and a predetermined low temperature at said temperature varying means to effect energization of said fan means, the combination of, thermoelectrically powered control means comprising a thermoelectric generator subject to a flame at said ignition burner, first electroresponsive relay means energizable by said generator to effect energization of said main burner fuel control means, switch means including second electroresponsive relay means operatively associated with said cooling means and a remotely positioned manually operable switch in circuit with said generator and said first and second relay means and controlling thermoelectric power to render said generator incapable of energizing said first relay means and effective to energize said second relay means for operation of said cooling means in response to thermoelectric power afforded by said generator, and a separate low resistance thermostatic switch in circuit with each of said first and second relay means, said thermostatic switches being positioned remotely of said temperature varying means and controlling the thermoelectric power afforded said first and second relay means, respectively, in accordance with predetermined temperature variations.

2,943,844
HEAT-TREATING APPARATUS
Lloyd T. Gustafson, Park Ridge, Ill., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 31, 1957, Ser. No. 637,568
3 Claims. (Cl. 257—312)



1. An apparatus for heat-treating a flowing fluid, comprising a fluid source; a heat exchange unit provided with a regenerative section, the latter having an upside through which such fluid is caused to flow and a downside through which such fluid is caused to flow subsequent to being heated, said upside and downside being separated from one another by a heat-conductive wall, said upside and downside each being provided with a fluid inlet and a fluid outlet, the fluid pressure in said downside always being greater than the pressure in said upside, during operation of the apparatus; a booster pump having the intake side thereof connected to said source and the discharge side thereof connected to said upside fluid inlet; a timing pump having the intake side thereof connected to said upside fluid outlet and the discharge side thereof communicating with said downside fluid inlet; and bypass conduit means for such fluid whereby circumvention of said upside by such fluid may be effected, said bypass conduit means having one end thereof communicating with said upside fluid inlet and the other end thereof communicating with the intake side of said timing pump; all of such fluid flowing through said bypass conduit means only when said timing pump is operating and said booster pump is at rest.

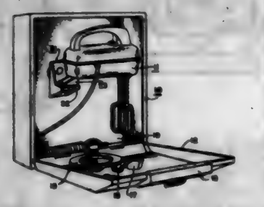
2,943,845
HEAT EXCHANGER FOR VISCOUS FLUIDS
Franz Jaklitsch, 823 Marywood, Royal Oak, Mich.
Filed Oct. 23, 1957, Ser. No. 692,015
2 Claims. (Cl. 257—312)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A heat transfer device of the character described comprising a core having an inner fluid flow passage and

a plurality of peripheral fins thereon each extending parallel to the longitudinal axis thereof, a housing surrounding said core and having a plurality of longitudinal fins therein intermating with said core fins and defining a second fluid flow passage positioned in direct heat transferable relation to said core fluid flow passage, a shaft carrying a bladed helicoidal screw rotatably mounted in said core inner passage and adapted to be rotated upon flow of fluid in said core inner passage, said screw in said core inner passage defining a spiral fluid flow passage therein, the blade of said screw during rotation thereof being adapted to prevent adherence of fluid in said core inner passage, said shaft having an inner passage therethrough defining a diverting fluid flow passage, and fluid flow control means regulating fluid flow in said diverting fluid flow passage.

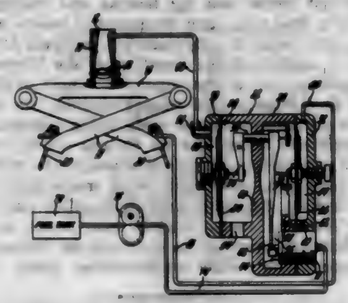
2,943,846
FOOD MIXER APPARATUS
Raoul A. Lambert, Ludlow, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 14, 1958, Ser. No. 708,777
2 Claims. (Cl. 259—108)



1. The combination with a portable household mixer having an elongated power unit and at least one beater depending from one end of said power unit, of means for supporting said mixer in storage and operating positions and comprising an upright wall, and means carried by said wall and engageable with the end of said mixer power unit opposite said beater for supporting said power unit in a substantially horizontal attitude, said last-named means comprising a first pivotal connection providing swinging movement of said mixer about a substantially vertical axis and permitting said mixer to be moved to a storage position parallel to said wall and to an operating position normal to said wall, said last-named means further comprising a second pivotal connection permitting swinging movement of said mixer about a substantially horizontal axis extending longitudinally of the mixer, whereby said mixer may be tilted about said horizontal axis to facilitate placement of a mixing bowl beneath said mixer in operative relation to said beater.

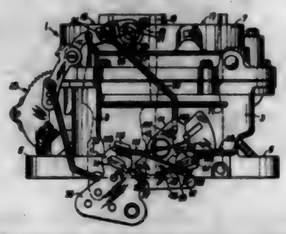
2,943,847
FUEL INJECTION FLOW CONTROL VALVE
Donald C. Sceville, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 3, 1958, Ser. No. 726,188
3 Claims. (Cl. 261—23)

1. A charge forming device for an internal combustion engine comprising an air intake passage, a venturi formed in said passage, a plurality of individual cylinder intake passages communicating said intake passage with the individual cylinders of the engine, a fuel nozzle disposed in each of said plurality of intake passages, and a fuel metering mechanism responsive to the quantity of air flow through said venturi for supplying fuel to said nozzles in proportion to said air flow, said metering mechanism including a fuel inlet passage, a fuel outlet passage, a pintle valve member axially adjustable with respect to said inlet passage to control the quantity of fuel flow therethrough, said pintle being radially supported by a pair of flexible diaphragm members, and a control arm operatively connected to said pintle and adapted to vary



the axial position of said pintle in relation to said inlet passage in accordance with the mass of air flow through the venturi, the areas of said diaphragms arranged so that the axial position of said pintle valve member is unaffected by fuel pressure acting on said diaphragms and pintle.

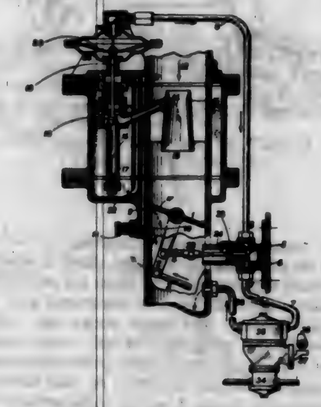
2,943,848
SEPARATE THERMOSTAT CONTROLLED FAST IDLE CAM
Dwight M. Gordon, Farmington, Mich., and Wenford E. Highley, Normandy, Mo., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Oct. 6, 1958, Ser. No. 765,387
20 Claims. (Cl. 261—39)



1. In a carburetor for an internal combustion engine, said carburetor having a mixture conduit, a choke valve and a throttle valve in said conduit, and means connected to the choke valve for limiting closing of the throttle valve at idle in accordance with engine temperature, thermostatic means responsive to temperature ambient to the carburetor for restricting the range of active positions of said position-controlling means at relatively low ambient temperatures independently of engine temperature and adapted upon increase of ambient temperature to release said position-controlling means.

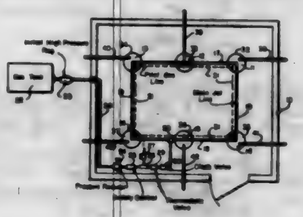
2,943,849
CARBURETOR ATTACHMENT FOR MOTOR VEHICLES
Aladar Csecs, 26 Holly Place, Stamford, Conn.
Filed May 16, 1958, Ser. No. 735,722
6 Claims. (Cl. 261—51)

1. In connection with a vehicle motor carburetor having a throttle for regulation of the motor's gas intake and having a fuel valve, a fuel saving device comprising an air duct, sucking means at one end of said duct, an air chamber at the other duct end, a diaphragm forming a hermetically closing wall of said air chamber, having one side facing said air chamber and having another side exposed to atmospheric pressure whereby the central part of said diaphragm moves when suction reaches said air chamber, said central part being affixed to said fuel valve in a position in which said fuel valve is closed when said diaphragm is relaxed and is opened



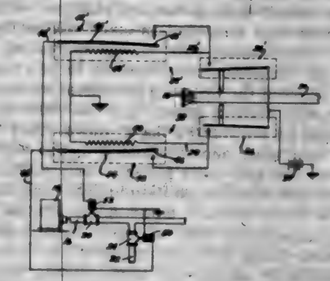
when said diaphragm moves under the influence of suction in said air chamber, and means operatively connected with said throttle interrupting said duct when said throttle is closed and opening said duct when said throttle is opened, whereby suction will reach said air chamber and said fuel valve will be opened only when said throttle is opened.

2,943,850
GAS FIRED TOBACCO CURERS
John Wooten Moseley, 610 N. College St., Kinston, N.C.
Filed Mar. 26, 1956, Ser. No. 573,808
6 Claims. (Cl. 263—19)



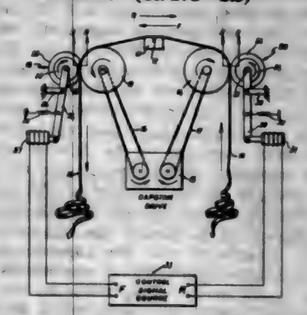
6. A tobacco curer comprising a curing barn having a plurality of gas burners spaced from one another on the interior of said barn, each of said gas burners comprising an elongated hollow tubular burner member disposed substantially upright adjacent the floor of said barn, said tubular burner member having a plurality of apertures adjacent the lower end thereof for the admission of air to said burner member, said apertures being disposed in the walls of said member and being spaced from one another in staggered disposition about said tubular burner member, a main jet orifice disposed within said tubular burner member adjacent said orifices, a pilot jet orifice disposed adjacent the upper end of said tubular member, and means for supplying both the main and pilot jet orifices of each of said burners with gas under pressure, the gas supplied to at least said main jet orifices being at a pressure in excess of one p.s.i.

2,943,851
ELECTRIC CONTROL SYSTEM FOR FLUID SPRINGS
Achilles Charles Sampietro, Ann Arbor, Mich., assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Sept. 6, 1955, Ser. No. 532,708
1 Claim. (Cl. 267—65)



Apparatus for controlling the inflation pressure of a pneumatic spring system which resiliently interconnects relatively movable frame and axle members, comprising air control valve means regulating the inflation pressure of said pneumatic system, means responsive to the spacing between said relatively movable members for controlling operation of said valve means, said controlling means including first and second electric circuits, first switch means energizing the first circuit instantaneously upon relative movement of said members in one direction away from a neutral position and second switch means energizing the second electrical circuit upon relative movement of said members in the opposite direction away from the neutral position, each of said circuits including a time delay relay having a heater and a temperature-responsive element fixedly secured relative to said frame member and operative to energize an output circuit through the relay when heated by said heater, said output circuits when energized being adapted respectively to cause either admission of air to said pneumatic means or venting of air from said pneumatic means, deenergization of the respective circuits operating to close their respective valve means instantaneously upon reverse relative movement between said first and second members positioning them in said neutral position.

2,943,852
RAPID ACCELERATION DRIVING MECHANISMS
Robert Warren Quirk, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed July 1, 1955, Ser. No. 519,324
5 Claims. (Cl. 271—2.3)



1. A tape drive mechanism for rapidly accelerating a tape from rest to a predetermined constant velocity; said

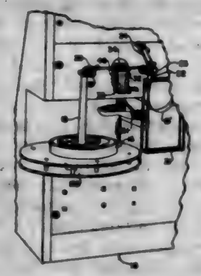
drive mechanism comprising: a source of driving power; a drive roller coupled to said source and continuously rotated thereby at a constant peripheral velocity equal to the predetermined constant velocity of the tape, said drive roller having a substantially frictionless peripheral surface in contact with the tape; a freely rotatable jam roller in continuous engagement with said drive roller and continuously rotated thereby, said jam roller including an inner rigid drum and an outer resilient collet, said resilient collet having two parallel extrusions disposed around the circumference thereof to form a rectangular opening between the opposing peripheral surfaces of said rollers having a width greater than the width of the tape and having an undistorted depth greater than the thickness of said tape; and positioning means mechanically coupled to said jam roller for selectively positioning said jam roller in a tape-rest position in light engagement with said drive roller and in a tape-running position in heavy pressure engagement with said drive roller, said pressure engagement being sufficient to cause said two parallel extrusions to be compressed thus reducing the depth of said rectangular opening so as to cause said tape to be squeezed between said jam roller and said drive roller.

2,943,853

RECORD TAPE SUPPLY MEANS

Cebern B. Trimble, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Original application Sept. 30, 1954, Ser. No. 459,476, now Patent No. 2,864,609, dated Dec. 16, 1958. Divided and this application Aug. 1, 1957, Ser. No. 675,674
2 Claims. (Cl. 242—55.18)



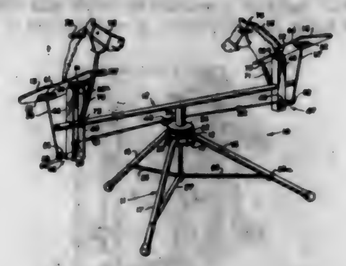
1. In a tape-feeding apparatus, a tape supply device adapted to unreel tape from the inside of a tape storage roll in response to a tape-required signal applied to the tape and effective to unreel tape from the roll, comprising a planar support for the roll to be unwound, a plurality of arcuate shoes extending outwardly of the support in spaced-apart relation to outline a circular core for accommodating the tape roll, a plurality of driving capstans respectively interspersed with the shoes within the core outline, said capstans respectively having those portions of their peripheries closest to the circumference of the circular core lying outwardly of lines defined by chords of the circular core extending between opposed edges of the shoes and lying inwardly of the circumference of the core, means for guiding tape outwardly from the roll interior over one of the driving capstans, and means for imparting continuous rotation to the driving capstans whereby in the absence of the tape-required signal the innermost layer of tape expands outwardly due to the resiliency of the tape in the roll and moves out of driving engagement with the capstans, whereas, in response to a tape-required signal, successively outwardly positioned layers of the tape, including the innermost layer, contract toward the configuration of the chords between opposed edges of the shoes to increase the driving engagement between the capstans and the innermost layer.

2,943,854

AMUSEMENT DEVICES

Louis E. Levinson, 6458 Royal Lane, Dallas, Tex.

Filed Sept. 13, 1957, Ser. No. 683,823
5 Claims. (Cl. 272—33)



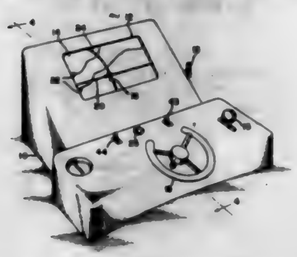
1. An amusement device including a base; a beam mounted on said base for rotation about a vertical axis; a seat pivotally mounted on said beam for oscillatory movement about a first substantially horizontal axis; and drive means for rotating said beam about the vertical axis, said drive means comprising a bell crank lever having two arms extending substantially perpendicularly relative to one another pivotally mounted on said beam for oscillatory movement about a second substantially horizontal axis perpendicular to said first horizontal axis, means connecting one of said arms to said seat, cooperating gear means on said beam and said base, and means connecting the other of said arms to said gear means.

2,943,855

GAME APPARATUS

Stephen Lewis Javna, Tenafly, Edward George Griffiths, Maywood, and Peter Smal, Teaneck, N.J., assignors, by mesne assignments, to Stephen Lewis Javna, Tenafly, and Edward George Griffiths, Maywood, N.J.

Filed Mar. 21, 1956, Ser. No. 573,852
3 Claims. (Cl. 273—1)



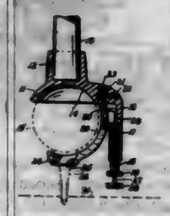
1. In a toy of the type having an endless, continuously movable element which has on an exposed surface first and second distinctive areas, one of said areas comprising a continuous route line extending in the direction of movement of said element and the other of said areas comprising the remaining portion of said surface, an indicator which is movable laterally with respect to the direction of movement of said element, said movable element having an electrically conductive surface portion which is coextensive with one of said distinctive areas and an electrically non-conductive surface portion which is coextensive with the other of said distinctive areas, an electric signaling circuit including said conductive surface portion, a contact element in said circuit which touches said movable element and which is linked to said indicator to move laterally therewith whereby to close and open said circuit as said contact touches said conductive and non-conductive portions upon alignment and misalignment of said indicator with said route line, said first surface area including lateral extensions of said route line, said lateral extensions being arranged in patterns of spaced, short lines which are of different configuration on opposite sides of said route line whereby to provide different signal sequences upon deviations of said indicator on different sides of said route line.

2,943,856

GOLF BALL AND TEE HANDLING DEVICES

Gustave F. Elmerman, Milwaukee, Wis.; Florence G. Melter, administratrix of said Gustave F. Elmerman, assignor of one-half to herself and of one-half to Ruth E. Becker

Filed Mar. 20, 1958, Ser. No. 722,722
4 Claims. (Cl. 273—33)



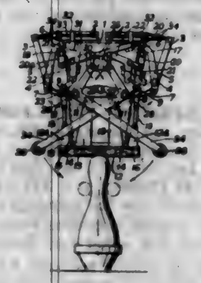
1. In a golf ball and tee handling device, the combination of a holder provided with an inverted ball receiving socket, a pair of coacting arms pivoted to said holder for closing and opening movement toward and away from each other, said arms extending downwardly from the holder, jaws provided at the lower ends of said arms for supportably engaging a tee placed under a ball in said socket when the arms are closed, a downward extension provided on the holder centrally relative to said arms, and a plunger slidable in said extension and having its lower end engageable with the ground, the upper end portion of said plunger being bifurcated and providing a pair of resilient furcations operatively connected to the respective arms and urging the same apart when said plunger is upwardly slid in said extension by downward pressure on said holder while the lower end of the plunger engages the ground.

2,943,857

BOWLING ALLEY PIN RESETTING MACHINE

Bruno Scherzinger, Calgary, Alberta, Canada, assignor to Mechanical Pin Resetter Co., Ltd., Calgary, Alberta, Canada

Original application Oct. 4, 1956, Ser. No. 614,911, now Patent No. 2,902,281, dated Sept. 1, 1959. Divided and this application July 2, 1958, Ser. No. 748,557
2 Claims. (Cl. 273—43)



1. A pin holding mechanism for a bowling alley pin resetting machine, comprising a framework, pressure plate means mounted beneath said framework for exerting a downward pressure on the head of an upright pin to clamp said pin against horizontal displacement, a normally horizontal beam centrally freely pivotally mounted on said framework, a brake disc co-axially secured to said beam, a pair of depending pick-up levers respectively generally centrally pivotally mounted on opposite ends of said beam about axes parallel to the pivotal axis of said beam, a pair of elongated clamping bars secured each to a lower part of a respective such pick-up lever to extend parallel to each other and to said axes, a pair of actuating levers respectively pivotally mounted on opposite sides of said framework, a pair of links connecting the free end of each said actuating lever to the upper arm of a respective one of said pick-up levers, brake shoe means secured to at least one of said actuating levers for co-operation with said brake disc, power operated means including a toggle mechanism for rotating said actuating levers in opposite directions to rotate said pick-up levers about said beam to move said clamping bars downwardly and towards each other into a position in which they are in firm engagement with aligned areas on opposite sides of the neck of said pin, said toggle mechanism being effective to lock said actuating levers in such position of the clamping bars and said brake shoe means being effective to prevent rotation of said brake disc in such position of the clamping bars.

2,943,858

RING-LIKE DEVICE FOR PLAYING THE GAME OF MARBLES

Frank W. Slater, Denver, Colo., assignor of one-third to Ralph E. Penney, one-sixth to Wesley B. Blankenship, and one-sixth to Royce E. Blankenship, all of Lubbock, Tex.

Filed Oct. 10, 1957, Ser. No. 689,280
2 Claims. (Cl. 273—118)



1. A collapsible device adapted for use in playing the game of marbles, comprising a flat base portion, a raised inflatable portion secured to said base at the periphery thereof and being of a size when inflated to act as a retaining wall for marbles, a generally circular marble court mounted on the top surface of said base portion in spaced relation to said raised portion to define a marble shooting area between said court and said raised portion, and a plurality of inflatable partitions communicating with the interior of said raised portion at spaced locations therealong so as to divide said shooting area into a number of compartments.

2,943,859

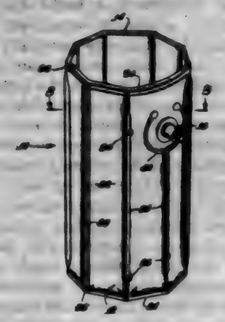
ARM STIFFENING DEVICE

William Anthony Koski, 2423 W. Palmyra, Orange, Calif., and Paul R. Maguire, 4260 Seaview Lane, Los Angeles, Calif.; said Maguire assignor, by mesne assignments, to said Koski

Filed May 11, 1959, Ser. No. 812,478
4 Claims. (Cl. 273—189)

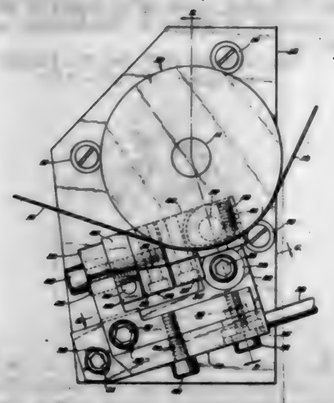
1. An arm stiffening device adapted to be worn by a golfer on his leading arm comprising: an elongated tubular sheath having an inner layer and an outer layer, said inner and outer layers being formed from an air imper-

vious, flexible, substantially inelastic material; a plurality of longitudinally extending reinforcing ribs formed by



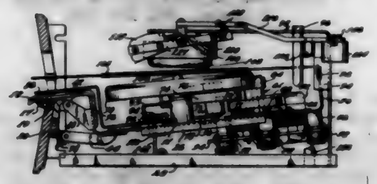
sealing selected portions of said inner and outer layers to one another; and inflating means carried by said sheath for selectively inflating said ribs.

2,943,860
ADJUSTABLE HEAD MOUNT
Ellis W. D'Arcy, Box 1103, Ogden Dunes, Gary, Ind.
Filed November 13, 1956, Ser. No. 621,914
6 Claims. (Cl. 274—4)



3. In a motion picture machine having a frame, a sound drum spaced from the frame and rotatable on an axis perpendicular thereto, and a strip of motion picture film passing around the sound drum, with an edge of the film overhanging one edge of the drum and extending toward the frame with a magnetic sound track along said overhanging edge, the combination of a magnetic transducer head positioned between the sound drum and the frame to engage the edge of the film in sliding engagement with the sound track thereon; together with adjustable head mounting means consisting of a first pivot affixed to the frame with its axis parallel to the axis of the sound drum and disposed outside of the periphery of said drum; a primary mounting bracket having a base and a mounting flange perpendicular to each other, with the mounting flange secured to the frame by the aforementioned first pivot; a second pivot affixed to the base of the primary supporting bracket with its axis perpendicular to the axis of the first pivot; a secondary mounting bracket having a base and an arm generally perpendicular to each other with the base of the secondary mounting bracket carried by said second pivot; a third pivot affixed to the arm of the secondary mounting bracket with its axis perpendicular to the axes of the first and second pivots, and a head carrier bracket mounted on said third pivot and extending between the sound drum and the frame and supporting the aforementioned transducer head.

2,943,861
MULTI-SPEED PHONOGRAPH RECORD PLAYER
George E. Redfield, Mount Holly, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 28, 1956, Ser. No. 587,695
3 Claims. (Cl. 274—9)

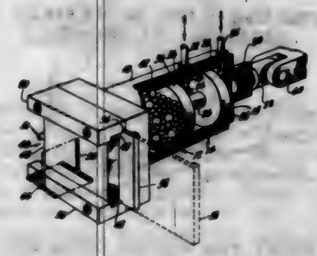


1. In a slot type phonograph record player of the type having a cabinet enclosing record playing mechanism including a substantially horizontal rotatable turntable, said cabinet having a slot in one side thereof adjacent said rotatable turntable and through which records are inserted for playing, the combination of means for guiding a record manually inserted through said slot to a position over said turntable comprising guide pins extending beyond the periphery of and parallel to the axis of a record positioned on said turntable, a weighted first record centering member loosely supported for pivotal and rotational motion above said turntable and having a rounded bottom end portion of a dimension for entry into the center hole of large center hole records and a flanged portion of larger dimension than the center hole of large center hole records positioned above said end portion, means providing a central well in said turntable for receiving and aligning said rounded end portion with a central axis of said turntable, means providing relative movement between said first record centering member and said turntable from a spaced-apart record loading position to an adjacent record playing position wherein said rounded end portion extends into said turntable well to center a large center hole record positioned on said turntable and means providing a second record centering member comprising a spindle supported on and extending along the central axis of said turntable, said spindle having a portion of a dimension for entry into the center hole of small center hole records, the flanged portion of said first centering member engaging and resting on the top surface of a large center hole record to be played, and the rounded bottom end portion of said first centering member engaging and resting on the top surface of a small center hole record to be played.

2,943,862
STRETCH PRESS JAW
Richard A. Myers, Los Angeles, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Jan. 28, 1952, Ser. No. 268,650
10 Claims. (Cl. 279—4)

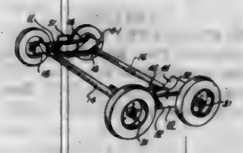
1. A stretch press jaw for gripping an elongate member, comprising: a space enclosing vessel; a wall mounted in the interior of said vessel and dividing the space enclosed into first and second sections; a piston rod passing through and longitudinally movable in relation to said wall; first and second piston means mounted on the opposite ends of said rod in said respective first and second sections; means for transmitting hydraulic pressure to one of said divided sections in a manner which

will actuate the first piston means mounted therein to thereby actuate the second piston means mounted on the opposite end of said piston rod; retainer means closing the end of said vessel adjacent the space containing said second piston means; guide means formed in said retainer means conforming substantially to the cross-sectional outline of one end of said elongate member to permit passage of said end through said retainer means



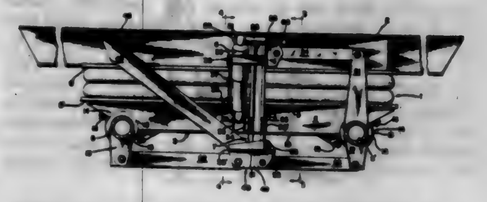
and into the adjacent section of said vessel; and a multiplicity of discrete hard bodies filling a substantial portion of the space defined by said retainer means, the second piston means and said vessel; said hard bodies being movable with respect to each other and to the end of said member when said first and second piston means are actuated to thereby be forced into intimate contact with each other and into gripping contact with the end of said member.

2,943,863
DOLLY FOR USE WITH DISABLED VEHICLES
Flournoy Corey, Maurice G. Swords, Dennis J. Erger, and Robert D. Pitts, Cedar Rapids, Iowa, assignors to Pickwick Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Apr. 3, 1958, Ser. No. 726,176
7 Claims. (Cl. 280—79.1)



1. A dolly for transporting a vehicle comprising a spaced, opposed pair of horizontally extending frame members, a pair of wheels mounted on each of said frame members for rotation on fixed horizontal axes extending laterally from said frame members, one wheel of each of said pair of wheels being disposed rearwardly of the other wheel in said pair, each wheel of a pair being opposed to a wheel in the spaced pair of wheels to provide a set of opposed wheels, a pair of pan members positioned inboard of a set of opposed wheels, a torsion member extending between said frame members and having end portions, and means for rigidly securing each of said end portions to the frame member adjacent thereto, said torsion member being spaced from the horizontal axes of rotation of one set of opposed wheels of said pairs of wheels, each of said pan members being connected to said torsion member adjacent a terminal end thereof and extending toward the horizontal axes of rotation of the other set of opposed wheels, whereby said pan members and said set of opposed wheels remote from said torsion member are rotatable with respect to the longitudinal axis of said torsion member.

2,943,864
VEHICLE SUSPENSION ASSEMBLY
Donald L. Richter, Oakland, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed Aug. 13, 1956, Ser. No. 603,728
14 Claims. (Cl. 280—104.5)



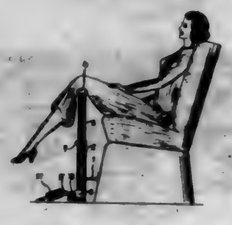
1. An axle suspension assembly for vehicles including spaced frame members comprising the combination of elongated and longitudinally extending pneumatic bellow means, bogie beams extending beneath said bellow means, said bellow means also being interposed between said frame members and said bogie beams, axles carried in tandem relation by said bogie beams, wheels carried by said axles, stabilizing means for said bogie beams and said axles beneath said frame members, said stabilizing means including common linkage elements for resisting both longitudinal movement and torque reactions in said bogie beams during braking of said wheels, certain of said linkage elements comprising vertically disposed levers, column means including a diagonally disposed brace forming a tripod structure connected to said linkage elements, said column means also being rigidly fixed to said frame members and acting to connect said linkage elements to said frame members, and hydraulic damper units for resisting lateral movement of said bogie beams relative to said frame members.

2,943,865
WEIGHT DISTRIBUTING TRUCK BED ATTACHMENT
Luther S. Fite, 9 Fatherland Road, Natchez, Miss.
Filed Mar. 25, 1958, Ser. No. 723,920
8 Claims. (Cl. 280—104.5)



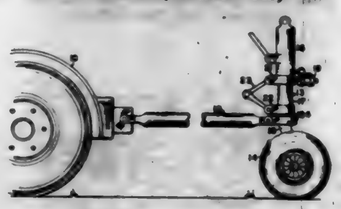
1. A truck bed attachment for distributing the weight of a loaded bed over a greater number of wheels than the distributed weight of an unloaded bed comprising in combination with a truck frame having a resiliently suspended live axle, a rigid elongated equalizing bar pivotally supported by said truck bed, means terminally and pivotally connecting said bar to said live truck axle, said pivotal connection in alignment with said live axle, said bar terminally and pivotally carrying a towed axle remote from said live axle, said resilient suspension associated with said live axle being of sufficient strength to raise said bed when in an unloaded condition relative to said live axle whereby said pivot point between said bar and bed will be raised to elevate said towed axle relative to said live axle.

2,943,866
PROTECTIVE DEVICE
Mathias Witter, Dorfstr. 11, Lerbeck-Porta, Westphalia, Germany
Filed Jan. 7, 1958, Ser. No. 707,491
Claims priority, application Germany Jan. 10, 1957
9 Claims. (Cl. 280—150)



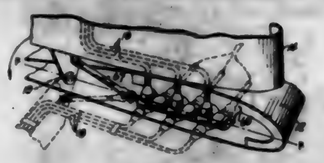
1. A protective device comprising, in combination, support means adapted to be mounted on a vehicle in front of a passenger seat; raising means supported and guided by said supporting means for upward movement for raising the knees of a passenger to prevent the passenger from moving forwardly when the speed of the vehicle is sharply reduced; spring means cooperating with said raising means for permanently urging the latter upwardly from a rest position into a raised upper position; releasable lock means cooperating with said raising means for maintaining the latter against the force of said spring means in said rest position; and inertia-responsive releasing means automatically actuated by a sudden deceleration of the vehicle for releasing said releasable lock means upon such sudden deceleration, whereby in such event said raising means will be released for sudden upward movement from its rest into its raised upper position exclusively by said spring means substantially independently of the extent of said sudden deceleration.

2,943,867
STEERING DISCONNECT FOR AIRCRAFT
Erwin H. Hartel, Cleveland, Ohio, assignor to The Cleveland Pneumatic Industries Inc., Cleveland, Ohio, a corporation of Ohio
Filed July 29, 1957, Ser. No. 674,858
1 Claim. (Cl. 280—442)



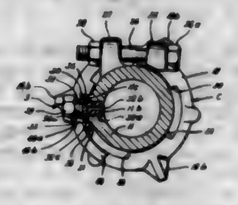
A landing gear comprising a cylinder member adapted to be mounted on an aircraft, a piston member telescoping into said cylinder member axially movable relative thereto, a landing wheel journalled on said piston member, a steerable collar axially fixed and rotatable relative to said piston member, a lock assembly including a lock element mounted on said piston member for horizontal movement relative thereto from a locked position in which it engages said collar and prevents rotation thereof relative to said piston member and an unlocked position in which it disengages said collar and permits relative rotation between said collar and said piston member, a pair of lugs on said piston, a tow bar, aligned bores on said tow bar and lugs adapted to receive a bolt connecting said tow bar to said piston, said lock element projecting between said bores on said lugs when it is in said locked position and being maintained in the unlocked position when said bolt connects said tow bar and piston member, and a spring resiliently urging said lock element towards said locked position.

2,943,868
SWIVEL CLUSTER COUPLING
Francis J. Hasbrock, Palos Verdes Estates, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Filed Sept. 17, 1956, Ser. No. 610,221
10 Claims. (Cl. 285—62)



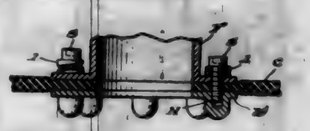
1. An aircraft wing structure having parts thereof moveable relative to each other about a pivot axis and having fluid lines on each part leading toward said axis; a longitudinally extending, internally ducted stem mounted on an axis coincident with said pivot axis; at least a pair of sleeves in fluid tight engagement on the stem and being swivelled thereon for motion about the stem axis; a bracket on one of the relatively moveable parts, one of said sleeves being fixed to said bracket and connected to a fluid line on said one of the parts, the other of said sleeves being connected to a fluid line on the other of said relatively moveable parts and each of said sleeves also including a flow passage between its associated fluid line and the internal duct in the stem whereby the fluid lines are communicated with each other; and a torque applying rod attached at one of its ends to an end of the stem; the other end of the torque rod being attached to the other of said relatively moveable parts at a point spaced laterally of the pivot axis whereby upon relative motion of the relatively moveable parts the stem is rotated to eliminate bending strains in the fluid lines.

2,943,869
COUPLINGS AND SAFETY DEVICES THEREFOR
Obert L. Nordin, P.O. Box 1184, Houston, Tex.
Continuation of application Ser. No. 797,819, Feb. 25, 1959. This application Aug. 7, 1959, Ser. No. 832,187
12 Claims. (Cl. 285—90)



9. A coupling adapted to connect sections of pipe together comprising, hub means connected to the pipe sections to be connected together, a nut member having means thereon for engaging said hub means for effecting a connection of the hub means upon a turning of said nut member with respect to said hub means, wedge means axially movable relative to said nut member for turning said nut member with respect to said hub means whereby a connection of the hub means and the pipe sections is effected, a threaded hole in the hub means, and a bleeder plug in said hole normally sealing said hole and blocking movement of the wedge means in a direction to permit release of the coupling, whereby said plug must be removed prior to the release of the coupling.

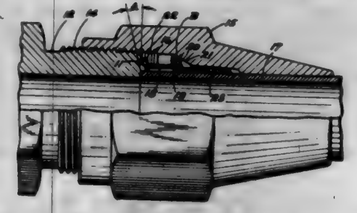
2,943,870
RESILIENT TAKEUP MEANS FOR USE WITH SCREW THREADED FASTENERS
Allen V. C. Davis, Burbank, Calif.
(5600 Alta Canyada Road, La Canada, Calif.)
Filed Jan. 15, 1954, Ser. No. 404,303
1 Claim. (Cl. 285—200)



In combination, a flexible and resilient fuel cell for aircraft having an orifice in a wall of said fuel cell, a metallic fitting attached to the outer face of said wall in alignment with said orifice, and means for securing said fitting to said wall comprising a flange on said fitting engaging the outer face of said wall, a washer of substantially the same inner and outer diameters as said flange on the inner face of said wall and having a series of radially spaced threaded holes formed in the wall engaging face only thereof, a series of bolts extending through said flange and said wall and threadedly engaging said threaded holes, and a plurality of resilient takeup means mounted one each on each of said bolts between the head thereof and the outer surface of said flange; each of said takeup means comprising a helical spring of substantially two complete revolutions and having an inner diameter slightly larger than the screw or bolt with which it is to be used; said spring, when uncompressed having flat end faces each of greater than a half revolution in extent and said faces being disposed in parallel planes extending at right angles to the axis of the spring and the adjacent sides of the convolutions being spaced from each other to an extent that is substantially greater than the range through which said spring is intended to effect takeup action; said spring when subjected to compression forces first responding by bodily movement of said ends toward each other in the line of the axis of the spring until contact of the convolutions at a point diametrically opposite the ends of the spring and then responding to further compression by progressive deflection of the ends of the spring into contact with the adjacent convolution from said first point of contact until the decrease in length of the uncontacting portion of the ends reaches zero; the rate of increase of the torque required to deflect said ends after said initial contact being substantially greater than the rate of increase of torque required to effect said initial contact of the convolutions of the spring.

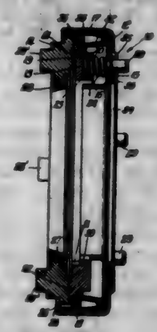
2,943,871
TUBE COUPLING WITH DEFORMABLE PIPE GRIPPING CUTTING MEANS
Theodore A. St. Clair, Chagrin Falls, Ohio, assignor, by mesne assignments, to Paul D. Wurzburger, Cleveland, Ohio
Filed Oct. 25, 1956, Ser. No. 618,287
1 Claim. (Cl. 285—342)

In a tube coupling comprising a body member, a cutting ring to engage the tube to be coupled and a nut, said body member having an axial bore corresponding to the inner diameter of the tube to be coupled, said body having an end face, said end face having an annular flat face portion normal to the tube axis and substantially the same thickness as the tube wall adjacent said bore, said end face having an annular recess outwardly beyond said annular flat face, said recess having an inclined face sloping away from the end of the tube and an outer cylindrical wall concentric with the wall of the tube, said ring comprising a rear cylindrical portion having an inner diameter corresponding to the outer diameter of the tube, and a forward cylindrical portion having an inner wall spaced outwardly from the outer wall of the tube, said forward cylindrical portion having an outer wall spaced inwardly with respect to the cylindrical wall of said recess, said ring having a cutting edge formed at the juncture between the two different inner diameters of the ring, said ring having a forward section thickened with respect to the walls of the ring and being outwardly flared at the extreme forward end of the ring, said thickened end section having its inner peripheral edge portion terminating in said recess in the end face of the body adjacent the outer cylindrical wall of said recess, said flare having a length corresponding substantially to the length of the sloping face of the recess, said cutting ring having a shoulder at the exterior thereof opposite the juncture between the two cylindrical



portions of the ring, said shoulder having an inclined face, said nut having an interior inclined shoulder opposite the shoulder on the ring, the inclined shoulder of the nut being at a lesser angle to the axis of the tube than the inclined face on the ring shoulder and means to draw the nut on the body whereby the shoulder of the nut engages the shoulder of the ring and moves the ring forward to tilt the outwardly flared thickened end section in a clockwise direction and buckle the ring wall outwardly away from the tube between the shoulder and the thickened forward end portion and thereby move the portion of the ring inwardly of the flared end inwardly against the end of the tube with the interior of the flare against the sloping wall of the recess and the shoulder on the ring tilted in a counter-clockwise direction as the cutting edge of the ring cuts into the outer surface of the tube.

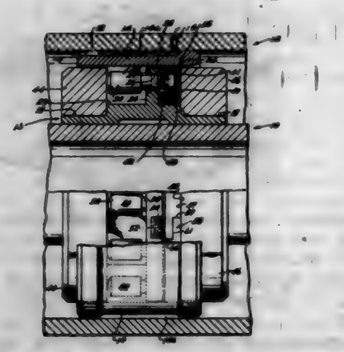
2,943,872
SEALS
Richard T. Cahill, Arlington Heights, and Edward A. Wheelock, Lake Zurich, Ill., assignors to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed July 16, 1957, Ser. No. 672,325
14 Claims. (Cl. 286—11)



1. An end face rotary type seal including a sealing ring for end face sealing engagement with a surface, a

casing member mounting said ring against rotation relative thereto, said sealing ring being eccentrically movable within said casing member, and a resilient cushion associated with at least one peripheral surface of said sealing ring to cushion abutment between said sealing ring and the adjacent inner surface of said casing member, said cushion being spaced from said adjacent inner surface upon concentric positioning of said sealing ring in said casing member.

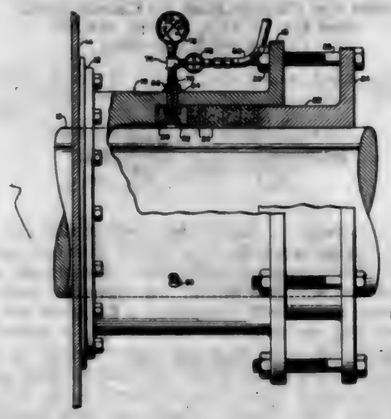
2,943,873
COMPENSATED SEAL
Clarence Lockwood Hamm and William Widlansky, Marblehead, Mass., assignors to General Electric Company, a corporation of New York
Filed Apr. 21, 1959, Ser. No. 807,790
7 Claims. (Cl. 286—11.11)



1. A centrifugally-compensated annular seal comprising: cylindrical support means affixed to a shaft; a plurality of levers carried by said support means; at least one annular sealing element having peripheral and radially-extending sealing surfaces, said element being acted on by said levers which pivot under the influence of centrifugal force to reduce the effect of said force on the peripheral sealing pressure exerted by said element on a cylindrical member disposed concentrically to said shaft; means carried by the support means to retain said levers and said element in position on said support means; and means to force a radially-extending sealing surface of said element into abutment with said retaining means.

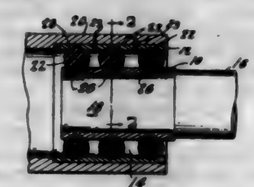
2,943,874
STERN TUBE SAFETY RING ASSEMBLY
Walter J. Valdi, 2546 43rd Ave., and Emmett T. King, 846 Clayton St., both of San Francisco, Calif.
Filed Sept. 19, 1955, Ser. No. 534,986
2 Claims. (Cl. 286—26)

1. A safety ring assembly adapted to be disposed within the stuffing box shell of a conventional stern tube of a ship and around the ship's propeller shaft and against the internal annular shoulder of said shell, said assembly comprising an annular air tight expansible tube, an annular fin formed on the outer periphery of said tube, means to hold and house said tube comprising a ring assembly formed of two mating rings adapted to be fixedly secured together and to grippingly enclose said annular fin and to laterally and freely enclose said tube, and conduit means extending through said shell and ring assembly and into said tube adapted to introduce pressurized fluid into said tube to expand the same into pressing engagement with the periphery of said shaft to prevent the influx of sea water along said shaft when the packing rings of said stuffing box are being removed and replaced, said tube being initially adapted to be wrapped around the shaft and said mating rings being each formed of a plurality of complemental arcuate sections, with the sections of one ring being staggered with respect to the



sections of the other ring, whereby said tube and ring assembly may be positioned around the shaft while said shaft remains in place.

2,943,875
RESILIENT CONNECTION
Paul F. H. Reichert, Ottawa Hills, Ohio, assignor to The Toledo Industrial Rubber Company, Toledo, Ohio, a corporation of Illinois
Filed Jan. 23, 1957, Ser. No. 635,858
3 Claims. (Cl. 287—85)

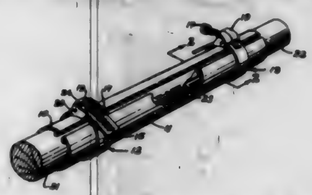


1. A yieldable connection of the character disclosed, in combination, an inner member having an outer circular cylindrical surface, an outer member having a circular cylindrical inner surface, said surfaces being spaced to form an annular chamber, at least one of said surface regions being formed with a plurality of peripheral recesses spaced longitudinally of the member and of circular cross section, and individual annular elements of circular cross section formed of yieldable material extending into the recesses and engaging the other member, said elements disposed between the members being under radially directed compression establishing a friction connection between the members adapted to resist axial and torsional movements of one member relative to the other, and means for venting the region between adjacent annular elements.

2,943,876
METAL MENDING SLEEVE WITH RATCHET STRAP
Earl B. Morris, 409 W. Monroe, Mexico, Mo.
Filed May 20, 1959, Ser. No. 814,561
1 Claim. (Cl. 287—118)

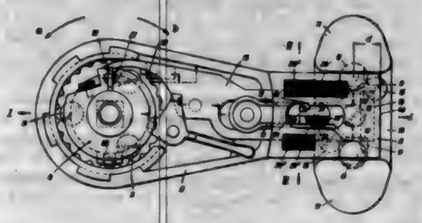
In a connector for sections of a handle, the combination which comprises elongated strips of sheet material substantially semi-circular in cross-section having inturned

edges positioned around the handle with ends of the strips of material overlapping adjoining ends of sections of the handle, straps mounted on the sections of the strips and having worm gear teeth therein positioned around said substantially semi-circular sections, heads pivotably mounted on ends of the straps, screws having



worm threads thereon rotatably mounted in the heads and positioned in meshing relation with the worm gear teeth of the straps, and means securing one of the straps to one of said substantially semi-circular sections and the other of said straps to the other of said substantially semi-circular sections so that the edges of said sections are retained in spaced parallel relation to each other.

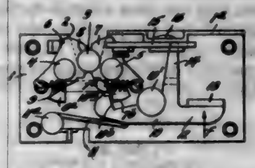
2,943,877
LOCKING DEVICE FOR DOORS
Friedrich Pisterski, Muhlgasse 9/12, Vienna, Austria
Filed Apr. 30, 1957, Ser. No. 656,051
Claims priority, application Austria May 15, 1956
6 Claims. (Cl. 292—23)



4. A locking device for doors, comprising a U-shaped holding block carrying spaced locking claws formed with notches, said holding block including means to be affixed to a door frame with the bottom of the U, a casing including means to be affixed to a door leaf, a bolt movably enclosed in said casing, two balls mounted in said casing symmetrically with respect to said bolt and means for said balls to enter said notches, said bolt being movable to a locking position, in which it holds said balls in said notches, the width of said bolt exceeding the difference between the clearance between said locking claws and twice the ball diameter.

2,943,878
LOCKING DEVICE
Maurice Rigaud, Paris, France, assignor to Societe des Agrafes Francaises & d'Articles Metalliques (Société Anonyme), Paris, France, a French company
Filed Dec. 21, 1956, Ser. No. 629,942
Claims priority, application France December 21, 1955
16 Claims. (Cl. 292—44)

1. A locking device for use in cooperation with a stud with which it is adapted to come into locking engagement, said device comprising, in combination, a supporting base member, a pair of oppositely disposed jaw elements pivotally mounted on said base member and having opposed locking arms adapted to move toward each other to lock such a stud therebetween and at least one of said jaws having oppositely extending non-locking arms arranged to move in the opposite direction as its corresponding locking arm moves toward the other, means coacting between said jaw elements yieldably urging said locking arms apart, a lever having a blocking arm with a blocking portion rigidly associated with the free end of the blocking arm, means for pivotally mounting said lever directly on the said supporting base member, said lever being pivotable to a blocking position in which said blocking portion extends into engagement with an integral part of the non-locking arm of one of said jaw



elements to prevent the locking arm of the latter jaw element from disengaging the stud, and means effective continuously upon said lever tending to pivot the latter toward its said blocking position, and a lever-blocking device, including a stop element and means for interposing said stop element in the path of said blocking lever so as to prevent said lever from unlocking the jaw element with which it cooperates.

2,943,879
LATCH MECHANISM
Edwin L. Allen, Cleveland Heights, Ohio, assignor, by mesne assignments, to Linis W. Menzimer, trustee, Rockford, Ill.
Filed May 10, 1957, Ser. No. 658,289
8 Claims. (Cl. 292—44)



3. In door control mechanism for a vehicle having body structure defining a pillarless access opening for a compartment and provided with keepers at the top and bottom of said opening, and a pair of doors swingably connected with the body structure and having co-operating upright free edge portions; a latch device adapted to be mounted on one of said doors at an intermediate height of the free edge portion thereof and comprising a single detent means and a pivoted upright shaft means; said shaft means having an intermediate portion connected with said detent means and also having end portions adapted to extend to points adjacent the top and bottom portions of said one door; a pair of latch members attached to said end portions and movable to and from door-latched engagement

with said keepers during a combined swinging movement of said one door and pivotal movement of said shaft means; said detent means being common to said pair of latch members and effective to releasably hold the latter in said door-latched engagement; and door support means comprising pairs of door support elements co-operably effective between said body structure and the top and bottom portions of said one door when the latter is in its closed position; said one door when in its closed and door-latched condition being positionably held in said opening in a substantially rigid body-pillar relation to said structure for co-operation of the free edge portion of the other door therewith.

2,943,880
CLOSURE LATCH
Joseph George Joachim, Detroit, and Alfred B. Sauer, Farmington, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 30, 1958, Ser. No. 751,927
12 Claims. (Cl. 292—201)



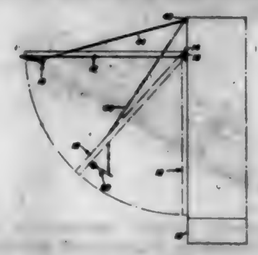
9. Means for latching a closure member to a support member comprising, striker means secured to one of said members, latch means engageable with said striker means, means mounting said latch means on the other of said members for bodily movement relative thereto, and means interconnecting said other of said members and said latch means and responsive to latching engagement of said latch means with said striker means when said members are in spaced relationship for moving said other of said members relative to said latch means into engagement with said one of said members.

2,943,881
MAGNETIC CATCH
Frank W. Dukes, Sterling Ill., assignor to National Manufacturing Co., Sterling, Ill., a corporation of Illinois
Filed Sept. 26, 1957, Ser. No. 686,540
13 Claims. (Cl. 292—251.5)



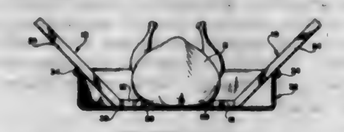
11. A magnetic catch comprising a housing member having at least three connected walls and first and second open sides opposite at least two adjacent ones of said walls respectively, a post mounted on and projecting from one of said adjacent walls and extending toward said first open side, a magnet assembly having an opening therethrough freely receiving said post, said magnet assembly being dimensioned relatively to said housing whereby said assembly protrudes through said second open side and is pivotable through a substantial angle about said post and within said housing and a removable closure closing said first open side.

2,943,882
OVERHEAD DOOR HOLDER
Henry O. Gelder, Portland, Oreg., assignor to G & M Sheet Metal Works, Portland, Oreg., a partnership
Filed Dec. 31, 1957, Ser. No. 706,502
5 Claims. (Cl. 292—262)



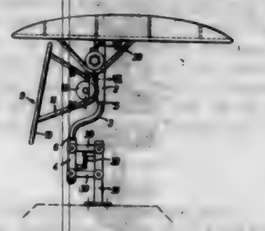
1. The combination of a support structure, an overhead door, a hinge connecting said door to said support structure for swinging between a vertical closed position and a substantially horizontal open position, and means responsive to swinging of the door from its closed to its open position for holding the door open, said means comprising a lever pivoted at one end thereof to said door at a point remote from said hinge for swinging movement about a pivot axis parallel to the hinge between an inactive position wherein the lever extends from its pivot axis toward the hinge and an operative position wherein it extends away from the hinge and supportably abuts the door, and an elongated flexible element connected at one end thereof to said lever at a point remote from the pivot axis of the latter and anchored at its other end to said support structure at a point spaced above said hinge, the length of said flexible element in relation to the distance between its anchor point on said support structure and the pivot axis of said lever being such that said element is taut when said lever is in its operative position in abutment with the door to hold the latter in its open position but that said element is slackened upon swinging of the lever to its inactive position to permit closing of the door.

2,943,883
LIFTING FORK FOR ROAST MEAT
Conrad A. Hansen, 915 13th Ave., Seattle, Wash.
Filed Apr. 13, 1959, Ser. No. 805,853
4 Claims. (Cl. 294—49)



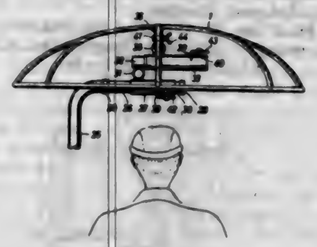
1. Lifting forks for roast meat, fish and the like adapted for use in coacting pairs, comprising: a header portion for each of said forks having a substantially rectangular cross section and an elongated shape with a length in excess of four times the width of the cross section; said header having a vertical engaging surface of longitudinal arcuate, concave shape and substantially parallel top and bottom faces, the bottom face providing a guiding and positioning surface for the fork when in use and the top face providing a sharp corner at its juncture with the vertical engaging surface; a plurality of lifting tines secured in said header portion and extending outwardly from and substantially normal to said vertical surface; and a handle for said fork secured at substantially the back longitudinal center of said header portion and sloping upwardly at an angle of 45° to 60° with the horizontal plane of said header portion to provide prying means for said forks.

2,943,884
ROOF AND WINDSHIELD ARRANGEMENT FOR VEHICLES
Georg Fritzmeier, House No. 14, Groebelfendorf, near Munich, Germany
Filed Aug. 16, 1957, Ser. No. 678,634
Claims priority, application Germany Aug. 18, 1956
6 Claims. (Cl. 296—90)



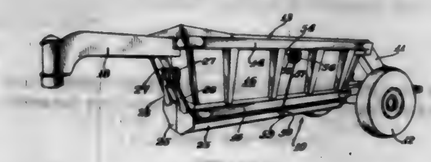
1. In a vehicle, in combination, a roof; only two support means carrying said roof, each support means being composed of three elongated members extending into each other and being turnable with respect to each other, said three members including upper and lower members and an intermediate member between said upper and lower members and said intermediate member having the configuration of a crank and the crank portions on the intermediate members of said two support means extending respectively in the same direction so that said intermediate members provide for lateral shifting of the roof; and means connected to the upper members of both of said support means for supporting a windshield of the vehicle for turning movement about a horizontal axis.

2,943,885
ADJUSTABLE SUPPORT MEANS FOR A ROOF OF A VEHICLE
George Fritzmeier, Groebelfendorf, near Munich, Germany
Filed Aug. 14, 1957, Ser. No. 678,688
Claims priority, application Germany July 22, 1957
3 Claims. (Cl. 296—102)



1. In a vehicle, in combination, a pair of elongated support members extending upwardly from the same side of the vehicle and respectively having horizontally extending arms at their upper ends, said arms extending transversely across the vehicle; a first shaft fixedly carried by said arms and also extending transversely across the vehicle; a first tube into which said first shaft extends and being turnable about the axis thereof; a second tube fixed to the transversely extending tube and extending longitudinally of the vehicle; a second shaft extending through said second tube and being turnable therein, said second shaft having a pair of end portions fixedly connected with the roof so that said second shaft cooperates with said second tube to support the roof for turning movement about a longitudinal axis, said first tube and shaft cooperating together to support said roof for turning movement about a transverse axis, and said second shaft being longitudinally shiftable in said second tube so that the position of the roof may be adjusted in a longitudinal direction; and a pair of independent means for respectively releasably fixing said first tube in an adjusted position on said first shaft and for releasably fixing said second tube in an adjusted position on said second shaft.

2,943,886
DOOR OPENING MECHANISM FOR BOTTOM DUMP VEHICLES
John R. Wilkinson, Mount Prospect, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 16, 1957, Ser. No. 634,470
3 Claims. (Cl. 296—35)

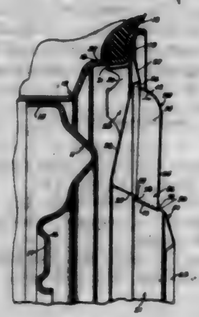


3. In a bottom dump vehicle having opposite sides defining a material receiving body, a pair of bottom closure members, means hingedly connecting said closure members to said body about hinge axes spaced upwardly from said closure members, said hinge axes extending longitudinally with said body, said closure members being movable laterally outwardly with respect to said hinge axes to an open position, a tubular housing having opposed open ends extending transversely within said body, said sides having oppositely disposed openings, means connecting said tubular member to said body with said open ends registering with said openings, a power actuating means secured within said housing and including a member movable within said housing and transversely with respect said said body, cable guide means secured within said housing adjacent said openings, a cable connected to said movable member, said cable extending from said movable member over said guide means and through said openings and outwardly of said body, said cable having opposite ends, one cable end being connected to one closure member which is positioned below the side having one opening, the other cable end being connected to the other closure member which is positioned below the other side having said other opening, and means for moving said movable member whereby said cable ends are moved upwardly toward said openings and said closure members are opened.

2,943,887
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed July 19, 1957, Ser. No. 672,891
7 Claims. (Cl. 301—37)

2. In a wheel structure, a wheel including rim and body parts, a wheel cover structure for overlying disposition upon the wheel including a series of circumferentially spaced generally radially outwardly facing openings defined by edges, means cooperable with said structure for maintaining the same upon the wheel, circumferentially spaced generally radially outwardly extending handles cooperable with the edge of said openings for facilitating assembly and removal of the structure with respect to the wheel, said handles each having a pivot, a cam, and a shoulder with said pivot being engaged against

the edge and upon pressure being applied to the handle the cam also cooperating with the edge until the shoulder



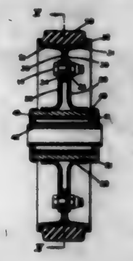
snaps over the edge and engages the cover thereby maintaining the handle under resilient tension with the cover.

2,943,888
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed July 19, 1957, Ser. No. 672,952
13 Claims. (Cl. 301—37)



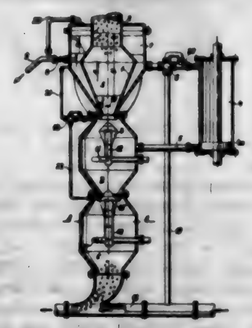
1. In a wheel structure including rim and body parts, a cover structure including an annular dished portion with the dished portion having opposed radially inner and radially outer side wall areas, said side wall areas having circumferentially spaced sets of openings defined by edges, circumferentially spaced bridging elements having resiliently deflectable and collapsible end portions each cooperable with one of said sets of openings with said bridging elements spanning and reinforcing said dished portion telescopingly cooperable with the edges defining the openings, said resiliently collapsible end portions upon being collapsed being insertable into the openings and upon being released being engaged under tension with the edges defining the openings, and means on the cover structure for fastening the cover structure in detachable assembly with one of the rim and body parts.

2,943,889
CASTER TRUCK WHEELS
Egbert Woldring and Maurice De Graaf, Grand Rapids, and John C. Baxter, East Grand Rapids, Mich., assignors to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Sept. 27, 1956, Ser. No. 612,416
10 Claims. (Cl. 301—63)



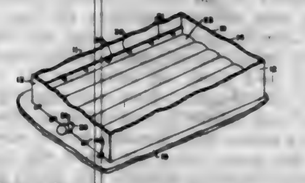
1. An industrial wheel assembly comprising a cylindrical hub member; a pair of hub discs mounted on said member, said hub discs having a perimeter of varying radial distance from the axis of said hub member; a pair of circular disc-like rims, said rims having combined tire supporting and clamping means at their peripheries, said rims each having a central opening of substantially the same outline as the perimeters of said hub discs, said hub discs being spaced one from the other a distance sufficiently great to receive said rims and permit relative rotational sliding movement between said composite rims and said hub discs, said rims being arranged on a common axis with each other and said hub discs so that the hub disc portions of greatest radial dimension overlap the rim portions of least radial dimension; a tire in said combined clamping means; and means for attaching said rims to said hub discs at said overlapping portions.

2,943,890
FEED APPARATUS WITH LOCK CHAMBERS FOR HYDRAULIC CONVEYING
Oszkár Hrabovszky and Levente Pányi, Budapest, Hungary, assignors to Licencia Találmányokat Értékesito Vállalat, Budapest, Hungary
Filed Nov. 25, 1957, Ser. No. 698,589
Claims priority, application Hungary Dec. 1, 1956
3 Claims. (Cl. 302—14)



1. An apparatus for feeding solid substances into a stream of liquid flowing through a conduit, comprising an upper feeding chamber, a jacket surrounding the feeding chamber and provided with an orifice of adjustable size affording communication between the feeding chamber and surrounding jacket, an intermediate pressure chamber communicating at its upper end with the lower portion of the feeding chamber, a lower mixing chamber communicating at its upper end with the intermediate pressure chamber, means connecting the lower end of the mixing chamber to the liquid conduit, valve means operable to close and open communication between the feeding chamber and intermediate pressure chamber and to close and open communication between the intermediate pressure chamber and the mixing chamber, a double-acting reciprocating accelerating pump having a cylinder and a piston, means connecting one end of the cylinder to the intermediate pressure chamber, means connecting the other end of the cylinder to said jacket and to the liquid conduit, and a change-over valve for alternately placing said other end of the pump cylinder in communication with the jacket and liquid conduit.

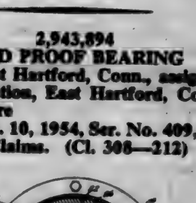
2,943,891
UNLOADING FLOOR MAT
Hamilton Neil King Paton, 4279 Pelly Road, North Vancouver, British Columbia, Canada
Filed Dec. 7, 1956, Ser. No. 627,017
7 Claims. (Cl. 302—29)



1. A fluidizing floor mat to be placed on the floor of a mobile or stationary storage compartment for assisting in the unloading therefrom of materials in small particle form, which compartment has a discharge outlet near its bottom, comprising a bottom layer of gas-impervious material, an upper layer of gas-pervious fluidizing material secured to the impervious layer at the periphery thereof and normally collapsed against said impervious layer to form a collapsed mat to be placed on the floor of a storage compartment, said upper and bottom layers forming a normally-collapsed distributing chamber therebetween, means connected to the upper and bottom layers to reduce the billowing of said upper layer away from said bottom layer and to divide the chamber into independent sections, a perforated pipe extending substantially throughout each chamber section for preventing the upper layer from being completely pressed against the bottom layer under load of material on the mat, and means for directing gas to each perforated pipe for discharge into the chamber section thereof independently of the other sections, said gas being distributed throughout the chamber sections by the perforated pipes thereof and passing through the pervious layer to fluidize small particle material over the mat.

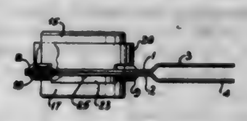
2,943,892
SWIVEL CONNECTOR FOR MOPS
John O. Hessler, Arlington Heights, Philip K. O'Connor, Riverside, and Stanley J. Stomiany, Chicago, Ill., assignors to American-Marietta Company, a corporation of Illinois
Filed July 11, 1956, Ser. No. 597,282
3 Claims. (Cl. 306—3)

1. A universal swivel connector for attaching a handle to a pivot member which comprises: a U-shaped lower socket member having a looped end portion receiving said pivot member, two upwardly extending friction bearing arms and a spring clamping finger integral with and extending from one of said arms in opposed spaced relation to said looped end portion, said finger being normally biased to press against said pivot member; an upper socket having an end portion adapted to receive a handle and having downwardly extending friction bearing means; and means for securing the friction bearing



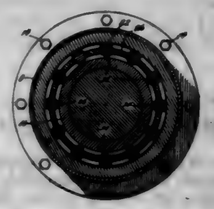
means of the upper socket in rotatable, frictional engagement with said friction bearing means of the lower socket member, the spring clamping finger being urged against and in rotatable frictional resilient engagement with said pivot member.

2,943,893
BEARING-HANGER STRUCTURE
Preston G. Siebert, Underhill Road, Ossining, N.Y.
Filed Feb. 16, 1959, Ser. No. 793,467
10 Claims. (Cl. 308—72)



1. In a bearing and hanger for shafts having a plate, means for attaching said plate to a support, said plate being provided with a substantially circular opening, a cylindrical bearing, a shroud on the outer periphery of said bearing, cooperating means on said shroud and said opening for retaining said bearing in said hanger, the improvement in which said cooperating means comprises a pair of arcuate ribs extending from said shroud and in opposed relation cooperating with a pair of arcuate tracks for the reception of said ribs extending from said opening and in opposed relation, whereby said ribs and tracks are adapted to coincide, leaving at least one arcuate area between opposed tracks and ribs, an arcuate resilient strip adapted to fit into said area, and means for retaining said strip in said hanger against accidental displacement.

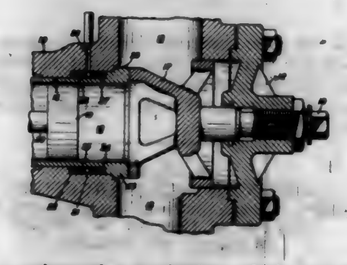
2,943,894
SKID PROOF BEARING
Niles J. Brook, East Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Feb. 10, 1954, Ser. No. 409,424
11 Claims. (Cl. 308—212)



1. A bearing construction including an inner race ring, an outer race ring, and anti-friction bearing members between said rings and engaging a surface on each of said rings, one of said rings having its member engaging sur-

face out-of-round such that, at a plurality of circumferentially spaced points thereon, the spacing between the member engaging surfaces of said rings is slightly less than the comparable dimension of the member, one of said rings being resilient to permit distortion of the ring as the members pass said spaced points.

2,943,895
PACKING FOR CYLINDER LINERS
John E. Miller, Dallas, Tex., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Nov. 29, 1956, Ser. No. 625,125
3 Claims. (Cl. 309—3)



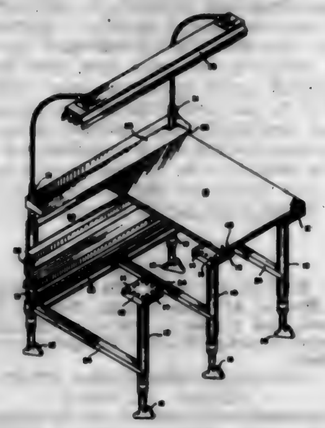
1. In a reciprocating mechanism which comprises a metal cylinder having a bore and a counterbore at one end of said bore, the inner end of said counterbore forming an internal shoulder, and a metal liner within said bore and having an annular enlargement within said counterbore, said enlargement having an inner face which forms an external shoulder spaced from said internal shoulder, the inside of said liner being adapted to contain fluid under relatively high pressure, the combination therewith of a seal normally preventing leakage of fluid between said cylinder and said liner comprising a pair of spaced apart resilient packing rings within said counter bore and abutting the respective shoulders, the space within said counterbore between said packing rings forming an annular pressure chamber, a lantern ring housed within said chamber, said packing rings having opposed sealing lips directed toward said lantern ring, the wall of said cylinder having a passage communicating with said chamber, means connected with said passage for introducing fluid to said chamber under a pressure greater than the pressure within said liner, fluid within said chamber being in direct contact with the walls of both said cylinder and said liner and acting to expand said sealing lips into sealing engagement with these walls and thus prevent flow in either direction between said chamber and other portions of said counterbore, the pressure within said chamber being transmitted through said packing rings to the shoulders formed on both said liner and said cylinder and acting in opposite directions axially against the liner and cylinder tending to force the liner out of the cylinder, and fastening means holding said liner in said cylinder against pressure within said chamber, whereby fluid leaking past said seal produces a pressure drop in said passage to afford an immediate positive indication of leakage.

2,943,896
COLLAPSIBLE SUPPORTING DEVICES FOR DROP LEAVES
Paul S. Gaston, Washington, D.C., assignor to Macinar, Inc., Washington, D.C., a corporation of Delaware
Filed Jan. 23, 1959, Ser. No. 788,611
3 Claims. (Cl. 311—19)

1. A collapsible supporting device for drop leaves, comprising a mounting plate adapted to be secured to the underside of a drop leaf, a plurality of foldable struts disposed in mutually spaced relation transversely of said mounting plate and extending obliquely therefrom to a side support, means pivotally connecting upper ends of said struts to the mounting plate, means provided at the lower ends of the struts for pivotally connecting the same to a side support, said struts being automatically lockable in their drop leaf supporting position, and means for unlocking the struts to facilitate folding thereof and lowering of the drop leaf, said last mentioned means comprising a substantially U-shaped rod, a pair of coaxial end portions provided on said rod and pivotally connected to said struts, a detent provided on said mounting plate and engageable by the bight portion of said rod when the drop leaf is raised, said bight portion of the rod being movable beyond said detent to effect folding of said struts, an unlocking bar slidably attached to said mounting plate and engaging the bight portion of said rod for moving the same beyond the detent, and a keeper strap provided on the mounting plate adjacent but spaced from said detent, the bight portion of said rod extending through the space between the detent and said keeper strap and being sustained in engagement wtih the former by the latter.

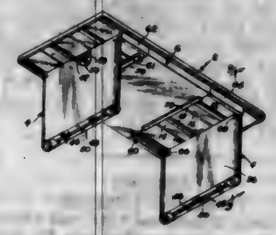


2,943,897
WORK BENCH SYSTEM WITH ADJUSTABLE DIMENSIONS AND CONFIGURATIONS
Peter W. R. Johnson, Wilton, William Hayden, Bridgeport, Nicolas J. Georgetis, Stratford, and Marcel Fabre, Easton, Conn., assignors to Products for Industry, Stamford, Conn., a sole proprietorship
Filed Nov. 14, 1956, Ser. No. 622,849
5 Claims. (Cl. 311—39)



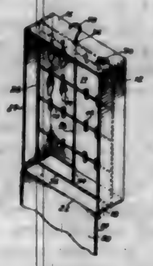
1. A bench comprising a back assembly having two rear legs and longitudinally-extending members connected to said legs and holding said legs in spaced relation to one another, a plurality of front legs, leg struts connecting the front legs with the back assembly of the beach, one of the longitudinally-extending members of the back assembly being of channel cross-section, an element connected to the rearward end of each leg strut and movable along the length of the channel member as a guide for shifting the front legs longitudinally with respect to the back assembly to space the front legs at any desired spacing from one another and independently of the spacing of the back legs, and means connected with the front legs for supporting panels of various sizes and of lengths substantially shorter than the back assembly and for which the spacing of the front legs is adjusted.

2,943,898
SHEET METAL TABLE HAVING HOLLOW END PANELS SUPPORTING THE TABLE TOP
Harvey G. Knuth, Elgin, Ill., assignor to Lyon Metal Products, Incorporated, Aurora, Ill., a corporation of Illinois
Filed Sept. 4, 1958, Ser. No. 759,032
7 Claims. (Cl. 311—110)



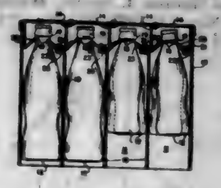
1. A sheet metal table including a table top comprising oppositely facing interfitted channels forming a peripheral frame, a top panel secured to said frame, hollow sheet metal end panels, a plurality of one-piece brackets each having a top plate secured to said peripheral frame and a depending body portion having laterally directed, parallel end flanges, the external dimensions of the bracket across said flanges being substantially equal to the internal dimensions of said hollow end panels, and said brackets being telescoped into said end panels with the flanges of the brackets contacting the inner wall surfaces of said panels, and detachable means securing said brackets to said end panels.

2,943,899
PORTABLE BAG FOR TRANSPORTING AND STORING SHOES
Solomon Beller, 5601 14th Ave., Brooklyn, N.Y.
Filed June 11, 1956, Ser. No. 590,546
1 Claim. (Cl. 312—3)



A portable shoe bag comprising a generally rectangular multipanel prismatic housing formed of relatively flexible material, an internal skeletal framework including a plurality of parallel vertical bars, a plurality of parallel horizontal bars, the ends of said horizontal bars being joined to the outermost of said vertical bars, with the ends of the uppermost and lowermost horizontal bars being joined to the adjacent ends of the outermost vertical bars, spaced shoe retention means carried on each of said horizontal bars, said horizontal and vertical bars lying generally in the same plane, a corner bar positioned generally normal to both said vertical bars and said horizontal bars at each of the ends of the outermost of said vertical bars and the corresponding ends of the uppermost and lowermost horizontal bars, each of said corner bars being disposed generally horizontally, and each of said corner bars being secured to its associated vertical bar at a point midway between the ends of said corner bar, with each of said corner bars distending said generally rectangular multipanel prismatic housing at a corner thereof and maintaining such housing in a distended disposition, a perforation in the ceiling of said housing, and a hanger for suspending said shoe bag to a support extending outside of said housing through said perforation.

2,943,900
DISPENSING APPARATUS
Le Roy C. Van Brunt, Palmer, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 23, 1958, Ser. No. 737,265
5 Claims. (Cl. 312—45)



1. In apparatus for dispensing articles having neck and shoulder portions near one end thereof, a magazine adapted to store a row of said articles and having a front opening for admitting articles thereto, and article retaining means for each row of articles comprising a pair of elongated members for retaining said articles at their neck and shoulder portions, said members being arranged on opposite sides of said row, each of said members having an edge portion, said edge portions being disposed rearwardly of said front opening and spaced apart to define an elongated slot therebetween, said slot being wider than said neck portion of said article and narrower than said one end of said article, one of said members being rigidly constructed, the other of said members comprising an elongated flexible strip of resilient material, said edge portion of said one member being positioned rearwardly of said edge portion of said other member, whereby said edge portion of said one member takes the stress of retaining said articles and minimizes wear to the edge portion of said other member.

2,943,901
PORTABLE PROTECTIVE APPARATUS FOR CASH REGISTERS AND THE LIKE
William M. Eaton and George A. Sporn, Fair Lawn, N.J., assignors to Cash Control Cover Corp., Fair Lawn, N.J., a corporation of New Jersey
Filed Apr. 18, 1956, Ser. No. 578,955
2 Claims. (Cl. 312—229)

1. In apparatus of the character described, a housing comprising a case and a hood, said case being open at the front and top and including a bottom wall, an upstanding rear wall and a pair of spaced parallel upstanding side walls having the general configuration of a sector, said hood being open at the bottom and back and including a pair of spaced parallel upstanding side walls also having the general configuration of a sector and a front wall, at least a portion of the hood front wall being

arcuate in longitudinal cross section, the hood side walls being disposed outside the case side walls and the hood front wall extending across the case open front, the upper end of the hood front wall projecting over and beyond



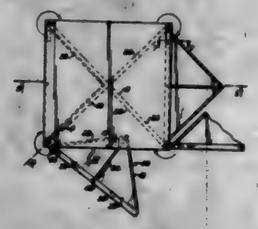
the case rear wall, said hood additionally including a trough secured to the lower end of its front wall and extending thereacross, means pivotally connecting the hood to the case in a manner to permit the hood to be swung forwardly to a raised position relative to the case, and means for releasably maintaining the hood in said raised position relative to the case.

2,943,902

CONVERTIBLE BRIDGE AND POKER TABLE TOPS

William F. McMechen, Yorktown Village, Md., assignor of one-half to Herbert J. Jacobi, Washington, D.C.

Filed Nov. 24, 1958, Ser. No. 775,884
7 Claims. (Cl. 312—285)



1. A convertible bridge and poker table top comprising a frame provided by diagonal members, a rectangular bottom wall secured to said frame, a rectangular top wall secured to said frame, said diagonal members together with said top and bottom walls providing an outwardly opening triangular recess on each side edge of said table top, a triangular shelf removably received in each recess, each shelf having upstanding side walls and a central upstanding partition dividing each shelf into two compartments, hinge means pivotally mounting each shelf on said frame at one corner of said table top for movement in a horizontal plane, whereby each shelf may be swung out of the recess in one side edge of said table top to a position in alignment with and projecting outwardly of the adjacent side edge of said table top to provide a poker table top and whereby each shelf may be swung into said recesses with the outer wall of each shelf in alignment with the adjacent side edge of said top wall to provide a bridge table top and detent means for releasably holding said shelves in extended or housed position.

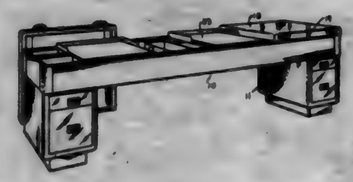
2,943,903

COMBINATION OF COVERS FOR OPEN TOP RECEPTACLES

Carl O. Peterson and Norman J. Spindler, Jamestown, N.Y., assignors to Watson Manufacturing Company, Inc., Jamestown, N.Y., a corporation of New York

Substituted for abandoned application Ser. No. 374,546 Aug. 17, 1953. This application Sept. 10, 1956, Ser. No. 609,834
2 Claims. (Cl. 312—311)

1. A receptacle having a top access opening, a pair of covers adapted to enclose opposite end portions of said opening, said covers being individually swingable into and out of enclosing position, an intermediate shelf-like cover adapted to close that portion of said opening not affected by said pair of covers, track means within said receptacle extending substantially the full length thereof, anti-friction means mounting said intermediate



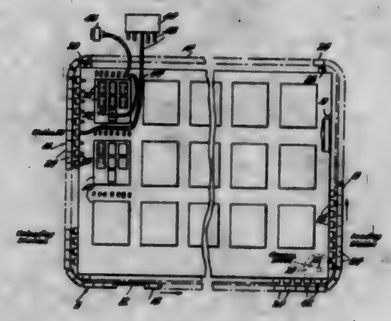
cover for movement along said track means from one to the other end of said receptacle, flanges carried by said intermediate cover underlying said track means and serving to prevent removal of said intermediate cover from said track means, said intermediate cover being freely movable along said track means when said pair of covers occupy an open position and expose the end portions of said access opening.

2,943,904

CURRENT LIMITER

Charles J. Bussom, Fairmount City, and Donald L. Say, Brookville, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware

Filed Mar. 20, 1959, Ser. No. 800,734
7 Claims. (Cl. 316—27)



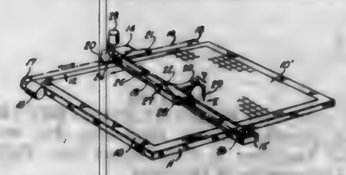
1. In a machine for aging electron tubes having a cathode, control grid, screen grid and anode, the combination comprising a conveyor frame, an indexible conveyor on the frame, bars carried by the conveyor and tube sockets for said tubes on each bar, contacts on each bar wired to individual contacts in the tube sockets, contacts mounted on the conveyor frame, one for each contact on the bars at each of a multiplicity of positions of the bars, said frame mounted contacts being connected individually to individual sources of voltage, the contacts on the frame at one position of the bars leading to relay mechanism, switching means forming part of said mechanism for normally establishing a current flow from screen grid to cathode within tubes in the sockets, said relay mechanism having a circuit element through which tube current flows and responsive to the magnitude of said current to switch the current so that it flows via the anode and screen grid to the cathode of the tube.

2,943,905

AUTOMATIC PLOTTING APPARATUS AND METHOD OF OPERATION

Sidney Godet, Great Neck, N.Y., assignor to Reeves Instrument Corporation, New York, N.Y., a corporation of New York

Filed Dec. 29, 1955, Ser. No. 556,349
14 Claims. (Cl. 346—8)



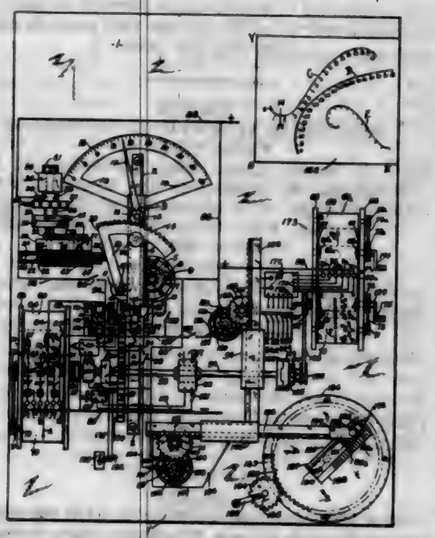
5. In an automatic plotting apparatus for producing a graphical presentation of the relationship of two variable quantities on a plotting surface, the combination comprising a writing implement, at least two servo actuating devices for moving said implement longitudinally and transversely of the plotting surface in response to electrical signals representing the quantities to be plotted, at least one of said servo devices producing an error signal proportional to the distance said implement is to be moved in response to a change in magnitude of one of said quantities, and implement actuating means responsive to the magnitude of said error signal for moving said implement in the direction corresponding to said one quantity independently of the movement of said implement in response to the operation of said servo devices.

2,943,906

DEVICE FOR MAKING TAPE AND OTHER RECORDS

Albert G. Thomas, Butler, Pa., assignor to Industrial Controls Corporation, Chattanooga, Tenn., a corporation of Tennessee

Filed Jan. 14, 1957, Ser. No. 633,994
36 Claims. (Cl. 346—33)



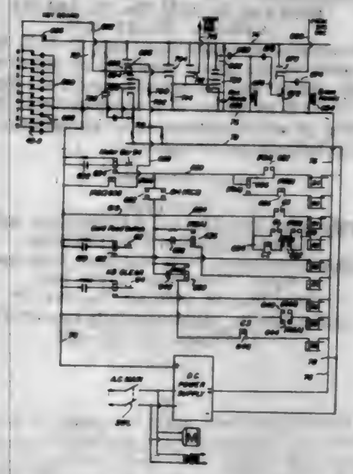
1. In a device for making a record representing movement of an element at an angle relative to a reference axis, first means for recording characterizations representing movement of said element relative to said axis, second means for recording characterizations representing movement of said element relative to a coordinate axis, means including a movable member for producing a predetermined number of spaced energizations of said first recording means, a second member having a surface settable at said angle with respect to a plane containing an axis of movement of said movable member, and means including means in contact with said surface and moved thereby for producing spaced energizations of said second recording means at a rate proportional to the degree of said angle.

2,943,907

APPARATUS FOR MAKING MAGNETIC RECORDINGS

Arthur H. Dickinson, Greenwich, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 16, 1954, Ser. No. 423,816
14 Claims. (Cl. 346—74)



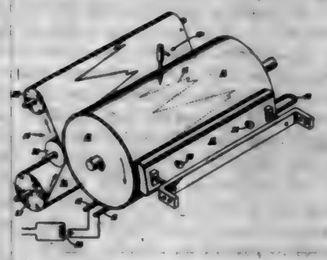
1. Apparatus for making magnetic recordings comprising means for advancing a magnetizable medium, a recording head positioned adjacent the path of movement of said medium, means for applying an alternating current of predetermined and uniform high frequency to said recording head during such movement for a period of predetermined duration and means for selectively modifying the voltage of said current at a predetermined rate during a selected portion of said period.

2,943,908

APPARATUS FOR RECORDING AND PORTRAYING A VISIBLE MAGNETIC IMAGE

John P. Hanna, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Aug. 2, 1954, Ser. No. 447,350
14 Claims. (Cl. 346—74)



1. Magnetic recording and portraying apparatus comprising a ferromagnetic member, means for impressing a magnetic image on said ferromagnetic member, means

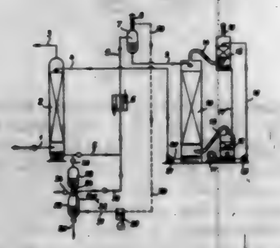
for subjecting minute magnetic particles to the attracting influence of said magnetic image whereby some of said particles adhere to said ferromagnetic member in the form of said impressed magnetic image, means for removing excess magnetic particles from said ferromagnetic member, and means for aligning with the field of said impressed magnetic image those minute magnetic particles remaining on said ferromagnetic member which have become misaligned with respect to said field by said removing means.

CHEMICAL

2,943,909
CORROSION- AND FUNGUS-INHIBITING COMPOSITION
Aaron Wachter, Oakland, and Rita Wiklund, Berkeley, Calif., assignors to Shell Oil Company, a corporation of Delaware
Filed Aug. 26, 1957, Ser. No. 680,162
6 Claims. (Cl. 21—2.7)

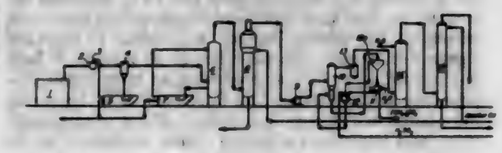
2. A composition comprising about 25–75% by weight of a nitrite of the group consisting of dicyclohexylammonium nitrite and diisopropylammonium nitrite and about 75–25% by weight of a nitrophenate of the group consisting of cyclohexylammonium nitrophenate and dicyclohexylammonium nitrophenate.

2,943,910
METHOD OF REMOVING HYDROGEN SULFIDE FROM GASEOUS MIXTURES
Giuseppe Giammarco, Porto Marghera, Italy, assignor to S.p.A. "Vetrocoke," Turin, Italy
Filed June 29, 1956, Ser. No. 594,775
Claims priority, application Italy June 30, 1955
11 Claims. (Cl. 23—3)



1. Method of removing hydrogen sulphide from a gaseous mixture by the use of a scrubbing liquid comprising the steps of introducing the gaseous mixture into an absorption and digestion zone, contacting said gaseous mixture in the said zone with said scrubbing liquid comprising an aqueous solution containing an alkaline arsenite capable of reacting with the hydrogen sulphide to form a thioarsenite, and containing an alkaline arsenate in the proportion of at least three moles of arsenate per mole of thioarsenite, whereby the thioarsenite is converted to arsenite and arsenate is converted to monthioarsenate, tranferring the monothioarsenate-containing solution from said absorption and digestion zone to an acidification zone and reducing its alkalinity in said last-named zone, whereby monothioarsenate is converted to arsenite and sulphur in elemental state is precipitated, separating and recovering the elemental sulphur, conveying the solution from the acidification zone to an oxidation zone in which part of its arsenite content is oxidized to reform the arsenate consumed in the absorption and digestion zone, and returning the solution from the oxidation zone to the absorption and digestion zone.

2,943,911
COKE OVEN BY-PRODUCT RECOVERY PROCESS
Maxwell Patrick Sweeney, Glenolden, Pa., assignor to United Engineers & Constructors Inc., Philadelphia, Pa., a corporation of Delaware
Filed Aug. 11, 1953, Ser. No. 373,497
4 Claims. (Cl. 23—3)



1. In a semi-direct coke oven by-product recovery process, the steps of contacting the gases issuing from coke ovens with an aqueous ammoniacal liquor to remove and recover tar and ammonia therefrom and to cool said gases to between about 20° C. and about 40° C., compressing the cooled coke oven gases to between about 9 p.s.i.g. and about 50 p.s.i.g. and thereby heating said gases to between about 103° C. and about 250° C., and contacting said gases, while said gases are within the last mentioned pressure and temperature ranges, with a dilute mineral acid maintained at a temperature between about 55° C. and about 100° C. by contact with said gases, to remove and recover ammonia from said gases.

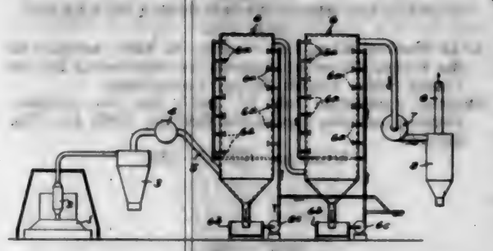
2,943,912
PROCESS OF SEPARATING TANTALUM FROM NIOBIUM
Lloyd H. Brown, Crystal Lake, and Francis K. Cole, Woodstock, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey
No Drawing. Filed Dec. 2, 1957, Ser. No. 699,882
5 Claims. (Cl. 23—23)

1. A process for separating tantalum values from niobium values contained in a mixture of the hydroxides thereof, comprising dissolving the hydroxides in an aqueous solution of a furfural-soluble alpha-hydroxy acid selected from the group consisting of glycolic acid, lactic acid, and tartaric acid; mixing the acid solution containing said values with furfural; and separating a furfural phase preferentially containing tantalum values from an aqueous phase containing niobium values.

2,943,913
FERROMAGNETIC MATERIAL AND PROCESS
Lothar Heinrich Brixner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 17, 1957, Ser. No. 684,423
4 Claims. (Cl. 23—58)

1. As a composition of matter, the ferromagnetic material $BaMnFe_{12}O_{21}$.

2,943,914
METHOD OF RECOVERING FLUORINE FROM WASTE GASES
Erwin Moser, Rheinfelden, Baden, Germany, assignor to Aluminium - Industrie - Aktien - Gesellschaft, Chippis, Switzerland, a joint stock company of Switzerland
Filed Mar. 24, 1958, Ser. No. 723,373
Claims priority, application Switzerland Apr. 1, 1957
2 Claims. (Cl. 23—88)



1. The process of recovering fluorine from waste gases produced in the electrolytic production of aluminum from a fluoride-containing fused salt bath in an electrolytic cell operated with self-baking anodes, and containing sulphur dioxide and hydrofluoric acid, comprising adding air to the waste gases and burning carbon monoxide and tar products in a combustion chamber, depositing dust and carbon black in a cyclone, cooling the gases to about 40° C.–30° C., washing the waste gases with water, initially containing substantially no solutes, until a solution containing from 3% to 10% hydrofluoric acid is obtained, and reacting said solution with aluminum and sodium containing compounds to precipitate a sodium aluminum double fluoride.

2,943,915
PROCESS FOR PRODUCING POTASSIUM ACID PYROPHOSPHATE
James W. Edwards, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 27, 1957, Ser. No. 668,321
2 Claims. (Cl. 23—106)

1. A method for producing crystalline potassium acid pyrophosphate from an orthophosphate composition containing approximately equal atomic proportions of potassium and phosphorus by molecular dehydration of said orthophosphate composition at an elevated temperature below the melting point of said pyrophosphate, which method comprises adding solid crystalline potassium acid pyrophosphate to said orthophosphate composition prior to molecular dehydration thereof.

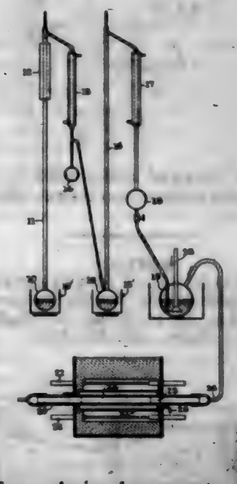
2,943,916
PREPARATION OF BORON TRICHLORIDE
Albert D. McElroy, Mars, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Dec. 20, 1957, Ser. No. 703,990
5 Claims. (Cl. 23—205)

1. A method of preparing boron trichloride which comprises contacting a compound selected from the group consisting of trimethyl borate and trimethoxyboroxine with chlorine, and recovering the boron trichloride formed.

2,943,917
PROCESS FOR THE CONVERSION OF HYDROGEN
Daniel H. Weitzel, 3040 Arh Ave., Boulder, Colo., and William V. Loebenstein, 8501 Sundial Drive, Silver Spring, Md.
No Drawing. Filed Dec. 20, 1956, Ser. No. 629,471
14 Claims. (Cl. 23—210)

1. The process for catalytically converting hydrogen to an equilibrium energy state within the temperature range of from about 20° K. to about 240° K. which comprises passing the hydrogen through a porous bed of heat-activated ferric oxide gel particles.

2,943,918
PROCESS FOR MANUFACTURING DENSE, EXTRA PURE SILICON
Gerhard Pauls, La Prue, France, assignor to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation of France
Filed Feb. 1, 1957, Ser. No. 637,645
Claims priority, application France Feb. 11, 1956
7 Claims. (Cl. 23—223.5)

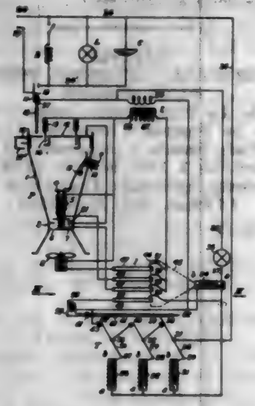


1. Process for producing dense, spectrographically pure silicon, comprising the steps of: contacting in a reaction zone silicon containing about 5% copper with gaseous hydrochloric acid at a temperature not in excess of 250° C. to thereby form a mixture of vapors containing trichlorosilane; subjecting said mixture to successive distillations under reflux conditions to produce trichlorosilane of high purity; heating said highly purified trichlorosilane diluted with hydrogen in a plurality of decomposition zones maintained at progressively higher temperatures, whereby the initial decomposition zone is heated to a temperature within the range of 800°–900° C., and the final decomposition zone to about 950° C., to decompose the trichlorosilane and produce a deposit of silicon in solid state, and recovering the deposited silicon.

2,943,919
DEVICE FOR DETECTING COMBUSTIBLE GAS
Vincenzo Berardi, 46, Via Piave, Terlizzi, Italy, and Giovanni Manzari, 2, Via Tufaro, Valenzano, Italy
Filed Jan. 16, 1957, Ser. No. 634,574
Claims priority, application Italy Jan. 20, 1956
3 Claims. (Cl. 23—255)

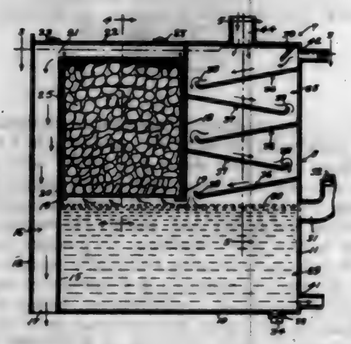
1. In a self operating safety device for testing for the presence of combustible gas for use in conjunction with a gas supply line having an electrically operated flow valve, a compression chamber having inlet and outlet ports, an expandable member comprising a portion of said chamber, electrically operated simultaneously actuated closure means associated with said ports, an electrically driven fan for filling said chamber with the atmosphere to be tested, electrical gas ignition means within said chamber, first switch means sequentially activating said fan, closing said closure means and activating said ignition means, timing means operating said first switch

means at pre-determined intervals, second switch means operably connected to said expandable member adapted



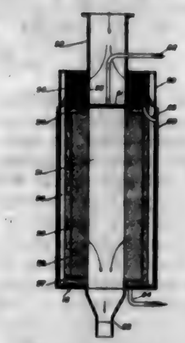
to close the flow valve and render said first switch means inoperative upon an explosion occurring within said chamber.

2,943,920
EXHAUST GAS CONDITIONER
Kenneth H. Hoover, P.O. Box 72, Marysvale, Utah
Filed Apr. 28, 1958, Ser. No. 731,231
1 Claim. (Cl. 23—284)



An exhaust gas conditioner comprising a horizontally elongated casing including a bottom portion defining a reservoir containing water, one end portion of the casing forming a scrubbing chamber disposed above a part of the reservoir, the other end of said casing constituting an exhaust chamber having a part disposed beyond an end of the reservoir, said casing having a drying and purifying chamber disposed in the upper part thereof between said scrubbing chamber and another part of the exhaust chamber and having a foraminous bottom opening into the top of a portion of the reservoir and slightly above the level of the water therein, said casing having an inlet for exhaust gases opening into the upper end of the scrubbing chamber, said scrubbing chamber containing a plurality of oppositely directed downwardly inclined superposed baffles, each of the baffles, except the lowermost baffle, having a lower end disposed above and spaced from the upper end of a baffle disposed immediately therebeneath and spaced from an adjacent wall of the scrubbing chamber, means for removing water from the reservoir and for discharging the water into the scrubbing chamber above the upper end of the uppermost baffle, said baffles causing the water and exhaust gases to pass by an indirect route downwardly through the scrubbing chamber and so that the water cascades from the lower ends of the baffles to create walls of water through which the exhaust gases must pass, and said lower ends of the baffles having upturned lips for spreading and deflecting the water passing thereover.

2,943,921
CATALYTIC RECOMBINER FOR A NUCLEAR REACTOR
L. D. Percival King, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
Original application July 27, 1957, Ser. No. 690,641. Divided and this application Oct. 24, 1957, Ser. No. 692,248
2 Claims. (Cl. 23—288)

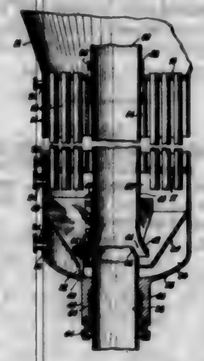


1. A catalytic recombining chamber for recombining hydrogen and oxygen formed by the radiolytic dissociation of water, comprising in combination a housing of generally cylindrical shape and having an inlet and an outlet at opposite ends thereof, an annular flashback shield disposed adjacent the inlet end of said housing to define a central passage contiguous with said inlet, said flashback shield consisting essentially of metal shaft, a baffle plate contiguous with said flashback shield and extending across said central passage, an annular catalyst bed contiguous with said baffle plate and extending to the outlet end of said housing to define a centrally disposed gas outlet channel continguous with said outlet and an annular distributor-flashback shield surrounding and contiguous with said catalyst bed, said distributor-flashback shield consisting essentially of non-platinized alumina pellets, the outer peripheries of said flashback shield, said baffle plate and said distributor-flashback shield together with said housing defining an annular flow channel for the passage of gases from said flashback shield to said distributor-flashback shield including a coolant jacket partially surrounding said housing, a coolant jacket secured to said baffle plate, pipe means connecting the coolant channels defined by said members and said coolant jackets, and means including a coolant inlet pipe extending through said housing inlet opening and connected to said baffle coolant jacket and a coolant outlet pipe connected to said housing coolant jacket to circulate a coolant through said channels and pipes.

2,943,922
SOLIDS COOLING MEANS AND RISER CONDUIT
Ludlow S. Daniels, New York, N.Y., assignor to Hydrocarbon Research, Inc., New York, N.Y., a corporation of New Jersey
Filed Apr. 1, 1953, Ser. No. 346,132
1 Claim. (Cl. 23—288)

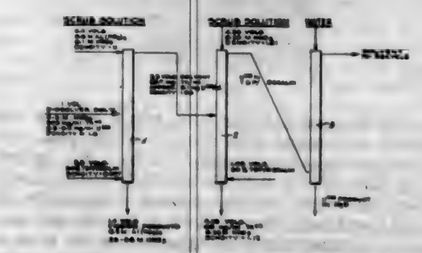
A tubular leg open at one end from which it is adapted to depend vertically from and communicate with the

bottom of a reactor, in combination with a contact material uplift conduit extending centrally in said leg from near the bottom thereof to substantially beyond the open end of said leg with a length sufficient for it to reach a point near the top of said reactor when installed, said uplift conduit being fastened solely by its lower end to the bottom end of said leg with its walls and said lower end spaced from the walls and bottom end of said leg, a fluid inlet disposed in said bottom end and discharging into said lower end of said uplift conduit, said leg and said uplift conduit being cylindrical and forming an annular space therebetween, an annular boiler disposed



in said annular space, said boiler having a plurality of vertical tubes supported in parallel by upper and lower spaced tube sheets, a frusto-conical baffle disposed in said leg below said lower tube sheet to form therebetween an annular plenum chamber into which the bottom ends of said vertical tubes discharge, a fluid inlet in communication with the upper portion of said plenum chamber, said bottom ends of said vertical tubes projecting below said lower tube sheet and said fluid inlet in communication with said upper portion of said plenum chamber, said baffle being sloped toward said uplift conduit and having its inner periphery positioned adjacent the lower end of said uplift conduit, and an inlet for supplying a fluid to the space in said leg beneath said baffle.

2,943,923
PROCESSING OF NITRATE SOLUTIONS CONTAINING THORIUM AND URANIUM 233
William W. Morgan, Deep River, Ontario, Canada, assignor to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada, a company of Canada
Filed Feb. 18, 1958, Ser. No. 714,134
3 Claims. (Cl. 23—312)



1. A process for the treatment of nitric acid solutions of neutron irradiated thorium-containing material which comprises treating the solution with an extracting solvent consisting of tributyl phosphate in decahydronaphthalene.

2,943,924
STABLE FUEL OIL COMPOSITIONS
Ira Kukin, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed May 21, 1956, Ser. No. 585,933
7 Claims. (Cl. 44—66)

1. A compounded fuel oil composition comprising a major amount of a mixture of catalytically cracked and straight run fuel oil distillates that has a total acid number of not more than 0.045 before compounding, and that normally tends to deposit sludge, and containing a small amount of a combination of (*a*) an oil-soluble member selected from the group consisting of naphthenic acids containing at least 8 carbon atoms and fatty acids containing 8 to 30 carbon atoms per molecule, and (*b*) a normal alkaline earth metal salt of an alkylbenzene sulfonic acid containing 1 to 3 alkyl substituents per molecule, at least one of said alkyl substituents containing 12 to 30 carbon atoms, said small amount being sufficient to inhibit sludge deposition from said mixture of oils and comprising at least 0.01 percent by weight of the composition of each of said acid and said alkaline earth metal salt of said sulfonic acid and not more than 0.6 percent of said combination by weight of the composition.

2,943,925
RESIDUAL FUEL OILS
Henry A. Ambrose, Penn Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Aug. 27, 1956, Ser. No. 606,413
9 Claims. (Cl. 44—66)

1. A fuel composition comprising a major amount of a residual petroleum fuel yielding a corrosive vanadium-containing ash upon combustion, and a small amount of a salt selected from the class consisting of oil-soluble and oil-dispersible manganese salts of an acidic organic compound sufficient to retard the corrosiveness of said ash.

2,943,926
ABRASIVE WHEEL COMPOSITION
George J. Goepfert, Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed July 18, 1958, Ser. No. 749,328
11 Claims. (Cl. 51—298)

2. The method of making a resin-bonded abrasive product having a relatively high ratio of bond to abrasive and a relatively low volatile content which comprises wetting the surfaces of granules of an abrasive material with a bond-adhesion-promoting agent selected from the group consisting of said condensation resin in liquid form, an organic solvent having an appreciable solvent power for said condensation resin and mixtures of said liquid resin and solvent, mixing with the wetted granules a first portion of said filled condensation resin in dry powder form to cause said granules to be coated with said dry resin, adding water to the resulting mixture to wet the coated granules and any excess of resin powder that may be present in the mixture, incorporating a second portion of said dry powdered resin in the resulting mixture to increase the thickness of the resin coating on said granules, the quantity of said added water being sufficient to cause said second portion of powdered resin to adhere to said coated granules, vaporizing the added water from said coated granules and molding said granules to form said resin-bonded abrasive product.

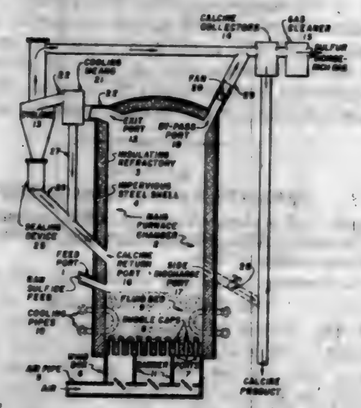
2,943,927
FUEL
Ludwig F. Audrieth, Urbana, and Don W. Ryker, Alton, Ill., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Mar. 28, 1949, Ser. No. 83,812
8 Claims. (Cl. 52—.5)

1. A composition of matter consisting essentially of hydrazine with from zero to one part water per part hydrazine by weight included therewith and having as an ingredient dissolved therein a content of hydrazine mononitrate within a range of from about three percent to about sixty-seven percent by weight of the resultant mixture.

2,943,928
METHOD FOR IMPROVING THE STORAGE STABILITY OF AMMONIUM SALTS
Eugene D. Guth, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 13, 1955, Ser. No. 508,294
17 Claims. (Cl. 71—64)

1. A method for improving the storage stability of an ammonium salt, which comprises incorporating in said salt a small but stabilizing amount of a metal nitride.

2,943,929
PROCESS FOR ROASTING SULFIDES
George Hugh Charles Norman, Copper Cliff, Ontario, Canada, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 6, 1958, Ser. No. 733,448
Claims priority, application Canada June 4, 1952
20 Claims. (Cl. 75—9)



1. A process for suspension roasting finely-divided iron sulfide to obtain calcines of low sulfur contents which comprises feeding the finely-divided iron sulfide having a particle size of less than about 20 mesh and containing at least 15% sulfur into a fluid-bed roasting operation to establish a gas-permeable bed of solids; controlling the temperature of said bed between about 1000° F. and about 1800° F. while passing upwardly therethrough an oxidizing gas containing free oxygen at a volume sufficient to roast said sulfide and to fluidize said bed; separating from the solids-containing exhaust gases the bulk of the solids entrained therein; returning the separated solids to the fluid bed in an amount equal to at least about 5 times the amount of unroasted sulfide being fed to said fluid-bed roasting operation; and withdrawing a calcine product of low sulfur content.

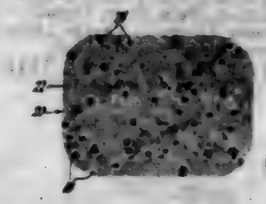
2,943,930
SCRAP REFINING PROCESS AND PRODUCT
Sam Proler, Houston, Tex., assignor to Proler Steel Corporation, Houston, Tex., a corporation of Texas
Continuation of application Ser. No. 677,514, Aug. 12, 1957. This application Oct. 27, 1959, Ser. No. 849,116
8 Claims. (Cl. 75—44)

1. Process of refining a raw ferrous bearing scrap material comprising shredding the raw material, separating the more ferrous bearing shredded material from the less ferrous bearing shredded material, roasting the more ferrous bearing shredded material at a temperature sufficient to remove substantially all non-ferrous metals, and individually compacting and balling up the pieces of the more ferrous bearings shredded material to densify it while maintaining the individuality of the separate pieces, whereby a fluent mass is obtained.

2,943,931
PROCESS FOR THE PRODUCTION OF REFRACTORY METALS
Dale M. Hiller, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 29, 1958, Ser. No. 738,636
9 Claims. (Cl. 75—84.5)

1. In a process for the production of refractory metal selected from the group consisting of niobium and tantalum wherein a halide of said metal is reduced with hydrogen within a reactor to deposit said metal on dissimilar surfaces within said reactor, the improvement which comprises conducting the following steps after discontinuing the introduction of refractory metal halide into the reactor: maintaining the surfaces of the reactor at a temperature between 800° C. and 1000° C. and passing hydrogen through said reactor, cooling the reactor surfaces while in contact with hydrogen to below the decomposition temperature of the hydride, thus causing a brittle refractory metal hydride to form, and removing said hydride from the dissimilar surfaces.

2,943,932
BORON-CONTAINING FERROUS METAL HAVING AS-CAST COMPACTED GRAPHITE
Philip R. White, Murray Hill, N.J., and Robert F. Thomson, Grosse Pointe Woods, and Carl F. Joseph, Saginaw, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 10, 1957, Ser. No. 664,727
14 Claims. (Cl. 75—123)



1. A ferrous metal having high tensile strength and a modulus of elasticity of at least 27 million p.s.i., said metal comprising approximately 1% to 2.5% carbon, 1.5% to 3.2% silicon, 0.001% to 0.05% predominantly acid-insoluble boron and the balance substantially all iron, said metal being characterized in the "as-cast" condition by a microstructure having carbon in the form of compacted graphite and in the absence of boron having a white iron "as-cast" microstructure.

3. A ferrous metal having high tensile strength and a modulus of elasticity of at least 27 million p.s.i., said metal comprising approximately 1% to 2.5% carbon, 1.5% to 3.2% silicon, 0.001% to 0.05% predominantly acid-insoluble boron, a small amount not in excess of about 0.02% of an additive selected from the class consisting of tellurium and bismuth, and the balance substantially all iron, said additive being present in an amount sufficient to insure that said ferrous metal has an "as-cast" microstructure with free carbon substantially all in the form of compacted graphite, said ferrous metal in the absence of boron having a white iron "as-cast" microstructure.

2,943,933
METHOD AND APPARATUS FOR MAKING ISOTROPIC PROPERTIED BERYLLIUM SHEET
Robert E. Leuhart, Shillington, Pa., assignor to The Beryllium Corporation, Reading, Pa., a corporation of Delaware
Filed May 21, 1959, Ser. No. 814,846
5 Claims. (Cl. 75—214)



1. The method of making isotropic propertied beryllium sheets which comprises the steps of confining powdered beryllium metal in an envelope, placing such envelope on a die plate, locating an explosive charge in fixed predetermined distance above said envelope and die plate, lowering the die plate, envelope and explosive charge beneath the surface of a body of water, then detonating the explosive charge to effect compaction of the powdered beryllium metal within the envelope, and sintering said thus compacted powdered beryllium metal while still in said envelope, said sintering carried out at a temperature of from 800 to 1000° C. for approximately two hours, stripping the envelope from the sintered and compacted powdered beryllium and subjecting the thus dejacketed sheet to a further sintering at a temperature of from 1000 to 1200° C. for approximately two hours.

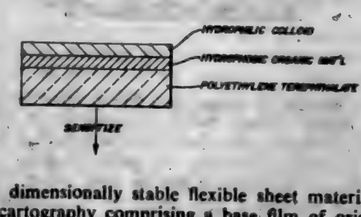
2,943,934
COLOR PHOTOGRAPHIC MATERIAL AND PROCESS
Bela Gaspar, Beverly Hills, and Gustave B. Linden, North Hollywood, Calif; said Gaspar assignor to Gaspar-color, Inc., Hollywood, Calif., a corporation of Delaware
No Drawing. Original application May 8, 1951, Ser. No. 225,267. Divided and this application Sept. 18, 1953, Ser. No. 381,473
14 Claims. (Cl. 96—53)

1. A photographic material comprising an emulsion layer containing a light-sensitive silver halide and a water-soluble non-diffusing dye-forming compound containing $-SO_3$ cation solubilizing groups and said dye-forming compound comprising a high molecular weight polymeric linear chained radical of the group consisting of polymeric hydrocarbon radicals, polymeric oxahydrocarbon radicals, and polymeric carboxylic acid amide radicals having recurring amide groups in the main linear polymeric chain, said polymeric radical carrying a plurality of $-SO_2Y$ groups outside the main linear polymeric chain, wherein Y is a radical selected from the group consisting of azo dye coupling components and a radical capable of coupling with the oxidation products of a primary aromatic amino color developer to form a dye, said radical Y being attached to the SO_2 radical by the valence bond of an atom selected from the group consisting of nitrogen and oxygen, said $-SO_2Y$ groups being linked to the main linear chain of said polymeric radical only through carbon atoms selected from the group consisting of carbon atoms of phenyl nuclei and carbon atoms of the main linear chain.

2,943,935
STABILIZATION OF PHOTOGRAPHIC BLEACH POWDERS CONTAINING AN ALKALI METAL FERRICYANIDE
Lawrence G. Welliver, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 15, 1957, Ser. No. 659,213
10 Claims. (Cl. 96—60)

1. A stable single powder photographic bleach mixture containing as its essential components from 30 to 120 parts by weight of an alkali metal ferricyanide, from 2 to 20 parts by weight of an alkali metal bromide, from 4 to 25 parts of boric anhydride and from 2 to 12 parts by weight of an alkali metal ferrocyanide, the parts being based on the total weight of the powder.

2,943,936
CARTOGRAPHIC MATERIAL
Daniel S. Spechler, Brooklyn, N.Y., assignor to Keuffel & Esser Company, Hoboken, N.J., a corporation of New Jersey
Filed Dec. 13, 1956, Ser. No. 627,981
3 Claims. (Cl. 96—75)

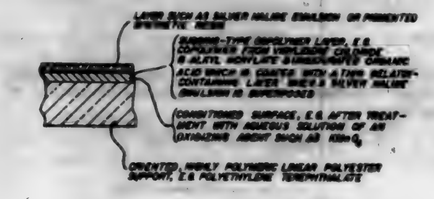


1. A dimensionally stable flexible sheet material useful in cartography comprising a base film of orientated polyethylene terephthalate, an adherent coating on one side of said base film of a film forming hydrophobic organic material including a compound from the group consisting of nitrocellulose, ethyl cellulose, acrylic resins, sisting of nitrocellulose, ethyl cellulose, acrylic resins, and alkyd resins receptive to a first solution comprising dye dissolved in organic solvents but not to a second solution comprising dye dissolved in water and a coating comprising a hydrophilic compound from the group consisting of polyvinyl alcohol and geletin applied over said adherent coating, which second coating is made photosensitive by treatment with an aqueous solution containing a bichromate and which after exposure is developed with water to form a relief image that is peelable in a continuous sheet from said adherent coating and is receptive to the solution comprising a dye dissolved in water but which will not accept a dye applied in a solution in organic solvents.

2,943,937
SURFACE CONDITIONING AND SUBBING OF ORIENTED LINEAR POLYESTER PHOTOGRAPHIC FILM SUPPORT
Gale F. Nadeau and Walter R. White, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed June 12, 1956, Ser. No. 590,984
11 Claims. (Cl. 96—87)

1. In a process for preparing a film adapted for photographic utility wherein the film support is an oriented and heat set highly polymeric linear polyester of a bifunctional aromatic dicarboxylic acid condensed with a dihydroxy organic compound, the steps comprising (I) conditioning the surface of the oriented and heat set film for from about 1 second to about 5 minutes at from about 50° F. to about 175° F. by contact with an aqueous oxidizing solution selected from the group consisting of (1) a solution of from about 1% up to about 10% by weight of an inorganic salt which is an oxidizing agent

dissolved in water containing up to about 5% by weight of an alkaline inorganic compound, and (2) a solution of from about 15% up to about 95% by weight of an inorganic oxidizing acid dissolved in water, and (II) coating the conditioned surface with an adherent copolymer of at least 35% by weight of a monomer selected from the group consisting of vinyl chloride and vinylidene chloride, and from about 0.5 to 25% of an ethylenically unsaturated monomeric copolymerizable carboxylic acidic compound, wherein said carboxylic acidic compound is selected from the group consisting of itaconic acid, citraconic acid, mesaconic acid, acrylic acid, α-methacrylic acid, maleic acid, fumaric acid and the anhydrides and lower alkyl half esters of those acids which are dibasic.



5. In a process for preparing a film adapted for photographic utility wherein the film support is an oriented and heat set highly polymeric linear polyethylene terephthalate, the steps comprising (I) conditioning the surface of the oriented and heat set film for from about 1 second to about 10 minutes at from about 50° F. to about 175° F. by contact with an aqueous oxidizing solution containing from about 1% up to about 10% by weight of a permanganate salt dissolved in water containing up to about 5% of an alkali metal hydroxide, and (II) coating the conditioned surface with an adherent copolymer containing from 60 to 96% by weight of vinylidene chloride, from 4 to 20% by weight of an acrylic ester of a lower alkanol and from 1 to 10% of acrylic acid.

2,943,938
GIBBERELLIN IN ANIMAL FEEDS
John R. De Zeeuw, Gerald A. Donovan, and William C. Sherman, Terre Haute, Ind., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 6, 1958, Ser. No. 713,560
3 Claims. (Cl. 99—2)

1. Animal feed compositions comprising a nutritionally-balanced animal feed and a small, growth-promoting portion of gibberellin.

2,943,939
CARBONATED BEVERAGES
Wesley N. Karlson, 1015 St. James Place, Park Ridge, Ill.
No Drawing. Filed Jan. 30, 1957, Ser. No. 637,896
4 Claims. (Cl. 99—28)

1. The method of producing carbonated water which consists in treating the raw water to be used with a water soluble glassy sodium polyphosphate of a molar composition substantially midway of the glass-forming range as a treating material in a proportion equal to three parts per million of the treating material for each part per million of metallic ion content of the raw water plus an excess of treating material equal to substantially two parts per million, and introducing carbon dioxide into such treated water.

2,943,940
METHOD AND APPARATUS FOR PRESERVING THE CONTENTS OF PERVIOUS CONTAINERS
Claus M. Wiedemann, Indian Hill, Ohio. (% Claus M. Wiedemann and Associates, Mariemont Center Bldg., Cincinnati 27, Ohio)
Filed Jan. 24, 1958, Ser. No. 710,943
2 Claims. (Cl. 99—48)



2. In combination a closed wooden container filled with whiskey and an envelope surrounding the container, the envelope having a core of aluminum foil and coatings of heat sealable resin on the faces thereof, the envelope being collapsed against the outside of the container, the envelope being sealed to prevent exposure of the walls of the container to ambient air.

2,943,941
STABILIZED MALT BEVERAGES
Philip P. Gray, New York, Irwin M. Stone, Eastchester, and John E. Wylie, Manhasset, N.Y., assignors to Baxter Laboratories, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Jan. 29, 1958, Ser. No. 711,781
4 Claims. (Cl. 99—48)

1. The process of stabilizing malt beverages normally containing tannin bodies which comprises adding to the fermented malt beverage at a stage in the processing thereof prior to packaging a water soluble polyvinylpyrrolidone of an average molecular weight in excess of about 30,000 in an amount sufficiently in excess of the amount which will precipitate with said tannin bodies to prevent the formation of a precipitate in said beverage and to stabilize the packaged beverage against the formation of haze therein on long standing even in the presence of air.

3. A stabilized malt beverage containing a water soluble polyvinylpyrrolidone of an average molecular weight in excess of about 30,000 in an amount sufficiently in excess of the amount which will precipitate with said tannin bodies to prevent the formation of a precipitate in said beverage and to stabilize the packaged beverage against the formation of haze therein on long standing even in the presence of air.

2,943,942
FOAMING BEVERAGES
Edward Segal, Chicago, Ill., assignor to J. E. Siebel Sons' Company, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed Mar. 18, 1959, Ser. No. 800,077
6 Claims. (Cl. 99—48)

5. Beer containing from about 20 to about 80 parts per million by weight of phosphorylated mannan.

2,943,943
DYEING SOLUTION FOR COLORING CITRUS FRUITS AND METHOD OF DYEING CITRUS FRUITS
Herman J. Keller, 1000 Pinebrook Drive, Clearwater, Fla.
No Drawing. Filed July 10, 1957, Ser. No. 670,881
4 Claims. (Cl. 99—148)

1. A method of dyeing citrus fruits in the yellow to orange range with an oil soluble dye which comprises dissolving an annatto derivative in a hydrocarbon solvent, oleic acid and an amine in which the amine is present in about at least equal amounts in relation to the oleic acid,

emulsifying the mixture with water, maintaining the mixture at a pH between neutrality and 13, and applying the emulsion to the skin of citrus fruit to dye the same.

2,943,944
WRAPPED BREAD AND CLOSURE THEREFOR
Alexander G. Jones, Rochester, Minn., assignor to Consumers Merchandising Corporation, Rochester, Minn., a corporation of Minnesota
Filed Dec. 8, 1955, Ser. No. 551,868
5 Claims. (Cl. 99—173)



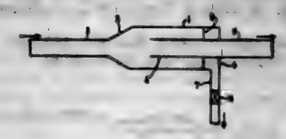
1. An assemblage for maintaining wrapped and presliced bread in easily dispensed and fresh condition, said assemblage comprising, a ring element having an inner annular surface, an opened loaf of wrapped bread having a portion of its wrapped material extending beyond the last exposed slice of bread at an opened end thereof and passing through said ring, a closure having a peripheral outer rim surface interfitting within the extending portion of said wrapper material and pressing outwardly against the inner annular surface of the ring element in frictional engagement therewith, and tearing means disposed closely adjacent the wrapper whereby excess wrapper material extending beyond the tearing means may be manually torn off therefrom while leaving bread within the remaining wrapper in sealed and fresh condition.

2,943,945
CORROSION PREVENTION
Lawrence G. Saywell, San Francisco, Calif., assignor to Eureka Chemical Company, a corporation of California
No Drawing. Filed May 13, 1959, Ser. No. 812,792
6 Claims. (Cl. 106—14)

1. The method of making a corrosion control composition comprising heating about 1,000 pounds of wool fat to a temperature of about 140° F., adding thereto about 1½ gallons of diethylene glycol monoethyl ether and about 1 quart of an oil soluble non-ionic type detergent, adding to said mixture a slurry containing about 65 to 75 pounds of calcium hydroxide, about 60 gallons of diesel oil, and 2½ gallons of water, raising the temperature to about 165° F., adding about 60 gallons of diesel oil, heating the mixture to a temperature of about 185° to 198° F. for several hours, thereupon adding 200 pounds of pine oil, about 50 to 80 pounds of heavy fuel oil and about 140 gallons of diesel oil, maintaining said temperature for about an additional hour, adding about 4 pounds of an amine type corrosion inhibitor and 2½ gallons of dichloropentane and cooling the mixture.

2,943,946
MANUFACTURE OF ARTIFICIAL MATERIALS
Selwyn George Hawtin, Spondon, David Roland Parker, Newlyn, and John Downing, Kinross, England, assignors to British Celanese Limited, County of London, England, a British company
Filed Sept. 10, 1958, Ser. No. 760,166
Claims priority, application Great Britain Sept. 19, 1957
10 Claims. (Cl. 106—196)

1. The method of obtaining, from a solution of a cellulose acetate which solution contains gels, a solution containing a lower proportion of gels, which comprises forwarding the solution continuously through a conduit and continuously bleeding-off from said conduit a portion only of the solution, said portion being that flowing adjacent to the walls of the conduit, while permitting the remainder to continue along the conduit as a product of reduced gel content.



2,943,947
Sb_2O_3-ADDUCT OF AN ORGANIC MONOBASIC FATTY ACID TRIGLYCERIDE WITH AN ORGANIC POLYISOCYANATE COMPOSITION
Waclaw Szaklewicz, Snyder, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Dec. 1, 1958, Ser. No. 777,214
9 Claims. (Cl. 106—266)

1. A composition adapted for use in the production of adhesives, coatings and films consisting essentially of a mixture of Sb_2O_3 and an adduct of a monobasic fatty acid triglyceride having a hydroxyl number above about 50 with an organic polyisocyanate sufficient to provide from 1.5 to 4.0 isocyanate groups for each hydroxyl group in the glyceride, said Sb_2O_3 being present in the proportion of about 25% to about 300% by weight of the adduct.

2,943,948
SILICA COMPOSITION AND PRODUCTION THEREOF
Edward M. Allen, Doylestown, Ohio, assignor to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware
No Drawing. Filed June 24, 1959, Ser. No. 822,441
8 Claims. (Cl. 106—288)

1. Finely divided, precipitated, white alumina-silica pigment in the form of flocs of ultimate particles and having at least 6 but less than 40 moles of SiO_2 per mole of Al_2O_3, said pigment having an average ultimate particle size below 0.1 micron and containing up to but not in excess of 10 percent by weight of free water.

2,943,949
DECORATIVE PLASTIC SURFACE COVERING AND PROCESS THEREFOR
Robert K. Petry, Mountain Lakes, N.J., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Oct. 23, 1957, Ser. No. 691,883
22 Claims. (Cl. 117—11)

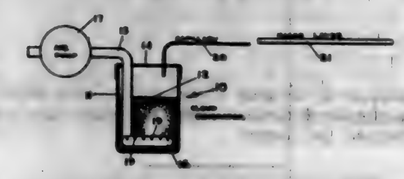


7. A decorative surface covering which comprises a solid flexible sheet having on one surface a plurality of areas depressed at least 5 mils beneath said surface and a layer of expanded and foamed plasticized thermoplastic resinous composition covering said surface and adherent thereto, said layer having a plurality of raised portions overlaying and conforming in character and spacing to said depressed areas in said surface.

2,943,950
ELECTROSTATIC DEVELOPING APPARATUS AND METHOD

Eugene C. Ricker, Columbus, Ohio, assignor, by mesne assignments, to Haloid Xerox Inc., a corporation of New York

Filed May 7, 1953, Ser. No. 353,520
12 Claims. (Cl. 117—17.5)



1. Apparatus for developing by dusting with powder an electrostatic latent image on an image bearing member, comprising means to create a suspension of powder particles in gas having a pressure of at least about 10 p.s.i., support means for an image bearing member having an electrostatic latent image thereon, a tubular member of restrictive cross section between said means to create a suspension of powder particles in gas and said support means adapted to feed the suspension of powder particles in gas for image development to an electrostatic latent image bearing member on said support means, and means to turbulently flow a gas suspension of particles through the tubular member from said means to create a suspension of powder particles in gas to bring the suspended particles into repeated, triboelectrically charging contact with the walls of said member during passage therethrough and to present to an image bearing member on said support means a suspension of charged particles, said tubular member being so proportioned with respect to a tube having a length of at least about 0.1 inch and a diameter less than about 0.050 inch to produce a flow rate having a Reynolds number in excess of 2,000 when a pressure drop of at least about 10 p.s.i. is maintained therethrough.

2,943,951
FLAME SPRAYING METHOD AND COMPOSITION

John Helge Hagland, Hallstahammar, Sweden, assignor to Aktiebolaget Kanthal, Hallstahammar, Sweden, a corporation of Sweden

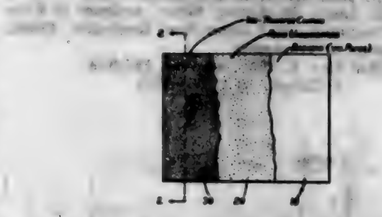
No Drawing. Filed Mar. 18, 1957, Ser. No. 646,536
Claims priority, application Sweden Mar. 23, 1956
17 Claims. (Cl. 117—22)

16. A process for flame spraying on a surface a coating largely comprising a silicide of molybdenum, said process including flame spraying on said surface a composition including a refractory component comprising at least one compound selected from the group consisting of refractory silicon compounds of the transition metals of the fourth, fifth and sixth groups of the periodic table and carbon, said refractory component at least largely comprising a silicide of molybdenum and being in the form of powder particles which when exposed to the atmosphere automatically form thereon coating films of silicon dioxide interfering with their adhesion together, said composition further including a metallic component in the form of powder particles of a metal having a strongly positive heat of reaction with oxygen as compared to that of silicon, said components being intermixed and said composition being heated to temperatures at least softening said silicide during said flame spraying and said metal being effective at said temperatures to reduce said silicon dioxide films and expose clean surfaces on said refractory component particles which adhere together on said surface, said composition being heated during said flame spraying by means adding to the heat of reaction produced by said reduction of said films as required to maintain said reaction and said temperatures.

2,943,952
METHOD OF MAKING DUPLICATING TRANSFER SHEET AND RESULTANT ARTICLE

Ralph H. Clark, Westwood, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Filed Dec. 14, 1956, Ser. No. 628,312
4 Claims. (Cl. 117—36)



1. A method of producing duplicating articles such as long-lasting carbon paper and the like comprising: applying to a surface of a paper backing member, capable of transmitting an impression, a coating composition comprising a polyvinyl chloride plastisol dispersion resin and a liquid vehicle therefor, said liquid vehicle being substantially free of volatile ingredients and including a substantially non-volatile solvent-type plasticizer for the resin, said plasticizer being present from about ½ to 1½ parts by weight per part of the resin; heating the composition to the fusing temperature to fuse the resin particles to the backing member; applying thereover a coating of an ink-transfer composition comprising a vinyl chloride resin and an acrylic resin selected from the group consisting of polymerized acrylic and methacrylic esters of lower aliphatic alcohols, a volatile solvent for said resins, coloring matter, and a nonvolatile nondrying color-carrier liquid expressible when subject to pressure from said synthetic resin when in solid form after removal of the solvent, said solvent being substantially a non-solvent for the polyvinyl chloride plastisol dispersion resin; and evaporating said solvent from the ink-transfer composition.

2,943,953
FLOORING COMPOSITION AND METHOD OF MAKING THE SAME

Frederick K. Daniel, 125 Cedar Ave., Hackensack, N.J.

Filed July 5, 1957, Ser. No. 670,283
7 Claims. (Cl. 117—43)

1. A method of producing a flooring composition adapted to be applied to a surface as a protective covering, comprising the steps of introducing into a deformable container containing a mixture comisting essentially of between five and seven parts of sand and one part of a liquid epoxy resin composition adapted to be cross-linked and hardened, a liquid cross-linking agent in an amount sufficient to cross-link and harden said epoxy resin so as to form a hardening mixture; and deforming said container so as to intimately mix the contents of the same, thereby forming in said container a hardening flooring composition adapted to be applied to a surface as a protective covering of great resistance against mechanical and chemical attack.

2,943,954
CASTING SURFACE FOR PRODUCING CAST-SURFACED MINERAL COATED PAPER

James V. Robinson and Ivan E. Shaffer, Chillicothe, Ohio, assignors to The Mead Corporation, Dayton, Ohio, a corporation of Ohio

No Drawing. Filed Feb. 10, 1958, Ser. No. 714,018
6 Claims. (Cl. 117—64)

1. A method of producing highly glossed finish cast-surfaced, mineral coated paper comprising applying to the surface of a web of paper a relatively fluidic cast coating composition consisting essentially of an aqueous pigment-adhesive suspension, said coating composition having from about 45% to about 65% by weight of non-volatile solids bringing the coated surface of the paper into contact with a passivated chromium casting surface while said coating is still fluent on the paper, and maintaining the passivated surface by the addition of a protective agent in said cast coating composition.

2,943,955
COMPOSITION AND PROCESS OF FORMING AN ADHERENT POLYOXIDE COATING ON A SURFACE

Harold C. Brill, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 21, 1955, Ser. No. 489,800
10 Claims. (Cl. 117—121)

1. An adhesion-promoting composition consisting essentially of an alkyl titanate having up to 8 carbon atoms per alkyl group, a volatile inert organic solvent for said alkyl titanate, and at least one hydrolysis modifier for said alkyl titanate selected from the group consisting of normally solid hydrocarbons; normally solid, chlorinated hydrocarbons; monohydroxy alcohols having 9–31 carbon atoms and the titanates of said monohydroxy alcohols; compounds of the structure

$$R—O—(—R'—O—)_x—R''$$

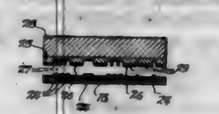
wherein R and R′ are hydrocarbons and R″ is hydrocarbon or hydrogen and x represents integers from 1 to 10 when R and R′ are aliphatic and R″ is aliphatic or hydrogen and x is zero or one when at least one of the R and R″ groups is aromatic; and tertiary amines which are both water soluble and organo soluble, the combined concentration of the alkyl titanate and the hydrolysis modifier being up to about 2% by weight of the adhesion-promoting composition and the hydrolysis modifier being present in a minor amount by weight with respect to the alkyl titanate.

6. A process for preparing the surface of a solid for the subsequent application of an adhesive material comprising applying a thin film of the composition of claim 1 to said surface, exposing the resulting film to an atmosphere containing water vapor at temperatures ranging from room to 300° C. until volatile solvents present become substantially evaporated and hydrolysis and polymerization of said titanate takes place to form an adherent polyoxide coating on said surface.

2,943,956
PRINTED ELECTRICAL CIRCUITS AND METHOD OF MAKING THE SAME

Thomas L. Robinson, Buffalo, N.Y., assignor to Automated Circuits, Inc., North Tonawanda, N.Y.

Filed Dec. 18, 1952, Ser. No. 326,679
4 Claims. (Cl. 117—212)

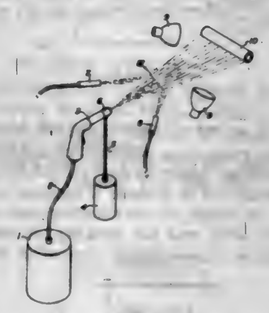


1. A method of making a printed electrical circuit, comprising applying to a non-conducting base a coating of a non-metallic electricity conducting material in semi-liquid form, and removing undesired portions of said coating by contacting the same with a surface, and removing from said surface the coating material adhering thereto to render said surface usable for further removal of coating material, to which said coating material adheres while said coating is in semi-liquid form, thereby leaving on said base accurately defined and located parts of said coating to form conductors, removing from said surface the coating adhering thereto, and repeating the contacting of said undesired portions of said coating with said surface, by guiding the movement of said surface into accurate contact with the same areas of said base which were originally contacted by said surface until all of said coating not required for conductors is removed from said base.

2,943,957
METHOD FOR THE SPRAYING OF ELECTRON EMITTING THERMIONIC CATHODES

Walter Grattidge and Fredrik Arthur Muller, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Filed Oct. 21, 1958, Ser. No. 768,654
11 Claims. (Cl. 117—223)



1. The method of coating a cathode base with an electron emissive material comprising the formation of small droplets of a hydroxide solution of alkaline earth elements, propelling said droplets towards the cathode base to be coated, directing a flow of carbon dioxide toward said droplets for producing an intermixture therebetween during transit, the reaction of the hydroxide contained in said droplets with carbon dioxide forming a carbonate of the alkaline earth metal prior to contact with the cathode base to be coated, evaporating the liquid in said droplets, and deposition of said carbonate on the cathode base.

2,943,958
MANUFACTURE OF CIGARETTES

Gerald M. Schaffander, Fresh Meadows, N.Y., assignor to Bantob Products Corp., New York, N.Y., a corporation of New York

No Drawing. Filed Nov. 20, 1958, Ser. No. 775,128
14 Claims. (Cl. 131—2)

11. A composition adapted for smoking in cigarette-like form, said composition consisting essentially of cornsilk, alfalfa fibers, an aldose and a humectant.

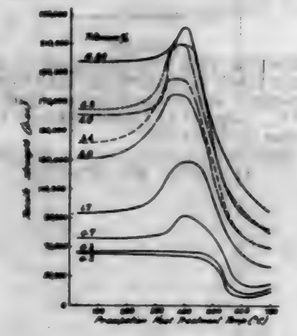
2,943,959
MANUFACTURE OF CIGARETTES

Gerald M. Schaffander, Fresh Meadows, N.Y., assignor to Bantob Products Corp., New York, N.Y., a corporation of New York

No Drawing. Filed Nov. 20, 1958, Ser. No. 775,130
9 Claims. (Cl. 131—2)

7. A composition adapted for smoking in cigarette-like form, said composition consisting essentially of cornsilk and alfalfa fibers.

2,943,959
PROCESS FOR MAKING WROUGHT COPPER-TITANIUM ALLOYS
Matti J. Saarivirta, Plainfield, N.J., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York
Filed Aug. 27, 1957, Ser. No. 680,439
4 Claims. (Cl. 148—12.7)

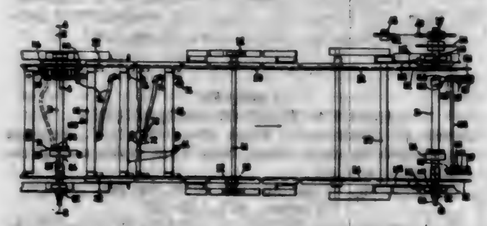


1. In the process of making copper-titanium alloys, the improvement comprising the steps of alloying initially oxygen-free copper under oxygen excluding conditions with sufficient titanium to provide a titanium content of from 1 to 6% by weight in the resulting cast alloy, preheating said cast alloy and hot working the same to effect a reduction in cross-sectional area of at least 50%.

2,943,961
PREVENTION OF IRREGULAR SCALING OF FERROUS METALS
James L. Ma, Coatesville, Pa., assignor to Lukens Steel Company, Coatesville, Pa., a corporation of Pennsylvania
No Drawing. Filed Mar. 7, 1958, Ser. No. 719,927
4 Claims. (Cl. 148—14)

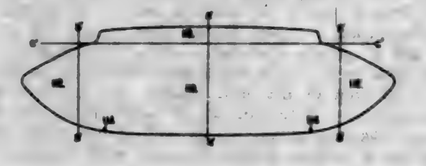
1. The method of preventing alligator scale formation on the backing steel of a clad plate which comprises, forming an aqueous mixture consisting essentially of magnesium chromate, and calcium oxide in the range of 5% to 35% calcium oxide, coating said plate with said aqueous mixture, drying said coating, and annealing said plate at a temperature of approximately 1950° F.

2,943,962
APPARATUS FOR LAMINATING
Dean B. Fitzgerald, Crystal City, Mo., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Dec. 16, 1957, Ser. No. 703,205
10 Claims. (Cl. 154—2.7)



1. An apparatus for laminating a composite assembly of two glass sheets and a thermoplastic interlayer comprising vacuum tanks, means for conveying said vacuum tanks in a cyclic path having a rectilinear portion and an arcuate portion with a uniform radius of curvature, first coupling means, vacuum hose means connected to said first coupling means, means for moving said first coupling means in an arcuate path concentric with the arcuate portion of the cyclic path of the vacuum tanks at the same angular velocity as that of the vacuum tanks in said arcuate portion of movement, valved coupling means mounted on said vacuum tanks, and means for moving said first coupling means into operative engagement with said valved coupling means only during movement of said vacuum tanks in said arcuate portion whereby the first coupling means and the valved coupling means are operatively engaged during at least part of the arcuate portion of movement of the vacuum tanks and are disengaged during the movement of the vacuum tanks in said rectilinear portion of said cyclic path of said vacuum tanks.

2,943,963
TREATING GLASS SHEETS
Herman R. Marini and William O. Lytle, New Kensington, Arnold E. Saunders, Saxonburg, and William E. Wagner, Verona, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Feb. 14, 1957, Ser. No. 640,195
16 Claims. (Cl. 154—2.73)



1. In the method of producing laminated glass sheet assemblies comprising a pair of curved glass sheets and a plastic interlayer, wherein the pair of glass sheets are stacked on a bending mold, bent simultaneously by subjecting the sheets to glass softening temperatures, and separated for the insertion of the plastic interlayer prior to laminating, the improvement comprising applying a staining composition to a surface of only one of the glass sheets at a pair of spaced spots along its margin, before stacking the sheets for bending, the staining composition transferring a portion of its stain to the facing surfaces of the stacked glass sheets at elevated temperatures in the region of the glass softening point, heating the glass sheets to a temperature sufficient to bend the glass sheets and to transfer a portion of the staining composition to the facing surface of the originally unstained glass sheet, and aligning the bent glass sheets by matching their spots after inserting the plastic interlayer therebetween to insure proper alignment of the glass sheets in the assembly to be laminated.

2,943,964
TELEVISION VIEWING SCREEN
Max Goldenberg, 1226 S. Linwood Ave., Evansville, Ind.
Filed June 17, 1958, Ser. No. 742,530
2 Claims. (Cl. 154—2.74)

1. A viewing screen for television picture tubes comprising means providing opaque thin thread-like lines intersecting with one another and running horizontally and vertically and defining small squares of the order of one sixty-fourth of an inch on each side, said thread-like lines being of a thickness almost invisible when the television picture is being displayed yet sufficient to reduce the



ambient light and glare, transparent sheet means for supporting said thread-like means in a vertical plane.

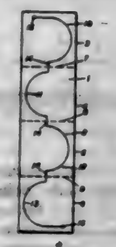
2,943,965
INSULATING BOARD CONSTRUCTION
Alexander E. Stogre, 136 Glenrose Ave., Toronto, Ontario, Canada
Filed Mar. 3, 1955, Ser. No. 491,923
1 Claim. (Cl. 154—45)



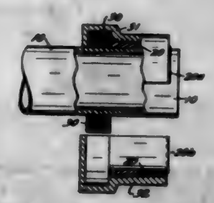
An insulating board comprising, in combination: a paper board sheet of a width corresponding to a standard joist spacing multiple; transverse reinforcing means in said sheet in the form of rigidifying undulations formed about a series of equally spaced apart parallel axes extending the full width of said sheet, said series extending the full length of said sheet; a paper board carrier sheet having parallel spaced apart edges defining a predetermined width therefor greater than the width of said undulated sheet; means bonding said undulated sheet to said carrier sheet thereby aligning one edge of said carrier sheet with one edge of said undulated sheet and providing an extended portion of said carrier sheet beyond the other edge of said undulated sheet; a single flat surfaced sealing flange formed by the extended portion of said carrier sheet and continuing for the full length of the latter, said flange being adapted sealably to overlap the said aligned edges of an adjacent insulating board and to be fastened to a joist; and a metal foil covering extending entirely over the outer surfaces of said undulated sheet and said carrier sheet.

2,943,966
PRINTED ELECTRICAL CIRCUITS
John Albert Lano and Arthur Mackenzie Searle, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Dec. 10, 1954, Ser. No. 474,566
Claims priority, application Great Britain Dec. 30, 1953
1 Claim. (Cl. 154—99)

An inductive electrical winding comprising an insulating carrier having portions folded back against each other, thus forming a plurality of parallel surfaces, a printed circuit on certain of said surfaces, each of said printed circuits having the configuration of portions only of a plurality of complete turns about an axis perpendicular to said surfaces and cooperating with corresponding turn portions on another one of said surfaces to form a corresponding plurality of complete turns, said cooperating circuits having printed conductors connected thereto and extending over the fold lines therebetween and connecting said circuits together, whereby all of said circuits form a continuous conductor, each portion of the insulating carrier being folded back against at least two other portions respectively on two fold lines substantially perpendicular to each other, the printed circuits being arranged so that both ends of the continuous conductor formed thereby are on the same portion of said carrier.



2,943,967
REINFORCED PLASTIC SCREW THREADS
John G. Simon, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed June 29, 1956, Ser. No. 594,811
2 Claims. (Cl. 154—83)



1. The method of fabricating reinforced plastic male screw threads for a plastic pipe member from flat compact layers of continuous non-woven lineally-aligned filaments filled with plastic material and using an internally threaded split die, consisting essentially of the steps of laying at least two of said plastic-filled layers, with the filaments of each layer disposed at substantial angles to the filaments of an adjacent layer, across the surface of each portion of said split die; forcing the plastic-filled layers into the profile of the die threads progressively from one end of each die section to the other under a pressure sufficient to cause the plastic-filled layer to flow; adhering the exposed surfaces of the plastic-filled layers to said plastic pipe member; hardening the plastic; and removing the die.

2,943,968
METHOD OF MANUFACTURING FIBROUS MATERIAL SLAB
Arnold B. Freeman and Bernard D. Raffel, Akron, and Roland A. Tripp, Cuyahoga Falls, Ohio, assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Nov. 20, 1956, Ser. No. 623,422
1 Claim. (Cl. 154—90)

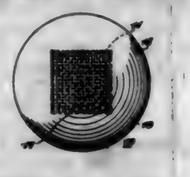
The method of making slabs formed of parallel fibers in a plastic binder medium which includes the steps of positioning a plurality of continuous parallel fibers in a single plane to form a layer having a thickness about equal to the diameter of a fiber, impregnating the fibers

in the layer with a tacky, uncured plastic binder, superimposing a plurality of the tacky layers with the fibers parallel to each other to form a block, the fibers being parallel to the top, the bottom and the longitudinal sides of the block, and being perpendicular to the ends of the



block, cutting slabs in turn from the end of the block, the cut surfaces of the slabs being perpendicular to the fibers, and with the distance between the cut surfaces being the shortest dimension of each slab, and arranging the slabs so that the edges containing the exposed parallel sides of the fibers contact each other.

2,943,969
METHOD OF MANUFACTURING A REPAIR PATCH
Ralph K. Boyer, Cleveland, and Henry W. Krohn, Jr., North Olmsted, Ohio, assignors to The Dill Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 30, 1956, Ser. No. 575,186
3 Claims. (Cl. 154—110)

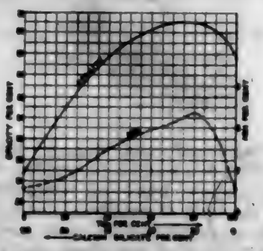


1. The method of manufacturing rubber repair patches for tires, inner tubes and the like which comprises interleaving between two identical sized rectangular sheets of uncured rubber composition of identical flow characteristics when subjected to heat and pressure and elongated in length as compared to their width a sheet of the same area size of open mesh fabric of a type through which the rubber composition can flow to be intermixed and integrated and which sheet of fabric is relatively thin as compared to the thickness of said two sheets of uncured rubber composition; applying sufficient pressure to the interleaved sheets of rubber composition and open mesh fabric to cause the rubber of the two sheets of rubber composition to flow through the openings in the fabric and become intermingled and integrated to unite the two sheets of rubber composition; then severing the united interleaved sheets into a plurality of rectangular patch pieces the aggregate surface area of which equals the surface area of the undivided integrated interleaved sheets and then subjecting each patch piece to heat and pressure in cooperating mold members defining a mold cavity of curved outline and of greater area than the area of the patch piece and with one of the mold members of concave configuration on the side that engages the patch piece and the other of the mold members of planular shape on the side that engages the patch piece and thereby forming each patch piece into a patch having a relatively thick convex central body portion and a peripherally curved skirt portion of rubber extending beyond the sides of the rectangular mesh fabric in the patch piece and thinned out to form a feather edge, with said body portion and skirt portion having a continuous planular surface on one side of the patch.

2,943,970
PAPER PIGMENTS
Edward M. Allen, Doylestown, Ohio, assignor to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware
No Drawing. Filed Apr. 14, 1959, Ser. No. 806,212
34 Claims. (Cl. 162—181)

6. Paper having dispersed therein finely divided, precipitated, flocculated siliceous pigment, the pigment being in the form of flocs of ultimate particles, said flocs under high magnification visually resembling grape clusters, the individual grapes of which are representative of ultimate particles of siliceous material, the average size of the ultimate particles being less than 0.25 micron, at least 55 percent by weight of the pigment flocs being below 7 microns.

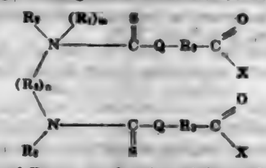
2,943,971
PIGMENTED PAPER AND PREPARATION THEREOF
Louis B. Taylor, Pittsburgh, Pa., assignor to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware
Continuation of application Ser. No. 543,835, Oct. 31, 1955. This application July 31, 1959, Ser. No. 830,859
13 Claims. (Cl. 162—181)



7. Pigmented cellulosic paper of enhanced opacity pigmented with independently prepared titanium dioxide and a flocculent finely divided, pigmentary, amorphous, precipitated siliceous material having an average ultimate particle size below 1.0 micron and containing at least 50 percent SiO_2 by weight.

2,943,972
METHOD OF TREATING PLANTS EMPLOYING DITHIOCARBAMATES
Gerrit Johann Meine van der Kerk, Utrecht, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 14, 1956, Ser. No. 571,379
Claims priority, application Netherlands Mar. 30, 1955
15 Claims. (Cl. 167—22)

1. A method of treating plants to prevent injury to the plants by fungi comprising applying to the absorptive structure of said plants a composition containing a compound corresponding to the general formula



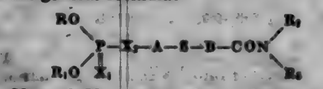
wherein R_1 and R_2 are each selected from the group consisting of hydrogen atoms, alkyl radicals containing less than 4 carbon atoms and together with the nitrogen atoms to which they are attached to heterocyclic ring containing not more than 6 atoms, R_3 is selected from the group consisting of bivalent alkylene radicals containing less than 5 carbon atoms R_3 is selected from the group consisting of bivalent alkylene radicals containing less than 6 carbons atoms, together with both R_3 radicals and both nitrogen atoms a heterocyclic ring containing not more than 6 atoms and together with one of the nitrogen atoms and the R_3 radical attached to this nitrogen atom and heterocyclic ring containing not more than 6 atoms, X is selected from the group consisting of NH_2, OH, OMe wherein Me is an alkali metal ion OAlk wherein Alk is an alkyl radical containing less than 6 carbon atoms, Q is selected from the group consisting of oxygen and sulfur atoms and n and m are each small whole numbers selected from the group consisting of zero and one and wherein the sum of the values of n and m equal one, whereby said composition is absorbed by said plants.

2,943,973
INSECTICIDES FOR USE AS TREE SPRAY
Bradford L. Archer, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 26, 1957, Ser. No. 648,710
5 Claims. (Cl. 167—22)

2. A method of controlling mites which comprises applying to plants infested with said mites, a miticidal amount of a dispersion of a high-boiling organic sulfur-containing kettle product material having a total sulfur content of not more than 15 weight percent and a dodecyl mercaptan content of about 53 weight percent, in an aqueous carrier medium containing an emulsifying agent, said sulfur-containing kettle product material having been prepared by the interaction of a tertiary C_{12} olefin hydrocarbon-containing fraction boiling within the range of about 345° F. and 370° F. and hydrogen sulfide in the presence of a solid clay-type contact catalyst within a temperature range of about 230° F. to 250° F. and at about 800 p.s.i.g. pressure, and fractionally distilling the reaction product for use in the method to recover said high-boiling kettle product.

2,943,974
PHOSPHORUS ESTERS
Jean Metivier, Arpajon, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France
No Drawing. Filed Jan. 5, 1959, Ser. No. 784,852
Claims priority, application France Jan. 28, 1958
8 Claims. (Cl. 167—22)

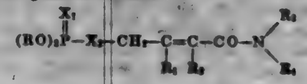
1. A member of the class consisting of phosphorus esters of the general formula:



wherein X_1 and X_2 are members of the class consisting of oxygen and sulphur atoms, at least one being a sulphur atom, A represents a member of the class consisting of ethylene and propylene groups, B represents a member of the class consisting of methylene and ethylidene groups, R and R_1 represent lower alkyl groups, and R_2 and R_3 represent members of the class consisting of hydrogen atoms and lower alkyl groups.

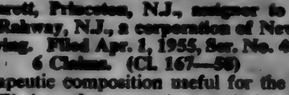
2,943,975
NEW PHOSPHORIC ESTERS
Jean Metivier, Arpajon, France, assignor to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France
No Drawing. Filed Oct. 9, 1959, Ser. No. 845,318
Claims priority, application France Nov. 7, 1958
12 Claims. (Cl. 167—22)

1. A member of the class consisting of the phosphoric esters of the general formula:



wherein R represents a lower alkyl group, X_1 and X_2 are chosen from the group consisting of oxygen and sulphur, and R_1, R_2, R_3, and R_4 are chosen from the group consisting of hydrogen atoms and lower alkyl groups.

12. A pesticidal composition comprising at least one member of the class consisting of the phosphoric esters of the general formula:



wherein R represents a lower alkyl group, X_1 and X_2 are chosen from the group consisting of oxygen and sulphur, and R_1, R_2, R_3, and R_4 are chosen from the group consisting of hydrogen atoms and lower alkyl groups in association with at least one diluent compatible therewith.

2,943,976
METHOD OF KILLING INSECTS COMPRISING APPLYING NITROPYRIDINE AND NITROPYRIDINE-1-OXIDE
Lyle D. Goodhue, Bartlesville, Kenneth E. Cantrell, Dewey, and Anton M. Schaldner, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Oct. 8, 1957, Ser. No. 688,838
9 Claims. (Cl. 167—33)

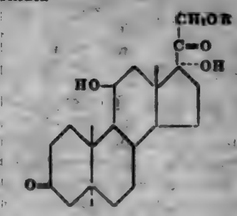
1. A method of killing an insect such as a fly, roach, ant, gnat, and mosquito which comprises contacting said insect with an insecticidal amount of an insecticidal compound selected from the group consisting of nitropyridine and nitropyridine-1-oxide substituted on ring carbons with 1 to 2 nitro groups and alkyl groups selected from the group consisting of methyl and ethyl, in which the total carbon atoms in the alkyl groups is not greater than 3.

2,943,977
INSECTICIDAL COMPOSITION COMPRISING 2,2,4,4,6,6-TRIS (TETRAMETHYLENE)-1,3,5-TRITHIANE AND 2,2,4,4,6,6 TRIS(PENTAMETHYLENE) 1,3,5-TRITHIANE
Francis T. Wadsworth, Dickinson, and Paul D. May, Galveston, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas
No Drawing. Filed May 12, 1958, Ser. No. 734,628
6 Claims. (Cl. 167—33)

5. A composition useful for destroying sucking-type insects which comprises a trithiane selected from the group consisting of 2,2,4,4,6,6-tris(tetramethylene)-1,3,5-trithiane, 2,2,4,4,6,6-tris(pentamethylene)-1,3,5-trithiane, and mixtures thereof diluted with water to a trithiane concentration between about 0.001% and 1.0% by weight.

2,943,978
ALLOPREGNANE COMPOUNDS FOR TOPICAL APPLICATION
Lewis H. Sarett, Princeton, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 1, 1955, Ser. No. 498,753
6 Claims. (Cl. 167—58)

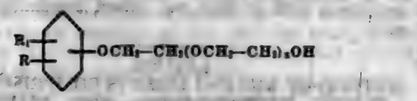
1. A therapeutic composition useful for the treatment of topical afflictions that comprises an intimate mixture of 0.01 to 10% by weight of an allopregnane compound having the formula—



in an oil, wherein R is selected from the class consisting of hydrogen and lower acyl radicals.

2,943,979
CONCENTRATED FOAM-PRODUCING SPERMICIDES
Nathaniel M. Elias, 56 Washington Mews, New York, N.Y.
No Drawing. Filed June 23, 1959, Ser. No. 822,202
20 Claims. (Cl. 167—58)

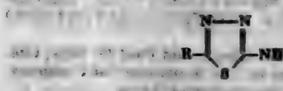
1. A spermicidal composition consisting essentially of a buffered pharmaceutical vehicle and as chief spermicidal ingredient an alkylphenoxypolyethoxyethanol of the formula



wherein R represents an alkyl group having from 1 to 23 carbon atoms in the chain and R_1 represents a member selected from the class consisting of alkyl groups having from 1 to 23 carbon atoms and hydrogen, and x has an average value of from about 5 to about 12, and wherein the sum of the carbon atoms in R and R_1 is not less than 4 or greater than 23, said composition having a pH in the range from about 1 to about 8.5 inclusive.

2,943,980
THIADIAZOLES
Giulio Maffii, Renato Ettorre, and Emilio Testa, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy
No Drawing. Filed Apr. 30, 1957, Ser. No. 655,962
Claims priority, application Italy May 5, 1956
11 Claims. (Cl. 167—65)

1. The 5-substituted 2-amino-1,3,4-thiadiazoles of the formula



wherein R is a member of the class consisting of 2-thienyl, o-chlorophenyl and o-tolyl radicals, and their mineral acid addition salts.

8. A tranquillizing composition in dosage unit form adapted for the treatment of anxiety conditions comprising a solid pharmaceutical carrier and from 0.1 to 100 milligrams per dosage unit of a medicament active on the central nervous system and selected from the group consisting of compounds of the formula



wherein R represents a member of the class consisting of 2-thienyl, o-chlorophenyl and o-tolyl, and pharmacologically acceptable acid addition salts thereof.

2,943,981
THYROTROPHIN DERIVATIVES AND METHODS FOR USING SAME
Martin Sonenberg, New York, N.Y., assignor to Research Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 18, 1957, Ser. No. 640,609
4 Claims. (Cl. 167—74)

1. A thyrotrophin inhibiting preparation comprising pituitary thyrotrophin having substantially all the amino groups thereof converted to a member of the group consisting of acetylamino and phenylureido.

2,943,982
PROCESSING OF DICALCIUM PHOSPHATE AND COMPOSITION THEREOF
Clarence W. Dubois, 76 Pilgrim Road, Wellesley, Mass.
No Drawing. Filed Oct. 10, 1955, Ser. No. 539,695
8 Claims. (Cl. 167—93)

1. The process of simultaneously comminuting dicalcium phosphate and forming a suspension thereof comprising, bringing dicalcium phosphate together with water and a minor amount of a swelling clay of the montmorillonite group, heating the mixture thus formed to at least 200° F., said temperature being attained within fifteen minutes, and subsequently cooling the mixture for use.

6. An aqueous suspension of dicalcium phosphate comprising water, dicalcium phosphate having a particle size of about 1 to 4 microns, and a swelling clay of the montmorillonite group to the extent of at least 1/10 of the weight of the dicalcium phosphate, the said dicalcium phosphate having been heat-shattered by the process of claim 1.

2,943,983
PROCESS OF OBTAINING CONCENTRATES OF VITAMINS OF THE B_{12} GROUP FROM WASTE LIQUORS AND RESIDUAL PRODUCTS OF INDUSTRIAL FERMENTATION PROCESSES
Konrad Bernhauer, Wilhelm Friedrich, Gisela Gross, and Siegfried Spande, Aschaffenburg (Main), Germany, assignors to Aschaffenburger Zellstoffwerke, A.G., Aschaffenburg (Main), Germany
No Drawing. Filed Mar. 16, 1956, Ser. No. 571,983
Claims priority, application Germany Mar. 19, 1955
7 Claims. (Cl. 195—96)

1. In a process for producing vitamins of the B_{12} group from a digested sludge, the method of producing a new type of digested sludge as sludge material for the aforesaid process, which method comprises the steps of

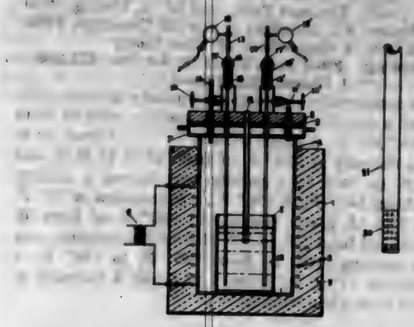
(1) inoculating a waste product of at least one industrial fermentation process selected from the group consisting of the waste liquors and mycelial residuals of (*a*) yeast and spirit plants, the waste liquors and residuals of (*b*) breweries, (*c*) the production of antibiotics by fermentation, (*d*) the production of citric acid by fermentation, (*e*) the production of butanol and acetone by fermentation, and (*f*) the production of lactic acid by fermentation; with a mixed culture consisting of sewage sludge from an industrial fermentation process previously subjected to the conventional steps of methane fermentation, and

(2) fermenting the inoculated waste product at a temperature in the order of 30° C. and at a pH of between 7.0 and 8.5, thereby obtaining a thin sludge having a dry matter content of up to 2.4% and a microbiological vitamin B_{12} activity of at least about 1.2 micrograms per millimeter.

2,943,984
CONTROL OF OXYGEN IN METALS OF GROUPS IV-B, V-B, VI-B, AND THEIR ALLOYS
William W. Gullett, College Park, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Filed Oct. 22, 1958, Ser. No. 769,037
1 Claim. (Cl. 204—1)

The method of determining the content of oxygen up to .06% in solid solution in an electrode selected from the group consisting of a metal of groups IV-B, V-B and VI-B and alloys of these metals with Mn, V and Al, which consists in measuring the E.M.F. of a cell having an electrode selected from a group consisting of the pure metal and an oxygen-free alloy of Mn, V and Al and an electrode of the oxygen solid solution to be measured in a cell with an inert atmosphere having an electrolyte consisting essentially of molten sodium chloride having in solution a chloride of mixed valence of the metal and an

alkalinous metal then calculating the percent oxygen from the equation $A+B \log_{10}$ percent O_2, the constants



A and B having been determined by measurements with the same cell and same electrolyte using metals having known contents of oxygen in solid solution.

2,943,985
APPARATUS AND METHOD FOR COLLECTING GAS FROM ALUMINUM FURNACES
Mathias Övrom Sem, Smestad, Oslo, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway
Filed Oct. 22, 1957, Ser. No. 691,733
3 Claims. (Cl. 204—67)



1. In an aluminum reduction furnace of the type having a pot adapted to receive a bath of cryolite and alumina, a casing above the bath adapted to hold and guide an electrode and vertical control studs running down inside the casing adapted to enter the electrode to support the same and conduct current to it, means for collecting gases generated around the electrode comprising a member running around the electrode extending out from the casing adapted to be sealed by alumina relative to the top of a bath in the pot to form a substantially gas-tight seal between such member and the bath whereby gases can be collected below such member and adjacent the electrode at a concentration above the explosive point, a second member also extending out above such casing above said first member to form a channel having open areas through which gases can be sucked into such channel and suction means whereby air and escaped furnace gases can be collected into a second channel at a concentration below the explosive point, said second member being so positioned that a large open area is left between said member and the outer periphery of the furnace pot through which access can be had for working on the surfaces of the charge in the pot and through which gases might escape except for the suction means whereby such gases are collected into the said second channel.

2,943,986
OPERATION OF RADIATION EMITTING APPARATUS
Roy E. Thorpe, San Francisco, and Alan C. Nixon, Berkeley, Calif., assignors to Shell Oil Company, a corporation of Delaware
Filed Sept. 16, 1957, Ser. No. 684,222
4 Claims. (Cl. 204—154)



1. In the operation of radiant energy-emitting equipment, wherein an operating fluid therefor is subjected to radiation, the steps comprising utilizing as the operating fluid a fluid composition comprising at least 30% by weight of cis-trans isomeric saturated cyclic hydrocarbons, any balance of the composition being other hydrocarbons, no more than 20% by weight of the composition being aromatic and olefinic hydrocarbons, subjecting said fluid to the radiation, whereby the ratio of cis-isomers to trans-isomers is increased, subjecting the mixture so formed to isomerization whereby the cis to trans ratio is substantially decreased, and recycling the resulting product for use as an operating fluid in radiation-emitting equipment.

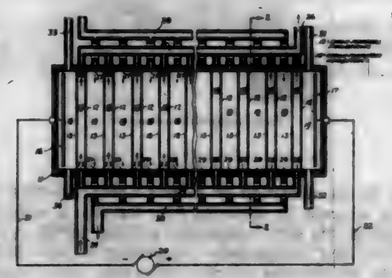
2,943,987
LOW PRESSURE POLYMERIZATION OF DIENES
William S. Anderson, Berkeley, Calif., assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Feb. 25, 1958, Ser. No. 717,334
12 Claims. (Cl. 204—162)

1. The process comprising polymerizing a conjugated diene in the presence of a catalyst composition comprising free mercury and a heavy metal salt selected from the group consisting of halides, nitrates and sulfates, the polymerization being conducted by exposing the reaction mixture to a mercury light source, and recovering a polymer containing a major portion of the cis 1,4-addition product of the conjugated diene.

2,943,988
HALOGENATION OF RUBBERY POLYMERS
Peter J. Canterino, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 17, 1956, Ser. No. 585,400
6 Claims. (Cl. 204—163)

4. A process for the production of a chlorinated rubbery polymer which is soluble in acetone, in benzene, in toluene, and in carbon tetrachloride, said process comprising reacting elemental chlorine with from 95 to 10 parts by weight of a rubbery polybutadiene having a Mooney viscosity (ML-4) in the range 5 to 75 in the presence of from 5 to 90 parts by weight of a liquid polybutadiene having a viscosity in the range 200 to 5000 Saybolt Furol Seconds at 100° F., said polymers being maintained, during chlorination, in solution in carbon tetrachloride at a total polymer concentration in the range 5 to 30 weight percent, the chlorination being effected in the range 20 to 80° C., the reaction mixture being irradiated with ultraviolet light, to produce a chlorinated polymer having a chemically combined chlorine content in the range 50 to 75 weight percent, and recovering said polymer.

2,943,989
APPARATUS FOR MODIFYING THE CHEMICAL COMPOSITION OF SUBSTANCES BY ION TRANSFER
Paul Kollmann, 100 E. 80th St., New York, N.Y.
Original application July 16, 1957, Ser. No. 672,311. Divided and this application Nov. 7, 1958, Ser. No. 775,670
34 Claims. (Cl. 204—301)



2. An apparatus for increasing and decreasing the ion content of liquids comprising, means forming a plurality of chambers, not less than five, the chambers being arranged in line; anion-discriminating and cation-discriminating diaphragms between said chambers for establishing a selective path for ions from one chamber into an adjoining chamber under the influence of an electrical potential, said diaphragms being arranged in alternating sequence with respect to traverse from one terminal chamber through the intermediate chambers to the other terminal chamber; an electrode in each of the terminal chambers, one electrode to serve as an anode, the other electrode to serve as a cathode; means including an inlet duct and inlet ports at one end of certain alternate chambers, said inlet ports being manifolded with respect to said inlet duct, for supplying raw liquid to be deionized into said alternate chambers; means including an outlet duct and outlet ports at the other end of said alternate chambers, said outlet ports being manifolded with respect to said outlet duct for discharging treated liquid from said alternate chambers; and means including a discharge duct and discharge ports at the one end of other chambers which lie between said alternate chambers, said discharge ports being manifolded with respect to said discharge duct, for discharging concentrate from said other chambers.

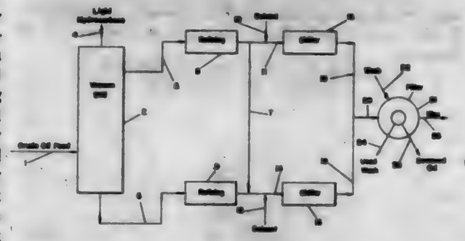
2,943,990
PROCESS AND COMPOSITION FOR PREPARING SULFUR-CHLORINATED CUTTING OILS
Maurice K. Rausch, Harvey, and Thomas A. Francis, Chicago, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Jan. 20, 1956, Ser. No. 560,293
4 Claims. (Cl. 208—18)

1. A method for producing a reactive oil product of low sludge forming tendencies from an extract oil obtained in the extraction of a lubricating oil stock with a solvent selective for aromatics to produce a primary raffinate oil and said extract oil, the step comprising extracting with a solvent selective for aromatics a material consisting essentially of said extract oil and a paraffin distillate, said extract being present in an amount of at least 25 volume percent of the total, to produce a secondary raffinate oil in a yield of about 20 to 90 volume percent of the material treated containing about 20 to 40 volume percent of the extract.

2,943,991
WAX COMPOSITION COMPRISING A MIXTURE OF SPECIFIC PARAFFIN WAXES AND 1-3% OF A MICROCRYSTALLINE WAX
John D. Tench, Prospect Park, and Irl N. Duling, Newtown Square, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Mar. 13, 1958, Ser. No. 721,886
1 Claim. (Cl. 208—21)

A wax composition consisting essentially of from 45% to 54% of a paraffin wax having a melting point of from 131° F. to 136° F., a penetration at 77° F. of from 10 to 16, and a viscosity at 210° F. of from 35 to 41 SUS, and from 45% to 54% of a paraffin wax having a melting point of from 148° F. to 156° F., a penetration at 77° F. of from 9 to 15, and a viscosity at 210° F. of from 40 to 46 SUS, and from 1% to 2% of a microcrystalline wax having a melting point of from 190° F. to 196° F., a penetration at 77° F. of from 3 to 8 and a viscosity at 210° F. of from 80 to 90 SUS.

2,943,992
SEPARATION OF OIL AND WAX
Harold S. Elward, Springfield, Elmer H. Smith and Richard K. Rockstroh, Media, and Jack A. Guthrie, Springfield, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Feb. 16, 1956, Ser. No. 565,839
3 Claims. (Cl. 208—33)

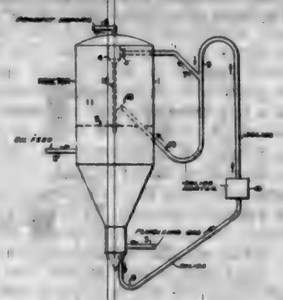


1. Method of separating wax from oil which comprises: (A) distilling a mixture of wax and oil to form at least two wax-oil fractions having different boiling ranges, (B) admixing a portion of the lower boiling fraction prior to any dewaxing thereof, with the higher boiling fraction, said portion being from 5% to 20% by volume based on the higher boiling fraction, (C) dissolving the remainder of the lower boiling fraction in a solvent and chilling the resulting solution to precipitate at least 10% of the wax present whereby a slurry is formed, (D) dissolving the admixture of lower boiling fraction and higher boiling fraction in a solvent and chilling the resulting solution to precipitate at least 10% of the wax present whereby a slurry is formed, (E) admixing said slurries, (F) filtering the admixed slurries to separate said precipitated wax from oil and solvent, and (G) separating oil from solvent.

2,943,993
SPLIT RETURN OF SOLIDS TO COKER
Hollister B. Sykes, Roselle, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Aug. 7, 1957, Ser. No. 676,756
4 Claims. (Cl. 208—48)

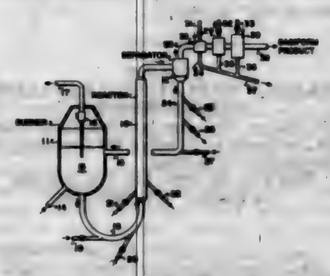
1. In a process for coking a heavy hydrocarbon oil coking charge stock by contacting the charge stock at a coking temperature with a dense, turbulent, fluidized bed of inert particulate solids in a coking zone and having a superposed disperse phase thereabove, the oil being introduced directly into said fluidized bed and converted to

product vapors and carbonaceous material which is continuously deposited on the inert solids in the coking zone; removing product vapors from the coking zone through a cyclone separating zone at the upper portion of the disperse phase; circulating at least a portion of the inert solids to an external heating zone to increase their temperature and recycling at least a portion of the heated solids to the coking zone to supply heat thereto, the improvement which comprises the steps of injecting a minor



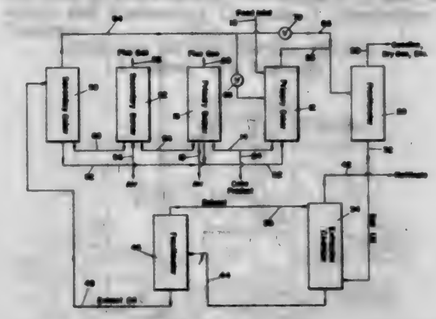
proportion of the recycled heated solids to the upper portion of the disperse phase adjacent the cyclone separating zone and injecting the rest of the recycled heated solids into the lower portion of the disperse phase, a short distance above the level of the dense, turbulent, fluidized bed against a diffuser baffle zone arranged substantially above the central portion of the dense fluidized bed to effect dispersion of the incoming heated solids in said dilute phase above the dense fluidized bed and to obtain a more uniform dilute phase temperature.

2,943,994
CHEMICALS COKING QUENCHING SYSTEM
William David McCain, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,294
13 Claims. (Cl. 208—48)



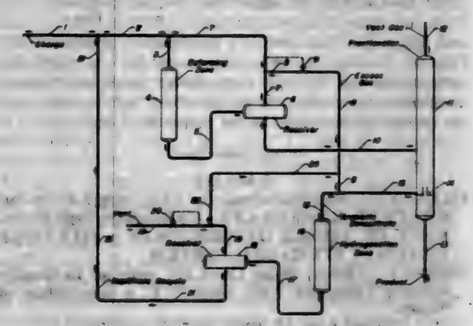
1. In the coking of hydrocarbons wherein a gas-solids rapidly moving gaseous suspension of inert solids at a temperature above 1200° F. is passed through an elongated, conduit-like reaction zone at a velocity greater than 20 ft./sec., wherein a hydrocarbon oil feed is introduced into said solids suspension and upon contact with said solids is converted into lighter gasiform material and carbonaceous residue which deposits on said solids, and wherein said gasiform materials and said hot solids are separated in a gas-solids separation zone, the improvement which comprises subjecting separated gasiform material leaving said separation zone to a plurality of quenching stages in succession, injecting quenching liquid into each of said stages in sufficient amounts to be only partially vaporized while lowering the temperature of the gasiform material passing through each of the said stages by substantially equal amounts of about 200 to 300° F., said quenching liquid thus condensing out only high boiling material in said stream and diluting and washing away the condensed high boiling material while maintaining the major portion of said gasiform material above its dew point.

2,943,995
TWO STAGE HEAVY OIL COKING PROCESS
Thomas S. Mertes, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Apr. 15, 1958, Ser. No. 728,685
5 Claims. (Cl. 208—53)



1. A hydrocarbon conversion process which comprises coking a heavy hydrocarbon oil, whereby vaporous conversion products are produced, separating a gas oil fraction from the vaporous conversion products, extracting substantially all of the aromatic portion of said gas oil fraction, and coking said aromatic portion under conditions substantially more severe than those of the first coking, whereby additional vaporous conversion products are produced.

2,943,996
REFORMING PROCESS
Charles H. Watkins, Arlington Heights, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed June 10, 1957, Ser. No. 664,833
1 Claim. (Cl. 208—62)



A process which comprises reforming a naphthene-containing hydrocarbon charge in the presence of hydrogen, separating the resultant products into a hydrogen-containing gas phase and a reformed gasoline liquid phase, fractionating the latter to separate therefrom a gasoline product and a lighter aromatic concentrate boiling in the gasoline range, catalytically hydrogenating said con-

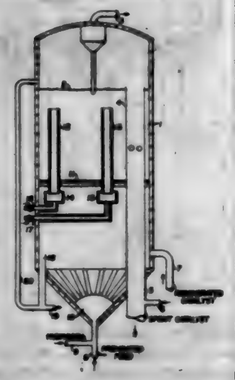
centrate with at least a portion of said hydrogen containing gas phase at a temperature of from about 100° to about 450° F. to form naphthenes, separating resultant naphthene-rich liquid from unreacted gases, venting said gases from the process and supplying said naphthene-rich liquid to the aforesaid reforming step as a hydrogen donor therein.

2,943,997

FLUID HYDROFORMING PROCESS AND APPARATUS

Donald D. MacLaren, Scotch Plains, and Walter G. May, Union, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 1, 1957, Ser. No. 643,342
6 Claims. (Cl. 208—64)



1. In a fluidized catalyst hydroforming process the improvement which comprises increasing catalyst efficiency by introducing vaporized feed and recycle gas well distributed horizontally into the bottom of a vertical reactor zone containing two vertically spaced dense fluidized beds of finely divided hydroforming catalyst particles separated from each other by a high, 1–2.5 p.s.i., pressure drop separation zone, continuously supplying highly active catalyst to the lower fluid bed and continuously withdrawing a stream of catalyst from the upper fluid bed for regeneration, circulating a stream of catalyst from the upper fluid bed to the lower fluid bed, circulating another smaller external stream from the lower fluid bed to the upper bed, maintaining said lower fluid bed zone at a temperature of 920 to 955° F. and said upper fluid bed zone at a temperature of 900 to 925° F., and locating the separation zone for the particular temperatures of the upper and lower zones and catalyst circulation rates so as to obtain about 80% of the total conversion of reactants in the lower fluid bed zone.

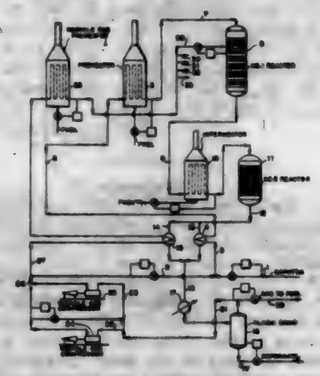
2,943,998

CATALYTIC REFORMING OF STRAIGHT-RUN OR CRACKED NAPHTHA FRACTIONS IN THE PRESENCE OF ADDED HYDROGEN IN A MULTIPLE REACTOR FIXED-BED SYSTEM

William H. Decker, Hazel Crest, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

Filed Aug. 27, 1956, Ser. No. 606,286
1 Claim. (Cl. 208—65)

A method for the catalytic reforming of a gasoline boiling range hydrocarbon material under semi-isothermal temperature conditions in a multiple reactor fixed-bed system which comprises charging a mixture of hydrogen-containing gas and hydrocarbon material in a molar ratio of at least 2:1 and at a temperature of 900° to 975° F. to a first fixed-bed reactor having a plurality of catalyst zones containing platinum-on-alumina type reforming catalyst, said zones in the course of the hydrocarbon flow containing a progressively larger amount of catalyst separately introducing additional hydrogen-containing gas at a temperature of 1000° to 1400° F. into the first reactor at a plurality of points along the path of hydrocarbon flow through the bed, intimately admixing the pre-heated hydrogen-containing gas at each point of introduction with the partially reacted hydrocarbon material passing that point, the pre-heated hydrogen-containing gas being introduced at each point along the path of hydrocarbon



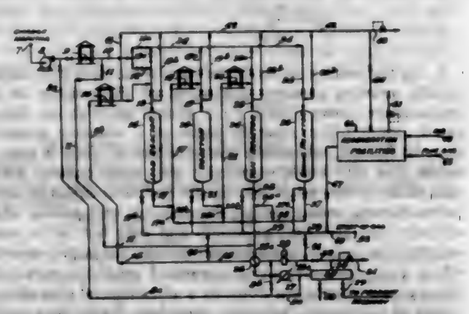
flow in progressively increasing quantities and being admixed in such a manner that the temperature at any point along the path of hydrocarbon flow within the catalyst bed is maintained within about 10°–70° F. of the hydrocarbon material inlet temperature and such that the effluent gas from the first reactor contains a final molar ratio of hydrogen-containing gas to hydrocarbon material of about 5–15:1, withdrawing the total effluent from the first reactor at a temperature of 850° to 925° F., reheating the effluent from the first reactor to a temperature of 900° to 975° F., introducing the first reactor effluent to a catalyst bed in a subsequent fixed-bed reactor, and withdrawing the effluent from the subsequent reactor at a temperature of 880° to 960° F.

2,943,999

START-UP OF PLATINUM CATALYST HYDROFORMERS

Thomas M. Moore, Munster, and Joseph B. Cornu, Griffith, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Feb. 15, 1957, Ser. No. 640,468
10 Claims. (Cl. 208—65)



1. The method of starting up a naphtha hydroforming zone containing platinum-alumina catalyst with adsorbed

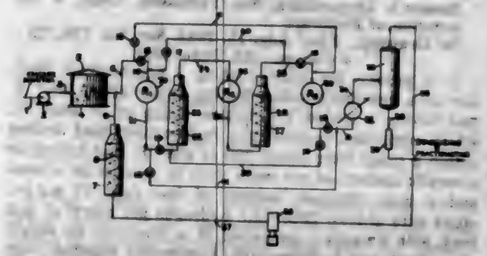
carbon oxides at temperatures below about 500° F. which method comprises purging said zone with flue gas, said flue gas containing carbon dioxide and about 0.1 to 1 mol percent oxygen, circulating said flue gas through said zone at a pressure in excess of about 30 pounds per square inch gage while simultaneously heating the circulating flue gas to a temperature above about 500° F., depressuring, introducing at a temperature above about 500° F. and a pressure in excess of about 30 pounds per square inch gage a substantially hydrogen-free startup gas, said startup gas being selected from the group consisting of nitrogen, normally-gaseous hydrocarbons, and mixtures thereof, into said zone, whereby the partial pressure of carbon oxides in said zone is reduced below about 1 pound per square inch absolute, circulating said startup gas through said zone until said zone is at a temperature in the range of about 600 to 800° F., introducing into said zone while the pressure of the startup gas therein is in the range of about 30 to 200 pounds per square inch gage preheated naphtha charge stock at a temperature in the range of 650–800° F., whereby hydrogen is produced, continuing the introduction of naphtha charge stock at a temperature in said range until the partial pressure of hydrogen in said zone reaches at least about 150 pounds per square inch gage, and then increasing the temperature of the naphtha charge to at least about 850° F.

2,944,000

METHOD OF EXTENDING ONSTREAM PORTION OF CYCLE DURING REFORMING BY REVERSING DIRECTION OF FLOW

Earle F. Ginter, Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Apr. 11, 1958, Ser. No. 727,939
10 Claims. (Cl. 208—65)



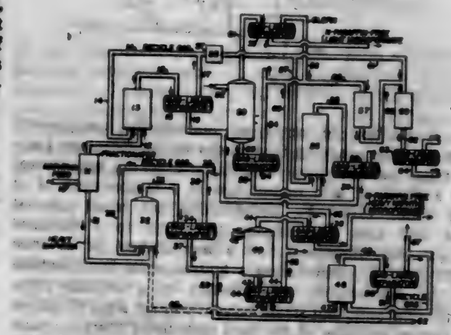
1. In the method of reforming naphtha wherein naphtha and hydrogen-containing gas are passed as a charge mixture sequentially through a plurality of adiabatic reactors, wherein the charge mixture is heated to reaction temperature between successive reactors, wherein a carbonaceous deposit designated coke is laid down on the catalyst in each reactor, wherein the amount of coke laid down in the last reactor of the series is greater than the amount of coke laid down in the first reactor of the series with respect to the direction of flow of said charge mixture, and wherein the length of the onstream period for all of said plurality of reactors is controlled by the length of the onstream period of the last reactor of the series and the maximum amount of coke which can be burned off the catalyst in a stream of combustion-supporting gas during a regeneration period, the improvement which comprises in a cyclic manner passing charge naphtha and hydrogen-containing gas in series flow through a plurality of adiabatic reactors R_1 to R_n from R_1 to R_n until the coke deposited on the catalyst in reactor R_n is about 20 to about 70 percent of the amount of coke requiring regeneration, reversing the direction of flow of said charge naphtha and said hydrogen-containing gas through said plurality of adiabatic reactors by passing said charge naphtha and said hydrogen-containing gas through said plurality of reactors sequentially from R_n to R_1 until the coke deposited in reactor R_1 is at least equal to the coke deposited in reactor R_n, and in a cyclic manner continuing to reverse the direction of flow of said charge mixture of naphtha and said hydrogen-containing gas until the coke deposit in all reactors of said plurality of reactors is substantially the same and not greater substantially than the amount of coke requiring regeneration.

2,944,001

NAPHTHA REFORMING PROCESS

Charles Newton Kimberlin, Jr., and William Judson Mattox, both of Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 29, 1956, Ser. No. 587,999
2 Claims. (Cl. 208—80)



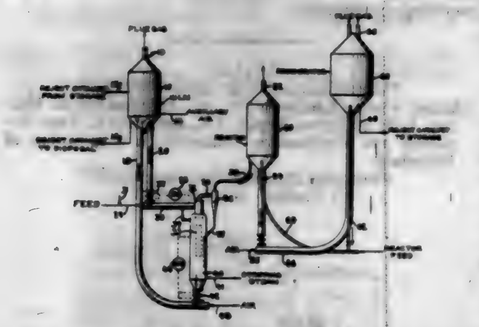
1. A method for producing high octane number motor fuels which comprises fractionating the naphtha to form a 200° F. end point light naphtha fraction and a 200° to 350° or 400° F. end point heavy naphtha fraction, hydroforming the light naphtha fraction in contact with a platinum-alumina catalyst at temperatures of from 800°–975° F. and pressures below 125 p.s.i.g. and in the presence of from 500 to 5000 cu. ft. of hydrogen-rich gas per barrel of liquid feed, treating the light naphtha hydroformate with molecular sieves having pores of about 5 A. diameter to separate the normal paraffins contained therein, separating the normal paraffins from the sieves by passing olefin-containing gases therethrough, treating the separated normal paraffins under isomerizing conditions to convert normal paraffins to branch chain isomers, passing the isomerizate to the molecular sieves for the recovery of the branch chain isomers along with the non-normal paraffin constituents of the light naphtha hydroformate, subjecting the heavy naphtha fraction to catalytic hydroforming at temperatures of from 850°–1000° F. and at pressures above about 200 p.s.i.g. in the presence of from 2000 to 8000 cu. ft. of hydrogen-rich gas per barrel of liquid feed, treating the heavy naphtha hydroformate with molecular sieves having pores of about 5 A. diameter to separate the normal paraffins contained therein, separating the normal paraffins from the molecular sieves by passing olefin-containing gases therethrough, aromatizing the normal paraffins separated from the heavy naphtha hydroformate and recycling the resultant aromatizate to the molecular sieve treatment for the recovery of branch chain paraffins and aromatics therein with the non-normal paraffins in the heavy naphtha hydroformate, separating the olefin-containing desorption gases from the molecular sieves, polymerizing the separated olefins to form additional gasoline boiling range products and passing the resultant polymerizate, the light naphtha products and heavy naphtha products to blending and storage.

2,944,883

REMOVAL OF NON-VOLATILE COMPONENTS FROM A CATALYTIC CRACKING FEED USING A REJECT CRACKING CATALYST

Kenneth H. Pauli, Lake Charles, La., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

Filed Oct. 9, 1957, Ser. No. 689,137
3 Claims. (Cl. 208—91)



3. A method of removing non-volatile components from catalytic cracking feed stocks which comprises passing reject catalyst from a fluidized cracking regenerator into a fluidized kiln maintained at a temperature of at least about 1100° F., withdrawing hot reject catalyst from said kiln and passing the same to a fluidized contact zone maintained at a temperature of at least about 900° F., introducing a hydrocarbon feed containing the non-volatile contaminants to a contact zone, introducing sufficient steam to said contact zone to reduce the partial pressure of the feed introduced therein, maintaining contact between the reject catalyst and vaporized feed for a period of time less than five seconds, passing the feed and reject catalyst to a separating zone wherein vaporized feed and reject catalyst are separated, passing the separated vapors to the fluidized reaction zone of a fluid cracking unit, subjecting the separated reject catalyst to stripping gas, recycling stripped feed vapors to the separating zone, recycling reject catalyst to the fluidized kiln and withdrawing contaminated reject catalyst from the kiln to waste disposal at substantially the same rate that fresh reject catalyst is delivered to said kiln.

2,944,893

PRODUCTION OF AVIATION GASOLINE

Wilhelmus M. J. Roedinghuijs, The Hague, and Marinus 't Hart, Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Oct. 27, 1955, Ser. No. 543,271
Claims priority, application Netherlands Oct. 29, 1954
4 Claims. (Cl. 208—93)

3. Process for the production of 100/130 grade aviation gasoline which comprises (1) separating from a naphthenic straight-run gasoline containing at least 40% by weight naphthenes by fractional distillation a light ends fraction boiling up to about 65° C. and a fraction having a lower cutting point of about 65° C. and an upper cutting point of about 130–140° C., (2) catalytically reforming the latter fraction by contacting it with an acidic platinum catalyst under a pressure between 2 and 30 atmospheres at a temperature between 450 and 525° C., (3) blending the catalytic reformate thus obtained with the said light ends fraction from the straight-run gasoline, (4) stabilizing the catalytic reformate/straight-run blend, and (5) blending the stabilized product thus obtained in an amount at least 30% by volume of the finished aviation gasoline with less than 50% by volume of alkylate, a minor amount of isopentane sufficient to meet the volatility requirements and tetraethyl lead in permissible amounts, any additional components being present in an amount less than 20% by volume of the said stabilized product.

2,944,894

PREPARATION OF COMPONENT FOR PREMIUM GRADE MOTOR GASOLINE

Wilhelmus M. J. Roedinghuijs, The Hague, Netherlands, assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Oct. 26, 1955, Ser. No. 543,827
Claims priority, application Netherlands Oct. 29, 1954
3 Claims. (Cl. 208—109)

1. In a process for the preparation of a high octane number component for premium grade automotive gasoline which comprises catalytically reforming a straight-run naphtha boiling within the gasoline boiling range by contacting the naphtha with an acidic platinum catalyst at a temperature between 450° C. to 550° C. and a pressure between 2 and 100 atmospheres, the improvement comprising increasing the octane number of the reformate by separating and removing an intermediate fraction boiling between 85° C. and 130° C., recombining the fractions boiling below and above said intermediate fraction to produce thereby a premium grade automotive gasoline component having an F–1 octane number with 1.5 cc. TEL per gallon of at least 95 and having approximately the initial boiling point and the final boiling point of automotive gasoline.

2,944,905

CATALYTIC CONVERSION OF HYDROCARBON DISTILLATES

John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Aug. 13, 1958, Ser. No. 754,715
4 Claims. (Cl. 208—109)

1. A process for hydrocracking a hydrocarbon distillate to a gasoline fraction boiling below about 200° F. and having a leaded F–1 octane rating of at least 97, which comprises contacting a hydrocarbon feed boiling within a range from about 200 to 450° F. and having an aromatic content of not more than 10 percent by volume and a basic nitrogen content of less than 25 p.p.m., along with at least 2000 s.c.f. hydrogen per barrel of said feed, with a catalyst comprised of at least 1% by weight of at least one hydrogenating component selected from the group consisting of nickel sulfide and cobalt sulfide, said component being carried on a siliceous active cracking support, the contacting over the catalyst being effected at pressures of from about 200 to 3000 p.s.i.g. and at average catalyst temperatures of from about 450° to 730° F. whereby there is obtained a conversion of the feed to the aforesaid gasoline fraction of at least 20% per pass over the catalyst, there being consumed in said process at least 1000 s.c.f. hydrogen per barrel of feed converted to product boiling below the initial boiling point of the feed.

2,944,906

HYDROCRACKING OF A HYDROCARBON DISTILLATE EMPLOYING A SULFIDE OF NICKEL OR COBALT, DISPOSED ON AN ACTIVE SILICEOUS CRACKING CATALYST SUPPORT

John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Oct. 29, 1959, Ser. No. 849,441
15 Claims. (Cl. 208—109)

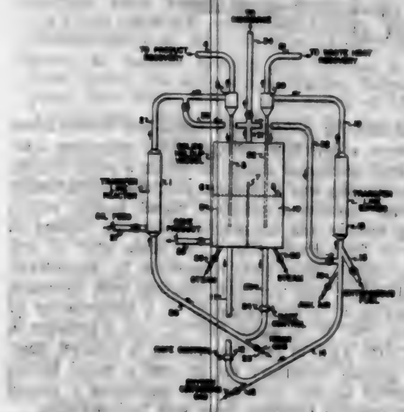
1. A process for converting a hydrocarbon distillate feed having a total nitrogen content of less than 10 p.p.m. and boiling within a range of from about 320° to 850° F. to produce fractions boiling below the initial boiling point of said feed in a yield of at least 20% per pass, which comprises passing said feed, along with at least 1500 s.c.f. H_2 per barrel thereof, through an isocracking zone for contact therein, at hydrogen partial pressures of at least 350 p.s.i.g., at temperatures between 350° and about 700° F., and at liquid hourly space velocities above 0.2 v./v./hr., with a catalyst comprising a hydrogenating component selected from the group consisting of nickel sulfide and cobalt sulfide as disposed on an active siliceous cracking catalyst support, the process being characterized by operation during a substantial portion of the on-stream period not less than 100 hours at temperatures below 650° F., and by a hydrogen consumption of at least 500 s.c.f. per barrel of feed so converted.

2,944,907

SOLIDS SYSTEM FOR TRANSFER LINE COKING OF RESIDUA

William Joseph Metralfe, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 5, 1956, Ser. No. 626,513
17 Claims. (Cl. 208—127)



1. The process of converting a hydrocarbon oil to lighter hydrocarbons and coke, which comprises contacting an oil feed in a reaction zone with hot, particulate solids, separating the product stream from said reaction zone into gaseous conversion products and solids, passing said solids into a semi-partitioned section of a solids holdup zone, withdrawing solids from said section and passing said solids along with an oxygen-containing gas to a heating zone, separating the effluent of said heating zone to recover heated solids, passing said heated solids to a second semi-partitioned section of said holdup zone, withdrawing hot solids from said second section and passing said solids to said reaction zone, solids being passed from one semi-partitioned section to the other in response to differences in solids inventories between said sections.

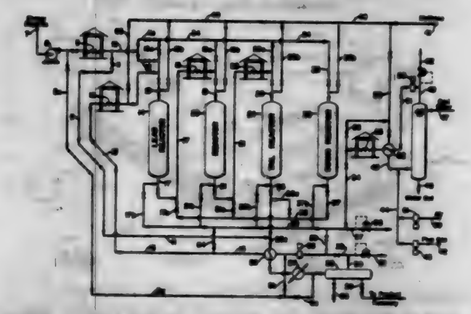
2,944,908

CONTROLLING HEAT FRONTS IN PLATINUM CATALYST HYDROFORMING

Manford R. Haxton, Texas City, and Walker F. Johnston, Jr., La Marque, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas

Filed May 31, 1957, Ser. No. 662,868
9 Claims. (Cl. 208—140)

1. In a platinum-catalyst naphtha reforming system including lead, intermediate, and tail reactors, heating zones, a gas separation zone, a compressor and lines for recycling hydrogen-rich separated gas, the method of bringing a reactor containing new or regenerated platinum catalyst on-stream at reforming temperatures which comprises purging said reactor with flue gas to remove



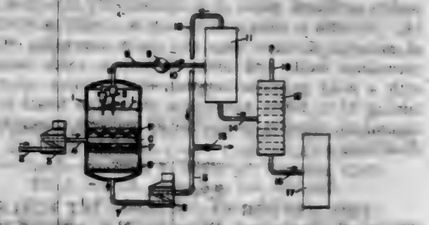
oxygen therefrom, purging said reactor with said hydrogen-rich separated gas at about atmospheric pressure whereby a heat-front may be initiated in the platinum catalyst, purging said reactor with a hydrocracking-resistant gas whereby said heat-front is quenched, again introducing said hydrogen-rich separated gas into said reactor, and introducing naphtha vapors therein.

2,944,909

FLUIDIZED SOLIDS TECHNIQUE

Allan R. Huntley, Cranford, and Francis R. Russell, Mountainside, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Sept. 3, 1957, Ser. No. 681,575
13 Claims. (Cl. 208—155)



1. A method for improving the inter-phase contacting in a multi-phase fluidized solids process which comprises causing a lighter gasiform phase to flow upwardly through a dense phase comprising particulate fluidizable solids, subdividing the upwardly flowing lighter gasiform phase passing through a lower portion of the dense phase into a plurality of small confined and separated streams and baffling lateral flow of said streams, then further subdividing each of said confined streams into a multiplicity of smaller streams which are discharged into and intimately dispersed in the dense phase immediately thereabove.

2,944,910

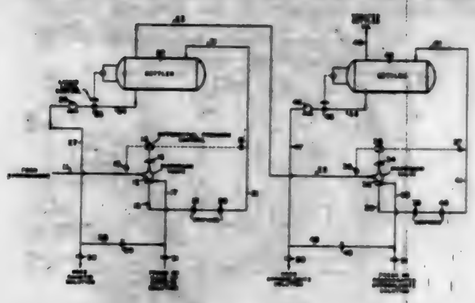
METHOD AND APPARATUS FOR TREATING HYDROCARBONS

William O. Webber, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Dec. 6, 1957, Ser. No. 701,088
16 Claims. (Cl. 208—177)

1. A method for admixing and separating immiscible liquids which comprises flowing a first liquid hydrocarbon through a restricted zone, introducing into said

first liquid hydrocarbon as it flows through the vena contracta of said zone a second liquid treating agent immiscible in the first liquid hydrocarbon at a plurality of circumferentially spaced apart points to form a mixture of



small and uniform size droplets of said liquids, flowing the mixture through an elongated zone, coagulating the mixture as it flows through said elongated zone, and then settling the coagulated mixture into said first and second liquids.

2,944,011
SWEETENING HYDROCARBONS WITH DRIED CHROMIUM OXIDE

Peter B. Murray, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

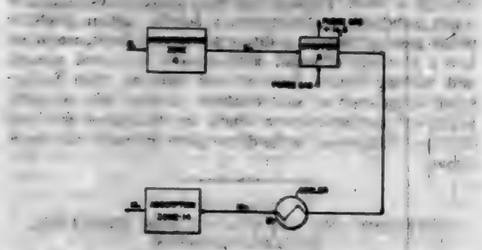
No Drawing. Filed Dec. 10, 1956, Ser. No. 627,142
6 Claims. (Cl. 208—189)

1. Process for sweetening hydrocarbons which comprises contacting hydrocarbons containing mercaptans and containing less than about 100 p.p.m. of mineral acidity in liquid phase at a temperature less than about 140° F. with a solid refining agent consisting essentially of material selected from the group consisting of dried chromium oxide and dried chromium oxide associated with a solid granular support, said refining agent containing 35 to 100% hexavalent chromium based on total chromium, thereby to selectively convert mercaptans to disulfides.

2,944,012
PROCESS FOR STABILIZING JET FUELS

Charles E. Thompson, Fanwood, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 15, 1957, Ser. No. 646,288
8 Claims. (Cl. 208—212)

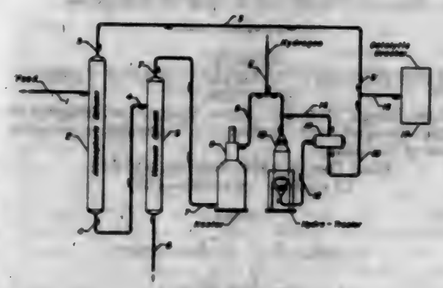


1. An improved process for refining a hydrocarbon fuel to produce a highly thermally stable product which comprises segregating a refining stream boiling in the range of about 200–600° F. and containing sulfur, catalytically hydrotreating said stream in the presence of a hydrotreating catalyst at a temperature of from about 300–750° F., and pressure of 50–1000 p.s.i.g., removing sulfur-containing products from said hydrotreating material, condensing said hydrotreated product, treating said liquefied product with an adsorbent having a high surface area, and recovering a thermally stable fuel.

2,944,013
PRODUCING METAL-FREE PETROLEUM STOCKS BY HYDROGENATION

Donald L. Holden, Des Plaines, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Dec. 9, 1957, Ser. No. 701,687
3 Claims. (Cl. 208—251)

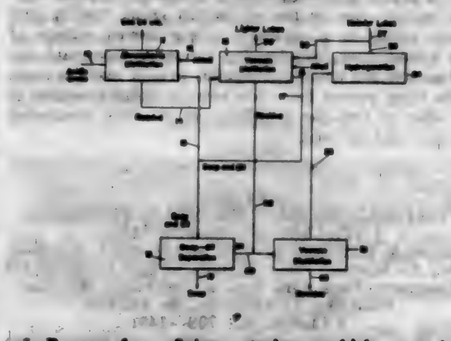


1. A process for producing a metal-free hydrocarbon distillate from a petroleum charge which comprises fractionating said petroleum charge to obtain a lower boiling metal-free fraction and a bottoms fraction, fractionating said bottoms fraction to obtain a higher boiling metal-containing residue and an overhead fraction boiling in the range of from about 370° C. to about 450° C. and containing metal compounds removable by hydrotreating, commingling said overhead fraction with hydrogen and subjecting it to hydrotreating at a temperature of from about 350° C. to about 500° C. and a pressure in excess of 200 p.s.i. in the presence of a catalyst comprising a porous refractory carrier and a metal having hydrogenation catalyst activity and recovering a second metal-free fraction resulting from said hydrotreating.

2,944,014
OBTAINING NEUTRAL DISTILLATES FROM PETROLEUM

James P. Hoffman, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Dec. 10, 1956, Ser. No. 627,329
5 Claims. (Cl. 208—263)



1. Process for refining petroleum which comprises: distilling petroleum containing naphthenic acids and lubricating oil constituents to obtain a vaporized portion containing naphthenic acids and to obtain a residue; contacting said vaporized portion under vapor phase treating conditions with liquid alkaline material in a treating zone, thereby to form alkali metal naphthenates and to condense relatively high boiling hydrocarbon constituents of said portion; removing treated vapors from the treating zone; removing said high boiling hydrocarbon constituents from said liquid alkaline material; distilling in the absence of liquid alkaline material a charge stock selected from the group consisting of (1) said residue, (2) said high boiling hydrocarbon constituents, and (3) mixtures of said residue and said high boiling hydrocarbon constituents, thereby to obtain a distillate having Saybolt Universal viscosity at 210° F. within the approximate range from 100 to 200 seconds; contacting the last-named distillate with hydrogen at 500 to 750° F. and 100 to 2000 p.s.i.g. in the presence of a hydrogenation catalyst to obtain a hydrogenated distillate; and blending said hydrogenated distillate and said treated vapors to obtain distillates containing constituents of both.

2,944,015
PROCESS FOR PREPARING IMPROVED LUBRICATING OILS BY ACID TREATING THEN HYDROFINISHING THE LUBRICATING OILS

Maurice E. Rausch, Harvey, and William B. Watson, Park Forest, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Feb. 25, 1957, Ser. No. 641,858
1 Claim. (Cl. 208—264)

A method for the production of a lubricating oil fraction of enhanced color, color stability and oxidation stability which includes the steps of distilling a naphthenic base crude oil to produce a raw lube distillate fraction having a SSU viscosity at 100° F. of from 50 to 6000 seconds, acid treating the raw distillate fraction with sulfuric acid having a strength of from 93–98 percent by weight in amount varying from 5 to 10 pounds of acid per barrel of oil for a raw lube distillate fraction having a SSU viscosity at 100° F. of 50 seconds to from 45 to 65 pounds of acid per barrel for a raw lube distillate fraction having a SSU viscosity at 100° F. of 6000 seconds, neutralizing the acid oil and washing the oil with water until free of sulfonates, and then hydrogenating the acid-treated raw lube distillate by passing it into contact with cobalt molybdate supported on alumina catalyst at a temperature of from 450 to 700° F., a pressure of from 400 to 700 p.s.i.g., and a weight hourly space velocity of from 5 to 20 while the distillate is in admixture with from 500 to 2000 standard cubic feet of hydrogen per barrel of oil and is sufficient to improve the color, color stability and oxidation stability of the oil whereby from 5 to 30 standard cubic feet of hydrogen are reacted per barrel of oil.

2,944,016
INCREASING OXIDATION STABILITY OF HYDROCARBONS

Charles L. Thomas, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

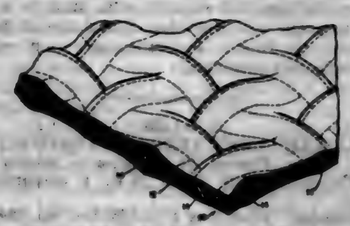
No Drawing. Filed Apr. 16, 1958, Ser. No. 728,783
7 Claims. (Cl. 208—284)

1. Process for improving oxidation stability of hydrocarbons which comprises contacting hydrocarbons containing small amounts of nonhydrocarbon constituents normally causing poor oxidation stability with 0.01 to 5 weight percent of an alkali metal salt of a carboxylic acid containing an alkali metal attached to an alpha carbon atom, at a temperature within the approximate range from room temperature to 600° F., thereby to react said compound with nonhydrocarbon constituents.

2,944,017
FILTER MEDIUM

Richard A. Cotton, Newton, Mass., assignor to Millipore Filter Corporation, Watertown, Mass., a corporation of Massachusetts

Filed Dec. 17, 1956, Ser. No. 628,433
3 Claims. (Cl. 210—500)



1. A physically strong and flexible filter sheet capable of removing particles of bacterial size comprising in combination a thin flexible microporous plastic film sufficiently permeable for filtration and having substantially transverse pores of effective diameter between 100 millimirons and 1 micron which in number occupy a total volume in excess of 80 percent of said film and render it inherently fragile and brittle, and a web embedded in and substantially completely surrounded by said film, said web being an open mesh fabric formed of smooth surfaced nylon strands of non-absorbent monofilament fibers which are completely within and covered by said film such that the filter surface is not disrupted by said strands, said strands having a strand diameter less than about 250 microns and forming between them openings of less than about 1 mm. but of sufficient size that the permeability of the sheet is sufficient for filtration, the volume within said openings being completely occupied by said filter film and the area of said openings being of sufficient size that filtration occurs solely by the action of said film and said film being of reduced thickness in the region of said strands.

2,944,018
COMPOSITION AND PROCESS FOR PREVENTING OR RESTORING LOST CIRCULATION

Bert Barcherdt, 2538 E. Main St., Ventura, Calif.

Filed Oct. 22, 1956, Ser. No. 617,507
9 Claims. (Cl. 252—8.5)

1. A drilling fluid comprising a liquid base, a lost-circulation material, and a bridge-initiating agent, said agent comprising a plurality of wedge-like particles of a rubber-like material capable of being suspended in said drilling fluid and being capable of maintaining said wedge shape when exposed to said fluid and to the temperature and pressure conditions of use, said wedge-like particles having at least one end portion defined by surfaces converging to form an acute angle, said surfaces of said end portion converging from a portion having a minimum dimension of at least about one-quarter inch, and no less than about one-eighth of said particles being of substantially the same size and shape.

2,944,019
WELL DRILLING MUD AND THE METHOD OF MAKING THE SAME

James V. Thompson, Denver, Colo., assignor to James V. Thompson and Alfred G. Hoyl, a partnership

No Drawing. Filed Nov. 13, 1956, Ser. No. 621,511
10 Claims. (Cl. 252—8.5)

1. A composition for use as a weighting agent in a drilling fluid for oil and gas wells, comprising a non-separating homogeneous mixture of fine particles of vermiculite impregnated with fine particles of magnetite, the propor-

tion of vermiculite to magnetite by weight being between 5 and 50 percent.

10. A method of controlling the viscosity of a mud-laden fluid for use in drilling oil and gas wells containing finely ground particles of vermiculite impregnated with magnetite, said vermiculite being in proportion to the magnetite in the order of from 5 to 50 percent by weight, including the steps of subjecting the fluid to a direct current magnetic field to produce flocculation of the fluid, and subject the fluid to an alternating current magnetic field to deflocculate the fluid.

2,944,820

ANTI-WEAR LUBRICATING OIL COMPOSITION

Guy M. Verley, Harvey, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 11, 1956, Ser. No. 584,181
2 Claims. (Cl. 252—32.7)

1. A lubricating oil composition consisting essentially of a major amount of a mineral lubricating oil containing minor amounts of oil-soluble nickel alkyl phenol sulfide in which the alkyl group contains about 8–24 carbon atoms, zinc dithiophosphate diester in which the ester groups contain about 4–14 carbon atoms, a sulfurized sperm oil anti-wear agent in an amount sufficient to contribute about 0.06 to 0.2% by weight of sulfur based on the mineral oil, a small amount of basic barium petroleum sulfonate sufficient to impart a barium content of about 0.2 to 2.0 percent by weight, said sulfide being present in an amount to provide about 0.01 to 0.20% of nickel and said dithiophosphate being present in an amount to provide 0.03 to 0.2% phosphorus based on the mineral oil.

2,944,821

MARINE DIESEL LUBRICANT

Clifford J. Ulzheimer, Woodbury Heights, and John C. Zimmer, Union, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Jan. 25, 1956, Ser. No. 561,344
2 Claims. (Cl. 252—33.4)

1. An emulsion lubricant for marine diesels which consists of, by weight of the lubricant, between about 10 percent and about 35 percent water, between about 80 percent and about 55 percent mineral lubricating oil having a Saybolt Universal viscosity of between about 75 seconds and about 80 seconds measured at 210° F., between about 1 percent and about 5 percent alkali-metal hydroxide, said alkali-metal hydroxide being present in the water phase of said lubricant, the amount thereof being sufficient to effect a total base number in the lubricant of between about 10 and about 50, between about 1 percent and about 10 percent oil soluble polyvalent metal sulfonate and between about 3 percent and about 10 percent esters of high molecular weight acids obtained by controlled oxidation of petroleum oil.

2,944,822

MARINE DIESEL LUBRICANT

Clifford J. Ulzheimer, Woodbury Heights, and John C. Zimmer, Union, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed July 9, 1956, Ser. No. 596,400
3 Claims. (Cl. 252—33.4)

1. An emulsion lubricant for marine diesels which consists of, by weight of the lubricant, between about 10 percent and about 50 percent water, between about 80 percent and about 45 percent mineral lubricating oil, having a Saybolt Universal viscosity of between about 45 seconds and about 100 seconds measured at 210° F., between about 1 percent and about 5 percent alkali-metal hydroxide, the amount thereof being sufficient to effect a total base number in the lubricant of between about 10 and about 100, between about 1 percent and about 10 percent calcium petroleum sulfonate, between about 3 percent and about 7 percent of a mixture of polyhydric alcohol esters of high molecular weight acids obtained by controlled oxidation of petroleum wax, and between about 0.5 percent and about one percent saturated fatty acid having between 16 and 20 carbon atoms per molecule.

2,944,823

ANTICORROSIVE MARINE DIESEL LUBRICANT

Ivan S. Kolaric, East Paterson, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Filed Jan. 15, 1957, Ser. No. 634,179
3 Claims. (Cl. 252—33.4)

1. An emulsion lubricant for marine diesels which comprises, by weight of the lubricant, between about 10 percent and about 50 percent water, between about 80 percent and about 45 percent mineral lubricating oil, having a Saybolt Universal viscosity of between about 45 seconds and about 100 seconds measured at 210° F., between about 1 percent and about 5 percent alkali-metal hydroxide, the amount thereof being sufficient to effect a total base number in the lubricant of between about 10 and about 100, between about 1 percent and about 10 percent calcium mahogany sulfonate, between about 3 percent and about 7 percent of a mixture of polyhydric alcohol esters of high molecular weight acids obtained by controlled oxidation of petroleum wax, between about 0.5 percent and about one percent saturated fatty acid having between 16 and 20 carbon atoms per molecule, and between about 0.25 percent and about 0.5 percent lime, expressed as CaO.

2,944,824

LUBRICANTS CONTAINING FATTY ACID ESTERS OF SACCHARIDES

Arnold J. Morway, Clark, and Walter E. Waddey, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 28, 1958, Ser. No. 724,524
7 Claims. (Cl. 252—40.5)

1. A lubricating grease composition comprising a major proportion of lubricating oil, about 5 to 30 wt. percent of an ester of one mole of a disaccharide and 1 to 3 moles of a C_{12} to C_{20} fatty acid and 5 to 40 wt. percent of an alkaline earth metal salt of a C_2 to C_6 fatty acid.

2,944,825

LUBRICATING OIL COMPOSITION

Joseph Arthur Verdol, Dolton, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 7, 1957, Ser. No. 676,720
4 Claims. (Cl. 252—51.5)

1. A lubricating oil composition consisting essentially of a major portion of a mineral oil of lubricating viscosity and a polyester compatible with said mineral oil in an amount sufficient to impart sludge-dispersing properties to the lubricating oil composition, said polyester being characterized by the formula:



wherein R is a non-aromatic divalent hydrocarbon radical containing 12 to 38 carbon atoms, R′ is an alkyl radical containing 4 to 20 carbon atoms, R and R′ contain a total of 22 to 44 carbon atoms and y is from 1 to an integer providing the mineral lubricating oil-compatible polyester.

2,944,826

ELECTROLYTES

Preston Robinson, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

No Drawing. Filed May 14, 1957, Ser. No. 658,929
1 Claim. (Cl. 252—62.2)

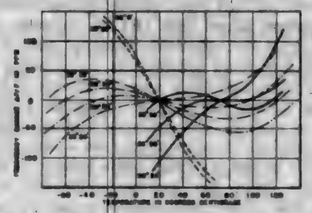
An electrolytic capacitor electrolyte consisting of a solute selected from the group consisting of (*a*) the 1:1 adduct of aniline and maleic anhydride and (*b*) the 1:1 adduct of heptafluorobutyric acid and triethanolamine, said solute being the adduct combination of a strong electron affinity compound and a nucleophilic substance, said solute being dissolved in a solvent selected from the class consisting of triethylene glycol, dimethyl formamide, propionitrile, glycolo nitrile, lacto nitrile and n-butyronitrile, said solute being from about 1 to 50% of the solvent.

2,944,827

METHOD OF FABRICATING A SYNTHETIC QUARTZ CRYSTAL

Joseph M. Stanley, Spring Lake, Serglus Theokritoff, Red Bank, Edward A. Gerber, West Long Branch, and Andrew R. Chi, Eatontown, N.J., and Donald L. Hammond, Estes, Colo., assignors to the United States of America as represented by the Secretary of the Army

Filed May 7, 1956, Ser. No. 583,343
5 Claims. (Cl. 252—62.9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In the fabrication of a synthetic quartz crystal, the improvement comprising introducing aluminum into the solution from which said quartz crystal is made in an autoclave operated in pressure ranges from 5000–6000 p.s.i. at a temperature of about 350° C. for a period of from 8 to 15 days.

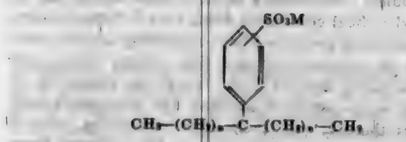
2,944,828

SULFONATE DETERGENT COMPOSITIONS

Richard D. Stayner, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Filed Sept. 12, 1956, Ser. No. 609,349
2 Claims. (Cl. 252—161)

1. A detergent composition consisting essentially of a water-soluble polypropylene benzene sulfonate detergent having an average carbon content in the polypropylene chain of about 12 carbon atoms, and, in an amount sufficient to enhance the sudsing properties of said polypropylene benzene sulfonate, of a straight-chain alkylbenzene sulfonate having the formula



wherein *n* is an integer from 5 to 7, *n′* is an integer from 5 to 8, and M is a radical selected from the group consisting of alkali metals and ammonium.

2,944,829

AEROSOLIZATION PROCESS

James B. Jones and John L. Straughn, West Chester, Pa., assignors to Aeroprojects, Inc., West Chester, Pa., a corporation of Pennsylvania

Filed Sept. 16, 1957, Ser. No. 684,827
16 Claims. (Cl. 252—305)

1. A method for aerosolizing a liquid which undergoes a deleterious chemical change when raised to an elevated decomposition temperature below its vaporization temperature for an appreciable period of time, said liquid being one whose surface tension and viscosity are such at a temperature above its decomposition temperature and below its vaporization temperature as to permit it to be aerosolized, which method comprises heating an inert gas to an elevated temperature above the decomposition temperature at which the liquid undergoes such deleterious chemical change, contacting a rapidly moving stream of said heated gas at said elevated temperature with a stream of said liquid, said stream of liquid being below its decomposition temperature, said contact aerosolizing at least an appreciable portion of said liquid, the time duration of such contact between said liquid and said gas being insufficient to effect any deleterious chemical change on said liquid but being sufficient to raise the temperature of said liquid for a short time period above such decomposition temperature at which said liquid undergoes a deleterious chemical change to a temperature below the liquid's vaporization temperature at which temperature the surface tension and viscosity of the liquid are reduced to a level permitting the liquid to be aerosolized, and then cooling the aerosolized liquid droplets by passage through a gas to a temperature appreciably below the decomposition temperature of the liquid.

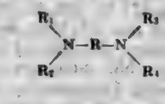
2,944,830

BINARY EMULSIFIERS

John T. Patton, Jr., Wyandotte, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed May 31, 1957, Ser. No. 662,558
8 Claims. (Cl. 252—356)

1. A binary emulsifier consisting of about 25 weight percent of (*a*) an amino-ester having the formula



wherein R_1, R_2, R_3 and R_4 are monovalent radicals selected from the group consisting of radicals having the formulae $—CH_2CH(OH)CH_3$; $—CH_2CH(OOCR_5)CH_3$; $—CH_2CH(OH)CH_2CH_3$; $—CH_2CH(OOCR_5)CH_2CH_3$; $—CH(CH_3)CH(OH)CH_3$; and

$$—CH(CH_3)CH(OOCR_5)CH_3$$

wherein in said radical formulae R_5 is selected from the group consisting of aliphatic hydrocarbon radicals having from 8 to 20 carbon atoms and abietyl radical, at least 1 and not more than 2 of said R_1, R_2, R_3 and R_4 radicals containing an R_5 radical in its structure; and wherein R is a divalent radical selected from the group consisting of alkylene radicals having 2 to 6 carbon atoms, 2-hydroxy-1,3-propylene, and radicals represented by the formula $[—R_6N(R_1)—]_n$ wherein *n* is an integer not higher than 2, R_6 is a divalent radical selected from the group consisting of ethylene and propylene and R_1 is a monovalent radical as hereinbefore defined and (*b*) about 75 weight percent of the corresponding adduct of (*a*) with from about 50 to about 75 weight percent of ethylene oxide.

2,944,831
SELECTIVE ADSORBENT CHAR FOR SEPARATION OF STRAIGHT CHAIN FROM NON-STRAIGHT CHAIN HYDROCARBONS
Ralph Burgess Mason, Dunham Springs, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 5, 1957, Ser. No. 682,218
6 Claims. (Cl. 252—421)

1. An improved process for preparing a selective adsorbent char having uniform pores adapted to adsorb straight chain hydrocarbons and reject non-straight chain hydrocarbons, which comprises heating a chlorinated hydrocarbonaceous composition wherein the ratio of hydrogen to chlorine atoms is 1:1 and which evolves on pyrolysis a hydrogen chloride comprising gas to a temperature in the range of about 400° to 700° F. while suspended in a liquid having a boiling point within the range of approximately 400° to 700° F., partially charring said hydrocarbonaceous material in said liquid, maintaining a residence time of from 30 to 60 minutes, removing said charred material from said liquid, thereafter heating said charred material to a temperature of from about 1000° to 2000° F. and recovering a superior selective adsorbent char.

2,944,832
CATALYST MANUFACTURING
William G. Nixon, Westchester, Ill., assignor to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Aug. 7, 1959, Ser. No. 832,155
13 Claims. (Cl. 252—441)

1. A process for manufacturing a catalyst which comprises treating alumina with aluminum nitrate in an amount of from about 1% to about 10% by weight of the alumina, impregnating said alumina with a platinum compound to form an alumina-platinum composite, and treating said alumina-platinum composite with at least one oxide of nitrogen selected from the group consisting of nitric oxide and nitrogen peroxide.

2,944,833
EXCHANGE RESINS FROM N-HALOGENATED COPOLYMERS
Solomon Goodman, 421 W. 25th St., New York, N.Y.
No Drawing. Filed June 25, 1956, Ser. No. 593,334
4 Claims. (Cl. 260—2.1)

1. Insoluble complex, high molecular weight, polymeric exchange resins having exchangeable positive chlorine atoms and consisting basically of a high molecular weight copolymer of styrene and maleic anhydride containing N-halogen amide groups, said copolymer being cross-linked with diamines through carboxyl and having the N atoms of the diamines n-chlorinated.

2,944,834
DIALDEHYDE SUGAR REACTION PRODUCTS, PROCESS FOR PREPARING SAME AND PRINTING INK PREPARED THEREFROM
Ronald J. Baird, Philadelphia, Pa., assignor to The National Sugar Refining Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed Jan. 4, 1956, Ser. No. 557,253
20 Claims. (Cl. 260—9)

1. A process for preparing a solvent-soluble condensation product of a dialdehyde and a sugar, which comprises allowing a dialdehyde and a sugar having at least four hydroxyl groups so relatively positioned as to present at least two pairs of hydroxyls, with each pair having its hydroxyls separated by under four carbon atoms, to react together in a ratio such that there are at least three to about sixteen moles of hydroxyl group in the sugar reactant per mol of aldehyde, in a reaction medium which has a pH below that which exceeds pH 7 and is a solvent for at least one of the reactants, at an elevated temperature from about 50° C. to under that at which decomposition of either reactant occurs, and for a time sufficient for them to condense together with the elimination of water, and removing the water of condensation thus formed and also any other water introduced as reaction medium; thereby obtaining a solvent-soluble condensation product of the dialdehyde and the sugar.

2,944,835
AROMATIC EPOXIDIZED POLYESTER AND METHOD OF MAKING
Robert L. Wear, West St. Paul, Minn., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed July 20, 1955, Ser. No. 523,367
9 Claims. (Cl. 260—18)

1. The method of making an epoxy polyester resin which can be cured in admixture with a polyfunctional chemical hardening agent for epoxy polyether resin to a tough resinous state, said method consisting essentially of the steps of (1) blending in an alkaline medium (A) a polyester of polyhydric aliphatic alcohol and long-chain fatty acid having, per average molecular weight, at least about 1.5 oxirane groups directly and laterally attached to carbon atoms of the fatty acid radicals of the polyester at least eight carbon atoms removed from the acyl carbon atoms with (B) an aromatic compound having at least one phenolic hydroxyl radical and free from other functional substituents, (2) heating the blend at a temperature and for a time to convert at least about 0.5 oxirane groups per average molecular weight of the polyester to aryloxy and hydroxyl radicals directly and laterally attached to adjacent carbon atoms of the fatty acid radicals of the polyester while leaving at least about one oxirane group per average molecular weight and not more than about one oxirane group per ester linkage, and (3) cooling the converted blend and thereby obtaining said epoxy polyester resin.

2,944,836
PLASTIC SOLDER COMPOUND
Don E. Floyd, Robbinsdale, and William J. Ward, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
No Drawing. Filed May 3, 1957, Ser. No. 656,747
4 Claims. (Cl. 260—18)

1. A thixotropic, heat-curable composition suitable for use as an auto-body solder composed of (*a*) an amino-polyamide derived from polymeric fat acids and a polyamine having the formula $H_2NR(NHR)_pNH_2$ in which R is an alkylene radical and *p* is a whole integer of from 1 to 6, said amino-polyamide having an amine number within the range of about 150 to about 400, (*b*) a glycidyl poly ether of a polyhydric phenol having an epoxy equivalent weight of from 100 to 300, (*c*) a cation-modified clay flow control agent having the formula $(T)_2(T_1)_2N^+$bentonite$^-$ where T is an aliphatic hydrocarbon radical containing 8 to 22 carbon atoms and T_1 is an alkyl radical containing from 1 to 5 carbon atoms, (*d*) a nonvolatile polar hydroxyl-containing organic compound as an activator for said flow control agent, said compound being selected from the group consisting of fatty acid mono esters of sorbitan and polyoxyalkylene derivatives thereof, said fatty acids containing from 8 to 22 carbon atoms, and (*e*) an inert filler selected from the group consisting of aluminum, iron, the oxides thereof and kaolin clay.

2,944,837
INK-TRANSFER COMPOSITIONS AND DUPLICATING MEDIA PREPARED THEREWITH
Ralph H. Clark, Westwood, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
No Drawing. Filed July 19, 1956, Ser. No. 598,753
13 Claims. (Cl. 260—33)

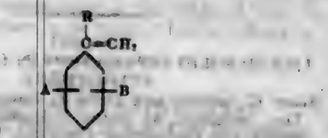
1. In an ink-transfer composition comprising a uniform mixture of a solid synthetic resin comprising a vinyl chloride resin, a non-volatile, non-drying liquid sufficiently incompatible with the resin and present in sufficient quantity to migrate within the resin and to be expressible therefrom under pressure, and coloring matter, which composition is operative to transfer ink when subjected to pressure by the expression from the resin of the non-volatile, non-drying liquid carrying the coloring matter; the improvement wherein said solid synthetic resin also includes an acrylic resin selected from the group consisting of polymerized acrylic and methacrylic esters of lower aliphatic alcohols.

2,944,838
METHOD FOR PREPARING BUTYL RUBBER EMULSIONS
Edward Allen Hunter, Baton Rouge, La., Maxwell Albin Sagura, Elizabeth, N.J., Augustus Bailey Small, Baton Rouge, La., and Alfred L. Miller, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed May 17, 1956, Ser. No. 585,398
9 Claims. (Cl. 260—23.7)

2. A stable latex of butyl rubber prepared by low temperature polymerization of a major proportion of isobutylene and a minor proportion of a multiolefin comprising 100 parts by weight of butyl rubber emulsified in an aqueous solution containing about 3–4 parts by weight based on rubber of an alkali metal soap of a fatty acid containing 12–24 carbon atoms, about 2–3.5 parts by weight based on rubber of polyvinyl alcohol and about 2–4 parts by weight based on rubber of polyoxyethylated alkyl phenol having from 8–12 ethylene oxide units in which the alkyl group contains 8–9 carbon atoms.

2,944,839
METHOD FOR PREPARING HOMOGENEOUS COMPOSITION COMPRISING OXIDIZED PETROLEUM WAX AND A POLYMER OF A MONOVINYL AROMATIC COMPOUND
Samuel E. Jolly, Ridley Park, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Nov. 7, 1957, Ser. No. 694,917
4 Claims. (Cl. 260—28.5)

1. Method for preparation of saponifiable materials having low penetration which comprises: contacting partially oxidized petroleum wax having saponification number within the range from 30 to 150 mg. of KOH per gram with a monovinyl aromatic compound having the following formula:



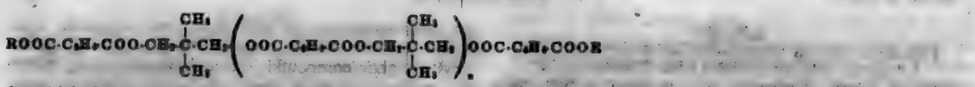
where R is selected from the group consisting of hydrogen, methyl and ethyl radicals, A is selected from the group consisting of hydrogen, halogen and alkyl radicals having 1 to 3 carbon atoms inclusive, and B is selected from the group consisting of hydrogen, halogen and alkyl radicals having 1 to 3 carbon atoms inclusive, the contacting being performed under conditions for polymerization of said monovinyl aromatic compound, and the weight ratio of oxidized wax to monovinyl aromatic compound in said contacting being within the approximate range from 1.5:1 to 1:5, thereby polymerizing said aromatic compound while in intimate contact with said partially oxidized petroleum wax; and admixing the polymerization product with additional partially oxidized petroleum wax having saponification number within the range from 30 to 150 mg. of KOH per gram, thereby to obtain a homogeneous product containing a greater amount of oxidized wax than the maximum amount which will form a homogeneous composition with the monovinyl aromatic compound polymer in direct polymerization of the monovinyl aromatic compound in the presence of oxidized wax, said amount of oxidized wax being within the range from 65 to 95 weight percent based on the vinyl polymer-oxidized wax mixture.

2,944,840
METHOD OF PREPARING HIGH SOLIDS LATICES OF FILM-FORMING POLYMERS AND HIGH DENSITY ETHYLENE POLYMERS
Lyle W. Pollock and John E. Cottle, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 17, 1956, Ser. No. 610,198
4 Claims. (Cl. 260—29.7)

1. A method of making an improved latex for paint and surface coatings which comprises forming a solution of from 2 to 10 weight percent of ethylene polymer in inert and non-deleterious hydrocarbon liquid solvent selected from the group consisting of paraffins, cycloparaffins and mixtures thereof, and having 3 to 12 carbon atoms per molecule, said ethylene polymer being selected from the group consisting of polyethylene and copolymers of ethylene with acyclic monoolefin having from 3 to 8 carbon atoms per molecule, said copolymers being polymerizates of monomer systems containing at least 90 parts by weight of ethylene per 100 parts of polymerizable material, said ethylene polymer being characterized by a density of 0.94 to 0.99 gram per cubic centimeter at 25° C. and a crystallinity of about 80 to 94 percent and 25° C.; forming a latex of a film-forming polymer selected from the group consisting of butadiene-styrene copolymer, polystyrene, polyvinylacetate, vinyl chloride-vinylidene chloride copolymer, polyvinyl chloride, butadiene-acrylonitrile copolymer, and chlorinated natural rubber; heating and concentrating said latex to about 40 to 60 weight percent solids; blending said solution and said latex in a solids weight ratio of 5 to 100 parts of ethylene polymer per 100 parts of film-forming polymer while maintaining the temperature of the combined materials above the softening point of the ethylene polymer, thus forming a homogeneous mixture; flashing said mixture to remove solvent therefrom; and cooling said mixture to a temperature in the range of 150 to 225° F., said flashing step being performed within about 5 minutes after said latex heating step, thereby preventing said latex from coagulating prematurely and producing a latex product containing from 40 to 60 weight percent solids.

2,944,841
NEOPENTYL GLYCOL ALKYL PHTHALATES AND POLYVINYL CHLORIDE COMPOSITIONS PLASTICIZED THEREWITH
Arthur C. Hecker, Richmond Hill, and Mark W. Pollock and Iocheved Rabinovici, New York, N.Y., assignors to Argus Chemical Corporation, a corporation of New York
No Drawing. Filed Aug. 21, 1957, Ser. No. 679,538
7 Claims. (Cl. 260—31.6)

1. A neopentyl glycol alkyl phthalate ester of the formula



in which R represents a C_6–C_{10} alkyl group and *n* an integral number within the range 0–1.

7. A plastic composition comprising a polyvinyl chloride resin and the ester of claim 1 compounded therewith and serving as plasticizer therefor in the proportion of about 20–125 parts of the said ester for 100 of the polyvinyl chloride resin.

2,944,842

RUBBER COMPOSITION AND PREPARATION THEREOF

Herbert R. Anderson, Jr., Bartlesville Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Mar. 10, 1958, Ser. No. 720,026
19 Claims. (Cl. 260—41.5)

1. A vulcanized rubber composition comprising a rubbery component selected from the group consisting of natural rubber, a homopolymer of a conjugated diene, a copolymer of a conjugated diene and a compound containing an active $CH_2=C<$ group which is copolymerizable therewith, said conjugated diene containing at least 4 carbon atoms per molecule, and a reinforcing amount of a sulfide of a group VI–A metal, added to said rubber before vulcanization.

2,944,843

POLYISOBUTYLENE COMPOSITIONS PREPARED WITH A CONDENSATION PRODUCT OF CYCLOHEXANONE WITH METHYL CYCLOHEXANONE

William John G. McCulloch, Plainfield, and Luther B. Turner, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Aug. 6, 1957, Ser. No. 676,502
2 Claims. (Cl. 260—45.5)

1. A composition of matter comprising 70 to 98 parts by weight of a polymer of isobutylene having a molecular weight above 100,000 prepared in the presence of a Friedel-Crafts catalyst and 2 to 30 parts by weight of a resinous condensation product of cyclohexanone with methyl cyclohexanone to provide a mixture with improved processability.

2,944,844

POLYMER BLEND OF A CARBOXYL-CONTAINING MONOVINYLIDENE AROMATIC POLYMER AND A CARBOXYL-CONTAINING CONJUGATED 1,3-DIENE POLYMER

Maurice Baer, Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 9, 1958, Ser. No. 740,546
9 Claims. (Cl. 260—45.5)

1. An intimate blend of thermoplastic polymeric materials consisting essentially of (1) greater than 50% of a rigid, water-insoluble polymer of a monovinylidene aromatic compound containing an average of 3–35 carboxyl groups per each 100 monomeric units in the polymer chain and (2) less than 50% by weight of a rubbery polymer of a conjugated 1,3-diene containing an average of 1.5–30 carboxyl groups per each 100 monomeric units in the polymer chain, said conjugated 1,3-diene conforming to the formula:



Where: R_1 and R_2 are independently selected from the group consisting of hydrogen, methyl radicals and ethyl radicals, and R_3 is selected from the group consisting of hydrogen and methyl radicals, said rubbery polymer of a conjugated 1,3-diene having a brittle temperature not higher than about 0° C., (as determined by ASTM test D746–52T), said rubbery polymer being present in the polymer blend in such an amount that the impact strength of the polymer blend (as determined by ASTM test D256–47T) is greater than the impact strength of the rigid, water-insoluble polymer of a monovinylidene aromatic compound contained therein.

2,944,845

STABILIZED VINYL RESIN COMPOSITIONS

Chrysostomis M. Canarios, Maple Heights, Ohio, assignor to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 9, 1959, Ser. No. 797,841
9 Claims. (Cl. 260—45.75)

1. A heat stable vinyl resin composition comprising 100 parts of a resin selected from the group consisting of polyvinyl chloride homopolymers and polyvinyl chloride copolymers and from 0.1 to 15 parts of each constituent of a stabilizing component, having the property of retaining stability after long periods of vinyl resin composition storage, said stabilizing component consisting of a metal salt of a higher fatty acid selected from the group consisting of barium and lead salts of higher fatty acids and mixtures thereof and a metal oxide of the class consisting of lead oxide, barium oxide, calcium oxide, magnesium oxide and mixtures thereof.

2,944,846

PROCESS FOR THE PRODUCTION AND USE OF NOVEL TANNING AGENTS AND PRODUCTS PRODUCED BY SUCH PROCESS

Lucien Seillet, Saddle River, N.J., assignor to Jacques Wolf & Co., a corporation of New Jersey

No Drawing. Filed Sept. 23, 1952, Ser. No. 311,149
26 Claims. (Cl. 260—67.6)

1. A process for the preparation of a modified amino-formaldehyde resin having cationic active properties and which is stable in water and will not heat polymerize or condense therein, comprising reacting at a temperature in the range of about 75° C. to about 110° C. (*a*) a water-soluble, amino-formaldehyde resin containing free unreacted methylol groups which impart instability to said amino-formaldehyde resin in water, said amino-formaldehyde resin being selected from the group consisting of urea-formaldehyde resins, thiourea-formaldehyde resins, guanidine-formaldehyde resins, acetylene diurea-formaldehyde resins, melamine-formaldehyde resins and dicyandiamide-formaldehyde resins with (*b*) a water-soluble amino base selected from the group consisting of urea, thiourea, guanidine, acetylene diurea, melamine and dicyandiamide, the water-soluble amino base being in an amount sufficient to react with all of the methylol groups of the amino-formaldehyde resin, said reaction being carried out at a pH of about at least 7.

2,944,847

LIQUID-SOLID SEPARATION IN OXYGEN-FREE ATMOSPHERE

Henry G. Schatze and Delos E. Bowa, Harris County, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 2, 1957, Ser. No. 687,777
6 Claims. (Cl. 260—88.2)

1. A method of producing color-free solid olefinic polymers from polymer particles of a mono-olefin having 2 to 5 carbon atoms in the molecule, said polymer having a molecular weight in the range from about 10,000 to about 1,000,000 formed in a slurry in a non-polar organic liquid which comprises the steps of separating said liquid from said slurry to recover said polymer particles, then applying pressure by squeezing said polymer particles to remove any of said liquid from and to reduce the surface area of the polymer to less than 1 $m.^2/g.$, said steps being performed while maintaining said slurry and polymer particles free of oxygen-containing gas, and recovering said polymer free of oxygen-containing gas and having a low surface area less than 1 $m.^2/g.$ after application of said pressure, said low surface area polymer remaining substantially free of color on further treatment.

2,944,848

PROCESS AND CATALYST FOR PRODUCTION OF OLEFIN POLYMERS

Gene Nowlin, Glen Burnie, Md., and Harold D. Lyons, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 30, 1955, Ser. No. 556,483
15 Claims. (Cl. 260—94.9)

1. A method for polymerizing an aliphatic 1-olefin having up to and including 8 carbon atoms per molecule which comprises contacting said olefin with a catalyst consisting essentially of (1) a metal halide selected from the group consisting of halides of titanium, zirconium, hafnium and germanium, (2) a hydride selected from the group consisting of hydrides of aluminum, gallium, indium and thallium and complexes of said hydrides with alkali metal hydrides, and (3) an organic halide corresponding to the formula RX, wherein R is selected from the group consisting of alkyl, cycloalkyl, alkenyl, cycloalkenyl, aryl, and alkynyl radicals, and combinations of these radicals, and X is a halogen, the ratio of the amounts of the components of said catalyst being in the range of from 0.2 to 3 mols of said hydride per mol of said metal halide and in the range of from 0.2 to 3 mols of said organic halide per mol of said metal halide.

2,944,849

POLYMERIZATION OF OLEFINS IN HALOGEN-CONTAINING DILUENT

James T. Edmonds, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,371
3 Claims. (Cl. 260—94.9)

2. A method for polymerizing ethylene which comprises contacting ethylene with a catalyst consisting essentially of (1) chromium oxide, at least part of the chromium being in the hexavalent state, supported on silica and alumina, and (2) a compound having the formula AlR_3, wherein R is an alkyl radical having up to 20 carbon atoms, the amount of the AlR_3 compound in said catalyst being in the range of 0.5 to 5 parts by weight per part of said chromium oxide and said silica and alumina, said contacting occurring in the presence of carbon tetrachloride at a temperature in the range of zero to 250° F. and a pressure in the range of 100 to 500 p.s.i.g.

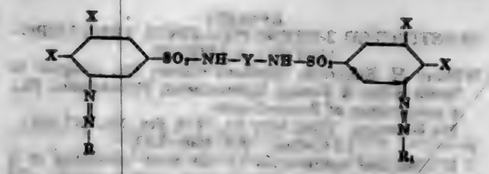
2,944,850

WATER-INSOLUBLE AZO DYESTUFFS

Heinz Heubrich and Reinhold Hörnle, Köln-Stammheim, and Hans Raab, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed May 20, 1958, Ser. No. 736,463
Claims priority, application Germany June 7, 1957
3 Claims. (Cl. 260—178)

1. Water-insoluble disazo dyestuffs of the following composition:



wherein the radicals X stand for members selected from the group consisting of hydrogen, halogen, a lower alkoxy, lower alkyl and nitro group, Y means a member selected from the group consisting of a radical of the benzene series and a saturated aliphatic radical having 1 to 6 carbon atoms, and R and R_1 stand for radicals of an azo coupling component being free of sulfonic acid and carboxylic acid groups, said azo coupling component being selected from the groups consisting of the 2,3-hydroxynaphthoic acid amide, 2-hydroxy-naphthalene, 1-phenyl-3-methyl-5-pyrazolone and acetoacetylamino series.

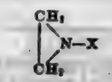
2,944,851

N-HALOETHYLENIMINES

Allen F. Graefe, Pomona, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Jan. 3, 1955, Ser. No. 479,658
10 Claims. (Cl. 260—239)

1. As new compositions of matter, N-haloethylenimines having the general formula:



wherein X is a halogen radical selected from the group consisting of chlorine, bromine and iodine radicals.

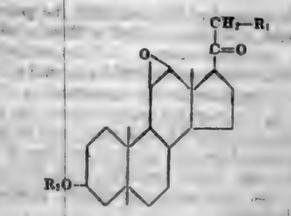
2,944,852

NOVEL EPOXY PREGNANES

Percy L. Julian, Oak Park, and Arthur Magnani, Willmette, Ill., assignors to The Julian Laboratories, Inc., Franklin Park, Ill., a corporation of Illinois

No Drawing. Filed June 26, 1957, Ser. No. 668,025
7 Claims. (Cl. 260—239.55)

1. A chemical compound having the following formula:



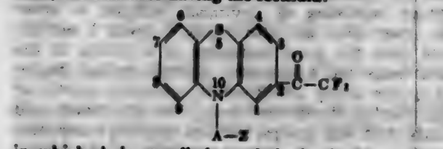
in which R_1 is a member selected from the group consisting of hydrogen, hydroxyl, alkanoyloxy having 2 to 6 carbon atoms, ω-carboxyalkanoyloxy having 4 to 6 carbon atoms, alkali metal salts of ω-carboxyalkanoyloxy moieties having 4 to 6 carbon atoms, and benzoyloxy; R_2 is a member selected from the group consisting of hydrogen, alkanoyl having 2 to 6 carbon atoms, benzoyl, ω-carboxylalkanoyl having 4 to 6 carbon atoms, alkali metal salts of ω-carboxyalkanoyl moieties having 4 to 6 carbon atoms.

2,944,853
SUBSTITUTED 2-PHENOTHIAZINYL TRIFLUOROMETHYL KETONES

William H. Edgerton, Strafford-Wayne, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 23, 1958, Ser. No. 737,190
12 Claims. (Cl. 260—243)

1. Chemical compounds of the class consisting of a free base and its nontoxic organic and inorganic acid salts, the free base having the formula:



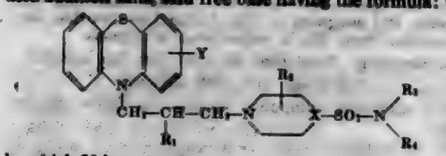
in which A is an alkylene chain having 2 to 6 carbon atoms, separating the nitrogens to which it is attached by at least 2 carbon atoms; and Z is a member selected from the group consisting of dialkylamino, pyrrolidinyl, piperidinyl, morpholinyl, thiomorpholinyl, piperazinyl, N-alkylpiperazinyl, N-(ω-hydroxyalkylene)-piperazinyl, N - (ω - alkanoyloxyalkylene) - piperazinyl, N - (ω-benzoyloxyalkylene - piperazinyl, N - (ω - hydroxyalkyleneoxyalkylene) - piperazinyl, N - (ω - alkanoyloxyalkyleneoxyalkylene) - piperazinyl, N - (ω - benzoyloxyalkyleneoxyalkylene) - piperazinyl, N - phenylalkylpiperazinyl, N - diethylaminoethylpiperazinyl, N - acetylpiperazinyl and N - benzoylpiperazinyl; each of the aforesaid alkyl moieties having 1 to 4 carbon atoms; each of the aforesaid alkylene moieties having 2 to 4 carbon atoms; and each of the aforesaid alkanoyl moieties having 2 to 4 carbon atoms.

2,944,854
SUBSTITUTED PHENOTHIAZINYLALKYL AMINOSULFONYLPIPERAZINES

Maxwell Gordon, Elkins Park, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 30, 1958, Ser. No. 764,264
6 Claims. (Cl. 260—243)

1. A chemical compound of the class consisting of a free base and its nontoxic pharmaceutically acceptable acid addition salts, said free base having the formula:



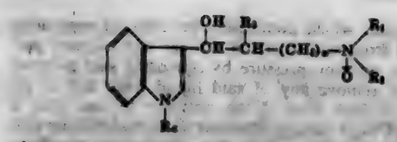
in which Y is a member selected from the group consisting of hydrogen, chlorine, methyl, trifluoromethyl, methoxy, acetyl, methylmercapto, trifluoromethylmercapto, methylsulfonyl, trifluoromethylsulfonyl, and cyano; R_1 is a member selected from the group consisting of hydrogen and methyl; R_2 is a member selected from the group consisting of hydrogen, methyl, and ethyl; and R_3 and R_4 are members selected from the group consisting of hydrogen, methyl, ethyl and, taken together with the nitrogen to which they are attached, piperidinyl, piperazinyl and N-methylpiperazinyl.

2,944,855
1-ALKYL-3-(HYDROXYALKYLAMINO) INDOLE N-OXIDES

William C. Anthony, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed July 18, 1958, Ser. No. 749,334
9 Claims. (Cl. 260—247.5)

1. A compound selected from the group consisting of (1) a compound having the formula



wherein R_1 and R_2 taken individually represent alkyl radicals containing from one to six carbon atoms, and R_1 and R_2 taken together with —N< form a heterocyclic amino radical selected from the class consisting of pyrrolidino, 2-methylpyrrolidino, 2,2-dimethylpyrrolidino, piperidino, methylpiperidino, ethylpiperidino, morpholino, thiamorpholino, and hexamethyleneimino, R_3 is selected from the group consisting of hydrogen and an alkyl radical containing from one to six carbon atoms, R_4 represents an alkyl radical containing from one to six carbon atoms, and n is an integer from zero to one; and (2) pharmacologically acceptable acid addition salts thereof.

4. 1 - methyl - 3 - (2 - morpholino - 1 - hydroxyethyl)indole N-oxide.

2,944,856
METHOD OF PRODUCING QUINAZOLINE DERIVATIVES

Shunsuke Murahashi and Shigeki Horie, Suita, Japan, assignors to Sumitomo Chemical Company, Ltd., Osaka, Japan, a corporation of Japan

No Drawing. Filed May 22, 1957, Ser. 660,773
4 Claims. (Cl. 260—251)

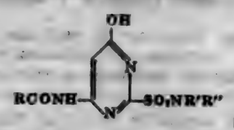
1. A method of producing a 3-phenylquinazoline-2,4-dione comprising contacting azobenzene with carbon monoxide in benzene at a pressure of at least about 10 atmospheres and a temperature of from about 200–300° centigrade in the presence of cobalt carbonyl.

2,944,857
PYRIMIDINE DERIVATIVES

Jerome Korman, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Apr. 30, 1958, Ser. No. 731,867
5 Claims. (Cl. 260—256.5)

5. The compound having the formula:



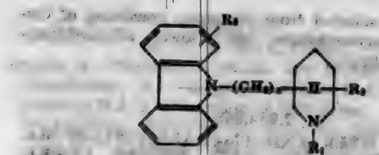
wherein R represents lower-alkyl, and R′ and R″ taken individually are selected from the class consisting of hydrogen, lower-alkyl, cycloalkyl from 5 to 6 ring carbon atoms, inclusive, aralkyl from 7 to 8 carbon atoms, inclusive, and aryl from 6 to 7 carbon atoms, inclusive, and R′ and R″ taken together with —N< are selected from the class consisting of pyrrolidino, piperidino, piperazino, morpholino, 2,2-dimethylpyrrolidino, 2-methylpiperidino, and N-methylpiperazino.

2,944,858
PROCESS FOR PREPARING SUBSTITUTED CARBAZOLE DERIVATIVES

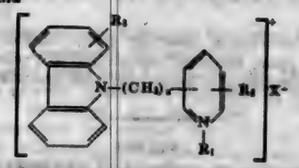
Rolf Kallscheuer, Hamburg, Germany, assignor to Chemische Fabrik Promonta G.m.b.H., Hamburg, Germany, a firm of Germany

No Drawing. Filed June 15, 1957, Ser. No. 667,957
Claims priority, application Germany June 27, 1956
9 Claims. (Cl. 260—293.3)

1. A process for the preparation of carbazole derivatives containing basic substituents and corresponding to the general formula



wherein the carbazole is attached in one of the positions 2, 3 and 4 of the piperidine radical, whereby the value of x is selected from 1 and 2 in the 2-position and from 0, 1 and 2 in the 3- and 4 positions; R_1 is a lower alkyl; R_2 is selected from the group consisting of H and lower alkyl; R_3 is selected from the group consisting of H, lower alkyl, oxy and alkoxy groups and halogens; said process comprising the following steps: (*a*) a compound selected from the group consisting of carbazole and C-substituted carbazoles is alkylated with a compound selected from the group consisting of pyridyl halides and pyridyl alkylhalides, in the presence of an alkaline condensing agent, in an inert solvent; (*b*) the products resulting from step (*a*) are quaternarized at the pyridine N with a lower alkyl halide; (*c*) the pyridinium salts resulting from step (*b*) and corresponding to the general formula



in which R_1, R_2, R_3 and x have the meaning defined above and X stands for the anion, are subjected to hydrogenation in the presence of a metallic hydrogenation catalyst, in order to form a compound selected from the group consisting of N-alkylpiperidylcarbazoles and N-alkylpiperidylalkyl carbazoles.

2,944,859
SYNTHESIS OF PYRIDINOLS AND INTERMEDIATE

Niels Elming, Vermlandsgade 2, 4, Copenhagen S, Denmark, and Niels Konrad Friedrich Wilhelm Clauson-Kaas, Disraeli St. 13, Haifa, Israel

No Drawing. Filed May 24, 1956, Ser. No. 586,919
2 Claims. (Cl. 260—297)

1. 2-acetamidomethyl-5-acetoxymethyl-furan.

2. A process for preparing 6-methyl-3-pyridinol, which comprises heating 5-hydroxymethyl-furfurylamine with a dilute aqueous acid and recovering the 6-methyl-3-pyridinol produced.

2,944,860
URAZOLES

Warren J. Close and Daniel A. Dunnigan, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed June 25, 1958, Ser. No. 744,354
3 Claims. (Cl. 260—308)

1. 1,2-diethylurazole.

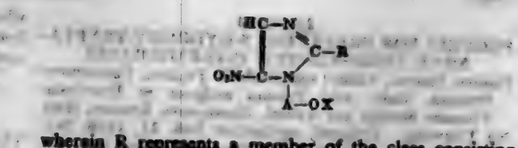
3. 1,2-di-sec-butylurazole.

2,944,861
CERTAIN NITRO IMIDAZOLEALKANOLS AND ACYL DERIVATIVES AND PROCESS

Robert Michel Jacob, Asnieres-sur-Seine, Gilbert Louis Regnier, Paris, and Cornel Crisan, Sceaux, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Filed Jan. 8, 1959, Ser. No. 785,577
Claims priority, application France Sept. 20, 1957
8 Claims. (Cl. 260—309)

1. A member of the class consisting of an imidazole derivative of the general formula:



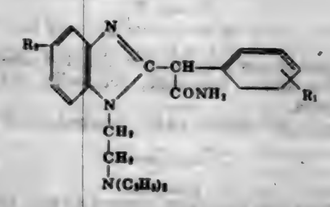
wherein R represents a member of the class consisting of a hydrogen atom and an alkyl group containing up to five carbon atoms, A represents a saturated aliphatic wholly hydrocarbon group containing two to four carbon atoms and X is a member of the class consisting of N-alkanoic acyl containing 1–17 carbon atoms in the alkane radical, dichloroacetyl, pivaloyl, cinnamoyl, succinoyl, benzoyl, chlorobenzoyl, methoxybenzoyl, nitrobenzoyl, salicyloyl, phthaloyl, acid addition salts of the above members having pharmaceutically acceptable anions and hydrogen.

2,944,862
CERTAIN ALPHA (1-DIETHYLAMINOETHYL) BENZIMIDAZOLYL (2), ALPHA-ARYL ACETAMIDES

Karl Hoffmann, Binningen, and Alfred Hunger, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J., a firm

No Drawing. Filed June 19, 1958, Ser. No. 743,005
Claims priority, application Switzerland July 17, 1957
6 Claims. (Cl. 260—309.2)

1. A member of the group consisting of benzimidazolylacetamides of the formula



in which R_1 stands for a member of the group consisting of hydrogen, halogen, lower alkyl and lower alkoxy and R_2 for a member of the group consisting of hydrogen and and the nitro group, and therapeutically acceptable acid addition salts thereof.

2,944,863
REMOVAL OF NITROGEN COMPOUNDS FROM HEATING OIL

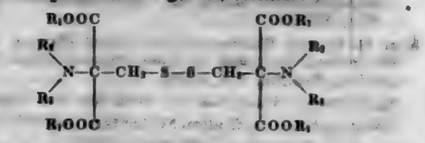
Henry C. Panison, Elizabeth, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed June 17, 1953, Ser. No. 362,197
3 Claims. (Cl. 260—313)

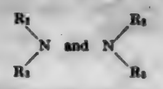
1. The process of recovering cyclic nitrogen compounds from mineral oils boiling in the heating oil boiling range and containing the same comprising the steps of mixing said mineral oil with about 3% to about 15% by volume of an acid of phosphorus having an acid concentration of 80–95% by weight, segregating the mixture of oil and acid so formed into an oil phase and a spent acid phase, mixing said spent acid phase with sufficient water to form a dilute acid phase containing less than about 40% by weight of acid, mixing said dilute acid phase with a chlorinated solvent selected from the group consisting of chloroform and carbon tetrachloride to form a second acid phase and a solvent phase, segregating said second acid phase from said solvent phase and recovering said cyclic nitrogen compounds from said solvent phase.

2,944,064
PROCESS FOR PREPARING 5-HYDROXY-TRYPTAMINE THROUGH NEW INTERMEDIATES
Romeo Justoni, Milan, and Raffaele Pessina, Cesatenovo Brianza, Italy; said Pessina assignor to Francesco Vimarca Società per Azioni, Cesatenovo Brianza, Italy
No Drawing. Original application Feb. 21, 1956, Ser. No. 566,776. Divided and this application Feb. 18, 1957, Ser. No. 644,705
2 Claims. (Cl. 260—319)
1. 5-benzyloxy-indole-3-β-propionazide.

2,944,065
BIS AMINO ETHYL DISULPHIDE COMPOUNDS
Maurice Joullie, Saint-Germain-en-Laye, and Michel Laurre, Gabriel Maillard, and Pierre Muller, Paris, France, assignors to Recherches et Propagande Scientifiques (Société à Responsabilité Limitée), Paris, France, a French company
No Drawing. Filed Nov. 28, 1956, Ser. No. 624,732
Claims priority, application France Nov. 30, 1955
8 Claims. (Cl. 260—326)
1. A compound of the general formula:



wherein R_1 is a lower alkyl group and the groups

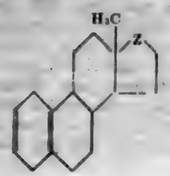


are identical groups selected from the class consisting of amino, formamido, acetamido, benzamido and phthalimido groups.

5. Bis-(β-phthalimido-β,β-dicarbethoxyethyl) disulphide.

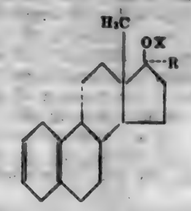
2,944,066
PROCESS FOR THE PRODUCTION OF 3-KETOTETRAHYDROFURAN
Edwin George Edward Hawkins, Lower Kingswood, Surrey, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a company of Great Britain
No Drawing. Filed Oct. 13, 1958, Ser. No. 766,689
Claims priority, application Great Britain Oct. 25, 1957
7 Claims. (Cl. 260—347.3)
1. A process for the production of 3-ketotetrahydrofuran which comprises heating the cis isomer of 3-chloro-4-hydroxy-tetrahydrofuran in the presence of a metal oxide selected from the group consisting of silver oxide, cuprous oxide, mercuric oxide and a mixture of silver oxide and cuprous oxide.

2,944,067
17-OXYGENATEDESTRA-2,5(10)-DIENES AND INTERMEDIATES
William F. Johns, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 24, 1959, Ser. No. 801,442
6 Claims. (Cl. 260—397.3)
1. A compound of the structural formula



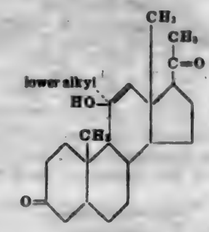
wherein Z is selected from the group consisting of carbonyl, hydroxymethylene, and (lower alkanoyl)oxymethylene radicals.

2,944,068
17α-(1-ALKYNYL)- AND 17α-(1-ALKENYL)-ESTRA-2,5(10)-DIEN-17β-OLS AND ESTERS CORRESPONDING
William F. Johns, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 24, 1959, Ser. No. 801,443
7 Claims. (Cl. 260—397.5)
1. A compound of the structural formula



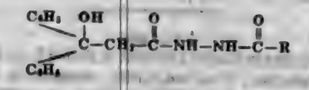
wherein X is selected from the group consisting of hydrogen and lower alkanoyl radicals and R is selected from the group consisting of lower 1-alkynyl and lower 1-alkenyl radicals.

2,944,069
11β-HYDROXY-11α-LOWER-ALKYLPREGNANE-3,20-DIONES
Gunther S. Fonken, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Filed May 23, 1957, Ser. No. 661,036
2 Claims. (Cl. 260—397.45)
1. 11α-alkylated steroids represented by the following formula:



2,944,070
PREPARATION OF 16α-LOWER ALKYL STEROIDS
Janos Kollonitsch, Westfield, Roger J. Tull, Plainfield, and Leonard M. Weinstock, Clifton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 8, 1958, Ser. No. 759,444
20 Claims. (Cl. 260—397.45)
1. A process which comprises intimately contacting a Δ^{16}-20-keto steroid of the pregnane and allopregnane series with a metal di lower alkyl of the formula $(R)_2M$, wherein R represents a lower alkyl and M represents a metal from the group consisting of zinc and cadmium in the presence of magnesium and copper halides wherein the halogen has an atomic weight greater than 35 to produce the corresponding 16α-lower alkyl enol derivative.

2,944,071
ACYL HYDRAZINES
Arsenio A. Pessotano, Colonia, and Robert L. Clark, Woodbridge, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Oct. 15, 1957, Ser. No. 690,220
9 Claims. (Cl. 260—404.5)
1. A product selected from the group consisting of N-(3,3-diphenyl-3-hydroxypropionyl) N'-acyl hydrazines of the general fromula



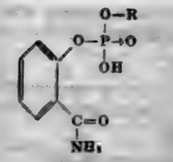
wherein R is a member selected from the group consisting of the hydrogen atom, alkyl, benzyl, diphenylmethyl, and phenyl radicals.

4. N-(3,3-diphenyl-3-hydroxypropionyl) N'-lauroyl hydrazine.

2,944,072
PROCESS FOR NEUTRALIZING VEGETABLE OR ANIMAL OILS OR FATS IN A WATER-SOLUBLE SOLVENT
Carmelo Vaccarino and Giuseppe Vaccarino, both of Giammoro, Messina, Italy
No Drawing. Filed June 5, 1956, Ser. No. 589,377
Claims priority, application Italy June 7, 1955
10 Claims. (Cl. 260—426)
1. A process for neutralizing vegetable and animal oils and fats, comprising the steps of dissolving said oils and fats in a solvent miscible in all proportions with both water and said oils and fats, treating the solution thus obtained with at least one substance selected from the group consisting of the hydroxides and carbonates of an alkali metal of the group consisting of sodium and potassium until neutralization of said oils and fats has been obtained, intimately contacting said substance with said solution in order to accelerate the neutralization of said oils and fats, adding substantial quantities of hot water following said neutralization to strongly dilute the neutralized miscella thus obtained, whereupon two immiscible liquid phases are obtained having different specific gravities, separating said liquid phases from each other, distilling off the solvent from said liquid phases individually, collecting the solvent-free neutralized oils and fats, and discarding the solvent-free aqueous phase which is a solution of soap and water-soluble impurities.

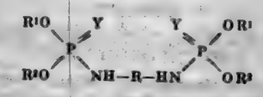
2,944,073
FUNGICIDAL CUPROUS AGENT AND PROCESS OF MAKING SAME
Anatole Vesterman and André Allais, Paris, France, assignors to UCLAF, Paris, France, a body corporate of France
No Drawing. Filed Nov. 8, 1957, Ser. No. 695,239
Claims priority, application France Nov. 8, 1956
2 Claims. (Cl. 260—438)
1. As a new product, the cuprous chelate compound with ethylene bis-dithiocarbamic acid, containing from 47% to 49% of copper.

2,944,074
ESTERS OF 2-CARBAMYLPHENYL PHOSPHATE
Frank Ratcliffe Atherton, Welwyn Garden City, England, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed May 20, 1957, Ser. No. 660,044
Claims priority, application Great Britain May 31, 1956
8 Claims. (Cl. 260—461)
1. A member of the group consisting of compounds represented by the formula



wherein R represents a member of the group consisting of lower alkyl, phenyl, lower alkyl phenyl, di-lower alkyl phenyl benzyl and lower alkyl benzyl and alkali metal and ammonium salts thereof.

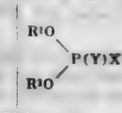
2,944,075
METHOD OF PRODUCING PHOSPHORIC ACID AND THIOPHOSPHORIC ACID DERIVATIVES
Arno Debo, Heidelberg, Germany, assignor to Joh. A. Benckiser, G.m.b.H. Chemische Fabrik, Ludwigshafen (Rhine), Germany
No Drawing. Filed Dec. 19, 1957, Ser. No. 703,742
Claims priority, application Germany Dec. 22, 1956
5 Claims. (Cl. 260—461)
1. A method of producing a diamine-N-N'-bis-phosphoric acid derivative having the following general formula:



wherein R^1 and R^2 are selected from the group consisting of lower alkyl and phenyl, tolyl and hydroxyl-tolyl radicals, wherein Y is selected from the group consisting of oxygen and sulfur, and wherein R is selected from the group consisting of divalent alkylene radicals of 2–18 carbon atoms and divalent diethylene amine, triethylene diamine, 1,2-propane, dipropylene amine, tripropylene diamine, 1,3-propanone (2), diethyl ether, dipropyl ether, diethyl thioether, 1,3-propanol (2), phenylene, benzidine, naphthylene, and 4,4'-diphenylmethane radicals, comprising the steps of reacting a diamine having the following general formula:

$$H_2N—R—NH_2$$

wherein R has the same definition as above with a halogen phosphoric acid-diester having the following general formula:



wherein R^1, R^2 and Y have the same definitions as above and wherein X is a halogen atom in a ratio of two mols of said halogen phosphoric acid-diester per each mol of said diamine in an aqueous medium containing an inorganic base in solution; and recovering the thus-formed diamine-N-N'-bis-phosphoric acid derivative.

2,944,076
PREPARATION OF METHYL BORATE
Charles H. Rice, Pittsburgh, Pa., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 4, 1956, Ser. No. 583,605
8 Claims. (Cl. 260—462)
1. A method of separating methyl borate from mixtures with methanol that comprises countercurrently contacting a falling extractive mineral oil with a rising

methyl borate-methanol solution which has a lower density than an equilibrium solution of methyl borate in

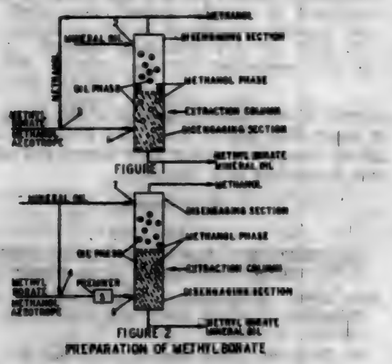


FIGURE 1

FIGURE 2

PREPARATION OF METHYL BORATE

the extractive oil, and separating methyl borate from the resultant methyl borate-oil solution.

2,944,077

PYROLYSIS OF BORIC ESTERS OF ARYL BROMO- AND CHLOROHYDRINS

Lambertus Gerke Heeringa and Muus Gerrit Jan Beets, both of Hilversum, Netherlands, assignors, by mesne assignments, to Polak & Schwarz International N.V., a corporation of the Netherlands

No Drawing. Filed Apr. 30, 1957, Ser. No. 655,941

Claims priority, application Netherlands May 2, 1956

18 Claims. (Cl. 260—462)

1. A process of preparing a compound selected from the group consisting of ω-halostyrene and ω-halomethylstyrene, wherein the halogen is selected from the group consisting of chlorine and bromine, comprising the steps of reacting a halohydrin correspondingly selected from the group consisting of bromo- and chlorohydrin of styrene and methylstyrene with a boron compound selected from the group of boric acid and boron oxide to obtain a boric ester of said halohydrin, removing water obtained during ester formation subjecting the boric ester to pyrolysis at temperatures between about 140° C. and about 210° C. and in vacuo and distilling off the reaction product.

18. As a new composition of matter, a metaboric ester of a halohydrin selected from the group consisting of bromo- and chlorohydrin of styrene and methylstyrene.

2,944,078

DERIVATIVES OF DIBENZO CYCLOHEPTADIENE AND A PROCESS OF PREPARING SAME

Bruno Vaterlaus, Basel, Switzerland, and André Furlenmeier, La Courneuve, France, assignors to UCLAF, Paris, France, a French body

No Drawing. Filed June 24, 1958, Ser. No. 744,069

Claims priority, application France Aug. 7, 1957

9 Claims. (Cl. 260—470)

1. The methyl ester of 12,13,14-trimethoxy-9-methyl thio-4,5-6,7-dibenzo cycloheptadiene-8-carboxylic acid.

2. The methyl ester of 12,13,14-trimethoxy-4,5-6,7-dibenzo cycloheptadiene-8-carboxylic acid.

4. The iodo methylate of N-desacetyl-N,N-dimethyl thiocolchicine.

2,944,079

NN-DI-CHLOROETHYLAMINOBUTYRATES AND PREPARATION THEREOF

Walter Charles Joseph Ross, James Lionel Everett, and John James Roberts, London, England, respectively, assignors to National Research Development Corporation, London, England, a British corporation

No Drawing. Filed Nov. 9, 1953, Ser. No. 391,134

Claims priority, application Great Britain Nov. 28, 1952

1 Claim. (Cl. 260—518)

p-NN-di-(2-chlorocthyl)-aminophenylbutyric acid.

2,944,080

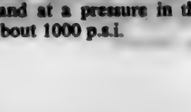
PENTACHLOROBENZENESULFENYL HALIDES

Howard Johnston, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 23, 1956, Ser. No. 623,761

3 Claims. (Cl. 260—543)

1. A pentachlorobenzenesulfenyl halide having the formula



in which X represents a member of the class consisting of chlorine and bromine.

2,944,081

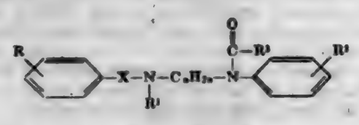
DIPHENYL ALKYLENEDIAMINES AND METHODS OF PREPARING THE SAME

William Blythe Wright, Jr., Woodcliff Lake, and Robert Allis Hardy, Jr., Ridgewood, N.J., and Herbert Joseph Brabander, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Mar. 14, 1958, Ser. No. 721,347

10 Claims. (Cl. 260—562)

1. A compound of the group consisting of those having the general formula:



in which R is a member of the group consisting of hydrogen, halogen, lower alkoxy, hydroxy, lower alkanoyloxy, lower alkyl, nitro, amino, and lower alkanoylamino, R^2 is a member of the group consisting of hydrogen, lower alkyl, halogen, lower alkoxy, hydroxy, and lower alkanoyloxy, R^1 and R^3 are lower alkyl radicals, X is a divalent hydrocarbon radical of 1–4 carbon atoms, n is an integer of from 2–4 and non-toxic acid addition salts thereof.

2,944,082

PRODUCTION OF DIETHYLMETHYLAMINE

Jay B. Class, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 20, 1957, Ser. No. 703,996

5 Claims. (Cl. 260—583)

1. A process for the preparation of diethylmethylamine by reacting methyl toluate with diethylamine in equimolecular ratio which comprises contacting methyl toluate with diethylamine under substantially anhydrous conditions at a temperature in the range of about 200° to about 250° C. and at a pressure in the range of from atmospheric to about 1000 p.s.i.

2,944,083

MANUFACTURE OF METHYLETHYLKETONE

André Guivin, Saint-Avre-La-Chambre, Paul Reason, La Chambre, Pierre Brun, Saint Avold, and Pierre Thirion, Saint-Avre, France, assignors to Societe Industrielle des Derives de l'Acetylene (S.I.D.A.), Paris, France, a corporation of France

Filed Sept. 25, 1957, Ser. No. 686,197

Claims priority, application France Aug. 5, 1954

6 Claims. (Cl. 260—596)

1. A method of manufacturing pure anhydrous methyl-ethyl-ketone by catalytic dehydrogenation of secondary butanol in the vapor phase, comprising reacting vaporous secondary butanol in a catalytic dehydrogenation furnace to form a nonaqueous mixture of vaporous methyl-ethyl-ketone, vaporous heavy organic by-products, vaporous unconverted secondary butanol and non-condensable inert gases, moving said mixture from the furnace directly to a fractionating column having top and bottom outlets to utilize the sensible and latent heats of the mixture to separate the constituents of the vaporous mixture by fractional condensation; injecting additional non-condensable inert gases into the fractionating column during said separation to reduce the reflux ratio and the temperature of separation; removing the heavy organic by-products and unconverted butanol from said bottom outlet of the column; removing a mixture containing anhydrous vaporous methyl-ethyl-ketone and non-condensable gases from said top outlet of the column; and condensing and collecting the methyl-ethyl-ketone from the last-mentioned mixture.

2,944,084

SODIUM TETRAETHYLBORON

Sidney M. Blitzer and Tillmon H. Pearson, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,213

1 Claim. (Cl. 260—606.5)

Sodium tetraethylboron.

2,944,085

PHOSPHINE BORINES AND THEIR PREPARATION

Ross I. Wagner, Whittier, Calif., assignor to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Filed Mar. 2, 1959, Ser. No. 796,295

16 Claims. (Cl. 260—606.5)

1. Compounds of the general formula

$$R_3P{:}BX_2R'X_2B{:}PR_3$$

where each R is selected from the group consisting of H and lower alkyl, X is halogen and R' is a lower alkylene group.

2,944,086

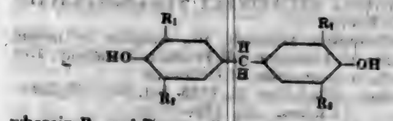
1,1-BIS(3,5-DIALKYL-4-HYDROXYPHENYL) METHANES

Thomas H. Coffield, Birmingham, and Allen H. Filbey, Walled Lake, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 23, 1955, Ser. No. 536,315

3 Claims. (Cl. 260—619)

1. 1,1,- bis -(3,5 - dialkyl-4-hydroxyphenyl) methanes having the formula



wherein R_1 and R_2 are alkyl groups containing from 3 to 8 carbon atoms and are branched on their respective alpha carbon atoms.

2,944,087

ALCOHOL HYDROFINISHING

Erwin Ward Neumann, Edward Allen Hunter, Joseph Kern Mertzweiller and Elaine Theodora Delaune, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 16, 1955, Ser. No. 508,684

3 Claims. (Cl. 260—643)

1. A method of improving the quality of ethyl alcohol prepared by hydrating ethylene which comprises extractively distilling crude ethyl alcohol with water to produce an ethyl alcohol feed having a permanganate time test value of at least 20 minutes and a miscellaneous organic impurities number of not more than about 0.1, contacting said ethyl alcohol with a reduced nickel catalyst at a temperature within the range of 65° to 110° F. and hydrogen pressure between about 0 to 50 p.s.i.g., at a feed rate of at least 5 volumes of alcohol feed per volume of catalyst per hour, the contact time being below about 2.2 hours, fractionally distilling the thus hydrofinished alcohol to remove dissolved hydrogen therefrom and recovering an alcohol product having improved odor qualities, a higher permanganate time test value and a miscellaneous organic impurities concentration not greater than that of the ethyl alcohol feed.

2,944,088

STABILIZATION OF CHLORINATED SOLVENTS

Otto S. Kauder, Jamaica, N.Y., assignor to Argus Chemical Corporation, a corporation of New York

No Drawing. Filed Oct. 31, 1958, Ser. No. 770,942

8 Claims. (Cl. 260—652.5)

1. A stabilized chlorinated aliphatic solvent having a boiling point below 130° C. containing per 100 g. solvent 0.01 to 2 g. of a condensation product of an aldehyde of the group consisting of formaldehyde and acetaldehyde with a primary amine containing 1–3 carbon atoms.

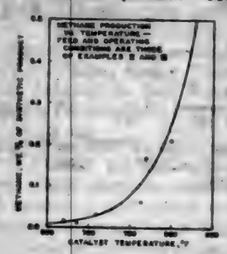
2,944,089

PROCESS FOR PRODUCING XYLENES

John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed July 7, 1958, Ser. No. 746,719

8 Claims. (Cl. 260—668)



1. A method of producing xylene isomers from aromatic-rich hydrocarbon distillates, which comprises selecting as a feed stock a petroleum hydrocarbon fraction boiling within a range of from 325 to 450° F., and having an aromatic content of at least 75% by volume and a basic nitrogen content of less than 10 p.p.m., contacting said feed stock in admixture with at least 200 s.c.f. hydrogen per barrel of feed in an isocracking zone with a catalyst comprising a hydrogenating component selected from the group consisting of nickel sulfide and cobalt sulfide, disposed on an active acid cracking support and having a severity factor in the range of about 0.1 to 2.0, said isocracking zone being operated at pressures of at least about 400 p.s.i.g. and at instantaneous catalyst temperatures in the range of about 450° to 730° F., whereby

there is produced, in a conversion of at least 20% per pass through the isocracking zone, a synthetic product boiling essentially below the initial boiling point of the feed, said synthetic product being characterized by the fact that of the aromatic present therein boiling below about 325° F., at least 50% by volume consists of xylene isomers, there being consumed in said isocracking process at least 1000 s.c.f. of hydrogen per barrel of feed converted to said synthetic product.

2,944,090

PRODUCTION OF BENZENE

Jack A. Guthrie, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Jan. 23, 1959, Ser. No. 788,678
2 Claims. (Cl. 260—668)

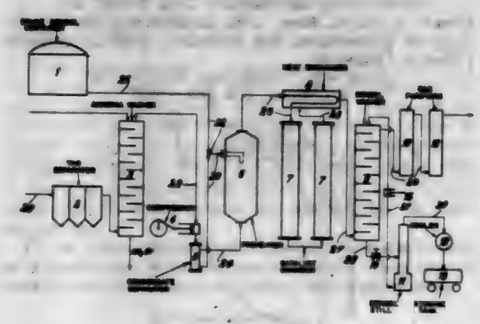
1. In a process for the production of benzene by the catalytic isomerization and dehydrogenation of methyl cyclopentane, the improvement which consists in contacting a saturated hydrocarbon fraction comprising methyl cyclopentane, in the presence of added hydrogen, and in the presence of a material selected from the group consisting of ammonia and amines, said material being present in an amount sufficient to yield from 3 to about 8.5 parts per million of ammonia based on the hydrocarbons, with a catalyst comprising platinum supported on a halogen-containing alumina, under reforming conditions of temperature and pressure, and recovering a reformate comprising benzene.

2,944,091

METHOD OF PRODUCING REFINED BENZOL

Franz Sonntag, Dortmund-Mengede, Germany, assignor to Gelsenkirchener Bergwerks Akt.-Ges., Essen, Germany

Filed Apr. 8, 1957, Ser. No. 651,378
Claims priority, application Germany Apr. 11, 1956
3 Claims. (Cl. 260—674)



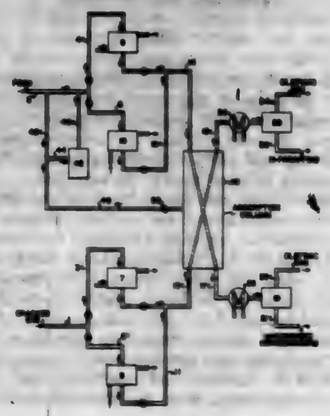
1. A method of producing refined benzol from coke oven gas containing crude benzol, comprising the steps of removing ammonia from said coke oven gas; compressing and heating the thus formed substantially ammonia-free coke oven gas to a pressure of between about 5 and 30 atmospheres and a temperature of between about 300° and 450° C.; contacting said heated and compressed substantially ammonia-free coke oven gas with a sulfide catalyst so as to at least partially crack and hydrogenate the crude benzol contained in said compressed coke oven gas, thereby refining said crude benzol; and scrubbing the thus treated gas with a wash oil free of gum-forming constituents so as to form a solution consisting essentially of said refined benzol dissolved in said wash oil.

2,944,092

GASOLINE HYDROCARBON SEPARATION RECOVERY PROCESS USING ZEOLITIC MOLECULAR SIEVES

George F. Feldbauer, Jr., Cranford, Charles E. Jahnig, Rumson, and Norman J. Weinstein, Newark, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 5, 1956, Ser. No. 626,359
8 Claims. (Cl. 260—676)



1. An improved process for separating straight-chain paraffinic hydrocarbons from a feed containing said straight-chain hydrocarbons in mixture with non-straight-chain hydrocarbons which comprises passing a gaseous stream of said feed into a molecular sieve zone containing molecular sieves having pore diameters of about 5 Angstrom units; maintaining an adsorption temperature of about 175° to about 400° F. and an adsorption pressure of from about 5 to about 100 p.s.i.g. in said sieve zone; withdrawing unadsorbed non-straight-chain hydrocarbons from said sieve zone while adsorbing straight-chain hydrocarbons on said molecular sieves; establishing open communication between said sieve zone and a quenching zone maintained at a lower pressure than said sieve zone, depressuring said sieve zone by passing at least a portion of the vapors in said sieve zone to said quenching zone, maintaining a reduced pressure in said quenching zone by quenching said vapors with cold feed to a temperature corresponding to a pressure substantially the same as a desired desorption pressure until said desorption pressure obtains within said sieve zone; passing a hydrocarbon gas into said sieve zone whereby normal paraffins are desorbed and said hydrocarbon gas adsorbed; maintaining a pressure of from about 5 to 20 p.s.i.g. in said sieve zone during said desorption step, said desorption pressure being lower than said adsorption pressure; withdrawing said normal desorbed hydrocarbons; thereafter repressuring the said sieve zone to adsorption pressures; and again passing said gaseous stream into said sieve zone.

2,944,093

SEPARATION OF HYDROCARBON MIXTURES CONTAINING RELATIVELY STRAIGHT-CHAIN COMPONENTS

Ralph B. Thompson, Hinsdale, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed May 26, 1958, Ser. No. 737,529
9 Claims. (Cl. 260—676)

1. A process for separating a relatively straight-chain sorbate hydrocarbon containing at least 4 carbon atoms per molecule from a raffinate-type hydrocarbon selected from the branched-chain aliphatic and cyclic hydrocarbons which comprises contacting a mixture of said sorbate and said raffinate-type hydrocarbons with a sorbent comprising the condensation product of a phenol containing at least two and not more than three nuclear hydroxyl groups and not more than one additional nuclear substituent selected from the group consisting of hydroxyl, alkoxyl and alkyl with a nuclearly-substituted benzaldehyde having not more than 2 nuclear substituents other than the formyl radical, one of said substituents being hydroxyl and the other being selected from the group consisting of hydroxyl, alkoxyl and alkyl, and withdrawing said raffinate-type hydrocarbon from a resulting spent sorbent.

2,944,094

PURIFICATION OF OLEFINS SELECTIVE HYDROGENATION OF MONOSUBSTITUTED 1-OLEFINS WITH A RUTHENIUM CATALYST

Paul N. Rylander and Lewis M. Berkowitz, Newark, N.J., assignors to Engelhard Industries, Inc., Newark, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 23, 1958, Ser. No. 782,391
8 Claims. (Cl. 260—677)

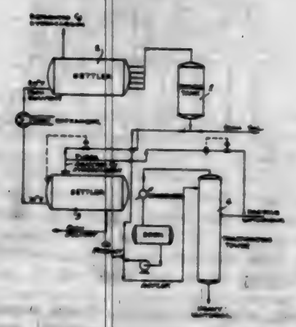
1. A process for the selective hydrogenation of a monosubstituted 1-olefin, containing a single substituent which is non-reactive under the reaction conditions, in admixture with a more highly substituted olefin which comprises contacting the mixture of olefins with a ruthenium catalyst in the presence of hydrogen.

2,944,095

PURIFICATION OF BUTADIENE USING AN AMMONICAL SOLUTION OF COPPER IONS

Peter C. Kupa and Charles M. Finigan, Sarnia, Ontario, Canada, assignors to Polymer Corporation Limited, Sarnia, Ontario, Canada, a corporation of Canada

Filed Apr. 23, 1956, Ser. No. 579,980
5 Claims. (Cl. 260—681.5)



1. In the liquid phase solvent extraction of butadiene-1,3 from a hydrocarbon feed consisting of a mixture of butadiene-1,3 and other olefinic and paraffinic four carbon hydrocarbons wherein the hydrocarbon mixture is intimately contacted with a preferential solvent for said butadiene-1,3, said solvent comprising an ammoniacal solution of copper ions with an anion capable of forming salts soluble in said ammoniacal solution in a countercurrent extraction system comprising a plurality of stages, the solvent passing through the stages in progressively increasing concentration of the butadiene-1,3 content and the hydrocarbon mixture passing through the stages in progressively decreasing content of the butadiene-1,3 the solvent for the butadiene-1,3 first being intimately contacted with the said hydrocarbon mixture in mixers and then separated in settlers to form a solvent phase and a hydrocarbon phase, the improvement which comprises the steps in sequence of: (1) withdrawing a purge stream of the hydrocarbon phase only from a settler of any stage in said system, such stages being designated with reference to the direction of the solvent flow subsequent to the point at which the hydrocarbon feed enters the system; (2) fractionating said hydrocarbon purge stream to separate the volatile material from the non-volatile material; and (3) recycling the volatile material to a previous stage in the countercurrent extraction system.

2,944,096

PROCESS FOR ISOMERIZING LIGHT NORMAL ALKANES

John W. Teter, deceased, late of Chicago, Ill., by Ruth Young Teter, administratrix, Chicago, and John L. Gring, Homewood, Ill., and Carl D. Keith, Munster, Ind., assignors to Engelhard Industries, Inc., a corporation of New Jersey

No Drawing. Filed Oct. 19, 1956, Ser. No. 616,920
5 Claims. (Cl. 260—683.65)

1. A method for the isomerization of a normal alkane containing from 4 to 6 carbon atoms which comprises bringing the normal alkane in admixture with from about 1 to 5 moles of hydrogen, per mole of normal alkane, into contact with a platinum metal-alumina catalyst at a temperature within the range from about 800 to 900° F., a pressure of from about 200 to 500 p.s.i.g. and a weight hourly space velocity of from about 2 to 20, the said catalyst being characterized by large pore, high area base structure essentially composed of gamma alumina modifications resulting from the drying and calcination of a mixture of precursor hydrous alumina phases containing from about 65% to about 95% of trihydrate, said catalyst containing from about 0.1% to about 1% by weight of a platinum metal, said platinum metal being present in sufficiently finely divided form as to exhibit, by X-ray diffraction studies, the substantial absence of crystallites and crystals of size larger than 50 angstrom units, said catalyst after calcining and before use having an area (BET method) of from about 350 to about 550 square meters per gram.

2,944,097

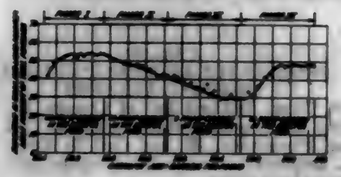
PROCESS FOR ISOMERIZING LIGHT STRAIGHT CHAIN PARAFFINS

William C. Starnes, Winfield Township, Butler County, and Robert C. Zabor, Shaler Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 31, 1957, Ser. No. 706,233
3 Claims. (Cl. 260—683.65)

1. A process which comprises contacting with a platinum-alumina catalyst a feed stream consisting of a hydrocarbon fraction, hydrogen and a volatile halogen-containing material selected from the group consisting of free halogens, hydrogen halides and hydrocarbon halides, at least 90 percent of said hydrocarbon fraction consisting of aliphatic paraffins having 5 to 7 carbon atoms, at a temperature from 600° to 900° F., at a pressure of 375 to 600 pounds per square inch gauge, at a liquid hourly space velocity greater than 5 volumes of hydrocarbon per volume of catalyst per hour and with a hydrogen concentration less than the concentration corresponding to a mol fraction of hydrocarbon of 0.5 but greater than the hydrogen concentration corresponding to rapid catalyst aging, the concentration of said halogen-containing material in the feed corresponding to 10 to 150 parts by weight of halogen per million parts of hydrocarbon, and recovering a conversion product of substantially the same average molecular weight as the hydrocarbon feed.

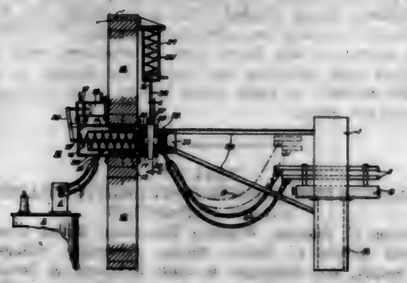
2,944,098
PROCESS FOR ISOMERIZING NORMAL PARAFFINS
Merald C. Fogle, Fox Chapel, Richard G. Goldthwait, Penn Township, Allegheny County, Stanley J. Kwolek, New Kensington, and Theodore Rice, Penn Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Sept. 3, 1957, Ser. No. 681,823
3 Claims. (Cl. 260—683.68)



1. In the hydroisomerization process which comprises contacting with a platinum-alumina catalyst a hydrocarbon fraction reactor feed comprising at least 90 volume percent of at least one aliphatic paraffin having from 4 to 6 carbon atoms in admixture with hydrogen in a concentration corresponding to a mol fraction of hydrocarbon greater than 0.5 but less than the mol fraction hydrocarbon corresponding to rapid catalyst aging, at a charge liquid hourly space velocity of at least 5 volumes of hydrocarbon per volume of catalyst per hour, a temperature from 600 to 1000° F. and a pressure from 300 to 600 p.s.i.g., while adding to the reactor feed an alkyl halide that vaporizes under the process conditions, and recovering from the reaction zone an effluent stream enriched in branched chain paraffins, the improvement which comprises restoring the catalyst activity following a rapid decline in the branched chain paraffin content of the product by charging said hydrocarbon fraction to the reaction zone substantially free of halogen until the catalyst activity reaches a substantially constant level, and thereafter resuming the addition of said alkyl halide to the hydrocarbon feed in a concentration from 10 to 50 parts of halogen per million parts of hydrocarbon.

ELECTRICAL

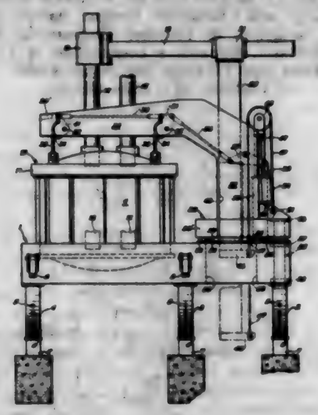
2,944,099
CONNECTOR FOR A TILTABLE ELECTRODE FURNACE
Paul Sernitz and Emil Hodapp, Duisburg, Germany, assignors to Demag-Elektrometallurgie G.m.b.H., Duisburg, Germany, a corporation of Germany
Filed Dec. 30, 1957, Ser. No. 706,125
Claims priority, application Germany Dec. 31, 1956
8 Claims. (Cl. 13—10)



8. In combination, an electric furnace having an axially adjustable and tiltable electrode means, a stationary power source, conductor means connecting said stationary power source with the electrode means, and releasable connector means interposed in said conductor, said connector means comprising first and second separable contacts respectively connected to the portions of said conductor means leading to the electrode means and to the source, said first separable contact being secured to said electrode and tiltable therewith, and means for releasably securing said contacts in high pressure registry with each other when said furnace is in operating position.

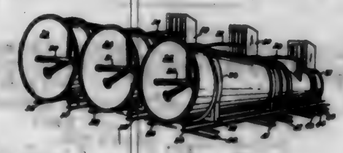
2,944,100
TILTING ELECTRODE FURNACE
Wilhelm Serg and Karl Pfeltzner, Duisburg, Germany, assignors to Demag-Elektrometallurgie G.m.b.H., Duisburg, Germany, a corporation of Germany
Filed Jan. 16, 1958, Ser. No. 709,378
Claims priority, application Germany Jan. 26, 1957
7 Claims. (Cl. 13—10)

7. In an arc furnace assembly comprising platform means, at least two rocker means supporting said platform means at opposite sides for tilting, a furnace body mounted on said platform means between said rocker means, column means mounted on said platform and disposed laterally of said furnace body in the general direction of the tilting axis of said platform means and toward the one of said rocker means most remote from said furnace body, electrode support means mounted on said column means for adjustable vertical movement, and electrode adjusting means operatively connected with said support means, said adjusting means including drive means mounted on said platform approximately in the plane of the said one rocker means to thereby transfer the reaction of said adjusting means directly to said one rocker means with a minimum bending moment.



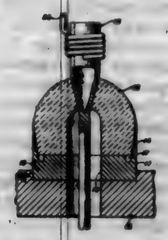
2,944,101
HIGH VOLTAGE BUS STRUCTURE
Roy H. Albright, Greensburg, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 13, 1956, Ser. No. 609,744
23 Claims. (Cl. 174—99)

1. A high voltage metal enclosed bus structure comprising a metal housing, a bus and a plurality of insulating support means axially spaced along said housing; each of said insulating support means being directly and individually mounted on said housing to support said bus at a plurality of axially spaced locations from said housing in insulated relationship therewith; said housing comprising a continuous body formed of a plurality of welded sections; said continuous housing body having a plurality



of axially spaced annular shaped reinforcing members fastened to the periphery thereof for imparting rigidity to said housing; each of said plurality of axially spaced annular shaped reinforcing members being in registry with a corresponding one of said plurality of insulating support means to thereby impart rigidity to said housing at a point of highest stress.

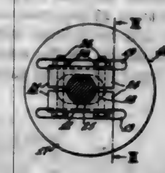
2,944,102
HIGH PRESSURE HERMETICALLY SEALED TERMINAL
Elbert D. Tidd, Clinton, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 21, 1956, Ser. No. 629,888
3 Claims. (Cl. 174—152)



1. A high pressure hermetically sealed terminal capable of withstanding pressures of many thousands of pounds per square inch comprising a cylindrical base cup member having a base portion with an axial aperture therein and thin tapering side walls, a cylindrical insulator sealed in said cup member, said insulator having a domed configuration exterior of said cup and an axial bore communicating at one end with said aperture and terminating at the other end in an internal arch, said insulator also having a tapered axial aperture which extends from the apex of said arch to the apex of said dome with gradually increasing diameter, and a lead-in conductor extending through said apertures and said bore and sealed within the insulator in the vicinity of the tapered aperture, the portion of said conductor sealed within the insulator having a taper corresponding to that of said aperture and being hollow.

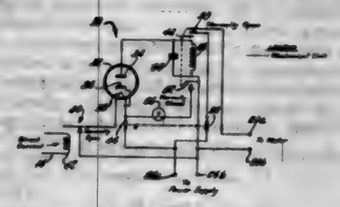
2,944,103
CLAMPING DEVICE FOR AN ELECTRICAL CONDUCTOR
Lester W. Davison, Pittsburgh, and Frank J. Surenda, Freedom, Pa., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 22, 1958, Ser. No. 782,191
6 Claims. (Cl. 174—167)

1. A clamping device for adjustably clamping a conductor in a hollow housing, said device comprising: a circular plate, said plate defining an elongated aperture for snugly receiving said conductor and encompassing the center of said plate, guide tracks spaced on opposite sides and parallel with the elongated portions of said aperture; a pair of gripping elements slidably engaging said guide



tracks; and tightening means cooperating with said elements for drawing said elements toward each other on a line perpendicular to said guide tracks in a clamping relationship with said conductor whereby said conductor is maintained in a fixed position in said housing.

2,944,104
TELETYPEWRITER REMOTE CUTOFF SYSTEM
Leo E. Neagle, Jr., 49 Oak St., Cohasset, Mass.
Filed July 29, 1957, Ser. No. 674,986
6 Claims. (Cl. 178—4.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

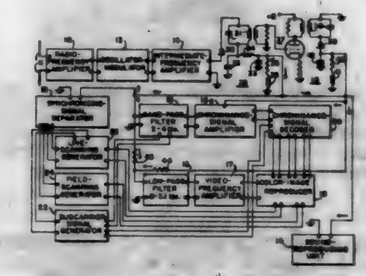


1. In a teletypewriter communication system including a teletypewriter transmitter, a teletypewriter receiver and a signal line for carrying direct current coupling said transmitter and said receiver, wherein said transmitter includes a source of constant direct current of a particular level connected in series with said signal line and a switch device in series with said signal line for selectively interrupting the continuity in said signal line for conveying information in the form of pulses to said receiver, and wherein said receiver includes a main shaft, a motor and a clutch device, said signal line connected with said clutch device for permitting said clutch device to couple said motor and said main shaft when current flow through said signal line is interrupted at said switch device and for decoupling said motor and said main shaft when there is no current flow through said signal line; the combination therewith of a running-open cutoff, said cutoff including a motor switch connected in series with said motor, and means coupled to said signal line and said motor switch and activated by current flow in said signal line for longer than a predetermined short interval for operating said motor switch to closed circuit condition, said means being deactivated when current flow in said signal line is absent for longer than a predetermined short interval for operating said motor switch to open circuit condition.

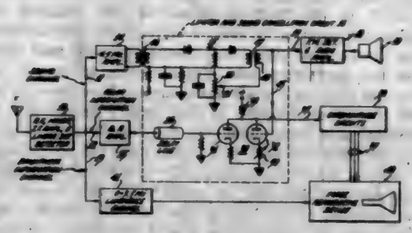
2,944,105
SIGNAL-TRANSLATING APPARATUS FOR MODULATED WAVE SIGNALS
Bernard D. Loughlin, Huntington, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 19, 1956, Ser. No. 617,041
10 Claims. (Cl. 178—5.4)

1. In a wave-signal receiver susceptible to output-signal distortion, signal-translating apparatus comprising: first

circuit means for supplying a modulated carrier wave signal and a modulated wave-signal component effectively in single-side-band relation thereto; detector circuit means including an output circuit and coupled to said supply circuit means for deriving in said output circuit a signal component representative of the modulation of said carrier wave signal or said modulated component but subject to distortion introduced by the single-side-band relation of said carrier wave signal and said modulated component; second circuit means coupled to said detector circuit means and responsive to a distortion component at a harmonic of the difference frequency between said carrier wave signal and said modulated component for deriving therefrom a component representative of a distortion component of said derived signal component at one or more levels of the modulation of said carrier wave signal; and means coupling said output circuit and said second circuit means for substantially reducing the distortion of said derived signal component.

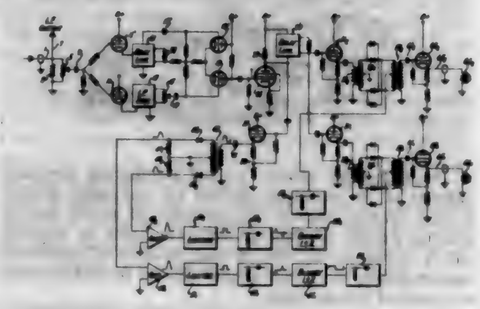


2,944,106
SOUND CANCELLATION IN TELEVISION RECEIVERS
Alfred C. Schroeder, Southampton, Pa., and Dalton H. Pritchard, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 7, 1958, Ser. No. 719,943
7 Claims. (Cl. 178—5.4)



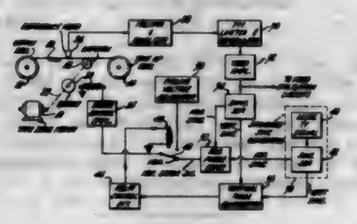
1. In a television receiver or the like, the combination of, a linear second detector providing a picture information video signal and a frequency modulated sound carrier within the frequency range of said video signal, a sound channel coupled to said detector and including frequency selective means and a limiter, said limiter responding to the signal output provided by said detector to develop a frequency modulated sound carrier output substantially free of amplitude modulation, a video channel also coupled to said detector, and means coupled between said limiter and said video channel for applying the substantially amplitude modulation free frequency modulated sound carrier output of said limiter to said video channel in such phase and amplitude as to cancel said sound carrier therein.

2,944,107
APPARATUS FOR WAVE-BAND DIVISION
Wayne R. Johnson, Los Angeles, Calif., assignor, by mesne assignments, to Minnesota Mining & Manufacturing Co., St. Paul, Minn., a corporation of Delaware
Filed Apr. 23, 1956, Ser. No. 580,064
18 Claims. (Cl. 178—6.6)



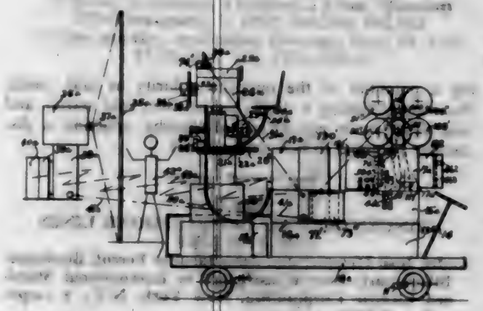
1. Apparatus for recording on a movable medium and for reproducing from said medium wideband information signals including signals of higher frequency than the cut-off frequency of the reproducing apparatus, including, means responsive to the information signals for deriving from the information signals a plurality of separate wave trains representative, respectively, of the portions of said information signals within particular amplitude ranges distinct from one another; means coupled to said deriving means for separately recording on the movable medium the wave trains produced by said deriving means; means coupled to said movable medium for reproducing the information recorded by said recording means; means coupled to said reproducing means for increasing by a particular multiple the frequency of the reproduced signals and for increasing the frequency of the reproduced signals by a multiple related to the number of wave trains in the plurality; and means responsive to the signals of increased frequency for combining the signals produced by said frequency increasing means to reproduce substantially the original signals.

2,944,108
TELEVISION SYNCHRONIZING SYSTEM
William D. Houghton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 27, 1958, Ser. No. 724,458
7 Claims. (Cl. 178—6.6)



1. In a television system having a composite television signal recorded on a movable storage medium, said television signal including a picture representative component, and line and field synchronizing components, the combination of means for recovering said composite television signal from said storage medium, means for separating the line and field synchronizing components from the recovered composite television signal, a source of standard line and field synchronizing components for a local television signal, means for comparing the phase of said separated field synchronizing components with the phase of said standard field synchronizing components, and means for varying the movement of said storage medium in a predetermined manner until the phase of said recovered field synchronizing components and the phase of said standard field synchronizing components substantially coincide.

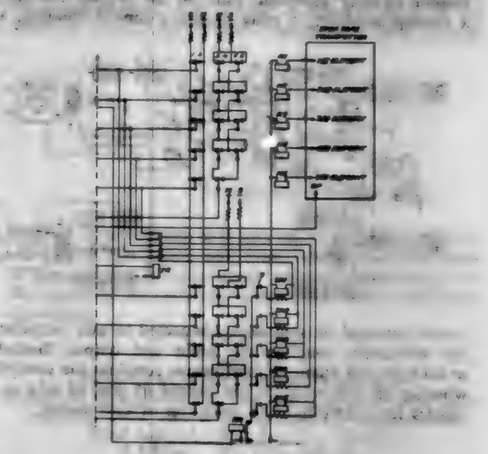
2,944,109
COMBINED SOUND AND COLOR MOTION PICTURE AND TELEVISION RECORDING APPARATUS
Martin E. Evans, 285 6th Ave., Brooklyn 17, N.Y.
Filed Dec. 7, 1953, Ser. No. 396,111
16 Claims. (Cl. 178—7.4)



16. In combination with a background screen a background projector for the screen, a switch operatively connected to the projector for controlling the light interval of said projector, a closed television system showing images from the screen on a cathode ray tube of the system, a film recording camera with a shutter adapted to cut off the light from said tube during the film moving interval of said camera, and means including an electronic operating connection between said camera and said projector for synchronizing the pull down periods of said projector and said camera and the blanking of said projector.

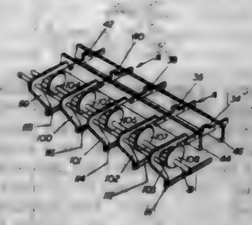
2,944,110
ERROR SUPPRESSING TELEGRAPH SYSTEM
George Taylor Royden, South Orange, and John William Butterworth, Wayne Township, Paterson, N.J., assignors to Mackay Radio and Telegraph Company, New York, N.Y., a corporation of Delaware
Filed July 27, 1956, Ser. No. 600,524
11 Claims. (Cl. 178—23)

1. In a telegraph system for receiving and transmitting conventional five unit code telegraph messages in which the character code signals each comprise five signal elements of either one or other of two electrical values, and in which the number of elements of each electrical value have either an odd or an even numerical characteristic, means for converting said five unit code signals into six unit code signals in which the signal elements of one of said two electrical values in each respective character codes may vary in number as between different character codes but which has the same predetermined numerical characteristic, each six unit code including the five elements of the five unit code in their original relative positions and with their original electrical values, means for transmitting said converted signals over a transmission channel, and receiving apparatus coupled to said channel comprising means for scanning each character code signal to determine whether, in the aggregate, said signal contains elements of said one value having said predetermined numerical characteristic, and



means responsive to said last-mentioned means for converting the six unit code signals back into said conventional five unit code.

2,944,111
PRINTING TELEGRAPH APPARATUS
John Handley, Purley, England, assignor to Creed & Company Limited, Croyden, Surrey, England, a British company
Original application Jan. 21, 1955, Ser. No. 483,313. Divided and this application Dec. 23, 1957, Ser. No. 704,583
1 Claim. (Cl. 178—35)

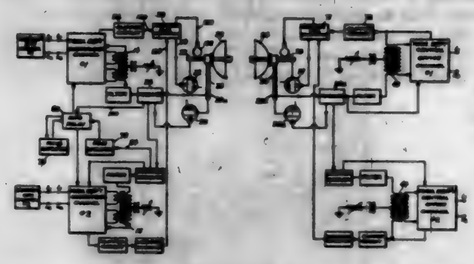


In printing telegraph apparatus, a plurality of control plates and means for operating them in accordance with received telegraph signal combinations, a type carrier, a plurality of cams and associated cam followers for respective control plates, each cam follower including means controlled by the operation of its associated control plate for preventing the cam follower from following the contour of its associated cam, an aggregate motion mechanism and means linking it to the type carrier and to the cam followers for controlled movement to selectively position the type carrier in accordance with the received signal combination, and anti-backlash means urging each cam follower against its associated cam.

2,944,112
TELEPHONY
Paul J. Pontecorvo, Cambridge, Charles N. Gillespie, Wayland, and Donald W. Smith, Waltham, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Mar. 26, 1954, Ser. No. 418,862
5 Claims. (Cl. 179—15)

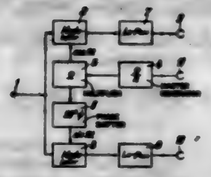
1. In a two-channel telephone system, a local station comprising apparatus for receiving incoming signals, first

and second receivers connected to said apparatus, said first receiver accepting calls on the first channel and said second receiver accepting calls on the second channel, a ringing amplifier, a relay having a control winding, a



switch actuated by said relay connected to said amplifier for selectively coupling the input and output thereof to each of said channels, and means coupling the control winding of said relay to the output of one of said receivers for controlling the actuation of said switch.

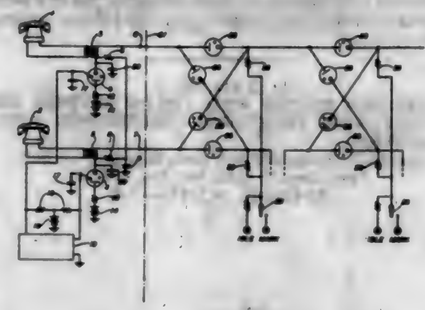
2,944,113
SYSTEM FOR BROAD-BAND RECORDING
Heinz P. Wehde and Paul G. Rothe, Hannover, Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed July 10, 1956, Ser. No. 596,988
Claims priority, application Germany July 20, 1955
5 Claims. (Cl. 179—15.55)



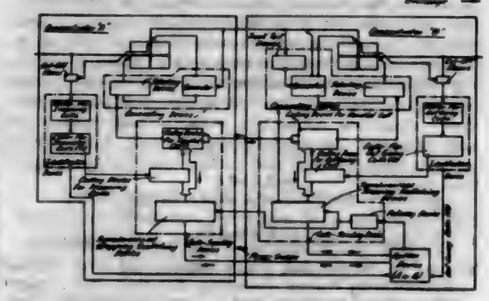
1. A system to transpose original signals covering a wide frequency band into two components each covering a narrower band-width and for recording the narrower band-width components on a recording medium, comprising a master oscillator for generating a frequency, phase-splitting network means for dividing said frequency into two quadrature carriers, said frequency lying within said wide frequency band, two mixers for respectively multiplying said original signals by one quadrature carrier to form two products, means for selecting the lower side-bands of each of said products, and means for simultaneously recording on said medium each of said lower side-bands and said master oscillator frequency.

2,944,114
COMMUNICATION SWITCHING SYSTEM EMPLOYING GAS TUBES
Raymond W. Ketchledge, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 28, 1955, Ser. No. 504,433
14 Claims. (Cl. 179—18)

1. A communication switching network comprising a first and a second group of terminals and means for applying predetermined voltages to selected ones of said terminals to establish and disestablish a path through the network, said means including a gas discharge device having a pair of main gap defining electrodes and a starter electrode, means connecting one of said main gap electrodes to one of said terminals and the other of said main gap electrodes to a source of potential, means for applying a potential of one polarity to said starter electrode initiating a discharge between said starter electrode and said one main gap electrode, and means for applying a potential of the opposite polarity to said starter electrode initiating a discharge between said starter and said other main gap electrode thereby applying a disconnect potential to said one terminal.



2,944,115
CONCENTRATORS OF TELEPHONE LINES OR THE LIKE
André Jean Henquet and Jean Jacques Perrot, Boulogne-Billancourt, France, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 27, 1957, Ser. No. 686,662
Claims priority, application France Sept. 28, 1956
7 Claims. (Cl. 179—18)



1. A concentrator for connecting a group of telephone subscriber lines to their corresponding positions in an exchange over a smaller number of trunks, comprising a first set of switches of the cross-bar type in the immediate vicinity of said group of subscriber lines with said subscriber lines connected to the horizontal multiples of said switches controlled by the selecting bars, a plurality of trunks connected to the vertical multiples controlled by the selectors, there being less trunks than there are subscriber lines, a second set of switches of the cross-bar type at the exchange with the positions corresponding to said subscriber line connected to the horizontal multiples and the other ends of said trunks connected to the vertical multiples controlled by the selectors, first and second test devices each comprising a plurality of rectifier matrices and positioned respectively adjacent said first and second sets of switches, said first test device having a plurality of inputs each connected to a different combination of the subscribers' lines, means for energizing an input of said first test device when a line connected thereto is in calling condition, said second test device having a plurality of inputs each connected to a different combination of the corresponding positions at said exchange, means for energizing an input of said second test device when a position connected thereto is in calling condition, a plurality of two-condition devices in each matrix adapted to be normally in one condition, means including the rectifiers of said matrix for causing one of said two-condition devices to shift to its other condition when one of the inputs of said matrix is energized, and means operated by the combination of two-condition devices shifted for transmitting signals indicating the existence of a call and the identity of the line or position which is in calling condition.

2,944,116
RECORD-TAPE MUSIC BOX
Wilhelm Vershoven, 4 Sedanstr., Essen, Germany
Filed September 9, 1957, Ser. No. 682,902
Claims priority, application Germany Sept. 19, 1956
17 Claims. (Cl. 179—100.1)



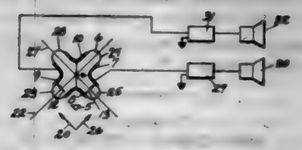
1. In a music box of the class described, a tape, a tranducer head cooperating therewith, a group of a certain number of tracks longitudinally arranged side by side on the tape, each destined for a number of sound records to be played back by means of said transducer head, means for transversely moving said transducer head with respect to said tape for adjusting the transducer head to anyone of said tracks, said tape being subdivided in longitudinal direction into a certain number of sections each destined for one sound piece in each track, means for longitudinally moving said tape in the one or the other direction adapted to adjust anyone of its sections in front of the transducer head, a selection dial turnable into a certain number of turn positions each allotted to one of said tracks and to one of said sections, operative connecting means between said transversely moving means and said selection dial adapted to adjust, by a first turning of said selection dial, the transducer head to the track corresponding to the drawn turn position of said dial, and operative connecting means between said longitudinally moving means and said selection dial adapted to adjust, by a second turning of said selection dial, the section of the tape corresponding to the drawn turn position of said dial in front of the transducer head, whereby anyone of the recorded sound records can be selected by two turnings of said selection dial.

2,944,117
BENDER TYPE PIEZOELECTRIC TRANSDUCER
Robert B. Gray, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Filed June 20, 1955, Ser. No. 516,638
24 Claims. (Cl. 179—100.41)

1. A bender type piezoelectric transducer comprising an elongated body of polarized ferro-electric ceramic, said body having upper and lower exterior faces and opposite exterior side faces connecting the opposite edges of the upper and lower faces and each of the faces being of area large compared to the cross sectional area of the body transverse to the length of the body, a pair of longitudinally extending take-off electrodes, one on each of the upper and lower faces, said body being polarized by an electrostatic field applied along the length of the body to at least one of said exterior side faces and diverging from between said one exterior side face to the conducting electrodes, and means supporting the body at one end for bending about an axis perpendicular to the length of the body and between the upper and lower electrodes.



2,944,118
BINAURAL PHONOGRAPH PICKUP
Robert B. Gray, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Apr. 14, 1958, Ser. No. 728,339
9 Claims. (Cl. 179—100.41)



1. A piezoelectric element having separate outputs respectively in response to bending about one and the other of two axes at right angles to each other, said element comprising a bar-like body of polarizable ceramic having four longitudinally extending radially projecting flanges spaced substantially 90 degrees from each other, two of the flanges being centered on one of said axes and the other two flanges being centered on the other of said axes, four longitudinally extending electrodes spaced substantially 90 degrees from each other and each being between a different pair of adjacent flanges, said bar being polarized from one electrode lying between said two axes to two adjacent electrodes, said one electrode and the diametrically opposite electrode being grounded, the other two electrodes serving respectively as output electrodes for bending about one and the other of said two axes.

2,944,119
TRANSDUCERS
Robert B. Albright, Wyndmoor, Edward J. Michonski, Churchville, and Francis Richardson, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 20, 1957, Ser. No. 704,175
10 Claims. (Cl. 179—111)



1. In an electro-acoustic transducer, a pair of perforated backing plate sections so arranged as to form a hollow, flattened cylinder, a thin vibratory membrane having an electrically conductive surface and encircling said sections, and means for moving said sections bodily relative to one another and against said membrane.

2,944,120
SAFETY FOOT SWITCH
Zorro D. Ruben, 545 Fern Ave., Elmhurst, Ill.
Filed June 12, 1958, Ser. No. 741,542
3 Claims. (Cl. 200—5)

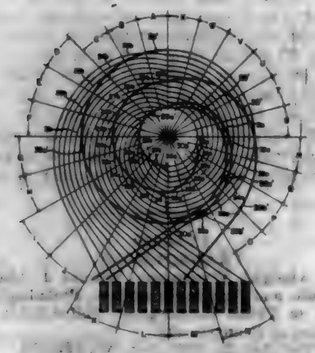


2. In combination, in a power tool controller, two electric switches wired in series on one side of a power circuit and arranged to be actuated approximately simultaneously; one of said switches being a push on, push off, type and the other being a momentary, normally off, type to produce the following, indefinitely repeating, sequence of actuation cause and circuit effect:

(1) Press said switches: circuit remains open;
(2) Release pressure: circuit remains open;
(3) Press said switches: circuit closes;
(4) Release said switches: circuit opens,

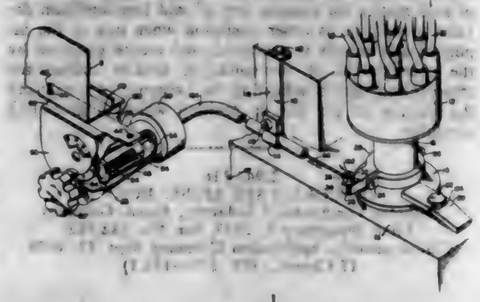
thus avoiding accidental operation of a power tool after each operation thereof.

2,944,121
SWITCHING APPARATUS
William J. Wasylenko, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 20, 1959, Ser. No. 800,838
12 Claims. (Cl. 200—11)



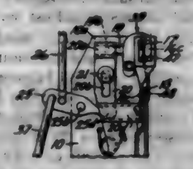
9. In a switching mechanism, a pair of non-conducting base sheets arranged in spaced relationship with respect to each other, each of said sheets having a pattern of mutually insulated conductive paths thereon with the pattern contained on one board being identical with that on the other board, said sheets moreover being arranged so that each conductive path on one board is disposed in spaced cross over relationship with all of the circuit paths of the other, and rotatable wiper means including a plurality of mutually insulated contacts, whereby each one of said contacts connects a conductive path of one board successively with the circuit paths of the other board.

2,944,122
REMOTE CONTROL MECHANISM FOR ADJUSTING THE IGNITION TIMING OF AN INTERNAL COMBUSTION ENGINE
John H. Thedick, 1781 Arthur St., Klamath Falls, Oreg.
Filed July 25, 1958, Ser. No. 751,055
11 Claims. (Cl. 200—31)



9. Timer-distributor control mechanism for selectively advancing or retarding the ignition timing of the engine of a ground vehicle from the driver's compartment of said vehicle in accordance with the altitude of operation of said vehicle, said mechanism comprising a flexible shaft having one end thereof connected to the timer-distributor and having the other end thereof positioned within said driver's compartment, means disposed in both the engine compartment and the driver's compartment of said vehicle supporting said shaft for reciprocal movement, means for converting linear movement of said shaft to rotative movement of said timer-distributor to effect advancing or retarding of the ignition timing, manually operable control means for said shaft, means mounting said control means for rotative movement and against sliding movement, and means interconnecting said manually operable control means with said other end of said shaft and operable to convert rotative movement of said control means to linear movement of said shaft.

2,944,123
DOOR-LOCKING SWITCH
Joseph B. Gaida, 511 9th Ave. S., St. Cloud, Minn.
Filed Mar. 14, 1957, Ser. No. 646,141
3 Claims. (Cl. 200—44)



1. The combination of a motor vehicle door latching mechanism having movable release means and a locking element movable with respect to the release means into locking and unlocking positions, key-operated means in the door and including a rotatably oscillatable key bar rotatable in opposite directions from normal position when the key is turned, and a reversible electrically operated power source connected with the locking element for moving the same into locking and unlocking positions; and an oscillatable switch in the door for operating the power source, said switch having a stator and a rotor with opposed relatively rotatable circumferential portions, the rotor being drivably connected with the key-operated bar to be turned thereby, said stator having on said portion a pair of circumferentially spaced contacts connected to

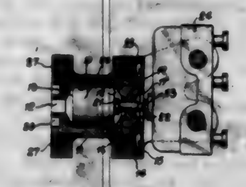
the power source for supplying electrical energy to cause operation of the power source in forward and reverse directions respectively, and said stator also having a third contact between said pair of contacts and supplying electrical energy thereto, said rotor having a single spanning contact slidable on the stator contacts and dimensioned for simultaneous engagement with the third contact and one of the other contacts on the stator when the rotor is turned in one direction and then the other direction, whereby to move the locking element into locking and unlocking positions by turning the key in said means.

2,944,124
DISPENSER PACKAGE
Donald L. Arnold, Emporium, Pa., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Oct. 16, 1959, Ser. No. 846,869
9 Claims. (Cl. 206—56)



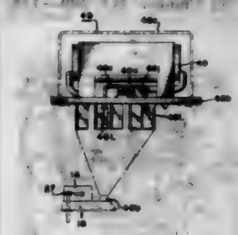
1. A package comprising an outer container, vertical stacks of front and rear packets within the outer container, a vertical partition between the front and rear stacks of packets, said partition being unattached to the container and the packets, a rear vertical follower partition behind the rear stack of packets, and means urging said follower partition against the rear stack of packets.

2,944,125
PRESSURE ACTUATED ELECTRIC SWITCH
John V. Olivean, Greenwich, Conn., assignor to The Aerotec Industries, Inc., a corporation of Connecticut
Filed June 27, 1958, Ser. No. 745,041
7 Claims. (Cl. 200—82)



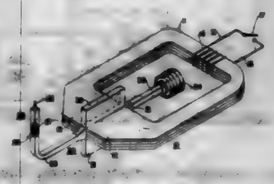
1. A pressure actuator which comprises a housing having a cylindrical chamber and having an inlet at one end of said chamber and an axial passage from the opposite end of said chamber, a cylindrical block of resilient elastomer fitting the cylindrical surface of said chamber between said ends and supported at its perimeter at the end of said cylinder having said passage and spaced from said passage inwardly of its perimeter to be distorted toward said passage by pressure fluid admitted through said inlet and a movable element extending through said passage to be moved longitudinally by said block of elastomer when distorted by said fluid pressure.

2,944,126
CONTROL FOR FLUID SUSPENSION SYSTEM
Ralph K. Shewmon, Centerville, and George A. Neyhouse, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,711
2 Claims. (Cl. 200—83)



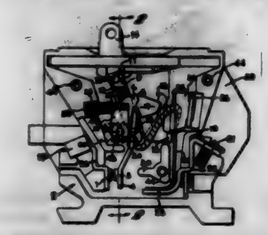
1. A compact and unitary electrical delay means for use in series with an electrically operated valve means adapted to control inlet and exhaust of air relative to an air suspension system air spring provided to maintain a predetermined clearance height between a sprung mass and an unsprung mass of a vehicle also provided with a linkage and electrical switching means sensitive to increase and decrease of height between the sprung and unsprung masses, comprising, a base, a bracket and terminal means mounted relative to said base, a relay coil supported by said bracket, an armature movable centrally of said coil, an impedance-drop means in series with said coil and supported adjacent to said bracket, bi-metal contact means in proximity to said impedance-drop means and adapted to be heated thereby to short out said impedance-drop means thereby permitting full operating voltage to be applied relative to said relay coil, and a relay switch arm adapted to be shifted by said relay coil to effect shunting of said impedance drop means for preventing repeat cycling thereof.

2,944,127
CONDUCTIVE FLUID RELAY
William L. Carlson, Jr., Bloomington, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 16, 1957, Ser. No. 659,632
3 Claims. (Cl. 200—112)



1. In a relay of the class described wherein an electric current passes through a conductive fluid at substantially right angles to a magnetic flux to propel the fluid in a direction mutually perpendicular to said current and said flux to operate current control means: fluid containing means including fluid reservoir means; variable impedance magnetic structure means adjacent said fluid containing means to conduct said fluid across said fluid; flux control means associated with said magnetic structure means; and current carrying means electrically independent of said flux control means conducting said current to said fluid; said flux control means varying the impedance of said magnetic structure means to vary said flux; the flux and the current in turn propelling said fluid to operate said current control means.

2,944,128
COUNTER-DIRECTIONALLY RELEASABLE CIRCUIT BREAKER
William H. Middendorf, Covington, Ky., assignor to The Wadsworth Electric Manufacturing Company, Inc., Covington, Ky., a corporation of Kentucky
Filed Feb. 25, 1957, Ser. No. 642,018
15 Claims. (Cl. 200—116)



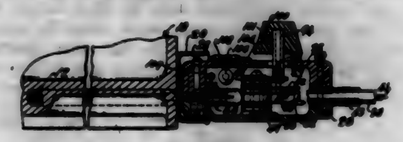
1. A multi-pole circuit breaker comprising stationary contacts, carriers having contact surfaces respectively engageable with said stationary contacts, said carriers being movable to positions in which their contact surfaces are out of engagement with said stationary contacts, means for effecting movement of each carrier to a position in which its contact surface is separated from the stationary contact therefor, releasable latching means for each carrier, for holding the same in position in which its contact surface engages the stationary contact therefor, said means including cooperable members, means for moving one of said members to unlatching position in event of current overload, means for independently moving the other of said members to unlatching position including a shaft common to all carriers, the said shaft being rotationally responsive to the release of any carrier and means for bodily shifting said shaft in response to rotational movement thereof, and means responsive to the bodily shifting of said shaft for releasing all other of said releasable latch means.

2,944,129
CIRCUIT BREAKERS
Thomas M. Cole, Harrison, N.Y., and Henry S. Wingard, Cranford, N.J., assignors to Federal Pacific Electric Company, a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,708
27 Claims. (Cl. 200—116)



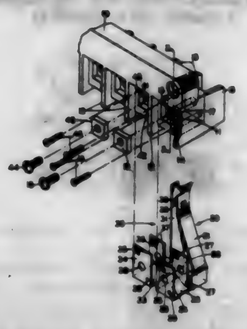
1. Current responsive contact opening means for use with alternating current, including a pair of separable contacts, spring actuated contact-opening means normally effective toclose the contacts and having electrodynamically actuated means effective during a half cycle of overload current to change said spring actuated means into condition to bias the contacts in the opening direction in response to a predetermined instantaneous overload current level, electrodynamic contact biasing means including a conductor in series with the contacts effective to hold the contacts together during instantaneous current levels comparable to said predetermined level, despite conditioning of the contact-opening means to bias the contacts open, the bias of said electrodynamic biasing means declining during said half cycle and the electrodynamically conditioned spring actuated contact-opening means thereupon becoming effective to part the contacts.

2,944,130
THERMORESPONSIVE SWITCH MEANS
Roy E. Hallenbeck, Jr., Drayton Plains, Mich., assignor to Pace, Inc., Mansfield, Ohio, a corporation of Ohio
Filed July 30, 1957, Ser. No. 675,979
4 Claims. (Cl. 200—136.5)



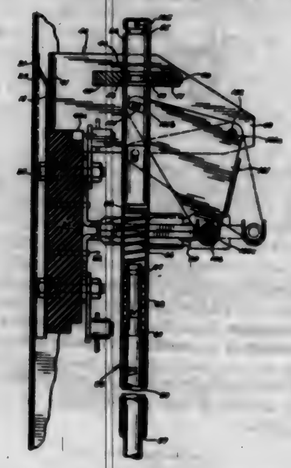
1. Apparatus of the character disclosed, in combination, a housing formed of insulating material, a stacked switch mechanism disposed in said housing including a sleeve, a connector bar insulatingly carried by the sleeve and adapted to be directly connected with a terminal of an electrically energizable heating element, a thermoresponsive element insulatingly supported by said sleeve, said bar having a portion of cylindrical cross section terminating at one end in a flat portion, said cylindrical portion having an axial bore and a longitudinally extending diametrically arranged slot, the flat portion of said connector bar being arranged in direct contact with said thermoresponsive element for transferring heat by conduction from the heating element to the thermoresponsive element, a pair of switch blades insulatingly supported on said sleeve, a contact carried by each of said blades, manually operable means for regulating the relative position of one of said switch blades, said thermoresponsive element being arranged to control the position of the other of said switch blades responsive to heat transferred to the thermoresponsive element through the connector, a second connector formed of sheet metal adapted to be connected to the other terminal of the heating element, one of said switch contacts and said second connector being adapted to be connected with a current supply.

2,944,131
TERMINAL ASSEMBLY
Warren N. Kernander, Topsfield, and Carl F. Van Bensekom, Lynnfield, Mass., assignors to General Electric Company, a corporation of New York
Filed July 19, 1956, Ser. No. 598,951
2 Claims. (Cl. 200—166)



1. A terminal assembly for use in switching apparatus comprising a terminal board member having first and second parallel surfaces, an electrically conductive deflectable blade member mounted on said board member having a portion with an electrical contact attached proximate to one end thereof and integral means at the other end to secure said blade to said terminal board, said integral means comprising a terminal portion overlaying said first surface and a flange portion overlaying said second surface, a nut member interposed between said terminal portion and first parallel surface and retained by said terminal portion, attaching means transfixing said terminal portion and said flange portion to said board member, and a terminal screw extending through said terminal portion and coacting with said nut member for electrically connecting an external conductor between said screw and said terminal portion to provide an electrical connection between said electrical contact and said external conductor.

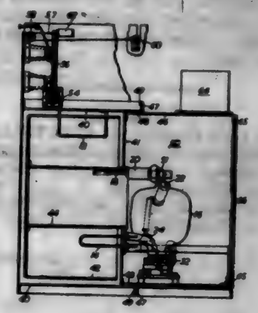
2,944,132
CIRCUIT BREAKER MECHANISM
Claude E. Franke, Cambridge, Minn., assignor to Braham Industries, Inc., Braham, Minn., a corporation of Minnesota
Filed June 1, 1959, Ser. No. 817,243
8 Claims. (Cl. 200—172)



1. An electrical switch operating mechanism in connection with a movable contact member having in combination, a stationary supporting member, a toggle plate member pivoted at one terminal point to said stationary member and pivoted at a second terminal point to said contact member, said toggle plate having an elongated slot at a third point, a pull rod, said toggle plate being pivoted to said rod at said third point adjacent one end portion of said rod, a pair of longitudinally spaced angular grooves about said rod forwardly of said last mentioned pivot point, an apertured plate member secured to said stationary member in a plane at right angles to the plane of the axis of said rod, said rod being adapted to slide through said aperture, said grooves being positioned to be at either side of said apertured plate, a pressure responsive detent recessed in said plate member and adapted to positively engage said grooves when said grooves are respectively moved into alignment therewith in being moved into and out of said aperture whereby said rod and said contact member are positively locked into position when either of said grooves are engaged by said ball.

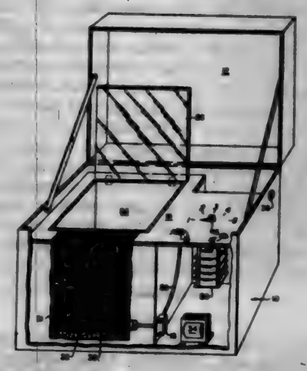
2,944,133
RADIO FREQUENCY DIELECTRIC HEATING APPARATUS
Christopher E. M. Tibbs, Wokingham, England, assignor to Radio Heaters Limited
Filed Dec. 1, 1958, Ser. No. 777,495
Claims priority, application Great Britain Dec. 5, 1957
26 Claims. (Cl. 219—10.55)

1. R.F. dielectric heating apparatus or medical diathermy apparatus including a cavity resonator having an outer screening shell and a hollow inner conductor unit of substantial overall cross-sectional dimensions connected at one end to an end wall of the shell and free at the other end and forming an electrode of a concentrated electrical capacitance included within said outer screening shell, said cavity having an equivalent diameter which is at least 0.8 of its length, said apparatus further compriaing a screened compartment adjoining the cavity



resonator, an oscillator tube entirely within the screened compartment, a loop within the cavity coupling the cavity to the grid circuit of the oscillator, means coupling the anode of the tube to the inner conductor, power supply leads for the tube extending externally of the compartment and radio-frequency filters connected to the leads, and an output pick-up loop within said cavity having an output connection which passes through the outer shell of said cavity and connected to partially screened operating electrodes external to the cavity.

2,944,134
PORTABLE INCUBATOR
Walter W. Kenyon, Needham, Mass., assignor to Millipore Filter Corporation, Watertown, Mass., a corporation of Massachusetts
Filed June 24, 1958, Ser. No. 744,228
4 Claims. (Cl. 219—20)



1. An electrically heated incubator operable on any one of several voltages comprising an outer housing, partitioning means forming an inner compartment within said housing, a radiant heating zone surrounding said compartment including at least two resistance windings surrounding said inner compartment connected together in series to form a series resistance, one of said resistance windings being of greater resistance than the other and including an intermediate point where said series resist-

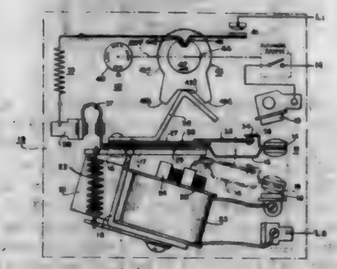
ance is divided in half, each of said windings being coextensive with and evenly distributed along the length of said zone, power connections to said windings including one at each end of said series resistance, one where the windings connect together, and one at the said intermediate point, a pair of power leads, and switching means for selectively connecting said power leads to said power connections in such a manner that current passes through the whole length of each of said windings regardless of which power connections are selected, and a thermostatic switch responsive to the temperature in said compartment in said power leads.

2,944,135

CONTROL FOR FLASHING ELECTRIC HEATERS

Calvin J. Holtkamp, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Jan. 23, 1959, Ser. No. 788,630
8 Claims. (Cl. 219—20)



1. A control for flashing an electrical heater having relatively high and low voltage power sources; comprising a transfer switch having first and second spaced relatively stationary contacts for connection, respectively, to high and low voltage power sources, a third contact supported for movement between a flashing position in engagement with the first contact and a low voltage position in engagement with the second contact, manually operable cam means movable from "off" position to any one of a plurality of active positions, said cam means having a portion cooperating with said transfer switch to actuate said movable contact to its flashing position during movement of said cam means from its "off" position to an active position, electromagnetic means in series with said first contact for holding said movable contact in its flashing position, means urging said movable contact to its low voltage position, and means carried by said transfer switch for moving said movable contact out of engagement with said first contact when the electrical heater has flashed to the desired operating temperature, whereupon said electromagnetic means is deenergized and said urging means is effective to move said movable contact to its low voltage position.

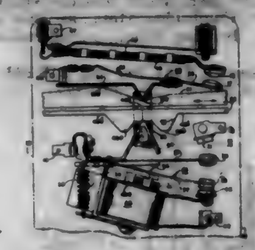
2,944,136

CONTROL FOR FLASHING ELECTRIC HEATERS

Calvin J. Holtkamp, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Continuation of application Ser. No. 640,827, Feb. 18, 1957. This application Jan. 26, 1959, Ser. No. 789,210
10 Claims. (Cl. 219—20)

1. The combination with a primary electric heater and relatively high and low voltage power sources, of a cycling switch controlling energization of said heater, thermal operated means for alternately opening and closing the switch, means controlled by the switch for heating the thermal operated means, means including a manually operated member for adjusting said cycling switch from an inactive station to a plurality of active stations wherein selective predetermined ratios of the period of time that the cycling switch is closed to the period that the cycling switch is open are effected, a transfer switch structure effective in first and second positions for respectively connecting said primary heater to the high and low voltage power sources, means biasing the transfer switch structure to said second position, an electromagnet energizable for retaining the transfer switch structure in said first position, cam means actu-



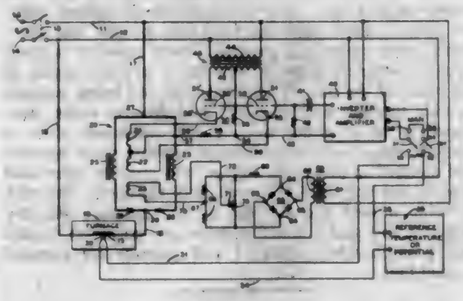
ated by the manually operated member for positioning the transfer switch structure, said cam means positioning the transfer switch structure in open position in the inactive station of said manually operated member and releasing the transfer switch in the active positions of the member, means associated with the cam means for actuating the transfer switch momentarily to its first position during movement of the manually operated member from its inactive station to an active station, and a circuit for said electromagnet controlled by the cycling switch and the transfer switch, and switching means, associated with the transfer switch structure, serially connected in said circuit and closed in the first position of the transfer switch structure.

2,944,137

SELF STABILIZING AUTOMATIC TEMPERATURE CONTROL

Frederick H. Kaltenbach, Alliance, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed Mar. 18, 1959, Ser. No. 800,305
8 Claims. (Cl. 219—20)



1. Automatic temperature control apparatus for an electrically energized furnace, comprising, in combination, a thermo-electric generator developing a D.C. output potential proportional to the temperature of the furnace; a source of constant value D.C. reference potential, presettable as to such constant value, connected in opposing relation with said output potential; a source of A.C. potential; an inverter and amplifier unit energized from said

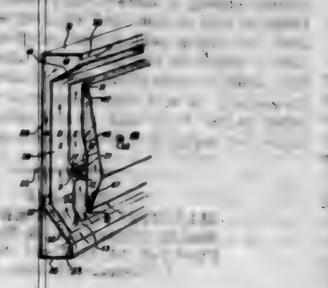
A.C. source and operable to convert a D.C. input potential into an amplified A.C. output potential having a magnitude proportional to the magnitude of the input potential and a relative phase corresponding to the polarity of the input potential; means, including circuit connections, operable to impress on the input of said inverter and amplifier unit any signal potential difference between said D.C. output and reference potentials; a phase detector, including a pair of grid-controlled electronic valve sections, connected across said source of A.C. potential with said sections in phase opposition; means applying said amplified A.C. output potential to the grids of said sections in substantial phase coincidence; and a magnetic amplifier including power coil means controlling flow of current from said source of A.C. potential to said furnace, and a pair of matching control coils operatively associated with said power coil means to control saturation of the latter; said control coils being connected in series opposing relation and each operatively connected to said source of A.C. potential in series with a different one of said sections; whereby, responsive to any signal potential difference between said output and reference D.C. potentials due to variation of the furnace temperature from a pre-set value proportional to such pre-set value of reference potential, said control coils will be effectively energized in push-pull relation to vary the current flow through said power coil means in a direction to restore the furnace temperature to its pre-set value.

2,944,138

ELECTRIC SPACE HEATER AND METHOD OF MANUFACTURE

James E. Goff, Knoxville, Tenn., assignor to Electric Heaters, Inc., Knoxville, Tenn., a corporation of Tennessee

Filed Dec. 23, 1957, Ser. No. 704,824
1 Claim. (Cl. 219—34)



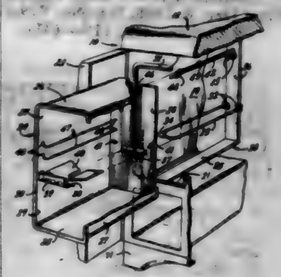
An electric space heater including, in combination, a mounting member, spaced apart elongated front and rear baffles supported from said mounting member providing an air flow channel therebetween, an elongated metallic heat conductive and heat dissipating member supported from said mounting member in said channel in spaced relation with respect to said front and rear baffles, said heat conductive and heat dissipating member comprising an upper heat conductive and dissipating fin and a lower heat conductive and dissipating fin, a section being provided between and connecting said fins and having a longitudinally extending groove formed therein, a tubular heating element including a resistance element encased within a metallic sheath and positioned within said groove in substantially continuous thermal engagement with the wall thereof, a continuous flange formed on each side of said groove integral with said section and rolled over said tubular heating element and in substantially continuous thermal engagement therewith for transfer of heat from the former to the latter and to the heat conductive and heat dissipating member, and the metals from which said heat conductive and heat dissipating member and said metallic sheath are formed have substantially the same coefficients of expansion, and the entire lower fin extending in a plane on one side of the axial plane of said tubular heating element and the entire upper fin extending in a plane on the other side of the axial plane of said tubular heating element, whereby the air flowing through said channel is heated by said heat conductive and heat dissipating member and said tubular heating element, and said section provides minimum restriction to flow of air over said heat conductive and heat dissipating member.

2,944,139

COOKING RANGE OVEN WITH REMOVABLE LINER

Joseph Earl Harris, Jr., Huntington Valley, and Ronald K. Becker, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 27, 1959, Ser. No. 789,380
6 Claims. (Cl. 219—35)



3. A cooking range comprising cabinet structure defining an oven compartment having a back wall and a front opening, a support bracket mounted within said compartment and having a horizontal portion and a vertical portion, said horizontal portion extending from said front opening toward said back wall, said vertical portion being disposed away from and rearwardly of said opening, a heating unit affixed to said vertical portion and projecting forwardly therefrom in a direction toward said front opening, thermostatic means for controlling the operation of said heating unit and including a temperature sensing element carried by said vertical portion and projecting therefrom in a direction toward said front opening, and an oven liner mounted within and withdrawable from said compartment through said front opening and with respect to said heating unit and said sensing element, said liner being slidably supported by said horizontal portion and having a rear wall provided with apertures for passage of said unit and element into said liner when inserted within said compartment.

2,944,140

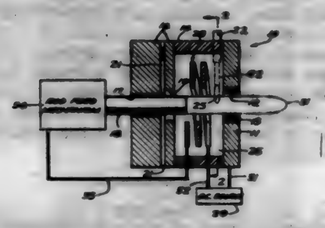
HIGH-INTENSITY ELECTRICAL PLASMA-JET TORCH INCORPORATING MAGNETIC NOZZLE MEANS

Gabriel M. Giannini, Newport Beach, and Vernon H. Blackman, Laguna Beach, Calif., assignors to Plasmadyne Corporation, Santa Ana, Calif., a corporation of California

Filed Nov. 24, 1958, Ser. No. 775,973
17 Claims. (Cl. 219—123)

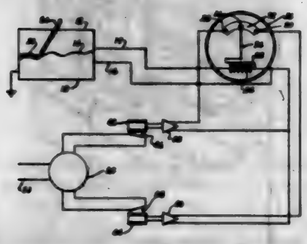
1. In a plasma apparatus, electric means to generate a stream of plasma, and means to generate a strong magnetic field surrounding and adjacent at least a portion of

said stream, the lines of magnetic force of said field being shaped generally as a venturi having a throat and having portions diverging in opposite directions from said throat



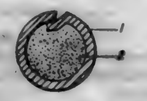
axially of said stream, said magnetic venturi being coaxial to said stream whereby said stream passes therethrough for stabilization and concentration thereby.

2,944,141
APPARATUS FOR ELECTRIC ARC WELDING
Rodger T. Lovrenich, 21456 Karl, Detroit 19, Mich.
Filed Dec. 8, 1958, Ser. No. 779,026
9 Claims. (Cl. 219—131)



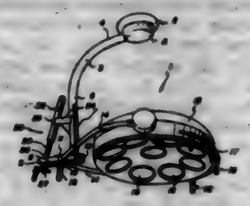
1. An apparatus for indexing a crack in an electrically grounded metal piece, said apparatus comprising an indexing electrode adapted to be moved across the surface of the metal piece and adapted to introduce an electric current into said piece; a pair of auxiliary electrodes spaced from each other and from said indexing electrode; and electrical means to detect differences in electrical potential between said auxiliary electrodes.

2,944,142
ELECTRIC ARC WELDING ELECTRODES AND METHODS OF MANUFACTURING THE SAME
Per Yngve Sjöman, Goteborg, Sweden, assignor to Elektriska Svetsningsaktiebolaget, Goteborg, Sweden, a corporation of Sweden
Filed Mar. 5, 1958, Ser. No. 719,358
Claims priority, application Sweden Mar. 7, 1957
3 Claims. (Cl. 219—146)



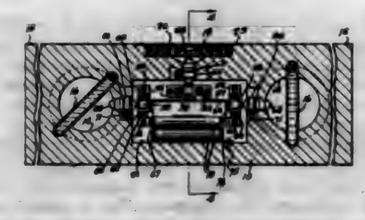
1. An electrode for electric arc welding comprising a sheath of low carbon iron and a metal powder core contained therein consisting of one single powdered alloy containing at least two non-ferrous metals, the weight of said metal powder core being not less than 10% and not more than 50% of the combined weight of the sheath and the metal powder core.

2,944,143
OPERATING ROOM LAMP
Hermann Gunther, Hanau (Main), Germany, assignor to Quarzlampen Gesellschaft m.b.H., Hanau (Main), Germany
Filed Apr. 30, 1957, Ser. No. 655,985
2 Claims. (Cl. 248—1.4)



1. In an operating room lamp, a supporting arm with the upper portion thereof being substantially horizontal and the lower portion thereof being substantially vertical, means for mounting the horizontal portion of said supporting arm for pivotal movement around a vertical axis, a non-rotatable tubular casing comprising two rigidly connected axially spaced sections with one of said sections pivotally mounted on the end of said supporting arm vertical portion for pivotal movement around a first horizontal axis, a shaft rotatably mounted in both sections of said tubular casing for pivotal movement about a second horizontal axis, a frame secured to said rotatable shaft and extending on the side of said pivotal mounting opposite from said tubular casing, a lamp mounted on said frame, a handle on said rotatable shaft between said sections of the tubular casing for rotating said frame around said second horizontal axis, a threaded tube having one end pivotally mounted on the lower vertical portion of said supporting arm on the side toward said tubular casing, a screw shaft pivotally supported on the other of said sections and received within said threaded tube for tilting said frame about said first horizontal axis, a handle on one end of said screw shaft for rotating said shaft, a compression spring having one end engaging an element on said supporting arm vertical portion at a point spaced from said pivotal mounting and with the other end engaging said other section.

2,944,144
ILLUMINATED POCKET LEVEL
Paul H. Naylor, Rte. 5, Fayette, Mo.
Filed Feb. 14, 1958, Ser. No. 715,310
2 Claims. (Cl. 248—6.44)



1. An illuminated bubble level comprising an elongated substantially solid conductive body having first and second sides, a top side, and first and second ends, a relatively large rectangular chamber formed in said body midway between the ends thereof and opening to said first side, said chamber having a back wall at said second side, said chamber having end walls, a top wall, and a bottom wall, a longitudinal groove formed in said top side in registry with the chamber, an outwardly tapered bore formed in the chamber top wall and opening to said

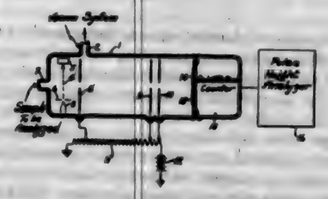
groove, first and second transverse openings extending through said body at points spaced between said chamber and said first and second ends of the body, outwardly tapered bores formed in the body and extending between the chamber end walls and related transverse openings, diametrical bubble tubes fixed in and extending across said transverse openings at differing angles, a horizontal bubble tube secured in and extending along said groove, electric bulbs engaged in said bores for illuming the bubble tubes when energized, and energizing means within said chamber, a cover plate removably secured to said first side of the body across the open side of the chamber, and individually operable switches having stationary contacts within said chamber connected to the energizing means and severally connected to one side of the bulbs, the other sides of the bulbs being grounded to the body, and movable manual contacts mounted on and insulated from the cover plate for selective engagement with stationary contacts.

2,944,145
DOME AND READING LAMP ASSEMBLY
George D. Legge, Farmington, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 7, 1958, Ser. No. 753,694
9 Claims. (Cl. 240—7.35)



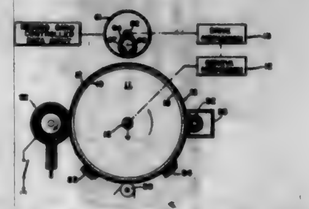
1. In combination with a lamp body having an opening therein, a lens mounting assembly; said assembly comprising a lens support including a lens seat rotatably mounted on said body to form a closure for said body opening, said support being selectively rotatably adjustable about a fixed axis, a light-concentrating lens mounted on said seat with the optical axis of said lens at a fixed angle to the axis of rotation of said support, and means retaining said lens on said seat and holding said lens support on said body, said retaining means including an annular retaining ring secured to said support, a plurality of spaced spring fingers on said retaining ring yieldably engaging said body, and means secured to said retaining ring and maintaining said lens on said seat.

2,944,146
MASS SPECTROMETER
Warner W. Schultz, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 13, 1955, Ser. No. 501,111
9 Claims. (Cl. 250—41.9)



1. A mass spectrometer comprising, means for ionizing a material to be analyzed, means for accelerating the resulting ions in a single beam, said ions being accelerated to the same energy level, means for converting the accelerated ions from said single beam into corresponding electrical pulses having amplitudes that are respectively proportional only to the masses of the respective ions, and means for analyzing said electrical pulses to determine the nature of the ionized material.

2,944,147
XEROGRAPHIC PRINTER
Wallis D. Bolton, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application Dec. 21, 1955, Ser. No. 554,513. Divided and this application Sept. 23, 1957, Ser. No. 685,741
2 Claims. (Cl. 250—49.5)



1. In a xerographic printer comprising a xerographic member having an insulating surface layer adapted to have electrostatic images formed thereon, means for producing electrostatic images on said layer comprising in combination a continuously rotatable conductive cylinder having a plurality of columns of different beam shaping stencil characters; means located within said cylinder for producing a continuous electrostatic field discharge beam substantially coextensive with and radiating outward said cylinder for passage through said stencil characters; means for controlling the formation of discrete select character shaped electrostatic beams from said continuous beam during transit of said columns of said stencil characters including a plurality of pairs of electrodes equal in number to the number of columns of said stencil characters, each of said pairs of electrodes being located in spaced apart relation intermediate said continuous beam producing means and said cylinder at positions corresponding to said columns, and control means connected to said pairs of electrodes normally operable for directing said continuous beam onto said electrodes and selectively operable for deflecting select portions of said continuous beam onto corresponding select areas of said cylinder for passage through select stencil characters.

2,944,148
APPARATUS FOR INVESTIGATING EARTH FORMATIONS
Frank F. Johnson and Jay Tittman, Danbury, Conn., assignors, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed July 2, 1954, Ser. No. 441,064
12 Claims. (Cl. 250—71)

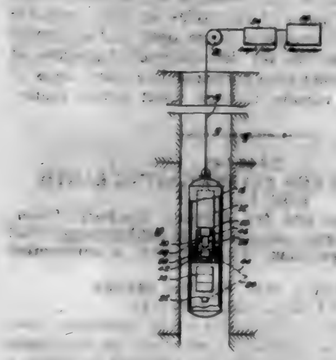
4. Apparatus for investigating earth formations traversed by a well or borehole comprising: an instrument adapted to be passed through the borehole including a wall-engaging face and an extension tilted relative to a longitudinal line of said wall-engaging face in a direction toward the axis of the borehole, and said instrument having a bore substantially aligned with said extension; means for maintaining said wall-engaging face in engagement with the sidewall of the borehole; a source of gamma radiation supported within said instrument in the vicinity of said wall-engaging face; and a detection system including a gamma-ray-responsive scin-

tillation device supported within said bore of said instrument in the vicinity of said wall-engaging face and in longitudinally spaced relation from said source relative to



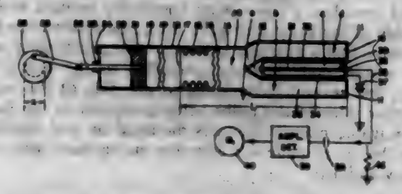
the axis of the borehole, and a photo-electric element optically coupled to said gamma-ray-responsive device and supported in part, within said bore of said instrument and extending into said extension of said instrument.

2,944,149
RADIOACTIVITY EARTH EXPLORATION
Gerhard Herzog, Houston, Tex., assignor to Texaco Inc., a corporation of Delaware
Original application Aug. 9, 1951, Ser. No. 240,992, now Patent No. 2,782,318, dated Feb. 19, 1957. Divided and this application Oct. 9, 1956, Ser. No. 614,970
2 Claims. (Cl. 250—71)



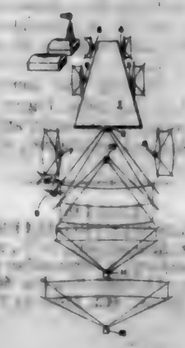
1. The method of logging earth formations traversed by a bore hole which comprises passing through said hole a source of gamma rays to bombard said formations and cause gamma rays to be scattered thereby measuring the intensity of scattered gamma radiation entering the hole from the traversed formations, the measurement being made within a zone spaced from said source and having a vertical dimension not more than one sixth the distance between the source and said zone.

2,944,150
MEANS FOR MODULATING AND DETECTING NEUTRON FLUX
Frank S. Replogle, Jr., Arlington, Mass., and Donald A. Gordon, York, Maine, assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 17, 1954, Ser. No. 437,596
12 Claims. (Cl. 250—83.1)



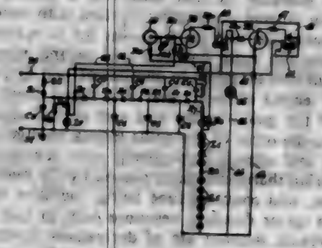
1. A device for measuring the intensity of slow neutrons passing through a space comprising, an ionization chamber responsive to passage of said neutrons to produce an ion current therefrom, means energizing said chamber at a direct current polarization, an absorbing medium surrounding said chamber including a boron constituent selectively absorptive of slow neutrons, means impressing upon said medium a variation of pressure at a sonic frequency, means separating components of said ion current of direct current nature from components of alternating current nature at said frequency, and means indicative of magnitude of said alternating current representative of the total slow neutron intensity in said space.

2,944,151
INFRARED LANDING SYSTEM FOR AIRCRAFT
Theodore R. Whitney, Whittier, and Averd J. Fairbanks, South San Gabriel, Calif., assignors to North American Aviation, Inc.
Filed Feb. 1, 1955, Ser. No. 485,381
5 Claims. (Cl. 250—83.3)



1. In an infrared landing system for aircraft, a first plurality of infrared beacons radiating vertically in restricted sectors, a second plurality of infrared beacons radiating horizontally in restricted sectors, said vertically and horizontally radiating beacons overlapping to define a common area indicating a correct landing approach, an airborne infrared receiver comprising an infrared-sensitive element, a scanner in spaced relationship with said infrared sensitive element, an oscilloscope, and means for synchronizing the beam sweep of said oscilloscope with the sweep of said scanner and the intensity of said oscilloscope connected to be controlled by said infrared-sensitive element.

2,944,152
FIRE DETECTION
John B. Johnson, Maplewood, and Neal T. Williams, Bloomfield, N.J., assignors, by mesne assignments, to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed June 30, 1958, Ser. No. 749,662
7 Claims. (Cl. 250—83.6)



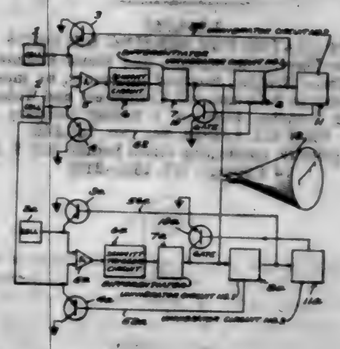
1. In a radiation-detection system; the combination of a Geiger-Mueller tube comprising a sealed vessel made of ultra-violet transmitting material and containing an ionizable gas, a central cathode wire element and a spaced surrounding anode element; a voltage supply circuit for said tube connected between said anode and cathode elements and tending to provide an avalanche discharge between said elements whenever the cathode element is excited by ultra-violet radiation; and means comprising an external condenser connected across said tube and a resistance connected serially in said voltage supply circuit adapted to quench said discharge and limit the same to a single pulse.

2,944,153
ENERGY CALIBRATION SOURCE HOLDER
Walter Brown, White Plains, N.Y., assignor to North American Philips Company, Inc., Mount Vernon, N.Y.
Filed Apr. 4, 1955, Ser. No. 499,154
7 Claims. (Cl. 250—106)



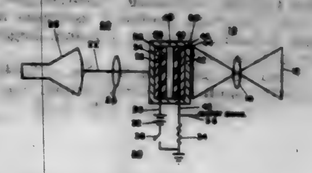
1. An X-ray apparatus comprising an X-ray source, a sample to be irradiated held in a predetermined position to said source, a first support member, a radiation detector mounted on said first support member in a predetermined position with respect to said sample and source, a collimator support member mounted on said first support member in a predetermined position with respect to said detection means, the X-rays emanating from said X-ray source having a given axis forming a path between said sample and said detection means, said collimator support member having a first precise reference mounting surface and a second precise reference mounting surface, a calibration source for said detector removably supported in said collimator support member, said source comprising a source holder member slidable in said collimator support member having a first precise reference surface slidable into abutting relationship with said first precise reference surface of said collimator support and a second precise reference surface slidable into abutting relationship with said second precise reference surface of said collimator support, a radiating source constituted of radioactive isotopes emitting X-rays of predetermined energy positioned in fixed relationship to said first and second precise reference surfaces of said source holder and thereby being adapted to emit radiation into the detector along said given X-ray path axis.

2,944,154
PHOTOELECTRIC SPEEDOMETER, ALTIMETER AND COURSE INDICATOR
Carl Bosch, New York, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed July 14, 1959, Ser. No. 827,052
6 Claims. (Cl. 250—209)



1. An aeronautical value indicating circuit comprising a pair of photocells adapted to respond to ground radiation, a pulse generator adapted to generate a pulse when its input signal reaches a given value, pulse responsive means connected to said generator and adapted to yield an indication from which said values may be derived, a switch selectively connecting each of said photocells to said generator and timing means connected to receive the output of said generator for controlling said switches, a gate disposed between said pulse generator and said timing means and a second timing means and in control of said gate, said gate being arranged to isolate the first timing means and said pulse generator for a time duration determined by said second timing means.

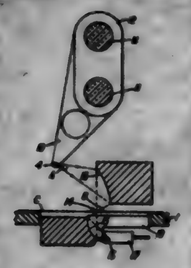
2,944,155
TELEVISION PICKUP TUBE
Edward F. Mayer, Cleveland, Ohio, assignor to Horizons Incorporated, Princeton, N.J., a corporation of New Jersey
Filed Jan. 30, 1957, Ser. No. 637,264
1 Claim. (Cl. 250—213)



A device for converting a light image into an electrical signal corresponding to said light image which comprises: a unitary assembly consisting essentially of a thin photoconductive wafer consisting of a photoconductive core having on each of two of the larger opposed faces respectively a transparent layer and an electrically conductive layer, the thickness of the photoconductive core of said wafer being between 1.25 and 1.75 times the average carrier range for the specific photoconductive material; means to impinge a light image through one of said transparent layers and onto one surface of the pho-

toconductive core and to thereby move electrical charges through the major portion of the thickness of said photoconductive core; and means to scan the opposed surface of the photoconductive wafer by means of a light beam projected through the second of said transparent layers and onto the second of the larger opposed surfaces of said photoconductive core; means for electrically connecting a source of D.C. potential to each of said electrically conductive layers and thereby impressing said D.C. potential across said photoconductive wafer while it is being illuminated and while it is being scanned and means to conduct an output signal from the device.

2,944,156
APPARATUS FOR SENSING RECORDS
John Colin Davy, Warlingham, and Victor Eugene Bateman, Three Bridges, England, assignors, by mesne assignments, to International Computers and Tabulators Limited, London, England, a British company
Filed Jan. 9, 1959, Ser. No. 785,840
Claims priority, application Great Britain July 9, 1958
14 Claims. (Cl. 250—219)



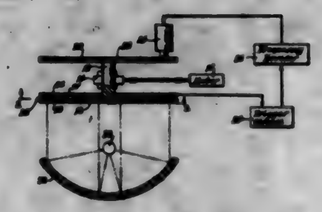
1. Apparatus for sensing a record provided with data-indications formed by perforations or radiant energy responsive marks, comprising photo-electric devices adapted on activation thereof to produce electric signals, a system of elliptical reflectors to direct a beam of radiant energy on to said devices to effect activation thereof, one focus of at least one of said reflectors being located on the path along which a record to be sensed is movable, and a straight resistance wire located at one focus of the first reflector of said system and adapted on connection to a source of electrical potential for heating to a temperature providing maximum emissivity at a wave length approaching that for which said photo-electric devices have maximum sensitivity.

2,944,157
SHAFT-POSITION DETERMINING APPARATUS
James Hay Loudon McAusland, Port-Glasgow, and William Nock, Saltcoats, Scotland, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Nov. 22, 1954, Ser. No. 470,449
Claims priority, application Great Britain Nov. 30, 1953
16 Claims. (Cl. 250—233)



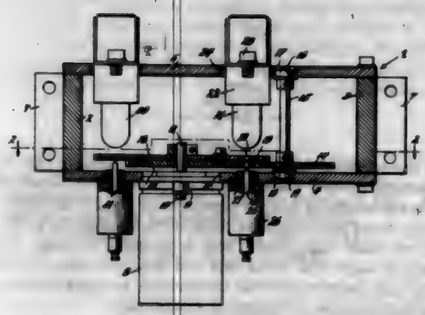
1. Apparatus for detecting the movement and position of a rotatable shaft, comprising means for producing a first signal and a second signal, means operative upon rotation of said shaft for causing the first signal to begin before the second signal during rotation of the shaft in one direction and for causing the second signal to begin before the first signal during rotation of the shaft in the opposite direction, said last mentioned means including means for causing overlap to a predetermined extent of only the earlier occurring one of said signals with the later occurring one of said signals, and a counting tube having a plurality of first elements, a second element disposed in current conducting relation with each of said first elements and two guide means for transferring current conduction from between said second element and one of said first elements to another of said first elements and said second element, said first signal being coupled to one of the guide means and said second signal being coupled to the other of the guide means, said guide means receiving said signals respectively with substantially the same overlap therebetween as caused by the overlap causing means, said counting tube being operative to reversibly count up or down in response only to said first and second signals, without aid of derivatives thereof, in accordance with the order of the first and second signals as received by said two guide means, the arrangement being such that rotation of said shaft in one direction causes transfer of current conduction to an adjacent one of said plurality of first elements in one direction, while rotation of the shaft in said opposite direction causes transfer of current conduction in an adjacent one of said plurality of first elements in another direction.

2,944,158
PULSE GENERATOR
Wilfred K. Brown, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 20, 1956, Ser. No. 629,546
11 Claims. (Cl. 250—233)



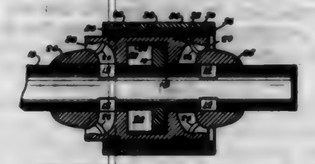
1. A device for generating electrical pulses responsive to the rotational position of a shaft comprising an assembly of equally spaced photocells disposed equidistant from a common point having a first ring of electrically conducting material having a plurality of equally spaced radial ribs extending outwardly therefrom, a second electrically conducting ring having an equal number of equally spaced radial ribs extending inwardly therefrom, the second ring being disposed coaxially about the first ring and the ribs of the second ring being disposed centrally between the ribs of the first ring and spaced therefrom, and a mass of light sensitive semiconductor material disposed between the confronting ribs of the two rings and in contact with said ribs, a disc adapted to be mechanically coupled to the shaft and disposed adjacent to the photocell assembly having transparent sectors equal in number to the ribs of the rings and disposed in a circular orbit confronting the ribs of the photocell assembly and separated by opaque sectors, and means disposed on the side of the disc opposite the photocell assembly to illuminate the disc, whereby the photocell assembly responds to illumination when the transparent sectors of the disc are aligned with the regions between the ribs of the photocell assembly.

2,944,159
DIFFERENTIAL ACTION SYNCHRO TRANSDUCER
Martin J. Leff, Bronx, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Filed Sept. 22, 1959, Ser. No. 841,575
7 Claims. (Cl. 250—233)



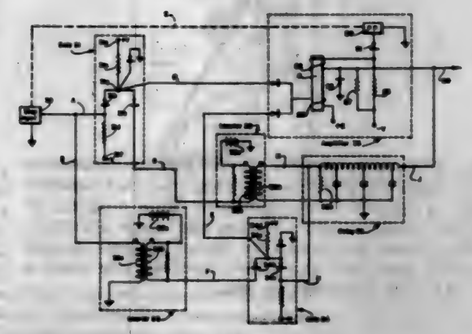
1. A differential action transducer of the character described comprising an input gear, means by which said input gear is rotated, a follower gear having a greater number of teeth than said input gear and which is adapted to be rotated by said input gear, an aperture through one of said gears, a disk secured to the other of said gears for rotation therewith, said disk overlying a portion of said one of said gears and being provided with an aperture, said gear aperture and said disk aperture being adapted to register with each other once every predetermined number of revolutions of said input gear, a light source disposed on one side of said gears and disk, a photo diode disposed on the opposite side of said gears and disk, said light source and said diode being disposed in horizontal alignment with each other and the registration point of said gear and disk apertures, said light source being adapted to project light through said apertures and onto said photo diode each registration of said apertures, and said photo diode being operative to impart an electrical pulse to a receiving mechanism each time light impinges thereon.

2,944,160
OSCILLATORY MOTOR-GENERATOR
Charles B. Dickinson, 1307 Kennamar Drive, Huntsville, Ala.
Filed May 16, 1958, Ser. No. 735,813
13 Claims. (Cl. 290—1)



13. An oscillatory motor generator comprising, in combination, a pressure tube, an oscillating core section movably mounted on said pressure tube, a field magnet mounted on said pressure tube intermediate said spaced apart exhaust ports and interior of said oscillating core section, exhaust port control means mounted on said oscillating core section, and oppositely directed fluid reaction ports in said oscillating core section adjacent said exhaust port control means for providing alternating oppositely directed thrusts to said oscillating core section to impart oscillatory motion thereto.

2,944,161
MAGNETIC COUNTER CIRCUITS
John Prosper Eckert, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 6, 1954, Ser. No. 448,286
31 Claims. (Cl. 307—88)

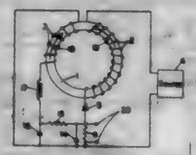


6. In a magnetic counter circuit; a step input; a first gate controlled by the step input and including a control wire; said first gate producing an output therefrom when pulses appear simultaneously on the step input and the control wire; an inverter for producing an output when there is nothing on its input and for omitting an output when there is a pulse on its input; said step input being connected to the input of said inverter; a second gate controlled by the output of the inverter; the second gate having a control wire and arranged to give an output when said inverter gives an output simultaneously with a pulse on said control wire; a magnetic amplifier that produces an output pulse following each input pulse; said magnetic amplifier comprising a saturable core, a power winding on the core, means for supplying the power winding with spaced power pulses, means for resetting the core during the spaces between power pulses, and a control winding for cancelling the effect of the resetting means; means for energizing the control winding to cancel the effect of the resetting in response to an output from either of said gates; a delay element connecting the output of the power winding to the control wire of said second gate; and an inverter connecting the delayed output of the amplifier to the control wire of the first gate; the last-named inverter producing an output therefrom in the absence of an input thereto and producing no output therefrom in the presence of an input thereto; said delay line, amplifier, inverter and gates being so constructed and arranged that the first step input pulse will flow through the first gate and prevent resetting of the core whereby there will be a large output from the amplifier which will be delayed and caused to actuate the second gate which will produce a current flow which will again prevent resetting of the core, this recycling continuing until the next step input pulse blocks output from the second gate.

2,944,162
MAGNETIC OSCILLATOR
Bock M. Chin, Boston, Mass., assignor to General Electric Company, a corporation of New York
Filed Mar. 4, 1957, Ser. No. 643,685
6 Claims. (Cl. 307—88)

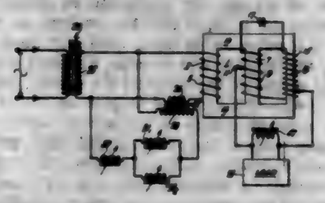
1. Apparatus for producing periodically varying electrical signals comprising a saturable magnetic core, first and second winding means disposed in inductive relationship with said core, a load impedance, means impressing periodically varying signals across the series combination of said first winding means and said impedance to cause

unidirectional current conduction therethrough at a first repetition rate, a capacitor, means applying to said capacitor unidirectional voltages developed across said load impedance, an inductance, and means coupling said inductance and said second winding means serially in a discharge path for said capacitor, said second winding means



being disposed to produce in said core magnetomotive force responsive to discharge current from said capacitor which is opposed to magnetomotive force produced by said first winding means, whereby said core is alternately saturated and unsaturated to control currents through said load impedance at a second repetition rate which is less than said first repetition rate.

2,944,163
AUTOMATIC CONTROL APPARATUS
Philip J. Walsh, 239 Phelan Ave., San Francisco, Calif.
Filed Mar. 24, 1958, Ser. No. 723,562
6 Claims. (Cl. 307—88)



1. In combination with a ferro-resonant transformer the core of which has a non-rectangular hysteresis loop and having an input winding and an output winding, the voltage whereof under load jumps from low to high relative values with increase of voltage across said input winding above one critical value and breaks from said high to said low value with decrease of voltage across said input winding below a lower critical value, means for supplying and controlling a load on said transformer comprising a substantially constant-voltage alternating current source, an auxiliary transformer having a secondary winding connected in series with said input winding across said source and a primary winding, and variable impedance means connected in series with said primary winding and supplied by said source, whereby the algebraic sum of the voltage from said source and said secondary winding is above said one critical value, for one value of said variable impedance and below said lower critical value for another value of said variable impedance.

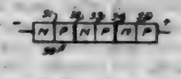
2,944,164
ELECTRICAL CIRCUITS USING TWO-ELECTRODE DEVICES
Alexander Douglas Odell and Henry Frederick Hartley, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed May 13, 1954, Ser. No. 429,628
Claims priority, application Great Britain May 22, 1953
3 Claims. (Cl. 307—88.5)

1. An electrical circuit which comprises two gap diodes, each of which has two stable states, one being a high current or "on" state and the other being a low current or "off" state, interconnections between said diodes including means responsive to either one of said diodes assuming its "on" state when the other one of said diodes is in its "on" state for causing said other diode automatically to assume its "off" state, means for supplying pulses to each said diode of such polarity that a pulse applied to a diode in its "off" state causes that diode to assume its "on" state, a source of voltage supply, a rectifier connected be-



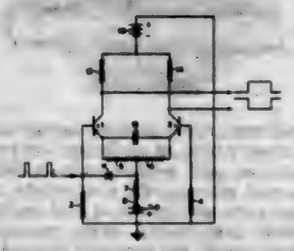
tween the anode of each said diode and the positive side of said voltage source, each said rectifier being so poled as to be in the direction of easy conductivity for current flowing away from said source, a pulse input connection to the anode of each said diode, and a resistor between the cathode of each said diode and the negative side of said source, said interconnections comprising a capacitor connected between the cathodes of said diodes.

2,944,165
SEMICONDUCTIVE DEVICE POWERED BY LIGHT
Otmar M. Stuetzer, Hopkins, Minn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 15, 1956, Ser. No. 622,585
2 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



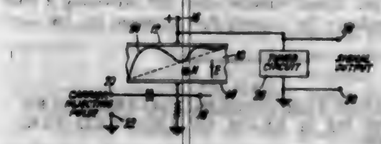
1. A semiconductive device having a plurality of alternate regions with opposite types of conductivity, said device having an emitter junction, a collector junction, an input electrode, a load junction and two additional junctions, means for illuminating the emitter junction and the two additional junctions to provide power and bias to said device, said input electrode being connected to a region having one conductivity and an output means connected to a region having the other type of conductivity.

2,944,166
BISTABLE TRIGGER CIRCUIT
Heinz Andries Rodrigues de Miranda, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 19, 1957, Ser. No. 684,942
Claims priority, application Germany Oct. 9, 1956
4 Claims. (Cl. 307—88.5)



1. A bistable trigger circuit arrangement comprising two transistors of the current amplifying type, each transistor having base, emitter and collector electrodes, each of said emitter electrodes being connected to a first point of constant potential through an emitter resistor which comprises a first portion connected to an associated respective emitter electrode and a second portion connected to said first point of constant potential, each of said collector electrodes being connected to a source of supply voltage through a collector resistor, each of said base electrodes being connected solely to a second point of constant potential through a base resistor, means for intercoupling said transistors comprising a capacitor connected across said emitter electrodes, the second portion of said emitter resistor being common to both emitter electrodes, said arrangement causing only one transistor at a time to remain conductive while the other is non-conductive.

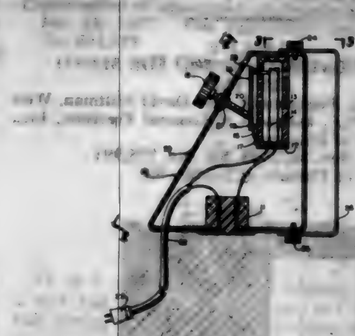
2,944,167
SEMICONDUCTOR OSCILLATOR
Herbert F. Mataré, West End, N.J., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 21, 1957, Ser. No. 691,213
8 Claims. (Cl. 307—88.5)



1. In combination, a crystalline semiconductor body exhibiting a high degree of periodicity and containing a small amount of impurities selected from the class consisting of donor and acceptor impurities; means to cool said body to a low temperature not exceeding the temperature of liquid nitrogen; means to establish mutually orthogonal, time-invariant magnetic and electric fields within said body; means to produce charge-carriers having a predetermined carrier relaxation time τ within said body; resonant means tuned to a predetermined frequency ω_0 and coupled to said body, said frequency being at least equal to the reciprocal of said relaxation time and being proportional to the intensity of said invariant magnetic field whereby said carriers are accelerated in spiral orbits in a plane perpendicular to the direction of the magnetic field and induce an alternating electromagnetic field of said frequency in said resonant means, the electric vector of the said induced field during one half cycle of said alternating field pointing in the same direction as the electric vector of said time-invariant field and during the next half cycle pointing in opposite direction.

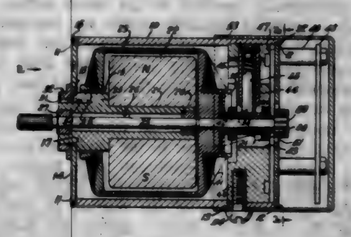
2,944,168
CONTROL DEVICE FOR FANS
William D. Hall, 904 Ring Bldg., Washington, D.C.
Filed May 31, 1957, Ser. No. 662,683
4 Claims. (Cl. 307—117)

1. A thermostatic control device adapted for attachment to the grill of a ventilating device comprising a temperature sensitive switching unit, an electrical socket, a plug, wires connecting the plug, switch and socket in series, a casing surrounding and supporting said switch, said casing having a front side and a rear side, a control knob on the front side of the casing and mechanically in engagement with said switching unit to effect adjustment thereof whereby to vary the temperature setting thereof, and clamping means carried by the casing for clamping said rear side of the casing against the grill of a ventilating device comprising a member extending away from said rear side and transverse thereto, said member having a hook portion that may be hooked over a part of a grill of a ventilating device and then moved inward toward the rear side of the casing to thereby clamp the rear side of the casing against the grill, said clamping means including adjustable means permitting the hook portion to be moved at will toward and away from the rear side of the



casing so as to accommodate grills of different thickness, said adjustable means being operable to hold the hook portion in position after it has been moved to a position at which it clamps the casing against the grill.

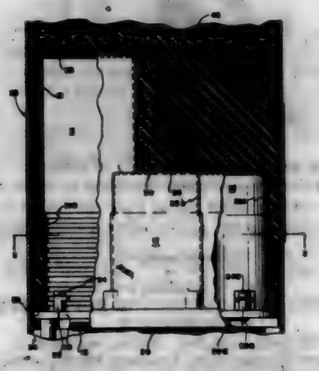
2,944,169
MOTOR AND GOVERNOR SUPPORTING ASSEMBLY
Louis F. Schmidt, Lansing, Mich., assignor to Abrams Instrument Corporation, Lansing, Mich., a corporation of Michigan
Filed July 5, 1956, Ser. No. 595,883
4 Claims. (Cl. 310—83)



4. A motor and governor supporting assembly, comprising a tubular housing having counterbores at the opposite ends thereof, a governor supporting unit including spaced apart mounting plates, one of which is received in the counterbore at one end of said housing, tab formations on said housing turned over on said one mounting plate to hold said unit from relative longitudinal movement, said one plate having a notch receiving one of said tab formations to hold said unit from relative rotary movement, a motor mounting plate received in the counterbore in the other end of said housing, said last mentioned plate having an opening in the longitudinal axis of said housing, a support member disposed within said housing in said longitudinal axis and having a cylindrical threaded portion on its one end extending through the opening in said motor mounting plate, a nut on said portion turned up into contact with the surface of said motor mounting plate to lock said support member thereto, a motor shaft having a rotary bearing in said support member and projecting at its one end to and through said one plate of the governor supporting unit, said one plate being in non-supporting relation to said shaft, driving means on the projecting end of said shaft, motor means on said support member in rotary driving relation to said shaft, the said opening in said motor mounting plate having a key slot in the periphery thereof and

said support member being formed with a similar registering slot, and a key interfitting with said slots and holding said member from rotation relatively to said motor mounting plate.

2,944,170
ENCAPSULATING METHOD FOR SERVO SYSTEMS
Peter M. Knapp, Pequannock, and David Mittman, West Englewood, N.J., assignors to General Precision, Inc., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,991
11 Claims. (Cl. 310—89)



1. In combination with a servo system, including a servo motor and a plurality of auxiliary servo components mounted substantially parallel to the servo motor, with a base plate supporting the servo motor and the auxiliary servo components, said servo motor and the auxiliary servo components each having a rotatable shaft incorporated therewith and projecting through the base plate, and means attached to the rotatable shaft of each of said servo components adapted to transfer the rotation of the shaft of the servo motor to the shafts of the auxiliary servo components, a relatively thin hollow shell formed of a pliable, readily expansible plastic material, fitted to the outer surfaces of the portion of the servo motor and the auxiliary servo components projecting above the base plate, said hollow shell having a base section integral therewith adapted to engage the surface of the base plate directed toward the projecting portion of the servo components, a portion of the shell extending beyond the base section thereof being adapted to be fitted around the base plate, said shell being adapted to completely enclose the projecting portion of the servo motor and the auxiliary servo components, supported by the base plate.

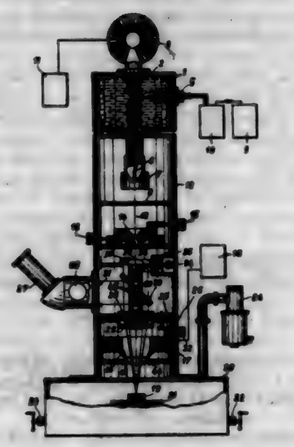
2,944,171
INTERMEDIATE RING SQUIRREL CAGE ROTOR
Philip L. Alger, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 4, 1957, Ser. No. 632,528
9 Claims. (Cl. 310—211)

1. An intermediate ring squirrel cage rotor compriaing a shaft supporting a plurality of punchings having slots, said punchings comprising a series of sections alternately disposed along the shaft and including first sections having a plurality of closed conductor slots of the same configuration throughout the length of the rotor spaced concentrically at equal distances from the shaft and terminating short of the peripheral surface of the punchings, second sections of punchings interposed between said first sections and comprising closed window slots each having an opening of sufficient area to extend diagonally across at least a portion of two adjacent conductor slots formed in said first sections of punchings, the opening in each of said slots being defined by outer and inner walls joined with side walls and wherein said outer and inner walls lie in planes concentric with the shaft, and a cast secondary winding in said rotor completely filling the slots of said



first and second sections so as to provide a secondary winding including conductor bars extending the length of said rotor and all electrically interconnected with each other by an intermediate ring of minimum impedance appearing in the closed window slots for providing a path of low impedance for current flow between the bar conductors.

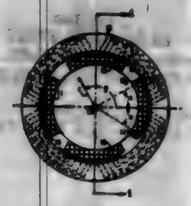
2,944,172
APPARATUS FOR WORKING MATERIALS BY MEANS OF A BEAM OF CHARGED PARTICLES
Wolfgang Opitz, Aalen, Wurttemberg, Helmut Spruck, Koenigsbronn, Wurttemberg, and Karl Heinz Steigerwald, Heidenheim (Brenz), Wurttemberg, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany
Filed Aug. 26, 1959, Ser. No. 836,226
Claims priority, application Germany Aug. 30, 1958
16 Claims. (Cl. 313—7)



1. In an apparatus for working materials by means of a beam of charged particles consisting of a high-vacuum vessel containing the beam producing system, means for forming and focussing the produced beam and a working space in which the object to be worked is arranged, a device for obeerving said object, said device comprising a microscope of large working distance connected to said high-vacuum vessel, said microscope having, as seen in the direction of light, a parallel ray path behind its objective lens, said objective lens being separated from the microscope stage and mounted in said high-vacuum vessel, an X-ray protective glass arranged in the wall of said vessel in front of said microscope stage, and means for

transmitting the light rays originating from said object after passing through said objective lens into said microscope stage.

2,944,173
CATHODE-RAY TUBE SCANNING APPARATUS
Alan Haseltine, Maplewood, N.J., assignor to Haseltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed July 17, 1958, Ser. No. 749,275
4 Claims. (Cl. 313—77)



1. Cathode-ray tube scanning apparatus for providing augmented beam deflection, comprising: deflection winding means for scanning the beam; magnetic core means encompassing the deflection means; means for supplying a direct current; and means including a four-pole auxiliary winding responsive to the direct-current supply means and disposed between the core means and the tube for providing a uniformly changing magnetic field across the beam-deflection area, said auxiliary winding having its longitudinal sides distributed substantially sinusoidally about the tube.

2,944,174
ELECTRONIC IMAGE SYSTEM AND METHOD
Douglas W. Taylor, Forest Grove, Oreg., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Continuation of abandoned application Ser. No. 517,332, June 22, 1955. This application Sept. 18, 1958, Ser. No. 762,201
13 Claims. (Cl. 313—77)



1. In a television receiving system which includes a cathode-ray image reproducer having means for developing a cathode-ray beam therein and means for directing such a beam to a target area, the combination of deflection means for establishing a pair of mutually perpendicular varying deflection fields in the reproducer to scan the beam in a vertical direction and in a horizontal direction thereby to reproduce an image on the target area having a vertical dimension and a horizontal dimension, with the image as produced by said deflection means alone being inverted in the vertical direction, and a magnetic lens including magnet means for producing a plurality of fixed fields within the reproducer between the deflection fields and the target area, said fixed fields increasing in intensity from zero at the center of the tube, said magnet means having poles of polarities and strengths such that said fields have a sense and magnitude to invert and magnify the vertical dimension of the reproduced image and to magnify the horizontal dimension of the reproduced image in its original direction.

2,944,175
TELEVISION RECEIVER
Douglas W. Taylor, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Continuation of abandoned application Ser. No. 635,027, Jan. 18, 1957. This application Mar. 26, 1959, Ser. No. 802,259
17 Claims. (Cl. 313—77)



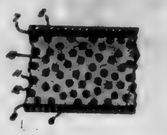
11. In a system including a cathode-ray tube having a neck and a beam source at one end of the neck and also having a target area at the other end of the neck, the combination therewith of magnifying magnetic lens means spaced along the neck from the beam source, a horizontal yoke between said lens means and said source, focus-compensating magnetic lens means positioned between said horizontal yoke and said source, and a vertical yoke positioned between said focus-compensating lens means and said source.

2,944,176
RADIATION DETECTOR
Nicholas Anton, 1226 Flushing Ave., Brooklyn, N.Y.
Filed July 13, 1953, Ser. No. 367,669
11 Claims. (Cl. 313—93)



1. A radiation detector comprising a conductive casing having an opening, a radiation-permeable non-conductive window sealed across said opening, a conductive coating on said window and insulated from said casing at its periphery, and a conductive support for an inner portion of said window connecting said coating to said casing.

2,944,177
ELECTROLUMINESCENT CELL AND METHOD OF MAKING THE SAME
William W. Piper, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 28, 1958, Ser. No. 731,367
13 Claims. (Cl. 313—108)



1. An electroluminescent cell exhibiting improved maintenance characteristics and comprising; a layer of non-vitreous dielectric material having suspended therein a plurality of discrete spaced glass particles containing particles of an electroluminescent phosphor; and a pair of electrically conductive layers, one of which is light transmissive, contacting different surface portions of said dielectric layer.

2,944,176
SPARK PLUGS
Thomas S. Schaub, % J. S. Palmer, Evans Road RI, Ambler, Pa.
Filed Sept. 21, 1956, Ser. No. 611,249
1 Claim. (Cl. 313—141)



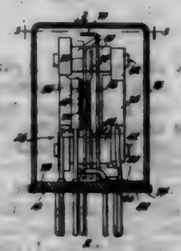
A spark plug comprising a body portion threaded for insertion into a cylinder block and having a chamber opening through its forward end, an insulator sealed in said chamber, a main electrode of substantially uniform diameter throughout its length sealed in said insulator and terminating at its forward end in a flat portion, and a ground electrode in the form of a bar connected at one end to the forward end of said body portion and extending laterally across said opening in spaced relationship with said flat portion of the main electrode and terminating a slight distance beyond said main electrode, said ground electrode having a hole of aproximately twenty five thousandths of an inch through it in longitudinal alignment with the main electrode and of less diameter than that of the main electrode at its flat forward end.

2,944,179
GASEOUS DISCHARGE DEVICE
James M. Lafferty, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 17, 1957, Ser. No. 690,847
10 Claims. (Cl. 313—214)



1. A gaseous electric discharge device for maintaining a constant terminal voltage over a substantial range of current through the device comprising: a cup-shaped elongated metallic member having a deep cylindrical bore therein terminating in a smoothly curved concave surface forming an interior end wall therefor, the interior surface of said bore and said end wall providing a cathode surface for the device; a metallic end wall member hermetically sealed to the open end of said cup-shaped member in insulating relation therewith and supporting an elongated rod-like anode concentrically within said cylindrical bore, said anode terminating short of the smoothly curved end wall to provide a breakdown gap which is very small with respect to the radial distance between said anode rod and the interior surface of said cylindrical bore; and a highly purified noble gas atmosphere within said device.

2,944,180
ELECTRON TUBE
William R. Wheeler, Saratoga, Calif., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Apr. 22, 1959, Ser. No. 808,061
4 Claims. (Cl. 313—241)

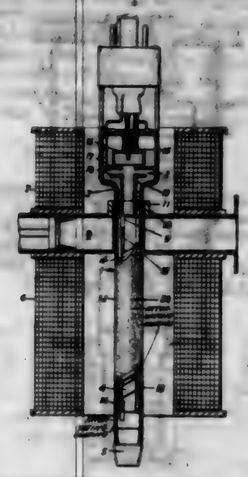


2. An electron tube having a metallic envelope and electrode elements therein which comprise at least a cathode, a control grid, a suppressor grid and an anode, said suppressor grid being in the form of a plate interposed between the control grid and the anode and apertured to allow electron flow from cathode to anode, said plate extending in all directions beyond the lateral and longitudinal dimensions of the other electrode elements and close to the inner walls of the metallic envelope and an electrical connection between said plate and envelope.

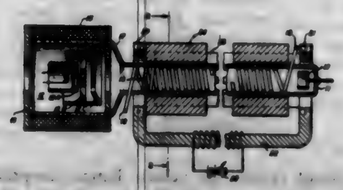
2,944,181
ELECTRON VELOCITY MODULATION APPARATUS
Douglas Cecil Rogers, Aldwych, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed May 12, 1955, Ser. No. 507,949
Claims priority, application Great Britain Aug. 5, 1954
4 Claims. (Cl. 315—3.5)

1. A backward wave oscillator tube comprising an evacuated envelope, an electron gun at one end of the said envelope, an electron collector electrode at the other end of the envelope, a helix surrounding the electron beam path between the electron gun and the collector electrode, coupling means at the electron gun end of the helix for transferring electromagnetic wave energy therefrom to a utilization load, an impedance matching termination at the other end of the helix, and a film of resistive material positioned about the said helix at a distance Δr from the surface of the slow-wave structure such that $\gamma\Delta r$ lies in the range 2.0 to 3.0 at the desired frequencies of operation of the tube, where γ is equal to $2\pi/\lambda_g$, λ_g being the wavelength of the mid-band frequency of the desired band of operation to prevent growth of a forward travelling wave at a lower frequency

than the desired oscillations while not substantially attenuating the said desired oscillations, said film extending along the greater part of the axial length of said helix.



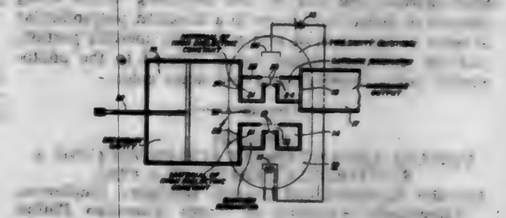
2,944,182
BEAM FOCUSING SYSTEM
William W. Rigrod, Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 13, 1953, Ser. No. 773,612
9 Claims. (Cl. 315—3.5)



1. In an electron discharge device, an electron gun for forming and projecting a cylindrical electron beam having transverse and longitudinal velocity components, a collector for collecting said electron beam, and means for producing a focusing field about said electron beam which is of substantially uniform strength in the longitudinal sense of said electron beam and which is spatially alternating in the circumferential sense of said electron beam, said means surrounding said electron beam and extending substantially the entire distance from said electron gun to said collector.

2,944,183
INTERNAL CAVITY REFLEX KLYSTRON TUNED BY A TIGHTLY COUPLED EXTERNAL CAVITY
Jerome Drexler, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 25, 1957, Ser. No. 636,261
15 Claims. (Cl. 315—5.46)

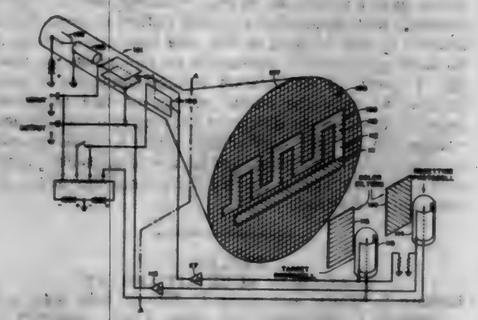
1. An electron discharge device of the klystron type comprising means for projecting a stream of electrons, a resonant cavity having a pair of electron-permeable members forming a portion of the walls thereof and positioned in the path of said stream of electrons, means for extracting output power from said resonant cavity, means for tightly coupling an external secondary resonant cavity



to said first-mentioned resonant cavity remote from the power output, said last-mentioned means including a coupling iris of a high dielectric constant material, and means for tuning said secondary resonant cavity to vary the frequency of said discharge device.

2,944,184
WITHDRAWN

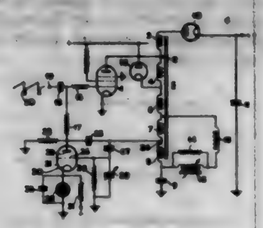
2,944,185
ELECTRONIC SYSTEM
Harold D. Goldberg, 11 Edna Place, New York, N.Y., and Milton I. Goldberg, 3336 Hull Ave., New Rochelle, N.Y.
Filed May 2, 1956, Ser. No. 582,271
21 Claims. (Cl. 315—8.5)



1. An electronic apparatus comprising a cathode ray tube having means for producing an electron beam, a pair of deflecting means for deflecting said beam in respective first and second independent directions and a fluorescent screen adapted to produce light of at least two different color components in response to impingement of said beam upon said screen, a pair of photoelec-

tric devices, each respectively responsive to light of only one of said color components, a mask between said screen and said devices and having a pair of apertured portions, each portion having a filter therein adapted to pass light of a respective one of said color components, and means coupling each of said photoelectric devices to a respective deflecting means, said mask having a rectilinear serpentine aperture portion having a single-color filter therein, and one of said deflecting means being adapted to deflect said beam in a direction perpendicular to some of the edges of said serpentine aperture portion, said one deflecting means being coupled to the photoelectric device responding to said single color.

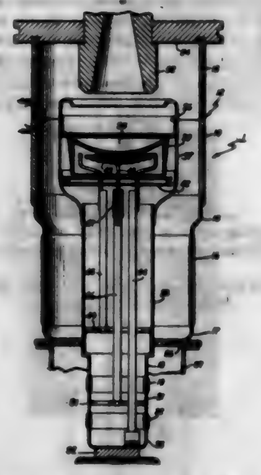
2,944,186
CIRCUIT ARRANGEMENT FOR PRODUCING A SAWTOOTH CURRENT IN A COIL
Antonius Boekhorst and Hendrik Heijligers, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 8, 1957, Ser. No. 657,767
Claims priority, application Netherlands June 15, 1956
3 Claims. (Cl. 315—27)



1. A circuit for producing a sawtooth current in a coil, comprising an amplifier device having a control electrode and an output electrode, a source of signals connected to said control electrode to render said amplifier device periodically conductive, a capacitor, a transformer winding connected in series between said output electrode and said capacitor, whereby a pulsatory voltage is developed in said winding, means coupling said coil to said transformer winding, a normally cut-off rectifying amplifier device having a cathode, an input electrode and an output element, said input electrode and output element being coupled to said winding so that said last-named device is rendered periodically conductive by said pulsatory voltage, a source of stabilization voltage connected to said cathode whereby the output voltage of said rectifying amplifier device is the difference between said stabilization voltage and said pulsatory voltage which is applied to said rectifying amplifier device, and means connected to apply said output voltage of the rectifying amplifier device to said control electrode.

2,944,187
ELECTRON TUBE APPARATUS
Richard L. Walter and James C. Filmer, Palo Alto, and Norman P. Hiestand, Los Altos, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Filed June 14, 1955, Ser. No. 515,317
3 Claims. (Cl. 315—39)

1. In an electron tube apparatus an output window assembly comprising a wave energy permeable material covering an opening, a flanged frame holding said permeable material, a resilient electrical conductor encircling the outer sides of said frame, a gasket encircling said frame adjacent said flange portion, an outer waveguide enveloping said resilient electrical conductor, and means for pressing said outer waveguide snugly against said gasket thereby effecting an air tight electrical conducting



seal between elements which differ greatly in their expansive characteristics.

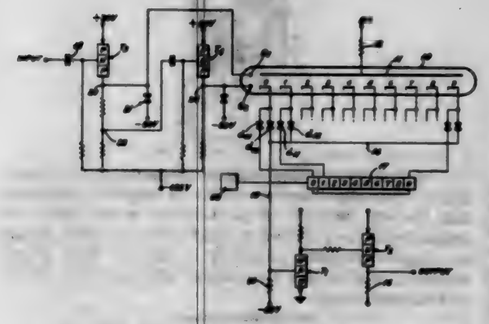
2,944,188
AUTOMATIC LIGHT CONTROLLED HEADLAMP MEANS
Thomas E. Lohr, Detroit, and George B. Horton, Garden City, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 16, 1958, Ser. No. 727,634
2 Claims. (Cl. 315—83)



1. A control system for vehicle lamps comprising, a headlamp control circuit including upper beam and lower beam filaments, a voltage source, a light pick-up unit comprising a casing, first and second lens means mounted in the casing and having axes extending transversely of each other, a first light sensitive device being mounted at the focal point of the first lens means, a second light sensitive device being mounted at the focal point of the second lens means, a support member on the pick-up unit adapted for connection with a vehicle body to position the unit interiorly thereof adjacent the windshield so that the axis of the first lens means extends vertically through the windshield and the axis of the second lens means extends forwardly and horizontally through the windshield, an amplifier coupled with the first light sensitive device and adapted to develop a first control voltage corresponding to the ambient light intensity, relay actuated switching means having an energizing coil connected with said amplifier and having switching contacts connecting said voltage source to said headlamp control circuit when the ambient light intensity is below a predetermined value and disconnecting the voltage source from the headlamp control circuit when the ambient light intensity is above the predetermined value, an amplifier coupled with the second light sensitive device and adapted to develop a second control voltage corresponding to the

light intensity impinging thereon from a direction forward of the vehicle and in a horizontal plane, relay actuated switching means having an energizing coil connected with the last-mentioned amplifier and having switching contacts connecting said voltage source to said upper beam filament when the second control voltage is less than a predetermined value and connecting said voltage source to the lower beam filament when the second control voltage is greater than the last-mentioned predetermined value.

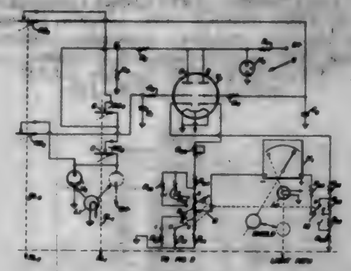
2,944,189
PULSE COUNTING AND CHECKING APPARATUS
Maxwell R. Cannon, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 25, 1958, Ser. No. 744,359
15 Claims. (Cl. 315—84.6)



1. A gas tube pulse counter circuit including a multicathode gas discharge tube, means to advance a plate-to-cathode discharge in said tube from one cathode to another as a function of a pulse input to said circuit, and a read-out means to read out nondestructively from said tube a count stored therein, said read-out means comprising a source of potential, pairs of first and second unidirectional current conducting devices, the devices of each pair being connected at one end thereof to a respective one of said tube cathodes, means connecting all of said first devices of said pairs of devices to said source of potential whereby a discharge between a selected cathode and the plate of said tube will forwardly bias the first device of the pair of devices associated with that cathode, means to advance a forward-biasing voltage from the second device of a pair to the second device of the next succeeding pair, and means to provide a read-out voltage upon the simultaneous forward biasing of both of the devices associated with the selected cathode.

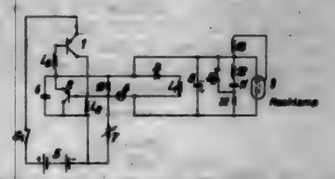
2,944,190
LIGHT INTEGRATOR
Clarence S. Ost, 118 N. Mansfield Ave., Margate City, N.J.
Filed Oct. 28, 1958, Ser. No. 770,111
9 Claims. (Cl. 315—156)

1. A light integrator comprising, an integrating condenser, means selectively connecting said condenser to a source of charging voltage, a phototube of the current conducting type having a cathode and an anode, said phototube being connected with said condenser, a bridge circuit comprising a pair of branches, one junction point of said branches being connected to a source of current and the other junction being connected to ground, and including a separate current control means in each branch of said bridge, the current control means in one branch being connected to said integrating condenser and controlled by the rate of discharge of said condenser, an indicating meter connected across said bridge, adjusting means in one branch of said bridge and connected to said meter for balancing said bridge to obtain a zero meter reading across the bridge, said adjusting means being adapted to selectively unbalance said bridge thereby giving a meter reading corresponding to the amount of light to be integrated, means for selectively charging or discharging said condenser through said phototube, and



the current control means, in the branch of said bridge having the adjusting means, being adapted to vary the current in said branch in response to the discharge of said condenser through said phototube to restore the bridge to a balanced condition, thereby resulting in a zero reading on said meter, and means on said meter for stopping discharge of said condenser when said meter indicator reaches zero, the meter indicator movement from a predetermined quantity to zero corresponding to the integration of a predetermined quantity of light.

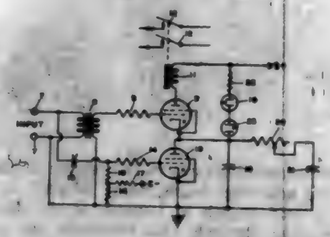
2,944,191
CIRCUIT SYSTEM FOR ELECTRONIC FLASH INSTRUMENTS WITH TRANSISTORS
Paul Kapteyn, Berlin-Lichterfelde, am Pfarracker 15, U.S. Sector of Berlin, Germany
Filed Nov. 10, 1958, Ser. No. 772,898
Claims priority, application Germany Nov. 13, 1957
4 Claims. (Cl. 315—183)



1. A current economizing circuit arrangement for electronic flash units comprising a transistor oscillator, a regulating transistor, a coupling transformer with two primary coils and a secondary winding, a rectifier, a glow-discharge lamp, a bias resistance, a storage condenser, and a flash lamp ignition circuit, said transistors and said primary coils being connected together for producing an oscillatory voltage which is inductively coupled to said secondary winding thereby producing in series connection with said rectifier an output voltage for charging said storage condenser which supplies said flash lamp ignition circuit with operating potential by being connected with its terminals to said ignition circuit, said secondary winding and said rectifier being connected in series with said glow-discharge lamp and said bias resistance lying in the emitter-base circuit of said regulating transistor, said glow-discharge lamp thus becoming conductive as soon as the minimum voltage on said storage condenser necessary for the ignition of the flash lamp is reached, and generating by its current across said bias resistance a voltage drop which effects the base potential

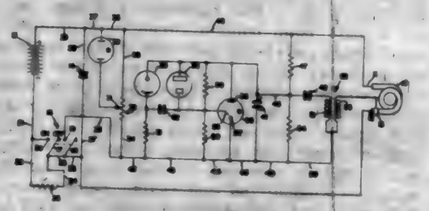
of said regulating transistor to become more positive, thereby quenching the current of said regulating transistor and interrupting the operation of said oscillatory transistor when the magnitude of the voltage on said storage condenser reaches the ignition voltage for said flash lamp circuit.

2,944,192
ELECTRONIC DECODING CIRCUIT
Victor A. Mack, Nashua, N.H., assignor, by mesne assignments, to Sanders Associates, Incorporated, Nashua, N.H., a corporation of Delaware
Filed Apr. 22, 1954, Ser. No. 424,937
7 Claims. (Cl. 315—198)



1. A decoding circuit responsive only to an input signal characterized by a positive voltage portion followed by a negative voltage portion comprising first and second gas discharge tubes each having anode, control grid and cathode electrodes, a source of direct voltage having positive and ground terminals, a cascode circuit serially connecting the anode-cathode discharge paths of said tubes across said direct voltage source and providing a junction between said cathode of said first tube and said anode of said second tube, a voltage divider comprising a non-linear impedance means, a resistor and a capacitor serially connected between said positive and ground terminals in the order stated, a connection joining the junction of said impedance means and said resistor with the junction of said cathode of said first tube and said anode of said second tube, a negative bias voltage for said grid of said second tube, a substantially ground bias voltage for said grid of said first tube, means for applying said input signal to said grid of said second tube, and means for applying to said grid of said first tube a signal obtained by phase inverting said input signal.

2,944,193
ELECTRIC SYSTEM
Richard E. Williams, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,745
7 Claims. (Cl. 315—241)



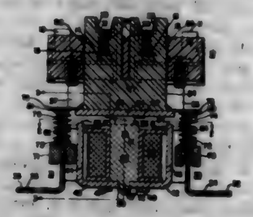
1. An electronic flash illumination system, comprising; an electronic flash tube, a capacitor, circuit means connecting said capacitor to said flash tube such that the discharging of said capacitor through said flash tube produces a brilliant flash of light, a source of voltage, switch means, a ready light, and circuit means controlled by said switch means in a first position connecting said source of voltage and said ready light to said capacitor to thereby charge said capacitor and energize said ready light as an indication of the state of charge of said capacitor, said switch means when in a second position disconnecting said source of voltage and said ready light from said capacitor to thereby immediately deenergize said ready light independent of the state of charge of said capacitor.

2,944,194
FOUR POLE TRANSDUCER
James A. Ross, San Fernando, Calif., assignor to Ling-Altec Electronics, Inc., Dallas, Tex., a corporation of Delaware
Filed July 18, 1958, Ser. No. 749,539
18 Claims. (Cl. 317—123)



1. A transducer comprising an armature of cross cross-section, laterally disposed means to impress a magnetic field through the arms of the armature cross, conductive means inductively related to said armature cross, means to cause a motional actuating current to flow in said armature, and means to position said armature within said magnetic field.

2,944,195
ELECTROMAGNETIC ACTUATOR
John W. Mobarry, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,298
12 Claims. (Cl. 317—184)



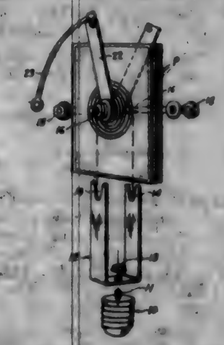
1. An electromagnetic actuator particularly adapted to operate switch means mounted thereon: an E-shaped core formed of a solid U-shaped magnetic member and a laminated magnetic center leg member; said members defining a flat plane; an energizing coil surrounding said center leg and positioned below said plane; two frame members formed of an electrically conductive non-magnetic material and supported from said core; said frame members each having an integral shading ring linking opposite sides of said U-shaped member; said shading rings further holding said coil against said core; each said frame member including two upstanding members supporting an insulated support substantially parallel to said plane; said insulated support having an opening therein as a guideway; a substantially flat armature of solid magnetic material parallel to said plane and attached to a guide passing through said guideway; and a pair of springs supported between said frame members and said guide to allow said flat magnetic armature to move parallel to said plane and operate said guide in said guideway.

2,944,196
INSULATING DISC FOR ELECTROLYTIC CAPACITORS
Gordon V. Poch, Dallas, Tex., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Filed Feb. 18, 1957, Ser. No. 640,681
8 Claims. (Cl. 317—230)



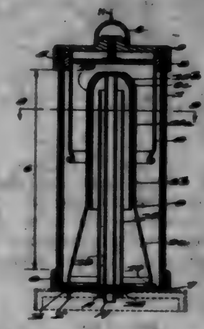
1. A lead-in construction for a capacitor comprising a cartridge therefor, said cartridge having a plurality of tabs connected to the ends thereof, a metal casing within which said cartridge is positioned, the bottom end of said casing adapted to act as an electrode of said capacitor, a rivet in the bottom end of said casing to which one of said tabs is connected, an insulative closure placed at the top of said casing adapted to hold rivet means therein, said rivet means having tabs connected thereto, a cupola configured fibre disc placed above said rivets through which stranded flexible leads may be passed and connected to the rivets, said disc thus adapted to support said leads as they pass therethrough and help prolong the strength of the connection of said individual flexible leads to said rivet and an open-ended, tubular cardboard container placed over said metal casing, said ends being crimped so as to bear against the insulative caps so as to form a tight capacitor assembly.

2,944,197
RECTIFIER UNIT
Richard F. Knisley, 1643 S. Cove Blvd., Toledo 6, Ohio
Filed Aug. 18, 1958, Ser. No. 755,708
4 Claims. (Cl. 317—234)



1. A rectifier unit adapted to replace a gas-filled tube comprising a threaded base for reception in a tube socket, a mounting means having a first portion adjustably mounted on said base and a second portion extending at right angles to said first portion, and a dry-type rectifier received in said second portion, said mounting means forming with said base one side of an electrical circuit including said rectifier.

2,944,198
CAPACITATIVE VOLTAGE DIVIDER
Roger Louys, Zurich, Switzerland, assignor to Micafil A.-G. Werke für Elektro-Isolation und Wickleredrichtungen, Zurich, Switzerland, a joint-stock company
Filed May 13, 1957, Ser. No. 658,872
Claims priority, application Switzerland June 11, 1956
5 Claims. (Cl. 317—242)



1. A voltage divider of the capacitative type comprising a hollow cylindrical insulating casing, a high voltage electrode in the form of a conductive cylindrical sleeve arranged coaxially within said casing, said high voltage electrode having a lead-in terminal at one end of said cylindrical casing, a low voltage electrode in the form of a conductive cylindrical sleeve arranged coaxially within said casing and spaced radially inward from said high voltage electrode, a measuring grounded electrode in the form of a conductive cylindrical sleeve arranged coaxially within said casing and spaced radially inward from said low voltage electrode thereby to establish a high voltage capacity between said high voltage and low voltage electrodes series connected with a low voltage capacity between said low voltage and measuring grounded electrodes, said measuring electrode having lead-in terminal means extending through said casing, a conductive member coaxially arranged within and spaced from said measuring grounded electrode, said conductive member being connected at one end to said low voltage electrode and extending at its other end from the other end of said casing, and a grounded cylindrical screening electrode sleeve arranged coaxially within said casing and located intermediate and spaced from said high and low voltage electrodes to protect said low voltage and measuring electrodes against penetration of interference fields, said screening electrode sleeve having grounded lead-in terminal means extending from said casing.

2,944,199
MEASURING APPARATUS
Kenneth C. Hudson, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 27, 1956, Ser. No. 630,888
10 Claims. (Cl. 317—246)

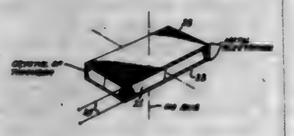
1. A pressure to electric transducer comprising an elongated electrically conductive hollow pressure deformable tube adapted for exposure to a pressure to be measured, said deformable tube forming one plate of a capacitor, an elongated electrically conductive rigid element, said element forming a second plate of said capacitor, means for mounting said element and said tube coaxially one

within the other and separated from each other by a space, a liquid dielectric partially filling said space between said rigid element and said deformable tube, said liquid dielectric arranged to rise and fall in said space

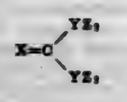


in accordance with volume changes of said deformable tube, and electrical connections to said capacitor for connecting thereto means for measuring changes in the capacitance of said capacitor to obtain an electrical signal proportional to changes in pressure applied to said deformable tube.

2,944,209
FERROELECTRIC DEVICES
Allen L. Solomon, Glen Cove, N.Y., and George J. Goldsmith, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Aug. 30, 1956, Ser. No. 607,975
3 Claims. (Cl. 317—262)



1. A ferroelectric device comprising a crystal of a material crystallographically isomorphic with thiourea and selected from the group consisting of compounds having the formula:



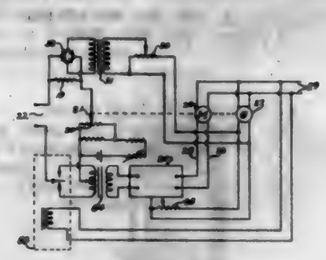
wherein:

X may be sulfur, selenium, telliurium, or combinations thereof,
Y may be nitrogen, phosphorus or combinations thereof, and
Z may be hydrogen, deuterium, methyl, amine or combinations thereof,

and means for applying an electric field having a substantial component parallel to the 010 axis of said crystal.

2,944,221
WIPER VOLTAGE COMPENSATED SERVOSYSTEM
Orville E. Doolen, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 23, 1957, Ser. No. 704,367
7 Claims. (Cl. 318—28)

1. In a self-balancing potentiometer having a potentiometer circuit including a potentiometer with a slider moved by a servo-controlled balancing motor with a generator coupled thereto, the improvement which comprises a rectifier having a unidirectional irreversible output connected to said generator adapted to rectify at least



a part of the output of said generator, and means connecting said rectifier to the potentiometric circuit in such manner that electrical signal passed by said rectifier is in opposition to a spurious electrical signal generated incidentally to movement of the potentiometer slider.

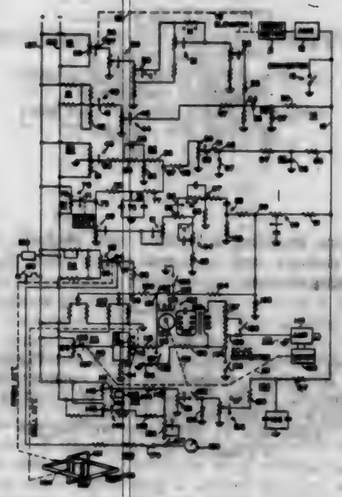
2,944,262
MULTI-PHASE SERVO SYSTEM
John R. Bonaccorsi, Philadelphia, Pa., and Roland J. White, Westmont, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Jan. 22, 1959, Ser. No. 788,464
8 Claims. (Cl. 318—29)

2. A servo system comprising, in combination, connections for a multiple phase power source; a pair of like, multiple phase bridges, both connected in the same manner to said connections; slider means engaged with each bridge, each for receiving a voltage from its bridge; sensing means connected to both of said slider means for producing an error signal in response to an unbalance in the voltages it receives; and drive means responsive to said error signal for driving one of said slider means with respect to the other an amount sufficient to balance said voltages.

2,944,283
AUTOMATIC PILOT SERVOSYSTEM
John Edward Anderson, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 716,972
14 Claims. (Cl. 318—489)

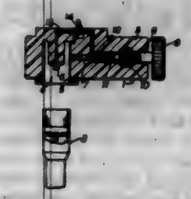
1. In an automatic pilot for an aircraft having pitch attitude changing means, in combination: servo means operating said pitch attitude changing means; manual means operating said servo means to select a pitch attitude; pitch attitude responsive sensing means comprising a vertical gyroscope having two axes of freedom and having three hundred sixty degrees of freedom in the pitch axis for indicating craft pitch attitude measured in a

vertical plane; and further means compensating for an apparent change in pitch attitude of the craft sensed by



said pitch attitude responsive means but caused by change in craft bank angle or roll attitude.

2,944,284
CHARGING DEVICE FOR ELECTROMETERS
John M. Herbert, Herton, England, assignor to The Pneumy Company Limited, Ilford, England, a British company
Filed Apr. 26, 1957, Ser. No. 655,443
Claims priority, application Great Britain Apr. 12, 1957
3 Claims. (Cl. 320—1)



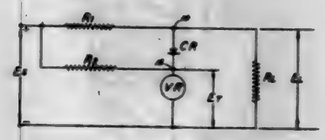
1. A charging device for electrometers, comprising a piezoelectric element, manually operable means for mechanically stressing the piezoelectric element by a pre-intended amount to produce a voltage of accurately predetermined value between two points of the piezoelectric element, connector electrodes for applying this potential difference to the electrometer, a switch arrangement which permits the voltage created when releasing the stress from the element to be utilised for charging as well as the voltage produced on application of the stress and a resilient element interposed between the manually operable means and the piezoelectric element whereby a relatively great actuating movement of the manually operable means is required in order to produce a relatively small amount of change in the applied stress and in consequence the voltage arising from the application of the stress.

2,944,285
FREQUENCY DIVIDER
Eugene O. Keizer, Princeton, and Robert F. Sanford, Cranbury, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 27, 1956, Ser. No. 630,876
18 Claims. (Cl. 321—69)



1. A frequency divider circuit comprising a junction diode device functioning as a capacitor in shunt with a resistance, an inductor, a parallel circuit comprising a capacitor and an impedance element, means connecting said diode device, said inductor, and said parallel circuit effectively in series to form a series circuit capable of passing direct current, means for applying a signal in series with said series circuit, and means for deriving a signal from said parallel circuit.

2,944,286
FIRING CIRCUIT FOR VOLTAGE REGULATOR TUBE
Charles B. Brahm, Windsor Locks, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 23, 1955, Ser. No. 496,188
4 Claims. (Cl. 323—16)

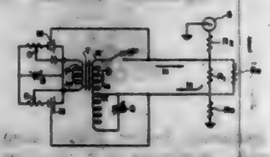


1. In combination a direct current power source, a load connected across said source, a voltage regulator tube and a rectifier in series connected across said source in parallel with said load, means modifying the potential of said source in accordance with current flow through said load and rectifier; a connection, including means modifying the potential of said source in accordance with current flow, connecting said source directly across said tube to provide a firing circuit for said tube.

2,944,287
CURRENT LOSS COMPENSATING DEVICE
Stanley Rogers and Toivo M. Dannbeck, San Diego, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed June 26, 1956, Ser. No. 593,589
4 Claims. (Cl. 323—44)

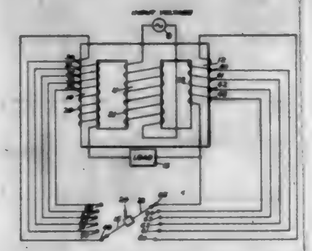
1. Means for correcting transformer error comprising in combination, a transformer having current losses between a first and second point having a current flow therebetween, said first point receiving current from an energy source, means connected between said first point and its energy source for measuring the amount of input current flowing into said first point from said source, means connected to said second point for measuring the

amount of output current flowing out of said second point, and circuit means connected across said points for producing a correction current flowing into said first point to equalize said input and output currents, said circuit means comprising means comparing said input and output cur-



rents for controlling the amount of correction current flowing into said first point and including generating means producing a current corresponding to the resultant of said input and output currents, said circuit means also including a transformer having its primary winding connected to said generating means and its secondary winding connected across said first and second points.

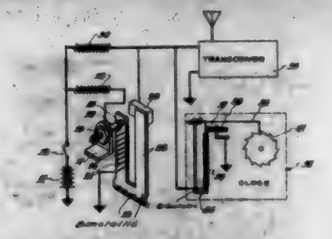
2,944,208
HIGH REACTANCE TRANSFORMERS
Robert S. Quimby, Lexington, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Oct. 28, 1955, Ser. No. 543,528
11 Claims. (Cl. 323—48)



1. A reactance transformer comprising in combination a closed magnetic core having three core members, a primary winding only on one core member adapted to be connected to a source of alternating current and to provide a source of flux equally traversing said other core members, a secondary circuit adapted to be connected to a load comprising a winding on the first of said other core members connected in series addition with a winding on the second of said other core members, said latter core winding co-acting with said first core winding to determine the percentage of leakage flux applied to said latter core winding from said first core winding in response to said load connected to said secondary circuit.

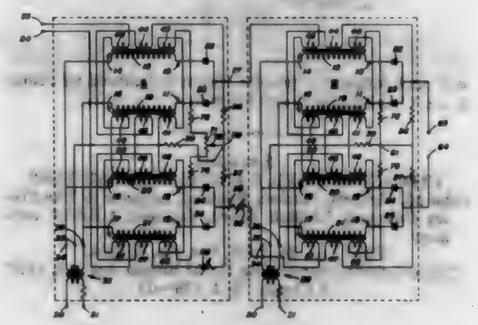
2,944,209
CONSTANT VOLTAGE OUTPUT DEVICE
Charles W. King, Chicago, Ill., assignor, by mesne assignments, to King-Seely Corporation, Ann Arbor, Mich., a corporation of Michigan
Filed Feb. 1, 1950, Ser. No. 141,757
4 Claims. (Cl. 323—68)

2. The combination comprising a source of variable direct current voltage, a circuit connected across said voltage source including a resistor in series with a heating element, an ambient temperature compensated bimetallic element associated with said heating element, a pair of electric contacts controlled by said bi-metallic element, and a second circuit connected across said volt-



age source including a resistor, said contacts and said heating element, and an output circuit connected across said heating element.

2,944,210
THERMOCOUPLE MAGNETIC AMPLIFIER
John F. Ringelman, Catonsville, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Oct. 27, 1955, Ser. No. 543,286
2 Claims. (Cl. 323—89)



1. A magnetic amplifier circuit comprising input alternating current source terminals, a saturating transformer connected to said source terminals having a secondary provided with full wave and center taps, a conductor connected to said center tap, a pair of saturable reactors each having a pair of load windings having input terminals and output terminals, circuit means connecting the input terminal of one load winding of each reactor to one of said full wave taps, circuit means connecting the input terminal of the other load winding of each reactor to the other full wave tap, a rectifier provided with an output terminal and having an input terminal connected to the output terminal of each load winding, a pair of reactor circuit output terminals, circuit means connecting the output terminals of the rectifiers respectively associated with each of said reactors to one of said reactor circuit output terminals, a load resistor connected in series between said conductor and each of said reactor circuit output terminals, a bias coil positioned in juxtaposition to each of said load windings to oppose saturation thereof, a resistor connected in series with said center tap conductor, circuit means connecting the bias coils of each reactor in series with each other and in parallel with said resistor, said circuit means for connecting said bias coils to said resistor including a slide and variable resistor with the slide movable on the variable resistor whereby the voltage applied to said bias coils may be varied, said slide being connected to the conductor at the juncture of said load resistors, and the variable resistor being connected in series between at least

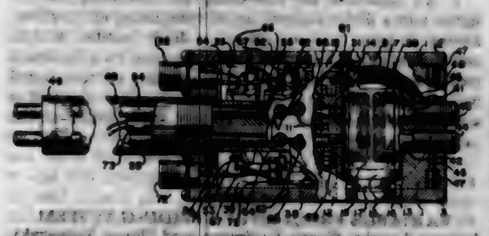
two of said bias coils whereby shifting of said slide simultaneously increases current flow in one bias coil and reduces current in the other bias coil.

2,944,211
LOW-TEMPERATURE DIGITAL COMPUTER COMPONENT
Richard K. Richards, Old Troy Road, Wappingers Falls, N.Y.
Filed Jan. 28, 1958, Ser. No. 709,989
15 Claims. (Cl. 323—94)



1. A cryotron device comprising at least four concentrically arranged electrical conductors, at least a first one of said conductors other than the two innermost conductors comprising a material having superconductive characteristics which can be affected by a magnetic field, means electrically connecting said first conductor to one of the conductors lying therewithin thereby providing a controllable element, said means electrically connecting another one of the conductors lying within said first conductor to one of the conductors lying without said first conductor thereby providing a control element, whereby the conductivity of said controllable element can be controlled by a magnetic field produced by current flowing in said control element.

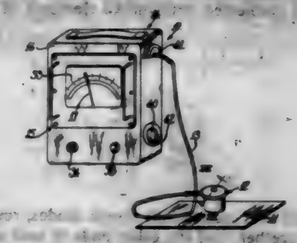
2,944,212
GYROMAGNETIC RESONANCE APPARATUS
Leonard R. Malling, Los Angeles, Dolan L. Mansir and Forrest A. Nelson, Palo Alto, and Martin E. Packard, Menlo Park, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Filed July 6, 1953, Ser. No. 366,156
20 Claims. (Cl. 324—5)



1. A probe structure for use in positioning gyromagnetic matter in a polarizing magnetic field comprising a main body member having a cylindrical bore extending therein, a first hollow cylindrical dielectric tube mounted in axial alignment within said bore, a transmitter coil secured on the outer surface of said first tube, a second hollow cylindrical dielectric tube mounted in axial alignment within said first tube, and a receiver coil secured to the inner surface of said second tube in such manner that the axis of said receiver coil is substantially normal to the axis of said transmitter coil.

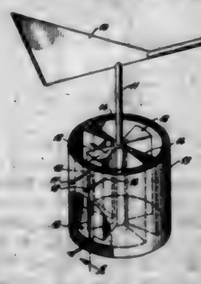
2,944,213
APPARATUS FOR NON-DESTRUCTIVE TESTING
Friedrich M. O. Foerster, Panoramastr. 107, Reutlingen, Germany
Filed Nov. 15, 1954, Ser. No. 468,964
6 Claims. (Cl. 324—34)

1. Apparatus for measuring the magnetic properties or dimensions of a specimen structure, comprising: a magnet movable between an initial position in which the flux path between poles thereof is not affected by the specimen structure and a test position in which the flux path is



affected by the specimen structure, a coil on said magnet, and a ballistic galvanometer connected to said coil and having a restoring force substantially equal to zero.

2,944,214
APPARATUS FOR DETECTING RATE OF CHANGE OF ANGULAR ATTITUDE OF A BODY
Norman K. Walker, Kensington, Md., assignor to Advanced Research Associates, Incorporated, Kensington, Md.
Filed June 4, 1958, Ser. No. 739,988
9 Claims. (Cl. 324—70)



1. Apparatus for detecting rate of change of angular attitude of a body and for providing an electrical signal proportionate to said rate that comprises: mechanical means to sense said rate, a housing for housing a conductive fluid, means operatively connected to said mechanical means to pump said fluid in a path of movement in said housing at a velocity proportionate to said rate, a first electrode positioned in said path of movement, said electrode being resilient and flexible in the direction of said movement, second and third electrodes positioned in said path on opposite sides of said first electrode and means to detect the fluid resistance between said electrodes as a function of said fluid velocity to provide said electrical signal.

2,944,215
SUPPRESSED ZERO FREQUENCY METER CIRCUIT
Almon J. Corson, Marblehead, Mass., assignor to General Electric Company, a corporation of New York
Filed Apr. 25, 1958, Ser. No. 731,031
7 Claims. (Cl. 324—81)

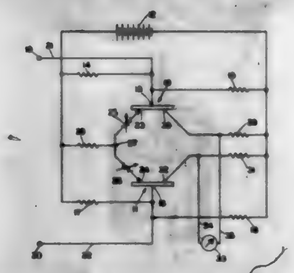
3. For use in a frequency meter of the differential resonance type utilizing first and second circuits to develop differential currents in response to frequency variations of an input signal, a metering circuit comprising a first diode in series with said first circuit and the input signal, a second diode in series with said second circuit and the input signal, a first and second meter coil associated with an indicating instrument, one end of said first coil being connected

through a third diode to a first junction between said first circuit and first diode, one end of said second coil being connected through a fourth diode to a second junction between said second circuit and said second diode, said diodes being connected with unlike elements of said first



and third and said second and fourth diodes, respectively, connected together, and the other ends of said coils being connected to the input signal and arranged to produce opposing torques upon said indicating instrument through current flow therethrough from said first and second circuits.

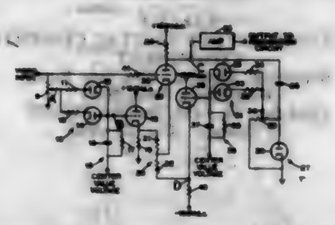
2,944,216
CURRENT MEASURING CIRCUIT
Dennis Allenden, Baughurst, near Basingstoke, England, assignor to Associated Electrical Industries Limited, London, England, a British company
Filed Aug. 6, 1956, Ser. No. 602,395
Claims priority, application Great Britain Aug. 11, 1955
1 Claim. (Cl. 324—123)



A current measuring circuit comprising a pair of transistors, each having base, collector and emitter electrodes, a single source of voltage, a potential divider network including two branches connected across said source of voltage, each branch being associated with one of said pair of transistors, each branch having two series connected resistors, the junction of the two series connected resistors in each branch being connected to the base electrode of the corresponding one of said pair of transistors whereby a predetermined potential is imposed upon the base of each transistor, said network including emitter circuits of said transistors connected together and through a high resistance to one side of said voltage source and collector circuits connected to the opposite side of said source, said collector circuits comprising resistor elements in series with the collector electrodes of said transistors, means adapting the base electrodes of said transistors for external connection in series with the circuit carrying current to be measured, and a current measuring device connected across said collector circuits at said collector electrodes.

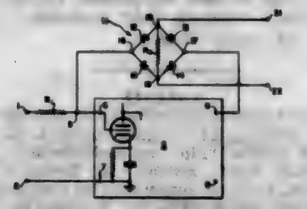
2,944,217
SIGNAL TRANSLATING APPARATUS
Even C. Greanias, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 30, 1955, Ser. No. 550,824
11 Claims. (Cl. 328—2)

2. In a signal translating apparatus for video signals produced by light sensitive means scanning graphic data, a clipping circuit having first and second input terminals, said first input terminal being connected to receive said video signals, said clipping circuit including means responsive to a control signal supplied to said second input



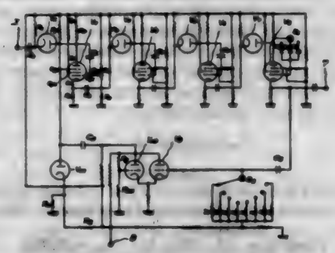
terminal for determining which of said video signals will produce output signals, gating means connected to receive said video signals and means including integrating means in circuit with said gating means for generating said control signal.

2,944,218
ELECTRICAL SIGNAL CONVERSION APPARATUS
William F. Newbold, Ambler, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,284
5 Claims. (Cl. 328—26)



1. An apparatus for converting an alternating current signal into a direct current signal comprising an amplifier having an input and an output, a diode rectifier bridge, and means connecting said rectifier bridge in a feedback loop around said amplifier, the alternating current signal being applied to the input of said amplifier through a series resistor and the direct current being taken across said rectifier bridge.

2,944,219
VARIABLE FREQUENCY DIVIDING SYSTEM
Isokazu Tanaka, Shizuo Kurimura, and Shigeo Yamazaki, all of Tokyo-to, Japan, assignors to Kabushiki-Kaisha Kodan Seisakusho, Tokyo-to, Japan
Filed June 18, 1957, Ser. No. 664,799
Claims priority, application Japan June 20, 1956
1 Claim. (Cl. 328—134)



A circuit arrangement for use as an automatic phase synchronizing circuit for synchronizing the phase of an output wave form with a standard wave form and for

use in a variable frequency dividing system comprising, in combination, at least one multiple stage chain frequency divider including at least one phantastron circuit for providing a frequency-divided output, the output wave form corresponding to the wave form whose phase is to be synchronized with a standard wave form having a different phase, means to apply an input wave form to the frequency divider, means for generating control pulses each having a predetermined duration corresponding to the phase difference between the output wave form and said standard wave form and for variably controlling the frequency dividing ratio of the frequency divider comprising, a multivibrator for generating the control pulses and applying them to the frequency divider to stop the frequency dividing operation thereof for intervals of time corresponding to the duration of the individual control pulses, means for applying the output of the chain frequency divider to the multivibrator, means for varying the width-time duration of the control pulses, and detector means for applying a detected standard wave form to said multivibrator.

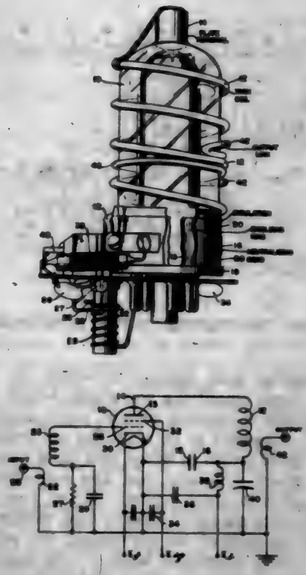
2,944,220
CIRCUIT ARRANGEMENT COMPRISING A PASSIVE ELECTRICAL QUADRIPOLE
Bernardus Dominicus Hubertus Tellegen, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., Irvington, N.Y.
Continuation of application Ser. No. 354,895, May 11, 1953. This application Mar. 12, 1957, Ser. No. 645,539
Claims priority, application Netherlands Apr. 29, 1947
11 Claims. (Cl. 330—63)



1. A circuit arrangement compriaing first and second electron tubes having grid and anode circuits, first and second resonant circuits, said first resonant circuit being inserted in the anode circuit of said first electron tube and said second resonant circuit being inserted in the grid circuit of said second electron tube, and a passive electrical quadripole having input and output terminals, said input terminals being coupled to said anode circuit of said first electron tube and said output terminals being coupled to said grid circuit of said second electron tube, said quadripole comprising a polarizable medium, which is polarized in a first direction, means connected to said input terminals to produce a primary field in said medium in a second direction different from said first direction, said primary field producing in said polarized medium a secondary field having a third direction different from said first and second directions, and means coupled to said secondary field to produce a voltage at said output terminals, a resistive element being interconnected between said input and said output terminals to produce an additional voltage at said output terminals.

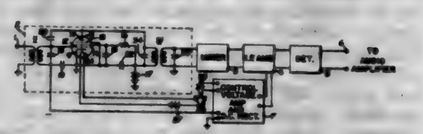
2,944,221
TRANSMITTER FINAL WITH SERIES-TUNED SELF-NEUTRALIZED TANK CIRCUIT
Gilbert G. Robinson, 1302A Smith Road, China Lake, Calif., and James H. Madden, 2666 Chanella Way, Rancho Cordova, Calif.
Filed May 15, 1959, Ser. No. 813,607
5 Claims. (Cl. 330—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In an extremely efficient transmitter final circuit, a final amplifier tube having an envelope and base and at least a plate and a cathode therein, and a metal shielding ring about the tube base, a series-tuned tank coil wrapped coaxially around the envelope of said tube, one end of said tank coil being attached to the plate of said tube and the opposite end of said tank coil being attached to a metal neutralizing band, said neutralizing band being



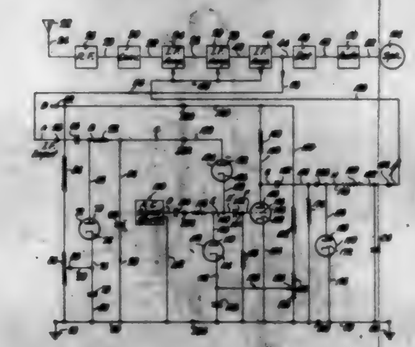
positioned around and insulated from said shielding ring, a tuning capacitor connected between said neutralizing band and ground, plate potential being provided to the circuit through an RF choke connected to said neutralizing band, RF energy from the circuit being removed through an output link also wrapped coaxially around the envelope of said tube.

2,944,222
INTERMODULATION SUPPRESSION SYSTEM
Arthur G. Manke, Syracuse, N.Y., and Henry A. Bazydlo, Detroit, Mich., assignors to General Electric Company, a corporation of New York
Filed Dec. 29, 1953, Ser. No. 401,021
8 Claims. (Cl. 330—128)



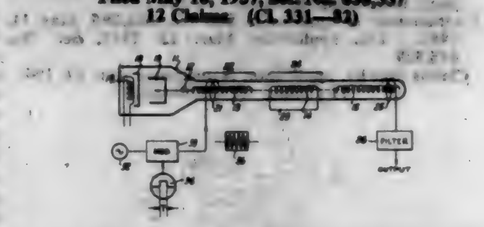
1. In combination, an amplifier having an amplifying device, an input circuit and an output circuit associated with said amplifying device, said input circuit being tuned to select a band of frequencies, said input circuit including tuning means for tuning said input circuit, means for coupling waves from said tuning means in the input of said amplifying device directly to the output thereof, and means responsive to waves appearing in the output of said amplifier having an amplitude greater than a predetermined amplitude for rendering said amplifying device inoperative, said coupling means coupling the waves appearing at said input directly to said output when said amplifying device is inoperative.

2,944,223
DELAYED, AMPLIFIED AUTOMATIC VOLUME CONTROL SYSTEM FOR RADIO RECEIVERS
Wallace F. Wiley, Jr., Prairie Village, Kans., assignor to Wilcox Electric Company, Inc., Kansas City, Mo., a corporation of Kansas
Filed Nov. 3, 1958, Ser. No. 771,598
10 Claims. (Cl. 330—139)



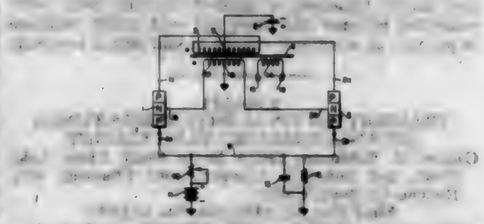
1. Automatic gain control apparatus for use with electrical signal amplifying equipment having input terminal to which alternating current, input signals of relatively high frequency to be amplified are applied, signal output terminal means at which said input signals in amplified form are presented, and gain controlling voltage terminal means to which a direct current, control voltage of variable level measured from a zero voltage reference value may be applied for controlling the amplification effected by said equipment between said input terminal means and said output terminal means thereof, said apparatus being adapted for producing said control voltage and comprising the combination of: detector means adapted for coupling with said output terminal means of said equipment for deriving from the latter a continuous sampling of said amplified, high frequency signals and arranged for rectifying said amplified, high frequency signals to present a first, pulsating, direct current, voltage output of variable amplitude generally corresponding to, and at least as small as, the concurrent amplitude of said amplified, high frequency signals, and of periodicity corresponding to said relatively high frequency; first smoothing filter means coupled with said detector means for receiving from the latter said first output and arranged for integrating said first output to present a second, filtered, direct current, voltage output whose level varies smoothly in general correspondence with, but by changes of magnitude at least as limited as concurrent variations in, the amplitude of said amplified, high frequency signals; a source of a third, alternating current voltage output of substantially constant amplitude greater than the usual maximum amplitude of said amplified, high frequency signals and of relatively low frequency, lower than said relatively high frequency; comparative mixing and amplifying means coupled with said first filter means for receiving from the latter said second output, coupled with said source for receiving from the latter said third output, and arranged for removing from said third output those portions of its peaks which are of magnitude greater than the level of said second output and amplifying the resultant thereof to present a fourth, amplified, pulsating, generally square wave type, direct current, voltage output of variable amplitude generally corresponding to, but characterized by greater changes in magnitude than concurrent variations in, the concurrent level of said second output, and of periodicity corresponding to said relatively low frequency; rectifier means coupled with said mixing and amplifying means for receiving from the latter said fourth output and arranged for rectifying said fourth output and referencing the latter to said zero voltage reference value to present a fifth, amplified, pulsating, generally square wave type, direct current, voltage output whose amplitude measured from said zero voltage reference value generally corresponds to, but is characterized by greater changes in magnitude than concurrent variations in, the level of said second output, and whose periodicity corresponds to said relatively low frequency; and second smoothing filter means coupled with said rectifier means for receiving from the latter said fifth output, arranged for integrating said fifth output to present a sixth, filtered, direct current, voltage output whose level measured from said zero voltage reference value generally corresponds to, but is characterized by greater changes in magnitude than concurrent variations in the level of said second output, and adapted for coupling with said gain controlling terminal means of said equipment for applying to the latter said sixth output as said control voltage.

2,944,224
HIGH SPEED BINARY COUNTER
Peter D. Lacy, Redwood City, Calif., assignor to Hewlett-Packard Co., Palo Alto, Calif., a corporation of California
Filed May 10, 1957, Ser. No. 658,337
12 Claims. (Cl. 331—82)



1. A high speed binary counter comprising means forming an electron beam and means serving to receive said beam, a bistable oscillator coupled to said beam and adapted to oscillate at predetermined modes said oscillator adapted to oscillate at only one mode at one time, means for exciting the electron beam prior to coupling to the bistable oscillator to switch the oscillator from one oscillatory mode to another.

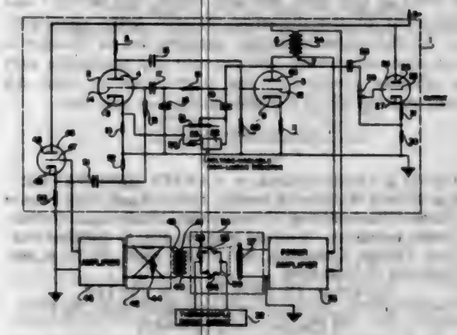
2,944,225
OSCILLATORS
George D. Bruce, Poughkeepsie, and Robert L. Ebsen, Hopewell Junction, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Continuation of abandoned application Ser. No. 459,387, Sept. 30, 1954. This application Feb. 11, 1957, Ser. No. 639,583
7 Claims. (Cl. 331—113)



1. A free-running square wave generator, comprising two transistors, each having an input electrode, an output electrode, and a common electrode, transformer means

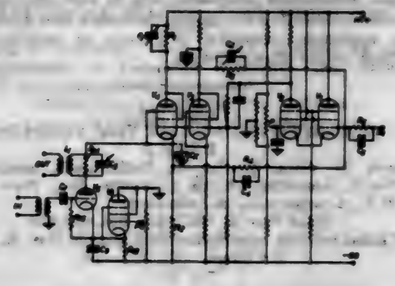
having primary winding means and secondary winding means, first non-resonant circuit means including the primary winding means and connected to the output electrodes, second non-resonant circuit means including the secondary winding means and connected to the input electrodes in a sense so that the transformer means provides regenerative feedback from each output electrode to the input electrode of its associated transistor and degenerative feedback from each output electrode to the input electrode of the other transistor, said first and second non-resonant circuit means and said transformer means constituting the only source of signals for said input electrodes and cooperating during an increase in current flow at a constant rate through one of said output electrodes to produce a constant potential feedback regeneratively to the input electrode associated with said one output electrode and degeneratively to the other input electrode, a source of unidirectional electrical energy connected between said first circuit means and said common electrodes to provide current flow through said output electrodes in their high impedance directions, and means effective to limit said current flow, and thereby to terminate said constant rate of increase and said constant potential feedback.

2,944,226
FREQUENCY MODULATION SIGNAL GENERATOR
Robert E. Rawlins, North Hollywood, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Nov. 16, 1954, Ser. No. 467,976
2 Claims. (Cl. 332—19)



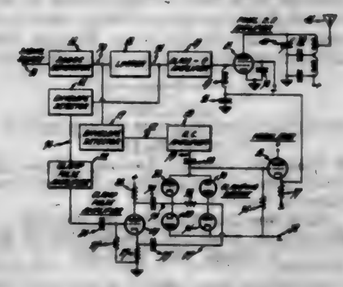
1. A frequency modulation signal generator comprising, first and second electron tubes each having an anode, a cathode and a control electrode, means applying a voltage to the anodes of said tubes for effecting current flow therethrough, the anode of said first tube being coupled to the control electrode of the second tube, phase shifting means coupling the anode of the second tube with the control electrode of said first tube and inducing oscillations in the current flow therethrough at a frequency controlled by the phase shift means, degenerative feedback means coupling the anode of the second tube with the cathode of said first tube and stabilizing the amplitude of the oscillations, a modulator responsive to the anode voltage of the second tube and to a modulation input and producing an alternating current modulating signal, the magnitude of which is proportional to the modulation input and the frequency of which is substantially equal to the frequency of the oscillations, and a second phase shifting means receiving the modulating signal and applying the same to the control electrode of the first tube substantially 90 degrees out of phase with the signal applied thereto through the first mentioned phase shifting means whereby the magnitude of the modulating signal effects a proportional change in the frequency of the oscillations produced by the first and second electron tubes.

2,944,227
MODULATING CIRCUIT ARRANGEMENTS
Alfred Benjamin Starks-Field, Chelmsford, and Thomas George Patterson, Sheffield, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Filed Dec. 17, 1956, Ser. No. 628,758
Claims priority, application Great Britain Jan. 19, 1956
7 Claims. (Cl. 332—37)



1. A modulating circuit arrangement comprising a modulator valve including an anode, grid and cathode, means for applying carrier input to said grid, a source of anode potential, a modulating valve including an anode, grid and cathode, a series circuit connected across said source including two impedances with the modulating valve connected therebetween, a direct current connection between the anode of said modulator valve and said series circuit wherein the potential applied from said source to the anode of said modulator valve will vary in accordance with the modulating potentials applied to the grid of said modulating valve, an amplifier, means for applying modulating potentials as input to said amplifier, means for applying amplified modulating potentials from said amplifier to the grid of said modulating valve, means including said series circuit for applying two feedback voltages to the input side of said amplifier.

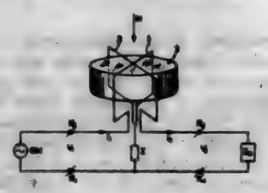
2,944,228
SIDEBAND TRANSMITTER WITH PHASE AND AMPLITUDE MODULATION COMPONENTS AMPLIFIED OVER SEPARATE PATHS
George A. Olive, Lawrenceville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,845
25 Claims. (Cl. 332—45)



1. In a transmitter, means for generating a single sideband wave having phase and amplitude modulation components, said amplitude modulation component having a given average amplitude component according to the modulating signal energy to be transmitted, means for amplifying said phase modulation component, a separate means including an alternating current amplifier for amplifying said amplitude modulation component, means

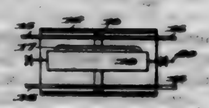
connected between the output of said generating means and the output of said separate means responsive to the envelope of said phase modulation component to cause said amplified amplitude modulation component to include said given average amplitude component, a grid-modulated amplifier stage, means for connecting said first amplifying means to said stage and means for connecting the output of said separate amplifying means to said stage, said stage being responsive to said amplified phase modulation component and to said amplified amplitude modulation component including said given average amplitude component to provide an amplified copy of said single sideband wave.

2,944,229
NON-RECIPROCAL ELECTRIC COUPLING DEVICE
Gerrit de Vries, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 6, 1957, Ser. No. 694,988
Claims priority, application Netherlands Nov. 9, 1956
6 Claims. (Cl. 333—24)



1. A non-reciprocal electric coupling device comprising a core of ferromagnetic material exhibiting gyromagnetic resonance, first and second windings positioned to substantially surround said core at mutually right angles with respect to each other, a source of oscillations, a load, means connecting one terminal of said source to one end of said first winding, means connecting one terminal of said load to one end of said second winding, reactance coupling means, means connecting said reactance means between intermediate points on said first and second windings and the other terminals of said source and load, and means providing a polarizing field in said core in a direction parallel to the line of intersection of the planes of said two windings, said field having a strength to cause said core to be in a state of magnetic resonance for a given frequency, said coupling means having such a value that there is substantially no electrical coupling in said device in the direction from said second winding to said first winding at said given frequency, whereas there is an electrical coupling in said device in the direction from said first to said second winding at said given frequency.

2,944,230
CONTACT-FREE HIGH FREQUENCY COMMUTATOR
Carl-Erik Granqvist, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden
Filed June 24, 1957, Ser. No. 667,319
Claims priority, application Sweden July 9, 1956
6 Claims. (Cl. 333—27)



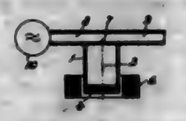
1. A high frequency commutator comprising a pair of line conductors, each of said conductors being of a length substantially equal to ¼ of a wave length within the range of frequencies to be transferred, said line conductors being disposed in a straight line relationship and grounded at their free ends, one of said line conductors being an input conductor and the other being an output conductor, means for coupling said input conductor to said output conductor comprising a coupling conductor disposed in parallel arrangement to said line conductors and grounded at both ends, said coupling conductor being of a length substantially equal to ½ of a wave length within the range of frequencies to be transferred, and means for varying the distance between said coupling conductor and each of said line conductors.

2,944,231
MICROWAVE TRANSMISSION LIMITER
Ronald Thomas Albert Howell and Leo Young, London, England, assignors to The Decca Record Company Limited, London, England, a British company
Filed May 8, 1956, Ser. No. 583,385
2 Claims. (Cl. 333—31)



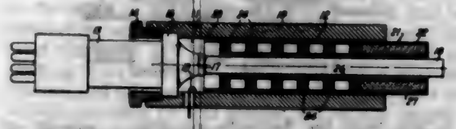
1. A microwave transmission limiter comprising a waveguide having a laterally disposed short-circuited stub with a piece of dielectric material of the kind in which the dielectric constant depends on an applied electric field in said stub, the stub length and position and dimensions of the dielectric material being so chosen that the changes in dielectric constant due to changes in an incident microwave field fed into said wageguide vary the effective position of the short-circuit to limit the power passing along the waveguide past said stub.

2,944,232
DEVICE COMPRISING A CAVITY RESONATOR
Hugo Gerrit Beljers, Kornelis Swier Knol, and Anton Eduard Passenborg, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 19, 1954, Ser. No. 424,134
Claims priority, application Netherlands Apr. 29, 1953
4 Claims. (Cl. 333—73)



1. A cavity resonator device comprising a cavity, a ferromagnetic material which exhibits the gyromagnetic effect at microwave frequencies being positioned with said cavity, magnetic field means for magnetically polarizing said ferromagnetic body in a direction parallel to the axis of said cavity, said cavity having symmetrical dimensions in at least two directions in a plane normal to said axis, so that said resonator device has at least two substantially equal natural frequencies of resonance corresponding to said two directions, and means for producing within said cavity a transverse high frequency oscillation having an electric field normal to the axis of said cavity, said magnetic polarization of said ferromagnetic body being sufficient to cause said cavity resonator device to have two different simultaneous resonant frequencies for the two circularly polarized components of said transverse oscillation.

2,944,233
CAVITY RESONATOR AND OSCILLATION GENERATOR
Arthur Fong, Palo Alto, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Continuation of application Ser. No. 370,553, July 27, 1953. This application Oct. 16, 1958, Ser. No. 768,536
4 Claims. (Cl. 333—82)



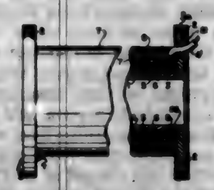
1. In high frequency electrical apparatus designed to oscillate at the three-quarter wave mode, means defining a high frequency resonant cavity, a velocity modulation tube forming at least part of one end wall of said cavity and a low-pass filter forming another end wall of the cavity, said filter serving to pass high frequency energy of the quarter-wave mode and reject high frequency energy of the three-quarter wave mode.

2,944,234
ADJUSTABLE IMPEDANCE FOR USE IN WAVEGUIDES
Frans Christiaan de Ronde, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed June 17, 1957, Ser. No. 666,058
Claims priority, application Netherlands July 11, 1956
1 Claim. (Cl. 333—98)



A variable impedance arrangement comprising a hollow waveguide, a first flat strip composed at least in part of resistive material positioned in said waveguide in a plane passing through the axis of said waveguide, a short-circuiting piston positioned in said waveguide and adapted to be independently rotated and moved in the axial direction of the waveguide, and a second flat strip composed at least in part of resistive material attached to the end of said piston which faces said first flat strip and being rotatable with said piston, said second flat strip being aligned along the axis of said waveguide.

2,944,235
HIGH TEMPERATURE COIL STRUCTURE
Melville F. Peters, 29 N. Ridge Road, Livingston, N.J.
Filed Mar. 21, 1957, Ser. No. 647,539
4 Claims. (Cl. 336—199)



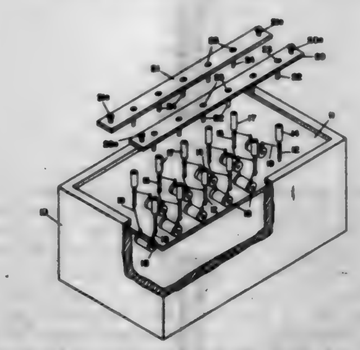
1. A high temperature coil structure comprising, a metallic core member, a first coating of a matching enamel overlying said core, a metal disk at each end of the core, a second coating of a matching enamel overlying the disks, layers of wire around the core coating between the disks, a covering of a ceramic matched to the metal of the wire around said wire, a quantity of a powdered refractory material filling the spaces between the covered wire and the covered core and a layer of ceramic enamel overlying the powdered material and the coil.

2,944,236
ELECTRICAL TEMPERATURE MEASURING DEVICE
Edward P. Anderson, Teaneck, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of New Jersey
Filed Mar. 2, 1956, Ser. No. 569,284
2 Claims. (Cl. 338—26)



1. A transducer for surface pyrometry comprising a grid member having a coating of an electrically insulating material thereon, a continuous electrically conductive wire interlaced on the coated grid member and having terminal leads connected to the ends thereof, and a coating of an electrically insulating material over the assembly.

2,944,237
APPARATUS FOR MEASURING RESISTANCE
Benjamin Solow, Philadelphia, Pa., assignor to International Resistance Company, Philadelphia, Pa.
Filed Dec. 6, 1954, Ser. No. 473,281
7 Claims. (Cl. 338—77)



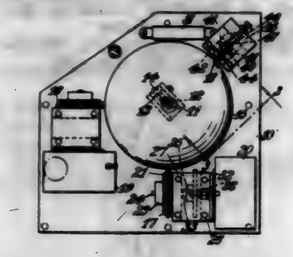
1. A resistance measuring device comprising the combination of a supporting plate of an electrically insulating material, five terminals of conductive material mounted on said plate and arranged in an aligned row, six additional terminals of conductive material mounted on said plate and arranged in a second aligned row spaced from and parallel to said first row of terminals, ten resistors of substantially the same resistance value secured across the terminals of the rows and arranged in series relation, and removable means for electrically connecting together the terminals in each row so as to connect the resistors in parallel relation.

2,944,238

RESOLVERS FOR PRODUCING ELECTRICAL SIGNALS REPRESENTATIVE OF THE COMPONENTS IN COORDINATE DIRECTIONS OF A MECHANICAL MOVEMENT

Arthur Alec Cecil Barnett, Kenneth Charles Warner, and Philip Neville George Knowles, all of London, England, assignors to The Decca Record Company Limited, London, England, a British company

Filed May 18, 1959, Ser. No. 814,083
14 Claims. (Cl. 338—131)



1. A resolver for producing electrical signals representative of the components in two co-ordinate directions of a mechanical movement comprising a freely mounted ball, at least two wheels frictionally engaging the surface of the ball at different points thereon and potentiometers driven by said wheels.

2,944,239

ELECTRICALLY CONDUCTIVE ELEMENT FOR USE AT ELEVATED TEMPERATURES

Nils Gustav Schrewelius, Hallstahammar, Sweden, assignor to Aktiebolaget Kanthal, Hallstahammar, Sweden, a corporation of Sweden

Filed Jan. 26, 1959, Ser. No. 789,118
Claims priority, application Sweden Jan. 27, 1958
8 Claims. (Cl. 338—322)



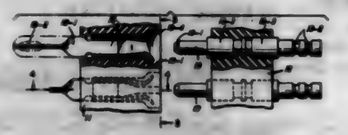
1. An electrically conducting element for use at elevated temperatures, wherein the resistor proper is composed of a highly refractory oxide of the kind which becomes electrically conductive at temperatures above about 900° C., and wherein the lead-in electrodes are composed at least to an essential proportion of a highly temperature resistant silicide, and are provided with an insulation of at least one oxide of the kind which is electrically non-conducting at very high temperatures.

2,944,240

ELECTRICAL CONTACT MEMBER

Charles C. Barber, Freeport, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 3, 1956, Ser. No. 601,990
1 Claim. (Cl. 339—64)



A jack body for floatingly mounting a plurality of pin-receiving contact members, said jack body including a plurality of apertures extending therethrough, each of said apertures having recessed portions at one end thereof, rib members formed integrally with said jack body and extending laterally into each of said apertures, each rib means including a first portion extending from the recessed portions end of an aperture in parallel relationship to the walls of said aperture to a first zone intermediate the ends of said aperture, and a second rib means portion extending from said first zone to a second zone adjacent the other end of said aperture, said second rib means portion being disposed at an angle to the walls of said aperture, whereby said second rib means portion facilitates the mounting of a contact member by directing the inserted end thereof through said jack body, and whereby the pin-receiving portions of a mounted contact member extend into said recessed portions and are freely expandable therein.

2,944,241

CONNECTOR

William J. Londell, Jr., North Plainfield, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey

Filed Dec. 9, 1957, Ser. No. 701,452
4 Claims. (Cl. 339—91)



1. A connector comprising in combination a male element, a female element cooperating therewith and means for making electrical connection to said male and said female element; said male element comprising a body portion and at least one conductive pin, said pin being insulated from and extending beyond one end of said body portion, at said end a plurality of resilient elements affixed to said body portion substantially at its outer perimeter, each said resilient element being parallel to said pin and extending beyond the end of said pin, the ends of said resilient elements being beveled so that each beveled surface forms an acute angle with the major surface of said element and so that said element is thinnest at its end, said beveled surface being carried from the end of said resilient element toward the end thereof which is affixed to said body portion, said beveled surface being shorter than the major surface of said resilient element, there being a surface substantially perpendicular to said pin connecting the end of said beveled surface furthest from the end of said resilient element with the major surface of said resilient element, said beveled surface carrying a groove at the end thereof furthest from the end of said resilient element; said female element comprising a body portion with a forward beveled surface forming an obtuse angle with the major surface of said body, a smaller surface of substantially the same shape as said body portion and smaller in radius than said body portion extending from said beveled surface toward the end of said female element, a beveled surface at the end of said smaller surface such that its small end forms the end of said female element and its larger end is nearer the body portion of said female element and is adjacent said smaller surface thereby forming a lip in the region at which they are contiguous, at least one conducting surface within said outer portions and insulated therefrom and carrying an opening therein, said opening being adapted to receive said pin of said male element and being greater in length than said pin, a ring slidably mounted on said smaller surface and shaped to fit in said recess carried by said resilient elements of said male element; the portions of said male and female elements beyond said body portions being of substantially the same length.

2,944,242

WIRE GRIPPING MEANS FOR ELECTRIC WIRING DEVICES

Robert H. Bentley, Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut

Filed Apr. 15, 1957, Ser. No. 652,881
5 Claims. (Cl. 339—95)



4. In an electric wiring device, a conductive member to which a wire is to be connected, an insulating body hollowed out for the reception of said conductive member and providing interior floor and side surfaces, a sheet metal wire-gripping member having a leg portion held at both its ends against movement upwardly from the floor of said body, with at least a part thereof being flat and lying on the floor, said wire gripping member having a jaw portion alongside of said leg portion but laterally spaced from one edge of said leg portion and having an end adjacent said conductive member to grip a wire inserted between the two, a connecting portion lying on the floor of said body joining said leg portion to said jaw portion and holding said jaw portion in wire gripping position, a lug extending from said connecting portion into engagement with the body and holding one end of said leg portion, and said jaw portion against movement from the floor, and said jaw portion being inclined from the floor and bendable at its other end toward the floor as an outward pull is exerted on the wire to more tightly grip the wire as the pull increases.

2,944,243

ELECTRICAL CONNECTOR

Jacob Schmier, Allentown, Pa., assignor to Rodale Manufacturing Company, Inc., Emmaus, Pa., a corporation of Pennsylvania

Original application Aug. 18, 1955, Ser. No. 529,149, now Patent No. 2,795,767, dated June 11, 1957. Divided and this application June 3, 1957, Ser. No. 663,060
1 Claim. (Cl. 339—193)

An electrical receptacle comprising a body portion having a plurality of projecting spaced terminals connected thereto, a relatively soft, flexible rubber sleeve, means to detachably connect said soft rubber sleeve to said receptacle body, said sleeve extending beyond said receptacle terminals and completely enveloping said receptacle terminals, a wall integrally connected to and substantially closing one end of said sleeve, a central projection within said sleeve, said projection being integral with one end of said wall and extending axially of said sleeve, radially extending ribs on said projection forming a plurality of inner chambers therebetween, each of said chambers encompassing one of said receptacle terminals, an inner peripheral recess in said sleeve adjacent said wall, openings in said wall aligned with corresponding inner chambers, a relatively rigid insulator disc seated in said inner peripheral recess and having a configuration to receive said ribs, and openings in said insulator disc in alignment with the openings in said wall to enable penetration therethrough into each of said inner chambers of a detachable terminal for detachable connection with corresponding receptacle terminals whereby said insulator disc prevents the unauthorized spreading of the openings in said wall.



2,944,244

POSITION INDICATOR MECHANISM FOR ELEVATORS

Arthur Ennis Prince, Boonton Township, Morris County, N.J., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey

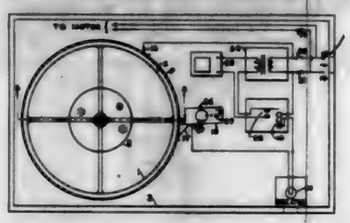
Filed Oct. 20, 1958, Ser. No. 768,368
7 Claims. (Cl. 340—21)



7. In an elevator installation in which an elevator car traveling in a hoistway of a building serves a first floor landing and also a plurality of floor landings located above said first floor landing, and in which selector mechanism is provided, said selector mechanism including a crosshead which is actuatable along a fixed vertical linear path in accordance with movement of said car but at a speed proportional to the speed of the said car, and a plurality of horizontally disposed floor bars mounted in vertically spaced relationship to each other along said path at predetermined points corresponding to the positions of said floor landings in said building; a car position indicator being characterized in that there are provided a plurality of incandescent light bulbs, one each of which corresponds to one of said floor landings served by said car, an electric power source for energizing said light bulbs, said power source having two output terminals, said light bulbs having one side electrically connected in parallel to one of said output terminals, a plurality of snap action toggle switches of the single pole double throw latching type, one each of which is mounted in

vertical alignment with each other on said floor bars corresponding to said floor landings located above said first floor landing, said toggle switches each having two relatively stationary contacts and a switch lever with two relatively movable contacts in position to engage said stationary contacts, the other output terminal of said power source being electrically connected to said switch lever and in turn the movable contacts of the uppermost toggle switch, one stationary contact of that toggle switch being electrically connected to the other side of the light bulb corresponding to the uppermost floor landing and the other stationary contact being electrically connected to the switch lever of the toggle switch located directly below said uppermost toggle switch, all other of said toggle switches except the lowermost toggle switch having one stationary contact connected to its corresponding light bulb and the other connected to the switch lever of the toggle switch located directly below it, the lowermost toggle switch having one stationary contact connected to its corresponding light bulb and the other stationary contact connected to the light bulb corresponding to said first floor landing, and a cam mounted on said crosshead in position to engage and actuate said toggle switches in sequence as said crosshead is actuated along said path in accordance with the movement of said car in said hoistway for sequentially connecting said light bulbs across said power source in accordance with car movement to indicate continuously the position of the car.

2,944,245
PROGRAM SELECTOR
Maurice R. Lynaworth, 2265 62nd St., Brooklyn 4, N.Y., and Lawrence C. Lynaworth, Brooklyn, N.Y. (60 Concord St., Wilmington, Mass.)
Filed Aug. 10, 1959, Ser. No. 832,760
3 Claims. (Cl. 340—162)



1. Program selector means comprising a rotatable drum having a conductive surface, synchronous motor means to rotate said drum, punched paper means removably mounted on said drum, said paper being printed with time coordinates in the direction of said drum surface travel and television channel coordinates in the direction perpendicular to said time coordinates, a plurality of conductive contact fingers, one for each television channel, mounted to ride on said drum surface, a source of electricity connected to said fingers, and utilization means connected to said fingers, said fingers being mounted on a movable mounting, a slotted support for said mounting, and pins on said drum adapted to move said mounting to a new position on said slotted support after a predetermined increment of time.

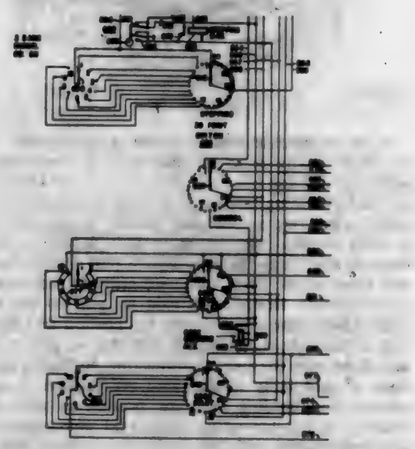
2,944,246
MOLECULAR STORAGE OF INFORMATION
Robert H. Dicke, 37 Jefferson Road, Princeton, N.J.
Filed Mar. 12, 1956, Ser. No. 570,911
7 Claims. (Cl. 340—173)

1. Information storage apparatus comprising a gas chamber, a microwave resonant gaseous medium confined within said chamber, the gas molecules of said medium having electric dipole moments and being convertible by microwave energy from a microwave attenuative state to a microwave radiant state, a source of microwave pulses containing the information to be stored, said pulses being of a frequency which is a resonant frequency of said medium for impressing said information on said medium in its attenuative state, a source of recollection pulses of microwave energy at a resonant fre-



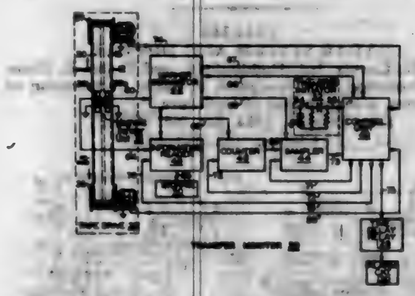
quency of said medium for inducing the occurrence of energy level transitions between energy levels of said medium thereby converting said medium from said attenuative state to said radiant state, coupling means connecting both of said sources to said chamber, and means for applying said recollection pulses to said medium at the conclusion of the desired storage time interval to recall said stored information.

2,944,247
SUPERVISORY CONTROL SYSTEM
Lemuel R. Breese, Galion, Ohio, assignor to North Electric Company, a corporation of Ohio
Filed Mar. 23, 1955, Ser. No. 496,158
20 Claims. (Cl. 340—163)



3. In a supervisory control system comprising a control station interconnected by a communication channel with a plurality of substation positions, each of which positions has a different station selection and identification code signal preassigned thereto, a plurality of substation units adapted for use at the various positions in said system including signal means for receiving and transmitting impulse signals including selection and identification code signals, switch means in each substation unit adjustable to each of a number of settings, and means controlled by said switch means in each of its different settings to adapt said unit for use at a correspondingly different position in the system including means for controlling said signal means to respond to a correspondingly different station selection code signal on each different setting, and to transmit a correspondingly different code identification signal at each different setting.

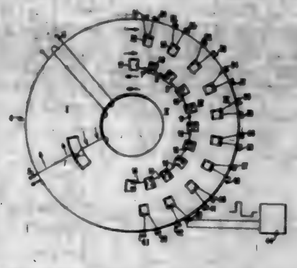
2,944,248
DATA TRANSFER DEVICE
Albert A. Auerbach, Hollis, and Robert F. Shaw, New York, N.Y., assignors, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Filed Feb. 23, 1955, Ser. No. 489,933
4 Claims. (Cl. 340—174)



1. Apparatus for controlling the correct transfer of blocks of information recorded on a tape to a storage device, each block of information comprising a pair of spaced block indicators, a plurality of information characters recorded on said tape between said block indicators and a predetermined number of information locating indicia recorded adjacent said information characters, said apparatus comprising a sensing device to transfer signals representing said information characters to said storage device, a counter, a second sensing device to transfer pulses representing said information locating indicia to said counter, a reversible tape driving means, a control unit settable to enable said tape driving means to drive said tape in a forward direction, block indicator detecting means, a comparison device energized by the second of said block indicators to determine if said counter has counted said predetermined number of indicia, a switching device controlled by said comparison device if said count is not said predetermined number to reset said control unit to enable said tape driving means to drive said tape in a reverse direction, means connected between said block indicator detecting means and said control unit to again set said control unit for the forward direction of tape drive when the first of said block indicators is detected during reverse travel of said tape to retransfer said information signals, and other means in said control unit to reset said counter as said control unit is set to enable a forward drive of said tape.

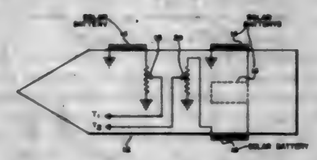
2,944,249
MAGNETIC STORAGE AND SWITCHING STRUCTURE
Harry C. Knutsinnen, Newark Valley, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1958, Ser. No. 783,913
8 Claims. (Cl. 340—174)

4. A magnetic core structure for storing one of a plurality of values comprising a closed loop magnetic core of material having substantial retentivity, first and second primary magnetic circuits extending around different portions of the closed loop of said magnetic core, means for energizing said first and second primary circuits in opposite directions to magnetize said different portions of the closed loop of said core in opposite directions, a plurality of secondary magnetic circuits disposed between said first and second primary magnetic circuits, means for selectively energizing said plurality of secondary circuits to reverse the direction of magnetization in a portion of said first and said second magnetic circuits adjacent the selected secondary circuit and store the value assigned to the selected secondary circuit, and an auxiliary magnetic circuit for each of said



secondary circuits disposed in said core adjacent the associated secondary circuit for sensing the states of said secondary circuits to determine the value stored therein.

2,944,250
METEOR PARTICLE IMPACT SENSING APPARATUS
John R. Ould, Malvern, Pa., assignor to General Electric Company, a corporation of New York
Filed Jan. 24, 1958, Ser. No. 710,997
1 Claim. (Cl. 340—201)

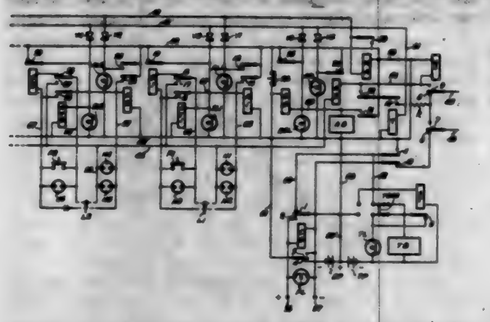


A meteor particle impact sensing device for a high velocity missile, comprising a single solar battery mounted on the surface of the fore portion of the missile, three solar batteries mounted on the surface of the aft portion of the missile equally spaced about the circumference thereof and exposed to the impact of particles, a first and a second telemetry transmitting channel, said single solar battery electrically coupled to said first transmitting channel and said three solar batteries electrically coupled to said second transmitting channel, whereby the output of said solar batteries is proportional to the integrated eroding effect of a large number of very small velocity particles on the surface of the missile.

2,944,251
FIRE ALARM SYSTEM
Claude L. Tetherow, Lincoln, Nebr., assignor to Notifier Corporation, Lincoln, Nebr., a corporation of Nebraska
Filed Jan. 13, 1956, Ser. No. 558,865
25 Claims. (Cl. 340—213)

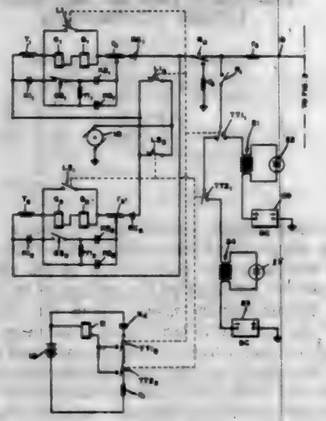
1. In a zoned alarm system, a source of D.C. potential, a conductor common to all of the zones, a different signal circuit for each zone, each said circuit comprising a lamp in series with a unidirectional current flow valve, the valves in all of said circuits being poled in the same sense with respect to the lamps in said circuits, the lamp end of each circuit being connected to one terminal of said source and the valve end of each circuit being connected to said common conductor whereby all of said circuits are in parallel, each said circuit having individual thereto a normally open contact for connecting the opposite terminal of said source to that circuit at a point intermediate the lamp and the valve in that circuit, zone controlled means for closing any one of said contacts, a de-

vice common to all of said zones, and a circuit for energizing said device from said source responsive to the



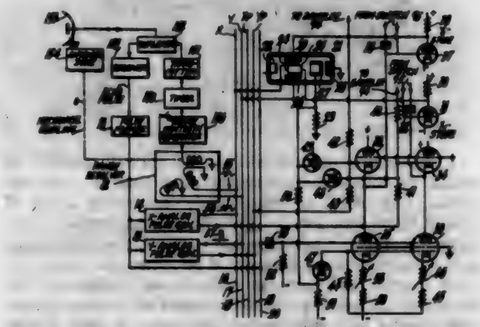
closing of any of said contacts, said last circuit including the closed contact and said common conductor.

2,944,252
INTRUDER ALARM SYSTEM
Manfred W. Mushter, Nutley, N.J., assignor to American District Telegraph Company, Jersey City, N.J., a corporation of New Jersey
Filed Jan. 7, 1957, Ser. No. 632,881
12 Claims. (Cl. 340—276)



1. An intruder alarm system for servicing a plurality of protected premises from a single central station, each of said protected premises having individual protection equipment and said central station having individual equipment associated with particular premises and having common equipment, a communication path intercoupling said central station and at least two of said protected premises and comprising a common conductive line and a common return, the individual equipment at each protected premises and the corresponding individual equipment at said central station forming a set, a source of alternating current at said central station, means to supply said alternating current to said sets, rectifier means at said central station and at said protected premises, said rectifier means being arranged and poled so that one polarity of current flows through one set associated with a particular line while the other polarity flows through the other set associated with said particular line, whereby current flow through the individual equipment at each protected premises may be separately supervised, testing means at said central station for supplying a direct current over said line to the individual equipment at each subscriber's premises, said direct current being of the same polarity but of greater amplitude than the rectified alternating current supplied thereto from said source, means for automatically disconnecting the individual equipment at said central station and associated with the line carrying said direct current while said testing means is operated, and means for maintaining normal current flow through the individual equipment at the central station forming a part of the set associated with the line carrying said direct current but which is not being tested.

2,944,253
RADAR SYSTEM AND DISPLAY
Frank D. Covely 3rd, Haddonfield, and Lester E. Haining, Audubon, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 31, 1954, Ser. No. 479,151
27 Claims. (Cl. 343—5)

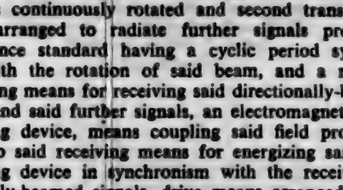


1. In a display system, in combination, a first display device responsive to applied voltages for displaying indications; a second display device responsive to applied voltages for displaying indications; means for producing voltages indicative of the position on one of said display devices of at least some of the indications thereon; means coupled to said other display device and responsive to said produced voltages for placing indications on said other display device in the same relative positions as said some indications on said one display device; and means operatively associated with said two display devices for distinguishing the indications on one device duplicated on the other from those on said one device not duplicated on the other.

15. In a radar system including means for transmitting pulses to objects in a predetermined area and for receiving echoes from said objects, in combination, first display means for displaying said echoes in positions corresponding to the positions in space of the objects from which the echoes are received; second display means responsive to a generated voltage for producing indications; selection means for generating a voltage and applying the same to said second display means for producing an indication on said second display means in the same relative position as a given echo on said first display means; and means operatively associated with said two display means for producing a combined indication of said two display means with indications of one superimposed on corresponding indications of the other.

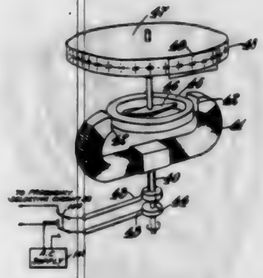
2,944,254
METHOD AND APPARATUS FOR MEASURING DISTANCE IN RADIO HOMING SYSTEMS
David Kerr, Ealing, London, England, assignor to Ultra Electric, Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 12, 1953, Ser. No. 385,625
Claims priority, application Great Britain Nov. 14, 1952
14 Claims. (Cl. 343—11)

14. The method of determining the distance from a radio homing receiver to a radio beacon capable of emitting spaced pairs of pulses of radio frequency energy comprising the steps of measuring the time interval between successive pulses of a pair, selecting a first time interval less than the interval between said successive pulses and transmitting a ranging pulse said selected interval after receipt of the first pulse of a pair, changing



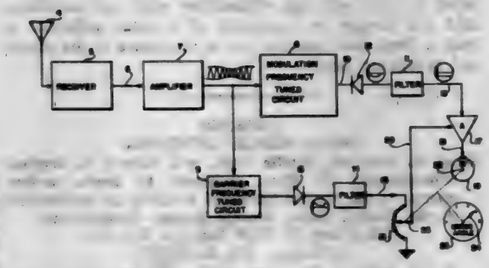
said selected interval and again transmitting a pulse until the selected interval is such that the transmitted pulse reaches said beacon at a time immediately prior to emission by the beacon of the second pulse of the pair, and using the finally selected interval along with the measured time interval between pulses of a pair to determine said distance.

2,944,255
RADIO DIRECTION INDICATING SYSTEMS
Eric Parker, London, England, assignor to The Decca Record Company Limited, London, England, a British company
Filed Nov. 23, 1956, Ser. No. 623,958
6 Claims. (Cl. 343—106)



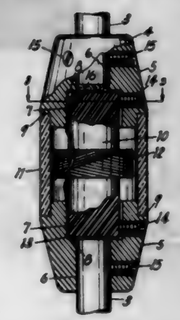
1. A radio direction indicating system comprising a fixed station having first transmitting means arranged to radiate a first signal in a sharply directional beam which is continuously rotated and second transmitting means arranged to radiate further signals providing a reference standard having a cyclic period synchronised with the rotation of said beam, and a receiver comprising means for receiving said directionally-beamed signals and said further signals, an electromagnetic field producing device, means coupling said field producing device to said receiving means for energizing said field producing device in synchronism with the received directionally-beamed signals, drive means arranged to rotate said field producing device in synchronism with the received further signals, a magnetizable element positioned with respect to the field of said field producing device so as to be magnetized by the field produced by said device and an indicating element controlled by said magnetizable element so as to take up a position dependent on the position of said field producing device when it is magnetized by the field produced by the received directionally-beamed signals.

2,944,256
RADAR AIMING ANGLE ANALYZER
Robert E. Rawlins, North Hollywood, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 11, 1955, Ser. No. 527,704
9 Claims. (Cl. 343—113)



3. An analyzer for determining the aiming angle of a radiant energy transmitter comprising, a receiver detecting the radiant energy reaching said receiver which is transmitted by said transmitter, a pair of band pass filter circuits connecting with said receiver, one of said pair of filter circuits being responsive only to the received radiant energy and producing an output signal proportional to the amplitude thereof, the other of said pair of filter circuits being responsive only to the modulation envelope appearing on the radiant energy detected by said receiver and producing an output signal proportional to the amplitude thereof, means connecting with said filter circuits and rectifying said output signals to provide voltages of opposite polarity, and means responsive to the voltages of opposite polarity and indicating the aiming angle of the radiant energy transmitter relative to said receiver.

2,944,257
ANTENNA TUNING DEVICE FOR AUTOMOBILE RADIOS
Donald J. Martin, St. Joseph, Mich., assignor to St. Joe Machines, Inc., St. Joseph, Mich.
Filed July 5, 1955, Ser. No. 519,970
5 Claims. (Cl. 343—749)

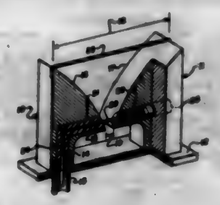


5. An antenna tuning device for receiving sets of automotive vehicles having antenna rods comprising spaced metallic and identical body members having bores formed in the outer ends thereof and adapted to receive the ends of an antenna rod when said rod is cut in two, an insulat-

ing core rod extending between said body members and having its ends received in recesses formed in the body members, a coil wound around said core between members and having bared ends extending into contact with said members and clamped against the members by the ends of said core, set screws in the sides of said members extending into said recesses and clamping the ends of the core against the members, other set screws in said body members extending into said bores and adapted to clamp the severed ends of said antenna rod in said body members, and an insulating sleeve extending between said members and around said coil, said sleeve being in axial abutting engagement with said members, said coil having an impedance of a value sufficient to tune a three foot antenna rod to resonance in the standard broadcast band.

2,944,258
DUAL-RIDGE ANTENNA
Dean K. Yearout, Sandia Park, and Harvey L. Jergins, Albuquerque, N. Mex., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed July 25, 1958, Ser. No. 751,101
4 Claims. (Cl. 343—767)

4. An antenna for transmitting and receiving radio waves of predetermined frequencies comprising a ground plane, a pair of oppositely disposed conductive ridges mounted perpendicular thereto, each ridge having a substantially sector-like longitudinal section with a generally rectangular cutout portion adjacent the ground plane, a pair of curved surfaces on the facing inner ridge portions converging at a predetermined radius of curvature toward the ground plane and terminating a selected distance



therefrom, thereby forming an antenna mouth and throat respectively, an exciter element parallel to the ground plane across the antenna throat, a conductor joining the ridges at the antenna mouth, an energy transferring connector mounted in one of said ridges, a transmission line within said ridge joining said connector to the exciter element, and turning means located wthin the second ridge slidably connected to the exciter element.

DESIGNS

JULY 5, 1960

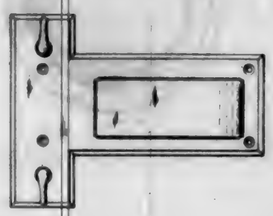
188,306
COMBINED ADVERTISING SIGN AND STANDARD
Myron R. Cothern, Greenwich, Conn., assignor to Texaco Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 1, 1960, Ser. No. 59,286
Term of patent 14 years
(Cl. D1—12)



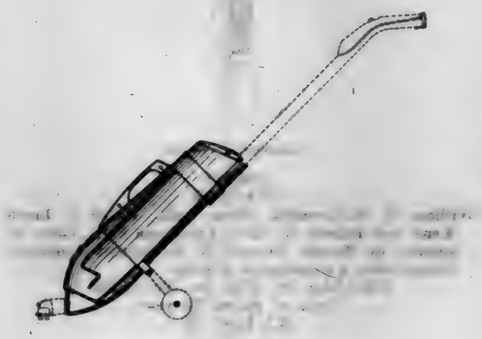
188,307
BASEBALL GLOVE
Harry B. Latina, East St. Louis, Ill., assignor to A. G. Spalding & Bros., Inc., Chicopee, Mass., a corporation of Delaware
Filed July 31, 1959, Ser. No. 57,027
Term of patent 14 years
(Cl. D3—11)



188,308
ELECTRIC SHAVER HOLDER
Harold L. Ettinger, Shubenacadie, Nova Scotia, Canada
Filed Aug. 18, 1959, Ser. No. 57,221
Term of patent 7 years
(Cl. D4—3)



188,309
COMBINED CLEANER AND DRIER
Carroll M. Gantz, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed June 16, 1959, Ser. No. 56,380
Term of patent 14 years
(Cl. D9—2)



188,310
MOLDED POULTRY NEST CUSHION
Glenn O. Bressler, 630 Franklin St., State College, Pa., and Arthur G. Perry, 203 Burncoat St., Worcester, Mass.
Filed Nov. 16, 1959, Ser. No. 58,340
Term of patent 14 years
(Cl. D12—2)



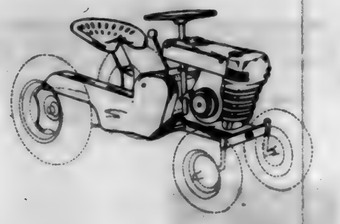
188,311
BUILDING
Flynn E. Hudson, Jr., 145 Carter Road, Decatur, Ga., and La Fayette M. Sheffer, 1734 Moores Mile Road NW., Atlanta, Ga.
Filed Oct. 16, 1957, Ser. No. 48,123
Term of patent 14 years
(Cl. D13—1)



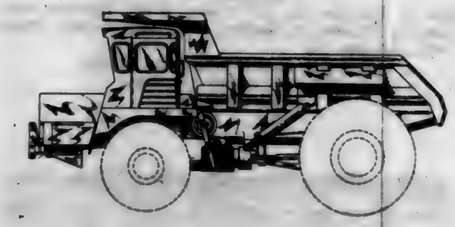
188,312
COMBINED RAILING POST AND BRACKET
Louis Blum, Pittsburgh, Pa., assignor to Blumcraft of Pittsburgh, Pittsburgh, Pa., a firm
Filed Feb. 8, 1960, Ser. No. 59,295
Term of patent 14 years
(Cl. D13—7)



188,313
TRACTOR
William S. McCormick, Silver Lake, Ralph J. Jacob, Kent, and Robert G. Hills, Cuyahoga Falls, Ohio, assignors to Bready Tractor & Implement Company, Solon, Ohio, a corporation of Ohio
Filed May 20, 1959, Ser. No. 56,002
Term of patent 14 years
(Cl. D14—3)



188,314
TRUCK
John H. Babbitt, Jr., Peoria, Lawrence F. Clancy, Pekin, and Robert E. Gerber and Charles C. Sons, Jr., Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Oct. 29, 1959, Ser. No. 58,126
Term of patent 14 years
(Cl. D14—3)



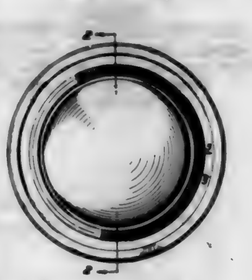
188,315
FOOD SERVICE CART
William H. Frick, 850 Euclid Ave., Cleveland, Ohio
Filed Jan. 6, 1959, Ser. No. 54,053
Term of patent 14 years
(Cl. D14—3)



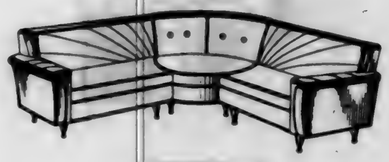
188,316
SUPPORT FOR A REAR VIEW MIRROR
Anthony M. Lombari, 8709¼ S. Hoover, and Edwin L. Schwartz, 2429 Guthrie Drive, both of Los Angeles, Calif.
Filed June 8, 1959, Ser. No. 56,250
Term of patent 14 years
(Cl. D14—6)



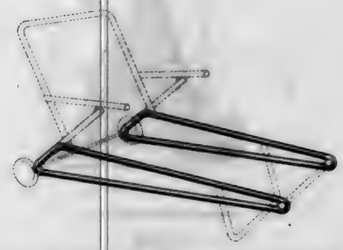
188,317
WHEEL COVER
Frederic P. Plotkin, 1044 Hilts Ave., Los Angeles, Calif.
Filed Dec. 24, 1958, Ser. No. 53,893
Term of patent 14 years
(Cl. D14—30)



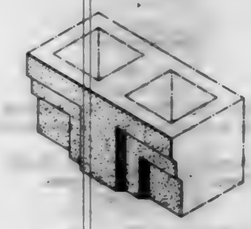
188,318
SECTIONAL SOFA
Stanley J. Niederman, Chicago, Ill., assignor to Howard Parlor Furniture Co., Chicago, Ill., a corporation of Illinois
Filed Mar. 1, 1960, Ser. No. 59,574
Term of patent 14 years
(Cl. D15—11)



188,319
CHAISE FRAME
Morton I. Thomas, R.D. 2, Box 182H, Monroe, N.Y.
Filed Dec. 18, 1958, Ser. No. 53,817
Term of patent 14 years
(Cl. D15—11)



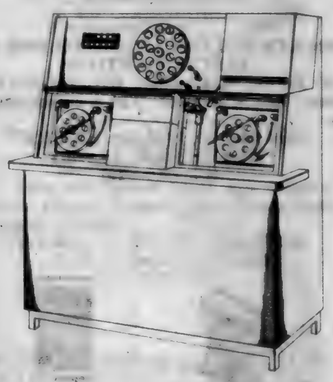
188,320
BUILDING BLOCK UNIT
Verne Frese, 7265 E. Marginal Way, Seattle, Wash.
Filed May 12, 1959, Ser. No. 55,879
Term of patent 14 years
(Cl. D18—2)



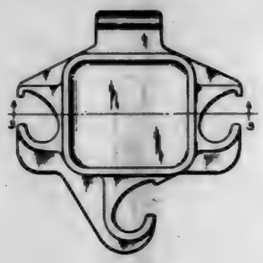
188,321
DENTAL DRILL UNIT
Percy Hawtin, Blackpool, England, assignor to The Dental Manufacturing Company Limited, Blackpool, Lancashire, England, a British company
Filed Aug. 12, 1959, Ser. No. 57,153
Claims priority, application Great Britain Apr. 28, 1959
Term of patent 14 years
(Cl. D24—1)



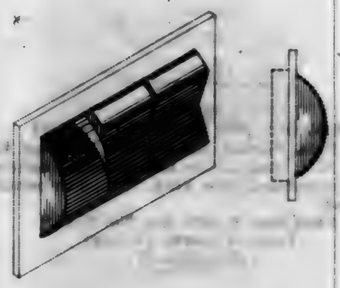
188,322
CONSOLE FOR TAPE EQUIPMENT
Robert H. Eytel, Fishkill, and Hercules A. Volpe, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 9, 1959, Ser. No. 57,495
Term of patent 14 years
(Cl. D26—5)



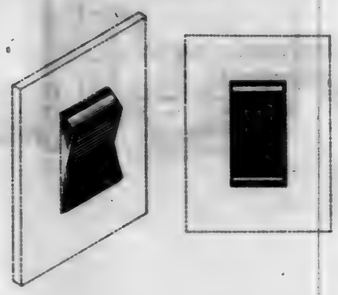
188,325
COMBINED CABLE SEPARATOR AND HANGER OR SIMILAR ARTICLE
William F. Johnson, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Aug. 28, 1959, Ser. No. 57,355
Term of patent 14 years
(Cl. D16—10)



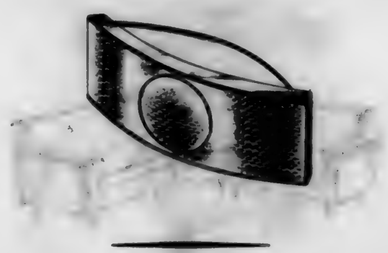
188,324
COMBINED THERMOSTATIC CONTROL AND ROCKER BUTTON ACTUATOR FOR AN ELECTRIC SWITCH
Harry W. Brown, Mukwonago, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 25, 1958, Ser. No. 52,375
Term of patent 14 years
(Cl. D26—13)



188,325
ROCKER BUTTON ACTUATOR FOR AN ELECTRIC SWITCH
Harry W. Brown, Mukwonago, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Aug. 25, 1958, Ser. No. 52,377
Term of patent 14 years
(Cl. D26—13)



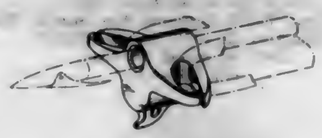
188,326
LOUD-SPEAKER
Sidney E. Levy and Bernard C. Sharp, White Plains, N.Y., assignors to University Loudspeakers, Inc., White Plains, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 56,601
Term of patent 14 years
(Cl. D26—14)



188,327
FIGURINE
Philip H. Nordberg and Adeline S. Nordberg, both of 3201 E. Moreland St., Phoenix, Ariz.
Filed Oct. 22, 1959, Ser. No. 58,031
Term of patent 14 years
(Cl. D29—23)



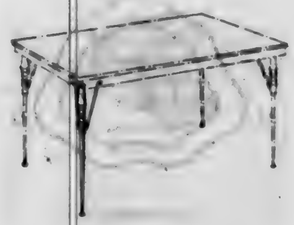
188,328
MUZZLE FOR A SPEAR FISHING GUN
James S. Christiansen, 135 Covina, Long Beach, Calif.
Filed May 28, 1959, Ser. No. 56,115
Term of patent 14 years
(Cl. D30—1)



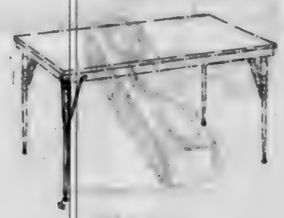
188,329
TIE BAR
Howard C. Kelley, Des Plaines, Ill., assignor to W. L. Stensgaard and Associates, Inc., a corporation of Illinois
Filed Apr. 13, 1959, Ser. No. 55,471
Term of patent 14 years
(Cl. D33—8)



188,330
TABLE
Morton R. Cohen, 5490 S. South Shore Drive, Chicago, Ill.
Filed Aug. 12, 1957, Ser. No. 47,310
Term of patent 14 years
(Cl. D33—14)



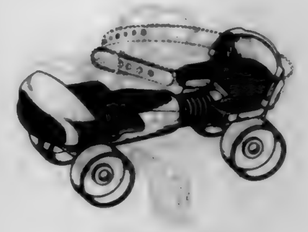
188,331
TABLE
Morton R. Cohen, 5490 S. South Shore Drive, Chicago, Ill.
Filed Aug. 12, 1957, Ser. No. 47,311
Term of patent 14 years
(Cl. D33—14)



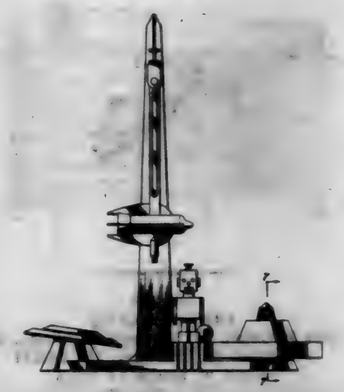
188,332
CORNER SHELF
Martin M. Salen, 6303 Large St., Philadelphia, Pa.
Filed May 18, 1959, Ser. No. 55,962
Term of patent 14 years
(Cl. D33—16)



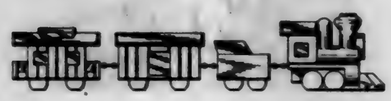
188,333
ROLLER SKATE
John Budd, Eastford, Conn., assignor to Union Hardware Company, Torrington, Conn., a corporation of Connecticut
Filed Feb. 24, 1960, Ser. No. 59,495
Term of patent 14 years
(Cl. D34—5)



188,334
ACTION GAME DEVICE
John T. Warrix and Reece I. Warrix, Columbus, Ohio, assignors to Kilgore, Inc., Westerville, Ohio, a corporation of Ohio
Filed Oct. 7, 1959, Ser. No. 57,852
Term of patent 14 years
(Cl. D34—15)



188,335
BEADED TOY TRAIN
Robert Y. Allen and Melvin Shaw, Los Angeles, Calif., assignors to Hoover Products, Inc., Youngstown, Ohio, a corporation of Ohio
Filed Dec. 11, 1959, Ser. No. 58,642
Term of patent 14 years
(Cl. D34—15)



188,336
COMBINED HOBBYHORSE AND BICYCLE
John P. Dondelinger, 9136 Greenwood Ave., Des Plaines, Ill.
Filed May 18, 1959, Ser. No. 53,964
Term of patent 14 years
(Cl. D34—15)



188,337
ABRADING TOOL
William E. Cowley and Wilfred M. McCord, Jr., Louisville, Ky., assignors to American Saw and Tool Company, Louisville, Ky., a corporation of Kentucky
Filed July 9, 1958, Ser. No. 51,716
Term of patent 14 years
(Cl. D37—1)



188,338
DOG BLANKET
Olga P. Gajda, 707 W. Junior, Chicago, Ill.
Filed Jan. 26, 1959, Ser. No. 54,291
Term of patent 14 years
(Cl. D38—10)

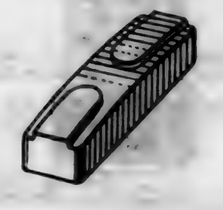


188,339
PLATTER
Fridolin J. Blumer, Lane Gate Road, Cold Spring-on-Hudson, N.Y.
Filed Feb. 5, 1960, Ser. No. 59,285
Term of patent 14 years
(Cl. D44—15)



188,340
LINK FOR AN EXPANSIBLE BRACELET OR SIMILAR ARTICLE
Nathan Goodman, Forest Hills, N.Y., assignor to Baldwin Bracelet Corporation, New York, N.Y., a corporation of New York
Filed Aug. 27, 1959, Ser. No. 57,334
Term of patent 7 years
(Cl. D45—4)

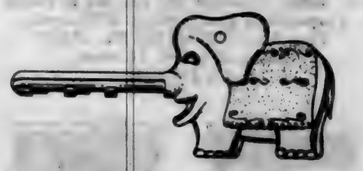
188,341
LINK FOR AN EXPANSIBLE BRACELET OR SIMILAR ARTICLE
Nathan Goodman, Forest Hills, N.Y., assignor to Baldwin Bracelet Corporation, New York, N.Y., a corporation of New York
Filed Aug. 27, 1959, Ser. No. 57,336
Term of patent 7 years
(Cl. D45—4)



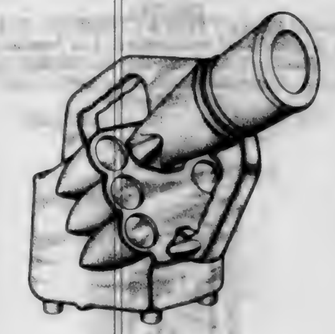
188,342
DRAWER KNOB AND THE LIKE
Benjamin S. Faber, New York, N.Y., assignor to Penn-Akron Corporation, a corporation of Delaware
Filed July 15, 1959, Ser. No. 56,785
Term of patent 14 years
(Cl. D50—3)



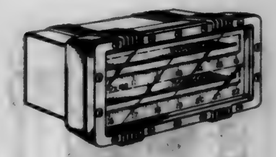
188,343
NOVELTY KEY
Bruce S. Sedley, Fairfax, Calif., assignor to Audio Tours, Inc., San Francisco, Calif., a corporation of California
Filed Dec. 23, 1959, Ser. No. 58,785
Term of patent 14 years
(Cl. D50—4)



188,344
COMBINED IGNITION AND SPARK PLUG TESTER
Ronald F. Carlson, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 57,886
Term of patent 14 years
(Cl. D52—1)



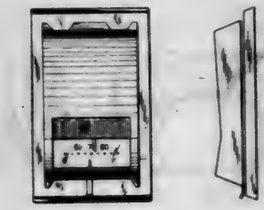
188,345
VIBRATING REED INSTRUMENT OR SIMILAR ARTICLE
Frederick E. Lombard, Dublin, Pa., assignor to James G. Biddle Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 16, 1959, Ser. No. 58,360
Term of patent 14 years
(Cl. D52—1)



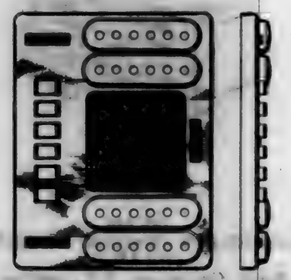
188,346
ENCLOSURE FOR VENDING MACHINES OR THE LIKE
Harvey J. Smith, Greensboro, N.C., assignor to Modern Metal Products Company, Greensboro, N.C., a corporation of North Carolina
Filed Oct. 17, 1958, Ser. No. 53,017
Term of patent 14 years
(Cl. D52—3)



188,347
SPACE CONDITION RESPONSIVE INSTRUMENT
Henry Dreyfuss, South Pasadena, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 57,683
Term of patent 14 years
(Cl. D52—7)



188,348
CONTROL PANEL FOR A GUITAR OR SIMILAR ARTICLE
Olof Holger Bergland, Alvdalen, Sweden, assignor to Aktiebolaget Alvin Hagstrom, Alvdalen, Sweden, a joint-stock company of Sweden
Filed May 29, 1959, Ser. No. 56,136
Term of patent 7 years
(Cl. D56—1)



188,349
ELECTRIC GUITAR
Junior R. Cole, Rte. 2, Box 62, Quiln, Mo., and Archie L. Brown, Brooseley, Mo.
Filed July 31, 1959, Ser. No. 57,020
Term of patent 14 years
(Cl. D56—1)



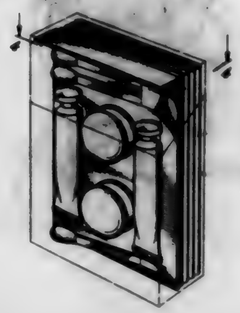
188,350
ORGAN CONSOLE
William Millington, Grand Rapids, Mich., and Wilbur M. Day, Kenwood, Ohio, assignors to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 13, 1959, Ser. No. 54,986
Term of patent 14 years
(Cl. D56—2)



188,351
PORTABLE RADIO CABINET
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Mar. 9, 1960, Ser. No. 59,679
Term of patent 14 years
(Cl. D56—4)



188,352
CONTAINER INSERT FOR A COSMETIC PACKAGE
Georges Kocens, 8462 Sunset Blvd., Los Angeles, Calif.
Filed July 24, 1957, Ser. No. 47,061
Term of patent 3½ years
(Cl. D58—2)



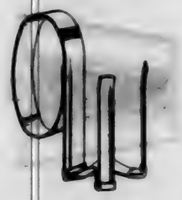
188,353
LIQUOR DECANTER
Thomas Merrill, 426 S. Roosevelt Ave., Pasadena, Calif.
Filed Oct. 29, 1959, Ser. No. 58,110
Term of patent 14 years
(Cl. D58—9)



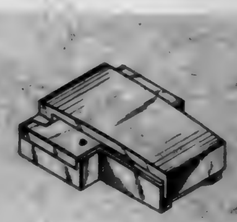
188,354
BOTTLE
Edward Rachins, 144 Winchester St., Brookline, Mass.
Filed Mar. 11, 1960, Ser. No. 59,698
Term of patent 14 years
(Cl. D58—9)



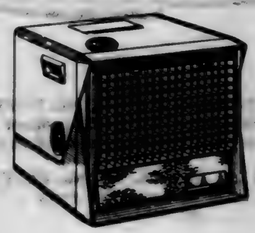
188,355
HOLDER FOR A CAN OR SIMILAR ARTICLE
Charles F. Greenleaf, 1104 Berkeley Drive, Glendale, Calif.
Filed June 29, 1959, Ser. No. 56,574
Term of patent 14 years
(Cl. D58—26)



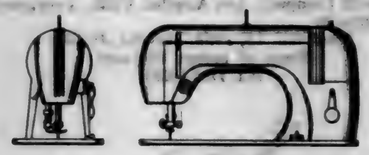
188,356
FILM SPLICER
Frederick Hertzler, St. Clair Shores, Mich., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 3, 1959, Ser. No. 57,421
Term of patent 7 years
(Cl. D61—1)



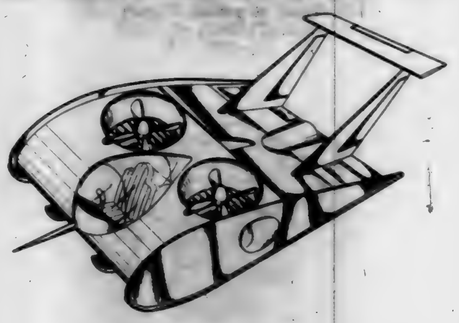
188,357
PORTABLE EVAPORATIVE COOLER
Edward C. Klotz, Jr., Phoenix, Ariz., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 53,188
Term of patent 14 years
(Cl. D62—4)



188,358
SEWING MACHINE
Humberto A. Garcia, 8 Tori, 3 Chome, Nihonbashi, Tokyo, Japan
Filed Dec. 8, 1958, Ser. No. 53,681
Term of patent 14 years
(Cl. D70—1)



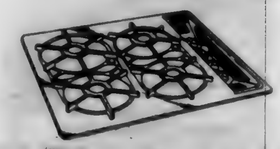
188,359
AIRCRAFT
John P. Le Bel, 242 S. Vendome, Los Angeles, Calif.
Filed Apr. 6, 1959, Ser. No. 55,377
Term of patent 14 years
(Cl. D71—1)



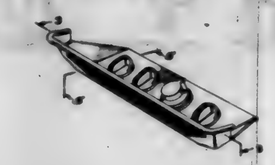
188,360
DRONE AIRCRAFT
Philip E. R. Brice, Amityville, N.Y., assignor to Republic Aviation Corporation, Farmingdale, N.Y., a corporation of Delaware
Filed May 20, 1959, Ser. No. 55,989
Term of patent 14 years
(Cl. D71—1)



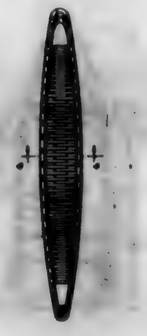
188,361
COUNTER TOP COOKING UNIT
Emery J. Poracki, South Gate, Calif., assignor to O'Keefe & Merritt Company, Los Angeles, Calif., a corporation of California
Filed Jan. 13, 1958, Ser. No. 49,237
Term of patent 14 years
(Cl. D81—25)



188,362
CONTROL PANEL FOR COOKING RANGE OR THE LIKE
Emery J. Poracki, South Gate, Calif., assignor to O'Keefe & Merritt Company, Los Angeles, Calif., a corporation of California
Filed Jan. 13, 1958, Ser. No. 49,240
Term of patent 14 years
(Cl. D81—25)



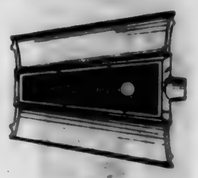
188,363
BARRETTE
Irene M. Derr, 103 Oakway Road, Timonium, Md.
Filed June 29, 1959, Ser. No. 56,572
Term of patent 14 years
(Cl. D06—8)



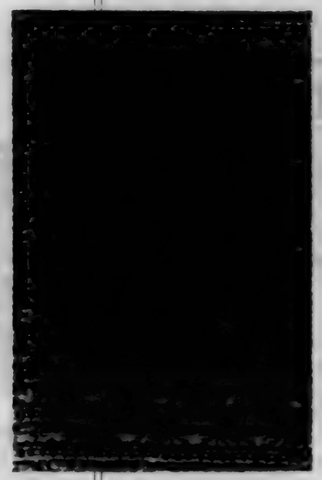
188,364
APPARATUS FOR APPLYING AND REMOVING MAKE-UP
Antoine Francois Peyron, 4 Rue de Londres, Paris, France
Filed May 25, 1959, Ser. No. 56,037
Term of patent 14 years
(Cl. D86—10)



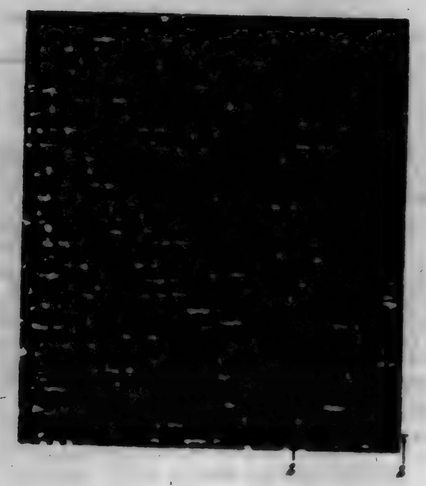
188,365
SPRINKLER BASE
John D. Beinert, Babylon, N.Y., assignor to Melnor Industries, Inc., Brooklyn, N.Y., a corporation of New York
Filed June 30, 1959, Ser. No. 56,605
Term of patent 7 years
(Cl. D91—1)

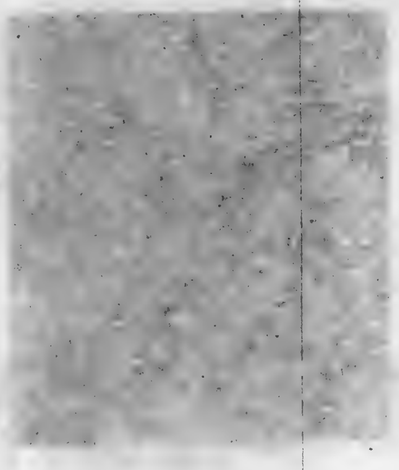


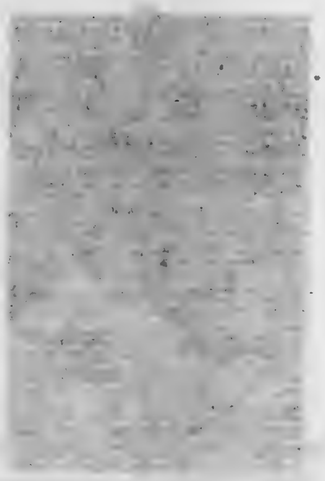
188,366
EMBROIDERED FABRIC OR SIMILAR ARTICLE
Anton J. Wider, 14 Dianne Court, Clifton, N.J.
Filed Dec. 31, 1959, Ser. No. 58,870
Term of patent 7 years
(Cl. D92—1)



188,367
BREATHABLE POLYMER COATED FABRIC
Jack D. Kahney, Mishawaka, Ind., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 23, 1958, Ser. No. 49,363
Term of patent 14 years
(Cl. D92—1)







LIST OF PLANT PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 5TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Parker, Elizabeth B. Chrysanthemum plant. 1,957, 7–5–60, Cl. 47—60.

LIST OF DESIGN PATENTEES

Aktiebolaget Albin Hagstrom: *See*—
Berglund, Olof H. 188,348.
Allen, Robert Y., and M. Shaw, to Hoover Products, Inc. Beaded toy train. 188,335, 7–5–60, Cl. D34—15.
American Saw and Tool Co.: *See*—
Cowley, William E., and McCord. 188,337.
Audio Tours, Inc.: *See*—
Sedley, Bruce S. 188,343.
Babbitt, John H., Jr., L. F. Clancy, R. E. Gerber, and C. C. Sons, Jr., to Caterpillar Tractor Co. Truck. 188,314, 7–5–60, Cl. D14—3.
Baldwin Bracelet Corp.: *See*—
Goodman, Nathan. 188,340.
Goodman, Nathan. 188,341.
Baldwin Piano Co., The: *See*—
Millington, William, and Day. 188,350.
Beinert, John D., to Melnor Industries, Inc. Sprinkler base. 188,365, 7–5–60, Cl. D91—1.
Berglund, Olof H., to Aktiebolaget Albin Hagstrom. Control panel for a guitar or similar article. 188,348, 7–5–60, Cl. D56—1.
Biddle, James G., Co.: *See*—
Lombard, Frederick E. 188,345.
Blum, Louis, to Blumcraft of Pittsburgh. Combined railing post and bracket. 188,312, 7–5–60, Cl. D12—7.
Blumcraft of Pittsburgh: *See*—
Blum, Louis. 188,312.
Blumer, Fridolin J. Platter. 188,330, 7–5–60, Cl. D44—15.
Boldt, Melvin H., to Zenith Radio Corp. Portable radio cabinet. 188,351, 7–5–60, Cl. D56—4.
Bready Tractor & Implement Co.: *See*—
McCormick, William S., Jacob, and Hills. 188,313.
Bressler, Glenn O., and A. G. Perry. Molded poultry nest cushion. 188,310, 7–5–60, Cl. D12—2.
Brice, Philip E. R., to Republic Aviation Corp. Drone aircraft. 188,300, 7–5–60, Cl. D71—1.
Brown, Archie L.: *See*—
Cole, Junior R., and Brown. 188,349.
Brown, Harry W., to Cutler-Hammer, Inc. Combined thermostatic control and rocker button actuator for an electric switch. 188,324, 7–5–60, Cl. D26—13.
Brown, Harry W., to Cutler-Hammer, Inc. Rocker button actuator for an electric switch. 188,325, 7–5–60, Cl. D26—13.
Budd, John, to Union Hardware Co. Roller skate. 188,333, 7–5–60, Cl. D34—5.
Carlson, Ronald F., to General Motors Corp. Combined ignition and spark plug tester. 188,344, 7–5–60, Cl. D52—1.
Caterpillar Tractor Co.: *See*—
Babbitt, John H., Jr., Clancy, Gerber, and Sons. 188,314.
Christiansen, James S. Muzzle for a spear fishing gun. 188,328, 7–5–60, Cl. D30—1.
Clancy, Lawrence F.: *See*—
Babbitt, John H., Jr., Clancy, Gerber, and Sons. 188,314.
Cohen, Morton R. Table. 188,330, 7–5–60, Cl. D33—14.
Cohen, Morton R. Table. 188,331, 7–5–60, Cl. D33—14.
Cole, Junior R., and A. L. Brown. Electric guitar. 188,349, 7–5–60, Cl. D56—1.
Corning Glass Works: *See*—
Johnson, William F. 188,323.
Cothern, Myron R., to Texaco Inc. Combined advertising sign and standard. 188,306, 7–5–60, Cl. D1—12.
Cowley, William E., and W. M. McCord, Jr., to American Saw and Tool Co. Abrading tool. 188,337, 7–5–60, Cl. D37—1.
Cutler-Hammer, Inc.: *See*—
Brown, Harry W. 188,324.
Brown, Harry W. 188,325.
Day, Wilbur M.: *See*—
Millington, William, and Day. 188,350.
Dental Mfg. Co. Ltd., The: *See*—
Hawtin, Percy. 188,321.
Dondelinger, John P. Combined hobbyhorse and bicycle. 188,338, 7–5–60, Cl. D34—15.
Dorr, Irene M. Barrette. 188,363, 7–5–60, Cl. D86—8.
Dreyfuss, Henry, to Minneapolis-Honeywell Regulator Co. Space condition responsive instrument. 188,347, 7–5–60, Cl. D52—7.
Eytel, Robert H., and H. A. Volpe, to International Business Machines Corp. Console for tape equipment. 188,322, 7–5–60, Cl. D26—5.
Ettinger, Harold L. Electric shaver holder. 188,308, 7–5–60, Cl. D4—3.
Faber, Benjamin S., to Penn-Akron Corp. Drawer knob and the like. 188,342, 7–5–60, Cl. D50—3.
Frese, Verne. Building block unit. 188,320, 7–5–60, Cl. D18—2.
Frick, William H. Food service cart. 188,316, 7–5–60, Cl. D14—3.
Gajda, Olga P. Dog blanket. 188,336, 7–5–60, Cl. D38—10.
Gantz, Carroll M., to The Hoover Co. Combined cleaner and drier. 188,309, 7–5–60, Cl. D9—2.
Garcia, Humberto A. Sewing machine. 188,358, 7–5–60, Cl. D70—1.
General Motors Corp.: *See*—
Carlson, Ronald F. 188,344.
Gerber, Robert E.: *See*—
Babbitt, John H., Jr., Clancy, Gerber, and Sons. 188,314.
Goodman, Nathan, to Baldwin Bracelet Corp. Link for an expansible bracelet or similar article. 188,340, 7–5–60, Cl. D45—4.
Goodman, Nathan, to Baldwin Bracelet Corp. Link for an expansible bracelet or similar article. 188,341, 7–5–60, Cl. D45—4.
Greenleaf, Charles F. Holder for a can or similar article. 188,355, 7–5–60, Cl. D38—26.
Hawtin, Percy, to The Dental Mfg. Co. Ltd. Dental drill unit. 188,321, 7–5–60, Cl. D24—1.
Hertuler, Frederick, to Sylvania Electric Products Inc. Film splicer. 188,356, 7–5–60, Cl. D61—1.
Hills, Robert G.: *See*—
McCormick, William S., Jacob, and Hills. 188,313.
Hoover Co., The: *See*—
Gantz, Carroll M. 188,309.
Hoover Products, Inc.: *See*—
Allen, Robert Y., and Shaw. 188,335.
Howard Parlor Furniture Co.: *See*—
Niederman, Stanley J. 188,318.
Hudson, Flynn E., Jr., and L. F. M. Sheffer. Building. 188,311, 7–5–60, Cl. D13—1.
International Business Machines Corp.: *See*—
Eytel, Robert H., and Volpe. 188,322.
Jacob, Ralph J.: *See*—
McCormick, William S., Jacob, and Hills. 188,313.
Johnson, William F., to Corning Glass Works. Combined cable separator and hanger or similar article. 188,323, 7–5–60, Cl. D26—10.
Kahney, Jack D., to United States Rubber Co. Breathable polymer coated fabric. 188,367, 7–5–60, Cl. D92—1.
Kelley, Howard C., to W. L. Stensgaard and Associates, Inc. Tie bar. 188,329, 7–5–60, Cl. D33—8.
Kilgore, Inc.: *See*—
Warrix, John T. and R. I. 188,334.
Klotz, Edward C., Jr., to McGraw-Edison Co. Portable evaporative cooler. 188,357, 7–5–60, Cl. D62—4.
Kocens, Georges. Container insert for a cosmetic package. 188,352, 7–5–60, Cl. D58—2.
Latina, Harry R., to A. G. Spalding & Bros., Inc. Baseball glove. 188,307, 7–5–60, Cl. D3—11.
Le Bel, John P. Aircraft. 188,359, 7–5–60, Cl. D71—1.
Levy, Sidney E., and B. C. Sharp, to University Loudspeakers, Inc. Loud-speaker. 188,326, 7–5–60, Cl. D26—14.
Lombard, Frederick E., to James G. Biddle Co. Vibrating reed instrument or similar article. 188,345, 7–5–60, Cl. D52—1.
Lombari, Anthony M., and E. L. Schwartz. Support for a rear view mirror. 188,310, 7–5–60, Cl. D14—6.
McCord, Wilfred M., Jr.: *See*—
Cowley, William E., and McCord. 188,337.
McCormick, William S., R. J. Jacob, and R. G. Hills, to Bready Tractor & Implement Co. Tractor. 188,313, 7–5–60, Cl. D14—3.
McGraw-Edison Co.: *See*—
Klotz, Edward C., Jr. 188,357.
Melnor Industries, Inc.: *See*—
Beinert, John D. 188,365.
Merrill, Thomas. Liquor decanter. 188,353, 7–5–60, Cl. D58—9.
Millington, William, and W. M. Day, to The Baldwin Piano Co. Organ console. 188,350, 7–5–60, Cl. D56—2.
Minneapolis-Honeywell Regulator Co.: *See*—
Dreyfuss, Henry. 188,347.
Modern Metal Products Co.: *See*—
Smith, Harvey J. 188,346.
Niederman, Stanley J., to Howard Parlor Furniture Co. Sectional sofa. 188,318, 7–5–60, Cl. D15—11.
Nordberg, Adeline S.: *See*—
Nordberg, Philip H. and A. S. 188,327.
Nordberg, Philip H. and A. S. Figurine. 188,327, 7–5–60, Cl. D29—23.
O'Keefe & Merritt Co.: *See*—
Poracki, Emery J. 188,361.
Poracki, Emery J. 188,362.

Penn-Akron Corp.: *See*—
Faber, Benjamin S. 188,342.
Perry, Arthur G.: *See*—
Bressler, Glenn O., and Perry. 188,310.
Peyron, Antoine F. Apparatus for applying and removing make-up. 188,364, 7–5–60, Cl. D86—10.
Plotkin, Frederic P. Wheel cover. 188,317, 7–5–60, Cl. D14—30.
Poracki, Emery J., to O'Keefe & Merritt Co. Counter top cooking unit. 188,361, 7–5–60, Cl. D81—25.
Poracki, Emery J., to O'Keefe & Merritt Co. Control panel for cooking range or the like. 188,362, 7–5–60, Cl. D81—28.
Rachins, Edward. Bottle. 188,354, 7–5–60, Cl. D58—9.
Republic Aviation Corp.: *See*—
Brice, Philip E. R. 188,360.
Salen, Martin M. Corner shelf. 188,332, 7–5–60, Cl. D33—18.
Schwartz, Edwin L.: *See*—
Lombari, Anthony M., and Schwartz. 188,316.
Sedley, Bruce S., to Audio Tours, Inc. Novelty key. 188,343, 7–5–60, Cl. D50—4.
Sharp, Bernard C.: *See*—
Levy, Sidney E., and Sharp. 188,320.
Shaw, Melvin: *See*—
Allen, Robert Y., and Shaw. 188,335.
Sheffer, La Fayette M.: *See*—
Hudson, Flynn E., Jr., and Sheffer. 188,311.
Smith, Harvey J., to Modern Metal Products Co. Enclosure for vending machines or the like. 188,346, 7–5–60, Cl. D52—3.
Sons, Charles C., Jr.: *See*—
Babbitt, John H., Jr., Clancy, Gerber, and Sons. 188,314.
Spalding, A. G., & Bros., Inc.: *See*—
Latina, Harry B. 188,307.
Stensgaard, W. L., and Associates, Inc.: *See*—
Kelley, Howard C. 188,329.
Sylvania Electric Products Inc.: *See*—
Hertzler, Frederick. 188,356.
Texaco Inc.: *See*—
Cothern, Myron R. 188,306.
Thomas, Morton I. Chaise frame. 188,319, 7–5–60, Cl. D15—11.
Union Hardware Co.: *See*—
Budd, John. 188,333.
United States Rubber Co.: *See*—
Kahney, Jack D. 188,367.
University Loudspeakers, Inc.: *See*—
Levy, Sidney E., and Sharp. 188,326.
Volpe, Hercules A.: *See*—
Rytel, Robert H., and Volpe. 188,322.
Warrix, John T. and R. I., to Kilgore, Inc. Action game device. 188,334, 7–5–60, Cl. D64—15.
Warrix, Reece I.: *See*—
Warrix, John T. and R. I. 188,334.
Wilder, Anton J. Embroidered fabric or similar article. 188,366, 7–5–60, Cl. D92—1.
Zenith Radio Corp.: *See*—
Boldt, Melvin H. 188,351.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 5TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Eisenberg, Robert M. 2,943,401.
Gordon, Dwight M., and Highley. 2,943,848.
Whitby, Clyde M. 2,943,402.
Abbott Laboratories: *See*—
Close, Warren J., and Dunnigan. 2,944,060.
Abrams Instrument Corp.: *See*—
Schmidt, Louis F. 2,944,169.
Acme Steel Co.: *See*—
Hall, Marchand B., and Winkler. 2,943,658.
Adams, Elmer L., and R. C. Gazmire, to Owens-Illinois Glass Co. Apparatus for trimming excess plastic from blown plastic articles. 2,943,349, 7–5–60, Cl. 18—5.
Advanced Research Associates, Inc.: *See*—
Walker, Norman K. 2,944,214.
Aeon Industries, Inc.: *See*—
Golding, Fred E. 2,943,234.
Aerojet-General Corp.: *See*—
Graefe, Allen F. 2,944,051.
Aeroprojects, Inc.: *See*—
Jones, James B., and Straughn. 2,944,029.
Aerotec Industries, Inc., The: *See*—
Oliveau, John V. 2,944,125.
Aktiebolaget Bygg-Och Transportekonomi: *See*—
Bryntse, Anders I. 2,943,755.
Aktiebolaget Kanthal: *See*—
Haglund, John H. 2,943,951.
Schrewelius, Nils G. 2,944,239.
Aktiengesellschaft Brown, Boveri & Cie: *See*—
Latzko, John A. 2,943,717.
Albright, Robert B., E. J. Michonski, and F. Richardson, to Philco Corp. Transducers. 2,944,119, 7–5–60, Cl. 179—111.
Albright, Roy H., to I-T-E Circuit Breaker Co. High voltage bus structure. 2,944,101, 7–5–60, Cl. 174—99.
Aldinger, Ulrich: *See*—
Bosch, Robert, Aldinger, and Volk. 2,943,614.
Aldrich, Clare A., and J. F. Jacob, to United Aircraft Products, Inc. Heat absorbing unit using solid material of high specific heat. 2,943,714, 7–5–60, Cl. 188—264.
Aldrich, Clare A., and J. F. Jacob, to United Aircraft Products, Inc. Capacitance system of heat transfer. 2,943,715, 7–5–60, Cl. 188—264.
Alger, Philip L., to General Electric Co. Intermediate ring squirrel cage rotor. 2,944,171, 7–5–60, Cl. 310—211.
Allais, Andre: *See*—
Vesterman, Anatole, and Allais. 2,944,073.
Allen, Edward M., to Columbia-Southern Chemical Corp. Silica composition and production thereof. 2,943,948, 7–5–60, Cl. 106—288.
Allen, Edward M., to Columbia-Southern Chemical Corp. Paper pigments. 2,943,970, 7–5–60, Cl. 162—181.
Allen, Edwin L., to L. W. Mensimer, trustee. Latch mechanism. 2,943,879, 7–5–60, Cl. 292—44.
Allenden, Dennis, to Associated Electrical Industries Ltd. Current measuring circuit. 2,944,216, 7–5–60, Cl. 324—123.
Allied Chemical Corp.: *See*—
Saukiewicz, Waclaw. 2,943,947.
Allis-Chalmers Mfg. Co.: *See*—
Davison, Lester W., and Surenda. 2,944,103.
Gray, James H., and Wood. 2,943,431.
Alquist, Mavis M. Quantitative indicator for syringes. 2,943,624, 7–5–60, Cl. 128—218.
Aluminium-Industrie-Aktien-Gesellschaft: *See*—
Moser, Erwin. 2,943,914.
Ambrose, Henry A., to Gulf Research & Development Co. Residual fuel oils. 2,943,925, 7–5–60, Cl. 44—66.
Ambuter, Arthur J.: *See*—
Voymas, James S., and Ambuter. 2,943,443.
American Brake Shoe Co.: *See*—
Fraula, William S., and Olson. 2,943,353.
Salak, Michael, Keesling, and Wilson. 2,943,713.
American Cast Iron Pipe Co.: *See*—
Daniel, Kenneth R., Farlow, Lowery, and Patton. 2,943,335.
American Cyanamid Co.: *See*—
Wright, William B., Jr., Hardy, and Brabander. 2,944,081.
American District Telegraph Co.: *See*—
Muehter, Manfred W. 2,944,252.
American Enka Corp.: *See*—
Henry, William V. 2,943,803.
Van Dijk, Pieter. 2,943,433.
American-Marietta Co.: *See*—
Hemler, John O., O'Connor, and Stomiany. 2,943,892.
American-Marietta Co., Cedar Division: *See*—
Channell, Charles A. 2,943,340.
American Metal Climax, Inc.: *See*—
Saarivirta, Matti J. 2,943,960.
American National Bank and Trust Co. of Chicago: *See*—
Nicolaus, Frank G. 2,943,512.
American Oil Co., The: *See*—
Byrne, Thomas J. 2,943,485.
Haxton, Manford R., and Johnston. 2,944,008.
Wadsworth, Francis T., and May. 2,943,977.
American Potash & Chemical Corp.: *See*—
Wagner, Ross L. 2,944,085.
American Window Glass Co.: *See*—
Insolio, Thomas A. 2,943,393.
Ammerman, John M., to Spickelmier Industries, Inc. Window structure. 2,943,345, 7–5–60, Cl. 16—197.
Andersen, Harold W. Boat mooring. 2,943,890, 7–5–60, Cl. 114—230.
Anderson, Earl R., to Filper Corp. Peach half pitter. 2,943,659, 7–5–60, Cl. 146—28.
Anderson, Edward P., to Engelhard Industries, Inc. Electrical temperature measuring device. 2,944,236, 7–5–60, Cl. 338—26.
Anderson, Ernest H. Mirror support. 2,943,680, 7–5–60, Cl. 248—28.
Anderson, Herbert R., Jr., to Phillips Petroleum Co. Rubber composition and preparation thereof. 2,944,042, 7–5–60, Cl. 260—41.5.
Anderson, John E., to Minneapolis-Honeywell Regulator Co. Automatic pilot servosystem. 2,944,203, 7–5–60, Cl. 318—489.
Anderson, William S., to Shell Oil Co. Low pressure polymerization of dienes. 2,943,987, 7–5–60, Cl. 204—162.
Andras, Julius. Propulsion of boats or the like. 2,943,440, 7–5–60, Cl. 60—35.5.
Annis, Robert B. Under drive balancing machine. 2,943,491, 7–5–60, Cl. 73—477.
Anthony, Russel W., and G. H. Rickard, to National Broach & Machine Co. Broach. 2,943,383, 7–5–60, Cl. 29—95.1.
Anthony, William C., to The Upjohn Co. 1-alkyl-3-(hydroxyalkylamino) indole N-oxides. 2,944,055, 7–5–60, Cl. 260—247.5.
Anton, Nicholas. Radiation detector. 2,944,176, 7–5–60, Cl. 313—93.
Antonson, John O., to The B. F. Goodrich Co. Tire construction. 2,943,663, 7–5–60, Cl. 152—356.
Archer, Bradford L., to Phillips Petroleum Co. Insecticides for use as tree spray. 2,943,973, 7–5–60, Cl. 167—22.
Archibald, Ian W., to James Hardie & Coy. Pty. Ltd. Apparatus and method for setting and curing brake lining blanks. 2,943,347, 7–5–60, Cl. 18—4.
Argus Chemical Corp.: *See*—
Hecker, Arthur C., Pollock, and Rabinoviel. 2,944,041.
Kauder, Otto S. 2,944,088.
Arnold, Donald L., to Sylvania Electric Products Inc. Dispenser package. 2,944,124, 7–5–60, Cl. 200—56.
Arnold, Marion L., to Richfield Oil Corp. Device for attenuating pulsative flow in gases. 2,943,641, 7–5–60, Cl. 138—26.
Arrow-Hart & Hegeman Electric Co., The: *See*—
Bentley, Robert H. 2,944,242.
Arrowsmith Tool & Die Corp.: *See*—
Ewing, Wayne, and Backus. 2,943,667.
Aschaffenburger Zellstoffwerke, A.G.: *See*—
Bernhauer, Konrad, Friedrich, Gross, and Spaude. 2,943,983.
Associated Electrical Industries Ltd.: *See*—
Allenden, Dennis. 2,944,216.
Ateliers G.S.P.: *See*—
Pegard, Pierre. 2,943,538.
Atherton, Frank R., to Hoffmann-La Roche Inc. Esters of 2-carbamylphenyl phosphate. 2,944,074, 7–5–60, Cl. 260—461.
Atkinson Mfg. Co., Inc.: *See*—
Atkinson, Truman L. 2,943,741.
Atkinson, Truman L., Jr.: *See*—
Atkinson, Truman L., Sr. 2,943,744.
Atkinson, Truman L., to Atkinson Mfg. Co., Inc. Shoe rack. 2,943,741, 7–5–60, Cl. 211—37.
Atkinson, Truman L., Sr., to T. L. Atkinson, Jr. Fireplace fixture. 2,943,744, 7–5–60, Cl. 211—60.
Atomic Energy of Canada Ltd.: *See*—
Morgan, William W. 2,943,923.
Attridge, Richard B. Beam compass tool. 2,943,392, 7–5–60, Cl. 30—361.
Atwood, Smith B., Jr., to King-Seeley Corp. Speedometer. 2,943,595, 7–5–60, Cl. 116—116.
Audrieth, Ludwig F., and D. W. Ryker, to Olin Mathieson Chemical Corp. Fuel. 2,943,927, 7–5–60, Cl. 52—5.
Auerbach, Albert A., and R. F. Shaw, to Curtiss-Wright Corp. Data transfer device. 2,944,248, 7–5–60, Cl. 340—174.
Automated Circuits, Inc.: *See*—
Robinson, Thomas L. 2,943,956.
Automatic Voting Machine Corp.: *See*—
Swanson, Oscar F. 2,943,786.
Babcock, Henry N. Building construction. 2,943,716, 7–5–60, Cl. 189—1.
Babcock & Wilcox Co., The: *See*—
Kaltenbach, Frederick H. 2,944,137.
Bachman, Rudolph E., to Sterling Precision Corp. Precision gear train. 2,943,507, 7–5–60, Cl. 74—421.
Backus, Lester B., Jr.: *See*—
Ewing, Wayne, and Backus. 2,943,667.

Bashr, Edward F. Rocket thrust chamber construction. 2,943,442, 7–5–60, Cl. 60—35.6.

Baer, Maestino, to Monsanto Chemical Co. Polymer blend of a carboxyl-containing monovinylidene aromatic polymer and a carboxyl-containing conjugated 1,3-diene polymer. 2,944,044, 7–5–60, Cl. 260—45.5.

Bagcraft Corp. of America: *See*—
Meister, Albert A., 2,943,403.

Bahnik, Emil M. Combination hanger, stretcher, and creaser for a waistband of a pair of pants. 2,943,773, 7–5–60, Cl. 223—63.

Baird, Ronald J., to The National Sugar Refining Co. Dialdehyde sugar reaction products, process for preparing same and printing ink prepared therefrom. 2,944,034, 7–5–60, Cl. 260—9.

Baker, Allister L., to Keuffel & Esser Co. Alidade with pendulously stabilized reticle. 2,943,529, 7–5–60, Cl. 88—1.

Baldwin, Francis P., A. L. Miller, and S. B. Robison, to Esso Research and Engineering Co. Pneumatic tire. 2,943,664, 7–5–60, Cl. 152—359.

Baldwin-Lima-Hamilton Corp.: *See*—
Phillips, Adrian, and Robbins. 2,943,562.

Baldwin Piano Co., The: *See*—
Brown, Wilfred K. 2,944,158.

Balmes Solanas, Ramon, to Estirajes Balmes, S.A., Drawing mechanisms for textile rovings. 2,943,364, 7–5–60, Cl. 19—135.

Balsiger, Harold E., to Landis Tool Co. Feed correction mechanism. 2,943,425, 7–5–60, Cl. 51—163.

Bancroft, George H., G. P. Gerow, and D. L. Stevenson, to Consolidated Vacuum Corp. Heater for a diffusion pump. 2,943,783, 7–5–60, Cl. 230—101.

Bank of America National Trust & Savings Association: *See*—
Lewis, Howard B. 2,943,454.

Banning, Thomas A., Jr. Transmissions, and the like. 2,943,519, 7–5–60, Cl. 74—789.

Bantob Products Corp.: *See*—
Schaflander, Gerald M. 2,943,958.
Schaflander, Gerald M. 2,943,959.

Barber, Charles C., to Bell Telephone Laboratories, Inc. Electrical contact member. 2,944,240, 7–5–60, Cl. 339—64.

Barker, Alvin. Greeting card or folder. 2,943,416, 7–5–60, Cl. 46—34.

Barker, Woodrow F. Pump. 2,943,577, 7–5–60, Cl. 103—148.

Barnett, Arthur A. C., K. C. Warner, and P. N. G. Knowles, to The Decca Record Co. Ltd. Resolvers for producing electrical signals representative of the components in co-ordinate directions of a mechanical movement. 2,944,236, 7–5–60, Cl. 338—131.

Barrett, Michael W. Fracturing using calcium carbide. 2,943,681, 7–5–60, Cl. 166—38.

Barrett, Nellon, and C. A. Grant, to Gaylord Bros., Inc. Apparatus for use in assembling and applying book covers. 2,943,336, 7–5–60, Cl. 11—1.

Bashuk, Peter. Detachable wing for half couch casket. 2,943,376, 7–5–60, Cl. 27—1.

Baso Inc.: *See*—
Matthews, Russell B. 2,943,843.

Bassinger, Ross, to Bassinger Tool Co. Fluid actuated impact tool. 2,943,603, 7–5–60, Cl. 121—30.

Bassinger Tool Co.: *See*—
Bassinger, Ross. 2,943,603.

Bateman, Victor E.: *See*—
Davy, John C., and Bateman. 2,944,155.

Bauer, Hans E.: *See*—
MacMaster, Harry D., Bauer, and Guthrie. 2,943,357.

Baxter, John C.: *See*—
Woldring, Egbert, De Graaf, and Baxter. 2,943,889.

Baxter, John W., to Ryan Aeronautical Co. Combination thrust augmenter, sound suppressor and thrust reverser for jet engines. 2,943,444, 7–5–60, Cl. 60—35.54.

Baxter Laboratories, Inc.: *See*—
Gray, Philip P., Stone, and Wylie. 2,943,941.

Baxydio, Henry A.: *See*—
Manke, Arthur G., and Baxydio. 2,944,222.

Becker, Ruth E.: *See*—
Elmerman, Gustave F. 2,943,856.

Becker, Ronald K.: *See*—
Harris, Joseph E., Jr., and Becker. 2,944,139.

Beets, Muus G. J.: *See*—
Heeringa, Lambertus G., and Beets. 2,944,077.

Bel Geddes, Edith: *See*—
Bel Geddes, Norman. 2,943,579.

Bel Geddes, Norman, deceased: E. Bel Geddes, executrix. Transit grid. 2,943,579, 7–5–60, Cl. 104—94.

Beljers, Hugo G., K. S. Knol, and A. E. Pansenborg, to North American Philips Co., Inc. Device comprising a cavity resonator. 2,944,232, 7–5–60, Cl. 333—73.

Bell Telephone Laboratories, Inc.: *See*—
Barber, Charles C. 2,944,240.
Draxler, Jerome. 2,944,183.
Ketchledge, Raymond W. 2,944,114.
Rigrod, William W. 2,944,182.
Tidd, Elbert D. 2,944,102.

Beller, Solomon. Portable bag for transporting and storing shoes. 2,943,899, 7–5–60, Cl. 312—3.

Benckiser, Joh. A., G.m.b.H. Chemische Fabrik: *See*—
Debo, Arno. 2,944,075.

Bender, Carl F.: *See*—
Wolferman, Raymond E. 2,943,462.

Bendik, Stephen J. Steadying device. 2,943,581, 7–5–60, Cl. 105—150.

Bendix-Westinghouse Automotive Air Brake Co.: *See*—
Valentine, Harry M. 2,943,496.

Bennett, Leslie H.: *See*—
Decker, William H., Rieck, and Bennett. 2,943,520.

Benson, Carl B., and C. G. Carlson. Air-cooled outboard motor. 2,943,592, 7–5–60, Cl. 115—17.

Benson, Robert M., to Inertial Instruments, Inc. Mass flow meter. 2,943,485, 7–5–60, Cl. 73—194.

Bentley, Lawrence C., to U. D. Engineering Co. Ltd. Photoelectric inspection apparatus. 2,943,531, 7–5–60, Cl. 88—14.

Bentley, Robert H., to The Arrow-Hart & Hegeman Electric Co. Wire gripping means for electric wiring devices. 2,944,242, 7–5–60, Cl. 339—96.

Benveniste, Jacques, C. P. West, and H. N. Lieberman, to Esso Research and Engineering Co. Process for visibly detecting reactor insulation failure by means of color change in temperature indicating paint applied to exterior wall thereof. 2,943,475, 7–5–60, Cl. 73—15.

Berardi, Vincenzo, and G. Mansart. Device for detecting combustible gas. 2,943,910, 7–5–60, Cl. 23—255.

Berch, Julian: *See*—
Harkenrider, Robert J., Misell, and Berch. 2,943,878.

Beresin, Evelyn, and P. Hersh, to Curtiss-Wright Corp. Arithmetic device. 2,943,790, 7–5–60, Cl. 235—170.

Berggren, Lloyd E., G. B. Schneider, and H. P. Sorensen, to Minneapolis-Honeywell Regulator Co. Jet engine control apparatus. 2,943,448, 7–5–60, Cl. 60—39.28.

Berkowitz, Lewis M.: *See*—
Rylander, Paul N., and Berkowitz. 2,944,094.

Bernhauer, Konrad, W. Friedrich, G. Gross, and S. Spande, to Aschaffenburger Zellstoffwerke, A.G. Process of obtaining concentrates of vitamins of the B_{12} group from waste liquors and residual products of industrial fermentation processes. 2,943,983, 1–5–60, Cl. 195—96.

Bernstein, Harold A., to Simmonds Aerocessories Ltd. Liquid densitometers. 2,943,476, 7–5–60, Cl. 73—32.

Beryllium Corp., The: *See*—
Lenhart, Robert E. 2,943,983.

Besimer, William B.: *See*—
Lytle, Gene S., Wilcox, and Besimer. 2,943,539.

Besse, Harlan F.: *See*—
Houser, Philip H., and Besse. 2,943,740.

Besson, Louis, to Sud-Aviation Societe Nationale De Constructions Aeronautiques. Aerodynes, more particularly pilotless aerodynes. 2,943,816, 7–5–60, Cl. 244—14.

Besson, Paul: *See*—
Galvin, Andre, Besson, Brun, and Thirion. 2,944,083.

Bethlehem Steel Co.: *See*—
Joy, Robert P., and Smollinger. 2,943,434.

Bettigole, Alfred W.: *See*—
Sullivan, Edward M. 2,943,842.

Betton, Arnold L. Tweezers. 2,943,521, 7–5–60, Cl. 81—43.

Bingham-Herbrand Corp., The: *See*—
Johnstone, Theodore H. 2,943,511.

Birkness, Harald A., P. N. Randall, and L. T. Wright, to Standard Oil Co. Burner structure for high temperature gas generators. 2,943,674, 7–5–60, Cl. 158—100.

Birmann, Rudolph, to De Laval Steam Turbine Co. Elastic fluid mechanism. 2,943,839, 7–5–60, Cl. 253—39.

Bishop, Harold P. Cyclone-type separator. 2,943,698, 7–5–60, Cl. 183—37.

Bjornson, Beatrice F. Thermometer holder. 2,943,745, 7–5–60, Cl. 211—60.

Black-Clawson Co., The: *See*—
Phelps, Richard W. 2,943,806.

Blackman, Vernon H.: *See*—
Giannini, Gabriel M., and Blackman. 2,944,140.

Blankenship, Boyce E.: *See*—
Slater, Frank W. 2,943,858.

Blankenship, Wesley B.: *See*—
Slater, Frank W. 2,943,858.

Blecker, Raymond H., J. S. Petersen, and K. J. Unwin, to Simmons Co. Sofa bed. 2,943,333, 7–5–60, Cl. 5—18.

Blizard, Harold S., E. H. Smith, R. K. Rockstroh, and J. A. Guthrie, to Sun Oil Co. Separation of oil and wax. 2,943,992, 7–5–60, Cl. 208—33.

Blitzer, Sidney M., and T. H. Pearson, to Ethyl Corp. Sodium tetraethylboron. 2,944,084, 7–5–60, Cl. 260—606.5.

Blomqvist, Bengt O.: *See*—
Fagerlund, Yngve A. F., and Blomqvist. 2,943,759.

Bloomfield, Irwin M. Roll film adapter. 2,943,542, 7–5–60, Cl. 95—1.1.

Boast, Gordon: *See*—
Woollett, Ralph, and Boast. 2,943,468.

Bochan, John, to General Electric Co. Washing machine recirculation system. 2,943,474, 7–5–60, Cl. 68—18.

Bodmer, Hans. Valve and nozzle for a washing unit. 2,943,799, 7–5–60, Cl. 239—509.

Boeing Airplane Co.: *See*—
Dalrymple, George H. 2,943,729.

Boekhorst, Antonius, and H. Heijligers, to North American Philips Co., Inc. Circuit arrangement for producing a sawtooth current in a coil. 2,944,186, 7–5–60, Cl. 315—27.

Bohnhoff, Arthur F., and R. J. Skerl, to General Motors Corp. Transmission control. 2,943,510, 7–5–60, Cl. 74—485.

Boilding, Hubert V., to Standard Packaging Corp. Recessed automatic bottom carton. 2,943,780, 7–5–60, Cl. 229—39.

Bolton, Wallis D., to International Business Machines Corp. Xerographic printer. 2,944,147, 7–5–60, Cl. 250—49.5.

Bonaccorsi, John R., and R. J. White, to Radio Corp. of America. Multi-phase servo system. 2,944,202, 7–5–60, Cl. 318—29.

Bonanno, Joseph L., to The Lionel Corp. Door construction for toy car roofs and the like. 2,943,582, 7–5–60, Cl. 108—5.4.

Bonanno, Joseph L., to The Lionel Corp. Trestles. 2,943,793, 7–5–60, Cl. 238—10.

Borcherdt, Bert. Composition and process for preventing or restoring lost circulation. 2,944,018, 7–5–60, Cl. 252—8.5.

Borg-Warner Corp.: *See*—
Lauck, John A. 2,943,451.
Markley, William F., Brysselbout, and Smirl. 2,943,517.
Norlin, Francis E. 2,943,574.

Bosch, Carl, to Sperry Rand Corp., Ford Instrument Co. Division. Photoelectric speedometer, altimeter and course indicator. 2,944,154, 7–5–60, Cl. 250—209.

Bosch, Robert, U. Aldinger, and K. Volk. Fuel injection arrangement. 2,943,614, 7–5–60, Cl. 123—139.

Bostitch, Inc.: *See*—
Petersson, Henry F. 2,943,436.

Botka, Imre, to Ganz Vagon es Gepgyar. Gearing system for gear wheels generated of cylindrical blanks. 2,943,509, 7–5–60, Cl. 74—462.

Bouchard, Irvine H. Antenna mounting base. 2,943,632, 7–5–60, Cl. 248—43.

Bourne, John A. Pneumatically-operated, slidable inner jaw wrench. 2,943,524, 7–5–60, Cl. 81—129.

Bowen Co. of Texas, Inc.: *See*—
Ingram, William H., Jr., and Greer. 2,943,682.

Bown, Delos E.: *See*—
Schutse, Henry G., and Bown. 2,944,047.

Boyd, James R. Mailing chute. 2,943,720, 7–5–60, Cl. 193—8.

Boyer, Ralph K., and H. W. Krohn, Jr., to The Dill Mfg. Co. Method of manufacturing a repair patch. 2,943,969, 7–5–60, Cl. 154—110.

Boyer, Watson F., and J. W. Foster, to The Ford Motor Co. Fuel injection system. 2,943,616, 7–5–60, Cl. 123—140.

Brabender, Carl W., and W. R. Coyne, to The Pillsbury Co. Sample removing apparatus. 2,943,478, 7–5–60, Cl. 73—76.

Brabender, Carl W., and W. R. Coyne, to The Pillsbury Co. Moisture content determining apparatus. 2,943,479, 7–5–60, Cl. 73—76.

Brabander, Herbert J.: *See*—
Wright, William B., Jr., Hardy, and Brabander. 2,944,081.

Braham Industries, Inc.: *See*—
Franke, Claude E. 2,944,132.

Brahm, Charles E., to United Aircraft Corp. Firing circuit for voltage regulator tube. 2,944,206, 7–5–60, Cl. 323—16.

Brainard, David S.: *See*—
Wile, Daniel D., and Brainard. 2,943,457.

Brase, George, 209, to A. F. Jones. Wrench for inserting or removing pipe union nipples. 2,943,522, 7–5–60, Cl. 81—53.

Bresse, Lemuel R., to North Electric Co. Supervisory control system. 2,944,247, 7–5–60, Cl. 340—163.

Brierley, Kenneth. Powder-compressing machines. 2,943,651, 7–5–60, Cl. 141—74.

Brill, Harold C., to E. I. du Pont de Nemours and Co. Composition and process of forming an adherent polyoxide coating on a surface. 2,943,955, 7–5–60, Cl. 117—121.

Brinton, David R.: *See*—
Sirmay, Julius, and Brinton. 2,943,409.

British Celanese Ltd.: *See*—
Hawtin, Selwyn G., Parker and Downing. 2,943,946.

British Messier Ltd.: *See*—
Orloff, George, Roy, Cooper, and Langdon. 2,943,819.

British Titan Products Co. Ltd.: *See*—
Coates, William H., and Hayden. 2,943,704.

Brixner, Lothar H., to E. I. du Pont de Nemours and Co. Ferromagnetic material and process. 2,943,913, 7–5–60, Cl. 23—58.

Broders, Claude O., to United Aircraft Corp. Maximum pressure selector. 2,943,605, 7–5–60, Cl. 121—38.

Brook, Niles J., to United Aircraft Corp. Skid proof bearing. 2,943,894, 7–5–60, Cl. 308—212.

Brown, Alfred D., to Fellowcraft Engineering, Inc. Protective packaging. 2,943,731, 7–5–60, Cl. 206—46.

Brown & Bigelow: *See*—
Paulsen, Henry A. 2,943,778.

Brown, Donald L.: *See*—
Warrick, Edward C., and Brown. 2,943,631.

Brown, Kenneth, to North American Aviation, Inc. Ice prevention in air conditioning systems. 2,943,460, 7–5–60, Cl. 62—272.

Brown, Lloyd H., and F. K. Cole, to The Quaker Oats Co. Process of separating tantalum from niobium. 2,943,912, 7–5–60, Cl. 23—23.

Brown & Sharpe Mfg. Co.: *See*—
Boucy, George H. 2,943,395.

Brown, Walpir, to North American Philips Co., Inc. Energy calibration source holder. 2,944,153, 7–5–60, Cl. 250—106.

Brown, Wilfred K., to The Baldwin Piano Co. Pulse generator. 2,944,156, 7–5–60, Cl. 250—233.

Brown, William L., 4th: *See*—
Greenspan, Alvin T., and Brown. 2,943,417.

Bruce, George D., and R. L. Elbeen, to International Business Machines Corp. Oscillators. 2,944,225, 7–5–60, Cl. 331—113.

Brucker, Henry J.: *See*—
Klausmann, Milton H., Brucker, and Von Culin. 2,943,760.

Brun, Pierre: *See*—
Galvin, Andre, Besson, Brun, and Thirion. 2,944,083.

Brynzae, Anders L., to Aktiebolaget Bygg-Och Transportekonomi. Lifting fork vehicles. 2,943,755, 7–5–60, Cl. 214—672.

Brysselbout, Henri A.: *See*—
Markley, William F., Brysselbout, and Smirl. 2,943,517.

Bub, Robert A., to Mine Safety Appliances Co. Zigzag filter blank and method of making a filter. 2,943,700, 7–5–60, Cl. 183—71.

Buchanan, Leslie B. M., to Westinghouse Electric Corp. Thermoelectric warming and cooling appliance. 2,943,452, 7–5–60, Cl. 62—3.

Budsyna, Joseph M., to Draper Corp. Loom picker. 2,943,647, 7–5–60, Cl. 139—159.

Burroughs Corp.: *See*—
Clark, Ralph H. 2,943,952.
Clark, Ralph H. 2,944,037.
Wasylenko, William J. 2,944,121.

Burroughs Mfg. Corp.: *See*—
Dvoracek, Frank. 2,943,777.

Burrows, Arthur T. C., to Geo. W. King Ltd. Conveyor systems. 2,943,580, 7–5–60, Cl. 104—162.

Bush, Ian R. Apparatus for washing porous materials. 2,943,632, 7–5–60, Cl. 134—154.

Bussom, Charles J., and D. L. Say, to Sylvania Electric Products Inc. Current limiter. 2,943,904, 7–5–60, Cl. 316—27.

Butler, Richard K., to Machinecraft, Inc. Spinning frame apron guides. 2,943,362, 7–5–60, Cl. 19—131.

Butterworth, John W.: *See*—
Royden, George T., and Butterworth. 2,944,110.

Buttery, Kenneth T., to KVP Sutherland Paper Co. Dispensing carton. 2,943,779, 7–5–60, Cl. 229—17.

Byrne, Thomas J., to The American Oil Co. Automatic overload protection for flow meters. 2,943,486, 7–5–60, Cl. 73—199.

Cahill, Richard T., and E. A. Wheelock, to Chicago Rawhide Mfg. Co. Seals. 2,943,872, 7–5–60, Cl. 286—11.

Cairns, James J.: *See*—
Olson, Frederick F., and Cairns. 2,943,406.

California Research Corp.: *See*—
Scott, John W., Jr. 2,944,005.
Scott, John W., Jr. 2,944,006.
Scott, John W., Jr. 2,944,009.
Stayner, Richard D. 2,944,028.

Callery Chemical Co.: *See*—
McElroy, Albert D. 2,943,916.
Rice, Charles B. 2,944,076.

Camino, Anthony V., and W. H. Hogan, to Cleveland Pneumatic Industries, Inc. Steering mechanism. 2,943,518, 7–5–60, Cl. 244—50.

Campbell, Mark R., to North American Aviation, Inc. Tracking display for aircraft. 2,943,824, 7–5–60, Cl. 244—77.

Canarios, Chrysosthenis M., to The Harshaw Chemical Co. Stabilized vinyl resin compositions. 2,944,045, 7–5–60, Cl. 260—45.75.

Cannon, Maxwell R., to International Business Machines Corp. Pulse counting and checking apparatus. 2,944,189, 7–5–60, Cl. 315—84.6.

Canon Camera Co., Inc.: *See*—
Hashimoto, Teiji. 2,943,582.

Canterino, Peter J., to Phillips Petroleum Co. Halogenation of rubbery polymers. 2,943,988, 7–5–60, Cl. 204—163.

Cantrel, Kenneth E.: *See*—
Goodhue, Lyle D., Cantrel, and Schnitzer. 2,943,976.

Caranda Machine Works: *See*—
McCoy, Thomas A., 2,943,724.

Carlson, Clarence G.: *See*—
Benson, Carl B., and Carlson. 2,943,592.

Carlson, Drexel T.: *See*—
Wreh, Ronald M., Carlson, and Stephens. 2,943,580.

Carlson, William L., Jr., to Minneapolis-Honeywell Regulator Co. Conductive fluid relay. 2,944,127, 7–5–60, Cl. 200—112.

Carpenter, Keith H., and F. W. Reinhold, to United Shoe Machinery Corp. Fastener inserting devices. 2,943,328, 7–5–60, Cl. 1—44.4.

Carruthers, Eben H., to Chisholm Ryder Co. Inc. Machine for harvesting pod type vegetables. 2,943,430, 7–5–60, Cl. 56—1.

Carruthers, Eben H., to Chisholm Ryder Co., Inc. Cutter bank for harvesting machines. 2,943,629, 7–5–60, Cl. 130—30.

Cartwright, John H., to International Computers and Tabulators Ltd. Data checking apparatus. 2,943,787, 7–5–60, Cl. 235—61.7.

Case, J. I., Co.: *See*—
Long, Elton B. 2,943,407.

Cash Control Cover Corp.: *See*—
Eaton, William M., and Sporn. 2,943,901.

Cass, Freeman R. Thread guides for textile machines. 2,943,813, 7–5–60, Cl. 242—157.

Caterpillar Tractor Co.: *See*—
Goulet, Jules H., Dawes, and Smith. 2,943,422.
Zuhn, Arthur A. 2,943,617.

Channell, Charles A., to American-Marietta Co., O'Cedar Division. Self-wringing sponge mop. 2,943,340, 7–5–60, Cl. 15—119.

Chapman, Jack A. Kite. 2,943,829, 7–5–60, Cl. 244—153.

Chautauqua Hardware Corp.: *See*—
Stafford, Clifford L. 2,943,536.

Chemische Fabrik Promonta G.m.b.H.: *See*—
Kalltechnigg, Rolf. 2,944,058.

Chereth, Anthony F.: *See*—
Pinter, George, and Chereth. 2,943,643.

Chi, Andrew E.: *See*—
Stanley, Joseph M., Theokritoff, Gerber, Chi, and Hammond. 2,944,027.

Chicago Development Corp.: *See*—
Gullett, William W. 2,943,984.

Chicago Rawhide Mfg. Co.: *See*—
Cahill, Richard T., and Wheelock. 2,943,872.

Chicken, John C.: *See*—
Goodall, Donald G., and Chicken. 2,943,446.

Chilton, William D., to General Motors Corp. Power operated tool for feeding and driving headed fasteners. 2,943,652, 7–5–60, Cl. 144—32.

Chin, Bock M., to General Electric Co. Magnetic oscillator. 2,944,162, 7–5–60, Cl. 307—88.

Chisholm Ryder Co. Inc.: *See*—
Carruthers, Eben H. 2,943,430.
Carruthers, Eben H. 2,943,629.

Chubb, Dale L., to Sylvania Electric Products Inc. Motor velocity control valve. 2,943,604, 7–5–60, Cl. 121—38.

Ciba Pharmaceutical Products Inc.: *See*—
Hoffmann, Karl, and Hunger. 2,944,062.

Cincel, Walter H., to J. W. Gottschlich. Valve lock cap. 2,943,665, 7–5–60, Cl. 152—431.

Cincinnati Milling Machine Co., The: *See*—
Goeptert, George J. 2,943,926.

Cities Service Research & Development Co.: *See*—
Faulk, Kenneth H. 2,944,007.
Clark, Ralph H., to Burroughs Corp. Method of making duplicating transfer sheet and resultant article. 2,943,952. 7-5-60, Cl. 117—36.
Clark, Ralph H., to Burroughs Corp. Ink-transfer compositions and duplicating media prepared therewith. 2,944,037, 7-5-60, Cl. 260—23.
Clark, Robert L.: *See*—
Pessolano, Arsenio A., and Clark. 2,944,071.
Class, Jay B., to Hercules Powder Co. Production of diethylmethylamine. 2,944,062, 7-5-60, Cl. 260—583.
Clauson-Kaas, Niels K. F. W.: *See*—
Elming, Niels, and Clauson-Kaas. 2,944,069.
Clemons, Maurice M.: *See*—
Sehn, Francis J., and Clemons. 2,943,750.
Cleveland Pneumatic Industries, Inc.: *See*—
Camino, Anthony V., and Hogan. 2,943,818.
Hamilton, Wallace. 2,943,760.
Hartel, Erwin H., and Westcott. 2,943,827.
Hogan, Walter H. 2,943,817.
Lovell, Jack, and Hamilton. 2,943,589.
Nye, Benjamin F., and Smith. 2,943,826.
Smith, Ira D. 2,943,493.
Westcott, William B., Jr. 2,943,642.
Westcott, William B., Jr. 2,943,820.
Willis, Clifford E., McWeeney, and Nichols. 2,943,606.
Cleveland Pneumatic Industries, Inc., The: *See*—
Hartel, Erwin H. 2,943,867.
Close, Warren J., and D. A. Dunnigan, to Abbott Laboratories, Uraloles. 2,944,060, 7-5-60, Cl. 260—308.
Clyne, Joseph, to Flexalew, Inc. Garment construction particularly dress shirts. 2,943,330, 7-5-60, Cl. 2—125.
Coates, William H., and J. Hayden, to British Titan Products Co. Ltd. Discharge of solids precipitated from chlorination gases. 2,943,704, 7-5-60, Cl. 183—119.
Coffee, Wendell: *See*—
Megert, Karl A., Jr., and Line. 2,943,593.
Cofield, Thomas H., and A. H. Filbey, to Ethyl Corp. 1,1-bis(3,5-dialkyl-4-hydroxyphenyl) methanes. 2,944,080, 7-5-60, Cl. 260—619.
Coffing, James H. Ground elevation indicator dial for aircraft altimeter. 2,943,587, 7-5-60, Cl. 116—131.
Cohen, James T. Control apparatus for refrigeration system. 2,943,458, 7-5-60, Cl. 62—204.
Cole, Francis K.: *See*—
Brown, Lloyd H., and Cole. 2,943,912.
Cole, Thomas M., and H. S. Wingard, to Federal Pacific Electric Co. Circuit breakers. 2,944,120, 7-5-60, Cl. 200—116.
Colley, Russell H. Self-service merchandise display rack for boxes. 2,943,742, 7-5-60, Cl. 211—49.
Collins Radio Co.: *See*—
Fritze, Edgar H., and Schweighofer. 2,943,482.
Colon, Ernesto F. Fruit gathering device. 2,943,432, 7-5-60, Cl. 56—328.
Colt's Patent Fire Arms Mfg. Co., Inc.: *See*—
McNally, John M. 2,943,412.
Columbia-Southern Chemical Corp.: *See*—
Allen, Edward M. 2,943,948.
Allen, Edward M. 2,943,970.
Taylor, Louis B. 2,943,971.
Compodex Co. Ltd.: *See*—
Moseley, John. 2,943,644.
Compur-Werk Friedrich Deckel OHG: *See*—
Fahlenberg, Paul. 2,943,545.
Gebele, Kurt. 2,943,551.
Congoleum-Nairn Inc.: *See*—
Petry, Robert K. 2,943,949.
Consolidated Vacuum Corp.: *See*—
Bancroft, George H., Gerow, and Stevenson. 2,943,783.
Stevenson, Donald L., and Gallagher. 2,943,784.
Consumers Merchandising Corp.: *See*—
Janus, Alexander G. 2,943,944.
Continental Steel Corp.: *See*—
Loop, James P. 2,943,807.
Cooper, Bernard E.: *See*—
Orloff, George, Roy, Cooper, and Langdon. 2,943,819.
Coosa River News Print Co.: *See*—
Wakeman, Arthur G. 2,943,656.
Corns, Joseph B.: *See*—
Moore, Thomas M., and Corns. 2,943,999.
Corson, Almon J., to General Electric Co. Superessed zero frequency meter circuit. 2,944,215, 7-5-60, Cl. 324—81.
Corey, Flournoy, M. G. Swords, D. J. Erger, and R. D. Pitts, to Pickwick Co. Dolly for use with disabled vehicles. 2,943,863, 7-5-60, Cl. 280—79.1.
Cotchett, Louis M., to Machinecraft, Inc. Spinning frame apron guides. 2,943,361, 7-5-60, Cl. 19—131.
Cotterman, Frank D., D. R. Sterba, W. J. Knorowski, and A. M. Olsen, to Crane Co. Alignment rod. 2,943,381, 7-5-60, Cl. 29—1.1.
Cottle, John E.: *See*—
Pollock, Lyle W., and Cottle. 2,944,040.
Cotton, Richard A., to Millipore Filter Corp. Filter medium. 2,944,017, 7-5-60, Cl. 210—500.
Coulter & McKenzie Machine Co., Inc., The: *See*—
Kovaleski, Joseph J., and Lewis. 2,943,732.
Coursen, David L., to E. I. du Pont de Nemours and Co. Explosive device. 2,943,571, 7-5-60, Cl. 102—22.
Covely, Frank D., 3rd, and L. E. Haining, to Radio Corp. of America. Radar system and display. 2,944,253, 7-5-60, Cl. 343—5.
Cox, Robert E., and J. F. Sullivan, to Deere & Co. Reversible plow and gauge wheels. 2,943,688, 7-5-60, Cl. 172—212.
Coyne, William R.: *See*—
Brabender, Carl W., and Coyne. 2,943,478.
Brabender, Carl W., and Coyne. 2,943,479.
Crane Co.: *See*—
Cotterman, Frank D., Sterba, Knorowski, and Olsen. 2,943,381.
Creamery Package Mfg. Co., The: *See*—
Gustafson, Lloyd T. 2,943,844.
Creed & Co. Ltd.: *See*—
Handley, John. 2,944,111.
Salmon, Reginald D., and Tedham. 2,943,721.
Crider, Gordon A. Blind dwelling driller. 2,943,653, 7-5-60, Cl. 144—92.
Crisan, Cornel: *See*—
Jacob, Robert M., Regnier, and Crisan. 2,944,061.
Crocker, George E., and E. J. De Leo. Loop guide for dial looper. 2,943,585, 7-5-60, Cl. 112—26.
Cronholm, Einar, to F. V. Hasselblad. Rotatable detachable photometer on camera. 2,943,544, 7-5-60, Cl. 95—10.
Crosby, Alton L., and K. M. Stoll, to Sylvania Electric Products Inc. Tube-orientator. 2,943,723, 7-5-60, Cl. 198—33.
Crown Cork & Seal Co., Inc.: *See*—
Fauth, Frederick E. 2,943,722.
Csecs, Aladar. Carburetor attachment for motor vehicles. 2,943,849, 7-5-60, Cl. 261—51.
Curry, Virgil A. Mine roof stress indicating bolt. 2,943,528, 7-5-60, Cl. 85—62.
Curtiss, Raymond H., and M. J. Ford, to Raybestos-Manhattan, Inc. Brake lining. 2,943,712, 7-5-60, Cl. 188—234.
Curtiss-Wright Corp.: *See*—
Auerbach, Albert A., and Shaw. 2,944,248.
Beresin, Evelyn, and Herah. 2,943,790.
Marone, Joseph N. 2,943,840.
Wisner, Kenneth R. 2,943,384.
Dadd, Morris V., to Johnson Products Inc. Hydraulic tappets. 2,943,611, 7-5-60, Cl. 123—90.
Dahlin, Clarence W. Processing of dicalcium phosphate and composition thereof. 2,943,982, 7-5-60, Cl. 167—93.
Daimler-Benz Aktiengesellschaft: *See*—
Förster, Hans-Joachim M. 2,943,503.
Kains, Kurt H. 2,943,615.
Dalrymple, George H., to Boeing Airplane Co. Contractable ram mandrels. 2,943,729, 7-5-60, Cl. 205—7.
Daniel, Frederick K. Flooring composition and method of making the same. 2,943,953, 7-5-60, Cl. 117—43.
Daniel, Kenneth R., C. P. Farlow, Jr., J. C. Lowery, and J. O. Patton, Jr., to American Cast Iron Pipe Co. Electrically operated pneumatic apparatus for automatically assembling nuts and bolts. 2,943,335, 7-5-60, Cl. 10—155.
Daniels, Ludlow S., to Hydrocarbon Research, Inc. Solids cooling means and riser conduit. 2,943,922, 7-5-60, Cl. 23—286.
Dannback, Toivo M.: *See*—
Rogers, Stanley, and Dannback. 2,944,207.
Dant, John E. Paint brush. 2,943,341, 7-5-60, Cl. 15—202.
D'Arcy, Ellis W. Adjustable head mount. 2,943,860, 7-5-60, Cl. 274—4.
Dausch, Erwin. Drawing mechanisms for spinning machines. 2,943,363, 7-5-60, Cl. 19—135.
Davies, David O., to Rolls-Royce Ltd. Engine acceleration fuel control responsive to speed scheduled compressor pressure ratio. 2,943,447, 7-5-60, Cl. 60—39.28.
Davis, Allen V. C. Resilient takeup means for use with screw threaded fasteners. 2,943,870, 7-5-60, Cl. 285—200.
Davis, Virgil A. Ice making machine. 2,943,461, 7-5-60, Cl. 62—354.
Davis, Wilbur M. Pocket quiz game. 2,943,399, 7-5-60, Cl. 35—9.
Davison, Lester W., and F. J. Surenda, to Allis-Chalmers Mfg. Co. Clamping device for an electrical conductor. 2,944,103, 7-5-60, Cl. 174—167.
Davy, John C., and V. E. Bateman, to International Computers and Tabulators Ltd. Apparatus for sensing records. 2,944,156, 7-5-60, Cl. 250—219.
Dawes, Stanley G.: *See*—
Goulet, Jules H., Dawes, and Smith. 2,943,422.
Dawson, Lester K., to Lukens Steel Co. Process of circumferentially welding steel pipe. 2,943,387, 7-5-60, Cl. 29—471.1.
Dean, Janice: *See*—
Wolferman, Raymond E. 2,943,462.
Debo, Arno., to Joh. A. Benckiser, G.m.b.H. Chemische Fabrik. Method of producing phosphoric acid and thiophosphoric acid derivatives. 2,944,075, 7-5-60, Cl. 260—461.
Decca Record Co. Ltd., The: *See*—
Barnett, Arthur A. C., Warner, and Knowles. 2,944,238.
Howell, Ronald T. A., and Young. 2,944,231.
Parker, Eric. 2,944,255.
Decker, William H., R. J. Rieck, and L. H. Bennett, to Maxant Button and Supply Co. Fabric-covered garment-button assembling device. 2,943,520, 7-5-60, Cl. 79—5.
Decker, William H., to Sinclair Refining Co. Catalytic reforming of straight-run or cracked naphtha fractions in the presence of added hydrogen in a multiple reactor fixed-bed system. 2,943,998, 7-5-60, Cl. 208—65.
Deere & Co.: *See*—
Cox, Robert E., and Sullivan. 2,943,688.
Hyland, William A., and Welch. 2,943,692.
Wittren, Richard A. 2,943,500.
De Graaf, Maurice: *See*—
Woldring, Egbert, De Graaf, and Baxter. 2,943,889.
Delaune, Elaine T.: *See*—
Nommensen, Erwin W., Hunter, Mertzweiller, and Delaune. 2,944,087.
De Laval Steam Turbine Co.: *See*—
Birmann, Rudolph. 2,943,839.
De Leo, Emile J.: *See*—
Crocker, George B., and De Leo. 2,943,585.
Demag-Elektrometallurgie G.m.b.H.: *See*—
Seraits, Paul, and Hodapp. 2,944,099.
Sorg, Wilhelm, and Pfützner. 2,944,100.

Demer, Frederick M., to International Business Machines Corp. Printed data storage interpreter. 2,943,564, 7-5-60, Cl. 101—93.
De Miranda, Heine A. B., to North American Philips Co., Inc. Bistable trigger circuit. 2,944,166, 7-5-60, Cl. 307—88.5.
De Reade, Frans C., to North American Philips Co., Inc. Adjustable impedance for use in waveguides. 2,944,234, 7-5-60, Cl. 333—98.
De Vries, Gerrit, to North American Philips Co., Inc. Non-reciprocal electric coupling device. 2,944,229, 7-5-60, Cl. 333—24.
De Zeeuw, John R., G. A. Donovan, and W. C. Sherman, to Chas. Pfizer & Co., Inc. Gibberellin in animal feeds. 2,943,938, 7-5-60, Cl. 99—2.
Dicke, Robert H. Molecular storage of information. 2,944,246, 7-5-60, Cl. 340—173.
Dickinson, Arthur H., to International Business Machines Corp. Apparatus for making magnetic recordings. 2,943,907, 7-5-60, Cl. 346—74.
Dickinson, Charles B. Oscillatory motor-generator. 2,944,160, 7-5-60, Cl. 290—1.
Diehl Gesellschaft mit beschrankter Haftung: *See*—
Huber, Siegfried. 2,943,492.
Dietrich, Howard H., J. D. Hiller, R. Lay, M. R. Rowe, and H. C. Zeisloft, to General Motors Corp. Afterburner fuel scheduling control with enrichment at low compressor discharge pressure. 2,943,441, 7-5-60, Cl. 60—35.6.
Dill Mfg. Co., The: *See*—
Boyer, Ralph K., and Krohn. 2,943,969.
Directomat, Inc.: *See*—
Schiffman, Murray. 2,943,563.
Dirksen, Nick R. Top seal for bottom lock pumps. 2,943,688, 7-5-60, Cl. 166—106.
Distillers Co. Ltd., The: *See*—
Hawkins, Edwin G. E. 2,944,036.
Dixie Products, Inc.: *See*—
Meisinger, Elmer H., and Merlo. 2,943,497.
Dodge Mfg. Corp.: *See*—
Firth, David. 2,943,499.
Dommann, Günther, to Gewerkschaft Eisenhutte Westfalia. Mining conveyors. 2,943,728, 7-5-60, Cl. 198—204.
Donovan, Gerald A.: *See*—
De Zeeuw, John R., Donovan, and Sherman. 2,943,938.
Doolen, Orville K., to Gulf Research & Development Co. Wiper voltage compensated servosystem. 2,944,201, 7-5-60, Cl. 318—28.
Dormia, Enrico. Instruments for the extraction of foreign bodies. 2,943,626, 7-5-60, Cl. 128—328.
Dotterer, Elmer E., D. J. Kantner, H. P. Sprankle, and W. E. Van Gorder, to Sylvania Electric Products Inc. Multiple clamping of mount stems. 2,943,749, 7-5-60, Cl. 214—1.
Douglas Aircraft Co., Inc.: *See*—
Hanback, Francis J. 2,943,868.
Myers, Richard A. 2,943,862.
Ritterskamp, Jack E., and Weise. 2,943,445.
Dow Chemical Co., The: *See*—
Johnston, Howard. 2,944,080.
Downing, John: *See*—
Hawtin, Selwyn G., Parker, and Downing. 2,943,946.
Downs, William J., ¼ to J. J. Kebbs and ¼ to J. A. Pateracki, Jr. Display devices. 2,943,408, 7-5-60, Cl. 40—32.
Draper Corp.: *See*—
Budzyna, Joseph M. 2,943,647.
Thatcher, Harry W. 2,943,646.
Dresser Industries, Inc.: *See*—
Ingram, William E., Jr., and Greer. 2,943,682.
Drewett, Harold I. Printing apparatus. 2,943,553, 7-5-60, Cl. 95—75.
Drexler, Jerome, to Bell Telephone Laboratories, Inc. Internal cavity reflex klystron tuned by a tightly coupled external cavity. 2,944,183, 7-5-60, Cl. 315—5.46.
Driscoll, Anthony F., ¼ to J. Masbach. Cam operated closure. 2,943,771, 7-5-60, Cl. 222—512.
Dubois, Joseph G. Punch for perforating cans. 2,943,389, 7-5-60, Cl. 30—16.
Duchnowski, Henry E.: *See*—
Gray, Abe L. 2,943,523.
Duhm, Frank W., to National Mfg. Co. Magnetic catch. 2,943,881, 7-5-60, Cl. 292—251.5.
Duling, Irl N.: *See*—
Tench, John D., and Duling. 2,943,891.
Dunbar, George W., to Kusan Inc. Toy boomerang projecting gun. 2,943,619, 7-5-60, Cl. 124—16.
Dunlop Rubber Co. Ltd.: *See*—
Trevaskis, Henry W., and Lowe. 2,943,668.
Dunn, Donald M.: *See*—
Dunn, Michael J. and D. M. 2,943,541.
Dunn, Michael J. and D. M. Compaction roller. 2,943,541, 7-5-60, Cl. 94—50.
Dunnigan, Daniel A.: *See*—
Close, Warren J., and Dunnigan. 2,944,060.
Du Pont de Nemours, E. I., and Co.: *See*—
Brill, Harold C. 2,943,955.
Brixner, Lothar H. 2,943,913.
Coursen, David L. 2,943,571.
Funck, Dennis L. 2,943,701.
Hiller, Dale M. 2,943,931.
Dvoracek, Frank, to Burroughs Mfg. Corp. Combination towel and wrap dispenser. 2,943,777, 7-5-60, Cl. 225—38.
Eagle-Picher Co., The: *See*—
Gora, Henry E. 2,943,354.
Eastman Kodak Co.: *See*—
Nadeau, Gale F., and White. 2,943,937.
Eaton Mfg. Co.: *See*—
Garrett, Roscoe H. 2,943,809.
Line, Gerald D. 2,943,613.
Winther, Jerrold B. 2,943,461.
Eaton, William M., and G. A. Sporn, to Cash Control Cover Corp. Portable protective apparatus for cash registers and the like. 2,943,901, 7-5-60, Cl. 312—229.
Eberly, John H.: *See*—
Heusing, Albert M., and Eberly. 2,943,537.
Eckert, John P., Jr., to Sperry Rand Corp. Magnetic counter circuits. 2,944,161, 7-5-60, Cl. 307—88.
Edgerton, William H., to Smith Kline & French Laboratories. Substituted 2-phenothiazinyl trifluoromethyl ketones. 2,944,063, 7-5-60, Cl. 260—243.
Edmonds, James T., Jr., to Phillips Petroleum Co. Polymerization of olefins in halogen-containing diluent. 2,944,049, 7-5-60, Cl. 260—94.9.
Edwards, James W., to Monsanto Chemical Co. Process for producing potassium acid pyrophosphate. 2,943,915, 7-5-60, Cl. 23—106.
Egi, Mario, and A. I. Novi. Coffee-making apparatus. 2,943,550, 7-5-60, Cl. 99—289.
Eibsen, Robert L.: *See*—
Bruce, George D., and Eibsen. 2,944,225.
Eichenauer, Rudolf. Tire inflating and testing device. 2,943,637, 7-5-60, Cl. 137—224.
Eimerman, Gustave F.; F. G. Meiter, administratrix, ¼ to F. G. Meiter and ¼ to R. H. Becker. Golf ball and tee handling devices. 2,943,856, 7-5-60, Cl. 273—33.
Eisele, Andrew. Bore concentricity gauge. 2,943,396, 7-5-60, Cl. 33—174.
Eisenberg, Robert M., to ACF Industries, Inc. Simulated oxygen regulator system. 2,943,401, 7-5-60, Cl. 35—12.
Elastic Stop Nut Corp. of America: *See*—
Nagel, Robert I. 2,943,530.
Electric Heaters, Inc.: *See*—
Goff, James E. 2,944,138.
Elektriska Svetsmengaktiebolaget: *See*—
Sjöman, Per Y. 2,944,142.
Elektrokemisk A/S: *See*—
Sem, Mathias Ö. 2,943,985.
Elias, Nathaniel M. Concentrated foam-producing spermicides. 2,943,979, 7-5-60, Cl. 167—58.
Elliot Enterprises, Inc.: *See*—
Mallinckrodt, George E. 2,943,785.
Elliott, Jarrell N., to Masonite Corp. Friction clutch sprocket. 2,943,466, 7-5-60, Cl. 64—30.
Elming, Niels, and N. K. F. W. Clauson-Kaas. Synthesis of pyridinols and intermediate. 2,944,059, 7-5-60, Cl. 260—297.
Elwood Research Co., a division of Audiger, Inc.: *See*—
Freiberger, Herman. 2,943,377.
Emerson & Cuming, Inc.: *See*—
Hutchins, Samuel F., and Robinson. 2,943,358.
Emmons, Arthur N., to The Porter-Cable Machine Co. Portable power operated router. 2,943,654, 7-5-60, Cl. 144—134.
Endicott Johnson Corp.: *See*—
Sweeney, Frank B. 2,943,337.
Engelhard Industries, Inc.: *See*—
Anderson, Edward P. 2,944,236.
Rylander, Paul N., and Berkowitz. 2,944,094.
Teter, John W., Gring, and Keith. 2,944,094.
English, Charles L. Oil well pump. 2,943,576, 7-5-60, Cl. 103—46.
Erger, Dennis J.: *See*—
Corey, Flournoy, Swords, Erger, and Pitts. 2,943,863.
Erickson, Harold E., R. W. Riley, and D. L. Schubert; said Erickson and said Riley assors. of ⅛ to said Schubert, and ¾ to Industrial Development Co. Felting apparatus. 2,943,365, 7-5-60, Cl. 19—155.
Erie Resistor Corp.: *See*—
Gray, Robert B. 2,944,117.
Gray, Robert B. 2,944,118.
Esso Research and Engineering Co.: *See*—
Baldwin, Francis P., Miller, and Robison. 2,943,664.
Benveniste, Jacques, West, and Lieberman. 2,943,475.
Feldbauer, George F., Jr., Jahnig, and Weinstein. 2,944,092.
Hudson, Boyd E., Jr., and Messner. 2,943,702.
Hunter, Edward A., Segura, Small, and Miller. 2,944,038.
Huntley, Allan R., and Russell. 2,944,009.
Kimberlin, Charles N., Jr., and Mattox. 2,944,001.
MacLaren, Donald D., and May. 2,943,997.
Mason, Ralph B. 2,944,031.
McCain, William D., Jr. 2,943,994.
McCulloch, William J. G., and Turner. 2,944,043.
Metrailer, William J. 2,944,007.
Morway, Arnold J., and Waddey. 2,944,024.
Nommensen, Erwin W., Hunter, Mertzweiller, and Delaune. 2,944,087.
Paulsen, Henry C. 2,944,063.
Schutze, Henry G., and Bown. 2,944,047.
Sykes, Hollister B. 2,943,993.
Thompson, Charles E. 2,944,012.
Webber, William O. 2,944,010.
Estirajes Balmes, S.A.: *See*—
Balmes Solanas, Ramon. 2,943,364.
Ethyl Corp.: *See*—
Blitzer, Sidney M., and Pearson. 2,944,084.
Cofield, Thomas H., and Filbey. 2,944,086.
Ettorre, Renato: *See*—
Mamli, Giulio, Ettorre, and Testa. 2,943,980.
Eureka Chemical Co.: *See*—
Saywell, Lawrence G. 2,943,945.
Evans, Arthur G.: *See*—
Morkoski, James, Evans, and Harden. 2,943,680.
Evans, Martin E. Combined sound and color motion picture and television recording apparatus. 2,944,109, 7-5-60, Cl. 178—7.4.
Everett, James L.: *See*—
Ross, Walter C. J., Everett, and Roberts. 2,944,079.

Ewing, Wayne, and L. B. Backus, Jr., to Arrowsmith Tool & Die Corp. Expanding mandrel hydro-press. 2,943,667, 7-5-60, Cl. 153—80.

F. N. F. Machinery Mfg. Co. Ltd.: *See*—
Woollett, Ralph, and Boast. 2,943,468.

Fagerlund, Ynqve A. F., and B. O. Blomqvist, to Stockholms Superfosfat Fabriks Aktiebolaget. Container for storing and transport. 2,943,750, 7-5-60, Cl. 220—65.

Fahlenberg, Paul, to Compur-Werk Friedrich Deckel OHG. Photographic camera with automatic exposure setting. 2,943,545, 7-5-60, Cl. 95—10.

Fairbanks, Avard F.: *See*—
Whitney, Theodore E., and Fairbanks. 2,944,151.

Fairchild Engine and Airplane Corp.: *See*—
Rind, Harold. 2,943,459.

Falk Corp., The: *See*—
Falk, Louis W., and Richardson. 2,943,504.

Falk, Louis W., and W. S. Richardson, to The Falk Corp. Marine reduction gear transmission. 2,943,504, 7-5-60, Cl. 74—361.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Haubrich, Heins, Horale, and Raab. 2,944,050.
Rodenacker, Wolf. 2,943,350.

Farlow, Carl P., Jr.: *See*—
Daniel, Kenneth R., Farlow, Lowery, and Patton. 2,943,338.

Farmers Cooperative Exchange: *See*—
Platt, Donald D. 2,943,752.

Farren, Roy. Tile forming machine. 2,943,374, 7-5-60, Cl. 25—66.

Fasoli, Paul A., to The Sandy Hill Iron & Brass Works. Paper making apparatus. 2,943,678, 7-5-60, Cl. 162—321.

Faulk, Kenneth H., to Cities Service Research & Development Co. Removal of non-volatile components from a catalytic cracking feed using a reject cracking catalyst. 2,944,002, 7-5-60, Cl. 208—94.

Fauth, Frederick E., to Crown Cork & Seal Co., Inc. Article feeding mechanism. 2,943,722, 7-5-60, Cl. 198—33.

Fedders Corp.: *See*—
Kelly, Kenneth L., and Hoffman. 2,943,834.

Federal Pacific Electric Co.: *See*—
Cole, Thomas M., and Wingard. 2,944,129.

Feldhauer, George F., Jr., C. H. Jahnig, and N. J. Weinstein, to Esso Research and Engineering Co. Gasoline hydrocarbon separation recovery process using zeolitic molecular sieves. 2,944,092, 7-5-60, Cl. 260—676.

Fellowcraft Engineering, Inc.: *See*—
Brown, Alfred D. 2,943,731.

Ferguson, Henry A.: *See*—
Isaacson, Jerrold A., and Ferguson. 2,943,515.

Fidelity Machine Co., Inc.: *See*—
Thore, Thomas J. 2,943,467.

Filbey, Allen H.: *See*—
Cofield, Thomas H., and Filbey. 2,944,086.

Filmer, James C.: *See*—
Walter, Richard L., Filmer, and Hiestand. 2,944,187.

Filper Corp.: *See*—
Anderson, Earl R. 2,943,659.

Finigan, Charles M.: *See*—
Kupa, Peter C., and Finigan. 2,944,095.

Firth, David, to Dodge Mfg. Corp. Variable pitch sheave. 2,943,499, 7-5-60, Cl. 74—230.17.

Fischer, Alfred O.: *See*—
Scott, Piatho P., Jr., and Fischer. 2,943,679.
Scott, Piatho P., Jr., and Fischer. 2,943,680.

Fischer & Porter Co.: *See*—
Haigler, Edmund D. 2,943,489.

Fisher, Constance M.: *See*—
Fisher, John V. 2,943,427.

Fisher, John V., deceased, C. M. Fisher, administratrix. Method of forming a carton. 2,943,427, 7-5-60, Cl. 53—29.

Fite, Luther S. Weight distributing truck bed attachment. 2,943,865, 7-5-60, Cl. 280—104.5.

Fitzgerald, Dean R., to Pittsburgh Plate Glass Co. Apparatus for laminating. 2,943,962, 7-5-60, Cl. 154—2.7.

Fleming, Jack F., to Sterling Plastics Co. Clipboard. 2,943,372, 7-5-60, Cl. 24—66.

Flett, William J., to United States of America, Navy. Fuze. 2,943,572, 7-5-60, Cl. 102—70.

Flexsleev, Inc.: *See*—
Clyne, Joseph. 2,943,330.

Floyd, Don E., and W. J. Ward, to General Mills, Inc. Plastic solder compound. 2,944,036, 7-5-60, Cl. 260—18.

Foerster, Friedrich M. O. Apparatus for non-destructive testing. 2,944,213, 7-5-60, Cl. 324—34.

Fogle, Merald C. R. G. Goldthwait, S. J. Kwolek, and T. Rice, to Gulf Research & Development Co. Process for isomerizing normal paraffins. 2,944,098, 7-5-60, Cl. 260—683.68.

Folts, Thomas E., Jr., to Lockport Felt Co., Inc. Papermaker's felt. 2,943,379, 7-5-60, Cl. 28—79.

Fong, Arthur, to Hewlett-Packard Co. Cavity resonator and oscillation generator. 2,944,233, 7-5-60, Cl. 333—82.

Fonken, Gunther S., to The Upjohn Co. 11β-hydroxy-11α-lower-alkylpregnane-3,20-diones. 2,944,069, 7-5-60, Cl. 260—397.45.

Ford, Malcolm J.: *See*—
Curtiss, Raymond H., and Ford. 2,943,712.

Ford, Michael F. Phonograph record carry stand. 2,943,776, 7-5-60, Cl. 224—46.

Ford Motor Co., The: *See*—
Boyer, Watson P., and Foster. 2,943,616.
Middler, Alexander G. 2,943,612.

Ford, Ralph E., to W. A. Ternes. Door. 2,943,675, 7-5-60, Cl. 160—206.

Förster, Hans-Joachim M., to Daimler-Benz Aktiengesellschaft. Automobile transmission. 2,943,503, 7-5-60, Cl. 74—359.

Foster, Berry W. Free piston compressed gas generator. 2,943,610, 7-5-60, Cl. 123—46.

Foster, James W.: *See*—
Boyer, Watson P., and Foster. 2,943,616.

Francis, Thomas A.: *See*—
Rausch, Maurice K., and Francis. 2,943,900.

Franke, Claude E., to Braham Industries, Inc. Circuit breaker mechanism. 2,944,132, 7-5-60, Cl. 200—172.

Frank, William E., and W. J. Olson, to American Brake Shoe Co. Molding process. 2,943,353, 7-5-60, Cl. 18—17.

Freeman, Arnold R., B. D. Raffel, and R. A. Tripp, to Goodyear Aircraft Corp. Method of manufacturing fibrous material slab. 2,943,968, 7-5-60, Cl. 154—90.

Freiberger, Herman, to Elwood Research Co., a division of Audiger, Inc. Method and apparatus for crimping filaments. 2,943,377, 7-5-60, Cl. 28—1.

Friedrich, Wilhelm: *See*—
Bernhauer, Konrad, Friedrich, Gross, and Spande. 2,943,983.

Fritze, Edgar H., and H. M. Schweighofer, to Collins Radio Co. Flight director aircraft instrument. 2,943,482, 7-5-60, Cl. 73—178.

Fritzmeier, Georg. Roof and windshield arrangement for vehicles. 2,943,884, 7-5-60, Cl. 296—90.

Fritzmeier, Georg. Adjustable support means for a roof of a vehicle. 2,943,885, 7-5-60, Cl. 296—102.

Frost, George H., to Westinghouse Electric Corp. Blanket control. 2,943,596, 7-5-60, Cl. 116—124.

Fuhro, Marcel: *See*—
Johnson, Peter W. R., Hayden, Georgette, and Fuhro. 2,943,897.

Fuller Mfg. Co.: *See*—
McNamara, Thomas V., and Perkins. 2,943,719.
Perkins, Charles M., and McNamara. 2,943,502.

Funck, Dennis L., to E. I. du Pont de Nemours and Co. Process for purification of gaseous formaldehyde. 2,943,701, 7-5-60, Cl. 183—115.

Furlenmeier, Andre: *See*—
Vaterlaus, Bruno, and Furlenmeier. 2,944,078.

G-M Laboratories, Inc.: *See*—
Malershofer, Karl M. 2,943,400.

G & M Sheet Metal Works: *See*—
Geisler, Henry O. 2,943,882.

Gafford, John L. Shutterless camera for taking pictures of the wall of a well or the like. 2,943,546, 7-5-60, Cl. 95—11.

Gaida, Joseph B. Door-locking switch. 2,944,123, 7-5-60, Cl. 200—44.

Gallagher, John L.: *See*—
Stevenson, Donald L., and Gallagher. 2,943,784.

Galvin, Andre, P. Besson, P. Brun, and P. Thirion, to Societe Industrielle des Derives de l'Acetylene (S.I.D.A.). Manufacture of methylethylketone. 2,944,083, 7-5-60, Cl. 260—590.

Gans Vagon es Gepgyar: *See*—
Botka, Imre. 2,943,509.

Garrett, Roscoe H., to Eaton Mfg. Co. Tension control apparatus. 2,943,809, 7-5-60, Cl. 242—78.51.

Gartner, Stanley J., to Sylvania Electric Products Inc. Grid transfer mechanism. 2,943,751, 7-5-60, Cl. 214—1.

Gasmire, Richard C.: *See*—
Adams, Elmer L., and Gasmire. 2,943,349.

Gaspar, Bela, and G. B. Lindes; said Gaspar assor. to Gasparcolor, Inc. Color photographic material and process. 2,943,934, 7-5-60, Cl. 96—83.

Gasparcolor, Inc.: *See*—
Gaspar, Bela, and Linden. 2,943,934.

Gaston, Paul S., to Macinar, Inc. Collapsible supporting devices for drop leaves. 2,943,896, 7-5-60, Cl. 311—19.

Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Karl F. 2,943,543.
Rentschler, Waldemar T. 2,943,550.

Gaylord Bros., Inc.: *See*—
Barrett, Neilon, and Grant. 2,943,336.

Gebele, Kurt, to Compur-Werk Friedrich Deckel OHG. Photographic shutter. 2,943,551, 7-5-60, Cl. 95—64.

Geisler, Henry O., to G & M Sheet Metal Works. Overhead door holder. 2,943,882, 7-5-60, Cl. 292—282.

Gelsenkirchener Bergwerks Akt.-Ges.: *See*—
Sonntag, Franz. 2,944,091.

General Aniline & Film Corp.: *See*—
Welliver, Lawrence G. 2,943,935.

General Dynamics Corp.: *See*—
Rogers, Stanley, and Dannback. 2,944,207.

General Dynamics Corp. (Convair Division): *See*—
White, Phillip F. 2,943,750.

General Electric Co.: *See*—
Alger, Philip L. 2,944,171.
Bochan, John. 2,943,474.
Chin, Eock M. 2,944,162.
Corson, Almon F. 2,944,215.
Grattidge, Walter, and Muller. 2,943,957.
Hamm, Clarence L., and Widlansky. 2,943,873.
Hanna, John F. 2,943,908.
Houser, Philip H., and Besse. 2,943,740.
Kernander, Warren N., and Van Beneekom. 2,944,181.
Lafferty, James M. 2,944,179.
Manke, Arthur G., and Baydio. 2,944,222.
Newton, Walter H. 2,943,598.
Outt, John E. 2,944,250.
Painter, Delbert J. 2,943,472.
Pinter, George, and Chereih. 2,943,643.
Piper, William W. 2,944,177.
Prucha, Richard V. 2,943,638.
Schultz, Warner W. 2,944,146.
Shipley, Eugene E. 2,943,463.
Worst, Joseph C. 2,943,473.

General Grinding Wheel Corp.: *See*—
MacMaster, Harry D., Bauer, and Guthrie. 2,943,357.

General Mills, Inc.: *See*—
Floyd, Don E., and Ward. 2,944,036.

General Motors Corp.: *See*—
Bohnhoff, Arthur F., and Skerl. 2,943,510.
Chilton, William D. 2,943,652.
Dietrich, Howard E., Hiller, Lay, Rowe, and Zeisloft. 2,943,441.
Herndon, Walter B. 2,943,510.
Joachim, Joseph G., and Sauer. 2,943,220.
Legge, George D. 2,944,145.
Lohr, Thomas E., and Horton. 2,944,186.
McGregor, Ralph. 2,943,782.
Norton, James A. 2,943,737.
Rossman, Edwin F. 2,943,711.
Scoville, Donald C. 2,943,847.
Shewmon, Ralph K., and Newhouse. 2,944,126.
Stapleton, Robert W. 2,943,501.
Thornburgh, William F. 2,943,609.
White, Phillip R., Thomas, and Joseph. 2,943,932.

General Precision, Inc.: *See*—
Kaegy, Peter M., and Mittman. 2,944,170.

General Steel Products Co., Inc.: *See*—
Hoffman, Frank D., Jr. 2,943,670.

Georgette, Nicolas J.: *See*—
Johnson, Peter W. R., Hayden, Georgette, and Fuhro. 2,943,897.

Gerber, Eduard A.: *See*—
Stanley, Joseph M., Theakritoff, Gerber, Chi, and Hammond. 2,944,027.

Gerber Products Co.: *See*—
Krupp, Robert F., and Wagner. 2,943,737.

Gerow, Gordon P.: *See*—
Bancroft, George H., Gerow, and Stevenson. 2,943,783.

Gewerkschaft Eisenhutte Westfalia: *See*—
Dommann, Günther. 2,943,725.

Giammarco, Giuseppe, to S.p.A. "Vetrocoke." Method of removing hydrogen sulfide from gaseous mixtures. 2,943,910, 7-5-60, Cl. 23—2.

Giannini, Gabriel M., and V. H. Blackman, to Plasmadyne Corp. High-intensity electrical plasma-jet torch incorporating magnetic nozzle means. 2,944,140, 7-5-60, Cl. 219—123.

Gillespie, Charles N.: *See*—
Pontecorvo, Paul J., Gillespie, and Smith. 2,944,112.

Ginter, Karle P., to Socony Mobil Oil Co., Inc. Method of extending onstream portion of cycle during reforming by reversing direction of flow. 2,944,000, 7-5-60, Cl. 208—65.

Glasgow, Clarence O.: *See*—
Glasgow, Edsel R. and C. O. 2,943,765.

Glasgow, Edsel R. and C. O. Container mounted fluid pressure displacement pump. 2,943,765, 7-5-60, Cl. 222—110.

Godet, Sidney, to Reeves Instrument Corp. Automatic plotting apparatus and method of operation. 2,943,905, 7-5-60, Cl. 346—8.

Goepfert, George J., to The Cincinnati Milling Machine Co. Abrasive wheel composition. 2,943,926, 7-5-60, Cl. 51—298.

Goff, James E., to Electric Heaters, Inc. Electric space heater and method of manufacture. 2,944,138, 7-5-60, Cl. 219—34.

Goldberg, Harold D. and M. I. Electronic system. 2,944,185, 7-5-60, Cl. 315—8.5.

Goldberg, Milton I.: *See*—
Goldberg, Harold D. and M. I. 2,944,185.

Golde, Hans. Devices for causing two longitudinally-extending members to move lengthwise in opposite directions. 2,943,514, 7-5-60, Cl. 74—665.

Goldenberg, Max. Television viewing screen. 2,943,964, 7-5-60, Cl. 154—2.74.

Golding, Fred E., to Aeon Industries, Inc. Extensible leg for furniture. 2,943,334, 7-5-60, Cl. 5—310.

Goldsmith, George J.: *See*—
Solomon, Allen L., and Goldsmith. 2,944,200.

Goldthwait, Richard G.: *See*—
Fogle, Merald C., Goldthwait, Kwolek, and Rice. 2,944,098.

Goodall, Donald G., and J. C. Chicken, to Rolls-Royce Ltd. Means sensitive to changes in the effective restriction of a restrictive element in a flow conduit. 2,943,446, 7-5-60, Cl. 60—39.09.

Goodbar, Isaac. Apparatus for photographing and exhibiting a succession of pictures. 2,943,533, 7-5-60, Cl. 88—16.

Goodbus, Lyle D., K. E. Cantrel, and A. M. Schmitzer, to Phillips Petroleum Co. Method of killing insects comprising applying nitropyridine and nitropyridine-1-oxide. 2,943,976, 7-5-60, Cl. 167—33.

Goodman, Clark, to Schlumberger Well Surveying Corp. Method and apparatus for exploring boreholes. 2,943,694, 7-5-60, Cl. 181—5.

Goodman, Solomon. Exchange resins from N-halogenated copolymers. 2,944,033, 7-5-60, Cl. 260—2.1.

Goodrich, B. F., Co., The: *See*—
Antonson, John O. 2,943,663.
Olson, Frederick F., and Cairns. 2,943,406.

Goodrich, John J., to St. Regis Paper Co. Multiwall bag tear strips. 2,943,781, 7-5-60, Cl. 229—66.

Goodyear Aircraft Corp.: *See*—
Freeman, Arnold R., Raffel, and Tripp. 2,943,968.

Gora, Henry Z., to The Eagle-Picher Co. Apparatus and method for molding plastic material. 2,943,354, 7-5-60, Cl. 18—21.

Gordon, Donald A.: *See*—
Replogle, Frank S., Jr., and Gordon. 2,944,160.

Gordon, Dwight M., and W. E. Highley, to ACF Industries, Inc. Separate thermostat controlled fast idle cam. 2,943,848, 7-5-60, Cl. 261—39.

Gordon, Maxwell, to Smith Kline & French Laboratories. Substituted phenothiazinylalkyl aminosulfonylpiperazines. 2,944,054, 7-5-60, Cl. 260—243.

Gorsuch, John T., to The Martin Co. Indicating device. 2,943,435, 7-5-60, Cl. 58—3.

Goss, James W. Bracket for hanging pictures and the like. 2,943,831, 7-5-60, Cl. 248—31.

Gottschlich, Joseph W.: *See*—
Ciacci, Walter H. 2,943,605.

Goulet, Jules H., S. G. Dawes, and A. J. Smith, to Caterpillar Tractor Co. Valve lapping machine. 2,943,422, 7-5-60, Cl. 51—27.

Graefe, Allen F., to Aerojet-General Corp. N-haloethylenimines. 2,944,051, 7-5-60, Cl. 260—239.

Grafler, Inc.: *See*—
Nerwin, Hubert. 2,943,549.

Granath Axel G., to Herbert Simpson Corp. Drive for mold conveyor systems. 2,943,726, 7-5-60, Cl. 198—135.

Granqvist, Carl-Erik, to Svenska Aktiebolaget Gasaccumulator. Contact-free high frequency commutator. 2,944,230, 7-5-60, Cl. 333—27.

Grant, Chester A.: *See*—
Barrett, Neilon, and Grant. 2,943,336.

Grasser, Gilbert E., to United States of America, Army. Self destruction device. 2,943,573, 7-5-60, Cl. 102—78.

Grattidge, Walter, and F. A. Muller, to General Electric Co. Method for the spraying of electron emitting thermionic cathodes. 2,943,957, 7-5-60, Cl. 117—229.

Gray, Abe L., and H. E. Duchnowski, to North American Machine Co. Reversible ratchet wrench. 2,943,523, 7-5-60, Cl. 81—63.

Gray, Alvin N., to Western Electric Co., Inc. Methods of and apparatus for extruding plastic materials. 2,943,351, 7-5-60, Cl. 18—13.

Gray, James H., and W. L. Wood, to Allis-Chalmers Mfg. Co. Cotton picking spindle. 2,943,431, 7-5-60, Cl. 56—50.

Gray, Phillip P., I. M. Stone, and J. E. Wylie, to Baxter Laboratories, Inc. Stabilized malt beverages. 2,943,941, 7-5-60, Cl. 99—48.

Gray, Robert B., to Erie Resistor Corp. Bender type piezoelectric transducer. 2,944,117, 7-5-60, Cl. 179—100.41.

Gray, Robert B., to Erie Resistor Corp. Binaural phonograph pickup. 2,944,118, 7-5-60, Cl. 179—100.41.

Greanias, Evon C., to International Business Machines Corp. Signal translating apparatus. 2,944,217, 7-5-60, Cl. 328—2.

Greenspan, Alvin T., and W. L. Brown 4th. Jet propulsion device. 2,943,417, 7-5-60, Cl. 46—76.

Greer, Cecil R.: *See*—
Ingram, William H., Jr., and Greer. 2,943,432.

Greer, Edward M., J. Kendall, and L. B. Winston, to Greer Hydraulics, Inc. Gas pressure booster system. 2,943,635, 7-5-60, Cl. 137—154.

Greer Hydraulics, Inc.: *See*—
Greer, Edward M., Kendall, and Winston. 2,943,635.

Grenet, Dominic A., to National Distillers and Chemical Corp. Plastic window covering and method of making the same. 2,943,676, 7-5-60, Cl. 160—368.

Griem, Gustav A. Rotary engine. 2,943,609, 7-5-60, Cl. 123—11.

Griffiths, Edward G.: *See*—
Jayna, Stephen L., Griffiths, and Small. 2,943,855.

Gring, John L.: *See*—
Teter, John W., Gring, and Keith. 2,944,096.

Griswold, Damon E. Testing and test recording device. 2,943,460, 7-5-60, Cl. 35—9.

Gross, Gisella: *See*—
Bernhauer, Konrad, Friedrich, Gross, and Spande. 2,943,983.

Gulden, Ernest V.: *See*—
Heersum, Desmond R., and Gulden. 2,943,788.

Gulf Oil Corp.: *See*—
James, Gordon. 2,943,640.

Gulf Research & Development Co.: *See*—
Ambrose, Henry A. 2,943,925.
Doolen, Orville K. 2,944,201.
Fogle, Merald C., Goldthwait, Kwolek, and Rice. 2,944,098.
Kukin, Ira. 2,943,924.
Starnes, William C., and Zabor. 2,944,097.

Gullett, William W., to Chicago Development Corp. Control of oxygen in metals of groups IV-B, V-B, VI-B, and their alloys. 2,943,984, 7-5-60, Cl. 204—1.

Gulton Industries, Inc.: *See*—
Londell, William J., Jr. 2,944,241.

Gunther, Hermann, to Quarzlampen Gesellschaft m.b.H. Operating room lamp. 2,944,143, 7-5-60, Cl. 240—1.4.

Gustafson, Lloyd T., to The Creamery Package Mfg. Co. Heat-treating apparatus. 2,943,844, 7-5-60, Cl. 257—312.

Guth, Eugene D., to Phillips Petroleum Co. Method for improving the storage stability of ammonium salts. 2,943,928, 7-5-60, Cl. 71—64.

Guthrie, Jack A.: *See*—
Blisard, Harold S., Smith, Rockstrob, and Guthrie. 2,943,992.

Guthrie, Jack A., to Sun Oil Co. Production of benzene. 2,944,090, 7-5-60, Cl. 260—668.

Guthrie, Stanford A.: *See*—
MacMaster, Harry D., Bauer, and Guthrie. 2,943,357.

Haberstump, Alfred H., to Haberstump-Harris, Inc. Article arranging and collecting device. 2,943,764, 7-5-60, Cl. 221—68.

Haberstump-Harris, Inc.: *See*—
Haberstump, Alfred H. 2,943,764.

Haggar, Robert W. Combined filing cabinet and viewing arrangement for photographic transparencies. 2,943,410, 7-5-60, Cl. 40—106.1.

Haglund, John H., to Aktiebolaget Kanthal. Flame spraying method and composition. 2,943,981, 7-5-60, Cl. 117—22.

Haigler, Edmund D., to Fischer & Porter Co. Pressure or temperature responsive mechanism. 2,943,489, 7-5-60, Cl. 73—418.

Haining, Lester E.: *See*—
Covely, Frank D., 3rd, and Haining. 2,944,253.

Hall, Marchand B., and A. L. Winkler, to Acme Steel Co. Conveyor for packages. 2,943,558, 7-5-60, Cl. 100—1.
Hall, William D. Control device for fans. 2,944,168, 7-5-60, Cl. 307—117.
Hallenbeck, Roy E., Jr., to Pace, Inc. Thermoresponsive switch means. 2,944,130, 7-5-60, Cl. 200—136.5.
Hallmark Cards, Inc.: *See*—
Wrob, Ronald M., Carlson, and Stephens. 2,943,560.
Haloid Xerox Inc.: *See*—
Ricker, Eugene C. 2,943,930.
Hamilton, Bertis F., deceased (W. S. Hamilton, executor), and E. F. and W. S. Hamilton, to Hamilton Mfg. Corp. Article of furniture. 2,943,671, 7-5-60, Cl. 155—112.
Hamilton, Earl F.: *See*—
Hamilton, Bertis F., E. F., and W. S. 2,943,671.
Hamilton Mfg. Corp.: *See*—
Hamilton, Bertis F., E. F., and W. S. 2,943,671.
Hamilton, Seaborn. Aircraft control by thrust producers. 2,943,822, 7-5-60, Cl. 244—77.
Hamilton, Wallace: *See*—
Lovell, Jack, and Hamilton. 2,943,589.
Hamilton, Wallace, to Cleveland Pneumatic Industries, Inc. Sealing connector. 2,943,760, 7-5-60, Cl. 220—75.
Hamilton, William S.: *See*—
Hamilton, Bertis F., W. S., E. F., and W. S. 2,943,671.
Hamlett, Sidney J., to White Sewing Machine Corp. Bobbin winding mechanism. 2,943,580, 7-5-60, Cl. 112—218.
Hamm, Clarence L., and W. Widlansky, to General Electric Co. Compensated seal. 2,943,873, 7-5-60, Cl. 286—11.11.
Hammond, Donald L.: *See*—
Stanley, Joseph M., Theokritoff, Gerber, Chi, and Hammond. 2,944,027.
Hanback, Francis J., to Douglas Aircraft Co., Inc. Swivel cluster coupling. 2,943,668, 7-5-60, Cl. 285—62.
Handley, John, to Creed & Co. Ltd. Printing telegraph apparatus. 2,944,111, 7-5-60, Cl. 178—35.
Hanert, John M. Adjustable tune producing instrumentality. 2,943,527, 7-5-60, Cl. 84—403.
Hanna, John P., to General Electric Co. Apparatus for recording and portraying a visible magnetic image. 2,943,908, 7-5-60, Cl. 346—74.
Hansen, Conrad A. Lifting fork for roast meat. 2,943,883, 7-5-60, Cl. 294—49.
Hansen, Harold. Combination coat and pants hanger. 2,943,774, 7-5-60, Cl. 223—88.
Hård Af Segerstad, Carl G., to Sandvikens Jernverks Aktiebolag. Measuring apparatus. 2,943,477, 7-5-60, Cl. 73—37.5.
Harden, Eldon A.: *See*—
Morkoski, James, Evans, and Harden. 2,943,689.
Hardie, James, & Coy. Pty. Ltd.: *See*—
Archibald, Ian W. 2,943,347.
Hardman, Peck, & Co.: *See*—
Sauerland, Joseph. 2,943,525.
Hardy, Robert A., Jr.: *See*—
Wright, William B., Jr., Hardy, and Brabander. 2,944,081.
Harjes, Frederick W., to Sylvania Electric Products Inc. Method for producing travelling wave tubes. 2,943,382, 7-5-60, Cl. 29—25.13.
Harkenrider, Robert J., L. R. Mizell, and J. Berch, to G. D. Miller. High lift fabric for laminated lubricator wick. 2,943,378, 7-5-60, Cl. 28—78.
Harrington, George H., and C. F. Ruff; said Harrington assor. to said Ruff. Meter for registering high-rate flow volume. 2,943,484, 7-5-60, Cl. 73—197.
Harrington Mfg. Co., Inc., The: *See*—
Mitchell, John D. 2,943,630.
Harris, Joseph E., Jr., and R. K. Becker, to Philco Corp. Cooking range oven with removable liner. 2,944,139, 7-5-60, Cl. 219—35.
Harris, Marlin J., Jr. Agricultural process and apparatus for carrying out the same. 2,943,419, 7-5-60, Cl. 47—58.
Harris, Thomas, to Structural Fibers, Inc. Containers. 2,943,758, 7-5-60, Cl. 220—4.
Harshaw Chemical Co., The: *See*—
Canarios, Chrysosthenis M. 2,944,045.
Hart, Marius 't: *See*—
Ruedisuli, Wilhelmus, and 't Hart. 2,944,003.
Hartel, Erwin H., to The Cleveland Pneumatic Industries, Inc. Steering disconnect for aircraft. 2,943,867, 7-5-60, Cl. 280—442.
Hartel, Erwin H., and W. B. Westcott, Jr., to Cleveland Pneumatic Industries, Inc. Landing gear construction. 2,943,827, 7-5-60, Cl. 244—111.
Hartley, Henry F.: *See*—
Odell, Alexander D., and Hartley. 2,944,164.
Hashimoto, Teiji, to Canon Camera Co., Inc. Shutter releasing device for motion picture cameras. 2,943,532, 7-5-60, Cl. 88—16.
Hasselblad, Fritz V.: *See*—
Cronholm, Einar. 2,943,544.
Hastings, Paul F.: *See*—
Merry, Albert B., and Hastings. 2,943,687.
Haubrich, Heinz, R. Hornle, and H. Raab, to Farbenfabriken Bayer Aktiengesellschaft. Water-insoluble azo dyestuffs. 2,944,050, 7-5-60, Cl. 260—178.
Hauserman, E. F., Co., The: *See*—
Pollock, Gordon J. 2,943,718.
Hawkes, Thomas B. Gripper devices. 2,943,666, 7-5-60, Cl. 153—48.
Hawkins, Edwin G. K., to The Distillers Co. Ltd. Process for the production of 3-ketotetrahydrofuran. 2,944,066, 7-5-60, Cl. 260—347.8.
Hawtin, Selwyn G., D. R. Parker, and J. Downing, to British Celanese Ltd. Manufacture of artificial materials. 2,943,946, 7-5-60, Cl. 106—196.
Haxton, Manford R., and W. F. Johnston, Jr., to The American Oil Co. Controlling heat fronts in platinum catalyst hydroforming. 2,944,008, 7-5-60, Cl. 208—140.
Hayden, John: *See*—
Coates, William H., and Hayden. 2,943,704.
Hayden, William: *See*—
Johnson, Peter W. R., Hayden, Georgette, and Fuhro. 2,943,897.
Hasseltine, Alan, to Hasseltine Research, Inc. Cathode-ray tube scanning apparatus. 2,944,178, 7-5-60 Cl. 313—77.
Hasseltine Research, Inc.: *See*—
Hasseltine, Alan. 2,944,178.
Loughlin, Bernard D. 2,944,105.
Hearsum, Desmond E., and E. V. Gulden, to The National Cash Register Co. Data analysing apparatus. 2,943,788, 7-5-60, Cl. 235—61.9.
Heck, Friedrich. Apparatus for applying pulverulent substance to a base. 2,943,599, 7-5-60, Cl. 118—306.
Hecker, Arthur C., M. W. Pollock, and I. Rabinovici, to Argus Chemical Corp. Neopentyl glycol alkyl phthalates and polyvinyl chloride compositions plasticised therewith. 2,944,041, 7-5-60, Cl. 260—31.6.
Heeringa, Lambertus G., and M. G. J. Beets, to Polak & Schwarz International N.V. Pyrolysis of boric esters of aryl bromo- and chlorohydrins. 2,944,077, 7-5-60, Cl. 260—462.
Heijligers, Hendrik: *See*—
Boekhorst, Antonius, and Heijligers. 2,944,186.
Heule, Robert A., and M. L. Wood, to International Business Machines Corp. Binary adder using transformer logical circuits. 2,943,791, 7-5-60, Cl. 235—176.
Henquet, André J., and J. J. Perrot, to International Standard Electric Corp. Concentrators of telephone lines or the like. 2,944,115, 7-5-60, Cl. 179—18.
Henry, William V., to American Enka Corp. Traversing roll. 2,943,803, 7-5-60, Cl. 242—43.2.
Herbert, John M., to The Plessey Co. Ltd. Charging device for electrometers. 2,944,204, 7-5-60, Cl. 320—1.
Hercules Powder Co.: *See*—
Class, Jay B. 2,944,082.
Hergeth, Adolf and H., to Hergeth K.-G. Maschinenfabrik und apparatebau. Cotton cleaner. 2,943,360, 7-5-60, Cl. 19—93.
Hergeth, Herbert: *See*—
Hergeth, Adolf and H. 2,943,360.
Hergeth K.-G. Maschinenfabrik und apparatebau: *See*—
Hergeth, Adolf and H. 2,943,360.
Herndon, Walter B., to General Motors Corp. Transmission. 2,943,516, 7-5-60, Cl. 74—732.
Hersh, Phyllis: *See*—
Beresin, Evelyn, and Hersh. 2,943,790.
Hersog, Gerhard, to Texaco Inc. Radioactivity earth exploration. 2,944,149, 7-5-60, Cl. 250—71.
Hessler, John O., P. K. O'Connor, and S. J. Stomiany, to American-Marietta Co. Swivel connector for mops. 2,943,892, 7-5-60, Cl. 306—3.
Hewlett-Packard Co.: *See*—
Fong, Arthur. 2,944,233.
Lacy, Peter D. 2,944,224.
Hickman, Clarence N., to United States of America, War. Flamethrower. 2,943,673, 7-5-60, Cl. 158—28.
Hickok Mfg. Co., Inc.: *See*—
Meeker, William H. 2,943,332.
Hiestand, Norman P.: *See*—
Walter, Richard L., Filmer, and Hiestand. 2,944,187.
Highley, Wenford E.: *See*—
Gordon, Dwight M., and Highley. 2,943,848.
Hill, John H. Developing apparatus for sensitized materials. 2,943,555, 7-5-60, Cl. 95—89.
Hiller Aircraft Corp.: *See*—
Hiller, Stanley, Jr. 2,943,816.
Sargent, Elbert R., and Sigler. 2,943,685.
Hiller, Dale M., to E. I. du Pont de Nemours and Co. Process for the production of refractory metals. 2,943,931, 7-5-60, Cl. 75—84.5.
Hiller, John D.: *See*—
Dietrich, Howard H., Hiller, Lay, Rowe, and Zeisloft. 2,943,441.
Hiller, Stanley, Jr., to Hiller Aircraft Corp. Vertical take-off high-speed aircraft. 2,943,816, 7-5-60, Cl. 244—23.
Hindle, Thomas, to Scapa Dryers Inc. Stretching machine for dryer felts and the like. 2,943,375, 7-5-60, Cl. 26—68.
Hodapp, Emil: *See*—
Sernitz, Paul, and Hodapp. 2,944,099.
Hoffman, Donald E.: *See*—
Kelly, Kenneth L., and Hoffman. 2,943,834.
Hoffman, Frank D., Jr., to General Steel Products Co., Inc. Reclining chair. 2,943,670, 7-5-60, Cl. 155—106.
Hoffman, James P., to Sun Oil Co. Obtaining neutral distillates from petroleum. 2,944,014, 7-5-60, Cl. 208—263.
Hoffmann, Karl, and A. Hunger, to Ciba Pharmaceutical Products Inc. Certain alpha (1-diethylaminoethyl) benzimidazolyl (2), alpha-aryl acetamides. 2,944,062, 7-5-60, Cl. 260—309.2.
Hoffmann-La Roche Inc.: *See*—
Atherton, Frank R. 2,944,074.
Hogan, Walter H.: *See*—
Camino, Anthony V., and Hogan. 2,943,818.
Hogan, Walter H., to Cleveland Pneumatic Industries, Inc. Aircraft ground steering mechanism. 2,943,817, 7-5-60, Cl. 244—50.
Hohman, Harry A. Automobile parking and storage towers. 2,943,725, 7-5-60, Cl. 198—35.
Holden, Donald L., to Universal Oil Products Co. Producing metal-free petroleum stocks by hydrogenation. 2,944,013, 7-5-60, Cl. 208—251.
Holtkamp, Calvin J., to Westinghouse Electric Corp. Control for flashing electric heaters. 2,944,135, 7-5-60, Cl. 219—20.
Holtkamp, Calvin J., to Westinghouse Electric Corp. Control for flashing electric heaters. 2,944,136, 7-5-60, Cl. 219—20.

Hook, John T., and R. C. Mack; said Hook assor. to said Mack. Folding chair. 2,943,672, 7-5-60, Cl. 155—139.
Hoover, Kenneth H. Exhaust gas conditioner. 2,943,920, 7-5-60, Cl. 23—284.
Hortle, Shigeki: *See*—
Murahashi, Shunsuke, and Hortle. 2,944,056.
Horizons Inc.: *See*—
Mayer, Edward F. 2,944,155.
Hörnle, Reinhold: *See*—
Haubrich, Heinz, Hörnle, and Raab. 2,944,050.
Horton, George B.: *See*—
Lohr, Thomas E., and Horton. 2,944,168.
Houghton, William D., to Radio Corp. of America. Television synchronizing system. 2,944,109, 7-5-60, Cl. 178—6.6.
Houser, Philip H., and H. F. Bowe, to General Electric Co. Clothes retaining arrangement for washing machines. 2,943,746, 7-5-60, Cl. 210—382.
Howell, Ronald T. A., and L. Young, to The Decca Record Co. Ltd. Microwave transmission limiter. 2,944,231, 7-5-60, Cl. 333—81.
Howell, William L. Electrode. 2,943,627, 7-5-60, Cl. 128—416.
Howell, William L. Electrode assembly. 2,943,628, 7-5-60, Cl. 128—416.
Hoyl, Alfred G.: *See*—
Thompson, James V. 2,944,019.
Hrabovsky, Oszkar, and L. Pasyl, to Licencia Talalmanyokat Ertekesito Vallalat. Feed apparatus with lock chambers for hydraulic conveying. 2,943,890, 7-5-60, Cl. 302—14.
Huber, Robert, to Societe d'Etudes et de Participations, Eau, Gaz, Electricite, Energie, S.A. Improvements in free piston engine and gas turbine power plant. 2,943,438, 7-5-60, Cl. 60—13.
Huber, Siegfried, to Diehl Gesellschaft mit beschrankter Haftung. Method of balancing oscillating or rotating members. 2,943,492, 7-5-60, Cl. 72—480.
Hudson, Boyd E., Jr., and A. E. Messner, to Esso Research and Engineering Co. Gas chromatography. 2,943,702, 7-5-60, Cl. 183—115.
Hudson, Kenneth C., to Minneapolis-Honeywell Regulator Co. Measuring apparatus. 2,944,199, 7-5-60, Cl. 317—246.
Hughes Aircraft Co.: *See*—
Quirk, Robert W. 2,943,852.
Hughes, Paul R., and W. C. Klank, Jr., to United Aircraft Products, Inc. Storage tank for liquid circulating system. 2,943,841, 7-5-60, Cl. 257—196.
Hull, Walter E. Magnetic compass. 2,943,398, 7-5-60, Cl. 33—225.
Hunger, Alfred: *See*—
Hoffmann, Karl, and Hunger. 2,944,062.
Hunter, Edward A.: *See*—
Nonnemann, Erwin W., Hunter, Mertzweiller, and Delanne. 2,944,067.
Hunter, Edward A., M. A. Segura, A. B. Small, and A. L. Miller, to Esso Research and Engineering Co. Method for preparing butyl rubber emulsions. 2,944,058, 7-5-60, Cl. 260—23.7.
Huntley, Allan E., and F. R. Russell, to Esso Research and Engineering Co. Fluidized solids technique. 2,944,009, 7-5-60, Cl. 208—155.
Hutchins, Samuel F., and G. P. Robinson, Jr., to Emerson & Cuming, Inc. Method of fabricating luneberg lenses. 2,943,358, 7-5-60, Cl. 18—58.
Hydrocarbon Research, Inc.: *See*—
Daniels, Ludlow S. 2,943,922.
Hyland, William A., and A. E. Welck, to Deere & Co. Hitch devices-back-up hitch for plow press drill. 2,943,692, 7-5-60, Cl. 172—657.
I-T-E Circuit Breaker Co.: *See*—
Albright, Roy H. 2,944,101.
Ihringer, Gerhard, to Rodi & Wienenberger Aktiengesellschaft. Expansible link strap. 2,945,437, 7-5-60, Cl. 59—79.
Illinois Tool Works: *See*—
Rapata, George M. 2,943,373.
Stern, William. 2,943,661.
Imperial Chemical Industries Ltd.: *See*—
McAuslan, James H. L., and Nock. 2,944,157.
Indiana General Corp.: *See*—
Maynard, Charles A. 2,943,739.
Industrial Controls Corp.: *See*—
Thomas, Albert G. 2,943,906.
Industrial Development Co.: *See*—
Erickson, Harold E., Riley, and Schubert. 2,943,365.
Industrial Filter & Pump Mfg. Co.: *See*—
Schmidt, Henry, Jr. 2,943,758.
Inertial Instruments, Inc.: *See*—
Benson, Robert M. 2,943,483.
Ingram, William H., Jr., and C. B. Greer, ¼ to Bowen Co. of Texas, Inc., and ¾ to Dresser Industries, Inc. Wireline control head. 2,943,682, 7-5-60, Cl. 166—77.
Insolio, Thomas A., to American Window Glass Co. Glass cutter trolley unit. 2,943,393, 7-5-60, Cl. 33—32.
International Business Machines Corp.: *See*—
Bolton, Wallis D. 2,944,147.
Bruce, George D., and Elbern. 2,944,225.
Cannon, Maxwell R. 2,944,160.
Demer, Frederick M. 2,943,544.
Dickinson, Arthur W. 2,943,907.
Greaniss, Evon C. 2,944,217.
Henle, Robert A., and Wood. 2,943,791.
Kuntzleman, Harry C. 2,944,249.
International Computers and Tabulators Ltd.: *See*—
Cartwright, John R. 2,943,787.
Davy, John C., and Bateman. 2,944,156.
International Harvester Co.: *See*—
Isaacson, Jerrold A., and Ferguson. 2,943,515.
Kramer, Richard W. 2,943,691.
Mortoski, James, Evans, and Harden. 2,943,689.
Palmer, John E., Singer, and Segura. 2,943,584.
Wilkinson, John R. 2,943,903.
International Nickel Co., Inc., The: *See*—
Norman, George H. C. 2,943,929.
International Resistance Co.: *See*—
Solow, Benjamin. 2,944,237.
International Standard Electric Corp.: *See*—
Henquet, Andre J., and Perrot. 2,944,115.
Leno, John A., and Searle. 2,943,968.
Mittag, Fritz, and Ringhandt. 2,943,614.
Odell, Alexander D., and Hartley. 2,944,164.
Rogers, Douglas C. 2,944,181.
Isaacson, Jerrold A., and H. A. Ferguson, to International Harvester Co. Power transmitting apparatus. 2,943,515, 7-5-60, Cl. 74—730.
Issell, Aubrey D. Fishing reel. 2,943,811, 7-5-60, Cl. 242—84.1.
Jacob, James P.: *See*—
Aldrich, Clare A., and Jacob. 2,943,714.
Aldrich, Clare A., and Jacob. 2,943,715.
Jacob, Robert M., G. L. Regnier, and C. Crisan, to Societe des Usines Chimiques Rhone-Poulenc. Certain nitro imidazolealkanols and acyl derivatives, and process. 2,944,061, 7-5-60, Cl. 260—309.
Jacobi, Herbert J.: *See*—
McMechen, William F. 2,943,902.
Jacobsen, Charles. Retractable clothesline. 2,943,746, 7-5-60, Cl. 211—119.5.
Jahnig, Charles E.: *See*—
Feldhauer, George P., Jr., Jahnig, and Weinstein. 2,944,092.
Jaklitsch, Franz. Heat exchanger for viscous fluids. 2,943,845, 7-5-60, Cl. 257—312.
James, Gordon, to Gulf Oil Corp. Manifold for dual zone well. 2,943,640, 7-5-60, Cl. 137—594.
Jankelson, Bernard. Tooth polishing device. 2,943,343, 7-5-60, Cl. 15—256.5.
Janus, Alexander G., to Consumers Merchandising Corp. Wrapped bread and closure therefor. 2,943,944, 7-5-60, Cl. 99—173.
Javns, Stephen L., E. G. Griffiths, and P. Small, to S. L. Javns and E. G. Griffiths. Game apparatus. 2,943,855, 7-5-60, Cl. 273—1.
Jeffords, Joseph. Silencer. 2,943,695, 7-5-60, Cl. 181—50.
Jensen, Christian O. Machine for the chopping of stable manure. 2,943,802, 7-5-60, Cl. 241—186.
Jensen, Melvin J. Eviscerating tool. 2,943,346, 7-5-60, Cl. 17—11.
Jergins, Harvey L.: *See*—
Yearout, Dean K., and Jergins. 2,944,258.
Joachim, Joseph G., and A. B. Sauer, to General Motors Corp. Closure latch. 2,943,880, 7-5-60, Cl. 292—201.
Johns, William F., to G. D. Searle & Co. 17-oxygenatedestra-2,5(10)-dienes and intermediates. 2,944,067, 7-5-60, Cl. 260—397.3.
Johns, William F., to G. D. Searle & Co. 17α-(1-alkynyl)- and 17α-(1-alkenyl)-estra-2,5(10)-dien-17β-ols and esters corresponding. 2,944,068, 7-5-60, Cl. 260—397.5.
Johnson, Frank F., and J. Tittman, to Schlumberger Well Surveying Corp. Apparatus for investigating earth formations. 2,944,148, 7-5-60, Cl. 250—71.
Johnson, John B., and N. T. Williams, to McGraw-Edison Co. Fire detection. 2,944,152, 7-5-60, Cl. 250—83.6.
Johnson, Peter W. R., W. Hayden, N. J. Georgette, and M. Fuhro, to Products for Industry. Work bench system with adjustable dimensions and configurations. 2,943,897, 7-5-60, Cl. 311—35.
Johnson Products Inc.: *See*—
Dadd, Morris V. 2,943,611.
Johnson, Wayne R., to Minnesota Mining & Mfg. Co. Apparatus for wave-band division. 2,944,107, 7-5-60, Cl. 178—6.6.
Johnston, Howard, to The Dow Chemical Co. Pentachlorobenzenesulfenyl halides. 2,944,080, 7-5-60, Cl. 260—543.
Johnston, Walker F., Jr.: *See*—
Haxton, Manford R., and Johnston. 2,944,008.
Johnstone, Theodore H., to The Bingham-Herbrand Corp. Parking brake assembly. 2,943,511, 7-5-60, Cl. 74—529.
Jolly, Samuel R., to Sun Oil Co. Method for preparing homogeneous composition comprising oxidized petroleum wax and a polymer of a mono vinyl aromatic compound. 2,944,039, 7-5-60, Cl. 260—28.5.
Jones, Alice F.: *See*—
Brase, George. 2,943,522.
Jones, James B., and J. L. Straughn, to Aeroprojects, Inc. Aerosolization process. 2,944,029, 7-5-60, Cl. 252—305.
Jonkers, Cornelius O., and J. W. L. Kohler, to North American Philips Co., Inc. Gaseous medium leakage prevention arrangement for a hot-gas reciprocating machine. 2,943,453, 7-5-60, Cl. 62—6.
Joseph, Carl F.: *See*—
White, Philip E., Thomson, and Joseph. 2,943,932.
Joullie, Maurice, M. Laurre, G. Maillard, and P. Muller, to Recherches et Propagande Scientifiques (Societe a Responsabilite Limitee). Bis amino ethyl disulphide compounds. 2,944,085, 7-5-60, Cl. 260—826.
Joy Mfg. Co.: *See*—
Little, Larry L. 2,943,697.
Joy, Robert F., and C. W. Smollinger, to Bethlehem Steel Co. Splice and method of making the same. 2,943,434, 7-5-60, Cl. 57—142.
Julifs, Albert G., to Senco Products, Inc. Stapling plier. 2,943,327, 7-5-60, Cl. 1—44.4.
Julian Laboratories, Inc., The: *See*—
Julian, Percy L., and Magnani. 2,944,052.
Julian, Percy L., and A. Magnani, to The Julian Laboratories, Inc. Novel epoxy pregnanes. 2,944,052, 7-5-60, Cl. 260—239.55.

Justoni, Romeo, and R. Pessina, to Francesco Vismara Societa per Azioni. Process for preparing 5 hydroxy-tryptamine through new intermediates. 2,944,064, 7–5–60, Cl. 260—319.

KVP Sutherland Paper Co.: *See*—
Buttery, Kenneth T. 2,943,779.

Kabushiki-Kaisha Koden Seisakusho: *See*—
Tanaka, Isokazu, Kurimura, and Yamasaki. 2,944,219.

Kaden, Harry E. Multi-gang switch box. 2,943,757, 7–5–60, Cl. 220—3.9.

Kaiser, Kurt E., to Daimler-Benz Aktiengesellschaft. Air inlet control mechanism for an internal combustion engine. 2,943,615, 7–5–60, Cl. 123—140.

Kaiser Aluminum & Chemical Corp.: *See*—
Richter, Donald L. 2,943,864.

Kallischnigg, Rolf, to Chemische Fabrik Promonta G.m.b.H. Process for preparing substituted carbazole derivatives. 2,944,058, 7–5–60, Cl. 260—293.3.

Kaltenbach, Frederick H., to The Babcock & Wilcox Co. Self stabilizing automatic temperature control. 2,944,137, 7–5–60, Cl. 219—20.

Kantner, Donald J.: *See*—
Dotterer, Elmer E., Kantner, Sprankle, and Van Gorder. 2,943,749.

Kapteyn, Paul. Circuit system for electronic flash instruments with transistors. 2,944,191, 7–5–60, Cl. 315—183.

Karlson, Wesley N. Carbonated beverages. 2,943,939, 7–5–60, Cl. 99—28.

Klatner, Erich. Film printing machine. 2,943,554, 7–5–60, Cl. 95—75.

Katz, Jack L., to Kingsland Drum & Barrel Co. Inc. Methods of reconditioning drums. 2,943,886, 7–5–60, Cl. 29—401.

Kauder, Otto S., to Argus Chemical Corp. Stabilization of chlorinated solvents. 2,944,088, 7–5–60, Cl. 260—652.5.

Keating, Charles R., Jr.: *See*—
Salak, Michael, Keating, and Wilson. 2,943,713.

Kebba, John J.: *See*—
Downs, William J. 2,943,408.

Keith, Carl D.: *See*—
Teter, John W., Gring, and Keith. 2,944,096.

Keizer, Eugene O., and R. F. Sanford, to Radio Corp. of America. Frequency divider. 2,944,205, 7–5–60, Cl. 321—69.

Keller, Herman J. Dyeing solution for coloring citrus fruits and method of dyeing citrus fruits. 2,943,943, 7–5–60, Cl. 99—148.

Kelly, Kenneth L., and D. E. Hoffman, to Fedders Corp. Mounting platform for air conditioning units. 2,943,834, 7–5–60, Cl. 248—208.

Kendall, Julius: *See*—
Greer, Edward M., Kendall, and Winston. 2,943,635.

Kenyon, Walter W., to Millipore Filter Corp. Portable incubator. 2,944,134, 7–5–60, Cl. 219—20.

Kernander, Warren N., and C. F. Van Beanekom, to General Electric Co. Terminal assembly. 2,944,131, 7–5–60, Cl. 200—166.

Kerr, David, to Ultra Electric, Inc. Method and apparatus for measuring distance in radio homing systems. 2,944,254, 7–5–60, Cl. 343—11.

Ketchledge, Raymond W., to Bell Telephone Laboratories, Inc. Communication switching system employing gas tubes. 2,944,114, 7–5–60, Cl. 179—18.

Keuffel & Esser Co.: *See*—
Baker, Allister L. 2,943,529.
Spechler, Daniel S. 2,943,936.

Keys, Conrad R. Equipment for loading, hauling and dumping loose materials. 2,943,753, 7–5–60, Cl. 214—317.

Keys, Conrad R. Vehicular dumping receptacle. 2,943,754, 7–5–60, Cl. 214—317.

Kimball, A., Co.: *See*—
Rothmann, Harry E. 2,943,559.

Kimberlin, Charles N., Jr., and W. J. Mattox, to Esso Research and Engineering Co. Naphtha reforming process. 2,944,001, 7–5–60, Cl. 208—80.

Kimmell, Richard T.: *See*—
Strobel, Charles K., McMichael, and Kimmell. 2,943,488.

King, Emmett T.: *See*—
Valdi, Walter J., and King. 2,943,874.

King, Geo. W., Ltd.: *See*—
Burrows, Arthur T. C. 2,943,580.

King, L. D. Percival, to United States of America, Atomic Energy Commission. Catalytic recombiner for a nuclear reactor. 2,943,921, 7–5–60, Cl. 23—288.

King-Seeley Corp.: *See*—
Atwood, Smith R., Jr. 2,943,595.
Klug, Charles W. 2,944,209.

Kingsland Drum & Barrel Co. Inc.: *See*—
Katz, Jack L. 2,943,386.

Kishel, Joseph F.: *See*—
Ten Bosch, Maurits, and Kishel. 2,943,493.

Klank, Walter C., Jr.: *See*—
Hughes, Paul R., and Klank. 2,943,841.

Klansmann, Milton H., H. J. Brucker, and R. P. Von Culin, to Seal-Spout Corp. Combined container and measuring spout. 2,943,769, 7–5–60, Cl. 222—364.

Kleindienst & Co. Maschinenfabrik und Eisengieberei: *See*—
Weihmayr, Engelbert. 2,943,772.

Klug, Charles W., to King-Seely Corp. Constant voltage output device. 2,944,209, 7–5–60, Cl. 323—68.

Knapp, Peter M., and D. Mittman, to General Precision, Inc. Encapsulating method for servo systems. 2,944,170, 7–5–60, Cl. 310—80.

Kneisley, Richard F. Rectifier unit. 2,944,197, 7–5–60, Cl. 317—234.

Knol, Kornelis S.: *See*—
Beljers, Hugo G., Knol, and Pannenborg. 2,944,282.

Knowles, Philip N. G.: *See*—
Barnett, Arthur A. C., Warner, and Knowles. 2,944,288.

Knuth, Harvey G., to Lyon Metal Products, Inc. Sheet metal table having hollow end panels supporting the table top. 2,943,898, 7–5–60, Cl. 311—110.

Koehler, Otto A. Fishing rod and reel assembly. 2,943,413, 7–5–60, Cl. 43—21.

Kohler, Jacob W. L.: *See*—
Jonkers, Cornelius O., and Kohler. 2,943,453.

Kolarik, Ivan S., to Socony Mobil Oil Co., Inc. Anticorrosive marine diesel lubricant. 2,944,023, 7–5–60, Cl. 252—33.4.

Kollonitsch, Janos, R. J. Tull, and L. M. Weinstock, to Merck & Co., Inc. Preparation of 16a-lower alkyl steroids. 2,944,070, 7–5–60, Cl. 260—397.45.

Kollsman, Paul. Apparatus for modifying the chemical composition of substances by ion transfer. 2,943,989, 7–5–60, Cl. 204—301.

Korman, Jerome, to The Upjohn Co. Pyrimidine derivatives. 2,944,057, 7–5–60, Cl. 260—256.5.

Koski, William A., and P. R. Maguire; said Maguire assor. to said Koski. Arm stiffening device. 2,943,859, 7–5–60, Cl. 273—180.

Kostic, Andy H., to Libbey-Owens-Ford Glass Co. Glass bending mold. 2,943,420, 7–5–60, Cl. 49—67.

Kovaleski, Joseph J., and T. E. Lewis, Jr., to The Coulter & McKenzie Machine Co., Inc. Package and container forming part thereof. 2,943,793, 7–5–60, Cl. 215—59.

Kramer, Richard W., to International Harvester Co. Disk harrow and control means. 2,943,691, 7–5–60, Cl. 172—572.

Krohn, Henry W., Jr.: *See*—
Boyer, Ralph K., and Krohn. 2,943,969.

Krupp, Robert F., and J. K. Wagner, to Gerber Products Co. Carrier for glass jar handling machine. 2,943,727, 7–5–60, Cl. 198—188.

Kukin, Ira, to Gulf Research & Development Co. Stable fuel oil compositions. 2,943,924, 7–5–60, Cl. 44—66.

Kuntzleman, Harry C., to International Business Machines Corp. Magnetic storage and switching structure. 2,944,249, 7–5–60, Cl. 340—174.

Kupa, Peter C., and C. M. Finigan, to Polymer Corp. Ltd. Purification of butadiene using an ammoniacal solution of copper ions. 2,944,095, 7–5–60, Cl. 260—681.5.

Kurimura, Shisuo: *See*—
Tanaka, Isokazu, Kurimura, and Yamasaki. 2,944,219.

Kurti, Alexander, to United Aircraft Corp. Bypass engine with flexible duct structure. 2,943,449, 7–5–60, Cl. 60—39.32.

Kuzan Inc.: *See*—
Dunbar, George W. 2,943,619.

Kwolek, Stanley J.: *See*—
Fogle, Merald C., Goldthwait, Kwolek, and Rice. 2,944,098.

Labbee, Joseph A., Jr., deceased; K. G. Labbee, administratrix. Screw-taper drill with a depth gauge. 2,943,658, 7–5–60, Cl. 145—125.

Labbee, Katherine G.: *See*—
Labbee, Joseph A., Jr. 2,943,658.

Lacy, Peter D., to Hewlett-Packard Co. High speed binary counter. 2,944,224, 7–5–60, Cl. 331—82.

Lafferty, James M., to General Electric Co. Gaseous discharge device. 2,944,179, 7–5–60, Cl. 313—214.

Lambert, Raoul A., to Westinghouse Electric Corp. Food mixer apparatus. 2,943,840, 7–5–60, Cl. 259—108.

Landis Tool Co.: *See*—
Balsiger, Harold E. 2,943,425.

Lane, Frank L., to United States of America, Navy. Aerodynamic seal. 2,943,825, 7–5–60, Cl. 244—60.

Langdon, Kenneth T. P.: *See*—
Orloff, George, Roy, Cooper, and Langdon. 2,943,819.

La Rue, Harold E.: *See*—
Reed, Edwin E., and La Rue. 2,943,636.

Lash, Eugene C.: *See*—
Van Vactor, Alburtus O., and Lash. 2,943,429.

Latzko, John A., to Aktiengesellschaft Brown, Boveri & Cie. Enclosed switchgear assemblies for outdoor erection. 2,943,717, 7–5–60, Cl. 189—1.

Lauck, John A., to Borg-Warner Corp. Hydraulic transmission. 2,943,451, 7–5–60, Cl. 60—53.

Laurre, Michel: *See*—
Joullie, Maurice, Laurre, Maillard, and Muller. 2,944,065.

Lavanchy, Andre C.: *See*—
Payne, Robert E., and Lavanchy. 2,943,734.
Payne, Robert E., Lavanchy, and Sharpies. 2,943,735.

Lawson, E. P., Co., Inc.: *See*—
Thumim, Carl. 2,943,500.

Lay, Robert: *See*—
Dietrich, Howard H., Hiller, Lay, Rowe, and Zeisloft. 2,943,441.

Lee, Aaron. Ice cube making addition to domestic refrigerators. 2,943,456, 7–5–60, Cl. 62—138.

Leek, Francis W. J. Paper making and the like machines. 2,943,677, 7–5–60, Cl. 162—319.

Leff, Martin J., to Sperry Rand Corp., Ford Instrument Co. Division. Differential action synchro transducer. 2,944,159, 7–5–60, Cl. 250—233.

Legge, George D., to General Motors Corp. Dome and reading lamp assembly. 2,944,143, 7–5–60, Cl. 240—7.35.

Lenhart, Robert E., to The Beryllium Corp. Method and apparatus for making isotropic propertied beryllium sheet. 2,943,933, 7–5–60, Cl. 75—214.

Leno, John A., and A. M. Searle, to International Standard Electric Corp. Printed electrical circuits. 2,943,966, 7–5–60, Cl. 154—80.

Lepetit S.p.A.: *See*—
Maffii, Giulio, Ettorre, and Testa. 2,943,980.

Levinson, Louis E. Amusement devices. 2,943,854, 7–5–60, Cl. 272—33.

Lewis, Howard B., deceased (Bank of America National Trust & Savings Assn., executor), to Mine Safety Appliances Co. Liquid oxygen converter. 2,943,454, 7–5–60, Cl. 62—51.

Lewis, Thomas E., Jr.: *See*—
Kovaleski, Joseph J., and Lewis. 2,943,732.

Libbey-Owens-Ford Glass Co.: *See*—
Kostic, Andy H. 2,943,420.

Licencia Talalmanyokat Ertekesito Vallalat: *See*—
Hrabovszky, Oszkar, and Pasyt. 2,943,890.

Lieberman, Harvey N.: *See*—
Benveniste, Jacques, West, and Lieberman. 2,943,475.

Linden, Gustave B.: *See*—
Gaspar, Bela, and Linden. 2,943,934.

Lindmark, Howard C. Reversible ratchet. 2,943,710, 7–5–60, Cl. 188—82.2.

Lindsay, Myles W. Air operated sealant dispenser. 2,943,768, 7–5–60, Cl. 222—327.

Line, Gerald D., to Eaton Mfg. Co. Hydraulic tappet. 2,943,613, 7–5–60, Cl. 123—90.

Line, Joe V.: *See*—
Megert, Karl A., Jr., and Line. 2,943,593.

Ling-Altec Electronics, Inc.: *See*—
Ross, James A. 2,944,194.

Lionel Corp., The: *See*—
Bonanno, Joseph L. 2,943,582.
Bonanno, Joseph L. 2,943,783.

Little, Larry L., to Joy Mfg. Co. Automatic field strength control for precipitators. 2,943,697, 7–5–60, Cl. 183—7.

Livingston, A. Kip: *See*—
Oxberry, John W. 2,943,535.

Lockheed Aircraft Corp.: *See*—
Rawlins, Robert E. 2,944,226.
Rawlins, Robert E. 2,944,256.

Lockport Felt Co., Inc.: *See*—
Polts, Thomas E., Jr. 2,943,379.

Loebenstein, William V.: *See*—
Weitzel, Daniel H., and Loebenstein. 2,943,917.

Loewe, Siegmund, and W. Zorn. Magnetic sound recording device. 2,943,804, 7–5–60, Cl. 242—55.12.

Loewe, Siegmund. Clamping device for tape spools of magnetic tape recorders. 2,943,805, 7–5–60, Cl. 242—55.13.

Loewe, Siegmund, and W. Zorn. Magnetic tape reel. 2,943,808, 7–5–60, Cl. 242—74.1.

Lohr, Thomas E., and G. B. Horton, to General Motors Corp. Automatic light controlled headlamp means. 2,944,188, 7–5–60, Cl. 315—83.

Lomdell, William J., Jr., to Guiton Industries, Inc. Connector. 2,944,241, 7–5–60, Cl. 339—91.

Long, Alton B., to J. I. Case Co. Bulldozer blade mounting. 2,943,407, 7–5–60, Cl. 37—144.

Longines-Wittnauer Watch Co., Inc.: *See*—
Oxberry, John W. 2,943,535.

Loop, James P., to Continental Steel Corp. Spool mechanism. 2,943,807, 7–5–60, Cl. 242—72.1.

Lotts, Delbert L. Catamenial device. 2,943,625, 7–5–60, Cl. 128—285.

Loughlin, Bernard D., to Hazeltine Research, Inc. Signal-translating apparatus for modulated wave signals. 2,944,105, 7–5–60, Cl. 178—5.4.

Louys, Roger, to Micafil A.-G. Werke fur Elektro-Isolation und Wickeleieinrichtungen. Capacitative voltage divider. 2,944,198, 7–5–60, Cl. 317—242.

Lovell, Jack, and W. Hamilton, to Cleveland Pneumatic Industries, Inc. Securing latch for hatch covers. 2,943,589, 7–5–60, Cl. 114—203.

Lovrenich, Rodger T. Apparatus for electric arc welding. 2,944,141, 7–5–60, Cl. 219—131.

Lowe, Jack M.: *See*—
Trevaskis, Henry W., and Lowe. 2,943,668.

Lowen, Stanley. Container closure and applicator. 2,943,338, 7–5–60, Cl. 15—105.

Lowery, James C.: *See*—
Daniel, Kenneth R., Farlow, Lowery, and Patton. 2,943,335.

Luis, Edward A., and M. B. Thornton, to United Aircraft Corp. Hydraulic control system for an aeronautical propeller. 2,943,686, 7–5–60, Cl. 170—135.72.

Lukens Steel Co.: *See*—
Dawson, Lester K. 2,943,387.
Ma, James L. 2,943,961.
Rote, Richard S. 2,943,388.

Lynnworth, Lawrence C.: *See*—
Lynnworth, Maurice R. and L. C. 2,944,245.

Lynnworth, Maurice R. and L. C. Program selector. 2,944,245, 7–5–60, Cl. 340—162.

Lyon, George A. Wheel cover. 2,943,887, 7–5–60, Cl. 301—37.

Lyon, George A. Wheel cover. 2,943,888, 7–5–60, Cl. 301—37.

Lyon Metal Products, Inc.: *See*—
Knuth, Harvey G. 2,943,898.

Lyons, Harold D.: *See*—
Nowlin, Gene, and Lyons. 2,944,048.

Lytle, Gene S., A. A. Wilcox, and W. R. Besimer, to Mastic Tile Corp. of America. Tile accumulating, counting, stacking and squaring machine. 2,943,539, 7–5–60, Cl. 93—93.

Lytle, William O.: *See*—
Marini, Herman R., Lytle, Saunders, and Wagner. 2,943,963.

Ma, James L., to Lukens Steel Co. Prevention of irregular scaling of ferrous metals. 2,943,961, 7–5–60, Cl. 148—14.

MacCaffrey, Rex S., Jr., to C. H. Masland and Sons. Warp knitted pile fabric having each pile end bound entirely in one wale. 2,943,470, 7–5–60, Cl. 66—191.

Machinecraft, Inc.: *See*—
Butler, Richard K. 2,943,362.
Cotchett, Louis M. 2,943,361.

Machovec, Fred J. Sharpener for rotary lawn mower blade. 2,943,423, 7–5–60, Cl. 51—34.

Macinar, Inc.: *See*—
Caston, Paul S. 2,943,898.

Mack, Richard G.: *See*—
Hook, John T., and Mack. 2,943,672.

Mack, Richard G. Back pack and harness for carrying compressed gas cylinders. 2,943,775, 7–5–60, Cl. 224—5.

Mackay Radio and Telegraph Co.: *See*—
Royden, George T., and Butterworth. 2,944,110.

MacLaren, Donald D., and W. G. May, to Esso Research and Engineering Co. Fluid hydroforming process and apparatus. 2,943,997, 7–5–60, Cl. 208—64.

MacMaster, Harry D., H. E. Bauer, and S. A. Guthrie, to General Grinding Wheel Corp. Method of making abrasive articles. 2,943,357, 7–5–60, Cl. 18—55.

Madden, James H.: *See*—
Robinson, Gilbert G., and Madden. 2,944,221.

Mami, Giulio, R. Ettorre, and E. Testa, to Lepetit S.p.A. Triadiazoles. 2,943,980, 7–5–60, Cl. 167—65.

Magnani, Arthur: *See*—
Julian, Percy L., and Magnani. 2,944,052.

Maguire, Paul R.: *See*—
Koski, William A., and Maguire. 2,943,859.

Maiersnofer, Karl M., to G-M Laboratories, Inc. Slide viewer. 2,943,400, 7–5–60, Cl. 40—63.

Maillard, Gabriel: *See*—
Joullie, Maurice, Laurre, Maillard, and Muller. 2,944,065.

Malek, Jack H.: *See*—
Malek, Morris S. 2,943,565.

Malek, Morris S., deceased; J. H. Malek, administrator, to himself. Silk screen printing devices and method of manufacturing same. 2,943,565, 7–5–60, Cl. 101—127.1.

Mallinckrodt, George E., to Elliot Enterprises, Inc. Internally powered compressor. 2,943,785, 7–5–60, Cl. 230—139.

Malling, Leonard R., D. L. Mansir, F. A. Nelson, and M. E. Packard, to Varian Associates. Gyromagnetic resonance apparatus. 2,944,212, 7–5–60, Cl. 324—5.

Mallory, P. R., & Co., Inc.: *See*—
Peck, Gordon V. 2,944,196.

Manke, Arthur G., and H. A. Bazydlo, to General Electric Co. Intermodulation suppression system. 2,944,222, 7–5–60, Cl. 330—128.

Manning, John A. Concentrating table. 2,943,736, 7–5–60, Cl. 209—441.

Mansir, Dolan L.: *See*—
Malling, Leonard R., Mansir, Nelson, and Packard. 2,944,212.

Manzari, Giovanni: *See*—
Berardi, Vincenzo, and Manzari. 2,943,919.

Marconi's Wireless Telegraph Co. Ltd.: *See*—
Starks-Field, Alfred B., and Patterson. 2,944,227.

Marini, Herman R., W. O. Lytle, A. E. Saunders, and W. E. Wagner, to Pittsburgh Plate Glass Co. Treating glass sheets. 2,943,963, 7–5–60, Cl. 154—2.73.

Markley, William F., H. A. Brasselbout, and R. L. Smiri, to Borg-Warner Corp. Two-speed drive. 2,943,517, 7–5–60, Cl. 74—750.

Marmo, Anthony B., and V. D. Thurston, to Westinghouse Electric Corp. Dishwashing apparatus. 2,943,633, 7–5–60, Cl. 134—174.

Marone, Joseph N., to Curtiss-Wright Corp. Turbine cooling cap structure. 2,943,840, 7–5–60, Cl. 253—39.15.

Martin Co., The: *See*—
Gorsuch, John T. 2,943,435.

Martin, Donald J., to St. Joe Machines, Inc. Antenna tuning device for automobile radios. 2,944,257, 7–5–60, Cl. 343—749.

Martin, George E.: *See*—
Pannier, Ralph A., and Martin. 2,943,561.

Martin, Marian S. Firearm supported camera mount. 2,943,547, 7–5–60, Cl. 95—12.

Masbach, Jean: *See*—
Driscoll, Anthony F. 2,943,771.

Masland, C. H., and Sons: *See*—
MacCaffray, Rex S., Jr. 2,943,470.

Mason, Ralph B., to Esso Research and Engineering Co. Selective adsorbent char for separation of straight chain from non-straight chain hydrocarbons. 2,944,031, 7–5–60, Cl. 252—421.

Masonite Corp.: *See*—
Elliott, Jarrell N. 2,943,466.

Mastic Tile Corp. of America: *See*—
Lytle, Gene S., Wilcox, and Besimer. 2,943,539.

Matare, Herbert F., to Sylvania Electric Products Inc. Semiconductor oscillator. 2,944,167, 7–5–60, Cl. 307—88.5.

Matthews, Russell B., to Baso Inc. Temperature control apparatus. 2,943,843, 7–5–60, Cl. 257—286.

Mattox, William J.: *See*—
Kimberlin, Charles N., Jr., and Mattox. 2,944,001.

Maxant Button and Supply Co.: *See*—
Decker, William H., Rieck, and Bennett. 2,943,520.

May, Paul D.: *See*—
Wadsworth, Francis T., and May. 2,943,977.

May, Walter G.: *See*—
MacLaren, Donald D., and May. 2,943,997.

Mayer, Edward F., to Horizons Inc. Television pickup tube. 2,944,155, 7–5–60, Cl. 250—213.

Maynard, Charles A., to Indiana General Corp. Magnetic filter. 2,943,739, 7–5–60, Cl. 210—223.

McAuslan, James H. L., and W. Nock, to Imperial Chemical Industries Ltd. Shaft-position determining apparatus. 2,944,157, 7–5–60, Cl. 250—233.

McBain, John K., to W. C. Ritchie & Co. Method of making a spirally wound container. 2,943,540, 7–5–60, Cl. 93—94.

McCain, William D., Jr., to Esso Research and Engineering Co. Chemicals coking quenching system. 2,943,994, 7–5–60, Cl. 208—48.

McCombie, Frederick W., to Megator Pumps and Compressors Ltd. Pumps of the air displacement type. 2,943,578, 7–5–60, Cl. 103—242.

McCoy, Thomas A., to Canada Machine Works. Feed control mechanism for article conveyors. 2,943,724, 7–5–60, Cl. 198—34.

McCulloch, William J. G., and L. B. Turner, to Esso Research and Engineering Co. Polyisobutylene compositions prepared with a condensation product of cyclohexanone with methyl cyclohexanone. 2,944,043, 7–5–60, Cl. 260—45.5.

McElroy, Albert D., to Callery Chemical Co. Preparation of boron trichloride. 2,943,919, 7–5–60, Cl. 23—205.

McGraw-Edison Co.: *See*—
Johnson, John B., and Williams. 2,944,152.

McGregor, Ralph, to General Motors Corp. Refrigerating apparatus. 2,943,782, 7–5–60, Cl. 230—20.

McIlvaine, Robert L., and A. G. Granath, to Herbert Simpson Corp. Multiple stage mixing apparatus. 2,943,801, 7–5–60, Cl. 241—124.

McMechen, William F., ½ to H. J. Jacobi. Convertible bridge and poker table tops. 2,943,902, 7–5–60, Cl. 312—285.

McMichael, Robert G.: *See*—
Strobel, Charles K., McMichael, and Kimmell. 2,943,488.

McNally, John M., to Colt's Patent Fire Arms Mfg. Co., Inc. Trigger operating means for a pistol. 2,943,412, 7–5–60, Cl. 42—69.

McNamara, Thomas V.: *See*—
Perkins, Charles M., and McNamara. 2,943,502.

McNamara, Thomas V., and C. M. Perkins, to Fuller Mfg. Co. Change gear system. 2,943,719, 7–5–60, Cl. 192—3.5.

McWeeney, Robert J.: *See*—
Willis, Clifford E., McWeeney, and Nichols. 2,943,606.

Mead Corp., The: *See*—
Robinson, James V., and Shaffer. 2,943,954.

Mechanical Fin Rosetter Co., Ltd.: *See*—
Scherninger, Bruno. 2,943,857.

Meeker, William H., to Hickok Mfg. Co., Inc. Belt buckle assembly. 2,943,332, 7–5–60, Cl. 3—321.

Megator Pumps and Compressors Ltd.: *See*—
McCombie, Frederick W. 2,943,578.

Megert, Karl A., Jr., and J. V. Lisa, ¼ to W. Coffee. Outboard motor. 2,943,593, 7–5–60, Cl. 115—18.

Meisinger, Elmer H., and V. J. Merlo, to Dixie Products, Inc. Toggle linkage. 2,943,497, 7–5–60, Cl. 74—106.

Meister, Albert A., to Bagcraft Corp. of America. Paper slipper. 2,943,403, 7–5–60, Cl. 36—9.

Melter, Florence G.: *See*—
Elmerman, Gustave F. 2,943,856.

Melton, Donald F., to United States of America, Navy. Air sampling device. 2,943,490, 7–5–60, Cl. 73—421.5.

Menzimer, Lisle W.: *See*—
Allen, Edwin L. 2,943,879.

Merck & Co., Inc.: *See*—
Kollenitsch, Janos, Tull, and Weinstock. 2,944,070.
Pessolano, Arsenio A., and Clark. 2,944,071.
Sarett, Lewis H. 2,943,978.

Merlo, Vincent J.: *See*—
Meisinger, Elmer H., and Merlo. 2,943,497.

Merry, Albert B., and P. F. Hastings. Reversible earth working tiller. 2,943,687, 7–5–60, Cl. 172—125.

Mertes, Thomas S., to Sun Oil Co. Two stage heavy oil coking process. 2,943,995, 7–5–60, Cl. 208—53.

Mertzweiller, Joseph K.: *See*—
Nommensen, Erwin W., Hunter, Mertzweiller, and Delaune. 2,944,087.

Messner, Arthur E.: *See*—
Hudson, Boyd E., Jr., and Messner. 2,943,702.

Metivier, Jean, to Societe des Usines Chimiques Rhone-Poulenc. Phorphorus esters. 2,943,974, 7–5–60, Cl. 167—22.

Metivier, Jean, to Societe des Usines Chimiques Rhone-Poulenc. New Phosphoric esters. 2,943,975, 7–5–60, Cl. 167—22.

Metraller, William J., to Esso Research and Engineering Co. Solids system for transfer line coking of residua. 2,944,007, 7–5–60, Cl. 208—127.

Micafil A.-G. Werke fur Elektro-Isolation und Wickeleinrichtungen: *See*—
Louys, Roger. 2,944,198.

Michonski, Edward J.: *See*—
Albright, Robert B., Michonski, and Richardson. 2,944,119.

Middendorf, William H., to The Wadsworth Electric Mfg. Co., Inc. Counter-directionally releasable circuit breaker. 2,944,128, 7–5–60, Cl. 200—116.

Middler, Alexander G., to Ford Motor Co. Valve gear. 2,943,612, 7–5–60, Cl. 123—90.

Miller, Alfred L.: *See*—
Baldwin, Francis P., Miller, and Robison. 2,943,664.

Miller, Alfred L.: *See*—
Hunter, Edward A., Segura, Small, and Miller. 2,944,038.

Miller, Gladys D.: *See*—
Harkenrider, Robert J., Misell, and Berch. 2,943,378.

Miller, Harry J., to L. M. Williams. Method and apparatus for removing valve lifter units from internal combustion engines. 2,943,385, 7–5–60, Cl. 29—213.

Miller, John E., to United States Steel Corp. Packing for cylinder linners. 2,943,895, 7–5–60, Cl. 309—8.

Millipore Filter Corp.: *See*—
Cotton, Richard A. 2,944,017.
Kenyon, Walter W. 2,944,134.

Mine Safety Appliances Co.: *See*—
Bub, Robert A. 2,943,700.
Lewis, Howard B. 2,943,454.

Minneapolis-Honeywell Regulator Co.: *See*—
Anderson, John E. 2,944,203.
Berggren, Lloyd E., Schneider, and Sorensen. 2,943,448.
Carlson, William L., Jr. 2,944,127.
Hudson, Kenneth C. 2,944,199.
Mobarry, John W. 2,944,195.
Newbold, William F. 2,944,218.
Williams, Richard E. 2,944,193.

Minnesota Mining & Mfg. Co.: *See*—
Johnson, Wayne B. 2,944,107.
Simon, John G. 2,943,967.
Wear, Robert L. 2,944,035.

Misek, Victor A., to Sanders Associates, Inc. Electric device. 2,944,192, 7–5–60, Cl. 315—196.

Mitchell, John D., to Harrington Mfg. Co., Inc. Chain protector for peanut picking machine. 2,943,630, 7–5–60, Cl. 130—30.

Mittag, Fritz, and H. Ringhandt, to International Standard Electric Corp. Data sensing arrangement. 2,943,814, 7–5–60, Cl. 235—16.

Mittman, David: *See*—
Knapp, Peter M., and Mittman. 2,944,170.

Misell, Louis R.: *See*—
Harkenrider, Robert J., Misell, and Berch. 2,943,378.

Mobarry, John W., to Minneapolis-Honeywell Regulator Co. Electromagnetic actuator. 2,944,195, 7–5–60, Cl. 317—184.

Modern Aids, Inc.: *See*—
Phillips, Sam J., and Oestreicher. 2,943,621.

Moen, Alfred M. Pressure balanced valve structure. 2,943,792, 7–5–60, Cl. 236—12.

Moloney, Raymond T.: *See*—
Nicolaus, Frank G. 2,943,512.

Monier, Theodore L. Paint brush scraper. 2,943,761, 7–5–60, Cl. 220—90.

Monsanto Chemical Co.: *See*—
Baer, Massimo. 2,944,044.
Edwards, James W. 2,943,915.

Moore, Thomas M., and J. B. Corns, to Standard Oil Co. Start-up of platinum catalyst hydroformers. 2,943,999, 7–5–60, Cl. 208—85.

Morgan, Carrel B., to Specialties Development Co. Quick acting valve operating mechanism. 2,943,706, 7–5–60, Cl. 185—40.

Morgan, George H. Insect-proof enclosures. 2,943,634, 7–5–60, Cl. 135—1.

Morgan, William W., to Atomic Energy of Canada Ltd. Processing of nitrate solutions containing thorium and uranium. 2,943,923, 7–5–60, Cl. 23—312.

Morgenthaler, Frederick W.: *See*—
Mullins, William D., Jr., and Morgenthaler. 2,943,823.

Morkoski, James, A. G. Evans, and E. A. Hardee, to International Harvester Co. Latch means for two-way plow. 2,943,689, 7–5–60, Cl. 172—227.

Moro-Lin, Joseph J. Constant portion liquid dispenser. 2,943,767, 7–5–60, Cl. 222—207.

Morris, Earl B. Metal mending sleeve with ratchet strap. 2,943,876, 7–5–60, Cl. 287—118.

Morway, Arnold J., and W. E. Waddey, to Esso Research and Engineering Co. Lubricants containing fatty acid esters of saccharides. 2,944,024, 7–5–60, Cl. 252—40.5.

Moseley, John, to Compodex Co. Ltd. Flexible hose. 2,943,644, 7–5–60, Cl. 138—56.

Moseley, John W. Gas fired tobacco curers. 2,943,850, 7–5–60, Cl. 263—19.

Moser, Erwin, to Aluminum-Industrie-Aktien-Gesellschaft. Method of recovering fluorine from waste gases. 2,943,914, 7–5–60, Cl. 23—88.

Motorola, Inc.: *See*—
Taylor, Douglas W. 2,944,174.
Taylor, Douglas W. 2,944,175.

Muehter, Manfred W., to American District Telegraph Co. Intruder alarm system. 2,944,252, 7–5–60, Cl. 340—270.

Muller, Fredrik A.: *See*—
Grattidge, Walter, and Muller. 2,943,937.

Muller, Pierre: *See*—
Jouille, Maurice, Laurre, Maillard, and Muller. 2,944,055.

Mullins, William D., Jr., and F. W. Morgenthaler, to North American Aviation, Inc. Trim correction system for high speed vehicles. 2,943,823, 7–5–60, Cl. 244—77.

Mumford, George V., and O. B. Sherman, to Owens-Illinois Glass Co. Apparatus for forming hollow plastic articles. 2,943,348, 7–5–60, Cl. 18—5.

Murahashi, Shunsuke, and S. Horiie, to Sumitomo Chemical Co., Ltd. Method of producing quinazoline derivatives. 2,944,056, 7–5–60, Cl. 260—251.

Murarasheed, Lateef. Hot metal valve for ladles and the like. 2,943,370, 7–5–60, Cl. 22—84.

Murray, Peter B., to Sun Oil Co. Sweetening hydrocarbons with dried chromium oxide. 2,944,011, 7–5–60, Cl. 208—189.

Musser, C Walton, to United Shoe Machinery Corp. Adjustable spline. 2,943,465, 7–5–60, Cl. 64—24.

Musser, C Walton, to United Shoe Machinery Corp. Means for producing motion through sealed wall. 2,943,495, 7–5–60, Cl. 74—17.8.

Musser, C Walton, to United Shoe Machinery Corp. Strain wave gearing-linear motion. 2,943,506, 7–5–60, Cl. 74—424.8.

Musser, C Walton, to United Shoe Machinery Corp. Dual strain wave gearing. 2,943,513, 7–5–60, Cl. 74—640.

Myers, Richard A., to Douglas Aircraft Co., Inc. Stretch press jaw. 2,943,862, 7–5–60, Cl. 279—4.

Nadeau, Gale F., and W. R. White, to Eastman Kodak Co. Surface conditioning and subbing of oriented linear polyester photographic film support. 2,943,937, 7–5–60, Cl. 96—87.

Nagel, Robert L., to Elastic Stop Nut Corp. of America. Optical indicator for liquid level. 2,943,550, 7–5–60, Cl. 88—1.

National Bank of Detroit: *See*—
Sahlin, Henry. 2,943,748.

National Broach & Machine Co.: *See*—
Anthony, Russel W., and Rickard. 2,943,363.

National Cash Register Co., The: *See*—
Hearsum, Desmond E., and Guldea. 2,943,788.
Trimble, Cebern B. 2,943,853.

National Distillers and Chemical Corp.: *See*—
Grenci, Dominic A. 2,943,676.

National Mfg. Co.: *See*—
Duhm, Frank W. 2,943,881.

National Research Development Corp.: *See*—
Ross, Walter C. J., Everett, and Roberts. 2,944,079.

National Sugar Refining Co., The: *See*—
Baird, Ronald J. 2,944,034.

Naylor, Paul H. Illuminated pocket level. 2,944,144, 7–5–60, Cl. 240—8.44.

Neagle, Lee E., Jr. Teletypewriter remote cutoff system. 2,944,104, 7–5–60, Cl. 178—4.1.

Neilson Chemical Co.: *See*—
Neilson, Howard R. 2,943,797.

Neilson, Howard R., deceased, S. W. Neilson, executrix, ½ to Neilson Chemical Co. Apparatus for treating surfaces. 2,943,797, 7–5–60, Cl. 239—305.

Neilson, Shirley W.: *See*—
Neilson, Howard R. 2,943,797.

Nelson, Forrest A.: *See*—
Malling, Leonard R., Mansir, Nelson, and Packard. 2,944,212.

Nelson, Kurt E. Leg brace orthopedic appliance. 2,943,622, 7–5–60, Cl. 128—80.

Nelting, Heinz, to North American Philips Co. Inc. Arrangement for checking the zero constancy of Wheatstone impedance measuring bridges. 2,943,480, 7–5–60, Cl. 73—58.5.

Nerwin, Hubert, to Graflex, Inc. Photographic camera. 2,943,549, 7–5–60, Cl. 95—44.

Newbold, William F., to Minneapolis-Honeywell Regulator Co. Electrical signal conversion apparatus. 2,944,218, 7–5–60, Cl. 328—26.

Newman, Stanley H., to Schick Inc. Cigarette lighter. 2,943,471, 7–5–60, Cl. 67—7.1.

Newton, Walter H., to General Electric Co. Wire coating apparatus. 2,943,588, 7–5–60, Cl. 118—67.

Neyhouse, George A.: *See*—
Shewmon, Ralph K., and Neyhouse. 2,944,126.

Nichols, Charles H., Jr.: *See*—
Willis, Clifford E., McWeeney, and Nichols. 2,943,606.

Nicholaus, Frank G., to E. T. Moloney, deceased; American National Bank and Trust Co. of Chicago, executor. Switch ratchet structure. 2,943,512, 7–5–60, Cl. 74—575.

Nicotra, Joseph P.: *See*—
Pedersen, Dane H., and Nicotra. 2,943,685.

Nixon, Alan C.: *See*—
Thorpe, Roy E., and Nixon. 2,943,986.

Nixon, William G., to Universal Oil Products Co. Catalyst manufacturing. 2,944,032, 7–5–60, Cl. 252—441.

Noble, John. Valve and magnetic actuating tool. 2,943,837, 7–5–60, Cl. 251—110.

Nock, William: *See*—
McAuslan, James H. L., and Nock. 2,944,157.

Nommensen, Erwin W., E. A. Hunter, J. K. Mertzweiller, and E. T. Delaune, to Esso Research and Engineering Co. Alcohol hydrofinishing. 2,944,067, 7–5–60, Cl. 260—6.2.

Nordin, Obert L. Couplings and safety devices therefor. 2,943,869, 7–5–60, Cl. 285—90.

Norlin, Francis E., to Borg-Warner Corp. Pump. 2,943,574, 7–5–60, Cl. 103—37.

Norman, George H. C., to The International Nickel Co., Inc. Process for roasting sulfides. 2,943,929, 7–5–60, Cl. 75—9.

Norrie, Robert C., to Pacific Car and Foundry Co. Latching mechanism for tilting cab vehicle. 2,943,696, 7–5–60, Cl. 180—89.

North American Aviation, Inc.: *See*—
Brown, Kenneth. 2,943,460.
Campbell, Mark E. 2,943,824.
Mullins, William D., Jr., and Morgenthaler. 2,943,823.
Van Driest, Edward R. 2,943,828.
Whitney, Theodore R., and Fairbanks. 2,944,161.

North American Machine Co.: *See*—
Gray, Abe L., and Duchnowski. 2,943,523.

North American Philips Co., Inc.: *See*—
Beijers, Hugo G., Knol, and Pannenborg. 2,944,232.
Boekhorst, Antonius, and Heijligers. 2,944,166.
Brown, Walter. 2,944,158.
De Miranda, Heine A. R. 2,944,166.
De Roode, Frans C. 2,944,234.
De Vries, Gerrit. 2,944,229.
Jonkers, Cornelius O., and Kohler. 2,943,483.
Nelting, Heinz. 2,943,480.
Teilegen, Bernardus D. H. 2,944,220.
Van Der Kerk, Gerrit J. M. 2,943,972.

North Electric Co.: *See*—
Breese, Lemuel R. 2,944,247.

Norton, James A., to General Motors Corp. Filter and method for purifying oil. 2,943,787, 7–5–60, Cl. 210—75.

Notifer Corp.: *See*—
Tetherow, Claude L. 2,944,251.

Novi, Andrea L.: *See*—
Ezi, Mario, and Novi. 2,943,536.

Nowlin, Gene, and E. D. Lyons, to Phillips Petroleum Co. Process and catalyst for production of olefin polymers. 2,944,048, 7–5–60, Cl. 260—94.9.

Nye, Benjamin E., and I. D. Smith, to Cleveland Pneumatic Industries, Inc. Landing gear shock absorber system. 2,943,826, 7–5–60, Cl. 244—104.

O'Connor, Philip K.: *See*—
Hessler, John O., O'Connor, and Stomiany. 2,943,892.

Odell, Alexander D., and H. F. Hartley, to International Standard Electric Corp. Electrical circuits using two-electrode devices. 2,944,164, 7–5–60, Cl. 307—88.5.

Oestreicher, Warren J.: *See*—
Phillips, Sam J., and Oestreicher. 2,943,621.

Olin Mathieson Chemical Corp.: *See*—
Audrieth, Ludwig F., and Ryker. 2,943,927.
Seavey, Frederick R. 2,943,810.

Olive, George A., to Radio Corp. of America. Single sideband transmitter phase and amplitude modulation components amplified over separate paths. 2,944,223, 7–5–60, Cl. 332—45.

Olivson, John V., to The Aerotec Industries, Inc. Pressure actuated electric switch. 2,944,125, 7–5–60, Cl. 200—83.

Olson, Frederick P., and J. J. Cairns, to The B. F. Goodrich Co. Arch support. 2,943,406, 7–5–60, Cl. 36—71.

Olson, Walter J.: *See*—
Frania, William S., and Olson. 2,943,553.

Opitz, Wolfgang, H. Ipruch, and K. H. Steigerwald, to Carl Zeiss. Apparatus for working materials by means of a beam of charged particles. 2,944,172, 7–5–60, Cl. 313—7.

Optische Werke C. A. Steinheil Sohn G.m.b.H.: *See*—
Schiks, Albert. 2,943,552.

Orlon, George, E. Ray, B. E. Cooper, and K. T. F. Langdon, to British Messier Ltd. Aircraft undercarriage. 2,943,019, 7–5–60, Cl. 244—50.

Orr, Charles F., to Spray Products Corp. Spray applicator system for injecting starting fluid into diesel and gasoline engines. 2,943,760, 7–5–60, Cl. 222—180.

Osgood, Richard E. High response flow-meter. 2,943,488, 7–5–60, Cl. 73—228.

Ost, Clarence S. Light integrator. 2,944,190, 7–5–60, Cl. 315—156.

Otis Elevator Co.: *See*—
Prince, Arthur E. 2,944,244.

Outt, John R., to General Electric Co. Meteor particle impact sensing apparatus. 2,944,250, 7–5–60, Cl. 340—201.

Owens-Illinois Glass Co.: *See*—
Adams, Elmer L., and Gamsire. 2,943,349.
Mumford, George V., and Sherman. 2,943,348.
Kink, Harold F. 2,943,858.

Oxberry, John W., ½ to A. K. Livingston and ½ to Longines-Wittnauer Watch Co., Inc. Combined camera and projector. 2,943,535, 7–5–60, Cl. 88—17.

Pace, Inc.: *See*—
Hallenbeck, Roy R., Jr. 2,944,180.

Pacific Car and Foundry Co.: *See*—
Norrie, Robert C. 2,943,698.

Packard, Martin E.: *See*—
Malling, Leonard R., Mansir, Nelson, and Packard. 2,944,212.

Painter, Delbert J., to General Electric Co. Unbalance sensing arrangement for machines having a centrifugal liquid extraction step. 2,943,472, 7–5–60, Cl. 68—12.

Palmer, John S., B. J. Shager, and J. N. Segura, to International Harvester Co. Implement control means. 2,943,584, 7–5–60, Cl. 111—67.

Pan American Petroleum Corp.: *See*—
Scott, Platho P., Jr., and Fischer. 2,943,679.
Scott, Platho P., Jr., and Fischer. 2,943,680.

Pannenborg, Anton E.: *See*—
Beijers, Hugo G., Knol, and Pannenborg. 2,944,232.

Pannier Corp., The: *See*—
Pannier, Ralph A. 2,943,567.
Pannier, Ralph A., and Martin. 2,943,561.

Pannier, Ralph A., and G. E. Martin, to The Pannier Corp. Marker for cylindrical articles. 2,943,561, 7–5–60, Cl. 101—40.

Pannier, Ralph A., to The Pannier Corp. Flexible snap-on elastomer die. 2,943,567, 7–5–60, Cl. 101—377.

Panyi, Levente: *See*—
Hrabovsky, Oszkar, and Panyi. 2,943,890.

Panza, Eugene. Electric dry shaver having rotary operating blade means. 2,943,399, 7–5–60, Cl. 30—43.

Parigini, Harry T. Disc computer. 2,943,789, 7–5–60, Cl. 235—58.

Parker, David R.: *See*—
Hawtin, Selwyn G., Parker, and Downing. 2,943,948.

Parker, Eric, to The Decca Record Co. Ltd. Radio direction indicating systems. 2,944,255, 7–5–60, Cl. 343—106.

Parks, Herman D., to Time, Inc. Combined sinusoidal drive mechanism. 2,943,805, 7–5–60, Cl. 74—394.

Parks, Robert F. Filling control device. 2,943,649, 7–5–60, Cl. 139—217.

Pateracki, John A., Jr.: *See*—
Downs, William J. 2,943,408.

Paton, Hamilton N. K. Unloading door mat. 2,943,891, 7–5–60, Cl. 302—29.

Patterson, Herman W. Tying and fastening device. 2,943,371, 7–5–60, Cl. 24—16.

Patterson, Thomas G.: *See*—
Starks-Field, Alfred B., and Patterson. 2,944,227.

Patton, James O., Jr.: *See*—
Daniel, Kenneth R., Farlow, Lowery, and Patton. 2,943,335.

Patton, John T., Jr., to Wyandotte Chemicals Corp. Binary emulsifiers. 2,944,080, 7–5–60, Cl. 252—358.

Pauls, Gerhard, to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques. Process for manufacturing dense, extra pure silicon. 2,943,918, 7–5–60, Cl. 23—223.5.

Paulsen, Henry A., to Brown & Bigelow. Depository calender. 2,943,778, 7–5–60, Cl. 229—8.5.

Paulsen, Henry C., to Esso Research and Engineering Co. Removal of nitrogen compounds from heating oil. 2,944,063, 7–5–60, Cl. 260—313.

Pavlan, Henry C., to United States of America, Navy. Stabilizing device. 2,943,568, 7–5–60, Cl. 102—7.

Payne, Robert E., and A. C. Lavanchy, to The Sharples Corp. Air directing and particle removing structure for particle classifiers. 2,943,734, 7–5–60, Cl. 209—144.

Payne, Robert E., A. C. Lavanchy, and T. D. Sharples, to The Sharples Corp. Particle classifiers. 2,943,735, 7–5–60, Cl. 209—144.

Pearson, Tillmon H.: *See*—
Blitzer, Sidney M., and Pearson. 2,944,084.

Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
Pauls, Gerhard. 2,943,918.

Peck, Gordon V., to P. R. Mallory & Co., Inc. Insulating disc for electrolytic capacitors. 2,944,196, 7–5–60, Cl. 317—230.

Pedersen, Dane H., and J. P. Nicotra, to The Porter-Cable Machine Co. Reversible router guide for straight and circular work. 2,943,655, 7–5–60, Cl. 144—136.

Pegard, Pierre, to Ateliers G.S.P. Gear cutting machine. 2,943,538, 7–5–60, Cl. 90—4.

Penney, Ralph E.: *See*—
Slater, Frank W. 2,943,858.

Peras, Lucien, to Regie Nationale des Usines Renault. Semi-automatic machine for the centrifugal casting of cylinder liners. 2,943,368, 7–5–60, Cl. 22—64.

Perkins, Charles M.: *See*—
McNamara, Thomas V., and Perkins. 2,943,719.

Perkins, Charles M., and T. V. McNamara, to Fuller Mfg. Co. Apparatus for the synchronizing and shifting of rotating shiftable toothed elements. 2,943,502, 7–5–60, Cl. 74—339.

Permanent Filter Corp.: *See*—
Price, Harold A. 2,943,594.

Perrot, Jean J.: *See*—
Henquet, André J., and Perrot. 2,944,115.

Pessina, Raffaele: *See*—
Justoni, Romeo, and Pessina. 2,944,064.

Pessolano, Arsenio A., and R. L. Clark, to Merck & Co., Inc. Acyl hydrazines. 2,944,071, 7–5–60, Cl. 260—404.5.

Peters, Melville F. High temperature coil structure. 2,944,235, 7–5–60, Cl. 336—199.

Petersen, John S.: *See*—
Blecker, Raymond H., Petersen, and Unwin. 2,943,333.

Peterson, Carl O., and N. J. Spindler, to Watson Mfg. Co., Inc. Combination of covers for open top receptacles. 2,943,903, 7–5–60, Cl. 312—311.

Petersson, Henry F., to Bostitch, Inc. Staple blank. 2,943,436, 7–5–60, Cl. 59—77.

Petry, Robert K., to Congoleum-Nairn Inc. Decorative plastic surface covering and process therefor. 2,943,949, 7–5–60, Cl. 117—11.

Pettibone, Raymond B., to Vickers Inc. Power transmission. 2,943,575, 7–5–60, Cl. 103—42.

Pfizer, Chas., & Co., Inc.: *See*—
De Zeeuw, John R., Donovan, and Sherman. 2,943,938.

Pfützner, Karl: *See*—
Sorg, Wilhelm, and Pfützner. 2,944,100.

Phelps, Richard W., to The Black-Clawson Co. Paper machinery. 2,943,808, 7–5–60, Cl. 242—56.

Philco Corp.: *See*—
Albright, Robert B., Michonski, and Richardson. 2,944,119.
Harris, Joseph E., Jr., and Becker. 2,944,189.

Phillips, Adrian, and L. Robbins to Baldwin-Lima-Hamilton Corp. Stencilling machine. 2,943,562, 7–5–60, Cl. 101—42.

Phillips Petroleum Co.: *See*—
Anderson, Herbert R., Jr. 2,944,042.
Archer, Bradford L. 2,943,973.
Canterino, Peter J. 2,943,988.
Edmonds, James T., Jr. 2,944,049.
Goodhue, Lyle D., Cantrel, and Schnitzer. 2,943,976.
Guth, Eugene D. 2,943,928.
Nowlin, Gene, and Lyons. 2,944,048.
Pollock, Lyle W., and Cottle. 2,944,040.

Phillips Petroleum Co.: *See*—
Reed, Edwin E., and La Rue. 2,943,636.
Scott, Cleveland R. 2,943,439.

Phillips, Sam J., and W. J. Oestreicher, to Modern Aids, Inc. Vibrating pillow. 2,943,621, 7–5–60, Cl. 128—33.

Picanol, Jaime. Heddle frame return motion device for broad weaving looms. 2,943,645, 7–5–60, Cl. 139—89.

Picanol, Jaime. Tongue for shuttle boxes in weaving looms. 2,943,648, 7–5–60, Cl. 139—185.

Pickwick Co.: *See*—
Corey, Flournoy, Swords, Erger, and Pitts. 2,943,863.

Pierschel, Gerhard, to VEB Kamera-und Kinowerke Dresden. Film projector device. 2,943,534, 7–5–60, Cl. 88—17.

Pillsbury Co., The: *See*—
Brabender, Carl W., and Coyne. 2,943,478.
Brabender, Carl W., and Coyne. 2,943,479.

Pinter, George, and A. F. Chereih, to General Electric Co. Flow modulating device. 2,943,643, 7–5–60, Cl. 138—46.

Piper, William W., to General Electric Co. Electroluminescent cell and method of making the same. 2,944,177, 7–5–60, Cl. 313—108.

Pitts, Robert D.: *See*—
Corey, Flournoy, Swords, Erger, and Pitts. 2,943,863.

Pittsburgh Plate Glass Co.: *See*—
Fitzgerald, Dean B. 2,943,902.
Marini, Herman R., Lytle, Saunders, and Wagner. 2,943,963.

Plasmadyne Corp.: *See*—
Giannini, Gabriel M., and Blackman. 2,944,140.

Platt, Donald D., to Farmers Cooperative Exchange. Bulk feed bin. 2,943,752, 7–5–60, Cl. 214—17.

Plessey Co. Ltd. The: *See*—
Herbert, John M. 2,944,204.

Pleterski, Friederich. Locking device for doors. 2,943,877, 7–5–60, Cl. 292—23.

Plummer, Harland C., to Woodward Governor Co. Power actuated pressure measuring and indicating device. 2,943,607, 7–5–60, Cl. 121—41.

Poeschl, Anneiore: *See*—
Poeschl, Ernest and A. 2,943,733.

Poeschl, Ernest and A. Shipping container for mirrors and the like. 2,943,733, 7–5–60, Cl. 206—62.

Polak & Schwarz International N.V.: *See*—
Heeringa, Lambertus G., and Beets. 2,944,077.

Pollock, Gordon J., to The E. F. Hauserman Co. Movable panel assembly. 2,943,718, 7–5–60, Cl. 189—34.

Pollock, Lyle W., and J. E. Cottle, to Phillips Petroleum Co. Method of preparing high solids latices of film-forming polymers and high density ethylene polymers. 2,944,040, 7–5–60, Cl. 260—29.7.

Pollock, Mark W.: *See*—
Hecker, Arthur C., Pollock, and Rabinovici. 2,944,041.

Polymer Corp. Ltd.: *See*—
Kupa, Peter C., and Finigan. 2,944,095.

Pontecorvo, Paul J., C. N. Gillespie, and D. W. Smith, to Raytheon Co. Telephony. 2,944,112, 7–5–60, Cl. 179—15.5.

Porter-Cable Machine Co., The: *See*—
Emmons, Arthur N. 2,943,654.
Pedersen, Dane H., and Nicotra. 2,943,655.

Potter, David M. Mass flow meter using tandem rotors. 2,943,487, 7–5–60, Cl. 73—231.

Price, Harold A., to Permanent Filter Corp. Cell for testing hydrocarbon fuel. 2,943,594, 7–5–60, Cl. 116—114.

Prince, Arthur E., to Otis Elevator Co. Position indicator mechanism for elevators. 2,944,244, 7–5–60, Cl. 340—21.

Pritchard, Dalton H.: *See*—
Schroeder, Alfred C., and Pritchard. 2,944,106.

Products for Industry: *See*—
Johnson, Peter W. R., Hayden, Georgette, and Fuhro. 2,943,897.

Proler, Sam., to Proler Steel Corp. Scrap refining process and product. 2,943,930, 7–5–60, Cl. 75—44.

Proler Steel Corp.: *See*—
Proler, Sam. 2,943,930.

Prucha, Richard V., to General Electric Co. Flow restricting device. 2,943,038, 7–5–60, Cl. 137—498.

Puechberty, Lucien P., to Societe de Fabrication d'Instruments de mesure. Mine device with doppler effect continuous wave radar. 2,943,570, 7–5–60, Cl. 102—19.2.

Quaker Oats Co., The: *See*—
Brown, Lloyd H., and Cole. 2,943,912.

Quarzlampen Gesellschaft m.b.H.: *See*—
Gunther, Hermann. 2,944,143.

Quimby, Robert S., to Raytheon Co. High reactance transformers. 2,944,208, 7–5–60, Cl. 323—48.

Quirk, Robert W., to Hughes Aircraft Co. Rapid acceleration driving mechanisms. 2,943,852, 7–5–60, Cl. 271—2.3.

Raab, Hans: *See*—
Haubrich, Heinz, Hörnle, and Raab. 2,944,050.

Rabinovici, Iocheved: *See*—
Blecker, Arthur C., Pollock, and Rabinovici. 2,944,041.

Radio Corp. of America: *See*—
Bonaccorsi, John R., and White. 2,944,202.
Covely, Frank D., 3rd, and Haining. 2,944,253.
Houghton, William D. 2,944,108.
Keizer, Eugene O., and Sanford. 2,944,205.
Olive, George A. 2,944,228.
Redfield, George E. 2,943,661.
Schroeder, Alfred C., and Pritchard. 2,944,106.
Solomon, Allen L., and Goldsmith. 2,944,200.

Radio Heaters Ltd.: *See*—
Tibbs, Christopher E. M. 2,944,133.

Raffel, Bernard D.: *See*—
Freeman, Arnold B., Raffel, and Tripp. 2,943,968.

Ramlose, George A., to H. I. Sides, d.b.a. Sides Mfg. Co. Shopping apparatus. 2,943,707, 7–5–60, Cl. 186—1.

Ramse, Lester J. Hose holder. 2,943,833, 7–5–60, Cl. 248—49.

Randall, Pryor N.: *See*—
Birkness, Harald A., Randall, and Wright. 2,943,674.

Rapata, George M., to Illinois Tool Works. Plastic anchor member. 2,943,373, 7–5–60, Cl. 24—216.

Rapids-Standard Co., Inc., The: *See*—
Woldring, Egbert, De Graaf, and Baxter. 2,943,889.

Rasmussen, Ole-Bendt. Method of manufacturing a thin band of a high molecular substance which is axially orientated in another direction than the length direction. 2,943,350, 7–5–60, Cl. 18—47.5.

Rausch, Maurice K., and T. A. Francis, to Sinclair Refining Co. Process and composition for preparing sulfur-chlorinated cutting oils. 2,943,990, 7–5–60, Cl. 208—18.

Rausch, Maurice K., and W. B. Watson, to Sinclair Refining Co. Process for preparing improved lubricating oils by acid treating then hydrofinishing the lubricating oils. 2,944,015, 7–5–60, Cl. 208—264.

Rawlins, Robert E., to Lockheed Aircraft Corp. Frequency modulation signal generator. 2,944,226, 7–5–60, Cl. 332—19.

Rawlins, Robert E., to Lockheed Aircraft Corp. Radar aiming angle analyzer. 2,944,256, 7–5–60, Cl. 343—113.

Raybestos-Manhattan, Inc.: *See*—
Curtiss, Raymond H., and Ford. 2,943,712.

Raytheon Co.: *See*—
Pontecorvo, Paul J., Gillespie, and Smith. 2,944,112.
Quimby, Robert S. 2,944,208.

Recherches et Propagande Scientifiques (Societe a Responsabilite Limitee): *See*—
Joullie, Maurice, Laurre, Maillard, and Muller. 2,944,065.

Recold Corp.: *See*—
Wile, Daniel D., and Brainard. 2,943,457.

Redfield, George E., to Radio Corp. of America. Multi-speed phonograph record player. 2,943,663, 7–5–60, Cl. 274—9.

Reed, Edwin E., and H. E. La Rue, to Phillips Petroleum Co. Fluid handling structure. 2,943,630, 7–5–60, Cl. 137—220.

Reed, Norman H. Shoe shine kit. 2,943,344, 7–5–60, Cl. 15—258.

Reed-Lethbridge, William. Windscreen wipers. 2,943,342, 7–5–60, Cl. 15—250.19.

Reeves Instrument Corp.: *See*—
Godet, Sidney. 2,943,905.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 2,943,368.

Regnier, Gilbert L.: *See*—
Jacob, Robert M., Regnier, and Crisan. 2,944,061.

Reichert, Paul F. H., to The Toledo Industrial Rubber Co. Resilient connection. 2,943,575, 7–5–60, Cl. 287—85.

Reid, Hugh C. Variable gear units for use in motor vehicles. 2,943,518, 7–5–60, Cl. 74—751.

Reinhold, Frank W.: *See*—
Carpenter, Keith H., and Reinhold. 2,943,328.

Rejaflx Ltd.: *See*—
Simpson, Alfred W. 2,943,566.

Rentschler, Karl F., to Alfred Gauthier, G.m.b.H. Photographic shutter housing construction. 2,943,843, 7–5–60, Cl. 95—10.

Rentschler, Waldemar T., to Alfred Gauthier, G.m.b.H. Photographic intra-lens shutter. 2,943,550, 7–5–60, Cl. 95—63.

Renwick, Frederick W., Sr. Antiskid device. 2,943,662, 7–5–60, Cl. 152—208.

Replogle, Frank S. Jr., and D. A. Gordon, to United States of America, Navy. Means for modulating and detecting neutron flux. 2,944,150, 7–5–60, Cl. 250—83.1.

Research Corp.: *See*—
Sonenberg, Martin. 2,943,981.

Rusing, Albert M., and J. H. Eberly, to Sperry Rand Corp. Cutting tool. 2,943,537, 7–5–60, Cl. 90—1.4.

Reverman, George H., Jr., to Westinghouse Electric Corp. Refrigerator cabinet. 2,943,455, 7–5–60, Cl. 62—77.

Rice, Charles H., to Callery Chemical Co. Preparation of methyl borate. 2,944,076, 7–5–60, Cl. 260—462.

Rice, Theodore: *See*—
Fogle, Merald C., Goldthwait, Kwolek, and Rice. 2,944,098.

Richards, Richard K. Low-temperature digital computer component. 2,944,211, 7–5–60, Cl. 323—94.

Richardson, Francis: *See*—
Albright, Robert B., Michonski, and Richardson. 2,944,119.

Richardson, James A., to Unipak Cartons Ltd. Cartons. 2,943,762, 7–5–60, Cl. 220—105.

Richardson, James A., to Unipak Cartons Ltd. Cartons. 2,943,763, 7–5–60, Cl. 220—116.

Richardson, William S.: *See*—
Falk, Louis W., and Richardson. 2,943,504

Richfield Oil Corp.: *See*—
Arnold, Marion L. 2,943,641.

Richter, Donald L., to Kaiser Aluminum & Chemical Corp. Vehicle suspension assembly. 2,943,884, 7–5–60, Cl. 280—104.5.

Rickard, George H.: *See*—
Anthony, Russel W., and Rickard. 2,943,883.

Ricker, Eugene C., to Haloid Xerox Inc. Electrostatic developing apparatus and method. 2,943,950, 7–5–60, Cl. 117—17.5.

Rieck, Roy J.: *See*—
Decker, William H., Rieck, and Bennett. 2,943,520.

Rienks, George W. Variable spray pattern lawn sprinkler. 2,943,798, 7–5–60, Cl. 239—520.

Rigaud, Maurice, to Societe des Agrafes Francaises & d'Articles Metalliques (Societe Anonyme). Locking device. 2,943,878, 7–5–60, Cl. 292—44.

Rigrod, William W., to Bell Telephone Laboratories, Inc. Beam focusing system. 2,944,182, 7–5–60, Cl. 315—3.5.

Riley, Robert W.: *See*—
Erickson, Harold E., Riley, and Schubert. 2,943,365.

Rind, Harold, to Fairchild Engine and Airplane Corp. Air conditioning system. 2,943,450, 7–5–60, Cl. 62—217.

Ring, Roland, to Sperry-Sun Well Surveying Co. Bore hole surveying method and apparatus. 2,943,397, 7–5–60, Cl. 33—205.5.

Ringelman, John F., to United States of America, Navy. Thermocouple magnetic amplifier. 2,944,210, 7–5–60, Cl. 323—89.

Ringhandt, Horst: *See*—
Mittag, Fritz, and Ringhandt. 2,943,614.

Ritchie, W. C., & Co.: *See*—
McBain, John K. 2,943,540.

Ritterskamp, Jack H., and C. A. Weise, to Douglas Aircraft Co., Inc. Missile safety closure. 2,943,445, 7–5–60, Cl. 60—39.9.

Robbins, Leo: *See*—
Phillips, Adrian, and Robbins. 2,943,562.

Roberts, George G. Pilot's ladder and the like. 2,943,696, 7–5–60, Cl. 182—196.

Roberts, John J.: *See*—
Ross, Walter C. J., Everett, and Roberts. 2,944,079.

Robertshaw-Fulton Controls Co.: *See*—
Strobel, Charles K., McMichael, and Kimmell. 2,943,488.

Robinson, Gilbert G., and J. H. Madden. Transmitter final with series-tuned self-neutralised tank circuit. 2,944,221, 7–5–60, Cl. 330—65.

Robinson, Glen P., Jr.: *See*—
Hutchins, Samuel F., and Robinson. 2,943,358.

Robinson, James V., and I. E. Shaffer, to The Mead Corp. Casting surface for producing cast-surfaced mineral coated paper. 2,943,954, 7–5–60, Cl. 117—64.

Robinson, Preston, to Sprague Electric Co. Electrolytes. 2,944,026, 7–5–60, Cl. 252—62.2.

Robinson, Thomas L., to Automated Circuits, Inc. Printed electrical circuits and method of making the same. 2,943,956, 7–5–60, Cl. 117—212.

Robison, Samuel B.: *See*—
Baldwin, Francis P., Miller, and Robison. 2,943,664.

Rockstroh, Richard K.: *See*—
Blisard, Harold S., Smith, Rockstroh, and Guthrie. 2,943,992.

Rockwell Mfg. Co.: *See*—
Warrick, Edward C., and Brown. 2,943,681.

Rodale Mfg. Co., Inc.: *See*—
Schmier, Jacob. 2,944,243.

Rodenacker, Wolf, to Farbenfabriken Bayer Aktiengesellschaft. Polyamide melt spinning process and apparatus. 2,943,350, 7–5–60, Cl. 18—8.

Rodi & Wiesenberger Aktiengesellschaft: *See*—
Ihringer, Gerhard. 2,943,437.

Rogers, Douglas C., to International Standard Electric Corp. Electron velocity modulation apparatus. 2,944,181, 7–5–60, Cl. 315—3.5.

Rogers, Stanley; and T. M. Dannback, to General Dynamics Corp. Current loss compensating device. 2,944,207, 7–5–60, Cl. 323—44.

Rolls-Royce Ltd.: *See*—
Davies, David O. 2,943,447.
Goodall, Donald G., and Chicken. 2,943,446.

Roseff, Arthur M. Feed container-dispenser. 2,943,600, 7–5–60, Cl. 119—18.

Ross, James A., to Ling-Altec Electronics, Inc. Four pole transducer. 2,944,194, 7–5–60, Cl. 317—123.

Ross, Walter C. J., J. L. Everett, and J. J. Roberts, to National Research Development Corp. NN-di-chloroethyl-aminobutyrates and preparation thereof. 2,944,078, 7–5–60, Cl. 260—518.

Rossman, Edwin F., to General Motors Corp. Rod seal for shock absorber. 2,943,711, 7–5–60, Cl. 188—100.

Roth, Richard S., to Lukens Steel Co. Method of making corrosion resistant clad steel plate. 2,943,388, 7–5–60, Cl. 29—471.5.

Rothe, Paul G.: *See*—
Wehde, Heinz P., and Rothe. 2,944,113.

Rothmann, Harry E., to A. Kimball Co. Hand remarker. 2,943,559, 7–5–60, Cl. 101—19.

Rowe, Mark R.: *See*—
Dietrich, Howard H., Hiller, Lay, Rowe, and Zeiuloft. 2,943,441.

Roy, Robert: *See*—
Orloff, George, Roy, Cooper, and Langdon. 2,943,819.

Royden, George T., and J. W. Butterworth, to Mackay Radio and Telegraph Co. Error suppressing telegraph system. 2,944,110, 7–5–60, Cl. 178—23.

Ruben, Zorro D. Safety foot switch. 2,944,120, 7–5–60, Cl. 200—5.

Rubin, Paul S. Device for tensing, twisting, and severing wire. 2,943,650, 7–5–60, Cl. 140—119.

Ruediseli, Wilhelmus M. J., to Shell Oil Co. Preparation of component for premium grade motor gasoline. 2,944,004, 7–5–60, Cl. 208—100.

Ruediseli, Wilhelmus M. J., and M. 't Hart, to Shell Oil Co. Production of aviation gasoline. 2,944,003, 7–5–60, Cl. 208—93.

Ruff, Charles F.: *See*—
Harrington, George H., and Ruff. 2,943,484.

Rundle, George W. Toothed applicator. 2,943,602, 7–5–60, Cl. 119—156.

Russell, Francis R.: *See*—
Huntley, Allan R., and Russell. 2,944,009.

Ryan Aeronautical Co.: *See*—
Baxter, John W. 2,943,444.

Ryan, F. B., Mfg. Co.: *See*—
Ryan, Francis B. 2,943,583.

Ryan, Francis B., to F. B. Ryan Mfg. Co. Reel trailer and cable layer. 2,943,583, 7–5–60, Cl. 111—5.

Ryker, Don W.: *See*—
Audrieth, Ludwig F., and Ryker. 2,943,927.

Rylander, Paul N., and L. M. Berkowitz, to Engelhard Industries, Inc. Purification of olefins selective hydrogenation of monosubstituted 1-olefins with a ruthenium catalyst. 2,944,094, 7–5–60, Cl. 260—677.

S.p.A. "Vetrocoke": *See*—
Giammarco, Giuseppe. 2,943,910.

Saarivirta, Matti J., to American Metal Climax, Inc. Process for making wrought copper-titanium alloys. 2,943,960, 7–5–60, Cl. 148—12.7.

Sadwith, Howard M. Automatic cleaning machine. 2,943,424, 7–5–60, Cl. 51—164.

Sahlin Engineering Co., Inc.: *See*—
Sahlin, Henry. 2,943,748.

Sahlin, Henry; R. T. Sahlin and National Bank of Detroit, executors, to Sahlin Engineering Co., Inc. Loading and unloading apparatus. 2,943,748, 7–5–60, Cl. 214—1.

Sahlin, Richard T.: *See*—
Sahlin, Henry. 2,943,748.

St. Clair, Theodore A., to P. D. Wurzburger. Tube coupling with deformable pipe gripping cutting means. 2,943,871, 7–5–60, Cl. 285—342.

St. Joe Machines, Inc.: *See*—
Martin, Donald J. 2,944,257.

St. Regis Paper Co.: *See*—
Goodrich, John J. 2,943,781.

Salak, Michael, C. R. Keating, Jr., and R. L. Wilson, to American Brake Shoe Co. Brake shoes. 2,943,713, 7–5–60, Cl. 188—251.

Salmon, Reginald D., and L. T. Tedham, to Creed & Co. Ltd. Platen arrangements for teleprinters and the like. 2,943,721, 7–5–60, Cl. 197—138.

Salva, John. Safety lock for revolvers. 2,943,411, 7–5–60, Cl. 42—66.

Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Electric control system for fluid springs. 2,943,851, 7–5–60, Cl. 267—65.

Samuelsson, John H. S., to Svenska Aeroplan Aktiebolaget. Method of forming sheet metal articles having compound curves. 2,943,587, 7–5–60, Cl. 113—51.

Sanders Associates, Inc.: *See*—
Misek, Victor A. 2,944,192.

Sandvikens Jernverks Aktiebolag: *See*—
Hård Af Segerstad, Carl G. 2,943,477.

Sandy Hill Iron & Brass Works, The: *See*—
Fasoli, Paul A. 2,943,678.

Sanford, Arthur C. Unit column building construction. 2,943,366, 7–5–60, Cl. 20—1.

Sanford, Robert F.: *See*—
Keizer, Eugene O., and Sanford. 2,944,205.

Sarett, Lewis H., to Merck & Co., Inc. Allopregnane compounds for topical application. 2,943,978, 7–5–60, Cl. 167—58.

Sargent, Elbert R., and H. H. Sigler, to Hiller Aircraft Corp. Fuel supply control for rotary wing aircraft. 2,943,685, 7–5–60, Cl. 170—135.4.

Saagen Derrick Co.: *See*—
Saagen, Matthias F. 2,943,708.

Saagen, Matthias F., to Saagen Derrick Co. Hoisting equipment. 2,943,706, 7–5–60, Cl. 187—85.

Saterea, Martin G., to United States of America, Navy. Control system for torpedo. 2,943,588, 7–5–60, Cl. 114—23.

Sauer, Alfred H.: *See*—
Joachim, Joseph G., and Sauer. 2,943,680.

Sauerland, Joseph, to Peck Hardman & Co. Pneumatic action for player pianos. 2,943,535, 7–5–60, Cl. 84—35.

Saunders, Arnold E.: *See*—
Marinl, Herman E., Lytle, Saunders, and Wagner. 2,943,963.

Say, Donald L.: *See*—
Bussom, Charles J., and Say. 2,943,904.

Saywell, Lawrence G., to Eureka Chemical Co. Corrosion prevention. 2,943,945, 7–5–60, Cl. 106—14.

Scapa Dryers Inc.: *See*—
Hindle, Thomas. 2,943,375.

Schabot, Bernard W. Tapered hole gage. 2,943,394, 7–5–60. Cl. 33—147.

Schaflander, Gerald M., to Bantob Products Corp. Manufacture of cigarettes. 2,943,958, 7–5–60, Cl. 131—2.

Schaflander, Gerald M., to Bantob Products Corp. Manufacture of cigarettes. 2,943,959, 7–5–60, Cl. 131—2.

Schaub, Thomas S. Spark plugs. 2,944,178, 7–5–60, Cl. 313—141.

Scheersinger, Bruno, to Mechanical Pin Resetter Co., Ltd. Bowling alley pin resetting machine. 2,943,857, 7–5–60, Cl. 273—43.

Schiet Inc.: *See*—
Newman, Stanley H. 2,943,471.

Schiffman, Murray, to Directomat, Inc. Printing device. 2,943,563, 7–5–60, Cl. 101—89.

Schiks, Albert, to Optische Werke C.A. Steinheil Sohn G.m.b.H. Photographic camera. 2,943,552, 7–5–60, Cl. 95—94.

Schlegel, Carl F., to The Schlegel Mfg. Co. Buffing wheel. 2,943,426, 7–5–60, Cl. 51—193.

Schlegel Mfg. Co., The: *See*—
Schlegel, Carl F. 2,943,426.

Schlumberger Well Surveying Corp.: *See*—
Goodman, Clark. 2,943,694.
Johnson, Frank F., and Tittman. 2,944,148.

Schmid, Leonhard. Measuring devices for fluids. 2,943,770, 7–5–60, Cl. 222—440.

Schmidt, Henry, Jr., to Industrial Filter & Pump Mfg. Co. Filtration apparatus. 2,943,738, 7–5–60, Cl. 210—185.

Schmidt, Louis F., to Abrams Instrument Corp. Motor and governor supporting assembly. 2,944,169, 7–5–60, Cl. 310—83.

Schmier, Jacob, to Rodale Mfg. Co., Inc. Electrical connector. 2,944,243, 7–5–60, Cl. 339—193.

Schneider, Gordon B.: *See*—
Berggren, Lloyd E., Schneider, and Sorensen. 2,943,448.

Schneider, Lawrence E. Tow for motor boats. 2,943,591, 7–5–60, Cl. 114—235.

Schnitzer, Anton M.: *See*—
Goodhue, Lyle D., Cantrel, and Schnitzer. 2,943,976.

Schöde, Paul. Bar-shaped car retarder of the direct-control type. 2,943,709, 7–5–60, Cl. 188—62.

Schoenfeldt, William M. Pickling unit for internal combustion engines. 2,943,615, 7–5–60, Cl. 123—198.

Schrewelius, Nils G., to Aktiebolaget Kanthal. Electrically conductive element for use at elevated temperatures. 2,944,239, 7–5–60, Cl. 338—322.

Schroeder, Alfred C., and D. H. Pritchard, to Radio Corp. of America. Sound cancellation in television receivers. 2,944,106, 7–5–60, Cl. 178—5.4.

Schroeder, George F., to Sperry Rand Corp., Ford Instrument Co. Division. Electrolytic mass shift compensator for gyros. 2,943,494, 7–5–60, Cl. 74—5.4.

Schubert, Dale L.: *See*—
Erickson, Harold E., Riley, and Schubert. 2,943,365.

Schultz, Warner W., to General Electric Co. Mass spectrometer. 2,944,146, 7–5–60, Cl. 250—41.9.

Schutte, Henry G., and D. E. Bowa, to Esso Research and Engineering Co. Liquid-solid separation in oxygen-free atmosphere. 2,944,047, 7–5–60, Cl. 260—88.2.

Schweighofer, Horst M.: *See*—
Fritze, Edgar H., and Schweighofer. 2,943,482.

Scott, Cleveland E., to Phillips Petroleum Co. Method of propelling rockets and rocket fuels. 2,943,439, 7–5–60, Cl. 60—35.4.

Scott, John W., Jr., to California Research Corp. Catalytic conversion of hydrocarbon distillates. 2,944,005, 7–5–60, Cl. 208—109.

Scott, John W., Jr., to California Research Corp. Hydrocracking of a hydrocarbon distillate employing a sulfide of nickel or cobalt, disposed on an active siliceous cracking catalyst support. 2,944,006, 7–5–60, Cl. 208—109.

Scott, John W., Jr., to California Research Corp. Process for producing xylenes. 2,944,089, 7–5–60, Cl. 260—668.

Scott, Platho P., Jr., and A. G. Fischer, to Pan American Petroleum Corp. Well-servicing compositions and methods. 2,943,679, 7–5–60, Cl. 166—21.

Scott, Platho P., Jr., and A. G. Fischer, to Pan American Petroleum Corp. Hard plast seeds in well-servicing compositions and methods. 2,943,680, 7–5–60, Cl. 166—21.

Scott and Williams, Inc.: *See*—
Stirmay, Julius, and Brinton. 2,943,469.

Scoville, Donald C., to General Motors Corp. Fuel injection flow control valve. 2,943,847, 7–5–60, Cl. 261—23.

Seal-Spout Corp.: *See*—
Klausmann, Milton H., Brucker, and Von Culin. 2,943,769.

Searle, Arthur M.: *See*—
Lenz, John A., and Searle. 2,943,906.

Searle, G. D., & Co.: *See*—
Johns, William F. 2,944,067.
Johns, William F. 2,944,068.

Seavey, Frederick R., to Olin Mathieson Chemical Corp. Take-up mechanism. 2,943,810, 7–5–60, Cl. 242—55.

Seeger, Beverly. Disposal sanitary receptacle. 2,943,680, 7–5–60, Cl. 150—3.

Segal, Edward, to J. E. Siebel Sons' Co., Inc. Foaming beverages. 2,943,942, 7–5–60, Cl. 99—48.

Segura, Joseph M.: *See*—
Palmer, John S., Shager, and Segura. 2,943,584.

Segura, Marnell A.: *See*—
Hunter, Edward A., Segura, Small, and Miller. 2,944,033.

Sehn, Francis J., and M. M. Clemens; said Clemens assor. to said Sehn. Material handling device. 2,943,750, 7–5–60, Cl. 214—1.

Sellet, Lucien, to Jacques Wolf & Co. Process for the production and use of novel tanning agents and products produced by such process. 2,944,048, 7–5–60, Cl. 260—67.6.

Sem, Mathias O., to Elektrotermisk A/S. Apparatus and method for collecting gas from aluminum furnaces. 2,943,985, 7–5–60, Cl. 204—67.

Semco Products, Inc.: *See*—
Julifs, Albert G. 2,943,227.

Sernitz, Paul, and K. Hodapp, to Demag-Elektrometallurgie G.m.b.H. Connector for a tiltable electrode furnace. 2,944,099, 7–5–60, Cl. 13—10.

Shaffer, Ivan E.: *See*—
Robinson, James V., and Shaffer. 2,943,854.

Shager, Bernice J.: *See*—
Palmer, John S., Shager, and Segura. 2,943,584.

Shank, Howard C. Extensible cement hog trough. 2,943,601, 7–5–60, Cl. 119—78.

Shannon, Fred L. Electrical cable and processing tool. 2,943,301, 7–5–60, Cl. 20—61.

Sharples Corp., The: *See*—
Payne, Robert E., and Lavanchy. 2,943,734.
Payne, Robert E., Lavanchy, and Sharples. 2,943,735.

Sharples, Thomas D.: *See*—
Payne, Robert E., Lavanchy, and Sharples. 2,943,735.

Shaw, Richard A., to Stockbin Corp. Rack loading and unloading shelf. 2,943,747, 7–5–60, Cl. 211—153.

Shaw, Robert F.: *See*—
Auerbach, Albert A., and Shaw. 2,944,348.

Shell Oil Co.: *See*—
Anderson, William S. 2,943,987.
Boedtker, Wilhelmus M. J. 2,944,004.
Boedtker, Wilhelmus M. J., and 't Hart. 2,944,005.
Thayer, David S. 2,943,703.
Thorpe, Roy E., and Nixon. 2,943,886.
Webster, Aaron, and Wieland. 2,943,909.

Sherman, Orville B.: *See*—
Mumford, George V., and Sherman. 2,943,248.

Sherman, William C.: *See*—
De Leeuw, John B., Donovan, and Sherman. 2,943,935.

Shewmon, Ralph K., and G. A. Neyhouse, to General Motors Corp. Control for fluid suspension system. 2,944,126, 7–5–60, Cl. 200—82.

Shipley, Eugene E., to General Electric Co. Grease seal for high speed flexible coupling. 2,943,463, 7–5–60, Cl. 64—9.

Sibert, Frank J. Pillow or cushion type vibrator. 2,943,620, 7–5–60, Cl. 128—24.1.

Sides, H. L.: *See*—
Ramloss, George A. 2,943,707.

Sides Mfg. Co.: *See*—
Ramloss, George A. 2,943,707.

Siebel, J. E., Sons' Co., Inc.: *See*—
Segal, Edward. 2,943,942.

Siebert, Preston G. Bearing-hanger structure. 2,943,893, 7–5–60, Cl. 308—72.

Sigler, Harold H.: *See*—
Sargent, Elbert R., and Sigler. 2,943,685.

Simmonds Aerocessories Ltd.: *See*—
Bernstein, Harold A. 2,943,476.

Simmons Co.: *See*—
Blecker, Raymond H., Petersen, and Unwin. 2,943,323.

Simon, John G., to Minnesota Mining and Mfg. Co. Reinforced plastic screw threads. 2,943,967, 7–5–60, Cl. 154—53.

Simpson, Alfred W., to Rejaflx Ltd. Printing. 2,943,566, 7–5–60, Cl. 101—198.

Simpson, Herbert Corp.: *See*—
Granath, Axel G. 2,943,736.
McIlvaine, Robert L., and Granath. 2,943,801.

Sinclair Refining Co. *See*—
Decker, William H. 2,943,908.
Rausch, Maurice K., and Francis. 2,943,990.
Rausch, Maurice K., and Watson. 2,944,015.
Verdol, Joseph A. 2,944,020.
Verley, Guy M. 2,944,020.

Stirmay, Julius, and D. E. Brinton, to Scott and Williams, Inc. Pattern mechanism. 2,943,469, 7–5–60, Cl. 66—156.

Sjöman, Per Y., to Elektriska Svetsningsaktiebolaget. Electric arc welding electrodes and methods of manufacturing the same. 2,944,142, 7–5–60, Cl. 219—146.

Skot, Edward C., to Telecomputing Corp. Seal for plug-type valves. 2,943,838, 7–5–60, Cl. 251—317.

Skeri, Stanley J.: *See*—
Boshbot, Arthur F., and Skeri. 2,943,510.

Slater, Frank W., ½ to R. E. Feeney, ¼ to W. B. Blankenship, and ¼ to M. E. Blankenship. Ring-like device for playing the game of marbles. 2,943,858, 7–5–60, Cl. 273—118.

Small, Augustus E.: *See*—
Hunter, Edward A., Segura, Small, and Miller. 2,944,033.

Small, Peter: *See*—
Javna, Stephen L., Griffiths, and Small. 2,943,855.

Smirl, Richard L.: *See*—
Markley, William F., Brynestout, and Smirl. 2,943,517.

Smith, Alfred J.: *See*—
Goulet, Jules H., Dawes, and Smith. 2,943,422.

Smith, Donald W.: *See*—
Pontecorvo, Paul J., Gillespie, and Smith. 2,944,113.

Smith, Edwin W., to Turner Corp. Double tube oscillating lawn sprinkler. 2,943,796, 7–5–60, Cl. 239—242.

Smith, Elmer H.: *See*—
Blizard, Harold S., Smith, Rockstroh, and Guthrie. 2,943,992.

Smith, George L. Readily assembled check valve. 2,943,639, 7–5–60, Cl. 137—515.7.

Smith, Horace L., Jr., to Horace L. Smith, Jr., Inc. Automatic weighing apparatus. 2,943,836, 7–5–60, Cl. 249—9.

Smith, Horace L., Jr., Inc.: *See*—
Smith, Horace L., Jr. 2,943,836.

Smith, Ira D.: *See*—
Nye, Benjamin E., and Smith. 2,943,826.

Smith, Ira D., to Cleveland Pneumatic Industries, Inc. Steering mechanism. 2,943,498, 7–5–60, Cl. 74—106.

Smith Kline & French Laboratories: *See*—
Edgerton, William H. 2,944,063.
Gordon, Maxwell. 2,944,054.

Smith, Ramsey. Selective hydrofracting apparatus. 2,943,694, 7–5–60, Cl. 166—187.

Smith, Walter. Reversing mechanism for toy cars. 2,943,418, 7–5–60, Cl. 46—244.

Smollinger, Carl W.: *See*—
Joy, Robert F. and Smollinger. 2,942,434.

Societe de Fabrication d'Instruments de mesure: *See*—
Puschberty, Lucien P. 2,943,570.

Societe des Agrafes Francaises & d'Articles Metalliques (Societe Anonyme): *See*—
Rigaud, Maurice. 2,943,878.

Societe des Usines Chimiques Rhone-Poulenc: *See*—
Jacob, Robert M., Regnier, and Crimon. 2,944,061.
Metivier, Jean. 2,943,974.
Metivier, Jean. 2,943,975.

Societe d'Etudes et de Participations, Eau, Gaz, Electricite, Energie, S.A.: *See*—
Huber, Robert. 2,943,438.

Societe Industrielle des Derives de l'Acetylene (S.I.D.A.): *See*—
Galvin, Andre, Besson, Brus, and Thirion. 2,944,083.

Socony Mobil Oil Co., Inc.: *See*—
Ginter, Earle F. 2,944,000.
Kolarik, Ivan S. 2,944,023.
Ulsheimer, Clifford J., and Zimmer. 2,944,021.
Ulsheimer, Clifford J., and Zimmer. 2,944,022.

Solomon, Allan L., and G. J. Goldsmith, to Radio Corp. of America. Ferro electric devices. 2,944,200, 7–5–60, Cl. 317—202.

Solow, Benjamin, to International Resistance Co. Apparatus for measuring resistance. 2,944,237, 7–5–60, Cl. 338—77.

Sonenberg, Martin, to Research Corp. Thyrotrophin derivatives and method for using same. 2,943,981, 7–5–60, Cl. 167—74.

Sonntag, Franz, to Gelsenkirchener Bergwerks Akt.-Ges. Method of producing refined benzol. 2,944,061, 7–5–60, Cl. 260—674.

Sorensen, Harold P.: *See*—
Berggren, Lloyd E., Schneider, and Sorensen. 2,943,448.

Sorg, Wilhelm, and K. Prüfsner, to Demag-Elektrometallurgie G.m.b.H. Tilting electrode furnace. 2,944,100, 7–5–60, Cl. 13—10.

Soucy, George H., to Brown & Sharpe Mfg. Co. Micrometer spindle clamp. 2,943,395, 7–5–60, Cl. 33—164.

Spaude, Siegfried: *See*—
Bernhauer, Konrad, Friedrich, Gross, and Spaude. 2,943,962.

Spechler, Daniel S., to Keuffel & Esser Co., Cartographic material. 2,943,936, 7–5–60, Cl. 96—75.

Specialties Development Co.: *See*—
Morgan, Carrel B. 2,943,706.

Spencer, Frank W., to United Shoe Machinery Corp. Heel attaching machines. 2,943,329, 7–5–60, Cl. 1—141.

Sperry Rand Corp.: *See*—
Eckert, John P., Jr. 2,944,161.
Keesing, Albert M., and Eberly. 2,943,537.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Bosch, Carl. 2,944,154.
Leff, Martin J. 2,944,169.
Schroeder, George F. 2,943,494.

Sperry-Sun Well Surveying Co.: *See*—
Ring, Roland. 2,943,397.

Spickelmier Industries, Inc.: *See*—
Ammerman, John M. 2,943,345.

Spindler, Norman J.: *See*—
Peterson, Carl O., and Spindler. 2,943,903.

Sporn, George A.: *See*—
Eaton, William M., and Sporn. 2,943,901.

Sprague Electric Co.: *See*—
Robinson, Preston. 2,944,026.

Sprankle, Howard P.: *See*—
Dotterer, Elmer E., Kantner, Sprankle, and Van Gorder. 2,943,749.

Spray Products Corp.: *See*—
Orr, Charles P. 2,943,766.

Spruck, Helmut: *See*—
Opitz, Wolfgang, Spruk, and Steigerwald. 2,944,172.

Squires, Eugene B. Eaves trough. 2,943,421, 7–5–60, Cl. 50—4.

Stafford, Clifford L., to Chattanooga Hardware Corp. Tiltable mirror supports. 2,943,556, 7–5–60, Cl. 88—27.

Standard Oil Co. (Indiana): *See*—
Birkness, Harold A., Randell, and Wright. 2,943,674.
Moore, Thomas M., and Corns. 2,943,999.

Standard Packaging Corp.: *See*—
Bolding, Hubert V. 2,943,780.

Stanley, Joseph M., Theokritoff, E. A. Gerber, A. R. Chi, and D. L. Hammond, to United States of America, Army. Method of fabricating a synthetic quartz crystal. 2,944,027, 7–5–60, Cl. 252—62.9.

Stapleton, Robert W., to General Motors Corp. Transmission control. 2,943,501, 7–5–60, Cl. 74—336.

Starke-Field, Alfred B., and T. G. Patterson, to Marconi's Wireless Telegraph Co. Ltd. Modulating circuit arrangements. 2,944,227, 7–5–60, Cl. 332—37.

Starnes, William C., and E. C. Zabor, to Gulf Research & Development Co. Process for isomerizing light straight chain paraffins. 2,944,097, 7–5–60, Cl. 260—683.65.

Staunt, Martin. Lubricating apparatus. 2,943,705, 7–5–60, Cl. 184—55.

Stayner, Richard D., to California Research Corp. Sulfonate detergent compositions. 2,944,028, 7–5–60, Cl. 252—161.

Steigerwald, Karl H.: *See*—
Opitz, Wolfgang, Spruck, and Steigerwald. 2,944,172.

Stephens, Frederick M.: *See*—
Wrob, Ronald M., Carlson, and Stephens. 2,943,560.

Sterba, Donald E.: *See*—
Cotterman, Frank D., Sterba, Knorowski, and Olsen. 2,943,351.

Sterling Plastics Co.: *See*—
Fleming, Jack F. 2,943,372.

Sterling Precision Corp.: *See*—
Bachman, Rudolph E. 2,943,937.

Stern, William, to Illinois Tool Works. Nut and sealing washer assembly with inclined securing tongues. 2,943,661, 7–5–60, Cl. 151—36.

Sternbane, Oscar H.: *See*—
Sullivan, Edward M. 2,943,842.

Stevenson, Donald L.: *See*—
Bancroft, George H., Gerow, and Stevenson. 2,943,783.
Stevenson, Donald L., and J. L. Gallagher, to Consolidated Vacuum Corp. Heater for a diffusion pump. 2,943,784, 7–5–60, Cl. 230—101.

Stockbin Corp.: *See*—
Shaw, Richard A. 2,943,747.

Stockholms Superfosfat Fabriks Aktiebolaget: *See*—
Fagerlund, Yngve A. F., and Blomqvist. 2,943,738.

Stogre, Alexander E. Insulating board construction. 2,943,965, 7–5–60, Cl. 154—45.

Stoll, Kenneth M.: *See*—
Crosby, Alton L., and Stoll. 2,943,722.

Stomiany, Stanley J.: *See*—
Hessler, John O., O'Connor, and Stomiany. 2,943,892.

Stone, Irwin M.: *See*—
Gray, Philip F., Stone, and Wylie. 2,943,941.

Straughn, John L.: *See*—
Jones, James B., and Straughn. 2,944,029.

Strobel, Charles K., R. G. McMichael, and E. T. Kimmell, to Robertshaw-Fulton Controls Co. Humidistat. 2,943,488, 7–5–60, Cl. 73—336.5.

Stroop, John H., to Vol-Pak, Inc. High speed packaging machine. 2,943,428, 7–5–60, Cl. 53—59.

Structural Fibers, Inc.: *See*—
Harris, Thomas. 2,943,758.

Stuetzer, Otmar M., to United States of America, Air Force. Semiconductive device powered by light. 2,944,165, 7–5–60, Cl. 307—88.5.

Suckle, Jerome L. Dropcloth. 2,943,380, 7–5–60, Cl. 28—80.

Suckling, William R. Tree-uprooting attachment for agricultural tractors. 2,943,406, 7–5–60, Cl. 37—2.

Sud-Aviation Societe Nationale de Constructions Aeronautiques: *See*—
Besson, Louis. 2,943,815.

Suehlsen, Herman W. Barbecue grill. 2,943,557, 7–5–60, Cl. 99—421.

Sullivan, Edward M., to A. W. Bettigole and O. H. Sternbane. Heating and/or cooling system. 2,943,842, 7–5–60, Cl. 257—279.

Sullivan, James F.: *See*—
Cox, Robert E., and Sullivan. 2,943,688.

Sultan, Robert. Replaceable heel construction. 2,943,404, 7–5–60, Cl. 36—42.

Sumitomo Chemical Co., Ltd.: *See*—
Murahashi, Shunsuke, and Horlie. 2,944,058.

Sun Oil Co.: *See*—
Blizard, Harold S., Smith, Rockstroh, and Guthrie. 2,943,992.
Guthrie, Jack A. 2,944,060.
Hoffman, James P. 2,944,014.
Jolly, Samuel E. 2,944,029.
Meries, Thomas S. 2,943,995.
Murray, Peter B. 2,944,011.
Tesch, John D., and Duling. 2,943,991.
Thomas, Charles L. 2,944,016.

Surenda, Frank J.: *See*—
Davison, Lester W., and Surenda. 2,944,108.

Sussman, Martin V. Liquid aerating drinking straw. 2,943,794, 7–5–60, Cl. 239—33.

Sussman, Vincent, to Joseph Waldman & Sons. Method of encapsulating electronic components or other elements. 2,943,359, 7–5–60, Cl. 18—50.

Svenska Aeroplan Aktiebolaget: *See*—
Samuelsson, John H. S. 2,943,587.

Svenska Aktiebolaget Gasaccumulator: *See*—
Granqvist, Carl-Erik. 2,944,230.

Swanson, Oscar F., to Automatic Voting Machine Corp. Voting machine record printing means. 2,943,786, 7–5–60, Cl. 235—50.

Sweeney, Frank B., to Endicott Johnson Corp. Flash trimming machine. 2,943,337, 7–5–60, Cl. 12—86.7.

Sweeney, Maxwell P., to United Engineers & Constructors Inc. Coke oven by-product recovery process. 2,943,911, 7–5–60, Cl. 23—3.

Swords, Maurice G.: *See*—
Corey, Flournoy, Swords, Enger, and Pitts. 2,943,863.
Sykes, Hollister B., to Esso Research and Engineering Co. Split return of solids to coker. 2,943,993, 7–5–60, Cl. 208—48.
Sylvania Electric Products Inc.: *See*—
Arnold, Donald L. 2,944,124.
Bussom, Charles J., and Say. 2,943,904.
Chubb, Dale L. 2,943,604.
Crosby, Alton L., and Stoll. 2,943,723.
Dotterer, Elmer E., Kantner, Sprankle, and Van Gorder. 2,943,749.
Gartner, Stanley J. 2,943,751.
Harjes, Frederick W. 2,943,382.
Matard, Herbert F. 2,944,167.
Wheeler, William R. 2,944,180.
Szukiewicz, Waclaw, to Allied Chemical Corp. 8&Or-adduct of an organic monobasic fatty acid triglyceride with an organic polyisocyanate composition. 2,943,947, 7–5–60, Cl. 106—266.
Sawed, Victor A., to United States Pipe and Foundry Co. Apparatus for centrifugal casting of pipe. 2,943,360, 7–5–60, Cl. 22—65.
Tanaka, Isokazu, S. Kurimura, and S. Yamasaki, to Kabushiki-Kaisha Kodeu Seisakusho. Variable frequency dividing system. 2,944,219, 7–5–60, Cl. 328—134.
Taylor, Douglas W., to Motorola, Inc. Electronic image system and method. 2,944,174, 7–5–60, Cl. 313—77.
Tayles, Douglas W., to Motorola, Inc. Television receiver. 2,944,175, 7–5–60, Cl. 313—77.
Taylor, Louis B., to Columbia-Southern Chemical Corp. Pigmented paper and preparation thereof. 2,943,971, 7–5–60, Cl. 62—181.
Tedham, Leslie T.: *See*—
Salmon, Reginald D., and Tedham. 2,943,721.
Telecomputing Corp.: *See*—
Shel, Edward C. 2,943,838.
Telefunken G.m.b.H.: *See*—
Wehde, Heinz P., and Rothe. 2,944,118.
Tellegen, Bernardus D. H., to North American Philips Co., Inc. Circuit arrangement comprising a passive electrical quadripole. 2,944,220, 7–5–60, Cl. 330—53.
Ten Bosch, M., Inc.: *See*—
Ten Bosch, Maurits, and Kisbel. 2,943,493.
Ten Bosch, Maurits, and J. F. Kisbel, to M. ten Bosch, Inc. Accelerometer. 2,943,493, 7–5–60, Cl. 73—503.
Ten Broeke, Klaas E. Concrete beam mould clamp. 2,943,657, 7–5–60, Cl. 144—291.
Tench, John D., and I. N. Duling, to Sun Oil Co. Wax composition comprising a mixture of specific paraffin waxes and 1–5% of a microcrystalline wax. 2,943,991, 7–5–60, Cl. 208—21.
Ternes, William A.: *See*—
Ford, Ralph E. 2,943,675.
Testa, Emilio: *See*—
Maffi, Giulio, Ettorre, and Testa. 2,943,980.
Teter, John W., deceased: by R. Y. Teter, administratrix, J. L. Gring, and C. D. Keith, to Engelhard Industries, Inc. Process for isomerizing light normal alkanes. 2,944,096, 7–5–60, Cl. 260—683.65.
Teter, Ruth Y.: *See*—
Teter, John W. 2,944,096.
Tetherow, Claude L., to Notifier Corp. Fire alarm system. 2,944,251, 7–5–60, Cl. 340—213.
Texaco Inc.: *See*—
Hersog, Gerhard. 2,944,149.
Thalhammer, Karl W. Panoramic camera. 2,943,548, 7–5–60, Cl. 95—16.
Thatcher, Harry W., to Draper Corp. Picker stick connecting means. 2,943,646, 7–5–60, Cl. 139—151.
Thayer, David S., to Shell Oil Co. Acetylene recovery. 2,943,703, 7–5–60, Cl. 183—115.
Thedick, John H. Remote control mechanism for adjusting the ignition timing of an internal combustion engine. 2,944,122, 7–5–60, Cl. 200—31.
Theokritoff, Sergius: *See*—
Stanley, Joseph M., Theokritoff, Gerber, Chi, and Hammond. 2,944,027.
Thirion, Pierre: *See*—
Galvin, Andre, Besson, Brun, and Thirion. 2,944,083.
Thomas, Albert G., to Industrial Controls Corp. Device for making tape and other records. 2,943,900, 7–5–60, Cl. 346—33.
Thomas, Charles L., to Sun Oil Co. Increasing oxidation stability of hydrocarbons. 2,944,016, 7–5–60, Cl. 208—284.
Thompson, Charles E., to Esso Research and Engineering Co. Process for stabilising jet fuels. 2,944,012, 7–5–60, Cl. 208—212.
Thompson, James V., to J. V. Thompson and A. G. Hoyl. Well drilling mud and the method of making the same. 2,944,019, 7–5–60, Cl. 252—8.5.
Thompson, Ralph B., to Universal Oil Products Co. Separation of hydrocarbon mixtures containing relatively straight-chain components. 2,944,093, 7–5–60, Cl. 260—676.
Thompson Ramo Wooldridge Inc.: *See*—
Sampietro, Achilles C. 2,943,851.
Thompson, Thalmer J. Skin plaster. 2,943,623, 7–5–60, Cl. 128—153.
Thomson, Robert F.: *See*—
White, Philip R., Thomson, and Joseph. 2,943,932.
Thore, Thomas J., to Fidelity Machine Co., Inc. Dial shogging mechanism for circular knitting machines. 2,943,467, 7–5–60, Cl. 66—15.
Thornburgh, William F., to General Motors Corp. Air cleaner and silencer assembly. 2,943,699, 7–5–60, Cl. 183—71.
Thornton, Marshall B.: *See*—
Lutz, Edward A., and Thornton. 2,943,686.
Thorpe, Roy E., and A. C. Nixon, to Shell Oil Co. Operation of radiation emitting apparatus. 2,943,206, 7–5–60, Cl. 204—154.
Thorson, Roy M. Key rack. 2,943,743, 7–5–60, Cl. 211—59.
Thumim, Carl, to E. F. Lawson Co., Inc. Crank drive for paper cutter knives. 2,943,506, 7–5–60, Cl. 74—414.
Thurston, Vinal D.: *See*—
Marmo, Anthony B., and Thurston. 2,943,683.
Tibbs, Christopher E. M., to Radio Heaters Ltd. Radio frequency dielectric heating apparatus. 2,944,123, 7–5–60, Cl. 219—10.55.
Tidd, Elbert D., to Bell Telephone Laboratories, Inc. High pressure hermetically sealed terminal. 2,944,102, 7–5–60, Cl. 174—152.
Tierney, Marcus M. Peg board bracket. 2,943,835, 7–5–60, Cl. 248—216.
Time, Inc.: *See*—
Parks, Herman D. 2,943,505.
Tittman, Jay: *See*—
Johnson, Frank F., and Tittman. 2,944,145.
Toledo Industrial Rubber Co., The: *See*—
Reichert, Paul F. H. 2,943,675.
Toplansky, John J. Necktie. 2,943,331, 7–5–60, Cl. 2—150.
Towt, Donald G. Pendulum cultivating tool. 2,943,690, 7–5–60, Cl. 172—376.
Treglgas, Harold R. Pill dispenser. 2,943,730, 7–5–60, Cl. 206—42.
Trevaskis, Henry W., and J. M. Lowe, to Dunlop Rubber Co. Ltd. Tire building apparatus. 2,943,668, 7–5–60, Cl. 154—10.
Trimble, Coburn B., to The National Cash Register Co. Record tape supply means. 2,943,853, 7–5–60, Cl. 271—2.17.
Tripp, Roland A.: *See*—
Freeman, Arnold B., Raffel, and Tripp. 2,943,968.
Tull, Roger J.: *See*—
Kollonitsch, Janos, Tull, and Weinstock. 2,944,070.
Turner Corp.: *See*—
Smith, Edwin W. 2,943,796.
Turner, Luther B.: *See*—
McCulloch, William J. G., and Turner. 2,944,043.
Tussing, Denton E. Fishing pole attachment. 2,943,414, 7–5–60, Cl. 43—25.2.
UCLAF: *See*—
Vaterlaus, Bruno, and Furlenmeier. 2,944,078.
Vesterman, Anatole, and Allais. 2,944,073.
U.D. Engineering Co. Ltd.: *See*—
Bentley, Lawrence C. 2,943,531.
Ultra Electric, Inc.: *See*—
Kerr, David. 2,944,264.
Ulsheimer, Clifford J., and J. C. Zimmer, to Socony Mobil Oil Co., Inc. Marine diesel lubricant. 2,944,021, 7–5–60, Cl. 252—33.4.
Ulsheimer, Clifford J., and J. C. Zimmer, to Socony Mobil Oil Co., Inc. Marine diesel lubricant. 2,944,022, 7–5–60, Cl. 252—33.4.
Unipak Cartons Ltd.: *See*—
Richardson, James A. 2,943,762.
Richardson, James A. 2,943,763.
United Aircraft Corp.: *See*—
Brahm, Charles R. 2,944,206.
Broders, Claude O. 2,943,605.
Brook, Miles J. 2,943,894.
Kurti, Alexander. 2,943,449.
United Aircraft Corp.: *See*—
Luiz, Edward A., and Thornton. 2,943,686.
Voymas, James S., and Ambuter. 2,943,443.
Wetherbee, Arthur E., Jr. 2,943,851.
United Aircraft Products, Inc.: *See*—
Aldrich, Clare A., and Jacob. 2,943,714.
Aldrich, Clare A., and Jacob. 2,943,715.
Hughes, Paul R., and Klank. 2,943,841.
United Engineers & Constructors Inc.: *See*—
Sweeney, Maxwell P. 2,943,911.
United Shoe Machinery Corp.: *See*—
Carpenter, Keith H., and Reinhold. 2,943,328.
Musser, C Walton. 2,943,495.
Musser, C Walton. 2,943,496.
Musser, C Walton. 2,943,508.
Musser, C Walton. 2,943,513.
Spencer, Frank W. 2,943,329.
United States of America
Air Force: *See*—
Stuetzer, Otmar M. 2,944,165.
Army: *See*—
Graser, Gilbert R. 2,943,573.
Stanley, Joseph M., Theokritoff, Gerber, Chi, and Hammond. 2,944,027.
Atomic Energy Commission: *See*—
King, L. D. P. 2,943,921.
Yearout, Dean K., and Jergins. 2,944,358.
Navy: *See*—
Flett, William J. 2,943,572.
Lane, Frank L. 2,943,825.
Melton, Donald F. 2,943,490.
Pavian, Henry C. 2,943,568.
Replogle, Frank S., Jr., and Gordon. 2,944,150.
Ringelman, John F. 2,944,210.
Sateren, Martin G. 2,943,588.
Wolfe, Richard C. 2,943,569.
War: *See*—
Hickman, Clarence N. 2,943,673.
United States Pipe and Foundry Co.: *See*—
Sawed, Victor A. 2,943,360.
United States Steel Corp.: *See*—
Miller, John E. 2,943,695.

Universal Oil Products Co.: *See*—
Holden, Donald L. 2,944,012.
Nixon, William G. 2,944,082.
Thompson, Ralph B. 2,944,093.
Watkins, Charles H. 2,943,908.
University of Illinois Foundation: *See*—
Wong, Herbert K. 2,943,267.
Unwin, Kenneth J.: *See*—
Blecker, Raymond H., Petersen, and Unwin. 2,943,233.
Upjohn Co., The: *See*—
Anthony, William C. 2,944,055.
Fonken, Gunther S. 2,944,069.
Korman, Jerome. 2,944,057.
VEB Kamera-und Kinowerke Dresden: *See*—
Pierschel, Gerhard. 2,943,524.
Vaccarino, Carmelo and G. Process for neutralizing vegetable or animal oils or fats in a water-soluble solvent. 2,944,072, 7–5–60, Cl. 260—420.
Vaccarino, Giuseppe: *See*—
Vaccarino, Carmelo and G. 2,944,072.
Valdi, Walter J., and E. T. King. Stern tube safety ring assembly. 2,943,874, 7–5–60, Cl. 286—26.
Valentine, Harry M., to Bendix-Westinghouse Automotive Air Brake Co. Motion translating device. 2,943,496, 7–5–60, Cl. 74—56.
Van Bennekom, Carl F.: *See*—
Kernander, Warren N., and Van Bennekom. 2,944,181.
Van Brunt, Le Roy C., to Westinghouse Electric Corp. Dispensing apparatus. 2,943,900, 7–5–60, Cl. 312—46.
Van Caster, Bernard L. Detachable union and tuning joint for musical instruments. 2,943,528, 7–5–60, Cl. 84—386.
Van Der Kerk, Gerrit J. M., to North American Philips Co., Inc. Method of treating plants employing dithiocarbamates. 2,943,972, 7–5–60, Cl. 167—22.
Van Dijk, Pieter, to American Enka Corp. Crimping or curling of yarns or threads. 2,943,433, 7–5–60, Cl. 57—34.
Van Driest, Edward R., to North American Aviation, Inc. Thermal aerodynamic drag controller. 2,943,829, 7–5–60, Cl. 244—117.
Van Gorder, Wilbert E.: *See*—
Dotterer, Elmer E., Kantner, Sprankle, and Van Gorder. 2,943,749.
Van Haam, Harry L. Door attached riding toy. 2,943,689, 7–5–60, Cl. 155—2.
Van Riper, Jurian W. Plastic material extrusion head. 2,943,352, 7–5–60, Cl. 18—13.
Van Vactor, Alburtus O., and E. C. Lash. Loading device for a packaging machine. 2,943,429, 7–5–60, Cl. 53—182.
Varian Associates: *See*—
Malling, Leonard R., Mamir, Nelson, and Packard. 2,944,212.
Walter, Richard L., Filmer, and Hiestand. 2,944,167.
Vaterlaus, Bruno, and A. Furlenmeier, to UCLAF. Derivatives of dibenzo cycloheptadiene and a process of preparing same. 2,944,078, 7–5–60, Cl. 260—470.
Verdol, Joseph A., to Sinclair Refining Co. Lubricating oil composition. 2,944,025, 7–5–60, Cl. 252—51.5.
Verier, Guy M., to Sinclair Refining Co. Anti-wear lubricating oil composition. 2,944,020, 7–5–60, Cl. 252—32.7.
Vershoven, Wilhelm. Record-tape music box. 2,944,116, 7–5–60, Cl. 179—100.1.
Vesterman, Anatole, and A. Allais, to UCLAF. Fungicidal cuprous agent and process of making same. 2,944,073, 7–5–60, Cl. 260—438.
Vickers Inc.: *See*—
Pettibone, Raymond B. 2,943,575.
Viken, Reidar. Toy construction. 2,943,415, 7–5–60, Cl. 46—28.
Vismara, Francesco, Societa per Azioni: *See*—
Justoni, Romeo, and Pessina. 2,944,064.
Voges, Fred W. Aligning flexible coupling. 2,943,464, 7–5–60, Cl. 64—14.
Volk, Karl: *See*—
Bosch, Robert, Aldinger, and Volk. 2,943,614.
Vol-Pak, Inc.: *See*—
Stroop, John H. 2,943,428.
Von Culin, Raymond P.: *See*—
Klausmann, Milton H., Brucker, and Von Culin. 2,943,760.
Vosbikian, Peter S. and T. S. Waxing and polishing heads for mops. 2,943,339, 7–5–60, Cl. 15—118.
Vosbikian, Thomas S.: *See*—
Vosbikian, Peter S. and T. S. 2,943,339.
Voymas, James S., and A. J. Ambuter, to United Aircraft Corp. Thrust reversers. 2,943,443, 7–5–60, Cl. 60—35.54.
Wachter, Aaron, and R. Wieland, to Shell Oil Co. Corrosion- and fungus-inhibiting composition. 2,943,909, 7–5–60, Cl. 21—2.7.
Waddey, Walter E.: *See*—
Morway, Arnold J., and Waddey. 2,944,024.
Wadsworth Electric Mfg. Co., Inc., The: *See*—
Middendorf, William H. 2,944,128.
Wadsworth, Francis T., and P. D. May, to The American Oil Co. Insecticidal composition comprising 2,2,4,4,6,6-tris-(tetra-methylene)-1,3,5-trithiane and 2,2,4,4,6,6 tris(pentamethylene)1,3,5-trithiane. 2,943,977, 7–5–60, Cl. 167—33.
Wagner, Jan K.: *See*—
Krupp, Robert F., and Wagner. 2,943,727.
Wagner, Ross L., to American Potash & Chemical Corp. Phosphine borines and their preparation. 2,944,085, 7–5–60, Cl. 260—606.5.
Wagner, William R.: *See*—
Marini, Herman R., Lytle, Saunders, and Wagner. 2,943,963.
Wakeman, Arthur G., to Coosa River News Print Co. Pulpwood-debarking drum having angularly slotted wall and stationary shearing bars. 2,943,656, 7–5–60, Cl. 144—208.
Waldman, Joseph, & Sons: *See*—
Sussman, Vincent. 2,943,359.
Walker, Norman K., to Advanced Research Associates, Inc. Apparatus for detecting rate of change of angular attitude of a body. 2,944,214, 7–5–60, Cl. 324—70.
Walsh, Philip J. Automatic control apparatus. 2,944,163, 7–5–60, Cl. 307—68.
Walter, Richard L., J. C. Filmer, and N. P. Hiestand, to Varian Associates. Electron tube apparatus. 2,944,187, 7–5–60, Cl. 315—39.
Ward, William J.: *See*—
Floyd, Don E., and Ward. 2,944,036.
Warner, Kenneth C.: *See*—
Barnett, Arthur A. C., Warner, and Knowles. 2,944,238.
Warrick, Edward C., and D. L. Brown, to Rockwell Mfg. Co. Fare box. 2,943,681, 7–5–60, Cl. 133—3.
Wasylenko, William J., to Burroughs Corp. Switching apparatus. 2,944,121, 7–5–60, Cl. 200—11.
Watkins, Charles H., to Universal Oil Products Co. Reforming process. 2,943,906, 7–5–60, Cl. 208—62.
Watson Mfg. Co., Inc.: *See*—
Peterson, Carl O., and Spindler. 2,943,903.
Watson, William B.: *See*—
Ranech, Maurice K., and Watson. 2,944,015.
Wear, Robert L., to Minnesota Mining & Mfg. Co. Aromatic epoxidized polyester and method of making. 2,944,055, 7–5–60, Cl. 260—18.
Webber, William O., to Esso Research and Engineering Co. Method and apparatus for treating hydrocarbons. 2,944,-010, 7–5–60, Cl. 208—177.
Webde, Heinz P., and F. G. Rothe, to Telefunken G.m.b.H. System for broad-band recording. 2,944,113, 7–5–60, Cl. 179—15.55.
Weihmayr, Engelbert, to Kleinfienst & Co. Maschinenfabrik und Eisengiesserei. Pressing device. 2,943,772, 7–5–60, Cl. 225—57.
Weinstein, Norman J.: *See*—
Feldbauser, George F., Jr., Jahnig, and Weinstein. 2,944,092.
Weinstock, Leonard M.: *See*—
Kollonitsch, Janos, Tull, and Weinstock. 2,944,070.
Weise, Carl A.: *See*—
Ritterskamp, Jack H., and Weise. 2,943,445.
Weitzel, Daniel H., and W. V. Loebenstein. Process for the conversion of hydrogen. 2,943,917, 7–5–60, Cl. 23—210.
Welch, Arnold E.: *See*—
Hyland, William A., and Welch. 2,943,692.
Wellliver, Lawrence G., to General Aniline & Film Corp. Stabilization of photographic bleach powders containing an alkali metal ferricyanide. 2,943,935, 7–5–60, Cl. 96—60.
West, Charles P.: *See*—
Beauvelete, Jacques, West, and Lieberman. 2,943,475.
Westcott, William B., Jr.: *See*—
Hartel, Erwin H., and Westcott. 2,943,827.
Westcott, William B., Jr., to Cleveland Pneumatic Industries, Inc. Liquid spring accumulator. 2,943,642, 7–5–60, Cl. 138—31.
Westcott, William B., Jr., to Cleveland Pneumatic Industries, Inc. Tandem landing gear. 2,943,820, 7–5–60, Cl. 244—50.
Western Electric Co., Inc.: *See*—
Gray, Alvin N. 2,943,351.
Westinghouse Electric Corp.: *See*—
Buchanan, Leslie B. M. 2,943,462.
Frost, George H. 2,943,596.
Holtkamp, Calvin J. 2,944,188.
Holtkamp, Calvin J. 2,944,196.
Lambert, Raoul A. 2,943,846.
Marmo, Anthony B., and Thurston. 2,943,683.
Reverman, George E., Jr. 2,943,455.
Van Brunt, Le Roy C. 2,943,900.
Wetherbee, Arthur E., Jr., to United Aircraft Corp. Directional control means for a supersonic vehicle. 2,943,851, 7–5–60, Cl. 244—52.
Wheeler, William R., to Sylvania Electric Products Inc. Electron tube. 2,944,180, 7–5–60, Cl. 313—241.
Wheelock, Edward A.: *See*—
Cahill, Richard T., and Wheelock. 2,943,872.
Whitby, Clyde M., to ACF Industries, Inc. Turbo compressor tachometer simulator. 2,943,402, 7–5–60, Cl. 35—12.
White, Philip F., to General Dynamics Corp. (Convair Division). Hinge structure. 2,943,756, 7–5–60, Cl. 217—60.
White, Philip R., R. F. Thomson, and C. F. Joseph, to General Motors Corp. Boron-containing ferrous metal having as-cast compacted graphite. 2,943,932, 7–5–60, Cl. 75—123.
White, Roland J.: *See*—
Bonaccorsi, John R., and White. 2,944,202.
White Sewing Machine Corp.: *See*—
Hamlett, Sidney J. 2,943,586.
White, Walter R.: *See*—
Nadeau, Gale F., and White. 2,943,937.
Whitehead, Richard K., Jr.: *See*—
Whitehead, Richard K., Sr., and R. K. Whitehead, Jr. 2,943,812.
Whitehead, Richard K., Sr., and R. K. Whitehead, Jr. Bobbin holder. 2,943,812, 7–5–60, Cl. 242—130.2.
Whitney, Theodore R., and A. F. Fairbanks, to North American Aviation, Inc. Infrared landing system for aircraft. 2,944,151, 7–5–60, Cl. 250—83.3.
Widlansky, William: *See*—
Hamm, Clarence L., and Widlansky. 2,943,873.
Wiedemann, Claus M. Method and apparatus for preserving the contents of pervious containers. 2,943,940, 7–5–60, Cl. 99—48.
Wieland, Rita: *See*—
Wachter, Aaron, and Wieland. 2,943,909.
Wilcox, Arnold A.: *See*—
Lytle, Gene S., Wilcox, and Besimer. 2,943,539.
Wilcox Electric Co., Inc.: *See*—
Wiley, Wallace F., Jr. 2,944,223.
Wile, Daniel D., and D. S. Brainard, to Recold Corp. Control system for winter operation of air-cooled condensers. 2,943,457, 7–5–60, Cl. 62—184.

Wiley, Wallace F., Jr., to Wilcox Electric Co., Inc. Delayed, amplified automatic volume control system for radio receivers. 2,944,223, 7–5–60, Cl. 330—129.

Wilkinson, John R., to International Harvester Co. Door opening mechanism for bottom dump vehicles. 2,943,886, 7–5–60, Cl. 298—38.

Williams, Calvin C. Steam engine. 2,943,606, 7–5–60, Cl. 121—132.

Williams, Mrs. Lorelle M.: *See*—
Miller, Harry J. 2,943,385.

Williams, Neal T.: *See*—
Johnson, John R., and Williams. 2,944,183.

Williams, Richard E., to Minneapolis-Honeywell Regulator Co. Electric system. 2,944,195, 7–5–60, Cl. 315—241.

Willis, Clifford E., R. J. McWeeney, and C. H. Nichols, Jr., to Cleveland Pneumatic Industries, Inc. Servo actuator adapted to be operated by a plurality of control signals. 2,943,606, 7–5–60, Cl. 121—21.

Willson, Corwin D. Chemo-kinetic engines. 2,942,455, 7–5–60, Cl. 60—39.24.

Wilson, Rosser L.: *See*—
Salak, Michael, Keating, and Wilson. 2,943,713.

Wingard, Henry S.: *See*—
Cole, Thomas M., and Wingard. 2,944,129.

Winkler, Alvin L.: *See*—
Hall, Marchand R., and Winkler. 2,945,535.

Winston, Larry S.: *See*—
Greer, Edward M., Kendall, and Winston. 2,943,635.

Winther, Jerrold B., to Eaton Mfg. Co. Dynamometer. 2,943,481, 7–5–60, Cl. 73—116.

Wisner, Kenneth R., to Curtiss-Wright Corp. Method of making magnetic recording units. 2,943,564, 7–5–60, Cl. 29—155.59.

Witter, Mathias. Protective device. 2,943,866, 7–5–60, Cl. 200—150.

Wittren, Richard A., to Deere & Co. Hydraulic control system. 2,943,500, 7–5–60, Cl. 74—334.

Woldring, Egbert, M. De Graaf, and J. C. Baxter, to The Rapids-Standard Co., Inc. Caster truck wheels. 2,943,889, 7–5–60, Cl. 301—63.

Wolf, Jacques, & Co.: *See*—
Sellet, Lucien. 2,944,046.

Wolfe, Richard C., to United States of America, Navy. Ordnance exploding mechanism. 2,943,569, 7–5–60, Cl. 102—16.

Wolferman, Raymond E., 15% to C. F. Bender and J. Dean. Ice chipping machine. 2,943,462, 7–5–60, Cl. 62—354.

Wong, Herbert K., to University of Illinois Foundation. Ceiling structure. 2,943,367, 7–5–60, Cl. 20—4.

Wood, Marion L.: *See*—
Henle, Robert A., and Wood. 2,943,791.

Wood, William L.: *See*—
Gray, James H., and Wood. 2,943,431.

Woodward Governor Co.: *See*—
Plummer, Harland C. 2,943,607.

Woollett, Ralph, and G. Boast, to F.H.F. Machinery Mfg. Co. Ltd. Warp knitting machines. 2,943,468, 7–5–60, Cl. 66—86.

Worst, Joseph C., to General Electric Co. Combination washer-dryer. 2,943,473, 7–5–60, Cl. 68—12.

Wright, Lawrence T.: *See*—
Blikkeen, Harold A., Randall, and Wright. 2,943,674.

Wright, William B., Jr., R. A. Hardy, Jr., and H. J. Brabander, to American Cyanamid Co. Dipheayl alkylenediamines and methods of preparing the same. 2,944,081, 7–5–60, Cl. 260—562.

Wrob, Ronald M., D. T. Carlson, and F. N. Stephens, to Hallmark Cards, Inc. Embossing apparatus. 2,943,568, 7–5–60, Cl. 101—23.

Wultsch, Ferdinand. Highly effective device for wet-separation. 2,943,800, 7–5–60, Cl. 241—42.

Wurzburger, Paul D.: *See*—
St. Clair, Theodore A. 2,943,871.

Wyandotte Chemicals Corp.: *See*—
Patton, John T., Jr. 2,944,080.

Wylie, John R.: *See*—
Gray, Philip F., Stone, and Wylie. 2,945,941.

Yahnke, Grace: *See*—
Yahnke, James G. 2,943,795.

Yahnke, James G., deceased: G. Yahnke, executrix. Spraying device. 2,943,795, 7–5–60, Cl. 239—128.

Yamazaki, Shigeo: *See*—
Tanaka, Isokazu, Kurimura, and Yamazaki. 2,944,219.

Yearout, Dean K., and H. L. Jorgina, to United States of America, Atomic Energy Commission. Dual-ridge antenna. 2,944,258, 7–5–60, Cl. 343—767.

Young, Leo: *See*—
Howell, Ronald T. A., and Young. 2,944,221.

Zabor, Robert C.: *See*—
Starnes, William C., and Zabor. 2,944,097.

Zeisloft, Harry C.: *See*—
Dietrich, Howard H., Hiller, Lay, Rowe, and Zeisloft. 2,943,441.

Zeiss, Carl: *See*—
Opitz, Wolfgang, Spruck, and Steigerwald. 2,944,172.

Zimmer, John C.: *See*—
Ulsheimer, Clifford J., and Zimmer. 2,944,021.
Ulsheimer, Clifford J., and Zimmer. 2,944,022.

Zink, Harold F., to Owens-Illinois Glass Co. Glass conveying device and method of making same. 2,943,358, 7–5–60, Cl. 18—47.5.

Zorn, Werner: *See*—
Loewe, Siegmund, and Zorn. 2,943,808.

Zuhn, Arthur A., to Caterpillar Tractor Co. Starting engine with hydraulic drive and means to preheat main engine. 2,943,617, 7–5–60, Cl. 123—179.

CLASSIFICATION OF PATENTS

ISSUED JULY 5, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 44. 4: 2,943,327
2,943,328
141: 2,943,329
2— 125: 2,943,330
142: 2,943,331
221: 2,943,332
5— 18: 2,943,333
310: 2,943,334
10— 155: 2,943,335
11— 1: 2,943,336
12— 86. 7: 2,943,337
13— 10: 2,944,099
2,944,100
15— 105: 2,943,338
118: 2,943,339
119: 2,943,340
202: 2,943,341
250. 19: 2,943,342
250. 5: 2,943,343
258: 2,943,344
16— 197: 2,943,345
17— 11: 2,943,346
18— 4: 2,943,347
5: 2,943,348
2,943,349
8: 2,943,350
13: 2,943,351
2,943,352
17: 2,943,353
21: 2,943,354
47. 5: 2,943,355
2,943,356
55: 2,943,357
56: 2,943,358
59: 2,943,359
19— 99: 2,943,360
131: 2,943,361
2,943,362
135: 2,943,363
2,943,364
155: 2,943,365
20— 1: 2,943,366
4: 2,943,367
21— 2. 7: 2,943,909
22— 64: 2,943,368
65: 2,943,369
94: 2,943,370
23— 2: 2,943,910
3: 2,943,911
23: 2,943,912
58: 2,943,913
89: 2,943,914
106: 2,943,915
205: 2,943,916
210: 2,943,917
222. 5: 2,943,918
255: 2,943,919
284: 2,943,920
288: 2,943,921
2,943,922
312: 2,943,923
24— 16: 2,943,371
66: 2,943,372
216: 2,943,373
25— 66: 2,943,374
26— 68: 2,943,375
27— 1: 2,943,376
28— 1: 2,943,377
78: 2,943,378
79: 2,943,379
80: 2,943,380
29— 1. 1: 2,943,381
25. 13: 2,943,392
95. 1: 2,943,393
155. 59: 2,943,394
213: 2,943,395
401: 2,943,396
471. 1: 2,943,397
471. 5: 2,943,398
30— 16: 2,943,389
43: 2,943,390
91: 2,943,391
261: 2,943,392
33— 32: 2,943,393
147: 2,943,394
164: 2,943,395
174: 2,943,396
205. 5: 2,943,397
225: 2,943,398
35— 9: 2,943,399
2,943,400
12: 2,943,401
2,943,402
9: 2,943,403
42: 2,943,404
71: 2,943,405
37— 2: 2,943,406
144: 2,943,407
40— 32: 2,943,408
62: 2,943,409
106. 1: 2,943,410
42— 66: 2,943,411
69: 2,943,412
43— 21: 2,943,413
25. 2: 2,943,414
44— 66: 2,943,924
2,943,925
46— 26: 2,943,415
34: 2,943,416
76: 2,943,417
244: 2,943,418
47— 38: 2,943,419
60: P.P.1,957
49— 67: 2,943,420
50— 4: 2,943,421
13: 2,943,592
51— 27: 2,943,422
34: 2,943,423
2,943,424
165: 2,943,425
198: 2,943,426
289: 2,943,936
52— 5: 2,943,927
53— 29: 2,943,427
59: 2,943,428
182: 2,943,429
56— 1: 2,943,430
50: 2,943,431
328: 2,943,432
57— 34: 2,943,433
142: 2,943,434
58— 2: 2,943,435
59— 77: 2,943,436
79: 2,943,437
60— 12: 2,943,438
35. 4: 2,943,439
35. 8: 2,943,440
35. 54: 2,943,443
2,943,444
35. 6: 2,943,441
2,943,442
39. 09: 2,943,445
2,943,446
39. 28: 2,943,447
2,943,448
39. 32: 2,943,449
39. 34: 2,943,450
53: 2,943,451
62— 3: 2,943,452
6: 2,943,453
51: 2,943,454
77: 2,943,455
138: 2,943,456
184: 2,943,457
204: 2,943,458
217: 2,943,459
272: 2,943,460
354: 2,943,461
2,943,462
64— 9: 2,943,463
14: 2,943,464
24: 2,943,465
30: 2,943,466
66— 15: 2,943,467
86: 2,943,468
156: 2,943,469
191: 2,943,470
67— 7. 1: 2,943,471
68— 12: 2,943,472
2,943,473
18: 2,943,474
71— 64: 2,943,928
73— 15: 2,943,475
32: 2,943,476
37. 5: 2,943,477
76: 2,943,478
2,943,479
88. 5: 2,943,480
116: 2,943,481
178: 2,943,482
194: 2,943,483
197: 2,943,484
72— 169: 2,943,485
228: 2,943,486
231: 2,943,487
306. 5: 2,943,488
418: 2,943,489
421. 5: 2,943,490
477: 2,943,491
480: 2,943,492
502: 2,943,493
74— 5. 4: 2,943,494
16: 2,943,495
17. 8: 2,943,496
23: 2,943,497
106: 2,943,498
2,943,499
230. 17: 2,943,499
234: 2,943,500
335: 2,943,501
339: 2,943,502
359: 2,943,503
361: 2,943,504
366: 2,943,505
414: 2,943,506
421: 2,943,507
424. 5: 2,943,508
462: 2,943,509
485: 2,943,510
526: 2,943,511
578: 2,943,512
640: 2,943,513
663: 2,943,514
730: 2,943,515
732: 2,943,516
750: 2,943,517
761: 2,943,518
789: 2,943,519
75— 9: 2,943,929
80: 2,943,930
84. 5: 2,943,931
122: 2,943,932
216: 2,943,933
79— 8: 2,943,520
84— 42: 2,943,521
53: 2,943,522
63: 2,943,523
126: 2,943,524
25: 2,943,525
86— 388: 2,943,526
403: 2,943,527
88— 62: 2,943,528
90— 1: 2,943,529
2,943,530
14: 2,943,531
15: 2,943,532
2,943,533
17: 2,943,534
97: 2,943,535
2,943,536
90— 1. 4: 2,943,537
4: 2,943,538
98— 93: 2,943,539
94: 2,943,540
94— 50: 2,943,541
95— 1. 1: 2,943,542
10: 2,943,543
2,943,544
2,943,545
2,943,546
11: 2,943,546
12: 2,943,547
16: 2,943,548
44: 2,943,549
62: 2,943,550
64: 2,943,551
2,943,552
75: 2,943,553
2,943,554
89: 2,943,555
96— 53: 2,943,934
60: 2,943,935
75: 2,943,936
87: 2,943,937
99— 2: 2,943,938
28: 2,943,939
48: 2,943,940
2,943,941
2,943,942
148: 2,943,943
172: 2,943,944
289: 2,943,556
421: 2,943,557
100— 1: 2,943,558
101— 19: 2,943,559
101— 25: 2,943,560
40: 2,943,561
42: 2,943,562
69: 2,943,563
88: 2,943,564
127. 1: 2,943,565
195: 2,943,566
377: 2,943,567
102— 7: 2,943,568
16: 2,943,569
19. 2: 2,943,570
22: 2,943,571
70: 2,943,572
78: 2,943,573
103— 37: 2,943,574
42: 2,943,575
46: 2,943,576
148: 2,943,577
242: 2,943,578
104— 94: 2,943,579
162: 2,943,580
105— 150: 2,943,581
106— 14: 2,943,945
195: 2,943,946
205: 2,943,947
288: 2,943,948
111— 5: 2,943,583
67: 2,943,584
112— 35: 2,943,585
218: 2,943,586
113— 51: 2,943,587
114— 23: 2,943,588
203: 2,943,589
230: 2,943,590
235: 2,943,591
115— 17: 2,943,592
19: 2,943,593
116— 110: 2,943,594
116: 2,943,595
124: 2,943,596
131: 2,943,597
117— 11: 2,943,949
17. 5: 2,943,950
22: 2,943,951
36: 2,943,952
43: 2,943,953
64: 2,943,954
121: 2,943,955
212: 2,943,956
223: 2,943,957
118— 67: 2,943,598
308: 2,943,599
119— 18: 2,943,600
78: 2,943,601
150: 2,943,602
121— 30: 2,943,603
38: 2,943,604
2,943,605
41: 2,943,606
2,943,607
132: 2,943,608
122— 11: 2,943,609
46: 2,943,610
90: 2,943,611
2,943,612
2,943,613
139: 2,943,614
140: 2,943,615
2,943,616
179: 2,943,617
198: 2,943,618
124— 16: 2,943,619
128— 24. 1: 2,943,620
33: 2,943,621
80: 2,943,622
153: 2,943,623
218: 2,943,624
295: 2,943,625
328: 2,943,626
416: 2,943,627
418: 2,943,628
130— 30: 2,943,629
2,943,630
131— 2: 2,943,958
2,943,959
133— 3: 2,943,631
134— 155: 2,943,632
174: 2,943,633
135— 1: 2,943,634
137— 154: 2,943,635
220: 2,943,636
137— 224: 2,943,637
408: 2,943,638
515. 7: 2,943,639
594: 2,943,640
138— 26: 2,943,641
31: 2,943,642
46: 2,943,643
86: 2,943,644
139— 89: 2,943,645
151: 2,943,646
159: 2,943,647
165: 2,943,648
217: 2,943,649
140— 119: 2,943,650
141— 74: 2,943,651
144— 32: 2,943,652
92: 2,943,653
134: 2,943,654
156: 2,943,655
208: 2,943,656
145— 125: 2,943,657
146— 38: 2,943,659
148— 12. 7: 2,943,960
150— 3: 2,943,660
151— 38: 2,943,661
153— 208: 2,943,662
356: 2,943,663
359: 2,943,664
431: 2,943,665
155— 48: 2,943,666
80: 2,943,667
156— 2. 7: 2,943,962
112: 2,943,671
159— 2. 74: 2,943,964
10: 2,943,668
45: 2,943,965
160— 200: 2,943,675
308: 2,943,676
162— 181: 2,943,970
2,943,971
319: 2,943,677
321: 2,943,678
166— 21: 2,943,679
2,943,680
38: 2,943,681
77: 2,943,682
106: 2,943,683
187: 2,943,684
167— 22: 2,943,972
2,943,973
2,943,974
33: 2,943,976
2,943,977
58: 2,943,978
2,943,979
65: 2,943,980
74: 2,943,981
93: 2,943,982
170—135. 4: 2,943,685
135. 72: 2,943,686
172— 125: 2,943,687
212: 2,943,688
227: 2,943,689
376: 2,943,690
572: 2,943,691
657: 2,943,692
174— 99: 2,944,101
152: 2,944,102
167: 2,944,103
178— 4. 1: 2,944,104
5. 4: 2,944,105
2,944,106
6. 6: 2,944,107
2,944,108
7. 4: 2,944,109
23: 2,944,110
35: 2,944,111
179—15. 55: 2,944,113
18: 2,944,114
2,944,115
100. 1: 2,944,116
100. 41: 2,944,117
2,944,118
111: 2,944,119
180— 89: 2,943,683
181— 5: 2,943,684
50: 2,943,685
182— 196: 2,943,686
183— 7: 2,943,687
37: 2,943,688
71: 2,943,689
184— 55: 2,943,705
185— 40: 2,943,706
186— 1: 2,943,707
187— 85: 2,943,708
188— 62: 2,943,709
82. 2: 2,943,710
100: 2,943,711
234: 2,943,712
251: 2,943,713
304: 2,943,714
2,943,715
189— 1: 2,943,716
2,943,717
34: 2,943,718
192— 3. 5: 2,943,719
193— 8: 2,943,720
195— 98: 2,943,983
197— 133: 2,943,721
198— 32: 2,943,722
33: 2,943,723
34: 2,943,724
88: 2,943,725
138: 2,943,726
188: 2,943,727
204: 2,943,728
200— 5: 2,944,120
11: 2,944,121
31: 2,944,122
44: 2,944,123
82: 2,944,125
98: 2,944,126
112: 2,944,127
116: 2,944,128
2,944,129
136. 5: 2,944,130
166: 2,944,131
179: 2,944,132
204— 1: 2,943,984
67: 2,943,985
154: 2,943,986
162: 2,943,987
163: 2,943,988
201: 2,943,989
205— 7: 2,943,729
206— 42: 2,943,730
46: 2,943,731
56: 2,944,124
59: 2,943,732
62: 2,943,733
208— 18: 2,943,990
21: 2,943,991
33: 2,943,992
48: 2,943,993
2,943,994
53: 2,943,995
62: 2,943,996
64: 2,943,997
65: 2,943,998
2,943,999
2,944,000
80: 2,944,001
91: 2,944,002
93: 2,944,003
100: 2,944,004
109: 2,944,005
2,944,006
127: 2,944,007
140: 2,944,008
155: 2,944,009
177: 2,944,010
189: 2,944,011
212: 2,944,012

208—	351:	2,944,013	220—	101:	2,943,784	220—	200:	2,944,154	220—397.3:		2,944,057
	353:	2,944,014		139:	2,943,785		213:	2,944,155	397.45:		2,944,069
	354:	2,944,015	225—	50:	2,943,786		319:	2,944,156			2,944,070
	354:	2,944,016		61.7:	2,943,787		333:	2,944,157	397.5:		2,944,068
208—	144:	2,943,734		61.9:	2,943,788			2,944,158	404.5:		2,944,071
		2,943,735		88:	2,943,789			2,944,159	436:		2,944,072
	441:	2,943,736		170:	2,943,790	251—	110:	2,943,837	438:		2,944,073
210—	75:	2,943,737		176:	2,943,791		317:	2,943,838	451:		2,944,074
	155:	2,943,738	236—	12:	2,943,792	252—	8.5:	2,944,018			2,944,075
	223:	2,943,739	238—	10:	2,943,793			2,944,019	462:		2,944,076
	223:	2,943,740	240—	33:	2,943,794		32.7:	2,944,020			2,944,077
	300:	2,944,017		128:	2,943,795		33.4:	2,944,021	470:		2,944,078
211—	37:	2,943,741		342:	2,943,796			2,944,022	518:		2,944,079
	49:	2,943,742		395:	2,943,797			2,944,023	543:		2,944,080
	89:	2,943,743		550:	2,943,798		40.6:	2,944,024	562:		2,944,081
	90:	2,943,744		588:	2,943,799		51.4:	2,944,025	583:		2,944,082
		2,943,745	240—	1.4:	2,944,142		63.2:	2,944,026	590:		2,944,083
	119.05:	2,943,746		8.44:	2,944,144		63.3:	2,944,027	606.5:		2,944,084
	153:	2,943,747		7.55:	2,944,145		151:	2,944,028			2,944,085
214—	1:	2,943,748	241—	43:	2,943,800		305:	2,944,029	610:		2,944,086
		2,943,749		134:	2,943,801		366:	2,944,030	646:		2,944,087
		2,943,750		188:	2,943,802		421:	2,944,031	662.5:		2,944,088
		2,943,751	242—	43.2:	2,943,803		441:	2,944,032	668:		2,944,089
	17:	2,943,752		55.12:	2,943,804	250—	29:	2,943,839			2,944,090
	317:	2,943,753		55.13:	2,943,805		39.15:	2,943,840	674:		2,944,091
		2,943,754		55.18:	2,943,853	257—	198:	2,943,841	676:		2,944,092
	572:	2,943,755		88:	2,943,805		270:	2,943,842			2,944,093
217—	60:	2,943,756		72.1:	2,943,807		280:	2,943,843	677:		2,944,094
219—10.55:		2,944,133		74.1:	2,943,808		312:	2,943,844	681.5:		2,944,095
	20:	2,944,134		75.51:	2,943,809			2,943,845	683.05:		2,944,096
		2,944,135		88:	2,943,810	250—	109:	2,943,846			2,944,097
		2,944,136		84.1:	2,943,811	260—	3.1:	2,944,023	683.08:		2,944,098
		2,944,137		180.2:	2,943,812		9:	2,944,024	684—	20:	2,943,847
	94:	2,944,138		187:	2,943,813		12:	2,944,025		30:	2,943,848
	58:	2,944,139	243—	16:	2,943,814			2,944,026		31:	2,943,849
	139:	2,944,140	244—	14:	2,943,815		22:	2,944,027	689—	10:	2,943,850
	131:	2,944,141		88:	2,943,816		35.7:	2,944,028	697—	46:	2,943,851
	146:	2,944,142		90:	2,943,817		39.5:	2,944,029	701—	2.5:	2,943,852
220—	3.9:	2,943,757			2,943,818		39.7:	2,944,040	702—	33:	2,943,854
	4:	2,943,758			2,943,819		51.6:	2,944,041	703—	1:	2,943,855
	55:	2,943,759			2,943,820		61.5:	2,944,042		33:	2,943,856
	75:	2,943,760		82:	2,943,821		65.5:	2,944,043		42:	2,943,857
	90:	2,943,761		77:	2,943,822			2,944,044	118:		2,943,858
	105:	2,943,762			2,943,823		65.75:	2,944,045	122:		2,943,859
	115:	2,943,763			2,943,824		67.5:	2,944,046	274—	4:	2,943,860
221—	68:	2,943,764		90:	2,943,825		88.5:	2,944,047	279—	9:	2,943,861
225—	110:	2,943,765		104:	2,943,826		94.9:	2,944,048	279—	6:	2,943,862
	180:	2,943,766		111:	2,943,827			2,944,049	280—	70.1:	2,943,863
	207:	2,943,767		117:	2,943,828		178:	2,944,050		104.5:	2,943,864
	357:	2,943,768		155:	2,943,829		230:	2,944,051			2,943,865
	364:	2,943,769	249—	92:	2,943,830		239.55:	2,944,052		150:	2,943,866
	446:	2,943,770		93:	2,943,831		343:	2,944,053		443:	2,943,867
	512:	2,943,771		43:	2,943,832			2,944,054	285—	62:	2,943,868
220—	67:	2,943,772		98:	2,943,833		347.8:	2,944,055		90:	2,943,869
	68:	2,943,773		308:	2,943,834		351:	2,944,056		220:	2,943,870
	93:	2,943,774		316:	2,943,835		355.5:	2,944,057		342:	2,943,871
224—	5:	2,943,775	249—	9:	2,943,836		393.2:	2,944,058	286—	11:	2,943,872
229—	8.5:	2,943,776	250—	41.2:	2,944,146		397:	2,944,059		11.11:	2,943,873
	17:	2,943,779		60.6:	2,944,147		398:	2,944,060		26:	2,943,874
	29:	2,943,780		71:	2,944,148		399:	2,944,061	287—	55:	2,943,875
	68:	2,943,781		83.1:	2,944,150		399.2:	2,944,062		110:	2,943,876
230—	20:	2,943,782		83.3:	2,944,151		319:	2,944,064	290—	1:	2,944,160
	101:	2,943,783		83.6:	2,944,152		226:	2,944,065	293—	28:	2,943,877
				100:	2,944,153		347.8:	2,944,066		44:	2,943,878
293—	44:	2,943,879	317—	246:	2,944,199						
	201:	2,943,880		262:	2,944,200						
	251.5:	2,943,881	318—	28:	2,944,201						
	262:	2,943,882		39:	2,944,202						
294—	49:	2,943,883		489:	2,944,203						
296—	90:	2,943,884	320—	1:	2,944,204						
	102:	2,943,885	321—	69:	2,944,205						
298—	85:	2,943,886	323—	16:	2,944,206						
301—	37:	2,943,887		44:	2,944,207						
		2,943,888		45:	2,944,208						
	62:	2,943,889		69:	2,944,209						
302—	14:	2,943,890		89:	2,944,210						
	26:	2,943,891		94:	2,944,211						
306—	3:	2,943,892	324—	5:	2,944,212						
307—	53:	2,944,161		54:	2,944,213						
		2,944,162		70:	2,944,214						
		2,944,163		81:	2,944,215						
	58.5:	2,944,164		122:	2,944,216						
		2,944,165	326—	3:	2,944,217						
		2,944,166		26:	2,944,218						
		2,944,167		134:	2,944,219						
	117:	2,944,168	330—	63:	2,944,220						
308—	73:	2,943,893		66:	2,944,221						
	215:	2,943,894		128:	2,944,222						
309—	5:	2,943,895		159:	2,944,223						
310—	83:	2,944,169	331—	83:	2,944,224						
	86:	2,944,170		113:	2,944,225						
	211:	2,944,171	332—	19:	2,944,226						
311—	19:	2,943,896		27:	2,944,227						
	85:	2,943,897		48:	2,944,228						
	115:	2,943,898	333—	26:	2,944,229						
312—	3:	2,943,899		27:	2,944,230						
	48:	2,943,900		31:	2,944,231						
	239:	2,943,901		73:	2,944,232						
	265:	2,943,902		82:	2,944,233						
				93:	2,944,234						
	311:	2,943,903	336—	199:	2,944,235						
313—	7:	2,944,172	338—	26:	2,944,236						
	77:	2,944,173		77:	2,944,237						
		2,944,174		131:	2,944,238						
		2,944,175		322:	2,944,239						
	93:	2,944,176	339—	64:	2,944,240						
	168:	2,944,177		91:	2,944,241						
	141:	2,944,178		95:	2,944,242						
	314:	2,944,179		109:	2,944,243						
	341:	2,944,180	340—	21:	2,944,244						
315—	3.6:	2,944,181		162:	2,944,245						
		2,944,182		163:	2,944,247						
	5.46:	2,944,183		173:	2,944,246						
	9.5:	2,944,184		174:	2,944,248						
	97:	2,944,185			2,944,249						
	98:	2,944,187		201:	2,944,250						
	83:	2,944,188		213:	2,944,251						
	84.6:	2,944,189		276:	2,944,252						
	168:	2,944,190	343—	8:	2,944,253						
	169:	2,944,191		11:	2,944,254						
	198:	2,944,192		106:	2,944,255						
	241:	2,944,193		112:	2,944,256						
316—	27:	2,943,904		749:	2,944,257						
317—	123:	2,944,194		767:	2,944,258						
	184:	2,944,195	346—	8:	2,943,905						
	230:	2,944,196		22:	2,943,906						
	234:	2,944,197		74:	2,943,907						
	242:	2,944,198			2,943,908						

Classification of Designs

D 1—	12:	188,305	D14—	30:	188,317	D20—	1:	188,328	D38—	10:	188,339
D 3—	11:	188,307	D15—	11:	188,318	D23—	8:	188,329	D44—	15:	188,329
D 4—	3:	188,308			188,319		14:	188,330	D45—	4:	188,340
D 9—	2:	188,309	D18—	2:	188,320			188,331		5:	188,342
D12—	2:	188,310	D24—	1:	188,321		18:	188,332	D50—	4:	188,343
D13—	1:	188,311	D25—	5:	188,322	D24—	5:	188,333	D52—	1:	188,344
	7:	188,312		10:	188,323		15:	188,334			188,345
D14—	2:	188,313		12:	188,324			188,335		3:	188,346
		188,314			188,325			188,336		7:	188,347
		188,315		14:	188,326	D27—	1:	188,337			
	6:	188,316	D29—	23:	188,327						

D56—	1:	188,348	D70—	1:	188,355
		188,349	D71—	1:	188,356
	2:	188,350			188,360
	4:	188,351	D81—	25:	188,361
D58—	2:	188,352			188,362
	9:	188,353	D85—	8:	188,363
		188,354		10:	188,364
	25:	188,355	D91—	1:	188,365
D61—	1:	188,356	D92—	1:	188,366
D62—	4:	188,357			188,367

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 5, 1960 Volume 756 Number 1

TRADEMARKS

NOTICES

TITLE 37—PATENTS, TRADEMARKS, AND COPYRIGHTS

Chapter 1—Patent Office, Department of Commerce

PART 1—RULES OF PRACTICE IN PATENT CASES

PART 2—RULES OF PRACTICE IN TRADEMARK CASES

FEES AND CHARGES

The following amendments are made to take effect thirty days after publication in the Federal Register. Notice and public procedure are deemed unnecessary as the changes relate to minor adjustment of fee items.

1. In § 1.21 delete paragraph (c); amend paragraphs (a), (b) and (t); and add paragraphs (u) and (v), as follows:

§ 1.21 *Patent and miscellaneous fees and charges.*

• • • • • • •

(a) For typewritten copies of records, for each page produced (double-spaced) or fraction thereof..... $1.00

(b) For photocopies or other reproductions of records, drawings, or printed material, per page of material copied..... .30

(c) [Deleted]

• • • • • • •

(t) For special service to expedite furnishing items or services ahead of regular order:

On orders for copies of U.S. patents and trademark registrations, in addition to the charge for the copies, for each copy ordered..... .25

On all other orders or requests for which special service facilities are available, in addition to the regular charge, a special service charge equal to the amount of regular charge; minimum special service charge per order or request..... 1.00

(u) For air mail delivery:

On "special service" orders to destinations to which U.S. domestic air mail postage rates apply, no additional charge.

On regular service orders to any destination and "special service" orders to destinations other than those specified in the preceding subparagraph, an additional charge equal to the amount of air mail postage. (Available only when the ordering party has, with the Patent Office, a deposit account, § 1.25.)

(v) For items and services, that the Commissioner finds may be supplied, for which fees are not specified by statute or by this section, such charges as may be determined by the Commissioner with respect to each such item or service.

(Sec. 1, 66 Stat. 793; 35 U.S.C. 6. Interprets or applies sec. 1, 66 Stat. 796; 35 U.S.C. 41)

2. In § 2.6 amend paragraph (b) and delete paragraph (c) as follows:

§ 2.6 *Trademark fees.*

• • • • • • •

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]		10,472
Date of oldest new application		Jan. 5, 1960
Date of oldest amended application		Dec. 1, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 38, 40, 41, 42, 43, 44, 50	1-5-60	12-1-59
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 39, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-6-60	12-9-59
Renewals (All Classes)	5-5-60	.....
Sec. 12 (c) Publications (All Classes)	5-3-60	.....

Applications filed during the month of May 1960—2,017

Registrations Issued..... 431—No. 700,285 to No. 700,715
Renewals Issued..... 90

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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(b) For photocopies or other reproductions of records, drawings, or printed material, per page of material copied ..... .35

(c) [Deleted]

(Sec. 41, 60 Stat. 440, sec. 1, 66 Stat. 792; 15 U.S.C. 1123, 35 U.S.C. 6. Interprets or applies sec. 1, 66 Stat. 796; 35 U.S.C. 41)

ROBERT C. WATSON,
Commissioner of Patents.

Approved: May 23, 1960.

FREDERICK H. MUELLER,
Secretary of Commerce.

[F.R. Doc. 60-4796; Filed, May 26, 1960; 8:48 a.m.]

Published in 25 F.R. 4675, May 27, 1960.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 382,940 (PENN-HILLS), Industrial Oil Corporation, Motor lubricating oils, filed May 9, 1960, D.C., E.D. Pa. (Philadelphia), Doc. 28042, *Industrial Oil Corporation et al. v. Regal Petroleum Products Co., Inc. et al.*

Reg. No. 344,058 (ROTO ROOTER), Roto-Rooter Corporation, Sewer and drain cleaning machines; Reg. No. 607,731, same, Municipal, industrial, and domestic sewer, drain and pipe cleaning service, filed May 9, 1960, D.C.N.J. (Newark), Doc. 444/60, *Roto-Rooter Corporation v. Louis Singer Drain Service et al.*

Reg. No. 599,033 (EVERGLAZE), J. Bancroft & Sons Co., Cotton piece goods; Reg. No. 605,399, same, Fabrics in the piece made of cotton, of rayon, of acetate, of synthetic fibers and of mixtures thereof, filed Mar. 17, 1959, D.C., S.D.N.Y., Doc. 144/120, *Joseph Bancroft & Sons Co. v. Pleasant Valley Finishing Co., Inc.* Consent judgment May 13, 1960.

Reg. No. 368,415 (TRIUMPH), Triumph Hosiery Mills, Inc., Hosiery and stockings, filed May 6, 1960, D.C., S.D.N.Y., Doc. 1849, *Triumph Hosiery Mills, Inc. v. Triumph International Corporation and Triumph of Europe, Inc.*

Reg. No. 419,901 (HR), Hammel, Rigiander & Co., Inc., Watchmakers' and jewelers' tools—namely, tweezers, pliers, jewel setters, clamps to hold watch parts, etc., filed Apr. 15, 1960, D.C., S.D.N.Y., Doc. 60/1572, *Hammel Rigiander & Co., Inc. v. P. Mrozinski.* Notice of voluntary dismissal May 24, 1960.

Reg. No. 444,788 (HERITAGE), Heritage Furniture, Inc., Upholstered furniture for living rooms—namely, sofas, sofa beds, day beds, etc.; Reg. No. 599,971, same, Upholstered wood, plastic, and metal furniture for household and public use, etc., filed May 9, 1960, D.C.N.J. (Newark), Doc. 435/60, *Heritage Furniture, Inc. v. Heritage House, Inc.*

Reg. No. 602,000 (ARTIC FLO-), Prairie States Oil & Grease Company, Anti-freeze coolant for internal combustion engines, filed May 24, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60-C-509, *Prairie States Oil & Grease Co. v. Therm-X Chemical & Oil Corp. et al.*

Reg. No. 607,731. (See Reg. No. 344,058.)

Reg. No. 599,971. (See Reg. No. 444,792.)

Reg. No. 600,018 (PLAYBOY), HMH Publishing Co., Inc., Monthly magazine, filed May 17, 1960, D.C., E.D. Mich. (Detroit), Doc. 20119, *HMH Publishing Co., Inc. v. David Foster.*

Reg. No. 601,890 (THE FISHER), Fisher Radio Corporation, Radio and television receivers, phonographs, etc., filed Apr. 18, 1958, D.C., S.D.N.Y., Doc. 132/222, *Fisher Radio Corporation v. Fisher Cabinet Corporation et al.* Consent judgment; defendants have infringed; injunction granted May 11, 1960.

Reg. No. 617,121 (VOLKSWAGEN), Volkswagenwerk G.m.b.H., Automobiles and trucks, air craft, boats, and parts and accessories for automobiles, etc.; Reg. No. 621,049 (VW AND DESIGN), same; Reg. No. 622,606, same, filed May 3, 1960, D.C. Colo. (Denver), Doc. 6782, *Volkswagenwerk G.m.b.H. et al. v. Joseph E. Frank.*

Reg. No. 621,049. (See Reg. No. 617,121.)

Reg. No. 622,606. (See Reg. No. 617,121.)

Reg. No. 605,399. (See Reg. No. 254,253.)

Reg. No. 602,000 (ROLLECTRIC), Sperry Rand Corporation, Electric shavers and parts thereof, filed May 12, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c781, *Sperry Rand Corporation v. Sunbeam Corporation.*

Reg. No. 624,514 (MOB STAPLES), Plymouth Cordage Industries, Inc., Staples, filed May 14, 1960, D.C.N.H. (Concord), Doc. 2134, *Plymouth Cordage Industries, Inc. v. King Manufacturing Company, Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 48,775. Northrup, King & Co., Minneapolis, Minn. Filed Mar. 31, 1958.

1049

For Alfalfa Seed.
First use Sept. 20, 1957.

SN 54,325. National Rosin Oil Products, Inc., Savannah, Ga. Filed June 26, 1958.

NROP

For Rosin Oils, Rosin Pitches, Rosin, Partly Prepared Rosin, Oxidised Rosin, and Pine Tree Extractive Resinous Material Obtained by Solvent Extraction of Stump Wood Without Destructive Distillation.
First use June 12, 1958.

SN 59,257. Raymond R. Brueske, d.b.a. Mallard Seed Co., Plainview, Minn. Filed Sept. 22, 1958.



The drawing is lined for blue, green, and violet.
For Hybrid Seed Corn.
First use Oct. 1, 1956.

SN 66,411. Charco, Inc., Denver, Colo. Filed Jan. 26, 1959.



The drawing is lined for red.
For Charcoal Briquets.
First use on or about Dec. 5, 1958.

SN 67,561. Mutation Mink Breeders Association, Racine, Wis. Filed Feb. 11, 1959. COLLECTIVE MARK.

AEOLIAN

For Mink Fur Pelts.
First use on or about Dec. 8, 1958.

SN 70,064. General Electric Company, Schenectady, N.Y. Filed Mar. 23, 1959.

NSR

For Silicone Rubber.
First use Jan. 26, 1959.

SN 70,391. The Polymer Corporation, Reading, Pa. Filed Mar. 27, 1959.



Owner of Reg. No. 553,120.
For Synthetic Resins in the Form of Rods, Strips, Tubing, Tape, and Slabs; and in the Form of Industrial Molding Powders and Compounds, Coating Powders and Compounds, and Sintering Powders and Compounds.
First use in March 1955.

SN 71,706. Tyler Rose Mart, Inc., Tyler, Tex. Filed Apr. 16, 1959.

IMPERIAL ROSES

No claim is made to the word "Roses" apart from the mark as shown.
For Rose Bushes.
First use on or about July 1, 1952.

SN 72,803. Donovan Industries, Inc., New York, N.Y. Filed May 4, 1959.

CHANCELLOR CALF

The word "Calf" is claimed only in the association shown.
For Leather Goods Sold in the Hide or in the Piece.
First use Apr. 2, 1959.

SN 72,960. Lee Patten Seed Company, Jersey City, N.J. Filed May 5, 1959.

Super Sunny

For Mixed Grass Seed.
First use Mar. 15, 1959.

SN 74,859. A. F. Gallun & Sons Corporation, Milwaukee, Wis. Filed June 1, 1959.

STRATO CALF

The word "Calf" is disclaimed except in association with the other features of the mark.
For Leather.
First use May 18, 1959.

SN 75,696. Capitol Plastics Company, Lansing, Mich. Filed June 15, 1959.

CAP-LEX

For Extruded Plastic Sheet Material.
First use Mar. 24, 1959.

SN 77,194. Cinderella Coal Corporation, Huntington, W. Va. Filed July 7, 1959.

KENTUCKY CINDERELLA COAL

The words "Kentucky Coal" are disclaimed.
For Coal.
First use Dec. 26, 1958.

SN 77,400. United States Rubber Company, New York, N.Y. Filed July 9, 1959.

ENSOLEX

Owner of Reg. Nos. 569,399 and 674,363.
For Cellular Plastic Material in Shaped Extruded or Molded Form for Use in the Industrial Arts.
First use May 27, 1959.

SN 77,516. Coors Porcelain Company, Golden, Colo. Filed July 13, 1959.

SPACE AGE

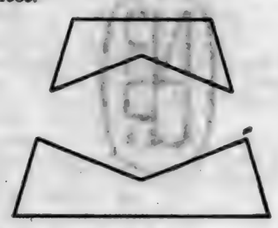
For High-Strength Corundum Type Alumina Materials Used in the Production of Mechanical and Electrical Equipment and Parts, Including Shaft and Bushing Assemblies, Sand Blast Nozzles, Pump Plungers, Metering Chokes, Check Valves, Tube Sheets, Mechanical Seal Rings, Metallized Tube Envelopes, Radomes, Nose Cones, and the Like.
First use June 4, 1956.

SN 78,617. Dreher Leather Mfg. Corp., New York, N.Y. Filed July 23, 1959.

STRAIGHT LACE

For Leather.
First use May 15, 1959.

SN 79,373. Avisun Corporation, Philadelphia, Pa. Filed Aug. 12, 1959.



For Synthetic Fibers.
First use Aug. 6, 1959.

SN 79,828. American Viscose Corporation, Philadelphia, Pa. Filed Aug. 19, 1959.

CELLAN

For Refined Particulate Form of Cellulose.
First use June 23, 1958.

SN 79,867. Shawinigan Resins Corporation, Springfield, Mass. Filed Aug. 19, 1959.

SHAWINIGAN RESINS

The word "Resins" is disclaimed apart from the mark as shown. Owner of Reg. No. 563,347.
For Synthetic Resins, Particularly Those Derived From Vinyl Acetate, in the Form of Powders, Granules, Lumps, Solutions or Emulsions, for General Use in the Industrial and Architectural Arts.
First use Mar. 20, 1937.

SN 82,527. Pennzoil Oil Company, New York, N.Y. Filed Oct. 1, 1959.

Jersey

For Vulcanizable Synthetic Rubber and Non-Vulcanizable Polymers.
First use Aug. 7, 1959.

SN 82,893. Courtaulds (Alabama) Inc., Le Moyne, Ala. Filed Oct. 8, 1959.

TOPEL



Owner of Reg. No. 676,515.
For Man-Made, Cross-Linked Cellulosic Fiber.
First use May 22, 1959.

SN 82,902. The Milwhite Co., Inc., Houston, Tex. Filed Oct. 9, 1959.

MIL-SORB

For Granular Calcined Fuller's Earth for Use as an Oil Absorbent.
First use Sept. 14, 1949.

SN 83,915. Snia Viscosa Società Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. Filed Oct. 23, 1959.

KOPLON

Priority claimed under Sec. 44(d) on Italian application filed Aug. 21, 1959; Reg. No. 145,872, dated Oct. 30, 1959.
For Viscose Staple.

SN 84,217. Albert Trostel & Sons Company, Milwaukee, Wis. Filed Nov. 27, 1959.

INSULATION

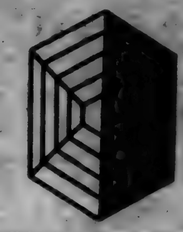
For Leather.
First use Feb. 24, 1956.

SN 84,218. Albert Trostel & Sons Company, Milwaukee, Wis. Filed Nov. 27, 1959.

THERMOTAN

For Leather.
First use Mar. 24, 1955.

SN 87,085. Stockholms Superfosfat Fabriks Aktiebolag, Stockholm, Sweden. Filed Dec. 16, 1959.



Owner of Swedish Reg. No. 80,937, dated Aug. 24, 1956.
For Synthetic Staple Fiber.

SN 88,054. Link Research Corporation, Beverly Hills, Calif. Filed Dec. 28, 1959.

MAGI-FOAM

For Foamed Type Plastics.
First use Nov. 24, 1959.

SN 88,527. Courtaulds (Alabama) Inc., Mobile, Ala. Filed Jan. 6, 1960.

CORVAL



Owner of Reg. No. 691,834.
For Man-Made, Cross-Linked Cellulosic Fiber.
First use Aug. 12, 1959.

SN 89,454. Pennsylvania Fluorocarbon Company, Inc., Philadelphia, Pa. Filed Jan. 21, 1960.

PENNTUBE

For Plastics in Tube Form for General Application and Use in the Industrial Arts.
First use Sept. 25, 1959.

SN 89,727. American Cyanamid Company, New York, N.Y. Filed Jan. 27, 1960.

CYANOCEL

Owner of Reg. Nos. 602,565, 662,769, and 610,790.
For Chemically Modified Cellulose.
First use Dec. 21, 1959.

SN 90,030. The Dow Chemical Company, Midland, Mich. Filed Feb. 1, 1960.

VORANATE

For Liquid Prepolymers Based on Polyether Polyols.
First use Mar. 20, 1956.

SN 90,032. The Dow Chemical Company, Midland, Mich. Filed Feb. 1, 1960.

VORANE

For Liquid Prepolymers Based on Polyether Polyols.
First use Dec. 12, 1958.

SN 90,492. Colab Resin Corporation, Tewksbury, Mass. Filed Feb. 8, 1960.

COLABCO

For Natural or Synthetic Resins.
First use July 3, 1959.

SN 90,634. Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio. Filed Feb. 9, 1960.



The drawing is lined for the colors blue and orange.
For Synthetic Rubbers and Natural Rubbers and Compositions Thereof.
First use on or about Sept. 21, 1956.

SN 92,638. Pemco Corporation, Baltimore, Md. Filed Mar. 11, 1960.



Owner of Reg. Nos. 146,847, 689,688, and others.
For Porcelain Enamel Frits, Ceramic Frits, and Clay.
First use Dec. 14, 1959.

SN 92,692. Armour and Company, Chicago, Ill. Filed Mar. 14, 1960.

AIRESKIN

For Upper Leather.
First use Feb. 9, 1960.

SN 92,941. Union Wadding Company, Pawtucket, R.I. Filed Mar. 15, 1960.



UNION

Owner of Reg. No. 692,979.
For Wadding With or Without Decorative Surfaces.
First use December 1954.

SN 93,750. Armour and Company, Chicago, Ill. Filed Mar. 28, 1960.

SHADOTIQUE

For Upper Leather.
First use Feb. 26, 1960.

Class 2—Receptacles

SN 69,978. Multi-Metex Corporation, Toledo, Ohio. Filed Mar. 20, 1959.

Pour-Easy

For Tubular Metal Pail Racks or Supports.
First use Feb. 16, 1959.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 84,635. Aristocrat Leather Products, Inc., New York, N.Y. Filed Nov. 5, 1959.

LETHAFLEX

For Wallets, Billfolds, and Ladies' Handbags.
First use Oct. 22, 1959.

Class 4—Abrasives and Polishing Materials

SN 79,565. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 14, 1959.

GY-POL

For Cleaners and Polishes, Particularly for Furniture.
First use July 28, 1959.

SN 79,566. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 14, 1959.

GY-WAX

For Waxes and Polishes, Particularly for Furniture.
First use July 28, 1959.

SN 85,846. Geigy Chemical Corporation, Ardsley, N.Y. Filed Nov. 23, 1959.

GY-WIX

For Waxes and Polishes, Particularly for Floors.
First use Sept. 11, 1959.

SN 88,237. Dura Commodities Corporation, New York, N.Y. Filed Dec. 30, 1959.

LEVOL

For Leveling Agent for Wax Emulsions.
First use November 1959.

SN 91,962. Norton Company, Troy, N.Y. Filed Mar. 1, 1960.

BEAR-TEX

Owner of Reg. Nos. 659,967, 665,900, and 670,066.
For Fibrous Buffing and Polishing Pads.
First use Sept. 15, 1959.

Class 5—Adhesives

SN 28,598. Emmett E. Hinson, Jr., d.b.a. Artop Products Company, Dallas, Tex. Filed Apr. 22, 1957. CONCURRENT USE to be restricted to Texas, Arkansas, and Oklahoma. Concurrent use with Artop Products, Inc. restricted to California, Arizona, and Nevada.

ARTOP

For Pressure Contact Adhesives Suitable for Bonding Plastics, Woods, Rubber, Glass, Metal, Masonry, and Cloth.
First use Sept. 10, 1956.

Class 6—Chemicals and Chemical Compositions

SN 57,460. B. T. Babbitt, Inc., New York, N.Y., assignee of Bostwick Laboratories, Inc., Bridgeport, Conn. Filed Aug. 19, 1958.

HEP

Owner of Reg. Nos. 506,569, 590,371, and 359,552.
For Insecticides, Insect Killer, Bug Killer, Moth Proofer, Ant and Roach Spray, Insect Repellent, and Charcoal Lighter.
First use Jan. 3, 1948, on insecticides.

SN 58,630. Hayes-Simmons Chemical Co., Mission, Tex. Filed Sept. 9, 1958.

RAT-A-KATE

For Rodenticides.
First use Aug. 6, 1958.

SN 58,756. Sun Chemical Corporation, New York, N.Y. Filed Sept. 10, 1958.

SYMENTARD

For Concrete Densifier and Retarder.
First use Aug. 1, 1958.

SN 60,678. Quaker Chemical Products Corporation, Conshohocken, Pa. Filed Oct. 15, 1958.

QUAKEREST

Owner of Reg. No. 417,066.
For Compositions for Treating Textiles for Rendering Same Dimensionally Stable and Shrinkproof.
First use Feb. 26, 1958.

SN 65,755. Dehydag Deutsche Hydrierwerke GmbH, Duesseldorf, Germany. Filed Jan. 13, 1959.

CEROXIN

Owner of German Reg. No. 226,175, dated Sept. 18, 1918.
For Hardened Castor Oil for Use in the Production of Lubrication Oil Additives, in Wax Coatings for Carbon Paper and as a Base for Cosmetic Creams and Ointments.

SN 68,607. L. A. Salomon & Bro., Inc., New York, N.Y. Filed Feb. 27, 1959.

KLEENFLO

For Filtering and Bleaching Powder.
First use on or about Jan. 15, 1938.

SN 74,708. Milwhite Mud Sales Company, Houston, Tex. Filed May 29, 1959.

MIL QUEBRACHO

Applicant claims no exclusive rights in "Quebracho" as the name of the goods identified herein.
For Quebracho Extract, for Use as a Drilling Mud Dispersant.
First use on or about June 1, 1952.

SN 74,772. Milwhite Mud Sales Company, Houston, Tex. Filed May 29, 1959.

MILWHITE FOAM BREAKER

Applicant claims no exclusive rights in "Foam Breaker" as the name of the goods identified herein.
For Formulated Anti-Foam Agent for Use as an Effective All-Purpose Anti-Foam Agent for Drilling Muds.
First use on or about May 1, 1952.

SN 77,653. Compania Argentina de Quebracho "Marco Formosa" S.A., Buenos Aires, Argentina. Filed July 14, 1959.

C.A.F.

For Wood Extract for Tanning Purposes.
First use September 1958; in commerce March 6, 1959.

SN 77,655. Curtis Laboratories, Inc., Kansas City, Kans. Filed July 14, 1959.

SQUERM

For Veterinary Preparation, for Topical Application, for the Control of Screw Worms on Animals.
First use May 14, 1958.

SN 83,264. Aquadyne Corporation, Clark, N.J. Filed Oct. 15, 1959.

AQUADYNE

For Chemicals for Industrial Wetting and Product Blending.
First use Nov. 16, 1949.

SN 84,971. Ansul Chemical Company, Marinette, Wis. Filed Nov. 10, 1959.

K-D-C

For Powdered Free-Flowing Fire Extinguishing Composition Containing Potassium Bicarbonate.
First use Oct. 21, 1959.

SN 87,692. Kolene Corporation, Detroit, Mich. Filed Dec. 21, 1959.

TUFFTRIDE

For Sodium Cyanide.
First use on or about Oct. 1, 1959.

SN 88,607. E. F. Houghton & Co., Philadelphia, Pa. Filed Jan. 7, 1960.

HOUGHTO-SAFE

Owner of Reg. Nos. 501,963 and 515,021.
For Power Transmission Fluids—Namely, Hydraulic Fluids of Non-Hydrocarbon Character.
First use Sept. 10, 1958.

SN 91,964. Oakite Products, Inc., New York, N.Y. Filed Mar. 1, 1960.

ACALAID

For Chemical Preparation—Namely, a Solvent Designed To Be Used as an Additive for Both Acid and Alkaline Cleaning Solutions To Increase Their Cleaning Ability.
First use Jan. 23, 1960.

SN 92,118. Sandox, Inc., New York, N.Y. Filed Mar. 3, 1960.

RELCAFIX

Owner of Reg. No. 678,291.
For Dyeing Assistant for the Leather Industry.
First use Feb. 17, 1960.

SN 92,119. Sandox, Inc., New York, N.Y. Filed Mar. 3, 1960.

RELCAFINISH

Owner of Reg. No. 678,291.
For Dyeing Assistant for the Leather Industry.
First use Feb. 17, 1960.

SN 92,146. The Dow Chemical Company, Midland, Mich. Filed Mar. 4, 1960.

FULL-FILL

For Chemical Preparations Used To Prevent Freezing and Overheating in Automotive Cooling Systems.
First use Feb. 15, 1960.

SN 92,274. Lignosol Chemicals Limited, Quebec City, Quebec, Canada. Filed Mar. 7, 1960.

PELLITE

Owner of Canadian Reg. No. 110,195, dated May 9, 1958.
For Well Drilling Fluid Dispersants.

SN 92,422. American Cyanamid Company, Portland, Maine. Filed Mar. 9, 1960.

AEROSOL

Owner of Reg. No. 378,642.
For Wetting Agents for Use in Reducing the Interfacial Tension Between Liquids and Solids or Between Two Immiscible Liquids.
First use Aug. 20, 1937.

SN 92,449. The Dow Chemical Company, Midland, Mich. Filed Mar. 9, 1960.

AP-30

For Flocculants.
First use Jan. 29, 1960.

SN 82,637. Pemco Corporation, Baltimore, Md. Filed Mar. 11, 1960.

PEMCO

Owner of Reg. Nos. 146,847, 659,688, and others.
For Pigments for General Industrial Use.
First use Jan. 2, 1960.

Class 7 — Cordage

SN 63,015. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Nov. 24, 1958.

TREVIRA

Owner of German Reg. No. 668,837, dated Mar. 21, 1956.
For Cordage—e.g., Rigging, Ropes, Twine, Ribbons, String, Clothes Lines, and Lassos.

SN 75,579. Puritan Cordage Mills, Louisville, Ky. Filed June 11, 1959.

PURITAN

For Tiller Cable, Rope, and Extruded Vinyl Lacing Cord.
First use Nov. 4, 1958.

SN 83,596. Berry Seed Company, Clarinda, Iowa. Filed Oct. 20, 1959.

Golden Beauty

For Baler Twine.
First use Dec. 10, 1958.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 86,856. Wolverine Household Products, Inc., Grand Rapids, Mich. Filed Dec. 7, 1959.

EXTINGLO

For Ash Trays.
First use June 15, 1949.

Class 10 — Fertilizers

SN 72,586. George A. Davis, Inc., Chicago, Ill. Filed Apr. 30, 1959.

DAVIS

For Fertilizers.
First use about May 1925.

SN 86,935. Vitaguano Limited, Nassau, Island of New Providence, Bahama Islands. Filed Nov. 23, 1959.

VITA GUANO

Applicant disclaims the term "Guano" apart from the mark.
For Fertiliser and Plant Food.
First use June 11, 1959; in commerce June 11, 1959.

SN 88,280. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. Filed Dec. 31, 1959.

DISTRA

Owner of Swedish Reg. No. 88,250, dated Nov. 6, 1959.
For Compound Used for Seed Treatment, as a Foliar Spray, as a Fertilizer Additive and for Similar Related Uses.

Class 12 — Construction Materials

SN 81,520. Societa Applicazioni Gomma Antivibranti "Saga" S.p.A., Milan, Italy. Filed Sept. 15, 1959.

SAGA

Owner of Italian Reg. No. 140,548, dated Dec. 22, 1958.
For Ceiling Panels and Antivibratory Mountings for Building Purposes.

SN 91,218. Air Master Corporation, Philadelphia, Pa. Filed Feb. 19, 1960.

REDI-SEAL

Owner of Reg. No. 680,847.
For Storm Windows—Double Hung Type.
First use Nov. 1, 1959.

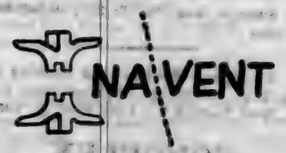
SN 91,222. Andresen Corporation, Chicago, Ill. Filed Feb. 19, 1960.

SUMMIT

For Chemical Road Binding Compound Adapted for Use With Bituminous Materials.
First use Dec. 4, 1959.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 63,594. Navan Products, Inc., El Segundo, Calif. Filed Dec. 3, 1958.



The figures in the drawing represent cross-sections of the plug. No claim is made herein to the exclusive appropriation of matter represented by the figures except in the precise relation and association in which they appear.
For Chamber Venting Plug.
First use June 10, 1958.

SN 84,669. The Standfast Products Company, Cleveland, Ohio. Filed Nov. 5, 1959.

MERRYMAID

For Plastic Housewares—Namely, Trays for Washcloths, Soap, and Similar Bathing Aids, Sieves, Bowls, Strainers, and Fluid Pitchers.
First use Oct. 7, 1959.

SN 87,885. Lando Products, Inc., Sausalito, Calif. Filed Dec. 23, 1959.

COLORWEVE

For Venetian Blind Components—Namely, Aluminum Slats To Be Inserted in Chain Link Fencing.
First use on or about Sept. 1, 1959.

SN 88,483. P-G Products Mfg. Co. Inc., New York, N.Y. Filed Jan. 5, 1960.

P-G

Owner of Reg. No. 610,537.
For Hose Couplings, Including Y Mixers, Elbow Couplings, Goose-Necks, Etc.
First use April 1959.

SN 89,566. P.D.R. Enterprises, Fort Wayne, Ind. Filed Jan. 25, 1960.

TWINKLE

For Infants' Auxiliary Toilet Seats.
First use Sept. 1, 1959.

SN 90,697. Moore Brothers Company, New York, N.Y. Filed Feb. 10, 1960.

LIQUIDFLO

For Soap Dispensers and Valves Therefor.
First use Oct. 20, 1958.

SN 91,028. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Feb. 16, 1960.

HYDRA-RIDE

For Hydraulic Accumulators.
First use Dec. 16, 1959.

SN 91,321. American Screw Company, Willimantic, Conn. Filed Feb. 23, 1960.

POZ-I-DRIV

For Screws, Bolts, Studs, Rivets, and Allied Fasteners.
First use Nov. 25, 1959.

SN 91,322. American Screw Company, Willimantic, Conn. Filed Feb. 23, 1960.

TRI-WING

For Screws, Bolts, Studs, Rivets, and Allied Fasteners.
First use Nov. 9, 1959.

For Valves, Valve Actuators, and Tube Fittings.
First use before Nov. 1, 1950.

Class 14—Metals and Metal Castings and Forgings

SN 47,843. Eastern Rolling Mills, Inc., New York, N.Y. Filed Mar. 17, 1958.

EASTERN



For Rolled Metallic Sheets.
First use January 1944.

SN 79,078. Precision Metalsmiths, Inc., Cleveland, Ohio. Filed Aug. 5, 1959.

SHELLVEST

For Investment Castings Made to the Order and Specification of the Customer.
First use June 9, 1959.

SN 83,689. Associated Spring Corporation, Bristol, Conn. Filed Oct. 21, 1959.

BARCO-SPEED

For Band Saw Steel.
First use Aug. 7, 1959.

Class 15—Oils and Greases

SN 62,809. Turner Corporation, Sycamore, Ill., by change of name from The Turner Brass Works, Sycamore, Ill. Filed Nov. 19, 1958.

QUICK-START

Owner of Reg. No. 648,701.
For Booster Fuel Mixture for Diesel Engines.
First use Oct. 10, 1955.

SN 70,308. Nippon Sekiyu Kabushiki Kaisha, Chiyoda-ku, Tokyo-to, Japan. Filed Mar. 26, 1959.

NISSEKIWAX

Priority is claimed under Sec. 44(d) on Japanese application filed Feb. 12, 1959; Reg. No. 547,838, dated Feb. 5, 1960.
For Paraffin Wax.

The mark shown is a fanciful representation of a bat. Owner of Japanese Reg. No. 67,327, dated Aug. 15, 1914.
For Paraffin Wax.

SN 83,968. A. Margolis & Sons Corp., Brooklyn, N.Y. Filed Oct. 26, 1959.

SILOGRAM

For Oils, Greases, and Lubricants—Namely, Motor Oils, Cutting Oils, Greases, Transmission Fluids, Silicone Mold Releases, Water Pump Lubes, Automatic Transmission Sealers, Cooling System Sealers, Hydraulic Oils, Dry Gas, and Solvents.
First use in or about January 1915 as to motor oils.

SN 84,457. Shell Oil Company, New York, N.Y. Filed Nov. 2, 1959.

MICROGEL

For Lubricating Grease.
First use Sept. 27, 1957.

Class 16—Protective and Decorative Coatings

SN 80,587. Plasmakote Corporation, Culver City, Calif. Filed Aug. 31, 1959.

PLASMAKOTE

For Materials Which Have Been Adherently Spray-Deposited at Elevated Temperatures Onto Substrates by Means of an Electric Torch, and Materials Adapted To Be so Deposited.
First use on or about July 18, 1959.

SN 87,574. National Lead Company, New York, N.Y. Filed Dec. 18, 1959.

45X

For Basic Silicate White Lead for Use Principally in Paints.
First use Sept. 25, 1947.

SN 88,281. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. Filed Dec. 31, 1959.

DISTRA

Owner of Swedish Reg. No. 88,250, dated Nov. 6, 1959.
For Ski Waxes.

SN 88,340. Sonneborn Chemical and Refining Corporation, New York, N.Y., by change of name from L. Sonneborn Sons, Inc., New York, N.Y. Filed Dec. 31, 1959.

SONOPLEX

Owner of Reg. No. 415,131.
For Chemical and Traffic Resistant Coating for Concrete, Metal, and Wooden Surfaces.
First use June 1957.

SN 91,063. Canadian Industries Limited, Montreal, Quebec, Canada. Filed Feb. 17, 1960.

DYNALITE

Owner of Canadian Reg. No. 112,299, dated Nov. 21, 1958; and U.S. Reg. No. 669,787.
For Paints.

Class 17—Tobacco Products

SN 89,513. Larus & Brother Company, Richmond, Va. Filed Jan. 22, 1960.

CHELSEA

Owner of Reg. No. 389,828.
For Cigarettes.
First use Oct. 3, 1939.

Class 18—Medicines and Pharmaceutical Preparations

SN 71,060. Vasenol-Werke Dr. Arthur Kopp, K.G., Oberndorf (Neckar), Germany. Filed Apr. 1, 1959.

Vusenol

Owner of German Reg. No. 717,887, dated Sept. 23, 1958.
For Chemical Products for Healing Purposes, Pharmaceutical Drugs, and Pharmaceutical Products.

SN 73,405. Milligan & Son, Inc., Sioux City, Iowa. Filed May 11, 1959.

SIOUXLAND

"MINI BLOCK"

The word "Block" is disclaimed apart from the mark as shown. Owner of Reg. No. 626,100.
For Medicated Salt Blocks for Live Stock.
First use Jan. 25, 1959.

SN 77,647. Bristol-Myers Company, New York, N.Y., by merger from Bristol Laboratories Inc., Syracuse, N.Y. Filed July 14, 1959.

PERICILLIN

For Antibiotic Pharmaceutical Preparation.
First use May 18, 1959.

SN 82,680. A/S Dumex (Dumex Limited), Copenhagen, Denmark. Filed Oct. 5, 1959.



Owner of Danish Reg. No. 1042/1959, dated June 13, 1959; and U.S. Reg. No. 651,664.
For Antibiotics, Vitamins, Hormones, Anesthetics, Tonics, Antiseptics, Antipyretics, Sedatives, Stimulants, and Baby Food in the Form of Therapeutic Dietary Supplements.

SN 83,798. La Lanne Incorporated, Oakland, Calif. Filed Oct. 22, 1959.

JACK LA LANNE'S

For Food Supplement Products Including a Mineral and Vitamin Food Supplement, a High Protein Food Supplement, and a Food Supplement Sold in the Form of Dessicated and De-Fatted Whole Liver Tablets.
First use Jan. 1, 1954.

SN 86,596. Plastic Film Products Corp., Akron, Ohio. Filed Dec. 3, 1959.

BON-VIE

For Food Supplement for Human Consumption Consisting of Vitamin, Mineral, and Protein Tablets.
First use Oct. 15, 1959.

SN 88,829. The Upjohn Company, Kalamazoo, Mich. Filed Jan. 11, 1960.

DEPO-BIOSOL

Owner of Reg. Nos. 515,760 and 660,031.
For Antibiotic Preparation for Parenteral Veterinary Use.
First use Aug. 14, 1958.

SN 86,870. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 12, 1960.

PRESSULES

For Collapsible Single-Dose Container Which Is Sold With a Drug Therein.
First use Sept. 25, 1959.

SN 91,056. Bristol-Myers Company, New York, N.Y. Filed Feb. 17, 1960.

CILLERAL

Owner of Reg. Nos. 537,316 and 586,204.
For Nasal Decongestant.
First use Dec. 15, 1959.

Class 19—Vehicles

SN 29,565. Sureloc Mfg. Co., Inc., Brooklyn, N.Y. Filed May 7, 1957.

Cori-Seal

THE RED CUP

The drawing is lined for red. The phrase "The Red Cup" is hereby disclaimed apart from the mark as shown, no common law rights being thereby waived. Owner of Reg. No. 613,483.
For Hydraulic Wheel Cylinder Brake Cups.
First use Apr. 15, 1957.

SN 79,874. Murray Marine Corporation, Tampa, Fla. Filed Aug. 19, 1959.

MURRAY

For Boat Trailers.
First use Oct. 1, 1951.

SN 83,683. Air Lift Company, Lansing, Mich. Filed Oct. 21, 1959.

LOADLIFTER

For Air Springs for Vehicles.
First use May 29, 1959.

SN 85,462. Auto Union G.m.b.H., Ingolstadt (Danube), Germany. Filed Nov. 17, 1959.

WANDERER

Owner of German Reg. No. 473,499, dated Feb. 25, 1935.
For Automobiles Including Motorcars for Personal Use and Trucks, and Structural Parts Thereof.

SN 85,501. Hubert S. Johnson Boat Manufacturer, Inc., Bay Head, N.J. Filed Nov. 17, 1959.

BLACK JACK 24

The numeral "24" is disclaimed apart from the mark as shown.
For Motor Boats.
First use May 1, 1958.

SN 85,623. Clyde W. Stanfield, d.b.a. Birmingham Tin Shop, Birmingham, Ala. Filed Nov. 18, 1959.



The drawing is lined for yellow, but no claim is made to color.
For Small Gasoline Powered Autos.
First use Oct. 1, 1959.

SN 91,447. Pucel Enterprises, Inc., Cleveland, Ohio. Filed Feb. 23, 1960.

Grizzly

For Box Trucks, Dump Trucks, Hand Trucks, Dollies and Wheeled Platforms, Wheeled Racks and Wheeled Tables.
First use Mar. 9, 1953.

SN 91,450. Pucel Enterprises, Inc., Cleveland, Ohio. Filed Feb. 23, 1960.



For Box Trucks, Dump Trucks, Hand Trucks, Dollies and Wheeled Platforms, Wheeled Racks and Wheeled Tables.
First use Mar. 9, 1953.

SN 91,923. Eastern Steel Products Corporation, Rocky Mount, N.C. Filed Mar. 1, 1960.

AMPHIB-A-HOME

For Amphibious Houseboat.
First use Jan. 1, 1959.

SN 92,062. Frank Wetherholt, d.b.a. Ranger Engineering & Manufacturing, Union City, Mich. Filed Mar. 2, 1960.

REMCO

For Camping Trailers.
First use Oct. 20, 1959.

SN 92,214. Borneo Sumatra Trading Company, Inc., New York, N.Y. Filed Mar. 7, 1960.

WINSTON

For Bicycles and Parts Thereof.
First use Dec. 5, 1959.

SN 92,279. Midwest Metal Stamping Co., Kellogg, Iowa. Filed Mar. 7, 1960.

TRACKMASTER

For Midget Racing Automobiles.
First use Dec. 1, 1959.

SN 92,339. Vought Industries, Inc., Dallas, Tex. Filed Mar. 7, 1960.

DUO

For Mobile Homes.
First use Feb. 1, 1944.

SN 92,342. Western Auto Supply Company, Kansas City, Mo. Filed Mar. 7, 1960.

WESTERN FLYER

Owner of Reg. Nos. 289,563 and 440,859.
For Boats.
First use Feb. 1, 1900.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 32,631. Rodale Manufacturing Company, Inc., Emmaus, Pa. Filed June 28, 1957.

SLUMBER-GLO

For Night Light.
First use July 15, 1956.

SN 49,270. General Electronic Laboratories, Inc., Cambridge, Mass. Filed Apr. 8, 1958.

GENERAL ELECTRONICS

For Electrical Apparatus—Namely, Multiplex Exciters, Radio Transmitters, and Radio Receivers.
First use on or about Mar. 5, 1958.

SN 50,204. Gould & Eberhardt, Inc., Irvington, N.J. Filed Apr. 24, 1958.

COLD-HEAT

For Electrical High-Frequency Induction Hardening Apparatus for Gear Teeth and Other Metallic Surfaces.
First use Mar. 1, 1957.

SN 53,179. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed June 9, 1958.

FIBREMAT

For Electrical Insulating Tapes.
First use Feb. 26, 1957.

SN 77,142. Republic Wire and Cable Corporation, Montebello, Calif. Filed July 6, 1959.

SUPER-FLEX

For Electrical Control Cable—Namely, Traveling and Lighting Cable for Elevators.
First use May 1, 1957.

SN 78,983. Airpax Electronics Incorporated, Fort Lauderdale, Fla. Filed Aug. 4, 1959.

AIRPAX ELECTRONICS

The word "Electronics" is disclaimed apart from the mark. Owner of Reg. No. 648,157.
For Choppers, Circuit Breakers, Magnetic Amplifiers, Frequency Detectors, Chokes, Power, Audio and Pulse Transformers, Data Logging Amplifiers, Saturable Reactors, Vibrators, Power Supplies, Modulators, and Demodulators.
First use Jan. 12, 1959.

SN 79,043. Casco Products Corporation, d.b.a. Medallion Products, Bridgeport, Conn. Filed Aug. 5, 1959.

MEDALLION

For Electric Heating Pads and Electric Blankets.
First use Apr. 29, 1959, on heating pads.

SN 85,513. New York Merchandise Co., Inc., New York, N.Y. Filed Nov. 17, 1959.

FLIKA-GLOW

Owner of Reg. No. 641,676.
For Electrical Christmas Tree Lights.
First use Oct. 9, 1958.

SN 91,092. Interlectric Corporation, Warren, Pa. Filed Feb. 17, 1960.



For Incandescent and Fluorescent Lamps, Fluorescent Starters, and Electric Fuses.
First use December 1959.

SN 91,167. Magnetics, Inc., East Butler, Pa. Filed Feb. 18, 1960.



Owner of Reg. Nos. 681,070 and 683,952.
For Magnetic Cores, Magnetic Amplifiers and Reactors.
First use in March 1954.

SN 91,937. General Electric Company, New York, N.Y. Filed Mar. 1, 1960.

TVX

For X-Ray Image Intensification Systems.
First use Oct. 21, 1957.

SN 92,152. George E. Foster, d.b.a. Lundell & Co., Chicago, Ill. Filed Mar. 4, 1960.

STATALARM

For Electrically Operated and Actuated Annunciators.
First use Feb. 20, 1959.

SN 92,299. Radio Merchandise Sales, Inc., New York, N.Y. Filed Mar. 7, 1960.

Crystal Air

For Electronic Air Purifiers.
First use Jan. 21, 1960.

SN 92,712. Circle F Mfg. Co., Trenton, N.J. Filed Mar. 14, 1960.

SMOOTHIE

For Wall Plates for Electrical Wiring Devices—in Particular, Switches and Receptacles.
First use Mar. 4, 1960.

SN 92,786. Mity-Lite, Santa Ana, Calif. Filed Mar. 14, 1960.

MITY-LITE

For Flashlights and Components Thereof.
First use on or about Oct. 1, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 69,396. John R. Brandell, d.b.a. Brandell Products Company, Chicago, Ill. Filed Mar. 12, 1959.



For Angleworm Bait Boxes.
First use on or about Feb. 2, 1959.

SN 80,826. Karsten Solheim, Redwood City, Calif. Filed Sept. 3, 1959.

PING

For Golf Clubs.
First use Jan. 7, 1959.

SN 85,872. Johnson Research and Development Co., Inc., Anniston, Ala. Filed Nov. 23, 1959.



For Recreational Equipment, Particularly Trapezes, Water Ski Tow Bridle Ropes, Climbing Ropes, and Climbing Ladders.
First use Aug. 13, 1959.

SN 87,432. Pascal M. Kamar, d.b.a. Kamar Imports, Los Angeles, Calif. Filed Dec. 16, 1959.

HEXTER

For Dolls.
First use May 21, 1959.

SN 88,064. Mattel, Incorporated, Los Angeles, Calif. Filed Dec. 28, 1959.

CHATTY CATHY

For Doll.
First use Nov. 30, 1959.

SN 91,514. Cadaco-Ellis, Inc., Chicago, Ill. Filed Feb. 24, 1960.

UNDERCOVER

For Gameboard, Template, Special Glasses, and Special Pencils for Use in Playing a Spy Game.
First use Feb. 16, 1960.

SN 91,515. Cadaco-Ellis, Inc., Chicago, Ill. Filed Feb. 24, 1960.

BAS·KET

For Game Box Provided With a Ball and Basket for Playing a Basketball Game.
First use 1937.

SN 91,541. Industrial Engineering & Erection Corporation, d.b.a. Schoolmaster Boat & Tackle Company, San Antonio, Tex. Filed Feb. 24, 1960.

SCHOOLMASTER

For Fishing Lures.
First use Jan. 20, 1960.

SN 91,749. Biddle Purchasing Company, d.b.a. Meridian Distributors, New York, N.Y. Filed Feb. 29, 1960.

Fleetline

For Fishing Rods, Fishing Tackle, Golf Carts, Baseball Bats, and Ice Skates.
First use Feb. 19, 1957.

SN 91,867. Soo Valley Company, Columbia, S.C. Filed Feb. 29, 1960.

S3

For Monofilament Fishing Line.
First use July 24, 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 75,952. Wagoner-Webster, Inc., Muskegon, Mich. Filed June 17, 1959.

WAGON WASHER

No claim is made to the word "Washer" apart from the mark.
For Apparatus for Washing Vehicles, Particularly Trucks and Buses.
First use Jan. 2, 1958.

SN 78,332. Dean Rubber Manufacturing Company, San Jose, Calif. Filed July 24, 1959.

BLACK WIDOW

Owner of Reg. No. 668,561.
For Rubber Products—Namely, Water Lubricated Spider Bearings, Tube Line Support Spiders, Air Tool Lubricators, and Tube and Shaft Protectors.
First use Feb. 10, 1937, on rubber spiders.

SN 79,417. The M.T. & D. Company, Cleveland, Ohio. Filed Aug. 12, 1959.



For Snow Pushers.
First use Apr. 2, 1959.

SN 81,246. Consolidated Vacuum Corporation, Rochester, N.Y., assignee of Consolidated Electrodynamics Corporation, Rochester, N.Y. Filed Sept. 14, 1959.

CVC

For Vacuum Pumps.
First use Aug. 27, 1959.

SN 81,918. A. Y. McDonald Manufacturing Company, Dubuque, Iowa. Filed Sept. 23, 1959.

MI-T-FLO

For Pumps.
First use Apr. 14, 1959.

SN 81,919. A. Y. McDonald Manufacturing Company, Dubuque, Iowa. Filed Sept. 23, 1959.

CENTURI-FLO

For Pumps.
First use Apr. 14, 1959.

SN 82,284. The Oilgear Company, Milwaukee, Wis. Filed Sept. 28, 1959.

HYTAC SYSTEM

No claim is made to the word "System" apart from the mark.
For Hydraulic Drives and Hydraulic Transmissions, Hydraulic Pumps, Motors, Valves, Cylinders, Controls, and Electrohydraulic Controls.
First use Aug. 13, 1959.

SN 83,481. Diamond Chain Company, Inc., Indianapolis, Ind. Filed Oct. 19, 1959.



For Bushing Chain.
First use Aug. 27, 1959.

SN 86,997. Societe d'Equipements Industriels et Laitiers, Paris, France. Filed Dec. 9, 1959.

SUPRATON

For Comminuting and Homogenizing Machines.
First use September 1954.

SN 87,125. Layne & Bowler Pump Company, Los Angeles, Calif. Filed Dec. 11, 1959.

POWERLINE

Owner of Reg. No. 622,157.
For Submersible Pumps.
First use Aug. 29, 1958.

SN 88,116. Western Machinery Company, San Francisco, Calif. Filed Dec. 28, 1959.

SANDPREP

Owner of Reg. No. 671,813.
For Machines for the Separation and Dewatering of Sand Particles.
First use Jan. 24, 1959.

SN 88,635. American-Marietta Company, Chicago, Ill. Filed Jan. 8, 1960.

SPRAZALL

For Spraying Devices Employing a Propellant in a Pressurized Container.
First use on or about Sept. 4, 1959.

SN 88,841. The Bullard Company, Bridgeport, Conn. Filed Jan. 12, 1960.

SIZE-AU-TROL

Owner of Reg. No. 414,872.
For Lathes and Boring Mills.
First use Dec. 15, 1959.

SN 88,872. Popeil Bros., Inc., Chicago, Ill. Filed Jan. 12, 1960.

DICEMASTER

Owner of Reg. No. 421,559.
For Variable Cut Dicer-Slicers.
First use Jan. 5, 1960.

SN 88,909. Hamac A.G., Zug, Switzerland. Filed Jan. 13, 1960.

EUROMAC

Priority claimed under Sec. 44(d) on Swiss Reg. No. 178,250, dated Sept. 30, 1959.
For Packaging Machinery, and Processing Machinery for Use in the Confectionery, Food, Chemical, and Pharmaceutical Industries.

SN 89,316. Fairchild Engine and Airplane Corporation, Bay Shore, N.Y. Filed Dec. 2, 1959.

HELI-ROTOR

For Gas Compressors and Expanders.
First use Dec. 12, 1955.

SN 89,366. National Engineering Company, Chicago, Ill. Filed Jan. 20, 1960.

MULTI-MULL

Owner of Reg. No. 646,449.
For Milling Machines.
First use on or about Dec. 15, 1958.

SN 89,808. Shell-O-Matic, Inc., Irvington, N.J. Filed Jan. 27, 1960.



The lining on the drawing indicates the color red.
For Mold Making Machinery for Making Shell, Molds for Metal Casting.
First use May 2, 1952.

SN 90,075. James E. Leitch, Owosso, Mich. Filed Feb. 1, 1960.

NICKEL THIN

For Pie Crust Former.
First use Jan. 12, 1960.

SN 90,297. Allis-Chalmers Manufacturing Company, West Allis, Wis. Filed Feb. 4, 1960.

KON-TORK

For Differentials for Vehicles.
First use Dec. 22, 1959.

SN 90,390. The Cincinnati Milling Machine Co., Cincinnati, Ohio. Filed Feb. 5, 1960.

INTRAFORM

For High Speed Revolving Die Press.
First use June 13, 1959.

SN 90,506. Vita Craft Corporation, Kansas City, Mo. Filed Feb. 8, 1960.

SCIMITAR

For Cutlery Blades.
First use Jan. 25, 1960.

SN 90,654. Morris Rosenberg, d.b.a. St. James Tool Company, Smithtown, N.Y. Filed Feb. 9, 1960.

ACCU-POWER

For Screw Drivers.
First use Jan. 22, 1960.

SN 90,716. The Tool Steel Gear and Pinion Co., Cincinnati, Ohio. Filed Feb. 10, 1960.

TSP

For Machine Parts—Namely, Gears, Pinions, Wheels, Screws, Nuts, Rolls, Rollers, Sheaves, Sprockets, Shafts, Pins, Gudgeons, Bushings, Drums, Bearings, Trunnions, and Axles.
First use Apr. 10, 1958.

SN 90,783. John W. Row, d.b.a. John W. Row Company, Berrien Springs, Mich. Filed Feb. 11, 1960.

SPIN L HONE

For Socket Cleaning Hand Tool for Use of Machinists.
First use Jan. 4, 1960.

SN 90,883. Bissell Inc., Grand Rapids, Mich. Filed Feb. 15, 1960.

FLIGHT

For Carpet Sweepers.
First use Feb. 18, 1937.

SN 90,917. Sol Gottstein, d.b.a. My-Tana Manufacturing Company, St. Paul, Minn. Filed Feb. 15, 1960.

MyTanik

For Sewer and Drain Cleaning Machine.
First use Jan. 26, 1960.

SN 91,041. The W. S. Tyler Company, Cleveland, Ohio. Filed Feb. 16, 1960.

TY-SPEED

For Vibrating Equipment Such as Screen and Bin Vibrators.
First use 1937.

SN 91,137. American Home Products Corporation, d.b.a. Boyle-Midway, New York, N.Y. Filed Feb. 18, 1960.

ANTROL

Owner of Reg. Nos. 352,823 and 383,826.
For Sprayers for Insecticides, Fertilizers, Fungicides, Herbicides.
First use Mar. 3, 1959.

SN 91,268. The Osborn Manufacturing Company, Cleveland, Ohio. Filed Feb. 19, 1960.

RIEHL

For Power Driven Rotary Brushes.
First use 1923.

SN 91,367. G & H Products Corporation, Kenosha, Wis. Filed Feb. 23, 1960.

G AND H

For Centrifugal Pumps.
First use July 1958.

SN 91,445. Pucel Enterprises, Inc., Cleveland, Ohio. Filed Feb. 23, 1960.



For Drum Lifters, Tilting Arcs, Drum Cradles, Drum Up-Enders, and Hoist Hooks.
First use Apr. 23, 1951.

SN 91,448. Pucel Enterprises, Inc., Cleveland, Ohio. Filed Feb. 23, 1960.

Grizzly

For Drum Lifters, Tilting Arcs, Drum Cradles, Drum Up-Enders, and Hoist Hooks.
First use Apr. 23, 1951.

SN 91,509. Charles D. Briddell, Inc., Crisfield, Md. Filed Feb. 24, 1960.

SOMERSET

For Stainless Steel Flatware and Carving Sets.
First use Jan. 15, 1960.

SN 91,676. Dymo Corporation, Berkeley, Calif. Filed Feb. 26, 1960.

DYMO-MITE

For Embossing Machines for Embossing Plastics, Metals and the Like.
First use on or about Apr. 27, 1959.

SN 91,716. Threadwell Tap & Die Company, Greenfield, Mass. Filed Feb. 26, 1960.

CHIP-SHAPE

For Metal Cutting Tools, More Specifically for Tool Bits and the Like.
First use Dec. 15, 1959.

SN 91,801. Ideal Roller & Manufacturing Company, Chicago, Ill. Filed Feb. 29, 1960.

BLACK MAGIC

For Rollers for Lithographic Printing Presses.
First use as early as May 1, 1958.

SN 91,961. Norton Company, Troy, N.Y. Filed Mar. 1, 1960.

BEAR-TEX

Owner of Reg. No. 671,161.
For Holders and Accessories for Polishing and Buffing Pads.
First use Dec. 9, 1959.

SN 91,988. Root-Lowell Manufacturing Co., Lowell, Mich. Filed Mar. 1, 1960.

PRO

For Pesticidal Applicators—Namely, Sprayers and Parts Thereof.
First use Feb. 19, 1960.

Class 24—Laundry Appliances and Machines

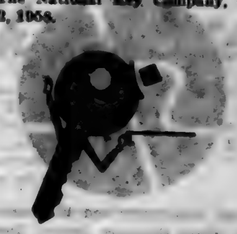
SN 76,822. Penley Brothers, West Paris, Maine. Filed June 30, 1959.

AMERICAN MAID

For Clothespins.
First use June 16, 1959.

Class 25—Locks and Safes

SN 58,227. The National Key Company, Cleveland, Ohio. Filed Sept. 2, 1958.



Owner of Reg. No. 647,439.
For Keys, Key Displays, Key Chains, Key Holders, and On Combination Devices Comprising Keys and Other Articles Including Combined Key and Nail Clipper and Key Coin Holders.
First use in February 1958.

SN 58,228. The National Key Company, Cleveland, Ohio. Filed Sept. 2, 1958.

MR. KEY

The word "Key" is disclaimed apart from the mark as shown. Owner of Reg. No. 647,439.
For Keys, Key Displays, Key Chains, Key Holders, and On Combination Devices Comprising Keys and Other Articles Including Combined Key and Nail Clipper and Key Coin Holders.
First use in February 1958.

Class 26—Measuring and Scientific Appliances

SN 64,444. Airpax Products Company, Middle River, Md. Filed Dec. 17, 1958.

TACH-PAK

For Speed Measurement Devices of the Tachometer Type and Instantaneous Frequency Detectors for Telemetering and Similar Applications.
First use Aug. 6, 1958.

SN 69,303. VEB Photographenwerk Dresden, Dresden, Germany. Filed Mar. 10, 1959.

V Vephota

For Unexposed Papers, Films, and Plates.
First use Sept. 1, 1957; in commerce July 15, 1958.

SN 70,544. Space Technology Laboratories, Los Angeles, Calif. Filed Mar. 30, 1959.

For Electrical, Electronic, and Electromechanical Equipment—Namely, Space Guidance System Apparatus, Communications and Telemetry Equipment, Space Television Equipment, Magnetometers, Radiation and Micrometeorite Analysis Equipment, Computer and Data Processing Equipment, and Space Vehicles.
First use Jan. 26, 1959.

SN 73,989. The Siegler Corporation, Anaheim, Calif. Filed May 18, 1959.

SELLEVISION

For Audio Visual Display Apparatus for Projecting Slides on a Screen in Synchronism With Coordinated Sound.
First use July 30, 1957.

SN 74,698. Wilson Products, Inc., Neshanic, N.J. Filed May 28, 1959.

COLOR-O-METER

For Machines for Proportioning Materials Such as Resins or Resin Compounds, and Particularly for Proportioning Color Concentrates to Such Materials.
First use Mar. 20, 1959.

SN 78,964. Airpax Electronics Incorporated, Fort Lauderdale, Fla. Filed Aug. 4, 1959.

The word "Electronics" is disclaimed apart from the mark.
Owner of Reg. No. 648,157.
For Electronic Tachometers, Frequency Meters, and Aircraft Test Sets—i.e., A.C. and D.C. Voltage and Electrical Frequencies of Voltages.
First use Jan. 12, 1959.

SN 80,592. Safety Products Limited, Redhill, Surrey, England. Filed Aug. 31, 1959.

Owner of British Reg. No. 769,923, dated Oct. 8, 1957.
For Goggles, Spectacles, Eye Shields, Face Shields, Hand Shields, Welding Helmets.

SN 80,764. Zenzaburo Yoshino, Itabashiku, Tokyo, Japan. Filed Sept. 2, 1959.

Priority claimed under Sec. 44(d) on Japanese application filed Mar. 16, 1959; Reg. No. 548,379, dated Feb. 22, 1960.
For Cameras and Parts Thereof.

SN 81,018. Royco Instrument Inc., Palo Alto, Calif. Filed Sept. 8, 1959.

ROYCO

For Meters for Measuring Atmospheric Conditions, Such as Temperature, Particle Count, and the Like.
First use on or about January 1958.

SN 81,165. Bourns, Inc., Riverside, Calif. Filed Sept. 11, 1959.

JUNIOR

For Potentiometers.
First use Aug. 3, 1956.

SN 81,166. Bourns, Inc., Riverside, Calif. Filed Sept. 11, 1959.

JR.

For Potentiometers.
First use Aug. 3, 1956.

SN 81,245. Consolidated Vacuum Corporation, Rochester, N.Y., assignee of Consolidated Electrodynamics Corporation, Rochester, N.Y. Filed Sept. 14, 1959.

CVC

For Vacuum Gauges, Electronic Systems and Parts Thereof for Vacuum Analysis and Leak Detection, Transducers for Insertion Into Vacuums for Testing, Measuring, and Recording Purposes.
First use Aug. 27, 1959.

SN 83,666. Stromberg Time Corporation, New York, N.Y. Filed Oct. 20, 1959.

Owner of Reg. No. 529,486.
For Measuring and Scientific Appliances, Including Instruments for Measuring, Indicating, and Recording Time; Programmers, Timers; Attendance Recorders; Signaling Equipment for Time and Program Control Systems Including Signal Control Racks and Panels; Signal Amplifiers; Signal Transmitters, Signal Receivers, Audible and Visual Signal Indicators and Annunciators; Manual and Automatic Alarm Systems; Job Cost Recorders; Data Communications Systems, Apparatus for Data Communication, Data Transmitters; Data Receivers and Systems, Parts, Subassemblies, and Associated Equipment of the Above.
First use Feb. 27, 1954, on time recording instruments.

SN 84,436. Lab-Tek Plastics Co., Westmont, Ill. Filed Nov. 2, 1959.

TISSUE-TEK

For Equipment Used in Micrology Laboratories—Namely, Slide Preparation Equipment, Paraffin Handling Equipment, Molds, Frames, Microtomes, Slides, Slide Cabinets, and Mold Release Compounds.
First use Apr. 30, 1957.

SN 84,516. Earl W. Bundy, Jr., Erwin, Tenn. Filed Nov. 3, 1959.

VATIC

For Aeronautical Navigation Disk Computers.
First use Apr. 20, 1959.

SN 85,184. Vari-Typer Corporation, Newark, N.J. Filed Nov. 12, 1959.

Foto-List

For Photocomposing Machines.
First use on or about Sept. 11, 1959; on or about Mar. 31, 1955, in full capital letters.

SN 85,449. William M. Wilson's Sons, Inc., Lansdale, Pa. Filed Nov. 16, 1959.

STARLINER

For Power Operated Measuring Pumps for Petroleum Products.
First use Mar. 21, 1955.

SN 91,202. Kalimar, Inc., St. Louis, Mo. Filed Feb. 18, 1960.

The drawing is lined for red. Owner of Reg. No. 617,200.
For Cameras, Camera Lenses, and Camera Accessories.
First use Jan. 15, 1960.

SN 91,393. Keystone View Company, Meadville, Pa. Filed Feb. 23, 1960.

TACHETTE

For Tachistoscopes.
First use Feb. 15, 1960.

SN 91,640. Walker Crosweller & Company Limited, Cheltenham, Gloucestershire, England. Filed Feb. 25, 1960.

MEZATAP

Owner of British Reg. No. 783,544, dated Nov. 4, 1958.
For Appliances (Being Parts of Water Supply Installations) for Dispensing Predetermined Quantities of Water for Washing Purposes.

SN 91,836. Polaroid Corporation, Cambridge, Mass. Filed Feb. 29, 1960.

POLAPAK

For Sensitised Photographic Film, Sensitised Photographic Papers, and Photographic Film Packs.
First use Dec. 7, 1959, on photographic film packs.

SN 91,859. Shaw Instrument Corporation, Latrobe, Pa. Filed Feb. 29, 1960.

Shawmeter

For Radiation Ratio Pyrometers (a Photo-Electric Device for Measuring Temperatures by Detection of Temperature Differences in Two Wave Bands of the Spectrum of a Hot Body and Interpolating the Variation in Energy Ratio in Terms of Temperature).
First use on or about Jan. 1, 1958.

SN 92,265. Johnson Service Company, Milwaukee, Wis. Filed Mar. 7, 1960.

For Pneumatic Temperature and Humidity Control Instruments for Heating, Ventilating, and Air Conditioning Systems.
First use Mar. 26, 1958.

SN 92,706. John Pagli, d.b.a. John Pagli & Sons, New York, N.Y. Filed Mar. 14, 1960.

GAUGE-O-TYPE

For Measuring Instrument Used To Ascertain Type Sizes and Styles.
First use Feb. 3, 1960.

SN 93,009. Sanilac Mfg. Co., Port Sanilac, Mich. Filed Mar. 18, 1960.

BIN-O-MATIC

For Bin Level Indicator.
First use on or about Nov. 10, 1959.

SN 93,060. Eastman Kodak Company, Rochester, N.Y. Filed Mar. 17, 1960.

MONITOR

Owner of Reg. No. 378,352.
For Film Readers.
First use Jan. 24, 1958.

SN 93,139. The Borg-Erickson Corporation, Chicago, Ill. Filed Mar. 18, 1960.

FOLDAWEIGH

For Scales.
First use Mar. 19, 1938.

SN 93,245. Abbott Laboratories, North Chicago, Ill. Filed Mar. 21, 1960.

UNITAG

For Flexible Plastic Bag and Tubing, Used in the Collection, Centrifuging, and Separation of Blood Samples, Especially the Tagging of Red Blood Cells With Radio-Isotopes, in Laboratory Diagnostic Procedures.
First use Feb. 11, 1960.

Class 28—Jewelry and Precious-Metal Ware

SN 82,646. Eisenstadt Manufacturing Company, St. Louis, Mo. Filed Oct. 5, 1959.

MEMORY HEARTS

For Jewelry for Personal Wear—Namely, Charms, Both Individually and When Connected to Bracelets and Chains.
First use Aug. 10, 1959.

Class 29—Brooms, Brushes, and Dusters

SN 89,886. American Sponge and Chamois Company, Inc., Long Island City, N.Y. Filed Jan. 29, 1960.

FARMEX

For Cellulose Sponge Cloth.
First use Jan. 25, 1960.

SN 89,921. Johnson & Johnson, New Brunswick, N.J. Filed Jan. 29, 1960.

TOPS

For Toothbrushes.
First use Nov. 16, 1959.

Class 31—Filters and Refrigerators

SN 64,118. The Trane Company, La Crosse, Wis. Filed Dec. 11, 1958.

COLD GENERATOR

For Refrigeration Machines and Parts Thereof—Namely, Compressors, Condensers, Evaporators, and Control Units of Refrigeration Machines.
First use Jan. 5, 1953.

SN 90,785. Rudy Manufacturing Company, Dowagiac, Mich. Filed Feb. 11, 1960.

RUDY

For Refrigeration Condensers, Refrigeration Evaporators, and Refrigeration Air Conditioning Coils.
First use April 1946.

SN 90,870. Thompson Distributing Co., Algona, Iowa. Filed Feb. 12, 1960.

HARVEST SUPREME

Owner of Reg. Nos. 645,976, 652,354, and 667,731.
For Oil Filters.
First use Sept. 7, 1956.

Class 32—Furniture and Upholstery

SN 79,612. Advance Shelving Company, Inc., Seattle, Wash. Filed Aug. 17, 1959.

E-Z LODE

For Combination Overlay Shelving and Dispensing Racks.
First use on or about Aug. 2, 1959.

SN 91,446. Pucel Enterprises, Inc., Cleveland, Ohio. Filed Feb. 23, 1960.



For Shop Equipment—Namely, Tables, Benches, Cabinets, Racks, Shelves, Stands, Desks and Parts Thereof.
First use Aug. 2, 1951.

SN 92,255. Erwin O. Haberfeld, Zurich, Switzerland. Filed Mar. 7, 1960.



Owner of Swiss Reg. No. 157,777, dated Aug. 17, 1955.
For Index Card Containers, File Cabinets, and Filing Boxes, Card Files, and Card Register Boxes.

SN 92,775. Kool Kooshion Manufacturing Co., Dyersburg, Tenn. Filed Mar. 14, 1960.

BAVARIAN

For Ventilated Seat Cushions.
First use Jan. 18, 1960.

SN 92,776. Kool Kooshion Manufacturing Co., Dyersburg, Tenn. Filed Mar. 14, 1960.

KasKade

For Ventilated Seat Cushions.
First use Feb. 11, 1960.

SN 92,777. Kool Kooshion Manufacturing Co., Dyersburg, Tenn. Filed Mar. 14, 1960.

ST. MORITZ

For Ventilated Seat Cushions.
First use Jan. 18, 1960.

SN 92,824. The Stearns & Foster Company, Cincinnati, Ohio. Filed Mar. 14, 1960.

VISCOUNT

For Mattresses.
First use Feb. 26, 1960.

Class 33—Glassware

SN 87,076. Hans Harald Rath, d.b.a. J. & L. Lobmeyr, Vienna, Austria. Filed Dec. 10, 1959.



For Glassware: Namely, Decorative Glassware—Namely, Drinking Sets, Pitchers, Decanters, Cocktail Shakers, Perfume Bottles, Bowls, Vases, Dishes, Covered Boxes, Punch Sets, Decorated Wall Panels and Windows, Presentation Cups and Other Presentation Pieces, All Made of Glass; Tableware, White and Colored, Plain and Decorated.
First use 1863; in commerce 1876.

SN 87,974. Micro Beads, Inc., Toledo, Ohio. Filed Dec. 24, 1959.

HI-SIGN

For Macroscopic Glass Beads for Reflecting Signs, Such as Traffic Signs, Advertising Signs, Railroad Signs, and Safety Signs.
First use 1955.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 79,649. Home Beautiful Mfg. Co., Inc., Wichita, Kans. Filed Aug. 17, 1959.

SPACEMASTER

For Prefabricated Fireplaces.
First use on or about Feb. 2, 1959.

SN 84,257. Titus Manufacturing Corporation, Waterloo, Iowa. Filed Oct. 29, 1959.

TITUS

For Hot and Cold Air Grilles, Registers, Diffusers, and Parts Thereof.
First use September 1947 on grilles.

SN 85,910. Fred H. Schaub Engineering Co., Chicago, Ill. Filed Nov. 23, 1959.

ISOTHERM

For Water Heating Systems.
First use in March 1952.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 64,813. Nupak of Los Angeles, El Monte, Calif. Filed Dec. 23, 1958. CONCURRENT USE to be restricted to Montana, New Mexico, Arizona, Utah, Idaho, Nevada, Oregon, Washington, California, and Hawaii.

NUPAK

For Twisted Jute Packing.
First use in July 1940.

SN 64,836. Nupak of New Orleans, Houston, Tex. Filed Dec. 23, 1958. CONCURRENT USE to be restricted to the United States except Montana, New Mexico, Arizona, Utah, Idaho, Nevada, Oregon, Washington, California, and Hawaii.

NUPAK

For Twisted Jute Packing.
First use in July 1940.

SN 87,462. Western Rubber Company, Goshen, Ind. Filed Dec. 16, 1959.

Mono Cord
NO SPLICE RINGS

Applicant disclaims the term "No Splice Rings" apart from the mark as shown.
For Annular Members Made of Rubber or the Like for Use as Gaskets, Seals, Spacers, Drive Belts, Friction Drives or the Like.
First use Nov. 25, 1959.

Class 36—Musical Instruments and Supplies

SN 88,839. Broadcast Electronics, Inc., Silver Spring, Md. Filed Jan. 12, 1960.

Spotmaster

The mark is the word "Spotmaster."
For Magnetic Sound Recording and Playback Equipment.
First use Apr. 1, 1959.

SN 89,362. Melodigrand Corp., New York, N.Y. Filed Jan. 20, 1960.

Grieg

The mark "Grieg" refers to the famous Norwegian composer Edvard Grieg (1843–1907).
For Pianos.
First use on or about Jan. 1, 1957.

Class 37—Paper and Stationery

SN 60,384. A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. Filed Mar. 26, 1959.

SLEND-O-LINE

For Wood Encased Lead Pencils, and Eraser Tipped Lead Pencils.
First use June 15, 1942.

SN 69,958. Diplomat Envelope Corporation, Long Island City, N.Y. Filed Mar. 20, 1959.



For Envelopes.
First use Nov. 1, 1958.

SN 70,071. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Mar. 23, 1959.

hostess helpers

For Invitations, Tallies, Place Cards, Party Favors, and Score Pads Made of Paper.
First use Jan. 30, 1959.

SN 70,238. The National Cash Register Company, Dayton, Ohio. Filed Mar. 25, 1959.

National

Owner of Reg. Nos. 387,641, 401,680, and others.
For Fanfold Paper, Paper Rolls, and Paper Strips for Use in Business Machines.
First use on or about January 1954.

SN 71,637. Barbara J. White, d.b.a. Barbara White Decorative Papers, New York, N.Y. Filed Apr. 15, 1959.



For Decorative Sheet Material—Namely, Papers With Colored Ink Designs.
First use in February 1959.

SN 78,905. The Parker Pen Company, Janesville, Wis. Filed Aug. 3, 1959.

MARINER

For Fountain Pens and Desk Sets.
First use Mar. 18, 1959.

SN 66,553. Eagle Pencil Company, Danbury, Conn. Filed Dec. 3, 1959.

FILMOGRAPH

For Lead Pencils and Writing and Drafting Leads, Specifically Formulated for Use on Coated Plastic Drafting Films.
First use June 15, 1959.

SN 68,910. Hamac A.G., Zug, Switzerland. Filed Jan. 18, 1960.

EUROMAC

Priority claimed under Sec. 44(d) on Swiss Reg. No. 178,250, dated Sept. 30, 1959.
For Wrapping and Packaging Materials Composed of Paper, Cardboard, Plastics, and Laminations Thereof, Sold in the Form of Sheets and Tubes.

Class 38—Prints and Publications

SN 67,962. Newsweek, Inc., New York, N.Y. Filed Feb. 18, 1959.

LISTENING POST

For Department of a Weekly Publication.
First use June 11, 1956.

SN 60,129. The Dento-Medical Tapes, Philadelphia, Pa. Filed Mar. 9, 1959.

THE AUDIO JOURNAL OF DENTISTRY

For Semi-Monthly Digest of Educational Information in the Dental Field in the Form of Tape Recordings.
First use Nov. 27, 1957.

SN 75,151. American Aviation Publications, Inc., Washington, D.C. Filed June 5, 1959.

AIR TRAVELER'S GUIDE

For Information Directory Issued Quarterly.
First use Feb. 11, 1959.

SN 80,781. Color Corporation of America, Tampa, Fla. Filed Sept. 3, 1959.

colorachrome
COLOR CORPORATION OF AMERICA

The drawing is lined to represent red color. Owner of Reg. No. 610,429.
For Photographic Color Prints and Transparencies.
First use Apr. 27, 1959.

SN 63,716. Fototype, Incorporated, Chicago, Ill. Filed Oct. 21, 1959.

FOTOTYPE

Owner of Reg. Nos. 430,679 and 542,105.
For Pads of Type Characters and Spaces Made of Heavy Paper for Use in Printing, as Well as Trays, Tray Cabinets, and Composing Sticks Adapted Only for Use With Such Pads.
First use in November 1935.

SN 80,631. The Bureau of National Affairs, Inc., Washington, D.C. Filed Feb. 9, 1960.

MODERN MANAGEMENT

Owner of Reg. No. 430,669.
For Periodically Published News Reports.
First use Aug. 30, 1954.

SN 90,878. Ahrens Publishing Co., Inc., New York, N.Y. Filed Feb. 15, 1960.

HOTEL WORLD-REVIEW AND HOTEL MANAGEMENT

Owner of Reg. Nos. 534,567 and 655,639.
For Combination Trade Newspaper-Magazine for the Hotel Industry.
First use Jan. 9, 1960.

Class 39—Clothing

SN 46,217. Frances Gee Garment Company, Inc., Kansas City, Mo. Filed Feb. 20, 1958.

PAY LESS

For Women's and Children's Uniforms.
First use Feb. 6, 1958.

SN 62,178. H Craft Coat Co., New York, N.Y. Filed Nov. 10, 1958.

H.CRAFT

For Coats and Toppers.
First use June 2, 1958.

SN 64,210. Société à Responsabilité Limitée dite: Christian Dior, Paris, France. Filed Dec. 12, 1958.

SAINT LAURENT

Owner of French Reg. No. 471,557, dated Apr. 11, 1958 (Paris); Natl. Inst. No. 106,064.
For Junior Misses', Misses', and Ladies' Coats, Dresses, Gowns for Outerwear, Suits, Jackets, Boleros, Evening Capes, Sport Ensembles Made Up of Blouses, Vests, and Skirts; Shawls and Scarfs; Pullovers and Sweaters; Coats, Jackets, Capes, Stoles, Scarfs, Muffs, and Collars All Made of Fur; Underwear; Stockings; Gloves; Shoes and Hats for Ladies.

SN 68,525. Société à Responsabilité Limitée dite: Christian Dior, Paris, France. Filed Feb. 26, 1959.



Priority is claimed under Sec. 44(d) on French Reg. No. 476,276, dated Dec. 3, 1958 (Seine); Natl. Inst. No. 116,867.
For Junior Misses', Misses', and Ladies' Coats, Dresses, Gowns for Outerwear, Suits, Jackets, Boleros, Evening Capes, Sport Ensembles Made Up of Blouses, Vests, and Skirts; Shawls and Scarfs; Pullovers and Sweaters; Coats, Jackets, Capes, Stoles, Scarfs, Muffs, and Collars All Made of Fur; Underwear; Stockings; Gloves; Shoes and Hats.

SN 69,255. Creative Shoes Limited, Montreal, Quebec, Canada. Filed Mar. 20, 1959.

BROOKFIELD

For Women's Shoes.
First use August 1951; in commerce August 1951.

SN 72,401. Konop Brothers, Inc., Port Huron, Mich. Filed Apr. 22, 1959.

SMILEY U-MAIL-'N

For Aprons.
First use on or about Mar. 2, 1959.

SN 75,323. William B. Kessler, Inc., Hammonton, N.J. Filed June 8, 1959.

GOLDEN CAVIAR

For Men's Clothing—Namely, Suits, Jackets, Topcoats, Trousers, and Sportcoats.
First use May 5, 1959.

SN 77,528. Esquire Sportswear Mfg. Co., New York, N.Y. Filed July 13, 1959.

PROLIN

For Slacks for Men and Young Men.
First use July 1, 1953.

SN 78,205. Kelray Knitting Mills, Inc., New York, N.Y. Filed July 22, 1959.

KELTRIQUE

Owner of Reg. Nos. 284,371, 380,969, and 387,525.
For Ladies', Misses', and Children's Panties, Step-Ins, Bandeaus, Vests, Slips, Petticoats, Nightgowns, Chemises, Bloomers, and Pajamas, Made of Rayon, Silk, Wool, Cotton, and Mixtures.
First use Mar. 26, 1959.

SN 78,358. Lewel Manufacturing Company, Inc., New York, N.Y. Filed July 24, 1959.

CAPTIVATE

For Girdles, Panties, Panty Briefs, Corselettes, Bandeaus, and Brassieres.
First use Apr. 24, 1959.

SN 78,709. The La Resista Corset Company, Bridgeport, Conn. Filed July 30, 1959.

FREEDOMETTE

Owner of Reg. No. 424,255.
For Girdles, Brassieres, and Foundation Garments.
First use about July 24, 1959.

SN 79,226. Coco Coat Co., New York, N.Y. Filed Aug. 10, 1959.



For Ladies' Coats and Suits.
First use May 7, 1959.

SN 80,409. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Aug. 28, 1959.

BILL MANN

For Women's Shoes.
First use Aug. 6, 1959.

SN 80,410. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Aug. 28, 1959.

PILLOW PUFF

For Women's Shoes.
First use Aug. 5, 1959.

SN 81,381. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Sept. 15, 1959.

VERI-FLEX

For Men's and Boys' Shoes.
First use in March 1952.

SN 81,382. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Sept. 15, 1959.

GENTLE TOUCH

For Shoes for Men and Boys.
First use Sept. 1, 1959.

SN 82,052. Carl Freudenberg, Kommanditgesellschaft auf Aktien, Weinheim (Bergstrasse), Germany. Filed Aug. 27, 1959.

CORTEZA

Owner of German Reg. No. 721,490, dated Jan. 26, 1959.
For Shoe Uppers.

SN 82,366. Sheepe Head Knitwear Corp., Newark, N.J. Filed Sept. 29, 1959.



For Infants' and Children's Bootee Sets, Sweaters, and Knit Headwear.
First use Feb. 1, 1947.

SN 82,423. W. T. Grant Company, New York, N.Y. Filed Sept. 30, 1959.

NORWOOD

Owner of Reg. No. 375,350.
For Men's, Women's, and Children's Outer Shirts, Slacks, Jackets, Pajamas, Robes, Coats, and Shorts; Men's Suits.
First use Dec. 3, 1938, on men's outer shirts.

SN 82,843. Professional Laundries Shirt Sales, Inc., d.b.a. Professional Laundries Shirt Plan, Louisville, Ky. Filed Oct. 7, 1959.



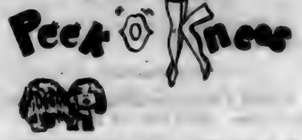
For Men's Dress Shirts.
First use June 17, 1959.

SN 84,381. Robert P. Ball, Oak Ridge, Tenn. Filed Nov. 2, 1959.

PEGO

For Men's and Women's House Dresses, Examination Gowns, Bathrobes, Wrap-Arounds, Lounging Robes, Patients' Bed Gowns, Beach Robes, and Women's Coverall Jackets.
First use in July 1959.

SN 85,655. Sylvia E. Chapman, d.b.a. Peek-O-Knees Gowns, Chicago, Ill. Filed Nov. 19, 1959.



For Women's and Misses' Sleeping Wear—Namely, Nightgowns and Pajamas.
First use Oct. 3, 1956.

SN 86,578. Interwoven Stocking Company, New Brunswick, N.J. Filed Dec. 3, 1959.

WEAR RESIST

Owner of Reg. No. 545,926.
For Hosiery.
First use July 1927.

SN 87,379. Alfred Shapiro Inc., New York, N.Y. Filed Dec. 15, 1959.



The words "Of New York" are disclaimed apart from the mark as a whole.
For Men's Shirts, Jackets, Beach Jackets, Beach Shirts, Walking Shorts, Swim Trunks, and Sweaters.
First use in 1943.

SN 88,021. Chicago Rawhide Manufacturing Company, Chicago, Ill. Filed Dec. 28, 1959.



Owner of Reg. Nos. 518,600 and 627,718.
For Workmen's Protective Garments—Namely, Leather Aprons and Hand Leathers (Which Are Workmen's Protective Hand Pads Used in Handling Heavy, Hot, or Rough Parts).
First use on or about Jan. 1, 1937.

SN 90,111. Sel-Mor Garment Co. Inc., St. Louis, Mo. Filed Feb. 1, 1960.

PIMAIRE

For Cotton Fabrics Sold as Women's Undergarments.
First use Jan. 4, 1960.

SN 90,565. Olga Company, Van Nuys, Calif. Filed Feb. 8, 1960.

SECRET HUG

For Brassieres.
First use Aug. 20, 1959.

SN 90,766. Matthews-Riseman, Inc., Boston, Mass. Filed Feb. 11, 1960.

GAINSBORG

For Ladies' Dresses.
First use Jan. 18, 1960.

SN 90,939. Pantino, Inc., Boston, Mass. Filed Feb. 15, 1960.

PANTISSIMO

Owner of Reg. No. 680,841.
For Women's and Misses' Sportswear—Namely, Slacks, Shorts, Skirts and Blouses, Commonly Sold as Coordinates.
First use Feb. 5, 1960.

SN 91,069. Coat Craft Company, Inc., Philadelphia, Pa. Filed Feb. 17, 1960.

KULE-JAK

For Hooded Outer Garments in the Form of the Parka Type.
First use Feb. 8, 1960.

SN 91,070. Coat Craft Company, Inc., Philadelphia, Pa. Filed Feb. 17, 1960.



For Hooded Outer Garments in the Form of the Parka Type.
First use Feb. 8, 1960.

SN 91,405. Macon Shirt Company, Macon, Ga. Filed Feb. 23, 1960.

LORDCASTLE

For Men's Sport and Dress Shirts.
First use Apr. 22, 1952.

SN 91,740. Balcort Shirt Co. Inc., New York, N.Y. Filed Feb. 29, 1960.

DAYCOTT

For Men's Dress Shirts, Sport Shirts, and Pajamas.
First use Sept. 1, 1954.

Class 40—Fancy Goods, Furnishings, and Notions

SN 52,897. Novel Knit, High Point, N.C. Filed June 4, 1958.

NOVEL KNIT

Applicant disclaims the word "Knit" separate and apart from the mark, for Jersey loops.
For Jersey Loops in Strip Form To Be Employed for Weaving, Hooking or Braiding Rugs, Bedspreads, Potholders, Bath Mats, Etc.
First use in October 1952.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 31,054. D. Swarovski & Co., Glasschleiferei, Wattens, Austria. Filed May 29, 1957.

JAIS SCARABÉ

Priority claimed under Sec. 44(d) on Austrian application filed Dec. 11, 1956, Reg. No. 36,073, dated Feb. 27, 1957.
The meaning of the trademark "Jais Scarabe" is "black scarabaeus" which is the Latin name for an extinct insect.
For Woven Fabrics With Imitation Ornamental Stones or Beads Provided With Cut Facet Surfaces.
First use Jan. 10, 1956; in commerce Jan. 19, 1956.

SN 75,010. Hartford Textile Corporation, New York, N.Y. Filed June 3, 1959.

WALLSCAPES

For Printed Plastic Film Material for Use Mainly as Draperies.
First use May 22, 1959.

SN 81,383. Crompton Company, New York, N.Y. Filed Sept. 15, 1959.

VELTESSA

For Textile Fabrics in the Piece Composed of Velvet.
First use Aug. 31, 1959.

SN 90,118. J. P. Stevens & Co. Inc., New York, N.Y. Filed Feb. 1, 1960.

CRUISEWALE

For Cotton Fabrics in the Piece, Used for the Manufacture of Women's Blouses and Dresses.
First use Aug. 11, 1959.

SN 90,272. Rhoads & Company, Philadelphia, Pa. Filed Feb. 3, 1960.

RHODESSA

Owner of Reg. No. 181,220.
For Sheets and Pillow Cases.
First use 1920.

SN 90,547. Milway, Inc., Milwaukee, Wis. Filed Feb. 8, 1960.

MILCREST

For Textile Bed Sheets.
First use Jan. 4, 1960.

SN 90,682. Deering, Milliken & Co. Inc., New York, N.Y. Filed Feb. 10, 1960.

WISTELLE

For Textile Fabrics Made of Wool and Synthetic Fibers and Combinations Thereof.
First use on or about Dec. 7, 1959.

Class 43—Thread and Yarn

SN 82,117. Imperial Chemical Industries Limited, London, England. Filed Sept. 25, 1959.

CRIMPLENE

Priority is claimed under Sec. 44(d) on British Reg. No. 791,066, dated May 18, 1959.
For Yarns and Threads of Textile Materials or for Textile Purposes.

SN 90,617. The American Thread Company, New York, N.Y. Filed Feb. 9, 1960.

STAR-D-LOFT

For Thread.
First use Nov. 11, 1959.

SN 90,662. Syn-Pro, Inc., Annapolis, Md. Filed Feb. 9, 1960.

POLY-FIBE

For Synthetic Filament or Spun-Type Yarns From Polymers of Polypropylene, Polyvinyl Chloride, Vinylidene Chloride or Any Copolymers of Same.
First use Oct. 1, 1959.

Class 44—Dental, Medical, and Surgical Appliances

SN 70,927. Niagara Therapy Manufacturing Corporation, Adamsville, Pa. Filed Apr. 6, 1959.

CYCLOMATT

For Motor Operated Massage Devices in the Form of Cushions or Pads To Be Applied to the Body.
First use on or about Aug. 21, 1958.

SN 89,109. The Akwell Corporation, Akron, Ohio. Filed Jan. 18, 1960.

MARK III

For Prophylactic Rubber Articles for the Prevention of Contagious Diseases.
First use Aug. 10, 1959.

SN 89,871. Rower Dental Mfg. Corp., Boston, Mass. Filed Jan. 28, 1960.

SOF-TI

For Dental Saliva Ejector and a Tip To Cover an End Portion of a Dental Saliva Ejector.
First use 1956.

SN 89,922. Johnson & Johnson, New Brunswick, N.J. Filed Jan. 29, 1960.

SCAN

For Medical Spray-On Dressings.
First use Jan. 18, 1960.

Class 45—Soft Drinks and Carbonated Waters

SN 75,560. Irving Herman, d.b.a. Herman's Quality Syrups, New York, N.Y. Filed June 11, 1959.

ROCK-N-ROOT

For Syrups for Making Soft Drinks.
First use Mar. 1, 1956.

SN 77,436. Ma Cherie Sales Corporation of America, St. Louis, Mo., assignee of Golden Girl Premix Sales Corporation, St. Louis, Mo. Filed July 10, 1959.



My Sweetheart

For Flavoring Base and Flavoring Concentrates Used in Making Soft Drink Beverages.
First use Oct. 1, 1959.

SN 85,482. Frutas Concentradas, S.A., Mexico City, Mexico. Filed Nov. 17, 1959.



The Spanish word "Jarritos" means "small jugs or pitchers." Owner of Mexican Reg. No. 75,959, dated Sept. 9, 1953.
For Carbonated Soft Drinks and Mineral Waters.

Class 46—Foods and Ingredients of Foods

SN 700,121. Quality Chekd Dairy Products Association, Chicago, Ill. Filed Dec. 16, 1955. COLLECTIVE MARK.

BIG SHAKE

Owner of Reg. No. 624,238.
For Low Butter Fat Iced Milk and an Iced Milk Preparation Containing Iced Milk, Regular Milk, and Flavoring Materials.
First use Apr. 7, 1949.

SN 43,949. Moore & Co. Soups, Inc., Newark, N.J. Filed Jan. 14, 1958.

"THE KING OF SOUPS"

Applicant claims no exclusive rights in "Soups" as the name of the goods identified.
For Canned Soups and Consomme.
First use in June 1922.

SN 45,264. Joseph C. Ulick, d.b.a. Londonderry Farms, Ltd., Beverly Hills, Calif., assignee of Maison Roches, Ltd., Los Angeles, Calif. Filed Feb. 4, 1958.

COCONUT SNOW

Applicant claims no exclusive rights in "Coconut" as the name of the goods identified.
For Flavoring Additive Containing Coconut for Beverages and Foods.
First use in April 1947.

SN 64,541. Food Marketing Corp., Fort Wayne, Ind. Filed Dec. 18, 1958.

ELF

Owner of Reg. Nos. 176,758, 391,778, and 530,316.
For Canned Foods—Namely, Fruits, Vegetables, Fruit Juices, Vegetable Juices, Pork and Beans, Tomato Puree; Catsup, Mustard, Peanut Butter; Dry Macaroni, Spaghetti and Noodles; Tea, Salt, Flour, and Marshmallows.
First use Jan. 1, 1958; Feb. 15, 1919, as to "Elf" as part of mark "Little Elf."

SN 69,671. The New England Vinegar Works, Inc., d.b.a. New England Apple Products Co., Littleton, Mass. Filed Mar. 16, 1959.

ALPINE PUNCH

The word "Punch" is disclaimed apart from the mark as a whole.
For Canned Apple-Pineapple Juice.
First use Jan. 14, 1959.

SN 72,061. The Nashville Agricultural and Normal Institute, Madison, Tenn. Filed Apr. 22, 1959.

CHEZE-O-SOY

For Prepared Dietary and Vegetarian Foods—Namely, Canned Vegetable Loaves and Vegetable Sandwich Fillings.
First use during August 1940.

SN 72,791. Candygram, Inc., Chicago, Ill. Filed May 4, 1959.

KIDDIE CANDYGRAM

Owner of Reg. No. 648,193.
For Candies.
First use Apr. 3, 1959.

SN 73,606. Prepackage Sales Corp., d.b.a. Kitchenest Products and Kitchenest Foods, Denver, Colo. Filed May 13, 1959.

DAFFY DILLY DANDY

For Caramel Nut Fudge.
First use Oct. 7, 1958.

SN 74,968. Ira O. Well, Orinda, Calif. Filed June 2, 1959.

SUPER SATELLITE

"OUT OF THIS WORLD"

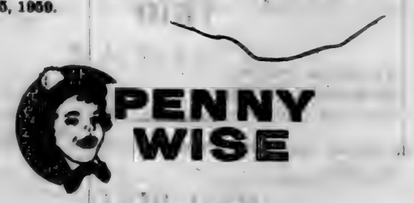
No claim is made to the phrase "Out of This World" apart from the mark as shown.
For Canned and Bottled Olives.
First use Feb. 12, 1958.

SN 81,928. Order of St. Benedict, Collegeville, Minn. Filed Sept. 23, 1959.



For Bakery Products—Namely, Bread.
First use June 18, 1959.

SN 83,328. B. F. Trappey's Sons Inc., New Iberia, La. Filed Oct. 15, 1959.



The drawing is lined for red, yellow, and green.
For Canned Sweet Potatoes.
First use May 1, 1959.

SN 83,791. Albert Harris & Co., S.A., Lima, Peru. Filed Oct. 22, 1959.

VOLO

For Canned Fish.
First use Aug. 30, 1959; in commerce Aug. 30, 1959.

SN 83,906. Meyer Tomatoes, Hlag City, Calif. Filed Oct. 26, 1959.

MEYER'S PRIDE

The picture of the child is that of the daughter of Robert L. Meyer, whose name is Lynn Meyer, and his consent to the use and registration of the picture is of record. Applicant claims no exclusive rights to the representation of the tomato.
For Fresh Tomatoes.
First use in July 1958.

SN 84,198. Winn-Dixie Stores, Inc., Jacksonville, Fla. Filed Oct. 28, 1959.

PINEBREEZE FARM

For Fresh Eggs.
First use in 1931.

SN 85,413. Standard Fruit and Steamship Company, New Orleans, La. Filed Nov. 16, 1959.

CABANA

For Bananas.
First use Oct. 30, 1959.

SN 85,415. Standard Fruit and Steamship Company, New Orleans, La. Filed Nov. 16, 1959.

TROPIPAC

For Bananas.
First use Oct. 30, 1959.

SN 87,190. Carnation Company, Los Angeles, Calif. Filed Dec. 14, 1959.

TRIO

For Instant Potatoes.
First use Oct. 3, 1959.

SN 87,876. Hardy Salt Company, St. Louis, Mo. Filed Dec. 23, 1959.

RED BIRD

For Table Salt.
First use March 1947.

SN 87,979. Osceola Foods, Inc., d.b.a. Delta Foods of Osceola, Arkansas, Osceola, Ark. Filed Dec. 24, 1959.

SEMINOLE

For Oleomargarine.
First use Oct. 31, 1959.

SN 88,071. Anthony Mule, d.b.a. A. Mule & Sons and A.M.S. Packing Company, Ozone Park, N.Y. Filed Dec. 28, 1959.

PINOCHIO

Owner of Reg. No. 383,545.
For Edible Oils, Used Independently and/or in Blended Form—Namely, Olive Oil, Peanut Oil, Corn Oil, Cottonseed Oil, and Soyabean Oil.
First use Sept. 9, 1939.

SN 89,595. Mayfair Packing Company, San Jose, Calif. Filed Jan. 25, 1960.

TENDERIFFIC

For Canned and Dried Fruits.
First use May 14, 1959.

SN 89,735. Blumenthal Bros. Chocolate Co., Philadelphia, Pa. Filed Jan. 27, 1960.

FRECKLES

For Chocolate Malted Milk Eggs.
First use Dec. 30, 1959.

SN 89,882. West Foods, Inc., Soquel, Calif. Filed Jan. 28, 1960.

ERLAND'S

For Fresh Mushrooms and Canned Mushrooms.
First use March 1941.

SN 90,461. The Wander Company, d.b.a. Ovaltine Food Products, Chicago, Ill. Filed Feb. 5, 1960.

OVALTINE

Owner of Reg. Nos. 93,650 and 385,640.
For Candy.
First use Jan. 28, 1960.

SN 90,789. J. Allen Smith & Co., Knoxville, Tenn. Filed Feb. 11, 1960.

SEVEN SISTERS

For Wheat Flour.
First use on or about Apr. 20, 1911.

SN 90,852. McCallum-Legas Fish Company Inc., Seattle, Wash. Filed Feb. 12, 1960.

"HALIBURGERS"

For Fresh and Frozen Patties, Steaks, and Cutlets of Halibut, Cod, Snapper, Ling Cod, True Cod, Black Cod, and Perch.
First use Dec. 28, 1959.

SN 90,868. Superior Tea & Coffee Co., Chicago, Ill. Filed Feb. 12, 1960.

SUCAF

For Coffee—Namely, So-Called Instant Coffee.
First use Feb. 1, 1960.

SN 91,374. The Glidden Company, d.b.a. Durkee Famous Foods Company, Inc., Cleveland, Ohio. Filed Feb. 23, 1960.

SNOWFLAKE

For Shredded Coconut.
First use Nov. 7, 1955.

SN 91,736. Arnold Bakers, Inc., Port Chester, N.Y. Filed Feb. 29, 1960.

ARNOLD

Owner of Reg. Nos. 566,553 and 636,916.
For Breads, Rolls, Partially Baked Rolls, Buns, Biscuits, Brownies, Cookies, Crumpets, and Bread Stuffing.
First use Jan. 22, 1960, on rolls; Jan. 27, 1958, in substantially the form shown on breads.

Class 47—Wines

SN 48,476. The Globe Distributing Company, Washington, D.C. Filed Mar. 26, 1958.

LA BRONTE

For Vermouth.
First use Feb. 20, 1958.

SN 80,951. John Bardenheier Wine & Liquor Company, d.b.a. The Old Dublin Wine Company, St. Louis, Mo. Filed Sept. 8, 1959.

SWEET "ROSIE O'GRADY"

For Wines.
First use June 25, 1959.

Class 48—Malt Beverages and Liquors

SN 47,764. The Seeburg Corporation, Pittsburgh, Pa., by change of name from Fort Pitt Industries, Incorporated, Pittsburgh, Pa. Filed Mar. 14, 1958.

Old Shay

Owner of Reg. No. 385,610.
For Beer.
First use June 1943; Sept. 20, 1933, as to "Old Shay"; May 5, 1940, as to "Old Shay" with the representation of the shay.

Class 49—Distilled Alcoholic Liquors

SN 66,564. Merchants Distilling Corporation, Terre Haute, Ind., assignee of J. T. S. Brown's Son Company, Cincinnati, Ohio. Filed Jan. 9, 1959.

PEYTON'S PREMIUM

Applicant disclaims the exclusive right to the word "Premium" apart from the mark as shown.
For Whiskey.
First use Sept. 24, 1957.

SN 77,729. Colin Forbes Ross & Company Limited, Glasgow, Scotland. Filed July 15, 1959.

Glen Bowie

The drawing is lined for red.
For Scotch Whisky.
First use Mar. 23, 1959; in commerce Mar. 23, 1959.

Class 50—Merchandise Not Otherwise Classified

SN 43,412. American Rack Merchandisers Institute, Chicago, Ill. Filed Jan. 8, 1958. COLLECTIVE MARK.

THRIFTY HOSTESS

For Vinyl Plastic Table Covers, Toaster Covers, Mixer Covers, Bowl Covers, Basket Liners, Blanket Bags, Dampening Bags, Garment Bags.
First use Sept. 3, 1957.

SN 48,851. Le Bouchon Rapid, Cusset, Allier, France. Filed Apr. 1, 1958.

NECK-LOCK

Priority is claimed under Sec. 44(d) on French Reg. No. 1,959, dated Oct. 5, 1957 (Cusset); Natl. Inst. No. 96,657.
For Bottle Caps.

SN 67,017. Miller Outdoor Advertising Products Company, Inc., Greenville, S.C. Filed Feb. 3, 1959.



Greenville, S.C. Filed Feb. 3, 1959.
For Billboards.
First use Apr. 10, 1958.

SN 81,581. Harold J. Miskend, d.b.a. The Pink Poodle, New York, N.Y. Filed Sept. 17, 1959.

THE PINK POODLE

For Woolen Jacket Type Bottle Cover.
First use Sept. 8, 1959.

SN 84,963. Limhamns Trilndustri Aktiebolag, Malmo, Sweden. Filed Oct. 27, 1959.

VERYNYL

Owner of Swedish Reg. No. 74,154, dated June 5, 1953.
For Plastic Sheeting Marking Material for Streets, Highways, Car Parks, Airfields, Hangars, and Industrial Premises.

Class 51 — Cosmetics and Toilet Preparations

SN 53,509. Jean Huerre & Cie, S.A.R.L., Levallois-Perret, Seine, France. Filed June 13, 1958.

MEGEVE

Owner of French Reg. No. 403,784, dated June 15, 1950 (Seine); Natl. Inst. No. 474,245.
For Beauty Preparations—Namely, Beauty Cream, Perfume, Dentifrices, and Rouge.

SN 84,057. Alexandra de Markoff Sales Corporation, New York, N.Y. Filed Oct. 27, 1959.

DRESDOLL

For Facial Foundation Make-Up.
First use about May 1946.

SN 86,469. Ambel Laboratories Inc., Brooklyn, N.Y. Filed Dec. 2, 1959.

WINTERCOAT

For Cold Weather Skin Cream.
First use Nov. 17, 1959.

SN 88,330. Germaine Monteil Cosmetiques Corporation, New York, N.Y. Filed Dec. 31, 1959.

ROYAL SECRET

For Bath Perfume, Liquid Foundation Base, and Face Powder.
First use Dec. 14, 1959.

Class 52 — Detergents and Soaps

SN 53,283. National Cooperatives, Inc., Albert Lea, Minn. Filed June 10, 1958.

Breakwater

For Bead Detergents for Laundry, Dishwashing and General Cleaning Purposes, Sold Through Applicant's Member Cooperatives.
First use Jan. 8, 1951.

SN 70,089. MacDermid Incorporated, Waterbury, Conn. Filed Mar. 23, 1959.

CI

For Copper Brighteners.
First use Feb. 19, 1957.

SN 71,278. Food Brands, Inc., Concordia, Kans. Filed Apr. 10, 1959.

BESTYET

Owner of Reg. Nos. 177,369, 180,568, and others.
For Household Soap and Detergent.
First use during October 1952.

SN 87,171. Potter Drug & Chemical Corporation, Malden, Mass. Filed Dec. 10, 1959.

NEOCURA

Owner of Reg. Nos. 36,921, 590,172, and others.
For Antiseptic Incorporated in Soap and Hand Cream.
First use Dec. 4, 1959.

SN 89,559. Deltex Industries, Inc., New York, N.Y. Filed Jan. 25, 1960.

FAIR LADY

For Liquid Detergent for Household Use.
First use Oct. 26, 1959.

SERVICE MARKS

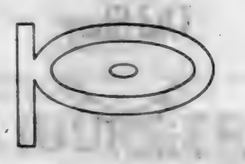
Class 100 — Miscellaneous

SN 68,698. Identacode, Ltd., Los Angeles, Calif. Filed Mar. 2, 1959.

IDENTACODE

For Providing Means for the Identification of Lost or Stolen Dogs Through the Process of Tatooing Dogs With Code Identifications and Maintaining Records in the Office of Applicant and With Owners and in Other Appropriate Places Whereby the Owners of the Dogs Can Be Readily Identified and Located.
First use Nov. 5, 1947.

SN 75,776. Lawrence Peabody, d.b.a. Lawrence Peabody Associates, Boston, Mass. Filed June 15, 1959.



For Designing Service in Connection With Furniture.
First use June 1958.

SN 89,533. Woolens and Worsteds of America, Inc., New York, N.Y. Filed Jan. 22, 1960.



The drawing is lined for blue and red. The words "Style," "Quality," and "Value" are disclaimed apart from the mark as shown.
For Trade Association Services to Its Members Including Publicity, Promotional Activity for the Purpose of Expanding the Market for Woolen and Worsted Products, Representing Its Members Before Government Agencies and Dissemination of Information to Its Members Through Bulletins and Letters.
First use Sept. 4, 1958.

Class 101 — Advertising and Business

SN 55,322. Household Needs, Inc., Chicago, Ill. Filed July 15, 1958.



For Services Comprising Mail-Order Retailing of Consumer Goods.
First use June 1, 1958.

SN 66,678. Rawson J. White, d.b.a. Rawson J. White Company, San Francisco, Calif. Filed Jan. 28, 1959.



Applicant disclaims the exclusive use of the words "A Train 'Em Yourself System for Supervisory Personnel for Retailers of New Cars and Trucks."
For Analyzing, Instructing, and Counseling Services With Respect to the Sound Operation of Car and Truck Retailing Businesses.
First use Nov. 24, 1958.

SN 88,805. Resources Development Corporation of America, Los Angeles, Calif. Filed Jan. 11, 1960.



For Conducting Searches for Businesses and Buyers Therefor, Negotiating the Consummation of Sales of Businesses, Recruiting and Placing of Personnel, and Conducting Product Research and Marketing Studies.
First use Aug. 15, 1959.

Class 102 — Insurance and Financial

SN 79,594. North American Planning Corporation, New York, N.Y. Filed Aug. 14, 1959.



For Financial Service—Namely, Sponsoring and Distributing Open-End Investment Trust Shares by Creating, Promoting, and Selling and Thereby Making Available for Purchase Such Trust Shares, Which Are Commonly Called Mutual Funds.
First use Mar. 10, 1957.

SN 87,420. Foundation for Commercial Banks, Philadelphia, Pa. Filed Dec. 16, 1959. COLLECTIVE MARK.



The drawing is lined for blue and gold. Applicant disclaims any exclusive right to the use of the words "Full-Service Bank" apart from the mark as shown.
For Banking Services To Indicate the Services Rendered by Commercial Banks, Members of or Eligible for Membership in Applicant.
First use Oct. 24, 1959.

Class 103—Construction and Repair

SN 79,312. Wade, Wenger & Associates, Inc., Chicago, Ill. Filed Aug. 10, 1959.



Owner of Reg. Nos. 583,083 and 579,305.
For General Household, Office, and Institutional Cleaning and Renovating Services, Such as Wall and Window Washing, Window Shades, Blind and Drapery Cleaning, Mothproofing, Floor Maintenance Including Surfacing, Cleaning, Polishing, and Waxing, Dry Cleaning and Laundry Work.
First use Sept. 15, 1958.

Class 104—Communication

SN 77,253. The Baltimore and Ohio Railroad Company, Baltimore, Md. Filed July 8, 1959.



No exclusive claim is made to the words "Data on Tracing" apart from the mark as shown. Owner of Reg. No. 619,642.
For Providing Immediate and Continuous Information to Freight Shippers on the Progressive Movement of Railroad Freight Cars.
First use Mar. 14, 1959.

SN 86,883. The Western Union Telegraph Company, New York, N.Y. Filed Jan. 12, 1960.

WIREFAX

For Furnishing Public Telegraph Facsimile Communication Services.
First use on or about Dec. 1, 1959.

Class 105—Transportation and Storage

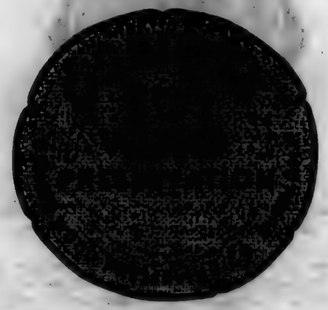
SN 75,606. Braniff Airways, Incorporated, d.b.a. Braniff International Airways, Dallas, Tex. Filed June 12, 1959.

"Gold Service"

Owner of Reg. No. 695,440.
For Air Transportation of Passengers, Freight, and Mail.
First use July 14, 1958.

Class 106—Material Treatment

SN 55,265. Osmose Wood Preserving Co. of America, Inc., Buffalo, N.Y. Filed July 14, 1958.



The drawing is lined for yellow. However, the applicant makes no claim as to color. Applicant disclaims the words "Process for Wood Preservation" and "Buffalo, N.Y." Owner of Reg. Nos. 330,697 and 546,873.
For Technical Informational Services Rendered in the Preparation, Use and Application of Wood Preservatives and in Applying Preservatives to the Wooden Products of Others.
First use prior to 1940.

SN 85,664. Gisholt Machine Company, Madison, Wis. Filed Nov. 19, 1959.

GISHOLT
MASTERGLAS

Owner of Reg. Nos. 56,496, 672,454, and others.
For Custom Designing, Engineering, and Production of Molded Resinous and Fiberglass Reinforced Plastics.
First use October 1956.

SN 87,866. General Photo Laboratories Inc., New York, N.Y. Filed Dec. 23, 1959.



For Service Involving Developing and Processing Exposed Film.
First use Dec. 7, 1959.

CERTIFICATION MARKS

Class B—Services

SN 51,139. Owner-Manager National Motel Association, Greeneville, Tenn. Filed May 6, 1958.



The mark certifies that the facilities and services offered to the public by the motels and motor courts in connection with which it is used meet standards set by applicant.
For Motel and Motor Court Services.
First use Apr. 7, 1958.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

700,285. CORNELI KEYSTONE AND DESIGN. Cornell Seed Company. SN 30,639. Pub. 4–19–60. Filed 5–24–57.

700,286. FERROMOLD. Kerr Manufacturing Company. SN 47,661. Pub. 7–7–59. Filed 3–13–58.

700,287. CHARKETS AND DESIGN. Tennessee Products & Chemical Corporation. SN 49,884. Pub. 4–19–60. Filed 4–17–58.

700,288. EMPIRE. Farmers Chinchilla Cooperative of America, Inc. SN 63,703. Pub. 4–19–60. Filed 12–8–58.

700,289. SCEPTOR. Farmers Chinchilla Cooperative of America, Inc. SN 63,704. Pub. 4–19–60. Filed 12–8–58.

700,290. CURA-SOLE. Beebe Rubber Company. SN 81,534. Pub. 4–19–60. Filed 9–17–59.

700,291. AQUA-L-AIR. Big Three Welding Supply Company. SN 85,092. Pub. 4–19–60. Filed 11–12–59.

700,292. TROFLEX. Albert Trostel & Sons Company. SN 86,215. Pub. 4–19–60. Filed 11–27–59.

700,293. WEETEEN. Albert Trostel & Sons Company. SN 86,216. Pub. 4–19–60. Filed 11–27–59.

700,294. TREEBARK. Albert Trostel & Sons Company. SN 86,221. Pub. 4–19–60. Filed 11–27–59.

700,295. NUBIAN. Albert Trostel & Sons Company. SN 86,223. Pub. 4–19–60. Filed 11–27–59.

700,296. ANTONIO. Albert Trostel & Sons Company. SN 86,227. Pub. 4–19–60. Filed 11–27–59.

700,297. DOLYN. E. I. du Pont de Nemours and Company. SN 87,836. Pub. 4–19–60. Filed 12–15–59.

700,298. SPORT PAC. Armour and Company. SN 87,844. Pub. 4–19–60. Filed 12–23–59.

700,299. BROADTAIL GRANDE. Shulof & Co., Inc. SN 88,432. Pub. 4–19–60. Filed 1–4–60.

700,300. TEXTURESKIN. Armour and Company. SN 88,587. Pub. 4–19–60. Filed 1–7–60.

700,301. SOFPAC. Armour and Company. SN 88,588. Pub. 4–19–60. Filed 1–7–60.

700,302. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 89,096. Pub. 4–19–60. Filed 1–15–60.

700,303. KEMET. Union Carbide Corporation. SN 89,393. Pub. 4–19–60. Filed 1–20–60.

700,304. DESIGN OF BARS. Mobay Chemical Company. SN 89,596. Pub. 4–19–60. Filed 1–25–60.

700,305. CELCON. Celanese Corporation of America. SN 89,894. Pub. 4–19–60. Filed 1–29–60.

700,306. F AND DESIGN. J. P. Frank Corp. SN 90,244. Pub. 4–19–60. Filed 2–3–60.

Class 2—Receptacles

700,307. KOOL KAN. United States Steel Corporation. SN 50,327. Pub. 4–19–60. Filed 4–24–58.

700,308. BAS-KITS. Forrest C. Crooks, d.b.a. Tuckamony Nursery. SN 71,188. Pub. 4–19–60. Filed 4–9–59.

700,309. BEST BUY. Aladdin Industries, Incorporated. SN 74,357. Pub. 4–19–60. Filed 5–25–59.

700,310. SPEEDILY YOURS. Peter A. Conroy. SN 78,428. Pub. 4–19–60. Filed 7–27–59.

700,311. MONOSEAL. Batesville Casket Company, Inc. SN 82,468. Pub. 4–19–60. Filed 10–1–59.

700,312. WESTERN AGRI-PAK AND DESIGN. Western Kraft Corporation. SN 83,147. Pub. 4–19–60. Filed 10–12–59.

700,313. CLEARVIEW. Floyd M. Williamson. SN 85,447. Pub. 4–19–60. Filed 11–16–59.

700,314. CITATION. Harris Vault Company. SN 85,585. Pub. 4–19–60. Filed 11–18–59.

700,315. TROPICAL. Van Brode Milling Co., Inc. SN 85,698. Pub. 4–19–60. Filed 11–19–59.

700,316. VB. Van Brode Milling Co., Inc. SN 85,699. Pub. 4–19–60. Filed 11–19–59.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

700,317. CLIFTON'S PRINCESS. Clifton Wood, d.b.a. Western Supply Company. SN 74,174. Pub. 12–8–59. Filed 5–20–59.

700,318. WHISPER-LITE. Peter's Bag & Novelty Corporation. SN 82,528. Pub. 4–19–60. Filed 10–1–59.

700,319. LITE-PAC BY NEEVEL AND DESIGN. Neevel Luggage Manufacturing Company. SN 83,115. Pub. 4–19–60. Filed 10–12–59.

700,320. PENNY-PINCHER. Bernard Cahn Co., Inc. SN 83,460. Pub. 4–19–60. Filed 10–19–59.

700,321. TRAVEL WISE. General Sewing Corp. SN 84,536. Pub. 4–19–60. Filed 11–3–59.

Class 4—Abrasives and Polishing Materials

700,322. SHOW ROOM. Star Chemical Co. SN 80,280. Pub. 4–19–60. Filed 8–26–59.

700,323. WALBERNIZE AND DESIGN. Walbern Laboratories, Inc. SN 81,947. Pub. 4–19–60. Filed 9–23–59.

Class 5—Adhesives

700,324. EASTMAN 910. Eastman Kodak Company. SN 80,724. Pub. 4–19–60. Filed 9–2–59.

700,325. ADHECO. Adhesive Tape Corporation. SN 81,527. Pub. 4–19–60. Filed 9–17–59.

700,326. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 89,097. Pub. 4–19–60. Filed 1–15–60.

Class 6—Chemicals and Chemical Compositions

700,327. ACTO-VATE. E. F. Drew & Co., Inc. SN 3,595. Pub. 4–23–57. Filed 2–20–56.

700,328. ACTI-DIONE PM AND DESIGN. The Upjohn Company (Delaware corporation), assignee of The Upjohn Company (Michigan corporation). SN 47,471. Pub. 4–19–60. Filed 3–10–58.

700,329. MULTI-FILM. Hercules Glue Company, Ltd. SN 54,228. Pub. 4–19–60. Filed 6–25–58.

700,330. E–2 AND DESIGN. Monsanto Chemical Company. SN 66,918. Pub. 4–19–60. Filed 2–2–59.

700,331. PARA-BACTOL AND DESIGN. Parachlor Chemical Corporation. SN 68,311. Pub. 4–19–60. Filed 2–24–59.

700,332. STEPANATE. Stepan Chemical Company (Delaware corporation) assignee of Stepan Chemical Company (Illinois corporation). SN 70,550. Pub. 4–19–60. Filed 3–30–59.

700,333. DYNASTOP. Dynacolor Corporation. SN 71,192. Pub. 4–19–60. Filed 4–9–59.

700,334. DYNOL. Dynacolor Corporation. SN 71,193. Pub. 4–19–60. Filed 4–9–59.

700,335. DYNAFIX. Dynacolor Corporation. SN 71,196. Pub. 4–19–60. Filed 4–9–59.

700,336. RUELENE. The Dow Chemical Company. SN 72,804. Pub. 4–19–60. Filed 5–4–59.

700,337. BROZONE. The Dow Chemical Company. SN 72,811. Pub. 4–19–60. Filed 5–4–59.

700,338. CLOROFUME. Vulcan Materials Company, d.b.a. Frontier Chemical Company. SN 73,459. Pub. 4–19–60. Filed 5–11–59.

700,339. SANIPHOR. Herman E. Wilde, d.b.a. Herman E. Wilde Chemical Co. SN 75,812. Pub. 3–22–60. Filed 6–15–59.

700,340. FINEX. American Cyanamid Company. SN 78,408. Pub. 4–19–60. Filed 7–27–59.

700,341. QUALEX. E. I. du Pont de Nemours and Company. SN 78,619. Pub. 4–19–60. Filed 7–29–59.

700,342. ANSCOCHROME. General Aniline & Film Corporation, d.b.a. Ansco. SN 81,475. Pub. 4–19–60. Filed 9–16–59.

700,343. SCALPEX. Columbus Wholesale Barber & Beauty Supply Co., Inc., d.b.a. Eudora Products. SN 82,897. Pub. 4–19–60. Filed 9–30–59.

700,344. POLYDRIL. The Dow Chemical Company. SN 83,870. Pub. 4–19–60. Filed 10–23–59.

700,345. MUDBAN. The Dow Chemical Company. SN 85,318. Pub. 4–19–60. Filed 11–16–59.

Class 7—Cordage

700,346. HANDY COILS. American Manufacturing Company, Inc. SN 53,685. Pub. 4–19–60. Filed 6–17–58.

700,347. BARBOUR'S. The Linen Thread Co., Inc. SN 72,737. Pub. 4–19–60. Filed 5–1–59.

Class 9—Explosives, Firearms, Equipments, and Projectiles

700,348. WIN-LITE. Olin Mathieson Chemical Corporation. SN 82,700. Pub. 4–19–60. Filed 10–5–59.

700,349. AIRDOX AND DESIGN. Marmon-Herrington Company, Inc., assignee of Airdox Cardox Products Company. SN 86,861. Pub. 4–19–60. Filed 12–8–59.

Class 11—Inks and Inking Materials

700,350. DRI-FAST. Speed-O-Print Corporation. SN 39,754. Pub. 4–19–60. Filed 10–29–57.

700,351. ASSURANCE AND DESIGN. Best Industries, Inc. SN 85,466. Pub. 4–19–60. Filed 11–17–59.

Class 12—Construction Materials

700,352. SHOWERGON. The Logan Manufacturing Company. SN 49,592. Pub. 4–19–60. Filed 4–14–58.

700,353. STRUC-INT DFPA TESTED QUALITY AND DESIGN. Douglas Fir Plywood Association. SN 69,628. COLLECTIVE MARK. Pub. 4–19–60. Filed 8–16–59.

700,354. LEVEL-BEST. The Savogran Company. SN 71,808. Pub. 4–19–60. Filed 4–10–59.

700,355. CERTON. Andersen Corporation. SN 73,756. Pub. 4–19–60. Filed 5–15–59.

700,356. SPEED-CRETE. International Speed-Crete Research Corporation. SN 74,665. Pub. 4–19–60. Filed 5–28–59.

700,357. BLUMCRAFT. Blumcraft of Pittsburgh. SN 77,666. Pub. 4–19–60. Filed 7–14–59.

700,358. NATIONAL ETC. AND DESIGN. National Pool Equipment Co. SN 77,837. Pub. 4–19–60. Filed 7–16–59.

700,359. FILUMA. Frantz Manufacturing Company. SN 78,020. Pub. 4–19–60. Filed 7–20–59.

700,360. THE VILLAGE BLACKSMITH. Richard E. Cayo. SN 78,606. Pub. 4–19–60. Filed 7–29–59.

700,361. BUTLERIB. Butler Manufacturing Company. SN 78,848. Pub. 4–19–60. Filed 8–3–59.

700,362. MID-AMERICA HOMES AND DESIGN. South Gary Homes, Inc. SN 79,813. Pub. 4–19–60. Filed 8–18–59.

700,363. MAJESTIC. The Majestic Company, Inc. SN 80,434. Pub. 4–19–60. Filed 8–28–59.

700,364. HANDY PANEL. Douglas Fir Plywood Association. SN 82,089. COLLECTIVE MARK. Pub. 4–19–60. Filed 9–25–59.

700,365. PLYGLAZE 101. St. Regis Paper Company. SN 82,791. Pub. 4–19–60. Filed 10–6–59.

700,366. X-LIME. Sun Chemical Corporation. SN 84,477. Pub. 4–19–60. Filed 11–2–59.

700,367. LEX-CRETE. Rutland Fire Clay Company. SN 84,623. Pub. 4–19–60. Filed 11–4–59.

700,368. PATIORAMA. Daryl Products Corp. SN 84,649. Pub. 4–19–60. Filed 11–5–59.

700,369. THRIFTMASTER. Hough Manufacturing Corporation. SN 85,857. Pub. 4–19–60. Filed 11–23–59.

700,370. GEOMETRIC DESIGN. Butler Manufacturing Company. SN 86,722. Pub. 4–19–60. Filed 12–7–59.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

700,371. CURMET. Curtiss-Wright Corporation. SN 72,584. Pub. 4–19–60. Filed 4–30–59.

700,372. DENISON ELECTROILIC. American Brake Shoe Company. SN 73,642. Pub. 4–19–60. Filed 5–14–59.

700,373. AIRCOMB. The American Well Works. SN 78,753. Pub. 4–19–60. Filed 7–31–59.

700,374. INVIZIP. Ideal Fastener Corporation. SN 86,577. Pub. 4–19–60. Filed 12–3–59.

700,375. RING JET. Allis-Chalmers Manufacturing Company. SN 86,713. Pub. 4–19–60. Filed 12–7–59.

700,376. ATLANTIS AND DESIGN. Albert W. Lindberg, Jr., d.b.a. Atlantis Products Company. SN 86,887. Pub. 4–19–60. Filed 12–8–59.

700,377. PIPE-SAVER. Adams Pipe Repair Products. SN 87,172. Pub. 4–19–60. Filed 12–14–59.

700,378. E AND DESIGN. The Superior Switchboard & Devices Company. SN 87,292. Pub. 4–19–60. Filed 12–14–59.

Class 14—Metals and Metal Castings and Forgings

700,379. PEHAGE. Pforzheimer Edelmetall-Handelsgesellschaft m.b.H.—Pehage. SN 72,525. Pub. 4–19–60. Filed 4–29–59.

700,380. CURMET. Curtiss-Wright Corporation. SN 72,583. Pub. 4–19–60. Filed 4–30–59.

700,381. DESIGN OF GEOMETRICAL FIGURE. Mueller Brass Co. SN 81,301. Pub. 4–19–60. Filed 9–14–59.

Class 15—Oils and Greases

700,382. METALFLO. Nopco Chemical Company. SN 61,427. Pub. 4–19–60. Filed 10–27–58.

700,383. CONOCO. Continental Oil Company. SN 82,880. Pub. 4–19–60. Filed 10–6–59.

700,384. TOT 'N TEEN BIRTHDAY CANDLE. Penn Wax Works, Inc. SN 83,307. Pub. 4–19–60. Filed 10–15–59.

700,385. V VALVOLINE. Ashland Oil & Refining Company. SN 86,392. Pub. 4–19–60. Filed 12–1–59.

Class 16—Protective and Decorative Coatings

700,386. 2–H. Devoe & Raynolds Company, Inc. SN 61,367. Pub. 4–19–60. Filed 10–27–59.

700,387. RUB-KIL. Mobile Paint Mfg. Co. Inc. SN 71,864. Pub. 4–19–60. Filed 4–20–59.

700,388. FUSED GOLD. Barrack's Industries, Inc. SN 75,834. Pub. 4–19–60. Filed 6–16–59.

700,389. STAIN DROPS AND DESIGN. Putty Stik, Inc. SN 78,914. Pub. 4–19–60. Filed 8–3–59.

700,390. SHURCOTE. St. Louis Paint Manufacturing Company, d.b.a. Shurcote Paint Manufacturing Company. SN 81,348. Pub. 3–22–60. Filed 9–14–59.

700,391. BUTY-ROOF. National Gypsum Company. SN 85,605. Pub. 4–19–60. Filed 11–18–59.

700,392. GOTTA. The United States Refining Company. SN 85,630. Pub. 4–19–60. Filed 11–18–59.

700,393. DIARASOL. Diamond Alkali Company. SN 85,662. Pub. 4–19–60. Filed 11–19–59.

700,394. MAR-LAK. The Marzilli Shellac Corporation. SN 85,887. Pub. 4–19–60. Filed 11–23–59.

Class 18—Medicines and Pharmaceutical Preparations

700,395. MEDICE AND DESIGN. Medice Chemisch-Pharmaceutische Fabrik G.m.b.H. SN 42,512. Pub. 2–24–59. Filed 12–16–57.

700,396. TRIP-SUL. Carrtone Laboratories, Inc. SN 58,165. Pub. 4–19–60. Filed 9–2–58.

700,397. PAMLAB AND DESIGN. Pan American Laboratories, Inc. SN 62,413. Pub. 4–19–60. Filed 11–13–58.

700,398. STERABOL. Società Farmaceutici Italia. SN 63,254. Pub. 1–5–60. Filed 11–26–58.

700,399. LIFANU. Lifanu Corporation of America. SN 63,944. Pub. 4–19–60. Filed 12–9–58.

700,400. SMOOTH-N-SOOTHE. Sterling Drug Inc. SN 65,982. Pub. 4–19–60. Filed 1–16–59.

700,401. DIGENE. American Home Products Corporation, d.b.a. Whitehall Laboratories. SN 67,582. Pub. 7–21–59. Filed 2–12–59.

700,402. SAN PELLEGRINO. Saprochi S.A. SN 68,736. Pub. 4–19–60. Filed 3–2–59.

700,403. TRAMS. Mark Lipsky. SN 60,155. Pub. 4–19–60. Filed 3–9–59.

700,404. DOSETTE. Durr Products, Inc. SN 78,275. Pub. 4–19–60. Filed 7–23–59.

700,405. BP AND DESIGN. Burton, Parsons & Company. SN 80,052. Pub. 4–19–60. Filed 8–24–59.

700,406. FEEN-A-MINT. White Laboratories, Inc. SN 81,785. Pub. 4–19–60. Filed 9–21–59.

700,407. SYNTETRIN. Bristol-Myers Company, by merger from Bristol Laboratories, Inc. SN 83,043. Pub. 4–19–60. Filed 10–12–59.

700,408. ALVEOL. The Denver Chemical Manufacturing Company, d.b.a. Wampole Laboratories. SN 85,569. Pub. 4–19–60. Filed 11–18–59.

700,409. DIET-MASTER. Drugmaster, Inc. SN 85,723. Pub. 4–19–60. Filed 11–20–59.

700,410. INSULFON. C. F. Boehringer & Soehne G.m.b.H. SN 85,815. Pub. 4–19–60. Filed 11–23–59.

700,411. GOMPYRID. C. F. Boehringer & Soehne G.m.b.H. SN 85,817. Pub. 4–19–60. Filed 11–23–59.

700,412. RAULYSIN. C. F. Boehringer & Soehne G.m.b.H. SN 85,819. Pub. 4–19–60. Filed 11–23–59.

700,413. CARACIL. The Upjohn Company. SN 85,932. Pub. 4–19–60. Filed 11–23–59.

700,414. HEMETHICA. Ethica Standard Co. Inc. SN 86,123. Pub. 4–19–60. Filed 11–27–59.

700,415. GRUBCIDE. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,133. Pub. 4–19–60. Filed 11–27–59.

700,416. FORTAMINE. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,134. Pub. 4–19–60. Filed 11–27–59.

700,417. GONAMONE. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,135. Pub. 4–19–60. Filed 11–27–59.

700,418. VERNA-SPRAY AND DESIGN. Professional Pharmacal Co., Inc. SN 86,324. Pub. 4–19–60. Filed 11–30–59.

700,419. THIADEX. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,566. Pub. 4–19–60. Filed 12–3–59.

700,420. CARAFEN. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,567. Pub. 4–19–60. Filed 12–3–59.

700,421. ACTIVAGE. Vick Chemical Company. SN 86,615. Pub. 4–19–60. Filed 12–3–59.

700,422. RADOCONTRAL. C. H. Boehringer Sohn. SN 86,633. Pub. 4–19–60. Filed 12–4–59.

700,423. RADOSECUR. C. H. Boehringer Sohn. SN 86,634. Pub. 4–19–60. Filed 12–4–59.

700,424. INTRAGEL. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 87,118. Pub. 4–19–60. Filed 12–11–59.

700,425. GWI-PO. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 87,122. Pub. 4–19–60. Filed 12–11–59.

700,426. A.S.H. Newman Pharmacal Company, Incorporated. SN 87,265. Pub. 4–19–60. Filed 12–14–59.

700,427. NITOMAN. Hoffmann-La Roche Inc. SN 87,427. Pub. 4–19–60. Filed 12–16–59.

700,428. EFOPAQUE. E. Fougera & Co., Inc. SN 89,263. Pub. 4–19–60. Filed 1–19–60.

Class 19—Vehicles

700,429. ARAYA. Araya Kogyo Kabushiki-Kaisha (Araya Industrial Co. Ltd.). SN 56,620. Pub. 4–19–60. Filed 8–5–58.

700,430. WASTE MOBILE. Walton-March. SN 58,476. Pub. 4–19–60. Filed 9–5–58.

700,431. KORLIS. Korlis, Ltd. SN 75,563. Pub. 4–19–60. Filed 6–11–59.

700,432. TERNSTEDT DESIGN MARK. General Motors Corporation. SN 83,964. Pub. 4–19–60. Filed 10–26–59.

700,433. CAR-BUOY. Moog Industries, Inc. SN 84,684. Pub. 4–19–60. Filed 11–5–59.

700,434. BRISTOL. Allen Quimby Veneer Co. SN 84,940. Pub. 4–19–60. Filed 11–9–59.

Class 20—Linoleum and Oiled Cloth

700,435. FORMICA. Formica Corporation. SN 76,863. Pub. 4–19–60. Filed 7–1–59.

Class 21—Electrical Apparatus, Machines, and Supplies

700,436. ZEPHYR. Eastern Associates, Ltd. SN 53,247. Pub. 6–30–59. Filed 6–10–58.

700,437. RBG AND DESIGN. R.B.G. Manufacturing and Sales Company, Inc. SN 67,589. Pub. 4–19–60. Filed 2–17–59.

700,438. POWERED BY HOWARD AND DESIGN. Howard Industries, Inc. SN 71,469. Pub. 4–19–60. Filed 4–14–59.

700,439. STARTOMAT. Grundig Radio-Werke G.m.b.H. SN 80,325. Pub. 4–19–60. Filed 8–27–59.

700,440. INVAR AND DESIGN. Invar Electronics Corp. SN 81,994. Pub. 4–19–60. Filed 9–24–59.

700,441. PLEASANT AIRE. Viritrol Corporation. SN 82,047. Pub. 4–19–60. Filed 9–24–59.

700,442. AMP EDGE. AMP Incorporated. SN 83,422. Pub. 4–5–60. Filed 10–19–59.

700,443. POWER SEALED. Atlas Supply Company. SN 84,050. Pub. 4–19–60. Filed 10–27–59.

700,444. UNIDYNE. Shure Brothers, Incorporated. SN 84,251. Pub. 4–19–60. Filed 10–29–59.

700,445. TELECEPH. Taber Instrument Corporation. SN 85,174. Pub. 4–19–60. Filed 11–12–59.

700,446. TELECARDIO. Taber Instrument Corporation. SN 85,175. Pub. 4–19–60. Filed 11–12–59.

700,447. FRANTZ-VACLEANER. Frantz Electric Industries, Inc. SN 85,480. Pub. 4–19–60. Filed 11–17–59.

700,448. AEROGLAZE. Aerovox Corporation. SN 86,092. Pub. 4–19–60. Filed 11–27–59.

700,449. CITATION. Harman-Kardon Inc. SN 86,145. Pub. 4–19–60. Filed 11–27–59.

700,450. BPC AND DESIGN. Basic Products Corporation. SN 86,533. Pub. 4–19–60. Filed 12–3–59.

700,451. ERIEZ MAGNA-ROLL AND DESIGN. Eriez Manufacturing Co. SN 86,559. Pub. 4–19–60. Filed 12–3–59.

700,452. BELLBOY. American Telephone and Telegraph Company. SN 86,718. Pub. 4–19–60. Filed 12–7–59.

700,453. ETP. Electric Tube Products, Inc. SN 86,741. Pub. 4–19–60. Filed 12–7–59.

700,454. SANI-MATIC. Herbert C. Le Doux. SN 86,794. Pub. 4–19–60. Filed 12–7–59.

700,455. GT AND DESIGN. Glass-Tite Industries, Inc. SN 87,057. Pub. 4–19–60. Filed 12–10–59.

700,456. REV-O-LITE. American Post Lite Co., Inc. SN 87,616. Pub. 4–19–60. Filed 12–21–59.

Class 22—Games, Toys, and Sporting Goods

700,457. BUDGE INTERNATIONAL. Lloyd K. Budge. SN 63,570. Pub. 4–19–60. Filed 12–3–58.

700,458. AGGRAVATION. Beri Industries. SN 71,258. Pub. 4–19–60. Filed 4–10–59.

700,459. "JANIE." Alexander Doll Company, Inc., d.b.a. Madame Alexander. SN 81,442. Pub. 4–19–60. Filed 9–16–59.

700,460. COUNT IMPERIAL. The Brunswick-Balke-Collender Company. SN 83,773. Pub. 4–19–60. Filed 10–22–59.

700,461. PREMIERE. The Brunswick-Balke-Collender Company. SN 83,774. Pub. 4–19–60. Filed 10–22–59.

700,462. COUNTESS IMPERIAL. The Brunswick-Balke-Collender Company. SN 83,775. Pub. 4–19–60. Filed 10–22–59.

700,463. TUNE TOOTER. Louis Marx & Co., Inc. SN 83,992. Pub. 4–19–60. Filed 10–26–59.

700,464. UL AND DESIGN. Rockland Tackle Company, Inc. SN 84,097. Pub. 4–19–60. Filed 10–27–59.

700,465. QWIK-NIK8. Cleveland Cleaner & Paste Company. SN 84,119. Pub. 4–19–60. Filed 10–28–59.

700,466. COMET AND DESIGN. Comet Model Hobbycraft, Inc. SN 84,853. Pub. 4–19–60. Filed 11–9–59.

700,467. GENERAL BLOON. General Rubber Products, Inc. SN 85,124. Pub. 4–19–60. Filed 11–12–59.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

700,468. SPIRAL-GUIDE AND DESIGN. Guide Stitch Corporation. SN 49,759. Pub. 4–19–60. Filed 4–16–58.

700,469. LADY. Estarta y Ecenarro, S.A. SN 62,678. Pub. 4–19–60. Filed 11–18–58.

700,470. APPROVED BY HONEST CHARLEY ETC. AND DESIGN. Honest Charley Speed Shop, Inc. SN 67,606. Pub. 4–19–60. Filed 2–12–59.

700,471. HONEST SPEED PARTS AND DESIGN. Honest Charley Speed Shop, Inc. SN 67,607. Pub. 4–19–60. Filed 2–12–59.

700,472. LUCKY WOOD AND DESIGN. Kobayashi Kogyo Kabushiki Kaisha, d.b.a. Kobayashi Industrial Co., Ltd. SN 68,707. Pub. 4–19–60. Filed 3–2–59.

700,473. STRAIGHT GROUND. Pivot Punch & Die Corporation. SN 69,845. Pub. 4–19–60. Filed 3–18–59.

700,474. HELI-GRIP. Warner Electric Brake & Clutch Company. SN 71,925. Pub. 4–19–60. Filed 4–20–59.

700,475. SHULER. Shuler Axle Company. SN 73,838. Pub. 4–19–60. Filed 5–15–59.

700,476. EVEREDE. Everede Tool Company. SN 75,476. Pub. 4–19–60. Filed 6–10–59.

700,477. MAG-NA-PAD. Miller Pattern and Manufacturing Company. SN 76,107. Pub. 4–19–60. Filed 6–19–59.

700,478. S AND DESIGN. Sundstrand Corporation. SN 76,128. Pub. 4–19–60. Filed 6–19–59.

700,479. PEP. Holley Carburetor Company. SN 78,284. Pub. 4–19–60. Filed 7–23–59.

700,480. TRACKMASTER. The Owatonna Tool Company. SN 79,692. Pub. 4–19–60. Filed 8–17–59.

700,481. MSL. The Whitney Chain Company. SN 80,140. Pub. 4–19–60. Filed 8–24–59.

700,482. THERMATIC. Franklin Research Corporation. SN 80,321. Pub. 4–19–60. Filed 8–27–59.

700,483. WOOD'S ULTRA DRIVE AND DESIGN. T. B. Wood's Sons Company. SN 80,763. Pub. 4–19–60. Filed 9–2–59.

700,484. FLOMATIC. The Bastian-Blessing Company. SN 81,110. Pub. 4–19–60. Filed 9–10–59.

700,485. LIFE-LUBE. T. B. Wood's Sons Company. SN 82,049. Pub. 4–19–60. Filed 9–24–59.

700,486. AEC AND DESIGN. Armor Elevator Company, Inc. SN 82,461. Pub. 4–19–60. Filed 10–1–59.

700,487. ARMOR. Armor Elevator Company, Inc. SN 82,462. Pub. 4–19–60. Filed 10–1–59.

700,488. FEMCO. The Falls Engineering & Machine Company. SN 83,078. Pub. 4–19–60. Filed 10–12–59.

700,489. TEMPLAMATION. Wiedemann Machine Company. SN 83,586. Pub. 4–19–60. Filed 10–19–59.

700,490. MIDAS AND OVAL DESIGN. Midas, Inc. SN 83,998. Pub. 4–19–60. Filed 10–26–59.

700,491. CHAMPION. Van Brode Milling Co., Inc. SN 84,194. Pub. 4–19–60. Filed 10–28–59.

700,492. BELMONT. Van Brode Milling Co., Inc. SN 84,270. Pub. 4–19–60. Filed 10–29–59.

700,493. ROTALOCK. Willcox & Gibbs Sewing Machine Co. SN 84,492. Pub. 4–19–60. Filed 11–2–59.

700,494. SANDSORT. Western Machinery Company. SN 84,707. Pub. 4–19–60. Filed 11–5–59.

700,495. MAJOR-DOMO. Major Slicing Machine Corp. SN 84,785. Pub. 4–19–60. Filed 11–6–59.

700,496. FLOC-FLO. Floc-Flo Corporation. SN 85,571. Pub. 4–19–60. Filed 11–18–59.

700,497. CIRCLE "M" AND M WITHIN A CIRCLE. Firth Sterling, Inc. SN 85,729. Pub. 4–19–60. Filed 11–20–59.

700,498. FIRE DOOM. Tolman-Shea Laboratories, Inc. SN 86,003. Pub. 4-19-60. Filed 11-24-59.

700,499. MICRO-MOUNT. Dodge Manufacturing Corporation. SN 86,455. Pub. 4-19-60. Filed 12-2-59.

700,500. GEOMETRIC DESIGN. Butler Manufacturing Company. SN 86,725. Pub. 4-19-60. Filed 12-7-59.

700,501. ROBERTS. The Roberts Co., by change of name from Roberts Manufacturing Co. SN 86,832. Pub. 4-19-60. Filed 12-7-59.

700,502. MIAMI. Van Brode Milling Co., Inc. SN 86,853. Pub. 4-19-60. Filed 12-7-59.

700,503. AIRDOX AND DESIGN. Marmon-Herrington Company, Inc., assignee of Airdox Cardox Products Company. SN 86,960. Pub. 4-19-60. Filed 12-8-59.

700,504. TRIPLE ATTACK. John W. Bolton & Sons, Inc. SN 86,922. Pub. 4-19-60. Filed 12-8-59.

Class 25—Locks and Safes

700,505. RED CAP. E. J. Brooks Company. SN 70,136. Pub. 4-19-60. Filed 3-24-59.

Class 26—Measuring and Scientific Appliances

700,506. BATH-O-METER. The Upjohn Company. SN 68,340. Pub. 4-19-60. Filed 2-24-59.

700,507. PEE-WEE. Lufkin Rule Company. SN 78,047. Pub. 4-19-60. Filed 7-20-59.

700,508. THERMIX. Fisher Scientific Company. SN 82,409. Pub. 4-19-60. Filed 9-30-59.

700,509. THERMOCHROM. A. W. Faber-Castell Pencil Co., Inc. SN 84,748. Pub. 4-19-60. Filed 11-6-59.

700,510. CENTURY. Century Geophysical Corporation. SN 85,824. Pub. 4-19-60. Filed 11-23-59.

Class 27—Horological Instruments

700,511. PRESTIGE. General Time Corporation. SN 76,084. Pub. 4-19-60. Filed 6-19-59.

700,512. PORTRAIT. General Time Corporation. SN 76,085. Pub. 4-19-60. Filed 6-19-59.

700,513. BERCONA. Berco, Inc. SN 81,042. Pub. 4-19-60. Filed 9-8-59.

700,514. DYNAPLAN. Movado Watch Agency, Inc. SN 83,235. Pub. 4-19-60. Filed 10-14-59.

Class 28—Jewelry and Precious-Metal Ware

700,515. REPRESENTATION OF DIVING GIRL. Jantzen Inc. SN 55,146. Pub. 4-19-60. Filed 7-11-58.

700,516. JANTZEN. Jantzen Inc. SN 55,147. Pub. 4-19-60. Filed 7-11-58.

Class 29—Brooms, Brushes, and Dusters

700,517. HELMAC. Nicholas D. McKay and Helen L. McKay. SN 69,822. Pub. 4-19-60. Filed 3-18-59.

700,518. YELLO-JACKET. A. Langnickel, Inc. SN 80,187. Pub. 4-19-60. Filed 8-25-59.

Class 31—Filters and Refrigerators

700,519. PRIMATIC. Primatic, Camps & Cie, Société à Responsabilité Limitée. SN 82,050. Pub. 4-19-60. Filed 9-21-59.

Class 32—Furniture and Upholstery

700,520. MODIFRAME. The Harvard Manufacturing Company. SN 68,055. Pub. 4-19-60. Filed 2-19-59.

700,521. FEDERAL. Camden Furniture Company. SN 88,521. Pub. 4-19-60. Filed 1-6-60.

700,522. MARSHMALLOW. State Upholstery Corporation. SN 88,947. Pub. 4-19-60. Filed 1-13-60.

700,523. THE CHIRO SPINAL. Dandy Mattress Corporation. SN 88,975. Pub. 4-19-60. Filed 1-14-60.

Class 34—Heating, Lighting, and Ventilating Apparatus

700,524. ROTO-BURNER. Bastian-Morley Co., Inc. SN 48,689. Pub. 4-19-60. Filed 3-31-58.

700,525. ELECTRO-MAGIC. Electronics Incorporated. SN 77,362. Pub. 4-19-60. Filed 7-9-59.

700,526. PANEL TRACK. Embassy Steel Products, Inc. SN 81,391. Pub. 4-19-60. Filed 9-15-59.

700,527. MANCUNA-FUMEX. Mancuna Engineering Limited. SN 84,073. Pub. 4-19-60. Filed 10-27-59.

700,528. BRUNNER. Dunham-Bush, Inc. SN 85,964. Pub. 4-19-60. Filed 11-24-59.

700,529. POLAR PRINCE AND DESIGN. The Coleman Company, Inc. SN 86,483. Pub. 4-19-60. Filed 12-2-59.

700,530. GEOMETRIC DESIGN. Butler Manufacturing Company. SN 86,724. Pub. 4-19-60. Filed 12-7-59.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

700,531. WOOD'S ULTRA V DRIVE AND DESIGN. T. B. Wood's Sons Company. SN 80,762. Pub. 4-19-60. Filed 9-2-59.

Class 36—Musical Instruments and Supplies

700,532. STEREOREED. French American Reeds Manufacturing Co., Inc. SN 85,221. Pub. 4-19-60. Filed 11-13-59.

700,533. DISC-ED. Visual Education Association, Inc. SN 85,444. Pub. 4-19-60. Filed 11-16-59.

700,534. ZING. Louis N. Seltzer. SN 85,622. Pub. 4-19-60. Filed 11-18-59.

700,535. AMPICO. Aeolian American Corporation. SN 85,799. Pub. 4-19-60. Filed 11-23-59.

700,536. AUDIO LABORATORY. Audio Fidelity Inc. SN 85,800. Pub. 4-19-60. Filed 11-23-59.

700,537. RYTHMODIK AND DESIGN. Melodigrand Corp. SN 86,044. Pub. 4-19-60. Filed 11-25-59.

700,538. GOLD LEAF. Eugene Jelesnik, d.b.a. Gold Leaf Records. SN 86,286. Pub. 4-19-60. Filed 11-30-59.

700,539. AMRAWCO. American Rawhide Manufacturing Co. SN 86,391. Pub. 4-19-60. Filed 12-1-59.

700,540. ISOVIBRANT. French American Reeds Manufacturing Co., Inc. SN 86,414. Pub. 4-19-60. Filed 12-1-59.

700,541. UHER. Kimberley International, Ltd. SN 86,790. Pub. 4-19-60. Filed 12-7-59.

Class 37—Paper and Stationery

700,542. SHELF-STYK. Converter Corporation. SN 53,929. Pub. 1-6-59. Filed 6-20-58.

700,543. WISK OFF. Advance Crayon & Color Corporation. SN 63,199. Pub. 4-19-60. Filed 11-28-58.

700,544. PLEASE NOTIFY. Please Notify, Inc. SN 69,986. Pub. 4-19-60. Filed 5-20-59.

700,545. LINDY. Lindy Pen Co., Inc. SN 71,495. Pub. 4-19-60. Filed 4-14-59.

700,546. GRIPS-ALL. United States Envelope Company. SN 72,908. Pub. 4-19-60. Filed 5-4-59.

700,547. "BIECHWITE." Cornell Paperboard Products Co. SN 73,324. Pub. 4-19-60. Filed 5-11-59.

700,548. KARD-O-FILM. The American Bag and Paper Corporation. SN 74,811. Pub. 4-19-60. Filed 6-1-59.

700,549. DUPLI-CHECK. The Merchants National Bank of Boston. SN 75,781. Pub. 4-19-60. Filed 6-15-59.

700,550. WEAREVER METALARGE. David Kahn, Inc. SN 76,572. Pub. 4-19-60. Filed 6-26-59.

700,551. ALL AMERICAN. Teen Time, Inc. SN 78,947. Pub. 4-19-60. Filed 8-3-59.

700,552. PEN-ROD. Micropoint, Inc. SN 87,256. Pub. 4-19-60. Filed 12-14-59.

700,553. COLOREX. A. W. Faber-Castell Pencil Co., Inc. SN 88,307. Pub. 4-19-60. Filed 12-31-59.

700,554. SNOWBRAVE. Peninsular Paper Company. SN 89,085. Pub. 4-19-60. Filed 1-15-60.

700,555. PIKE. E. W. Pike & Co., Inc. SN 89,086. Pub. 4-19-60. Filed 1-15-60.

700,556. LITHO-FLOW. American Lithofold Corporation. SN 89,112. Pub. 4-19-60. Filed 1-18-60.

Class 38—Prints and Publications

700,557. BETTER HOMES & GARDENS CHRISTMAS IDEAS. Meredith Publishing Company. SN 48,300. Pub. 12-16-58. Filed 3-24-58.

700,558. BETTER HOMES & GARDENS HOME BUILDING IDEAS. Meredith Publishing Company. SN 48,302. Pub. 4-14-59. Filed 3-24-58.

700,559. BETTER HOMES & GARDENS HOME FURNISHINGS IDEAS. Meredith Publishing Company. SN 48,304. Pub. 4-14-59. Filed 3-24-58.

700,560. BETTER HOMES & GARDENS GARDEN IDEAS. Meredith Publishing Company. SN 48,306. Pub. 4-14-59. Filed 3-24-58.

700,561. DYNAMATION. Morningside Productions International, Inc. SN 57,917. Pub. 7-7-59. Filed 8-26-58.

700,562. INTERNATIONAL NEWS SOUNDPHOTO. United Press International, Inc. SN 64,579. Pub. 4-19-60. Filed 12-18-58.

700,563. LILAC HEDGES AND EMBLEM DESIGN. Lilac Hedges of Litchfield, Inc. SN 66,158. Pub. 4-19-60. Filed 1-20-59.

700,564. KIMFACTS. Kimberly-Clark Corporation. SN 66,998. Pub. 4-19-60. Filed 3-5-59.

700,565. MRD MEDICAL RESEARCH DIGEST THE GRAY SHEET. Drug Research Reports, Inc. SN 69,511. Pub. 4-19-60. Filed 3-13-59.

700,566. DRR DRUG RESEARCH REPORTS THE BLUE SHEET. Drug Research Reports, Inc. SN 69,513. Pub. 4-19-60. Filed 3-13-59.

700,567. WPR WEEKLY PHARMACY REPORTS THE GREEN SHEET. Pharmacy Reports, Inc. SN 69,550. Pub. 4-19-60. Filed 3-13-59.

700,568. SPACE/AERONAUTICS ETC. AND DESIGN. Conover-Mast Publications, Inc. SN 70,521. Pub. 4-19-60. Filed 3-31-59.

700,569. ALL AMERICAN. Teen Time, Inc. SN 78,948. Pub. 4-19-60. Filed 8-3-59.

700,570. THE ST. LOUIS FOOD NEWS. Rutledge & Lilienfeld, Inc., d.b.a. Rutledge Advertising Company. SN 81,201. Pub. 4-19-60. Filed 9-11-59.

700,571. THE MICHIGAN YEARBOOK. The Democratic Business and Professional Committee. SN 81,663. Pub. 4-19-60. Filed 9-21-59.

700,572. ALONG THE COAST AND DESIGN. William E. Darby, d.b.a. Resort Publications. SN 83,955. Pub. 4-19-60. Filed 10-26-59.

700,573. PETROLEUM WEEK. McGraw-Hill Publishing Company, Inc. SN 83,993. Pub. 4-19-60. Filed 10-26-59.

700,574. PROFESSIONAL NURSING HOME AND DESIGN. The Miller Publishing Company. SN 84,003. Pub. 4-19-60. Filed 10-26-59.

700,575. "TODAY'S HOSTESS." Mary Jordan Spilman. SN 84,025. Pub. 4-19-60. Filed 10-26-59.

700,576. OVERVIEW. Buttenheim Publishing Corporation. SN 84,116. Pub. 4-19-60. Filed 10-28-59.

700,577. THEY NEVER CHANGE. The McNaught Syndicate, Inc. SN 84,683. Pub. 4-19-60. Filed 11-5-59.

Class 39—Clothing

700,578. CASHMILON. Asahi Kasei Kogyo Kabushiki Kaisha. SN 45,100. Pub. 4-12-60. Filed 2-3-58.

700,579. COLECORA. Colebrook Knitwear Inc. SN 46,288. Pub. 4-19-60. Filed 2-21-58.

700,580. ACTION CUFF. Morpul, Inc. SN 47,771. Pub. 4-19-60. Filed 3-14-58.

700,581. DAISY CRUMMINS. F. B. Crummins Co. Inc. SN 67,858. Pub. 4-5-60. Filed 2-17-59.

700,582. ANN-LEE. Benjamin Shander, Incorporated. SN 68,944. Pub. 4-19-60. Filed 3-4-59.

700,583. COBAR. Paul Van A. Comey. SN 69,050. Pub. 4-19-60. Filed 3-6-59.

700,584. RANCH & TOWN. Westmoor Mfg. Co., d.b.a. Panhandle Slim. SN 69,228. Pub. 4-19-60. Filed 3-9-59.

700,585. ROUND THE CLOCK AND DESIGN. Joseph Kanner Hat Co., Inc. SN 69,534. Pub. 4-19-60. Filed 3-13-59.

700,586. ELASTI-BAC. Brader Sportswear, Inc. SN 69,999. Pub. 4-19-60. Filed 3-20-59.

700,587. SMOOTHIE. A. Schreter & Sons Co., Inc., d.b.a. A. Schreter & Sons, Inc. SN 71,613. Pub. 4-19-60. Filed 4-15-59.

700,588. INVITATION. Oscar Tarnof, d.b.a. Standard Merchandising Co. SN 75,375. Pub. 4-19-60. Filed 6-8-59.

700,589. YOUNG SIZE. Carrie Walker, Inc. SN 75,452. Pub. 4-19-60. Filed 6-9-59.

700,590. C AND DESIGN. Miami Sportswear Co., Inc., d.b.a. Ceeb and as Ceeb of Miami. SN 77,302. Pub. 4-19-60. Filed 7-8-59.

700,591. EQUALIZER. Joseph H. Cohen & Sons, Inc. SN 81,047. Pub. 4-19-60. Filed 9-9-59.

700,592. MOHLITE. Fashion Park, Inc. SN 81,264. Pub. 4-12-60. Filed 9-14-59.

700,593. PETAL-AIRE. Miles Undergarment Co. Inc. SN 82,839. Pub. 4-19-60. Filed 10-7-59.

700,594. CONVENT BRAND AND DESIGN. Jamieson Incorporated. SN 83,418. Pub. 4-19-60. Filed 10-14-59.

700,595. SHIELD DESIGN WITH LETTERS NK. Newport Knitting Co., Inc. SN 83,040. Pub. 4-19-60. Filed 10-20-59.

700,596. FREEFIT. Glovecraft, Inc. SN 84,598. Pub. 4-19-60. Filed 11-4-59.

700,597. TIEVOGUE. Schoenfeld Neckwear Company. SN 84,807. Pub. 4-19-60. Filed 11-6-59.

700,598. PRO-MOLD. Sanford E. Solomon, d.b.a. New England Laboratory. SN 84,811. Pub. 4-19-60. Filed 11-6-59.

700,599. YOUTHLINE. W. B. Foundations, Inc. SN 85,063. Pub. 4-19-60. Filed 11-10-59.

700,600. MAIDENSTAR. Maiden Form Brassiere Company, Inc. SN 85,356. Pub. 4-19-60. Filed 11-16-59.

700,601. EMPHASIS. Maiden Form Brassiere Company, Inc. SN 85,357. Pub. 4-19-60. Filed 11-16-59.

700,602. FIRST STAR. Maiden Form Brassiere Company, Inc. SN 85,358. Pub. 4-19-60. Filed 11-16-59.

700,603. GAY CHORD. Maiden Form Brassiere Company, Inc. SN 85,360. Pub. 4-19-60. Filed 11-16-59.

700,604. MARLENE. J. J. Newberry Co. Inc. SN 85,370. Pub. 4-19-60. Filed 11-16-59.

700,605. TREET. Topaz Hosiery Mills, Inc. SN 85,422. Pub. 4-19-60. Filed 11-16-59.

700,606. FESCONY. Felt Slipper Company, Inc. SN 85,970. Pub. 4-19-60. Filed 11-24-59.

700,607. PARISIAN. Parisian Hosiery Mills, Inc. SN 90,132. Pub. 4-19-60. Filed 1-13-60.

Class 40 — Fancy Goods, Furnishings, and Notions

700,608. TIDEE. Irwin Corporation. SN 54,166. Pub. 4-19-60. Filed 6-24-58.

700,609. COBAR. Paul Van A. Comey. SN 69,051. Pub. 4-19-60. Filed 3-6-59.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

700,610. EINIGER HONORE. Einiger Mills, Inc. SN 67,769. Pub. 4-19-60. Filed 2-16-59.

700,611. BONDYNE ETC. AND DESIGN. Bondyne Associates, Inc. SN 78,846. Pub. 4-19-60. Filed 8-3-59.

700,612. CO-TOHN-A. Lanella Corporation. SN 79,492. Pub. 4-19-60. Filed 8-13-59.

700,613. IBO LELE. Vol T. Blacknall Company. SN 80,307. Pub. 4-19-60. Filed 8-27-59.

700,614. DECORETTE. Jack Sutton Company, Inc. SN 82,163. Pub. 4-19-60. Filed 9-25-59.

700,615. KYOTO BEAUTIES DESIGN. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd. SN 85,749. Pub. 4-19-60. Filed 11-20-59.

700,616. KANEBO AND DESIGN. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd. SN 85,750. Pub. 4-19-60. Filed 11-20-59.

700,617. PLASTI-KNIT. Will Ross, Inc. SN 85,779. Pub. 4-19-60. Filed 11-20-59.

700,618. CRESTINE. Cotopa Limited. SN 85,962. Pub. 4-19-60. Filed 11-24-59.

Class 43 — Thread and Yarn

700,619. CRESTINE. Cotopa Limited. SN 85,963. Pub. 4-19-60. Filed 11-24-59.

Class 46 — Foods and Ingredients of Foods

700,620. CIRCUS AND DESIGN. USTCO Products Corporation, assignee of Circus Foods, Inc. SN 610,491. Pub. 7-15-52. Filed 2-24-51.

700,621. SCHNAPS. Milwaukee Nut Company. SN 602,483. Pub. 12-4-56. Filed 8-4-55.

700,622. DELLA. George A. Gardella Company. SN 15,427. Pub. 4-19-60. Filed 6-29-56.

700,623. DECECCO. John N. Wright, Jr. SN 43,127. Pub. 6-24-58. Filed 12-27-57.

700,624. RED COACH INN. Bruce Church, Inc. SN 51,424. Pub. 4-19-60. Filed 5-12-58.

700,625. LI'L PO'KS. West Shore Products, Inc. SN 55,766. Pub. 4-19-60. Filed 7-21-58.

700,626. CHERRY HOME. The Haserot Company. SN 56,007. Pub. 4-19-60. Filed 7-25-58.

700,627. HARVEST. Wm. G. Scarlett & Co. SN 59,418. Pub. 4-19-60. Filed 9-23-58.

700,628. ROYAL STEWART. Stewart Brothers Nurseries Limited. SN 66,656. Pub. 4-19-60. Filed 1-28-59.

700,629. FEATHERWEIGHT AND DESIGN. The Chicago Dietetic Supply House, Inc. SN 66,848. Pub. 4-19-60. Filed 2-2-59.

700,630. MELOGRAIN. Melograin Milling Co. Ltd. SN 67,110. Pub. 4-19-60. Filed 1-12-59.

700,631. MORRELL'S ORIGINAL CHEF BRAND AND DESIGN. John Morrell & Company. SN 68,071. Pub. 10-6-59. Filed 2-19-59.

700,632. MAJOR TREAT AND DESIGN. Barry Ice Cream Company. SN 68,217. Pub. 4-19-60. Filed 2-24-59.

700,633. MERKEL AND DESIGN. Williams-McWilliams Industries, Inc. SN 69,702. Pub. 4-19-60. Filed 3-16-59.

700,634. NORDSEE AND DESIGN. "Nordsee" Deutsche Hochseefischerei Aktiengesellschaft. SN 69,838. Pub. 4-19-60. Filed 3-18-59.

700,635. FAIR SAIL. James Adam. SN 74,355. Pub. 4-19-60. Filed 5-25-59.

700,636. GILROY BANNER. Consolidated Foods Corporation. SN 77,096. Pub. 4-19-60. Filed 7-6-59.

700,637. BIG DIPPER ETC. AND DESIGN. Clinton R. Northcutt, d.b.a. Northcutt Donut Company. SN 77,133. Pub. 4-19-60. Filed 7-6-59.

700,638. GOLDEN CROWN. Golden Crown Citrus Corporation. SN 77,435. Pub. 1-5-60. Filed 7-10-59.

700,639. EARLY AMERICAN. The Procter & Gamble Company. SN 79,119. Pub. 4-19-60. Filed 8-6-59.

700,640. WILLIAM OF ORANGE. Co-Operative Wholesale Society, Limited. SN 79,923. Pub. 4-19-60. Filed 8-20-59.

700,641. ST. CHRISTOPHER. R. G. Herbig, d.b.a. R.G.H. Company. SN 81,900. Pub. 4-19-60. Filed 9-23-59.

700,642. MALT DIATEX. Barth Levitt Products. SN 82,678. Pub. 4-19-60. Filed 10-5-59.

700,643. CHEESE TINGS. Salerno-Megowen Biscuit Company. SN 82,717. Pub. 4-19-60. Filed 10-5-59.

700,644. CLARCO. Ashland Cooperative Exchange. SN 83,437. Pub. 4-19-60. Filed 10-19-59.

700,645. SWEET LOAF. Russell-Miller Milling Co. SN 84,177. Pub. 4-19-60. Filed 10-28-59.

700,646. SUNBURST. Russell-Miller Milling Co. SN 84,568. Pub. 4-19-60. Filed 11-3-59.

700,647. JETZELS. Bachman Bakeries Corporation. SN 84,588. Pub. 4-19-60. Filed 11-4-59.

700,648. LORRAINE. Eugene Fruit Growers Association. SN 84,739. Pub. 4-19-60. Filed 11-6-59.

700,649. OAKRIDGE. Eugene Fruit Growers Association. SN 84,743. Pub. 4-19-60. Filed 11-6-59.

700,650. CRESWELL. Eugene Fruit Growers Association. SN 84,744. Pub. 4-19-60. Filed 11-6-59.

700,651. SUMMER TIME. Eugene Fruit Growers Association. SN 84,746. Pub. 4-19-60. Filed 11-6-59.

700,652. MARCOLA. Eugene Fruit Growers Association. SN 84,747. Pub. 4-19-60. Filed 11-6-59.

700,653. REPRESENTATION OF A FANCIFUL FIGURE. United Fruit Company. SN 85,430. Pub. 4-19-60. Filed 11-16-59.

Class 47 — Wines

700,654. TRINQAMOUR. Albert Besombes Société à Responsabilité Limitée. SN 64,043. Pub. 4-19-60. Filed 12-11-58.

Class 48 — Malt Beverages and Liquors

700,655. SHANDREX. Shandex (Edinburgh) Limited. SN 40,382. Pub. 4-19-60. Filed 11-8-57.

700,656. SHANDELL. Shandex (Edinburgh) Limited. SN 40,384. Pub. 4-19-60. Filed 11-8-57.

Class 49 — Distilled Alcoholic Liquors

700,657. SCOTCH HOUSE. Schenley Distillers, Inc., assignee of Affiliated Distillers Brands Corp., d.b.a. Park & Tilford. SN 72,978. Pub. 4-19-60. Filed 5-6-59.

700,658. THE "ANTIQUARY." J. & W. Hardie Limited. SN 74,935. Pub. 4-19-60. Filed 6-2-59.

700,659. THE DISCOUNT. Schenley Distillers, Inc. SN 84,805. Pub. 4-19-60. Filed 11-6-59.

Class 50 — Merchandise Not Otherwise Classified

700,660. IMPERIAL. Harris-Intertype Corporation. SN 55,583. Pub. 4-19-60. Filed 7-18-58.

700,661. CELLO MAT. Theodore Merwitz Textiles, Inc. SN 71,500. Pub. 4-19-60. Filed 4-14-59.

700,662. SLIDE-A-POUR. Schenley Industries, Inc. SN 79,715. Pub. 4-19-60. Filed 8-17-59.

700,663. O'DAPTER. The V. L. Smithers Manufacturing Company. SN 81,645. Pub. 4-19-60. Filed 9-18-59.

Class 51 — Cosmetics and Toilet Preparations

700,664. DEB-U-CURL. Kayette, Inc. SN 685,518. Pub. 8-28-56. Filed 4-14-55.

700,665. VITALINE. Bristol-Myers Company. SN 72,478. Pub. 1-12-60. Filed 4-29-59.

700,666. BERMUDA BREEZES. Perfumeries Distributors, Ltd. SN 73,803. Pub. 4-19-60. Filed 5-15-59.

700,667. CELUI. Les Parfums Jean Desses, Société à Responsabilité Limitée. SN 76,706. Pub. 4-19-60. Filed 6-29-59.

Class 52 — Detergents and Soaps

700,668. BANTER. Paul Reed, Inc. SN 71,226. Pub. 4-19-60. Filed 4-9-59.

700,669. CONTA-SONICS. The Plastic Contact Lens Company. SN 76,247. Pub. 4-19-60. Filed 6-22-59.

700,670. FUR GLAMOR AND DESIGN. Saja Chemical Co. of America, Inc. SN 78,512. Pub. 4-19-60. Filed 7-27-59.

700,671. GARDEN BOUQUET. Purex Corporation, Ltd., d.b.a. Manhattan Soap Co., Inc. SN 79,708. Pub. 4-19-60. Filed 8-17-59.

700,672. M AND DESIGN. Microbiological Associates, Inc. SN 81,417. Pub. 4-19-60. Filed 9-15-59.

Service Marks

Class 100 — Miscellaneous

700,673. REPRESENTATION OF MAN'S FACE. Polly Davis, d.b.a. Davis Cafeterias. SN 65,414. Pub. 4-19-60. Filed 1-7-59.

700,674. WESTERN PANCAKE HOUSE AND DESIGN. Western Pancake Houses, Inc. SN 84,274. Pub. 4-19-60. Filed 10-29-59.

700,675. ATC. Automatic Timing & Controls, Inc. SN 85,052. Pub. 4-19-60. Filed 11-12-59.

700,676. A.D.T. SYSTEM AND DESIGN. American District Telegraph Company. SN 86,098. Pub. 4-19-60. Filed 11-27-59.

700,677. ADT AND DESIGN. American District Telegraph Company. SN 86,471. Pub. 4-19-60. Filed 12-3-59.

Class 101 — Advertising and Business

700,678. CHARLIE AND DESIGN. Charles H. Glueck, d.b.a. Charles Vending Company. SN 26,087. Pub. 4-19-60. Filed 3-13-57.

700,679. V+P. Valu-Plus Trading Stamp Corp. SN 53,844. Pub. 4-19-60. Filed 6-18-58.

Class 102 — Insurance and Financial

700,680. EMBLEM DESIGN INTERNATIONAL TRADERS CLUB MIXED. International Traders Club of the National Institute of Real Estate Brokers. SN 56,483. COLLECTIVE MARK. Pub. 4-19-60. Filed 8-1-58.

700,681. E & E INSURANCE AND DESIGN. Educator & Executive Insurers, Inc. SN 84,652. Pub. 4-5-60. Filed 11-5-59.

Class 103 — Construction and Repair

700,682. "WINDERELLA" AND DESIGN. Blue Ribbon Cleaners. SN 66,219. Pub. 4-19-60. Filed 2-24-59.

Class 105 — Transportation and Storage

700,683. U DRIVE-IT CO. AND DESIGN. U Drive-It Company, Incorporated. SN 45,289. Pub. 4-19-60. Filed 2-4-58.

700,684. HERTZ. Hertz Rent A Plane System, Inc. SN 55,793. Pub. 4-19-60. Filed 7-22-58.

700,685. "JETAIRPAK." AA Triangle Transfer and Warehouse Co. SN 77,407. Pub. 4-19-60. Filed 7-10-59.

Class 107 — Education and Entertainment

700,686. "DON'T YOU BELIEVE IT." Willard C. Chamberlin. SN 68,972. Pub. 4-19-60. Filed 3-3-59.

700,687. TAKE FIVE AND DESIGN. Wilson & Company, Inc. SN 74,352. Pub. 4-19-60. Filed 5-22-59.

Collective Membership Marks

Class 200

700,688. THE TURTLE CLUB AND DESIGN. The Turtle Club. SN 65,030. Pub. 4-19-60. Filed 12-29-58.

700,689. PINOCHLE BUGS, INC. ETC. AND DESIGN. Pinochle Bugs Social and Civic Club, Inc., d.b.a. Pinochle Bugs, Inc. SN 70,735. Pub. 4-19-60. Filed 4-2-59.

Certification Marks

Class A—Goods

700,690. CERTIFIED RATINGS—AMCA ETC. AND DESIGN. Air Moving and Conditioning Association, Inc. SN 70,267. Pub. 4-19-60. Filed 3-26-59.

700,691. MADRAS ALL INDIA ETC. AND DESIGN. All-India Handloom Board, Indian Dept. of the Ministry of Commerce and Industry. SN 62,317. Pub. 2-23-60. Filed 11-27-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

700,692. Pedigreed Lawnseed Company, Inc., Jersey City, N.J., assignee of Pedigreed Seed Co., Jersey City, N.J. SN 55,703. Filed P.R. 7-21-58; Am. S.R. 5-6-60.



For Lawn Grass Seed.
First use in June 1940.

Class 12—Construction Materials

700,693. Keasbey & Mattison Company, Ambler, Pa. SN 74,666. Filed P.R. 5-28-59; Am. S.R. 4-14-60.

K-BOARD

For Asbestos Board Used for Ceilings, Walls, and Floors.
First use Mar. 26, 1959.

Class 22—Games, Toys, and Sporting Goods

700,694. Burke Flexo-Products Company, Traverse City, Mich., assignee of Charles I. Burke, d.b.a. Burke Flexo-Products Co., Traverse City, Mich. SN 52,682. Filed P.R. 6-2-58; Am. S.R. 4-4-60.

Jig-N-Worm

For Artificial Fish Lures.
First use Feb. 25, 1958.

Class 26—Measuring and Scientific Appliances

700,695. Robertson Photo-Mechanix, Inc., Chicago, Ill. SN 30,682. Filed P.R. 5-24-57; Am. S.R. 2-12-60.

TRI-COLOR

For Photographic Cameras and Parts Thereof.
First use September 1951.

Class 27—Horological Instruments

700,696. F. W. Woolworth Co., New York, N.Y. SN 68,578. Filed 1-6-60.

CAMERON

For Watches.
First use on or about Apr. 21, 1958.

Class 29—Brooms, Brushes, and Dusters

700,697. Arsco Corporation, Hialeah, Fla. SN 51,771. Filed P.R. 5-16-58; Am. S.R. 11-16-59.

"N-T-N"
NYLON TO NYLON

For Paint Applicator, Stippling and Glazing Rollers and Frames Therefor.
First use in November 1957.

Class 38—Prints and Publications

700,698. TV Timetables, Inc., New York, N.Y. SN 68,088. Filed P.R. 2-19-59; Am. S.R. 2-16-60.

WEEKLY TV LOG

For Weekly Publications Pertaining to Television Programs.
First use in April 1958.

Class 39—Clothing

700,699. Seamprufe Incorporated, New York, N.Y. SN 49,389. Filed P.R. 4-9-58; Am. S.R. 4-29-60.

SHADOWEAVE

For Fabric Sold Only in Finished Apparel—Namely, Ladies' Slips and Nightgowns.
First use Apr. 1, 1937.

Class 45—Soft Drinks and Carbonated Waters

700,700. Canada Dry Corporation, New York, N.Y. SN 82,957. Filed P.R. 10-9-59; Am. S.R. 5-11-60.



The mark consists of the conformation of a bottle used as the container for applicant's carbonated soft drinks.
For Carbonated Soft Drinks.
First use May 1955.

Class 46—Foods and Ingredients of Foods

700,701. Theodore Ansel Crenshaw, d.b.a. The Tugalo Poultry Company, Toccoa, Ga. SN 48,906. Filed P.R. 4-2-58; Am. S.R. 4-25-60.

GEORGIA CHICK

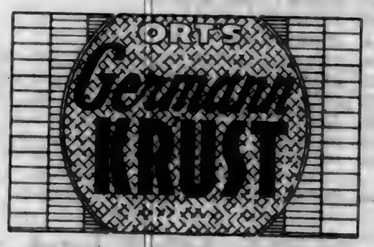
For Fresh Dressed and Frozen Poultry.
First use Mar. 18, 1958.

700,702. The Pillsbury Company, Minneapolis, Minn. SN 67,149. Filed P.R. 2-5-59; Am. S.R. 3-8-60.

SO STRONG

For Wheat Flour.
First use June 18, 1937.

700,703. Lewis J. Ort, La Vale, Md. SN 67,238. Filed 2-6-59.



The drawing is lined for blue and orange.
For Bread.
First use Jan. 7, 1957.

Class 51—Cosmetics and Toilet Preparations

700,704. Beautiful Eyes, Ltd., New York, N.Y. SN 57,051. Filed P.R. 8-12-58; Am. S.R. 7-28-59.

BEAUTIFUL SKIN

For Cleansing Pads Impregnated With a Deep Pore Cleansing Lotion.
First use August 1956.

700,705. Neiman-Marcus Company, Dallas, Tex. SN 63,737. Filed P.R. 12-5-58; Am. S.R. 11-30-59.

STACK-PAC

For Perfumes, Colognes, Toilet Waters, Bath Oils, Face and Body Powders, Lipsticks, Mascara, Rouges, Eye Shadows, Eyebrow Pencils, and Face Creams.
First use Oct. 20, 1958.

700,706. Johnson & Johnson, New Brunswick, N.J. SN 72,319. Filed P.R. 4-27-59; Am. S.R. 4-27-60.



The mark consists of the conformation of a bottle used as the container for applicant's goods.
For Skin Lotions.
First use Jan. 22, 1959.

700,707. Revlon, Inc., New York, N.Y. SN 73,043. Filed P.R. 5-6-59; Am. S.R. 5-9-60.

PINEAPPLE YUM-YUM

For Nail Enamel.
First use Apr. 15, 1959.

700,708. Revlon, Inc., New York, N.Y. SN 73,044. Filed P.R. 5-6-59; Am. S.R. 5-9-60.

SUGAR BLUE

For Nail Enamel.
First use Apr. 15, 1959.

700,709. Revlon, Inc., New York, N.Y. SN 73,045. Filed P.R. 5-6-59; Am. S.R. 5-9-60.

PINK COCONUT

For Nail Enamel.
First use Apr. 15, 1959.

700,710. Revlon, Inc., New York, N.Y. SN 73,046. Filed P.R. 5-6-59; Am. S.R. 5-9-60.

CHAMPAGNE TAFFY

For Nail Enamel.
First use Apr. 15, 1959.

700,711. Revlon, Inc., New York, N.Y. SN 73,047. Filed P.R. 5-6-59; Am. S.R. 5-9-60.

PISTACHIO MINT

For Nail Enamel.
First use Apr. 15, 1959.

700,712. Revlon, Inc., New York, N.Y. SN 73,048. Filed P.R. 5-6-59; Am. S.R. 5-9-60.

VIOLET CREME

For Nail Enamel.
First use Apr. 15, 1959.

700,712. Revlon, Inc., New York, N.Y. SN 74,254. Filed P.R. 5-21-59; Am. S.R. 5-9-60.

PINK JULEP

For Lipstick.
First use Apr. 15, 1959.

700,714. Revlon, Inc., New York, N.Y. SN 74,255. Filed P.R. 5-21-59; Am. S.R. 5-9-60.

CANDIED PEACH

For Lipstick.
First use Apr. 15, 1959.

700,715. Revlon, Inc., New York, N.Y. SN 74,256. Filed P.R. 5-21-59; Am. S.R. 5-9-60.

CHERRY MOUSSE

For Lipstick.
First use Apr. 15, 1959.

TRADEMARK REGISTRATIONS RENEWED

17,353. ROYAL WORCESTER. Cl. 30. 5-27-1890.
130,312. PIED PIPER. Cl. 39. 5-4-20.
131,265. JACK SPRAT AND DESIGN. Cl. 46. 5-4-20.
131,383. VITAGRAPH. Cl. 26. 5-11-20.
132,211. NAPIER. Cl. 23. 6-15-20.
132,225. LACONIA. Cl. 42. 6-15-20.
132,251. STANDARD KID AND DESIGN. Cl. 1. 6-15-20.
132,709. KNOXOUT. Cl. 52. 6-29-20.
132,912. WINTERFIELD AND DESIGN. Cl. 39. 7-6-20.
133,607. CHARMS. Cl. 45. 8-3-20.
133,635. DA LUBRICANT AND DESIGN. Cl. 15. 8-3-20.
134,069. REPRESENTATION OF A MULE. Cl. 46. 8-10-20.
134,254. DAUFUSKI. Cl. 46. 8-24-20.
134,383. HOOD AND DESIGN. Cl. 35. 8-31-20.
134,647. FISCHER. Cl. 36. 9-14-20.
134,661. MOR-ECON. Cl. 35. 9-14-20.
135,077. KOVERFLOR AND DESIGN. Cl. 16. 9-21-20.
135,381. A AND DESIGN. Cl. 22. 10-12-20.
135,420. BILLYKID SHOES. Cl. 39. 10-12-20.
135,587. NAVY. Cl. 17. 10-19-20.
135,639. ST. ANDREWS AND DESIGN. Cl. 39. 10-19-20.
135,655. CLEOPATRA. Cl. 52. 10-19-20.
135,803. REDPACK. Cl. 46. 10-19-20.
375,134. WARMNIGHT. Cl. 42. 2-6-40.
375,270. JUNO SUDS. Cl. 52. 2-13-40.
375,949. LADY PEPPERELL AND DESIGN. Cl. 42. 3-5-40.
376,158. DOWNAP. Cl. 42. 3-12-40.
377,066. OCTUPLET. Cl. 23. 4-16-40.
377,067. DECUPLET. Cl. 23. 4-16-40.
377,313. REDDY KILOWATT. Cl. 37. 4-30-40.
377,363. ELECTRICORD. Cl. 21. 4-30-40.
377,435. DUREX. Cl. 26. 5-7-40.
377,464. PEO MAT. Cl. 6. 5-7-40.
377,479. AQUA-SHEEN. Cl. 42. 5-7-40.
377,589. CHIXCLOTH. Cl. 42. 5-7-40.
377,592. META AND DESIGN. Cl. 6. 5-7-40.
377,721. RIVNUTS. Cl. 13. 5-14-40.
377,922. DAN BRADY AND DESIGN. Cl. 40. 5-21-40.
378,042. CLINCH VALLEY. Cl. 49. 5-21-40.
378,043. DOUBLE A. Cl. 49. 5-21-40.
378,609. BIAD. Cl. 18. 6-11-40.
378,610. BUTIBOL. Cl. 18. 6-11-40.
378,612. FERROMIN. Cl. 18. 6-11-40.
378,613. LINOCID. Cl. 18. 6-11-40.
378,614. LIQUOID. Cl. 18. 6-11-40.
378,615. PERSALS. Cl. 18. 6-11-40.
378,616. PHOSTOMIN. Cl. 18. 6-11-40.
378,618. SORPARIN. Cl. 18. 6-11-40.
378,619. TOLUBANE. Cl. 18. 6-11-40.
378,672. MERMAID. Cl. 40. 6-11-40.
378,705. DESIGN OF A DISK SHOWING STRIPE. Cl. 4. 6-18-40.
378,738. 5 POINT. Cl. 39. 6-18-40.
378,913. BATMAN. Cl. 38. 6-25-40.
379,118. AMODYN. Cl. 9. 7-2-40.
379,119. APCODYN. Cl. 9. 7-2-40.
379,244. RED-HED. Cl. 19. 7-9-40.
379,758. ARGOSE. Cl. 46. 7-23-40.
379,914. KINELLAPRINTS. Cl. 42. 7-30-40.
380,006. SEALMASTER. Cl. 23. 8-6-40.
380,350. BOLLITE. Cl. 14. 8-20-40.
380,388. DEKA. Cl. 18. 8-20-40.
380,462. BROMIPHEN. Cl. 18. 8-20-40.
380,555. RAYBOND. Cl. 1. 8-27-40.
380,556. RAYBOOK. Cl. 1. 8-27-40.
380,557. RAYBRITE. Cl. 1. 8-27-40.
380,558. RAYACETA. Cl. 1. 8-27-40.
380,559. RAYSELECT. Cl. 1. 8-27-40.
380,560. RAYWHITE. Cl. 1. 8-27-40.
381,102. ORA-CRYLIC. Cl. 44. 9-10-40.
381,103. PHI SYMBOL. Cl. 21. 9-10-40.
381,320. AIRCO. Cl. 14. 9-17-40.
381,397. BARRICINI. Cl. 46. 9-24-40.
381,403. LAUREL AND DESIGN. Cl. 13. 9-24-40.
381,437. PARABLOX AND DESIGN. Cl. 23. 9-24-40.
381,441. RICH-LUX. Cl. 16. 9-24-40.
381,496. AIRCO. Cl. 34. 9-24-40.
381,620. JULIETTE. Cl. 39. 10-1-40.
381,644. JOHNSONIAN. Cl. 39. 10-1-40.
381,694. THREE SEASONS DESIGN. Cl. 39. 10-1-40.
381,716. REPELLO AND DESIGN. Cl. 37. 10-1-40.
381,807. PRESDWOOD TEMPERTILE. Cl. 12. 10-8-40.
381,960. TUFFET. Cl. 39. 10-15-40.
381,962. AQUANON. Cl. 39. 10-15-40.
382,054. GROTESQUE REPRESENTATION OF A MAN. Cl. 12. 10-15-40.
382,064. TONKAIRE. Cl. 3. 10-15-40.
382,127. NYL-O-NOL. Cl. 6. 10-15-40.
382,158. MILKMAID. Cl. 51. 10-15-40.
382,238. BEECH-NUT AND OVAL DESIGN. Cl. 46. 10-22-40.
382,256. MAYO'S. Cl. 17. 10-22-40.
382,230. BLB AND DESIGN. Cl. 44. 10-22-40.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

175,345. TAO TEA. Cl. 42. 11-6-23.
597,532. PERMA-LINE. Cl. 18. 11-2-54.
629,337. HALLCO. Cl. 6. 6-26-56.
672,413. FERROJECT. Cl. 18. 1-13-59.
681,021. BON-AIR. Cl. 14. 6-30-59.
683,178. GENERALAIRE. Cl. 28. 7-21-59.
691,512. ADMIRAL. Cl. 13. 1-19-60.

Section 8

208,220. COLIVEROL. Cl. 6. 1-19-26.
235,077. NOFADE. Cl. 42. 11-22-27.
235,831. NOFADE. Cl. 39. 11-29-27.
303,810. REALTEX. Cl. 16. 6-6-33.
306,064. JIFFY-LAX. Cl. 18. 9-5-33.
589,676. LAVADOR. Cl. 12. 5-11-54.

The following registrations issued May 16, 1944

589,869. ROUND-UP RIDERS ETC. AND DESIGN. Cl. 39.
589,870. WHITE HYDRO-TONQUE. Cl. 23.
589,875. HYGRADE AND DESIGN. Cl. 26.
589,879. BANNER AND DESIGN. Cl. 9.
589,886. NYLOWHITE. Cl. 52.
589,887. HYMAN'S CUSTOM-BILT AND DESIGN. Cl. 19.
589,888. TRUVAL TRU-SLOPE. Cl. 39.
589,897. MIDWEST'S FRIENDLY GIANT AND DESIGN. Cl. 22.
589,902. WADE'S WAY. Cl. 23.
589,905. PADICARES. Cl. 26.
589,907. POVIA BROS. SUNGLOW FARMS AND DESIGN. Cl. 1.
589,913. TIDEE-DIPE. Cl. 23.
589,923. STANDARD TRU-AGE AND DESIGN. Cl. 48.
589,924. RAY-O-VAC AND DESIGN. Cl. 21.
589,927. CLEON. Cl. 21.
589,935. ELEENE-EM. Cl. 52.
589,936. STAR-BRITE. Cl. 52.
589,939. KILTY. Cl. 23.
589,943. CITY ROAD AND DESIGN. Cl. 19.
589,947. TUMBLE WEAVE. Cl. 39.
589,949. LOVE-MATE. Cl. 28.
589,950. LOVE-MATES. Cl. 28.
589,953. THE CHAINED HEARTS KEY CHAIN ETC. Cl. 28.
589,954. MAID OF ERIN. Cl. 39.
589,956. CINERAMA. Cl. 3.
589,957. DAILY DOZEN HONOR ROLL. Cl. 37.
589,964. WELLIT. Cl. 12.
589,965. PERORIT. Cl. 12.
589,966. DESIGN OF A CROWN. Cl. 26.
589,967. THE CHICAGOAN. Cl. 21.
589,970. CLORA-VIM. Cl. 18.
589,971. PARAFLEX JR. Cl. 39.
589,972. THERMOLITE. Cl. 1.
589,974. TRAVELER. Cl. 23.
589,979. AEROWRAP. Cl. 12.
589,985. BALL-RITE. Cl. 21.
589,986. PERM-ALIGN. Cl. 21.
589,998. OUR FATHER AND PICTURE OF APPLICANT. Cl. 18.
590,000. PROPI-VAGINAL. Cl. 18.
590,002. HARDIKRAFT. Cl. 37.
590,005. PIXIE. Cl. 36.
590,007. GARDEN KIST. Cl. 10.
590,012. LA BOHEME. Cl. 39.
590,013. TALKING WINDOW. Cl. 21.
590,017. PERMA-VIEWERS. Cl. 26.
590,020. TEKTOLOG. Cl. 26.
590,024. HI-DULTWIST. Cl. 39.
590,025. COGNAC. Cl. 51.
590,030. ZIP-N-DRI. Cl. 39.
590,037. ELECTRONIC STITCH. Cl. 39.
590,038. LIME-LITE. Cl. 39.
590,046. USRUREX. Cl. 21.
590,050. CLAIRE SCHWARTZ ORIGINAL. Cl. 39.
590,054. HEET-HAMP. Cl. 21.
590,062. BRUNLITE. Cl. 36.
590,069. CRUCIANELLI. Cl. 36.
590,070. THE CHAMPAGNE OF TEAS. Cl. 46.
590,073. DONUT WORRY, DONUT FRET—YOU'LL BE DUNCAN DONUTS YET. Cl. 46.
590,074. DUNCAN DONUTS INC. ETC. AND DESIGN. Cl. 46.
590,075. RUSTOP. Cl. 6.
590,078. P'NUTETTES. Cl. 46.
590,079. LADY TARLETON. Cl. 27.
590,080. LORD TARLETON. Cl. 27.
590,081. TARLETON. Cl. 27.
590,087. EYE-MODE AND DESIGN. Cl. 26.
590,089. PACIFIC PAN READY. Cl. 46.
590,095. GLASTRAND. Cl. 12.
590,097. RECORDS HI-FI AND DESIGN. Cl. 38.
590,101. HARTNELL 1ST. Cl. 51.
590,102. EYE BANDELETTES. Cl. 44.
590,107. THUM-CUFF. Cl. 26.
590,109. BEAD-A-KIT. Cl. 40.
590,113. PIGS-KIN. Cl. 12.
590,115. EASY DRAPE. Cl. 13.
590,116. SHEFFIELD. Cl. 4.
590,118. 1000 HINTS BEAUTY. Cl. 38.
590,122. STAR DETECTIVE CASES. Cl. 28.
590,123. WHO'S WHO IN WESTERN STARS. Cl. 38.
590,126. TALL GIRL LOUNGEWEAR. Cl. 39.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

327,316. ELGIN AND DESIGN. Cl. 27. 8-20-35. Elgin National Watch Company, Elgin, Ill. Amended: In the statement, column 1, lines 8 and 9, the description of goods, "watches, watch movements and watch cases" is deleted and *watches and watch movements* is inserted.

533,184. AUTOLITE. Cl. 23. 11-7-50. The Electric Auto-Lite Company, Toledo, Ohio. Amended to appear:

AUTOLITE

582,480. ORZAN. Cl. 12. 11-17-53. Crown Zellerbach Corporation, San Francisco, Calif. Amended to appear:

ORZAN

603,637. WHEN TO SELL AND BUY. Cl. 38. 3-22-55. Doane Agricultural Service, Inc., St. Louis, Mo. Corrected: In the statement, column 2, line 3, "28" should be deleted and *38* should be inserted.

683,061. NECTAR ETC. AND DESIGN. Cl. 47. 8-4-59. Gonsales, Byass & Co. Limited, doing business as Gonsales, Byass y Cx. and Gonsales, Byass & Co., London, England.

Corrected: In the statement, column 1, line 4 should be deleted and *7 & 8 Great Winchester Street, Old Bread Street* should be inserted.

691,949. FOOD-ALA-CART. Cl. 21. 1-26-60. Nutting Truck and Caster Company, Faribault, Minn. Amended to appear:

FOOD
-ala-
CART

692,924. RUGGED CROSS MEMORIAL AND DESIGN. Cl. 50. 2-9-60. Coggins Granite and Marble Industries, Inc., Elberton, Ga. Corrected: In the statement, column 1, line 2, after "corporation)", *now by change of name Coggins Granite Industries, Inc.* should be inserted.

693,696. STARLINE. Cl. 12. 3-1-60. Starline, Inc., Harvard, Ill. Corrected: In the statement, column 2, line 10, "200,693" should be deleted and *200,639* should be inserted.

693,712. INGRAM AND DESIGN. Cl. 15. 3-1-60. Ingram Products Company, doing business as Ingram Oil and Refining Co., New Orleans, La. Corrected: In the statement, column 2, line 3, after "heavy" *fuel* should be inserted.

694,073. FLORMATE AND DESIGN. Cl. 4. 3-8-60. Janitorial Supplies Corporation, Albany, N.Y. Corrected: In the statement, column 2, line 3, "searing" should be deleted and *sealing* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946

Class 1—Raw or Partly Prepared Materials

411,125. Jan. 2, 1945. Kelly-Western Seed Co., Salt Lake City, Utah. Pub. by Utah Cooperative Association, d.b.a. Pax Company, Salt Lake City, Utah.

PAX

For Lawn Seeds, Grass Seeds, Field Seeds, Garden Seeds.

Class 6—Chemicals and Chemical Compositions

379,327. July 9, 1940. United States Rubber Company, New York, N.Y. Pub. by registrant.

BETANOX

For Antioxidants for Natural or Synthetic Rubber, or Other Oxidizable Organic Materials.

Class 10—Fertilizers

417,314. Oct. 23, 1945. Kelly-Western Seed Co., Salt Lake City, Utah. Pub. by Utah Cooperative Association, d.b.a. Pax Company, Salt Lake City, Utah.

PAX
LAWN CONTROL

For Combination of Soil Conditioning and Chemical Ingredients Adapted for Use as a Fertilizer and Soil Conditioner, and for Rejuvenating and Improving and Maintaining of Turf.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

328,853. Sept. 24, 1935. Hugo Wurzburger, Paris, France. Pub. by The Weatherhead Company, Cleveland, Ohio.

ERMETO

For Metal Pipes and Tubes; Connecting Unions and Nipples for Pipes and Tubes; and All Fittings for Pipes, Tubes, and Pipe Lines.

Class 18—Medicines and Pharmaceutical Preparations

378,488. June 11, 1940. Nicholas Salinitro, d.b.a. Salinitro Laboratories, New York, N.Y. Pub. by registrant.

SANAPEL

For Chemical Preparation for the Alleviation of Superficial Skin Irritations.

Class 20—Linoleum and Oiled Cloth

133,856. Aug. 3, 1920. United States Rubber Company, New York, N.Y. Pub. by registrant.

Usco

For Floor-Covering at Present Made of Rubber Compound.

Class 21—Electrical Apparatus, Machines, and Supplies

378,085. May 28, 1940. United States Rubber Company, New York, N.Y. Pub. by registrant.

TWINSULATION

For Friction and Rubber Tape Combined.

379,854. July 30, 1940. The Strong Electric Corporation, Toledo, Ohio. Pub. by registrant.

STRONG

For Arc Lamps, Rectifiers, and Replacement Parts.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

374,582. Jan. 16, 1940. Temme Spring Corporation, Chicago, Ill. Pub. by Maremont Automotive Products, Inc., Chicago, Ill.

"Vac-U-Matic"

For Mufflers for Internal Combustion Engines.

376,377. Mar. 19, 1940. Frederick Parker Limited, Leicester, England. Pub. by registrant.

KUBIT

For Machines for Crushing or Breaking Stone, Slag, Gravel, and Similar Materials.

Class 29—Brooms, Brushes, and Dusters

386,739. Apr. 22, 1941. The Deshler Broom Factory, Deshler, Nebr. Pub. by registrant.

BROWNIE



For Brooms.

386,740. Apr. 22, 1941. The Deshler Broom Factory, Deshler, Nebr. Pub. by registrant.

BROWNIE

For Brooms.

386,741. Apr. 22, 1941. The Deshler Broom Factory, Deshler, Nebr. Pub. by registrant.



For Brooms.

Class 32—Furniture and Upholstery

376,136. Mar. 12, 1940. Bloomingdale Bros., Inc., New York, N.Y. Pub. by Federated Department Stores, Inc., New York, N.Y.

B

For Tables, Chairs, Buffets, Sideboards, China Closets, Bookcases, Desks, Beds, Springs, Mattresses, Bureaus, Vanity Tables, Chiffoniers, Chests of Drawers, and Venetian Blinds.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

237,824. Jan. 17, 1928. Woodward-Wanger Company, Philadelphia, Pa. Pub. by registrant.

NEVER-DRIP

For Bib and Faucet Washers.

377,780. May 14, 1940. The Flak Rubber Corporation, assignor to United States Rubber Company, New York, N.Y. Pub. by United States Rubber Company, New York, N.Y.

MULTI-DUTY

For Vehicle Tires Made Wholly or Partly of Rubber.

403,070. Aug. 31, 1943. Woodward-Wanger Company, Philadelphia, Pa. Pub. by registrant.

RHINO-PRENE

For Nonmetallic Faucet Washers.

Class 38 — Prints and Publications

376,461. Mar. 26, 1940. Buffalo Industrial Bank, Buffalo, N.Y. Pub. by Bank of Buffalo, Buffalo, N.Y.

BANKWAY

For Publications Issued From Time to Time of Interest to Depositors and Investors.

Class 39 — Clothing

130,418. Apr. 20, 1920. John B. Stetson Company, Philadelphia, Pa. Pub. by registrant.



For Soft and Stiff Hats and Caps.

310,430. Feb. 27, 1934. A. Sulka & Company, New York, N.Y. Pub. by registrant.

Sulka

For Dress Shirts, Negligee Shirts, Work Shirts, and Undershirts; Collars, Ties, Sweaters, Sweater Jackets, Hosiery, Bathing Suits, Beach Robes, House Robes; Underwear of Knitted, Netted, and Textile Fabrics; and Pyjamas.

310,431. Feb. 27, 1934. A. Sulka & Company, New York, N.Y. Pub. by registrant.

A. Sulka & Company

For Dress Shirts, Negligee Shirts, Work Shirts, and Undershirts; Collars, Ties, Sweaters, Sweater Jackets, Hosiery, Bathing Suits, Beach Robes, House Robes; Underwear of Knitted, Netted, and Textile Fabrics; and Pyjamas.

376,508. Apr. 2, 1940. Bloomingdale Bros., Inc., New York, N.Y. Pub. by Federated Department Stores, Inc., New York, N.Y.

Roamabout

For Suits and Shoes Made of Leather, Fabric, and Combinations Thereof for Women and Misses, and Coats, Suits, and Outer and Under Shirts for Men.

378,903. June 25, 1940. Bloomingdale Bros., Inc., New York, N.Y. Pub. by Federated Department Stores, Inc., New York, N.Y.



For Women's, Misses', and Children's Coats, Suits, Dresses, Blouses, Gloves Made of Leather, Fabric, Rubber, and Combinations Thereof, Hosiery, Shoes Made of Leather, Fabric, Rubber, and Combinations Thereof, Slippers, Hats, Sweaters, Underwear; and Men's and Boys' Coats, Suits, Outer and Under Shirts, Gloves Made of Leather, Fabric, Rubber, and Combinations Thereof, Hose, Shoes Made of Leather, Fabric, Rubber, and Combinations Thereof, Slippers, Hats, Sweaters, Windbreakers, Underwear, and Handkerchiefs.

388,894. July 15, 1941. Interwoven Stocking Company, New Brunswick, N.J. Pub. by registrant.

SUPER X ESSEX

For Hosiery.

402,766. Aug. 10, 1943. Marilyn Shoe Company, Milwaukee, Wis. Pub. by Hampton Corporation, Milwaukee, Wis.

Kickernos

For Shoes of Leather, Rubber, Fabric, or Combinations Thereof, for Growing Girls, Misses, and Women.

423,062. Aug. 20, 1946. Interwoven Stocking Company, New Brunswick, N.J. Pub. by registrant.

Interwoven

For Hosiery.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

377,051. Apr. 16, 1940. Bloomingdale Bros., Inc., New York, N.Y. Pub. by Federated Department Stores, Inc., New York, N.Y.



For Silk, Rayon, Cotton, Wool Yard Goods, Bath Towels, Linen Towels, Table Cloths, Napkins, Sheets, Pillow Cases, Textile Rugs and Carpets.

380,111. Aug. 6, 1940. Reeves Brothers, Inc., New York, N.Y. Pub. by registrant.

FAIRFOREST

For Cotton Piece Goods.

Class 46 — Foods and Ingredients of Foods

232,417. Sept. 6, 1927. The Colorado Milling & Elevator Co., also d.b.a. The Pacific Seed House, Denver, Colo., and Salt Lake City, Utah. Pub. by Utah Cooperative Association, d.b.a. Pax Company, Salt Lake City, Utah.

PAX

For Horse Feed, Cow Feed, Chicken Feed, Sheep Feed, Pig Feed, and Calf Feed.

375,506. Feb. 20, 1940. American Fruit Growers Incorporated, Wilmington, Del., and Pittsburgh, Pa. Pub. by Blue Goose, Inc., Los Angeles, Calif.

BLUE GOOSE



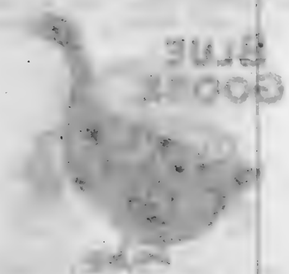
For Fresh Citrus Fruits, Fresh Deciduous Fruits, Fresh Berries, Fresh Grapes, Watermelons, Cantaloupes, Casaba Melons, Honeydew Melons, Pineapples, Canned Fruits, Canned Fruit Juices, Fresh Figs and Dates, and Fresh Vegetables.

Class 52 — Detergents and Soaps

378,358. June 4, 1940. Alfred D. McKelvy, d.b.a. Alfred D. McKelvy Company, Minneapolis, Minn. Pub. by Chesebrough-Pond's Inc., New York, N.Y.

Seaforth!

For Shaving Soap and Toilet Soap.





INDEX OF REGISTRANTS

JULY 5, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AA Triangle Transfer and Warehouse Co., Miami, Fla. 700,685, pub. 4–19–60. Cl. 105.
Abbott Laboratories, North Chicago, Ill. 672,413, canc. Cl. 18.
Abramowitz, Curt E., Brooklyn, N.Y. 569,886, canc. Cl. 52.
Adam, James, El Centro, Calif. 700,635, pub. 4–19–60. Cl. 46.
Adams Pipe Repair Products, South El Monte, Calif. 700,877, pub. 4–19–60. Cl. 13.
Adhesive Tape Corp., Brooklyn, N.Y. 700,225, pub. 4–19–60. Cl. 5.
Advance Crayon & Color Corp., Brooklyn, N.Y. 700,543, pub. 4–19–60. Cl. 37.
Advance Mfg. Co., Chicago, Ill., to Aqua Sheen by Advance Inc., New York, N.Y. 377,479, ren. 7–5–60. Cl. 42.
Aeolian American Corp.: *See*—
Fischer, J. & C.
Aeolian American Corp., East Rochester, N.Y. 700,535, pub. 4–19–60. Cl. 36.
Aerovox Corp., New Bedford, Mass. 700,448, pub. 4–19–60. Cl. 21.
Affiliated Distillers Brands Corp.: *See*—
Schenley Distillers, Inc.
Schenley Distributors, Inc.
Air Cardox Products Co.: *See*—
Marmon-Herrington Co., Inc.
Air Moving and Conditioning Association, Inc., Detroit, Mich. 700,690, pub. 4–19–60. Cl. A.
Air Reduction Co., Inc.: *See*—
Air Reduction Sales Co.
Ohio Chemical & Mfg. Co., The.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 381,320, ren. 7–5–60. Cl. 14.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 381,496, ren. 7–5–60. Cl. 34.
Aladdin Industries, Inc., Nashville, Tenn. 700,309, pub. 4–19–60. Cl. 2.
Alexander Doll Co., Inc., d.b.a. Madame Alexander, New York, N.Y. 700,459, pub. 4–19–60. Cl. 22.
Allied Kid Co.: *See*—
Standard Kid Mfg. Co.
All-India Handloom Board, Fort, Bombay, India. 700,691, pub. 2–23–60. Cl. A.
Allis-Chalmers Mfg. Co., Milwaukee, Wis. 700,375, pub. 4–19–60. Cl. 13.
Amerace Corp.: *See*—
American Hard Rubber Co.
American Bag and Paper Corp., The, Philadelphia, Pa. 700,548, pub. 4–19–60. Cl. 37.
American Brake Shoe Co., New York, N.Y. 700,372, pub. 4–19–60. Cl. 13.
American Cyanamid Co., New York, N.Y. 700,340, pub. 4–19–60. Cl. 6.
American District Telegraph Co., New York, N.Y. 700,676–7, pub. 4–19–60. Cl. 100.
American Fruit Growers Inc., Wilmington, Del., and Pittsburgh, Pa., by Blue Goose, Inc., Los Angeles, Calif. 375,506, 12(c) pub. 7–5–60. Cl. 46.
American Hard Rubber Co., Hempstead and New York, to America Corp., New York, N.Y. 135,381, ren. 7–5–60. Cl. 22.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,415–17, pub. 4–19–60. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,419–20, pub. 4–19–60. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,424–5, pub. 4–19–60. Cl. 18.
American Home Products Corp., d.b.a. Whitehall Laboratories, New York, N.Y. 700,401, pub. 7–21–59. Cl. 18.
American Lithofold Corp., St. Louis, Mo. 700,556, pub. 4–19–60. Cl. 37.
American Mfg. Co., Inc., Brooklyn, N.Y. 700,346, pub. 4–19–60. Cl. 7.
American Post Lite Co., Inc., North Kokomo, Ind. 700,456, pub. 4–19–60. Cl. 21.
American Rawhide Mfg. Co., Chicago, Ill. 700,529, pub. 4–19–60. Cl. 36.
American Telephone and Telegraph Co., New York, N.Y. 700,452, pub. 4–19–60. Cl. 21.
American Tobacco Co., The, New York, N.Y. 135,587, ren. 7–5–60. Cl. 17.
American Tobacco Co., The, New York, N.Y. 382,258, ren. 7–5–60. Cl. 17.
American W.M.B., Inc.: *See*—
Isoleringsaktiebolaget WMB.
American Well Works, The, Chicago, Ill. 700,373, pub. 4–19–60. Cl. 13.
AMP Inc., Harrisburg, Pa. 700,442, pub. 4–5–60. Cl. 21.
Andersen Corp., Chicago, Ill. 700,355, pub. 4–19–60. Cl. 12.
Angio-French Drug Co. Ltd., Montreal, Quebec, Canada. 690,000, canc. Cl. 18.
Anseo: *See*—
General Aniline & Film Corp.
Aqua Sheen by Advance Inc.: *See*—
Advance Mfg. Co.
Araya Kogyo Kabushiki-Kaisha (Araya Industrial Co. Ltd.), Nishi Yodogawa-ku, Osaka, Japan. 700,429, pub. 4–19–60. Cl. 19.
Arden, Elizabeth, Sales Corp., New York, N.Y. 590,025, canc. Cl. 51.
Arden, Elizabeth, Sales Corp., New York, N.Y. 590,102, canc. Cl. 44.
Armor Elevator Co., Inc., Long Island City, N.Y. 700,486–7, pub. 4–19–60. Cl. 23.
Armour and Co., Chicago, Ill. 700,298, pub. 4–19–60. Cl. 1.
Armour and Co., Chicago, Ill. 700,300–1, pub. 4–19–60. Cl. 1.
Arsco Corp., Hialeah, Fla. 700,607. Cl. 29.
Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. 700,578, pub. 4–12–60. Cl. 39.
Ashland Cooperative Exchange, Ashland, Kans. 700,644, pub. 4–19–60. Cl. 46.
Ashland Oil & Refining Co., Ashland, Ky. 700,385, pub. 4–19–60. Cl. 15.
Atlantis Products Co.: *See*—
Lindberg, Albert W., Jr.
Atlas Overall Co., Philadelphia, Pa. 589,889, canc. Cl. 39.
Atlas Powder Co., Wilmington, Del. 370,118–19, ren. 7–5–60. Cl. 9.
Atlas Supply Co., Newark, N.J. 700,443, pub. 4–19–60. Cl. 21.
Audio Fidelity Inc., New York, N.Y. 700,586, pub. 4–19–60. Cl. 36.
Automatic Timing & Controls, Inc., King of Prussia, Pa. 700,675, pub. 4–19–60. Cl. 100.
Bachman Bakeries Corp., Reading, Pa. 700,647, pub. 4–19–60. Cl. 46.
Baker, Wade, Burley, Idaho. 589,902, canc. Cl. 23.
Bank of Buffalo: *See*—
Buffalo Industrial Bank.
Banner Fireworks Corp.: *See*—
Banner Fireworks Mfg. Co., Inc.
Banner Fireworks Mfg. Co., Inc., now by change of name Banner Fireworks Corp., Toledo, Ohio. 589,879, canc. Cl. 9.
Barrack's Industries, Inc., Springdale, Ark. 700,388, pub. 4–19–60. Cl. 16.
Barricini Inc., Long Island City, N.Y. 381,397, ren. 7–5–60. Cl. 46.
Barry Ice Cream Co., St. Louis, Mo. 700,632, pub. 4–19–60. Cl. 46.
Barth Levitt Products, Lynbrook, N.Y. 700,642, pub. 4–19–60. Cl. 46.
Basic Products Corp., Milwaukee, Wis. 700,450, pub. 4–19–60. Cl. 21.
Bastian-Blessing Co., The, Chicago, Ill. 700,484, pub. 4–19–60. Cl. 23.
Bastian-Morley Co., Inc., La Porte, Ind. 700,524, pub. 4–19–60. Cl. 34.
Batesville Casket Co., Inc., Batesville, Ind. 700,311, pub. 4–19–60. Cl. 2.
Baum, Russell Ernest, Inc.: *See*—
Baum, Russell E.
Baum, Russell E., to Russell Ernest Baum, Inc., Philadelphia, Pa. 377,066–7, ren. 7–5–60. Cl. 23.
Bear Brand Hosiery Co., Chicago, Ill. 589,971, canc. Cl. 39.
Beauregard, Louis, Burbank, Calif. 589,953, canc. Cl. 28.
Beautiful Eyes, Ltd., New York, N.Y. 700,704. Cl. 51.
Beebe Rubber Co., Nashua, N.H. 600,290, pub. 4–19–60. Cl. 1.
Beech-Nut Life Savers, Inc.: *See*—
Beech-Nut Packing Co.
Beech-Nut Packing Co., to Beech-Nut Life Savers, Inc., Canajoharie, N.Y. 382,238, ren. 7–5–60. Cl. 46.
Berco, Inc., New York, N.Y. 700,513, pub. 4–19–60. Cl. 27.
Berl Industries, Midwest City, Okla. 700,458, pub. 4–19–60. Cl. 22.
Besombes, Albert, Societe a Responsabilite Limitee, Saint-Hilaire-Saint-Florent, Maine et Loire, France. 700,654, pub. 4–19–60. Cl. 47.
Best Industries, Inc., Miami, Fla. 700,351, pub. 4–19–60. Cl. 11.
Big Three Welding Supply Co., Fort Worth, Tex. 700,291, pub. 4–19–60. Cl. 1.
Blacknall, Vol T., Co., Atlanta, Ga. 700,613, pub. 4–19–60. Cl. 42.
Bloomingdale Bros., Inc., by Federated Department Stores, Inc., New York, N.Y. 376,136, 12(c) pub. 7–5–60. Cl. 32.
Bloomingdale Bros., Inc., by Federated Department Stores, Inc., New York, N.Y. 376,598, 12(c) pub. 7–5–60. Cl. 39.
Bloomingdale Bros., Inc., by Federated Department Stores, Inc., New York, N.Y. 377,051, 12(c) pub. 7–5–60. Cl. 42.
Bloomingdale Bros., Inc., by Federated Department Stores, Inc., New York, N.Y. 378,903, 12(c) pub. 7–5–60. Cl. 39.
Blue Goose, Inc.: *See*—
American Fruit Growers Inc.
Blue Ribbon Cleaners, New Orleans, La. 700,662, pub. 4–19–60. Cl. 103.

Blumcraft of Pittsburgh, Pittsburgh, Pa. 700,357, pub. 4–19–60. Cl. 12.
Boehringer, C. F., & Soehne G.m.b.H., Mannheim-Waldhof, Germany. 700,410–12, pub. 4–19–60. Cl. 18.
Boehringer, C. H., Sohn, Ingelheim am Rhein, Germany. 700,422–3, pub. 4–19–60. Cl. 18.
Bolton, John W., & Sons, Inc., Lawrence, Mass. 700,504, pub. 4–19–60. Cl. 23.
Bondyne Associates, Inc., New York, N.Y. 700,611, pub. 4–19–60. Cl. 42.
Boos, Henry P., Dental Laboratories: *See*— Boos, Henry P.
Boos, Henry P., d.b.a. Henry P. Boos Dental Laboratories, to Henry P. Boos Dental Laboratories, Inc., Minneapolis, Minn. 381,102, ren. 7–5–60. Cl. 44.
Boulais, Paul E., Hackensack, N.J. 590,107, canc. Cl. 25.
Bristol Laboratories, Inc.: *See*— Bristol-Myers Co.
Bristol-Myers Co., by merger from Bristol Laboratories, Inc., Syracuse, N.Y. 700,407, pub. 4–19–60. Cl. 18.
Bristol-Myers Co., New York, N.Y. 700,665, pub. 1–12–60. Cl. 51.
Brooks, E. J., Co., Newark, N.J. 700,505, pub. 4–19–60. Cl. 25.
Bruder, M. A., & Sons, Inc.: *See*— Bruder, M. A., & Sons.
Bruder, M. A., & Sons, to M. A. Bruder & Sons, Inc., Philadelphia, Pa. 381,441, ren. 7–5–60. Cl. 16.
Brunswick-Balke-Collender Co., The, Chicago, Ill. 700,480–2, pub. 4–19–60. Cl. 22.
Brunswick Radio Corp., New York, N.Y. 590,062, canc. Cl. 36.
Budge, Lloyd K., White Plains, N.Y. 700,457, pub. 4–19–60. Cl. 22.
Buffalo Industrial Bank, by Bank of Buffalo, Buffalo, N.Y. 376,461, 12(c) pub. 7–5–60. Cl. 38.
Burke Flexo-Products Co., from Charles I. Burke, d.b.a. Burke Flexo-Products, Traverse City, Mich. 700,694. Cl. 22.
Burkhardt-Warner Industries, Holyoke, Mass. 589,957, canc. Cl. 37.
Burton, Parsons & Co., Washington, D.C. 700,405, pub. 4–19–60. Cl. 18.
Butler Mfg. Co., Kansas City, Mo. 700,361, pub. 4–19–60. Cl. 12.
Butler Mfg. Co., Kansas City, Mo. 700,370, pub. 4–19–60. Cl. 12.
Butler Mfg. Co., Kansas City, Mo. 700,500, pub. 4–19–60. Cl. 23.
Butler Mfg. Co., Kansas City, Mo. 700,530, pub. 4–19–60. Cl. 34.
Buttenheim Publishing Corp., New York, N.Y. 700,576, pub. 4–19–60. Cl. 38.
Cado, W. W., Sales Co., Los Angeles, Calif. 590,007, canc. Cl. 10.
Cahn, Bernard, Co., Inc., New York, N.Y. 700,320, pub. 4–19–60. Cl. 3.
California Optical Leather Co., Castro Valley, Calif. 589,905, canc. Cl. 26.
Camden Furniture Co., Camden, Ark. 700,521, pub. 4–19–60. Cl. 32.
Canada Dry Corp., New York, N.Y. 700,700. Cl. 45.
Capehart-Farnsworth Corp., now by merger International Telephone and Telegraph Corp., Wilmington, Del. 589,967, canc. Cl. 21.
Car-Blair Ltd., New York, N.Y. 590,030, canc. Cl. 39.
Carrtone Laboratories, Inc., New Orleans, La. 700,396, pub. 4–19–60. Cl. 18.
Cayo, Richard S., Portland, Oreg. 700,360, pub. 4–19–60. Cl. 12.
Ceeb: *See*— Miami Sportswear Co., Inc.
Ceeb of Miami: *See*— Miami Sportswear Co., Inc.
Celanese Corp. of America, New York, N.Y. 700,305, pub. 4–19–60. Cl. 1.
Century Geophysical Corp., Tulsa, Okla. 700,510, pub. 4–19–60. Cl. 26.
Chadbourn Hosiery Mills, Inc., Charlotte, N.C. 590,024, canc. Cl. 39.
Chamberlin, Willard C., Hollywood, Calif. 700,686, pub. 4–19–60. Cl. 107.
Charles Vending Co.: *See*— Glueck, Charles H.
Charms Co., Newark, to Charms Co., Asbury Park, N.J. 133,607, ren. 7–5–60. Cl. 45.
Chesebrough-Pond's Inc.: *See*— McKelvy, Alfred D.
Chicago Dietetic Supply House, Inc., The, Chicago, Ill. 700,629, pub. 4–19–60. Cl. 46.
Chicopee Mfg. Corp., New Brunswick, N.J., to Chicopee Mills, Inc., New York, N.Y. 377,589, ren. 7–5–60. Cl. 42.
Chicopee Mills, Inc.: *See*— Chicopee Mfg. Corp.
Church, Bruce, Inc., Salinas, Calif. 700,624, pub. 4–19–60. Cl. 46.
Circus Food, Inc.: *See*— USTCO Products Corp.
City Road Engineering Works Ltd., London, England. 589,943, canc. Cl. 19.
Cleon Products, Inc., Phoenix, Ariz. 589,927, canc. Cl. 21.
Cleveland Cleaner & Paste Co., Cleveland, Ohio. 700,465, pub. 4–19–60. Cl. 22.
Coating Materials Laboratories, Inc., Belleville, N.J. 590,075, canc. Cl. 6.
Coggins Granite and Marble Industries, Inc., Elberton, Ga. 692,924, cor. Cl. 50.
Cohen, Goldman & Co., Inc., New York, N.Y., to House of Worsted-Tex, Inc., Baltimore, Md. 132,912, ren. 7–5–60. Cl. 39.
Cohen, Goldman & Co., Inc., New York, N.Y., to House of Worsted-Tex, Inc., Baltimore, Md. 135,630, ren. 7–5–60. Cl. 39.
Cohen, Joseph H., & Sons, Inc., New York, N.Y. 700,591, pub. 4–19–60. Cl. 39.
Colebrook Knitwear Inc., New York, N.Y. 700,579, pub. 4–19–60. Cl. 39.
Coleman Co., Inc., The, Wichita, Kans. 700,529, pub. 4–19–60. Cl. 34.
Colgate-Palmolive Co.: *See*— Hayter, A. P.
Collins, Ashton B., Birmingham, Ala., to Reddy Kilowatt, Inc., New York, N.Y. 377,313, ren. 7–5–60. Cl. 37.
Colorado Milling & Elevator Co., The, also d.b.a. The Pacific Seed House, Denver, Colo., and Salt Lake City, by Utah Cooperative Association, d.b.a. PAX Co., Salt Lake City, Utah. 232,417, 12(c) pub. 7–5–60. Cl. 44.
Columbus Wholesale Barber & Beauty Supply Co., Inc., d.b.a. Eudora Products, Columbus, Ohio. 700,343, pub. 4–19–60. Cl. 6.
Comet Model Hobbycraft, Inc., Chicago, Ill. 700,464, pub. 4–19–60. Cl. 22.
Comey, Paul V., Brooklyn, N.Y. 700,583, pub. 4–19–60. Cl. 39.
Comey, Paul V., Brooklyn, N.Y. 700,609, pub. 4–19–60. Cl. 40.
Compagnie-Paresto, Inc., Croton-on-Hudson, N.Y. 382,064, ren. 7–5–60. Cl. 6.
Comptone Co., Ltd., New York, N.Y. 590,057, canc. Cl. 26.
Conover-Mast Publications, Inc., New York, N.Y. 700,568, pub. 4–19–60. Cl. 38.
Conroy, Peter A., Paducah, Ky. 700,310, pub. 4–19–60. Cl. 2.
Consolidated Foods Corp.: *See*— Western Grocer Co.
Consolidated Foods Corp., Chicago, Ill. 700,636, pub. 4–19–60. Cl. 46.
Continental Oil Co., Ponca City, Okla. 700,382, pub. 4–19–60. Cl. 15.
Converter Corp., Leominster, Mass. 700,542, pub. 1–6–59. Cl. 37.
Co-Operative Wholesale Society, Ltd., Manchester, England. 700,640, pub. 4–19–60. Cl. 46.
Corn Products Co.: *See*— Corn Products Refining Co.
Corn Products Refining Co., to Corn Products Co., New York, N.Y. 379,758, ren. 7–5–60. Cl. 46.
Cornell Seed Co., St. Louis, Mo. 700,285, pub. 4–19–60. Cl. 1.
Cornell Paperboard Products Co., Milwaukee, Wis. 700,547, pub. 4–19–60. Cl. 37.
Cotopa Ltd., Bradford, England. 700,618–19, pub. 4–19–60. Cl. 42.
Craddock-Terry Co., to Craddock-Terry Shoe Corp., Lynchburg, Va. 135,420, ren. 7–5–60. Cl. 39.
Craddock-Terry Shoe Corp.: *See*— Craddock-Terry Co.
Crenshaw, Theodore A., d.b.a. The Tugalo Poultry Co., Toccoa, Ga. 700,701. Cl. 46.
Crooks, Forrest C., d.b.a. Tuckamony Nursery, New Hope, Pa. 700,308, pub. 4–19–60. Cl. 2.
Crown Cinema Corp., New York, N.Y. 589,866, canc. Cl. 26.
Crown Zellerbach Corp., San Francisco, Calif. 582,489. Am. 7(d). Cl. 12.
Crummins, F. B., Co. Inc., New York, N.Y. 700,581, pub. 4–5–60. Cl. 39.
Cummins-Chicago Corp., Chicago, Ill. 589,985–6, canc. Cl. 21.
Curtiss-Wright Corp., New York, N.Y. 700,371, pub. 4–19–60. Cl. 13.
Curtiss-Wright Corp., New York, N.Y. 700,380, pub. 4–19–60. Cl. 14.
D-A Lubricant Co., of Washington, D.C. and Indianapolis, Ind., to D-A Lubricant Co., Inc., Indianapolis, Ind. 133,625, ren. 7–5–60. Cl. 15.
D-A Lubricant Co., Inc.: *See*— D-A Lubricant Co., of Washington, D.C. and Indianapolis, Ind.
Dandy Mattress Corp., Brooklyn, N.Y. 700,523, pub. 4–19–60. Cl. 32.
Darby, William E., d.b.a. Resort Publications, Myrtle Beach, S.C. 700,572, pub. 4–19–60. Cl. 38.
Daryl Products Corp., Miami, Fla. 700,368, pub. 4–19–60. Cl. 12.
Davidson, MacGregor & Co. Ltd., London, England. 589,939, canc. Cl. 23.
Davis Cafeterias: *See*— Davis, Polly.
Davis, Polly, d.b.a. Davis Cafeterias, Miami, Fla. 700,673, pub. 4–19–60. Cl. 100.
Dell Publishing Co., Inc., New York, N.Y. 590,118, canc. Cl. 38.
Dell Publishing Co., Inc., New York, N.Y. 590,122–3, canc. Cl. 38.
Democratic Business and Professional Committee, The, Detroit, Mich. 700,571, pub. 4–19–60. Cl. 38.
Denver Chemical Mfg. Co., The, d.b.a. Wampole Laboratories, Stamford, Conn. 700,408, pub. 4–19–60. Cl. 18.
Deshler Broom Factory, The, Deshler, Nebr. 386,739–41, 12(c) pub. 7–5–60. Cl. 29.
Detective Comics, Inc., to National Comics Publications, Inc., New York, N.Y. 378,913, ren. 7–5–60. Cl. 38.
Devoe & Raynolds Co., Inc., Louisville, Ky. 700,386, pub. 4–19–60. Cl. 16.
Diamond Alkali Co., Cleveland, Ohio. 700,393, pub. 4–19–60. Cl. 16.
Dictaphone Corp., Bridgeport, Conn. 377,362, ren. 7–5–60. Cl. 21.
Doane Agricultural Service, Inc., St. Louis, Mo. 603,637, cor. Cl. 38.
Dodge Mfg. Corp., Mishawaka, Ind. 700,498, pub. 4–19–60. Cl. 23.

Douglas Fir Plywood Association, Tacoma, Wash. 700,255, pub. 4–19–60. Cl. 12.
Douglas Fir Plywood Association, Tacoma, Wash. 700,364, pub. 4–19–60. Cl. 12.
Dow Chemical Co., The, Midland, Mich. 700,336–7, pub. 4–19–60. Cl. 6.
Dow Chemical Co., The, Midland, Mich. 700,344–5, pub. 4–19–60. Cl. 6.
Down Beat, Inc., Chicago, Ill. 590,097, canc. Cl. 38.
Drew, R. F., & Co., Inc., New York, N.Y. 700,327, pub. 4–23–57. Cl. 6.
Drug Research Reports, Inc., Washington, D.C. 700,565–6, pub. 4–19–60. Cl. 38.
Drugmaster, Inc., St. Louis, Mo. 700,409, pub. 4–19–60. Cl. 18.
Duncan Donuts, Inc., Baltimore, Md. 590,073, canc. Cl. 46.
Duncan Donuts, Inc., Baltimore, Md. 590,074, canc. Cl. 46.
Dunham-Bush, Inc., West Hartford, Conn. 700,528, pub. 4–19–60. Cl. 34.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 700,-297, pub. 4–19–60. Cl. 1.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 700,-341, pub. 4–19–60. Cl. 6.
Durr Products, Inc., Dayton, Ohio. 700,404, pub. 4–19–60. Cl. 18.
Dynacolor Corp., Brockport, N.Y. 700,333–5, pub. 4–19–60. Cl. 6.
Eastern Associates, Ltd., San Francisco, Calif. 700,436, pub. 6–30–59. Cl. 21.
Eastman Kodak Co., Rochester, N.Y. 700,324, pub. 4–19–60. Cl. 5.
Easy Drape Hangers, Inc., Babylon, N.Y. 590,115, canc. Cl. 13.
Educator & Executive Insurers, Inc., Columbus, Ohio. 700,-681, pub. 4–5–60. Cl. 102.
Ekniger Mills, Inc., New York, N.Y. 700,610, pub. 4–19–60. Cl. 42.
Electric Autolite Co., The, Toledo, Ohio. 533,184. Am. 7(d). Cl. 23.
Electric Tube Products, Inc., Maspeth, N.Y. 700,453, pub. 4–19–60. Cl. 21.
Electronics Inc., Vermillion, S. Dak. 700,525, pub. 4–19–60. Cl. 34.
Elgin National Watch Co., Elgin, Ill. 327,316. Am. 7(d). Cl. 27.
Embassy Steel Products, Inc., Brooklyn, N.Y. 700,526, pub. 4–19–60. Cl. 34.
Endicott Johnson Corp., Endicott, N.Y. 381,644, ren. 7–5–60. Cl. 39.
Eries Mfg. Co., Erie, Pa. 700,451, pub. 4–19–60. Cl. 21.
Estarta y Ecenarro, S.A., Elgoibar, Guipuscoa, Spain. 700,-469, pub. 4–19–60. Cl. 28.
Ethica Standard Co. Inc., Long Island City, N.Y. 700,414, pub. 4–19–60. Cl. 18.
Eudora Products: *See*— Columbus Wholesale Barber & Beauty Supply Co., Inc.
Eugene Fruit Growers Association, Eugene, Oreg. 700,648–52, pub. 4–19–60. Cl. 46.
Everede Tool Co., Chicago, Ill. 700,476, pub. 4–19–60. Cl. 23.
Ewing, M., Fox Co., Inc., New York, N.Y. 303,810, canc. Cl. 16.
Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 700,509, pub. 4–19–60. Cl. 28.
Faber-Castell, A. W., Pencil Co., Inc., Newark, N.J. 700,553, pub. 4–19–60. Cl. 37.
Falls Engineering & Machine Co., The, Cuyahoga Falls, Ohio. 700,488, pub. 4–19–60. Cl. 23.
Farmers Chinchilla Cooperative of America, Inc., New York, N.Y. 700,288–9, pub. 4–19–60. Cl. 1.
Fashion Hobbies, New York, N.Y. 590,109, canc. Cl. 40.
Fashion Park, Inc., Rochester, N.Y. 700,592, pub. 4–12–60. Cl. 39.
Federated Department Stores, Inc.: *See*— Bloomingdale Bros., Inc.
Felt Slipper Co., Inc., New York, N.Y. 700,608, pub. 4–19–60. Cl. 39.
Finch, Joseph S., and Co., Schenley, Pa. 378,042, ren. 7–5–60. Cl. 49.
Firth Sterling, Inc., Pittsburgh, Pa. 700,497, pub. 4–19–60. Cl. 23.
Fischer, J. & C., New York, to Aeolian American Corp., East Rochester, N.Y. 134,647, ren. 7–5–60. Cl. 36.
Fisher Laboratories: *See*— Fisher, Tommie.
Fisher Scientific Co., Pittsburgh, Pa. 700,508, pub. 4–19–60. Cl. 26.
Fisher, Tommie, d.b.a. Fisher Laboratories, Chicago, Ill. 589,998, canc. Cl. 18.
Fisk Rubber Corp., The, to United States Rubber Co., Chicopee Falls, Mass., by United States Rubber Co., New York, N.Y. 377,790. 12(c) pub. 7–5–60. Cl. 35.
Floc-Flo Corp., Chicago, Ill. 700,496, pub. 4–19–60. Cl. 23.
Formica Corp., Cincinnati, Ohio. 700,435, pub. 4–19–60. Cl. 26.
Fort Dodge Laboratories, Inc.: *See*— American Home Products Corp.
Fougera, E., & Co., Inc., Hicksville, N.Y. 700,428, pub. 4–19–60. Cl. 18.
Frank, J. P., Corp., Brooklyn, N.Y. 700,306, pub. 4–19–60. Cl. 1.
Franklin Research Corp., Boston, Mass. 700,482, pub. 4–19–60. Cl. 23.
Frantz Electric Industries, Inc., Cleveland, Ohio. 700,447, pub. 4–19–60. Cl. 21.
Frantz Mfg. Co., Sterling, Ill. 700,359, pub. 4–19–60. Cl. 12.
French American Reeds Mfg. Co., Inc., New York, N.Y. 700,532, pub. 4–19–60. Cl. 36.
French American Reeds Mfg. Co., Inc., New York, N.Y. 700,540, pub. 4–19–60. Cl. 36.
Fymatic, Camps & Cie, Societe a Responsabilite Limitee, Paris, France. 700,519, pub. 4–19–60. Cl. 31.
Frontier Chemical Co.: *See*— Vulcan Materials Co.
Gardella, George A., Co., Detroit, Mich. 700,622, pub. 4–19–60. Cl. 46.
Gardner Machine Co., South Beloit, Ill., to Gardner Machine Co., Beloit, Wis. 378,705, ren. 7–5–60. Cl. 4.
Gate City Steel Works, Inc., Omaha, Nebr. 589,887, canc. Cl. 23.
General Aniline & Film Corp., d.b.a. Ansco, New York, N.Y. 700,342, pub. 4–19–60. Cl. 6.
General Appliance Co.: *See*— Lever Distributing Co.
General Motors Corp., Detroit, Mich. 377,635, ren. 7–5–60. Cl. 26.
General Motors Corp., Detroit, Mich. 700,432, pub. 4–19–60. Cl. 19.
General Paint & Varnish Co. Inc., Chicago, Ill. 589,885, canc. Cl. 52.
General Rubber Products, Inc., Dallas, Tex. 700,467, pub. 4–19–60. Cl. 22.
General Sewing Corp., New York, N.Y. 700,321, pub. 4–19–60. Cl. 3.
General Time Corp., New York, N.Y. 700,511–12, pub. 4–19–60. Cl. 27.
Gesell, Violet V., d.b.a. Jiffy-Lax Co., New York, N.Y. 306,064, canc. Cl. 18.
Glass-Tite Industries, Inc., Providence, R.I. 700,455, pub. 4–19–60. Cl. 21.
Glovecraft, Inc., Johnstown, N.Y. 700,586, pub. 4–19–60. Cl. 39.
Glueck, Charles H., d.b.a. Charles Vending Co., Cleveland, Ohio. 700,678, pub. 4–19–60. Cl. 101.
Gold Leaf Records: *See*— Jelesnik, Eugene.
Golden Crown Citrus Corp., Evanston, Ill. 700,638, pub. 1–5–60. Cl. 46.
Gonsales, Byass & Co. Ltd., d.b.a. Gonsales, Byass y Ca. and Gonzales, Byass & Co., London, England. 688,061, cor. 7–5–60. Cl. 47.
Gonsales, Byass y Ca.: *See*— Gonsales, Byass & Co. Ltd.
Goodrich, B. F., Co., The: *See*— Hood Rubber Co.
Goodrich, B. F., Co., The, Akron, Ohio. 377,791, ren. 7–5–60. Cl. 15.
Goodrich, B. F., Co., The, New York, N.Y. 134,661, ren. 7–5–60. Cl. 35.
Grundig Radio-Werke G.m.b.H., Fuerth, Bavaria, Germany. 700,439, pub. 4–19–60. Cl. 21.
Guide Stitch Corp., Raritan, N.J. 700,468, pub. 4–19–60. Cl. 23.
Halberg Machinefabriek N.V., Weert, Netherlands. 589,874, canc. Cl. 23.
Hall, C. P., Co., The, Akron, Ohio. 629,337, canc. Cl. 6.
Hanes Hosiery Mills Co., Winston-Salem, N.C. 590,037, canc. Cl. 39.
Hardie, J. & W., Ltd., Edinburgh, Scotland. 700,658, pub. 4–19–60. Cl. 49.
Harman-Kardon Inc., Westbury, N.Y. 700,449, pub. 4–19–60. Cl. 21.
Harris-Intertype Corp., Cleveland, Ohio. 700,660, pub. 4–19–60. Cl. 50.
Harris Vault Co., Winston-Salem, N.C. 700,314, pub. 4–19–60. Cl. 2.
Hartnell Perfumes, Inc., New York, N.Y. 590,101, canc. Cl. 51.
Harvard Mfg. Co., The, Cleveland, Ohio. 700,520, pub. 4–19–60. Cl. 32.
Haserot Co., The, Cleveland, Ohio. 700,626, pub. 4–19–60. Cl. 46.
Hayter, A. P., Greenville, Tex., to Colgate-Palmolive Co., New York, N.Y. 135,868, ren. 7–5–60. Cl. 52.
Herbig, R. G., d.b.a. R.G.H. Co, Lafayette, Ind. 700,641, pub. 4–19–60. Cl. 46.
Hercules Glue Co., Ltd., Sausalito, Calif. 700,329, pub. 4–19–60. Cl. 6.
Herts Rent A Plane System, Inc., Chicago, Ill. 700,684, pub. 4–19–60. Cl. 105.
Hoffmann-La Roche Inc., Nutley, N.J. 700,427, pub. 4–19–60. Cl. 18.
Holley Carburetor Co., Warren, Mich. 700,479, pub. 4–19–60. Cl. 23.
Honest Charley Speed Shop, Inc., Chattanooga, Tenn. 700,-470–1, pub. 4–19–60. Cl. 23.
Hood Rubber Co., Watertown, Mass., to The B. F. Goodrich Co., New York, N.Y. 134,383, ren. 7–5–60. Cl. 35.
Horowitz, Oscar, New York, N.Y. 235,677, canc. Cl. 42.
Horowitz, Oscar, New York, N.Y. 285,831, canc. Cl. 39.
Hough Mfg. Corp., Janesville, Wis. 700,369, pub. 4–19–60. Cl. 12.
House of Worsted-Tex, Inc.: *See*— Cohen, Goldman & Co., Inc.
Howard Industries, Inc., Chicago, Ill. 700,438, pub. 4–19–60. Cl. 21.
Hulbert Creeper Co.: *See*— Hulbert, Reed O.
Hulbert, Reed O., d.b.a. Hulbert Creeper Co., to The Smash-Proof Co., Ashtabula, Ohio. 379,244, ren. 7–5–60. Cl. 19.
Huntington Chemical Co., to Huntington Laboratories, Inc., Huntington, Ind. 132,709, ren. 7–5–60. Cl. 52.
Huntington Laboratories, Inc.: *See*— Huntington Chemical Co.
Hyman, S. E., Co., The, Fremont, Ohio. 589,887, canc. Cl. 19.
Ideal Fastener Corp., Long Beach, N.Y. 700,374, pub. 4–19–60. Cl. 13.

Indiana General Corp.: *See*—
Indiana Steel Products Co., The.
Indiana Steel Products Co., The, Chicago, Ill., to Indiana General Corp., Valparaiso, Ind. 381,103, ren. 7-5-60. Cl. 21.
Ingram Oil and Refining Co.: *See*—
Ingram Products Co.
Ingram Products Co., d.b.a. Ingram Oil and Refining Co., New Orleans, La. 693,712, cor. Cl. 15.
International Paper Co., New York, N.Y. 590,002, canc. Cl. 37.
International Speed-Crete Research Corp., Fort Lauderdale, Fla. 700,356, pub. 4-19-60. Cl. 12.
International Telephone and Telegraph Corp.: *See*—
Capehart-Farnsworth Corp.
International Traders Club of the National Institute of Real Estate Brokers, Chicago, Ill. 700,680, pub. 4-19-60. Cl. 102.
Interwoven Stocking Co., New Brunswick, N.J. 388,894, 12(c) pub. 7-5-60. Cl. 39.
Interwoven Stocking Co., New Brunswick, N.J. 422,062, 12(c) pub. 7-5-60. Cl. 39.
Invar Electronics Corp., Pasadena, Calif. 700,440, pub. 4-19-60. Cl. 21.
Irwin Corp., New York, N.Y. 700,608, pub. 4-19-60. Cl. 40.
Isbrandtsen & Sons Inc., New York, N.Y. 590,070, canc. Cl. 46.
Isolerингaktiebolaget WMB, Goteborg, Sweden, to American W.M.B., Inc., New York, N.Y. 588,964-5, canc. Cl. 12.
Jackson-Wheeler Metals Service, Inc., Brooklyn, N.Y. 380,-350, ren. 7-5-60. Cl. 14.
Jamieson Inc., Chicago, Ill. 700,594, pub. 4-19-60. Cl. 39.
Janitorial Supplies Corp., Albany, N.Y. 694,073, cor. Cl. 4.
Jantzen Inc., Portland, Oreg. 700,515-16, pub. 4-19-60. Cl. 22.
Jelesnik, Eugene, d.b.a. Gold Leaf Records, Salt Lake City, Utah. 700,538, pub. 4-19-60. Cl. 36.
Jiffy-Lax Co.: *See*—
Gewell, Violet V.
Johnson, Endicott, Corp., Endicott, N.Y. 381,437, ren. 7-5-60. Cl. 23.
Johnson & Johnson, New Brunswick, N.J. 700,706. Cl. 51.
Joseph & Feiss Co., The: *See*—
Shane, C. B., Corp.
Joseph & Feiss Co., The, Cleveland, Ohio. 581,982, ren. 7-5-60. Cl. 39.
Kahn, David, Inc., North Bergen, N.J. 700,550, pub. 4-19-60. Cl. 37.
Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Miyakojima-ku, Osaka, Japan. 700,-615-16, pub. 4-19-60. Cl. 42.
Kanegafuchi Spinning Co., Ltd.: *See*—
Kanegafuchi Boseki Kabushiki Kwaisha.
Kanner, Joseph, Hat Co., Inc., South Norwalk, Conn. 700,-585, pub. 4-19-60. Cl. 39.
Keasbey & Mattison Co., Ambler, Pa. 700,693. Cl. 12.
Kelly-Western Seed Co., Salt Lake City, by Utah Cooperative Association, d.b.a. PAX Co., Salt Lake City, Utah. 411,125, 12(c) pub. 7-5-60. Cl. 1.
Kelly-Western Seed Co., Salt Lake City, by Utah Cooperative Association, d.b.a. PAX Co., Salt Lake City, Utah. 417,314, 12(c) pub. 7-5-60. Cl. 10.
Kerr Mfg. Co., Detroit, Mich. 700,286, pub. 7-7-59. Cl. 1.
Kiefer, Edgar S., Tanning Co., Grand Rapids, Mich. 590,113, canc. Cl. 12.
Kimberley International, Ltd., New York, N.Y. 700,541, pub. 4-19-60. Cl. 36.
Kimberly-Clark Corp., Neenah, Wis. 700,564, pub. 4-19-60. Cl. 38.
Kobayashi Industrial Co., Ltd.: *See*—
Kobayashi Kogyo Kabushiki Kaisha.
Kobayashi Kogyo Kabushiki Kaisha, d.b.a. Kobayashi Industrial Co., Ltd., Tsubame-Shi, Niigata-ken, Japan. 700,472, pub. 4-19-60. Cl. 23.
Korlis, Ltd., New York, N.Y. 700,431, pub. 4-19-60. Cl. 19.
Lanolia Corp., New York, N.Y. 700,612, pub. 4-19-60. Cl. 42.
Langnickel, A., Inc., New York, N.Y. 700,518, pub. 4-19-60. Cl. 29.
Lavador Mfg. Co.: *See*—
Steiser, Otto E.
Leathercraft Mfg. Co., New York, N.Y. 589,956, canc. Cl. 3.
Le Doux, Herbert C., New York, N.Y. 700,454, pub. 4-19-60. Cl. 21.
Lench, Thomas William, Ltd., Blackheath, England. 691,512, canc. Cl. 23.
Les Parfums Jean Desses, Societe a Responsabilite Limitee, Paris, France. 700,667, pub. 4-19-60. Cl. 51.
Levey Distributing Co., d.b.a. General Appliance Co., Omaha, Nebr. 682,178, canc. Cl. 23.
Lifanu Corp. of America, Fort Worth, Tex. 700,389, pub. 4-19-60. Cl. 18.
Lilac Hedges of Litchfield, Inc., Litchfield, Conn. 700,563, pub. 4-19-60. Cl. 38.
Linco Products Corp., Chicago, Ill. 675,270, ren. 7-5-60. Cl. 52.
Lindberg, Albert W., Jr., d.b.a. Atlantis Products Co., Bayonne, N.J. 700,376, pub. 4-19-60. Cl. 13.
Lindy Pen Co., Inc., Culver City, Calif. 700,545, pub. 4-19-60. Cl. 37.
Linen Thread Co., Inc., The, New York, N.Y. 700,347, pub. 4-19-60. Cl. 7.
Lipsky, Mark, Los Angeles, Calif. 700,403, pub. 4-19-60. Cl. 18.
Logan Mfg. Co., The, Glendale, Calif. 700,352, pub. 4-19-60. Cl. 12.
Lonza Elektrizitatswerke und Chemische Fabriken Aktiengesellschaft, Gampal, Switzerland. 377,592, ren. 7-5-60. Cl. 6.
Lorr Laboratories, Paterson, N.J., to Milkmaid, Inc., New York, N.Y. 382,159, ren. 7-5-60. Cl. 51.
Lufkin Rule Co., Saginaw, Mich. 700,507, pub. 4-19-60. Cl. 28.
Madame Alexander: *See*—
Alexander Doll Co., Inc.
Maggioni, L. P., & Co., to L. P. Maggioni & Co., Savannah, Ga. 134,254, ren. 7-5-60. Cl. 46.
Maiden Form Brassiere Co., Inc., New York, N.Y. 700,600-8, pub. 4-19-60. Cl. 39.
Majestic Co., Inc., The, Huntington, Ind. 700,583, pub. 4-19-60. Cl. 12.
Major Slicing Machine Corp., Walden, N.Y. 700,485, pub. 4-19-60. Cl. 23.
Mancuna Engineering Ltd., Deaton, England. 700,527, pub. 4-19-60. Cl. 34.
Manhattan Shirt Co., The, New York, N.Y. 589,947, canc. Cl. 39.
Manhattan Soap Co., Inc.: *See*—
Purex Corp. Ltd.
Manos, M. John, Evanston, Ill. 589,913, canc. Cl. 22.
Many, Blanc & Co., Inc., Chicago, Ill., to Schenley Industries, Inc., New York, N.Y. 377,922, ren. 7-5-60. Cl. 49
Marathon Shoe Co., to Pied Piper Shoe Co., Wausau, Wis. 130,312, ren. 7-5-60. Cl. 39.
Maremont Automotive Products, Inc.: *See*—
Temmo Spring Corp.
Marilyn Shoe Co., by Hampton Corp., Milwaukee, Wis. 402,766, 12(c) pub. 7-5-60. Cl. 39.
Markel Electric Products, Inc., Buffalo, N.Y. 590,054, canc. Cl. 21.
Marmon-Herrington Co., Inc., Indianapolis, Ind., from Airdox Cardox Products Co., Chicago, Ill. 700,349, pub. 4-19-60. Cl. 9.
Marmon-Herrington Co. Inc., Indianapolis, Ind., from Airdox Cardox Products Co., Chicago, Ill. 700,503, pub. 4-19-60. Cl. 22.
Marx, Louis, & Co., Inc., New York, N.Y. 700,468, pub. 4-19-60. Cl. 22.
Marzilli Shellac Corp., The, Gardena, Calif. 700,394, pub. 4-19-60. Cl. 16.
Masonite Corp., Chicago, Ill. 381,807, ren. 7-5-60. Cl. 12.
Masonite Corp., Chicago, Ill. 382,050, ren. 7-5-60. Cl. 12.
Maxan Negligees, Inc., New York, N.Y. 590,126, canc. Cl. 39.
McGraw Electric Co., Chicago, Ill. 597,582, canc. Cl. 13.
McGraw-Hill Publishing Co., Inc., New York, N.Y. 700,573, pub. 4-19-60. Cl. 38.
McKay, Helen L.: *See*—
McKay, Nicholas D., and Helen L. McKay.
McKay, Nicholas D., and Helen L. McKay, Flint, Mich. 700,517, pub. 4-19-60. Cl. 29.
McKelvy, Alfred D., d.b.a. Alfred D. Mckelvy Co., Minneapolis, Minn., by Chesebrough-Pond's Inc., New York, N.Y. 378,358, ren. 7-5-60. Cl. 52.
McNaught Syndicate, Inc., The, New York, N.Y. 700,577, pub. 4-19-60. Cl. 38.
McNeil Laboratories, Inc., Philadelphia, Pa. 378,609-10, ren. 7-5-60. Cl. 18.
McNeil Laboratories, Inc., Philadelphia, Pa. 378,612-16, ren. 7-5-60. Cl. 18.
McNeil Laboratories, Inc., Philadelphia, Pa. 378,618-19, ren. 7-5-60. Cl. 18.
McNeil Laboratories, Inc., Philadelphia, Pa. 380,463, ren. 7-5-60. Cl. 18.
Medico Chemisch-Pharmaceutische Fabrik G.m.b.H., Iserlohn, Westphalia, Germany. 700,395, pub. 3-24-59. Cl. 18.
Melodigrand Corp., New York, N.Y. 700,537, pub. 4-19-60. Cl. 36.
Melograin Milling Co. Ltd., Vancouver, Canada. 700,630, pub. 4-19-60. Cl. 46.
Merchants National Bank of Boston, The, Boston, Mass. 700,549, pub. 4-19-60. Cl. 37.
Meredith Publishing Co., Des Moines, Iowa. 700,557-60, pub. 12-16-56. Cl. 38.
Merwitz, Theodore, Textiles, Inc., Chicago, Ill. 700,661, pub. 4-19-60. Cl. 50.
Miami Sportswear Co., Inc., d.b.a. Ceeb and as Ceeb of Miami, Opa Locka, Fla. 700,590, pub. 4-19-60. Cl. 39.
Microbiological Associates, Inc., Bethesda, Md. 700,672, pub. 4-19-60. Cl. 52.
Micropoint, Inc., Sunnyvale, Calif. 700,532, pub. 4-19-60. Cl. 37.
Midas, Inc., Chicago, Ill. 700,490, pub. 4-19-60. Cl. 23.
Midcontinent Chemical Co., Grove City, Ohio. 589,972, canc. Cl. 1.
Milco Undergarment Co. Inc., New York, N.Y. 700,583, pub. 4-19-60. Cl. 39.
Milkmaid, Inc.: *See*—
Lorr Laboratories.
Miller Pattern and Mfg. Co., Saginaw, Mich. 700,477, pub. 4-19-60. Cl. 23.
Miller Publishing Co., The, Minneapolis, Minn. 700,574, pub. 4-19-60. Cl. 38.
Milwaukee Nut Co., Milwaukee, Wis. 700,621, pub. 12-4-56. Cl. 46.
Mobay Chemical Co., Pittsburgh, Pa. 700,304, pub. 4-19-60. Cl. 1.
Mobile Paint Mfg. Co. Inc., Mobile, Ala. 700,387, pub. 4-19-60. Cl. 16.
Mogavero, Maurice, d.b.a. Star-Brite Mfg. Co., Newark, N.J. 589,936, canc. Cl. 52.
Monsanto Chemical Co., St. Louis, Mo. 700,330, pub. 4-19-60. Cl. 6.
Moog Industries, Inc., St. Louis, Mo. 700,433, pub. 4-19-60. Cl. 19.
Morgan Co., The: *See*—
Morgan, Ray F.
Morgan, Ray F., d.b.a. The Morgan Co., Chicago, Ill. 651,-021, canc. Cl. 14.

Morningside Productions International, Inc., Los Angeles, Calif. 700,561, pub. 7-7-59. Cl. 38.
Morpal, Inc., Greensboro, N.C. 700,559, pub. 4-19-60. Cl. 39.
Morrell, John, & Co., Ottumwa, Iowa. 700,631, pub. 10-6-59. Cl. 46.
Movado Watch Agency, Inc., New York, N.Y. 700,514, pub. 4-19-60. Cl. 27.
Mueller Brass Co., Port Huron, Mich. 700,361, pub. 4-19-60. Cl. 14.
Napier Saw Works, Inc., to Napier Saw Works, Inc., Middletown, N.Y. 182,211, ren. 7-5-60. Cl. 23.
National Comics Publications, Inc.: *See*—
Detective Comics, Inc.
National Gypsum Co., Buffalo, N.Y. 700,391, pub. 4-19-60. Cl. 16.
National Pool Equipment Co., Florence, Ala. 700,358, pub. 4-19-60. Cl. 12.
National Screen Service Corp., New York, N.Y. 590,017, canc. Cl. 26.
Neeval Luggage Mfg. Co., Kansas City, Mo. 700,319, pub. 4-19-60. Cl. 3.
Neiman-Marcus Co., Dallas, Tex. 700,705. Cl. 51.
New England Laboratory: *See*—
Solomon, Sanford S.
Newberry, J. J., Co. Inc., New York, N.Y. 700,604, pub. 4-19-60. Cl. 39.
Newman Pharmacal Co., Inc., Louisville, Ky. 700,426, pub. 4-19-60. Cl. 18.
Newport Knitting Co., Inc., New York, N.Y. 700,595, pub. 4-19-60. Cl. 39.
Nepco Chemical Co., Newark, N.J. 700,382, pub. 4-19-60. Cl. 15.
"Nordsee" Deutsche Hochseefischerei Aktiengesellschaft, Bremerhaven-G., Germany. 700,634, pub. 4-19-60. Cl. 46.
North Pacific Frozen Products Co., Seattle, Wash. 590,089, canc. Cl. 46.
Northcutt, Clinton R., d.b.a. Northcutt Donut Co., Graham, Tex. 700,637, pub. 4-19-60. Cl. 46.
Northcutt Donut Co.: *See*—
Northcutt, Clinton R.
Nutting Truck and Caster Co., Faribault, Minn. 691,949. Am. 7(d). Cl. 21.
Ohio Chemical & Mfg. Co., The, Cleveland, Ohio, to Air Reduction Co., Inc., New York, N.Y. 382,330, ren. 7-5-60. Cl. 44.
Olin Mathieson Chemical Corp., New Haven, Conn. 700,348, pub. 4-19-60. Cl. 6.
Ort, Lewis J., Lavale, Md. 700,703. Cl. 46.
Owatonna Tool Co., The, Owatonna, Minn. 700,480, pub. 4-19-60. Cl. 23.
Owens-Corning Fiberglas Corp., Toledo, Ohio. 589,979, canc. Cl. 12.
Pacific Seed House, The: *See*—
Colorado Milling & Elevator Co., The.
Pan American Laboratories, Inc., New Orleans, La. 700,297, pub. 4-19-60. Cl. 18.
Pancordion, Inc., Long Island City, N.Y. 590,069, canc. Cl. 36.
Panhandle Slim: *See*—
Westmoor Mfg. Co.
Parachlor Chemical Corp., New York, N.Y. 700,331, pub. 4-19-60. Cl. 6.
Parisian Hosiery Mills, Inc., Baltimore, Md. 700,607, pub. 4-19-60. Cl. 39.
Park & Tilford: *See*—
Schenley Distillers, Inc.
Parker, Frederick, Ltd., Leicester, England. 376,377, 12(c) pub. 7-5-60. Cl. 23.
Paul-Reed, Inc., Charlevoix, Mich. 700,668, pub. 4-19-60. Cl. 52.
PAX Co.: *See*—
Colorado Milling & Elevator Co., The.
Kelly-Western Seed Co.
Pedigreed Lawnseed Co., Inc., from Pedigreed Seed Co., Jersey City, N.J. 700,602. Cl. 1.
Pedigreed Seed Co.: *See*—
Pedigreed Lawnseed Co., Inc.
Peninsular Paper Co., Ypsilanti, Mich. 700,554, pub. 4-19-60. Cl. 37.
Penn Wax Works, Inc., Philadelphia, Pa. 700,386, pub. 4-19-60. Cl. 15.
Pepperell Mfg. Co., Boston, Mass. 375,124, ren. 7-5-60. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 375,949, ren. 7-5-60. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 376,158, ren. 7-5-60. Cl. 42.
Pepperell Mfg. Co., to Pepperell Mfg. Co., Boston, Mass. 132,225, ren. 7-5-60. Cl. 42.
Perfumeries Distributors, Ltd., Hamilton, Bermuda. 700,-666, pub. 4-19-60. Cl. 51.
Peter's Bag & Novelty Corp., New York, N.Y. 700,318, pub. 4-19-60. Cl. 3.
Pforzheimer Edelmetall-Handelsgesellschaft m.b.h. Pehage, Pforzheim, Germany. 700,379, pub. 4-19-60. Cl. 14.
Pharmacy Reports, Inc., Washington, D.C. 700,567, pub. 4-19-60. Cl. 38.
Pharmakon, Inc., Minneapolis, Minn. 589,970, canc. Cl. 18.
Pied Piper Shoe Co.: *See*—
Marathon Shoe Co.
Pike, E. W., & Co., Inc., Elizabeth, N.J. 700,555, pub. 4-19-60. Cl. 37.
Pillsbury Co., The, Minneapolis, Minn. 700,702. Cl. 46.
Pinochle Bugs, Inc.: *See*—
Pinochle Bugs Social and Civic Club, Inc.
Pinochle Bugs Social and Civic Club, Inc., d.b.a. Pinochle Bugs, Inc., Roanoke, Va. 700,639, pub. 4-19-60. Cl. 200.
Pivot Punch & Die Corp., North Tonawanda, N.Y. 700,473, pub. 4-19-60. Cl. 23.
Plastic Contact Lens Co., The, Chicago, Ill. 700,669, pub. 4-19-60. Cl. 52.
Please Notify, Inc., Poplar Bluff, Mo. 700,544, pub. 4-19-60. Cl. 37.
Poor & Co.: *See*—
Promat Co., The.
Povia Bros., Parma, Fort Myers, Fla. 589,907, canc. Cl. 1.
Procter & Gamble Co., The, Cincinnati, Ohio. 700,638, pub. 4-19-60. Cl. 46.
Professional Pharmacal Co., Inc., San Antonio, Tex. 700,413, pub. 4-19-60. Cl. 18.
Promat Co., The, to Poor & Co., Chicago, Ill. 377,464, ren. 7-5-60. Cl. 6.
Purex Corp., Ltd., d.b.a. Manhattan Soap Co., Inc., South Gate, Calif. 700,671, pub. 4-19-60. Cl. 52.
Putty Stik, Inc., Seattle, Wash. 700,389, pub. 4-19-60. Cl. 16.
Quaker Chemical Products Corp., Conshohocken, Pa. 382,137, ren. 7-5-60. Cl. 6.
Quimby, Allen, Veneer Co., Bingham, Maine. 700,424, pub. 4-19-60. Cl. 19.
R.B.S. Mfg. and Sales Co., Inc., Shawnee, Okla. 700,437, pub. 4-19-60. Cl. 21.
R.G.H. Co.: *See*—
Herbig, R. G.
Ralston Purina Co., St. Louis, Mo. 134,069, ren. 7-5-60. Cl. 46.
Rand Rubber Co., Inc., Brooklyn, N.Y. 378,672, ren. 7-5-60. Cl. 40.
Rayette, Inc., St. Paul, Minn. 700,664, pub. 8-28-56. Cl. 51.
Rayonier Inc., New York, N.Y. 380,858-60, ren. 7-5-60. Cl. 1.
Ray-O-Vac Co., Madison, Wis. 589,924, canc. Cl. 21.
Record Guild of America Inc., The, New York, N.Y. 590,005, canc. Cl. 36.
Reddy Kilowatt Inc.: *See*—
Collins, Ashton B.
Reeves Brothers, Inc., New York, N.Y. 380,111, 12(c) pub. 7-5-60. Cl. 42.
Resort Publications: *See*—
Darby, William R.
Revlon, Inc., New York, N.Y. 700,707-15. Cl. 51.
Roberts Co., The, by change of name from Roberts Mfg. Co., City of Industry, Calif. 700,501, pub. 4-19-60. Cl. 23.
Roberts Mfg. Co.: *See*—
Roberts Co., The.
Robertshaw-Fulton Controls Co., Greensburg, Pa. 590,020, canc. Cl. 26.
Robertson Photo-Mechaniz, Inc., Chicago, Ill. 700,695. Cl. 26.
Robins & Brode Co., Detroit, Mich. 590,039, canc. Cl. 39.
Rockland Tackle Co., Inc., Suffern, N.Y. 700,464, pub. 4-19-60. Cl. 22.
Rosenholz, J., Inc., to Rosewood Fabrics, Inc., New York, N.Y. 379,014, ren. 7-5-60. Cl. 42.
Rosewood Fabrics, Inc.: *See*—
Rosenholz, J., Inc.
Ross, Will, Inc., Milwaukee, Wis. 700,617, pub. 4-19-60. Cl. 42.
Royal Worcester Ltd.: *See*—
Worcester Royal Porcelain Co., (Ltd.), The.
Russell-Miller Milling Co., Minneapolis, Minn. 700,645-6, pub. 4-19-60. Cl. 46.
Rutland Fire Clay Co., Rutland, Vt. 700,367, pub. 4-19-60. Cl. 12.
Rutledge Advertising Co.: *See*—
Rutledge & Lilienfeld, Inc.
Rutledge & Lilienfeld, Inc., d.b.a. Rutledge Advertising Co., St. Louis, Mo. 700,570, pub. 4-19-60. Cl. 38.
St. Louis Paint Mfg. Co., d.b.a. Shurcote Paint Mfg. Co., St. Louis, Mo. 700,390, pub. 3-22-60. Cl. 16.
St. Regis Paper Co.: *See*—
Taggart Corp.
St. Regis Paper Co., New York, N.Y. 700,365, pub. 4-19-60. Cl. 12.
Saja Chemical Co. of America, Inc., Coral Gables, Fla. 700,670, pub. 4-19-60. Cl. 52.
Salerno-Megowen Biscuit Co., Chicago, Ill. 700,643, pub. 4-19-60. Cl. 46.
Salintro Laboratories: *See*—
Salinitro, Nicholas.
Salinitro, Nicholas, d.b.a. Salintro Laboratories, New York, N.Y. 378,488, 12(c) pub. 7-5-60. Cl. 18.
San Jose Canning Co., to San Jose Canning Co., San Jose, Calif. 135,803, ren. 7-5-60. Cl. 46.
Saprochi S.A., Geneva, Switzerland. 700,402, pub. 4-19-60. Cl. 18.
Savogran Co., The, Norwood, Mass. 700,354, pub. 4-19-60. Cl. 12.
Scarlett, Wm. G., & Co., Baltimore, Md. 700,627, pub. 4-19-60. Cl. 46.
Schenley Distillers, Inc., from Affiliated Distillers Brands Corp. d.b.a. Park & Tilford, New York, N.Y. 700,657, pub. 4-19-60. Cl. 49.
Schenley Distillers, Inc., New York, N.Y. 700,659, pub. 4-19-60. Cl. 49.
Schenley Distributors, Inc., to Affiliated Distillers Brands Corp., New York, N.Y. 378,048, ren. 7-5-60. Cl. 49.
Schenley Industries, Inc.: *See*—
Many, Blanc & Co., Inc.
Schenley Industries, Inc., New York, N.Y. 700,662, pub. 4-19-60. Cl. 50.
Schoenfeld Neckwear Co., Seattle, Wash. 700,597, pub. 4-19-60. Cl. 39.
Schreter, A., & Sons Co., Inc., d.b.a. A. Schreter & Sons, Inc., Baltimore, Md. 700,587, pub. 4-19-60. Cl. 39.
Schreter, A., & Sons, Inc.: *See*—
Schreter, A., & Sons Co., Inc.

Schuler Axle Co., Louisville, Ky. 700,475, pub. 4–19–60. Cl. 23.
Schwartz, Claire E., Jenkintown, Pa. 580,050, canc. Cl. 39.
Seamprufe Inc., New York, N.Y. 700,699. Cl. 39.
Seltzer, Louis M., Downingtown, Pa. 700,534, pub. 4–19–60. Cl. 36.
Shandler, Benjamin, Inc., Philadelphia, Pa. 700,582, pub. 4–19–60. Cl. 39.
Shandex (Edinburgh) Ltd., Perth, Scotland. 700,655–6, pub. 4–19–60. Cl. 46.
Shane, C. B., Corp., Chicago, Ill., to The Joseph & Feiss Co., Cleveland, Ohio. 261,694, ren. 7–5–60. Cl. 39.
Shulof & Co., Inc., New York, N.Y. 700,289, pub. 4–19–60. Cl. 1.
Shurcote Paint Mfg. Co.: *See*—
St. Louis Paint Mfg. Co.
Shure Brothers, Inc., Evanston, Ill. 700,444, pub. 4–19–60. Cl. 21.
Slimo Chemical Co. Inc., Vineland, N.J. 208,220, canc. Cl. 6.
Sims, Marvin, Redondo Beach, Calif. 580,116, canc. Cl. 4.
Smash-Proof Co., The: *See*—
Hulbert, Reed O.
Smithers, V. L., Mfg. Co., The, Kent, Ohio. 700,663, pub. 4–19–60. Cl. 50.
Societa Farmaceutici Italia, Milan, Italy. 700,398, pub. 1–5–60. Cl. 18.
Solomon, Sanford B., d.b.a. New England Laboratory, Hartford, Conn. 700,596, pub. 4–19–60. Cl. 39.
South Gary Homes, Inc., Gary, Ind. 700,362, pub. 4–19–60. Cl. 12.
Speed-O-Print Corp., Chicago, Ill. 700,250, pub. 4–19–60. Cl. 11.
Spence, Bryson and Co. Ltd., Belfast, Northern Ireland. 580,964, canc. Cl. 39.
Spilman, Mary J., Darien, Conn. 700,575, pub. 4–19–60. Cl. 38.
Srader Sportswear, Inc., Mount Pleasant, Tex. 700,586, pub. 4–19–60. Cl. 39.
Standard Brewing Co. of Scranton, Scranton, Pa. 580,923, canc. Cl. 49.
Standard Kid Mfg. Co., to Allied Kid Co., Boston, Mass. 132,251, ren. 7–5–60. Cl. 1.
Standard Merchandising Co.: *See*—
Tarnoff, Oscar.
Standard Motor Products, Inc., Long Island City, N.Y. 580,875, canc. Cl. 26.
Standard-Toch Chemicals, Inc.: *See*—
Standard Varnish Works.
Standard Varnish Works, New York, N.Y., to Standard-Toch Chemicals, Inc., Staten Island, N.Y. 135,077, ren. 7–5–60. Cl. 16.
Star-Brite Mfg. Co.: *See*—
Megavero, Maurice.
Star Chemical Co., Westchester, Ill. 700,322, pub. 4–19–60. Cl. 4.
Starline, Inc., Harvard, Ill. 693,696, cor. Cl. 12.
State Upholstery Corp., Newburgh, N.Y. 700,522, pub. 4–19–60. Cl. 32.
Stelzer, Otto E., d.b.a. Lavador Mfg. Co., South Bend, Ind. 580,676, canc. Cl. 12.
Stepan Chemical Co., from Stepan Chemical Co., Chicago, Ill. 700,332, pub. 4–19–60. Cl. 6.
Stephens-Adamson Mfg. Co., Aurora, Ill. 380,006, ren. 7–5–60. Cl. 23.
Sterling Drug Inc.: *See*—
Sterling Products (Inc.).
Sterling Drug Inc., New York, N.Y. 700,400, pub. 4–19–60. Cl. 18.
Sterling Products (Inc.), Wheeling, W. Va., to Sterling Drug Inc., New York, N.Y. 380,368, ren. 7–5–60. Cl. 18.
Stetson, John B., Co., Philadelphia, Pa. 130,418, 12(c) pub. 7–5–60. Cl. 39.
Stewart Brothers Nurseries Ltd., Kelowna, Canada. 700,628, pub. 4–19–60. Cl. 46.
Strandcote Corp., Hawthorne, Calif. 580,095, canc. Cl. 12.
Straus, Boyer & Straus, Inc., Baltimore, Md. 378,738, ren. 7–5–60. Cl. 39.
Strong Electric Corp., The, Toledo, Ohio. 379,854, 12(c) pub. 7–5–60. Cl. 21.
Sulka, A., & Co., New York, N.Y. 310,430–1, 12(c) pub. 7–5–60. Cl. 39.
Sun Chemical Corp., New York, N.Y. 700,346, pub. 4–19–60. Cl. 12.
Sundstrand Corp., Rockford, Ill. 700,475, pub. 4–19–60. Cl. 23.
Superior Switchboard & Devices Co., The, Canton, Ohio. 700,378, pub. 4–19–60. Cl. 13.
Sutton, Jack, Co., Inc., New York, N.Y. 700,614, pub. 4–19–60. Cl. 42.
TV Timetables, Inc., New York, N.Y. 700,698. Cl. 38.
Taber Instrument Corp., North Tonawanda, N.Y. 700,445–6, pub. 4–19–60. Cl. 21.
Taggart Corp., to St. Regis Paper Co., New York, N.Y. 381,716, ren. 7–5–60. Cl. 37.
Talking Windows, Inc., Columbus, Ohio. 580,013, canc. Cl. 21.
Tao Tea Co., Inc., New York, N.Y. 175,345, canc. Cl. 46.
Tarleton International Corp., New York, N.Y. 580,079–81, canc. Cl. 27.
Tarnoff, Oscar, d.b.a. Standard Merchandising Co., Philadelphia, Pa. 700,588, pub. 4–19–60. Cl. 39.
Teen Time, Inc., Pawtucket, R.I. 700,551, pub. 4–19–60. Cl. 37.
Teen Time, Inc., Pawtucket, R.I. 700,569, pub. 4–19–60. Cl. 38.
Temme Spring Corp., by Maremont Automotive Products, Inc., Chicago, Ill. 374,582, 12(c) pub. 7–5–60. Cl. 23.
Tennessee Products & Chemical Corp., Nashville, Tenn. 700,287, pub. 4–19–60. Cl. 1.
Thomas & Co., Seattle, Wash. 580,940–50, canc. Cl. 26.
Tolman-Shea Laboratories, Inc., Keene, N.H. 700,498, pub. 4–19–60. Cl. 23.
Topaz Hosiery Mills, Inc., New York, N.Y. 700,605, pub. 4–19–60. Cl. 39.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 700,332–6, pub. 4–19–60. Cl. 1.
Truval Manufacturers, Inc., New York, N.Y. 580,886, canc. Cl. 39.
Tuckamony Nursery: *See*—
Crooks, Forest C.
Tugalo Poultry Co., The: *See*—
Crenshaw, Theodore A.
Turtle Club, The, Sausalito, Calif. 700,668, pub. 4–19–60. Cl. 200.
U Drive-It Co., Inc., Jersey City, N.J. 700,683, pub. 4–19–60. Cl. 105.
USTCO Products Corp., New York, N.Y., from Circus Food, Inc., San Francisco, Calif. 700,639, pub. 7–15–52. Cl. 46.
Union Carbide Corp., New York, N.Y. 700,302–3, pub. 4–19–60. Cl. 1.
Union Carbide Corp., New York, N.Y. 700,326, pub. 4–19–60. Cl. 5.
United Fruit Co., Boston, Mass. 700,653, pub. 4–19–60. Cl. 46.
United Press International, Inc., New York, N.Y. 700,562, pub. 4–19–60. Cl. 38.
United States Envelope Co., Springfield, Mass. 700,546, pub. 4–19–60. Cl. 37.
United States Reducing Co., The, Cleveland, Ohio. 700,392, pub. 4–19–60. Cl. 16.
United States Rubber Co.: *See*—
Fisk Rubber Corp., The.
United States Rubber Co., New York, N.Y. 133,856, 12(c) pub. 7–5–60. Cl. 20.
United States Rubber Co., New York, N.Y. 378,085, 12(c) pub. 7–5–60. Cl. 21.
United States Rubber Co., New York, N.Y. 379,227, 12(c) pub. 7–5–60. Cl. 6.
United States Rubber Co., New York, N.Y. 580,646, canc. Cl. 21.
United States Steel Corp., Pittsburgh, Pa. 700,307, pub. 4–19–60. Cl. 2.
Upjohn Co., The, Dover, Del., from The Upjohn Co., Kalamazoo, Mich. 700,328, pub. 4–19–60. Cl. 6.
Upjohn Co., The, Kalamazoo, Mich. 700,413, pub. 4–19–60. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 700,506, pub. 4–19–60. Cl. 26.
Utah Cooperative Association: *See*—
Colorado Milling & Elevator Co.
Kelly-Western Seed Co.
Valcort Hosiery Corp., New York, N.Y. 580,012, canc. Cl. 39.
Vale-Plus Trading Stamp Corp., Farmingdale, N.Y. 700,679, pub. 4–19–60. Cl. 101.
Van Brode Milling Co., Inc., Clinton, Mass. 700,315–16, pub. 4–19–60. Cl. 2.
Van Brode Milling Co., Inc., Clinton, Mass. 700,491–2, pub. 4–19–60. Cl. 23.
Van Brode Milling Co., Inc., Clinton, Mass. 700,502, pub. 4–19–60. Cl. 25.
Vanity Fair Mills, Inc.: *See*—
Vanity Fair Silk Mills.
Vanity Fair Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 381,620, ren. 7–5–60. Cl. 39.
Vanity Fair Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 381,959, ren. 7–5–60. Cl. 39.
Vick Chemical Co., New York, N.Y. 700,421, pub. 4–19–60. Cl. 18.
Viritrol Corp., Bethesda, Md. 700,441, pub. 4–19–60. Cl. 21.
Visual Education Association, Inc., Dayton, Ohio. 700,533, pub. 4–19–60. Cl. 36.
Vitagraph Co. of America, The, Brooklyn, to Warner Bros. Pictures Distributing Corp., New York, N.Y. 131,393, ren. 7–5–60. Cl. 96.
Vulcan Materials Co., d.b.a. Frontier Chemical Co., Wichita, Kans. 700,338, pub. 4–19–60. Cl. 6.
W.B. Foundations, Inc., Newark, N.J. 700,599, pub. 4–19–60. Cl. 39.
Walbern Laboratories, Inc., Decatur, Ill. 700,323, pub. 4–19–60. Cl. 4.
Walker, Carrie, Inc., New Bedford, Mass. 700,589, pub. 4–19–60. Cl. 39.
Walton-March, Highland Park, Ill. 700,430, pub. 4–19–60. Cl. 19.
Wampole Laboratories: *See*—
Denver Chemical Mfg. Co., The.
Warner Bros. Pictures Distributing Corp.: *See*—
Vitagraph Co. of America, The.
Warner Electric Brake & Clutch Co., South Beloit, Ill. 700,474, pub. 4–19–60. Cl. 23.
Weatherhead Co., The: *See*—
Wurzburger, Hugo.
West Bend Aluminum Co., West Bend, Wis. 381,403, ren. 7–5–60. Cl. 13.
West Shore Products Inc., Holland, Mich. 700,625, pub. 4–19–60. Cl. 46.
Western Grocer Co., Oskaloosa and Marshalltown, Iowa, to Consolidated Foods Corp., Chicago, Ill. 131,268, ren. 7–5–60. Cl. 46.
Western Kraft Corp., Portland, Oreg. 700,312, pub. 4–19–60. Cl. 2.
Western Machinery Co., San Francisco, Calif. 700,494, pub. 4–19–60. Cl. 23.
Western Pancake Houses, Inc., Colorado Springs, Colo. 700,674, pub. 4–19–60. Cl. 100.

Western Supply Co.: *See*—
Wood, Clifton.
Westmoor Mfg. Co., d.b.a. Panhandle Slim, Nebraska City, Nebr. 700,564, pub. 4–19–60. Cl. 39.
White Laboratories, Inc., Kenilworth, N.J. 700,666, pub. 4–19–60. Cl. 18.
White Motor Co., The, Cleveland, Ohio. 580,878, canc. Cl. 23.
Whitehall Laboratories: *See*—
American Home Products Corp.
Whitman, H. G., & Co., Inc., Philadelphia, Pa. 580,078, canc. Cl. 46.
Whitney Chain Co., The, Hartford, Conn. 700,481, pub. 4–19–60. Cl. 23.
Wiedemann Machine Co., King Of Prussia, Pa. 700,480, pub. 4–19–60. Cl. 23.
Wilde, Herman R., Chemical Co.: *See*—
Wilde, Herman R.
Wilde, Herman R., d.b.a. Herman R. Wilde Chemical Co., Westfield, N.J. 700,336, pub. 2–23–60. Cl. 6.
Willcox & Gibbs Sewing Machine Co., New York, N.Y. 700,492, pub. 4–19–60. Cl. 23.
Williams-Mc Williams Industries, Inc., New Orleans, La. 700,683, pub. 4–19–60. Cl. 46.
Williamson, Floyd M., Detroit, Mich. 700,310, pub. 4–19–60. Cl. 2.
Wilson & Co., Inc., Chicago, Ill. 700,697, pub. 4–19–60. Cl. 107.
Wood, Clifton, d.b.a. Western Supply Co., Ardmore, Okla. 700,317, pub. 12–2–59. Cl. 2.
Wood's, T. B., Sons Co., Chambersburg, Pa. 700,488, pub. 4–19–60. Cl. 23.
Wood's, T. B., Sons Co., Chambersburg, Pa. 700,495, pub. 4–19–60. Cl. 23.
Wood's, T. B., Sons Co., Chambersburg, Pa. 700,531, pub. 4–19–60. Cl. 35.
Woodward-Wagner Co., Philadelphia, Pa. 237,224, 12(c) pub. 7–5–60. Cl. 35.
Woodward-Wagner Co., Philadelphia, Pa. 438,070, 12(c) pub. 7–5–60. Cl. 35.
Woolworth, F. W., Co., New York, N.Y. 700,696. Cl. 27.
Worcester Royal Porcelain Co., (Ltd.), The, to Royal Worcester Ltd., Worcester, England. 17,952, ren. 7–5–60. Cl. 30.
Wright, John N., Jr., Federalsburg, Md. 700,623, pub. 6–24–58. Cl. 46.
Wurzburger, Hugo, Paris, France, by The Weatherhead Co., Cleveland, Ohio. 328,283, 12(c) pub. 7–5–60. Cl. 12.

U.S. GOVERNMENT PRINTING OFFICE: 0—1000

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of May 1960

Examiner affirmed	162
Examiner affirmed in part	34
Examiner reversed	52
Total	248

Notice of Tentative Recordation of a Trade Name

[T.D. 55157]

Tentative recordation of trade name under section 42 Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., June 16, 1960

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"FREE FILM CO." a name used by Film Enterprises, Inc., in the film processing business and mail advertising, as well as national advertising. The principal plant of this company is located at 239 Hollywood Avenue, Hillside, Union County, New Jersey. FREE FILM CO., advertises "free film for life." For every exposed roll of film sent to this company, a free same size roll of fresh dated film along with the developed prints will be returned to the sender.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after July 15, 1960, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after July 15, 1960, of any opposition proceeding.

Until 45 days after July 15, 1960, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) RALPH KELLY,
Commissioner of Customs.

Erratum

All references to Patent No. 2,941,886 to Junius M. McIntire and Ching C. Loo, assignors by mesne assignment to Dairy Foods Incorporated, for Fat-Containing Dried Dairy Product and Method of Manufacture, appearing in the OFFICIAL GAZETTE of June 21, 1960, should be deleted as the application was withdrawn from issue and the patent was not issued.

Adjudicated Patents

(D.C.N.Y.) Seary Patent No. 2,495,142 (40—158), for transparency mount and method for making same. Claim 4 *Held* valid and infringed; claims 1 to 3 and 5 *Held* invalid. *Seary* v. *Emil Koudelka, Inc.*, 182 F. Supp. 572; 125 USPQ 170.

(C.A. Wis.) Saul and Fenstermaker Patent No. 2,626,711 (211—13), for adjustable peg rack. *Held* invalid. *Saul et al.* v. *International Harvester Co.*, 276 F.2d 361; 125 USPQ 42.

(C.A. Ill.) Zysset Patent No. 2,782,826 (146—16), for vegetable shredder. Claim 2 *Held* valid and infringed. Judgment of validity and infringement reversed as to claim 1. *Zysset* v. *Popeil Bros., Inc.*, 276 F.2d 354; 125 USPQ 152.

(C.A. Ill.) Bullard Reissue Patent No. 23,937 (51—131), for lapping machine. Claims 1 to 4 and 9 to 14 *Held* invalid. *Crane Packing Co.* v. *Spitfire Tool & Machine Co.*, 276 F.2d 271; 125 USPQ 89.

Disclaimer

2,688,383.—*William F. Eames*, Westfield, N.J. ZONED ELEVATOR SYSTEM. Patent dated Sept. 7, 1954. Disclaimer filed June 3, 1960, by the assignee, *Westinghouse Electric Corporation*.

Hereby enters this disclaimer to claims 1, 2, 3, 11, 33, 34, 35, and 36 of said patent.

Patents Available for Licensing or Sale

2,869,378. Variable Speed Drive Mechanism. Andrew P. Fischer, 1310 Ninth St., Modesto, Calif.

2,892,474. Automatic Cut-Off Stop for Power Saws. A. G. Hiebert, 240 19th Ave., Santa Cruz, Calif.

2,928,674. Rocking Horse (Natural Strides Controlled Automatically). C. B. Foster, 715 Atheys Road, Mobile, Ala.

2,936,471. Household Hand Mop (Fountain Type). Susan E. Coleman, % Mrs. James Weed, Box #9, Monte Rio, Calif.

2,938,732. Disc Record Cleaning Device. Cornelius Mantell, Jr., 22834 Burton St., Canoga Park, Calif.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers.

Applications for license under these patents may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

New Applications Received During May 1960

Patents	7,228
Designs	419
Plant Pats	7
Reissues	24
Total	7,678

Issue

Patents	976—No.	2,944,259 to No.	2,945,234, incl.
Designs	42—No.	188,368 to No.	188,409, incl.
Plant Patents	2—No.	1,958 to No.	1,959, incl.
Reissues	2—No.	24,843 to No.	24,844, incl.
Total	1,022		

2,721,023.	Arrangement for Reducing Case Resonance.	2,906,355.	Flow Control Device.
2,724,548.	Compressor Oil Pump.	2,911,800.	Window Closure for Room.
2,873,657.	Air Conditioning Unit.	2,932,474.	Vibration Mount.
2,895,306.	Hot Gas Defrost System Including Bypass-Suction Line Heat Exchange.	2,932,545.	Magnetic Door Latching Arrangement for Refrigerator.
2,907,515.	Oil Cooling System for Compressors.	2,932,715.	Electric Range.

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1960

Total number of pending applications (excluding Designs)	198, 233
Total number of pending Design applications	6, 108
Total number of applications awaiting action (excluding Designs)	81, 125
Total number of Design applications awaiting action	1, 400
Date of oldest new application	Feb. 2, 1959
Date of oldest amended application	Feb. 9, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 39, 48, 46, 50, 58, 59, 60, 65, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 63.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 32, 23, 25, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 28, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	11-5-59	10-26-59
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-3-59	11-17-59
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	11-20-59	11-20-59
4. (VI) FALLER, R. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	10-5-59	10-7-59
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-5-59	8-5-59
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	10-19-59	10-19-59
7. (IV) ANDERSON, E. G., Optics	9-1-59	9-8-59
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	10-19-59	10-27-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-13-59	10-7-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-5-59	12-1-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	10-19-59	9-4-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-4-59	12-3-59
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-12-59	10-13-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-8-59	7-17-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-4-59	12-17-59
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	7-1-59	6-1-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-3-59	11-5-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-9-59	10-9-59
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-4-60	12-17-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-10-59	12-10-59
21. (III) MADER, R. C., Textiles	10-26-59	11-6-59
22. (VI) BUCHLER, M. D., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-12-59	10-6-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	3-3-59	1-9-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	9-4-59	9-2-59
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	9-3-59	9-1-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	9-29-59	8-12-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	11-2-59	10-30-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	10-26-59	11-4-59
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-6-59	11-10-59
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-8-59	12-10-59

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Bracket removable in parentheses indicate Examining Group)	Oldest Application Now	Oldest Application Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	12-21-59	12-23-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	11-16-59	11-17-59
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	9-4-59	9-8-59
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	5-31-59
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	11-6-59	11-6-59
36. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	9-28-59	9-23-59
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	9-29-59	9-15-59
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-5-59	8-5-59
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	10-30-59	10-31-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-59	12-2-59
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television; Telegraphy (part)	11-23-59	10-23-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-1-59	10-1-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilising and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	9-14-59	9-24-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	6-22-59	8-5-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	11-16-59	11-13-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-12-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-16-59	11-18-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	8-6-59	8-19-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	7-6-59	7-13-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-2-59	8-17-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	10-1-59	10-1-59
52. (V) LE ROY, C. A., Supports and Racks	1-20-60	1-20-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	10-26-59	10-12-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	11-24-59	12-2-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	10-13-59	9-30-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-7-59	12-3-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-19-59	8-11-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	9-16-59	10-6-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-8-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	9-15-59	9-21-59
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	12-1-59	11-27-59
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	11-24-59	11-13-59
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	9-23-59	10-5-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	8-11-59	7-17-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	11-16-59	11-6-59
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	7-7-59	6-17-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	8-25-59	8-5-59
81. (III) MONCURE, J. A., Industrial Arts	3-4-60	3-16-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-14-60	3-15-60
91. BAILEY, J. S., Ornamentation	2-16-60	2-9-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	1-4-60	1-7-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	12-9-59	12-1-59
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	12-3-59	12-4-59
95. ANGEL, C. D., Masonry and Concrete Structures; Packed Rod Joints; Joint Packings	10-5-59	10-1-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	12-2-59	11-9-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 60 Stat. 221) and those which may have expired earlier due to shortened terms under the provisions of Public Law 593. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1959*.

Patents ..... Numbers 2,938,357 to 2,935,576, inclusive
Plant Patents ..... Numbers 504 to 505, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

BLACK PANTHER COMPANY, INC. v. COOK CHEMICAL COMPANY

No. 6537. Decided April 6, 1960

[47 CCPA —; 277 F.2d 177; 125 USPQ 402]

1. TRADEMARK—OWNERSHIP—ASSIGNMENT.

Where appellant alleged ownership of Trademark Registration No. 353,606, issued January 11, 1938, to the EZ-Fire Company, for "EZ-Fire" as a trademark for kindling blocks, and appellant introduced in evidence copies of two assignments of that registration, together with the good will of registrant's business, the first assignment naming one Charles M. McBryde as assignee, and being executed on behalf of the registrant July 3, 1956, by one Harold C. Long as "succeeding partner," and containing a notation that the other partner, one Gibbs E. Smith, was deceased, and the second assignment, executed August 3, 1956, by said McBryde, naming appellant as assignee; and where both assignments were recorded on August 7, 1956; and where the Trademark Trial and Appeal Board stated that the registration was renewed by appellant on January 11, 1958, *Held* that "Prima facie, therefore, the papers show title to the registration and ownership of the registered mark to be in appellant."

2. SAME—SAME—SAME.

"The Board held the assignment to McBryde ineffective because 'a trademark owned by a copartnership does not pass to the survivor by operation of law; and the record is devoid of any evidence which might tend to show either that Long had succeeded to EZ-Fire and its registration, or had made any use of the mark as an individual.' No authority is cited for the first part of that statement. It appears to be incorrect."

3. SAME—SAME—SAME.

"In the absence of any evidence that he was acting outside his authority, we are of the opinion Long should be regarded as having been qualified to act for EZ-Fire Company. Even assuming, as seems to be suggested by the Board, that the partner Smith was not dead when the assignment was executed, it appears that Long would have been entitled to act for the company under the law of partnership."

4. SAME—SAME—PRESUMPTION OF USE OF REGISTERED MARK.

"It was not necessary that Long should show use of the mark as an individual since, in the absence of evidence to the contrary, it is presumed that a registered mark is being used by the registrant. * * * In our view Long was entitled to act for the registrant, EZ-Fire Company."

5. SAME—SAME—USE—ABANDONMENT BY NONUSE.

"While McBryde does not appear to have used the mark, he transferred it to appellant one month after he acquired it. No presumption of abandonment can be based on nonuse during that short period. As shown by the record, appellant began using the mark on charcoal lumps and briquets in the spring of 1957, which is early enough to avoid any presumption that it abandoned the mark after acquiring it on August 3, 1956, especially in view of the fact that the record indicates that not much business was done by appellant with charcoal during the fall and winter months. The record also reflects that appellant's charcoal lumps are used in many instances in kindling fires; accordingly, they may be considered as coming within the term 'kindling blocks' used in Registration No. 353,606."

6. SAME—SAME—OPPOSITION—CONFUSING SIMILARITY—"E-Z LITE" AND "EZ-FIRE" ON MATERIALS FOR KINDLING FIRES.

"In our opinion the record sufficiently establishes appellant's ownership of Registration No. 353,606, which long antedates appellee's application here involved. The Board indicated, * * * that the "'E-Z Lite' and 'EZ-Fire' marks are confusingly similar and we are in accord with that view. Both the registration and appellee's application relate to materials for kindling fires, and the marks as applied to such goods contain the identical suggestion that the fire will light easily. In view of this identity in meaning and of the similarity in sound and appearance of the marks we think their concurrent use on the goods of the respective parties would be likely to cause or create confusion, within the meaning of the Lanham Act."

APPEAL from the Patent Office. Opposition No. 37,332.

REVERSED.

John Howard Joynt for Black Panther Company, Inc.

Beale & Jones, George R. Jones, Hovey, Schmidt, Johnson & Hovey, Robert D. Hovey, for Cook Chemical Company.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board of the United States Patent Office dismissing an opposition by appellant to appellee's application, No. 6,502, filed April 18, 1956, for registration of "E-Z Lite" as a trademark for a liquid chemical composition for use in starting fires.

The opposition was based on appellant's alleged prior use of "E-Z Lite" for charcoal, and alleged ownership of Trademark Registration No. 353,606, granted January 11, 1938, for "EZ-Fire" as a trademark for kindling blocks, to the EZ-Fire Company of Ludewici, Georgia. In dismissing the opposition, the Board held (1) that appellant had not established use of the "E-Z Lite" trademark prior to the filing date of appellee's application, and (2) had not proved ownership of the "EZ-Fire" registration. Appellant's claim of ownership of the "EZ-Fire" registration represents a ground of opposition entirely distinct from its activities in connection with "E-Z Lite." If the record supports the former claim, it is immaterial whether the latter constitutes a valid ground of opposition. Accordingly, we shall dispose of the issue as to the "EZ-Fire" registration first.

[1] With respect to the second ground, appellant introduced in evidence copies of two assignments of Registration No. 353,606, together with the good will of the business. The first names one Charles M. McBryde as assignee, and was executed on behalf of EZ-Fire Company July 3, 1956,[1] by one Harold C.

[1] The date of this assignment is incorrectly given in the Board's decision as July 31, 1950.

Long as "succeeding partner." It contains a notation that the other partner, one Gibbs E. Smith, was deceased. The second assignment, executed August 3, 1956, by Charles M. McBryde, names Black Panther Company, Inc., appellant here, as assignee. Both assignments were recorded in the Patent Office on August 7, 1956. It is stated in the Board's decision that the registration was renewed by appellant on January 11, 1958. Prima facie, therefore, the papers show title to the registration and ownership of the registered mark to be in appellant. *Rosengart, Etc. v. Ostrex Company, Inc.*, 80 CCPA 1046, 136 F.2d 249, 57 USPQ 548.

[2] The Board held the assignment to McBryde ineffective because "a trademark owned by a copartnership does not pass to the survivor by operation of law; and the record is devoid of any evidence which might tend to show either that Long had succeeded to EZ-Fire and its registration, or had made any use of the mark as an individual." No authority is cited for the first part of that statement. It appears to be incorrect. As stated in Corpus Juris Secundum, volume 68, pp. 766, 767:

> However it is generally held that the survivor does become the legal owner of the assets of the firm or of its personal property, including its choses in action, for the purpose of adjusting or liquidation of the partnership affairs and it has been held that in the eyes of the law his ownership is absolute, although it may be somewhat qualified in equity, or the title may be considered by an equitable one.

See also *Abraham & Straus, Inc. v. Travel Manufacturers, Inc.*, 31 CCPA 731, 138 F.2d 77, 59 USPQ 162; *Slater, et al. v. Slater, et al.*, 67 N.E. "224; *Cook v. Cochran*, 156 S.E. 465 (Ga.); and *Richter v. Richter*, 43 S.E. 2d 635 (Ga.).

[3] In the absence of any evidence that he was acting outside his authority, we are of the opinion Long should be regarded as having been qualified to act for EZ-Fire Company. Even assuming, as seems to be suggested by the Board, that the partner Smith was not dead when the assignment was executed, it appears that Long would have been entitled to act for the company under the law of partnership. See 68 CJS, p. 572.

[4] It was not necessary that Long should show use of the mark as an individual since, in the absence of evidence to the contrary, it is presumed that a registered mark is being used by the registrant. *American Throwing Co., Inc. v. Famous Bathrobe Co., Inc.*, 45 CCPA 737, 250 F.2d 377, 116 USPQ 156, and cases there cited. In our view Long was entitled to act for the registrant, EZ-Fire Company.

[5] While McBryde does not appear to have used the mark, he transferred it to appellant one month after he acquired it. No presumption of abandonment can be based on nonuse during that short period. As shown by the record, appellant began using the mark on charcoal lumps and briquets in the spring of 1957, which is early enough to avoid any presumption that it abandoned the mark after acquiring it on August 3, 1956, especially in view of the fact that the record indicates that not much business was done by appellant with charcoal during the fall and winter months. The record also reflects that appellant's charcoal lumps are used in many instances in kindling fires; accordingly, they may be considered as coming within the term "kindling blocks" used in Registration No. 353,606.

[6] In our opinion the record sufficiently establishes appellant's ownership of Registration No. 353,606, which long antedates appellee's application here involved. The Board indicated, in a footnote to its decision, that the "E-Z Lite" and "EZ-Fire" marks are confusingly similar and we are in accord with that view. Both the registration and appellee's application relate to materials for kindling fires, and the marks as applied to such goods contain the identical suggestion that the fire will light easily. In view of this identity in meaning and of the similarity in sound and appearance of the marks we think their concurrent use on the goods of the respective parties would be likely to cause or create confusion, within the meaning of the Lanham Act.

It follows that the opposition should have been sustained on the basis of appellant's Registration No. 353,606, and it is therefore unnecessary to consider opposer's alleged prior use of the "E-Z Lite" mark.

The decision of the Trademark Trial and Appeal Board is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

UNITED STATES SAFETY SERVICE CO. *v.* ROBERT C. GRAHAM

No. 6539. Decided April 6, 1960

[47 CCPA —; — F.2d —; 125 USPQ 405]

1. TRADEMARK—CONFUSING SIMILARITY.
   In an opposition by appellant to appellee's application for registration of "Safelite" as a trademark for lenses for optical use, based on appellant's prior use and registration of the marks "Saf-I-Duo," "Saf-I-Shield," "Saf-I-Spec," "Saf-I-Flex," "Saf-I-Chem," "Saf-I-Weld," "Saf-I-Lens," "Saf-I-Glare," and "Saf-I-Spectacle," primarily for use on industrial safety equipment, to protect the head and eyes, such as face shields, goggles, welder's helmets, etc., *Held*, in agreement with the Trademark Trial and Appeal Board, that the marks differ substantially in sound, appearance, and significance, that the products of the parties would ordinarily be purchased with care, and that confusion would not be likely.
2. SAME—SAME—FAMILY OF MARKS.
   "'Safelite' differs substantially from each of appellant's 'Saf-I-' marks. Even if appellant's marks be considered as a family, as appellant urges, there would be no reason to think that 'Safelite' was a member of that family, since, as pointed out by the Board, 'The family characteristic of opposer's marks is "Saf-I" and applicant's mark does not involve an appropriation thereof.'"
3. SAME—SAME.
   "Appellant stresses in its brief here its 'Optilite' mark, which was not mentioned by the Board. That mark clearly is not confusingly similar to applicant's 'Safelite' mark, and the 'lite' portion which is the only feature common to the two marks, is suggestive as applied to optical goods. We do not think the public would be likely to make any such association of the 'lite' portion of 'Optilite' with the 'Saf-I' portion of appellant's other marks as to result in confusion with 'Safelite.'"

APPEAL from the Patent Office. Opposition No. 37,412.

AFFIRMED.

Hovey, Schmidt, Johnson & Hovey, Robert D. Hovey, Beale & Jones, George R. Jones, for United States Safety Service Co.

W. D. Sellers for Robert C. Graham.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board of the United States Patent Office dismissing an opposition by appellant to appellee's application for registration of "Safelite" as a trademark for lenses for optical use. The opposition was based on appellant's prior use and registration of the marks "Saf-I-Duo," "Saf-I-Shield," "Saf-I-Spec," "Saf-I-Flex," "Saf-I-Chem," "Saf-I-Weld," "Saf-I-Lens," "Saf-I-Glare," and "Saf-I-Spectacle," primarily for use on industrial safety equipment to protect the head and eyes, such as face shields, goggles, welder's helmets, etc.

Since priority is not disputed and the goods of the parties are quite similar, the issue is whether concurrent use of the marks by the respective parties would result in a likelihood of confusion within the meaning of section 2(d) of the Lanham Act.

[1] The Board was of the opinion the marks differ substantially in sound, appearance, and significance; that in view of those differences coupled with its belief that the products of the parties would ordinarily be purchased with care, confusion would not be likely.

We agree with the Board. [2] "Safelite" differs substantially from each of appellant's "Saf-I-" marks. Even if appellant's marks be considered as a family, as appellant urges, there would be no reason to think that "Safelite" was a member of that family, since, as pointed out by the Board, "The family characteristic of opposer's marks is 'Saf-I' and applicant's mark does not involve an appropriation thereof."

[3] Appellant stresses in its brief here its "Optilite" mark, which was not mentioned by the Board. That mark clearly is not confusingly similar to applicant's "Safelite" mark, and the "lite" portion which is the only feature common to the two marks, is suggestive as applied to optical goods. We do not think the public would be likely to make any such association of the "lite" portion of "Optilite" with the "Saf-I" portion of appellant's other marks as to result in confusion with "Safelite."

The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

COLUMBIAN STEEL TANK COMPANY *v.* UNION TANK AND SUPPLY COMPANY (BUTLER MANUFACTURING COMPANY, ASSIGNEE, SUBSTITUTED)

No. 6540, Decided April 6, 1960

[47 CCPA —; 277 F.2d 192; 125 USPQ 406]

1. TRADEMARK—USE—EVIDENCE.
   "Appellee's application alleges February 1, 1946 as the date of first use of its mark but in the absence of testimony appellee must be restricted to its filing date of June 29, 1956, * * *."
2. SAME—CONFUSING SIMILARITY—WORLD SYMBOL MARK ON TANKS.
   On the basis of the conclusion from the evidence that the world symbol mark of opposer-appellant had become as well known to users and prospective users of tanks, and to others seeing the tanks already in use, as the opposer's name and that the mark and the name had become associated in the minds of such persons so that the world symbol mark would suggest opposer or some connection with opposer, *Held* that the prominent use, by applicant-appellee, of two hemispheres, representative of the world, on metal tanks would be likely "to cause confusion or mistake or to deceive purchasers," and that the addition in applicant's "actual label of the words 'World Wide Service' would, * * *, aggravate the situation by further emphasizing the 'world' aspect of the mark"; and *Held* that "the mark applied for should not be registered."
3. SAME—SAME.
   "We do not think it is of much significance in this case how the goods would be *ordered*. Through more than forty years of continuing use of its highly publicized world symbol mark opposer has built up an association in the public mind between that mark and tanks of its manufacture—Columbian, 'Tanks For The World,' a picture of a globe representing the world. Opposer has consistently fostered this association by its use of the world symbol and through its advertising to the point where we believe the world symbol mark is as much indicative of origin of the goods as the name COLUMBIAN. We do not see how another could now use a picture of the world in the form of a globe or a map of a hemisphere on the same goods without confusing or deceiving purchasers as to origin. There is nothing about a globe or a map that is in the least suggestive of tanks or any of their characteristics. While the use of two hemispheres by appellee makes it easy to distinguish the marks, we do not think that in effect duplicating opposer's mark eliminates likelihood of confusion. Whatever goodwill attaches to a symbol of the world as a trademark in the tank field belongs to opposer since it created that goodwill."
4. SAME—SAME—WORLD SYMBOL MARK—SYMBOL'S PRIMARY SIGNIFICANCE NOT DESTROYED BY DUPLICATION.
   "We disagree with the Board's conclusion that the marks do not look alike, because two hemispheres look very much like a duplication of one hemisphere. Duplicating a symbol would not ordinarily destroy its primary significance. We disagree with the conclusion that the marks do not have similar connotations, because they have identical connotations. As to sounding alike, we think that this rule of thumb has no bearing on the issue here. Symbols of this kind do not sound."
5. SAME—SAME—SECTION 2(d), 1946 ACT—POSSIBILITY OR EASE OF DISTINGUISHING MARKS DOES NOT GOVERN—QUESTION IS WHETHER MARKS WILL CONFUSE PEOPLE.
   "* * * we have a feature which makes it easy to distinguish the marks but it is not the possibility or even the ease of distinguishing the marks which governs. The statute prohibits the registration of a mark (Sec. 2(d), 1946 act) which, when applied to the goods of the applicant, is likely *to cause confusion, mistake or deception of purchasers*. It is not a question of whether people will confuse the marks but of whether the marks will confuse people. The incorporation into a new mark for tanks of the essence of Columbian's world symbol mark as a prominent feature is bound to be confusing, no matter what else is added."
6. SAME—SAME—SAME—STATUTE CONSTRUED.
   Held that the trademark statute "does not require close similarity *of marks* to justify the refusal of registration but uses the expression 'so resembles a mark registered * * * or * * * previously used * * * by another' * * * as to be likely to create confusion, mistake or deception."

APPEAL from the Patent Office. Opposition No. 36,918.

REVERSED.

Alfred R. Fuchs for Columbian Steel Tank Company.

Thomas E. Scofield for Union Tank and Supply Company, (Butler Manufacturing Company, Assignee, Substituted).

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

RICH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board dismissing appellant's opposition to the registration of appellee's trademark on application Serial No. 11,310 filed June 29, 1956. The goods are described in the application as "Metal Tanks" and the mark consists, as shown in the application drawing, of a pair of terrestrial hemispheres, side by side, centrally disposed on which in large block letters is the word "UNION" under which is a long narrow panel or ribbon with reverse folded ends and

over which are the words "World Wide Service." The specimen label filed with the application, showing how the aforesaid mark sought to be registered is actually used, contains in addition the words "SOLD BY" at the top of the label, the words "TANK & SUPPLY CO." on the ribbon under "UNION," and under the ribbon "HOUSTON, TEXAS." The overall impression created by the mark as used is, therefore, that the goods bearing the label are *sold* by Union Tank & Supply Co. of Houston, Texas, and that that company claims to render world wide service. The two hemispheres, if they are given significance other than mere decoration, tie in with the concept of world wide service since they depict the world in a conventional cartographic fashion.

Opposer took testimony and introduced many exhibits of labels, catalogs, registrations, advertising, etc. Applicant-appellee did not attend the taking of opposer's testimony and none was taken on its behalf. It has filed no brief in this court and did not appear at the oral argument. Opposer has filed a lengthy brief with us on which it submitted its case without oral argument.

[1] Appellee's application alleges February 1, 1946 as the date of first use of its mark but in the absence of testimony appellee must be restricted to its filing date of June 29, 1956, as the Board correctly held. This is not of critical significance as opposer antedates the earlier date by many years with respect to use of the mark on which it relies. Appellee's application was filed by Union Tank & Supply Company, a Delaware corporation doing business in Houston, Texas, and two and a half months later, on September 15, 1956, Union assigned it with the good will of the business symbolized by the mark to Butler Manufacturing Company, a corporation of Missouri doing business in Kansas City, Missouri.

Opposer, Columbian Steel Tank Company, also located in Kansas City, Missouri, is a partnership consisting of William F. and Joseph M. Kramer and Helen Kramer Biersmith which has succeeded to the business of Andrew A. Kramer who did business under the present company name. The literature in evidence variously states that the business was established in 1893 or 1894. While the present actual sales were not brought out, it is now obviously a very substantial manufacturing business. Its principal products, accounting for about 75% of its sales, are tanks of one kind or another, made of sheet metal and ranging in size from 10 gallon to 10,000 barrel (420,000 gallon) capacity. At one time a 27,000 barrel tank was made. The larger tanks are of the type used for storage of water, oil and other liquids, and solids such as grain, either as bins or elevators. They may be of welded or bolted construction. Tank truck bodies are part of the line which also includes possibly as many as 200 other miscellaneous items we need not consider in view of the limitation of appellee's application to metal tanks.

Opposer principally relies on a mark which it has used since 1915, and on which it has several registrations, which we shall call its "world symbol" mark. It is a representation of the globe showing the western hemisphere, around which in an equatorial orbit is a ribbon or band bearing the slogan "Tanks For The World." In 1915 opposer obtained copyright registration No. 18437 on this world symbol as a label and deposited a copy of it on April 14, 1915. The testimony of Mr. Culver, sales engineer with opposer continuously since 1910 (also with them in 1907 and 1908), one of the two witnesses called, and of the other witness, Mr. Robinson, advertising manager, employed by the opposer since 1933 and in his present capacity since 1936, shows that this world symbol, associated with opposer's name in one way or another, has been in continuous use from 1915 to the present time. Eight trademark registrations thereof are in evidence for different products, it being sufficient for this case to refer to the following which include metal tanks among the enumerated goods: Under the 1905 act, Reg. No. 369,121, July 18, 1939, with the company name and address superposed on the peripheral portion of the globe, and No. 411,008, January 2, 1945, without the company name and address; and under the 1946 act, Reg. No. 562,495, August 5, 1952, the world symbol with a panel beneath it bearing the word "Columbian," the symbol being the more prominent part of the mark. Other exhibits show that the practice of opposer has been and is to associate this world symbol with its name throughout its business as, for example, on letterheads, catalog covers, individual catalog pages, shipping tags, envelopes and the like. The company slogan appears to be "Tanks For The World" and this is associated with the word "Columbian" or the company name, usually in conjunction with the world symbol which includes the slogan. One catalog in evidence shows on its cover an aerial view of the Kansas City plant on the several buildings of which in large letters or on roof signs appear the company name and the "Tanks For The World" slogan. The cover of this same catalog features the world symbol, i.e. a globe and its slogan, floating above the plant and occupying a third of the page. The world symbol is likewise displayed on other catalog front and back covers, sometimes in large and sometimes in small size.

Opposer's large, bolted, oil and grain storage tanks are erected out of doors, adjacent railways and highways in many cases, and it has been the practice to apply to them, so as to be clearly visible to passers-by, three foot high decal labels, including, with about equal prominence, the world symbol mark, the company name and the words "Columbian Tanks." Catalogs and advertisements feature photographs of tanks so marked. Smaller tanks for "L.P." (liquified petroleum) gas which are also located out in the open are marked with a foot-long decal label featuring a three-inch world symbol mark. Another similar label is applied to miscellaneous other tanks and similar structures used by farmers, gas and oil service stations and the like. Tens of thousands of catalogs bearing the world symbol have been distributed to dealers and prospective purchasers, millions of pieces of business stationery bearing it have been used and the witness Robinson estimated that some ninety million reproductions of advertisements featuring the world symbol had appeared in various mass media directed toward those having some need for tanks.

[2] It is an inescapable conclusion from the evidence that the world symbol mark of opposer has become as well known to users and prospective users of tanks, and to others seeing the tanks already in use, as the opposer's name and that the mark and the name have become associated in the minds of such persons so that the world symbol mark would suggest opposer or some connection with opposer.

On the basis of this conclusion it is our opinion that the prominent use of two hemispheres, representative of the world, on metal tanks would be likely "to cause confusion or mistake or to deceive purchasers." The addition in appellee's actual label of the words "World Wide Service" would, it seems to us, aggravate the situation by further emphasizing the "world" aspect of the mark. We therefore hold that the mark applied for should not be registered.

The Board reached the opposite conclusion, after making the assumption that the tanks of the parties move through the same channels of trade to the same average purchasers, on the basis that the marks in their entireties do not look alike, sound alike, or have similar connotations. The Board opined that "The products are likely to be ordered by the word marks 'UNION' and 'COLUMBIAN'."

[3] We do not think it is of much significance in this case how the goods would be *ordered*. Through more than forty years of continuing use of its highly publicized world symbol mark opposer has built up an association in the public mind between that mark and tanks of its manufacture—Columbian, "Tanks For The World," a picture of a globe representing the world. Opposer has consistently fostered this association by its use of the world symbol and through its advertising to the point where we believe the world symbol mark is as much indicative of origin of the goods as the name COLUMBIAN. We do not see how another could now use a picture of the world in the form of a globe or a map of a hemisphere on the same goods without confusing or deceiving purchasers as to origin. There is nothing about a globe or a map that is in the least suggestive of tanks or any of their characteristics. While the use of two hemispheres by appellee makes it easy to distinguish the marks, we do not think that in effect duplicating opposer's mark eliminates likelihood of confusion. Whatever goodwill attaches to a symbol of the world as a trademark in the tank field belongs to opposer since it created that goodwill.

[4] We disagree with the Board's conclusion that the marks do not look alike, because two hemispheres look very much like a duplication of one hemisphere. Duplicating a symbol would not ordinarily destroy its primary significance. We disagree with the conclusion that the marks do not have similar connotations, because they have identical connotations. As to sounding alike, we think that this rule of thumb has no bearing on the issue here. Symbols of this kind do not sound. The Board probably reached its conclusion as to sound by comparing COLUMBIAN with UNION, for sound can be attributed to these parts of the marks; but the issue in this case is not the likelihood of confusion from the use of those names but rather whether confusion is likely to result from the use of appellee's *whole* mark in view of opposer's use of its *world symbol* mark. That is the case presented by the opposer. The Board does not appear to have considered this issue at all. The Board did compare the phrases "World Wide Service" and "Tanks For The World," concluding that these would be insufficient to support a finding of likelihood of confusion and with this we agree, considering these phrases by themselves.

We have no doubt that the Board was strongly influenced by the prominence of the display of the word "UNION" in appellee's mark. Here too [5] we have a feature which makes it easy to distinguish the marks but it is not the possibility or even the ease of distinguishing the marks which governs. The statute prohibits the registration of a mark (Sec. 2(d), 1946 act) which, when applied to the goods of the applicant, is likely *to cause* confusion, mistake or deception *of purchasers*. It is not a question of whether people will confuse the marks but of whether the marks will confuse people. The incorporation into a new mark for tanks of the essence of Columbian's world symbol mark as a prominent feature is bound to be confusing, no matter what else is added.

It is also possible that the Board concentrated its attention on the mark as depicted in the application drawing which contains less than the whole of the mark as actually used. When the actual label is viewed with its notation "SOLD BY" at the top, above "UNION," it is not so clear that "UNION" would counteract the impression that there is some connection with opposer as a manufacturer of tanks. It will be observed [6] that the statute does not require close similarity *of marks* to justify the refusal of registration but uses the expression "*so* resembles a mark registered * * * or * * * previously used * * * by another" (emphasis ours) as to be likely to create confusion, mistake or deception. We think there is *such* resemblance here, on the basis of the evidence showing how opposer has built up the picture of the globe and its associated slogan "Tanks For The World" as an outstanding and well-known symbol of its entire business, 75% of which is metal tanks.

The decision of the Board dismissing the opposition is reversed.

REVERSED.

MARTIN, *J.* (concurring):

I concur in the result only for the reason that doubt as to likelihood of confusion exists in my mind and I resolve that doubt against the newcomer.

WORLEY, *Chief Judge* (dissenting):

In my opinion the reasoning and conclusion reflected in the following excerpt from the opinion of the Trademark Trial and Appeal Board are sound:

> The marks in their entireties do not look alike; they do not sound alike and they do not have similar connotations. The products are likely to be ordered by the word marks "Union" and "Columbian." The words "World Wide Service" in applicant's mark and the words "Tanks for the World" in opposer's mark suggest that both parties do world wide business, but this is insufficient to support a finding that applicant's mark so resembles opposer's as to be likely, when applied to metal tanks, to cause confusion or mistake of purchasers.

I would affirm.

U.S. Court of Customs and Patent Appeals

CLUETT, PEABODY & CO., INC. *v.* SAVATUX FACING COMPANY

No. 6494. Decided May 3, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. TRADEMARK — OPPOSITION — GOODS — GOODS SIMILAR IN NATURE—MARKS MUST BE COMPARED IN THEIR ENTIRETIES.

In an opposition by appellant, based on registration of "Prom" as a trademark for collars and its use of that mark on wing collars intended for formal wear, to an application by appellee for registration of "Prom Plaid" for men's dinner jackets, *Held* that "The goods of the parties are generally similar in nature, both being articles of men's wearing apparel, but this fact is not alone a sufficient basis for sustaining an opposition"; and that "We must compare the marks in their entireties as to appearance, sound and meaning."

2. SAME—SUGGESTIVENESS—"PROM" AND "PROM PLAID" ON ARTICLES OF WEARING APPAREL.

In connection with appellant-opposer's trademark "Prom" for collars, and the mark of appellee-applicant, "Prom Plaid," for men's dinner jackets, *Held* that "The word 'prom,' a contraction of the word 'promenade,' refers to a ball or dance, usually given by a particular group or class of students at a college, high school, etc." and that "Used on articles of wearing apparel as a trademark, the word 'Prom' is suggestive of the intended use of the goods at a 'prom'"; and *Held* that "When the word 'Prom' is combined with the word 'Plaid' as in appellee's mark, the combined words suggest an article made of plaid for use at a prom and as such may be both descriptive of such articles, and suggestive of their use."

3. SAME — CONFUSING SIMILARITY — "PROM" AND "PROM PLAID" ON WEARING APPAREL.

Upon review of the decision below dismissing an opposition by appellant based on registration of "Prom" for collars and use by appellant of that mark on wing collars for formal wear, to appellee's application for registration of "Prom Plaid" as a trademark for men's dinner jackets, *Held* "that the marks 'Prom' and 'Prom Plaid' have in common only the suggestive word 'prom' which is not a sufficient basis for sustaining the opposition," and that "The marks, taken in their entireties neither look nor sound alike nor do they convey the same meaning to a purchaser."

APPEAL from the Patent Office. Opposition No. 85,726.

AFFIRMED.

Dudley B. Smith (*Harold Edward Foerch, Jr.*, of counsel) for Cluett, Peabody & Co., Inc.

Arthur H. Seidel for Savatux Facing Company.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Assistant Commissioner of Patents (118 USPQ 236), reversing the decision of the Examiner of Interferences and dismissing an opposition by appellant to appellee's application for registration of "Prom Plaid" as a trademark for men's dinner jackets. The opposition was based on appellant's ownership of Registration No. 386,227 for "Prom" as a trademark for collars, and on use by appellant of that mark on wing collars intended for formal wear. No question is raised as to appellant's priority.

In reversing the decision of the Examiner of Interferences the Assistant Commissioner held that "in view of the manner of use of 'Prom' by opposer and of the highly suggestive nature of the word when used on dinner jackets and winged collars, it is concluded that purchaser confusion of the type contemplated by the statute is highly improbable."

The single issue here is: Does appellee's mark when applied to its goods so resemble appellant's mark that there is a likelihood of purchaser confusion within the meaning of section 2(d) of the Lanham Act?

[1] The goods of the parties are generally similar in nature, both being articles of men's wearing apparel, but this fact is not alone a sufficient basis for sustaining an opposition. We must compare the marks in their entireties as to appearance, sound and meaning.

[2] The word "prom," a contraction of the word "promenade," refers to a ball or dance, usually given by a particular group or class of students at a college, high school, etc. Used on articles of wearing apparel as a trademark, the word "Prom" is suggestive of the intended use of the goods at a "prom."

When the word "Prom" is combined with the word "Plaid"[1] as in appellee's mark, the combined words suggest an article made of plaid for use at a prom and as such may be both descriptive of such articles, and suggestive of their use.

[3] We find, therefore, that the marks "Prom" and "Prom Plaid" have in common only the suggestive word "prom" which is not a sufficient basis for sustaining the opposition. The marks, taken in their entireties neither look nor sound alike nor do they convey the same meaning to a purchaser. For the foregoing reasons, we affirm the decision of the Assistant Commissioner of Patents.

AFFIRMED.

WORLEY, *Chief Judge*, did not participate in the decision.

U.S. Court of Customs and Patent Appeals

IN RE FREDERICK C. KULIEKE

No. 6589. Decided May 3, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. PATENTABILITY—INVENTION—EVIDENCE—AFFIDAVIT.

"Appellant has stressed the commercial importance of the coupler knuckle casting per se and asserts that the prior attempts to eliminate the fatigue cracks in the knuckle casting did not meet with success largely because no one recognized the actual reason for the defects. Appellant asserts he not only recognized the reason for the fatigue cracks, but that he conceived a mold and core structure wherein the knuckle castings could be made which do not develop such fatigue cracks in service. Appellant also contends that by his invention he has provided a satisfactory solution to a problem long recognized but unsolved in the art, and that this constitutes invention. In support of this position, appellant submitted an affidavit showing commercial acceptance of such a coupler knuckle by the railroad industry. The affidavit has neither significance nor pertinency as to the allowability of the claims here before us which relate to a mold and core construction."

2. SAME—SAME—POSITIONING AND INTERLOCKING CORE MEMBERS.

"* * *, we agree with appellant that there is but a single invention here involved, but we disagree with the conclusion he would have us draw from this fact. In our opinion, this single invention is found in the coupler knuckle per se. We have found nothing about the mold and core assembly, as claimed, which indicates that it would be unobvious to one having the ordinary skills in this art to form such an assembly to produce the cast knuckle. If, as here, a flat side is required on such a knuckle, it would be obvious to a core maker that such a flat side should be provided for by the mold and core assembly. If, as here, that flat side must be placed in a particular position in the article, it would be obvious that a suitable mold and core construction should provide for that location. The positioning and interlocking of the core members are all features which a core maker having the ordinary skills of the art would consider to be obvious."

3. SAME—SAME—MOLD AND CORES.

"The Examiner is correct in stating that the differences which appellant urges over the teachings of the prior art '* * * pertain to the design of the object which is being cast and the construction of the cores to produce the desired strength in the casting * * *.' Once the engineering design of the casting has been determined, the mold and cores will necessarily follow that design. Nothing is seen in the structure of the cores which would not be obvious to one having the ordinary skills of this art."

4. SAME — PARTICULAR SUBJECT MATTER — CORE MOLD ASSEMBLY.

Claims to a core mold assembly for use in casting coupler knuckles *Held* unpatentable over the cited prior art. "For the foregoing reasons we *affirm* the decision of the Board of Appeals."

APPEAL from the Patent Office. Serial No. 394,547.

AFFIRMED.

Walter L. Schlegel, Jr., for Frederick C. Kulieke.

Clarence W. Moore (*Raymond E. Martin* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge FRANCIS L. VAN DUSEN, *United States District Judge for the Eastern District of Pennsylvania*

SMITH, *J.*, delivered the opinion of the court.

Appellant filed application Serial No. 394,547 on November 27, 1953, as a divisional application based on his application Serial No. 182,008 which issued as U.S. Patent No. 2,688,412 on September 7, 1954. The issued patent relates to a coupler knuckle casting. Claims 15–20, inclusive, which are here on appeal, relate to a core mold assembly for use in casting coupler knuckles.

Appellant here appeals from the decision of the Board of Appeals affirming the Examiner's rejection of the appealed claims. We agree with the Board that claims 15 and 19 are fairly illustrative of all the claims on appeal. These claims read as follows:

15. A railway coupler knuckle core assembly, comprising a pin hole core having an enlarged central portion having one flattened side but otherwise being generally circular, said flattened side being disposed at such location that the distance from the central axis to the flattened side is substantially less than a radius but the difference in mass of the central portion relative to full cylindrical shape is minor, the pin hole core having projections at its ends for support by associated cope and drag mold sections, respectively, and a knuckle tail core having a support lug at its rear end and having a tongue and groove interlock at its front end with said enlarged central portion of the pin hole core at a location displaced circumferentially from said flattened side.

19. A pin hole core for a coupler knuckle mold having an enlarged central portion with one flattened side but otherwise being generally circular, said flattened side being disposed at such location that the distance from the central axis to the flattened side is substantially less than a radius but the difference in mass relative to full cylindrical shape is minor, the pin hole core having projections at its ends for support by associated cope and drag mold sections, respectively.

The invention disclosed and claimed in the application which forms the basis of this appeal relates to a mold and core structure and arrangement for use in casting knuckles for the American Association of Railroads' Standard E Couplers. Such a knuckle comprises nose and tail sections interconnected by an intermediate section or throat which is of relatively narrow cross-sectional area, compared to the nose and tail sections. Coupler knuckles of this type have been produced by casting for many years, and certain molding practices have become commonplace. One of these practices has been the provision of a core for the purpose of lightening the coupler knuckle casting by forming a central cavity.

Appellant asserts he discovered that the weaknesses inherent in prior art knuckle castings occurred as a result of the existing knuckle mold coring practices and that these problems could be overcome by a mold coring arrangement wherein the forward end of the knuckle tail core is supported by the knuckle pin hole core, with the rear end of the knuckle tail core being supported by the mold itself. By supporting the forward end of the tail core by the pin hole core, appellant asserts that the need for supporting the tail core intermediate its ends was eliminated. This also eliminated the top and bottom holes in the knuckle tail section which had previously been formed by the core prints which supported the knuckle tail core.

All of the appealed claims are directed to a mold, a core assembly, or a component thereof and call for a pin hole core having an enlarged central portion generally circular, but with one flattened side disposed a distance from the central axis which is less than the radius but wherein the difference in mass relative to the full cylindrical shape is minor, and also including projections on the pin hole core for supporting the core in the mold.

Claims 16 and 20 are further limited to an arrangement wherein one of the projections is non-symmetrical about the longitudinal axis of the core.

Claim 18, in addition to containing the above limitations, is further limited to an arrangement including a knuckle tail core having support at one end solely by a lug carried by the mold drag and having sole support at the other end of said core by a tongue and groove interlock with the enlarged portion of the pin hole core at a location displaced circumferentially from the flattened side of the pin hole core.

Claim 17 is further limited to an arrangement wherein the tongue and groove interlock between the pin hole core and the tail core is of minor dimension relative to that of the enlarged central portion, and of the knuckle tail core, in a direction longitudinally of the pin hole core.

The references relied upon are:

Meyer, 1,999,511, April 30, 1935.
Wessel, 2,429,146, October 14, 1947.
Mayer (Germany), 735,764, May 5, 1943.

Appellant has asserted that Kulieke Patent No. 2,688,412 is not a proper reference under 35 U.S.C. 121. While referred to by the Examiner in the final rejection, his answer does not list the said Kulieke patent as a reference for any of the stated grounds of rejection. We, therefore, agree with the Board of Appeals that appellant's argument on this point is irrelevant.

The sole issue is the rejection of the claims on the cited art. The principal reference relied upon is the Mayer (Germany) reference, the Examiner's position, with which we agree, being that the other two references "are in effect cumulative."

[1] As pointed out in appellant's brief:
The term "Plaid" is a word of art and a generic term in the textile industry meaning, as stated in Webster's New International Dictionary, Second Edition, Unabridged, (1956) ". . . any fabric with a woven or printed design imitating a tartan pattern or similarly cross-barred; as, a stock of Scottish plaids."

The Mayer (German) patent discloses a plurality of stacked plates in the form of irregular rings which are machined prior to stacking so that the completed composite stack is shaped internally to approximate the desired contour of an automotive cylinder which is to be produced in the mold. Aligned holes are provided through the plates for reception of pressure relieving rods. The plates are also utilized to define cavities for creating a whirling action of the cooling air to thereby improve its cooling effects. Although several cores are used in the mold and are vaguely illustrated in the drawing of the reference, these cores are only incidentally referred to in the specification.

It is appellant's position that the references as exemplified by Mayer (German) do not disclose his invention because they do not show:

(1) A pin hole core having an enlarged central section;

(2) A core with a flat side;

(3) A knuckle tail core supported at its ends by a pin hole core and by a drag mold section.

Appellant's position as summarized in his brief is:

Inasmuch as the manner in which the cores of the Mayer arrangement are assembled and maintained in position is not disclosed by the reference patent, it is not believed to constitute a proper basis for rejecting the claims of the application which are narrowly directed to the structural details of appellant's arrangement, which is entirely different from that of the reference.

In other words, appellant seeks to distinguish his invention over the Mayer (German) patent by reference to particular structural features of the article to be cast.

It is unfortunate that neither the Examiner nor the Board of Appeals spelled out clearly what we believe to have been the ground of rejection, i.e., obviousness of the claimed invention under 35 U.S.C. 103.

The invention here claimed is a mold and core assembly for casting a particular article, i.e., a coupler knuckle. Mayer, as well as the cumulative references, teaches one skilled in the casting art that a mold and built up core assembly may be constructed and used to cast items of various shapes and kinds as, for example, the engine block of Meyer, or the air-cooled ribbed cylinders of Mayer. In each instance, the type of mold and the arrangement of the built up cores are dictated by the structure of the article to be cast. As shown in these references, the individual elements of the mold and core assemblies are suitably interlocked and held in position so that the final casting will have a predetermined structure and shape. It seems to us these specific teachings would make it obvious to one having ordinary skill in the construction and assembly of molds and cores in the casting art to construct a mold and built up core as claimed in the claims on appeal.

Appellant's argument does not meet this ground of rejection. The fact that Mayer does not show cores having a flattened side and means to position the flattened side in a predetermined relationship to the other parts of the mold, indicates merely that such a flattened side was not required in the air-cooled ribbed cylinders which Mayer proposed to cast. While such a flattened side appears to be an important feature of the coupler knuckle which appellant proposes to cast, we are here concerned with claims to a mold and core structure, not claims to a particular knuckle. [1] Appellant has stressed the commercial importance of the coupler knuckle casting per se and asserts that the prior attempts to eliminate the fatigue cracks in the knuckle casting did not meet with success largely because no one recognized the actual reason for the defects. Appellant asserts he not only recognized the reason for the fatigue cracks, but that he conceived a mold and core structure wherein the knuckle castings could be made which do not develop such fatigue cracks in service. Appellant also contends that by his invention he has provided a satisfactory solution to a problem long recognized but unsolved in the art, and that this constitutes invention. In support of this position, appellant submitted an affidavit showing commercial acceptance of such a coupler knuckle by the railroad industry. The affidavit has neither significance nor pertinency as to the allowability of the claims here before us which relate to a mold and core construction.

[2] From our consideration of the record, we agree with appellant that there is but a single invention here involved, but we disagree with the conclusion he would have us draw from this fact. In our opinion, this single invention is found in the coupler knuckle per se. We have found nothing about the mold and core assembly, as claimed, which indicates that it would be unobvious to one having the ordinary skills in this art to form such an assembly to produce the cast knuckle. If, as here, a flat side is required on such a knuckle, it would be obvious to a core maker that such a flat side should be provided for by the mold and core assembly. If, as here, that flat side must be placed in a particular position in the article, it would be obvious that a suitable mold and core construction should provide for that location. The positioning and interlocking of the core members are all features which a core maker having the ordinary skills of the art would consider to be obvious.

[3] The Examiner is correct in stating that the differences which appellant urges over the teachings of the prior art "* * * pertain to the design of the object which is being cast and the construction of the cores to produce the desired strength in the casting * * *." Once the engineering design of the casting has been determined, the mold and cores will necessarily follow that design. Nothing is seen in the structure of the cores which would not be obvious to one having the ordinary skills of this art.

[4] For the foregoing reasons we affirm the decision of the Board of Appeals.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

PHILLIPS PETROLEUM COMPANY v. KNOX INDUSTRIES CORP.

No. 6504. Decided May 3, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. TRADEMARK—CONFUSING SIMILARITY.

On the issue whether applicant's mark, "Frig-Tropic," so resembled the registered mark, "Trop-Artic," "as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers * * *," *Held* that "The question of similarity must be considered with respect to similarity of sound, appearance and meaning."

2. SAME—SAME.

"The Assistant Commissioner stated categorically that the marks 'neither look alike nor sound alike.' We do not think the issue may be so summarily determined. The question of similarity is ordinarily one of degree. The issue is whether the marks are confusingly similar, not whether they are identical."

3. SAME — SAME — "TROP-ARTIC" AND "FRIG-TROPIC" ON ALL-WEATHER MOTOR OILS.

In regard to applicant's mark, "Frig-Tropic," and registrant's mark, "Trop-Artic," used on all-weather motor oils, sold competitively, *Held* "that there is some similarity between the marks both in appearance and sound, possibly insufficient, when considered alone, to create confusion, but important in the over-all assessment of the marks on the issue of confusing similarity," that "Each mark has three syllables with a hyphen separating the first from the second," that "Each has 'Trop' and 'ic' as two of its three syllables," and that "The 'ic' ending is common to both"; and *Held* that "The marks * * * are obviously identical in meaning, each connoting opposite extremes in temperature," and that "While these extremes are, of course, inverted through a transposition of the hyphenated terms, the marks embody identical suggestions of the properties intended to be attributed to the motor oils."

4. SAME—SAME—SAME.

"Measured by the criterion of likelihood of confusion, mistake or deception to purchasers, we are persuaded that an ordinary prospective purchaser of Phillips' [registrant's] all-weather motor oil, faced with a choice of cans bearing, as indicative of origin, only the respective marks 'Trop-Artic' and 'Frig-Tropic' would be likely to be confused or mistaken."

5. SAME—SAME—SAME—DOUBT RESOLVED AGAINST NEWCOMER.

"We conclude that the marks now before us, when viewed in their entireties, and in every aspect, are so similar as to be likely, when applied to identical goods, to cause confusion or mistake or to deceive purchasers. If there were any doubt on the subject, that doubt would have to be resolved against the newcomer."

APPEAL from the Patent Office. Opposition No. 85,549.

REVERSED.

J. Arthur Young, Donald J. Quigg, Robert R. Cochran (*L. Malcolm Oberlin* of counsel) for Phillips Petroleum Company.

Herbert J. Jacobi for Knox Industries Corp.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge C. WILLIAM KRAFT, JR., *United States District Judge for the Eastern District of Pennsylvania*, designated to participate in place of JUDGE O'CONNELL.

KRAFT, JR., *J.*, delivered the opinion of the court.

This appeal by Phillips Petroleum Company (Phillips) challenges the correctness of the decision of the Assistant Commissioner of Patents which affirmed the dismissal of the notice of opposition by the Examiner of Interferences. As owner of the trademark "Trop-Artic," Phillips opposed registration of the mark "Frig-Tropic" to the applicant, Knox Industries Corp. (Knox).

The marks are used on substantially identical goods, all-weather motor oils, sold competitively. Phillips' mark "Trop-Artic," Registration No. 608,209 issued March 15, 1955, has been in continuous use since April 1954. Knox claims use of the mark "Frig-Tropic" since February 1, 1955.

The basic issue, of course, is whether "Frig-Tropic," the mark sought to be registered, so resembles the registered mark, "Trop-Artic," "as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers * * *" Trademark Act of 1946, Sec. 2, 15 U.S.C. 1052. If it does, the opposition must be sustained.

In our recent case of *L. J. Mueller Furnace Co. v. United Conditioning Corp.*, 42 CCPA 932, 222 F.2d 755, 106 USPQ 112, we set forth the relevant considerations in the determination of the issue of confusing similarity:

The test applied by this court in an opposition proceeding is the likelihood of confusion in the minds of the purchasing public as to the origin of the goods. *Nestle's Milk Products, Inc. v. Baker Importing Co., Inc.*, 37 CCPA (Patents) 1066, 182 F.2d 193, 86 USPQ 80; *Standard Laboratories, Inc. v. Procter & Gamble Co.*, 35 CCPA (Patents) 1146, 167 F.2d 1022, 77 USPQ 617. This is a subjective test. Therefore prior decisions are of little value since each case must be decided on its own particular set of facts. *North Star Manufacturing Co. v. Wells Lamont Corp.*, 39 CCPA (Patents) 764, 193 F.2d 204, 92 USPQ 128.

However, various rules have been developed for the purpose of aiding in the determination of the question of confusing similarity. It is well settled that the marks must be considered in their entireties. *Apollo Shirt Co. v. Enro Shirt Co., Inc.*, 35 CCPA (Patents) 849, 165 F.2d 460, 76 USPQ 329; *Valpo Co. v. Solis, Estrialgo y Compania*, 38 CCPA (Patents) 1160, 175 F.2d 457, 82 USPQ 182. But different features may be analyzed to determine whether the marks are confusingly similar, *Hoffmann-La Roche, Inc. v. Rock D. Keswick, Etc.*, 32 CCPA (Patents) 954, 148 F.2d 557, 65 USPQ 318, and similarities and dissimilarities should both be considered. *Youngbusband v. Kuriack Co., Inc.*, 25 CCPA (Patents) 856, 94 F.2d 230, 36 USPQ 323.

It has also been held that the common portions of the marks cannot be disregarded. *Schering & Glatz, Inc. v. Sharp & Dohme, Inc.*, 32 CCPA (Patents) 827, 146 F.2d 1019, 64 USPQ 396, but a descriptive word, which has little trademark significance, will not be regarded as the dominant part of the mark. *West Disinfecting Co. v. Lan-O-Sheen Co.*, 35 CCPA (Patents) 706, 163 F.2d 566, 75 USPQ 77.

[1] The question of similarity must be considered with respect to similarity of sound, appearance and meaning. *Coty, Inc. v. Perfumes Habana, S.A.*, 38 CCPA 1180, 190 F.2d 91, 90 USPQ 224.

[2] The Assistant Commissioner stated categorically that the marks "neither look alike nor sound alike." We do not think the issue may be so summarily determined. The question of similarity is ordinarily one of degree. The issue is whether the marks are confusingly similar, not whether they are identical. *Coty, Inc. v. Perfumes Habana, S.A.*, supra.

[3] We find that there is some similarity between the marks both in appearance and sound, possibly insufficient, when considered alone, to create confusion, but important in the overall assessment of the marks on the issue of confusing similarity. Each mark has three syllables with a hyphen separating the first from the second. Each has "Trop" and "ic" as two of its three syllables. The "ic" ending is common to both.

This brings us to consideration of similarity of meaning. The Examiner observed that the marks "are to some extent similar in connotation, in that both are suggestive of the fact that the motor oils to which they are applied are intended for use in both hot and cold weather * * *." The Assistant Commissioner stated that although the marks "suggest similar things they are so highly suggestive when applied to all-weather motor oils that the differences in sound and appearance are believed to be sufficient to avoid all reasonable probability of confusion, especially where, as here, opposer's mark, as used, is in the nature of a grade or type mark."

The marks "Trop-Artic" and "Frig-Tropic" are obviously identical in meaning, each connoting opposite extremes in temperature. While these extremes are, of course, inverted through a transposition of the hyphenated terms, the marks embody identical suggestions of the properties intended to be attributed to the motor oils.

In *Independent Nail & Pack. Co.* v. *Stronghold Screw Prod.*, 205 F.2d 921, 925, it was said:

> Of course no one has a right to preempt a word which has been commonly used to designate and identify the product to which it is applied. However, a trademark may consist of a word or words suggestive of the character of the goods or the properties which the owner of the mark wishes the public to attribute to them, such as "Holeproof." *Holeproof Hosiery Co.* v. *Wallach Bros.*, C.C. 172 F. 859, and be valid.

We do not agree that the marks are "so highly suggestive" as to warrant the conclusion reached by the Assistant Commissioner. They are certainly no more suggestive than the marks "Dear to Me" and "Endearing" as applied to perfumes and toilet articles. *Cecile Gagnon Co.* v. *Bourjois, Inc.*, 42 CCPA 972, 223 F.2d 731, 106 USPQ 208. There, registration of "Dear to Me" was refused on the ground of confusing similarity of meaning. The court agreed that the marks also had a "considerable similarity in sound," but went on to state:

> Suffice it to say, that this court has recently held that marks substantially identical in meaning alone, but attached to identical goods, may result in the likelihood of confusion, despite the fact that such marks are wholly unlike both in sound and appearance. *Hancock* v. *The American Steel & Wire Co. of New Jersey, Etc.*, 40 CCPA (Patents) 931, 203 F.2d 737, 97 USPQ 330.

Hillyard Chemical Co. v. *Vestal Laboratories, Inc.*, 41 CCPA 701, 708, 206 F.2d 926, 99 USPQ 117, relied on by the Examiner, is distinguishable on its facts. The marks there involved, "Shine-All" and "Briten-All," were highly suggestive of the nature of the goods to which they were applied—cleaning and polishing—but differed sufficiently in sound and appearance to avoid the likelihood of confusion.

[4] Measured by the criterion of likelihood of confusion, mistake or deception to purchasers, we are persuaded that an ordinary prospective purchaser of Phillips' all-weather motor oil, faced with a choice of cans bearing, as indicative of origin, only the respective marks "Trop-Artic" and "Frig-Tropic" would be likely to be confused or mistaken.

[5] We conclude that the marks now before us, when viewed in their entireties, and in every aspect, are so similar as to be likely, when applied to identical goods, to cause confusion or mistake or to deceive purchasers. If there were any doubt on the subject, that doubt would have to be resolved against the newcomer. *Vanity Fair Mills, Inc.* v. *Pedigree Fabrics, Inc.*, 34 CCPA 1048, 161 F.2d 226, 73 USPQ 438.

The decision of the Assistant Commissioner is accordingly reversed.

REVERSED.

MARTIN, *J.*, did not participate in decision.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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2,396,014, Koch and Robillard, Electron gun structures; 2,396,585, S. J. Koch, Contact terminals for electron tubes; 2,451,990, Tidik and Steadman, Process of forming a luminescent screen; 2,582,484, E. Pohle, Cathode grid assembly; 2,641,727, same, Cathode insulator; 2,722,163, A. Steadman, Process of forming luminescent screens; Re. 24,673, K. A. Hoagland, Electrostatic electron lens, filed May 23, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c802, *Allen B. Du Mont Laboratories, Inc.* v. *National Video Corporation.*

2,396,585. (See 2,396,014.)

2,431,657, J. H. Speed, Hand saw filing guide, filed May 20, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 580/60–T, *Speed Corporation* v. *Sears, Roebuck & Co.*

2,445,223, M. C. Fridolph, Body garment, filed Apr. 20, 1956, D.C., S.D.N.Y., Doc. 109/47, *Sarong, Inc. et al.* v. *Primrose Foundations, Inc.* Stipulation and order of discontinuance May 20, 1960.

2,451,990. (See 2,396,014.)

2,471,041, J. C. Milne, Supply equipment for electric arcs, filed May 24, 1960, D.C., S.D. Tex. (Houston), Doc. 13/176, *United States Insulation Corporation* v. *Billy Ed Hassell, doing business as Custom Home Improvement Co.*

2,582,367, B. Madsen, Separable fastener; 2,612,421, same, Slide fastener; 2,637,085, same, Fastener, filed May 19, 1960, D.C., S.D.N.Y., Doc. 60/2022; *Flexigrip, Inc.* v. *Equality Plastics & Merchants Bag Company.*

2,582,484. (See 2,396,014.)

2,612,421. (See 2,556,367.)

2,631,101, B. Cooper, Toll collection transaction printer; 2,632,126, same, Toll checking systems; 2,672,302, same, Treadle controlled toll checking system; 2,736,630, same, Toll checking system, filed May 13, 1960, D.C., S.D.N.Y., Doc. 60/1964, *American Electronics, Inc.* v. *Neptune Meter Company et al.*

2,632,126. (See 2,631,101.)

2,637,085. (See 2,556,367.)

2,641,727. (See 2,396,014.)

2,672,302. (See 2,621,101.)

2,690,618, Begle and Gaudreau, Milling cutter, filed May 23, 1960, D.C., W.D. Pa. (Pittsburgh), Doc. 60/368, *Futurmill, Inc. et al.* v. *Newcomer Products, Inc. et al.*

2,732,163. (See 2,396,163.)

2,736,630. (See 2,621,101.)

2,767,732, J. R. Neuschel, Tire tread construction, filed May 23, 1960, D.C., N.D.N.Y. (Utica), Doc. 8095, *Lucille H. Nueschel* v. *Firestone Rubber and Tire Company et al.*

2,836,918, R. Aronstein, Optical device for therapeutic and other purposes, filed Feb. 29, 1960, D.C., S.D.N.Y., Doc. 60/842, *Transmirra Products Corporation* v. *Sylvania Electric Products Co., Inc.* Stipulation and order of dismissal May 20, 1960.

2,862,343, R. M. Milton, Molecular sieve absorbents; 2,862,344, same, filed May 13, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c752, *Union Carbide Corporation* v. *W. R. Grace & Co., Inc. et al.*

2,862,344. (See 2,862,343.)

2,869,234, E. H. Belk, Automobile carpet, filed May 23, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39162, *Earl H. Belk* v. *C. P. Hunt Company.*

2,919,942, J. V. Kieruff, Travelling shiploading crane, filed May 12, 1960, D.C. Del. (Wilmington), Doc. 2204, *Jorgen V. Kieruff* v. *Commercial Metals Company.*

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Re. 24,673. (See 2,396,014.)

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Des. 181,228, Stahlhut and Meyer, Panel for lighting fixture or the like, filed May 20, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c937, *Day-Brite Lighting, Inc.* v. *Sandee Manufacturing Company.* Patent held valid and infringed; injunction issued Apr. 15, 1960.

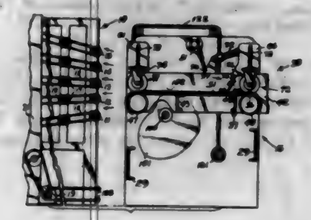
REISSUES

JULY 12, 1960

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,843
SHEET LOADING MECHANISM FOR MULTIDECK CONVEYOR

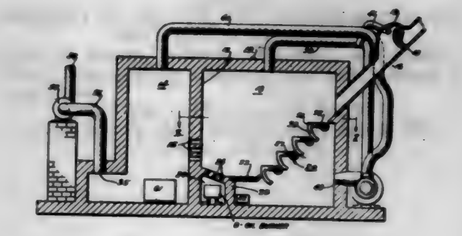
Otto G. Joddeich, P.O. Box 518, Gold Hill, Oreg.
Original No. 2,876,909, dated Mar. 3, 1959, Ser. No. 733,062, May 5, 1958. Application for reissue May 25, 1959, Ser. No. 815,763
10 Claims. (Cl. 271—64)



1. In sheet handling mechanism for handling sheets of predetermined length, a multiple deck receiving conveyor assembly having plural conveyor sections stacked one over another, a [pivotal] loading conveyor mechanism aligned longitudinally with said receiving conveyor assembly [and] *for* transporting sheets in a path toward said receiving conveyor assembly, said loading conveyor mechanism having a length substantially less than the length of said sheets and a pair of clamp means, one at each end of the loading conveyor mechanism, each having opposed clamp portions *for* clamping against opposite faces of a sheet *at least one of said clamping portions of each clamp means being rotatable and power driven whereby each clamp means is operable to move a sheet independently of the other*, a frame pivotally mounting the infeed end of said loading conveyor mechanism with the outfeed end thereof swinging up and down in a path past registering positions with the infeed ends of said stacked conveyor sections, said infeed end of said loading conveyor mechanism [swinging about] *having* a fixed pivot axis spaced at an elevation substantially centrally of the elevation of the upper and lowermost conveyor sections of said multiple deck receiving conveyor assembly *and extending substantially between the opposed clamping portions at the infeed end*, elevatable platform means adjacent the infeed end of said loading conveyor mechanism supporting stacked sheets to be fed to said loading conveyor mechanism, a cam member mounted on said frame rotatable about an axis extending transversely of the path of sheets transported by said loading conveyor mechanism and having a cam edge engaging a portion of said loading conveyor mechanism spaced from its infeed end, said cam edge having plural step portions radially offset at unequal distances from the rotation axis of said cam member and corresponding in number to at least the number of conveyor sections of said multiple deck receiving conveyor assembly, each of said step portions having an outline which gradually recedes from the rotation axis of said cam member, said step portions being separated by sharply receding cam edge portions, and power actuated drive means rotating said cam member and driving the conveyor sections of said receiving conveyor assembly conjointly and at related speeds.

24,844
COMBUSTION GAS RECUPERATOR AND SMELL AND SMOKE CONSUMER

Ovide Bouchard, deceased, late of Quebec, Canada, by Marie Villeneuve Bouchard, legal representative, Riviere des Prairies, Quebec, Canada, assignor to Daniel N. Crowley, Peabody, and Alma A. Gauthier, Salem, Mass.
Original No. 2,811,937, dated Nov. 5, 1957, Ser. No. 351,669, Apr. 28, 1953. Application for reissue Oct. 30, 1959, Ser. No. 856,883
4 Claims. (Cl. 110—8)



1. In fuel burning apparatus, a first chamber, a grate in said chamber, a second chamber, a vertical wall forming the division between said chambers, said wall having an orifice affording communication between said chambers, a burner in said first chamber adjacent said wall and below said orifice, an outside duct connecting the top of said first chamber with said first chamber below said grate, means operatively associated with said duct for sucking gases out of said first chamber into said duct for delivery of such gases back into said first chamber, an air admission device interposed in the length of said duct for admitting air from atmosphere into said duct to mix with the gases sucked out of said first chamber, means communicating with said second chamber below said orifice for sucking gases out of said second chamber for discharging such gases to atmosphere, and an outside duct connecting the top of said second chamber with said first chamber below said grate, said last-mentioned duct being operatively associated with said first-mentioned sucking means for sucking gases into said last-mentioned duct for delivery of such gases into said first chamber, a second air admission device interposed in said last-mentioned duct for admitting air from atmosphere into said last-mentioned duct to mix with the gases sucked out of said second chamber.

PLANT PATENTS

GRANTED JULY 12, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,958
ROSE PLANT
Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Oct. 1, 1959, Ser. No. 843,982
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of glossy green foliage, with attendant good contrast in combination with yellow flowers, freedom of flower production, with attendant suitability for greenhouse forcing, good form of the flowers in both bud and open stages, a uniform Empire Yellow general color tonality of the buds, lightly overcast with Martius Yellow on the outer edges of the petals, and absence of off-colored buds throughout the season, double form and slow-opening flower habit, a distinctive Empire Yellow general color tonality of the fully open flowers, with the outer edges of the flower petals lightly overcast with Baryta Yellow, prolonged retention of the flower colors, and unusual long-lasting qualities of the buds and open flowers.

1,959
PYRACANTHA PLANT
Walter Lee, Bellflower, Calif., assignor to Monrovia Nursery Co., Azusa, Calif., a corporation of California
Filed Dec. 19, 1958, Ser. No. 781,821
1 Claim. (Cl. 47—59)

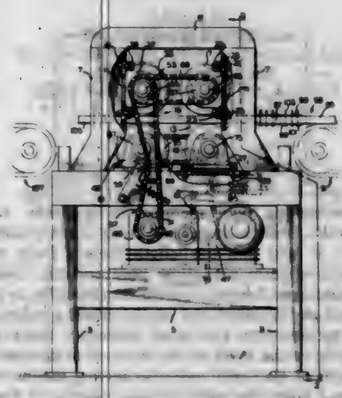
The new and distinct variety of Pyracantha plant, substantially as herein shown and described, characterized especially by its upright compact growth, its abundance of bright red berries, and the ability of the berries to retain their bright red coloration after exposure to cold weather.

PATENTS

GRANTED JULY 12, 1960

GENERAL AND MECHANICAL

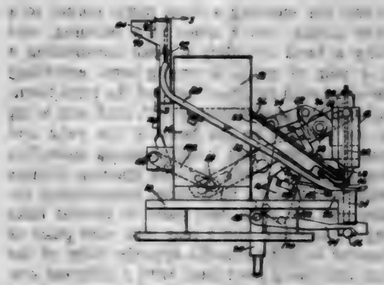
2,944,259
NAIL CLINCHING APPARATUS
Gail H. Templin, Bldg. 6, Airbase, Vero Beach, Fla.
Filed Apr. 16, 1959, Ser. No. 806,832
6 Claims. (Cl. 1—1)



1. A nail clinching apparatus for clinching the projecting pointed ends of nails extending through and securing connecting elements to and across adjacent components of structural trusses to provide an assembled truss, said apparatus including an inlet end and an outlet end and means for drawing assembled trusses successively into the apparatus through said inlet end and ejecting them from said outlet end following the clinching operation, and rotative means engageable with the projecting pointed ends of said nails for causing the clinching thereof, back up means spaced vertically from said rotative means, and engageable with the heads of the nails as a truss is drawn through the apparatus and between said rotative means and said back up means, said back up means being positioned closer to said inlet end than is said rotative means, and means for causing rotation of said rotative means.

2,944,260
MACHINE FOR MOUNTING RHINESTONES ON FABRIC
Anton Effgen, Westwood, Mass.
Filed Feb. 26, 1957, Ser. No. 642,438
6 Claims. (Cl. 1—3)

1. In a machine for affixing rhinestones to a fabric, a hopper for a supply of rhinestones, an inclined feed rail extending through a side of said hopper, said rail having a transversely inclined top face wider than the diameter of a rhinestone and a narrow flange along the lower edge of said top-face, a vertically reciprocal blade having its upper portion within said hopper and face to face against the flanged side of said rail, said blade having a top portion with a face inclined toward said rail, said inclined face of said blade being concave and tapering in width in both directions from an intermediate portion of maximum width, and means for reciprocating said blade from and to a low position in which its top is below the level of said top face.

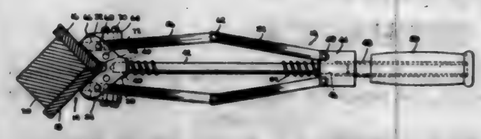


2,944,261
METHOD OF DRIVING STUDS INTO BODIES BY HIGH PRESSURE GASES
Walter E. Schulz, Wulfrath, Rhineland, and Georg I. Seitz, Braunschweig, Germany; said Seitz assignor to said Schulz
Filed May 4, 1955, Ser. No. 505,994
Claims priority, application Germany July 8, 1954
3 Claims. (Cl. 1—69)



1. A method of driving a stud having a shank with a high pitch thread into a body by means of gases under pressure, which includes the steps of: applying the force of gases under pressure to impart to said stud a relatively high velocity in an axial direction, and simultaneously imparting to said stud a rotation about its longitudinal axis in the same sense as that of the high pitch thread on said shank, thereby causing said shank to carry out a rotary movement of relatively high speed about its axis prior to said stud hitting said body.

2,944,262
CORNER CRIMPER
Oscar Richman, Jamaica, Solomon Richman, Bayside, Bruno Weissenberg, Queens Village, and Nicholas Fabrizio, Brooklyn, N.Y.; said Solomon Richman assignor to said Oscar Richman
Filed Apr. 14, 1958, Ser. No. 728,152
1 Claim. (Cl. 1—269)



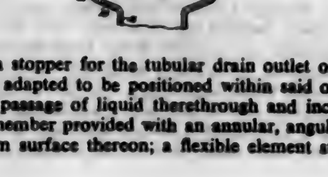
A building tool for securing a sheet metal corner to a building corner jutting into a space in a building, said tool comprising a head including a yoke constituting a body having a pair of equal diverging arms extending away from the same with the inner faces of the arms forming an internal angle of approximately 90°, each arm being bifurcated, a rod secured to the body of the yoke and extending away from the arms, a spiral spring encircling the rod, a shoe having a central through opening slidable on the rod, said spring being held under compression between the shoe and the yoke, two pairs of pivotal links each including a front link and a rear link, said pairs of links being located on diametrically opposite sides of the rod, each front link being associated with a different one of the arms, means pivotally connecting the back ends of the rear links to the shoe, means pivotally connecting the forward ends of the front links to the arms, and means pivotally connecting the back end of each front link to the forward end of its associated back link, and cutter members removably carried on the forward end of the front links, said cutter members being positioned between the bifurcations of the arms for retraction into the arms when the shoe is in its remotest position from the yoke and jutting from the inner faces of the arms between the bifurcations when the shoe is in its closest position to said yoke so that as the shoe is moved forwardly the cutting members shear tines from the sheet metal corner and clinch the tines in the building corner.

2,944,263
SAFETY HELMET WITH FACE GUARD
Donald H. Rayburn and Olaf J. Pedersen, Stroudsburg, and John J. Fischer, East Stroudsburg, Pa., assignors to Pocono Fabricators, Inc., East Stroudsburg, Pa.
Filed Feb. 24, 1958, Ser. No. 717,007
4 Claims. (Cl. 2—9)



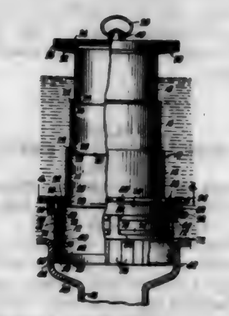
1. A safety device comprising in combination, a helmet adapted to substantially encase the head of the wearer and having opposite side cheek portions while having a frontal opening exposing the facial features of said wearer, and a facial feature protector comprising a U-shaped member adapted to encircle the otherwise unprotected features of the helmet wearer, said member terminating rearwardly in a pair of apertured end panel portions, a base plate fixed at each opposite side cheek portion of said helmet and having centrally extending pivot devices and serrated rim portions disposed concentrically of said pivot devices, a serrated disc centrally apertured and slip-fitted upon each of the said pivot devices with the serrations thereof meshing with the serrations of said base plates, said discs being exteriorly recessed and accommodating therein in angularly keyed relation said panel portions of said protective device, the apertured portions of said panel portions being slip-fitted upon said pivot devices, and screw means engaging said pivot devices and locking together into assembled predetermined angular relation said protector and said discs and said base plate and helmet unit.

2,944,264
PREFABRICATED SWIMMING POOL
Oscar J. Gagne, 5221 Greyton, and Bernard J. Brown, 8664 Penrod, both of Detroit, Mich.
Filed Feb. 11, 1957, Ser. No. 639,389
3 Claims. (Cl. 4—172)



1. A swimming pool member having side, end and bottom walls, said bottom wall being substantially horizontal for at least half the length thereof from one end of the pool to form a shallow pool end, the remainder of said bottom wall being formed downwardly to provide a deep end at the other end of the pool, a safety jacket in combination with said pool having a floor portion substantially at the level of the horizontal portion of the bottom wall of said pool and also having means for support thereof from the sides of said pool, said floor portion of said safety jacket having substantially the same dimensions horizontally as the deep end of the pool, said safety jacket being adapted to be positioned selectively over the shallow end of said pool to provide reinforcement for the horizontal bottom at said shallow end and over the deep end of said pool to provide a bottom therefor thereby reducing the depth thereof for the safety of non-swimmers.

2,944,265
COLLAPSIBLE SINK STOPPER STRUCTURE
Bruce Carmichael, 543 Nettleton, Independence, Mo.
Filed Mar. 18, 1958, Ser. No. 720,151
7 Claims. (Cl. 4—286)



1. In a stopper for the tubular drain outlet of a sink, structure adapted to be positioned within said outlet for blocking passage of liquid therethrough and including a tubular member provided with an annular, angularly disposed cam surface thereon; a flexible element surrounding said member; an annular component interposed between said element and the member and having a series of segments integral therewith and slidably engaging and extending around the circumference of said surface; a ring rotatably carried by said member and having a series of circumferentially disposed, inclined cam faces thereon; and means coupled with said component and including parts slidably engaging said cam faces for moving the component relative to the member in a direction to shift the segments thereof on said surface toward the greatest diameter of the same as the ring is rotated in a direction to cause said parts to slide up the incline of respective cam faces whereby the element may be expanded into uniform engagement with the proximal inner surface of outlets of various diameters in circumferentially extending, liquid sealing relationship thereto.

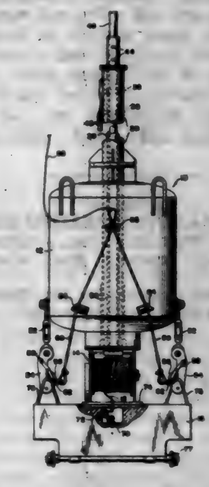
2,944,266
PILLOW OR CUSHION
Kurt Wertheimer, 1263 S. Highland Ave., Los Angeles 19, Calif.
Filed Feb. 7, 1957, Ser. No. 638,773
1 Claim. (Cl. 5—341)



A pillow or cushion comprising, a casing including generally spherically curved casing sections which are arranged in opposed relation, an air-proof substantially flat sheet arranged between the casing sections and having its marginal edge arranged between the marginal edges of the casing sections, means securing all of the marginal edges together, the sheet forming with the casing sections separate compartments, a compressible unitary filling element formed entirely of foam rubber arranged within one compartment only, said element including a spherically curved back element and a plurality of spaced parallel ribs which are integral with the back element, said ribs being straight throughout their vertical and horizontal lengths and arranged at a right angle to said sheet, said ribs being separated from and contacting with said sheet, said ribs being arranged in a group extending longitudinally of the compartment within which the ribs are mounted, said ribs decreasing in vertical dimensions toward the ends of the group and said compartment, each rib tapering longitudinally toward its opposite ends, each rib having an upper spherically curved edge each rib extending transversely of its compartment and having its reduced ends arranged near the transverse sides of said compartment, and a down filling arranged within the other compartment and upon the opposite side of said sheet and contacting with the sheet and outer casing section, said down filling having a higher degree of compressibility than said unitary filling element formed of foam rubber the arrangement being such that the down filling and the foam rubber filling element provide the opposite side portions of the pillow or cushion with different degrees of softness or compressibility.

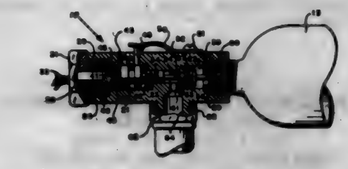
2,944,267
BUOY
Mark Kurtz, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 8, 1958, Ser. No. 747,319
1 Claim. (Cl. 9—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A buoy assembly comprising, a buoyancy chamber, a tubular member extending axially of said buoyancy chamber and intersecting the opposite ends thereof, said tubular member being fixedly connected to said buoyancy chamber, a counterweight pipe telescopically mounted within said tubular member and adapted to move downwardly thereof to a position outward of said buoyancy chamber, stop means for arresting outward movement of said counterweight pipe, a mooring wire reel fixedly attached to the lower end of said counterweight pipe to serve as both a wire storage means and a counterweight, a length of mooring wire wound on said mooring reel, an anchor block fixedly attached to the free end of said mooring



wire, a latch means for selectively maintaining said anchor block in direct surface contact with the lower end of said mooring reel and maintaining the mooring reel and counterweight pipe in retracted position relative to said buoyancy chamber, whereby said buoy assembly has substantially less vertical height prior to release of said latch means than after release thereof and subsequent launching of the assembly, and a plurality of wheels on the lower side of said anchor block whereby the entire buoy assembly may be rolled about prior to launching from a ship.

2,944,268
ACTUATING MECHANISM FOR EXPANDING AN INFLATABLE ARTICLE
Adel J. Fruendt, 17 S. York Road, Hatboro, Pa.
Filed Apr. 28, 1959, Ser. No. 809,580
5 Claims. (Cl. 9—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. In an explosion-operated actuating mechanism, housing means, a first, second, and third cylindrical opening formed in said housing, first piston means slidably disposed in said first cylindrical opening, second piston means loosely and slidably disposed in said second cylindrical opening, said second and third cylindrical openings being coaxial with each other and eccentric to said first cylindrical opening, said first piston means being adapted

to be explosively actuated towards and axially displace said second piston means, means for limiting the travel of said first and second piston means, sealing means disposed about said first piston means for preventing the transgression of pressure fluid therepast, valve seat means formed at the mouth of said second cylindrical opening and projecting into said third cylindrical opening, said second piston means being enlarged at a midportion thereof and having annular valve means adapted to seat upon said valve seat means and partition said second and third cylindrical openings, lateral duct means communicating with said second cylindrical opening means between said sealing means and said valve seat means, said third cylindrical opening being adapted to have a pressure fluid capsule secured therein in such a manner that the axial displacement of said second piston means causes the unseating of said valve means and the release of pressure fluid from the capsule into said lateral duct means via said third and second cylindrical openings, respectively.

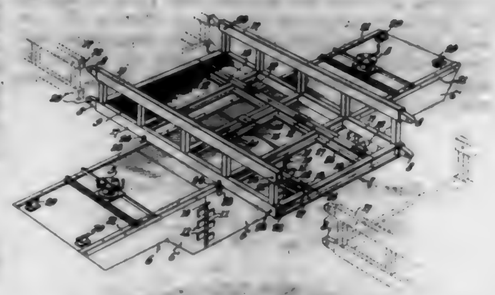
2,944,269
METHOD OF MAKING A BEADED SHOE WELT
Percy W. Greene, Whitman, Mass., assignor to Barbour Welting Company, Brockton, Mass., a corporation of Massachusetts
Filed Mar. 19, 1958, Ser. No. 722,506
2 Claims. (Cl. 12—146)



1. The method of making a beaded shoe welt having an inseam flange along one of its marginal edges and a welt extension along its other marginal edge from a relatively thick fillet of welt stock which comprises the steps of providing a flap in the body of the fillet, one end of the flap being cut from the marginal edge of the fillet which will be the inseam flange of the finished welt and the other end of the flap being integral with the body of the fillet, removing a strip from the fillet underlying the portion of the fillet which will be the welt extension in the finished welt to thereby reduce the thickness thereof and to form a shoulder adjacent the marginal edge which is to be the inseam flange, providing a core member in the body of the fillet, folding a portion of the flap over the core and securing the remaining portion of the flap to the surface of the fillet along the marginal edge which is to be the inseam flange in the finished welt to form an upstanding bead, a welt extension and an inseam flange, and then molding the inseam flange laterally to increase the width of the welt.

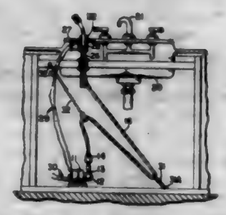
2,944,270
REVOLVING AND FOLDING MOBILE FLOATING BRIDGE
John J. Pearse, U.S. Army
Filed June 17, 1957, Ser. No. 666,257
2 Claims. (Cl. 14—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. A bridge construction comprising a main bridge deck and a foldable deck portion hingedly secured to each one of a pair of opposite sides of said main bridge deck, a pair of complementary members extending along each one of said pair of opposite sides of said bridge deck, each pair of said complementary members comprising an I-beam secured to an outboard edge of one of said pair of opposite sides of said main bridge deck and a channel beam secured to an inboard edge of each one of said foldable deck portions with the flanges thereof facing the outboard direction, a plurality of hinges connecting the I-beam and the channel beam of each pair of said complementary members to permit folding each said foldable deck portion onto said main bridge deck, a plurality of drilled lugs attached to the web of the channel beam of each said pair of complementary mem-



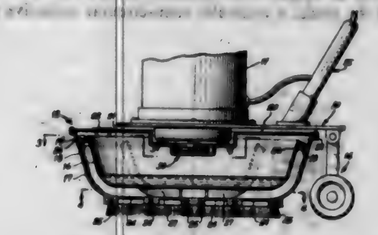
bers on a side opposite the flanges thereof and juxtaposed over each other and a plurality of pins fitting through the I-beam flanges and the juxtaposed lugs locking each of said foldable deck portions in the open position, and railings extending from the outboard edge of each of said foldable deck portions, said railings having alternate male and female connections at their ends for joining to similar bridges.

2,944,271
POT CLEANING DEVICES
Elmer C. Foster, Plymouth County, and Frances O. Foster and Leo Foster, Suffolk County, Mass., assignors to Fromlee Development Corporation, Dorchester, Mass., a corporation of Massachusetts
Filed Nov. 18, 1957, Ser. No. 696,973
4 Claims. (Cl. 15—28)



1. A utensil cleaning device, comprising a motor means arranged to have its shaft rotatable at a speed in the order of magnitude of 150–300 revolutions a minute, slip clutch means attached on one side to said motor shaft and on the other side to a flexible rotatable cable shaft, a flexible waterproof sheath coextensive with and surrounding the flexible cable shaft, a bearing handle within which the cable shaft terminates, and a rotatable scouring unit coupled to the cable shaft termination, said handle being positioned in an aperture on a sink, said aperture containing an upper collar section and a lower narrower bottom section, said handle being smaller than the diameter of said upper section, said upper section containing a spring actuated switch having a finger extending into said upper collar section, said switch being operated by said handle moving vertically in and out of said aperture.

2,944,272
CLEANING MACHINE
Raymond C. Mennonico, 184—55 Tudor Road, Jamaica, N.Y.
Filed Oct. 4, 1955, Ser. No. 538,364
11 Claims. (Cl. 15—50)



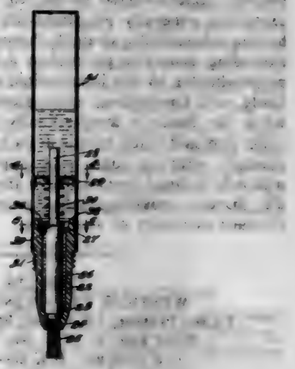
11. In a rotatable applicator, the combination with a motor and a brush rotated by said motor, of a reservoir adapted to be rotated by said motor and adapted to contain a supply of liquid therein, a laterally projecting flange at an upper edge of said reservoir having openings therein, means connected to the openings forming a passageway for said liquid between said reservoir and said brush, and means interconnecting said motor and said reservoir, whereby upon rotation of said reservoir by said motor the liquid is centrifuged through said openings along said passageway into said brush.

2,944,273
COMBINATION CONTAINER AND MASSAGE BRUSH
Stephen W. Harris, Kansas City, Mo., assignor to Lucky Tiger Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Filed Sept. 12, 1957, Ser. No. 683,595
1 Claim. (Cl. 15—105)



Hair grooming structure comprising an elongated, hollow handle having a bottom wall, a relatively inflexible, cylindrical side wall, and an uppermost annular edge defining an opening, rendering the handle adaptable to receiving a hair grooming subetance; a cover for said opening comprising a disc-like element of flexible material having a circular edge and a pair of opposed, flat, parallel surfaces, one of said surfaces normally engaging said edge of the handle, a downturned, annular side wall integral with said element and depending from said one surface in surrounding relationship to the handle; a first bead integral with the side wall of the cover and surrounding the handle; a second bead integral with the handle and surrounding the latter adjacent said edge, the second bead being clamped between the first bead and said one surface, said beads having tightly interengaging, dove-tailed surfaces whereby the cover snaps into place when mounted on the handle; a finger piece integral with the side wall of the cover and extending radially outwardly therefrom for manually snapping the cover off the handle; and scalp massaging and brushing means on said cover including a plurality of closely juxtaposed, identical fingers integral with said cover and extending outwardly from the outer of said surfaces of the element throughout substantially the entire area thereof, each finger being substantially a solid, truncated cone with the outermost apex and thereof dome-shaped.

2,944,274
FOUNTAINBRUSHES FOR MOBILE MATERIAL
Cecil L. Hopkins, 120 Harding Way West, Galion, Ohio
Filed Sept. 14, 1953, Ser. No. 379,851
2 Claims. (Cl. 15—139)



1. In a fountain type liquid applying device comprising a hollow housing open at one end and having an internal reservoir chamber for liquid, a tubular nozzle having base and tip ends, the base end being received in the end opening of the housing in assembly, the nozzle being formed with a through passage having an inlet through the base end continuous with the chamber, a restriction providing a valve seat adjacent the tip end, and a discharge outlet through the tip end, an elongated stem extending longitudinally in the nozzle passage and having an inner end portion projecting through the inlet into the housing chamber, a deformable applicator fast on the outer end of the stem, the stem and applicator comprising a unit movable axially in the nozzle passage in one direction to engage the outer end of the stem locatingly and sealingly against the valve seat and to project the applicator through the outlet for use and in a reverse direction to retract the applicator into the nozzle passage for storage, a first washer fast in the nozzle and surrounding the stem as a guide to center the stem in the passage, a second washer fast in the housing and surrounding the inner end portion of the stem as a guide to center the stem in the chamber, the washers each surrounding the stem with intervening clearance providing for gravity flow of liquid past the washers axially of the stem, spring means seated on the second washer and reacting against the stem to bias the applicator unit to use position, the applicator and said outer end of the stem being receivable through the inlet opening of the nozzle and through the first washer in such assembly, and said inner end portion of the stem being receivable through the end opening of the housing and the second washer in such assembly.

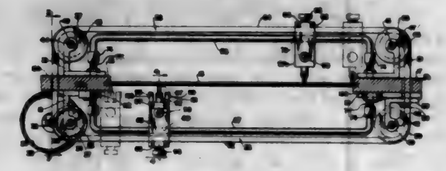
2,944,275
ROLLER SCRAPER
Jimmie Markusen, Fairdale, N. Dak.
Filed Aug. 27, 1957, Ser. No. 681,872
1 Claim. (Cl. 15—236)



A scraper for longitudinally removing accumulated material from a cylindrical member such as a roller com-

prising a substantially rigid continuous, unbroken metal blade of arcuate cross sectional shape substantially throughout its length and tapering from its rearward portion to the forward end thereof, the arc at the forward end of the said blade conforming generally in close relation to the peripheral shape of rollers to be scraped, a handle member rigidly affixed to the rear end of said blade and extending generally longitudinally therefrom, said blade having substantially straight, sharpened longitudinal edges extending generally parallel to a central plane which is perpendicular to the longitudinal central surface of said blade, said longitudinal edges providing a shearing action when the blade is longitudinally reciprocated against a roller and said blade having at its forward end a transverse concave scraping edge lying approximately in a plane which is inclined rearwardly in the direction of said handle, thereby providing spaced pointed tip portions at the forward extremity of said blade.

2,944,276
WINDOW CLEANING DEVICE
Leiser Presser, 1367 46th St. Brooklyn, N.Y.
Filed June 6, 1958, Ser. No. 740,325
5 Claims. (Cl. 15—250.24)



1. In a window cleaning device for operative attachment to a window structure, front and rear window cleaning elements positioned on opposite sides of the pane of the window structure and in slidable engagement with the respective front and rear surface of said pane, a carrier member for each of said elements, resilient means mounted on said carrier members for urging said cleaning elements toward the window pane with respect to said carrier members, front and rear rigid guide bars rigidly anchored in spaced parallel relation to the respective front and rear surfaces of said pane, apertured portions extending through said carrier members in directions parallel to the plane of the window pane, a movable belt having front and rear sections supporting said respective carrier members, said belt extending through said window structure, said guide bars extending through and being in slidable engagement with said respective apertured portions in the carrier members, a plurality of pulleys supported by said structure and operatively supporting said belt, and actuating means for said belt, whereby the operative movement of said belt will simultaneously cause operative movements of said carrier members and their said respective cleaning elements.

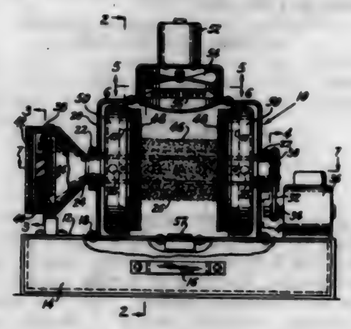
2,944,277
SIDE-MOUNTED REAR VIEW MIRROR FOR VEHICLES HAVING WIPER MEANS THEREON
Thomas J. Ochello, 223 Oak Drive, and Thomas J. Ochello, 904 Ekret Road, both of Marrero, La.
Filed Jan. 31, 1958, Ser. No. 712,513
1 Claim. (Cl. 15—250.3)

For mounting upon a mirror support frame of a truck, a combination mirror and wiper unit comprising: a backing plate including a planiform, semi-circular body portion, coaxially aligned studs projecting outwardly from the respective ends of the body portion as longitudinal extensions of the straight side of the stud for mounting the backing plate upon a side view mirror support frame for pivotal movement about the common axis of the studs, and a lateral extension integrally formed upon the body portion at said straight side thereof and lying in a plane common to that of the body portion, said body portion and lateral extension having substantially their entire areas at respectively opposite sides of said common axis of the studs; a generally semi-circular reflective panel



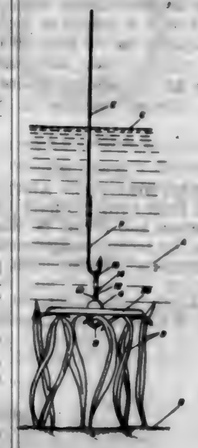
overlying and connected to the body portion; a motor mounted upon said lateral extension; a wiper blade supported at one end upon the extension for oscillating movement about an axis normal to said common axis of the studs, said blade overlying the panel in position to traverse the same when oscillated; and a driving connection between the motor and blade.

2,944,278
ROTARY SHOE BRUSHING AND POLISHING APPARATUS
Jack L. Ballard, 713 Hartford Place, Broken Arrow, Okla.
Filed July 23, 1959, Ser. No. 829,154
6 Claims. (Cl. 15—311)



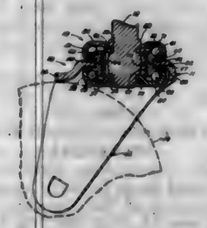
1. A shoe cleaning apparatus comprising a rotary brush means consisting of a cylindrical brush flanked by a disc brush at each longitudinal end thereof, said two disc brushes and said cylindrical brushes being mounted for rotation on a common hollow shaft with the disc brushes being opposed and having their bristles extending inwardly, a base, bearing means for said hollow shaft, and support means for said bearing means mounted on said base, means for rotating said hollow shaft, said base providing a shoe rest beneath said rotary cylindrical brush and between said flanking disc brushes for supporting a shoe in operative contact with said cylindrical brush and said flanking disc brushes, said hollow shaft being perforated within said brush means, aperture means in said cylindrical brush means communicating with the perforations in said hollow shaft for directing air through said brush means from within said hollow shaft, and means for directing air about said cylindrical brush and between said disc brushes toward said shoe rest.

2,944,279
DEPTH FINDER FOR FISHERMEN
Eugene R. Pazz, Rte. 1, Box 548, and Claude J. Pazz, Rte. 4, Box 219, both of Waupaca, Wis.
Filed May 28, 1958, Ser. No. 738,522
2 Claims. (Cl. 16—1)



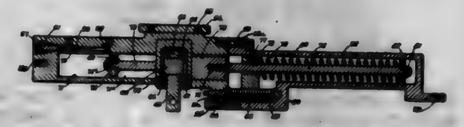
1. A depth measuring device for use by a fisherman comprising a disk-like perforated plate provided around its outer marginal edge with an inverted endless imperforate channel-shaped rim, said plate being centrally provided with a hole, the marginal edge of the hole providing an attaching flange, and a relatively heavy weight of generally cylindrical cross-sectional form fitted through said hole and having its median portion provided with a channel-like groove, said flange being keyed in said groove, said weight being vertically elongated and having an upper half-portion projecting to a plane above the plane of the plate and a corresponding lower half-portion depending below the bottom plane of said plate, and means carried by said weight and having an eye accessible at the upper end of the weight, said eye being adapted to accommodate a swivel for a fishing line.

2,944,280
CASTER SWIVEL CONSTRUCTION
John W. Black, Kalamazoo Township, Kalamazoo County, Mich., assignor to Pomco Wheel Company, Kalamazoo, Mich., a corporation of Michigan
Filed Aug. 15, 1957, Ser. No. 678,287
5 Claims. (Cl. 16—21)



1. In a swivel mechanism for a swivel caster having a mounting plate, said swivel mechanism including a pair of flanged bearing ball retainer rings on opposite sides of, and spaced from, said mounting plate, a pair of thrust rings disposed between said retainer rings and on opposite sides of said mounting plate, the flange of each of said retainer rings encircling and being radially spaced from the adjacent thrust ring, and a plurality of bearing balls disposed between each retainer ring and adjacent thrust ring, the combination comprising: a pair of flexible, expansible and resilient sealing rings having inside diameters normally smaller than the outside diameters of said thrust rings, said sealing rings being substantially flat in their unstressed condition and being expanded and sleeved over said thrust rings so that the inner portions of said sealing rings snugly but releasably engage said thrust rings adjacent to said mounting plate; means on said thrust rings holding the radially inner portions of said sealing rings against axial movement away from said mounting plate, the engagement of each thrust ring by the inner portion of each sealing ring effecting an axial deflection of the peripheral portion of said sealing ring, toward the flange of the adjacent retainer ring, said peripheral portion being in sealing engagement with the adjacent retainer ring radially outwardly of said bearing balls.

2,944,281
BALANCED DOOR CONSTRUCTION
John A. Gullick, Tulsa, and John C. Canfield, Oklahoma City, Okla., assignors to Rote-Swing Door Company, Inc., Oklahoma City, Okla., a corporation of Oklahoma
Filed July 5, 1956, Ser. No. 595,978
1 Claim. (Cl. 16—85)

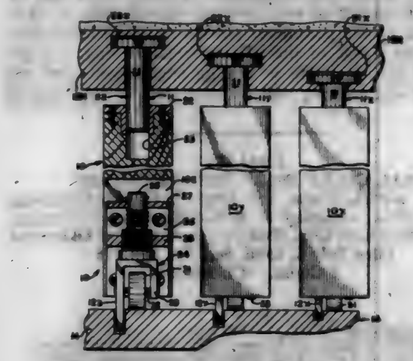


In a door check structure adapted to be disposed in the lower leaf of a door comprising a housing having horizontally aligned cylinders, a projecting portion provided in the housing, a pinion gear disposed in the projecting portion and adapted to be secured to an upstanding stud of a door hinge, a rack bar horizontally disposed in one of the aligned cylinders and engageable with the pinion gear for movement in opposite directions in response to rotation of the gear upon rotation of the stud during opening and closing of the door, a rod extending horizontally from one end of the rack bar and having a helical spring disposed therearound, means for anchoring each end of the spring disposed at either end of said bar, screw jack means providing for sliding movement of the anchoring means at one end of the bar for adjusting the tension of the helical spring, a piston rod extending from the opposite end of the rack bar in horizontal alignment with the helical spring, a piston carried by the rod and movable in one of the cylinders in opposite directions in response to movement of the rack bar, dash pot means for controlling the movement of the piston in one direction in response to actuation by the spring when the spring expands between the anchoring means and comprising a pair of horizontally disposed passageways provided in the housing, one of said passageways of greater length than the other of said passageways and both passageways communicating with said last mentioned cylinder at each end thereof, and valve means provided at one end thereof in each of said passageways for controlling the fluid flow through the passageways upon movement of the piston in one direction.

2,944,282
CONCEALABLE PARTITIONS
Michael Greco, 42 W. 13th St., New York, N.Y.
Filed Aug. 17, 1959, Ser. No. 834,058
5 Claims. (Cl. 16—87)

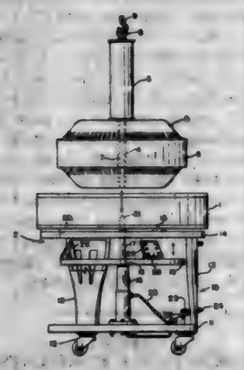
3. A concealable wall apparatus comprising a plurality of vertically disposed and separately movable partitions; a pair of spaced-apart T-bars disposed in the top edge of each of said partitions, the T-bars of one partition vary-

ing in height from the T-bars of other partitions; a pair of spaced-apart roller means disposed in the bottom edge of each of said partitions adapted to support the weight of the partition on the rollers, each of said roller means having a U-shaped yoke having a depending lug of pre-determined length, the depending lugs of one partition varying in length with the depending lugs of other partitions; a ceiling guide rail having spaced-apart horizontally disposed channels communicating with a centrally disposed vertical channel, said T-bars of varying length of said partitions being disposed in respective re-



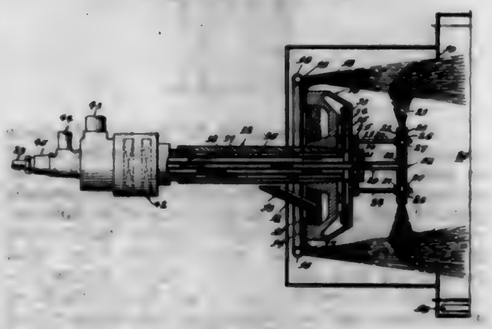
ceiving horizontally disposed channels of said ceiling guide rail; a floor guide rail having a single vertically disposed channel adapted to receive the depending lugs of all of said roller means; a ceiling routing block engaging said ceiling guide rail and adapted to transfer partitions having T-bars of uniform height into stalls adapted to receive said uniform height T-bars, and a floor routing block disposed directly below said ceiling block and adapted to transfer partitions having lugs of uniform length into stalls adapted to receive said uniform length lugs.

2,944,283
CENTERING DEVICE
Melbourne R. Lawson, Macon, Ga., assignor to Clement O. Dennis, Macon, Ga.
Filed May 19, 1958, Ser. No. 736,307
10 Claims. (Cl. 18—2)



1. A centering device for locating a tire casing and a band mold matrix relative to each other during a loading operation in which a loading device having a centrally located sleeve is used, said centering device comprising, in combination, a base, wheel means supporting the base, a substantially horizontal plate erected from and stationary relative to the base, a guide rod defining a reference axis, the mold matrix being placed upon the plate in a position such that it is roughly centered relative to the reference axis, cam means concentric relative to the reference axis, and means for moving the cam means from a first position below the plate to a second position above the plate, the cam means being adapted to contact the mold matrix as it is moved to the second position to shift the mold matrix on the plate to a centered position relative to the reference axis, said guide rod cooperating with the sleeve of the loading device to guide the tire casing into a centered position in the centered mold matrix.

2,944,284
BINDER DISTRIBUTION AND ATOMIZING SYSTEM FOR FIBERIZING APPARATUS
Wesley T. Tillotson and Floyd W. Easterday, Wilmette, Ill., assignors, by mesne assignments, to United States Gypsum Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 9, 1957, Ser. No. 689,168
7 Claims. (Cl. 18—2.5)



3. In a fiberizing unit, a distributing rotor rotating about a horizontal axis for receiving and centrifugally ejecting therefrom molten fiber-forming material in an annular pattern and in a substantially vertical plane, a fiberizing steam ring for intercepting and drawing the ejected molten fiber-forming material into individual fibers and projecting these fibers rearwardly from the rotor in a cone of high-velocity steam and air, a pair of spaced plates carried by, spaced rearwardly from and rotatable with said rotor, and a stationary tube for discharging the binder solution into the space between said plates, said plates when rotated by said rotor atomizing and centrifugally ejecting said binder solution from the center of said cone outwardly in a substantially vertical plane and in a radial pattern into and through the encompassing cone of fibers after such fibers have been formed and projected by the high velocity steam and air from the steam ring for uniformly coating the individual fibers with the binder.

2,944,285
APPARATUS FOR PROCESSING ELASTOMERIC MATERIAL
Thomas J. Rhodes, Smoke Rise, Kinnelon Borough, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed June 13, 1958, Ser. No. 741,963
11 Claims. (Cl. 18—12)

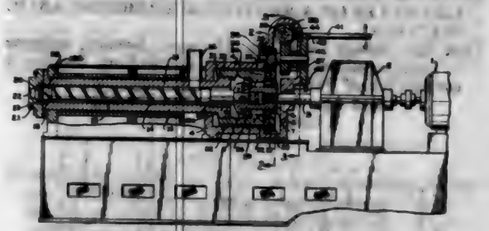
1. Apparatus for processing elastomeric material comprising inner annular means for supporting elastomeric material thereon; unsupported outer annular means substantially surrounding said inner annular means and displaced therefrom by the elastomeric material; means for developing an area of pressure between said outer annular means and the material on said inner annular means

along a minor portion of the periphery of said outer annular means; and means for causing said area of pressure to revolve continuously around said periphery of said



outer annular means between said inner and outer annular means to cause a continuous rotary displacement of said area of pressure.

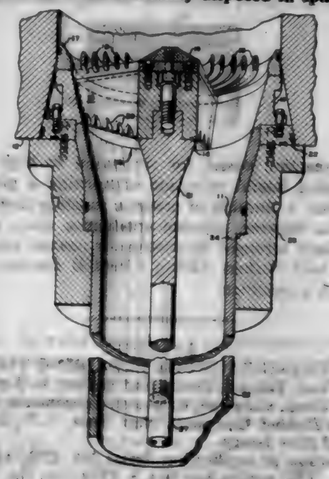
2,944,286
EXTRUSION SCREW ADJUSTING MECHANISM
Gilbert V. Kallgren and Daniel W. Stephenson, Akron, Ohio, assignors, by mesne assignments, to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Oct. 14, 1958, Ser. No. 767,145
6 Claims. (Cl. 18—12)



6. In an extrusion press, supporting structure, an exarusion barrel carried by the supporting structure, an extrusion screw within the extrusion barrel, a separately formed thrust sleeve fixed to and in driving engagement with the inboard end of the extrusion screw, means for driving the thrust sleeve while permitting longitudinal movement thereof, a locating sleeve having internal threads in threaded engagement with external threads on the inboard end of the extrusion barrel, anti-friction thrust bearing means carried by the locating sleeve and supporting the thrust sleeve, and means for rotating the locating sleeve while the press is operating thereby simultaneously moving the locating sleeve bearing means, thrust sleeve and extrusion screw longitudinally relative to the extrusion barrel.

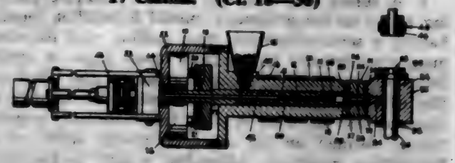
2,944,287
APPARATUS FOR AND METHOD OF EXTRUDING PLASTIC MATERIALS
Jesse N. Moran, Waco, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 28, 1956, Ser. No. 606,718
3 Claims. (Cl. 18—14)

2. An extrusion machine for extrusion molding of a solid plastic heterogeneous propellant material comprising a rubber fuel component having an oxidizer salt uniformly dispersed therein, which machine comprises, in combination: a die; means for forcing said propellant through said die; a mandrel; and means for holding said mandrel within said die; said mandrel-holding means comprising: a hub; a plurality of arm members each extending radially from said hub, each said arm member having an upstream edge and a rounded downstream edge; a plurality of arcuate shaped tapered grooves alternately disposed with respect to each other in the lower portion of each side of each said arm member, said grooves tapering and extending from said downstream edge to a point intermediate said downstream edge and said upstream edge; a ring member connecting the outer ends of said arm members; means for attaching said mandrel to said hub; and a plurality of breaker rings of increasing diameter concentrically disposed in spaced apart



relationship around said hub and mounted in recesses in the upstream edge of said arm members, said breaker rings extending in an upstream direction from said upstream edge of said arm members and each successive breaker ring in an outward direction from said hub being thicker than the preceding breaker ring.

2,944,288
COMBINATION PLASTICIZER, EXTRUDER AND INJECTION CYLINDER WITH RECIRCULATION
Orville B. Sherman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 28, 1957, Ser. No. 636,559
17 Claims. (Cl. 18—30)



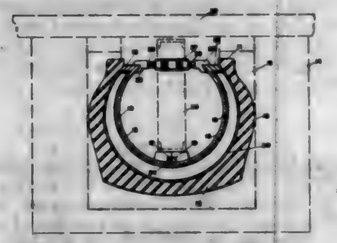
17. In a method of making a number of successive individual plastic articles from solid plastic material supplied to a housing to be advanced therethrough by a continuously rotating extruder screw at a normal extruder output pressure, the exit end of the screw communicating with an orifice, the solid material being rendered fluid during its passage intermediate the housing and the exterior periphery of the screw therein, the steps of interrupting communication between the screw exit end and the orifice intermediate the forming of successive articles, accumulating that material supplied by the screw during such interruption, venting excess accumulated material to that exterior peripheral portion of the screw at which the material in the housing is fluid, thereby recirculating a portion of the accumulated material, simultaneously interrupting the venting of the accumulated material and issuing through the orifice the accumulated plasticized material during interruption of communication between the screw exit end and the orifice, reestablishing communication between the screw exit end and the orifice, and issuing plastic material through the orifice from the screw.

2,944,289
REACTION VESSEL
Howard Tracy Hall, Niskayuna, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 18, 1955, Ser. No. 529,100
4 Claims. (Cl. 18—34)



1. A reaction vessel for subjection to high pressure with limited lateral extrusion comprising a plurality of metal discs, a plurality of pressure resisting stone washers positioned between adjacent conductive discs, said discs and washers arranged in contiguous coaxial relationship, each of said washers having a central aperture adapted to contain a specimen.

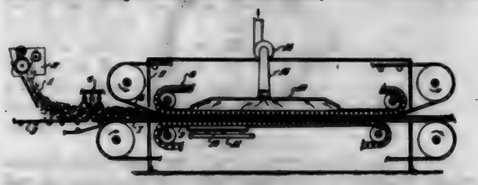
2,944,290
CURING BAGS FOR REPAIRING TIRES
Anton Feist, Yakima, Wash., and Delbert E. Taylor, Portland, Oreg., assignors, by mesne assignments, to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Continuation of application Serial No. 590,281, June 8, 1956. This application Oct. 3, 1958, Ser. No. 765,193
4 Claims. (Cl. 18—45)



1. A curing bag assembly for tire repairing comprising a pair of longitudinally curved foundation members having a semi-cylindrical cross section, said foundation members normally having their lower edges in abutting relation, interengaging means formed on said lower abutting edges of said foundation members for holding said edges of said members in alignment, outwardly extending flanges formed on the other peripheral edges of said foundation members, adjustable means extending between the upper edges of said foundation members for maintaining said upper edges in spaced aligned relation, a curing bag overlying said foundation members between said outwardly extending flanges, and means for circulating a curing medium through said bag, whereby the bag and tire may be maintained at a proper temperature during the vulcanization of the repair.

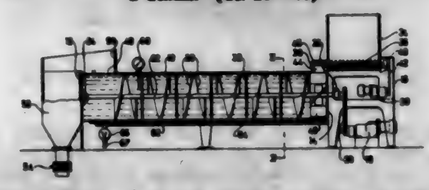
2,944,291
PROCESS FOR STEAM TREATING MAGNESIUM CEMENT FIBROUS PANELS
William L. Prior and Howard J. Snelson, Newark, Ohio, assignors to Tectum Corporation, Columbus, Ohio, a corporation of Ohio
Filed Oct. 28, 1957, Ser. No. 692,922
13 Claims. (Cl. 18—47.5)

1. The method of forming a low density porous panel composed of fibrous material and a magnesium cement binder composed of water-borne magnesium oxide and magnesium salts of the group of sulphate and chloride, said binder being settable upon hydration by an exothermic reaction, which method consists essentially of forming a porous layer of fibers each of which is thoroughly coated with said cementitious binder, compacting the porous layer so formed between compressing surfaces and, while holding the layer between said compressing surfaces, saturating said porous layer with an aqueous fluid at a temperature of substantially 212° F. so as to



rapidly bring said layer to an internal temperature of substantially 212° F. under conditions of excessive moisture, whereby to rapidly accelerate and carry to completion the exothermic reaction of said cement binder to set said layer against expansion while holding it between said compressing surfaces.

2,944,292
METHOD FOR PRE-EXPANDING EXPANDABLE GRANULES OF A SYNTHETIC THERMOPLASTIC MATERIAL
Lars Stea Robert Norrhede, Alvangen, Sweden, assignor to Isoleringaktiebolaget WMB, Gothenburg, Sweden, a corporation of Sweden
Filed Apr. 4, 1956, Ser. No. 576,851
1 Claim. (Cl. 18—48)



The method of expanding granules of a synthetic thermoplastic material which comprises maintaining a confined body of liquid at an elevated temperature which is sufficiently high so as to render the thermoplastic material sufficiently soft for expansion, said liquid body comprising a plurality of successive zones, the first of which is a feeding zone, the final one a discharge zone, and an intermediate zone through which the granules have a horizontal progression, continually feeding to said feeding zone granules of the synthetic thermoplastic material having a specific gravity about the same as that of the liquid, dispersing said granules and imparting thereto a forward progression into said intermediate zone, agitating said granules and disintegrating agglomerations thereof while progressing forwardly through said intermediate zone for retarding the rate of progression and the time of transit to determine the degree of expansion and reduction of the specific gravity of the expanded granules and to cause them to float to the liquid surface upon reaching the discharge zone.

2,944,293
DENTURE MATERIAL COMPOSITION AND METHOD OF PRODUCING DENTURES
Philander B. Taylor, Larchmont, N.Y., assignor to Cosmos Dental Products, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Nov. 16, 1953, Ser. No. 392,510
10 Claims. (Cl. 18—55.1)

1. A composition of matter adapted for use in making oral restorations, comprising a mixture of a major amount of polymerized denture base material, pink in color, and a minor amount of particles of a polymeric

plastic material which are discretely pigmented with colors normally found in oral tissue, said pigmented particles, each being of a size to be seen at a glance in the mixture by the unaided eye and being plasticizable to a greater degree than the denture base material by a common compatible polymerizable plasticizer, and said pigmented particles when so plasticized in the mixture being adapted to remain at least as plastic as said denture base material during the gelling stage of the mixture.

10. A process for the preparation of a denture of heterogeneous color distribution, comprising mixing a major amount of pink colored denture base material with a relatively small amount of particles of polymeric plastic material which are discretely intensely pigmented with colors present in normal oral tissue, said particles being at least as readily plasticizable as the denture base material by a common compatible polymerizable plasticizer, and said particles, when so plasticized in the mixture, being softened and remaining more plastic than said denture base material during the gelling stage of the mixture, adding a sufficient amount of polymerizable plasticizer to the mixture to form a slurry, allowing said slurry to stand for several minutes to form a gelled doughy mass and applying localized pressure by gentle kneading or spatulation to deform the doughy mass and thereby disperse and streak the more plastic colored particles through the dough mass to an effective volume many times the original volume of the colored particles.

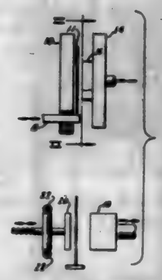
2,944,294
METHODS FOR TREATING POLYMERIC PLASTIC SURFACES
Francis J. Bourbeau, Randolph, John Greenhalgh, Wellesley, and Claude F. Valle, Jr., Waltham, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,064
4 Claims. (Cl. 18—56)



1. The method of polishing the surface of a substantially solvent-free, hardened thermoplastic polymeric layer carried upon a paper support to a high gloss which comprises the steps of providing at least one source of a softening agent for said polymeric layer, moving said polymeric layer past said source of softening agent, contacting said polymeric layer during movement past said source with a quantity of softening agent sufficient to soften only a thin surface portion of said polymeric layer, substantially immediately after passing said source pressing the softened layer surface into contact with a rotating smooth-surfaced polishing element, said polishing element being heated to a temperature sufficient to substantially redry said softened layer surface, and maintaining said softened layer surface in contact with said heated, rotating polishing element until a smooth, hard, high-gloss surface is formed.

2,944,295
FORMING CONTAINERS
Francis J. Sloan, Springfield, Mass., assignor to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts
Filed Oct. 29, 1957, Ser. No. 693,183
3 Claims. (Cl. 18—56)

1. The method of forming oriented plastic sheet material into container form comprising the steps of impressing a pattern of disappearing hinge lines on a blank of such material by simultaneously contacting one side of the blank with a plate heated to a temperature just below the distortion temperature of said material and contacting the other side of the blank with a rule plate having rules arranged in the desired pattern of the hinge



lines, with the rules heated to a temperature above said distortion temperature, maintaining said contacting relation for a time sufficient for the blank to be weakened along sharply defined lines in contact with said rules and then folding the blank into container form about said weakened hinge lines before the weakened material cools and returns to substantially its original strength.

2,944,296
PROCESS FOR THE PRODUCTION OF IMPROVED REGENERATED CELLULOSE FILMS
James Albert Mitchell and Barton Leslie Hinkle, Richmond, Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Feb. 2, 1956, Ser. No. 563,813
4 Claims. (Cl. 18—57)

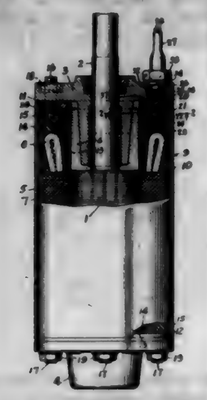


1. A process for producing regenerated cellulose film of improved tear and impact strengths which comprises casting a viscose solution at a temperature of 38° C. to 50° C. into a coagulating and regenerating bath maintained at a temperature of 40° C. to 55° C.; stretching the partially regenerated film prior to completing regeneration, said stretching being less than 25%; washing the film after completing regeneration; and drying the film.

2,944,297
METHOD OF FORMING A POWER LEAD CONNECTION FOR PLASTIC POTTED STATOR WINDINGS
John T. Maynard, West Allis, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 3, 1957, Ser. No. 681,596
9 Claims. (Cl. 18—59)

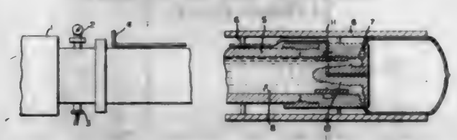
1. In the method of forming a power lead connection in a potted stator assembly including an outer hermetically enclosing casing having an opening through which incoming power leads are adapted to be connected to the field winding, sealing the opening with a member extending into the casing, said member having a substantially non-adhering surface adjacent the potting material and supporting the lead means from said field winding with the leads extending outwardly of the plastic, curing the

potting material to a solid mass, and removing the sealing plug to permit connection of incoming power leads



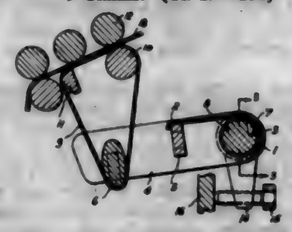
to the lead means and sealing of the opening to hermetically enclose the stator and field winding.

2,944,298
COATING THE INTERIOR SURFACES OF TUBULAR ARTICLES
Ernest Carl Bernhardt, John Anthony Boxler, and Philip Ephraim Prince, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,463
7 Claims. (Cl. 18—59)



1. A method for applying a coating upon the interior surface of an article having a tubular shape, which comprises conducting thermoplastic material through an elongated walled passage to an annular die, the inner surface of the article to be coated being initially exterior to the outer surface of the wall confining said passage, extruding the thermoplastic material through the annular die, injecting a gas into the tube of thermoplastic material thus formed and sealing the resultant thermoplastic tube to form a bubble, moving the article to be coated in the direction of the flow of thermoplastic material, and over said bubble, into a position concentric with the annular die, continuing the motion of the said article in the direction of the flow of thermoplastic material and continuing the injection of gas, whereby the thermoplastic material is impressed against the said interior surface to be coated, continuing further the said motion of the said article while it is being coated, and the said impressing of the thermoplastic material against the surface which is being coated until the coating is completed and the article has moved forward of said die, and thereafter severing the thermoplastic extrudate between the die and the coated article, the temperature of the extrudate being maintained above the melting point thereof at the time of contact thereof with the surface to be coated, the temperature of the coating being lowered to below the melting point thereof while the said coating is being impressed against the surface to be coated.

2,944,299
TENSIONING STIRRUP FOR LOWER APRONS OF DRAWING SYSTEMS IN TEXTILE SPINNING MACHINES
Walter Haupt, Friedenstrasse 44, Muenchardt, Germany
Filed Mar. 10, 1957, Ser. No. 647,243
9 Claims. (Cl. 19—131)



8. A device for tensioning the lower aprons of drawing systems in textile spinning machines having a frame comprising a tensioning stirrup having a transversely extending guide member arranged therein and a rigid cross-member and being turnably mounted on a carrier bar extending longitudinally with respect to the spinning machine, a longitudinal groove in said carrier bar, a wide leaf spring extending substantially parallel with respect to the longitudinal edges of said stirrup, said leaf spring having a center portion as well as an inner and outer portion, and said center portion being curled and embracing said carrier bar and said inner portion being offset for engagement with said longitudinal groove and said outer portion bearing with tension against said cross-member of said stirrup in order to tension said stirrup and, thereby, said aprons.

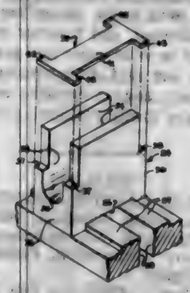
2,944,300
TOP ROLL CRADLE
Kenneth P. Swanson, 204 Chapel St., Abington, Mass.
Filed Nov. 19, 1958, Ser. No. 775,659
4 Claims. (Cl. 19—131)



1. In combination with a spinning frame including a bottom roll, a top roll cradle comprising a pair of side members of resilient plastic, means rigidly supporting said side members in spaced parallel relation, each side member being provided in its lower margin with an arcuate recess dimensioned to snap over and snugly engage the bottom roll, the upper margins of each of said members being provided with an arcuate recess to receive one end of a top roll, the two recesses in each side member being separated by a relatively narrow web sufficiently flexible to permit temporary enlargement of the lower recesses when the cradle is being snapped over the bottom roll.

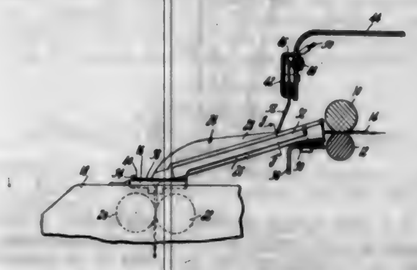
2,944,301
ROLL SUPPORT FOR TEXTILE APPARATUS
James L. Blalock, Gastonia, N.C., assignor to Piedmont Machine Shop, Inc., Gastonia, N.C., a corporation of North Carolina
Filed Nov. 14, 1958, Ser. No. 773,888
11 Claims. (Cl. 19—134)

2. A roll support for drawing frames and the like having axially aligned top and bottom drafting rolls between which textile slivers pass, comprising, in combination, a roll neck connecting said bottom rolls in endwise relationship, a roll stand, said roll stand having a recess therein for rotatably supporting said roll neck in frictional engagement therewith, corresponding ends of axially aligned top rolls being positioned for vertical



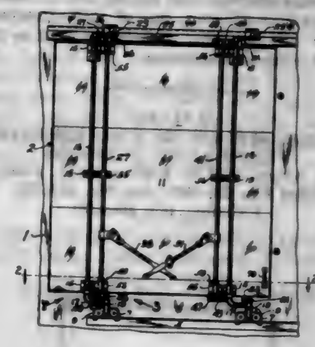
movement in said recess, and support means supported on said stand within said recess for supporting said corresponding ends of the top rolls independent of the bottom rolls and for rotation with said bottom rolls, said support means serving to maintain said top rolls in a predetermined minimum spaced relationship above respective bottom rolls.

2,944,302
DRAWING FRAME CONTROL MECHANISM
Paul B. West, Kennebunk, Maine, assignor to Saco-Lowell Shops, Boston, Mass., a corporation of Maine
Filed Sept. 25, 1958, Ser. No. 763,277
1 Claim. (Cl. 19—166)



In a textile drawing frame a drafting element comprising a plurality of rolls adapted to form a sliver web, a pair of calender rolls, a trumpet mounted above said calender rolls and fixedly positioned relative thereto, said trumpet being adapted to guide said sliver web into the bite of said calender rolls, a pin member extending upwardly from said trumpet, a sliver web confining enclosure disposed between the last pair of rolls of said drafting element adjacent the nip thereof and said trumpet, said enclosure having a base member with upstanding side portions and a cover member with depending flange portions adapted to engage said side portions to define a space for guiding the reduction of said sliver from a substantially flat web adjacent the output of said drafting element to substantially a strand suitable to pass through said trumpet, one end of said base member being pivotably mounted adjacent said drafting element and the other end being adapted to rest on said trumpet, said cover member having a flanged portion adapted to rest on the upper surface of said trumpet adjacent said pin member such that said pin member tends to maintain said cover in position, said cover member having a tendency to be lifted by an accumulation of sliver within said enclosure upon the occurrence of an obstruction to the movement of sliver through said trumpet, and control means including a switch mounted above said enclosure and having an actuating lever depending below said switch and adjacent said enclosure cover, said switch adapted to be actuated upon a lifting of the cover member such that it contacts said lever.

2,944,303
RAILWAY CAR FLUSH TYPE SIDE DOOR
Gerard T. Uphues, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed June 11, 1958, Ser. No. 741,362
9 Claims. (Cl. 20—23)

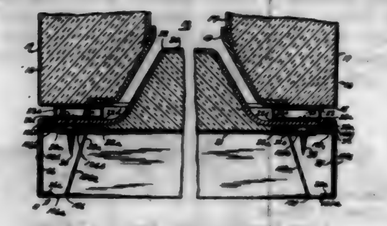


4. A railway house car sliding door mounting and operating gear including an upright shaft journaled on the door and having a crank arm with a trunnion at its outer end supporting the door on a carriage movable along the car side, a bracket on the door having an upright axis, an upright operating shaft journaled in said bracket and having an offset lug for engaging a cam-like keeper on the car side to move the door toward and away from the car side as the operating shaft is rotated, said bracket and operating shaft having vertically opposing lower and upper bearings supporting the shaft, there being a vertical projection on one of said bearings and an opposing horizontally elongated recess in the other bearing receiving said projection, the bearings being relatively rotatable about the shaft axis and shifting the operating shaft vertically as the projection and the recess are disaligned vertically whereby the shaft is yieldingly retained in the angular position in which said projection is in said recess.

2,944,304
REFRIGERATOR DOOR
Carl Louis Otto, New York, N.Y., and Börje Birger Grönqvist, Vägbyholm, Sweden, assignors to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Sept. 22, 1958, Ser. No. 762,468
12 Claims. (Cl. 20—35)

1. A refrigerator door including inner and outer wall members having an insulating medium therebetween, said outer wall member having a flange at its periphery which projects from the front face thereof, and an elongated trim strip which overlies said flange and conceals the latter from view, the longitudinal edge portions of said trim strip being bent and concealed from view, means for

fastening said trim strip to said outer wall member, said fastening means cooperating with at least one of the bent longitudinal edge portions of said trim strip, said one longitudinal edge portion of said trim strip being bent



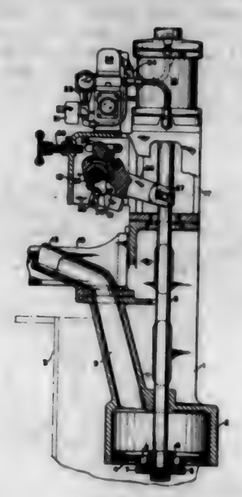
back upon itself to form a groove disposed essentially in a plane passing through said flange, and an angle member having a pair of arms, one of said arms nesting in said groove and the other arm being fixed to the rear side of said outer wall member.

2,944,305
FRAME STRUCTURE FOR LIGHTS OR VENTILATORS IN DOORS
Morris A. Avery, 1151 W. Williamson St., Flint, Mich.
Filed Jan. 22, 1957, Ser. No. 635,356
1 Claim. (Cl. 20—36)



A device of the character described for attachment at an opening extending entirely through a door to opposite sides thereof, said device comprising a main frame composed of a plurality of rails of the same general cross section mitered and joined together at their ends and of a size and shape that is closely received in the door opening, each of said rails being of one piece construction and having an outwardly directed flange thereon which together provide a peripheral flange for said frame that overlaps an outer surface portion of one side of the door, each of said rails having one longitudinally extending groove in its inner face, a shield bounded by said main frame and having marginal portions thereof received in said grooves, said frame and shield being assembled prior to insertion of said frame into the opening in the door, each of said rails also having another longitudinally extending groove in its side face opposite to that having the flange thereon, said grooves in the side faces of the rails being open to one another at their ends and together form a continuous channel in the side of the main frame, said grooved side face of said main frame being parallel with and slightly offset inwardly from one of the outer side surfaces of the door because of engagement of the peripheral flange on said frame with the other outer side surface of the door, said continuous channel in the side face of the main frame being of a depth considerably greater than the difference in thickness of the main frame and the door, an auxiliary frame composed of strips mitered at each end and arranged at the grooved side face of said main frame, each of said strips overlapping an outer surface portion of the side surface of the door adjacent thereto and having a tongue thereon extending into the continuous channel in the side face of said main frame, said tongues and the channel receiving same having their opposite side faces parallel and closely fitted so as to form slidable tongue-and-groove joints, said continuous channel also being of a depth at least equal to the distance of protrusion of said tongues on said strips so as not to bottom said tongues in said channel, and fastener elements attaching each strip to a rail so as to cause said peripheral flange on said main frame and said door overlapping portions of said strips to tightly engage opposite outer side surfaces of the door, thereby firmly positioning said united frames on the door.

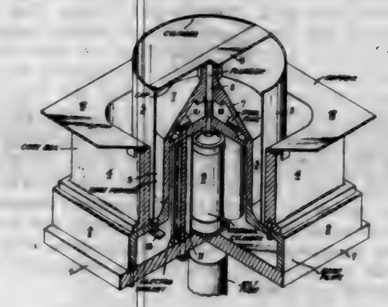
2,944,306
MACHINE FOR CASTING PRINTING PLATES
Paul L. Tollison, North Plainfield, and Charles L. Ricards, South Plainfield, N.J., assignors to Wood Newspaper Machinery Corporation, Plainfield, N.J., a corporation of Virginia
Filed June 2, 1955, Ser. No. 512,822
15 Claims. (Cl. 22—3)



4. In a plate casting machine, a casting box, a pump mounted on said casting box, said pump comprising a cylinder to be submerged in the metal to be pumped, a piston in said cylinder, a pneumatic cylinder supported in line with said pump cylinder, a piston in said pneumatic cylinder, a connecting rod between said pistons, means for admitting air under pressure to said pneumatic cylinder to thereby lift the piston of the metal pump and means for controlling the admission of air to said pneumatic cylinder, said last named means including a member adjustably carried by said piston rod for modifying the extent of movement of said piston.

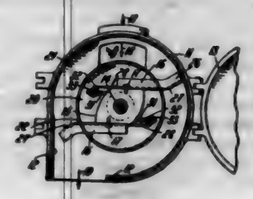
8. In a plate casting machine having a casting box and a plate trimming mechanism, said casting box having a core mounted for movement from vertical to horizontal position, said trimming mechanism comprising a trimming arch and plate supporting bars within said arch and extending longitudinally adjacent the bottom edges thereof, means for positioning said plate with its edges in line with the supporting bars of said trimming section, and means for shifting one of said bars to press said plate into contact with the trimming arch, said means including springs for pressing the edge of the plate outwardly as the plate is lifted.

2,944,307
PRODUCTION OF MULTILAYER COMPACTED GRANULAR PRODUCTS
George Joseph Nall Cherry and David Richard Thomas, Birmingham, England, assignors to Foundry Services International Limited, Birmingham, England, a British company
Filed Jan. 28, 1958, Ser. No. 711,684
Claims priority, application Great Britain Jan. 28, 1957
6 Claims. (Cl. 22—9)



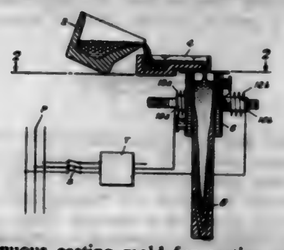
1. Apparatus for the production of hollow cylindrical products comprising two annular layers united together at their interface which comprises a hollow cylindrical core former and a core box of hollow cylindrical inner configuration defining an annular space therebetween, a removable thin cylindrical partition within said annular space whereby said annular space is divided into two adjacent annular spaces, a cover for the open end of said core former connected to said thin cylindrical partition, separately operable releasable means within the core former for holding the said cover close on said core former and for raising said cover and concomitantly said cylindrical partition, means for feeding separate granular materials into the said two annular spaces and means for jolting the whole apparatus continuously.

2,944,308
APPARATUS FOR FILLING AND RAMMING FOUNDRY FLASKS
Austin Sidney Booch, Leighton Buzzard, England, assignor to Foundry Equipment Limited, Leighton Buzzard, England, a British company
Filed July 8, 1957, Ser. No. 670,539
Claims priority, application Great Britain July 12, 1956
4 Claims. (Cl. 22—36)



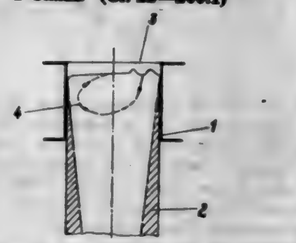
3. A blade for a foundry-sand ramming head comprising a narrow, straight flat root portion, two side portions curving up from the root portion, one of the said side portions having a sharp knife-shaped edge, the blade having a forwardly curved tip portion, said root portion carrying, at the opposite end from said tip portion, a tail portion bent and pierced to receive an adjusting stud.

2,944,309
ROTARY FIELD CHILL-MOLD
Otto Schnaber, Bremen-St. Magnus, Germany (Brautzeichen 23, Bremen-Schonebeck, Germany)
Filed Sept. 2, 1954, Ser. No. 453,967
Claims priority, application Germany Sept. 4, 1953
8 Claims. (Cl. 22—57.2)



1. A continuous casting mold for casting metal comprising a mold body having a cooled shape-giving part, electrical means surrounding said part for forming an exteriorly applied rotating magnetic field for producing a rotating electrical field in the metal being cast in the mold, said body being composed of a material which has a heat conductivity greater than 0.094 but less than that of copper and which has a higher Wiedemann-Frantz law constant than that for copper alone.

2,944,310
METHOD OF CONTINUOUS CASTING
Bruno Tarmann, Albert-Bohlergasse 7, Kapfenberg, Styria, Austria
Filed Feb. 13, 1958, Ser. No. 715,154
1 Claim. (Cl. 22—200.1)



A method for the continuous casting of metals which comprises forming a bath of molten metal in a mold, and pouring at least one jet of molten metal through an elongated, straight confining conduit the axis of which is inclined with respect to and crosses the longitudinal axis of said mold below said surface, said conduit having an outlet for discharging said metal which outlet is sufficiently closely spaced above said surface to cause said jet to impinge on said surface at an angle of 5–10 deg. with respect to the axis of said mold, whereby a current flowing along a substantially closed path which extends in a plane which is at right angles to said surface is produced in said bath.

2,944,311
DETACHABLE FASTENING DEVICE
Adolf Schnockenberger, Gernsbacher, Strasse Nr. 70, Baden-Baden, Germany
Filed Mar. 28, 1957, Ser. No. 649,149
Claims priority, application Germany Oct. 28, 1956
3 Claims. (Cl. 24—100)

1. In combination, a button having at least one pair of holes; a housing; a piece of fabric between said button and said housing; said housing comprising a generally circular first shell member having at least one pair of apertures aligned with said pair of holes and a second

generally circular shell member detachably engaging said first shell member; and a wire link detachably connecting said button with said housing; said wire link comprising a pair of parallel shanks traversing said holes with small clearance, said fabric and said apertures, a bridge element interconnecting said shanks at one end and preventing disengagement of said button from said link, and a pair of pointed, parallel prongs rigid with



said shanks and extending transversely thereto within said housing; said shell members engaging each other with so little spacing therebetween as to enable withdrawal of said link from said housing only upon detachment of said second shell member from said first shell member in a direction away from said fabric; said prongs lying flat within said housing and making loose lengthwise contact with the inner surfaces of said shell members.

2,944,312
PIN FASTENER
Franklin R. Lacy III, 926 Raleigh Road, Glenview, Ill.
Filed Sept. 19, 1955, Ser. No. 535,147
6 Claims. (Cl. 24—161)



2. A pin fastener comprising a pair of arms resiliently joined adjacent one end of each arm, the opposite end of one arm terminating in a piercing point and said one arm including a resilient joint intermediate its length between the portion thereof joined to the other arm and the portion thereof carrying the piercing point, said latter portion extending from said last named joint in the general direction of the opposite end of the other of said arms and substantially in the same plane as the other arm and the said portion joined thereto, said opposite end of the other arm carrying thereon means forming a tubular guard member extending generally in the direction of said last named joint, normally housing said piercing point and having an opening therein of relatively large cross-sectional area on the end of the tubular portion facing said last named joint and extending around on the side of said tubular member facing said first named joint, said first named resilient joint being biased to urge said piercing point into the said guard member, and said second named resilient joint being biased to urge the portion of the arm carrying the piercing point outwardly so that it forms a greater angle with the other portion of said arm when the point is free of restraint than the angle between said portions when the piercing point is housed within the guard member.

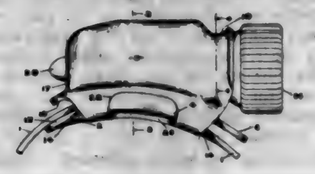
2,944,313
ANCHOR SLOT CHANNEL ATTACHMENT CLIP
Frank D. Relland, Chicago, Ill., assignor to Gateway Engineering Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 3, 1958, Ser. No. 718,854
2 Claims. (Cl. 24—214)

1. An attachment device for engaging the inner side faces of a dovetail anchor slot channel structure, comprising, in combination a channel-shaped clip in the form of a lightweight spring metal stamping including a base portion and a pair of outwardly diverging opposed side flanges yieldably connected to the base and compressible toward each other for insertion into the dovetail slot of said channel structure, the said diverging side flanges of the clip being formed intermediate the said base portion and the distal edges of said flanges with opposed inwardly projecting pressed corrugations formed at their



ends with laterally projecting webs for rigidifying the said medial portions of the flanges of the clip, and means for forcing said rigidified medial portions of the clip flanges into rigid wedging engagement with the side walls of the dovetail anchor slot of said channel structure comprising a bolt threaded through said base portion and having wedging engagement with said corrugations to force the clip sides outwardly into said wedging engagement with the walls of said dovetail slot.

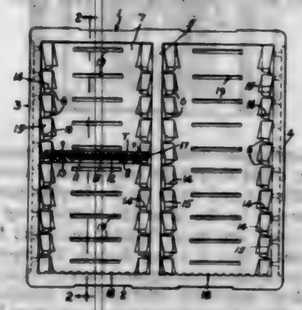
2,944,314
TANGENTIAL HOSE CLAMP
John B. Black, Berkeley Springs, W. Va., assignor to Murray Corporation, Towson, Md., a corporation of Maryland
Filed July 9, 1958, Ser. No. 747,531
9 Claims. (Cl. 24—279)



1. A tangential screw hose clamp comprising a band adapted to embrace a hose, a tangentially extending housing attached to one end of the band and shaped to receive therethrough the other end of the band, in overlapping relation to the housing attached end, said other end having screw thread receiving bars between openings transversely of the band, a threaded screw in said housing having a head at one end exteading in the direction of said other band end and a reduced portion between the head and screw threads, the housing having a wall at the end adjacent the attached band end extending adjacent the band and a bead at the opposite end resiliently expansible and contractible transversely of the screw and closely surrounding said reduced portion of the screw, the bead being wider, axially, longitudinally of the screw, than the thread pitch of the screw, the bead expanding upon insertion of the screw threads therethrough and after insertion because of its resiliency, contracting around the screw reduced portion to securely hold the screw in the housing at all times.

2,944,315
TILE SETTER
Wilbur Hall Corban, Zanesville, Ohio, and Albert W. Davidson, Matawan, N.J., assignors to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio, and Architectural Tiling Co., Inc., Keyport, N.J., a corporation of New Jersey
Filed July 23, 1956, Ser. No. 599,599
3 Claims. (Cl. 25—153)

1. A one piece ceramic compact for firing tile and a plurality of tile setter plates mounted in detachable interlocked relation on said compact and adapted to support tile thereon, said compact comprising top and bottom walls, side walls and a back wall to form a rigid compact of box-like open front configuration, a plurality of series of supporting ledges integrally formed on the inner surfaces of said side walls and said back wall and extending generally transversely of the respective wall in substantially parallel relation with respect to one another, each of said ledges comprising a section extending substantially completely across the respective of said side walls and a section extending only partially across said back wall, each of said side wall ledge sections having a support portion intermediate its ends that extends inwardly from the respective side wall a greater amount than the remainder of the respective side wall ledge section, each side and back wall ledge section having an upwardly and obliquely extending inwardly facing surface disposed above the elevation of said support portion, said support portion providing an upwardly facing flat horizontal surface of predetermined extent and being re-

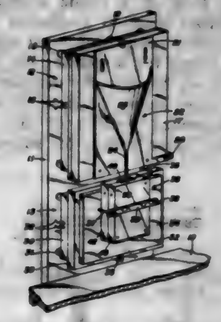


ceived in a complementary indentation on the underside of an associated one of said setter plates for supporting the latter on said side walls in vertically detachable and horizontally interlocked relation, said back wall ledge sections each comprising an abutment surface immediately below its respective obliquely exteading surface, said abutment surface being disposed in generally confronting relation with an edge of an associated setter plate for preventing inadvertent movement of the associated setter plate into engagement with said back wall and thus positively maintaining a spacing between the setter plates and said back wall for circulation of hot gases therebetween during the tile firing operation, said obliquely extending surfaces of said back and side wall ledge sections being so disposed with respect to a plane passing through said flat horizontal surface of the respective of said support portions to form an angle which in side elevation is greater than 90°, for preventing flat surface-to-surface contact between said ledge sections and the tile during firing operations.

2,944,316
PROCESS OF CASTING HEAVY SLIPS
William A. Maxwell, Towson, Md., and Joseph Douglas, Parma, Ohio, assignors, by mesne assignments, to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Dec. 28, 1956, Ser. No. 629,759
4 Claims. (Cl. 25—156)
(Granted under Title 35, U.S. Code (1952), sec. 266)

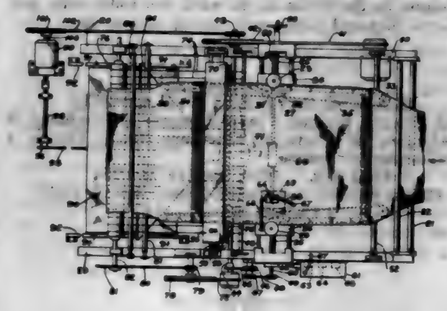
1. A process of making articles from powdered materials which comprises mixing the powder with a liquid in such amount as to form a thick slip which flows only under pressure, applying pressure to said slip to obtain a free slip flow into a mold to form a mold mass, subjecting the mold mass to centrifugal forces to compact

the mass powder in the mold, freezing the mold mass to form a casting, drying the casting by heating it to stand-



ard room temperature at normal atmospheric pressure and by application of a solid moisture absorbing agent to the casting surface, and sintering said casting.

2,944,317
METHOD AND APPARATUS FOR TREATING TUBULAR FABRICS
Samuel Cohn and Joseph Cohn, New York, and Eugene Cohn, Great Neck, N.Y., assignors to Samcoe Holding Corporation, Woodside, N.Y., a corporation of New York
Filed Aug. 23, 1955, Ser. No. 530,114
17 Claims. (Cl. 26—18.5)

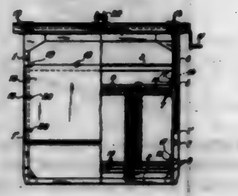


1. A process of finishing sweater fabrics in continuous tubular knitted lengths which include successive sweater lengths separated by draw threads, each sweater length including a body portion and a waist-bmd portion integral therewith, said process including spreading both portions of the fabric to predetermined width in a spreading zone, advancing said spread fabric through the zone, applying steam intermittently to the spread and advancing fabric so that steam is applied only to the body portions thereof, and conveying the fabric from the spreading zone in substantially completely relaxed condition both longitudinally and transversely, whereby the waist-band portions return to a narrower width than the body portions.

2,944,318
MATERIAL CARRIER FOR WET TREATMENT OF TEXTILES
Mario Scholl and Walter Obermaier, Neustadt A.D. Weinstrasse, and Friedrich Scharfenberger, Lindenberg/Pfalz, Germany, assignors to Obermaier & Cie, Neustadt A.D., Weinstrasse, Germany
Filed Jan. 28, 1958, Ser. No. 711,725
8 Claims. (Cl. 28—58)

1. A material carrier for the treatment of voluminous shrinkable and non-shrinking fibrous material in a vat

provided with a reversible liquor circulating system, said carrier being adapted to be received in said vat and being generally in the form of a frame arranged to receive skeins of the fibrous material suspended in reel length upon rods, said carrier comprising upper rods horizontally disposed in said frame for supporting the upper loops of the skeins and lower horizontally disposed rods extending through the lower loops of said skeins in a manner to maintain the suspended position of said skeins during circulation of the liquor, means for supporting said upper rods in said carrier, means for supporting said lower rods in said carrier and adjusting means including vertical members extending endwise of said rods operative in synchronism to establish the relative distance of said upper and lower rods with respect to each other as determined by the reel length of said skeins and by the shrinkage of the fibrous material, and indicator means operatively related to said adjusting means and movable in synchronism with said vertical members disposed to indicate the variations in the distances between the rods while said carrier is disposed within and outside of said vat.



2,944,319

HEATING DEVICE FOR FILAMENTS

Henri Crouzet, Roanne, France, assignor to Moulinage et Retorderie de Chavanoz, Chavanoz (Isere), France, a corporation of France

Filed Apr. 7, 1959, Ser. No. 804,764
Claims priority, application France, Apr. 8, 1958
1 Claim. (Cl. 28—62)



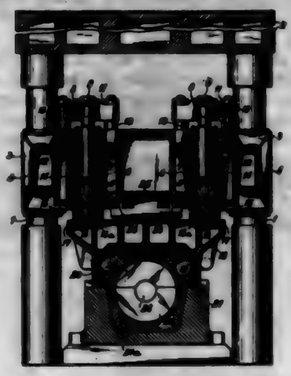
Apparatus for the treatment of textile filaments comprising a fixed tube having a substantially vertical axis, means heating said tube to a temperature suited for the treatment of said filaments, a sleeve disposed at the upper end of said tube and a second tube removably mounted in said sleeve in axial alignment with said first tube, said sleeve having heat-insulating means to retard the transfer of heat from said first tube to said second tube whereby condensation of vapors rising from said first tube may take place on the walls of said second tube, and means feeding a textile filament for treatment upwardly through said tubes.

2,944,320

EQUIPMENT FOR FORGING THE CRANES OF CRANKSHAFTS IN CONSECUTIVE OPERATIONS

Helmut Rohrs, Mulheim (Ruhr), Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany

Filed Feb. 14, 1957, Ser. No. 640,227
Claims priority, application Germany Feb. 23, 1956
2 Claims. (Cl. 29—6)



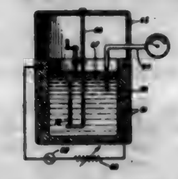
1. In combination with a forging press, equipment for forging the crank-throws of crank-shafts, comprising: a slide movable up and down in the forging press, a forging ram carried by the slide and movable up and down therewith, lower and upper holding members for holding the crank-shaft that is being forged, the upper holding members being movable up and down relatively to the lower holding members, intermediate members located beneath the slide, these intermediate members being movable up and down relatively to the slide, cylinder and piston units mounted in the slide, horizontal dovetail slot and guide means connecting the cylinder and piston units with the intermediate members, so that the cylinder and piston units can raise and lower the said intermediate members relatively to the slide, cross-beams located beneath the said intermediate members, and horizontal dovetail slot and guide means connecting these cross-beams with the intermediate members, these slot and guide means being at right angles to those connecting the cylinder and piston units with the intermediate members, and the upper holding members for the crank shaft being carried by the said cross-beams.

2,944,321

METHOD OF FABRICATING SEMICONDUCTOR DEVICES

Richard W. Westberg, Bethlehem, Pa., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Dec. 31, 1958, Ser. No. 784,315
4 Claims. (Cl. 29—25.3)



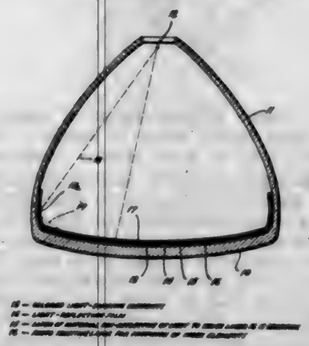
1. A method of fabricating a semiconductor signal translating device comprising applying a mask to portions of the surfaces of a body of semiconductive material of one conductivity type, immersing said body in a molten bath comprising a mixture of said semiconductive material and a significant impurity of the conductivity type opposite to said one conductivity type, said molten bath having a temperature corresponding to the condition of saturation of said semiconductive material in said mixture, raising the temperature of said bath proximate to said body thereby to dissolve material from the unmasked portions of said body, lowering the temperature of said bath proximate to said body thereby to regrow semiconductive material of the opposite conductivity type on said unmasked portions, removing said body from said bath, removing said mask, and applying electrodes to the different conductivity type regions of said body.

2,944,322

METHOD OF MANUFACTURE OF CATHODE RAY TUBES

Harry R. Colgate, Redondo Beach, Calif., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Filed Jan. 12, 1959, Ser. No. 786,248
6 Claims. (Cl. 29—25.14)



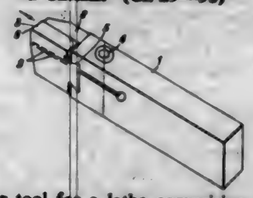
1. In the manufacture of cathode ray tubes wherein it is desired to provide for light reflection and also to provide elements on the screen and on the wall area adjacent thereto, the method which includes the steps of applying a light-reflecting film to the screen area and also at least to the adjacent wall area, applying to the light-reflecting film a material which is non-reflective of light of a particular color, applying over said material a photosensitive layer which is sensitive to light of said particular color, selectively exposing to light those areas of said layer where said elements are to be provided, and removing said material and the unexposed areas of said layer.

2,944,323

COMPOUND TOOL

Karl Heinz Stadler, Nurnberg, Germany, assignor to Georg Hufnagel Werkzeugfabrik, Nurnberg, Germany

Filed Dec. 4, 1953, Ser. No. 551,429
Claims priority, application Germany Dec. 7, 1954
2 Claims. (Cl. 29—95)



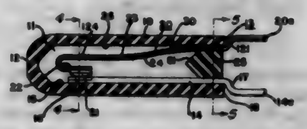
1. A cutting tool for a lathe comprising a pre-formed and sintered cutting body of a hard metal alloy such as stellite having a cutting edge and at least one elongated side having projections and recesses of a conformation presenting interengaging elongated surfaces, said recesses increasing in width toward the core of said body, and a mounting member of die cast brass alloy having a high copper content, great strength and relatively high heat conductivity press molded onto and interlocked with said body along adjacent sides and partly encompassing said body, said mounting presenting projections and recesses defining interengaging elongated surfaces intimately engaging the interengaging elongated surfaces presented by said recesses of said body of hard metal alloy and completely filling said recesses.

2,944,324

METHOD OF ASSEMBLING A CIRCUIT BREAKER

David F. Meyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application Sept. 4, 1953, Ser. No. 378,555, now Patent No. 2,743,335, dated Apr. 24, 1956. Divided and this application Feb. 14, 1956, Ser. No. 565,416
5 Claims. (Cl. 29—155.5)



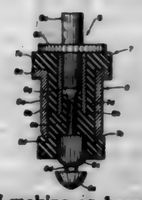
1. The method of effecting a predetermined opening point between the contacts of a thermal control device having a pair of longitudinally extending contact carrying arms at least one of which is a bimetallic arm and positioned in spaced fixed relationship at one end thereof with cooperating contacts at the opposite ends, the steps of, effecting stabilized deflection of the bimetallic arm at a predetermined controlled temperature, establishing a signal current of predetermined value across the said contacts and through said bimetallic arm to heat the arm to normal operating temperature, and inserting a spacer member between the spaced arm ends in frictional engagement therewith and then moving the spacer longitudinally between the arms in engagement with the said one arm to separate the arms until the contacts on the ends thereof effect initial opening as reflected by a discontinuance of the signal current.

2,944,325

METHOD OF MAKING HERMETICALLY SEALED ELECTRIC TERMINALS

Richard U. Clark, 4 Orchard Drive, West Acton, Mass.

Original application Apr. 27, 1953, Ser. No. 351,317, now Patent No. 2,774,812, dated Dec. 18, 1956. Divided and this application Dec. 6, 1956, Ser. No. 626,647
3 Claims. (Cl. 29—155.55)



1. The method of making an hermetically sealed electrical terminal assembly within a tubular wall defining an opening comprising the steps of forming an insert from a cold flowing plastic material with an axial bore, said material having a restoring memory after distortion, inserting said plastic insert into said tubular wall opening, forming a metallic stud with a reduced diameter shank portion and a surrounding tubular portion defining an

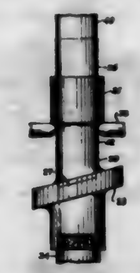
intermediate re-entrant space, placing said tubular wall, said insert and said stud in an evacuated assembly receptacle, inserting said metallic stud within said insert in such manner that the plastic material thereof is distorted and cold flowed into said re-entrant space within said tubular portion of said stud to form a seal thereagainst, and heating said assembly to accelerate the movement of said plastic material into said re-entrant space.

2,944,326
METHOD OF STAKING BLADES
Kurt R. Stadthaus, Madeira, and Melvin Bobo, Reading, Ohio, and Robert H. Schaefer, Stratford, Conn., assignors to General Electric Company, a corporation of New York
Filed June 2, 1955, Ser. No. 512,702
3 Claims. (Cl. 29—156.8)



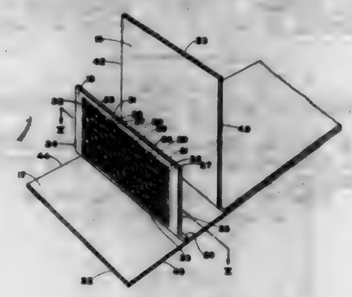
1. The method of staking bases of compressor or turbine blades to a base member comprising, coining the blade base in a die to provide tapered sides thereon and simultaneously coining grooves into said sides to extend only part of the length of said sides, piercing a slot in the base member, coining the base member to form tapered sides in the slot which exactly match the taper of said blade base sides, assembling said blade base in said slot, and deforming the base member to cause the material of the base member to flow into said grooves to secure the blade base and member together.

2,944,327
METHOD OF MAKING HOLLOW BLADES FOR TURBINE ENGINES
Cleaver C. Speer, Passaic, and Wilbert W. Frank, Long Valley, N.J., assignors to Curtiss-Wright Corporation, Propeller Division, a corporation of Delaware
Filed Oct. 17, 1956, Ser. No. 616,404
2 Claims. (Cl. 29—156.8)



1. The method of making a hollow metal blade for a turbine engine which consists in forming a tubular blank having an intermediate thickened ring and tube portions extending from each end thereof, tapering the bore of one tube portion to a level within the thickened ring, forming the bulk of the ring bore to elliptical cross section, securing the blank to a hollow chuck attached to the other of the tube portions, working and flowing the metal of the said one tube portion over a tapered mandrel to form an elongated, thin, tapered wall blade-forming portion, flattening the blank in forming dies while maintaining gas pressure therewithin and in so doing bringing the elliptical bore portions into contact while leaving the blade-forming tube portion as a hollow portion of airfoil cross-section and trimming of the other tube portion and parts of the thickened ring to comprise a blade butt for retention in a turbine engine rotor.

2,944,328
METHOD OF MAKING HEAT EXCHANGER
Richard F. Adams, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, a corporation of Delaware
Filed July 16, 1954, Ser. No. 443,944
5 Claims. (Cl. 29—157.3)



1. The pressure welding method of making a single sheet of metal having within its interior a voluminous thin-walled cavity of large expanse comprising superposing one upon the other at least three component sheets of metal consisting of two outer sheets and an interleaved sheet coextensive with the outer sheets at least in the direct transverse to the direction of elongation under a reducing pressure, said sheets having between them a weld preventing material applied in an open grid-like pattern each of which is of coextensive superposed relationship with the other, said interleaved sheet being incised at spaced portions in the unweldable areas on opposite sides of said grid openings of the patterns, said openings of one pattern being in staggered non-overlapping relationship with the openings of the adjacent pattern, preliminarily fastening said sheets sufficiently to prevent any interfacial slippage between said component sheets, sufficiently reducing said assemblage of component sheets to accomplish pressure welding of the outer component sheets to the interleaved sheet at marginal edge portions and at the openings of each grid-like pattern of weld preventing material, and applying fluid pressure along the included weld preventing material to move the outer component sheets apart to the ultimately desired separation and to simultaneously separate the interleaved sheet at said incisions thereby securing said outer sheet components within the marginal edge portions by a series of stay straps erected from said interleaved sheet.

2,944,329
TERMINAL CLIP STRUCTURE
Kenneth C. MacKay, Park Ridge, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed July 11, 1955, Ser. No. 521,145
6 Claims. (Cl. 29—193.5)

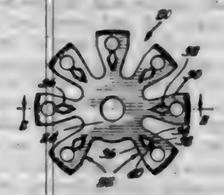
1. A one-piece sheet metal terminal clip structure comprising a central body portion, a plurality of socket portions integrally joined to an outer peripheral edge of and circumferentially spaced on and projecting generally radially outwardly from said body portion for receiving terminal elements, and a plurality of stud portions respectively connected with margins of said socket portions spaced radially outwardly from said central body portion and extending generally axially from said socket portions for insertion into openings in a panel member,

said body portion being separable and removable in one piece from said socket portions when the clip structure



is applied to the panel member to leave a plurality of separate terminal clips on the panel member.

2,944,330
TERMINAL CLIP STRUCTURE AND METHOD AND APPARATUS FOR APPLYING SAME
Edwin Grant Swick, Bartlett, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Nov. 8, 1955, Ser. No. 545,726
6 Claims. (Cl. 29—193.5)



1. A sheet metal strip of terminal clips or the like comprising a series of substantially flat clip structures including a plurality of circularly arranged clip elements integrally connected by a central connecting section, clip elements of each of said clip structures adjacent a longitudinal axis of said series being integrally connected with similarly located clip elements of an adjacent clip structure, said last mentioned integrally connected clip elements being severable for permitting the clip structures to be applied to an apertured workpiece, each of said clip elements including a socket portion for overlying one side of a workpiece for receiving a terminal element or the like and integrally joined directly to one of said central connecting sections and a finger portion integral with and extending from the socket portion for insertion through a workpiece aperture from said one side of said workpiece, each of said socket portions having slot means therein for receiving a terminal or the like, each of said slot means extending through an adjacent connecting section, said slot means normally having a width less than the width of a terminal to be received therein, said central connecting sections of said clip structures being severable from the clip structures after the clip structures have been applied to a workpiece so as to separate the clip elements from each other and to open ends of said slot means for facilitating spreading of the slot means for accommodating a terminal.

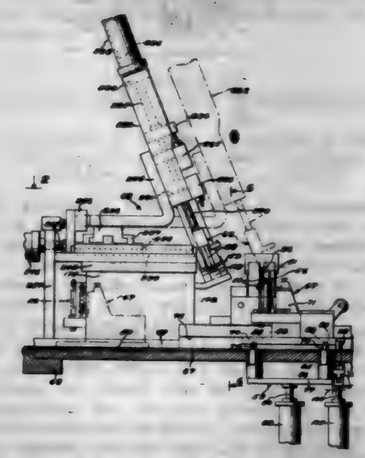
2,944,331
ENGINE INSTALLATION FRAME
Jay Albert Munn and John W. Schweikert, Hamilton, and James E. Sphar and Donald F. Berning, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 7, 1955, Ser. No. 545,233
4 Claims. (Cl. 29—200)

1. An aircraft installation frame for transporting an engine from a shipping container for installation in an airframe adapted to fit over said engine in an engine shipping container comprising, a yoke conforming to an airframe bulkhead, alignment means to align and secure said yoke to an airframe bulkhead, an engine-supporting track connected to said yoke, a bracket secured to said track at a point removed from the yoke, a travelling yoke carried by said track longitudinally of said first yoke,



and means cooperating with said track for supporting an engine therefrom at a plurality of points, and leg means connected to said first yoke and to the bracket to support the frame.

2,944,332
APPARATUS FOR ASSEMBLING OPERATING CARDS ONTO WIRE SPRING RELAYS
Joel R. Johnson and Walter Lach, Chicago, and William F. Stephen, Elmwood Park, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 26, 1957, Ser. No. 642,511
10 Claims. (Cl. 29—203)

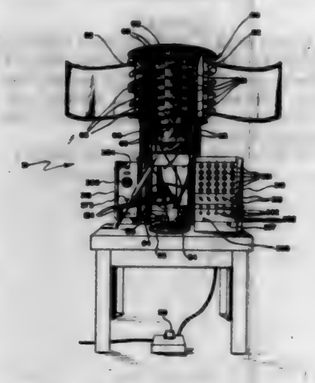


1. In a device for assembling an operating element onto a relay having a stationary contact spring and a movable contact spring engageable with each other, a spreader member for flexing the movable contact spring, mounting means for supporting the relay and the spreader member in predetermined positions and for movement of the spreader member relative to the relay, and means for actuating the spreader member sequentially in a first direction to a predetermined operative position between the stationary and the movable contact springs and in a second direction transversely of said first direction to flex the movable contact spring and separate the contact springs for receiving the operating element.

2,944,333
ASSEMBLY APPARATUS
Gerald A. Francis and Howard C. Davis, Columbus, and Charles E. Smith, Worthington, Ohio, assignors, by mesne assignments, to Hurd Lock & Manufacturing Co., Detroit, Mich., a corporation of Michigan
Filed Dec. 23, 1955, Ser. No. 555,047
21 Claims. (Cl. 29—211)

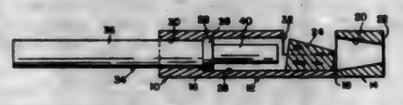
1. An orientator-dispenser mechanism for orienting pins with respect to the distinguishable ends thereof and

for dispensing said pins singly, comprising frame means; inlet channel means supported by said frame means for conveying said pins in single file into a gaging aperture, said gaging aperture having means for positioning said pins longitudinally with respect to the distinguishable end thereof; slide means forming a side of said gaging aperture at a first position, in contact with said pins on one side and having a dispensing aperture therein removed from said gaging aperture at said first position; and means to move said slide means and said dispensing aperture to a second position with said dispensing aperture adjacent said pin in said gaging aperture, said dispensing aperture length and position being predetermined at said second position to allow said pins to rotate through said dispensing aperture in one direction or the other according to the longitudinal position of said pins in said gaging aperture.



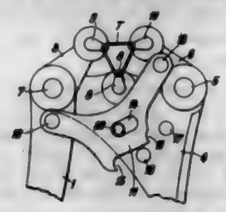
2. Apparatus for simultaneously assembling pins in the all pin chambers of a pin-tumbler lock with said pins oriented with respect to the distinguishable ends thereof comprising apparatus according to claim 1 wherein there is provided: gate means slidably supported in said frame to support said pins above said chambers at stationary sensing positions; conveyance means for conveying said pins from said dispensing aperture to said sensing positions on said gate means; engagement means reciprocaly supported on said frame, and operable to project into said sensing positions and engage said pins if said pins are present, and to project further into said sensing positions if said pins are not present; electric motor means operable to move said gate means from beneath said pins and to simultaneously release said pins into said chambers; and switch means in the electrical connection to said electric motor means, engaged and opened by said engagement means during said further projection into said sensing position, to prevent operation of said electric motor means if said pins are not present.

2,944,334
CORK TOOL
Artil Arrighini and Robert Bell, Detroit, Mich., assignors to Rockwell Company, Detroit, Mich., a corporation of Michigan
Filed Apr. 22, 1957, Ser. No. 654,185
2 Claims. (Cl. 29—235)



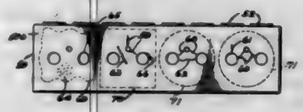
1. A tool for inserting a plug in a hole of smaller cross-section than the plug, said tool comprising axially aligned inner and outer tubular sections, said inner section having a frusto-conical inner surface which tapers from the outer end of said inner section radially inwardly to the inner end thereof where it has a smaller cross-section than the hole, said outer section having a cylindrical inner surface extending from the outer end of said outer section to the inner end thereof where it merges into the outer end of said frusto-conical inner surface of said inner section, said inner surfaces of said sections being axially aligned with one another, said outer section having a lateral opening to the interior thereof for the insertion of a plug, the inner end of said inner section being flat and in a plane normal to the axis of said inner section to enable said tool to be positioned with said inner section overlying the hole and with the inner end of said inner section flush with the surface surrounding the hole, and a plunger slidably supported in said outer section for movement from a retracted position in which its inner end is at the outer side of said opening to an advanced position in which its inner end extends into and through said inner section to force a plug in said outer section through said inner section and into the hole, said frusto-conical inner surface of said inner section serving as a reducing die to facilitate the entry of the plug into the hole by compressing the plug in response to its movement through the inner section in an axially inward direction, the outer end of said plunger extending outwardly beyond the outer end of said outer section in all positions thereof between said retracted and advanced positions for striking with a hammer, said cylindrical inner surface of said outer section having an outer portion closely receiving said plunger and an inner portion of greater diameter than said outer portion separated from the later by an annular shoulder, and a collar on said plunger engageable with said shoulder to determine said retracted position and with the outer end of said frusto-conical inner surface of said inner section to determine said advanced position, said collar engaging the inner portion of said cylindrical inner surface of said outer section in positions between said retracted and advanced positions for guiding said plunger in its travel between said positions while maintaining a minimum amount of frictional engagement between said plunger and tubular section.

2,944,335
DEVICE FOR WIDENING PIPES, TUBES, SPOUTS OR THE LIKE MADE OF RUBBER, SYNTHETIC RUBBER, OR ARTIFICIAL RESILIENT MATERIAL
Heinrich Kabel, Hamburg-Stellingen, Germany, assignor to Paul Hellermann, trading as Paul Hellermann Fabrik Elektrotechnischer Spezialartikel, a German firm
Filed Oct. 14, 1957, Ser. No. 690,075
Claims priority, application Germany Oct. 26, 1956
7 Claims. (Cl. 29—235)



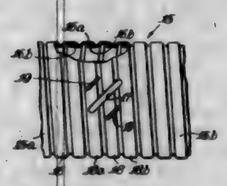
1. A device for widening tubes, spouts and the like of resilient material comprising a head having a first grip fixed to said head, pivots on opposite sides off said head and a fixed triblet on said head between and in alinement with said pivots, a shank carrying a triblet pivoted on one of said pivots and extending on the opposite side of said one pivot from said first grip, a second grip pivoted on said other pivot and a shank carrying a triblet fixed on said second grip and extending on the opposite side of said other pivot from said second grip, a lever pivoted on one of its ends on said second grip, the other end of said lever being pivoted to said pivoted shank, and means on said head cooperating with said lever for limiting the relative movement of said shanks.

2,944,336
METHOD OF REPAIRING AND PREVENTING THERMAL DAMAGE IN COMBUSTION REGION WALL STRUCTURES OF LIQUID COOLED INTERNAL COMBUSTION ENGINES
Clifton L. Stancliff and Gerald N. Stancliff, both of P.O. Box 1168, Bakersfield, Calif.
Continuation of abandoned application Ser. No. 520,550, July 7, 1955. This application Mar. 11, 1957, Ser. No. 645,096
8 Claims. (Cl. 29—402)



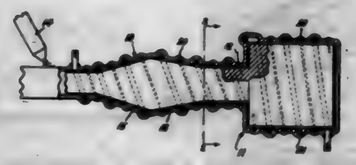
1. The method of altering an original wall of an internal combustion engine comprised of cylinder head and cylinder block, said wall having an inner flame-contacted area defining a combustion chamber and an outer cooler-running area therearound, that includes: making an opening in said wall by excising the entirety of said wall throughout the inner, flame-contacted combustion chamber area thereof and including a marginal portion of said wall outside said flame-contacted area along an outline encompassing and marginally spaced at all points outside the perimeter of said combustion chamber defining area of said wall, fabricating a replacement insert wall of outline substantially complementary to the opening so made in the original wall, mechanically installing said insert wall in said opening, preserving said insert wall essentially physically separate of the remaining portion of said original wall, in such manner as to accommodate thermal expansion and contraction movements thereof relative to said remaining portion of said original wall, and installing a compression sealing gasket between the cylinder block and cylinder head in contact with and extending entirely around said marginal portion of said insert wall.

2,944,337
METHOD OF FORMING FLEXIBLE TUBING
Bestor P. Coleman, Willow Springs, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 18, 1955, Ser. No. 489,027
10 Claims. (Cl. 29—417)



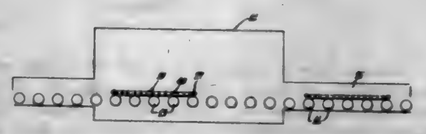
1. The method of severing metal tubing formed by a helical winding of a metal strip so as to provide separate lengths of the tubing which comprises the steps of cutting a convolution of the winding transversely, and securing the respective cut ends of the said convolution to next adjacent unsevered parts of the tube by stitches extending parallel to the plane of the cut.

2,944,338
SPRAY METAL PROCESS FOR MAKING PRECISION ARTICLES
Allen G. Craig, Gloversville, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 30, 1953, Ser. No. 401,273
3 Claims. (Cl. 29—423)



1. A spray metal process for making a hollow article requiring sharp and well-defined surfaces and capable of withstanding high temperatures comprising, forming a core of disposable material having a shape conforming to that of the article desired, metal spraying a coating onto said core, placing coiling coils on said coating, metal spraying additional layers onto said core and coils to secure them to the coating and form an integral spray metal structure of sufficient thickness to be self-supporting, and removing said disposable core from the spray metal structure.

2,944,339
METHOD OF BRAZING REFRIGERATOR EVAPORATORS
Ray A. Sandberg, Waukegan, Ill., assignor to Hoodaille Industries, Inc., a corporation of Michigan
Filed Dec. 3, 1953, Ser. No. 395,895
2 Claims. (Cl. 29—493)



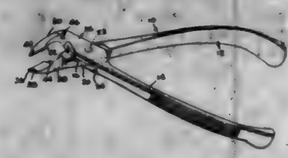
1. The method of making a refrigerator evaporator which comprises superimposing an inner shell of flat sheet metal and an outer shell of sheet metal having outwardly embossed portions and flat planar portions with a layer of brazing material between the shells to form an assembly, moving said assembly into a heating chamber, applying downward forces on spaced transversely disposed portions of the outer shell by means of individual separately and independently movable transversely disposed weights resting on the outer shell to press the flat planar portions of the outer shell toward mating portions of the inner shell while providing freedom for relative expansion and deflection of all portions of the shells during heating thereof, applying upward forces on the assembly along transversely extending lines of deflection which are substantially spaced to provide downward deflection of the assembly between successive lines of deflection upon heating thereof in said heating chamber, and moving the assembly relative to the lines of deflection while the assembly is in heated condition to cause successive portions of the inner shell to be moved upwardly at said lines of deflection while the inertia of said outer shell and the weights tends to maintain mating portions of the outer shell at their previous positions to provide an ironing action progressively along the length of said inner shell tending to close any gaps between mating portions of the inner and outer shells.

2,944,340
SHEARS
Peter S. Vosbikian and Thomas S. Vosbikian, both of 20th and Oxford Sts., Melrose, Pa.
Filed July 15, 1959, Ser. No. 827,184
5 Claims. (Cl. 30—248)



1. Shears, comprising a pair of cooperating blades, one of said blades having its rear body portion bent upwardly and forwardly to form a forwardly extending portion spaced from the main body portion, the other of said blades having its rear end located between said blade portions, a spring between the blades tensioning them together, a pivot member extending through said blades, a handle member fixed to the forward extension, and a second handle member pivoted to said first handle member and linked to the rear end of said other blade.

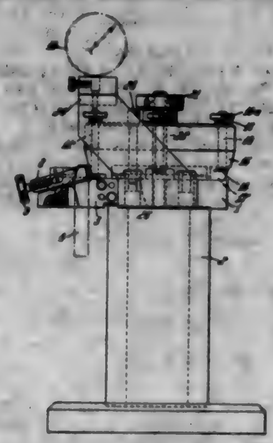
2,944,341
DENTAL FORCEPS
Henry M. Lane, 33 Main St., Dundee, N.Y.
Filed June 27, 1958, Ser. No. 745,675
5 Claims. (Cl. 32—42)



1. Dental forceps comprising a pair of handle members pivotally connected together adjacent one of their respective ends in crossed relation relative to each other, each of said ends comprising a jaw laterally offset with respect to their respective handle and having their respective longitudinal axes inclined at an acute angle with respect to the longitudinal axis of their respective associated handle, each of said ends having opposed concave sides formed by a pair of curvilinear planes intersecting to form an edge, an each of said edges being disposed in confronting relation relative to each other and having a plurality of serrations formed therein.

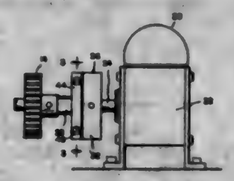
2,944,342
MEASURING APPARATUS
Christopher Leslie Bartlett, Bristol, England, assignor, by mesne assignments, to Bristol Aero-Engines Limited, Bristol, England, a British company
Filed May 2, 1955, Ser. No. 505,143
34 Claims. (Cl. 33—174)

1. Apparatus for checking or measuring a straight series of two or more grooves or serrations as defined comprising support means, gauging pillar means journalled with rotational and axial freedom in said support means, abutment means separate of said gauging pillar means and carried by said support means for locating an article having a straight series of two or more grooves or serrations as defined in a reference position with a reference line of pitch measurement of the grooves or serrations parallel to the direction of axial freedom of the gauging pillar means, cam-plate means fixed on said gauging pillar means, peripheral contacting means on said cam-plate means for engaging at least one flank of said grooves or serrations to be checked or measured, means on said support means for moving said gauging pillar means and contacting means into operational position whereby by rotation of said gauging pillar means at least said one flank of each of said grooves or serrations is successively engaged by said peripheral contacting means when the



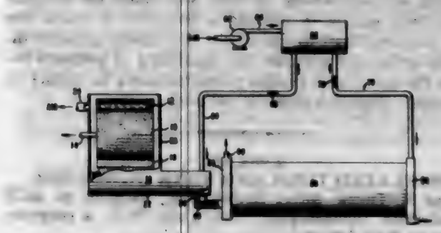
article is located by said abutment means, and means on said support means operatively connected to said gauging pillar means for indicating changes in a dimension extending in the direction of axial freedom of the gauging pillar means between a point on the gauging pillar means and a point fixed relatively to said abutment means.

2,944,343
DRIVE MEANS INCLUDING A SLIP CLUTCH
Russel W. Anthony, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed May 9, 1955, Ser. No. 506,947
6 Claims. (Cl. 33—179.5)



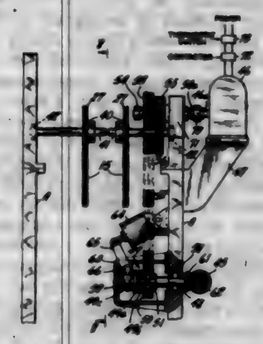
1. Gear checking apparatus comprising a pair of master gears spaced laterally to provide a space therebetween for passage of a gear being checked with its teeth meshed with the teeth of said master gears, drive means for rotating one of said master gears, means for advancing gears to be checked toward the space between said master gears and into contact with the driven one of said master gears, said drive means comprising a first shaft, means rotating said shaft in a first direction, a second shaft substantially coaxial with said first shaft and connected to one of said master gears, coupling means between said shafts arranged to transmit torque from said first shaft to said second shaft in the said first direction of rotation up to a predetermined torque and operable when said torque is exceeded to apply brief reverse torque to said second shaft to induce meshing between said gear being checked and said master gears if the increase in torque was due to jamming caused by failure to mesh.

2,944,344
DRYING OF CYANIDES
Charles P. Crews and William R. Jenks, Memphis, Tenn., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 15, 1957, Ser. No. 690,322
3 Claims. (Cl. 34—17)



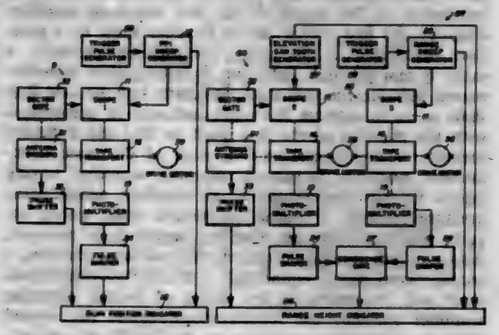
1. The process for drying alkali metal cyanide crystals wet with aqueous solution, which comprises drying the wet crystals with hot air heated to a temperature of 400° to 800° F. while mixing the crystals to maintain the surfaces wet until the average moisture content of the crystals decreases to less than 2%.

2,944,345
DRIVE MECHANISM FOR WEB THREADING APPARATUS
Harry W. Fueher, Larchmont, N.Y., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 30, 1958, Ser. No. 712,265
13 Claims. (Cl. 34—56)



1. A web handling apparatus comprising a plurality of rollers for guiding a web in a tortuous path, a pair of endless carriers, one disposed on each side of the web, means for guiding each of the carriers in the same tortuous path as the web, said carriers serving to thread the leading end of the web through the apparatus, a main drive system for the apparatus, drive coupling means for connecting the main drive system to the carriers when it is desired to thread the web through the apparatus and for disconnecting the main drive system from the carriers when the web threading operation has been completed, supplemental drive means for advancing the carriers at a relatively slow speed, and overrunning clutch means coupling the supplemental drive means and the carriers, permitting the supplemental drive means to advance the carriers slowly without interferring with the main drive system advancing them at a faster speed.

2,944,346
THREE-COORDINATE RADAR SIMULATOR
Richard Coburn, 2018 Catalina Blvd., and James M. Hedlun, 4719 Chickasaw Court, both of San Diego, Calif.
Filed June 6, 1955, Ser. No. 513,618
11 Claims. (Cl. 35—10.4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

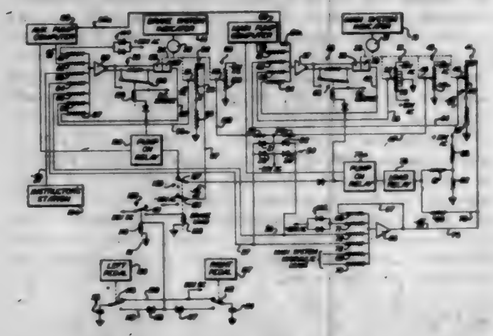


7. A radar target simulator which comprises a pair of cathode ray tubes, a pair of light sensitive elements disposed one in front of and spaced from each tube, an antenna synchro generator, means for mounting a pair of individual opaque tapes for movement progressively and linearly one between each tube and its related light sensitive element, motor means connected to and operating said tape mounting means and said antenna synchro generator concomitantly, a position indicator, a pulse shaper connected to each light sensitive element, a coincidence gate connected to each of said pulse shapers and to said position indicator, a sector gate programmer connected between said antenna synchro generator and one of said tubes, a phase shifter connected between said antenna synchro generator and said position indicator, a trigger pulse generator, a range sweep generator connected to said pulse generator, to the other of said tubes, and also directly to said position indicator, and an elevation saw-tooth generator connected to said one tube and also directly to said position indicator for providing the vertical sweep voltage to the indicator for elevation angle and to the horizontal amplifier of said one tube, whereby when opaque tapes having selectively placed apertures therein are passed progressively in front of said tubes by said mounting means, the apertures in said tapes will pass light pulses between said tubes and light sensitive means and cause formations to appear on said indicator corresponding to the positions of said apertures on said tape and their size.

2,944,347
HYDRAULIC PRESSURE SIMULATION
Robert R. Fontaine, East Riverdale, Clyde M. Whitby, Beltsville, and Hosea D. White, Jr., Greenbelt, Md., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Mar. 31, 1958, Ser. No. 725,082
2 Claims. (Cl. 35—12)

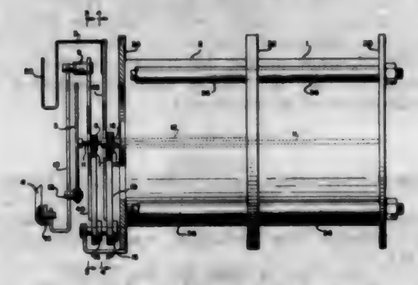
2. Apparatus for simulating to a trainee the operation of an aircraft hydraulic pressure system of the type having an oil pump supplying loads through a pair of accumulators interconnected for non-reversible flow from a main to a brake accumulator to equalize the pressure therebetween, comprising in combination a main pump computer operable by the trainee for generating a main pump potential representative of the rate of increase of main accumulator pressure resulting from the operation of a main hydraulic pump, an auxiliary pump computer operable by the trainee for generating an auxiliary pump

potential representative of the rate of increase of auxiliary accumulator pressure resulting from the operation of an auxiliary hydraulic pump, a first summing amplifier having inputs thereto representative of main accumulator pressure changes, a first mechanical shaft whose angular position represents main accumulator pressure, the said shaft having potentiometers mounted thereon, a first servo motor connected to the first mechanical shaft and responsive to the output of the first summing amplifier whereby the first motor drives the first shaft to a position analogous to the main accumulator pressure, a main system pressure indicator, a first synchro interconnected between the said main indicator and the said first shaft so as to activate the main indicator in accordance with the position of the first shaft so that the indicator presents to the trainee an indication of the main accumulator pressure, a second summing amplifier having inputs thereto representative of auxiliary accumulator pressure changes, a second mechanical shaft whose angular position represents auxiliary accumulator pressure, the said shaft having potentiometers mounted thereon, a second servo motor connected to the second mechanical shaft and responsive to the output of second summing amplifier whereby the second motor drives the second shaft to a position analogous to the auxiliary accumulator pressure, an auxiliary system pressure indicator, a



second synchro interconnected between the said auxiliary indicator and the said second shaft so as to activate the auxiliary indicator in accordance with the position of the second shaft so that the indicator presents to the trainee an indication of the auxiliary accumulator pressure, selector comparison means responsive to voltages from potentiometers on both the main and auxiliary shafts for generating a differential potential whereby the auxiliary accumulator pressure shaft is driven to indicate increasing pressure when the main pressure shaft indicates a greater pressure than the auxiliary pressure shaft but whereby the converse is not true, third summing amplifier means for combining potentials representative of main system hydraulic loads, the output of said third amplifier being applied to a potentiometer on the said main hydraulic pressure shaft, brake load means for generating a brake potential analogous to the pressure expended in the operation of brakes and means interconnecting said potential with a potentiometer on the auxiliary hydraulic pressure shaft, the inputs to the said first summing amplifier comprising the said main pump potential, auxiliary pump potential and main system load potential, the first two potentials being of such a phase as to tend to activate the main pressure shaft in an increasing pressure direction and the main system load potential is of such a phase as to tend to activate the main pressure shaft in a decreasing pressure direction, the actual direction of motion depending on the relative amplitudes of the potentials as summed by the said first summing amplifier, and the inputs to the said second summing amplifier comprising the said auxiliary pump potential, differential potential and brake potential whereby the amplifier output is analogous to a change in auxiliary pressure so that the auxiliary shaft is activated in accordance with the relative amplitude of the inputs and whereby a greater pressure in the main system will cause the auxiliary pressure shaft to move to indicate an increasing pressure which, in turn, will cause the selector comparison means to provide a potential to cause the main pressure shaft to move in a decreasing pressure direction to thereby simulate the equalizing of pressure between the main and auxiliary accumulators as occurs in an actual aircraft hydraulic pressure system.

2,944,348
SIMULATED TURN AND BANK INDICATOR
George R. Quick, Silver Spring, Md., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed July 23, 1958, Ser. No. 750,338
8 Claims. (Cl. 35—12)

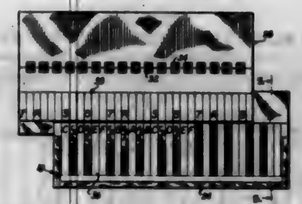


8. In a simulated flight instrument apparatus representative of a bank indicator comprising a frame to support said apparatus, an electrical rotational member whose angular position is analogous to that which an actual bank indicator would display during a real flight, a pinion gear having a disc associated therewith so as to produce proportional angular displacement of the disc for displacement of the pinion gear, a drive member interconnecting the electrical rotational member with the pinion gear whereby rotation of the rotational member imparts a proportional rotation to the pinion gear, a sector gear member having teeth in meshing relation with the pinion gear so as to be driven thereby and having one point pivotable at a point on the apparatus frame and having a second point to which a pivotable arm is attached, a sliding rotatable pivot having an aperture therein and being attached to said disc the said pivotable arm passing through the said rotatable aperture and movable thereby so that rotation of the drive member rotates the pinion gear to move the pivot junction of the sector gear and pivotable arm in an arc about the frame pivot and the combined motion of the pivot junction and rotatable pivot moves the pivotable arm so that the extremity thereof subscribes an arc the center of which if determined would lie outside the apparatus and a disc like member attached to the extremity of the pivotable arm so as to simulate in appearance the bank indicator of an actual aircraft instrument.

2,944,349
COMPARISON DEVICE
Harold G. Kaufman, Kansas City, Mo., assignor to Kaufman Advertising Co., Inc., Kansas City, Mo., a corporation of Missouri
Filed Sept. 22, 1958, Ser. No. 762,405
1 Claim. (Cl. 35—54)

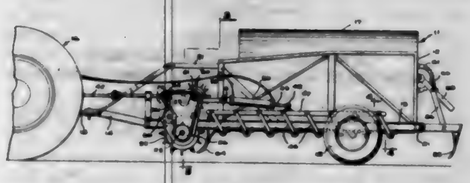
A comparator comprising a base having a generally rectangular back, a generally rectangular panel of lesser

width than the back secured to the latter in forwardly spaced, parallel relation thereto, and a spacer mounted between the back and the panel, said back including a portion extending transversely in one direction beyond one longitudinal edge of the panel, said spacer having a linear edge surface between the back and the panel, said surface being parallel to said one edge of the panel and offset therefrom in the opposite direction; reference data displayed on the front of the panel; a plate having a linear edge slidably supported on said surface of the spacer, a marginal part of the front face of the plate adjacent said edge of the latter slidably engaging the panel, a remaining part of the front face of the plate extending transversely in said one direction beyond said one edge of the panel,



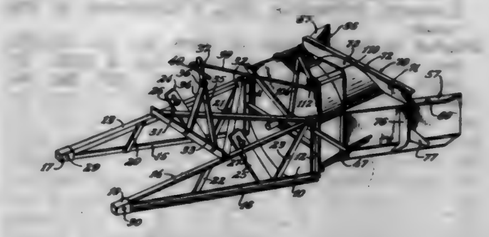
a part of the rear face of the plate slidably engaging said portion of the back; a set of generally rectangular tablets each having a top and a bottom edge; means hingedly mounting said tablets adjacent the top edge of the latter upon said remaining part of the front face of the panel, each of said tablets being selectively swingable into an operative position disposing its front face in generally coplanar relationship to the front face of the panel and its bottom edge in proximate and parallel relationship to said one edge of the panel; and a different chart displayed on the front face of each tablet respectively and bearing a corresponding relation to said data, whereby any of said charts may be compared with said data in any position of relative reciprocated relationship therebetween.

2,944,350
ROTARY LOADING AND SCRAPING MACHINE
Cornelius Bartsch, Rte. 1, Box 327A, Dinuba, Calif.
Filed Dec. 16, 1955, Ser. No. 553,551
4 Claims. (Cl. 37—4)



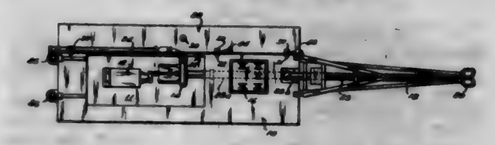
2. In a scraping and loading machine of the type comprising a wheeled container having its forward end open and being adapted to be connected to a tractor, a transverse cylinder rotatably mounted on the forward end of the container adjacent the bottom therof, a plurality of longitudinally spaced ground-engaging rectangular radial scraping blades of substantial length on said cylinder, a plurality of longitudinal rows of radial outwardly projecting ground-engaging pulverizing teeth on said cylinder, said rows being staggered with respect to said scraping blades, a transverse conveying rotor rotatably mounted on the forward end of the container above and rearwardly adjacent said cylinder, said conveying rotor being provided with a plurality of radial rectangular conveyor blades substantially coextensive in length therewith, a depending transiverse guide plate mounted adjacent and below the open forward end of the container and adjacent said cylinder, and drive means connected to said cylinder and conveying rotor and simultaneously rotating same in directions to propel scraped material against said guide plate and into the forward end of the container.

2,944,351
SNOW PLOW
Ervin A. Klecker, Fairfax, Minn., and Theodore G. Lange, Hector, Minn.
Filed Dec. 12, 1956, Ser. No. 627,921
7 Claims. (Cl. 37—43)



1. A snow plow including a rotor, a shaft rotatably supporting said rotor, a housing encircling said rotor and having an aperture therein through which snow may be forced, a pair of wings secured to sair rotor housing and diverging forwardly and outwardly therefrom, said wings being of a height less than the height of the housing, a shield extending forwardly from said housing, a beam having its ends connected to said wings at a point forwardly of said housing and a portion thereof lying intermediate said ends engaging the forward edge of said shield, said beam having its lower edge substantially below the top of said housing and forming an obstruction forwardly thereof, and said housing having an open front through which snow may be guided from said wings.

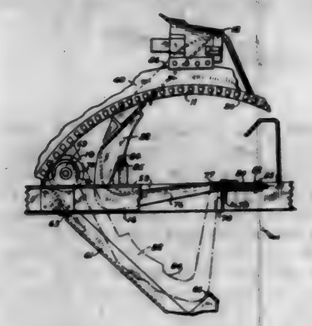
2,944,352
PORTABLE DREDGE
Carl P. Kaufmann, Baltimore, Md., assignor to Ellicott Machine Corporation, Baltimore, Md., a corporation of Maryland
Filed Oct. 2, 1957, Ser. No. 687,636
4 Claims. (Cl. 37—54)



1. A portable dredge comprising a hull having a main section and a side section wherein said main section is provided with a well for the pump and power unit, said well having a width substantially less than the width of the main section and one side of the well forming one side of said main section, the other side of said well being spaced from the other side of said main section, said main section having a deck flush with the top of the well and enclosing the top of the main section to provide a buoyant space around the well, ballast tanks within said buoyant space on that side of the main section remote from the well, said side section having a length corresponding substantially to the length of the main section, pivotal means for interconnecting said side section and said main section along that side of the main section most nearly adjacent the well whereby both of said sections may be floated in water and are independently buoyant

so that the ballast tanks in the main section may be utilized to decrease the list of the main section due to the eccentricity of the well, and said side section may be ballasted to facilitate connecting the side section to the main section in the water and wherein said ballast tanks in the main section and said side section may be pumped out to bring the connected units to a stable upright position with sufficient free board for operating the dredge.

2,944,353
BUCKET CLEANER
John F. Lindell and Raymond L. Kennedy, Newton, Iowa, assignors, by mesne assignments, to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Original application Mar. 11, 1955, Ser. No. 493,692, now Patent No. 2,841,895, dated July 8, 1958. Divided and this application Sept. 3, 1957, Ser. No. 681,615
5 Claims. (Cl. 37—91)



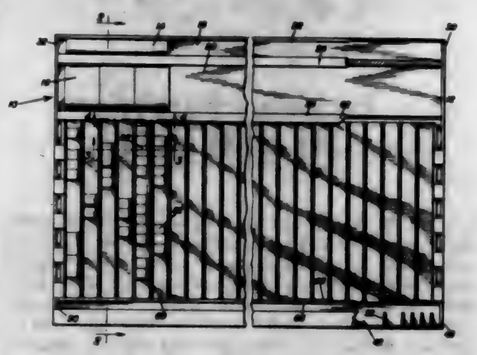
1. In a trenching machine, a vehicle, an endless series of excavating buckets movable along a definite path near an end of said vehicle, a frame supporting said bucket series from said vehicle and having a fixed abutment thereon, a bodily movable cleaning rake for said buckets having a ledge portion frictionally engaging said abutment, suspension means for said rake movably mounted on said frame, and means coacting with said suspension means for urging said rake into latching engagement with said abutment.

2,944,354
SUPPORTS FOR IRONING TABLES
Raymond N. Sellon, Jr., Milwaukee, Wis., assignor, by mesne assignments, to Arvin Industries, Inc., Columbia, Ind., a corporation of Indiana
Original application Nov. 2, 1953, Ser. No. 389,802, now Patent No. 2,892,273, dated June 30, 1959. Divided and this application Mar. 6, 1957, Ser. No. 644,252
1 Claim. (Cl. 38—121)



Supports for an ironing table, comprising crossed interpivoted legs, a removable foot secured to each of said legs, the lower end of each of said legs abutting its respective foot and having a plurality of lugs receivable in openings provided in said foot to locate and hold said foot against sliding and rotating relatively to said leg, a U-shaped tie rod extending from each of said legs and interconnecting said leg to its foot, each of said feet being formed of a length of metal-tubing and provided with spaced openings through which the ends of the tie rods extend, and means for securing said tie rods to the feet whereby to readily hold the feet on the legs, said feet having a circular cross section and the feet-engaging ends of the legs having a semicircular shape to abut said feet in a mating relationship.

2,944,355
OFFICE ORGANIZATION BOARD
Morris D. Parkinson, 253 E. Second S., Rexburg, Idaho
Filed Dec. 30, 1958, Ser. No. 783,826
2 Claims. (Cl. 40—63)



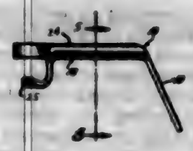
1. In a display device, the combination of a panel, a pair of strips provided in spaced relation on said panel, said strips having opposing faces provided at the surface of the panel with undercut grooves, a plurality of elongated channels extending between said strips and having substantially flat end portions removably received in said grooves with said channels resting against the surface of the panel, said channels including lateral keeper flanges extending between and of a length lesser than the distance between said strips whereby to facilitate insertion and removal of the channels in and from said grooves, and a plurality of flexible display cards removably positioned in said channels in engagement with said flanges.

2,944,356
TRANSPARENCY EQUIPMENT
Borwin F. Authen, 7596 Mulholland Drive, Los Angeles, Calif.
Filed Mar. 19, 1956, Ser. No. 572,491
6 Claims. (Cl. 40—106.1)



1. A transparency viewer comprising in combination: an elongated lamp case along one lateral edge of the viewer; a flat stiff first sheet of frosted, light permeable, material separably connected to and extending laterally from the lamp case, beginning at a first level above the position of the lamp in said lamp case to an outer edge; an elongated strip of stiff material hinged to the frosted sheet at its outer edge and of a width to extend downwardly from the said first sheet and rest upon a supporting surface at a second level substantially at the bottom of the lamp case, said width being equal to the vertical distance between the first and second levels, the inwardly directed face of said strip having a mirroring lining for reflecting light toward the interior of the viewer; and a second sheet on said surface, said second sheet being of substantially white material, and a holding means for holding the lamp case and second sheet together in a readily detachable manner, said holding means comprising a horizontally lying, inwardly opening slot channeled in the upper portion of the lamp case and an adjacent edge of the first sheet dimensioned and adapted to slide readily in said slot.

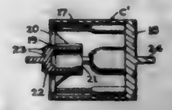
2,944,357
CARTRIDGE MAGAZINE FOLLOWER FOR AUTOMATIC PISTOLS
Donald R. Smith, Sierra Madre, and Donald B. H. Coates, Pasadena, Calif., assignors to Western Follower Corporation, Gardena, Calif., a corporation of California
Filed May 15, 1958, Ser. No. 735,439
2 Claims. (Cl. 42—50)



1. A one-piece magazine follower, particularly adapted for use in a single column cartridge magazine of an automatic type pistol, comprising an elongated body member having thereon a cartridge-engaging surface, a positioning and guiding tang member at one end of said body member extending obliquely thereto and in a direction opposite to said cartridge-engaging surface, a cut-out lip member depending from the opposite end of said body member, said tang member, lip member and elongated body member being common to a given plane passing through said members, the outer edges of said elongated body member lying in a plane normal to said given plane, the terminal end of said opposite end of the said body member extending beyond said lip member, the said body member being of such a length that it is adapted, when mounted for use, to extend obliquely across substantially the entire width of the magazine, the cartridge-engaging surface of said elongated body member being non-planar in cross-section, said non-planar cross-section having a maximum height in the medial plane of said body member and above the plane of said edges, said maximum height corresponding to the radial dimension of a cartridge with which the follower is adapted to be used whereby the follower, when magazine-mounted, is adapted to lift a cartridge when the latter is free of the conventional cartridge retaining lips of the magazine to a position appreciably above the magazine body.

2,944,358
TOY CAP REVOLVER
John H. Weimer, Manheim, Pa., assignor to The Hubley Manufacturing Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Oct. 29, 1959, Ser. No. 849,638
1 Claim. (Cl. 42—58)

In a toy revolver having stock and barrel portions, the combination, comprising, simulated two-piece cartridges each of which comprises a shell having a back wall with a single central opening and a slug having a rear end portion for telescopic engagement within the shell to maintain the periphery of an explosive cap between the inner edge of the slug and the rim of the shell surrounding said opening and with its fulminate portion exposed through said opening, said rear end portion of the slug being solid to provide a firm anvil for said fulminate portion and preventing the passage of smoke, a cylinder mounted between said barrel and stock portions for rotation by a synchronized hammer and trigger mechanism, a front wall of the cylinder having a solid web portion with a flat inner face engaged by the front end of the slug, a cartridge support on and extending from the inner face of the rear wall of the cylinder, and said rear wall also having an annular series of cartridge receiving openings arranged about said cartridge support, and a plurality of angularly spaced ribs on said cartridge support for maintaining said shells in axial relation to said openings, whereby the cartridges are supported with the cap in position to be engaged by the hammer passing through said opening and the front end of the slug abutting against the inner flat surface of said solid web portion of the front wall.



2,944,359
REVOLVER LOADING DEVICE
John A. Hanley, Noroton, Conn.; Margaretta C. Hanley executrix of said John A. Hanley, deceased, assignor of one-half to Albert J. Slimak, Stamford, Conn.
Filed Nov. 15, 1957, Ser. No. 696,787
2 Claims. (Cl. 42—89)

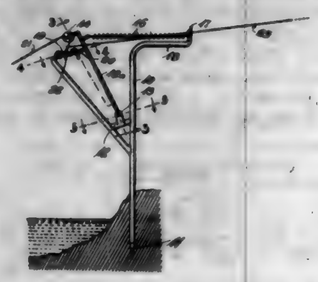


1. A rechargeable cartridge loading device for loading cartridges directly into a revolver comprising in combination, a body portion having a plurality of annular cylindrical chambers open at each end and in parallel spaced relationship for housing the cartridges and a central chamber, a resiliently biased reciprocating plunger slidably mounted within said central chamber, said plunger provided with a shoulder portion at one end thereof for laterally displacing the cartridges so that the flange ends of the cartridges overlap the outer edges of the body portion around said cylindrical chambers whereby the cartridges are retained in said annular cylindrical chambers until said plunger is displaced by engagement with a revolver, thus allowing the cartridges to fall freely into the revolver.

2,944,360
TRIGGER FISHING DEVICES
Arlie Green, 2758 Bristol Drive NE., Atlanta, Ga.
Filed Sept. 10, 1957, Ser. No. 683,148
1 Claim. (Cl. 43—16)

A device of the character described comprising; a generally Y-shaped supporting frame having upstanding portions defining forks, an actuating arm pivotally mounted at one end between said forks and having a roller element mounted on its free end, a spring urging said arm toward one fork of said Y-shaped frame, a hook mounted on the other fork, means on said arm for releasably engaging said hook and a fish line extending from the direction of said other fork looped around said roller and removably attached to said hook so that a pull on said

line in the direction of said other fork will release the hook and cause the spring to swing the arm and roller



toward said one arm and thereby jerk the said extending end of the line.

2,944,361
FISHING ROD HOLDER
Thomas W. Coulter, 1506 NW. 16th St., Oklahoma City, Okla.
Filed Aug. 28, 1958, Ser. No. 757,758
8 Claims. (Cl. 43—16)



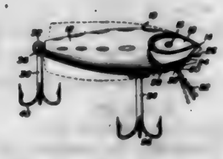
1. In a holder for supporting a fishing rod and swinging the fishing rod when the outer end of the rod is pulled by a fish, a frame having vertically extending and horizontally spaced leg portions, each of said leg portions having an aperture therethrough and a rectangular-shaped slot therethrough communicating with the upper portion of the aperture, the aperture and slot in each leg portion being aligned with the aperture and slot in the other leg portion, a shaft journaled in said apertures, said shaft having a substantially square cross section and being of a cross sectional size to slidingly fit in said slots and be held against turning movement by the edges of said slots when extended through said slots, a tube rigidly secured to the shaft between said leg portions and extended at a right angle to the axis of the shaft, said tube being of a size to receive the handle end of the fishing rod in one end thereof and support the fishing rod substantially in alignment with the tube, and a tension spring anchored to the opposite end of the tube and to the frame below said apertures to continually urge said one end of the tube upwardly.

2,944,362
PORK-RIND JACKET LURE
Donald E. Kreiger, Box 744, Ruskin, Fla.
Filed Dec. 2, 1957, Ser. No. 700,134
4 Claims. (Cl. 43—42.06)



1. A fish lure comprising an open tubular body having its tubular ends extending in parallel planes inclined at an acute angle to its axis and having its length and diameter in such relation to the angle of inclination of said parallel planes that the axially aligned rear edge portion of the most forwardly extending end portion is substantially forward of the axially aligned forward edge portion of the most rearwardly extending end portion, a fish line-receiving swivel connection secured to said tubular body adjacent the forward end edge of said most forwardly extending portion, a barb secured to and extending outwardly of said tubular body from its inner wall adjacent a point on the most rearwardly extending end portion edge most remote from said swivel connection securing area, a pork-rind mounted at one end on said swivel connection and extending through said open tubular body and secured to said barb, said pork-rind having a free flapping tail portion extending beyond said barbed end of said tubular body, and a fish hook mounted on said swivel connection intermediate said pork-rind and said most forward end edge of said tubular body, said fish hook having its hook shank extending through said open tubular body and its hook point extending exteriorly of said open tubular body and facing away from said pork-rind tail portion.

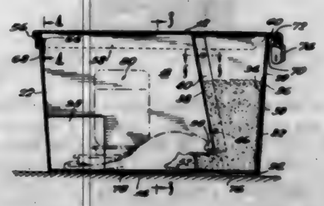
2,944,363
FISHING LURE
Milton D. Poe, 1949 River Road, Modesto, Calif.
Filed Sept. 13, 1957, Ser. No. 683,825
1 Claim. (Cl. 43—42.22)



A fish lure comprising a generally streamlined body having a convex top and bottom, a forwardly-convergent tapered nose having a flattened downwardly and rearwardly inclined underside and a truncated tail, hook means, means securing said hook means to said body, a tapered attaching plate conforming to the inclined underside of said nose and secured thereto, a flat straight edged baffle plate bendably secured to the lower rear edge of said attaching plate and underlying the lowermost portion of

said body, said baffle plate extending laterally beyond the sides of said body and therebelow and being adapted to be readily and manually bent to a selected position of angular adjustment relative to the longitudinal axis of said body, an offset apertured lip bendably secured at the top of said attaching plate, said apertured lip being adapted to be readily and manually bent to a selected position of angular adjustment relative to the longitudinal axis of said body, said apertured lip being adapted for attachment to a fishing line and oppositely disposed concaved cheek bevels in the upper front side of said body having flattened forward end portions adapted to be impinged by a water vortex created by said baffle plate to impart a wriggling motion to the lure.

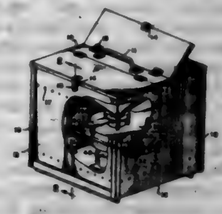
2,944,364
RODENT CONTROL FEEDING STATIONS
Lewis B. Kelly, % Solvit Chemical Co. Inc., 3734 Speedway Road, Madison, Wis.
Filed Oct. 17, 1956, Ser. No. 616,445
2 Claims. (Cl. 43—131)



2. A rodent control feeding station comprising a generally rectangular enclosure having front, rear, and side panels and a bottom panel, apertures in the lower rear corners of the side panels of a size adapted to provide a passage for rodents, support means slightly elevating the front portion of the bottom panel to drain liquids through the apertures, a vertical window slot in the front panel, a transparent window member, means for securing the window member over the slot, a single transverse partition member extending between the side panels with its upper end extending across the upper portion of the enclosure and its lower end spaced from the bottom of the enclosure, said partition member forming with the front panel a hopper rearwardly open at the bottom, a single transverse barrier member extending across the bottom of the enclosure rearwardly of the lower end of the partition member to form a trough fed by the hopper, and a lid pivotally mounted atop the enclosure having downwardly extending flanges on all edges thereof, the single hopper and trough so formed being forward of the passage apertures to provide a clear path of vision through the lower rear portion of the feeding station.

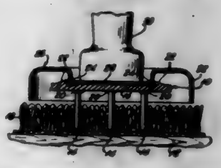
2,944,365
PORTABLE ELECTRIC JIFFY DUSTER
W. M. Faulks, San Angelo, Tex. (P.O. Box 1114, Fort Stockton, Tex.)
Filed Apr. 24, 1956, Ser. No. 580,252
1 Claim. (Cl. 43—148)

A portable duster having a vertical feed system comprising a housing, a hopper for holding a supply of dust powder mounted in the upper portion of the housing, said hopper having a discharge opening at the bottom thereof, a motor and blower mounted in the lower portion of the housing directly beneath the hopper, said blower having a center intake opening in the top for air and dust powder, said blower opening being in vertical alignment with the discharge opening at the bottom of the hopper thereby providing an unimpeded gravitational flow of dust powder downward from the hopper opening directly into the blower intake opening, vertically disposed mounting means closely adjacent the hopper and blower openings and supporting said hopper above said blower with only a narrow vertical space between said hopper and blower openings acting to positively create a venturi effect about the hopper opening, said mounting means supporting said blower and said hopper in a manner that the narrow spacing is substantially free of



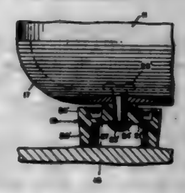
all impediments radially and horizontally outwardly whereby air may flow in through the housing converging from substantially all sides into the narrow spacing between the opening of the hopper and creating the venturi effect around substantially the entire hopper opening, a valve mounted directly beneath said hopper opening controlling the flow of dust from said hopper to said blower casing, and means to open and close said valve.

2,944,366
FURNITURE SUPPORTING DEVICE
Arthur H. Joabson, 140 Glenwood Ave., Jersey City, N.J.
Filed May 29, 1958, Ser. No. 738,661
5 Claims. (Cl. 45—137)



1. A device for supporting furniture above a rug directly on the floor beneath the rug comprising a furniture supporting platform, a plurality of rigid slight diameter spindle members connected to said platform and spaced apart sufficiently for threading through the weave and backing of the rug and for positioning on the floor therebeneath, and a furniture plate positioned on said platform including skirt portions extending around the side of said platform.

2,944,367
SELF-LEVELING FOOT STRUCTURE
Frederic C. Bontecue, Chicago, Ill., assignor to Plastic Precision Parts Co., Chicago, Ill., a partnership
Filed Nov. 15, 1957, Ser. No. 696,786
4 Claims. (Cl. 45—139)



1. In a foot structure of the character described adapted for use with record players and the like, a molded polyethylene foot comprising a hollow sleeve

equipped intermediate the ends thereof with a web extending transversely thereacross having a boss extending upwardly therefrom to an elevation above the upper edge of the sleeve, said sleeve at the lower edge thereof being adapted to be positioned on a support surface and said boss being adapted to abut the underside of an appliance, said sleeve and boss being provided with a centrally disposed, longitudinally extending opening therethrough adapted to receive a rivet for securing the foot to such appliance, the cross-sectional area of said foot at the lower edge thereof being less than its cross-sectional area at the upper edge of said sleeve, the thickness of said sleeve being progressively increased from the extremities thereof toward said web and the sleeve along the underside of said web being substantially thicker than along the upper side thereof, said web being characterized by resisting downward deflection but being downwardly deflectable free of lateral compressive forces when a weight in excess of a predetermined magnitude is applied thereto, said web also having the characteristic of restoring itself to its pre-deflected condition whenever such weight is removed therefrom.

2,944,368
TOY DOLL STRUCTURES
Edward D. O'Brien, Anaheim, Calif. (541 S. Spring St., Los Angeles 13, Calif.); Dell M. Mallek, Whittier, Calif. (417 S. Hill St., Los Angeles, Calif.); and Walter C. Whitteker, 912 S. Brookhurst, Fullerton, Calif.
Filed Dec. 19, 1956, Ser. No. 627,188
4 Claims. (Cl. 46—156)



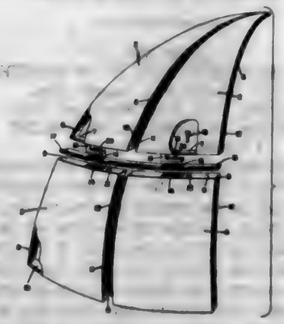
1. A toy doll structure of the class described which comprises: a bas relief type of doll formed so as to have a front and sides which are curved so as to extend in back of said front; and at least one curved article of apparel designed to be held in a predetermined position upon said doll, said article of apparel being formed out of a single piece of resilient material so as to have a front and sides, said front and said sides being shaped so that at least a part of said article of apparel is curved to the rear of said article of apparel in a shape corresponding to the shape of a part of said doll and is adapted to resiliently engage said doll so as to hold said article of apparel in said predetermined position upon said doll when said article of apparel is temporarily deformed and snapped into said predetermined position upon said doll.

2,944,369
SAP COLLECTION APPARATUS AND METHOD
Everett L. Soule, St. Albans, Vt.
Filed Aug. 6, 1958, Ser. No. 753,477
3 Claims. (Cl. 47—52)

1. A sap collector spout for secure attachment to a tree in a bore in the tree, said spout providing for continuous flow of the sap regardless of the depth of insertion of the spout into the bore of the tree, said spout comprising an elongated body having an axial passage through at least a major portion of the spout, an intermediate portion of said spout having a conical taper with the large diameter of the intermediate conically tapered portion always being exteriorly of the tree and the maximum diameter of the intermediate conically tapered portion being substantially greater than the diameter of the bore in the tree into which the spout is inserted whereby a wedging action will at all times be maintained between the intermediate conically tapered portion of the spout and the entrance end of the bore of the tree to assure a fluid tight connection, rib means having serrated outer edges extending from the small diameter end of the intermediate conically tapered portion to the inner end of the spout, the distance from the outer edges of the rib means and the teeth formed by the serrations on the rib means being less than the large diameter of the intermediate conically tapered portion and such distance being sufficiently large to grip the bore in the tree additionally retaining the spout in the bore, the portion of said spout adjacent said rib means lying within a space defined by a cylinder having a diameter not greater than the diameter of the bore in the tree, said passage through at least a major portion of the spout extending in the conical intermediate portion beyond a section of the conical portion having a diameter greater than the outer diameter of the bore in the tree, said spout having transverse inlet opening means in communication with the longitudinal passage throughout a substantial portion of the length of the spout and lying in the portion of the spout between the small diameter end of the intermediate conically tapered portion and the inner end of the spout whereby regardless of how far the spout is inserted into the bore or even though the inner end of the spout engages the bottom of the bore, sap may run into the transverse opening means and into the longitudinal passage to provide for continuous uninterrupted flow of sap through the spout, additional passage means being provided between the longitudinally extending passage extending a major portion of the length of the spout to an edge of the spout beyond the section of said intermediate conically tapered portion of greater diameter than the tree bore to provide for collection of sap through said additional passage means.



2,944,370
BUILDING CONSTRUCTION
Paul J. Malarkey, 2214 Greenstark Path, Wooster, Ohio
Filed Aug. 14, 1958, Ser. No. 755,814
3 Claims. (Cl. 50—52)



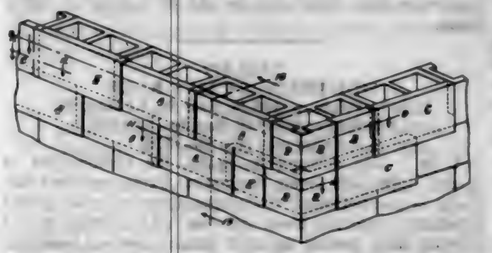
1. In a building construction having a dome-shaped structure with a plurality of triangularly shaped roof members and a plurality of wall members, and in which the roof members have lower flanged sides forming a horizontal joint with top flanged sides of the wall members; the combination in which one of said roof and wall members has at least one L-shaped lug and the other of said members has corresponding lug-receiving apertures, a locking ring disposed between the flanged sides of the roof and wall members forming the horizontal joint, the ring having a plurality of lug-receiving apertures aligned with the apertures of the assembled members, and the ring being movable to rotate the assembled roof members from unlocked to locked positions of the interfitting locking members.

2,944,371
ROOF CONSTRUCTION
John Muir, Dayton, Ohio
(650 SW. 62nd Court, Miami, Fla.)
Filed Aug. 24, 1956, Ser. No. 606,112
1 Claim. (Cl. 50—64)



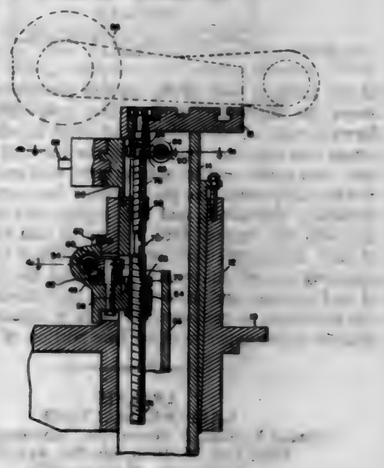
A roof construction comprising, in combination, a plurality of parallel equispaced inclined rafters, a plurality of parallel equispaced purlins engaging said rafters and extending normal thereto, said rafters and said purlins cooperating to provide a rectangular planar lattice for receiving a roof covering, a plurality of like roof tiles, there being one roof tile supported by each rafter at a point midway between each pair of adjacent purlins and one roof tile supported by each purlin at a point midway between each pair of adjacent rafters, said roof tiles having a length slightly greater than the distance between adjacent rafters and a width slightly greater than one half the distance between adjacent purlins whereby said tiles are disposed upon the rectangular lattice of purlins and rafters in equispaced tiers extending parallel to said purlins, the tiles in adjacent tiers overlapping in staggered relationship and adjacent tiles in each tier overlapping, each said tile having four spaced right angular flanges projecting normally from the underside thereof arranged to form two intersecting channels in the nature of an open cross engageable with the lattice thereunder, and means for securing the flanges to the lattice.

2,944,372
FACING FOR CONCRETE BUILDING BLOCKS
Scott Brobston, 433 E. Center St., Nazareth, Pa.
Filed Dec. 28, 1957, Ser. No. 704,849
1 Claim. (Cl. 50—193)



A wall comprising, in combination, wall blocks laid in courses forming a building wall and secured together by mortar, and a wall facing comprising a plurality of ornamental metal facing strips positioned over the outer faces of said building blocks, said strips having a greater frontal area than said outer faces of said blocks and cover said outer faces, the ends of adjacent strips overlapping in the formation of an ornamental surface, and a vertical and a horizontal laterally extended flange formed on one vertical and one horizontal edge respectively of each of said facing strips and the length of said vertical flange being less than the length of the corresponding edge, said flanges being embedded within the mortar between the adjacent building blocks securing said wall facing strips in position, said flanges having openings formed therein providing pockets for the reception of mortar positioned between the adjacent surfaces of said wall blocks.

2,944,373
GRINDER WITH COMPENSATING TRIMMING MECHANISM
Max B. Mendley, Zenon Kohorzycki, and David W. Daniel, all of Detroit, Mich., assignors to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 3, 1958, Ser. No. 718,768
6 Claims. (Cl. 51—5)

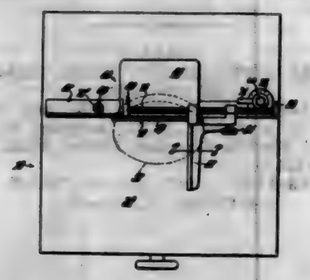


1. A grinder comprising a frame, a grinding wheel support movable on said frame toward and away from the path of movement of a work piece, a compound screw mounted on said movable support for rotation but prevented from endwise movement relative to said support, an adjustment nut carried by said frame for rotation but prevented from endwise movement relative thereto, and threadedly engaged with a first portion of said screw, a wheel trimmer device mounted on said wheel support for movement parallel to the axis of said screw, a nut fixedly carried by said device and threadedly engaged with a second portion of said screw, said portions of said screw having threads of opposite hand, and means for selectively rotating said adjustment nut and said screw.

2,944,374
GRINDING TOOL
Henry Persson, 224 Glenwood Ave., Bloomfield, N.J.
Filed May 15, 1958, Ser. No. 735,516
2 Claims. (Cl. 51—110)

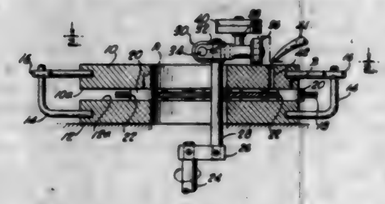
1. A machine for removing the corners and edges from workpieces comprising, a housing having a table provided with a work supporting surface and with an opening having a forward edge, an electric motor and a tool

rotatable thereby having a flat forward working face, mounting means mounting said motor relative to said housing and positioning a portion of said tool in said opening above said supporting surface and a portion of said forward face in a plane at an obtuse angle relative to and above said surface and adjacent the forward edge of said opening, an elongated member superposed on and movable on said supporting surface having a forward longitudinal guide portion and a closure portion intermediate opposite ends of said guide portion enclosing a portion of said tool and having a forward wall forming a continuation of said guide portion and being disposed forwardly of the working face of the tool, the lower edge



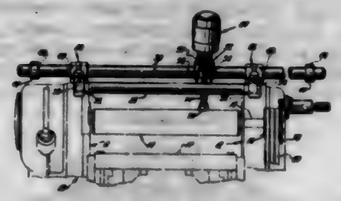
of the forward wall of the closure portion being spaced above the supporting surface and cooperating with the forward edge of said opening to form an elongated slot across and exposing a portion of the forward face of said tool, said guide portion and forward wall and supporting surface cooperating as guide means for movement of a workpiece therealong and into engagement through said slot with the exposed face portion of said tool, one end of said elongated member being pivoted to said table actuating means adjustably connecting the opposite end of said member and table to swing said member in opposite directions to position said guide in adjusted positions relative to the upper working face portion of the tool.

2,944,375
LAPPING MACHINE
Morton Lipkins, 3 Nemeth St., Malverne, N.Y.
Filed Oct. 26, 1956, Ser. No. 618,650
17 Claims. (Cl. 51—117)



1. In combination, an upper plate and a lower plate having confronting lapping surfaces in spaced-apart horizontal planes, a nest between said lapping surfaces, said nest having means for holding articles to be lapped in a circle extending to opposite sides of the center of said upper plate and at different distances from the periphery thereof, means for effecting relative motion between the nest and the pair of plates such that the center of the nest has relative shifting motion in an orbit, carrying the articles successively to relatively retracted and relatively projected positions, and a supplementary force applying means disposed to act continuously on the upper plate toward the lower plate at the side thereof adjacent to the successively projected portions of the nest.

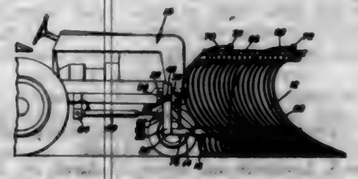
2,944,376
GRINDER ATTACHMENT FOR WOODWORKING MACHINES
Richard A. Butthe, Milwaukee, Wis., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 22, 1954, Ser. No. 438,570
24 Claims. (Cl. 51—249)



1. An attachment unit for conditioning the cutter blades of a woodworking machine, having a planar work support surface and a rotary cutter head fixedly journalled transversely of said work support surface so as to provide said cutter blades with cutting edges paralleling said work support surface, said unit comprising an attachment support frame comprising laterally spaced relatively fixed sidewalls having axially aligned through bores therein and integrally formed mounting pads having bottom support surfaces lying in a common plane paralleling the axis of said bores; guide means extending between and fixed in said through bores and having a rectilinear external surface parallel to said bore axis to form a guideway parallel to the plane of said mounting pad surfaces adapted when said attachment support frame is connected to said woodworking machine to be disposed in transverse parallel relation to said work support surface; a hinge pin supported between said sidewalls with its axis extending in spaced parallelism to said guideway and to the plane of said mounting pad surfaces; a blade conditioning tool mounting assembly carried by said hinge pin for pivotal movement around the axis of said hinge pin and including means for removably supporting thereon a blade conditioning tool adapted to be positioned in overlying relation to said cutter head when said support frame is operatively connected to said woodworking machine; manually releasable lock means for detachably securing said tool to said tool supporting means; a blade conditioning tool having a portion complemental to and mounted in said tool mounting means; support means carried by said blade conditioning tool mounting assembly for engaging said guideway and supporting said blade conditioning tool in contact with a selected cutter blade whereby movement of said blade conditioning tool in a transverse path paralleling said guideway and said work support surface is assured; and means on said blade conditioning tool mounting assembly adapting said blade conditioning tool mounting assembly for manual reciprocation in the direction of the axis of said hinge pin to move said blade conditioning tool in its predetermined transverse path from end to end of a selected cutter blade.

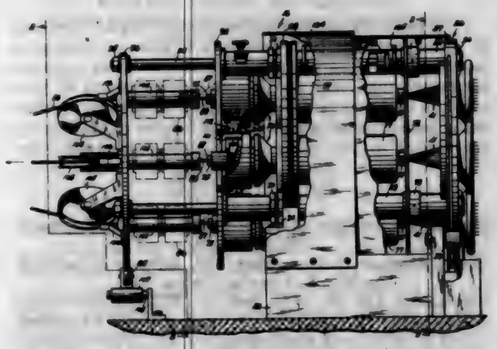
2,944,377
SIDE DELIVERY HAY RAKE
John L. Frieburg, 105 N. East St., Le Roy, Ill.
Filed Apr. 30, 1959, Ser. No. 810,090
3 Claims. (Cl. 56—376)

1. In a side delivery hay rake, the combination of spaced upper and lower horizontal frame members disposed in parallel relation with the upper member spaced forwardly from the lower member, and a set of spaced parallel tines carried by said frame members, each of said tines including a vertical upper end portion secured to the upper frame member, a relatively long curved intermediate portion extending first rearwardly and then downwardly and forwardly from said upper end portion to a point below and forwardly of the lower frame member, a reversely bent portion provided at the lower end of said curved intermediate portion, a curved lower por-



tion extending first rearwardly and downwardly and then upwardly from said reversely bent portion, and a lower end portion on said curved lower portion secured to said lower frame member.

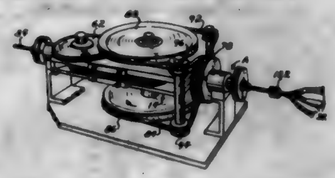
2,944,378
MULTI-UNIT BINDER
Charles H. Crosby, Cranford, Frank Wahl, North Bergen, and Roger R. Wahlberg, Bloomfield, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 30, 1959, Ser. No. 790,230
17 Claims. (Cl. 57—12)



1. A multi-unit cable binder comprising a rockable cradle, means to support the cradle for rocking movement, a plurality of twist heads rotatably supported at spaced positions by the cradle, face plates for the twist heads apertured for their respective groups of strands to form their respective cable units, motor driven means operable to rotate the heads to cause the face plates to form reverse spiral twists in the strands of each unit, a hollow motor driven serving head, through which each cable unit passes, supported by the cradle and aligned with its twist head to serve a spiral wrapping of material on its cable unit to bind the strands therein together, and means to rotate the cradle on its support to facilitate threading the strands through the heads.

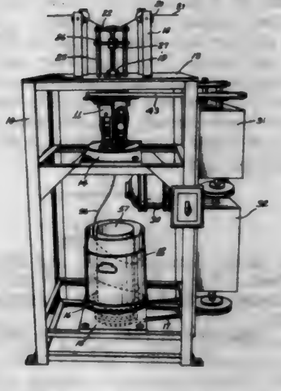
2,944,379
DRAWING AND TWISTING APPARATUS
Harry E. Davis, 510 E. Cuyahoga Falls Ave., Akron 10, Ohio
Filed Aug. 1, 1958, Ser. No. 752,493
6 Claims. (Cl. 57—31)

1. Apparatus for drawing and twisting a relatively thin and narrow strip or strips to form a stick material, comprising a pair of spaced-apart rotatable shafts each provided with a bore for receiving said strip or strips, a pair of endless belts positioned between said shafts for frictionally gripping said strip or strips and for feeding the strip or strips through said bores and along a path between said bores, a frame, spaced-apart pulleys rotatably carried by said frame for supporting said belts, means for rotating said frame, pulleys and belts about



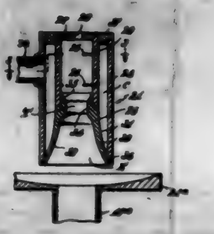
said path to twist the strip or strips, and means for rotating said pulleys and belts to simultaneously draw the strip or strips through one of said bores and to feed the strip or strips through the other bore, including a pair of rotatable pulleys, a stationary pulley member and belt means connecting said pair of rotatable pulleys with said stationary pulley member.

2,944,380
WIRE TWISTING MACHINE
John J. Klapper, New Canaan, and Claude C. Smith, Jr., Stratford, Conn., assignors to General Electric Company, a corporation of New York
Filed Jan. 15, 1957, Ser. No. 634,268
3 Claims. (Cl. 57—34)



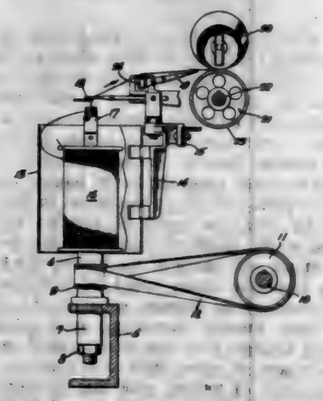
1. A wire twisting machine comprising guide means for supporting a plurality of wires which are being drawn into the machine, a twisting head rotating about a vertical axis and gripping the wires to pull them over the said guides while putting a continuous twist in the wires, a rotating barrel wire take-up means positioned under the said rotating head to receive the twisted wire as it is delivered from the head, the barrel having a central core so that the wire will fill up the barrel in the wire space around the core, the speed of rotation of the barrel measured as the speed of a point on the mean circumference of the wire space of the barrel, this barrel speed differing from the linear speed of wire output of the twisting head by an amount equal to the pitch of the twisted wire, thereby converting axial rotation of the wire, as it emerges from the twisting head to linear motion by means of more than one complete turn of a revolving helix of twisted wire that is whirled into the barrel take-up means to provide a level fill from bottom to top of the barrel.

2,944,381
APPARATUS FOR USE IN ASSEMBLING AND INTERTWINING DISCRETE FIBERS
Peter M. Strang, Needham, and James G. Gamble, North-bridge, Mass., assignors to Lawrence M. Kosler, Whitinsville, Mass.
Filed May 27, 1955, Ser. No. 511,528
14 Claims. (Cl. 57—53.91)



1. Apparatus for use in concatenating discrete fibrous elements to form a twisted strand comprising means defining an elongate cylindrical chamber whoses axis is vertical, a top closure for said chamber having a constantly open central yarn delivery port of a diameter substantially less than that of said chamber, means defining an upwardly tapering entrance passage, open at top and bottom, coaxial with said chamber, whose lower end is of a diameter exceeding that of said chamber, means defining a throat passage, of a diameter less than that of the chamber, coaxial with and which connects the lower end of the chamber with the upper end of the entrance passage, the peripheral wall of the chamber having jet orifices therein whose axes are tangential to the inner surface of the chamber, a supply conduit having a delivery end which is coaxial with said entrance passage and spaced from the lower end of the latter, means supplying liquid under pressure to the jet orifices, and means for supplying fiber-bearing liquid to the conduit under a substantially constant head such as to project a jet of liquid upwardly through the entrance and throat passages into said chamber.

2,944,382
UPTWISTER
Harry A. Batty, Lexington, Va., and Thomas G. Pullen III, Winston-Salem, N.C., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Oct. 2, 1959, Ser. No. 843,988
3 Claims. (Cl. 57—62)



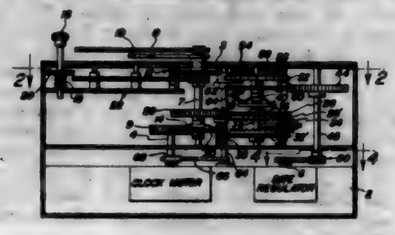
1. In a starting control device for textile twisting frames and the like the combination that comprises a spindle belt drive shaft, a motor directly connected to said spindle belt drive shaft, a take-up roll drive shaft, a countershaft, said take-up roll drive shaft and countershaft being journaled in a sub-frame, a clutch connecting the countershaft and the take-up roll drive shaft, driving connections between the countershaft and the spindle belt drive shaft, and time delay means for actuating the clutch when the motor is started and the spindle belt drive shaft is brought up to normal operating speed.

2,944,383
COMPOSITE YARN AND METHOD OF PRODUCING SAME
Charles S. Lawrence and Henry M. Straub, Jr., Winston-Salem, N.C., assignors to The Duplan Corporation, New York, N.Y., a corporation of New York
Filed Oct. 1, 1958, Ser. No. 764,549
4 Claims. (Cl. 57—140)



1. A three-ply composite yarn comprising a first strand of yarn which has been preshrunk a given percentage, a second strand of yarn which has been preshrunk a greater percentage than said first strand, a third strand of yarn which is unshrunk, said three strands being plied together under equal tension whereby equal lengths of each strand are present in any given length of the composite yarn.

2,944,384
SELF-ACTUATED AUTOMATIC REGULATION OF TIMEPIECES
Jacob Rabinow, Takoma Park, Md., assignor of one-half to Max L. Libman, Vienna, Va.
Application Apr. 10, 1956, Ser. No. 577,393, now Patent No. 2,858,629, dated Oct. 28, 1958, which is a continuation of abandoned application Ser. No. 396,093, Dec. 4, 1953. Divided and this application Apr. 4, 1958, Ser. No. 726,523
6 Claims. (Cl. 58—109)

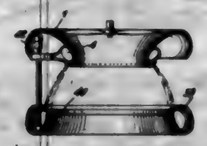


1. An automatically regulated timepiece having a time display element comprising a constant speed time shaft driven by the timepiece mechanism, a rate regulator movable in two directions to respectively increase or lower the running rate of the display element, a display element shaft rotatable in fixed relation with the time display element of the timepiece, a friction clutch between said two shafts for driving the display element from the time shaft, but capable of slipping when the display element is moved by external means to change the time setting of the time display element, a differential mechanism having one element thereof associated with each of said shafts and having a differential element movable in one of two directions only in accordance with a difference in motion of said shafts, regulator actuating means driven by said differential mechanism to actuate said rate regulator in a direction to speed up the running rate when the display element of the timepiece is set forward, and vice versa.

2,944,385
STABLE MONOPROPELLANTS
Emory E. Toops, Jr., Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland
No Drawing. Filed May 19, 1958, Ser. No. 735,928
5 Claims. (Cl. 60—35.4)

5. The process for producing thrust in a bipropellant burning reaction motor which comprises burning, in a bipropellant burning reaction motor, mixtures having a molar ratio of lithium chlorate to ammonia ranging from about 1:2 to about 1:3 and a bipropellant oxidant selected from the group consisting of liquid oxygen, red and white fuming nitric acid and dinitrogen tetroxide.

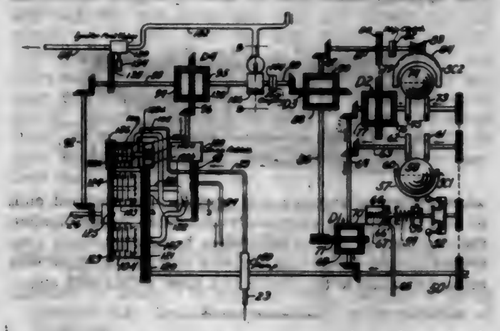
2,944,386
DEVICE FOR INCREASING THE IMPULSION OF A FLUID, ESPECIALLY APPLICABLE AS A LIFT OR PROPULSION DEVICE
Jean Henri Bertin, Neuilly-sur-Seine, and Henri François Schmitt, Bourg-la-Reine, France, assignors to Societe Bertin & Cie, Paris, France, a French company
Filed June 25, 1957, Ser. No. 667,831
Claims priority, application France June 25, 1956
1 Claim. (Cl. 60—35.5)



Jet augmenter comprising a convergent duct bounded by a physical wall and ending with an orifice open to the atmosphere, a pressure chamber integral with said wall and extending outside said duct in the vicinity of said orifice, means for supplying pressure liquid to said chamber, a slot-like nozzle communicating with said chamber and adapted to discharge said liquid in the form of a jet, said nozzle extending along the periphery of said orifice and facing in a direction diverging slightly from the axis of said duct whereby the jet issuing from said nozzle forms a divergent liquid wall extending the convergent physical wall of the duct and bathed by the atmosphere, a divergent duct bounded by a physical wall and substantially coaxial with the convergent duct, said divergent duct extending at a distance downstream of the convergent duct and around the path of the divergent jet, an annular chamber formed on said divergent duct and having an annular inlet facing towards said slot-like nozzle in order to collect part of the liquid issuing therefrom as a divergent jet, and a pump which sucks the liquid collected in said annular chamber and discharges it into said pressure chamber.

2,944,387
JET ENGINE SPEED AND NOZZLE CONTROLS
John L. Hall, Hanover, Joseph M. Marpen, Verona, and Douglas A. Elliott, Waldwick, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 24, 1954, Ser. No. 458,243
7 Claims. (Cl. 60—35.6)

6. In a gas turbine engine having a nozzle and movable means associated with the nozzle for varying the effective area thereof, a selectively operable mechanical driving connection from said engine to said movable means including a pair of friction clutches each having input elements driven by the engine and output elements drivably connected to said movable means, one said clutch when coupled connecting the engine to the movable



means to increase nozzle area, and the other clutch when coupled connecting the engine to the movable means to decrease nozzle area, and hydraulic mechanism connected and operable to engage one or the other of said clutches.

2,944,388
AIR ATOMIZING SPRAY BAR
Frank C. Bayer, Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Feb. 24, 1955, Ser. No. 490,330
9 Claims. (Cl. 60—35.6)

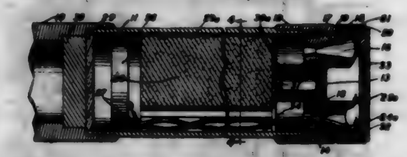


1. In a jet engine having a source of air under pressure, a source of fuel, and a combustion chamber, the improvement of a spray bar in said combustion chamber having an inside tube connected with said source of air and equipped with air ejection orifices at spaced intervals along the length thereof, first means controlling flow from said air source to said air ejection orifices, a second tube surrounding said first-mentioned tube connected with said source of fuel and equipped with orifices along the length thereof for discharging air atomized fuel into the combustion chamber, and second means controlling flow from said fuel source to the orifices in said second tube, said second tube providing a mixing chamber around the first-mentioned tube receiving air from the air ejection nozzles for admixing with the fuel in the second tube.

2,944,389
ROTATING ROCKET MOTOR AND METHOD OF MAKING SAME
Clarence E. Weinland, Pasadena, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 28, 1944, Ser. No. 564,337
4 Claims. (Cl. 60—35.6)

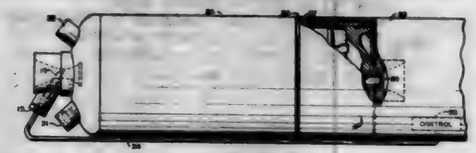
4. In a tubular rocket device having a transverse wall closing the rear end thereof and an opening extending

therethrough through which exhaust gas may flow, a metallic collar extending rearwardly of said transverse wall, a ring surrounding said collar and electrically insulated therefrom, an igniter in the rocket forwardly of said opening, and a pair of electric current conducting



wires extending through said opening, the forward ends of said wires being electrically connected to said igniter, the rear end of one of said wires being electrically connected to said collar and the rear end of the other wire being grounded to the device at a point within said collar.

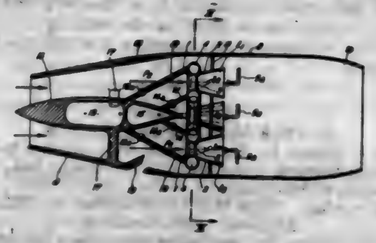
2,944,390
TERMINATION OF THRUST IN SOLID-PROPELLANT ROCKETS
Anthony C. Keathley and Norman A. Klunzel, Waco, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 25, 1957, Ser. No. 648,439
8 Claims. (Cl. 60—35.6)



1. Apparatus for terminating thrust of a solid-propellant rocket motor having a combustion chamber, an exhaust nozzle of suitable area to maintain suitable operating pressure within the motor case, and a safety disc having an area sufficiently greater than that of said nozzle so as to reduce the pressure in the motor case to a pressure insufficient to maintain combustion, positioned in the combustion chamber wall of said motor, which comprise a first means communicating with said nozzle and adapted to be forced radially into said nozzle so as to substantially close said nozzle so as to increase the pressure in the combustion chamber and burst the safety disc; and a second means operatively connected to said first means to force the first said means radially into said nozzle.

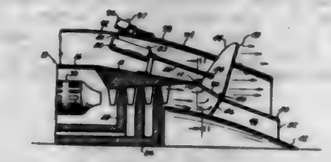
2,944,391
RAM-JET UNIT
Francois Gilbert Paris, Garches, Jean Henri Bertin, Neuilly-sur-Seine, and Benjamin Jean Marcel Salmson, Suresnes, all of France, assignors to Societe Bertin & Cie, Paris, France, a French company
Filed June 27, 1957, Ser. No. 668,388
Claims priority, application France June 29, 1956
7 Claims. (Cl. 60—35.6)

1. In a ram–jet unit having a ramming intake directed forward and designed to convert velocity of intake air into pressure, and a combustion chamber supplied with air providing from said ramming intake, an air pressure raising ejector device comprising a pipe extending between the downstream end of said ramming intake and the upstream end of said combustion chamber to interconnect the same, said pipe having an upstream convergent section opening into said downstream end of the ramming intake, an annular slot-like nozzle extending around said pipe, downstream of the convergent section thereof, and opening in a direction inclined downstream, and means for supplying pressure fluid to said annular nozzle to form a motive jet inducing compressed air from the down-



stream end of said ramming intake and discharging it into said combustion chamber with an increased pressure.

2,944,392
HOLLOW VANE EXHAUST SILENCER EFFECTING THRUST GENERATION
John M. Tyler, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 29, 1956, Ser. No. 574,884
9 Claims. (Cl. 60—35.6)

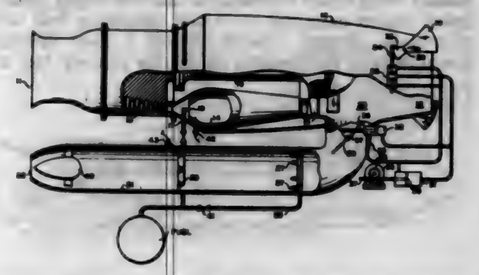


1. A jet engine located within a cowl and having a compressor, a turbine, a combustion section separating said compressor and said turbine, an exhaust duct adjacent to said turbine having an exhaust outlet and further having a plurality of openings in the outer periphery thereof, a hollow vane pivotally attached to each of said exhaust duct openings, means to pivot said vane such that it is either in a substantially radially outwardly extending operative position or in a retracted non-operative position with said vane juxtapositioned to the outer periphery of said exhaust duct, a plurality of rearwardly extending nozzles in the wall of said hollow vane, such that the total area of said nozzles will facilitate substantially equal exhaust gas flow to the exhaust gas flow through said exhaust outlet, means to block said exhaust duct so that gas may not pass through said exhaust outlet when said vane is in said operative position and so that all gas must pass through said nozzles, means to block said exhaust duct openings when said vane is in said retracted, non-operative position so that all gas must pass through said exhaust outlet, and retractable cowl means adapted to cover said vane when in its retracted position and further adapted to retract to permit said vane to pivot into its operative position.

2,944,393
AERODYNAMIC BRAKING OF JET ENGINE AIRCRAFT
Homer M. Fox, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 15, 1955, Ser. No. 501,626
4 Claims. (Cl. 60—35.54)

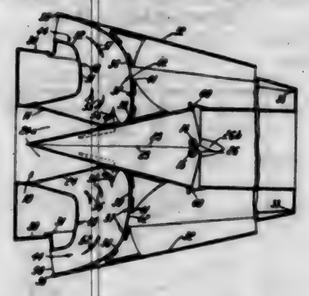
1. A device for producing a reverse thrust at a substantially constant level of combustion to a continuous combustion power plant, wherein fuel is burned in a combustion chamber and the products of combustion are expelled through a reaction nozzle so as to provide thrust,

which comprises auxiliary nozzle means positioned substantially parallel with and opposite to said reaction nozzle; conduit means communicating between said auxiliary nozzle and the interior of said power plant intermediate the combustion chamber and the reaction nozzle; first valve means positioned in said conduit means which closes said conduit means; fuel introducing means positioned in said conduit downstream from said first valve; second valve means operatively connected to said reaction



nozzle which reduces the effective area of said reaction nozzle; valve control means operatively connected to said first and second valve means so as to open said first valve and to reduce the effective area of said second valve simultaneously so that the effective area available for discharge of combustion gas from the combustion chamber is maintained substantially constant whereby the pressure in the combustion chamber is maintained substantially constant and the thrust of the power plant is reversed; and fuel ignition means positioned in said conduit.

2,944,394
JET ENGINE THRUST REVERSER
Edgar Phillips Peregrine, Royston, England, assignor, by mesne assignments, to Bristol Aero Engines Limited, Bristol, England, a British company
Filed May 16, 1955, Ser. No. 508,637
Claims priority, application Great Britain May 21, 1954
17 Claims. (Cl. 60—35.54)



1. In an aircraft, in combination, an airframe structure, a jet propulsion engine mounted in said airframe structure and comprising a jet pipe also mounted in said airframe structure, said jet pipe having an opening in its wall, and valve member means in said jet pipe, said valve member means being movable between a closed position in which it extends into the jet pipe and an open position in which it closes off the opening in the jet pipe and forms a faired continuation of the internal surface of the jet pipe, an airframe skin part on said airframe structure adjacent said opening in said jet pipe, said skin part having an opening therein, closure member means carried by said structure and movable between a flush position in which said closure member means fits flush on said skin part covering said skin part opening, and an open position in which at least its foremost part is spaced away from said skin part and extends into the relative airstream over said skin part, first deflector means on said valve member means, and second deflector means on said closure member means, said first and second deflector means lying wholly between the wall of said jet pipe and said skin part when said valve and closure member means are in their open and flush positions respectively and forming a continuation of one another when said valve and closure member means are in their closed and open positions respectively, to receive exhaust gases of the jet stream flowing out of the jet pipe and to direct these clear of the relative airstream flowing out of the jet pipe and to direct these clear of the relative airstream over the outer surface of said skin part.

2,944,395
MEANS AND METHODS OF NEUTRALIZING AND CONVERTING THRUST COMPONENTS
Edmond E. Doak, Los Angeles, Calif., assignor to Doak Aircraft Co., Inc., Torrance, Calif., a corporation of California
Filed June 6, 1955, Ser. No. 513,344
2 Claims. (Cl. 60—35.54)

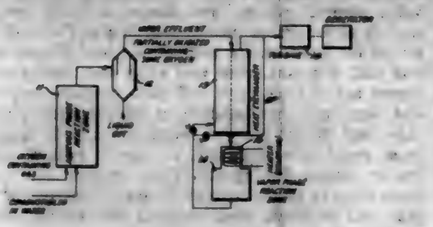


1. A device for utilization of thrust generated by a jet-type engine on an aircraft to control yaw and pitch comprising in combination: a single, thin-walled substantially cylindrical, open-ended nozzle having a longitudinal axis and extending beyond the body of an aircraft; at least four circumferentially spaced, radially directed ports in a common transverse plane, near the end of said nozzle and door means slidably mounted on the outer surface of said nozzle for covering and uncovering each of said ports; means carried by said nozzle for controllably and selectively actuating each of said door means; an obturating vane pivotally mounted at its rear edge on the inner surface of said nozzle adjacent the rear edge of each of said ports, said vanes being movable from an inobturating position closing the ports into position obturating the open end of the nozzle and deflecting thrust into said ports; and streamlined, separate, vane-actuating means centrally located within said nozzle along said longitudinal axis for pivoting said vanes between obturating and inobturating positions.

2,944,396
PROCESS AND APPARATUS FOR COMPLETE LIQUID-VAPOR PHASE OXIDATION AND HIGH ENTHALPY VAPOR PRODUCTION
Daniel M. Barton and Eugene W. Schoeffel, Kronenwetter, and Frederick J. Zimmermann, Weston, Wis., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 9, 1955, Ser. No. 487,174
8 Claims. (Cl. 60—39.05)

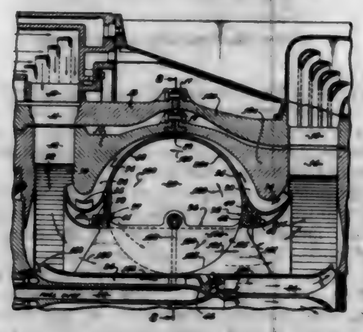
1. In a self-sustaining process for superheating vapors, the steps which include: entraining combustibles in a vapor stream containing sufficient oxygen-containing gas to supply at least the stoichiometric oxygen demand of the combustibles; elevating the temperature of said vapor stream with entrained combustibles and oxygen-containing gas to a point at which complete oxidation occurs, causing superheat of the vapor stream; cycling at least a part

of the thus produced superheated vapors in countercurrent heat exchange relation with the said vapor stream carry-



ing the entrained combustibles and oxygen-containing gas; and withdrawing the balance of superheated vapor for power conversion.

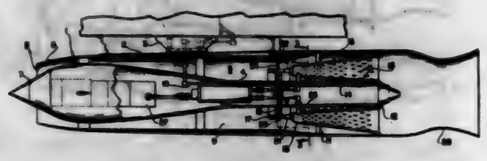
2,944,397
COMBUSTION CHAMBERS FOR GAS TURBINE POWER PLANTS
Vladimir H. Pavlecka, Los Angeles, Calif., assignor to American Machine & Foundry Company, a corporation of New Jersey
Original applications Mar. 23, 1951, Ser. No. 217,347, and Mar. 19, 1951, Ser. No. 216,303, now Patent Nos. 2,804,747, dated Sept. 3, 1957, and 2,809,493, dated Oct. 15, 1957. Divided and this application Aug. 27, 1956, Ser. No. 606,451
10 Claims. (Cl. 60—39.36)



4. A combustion chamber comprising a hollow toroid having a plurality of input and output wedge-shaped, or sector-shaped, ports having base portions and apex portions, said chamber receiving compressed air at the base portions of said input ports and discharging gases into said toroid at the apex portions of said input ports, said output ports receiving hot gases at the apex portions of said output ports and discharging said hot gases at the bases of said output ports, said input ports interleaving, or interlacing, said output ports, and the apices of the input ports pointing in the opposite direction to the apices of the output ports.

2,944,398
COMBUSTION CHAMBER FOR JET PROPULSION MOTORS
Robert J. Naegele, Jr., Van Nuys, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Oct. 28, 1954, Ser. No. 463,489
2 Claims. (Cl. 60—39.82)

1. A ram jet engine comprising a generally tubular housing, a centerbody concentrically carried within said housing and forming an annular air passage through the housing, an annular burner centrally located within said passage, said annular burner having downstream diverging walls and a rounded solid walled annular channel connected to the upstream ends of said walls so as to form an annular area therein, sheltered from air passing through the housing, for a continuous annular pilot flame at the upstream end of the burner, fuel supply piping in said centerbody extending upstream of said burner, a plurality of circumferentially spaced pilot flame fuel injection nozzles projecting through the upstream portion of said pilot flame channel to supply fuel thereto, said nozzles being rigidly connected to said fuel supply piping, igniter means projecting from said centerbody into said pilot flame channel adjacent to and a short distance downstream of said nozzles, an annular primary fuel in-



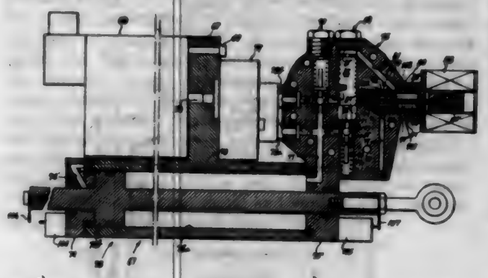
jector ring adjacent said pilot fuel nozzles and upstream thereof, said fuel injector ring connected to said fuel supply piping to release fuel within said air passage, said diverging burner walls having a plurality of generally circular openings formed therein downstream from said annular channel and extending in a downstream direction toward the ends thereof for directing the combustible air fuel mixture into said burner, said openings being progressively larger in a downstream direction, and small openings in said channel adjacent said nozzles for supplying a pilot air-fuel mixture thereto which is supplemented by the fuel from the nozzles to provide a rich mixture which will propagate an annular pilot flame in the channel.

2,944,399
AFTERBURNER COMBUSTION MEANS
Arthur McCardle, Jr., Cincinnati, Ohio, and Milton Howard Stuchbery, Cedar Grove, N.J., assignors to General Electric Company, a corporation of New York
Filed May 31, 1956, Ser. No. 588,564
3 Claims. (Cl. 60—39.82)



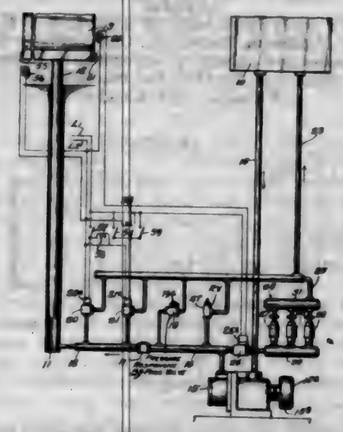
1. In an afterburner equipped reaction engine having an outer casing and an inner tailcone defining an annular diffusion passage therebetween, fuel spraying means in said passage, flameholder means in said passage downstream of said spraying means, and afterburner ignition means for providing a continuous torch of flame during afterburner operation including a generally cylindrical basket having one open end therein facing downstream, said end being open to the annular passage over its full cross-sectional area, said basket having at least one air inlet port therein, said basket being disposed between said spraying means and said flameholder, and fuel and ignition means connected to the inner portion of said basket.

2,944,400
SELF-CONTAINED POWER ACTUATOR
Benjamin N. Ashton, Kingston, N.Y., assignor to Electrol Incorporated, Kingston, N.Y., a corporation of Delaware
Original application Aug. 1, 1951, Ser. No. 239,880, now Patent No. 2,746,251, dated May 22, 1956. Divided and this application Mar. 8, 1956, Ser. No. 570,319
1 Claim. (Cl. 60—52)



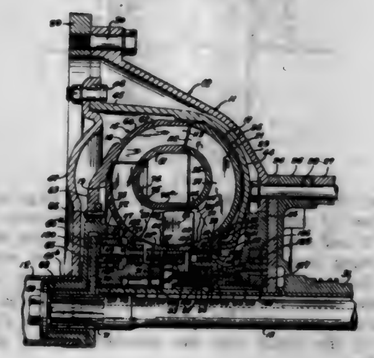
Hydraulic apparatus comprising a frame including a cylinder having open opposite ends, a wall extending laterally from said frame away from said cylinder, a pump carried by said wall, an electric motor carried by said wall, means extending through the wall connecting said motor to said pump for driving it, piston means in the cylinder, a passage plate secured to one end of said frame and having a first cap portion thereon closing one end of said cylinder, a second cap portion closing the other end of said cylinder, a piston rod fixed to said piston and extending through one of said cap portions, first conduit means including passages in the plate connecting the output of the pump with the cylinder on opposite sides of the piston means, a selector valve assembly in the plate for selectively directing the output of the pump to the cylinder on opposite sides of the piston means, and electromagnetic means carried by the passage plate to operate the selector valve assembly.

2,944,401
HYDRAULIC ELEVATOR LEVELING SYSTEM
Walter Beck, Moline, Ill., assignor, by mesne assignments, to Montgomery Elevator Company, a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 618,800
2 Claims. (Cl. 60—52)



1. In an operating system for controlling the delivery of liquid to the cylinder and plunger of a hydraulic elevator to control its ascent from station to station and its leveling at a station in the course of such ascent: a constant delivery pump to delivery liquid under pressure; a bypass line; a normally closed bypass valve between said pump and said bypass line; means for opening said bypass valve to admit liquid to said bypass line when the rising plunger reaches a predetermined point at which a reduced rate of rise is desired; and a flow regulator valve in said line downstream from the bypass valve, said flow regulator valve having a liquid passage and means for modifying the available area of said passage inversely with respect to back pressure at the pump outlet, whereby the rate at which liquid is bypassed remains substantially constant with variations in said back pressure.

2,944,402
VARIABLE REACTOR HYDRAULIC TORQUE CONVERTER
Robert C. Russell, Shaker Heights, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 29, 1957, Ser. No. 681,118
9 Claims. (Cl. 60—54)

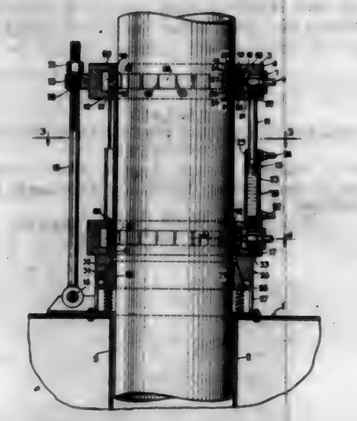


1. In a transmission of the fluid torque converter type; a group of cooperating relatively rotatable bladed annular members defining a toroidal fluid circuit and including pump means, turbine means, and reaction means inhibited against reverse rotation; a varinble-torque rotatable power input means; a rotatable power output means; means operably connecting said turbine means with said power output means to drive the latter; said reaction means having blade elements shiftable to different operative positions in said fluid circuit; means mechanically connecting said input means with said pump means for transmitting driving torque to the latter; said mechanical connecting means comprising co-operating torque transmitting members having a control relative movement therebetween of a variable extent in accordance with variations in the torque being transmitted thereby; and means responsive to said control relative movement for shifting said blade elements to said different positions.

2,944,403
HYDRAULIC JACKING ASSEMBLY FOR MARINE PLATFORMS
Edward A. Smith, Chatham, N.J., assignor to Raymond International Inc., New York, N.Y., a corporation of New Jersey
Filed Sept. 4, 1953, Ser. No. 378,460
1 Claim. (Cl. 61—46.5)

In a marine platform construction having apertures and spuds extending therethrough, a jacking assembly comprising upper and lower gripping rings located above the platform and encircling one of the spuds, each of

said rings being provided with a plurality of generally horizontally disposed jacks, a plurality of vertical double acting hydraulically operable piston and cylinder jacks interconnecting said upper and lower rings, means for selectively delivering fluid under pressure to the horizontal jacks of either of said rings and to said vertical jacks whereby portions of the horizontal jacks may be moved into tight gripping relation with the spud, thereby preventing relative movement in either vertical direction



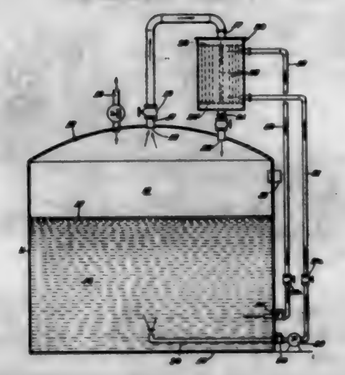
between the spud and at least one of said rings so that the other of said rings may be moved vertically relatively to said one ring by said vertical jacks, each of said rings being free, when its horizontal jacks are released from the spud, for vertical movement relatively to the platform under the action of said vertical jacks, and stop means secured to the platform to limit the upward travel of the upper ring and downward travel of the lower ring.

2,944,404
THERMOELECTRIC DEHUMIDIFYING APPARATUS
Robert W. Fritts, Elm Grove, Wis., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,858
11 Claims. (Cl. 62—3)



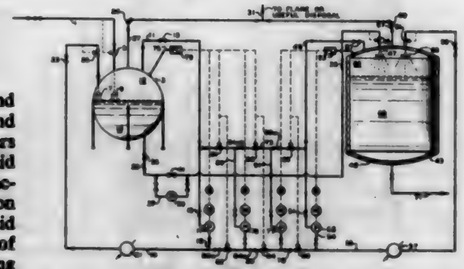
5. In a Peltier heat pump, a bank of first and second dissimilar thermoelements each having end portions and side portions, first and second thermojunction members interposed between and joined to the side portions of said first and second thermoelements to afford thermojunctions therebetween, and a layer of thermal insulation surroundingly disposed to the end portions of said thermoelements to prevent dissipation or absorption of heat thereat, said first thermojunction members extending outwardly through said insulation from one side only of said bank, and said second thermojunction members extending outwardly through said insulation from the opposite side only of said bank.

2,944,405
CONSERVATION ARRANGEMENT
Cleburne A. Bassett, Auburn, Ala., and William L. Barham, Baton Rouge, La., assignors, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 27, 1955, Ser. No. 543,060
13 Claims. (Cl. 62—54)



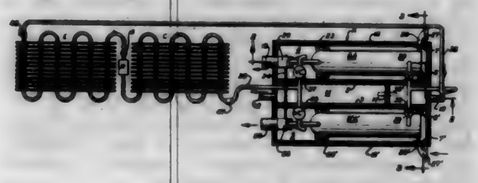
1. In a conservation apparatus for use with a volatile liquid storage tank, said tank defining a liquid containing portion and a chamber portion wherein vapors collect; the combination of a plurality of openings communicating with the chamber portion, passage means interconnecting said openings and establishing closed constant volume communication therebetween, said passage means being disposed externally of said chamber portion and temperature changing means operatively associated with said passage means to cool said vapors and induce circulation thereof through said passage means, said temperature changing means comprising a chamber surrounding a segment of said passage means and additional means associated with said chamber for circulating a substance therethrough to effect a temperature change of the segment of said passage means, said circulating means comprising passageways for establishing a closed communicating circuit between the chamber and a source of said substance external of the chamber, and a pump mechanism in at least one of said passageways to effect said circulation.

2,944,406
RECEIPT AND STORAGE OF LIQUEFIED GASES
Carlton C. Anderson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Apr. 22, 1959, Ser. No. 808,157
9 Claims. (Cl. 62—54)



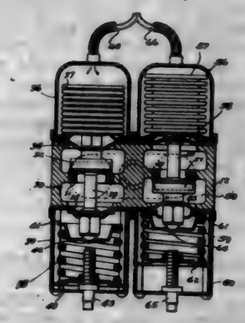
9. A method for storing liquefied petroleum gas comprising receiving said liquefied gas at a superatmospheric pressure, passing the liquefied gas into a receiving zone wherein liquid and vapor result, withdrawing flash vapor from the receiving zone, compressing the withdrawn vapor, condensing the compressed vapor thereby producing a first condensate, reducing the pressure of said condensate and passing the condensate of reduced pressure into said receiving zone wherein liquid and vapor result, withdrawing liquid from said receiving zone, reducing the pressure of this withdrawn liquid to a second superatmospheric pressure, said second superatmospheric pressure being only slightly above atmospheric pressure, and at this latter pressure passing the liquid into a storage zone in a spray flash vaporizing operation wherein liquid and vapor result, withdrawing flash vapor from said storage zone, compressing the latter withdrawn vapor, condensing the latter compressed vapor thereby producing a second condensate, reducing the pressure of said second condensate to said second superatmospheric pressure and at this latter pressure passing the second condensate into said storage zone in a spray flash vaporizing operation wherein liquid and vapor result, and storing the liquid in said storage zone.

2,944,407
REFRIGERATION AND HEATING APPARATUS OF THE ABSORPTION TYPE FOR USE ON INTERNAL COMBUSTION ENGINES INCLUDING A MUFFLER
Wendell W. Pettis, 1715 E. Cherry-Lynn Drive, Phoenix, Ariz.
Filed Feb. 27, 1958, Ser. No. 718,055
7 Claims. (Cl. 62—144)



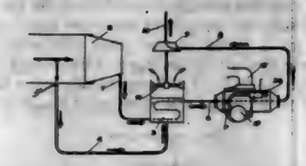
1. In refrigeration apparatus of the absorption type having an evaporator and a condenser connected to said evaporator through an expansion valve, and means operated by heat for forcing methyl chloride, as a refrigerant gas, under pressure into said condenser and absorbing said gas from said evaporator after expansion in said evaporator, consisting of a first elongated boiler absorber hingedly supported at one end and resiliently supported at the other end, and approximately half filled with refined liquid petroleum, as an absorber, connected by an inlet pipe and through an inwardly opening check valve to said evaporator, and connected by an outlet pipe through an outwardly opening check valve to said condenser, and a second boiler absorber hingedly supported at one end and resiliently supported at the other end, and approximately half filled with refined liquid petroleum, as an absorber, connected by an inlet pipe and through an inwardly opening check valve to said evaporator, and connected by an outlet pipe through an outwardly opening check valve to said condenser; said condenser, evaporator, and the spaces in said boiler absorbers being charged with methyl chloride, as a refrigerant gas; and means for alternately heating and cooling said boiler absorbers consisting of a container box divided into three parallel compartments by two parallel longitudinal partitions; the central compartment being connected at one end to a source of heated gas, and said boiler absorbers being disposed in the two side compartments and supported hingewise at one end and on a spring at the opposite end, valves on the spring supported ends of said boiler absorbers adapted to admit heated air from said central compartment when the free end of a boiler absorber is lowered and to close said side compartment to said heated air when said boiler absorber is raised, air scoops on the outside of said side compartments opening into said compartments, and valves on the free ends of said boiler absorbers operated by the up and down motion of said free ends, opening said side compartments to said air scoops when the free end of a boiler absorber is raised, and inter-connected turbo-blowers in the ends of each of said side compartments opposite said air scoops, each acting as a turbo motor when hot gases are let into said compartment to discharge said hot gases therefrom, and driving the other turbo-blower as a blower to discharge air let into said compartment by said air scoops.

2,944,408
WATER FLOW-REGULATING VALVE FOR A HEAT PUMP
Eldredge Willis, 218 E. Newell St., Winter Garden, Fla.
Filed Oct. 17, 1958, Ser. No. 767,957
3 Claims. (Cl. 62—160)



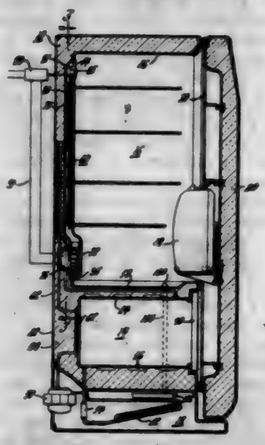
1. In a heat pump, a refrigeration compressor, a refrigerant conduit, means to selectively connect said conduit to the high pressure side or the low pressure side of the compressor, in accordance with operation of the heat pump for cooling or heating, a heat exchange water conduit, a dual water control valve in said heat exchange water conduit, said dual control valve comprising a body formed with a water inlet port and a water outlet port, a pair of valves mounted in said body between said inlet and outlet ports and being constructed and arranged to control communication therebetween, means acting on one of said valves and biasing same toward closed position, first fluid pressure-responsive means connected to said one valve in opposition to said biasing means and being constructed and arranged to open said one valve responsive to a relatively high predetermined range of fluid pressures therein, corresponding to operation of the heat pump for cooling, means in the other valve biasing same toward open position, second fluid pressure-responsive means connected to said other valve in opposition to said second-named biasing means and being constructed and arranged to move said other valve toward closing position responsive to a relatively low range of fluid pressures corresponding to operation of the heat pump for heating, and conduit means connecting both said fluid pressure-responsive means to said refrigerant conduit, whereby to control communication between said inlet and outlet ports in accordance with the respective working fluid pressures in the refrigerant conduit corresponding to heating and cooling.

2,944,409
EQUIPMENT FOR COOLING VARIOUS FLUIDS AND MORE PARTICULARLY AIR IN AIRCRAFT FLYING AT HIGH SPEED
André Chenesseau, Asnieres, France, assignor to Societe Anonyme des Usines Chenesseau, Asnieres, France, a company of France
Filed Jan. 28, 1958, Ser. No. 709,975
Claims priority, application France Jan. 22, 1957
13 Claims. (Cl. 62—169)



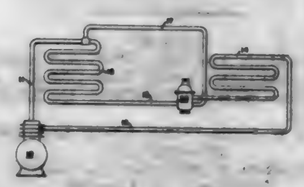
1. An evaporator type heat exchanger particularly for high speed aircraft in which air is to be cooled, comprising a nest of tubes for circulation of the air to be cooled, a casing enclosing at least in part said nest of tubes, said casing being completely filled with a volatile coolant liquid, a tank partially filled with said coolant liquid and provided with an opening for communication with the atmosphere, control means preventing any loss of coolant liquid through such opening when such opening is disposed below the tank during sloping flight paths of the aircraft, means for withdrawing the coolant liquid from said tank and delivering it under pressure into said casing, and calibrated means controlling communication between said casing and said tank, said calibrated means being loaded so that the pressure inside said casing prevents boiling of said coolant liquid.

2,944,410
REFRIGERATING APPARATUS
Leonard J. Mann, John M. Murphy, and Clifford H. Wurtz, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 6, 1955, Ser. No. 538,928
3 Claims. (Cl. 62—186)



2. In a refrigerator, a cabinet having a first compartment for storage of frozen foods and a second compartment for the storage of unfrozen foods, a first evaporator arranged in thermal exchange relationship with said first compartment, a second evaporator for cooling said second compartment, a compressor, a condenser, refrigerant flow means connecting said evaporators, compressor, and condenser in series flow relationship, pressure reducing means in said refrigerant flow means between said condenser and said first evaporator, said second evaporator being directly connected to the outlet of said first evaporator so as to receive the overflow refrigerant from said first evaporator, means forming an air flue adjacent one wall of said second compartment, said second evaporator being mounted in said air flue, fan means forcefully circulating air from said second compartment through said air flue in thermal exchange relationship with said second evaporator, and means responsive to the temperature of the air at the outlet of said air flue for starting and stopping said fan means.

2,944,411
REFRIGERATION SYSTEM CONTROL
William L. McGrath, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed June 10, 1955, Ser. No. 514,481
14 Claims. (Cl. 62—196)

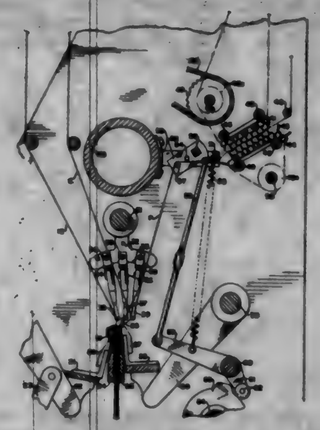


1. In a refrigeration system the combination comprising an evaporator, a compressor, a condenser and an expansion member interconnected to form a closed circuit for the flow of a refrigerant, said expansion member including a first inlet for permitting flow of liquid refrigerant to the evaporator and a second inlet permitting flow of substantially gaseous refrigerant from the high pressure side of the refrigeration system to the evaporator, and means responsive to evaporator pressure corresponding to predetermined evaporator temperature for controlling the effective area of each opening.

2,944,412
METHOD OF MAKING PILE FABRICS
Walter A. Rice, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Original application Dec. 4, 1957, Ser. No. 700,655. Divided and this application Oct. 7, 1958, Ser. No. 765,833
2 Claims. (Cl. 66—85)

1. A method of knitting a pile fabric on a knitting machine having a row of spaced endwise movable points and endwise movable needles aligned with respective points, which comprises the steps in repeated cycles of advancing the points, drawing from a reservoir fixed uniform lengths of a plurality of pile weft yarns, one for each point, and simultaneously positively engaging and feeding toward the reservoir an increment of each yarn from a source of supply thereof with the increments varying in length according to a pattern, laying each pile weft yarn across a plurality of points with the yarn passing on the side of at least one of said points remote from the needles to lap the yarn about the point and form a loop and on the needle side of the rest of said points, the pile weft yarns being longitudinally offset by the distance between adjacent points and all the pile weft yarns being lapped about different points and being laid in opposite directions in successive cycles, laying a plurality of back weft yarns along the row of points on the needle side thereof with each back weft yarn extending across at least three points and adjacent back weft yarns longitudinally offset by the distance between adjacent points, the back

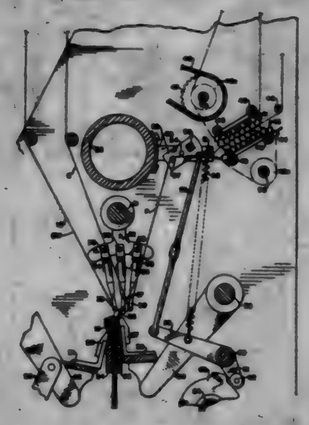
weft yarns being laid in opposite directions in successive cycles, advancing the needles, lapping chain warp yarns simultaneously about respective needles with each chain yarn overlying a plurality of pile and back weft yarns, retracting the needles to form stitches in respective chains with a plurality of pile and back weft yarns bound in each of the stitches, each pile weft yarn being bound in chain yarn stitches on opposite sides of the portion of each yarn forming a loop about a point, retracting the points to release the loops of pile weft yarns thereon,



and, after release of the loops, moving into the reservoir said fixed uniform lengths of the pile weft yarns fed as increments from the sources of supply, the movement into the reservoir of a fixed uniform length of a pile weft yarn, of which the increment fed during the cycle is shorter than the length of yarn required for laying across the points in such cycle, withdrawing said yarn from the loop thereof through the stitch binding the yarn on one side of the loop and shortening the loop by the difference in length between said increment and the length of the yarn required for lapping about a point.

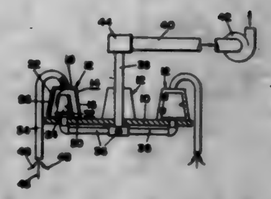
2,944,413
APPARATUS FOR MAKING PILE FABRICS
Walter A. Rice, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Application Oct. 7, 1958, Ser. No. 765,833, which is a division of application Ser. No. 700,655, Dec. 4, 1957. Divided and this application July 17, 1959, Ser. No. 827,753
5 Claims. (Cl. 66—85)

1. The combination with a knitting machine having bars carrying a row of points and a row of needles, respectively, the points and needles lying substantially parallel, means for advancing and retracting the point bar once per cycle of operation of the machine, means operating in each cycle to advance the needle bar later and retract it earlier than the point bar, and guides for pile weft yarns, back weft yarns, and warp yarns, respectively, the pile weft yarn guides operating after each advance of the point bar to lap pile weft yarns about selected points, the back weft yarn guides operating after each operation of the pile weft yarn guides to lay back weft yarns lengthwise of and between the rows of points and needles and past a plurality of needles with the back weft yarns laid in opposite directions in successive cycles, and the warp yarns guides operating after each advance of the needle bar to lap the warp yarns about respective needles, of means for drawing pile weft yarns from supplies and feeding them toward their guides in increments varying in length in accordance with a pattern, the drawing and feeding means operating to feed an increment of each yarn in each cycle, means engaging the pile weft yarns between the pile weft yarn guides and the drawing and feeding means, and means for operating said pile weft yarns engaging means, said last-mentioned means being synchronized with the means for actuating the



needles, the point bar and the yarn guides so that it is operated at the end of each cycle after retraction of the point bar to store supplies of the pile weft yarns of fixed uniform length and is operated in the following cycle to release the stored supplies of the pile weft yarns before operation of the pile weft yarn guides to lap the pile weft yarns about the advanced points.

2,944,414
VACUUM YARN FEEDING DEVICE
John E. Malley and John M. Ashe, both of 1215 W. Glenwood, Ave., Philadelphia, Pa.
Filed Apr. 14, 1959, Ser. No. 806,297
12 Claims. (Cl. 66—125)

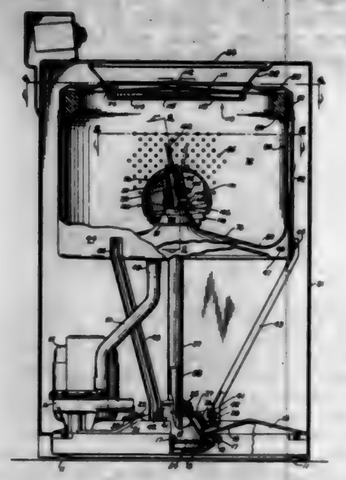


1. A yarn feeding device comprising an enclosed casing, means in said casing for holding a bobbin of yarn, a yarn feed tube extending from said casing, and means for applying a suction to said casing.

2,944,415
FILTER FOR WASHING MACHINE
Thomas R. Smith and Charles W. Burkland, Newton, Iowa, assignors to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Feb. 4, 1957, Ser. No. 637,931
13 Claims. (Cl. 68—18)

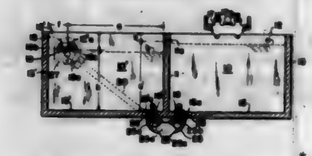
3. In a washing machine adapted to receive fluids and provided with an agitator for agitating said fluids, a member defining an access opening into said machine, a filter assembly positioned in said access opening, said filter assembly including an intake opening positioned above

said agitator and above the static level of said fluid and further including filter means for screening foreign particles from fluid splashed into said intake opening by



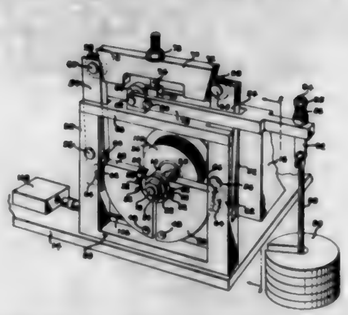
said agitator, said agitator having means thereon to direct fluids upwardly through said intake opening to said filter means.

2,944,416
LAUNDRY SYSTEM
Irvin A. Wilson, 1430 Tolman Ave., Pittsburgh 16, Pa.
Filed Dec. 10, 1957, Ser. No. 701,841
5 Claims. (Cl. 68—37)



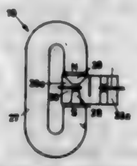
4. A laundry apparatus having a pair of upright rectangular containers in an end-to-end connected relationship and wherein, the containers have a common partition wall therebetween and having bottom, front, back, and end walls, and the walls of the one container define a final rinsing chamber and the walls of the other container define a first rinsing chamber which comprises, water injection means cooperatively positioned with respect to the back wall of the one container for filling its chamber and imparting a circular path of movement of water therein in one direction and for continuously supplying water thereto during a laundering operation, spillway means for discharging surface water and scum from said final rinsing chamber and for initiating a second unidirectional circular path of fluid movement in said first rinsing chamber which flows in the same direction as the path of movement in the chamber of the one container, said spillway passage means comprising a rectangular spillway passage portion through the partition wall at an upper-front corner portion thereof which defines the level of liquid within the final rinsing chamber, said spillway passage being positioned substantially tangential to the circular path of movement within said final rinsing chamber, a second rectangular spillway passage portion open through a wall of the other container adjacent a back corner thereof to discharge dirty water and surface scum from the first rinsing chamber, the opening of said second-mentioned spillway passage portion being positioned toward and tangentially of the circular path of movement of water within the first rinsing chamber, and said second-mentioned spillway having an inlet opening that is located substantially above the bottom wall of the other container and slightly below the first-mentioned spillway passage portion to maintain a level of water within the first rinsing chamber slightly below the level within the final rinsing chamber.

2,944,417
APPARATUS FOR MAKING FRICTION TESTS
Bernard C. Stupp, 814 Vermont Ave., Dayton, Ohio
Filed Apr. 4, 1957, Ser. No. 650,661
8 Claims. (Cl. 73—9)



1. An apparatus for testing the frictional characteristics of a bearing race or the like, said apparatus including means for engaging and supporting the race, means for rotating the race, a pair of rub shoes, means for supporting the rub shoes in compressive engagement with the race, the rub shoe supporting means comprising a pair of toroidal sectors arranged in the plane of said race, means supporting said sectors in substantial concentric relation to said race for limited rotary movement about said race, said last named means pivotally engaging said sectors so as to permit limited pivotal movement thereof away from the surface of said race, each said sector being provided with means for fixedly holding a rub shoe, said rub shoes being supported by said sectors at diametrically opposed positions in engagement with said race, means for applying a radially directed force to each sector for compressing said rub shoes radially against said race, and means opposing rotary movement of said sectors for determining the torque transmitted to the rub shoes upon rotation of said race.

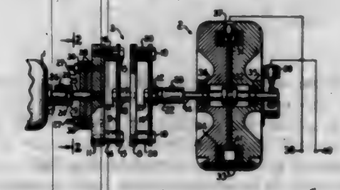
2,944,418
INSTRUMENT FOR GAS ANALYSIS
Heinz Engelhardt, Frankfurt am Main, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Filed Apr. 13, 1956, Ser. No. 578,074
2 Claims. (Cl. 73—27)



1. An instrument for determining heating values of a test gas subject to variations in molecular hydrogen, carbon monoxide and lower hydrocarbons content comprising a gas conduit connected to a source of said gas; an oxygen conduit connected to the gas conduit, means for mixing

the gas and oxygen to form an oxygen mix; a combustion chamber and comparison chamber each provided with outlet means; means for dividing a stream of the mix between the chambers; a paramagnetic gas analyzer having at least one pair of heater elements, and responsive to the differences between the paramagnetic gas contents of the gases issuing from the respective chambers; and means for passing gaseous contents from the chambers to the analyzer, said analyzer being calibrated to read in terms of heating units, the calibrations being approximately proportional to said differences in paramagnetic gas content of said gases issuing from the chambers when the test gas contains a mixture of molecular hydrogen, carbon monoxide, and lower hydrocarbons.

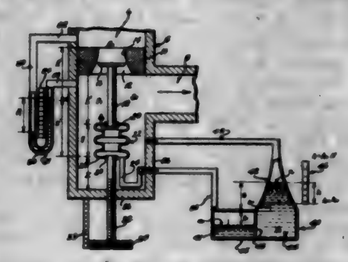
2,944,419
SPEED AND ACCELERATION DETECTION OF A ROTATING SHAFT
Alex Paalu, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 10, 1956, Ser. No. 583,959
5 Claims. (Cl. 73—116)



1. Apparatus for determining the acceleration of a rotating shaft wherein interference voltages established in the apparatus are substantially eliminated from the output of the apparatus without appreciable loss of information, which comprises means connected in driven relation to said shaft to provide an electrical signal proportional to the speed of the shaft, differentiating means connected to said last named means to provide an electrical signal proportional to the rate of change of said first named electrical signal, a filter circuit connected to the differentiating means and being adapted to pass electrical signals of a predetermined frequency range and to attenuate electrical signals of a frequency other than the predetermined frequency range including interference signals arising in said apparatus, and inertia means connected between said first-named means and said shaft to inertia load the shaft to limit the rate of acceleration of the shaft and to thereby confine the first named electrical signal to a frequency within the predetermined frequency range.

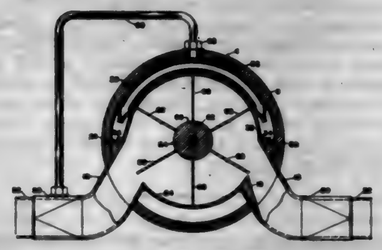
2,944,420
FLOW METER
Victor L. Streeter, Ann Arbor, Mich., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 23, 1956, Ser. No. 618,252
6 Claims. (Cl. 73—209)

1. A flow meter for measuring the flow of a fluid with varying head comprising a meter housing having an inlet and an outlet, an orifice member between said inlet and outlet and provided with an orifice opening with an increasing cross-section in a downstream direction, a valve disc positioned in said orifice movable with variations in pressure head to vary the cross-sectional flow area through said orifice, a bellows having a small resistance to compression and expansion and having a movable end operatively connected to said disk, a liquid manometer in communication with said bellows and having a shape so that liquid in the manometer will apply a non-linear force to the bellows to supply a non-linear support for the disc, and indicating means indicating



pressure drop across said disc to indicate the rate of flow through said orifice.

2,944,421
GAS METER
Carlton L. Cass, 38 Sollmar Beach Drive, Ventura, Calif.; George D. Harkey, P.O. Box 515, Carpinteria, Calif.; and Fred P. Miller, 7811 Leo Place, Westminster, Calif.
Filed Dec. 12, 1955, Ser. No. 552,344
6 Claims. (Cl. 73—230)



3. In a gas meter for use in a gas flow conduit, a housing having a gas passageway therethrough, an impeller rotatably supported in said housing and extending into said passageway for rotation in accordance with the flow of gas through said passageway, an arcuately-shaped spacer yieldingly supported in said chamber above said impeller and extending substantially from the inlet to the outlet of said housing, a bellows securing said spacer to said housing, and a conduit for connecting said bellows with the flow conduit.

2,944,422
ELECTRIC MEASURING DEVICE FOR MIXED AIR TEMPERATURE
Herman Wald, 23—31 29th St., Astoria, N.Y.
Filed Oct. 2, 1957, Ser. No. 687,750
5 Claims. (Cl. 73—342)



1. An electric measuring device for detecting the variation of the exact average temperature of air mixtures in a mixing compartment having two air supply openings leading thereto, and having means provided in each of said supply duct openings to produce any desired proportion of the volumes of said respective air streams flowing

therethrough, including in combination, a Wheatstone bridge circuit with a pair of terminals and having a pair of cooperating temperature responsive resistances of like characteristics in series located within said compartment in proximity of said respective supply openings to be directly exposed to the temperature changes in said air streams and connected in one arm of said bridge circuit; and having means provided on said temperature responsive resistances to adjust the relative proportion of the values of said temperature responsive resistances for a predetermined standard mixed-air temperature to correspond to the relative proportion of the variable volumes of the respective air streams to which they are subjected, and a non-responsive resistance connected in the adjacent arm of said bridge circuit having a resistance value of unit length equivalent to that of unit length of the temperature responsive resistances under standard air temperature condition and having separate means provided to independently adjust the length of said resistance to correspond to the total resultant operating length of both temperature responsive resistances in series, and two other non-responsive fixed resistances of like value each of which is connected in the opposed arms of said bridge circuit, said cooperating temperature responsive resistances in series controlling the unbalance potential on said pair of terminals electrically connected in said bridge circuit in accordance with the change of the average temperature of said air streams, said unbalance potential representing a condition in said bridge circuit when the mixed-air temperature departs from a predetermined standard value, and means connected to said pair of terminals in said bridge circuit affected by changes in said unbalance potential, thereby to obtain an exact measurement of the mixed-air temperature irrespective of the thoroughness of the mixing of both said air streams in said mixing compartment.

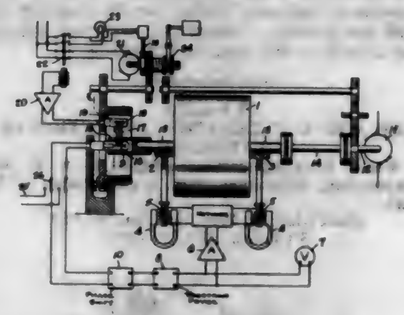
2,944,423
TEMPERATURE SENSING BY PRESSURIZED LIQUID MIXTURES
Delmer T. Lang, Palos Verdes Estates, Calif., assignor, by mesne assignments, to Delmer T. Lang
Filed Sept. 9, 1955, Ser. No. 533,379
15 Claims. (Cl. 73—368)



1. In a temperature sensing system: a hermetically sealed virtually constant volume sensing container and movable chamber in communication therewith, said container and chamber constituting a closed, substantially gas-free system completely filled with a mixture of water and a water-miscible organic liquid at a pressure of not less than 150 p.s.i. absolute through a selected working temperature range, said mixture exhibiting an incremental pressure change per unit temperature change through said range which is appreciably greater than the incremental pressure change per unit temperature change at the same working temperatures exhibited by water and said organic liquid individually.

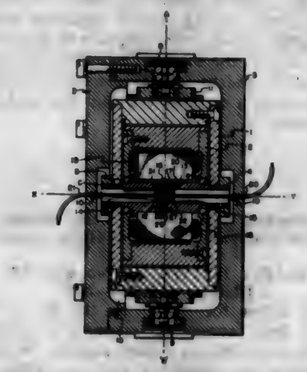
2,944,424
STROBOSCOPIC DETERMINATION OF ANGLE OF UNBALANCE IN ROTARY WORKPIECES
Werner I. Senger, Madison, Wis.
Filed Nov. 12, 1954, Ser. No. 468,397
8 Claims. (Cl. 73—466)

1. In apparatus for detecting unbalance in a rotating workpiece, a stroboscopic device for determining the angular position for the application of unbalance correction, comprising a light source; means to energize and flash said light source in phase with an unbalance vibration of the rotating workpiece; a light sensitive pick-up means adapted to produce a voltage signal upon a variation in the intensity of light received thereby; means driven in synchronism with the workpiece to effect an abrupt change in light intensity passing to said light sensitive pick-up means when said light source, said



driven means and said light sensitive pick-up means register at the moment of flashing of said light source; means to adjust the position of at least one said light source or said light sensitive pick-up means to a point of registry of said driven means with a light beam passing from said light source to said light sensitive pick-up means; and means responsive to the voltage signal from said light sensitive pick-up means to establish the adjustment at the point of registry.

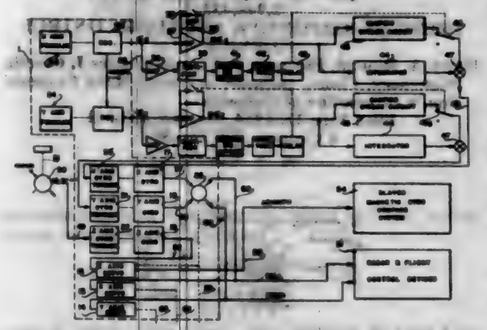
2,944,425
GYROSCOPIC APPARATUS
Hugh Brougham Sedgfield, Oakfield, Hamptea, England, assignor to The Sperry Gyroscope Company Limited, Brentford, England, a company of Great Britain
Filed Dec. 19, 1956, Ser. No. 629,419
Claims priority, application Great Britain Jan. 4, 1956
8 Claims. (Cl. 74—5)



1. The combination in a gyroscopic apparatus having a closed rotor casing with a bore extending along the rotor axis and a radial opening at the center of the bore and a follow-up member on which the casing is universally supported; of a closed receptacle containing an electrically conductive fluid therein having interfitting electrically conductive cup-shaped and electrically insulative diaphragm parts with a peripheral electrically insulative

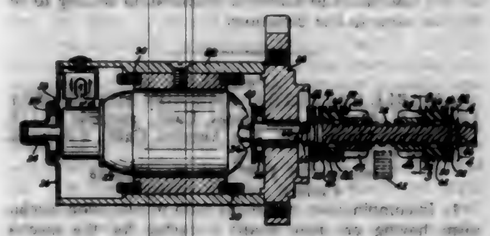
portion fitting the bore in juxtaposed relation to the radial opening in the casing, an electrically conductive ligament extending along the bore attached to the member and connected to the diaphragm in contacting relation to the fluid in the receptacle, and an electrically conductive spring member in said casing extending through the opening therein to contact the conductive cup-shaped part of the receptacle.

2,944,426
STABILIZED PLATFORM REFERENCE DEVICE
Dominic Amoru, Sherman Oaks, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 31, 1956, Ser. No. 588,331
18 Claims. (Cl. 74—5.34)



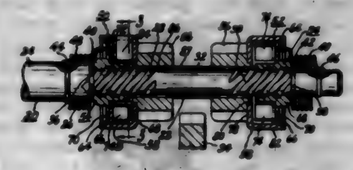
1. A gyro reference device for providing direction and control information to a vehicle adapted to move relative to the earth comprising, a platform pivotally carried on said vehicle, acceleration sensitive means carried on said platform, amplifier means responsive to said acceleration sensitive means and providing signal gain simulating a long period pendulum system so long as the accelerations are above a threshold level, switch means associated with said amplifier and responsive to actuation at said threshold level for changing the signal gain to simulate a short period pendulum system so long as accelerations are below the threshold level, integrator means responsive to said signal and providing an output representing the integral thereof, and gyro means responsive to the integrator output and stabilizing the platform in an initial reference position in the presence of changes in attitude of the vehicle on which it is mounted.

2,944,427
ENGINE STARTER DRIVE
John E. Antonidis and Robert A. Ulm, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 10, 1957, Ser. No. 664,893
8 Claims. (Cl. 74—7)



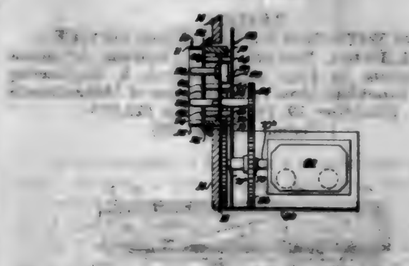
1. In a starting apparatus for an internal combustion engine, the combination comprising; a motor including a housing, a rotor and a shaft rotatable by said rotor in either direction, said shaft having a limited axial movement in said housing and an end projecting exterior to said housing having an integral threaded portion, a stop means fixed to the shaft located adjacent the respective ends of the threaded portion, a pair of pinion gears in threaded engagement with the threaded portion and normally spaced from each other on opposite sides of a gear connected to the engine to be started, resilient means disposed between the pinion gears and stops, a pair of spring means each having an end connected to the shaft and an end connected to one of the pinions for constantly opposing the movement of the pinions toward the engine gear, and a resilient means between the shaft and housing for permitting the limited axial movement of the shaft in the housing when the shaft is rotated and the pinion gear moves into tooth abutment with the engine gear.

2,944,428
ENGINE STARTER
John E. Antonidis and Robert A. Ulm, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 11, 1957, Ser. No. 689,574
9 Claims. (Cl. 74—7)



1. In an inertia type starting motor drive, comprising: a nut having a threaded engagement with a threaded portion on a starting motor shaft, outwardly extending lugs on the nut, a pinion gear slidable and rotatable over a smooth portion of the shaft, a shell connected to the pinion, and inwardly turned lugs integral with and extending from the shell interposed between the lugs on the nut and in metal to metal contact therewith, said lugs forming a direct drive between said nut and pinion.

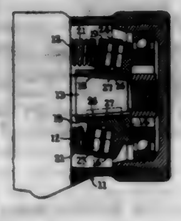
2,944,429
CONTROL KNOB CLUSTER FOR A TV RECEIVER OR THE LIKE
Thomas E. Duvall, 7545 Lyons, Morton Grove, and Harry Ehrensaft, 7426 Kenneth Ave., Skokie, Ill.
Filed Nov. 12, 1958, Ser. No. 773,447
4 Claims. (Cl. 74—10.8)



1. A control knob cluster for a TV receiver or the like and adapted to operate a station selector in coarse and fine tuning operation and to form an attractive appearance outside the cabinet without a trim plate comprising in combination: a mounting panel; coarse tuning and fine tuning coaxial driven gears on said panel adapted to operate the station selector in coarse and fine tuning opera-

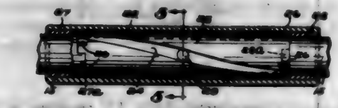
tion respectively; a main tuning knob of cylindrical conformation having teeth of limited axial extent in engagement with the coarse tuning driven gear, said knob extending outside the cabinet and having a decorative skirt outboard the cabinet and extending to closely spaced relation therewith, the knob further having an internal outboard facing shoulder and an internal inboard facing shoulder of less diameter than the outboard facing shoulder; an intermediate plate affixed to the panel and protruding outboard the same within the confines of the knob and adjacent the inboard facing shoulder thereof; an indicating panel removably secured outboard the intermediate plate and overlaying the external outboard shoulder of the knob; and a fine tuning knob with a drive gear in mesh with the fine tuning driven gear located within the confines of said main knob.

2,944,430
BEARING
Matthew W. Huber, Watertown, N.Y., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Mar. 23, 1956, Ser. No. 573,420
1 Claim. (Cl. 74—60)



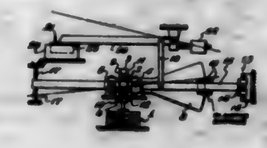
The combination of a rotary shaft; a swash plate fixed on said shaft and having a bearing race lying in a plane inclined to the shaft axis, said swash plate including an inclined journal whose axis is centered on said race and normal to the plane thereof; a cage having pockets for spacing rolling anti-friction members, said cage including a bearing sleeve and a projecting journal coaxial with said bearing sleeve, said bearing sleeve guiding the cage in rotary motion about said inclined journal; rolling anti-friction members rotatable in said pockets and engaging said race; and an annular thrust plate having a bearing portion engaging and rotatable on the second-named journal, and having a race opposed to the first-named race and engaging said anti-friction members.

2,944,431
MOP WITH BUILT-IN SHAKING DEVICE
Robert G. Dexter, Harvard, Mass., assignor, by mesne assignments, to Easy Day Research & Engineering Corp., Brookline, Mass., a corporation of Massachusetts
Filed Nov. 19, 1956, Ser. No. 622,883
1 Claim. (Cl. 74—89)



A mop comprising an elongated handle having a longitudinal axis, a pair of tubular grip members having smooth outer walls, means rotatably mounting said handle in one of said grip members and securing said handle and said one grip member against substantial relative movement along the handle axis, a pair of cam follower projections on diametrically opposite sides of said handle, the other of said grip members being provided with a pair of diametrically opposite longitudinally helical cam slots in the inside of said other grip member and arranged one in sliding camming engagement with each of said cam follower projections for oscillating said handle by relatively longitudinally reciprocating said other grip member while holding said one grip member relatively stationary, said slots being disposed at a helix angle angle of not more than 30° with respect to said handle axis.

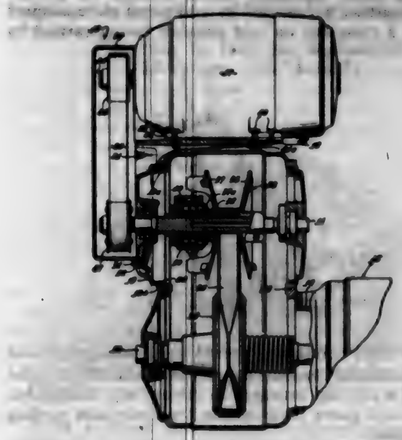
2,944,432
PRESSURE-RESPONSIVE ALTITUDE CONTROL DEVICE
Harry A. Rintoul, Freeport, N.Y., and Charles J. Cerulli, Waterbury, Conn., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed June 21, 1954, Ser. No. 438,242
6 Claims. (Cl. 74—96)



1. In a device having a driving unit, a driven unit, and a clutch, including rotatably mounted driver and driven halves, operable to connect said driving unit in actuating relation to said driven unit, first motion transmission means connecting said driving unit to the driver half of said clutch, second motion transmission means connecting said driven unit to the driven half of said clutch, said driven half of the clutch comprising a pair of opposed clamping surfaces, said driver half comprising a thin planar member freely interposed between said clamping surfaces, and clutch-operating means operable to clamp said clamping surfaces to said planar member, said first transmission means being arranged for rotating said planar member in the plane thereof about an axis parallel to the direction of the clamping force exerted thereon by said clamping surfaces, said second transmission means including first and second lever assemblies respectively mounted for rotation about spaced axes parallel to the axis of rotation of said driver clutch-half, and a substantially rigid link pivotally connected to each of said lever assemblies so as to constrain one assembly to rotate in an opposite sense relative to rotation imparted to the other assembly, the moments of inertia of said lever assemblies being so related as to prevent any net response of said assemblies to forces of acceleration tending to rotate the same in like directions.

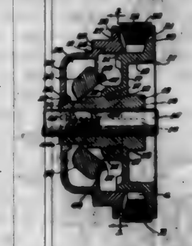
2,944,433
VARIABLE RATIO TRANSMISSION MECHANISM
Thomas G. Myers, Los Angeles, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 28, 1957, Ser. No. 636,618
7 Claims. (Cl. 74—230.17)

1. In combination: a variable ratio transmission mechanism having an input shaft; a casing for the mechanism, including a bearing bracket for the shaft; a wheel attached to the shaft and exteriorly of the casing; said bracket being capable of angular adjustment with respect to the shaft axis; a source of motion supported by aid of the bearing bracket; means driven by the source and coupled to the wheel; means supported by the bracket for adjusting the ratio of the transmission



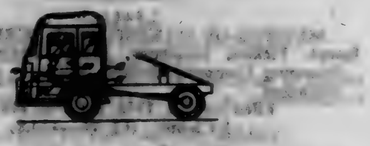
mechanism; and a cover for the wheel and said driven means, supported on the bracket.

2,944,434
PULLEY
Carl W. Mott, Lake Ozark, Mo., assignor to Mott Corporation, Brookfield, Ill., a corporation of Illinois
Filed Apr. 8, 1957, Ser. No. 651,274
12 Claims. (Cl. 74—230.17)



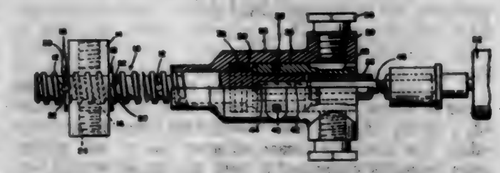
1. A belt-driving pulley comprising complemental belt-driving elements each including a hub, a web extending radially outward from the hub, an axially extending pilot rim on a radially outward portion of the web, and a flange projecting radially outward from the rim to dispose a conical belt-engaging surface of such flange coaxially with the hub, the hubs of such elements and the rims thereof being axially telescopically disposed and at least one of such hubs and rims being piloted on the one telescopically disposed therewith, the webs of such elements being spaced apart axially of the hubs and rims wherefore the hubs, webs and rims form an annular weight-receiving chamber, means yieldably urging the elements axially apart to increase the axial spacing between the belt-engaging surfaces, weight reaction elements in said chamber and respectively on the belt-driving elements, centrifugal weight means disposed in said chamber for revolving about the axis of the hubs to develop centrifugal force attendant to rotation of the belt-driving elements, and the centrifugal weight means being operable to apply components of the centrifugal force to the weight reaction elements for moving the belt-driving elements relatively axially toward one another in opposition to the yieldably urging means and pressing the belt-engaging surfaces in gripping relation with a belt therebetween with a force constituting a direct function of the pulley rotational speed.

2,944,435
GEAR SHIFT
George W. Hendrickson, Hinsdale, Ill., assignor to Hendrickson Mfg. Co., Lyons, Ill., a corporation of Illinois
Filed Mar. 28, 1958, Ser. No. 724,698
7 Claims. (Cl. 74—335)



1. In a truck tractor or the like of the cab-over-motor type wherein a mechanical transmission including the usual shifting finger is disposed behind the cab, a gear selecting shaft supported adjacent the transmission for axial and rotatable movements, means mounting the shifting finger on said shaft so that the finger extends into the transmission, the finger being adapted to provide gear shifting operations in the transmission in the usual manner upon a sequence of movements of said shaft first rotatably and then axially, a crank arm secured to one end of said shaft for rotating said shaft, a piston and cylinder device supported adjacent the transmission and having a piston rod operably connected to the other end of said shaft, actuation of said piston and cylinder device providing axial movement of said shaft, a manual shifting lever mounted in the cab for shifting movements transversely of the cab and forwardly and rearwardly thereof, a flexible, control cable connected between said shifting lever and the end of said crank arm and adapted to provide rotatable movement of said shaft upon movement of said shifting lever transversely of the cab, a valve mounted in the cab and connected to a source of pressure, and flexible conduit means connected between said valve and said piston and cylinder device, said valve being controlled by said movement of said shifting lever forward and rearwardly of the cab to actuate said piston and cylinder device and thus provide axial movement of said shaft.

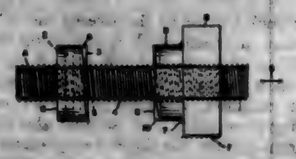
2,944,436
NON-JAMMING ACTUATED SCREW AND NUT COMBINATION
Joseph Pickles, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 20, 1958, Ser. No. 710,132
7 Claims. (Cl. 74—424.8)



5. In combination, a feed screw member having a rigid thread thereon, a nut member having a rigid thread therein threaded to said screw member, means supporting one of said members against axial movement, means supporting the other of said members for axial movement, means supporting one of said members against rotation, means supporting the other of said members for rotation, motor drive means connected to said last mentioned member for driving it in rotation, and means limiting relative axial movement between said members comprising abutment means on said members having abutment surfaces disposed generally transversely at a non-wedging angle to the direction of relative movement between said

surfaces upon engagement, said motor drive means being adapted to stall when said surfaces are brought into engagement thereby preventing any possibility of jamming or frictional interlocking between the feed screw member and the nut member.

2,944,437
METHOD OF MAKING FEED SCREW STOP
Joseph Pichios, Dearborn, Mich., assignor to Ferro Stamping Company, Detroit, Mich., a corporation of Michigan
Filed July 14, 1958, Ser. No. 748,479
5 Claims. (Cl. 74—424.8)



1. A device for attachment to a feed screw and its associated nut which will limit the relative axial travel thereof without jamming the device or the screw and nut, comprising a pair of annular members having generally radial abutment surfaces on opposing faces thereof engageable with each other on relative angular and axial movement of said members to limit relative circumferential movement therebetween without jamming said members, said members being adapted to be attached to a feed screw and a feed screw nut respectively, and rigid releasable tie means connecting said members to maintain them in correctly axially and angularly aligned position during their initial attachment to said screw and nut whereby on subsequent relative axial travel of said feed screw and nut said radial abutment surfaces will be caused to engage to limit said axial travel of said feed screw and nut without jamming said members or said feed screw and nut.

2,944,438
CAGING DEVICE
Jerald D. Weaver, Alhambra, Calif., assignor to North American Aviation, Inc., Downey, Calif.
Filed July 9, 1956, Ser. No. 596,717
4 Claims. (Cl. 74—478)



1. A caging device comprising two holding arms secured in a case, said holding arms being pivotally mounted, a spring abutting and biasing said arms toward each other, first rotatable means adjacent one of said pivoted arms rotatably connected to said case to adjust said last-mentioned arm to vary the distance betweeh said arms when biased by said spring in a holding position, and second rotatable means adjacent said pivoted arms and rotatably connected to said case to move said last-mentioned arms toward said abutting spring into a nonholding position.

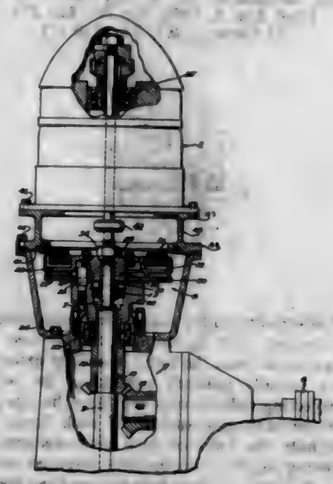
2,944,439
ACCELERATOR PEDALS FOR MOTOR VEHICLES
Frank Dalton, 425 Riverside Drive, New York, N.Y.
Filed Mar. 8, 1957, Ser. No. 644,915
5 Claims. (Cl. 74—562)

1. A device of the character described comprising an accelerator pedal, a movable panel plate mounted on said pedal and pivotally disposed thereon, arranged to be adjusted away from said pedal body at the heel portion thereof, a ratchet bar carried by said panel plate adapted to engage a cross bar on said pedal, a spring carried by



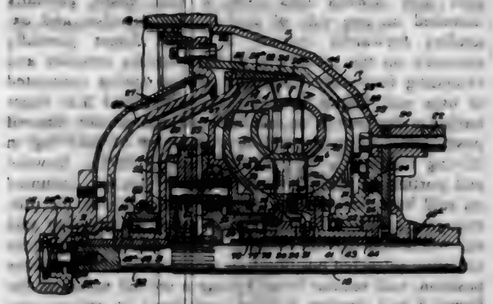
said panel plate controlling the adjusted position of said plate with relation to the face of said accelerator pedal body, and a trip clip arranged to release said ratchet bar to return said panel plate on the foot reception surface of said pedal.

2,944,440
SHAFT DRIVE STRUCTURE
George Pamphilon, El Cerrito, Calif., assignor to Johnson Gear & Manufacturing Co., Ltd.
Filed Dec. 31, 1956, Ser. No. 631,637
9 Claims. (Cl. 74—665)



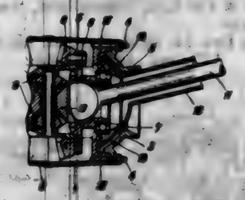
1. In a right angle gear drive that includes a vertical drive shaft having power means at its upper end portion for driving the same, and a hollow shaft coaxial with said drive shaft enclosing an intermediate portion of said drive shaft and in which said drive shaft is rotatable end vertically movable, an upper main thrust bearing above said power means supporting said drive shaft at its upper end, a lower thrust bearing below said power means supporting said hollow shaft and a pair of normally disconnected elements between said upper thrust bearing and said lower thrust bearing respectively connected with said drive shaft and with said hollow shaft, means for connecting said elements in driving relation with each other whereby said vertical shaft and said hollow shaft may be rotated as a unit, and means between said bearings for supporting the weight of said drive shaft on said lower thrust bearing in the event of the removal of said upper thrust bearing or failure of the latter.

2,944,441
MULTIPLE-TURBINE TORQUE CONVERTER
Robert C. Russell, Shaker Heights, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed May 28, 1957, Ser. No. 660,295
23 Claims. (Cl. 74—677)



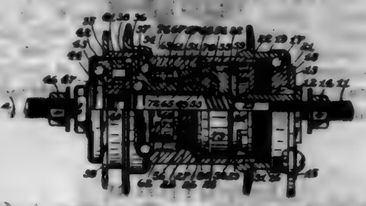
1. In a power transmission; a group of cooperating relatively rotatable bladed annular members defining a toroidal fluid circuit and including pump means, turbine means, and reaction means inhibited against reverse rotation; said members being disposed in a series relation to be traversed in succession in the order named by the fluid of said circuit; rotatable power input means connected with said pump means; rotatable output means; an epicyclic gear system including a reaction gear means inhibited against reverse rotation and a pinion gear carrier means of which the latter is drivingly connected with said output means; said gear system also comprising a main gear means connected with said turbine means, and pinion gear means on said carrier means and having meshed engagement with said main gear means and said reaction gear means; said gear system providing for the transmission of torque from said turbine means to said output means through said carrier means; said reaction means having blade elements shiftable thereon to different operative positions and said reaction means having limited rotation relative to said reaction gear means; and means responsive to such limited relative rotation for shifting said blade elements to said different operative positions.

2,944,442
DIFFERENTIAL GEARS
Thomas Meegerl and Ekkehard Hoyer, Wolfsburg, Germany, assignors to Volkswagenwerk G.m.b.H., Wolfsburg, Germany, a firm of Germany
Filed Sept. 9, 1958, Ser. No. 760,825
Claims priority, application Germany Sept. 11, 1957
6 Claims. (Cl. 74—713)



1. In a differential driving gear having a housing, a partially spherical surface on said housing, a partially spherical bearing lining abutting said partially spherical surface on said housing, an axle tube having a partially spherical shell-like part abutting said bearing lining, and a bearing cover having a partially spherical surface for engaging the shell-like part of the axle tube, the improvement of a bearing lining having spaced slots extending from the bore of the lining toward its outer periphery, said bearing lining being made from a synthetic plastomeric material selected from the group consisting of polyamids and low pressure polyethylene.

2,944,443
TWO SPEED HUB FOR VELOCIPEDES AND THE LIKE
Glenn S. Spencer, Horseheads, N.Y., assignor to Bendix Aviation Corporation, Elmira, N.Y., a corporation of Delaware
Filed Oct. 12, 1959, Ser. No. 845,968
14 Claims. (Cl. 74—750)

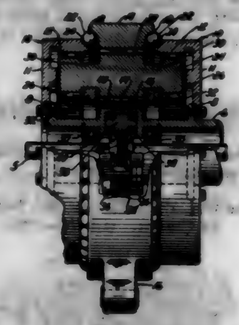


1. In a two-speed hub for velocipedes and the like a fixed axle, a first screw shaft member rotatably mounted on the axle, a first driver clutch nut threaded on said first screw shaft and having a clutch engaging surface, a second screw shaft member rotatably mounted on said first screw shaft, a second driver clutch nut threaded on said second screw shaft and having a clutch engaging surface, a driver member, means for rotating said screw shafts from said driver member at different gear ratios, a hub rotatably mounted relative to said axle and having a clutch surface, a driven clutch member rotatably mounted relative to said axle having a clutch surface engageable with said hub clutch surface and having other clutch surfaces selectively engageable with said driver clutch nut surfaces, retarder means for frictionally resisting rotation of said driver clutch nuts whereby said driver clutch nuts are caused to traverse their respective screw shafts, means under the control of the operator for blocking the engaging movement of the of one of said driver clutch nuts including a selector sleeve, an indexing and abutment ring swivelled on one of said shafts in the path of said sleeve, said sleeve having an arm bearing frictionally on said ring and having a complementing arcuate slot provided therein, said ring having a radial lug movable into and out of the path of said arm, said ring also having a spring pawl bearing on the periphery of said one shaft, said one shaft having ratchet teeth formed therein for cooperating with said pawl to index the ring on said one screw shaft responsive to backward and forward rotation.

2,944,444
ROTARY SPEED REDUCER
William E. Barnt, Denville, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 22, 1959, Ser. No. 841,648
6 Claims. (Cl. 74—801)

1. A high-ratio reduction gear comprising a high speed input shaft, a low speed hollow output shaft coaxial with and embracing the input shaft, a drive pinion on the input shaft, said output shaft having openings therein provided with bearings axially parallel to the input shaft, transfer gears rotatable in said bearings and engaging said drive pinion, a ring gear engaging and embracing said transfer gears; coaxial internal gears, one secured to said output shaft and one fixed, said internal gears having different tooth numbers, a plurality of planet mem-

bers spaced around and within said internal gears, each said planet member having a pinion meshed with each



said internal gear, and means to drive said planet members rotationally in response to rotation of said ring gear.

2,944,445
BORING FIXTURE
Rudolph F. Onsrud, Chicago, Ill., assignor to Onsrud Machine Works, Inc., Niles, Ill.
Filed Nov. 26, 1958, Ser. No. 776,572
10 Claims. (Cl. 77—5)



1. A machine fixture for sequentially boring a pair of parallel disposed bores in a workpiece comprising a base having a longitudinally disposed track thereon, a driven member slidably disposed in the forward portion of said track, stop means mounted on said base positioned to limit rearward movement of said driven member, a lug rigidly connected to said driven member and extending rearwardly in spaced relation with respect to said track, said lug having a first shoulder disposed on the rearward portion thereof and a second shoulder disposed laterally of said first shoulder, said driven member having a groove positioned transversely thereon, a motor having a rotatable element supported in said groove of said first member in slidable relation, said rotatable element having its axis of rotation longitudinally positioned, a boring element removably connected to said rotatable element and extending forwardly of said driven member positioned to engage said workpiece, a driving member slidably disposed in the rearward portion of said track, a double acting fluid pressure operated cylinder mounted on the rearward portion of said base and having a reciprocable work member thereon, said work member being drivingly connected to said driving member in operative relation, a shift cam mounted on the forward portion of said driving member, a shift arm pivotally connected to said motor and said lug and extending rearwardly thereof, a cam follower element disposed on the rearward portion of said shift arm positioned to engage said cam for shifting said motor laterally from an initial position to an alternate position, a first spring mounted on said base positioned to urge said cam follower element of said shift arm toward said cam, a first finger pivotally mounted on one side of said driving member and extending forwardly thereof, a second finger pivotally mounted on the other side of said driving member and extending forwardly thereof, a second spring connected to urge said fingers toward each other, said first finger having a first notch on the forward end portion thereof positioned to engage said first shoulder of said lug in driving relation, a first cam positioned on the forward end portion of said first finger, a first cam pin mounted on said base positioned to engage said first cam for disengaging said first finger from said first shoulder of said lug when said driving member is moved forwardly from an initial retracted position to a predetermined first release position, said second finger having a second notch on the forward end portion thereof positioned to engage said second shoulder of said lug in driving relation, said second notch being positioned rearwardly of said first notch, a second cam positioned on the forward end portion of said second finger, a second cam pin mounted on said base positioned to engage said second cam for disengaging said second finger from said second shoulder of said lug when said driving member is moved forwardly from said first release position to a predetermined second release position, a third spring mounted on said base positioned to urge said driven member rearwardly, a source of energy connected to energize said motor for rotating said boring element, a source of fluid under pressure connected to energize controllably said cylinder to move progressively forward said driving member from a retracted position to engage said first finger with said lug thereby moving said driven member forwardly to said first release position for boring a first bore in said workpiece, said driven member with said shift arm subsequently moving retractively to engage said cam follower element with said shift cam for shifting said motor transversely in said groove to said alternate position, said cylinder moving said driving member from said first release position to engage said second finger with said lug for moving said driven member to a second release position for boring a second bore in said workpiece juxtaposed to said first bore, and means for energizing said cylinder in the other direction to return said driving member to said retracted position.

2,944,446
APPARATUS FOR CARRYING OUT BORINGS, THREADINGS, AND MILLINGS
Ernst Hofmann, Neuchatel, Switzerland, assignor to E. Hofmann & Cie S.A., Saint-Blaise, Neuchatel, Switzerland, a firm
Filed Oct. 24, 1958, Ser. No. 769,506
3 Claims. (Cl. 77—64)



1. In an apparatus for achieving borings, threadings, millings, or the like, a frame, an L-shaped support carried by said frame and having an arm to receive a rotatable tool, a member slidably mounted on said frame for sliding toward and away from said L-shaped support, a chuck for gripping a workpiece, and a divider carrying said chuck, said divider and said chuck being rotatably mounted on said member, for being displaced angularly on an axis perpendicular to a plane including the axis of the tool and the axis of the divider and having a position of angular adjustment where the axes of the chuck and tool are substantially perpendicular to each other for operations to be performed on the workpiece.

2,944,447
HOLE CHAMFERING TOOL
Herman W. Eberhardt, Fairlawn, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Dec. 1, 1958, Ser. No. 777,291
3 Claims. (Cl. 77—73.5)



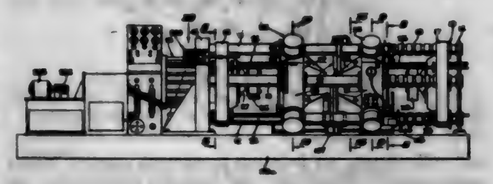
1. A hole chamfering device comprising a tool portion with a cutting edge for chamfering the inside edge of the hole of a workpiece, a pair of members one of which is attached to said tool portion and is axially movable relative to the other member, a support for the said other member having a substantially U-shaped portion insertable between the said other member and the workpiece, spring means which bears against said members urging the cutting edge against the inside edge of the hole and the said other member against said support, and means for turning the tool portion to accomplish the chamfering of the hole.

2,944,448
CAM OPERATED FORGING MACHINE
Willi Braatz, Berlin-Spandau, Germany, assignor to Canadian Ingersoll-Rand Company, Ltd., Montreal, Quebec, Canada, a corporation of Canada
Filed July 30, 1953, Ser. No. 301,773
Claims priority, application Germany Jan. 24, 1952
1 Claim. (Cl. 78—31)



In a swaging machine, a housing having a cylindrical inner track, a ring of rollers, a cage for said rollers maintaining them in spaced relation and in position to roll freely on said track, a ram holder adapted to be driven to rotate concentrically with respect to said track and held against rocking motion with respect to its axis, means to feed a work piece axially and centrally of said ram holder, a plurality of rams slidably mounted in said ram holder directed radially thereof and provided at their inner ends with dies to impact said work piece, and a head on each ram to contact said rollers compressively, said heads each having a cam-like surface for contact with the rollers in length equal to at least the arc between any two adjacent rollers, a curvature at all points flatter than the roller curvature starting at the ends with a radius equal to the distance from the ram holder axis to the innermost points of the rollers, the end portions of the abutment faces providing points of initial contact with said rollers at which points tangents to said faces are perpendicular to a radius passing through those points and the center of rotation of said ram holder thence concave with respect to the rollers and convex at the center with a maximum rise of 1/100 the length of said cam-like surface, and means to maintain each said head always in contact with at least one roller during rotation of the ram holder.

2,944,449
PRESSURE WELDING APPARATUS
Walter G. Wheeler, Los Angeles, Calif., Lincoln Van Camp, Fort Worth, Tex., and Wilbur G. Wood, Glendale, and Robert A. Lawson, La Crescenta, Calif., assignors to Menasco Manufacturing Company, Burbank, Calif., a corporation of California
Filed Apr. 9, 1957, Ser. No. 653,588
7 Claims. (Cl. 78—82)

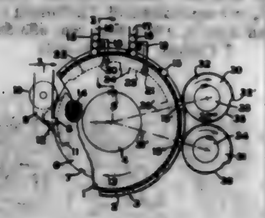


1. Pressure welding apparatus of the class described, comprising in combination: a frame, relatively movable work support units mounted on the frame, a heating torch assembly positioned between the work support units, a carriage movable along the frame supporting the torch assembly, a longitudinal gear rack fixed relative to one of the work support units, a rotatable screw extending parallel to the gear rack and held against axial movement with respect to the other work support unit, means for rotating the screw, a gear rotatably mounted on the carriage and meshing with the gear rack, a worm wheel rotatably mounted on the carriage co-axially of the gear and engaging the screw, the axis of the gear and worm wheel passing between the gear rack and the screw, and clutch means for establishing a driving connection between the gear and the worm wheel, whereby longitudinal movement of the gear rack causes the worm wheel to roll along the screw thereby to move the carriage one-half the relative distance of travel of said work support units for all relative movement thereof, whereby said carriage maintains a position midway between said work support units.

2,944,450
APPARATUS FOR FEEDING AND ROLLING WORKPIECES
Ernst Fritz Wilhelm Moeltzner, Berlin-Charlottenburg, and Kurt Lieddke, Berlin-Wilmersdorf, Germany, assignors, by mesne assignments, to Landis Machine Company, Waynesboro, Pa., a corporation of Pennsylvania
Filed June 30, 1953, Ser. No. 365,849
Claims priority, application Germany July 14, 1952
6 Claims. (Cl. 80—6)

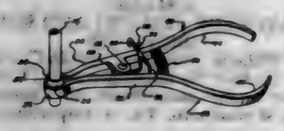
1. Apparatus for performing the same rolling operation simultaneously on a plurality of workpieces comprising a plurality of forming rolls; means mounting said rolls to form a plurality of work-forming stations spaced a predetermined circumferential distance about the axis of one of said rolls; a transfer cylinder surrounding one of said rolls, said transfer cylinder having a plurality of workpiece carriers so circumferentially spaced as to

position one carrier at one of said work-forming stations when another carrier is positioned at another work-forming station; a plurality of workpiece feeding devices for feeding workpieces to said carriers so as to position said workpieces in said carriers in circumferentially spaced relation about the axis of said one roll which is surrounded by said transfer cylinder to provide at least for a leading workpiece and a trailing workpiece, the number of devices being equal to the number of work-forming stations and said devices being spaced about the circumference of said one of said rolls in predetermined relationship to the spacing of said work-forming station; and indexing means operable to periodically advance said transfer cylinder and for controlling the movement of said workpieces comprising means for controlling said work-feeding devices to feed unformed workpieces to selected ones of said carriers at predetermined intervals, means providing free movement of said workpieces past



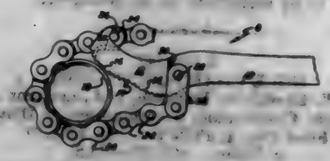
said rolls during an indexing movement, control means automatically controlling said indexing means and the rotation of said transfer cylinder in a predetermined direction to deliver in one indexing movement of said transfer cylinder unformed workpieces positioned in said carriers simultaneously to associated ones of said circumferentially spaced work-forming stations and thereafter rolling said workpieces at said stations wherein the leading one of said unformed workpieces is advanced in continuous movement through and beyond the first encountered work-forming station to the last encountered work-forming station and in the succeeding indexing movement that workpiece formed at its work-forming station and similarly fed and formed workpieces are advanced to a work removal station wherein the trailing one of said formed workpieces is advanced through and beyond succeeding work-forming stations to said work removal station.

2,944,451
VALVE KEEPER TOOL
Claude W. Vandament, P.O. Box 261, Hedrick, Iowa
Filed May 14, 1958, Ser. No. 735,184
1 Claim. (Cl. 81—5.1)



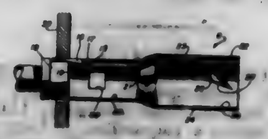
In a valve keeper tool, a pair of levers in substantial parallelism, handles and jaws on opposite ends of said levers, a pivoted connection between the levers so that the jaws may be spread upon a manual squeezing of the handles, a spring connecting the handles and biasing the handles apart, a bracket pivotally secured to said pivotal connection between the levers and extending toward said spring, and means on said bracket to selectively hold said handles in a position wherein the spring is under compression and the jaws are spread apart.

2,944,452
CHAIN LINK PIPE WRENCH WITH PLURAL HANDLE-SAW SURFACES
Robert W. Vose, West Springfield, Mass., assignor to Moore Drop Forging Company, Springfield, Mass., a corporation of Massachusetts
Filed Apr. 10, 1959, Ser. No. 805,593
3 Claims. (Cl. 81—68)



1. A chain pipe wrench comprising a handle portion, a head portion extending forwardly of said handle, toothed gripping surfaces of convex curvatures on the undersurface of said head portion for selectively rotating a pipe in forward and reverse directions, a binding chain pivotably anchored on said wrench, said head including means for releasably engaging the free end portion of the chain to bind said chain about a pipe and against one of said gripping surfaces, the curvatures of said gripping surfaces being defined by symmetrical equiangular spirals having a common point of origin located on a straight line extending from the anchorage point of said chain to chain engaging means and 9/16 the distance from said anchor point to said chain engaging means, each of said spirals forming an angle of between 60 and 75 degrees with its generating radii.

2,944,453
PIPE FITTING REMOVAL DEVICE
Phillip J. Brewington, 106 E. 46th St., Austin 5, Tex.
Filed Mar. 28, 1958, Ser. No. 724,636
2 Claims. (Cl. 81—121)

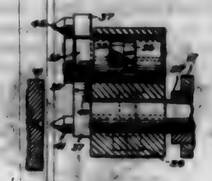


1. A tool for unscrewing a pipe fitting located in a position of limited access, comprising a hollow resilient steel tube of two coaxial cylindrical end portions of different diameters joined by an intermediate integral portion, each cylindrical portion having near its open end an angular struck-out lug with an inwardly projecting cutting edge to grip the fitting when the tool is turned in one direction and to slip on the fitting when the tool is turned in the opposite direction about its axis, each of the portions having a pair of diametrically opposed holes for reception of a handle serving member to rotate the tool.

2,944,454
CENTERING DEVICE FOR LATHES AND THE LIKE
Anthony J. Vranelli, 1 Carter Road, West Orange, N. J.
Filed Feb. 12, 1958, Ser. No. 714,965
2 Claims. (Cl. 82—19)

1. A centering device comprising a housing, first and second parallel bores in said housing a bar attachment member secured in said first bore, a sleeve mounted in said second bore, an irregular opening formed in said sleeve, an axially and rotatably slidable center bar carrier disposed in said sleeve, said center bar carrier being hollow and having a greater longitudinal length than said housing and sleeve, a flattened head secured to

said carrier and extending into the irregular opening in said sleeve, said sleeve having a head retaining shoulder portion formed in the wall of said irregular opening at one end thereof, a clamp extending through said housing and into the irregular opening of said sleeve at the other end of said opening and being engageable with said flat-



tened head when said carrier is disposed axially in its forward position, a center bar mounted in the forward end of said carrier, a backing plate secured to said housing at the rear end of said second bore and a forward biasing spring disposed within said hollow carrier and extending between said backing plate and said center bar.

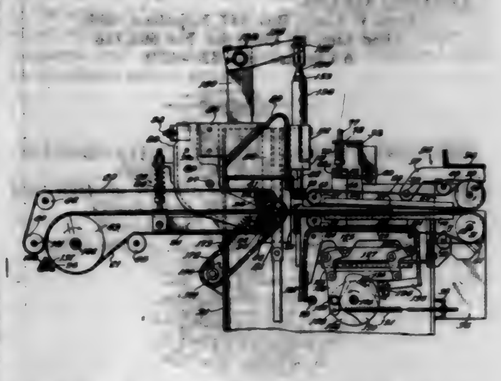
2,944,455
LATHE CENTER
Steve Alfons Haltenius, 29 Bainbridge Ave., Lakewood, R.I., and Leo C. Hall, 87 Lane 2, Gaspee Point, Warwick, R.I.
Filed Apr. 23, 1957, Ser. No. 654,572
1 Claim. (Cl. 82—33)



An adapter for use with a dead center of a lathe comprising inner and outer nested co-axial conical members, said inner member having a conical surfaced recess therein extending inwardly from its base face along the surface of a single cone adapted to receive and frictionally engage with the pointed end of a dead center, the outer surface of said inner member being conical and carrying antifriction bearings, one of said bearings being adjacent the base face of said member and the outer bearing being adjacent the point of said conical recess, said outer member having an outer conical surface and a conical recess therein, said inner member received in said conical recess of said outer member and rotatably mounting said outer member and means for securing said members against axial separation.

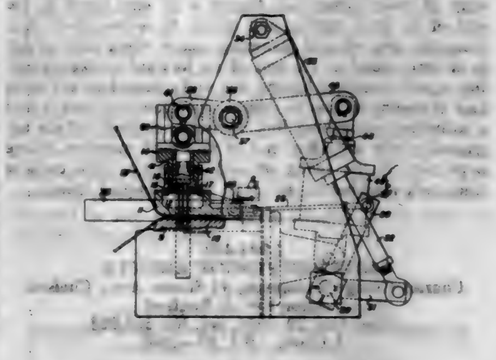
2,944,456
AUTOMATIC STITCHER TRIMMER
Robert J. Christiansen, Park Ridge, Rudolph J. Nevahnal, North Riverside, and Harold F. Volkert, Glenview, Ill., assignors to F. N. Volkert & Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 5, 1957, Ser. No. 700,781
25 Claims. (Cl. 83—151)

1. A trimmer for book signatures comprising a machine frame, a shear blade mounted in said frame for reciprocating vertical movement, a pair of infeed tapes disposed rearwardly of said shear blade, a pair of outfeed tapes disposed forwardly thereof, retractable stop means disposed adjacent to the lower of said outfeed tapes and adapted to be engaged by a signature fed beneath said shear blade to interrupt the forward movement of the same, means for moving said stop means rearwardly to align and position the signature with respect to said shear blade, means for separating said outfeed tapes while said signature is being positioned, and a presser foot for engaging said signature adjacent to its



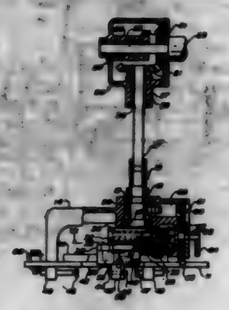
trailing edge for maintaining the same in aligned position after positioning and during trimming.

2,944,457
FILM PERFORATING MACHINE
William M. Thompson, Jr., Martin Kron, and David S. Smith, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Nov. 22, 1957, Ser. No. 698,233
10 Claims. (Cl. 83—321)



7. In a perforating machine, the combination of: a punch holder; a plurality of punches slidably carried by said holder; a die plate spaced from said punch holder to form a passageway of predetermined length for receiving a material to be punched; an elongated bar parallel to and in the same plane as said passageway and further having a length greater than said predetermined length; a support member secured to each end of said bar; roller means carried by said support members; a pair of channel members carried by said perforating machine, each of said channel members disposed adjacent one end of said passageway and transverse thereto and adapted to slidably receive one of said roller means; first means for imparting reciprocal movement to said bar and support members and adapted when said bar and support member are moved in one direction to draw said material within said passageway in the form of a loop; and second means for reciprocally operating said punches in timed relation to said bar whereby said punches pass through said loop of material.

2,944,458
DEVICE FOR FEEDING STRIP METAL TO POWER PRESSES HAVING POSITIVE WORKS CLAMP RELEASING MEANS
Alvin F. Groll, Box 347, Napoleon, Ohio
Filed Aug. 23, 1956, Ser. No. 605,766
6 Claims. (Cl. 83—437)



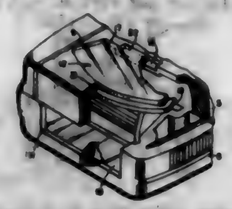
2. In a device for feeding strip metal to metal working apparatus, in combination; a reciprocable carrier; clamping means carried by said carrier; said clamping means being adapted to grip a strip of metal to be fed by said device; means for sequentially and smoothly accelerating movement of said carrier on a forward stroke from zero speed to a maximum speed and decelerating such movement from maximum speed to zero speed at the end of such forward stroke, and accelerating movement thereof on a back stroke from zero speed to maximum speed and decelerating such movement from maximum speed to zero speed at the end of such back stroke; means for causing said clamping means to grip such strip of metal when said carrier is at zero speed at the end of its back stroke; and means to release such strip from the grip of said clamping means when said carrier is at zero speed at the end of its forward stroke including a push member having one end adapted to act upon said clamping means to release said clamping means and a swinging connecting link having a curved surface engageable with the other end of said push member during a portion of the swing of said connecting link causing said push member to act upon said clamping means.

2,944,459
MOULDED PLASTIC ARTICLE
Charles George Simmonds, 94 Sloane Ave., Chelsea, London SW. 3, England
Filed Aug. 20, 1956, Ser. No. 605,008
1 Claim. (Cl. 84—380)



A tubular wind musical instrument comprising a tubular part having a stem of part-circular cross section projecting from one end thereof, the wall of said tubular member having a slot therein extending from said one end at a position diametrically opposite the middle of said part-circular stem and shaped to form a knife edge facing said one end, and a mouthpiece having in one end thereof an arcuate cavity complementary to said part-circular stem, said stem being inserted into said cavity, and said mouthpiece having a wind passage extending from end to end therethrough and providing a discharge orifice which is complementary to, spaced from, and aligned with said knife edge.

2,944,460
WINDOW ASSEMBLY FOR EXPOSURE METERS
Hans A. Bakis, Swampscott, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 7, 1954, Ser. No. 474,853
3 Claims. (Cl. 88—23)

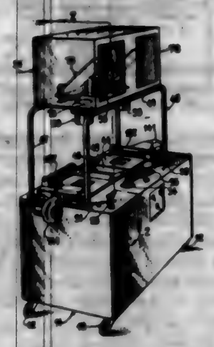


1. In an exposure meter of the type having apertures in its housing associated with a light responsive cell and an indicating dial, respectively, in combination: a two-part housing comprising top and bottom separable shells, said top shell having a first aperture in its surface proximate to one end thereof, said bottom shell having a portion of one of its ends cut away to form a second aperture, said apertures being proximate to one another, and a one-piece window assembly for covering both of said apertures, said window assembly comprising a molded transparent plastic member having first and second portions substantially at right angles to one another covering corresponding apertures in said housing, one of said portions being interfitted with one of said shells whereby said window assembly is affixed to its interfitted shell and retained therein upon separation of said housing, said portion covering said first aperture fitting snugly therein to have its surface substantially flush with the surface of said top shell, said portion having a flange extending around its periphery which cooperates with the inner surface of said shell surrounding said first aperture, said first aperture and said covering portion of said window assembly being substantially elongated in a direction substantially parallel to the ends of said housing, said flange portion cooperating with the edge of said first aperture removed from said end having a section thereof cooperating with the outer surface of said top shell, said outer surface having a corresponding section cut away to receive said flange section.

2,944,461
PROJECTION EQUIPMENT
Thomas B. Howell, 1815 Palmer Ave., Larchmont, N.Y., and Milton Rogin, 924 Woodmere Drive, North Woodmere, N.Y.
Filed Feb. 18, 1957, Ser. No. 640,868
3 Claims. (Cl. 88—24)

1. A composite optical image projecting apparatus comprising a base, a pair of spaced lenses supported by said base, a pair of light projectors supported by said base beneath said lenses to project light therethrough, a support positioned above said lenses, having a floor having a pair of spaced lens openings, a second pair of spaced lenses mounted on said support and positioned respectively over said first pair of lenses, beneath said lens openings, a pair of mirrors mounted on said support and positioned respectively over said second pair of lenses, each of said mirrors being inclined so as to reflect the light projected from the associated lens of said second pair outwardly from the support in substantially the same direction, means mounting each of said mirrors on said support for substantially universal movement, said mirror mounting means comprising a substantially U-shaped bracket associated with each of said lens openings, each of said brackets having a cross piece and a pair of upstanding legs, a plate centrally located on said

cross piece and affixed thereto extending laterally therefrom, said floor having an aperture positioned respectively to the rear of each of said lens openings, a vertical member extends through each of said apertures and through said plates, means to lock each of said plates in fixed position with respect to said floor to prevent rotation of its bracket about said associated vertical member, a rod extending through each of the legs of said bracket in substantially a horizontal plane, means to mount said mirrors on said rods, means operatively connecting said rods to said vertical members, means to effect vertical movement of said vertical members to adjust the angle of inclination of said mirrors, each of



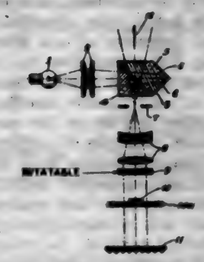
said brackets having a portion extending longitudinally therefrom beyond one of said legs, a member positioned in juxtaposition to said leg, each of said legs having an elongated slot through which the rod extends and said member having an opening through which the rod extends, said floor having an opening beneath said longitudinally extending portion, a vertical screw rotatably mounted on said extending portion restrained from vertical movement with respect thereto, said screw having its lower end extending through said last named opening and its upper end threaded into said slidable member, whereby upon rotation of said screw, said member may be raised or lowered to tilt said rod with respect to said bracket.

2,944,462
CINEMATOGRAPH SCREENS
Thomas Smith Harkness, London, England, assignor to Andrew Smith Harkness Limited, London, England, a company of Great Britain
Filed Sept. 28, 1959, Ser. No. 842,739
5 Claims. (Cl. 88—28.5)



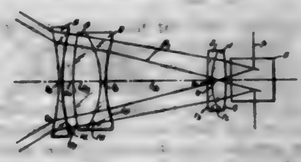
1. Projection screen comprising a screen base of sheet material having a white diffuse reflecting surface and an outer reflecting layer of crystals embedded in a carrier material lying over said surface, characterized in that the crystals consist essentially of transparent hexagonal basic lead carbonate crystals having high reflecting power and a refractive index of about 2 and are in the form of small thin plates having a major dimension of at least several microns, and in that these plates are disposed in the carrier material preponderantly parallel and at small angles to the viewing surface, further characterized in that light impinging upon said white surface through said crystals and reflected by said white surface is refracted by said crystals and combines with the light reflected by the upper surface of the crystal layer to give an increased reflectivity over a wide viewing angle, said screen when viewed at an acute viewing angle having an increased total reflectivity of up to 25% compared with an aluminum coated screen.

2,944,463
ILLUMINATING DEVICE PARTICULARLY FOR OBJECTS IN MICROSCOPES
Kurt Rintsch, Wetzlar, Germany, assignor to Carl Zeiss, Oberkochen, Wurttemberg, Germany
Filed Jan. 13, 1956, Ser. No. 558,997
Claims priority, application Germany Jan. 14, 1955
10 Claims. (Cl. 88—39)



1. In an illuminating system particularly for an object to be viewed by a microscope, a light source, transparent means for supporting said object, polarizing means arranged in the path of light emanating from said light source for directing polarized light to said object, a reflector composed of a plate provided on its back face with a plurality of triple mirrors arranged with their apices in a single plane which extends at right angles to the optical axis of the microscope, said reflector being disposed behind said object to reflect said polarized light passing through said transparent supporting means and to depolarize said light, an analyzer disposed to receive light reflected from said object and said reflector, said reflected light having substantially the same path as the incoming polarized light, and a rotatable optical member disposed in said path to control the oscillation plane of the light along said path.

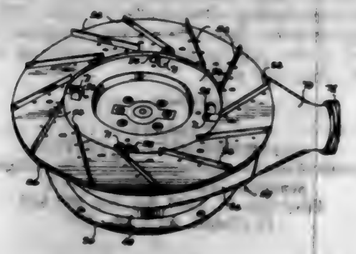
2,944,464
ANAMORPHIC LENS SYSTEM
Seymour Rodin, Massapequa Park, N.Y., assignor to Scanoptic, Inc., New York, N.Y.
Filed Oct. 31, 1957, Ser. No. 693,628
10 Claims. (Cl. 88—57)



1. An anamorphic lens system comprising, in combination, a negative front member including a negative cylindrical single lens element having a forwardly facing outer air face concave to the front, the absolute value of the radii of curvature of the outer airsurfaces of said single lens element being not greater than 2.5 times the focal length of said negative front member, and a cemented negative meniscus doublet rearwardly spaced a first airspace from said negative single lens element, said meniscus doublet including a forwardly located positive

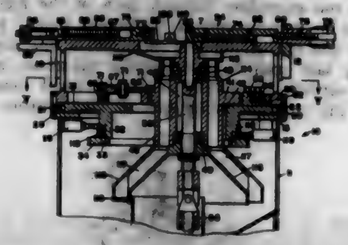
cylindrical lens element and a rearwardly located negative cylindrical lens element, said negative meniscus doublet having outer airsurfaces concave to the rear and a cemented interface convex to the rear, the radius of curvature of the rearwardly facing outer airsurface of said negative meniscus doublet being between two thirds and four thirds of the focal length of said negative front member, and the radius of curvature of the forwardly facing airsurface of said negative meniscus doublet being between five third and eight thirds of the focal length of said negative front member, the sum of surface powers of said negative meniscus doublet being not greater than half the sum of surface powers of said single lens element; and a positive rear member spaced a second airspace from said negative meniscus doublet and being a positive cemented doublet including a negative cylindrical lens element and a positive cylindrical lens element, said positive doublet having a rearwardly facing outer airsurface convex to the rear, the radius of curvature of said rearwardly facing outer surface being not greater than the focal length of said positive doublet and not smaller than two thirds of said focal length of said positive doublet, a forwardly facing outer airsurface concave to the rear, the absolute value of the radius of curvature of said forwardly facing outer airsurface being not greater than three times said focal length of said positive doublet and not smaller than two times said focal length of said positive doublet, and a cemented interface, said cylindrical lens elements having the generatrices thereof parallel, the principal points of said front and rear members being spaced an axial distance which is the sum of the focal lengths of said negative front member and of said positive rear member when the lens system is focused for infinity, the ratio between the focal lengths of said positive rear member and said negative front member being between 1.5:1 and 3:1.

2,944,465
CHIP COLLECTOR FOR MILLING MACHINE
Gordon H. Jones, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed June 28, 1955, Ser. No. 518,449
6 Claims. (Cl. 90—11)



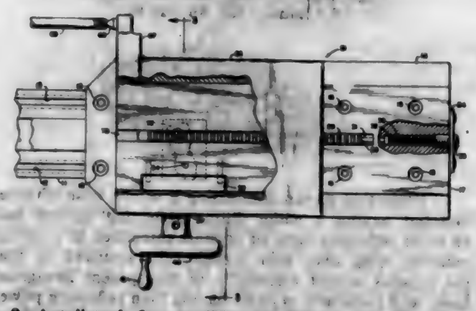
3. In a machine tool for machining the surface of a workpiece, the combination comprising, a headstock mounting a high speed face type cutting tool rotatable in one direction for removing chips of metal from the workpiece surface, a generally cylindrical chip collecting housing mounted on said headstock and surrounding said cutting tool, an annular chip deflecting plate secured to said housing and closely overlying the workpiece surface around the portion being machined, means providing a flow of air through said housing from between said plate and the workpiece surface for removing chips collected in said housing, and a plurality of flexible elongated chip deflecting vanes depending from said chip deflecting plate and disposed generally secantially around said plate and extending outwardly in a direction opposite to the direction of rotation of said cutting tool and for directing the flow of air over the surface being machined to facilitate the removal of chips therefrom.

2,944,466
PROFILE MILLING MACHINE
John H. Roblin, Winsted, Conn., assignor to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio
Filed Dec. 23, 1958, Ser. No. 782,510
12 Claims. (Cl. 90—13)



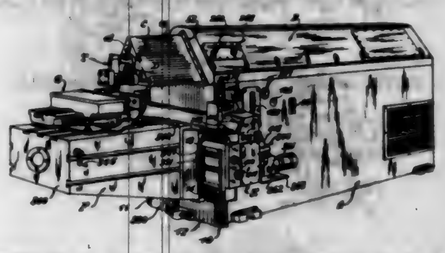
1. A machine for machining the peripheral surface of a workpiece which comprises a lower housing section, an upper housing section, said housing sections each having an annular flange adjacent the other of said housing sections, a circumferential bearing race disposed between said annular flanges, means securing said annular flanges and said bearing race together, a support plate received within said housing sections, a plurality of ball bearings disposed between said circumferential bearing race and the outer periphery of said support plate, means to rotate said support plate, a spindle housing slidably mounted on said support plate for sliding movement in the plane of rotation thereof, a spindle journaled within said spindle housing, said upper housing section having a top wall defining a workpiece supporting table, means to clamp a workpiece to said table, said spindle mounting a machining tool adapted to engage a workpiece held by said means to clamp on said workpiece supporting table, means to rotate said spindle, a generally circular cam secured to the internal surface of said upper housing section radially outwardly of said spindle housing, cam follower means, and means connecting said cam follower means with said spindle housing whereby said spindle housing is caused to move with respect to said support plate when said support plate is rotated.

2,944,467
FAST ACTING TAILSTOCK
Raymond C. Cannon, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,838
9 Claims. (Cl. 90—23)



9. A tailstock for a milling machine or the like having a bed, comprising a slide movable along said bed, a workpiece engaging dead center on said slide, a gear mounted for rotation in said slide, a rack in mesh with said gear and slidable relative to the bed and the slide, a handwheel for imparting rotation to said gear to move the slide along the rack through said gear, a spring tending to hold said rack in a predetermined position relative to the bed so that rotation of the gear in one direction will move the slide along the rack until the dead center engages the workpiece and the continued rotation of the gear will compress the spring by moving the rack with respect to the bed, a ram member oscillatably mounted on said bed, a pin on said rack for actuating said cam, clamping means for actuation by said cam when the rack moves in one direction with respect to the bed to lock the slide to the bed, and means rendered operable by movement of the rack in the opposite direction with respect to the bed to unlock the slide from the bed.

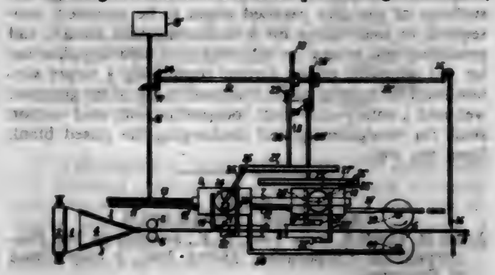
2,944,468
SHAPER
Merrill W. Hamilton, Richard E. Grieshaimer, and James M. Allnutt, Cincinnati, Ohio, assignors to The Cincinnati Shaper Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 28, 1955, Ser. No. 535,428
24 Claims. (Cl. 90—48)



1. In a machine of the character described, an elongated frame, a slide supported in the front end of said frame, a driving screw drivingly supported in said frame, a nut fixedly secured to said slide and having threaded engagement with said screw, forward and reverse driving gears rotatably supported coaxial with said driving screw, power actuated means for rotating said forward and reverse driving gears in opposite directions, pressure fluid actuated friction disk clutch means supported coaxial with said driving screw for operatively connecting and disconnecting said forward and reverse driving gears with said driving screw to reciprocate said tool carrier, valve means for controlling the flow of pressure fluid to and from said clutch means, and a control screw slidably supported by said frame and extending generally parallel with said driving screw, means operatively connecting said valve means and said control screw for actuating said valve means to reverse the direction of flow of fluid to said pressure actuated clutches upon reciprocation of said control screw, a pair of stops having threaded engagement with said control screw, abutment means carried by said slide and interposed between said stops for engagement therewith upon reciprocation of said slide, control means carried by said frame spaced from said stops for individually adjusting said stops along said control screw, and means for operatively connecting said control means to said stops.

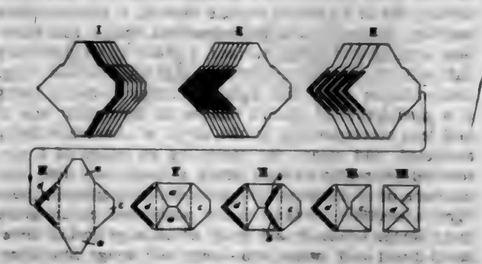
2,944,469
MACHINES FOR THE PRODUCTION OF BAGS CONSISTING AT LEAST ON THEIR INSIDE OF THERMOPLASTIC MATERIAL
Hans Heinzer, Neuhausen am Rheinfall, Switzerland, assignor to Schweizerische Industrie-Gesellschaft, Neuhausen am Rheinfall, Switzerland
Filed Dec. 11, 1957, Ser. No. 702,192
Claims priority, application Switzerland Dec. 21, 1956
4 Claims. (Cl. 93—8)

1. In a machine of the class described, a storage reel for a strip of thermoplastic material, means adjacent to said reel for folding said strip longitudinally, feeding means spaced from said folding means for advancing said strip from said reel, a pair of carriages, means supporting said carriages separately for sliding movement parallel to the path of said strip between said folding means and said feeding means, means associated with said carriages for reciprocating the same with one of said carriages always moving in the opposite direction to the other, a pair of clamping and heating jaws movably mounted on each of said carriages with one of said jaws of a pair at each side of said path of movement of the folded strip, a tooth rack secured to each of said jaws and extending transversely across its carriage with the toothed edges of the racks in each pair facing each other,



a tooth wheel rotatably mounted on said carriage in meshing engagement with said pair of tooth racks, a projecting arm secured to said tooth wheel, guide means parallel with said carriage supporting means, means on the free end of said projecting arm slidably engaging said guide means, means operatively connected with said guide means for moving said guide means transversely, and means interconnecting said strip feeding means, carriage reciprocating means, and guide moving means in such a way as to close one of said pairs of jaws on the folded strip and actuate said feeding means at the beginning of a stroke of the carriage carrying said one pair of jaws while at the same time opening the other pair of jaws sufficiently wide to permit said closed pair of jaws to pass between them.

2,944,470
METHOD AND APPARATUS FOR THE PRODUCTION OF ENVELOPES WITH GUMMED CLOSING FLAPS
Wilhelm Doetsch, Augustinusstrasse 11, Neuss (Rhine), Germany
Filed May 6, 1958, Ser. No. 733,305
Claims priority, application Germany June 13, 1957
2 Claims. (Cl. 93—62)



1. Machine for producing gummed envelopes comprising, in combination, means for withdrawing blanks individually and successively from a source of supply and forming a continuous web of blanks arranged in staggered formation having the edges of the closing flaps to be gummed exposed, means for smoothing, hardening

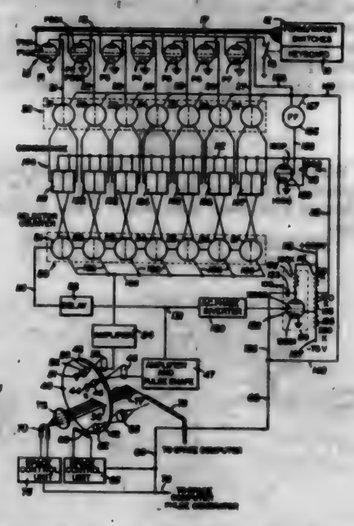
and heating said exposed edges, means for applying gum to said heated edges, means for cooling said gummed edges, means for straightening up and advancing the foremost and uppermost blank of the web, means for removing the advanced blanks successively from the web, means for folding over the side flaps of the blank, means for applying gum for sticking the side flaps and the bottom flap of each blank, means for folding over the bottom flap, means for folding over the closing flap and means for collecting the finished folded envelopes, and a transporting system interconnecting said aforementioned means, said means for smoothing, hardening and heating said exposed edges including a flat ironing device arranged in the path of said web adapted to engage the surfaces of the said exposed edges to be gummed, subsequent to said means for withdrawing said blanks, and preceding said means for applying gum, said straightening up and removing means further comprising a rotary suction shaft for raising up the foremost blank of the gummed web and a rotary cam shaft cooperating with said suction shaft for straightening and discharging the raised blank from the web.

2,944,471
COMPOSING APPARATUS
Jacob H. Drillick, New York, N.Y., assignor to The Photypograph Corporation, Dover, Del., a corporation of Delaware
Filed Apr. 22, 1953, Ser. No. 350,427
12 Claims. (Cl. 95—4.5)



1. A phototypograph including, in combination, a stationary screen having a front surface of predetermined configuration on one face thereof, at least one character array consisting of a plurality of characters to be reproduced arranged in a predetermined pattern on said front surface, a single projection lens disposed in front of said front surface and so positioned that said front surface lies at an object surface thereof, a photosensitive medium disposed at a predetermined image concentration area of said image surface, a plurality of stationary light-redirecting elements between said lens and said image concentration area, said light-redirecting elements being in a predetermined pattern relative to the optical axis of said lens corresponding to the array of characters being projected, and means for projecting an image of a preselected character of said array through said lens and onto one of said stationary light-redirecting elements, said light-redirecting elements being positioned at an angle to an image beam of said array which is projected thereon to direct said image beam onto said image concentration area and to form an image of said character upon the photosensitive medium at said image concentration area, said light-redirecting elements being so positioned and correlated to the position of the characters of said array that the image beam of each character of said array is projected upon a predetermined one of said light-redirecting elements.

2,944,472
PHOTOGRAPHIC TYPE COMPOSITION
Frederick J. Heeren, Dayton, and Richard C. O'Brien, Cleveland, Ohio, assignors to The Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Feb. 18, 1957, Ser. No. 640,741
11 Claims. (Cl. 95—4.5)



1. A character selecting device for use in phototypesetting apparatus having a character selector arranged to generate a coded signal corresponding to a selected character and also having a matrix and a light source movable relative to each other for illuminating a selected character on the matrix, comprising a transient memory device adapted for connection with said character selector to be preset in accordance with a code number identifying a selected character, a computer arranged to count continuously and in predetermined succession code numbers identifying the characters on the matrix as the matrix moves through successive cycles with respect to the light source, means for comparing the code number set into said memory device with the counts of said computer, means for energizing the light source, and means connecting said energizing and said comparing means for operating said energizing means when the code number set in said memory device and the count of said computer coincide to illuminate the selected character on the matrix.

2,944,473
PHOTOGRAPHIC INTRA-LENS SHUTTER COUPLED WITH AN EXPOSURE METER
Waldemar T. Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Apr. 1, 1958, Ser. No. 725,627
Claims priority, application Germany Apr. 9, 1957
6 Claims. (Cl. 95—10)

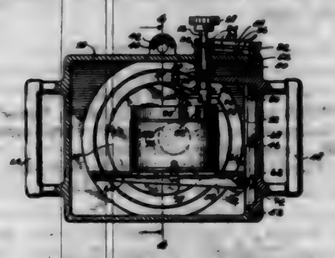
1. The combination with a camera having a photographic intra-lens shutter including a peripheral shutter housing and having an exposure meter and diaphragm and shutter speed setting members disposed coaxially with respect to the axis of the shutter, of a transmission ring mounted on the shutter for both turning and axial movement thereon, said ring being coaxial with the shutter structure and with said setting members; a movable tracing member associated with said exposure meter; drive means for actuating said tracing member in response to

axial movement of said transmission ring; and control means for shifting said transmission ring axially in response to relative turning movement of said setting members, said control means including as a portion a separate cam ring having a driving connection with one of said



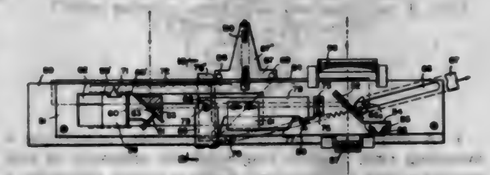
setting members to turn simultaneously therewith, and means mounting said cam ring on the periphery of the shutter housing for turning movement, said mounting means being independent of said setting members; and means holding said cam ring against axial movement.

2,944,474
UNDERWATER CAMERA HOUSING WITH OPERATING MEANS
George T. Dennis, Trenton, N.J., assignor to Everett W. Edmund, Haddonfield, N.J.
Filed May 14, 1959, Ser. No. 813,119
3 Claims. (Cl. 95—11)



1. In combination with a camera having a laterally focused lens, an exposed horizontally rotatable film winding element and a vertically projecting shutter actuating plunger, a rectangular housing for said camera open at one end and having a transparent lens window of substantially greater area than that of said lens, a film winding shaft projecting vertically through the top wall of said housing in fluid-tight relation therewith, said shaft having a handle on its outer end and coupling means on its inner end, a closure plate for said housing having a sealing ring in its marginal inner face for sealing engagement with the open end of said housing, coengaging means on said plate and housing for clamping said plate to said housing in fluid-tight relation, a camera support, means engageable with said support and said closure plate for clamping said support to said plate in different vertically and laterally relative positions, means engageable with said support and said camera for clamping said camera to said support in different relative positions, a vertically rotatable key member carried by said closure plate in position for coaxial relation with said winding shaft, said member having means on its lower end for engagement with and rotating said film winding element and coupling means on its upper end for coengagement with the coupling means on said film winding shaft, a shutter operating shaft projecting through said closure plate in fluid-tight relation therewith, said shaft having a handle on its outer end and means inside said housing engageable with the exposed end of said shutter actuating plunger for depressing said plunger upon rotation of said shaft.

2,944,475
PHOTOGRAPHIC RANGE FINDER
Herbert E. Goldberg, Plainville, Conn., assignor to The Kalart Company Inc., Plainville, Conn.
Filed June 2, 1955, Ser. No. 512,644
5 Claims. (Cl. 95—44)



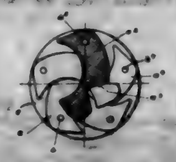
1. A photographic range finder of the kind controllable by a focussing movement of the lens system of a camera, said range finder comprising a base plate, a first light deflecting means fixedly mounted on said base plate, a second light deflecting means, a carriage supporting said second deflecting means for slidably displacing the same on the base plate at a constant angular relationship to said fixed light reflecting means, light deviating means disposed between said two deflecting means to obtain coincidence of the light beams, and means for varying the coaction between said deflecting means and said deviating means, said means including a sliding guiding member operatively connected to said light deviating means, and a guide means slidably guided on said base plate at a fixed angular relationship relative to the optical center axis between said deflecting means, one end of said guiding member bearing against said carriage and the other coacting with said guide means, and means for transmitting a focusing movement of the lens system to said guide means to vary correspondingly the position of said guiding member thereby setting the light deviating means in accordance with the focussing movement of the lens system.

2,944,476
PHOTOGRAPHIC SHUTTER
Berthold Pollick, Brooklyn, and Raymond G. Hennessey, Canterport, N.Y., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Apr. 4, 1956, Ser. No. 576,198
9 Claims. (Cl. 95—55)



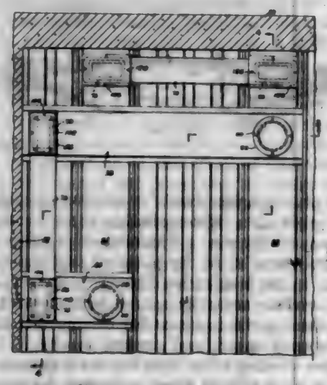
1. In a photographic shutter, a relatively elongated substantially rigid thin light-occluding sheet having an exposure aperture therein, a frictional drive roller mounted with its axis parallel to the plane of said sheet and perpendicular to the lengthwise dimension thereof, and with the roller surface normally spaced from contact with the adjacent sheet surface, means for driving said roller at a high peripheral speed, and control means for suddenly moving the rotating roller into frictional contact with the adjacent surface of said sheet to project the same, solely by such frictional engagement, impulsively across an exposure frame.

2,944,477
OBJECTIVE DIAPHRAGM COMPOSED OF SWINGABLE LEAVES
Karl Teoch, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed May 2, 1958, Ser. No. 732,597
Claims priority, application Germany Aug. 16, 1957
3 Claims. (Cl. 95—63)



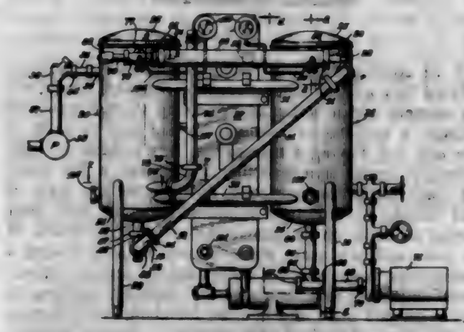
1. A diaphragm for optical objectives, comprising a mounting ring, a guide ring rotatable relatively to said mounting ring and substantially co-extensive therewith, a plurality of overlapping leaves with arcuate, concentric inner and outer edges disposed between said rings and pivotally secured to said mounting ring in angularly spaced positions, said inner and outer edges substantially registering with respective edges of both of said rings in a wide-open position of the diaphragm, said guide ring having a face adjacent said leaves provided with spirally extending grooves of substantially identical lengths, and a guide pin on each of said leaves received in a respective one of said grooves for inward movement of said leaves upon relative rotation of said rings whereby the inner edges of said leaves define progressively smaller diaphragm openings, the mutual spacing of said grooves being so close as to prevent an inward extension of said grooves with their original pitch for a distance sufficient to enable simultaneous convergence of said leaves into a position of complete diaphragm closure, at least one but less than all of said grooves being provided with a bent inner extremity of increased spiral pitch adapted to accelerate the terminal movement of the associated leaf, thereby causing the inner edge of the latter to swing past the axis of said rings so as to obstruct the residual diaphragm opening defined by the remaining leaves.

2,944,478
BUILDING AND AIR DISTRIBUTING STRUCTURE
Bernard E. Curran, Sewickley, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 14, 1957, Ser. No. 645,940
4 Claims. (Cl. 98—38)



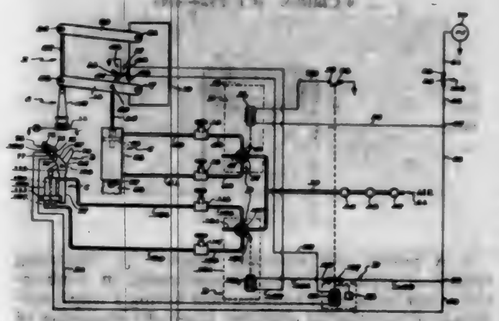
1. In an air distributing and building structure, a cellular metal load supporting floor having longitudinally extended air conducting cells forming a component of the floor, a dual air outlet unit having a pair of air receiving stacks, said outlet unit being spaced from and extended parallel to said air conducting cells, and air-tight connections between said air conducting cells and said dual outlet unit including a pair of crossover ducts extended transversely and on top of said cellular metal floor, each crossover duct having communicating openings at one end thereof between the upper wall of an air conducting cell and the lower wall of a crossover duct, and means providing an airtight connection between said air cell and crossover duct and a flanged outlet connection at the other end thereof cooperating with an opening in the upper wall of a crossover duct and to which the lower ends of said stacks are secured, said flanged outlet connections including an individual lower shoe plate for each outlet and having outwardly extended bottom flanges, and an elongated base plate extending between openings in the crossover ducts having a cooperating upper shoe plate formed at each end thereof, said upper shoe plates having outwardly extended bottom flanges cooperating with the bottom flanges of the lower shoe plates to embrace the inner and outer surfaces of the upper wall portions defining said openings, and upwardly extended rim portions and inwardly extended upper flanges, said rim portions of said shoe plates being arranged in substantially nesting relation and also provided with means for securing the inwardly extended upper flanges together to effect clamping of said lower flanges about said openings to form airtight connections therebetween, and said base plate providing means for registering the duct openings and the air receiving stacks of the outlet units.

2,944,479
VACUUM-STEAM PROCESSOR
John C. Walsh and William M. Hanslien, Cedar Rapids, Iowa, assignors to Cherry-Burrell Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 25, 1956, Ser. No. 618,241
7 Claims. (Cl. 99—251)



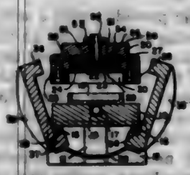
1. In a processor of the class described, the combination of a condenser, a first upright vacuum processing chamber at one side thereof, a second upright vacuum processing chamber adjacent thereto, a communicating duct connected to the bottom of the first chamber and leading tangentially into the upper portion of the second chamber, a product supply duct leading into the upper part of the first chamber and having means at the inner end thereof to spray product downwardly in a relatively cone-like pattern, a source of steam communicating relatively tangentially with the lower part of the first chamber, a product discharge duct communicating with the bottom of the second chamber, a pump connected to said discharge duct for removing product from the second chamber, a gas exhaust duct communicating with the second chamber and the condenser, pump means connected to said condenser remote from said exhaust duct to withdraw vapor from the second chamber through the condenser, and means in said exhaust duct for controlling the vacuum in said second chamber independently of said condenser and said first chamber.

2,944,480
ARTICLE IMPRINTER
Sven A. Nilsson, Richmond, Va., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,334
3 Claims. (Cl. 101—11)



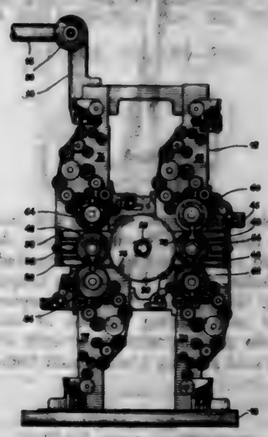
1. An apparatus for marking a pole having a substantially round cross section comprising electrically heated imprinting means, first pneumatically operated raising and lowering means for said imprinting means, first electrically operated actuating means to selectively actuate said first pneumatic means, selectively engageable pole holding means having a moveable member adapted alternately to close so as to form a substantially V-shaped groove which cradles said pole adjacent its ends and which opens so as to release said pole, a second pneumatically operated raising and lowering means for said moveable member, and a second electrically operated actuating means to selectively actuate said second pneumatic means so that said holding means and said actuating means cooperate to imprint said pole and to eject said pole sideways after said article is imprinted.

2,944,481
EMBOSSING PRESS
Gilbert C. De Malvilain, 3 Terrace Court, Port Chester, N.Y.
Filed Oct. 18, 1956, Ser. No. 766,618
18 Claims. (Cl. 101—37)



1. In a press, a die base; a diaphragm head adapted to be moved into and out of cooperating position relatively to said die base and including means for supplying fluid under pressure to a diaphragm held thereby; a flanged, open-mouth, flexible, container-like diaphragm within a cavity formed in said head, and arranged so that it presents a flexible force exerting surface opposite said die base; and means within said diaphragm for transmitting a force proportional to the pressure fluid therein to the flanges of said diaphragm to form a seal between said flanges and said head.

2,944,482
ROTARY PRINTING PRESS FOR OFFSET PRINTING WITH THREE OR MORE COLOURS
Claes Aller, Copenhagen, Denmark, assignor to Carl Allers Etablissement A/S, Copenhagen, Denmark, a Danish joint-stock company
Filed Feb. 4, 1958, Ser. No. 713,219
Claims priority, application Denmark Feb. 8, 1957
5 Claims. (Cl. 101—177)

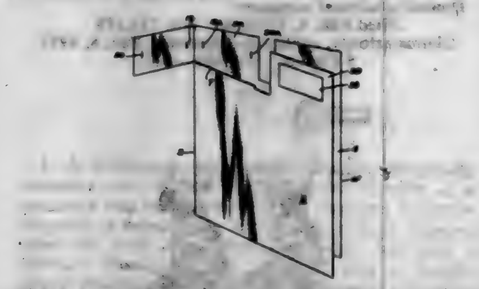


1. A rotary printing press for offset printing, comprising an impression cylinder, at least one blanket cylinder normally in contact with said impression cylinder, two cylindrical formes contacting said blanket cylinder at opposite sides thereof in a plane perpendicular to a plane through the axes of said impression cylinder and said blanket cylinder, a gear wheel fixed to said impression cylinder, a gear wheel fixed to said blanket cylinder and normally intermeshing with the gear wheel of the impression cylinder, gear wheels, each fixed to one of said cylindrical formes and intermeshing with the gear wheel of said blanket cylinder, and an extra gear wheel interposed between the gear wheel of the impression cylinder and the gear wheel of one of the cylindrical formes and in constant intermeshment with both last named gear wheels in order to retain the mutual angular position of said impression cylinder and said blanket cylinder when the latter is moved radially away from said impression cylinder to such extent that the intermeshment between their gear wheels is done away with.

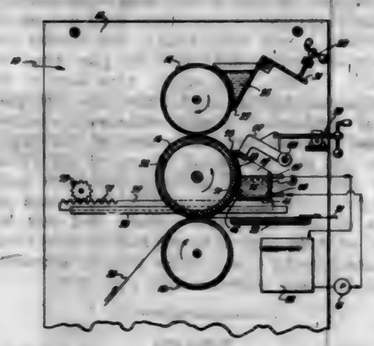
2,944,483
PRINTING AND RETAINING DEVICE
Leslie H. Cheeseman, Rickmansworth, England, assignor to Addressograph-Multigraph Corporation, Wilmington, Del., a corporation of Delaware
Filed Sept. 4, 1956, Ser. No. 607,362
Claims priority, application Great Britain Mar. 28, 1956
1 Claim. (Cl. 101—369)

In a record-keeping system in which an initially indeterminate number of different record instruments, each bearing similar information relating to a given subject and additional dissimilar information relating to the same subject, are to be maintained, a printing and record-holding device comprising a relatively thin, flexible folder, envelope, or the like having front and rear covers between which said record instruments may be inserted to afford a means for filing said instruments at a com-

mon location, said front and rear covers having complemental slots formed therein at a predetermined location with respect to one corner of said covers to afford a pair of complemental printing sections each having three free edges, one of said edges being common to said two printing sections and comprising a fold edge of said covers, and means, comprising a printing plate embossed to form a series of type characters indicative of the aforesaid information common to each of said instruments for printing that information in substantially identical form upon each said record instrument as required, said printing plate including a pair of mounting tongues extending from opposite sides thereof through complemental apertures in said two printing sections of said covers to fasten said two printing sections to each other and releasably affix said printing plate to said folder.



2,944,484
PRINTING APPARATUS
John E. Bruce, South Pasadena, Calif., assignor to Albert Van Luit & Co., Los Angeles, Calif., a corporation of California
Filed Mar. 11, 1957, Ser. No. 645,287
2 Claims. (Cl. 101—425)



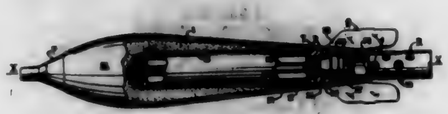
1. In an apparatus for transferring a continuous pigmented design to a material, a pattern roller, a pressure roller, a gelatinous printing roller vertically disposed above the pressure roller, said printing roller impressing the surface of the material as the material passes between the printing roller and the pressure roller, means for continuously pigmenting the pattern roller, a pigment solvent well coextensive with the effective length of the printing roller, a first solvent barrier co-extensive with the effective length of the printing roller and supported by the pigment solvent well, a second solvent barrier co-extensive with the effective length of the printing roller, and seals adjacent each end of the printing roller precluding passage of pigment solvent from the solvent well at the ends of the printing roller, the solvent well being positioned with respect to the printing roller so that a peripheral segment of the printing roller surface travelling from the region of contact with the material toward patterning contact with the pattern roller is directly contacted by a pigment solvent contained in the solvent well to wash from the printing roller pigment carried over from the printing contact with the material.

2,944,485
EXPLOSIVE DEVICE
Albert R. Ely, Kenvil, N.J., and Jack D. Hayes and Robert W. Lawrence, Wilmington, Del., assignors to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 5, 1955, Ser. No. 538,663
4 Claims. (Cl. 102—24)



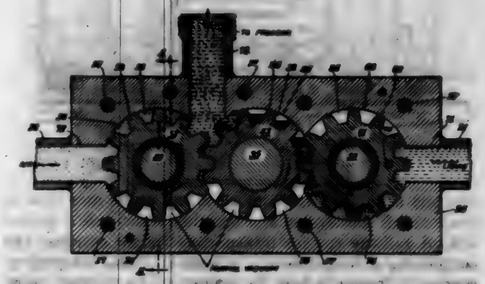
1. A primer unit especially adapted for detonating cylindrical explosive cartridges comprising, in combination, a flat, cylindrical body member having a length substantially less than its diameter essentially consisting of a covered unitary mass of a fissure-free synthetic waterproof, self-sustaining, resinous polymerization product containing dispersed therein at least 60% of a particulate, nonaromatic, crystalline high explosive, and a longitudinal, substantially imperforate tube to receive explosive initiating means therein embedded substantially midway of the length of the flat, cylindrical body member and diametrically extending entirely through said body member.

2,944,486
SELF-PROPELLED PROJECTILE
Joseph Raymond Jean, Paris, France, assignor to Hotchkiss-Brandt, Paris, France, a French body corporate
Filed May 2, 1958, Ser. No. 732,470
Claims priority, application France May 2, 1957
5 Claims. (Cl. 102—49)



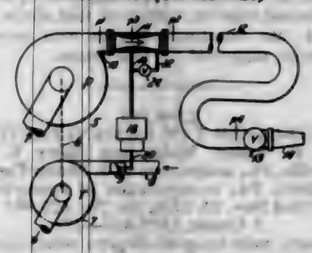
1. In a projectile provided with a self-propelling charge and capable of being launched by an auxiliary launching charge: a rear nozzle for ejecting the gases produced by combustion of the self-propelling charge and an ejectable device disposed in the nozzle for obturating the nozzle in the course of the launching of the projectile by the launching charge and for igniting the self-propelling charge by means of the launching charge, said device comprising a body, a shearing member fixing the body in the nozzle, said body having a longitudinal igniting passageway and a transverse rear face, a delay charge filling said passageway and permitting automatic ignition, with a predetermined delay, of the self-propelling charge by the launching charge, said passageway communicating with said rear face of the body through at least one ignition aperture, and a movable and adjustable obturator member against said rear face and permitting selectively closing said aperture for launching said projectile without self-propulsion and uncovering said aperture for ignition of the self-propelling charge.

2,944,487
GEAR PUMP
John C. Walsh, Cedar Rapids, Iowa, assignor to Cherry-Burrell Corporation, Chicago, Ill., a corporation of Delaware
Filed Aug. 3, 1956, Ser. No. 601,863
12 Claims. (Cl. 103—7)



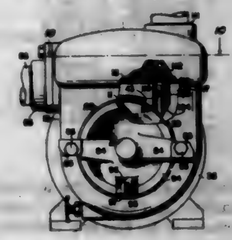
5. A gear pump comprising a housing having three substantially circular, intercommunicating chambers therein, two being end chambers communicating relatively diametrically with a center chamber, a gear in each of said chambers, the gears in the end chambers being meshed with the gear in the center chamber, a first fluid inlet port in said housing communicating with one of said end chambers remote from the center chamber, a second fluid inlet port in said housing communicating with the other of said end chambers, a single outlet port in said housing for said fluids, said outlet port communicating with the center chamber and the second fluid end chamber adjacent the meshing of the gears in said chambers, and means for transmitting the first fluid from its end chamber to said outlet port.

2,944,488
PUMP CONTROL SYSTEMS
Marvin Meyer, Caldwell, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Aug. 31, 1954, Ser. No. 453,375
8 Claims. (Cl. 103—16)



1. In a pump system including a controllable fluid delivery pump, said pump having an extended delivery conduit having tangible pressure drop therealong between its inlet and a preselected point downstream therein, a venturi at the pump outlet upstream of said conduit having a throat the pressure at which is equal to the pressure at said point in the conduit, said venturi having a zone at its downstream end whereat the pressure is substantially equal to pump delivery pressure, said latter pressure normally being greater than the pressure at said venturi throat when said pump is delivering fluid, means, including a fixed pressure reference element, connected to said venturi throat, said means having a movable member acted upon on one side by the venturi throat pressure in opposition to said fixed pressure reference element, and an operating connection from said movable member to control the fluid delivery of said pump.

2,944,489
SELF-PRIMING CENTRIFUGAL PUMP
Charles I. Longenecker, Wauwatosa, Wis., assignor to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Original application Apr. 12, 1951, Ser. No. 220,611, now Patent No. 2,798,439, dated July 9, 1957. Divided and this application Nov. 21, 1956, Ser. No. 627,721
9 Claims. (Cl. 103—113)

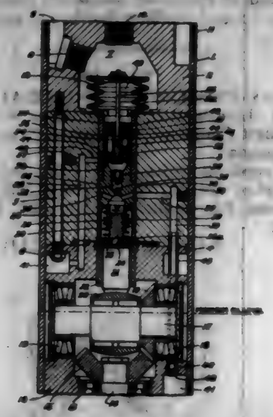


1. In a self-priming centrifugal pump of unitary construction, a housing in the form of an integrally cast impeller chamber and superimposed priming water chamber having vertical integrally formed substantially parallel circumferentially spaced discharge and priming passages connecting said priming water chamber with said impeller chamber and having a cylindrical peeler receiving open disposed vertically between and generally parallel with said passages, a centrifugal pump impeller rotatably mounted within said impeller chamber in a manner operative to eject liquid tangentially through said vertical discharge passage, a round bar constituting a replaceable cylindrical peeler slidably received in said peeler receiving opening and having its lower end sharpened to a straight transverse edge disposed to be adjusted into and to cooperate in closely spaced relationship with the periphery of said impeller in a manner operative to deflect therefrom liquid rotating therewith to divert it into said vertical discharge passage, and releasable fastening means operatively engaging said cylindrical peeler bar to retain it in adjusted position.

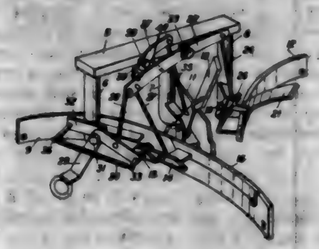
2,944,490
MEMBRANE PUMP
Friedrich Wilhelm Pleuger, Juthostrasse 80, Hamburg-Wandsbek, Germany, and Johann Schneider, Hamburg-Wandsbek, Germany; said Schneider assignor to said Pleuger
Filed July 8, 1958, Ser. No. 747,191
Claims priority, application Germany July 17, 1957
15 Claims. (Cl. 103—152)

1. A submersible deep well pump comprising a housing containing a pumping chamber, a working chamber, a flexible pumping membrane separating said chambers, hydraulic operating fluid in the working chamber, a hydraulic fluid reservoir, an auxiliary pump having a discharge line delivering hydraulic operating fluid from the reservoir to the working chamber whereby to increase the pressure in the latter and effect flexure of the membrane in its pumping direction, the displacement of the auxiliary pump being substantially less than the displacement of the pumping membrane, a hydraulic fluid return line from the working chamber to the reservoir, a valve controlling the flow of fluid through said return line, and means adapted

to move said valve to permit return of fluid from the working chamber to the reservoir upon a predetermined degree of flexure of the pumping membrane in its pumping direction whereby to reduce the hydraulic pressure in the working chamber and thereby to permit the pumping membrane to return to its starting position.

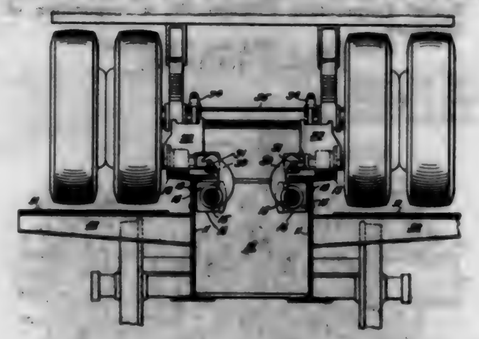


2,944,491
OVERHEAD SWITCH UNIT EMPLOYING SPRING TOGGLE
Sidney Le Fiell, 1469 Fairfax Ave., San Francisco, Calif.
Filed June 23, 1958, Ser. No. 743,551
3 Claims. (Cl. 104—103)



1. A track switch unit for overhead tracks comprising a header, a pair of spaced hangers depending from said header, a curved track section carried by each of said hangers at the opposite end of said header, a third hanger spaced between the said first-mentioned hangers, a straight track section carried by said third hanger, a switch section pivoted to each of said curved track sections, a rocker arm pivoted to said header, a pull rod connecting said rocker arm and each of said switch sections pivoted to said spaced curved track sections for simultaneously lowering one of said switch sections and raising the other of said switch sections to complete a through track, an arm pivoted to said header and spaced longitudinally from the pivotal point of said rocker arm, a switch section pivoted to said straight track section, a pull rod connecting one end of said last-mentioned pivoted arm and said last-mentioned switch section, a pair of spaced pins carried by said rocker arm and alternately engageable with said pivoted arm and on opposite sides of its pivotal connection whereby when said rocker arm is actuated in one direction, said pivoted arm will be rotated in the opposite direction.

2,944,492
RAILWAY CARS FOR TRANSPORTING ROAD VEHICLES
Deodat Clejan, New York, N.Y., assignor, by mesne assignments, to General American Transportation Corporation, Chicago, Ill., a New York corporation
Filed June 26, 1956, Ser. No. 593,848
7 Claims. (Cl. 105—369)



1. A railway car for transporting freight carriers, and comprising a longitudinally extending frame adapted to support a freight carrier, two substantially parallel longitudinally extending and laterally spaced-apart shafts arranged in said frame and each mounted thereon for both rotational and longitudinal sliding movements with respect thereto, a pair of upwardly projecting hooks respectively mounted on said shafts for movements therewith, a pair of downwardly projecting arms respectively mounted on said shafts for movements therewith, a pair of nuts, a pair of gimbals respectively connecting said nuts to the lower ends of said arms, a laterally extending member suspended between said nuts and independently of said frame and having oppositely inclined threads at its opposite end portions which are respectively engaged by said nuts, and means for selectively rotating said laterally extending member in either direction, rotation of said laterally extending member in one direction effecting drawing of the lower ends of said arms toward each other so as to impart first relative rotation to said shafts and rotation of said laterally extending member in the opposite direction effecting forcing of the lower ends of said arms away from each other so as to impart second relative rotation to said shafts, said first relative rotation of said shafts actuating said hooks into holding positions with respect to a freight carrier supported by said frame and said second relative rotation of said shafts actuating said hooks into releasing positions with respect to a freight carrier supported by said frame.

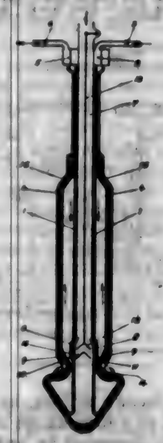
2,944,493
MULTI-LAYER TABLET MANUFACTURE
Lawrence H. Bailey, Rydal, and Harry F. Gabriel, Churchville, Pa., assignors to F. J. Stokes Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 23, 1956, Ser. No. 623,993
5 Claims. (Cl. 107—17)

5. A rotary multi-layer tablet press which comprises a die head having a vertical die cavity extending therethrough, an upper punch disposed above and vertically aligned with said die cavity for vertical reciprocation moving the working end thereof into and out of said die cavity, a lower punch disposed below and vertically aligned with said die cavity for vertical reciprocation moving the working end thereof up and down in said die cavity, means for rotating said die head and upper and lower punches together through a series of positions including in sequence a first tablet material receiving position, a first compression position, a second tablet material receiving position, a second compression position and an ejection position, a cam track mounted below said die head on which said lower punch rides to set the position of the working end of said lower punch in said die cavity, a portion of said cam track extending along the path of said lower punch between said first compression position and said second tablet material receiving position, and having an opening in said portion of said track, a vertically movable cam having an upper surface for engaging said lower punch, the upper surface



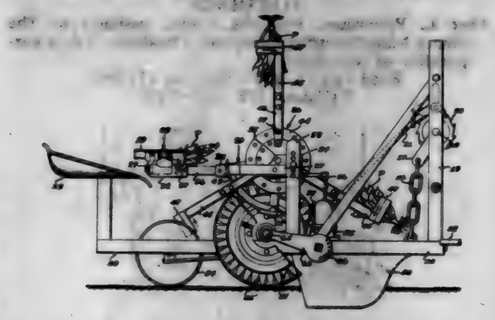
of said cam being upwardly inclined from each end and having a flat central surface interconnecting the inclined end surfaces, said movable cam being positioned in said opening with the inclined end portions of said cam aligned with the path of movement of said lower punch along said cam track, said cam having a normal position in which said flat surface is aligned with the guiding surfaces of said cam track portion adjacent said opening, and means for moving said cam upwardly to a position in which said inclined surfaces extend above the surfaces of said cam track portion adjacent said opening.

2,944,494
FIRE-BOXES OPERATING ON ATOMIZED FUEL
Francis Joseph Mary, Paris, France, assignor to Electricite de France, Paris, France, a national French organization
Filed Sept. 12, 1956, Ser. No. 609,413
Claims priority, application France Oct. 4, 1955
3 Claims. (Cl. 110—165)



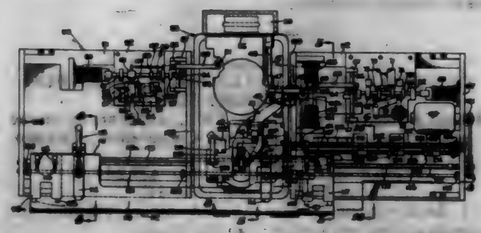
1. In a combustion chamber for atomized fuel provided with at least one burner, a combustion aid and ash melter comprising an open top refractory casing positioned in the path of the flames from said burner, a channel for receiving pulverulent ashes extending substantially axially through the open top of said casing and therein, means for placing said channel in communication with the exterior lower end of said casing and means for cooling the interior of said casing, a closing member positioned at the lower end of said channel and means for giving said closing member a reciprocating movement in a direction substantially parallel with the longitudinal axis of said channel to alternately throttle and release the lower end of said channel.

2,944,495
PLANT SETTING MACHINE
Robert W. Wilson and Oliver R. Rowe, Charlotte, N.C., assignors to R. H. Bouligny, Inc., a corporation of North Carolina
Filed Aug. 6, 1956, Ser. No. 602,107
12 Claims. (Cl. 111—2)



1. In a plant setting machine, the combination with setting means, operating cyclicly for grasping a plant at a pickup station and releasing said plant at a setting position, of means for supporting a plant at said pickup station for grasping by said setting means comprising a tray structure forming a fixed, upwardly facing, positioning support for receiving the root portion of a plant to be set, and a support member formed of resilient material and disposed in spaced alignment with the positioning support formed by said tray structure and in turn forming a positioning support for the top portion of said plant, said resilient support member being arranged in the path of said setting means to present an intermediate stalk portion of said plant for grasping at the spacing between said support member and tray structure and lifting upwardly therefrom, and said setting means operating upwardly at said pickup station to flex said resilient support member for gathering the top portion of said plant and permitting access to said intermediate stalk portion for grasping.

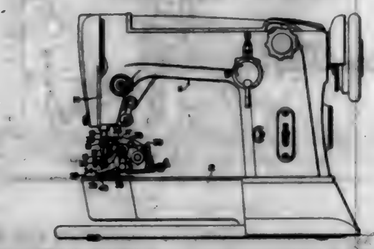
2,944,496
WORK INDEXING MECHANISM
Edgar J. Gardner, Santa Susana, Calif., assignor of small percentages to various assignees
Filed Dec. 9, 1957, Ser. No. 701,630
17 Claims. (Cl. 112—65)



1. In a buttonhole making machine of the type having a needle and a co-operating work clamp reciprocable

in a transverse direction, an attachment, in combination with said needle and work clamp, including means for supporting the work in operative position with a portion thereof under said work clamp, means for moving said work supporting means simultaneously with and in a path duplicating the transverse movement of said work clamp, and means operable in timed relation with said needle and said work clamp for intermittently feeding said work supporting means longitudinally past said work clamp for the automatic production of a plurality of button holes in said work.

2,944,497
WORK FEEDING ATTACHMENTS FOR SEWING MACHINES
Max L. Waterman, Fairfield, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed July 15, 1957, Ser. No. 671,799
1 Claim. (Cl. 112—212)



In combination, a sewing machine having a cylinder bed with an organized work feeding mechanism arranged to feed a work fabric across the cylinder bed, a bracket arm overhanging and substantially parallel to said cylinder bed, a needle bar journaled for endwise reciprocation in said bracket arm, a presser bar journaled in said bracket arm, said needle and presser bars being journaled on substantially parallel axes, said parallel axes contained within a vertical plane parallel to the direction of feed of said work feeding mechanism across the cylinder bed, an attachment having a top feeding device capable of advancing a work fabric continually in a predetermined direction relatively to said attachment, an actuating member on said attachment for operating said top feeding device upon oscillation of said actuating member, an attachment fastening bracket, means for securing said attachment fastening bracket to said attachment and to said sewing machine presser bar to secure said attachment to said sewing machine with the predetermined direction of feed of said work feeding device of the attachment occurring substantially perpendicular to that of the organized work feeding mechanism of the sewing machine, and means operatively connecting said sewing machine needle bar with said attachment actuating member for oscillating said attachment actuating member when the attachment is secured on said presser bar by said attachment fastening bracket.

2,944,498
CAN BODY MAKER INTERCHANGEABLE FOR LONG AND SHORT STROKES
Roland E. Emard, Los Gatos, Calif., assignor, by mesne assignments, to National Can Corporation, Chicago, Ill., a corporation of Delaware
Filed May 3, 1954, Ser. No. 427,244
19 Claims. (Cl. 113—11)

1. In a variable stroke can body-maker machine for manufacturing can bodies from flat blanks:

a main frame;

a plurality of work stations spaced longitudinally on said frame comprising a transfer station, a notcher station, an edger station and a forming station, the location of a plurality of said stations being changeable for a long stroke position and a short stroke position;

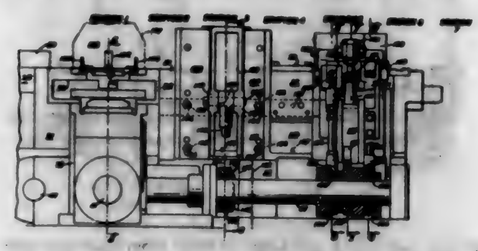
reciprocatory feed means for advancing blanks from station to station intermittently;

and feed drive means for said feed means;

said feed means and feed drive means being interchangeable for long stroke and short stroke;

said transfer station comprising a transfer sub-frame;

said transfer sub-frame being movable longitudinally



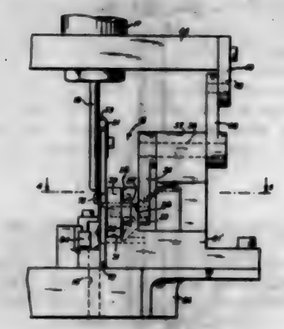
of said main frame from a long stroke to a short stroke position;

transmission means for driving said transfer station adjustable for different positions of said transfer sub-frame;

said notcher station comprising a notcher sub-frame on each side of the machine, a slide reciprocable on each said notcher subframe, a die on each said slide, a cooperating die block on each said notcher sub-frame, and notcher drive means for reciprocating said slides;

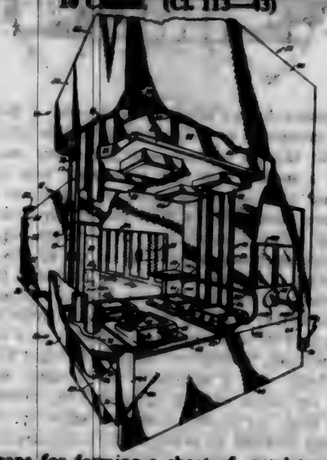
said notcher sub-frame being movable on said main frame from a long stroke to a short stroke position.

2,944,499
ARTICLE FEEDING FIXTURE
Henry W. Schaufelberger, Union, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 25, 1956, Ser. No. 612,820
6 Claims. (Cl. 113—38)



1. A fixture for feeding articles, having vertically extending projections, to a forming die and tool of a press wherein the tool is supported by and moved into and out of the die through successive operating cycles by a reciprocable ram, the fixture comprising a slide supported for movement relative to the die and a receiving position spaced from the die, means to guide articles successively to the receiving position, means operatively connecting the slide to the ram to cause reciprocation of the slide in timed relation with the ram, an element pivotally carried by the slide and recessed to receive articles successively, means to control movement of the element about its pivot during reciprocation of the slide to receive articles singly in the recess at the receiving position and transfer them into alignment with the tool and die, means carried by the slide to receive the projection of each article at the receiving position, and means to hold each article against tilting during movement of the article to the die.

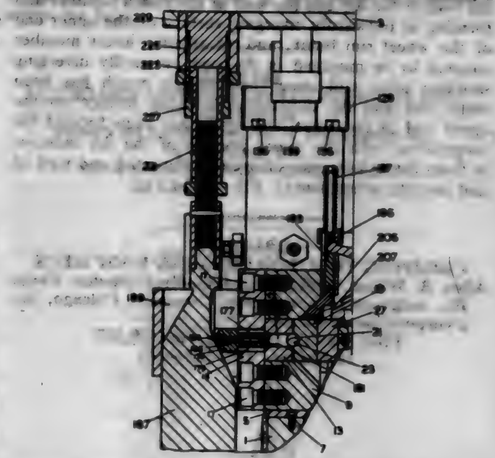
2,944,500
MACHINE FOR FORMING SHEET METAL
Burt F. Raynes, Chula Vista, Calif., assignor to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California
Filed Oct. 23, 1954, Ser. No. 464,017
10 Claims. (Cl. 113—43)



10. Means for forming a sheet of metal to a desired shape comprising, in combination: a hollow furnace having walls composed of heat insulating material; means including a body of gas heated within said furnace for heating a sheet of metal placed therein to a temperature high enough to increase substantially the ductility of the metal; a drop hammer having a die of the desired shape disposed near said furnace; a heat insulating casing enclosing said drop hammer; said furnace and casing having abutting walls and aligned openings therein for passing the sheet from within the furnace to the die; said casing having means including at least one aperture for opening the casing to the surrounding atmosphere and a transparent viewing window above said aperture; means for circulating said heated gas within the furnace and through said openings along a path to said die thereby to heat the die and said path thereto from the furnace; and means manually operable through said aperture and visible through said window and constructed to engage and transfer the heated sheet from the furnace to the die along said path whereby heated gas moves from the furnace through the openings into the casing and out of the aperture as the sheet of metal is moved to the die.

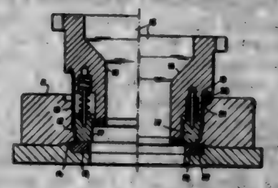
2,944,581
APPARATUS FOR MAKING BRANCHED PIPE FITTINGS
Charles Bernard Stanton, Birmingham, England, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain
Filed June 17, 1954, Ser. No. 437,387
Claims priority, application Great Britain Sept. 18, 1950
7 Claims. (Cl. 113—44)

1. Apparatus for forming branched pipe fittings from substantially tubular blanks comprising a base, a head movable with respect thereto, a plurality of complementary die members carried by said base, means for moving said die members apart and together, said die members together defining a main cavity and at least one branch cavity in communication therewith, plunger means movable in said main cavity for longitudinally compressing a blank disposed therein, means responsive to the movement of said head in one direction for moving said plunger means to longitudinally compress said blank, means responsive to the movement of said head in said one direction for applying a high hydraulic pressure through said plunger means to the interior of a blank, a



support member movable in said branch cavity for supporting the end portion of the branch formed therein, and means responsive to the movement of said head in said one direction for controlling the outward movement of said support member, said last mentioned means being operable in response to movement of said head in the opposite direction to eject a formed fitting from said die members when the latter are apart, and said last mentioned means comprising a member having an inclined surface, said inclined surface being operatively connected with said support member, and a lost motion connection between said member and said head.

2,944,582
APPARATUS FOR MANUFACTURING WHEEL RIMS FOR ROAD VEHICLES
Paul Lemmerz, Koenigswinter, Rhineland, Germany, assignor to Firma Lemmerz-Werke G.m.b.H., Koenigswinter, Rhineland, Germany
Filed Oct. 5, 1954, Ser. No. 460,483
Claims priority, application Germany Oct. 10, 1953
2 Claims. (Cl. 113—49)



2. Apparatus for making metallic wheel rims for vehicles having a rim bed defined by an integral tubular wall comprising an intermediate substantially cylindrical portion terminating at one end in a radially inwardly drawn portion forming a circumferentially extending groove and terminating at the other end in a radially outwardly extending portion which in turn terminates in an axially extending circumferential end wall, comprising a die

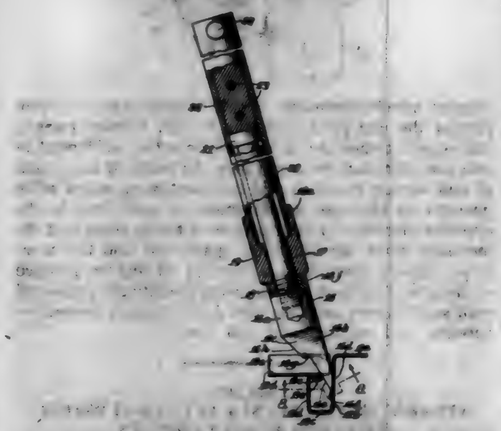
member having an annular inner wall conforming to the shape of the outer surface of the metallic wheel rim, a punch member movable into and out of the opening in said die member made up of two separable upper and lower parts connected together by spring means, the outer wall of said punch member conforming to the shape of the inner surface of the intermediate portion on the metallic wheel rim, an outwardly diverging shoulder on the upper part of the punch for engaging a wheel rim blank placed in the die member for pressing and shaping the wheel rim blank as it is forced into the space between the wall of the die and the wall of the punch member and forming an outwardly diverging surface on the upper end of the wheel rim blank, and an annular insert member adapted to be mounted in the said outwardly diverging shoulder after said upper part of the punch has been withdrawn and the outwardly diverging surface on the upper end of the wheel rim blank has been formed for cooperating with the upper portion of the die member to form the axially extending circumferential end wall of said metallic wheel rim.

2,944,583

CRIMPING TOOL FOR FORMING ROOF DECK

Allen B. Wilson, Chicago, and Godfrey Stanley, Crete, Ill., assignors to Acme Steel Company, Chicago, Ill., a corporation of Illinois

Filed May 12, 1954, Ser. No. 429,237
10 Claims. (Cl. 113—54)



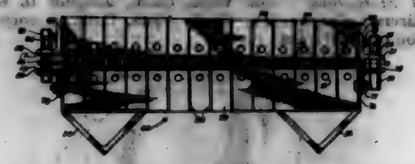
1. A tool to interconnect two contacting metal flanges extending toward a wall relatively immovable with respect thereto and disposed at an acute angle therewith, the flanges terminating at points spaced from the wall with the first flange extending toward the wall past the second flange, said tool comprising a head having a pair of spaced apart substantially parallel cutting edges thereon on one side thereof, an anvil surface on the other side of said head, said cutting edges and said anvil surface being disposed at an acute angle with respect to each other and being spaced apart a distance such that the smaller end of said head can be inserted between the first flange and the wall with said cutting edges against the first flange and said anvil surface against the wall, said cutting edges and said anvil surface diverging such that the distance therebetween is greater than the distance between the edge of the first flange and the wall so that movement of said anvil surface along the wall serves to force said cutting edges against the edge of the first flange to shear the edge of the first flange at spaced apart points therealong and in a direction substantially perpendicular thereto and substantially to the edge of the second flange to form a tongue, and tongue bending means on said head to contact and progressively to bend the tongue as said cutting edges form the tongue to direct it around the edge of the second flange to clamp the flanges together.

2,944,584

FIXTURE FOR MAKING HONEYCOMB PANEL

Hartley R. Herman, La Mesa, and Benjamin R. Aleobrook, Chula Vista, Calif., assignors to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California

Filed Nov. 26, 1954, Ser. No. 471,594
8 Claims. (Cl. 113—99)



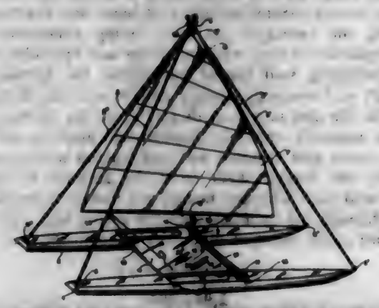
1. A lattice fixture adapted to support a honeycomb sandwich composed of a thin-walled flexible cellular core, a first thin skin in contact with the lower end of said core and a second thin skin in contact with the upper end of said core while the skins are brazed to the core, said fixture comprising a first set of separate parallel thin metal strips; a second set of separate parallel thin metal strips interlocked with the strips of the first set, the top edges of all said strips being machined to provide a supporting surface having the desired contour of the brazed sandwich, said top edges of said strips extending evenly spaced in both directions whereby said supporting surface provides a uniform support for said thin-walled cellular core; and a separable metal sheet in contact with the top edges of said strips and the lower face of said first skin, the material and thickness of said metal sheet being selected to prevent the concentration of upward pressure on said first skin to regions thereof directly opposite the top edges of said strips in response to the application of pressure on the top face of said second skin.

2,944,585

CATAMARAN SAIL BOAT

Jacques Marie Albert Charles Burgs, Chateau d'Arryt, Prechac (Hautes-Pyrenees), France

Filed Nov. 22, 1955, Ser. No. 548,583
13 Claims. (Cl. 114—39)



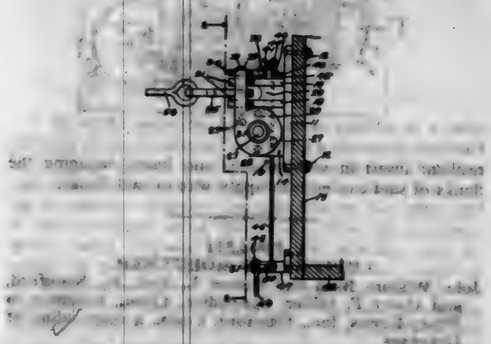
1. A catamaran sail boat comprising a number of separate hulls, connecting means between said hulls consisting of at least one group of inclined mast like elements secured to and extending over said hulls, connecting means between the lower end of each mast and the respective hull, further connecting means for connecting together the free opposite ends of at least some of said masts providing thereby a rigid connection between said hulls, deck means secured to said hulls and discharged by said masts of any torsion stresses and further at least one sail pertaining to a group of said mast like elements and secured to said mast like elements.

2,944,586

AUTOMATIC TOWLINE RELEASE

Stanley A. Barthowiak, 42710 Bemis Road, Belleville, Mich.

Filed Mar. 5, 1958, Ser. No. 719,326
9 Claims. (Cl. 114—230)



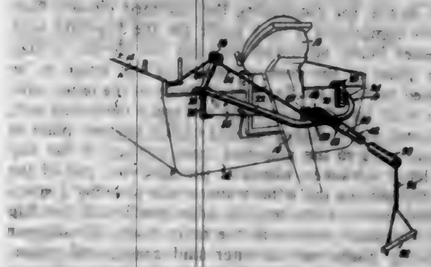
1. An automatic towline release comprising a base plate having a rearwardly projecting boss, a journal member extending through and supported by said boss, a disc journaled on said journal member, said disc and boss having normally abutting faces, spring means carried by the journal member and urging said disc face against the boss face, cam latch means interposed between said faces and coacting with said spring means for yieldably resisting rotational movement of the disc relative to the boss, an arm fixed to and extending from a part of said disc, a plate supported by said base plate above said boss and having a rearwardly opening notch through which a free end portion of said arm extends in an operative position of the arm, said arm being swingable rearwardly and downwardly to a released position in response to an excessive pull thereon in a direction away from the base plate for turning said disc against the resistance of said latch means.

2,944,587

WATER SKI TOWING ASSEMBLY

John Perry Beal, 1316 10th St., Great Bend, Kans.

Filed Mar. 24, 1958, Ser. No. 723,408
7 Claims. (Cl. 114—235)



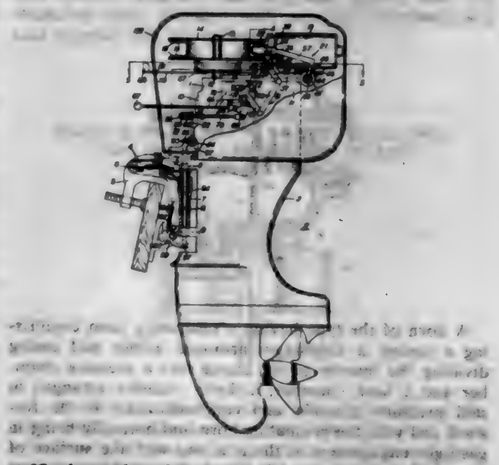
1. A water ski towing assembly for boats having a power operated propeller at the stern thereof, said assembly comprising a frame mounted on the stern transom of said boat; an elongated tubular element; means pivotally mounting one end of the element on the frame with the opposite end thereof normally extending rearwardly from the boat and terminating in horizontally spaced relationship to said stern transom of the boat and thereby the propeller; and an elongated tow line reciprocably threaded through said element and extending from said outer end of the same whereby the outer end of the line is maintained in safely spaced relationship to said propeller, said mounting means having a passage formed therethrough, the inner end of the line passing through said passage and being disposed within the boat whereby the effective length of line extending from said outer end of the tubular element may be selectively varied from within the boat.

2,944,588

OUTBOARD MOTOR AND STARTING MEANS THEREFOR

Elmer Carl Klekhoefer, 343 S. Washington St., Cedarburg, Wis.

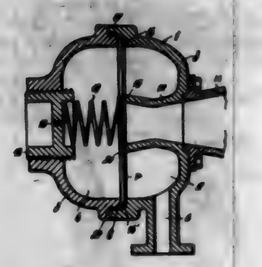
Filed Sept. 14, 1955, Ser. No. 534,275
28 Claims. (Cl. 115—18)



18. An outboard motor having a propeller and pivotally mounted on a support bracket whereby the motor is secured to the transom of a boat and is free to pivot rearwardly therefrom when the propeller is driving the boat forwardly and is adapted to be locked against rearward pivoting when the propeller is reversed, comprising a reversible internal combustion engine having a crankshaft drivingly connected to the propeller and operable in opposed directions and having a throttle and spark advance operable over a range of r.p.m., a movable actuator mounted on the engine and adapted to control the throttle and spark advance of the engine, a first member mounted on the crankshaft of the engine for rotation therewith and having a pair of opposed surfaces, a starter motor mounted on said outboard motor, switch means carried by the engine for starting the starter motor, second member mounted on said starter motor and adapted to selectively engage one of the opposed surfaces on the first member and drive same selectively in opposite directions in accordance with forward and reverse operation of the outboard motor, an ignition switch mounted on the engine, actuating means carried by the engine adjacent to the ignition switch and adapted to selectively actuate the ignition switch to a forward ignition on position and rearward ignition on position and thereafter move the second member into corresponding engagement with the first member and further actuating said starter motor switch means to energize said starter motor and crank the engine for starting the same selectively in either direction, interlock means carried by the engine

and disposed between the actuator and said actuating means and being operable by the actuator and engageable with said actuating means to lock the actuating means in either of the ignition on positions upon movement of the actuator to a position corresponding to engine speed above a predetermined r.p.m., and lock means carried by the outboard motor adjacent to the support bracket and operably connected to said actuating means whereby the motor is locked to the support bracket and against rearward pivoting thereon when the actuating means actuates the ignition switch to provide for rearward operation of the boat.

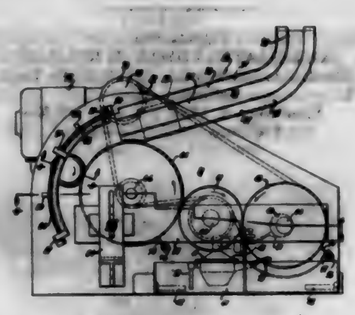
2,944,509
HORN DEVICE
Koichi Shimoku, 46, Masuzuka, Kaibe, Takarazuka, Japan
Filed Apr. 17, 1959, Ser. No. 807,145
Claims priority, application Japan Sept. 18, 1958
1 Claim. (Cl. 116—142)



A horn of the type having a resonating horn comprising a casing, a diaphragm arranged within said casing dividing the interior of the casing into a pressure chamber and a back chamber, a throat member arranged in said pressure chamber and communicating at the forward end with the resonating horn and normally being in gas-tight engagement at the rear end with the surface of the diaphragm, means for introducing working pressure into said pressure chamber, an annular recess formed on the inner wall of the casing and between the pressure and back chambers, said diaphragm being loosely inserted at its peripheral margin in said recess without being clamped, and a discal spring inserted at its peripheral margin in said recess, said spring having a circular ridge engaging the surface opposite to the surface for engagement with said throat member and pressing the diaphragm toward said throat member so as to normally effect gas tight engagement of said diaphragm with said throat member, said diaphragm being bodily reciprocated against and by the discal spring axially within said recess when the working pressure is introduced in said pressure chamber for operation.

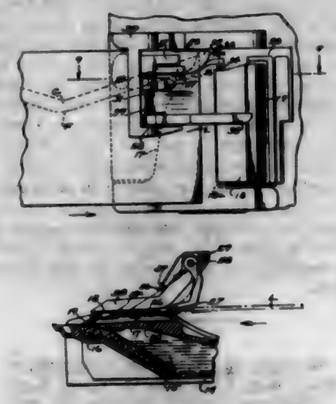
2,944,510
MACHINE FOR APPLYING WAX TO CAN ENDS
Earl E. Jeremiah, Pleasanton, Calif., assignor to National Can Corporation, Chicago, Ill., a corporation of Delaware
Filed Dec. 26, 1956, Ser. No. 630,783
6 Claims. (Cl. 118—233)

1. In a machine for applying wax to a predetermined position on the flank of a can end, an applicator wheel, means for rotating said applicator wheel, a reservoir for molten wax, means for transferring molten wax from said reservoir to said applicator wheel, means for guiding can ends into position with their flanks in contact with said applicator wheel, means for biasing said ends into engagement with said applicator wheel, said applicator wheel being formed with a peripheral groove, and a



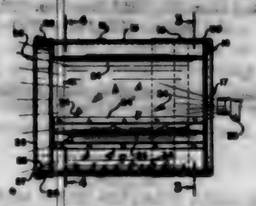
resilient insert in said groove, said insert engaging the flanks of said can ends to apply wax to said flanks.

2,944,511
LETTER FLAP MOISTENER
John William Bach and Robert L. Peel, Jr., Stamford, and Harry F. Miller, Springdale, Conn., assignors to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Apr. 21, 1958, Ser. No. 729,976
10 Claims. (Cl. 118—245)



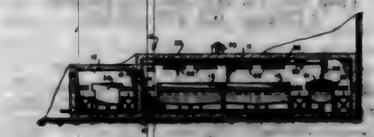
1. A device for moistening the gummed closure flaps of letters comprising a back guide for the flap-fold edge of a letter being advanced through the device; a flap stripper plate in the path of travel of the letter to be interposed between the flap and the body of the letter, said stripper plate having an entering end and a delivering end; a moistener at the delivering end of the stripper plate to apply moisture to the gummed inner surface of the flap as the letter advances; means at the receiving end of the device for bowing the letter transversely whereby a space is opened between the leading edge portion of the flap and the adjacent portion of the letter body, the stripper plate being positioned to enter said space; and means subsequently engaging the body of the letter adjacent the flap-fold edge for deflecting the flap-fold of the bowed portion of the letter to a position engaging the back guide so as to avoid the formation of a false flap-fold when the flap is moistened and pressed against the body of the letter.

2,944,512
METHOD AND APPARATUS FOR SPRAY PAINTING SMALL ARTICLES
Harold E. Wilson, Jr., Middle River, Md., assignor to The Martin Company, a corporation of Maryland
Filed July 17, 1956, Ser. No. 598,273
4 Claims. (Cl. 118—303)



3. Rotating apparatus for the spray coating of a large plurality of small articles comprising a container mounted for rotation about a substantially horizontal axis, one end of said container being substantially closed but having a centrally disposed aperture therein, the other end of said container being open and covered by a screen, spray means disposed adjacent said aperture and arranged to establish a flow path through said container by directing a spray of coating material through the interior of said container during the rotation thereof, the sprayed material being substantially unimpeded by said screen, with a portion of the spray not intercepted by articles in said container making its exit through said screen.

2,944,513
APPARATUS FOR FISH CULTURE
Donald O. Kealy, P.O. Box 357, Knox, Pa.
Filed June 20, 1957, Ser. No. 666,978
5 Claims. (Cl. 119—3)



1. Apparatus for hatching and rearing fish comprising a building structure a major portion of which is under ground, said building structure containing a supply tank having associated therewith a conduit adapted to be connected to a source of water, water tempering means including heating and cooling means operatively associated with said supply tank, an open top fish tank, conduit means interconnecting said supply tank and said fish tank, aerating and conditioning means operatively connected to a lower portion of said fish tank and a waste discharge conduit operatively connected to said fish tank.

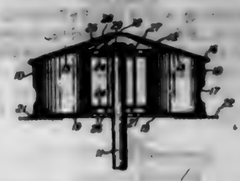
2,944,514
TEAT CUP INFLATION
Clifford A. Nesseth, Brimley, Mich.
Filed Dec. 8, 1958, Ser. No. 778,787
1 Claim. (Cl. 119—14.49)

In a milking cup construction, the combination of, a flexible milk tube having an upper end; a flexible inflation member having an inner surface on the upper end of said milk tube and having an open upper end for the reception of a teat projecting from an udder; a peripheral rib on said milk tube; a head on the open end of said inflation member; a rigid casing embracing said inflation member and engaging at one end against said inflation member and at the other end against said rib; a suction tube communicating with the interior of said casing; a circular extension surrounding said head and extending outwardly therefrom for engaging with an udder, said extension being of greater diameter than said casing and extending radially outwardly therefrom; a channel



formed in said head and surrounding the same and disposed outwardly from the inner surface of said inflation; said circular extension embracing said channel and said extension being provided with passages communicating said channel with the atmosphere.

2,944,515
COLONY BIRDHOUSE
Joseph H. Murn, 1627 N. Main St., Racine, Wis.
Filed Sept. 18, 1958, Ser. No. 761,883
4 Claims. (Cl. 119—23)

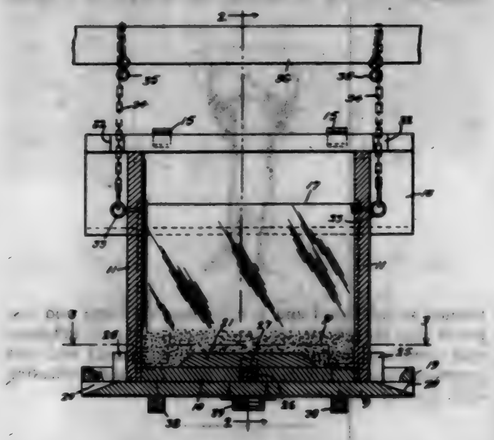


1. A colony birdhouse comprising a plurality of circular walls providing compartments and said walls being cylindrically shaped and disposed in a circle in a horizontal plane with the axes thereof vertically disposed and presenting a central space therebetween and each of said walls having an entrance opening faced to the outside of the circle, the top edges of said walls being pitched upwardly toward the axis of said circle, and a conically shaped roof attached to said walls and having a hole coaxial with and smaller than said space and with said roof being disposed with the apex thereof being coaxial with said axis of said circle and of a diameter to span all said walls to overhang the same, the pitch of said roof being greater than that of said walls to provide clearance between said top edges and said roof at the locations toward said axis for ventilating said compartments through said entrance openings and said clearance and said hole.

2,944,516
BIRD FEEDER
William M. Malloy, Sr., Stony Point, N.Y.
Filed June 9, 1958, Ser. No. 740,745
6 Claims. (Cl. 119—52)

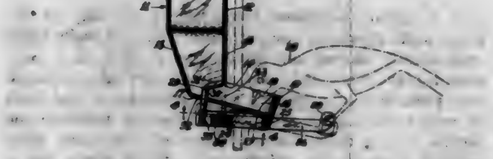
1. A wild bird feeder comprising a platform, a feed containing hopper fixed to and rising from said platform, said hopper including a bottom having an upper surface disposed substantially above the level of the platform and approximately parallel thereto, said platform having side edge portions and end portions extending outwardly from the hopper bottom, said hopper having at least one recess formed in and opening upwardly through the hopper bottom into the hopper and outwardly of the

hopper bottom onto a portion of said platform, and a valve member slidably supported on the platform and engaging said recess and slidably adjustable relative to the



hopper for regulating gravity flow of feed from the hopper onto a part of the platform disposed outwardly of the hopper bottom.

2,944,517
FEED HOPPER AND DISPENSING DEVICE
George Siggins, 8 Elmwood Drive, Livingston, N.J.
Filed Oct. 14, 1957, Ser. No. 689,818
6 Claims. (Cl. 119—55)



1. In a feed hopper and dispensing device, a container for the feed to be dispensed having a bottom wall and side walls, means on the container for supporting said container on a cage with one of said side walls approximately vertically disposed, said side wall having a food exit aperture at the bottom of the container, a trough inclined downwardly from said aperture and outwardly from said side wall, a bar pivotally mounted intermediate its ends on and beneath the trough, the portion of said bar beyond the outer end of said trough having a portion to be engaged by an animal and being movable in one direction by engagement of said portion by animal, a barrier-agitator extending vertically across and partially blocking said aperture, the upper portion of said agitator extending along said wall of the container above and adjacent said exit aperture, the bottom wall of said container having an opening therethrough and the lower portion of the agitator slidably projecting through said opening in the bottom wall of the container and being articulated with respect to the end portion of said bar remote from said end to be actuated, and spring means acting on said remote portion of the bar and disposed between it and the lower surface of said trough to normally bias said bar in the other direction after dis-engagement of the bar by an animal, whereby the barrier-agitator is reciprocated upon pivotal movement of said bar in one direction by an animal and in the opposite direction by said spring means.

2,944,518
LARIAT HOLDER AND GUIDE
Huron B. Hawks, Box 125, Hollis, Ark.
Filed Nov. 24, 1958, Ser. No. 775,950
4 Claims. (Cl. 119—153)



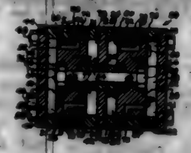
1. A lariat holder comprising an elongated handle, a vertically hinged section at an outer end of the handle, a lariat provided with a noose, a hinged section control means for angularly adjusting the hinged section relative to the handle, at least two longitudinally spaced spring clips supported by the hinged section and detachably engaging and supporting the noose in an open position, said control means including a manually operable shaft supported by and journaled in the other end of the handle, arms fixed to and extending laterally from said shaft, cables connected to the arms and to said hinged section, and guide means supported by the handle, between said hinged section and shaft, and in which said cables are slidably guided.

2,944,519
MULTIPLICATE WRITING INSTRUMENT
Stanley Ankud, 117 Noble St., Brooklyn 22, N.Y.
Filed Nov. 12, 1957, Ser. No. 695,582
2 Claims. (Cl. 120—42.13)



1. A multiplicate writing instrument comprising, in combination, a lower barrel portion having an outer end opening and an upper barrel portion having an outer end opening, said upper and lower barrel portions being rotatably secured together, means supporting a plurality of circumferentially spaced apart writing members for longitudinal movement within said lower barrel portion, ejector means within said upper barrel portion, means for manually operating said ejector means to releasably eject and retract a selected one of said writing members through said outer end opening of said lower barrel portion, said means for supporting said writing member within said barrel comprising a cylinder having a plurality of circumferentially spaced apart longitudinal bores, a coupling supported within said bore for reciprocating longitudinal movement, a writing member secured to each said coupling for movement between a completely enclosed position within said lower barrel portion and a partially extended position through said outer end opening of said lower barrel portion, each of said coupling connecting said associated writing member for limited universal movement for accommodating angular movement of said writing member relative to said lower barrel portion, each said coupling including a plunger extending in a direction away from said associated writing member toward said ejector means, said ejector means comprising a rod supported within said upper barrel portion for reciprocating longitudinal movement parallel to the longitudinal axis of said cylinder into engagement with a selected one of said plungers, said rotation of said upper barrel portion relative to said lower barrel portion being operative to align said rod with a predetermined one of said plungers to index said ejector means for the ejection of a selected one of said writing members, said means for normally operating said ejector means comprising a push button slidably supported within said outer one of said upper barrel portion, and linkage connecting said push button to said ejector rod.

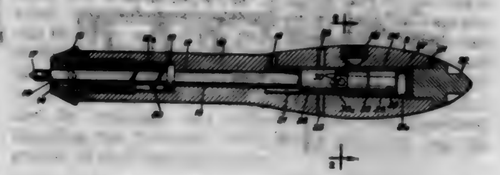
2,944,520
FLUID MOTOR WITH ROTARY AND/OR RECTILINEAR MOVABLE PISTON
Bernard August Swanson, 2710 Eastern Ave., Sacramento, Calif.
Filed Sept. 13, 1954, Ser. No. 455,512
26 Claims. (Cl. 121—17)



1. A fluid pressure operated engine comprising a composite cylinder member formed of a plurality of individually complete cylinder units, each of which units has an inlet fluid pressure means, exhaust means disposed on each side of said inlet pressure means, and end walls for said cylinder member; a dividing-separating wall between said units having a longitudinal axial opening therethrough; means connecting said cylinder units, dividing-separating wall and end walls in assembled position; and a composite piston member disposed in said composite cylinder member, said piston member being formed of individually complete piston units, each of which units is reciprocably disposed in one of said cylinder units which units are rigidly connected with each other in forming said composite piston member—each said piston unit having two pressure areas, one on each outermost end thereof, and each said piston unit having a plurality of inlet-exhaust ports periodically registrable with said inlet and exhaust means of said cylinder units during reciprocation and disposed in spaced relation between the ends of said piston unit and passageways within each said piston unit extending from each of said inlet-exhaust ports to that end of the piston most remote thereto.

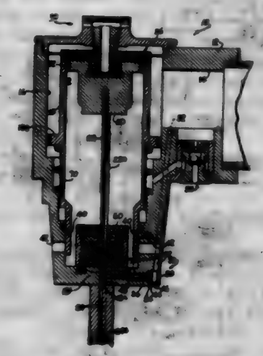
2,944,521
PNEUMATIC PEENING AND MARKING TOOL
Milo W. Kibbe, Jr., New Haven, Conn., assignor to Pheno Parts, Inc., New Haven, Conn., a corporation of Connecticut
Filed Nov. 28, 1956, Ser. No. 777,053
2 Claims. (Cl. 121—17)

1. In a pneumatic peening and marking tool, the combination of a tool body having an enlarged handle portion on one end thereof, said body having a bore in the other end thereof with an enlarged outer end, a driver bushing cap in the outer portion of said enlarged outer end, a driver having a collar thereon in said bore with said collar in said enlargement, said driver having a tool holding recess in the end thereof projecting from the body, a spring in said enlargement between said driver bushing cap and said collar, said spring urging said driver away from the end of said body from which said driver projects, the enlarged handle portion of said body having a cylinder bore therein joining the bore in said body, said handle portion having therein at least one threaded air inlet to said cylinder bore and two diametrically opposed air outlets from the portion of said cylinder bore adjacent to said air inlet, said air inlet and air outlets being spaced from each other along the length of said handle portion, and a further air outlet from the end of said cylinder bore away from said air inlet, a



differential piston in said cylinder bore having a larger diameter and a smaller diameter part, said piston having an axial bore therein opening out of the end of said piston at the larger diameter part, said smaller diameter part having a circumferential groove therein and four outlets opening into said groove from said axial piston bore and spaced at equal angles around said piston, and a closure cap closing the end of said piston bore, the length of the said driver from said collar to the end thereof adjacent said piston, plus the thickness of said collar and said spring when it is compressed is greater than the length of said body from the inner end of said driver bushing cap to said further air outlet, whereby said further air outlet always vents the inner end of said cylinder bore.

2,944,522
FASTENER DRIVING APPARATUS
Richard H. Doyle, Mount Prospect, Ill., assignor to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed Feb. 25, 1957, Ser. No. 642,143
19 Claims. (Cl. 121—30)



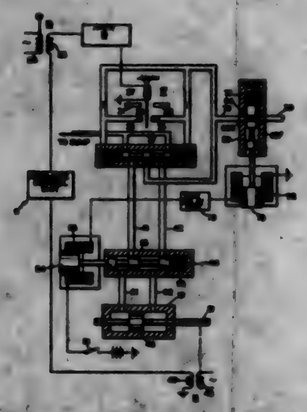
1. In a fastener driving device, structure defining a drive track lying within a single plane and adapted to receive fasteners to be driven, said structure also defining an opening offset relative to said plane, a fastener driving element slidable in said drive track and including a member slidable in said offset opening, valve means, and valve operator means projecting into said offset opening and adapted to be engaged by said member.

2,944,523
DUST PROTECTOR CAP FOR PERCUSSIVE HAMMERS
Frank A. Wurstein, Long Beach, Ind.
Original application Sept. 3, 1957, Ser. No. 681,689, now Patent No. 2,918,298, dated Dec. 22, 1959. Divided and this application Apr. 2, 1958, Ser. No. 726,539
2 Claims. (Cl. 121—33)



1. In a device of the character described and including a percussive hammer having a tool-holding sleeve protruding from the hammer, a tool operatively engaged on the interior of the sleeve and readily removable therefrom, a cylindrical member of resilient material having an open end thereof removably disposed on the exterior surface of the sleeve in substantially dust-tight engagement therewith, a readily separable lip and groove connection between the cylindrical member and the tool to enable the cylindrical member to reciprocate with the tool and simultaneously along the exterior surface of the tool-holding sleeve during operation and be carried by the tool when the tool is removed from the tool-holding sleeve the cylindrical member sliding off said sleeve in the latter instance.

2,944,524
ENGAGING MEANS FOR HYDRAULIC SERVO SYSTEM
Jack Maxwell Brandstadter, Bronx, N.Y., and Charles Warner McWilliams, Arlington, N.J., assignors to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed Aug. 18, 1954, Ser. No. 449,879
6 Claims. (Cl. 121—38)



1. In a hydraulic servo system for operating a control surface of a craft, means for conducting a pressure fluid, a fluid motor, means connecting said conducting means and said motor, and comprising a first solenoid operated valve means for initially limiting the flow of pressure fluid to said motor upon actuating the system, a second solenoid operated valve means for stopping fluid flow to said motor upon deactuating the system, and flow control means for controlling the flow of fluid to said motor, and manually operated switch means actuating the system and for energizing and deenergizing said first and second solenoid operated valves, and time delay means interposed between said manually operated switch means and said first solenoid operated valve to make available full fluid to said motor a predetermined time after actuation of said system.

2,944,525
FIXTURE-MOUNTED SPOT WELDING GUN
Ralph D. Fuggs, Detroit, Mich.; Sophie A. Fuggs, administratrix of said Ralph D. Fuggs, deceased
Filed Jan. 25, 1957, Ser. No. 636,350
1 Claim. (Cl. 121—38)

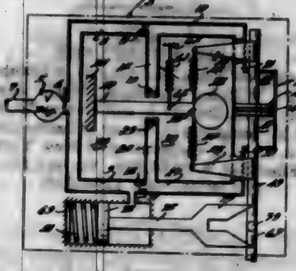


A reciprocatory fluid motor comprising a cylinder having first and second fluid service ports and a generally cylindrical outer cylinder bore communicating with one of said ports, a hollow generally cylindrical outer piston reciprocably mounted in said outer bore, said outer piston having an apertured piston head disposed near the rearward end of said cylinder and a tubular piston rod extending forwardly from said head and having an inner bore therein, a stationary hollow stem mounted in the rearward end of said cylinder and projecting through the aperture in the outer piston head into said inner bore and terminating near the mid-portion of said outer cylinder, a stationary abutment head mounted on the inner end of said stem in engagement with said inner bore, said stem having first and second fluid passageway means extending therethrough to the forward and rearward sides respectively of said abutment head and communicating respectively with said first and second service ports, an inner piston having an inner piston head reciprocably mounted in said inner bore forwardly of said abutment head, a coupling device drivingly interconnecting said pistons, a power output member connected to one of said pistons, a resilient concave follow-up thrust washer disposed between said output member and said last-mentioned piston, and a lost-motion device comprising a pin-and-slot connection disposed between said outlet member and the other piston, said cylinder bore having a plurality of elongated longitudinally-extending substantially flat slide bearing surfaces and said outer hollow piston rod having a plurality of elongated longitudinally-extending substantially flat slide bearing surfaces cooperably engaging said substantially flat slide bearing surfaces of said cylinder bore whereby to prevent relative rotation therebetween, said first fluid passageway means including a plurality of fluid passageways spaced transversely apart from one another and from said second fluid passageway means and extending through said stem to the forward side of said abutment head.

2,944,526
HYDRAULIC ACCELEROMETER
John Jarvis, Mount Clemens, Mich., assignor to Cadillac Gage Company, Detroit, Mich., a partnership of Michigan
Filed Nov. 21, 1956, Ser. No. 623,647
3 Claims. (Cl. 121—41)

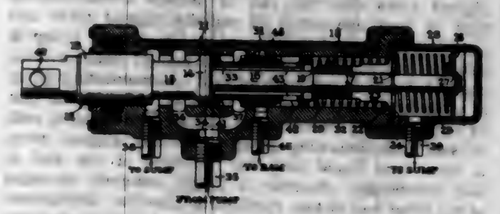
1. A closed loop hydraulic system for providing a mechanical output proportional to the acceleration of

an aircraft comprising a body defining a cylinder, means defining a pair of independent fluid paths each including a nozzle having an orifice, said orifices being disposed in closely spaced opposed confronting relationship, means communicating each of the opposite ends of said cylinder with one of said paths on the entrance side of the orifice therein, means to direct flow of hydraulic fluid from a pressure source through said paths including said orifices in a steady state condition of flow, a piston movable in said cylinder having a piston rod extending beyond opposite ends of said cylinder, a flexible rod having one end secured to a stationary structure of said aircraft, said rod extending between said orifices and being movable



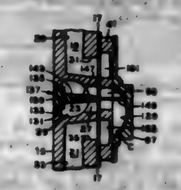
between said orifices on the exit side of each thereof, a weight suspended on the other end of said flexible rod, said flexible rod being arranged to vary the flow oppositely through said orifices from said steady state condition upon acceleration of said aircraft to unbalance the fluid pressures on the entrance side of each of said orifices and on opposite sides of said cylinder, and a pair of feedback springs each having one end movable with said flexible rod and the other end movable with said piston rod on one of the opposite sides of said piston, said feedback springs tending to restore said steady state condition whereby the displacement of said piston is proportional to said acceleration.

2,944,527
FLOW RATE COMPENSATED VALVE
Henry A. Vander Kooy, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Aug. 11, 1958, Ser. No. 754,239
2 Claims. (Cl. 121—46.5)



2. In a three position control valve for a single-acting ram of the type including a valve housing having a valve bore therein, a valve plunger reciprocable in said bore, said bore having a supply port, a first sump port, a ram port and a second sump port communicating therewith, said plunger having a neutral position in which said supply and said first sump ports are interconnected and said ram port is closed, an exhaust position in which said supply and said first sump ports are interconnected and said ram and said second sump ports are interconnected, and a ram-actuating position in which said supply and said ram ports are interconnected, the improvement which comprises a reduced diameter portion formed on said valve plunger; a valve seat at one end of said portion; a stop at the other end of said portion; a tubular sleeve valve encircling, but radially spaced from, said portion, said sleeve valve being reciprocable between said stop and said valve seat; spring means biasing said sleeve valve toward said stop, said sleeve valve having, on its outer surface, end lands and a center land axially spaced from one another by grooves, the groove adjacent the end land nearer the stop affording the interconnection provided in the ram-actuating position, the other groove having a radial port extending through the sleeve therefrom, that groove, the radial port, the bore of the sleeve valve, the clearance between the end of the sleeve valve and the valve seat affording the interconnection provided in the exhaust position of said control valve, the pressure drop through said clearance urging said sleeve valve toward said seat, and thereby throttling said interconnection by reducing said clearance and simultaneously throttling the flow-path between the ram port and the groove in said interconnection.

2,944,528
AIR DISTRIBUTING VALVES
Donald G. Phinney, St. Louis, Mo., assignor to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio
Filed July 24, 1959, Ser. No. 829,363
10 Claims. (Cl. 121—46.5)



1. In an air distributing valve comprising a valve seat having an exhaust port between first and second feed ports, and a valve member having a cavity therein slidable back and forth between a first position wherein the cavity provides for communication from the first feed port to the exhaust port and a second position wherein the cavity provides for communication from the second feed port to the exhaust port, expansion of air in said cavity tending to cause cooling of the air and freezing of moisture in the air in the cavity; means for preventing accumulation of ice in the cavity comprising a reed carried by said seat within said exhaust port and projecting out of said exhaust port into said cavity, said reed being oscillable in said exhaust port in the line of movement of the slidable valve member.

2,944,529
ROTARY SLIDE VALVES FOR HYDRAULIC PISTON MACHINES
Georg Wiggermann, Kreuzbroma, Germany, assignor of one-half to Walter Reinert, M. Gladbach, Germany
Filed Aug. 6, 1957, Ser. No. 676,585
Claims priority, application Germany Aug. 11, 1956
8 Claims. (Cl. 121—62)

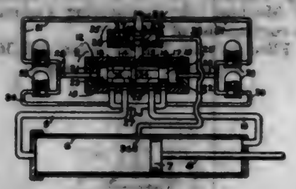
5. A rotary slide-valve device for the control of hydraulic machines, comprising two valve members rotatable one relative to the other and having respective control surfaces in face-to-face sliding engagement with each other, each of said valve members having mutually spaced control openings in said surface sequentially communicating with the control openings of the other member, and each of said two members having recesses in its control surface, said recesses of each member extending transverse to the direction of rotation and being located inter-

mediate each two successive control openings of said member in the traveling range of the control openings of



the other member and in spaced relation to said two successive control openings.

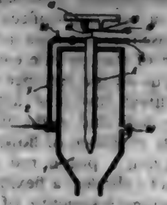
2,944,530
PNEUMATIC CONTROL MEANS FOR RECIPROCABLE PISTONS
Arne R. Severinsen, Seattle, Wash., assignor of one-half to Alfred C. Johnson, Seattle, Wash.
Filed Apr. 29, 1959, Ser. No. 809,824
7 Claims. (Cl. 121—158)



2. In pneumatic control means, a cylinder; a piston reciprocable in said cylinder; a reversing valve; an air pressure supply conduit communicatively connecting said reversing valve with a source of supply of compressed air; two main air conduits communicatively connecting the respective end portions of said cylinder with said reversing valve; a shut-off valve in said air pressure supply conduit capable of shutting off the supply of air to said reversing valve; a spring normally holding said shut-off valve open, said shut-off valve being capable of being closed by admission of air pressure thereto; and a control conduit connecting said shut-off valve with said cylinder at a predetermined location between the two ends of said cylinder, whereby air under pressure which is moving the piston will be admitted to said shut-off valve to close said shut-off valve and interrupt the supply of air to said cylinder when said piston is moved past the point of connection of said control conduit with said cylinder.

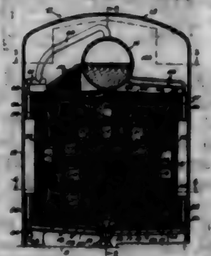
2,944,531
FIRE-BOXES OPERATING ON ATOMIZED FUEL
Francis Joseph Mary, Paris, France, assignor to Electricite de France, Paris, France, a national French organization
Filed Sept. 1, 1954, Ser. No. 453,583
Claims priority, application France Sept. 9, 1953
1 Claim. (Cl. 122—4)

In a fire-box for use with pulverized fuel including a combustion chamber having inlet and outlet openings in the top and bottom thereof respectively, and at least one burner horizontally directed into said chamber, a combustion aid comprising a closed hollow member, a weighing machine connected to said member for lowering said member through said chamber inlet opening while supporting the same in a vertical position and presenting a portion thereof to the flames from said burner and indicating the increase in weight due to the addition of ash thereto as a signal to the operator of conditions in said fire-box, refractory cover means enveloping said hollow member for the portion thereof exposed to said burner flames and means for internally cooling said hol-



low member by circulating a cooling medium therethrough.

2,944,532
VAPOR GENERATOR
Martin Frisch, New York, and John W. Curtinhour, Baldwin, N. Y., William Thibergien, North Bergen, N.J., and Tobias Stern, Brooklyn, and George W. Tidd, Manhasset, N.Y., assignors to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Oct. 8, 1954, Ser. No. 461,194
17 Claims. (Cl. 122—235)

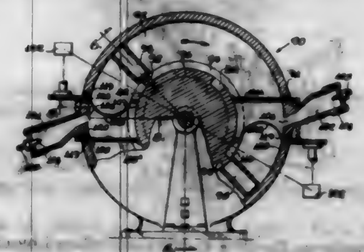


3. A vapor generator comprising a setting, a plurality of fluid conducting tubes arranged to substantially define a cylindrical combustion chamber having a gas outlet, means for firing said combustion chamber whereby combustion gases are formed therein, means forming an arcuate gas passage concentric with said combustion chamber and in communication with said gas outlet, a plurality of second fluid conducting tubes arranged in said gas passage in groups of radially aligned tubes, said groups being each disposed in separate radial planes spaced circumferentially in said gas passage, pairs of aligned headers associated with the groups of the radially aligned tubes with one pair of headers communicating with at least one group of radially aligned tubes and arranged in the radial plane of said associated group in said gas passage, one of said one pair of headers being connected to adjacent ends of said communicating group of radially aligned tubes and the other of said one pair of headers being connected to the opposite adjacent ends of said communicating group of radially aligned tubes, a vapor and liquid container arranged at one end of said combustion chamber, a liquid container arranged at the other end of said combustion chamber, downcomer means communicating the vapor and liquid container with the liquid container, said vapor and liquid container and said liquid container beag a communcaton with said pairs of aligned headers and said first and second fluid conducting tubes.

2,944,533
INTERNAL COMBUSTION ENGINE
Robert Edward Park, 603 High St., Trenton, Tenn.
Filed Sept. 22, 1954, Ser. No. 457,720
4 Claims. (Cl. 123—13)

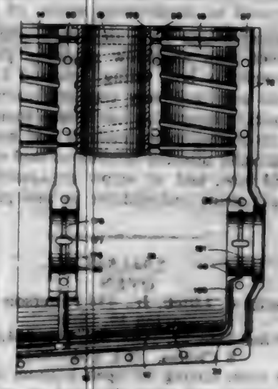
3. In an internal combustion engine, the combination comprising a housing having an annular piston cham-

ber defined therein with an annular slot communicating between said chamber and the exterior of said housing, an output shaft disposed in concentric relation with the annular chamber, at least one piston connected to said output shaft and disposed for orbital movement in said annular chamber, said piston being adapted to effect both compression and power development, at least one combustion chamber on the housing communicating with said annular chamber via a mouth, the number of combustion chambers being equal to the number of pistons, and a pair of gate valves disposed on opposite sides of the



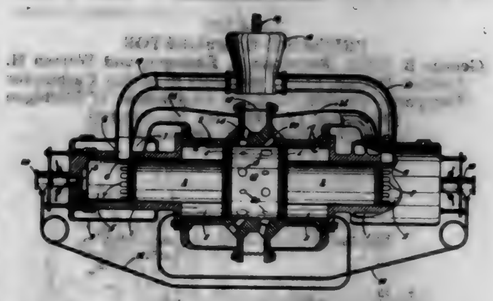
mouth of said combustion chamber and transversely of said annular chamber for intermittently blocking off the latter, said gate valves also being constructed and arranged to clear said annular chamber and permit said piston to move past said valves, and a sliding piston seal fixed relative to said shaft in leading and trailing relation to said piston, means in the leading and trailing seal of said piston defining a port opening through said slot into said annular chamber so that said seals close said annular slot over a progressively changing portion of its circumferential length.

2,944,534
INTERNAL COMBUSTION ENGINES
David Hodkin, Lidlington, England, assignor to Engineering Research and Application Limited, Dunstable, England
Filed Apr. 2, 1959, Ser. No. 803,715
Claims priority, application Great Britain Apr. 8, 1958
4 Claims. (Cl. 123—41.31)



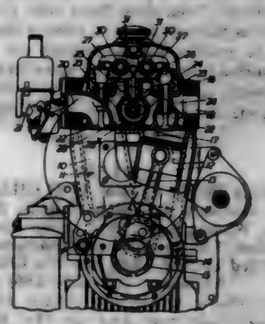
1. A housing providing the cylinders and crankcase of an internal combustion engine, said engine having a flywheel, gearbox, pistons and cylinder head, said housing having crankshaft bearings openings, said housing comprising a plurality of cast parts that have faces engaging each other in a plane passing through the axes of the cylinders and crankshaft and oil grooves are formed in one or more of the engaging faces of the cast parts which grooves form channels, said channels including a main channel which extends along the crankcase and subsidiary channels in communication with the main channel and feeding the crankshaft bearings openings.

2,944,535
FREE PISTON ENGINE
Tyrens H. Fliss, Seattle, Wash., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Jan. 23, 1958, Ser. No. 710,663
10 Claims. (Cl. 123—46)



1. A free piston engine comprising an engine block defining a cylinder therein, a pair of opposed free pistons disposed within said cylinder to establish a bounce chamber therebetween and a pair of combustion chambers at opposite ends of said cylinder and means supplying a combustible fuel mixture to said combustion chambers.

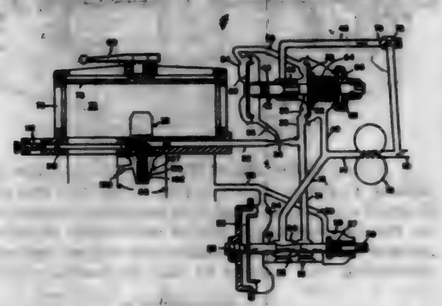
2,944,536
OVERHEAD VALVE INTERNAL COMBUSTION ENGINES
Eric R. Payne, Northfield, Birmingham, England, assignor to The Austin Motor Company Limited, Birmingham, England
Filed May 5, 1959, Ser. No. 811,115
Claims priority, application Great Britain May 30, 1958
1 Claim. (Cl. 123—59)



For use with a V-type multi-cylinder overhead valve engine having a cylinder block provided with cylinder bores, a cylinder head having a wholly flat lower or joint face adapted to be secured to the upper part of said block, said flat surface having exhaust and inlet ports therein, said head being cored to provide separate exhaust ducts and separate inlet ducts on either side of a center plane through said head, said exhaust and inlet ducts extending from the respective exhaust and inlet ports to the respectively adjacent side faces of the cylinder head, valves positioned on either side of said center plane and carried by

said head for controlling said suction and exhaust ducts, a cam shaft operative entirely within the lower portion of said head with the axis thereof disposed in said center plane, a pair of separate rocker shafts on said head respectively disposed laterally on opposite sides of said center plane, rockers for operating said valves carried by said rocker shafts, tappets for actuating said rockers, vertically arranged guide bores formed in the cylinder head with their axes arranged in said center plane for respectively receiving said tappets, and short push rods carried by the respective tappets and disposed in said center plane for operating said push rods.

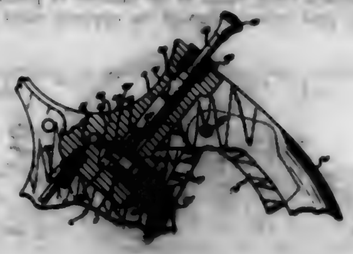
2,944,537
PRESSURE CARBURETOR
George B. Stroh, Raymond L. Essinger, and Warren H. Cowles, Detroit, Mich., assignors to Holley Carburetor Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 15, 1955, Ser. No. 528,195
27 Claims. (Cl. 123—119)



1. A pressure carburetor for an internal combustion engine having a manifold comprising a mixing chamber, a nozzle in said chamber, a positive displacement fuel pump operable in accordance with engine speed, passage means connecting said pump and nozzle, a by-pass passage connected to said passage means and dividing it into a pump outlet passage and an engine supply passage, a by-pass valve in said by-pass passage, first means responsive to discharge from flow from said pump connected to said by-pass valve to apply a closing bias thereto, second means responsive to flow through said engine supply passage connected to said by-pass valve to apply an opening bias thereto, and means for varying the effectiveness of said first means in accordance with manifold vacuum.

2,944,538
LUBRICATION SYSTEM FOR CHAIN SAWS
Edward F. Conway, Arlington Heights, Ill., and Ruben W. Pots, Winona Lake, Ind., assignors to Magnaflux Corporation, Chicago, Ill., a corporation of Delaware
Filed Oct. 18, 1956, Ser. No. 616,711
2 Claims. (Cl. 123—196)

1. An automatic lubrication system adapted for use with a power chain saw, and the like, utilizing a two-cycle internal combustion engine having a piston and cylinder assembly, a crankcase and an associated engine control means, said system comprising an associated housing having a lubricant chamber formed therein, a lubricant reservoir communicating with said lubricant chamber, said lubricant reservoir being subjected to crankcase bleed pressure generated by said internal combustion engine to provide a pressurized flow of lubricant into said lubricant chamber, a conduit between said lubrication chamber and a point of utilization on said saw directing a flow of pressurized lubricant therebetween, said housing also having a metering orifice formed therein between said lubrication chamber and said point of utilization, a valve in said housing selectively controlling the flow of lubricant to said point of utilization operatively connected to and responsive to predetermined positional changes of said engine control means, and a manually operated pump in said housing communicating with said lubrication chamber to pressurize said lubricant chamber and provide an additional pressurized flow of lubricant from said lubricant chamber to said point of utilization



to supplement the flow of lubricant induced by crankcase bleed pressure in said reservoir, said valve having a piston connected therewith and subjected to pressure in said chamber and being unseated in response to the actuation of said manually operated pump, whereby the increased flow of lubricant attained by operation of said manually operated pump will clear said lubricant conduit of foreign matter and work particles to maintain a free flow of lubricant to the point of utilization.

2,944,539
ARCHERY BOWS
Colin Wheeler, 14 Hope Road, Applecross, West Australia
Filed Feb. 26, 1957, Ser. No. 642,553
5 Claims. (Cl. 124—22)

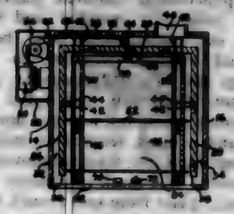


1. The combination of a rigid bow provided at the center thereof with an arrow receiving passage, a resiliently stretchable bow string, recessed keeper means slidable onto and resiliently engaging each end of the bow and quickly removably anchoring each end of said bow string to corresponding ends of said bow in parallel similarly centrally directed relation to said corresponding ends of said bow, and an arrow engageable at its rear end with said string and slidable in said passage of the bow.

2,944,540
OVEN
Charles C. Littell, Jr., 434 Patterson Road, Dayton 19, Ohio
Filed Dec. 22, 1955, Ser. No. 554,818
5 Claims. (Cl. 126—273)

1. In an oven having an open bottom, a plurality of partitions within said oven disposed so as to define an inner chamber with top and sides closed and with an open bottom, said partitions being separated from the walls of the oven so as to provide air spaces adjacent the inner chamber, a door movably attached to said oven for closing the bottom thereof, said door having a down position and an up position, the bottom of the oven being closed when the door is in the up position, there being an air gap between the inner chamber and the door

whereby air may flow from the inner chamber into the adjacent air spaces, the top of said oven having a duct

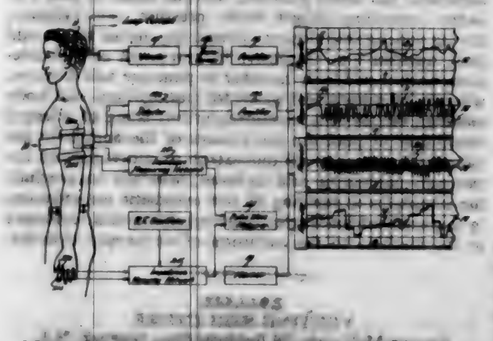


therein whereby air in the air spaces adjacent the inner chamber may flow out of the oven.

2,944,541
PROCESS FOR STIMULATING CONCEPTION IN ANIMALS
Eduardo M. Sacchi and Herbert G. Luther, Terre Haute, Ind., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed July 1, 1957, Ser. No. 668,856
8 Claims. (Cl. 128—1)

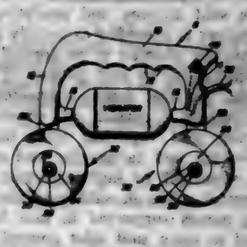
1. A process for inseminating an animal which comprises introducing into the uterus of an ovum-bearing animal (1) a substantially neutral, substantially isotonic, spermocompatible antibiotic-containing solution having a volume from about 2 ml. to about 15 ml., said volume being adjusted on the basis of the approximate weight of the uterus and being just sufficient to wet the endometrium of said uterus; and (2) motile sperm, so that (1) and (2) are present in the uterus at the same time and are brought into contact with each other approximately at the time of introduction into the uterus; said antibiotic-containing solution having from about 2 mg. to about 20 mg. of antibiotic per ml. of solution.

2,944,542
DETECTING AND RECORDING PHYSIOLOGICAL CHANGES ACCOMPANYING EMOTION STRESSES
Claude C. Burnett and Homer J. Dunn, Pullman, Wash., assignors, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Filed Oct. 3, 1955, Ser. No. 538,154
1 Claim. (Cl. 128—2.05)



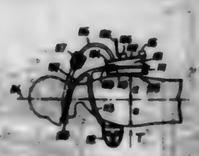
Means for measuring and recording together the variations in blood pressure of a living being and the variations in velocity of pulse waves travelling through a body segment of the living being comprising a plethysmograph applied to the body segment near the heart of the being, a second plethysmograph applied to said body segment at a point more remote from the heart, an electronic switch, means connecting the first plethysmograph to said electronic switch operable to close said switch upon detecting a pulse wave, means connecting the second plethysmograph to said switch operable to open said switch upon detecting said pulse wave after it has travelled between said first plethysmograph and said second plethysmograph, a recorder operably connected to one of said plethysmographs to record the changes in blood pressure indicated thereby, a second recorder operating in timed relation to the first recorder and circuit means connecting the second recorder to said electronic switch operable to actuate said second recorder to record variations in length of time the switch is closed during successive manipulations of the switch.

2,944,543
VIBRATOR AND MASSAGER FOR USE OVER SPINE
Harold J. Newcombe, 212 Walden Bldg., Little Rock, Ark.
Filed Apr. 2, 1958, Ser. No. 725,961
5 Claims. (Cl. 128—32)



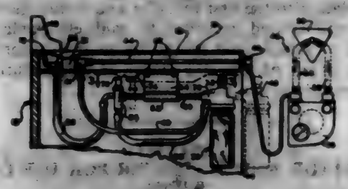
5. A manually usable massaging appliance comprising a generally U-shaped frame the bight portion of which is fashioned to provide a hand-grip, a pair of eccentrically mounted freely rotating wheels carried by lower portions of said frame, said handle being centered over the peripheral portions of said wheels, and a vibrator mounted on said frame above the peripheral surfaces of the wheels.

2,944,544
RESPIRATORS, PARTICULARLY FOR SUBMARINE USE
Claes Erik Gunnar Lundgren and Måns Månsson Arbenius, both of Hammargatan 1A, Stockholm, Sweden
Filed Dec. 26, 1956, Ser. No. 630,633
Claims priority, application Sweden Dec. 30, 1955
7 Claims. (Cl. 128—142)



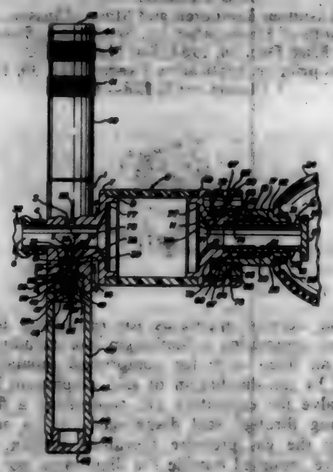
2. A gas control apparatus for respirators for submarine use, comprising a diaphragm box including a gas chamber, an inlet valve for compressed inhalation gas controlled by the diaphragm of said diaphragm box, an exhaust valve for expiratory gas comprising a flattened hose passing through said diaphragm box so as to be exposed to the gas pressure prevailing therein, a non-return valve mounted outside the diaphragm box on the outlet end of said hose, an inhalation tube communicating with said gas chamber and an expiration tube connected to the inlet end of said hose.

2,944,545
VAPORIZER MOUNTING WITH AUTOMATIC SHUTOFF
Harold A. Dietrich and Wayne W. Hay, Madison, Wis., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 16, 1958, Ser. No. 735,785
7 Claims. (Cl. 128—191)



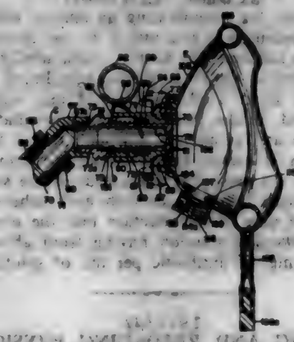
1. Inhalant anesthetic administering apparatus comprising a housing forming a cabinet having an anesthetic vaporizer adjustably supported therein for movement between an inoperative position in which said vaporizer is retracted within said housing and operative position in which said vaporizer is extended externally of said housing, respirator means adapted to be applied to a patient to permit the inhalation by said patient of inhalant anesthetic mixtures, gas inlet means connected to said vaporizer for delivering a carrier gas thereto, discharge means connecting said vaporizer with said respirator means for delivering said carrier gas and anesthetic vapor from said vaporizer to said respirator, a normally closed inlet control valve in said gas inlet means and valve actuating means supported in said housing operatively arranged to open said inlet control valve in response to movement of said vaporizer to said operative position.

2,944,546
PORTABLE RESPIRATORS FOR ANESTHESIA AND OTHER PURPOSES
Frank A. Ziberi, Cleveland, Arthur S. Kish, Mayfield Heights, and Robert A. Hingson, Cleveland Heights, Ohio, assignors to Z and W Manufacturing Corporation, Wickliffe, Ohio, a corporation of Ohio
Filed Aug. 24, 1954, Ser. No. 451,986
24 Claims. (Cl. 128—203)



8. In a device of the character described, a hollow body member having an outlet branch, hollow handles secured to said body member, cartridges containing gases under pressure disposed within said handles, said cartridges having puncturable closures, puncturing means disposed within said body member and responsive to attachment of said handles to said body member to puncture said closures whereby to release said gases for passage into said body member, a tubular element in communication with said outlet branch, said element having outlet openings, a sleeve normally closing said openings, and a mask secured to said sleeve, said sleeve being responsive to relative movement of said body member toward said mask to uncover said openings to thereby feed said gases from said branch into the mask.

2,944,547
PORTABLE ANESTHESIA MACHINE, OXYGEN INHALATOR AND RESUSCITATOR
Frank A. Ziberi, Cleveland, Arthur S. Kish, Lyndhurst, and Robert A. Hingson, Cleveland Heights, Ohio, assignors to Z and W Machine Products, Inc., Wickliffe, Ohio, a corporation of Ohio
Filed Dec. 9, 1955, Ser. No. 552,670
15 Claims. (Cl. 128—203)



3. In a machine of the character described, a hollow body member having an outlet branch, a pair of hollow side-arms secured to said body member and movable in relation to said body member, cylinders disposed within said side-arms, one of said cylinders containing an anesthetic gas under pressure, and the other of said cylinders containing oxygen under pressure, said cylinders having puncturable closures, puncturing means within said body member and responsive to movement of said side-arms toward said body member to puncture said closures, whereby to release said gases for passage into said body member, one of said puncturing means being of a length insufficient to puncture the closure of the anesthetic gas cylinder irrespective of the extent of movement of the side-arm containing said cylinder, whereby to preclude the simultaneous opening of two anesthetic gas cylinders in the event of inadvertent placing of two such cylinders in the machine to the exclusion of an oxygen cylinder.

2,944,548
VENTING STRUCTURE
Eugene M. Kutsko, 50 Baldwin Ave., Newark, N.J.
Filed Mar. 18, 1957, Ser. No. 646,906
3 Claims. (Cl. 128—214)

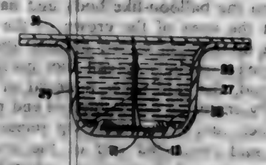
1. A venting structure including in combination a single cannula having a pointed closure-piercing end, a hollow body secured to said cannula and surrounding its opposite end, a side wall forming a part of said body and having an opening, another opening of said body being

defined by a tubular end thereof, filtering material within such body adjacent said openings and said opposite needle



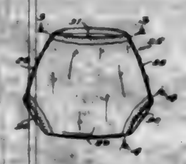
end being disposed at a position intermediate such openings.

2,944,549
INJECTION INSTRUMENT
Robert H. Alexander, Warren, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 25, 1955, Ser. No. 542,698
6 Claims. (Cl. 128—216)



1. A method of forming an injection instrument comprising the steps of fabricating a strip of material to provide a base portion and an elongated portion having three sections, folding the first section back upon said base, bending the second section to form a brace, and turning the third section to form a hollow needle.

2,944,550
THERMOPLASTIC GARMENTS
Sidney H. Magid, Morrisville, Pa.
(110 Elm Drive, Roslyn (E. Hills), N.Y.)
Filed July 13, 1954, Ser. No. 443,105
5 Claims. (Cl. 128—287)



1. In a blank of thermoplastic sheet material, to the opposite side edges of which are heat sealed along their respective lines of contact, strips of thermoplastic material which are to be separably joined; a separate elastic edging extending along each of the edges transverse to said strips, at least the ends of said elastic edging being entirely of thermoplastic material and welded in registry with said lines of contact.

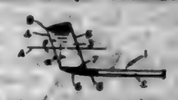
2,944,551
BODY APPLIANCE
Carl Breer, 15600 Windmill Point Drive, Grosse Pointe, Mich.
Filed Sept. 8, 1958, Ser. No. 759,637
3 Claims. (Cl. 128—295)

3. A urination control device for use by a human being comprising a fluid collector bag to be worn by a patient in the form of a liquid-proof, pants-like, garment having a trough-like crotch portion that is surrounded by internally disposed sealing rib means extending continuously around said crotch portion, a fluid drain conduit connected to said crotch portion, a motor driven suction pump connected to said conduit to provide a sub-atmospheric pressure within the collector bag to cause the con-



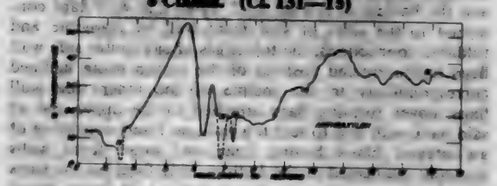
tinuous, internally ribbed, portions of the bag to be drawn into sealing engagement with the body of the patient, said pump also functioning to withdraw any fluid deposited within the bag crotch portion, and an accumulator tank connected to said fluid drain conduit to receive the fluid withdrawn from the collector bag by said pump.

2,944,552
SURGICAL INSTRUMENT
Jack A. Cannon, West Los Angeles, Calif., assignor to Richard B. Wilt, Los Angeles, Calif.
Filed Dec. 29, 1958, Ser. No. 783,662
5 Claims. (Cl. 128—304)



1. A surgical instrument comprising a tubular member one end of which is provided with a wedge-shaped annular cutting edge and inclined with respect to the axis of said tubular member, and a flexible rod-like thrust-absorbing handle attached to the opposite end of said member at one side of the axis thereof so that said inclined edge projects away from said handle, and the aperture through said tubular member is open.

2,944,553
CIGARETTE WRAPPERS
Henry H. Storch, Old Greenwich, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Sept. 27, 1954, Ser. No. 458,488
8 Claims. (Cl. 131—15)

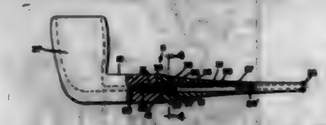


1. As a wrapper for a cigarette, a non-cellulosic material comprising hydrogen and carbon atoms and free of carbonyl groups.

2,944,554
SMOKING ARTICLES
Anton Margaleas, 201 San Anselmo Way, San Francisco, Calif.
Filed Jan. 21, 1959, Ser. No. 788,132
4 Claims. (Cl. 131—198)

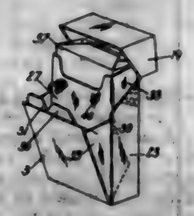
1. A device for smoking pipes and holders for cigars and cigarettes having a shank having a tobacco receiving

member at the outer end thereof, a mouthpiece and a smoke conveying duct adapted to convey smoke from the receiver to the mouthpiece, the improvement which comprises a connector between said shank and said mouthpiece having two portions wherein one portion is polygonal in section and fits into a similar recess in the outer end of said mouthpiece, the other portion is circu-



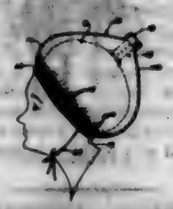
lar in section and mates with a duct in the shank, wherein said connector has radially directed passages through all but one of the walls of the polygonal portion adapted to be aligned with an aperture in the outer end portion of the mouthpiece whereby the quantity of air admitted to the smoke stream may be adjusted from zero to a maximum by removal and replacement of said connector.

2,944,555
FOLDING CIGARETTE BOX WITH ASH RECEPTACLE
Clyde A. Peel, Richard O. Peel, and Donald G. Peel, all of 17400 Prestport Road, Spring Lake, Mich.
Filed Mar. 30, 1959, Ser. No. 802,874
15 Claims. (Cl. 131—238)



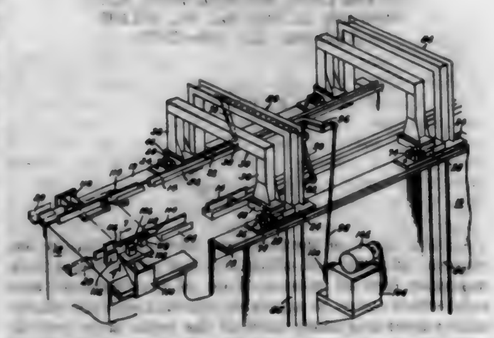
1. A package for cigarettes comprising an outer carton having front, back, top, bottom and side walls comprising an integral blank having inner side wall flaps along the side edges of the back wall with said inner side wall flaps being slit along downwardly inclined lines near the upper edge thereof, bottom flaps hingedly secured to the lower edges of said inner side wall flaps and disposed alongside of said bottom wall, the bottom wall being hingedly connected to the bottom of the back wall and the bottom of a front wall, outer side wall flaps connected to the sides of said front wall by frangible and foldable connections, the top edges of said outer side wall flaps in the erected position of the carton being inclined correspondingly to the incline of the inner side wall flaps, cover forming flaps attached to the upper end of said back wall and to said top wall, an insert consisting of an integral blank having inner and outer front walls hingedly connected at the bottom, side flaps on the sides of said inner and outer insert walls, said insert blank having a fireproof coating and said side flaps on said insert walls being folded into opposed lapped relation and positioned within the inner side wall flaps on said carton blank, the outer wall and side flaps on the outer front wall of said insert being shorter than the inner wall and side flaps on the inner wall of the insert and terminating below the upper ends thereof, the inner side wall flaps of said carton blank being secured to the projecting portions of the said flaps on the inner wall of said insert, the upper edge of the outer wall of said insert in the erected position of the package having a cigarette receiving notch cut therein and projecting above the top of the front wall of said carton blank.

2,944,556
HAIR COVERING CAP WITH SPACER
Helen N. Olsen, 913 Sir Francis Drake Blvd., Kentfield, Calif.
Filed Oct. 3, 1958, Ser. No. 765,978
2 Claims. (Cl. 132—46)



1. In a cap for covering the hair having a balloon-like body of flexible sheet material provided with a crown portion and an elastically expandible and contractible opening of lesser diameter than the crown portion for receiving therethrough the scalp and hair of the human head, the combination therewith of a tubular spacer member extending into the balloon-like body and having one end connected at the apex of the crown of the cap substantially axially of the said crown portion, the said spacer member having a radially spread foot portion at its opposite free end, the said sheet material of the cap circumferentially enclosing the connected end portion of the spacer member, and a clamping cup releasably engaged around the said connected end of the spacer member and the sheet material therearound, whereby the spacer member may be selectively removed and replaced in the crown of the balloon-like cap body.

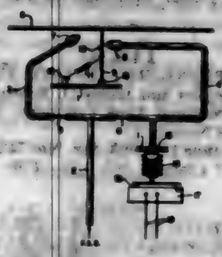
2,944,557
PLATING APPARATUS
Daniel J. Borodin, Detroit, Mich., assignor, by mesne assignments, to Allied Research Products, Incorporated, Baltimore, Md., a corporation of Maryland
Filed Dec. 20, 1956, Ser. No. 629,659
29 Claims. (Cl. 134—164)



1. In a plating apparatus of the type including a tank and a work supporting rail extending lengthwise of the tank, means for reciprocating said rail comprising a bridge member spanning the tank and supporting the rail, a pair of guide members mounted one at each side of the tank, said bridge member having its opposite ends supported one on each of said guide members, rolling elements disposed between said ends of said bridge and said guide members for supporting said bridge on said guide members for movement longitudinally of the tank, at least one of said guide members being adjustable in a direction transversely of the tank and cooperating with the corresponding rolling element and one end of the

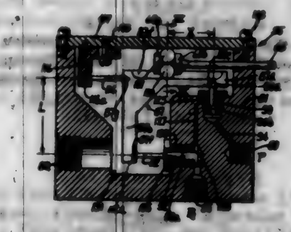
bridge to guide said end of the bridge in a rectilinear path lengthwise of the tank, the other end of the bridge being adapted to shift transversely relative to its guide member and means for reciprocating said bridge.

2,944,558
CONTROLLER
Frederick D. Dodge, Conshohocken, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 7, 1958, Ser. No. 746,859
2 Claims. (Cl. 137—82)



1. Means for detecting the presence or absence of a plate of glass on a conveyer, including, a jet nozzle adapted for connection at one end to a supply of air under pressure and adapted to expel a jet of air from its opposite end, a flapper pivotally mounted adjacent said jet nozzle and having its free end unaffected by said jet when a plate of glass is not present and moved by the deflected jet of air when a plate of glass is present, a relay inlet restriction adapted to be connected on its inlet side to a supply of air under pressure, a relay nozzle adapted to be connected to the outlet side of said relay inlet restriction, an outlet restriction mounted on the other end of said relay nozzle and cooperating with said flapper so that said flapper varies the flow of air which escapes through said relay nozzle, and an air conduit communicating with said relay nozzle between said restrictions and adapted to conduct the air at a pressure varied by said flapper to a point of use.

2,944,559
LINEAR POSITIONING SERVO MECHANISM
Rollin Douglas Ramsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed Sept. 4, 1957, Ser. No. 682,032
4 Claims. (Cl. 137—85)

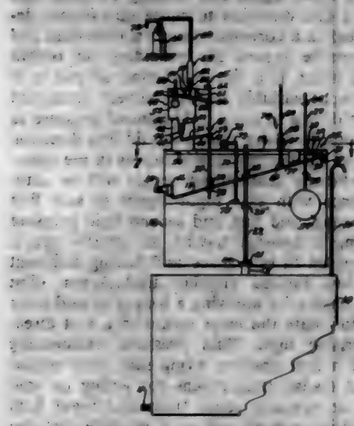


1. A fluid control system comprising a fluid operated output device having a pair of working chambers for receiving fluid under pressure to actuate said device in respective opposite directions, valve means displaceable in respective opposite directions to supply fluid under pressure to the respective working chambers and having biasing fluid chambers for receiving fluid under pressure to bias said valve means in respective opposite directions, first fluid pressure means for providing an output control pressure linearly proportional to an input signal and connected with a first one of said biasing chambers to provide a biasing force on said valve means linearly proportional to said input signal and tending to move said valve means in a first direction to cause said output device to be actuated in a corresponding first direction, and second fluid pressure means for providing an output control pressure which is a linear function of and is in response to an input variable and operatively connected with said output device to cause said control pressure to increase as said output device moves in said first direction and to decrease as said output device moves in the opposite direction, whereby said output device will be actuated in accordance with said input signal to said first fluid pressure means, said first and second fluid pressure means comprising a housing having an interior space, lever means disposed in said space and having sufficient clearance to allow limited angular displacement, first torque applying means for applying a torque to said lever means tending to rotate the lever means in a first direction and comprising input fluid pressure transmitting means acting at a first position along said lever means and input signal transmitting means for acting on said lever means in an opposite sense from said input fluid pressure transmitting means and at a variable distance from said first position dependent upon an input signal, second torque applying means for applying a torque to said lever means tending to rotate the lever means in the opposite direction from said first torque applying means and comprising control fluid pressure transmitting means, means defining input and control pressure chambers communicating respectively with said input and control fluid pressure transmitting means, means of delivering an input fluid pressure to said input pressure chamber for controlling the force exerted by said input fluid pressure transmitting means on said lever, input control means for controlling the position of said input signal transmitting means along said lever means in accordance with said input signal, means comprising said control fluid pressure transmitting means for maintaining a control pressure in said control pressure chamber proportional to the position of said input signal transmitting means, said control pressure chamber of each of said first and second fluid pressure means being connected with said first and second biasing chambers respectively, and said input control means of said second fluid pressure means being connected with said pressure actuated device for actuation thereby.

2,944,560
VETERINARY MEDICAMENT DISPENSER
Robert W. Vis, Orange City, Iowa
Filed Nov. 27, 1957, Ser. No. 699,247
4 Claims. (Cl. 137—101.25)

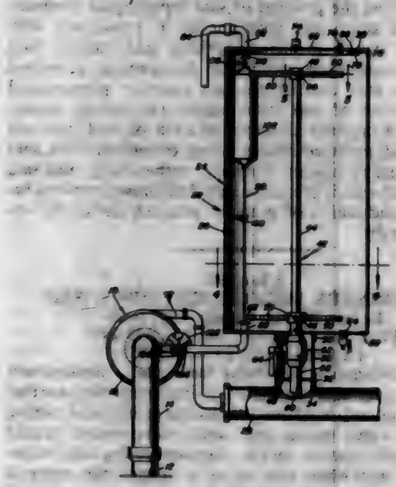
1. In combination, a mixing tank and a medicament metering tank, said tanks being interconnected so that the metering tank is adapted to discharge into said mixing tank, inlet valve means and outlet valve means in said mixing tank, control means interconnecting said valve means so that when one valve is opened the other is closed, said control means including float means adapted to operate said control means to cause said inlet valve means to fill said mixing tank to a predetermined level, outlet valve means in said metering tank operably connected to said control means and adapted to discharge a metered amount of medicament or the like from said metering tank into said mixing tank, said control means being adapted to cause said discharge only when the outlet valve means in said mixing tank is closed and said inlet valve is open, supply means connected to said metering tank and valve means between said supply means and said metering tank, metering control means for said last named valve means adapted to cause a metered amount of medicament to flow into said metering tank only when

said metering tank has been emptied and said outlet means in said metering tank is closed, said metering control means including float means to control the level of



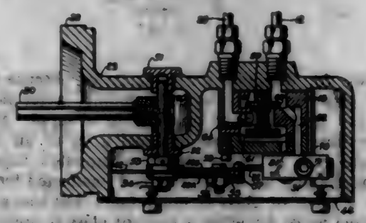
medicament in said metering tank, and means engageable between said metering control means and said first named control means to overrule said float means while said metering tank is being emptied.

2,944,561
LAWN SPRINKLER SYSTEM ATTACHMENT
Jack Sellati, 185 NW. 64th Court, Miami, Fla.
Filed Sept. 21, 1956, Ser. No. 611,169
8 Claims. (Cl. 137—268)



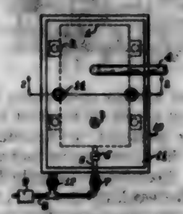
4. In combination with a sprinkler system of the type including a pump having an intake pipe and a discharge pipe, an attachment for adding fertilizer and the like to sprinkling water, said attachment comprising a supply tank, an inlet pipe secured to said supply tank and extending therein, a fitting on said discharge pipe connecting said inlet pipe to said discharge pipe for receiving water therefrom, a spray head within said supply tank, said spray head being connected to said inlet pipe in communication therewith for receiving water therefrom, said supply tank having a lower portion, an outlet pipe connected to the lower portion of said supply tank and extending therein, a fitting on said intake pipe connecting said outlet pipe to said intake pipe in communication therewith, said outlet pipe having a vertically disposed terminal portion within said supply tank terminating in a valve seat, and a control valve for said outlet pipe, said control valve including a valve rod, guide means carried by said supply tank and engaged with said valve rod for guiding said valve rod, said valve rod being aligned with said valve seat, a valve member secured to said valve rod and normally seated on said valve seat to close said outlet pipe, and a float secured to said valve rod for moving said valve member out of engagement with said valve seat when sufficient water is within said supply tank to assure proper operation of the attachment.

2,944,562
FLUID PRESSURE CONTROL SYSTEM
Clarence O. Glasgow and James O. Brown, Tulsa, Okla., assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed June 17, 1958, Ser. No. 742,569
7 Claims. (Cl. 137—270)



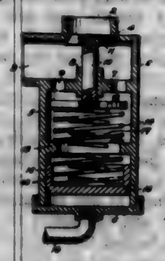
1. A fluid pressure transmitter including, a primary element which is moved in space by a variable, a member mechanically linked to and rotated by the primary element, a valve of the snap-acting type which is actuated between alternate positions by the rotated member and develops a fluid pressure output when actuated to a first of the alternate positions and effects the dissipation of said developed pressure output when actuated to a second of said alternate positions, a fluid pressure relay clamped to the valve and arranged to respond to the valve output fluid pressure to develop a power output fluid pressure when the valve is actuated to one of the positions and effects the dissipation of said developed power output when actuated to the other of the positions, and means between the valve and relay to predetermine which of the alternate positions of the valve will develop the power output fluid pressure.

2,944,563
SAFETY OIL TANK
James J. De Biasio, 119 Woodin St., Hamden, Conn., Henry Podsiadlo, 27 Hazel St., New Haven, Conn., and Alfred Sammons, 184 Foster St., New Haven, Conn.
Filed Oct. 22, 1957, Ser. No. 691,595
1 Claim. (Cl. 137—312)



An oil tank for holding and supplying fuel oil, having a filling opening; a vent pipe connecting the upper portion of said tank with the outside open air to conduct the gases discharged from the oil in said tank; a casing surrounding said tank, and having a lower section and a detachable upper section; said lower section of the casing being adapted and dimensioned so as to collect and contain the oil that may leak out of a full tank until equal oil level is reached in said tank and said lower section of the casing; said upper section of the casing being detachably carried by the said lower section, having air gaps at their junction for ventilation; a detector vent pipe mounted on, and communicating with, the said upper section of the casing conducting the gases discharged from the oil contained in the said casing as a result of a leak in the said tank to a desired point facilitating the detection of said gases by their odor; an outlet pipe detachably connected to the said tank and passing through the wall of the said lower section of the casing; a service valve adjoining the said outlet pipe; a supply pipe adjoining the said service valve conducting the oil from the said tank; an emergency valved conduit connecting the said lower section of the casing with the said supply pipe.

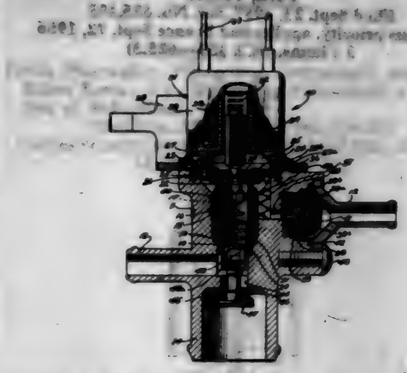
2,944,564
PRESSURE RELIEF VALVE WITH REMOTE CALIBRATION CHANGE
Thomas M. Pettey, Jr., Wayne, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed May 29, 1959, Ser. No. 817,613
1 Claim. (Cl. 137—529)



A pressure relief valve comprising a body having an inlet and outlet, a housing attached to said body, a valve member carried by said body movable toward and away from said inlet, said valve member extending into said housing, a stop in said housing intermediate the ends thereof, first spring means disposed between said stop and valve member, a piston slidable between said stop and the end of said housing remote from said valve member, means to admit pressure fluid to said housing to urge said piston toward said valve member, second spring means disposed between said piston and valve member, said first and second spring means urging said valve member toward said inlet and third spring means disposed between said stop and piston to urge said piston away from said valve member.

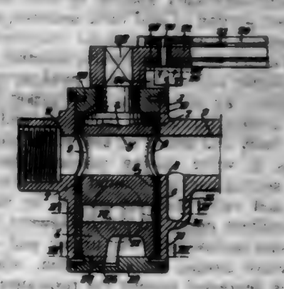
2,944,565
ACTUATOR VALVE
Robert R. Dahl, Chicago, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed May 8, 1956, Ser. No. 583,455
10 Claims. (Cl. 137—620)

1. In a flow control valve, a casing having an inlet for connection to a source of pressurized fluid, an inlet-outlet for connection to an actuating device, and an exhaust port, a hollow member slidably mounted in said casing and having a valve seat on one end, a pilot-operated valve member coacting with said valve seat to selectively intercommunicate said inlet and said inlet-outlet, and a combination relief and exhaust valve connected with said pilot-operated valve member and seated on said exhaust port upon opening of said



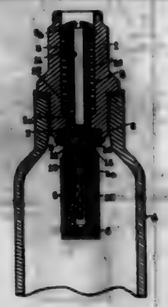
pilot operated valve member and responsive to fluid under pressure through said inlet-outlet for selectively intercommunicating said inlet-outlet and said exhaust port.

2,944,566
CONTROL VALVES HAVING FLUID-TIGHT DISTRIBUTOR MEMBERS, PARTICULARLY FOR VEHICLE BRAKING CIRCUITS
Louis Modrin, Saint-Etienne, France, assignor to L'Auxiliaire de l'Industrie et des Mines Auxins, Saint-Etienne (Loire), France, a society of France
Filed Feb. 12, 1957, Ser. No. 639,651
5 Claims. (Cl. 137—626)



1. A valve comprising a valve body having a cylindrical bore and inlet and outlet openings aligned and connected to said bore in diametrically opposed positions, a hollow sleeve fixed in said bore and having openings corresponding to the first said openings but larger than the latter, said sleeve having bevelled edges at said openings and defining with said body annular troughs, sealing rings in said troughs, rigid rings holding said sealing rings in position with the latter tending to protrude internally of said sleeve, a rotatable cylindrical plug in said sleeve frictionally engaging said rings and having axially spaced transverse passages arranged in parallel and one of which is aligned between said inlet and outlet openings to connect the same, said sleeve and body having further openings diametrically aligned transversely of the first said openings and alignable with the other of said passages, and means for coupling the outlet opening to one of the further openings in said body, the openings in said sleeves having saddle-shaped peripheries and the rigid rings which hold the sealing rings in position also being saddle-shaped.

2,944,567
VALVE FOR HIGH-PRESSURE GAS CONTAINER
Maurice Jouhanneau, 9 ter Rue Lucien Sampaix, Paris, France
Filed Sept. 23, 1957, Ser. No. 685,495
Claims priority, application France Sept. 22, 1956
3 Claims. (Cl. 137—625.3)



1. Valve system adapted to be secured to a container filled with a fluid under a relatively high pressure a relatively moderate output of fluid under reduced pressure, which comprises a hollow body constituting the body of the device and a valve shank formed with an axial outlet passage of relatively small diameter and mounted for sliding movement in an axial bore of said body, said shank extending beyond said bore into a high pressure inlet area, a valve member screwed on the inner end of said valve shank and formed with a blind axial cavity in which extends the corresponding smooth portion of said shank so as to leave between it and the wall an annular chamber of relatively small cross-sectional area, a narrow lateral longitudinal passage formed between the screw-threaded portion of said sliding shank and the tapped portion of said valve member, said narrow passage extending from said annular chamber and opening into the upper face of said valve member, said valve member movable between a valve opening and a valve closing position, an annular sealing gasket retained in an annular groove formed in the lower end portion of said hollow body and seated on said valve member when the latter is in valve closing position, thereby acting jointly as a sealing packing around said sliding shank, as a seat for said valve member and, in its valve closing condition, resilient means disposed between said sliding shank and said hollow body for urging said valve member to its valve closing seated position, whereby when said shank is depressed against the resistance of said resilient means and against the fluid pressure acting against the bottom of said valve member, said valve member will be unseated to move into the valve opening position and enable a thin stream of fluid from said high pressure inlet area to flow through said narrow passage in which its output is controlled and its pressure reduced by the resulting throttling action, whereafter said fluid expands slightly in said annular chamber and said end axial cavity of said valve member, and subsequently flows through the axial passage of said sliding valve shank without undergoing any detrimental expansion during the whole of this path, and finally penetrates into said axial outlet passage of said shank.

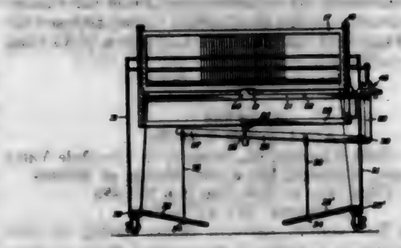
2,944,568
VALVE PARTICULARLY FOR USE IN AN ELECTRO-METALLIZING PISTOL
Erik Anders Jonsson, Stockholm-Vällingby, Sweden, assignor to Bo Lidgren, Osterund, Sweden
Filed Nov. 28, 1955, Ser. No. 549,474
4 Claims. (Cl. 137—630.22)

3. A dual control valve comprising a housing, a passage extending through said housing, a tapered bore extending through said housing transversely of said passage, a tapered valve body rotatably mounted in said bore, means for exerting axial pressure on said body and tending to produce frictional turning movement between the tapered surfaces of said bore and said valve body, a transverse aperture in said body in the plane of said passage whereby said aperture may register with said passage to permit flow therethrough or may be moved out of registry to interrupt flow, means for exerting axial force on said body tending to move said body into said bore whereby to maintain the tapered surfaces of said bore and said body in frictional contact tending to resist turning movement of said body within said bore, an axial bore in one end of said body communicating with said aperture, a shoulder in said axial bore providing a seat, a spindle in said axial bore, a shoulder on said spindle for engaging said seat to control flow from said aperture



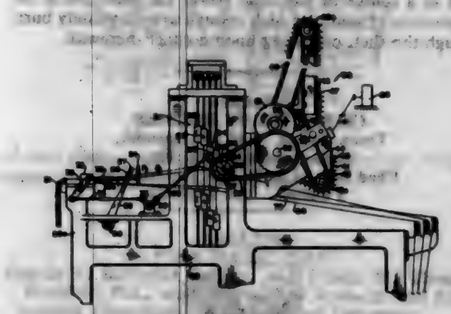
through a portion of said axial bore, a threaded connection between said spindle and said axial bore for advancing or retracting said spindle relative to said body upon relative rotation between the parts to engage or disengage said shoulder and said seat, said threaded connection being constructed to permit rotation of said spindle relative to said body when said shoulder and said seat or disengaged, due to the frictional resistance of said contact between the tapered surfaces of said body and said housing, to advance said spindle in said body when the spindle is turned in one direction until said shoulder engages said seat and thereafter to turn said body with said spindle upon further turning movement of the spindle in the same direction, and the frictional resistance of said tapered surfaces permitting movement of said spindle relative to said body to disengage said shoulder from said seat upon turning movement of said spindle in the opposite direction.

2,944,569
AUTOMATIC HANDWEAVING LOOM DEVICE
Fritz Schneegle, 2 Parkstrasse, Bombach/Bergstrasse, Germany
Filed June 27, 1957, Ser. No. 668,383
Claims priority, application Germany Feb. 26, 1955
7 Claims. (Cl. 139—33)



1. In a loom device having a pattern-selecting mechanism adapted to raise a number of heddles through actuation of heddle shafts in accordance with a set pattern to form sheds, the improvement which comprises a pattern-selecting mechanism having thereon a plurality of heddle shaft actuating means, said means adapted to engage said heddle shafts, a first pedal, a second pedal, said first pedal connected by linkage means to lower said pattern-selecting mechanism whereby to raise said heddles in accordance with a selected pattern, said second pedal connected by linkage means to raise said pattern-selecting mechanism whereby to move another selected pattern into position.

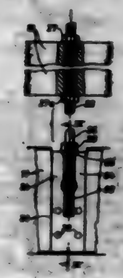
2,944,570
METHOD AND APPARATUS FOR MAKING LOOP PILE FABRIC
Walter A. Rice, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Filed Aug. 27, 1959, Ser. No. 836,430
12 Claims. (Cl. 139—38)



1. A method of weaving a pile fabric of pile warp yarns, stuffer warp yarns, and a single set of binder warp yarns interlaced with shots of filling yarn lying in a plurality of levels above and below stuffer warp yarns, which comprises carrying out in each of a succession of cycles the steps of forming a series of sheds of the warp yarns, inserting a filling shot in each shed and beating it up, at least one shed per cycle being formed with the pile and binder warp yarns in the upper line and the stuffer warp yarns in the lower line of the shed, drawing the pile yarns out of their normal positions in the upper line of said shed to form pile loops of uniform height, holding the loops drawn out until after the beat-up of a filling shot inserted below at least part of the stuffer warp yarns in a shed formed after the loops were drawn out and then releasing the loops, each loop extending over at least one filling shot lying in the top level above the stuffer warp yarns, and, during each cycle, drawing increments of the pile warp yarns from individual supplies thereof and feeding the yarn increments toward the fell of the fabric, the increments varying in length in accordance with a pattern and the drawing out of a pile warp yarn to form a loop in a cycle, in which the increment of such yarn fed is less than the length of yarn required for formation of the loop causing the withdrawal of yarn from the loop of the yarn formed in the preceding cycle with resultant reduction in the height of that loop.

10. A loom for weaving a pile fabric made up of pile, binder, and stuffer warp yarns interlaced with filling yarns, the loom having a harness motion for forming sheds of the warp yarns, means for inserting filling yarns into the sheds, and lay means for beating up the inserted filling yarns, characterized in the provision of hooks for drawing the pile yarns out of the top line of sheds to form pile loops, means for positively drawing the pile yarns from individual supplies thereof and feeding the yarns toward the hooks, means for reciprocating the hooks, and means for operating the pile yarn feed means to feed an increment of each pile yarn during each movement of the hooks forming loops of the pile yarns.

2,944,571
HEDDLE FRAME
Erwin Pfarrwaller, Winterthur, Switzerland, assignor to Sulzer Freres, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed Mar. 28, 1956, Ser. No. 724,675
Claims priority, application Switzerland Mar. 30, 1957
14 Claims. (Cl. 139—91)



1. A heddle frame comprising an upper beam, a lower beam, at least one intermediate stay member removably connected with and rigidly interconnecting said beams, operatively associated abutments connected with said stay member and with at least one of said beams, and yieldable means connected with said stay member and with at least one of said beams for resiliently pressing the respective abutments against each other.

2,944,572
SHUTTLE THREADING BLOCK
Robert Eugene Dauch, Abington, Pa., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Filed Sept. 26, 1957, Ser. No. 686,434
7 Claims. (Cl. 139—317)

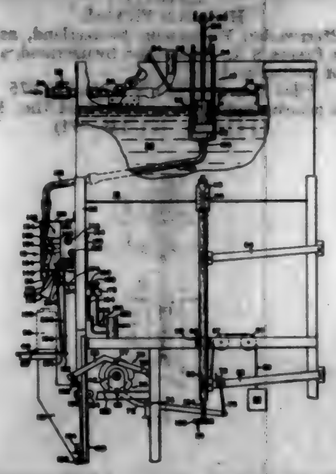


1. A threading block for loom shuttles comprising a body having means defining a longitudinal thread channel, a side eye, a horn with a thread confining lip and a downwardly extending, thread guiding portion for camming the thread into the side eye, tension pads resiliently pressed into thread tensioning engagement positioned to affect said thread once it becomes threaded in said block, and a second tension means by which said thread is engaged and tensioned upon the first pick of a shuttle of which said block is a part, said second tension means being so limited in extent and so positioned that the thread becomes entirely disengaged therefrom upon entering the said side eye and becoming fully threaded.

2,944,573
APPARATUS FOR FILLING RECEPTACLES
Bernard A. Waldmann, Stuart, and Jerome J. Greff, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 11, 1957, Ser. No. 639,333
16 Claims. (Cl. 141—87)

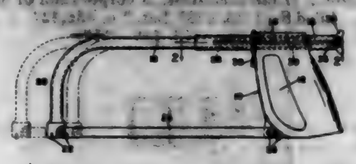
4. Apparatus for filling receptacles comprising, a cup, an outlet in said cup, a filling spout, conduit means con-

necting said outlet and said filling spout, a valve to control flow of liquid from said spout, a trough mounted to move beneath said spout and biased to move out from beneath said spout, means for raising and lowering a



receptacle up to and away from said spout, said means having a lost-motion connection with said trough to move said trough beneath said spout when said receptacle is lowered.

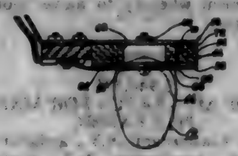
2,944,574
ADJUSTABLE HACKSAW FRAME
Alvin L. Johnson, Worcester, Mass., assignor to Johnson Enterprises, Inc., Worcester, Mass., a corporation of Massachusetts
Filed Jan. 30, 1958, Ser. No. 712,238
4 Claims. (Cl. 145—34)



1. A hacksaw comprising a handle, means on said handle mounting a tubular member in fixed relation thereto, a second tubular member telescopingly associated with the first tubular member, means on the handle and the second tubular member for engaging and holding a hacksaw blade, and means associated with the first-named tubular member for extending and retracting the second-named tubular member with respect thereto, said last-named means comprising an elongated screw rod located within the tubular members and engaging a nut fixed to the second-named tubular member, means to restrict longitudinal motion of the screw rod, and means to rotate the screw rod.

2,944,575
DEVICE FOR OPENING EGGS
Charles W. Smith, Jr., Francis X. Mead, and Elvan H. Dunbar, Jr., Terre Haute, Ind., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
Filed May 13, 1958, Ser. No. 734,936
5 Claims. (Cl. 146—2)

1. A device for opening eggs comprising a rod, an electrical heating element formed in a substantially closed ring which is slightly smaller than the girth of an average egg, said ring being mounted upon said rod in a position in which an entire side of said ring is free to contact the shell of an egg, and electrical conductors connected



to said heating element for connecting said heating element to a source of electrical power for maintaining the temperature of said ring high enough to immediately burn through the shell of an egg upon contact therewith.

2,944,576
CITRUS FRUIT REAMER
Tracy Acosta, % H. J. Magruder, New Smyrna Beach, Fla.
Filed July 16, 1956, Ser. No. 598,822
5 Claims. (Cl. 146—3)

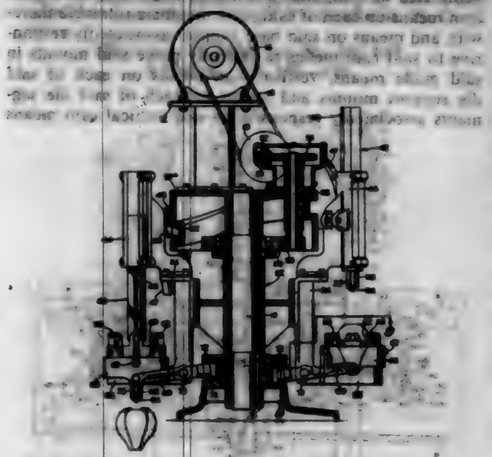


1. A reamer for citrus fruits comprising a solid domed head having a plurality of ribs formed on the periphery thereof and extending from a point adjacent the crown of the head to the lower edge thereof, said ribs being rounded at the apex thereof to provide a smoothly undulating surface on the head for pressing the juice from the fruit, and a cutter blade on said head eccentric of the axis of rotation thereof and extending outwardly therefrom in a direction substantially parallel to the axis of the head to cut the membranes which separate the sections of the fruit, said cutter blade having an oblong cross-section and having the major transverse axis thereof extending substantially tangentially of the circle described by said head at the point of attachment of the cutter blade thereto.

2,944,577
PEAR SLICING MACHINE
Albert H. Kagler, Oakland, Calif., assignor to California Packing Corporation, San Francisco, Calif., a corporation of California
Filed Dec. 11, 1957, Ser. No. 702,128
8 Claims. (Cl. 146—169)

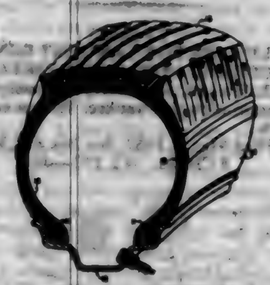
1. A machine for slicing pears or the like comprising: an annular support, radially arranged knives extending from said support inwardly with respect thereto, at least two supporting plates pivotally mounted on said support intermediate an adjacent pair of knives, each of said plates having an outer cam surface, and an annular axially mov-

able actuating member disposed about said annular support in engagement with the outer cam surface of each



of said plates, to cause movement of said plates from a supporting to a non-supporting position.

2,944,578
PNEUMATIC TIRE
Francis P. Baldwin, Colonia, and Robert M. Thomas, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed May 31, 1955, Ser. No. 512,182
24 Claims. (Cl. 152—330)



1. A composition comprising a substituted-chlorine-containing isoolefin-multiolefin butyl rubber copolymer, the chlorine combined in said copolymer being present in an amount of at least about 0.5 weight percent based on copolymer but not more than about 1 atom of combined chlorine per double bond in the copolymer, substantially all of said chlorine combined in the copolymer being present as substituted-chlorine, wherein the combined chlorine has replaced a hydrogen atom originally present in said copolymer.

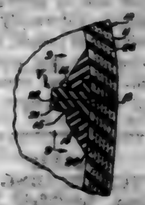
2,944,579
TIRE PRESSURE CONTROL DEVICE
Westfield L. E. Kenne, Stuttgart, Germany, Kurt Steiger, Indianapolis, Ind., and Willy F. Krantter, Portland, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Sept. 10, 1952, Ser. No. 308,277
6 Claims. (Cl. 152—416)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A tire pressure control system for a pneumatic tired vehicle comprising, in combination, rotatably mounted axles and wheel hubs, a compressed tire inflating gas source connected to axle and wheel hub positioned intake and exhaust valved conduit means, each of said conduit means formed in each of said axles terminating in an orifice formed in the surface thereof, a sealing structure contained within a recess in each of said wheel hubs, each sealing structure including a set of axle encompassing annular sealing rings axially positioned on both sides of said orifice, lips on said sealing rings projecting toward said orifice, holding rings positioning said sealing structure within said recess, a coupling within a wheel supporting flange of each of said hubs connecting each of



said recesses to a differential pressure tire attached combination tire opening and check valve assembly, said assembly including a housing, means for attaching said housing to a tire stem, a differential piston constructed of a large and a small diaphragm supported within said housing, an open passage formed in said piston, whereby gas may surround said piston, and a spring biased check valve supported within said housing and engageable with said piston, whereby compressed gas from said source may flow through said conduit means to said valve assemblies and pressure caused movement of said piston may open said check valve.

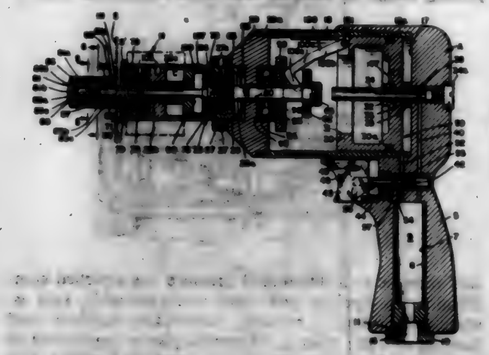
2,944,580
SIDE WALL VALVE AND METHOD OF MANUFACTURE THEREFOR
Roger H. Neco, Maple Heights, Ohio, assignor to The Dill Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 23, 1958, Ser. No. 769,221
3 Claims. (Cl. 152—429)



1. In combination with a tubeless tire having a side wall provided with an opening therethrough of minute diameter such as to just accommodate an inflating needle and located between the juxtaposed cords of a pair of reinforcing cords in said side wall, a side wall valve comprising a base having a normally planar side and having an opening therethrough having a counterbore, a stem formed of resilient material and having a self-closing inflating and deflating slit therein, said stem being provided with a head presenting a terminal end face, said stem being secured in said opening of said base with said head seated in said counterbore and with said terminal end face flush with said planar side, said base being secured with said planar side thereof to the inner side of said side wall and with said stem extending

entirely inwardly of said tire from the inner side of said side wall, said slit in said stem and the opening in said side wall being in axial alignment with each other.

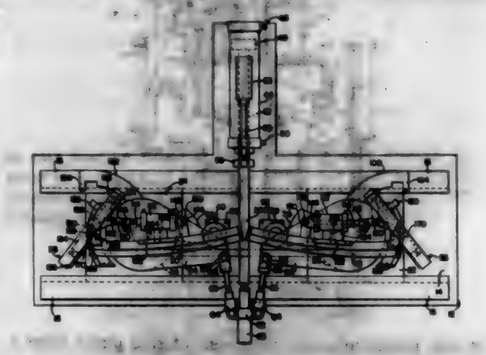
2,944,931
DIMPLING TOOL
Adolph A. Slyanoski, Los Angeles, Calif., assignor to Zephyr Manufacturing Co., Inglewood, Calif., a partnership
Filed Sept. 4, 1956, Ser. No. 607,621
3 Claims. (Cl. 153—21)



1. A pressure applying tool comprising a body providing a cylinder, a piston mounted to reciprocate in said cylinder, a pull plunger reciprocally carried by said body and having its outer end portion projecting therefrom, said body having an outer end work engaging surface through which said outer end portion of said plunger extends, and means for moving said plunger inwardly of said body in response to movement of said piston in the opposite direction, comprising a cam member in said body surrounding the inner end portion of said plunger and having thrust bearing against said body, a cam disc carried by the inner end portion of said plunger in longitudinally spaced opposed relationship to said cam member, levers pivotally secured at their inner ends to said piston in circumferentially spaced relationship to each other; each of said levers having an L-shaped outer end portion presenting portions engageable respectively with said cam member and said cam disc in response to movement of said piston in a direction outwardly of said body, and means for reciprocating said piston; said piston, plunger, cam member, cam disc, and said work engaging surface are coaxial with said body end wherein said levers are arranged symmetrical to said plunger.

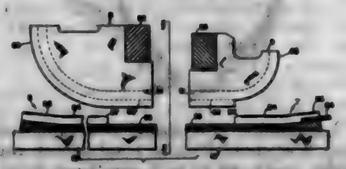
2,944,582
METAL STRETCH BENDING APPARATUS
Raymond M. Abonen, Southfield Township, Oakland County, Mich., assignor to Cincinnati Die & Manufacturing Company, Hazel Park, Mich., a copartnership of Michigan
Filed May 3, 1939, Ser. No. 811,885
10 Claims. (Cl. 153—40)

1. In apparatus for stretch bending metal stripe or bands, a top plate base support, a pair of complementary, cam controlled, laterally movable, aligned die support mounts slidingly arranged on said base support, guide means for each of said sliding die support mounts, each of said mounts having a die segment with metal strip die form thereon, a plate member horizontally rotatably mounted on each of said sliding mounts, each of said die segments being pivotally mounted for vertical swinging on each of said plate members, clamp means conjoined to the outer end of each die segment to releasably grip and hold said metal strip on said die forms adjacent the outer ends thereof, means to mount said die segments for horizontal rotatable movement, the inner ends of said die segments being free to swing into and out of alignment, horizontal cam means on each of said plate members rotatable therewith and means on said base support associatedly responsive to said cam means to laterally move said mounts in said guide means, vertical cam means on each of said die support mounts and means on each of said die segments associatedly responsive to said vertical cam means



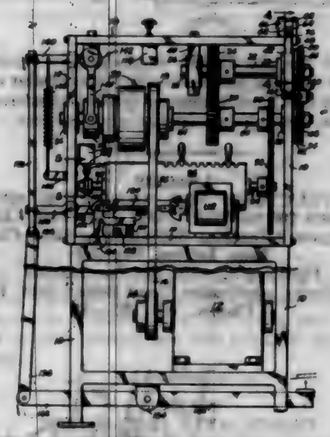
to pivot said die segments vertically as the latter rotate horizontally, and power drive means conjoined to said plate members rotatably moving said die segments and swinging the inner ends of said die segments in arcuate paths into contiguous alignment to a predetermined final position so as to stretch and bend said metal strip fully about and upon said die forms, said power drive means being operable through said horizontal cam means to control the movement of said die support mounts.

2,944,583
DIE STRUCTURE FOR TANGENT BENDING OF CORRUGATED SHEET METAL
Theodore O. Wellndt, Kenosha, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 6, 1957, Ser. No. 657,305
8 Claims. (Cl. 153—46)



1. A die construction for a tangent bending machine employed to bend a corrugated metal sheet in a direction longitudinal of the corrugations, comprising a first die member having a working face including a generally straight portion and a generally curved portion and having a series of corrugations extending substantially along the entire length of said working face to complement and receive the corrugations of said sheet, and a cooperating second die member supported for rocking movement with relation to said first die member to progressively bend the sheet clamped between said members to the curvature of the working face of said first die member, and said second die member having a working face including a generally flat surface disposed in cooperating relation with said straight portion of the working face of said first die member and a corrugated surface disposed outwardly of said flat surface and in cooperating relation with the curved portion of said working face of the first die member.

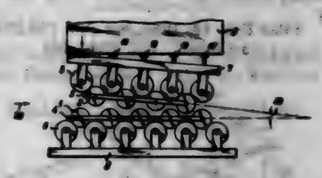
2,944,584
WIRE FORMING APPARATUS
Ralph Calney, Las Vegas, Nev., assignor, by direct and mesne assignments, to Dennis O. Maleforis, Portland, Oreg.
Filed Aug. 29, 1955, Ser. No. 531,147
2 Claims. (Cl. 153—66)



2. Wire forming apparatus comprising a frame; die means mounted on the frame; a bearing sleeve rotatably mounted about the die means and in frictional engagement with the wire passing therethrough; a pair of drive wheels positioned about the die means for forcing wire through the die means; drive means for the drive wheels; a clutch in the drive means for controlling operation of the latter; pivotally mounted link means on the frame engaging the clutch and movable between a locked position and a released position for holding the clutch in its engaging and disengaging positions, respectively; a manually operated lever on the frame connected to the link means for moving the link means to its locked position; a solenoid having a movable member and an electric circuit; a switch in the electric circuit; lock means connected to the movable member of the solenoid and releasably engaging the link means for securing the latter in locked position, the lock means comprising a cross link pivotally mounted on the frame and engaging the link means, a spring pressed latch pivotally mounted on the frame and connected to the movable member of the solenoid, the latch being engageable with the cross link upon movement of the manually operated lever to locked position, the latch being disengageable from the cross link upon movement of the movable member of the solenoid to unlocked position, thereby releasing the link means for movement to disengage the clutch; and a cam driven synchronously by the drive means, the cam being arranged to engage the switch at the completion of a wire forming cycle to move the movable member of the solenoid and release the link means from its locked position, thereby disengaging the clutch.

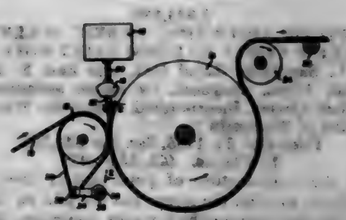
2,944,585
METHOD OF MANUFACTURING CURVED STRUCTURAL MEMBERS FROM SHEET METAL
Fritz Ungerer, Arlinger Strasse 6, Pforzheim-Brötzingen, Germany
Filed Feb. 14, 1956, Ser. No. 565,477
2 Claims. (Cl. 153—107)

1. The process of producing a curved structural member from a sheet of metal having a first end, an intermediate portion and a second end; comprising the steps of initially feeding said first end of said sheet in a first direction by passing the same in said first direction along a predetermined path to straighten said sheet between working rollers lying, respectively, in planes formed by the axes of rollers of respective roller banks, which planes in a first position converge toward one another in a direction opposite to said first direction of the feeding of said sheet, and which roller banks each include rollers which are staggered with respect to the rollers of the other bank and which have parts thereof penetrating between the rollers of the other bank, thereby influencing said sheet to become substantially flat, thereafter adjusting at least one of said working roller banks with respect to the other roller bank so that said planes in a second position converge toward one another in the direction of the feeding of said sheet, whereby upon further feed movement of said sheet between said working rollers of said respective roller banks with said planes in said second position said first end of said sheet is subjected to a predetermined curvature, then further adjusting at least one



of said roller banks and continuing the feed of said sheet between said respective roller banks so that when said intermediate portion of said sheet passes between said respective roller banks said planes formed by the axes of said rollers of said respective roller banks continuously decrease their degree of convergence becoming substantially parallel planes, whereby the curvature of said sheet is also continuously decreased, then reversing the rotation of the rollers after said second end of said sheet has been substantially straightened, thereby effecting feed movement in a second direction opposite said first feed direction while simultaneously adjusting one of said working roller banks with respect to the other roller bank so that said planes formed by the axes of said rollers of said respective roller banks in a third position converge toward one another in the direction of the feeding of said sheet in said second direction, whereby upon further feed movement of said sheet in said second direction said second end of said sheet is subjected to a predetermined curvature.

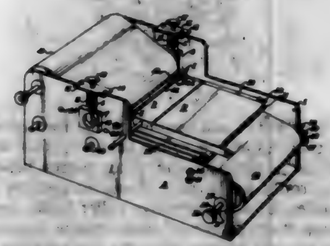
2,944,586
EXTRUSION COATING APPARATUS
Michael Yanulis, Rochelle Park, N.J., assignor to Lowe Paper Company, Ridgefield, N.J., a corporation of New Jersey
Filed Apr. 20, 1956, Ser. No. 579,625
8 Claims. (Cl. 154—1)



1. In extrusion coating apparatus, in combination, a cooling drum, a rubber faced pressure roller opposed thereto, said drum and roller forming a bight through which a substrate web is fed, a plastic extruder die-

posed to deposit in said bight between the substrate web and the cooling drum a sheet of plastic material which is wider than the substrate web to form plastic strips on each side of said substrate web and to form beads in the margins of the plastic sheet outside the lateral boundaries of the substrate web, thin, narrow, flexible protective belts trained to run on opposite end portions of the roller in positions to protect the roller against contact with the plastic material, said belts being composed of material which is non-adherent to the plastic material, means to feed said substrate web with said plastic strips integral therewith around and in contact with said drum to cool said plastic, and means to transfer said substrate web with the integral plastic strips away from said cooling drum.

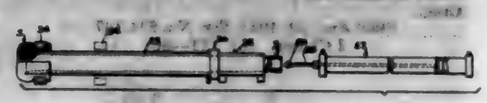
2,944,587
LAMINATING MACHINES
Robert K. Newcomb, Bound Brook, N.J., assignor to Rotobond, Bound Brook, N.J., a corporation of New Jersey
Filed Feb. 10, 1958, Ser. No. 714,355
6 Claims. (Cl. 154—36)



1. In a combining machine for webs and sheets, a pair of rolls urged together to form a nip therebetween and separable by a sheet or web passing through the nip, dams on the entrance side of said nip and adjustably spaced to form an adhesive reservoir behind the nip, said dams having surfaces conforming to the face of one of the combining rolls and an adjacent surface extending rearwardly of the nip and resting on the web or sheet to be laminated, a web supply unwinding around the nip roll against which the surfaces of the dams bear so as to confine the adhesive to the width of the unwinding web supply or less, a sheet or web supporting table having its surface in the plane of the nip line between the rolls whereby operation of the rolls to draw the webs into the nip distributes adhesive from the reservoir uniformly over the contiguous surfaces and unites the same under the bonding pressure of the nip as the combination of webs or sheets passes therethrough, and means for driving the rolls to draw the web or sheets through the nip thereof.

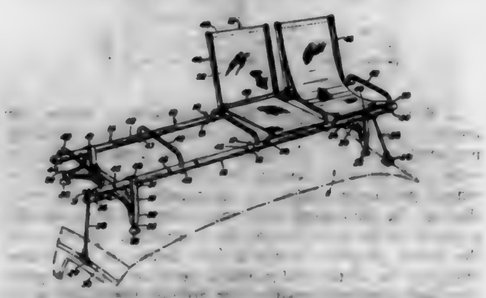
2,944,588
METHOD OF MOUNTING FABRIC SLEEVES ON HOLLOW CORES TO FORM PAINT ROLLERS
Alfred L. Stanipoli, Royal Oak, and Earl E. Thomas, Detroit, Mich., assignors, by mesne assignments, to Seamless Covers, Incorporated, Janesville, Wis., a corporation of Wisconsin
Filed Oct. 20, 1955, Ser. No. 541,702
17 Claims. (Cl. 154—41)

1. In the manufacture of paint rollers from a pile fabric sleeve wherein the sleeve has the pile on the inner surface thereof, the method which comprises inverting said sleeve onto a tubular member having a greater external circumference than the circumference of said base fabric of said sleeve and simultaneously gathering said sleeve on said tubular member whereby the gathered length of said sleeve after inverting is less than the length of said sleeve prior to inverting, thereafter positioning a core within said tubular member, gripping said core and



the end of said sleeve, and simultaneously moving said sleeve and said core axially relative to the tubular member away from said tubular member thereby transferring said sleeve from said tubular member onto said core.

2,944,589
SEAT STRUCTURE FOR MOUNTING ON THE ROOFS OF MOTOR CARS AND THE LIKE
Lionel Maxwell Joachim Balfour, The Folly Clavenage Lane, Tetbury, England
Filed Sept. 2, 1958, Ser. No. 758,309
Claims priority, application Great Britain Sept. 13, 1957
4 Claims. (Cl. 155—5)



1. A seating structure for mounting on the roof of an automobile, comprising a front transverse main frame member, a rear transverse main frame member, each of said main frame members being tubular, of circular cross section, and having a plurality of diametrically aligned pairs of holes therein, two end frame members each provided with transverse bores of circular cross section which receive said front and rear main frame members and hold said front and rear main frame members parallel at a fixed distance apart, supporting means to support said end frame members on said roof, anchoring means connected to said end frame members for detachable connection to roof side lodges to hold said structure on said roof, at least one seat comprising a back portion provided with downwardly extending pins each detachably received in one of said pairs of holes in said rear main frame member, a seat portion attached to said back portion, and supporting means for said seat portion detachably engaging said front main frame member, and a plurality of arm rests each having a front end and a rear end and pins extending downwardly from said ends detachably received in a pair of said holes in said front and rear main frame members, respectively, said arm rests providing positive locking means preventing rotation of said main frame members in said bores of said end frame members.

2,944,590
AUXILIARY BICYCLE SEAT
Benjamin Cooper, 15773 Chapel, Detroit, Mich.
Filed Nov. 24, 1958, Ser. No. 776,128
1 Claim. (Cl. 155—5.12)

An auxiliary seat of the character described for a bicycle including a frame, a rear axle on said frame, a rear wheel journaled on said axle and a luggage rack

mounted above said wheel, said auxiliary seat comprising: an inverted channel bar mounted longitudinally on the luggage rack, a pair of legs depending from the forward end portion of said channel bar on opposite sides of the wheel, said legs comprising apertured lower end portions secured on the end portions of the axle for securing the



channel bar in position on the luggage rack, foot rests on the lower portions of the legs, braces extending between said lower portions of said legs and the rear end portion of the channel bar, a saddle mounted on the rear portion of the channel bar, a post rising from the front portion of said channel bar, and a handle bar fixed on said post.

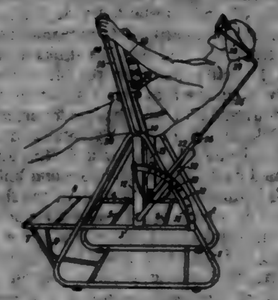
2,944,591
SWIVEL SEAT ATTACHMENT
Harry L. Morrill, Jr., 258 Hurt Bldg., Atlanta, Ga.
Filed Apr. 15, 1959, Ser. No. 806,527
8 Claims. (Cl. 155—10)



1. A swivel seat attachment for motor vehicle seats comprising a panel, a semi-circular segmental shaped flexible sleeve secured centrally to said panel in supporting relation thereto, said flexible sleeve having relatively slick contacting inner surfaces, and means securing said sleeve to an automobile seat whereby said panel may be pivoted on said seat with said contacting inner surfaces sliding against each other to pivot said panel.

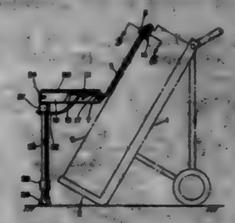
2,944,592
CHAIR FOR HYDROTHERAPEUTIC TREATMENT
Ludwig Hahne, Wildbad, Black Forest, Germany
Filed Sept. 12, 1957, Ser. No. 683,467
Claims priority, application Germany Sept. 14, 1956
3 Claims. (Cl. 155—21)

1. A chair for hydrotherapeutic treatments, comprising a frame including a pair of tubular side members, each forming a substantially equal-sided triangle and means for securing said triangular members in spaced relationship to each other, a pair of lateral stringers mounted on said frame, a seat for supporting the body of a patient substantially at the level of his buttocks, said seat comprising a flexible strap, means on said stringers for adjustably securing said strap thereon at different levels, and a stair step mounted on said triangular members at the front side of said chair and disposed at a level



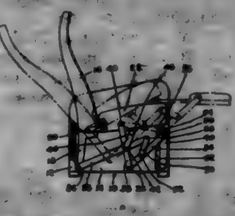
intermediate the levels of the base and apex of said triangular members.

2,944,593
COLLAPSIBLE SEAT FOR GOLFERS
Albert H. Zarnke, 4253 W. 219th St., Fairview Park, Cleveland, Ohio
Filed July 1, 1959, Ser. No. 824,411
3 Claims. (Cl. 155—78)



1. In a collapsible chair of the character described, a back having means adjacent the top thereof adapted to be hooked over the top edge of a golf bag, a seat hingedly secured to the lower portion of said back, a pair of legs pivotally secured to said seat, a cross-plate interconnecting said legs, and a leaf spring secured to the bottom of said seat, said spring having a recess adapted to be entered by said cross-brace, whereby to lock the legs against movement relatively to said seat, when the legs have been opened.

2,944,594
ARTICLE OF REPOSE FOR SUPPORTING THE BODY OF A PERSON
Anton Lerenz, Ocean Ridge, Boynton Beach, Fla.
Filed Nov. 5, 1954, Ser. No. 466,993
8 Claims. (Cl. 155—144)



1. In a reclining chair having a support frame, a body-supporting structure including a seat and back-rest pivotally mounted on the support frame for movement between an upright sitting position and a rearwardly-tilted position, and a leg-rest; a leg-rest linkage coupled to the body-

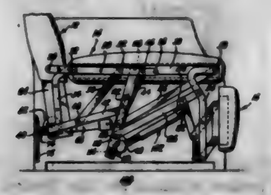
supporting structure for actuation thereby, the leg-rest being carried by said leg-rest linkage for movement from a retracted position beneath the seat to an extended position forwardly of and substantially at the level of said seat in response to rearward tilting movement of the body-supporting structure, said leg-rest linkage including a guiding link pivotally mounted on the support, a first link pivotally connected to the leg-rest, a second link operatively connected to said body-supporting structure, and a third link, said links being pivotally interconnected to form a closed quadrilateral linkage, the upper arm of which is formed by a portion of the second link, the lower arm of which is formed by a portion of the first link, and the side arms of which are formed by portions of the guiding and third links, said upper arm being longer than the lower arm and the third link being inclined from its top to bottom toward said guiding link in the upright sitting position of the body-supporting structure, whereby said third link turns said first link forwardly and downwardly and said first link carries said leg-rest in a direction away from the front end of the seat as the leg-rest is raised to its extended position.

2,944,595

POWER OPERATED RECLINING CHAIR

John J. Barabas, East Meadow, and Sumner C. Wills, White Plains, N.Y., assignors to Castro Convertible Corporation, Long Island City, N.Y., a corporation of New York

Filed May 21, 1957, Ser. No. 660,528
9 Claims. (Cl. 155—106)



1. A power operated reclining chair comprising: a stationary frame having two spaced sides, two side brackets each fixed to a respective side of said chair, a seat positioned between said sides and pivoted at points adjacent its rear to said side brackets, a back extending generally upward and pivoted to said points with a portion of said back extending above said seat and a portion below said seat, a first pair of links pivoted to the lower end of said back and extending forward, a second pair of links pivoted to the forward end of said first links and extending upward, said second pair of links being pivoted to said fixed brackets, a third pair of links pivoted to the middle of the first links, extending upwardly and being pivoted to said seat forward of said rear pivot points, a somewhat Y-shaped bracket rigidly attached to the lower end of said back and having a thrust point forward thereof, a jack screw pivoted at one end to said thrust point and pivoted at its other end to a fixed point on said chair frame generally behind and on a level with said thrust point, and an electric motor connected to said jack screw and adapted to retract or extend it, said motor being suspended solely from said jack screw.

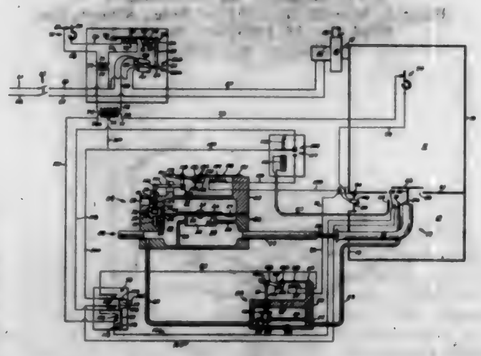
2,944,596

INDUCED DRAFT GAS FIRED SPACE HEATING SYSTEM

Paul B. Sugar, 1331 SE. 51st Ave., Portland, Oreg.

Filed Jan. 20, 1958, Ser. No. 710,011
7 Claims. (Cl. 158—7)

1. An induced draft gas fired heating system and a control system therefor, said heating system comprising a furnace for supplying heat to a space, a source of fuel gas, a source of combustion air, a normally inactive induction means for inducing combustion air from said source thereof into said furnace, motor means for operating said air induction means, a main gas burner in said furnace, a normally closed main gas valve operable to permit the flow of gas from said source thereof to said main burner, a pilot gas burner adjacent said main gas burner in said furnace and a normally closed pilot gas valve operable to permit the flow of gas from said source thereof to said pilot burner, and said control system comprising: a normally open air safety switch; an air safety switch operating means responsive to the pressure of air in said furnace to close said air switch at a preset reduction below atmospheric pressure of said pressure in said furnace; a first normally closed safety time switch, a second normally closed safety time switch, and an electrically operable safety timing means for simultaneously opening both of said safety time switches after said timing means has been energized for a preset time; an electric main valve operator for opening said main gas valve when said main valve operator is energized and closing said main valve when said main valve operator is deenergized; an electric pilot valve operator for opening said pilot gas valve when said pilot valve operator is energized and closing said pilot valve when said pilot valve operator is deenergized; an electric igniter for said



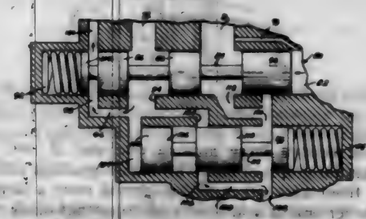
pilot burner; a normally closed transfer switch, a normally open transfer switch, transfer switch operating electric means operable when energized to open said normally closed transfer switch and close said normally open transfer switch and a thermo-electric generator adjacent said electric igniter and said pilot burner for energizing said transfer switch operating means when said pilot burner is in operation; an electric relay having a first normally open load switch, a second normally open load switch and electric operating means operable when energized to close both said load switches; a source of electric power; a normally open electric thermostat responsive to the temperature in said space and a first circuit means for cooperating with said source of power and said thermostat at a preset temperature in said space to energize said relay operating means to close both said load switches; a second circuit means for cooperating with said source of power and said first load switch to energize said motor means to actuate said air induction means to lower the air pressure in said furnace to actuate said air safety switch operating means to close said air safety switch; a third circuit means for cooperating with said source of power, said second load switch, said air safety switch and said two time switches simultaneously to energize said pilot valve operator to open said pilot gas valve and, to energize said electric igniter for said pilot burner, to light said pilot burner, whereby said pilot burner will heat said thermoelectric generator, said generator will energize said transfer switch operating means to open said normally closed transfer switch and to close said normally open transfer switch, whereby the opening of said normally closed transfer switch will de-energize said igniter and said safety timing means and the closing of said normally open transfer switch will energize said main valve operator to open said main valve to supply gas to said main gas burner and said main gas burner will be ignited from said pilot gas burner to supply heat to said space and raise the temperature therein whereby said thermostat will open to de-energize said circuits.

2,944,597

FUEL SYSTEM

Robert W. Wilson, Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio

Filed Feb. 20, 1957, Ser. No. 641,347
7 Claims. (Cl. 158—36.4)



1. In combination, a first pump operable to discharge fuel to a burner of a reaction engine, a second pump for selectively supplying fuel to the burner in response to the discharge pressure of said first pump, and means for activating said second pump at periods of peak flow demand manifested by said discharge pressure of said first pump, said means comprising a valve assembly having a first bore, a valve spool slidably mounted therein and having longitudinally spaced control portions, a second bore communicating with said first bore, a valve spool slidably mounted in said second bore, said second-named valve spool having a plurality of longitudinally spaced control portions, said second-named valve spool being normally positioned to afford recirculation of the discharge from said second pump at relatively low pressure, said second-named valve spool being movable axially in response to an increase in pressure of the discharge from said first pump to a predetermined level to terminate the recirculation of the discharge from said second pump, said first-named valve spool being movable axially in response to an increase in pressure of the discharge from said second pump to a predetermined value to interconnect the discharge of said second pump and the discharge of said first pump to afford an increased fuel supply to said burner.

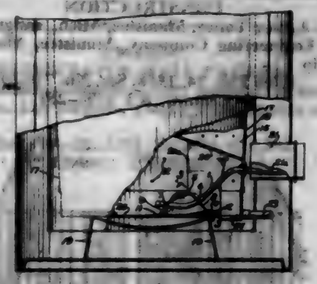
2,944,598

IGNITION MEANS FOR VAPORIZING TYPE OF OIL BURNER

Frederick H. Huntley and Clinton W. Frahm, Lansing, Mich., assignors to Motor Wheel Corporation, Lansing, Mich., a corporation of Michigan

Filed Feb. 9, 1953, Ser. No. 335,936
8 Claims. (Cl. 158—91)

1. In an oil burner construction wherein oil is delivered to the floor of the burner pot, means for igniting said oil comprising a heating element having a pair of spaced apart legs connected by a return bent portion, said heating element being supported on said burner pot with said return bent portion spaced above and adjacent the floor of the pot, the legs of said heating element being bent inwardly towards each other adjacent said return bent portion of said heating element so that said inwardly bent portions are spaced closely adjacent one another whereby a high concentration of heat is obtained between said inwardly bent portions of said heating element, the space between said inwardly bent portions being unobstructed in a generally vertical direction so that oil vapors ascending from the floor of said burner pot may pass freely between said inwardly bent portions for ignition.

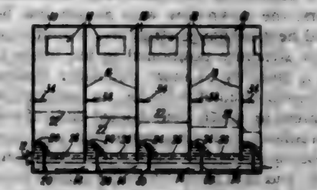


2,944,599

FLASH EVAPORATOR

Adolf Frankel, Gosforth, Newcastle-on-Tyne, England, assignor to Richardsons, Westgarth & Co. Limited, Northumberland Engine Works, Wallsend, Northumberland, England

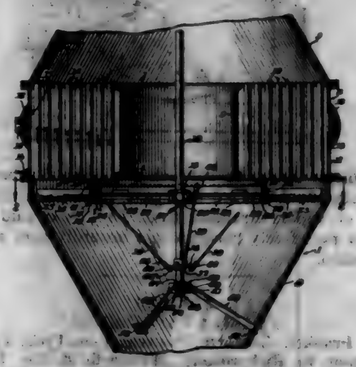
Filed Apr. 2, 1957, Ser. No. 650,217
Claims priority, application Great Britain Apr. 4, 1956
1 Claim. (Cl. 159—2)



In a flash evaporator, a rectangular fluid-evaporating section defined by a pair of flat side walls, a pair of flat end walls, one of said end walls constituting an upstream end wall, a flat top wall and a flat bottom wall, flat generally rectangular partition walls in said section dividing said section into at least three adjacent rectangular flash chambers arranged in a straight line horizontally and contiguously, said partition walls each extending from one of said side walls to the other of said side walls and from said top wall to said bottom wall, a simple aperture in the lower portion of each one of said partition walls providing communication between adjacent pairs of said flash chambers, and a similar aperture in the lower end of each end wall, a plurality of simple outlet apertures in the upper portion of said flash chambers respectively, said apertures being in one of said side walls of said section, said last-mentioned apertures being located one each in the respective flash chambers, and serving as vapor outlets, a plate-like weir member arranged in each of the lower portions of said flash chambers, said members being disposed adjacent to and downstream of the said apertures in the lower portions of said upstream end wall and said partitions, each weir member comprising a flat vertical lower portion and an inclined upper portion, said upper portion being inclined in upstream direction, baffle means fixed above said weir member to that wall of each chamber which is upstream

of said weir member, said baffle means being in the form of a flat plate-like member extending from said last-mentioned wall of said flash chamber at right angles thereto.

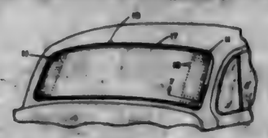
2,944,600
MULTI-BLADE CIRCULATOR AND EVAPORATOR CONSTRUCTION
William Arthur Tobey, Manistee, Mich., assignor to Manistee Engineering Company, Manistee, Mich., a partnership
Filed Feb. 24, 1958, Ser. No. 716,856
4 Claims. (Cl. 159—25)



1. In an evaporator structure having upper and lower chambers and an intermediate, generally annular-shaped, heat exchange structure including a plurality of tubes operatively connecting the upper and lower chambers and having a concentric downflow well also connecting said chambers, the down-flow well having less flow capacity than said heat exchange structure, a multi-blade rotatable circulator structure positioned in the lower chamber, including a plurality of inner circulator blades and a plurality of outer circulator blades, an intermediate circulator rim member to which the adjacent ends of said inner and outer circulator blades are connected, said inner circulator blades being pitched to urge liquid downwardly through said well, and said outer circulator blades being pitched to urge liquid upwardly through adjacent tubes, an annular skirt member carried by said heat exchange structure adjacent to and in concentric relation with said intermediate circulator rim member, said annular skirt member having a diameter greater than that of the down-flow well to include the innermost tube ends whereby the inner circulator blades are operative to move liquid through said well and such innermost tubes, the latter supplementing the well to produce a more closely balanced relation between upward and downward liquid flows in the structure, said outer circulator blades having their respective axes forwardly pitched in the direction of rotation relative to corresponding radii whereby the tip portions of said outer circulator blades lead the root portions thereof to apply radially inward force to the liquid acted thereupon, in opposition to centrifugal forces on such liquid, tending to concentrate the flow of liquid through said tubes.

2,944,601
WINDSHIELD COVER
Eve S. Compson, 446 Bridge St., Lyons, Mich.
Filed Dec. 5, 1957, Ser. No. 700,915
1 Claim. (Cl. 160—368)

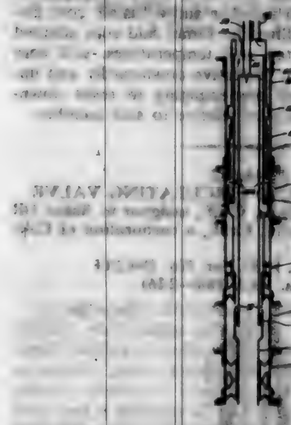
A detachable structure for temporarily covering an automotive windshield, comprising in combination: a plurality of fastening devices, each device including a flange defining a flat wall having a windshield engaging surface, and a shank projecting from said flange in a direction opposite to said windshield engaging surface, said shank having an enlarged, fastening knob at the outer end thereof; pressure sensitive adhesive means secured to said fastening device and applicable to the windshield engaging surface for permanently adhering said fastening device to a selected portion of a windshield; a disk having adhesive material on one side thereof and an opening substantially in the middle thereof, said disk receiving the fastening knob through its said opening and overlying the flange of said fastening device and adapted also to overlie the portion of the windshield immediately surrounding said flange upon said fastening device being applied to said selected portion of the windshield and thereby effecting further holding of said fastening device to said windshield; a cover comprising a rectangular sheet of flexible, resiliently stretchable and transparent polyethylene of approximately the shape and size of the windshield to be covered and having a group of relatively small openings spaced uniformly from each other and



dispersed over a large area at one end of said cover, and a similar group of relatively small openings uniformly spaced from each other and dispersed over a large area at the other end of said cover, said openings being slightly larger than said shank and slightly smaller than said knob and receiving said shanks of said fastening devices respectively through selected ones of said openings, the resiliency of said cover sheet being sufficient to permit stretching of said sheet a distance substantially equal to the spacing between adjacent openings, whereby if the fastening devices are placed anywhere upon the windshield in the regions covered by said areas of said cover having said groups of openings therein, the cover can be stretched sufficiently to enable the shank of each of the fastening devices to project through one of said openings and thereby hold said cover snugly against said windshield, said openings being resiliently enlargeable by stretching thereof so that said knobs may pass therethrough and said openings may thereafter return to their original size so that said cover releasably engages said shanks.

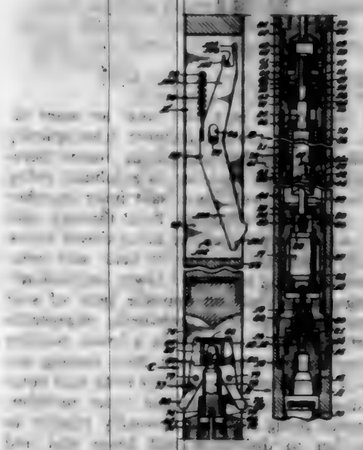
2,944,602
TRIPLE PRODUCTION PACKERS
Cicero C. Brown, % Brown Oil Tools, Inc., 2216 Campbell, Houston, Tex.
Filed May 17, 1954, Ser. No. 430,229
15 Claims. (Cl. 166—46)

9. The method of producing well fluids from a well having a trio of fluid producing zones which includes, setting a lower packer unit having a bore therethrough within the well bore above a first producing zone and below a second producing zone, setting an intermediate packer unit having a bore therethrough within the well bore above the second producing zone and below a third producing zone, thereafter lowering into the well on first and second flow conductors a combined flow control assembly and upper packer unit having a depending flow conduit means provided with a plurality of flow passages, setting said upper packer above the third producing zone and projecting said flow conduit means through the bores of the intermediate and lower packers to seal therewith when the upper packer is set, one of said passages in said flow conduit means establishing communication between the area below the lower packer unit and one of the flow conductors, another of said flow passages in said flow conduit means establishing communication between the area between the intermediate and lower packers and the well bore above the upper packer unit, and a third one



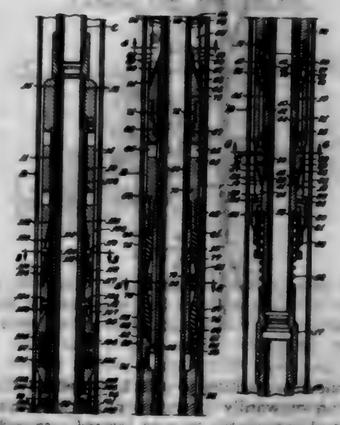
of said flow passages in said flow conduit means establishing communication between the area between the intermediate and upper packers and the second flow conductor.

2,944,603
SUBSURFACE ELECTRIC CURRENT GENERATING APPARATUS
Reuben C. Baker, Coalinga, Thomas M. Regan, Downey, and Cecil W. Wann, South Gate, Calif., assignors to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 30, 1956, Ser. No. 562,237
19 Claims. (Cl. 166—65)



1. In well apparatus adapted to be disposed in a well bore: a device to be operated in the well bore; a generator disposable in the well bore with its axis longitudinally of the well bore and electrically connected to said device for supplying current to said device; a spring motor, said motor including a drive shaft member substantially coaxial of said generator connected to said generator to rotate the same and a nut member surrounding said drive shaft member, means mounting said nut member for longitudinal slidable movement and against substantial rotation with said shaft member, one of said members having a helical thread thereon and the other of said members having means thereon engaging said thread, a spring for shifting said nut along said shaft to rotate said shaft, means connected to said spring for retaining said spring in a stressed condition and for preventing operation of said spring, said retaining means including releasable brake means, and means for releasing said brake means to permit said spring to shift said nut along said shaft.

2,944,604
RETRIEVABLE WELL PACKER
Reuben C. Baker, Coalinga, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 30, 1956, Ser. No. 619,281
19 Claims. (Cl. 166—131)



1. In apparatus of the character described to be set in a well conduit: a body; an inner expander on said body; a segmental outer expander on said inner expander and adapted to occupy a retracted position on said inner expander and to be expanded laterally outward by said inner expander upon longitudinal movement with respect to said inner expander; slips engageable with said outer expander to be expanded laterally outward by said outer expander; said inner and outer expanders having coengageable surfaces tapering in one longitudinal direction toward the axis of the body; said outer expander and slips having coengageable surfaces tapering in the opposite longitudinal direction toward the axis of the body; means for moving said slips longitudinally of said outer expander and laterally outward into engagement with the conduit; and means secured to said body for movement therewith and engageable with said outer expander for imposing a force exerted in said opposite longitudinal direction on said outer expander to hold said slips engaged with the conduit.

2,944,605
MEANS FOR CARRYING OUT A REMOVABLE FLOW TUBE PROGRAM
William W. Dollison, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Filed July 25, 1958, Ser. No. 750,946
16 Claims. (Cl. 166—143)

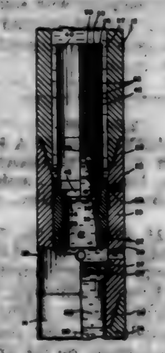
1. A well tool comprising an elongated tubular mandrel having an axial bore therethrough, an outwardly extending and downwardly facing seating surface on the upper end of said mandrel, a collet sleeve mounted for longitudinal sliding movement on the exterior surface of the lower end of said mandrel between upper, intermediate and lower positions thereon, said collet sleeve hav-

ing a plurality of longitudinally extending flexible ribs, said ribs having an outwardly extending projection and an inwardly extending projection thereon intermediate their ends, a recess formed in said mandrel adjacent said sleeve, said recess having a closed lower end, shear screw means extending through said sleeve into said recess and freely movable therein to allow normal movement of said sleeve between said upper and intermediate positions on said mandrel and engageable with the closed lower end of said recess to normally prevent movement of said sleeve from



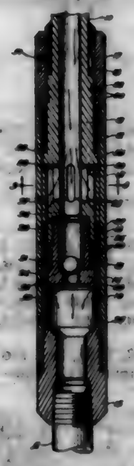
said intermediate position to said lower position on said mandrel, an outwardly extending projection formed on said mandrel engageable by said inwardly extending rib projections when said sleeve is in its intermediate position said mandrel having first and second annular grooves therein one above and one below said outwardly extending projection into which said inwardly extending rib projection may flex when said sleeve is in its upper or lower positions on said mandrel, and packing means mounted on the exterior of said mandrel between said downwardly facing seating surface and said sleeve.

2,944,606
FILLING DEVICE
Frank E. O'Neill, Glendale, Calif., assignor to Johnston Testers, Incorporated, Houston, Tex., a corporation of Texas
Filed July 26, 1956, Ser. No. 600,233
9 Claims. (Cl. 166—194)



1. A go-devil for engaging and actuating a sleeve valve in a pipe string within a well comprising an elongated cylindrical member having a longitudinal passage therethrough, said member having an outer wall portion sized to maintain said member in upright position within a pipe string, sealing means for valve sleeve engagement at the lower end of said member and a fusible core disposed in said passage filling the same, said core adapted to be softened at selected well temperatures, said core and said member having respective downwardly and upwardly facing shoulders inter-engaging to resist downward movement of said core relative to said member.

2,944,607
TUBING TESTER AND CIRCULATING VALVE
Reuben C. Baker, Coalinga, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Nov. 24, 1953, Ser. No. 394,111
5 Claims. (Cl. 166—226)



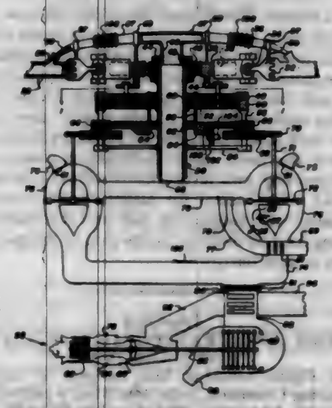
1. In a well tool for use in a well bore: an outer tubular member; an inner tubular member telescopically arranged in said outer member and having means thereon for attaching said inner member to a tubular string to lower the tool in the well bore; said inner member having a side port for discharging fluid through said outer member and said inner member being closed below said port against downward passage of fluid; said inner and outer members having upper and lower longitudinally spaced coengageable seals on opposite sides of said port; said upper and lower seals both being engageable when said inner member is disposed in a lower position within said outer member to prevent fluid passing out through said port from flowing upwardly from said outer member and downwardly through said outer member; said inner member being shiftable upwardly relative to said outer member to disengage said lower seal and permit fluid pumped down said inner member to pass into and down through said outer member; said outer member having a longitudinally extending key; said inner member having a flange engageable with the upper end of said key to prevent downward movement of said inner member within said outer member to hold said lower seal disengaged, said flange having a slot for receiving said key to allow said inner member to move downward within said outer member to engage said lower seal, and means on said inner member engageable with said key upon turning of said inner member within said outer member to selectively align said slot with said key or disalign said slot with said key.

2,944,608
CENTRALIZING SPIDER FOR WELLS
Robert M. Rush, Springfield, Ohio, assignor to Robbins & Myers, Inc., Springfield, Ohio, a corporation of Ohio
Filed Mar. 25, 1958, Ser. No. 723,694
1 Claim. (Cl. 166—241)



An adjustable centralizing spider for centering a pipe within a well casing, comprising a one-piece member of rubber having at each end a split collar element having an annular groove thereabout, and a clamp seated in said groove, whereby it is adapted to be clamped about said pipe, and a plurality of spaced limbs extending between said collar elements, whereby the external diameter of said spider may be varied by varying the spacing between said collar elements when clamped about said pipe, each of said limbs, substantially midway between said collar elements, being provided with a notch facing toward the axis of the device and a convex bead on the side thereof facing outwardly from the axis of the device, to provide a preferential point of outward flexure midway of its length, whereby said device may contact the inside wall of said casing substantially midway between said collar elements and thereby center said pipe within said casing.

2,944,609
HELICOPTER POWER TRANSMISSION SYSTEM
Igor I. Sikorsky, Easton, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed June 1, 1956, Ser. No. 588,737
18 Claims. (Cl. 170—135.4)



1. In a helicopter, a body, a rotor supported for rotation on said body, gear means for driving said rotor, said gear means including a master gear, said master gear being journalled for rotation about the axis of rotation of said rotor, a plurality of turbines arranged about the periphery of said master gear, each turbine having a gear with a driving connection with said master gear, a manifold connected to the inlets of said turbines for supplying fluid under pressure to drive said turbines, and means for supplying fluid under pressure to said manifold, said last named means including two compressors each driven by a separate prime mover, the outlet of one compressor being connected to said manifold between a pair of turbines, the outlet of the other compressor being connected to said manifold between another pair of turbines.

2,944,610
ROTOR BLADE COUNTERBALANCE MEANS
Eugene M. Gluhareff, Manhattan Beach, Calif., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Original application July 28, 1951, Ser. No. 239,695. Divided and this application Aug. 24, 1956, Ser. No. 606,535
1 Claim. (Cl. 170—160.27)

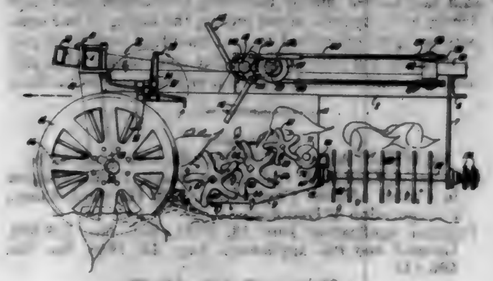


In a helicopter rotor, a shaft, a ring, said ring being mounted in relation to said shaft for universal movement, a first elongated member of airfoil section extending outwardly from said ring, a second elongated member of airfoil section extending outwardly from said ring at a point diametrically opposed from said first elongated member, means for fixing said first elongated member to said ring for integral movement therewith, means for mounting said second elongated member to said ring for rotation, said last named means including a spar extending outwardly from said ring at a point diametrically opposed from said first elongated member, means for fixing said spar to said ring for integral movement therewith, said spar extending into said second elongated member, bearing means located between said spar and said second elongated member permitting free relative motion therebetween, a counterweight located at the free end of said spar enclosed by said second elongated member, pitch changing means operatively connected to said first elongated member for changing the pitch of said first member and rotating said ring and spar, said spar rotating within said second member without affecting the pitch of said second member.

2,944,611
BEET HARVESTER AND CLEANER
Eugene C. Rollins, % Gen. Machine Co., P.O. Box 1330, Ogden, Utah
Filed Apr. 7, 1958, Ser. No. 726,732
3 Claims. (Cl. 171—58)

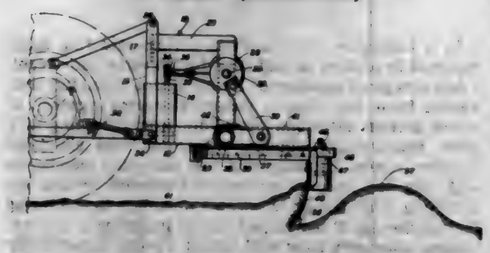
1. A beet harvester comprising: a frame; a pair of beet wheels mounted on the front end of said frame; forward, intermediate, and rear parallel sets of transversely spaced transfer and cleaning spiders mounted on said frame transversely thereof and rearwardly of said beet wheels, each of said spiders including outwardly extending fingers, the spiders of said intermediate set of spiders being interdigitated with the spiders of said forward and rear sets of spiders; pads mounted on the outer ends of the fingers of the spiders of the intermediate set of spiders; means for rotating said spiders so that the upper sides thereof rotate towards the rear of said harvester; a set of transversely spaced discs journaled in said frame rearwardly of said rear set of spiders, said discs

being in interdigitating relationship relative to the spiders of said rear set of spiders; and means for rotating said



discs in a direction reverse from the direction of rotation of said spiders.

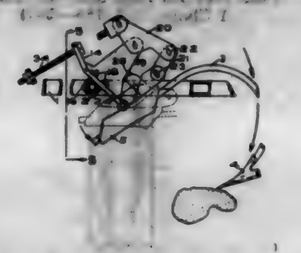
2,944,612
IRRIGATION FURROW FORMER
William Elmer Rood, Jr., Phoenix, and James De Lafayette Williams, Glendale, Ariz., assignors to Clarence S. Hadlock, doing business as Hadlock Welding and Machine Works, Mesa, Ariz.
Filed Sept. 21, 1953, Ser. No. 381,244
3 Claims. (Cl. 172—118)



1. In a mobile earth moving device for forming a series of spaced transverse furrows in a first field area lying between an irrigation ditch and a second field area comprised of row crop furrows extending away from the ditch, the combination comprising a blade disposed at ground level to the rear of a tractor having a power take-off, the blade being transverse to the direction of movement of the device and extending substantially across the first area and the transverse wheel base of the tractor, and crank means connected to the blade and power take-off to be automatically responsive to the movement of the device along the ground for moving the blade up and down in a predetermined cycle to form a series of furrows extending transverse to the direction of tractor movement and which are at a length substantially greater than the distance across each irrigation furrow, each irrigation furrow formed in the first field area matching a respective row crop furrow.

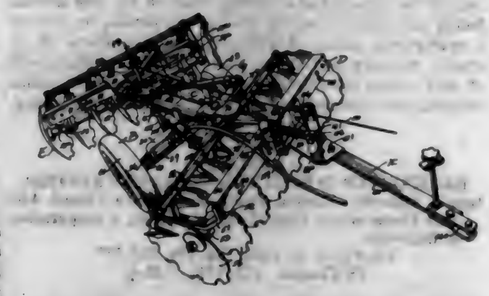
2,944,613
SPRING RELEASE MOUNTING FOR CULTIVATOR SHANK
Peter B. Anderson, Southey, Saskatchewan, Canada
Filed Sept. 9, 1957, Ser. No. 682,938
4 Claims. (Cl. 172—266)

1. An attachment for suspension of a shovel carrying shank on a cross bar of a cultivator frame including a body plate attachable to said cross bar, a shank holder having a bore lengthwise thereof oversize of the shank, means for pivotal suspension of said holder intermediate its length from the body plate, and pivotal mounting means for said shank including a bolt through the holder vertically disposed, said shank having an opening therethrough adapted for loosely mounting the shank on the bolt within the holder to pivot vertically and horizontally relative to the holder, and the bore of the holder having the rear end portion of the upper side tapered upward and



rearward and the opposing lower end portion tapered downward and rearward, and the front end portion of the upper side tapered upward and forward and the lower end portion opposed thereto tapered downward and forward.

2,944,614
OFFSET HARROW
John W. Shipp, Athens, Tenn., assignor to Athens Plow Company, Athens, Tenn., a corporation of Tennessee
Filed Apr. 14, 1958, Ser. No. 728,249
13 Claims. (Cl. 172—316)

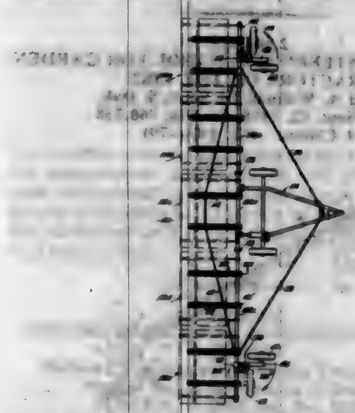


1. In a tractor driven type offset disc harrow the combination of front and rear gangs, a main beam connecting said gangs together for angled adjustment thereof, a cross beam connected to said main beam and extending to each side of said main beam, wheels, lever means rotatably supporting said wheels on aligning axes upon said cross beam at each side of the main frame, hydraulic mechanism upon the main beam including a piston rod, and a rod connecting said lever means with the piston rod to move said lever means for elevating and lowering the said wheels, said connecting rod and hydraulic mechanism being located entirely to one side of the gang mounting beam of said harrow.

2,944,615
SUPPORT AND TRANSPORTING STRUCTURE FOR HARROWS
David A. Clark, Atherton, Mo., assignor to Clark Manufacturing Company, Atherton, Mo., a partnership
Filed Mar. 26, 1956, Ser. No. 573,675
2 Claims. (Cl. 172—456)

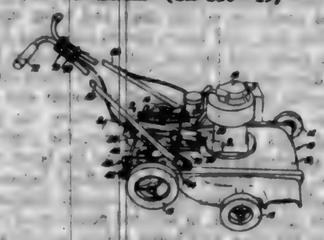
1. In an implement carrier, a mobile vehicle having a chassis; an elongated, horizontal drawbar member having a central length and a pair of end lengths; universal joints connecting the end lengths with the central length, permitting vertical and horizontal swinging movement of the end lengths relative to the central length; a plurality of normally horizontal arms secured to the member

and extending laterally therefrom; a ground wheel supporting the terminal end of each end length respectively when the arms are horizonal; means for attaching an implement to the arms with the latter overlying the implement when the arms are horizontal; means mounting said central length on the chassis for rotation of the member about a horizontal axis to swing the arms and the implement attached thereto to a vertical position; and



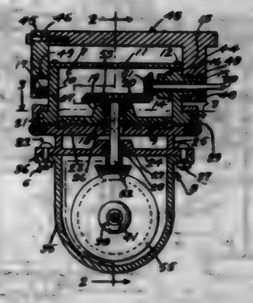
means attaching the wheels to the end lengths for movement to a position supporting the latter when the arms are vertical and said end lengths are swung to a transport position in angular relation to the central length, said means attaching the wheels each including a tube rotatable on the corresponding end length, a beam swingable on the tube, and means mounting the wheel for rotation on the beam.

2,944,616
POWER DRIVEN LAWN MOWER
George R. Bernard and Charles F. Falkenberg, Kansas City, Mo., assignors to Lazy Boy Lawn Mower Co., Inc., Kansas City, Mo., a corporation of Missouri
Filed Dec. 8, 1958, Ser. No. 778,925
1 Claim. (Cl. 180—19)



In a rotary blade type, power lawn mower, a housing having a front and a rear; a plurality of ground-engaging wheels, including a rear pair thereof, rotatably mounted on said housing and rendering the latter mobile; a pair of upright brackets mounted on said housing adjacent the rear thereof and spaced apart laterally of the latter, each of said brackets having an elongated slot therein, said slots being aligned; an elongated lever member for each bracket respectively pivotally mounted intermediate its end of the corresponding bracket for swinging movement about aligned, horizontal axes below and rearwardly of said slots, forward portions of said members extending forwardly across said slots, rear portions of said members extending rearwardly alongside said rear pair of wheels and above the axes of rotation of the latter; spring means oppositely coupled with said members and said housing for yieldably biasing said rear portions of the members downwardly; a horizontal shaft rotatably carried by said rear portions of the members extending transversely of said housing above a part of each of said rear pair of wheels; a pair of driving rolls mounted on said horizontal shaft for rotation therewith and disposed to drivingly engage the corresponding ones of said rear pair of wheels when said rear portions of the members are in their downwardly biased positions; a pulley mounted on said shaft for rotation therewith; an engine on said housing; a vertical shaft rotatably mounted on said housing and operably coupled with said engine for rotation by the latter; belt means continuously operably coupling said vertical shaft with said pulley for driving the latter whenever said engine is running; a mower handle extending rearwardly from said housing and having a side element for each bracket respectively pivotally mounted adjacent its lowermost extremity on the corresponding bracket for swinging movement about aligned, horizontal axes below and forwardly of said slots; a horizontal cross rod extending laterally of said housing, above said forward portions of the members in engagement therewith, through said slots and into connection with said elements at opposite ends of said rod, said rod being shiftable with said elements when the handle is swung downwardly to swing said members for moving said rolls out of operative engagement with said rear pair of wheels; a lock element pivotally mounted on said housing for swinging movement about a horizontal axis extending laterally of the housing, said lock element having a notch therein for receiving and holding said rod against upward movement when said rod is shifted and said lock element is swung to one extremity of its path of travel; and means on said handle operably coupled with said lock element for shifting the latter to and from said extremity of its path of travel.

2,944,617
DIFFERENTIAL MOUNTING FOR A MOTOR VEHICLE
William E. Harris, 3245 Park Ave., Paducah, Ky.
Filed July 29, 1959, Ser. No. 830,262
1 Claim. (Cl. 180—42)



In combination with a vehicle chassis portion having longitudinally spaced journal means; a differential housing including an upper housing section provided with outwardly projecting trunnions engaging in said journal means and swingably mounting said upper housing section in said chassis portion for swinging movement about a substantially horizontal axis disposed longitudinally of the chassis portion, a lower housing section including a bottom portion having an open top and a top portion detachably secured to said bottom portion and closing the open top thereof, said top portion including spaced substantially parallel walls having aligned openings, said upper housing section defining an upper chamber of the differential housing and including a bottom wall having an outwardly projecting surrounding annular flange, con-

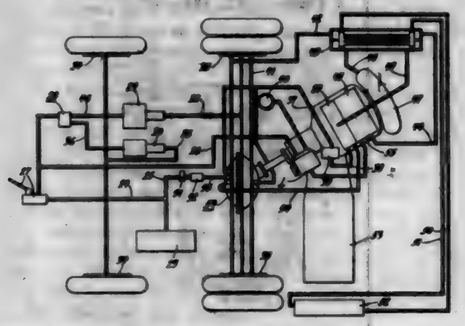
necting members of angular cross section detachably secured to said top portion and engaging around said annular flange for detachably and swivelly connecting the lower housing section to the upper housing section for swivel movement of the lower housing section relative to the upper housing section about an axis disposed crosswise of the axis of said journal means, antifriction bearing means interposed between said bottom wall and one of the walls of said top portion, disposed adjacent said bottom wall, said bottom wall having an opening aligning with the openings of said walls of the top portion, a shaft extending through and journaled in said wall openings and disposed to coincide with the swivel axis of the differential housing, one of said trunnions being tubular to provide a bearing, a drive shaft having a portion journaled in said trunnion bearing and extending into the chamber of the upper housing section, meshing bevel gears contained within said chamber of the upper housing section and secured to adjacent ends of the first mentioned shaft and said drive shaft, said lower housing section defining a lower chamber of the differential housing, disposed beneath the top portion thereof, into which the other end of said first mentioned shaft extends, a differential contained in said lower chamber, the axis of said differential being disposed perpendicular to the axis of said first mentioned shaft, said bottom portion having bearings aligning with the axis of said differential, axles connected to said differential and extending through and journaled in said last mentioned bearings, and a bevel gear disposed within said bottom chamber and secured to said first mentioned shaft and meshing with a bevel gear of the differential.

2,944,618

HYDRAULIC COOLING SYSTEM FOR BRAKES, TRANSMISSION, TORQUE CONVERTER AND DIFFERENTIAL

Hans O. Schjolin, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,678
6 Claims. (Cl. 188—54)



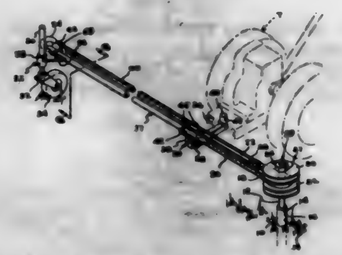
1. In a fluid vehicle cooling system the combination of a fluid actuated and cooled brake comprising; an air reservoir, a treadle air control valve, conduit means connecting said reservoir to said treadle air control valve, an air proportion valve, air-operated hydraulic master cylinders, conduit means connecting said air control valve with said air proportioning valve and said air-operated hydraulic master cylinders, a braking means, fluid conduit means connecting said braking means with said hydraulic master cylinder, a fluid-cooling system comprising a fluid pump with a control valve, a reservoir, a filter, and a heat exchanger, conduit means connecting said fluid pump, said braking means, said filter, said heat exchanger, and said reservoir, a differential, transmission, and torque converter cooling and lubricating system comprising, a second reservoir, a second pump, a differential, a transmission, and a torque converter, conduit means connecting said parts of said lubricating and cooling system, air conduit means for connecting said pump air control valve to said air reservoir through said treadle air control valve to provide cooling of said brake when said brakes are actuated.

2,944,619

AUTOMATIC STEERING CONTROL FOR GARDEN TRACTORS OR THE LIKE

Alferd A. Walkup, De Smet, S. Dak.

Filed Sept. 12, 1958, Ser. No. 760,758
9 Claims. (Cl. 180—79)



7. An automatic control for a ground-working machine comprising a stationary center post; boom means extending radially from and having an inner end rotatably connected to the center post; a carriage movably supported upon and adapted to travel longitudinally of the boom means; means for connecting a ground-working machine to the carriage so as to cause the boom means to turn about the post responsive to forward movement of the machine; a pair of discs fixedly connected to said center post; cable means wound in opposite directions about the respective discs and extending longitudinally of the boom means, said boom means including an idler sheave at the outer end thereof about which the cable means is trained, said cable means being connected to the carriage, whereby said machine will travel through a spiraling path responsive to forward motion thereof, with the cable means being wound upon one of the discs and being unwound from the other disc, said boom means including a caster wheel at the outer end thereof, said caster wheel having a vertically disposed post adjustable in a vertical direction so as to provide for positioning of the outer end of the boom means at a selected elevation above the ground surface, said discs being mounted upon the center post for vertical adjustment above and below the boom means, whereby the boom means will be confined between the discs and will be engaged thereby against displacement axially of the center post, in selected positions of vertical adjustment of the discs, said boom means including a pair of closely spaced rails fixedly connected in transversely spaced, parallel relation, said carriage including vertically extending, peripherally grooved rollers disposed between the rails in engagement therewith.

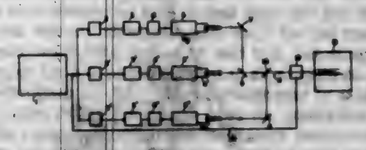
2,944,620

METHOD OF RECORDING SEISMOGRAMS AND OF PREPARING DERIVED SEISMOGRAMS

Willem Johannes Dominicus Van Dijck, The Hague, Netherlands, assignor to Shell Oil Company, a corporation of Delaware

Filed May 3, 1955, Ser. No. 505,752
Claims priority, application Great Britain May 4, 1954
5 Claims. (Cl. 181—5)

1. In a method of seismic exploration, the steps of generating seismic waves having a wide spectrum of frequencies, converting said seismic waves into electrical oscillations having a corresponding spectrum of frequencies, assigning to at least one band within said spectrum a particular color of the color spectrum, recording said electrical oscillations in the form of a variable area color seismogram, controlling the instantaneous amplitudes of



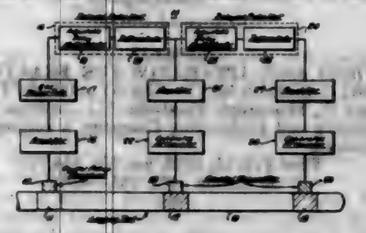
the variable areas on said seismogram as a function of the instantaneous amplitudes of said electrical oscillations, and controlling the intensity of said particular color in said seismogram as a function of the predominance of the oscillations of the corresponding frequency band in said seismic waves.

2,944,621

TESTING DEVICE FOR ACOUSTICAL LOGGING SYSTEM

Robert J. Loofbourrow, Ballinger, Tex., assignor to Texaco Inc., a corporation of Delaware

Filed Feb. 6, 1956, Ser. No. 563,579
11 Claims. (Cl. 181—5)



1. An acoustical testing device for testing the operation of an acoustical velocity well logging system which has means for producing acoustic energy and means for receiving acoustic energy, said device comprising an acoustical receiving transducer operatively coupled to said acoustic energy producing means for converting said acoustic energy into first electric energy, means responsive to said electric energy for producing delayed electric energy at a predetermined time after the arrival thereat of said first electric energy, an acoustical transmitting transducer operatively coupled to said acoustic energy receiving means at a point spaced from said acoustical receiving transducer for converting said delayed electric energy into second acoustic energy for transmission to the receiving means of the acoustical velocity logging system and a calibrated attenuator interposed between said delayed electric energy producing means and said transmitting transducer for controlling the strength of the delayed electric energy applied to said transmitting transducer.

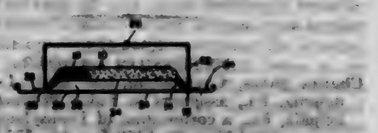
2,944,622

SOUND ABSORBING STRUCTURE

Mark Dobbins, Detroit, Mich., assignor to Fenestra, Incorporated, Detroit, Mich., a corporation of Michigan

Filed Jan. 28, 1957, Ser. No. 636,823
7 Claims. (Cl. 181—33)

1. A sound absorbing member for use in a hollow panel having a perforated lower wall, said member being a unitary elongated body composed of loosely aggregated fibers lightly held together in form-sustaining relation, the upper and lower surfaces of said body along the edge portions thereof extending downwardly from an intermediate portion of said body and forming supporting leg



portions for said member, said downwardly extending leg portions having substantially greater density than the density of the intermediate portion of the member between said legs.

2,944,623

JET ENGINE NOISE REDUCER

Albert G. Bodine, Jr., 13120 Moorpark St., Van Nuys, Calif.

Filed Sept. 2, 1955, Ser. No. 532,202
3 Claims. (Cl. 181—43)



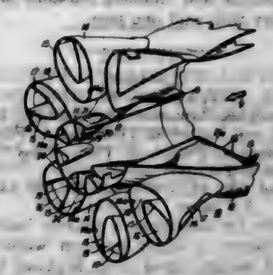
1. Jet engine noise reducing means compriaing the combination of: a non-rotatable sonic velocity jet duct and final exit nozzle having a constricted throat and a circumferential aft end, and a set of twisted vanes in said nozzle in the region of the constricted throat thereof, anterior of said aft end, and in the path of gas flow through the nozzle at sonic velocity, for imparting spin to the column of jet gases passing through said nozzle, whereby said column is radially expanded by centrifugal force.

2,944,624

JET NOISE SUPPRESSOR NOZZLE

Frederick William Walton Morley, Castle Donington, England, assignor to Rolls-Royce Limited, Derby, England, a company of Great Britain

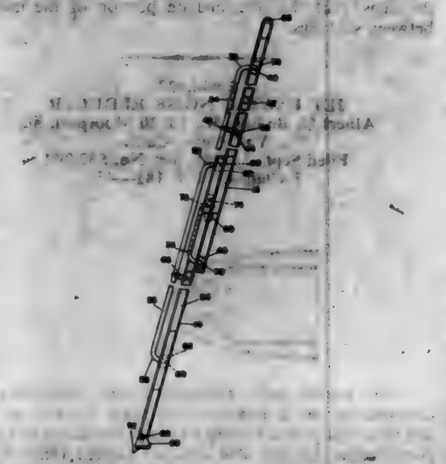
Filed July 25, 1958, Ser. No. 751,938
Claims priority, application Great Britain Aug. 7, 1957
11 Claims. (Cl. 181—51)



1. A noise suppressor nozzle for use on a jet engine comprising a central nozzle member, a plurality of individual nozzle members in a spaced arrangement around said central nozzle member, an internal wall member in and extending to the downstream end of each of said nozzle members, each said internal wall member being disposed to provide a longitudinal channel in its nozzle member for the flow therethrough of hot gases from a

jet pipe, each said internal wall member forming with the inner wall of its nozzle member a chamber which is open at its downstream end and closed at its upstream end, and means providing for flow of atmospheric air through each of said chambers in a downstream direction.

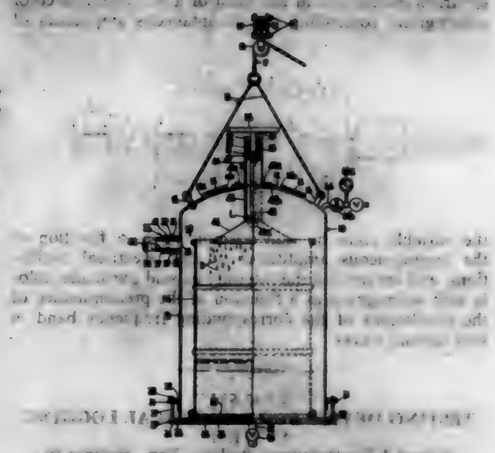
2,944,625
EXTENSION LADDER
Charles Shore, Cheltenham, and Ervin Leahner, Philadelphia, Pa., assignors to Falco Products Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 10, 1958, Ser. No. 772,968
2 Claims. (Cl. 182—106)



1. A light-weight metallic extension ladder comprising at least two slidably interconnected sections and means releasably latching said sections together in adjusted positions, each section including a pair of elongated legs of channel cross-section with the channels opening towards each other, and substantially flat steps whose ends are received and secured in said channels, said steps being spaced apart predetermined distances along the lengths of each section, said latching means including members pivoted at their ends to the legs of one section above one step thereof, said members having portions extending through apertures provided in said one step and open hook portions at their ends opposite their pivot points, said hook portions engaging a selected step of the other section and retaining the same in substantial vertical registry with said one step.

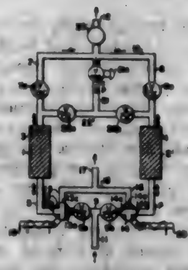
2,944,626
DEGASSING FLUIDS
Henry H. Douglas, Mountainside, Edward H. Follwell, Bloomfield, and Robert R. Tiefenthaler, Florham Park, N.J., assignors to Pittsburgh Plate Glass Company, a corporation of Pennsylvania
Filed Apr. 25, 1957, Ser. No. 655,146
3 Claims. (Cl. 183—2.5)

1. Apparatus for degassing a viscous liquid comprising a shell, means to apply vacuum within the shell, means to feed viscous liquid to be degassed to the shell, the latter means comprising a feed line having an outlet portion discharging downwardly into the top of the shell and having a circular lip upon the lower extremity thereof, a cone-like baffle disposed below the outlet portion with the apex thereof disposed coaxially upward with respect to the lip and having a base diameter several times greater than the diameter of the lip, whereby to distribute the liquid as it emerges from the outlet portion as a thin, flowing sheet, and means to vary the distance between the lip and the apex of the baffle from closed position to a position wherein the rate of flow is controlled to spread the liquid by wiping action of the lip acting as



a circular blade about the apex of the baffle to form a uniform film for degassing, the film being exposed to vacuum while flowing upon the baffle and being further exposed to vacuum as it drips from the edge of the baffle.

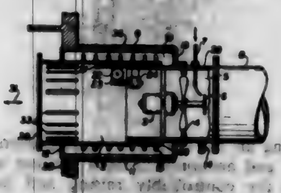
2,944,627
METHOD AND APPARATUS FOR FRACTIONATING GASEOUS MIXTURES BY ADSORPTION
Charles W. Skarstrom, Montvale, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Feb. 12, 1958, Ser. No. 714,780
36 Claims. (Cl. 183—4.7)



9. A method of fractionating a gaseous mixture of at least two components consisting essentially of the steps of flowing a feed stream of said gaseous mixture at a preselected initial relatively high pressure and in an initial positive flow direction through a fixed bed of an adsorbent, selective for at least one component of said mixture, for a first cycle time period less than required for said bed to come to equilibrium with said component, discharging the unadsorbed portion of said feed stream as a primary effluent stream; interrupting flow of said feed stream at the end of said first cycle period and reducing said initial pressure on said bed at the inlet end, desorbing said component from said bed at a reduced pressure, and discharging said desorbed component from said bed in a flow direction opposite to that of said feed stream of gaseous material, for a second cycle time period, during said second time period flowing at least a portion of

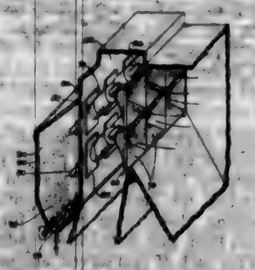
said primary effluent stream through said bed in the flow direction of said desorbed component and discharging said portion of primary effluent portion from said bed together with said desorbed component as a secondary effluent stream; said time periods being each of such short duration that the heats of adsorption and desorption are substantially balanced within said bed and that substantially the sole transfer of heat to and from the gas occurs in said bed, thereby eliminating the need for the transfer of heat externally with respect to said bed; adjusting said cycle periods for a duration adapted to develop an oscillating concentration gradient of said component in said bed which remains in the bed during both the adsorption and desorption cycle, and imparting oscillatory movement to said front substantially within the limits of said bed.

2,944,628
AIR CONDITIONING APPARATUS
Karl Sauter, Ulikon am Albis, Switzerland, assignor to Luwa Ltd., Zurich, Switzerland
Filed Oct. 2, 1956, Ser. No. 613,587
11 Claims. (Cl. 183—32)



1. In an air conditioning apparatus comprising: a movable case encompassing a mixing chamber; said case having an inlet orifice selectively in communication with a source of fresh air and/or a source of recirculated air for the admission of either or both fresh and recirculated air to the mixing chamber; a fan operatively positioned in conjunction with said mixing chamber to cause flow of an air stream thereinto; a relatively fixed housing surrounding said movable case, said housing having recirculated air apertures; a filter positioned over the apertures in said housing; and a heat exchanger arranged in the air stream produced by said fan, whereby the relative amounts of fresh air and recirculated air may be controlled by moving the movable case with respect to said housing to change the relative amounts of recirculated air and fresh air admitted to the mixing chamber through the inlet orifice.

2,944,629
TOBACCO SEPARATING APPARATUS
Oswald Erich Simmons, Richmond, Va., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Aug. 9, 1957, Ser. No. 677,314
9 Claims. (Cl. 183—34)



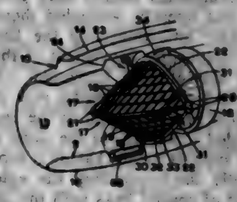
1. A separating apparatus for a tobacco processing machine comprising means for centrifugally separating foreign particles from a contaminated air stream, annular chambers formed in said separating means, ducts having intake openings for guiding the contaminated air stream into the annular chambers of said separating means, the inner surface of each of said ducts defining a smooth-walled uninterrupted channel having an open cross-section from the intake opening thereof throughout the annular chamber, the intake opening of said ducts being at an angle to said annular chamber, the surface area of the intake opening of said ducts having an outwardly flared form, all ducts being contiguously joined with each other at their extreme points of flare along all adjacent rim sections forming a bank and receiving their support from each other, said duct bank being vertically positioned across the total area of active entrance of the contaminated air stream, and support means for said separating means, said support means supporting said separating means in a region substantially removed from the intake openings of said ducts.

2,944,630
AIR LINE FILTER AND AUTOMATIC DRAIN VALVE
Eric Hoerner, P.O. Box 55, Dayton 1, Ohio
Filed Feb. 2, 1953, Ser. No. 269,651
4 Claims. (Cl. 183—42)



1. In a drain, a cup-shaped body member having an air inlet, a drain outlet and an annular seat, a tubular baffle in the body member, said baffle having a flange resting on the seat and notches adjacent the flange, a lid having an air outlet, said lid resting on the body member and on the flange on the seat and fitting closely around the notched part of the baffle, a stem in the baffle, said stem having on one end a valve structure to open and close the drain outlet, and on its other end a cup-shaped piston member having a flange fitting in the baffle adjacent the notches to open and close the notches to form passageways through the notches for the passage of air to the air outlet.

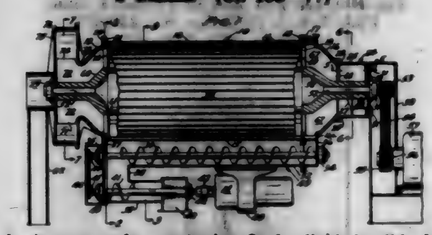
2,944,631
RETRACTABLE GUARDS FOR AIR INTAKES
Thomas Henry Kerry, Derby, and Peter Arthur Ward, Littleover, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Dec. 26, 1956, Ser. No. 630,643
Claims priority, application Great Britain Jan. 6, 1956
3 Claims. (Cl. 183—62)



1. A two section, retractable guard for the full cross-section of a non-annular air intake duct of an aircraft

gas turbine having a continuous substantially cylindrical wall, said guard sections being complementary when mated to extend across the whole path of fluid flowing in the duct and shaped to conform throughout their areas to the cylindrical configuration of the duct walls when retracted, means pivoting the downstream edges of said guard sections to said duct wall near a diameter thereof, the downstream edge of each guard portion interfitting closely with a portion of the wall of the duct to prevent the passage of debris therebetween when the guard is extended, a pocket in the duct wall in the area covered by each guard section when retracted to accommodate the debris which accumulated on the section when extended, and means out of the path of the fluid at all times to actuate the guard sections from retracted position to extended mating position and vice versa.

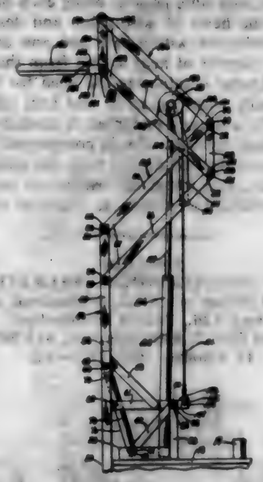
2,944,632
CENTRIFUGAL DUST COLLECTOR
Charles H. Whitmore, 2517 W. 66th St., Minneapolis, Minn.
Filed Sept. 11, 1956, Ser. No. 609,299
8 Claims. (Cl. 183—77)



1. Apparatus for separating finely divided solids from suspension in a gaseous medium which comprises, a fixed housing having a medial cylindrical body and an inlet portion with a tangential gas inlet in one end and an outlet portion with a tangential gas outlet at the other end thereof, a rotor coaxially journaled in close clearance within the housing and having elongated smooth-walled passageways formed generally parallel to the axis thereof, said rotor having peripheral-slotted openings communicating with each of said passageways, a plurality of vanes secured to said rotor coaxially therewith and lying in close clearance with the inlet end of said cylindrical body, a spirally bladed fixed pre-swirler interposed in the inlet portion adjacent said vanes whereby to preliminarily rotate the incoming gaseous medium and its divided solids suspended therein, and a work reclaiming element having blades secured coaxially with said rotor within said housing at the outlet end thereof.

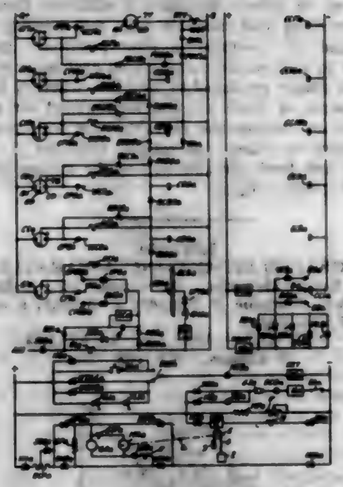
2,944,633
LOAD ELEVATING APPARATUS
Philip Richards, 9560 Columbia Drive N., Fresno, Calif.
Filed Sept. 30, 1957, Ser. No. 687,818
10 Claims. (Cl. 187—9)

1. An elevating apparatus comprising a base, a mast mounted in a substantially erect position on the base, a first pair of elevationally spaced links pivotally mounted on the mast and laterally extended therefrom, an end member pivotally interconnecting the links in substantially parallel relation for movement of the links relative thereto about substantially horizontal axes lying in a substantially erect plane, a second pair of elevationally spaced links pivotally connected to the end member and laterally extended therefrom to the same side thereof as the mast, load support means having a substantially erect portion pivotally interconnecting the extended ends of the second pair of spaced links with the links in substantially parallel relation, said links being elevationally pivotal about substantially horizontal axes lying in a substantially erect plane parallel to said plane of the axes of the end member, a sheave, means mounting the sheave on the first links in elevationally spaced relation thereabove, a flexible tension member extended over the



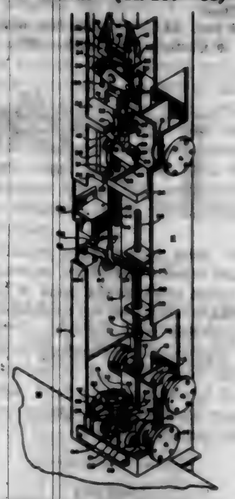
sheave having an end connected to the second links and an opposite end anchored in fixed relation to the mast, and means for controllably raising and lowering the sheave.

2,944,634
PREDICTED STOP DEMAND
John Edward Magee, 191 Forest Blvd., Ardsley, N.Y.
Filed July 24, 1959, Ser. No. 829,419
32 Claims. (Cl. 187—29)



1. An elevator dispatching and control system for a plurality of elevator cars serving a plurality of landings from a dispatching landing, said system comprising, means for selecting the cars for dispatching from said dispatching landing, dispatching means for dispatching said selected cars from said dispatching landing, predicted demand means for each of said served landings for permanently establishing an anticipated demand for service for the landing for which it is provided, registered demand means for each of said served landings operable for registering actual demand for service for the landing for which it is provided, and dispatching control means responsive to the total service demand established by said predicted demand means and registered by said registered demand means to which the then selected car is subject for causing said dispatching means to dispatch said selected car when such total service demand exceeds a certain amount.

2,944,635
SAFETY CONTROLS FOR ELEVATORS
Bruno A. Wilkalus, Skaneateles, N.Y., assignor to Hawkeye Products Corporation, Syracuse, N.Y., a corporation of New York
Filed Oct. 11, 1957, Ser. No. 689,682
7 Claims. (Cl. 187—29)



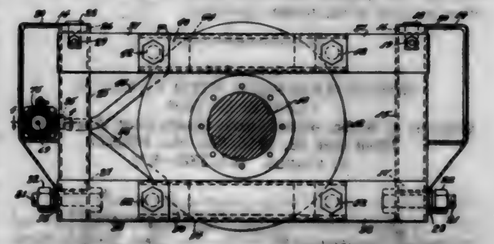
1. In an elevator structure including a cantilever type elevator car having a pair of cables operable to raise and lower the car and a fixed, upstanding structural member to guide the car during its movement: a safety device to prevent downward movement of the car in the event of breakage or stretching of either of said cables comprising a toothed safety pawl of hardened material pivotally mounted on said car adjacent said structural member, a first spring means normally holding said pawl out of engagement with said structural member, a plunger member mounted on said car for vertical movement between upper and lower limiting positions, means on said plunger member engaging said pawl, said last-named means being operable against the action of said first spring means to pivot said pawl into engagement with said structural member when said plunger is moved downwardly towards its lower position, a second spring means on said plunger member normally urging the member downwardly towards its lower position, a rocker arm pivotally secured intermediate its ends to the upper end of said plunger member, each of said cables being secured at one end to the ends of said rocker arm, said cables normally holding the arm against rocking movement on said plunger and also holding said plunging member in its upper position against the action of said second spring means, said rocker arm being rocked on said plunger member by either one of said cables upon the breaking or stretching of the other cable, and fulcrum means on said car engaged by said rocker arm when it rocks to cause said plunger member to move downwardly and pivot said safety pawl, said plunger member also being moved downwardly to actuate said pawl in the event of simultaneous breakage of both cables by said second spring means.

2,944,636
EMERGENCY BRAKE
Willard F. Rockwell, Pittsburgh, Pa., assignor to Rockwell-Standard Corporation, a corporation of Pennsylvania
Filed July 17, 1956, Ser. No. 598,329
6 Claims. (Cl. 188—29)



1. In an automotive vehicle having a frame suspended upon longitudinally spaced axles support at their outer ends by service brake equipped pneumatically tired ground engaging wheels, an auxiliary brake system for emergency use in stopping said vehicle in the event of failure of the service brakes thereof comprising a movable wall type expansible chamber type fluid motor, means mounting said motors on the vehicle frame with the movable walls thereof in outwardly adjacently spaced relation to the periphery of the pneumatic tire of the wheels at each of the opposite ends of at least one of said axles, means in each of said motors for guiding movement of the movable wall thereof adjacent the associated wheel upon expansion of the chamber of said motor between a retracted position remote from the wheel tire periphery and a braking position in braking contact with the wheel tire periphery, and selectively actuate means for simultaneously actuating said motors, the movable wall of said chamber being an elastomeric diaphragm exposed internally to fluid within said chamber and having an integral external frictional surface.

2,944,637
HYDRAULIC BRAKE SYSTEMS
John G. Knowles, 992 Huntingdon Pike, Huntingdon Valley, Pa.
Filed Sept. 16, 1957, Ser. No. 684,166
6 Claims. (Cl. 188—73)



1. A hydraulic brake system for a shaft comprising a brake disc carried by said shaft and having opposed face portions in non-parallel relation to each other longitudinally axially of said shaft, a fixedly mounted frame, spaced frame members in parallel pairs and in chordal relation with respect to said disc faces, mounting members connecting said frame and said frame members, a plurality of fluid operated expansible members carried by said frame members on opposite sides of the axis of the shaft, members interposed between said expansible members and said face portions for braking engagement with said face portions, a valve housing having spaced ports connected respectively to the interiors of said expansible members, a valve member in said valve housing, and an actuating member for said valve member, said valve

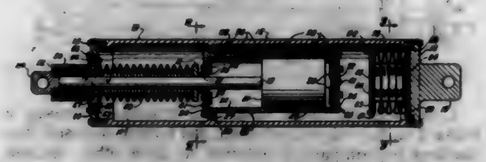
member being movable with respect to said ports to permit free flow between said ports, restrict the flow between said ports and cut off the flow between said ports.

2,944,638
DEVICE TO PREVENT MOVEMENT BEYOND PREDETERMINED RATE
Edwin F. Remmen, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 17, 1957, Ser. No. 634,658
7 Claims. (Cl. 188—96)



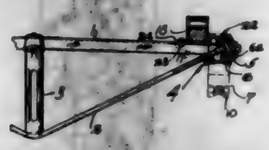
1. A hydraulic means to permit movement only below a predetermined rate, comprising, a housing having an opening in one end thereof, a double ended rod reciprocable relative to said housing through the opening, a piston having apertures therethrough attached centrally of said rod, a partitioning member slidably engaged by said rod to divide said housing into a reservoir chamber and a piston chamber of two portions, a check valve in each of several passages of said partitioning member capable of sealing off the reservoir chamber from the piston chamber, and valve means located on said piston and said rod on opposite sides of said piston, said valve means on each side including a pair of spring discs arranged parallel to each other, an annular member connected between the outer annular periphery of each of said discs and movable therewith thereby capable of effecting closing off of the apertures through said piston preventing movement exceeding a predetermined hydraulic flow about said ring and the periphery of said discs through the piston apertures from one portion to the other portion of the piston chamber.

2,944,639
SHOCK ABSORBER WITH VACUUM COMPENSATOR
William T. Blake, 4424 Morris Court, Fort Worth, Tex.
Filed July 30, 1956, Ser. No. 600,977
17 Claims. (Cl. 188—97)



1. A shock-resisting hydraulic mechanism comprising a housing, a cylinder having end and side walls mounted in said housing and providing a chamber between said cylinder and said housing, a wall of said cylinder having openings establishing communication between said cylinder and said chamber, a piston reciprocable in said cylinder between its end walls, a piston rod connected to the piston and reciprocably extending to the exterior through one of the end walls of said cylinder and sealingly through said housing, said chamber and cylinder being completely filled with a non-compressible fluid, and a substantially temperature insensitive compensating device exposed to the fluid in said chamber having a hermetically-sealed collapsible and expansible container member providing an enclosed space, said space being substantially evacuated to tend to collapse said container member under pressure of the fluid in said chamber, and spring means balancing said chamber member in expanded positions against the collapsing force of the fluid in said chamber as said force varies in response to temperature changes and displacement of said fluid due to reciprocation of said piston rod.

2,944,640
RAILWAY BRAKE BEAM STRUCTURE
Thomas C. Seddy, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 24, 1957, Ser. No. 636,182
6 Claims. (Cl. 188—207)



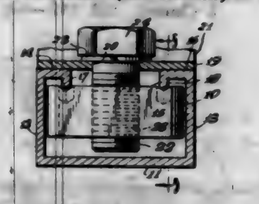
1. A railway truss brake beam structure comprising compression and tension members, converging from the middle of the beam towards the ends of the beam, there being rigid unitary structure at each end of the beam comprising a member for mounting a brake head and provided with a projection extending transversely of the beam and offset from the end of the beam lengthwise thereof inboard from the brake head mounting and including a hanger-receiving part spaced rearwardly from the compression member.

2,944,641
WALL CONSTRUCTION
Gerald D. Peterson, 1130 Parker Ave., Detroit, Mich.
Filed Dec. 6, 1954, Ser. No. 473,255
2 Claims. (Cl. 189—34)



1. A structure for attaching a plurality of structural members to the framework of a building comprising, in combination: an elongated framework member; first and second axially aligned structural members substantially parallel with the longitudinal axis of said framework member; third and fourth axially aligned structural members extending transversely to the longitudinal axis of said framework member, said four structural members having surfaces lying in a common plane spaced from, and parallel with, said framework member; a pair of angle members, each of said angle members having a first leg substantially parallel with said common plane and a second leg extending transversely to said common plane toward said framework member; first connecting means rigidly connecting the first leg of one of said angle members to said first structural member and said third structural member adjacent the proximate ends thereof; second connecting means rigidly connecting the first leg of the other of said angle members to said first structural member and said fourth structural member adjacent the proximate ends thereof; means rigidly connecting the second legs of said angle members to said framework member adjacent the ends of said second legs closest to said framework member, said second legs being of sufficient length between the point of connection thereof to said framework member and said common plane to be capable of flexing in a direction parallel with the longitudinal axis of said third and fourth structural members; a bracket fixedly secured to the end of said second structural member adjacent the other structural members, said bracket extending transversely to the longitudinal axis of said second structural member toward said framework member; means connecting said bracket to said framework member for pivotal movement with respect thereto in the direction of the longitudinal axis of said framework member.

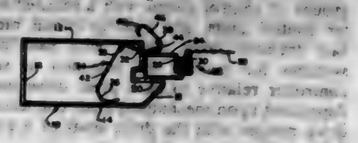
2,944,642
DISMANTLEABLE FRAMING STRUCTURES
Robert C. Evans, 14901 S. Michigan Ave., Dolton, Ill.
Filed Oct. 4, 1956, Ser. No. 613,933
1 Claim. (Cl. 189—36)



The combination of a framing member and a connecting nut wherein said framing member has a pair of spaced square edge flanges and said connector nut has spaced slots therein, each of which is engaged with the square edge of a flange of said pair of square edge flanges; the improvement in said combination wherein each of said slots extends for the width of said connector nut and the width of each slot is greater than the thickness of a flange engaged in said slot, each of said slots being deeper throughout the intermediate portions than at the ends thereof forming a knife edge at each end of each slot, said knife edges of each slot being in engagement with the square edge of an aforesaid flange.

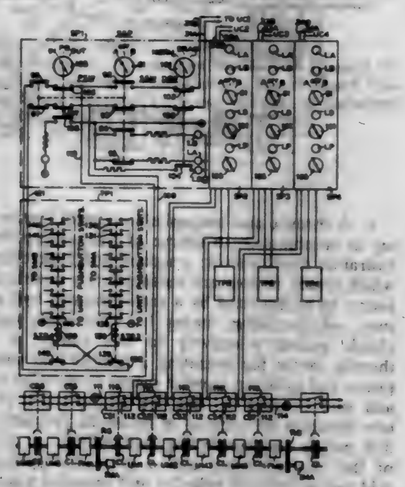
2,944,643
RETAINING DEVICE FOR REMOVABLE PANEL
Eric David, Baltimore, and Peter M. Aiello, Dundalk, Md., assignors to L.A.D. Industries, Inc., a corporation of Maryland
Filed July 29, 1957, Ser. No. 674,925
3 Claims. (Cl. 189—88)

1. An article of the type described, comprising a hollow box-like frame member having front, rear, and side walls and an abutment along one side thereof having substantially the same orientation as said front and rear walls, a panel having its rear surface against said abutment, and a panel retaining clip composed of a one piece detachable strip of resilient material having a first part extending between and tensed between said front and rear walls, a second part passing through the side wall adjacent said panel and tensed between said front wall and the front surface of said panel, and a third part extending from said second part and exposed for manual engagement to move said second part into and out of said frame



member, whereby said panel is detachably secured to said frame member, said first clip part having a curved extremity engaging said rear wall, the friction between said extremity and the rear wall being sufficient to cause said extremity to roll on said rear wall as said second clip part is moved into and out of said frame member.

2,944,644
MULTI-UNIT PRINTING-PRESS DRIVE
Fred Sandgren and Terrence Glueski, Chicago, Ill., assignors, by mesne assignments, to Electric Eye Equipment Company, Danville, Ill., a corporation of Delaware
Filed June 4, 1956, Ser. No. 589,150
29 Claims. (Cl. 192—82)



7. An alternating-current drive for a printing plant having folder units and press units, comprising folder drive motors and press drive motors all of the wound-rotor type each having primary terminals and secondary terminals and each having a drive shaft aligned with the drive shafts of the other motors; a clutch disposed between each two adjacent shafts for interconnecting said shafts to permit joining a selected number of said press units with a selected folder unit; an electric switch connected with each clutch and controlled thereby in dependence upon open and closed setting of the clutch; each of said motors having an individual control unit comprising a primary contactor connected to said primary terminals for controlling the supply of power thereto, a resistor circuit connected to said secondary terminals, and acceleration contactors connected with said resistor circuit for varying its resistance to control the motor speed; a plurality of master controllers equal in number to said folder drive motors, each of said master controllers hav-

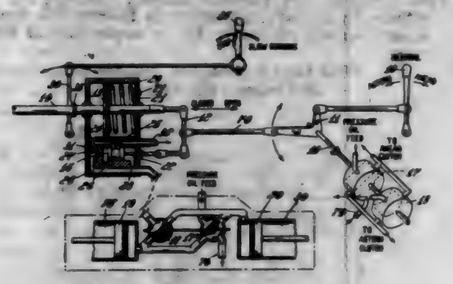
ing reversible sequencing switch means for controlling said contactors; groups of control means for controlling the sequencing switch means, each group being correlated to one of said respective folder units and press units; transfer relay means connecting said contactors in each of said control units and the associated one of said groups of control means with a selected one of said master control units, and electric circuit means connecting said transfer relay means with said clutch-controlled switches for making the selection of said one master controller relative to each press drive motor electrically dependent upon mechanical shaft connection of said press drive motors with the drive shaft of a given one of said folder units.

2,944,645

THROTTLE CONTROL SYSTEMS FOR ENGINES DRIVING FORWARD AND REVERSE GEARS

Basil Gervase Markham, Bristol, England, assignor, by mesne assignments, to Bristol Aero-Engines Limited, Bristol, England, a British company

Filed Dec. 19, 1955, Ser. No. 554,035
Claims priority, application Great Britain Dec. 9, 1955
5 Claims. (Cl. 192—.098)



1. A throttle and transmission control system comprising in combination; a source of hydraulic power; a first hydraulic clutch motor; a second hydraulic clutch motor, which clutch motors are independently connected to said source to be operated by a predetermined hydraulic pressure, selector valve means for connecting one of said clutch motors selectively to said source, a hydraulic throttle motor for operating a throttle and comprising a piston and cylinder; conduit means connecting said source and said cylinder so that the piston tends to move in one direction on increase of hydraulic pressure, said conduit means also connecting said cylinder to the said one of the clutch motors and a preloaded spring between said piston and said cylinder and opposing relative movement between said piston and said cylinder in said one direction, said spring being preloaded to an extent such that said piston moves relative to said cylinder only after said predetermined hydraulic pressure has been exceeded.

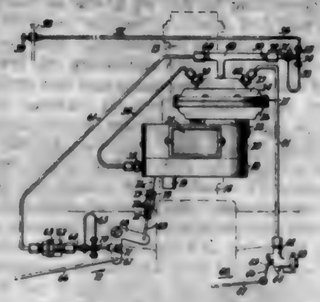
2,944,646

CARBURETTOR VACUUM CONTROL DEVICE

Victor George Willmer, Toorbul, via Caboolture, Queensland, Australia

Filed June 6, 1957, Ser. No. 664,011
Claims priority, application Australia June 8, 1956
2 Claims. (Cl. 192—3)

1. In combination with an internal combustion engine having a carburettor, an intake manifold, and an accelerator control for the carburettor; a control device entirely vacuum-operated free of the speed of said engine for reducing the vacuum on the carburettor during periods of engine-braking or vehicle over-running, said control device including a chamber connected in communication with the carburettor and intake manifold, said chamber having an inlet for atmospheric air, a vacuum break valve normally closing such inlet, means responsive solely to vacuum conditions extant within said manifold for opening said valve to admit atmospheric air to the chamber to neutralize vacuum in the carburettor and intake manifold, a lost-motion connection in said accelerator control,



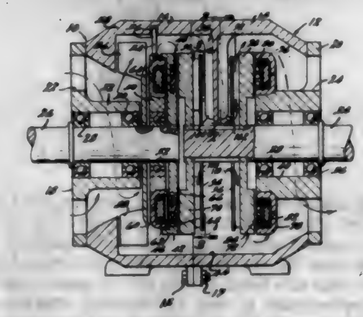
and de-control means connected to said accelerator control for rendering said vacuum responsive means inoperable coincident with initial movement of said lost-motion connection, whereby the vacuum control device is rendered inoperative upon actuation of the accelerator control before regulation of the carburettor thereby.

2,944,647

AIR COOLED CLUTCH-BRAKE

L Raymond Twyman, P.O. Box 204, Bloomfield Hills, Mich.

Filed May 17, 1957, Ser. No. 659,922
8 Claims. (Cl. 192—18)



5. In a power transmitting device, the combination comprising a housing defining a chamber having inlet and outlet openings, a clutch mechanism and a brake mechanism disposed in spaced substantially coaxial relationship within the chamber, fan means disposed within said chamber intermediate said inlet and outlet openings for creating a generally spiralling flow of air through the chamber from the inlet to the outlet openings, and means carried by said housing intermediate said mechanisms and effective to direct the rotational component of the air flowing through the chamber radially inwardly of said housing and between said mechanisms.

2,944,648

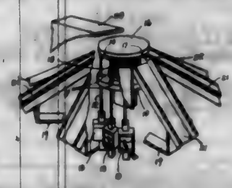
TILTING PLATE SEGREGATOR

Malcolm P. Haines, Indianapolis, Ind., assignor to Merz Engineering, Inc., Indianapolis, Ind., a corporation

Filed Mar. 12, 1958, Ser. No. 720,948
5 Claims. (Cl. 193—39)

1. A device for segregating material delivered thereto comprising a stationary base, a circular platform adapted

to receive the material to be segregated, support means for said platform extending from said base permitting tilting of the platform relative to the base and biasing said platform into horizontal position, material discharge chutes disposed in spaced relation about said platform, selectively energizable solenoid actuators disposed in



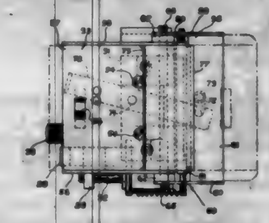
spaced relation about said platform and each adapted to tilt said platform a predetermined amount toward one or the other of said discharge chutes to release material thereto, and stop means carried by said platform engageable with cooperating abutments carried by said discharge chutes to insure registry of the tilted platform with the selected chute.

2,944,649

PRINTING DEVICE WORK HOLDER

Joseph Freedson, Cleveland Heights, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware

Filed Aug. 16, 1956, Ser. No. 604,379
10 Claims. (Cl. 197—6.6)



7. A work holder for locating and supporting any one of a plurality of blank printing devices or the like having substantially different dimensions in predetermined embossing positions upon the carriage of an embossing machine, said work holder comprising: a first guide member adapted to be mounted in fixed position upon said machine carriage and having a first guideway of predetermined width affording a blank-supporting surface extending transversely of said carriage; a second guide member having a second guideway substantially wider than said first guideway and affording a blank-supporting surface adapted to extend from said first card-supporting surface in substantially co-planar relationship with respect to said first guideway surface; a retaining member pivotally mounted upon said first guide member for movement between a clamping position closely adjacent said second guideway surface and an inactive position spaced from said second guideway surface; and resilient biasing means for maintaining said retaining member in said clamping position.

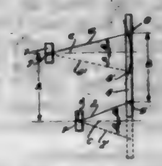
2,944,650

SHIFTING ARRANGEMENT FOR TYPEWRITERS

Hans Sippel, Furth, Bay, Germany, assignor to Triumph Werke Nurnberg A.G., Nurnberg, Germany

Filed Jan. 29, 1958, Ser. No. 719,180
Claims priority, application Germany Jan. 30, 1957
17 Claims. (Cl. 197—74)

1. Shifting arrangement for typewriters comprising, in combination, a support; a type lever carrier; first lever means having one end thereof connected to said carrier for turning movement; second lever means having one end thereof connected to said carrier for turning movement; first supporting means for supporting the other end of said first lever means for turning movement on said support; and second supporting means for supporting the other end of said second lever means for turning movement on said support, one of said supporting means including continuously adjustable threaded means in



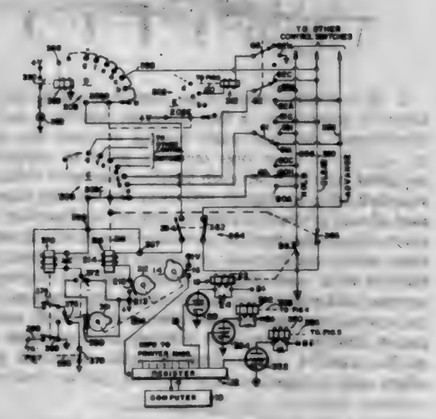
threaded connection with said support for placing the turning axis of the respective lever means in a selected position relative to said support whereby said carrier is supported by said lever means on said support for movement between two positions in which the upper case types and the lower case types of type levers supported on said carrier are adapted to be respectively located in the same position relative to a platen when in printing position.

2,944,651

FORMAT CONTROL

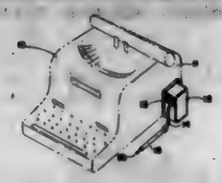
Donald H. Malcolm, Brooklyn Center, and Donald W. Martin, St. Paul, Minn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Filed May 7, 1958, Ser. No. 733,609
17 Claims. (Cl. 197—133)



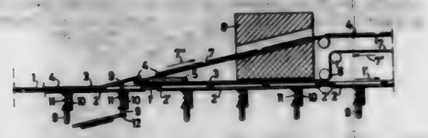
1. Apparatus for selectively controlling the vertical spacing between successive printable lines effected by a printing device operating in response to signals from a data processing system comprising a platen rotatable in steps corresponding respectively to said lines, means including step selecting means adjustable to any one of a plurality of positions for rotating said platen one or more of a like plurality of steps at a given time in accordance with the adjustment of said step selecting means, an electrical switch manually settable to a plurality of positions corresponding respectively to the plurality of positions for said step selecting means, and adjustment means for causing said step selecting means to be in a position corresponding to the setting of said switch.

2,944,652
TYPEWRITER ERASER
Emily S. Teters, 1213 SE. Bidwell St., Portland 2, Oreg., and Warren A. Atkins, 923 20th Ave., Longview, Wash., and William E. Strader, 863½ S. 3rd, Kelso, Wash.; said Atkins and Strader assignors to said Teters
Filed June 28, 1958, Ser. No. 743,316
9 Claims. (Cl. 197—181)



1. In a power-operated eraser and the like, a flexible shaft for driving the eraser, a reel receiving said flexible shaft when the eraser is not in use, and means operable by said reel to energize said flexible shaft when the flexible shaft is partially withdrawn from the reel.

2,944,653
CONVEYOR ARRANGEMENT IN PLANTS FOR MOULDING CHOCOLATE AND SIMILAR MASSES
Asgar Hansen, Herley, Denmark, assignor to Mikrovaerk A/S, Soborg, Denmark
Filed Nov. 1, 1954, Ser. No. 465,907
Claims priority, application Denmark Nov. 10, 1953
3 Claims. (Cl. 198—20)



1. In a confectionary mass moulding plant, the combination comprising a first conveyor having a series of interhinged carriages each having at least one pocket to receive at least one separate plate to support the moulded articles and each further having a raising device operative to engage and raise the leading edge portion of said plates from the bottom of said pockets while the trailing edge portion of said plates is still in engagement with said bottom, a second endless conveyor extending to a point slightly above said first conveyor to receive said plates therefrom, and a stationary structure to successively operate the raising devices of said carriages shortly before said leading edge portions arrive at the transfer region between both conveyors and to allow said devices to return to their bottom position.

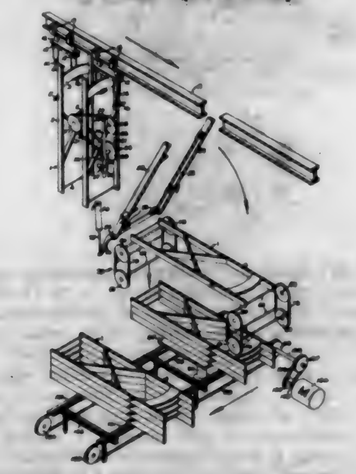
2,944,654
DEVICE FOR ALIGNING FILTER ROD PORTIONS IN FILTER TIP CIGARETTE MAKING MACHINES
Bernhard Schubert, Hamburg-Lohbrugge, Germany, assignor to Hauni-Werke Korber & Co. K.G., Hamburg-Bergedorf, Germany
Filed July 24, 1959, Ser. No. 829,361
Claims priority, application Germany July 25, 1958
5 Claims. (Cl. 198—32)

1. A conveying device for rod-shaped articles, such as filter bodies used in the manufacture of filter tip cigarettes, including a rotary drum provided on its circumference with axially arranged trough-shaped members for the reception of said rod-shaped articles, each of said members being divided so as to form a plurality of separate axially aligned parts, the center part of which is fixedly attached to the circumference of said drum, means for moving the other parts of said trough-shaped members into and out of axial alignment with said fixed center part, said means including movable members operatively connected with said other parts of said trough-shaped members to move said movable parts from their



axially aligned position into a position in which all parts are arranged in circumferential spaced position along the circumference of the drum, said movement of the movable trough parts taking place in a forward direction and in opposite direction with respect to the direction of rotation of said drum.

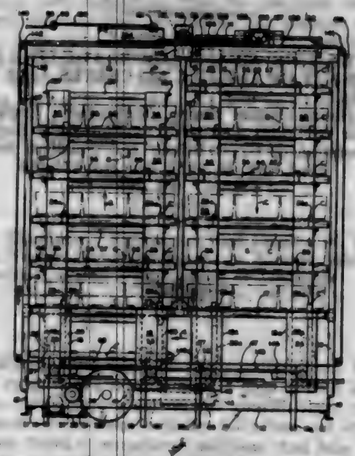
2,944,633
APPARATUS FOR UNLOADING ARTICLES FROM A MOVING CONVEYOR
Walter R. Griswold, Chicago, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Sept. 13, 1955, Ser. No. 534,059
13 Claims. (Cl. 198—35)



1. An apparatus for conveying, unloading and stacking vehicle frames which comprises, a fixed framework, a series of conveyor hooks supported by said framework and movable with respect thereto, each of said conveyor hooks adapted to engage and support a vehicle frame, inclined conveyor means supported by the framework and being inclined upwardly in the direction of movement of the conveyor hooks, said inclined conveyor means adapted to be engaged by a portion of the vehicle frame and elevate the frame from the respective hook as the frame is moved with said hooks, cam means connected to said framework and disposed adjacent the uppermost end of said inclined conveyor means, said cam means disposed to inscribe a generally circular path of movement and being adapted to engage said vehicle frame as the frame approaches the uppermost end of said inclined conveyor means and move the frame forwardly out of registry with the respective hook, means pivotally connected to the framework and disposed in the downward portion

of the path of movement of said cam means for receiving the frame from the cam means and lowering the frame to a horizontal position, and drive means interconnecting said conveyor hooks, said inclined conveyor means and said cam means for driving the same in synchronization.

2,944,656
STORAGE APPARATUS
Bertrand R. Bellamare, 6286 Sterling Road, Newport, Mich.
Filed July 25, 1956, Ser. No. 599,975
16 Claims. (Cl. 198—25)



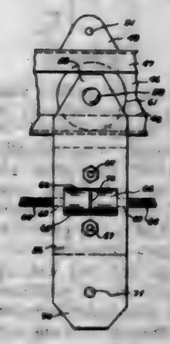
2. In a storage system or the like, the combination of a plurality of separate storage units arranged in a pair of adjacent vertical columns, means for raising the units in one column and lowering the units in the other column, a carriage transfering a cage in a substantially horizontal path from one column to another, power means, means actuated by said power means moving in a substantially horizontal path, means alternately varying the speed of travel of said last means depending on whether the carriage is transferring a cage or is returning empty, and motion multiplying elements transmitting the movement of said means actuated by the power means to said carriage.

2,944,657
HIGH CAPACITY BUCKET ELEVATOR
David A. Davis, Clarendon Hills, Frederick L. Smith, Maywood, and James H. Snodgrass, Chicago, Ill., assignors to Link-Belt Company, a corporation of Illinois
Filed Aug. 18, 1958, Ser. No. 755,729
5 Claims. (Cl. 198—152)



1. A bucket elevator comprising an endless chain formed of pivotally connected links supported by a head sprocket for movement in vertical ascending and descending runs, a plurality of closely positioned buckets attached to the links of said chain and adapted to discharge after passing the top dead center of the head sprocket, each of said buckets having end, bottom, front and rear walls forming a material conveying cavity; said rear wall being shaped to define a centrally positioned, rearwardly facing channel extending the full height of the bucket and spaced from the end walls to provide a pocket, on each side of said channel, forming a part of said bucket cavity, and a roof portion covering each of said pockets with the front edges of said roof portions being aligned with a portion of the top edge of said channel to provide a common edge extending the full distance between the end walls over which all of the material from the bucket cavity spills when being discharged, and means for fastening the buckets to their chain links with the latter positioned in said rear wall channels.

2,944,658
CONVEYOR CONSTRUCTION
Donald D. Zabley, P.O. Box 7176, Brentwood Station, Greenville, S.C.
Original application Apr. 1, 1957, Ser. No. 649,837. Divided and this application Nov. 19, 1958, Ser. No. 774,911
5 Claims. (Cl. 198—177)

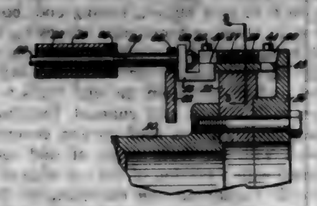


1. In a conveyor adapted for movable mounting on and suspended from an overhead track, a pair of aligned cable elements, enlarged cylindrical buttons secured on the ends of said cable elements, an upright load carrying plate depending from said track, there being a horizontally elongated transverse aperture extending through said plate loosely receiving portions of a pair of buttons on adjacent ends of said cable elements, portions of said plate defining the ends of said aperture retainingly engaging the outer ends of said buttons, a retainer plate parallel to said load carrying plate having a similar transverse aperture therethrough loosely receiving portions of said buttons, portions of said retainer plate defining the ends of its aperture retainingly engaging the outer ends of said buttons, and means securing said plates together above and below said buttons.

2,944,659
ROLLER BELT CONVEYOR FOR MOUTHPIECE CIGARETTE ASSEMBLIES
George Dearsley, Raleigh, N.C., and Tennes I. Erstad, Brooklyn, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed July 14, 1958, Ser. No. 748,444
10 Claims. (Cl. 198—183)

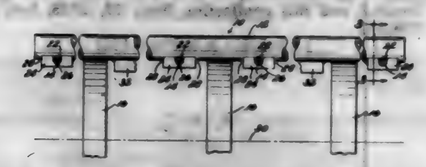
1. A cigarette assembly conveying and supporting apparatus comprising a pair of belts, tooth-like bulges of rubber-like material projecting from said belts, carriers

shaped to fit on a number of said teeth, externally applied clamps to fasten said carriers on to said teeth and



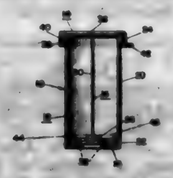
roller assemblies on which assemblies of cigarettes are supported by adjoining rollers.

2,944,660
PERFORATED CONVEYOR FOR POTATO DIGGERS AND THE LIKE
Clair R. Johnston, 1397 Firestone Parkway, Akron, Ohio
Filed Mar. 15, 1959, Ser. No. 800,445
4 Claims. (Cl. 198—195)



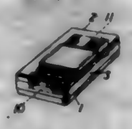
1. A belt conveyor for potato diggers and the like including a plurality of longitudinally spaced, transversely extending, round, straight metal rods, a plurality of transversely spaced, longitudinally extending flexible metal cables of less than about one-half of the diameter of the rods, said rods being provided with half round grooves to receive the cables, a metal shoe with a half round groove receiving the cable and positioned at each intersection of cable and rod except one rod, means including welding for uniting each shoe to its associated rod at positions spaced from the cable with the cable held under compression therebetween to clamp the cable thereto, said one rod having U-clamps welded thereto at cable intersections, said belt conveyor being made endless by the cable ends being secured in the U-clamps, pulley means riding on the rods and supporting the conveyor, certain of said pulley means being toothed and driven to effect movement of the belt conveyor, and shoes welded to the radially inner side of the rods in longitudinal alignment and laterally between the cables against which agitating means may strike.

2,944,661
CONTACT LENS CONTAINER
Gilbert Goldstein, 7801 Roosevelt Blvd., Philadelphia, Pa.
Filed Nov. 18, 1958, Ser. No. 774,462
7 Claims. (Cl. 206—5)



4. A container for contact lenses comprising a receptacle of transparent plastic material having a substantially flat bottom and an upstanding wall, said upstanding wall being of a height considerably greater than the largest dimension of a contact lens, an agitator-holder of opaque plastic material slidably fitting in said receptacle, said agitator-holder comprising a flat plate extending substantially parallel to the bottom of said receptacle, and an arm secured to the upper surface of said plate and extending upwardly therefrom, said arm extending across said plate for substantially the full width of said plate and dividing the upper surface of said plate into two parts, a plastic cover removably fitting tightly across the top of the wall of said receptacle, the bottom of said container having a central raised portion on which said plate normally rests, and said plate including means providing for passage of liquids from above said plate to below said plate.

2,944,662
PACKAGING MEANS FOR BLADE-LIKE ELEMENTS OF TEXTILE MACHINES AND THE LIKE
Lewis Henry Colton, Bunny, Nottingham, England, assignor to Coltex Limited, Loughborough, England, a corporation of Great Britain and Northern Ireland
Filed Nov. 20, 1956, Ser. No. 623,416
3 Claims. (Cl. 206—16)



1. A case holding a plurality of knitting machine jack sinkers, having each a long portion and a short portion at right angle thereto, comprising a walled body member open on top and a lid member open at the bottom engaging said body member for closure, a block positioned in each member and holding a series of said jack sinkers spaced from each other in substantially parallel close relationship, and releasably embedding and gripping a long portion of each jack sinker of said series with the short portions of the sinkers of each series projecting towards one another and positioned at opposite sides of the case, and means for accurately positioning a block in each member, said body and lid members being so dimentioned that upon placement in each of a block holding a series of jack sinkers the lid may be engaged on the body, and the jack sinkers of each series will be free from contact with the jack sinkers of the other series, each member including a partition forming an abutment for the ends of the long portions of its sinkers and defining with the wall of its member a compartment for receiving the short portions of the sinkers of the other member.

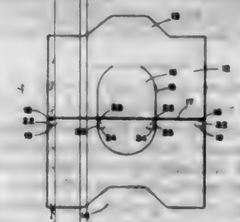
2,944,663
PHONOGRAPH NEEDLE PACKAGE
Albert R. Kaspari, Mount Prospect, Henry C. Rutherford, Chicago, and George M. Avalon, Wilmette, Ill., assignors to Fidelitone, Incorporated, a corporation of Illinois
Filed Aug. 6, 1957, Ser. No. 676,576
7 Claims. (Cl. 206—45.19)



1. A package including a phonograph stylus, tools for installing said stylus, a rigid container formed by a bottom tray and a cover telescoping over said tray, said tray and said cover being formed of transparent material, a rectangular block of resilient material disposed in one end of said tray adjacent a first end wall thereof and

occupying all of the space at that end, said block being deformable and having a thickness approximately equal to the depth of the tray so as to hold the stylus between said block and said cover, and a folded paper member disposed in said container and folded to define a rectangularly shaped chamber containing said tools and taking up the space in said container not occupied by said block, said paper member including an end fold lying adjacent a second end wall of the tray, a pair of side folds respectively lying adjacent the opposed side walls of the tray, a top fold lying adjacent the cover and a bottom fold extending along the inside bottom of the tray from said second end wall and beneath said block, whereby the bottom fold cooperates with the end fold, the side folds and the top fold to conceal the interior of the chamber from the exterior of the container, said bottom fold having a flap extending upwardly along the inside of said first end wall, said flap extending downwardly along the outside of said first end wall between said tray and said cover and terminating in a detachable integral extension located outside of said container.

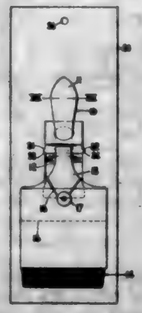
2,944,664
DISPOSABLE SEAT COVERS
John C. Thomasma, Kalamazoo, and Charles W. Thomasma, Sturgis, Mich., assignors to Sanitor Mfg. Co., Kalamazoo, Mich., a corporation of Michigan
Filed Dec. 11, 1957, Ser. No. 702,803
16 Claims. (Cl. 206—57)



1. In a disposable toilet seat cover, the combination including: a sheet of disposable, easily torn material of suitable dimensions having forward, rearward and lateral edges; a generally curved slit in the sheet separating a centrally located flap of suitable dimensions partially from the main body of the sheet; a pair of tear slits extending transversely of the sheet from a lateral edge thereof defining between them a tongue of the sheet adapted to accommodate a securing means whereby a plurality of the superposed slitted sheets can be secured in pack form to a backing member, the rearward slit of the pair being longer than the forward slit and being formed with a section adjacent its closed end generally convergent toward a projection of the line of the forward slit; and tear slit means in the central flap associated with an edge thereof and separate from the main body of the sheet defining a tongue of the flap adapted to accommodate a securing means whereby the flaps of a plurality of superposed sheets can be secured to a backing member.

2,944,665
BRUSH DISPLAY CARD
Ferdinand J. Obeck, Haddonfield, N.J., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Jan. 31, 1957, Ser. No. 637,503
2 Claims. (Cl. 206—79)

1. As an article of merchandise, a brush and a display card upon which said brush is mounted, said brush comprising a flattened bristle portion having a handle which is also flattened in the plane of the bristle portion and being restricted in width near the bristle portion and flared in width away from said bristle portion, and being of greater width than thickness at its wide portion, said card having a flap formed by a cut substantially of U-shape and having a hinge connection with the card provided by a line of score disposed transversely of the flap near the end of the cut, the flap being formed of an upper section and a lower section, the sections also having a hinge formed between them by a line of score extending parallel to the first-mentioned line of score, said sections both having ovoid openings formed therein and being adapted to register with each other when the sections are folded together, said openings receiving the handle of the brush, the openings having their major axes perpendicular to the lines of score in said flap and their minor axes in parallel to the lines of score, the minor axes



of the openings substantially corresponding in width to the width of the brush handle to be held, in the zone of restriction, and the major axes of the openings substantially corresponding in width to the width of the flared portion of the handle when the sections of the flap are folded upon each other, whereby the flaps can be folded upon each other and hinged toward vertical position with respect to the card, and the handle of a brush in a plane vertical to the card and the folded flap can be inserted in the openings of the flap, and the brush can then be rotated a quarter-turn about its own longitudinal axis to a plane parallel to the card, whereby to lock the brush handle in the openings, said sections of the flap being folded to provide an inverted V, and the handle of said brush being inserted in the openings in the sections of the flap and being rotated to lock the same in position.

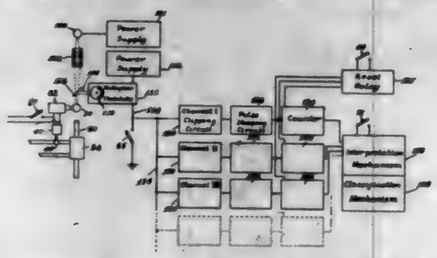
2,944,666
ORE BENEFICIATION
Fred Henry Bungs and Ivan George Pocrnich, Hibbing, Minn., assignors to The M. A. Hanna Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 4, 1956, Ser. No. 575,938
13 Claims. (Cl. 209—5)

1. A process for the recovery of iron-oxygen compounds from iron bearing ores which comprises grinding said ore to flotation size in the presence of 1 to 5 pounds of a fatty acid material per ton of solids and 1 to 20 pounds of a hydrocarbon oil per ton of solids, and subjecting the entire mass which has thus been ground to froth flotation.

2,944,667
ELECTRONIC INSPECTION APPARATUS
Samuel N. Stevens, West Lafayette, Ind., assignor to The Timken Roller Bearing Company, Canton, Ohio, a corporation of Ohio
Filed Oct. 8, 1951, Ser. No. 250,338
14 Claims. (Cl. 209—111)

7. Mechanism for inspecting characteristics of a workpiece, comprising a scanning head having means to ob-

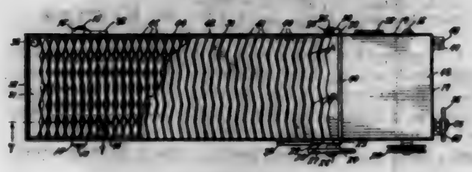
serve inherent characteristics of the workpiece in a scanning spot portion of an inspection field of the workpiece and sense random variations of such characteristics along a scanning path of the spot on the inspection field, means for relatively moving the workpiece and head to cause said spot to traverse a scanning path over the inspection field of the workpiece, electrical means responsive to said sensing along said scanning path to generate a voltage waveform containing correspondingly-random voltage variations varying in number and level with the random characteristic variations along said path, a plurality of parallel interpretation channels connected to receive said waveform, each including in order a clipping circuit operatively biased to pass voltage variations in said waveform above a voltage level corresponding to a selected level of random variations of the workpiece characteristics and to prevent passage of lower-level voltage variations, a counter to count the voltage excursions from said voltage level which are passed by the said clipping circuit of its channel, the said clipping circuits of said interpretation channels being biased at respectively different voltage levels, said counters being constructed and arranged to produce an output signal upon the occurrence of a predetermined plural count therein, and each interpretation channel including a normally non-conducting thermionic valve controlled by its counter and rendered conductive by the occurrence of said output signal, workpiece class-designating circuits controlled by said valve, an electrically actuated reject gate, and electrical means connecting said gate for operation in response to energization of any one of said class-designating circuits whereby said gate is operated in response to the occurrence in any channel of more than the predetermined count for said channel.



2,944,668

PLACER TYPE UNITS FOR THE RECOVERY OF MINERAL VALUES

Joseph Stephan, 309 W. Wilshire Drive, Craig, Colo.
Filed Apr. 6, 1959, Ser. No. 804,531
8 Claims. (Cl. 209—443)

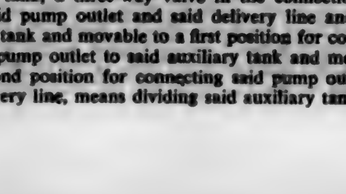


1. A placer type mineral recovery unit comprising: an elongated longitudinally-inclined pan arranged to allow a hydraulic suspension to be fed into its higher feed extremity to overflow its lower discharge extremity: a plurality of riffles extending in a common plane transversally of and on the bottom of said pan, and being spaced apart to form transversally extending collection channels between adjacent riffles, each of said riffles being longitudinally "zig-zag" in shape so that said collection channels will have longitudinally-aligned pointed portions directed toward the higher extremity of said pan and alternating pocket portions directed toward the lower extremity of said pan, said riffles being in contact with said bottom throughout their lengths to prevent transverse flow beneath said riffles throughout their lengths; grill bars extending transversally of said pan; and means supporting said grill bars in a plane parallel to the common plane of said riffles and in vertically-spaced relation thereto to allow hydraulic currents to flow between the plane of said bars and the plane of said riffles, said grill bars having a "zig-zag" contour throughout their lengths so that portions of said grill bars directed toward said feed extremity will alternate with portions directed toward said discharge extremity all of said portions lying in a common plane.

2,944,669

EFFLUENT REGULATOR FOR SEPTIC TANKS

Arthur A. Schaaf, 1205 Neubrecht Road, Lima, Ohio
Filed Nov. 22, 1957, Ser. No. 698,241
2 Claims. (Cl. 210—121)



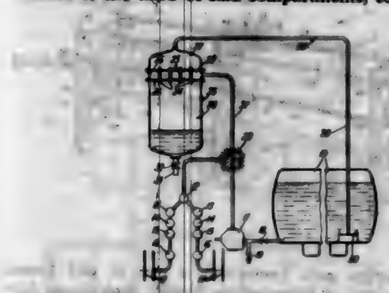
1. In a sub-surface septic tank having an inflow pipe opening into one side thereof and a horizontally extending outflow pipe located remotely from said inflow pipe and leading from said tank, the combination therewith of a vertical pipe intercepting said outflow pipe and extending from just the bottom of said tank to a point above the surface of the ground, said vertical and outflow pipes forming a closed T, and a regulator located in said vertical pipe comprising a floating body having an outside diameter slightly smaller than the inside diameter of said vertical pipe and a length at least as great as the vertical dimension of said outflow pipe, said body being positioned adjacent the junction of said vertical and outflow pipes and having a mass sufficient to float with at least a portion thereof extending below the bottom level of said outflow pipe a distance equal to a substantial part of the vertical dimension of said outflow pipe whereby said regulator controls the rate of flow of liquids through the septic tank and resist surging overflow thereof.

2,944,670

MEANS FOR ACCELERATING THE SEPARATION OF WATER AND SOLID IMPURITIES FROM LIQUID FUEL FOR AIRCRAFT

Alexander M. Hutcheson, Codsall, England, assignor to Thompson Brothers (Bilston) Limited, Bilston, England
Filed Feb. 20, 1958, Ser. No. 716,452
Claims priority, application Great Britain Mar. 4, 1957
2 Claims. (Cl. 210—152)

1. A fuel purifying and delivery system for aircraft comprising a fuel supply tank, an auxiliary tank, a delivery line for delivering fuel to an aircraft, a pump having an inlet side connected to said supply tank and an outlet side connected to said delivery line and to said auxiliary tank, a three-way valve in the connection between said pump outlet and said delivery line and said auxiliary tank and movable to a first position for connecting said pump outlet to said auxiliary tank and movable to a second position for connecting said pump outlet to said delivery line, means dividing said auxiliary tank into three compartments, one of said compartments being at all times in communication with said pump outlet when said valve is in its first position, impurity separating means in said auxiliary tank, said last named means having an inlet in the compartment communicating with the pump outlet and having a purified fuel outlet connected to a second of said compartments and an impurity outlet connected to the third of said compartments, conduit means

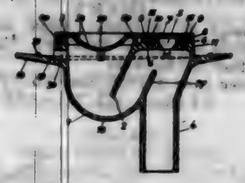


connecting the purified fuel compartment with said supply tank, and drain means affording a connection between the impurity compartment and waste, said pump continuously circulating said fuel between said supply and auxiliary tanks so as to continuously subject said fuel to purification except when the position of said three-way valve is changed to cut off the connection between said pump outlet and said auxiliary tank and open the connection between said outlet and said delivery line.

2,944,671

FLOOR DRAIN

Walther Bernhard Löffler, Fr.-Ebert-Str. 43, Markkleeberg-Mitte, Germany
Filed Sept. 29, 1955, Ser. No. 537,515
2 Claims. (Cl. 210—166)

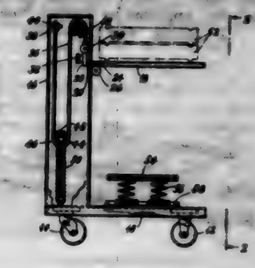


1. A floor drain comprising walls defining a bowl portion, a substantially vertical downwardly extending discharge conduit portion connected to the upper end of one side of said bowl portion, a top portion above said bowl portion having side by side pair of openings including an inlet opening in alignment with said bowl and an access opening in alignment with said discharge conduit portion, said top portion including a downwardly extending baffle wall spaced from the side of said bowl adjacent said discharge conduit portion and extending downwardly into said bowl to a position spaced from the bottom of said bowl whereby to define a substantially U-shaped passage from said inlet opening in said cover to said discharge conduit portion, a floor level flange extending around the outside of said drain at a location spaced downwardly from said cover portion, said flange including spaced upstanding portions with small openings therebetween to trap waste material thereon, said flange being sloped downwardly toward said bowl, at least one opening in said bowl at the inner end of said flange, said cover including an interior shoulder extending around said inlet opening and a shoulder extending around said access opening, a perforated drain plate positioned on said cover inlet opening interior shoulder and closing said inlet opening, and a cover plate closing said access opening.

2,944,672

SELF-LEVELING DISPENSER

Arthur P. Simpson, River Edge, N.J., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Apr. 2, 1956, Ser. No. 575,633
3 Claims. (Cl. 211—49)



1. A self-leveling, storing and dispensing apparatus comprising a base, an upright framework extending upwardly from said base, a carrier movable up and down relative to said upright framework above said base, means for maintaining said carrier horizontal when it travels up and down, calibrated yieldable tension spring means anchored against movement at one end and connected at a portion remote from said anchored end to said carrier, said tension spring means being of a tension which will exert a counterbalancing force which will be proportional to the distance said carrier moves so as to maintain the top of the material supported thereon at a constant level by raising or lowering said carrier a distance corresponding to the weight of each decrement or increment of material removed from or added to said carrier, a compression spring unit positioned in the path of the descending carrier and secured at its lower end to said base and having its upper end free and located beneath said carrier at a substantial distance below the carrier's upper position, said springs possessing sufficient load characteristics to engage said carrier supplementing the lifting effect of said tension spring means only at the lower portion of the carrier's movement to overcome the initial inertia resistance to rising.

2,944,673

HANGER FOR IRONING TABLES

Lawrence J. Gelasso, 5895 Ethelwin NE., Belmont, Mich.
Filed May 21, 1956, Ser. No. 586,301
4 Claims. (Cl. 211—86)



3. A hanger rack for ironing tables, comprising a member formed of flexible material and having two parallel sides of substantially equal length connected at one end by a portion perpendicular thereto, said sides being spaced apart sufficiently to receive the width of the top of said ironing table therebetween, the free ends of said sides each having a laterally-offset portion adapted to engage the underside of said ironing table, and a sec-

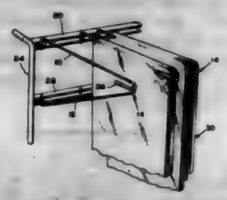
ond offset portion extending away from the plane of said parallel sides; and means forming a disengageable pivotal mounting at the end of said second offset portion adapted to connect the same to the underside of said ironing table.

2,944,674
BAGGAGE RACK
Maurice Fau, 32 Ave. Raymond Poincare, La Varenne Saint-Hilaire, France
Filed Nov. 7, 1957, Ser. No. 695,830
Claims priority, application France Nov. 8, 1956
2 Claims. (Cl. 211—90)



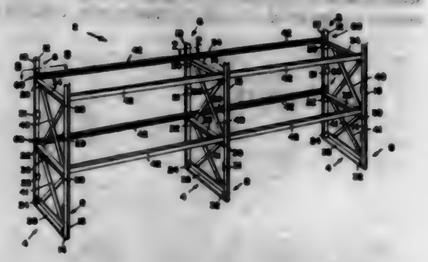
1. A baggage rack comprising spaced brackets each including an outwardly jutting portion, pairs of spaced rings on said portion in aligned relation, a solid flat sheet adapted to support the baggage, completely closed sleeves laterally connected to said sheet and integral therewith, said sheet being positioned in a diametral plane of said sleeves, said sleeves reinforcing said sheet, tubes slidably accommodated within said sleeves and extendible through said rings, threaded studs in said tubes, and nuts on said studs and sandwiching said rings against said sleeves.

2,944,675
GARMENT HANGER
Maurice Cohen, 3580 NW. 52nd St., Miami, Fla.
Filed July 16, 1956, Ser. No. 598,086
1 Claim. (Cl. 211—124)



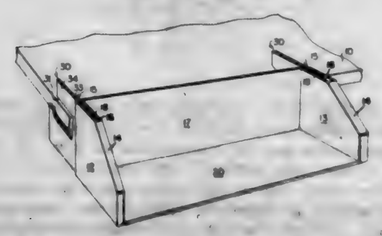
In a garment hanger, a generally horizontal upper rod for supporting trousers thereon, an inclined lower rod, a clip structure joined to said horizontal upper rod and to said inclined lower rod at the outermost ends thereof, said inclined lower rod defining a supporting member for absorbing the loads carried by said upper rod, projections formed on the innermost ends of said horizontal and inclined rods for engaging a supporting structure thereby pivotally mounting said garment hanger on said supporting structure, said clip structure including a short vertical portion and a clip bar joined to said short vertical portion and extending inwardly a distance equal to a portion of said upper horizontal rod and located in spaced parallel relation with respect thereto, said clip bar and upper and lower rods being disposed in substantially the same vertical plane so that a portion of said trousers suspended from said horizontal upper rod is forced around said clip bar, the curvature of the fabric around said clip bar causing the material adjacent said clip bar to make fabric-to-fabric contact for firmly retaining said trousers on said hanger.

2,944,676
STORAGE RACK
Francis J. Bell, Roxborough, Pa., assignor to The Allen Iron & Steel Company, Norristown, Pa., a corporation of Pennsylvania
Filed Apr. 14, 1958, Ser. No. 728,135
11 Claims. (Cl. 211—148)



5. A storage rack comprising a pair of end frames and a plurality of intermediate frames, each frame having a pair of opposed upright members having two sides forming an angle facing inwardly, supporting plates to each of said upright members having secured to the side edges thereof at least one of said plates, horizontal stringers supported on said plates, a right angle bracket secured to each end of said stringers and depending below said stringers, the brackets adjacent the intermediate frames slidably engaging the adjacent upright member supporting plate and right angle bracket member and the right angle brackets adjacent the end frames slidably engaging the adjacent upright member and plate, a right angle key member slidably engaging each right angle bracket adjacent an end frame and slidably engaging the adjacent upright member and supporting plate.

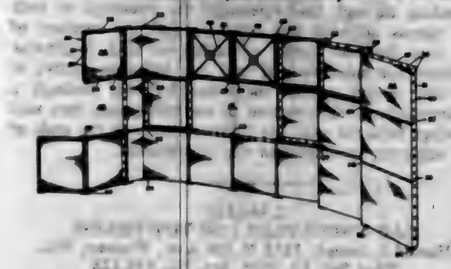
2,944,677
SHELF EXTENDER DISPLAY OR STORAGE DEVICE
Howard Stumpf, Jr., Sandusky, Ohio, assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Filed June 3, 1959, Ser. No. 817,818
4 Claims. (Cl. 211—153)



1. A paperboard shelf extender device for holding goods for display, dispensing or use, without taking up permanent shelf space, comprising a paperboard shelf having a front side and a rear side and comprising a bottom panel, upright primary end panels hinged to said bottom panel, secondary upright end panels hinged to said primary end panels, each pair of primary and secondary end panels together defining pockets having mouth portions facing to the side of said device corresponding to the rear side of said shelf, a side panel hinged to the rear side of said bottom panel and extending along the length thereof, end flaps hinged at each end of said side panel and engaged in said pockets, means to lock the associated pairs of primary and secondary end panels against movement away from each other at

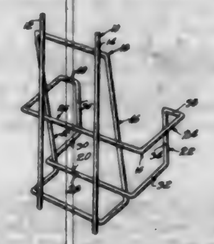
points remote from the sides at which they are hinged to each other, shelf-engaging paperboard panel means including vertical panels slidable at least partially into and partially out of said pockets through said pocket mouth portions and projectable therefrom in a rearward direction, said shelf-engaging paperboard panel means having shelf-engaging notches formed therein.

2,944,678
DISPLAY CONSTRUCTION
Barfield Fredrick Grantham, P.O. Box 1320, Deland, Fla.
Filed Sept. 6, 1955, Ser. No. 532,586
3 Claims. (Cl. 211—177)



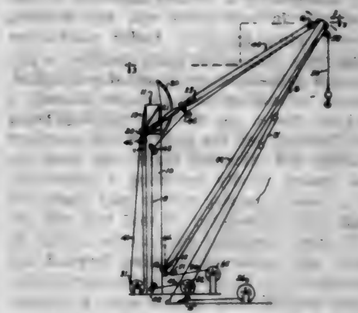
2. In a display structure, the combination which comprises a plurality of juxta-positioned rectangular-shaped trays assembled to provide a vertically disposed rack, said trays having back walls with side, bottom, and top flanges extended from edges thereof, said side, top and bottom flanges each being of a depth less than one-third of the width of the attached back wall, said flanges having spaced openings therethrough and the openings of the flanges of one tray being in registering relation with the openings of the flanges of adjoining trays, spacing blocks positioned between the flanges at the sides of the trays, connector blocks positioned below and above the bottom and top flanges of the trays with openings of the blocks positioned in registering relation with openings of the flanges, and tubular plugs of resilient material extended through openings of the blocks and flanges for retaining the parts in assembled relation, some of the trays being omitted providing openings through the structure.

2,944,679
WIRE DISPLAY RACK
Harry J. Rabenstein, 816 W. 69th Terrace, Kansas City, Mo.
Original application May 11, 1953, Ser. No. 354,268, now Patent No. 2,897,975, dated Aug. 4, 1959. Divided and this application Apr. 6, 1959, Ser. No. 804,325
4 Claims. (Cl. 211—181)



1. In a display fixture, an upright standard, a tray comprising a continuous length of wire presenting a U-shaped bottom having a horizontal bight portion and a pair of parallel, spaced legs extending forwardly from said bight portion in a common plane, an upright stretch joined to the forwardmost end of each leg respectively, the stretches being parallel and lying in a common plane, an outwardly extending arm on the uppermost end of each stretch respectively, the arms being disposed perpendicular to their respective stretches on a common line, a substantially horizontal side piece extending rearwardly from the outermost end of each arm respectively, the pieces being parallel in a common plane, and a horizontal rear portion joining the rearwardest end of each side piece respectively and lying in a vertical plane spaced inwardly from and parallel to the bight; and a continuous length of wire presenting a substantially transversely L-shaped back portion having a horizontal, spaced upper and lower end portion secured to said standard and vertically aligned, substantially L-shaped leg portions interconnecting corresponding opposed extremities of said upper and lower end portions, said L-shaped leg portions each including a lower stretch extending outwardly from said standard and an upper stretch positioned at an angle with respect to said standard, said bight portion and rear portion respectively of the tray being secured to said upper stretches of the back portion in vertically spaced, parallel relationship.

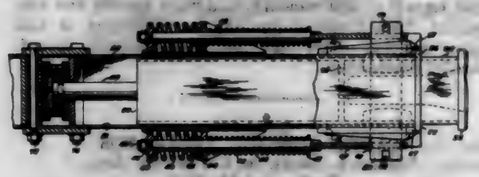
2,944,680
CARGO HOISTING APPARATUS
William L. Banks, Jr., 226 Warner Ave., Roslyn Heights, N.Y.
Filed Apr. 10, 1958, Ser. No. 727,722
7 Claims. (Cl. 212—3)



1. A cargo hoisting apparatus which includes a supporting structure such as a ship deck and cargo mast with a cargo boom pivotally mounted at one end of the boom on the lower part of the mast for up and down and swinging lifting movement of the outer end and for transverse swinging movement over the ship deck and to positions with the outer end laterally extending beyond the deck, said boom being longer than said mast, a hoist cable on said boom with a hoist end depending from the outer end of the boom and a hauling end extending to and available upon the deck, a cable pulley on the outer portion of the boom, a double block on the upper inboard part of the boom, a bracket mounted on the mast head, a pair of swivel arms located in spaced relation either side of the bracket each swivel arm mounted to swing in an arc of 120° either side of a center position and to swing in a vertical arc from a maximum top position to a maximum lowered position of the boom, the outer end of each swivel arm provided with a pulley, a pair of winch drums mounted on a single shaft to be rotated in unison, a third winch drum, a rigging cable, one end of said rigging cable rove on one of said pair of winch drums, said cable extending up said mast to the outer end of one of said swivel arms and extending through the double block of said boom end and extending back to the pulley mounted at the outer end of said same

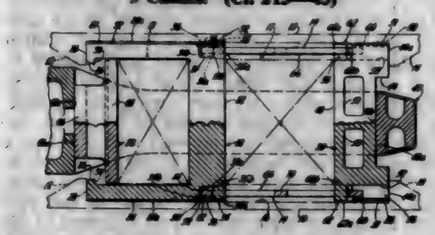
swivel arm and extending to said third winch drum to be rove on said winch drum and extending from the opposite side of said winch drum to the second swivel arm extending over the pulley mounted at the outer end of said swivel arm and extending to the second pulley of said double block at the outer end of said boom and extending back to a pulley mounted on the outer end of the second swivel arm and extending down the mast to the second of said pair of winch drums to be rove on said drum in the same direction of rotation as the opposite end of the cable to thus provide a double topping lift for the boom and to control the swinging range of the boom.

2,944,681
RAILWAY DRAFT APPLIANCE
William T. Blake, 4424 Morris Court, Fort Worth, Tex.
Filed July 22, 1957, Ser. No. 673,238
24 Claims. (Cl. 213—43)



1. In a railway car having a center sill and the like, a draft appliance comprising: a housing supported in and slidable longitudinally in said center sill, said housing enclosing a double-acting hydraulic buffer mechanism having a longitudinally disposed cylinder member, a piston member in said cylinder member slidable longitudinally with respect to said cylinder member through a preselected working stroke, one of said members being anchored to said housing and the other of said members having an operating rod extending rearwardly from the housing; anchor means fixedly mounting a rearwardly extending part of said operating rod to said center sill preventing longitudinal movement of said rod with respect to said sill; complementary stop means carried by said housing and said center sill limiting forward and rearward movement of said housing in said center sill, said stop means being longitudinally spaced apart a distance equal to the length of said working stroke, said stop means being positioned to permit longitudinal movement through said working stroke of the member anchored to said housing; and means for applying buff and draft forces to said housing.

2,944,682
DRAFT RIGGING
Donald Willison, Maple Heights, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 8, 1955, Ser. No. 533,957
9 Claims. (Cl. 213—45)



1. In a draft gear comprising: longitudinally spaced followers and a cushioning unit compressibly disposed between, and in engagement with, confronting end surfaces of the followers; each follower having a recess extending inwardly from each of both of its outer sides and extending also in the lengthwise direction of the gear to form an indentation in the respective end surface of said end surfaces; a lug extending laterally outwardly from the bottom of each recess in spaced relation of the sides thereof and positioned centrally with respect to the top and bottom of respective followers; and link means having openings for receiving said lugs positioned at each side of the draft gear lengthwise of the cushioning unit with end portions thereof disposed within a recess of each follower and the associated lugs thereof extending through said openings; the openings of both link means adjacent one follower and the recesses of said one follower being elongated in said lengthwise direction for movement of said one follower relative to the link means toward the other follower through a distance permitting insertion of assembly slugs into said openings adjacent said one follower between the ends of said adjacent openings and the lugs therein.

2,944,683
CAR UNCOUPLER FOR TOY TRAINS
Harold J. Joseph, 1018 N. 5th Ave., Wausau, Wis.
Filed Oct. 13, 1959, Ser. No. 846,128
8 Claims. (Cl. 213—211)



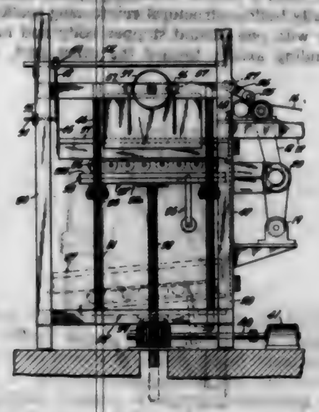
1. A portable manually operable uncoupler for the car couplings of toy railroad trains and the like, comprising connected inwardly shiftable members having opposed coupling release element-engaging portions, and a member carried by said shiftable members and engaging the train track or equivalent supporting surface to dispose the release element-engaging means in position thereabove to operatively engage said coupling release elements.

2,944,684
PNEUMATIC CONVEYOR
David H. Dennis, Short Hills, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Dec. 30, 1957, Ser. No. 706,082
6 Claims. (Cl. 214—1)



1. In a pneumatic conveyor, an airfilm table having a valve seat provided therein, a manifold below said table including a bottom wall, said valve seat having an annular portion extending downwardly toward said wall, and a freely movable valve member positioned within said annular portion and having a spherical portion adapted to abut said seat, said manifold wall and said valve member being constructed and arranged so that said valve member is confined by said annular portion and said wall.

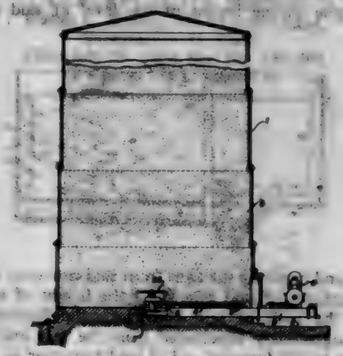
2,944,685
MOTOR CONVEYOR AND STRIPPER
John J. Nicolazzi, 1221 Ocean Parkway, Brooklyn, N.Y.
Filed Feb. 19, 1959, Ser. No. 794,489
2 Claims. (Cl. 214—6)



1. In equipment for handling lithographic plates, apparatus comprising stripper means for stripping plates from an oven wicket, said means including means for discharging excess plates from said oven wickets clear of the apparatus, conveyor means for receiving said plates from said stripper means, and unloader means for receiving and stacking said lithographic plates from said conveyor means, said unloader means comprising a frame, spaced parallel vertically extending tracks positioned by said frame, a double bottom carriage movable vertically on said tracks, the upper of said bottoms being hinged at one edge to the lower bottom, said lower bottom having an orifice opposite said hinged end and said upper bottom having a tilting leg mounted on its lower side and projecting through said orifice in said lower bottom, a roller conveyor mounted on said upper bottom of said carriage, power means for vertically moving said carriage on its tracks, a fixed stop means engageable by said tilting leg when said carriage moves downwardly a selected distance, said leg and stop cooperating to rotate or tilt said upper bottom about its hinged connection with said lower bottom and thereby tilting said roller conveyor mounted on said upper bottom, a platform supported on said roller conveyor, said platform being positioned when said carriage is moved upwardly a selected distance to receive plates from said conveyor means and to accumulate said plates in a vertical stack, control means actuated by said plates to activate said power means to move said carriage downwardly progressively as said plates are accumulated, the engagement of said stop with said tilting leg causing said upper bottom on which said roller conveyor is mounted to rotate about its hinged end and to tilt in a direction to discharge said platform and accumulated plates laterally from said roller conveyor when a selected number of plates have been accumulated.

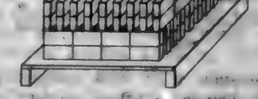
2,944,686
SHIELDING DEVICE FOR A DRIVE UNIT
Frank W. Church, Jr., Kankakee, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Nov. 10, 1958, Ser. No. 773,011
6 Claims. (Cl. 214—17)

1. In a storage structure containing a free-flowing material and having an unloading mechanism disposed in the lower end thereof to deliver the material to the exterior of the structure, a post extending upwardly within the storage structure, cutter means mounted on the post and disposed to rotate within the storage structure to dislodge the free-flowing material, a shield mounted on the upper end of the post and extending radially therefrom throughout the entire circumference of the post,



and means for supporting the peripheral edge portion of the shield to prevent deflection and bending of the shield due to the weight of the free-flowing material bearing thereon, said shield serving to prevent the free-flowing material from packing tightly around the post and thereby facilitating operation of said cutter means.

2,944,687
METHOD OF HACKING BRICK
Asa B. Segar, Oak Park, Ill., and Howard G. Esch, Dearborn, Mich., assignors to Morris Clay Products Co., a corporation of Illinois
Filed Oct. 11, 1956, Ser. No. 615,401
6 Claims. (Cl. 214—152)

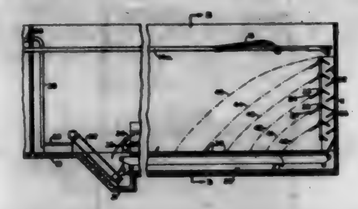


1. The method of hacking rectangular brick into a flat which comprises the steps of successively moving rows of end-to-end brick laterally from a supporting ledge onto a flat surface so as to form parallel, registering, spaced rows of brick, and whenever a row is distant from the first row by a multiple of the length of a brick, of positioning that row so that its longitudinal median line will be spaced from the upper bearing surface of the brick of the front row by a multiple of the length of the brick.

2,944,688
METHOD FOR HANDLING CANS
Emil E. Jeremiah, Hayward, Calif., assignor to United Can & Glass Company, Hayward, Calif., a corporation of Delaware
Application Aug. 13, 1956, Ser. No. 603,758, now Patent No. 2,874,856, dated Feb. 24, 1959, which is a continuation of abandoned application Ser. No. 394,183, Nov. 24, 1953. Divided and this application Oct. 30, 1958, Ser. No. 770,663
3 Claims. (Cl. 214—152)

1. The method of storing cans in a storage bin comprising the steps of introducing the cans into the top of said bin on a substantially level conveyor extending longitudinally of said bin, passing the cans from the rear end

of said conveyor downwardly in a zigzag manner to the floor of said bin to form a randomly oriented pile of cans on the floor of said bin, progressively raising the level of the pile of cans, progressively raising the downward limit of movement of said cans whereby said cans will pass downwardly and then onto the upper surface of said pile as the height of the level of said pile increases, and brushing the cans from said conveyor onto the upper surfaces of said pile when the height of said pile reaches the level of said conveyor, said brushing step being progressively effectuated from the rear end of said conveyor to the forward end of said conveyor as the pile increases from the rear end of said conveyor to the forward end of said conveyor.



2,944,689
LIFT TRUCK WITH AUXILIARY TRUCK PICKUP
Alfred Erwin Reginald Arnot, Basingstoke, England, assignor to Emmanuel Kaye and John Reginald Sharp, both of Basingstoke, Hampshire, England
Filed May 16, 1957, Ser. No. 659,696
Claims priority, application Great Britain May 17, 1956
6 Claims. (Cl. 214—620)



1. In combination, a lift-truck comprising a wheeled body, a mast thereon, a lifting carriage on the mast adapted to support normally removable fork members, an intermediate carrier member adapted to fit said carriage in place of the normally removable fork members and having hook-like projections extending forwardly and upwardly from a position near the top of the carriage when the carrier member is in place therein, and an auxiliary fork truck having a wheeled body with an upstanding back portion and forwardly extending fork arms for engaging pallets, crates and the like, said back portion having apertures therein substantially wider than the said hook-like projections and adapted to fit on said hook-like projections, said apertures having inclined centering faces at their upper ends to engage the projections and center the auxiliary truck relatively to the fork lift truck.

2,944,690
CLOSURE FOR VACUUM INSULATED VESSELS
Louis J. Darmstadt, Norwich, Conn., assignor to The American Thermos Products Company, a corporation of Ohio
Filed Oct. 27, 1955, Ser. No. 543,137
3 Claims. (Cl. 215—48)

1. An insulating closure for the open mouth of a container, such as a double-walled vacuum-insulated filler, comprising a hollow, generally cup-shaped unitary stopper body formed of resilient material and having a generally conical side wall and a convex bottom wall, said stopper body having an open upper end, a closure insert secured to said stopper body and extending across the upper end thereof to enclose the hollow interior of said body and form a hollow insulating space therein, and a substantially hollow structural reinforcing section formed integrally with one of said stopper body and insert parts and extending axially toward the other part, said reinforcing section comprising a wall spaced substantially outward from the center of said stopper body and substantially inward from the side wall thereof, the axial end of said reinforcing section terminating a predetermined distance short of said other part, whereby the end of said reinforcing section is positioned to engage the said other part upon predetermined deformation of said bottom wall, said predetermined deformation being less than that amount which would cause said bottom wall to assume a concave form.

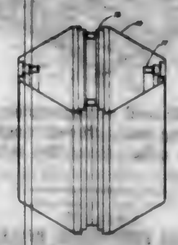


2,944,691
RECEPTACLE AND COVER THEREFOR
Anthony W. Serio, 1704 Caton Ave., Elmira, N.Y.
Filed May 15, 1957, Ser. No. 659,322
13 Claims. (Cl. 215—63)



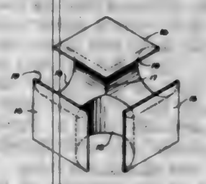
1. In combination, a receptacle having an open top, an outwardly flaring lip defining the open top, a cover adapted to position within the area enclosed by said lip and having an outwardly sloping peripheral face for surface peripheral sealing engagement with a substantial area of the inclined top surface of the lip, and means for hingedly coupling the cover with the receptacle, said coupling means including first guide means extending laterally toward said opening and second guide means extending at an angle with respect to said first guide means when the cover is in operative opening closing position whereby said cover may freely seek the said sealing engagement with the lip when pivoted on the hinge coupling to closed position.

2,944,692
EXPANSIBLE CONTAINER FOR LOW-TEMPERATURE FLUID
James H. Farrell, Arlington, and Alexis Pastuhov, Harvard, Mass., assignors, by mesne assignments, to Comstock Liquid Methane Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 27, 1958, Ser. No. 724,443
9 Claims. (Cl. 220—9)



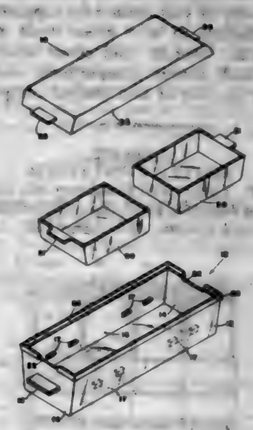
1. A tank for the storage of a liquid, the boiling point of which differs widely from the ambient temperature, consisting of an inner shell housing said liquid and which is subject to noticeable expansion and contraction due to temperature changes, a thermal insulating material surrounding the inner shell, said inner shell having the shape of a polyhedron and being provided with an expansible member at each of a plurality of the edges of the sides of said polyhedron, each such expansible member being in the form of a bellows member, each such bellows member being hermetically sealed along one edge to the contiguous edge of the side which it joins, a rigid member disposed parallel to said contiguous edge and secured thereto, the rigid members of said edges of said polyhedron constituting a supporting frame for said polyhedron, whereby the inner shell remains continuously substantially in contact with the insulating material.

2,944,693
EXPANSIBLE CONTAINER FOR FLUIDS AT LOW TEMPERATURE
Walter L. Benson, Needham, and Norman C. Dahl, Lexington, Mass., assignors, by mesne assignments, to Comstock Liquid Methane Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 3, 1958, Ser. No. 726,112
6 Claims. (Cl. 220—9)



1. In a tank for the storage of a liquid, the boiling point of which differs widely from the ambient temperature, comprising an inner shell housing said liquid and which is subject to noticeable expansion and contraction due to temperature change, an outer shell spaced from the inner shell to provide a confined space therebetween, and thermal insulating material between the shells, the improvement wherein said inner shell having the shape of a polyhedron is provided with an expansion joint at each of the sides of said polyhedron, each such expansion joint being in the form of a curvilinear section extending continuously throughout the lengths of the joined sides, the outer surface of said section being convex with respect to the interior of the inner shell, and the two edges of said section being hermetically sealed to the adjacent edges of the two sides which it joins, whereby the inner shell remains continuously in contact with the insulating material.

2,944,694
TV-PARTY SNACK SERVER
Walter C. Kinney, 2121 Cortez Lane, Sacramento 21, Calif.
Filed July 28, 1958, Ser. No. 751,401
1 Claim. (Cl. 220—17)



A triple compartment food serving tray and cover of rectangular configuration comprising, in combination, a main base of rectangular configuration with a bottom wall and upwardly and outwardly extending side and end walls defining an enlarged central compartment, an annular vertical rim extending outwardly and upwardly from the top of said side and end walls of said main base forming an internal shoulder therewith, each of said side walls of said main base provided with a plurality of integral longitudinally spaced apart inwardly extending lugs with flat horizontal upper supporting surfaces in a common horizontal plane, each of said end walls provided on the exterior thereof with integral rectangular shaped handles extending horizontally and outwardly therefrom, a pair of rectangular shaped trays with bottom walls of the same size and of a combined longitudinal length substantially equal to the longitudinal length of said central compartment midway between the bottom and the upper periphery thereof, each of said trays having one vertical end wall, along with two side walls and a second end wall which extend upwardly and outwardly therefrom defining closed wall trays, said inclined side and end walls of said trays having the same angle of inclination as that of said inclined side and end walls of said main base, the exterior width of said trays at the tops thereof being substantially the same as the internal width of said central compartment at the top of the side walls of said main base and adjacent said internal shoulder thereof, each of said trays having a single horizontal outwardly extending integral rectangular shaped handle on the exterior of the inclined end wall thereof, said rim formed with each of said end walls of said main base having defined cut-outs for accommodating the integral handles of each of said trays, whereby when the trays are arranged with their vertical end walls together, end to end, the handles are arranged at the opposite ends thereof so as to extend beyond the end walls of said main base when the trays are arranged within said central compartment, the bottom wall of each of said trays supported upon said lugs extending outwardly from the side walls of said main

base, the exterior of said side walls of said trays and the one inclined end wall of each tray being in surface contact with the interior surface of the sides and end walls of said main base, a rectangular cover with downwardly and outwardly inclined depending side and end walls, each of said end walls of said cover provided on the exterior thereof with an integral horizontal, outwardly extending rectangular shaped handle, said handles formed on said main base, said trays and said cover at either end thereof being in vertical alignment with respect to each other and on the exterior of the combined serving tray, and said shoulder of said main base supporting receiving the lower periphery of said cover when placed inside said vertical rim, whereby said cover seals the pair of trays within said central compartment and said trays seal the upper portion of said central compartment.

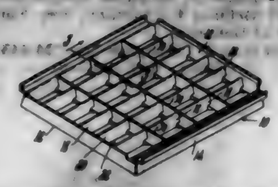
2,944,695
BOTTLE CONTAINER
Daniel P. Yunz, 1027 Cranberry St., Erie, Pa.
Filed June 13, 1957, Ser. No. 665,544
1 Claim. (Cl. 220—21)



In combination, a milk bottle case and a cover therefor, said case having sides, ends, and a bottom defining a space therein, and partitions dividing said case into a plurality of milk bottle receiving compartments, said partitions terminating a substantial distance from the upper edge of said case, said cover being molded in the form of a solid integral plastic body having downwardly facing recesses therein, the wall surface defining each of said recesses comprising an upper portion and a lower portion, said upper portion being circular at its top and flaring in a downward direction to a generally square configuration at its bottom, said lower portion being of the same transverse configuration and size throughout its height as the bottom of said upper portion, said recesses in said cover being adapted to receive the necks of milk bottles disposed in said compartments, the lowermost part of the material of said cover between said recesses resting on said partitions between said compartments, said cover extending into said case from the top thereof to said partitions and resting thereon, the outer sides and end surfaces of said cover interfitting into said case, the upper edges of said cover adjacent the top thereof extending above the sides of said case and slanting upwardly and inwardly to interfit into the lower part of another case adapted to rest on top of said case and said cover.

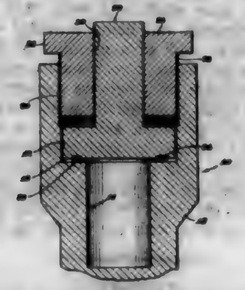
2,944,696
GRID TRAY
Anton Eligon, Westwood, Mass.
(575 Albany St., Boston, Mass.)
Filed Nov. 24, 1958, Ser. No. 775,850
4 Claims. (Cl. 220—22)

1. A compartmented tray comprising a shallow rectangular container with side walls and end walls, means dividing the interior of the container into rows and columns of rectangular compartments, said means comprising a series of elongated strips arranged side by side in said container and extending from one side wall to the other thereof, and an angle member between each pair of successive strips, said angle members extending from said one side wall of the container to the other side wall thereof, said strips being shaped with reversely bent portions forming at intervals inverted-V walls which rise to substantially the same height as said angle members



and define therewith said compartments, the bottom of said container having holes therethrough under said inverted-V walls but offset from the side edges of said strips.

2,944,697
HIGH PRESSURE BOMB
William A. Mays, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed July 2, 1958, Ser. No. 746,156
6 Claims. (Cl. 220—39)

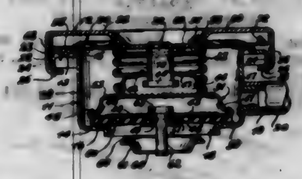


1. A high pressure bomb comprising a body, said body having a bore extending inwardly from a surface thereof and part way through said body, a counterbore coaxial with said bore, said counterbore having a threaded wall, a bearing surface between said bore and said counter bore, a closure head having a closed ended cylindrical lower part of larger diameter than said bore and smaller diameter than said counter bore and a threaded cylindrical upper part of smaller diameter than the lower part which is coaxial with the lower part, a gasket, said gasket being disposed between said lower part of the closure head and said bearing surface, and a nut having a threaded cylindrical outer wall part and a threaded coaxial bore extending therethrough, the cylindrical outer wall part of said nut being substantially equal in diameter to the diameter of said counter bore and threaded as is said counter bore, the bore of said nut being of substantially the same diameter as the diameter of the upper part of the closure head and threaded as is said upper part of the closure head, the threads of the counter bore and of the cylindrical surface of the nut being coarser than the threads of the upper part of the closure head and of the bore threads in the nut, all the threads turning in the same direction.

2,944,698
CLOSURE DEVICE
George R. Pipes, South Euclid, and Frank H. Krumm, Cleveland, Ohio, assignors to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 21, 1957, Ser. No. 641,553
20 Claims. (Cl. 220—40)

1. A closure cap comprising, a cap body having a depending marginal flange, attaching lugs carried by said

flange, diaphragm means in said cap body, other lugs carried by said diaphragm means, said cap body and said diaphragm means being relatively rotatable, and releasably cooperating elements on said cap body and diaphragm means and resisting relative rotation therebetween for initially maintaining said attaching lugs and said other lugs in a substantially aligned relation.



2,944,699
SAFETY DEVICE FOR CONTAINER COVER
Hans Ostiker, 21 Oberdorfstrasse, Horgen, Switzerland
Filed Feb. 16, 1959, Ser. No. 793,430
Claims priority, application Switzerland Feb. 14, 1958
3 Claims. (Cl. 220—44)



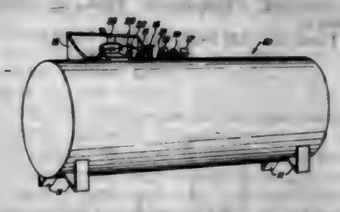
1. In combination with a cover for closing the filler opening of a tumbler barrel, a plurality of screws for fastening the cover to the barrel, a pressure equalizing valve built into said cover and having a stem portion extending outside of the cover, a spring interposed between the cover and said stem portion for closing the valve, a lever having one end pivotally connected to said cover, a cam mounted on the aforesaid end of said lever and adapted to engage said stem portion for opening said valve against the action of said spring when said lever is in one of its extreme positions, said cam being disengaged from said stem portion permitting the valve to be closed by said spring when said lever is in the opposite extreme position, said lever having a free end portion placed above one of said screws, preventing access to and loosening of said screw, when said lever is in said opposite extreme position, said free end portion of said lever being away from said screw, affording access to and loosening of said screw, when said lever is in the first extreme position wherein said cam engages said stem portion for opening said valve against the pressure of said spring.

2,944,700
MILK CARTON DRIP RECEPTACLE
Betty F. Stevenson, 1106 S. Lombard Ave., Oak Park, Ill.
Filed Apr. 14, 1958, Ser. No. 728,120
4 Claims. (Cl. 220—85)



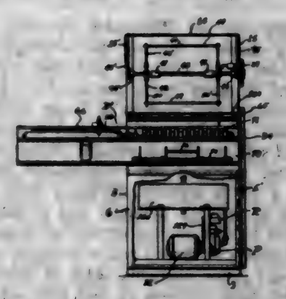
2. The combination with a holder for cartons containing milk or the like fluid, the holder open at the top and provided with a rectangular shaped imperforated bottom and four integral imperforated side walls with a single corner type dispensing channel, the channel extending substantially vertically upwardly at the juncture of two of said side walls, of a cardboard carton interchangeably mounted therein and provided above the peripheral top of said holder with a liquid dispensing opening, integral molded lugs at the corner juncture of the side walls and the bottom wall to provide a support for said carton above the bottom wall of said holder, a tapered groove in the one corner lug intermediate the dispensing channel and the bottom wall of said holder, the bottom wall and the lower portions of said side walls of said holder forming a cup adapted to retain drippings from the base and side walls of said carton, and said tapered groove in said lug and said corner type dispensing channel adapted to guide the drippings from said cup toward the distal end of said dispensing channel and to the exterior of said holder.

2,944,781
LIQUID FILL STRUCTURE FOR LP GAS TANKS
Tad Hatanaka, Salt Lake City, Utah, assignor, by mesne assignments, to Union Tank Car Company, a corporation of New Jersey
Filed May 8, 1958, Ser. No. 734,830
7 Claims. (Cl. 220—85)



1. In a storage tank arrangement for highly volatile fluids, an elongated cylindrical tank, said tank having an opening formed in a side thereof, a bar element positioned in said opening to close same and secured to the tank, a plurality of upraised bosses on said element, said bosses having generally flat surfaces thereon with apertures therein to accommodate fitting mountings communicating with the inside of said tank, certain of said surfaces being angularly related to the other of said surfaces.

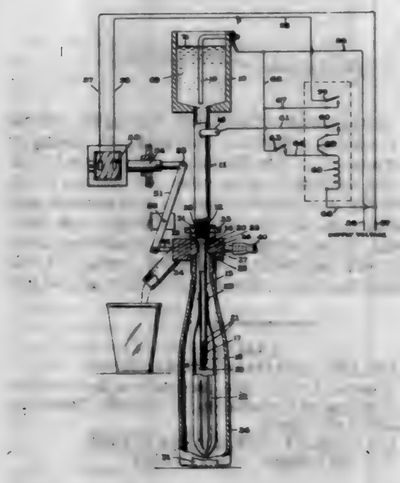
2,944,782
PALLET UNLOADING MACHINE
Frank W. Fenton, Lemay, Mo., assignor to Beacon Production Equipment Corporation, Centreville Township, a corporation of Illinois
Filed Mar. 12, 1956, Ser. No. 571,058
20 Claims. (Cl. 221—13)



f. A pallet unloading machine comprising a frame, a ramp-forming plate hingedly mounted in the upper portion of said frame for downward swinging under load,

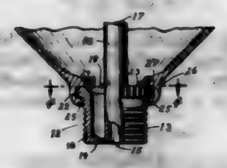
an elevator adapted to support a load-bearing pallet having containers or the like disposed in rowed tiers thereon, means for effecting vertical travel of said elevator from the lower portion of said frame to the upper portion thereof to present the uppermost tier for delivery to said ramp plate, means adapted to operate in timed sequence to stoppage of the elevator for pushingly removing the uppermost tier of containers from the load and onto the ramp plate, and a fixed discharge conveyor section disposed downwardly and outwardly of said ramp plate for receiving the containers from the ramp plate, said discharge conveyor section and ramp plate having a combined width greater than the greatest dimension of the containers being unloaded, said discharge conveyor sections being presented in axially parallel relation to the axis of the rows of containers to be unloaded, said discharge conveyor section being further inclined transversely with its side proximate the ramp plate being higher than its other side and with its length being at least as great as the length of one row of containers on the pallet to be unloaded for simultaneously accommodating the number of row-constituting containers.

2,944,703
CARBONATED BEVERAGE DISPENSER
Jack M. Womack, Chattanooga, Tenn., assignor to Cavalier Corporation, Chattanooga, Tenn., a corporation of Tennessee
Filed July 24, 1958, Ser. No. 750,641
5 Claims. (Cl. 222—76)



1. In apparatus for dispensing pre-mix carbonated beverages, a chamber holding the beverage to be dispensed, a valve body, a bore in said body having a portion of larger diameter and a communicating portion of reduced diameter, said portion of larger diameter being in communication with said chamber, a discharge port opening into said portion of smaller diameter, a unitary valve member mounted for reciprocation in said bore comprising a piston element having a fluid tight fit in said portion of reduced diameter and a piston element having a fluid tight fit in said portion of larger diameter, means for reciprocating said piston elements in said bore in unison, said piston elements being so constructed and arranged that both portions of said bore are closed for a predetermined distance of travel of said valve member after one of said portions is closed and before the other of said portions is opened, and means for placing said portion of larger diameter in communication with a source of pre-mix carbonated beverage under pressure.

2,944,704
STRIPING DISPENSER
William Earl Taylor, Jr., Bergenfield, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine
Filed Apr. 24, 1957, Ser. No. 654,801
4 Claims. (Cl. 222—94)



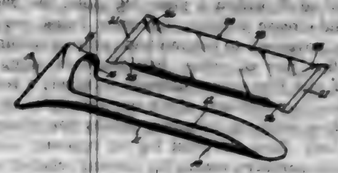
1. A device for dispensing fluent materials which comprises a container, the sides of said container being converged at one end to define an opening, a discharge nozzle attached to said container within said opening to provide communication external of said container, said discharge nozzle comprising a narrowed shoulder extending around one end of said discharge nozzle and adapted to be gripped by said container at said opening to form a part thereof, a first discharge port, means defining a discharge passageway extending from said first discharge port back into said container a predetermined distance, a second discharge port disposed adjacent said first discharge port opening externally of said container, and a plurality of threads about said discharge nozzle to receive a closure cap to seal said first and said second discharge ports.

2,944,705
DISPENSER FOR PASTE MATERIAL
Mathew A. Strumor, New Rochelle, N.Y., assignor to Regent Plastics, Inc., Brooklyn, N.Y., a corporation of New York
Filed Apr. 16, 1958, Ser. No. 727,574
2 Claims. (Cl. 222—94)



1. A paste container for dispensing a strip of paste material of at least two different substances, comprising a collapsible tube terminating in a neck, a partition in said tube extending substantially the length of said tube, said partition having a portion extending into and through said neck, said portion being helically convoluted to feed paste material from each side of said partition and each side of said portion in spiral strips twisted about each other, a shaping member including a ring fitted on said neck, a plurality of flexible arms integral with and extending radially outwardly from said ring, and a plurality of shaping caps integrally formed with said arms, said shaping caps being selectively individually secured on said neck, said fitting caps having feed apertures therethrough of different shapes, whereby a strip of paste material of a selected cross sectional configuration and of at least two different spirally intermixed materials is fed through the shaping cap fitted on said neck.

2,944,706
COLLAPSIBLE CONTAINER AND DISPENSING HOLDER THEREFOR
Alfred A. Moore, 5602 N. Burton, San Gabriel, Calif.
Filed Apr. 29, 1957, Ser. No. 655,563
15 Claims. (Cl. 222—105)



1. A dispensing device for use in dispensing a stream of fluent plastic material from a collapsible container mounted therein and for distributing the dispensed stream, said device comprising a trough-like holder of relatively rigid thin material open along one side and shaped at one end to conform substantially with the end of a collapsible tubular container sealed at the end thereof at an angle to the longitudinal axis and to provide a converging nozzle having a small discharge opening at its tip to receive the container contents from the foremost tip end of the container, said device being adapted to support a collapsible container charged with plastic material to be dispensed with the discharge end of the container pressed against the inner wall of said nozzle adjacent the dispensing tip thereof, said device further being adapted to be grasped within the hand with the user's fingers positioned to apply pressure through the open side thereof to dispense plastic material as desired.

2,944,707
DISPENSING DEVICE
William J. Steinmetz, 3752 N. Ritter Ave., Indianapolis, Ind.
Filed Aug. 5, 1957, Ser. No. 676,126
9 Claims. (Cl. 222—254)



1. Dispensing means comprising a frame member, three valve plates carried by said frame member for rotation relative thereto, said plates comprising an outer, an intermediate, and an inner valve plate, each of said valve plates provided with a metering opening, means providing a discharge outlet from said dispensing means, said valve plates having a non-dispensing position in which the metering openings of all are in communicating registry with each other but sealed from communication with said discharge outlet, said valve plates movable into a dispensing position in which the metering openings of all are in communicating registry with said discharge outlet, means for moving the outer valve plate into dispensing position independently of the intermediate and the inner valve plate, means for moving the outer and intermediate valve plates into dispensing position independently of the inner valve plate, and means for moving all three valve plates into dispensing position.

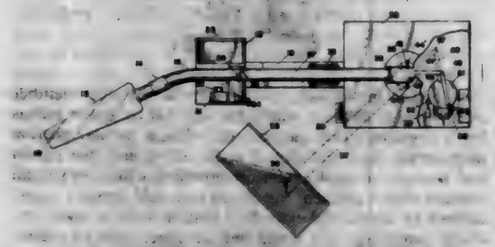
2,944,708
RETAINER FOR USE ON COLLAPSIBLE SQUEEZE TYPE CONTAINER
Frederick W. B. Smeaton, 29 Sudbury St., St. John's, Newfoundland, Canada
Filed Aug. 11, 1958, Ser. No. 754,291
1 Claim. (Cl. 222—553)



A dispensing device, comprising: a metallic member of frusto-conical form adapted to serve as an outlet means for a container, said member including a tubular portion open at one end and closed at the other end, the closed end having an axial extension provided with an external annular recess adjacent the closed end, said annular recess defined by an axially extending bottom wall, a lower, radially extending, side wall, and an upper wall of frusto-conical form whereby the annular recess diverges radially outward from the bottom, the outer end of the extension beyond the recess being in the form of a button having an upper frusto-conical surface and a cylindrical surface between said frusto-conical surface and said annular recess, said tubular portion having a longitudinally extending opening in the wall thereof; and a hollow frusto-conical closure cap, of a plastic material having inherent resilient characteristics, including a frusto-conical skirt having an unbroken internal flange at its smaller diameter end, said internal flange being fitted within the annular recess, and having parallel inner and outer side walls and a thickness intermediate the minimum and maximum axial extent of said annular recess, whereby upon pressing engagement of the internal flange of the cap over the button, said frusto-conical surface facilitates enlargement and slipping of the internal flange of the cap over said button during positioning of the cap on the tubular portion, and whereby the internal flange resiliently engages only the side walls of the annular recess to frictionally retain the cap in any adjusted angular position and to positively retain the cap against axial movement, the opening defined by said internal flange having a diameter slightly smaller than the cylindrical portion of the button-form extension and slightly larger than the diameter of the bottom wall of said annular recess to be expanded sufficiently to pass over the button-form extension and to be received in the annular recess with a clearance between the inner edge of the internal flange and the bottom wall of the recess, the inner surface of said frusto-conical skirt, throughout its axial length, frictionally engaging the outer tubular portion of said metallic member, a longitudinal opening through said frusto-conical skirt adapted to be placed in registration with the opening in the wall of the tubular portion upon rotation of said cap relative to the tubular portion to allow dispensing of the contents of the container, an external flange on the larger diameter end of said frusto-conical skirt, an arcuate recess, having radially extending side walls, in said flange, said recess being located in a position which is opposite that of the elongated opening in the skirt, and a fixed stop member, formed integrally with the tubular portion of the metallic member at its base adjacent the region of attachment to the container, said fixed stop extending into the arcuate recess to cooperate with the radially extending side walls to define the limits of rotation of the hollow cap relative to the metallic member, whereby the cap may be rotated within definite angular limits about said tubular portion to open and

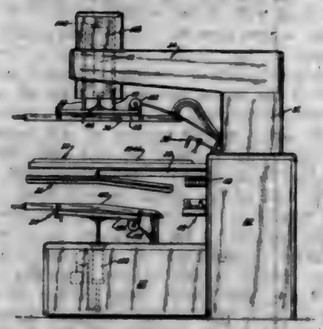
close the opening therein, while being frictionally retained in any position to which it may be rotated against angular movement, and positively retained against axial movement relative to said tubular portion.

2,944,709
PNEUMATIC APPARATUS FOR TURNING AND STACKING HOSIERY
Joseph E. Kissel, % Specialty Manufacturers & Sales Co., Acworth, Ga.
Filed Nov. 12, 1954, Ser. No. 468,288
6 Claims. (Cl. 223—43)



1. Apparatus of the class described comprising a tubular means, exhaust means connected to said tubular means for withdrawing air therefrom, valve means selectively operable to block said exhaust means, power means for reciprocally swinging said tubular means about a vertical axis, inlet means adapted to be selectively connected with said tubular means, said tubular means drawing air through said inlet means when connected with the same, said inlet means being provided with a free end over which hose may be fitted for turning by being drawn off said end and through said inlet means, said valve means being adapted to be closed upon swinging of said tubular means away from said inlet means, and means carried by said tubular means for holding said hose and withdrawing said hose from said inlet means upon swinging of said tubular means and dropping said hose upon closing of said valve means.

2,944,710
PANTS PRESSING MACHINE
Charles L. Bader, St. Louis, Mo., assignor to B.B.T. Automatic, Inc., St. Louis, Mo., a corporation of Missouri
Filed Nov. 18, 1958, Ser. No. 774,697
32 Claims. (Cl. 223—73)



1. A pants pressing machine comprising an elongated crease defining member arranged to fit within a pant leg along a crease line, a pair of elongated crease bars disposed along opposite sides of said member, means for clamping said crease bars against the pant leg along opposite sides of said member, and means for causing relative movement between said crease defining member and said crease bars transversely of the crease line to remove said member from the crease line while said bars remain clamped along the pant leg.

19. A pants pressing machine comprising a first crease defining member arranged to fit within a pant leg along the front crease line, a second crease defining member arranged to fit within a plant leg along the back crease line, said crease defining members being mounted for relative movement to expand and contract within the pant leg, a first pair of crease bars disposed along opposite sides of said first crease defining member, a second pair of crease bars disposed along opposite sides of said second crease defining member, means for clamping said crease bars along the pant leg on opposite sides of the respective members, means for causing relative movement between said crease defining members and said crease bars to remove said members from the crease lines while said bars remain clamped along the pant leg, means for distributing steam through the crease bars along the crease lines of the pant leg, means for distributing steam into the waist portion of the pants, means for distributing air through the crease bars along the crease lines for cooling and drying the pant leg, and means for distributing air into the waist of the pants for cooling and drying.

2,944,711
GARMENT HANGER STRUCTURE
Philip G. Sage, 240 Central Park South, New York, N.Y.
Filed May 25, 1959, Ser. No. 815,462
4 Claims. (Cl. 223—94)



1. A garment support and draping device comprising a body of substantially flat material provided with at least two spaced apart elongated slots, one of said slots extending in horizontal direction and having a median portion and opposite end portions, said end portions each being provided with serrated means, a curved end edge forming the upper boundary of said body, and shoulder extension means rotatably and displaceably received in each end portion of said one elongated slot, said shoulder extension means being provided with clamp means engageable with said body and with said serrated means for clamping said extension means in position relative to said curved end edge of said body, each of said shoulder extension means being defined by an arcuate upper end edge positionable for substantial alignment with the curved end edge of said body to thereby provide lateral extensions relative to the body and to conform said support to predetermined shoulder width of a garment and to drape the latter over said body and said lateral extensions, the other slot being adapted to engage at least a part of a pair of trousers when said trousers are inserted into the median portion of said one slot.

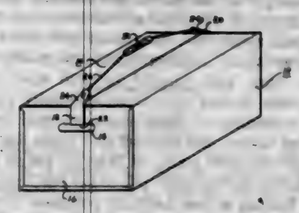
2,944,712
BICYCLE BASKETS
Clarence S. Glenny, Rockford, Ill., assignor to The Washburn Company, Worcester, Mass., a corporation of Massachusetts
Filed Aug. 13, 1956, Ser. No. 603,648
3 Claims. (Cl. 224—32)

1. In a bicycle having a frame including a substantially horizontal rear fork portion and an upwardly inclined rear fork portion, a carrier basket disposed vertically in spaced substantially parallel relation to one side of said fork, a straight elongated bracket horizontally disposed under and secured to the bottom of said basket transversely of a portion thereof intermediate the front and back of the basket and extending from the inner side of the basket to the horizontal fork portion and having means on the outer end thereof for rigidly securing the same thereto for support of the basket on said fork, and a substantially L-shaped bracket having one leg of the L disposed in a substantially vertical plane and adjustably but rigidly secured to the upper portion of the inner wall of the basket with the other leg of the L



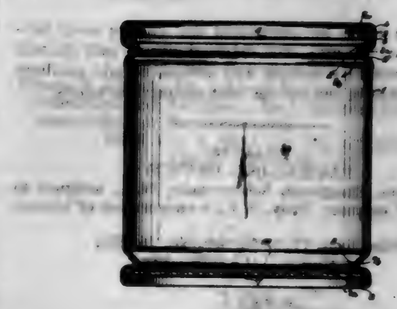
disposed substantially horizontally and turned on its longitudinal axis to whatever angularity is necessary to suit the inclination of the upwardly inclined rear fork portion, said first mentioned leg being elongated and having means thereon in longitudinally spaced relation with respect thereto for securing the same to the basket, the elongation of said leg providing increased length of bearing contact on the basket and wider spacing of the points of connection with the basket for increased rigidity, the horizontal leg of the L extending from the basket to the upwardly inclined fork portion and being elongated to space the basket from the bicycle and having means for rigidly securing the same to said fork for further support of the basket on the bicycle frame.

2,944,713
DETACHABLE AND FOLDABLE CONTAINER CARRIER
Frank A. Beach, Rte. 1, Box 152, Three Rivers, Mich.
Filed Oct. 7, 1957, Ser. No. 688,634
3 Claims. (Cl. 224—45)



1. A detachable and foldable carrier for containers having opposed finger slots on the opposite sides thereof for lifting the containers, comprising two arms for nesting with each other when the carrier is in folded position, each consisting of flat broad metal material and having an inwardly extending hook-like lower portion for engaging the portion of the container defining the finger slots and inwardly slanting upper portion with upper and lower longitudinally spaced holes therethrough, a tongue attached integrally to said upper portion adjacent the upper side of said lower hole and extending under said lower hole, a flexible member each end of which is threaded through said holes in one of said arms and secured therein by said tongues, and a substantially cylindrical handle with a longitudinal hole therethrough for receiving said member being secured to said member and spaced equally from said arms, said handle being shorter than said arms and said flexible member on either side of said handle being longer than the handle.

2,944,714
QUADRANGULAR RECEPTACLE STRUCTURES
Friedrich Mühlhoff, Köln-Bickendorf, Germany, assignor to Manner Kommandit-Gesellschaft, Köln-Ehrenfeld, Germany
Filed Nov. 22, 1957, Ser. No. 698,309
Claims priority, application Germany Mar. 29, 1957
2 Claims. (Cl. 229—5.5)

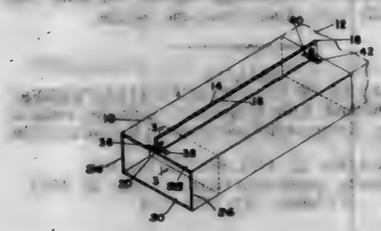


1. A receptacle comprising a hollow body part having an upper and lower end and formed of paperboard, a first inwardly extending peripheral indentation defined adjacent the upper end of said body part, a second inwardly extending peripheral indentation defined adjacent the lower end of said body part, said body part having a rim located above said first indentation to facilitate mounting of a cover, said body part being provided with a base contiguous to said second indentation and located therebelow, said body part being rectangular in cross section, a cover securing tension member overlying said upper end and shaped for retainment in said first indentation, a cover for engaging said upper end and said tension member, a reinforcing member interposed between said cover and said upper end and encompassing the latter and extending into said first indentation for engagement by said tension member, when applied to said cover, a bottom closure extending across and engaged by said base, said bottom closure including a metallic member having an extension portion integral therewith and encompassing said base to reinforce the latter, said extension portion projecting into and being retained in said second indentation, said metallic member completely closing said lower end, and a non-metallic disc overlying said metallic member and engaged between the latter and said second indentation.

2,944,715
PACKAGE
John G. Vergobbi, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Filed Sept. 10, 1957, Ser. No. 683,184
1 Claim. (Cl. 229—14)

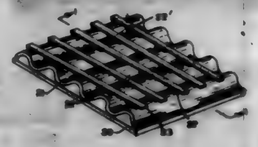
A package comprising a liner bag formed from a sheet having a relatively thin coating of thermoplastic material on the inner face thereof and having a heat sealed face-to-face longitudinal side seam and a heat sealed face-to-face transverse end closure seam in which a portion of the side seam occurring in the end closure seam forms a channel opening defined by the inner ends of the side seam fold in one wall of the end closure and

the inner face of the opposing wall of the end closure, said sheet being provided with opposing relatively thick strips of thermoplastic adhesive applied to the inner face thereof adjacent the side seam portions occurring in said



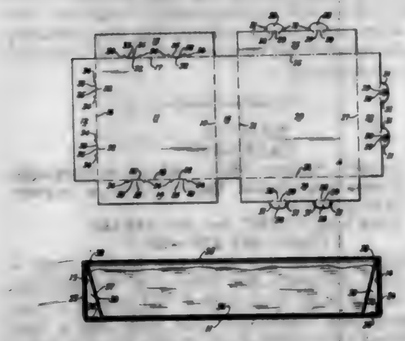
end closure seam, the completed end closure seam having a plug of thermoplastic material closing said channel opening formed by melting and flowing of said auxiliary strips of adhesive during the heat sealing operations.

2,944,716
PACKAGING DEVICE
Leon Eugene Hoogstoel, Schenectady, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts
Filed Sept. 17, 1958, Ser. No. 761,512
6 Claims. (Cl. 229—14)



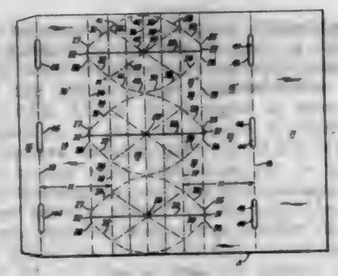
3. A packaging device comprising: a single face corrugated board having a plurality of compressible, resilient corrugations extending across the face thereof; a plurality of strips of material having high internal adhesion, each adhesively held with its bottom surface in contact with at least one of said corrugations; and a pressure-sensitive adhesive coating on the top surfaces of said strips, said strips being spaced out of contact with each other.

2,944,717
TRAY PACKAGE AND METHOD OF MAKING IT
Walton D. Lynch, Huntington, N.Y., assignor to Baljak Corporation, Wilmington, Del., a corporation of Delaware
Filed Oct. 9, 1958, Ser. No. 766,300
3 Claims. (Cl. 229—23)



1. A merchandise package comprising, a tray having a bottom and outwardly flared sides terminating at a rim extending, in plan view, beyond the boundaries of the tray bottom; and an enclosing box paperboard, said box comprising, a box bottom panel substantially equal in size to said rim, a rear panel articulated to said bottom panel, a cover panel articulated to said rear panel, and inner and outer wall panels articulated to said bottom panel and said top panel, respectively, said inner panels lying substantially in edge-to-surface abutment with said rim for support against infolding and having elongated apertures at the bottom, said apertures being formed by a cut in the shape of a shallow U having a central portion substantially coinciding with the line along which the respective panel is articulated to the bottom panel, and slanted end portions extending at an angle to the central portion; and substantially T-shaped lock tabs articulated to the said outer wall panels, said tabs extending through said apertures into the substantially triangular space between the tray sides, the box bottom and the inner panels.

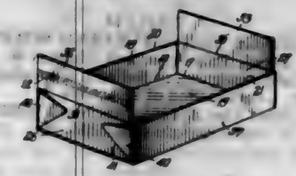
2,944,718
MULTICELLULAR FOLDING BOXES
Marshall I. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed July 19, 1957, Ser. No. 672,987
7 Claims. (Cl. 229—28)



1. A cellular folding box structure for the packaging of articles of substantially cylindrical cross-section, such as cans, bottles, jars, light bulbs and the like, the structure comprising, a pair of opposite side walls; a base panel between, and articulated to said side walls along parallel base fold lines; a cell panel between, and articulated to said side walls along two parallel main fold lines, each side wall having an intermediate folding score extending across it parallel to, and between, the respective base and main fold lines, said cell panel having a central longitudinal folding score extending across it equidistant from, and parallel to, said main fold lines, said cell panel having spaced substantially parallel cell cuts in it extending at right angles to said longitudinal folding score across and beyond said main fold lines into the body of said side walls, at least as far as said intermediate folding scores, said cell panel further comprising peripheral folding scores forming polygons about central points defined by the intersections of said cell cuts with said central folding score, said polygons including sides extending at an angle of 45 degrees with respect to said intermediate folding score from said intermediate folding score, said last named sides forming two opposite slanted sides of a trapezoidal panel of which the intermediate folding score and the main fold line form the two other parallel sides, each trapezoidal panel being inclined with respect to the side wall to which it is articulated, further sides of the polygon defining substantially triangular cell panel portions having the top of the trapezoid as a base, being inclined with respect to the planes of the trapezoidal panels and having an apex at said central folding score, the cell panel portion between each cell cut and the respective portion of the polygon subtended by said cut

being folded into substantially normal position with respect to the base panel, thereby forming a polygonal cell wall whose edge is substantially equidistant from said base panel at all points.

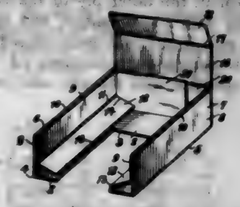
2,944,719
CONTAINER
Edwin L. Arneson, Morris, Ill., assignor, by mesne assignments, to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed Aug. 8, 1956, Ser. No. 602,745
3 Claims. (Cl. 229—31)



1. A container formed of a single blank of relatively flexible and bendable sheet material which is covered on one face with relatively thin aluminum foil, said container comprising, when erected, a foil lined tray-like member having a bottom, upstanding side walls which are integral with the side edges of said bottom and upstanding end walls, said walls all having an inner panel with the side and end wall panels being integrally connected to the periphery of the bottom wall panel, each of the side and end walls having an outwardly and downwardly folded outer panel, the outer side and end wall panels being hingedly connected along the top forming edges thereof to the top edges of the respective inner side and end wall panels, corner portions connecting the inner side and end wall panels, each of said corner portions being integrally hinged to the vertical corner forming edges of the adjacent inner side and end wall panels, said corner portions each having a diagonal fold line on which it is folded and each of said corner portions being folded into engagement with the outer face of the inner end wall panel to conceal the same between the inner and outer end wall panels, with the angle formed between the said diagonal fold line and the adjoining end edge of the side wall being 45 degrees and the angle between said diagonal fold line and the end edge of the end wall being greater than 45 degrees whereby the side walls are toed in at their connection with the end walls, and said bottom wall having an outer panel which is integral with one of said outer side wall panels.

2,944,720
CARTONS
David Levkoff, Great Neck, N.Y., assignor of one-fourth to Evelyn S. Levkoff, one-fourth to Henry S. Levkoff, and one-fourth to Edith L. Sennet, all of Great Neck, N.Y.
Filed Feb. 8, 1957, Ser. No. 639,062
3 Claims. (Cl. 229—31)

1. A carton having a bottom provided with a rectangular centrally-located aperture, upstanding side walls and end walls, each of the side walls consisting of two plies with the innermost ply of each side wall terminating at a point above the bottom, each of said innermost plies being at its lower end provided with an integral, inwardly-projecting free-end flap, said two flaps projecting toward one another and each terminating at an edge of the aperture in the bottom, the inner end of each of said flaps being freely positioned from and spaced above the bottom, said flaps forming flap-like supporting ledges for the goods in the box to hold the goods above the bottom yet permit inspection of the goods through the aperture in the bottom, the end walls including downturned flaps engaged behind the ends of the goods-supporting flaps and maintained against raising movement by such engagement.



2,944,721
PAPERBOARD BERRY BOX
James R. Choate, St. Albans, Vt., assignor to Riverside Manufacturing Company, Inc., Murfreesboro, N.C., a corporation of North Carolina
Filed Aug. 2, 1957, Ser. No. 675,854
1 Claim. (Cl. 229—34)



A paperboard berry box comprising an integral blank having a rectangular bottom panel, a plurality of side panels integrally joined to said bottom panel and extending upwardly therefrom, means extending between and connecting adjacent edges of the adjacent side panels, a reinforcing panel integrally joined to the upper edge of each of said side panels and lying in a flat plane extending upwardly and outwardly at an angle from the flat plane of said side panels, a second reinforcing panel integrally joined to the upper edge of each of said first panels and extending downwardly and outwardly therefrom, said second reinforcing panel having the same height as said first reinforcing panel, a third reinforcing panel integrally joined to the lower edge of each of said second panels and extending horizontally therefrom toward the upper edges of said side panels, and an elongated glue tab integrally formed on and depending perpendicularly from the side of each of said third reinforcing panels adjacent said side panels, each of said tabs engaging against and being fixedly secured to a respective one of said side panels closely adjacent the upper edge thereof, means securing said reinforcing panels to adjacent reinforcing panels at the corners of said box, said first, second and third reinforcing panels forming substantially an isosceles triangle in cross-section, whereby vertical pressure applied on the top edges of said box will be evenly distributed between said first and second reinforcing panels.

2,944,722
CRATE STACKER
Anthony H. Dahlhauser and Adolph H. Yaeger, Santa Clara, Calif., assignors to Keystone Steel & Wire Company, Peoria, Ill., a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,620
2 Claims. (Cl. 229—34)

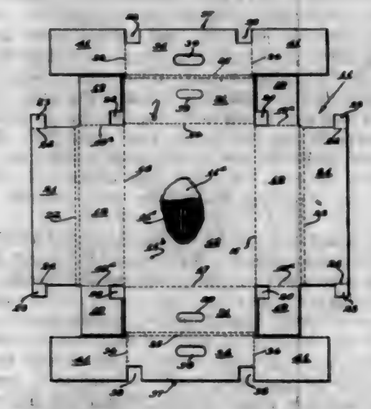
1. A crate stacker comprising, in combination with a crate having a multi-ply end wall, vertically aligned open-

ings in the top and bottom edges of the end wall registering with the space between adjacent plies thereof, a horizontal slit in the outer ply of the end wall in vertical alignment with the openings, and spaced openings in the outer ply of the end wall spaced from the slit, a generally U-shaped wire member of a width to fit through the openings and the slit, said member extend-



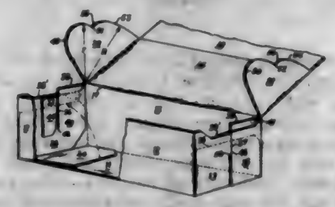
ing through the slit and through the opening at the top edge of the end wall with its closed end up and adapted to extend through the openings in the top and bottom edges of the end wall of an adjacent crate, the ends of the legs on the member being bent over perpendicular to the crate end wall and fitting respectively into the spaced openings in the outer ply of the end wall.

2,944,723
INTERLOCKED CARTON
Joseph A. Marino, Brooklyn, and Louis Mayer, Jackson Heights, N.Y., assignors, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed July 14, 1958, Ser. No. 748,315
4 Claims. (Cl. 229—34)



1. A carton construction formed of a single piece of relatively stiff, sheet-like material, said construction comprising a bottom wall of rectangular configuration defined by opposed parallel side edges and opposed parallel end edges, multiple thickness side and end walls formed by a pair of serially connected panels extending from each side and end edge being foldable normal to said bottom wall, and then the uppermost of said pair folded down into abutting relationship with the lower of said pair, said uppermost becoming the innermost ply of said respective walls, a first set of major flaps extending laterally and foldably from each end of the outermost ply panel of said side wall, said major flaps being provided with a notch adjacent its associated ply panel and being adapted to be embraced by the panels forming an end wall, a second set of major flaps foldably attached to each end of the innermost ply panel of said end wall being adapted to be embraced by the panels forming a side wall, said innermost ply panels of the end walls each being provided with a notch adjacent the flap connected thereto, said notches in said inner end wall and in said first set of major flaps embraced by said end wall panels being located to be in assembled registry, and a tab extending laterally and foldably from the inner ply panel forming said side wall, said tab being located in the same vertical plane as said notches, whereby it will snap into the recess formed by said notches in said end wall and hold said carton in assembled, interlocked relationship.

2,944,724
HINGE COVER FOLDING BOXES
Frank M. Lefief, Palo Alto, and Thomas R. Baker, Los Altos, Calif., assignors to Baljak Corporation, Wilmington, Del., a corporation of Delaware
Filed May 8, 1958, Ser. No. 734,028
4 Claims. (Cl. 229—36)

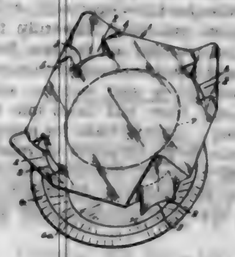


1. A folding box comprising, a bottom panel; a front panel articulated to the bottom panel along a bottom front fold line; a rear panel articulated to the bottom panel along a bottom rear fold line; a cover panel articulated to the rear panel along a cover hinge fold line; a front flap articulated to the cover panel along a front flap fold line; cover side flaps articulated to the sides of the cover panel along side flap fold lines; inner end flaps articulated to the bottom panel along end flap fold lines; front and rear end panels articulated to the sides of the front and rear panels, one of said end panels having an upwardly extending cut therein forming a downwardly extending lock tab, the other end panel having a downwardly extending cut therein forming an upwardly extending lock tab thereon adapted to be interlocked in hook fashion with said downwardly extending lock tab, the top edge of said end panels being recessed with respect to the top edge of the front panel to lie at a lower level than the top edge of the front panel except for the upwardly extending lock tab which extends above the recessed top edge portion of the end panels to provide an inwardly disposed stop against which the side flap may be swung in closing the cover, said upwardly extending lock tab guiding the cover side flap into the space between the upwardly extending lock tab on the inside and the remainder of said end panels on the outside.

2,944,725
PIE SHIELD
Edmund W. Hayes, 77 Douglas Road, Glastonbury, Conn.
Filed July 16, 1958, Ser. No. 748,835
6 Claims. (Cl. 229—43)

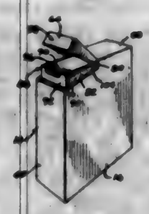
2. A protective device for pies and the like comprising in a container having an outwardly extending rim and comprising a sheet of material overlying and extending beyond the rim of said container, said sheet of material having a plurality of flaps formed by severing the material in the region of the extending portions inwardly of the edge thereof, the severance lines being positioned on said sheet so that the free end of each of said flaps is inwardly directed toward the center of the sheet, the upper surface of each of said flaps being in engagement with the

undersurface of said container rim, and score lines extending from the outer end of said severance lines transversely thereof to the edge of said sheet to form hinge lines



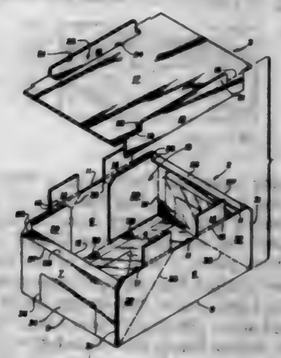
about which said flaps and edge portions of the sheet pivot to move the free ends of the flaps into cooperating engagement with said container.

2,944,726
FLIP-TOP PACKAGE
Wayne W. McCauley, 110 Cumberland St., Caldwell, Ohio
Filed Feb. 11, 1958, Ser. No. 714,513
2 Claims. (Cl. 229—44)



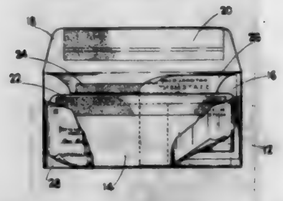
1. In a carton of the folded blank type, a hollow, rectangular body portion that includes a pair of end panels forming a top and bottom, respectively, of the body portion, a pair of side panels integrally connected to and extending between opposite side edges of the end panels, and front and back panels integrally connected to the side panels and extending between the front and back edges, respectively, of the end panels, the front panel comprising a pair of superposed front flaps having registering transverse slits extending the full distance thereacross adjacent one of the end panels, the material of each flap that lies between its slit and said one end panel comprising a tongue, the tongues being in registered, superposed relation with both tongues extending the full distance across the front panel, said side panels being formed with slits that constitute rearwardly extending continuations of the respective first-named slits, the respective second-named slits having inner ends terminating at the respective, opposite side edges of said one end panel intermediate the front and back panels, the material of the side panels bounded by the second slits, the front panel, and by said one end panel being integral with the respective tongues and comprising side cover portions, said one end panel having a fold line extending thereacross between said inner ends of the second slits, the material of said one end panel between the fold line and the front panel constituting a main cover portion integral with said side cover portions, said main cover portion including an integral, forwardly projecting ear extending the full distance thereacross and folded upon itself in embracing relation to the superposed tongues.

2,944,727
CARTON WITH SNAP-LOCK CLOSURE
Norman H. Moore, Palo Alto, Calif., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed Jan. 28, 1957, Ser. No. 636,665
3 Claims. (Cl. 229—45)



1. A carton comprising a main body part having a cover panel, and a first and second pair of opposite upright side walls hingedly connected to said cover panel with edges of said first and second pair of upright side walls defining an open mouth; a closure part for said open mouth comprising a closure cover panel telescoped within said open mouth, and a pair of opposite side panels hingedly connected to said closure cover panel and extending within said open mouth adjacent to said first pair of opposite upright side walls, said closure cover panel having openings therein adjacent said side panels; and locking flaps attached by hinged connections to said edges of said first pair of opposite upright side walls, said locking flaps extending entirely through said openings in said closure cover panel with portions of said side panels urging outwardly with respect to said open mouth against said locking flaps adjacent said hinged connections, and portions of said closure cover panel that face inwardly towards said open mouth and which lie adjacent said openings urging inwardly against the side of said locking flaps that face outwardly of said open mouth thereby securing said closure part within said open mouth, said locking flaps including portions projecting beyond the inner face of said cover panels, said openings through which the locking flaps extend having a width substantially greater than the thickness of said flaps whereby the locking flaps form an acute angle between the outer faces of the locking flaps and the inner face of the cover panel inwardly of said cover panel to provide a lock in which pressure within the carton against the closure part is transmitted to the locking flap adjacent its hinged connection and the free end portion of the locking flap extending through the opening in the closure part is in turn held in place by the closure part portion urging inwardly against the side of said locking flap that faces outwardly of said open mouth, and cooperative means providing for abutment of said main body part with said closure part to limit the extent of inward movement of said closure part, said cooperative means on said main body part against which said closure part abuts being substantially parallel to said closure cover panel and being hingedly connected on at least three sides to said main body part.

2,944,728
ENVELOPE FOR BANKING USE
Harlan M. Whitman, Minneapolis, Minn., assignor to Curtis 1000, Incorporated, St. Paul, Minn., a corporation of Minnesota
Filed July 13, 1959, Ser. No. 826,530
4 Claims. (Cl. 229—80)



2. A banking envelope comprising a front panel, a back panel, end flaps for sealing the ends of said panels together, a sealing flap extending from the long edge of said front panel and extending when folded over a portion of said back panel, a wide area of dry sealing composition on said sealing flap, areas of similar sealing composition on said back panel and on the inside surface of the front panel above the edge of said back panel, whereby when said sealing flap is folded said gummed area on said sealing flap is in sealing contact with the gummed areas on said back panel and inside surface of said front panel.

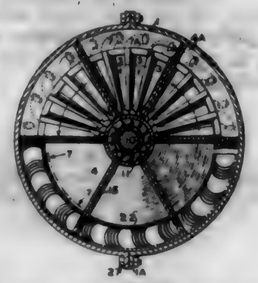
2,944,729
INDUCTION AND DISCHARGE MEANS FOR EFFECTIVE CAMBER CONTROL
John R. Foley, Manchester, and Charles B. Smith, Windsor, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 29, 1957, Ser. No. 649,397
5 Claims. (Cl. 230—122)



1. In a fluid machine, a stator unit comprising a plurality of radially extending, stationary, hollow vanes arranged in a circumferential pattern and each having a slot adjacent the trailing edge thereof, a rotor unit comprising a plurality of blades located downstream of and aligned with said vanes and extending radially from the periphery of a rotatable disc mounted for rotation to pump fluid between said vanes and blades, means connected to said vanes to pass fluid through said slots so as to vary the angle of attack of said first mentioned fluid on said blades, and means connected to said vanes to vary fluid flow along the radial stations of any of said vane slots.

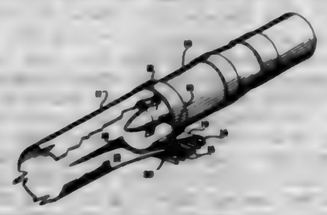
2,944,730
COMPRESSOR WITH COMPRESSED AIR REACTIVE DRIVE
Alfred M. Caddell, 1318 W. Hunting Park Ave., Philadelphia 40, Pa.
Original application Apr. 11, 1956, Ser. No. 577,567. Divided and this application June 5, 1957, Ser. No. 663,765
4 Claims. (Cl. 230—127)

1. In a centrifugal fluid compressor, an outer casing open at its forward end to form an intake duct for air, a rotor rotatably supported in said casing for compressing air radially and discharging it in a direction opposite to that of rotation, a ring of stator blades mounted in close proximity to said rotor and in communication with the discharge of said air therefrom for deflecting said air axially within said compressor, said rotor being comprised of a disc and a plurality of concavo-concave structures, said disc having a rear wall, a forward wall and a rim section extending forwardly therefrom to form a canopy, a plurality of recesses formed in the forward wall, said convavo-concave structures having base sections mounted in said recesses, said structures projecting forwardly from said bases into free air, one side thereof having a concave blade for pumping air radially as it advances in the direction of rotation and the other side having a curved formation for deflecting air from the back of said pumping blade into the pumping blade following next in rotation, each of said structures



terminating short of said canopy and being made secure thereto, chambers formed in said canopy for receiving air pumped by said blades, said chambers continuing diagonally through said rim section to the rear wall of said discs to form a channel having a lesser gross sectional dimension at its terminus than that portion of the chamber immediately radial to said pumping blade, an annular recess formed in the rear wall of said disc inwardly of its periphery, a plate formed to fit said recess, a set of nozzles having communication with said channels and extending through said plate, said nozzles having a diverging cross sectional construction protruding outwardly from said plate, the wall of said nozzles being curved in a direction opposite to that of the rotation of said rotor, said nozzles communicating with said chamber and having outlet ends discharging in a direction opposite to that of the rotation of the rotor.

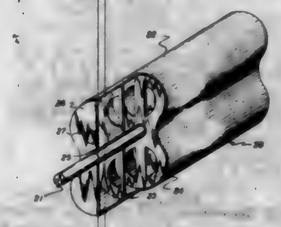
2,944,731
DEBRIS TRAPS FOR ENGINE-AIR INLETS
Howard Kastan, North Hollywood, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed May 17, 1956, Ser. No. 585,571
3 Claims. (Cl. 230—132)



1. An aircraft air-ingesting engine air inlet comprising an air inlet longitudinally extending tubular duct having a smooth non-irregular generally cylindrical inside configuration, a debris trap secured beneath said duct in advance of said engine, the bottom of said tubular duct

having an opening positioned in advance of said trap, a trap duct connecting said trap and said opening, the walls of said trap duct sloping forwardly and upwardly from said trap, the bottom and side walls of said trap duct forming a channel at the upper end of said trap duct and merging with the front and side edges of said opening, said trap duct side walls increasing in height gradually from front to rear, and said top wall of said trap duct connecting the rear edge of said opening.

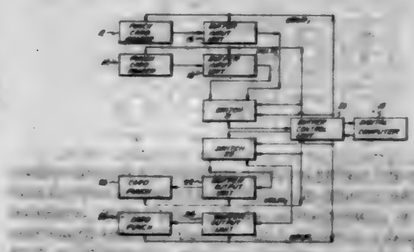
2,944,732
VACUUM PUMPS
Albert Lorenz, Hanau (Main), Germany, assignor to W. C. Heraeus, G.m.b.H., Hanau, Germany
Original application Feb. 24, 1955, Ser. No. 490,316. Divided and this application Jan. 14, 1957, Ser. No. 633,854
1 Claim. (Cl. 230—141)



A Root's type vacuum pump for operation at very high mechanical speeds above 2000 r.p.m. and at absolute pressures below 50 mm. Hg comprising a casing having an inlet and an outlet, a pair of shafts journaled in the casing for rotation, and a pair of rotatable impellers mounted on the respective shafts in the casing, the impellers being adapted to intermesh without actually touching in the central region of the casing to drive gas from the casing inlet toward the outlet, the surfaces of the impellers and adjoining interior surfaces of the casing having a microscopically smooth finish with a substantial clearance between the intermeshing surfaces of the two impellers and between the surfaces of the impellers and the interior of the casing, whereby no sliding friction is generated by rotation of the impellers, each of the impellers including a plurality of longitudinally spaced transverse reinforcing ribs secured to the associated shaft, the ribs having an outline conforming to the desired cross-sectional shape of the impeller, the ribs having large openings therethrough to decrease their weight, a pair of solid end plates secured to the associated shaft having the same outline shape as the ribs, and a skin of thin flexible material formed around and conforming to the outline shape of the ribs and end plates, the skin being secured along the edges thereof to the end plates to form a light hollow impeller body.

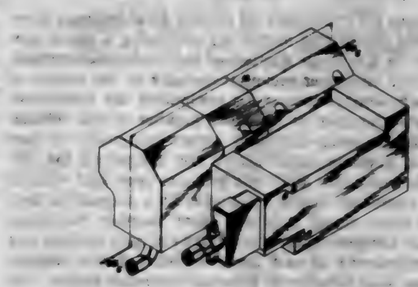
2,944,733
DATA CONVERSION SYSTEM
Kenneth L. Austin, Grapevine, Tex., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 26, 1957, Ser. No. 668,214
18 Claims. (Cl. 235—61.6)

4. Apparatus for translating alphanumeric information from a standard punch card having punches arranged in vertical columns and in two groups of horizontal rows, designated zone rows and numeric rows, to a binary-coded decimal computer having an input storage register, said apparatus comprising means for simultaneously storing in electrical form a plurality of binary-coded digits, said means including a number of digit storage positions substantially in excess of twice the number of punch card vertical columns, means for successively sensing and identifying by binary-coded digits in electrical form each of the rows on the punch card, means for simultaneously sensing a row at a time all of the punches in each successive row, means responsive to the punch sensing means and the row identifying means for establishing, in binary-coded form, row identifying digits in selected storage positions in the storing means according to the row being sensed and the punches sensed in that row respectively, said last-named means including means for channeling zone row digits and numeric row digits to alter-



nate storage positions in the storing means, whereby each column in the punch card has associated therewith two digit storage positions in the storing means, one position for zone row digits and one position for numeric row digits, said last-named means further including format control means linking each punched card column as sensed by the punch sensing means with a preselected pair of storage positions in the storing means, whereby the punch card information is transferred to selected ones of the storage positions equal to twice the number of card columns out of the total number of storing positions available.

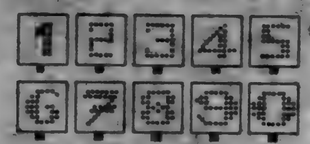
2,944,734
TEST SCORING MACHINE
Harold F. Martin, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 27, 1957, Ser. No. 642,747
13 Claims. (Cl. 235—61.7)



4. A device for determining according to quality the location of one of several marks disposed in a plurality of selected mark positions, comprising means for sequentially scanning said mark positions, said means being responsive to marks for generating signals representative of the quality and location thereof, means responsive to signals entered therein for indicating the location of marks corresponding thereto, means for gating generated signals into said indicating means, means controlled by gated signals for resetting said indicating means prior to the entry therein of the corresponding signals, said gating means being operative to gate a signal representative of a first mark, and means for rendering said gating means inoperative to gate successive signals representative of marks of poorer quality than said first mark, whereby

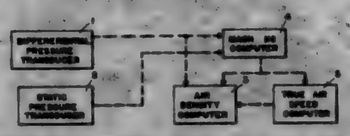
upon interpolation of said scan said indicating means indicates the location of the best quality mark in said scanned mark positions.

2,944,735
RECORD MEDIUM FOR REGISTRATION OF ADMINISTRATIVE DATA
Norbert Geleijnse, Tilburg, Wateringseplein, Netherlands
Filed Mar. 15, 1954, Ser. No. 416,383
1 Claim. (Cl. 235—61.12)



In a record sorting machine employing a record medium wherein the amount of radiant energy passed through said medium is representative of the information contained thereon and is converted into voltage impulses to activate electrical relays, a record medium comprising a card having information thereon, said information being formed by a plurality of perforations arranged in a visually comprehensible symbol, each of said perforations being of equal size and each of said symbols having a different number of perforations.

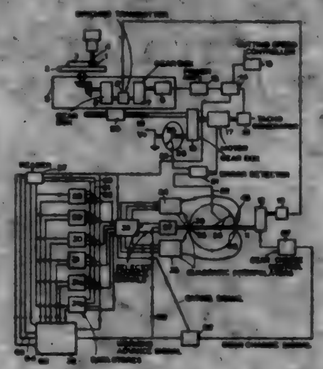
2,944,736
AIR DENSITY COMPUTER
James C. Elms, Newport Beach, and Frederick H. Gardner, Long Beach, Calif., assignors to North American Aviation, Inc.
Filed Oct. 12, 1953, Ser. No. 386,364
7 Claims. (Cl. 235—151)



1. Means for computing air density surrounding a moving vehicle comprising means for producing a signal proportional to the Mach number of said vehicle compressibility factor computer means responsive to the output of said Mach number means for computing the compressibility factor function of the Mach number of said vehicle; differential pressure computer means responsive to ram and static pressure input signals for computing the difference between ram and static pressure upon said vehicle; velocity computer means responsive to a stagnation temperature input signal and said Mach number producing means for computing the true velocity of said vehicle; and means responsive to said compressibility factor computer means, said differential pressure computer means, and said velocity computer means for dividing said differential pressure by said compressibility factor and by the square of said velocity.

2,944,737
IMPROVEMENTS RELATING TO CONTROL SYSTEMS FOR AUTOMATIC MACHINE TOOLS
Roland Allan Cull, Slough, and Edwin Malcolm Payne, Chorley Wood, England, assignors to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed June 29, 1955, Ser. No. 518,914
Claims priority, application Great Britain July 3, 1954
7 Claims. (Cl. 235—151)

1. A control system suitable for machine tools comprising means for reading a record to derive discrete instruction signals corresponding to relatively widely spaced ordinates of a desired locus, at least six stores, means for applying discrete instruction signals derived from said reading means in cyclic order to said stores, an interpolator of higher than linear order, selector means having inputs one for each store connected to the respective store and having two groups of outputs for applying signals to said interpolator, each group including at least three outputs, said interpolator being responsive alternately to

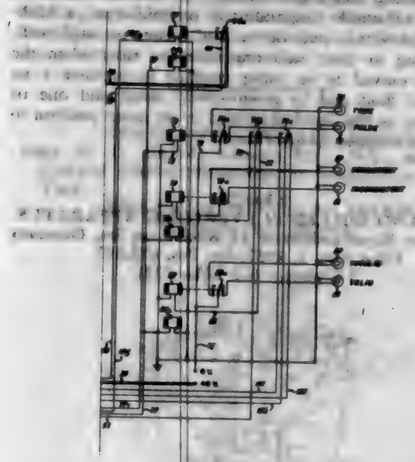


signals applied by said groups of selector outputs to derive a signal which varies to represent more closely spaced ordinates of said locus, synchronising means for operating said selector in timed relationship with said interpolator to connect groups of said inputs in a prearranged cycle to said two groups of outputs, and operation modifying means for causing said selector to skip predetermined steps in a cycle to allow said interpolator to negotiate discontinuities in said locus.

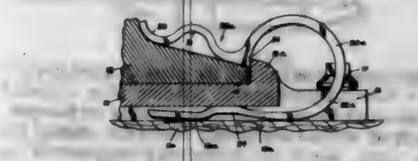
2,944,738
LOGICAL COMPUTING DEVICE
Melvin E. Maron, Santa Clara County, and John W. Hanstra, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 23, 1954, Ser. No. 412,086
2 Claims. (Cl. 235—156)

1. A logical data computing device comprising a plurality of primary circuits representative of premises of data, each said circuit having two conditions of conductivity representative of the truth or falsity of said premises, a plurality of connecting circuits representative of certain logical connectives, means for combining said primary circuits through said connecting circuits to form a complex circuit representative of a proposition in terms of said premises and said logical connectives, means for successively selecting all combinations of the conditions of conductivity of said primary circuits for successively representing all combinations of truth values of said premises, means for indicating the continuity of said complex circuit for each of said combinations of the conditions of conductivity of said primary circuits for resolving the truth value of said proposition for each combination of treth values of said premises, said means being operable in timed relation with said selecting means, means for indicating if said complex circuit is open for any one of said combinations of the conditions of conductivity of said primary circuits for resolving the validity of said proposition, means for indicating if said complex circuit is closed for any one of said combinations of the conditions of conductivity of said primary circuits for resolving the consistency of said proposition,

and means for rendering said selecting means inoperative if said complex circuit is ever open, whereby the particular combinations of truth values of said premises which render said proposition invalid may be analyzed.

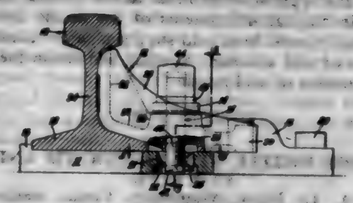


2,944,739
ANTI-CREEPER FOR RAILWAY RAILS
Frederick S. Schwinn, 4118 Tartan Lane, Houston 25, Tex.
Filed Nov. 23, 1956, Ser. No. 624,124
2 Claims. (Cl. 238—217)



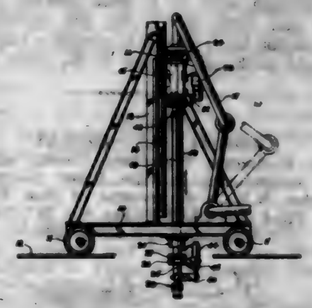
1. A railway rail anti-creeper assembly comprising, in combination, a tie plate formed with spaced apart shoulders defining a seat for a conventional railway rail having opposed fillets at the junction of the base portion with the central web thereof, and means for securing the rail to the plate compriaing a spring clip having single upper and lower jaws for embracing and vertically clamping together overlying portions of the rail base and the tie plate; the arm of the upper jaw being formed at one end with a curved portion for bearing against one of said fillets and provided at the other end with a vertically disposed loop and with a thickened portion serving to stiffen said upper jaw at its junction with the loop and having snap lock engagement with an inner face of one of said shoulders of the tie plate, and the portion of the upper jaw intermediate said curved end portion and said thickened portion being formed with a series of reverse bends normally compressed lengthwise of the jaw, when the jaw is forced to its applied position; the lower jaw of the clip being formed with an upwardly bowed portion at a location beneath the tie plate adapted to be partially flattened by forcing the lower jaw between a bottom portion of the plate and the top surface of a cross tie on which the tie plate is supported, whereby the deflection of the bowed portion of the lower jaw elongates the vertical loop and thereby increases the thrust of the upper jaw against the top surface of the rail base.

2,944,740
ADJUSTABLE RAIL BRACE
George R. Burkhardt, Chicago, Ill., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Feb. 15, 1955, Ser. No. 488,293
7 Claims. (Cl. 238—292)



1. In an adjustable rail brace, a tie plate, a stationary backer secured to said tie plate, said backer having a stationary wedge surface, a longitudinally adjustable rail-contacting wedge element movable lengthwise of the rail, said wedge element having a wedge surface engaging said stationary wedge surface, said adjustable wedge element having a base portion engaging said tie plate, said wedge surfaces sloping toward the rail in a direction lengthwise of the rail, a bolt for securing said adjustable element to said tie plate, said bolt having a non-circular head, said tie plate having a non-circular opening, the underside of said tie plate having an enlarged recess adjoining said opening, said base portion having an oblique slot extending generally parallel to said wedge surfaces, the end of said oblique slot nearest the rail having an enlarged part for the reception of said bolt head so that said head may be inserted through said tie plate opening from above, said head being disposed under said tie plate in said recess and bridged across said tie plate opening with the shank projecting through said tie plate opening and said slot, a washer element overlying said base portion and having an opening through which said shank passes, and a nut on said shank overlying said washer element.

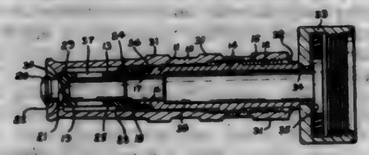
2,944,741
HYDRAULIC LOG BARKERS
Marion F. Fish, Everett, Wash., assignor to Sumner Iron Works, Inc., Everett, Wash.
Filed Feb. 25, 1957, Ser. No. 642,841
2 Claims. (Cl. 239—184)



1. An apparatus for hydraulically debarking logs including a supporting frame, a vertically disposed supply pipe rotatably mounted in said frame, a nozzle mounted at the discharge end of said supply pipe for directing the water therefrom, said nozzle being swingingly mounted for adjustment to angular positions relative to the supply pipe, a hydraulic cylinder mounted on the supply pipe adjacent the nozzle, said cylinder including a piston rod operatively connected with said nozzle, a valve mechanism

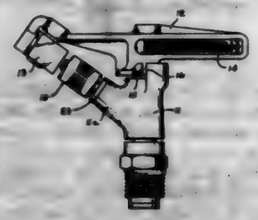
mounted on said supply pipe, a pipe line interconnecting said supply pipe and said valve mechanism, pipe connections between said valve mechanism and the hydraulic cylinder, a pair of electric solenoids interconnected with said valve mechanisms for controlling the operation of said valve mechanism whereby said valve is operable for effecting the application of water to the cylinder to effect and retain angular adjustments of the nozzle, and control means remote from said supply pipe for controlling operation of said solenoids to effect and retain the angular adjustments of said nozzle.

2,944,742
HOSE NOZZLE WITH PLASTIC TIP AND FLIP RING
Gerald A. Le Blanc, Waterbury, Conn., assignor, by mesne assignments, to Otto Bernz Company, Inc., Rochester, N.Y., a corporation of New York
Filed Jan. 10, 1958, Ser. No. 708,283
1 Claim. (Cl. 239—458)



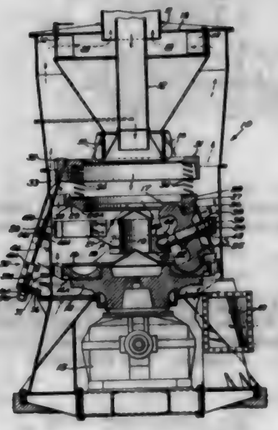
A nozzle adapted for attachment to a hose comprising a hollow outer sleeve having a discharge opening at one end, a hollow stem including a metal cylindrical body portion having threaded engagement with the outer sleeve and a reduced end section providing a shoulder between such end portion and the body of the stem, and an extension of pliable plastic material having an open end surrounding said reduced end of the metal stem and an internal annular groove adjacent said open end, a narrow annular rib around said reduced end of the metal stem engaging with said internal annular groove to hold said plastic piece in fixed position with respect to said shoulder so as to provide an exterior annular groove between the open end of the plastic piece and said shoulder, said rib being substantially of smaller diameter than the body portion of the metal stem member and having a beveled forward face, and a sealing member of the flip ring type seated in said exterior annular groove, said plastic extension piece having a passageway communicating with interior of the metal stem member and opening through ports to a space between the plastic extension and outer sleeve, the end portion of said plastic extension being shaped to provide a valve for controlling said discharge opening in the outer sleeve.

2,944,743
ADJUSTABLE NOZZLES
Henry J. Kachergis, Waterbury, Conn., assignor, by mesne assignments, to Otto Bernz Company, Inc., Rochester, N.Y., a corporation of New York
Filed Aug. 26, 1958, Ser. No. 757,274
5 Claims. (Cl. 239—458)



1. A nozzle comprising a hollow nozzle stem having means at one end for attachment to a fluid supply, the opposite end of said stem having a restricted orifice opening through said end in axial alignment with the stem and one or more slots intercepting said orifice and extending lengthwise through the wall of said stem, a sleeve adjustable longitudinally on said stem, a bushing carried within said sleeve, and means on said bushing serving to close said one or more slots when the sleeve is moved to an outer position to produce a jet stream of fluid and to progressively open said one or more slots as the sleeve is moved to an inner position to produce a widened spray of fluid.

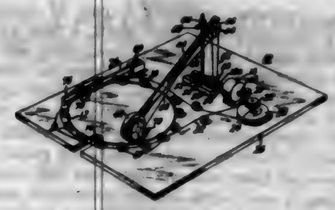
2,944,744
RING AND ROLLER PULVERIZING APPARATUS
Max Berz, Bayerlandstrasse 23, Kochel am See, Germany
Filed Aug. 2, 1957, Ser. No. 675,847
3 Claims. (Cl. 241—132)



3. Pulverizing apparatus of the class described, comprising a horizontally disposed grinding plate mounted for rotation and having an annular grinding surface provided with an arcuate depression, means for rotating the grinding plate, means for introducing material to be pulverized into said casing and in said arcuate depression, a roller race member disposed above and in spaced relationship with the grinding plate, the roller race member having interconnected concentric inner and outer rings spaced from each other and lying in different horizontal planes, three pairs of peripherally spaced guide strips secured to the inner and outer rings, each pair of guide strips of the inner and outer guide strips extend radially from their respective rings and toward the pair of guide strips on the other ring, three grinding rollers having a peripheral and arcuate grinding face adapted for movement within the arcuate depression and in contact therewith, the arcuate face of each of the rollers having a radius of curvature less than that of the arcuate depression to provide contact of said grinding face with the deepest portion of the arcuate depression, each grinding roller having a shaft, a bearing block disposed on the opposite end portions of each of the roller shafts, each bearing block being receivable between a pair of guide strips on the inner ring and a pair of guide strips on the outer ring whereby the roller race is supported by the rollers, the bearing blocks and guide strips being constructed to permit vertical movement of the opposite ends of each of the roller shafts relative to each other so that the arcuate faces of the rollers move within the arcuate depression vertically and toward and away from the axis of rotation of the grinding plate under the urging of material to be pulverized, each pair of guide strips on the

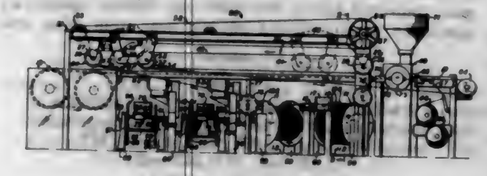
inner ring having flanged opposite edge portions extending over opposite edge portions of the bearing block disposed therebetween and spaced from the latter to limit vertical movement of the bearing block and roller shaft relative to the roller race member, means for exerting a biasing force on said rollers to urge the rollers in engagement with the arcuate depression.

2,944,745
TOROID WINDING APPARATUS
John W. C. Bennett, Johnson City, N.Y., assignor to General Electric Company, a corporation of New York
Filed Oct. 14, 1957, Ser. No. 689,830
8 Claims. (Cl. 242—4)



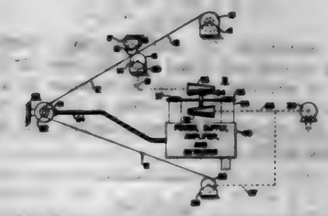
1. A machine for winding miniature toroids comprising; a hollow, circular shuttle, having a smaller outside diameter than the inner diameter of the toroids to be wound thereon, winding wire enclosed by said shuttle, a shuttle eye for removing the wire from said shuttle to the toroid, means securing one end of said wire to a stationary portion of said machine to thereby substantially suspend on said winding wire a toroid to be wound, and means for revolving said shuttle through the toroid, whereby turns of wire are wound upon the toroid.

2,944,746
APPARATUS FOR TAKING UP AND SUPPLYING STRAND MATERIAL
Samuel M. Martin, Lutherville, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 19, 1957, Ser. No. 684,964
3 Claims. (Cl. 242—25)



1. In an apparatus for taking up and supplying strand material including strand supply means, strand take-up means and means for advancing a strand along a predetermined path from the supply means to the take-up means, the improved accumulating means which comprises a movable carriage, a first travelling sheave mounted rotatably on said carriage, a first stationary sheave mounted rotatably between said supply means and said carriage and in alignment with said first travelling sheave on the carriage, a second travelling sheave mounted rotatably on said carriage, and a second stationary sheave mounted rotatably between said carriage and said take-up means and in alignment with said second travelling sheave on the carriage, all of said sheaves being positioned to have the advancing strand pass seriatim thereover so that all of said sheaves cooperate to define a portion of the predetermined path of the strand, whereby when the carriage is moved in one direction the path of travel of the strand between the supply means and the carriage is shortened while the path of the strand between the carriage and the take-up means is lengthened, and when the carriage is moved in the opposite direction the path of travel of the strand between the supply means and the carriage is lengthened while the path of travel of the strand between the carriage and the take-up means is shortened thereby permitting continuous advancement of the strand through the intermediate portion of its path of travel when either of the supply means and the take-up means is stopped.

2,944,747
TENSION CONTROLLER
Joseph A. Miller, Stillwater, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 19, 1956, Ser. No. 592,415
5 Claims. (Cl. 242—45)

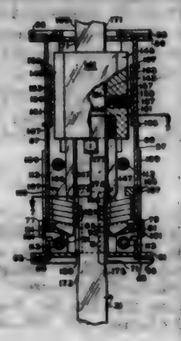


1. In a winding machine of the class described: power means having outputs one of which is fixed in speed and another is variable in speed; control means connected to said power means for varying said variable output; a supply spool mounted for rotation; drive means driven by said variable speed output of said power means; bobbin means mounted for rotation and being driven by said fixed speed output of said power means; a tension sensing device having a stator and a core and including energizing and output windings; means resiliently mounting said core including a guide means in cooperation with said stator; an elongated element to be wound from said supply spool to said bobbin and passing through said drive means and over said guide means; and circuit means connecting said output windings of said tension sensing device to said control means to control the energization of the same, the tension of said elongated element deflecting the core to variably energize the output windings of said tension sensing device from said energizing windings to vary the energization of said control means to vary said variable output and operate said drive means to maintain constant tension on said elongated element.

2,944,748
HOSE BRAKING MECHANISM
Harold E. Carnagua and Joseph F. Tye, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Nov. 20, 1957, Ser. No. 697,699
19 Claims. (Cl. 242—47.5)

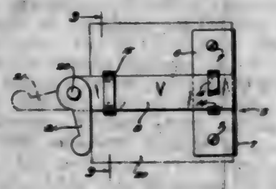
1. In a hose retracting mechanism comprising an integral hose retracting weight and hose pulley engaged in a bight of hose, means for fixing one end of the hose, means for guiding said weight and pulley for movement in a path, in directions to retract and yield the hose, the improvement which comprises brake reaction means disposed substantially along the path of said weight and pulley, releasable, unidirectional acting brake means mounted for movement with said weight and pulley,

along said reaction means, yieldable means for urging said brake means into position for engagement with said reaction means, said brake and reaction means cooperating, upon movement of said weight and pulley in its hose retracting direction to hold said weight and pulley against



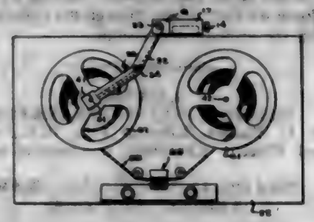
further movement in said direction, inertia means mounted on said pulley and movable from an initial position to an effective position in response to a predetermined acceleration of said pulley in its hose yielding direction, for releasing said brake means and for holding said brake means released.

2,944,749
DISPENSER FOR ROLLED PAPER
Anton P. Maier, 3410 W. Layton Ave., Greenfield, Wis.
Filed Feb. 18, 1955, Ser. No. 489,199
2 Claims. (Cl. 242—55.2)



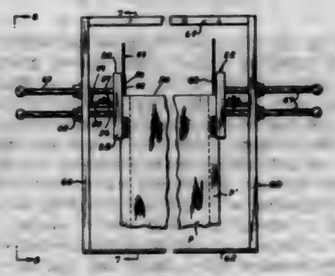
1. In a dispenser for rolled paper having an axial cylindrical opening, a bracket adapted to be mounted on a supporting structure, an arm carried by said bracket in spaced relationship to the supporting structure, said arm having a plurality of notches spaced along its length, a plurality of flexible rubber rings having a smooth unbroken peripheral surface and an outer diameter smaller than the diameter of said cylindrical opening and carried by said arm in said notches in axial alignment for insertion into said cylindrical opening to support the roll on their peripheries for rotation relative thereto, said rings having slots formed in their inner diameters for receiving the bottom edges of said notches, and a retainer operatively secured to said arm to prevent lateral displacement of the roll of paper off of said rings, whereby the peripheral surface of said rubber rings presents a frictional resistance to sliding movement with the paper about said cylindrical opening to retard overrunning of the roll when a sharp tangential force is applied as will occur when a sheet of paper is torn off of the roll, and the notches in said arm prevent lateral displacement of the rings on the arm while the bottom edges of the notches in the slots of said rings prevent the rings from rotating relative to the arm.

2,944,750
TAPE RECORDER INDICATOR ATTACHMENT
Buford C. Hall, Jr., 1346 Walnut Ave., Yuma, Ariz.
Filed Mar. 8, 1957, Ser. No. 644,901
2 Claims. (Cl. 242—55.12)



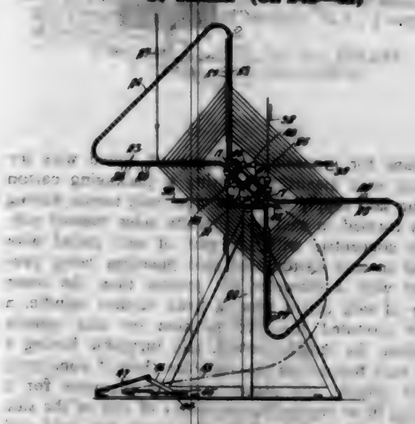
1. In a recorder including a pair of rotatable reel shafts, a reel carried by each shaft, a tape carrying an impression wound upon one of said reels and having a portion adjacent one end wound upon the other of said reels, and means for unwinding the wound tape on said one reel and winding the unwound tape on said other reel, the improvement consisting of providing a means for visually recording and indicating the respective windings unwound from said one reel, said last-named means comprising a revolution counter detachably mounted on said recorder, said counter including a horizontally disposed rotatable shaft having a portion adjacent one end projecting from one end of said counter, an upstanding housing positioned adjacent said one end of said counter and fixedly secured thereto, a gear train rotatably mounted within said housing and having one end operatively connected to said counter shaft portion and having the portion adjacent the other end arranged perpendicularly with respect to and above said counter shaft and projecting from said housing, a second housing arranged in spaced relation with respect to said first-named housing, means connecting said first-named and second housings together for movement toward and away from each other, a gear train rotatably mounted within said second housing and having one end exteriorly of said second housing and drivably connected to one of said reel shafts and having the portion adjacent the other end arranged perpendicularly with respect to and above said second housing gear train one end and projecting from said second housing, and a flexible shaft dependingly carried by said last-named means and having one end thereof operatively connected to said another end of said first-named housing gear train and having the other end thereof operatively connected to said second housing gear train other end.

2,944,751
PACKING DEVICE FOR PILE FABRICS
Sol Schwartz, 67—40 173rd St., Flushing, N.Y.
Filed July 1, 1957, Ser. No. 669,377
2 Claims. (Cl. 242—62)



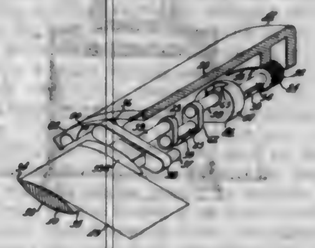
1. A machine for winding and packing pile fabric comprising the combination of a base structure having horizontally spaced supports, a rack for spooling pile fabric removably journaled on a horizontal axis on said spaced supports, said rack having radiating arms carrying rows of longitudinally spaced pile fabric supporting fingers provided with binding wire guides located at the opposite sides of the spaces between said spaced fabric supporting fingers, pile fabric piercing wires slidable in said guides across said spaces and through layers of pile fabric disposed therein, clutch means in gripping engagement with said wires and means for shifting said clutch means in the direction to advance said binding wires through said guides and layers of pile fabric spooled on said spaced fingers said clutch means and said means for shifting the same being rotatable with said fabric spooling rack.

2,944,752
MACHINE FOR PACKING PILE FABRICS
Sol Schwartz, 67—40 173rd St., Flushing, N.Y.
Filed July 2, 1957, Ser. No. 669,519
16 Claims. (Cl. 242—62)



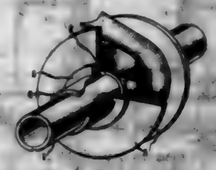
1. Machine for packing pile fabric comprising a reel having radiating arms provided with rows of longitudinally aligned spaced cloth supports with longitudinally registered passages extending therethrough, and means for advancing binding wires through said passages and through successive layers of cloth introduced between said spaced supports.

2,944,753
CAPACITOR PACK WINDING MACHINE
Robert C. Odell, Waukesha, and Herman C. Frantzel, Shorewood, Wis., Dane T. Scag, Princeton, N.J., and John M. Netzler, Milwaukee, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Apr. 9, 1958, Ser. No. 727,459
5 Claims. (Cl. 242—67.3)



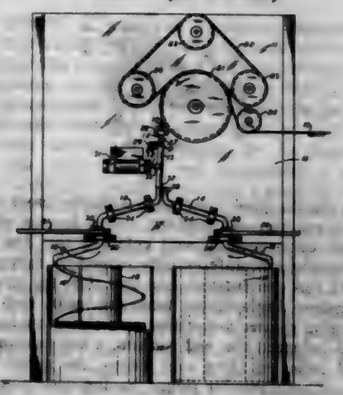
1. A winder for strip material comprising a mandrel, means for supplying said material to said mandrel, said mandrel having spaced winding edges transverse to the path of said material, means for engaging said mandrel near one of said edges and driving said one edge outward from said supply means for a distance approximately equal to the distance between said edges, said driving means and said one edge cooperating to pull said material from said supply means at a substantially uniform rate into a winding position with respect to said mandrel, and means for pivoting said mandrel about said one edge to wind said material on said mandrel and to position another of said edges to be engaged by said engaging means.

2,944,754
SLIT MACHINE WINDUP MECHANISM
Charles O. Jennings, Richmond, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 1, 1956, Ser. No. 581,976
2 Claims. (Cl. 242—68.3)



1. In a windup mechanism for a slitting machine comprising a driven mandrel, a pair of spaced, annular, rigid, edging discs mounted on said mandrel in driving engagement therewith, and a core upon which a slit web is wound mounted on said mandrel between and in driving contact with said discs, the improvement which comprises the web-contacting face of at least one of said discs being recessed, the recess tapering inwardly from the outer to the inner edge of the disc whereby the distance between the discs is greater at the inner edges thereof than at the outer edges thereof, the distance between the discs being fixed and the maximum distance between the discs being not greater than the width of the slit web being wound on the core.

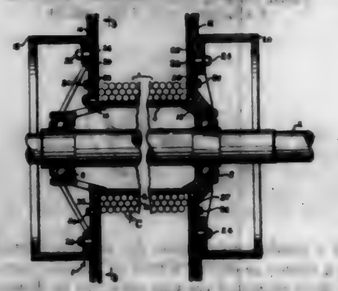
2,944,755
CUT-OVER MECHANISM FOR ADVANCING STRANDS
Arthur C. Foster, Westfield, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 5, 1959, Ser. No. 785,921
6 Claims. (Cl. 242—80)



1. In apparatus of the type wherein an advancing strand is to be delivered alternately through a number

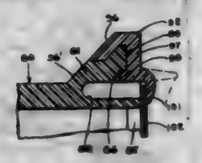
of guide members, a cut-over mechanism which comprises a plurality of guide members, a movable distributing guide designed to deliver the advancing strand to the guide members, means for moving said distributing guide between positions where said distributing guide registers with different ones of the guide members, and co-operating means provided on the guide members and the distributing guide for severing the advancing strand as the distributing guide moves from one distributing position to another.

2,944,756
RESILIENT FACINGS FOR DRUM FLANGES
John Hart Wilson, P.O. Box 329, Wichita Falls, Tex.
Filed July 31, 1956, Ser. No. 601,300
8 Claims. (Cl. 242—117)



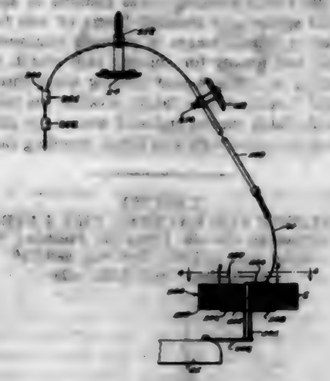
1. A winding drum assembly comprising two drum flanges, a drum barrel secured between said drum flanges, at least one disc-like resilient element encircling said drum barrel at an end thereof, and having a radial surface in abutting relation to the inner face of at least one of said drum flanges, at least one disc-like metal annulus encircling said drum barrel substantially parallel to said drum flange and in abutting relation to the opposite surface of said resilient element, and means securing said metal annulus and resilient element in assembled relationship to said flange.

2,944,757
RIMMED PLASTIC SPOOL
Louis H. Morin, Bronx, N.Y., assignor to Coats & Clark Inc., New York, N.Y., a corporation of Delaware
Filed June 2, 1955, Ser. No. 512,749
4 Claims. (Cl. 242—118.4)



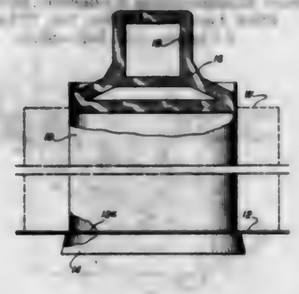
1. A plastic spool comprising a plastic spool body having enlarged rim end portions and a cast-on plastic rim arranged upon each of said enlarged rim end portions, interengaging circumferentially extending means on said enlarged rim end portions and said rims for retaining the rims against displacement from the spool body, said interengaging means comprising an annular undercut ridge on each enlarged rim end portion, a key portion on each of said rims engaging said ridges, the spool body, inwardly of said annular ridges, having deep annular slots, and each rim having circumferentially spaced ribs extending into said slots.

2,944,758
WIRE PACKAGE AND SUPPORT
John G. Wright, James M. Chadis, and George M. Wynn, Atlanta, Ga., assignors to The Auto-Soler Company, a corporation of Georgia
Filed June 15, 1956, Ser. No. 591,680
3 Claims. (Cl. 243—129)



1. Means for mounting a supply of coiled wire for dispensing, said means comprising a packaging carton containing said supply of coiled wire, said carton having openings formed in each of opposite sides thereof substantially concentric with the axis of said coiled wire contained in said carton and said openings being proportioned with a diameter not greater than the inner diameter of said coiled wire, a fixed vertical spindle, a turntable mounted for free rotation on said spindle intermediate the length thereof, said turntable having a circular boss formed on the top face thereof concentric with said spindle and proportioned in diameter for a positioning fit to engage the periphery of one of the side openings in said carton and thereby locate and hold said carton concentrically on said turntable, and a guide member fixed at the upper end of said spindle for directing the withdrawal of wire through the other side opening in said carton from the inside windings of said coiled supply.

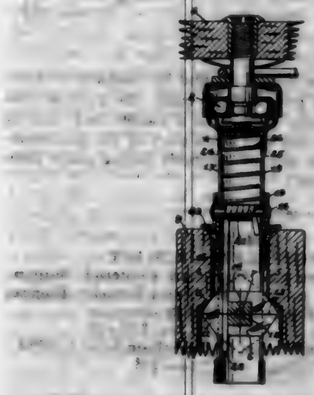
2,944,759
WIRE STAND
Gordon I. Donovan, Plainfield, N.J., assignor to Triangle Conduit & Cable Co., Inc., New Brunswick, N.J., a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,571
1 Claim. (Cl. 242—129)



A rack of the character described, comprising a cylindrical frame for mounting prewound material externally

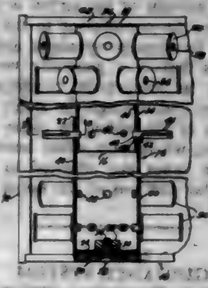
thereon, and means on said frame externally thereof for supporting the material, said supporting means comprising a flange extending laterally of said cylindrical frame externally thereof adjacent one end portion of the frame and projecting laterally inwardly of the frame for engaging the opposite end of a similar rack for support thereon when two or more racks are disposed in vertical stacked relation, and a means positioned below said flange providing a supporting base for the rack and adapted to overlap the upper end portion of the cylindrical frame of an adjacent lower rack in the stack, and handle means secured to said cylindrical frame internally thereof and projecting outwardly of the end of the frame opposite the end at which said flange is provided, said inwardly projecting flange terminating in an edge defining an opening in which a handle on a lower rack is received.

2,944,760
PENDULOUS ROTARY BOBBIN HOLDER
Merle E. Peterson, Elmira, N.Y., assignor to Bendix Aviation Corporation, Elmira Heights, N.Y., a corporation of Delaware
Filed Apr. 22, 1957, Ser. No. 654,105
2 Claims. (Cl. 242—130.2)



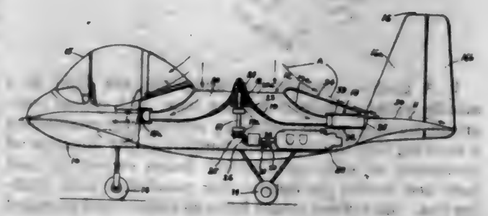
1. A pendulous rotary support for hollow bobbins for spinning frames and the like comprising a generally cylindrical body adapted to enter loosely into a bobbin, means for rotatably suspending the body from a member of the spinning frame, said body having a pair of diametrically arranged axially extending slots, an oblong latch member pivoted in the body on a horizontal axis in position to project through said slots when its major dimension is horizontal, and means for indexing the latch into and out of its horizontal position including a square ratchet member on the latch having flat vertically extending sides, a pin diametrically arranged and slidably mounted in the body of the support with its axis perpendicular to the vertical plane containing the pivotal axis of said latch, a collar slidably mounted on the exterior of the body and rigidly connected to the pin; and a vertically extending elastic pawl member having a journal bearing at its upper end on said pin, said pawl having a straight shank portion maintained by said bearing yieldingly pressed against a vertical flat side of the ratchet to urge the ratchet toward its indexed position, and said shank portion having a horizontal downwardly facing shoulder spaced from its lower end adapted to engage and index the ratchet on downward movement of the pawl, said pawl having a further straight portion below said shoulder engaging the ratchet to resist its rotation from indexed position when the pawl is raised.

2,944,761
ROTARY SPOOL RACK
Bernard H. Best, 12 Forest Drive, Plainview, N.Y.
Filed Aug. 7, 1959, Ser. No. 832,339
3 Claims. (Cl. 242—139)



1. A spool rack comprising a rotary cylinder having a side wall and ends, support means for the rack engaged with the ends of the cylinder, and spool-supporting pins mounted on said side wall and projecting radially outwardly from said side wall, said pins having outer and inner ends, said pins having resilient compressible portions spaced from their ends, said compressible portions being larger in diameter than the bores of the spools to be engaged on the pins, said cylinder side wall having holes therein, and said pins having plugs on their inner ends which are frictionally and removably engaged in said holes.

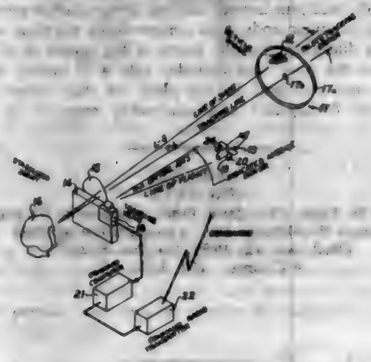
2,944,762
AIRCRAFT
Thomas R. Lane, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Dec. 12, 1955, Ser. No. 552,378
4 Claims. (Cl. 244—12)



1. An aircraft of generally circular configuration in plan and constructed for vertical, horizontal and hovering flight, comprising a saucer-shaped fuselage having a cabin spaced between the periphery and center thereof and a rigid ring-shaped cambered airfoil providing the peripheral portion of said fuselage and interrupted by said cabin, a compressor substantially enclosed by the fuselage at generally the center thereof and comprising a pair of flared and vertically spaced plates and a plurality of generally vertical and radially extending vanes between said plates, the upper ends of said plates providing a plurality of circumferentially spaced air intake openings and the lower ends a plurality of circumferentially spaced air discharge openings whereby the path of air flow is first vertically and then radially, a stator assembly essentially entirely surrounding the compressor and also enclosed by the fuselage, said stator assembly comprising a pair of vertically spaced plates mounted closely adjacent the lower ends of the compressor plates to receive air from the compressor discharge openings and direct said air over the upper surface only of the airfoil, said stator assembly

further including a plurality of arcuately swept vanes mounted for horizontally swingable movement by the stator plates and being of a length such that when a pair of said vanes are pivoted to a sufficient degree the ends thereof overlap and the compressed air flow over a particular portion of the airfoil is closed off, and means for rotating the compressor to take air from the atmosphere into the intake openings and between the compressor plates first in a generally vertical direction and then radially in compressed condition through the discharge openings and through the stator assembly over the upper surface of the airfoil to cause the aircraft to ascend and hover, whereupon when horizontal flight is desired the stator vanes are adjusted to direct the air over only particular portions of the upper surface of the airfoil.

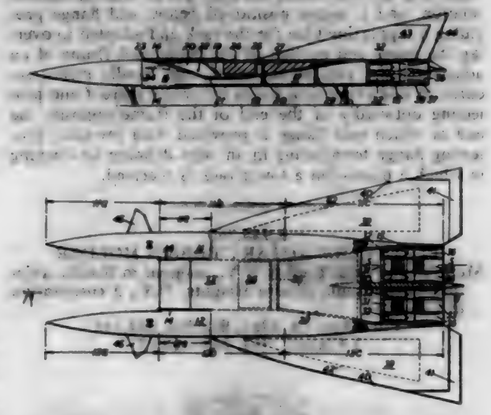
2,944,763
GUIDANCE SYSTEM
Roland Grandgent, Huntington Station, and Thracy Petrides, New York, N.Y., assignors to Republic Aviation Corporation, Farmingdale, N.Y., a corporation of Delaware
Filed July 13, 1955, Ser. No. 521,977
(Filed under Rule 47(a) and 35 U.S.C. 116)
5 Claims. (Cl. 244—14)



1. A guidance system for controlling the flight of a missile launched from a moving base, said system comprising sighting means carried by said base for establishing a tracking line from and substantially in the direction of movement of said base, optical means carried by said base and having an optical axis parallel to said tracking line, said optical means being organized and arranged to track the missile during its flight and to produce signals indicating its position relative to the tracking line and to convert the position signals into command signals, means for transmitting the command signals to the missile, and means carried by the missile and responsive to the command signals to direct the flight of the missile into substantial agreement with the tracking line.

2,944,764
JET-PROPELLED AIRCRAFT
Raymond John Lane and Raymond Frederick Sargent, Bristol, England, assignors to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed Aug. 27, 1959, Ser. No. 836,420
Claims priority, application Great Britain Sept. 1, 1958
7 Claims. (Cl. 244—15)

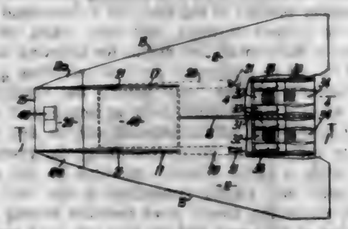
1. An aircraft for flight at supersonic speeds, comprising two elongated accommodation bodies spaced apart in side-by-side relation and each comprising a sharply pointed forebody, a centrebody of constant width and depth, and an afterbody tapering in width, the two accommodation bodies being interconnected, only in the regions of their centrebodies and afterbodies, by a power plant body, of generally rectangular section in transverse planes, comprising an air intake opening at its forward end, a diffuser passage leading rearwardly from the intake, air heating means connected to receive air discharged from the diffuser, and a propulsion nozzle con-



nected to receive the heated air and to discharge it from the rear end of the power plant body, the aircraft also comprising two wings, each with a swept back leading edge, extending laterally one from each of the accommodation bodies on the side of the body facing away from the power plant body.

2,944,765
JET-PROPELLED AIRCRAFT
Raymond John Lane and Raymond Frederick Sargent, Bristol, England, assignors to Bristol Siddeley Engines Limited, Bristol, England, a British company
Filed Aug. 27, 1959, Ser. No. 836,481
Claims priority, application Great Britain Sept. 1, 1958
7 Claims. (Cl. 244—15)

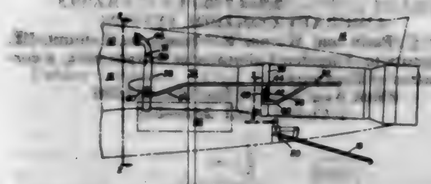




1. An aircraft for flight at supersonic speeds, comprising a body of substantially rectangular section and substantially constant width and depth, and a wing with a swept back leading edge on each side of the body, the body being pierced from end to end by an airflow duct at least a forward portion of which is of rectangular cross-section and extends across the whole width of the rectangular section body, the duct terminating at the forward end of the body in an air intake opening bounded

on one horizontal side by a compression surface oblique to the direction of flight, a rear end portion of the duct occupying the whole width and depth of the rectangular section body and containing air heating means and a propulsion nozzle system, and an intermediate portion of the duct being divergent so as to constitute a diffuser.

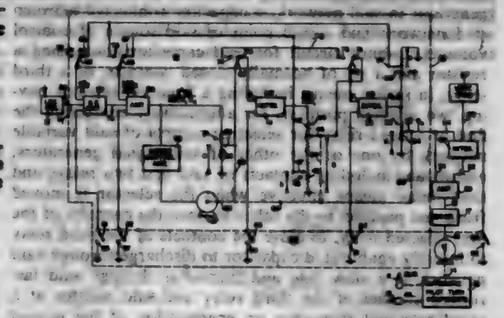
2,944,766
AIRCRAFT ENGINE INSTALLATION
John W. Freeding, George M. Hines, and Harold J. Vanhanik, Wichita, Kans., assignors to Boeing Airplane Company, Wichita, Kans., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,169
9 Claims. (Cl. 244—54)



1. The improvement in an engine installation in an aircraft wherein an engine is mounted in the tail portion of the fuselage, comprising: said aircraft having a vertical stabilizer and said fuselage in said tail portion being longitudinally divided to the rear end of the fuselage providing an upper fuselage portion including said vertical stabilizer hingedly movable to one side from normal position to a position exposing said engine, a pair of tracks supported by the fuselage and disposed at the sides of the engine and rollers on said engine operable to bear on said tracks for support of said engine in removal from the fuselage, the major portion of said tracks extending generally horizontally and longitudinally of said fuselage and a minor portion of said tracks that said rollers strike in initial rearward motion sloping upwardly and rearwardly whereby said engine is lifted to an upper position into the open space provided by the movement of said upper fuselage portion to one side, said aircraft having a series of supply and control lines to said engine having connections with said engine permitting said lines to remain connected in said upper engine position whereby part of the engine systems can be operated during maintenance and repair operations in said upper engine position, said engine being removable by further rearward movement from said upper engine position.

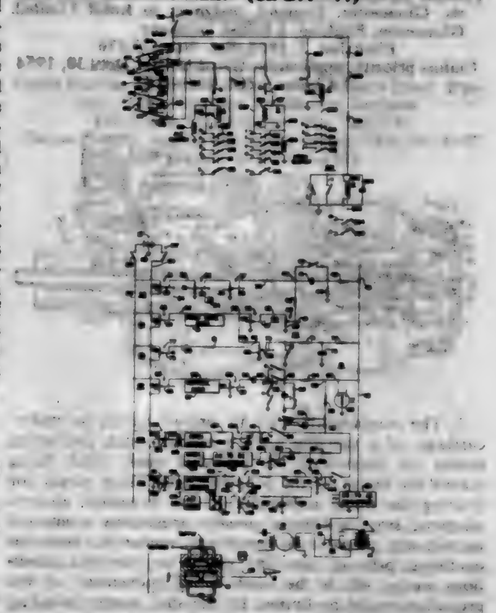
2,944,767
AIRCRAFT AUTOMATIC CONTROL APPARATUS HAVING NON-LINEAR CHARACTERISTICS
Robert J. Kesler, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 27, 1954, Ser. No. 477,796
10 Claims. (Cl. 244—77)

1. Apparatus of the class described comprising, in combination: means supplying an input signal having an intelligence component of relatively low frequencies and a noise component, of relatively high frequencies, which may instantaneously exceed the intelligence component; summing means for giving a second signal determined by the sum of three inputs; a filter including first and second integrators, first adjustable connecting means energizing the second integrator with the output of the first integrator, second adjustable connecting means energizing the first integrator with said second signal, and adjustable connecting third means supplying said input signal and the outputs of said integrators to comprise the three inputs to said summing means; motor means connected to said summing means for actuation in accordance with said second signal; means connecting said motor means to said first and second connecting means for adjusting the same;



and output means connected for energization from said second integrator.

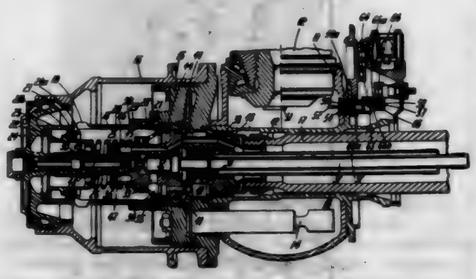
2,944,768
AUTOMATIC PILOT
Robert G. Weber, Coon Rapids, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 13, 1955, Ser. No. 552,848
9 Claims. (Cl. 244—77)



1. Control apparatus for an aircraft having an elevator surface for controlling the craft about its pitch axis, said apparatus comprising: motor means controlling said surface; control means including a balanceable parallel summing D.C. signal network operating said motor means on unbalance of said network; a source of control voltage; responsive means including a first variable signal generator connected to said source and responsive to a first flight condition of said craft; means including a first relay having a set of normally open contacts but effective on closing to connect said first signal generator in said network; means including a second variable signal generator connected to said source and responsive to a sec-

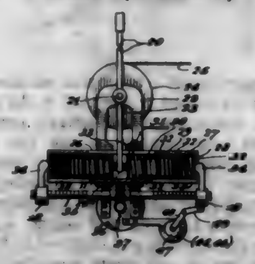
ond flight condition of said craft; connecting means comprising a second relay having a set of normally open contacts effective on closing to connect said second signal generator in said network; a capacitor connected between said network and a null point of said source of control voltage; a shunt circuit for said capacitor comprising a resistor and a set of normally closed contacts, of a third relay, in series; means including a function selector having two selected positions for alternatively energizing the first or second relay for selecting control of said variable network by one or the other of said signal generators; and means including contacts of said first two relays and time delay means effective when the selector is moved from one position to the other to open the contacts of the first selected relay, to close the contacts of the third relay to initially enable said capacitor to discharge through said network at a slow rate and thereafter through said last recited contact of the third relay and said resistor at a rapid rate and thereafter on energization of the second selected to effect reopening of said last named third relay contacts to enable said capacitor to be charged substantially in accordance with the magnitude of the signal from the last selected condition signal generator to effect the gradual increasing control of said network from said last selected generator.

2,944,769
VARIABLE PITCH AIRSCREWS
Thomas Edward Godden and Edward Hollingworth Morris, Gloucester, England, assignors to Rotol Limited, Gloucester, England, a British company
Filed Jan. 3, 1955, Ser. No. 479,576
Claims priority, application Great Britain Dec. 30, 1954
7 Claims. (Cl. 244—81)



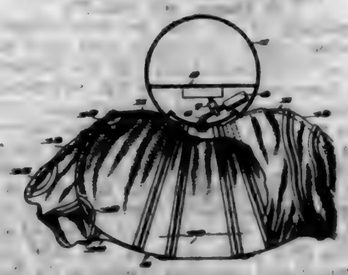
7. The combination with an aircraft having an undercarriage, of a variable pitch propeller, pitch coarsening means for coarsening the propeller pitch, pitch fining means for fining off the propeller pitch, stop means for limiting the fining movement of the propeller, electromagnetic stop withdrawal means operatively connected to said stop means and operable to render the latter inoperative, primary detecting means for detecting conditions under which the pitch fining movement of the propeller should be limited by the stop means including the undercarriage and first detecting switch means operatively connected to the undercarriage to be opened thereby, during flight only, when said primary detecting means detects said conditions, propeller detecting means operatively connected to the propeller to detect when the propeller has fined off further than the amount set by said stop means, propeller switch means operatively connected to said propeller detecting means to be closed thereby when said propeller detecting means detects that the propeller has fined off further than the amount set by said stop means, electromagnetic overriding pitch coarsening means operatively connected to the propeller pitch coarsening means to initiate coarsening movement of said propeller, said connection between the undercarriage and said first detecting switch means causing said first detecting switch means to close when the undercarriage contacts the ground, and an electric circuit comprising a source of electrical power, a first line across said source and connecting said electromagnetic stop withdrawal means to said source through said first detecting switch means when said first detecting switch means is closed to energize said electromagnetic stop withdrawal means, and a second line across said source connecting said source to said electromagnetic overriding pitch coarsening means through said propeller switch means to energize the said electromagnetic overriding pitch coarsening means when said propeller switch means is closed.

2,944,770
AIRCRAFT CONTROL SYSTEM
Albert C. Patin and Werner F. Mansmann, Lemont, Ill., assignors to Amptco Laboratories Corporation, a corporation of Delaware
Filed Aug. 4, 1954, Ser. No. 447,796
2 Claims. (Cl. 244—83)



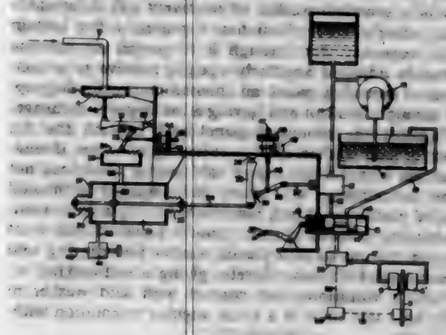
1. In an aircraft having a control surface, a movable operating element, means for effecting operation of said control surface in response to movement of said operating element, and means for sensing conditions of said aircraft which determine the effectiveness of said control surface, means of the character described, comprising: a progressive, resilient bias arrangement for said control element comprising a pair of elongated spring assemblies in opposed contact with said operating element, each spring assembly including at least two springs of different strength; and means for adjustably compressing said spring assemblies in response to said sensing means for maintaining a desired relation between the force applied to said operating element and the effect of said control surface.

2,944,771
AIR MAT BUMPER PAD
Orville J. Bash, Joppa, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland
Filed Feb. 11, 1954, Ser. No. 409,605
11 Claims. (Cl. 244—100)



2. An air mat bumper pad comprising a flexible bag having a plurality of compartments, one compartment adapted to be inflated with a gas, valve means formed in a partition between said inflated compartment and an adjacent compartment, said valve means comprising a frangible diaphragm mounted in said partition, said valve means adapted to break open to permit the escape of said gas from said inflated compartment to an adjacent compartment when the pressure of said gas in said inflated compartment is increased above a predetermined amount upon said inflated compartment absorbing shock, the flow of gas through said valve means being throttled when the pressure in said adjacent compartment starts to rise above atmospheric pressure.

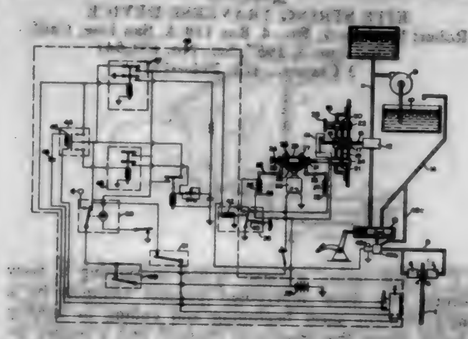
2,944,772
APPARATUS FOR MODULATING BRAKE PRESSURE
Edward T. Armstrong, Butler, N.J., and Frank H. Highley, Canton, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Nov. 19, 1956, Ser. No. 622,984
3 Claims. (Cl. 244—111)



1. Apparatus for modulating the pressure which can be applied to hydraulic brakes in an airplane, said apparatus including a supply of fluid under pressure, a hydraulic brake, a pilot-controlled valve for passing fluid from said supply to the brake, a fluid pressure regulating valve positioned between the brake and the said supply of fluid pressure for modulating the pressure of fluid passed by the pilot-controlled valve to the brake, means responsive to the airspeed of the airplane, means including mechanical linkage connecting the airspeed responsive means to the pressure regulating valve to position the valve as a function of airspeed, and hand adjusting means to change the mechanical throw of said mechanical linkage to effect proportional changes in the control effect of the airspeed responsive means, said hand adjusting means including means for changing the throw in proportion to the weight of the airplane and means for changing the throw in proportion to the ground coefficient of friction of the runway on which the airplane is to land.

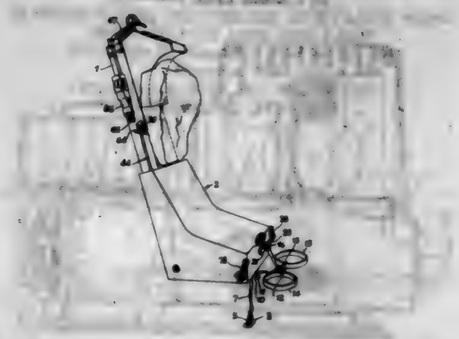
2,944,773
MEANS FOR AUTOMATICALLY ADJUSTING AIRCRAFT BRAKE PRESSURE
Frank H. Highley, Canton, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Dec. 27, 1956, Ser. No. 630,838
5 Claims. (Cl. 244—111)

1. Apparatus for automatically adjusting pressure of brake operating fluid applied to a brake operating cylinder of a landing wheel brake of an aircraft, said apparatus comprising a constant pressure source of brake operating fluid, a pilot-controlled valve connected between said constant pressure source and said brake operating cylinder for controlling supply of such fluid to the brake cylinder, a pressure regulating valve connected to said constant pressure source for controlling pressure of fluid supplied to said brake cylinder, sensing means associated with said wheel for sensing excessive deceleration of the wheel, and forward and reverse means connected to said



pressure regulating valve to increase or decrease the pressure passed thereby and controlled by said sensing means to continuously readjust the pressure at the brake operating cylinder in accordance with the output of said sensing means so as to establish automatically substantially the maximum braking force just short of excessive wheel deceleration.

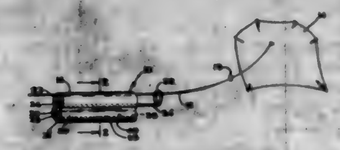
2,944,774
EJECTION SEATS FOR AIRCRAFT
James Martin, Southlands Manor, Southlands Road, Denham, near Uxbridge, Middlesex, England
Filed Mar. 25, 1958, Ser. No. 723,794
Claims priority, application Great Britain Mar. 29, 1957
8 Claims. (Cl. 244—122)



1. In an ejection seat for an aircraft comprising locks mounted on the seat for releasably securing a seat harness to the seat and means for restraining the legs of an airman: at least one line connected to said leg restraining means; means mounted on an aircraft portion which is independent of said seat for releasably connecting one end of said line to said aircraft portion; means mounted on said ejection seat and separate from said seat harness locks for releasably attaching the other end of said line to the ejection seat; means mounted on the leg restraining means for making a free running connection between said line and the leg restraining means; a snubbing box mounted on the ejection seat at a distance from said line attaching means and between the free running connection means and the connecting means for said one line end, the line passing from said other end through the free running connection means to and through said snubbing box and to said one end, the snubbing box permitting said line to pass freely therethrough only in the

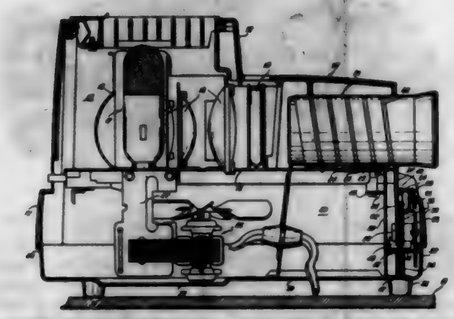
direction towards said connecting means; and means cooperating with said attaching means for the other like end for releasing said other end and thus to remove the leg restraint.

2,944,775
KITE STRING TRAVERSE DEVICE
Robert W. Sollock, Rte. 4, Box 150-A, San Jose, Calif.
Filed Apr. 5, 1957, Ser. No. 651,041
3 Claims. (Cl. 244—155)



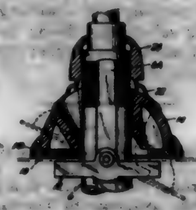
1. A kite string traverse device comprising a body formed into three superposed parallel channels by a single resilient sheet beginning and ending in lapping relation below the uppermost channel, and a trigger arranged within the lowermost and intermediate channels for sliding movement therein, said trigger formed in substantially a U-shape having a relatively short leg and a relatively long leg, said long leg being extended into an unclosed loop exteriorly of said body, said lowermost channel having an aperture therein adjacent one end of said short leg.

2,944,776
PROJECTOR TILT ADJUSTMENT
William Bruce Foster, Ann Arbor, Mich., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Mar. 22, 1956, Ser. No. 573,293
10 Claims. (Cl. 248—11)



1. In a tilt adjustment for a picture projector or the like, a support on which the optical system of the projector is mounted, a front post slidably mounted for vertical displacement on and with respect to said support, said post being formed at its lower end to rest on a table or like platform, a normally inclined spring lock arm mounted on said support apertured to permit passage of said post and biased to normally grip said post with the aperture edges to prevent said displacement, said spring lock arm being a bendable spring beam having one end secured upon said support, and movable control means on said support operable for engaging and bending said spring lock arm until its aperture edges no longer grip the post to permit vertical displacement of said post to obtain a desired tilt position of said support, said spring lock arm returning to its normal inclined post locking position to maintain said support tilted when said means is released.

2,944,777
ANTENNA MOUNTING MEANS
Joseph B. Cejka, Highland Park, N.J., assignor to General Motors Corporation, Garden City, N.Y., a corporation of New York
Filed Nov. 28, 1953, Ser. No. 393,332
2 Claims. (Cl. 248—43)



1. A vibration proof, angularly adjustable arrangement for mounting a mast antenna on a body panel of an automobile and the like, said arrangement comprising a generally hemispherical washer of relatively soft deformable plastic material and which has a generally flat bottom and an eccentric slot through it to permit an antenna mast to be adjusted angularly upright relative to a non-horizontal mounting panel, an antenna mast extending upward through said slot and having a lower portion engageable against the mounting panel and beneath the flat bottom of said washer, said mast having an upper threaded portion adjacent the top of said washer, and lock nut means surrounding said mast and engaged with said threaded portion, said lock nut means having a downwardly extending pointed portion closely adjacent said mast engaging the top of said plastic washer and digging into it a substantial distance thereby giving a self-locking action and a vibration-proof contact with said washer to tightly hold said mast in a given angular orientation within said slot.

2,944,778
PIPE HANGER
William R. Kath, Youngstown, Ohio, assignor to "Automatic" Sprinkler Corporation of America, Youngstown, Ohio, a corporation of Delaware
Filed Oct. 17, 1957, Ser. No. 690,748
5 Claims. (Cl. 248—62)



1. A pipe hanger including a metal strap having enlarged apertured end portions bent at oppositely disposed angles with respect to one another acting to place said end portions in parallel superimposed relation, a threaded support rod and a cylindrical body member threadably engaged on said support rod, said cylindrical body member having an outturned annular flange about its lower end and an annular shoulder above said outturned flange, said annular shoulder being of lesser diameter than said outturned flange, said apertured end portions of said metal strap being disposed on said cylindrical body member between said annular flange and annular shoulder, one of said apertured end portions acting to tilt when

weighted to engage said shoulder and the other of said apertured end portions acting to tilt when weighted to engage said first mentioned end portion and move the same into locking engagement with said shoulder.

2,944,779
BABY BOTTLE HOLDER
George Silagyi, Box 983 Glen Drive, Warrenville, Ill.
Filed Oct. 9, 1956, Ser. No. 614,914
2 Claims. (Cl. 248—103)



1. In a baby bottle holder, the combination which comprises a rod designed to extend across a crib and rest upon upper edges of side frames thereof, elongated blocks having openings spaced inwardly from ends thereof for receiving ends of the rod, the ends of the rod being frictionally retained in said openings and the blocks being slidable on the rod to compensate for cribs of different widths, the extending ends of the blocks providing counterbalances for turning the rod, a bottle, and an endless elastic band formed with a double loop that is extended over the rod and positioned with the bottle extended through the loops whereby the bottle is suspended from the rod, and with the bottle extended from the side of the rod opposite to that from which the counterbalances extend the bottle may be supported in angular positions for feeding.

2,944,780
FURNITURE JOINT
Sterling Norris Monk, 5919 Field Stone Road, Richmond 24, Va.
Filed May 27, 1958, Ser. No. 738,132
2 Claims. (Cl. 248—221)



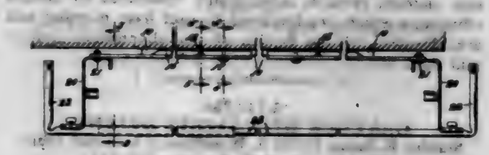
1. In furniture construction, comprising a joint construction, said construction comprising sections arranged in opposed but in mating aligned relation to each other and surrounding and embracing a coextensive leg member, said leg member having a transverse groove therein, said sections having flanges extending into said groove, said sections also being provided with outwardly extending flanges to engage a supported means.

2,944,781
HANGER CLIP
George E. Masters, 7514 E. Third St., Downey, Calif.
Filed July 15, 1955, Ser. No. 522,313
6 Claims. (Cl. 248—228)



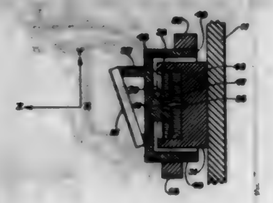
1. In a hanger clip embodying a pair of complementary members each of which includes a flat plate portion formed with a U-bend on an end thereof adapted to receive and engage a flange on an I-beam or the like, and which plates are designed to be disposed face to face and are adapted to have a hanger attached thereto; the improvement consisting in inturned flanges on opposed side margins of said plates adapted to slidably engage the other side margin of said plates and thereby interconnect the side margins of the plates when assembled, and a tongue on each of said plates arranged to overlie each other when said plates are abutted face to face, said tongues being adapted to be collectively bent outward when said plates are assembled whereby one of said tongues will protrude into a space formed by displacement of the other tongue and thereby fasten said plates against movement relative to each other.

2,944,782
SUPPORTS FOR DRAPERIES, CURTAINS, WINDOW SHADES AND THE LIKE
Florabelle R. Newcomb, 904 N. 7th St., Camden, N.J.
Filed Jan. 6, 1958, Ser. No. 707,376
2 Claims. (Cl. 248—261)



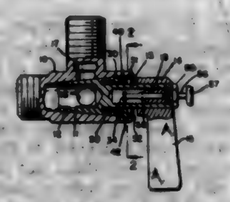
1. A support for draperies, curtains, window shades and the like, comprising a rail to be permanently secured in a horizontal position to a portion of a building structure, said rail being substantially rectangular in cross-section, a carriage at each end of the rail comprising a flat plate member having longitudinal ribs on its rear face spaced and shaped complemental to the rail, said carriages each having a longitudinal slot disposed between the aforesaid ribs, fastening bolts extending through said slots and mounted in the rail to secure said carriages in adjusted longitudinal locations on said rail, and said carriages each having a plurality of slots extending therethrough for mounting conventional drapery, curtain, window shade, and similar brackets on said carriage at desired selective locations, the arrangement being such that the carriages, with the desired brackets mounted, and secured thereon, may be frontally placed and may be secured at the desired longitudinal locations on the rail.

2,944,783
OPTICAL MOUNTING DEVICE
Kenneth G. Macleish and Robert E. Kesel, Rochester, N.Y., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 13, 1958, Ser. No. 708,735
2 Claims. (Cl. 248—358)



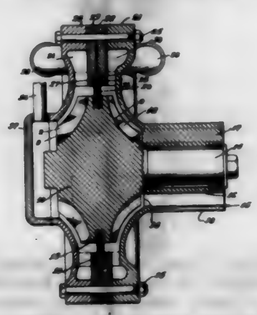
1. In a mounting device for an optical element having a viscous damping fluid for stabilizing said optical element, a support member for rigidly carrying said element, an extension formed on said support member opposite said element, a depending skirt portion formed on said support member concentric to said extension and spaced radially outwardly therefrom, a base member having formed in one end thereof a cavity for receiving said viscous fluid, said cavity being substantially larger than said extension whereby said extension is positionable in said cavity, positioning means fixed on the inner end of said cavity along the longitudinal axis thereof for engaging the end of said extension and longitudinally positioning said extension in said cavity, baffle means fixed on said extension and positioned within said cavity, said viscous fluid substantially filling said cavity and surrounding said extension and said baffle means, a diaphragm mounted between said base member and said extension, said diaphragm being flexible to resiliently support said extension in alignment with said positioning means and being imperforate to close said cavity for preventing the escape of said fluid therefrom, and weight means mounted on said depending skirt portion positioned without said cavity to provide dynamic balance for said support member and said element about the point of engagement of said positioning means and said extension whereby said element remains substantially unaffected by certain vibrations which are imparted to said base member and are absorbed by the flexing of said diaphragm and by said fluid.

2,944,784
GAS COCK WITH SAFETY DETENT
Stanley F. Jarot, 18850 S. Woodland, Cleveland, Ohio
Filed Feb. 9, 1959, Ser. No. 791,951
4 Claims. (Cl. 251—110)



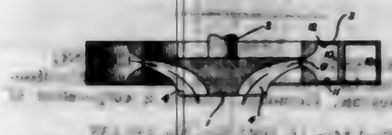
1. A hollow casing having a plug seat, a plug received on said seat, a stem on said plug, a bore in said stem, said stem having an arcuate exterior surface and also having a flat which intersects said arcuate exterior surfaces and also intersects said bore, a pair of adjacent washers received on said stem and having arcuate inner edge portions received on said arcuate exterior surface of said stem, one of said washers constituting a stop washer, means keying said stop washer against rotation, said stop washer having a projection extending radially inwardly from its arcuate inner edge portions against opposite sides of which projection said flat abuts when said stem is turned between extreme angular portions, the other of said washers constituting a detent washer, said detent washer having an inboard section radially inward of its associated arcuate inner edge portion, said inboard section having edge portions formed as a chord of the circle on which lies its said associated arcuate inner edge portion, said chordal edge portions being received on said flat, a lug integral with a part of said inboard section and extending further radially inwardly beyond said chord to the diametrical center of said detent washer and to within said bore, a radially extending split in said inboard section dividing it into two parts the first of which includes said lug, an arcuately extending continuation of said split, said first part of said inboard section being axially displaced progressively more and more at locations proceeding from the termination of said continuation of said split and proceeding to the juncture thereof with said radially extending split, the associated edge of said radially extending split being at the same axial location as said stop washer and abutting a first of said opposite sides of said radially inwardly extending stop washer projection when said flat abuts the second of said opposite sides of said stop washer projection, compression spring means between said plug and said detent washer and urging said detent washer against said stop washer, and pushing means extending through said bore from the exterior end of said plug stem for engaging said lug to urge said washers apart against the bias of said compression spring means to release said associated edge of said radially extending split from abutment with the first of said opposite sides of said radially inwardly extending stop washer projection to allow said flat to be turned away from the second of said opposite sides of said projection and toward the first of said opposite sides of said projection.

2,944,785
IMPELLER FOR TURBINE ENGINE AND THE LIKE
Achilles Charles Sampietro, Ann Arbor, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed May 18, 1955, Ser. No. 509,266
10 Claims. (Cl. 253—48)



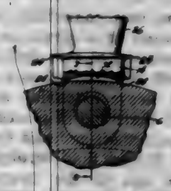
1. In a fluid impeller structure, a rotor having opposed vaned faces and a peripheral groove, a baffle ring in said groove, a housing having a fluid-tight closed high pressure end and comprised of inner and outer opposed sections, the inner opposed housing sections embracing the peripheral margin of said ring to hold same in position in said groove and so that said rotor may turn relative to the same, the outer opposed housing sections each cooperating with an inner section to define a fluid impelling chamber in which the vanes on one side of said rotor revolve and means for securing all four housing sections together and to clamp the ring between the inner sections, said inner sections defining mating halves of a radially inwardly opening groove in which the peripheral margin of said ring is clamped between said inner sections and so as to project with a loose fit in said rotor groove to afford a fluid leakage path in the event of leakage between the chambers.

2,944,786
SUPER AND SUBSONIC VANELESS NOZZLE
Pierce T. Angell, Euclid, Robert J. Anderson, Wickliffe, and Malcolm M. Hopper, Willoughby, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Oct. 15, 1953, Ser. No. 386,358
2 Claims. (Cl. 253—55)



1. A turbine having a wheel for operation at peripheral velocities above the speed of sound comprising a vaneless nozzle completely encircling said wheel and having a vaneless inner peripheral outlet facing said wheel and extending 360° around the periphery of said wheel, said nozzle having radially extending side walls and an outer peripheral wall progressively closer to the periphery of said wheel in the general form of a logarithmic spiral, said nozzle having a tangential inlet in its outer peripheral wall introducing fluid tangentially thereof, the radial dimension of said side walls being at least as great as the radial dimension of the inlet for at least 360° from the inlet, said nozzle having its side walls converging toward the inner peripheral outlet at a rate constant throughout the periphery of the inner peripheral outlet, and means introducing fluid at said inlet at a velocity at or slightly below the velocity of sound.

2,944,787
COMPRESSOR BLADE LIMIT STOPS
Richard E. Gingras, Agawam, Mass., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Mar. 20, 1957, Ser. No. 647,436
4 Claims. (Cl. 253—77)



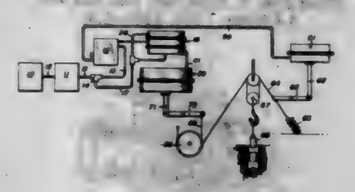
1. In a turbine rotor, a disc having a plurality of flanges on its periphery and a row of openings extending axially through said flanges, a plurality of blades projecting outwardly from the disc and having roots at their inner ends with projecting ribs intermeshing with the flanges on the disc, said ribs defining a slot therebetween, the ribs for each blade having aligned openings therein in alignment with the openings in the flanges, a pin for each blade positioned in said aligned openings in the flanges and ribs, said pin and openings being of such dimension that the pin is tight in the disc flanges and loose in the openings in the ribs and said blade and disc having radial clearance between the flanges and the bases of the ribs for rocking movement of the blade on its associated pin and circumferentially spaced stop means carried by the root at the base of and between the ribs thereon in a position to engage the disc for limiting the extent of rocking movement of the blade in either direction from a substantially radial position, said stop means being defined by a recess at the base of the slot between the ribs, said recess terminating short of the ends of the slot to form short stop elements engageable with the periphery of the disc flange between the ribs.

2,944,788
WIRE STRETCHER
Rudolph Schaefer, Rte. 2, Cisco, Tex.
Filed Aug. 28, 1956, Ser. No. 606,616
2 Claims. (Cl. 254—161)



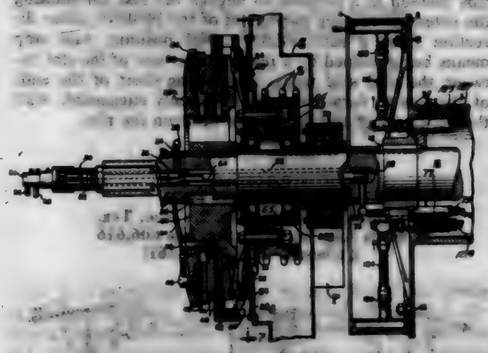
1. In a wire stretcher, the combination of a frame, a manually operable reel rotatably journalled in said frame for winding up a cable attached to one end portion of a wire, a swivel connected to said frame, an elongated plate having an aperture in one end portion thereof, a link extending through said aperture and connecting said plate to said swivel, a laterally projecting flange provided at one longitudinal side edge portion of said plate, a J-shaped jaw pivoted at one end thereof to the plate in juxtaposed relation therewith and movable toward and away from said flange whereby another end portion of a wire may be gripped between said flange and the intermediate portion of said jaw, a laterally projecting lug provided at the relatively opposite longitudinal side edge portion of the plate and formed with a screw-threaded opening, and a clamp screw extending through said opening and engaging the other end of said jaw for urging the latter toward said flange.

2,944,789
AUTOMATIC CONTROLS FOR WELL DRILLS
Osborne W. Le Gate, 44 E. 14th St., Edmond, Okla.
Filed Sept. 28, 1959, Ser. No. 842,819
2 Claims. (Cl. 254—173)



1. Automatic control apparatus for regulating the feed of a drilling string and associated tool comprising a drum, a cable wound on said drum and suspending said tool, a brake for said drum, a source of vacuum, vacuum-actuated means communicating with said source for releasing said brake to unwind said cable, a relay valve for controlling the degree of vacuum applied to said brake releasing means, a balanced vacuum-operated motor adapted to actuate said relay valve, and other valve means responsive to the weight of said drill string for modifying the pressures in said motor whereby said motor moves said valve to actuate said brake releasing means.

2,944,790
DRUM ASSEMBLY
John Hunt Wilson, P.O. Box 2446, Wichita Falls, Tex.
Filed Nov. 27, 1956, Ser. No. 624,293
6 Claims. (Cl. 254—187)



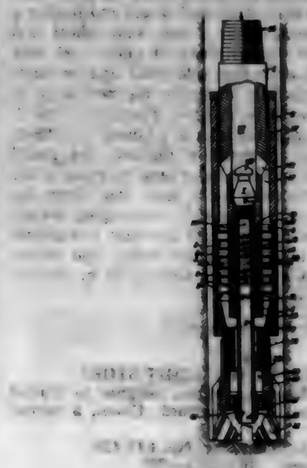
1. A drum assembly comprising a shaft, a drum having at least one water cooled brake ring assembly, which brake ring assembly is attachably connected to said drum, said drum being mounted on said shaft, an air actuated clutch, which clutch has a first hub rotatably mounted on said shaft, which shaft extends axially of said drum assembly and outward from each end thereof, a second hub portion of said clutch being keyed to said shaft adjacent said rotatably mounted first hub of said clutch, a clutch adapter plate mounted on said first hub, the outside diameter of which adapter plate is less than the inside diameter of said brake ring assembly, said clutch adapter plate being attachably secured to the rotatable portion of said first hub of said clutch, an annular adapter ring for said adapted plate, the outside diameter of which adapter ring is larger than the inside diameter of said brake ring assembly, which annular adapter ring is attachably secured to said adapter plate, the inside diameter of said annular adapter ring being larger than said second hub portion of said clutch.

2,944,791
SAMPLE TAKING APPARATUS
Jake H. Le Bus, Bellaire, Tex., assignor, by mesne assignments, to FOAC Development Company, Houston, Tex., a corporation of Texas
Filed Feb. 7, 1956, Ser. No. 563,995
4 Claims. (Cl. 255—1.4)



1. In a sample taking gun for use in a borehole, a body portion having a transverse bore the diameter of which decreases in at least one step to define an outwardly facing shoulder at the boundary between an outer projectile receiving chamber and an inner explosive receiving chamber, said projectile receiving chamber including a threaded side wall chamber of greater diameter than the projectile to be received therein, an explosive container housing an explosive charge and located within said explosive receiving chamber, said explosive container having an opening in the rear portion thereof, a hollow sample taking core projectile housed within said projectile receiving chamber, a retrieving cable stored within said explosive container, means extending through said opening in said explosive container for securing one end of said retrieving cable to said body portion, means connecting the other end of said retrieving cable to said core projectile, said core projectile being movable relative to said explosive container upon explosion of the charge in said container, bushing means surrounding said core projectile and including a portion externally threaded for cooperation with said threaded side wall to support said core projectile in said projectile receiving chamber and to guide the core projectile upon expulsion from said projectile chamber, said means including said shoulder and said bushing means for supporting said core projectile in sealed relation against the hydrostatic pressure in said borehole.

2,944,792
TURBINES FOR DRILLING AND CORING
Charles Gros, La Tronche, France, assignor to Etablissements Neyrpic, Grenoble, France, a corporation of France
Filed May 16, 1957, Ser. No. 659,635
Claims priority, application France May 28, 1956
5 Claims. (Cl. 255—4)



1. A coring turbine unit comprising a tubular shaft adapted to be connected at a given end thereof to a drill string in fixed relation to said drill string, a sleeve disposed coaxially with the axis of said shaft and providing a wall of the sleeve extending about said shaft along a length of said shaft and in spaced relation thereto to define between said shaft and said sleeve an annular passage for flow of driving fluid through said passage generally along said axis in the direction from said given end of the shaft toward the other end thereof, means supporting said sleeve on said shaft for rotation of said sleeve on said shaft axis, stator elements carried by said shaft, rotor elements carried by said sleeve for rotation therewith, said stator and rotor elements respectively providing stator and rotor turbine blades disposed in said passage in cooperative relation to each other and so as to be engaged by said driving fluid for effecting movement of said rotor blades and elements with respect to said stator blades and elements to produce rotation of said sleeve about said shaft on said shaft axis, said sleeve at the end thereof along said axis from said given end of said shaft being adapted to carry a core forming bit, and a core tube disposed within said tubular shaft coaxially therewith and supported by said shaft adjacent the end of said core tube disposed toward said given end of said shaft, said core tube extending to the opposite end thereof disposed adjacent said bit for receiving into said opposite end the core formed by said bit.

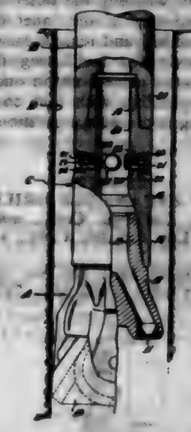
2,944,793
DRILL PIPE FLOAT VALVE APPARATUS
Martin B. Conrad, Downey, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Filed Oct. 19, 1956, Ser. No. 617,085
18 Claims. (Cl. 255—24)



1. In apparatus of the character described: inner and outer tubular members telescopically splined to one another throughout the full range of their telescopic movement; means on one of said members for securing said one member to an upper adjacent drill string portion; means on the other of said members for securing said other member to a lower adjacent drill string portion; means for transmitting drilling weight between said members when said members are in a relative contracted position; a valve device in one of said members adapted to close the passage through said members when said members are in extended position with respect to one another and still splined to one another; and means on one of said members engaging said valve device to shift it to passage opening position upon movement of said members to a relative contracted position in which drilling weight is to be transmitted between said members.

2,944,794
DRILLING MUD BY-PASS FOR ROTARY DRILL BITS
William D. Myers, Norwalk, Calif., assignor, by mesne assignments, to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 687,216
5 Claims. (Cl. 255—24)

1. In drilling apparatus for a well bore: a tubular drill string including a tubular body; a drill bit secured to the drill string and having a nozzle for discharging fluid from said drill string, said nozzle being normally open to permit fluid to flow upwardly therethrough into the drill string during lowering of the drill string in the well bore and said drill string being open to permit such upward flow of fluid; said body having a side port for allowing fluid to flow between the interior and exterior of said body, said body having a valve seat surrounding said port; a valve member movable in a laterally outward direction into engagement with said seat to close said port; and spring means engaging said valve member to shift said valve member laterally inwardly away from said seat; said spring means exerting a force sufficient to maintain said valve member away from said seat during elevation of said drill string and drill bit in the well bore to permit simultaneous drainage of drilling fluid from said drill string through said port and bit nozzle.



2,944,795
COMBINED CORING AND REAMING APPARATUS
Franklin L. Le Bus, Sr., Longview, Tex., assignor to Le Bus Royalty Company, Longview, Tex., a partnership
Filed May 15, 1957, Ser. No. 659,289
3 Claims. (Cl. 255—72)



1. In a combined reaming and core drill tool, an inner drive body, a core barrel unit carried by the inner drive body, a core bit carried by the core barrel unit, an outer drive body telescopically arranged over the inner drive body and core barrel, cooperating male and female spline means provided on the inner and outer drive bodies, said spline means interengaging in one position for locking the inner and outer bodies together to provide for a simultaneous longitudinal movement thereof, said spline means interengaging in a second position for transmitting rotation from the outer drive body to the inner drive body

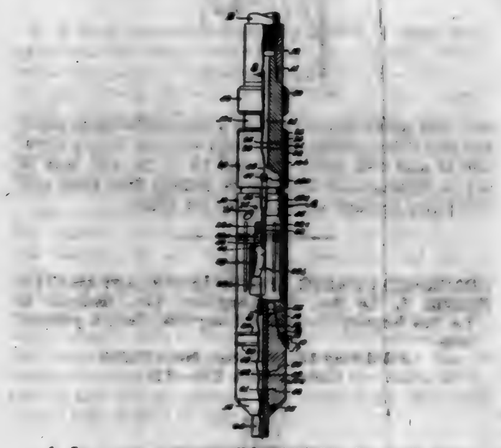
and core barrel unit and core bit, said spline means in said second position permitting a longitudinal movement of the outer drive body with respect to the inner drive body without movement of the core bit to provide alternate extended and contracted positions for the tool, said spline means out of engagement in the extended position for the tool whereby the outer drive body may be rotated independently of the inner drive body and core barrel and core bit, and reamer means provided on the outer drive body for facilitating the longitudinal movement of the outer drive body in one direction, said reamer means cooperating with said core bit for a simultaneous reaming and coring operation.

2,944,796

ROTARY EXPANSIBLE DRILL BITS

Reuben C. Baker, Coalinga, Calif., assignor to Baker Oil Tools Inc., Los Angeles, Calif., a corporation of California

Filed June 20, 1955, Ser. No. 516,476
13 Claims. (Cl. 255—76)



1. In a rotary expansible drill bit for well bores: a main body having means thereon for connecting said body to a drill string and having a fluid passage communicable with the drill string; cutter means mounted on said body for lateral expansion outwardly of said body; said body having a portion engageable with said cutter means through which drilling torque from the drill string is transmitted to said cutter means; a cylinder on the exterior of said body portion movable longitudinally therealong; means operatively connecting said cylinder to said cutter means in order that longitudinal movement of said cylinder along said body portion shifts said cutter means laterally of said body; and means for feeding fluid under pressure from said passage into said cylinder to shift said cylinder longitudinally of said body portion to expand said cutter means laterally outward of said body.

2,944,797

BALUSTRADE

Albert H. Magnesen, Belair, Md., assignor to Standard Equipment, Incorporated, Belair, Md., a corporation of Maryland

Filed Dec. 1, 1958, Ser. No. 777,296
6 Claims. (Cl. 256—21)

1. A tubular rail having a longitudinal slot along one side thereof, a plurality of balusters each having one end fitted into said slot and having an opening therein the axis of which extends cross-wise of the axis of the rail, a rod within the rail having spaced zig-zag bends therein, certain of said bends extending cross-wise of the rod, the balusters being engaged on the cross-wise bends of the rod through the said openings to anchor the ends of the



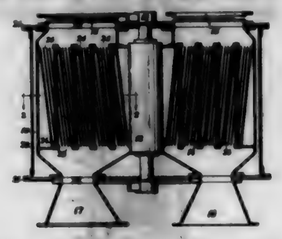
balusters securely in the rail, the balusters projecting from the rail slot, a plurality of balusters being anchored by the rod.

2,944,798

GUIDE PLATES FOR ROTARY REGENERATOR

Robert H. Muller, Wellsville, N.Y., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York

Filed June 22, 1955, Ser. No. 517,200
6 Claims. (Cl. 257—270)



1. A rotary regenerative heat exchanger or the like having a cylindrical rotor shell joined to a centrally positioned rotor post by radial partitions which form a series of sector shaped compartments; a housing surrounding the rotor and provided opposite the latter with end plates including imperforate portions between spaced apertures; inlet and outlet ducts connected to said apertured end plates to direct streams of hot gas and relatively cooler air to and through the rotor; regenerative heat transfer material carried by the rotor comprising a plurality of perforate element sections lying in banks parallel to the rotor axis and radially spaced to provide flow passageways extending between the axially spaced inlet and outlet ducts; imperforate flow sheets extending between opposite ends of radially spaced element sections dividing each passageway into a pair of oppositely tapering sections; and a plurality of intermediate flow sheets between adjacent banks of heat transfer material parallel to said imperforate flow sheets spaced to provide a plurality of passageways from the ends of the rotor to axially spaced portions of the element sections.

2,944,799

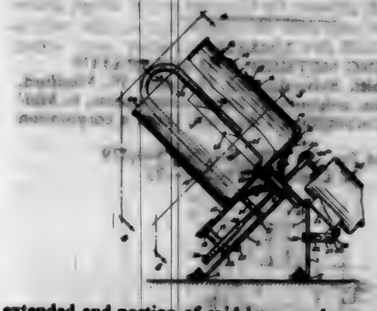
CEMENT MIXER

Karl O. Larsen, 2323 Ellis Ave., St. Paul 14, Minn.

Filed Aug. 7, 1958, Ser. No. 753,664
5 Claims. (Cl. 259—177)

1. In a mixing machine, a supporting frame structure, an open-topped mixing drum mounted for rotation on the frame structure about a generally upwardly and downwardly directed axis, a lever intermediately pivotally connected to the supporting frame structure on an axis parallel to but laterally offset from the drum axis and having end portions extending in generally opposite directions from said pivot, a drum-driving pulley concentric with the drum, a cooperating pulley journalled on one

extended end of said lever, a belt running over said pulleys, and a mixing arm extending into the drum through the open top thereof for engagement with mixed ingredients rotating with the drum, and means for mounting said mixing arm, said means comprising structure extending from the upper end of the arm and mounted on the other



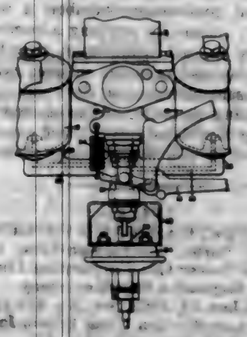
extended end portion of said lever, and means for driving the lever mounted pulley, the driving tension on one side of said belt tending to swing the lever and lever mounted pulley in a direction to loosen the belt, and the drag on said mixing arm by rotating batch ingredients tending to rotate the lever and lever mounted pulley in the opposite direction to tighten the belt.

2,944,800

FUEL ECONOMISERS FOR PETROL ENGINES OF THE RECIPROCATING PISTON TYPE

John H. Weaving, Copt Heath, Knowle, England, assignor to The Austin Motor Company Limited, Birmingham, England

Filed Sept. 11, 1958, Ser. No. 760,349
6 Claims. (Cl. 261—18)



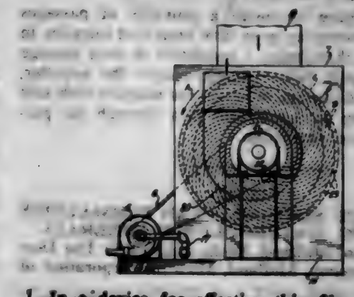
1. A fuel economiser for a petrol engine of the reciprocating piston type having a carburetter and a source of supply of high octane petrol and a source of supply of inferior petrol, both connected to said carburetter, said economiser comprising a single valve means interposed between said carburetter and said sources of supply and arranged to alternatively connect and disconnect said carburetter to and from the respective sources of petrol supply, spring means normally retaining said valve means in a position connecting said carburetter with said high octane supply while disconnecting said inferior supply from said carburetter, an induction manifold suction responsive means connected to said valve means and responsive to a predetermined high suction in said manifold to move said valve means against spring loading to progressively shut off the high octane supply while simultaneously progressively opening the inferior supply to said carburetter, and vice versa upon a decrease of manifold suction below said predetermined high suction, the two petrol supplies comprising a pair of float chambers and separate ducts connecting said chambers to said valve means, said valve means including a valve element having a port therethrough connecting with said carburetter, said element being movable past said ducts to cause said port to progressively move out of communication with one of said ducts while simultaneously moving into communication with the other of said ducts, said manifold suction responsive means comprising a diaphragm, and conduit means connecting one side of said diaphragm to said manifold at a position where said predetermined suction prevails under appropriate operating conditions corresponding to the loading of said spring means.

2,944,801

ROTARY INTERCHANGER WITH DIRECT INTERFACIAL FLUID CONTACT

Robert Katz, 546 Church St., Woodmere, N.Y.; William H. Nebgen, 48—42 43rd St., Woodside, N.Y.; and Bernard Anik, 185 Clinton Ave., Brooklyn, N.Y.

Filed May 9, 1955, Ser. No. 506,962
15 Claims. (Cl. 261—24)



1. In a device for effecting thin film countercurrent direct contact between a gas and a liquid, a rotor comprising a multiplicity of substantially identical thin partitions, each partition conforming in the shape of its longitudinal cross-section to a portion of the involute of a circle, the width of each partition being substantially uniform throughout the length of said partition, said partitions being circumferentially spaced about the center of the involute circle, said spaced partitions defining a multiplicity of substantially identical passages of substantially constant width transversely to the width of the partitions and of substantially constant cross-sectional area throughout the length of each passage, the inner and outer ends of the passages being open, means for closing the curved sides of said passages, means for introducing a liquid into the open inner ends of said passages at such a rate that said liquid only partially fills said passages, means whereby said rotor may be rotated about an axis through the center of said involute circle at a sufficiently high speed so that said liquid will be propelled by centrifugal force along said partitions to the open outer ends of said passages as a thin liquid film on the sides of the partitions defining said passages, and means for propelling a gas from the open outer ends of said passages to the open inner ends thereof, in countercurrent flow to the liquid films.

2,944,802

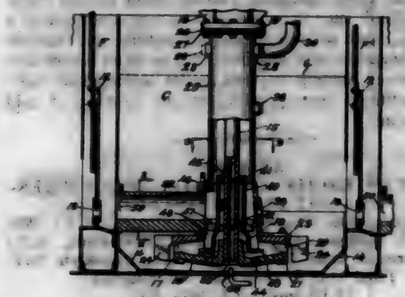
FROTH FLOTATION AND AERATION APPARATUS

Arthur C. Daman, Denver, Colo., assignor, by mesne assignments, to Denver Equipment Company, Denver, Colo., a corporation of Colorado

Filed Feb. 16, 1955, Ser. No. 488,523
8 Claims. (Cl. 261—87)

1. In aeration apparatus of the type having a rotary shaft carrying an impeller adjacent its lower end, a bol-

low column extending upwardly from a plane in proximity to the upper surface of said impeller and spaced from said shaft in enclosing relation thereto for delivering an aerated pulp onto the impeller, the improvement which comprises an upright tubular member carried by and rotatable with said shaft in spaced relation to the impeller, said member being disposed between said shaft and said



column and defining therewith a plurality of passages for dividing a descending pulp flow onto said impeller in separate streams, there being a restriction in each passage for accelerating pulp flow as it approaches the impeller, and means in each passage mounted for rotation with said shaft for inducing an accelerated flow through the passage and past said restriction.

2,944,885
TREATMENT OF SUBTERRANEAN FORMATIONS CONTAINING WATER-SOLUBLE MINERALS
Alden W. Hanson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Feb. 24, 1959, Ser. No. 794,845
8 Claims. (Cl. 262—3)

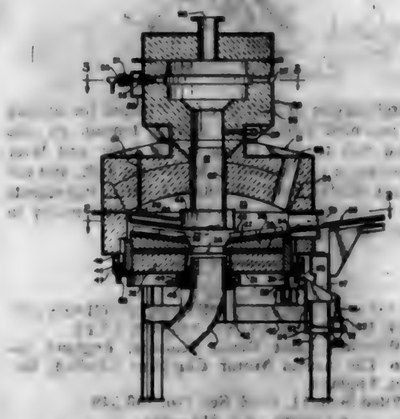
1. The method of treating a subterranean formation having a temperature above 0° C. containing a stratum of a water-solubilizable mineral traversed by a plurality of wells, at least two of said wells being in communication with each other through at least one fissure in the stratum which intercepts both wells, consisting of injecting down at least one of the wells in communication, along the intercepting fissure therebetween, and out at least one other of said wells in communication, at a temperature below 0° C., a flow of cold brine followed by a flow of an aqueous slurry of ice fragments to enlarge and extend passageways between said wells.

2,944,894
COAL-ROCK SENSING SYSTEM
Sten L. Persson and William A. Lest, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Sept. 9, 1958, Ser. No. 759,871
3 Claims. (Cl. 262—7)



1. In combination with a coal bore-mining machine having a rotary cutting head and a tractor for driving the head and carrying forwardly the head into a coal vein; means for indicating the entry of a cutting bit into roof or floor rock comprising a plurality of inertial accelerometers affixed to said tractor, said accelerometers being of the type which produces a voltage analogous to acceleration and being orthogonally arranged for responding to different components of vibratory accelerations imparted to said tractor by the bits of said cutting head, means for combining the voltage responses of said accelerometers, and means for instantaneously indicating coincidence in time of said voltages to show the direction of the resultant acceleration of the tractor and cutting head.

2,944,895
HEATING METHOD AND APPARATUS
John D. Nesbitt, Sylvania, and Theodore W. Mumford, Toledo, Ohio, assignors, by mesne assignments, to Midland-Ross Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 23, 1956, Ser. No. 560,479
12 Claims. (Cl. 263—7)

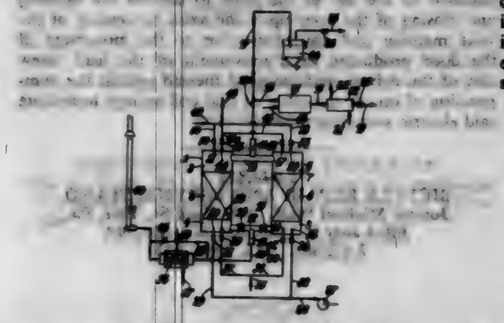


2. Apparatus for heating work by convection comprising a cylindrical combustion chamber; a work heating chamber; burner means for emitting a combustible mixture tangentially to said combustion chamber; ignition means for igniting said mixture, an inlet axially located at one end of said combustion chamber, steam supply means for emitting steam to said inlet, and duct means for directing the combusted mixture and steam from said chamber to work in said work heating chamber.

2,944,896
HEATING GASES AND VAPOURS
Austin George Carter, Stockton-on-Tees, England, assignor to The Power Gas Corporation Limited, Stockton-on-Tees, England, a British company
Filed Jan. 23, 1957, Ser. No. 635,812
Claims priority, application Great Britain Jan. 23, 1956
3 Claims. (Cl. 263—52)

1. A process for heating gaseous and vaporous material to a high temperature employing two separate heat storage zones, each having a combustion zone in open communication therewith, and utilizing a cycle having four major periods, which process comprises the following steps: (1) during the first major period passing air through a first heat storage zone, which has been heated during the previous cycle, to preheat the air, passing the preheated air through the first combustion zone into the second combustion zone, combusting the preheated air with fluid fuel in said second combustion zone, passing the resultant hot products of combustion through said second heat storage zone to heat up the same and discharging said products to the atmosphere; (2) during the second major period passing the material to be heated through said second heat storage zone and thence through said second combustion zone in a reverse direction to that in which the products of combustion were

passed in the previous period to thereby heat up said gas, and withdrawing said material for use directly from said second combustion zone while passing no gas or vapor through said first zones; (3) during the third major period passing air through said second heat storage and combustion zones in the same direction as that in which the gas to be heated was passed during said second period to pre-heat said air, passing the pre-heated air from said second combustion zone into said first combustion zone, combusting said air with fluid fuel in said



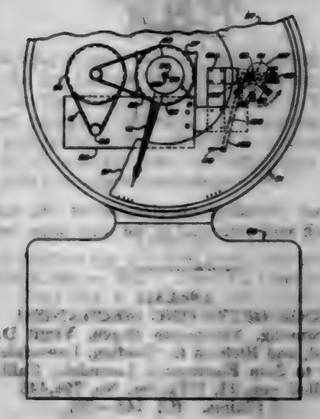
first combustion zone, passing the resultant products of combustion through said first heat storage zone to heat up the same, and discharging said products to the atmosphere; and (4) during the fourth major period passing the material to be heated through said first heat storage zone and, thence, through said first combustion zone in a reverse direction to that in which the products of combustion were passed in the third period to thereby heat up said gas, and withdrawing said material for use directly from said first combustion zone while passing no gas or vapor through said second zones.

2,944,897
PROCESS FOR SUPPLYING HEAT TO A BED OF FINELY DIVIDED REFRACTORY MATERIAL
Geert G. Kreijger, The Hague, Netherlands, assignor to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Nov. 18, 1957, Ser. No. 696,968
Claims priority, application Netherlands Nov. 28, 1956
6 Claims. (Cl. 263—52)

1. In a process for preventing the sintering of a bed of sand particles directly heated by the combustion with air of a liquid hydrocarbon fuel containing amounts of a metal of the group consisting of vanadium and sodium sufficient to cause sintering of said bed, the steps of adding to a bed of sand particles amounts of a material selected from the group consisting of magnesium oxide, aluminum oxide, zinc oxide and calcium oxide to a bed of sand sufficient to prevent the sintering of said bed and passing hot gases resulting from the combustion of the liquid hydrocarbon fuel with the air through the resulting mixed bed at sufficient velocity to cause fluidization of said mixed bed.

2,944,898
AUXILIARY LOAD MECHANISM FOR WEIGHING SCALES
Charles F. Spademan, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed May 18, 1956, Ser. No. 585,820
7 Claims. (Cl. 265—5)

1. A weighing scale comprising, in combination, transducer means having an output voltage which is a function of load applied to the scale, adjustable means in circuit with the transducer means for supplying a balancing voltage in opposition to the output voltage, servo means in circuit with both of said means for adjusting the adjustable means in a balancing direction in response to differences between voltages, a capacity changing switch in circuit with the adjustable means for adding increments of voltage to the balancing voltage to increase the capacity of the scale, indicating mechanism that has a normal capacity and that has an indicating member coupled to the servo means for indicating the balancing voltage in terms of weight, switch operating means coupled to the servo means, unidirectionally operable electrical stepping means connected to the capacity changing switch for operating the switch, and an operating circuit for the stepping means, said operating circuit including switch means, the switch operating means operating the switch means to complete a circuit to the stepping means whenever the servo means tends to drive

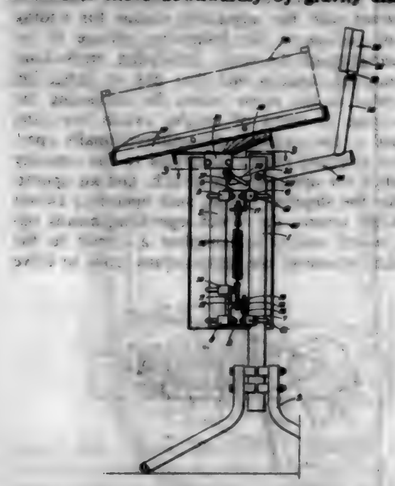


the indicating member to a value greater than said normal capacity of the indicating mechanism and whenever the servo means returns the indicating member to zero indication at anytime after the capacity of the scale has been increased beyond said normal capacity, said operating circuit further including time delay means to provide time intervals between repeat operations of the stepping means and switch mechanism that is controlled by the switch means and that is operatively connected to the stepping means by means of a lead which by-passes the time delay means, the switch mechanism completing a circuit to the stepping means whenever the servo means returns the indicating member to zero indication at anytime after the capacity of the scale has been increased beyond said normal capacity whereby said time intervals between repeat operations of the stepping means are avoided to return the capacity changing switch rapidly to its initial position.

2,944,899
PORTABLE PACKING SCALES
Theodore Heil, Lodi, Calif., assignor to Heilite Trailers, Lodi, Calif., a limited partnership
Filed Nov. 15, 1957, Ser. No. 696,698
2 Claims. (Cl. 265—68)

1. A weighing scales comprising a supporting structure, a vertical scale post having a load supporting platform on its upper end, means mounting the post on the structure for yieldably resisted downward movement from a predetermined position of the platform when unloaded, a weight gauge mounted on the supporting structure, a mechanism arranged to actuate the gauge in response to downward movement of the post, said mechanism including a generally horizontal scale beam pivoted intermediate its ends on the supporting structure for swinging in a vertical plane, motion transmitting means operatively con-

nected between one end of the scale beam and the weight gauge, the other end of the beam being weighted so that it tends to move downwardly by gravity and said last



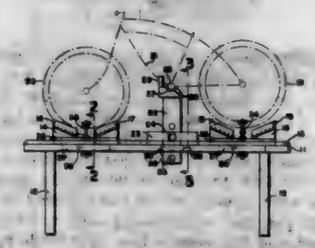
named means including an element on the scale post against which said other end of the scale beam rests from above.

2,944,810
DOOR OPERATING MECHANISM
David R. Stoettig, Manhattan Beach, Virgil D. Jones, Inglewood, and Richard G. Golding, Lawndale, Calif., assignors to Zeta Electronics, Lawndale, Calif.
Filed Aug. 21, 1958, Ser. No. 756,445
5 Claims. (Cl. 268—59)



1. An opening and closing mechanism for a garage door, and the like, the door being disposed in a vertical plane when closed and supported to be moved upwardly to a horizontal plane when opened, the mechanism including: a hanger assembly adapted to be mounted in a position displaced rearwardly from the plane of the door in its closed position and disposed substantially in the plane of the door in its open position, a housing adapted to be mounted in the plane of the door in its closed position and over the door, a drive motor supported on the housing and including a drive shaft, a driven shaft rotatably supported on the housing for limited axial movement and disposed in spaced parallel relationship with said drive shaft, an externally threaded elongated drive screw rotatably mounted at one end in said hanger assembly for limited axial movement with respect thereto, a resilient member for coupling the driven shaft to the other end of the drive screw to enable rotational motion to be imparted to the drive screw through the driven shaft, the drive screw being supported by the hanger assembly and by the resilient coupling member in a position extending essentially perpendicular to the plane of the door in its closed position and in essentially axial alignment with the driven shaft, a first pulley mounted in the housing on the drive shaft, a second pulley mounted in the housing on the driven shaft, a belt drive member in the housing intercoupling the first and second pulleys for imparting rotational motion from the motor to the drive screw, a pair of compression coil springs positioned in the housing in coaxial relationship with the driven shaft on opposite sides of the second pulley, electric switching means adapted to be actuated upon axial movement of the driven shaft against the compression of at least one of said coil springs, a threaded yoke member mounted on the drive screw in threaded relationship therewith for axial movement with respect to the drive screw upon rotation of the drive screw, and a linkage arm having one of its ends pivotally fastened to the yoke member and having its other end adapted to be pivotally fastened to the top of the door to control the opening and closing of the door upon the axial movement of the yoke member and any obstruction to the movement of the door producing axial movement of the lead screw and of the driven shaft coupled thereto against the compression of one or the other of said coil springs to actuate said electric switching means.

2,944,811
BICYCLE REPAIR AND SERVICE STAND
Joseph Michael Wolf, 2309 Reed St., Erie, Pa.
Filed July 9, 1959, Ser. No. 825,969
2 Claims. (Cl. 269—145)



1. A bicycle repair and service stand comprising an elongated base; a first cradle mounted on said base and positioned at one end thereof; a second cradle mounted on said base and positioned at the opposite end thereof; each of said cradles comprising a cradle base, a pair of oppositely inclined wedges having grooved upper surfaces, said wedges mounted on said cradle base, and clamping means combined with each of said cradles for securing a wheel of a bicycle within the cradle and positioned in the grooved upper surfaces of said wedges; a substantially upright center support adapted at its upper end to receive and support the crank housing of a bicycle, said support pivotably mounted on said base at a point intermediate the ends of said base.

2,944,812
METHOD AND APPARATUS FOR REGISTERING AND TIMING ENVELOPE BLANKS AND SIMILAR WORK PIECES IN THE PROCESSING THEREOF
Richard Winkler, Rengsdorf, near Neuwied, and Kurt Dannebier, Wollendorf, near Neuwied, Germany, assignors to Berkley Machine Company, Kansas City, Mo., a corporation of Missouri
Filed May 31, 1957, Ser. No. 662,661
Claims priority, application Germany June 8, 1956
13 Claims. (Cl. 271—1)

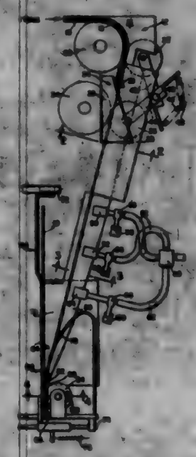
1. An apparatus for positioning blanks to be processed, including means for conveying the blanks in overlapped relation, upper and lower curved guides providing a curved pass in receiving relation with the conveying means, means for separating the foremost blank, suction means for engaging and carrying the separated blank into the curved pass to impart a curvature in each blank for temporarily stiffening the blank, a rotor having radially projecting pins, means supporting the rotor in coaxial relation with the curvature of said pass for carrying the

pins through said pass in engagement with rear edges of the blank to advance the blank through said pass in said curved condition, and means for removing the blank



from said pass, said lower guides providing frictional contact with the blank to hold the blank in contact with said pins.

2,944,813
DOCUMENT HANDLING APPARATUS
John G. Smith, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 13, 1958, Ser. No. 773,592
13 Claims. (Cl. 271—71)



1. Document handling apparatus comprising, means forming a throat for curvilinearly rigidifying a document, means adjacent said throat adapted to transport the document through said throat, means for deflecting said document out of its path of movement after it leaves said throat, and arresting means for said document, said arresting means including a fixed member, a plurality of rotatable members frictionally engageable with said document, a source of constant torque for rotating said rotatable members, a magnetic clutch for magnetically coupling said source of constant torque and said rotatable members to overcome said magnetic coupling thus normally to hold said rotatable members against rotation until a document is received, thus to decelerate said document and subsequently move it slowly against said fixed member.

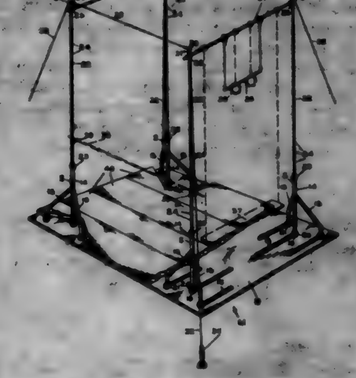
2,944,814
PLASTIC HORSE
George R. Theoming, Memphis, Tenn., assignor to Wonder Products Company, Collierville, Tenn., a corporation of Tennessee
Filed Jan. 24, 1957, Ser. No. 636,136
3 Claims. (Cl. 272—53)

1. In a spring suspended toy to be ridden by a child and particularly adapted to be stably suspended by springs connected to supporting uprights, a toy figure having a hollow plastic body forming a seat whereby said body may be straddled and ridden by a child, a first tube extending laterally across the interior of the hollow plastic body to join the body walls in integral relationship therewith and form a substantially rigid support therefor to transfer and distribute the weight uniformly from the walls of the body to the tube, a second similar



tube extending across the plastic body spaced horizontally from the first to form an additional substantially rigid support for the body, and rods extending through said tubes and projecting therefrom for connection at their ends to said spring so that the body is supported and the weight of the body and rider are transferred to the supporting rods and suspending springs.

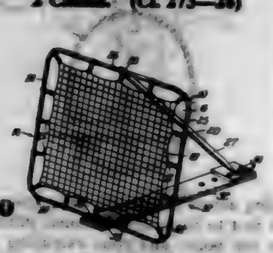
2,944,815
MOUNTING OF GYMNASTIC EQUIPMENT
Austin S. Moyer, Rte. 3, Box 212, Dundee, Greg.
Filed Mar. 6, 1958, Ser. No. 719,881
2 Claims. (Cl. 272—68)



1. A gymnastic equipment support comprising a generally flat rectangular horizontal base, said base having three transversely extending spaced apart parallel slots formed therein adjacent each corner thereof, a standard assembly positioned in upright relation adjacent each corner of said base, a pair of outwardly and downwardly sloping braces having their upper inner ends rigidly secured to said standard assembly, and means on the lower end of said standard assembly and on the lower end of each of said braces releasably securing said assembly and said braces in transversely adjusted position in said slots, said standard assembly and said braces having the lower ends thereof extending into said slots and having means thereon for clamping said braces and said standard assembly to said base, said last mentioned means comprising a flanged sleeve threadably engaged on the lower end of each of said braces and said standard assembly with said flange engaging under said base and

the sleeve extending through said slot and a clamping nut engaging over said base in clamping cooperation with each of said flanges.

2,944,816
RECREATIONAL APPARATUS
Jack R. Dixon, 685 Beachview Drive, Fort Walton Beach, Fla.
Filed Mar. 21, 1960, Ser. No. 16,416
2 Claims. (Cl. 273—26)



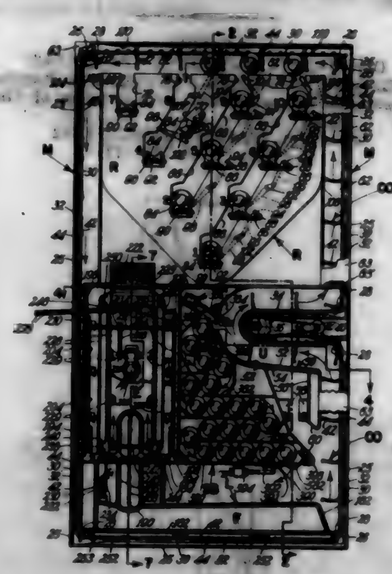
1. Recreational apparatus for rebounding balls and other projectiles thrown into engagement therewith comprising a rectangular frame, said frame comprising plural U-shaped tubular sections joined together in telescoping relation; a net within said frame of less area than the latter, said net being in spaced relation to said frame around its periphery; a supporting base; said frame being connected to said supporting base in pivotal relation thereto; said supporting base at positions rearwardly of said frame constituting means for selectively receiving and maintaining a brace in any one of a series of positions; a brace having aperture means at one end, said frame being pivotally received within said aperture means at a position opposite to that at which said frame connects to said supporting base; said brace at its other end being selectively received and maintained in one of said series of positions on said supporting base to sustain said frame at a selected vertical angle to the latter; a plurality of elastic members attached to said frame in uniform, spaced relation therearound, said elastic members being connected to said net around its periphery tautly to suspend said net within said frame.

2,944,817
TETHERED BALL AMUSEMENT DEVICE
Kenneth S. Stiller, Box 305, Southport, N.C.
Filed Feb. 26, 1958, Ser. No. 717,765
1 Claim. (Cl. 273—26)



A tethered amusement device comprising a baseball having a central bore extending therein and a second inwardly converging bore coaxial with said first bore, a flexible rope extending through said first bore, a knot on the end of said flexible rope seated in said inwardly converging bore securing said rope and said ball together, a spliced loop formed on the opposite end of said rope, a second rope, a spliced loop formed on one end of said second rope, a pair of eyes having said spliced loops threaded respectively therethrough, a swivel connecting said eyes and coupling said spliced loops together, an elongated flexible hollow resilient handle having an opening at each end encompassing said second rope and having one end thereof engaging partially over said swivel, and a knot formed on the opposite end of said second rope exteriorly of the other open end securing said flexible handle in position encompassing said second rope.

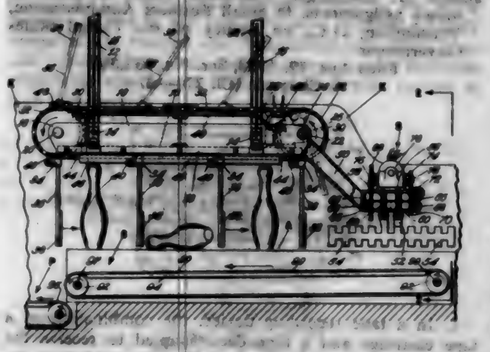
2,944,818
BOWLING PIN SETTING MACHINE
Willis L. Wells, St. Louis, Mo., assignor to American Machine & Foundry Company, a corporation of New Jersey
Original application Mar. 24, 1948, Ser. No. 16,725, now Patent No. 2,707,636, dated May 3, 1955. Divided and this application July 7, 1954, Ser. No. 441,799
19 Claims. (Cl. 273—43)



12. A bowling pin spotting machine for use with a bowling alley having a pit adjacent the bowling pin supporting bed thereof, said pit having a pin supporting portion, mechanism for removing bowling pins from said pit, said mechanism including a bowling pin conveyor having a plurality of pin lifting and conveying flights, said conveyor having a closed path of travel with a substantially horizontal path of travel extending transversely across said pit, means for positioning said flights in substantially horizontal pin receiving floor forming arrangement to engage bowling pins received into said pit from said alley and move said pins across said pit to one side thereof to a substantially vertically upward path of travel of said conveyor, means for moving bowling pins from said pin supporting portion of said pit onto said substantially horizontally positioned flights, a pin magazine, means mounting said magazine above said pit and proximate one path of travel of said conveyor to receive pins delivered thereto by said flights of said conveyor to receive pins delivered thereto by said flights of said conveyor with their handle ends all extending in the same direction, triangularly positioned pin supporting units in said magazine for receiving and holding pins delivered thereto by said flights in substantially horizontal triangular formation, mechanism adjacent said vertically upward path of travel of flights on said conveyor for orienting improperly positioned bowling pins carried by said flights, and means for re-directing an oriented bowling pin downwardly onto an

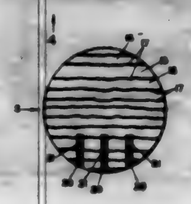
oncoming flight of said conveyor for movement in properly aligned arrangement to one of said units in said magazine.

2,944,819
BOWLING PIN REMOVING APPARATUS
Morehead Patterson, New York, and Charles E. Schow, West Hempstead, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed July 7, 1955, Ser. No. 520,683
20 Claims. (Cl. 273—43)



1. Mechanism for removing pins arranged in generally triangular playing configuration on the playing bed section of a bowling alley comprising a pin handling device movable into engagement with pins remaining standing after a ball has been thrown, means on said device for clamping said standing pins upright on the pin supporting zone of said alley bed in their respective on or off-spot positions, means operative while said pins are clamped for moving all fallen pins along said playing bed towards the front of said alley for delivery into the gutters of said alley whereby said fallen pins are moved from the base of said triangular playing configuration toward the apex thereof to provide said pins with a substantially greater unobstructed path of travel from adjacent said clamped pins to a point of removal from said playing bed of said alley, and means operative upon pins moved toward the front of said alley to deliver them from said playing bed of said alley into said gutters.

2,944,820
BALL-STRIKING IMPLEMENT
Clarence L. Paulin, Columbus, Ohio, assignor, by mesne assignments, to Hillerich & Bradsby Co., Louisville, Ky., a corporation of Kentucky
Filed Sept. 26, 1957, Ser. No. 686,325
5 Claims. (Cl. 273—72)



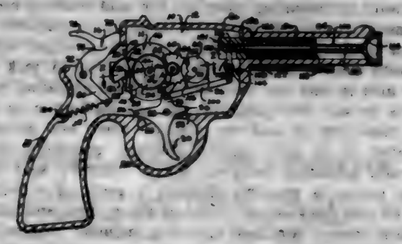
3. A wooden baseball bat comprising: a one-piece elongated cylindrical wooden body, tapered to a handle portion of reduced diameter from a portion of larger diameter having at least one reinforcing strip of a material denser than said wooden body, inlaid longitudinally into the surface of said portion of larger diameter at a position circumferentially removed from the striking surface of the bat, and substantially perpendicular to the plane of the growth layers of the wood, said strip being bonded to the adjacent wood of said bat to prevent chipping of said surface.

2,944,821
PLASTIC ARTICLES OF CONTROLLED SPECIFIC GRAVITY HAVING A WEAR-RESISTANT OUTER SURFACE AND METHOD OF PREPARING THE SAME
George Mason, Kansas City, Mo., assignor to Modern Plastics Research and Sales, Inc., Kansas City, Kans., a corporation of Kansas
Filed Nov. 24, 1957, Ser. No. 697,646
14 Claims. (Cl. 273—82)



5. A method of producing a bowling pin having an irregular longitudinal cross-sectional configuration, said method including the steps of admixing a fluid synthetic resin substance capable of undergoing polymerization to a solid state and a particulate material having a lower specific gravity than said substance; supporting said admixture in pin defining configuration and for rotation about the longitudinal axis thereof; and rotating said admixture to effect proportional segregation of the substance and the material depending upon the relative velocity of various parts of the admixture, said rotation being continued for a period of time and at a rate to cause a sufficiently greater degree of segregation of the substance and the material in those areas of the admixture in greatest spaced relationship from the axis of rotation to thereby present a harder and more wear-resistant outer surface at said areas upon polymerization of the substance and which areas are inherently subjected to the most strain and wear during utilization of the pin.

2,944,822
TOY FIREARM AND GAME THEREFOR
Bernard Jack Brown, 1307 Russell Road, Ann Arbor, Mich.
Filed May 15, 1959, Ser. No. 813,431
12 Claims. (Cl. 273—101)



1. A toy firearm comprising a firearm body; a timer structure in the firearm body; manually operable means for setting the timer; signal means energized by the timer

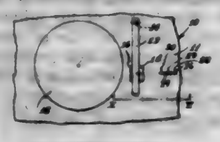
structure at a predetermined time subsequent to timer setting; manually operable trigger means operative in response to manual actuation to stop the timer structure; and recorder means for indicating the elapsed time between energization of the signal means and operation of the trigger means.

2,944,823
GAME BALL
Normand W. Gilbert, Salmon Falls, N.H.
Filed Feb. 3, 1956, Ser. No. 563,231
2 Claims. (Cl. 273—143)



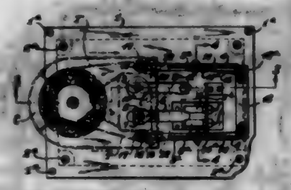
1. A game ball comprising a hollow spheroidal shell, a pair of oppositely disposed trunnions projecting radially inwardly from diametrically opposed portions of the shell, the ends of said oppositely disposed trunnions being spaced apart, and an indicator member consisting of a hollow cylinder having a cylindrical passage extending therethrough into which said trunnions project, said hollow cylinder being loosely carried on said trunnions for free rotation thereon, the outside cylindrical surface of said hollow cylinder having legends thereon, said shell having a window therein through which said legends may be observed.

2,944,824
TONE ARM LOCKING DEVICE
Erik Wennerbo and Gösta Hedberg, Motala, Sweden, assignors to Industriaktiebolaget Lesor, Motala, Sweden, a corporation of Sweden
Filed Mar. 25, 1954, Ser. No. 418,591
Claims priority, application Sweden Mar. 30, 1953
3 Claims. (Cl. 274—1)



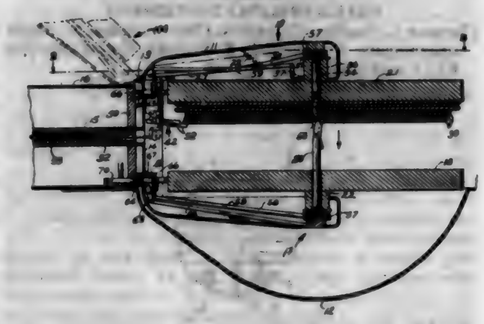
1. In a phonograph, a turntable, a tone arm, means whereby said tone arm is supported for swinging movement between a rest position outside said turntable and a position inwardly over the turntable, locking means for said tone arm, means whereby said locking means are actuatable for locking said tone arm in said rest position, an actuating member for said locking means, means whereby said actuating member is movable between a first position and a second position, means whereby said locking means are effective to lock said tone arm in said rest position when said actuating member is in said first position and are ineffective to lock said tone arm in said rest position when said actuating member is in said second position, operating means for said actuating member, means whereby said operating means is movable through a cycle of movement out of and back to an initial position, first and second control means for said actuating member disposed on said operating means, means whereby said first control means engages said actuating member during an initial portion of said cycle of movement and moves said actuating member to said second position, means whereby said second control means engages said actuating member during a final portion of said cycle of movement and moves said actuating member to said first position, and means whereby said second control means is movable to an inoperative position in which it is inoperative position in which it is inoperative to engage and actuate said actuating member to said first position thereof.

2,944,825
TAPE DECK FOR NON-REWINDING TAPE RECORDER
Joseph A. MacSinger, Cleveland, Ohio, assignor, by mesne assignments, to Small Business Administration, Washington, D.C., an agency of the United States Government
Filed Apr. 29, 1958, Ser. No. 731,807
10 Claims. (Cl. 274—4)



1. In a tape recording device, the combination of a tape cartridge and a tape deck adapted to receive the cartridge, said cartridge containing a wound tape arranged with a tangential portion movable into inoperative position within the cartridge and movable therefrom into operative position, a sound recording and reproducing member associated with said tape deck for operative engagement with the tangential portion of the tape, said tape deck having slidable means engageable by said cartridge and adapted for movement by said cartridge forwardly and rearwardly towards and from engaged position of said cartridge, and means actuated by the sliding movement of said cartridge for automatically moving the tangential portion of the tape into and out of operative position with respect to said sound recording and reproducing member.

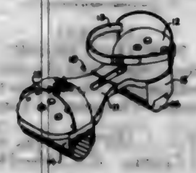
2,944,826
RECORD PLAYER
Bonifacius G. van Eeuwen, 102 Barkers Road, Hawthorn, Victoria, Australia
Filed Oct. 7, 1957, Ser. No. 688,772
8 Claims. (Cl. 274—10)



1. A record changer for record players for sequentially and automatically playing both sides of disc records of various sizes mixed together comprising, in combination, a shaft, a wall carried by said shaft, motor means for rotating said shaft and wall, a first turntable assembly

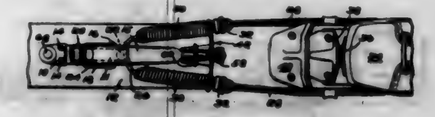
pivotally supported upon said wall for rotation about an axis perpendicular to the plane of the longitudinal axis of said shaft, a second turntable assembly rigidly supported upon said shaft, a common spindle extending between said turntable assemblies adapted to support a stack of records of diverse sizes, a pickup arm adapted to engage the exposed surface of the uppermost record of the turntable assembly in the lowest position, and means for alternately rotating said first and second turntable assemblies into said lowest position, each turntable assembly including a turntable, a drive roller in driving engagement with said turntable, a brake for preventing rotation of said turntable, a turntable mounting pin, and a spindle secured to the center of said turntable slidably supported for rotation and longitudinal movement upon said mounting pin, and said common spindle including retractable stop means for engaging records carried at each end thereof.

2,944,827
ROLLER SKATES
Frank Makara, 29 Orange Drive, Sanford, N.Y.
Filed Jan. 30, 1959, Ser. No. 790,690
1 Claim. (Cl. 280—11.28)



In a roller skate having a shoe receiving platform and shoe embracing straps secured to said platform, the improvement comprising a front and a rear pincer block each having opposed resilient spaced-apart jaws forming a suitable longitudinal cavity, said pincer blocks being secured to the respective undersurface area of said shoe platform, and a cylindrical roller of a diameter greater than that of the spaced-apart opening between said jaws and adapted to be seizingly seated in the cavity between said jaws, said jaws slidingly seizing said rollers along opposed cylindrical surfaces below the roller diameter, and a rubber I-shaped support secured to and intermediate said front pincer block and the front area of the shoe platform whereby steering of the front roller may be effected by pressure suitably applied to the respective outer edges of said front roller thereby causing said I-shaped support to twist the front roller into the desired direction of motion.

2,944,828
AUTOMATICALLY RELEASABLE SKI BINDING
Leif Nashe, West Concord, Mass., assignor to Dovre Ski Binding, Inc., West Concord, Mass., a corporation of Massachusetts
Filed June 23, 1958, Ser. No. 743,927
3 Claims. (Cl. 280—11.35)



1. In a releasable ski binding, a heel engaging cable unit comprising two coiled tension springs in laterally spaced and substantially parallel relation, a U-shaped heel engaging cable connected at its ends to the rear ends of said springs respectively, means connecting the front ends of the springs and adapted to be connected to a cable tensioning mechanism including a lever pivoted to the ski on an axis extending transversely across the ski and having a free end portion extending rearwardly of said axis, a bar mounted at its ends respectively on and connecting said ends of the cable, and a hook pivotally mounted on the bar intermediately between the springs for movement about an axis substantially parallel with the springs, said hook being adapted to pivot over said free end of the lever to a position holding the lever in cable tensioning position.

2,944,829
SELF-ADJUSTING PIVOT JOINT FOR VEHICLE STEERING LINKAGE
Edward J. Herbenar, Detroit, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Nov. 26, 1957, Ser. No. 698,959
8 Claims. (Cl. 280—95)

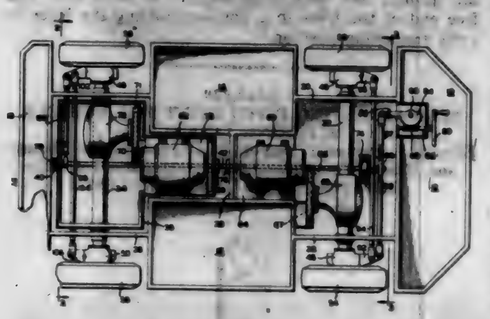


1. In a steering linkage of the type including a cross-link, tie rods having inner ends connected to the cross-link adjacent but inwardly from the ends of the cross-link, an idler arm supporting one end of the link and a pitman arm supporting the other end of the link, and a mounting bracket for the idler arm, the improvement of a permanently lubricated joint between the idler arm and bracket, said joint comprising, a cup-shaped housing having tapered inner surfaces and inwardly turned portions at opposite ends thereof, one end of the bracket having a cylindrical stud portion with radial flange thereon received in the housing, opposed bearings seated in an upright position on the radial flange and having tapered outer surfaces in slidable contact with the housing inner surfaces and generally cylindrical inner surfaces conforming to the cylindrical stud portion and essentially completely surrounding the same, and spring means in the housing acting on the bracket stud portion urging the bearings relative to the housing inner surfaces to a position at which the bearings are relatively more closely spaced from the upper end of the housing than from the lower end thereof and for maintaining the bearings in good bearing relation with the bracket stud portion.

2,944,830
FOUR WHEEL STEERING MECHANISM FOR A MINE CAR
Charles Vernon Osborne, Wise, Va.
Filed May 15, 1958, Ser. No. 735,461
3 Claims. (Cl. 280—96)

1. The combination of a motor car and a four wheel steering mechanism, said motor car comprising a main frame having a pair of longitudinally displaced transverse members, a sub-frame between said members, a first pair

of wheel supporting pivotal stub-shafts carried by said main frame, and a second pair of wheel supporting pivotal stub-shafts carried by said sub-frame at points spaced from said first pair, said steering mechanism comprising a rotatable steering shaft extending centrally, longitudinally and within the vertical extent of said frames, said steering shaft being journaled in bearings on said transverse frame members and in bearings at both ends of



said sub-frame, whereby said sub-frame is pivotally supported within said main frame on said steering shaft, means for rotating said steering shaft and means for translating rotational movement of said steering shaft into pivotal movement of said stub-shafts, said last mentioned means being connected to said steering shaft at spaced points corresponding generally to the spacing of said first and second stub-shaft pairs and also lying within the vertical extent of said frames.

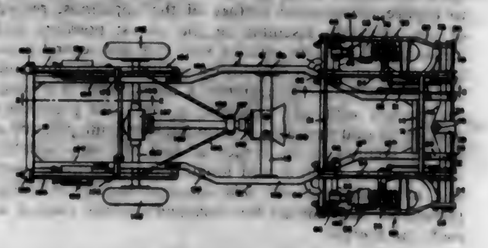
2,944,831
CONTROL ARM MOUNTING FOR VEHICLE WHEEL SUSPENSION
Paul P. Thomas, Detroit, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Aug. 7, 1957, Ser. No. 676,751
16 Claims. (Cl. 280—96.1)



1. A control arm construction for supporting the front wheel of an automotive vehicle comprising a control arm having one end adapted to be attached to said front wheel, two studs having enlarged balls on one end thereof, means for oscillatably mounting said balls in the other end of the control arm in spaced-apart relation with the studs thereon normally projecting in a direction away from said one end of the control arm substantially longitudinally of the control arm, and means for securing said studs to the chassis frame whereby caster and camber adjustment is permitted.

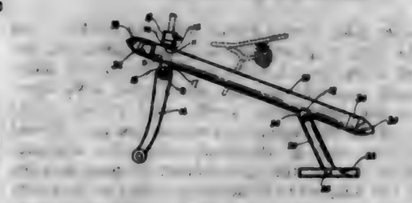
2,944,832
RUNNING GEAR AND SPRING SUSPENSION FOR MOTOR VEHICLES
George H. Tuber, 762 E. Water St., Elmira, N.Y.
Filed June 14, 1957, Ser. No. 665,784
29 Claims. (Cl. 280—124)

1. In a motor vehicle, a chassis frame, rear wheel running gear, resilient suspension means between said gear and the frame, steerable front wheel running gear, resilient suspension means between the steerable front wheel running gear and the frame, means for effecting elevation of the chassis frame relative to said rear wheel and steerable front wheel running gear, to increase the jounce spacing



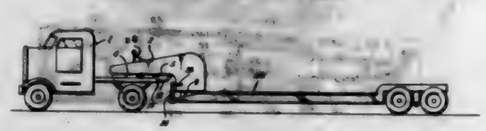
between the wheels and body members on the frame, and means actuatable by and simultaneously with the motor vehicle foot accelerator for modifying the action of the elevation effecting means to selectively produce lowering of the chassis frame on either side thereof.

2,944,833
TRICYCLE FRAME
Norman G. Whittemantel, Palos Heights, Ill., and Tennes L. Erstad, Brooklyn, N.Y., assignors to American Machine and Foundry Company, a corporation of New Jersey
Filed Feb. 1, 1957, Ser. No. 637,660
13 Claims. (Cl. 280—282)



1. A framework for a tricycle wherein a back bone cross bar is provided with open ends to receive accessories, means for inserting a head post vertically through said back bone cross bar intermediate the ends of said back bone cross bar so that one end of the cross bar projects in front of said front fork, a rear axle support having a plurality of open ends to receive accessories, said support being connected to said back bone cross bar intermediate the ends of said back bone cross bar so that the rear end of said back bone cross bar projects beyond the connection to the rear axle.

2,944,834
TRACTOR TRAILER DETACHABLE GOOSENECK
George L. Hill, 717 Carby, Houston, Tex.
Filed Jan. 20, 1958, Ser. No. 710,118
5 Claims. (Cl. 280—425)



4. In a tractor-trailer, a tractor having a pivotally mounted neck, one end of said neck being extended and downwardly turned, a pair of hydraulic jacks pivotally mounted in said neck and having downwardly extending connecting arms movable vertically, a hydraulic pump

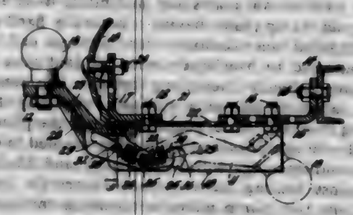
mounted in said neck and a common hydraulic line leading from said pump to said jacks, a pivotally mounted connecting bar on said arms and a hydraulic jack pivotally mounted on said neck and a pivotally mounted connection with said connecting bar and jack, aligning means on said neck and trailer, a hydraulic jack on said neck in position to be moved into contact with said tractor to raise or lower said neck and a bearing on the extended end of said last mentioned jack.

2,944,835
BOAT TRAILER
Gustave O. Englehardt, 36 Central St., Turners Falls, Mass., and Raymond E. Beaulac, 157 School St., Greenfield, Mass.
Filed May 2, 1958, Ser. No. 732,660
1 Claim. (Cl. 280—482)



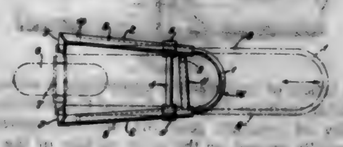
A boat trailer comprising a frame, a longitudinally extending upwardly opening channel track arranged in offset parallel relation to the longitudinal center line of said frame, said channel track having a horizontal bight portion and a pair of oppositely disposed upstanding parallel legs, an extensible tongue supported in said channel track for longitudinal sliding movement, a plurality of antifriction rollers mounted on said channel track projecting through and slightly above said horizontal bight portion supporting said tongue in spaced relation thereabove, additional antifriction rollers mounted on said channel track in upwardly spaced relation to said bight portion engaging over said tongue securing said tongue in said channel track, an offset plate secured to the forward end of said tongue with said plate offset to extend beyond the center line of said frame, pin means releasably securing said plate to the forward end of said frame, and a trailer hitch mounted on said plate and centered on the center line of said frame for securing said trailer to a towed vehicle, said frame being provided with a pair of channel tracks arranged in equi-spaced oppositely disposed relation to the longitudinal center line of said trailer, and said tongue including an elongated member arranged for longitudinal sliding movement in each of said channel tracks with said plate connecting the forward end of said tongues.

2,944,836
RETRACTABLE TRAILER HITCHES
Clell R. Matthews, Warsaw, Ind., assignor to The Dalton Foundries, Inc., Warsaw, Ind., a corporation of Indiana
Filed Aug. 7, 1958, Ser. No. 753,834
1 Claim. (Cl. 280—491)



Automotive coupling device comprising a body portion of channel section including a horizontal web and downwardly extending flanges, means for securing said body portion to a towing vehicle, a tension member of channel section having a web and flanges pivoted on a horizontal axis, adjacent one end of said member, to the body portion at a point toward the rearward end thereof, the other end of said tension member being formed to provide a mounting for a coupler member, and means for latching said tension member in extended position for use in towing a trailer or in retracted position substantially coextensive with said body portion, said latching means comprising open-ended slots in the flanges of said body portion, a pin extending transversely of said tension member and movable longitudinally thereof in closed slots formed in the flanges of said tension member, and spring means connected to said pin and anchored relative to said body portion for urging said pin inwardly of said open-ended slots, said open-ended slots comprising pairs of slots formed in the edges of the respective flanges of said body member, one said pair at the rearward end of said flanges and the other said pair at transversely aligned points in the lower edges of said flanges and disposed forwardly of said pivot, said last slots being of inverted L-shape, said web of said tension member being of a transverse dimension less than the distance between the flanges of said body portion whereby said tension member is received between said flanges when in retracted position, said spring means lying between the flanges of said tension member, and said tension member, when retracted, lying substantially entirely between the flanges of said body portion.

2,944,837
AIRCRAFT TOWING DEVICE
Douglas Fotheringham, 1152 N. 10th St., Laramie, Wyo.
Filed Mar. 24, 1958, Ser. No. 723,419
5 Claims. (Cl. 280—503)

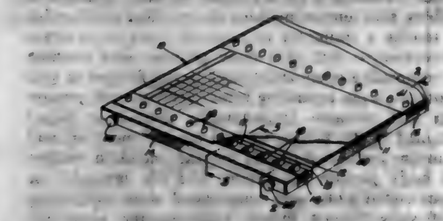


1. An aircraft towing device which, in combination, comprises means including a pair of spaced elongate arms having relatively laterally movable outer ends and a pair of opposed wheel engaging elements at said outer ends and a connection between the inner ends of said arms to prevent relative lateral and longitudinal displacement of said inner ends, said elements being movable into and out of wheel engaging relationship by said lateral movement of said arms, and means comprising a generally U-shaped handle having a pair of stiff legs telescopically but non-removably engaging the inner ends of said arms for movement between collapsed storage and extended operative positions, said handle including resilient means to urge the outer ends of said legs outwardly to normally hold said arms outwardly with said elements out of wheel engaging relationship when said handle and arms are collapsed, said connection retaining the outer ends of said legs inwardly against said resilient urging to hold said arms inwardly with said elements in wheel engaging relationship when said handle and arms are extended.

2,944,838
ACCOUNTING BOARD
Carl J. Nardon, Los Angeles, Calif., assignor to Nardon Mfg. Co., a copartnership
Filed Jan. 20, 1958, Ser. No. 710,094
6 Claims. (Cl. 282—29)

1. In a peg rail for an accounting board, a metal strip having a plurality of pegs integrally formed thereon in

longitudinally spaced position, each of the pegs projecting from an upper surface of the strip and being provided with an oblong crown, each peg having a first upright portion integrally connecting the crown to the said strip, a flange on each peg having an upper surface substantially co-planar with the upper surface of the



strip, each peg having a second upright portion integrally connecting the crown to said flange, the strip having an aperture adjacent each of said flanges, said crown, flange and latter said upright portion of each peg being formed from metal cut from the strip and defined by the boundary edge of said aperture.

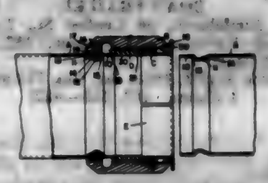
2,944,839
COUPLING FOR REINFORCED PLASTIC PIPE
Archie C. Anderson, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 8, 1958, Ser. No. 778,694
5 Claims. (Cl. 285—45)



1. An article of manufacture comprising a substantially rigid tubular member formed of cured themosetting resin, a plurality of separate generally arcuate segments circumferentially spaced on the outer surface of the tubular member adjacent an end thereof with the adjacent longitudinal edges of said segments being in close proximity, said segments formed of a material having a substantially higher bearing strength, compressive strength and shear strength than the resin, a nonmetallic bond securing said segments to said member and disposed between said adjacent longitudinal edges, and a layer of fibers impregnated with a cured thermosetting resin disposed around the longitudinally inwardly disposed portion of said segments and spaced longitudinally from the outer end of said segments, said layer extending a substantial distance beyond the inner ends of said segments toward the longitudinal center of the member to overlay a portion of said member, said layer being bonded to the segments and to said portion of the tubular member to provide an integral coupling construction for said member.

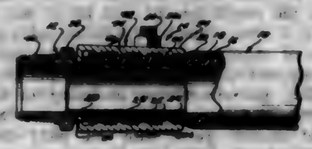
2,944,840
TUBE COUPLING HAVING A REINFORCED SEALING AND LOCKING RING
Sumner D. Wiltse, 4943 Ridgewood Ave., Detroit, Mich.
Filed Feb. 4, 1960, Ser. No. 6,697
8 Claims. (Cl. 285—232)

1. In combination, a length of tubing having adjacent one end thereof an outer concave annular surface curved outwardly and toward the end of said tubing, said curved surface in section forming substantially an arc of a circle of an extent of slightly less than 90°, an annular fitting encircling said end portion and having an annular channel and an annular recess in axial communication with each other spaced from an end of said fitting, said channel opening radially inwardly, the outer diameter of said recess being substantially less than that of said channel, said recess having an annular concave end surface curved inwardly and toward the end of said fitting, said last-mentioned annular surface in section forming an arc of a circle of an extent of slightly less than 90° and in the assembled position on said tubing being in opposed relation to the first-mentioned annular surface, and a single means providing a fluid-tight seal between said tubing and said fitting and preventing accidental



withdrawal of said tubing from said fitting, comprising a resilient radially expansible and substantially axially non-compressible ring of circular cross section between and having surface sealing engagement with the opposed curved surfaces aforesaid, and a closed annular coil spring embedded in said resilient ring adjacent but not protruding from the surface thereof, said channel being adapted to substantially completely receive the expanded ring to provide clearance for manual insertion or withdrawal of said tubing relative to said fitting, the interior of said fitting between the outer end thereof and said recess being spaced from said tube a distance less than the radius of the cross-section of said sealing means.

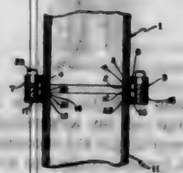
2,944,841
HOSE CLAMP
Robert H. Carpenter, Fort Wayne, Ind., assignor, by mesne assignments, to Flexonics Corporation, Maywood, Ill., a corporation of Illinois
Filed Sept. 23, 1955, Ser. No. 536,071
4 Claims. (Cl. 285—243)



1. A hose clamp adapted to clamp a section of hose to a projecting stem of an associated fitting having a stop shoulder spaced substantially from the tip of the stem, the hose being adapted to be slipped over said stem and toward said shoulder, said stem having a generally cylindrical outer contour of fixed outermost radius throughout, comprising, a pair of substantially identical clamp plates, flange means carried by said plates for engaging said stop shoulder to hold said plates and said fitting fixed axially, each of said clamp plates having a generally fixed radius semi-cylindrical inner contour extending from end to end therein adapted to overlie a section of said hose for a length longitudinally therealong opposite the stem and forming opposed clamping surfaces, matching flanges extending from the lateral edges of each of the plates and provided with openings, and bolt means adapted to extend through said openings with limited play and adapted to bear against bearing faces of said flanges for drawing together the two clamp plates in clamping embracement of said hose onto said stem, said openings being inwardly offset from a median plane normal to the longitudinal

center of the clamping surfaces of said plates to provide that the portion of said clamping surfaces lying inwardly along the hose with respect to said bolt means has less area for bearing against the hose than has the clamping surfaces outwardly of said bolt means, there being provided along the interior surface of the arcuate portion of each said plate an axially-spaced series of transverse ridges extending inwardly therefrom for protruding into the associated hose to grip the same, said ridges being of progressive peak height from a peak of maximum radial extent adjacent the inner ends of the clamp plates to a peak of minimum radial extent adjacent the outer ends of the clamp plates whereby tightening of the bolt means effects hose clamping engagement by the inner ends of the clamp plates prior to hose clamping engagement by the outer ends of the clamp plates.

2,944,842
VACUUM-TIGHT FLANGED PIPE COUPLING
Bernard G. E. Stiff, North Reading, Mass., assignor to High Voltage Engineering Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 9, 1953, Ser. No. 347,763
1 Claim. (Cl. 285—368)



A union for joining together in a vacuum-tight manner two standard pipe terminations forming part of a vacuum system in at least a portion of which charged particles travel at energies in excess of one-half million electron volts, wherein the sole necessary alterations in each standard pipe termination are (1) a counterbore at the inner edge of each pipe termination and (2) a groove in the outer surface of each pipe termination spaced from the end surface thereof, comprising, in combination with two such standard pipe terminations each having such a counterbore and such a groove as the sole alterations therein: a snap-ring positioned in each groove, a flange member slidably fitted over each pipe termination and abutting against each snap-ring for the purpose of drawing said pipe terminations together, a compressible annulus separating the end surfaces of said pipe terminations, a hard inner ring confined by said counterbores within said compressible annulus, the internal surface of said hard inner ring lying substantially flush with that portion of the internal surface of each of said pipe terminations which adjoins said counterbores, a hard outer ring confined between said snap-rings to surround said compressible annulus and a portion of the ends of said pipe terminations, and means including said flange members and said snap-rings for clamping said pipe terminations together to provide sufficient mating pressure between the compressible annulus and the four surfaces surrounding it (namely, the end surfaces of the pipe terminations, the outer surface of the inner ring, and the inner surface of the outer ring) to form a vacuum-tight seal capable of supporting not less than atmospheric pressure outside said vacuum system and 10^{-5} mm. Hg inside said vacuum system, said hard inner ring serving to shield said compressible annulus from bombardment by said charged particles in order to reduce evolution of gases from said compressible annulus and to limit the longitudinal movement of said pipe terminations in order to prevent excessive deformation of said compressible annulus.

2,944,843
SPRING LOADED SEAL
George E. Colby, Barrington, R.I., assignor to Magnetic Seal Corp., a corporation of Rhode Island
Filed Aug. 8, 1957, Ser. No. 677,875
4 Claims. (Cl. 286—11.14)



1. A fluid seal device for effecting a fluid-tight seal between two relatively rotatable members, sealing faces on said members, resilient means urging said faces into sealing engagement, and magnetic means urging said members into sealing engagement, said magnetic means exerting a force sufficient to critically dampen said resilient means and less than the force required to form a fluid tight seal between said faces.

2,944,844
RESILIENT COUPLING
Carl David Miller, Columbus, Ohio, assignor, by mesne assignments, to The Cooper Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio
Filed Nov. 1, 1954, Ser. No. 466,116
6 Claims. (Cl. 287—53)



1. A resilient coupling comprising: a driving member and a driven member; a hollow flexible disk connected between said members; a reservoir for fluid in one of said members; a fluid in the hollow of said flexible disk and said reservoir; fluid passage means between said reservoir and the hollow of said flexible disk to communicate and to control the rate of flow of fluid between said hollow flexible disk and said reservoir; said flexible hollow disk having walls of an elastic material, enmeshed with one group of flexible, relatively inelastic strands disposed in a spiral from an attachment position on said driving member to an attached position on said driven member, and with a second group of strands disposed at an angle to radial projected lines of said coupling from an attachment position on said driving member to an attachment position on said driven member.

2,944,845
SEWING MACHINES WITH ADJUSTABLE FLANGE COUPLINGS
Martin W. Enepl, Philadelphia, Pa., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Dec. 11, 1957, Ser. No. 702,032
2 Claims. (Cl. 287—53)

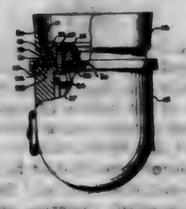
1. In an adjustable coupling having a flange member and a collar member, said flange member having a

threaded hole and an outer cylindrical surface, and a plurality of equally sized and equally spaced axially extending notches on the outer cylindrical surface of said flange member; said collar member located adjacent to said flange member and said collar member having a plurality of threaded holes and having an outer cylindrical surface, and a plurality of axially extending notches on the outer cylindrical surface of said collar member, said last named notches being equal in size and spaced the same as the notches on said flange member; an arcuate



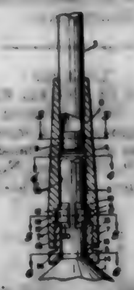
plate spanning portions of the outer cylindrical surface of said flange member and said collar member, the inner surface of said plate being provided with a plurality of notches meshing with the notches on the outer surfaces of said flange member and said collar member, and said plate being provided with a slotted hole and a pair of cylindrical holes; one screw passing through said slot in said plate and threaded into said flange member; and a plurality of screws passing through said cylindrical holes in said plate and threaded into the holes in said collar member.

2,944,846
CONTROLLED COLD FLOW PLASTIC BEARING FOR SWIVEL JOINTS
Robert Ellsworth Jones, West Covina, Calif., assignor to Sierra Engineering Co., a corporation of California
Filed Sept. 14, 1959, Ser. No. 839,873
4 Claims. (Cl. 287—91)



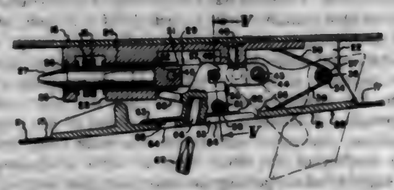
1. A frictional bearing which includes a tubular reception member having an end opening for reception of a bearing member into its interior; an annular shoulder formed on the interior surface of said tubular reception member near said opening, said shoulder having a conical bearing surface converging to a minimum opening spaced interior from said end opening; a bearing ring of elastically deformable material for reception into said tubular reception member, said bearing ring having internal and external conical surfaces parallel with said converging conical bearing surface on said shoulder; a compression ring having a maximum diameter permitting its close reception internal of said minimum opening, and converging in a conical surface adapted to seat on the interior of said bearing ring; an axial pressure plate or cone for engaging the outer surface of said deformable bearing ring and compressing it against the outer surface of said annular shoulder in said reception member opening; and at least one draw down screw connecting said pressure plate to said compression ring for holding said compression ring in a position relative to said axial pressure plate to apply adjustable bearing pressure to said deformable bearing ring.

2,944,847
REPLACEMENT ANTENNA STAFF ASSEMBLY OR UNIT
Joseph F. Chudowski, Cleveland, Ohio, assignor, by mesne assignments, to New-Trenton Corp., Cleveland, Ohio, a corporation of Ohio
Filed Dec. 15, 1958, Ser. No. 780,564
2 Claims. (Cl. 287—117)



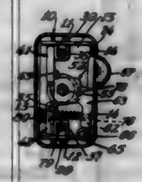
1. In combination with the broken stub of an original antenna installation of an automobile, a replacement mast assembly comprising a nut encompassing said broken stub and having a tapered surface at its upper end, a split ring encompassing said stub and having a correspondingly tapered surface at its lower end resting on said tapered surface of the nut, said split ring having a tapered surface at its upper end, a sleeve encompassing said broken stub and threadedly secured to said nut, said sleeve having an interior tapered surface corresponding to the taper of the tapered surface of the upper end of the split ring and adapted to engage said latter surface, and a replacement antenna mast press-fitted in the upper end of said sleeve, said split ring adapted to be clamped to said stub in response to relative movement of the sleeve and nut toward each other, whereby the conical surfaces of said sleeve and nut coact with the conical end surfaces of the split ring.

2,944,848
LATCH
Henry Irarus Mandolf, San Diego, Calif., assignor to Langley Corporation, San Diego, Calif., a corporation of California
Filed Feb. 10, 1958, Ser. No. 714,197
5 Claims. (Cl. 292—181)



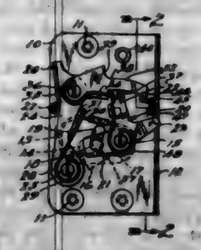
1. A latch mechanism comprising a support member, a latching bolt, means on said support member for mounting said latching bolt for rectilinear movement into and out of latching position, an actuating handle pivotally mounted on said support member for movement between closed and open positions relative to said support member, means interconnecting said actuating handle and said latching bolt for common movement, and release means movably carried by said actuating handle, means on said release means engageable with said interconnecting means for releasably securing said actuating handle in closed position, said release means having a base portion, said base portion having a recess therein opening to the exterior surface thereof adapted to receive a force applying means whereby said release means may be actuated out of engagement with said interconnecting means to release said actuating handle for movement to its open position.

2,944,849
DOOR LATCH
Harold W. Falk, 7425 Pleasant Ave., Minneapolis, Minn.
Filed Nov. 5, 1956, Ser. No. 620,221
6 Claims. (Cl. 292—222)



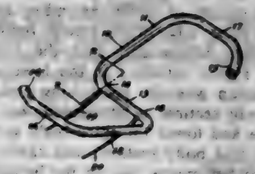
1. A door latch including a latch bolt, means at one end of said latch bolt pivotally supporting the same, a handle shaft supported in parallel relation to the axis of pivotal motion of the latch bolt, a substantially straight lever pivotally supported at one end in substantially parallel spaced relation to said latch bolt and on an axis parallel to the axis of rotation of said latch bolt, cam means on said handle shaft between said latch bolt and said lever and engageable with one end of said lever to pivot the same, and elongated connecting means connecting said lever and said latch bolt to tensionally pull said latch bolt to a retracted position upon pivotal movement of said lever by said cam means when said handle is turned, said connecting means including a pin extending through said latch bolt and said lever, said pin being slidable to permit relative pivotal movement of said latch bolt relative to said lever.

2,944,850
DOOR LOCK
John H. Roethel, Coral Gables, Fla.
(15148 W. Seven Mile Road, Detroit 35, Mich.)
Filed Feb. 17, 1956, Ser. No. 566,141
8 Claims. (Cl. 292—223)



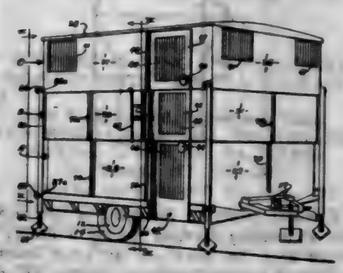
1. In a door latch mechanism for a swinging door, a support comprising a plate portion for disposition at the free edge wall of the door and having a flange extending from the inner edge thereof, a pivoted latch means mounted on the outer face of said plate portion, a lever means pivotally mounted on the inner face of said plate portion for swinging movement about a common pivot axis with said latch means, coupling means fixedly coupling said lever means to said latch means whereby both are swingable in unison upon actuation of either one, said lever means having an arm extending upwardly from the pivotal axis thereof, outer manually operable means for pivotally actuating said lever means and including a lever pivotally mounted on said plate portion and having a portion movable toward said flange upon swinging said lever, link means pivotally mounted on said lever portion and having a part arranged in operative relationship with a part of said arm and being shiftable upon swinging said lever to cause said lever means to swing, said coupling means transmitting swinging movement of said lever means to said latch means to swing the same from door latched to door unlatched condition, control means movably mounted on said support, and inner manually operable means for moving said control means to render said link means ineffective to swing said lever means.

2,944,851
BALE LIFTERS
George A. Dulmage, Box 505, Yorkton, Saskatchewan, Canada
Filed Dec. 11, 1958, Ser. No. 779,688
2 Claims. (Cl. 294—26)



1. A bale lifter, comprising: a one-piece S-shaped frame presenting three relatively parallel spaced cross members; each outer cross member forming a lateral handle and having one end thereof connected to one of the ends of the central cross member, for support of same; approximately one-half of said frame, which includes said central cross member, an outer cross member and the connection therebetween, positioned in a plane at an obtuse angle to the plane of the opposite approximate half of said frame; and a pair of spaced parallel piercing tines carried by said central cross member, and projecting from said frame, on the side remote from said obtuse angle, to a spaced location from one of said outer cross members.

2,944,852
VERTICALLY COLLAPSIBLE AND TELESCOPING TRAILER BODY
Vilas L. Snyder, 1906 S. Washington, Wichita, Kans.
Filed Aug. 19, 1955, Ser. No. 529,540
5 Claims. (Cl. 296—23)



1. In a trailer body structure of the kind described; said structure having a first, second and third horizontally disposed section; said first section being slidably receiv-

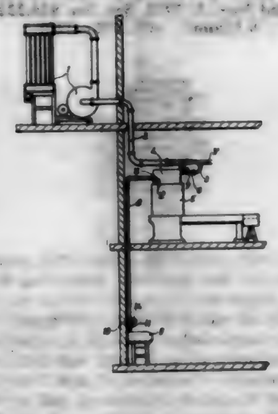
able vertically within the second section, said second section being slidably receivable vertically within the third section; a cable winding device, said cable winding device being crank operated, said cable winding device also being rigidly carried immediately adjacent the said body structure, a first cable system and a second cable system, one end of each cable of the first cable system being connected with the said cable winding device and being adapted to be wound thereon for purposes of simultaneously pulling each of said cables and also being unwound therefrom for purposes of releasing the pulling action of said cables, each of said cables extending around a series of guide pulleys to selected points around the lower portion of the first body section, thence upwardly to the top of the first body section and over pulleys thereon, and thence downwardly and their remaining ends being rigidly connected to the lower edge of the second body section for purposes of raising and lowering the second body section, upon the winding of the cables on and off of the winding device relative to the first body section, said second system of cables being several in number and being located at selected points around the body structure, each cable of the second system of cables having one end thereof rigidly connected with the upper edge portion of the first said body section and then each cable of the second system of cables extending over a pulley carried on the upper edge of the second body section and thence extending downwardly and the remaining end thereof being rigidly attached to the lower edge of the third body section whereby the raising and lowering of the second body section as aforementioned will simultaneously raise and lower the third body section relative to the second said body section, said cable winding device having ratchet means therein for holding the winding device and the second and third body sections in any adjusted, elevated position.

2,944,353
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed June 2, 1955, Ser. No. 512,785
5 Claims. (Cl. 301—37)



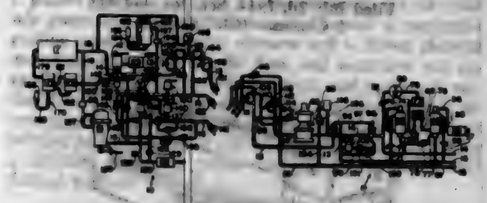
1. In a wheel structure including a tire supporting and wheel connecting member having a deeply axially inset flanged area, an inner and an outer cover member each having terminal portions capable of overlying one another in said deeply axially inset flanged area and defining a deep axial draw between same, said terminal portions having axially alignable slots therein, and a fastener carried by said deep axially inset flanged area capable of projecting through said axial slots in said overlying portions to hold same in unitary relation.

2,944,354
APPARATUS FOR SUPPLYING FIBROUS MATERIALS TO MACHINES
Hans Koch, Hamburg-Rahlstedt, Germany, assignor to Hauni-Werke Korber & Co. K.G., Hamburg-Bergedorf, Germany
Filed July 15, 1958, Ser. No. 748,740
Claims priority, application Germany July 16, 1957
2 Claims. (Cl. 302—17)



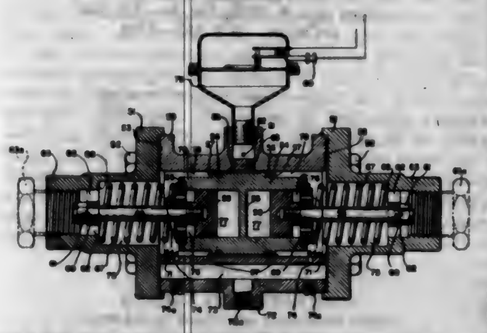
1. In an apparatus for feeding cut tobacco to a cigarette making machine comprising tobacco delivery means adjacent said machine, said means including a collector box having a closure biased by gravity to an open position and adapted to be closed by external atmospheric pressure and reduced pressure in said box, said collector box being adapted to receive tobacco from a supply point and periodically deliver it to the cigarette machine, duct means connecting said supply point to said box, a suction source connected to said collector box adapted to pneumatically convey material from said supply point through said duct means and to said collector box, said suction source being adapted to maintain said collector box closure in its closed position, feeler means in said collector box to sense the level of tobacco collecting therein, flap valve means in said duct adjacent said supply point movable between two positions one of which is adapted to cover an opening in said duct and the other position being adapted to close the duct means in the direction of the supply point and open the other portion of said duct means in the direction of said collector box to the atmosphere, electrical means connecting said feeler means to said flap valve means so that when the tobacco in said collector box reaches a predetermined level said flap valve means will be moved to a position to uncover said opening in said duct and permit air flow through that portion of the duct between the valve means and said collector box, but will interrupt the flow of tobacco material from said supply source, a delay mechanism adapted to be operated by said feeler means, and valve means between said suction source and said collector box operably connected to said delay means and adapted to be operated a predetermined time interval after the operation of said flap valve means to permit the pressure in said collector box to reach atmospheric pressure and permit said closure to open and deliver tobacco to said machine after tobacco material in transit in said duct from the supply point has reached said box.

2,944,855
VEHICLE BRAKE SYSTEM
Charles B. Parker, Nashville, Tenn., and Percie D. Houston, Sr., deceased, late of Nashville, Tenn., by First American National Bank of Nashville and P. D. Houston, Jr., co-executors, both of Nashville, Tenn.
Filed June 5, 1957, Ser. No. 663,854
18 Claims. (Cl. 303—6)



1. A fluid brake system for a vehicle comprising a main fluid line normally charged to a predetermined pressure, an auxiliary combination fluid line normally charged to a predetermined pressure less than said main line pressure, and a straight fluid brake line normally carrying atmospheric pressure, a brake mechanism adapted to be actuated by fluid pressure of a predetermined value substantially less than said auxiliary combination line pressure, an auxiliary reservoir communicating with and adapted to be charged with compressed fluid from said auxiliary combination line, a brake operating valve assembly comprising a first valve communicating said brake mechanism with said auxiliary reservoir, a second valve for communicating said brake mechanism with said straight fluid brake line, and means responsive to the pressure in said main line for controlling said first and second valves, said pressure responsive means being adapted to close said first valve and open said second valve under normal operating pressures, said pressure responsive means being adapted to open said first valve to supply compressed fluid from said auxiliary reservoir to said brake mechanism and to close said second valve when a reduction of pressure is effected in said main line.

2,944,856
SAFETY VALVE FOR AUTOMOTIVE AIR BRAKE SYSTEMS
Robert E. Swanson, Vancouver, British Columbia, Canada, assignor to Railway Appliance Research Limited, Vancouver, British Columbia, Canada, a corporation of British Columbia
Filed Jan. 26, 1956, Ser. No. 561,623
14 Claims. (Cl. 303—84)



1. In a brake system for a vehicle having wheels with fluid operated brake means associated therewith and conduits for delivering fluid under pressure from a source to said brake means, the combination of cut-off means in said conduits providing a part of the path for the fluid flowing to said brake means, said cut-off means comprising a housing having a fluid inlet and a plurality of fluid outlets, a member normally retained centrally within said housing between said outlets and enabling fluid to pass from said inlet to each of said outlets, said member having a cylinder bore in each end thereof, a dummy piston mounted within each of said bores and each held stationary by connections from said housing, said pistons and said cylinder bores defining fluid retaining chambers at opposite sides of said member, said member being arranged to shift toward one end or the other of said housing in response to a difference in the fluid pressure established at the opposite ends of said member, said fluid chambers serving to retard said movement, said pistons enabling the slow passage of fluid from one side to the other thereof and thus enabling continued movement of said member toward one end of the housing when the fluid pressures at the opposite ends of said member continues to be substantially different, and sealing means at each end of said member for closing the adjacent outlet after said member has shifted a predetermined distance from its normal position.

2,944,857
BEARING MOUNTING AND LUBRICATION
Edgar C. Schneider, East Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,943
8 Claims. (Cl. 308—187)



1. In a bearing mounting, a housing, a shaft within the housing and a bearing between said housing and shaft including inner and outer races and rolling bearing elements between and engaging said races, the outer race being mounted in and supported by said housing, a sleeve mounted on and surrounding said shaft and being spaced from said shaft except at axially spaced points, the inner bearing race being mounted on said sleeve between the axially spaced poits, means for introducing lubricant between said shaft and said sleeve, and orifices in said inner race and sleeve for delivering to said bearing elements lubricant supplied by said means.

2,944,858
WORK SUPPORT HAVING INDEPENDENT TILTING ADJUSTMENTS ABOUT A PLURALITY OF AXES
John N. Engelsted, Petersham, Mass.
(% O. S. Walker Company Inc., Worcester, Mass.)
Filed Oct. 7, 1958, Ser. No. 765,900
14 Claims. (Cl. 311—38)

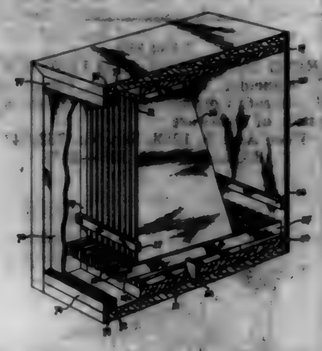
1. An adjustable work support for large work pieces, having a table supported for transverse and longitudinal tilting movements relative to a base about mutually perpendicular axes, a plurality of adjustable connections disposed at spaced intervals intermediate the table and the base for positioning the table about the tilt axes, said connections comprising jacks having primary adjusting means for effecting positive heightwise adjustment to tilt

the table about one axis, and supplementary adjusting means in the connections between table and base carried



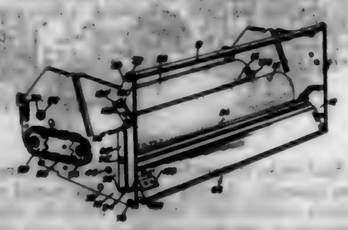
by the jacks for effecting tilting movement of the table about the other tilt axis.

2,944,859
DEVICE FOR HOLDING INDIVIDUALLY IDENTIFIABLE DISCS
Peter D. Ivanoff, 7749 Rouen, Dearborn, Mich.
Filed May 22, 1956, Ser. No. 586,475
1 Claim. (Cl. 312—15)



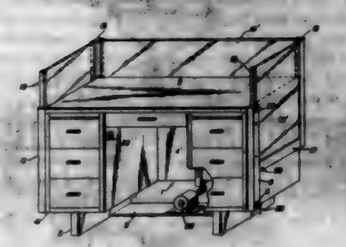
A cabinet for record discs, said cabinet comprising an enclosure including a bottom, top, two rectangular side walls and a single vertical back wall; a plurality of vertical partitions provided parallel to said side walls and dividing the enclosure so formed into a plurality of nest compartments, said partitions being fixed both at their tops and bottoms and said compartments adapted fully to house the discs in the rolled-in position thereof; a rocking lever at the bottom of each of said compartments, each lever having two ends and adapted to support the disc placed therein and to provide a straight and smooth rolling track for the disc supported thereon, a fulcrum point provided for each lever intermediately of its ends and intermediately the centers of the discs in the rolled-in and the rolled-out positions of the discs, a fixed front stop bar for the discs immediately in front of said partition to determine the rolled-out position of the record discs and to provide a stop for the record discs in said position, the ends of said levers extending forwardly beyond said partitions to form manually operable keys; two parallel tracks provided along the front edges of said bottom and said top and in the plane beyond the furthest extent of said keys as well as of the discs in the rolled-out position thereof, two rigid cover panels slidably arranged in said tracks to slide in vertical planes and adapted in their fully extended position to close completely the front of said cabinet, including said compartments, the keys and the record discs, including those discs that may be in their rolled-out position, and to open any one of said compartments when slid past the other panel, said front stop bar for the discs also serving as a base for an identification marking of the compartments, with the front ends of each second lever being recessed, and a back stop bar provided on the front of the back wall to serve as a stop for the levers.

2,944,860
LOADING PLATE FOR TOWEL DISPENSERS
Joseph L. Zizzi, Utica, N.Y., assignor to Joseph Darman, Utica, N.Y.
Filed July 26, 1954, Ser. No. 444,423
5 Claims. (Cl. 312—38)



1. In a towel dispensing assembly, a pair of spaced, rigidly interconnected side wall members, a fixed smoothing plate rigidly secured between said side wall members, a movable smoothing plate hingedly secured between said side walls, the hinge point of said movable plate being spaced from the fixed plate such that the movable plate is swingable between one position away from the fixed plate to permit the passage of toweling therebetween during loading operation of the assembly and a second position wherein a free edge portion holds a portion of toweling against the fixed plate, a bell crank pivotally secured intermediate its ends to one of said side walls and having one end abutting said movable plate, a spring member engaging the opposite end of said bell crank urging said crank between limits of pivotal movement on said one side wall, a pair of abrasive rolls journalled between said side walls, an abutment member rigidly secured to one of said rolls for rotation therewith, and link means engaged by said abutment member and connected to said bell crank urging the latter on its pivot to a position over-center with relation to said spring, said spring being operable to move the bell crank into engagement with the movable smoothing plate against the fixed plate.

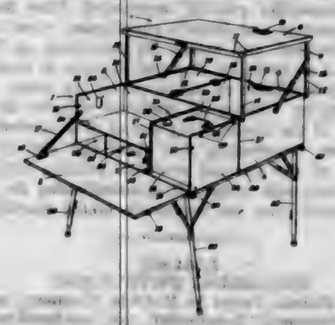
2,944,861
PRIVATE CONFERENCE DESKS
Maurice Lamb, 1840 Portal Drive NW., Washington, D.C.
Filed Apr. 9, 1958, Ser. No. 727,340
6 Claims. (Cl. 312—196)



6. In combination with a desk having a base and a top, of a light-permeable enclosure extending about the outer surfaces of the opposite sides and rear of the desk and open at its upper end, said enclosure including a pair of light transmitting vertically extending side panels and

a light transmitting rear panel extending between and rigidly secured to the rear ends of the side panels, means supporting said enclosure for vertical movement relative to the desk between positions wherein the top and bottom edges of the enclosure are adjacent the desk top, said means including a vertical guiding member extending along the forward end portion of each side of the desk and secured to the outer surface thereof, a guided member secured to the forward end of each side panel and slidably interengageable with a respective guiding member, a driving element and a driven element mounted respectively on the desk and enclosure and engageable for supporting the enclosure and moving it vertically in either direction, one of the members of each interengageable pair comprising a laterally extending flanged portion and the other of the members of the pair having a laterally extending recess for slidably receiving said flanged portion.

2,944,862
PORTABLE KITCHEN
Theodore Heil, Lodi, Calif., assignor to Heilite Trailers, Lodi, Calif., a limited partnership
Filed May 19, 1958, Ser. No. 736,227
2 Claims. (Cl. 312—237)



1. In a portable outdoor kitchen including a case having an initially separate vertical panel section, means vertically hinging the panel section for swinging motion between a normally closed position and a laterally outwardly projecting position, a water tank normally disposed in the case adjacent said panel section, means mounting the water tank on the panel section for swinging therewith, the water tank being in an outboard position clear of the case when said panel section is swung to its laterally projecting position, the case including a bottom, and means between the bottom and said water tank arranged to releasably latch the latter in said outboard position; the latch means including an element mounted on and upstanding from the case bottom adjacent its outer edge, and a swing arm pivoted on the side of the tank in position to frictionally engage said element in holding relation; the bottom of the tank being raised relative to the lower edge of the panel sufficiently to clear said element when the panel and tank are swung to a closed position while enabling said lower edge of the panel to have a closing fit against the case bottom.

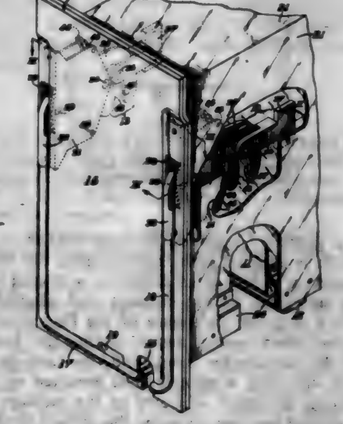
2,944,863
CLOSET CONSTRUCTION
Sigurd Ivar Bertelsen, Pinewood Drive, West Boylston, Mass.
Filed June 7, 1957, Ser. No. 664,246
3 Claims. (Cl. 312—238)

1. In combination with a pair of relatively angularly disposed wall members forming a corner, a rotatable closet construction for disposition adjacent said corner, said rotatable closet construction comprising a pair of panels secured together and located at substantially a right angle with respect to each other, means rotatably supporting one of said panels on a vertical axis, said means being arranged on the floor at the lower end of said closet construction and including means for application to one of the walls forming said corner at the upper end



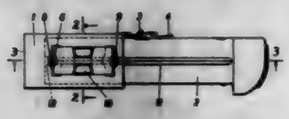
of said closet construction, said closet construction including the two panels being rotatable on said supporting means so as to form a substantially closed condition of the closet in one position with the panels forming a corner opposed to the wall formed corner, and upon rotation thereof this closet corner being revealed to open the closet, and article-supporting means on said panels located in the angle between the panels.

2,944,864
CHASSIS AND RACK APPARATUS
Albert S. Krivulka, Collingdale, Pa., assignor to South Chester Corporation, Chester, Pa., a corporation of Delaware
Filed Aug. 14, 1957, Ser. No. 678,214
4 Claims. (Cl. 312—320)



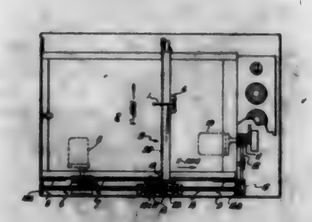
1. Chassis and rack apparatus for use with electronic equipment, said apparatus comprising a cover panel, a chassis mounted on the inner side of the cover panel, a stationary rack having side walls and a front end opening adapted to receive and hold said chassis, a keeper pin mounted on the side walls of the rack, combined engaging and latching means mounted on the inner side of the cover panel for camming the cover panel into and out of flush position with the rack and for positively latching the cover panel in flush position with the rack, and handle means operatively connected to said combined engaging and latching means.

2,944,865
ASH-TRAYS FOR VEHICLES
Willy Hammesfahr, Solingen-Wald, Germany, assignor to Firma Gebr. Happich G.m.b.H., Wuppertal-Elberfeld, Germany, a corporation of Germany
Filed Sept. 16, 1958, Ser. No. 761,357
Claims priority, application Germany Nov. 16, 1957
5 Claims. (Cl. 312—341)



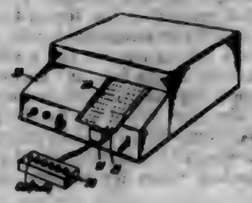
1. An ash-tray structure for motor vehicles or the like, comprising a housing and an ash-tray slidably received by said housing, and having guide grooves in the side walls thereof, a plate disposed adjacent to and outside of each of the side walls of said housing and the latter having a plurality of nose-like projections received by said guide grooves, and said plate being made of self-lubricating material, and means for clamping each of said plates at its central portion to the corresponding one of the side walls of said housing, said side walls of the housing having perforations longitudinally spaced apart at a predetermined distance, and the free ends of each of said plates forming skid-like projections to engage said guide grooves of said ash-tray.

2,944,866
GRAPHICAL RECORDERS
Francis L. Moseley, Pasadena, Calif., assignor to F. L. Moseley Co., a corporation of California
Filed Mar. 11, 1957, Ser. No. 645,338
7 Claims. (Cl. 346—8)



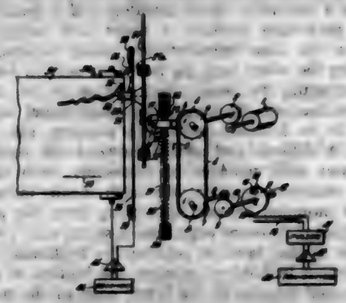
1. In a graphical recorder, the combination of a carriage which is adapted to be moved along the length of the recorder in a first given direction, a tracing element which is supported by the carriage and adapted to be moved in a direction transverse of the first given direction, a first drive motor, means linking the first drive motor to the carriage for transporting the carriage in said first given direction, a splined shaft mounted on the recorder along the length of travel of the carriage, an internally splined member engaging the splined shaft which is slideably movable longitudinally of the shaft and which is linked to the shaft for rotational movement, a sheave concentrically disposed around the splined shaft and supported by the carriage, a flexible coupling fastened between the internally splined member and the sheave, a cable wound around the sheave maintaining the sheave in position for support by the carriage and attached to the tracing element, and a second drive motor linked to the splined shaft so that the tracing element may be transported along the length of the carriage through a linkage comprising the splined shaft, the internally splined member, the flexible coupling, the sheave, and the cable when the second drive motor is energized.

2,944,867
RECORDING DEVICE
Richard Langton Gregory, The Psychology Laboratory, Downing Place, Cambridge, England
Filed Mar. 1, 1956, Ser. No. 568,790
Claims priority, application Great Britain Mar. 1, 1955
7 Claims. (Cl. 346—59)



1. A printing chronograph which comprises means for printing at any particular time, symbols representing that time, at least two independently operable printing members for printing symbols representing different events, a corresponding number of solenoid operated means for conditioning for printing operation any of the event symbol printing members, solenoid operated means for taking simultaneously printing impressions from the time printing symbols and from a conditioned event symbol printing member, and means for producing on the occurrence of an event an electrical impulse of fixed short duration independent of the length of the event, means for making an impulse so produced effective to cause operation of the conditioning means of a symbol printing member representing that event and also to cause operation of the solenoid operated printing impression taking means, and means for de-conditioning the conditioned symbol after the impression taking operation.

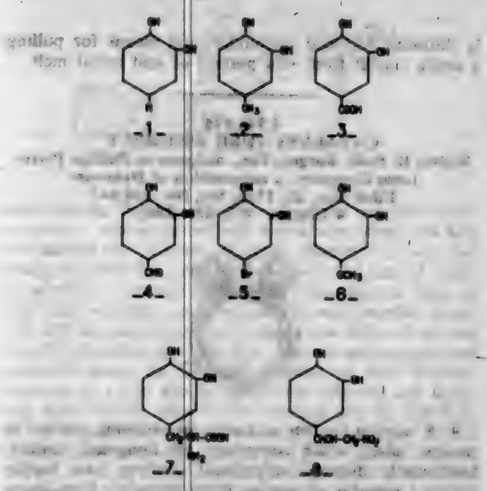
2,944,868
RECORDING INSTRUMENT
Friedrich Richter, Preetz in Holstein, Germany, assignor to Electroacustic Gesellschaft mit beschraenkter Haftung, Kiel, Germany, a corporation of Germany
Filed Oct. 2, 1959, Ser. No. 844,060
Claims priority, application Germany Oct. 4, 1958
11 Claims. (Cl. 346—74)



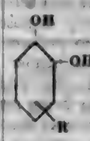
1. A recording instrument comprising record carrier means for advancing a surface member, a stylus for producing a record on the surface member, an elongated carrier structure on which said stylus is mounted, said carrier structure being longitudinally displaceable in a travel direction transverse to the advance of the surface member, rotatable gear means having a shaft and being peripherally in driving engagement with said carrier structure for displacing said structure, a stationary race member extending parallel to said carrier structure in spaced relation thereto, said gear means being peripherally in engagement with said race member to roll along said race member when driving said carrier structure, a rotatable drive mechanism having a plurality of entrainer members spaced from each other along the rotary travel path of said mechanism, a follower reciprocable in a direction parallel to said carrier structure and having a bearing for said shaft so as to drive said gear means along said race member to displace said carrier structure when said follower is being reciprocated, force-storing means tending to hold said follower in a given starting position, said entrainers being sequentially engageable with said follower during a given travel portion of said drive mechanism in a direction away from starting position, whereby said stylus is periodically advanced across the surface member by said respective entrainers and each time returned by said force-storing means.

CHEMICAL

2,944,869
PROCESS FOR DYEING KERATINOUS MATERIAL WITH ORTHO-DIPHENOLS
Grégoire Kalopissis and Giuliana Ghillardi, Paris, France, assignors to Societe Anonyme dite: Societe Monsavon-L'Oreal, Paris, France, a corporation of France
Filed Jan. 17, 1958, Ser. No. 709,602
Claims priority, application France Jan. 21, 1957
6 Claims. (Cl. 8—11)



1. A process for dyeing hair and other keratinous materials which comprises applying thereto an aqueous solution consisting of at least one orthodiphenol of the general formula:



wherein R is selected from the class consisting of the hydrogen atom, the halogen atom, aldehyde, alkyl, carboxy, alkoxy, nitro-hydroxyalkyl and alpha amino propanoic groups, and an oxidizing agent selected from the class consisting of ammonium and alkali metal iodates, periodates and persulphates.

2,944,870
NEW COLOURING PROCESS
John Reginald Atkinson, Gerald Booth, Eric Leslie Johnson, and Walter Percival Mills, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Sept. 24, 1958, Ser. No. 762,911
Claims priority, application Great Britain Oct. 4, 1957
8 Claims. (Cl. 8—39)

1. Process for the coloration of synthetic polymeric textile materials selected from the class consisting of polyamide and modified polyacrylonitrile textile materials which comprises treating the said synthetic polymeric textile materials with a water-insoluble anthraquinone dyestuff containing at least one group selected from the class consisting of ω-oxiranylalkoxy, ω-halogenoalkoxy, ω-oxiranylalkylamino, and ω-halogenoalkylamino, each group being attached to a carbon atom of the anthraquinone nucleus through a member selected from the class consisting of a direct link, an alkoxy radical, an alkylamino radical, and an arylamino radical.

2,944,871
NEW COLOURING PROCESS
John Reginald Atkinson, Gerald Booth, Eric Leslie Johnson, and Walter Percival Mills, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Sept. 24, 1958, Ser. No. 762,923
Claims priority, application Great Britain Oct. 4, 1957
11 Claims. (Cl. 8—41)

1. Process for the coloration of synthetic polymeric textile materials selected from the class consisting of polyamide and modified polyacrylonitrile textile materials which comprises treating the said synthetic polymeric textile materials with a water-insoluble azo dyestuff containing at least one group selected from the class consisting of ω-oxiranylalkoxy, ω-oxiranylalkylamino, N:N-di(ω-oxiranylalkyl)amino, ω-chloroalkoxy, ω-bromoalkoxy, ω-chloroalkylamino, ω-bromoalkylamino, N:N-di(ω-chloroalkyl)amino, and N:N-di-(ω-bromoalkyl)amino.

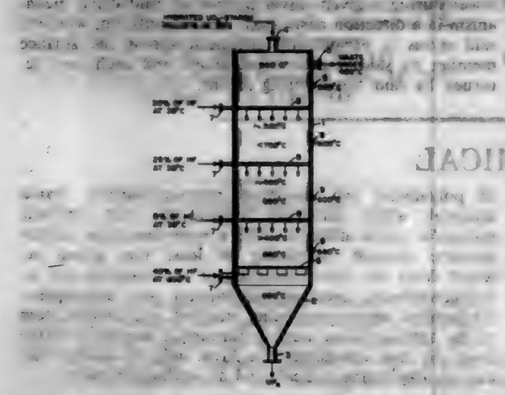
2,944,872
PROCESS FOR BLEACHING TEXTILE MATERIALS PREGNATED WITH SODIUM CHLORITE
Hendrikus C. Vermijs, Oldenzaal, Netherlands, assignor to H. P. Gelderman & Zonen N.V., Oldenzaal, Netherlands, a company
Filed Mar. 3, 1958, Ser. No. 718,520
Claims priority, application Netherlands Mar. 5, 1957
7 Claims. (Cl. 8—108)

1. In a bleaching process, wherein a textile material impregnated with a sodium chlorite solution having a pH between 4 and 7 is treated in a closed reaction chamber heated with steam to a temperature of 140 to 212° F., the method of neutralizing the chlorine dioxide vapors developed from the impregnated material comprising the step of introducing a volatile reducing agent selected from the group consisting of hydrogen sulfide and formaldehyde into said reaction chamber.

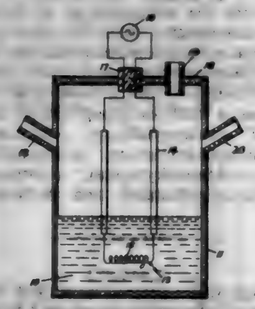
2,944,873
SINGLE-STEP CONVERSION OF UO_2 TO UF_4
James E. Moore, Pittsburgh, Pa., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed July 31, 1958, Ser. No. 752,386
4 Claims. (Cl. 23—14.5)

1. A method for the conversion of hexavalent uranium compounds to uranium tetrafluoride which comprises con-

tacting said compounds with a polysaccharide and hydrogen fluoride at an elevated temperature and recovering the uranium tetrafluoride formed thereby.



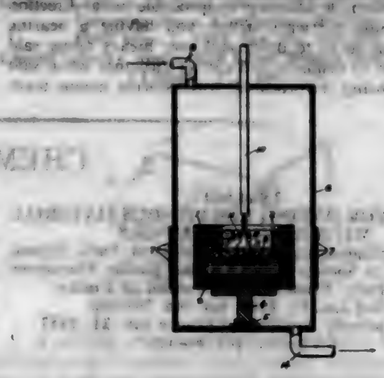
2,944,874
PREPARATION OF SILICON
John W. Irvine, Jr., Belmont, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Dec. 14, 1956, Ser. No. 628,270
18 Claims. (Cl. 23—223.5)



1. The method of preparing silicon comprising the steps of immersing a target in a liquid silane compound, heating said target to a temperature above the boiling point of said compound to convert said liquid to a gas substantially only in the immediate vicinity of said target while maintaining the remainder of said silane compound in a liquid state, and continuing to heat said target to cause molten silicon to form from said gas and deposit on said target.

2,944,875
CRYSTAL-GROWING APPARATUS AND METHODS
Walter F. Leverton, Waltham, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed July 13, 1953, Ser. No. 367,490
6 Claims. (Cl. 23—273)

1. A crystal-growing apparatus comprising a first container having a recess therein adapted to receive an initial melt of semiconductor material, a second container movably disposed within said recess in said first container and adapted to float in said initial melt, said second container having a recess therein adapted to receive a portion of said initial melt and a predetermined concentration of doping agent, and an opening through a wall thereof, the size of said opening causing the remainder of said initial melt to pass slowly into said second container and preventing said portion therein from effectively diffusing into said remainder, and means for pulling a single crystal from said portion of said initial melt.



2,944,876
CATALYST TUBE ASSEMBLY
Walter B. Polk, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 26, 1956, Ser. No. 630,647
4 Claims. (Cl. 23—288)

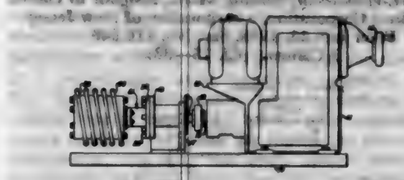


4. A catalyst retainer assembly for retaining catalyst in catalyst tubes, which comprises: an elongated, unitary, horizontally disposed cylindrical catalyst tube header having a plurality of catalyst tubes extending from openings provided in the upper portion of the wall of said header; a removable elongated cylindrical grid member having a diameter slightly less than the diameter of the inner wall of said header and self supporting within said header, and longitudinally disposed within said header adjacent said openings to prevent catalyst from flowing into the interior of said header from said tubes and adapted to be inserted into and removed from said header; said grid member being perforated throughout to allow gas flow from said tubes through said grid member.

2,944,877
CHEMICAL APPARATUS FOR CONTINUOUS REACTIONS, HEAT EXCHANGE, MIXING, COOKING AND OTHER CHEMICAL PROCESSES
John Marco, 815-25 W. 5th St., Wilmington 1, Del.
Filed Aug. 26, 1957, Ser. No. 680,147
18 Claims. (Cl. 23—290.5)

1. Chemical apparatus comprising a variable speed drive mechanism including a power output shaft, an impeller drive shaft coupled to said output shaft, a seal housing surrounding said drive shaft, an annular recess in said housing for receiving a drive shaft seal, a flange on one end of said housing providing an inner end plate, said drive shaft projecting through said flange and being provided exteriorly of said flange with a continuous polygonal cross section, an annular recess in said flange adjacent said drive shaft, a material supply bore in said flange communicating with said last named recess, a plurality

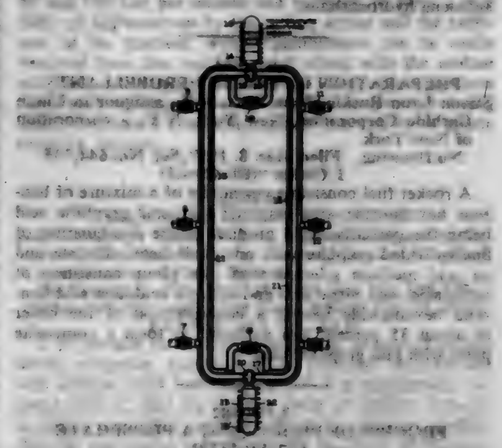
of axially spaced heat exchange plates concentric with said drive shaft and an outer end plate, an annular passage in each heat exchange plate and said outer end plate for receiving a heat exchange fluid, spacer rings separating said heat exchange plates and spacer rings between the inner and outer heat exchange plates and the inner and outer end plates, the inner diameters of said rings being greater than the inner diameters of said heat exchange plates to provide impeller receiving chambers between adjacent heat exchange plates and between the inner and outer heat exchange plates and the inner and outer end plates, the inner diameters of said heat exchange plates being greater than the diameter of the polygonal portion of said drive shaft to provide an annular material passage between adjacent impeller chambers, an impeller disposed in each chamber, each impeller comprises a set of radially extending vanes curved in one direction and engaging one sidewall of the impeller chamber with a wiping contact, a second set of radially extending vanes curved in the opposite direction



and engaging the opposite sidewall of the impeller chamber with a wiping contact and a disk separating said first and second sets of vanes, the outer diameter of said disk being less than the outer diameters of said sets of vanes to provide a material passage between opposite sides of said disk, whereby upon rotation of said impeller material will be moved outwardly along one sidewall of said impeller chamber in a thin film, through said passage and inwardly along the opposite sidewall of said impeller chamber in a thin film to agitate the material and facilitate heat transfer between the material and the sidewalls of the impeller chamber, each impeller having a central polygonal aperture for slidably and non-rotatably mounting the same on the polygonal portion of said drive shaft, the annular recess in said flange communicating with the inner impeller chamber, a central recess in the inner surface of said outer end plate communicating with the outer impeller chamber and a material discharge bore in said outer end plate communicating with said central recess.

2,944,878
PROCESS FOR THE SEPARATION OF SUBSTANCES BY VAPORIZATION
Léon Jacqué, Paris, and Pierre Dumez, Saint-Cloud, France, assignors to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation of France
Filed Mar. 22, 1957, Ser. No. 648,469
Claims priority, application France Apr. 3, 1956
13 Claims. (Cl. 23—294)

1. Process of separating a solid mixture into solid components of different volatilities, comprising the steps: subjecting the mixture to vaporizing conditions in a vaporizing zone; establishing in a fractionating zone connected to said vaporizing zone a temperature gradient whereby the temperature in said fractionating zone progressively decreases from approximately the temperature in said vaporizing zone to approximately the vaporization temperature of the most volatile component to be recovered; passing the vapors from the vaporizing zone through the fractionating zone, whereby the vapors of at least one component are condensed therein in solid state; thereafter displacing the temperature gradient in the fractionating zone relative to the vaporizing zone, whereby at least one condensed component is revaporized and



leaves the fractionating zone in the vapor state, and recovering the vapor thus revaporized.

2,944,879
LAPPING COMPOUND
Lloyd R. Allen, Belmont, and Dudley H. Woodard, Cambridge, Mass., assignors, by mesne assignments, to Kenmore Research Company, Framingham, Mass., a corporation of Ohio
No Drawing. Filed Apr. 25, 1957, Ser. No. 655,010
5 Claims. (Cl. 51—304)

1. A metal lapping compound consisting essentially of from 1 to 20 percent by weight of an organophilic clay as a gelling agent and from 5 to 40 percent by weight of abrasive ranging in size from 80 grit to 1 micron, and the balance from 40 to 94 percent of low boiling point kerosene hydrocarbons.

2,944,880
LAPPING COMPOUND
Lloyd R. Allen, Belmont, and Dudley H. Woodard, Cambridge, Mass., assignors, by mesne assignments, to Kenmore Research Company, Framingham, Mass., a corporation of Ohio
Filed Apr. 25, 1957, Ser. No. 655,040
8 Claims. (Cl. 51—306)



1. A metal lapping compound consisting essentially of from 1 to 20 percent by weight of an organophilic gelling agent, from 5 to 40 percent by weight of zirconium sili-

cate particles ranging in size from 80 grit to 1 micron, and the balance from 40 to 94 percent of low boiling point kerosene hydrocarbons.

2,944,881
PREPARATION OF ROCKET PROPELLANTS
Simon Lyon Rankin, New York, N.Y., assignor to Union Carbide Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed Mar. 8, 1957, Ser. No. 644,735
1 Claim. (Cl. 52—5)

A rocket fuel consisting essentially of a mixture of benzene hexafluoride with graphitic acid, said graphitic acid being the partially dried product of the combination of finely-divided graphite with an alkali-metal chlorate and an acid medium selected from the group consisting of nitric acid, and nitric acid and sulfuric acid, and said benzene hexafluoride having a concentration of the order of about 35 percent and sufficient to form a composite paste with said graphitic acid.

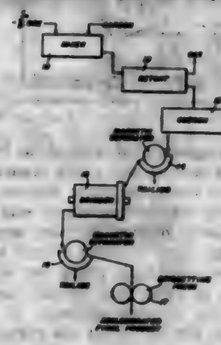
2,944,882
PROCESS OF PRODUCING A PHOSPHATE FERTILIZER
Pieter J. van den Berg, Sittard, and Johannes W. M. Steeman, Beek, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands
No Drawing. Filed Feb. 8, 1957, Ser. No. 638,281
Claims priority, application Netherlands Feb. 8, 1956
6 Claims. (Cl. 71—39)

1. A process of producing from raw calcium phosphate a fertilizer containing ammonium nitrate, calcium sulphite and dicalcium phosphate, comprising the steps of: treating the raw phosphate with nitric acid in amount sufficient to dissolve all the P_2O_5 and produce an acid decomposition liquor with a molar NO_3/CaO ratio within the range of 1.5–2; neutralizing the said acid liquor with NH_3 to obtain a suspension comprising precipitated dicalcium phosphate in a solution of calcium nitrate and ammonium nitrate having a molar NH_3/NO_3 ratio of about 0.6; thereafter completely neutralizing said suspension by contacting it with a reagent selected from the group consisting of ammonium sulphite, ammonium bisulphite, and a mixture of NH_3+SO_2, the dicalcium phosphate in said suspension remaining substantially unchanged, and the calcium nitrate in the suspension being converted into NH_4NO_3 and $CaSO_3$; thereafter drying said neutralized mass, and recovering the dried mass forming the above mentioned fertilizer.

2,944,883
TREATMENT OF NICKEL-CONTAINING SULFIDE ORES
Paul Etienne Queneau, Fairfield, Conn., Stanley Charles Townshend, Clydach, Swansea, Wales, and Roland Stansfield Young, Victoria, British Columbia, Canada, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Feb. 6, 1958, Ser. No. 713,536
Claims priority, application Canada Dec. 28, 1954
13 Claims. (Cl. 75—5)

1. A process for the separate recovery of nickel, cobalt and iron from nickel-containing sulfide ore which comprises beneficiating the ore to obtain a nickel sulfide concentrate having a ratio of iron present as sulfide to nickel present as sulfide ranging from about 10 to 1 to about 1 to 4; roasting the concentrate in an oxidizing atmosphere at a temperature below about 1600° F. and not below about 1300° F. to produce a calcine containing less than about 2% total sulfur and less than about 1% sulfide sulfur; specially reducing said calcine at a temperature below about 1600° F. and not below about 1300° F. in a controlled atmosphere containing a ratio of carbon monoxide to carbon dioxide of less than about 2 to 1 and not less than about 1 to 2 to obtain a reduced calcine containing nickel, cobalt and iron in an active metallic state in such a condition that when subjected to pressure treatment by carbon monoxide, the ratio of iron to carbonyl to nickel as carbonyl is less than about 2 to 1 and not less than about 1 to 4; reacting the reduced calcine with carbon monoxide under a pressure of more than about 300 pounds per square inch gauge and less than about 1000 pounds per square inch gauge and at a temperature at least about 200° F. and not more than about 350° F. to form and volatilize metal carbonyls leaving a solid residue; removing the resulting nickel, cobalt and iron carbonyls from the solid residue; separating the nickel, cobalt and iron carbonyls from one another and decomposing the separated carbonyls to yield metals of high purity.

2,944,884
METHOD OF BENEFICIATING REDUCING AND BRIQUETTING IRON ORE
Gaylord H. Halverson, Duluth, Minn., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Jan. 23, 1958, Ser. No. 710,640
3 Claims. (Cl. 75—33)



1. A method of preparing an iron concentrate from an ore which contains iron oxide and siliceous gangue comprising mixing crushed ore with completely non-coking and highly reactive peat char in proportions sufficient to furnish at least 50 percent excess carbon over that required for complete reduction of the iron oxide present in the ore, introducing the mixture of ore and peat char to a retort, heating the retort externally for a prolonged period to maintain the mixture of ore and peat char at a temperature of about 1600 to 2000 F. while conducting gases therefrom without introducing additional gas from outside, thereby reducing the iron oxide to metallic iron and carburizing this iron, the carbon content of the carburized iron being at least 0.65 percent, rapidly cooling the reduced product to render the iron particles non-malleable whereby they are easily broken away from the gangue particles, grinding the reduced product to liberation size, magnetically separating iron particles in the product from gangue particles therein, and agglomerating the iron particles.

2,944,885
METHOD OF PURIFYING ARSENIC AND ANTIMONY
Gunter A. Wolf, Little Silver, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed June 2, 1959, Ser. No. 817,694
4 Claims. (Cl. 75—69)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A fractional sublimation process for removing the elements of the sulphur selenium and tellurium from a metal of the group consisting of arsenic and antimony comprising heating the oxides of said metals in the closed end of a tube under high vacuum to at least their sublimation temperatures, allowing the metal oxide vapors to fractionally condense along a prolonged path of decreasing temperatures within the evacuated tube to form zones of metal oxide crystals of different degrees of purity, said zones being identifiable by different degrees of discoloration, marking the extent of the central white zone of purest oxide crystals on an index bar ex-

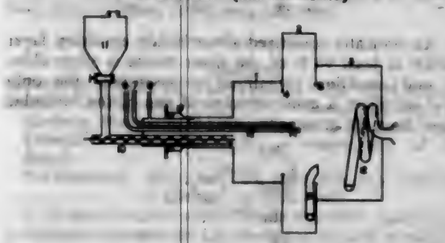


ternal to the tube, separating said white central oxide zone within the tube from the discolored zone by a mechanical cutting operation, repeating this fractional sublimation with the oxide taken from the central zone in a second tube under conditions identical with the first fractional sublimation, again separating the pure central zone by cutting the second tube according to the marks made on the index bar during the first fractional sublimation, repeating this cycle several times until a purification factor of better than 10^{-4} is attained, whereupon the pure metal oxide is reduced to the metallic state.

2,944,886
REDUCTION OF SILVER LOSS IN BURNING PHOTOGRAPHIC WASTE
Webster E. Fisher and John E. O'Brien, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 21, 1958, Ser. No. 756,287
4 Claims. (Cl. 75—83)

1. A process of recovering silver by burning waste photographic materials containing silver comprising adding water as a spray to the combustion sufficient to maintain the incandescent bed of the combustion at an average temperature of 1200–1600° F.

2,944,887
MANUFACTURE OF METALS
James John Gray, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Feb. 7, 1956, Ser. No. 564,870
Claims priority, application Great Britain Feb. 7, 1955
4 Claims. (Cl. 75—84.5)



1. A continuous process for the production of titanium which comprises reacting titanium tetrachloride with a reducing metal selected from the group consisting of an alkali metal, magnesium and mixtures of said metals in an inert atmosphere and at a temperature between the melting point of the reducing metal chloride and 1000° C., said reaction taking place within a continuously rotating reaction vessel, said vessel rotating about its substantially horizontal axis at a peripheral speed of between 50 and 150 feet per minute and sufficient to form a plurality of agglomerates by the rolling action and the tackiness of the titanium, which agglomerates can be easily removed from the reaction vessel along with the molten salt, and continuously withdrawing the reaction products from said rotating vessel, said titanium product being readily separated from the bulk of the salt by a gentle crushing process.

2,944,888
MANUFACTURE OF TITANIUM
James Paterson Quin, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Dec. 26, 1956, Ser. No. 630,466
Claims priority, application Great Britain Jan. 17, 1956
3 Claims. (Cl. 75—84.5)

1. A process for the manufacture of metallic titanium which comprises reacting excess titanium tetrachloride with sodium in an inert atmosphere at a temperature between 200° C. and the melting point of sodium chloride to obtain a reaction product comprising titanium, sodium chloride and excess tetrachloride in the form of titanium sub-halides, while maintaining in the reactor an agitated non-adherent particulate bed of reaction products and thereafter heating the product mixture, before any leaching operation thereon, for approximately five to seven hours in an inert atmosphere at a temperature between 600° C. and 780° C. in a separate vessel while maintaining said product mixture in the form of an agitated, substantially non-adherent particulate bed of discrete particles and recovering titanium therefrom.

2,944,889
ALUMINUM BRONZE ALLOY CONTAINING CHROMIUM AND HAVING IMPROVED WEAR RESISTANCE
John F. Klement, 2839 S. 46th St., Milwaukee, Wis.
No Drawing. Filed Nov. 20, 1957, Ser. No. 697,537
3 Claims. (Cl. 75—162)

1. An aluminum bronze alloy consisting essentially of 13.0% to 20.0% aluminum, from 1.0% to 8.0% iron, from 0.5% to 3.0% chromium and the balance being substantially copper, said alloy being characterized by having excellent corrosion resistance and having improved toughness and wear resistance.

2,944,890
ALUMINUM BRONZE ALLOY HAVING IMPROVED WEAR RESISTANCE BY THE ADDITION OF COBALT AND CHROMIUM
John F. Klement, Milwaukee, Wis., assignor to Ampco Metal, Inc., Milwaukee, Wis., a corporation of Wisconsin
No Drawing. Filed Jan. 22, 1958, Ser. No. 710,410
5 Claims. (Cl. 75—162)

1. An aluminum bronze alloy, consisting essentially of 13.0% to 20.0% aluminum, from 1.0% to 8.0% iron, from 0.50% to 5.0% cobalt, from 0.5% to 3.0% chromium and the balance being substantially copper, said alloy being characterized by having excellent corrosion resistance and having improved toughness and wear resistance.

2,944,891
BRAZING ALLOYS
Arthur T. Cape, Los Angeles, Calif., assignor to Coast Metals, Inc., Little Ferry, N.J., a corporation of Delaware
No Drawing. Filed May 11, 1959, Ser. No. 812,122
3 Claims. (Cl. 75—170)

1. A brazing alloy containing from about 2.5% to about 20% gold, from about 0.5% to about 3% boron,

from about 0.5% to about 3.5% silicon, from about 10% to about 30 manganese, and the remainder substantially nickel.

2,944,892
SILVER ALLOYS
Maximilian Stand, Bronx, N.Y., assignor to The Ventura Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Filed Aug. 26, 1958, Ser. No. 757,199
3 Claims. (Cl. 75—173)

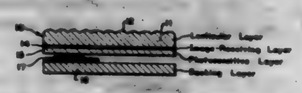
1. An homogeneous silver alloy consisting of the following ingredients within the respective ranges indicated based on percentages by weight:

Silver	Not less than 80%.
Copper	9–19%.
Vanadium	0.01–1.0%.

2,944,893
METHOD FOR PRODUCING TOOL STEELS CONTAINING TITANIUM CARBIDE
Peter J. Koenig, New York, N.Y., assignor to Sintercast Corporation of America, Yonkers, N.Y., a corporation of New York
No Drawing. Filed Dec. 26, 1956, Ser. No. 630,455
7 Claims. (Cl. 75—204)

1. A method for producing by infiltration a heat treatable titanium tool steel of substantially uniform composition from titanium carbide powder having a reactable carbon content determined as the sum of the free carbon contained in said titanium carbide and the carbon resulting from the decomposition of said titanium carbide during subsequent heating which comprises, mixing with said titanium carbide powder an amount of iron oxide powder substantially stoichiometrically proportioned to the said reactable carbon content, the stoichiometric reaction being based on the formation of carbon monoxide, forming a porous compact of said powder mixture, subjecting said porous compact to heating at an elevated temperature up to about 1250° C. at sub-atmospheric pressure to effect reaction between the said reactable carbon and the iron oxide, maintaining said porous compact under said sub-atmospheric pressure until substantially all the gaseous products have been removed, raising the temperature to above 1250° C. to strengthen the skeleton and then subjecting said treated skeleton to infiltration with a steel infiltrant at sub-atmospheric pressure, whereby a titanium tool steel is obtained characterized by a microstructure of titanium carbide grains distributed through a heat treatable steel matrix, said matrix being substantially free from primary cementite.

2,944,894
PHOTOGRAPHIC PROCESSES UTILIZING SCREEN MEMBERS
Edwin H. Land, Cambridge, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed Sept. 28, 1955, Ser. No. 537,261
15 Claims. (Cl. 96—3)

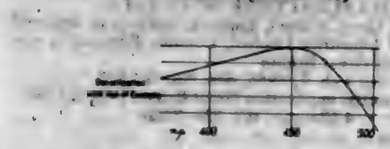


1. In a process for forming photographs utilizing a multilayer structure comprising a screen having an array of minute optical elements, a photosensitive layer, including a photosensitive material capable of having a developable image formed therein by exposure, superposed with and carried by said screen, and an image-receiving layer superposed with and carried by said screen at a location on the same side of said screen as said photosensitive layer, the steps comprising photoexposing said photosensitive layer with light directed through said screen and forming in said photosensitive layer a plurality of latent images the distribution of which is determined by the arrangement of said minute optical elements; permeating a processing liquid inwardly into said photosensitive layer only through the outer surface of said multilayer structure furthest from said screen; by means of said processing liquid developing said latent images in said photosensitive layer, forming an imagewise distribution of transferable image-forming substances and transferring said image-forming substances to said image-receiving layer to form visible images of said latent images in said image-receiving layer; retaining said photosensitive layer in fixed relation to said screen during exposure and formation of said visible images; and retaining said image-receiving layer in permanent fixed relation to said screen during and after formation of said visible images.

2,944,895
REGENERATION OF PHOTOGRAPHIC SILVER BLEACH SOLUTIONS
Lloyd E. West, Rochester, and Bernard A. Hutchins, Livonia, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Apr. 13, 1955, Ser. No. 501,188
3 Claims. (Cl. 96—60)

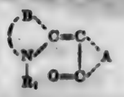
1. The processing of developed silver halide photographic emulsion layers which comprises treating said layers with a bleach solution containing an alkali metal ferricyanide and an alkali metal bromide, adding to the spent bleaching solution which results a water-soluble persulfate in an amount approximately chemically equivalent to the ferrocyanide present in the spent liquor plus sodium bromide in sufficient amount to restore the bromide content of the bleach solution and bleaching further developed silver halide photographic emulsion layers with the regenerated bleach solution thus obtained.

2,944,896
PROCESS FOR SENSITIZING SILVER HALIDE EMULSIONS
Oskar Riester, Leverkusen, Germany, assignor to Agfa Aktiengesellschaft, a corporation of Germany
Filed May 16, 1956, Ser. No. 585,146
Claims priority, application Germany May 25, 1955
8 Claims. (Cl. 96—63)

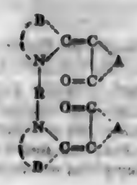


1. An optically sensitized silver halide emulsion layer in which at least 98% of the silver halide is silver chloride, said emulsion containing as essentially the only optical sensitizer a neutrocyanine of one of the formulae selected from the group consisting of

(I)

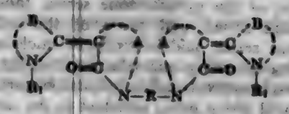


II



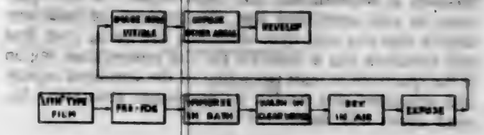
and

III



in which R_1 stands for a substituent selected from the group consisting of alkyl, cycloalkyl, aralkyl, and aryl radicals; A represents the non-metallic atoms necessary to complete a ring selected from the group consisting of thiohydantoin, rhodanine, isorhodanine, selenorhodanine, oxythionaphthene, indandione, and pyrazolone-5 rings; B stands for a saturated bivalent aliphatic hydrocarbon radical having a chain length of 3 to 5 carbon atoms completing the ring with the N–C chain; and R stands for an alkylene group.

2,944,897
REVERSAL FILM METHOD
Newman S. Shirk, Concordville, Pa. (1423 Carroll Brown Way, West Chester, Pa.)
Filed Dec. 12, 1956, Ser. No. 627,876
4 Claims. (Cl. 96—66)



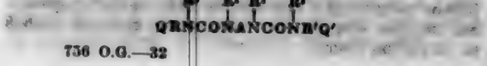
1. In the treatment of photographic film, the method comprising the steps of: (*a*) beginning with a manufactured high-contrast grainless film of a silver-bromide emulsion on an acetate base as the starting point of the method, (*b*) prefogging said film by exposing it to light for a predetermined period, (*c*) immersing the prefogged film in a solarizing bath, the bath being an aqueous solution of a compound taken from the group consisting of: sodium chloride, calcium chloride, potassium bromide, sodium hypochlorite, lead nitrate, potassium nitrate, copper nitrate, copper sulfate, aluminum sulfate, ferric sulfate, manganese sulfate, magnesium sulfate, zinc sulfate, uranium nitrate, potassium carbonate, sodium carbonate, potassium bichromate, Rochelle salts, acetic acid, hydrochloric acid, nitric acid, aqua regia, potassium hydroxide, sodium hydroxide, ammonium hydroxide, and hydrogen peroxide, (*d*) washing the film in clear water, (*e*) drying the washed film, (*f*) exposing a given area of said film to create an image thereon that is visible prior to development, and (*g*) then developing said film.

2,944,898
SENSITIZATION OF PHOTOGRAPHIC EMULSIONS
Dorothy J. Beavers, Charles V. Wilson, and James L. Graham, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Nov. 27, 1957, Ser. No. 699,198
17 Claims. (Cl. 96—66)

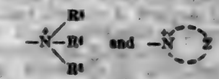
1. A photographic silver halide emulsion containing a quaternary ammonium salt having a general formula of the class consisting of

$$Q(RNHCOO)_{n-1}R'OOCNHANHCOOR'(OCONHR)_{n-1}Q', QRNHCOOA(OCONHR')_{n-1}Q'$$

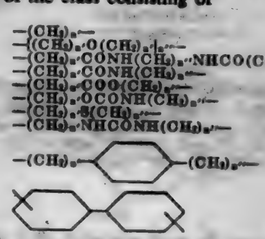
and



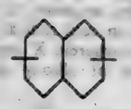
wherein Q and Q′ each represent radicals of the class consisting of



wherein R^3, R^4 and R^5 represent lower alkyl groups, Z represents the atoms necessary to complete a heterocyclic nucleus of the class consisting of pyridinium and quinolinium, R and R′ each represent alkylene groups linked to the quaternary nitrogen atoms of said radicals, R^2 represents a member of the class consisting of a hydrogen atom and an alkyl group of from 1 to 4 carbon atoms, *n* represents a positive integer of from 1 to 2, A represents a member of the class consisting of



and



wherein *n*′ and *n*″ represent positive integers of from about 1 to 10, there being from about 14 to about 30 atoms present in the shortest linear chain of atoms linking said quaternary nitrogen atoms.

2,944,899
STABILIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS
Rudolph E. Damschroder and Herbert B. Cowden, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Oct. 4, 1956, Ser. No. 613,816
7 Claims. (Cl. 96—95)

1. A photographic emulsion comprising a mixture of gelatin, silver halide and a stabilizing agent of the class consisting of 5,5-dimethylcyclohexanedione-1,3; 4-cyano-5-phenylcyclohexanedione-1,3; 5-phenylcyclohexanedione-1,3; 3-dicyanomethylene-5,5-dimethylcyclohexanone and 2-methyl-1-phenyl-4,6-(1H, 5H) pyrimidine dione.

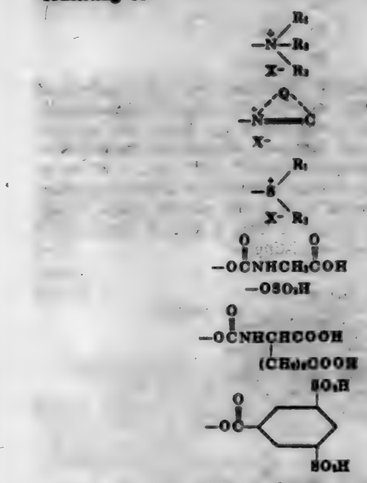
2,944,900
SENSITIZATION OF PHOTOGRAPHIC EMULSIONS WITH IONIC POLYALKYENE OXIDE SALTS
Burt H. Carroll, Herbert S. Elias, James L. Graham, and Charles V. Wilson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Dec. 10, 1956, Ser. No. 627,136
20 Claims. (Cl. 96—100)

1. A light-sensitive silver halide emulsion containing a coupler compound capable of reaction with the oxidation product of a primary aromatic amino silver halide developing agent to form a dye, said emulsion containing a sensitizing agent of the class consisting of (1) a water-soluble salt of a compound having the general formula

$$X'(—RO—)_nR—Y$$

wherein *n* represents a positive integer greater than 3, R represents an alkylene group of from 2 to 4 carbon

atoms, X' and Y represent the same radical of the class consisting of



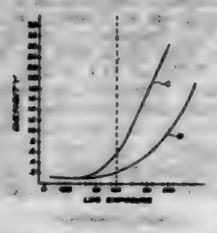
wherein R_1, R_2 and R_3 each represent alkyl groups, Q represents the non-metallic atoms necessary to complete a pyridyl nucleus, X represents an acid radical, and (2) a compound having said formula wherein X' represents a member of the class consisting of alkoxy and alkylphenoxy groups.

2,944,901

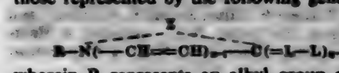
MULTICONTRAST PHOTOGRAPHIC EMULSIONS

Bert H. Carroll, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Jan. 18, 1957, Ser. No. 634,944
4 Claims. (Cl. 96—102)



1. A photographic silver halide emulsion sensitized with a spectral sensitizing dye selected from the group consisting of (1) an acid merocyanine dye selected from those represented by the following general formula:



wherein R represents an alkyl group containing from 1 to 2 carbon atoms, L represents a $—CR_1=$ group, wherein R_1 represents a member selected from the group consisting of a hydrogen atom and an alkyl group containing from 1 to 2 carbon atoms, *s* represents a positive integer of from 1 to 2, *q* represents a positive integer of from 1 to 3, Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the benzothiazole series, those of benzoxazole series, those of the benzoselenazole series, those of the naphthothiazole series, and those of the quinoline series, and Q represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the rhodanine series, those of the pyrazolinone series, those of the 2-thiohydantoin series, and those of the 2-thio-2,4-oxazolidinedione series, said heterocyclic nucleus defined by Q containing an acid group selected from the group consisting of carboxyalkyl, sulfoalkyl, carboxyaryl and sulfoaryl, said acid group being attached to the nitrogen atom of a heterocyclic ring of said merocyanine dye, and (2) 4-[(1,3,3-trimethyl-2(3H)-indolylidene)ethylidene]-3-methyl-1-phenyl-5-pyrazolinone, the amount of said sensitizing dye being from about 5 to 300 mg./mole of silver halide, said silver halide emulsion containing from about 4 to 25 g./mole, based on the amount of silver halide, of a light-absorbing oxonol dye selected from the class consisting of a trimethine oxonol dye and a pentamethine oxonol dye, said oxonol dye having a 3-methyl-1-(sulfophenyl)-5-pyrazolinone nucleus attached to one end of the methine chain through the 4-position of said 3-methyl-1-(sulfophenyl)-5-pyrazolinone nucleus, and attached to the other end of said methine chain a second nucleus selected from the class consisting of a 5-pyrazolinone nucleus and a 2,4,6-triketohexahydropyrimidine nucleus, said second nucleus being attached to said methine chain through the methylene group of said second nucleus, and said light-absorbing oxonol dye having its maximum absorption in substantially the same region of the spectrum as said sensitizing dye, the amounts of said sensitizing dye and said light-absorbing dye being such that said emulsion has a contrast for the unsensitized region of the spectrum at least twice that of the sensitized region, said sensitized dye having its maximum absorption beyond about 480 mμ.

2,944,902

SENSITIZATION OF PHOTOGRAPHIC EMULSIONS WITH IONIC POLYALKYLENE OXIDE SALTS

Bert H. Carroll, John Engel, Jr., and Dorothy J. Beavers, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Dec. 10, 1956, Ser. No. 627,135
19 Claims. (Cl. 96—107)

1. A light-sensitive photographic silver halide emulsion containing an azaindene stabilizing agent of the class consisting of hydroxy and amino triazaindenes, tetrazaindenes and pentazaindenes, and a sensitizing agent of the class consisting of (1) a compound having the general formula

$$X(—RO—)_nRY$$

wherein *n* represents a positive integer greater than 3, R represents an alkylene group of from 2 to 4 carbon atoms, X and Y represent the same radical containing a group of the class consisting of quaternary ammonium, ternary sulfonium, carboxyl, sulfonic acid and sulfuric acid groups, and (2) a compound having said formula wherein X represents a member of the class consisting of alkyloxy and alkylphenoxy groups and Y represents said radical.

2,944,903

PROCESS FOR STABILIZING CROPS AND THE RESULTING PRODUCT

Joseph A. Chenicek, Prairie View, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Original application June 25, 1957, Ser. No. 667,959. Divided and this application July 21, 1958, Ser. No. 749,634
13 Claims. (Cl. 99—5)

1. A process for stabilizing crops subject to oxidative deterioration which comprises applying thereto an inhibitor comprising a symmetrical N,N'-di-alkyl-p-phenylene diamine wherein each alkyl group contains from 8 to 12 carbon atoms.

2,944,904

PROCESS FOR PREPARING QUICK-COOKING BARLEY

Edward Seltzer, Teaneck, N.J., assignor to Thomas J. Lipton, Inc., Hoboken, N.J., a corporation of Delaware

No Drawing. Original application Sept. 30, 1953, Ser. No. 383,495. Divided and this application Nov. 17, 1958, Ser. No. 774,148
4 Claims. (Cl. 99—80)

1. The method of processing raw grains of barley to form a quick-cooking product which comprises, soaking said raw grains in water at a temperature less than that which would cause gelatinization to introduce into the grains substantially enough water for complete gelatinization of said grains, pressure cooking said soaked grains by subjecting them to steam at an elevated pressure until there is substantially complete gelatinization thereof, discharging the cooked grains into a body of water and agitating the cooked grains in said body of water to separate them into discrete grains, subjecting said discrete grains to transient compressive forces by passing them between a pair of rolls spaced apart a distance between about 0.01 and 0.03 inch, washing said grains to remove any exuded juices, and drying said grains to a moisture content between about 5% and 14%.

2,944,905

WITHDRAWN

2,944,906

MAYONNAISE PRODUCT AND METHOD OF MANUFACTURE

Joseph George Spitzer, Massapequa, Leo S. Nazarevich, Jackson Heights, Joseph L. Lange, Farmingdale, and Henry S. Rondi, Elmhurst, all of New York, assignors by direct and mesne assignments, to Carter Products, Inc., New York, N.Y., a corporation of Maryland

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,299
6 Claims. (Cl. 99—144)

1. A novel mayonnaise-like food product of relatively low caloric content which has water as the principal component thereof, comprising an oil in water emulsion wherein the oil phase dispersed throughout the continuous water phase comprises edible oil droplets in an amount from about 5.0 to 30% by weight of the total composition, said emulsion including an egg yolk containing material in an amount from about 1.0 to 7.0% by weight, an acidifying agent in an amount from about 0.1 to 1.5% by weight based on pure acid content, a stiff gum in an amount from about 0.5 to 2.5% by weight, and water in a predominant amount by weight.

2,944,907

RETARDING THE SPOILAGE OF MEAT PRODUCTS

Joseph F. Pagano, Bound Brook, Arthur R. Temple, Monmouth Junction, and Harold Yacowitz, Bound Brook, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed May 7, 1957, Ser. No. 657,509
5 Claims. (Cl. 99—157)

1. A method of retarding the spoilage of meats which essentially comprises dipping the meat in an aqueous solution essentially comprising chlortetracycline in a concentration of at least 5 parts per million, and nystatin in a concentration of at least 2.5 parts per million.

2,944,908

SOLVENTS FOR FAT AND OIL ANTIOXIDANTS

M. B. Knowles and Herman S. Bridges, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 29, 1958, Ser. No. 751,633
11 Claims. (Cl. 99—163)

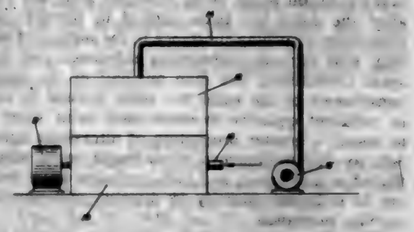
1. A normally liquid antioxidant composition for addition to fats and fatty oils consisting essentially of from 5 to 50% by weight of active constituents composed of from 5 to 42 parts by weight of a phenolic antioxidant out of a total of 5 to 52 parts by weight of active constituents and from 95 to 5% by weight of a solvent composed of from 10 to 95 parts by weight of an acetic acid ester of glycerine out of a total of 10 to 164 parts by weight of solvent.

2,944,909

METHOD OF SMOKING SAUSAGE MEAT

John A. Ziegler, Toronto, Ontario, Canada, assignor to The Griffith Laboratories, Inc., Chicago, Ill.

Filed Sept. 3, 1957, Ser. No. 681,533
3 Claims. (Cl. 99—229)



1. The method of producing a smoked comminuted meat product which comprises comminuting raw meat in a comminuting container therefor and exposing the meat to an atmosphere containing smoke simultaneously during the latter portion of the comminuting operation, whereby to inter-mix said smoke with said meat as comminution proceeds.

2,944,910

CERAMIC SPARK PLUG INSULATOR

Harry G. Scharecht, Detroit, Mich., assignor to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware

No Drawing. Filed July 9, 1958, Ser. No. 747,354
11 Claims. (Cl. 106—46)

1. A ceramic spark plug insulator, at least the surface of which, at the firing end, is produced by sintering a blend consisting essentially of from about 30 parts to 60 parts of SnO_2, from 35 parts to 60 parts of BeO, and from 1 part to 5 parts of a flux comprising at least about 0.5 part of a magnesium silicate and at least about 0.5 part of an alkaline earth compound which, after firing, is in the oxide form.

2,944,911

ACETYLENE CONTAINER FILLER AND METHODS

Nathan William Muller, Clarendon Hills, and Charles Stephen Long, Chicago, Ill., assignors, by mesne assignments, to Acetylene Cylinder Corp., San Francisco, Calif., a corporation of California

No Drawing. Filed Feb. 9, 1956, Ser. No. 564,360
4 Claims. (Cl. 106—120)

3. An acetylene container filler composition consisting essentially of charcoal and fibrous asbestos dispersed and

set in a silica-lime products, according to the following formula:

Silica to lime proportion by weight	1.61 to 2.47
Water to solids proportion by weight	3 to 4.5
Asbestos in percent of solids by weight	20 to 30
Charcoal in percent of solids by weight	15 to 30

2,944,912
ULTRAVIOLET ABSORBING WATERCOLOR PAINT COMPOSITIONS
James P. Kopley, Los Angeles, Calif., assignor to Printing Arts Research Laboratories, Inc., Santa Barbara, Calif., a corporation of Delaware
No Drawing. Filed July 31, 1958, Ser. No. 752,187
8 Claims. (Cl. 106—193)

1. A water-based paint containing pigment and water-soluble organic film-forming ingredients and having homogeneously incorporated therein materials providing ultraviolet absorption properties to said paint, said materials consisting essentially of a substance capable of absorbing ultraviolet light of wave lengths between about 340 and 410 millimicrons and an organic exudation agent in which said ultraviolet-absorbing substance is soluble, said exudation agent being exudable from the paint film after the paint has been applied to thereby carry the ultraviolet-absorbing substance to the surface of said paint film, said ultraviolet-absorbing substance and exudation agent constituting less than one-half of the nonaqueous constituents of the paint but being present in said paint in sufficient quantity to cause said paint when applied to absorb a greater proportion of ultraviolet light in said 340 to 410 millimicron wave-length range than is reflected in said range, and said exudation agent being present in sufficient quantity to dissolve said ultraviolet-absorbing substance.

2,944,913
STARCH DEXTRINS AND METHOD OF MAKING SAME
John D. Commerford, St. Louis County, and Barrett L. Scallet, Clayton, Mo., assignors to Anheuser-Busch, Incorporated, St. Louis, Mo., a corporation of Missouri
No Drawing. Filed Nov. 17, 1958, Ser. No. 774,165
6 Claims. (Cl. 106—213)

4. A process for producing a cross-linked dextrin including the steps of reacting from 0.01% to about 0.21% by weight based on the weight of dry starch present, of cyanuric chloride with starch, said reaction being at a temperature of between about 32° F. and about 140° F. and at a pH between about 2 and about 10 for between about 5 minutes to about 12 hours, and dextrinizing the resultant cross-linked starch product with the equivalent of up to about 600 milliliters 28% HCl per 1000 pounds starch at a temperature of from about 180° F. to about 350° F. for from about 1 hour to about 8 hours, said cross-linked starch dextrin being characterized by its paste having substantially less set-back than similar paste made from a dextrin produced from normal starch.

2,944,914
METHOD OF ESTERIFYING THE SURFACE OF ALUMINA MONOHYDRATE PLATELETS AND PRODUCT THEREOF
John Bugosh, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 17, 1959, Ser. No. 834,353
5 Claims. (Cl. 106—308)

1. Colloidal surface-esterified alumina monohydrate platelets, such platelets having from about 10 to 400 hydrocarbon groups per 100 square millimicrons of surface area.

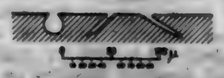
2,944,915
PREPARATION OF ODORLESS SOLVENT FROM A PROPYLENE TETRAMER COMPOSITION
Hans Low, Edwardsville, and William W. Reynolds, East Alton, Ill., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Dec. 6, 1957, Ser. No. 701,952
12 Claims. (Cl. 196—311)

1. A process of manufacturing a substantially odor-stable, olefinic solvent characterized by a low built odor and good solvent power which comprises preparing a propylene polymer composition containing propylene tetramer as one of the components, fractionating said polymer composition to obtain a fraction containing principally the propylene tetramer and having a boiling range within the temperature range of 345° F. to 550° F., subjecting the fraction to an adsorbent clay treatment at a temperature less than about 200° F. to reduce substantially the content of the oxidative products contained in said fraction, and incorporating a minor, effective amount of an oxidation inhibitor in the clay-treated fraction before its peroxide number exceeds 0.1, said inhibitor being incorporated in the fraction in an amount in excess of 0.001% on a weight basis.

2,944,916
PROCESSING OF IMAGE DISPLAY DEVICES
Lyle W. Evans, Seneca Falls, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,543
2 Claims. (Cl. 117—33.5)

1. A process for forming an image display screen on the viewing panel of a cathode ray tube comprising the steps of fabricating a screen layer including a phosphor material and a silicate on the panel, covering said screen layer with a film of lacquer, and issuing carbon dioxide gas into said tube to cause penetration of said gas into the lacquer covered screen layer.

2,944,917
METHOD OF COATING A METAL BASE WITH POLYTETRAFLUOROETHYLENE
Armand Calmé, Gif-sur-Yvette, France, assignor, by mesne assignments, to Marc Gregoire, Paris, France
Filed Dec. 8, 1955, Ser. No. 551,875
Claims priority, application France Dec. 13, 1954
6 Claims. (Cl. 117—49)



1. A method for coating a base selected from the group consisting of iron and aluminum with a continuous film of polytetrafluoroethylene anchored into said base, comprising the steps of providing anchoring cavities having an average size less than 30 microns and a throttled entrance in said base by attacking it with at least one acid, subsequently depositing an aqueous dispersion consisting essentially of polytetrafluoroethylene thereon in a succession of elementary layers, and drying and fusing each layer in situ before the next is deposited, the concentration of polytetrafluoroethylene in each successive layer being greater than that in the layer previously deposited.

2,944,918
POLYETHYLENE TEREPHTHALATE FILM HAVING AN ADHERENT WAX COATING
Herbert Nagel and Lawrence Roy Hatt, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 1, 1955, Ser. No. 512,588
9 Claims. (Cl. 117—68.5)

1. An oriented polyethylene terephthalate film having a continuous, thin, heat-sealable, uniform coating consisting essentially of wax, said coating being no thicker



than about 0.015 gram/square inch for film coated on two sides.

2,944,919
METHOD OF APPLYING A PROTECTIVE COATING TO A FERROUS METAL SURFACE
Lester Morris and Flora Lombardo, Los Angeles, Calif., assignors to Amercoat Corporation, County of Los Angeles, Calif., a corporation of California
No Drawing. Filed May 17, 1957, Ser. No. 659,752
12 Claims. (Cl. 117—127)

1. The method of producing a hard impervious coating upon a ferrous metal surface which comprises applying to said surface first (*a*) a primary coating comprising a mixture of a finely divided metal selected from the group consisting of zinc, magnesium, aluminum, manganese and titanium, and from about 10% to 40% by weight based upon said metal of an oxidizing agent selected from the group consisting of red lead and the peroxides of calcium, magnesium, and zinc, allowing said primary coating to dry, and thereafter applying on said primary coating (*b*) a curing agent for said mixture comprising an aqueous solution of a water soluble salt of a polyvalent metal, said polyvalent metal having an oxidation-reduction potential in acid solution equal to or greater than that of said finely divided metal.

2,944,920
PROCESS FOR LUBRICATING AND PROMOTING THE COHESION OF TEXTILE FIBERS
William H. Shields, Wyoming, and Herman T. Buckley, Cincinnati, Ohio, assignors to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Nov. 7, 1955, Ser. No. 545,571
2 Claims. (Cl. 117—139.5)

1. A process for pretreating organic textile fibers to provide lubricity and promote cohesion during textile fabricating operations said process comprising applying to the textile fibers a textile dressing comprising a solution of 5% to 50% polymerized fatty acid compound selected from the group consisting of polymerized fatty acids, polymerized esters of fatty acids and monohydric alcohols of up to 8 carbon atoms chain length, and the polymers of polymerized fatty acids and dihydric alcohols of up to 8 carbon atoms chain length, and 95% to 50% of an oily dilutent for the fatty compound said dilutent being selected from the group consisting of animal, vegetable, and mineral oils, liquid fatty acids, and the liquid esters of fatty acids.

2,944,921
PROCESS FOR THE PRODUCTION OF WATER-REPELLENT FINISHES ON TEXTILES AND COMPOSITION THEREFOR
Leonard Harrison Groves, John Alwyn Hall, and James William Roberts, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Mar. 24, 1958, Ser. No. 723,091
Claims priority, application Great Britain Mar. 27, 1957
8 Claims. (Cl. 117—161)

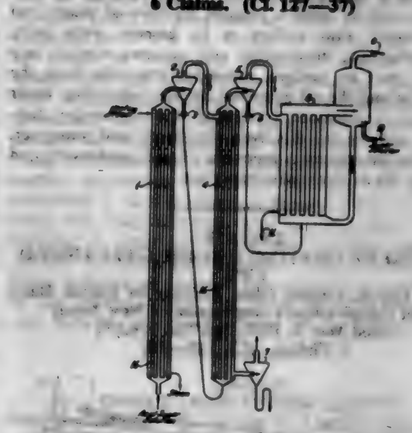
1. An aqueous composition useful for the production of water-repellent finishes on textile materials consisting essentially of a methylolamide of a fatty acid containing at least 14 carbon atoms in the molecule, less than 4.0% by weight of free fatty acids by weight of the said methylolamide, and an anionic surface active agent as dispersing agent in the proportion of not more than 6% by weight of the methylolamide.

6. A process for the production of water-repellent finishes on textile materials which comprises applying to the textile materials a composition according to claim 1 in conjunction with a member of the group consisting of an acid and an acid generating catalyst, and thereafter heating the treated textile materials.

2,944,922
TREATMENT OF SPENT SULPHITE LIQUOR
Lawrence Allen Beggs and Averill J. Wiley, Appleton, Wis., assignors to Sulphite Products Corporation, Appleton, Wis., a corporation of Wisconsin
No Drawing. Filed Apr. 23, 1956, Ser. No. 579,761
9 Claims. (Cl. 127—37)

1. In a process for treating materials selected from the group consisting of spent sulphite liquor solids and wood hydrolysate solids containing carbohydrate materials and wood extractives, the steps of mixing and reacting substantially dry solids selected from said group with a material selected from the group consisting of lower alkyl alcohols and carbonyl compounds having less than eight carbon atoms to form a soluble carbohydrate compound, in the presence of free hydrogen ion, said solvent treatment being carried out at a temperature below about 55° C. and removing ligneous materials from the carbohydrate solution.

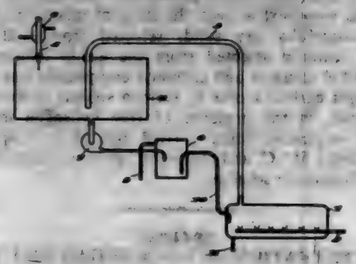
2,944,923
CONCENTRATION OF WOOD SUGAR SOLUTIONS
Theodor Rieken, Mannheim, Germany, assignor to Udic Societe Anonyme, Vevey, Switzerland
Filed Jan. 17, 1958, Ser. No. 709,519
Claims priority, application Switzerland Jan. 18, 1957
6 Claims. (Cl. 127—37)



1. A process for concentrating a sugar solution obtained in the hydrochloric acid saccharification of cellulosic materials comprising passing said solution substantially under atmospheric pressure upwardly at a rate of about 10 to 40 m./sec. through a first set of narrow vertical tubes having a diameter of about 8 to 20 mm. and heated at a temperature of about 100 to 150° C., said rate of flow preventing backflow of said solution into said tubes separating the generated vapors from the solution, transferring the thus separated solution at substantially the rate of separation, so as to prevent accumulation thereof in the separation zone, continuously substantially without intermediate stoppage into a second set of narrow vertical tubes, heating said second set of tubes with said generated

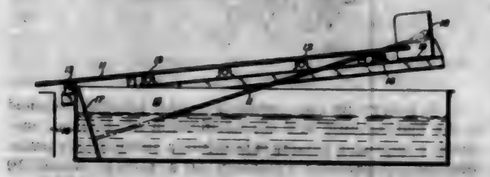
vapors, passing said solution at a pressure of about 100 to 250 Torr. upwardly through said second set of tubes, withdrawing vapors from the solution leaving said second set of tubes, feeding the remaining solution into a circulating evaporator maintained at a pressure of about 30 to 50 Torr., heating said circulating evaporator with said withdrawing vapors, and drawing off concentrated sugar syrup and hydrochloric acid vapors from said circulating evaporator.

2,944,924
METHOD OF CLEANING STORAGE AND TRANSPORT TANKS, ESPECIALLY SHIPS' TANKS, FROM OIL, FAT, WAX AND THE LIKE
Leif Sven-Erik Wikander, Karlstad, and Sven Helmer Persson, and Kurt Anders Holm, Edsviken, Skoghall, all of Sweden, assignors to Uddeholms Aktiebolag, Skoghall, Sweden, a Swedish company
Filed Nov. 5, 1957, Ser. No. 694,646
4 Claims. (Cl. 134—11)



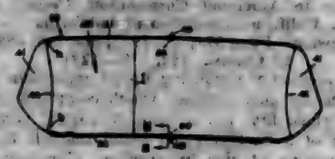
1. The method of internally cleaning a substantially empty oil tank which comprises the steps of introducing steam into a vaporizer containing a solvent to vaporize the same and to form a gaseous mixture of steam and solvent vapor, said solvent in its gaseous state being heavier than air, introducing said gaseous mixture into the tank near its bottom, removing from the tank the condensate and the oil dissolved therein, separating water from said condensate, returning the remaining condensate, and the oil dissolved therein to said vaporizer, vaporizing the solvent component of said condensate, and removing the oil from said vaporizer.

2,944,925
METHOD OF COATING HOT-DIP GALVANIZED PIPE
Carl R. Lynch, Lorain, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 1, 1957, Ser. No. 656,271
2 Claims. (Cl. 148—18)



1. A method of coating pipe lengths which consists in immersing them in a galvanizing bath, withdrawing each length axially from the galvanizing bath upwardly along a plane inclined at a small angle to the horizontal and moving it sidewise toward a tank which contains a quenching bath, dropping one end of each length into said quenching bath while continuing to support the other end of each length above the level of said quenching bath for a predetermined time, thereby permitting blow-through of vapor from the quenching bath generated by the heat of the pipe and removing from the interior of the pipe foreign matter picked up from the galvanizing bath, and subsequently dropping said other end of each length into the quenching bath for complete immersion.

2,944,926
ELECTRICALLY CONDUCTIVE WINDSHIELD
Ramsey A. Gaiser, Muncie, Ind., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Feb. 6, 1956, Ser. No. 563,679
11 Claims. (Cl. 154—2.73)



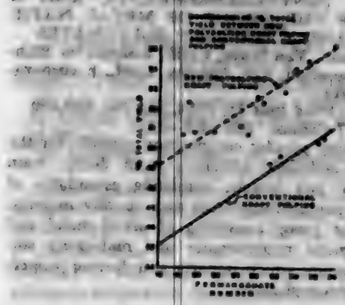
1. In a method of producing bent glass sheets having selected surface areas only that are electrically conducting and in which the electrical conductivity results from the presence of an electrically conducting film on said surface areas, the steps of applying the film to a surface of said sheet while in the flat, heating and bending said filmed sheet, and then removing portions of said film from the bent sheet to restrict it to said selected areas.

4. The method of producing an electrically conductive bent glass windshield, comprising applying a pair of spaced, substantially parallel strips of fusible electrode material along opposite margins of a flat sheet of glass, heating the glass sheet to substantially the point of softening of the glass to fuse said electrode material to the glass surface, applying an electrically conductive coating to the surface of the heated glass sheet containing the electrode material and in electrical contact therewith, heating and bending the glass sheet to the desired curvature, then removing part of the electrically conductive coating, and finally laminating said bent sheet with a second similarly bent glass sheet and an interposed layer of thermoplastic material to form a composite structure.

2,944,927
CURE OF CHLOROFLUOROCARBON ELASTOMER
Lucius P. Dousman, South Bend, Ind., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed May 15, 1959, Ser. No. 813,344
8 Claims. (Cl. 154—100)

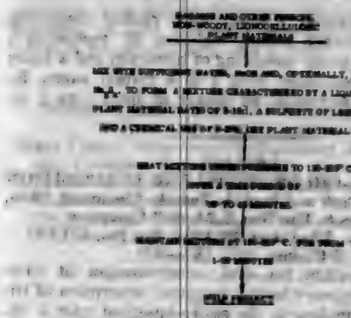
8. A method of making a laminated article having a layer made of unsaturated, vulcanizable rubber and a layer made of a saturated elastomer which is a copolymer of monochlorotrifluoroethylene and vinylidene fluoride, containing from 5% to 70% of vinylidene fluoride, comprising compounding said unsaturated, vulcanizable rubber for sulfur vulcanization, compounding 100 parts of said saturated elastomer with from 1 to 5 parts of a peroxide as a curing agent and from 1 to 20 parts of N,N'-methylenebisacrylamide as an accelerator, whereby the compounded unsaturated, vulcanizable rubber has a curing rate substantially similar to the curing rate of the compounded saturated elastomer, laminating the resulting two compounded stocks, and curing the laminate at a temperature of from 150° to 350° F. for a period of from 5 minutes to 24 hours.

2,944,928
METHOD OF PREPARING PAPER PULP
Andre C. Klerick, 8 Gramercy Park, New York 3, N.Y.; Irwin W. Scopp, 4 Stuyvesant Oval, New York 9, N.Y.; and Raymond R. Colton, New York, N.Y.; said Colton assignor to said Klerick and said Scopp
Filed Sept. 20, 1957, Ser. No. 685,000
6 Claims. (Cl. 162—32)



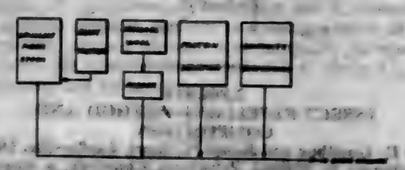
1. In the method of producing wood pulp according to a pulping process, the improvement comprising cooking the raw wood in solutions of alkali polysulfides with a sulfidity of 10% to 30% maintained by alkali polysulfides.

2,944,929
RAPID SODA PROCESS FOR PULPING BAGASSE AND OTHER NON-WOODY PLANT LIGNOCELLULOSE
Samuel B. Knapp, Honolulu, Hawaii, and James D. Wethern, Camas, Wash., assignors to Hawaiian Development Company, Ltd., Honolulu, Hawaii, a corporation of Hawaii
Filed Jan. 5, 1959, Ser. No. 784,966
14 Claims. (Cl. 162—90)



1. In the soda process for pulping fibrous, nonwoody lignocellulosic plant materials with an aqueous digesting liquor containing an active soda pulping agent comprising predominantly sodium hydroxide: the improvement which comprises producing a strong, easily bleachable, papermaking pulp having a pentosan content of the order of 20–30% by weight, by the combination of process steps comprising forming a mixture comprising the plant material and the aqueous digesting liquor, the ratio of liquor to oven-dry plant material being from 2:1 to 15:1 and the pulping agent use being from 6–20% by weight based on the weight of the oven-dry plant material; heating the mixture under pressure to a temperature of from 130°–210° C. over a rise time period of up to 45 minutes, and maintaining the mixture under pressure at 130°–210° C. for a digestion time period of from 1–25 minutes, the shorter digestion periods applying to the higher digestion temperatures and vice versa.

2,944,930
FIBERBOARD
Arthur B. Beach, Jr., and Alice C. Well, New Orleans, La., assignors to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Filed Apr. 16, 1957, Ser. No. 653,149
10 Claims. (Cl. 162—145)



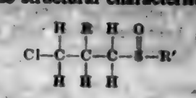
1. An incombustible heat insulating and sound absorbing fiberboard comprising by weight not less than about 60% mineral fiber together with not more than about 40% combustible fiber and the product of the reaction in acid suspension of between about 1.5 to five percent solubilized protein and 1½ to 10% sodium bentonite.

2,944,931
SANITARY PAPER AND PROCESS OF MAKING THE SAME
Christen H. C. Yang, Camas, Wash., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
No Drawing. Filed Dec. 13, 1957, Ser. No. 707,450
10 Claims. (Cl. 162—179)

1. The process of improving the softness and surface feel of sanitary paper, which comprises adding to an aqueous slurry of papermaking fibers a stable, aqueous emulsion of 1–90% by weight of lanolin and 10–99% by weight of a cationic emulsifier selected from the group consisting of quaternary ammonium salts, quaternary ammonium bases, quaternary sulfonium salts, quaternary sulfonium bases, long chain amine salts and tertiary sulfonium bases, said slurry and said emulsion being at substantially room temperature, whereby a substantial proportion of lanolin particles and emulsifier contained in said emulsion is deposited onto said fibers while said fibers are suspended in water, and thereafter forming a paper web from the resulting slurry, the amount of lanolin and emulsifier deposited on the fibers being sufficient to improve the softness and surface feel of the resulting paper but being insufficient to permit said lanolin from being rubbed off on said paper.

2,944,932
INSECT COMBATTING AGENT
Roy E. Stansbury and Rector P. Louthan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 8, 1958, Ser. No. 733,834
14 Claims. (Cl. 167—22)

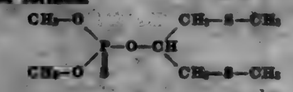
1. A method for combatting an insect which comprises subjecting said insect to the action of an effective amount of at least one compound selected from the group of compounds having the structural characteristics as follows:



wherein R is selected from the group consisting of H and CH_3 and R' is seelcted from the group consisting of normal, secondary, and tertiary-octyl groups.

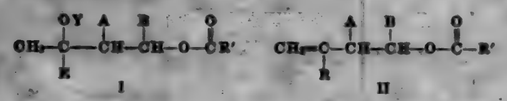
2,944,933
THIOPHOSPHORIC ACID ESTER
Richard Sallmann, Binningen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Filed June 12, 1959, Ser. No. 819,513
Claims priority, application Switzerland Aug. 8, 1958
2 Claims. (Cl. 167—22)

2. An insecticidal and acaricidal preparation which contains as the active ingredient the thiophosphoric acid ester of the formula



2,944,934
INSECT REPELLENT METHOD AND COMPOSITION
Lyle D. Goodhue and James N. Short, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Feb. 15, 1957, Ser. No. 640,337
34 Claims. (Cl. 167—30)

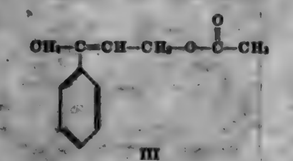
1. A composition useful for repelling insects which comprises a compound selected from the group consisting of compounds which have a characteristic structure as follows:



I

II

and



III

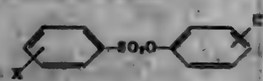
wherein Y is a member of the group consisting of —H and



wherein R is selected from the group consisting of an aryl radical containing not over 14 carbon atoms and such a radical which has been substituted with a radical selected from the group consisting of hydroxy, alkoxy, nitro and alkyl, the total number of carbon atoms in any substituent radical being not greater than 8; wherein R' is an alkyl radical containing from 1–6 carbon atoms; and A and B are selected from the group consisting of H, methyl and ethyl, and sufficient of a repellent adjuvant to apply the same.

2,944,935
PARASITICIDE COMPOSITION OF REDUCED PHYTOTOXICITY
Oscar H. Hammer, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,726
2 Claims. (Cl. 167—30)

1. A parasiticide composition comprising (1) a chlorophenyl ester of a benzenesulfonic acid said ester being characterized by the structure



wherein X is selected from the group consisting of hydrogen and chlorine and *n* is an integer of from 1 to 2, inclusive, and (2) diphenylamine wherein the amine is present in an amount of at least 0.05 to about 1 part by weight based on the weight of sulfonic acid ester.

2,944,936
POWDERED COMPOSITION CONSISTING ESSENTIALLY OF PENTACHLOROPHENOL AND A MEMBER OF THE GROUP OF METAL NAPHTHENATES AND MAHOGANY SULFONATES
Arthur H. Bronson, Van Nuys, Calif., assignor to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware
No Drawing. Filed June 15, 1954, Ser. No. 439,460
7 Claims. (Cl. 167—31)

1. A free-flowing powder composition suitable for the preservation of cellulosic materials from decay, stain and mold fungi, and insects, consisting essentially of powdered solid pentachlorophenol and an oily material selected from the group consisting of alkali metal and alkaline earth metal naphthenates and mahogany sulfonates in an amount which imparts anti-dusting properties to the pentachlorophenol.

2,944,937
PHOSPHORAMIDATES
Clarence L. Mayle, Clare, Mich., and Libby L. Wade, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed July 22, 1958, Ser. No. 750,102
9 Claims. (Cl. 167—53)

8. In the practice of animal husbandry, the step of administering to a warm-blooded animal a systemic agent in an amount sufficient to provide from 0.5 to 150 milligrams of the systemic agent per kilogram of body weight of the animal, said systemic agent being a phosphoramidate having the formula



wherein R represents a lower alkyl radical containing from 1 to 4 carbon atoms, inclusive, R' represents a member of the group consisting of hydrogen and a lower alkyl radical containing from 1 to 4 carbon atoms, inclusive, and *n* represents an integer of from 1 to 5, inclusive.

2,944,938
TRI-P-ANISYL-CHLOROETHYLENE COMPOSITION
Edwin D. Cartlidge and Paul A. Tuerck, Cincinnati, Ohio, assignors to The Wm. S. Merrell Company
No Drawing. Filed Apr. 29, 1958, Ser. No. 731,597
5 Claims. (Cl. 167—53)

1. A composition for oral administration of tri-p-anisylchloroethylene whereby increased absorption of tri-p-anisylchloroethylene in the gastro-intestinal tract is obtained which comprises tri-p-anisylchloroethylene dissolved in a hard edible digestible glyceryl fat, the amount of tri-p-anisylchloroethylene being from 10 to 50 percent by weight of the fat.

2,944,939
WATER-INSOLUBLE MOLYBDENUM SALTS OF NEOMYCIN AND PROCESS OF USING SAME IN THE PURIFICATION OF NEOMYCIN
George Kraft, Plainfield, N.J., and Richard R. Metcalf, Bloomsbury, and Stenson B. Pfau, Lewisburg, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Feb. 6, 1957, Ser. No. 638,626
5 Claims. (Cl. 167—65)

1. In the process of purifying neomycin, the improvement which comprises reacting an aqueous solution of neomycin complex at a pH within the range of about 1.5 to about 6.0 with a compound selected from the group consisting of ammonium molybdate, sodium molybdate, molybdic acid, phosphomolybdic acid, and arsenomolybdic acid, whereby to form a substantially water-insoluble salt of neomycin, and recovering from said salt neomycin predominantly of type B with the substantial absence of type A.

2,944,940
ADRENOCORTICOTROPHIN AND ZINC COMPOSITION
Joseph D. Fisher, Chicago Heights, and Robert E. Thompson and James R. Kettenmann, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Jan. 16, 1956, Ser. No. 559,095
6 Claims. (Cl. 167—74)

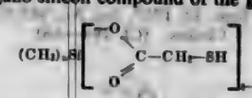
1. An adrenocorticotrophin composition suitable for parenteral administration, comprising zinc and adrenocorticotrophin in an aqueous solution, said zinc being in a concentration of from 0.0075 to 0.03% (weight/volume) in said adrenocorticotrophin composition, said adrenocorticotrophin being maintained in the dissolved state in said aqueous solution, and said adrenocorticotrophin composition demonstrating an enhanced adrenocorticotrophic hormone activity and a prolonged duration of physiological effect greater than that of said adrenocorticotrophin composition in the absence of zinc.

2,944,941
METHOD AND DENTIFRICE FOR REDUCING GINGIVAL INFLAMMATION
Lucien Goldenberg, New York, N.Y., assignor to Vaxico, Inc., Union City, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 23, 1957, Ser. No. 704,267
21 Claims. (Cl. 167—78)

1. A dentrifice for treating gingivitis comprising a dentifrice substrate having a non-liquid consistency and a polyvalent and polygenic vaccine incorporated therein, said vaccine containing about eleven species of bacteria selected from species occurring in oral cavities during gingivitis, said vaccine including both lysed and unlysed solutions of said bacteria, said substrate being antigenically compatible with said vaccine.

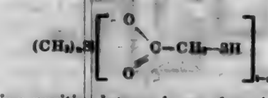
2,944,942
METHYLSILYL MERCAPTOACETATES AND THEIR USE IN TREATING HAIR
Roger Charle, Soisy-sous-Montmorency, and Roger Ritter and Grégoire Kalopissis, Paris, France, assignors to Societe Anonyme dite Societe Monsavon-L'Oreal, Paris, France, a corporation of France
No Drawing. Filed Aug. 1, 1957, Ser. No. 675,569
Claims priority, application France Aug. 4, 1956
7 Claims. (Cl. 167—87.1)

1. An organo-silicon compound of the general formula



where *n* is an integer selected from 1, 2 and 3.

5. A process for imparting any desired, stable configuration to hair, particularly live human hair, which comprises submitting said hair, while constrained in said configuration, to the action of a freshly prepared dispersion of an organo-silicon compound of the general formula



wherein *n* is a positive integer lower than 4, in an aqueous solution comprising, as an anti-precipitating agent, a substantial amount of ethyl alcohol.

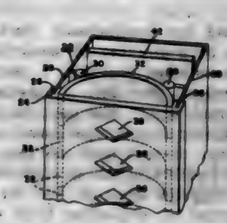
2,944,943
PREPARATION OF DL-LYSINE WITH LYSINE RACEMASE
Haing T. Huang, Fresh Meadows, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed May 21, 1958, Ser. No. 736,663
8 Claims. (Cl. 195—29)

1. A process for the production of lysine racemase which comprises growing a strain of an organism selected from the group consisting of *P. vulgaris, P. ammoniae, P. mirabilis, P. americanus, P. paroamericanus, P. rettgeri, P. spingidis, P. inconstans, E. anindolica* and *E. freundii*, in an aqueous nutrient medium containing sources of carbohydrate, organic nitrogen and inorganic nitrogen, at an intial pH value of from about 6.0 to about 8.0, and recovering said lysine racemase.

2,944,944
PYRROLIDONE PURIFICATION
Temple Clayton, White Bear Lake, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Mar. 3, 1958, Ser. No. 718,472
3 Claims. (Cl. 202—52)

1. The process for the purification of pyrrolidone, which comprises admixing phosphorus pentoxide with crude pyrrolidone, subjecting the mixture to distillation under reduced pressure, and collecting substantially neutral purified pyrrolidone in the distillate.

2,944,945
ELECTROPLATING
Paul R. Allison, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 13, 1957, Ser. No. 665,503
1 Claim. (Cl. 204—15)



The method of electroplating bearing shells so as to plate only one surface thereof, comprising the steps of providing a plating container having electrically nonconductive surfaces, placing a plurality of bearing shells in an end-to-end semi-sealing relationship with each other, positioning said plurality of shells in said plating container with the edges of said shells abutting opposite ends of a side of said non-conducting container surface to form a partition in said container, positioning an anode on one side of said bearing shell partition and out of contact with said shells and with said container, placing a single plate-type cathode having a width substantially equal to the projected width of said bearing shells, on the second side of said partition and out of contact with said shells and said container, filling all of said container with an electroplating bath, and finally flowing a plating current through and simultaneously agitating said bath to thereby cause limited ionic flow between the semi-sealed ends of said shells and electro-deposition on only the side of said shells facing the anode.

2,944,946

CATALYTIC ELEMENT AND METHOD OF MANUFACTURING SUCH ELEMENTS

Bernard F. A. Lane, Chepstow, and Gordon R. Strickland, Luton, England, assignors to H. Napier & Son Limited, London, England, a British company

No Drawing. Filed May 4, 1956, Ser. No. 583,628
Claims priority, application Great Britain July 29, 1955
5 Claims. (Cl. 204—24)

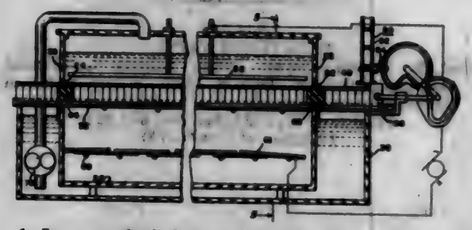
1. A method of producing a catalytic element for decomposing fluid and consisting of a metal supporting structure and a coating of silver applied to said metal supporting structure, which comprises the steps of applying a coating of silver to said supporting structure leaving interstices extending through said silver coating to said supporting structure, then anodically treating said silver coated supporting structure in a bath of an alkaline carbonate solution to form silver oxide upon said silver coating, and then immersing the anodically treated structure in an aqueous solution of ammonia into which solution silver oxide dissolves from the surface of said silver coating and from which metallic silver is deposited in arborescent form on exposed areas of the metal of said supporting structure.

2,944,947

ELECTROPLATING METHOD AND APPARATUS

Hollo C. Laschever, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 5, 1957, Ser. No. 682,197
11 Claims. (Cl. 204—26)



1. In a method for continuously electroplating the concave surfaces of a plurality of semicylindrical bearings, the steps comprising; providing a plating tank containing an electrolyte, providing a longitudinally apertured conveyor track within said tank for longitudinally dividing the tank into two compartments, feeding semicylindrical bearings to said track so that the bearings abut one another and bridge the aperture with their concave surfaces facing the aperture and act as a barrier toward free passage of electrolyte from one compartment to another through said aperture, positioning an anode in the lower compartment of said tank beneath said track and in substantially parallel relation thereto, positioning a conductive plate in the upper compartment above said bearings and in substantially parallel relation to said anode, electrically connecting the anode and the plate to opposite poles of a current source, progressively moving the bearings along said track and between the anode and the plate while maintaining the aperture bridged by said bearings, and maintaining the electrolyte at a level sufficient to cover said plate at all times.

2,944,948

METHOD OF PURIFYING ORGANOMETALLIC COMPLEXES AND THEIR USE IN THE PREPARATION OF ORGANOLEAD COMPOUNDS

Albert P. Giraitis, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Feb. 6, 1956, Ser. No. 563,422
7 Claims. (Cl. 204—59)

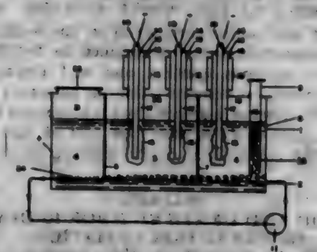
4. In a process for producing hydrocarbon lead compounds which comprises passing an electric current from a lead anode to a cathode in an electrolyte containing a complex of a hydrocarbon metal compound, wherein the valences of the metal are satisfied with monovalent hydrocarbon radicals, and an ionizable salt, the improvement comprising extracting said electrolyte prior to electrolysis with an extracting liquid selected from the group consisting of hydrocarbon metal compounds and aliphatic hydrocarbons having solubility for hydrocarbon metal oxide contaminants therein and being essentially immiscible with said electrolyte.

2,944,949

PROCESS FOR THE ELECTROLYTIC SEPARATION OF TITANIUM FROM TITANIUM SCRAP

Harry Rowland Leech, Widnes, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed May 8, 1959, Ser. No. 811,853
Claims priority, application Great Britain May 9, 1958
15 Claims. (Cl. 204—64)



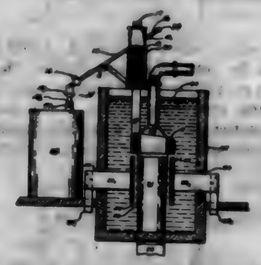
1. A process for the electrolytic separation of titanium from titanium scrap by electro-deposition of the titanium on a cathode in a fused salt in an electrolytic cell which comprises employing in the fused salt a metal which is molten at the temperature of the fused salt and which is not anodically attacked when in contact with titanium, is denser than titanium and is compatible with the material of construction of the cell, floating the titanium scrap on and keeping it in electrical contact with said metal in molten condition, dissolving the titanium from the titanium scrap into the fused salt by passing an electric current between said metal in molten condition and the cathode, and removing by said metal in molten condition matter which is undissolved in the fused salt and is derived from the titanium scrap during passage of the electric current.

2,944,950

OPERATION AND DISCHARGE OF SODIUM CELLS

Glenn O. Hayet, Greenwich, Conn., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

Filed Sept. 24, 1957, Ser. No. 685,902
4 Claims. (Cl. 204—68)



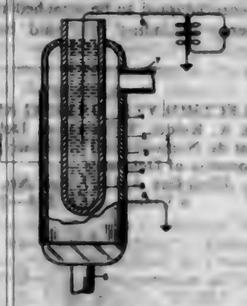
1. In combination, a sodium cell having an inverted sodium collection trough for receiving sodium by upward displacement from an electrolyte zone, a riser pipe connecting therewith for upward flow of said sodium to a point above the cell, a transfer conduit connecting to the upper portion of said riser pipe and inclined downwardly at an angle of at least about 45° to the horizontal, heating means associated with said transfer conduit, a valve means in said conduit, and coupling means at the lower terminus of said conduit, said conduit having a transverse area of not over about one percent of the transeverse area of the riser pipe, said coupling means being adapted to couple with coupling means on a movable transport vessel for receiving sodium.

2,944,951

METHOD OF PREPARING TETRA-LOWER ALKYL DIBORANE COMPOUNDS

George Mee, Pasadena, Robert D. Schultz, East Whittier, Joseph L. Shepherd, Glendale, and Thomas M. Cromwell, Covina, Calif., assignors to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

Filed Nov. 22, 1954, Ser. No. 470,248
12 Claims. (Cl. 204—165)



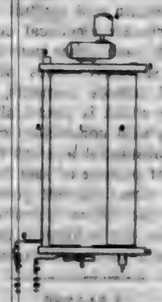
1. The method of preparing tetra-lower alkyl diborane compounds which comprises subjecting a mixture of hydrogen and a boron tri-lower alkyl compound to the discharge produced by a silent discharge tube.

2,944,952

POLYMER REMOVAL

Talmage D. McMinn, Jr., Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed July 14, 1953, Ser. No. 367,913
5 Claims. (Cl. 204—188)



1. A process for purifying an organic solvent which has been used for purification of acetylene by absorption and is contaminated by the presence of suspended polymeric material which comprises subjecting said solvent, in a suitable apparatus, to the action of an electric field established by a direct potential difference between two conducting surfaces.

2,944,953

PLATING MACHINE

Daniel J. Bertolin, Detroit, Mich., assignor to Wagner Brothers, Inc., Detroit, Mich., a corporation of Michigan

Filed Aug. 14, 1957, Ser. No. 678,225
18 Claims. (Cl. 204—198)



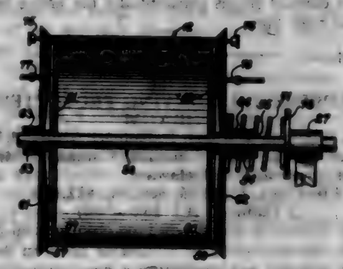
1. In a plating machine of the type wherein rack supported work pieces are conveyed through a plating tank, the racks being suspended from carriers which are slidably supported and in electrical contact with cathode rails and anodes are supported in the plating solution within the tank by means of anode bars extending along the tanks whereby electrical current is caused to flow from the cathode rails through the work carrier to the work pieces and through the solution to the anodes, the improvement which comprises an auxiliary anode carried by the work rack, means insulating the auxiliary anode from said work rack, a contact member on the carrier, means insulating the contact member from said carrier, means responsive to the suspending of the work rack on the carrier to electrically connect the auxiliary anode with the contact member, an auxiliary anode rail within and extending lengthwise of the tank structure of the plating machine, a second contact member on the carrier and arranged to slidably contact the auxiliary anode rail when the carrier is arranged on the cathode rails, means insulating said second contact member from the carrier and means electrically connecting said two contact members on the carrier.

2,944,954

ELECTROLYTIC PRODUCTION OF METAL SHEET

Robert P. Yeck, Scotch Plains, N.J., assignor to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 4, 1959, Ser. No. 791,681
2 Claims. (Cl. 204—216)



1. Apparatus for the electrolytic production of metal sheet comprising an electrolyte tank, a rotatable drum having a portion of its circumference disposed in said tank, means to rotate said drum, an anode disposed in said tank in proximity to the drum, means connecting said drum and said anode to a source of direct current, side plates for the sides of the drum, said side plates being fabricated of an electrically insulating and machinable material, yieldable means urging said plates in contact

against the sides of the drum, the contacting surfaces between said plates and the sides of said drum being machined contacting surfaces, means to provide relative rotative motion between said side plates and said drum, and means on said side plates for supplying a sealant to said machined contacting surfaces.

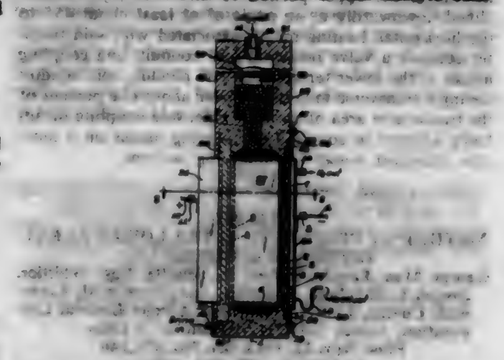
2,944,955
PURIFICATION DEVICE FOR ALKALI METAL CELLS
Arthur L. Fentress, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 27, 1959, Ser. No. 802,346
2 Claims. (Cl. 204—245)



1. In a fused salt electrolysis cell, having a riser pipe extending above the cell for concurrently discharging sodium metal, for cooling and precipitating the calcium impurity and returning same to the cell, and having in combination with said riser pipe an automatic tickler assembly which includes a cleaner device extending into the vertical riser pipe, and motor means operatively connected therewith for imparting vertical reciprocation and rotational motion of the cleaner device within said riser pipe, the improved cleaner having an elongated member of length approximately equal that of the riser pipe, a plurality of arms mounted on said member and projecting at substantially right angles therefrom and spaced along said member, and arcuate cleaner blades having edges beveled in the direction of rotational motion and the edges inclined toward the riser pipe wall, affixed to the extremities of said arms, said blades being adjacent to and arced to correspond generally to the curvature of the inner surface of the riser pipe, the summation of the vertical dimensions of said blades being substantially equal to the vertical dimension of the riser pipe whereby rotation of the cleaner cleans substantially the entire internal area of the riser pipe.

2,944,956
CHLORINE CELL HAVING PROTECTED DIAPHRAGM
Robert D. Blue and Marshall P. Neipert, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 16, 1956, Ser. No. 622,600
2 Claims. (Cl. 204—266)

1. In an improved diaphragm-type chlorine cell for the electrolytic decomposition of a chloride brine in the production of chlorine gas containing a non-conducting diaphragm which has small resistance against distortion, perforation, and dislodgement from position and which divides the cell into an anolyte compartment and a catholyte compartment, the improvement comprising a substantially rigid screen composed of meshed filaments positioned parallel to and adjacent to said diaphragm for the protection of the diaphragm on the anode side thereof, the filaments of said screen being coated with a protective coating selected from the group consisting of polymerized monochlorotrifluoroethylene and tetrafluoroethylene, and an anode consisting of a body of particulate graphite of a minimum particle dimension greater than that of the meshes in said screen compacted in said anolyte compartment and resting against said screen, and a rigid graphite core adapted to be attached to a source of electrical energy extending into said body of particulate graphite.



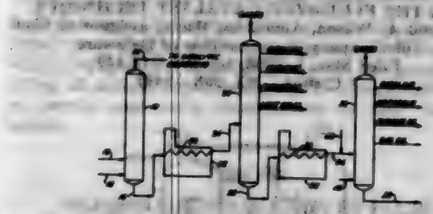
2,944,957
ELECTROLYTIC DRYING APPARATUS
Frederick A. Keidel, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 3, 1957, Ser. No. 688,935
4 Claims. (Cl. 204—275)



4. An apparatus for drying a flowing fluid comprising in combination a closed conduit provided with fluid inlet and outlet ports axially spaced one from another, at least one electrode pair within said conduit consisting of alternately disposed perforate electrical conductors disposed out of contact with each other between said fluid inlet and outlet ports, successive ones of which constitute anode elements and cathode elements, a deliquescent hygroscopic substance which is electrically conductive only when wet spanning said conductors over a length sufficient to absorb a substantial amount of water from said fluid in the course of passage of said fluid in proximity to said conductors, a direct current power source of voltage sufficient to electrolyze absorbed water in said deliquescent hygroscopic substance and electrical leads connecting said power source across said electrode pairs.

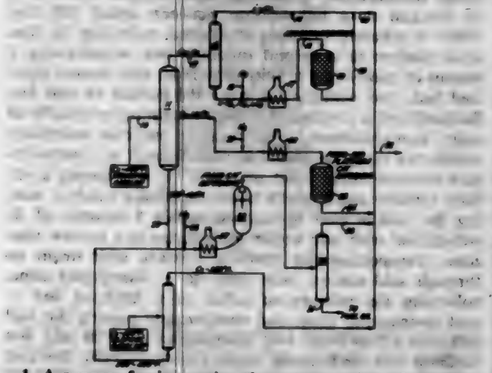
2,944,958
PROCESS OF MAKING PITCH
Richard G. Goldthwait and William R. Lehrian, Penn Hills, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,366
3 Claims. (Cl. 208—39)

1. A process for the preparation of a petroleum pitch having a ring and ball softening point above about 250° F. and an incipent fusion temperature above about 150° F. comprising flashing a topped crude oil under vacuum at a flash temperature, corrected to 760 mm. of mercury absolute pressure, above about 940° F. to produce a heavy bottoms fraction, visbreaking the heavy bottoms fraction at conditions to produce about 8 to 17% 400° F. end point gasoline, distilling the visbreaker product in an atmospheric distillation to separate furnace oil and



lighter fractions and produce a visbreaker tar as a residual fraction, passing the visbreaker tar in the absence of virgin petroleum fractions through a second visbreaker in which about 5 to 15% 400° F. end point gasoline is formed, flashing the second visbreaker product in an atmospheric distillation at a temperature in the range of 700° to 825° F. in the presence of steam to produce the pitch as a bottoms product.

2,944,959
PROCESS FOR UPGRADING A WIDE RANGE GASOLINE
Robert E. Kline, Verona, William C. Starnes, Whitfield Township, Butler County, and Robert C. Zaber, Glenshaw, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Feb. 26, 1958, Ser. No. 717,692
5 Claims. (Cl. 208—79)



1. A process for increasing the octane rating of gasoline which comprises fractionating a full range straight run gasoline to obtain a light paraffinic fraction consisting essentially of C_5 and C_6 paraffins, a middle fraction having an end point from about 320° to about 360° F. and a heavy residual fraction of about 450° F. end point, increasing the octane rating of said light fraction in a hydroisomerization stage comprising contacting straight chain C_5 and C_6 paraffins in admixture with hydrogen with a fixed-bed, halogen-promoted, platinum-on-alumina catalyst under hydroisomerization conditions including a hydrogen concentration from about 50 to 1,000 s.c.f./bbl. of hydrocarbon, a liquid-hourly space velocity greater than 5 vol./vol./hr. and a temperature from 600° to 850° F. and recovering a product of substantially the same average molecular weight as said light fraction and higher branched chain paraffin content, increasing the octane rating of said middle fraction in a fixed-bed catalytic reforming stage comprising contacting said middle fraction in admixture with hydrogen with a fixed-bed, halogen-promoted, platinum-on-alumina catalyst under reforming conditions including a hydrogen concentration from 3,000 to 10,000 s.c.f./bbl., a liquid-hourly space velocity from 1 to 4 vol./vol./hr. and a temperature from 850° to 950° F., separating light gases from the reactor effluent of said fixed-bed catalytic reforming stage and obtaining a normally liquid product entirely of the gasoline boiling range and of higher aromatic content and octane rating than said middle fraction, treating said heavy fraction in a fluid catalytic reforming stage wherein said heavy fraction in admixture with hydrogen is contacted with a fluidized supported molybdenum oxide catalyst under reforming conditions including a hydrogen concentration from 3,000 to 10,000 s.c.f./bbl., a space velocity from 1 to 3 vol./vol./hr., and a temperature from 850 to 980° F., recovering a conversion product of substantially lower average molecular weight and higher aromatic content than said heavy fraction, fractionating said product to recover a light fraction and a residual fraction, and blending said light fraction with the entire normally liquid hydrocarbon products of said hydroisomerization stage and said fixed-bed catalytic reforming stage to obtain a gasoline product having an octane rating of at least about 90 Research, clear.

2,944,960
ACETYLENE MAKING AND HEAVY OIL COKING PROCESS
Samuel P. Dickens, Poughkeepsie, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed Mar. 11, 1957, Ser. No. 645,862
6 Claims. (Cl. 208—85)

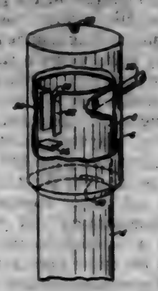


4. A unitary process for producing acetylene and petroleum coke which comprises admixing, at a temperature from 100–230° F. in an agitated hydration zone, calcium carbide particles with a separately formed dispersion of water particles in a mobile reaction medium of oil coking charge stock, the ratio of oil to water in said dispersion being within the range of from about 1 to 50 parts by weight of oil per part of water, thereby forming a wet acetylene gas phase and a liquid phase containing suspended hydrated lime, separately withdrawing said gas phase and said liquid phase from said hydration zone, passing at least a portion of said liquid phase containing suspended lime into a coking zone maintained at temperature between about 850° and about 1500° F., thereby forming hydrocarbon distillate and petroleum coke containing occluded lime, and withdrawing from said coking zone said hydrocarbon distillate and said petroleum coke containing occluded lime.

2,944,961
DESTRUCTIVE HYDROGENATION PROCESS AND APPARATUS
Jerry McAfee, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 4, 1957, Ser. No. 643,740
5 Claims. (Cl. 208—108)

1. A process for catalytically converting a high boiling hydrocarbon which contains asphaltic material which

process comprises establishing a liquid body of the high boiling hydrocarbon and suspended finely divided catalyst under destructive hydrogenation conditions, continuously introducing fresh high boiling hydrocarbon and hydrogen into the body of liquid suspension, continuously removing vaporous conversion products from above the top of the body of liquid suspension, continuously flowing a side stream of the body of liquid and suspended catalyst from the top of the body of liquid suspension



into a quiescent settling zone, preventing agitation in the settling zone by hydrogen and hydrocarbon vapors flowing through the liquid body undergoing catalytic conversion, settling the removed liquid under reaction conditions to form a portion having a high concentration of finely divided catalyst and a portion containing substantially only liquid, removing from the system at least part of the portion containing only liquid and returning the portion containing the catalyst to the body of liquid undergoing catalytic conversion.

2,944,963

FLUID CONTACT COKING OF HYDROCARBON OILS

Claude H. McIntosh and Wiley P. Ballard, Port Arthur, Tex., assignors to Texaco Inc., a corporation of Delaware

Filed Jan. 11, 1955, Ser. No. 481,857
5 Claims. (Cl. 208—127)



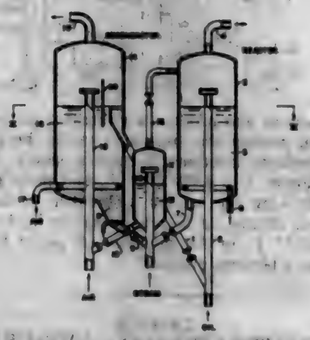
1. In a fluid contact coking of hydrocarbon oils wherein the oil is contacted in a reactor with finely divided coke in a dense phase under fluidized conditions, coke withdrawn from the reactor and subjected to combustion in a burning zone and resultant highly heated coke recycled to the reactor, the process that comprises passing the hot coke from the burning zone to the reactor through a conduit terminating in said dense phase of the fluidized mass and introducing the charge oil through a pipe extending interiorly of said conduit and terminating at a point adjacent to the termination of said conduit so that the hot coke from the burning zone at substantially the temperature of said burning zone and the charge oil are first brought together and intimately commingled at a localized zone in the dense phase.

2,944,963

CONVERSION OF HEAVY OILS TO GASOLINE USING THE FLUIDIZED CATALYST TECHNIQUE

Raymond A. Wilson, Anacortes, Wash., assignor to Shell Oil Company, a corporation of Delaware

Filed Mar. 3, 1958, Ser. No. 718,849
3 Claims. (Cl. 208—149)



1. Process for the catalytic cracking of hydrocarbon oils which comprises continuously withdrawing a finely divided cracking catalyst passing essentially a 100 mesh U.S. standard sieve at a temperature between about 1100 and 1200° F. from a first fluidized catalyst bed undergoing regeneration, contacting said catalyst with oil to be cracked at a temperature between about 900 and 1000° F. whereby cracking is effected, collecting the thus used catalyst in a second fluidized bed, withdrawing a stream of catalyst by gravity flow from said second fluidized bed, also withdrawing from the bottom of said first fluidized bed a continuous stream consisting essentially of inert, non-absorbent, solid ceramic particles essentially within the range of about 60 to 3.5 mesh at a temperature between about 1100 and 1200° F. and having a settling velocity substantially higher than said catalyst, mixing the said stream of catalyst within 5 seconds of its withdrawal with said stream of particles in a narrow riser zone, transporting the resulting mixture with steam up through said narrow riser zone to a disengaging zone, collecting the mixture of solids as a fluidized bed in said disengaging zone, and continuously passing the said collected solids from said disengaging zone to said first fluidized bed undergoing regeneration whereby the said particles of inert solids sink to the bottom of said fluidized bed and are recycled only between said first fluidized bed and said disengaging zone.

2,944,964

REMOVING ODOR FROM PETROLEUM-BASED DRY CLEANING SOLVENT WITH DIGLYCOLIC ACID

Joseph A. Piepmeyer, Cincinnati, Ohio, assignor to Emery Industries, Inc., Cincinnati, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 24, 1958, Ser. No. 782,634
2 Claims. (Cl. 208—180)

1. The method of improving the odor of a petroleum-based dry cleaning solvent which comprises distilling the solvent and contacting the distilled solvent with diglycolic acid.

2,944,965

METHOD OF TREATING METAL CONTAINING HYDROCARBON OILS

Frank A. Mirabile, Belleville, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

No Drawing. Filed May 27, 1958, Ser. No. 738,621
11 Claims. (Cl. 208—134)

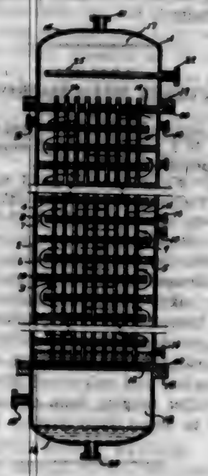
1. A method for treating a hydrocarbon oil containing metal contaminants which comprises contacting said oil with a halogenating agent selected from the group consisting of sodium hypochlorite and N-bromosuccinimide to convert said metal contaminants to their metallic halides.

2,944,966

METHOD FOR SEPARATION OF FLUID MIXTURES

Allen G. Eichmeyer, 7204 Cherokee Drive, Prairie Village, Kans.

Filed Feb. 19, 1954, Ser. No. 411,389
9 Claims. (Cl. 208—352)



1. The method of fractionating a hydrocarbon mixture including, passing the hydrocarbon mixture into contact with one side of an indirect heat exchange surface to effect selective condensation thereon of less volatile components of the hydrocarbon mixture while maintaining vapors of said hydrocarbon mixture in counter-current contact with the condensate on said heat exchange surface, collecting the condensate, reducing pressure on the condensate for cooling the condensate, directing the cooled condensate in descending contact with the other side of the indirect heat exchange surface to receive heat from said hydrocarbon mixture for vaporizing the more volatile components thereof while maintaining the vapors in stripping contact with said condensate, increasing the pressure of the last formed vapor, uniting said last formed vapor with the influent hydrocarbon mixture for ascension therewith in said heat exchange contact to effect condensation of the less volatile components, and separately removing said separated components.

2,944,967

METHODS FOR TREATING LIQUID CIRCULATING SYSTEMS AND COMPOSITIONS THEREFOR

Edward W. Dunklin, Fort Arthur, Ontario, Canada, and Merle K. Moudry, Northfield, Ill., assignors to United States Movidyn Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed May 12, 1958, Ser. No. 734,450
10 Claims. (Cl. 210—64)

1. The method for controlling slimes in a circulating liquid system wherein the liquid contains polyvalent metal ions and is successively at a lower pH and then a higher pH during circulation, comprising introducing into the circulating liquid at least one sequestering agent selected from the group consisting of the sugar acids, the alkali metal, alkaline earth metal and ammonium salts of the sugar acids, and sorbitol, and circulating the liquid through the system, said addition being made at a rate to provide a concentration of the sequestering agent, at the point or points of the system subject to slime formation, equal to 0.1–100 parts per million, said sequestering agents being effective to sequester such polyvalent metal ions and thereby prevent precipitation of slime-forming chemical compounds when the circulating liquid is at the higher pH.

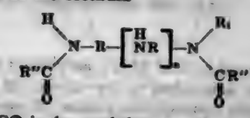
2,944,968

METHOD FOR PREVENTING CORROSION OF FERROUS METALS

Charles Bryce Hutchison, Webster Groves, Mo., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 30, 1956, Ser. No. 625,249
8 Claims. (Cl. 252—8.55)

1. A method for inhibiting corrosion of ferrous metals by hydrocarbon fluids containing water and a member of the group of corrosive materials selected from the class consisting of hydrogen sulfide, carbon dioxide, organic acids containing 2 to 4 carbon atoms per molecule, combinations of these materials with each other, combinations of each of said corrosive materials with oxygen, and combinations of said materials with each other and oxygen, comprising adding to said fluids at least 5 parts per million of the soluble basic reaction product obtained by heating at an elevated temperature up to about 280° C. a diamide of the formula



in which R"CO is the naphthenyl radical of a naphthenic acid within the molecular weight range of 200 to 500 and in which the beta carbon atom is a part of a ring structure; R is an alkylene radical having not over 6 carbon atoms, R_1 is a member of the class selected from hydrogen and low molal alkyl radicals having less than 8 carbon atoms, and n is a small whole number varying from one to four; said diamide derived product being obtained by a reaction involving polymerization by way of dehydration; said product being further characterized by the absence of a cyclic amidine structure and said dehydration of the diamide eliminating from .5 to 1.5 moles of water per molecule of diamide.

2,944,969

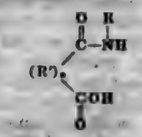
PREVENTION OF RUST AND CORROSION

Verner L. Stromberg, Shrewsbury, and William R. Hughes, Webster Groves, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 6, 1957, Ser. No. 638,428
10 Claims. (Cl. 252—8.55)

1. A method of inhibiting corrosion of corrodible ferrous metals employed in the recovery, transportation and

refining of petroleum hydrocarbon fluids; said hydrocarbon fluids containing water and a member of the group of corrosive materials consisting of hydrogen sulfide, carbon dioxide, organic acids containing 2 to 4 carbon atoms per molecule, combinations of these materials with oxygen, and combinations of said materials with each other and oxygen; said method comprising adding to said fluids at least 5 parts per million of a non-basic amidic acid of the formula:



in which R represents a member of the class of aliphatic, aryl and alicyclic hydrocarbon radicals having 6 to 22 carbon atoms, R' represents a member of the class of aliphatic alicyclic and aryl hydrocarbon radicals having not over 6 carbon atoms, and *n* represents a numeral not greater than one and including zero.

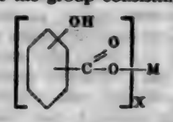
2,944,970

HIGH TEMPERATURE GREASE COMPOSITIONS CONTAINING SALICYLIC ACID DERIVATIVES

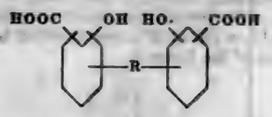
Walter H. Peterson, Point Richmond, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed July 12, 1954, Ser. No. 442,907
10 Claims. (Cl. 252—18)

1. A high temperature grease composition consisting essentially of a major proportion of a mineral lubricating oil, a gelling proportion of a non-soap colloidal gel of inorganic origin of the group consisting of amorphous inorganic oxides, clays and onium clays, and from about 1% to about 10% by weight of a hydroxy carboxy aromatic substance of the group consisting of



and



wherein the metal radical M is a polyvalent metal radical, X is an integer equivalent to the valency of the metal M, and the alkylene hydrocarbon radical R contains between about 1 and about 10 carbon atoms, the amount of said aromatic substance being sufficient to materially prolong the plastic life of the grease at high temperatures.

2,944,971

STABLE ANTI-CORROSIVE LUBRICANT COMPOSITION

Milton P. Kleinholz, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 3, 1956, Ser. No. 582,342
3 Claims. (Cl. 252—32.7)

1. A lubricating oil composition consisting essentially of a major proportion of mineral lubricating oil and minor amounts of an oil-soluble nickel dithiophosphate diester in which each organic group contains from about 4 to 14 carbon atoms, and a basic barium mahogany sulfonate formed by neutralizing a mahogany sulfonic acid with at least about 1.5 equivalents of a basic barium compound and wherein the barium content is from about 0.2 to 2.0 percent by weight and the phosphorus content is from about 0.03 to 0.3 percent by weight based on the total weight of said composition.

2,944,972

MIXED METAL SALTS OF ORGANIC THIOPHOSPHATES AND PROCESS FOR PREPARING THE SAME

Charles B. Welsh, Philadelphia, Pa., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 26, 1956, Ser. No. 618,459
8 Claims. (Cl. 252—32.7)

1. The process comprising reacting phosphorus pentasulfide with a member selected from the group consisting of aliphatic monohydric alcohols and phenols that contain 6 to 14 carbon atoms per molecule on the average in a mol ratio, respectively, of about 1:4, said reaction being effected at a temperature of about 130° to 350° F., and reacting the resultant product with a member selected from the group consisting of zinc metal and a basic zinc compound in a mol ratio of about 0.5 to 1 mol of said member per mol of phosphorus pentasulfide at temperatures of about 60° to 180° F., then reacting the resulting reaction product with sufficient basic alkaline earth metal compound to raise the pH of the reaction mixture to at least about 6 and about 0.5 to about 2 percent by weight of benzoyl peroxide, at a temperature of about atmospheric temperature to 300° F.

4. The product obtained by the process of claim 1.

5. A lubricant composition comprising a major amount of a mineral lubricating oil and containing a minor amount, sufficient to improve the wear-reducing characteristics of said oil, of a product prepared according to the process of claim 1.

2,944,973

DI-ESTER FLUIDS WITH IMPROVED WATER TOLERANCE

Theodore W. Langer, Buffalo, and Blake F. Mago, North Tonawanda, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Nov. 14, 1955, Ser. No. 546,790
9 Claims. (Cl. 252—47.5)

8. A lubricant and hydraulic fluid having improved viscometric stability and low temperature water tolerance, consisting essentially of a mixture composed of at least one aliphatic diester selected from the group consisting of the higher alkyl adipates, sebacates, azelates and pimelates, and from 2 to 22½ percent of at least one high viscosity alkyl polyoxyalkylene glycol ether selected from the group consisting of lower alkyl mono- and di-ethers of polyoxypropylene and polyoxyethylene glycols, the viscosity of said ether ranging from about 59 Saybolt Universal seconds to about 3000 Saybolt Universal seconds at 100° F.

2,944,974

LUBRICATING OIL COMPOSITIONS

Lyman Edward Lorensen, Orinda, and John Zachar and Robert Caldwell Jones, Berkeley, Calif., assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Dec. 31, 1956, Ser. No. 631,419
7 Claims. (Cl. 252—51.5)

1. A mineral lubricating oil composition comprising a major amount of mineral lubricating oil and a minor amount, sufficient to improve the pour point, viscosity index and detergency of the oil, of an oil-soluble copolymer of (1) a monovinyl-substituted pyridine of the group consisting of an unsubstituted vinylpyridine and derivatives of the said vinylpyridine having a lower alkyl group substituted on a ring carbon atom, (2) a mixture of a stearyl ester of an acrylic acid of the group consisting of acrylic acid and methacrylic acid and a lauryl ester of an acrylic acid of the group consisting of acrylic acid and methacrylic acid in the mol ratio varying from 1:4 to 4:1, respectively, and (3) a C_{1-4} alkyl ester of an acrylic acid of the group consisting of acrylic acid and methacrylic acid in an amount of from 10 to 60 mol percent

of the ester mixture of (2), the mol ratio of (1) and the ester mixture of (2) and (3) varying from 1:2 to 1:10, respectively said polymer having an average alkyl chain length of from C_{12} to C_{14} carbon atoms, the copolymer having a molecular weight of from about 5×10^4 to 2.5×10^6.

2,944,975

METHOD FOR PRODUCING AND RE-MELTING COMPOUNDS HAVING HIGH VAPOR PRESSURE AT THE MELTING POINT

Otto Gert Folberth, Erlangen, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of

Filed Aug. 9, 1956, Ser. No. 603,073
Claims priority, application Germany Sept. 14, 1955
19 Claims. (Cl. 252—62.3)



6. A method for producing a mixed crystal semiconductor body taken from the group consisting of those of the formula $(A_xB_{1-x})^{III}C_1^{V}$ and those of the formula $A^{III}(C_yD_{1-y})^{V}$, where A and B are component elements of the third group, and C and D are component elements of the fifth group of the periodic system and *x* and *y* are each greater than zero and less than one, by melting component substances forming said body within a sealed system, the partial vapor pressure of at least one component element above the melt in the state of equilibrium being considerably higher than the partial vapor pressure of another component element and considerably higher than the partial pressure of a gaseous compound of these component elements, there being no bottom body of any of the low-boiling, more volatile component elements present at the termination of the melting operation, the melt being thereafter made to solidify rapidly and in an unoriented manner in the sealed system, the speed of solidification being sufficient to obtain a body having a structure which is quasi-homogeneous macroscopically but with a crystalline lattice structure heterogeneous from the fine-structural viewpoint, and subsequently zone melting said body in a narrow melting zone in a sealed system successively in two mutually opposed directions to homogenize the product.

2,944,976

FUNCTIONAL FLUIDS

Elmer E. Waters, Westfield, John J. Shatynski, Elizabeth, and John E. Koch, Jr., Bayonne, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 19, 1956, Ser. No. 573,056
8 Claims. (Cl. 252—76)

1. A fire-resistant hydraulic fluid comprising a homogeneous mixture of about 40 to 60% of water, about 15 to 45% of a glycol, and about 15 to 45% of a polyoxyethylene ether of castor oil, said polyoxyethylene ether containing at least sufficient ethylene oxide units to make it water-soluble.

2,944,977

PROCESS FOR PREPARING AQUEOUS SOAP-SYNTHETIC DETERGENT MIXTURES IN RIBBON FORM

Russell Edward Compo, Bogota, N.J., assignor to Colgate-Palmolive Company, Jersey City, N.J., a corporation of Delaware

No Drawing. Filed Aug. 9, 1955, Ser. No. 527,487
7 Claims. (Cl. 252—121)

1. A process for the preparation of homogeneous, form-retaining ribbons of an aqueous mixture of synthetic detergent and soap which comprises forming, at a temperature above its setting-up point, a homogeneous aqueous mixture of a sodium soap of a substantially completely saturated higher fatty acid containing from about 16 to 18 carbon atoms and a sodium salt of a higher fatty acid monoglyceride sulfate detergent wherein said fatty acid contains about 12 to 18 carbon atoms, said aqueous mixture containing about 30 to about 35% water and said soap comprising about 35 to 70% of the solids in said mixture, chilling said mixture to a temperature below its setting-up point, and forming the thus set-up mixture into form-retaining ribbons.

2,944,978

PROCESS FOR BREAKING EMULSIONS OF THE OIL-IN-WATER CLASS

Louis T. Monson, La Puente, and Fred W. Jenkins, Los Angeles, Calif., assignors to Petrolite Corporation, Los Angeles, Calif., a corporation of Delaware

No Drawing. Filed July 29, 1957, Ser. No. 674,600
10 Claims. (Cl. 252—342)

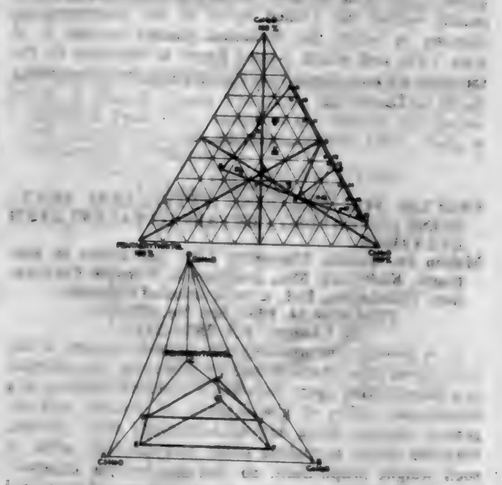
1. A process for breaking an emulsion comprising an oil dispersed in a non-oily continuous phase, in which the dispersed phase is not greater than about 20%, characterized by subjecting the emulsion to the action of a reagent which includes the ester of a polycarboxy acid and a high-molal non-ionic surfactant which is an oxyalkylated derivative produced by reaction between a 2,4,6-C_4-to-C_{14}-hydrocarbon-substituted monocyclic phenol-C_1-to-C_3 aldehyde resin and an alkylene oxide having from 2 to 4 carbon atoms selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide, glycide and methylglycide, the molecular weight of the oxyalkylated derivative being within the range of about 1,000 to about 10,000.

2,944,979

PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED PENTAERYTHRITOLS

Melvin De Groote, University City, and Owen H. Pettingill, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed May 24, 1954, Ser. No. 431,788
20 Claims. (Cl. 252—331)



1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including a cogeneric mixture of a homologous series of glycol ethers of pentaerythritol;

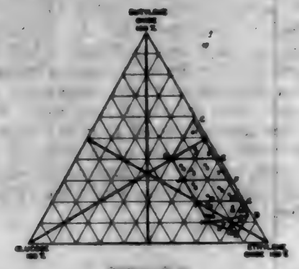
said cogeneric mixture being derived exclusively from pentaerythritol, butylene oxide, propylene oxide and ethylene oxide in such weight proportions, so that the average composition of said cogeneric mixture stated in terms of the initial reactants, lies approximately within the truncated triangular pyramid identified as E, H, F, I, G and J in Figure 1, with the proviso that the percentage of ethylene oxide is within the limits of 2% to 39.5%, by weight, and the remaining three initial reactants recalculated to 100% basis, lie approximately within the triangle defined in Figure 2 by points 1, 4 and 6.

2,944,980

PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED GLUCOSES

Melvin De Groote, University City, and Owen H. Petiniglll, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed May 24, 1954, Ser. No. 431,789
20 Claims. (Cl. 252—331)



1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including a cogeneric mixture of a homologous series of glycol ethers of glucose; said cogeneric mixture being derived exclusively from glucose, ethylene oxide and butylene oxide in such weight proportions so the average composition of said cogeneric mixture, stated in terms of initial reactants, lies approximately within the 5-sided figure of the accompanying drawing in which the minimum glucose content is at least 1.5% and which 5-sided figure is identified by the fact that its area lies within the straight lines connecting A, B, C, D, and H.

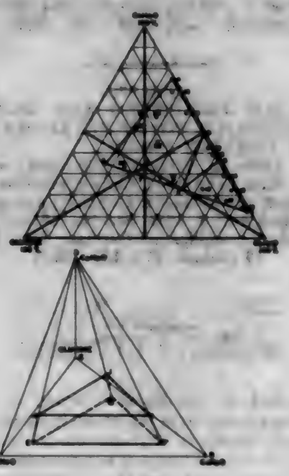
2,944,981

PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED GLUCOSES

Melvin De Groote, University City, and Owen H. Petiniglll, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed May 24, 1954, Ser. No. 431,790
20 Claims. (Cl. 252—331)

1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including a cogeneric mixture of a homologous series of glycol ethers of glucose; said cogeneric mixture being derived exclusively from glucose, butylene oxide, propylene oxide and ethylene oxide in such weight proportions, so that the average composition of said cogeneric mixture stated in terms of the initial reactants, lies approximately within the truncated triangular pyramid identified as E, H, F, I, G and J in Figure 1, with the proviso that the percentage of ethylene oxide is within the limits of 2% to 39.5%, by weight, and the remaining three initial reactants recalculated to 100% basis, lie approximately within the triangle defined in Figure 2 by points 1, 4 and 6.



2,944,982

PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED ACYCLIC DIGLYCEROLS

Melvin De Groote, University City, and Owen H. Petiniglll, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed June 10, 1954, Ser. No. 435,663
20 Claims. (Cl. 252—331)

1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including a cogeneric mixture of a homologous series of glycol ethers of acyclic diglycerol; said cogeneric mixture being derived exclusively from acyclic diglycerol, ethylene oxide and butylene oxide in such weight proportions so the average composition of said cogeneric mixture, stated in terms of initial reactants, lies approximately within the 5-sided figure of the accompanying drawing in which the minimum acyclic diglycerol content is at least 1.5% and which 5-sided figure is identified by the fact that its area lies within the straight lines connecting A, B, C, D, and H.

2,944,983

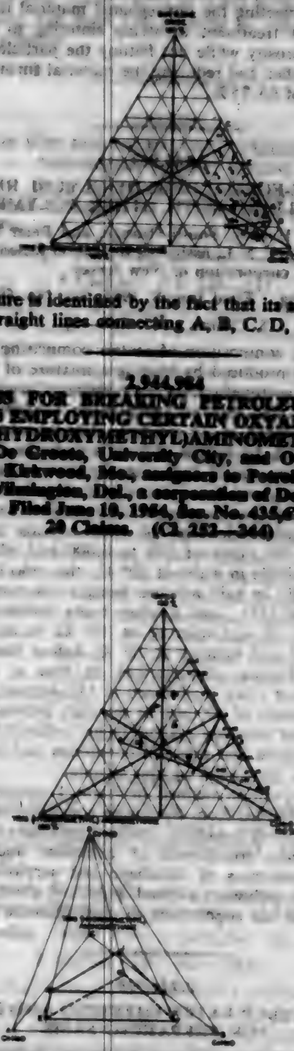
PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED TRIS(HYDROXYMETHYL)AMINOMETHANES

Melvin De Groote, University City, and Owen H. Petiniglll, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed June 10, 1954, Ser. No. 435,669
20 Claims. (Cl. 252—344)

1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including cogeneric mixture of a homologous series of glycol ethers of tris(hydroxymethyl)aminomethane; said cogeneric mixture being derived exclusively from tris(hydroxymethyl) aminomethane, ethylene oxide and butylene oxide in such weight proportions so the average composition of said cogeneric mixture, stated in terms of initial reactants, lies approximately within the 5-sided figure of the accompanying

drawing in which the minimum tris(hydroxymethyl) aminomethane content is at least 1.75% and which 5-sided figure is identified by the fact that its area lies within the straight lines connecting A, B, C, D, and H.



2,944,984

PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED TRIS(HYDROXYMETHYL)AMINOMETHANES

Melvin De Groote, University City, and Owen H. Petiniglll, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed June 10, 1954, Ser. No. 435,670
20 Claims. (Cl. 252—344)

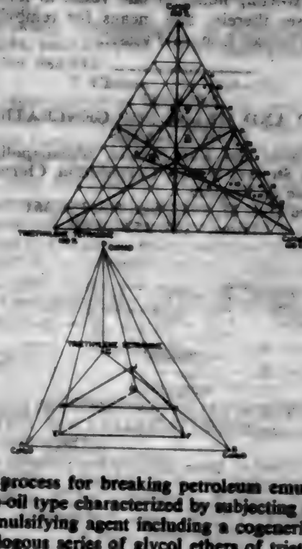
1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including a cogeneric mixture of a homologous series of glycol ethers of tris(hydroxymethyl)aminomethane; said cogeneric mixture being derived exclusively from tris(hydroxymethyl)aminomethane, butylene oxide, propylene oxide and ethylene oxide in such weight proportions, so that the average composition of said cogeneric mixture stated in terms of the initial reactants, lies approximately within the truncated triangular pyramid identified as E, H, F, I, G and J in Figure 1, with the proviso that the percentage of ethylene oxide is within the limits of 2% to 39.5% by weight, and the remaining three initial reactants recalculated to 100% basis, lie approximately within the triangle defined in Figure 2 by points 1, 4 and 6.

2,944,985

PROCESS FOR BREAKING PETROLEUM EMULSIONS EMPLOYING CERTAIN OXYALKYLATED TRIETHYLENE TETRAMINES

Melvin De Groote, University City, and Owen H. Petiniglll, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Filed Aug. 10, 1954, Ser. No. 448,925
20 Claims. (Cl. 252—344)



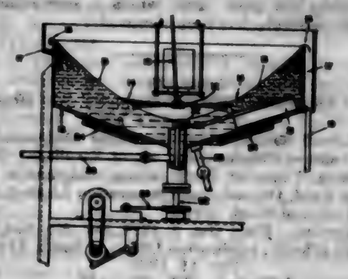
1. A process for breaking petroleum emulsions of the water-in-oil type characterized by subjecting the emulsion to a demulsifying agent including a cogeneric mixture of a homologous series of glycol ethers of triethylene tetramine; said cogeneric mixture being derived exclusively from triethylene tetramine, butylene oxide, propylene oxide and ethylene oxide in such weight proportions, so that the average composition of said cogeneric mixture stated in terms of the initial reactants, lies approximately within the truncated triangular pyramid identified as E, H, F, I, G and J in Figure 1, with the proviso that the percentage of ethylene oxide is within the limits of 2% to 39.5%, by weight, and the remaining three initial reactants recalculated to 100% basis, lie approximately within the triangle defined in Figure 2 by points 1, 4 and 6.

2,944,986

APPARATUS FOR FORMING SPHERICAL MASSES

Manly J. Powell, South Plainfield, and Tom A. Cecil, Highland Park, N.J., assignors to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland

Filed Apr. 11, 1956, Ser. No. 577,619
8 Claims. (Cl. 252—359)



1. An apparatus for forming solid spherical masses from a solids containing liquid capable of yielding such

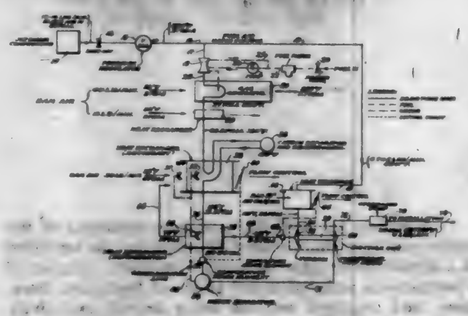
masses upon dispersion thereof in a second liquid which is at least partially immiscible therewith, comprising a vertically disposed vessel of circular transverse cross-section, having a bottom closure formed by inwardly and downwardly converging sides, for containing said second liquid; rotating paddle means in said liquid containing vessel for causing the liquid therein to swirl and form a vortex; means for dispersing said solids containing liquid in said swirling liquid in said vessel to form solid spherical masses therein; and means for removing the solid spherical masses from said vessel.

2,944,987

METHOD AND MEANS FOR GENERATING PURGE GASES

Donald A. Potter and Kurt Staiger, Indianapolis, Ind., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

Filed Dec. 27, 1955, Ser. No. 555,361
6 Claims. (Cl. 252—372)



1. The method of producing a relatively dry and inert gas for the purging of fuel cells of aircraft employing an air compressor, which comprises, bleeding some of the output of the aircraft compressor at a relatively high temperature and at a controlled pressure, mixing some of the air bled from the compressor with a liquid fuel, burning the fuel-air mixture in a gas generator, using ram air to cool the products of combustion to a temperature at which chemical decorroding agents are effective to neutralize aciduous gases in the products of combustion, passing the products of combustion through a means for removing the aciduous components thereof, cooling and using the remaining portion of air bled from the aircraft air compressor as a source of power for driving a turbine, using the exhaust from said turbine to cool the neutralized products of combustion to a low temperature slightly above the freezing point of water, removing a substantial portion of the water content, and by means of an air compressor driven by the turbine compressing and reheating the gases from which a substantial portion of the moisture has been removed.

2,944,988

PROCESS FOR PRODUCTION OF AN IRON CATALYST

Erwin Richard Sauter, Angus Farquhar McDonald, and John Andrew Charlesworth, all of Sasolburg, Orange Free State, Union of South Africa, assignors to South African Coal, Oil and Gas Corporation Limited, Sasolburg, Union of South Africa

No Drawing. Filed Oct. 5, 1956, Ser. No. 614,064
Claims priority, application Union of South Africa Oct. 11, 1955
3 Claims. (Cl. 252—443)

1. A process for the production of an iron catalyst suitable for the synthesis of hydrocarbons from a synthesis gas containing carbon monoxide and hydrogen, which comprises partially reducing magnetite to an iron material containing 30–50% of free iron and being of porous structure, impregnating the partially reduced product with catalyst promoting proportions of potassium carbonate, subjecting the impregnated material to a non-oxidising heat treatment involving sintering to at least reduce the porosity while not fritting the particles of the material together and reducing the material further to an iron content of 60–75%.

2,944,989

ACETONE-FORMALDEHYDE-GLYCOL RESINS AND BLENDS WITH OTHER POLYMERS

Mortimer T. Harvey, South Orange, and Peter L. Roumiliat, Newark, N.J., assignors to Harvel Research Corporation, a corporation of New Jersey

No Drawing. Filed June 8, 1956, Ser. No. 590,112
5 Claims. (Cl. 260—3)

1. A novel composition of matter comprising a thickened product produced by heating a mixture of (I) normally liquid acetoneformaldehyde resinous organic reaction product, said product being water soluble, capable of being converted to the infusible state when a mixture thereof and 5% by weight of lime is maintained at 300° F. for 16 hours, and of such viscosity that an 80% aqueous solution thereof has a viscosity at 25° C. of at least 300 centipoises and no greater than 20,000 centipoises, and (II) a polyalkylene glycol whose average molecular weight is in the range of 200 to 6,000 and which is at least 50% soluble in water at 20° C., the ratio by weight of (I) to (II) in said mixture being 1–10 parts of (I) to 1 part of (II), said heating being continued until the viscosity of said mixture at 25° C. is at least 10 times that of said mixture at 25° C. before heating said (I) being further characterized in that a 100-gram sample thereof when maintained at 150 degrees C. under reduced pressure of 40 mm. of mercury pressure, a residue is formed and said residue being undistillable under said temperature and pressure conditions and measuring at least 60% by weight of said sample.

5. A composition defined in claim 1 combined with a material selected from the group consisting of rubbery homopolymers of butadiene, rubbery polymers of chloroprene, rubbery copolymers of butadiene and styrene, rubbery copolymers of butadiene and acrylonitrile, natural rubber, polyvinyl alcohol, polyvinyl chloride, polyvinyl acetate and copolymers of vinyl chloride and vinyl acetate.

2,944,990

DRIED RUBBER LATEX SHEETING AND PROCESS FOR PREPARING SAME

David McCall, Sennett Estate, Singapore, assignor to Mac & Lai Company (Malaya) Limited, a company of the Colony of Singapore and Federation of Malaya

No Drawing. Filed Nov. 4, 1957, Ser. No. 694,101
Claims priority, application Great Britain June 26, 1957
4 Claims. (Cl. 260—3)

1. A process for the preparation of dried latex rubber sheeting, comprising the steps of diluting with water raw rubber latex, adding to the diluted latex a coagulant, in an amount sufficient to produce coagulation of the latex, and an additive which essentially comprises paranitrophenol, formic acid, oxalic acid, and formaldehyde, allowing a coagulum to form, preparing sheeting from the resulting coagulum, and thereafter allowing the resulting sheeting to dry in the absence of wood smoke to produce sheeting having the appearance of smoked sheeting and the qualities of natural rubber, said additive being added in an amount such that for every 1,280 parts by weight of resulting dried sheeting there are from 1 to 3 parts by weight of paranitrophenol, from 6 to 20 parts by weight of formic acid, from 0.0352 to 0.352 parts by weight of oxalic acid, and from 1 to 12 parts by weight of formaldehyde solution.

2,944,991

PROCESS FOR POST-BODYING STYRENATED OIL-MODIFIED ALKYD RESINS

William F. Hart, Pittsburgh, Pa., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 30, 1956, Ser. No. 606,984
5 Claims. (Cl. 260—22)

1. A process for increasing the viscosity of a styrenated glyceride oil modified alkyd resin comprising introducing a small but effective amount of an organic peroxide catalyst into an inert organic solvent solution of a preformed styrenated oil modified alkyd resin containing minor amounts of residual styrene monomer, which cannot be made significantly more viscous by heating alone at conventional polymerization temperatures, and heating, at a temperature between about 90° C. and the reflux temperature, in the presence of said catalyst with constant agitation to effect the viscosity increase desired wherein said preformed alkyd resin is the reaction product of an aliphatic polyhydric alcohol, a polycarboxylic acid free of non-benzenoid unsaturation and a glyceride oil, reacted with a polymerizable styrene selected from the group consisting of styrene, ring-substituted halostyrenes and ring-substituted alkyl styrenes and wherein said polycarboxylic acid is present in an amount approximating at least 90% by weight based on the total amount of polycarboxylic acid used.

2,944,992

VINYLPYRIDINE POLYMER ADHESIVE COMPOSITION CONTAINING BORIC OXIDE AND A HETERO-NITROGEN COMPOUND AS A STABILIZER

Gerard Kraus, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 1, 1957, Ser. No. 693,798
8 Claims. (Cl. 260—32.6)

1. In a fluid adhesive composition comprising a fluid adhesive cement containing boric oxide dispersed in a polymer of a monomer selected from the group consisting of an unsubstituted monovinylpyridine, an alkyl-substituted monovinylpyridine containing not more than 12 carbon atoms in alkyl-substituent groups, an unsubstituted monovinylquinoline and an alkyl-substituted monovinylquinoline containing not more than 12 carbon atoms in alkyl-substituent groups as essential adhesive ingredients, the improvement which consists of adding to the fluid adhesive cement a nitrogen compound selected from the group consisting of: (1) pyridine, (2) quinoline, (3) isoquinoline, and (4) one of the foregoing nitrogen compounds having any number of the nuclear hydrogen atoms of said nitrogen compound replaced by an aliphatic radical selected from the group consisting of saturated and unsaturated aliphatic hydrocarbon radicals, the total number of carbon atoms in the total of said aliphatic groups not exceeding 20 carbon atoms and the total number of carbon atoms in any one aliphatic group not exceeding 12 carbon atoms.

2,944,993

GLASS-REINFORCED THERMOPLASTIC RESIN COMPOSITIONS BASED ON SYNTHETIC LINEAR POLYPYROMELLITIMIDES

Donald Lee Bresser, Claymont, and Walter Murray Edwards, Ivan Maxwell Robinson, Edward Norman Squire, and Howard Warner Starkweather, Jr., Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Continuation of application Ser. No. 515,244, June 13, 1955. This application Oct. 7, 1957, Ser. No. 688,441
7 Claims. (Cl. 260—37)

1. A glass-reinforced thermoplastic resin composition, substantially unaffected in form and strength by boiling water and having a resin-to-glass bond shear strength of at least 2800 lb./sq. inch, consisting essentially of reinforcing glass and synthetic linear polypyromellitimide of low to moderate crystallinity having an inherent viscosity at 0.5 percent concentration and 25° C. in meta-cresol of at least 0.4, a glassy-state transition temperature of at least 100° C., a crystalline melting point not exceeding 400° C., and, as the sole recurring integral members of the main polymer chain, carbon and nitrogen bonded only to said carbon.

2,944,994

METHOD OF MAKING TRANSPARENT UNSATURATED POLYESTER-STYRENE-GLASS FIBER COMPOSITION

Fred G. Singleton, Pittsburgh, and Kenneth A. Schafer, Verona, Pa., assignors to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed July 7, 1954, Ser. No. 441,844
1 Claim. (Cl. 260—40)

A method of making a transparent plastic body reinforced with glass fibers, said glass fibers having a refractive index of approximately 1.549, comprising: preparing a monomeric styrene solution of an unsaturated polyester, said solution having a refractive index of approximately 1.528 measured at 20° C. using the sodium D line and a viscosity of approximately 200 centipoises, said polyester being the reaction product of the following ingredients in approximately the proportions shown:

Ingredient:	Parts by weight
Maleic anhydride	653
Phthalic anhydride	493
Propylene glycol	557
Dipropylene glycol	492

incorporating said glass fibers in said monomeric styrene solution; and curing said solution to a solid thermoset state.

2,944,995

ACCELERATION OF THE PEROXIDE CURE OF HEXAFLUOROPROPYLENE-VINYLIDENE FLUORIDE ELASTOMER WITH METHYLENE BISACRYLAMIDE

Lucian P. Doumaux and Gerald L. Barnes, South Bend, Ind., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed May 15, 1959, Ser. No. 813,345
7 Claims. (Cl. 260—41)

1. A method of curing a saturated fluorocarbon elastomer, which is a copolymer of 20% to 70% of hexafluoropropylene and correspondingly 80 to 30% of vinylidene fluoride, comprising mixing 100 parts of said elastomer with from 1 to 5 parts of a peroxide curing agent, the said peroxide being stable at temperatures below 50° C., and from 4 to 22 parts of N,N'-methylenebisacrylamide as an accelerator, at a temperature of from 150° to 350° F. for a period of from 5 minutes to 24 hours, the said parts and percentages being by weight.

2,944,996

RESINOUS CONDENSATION PRODUCT OF A POLYEPOXYPOLYETHER RESIN AND A HYDROXYL-TERMINATED POLYESTER AND METHOD OF MAKING SAME

Morris B. Sussman, Levittown, Pa., assignor to Thiokol Chemical Corporation, Trenton, N.J., a corporation of Delaware

No Drawing. Filed June 7, 1956, Ser. No. 589,856

6 Claims. (Cl. 260—45.4)

1. A resinous condensation product of (A) a resinous reaction product of an epihalohydrin with a member of the group consisting of polyhydric phenols and polyhydric alcohols with (B) a hydroxyl-terminated copolyester of diethylene glycol, propylene glycol, adipic acid and a member of the group consisting of phthalic acid, isophthalic acid and the anhydrides thereof, the relative molar proportion of the glycols in the copolyester being between about 1:2 and 2:1, the relative molar proportion of the acidic components in the copolyester being between about 1:2 and 2:1, the total glycols in the copolyester being present in a molar excess of between about 3.5 and 30% in relation to the acidic components and the proportion by weight of the copolyester to resinous condensation product ranging between about 2:1 and 1:3.

2,944,997

BLEND OF CHLOROTRIFLUOROETHYLENE HOMOPOLYMER AND CHLOROTRIFLUOROETHYLENE VINYLIDENE FLUORIDE COPOLYMER

Stephen Gates, South Charleston, and Dennis H. Mullins, St. Albans, W. Va., assignors to Union Carbide Corporation, a corporation of Delaware

Filed Oct. 3, 1956, Ser. No. 613,702

2 Claims. (Cl. 260—45.5)

1. A plastic composition having a secant tensile modulus above 1000 lbs. per sq. in. at temperatures below 215° C. comprising a blend of a solid resinous homopolymer of chlorotrifluoroethylene intimately admixed with a copolymer of chlorotrifluoroethylene and vinylidene fluoride containing from 5% to 6% by weight of vinylidene fluoride and from 94% to 95% by weight of chlorotrifluoroethylene and having an intrinsic viscosity of 0.75 to 3.0, the proportions of the homopolymer and copolymer in the blend being such that the vinylidene fluoride content of the blend is at least 0.5% by weight and not more than 1.8% by weight.

2,944,998

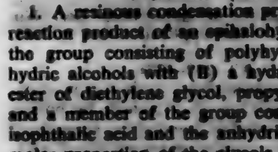
STABILIZED CURED POLYURETHANES

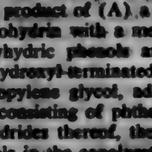
Edwin C. Buxbaum, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 30, 1958, Ser. No. 745,258

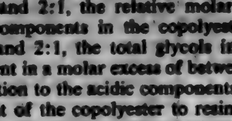
8 Claims. (Cl. 260—45.8)

1. A cured polyurethane polymer product stabilized against acidic gas fumes by having incorporated therein from about 0.1 to 2% by weight of a compound taken from the group consisting of a compound having the structure

(A) 

(B) 

and

(C) 

in which compound R is a radical taken from the group consisting of H, arylene and lower alkyl; R' is an arylene radical; R'' is a lower aliphatic radical; R''' is a radical taken from the group consisting of hydrogen and lower alkyl; a is an integer within the range of 0:1 and b is an integer within the range of 1:2 with the proviso that when integer a is 1, integer b is 2.

2,944,999

RESINOUS COMPOSITIONS LIGHT STABILIZED WITH A 2,4-DIAMINO-6-(p-ALKOXY-STYRYL)-s-TRIAZINE

Francis J. Abbruscato, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 26, 1958, Ser. No. 763,441

15 Claims. (Cl. 260—45.8)

1. A resinous composition of matter which comprises a thermosetting resinous condensate of from about 1 to 6 mols of an aldehyde with a mol of an amidogen selected from the group consisting of melamine, urea and benzoguanamine, and as a light-stabilizer therefor, from about 0.01 to 5% of a 2,4-diamino-6-(p-alkoxystyryl)-S-triazine.

2,945,000

LINEAR POLYESTER COMPOSITIONS CONTAINING AN ALKYL GALLATE AS A HEAT STABILIZER

Selma Hermsen Long, John W. Tamblyn, and Louis D. Moore, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 21, 1956, Ser. No. 611,368

3 Claims. (Cl. 260—45.85)

1. A polyester composition comprising a linear polyester of a dihydric alcohol with two dicarboxylic acids, stabilized against degradation by heat by a content of from 0.1 to 10 parts by weight of octadecyl gallate per 100 parts by weight of polyester.

2,945,001

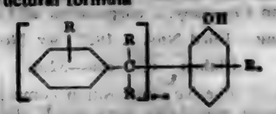
SYNERGISTIC ANTIOXIDANTS

Ronald B. Specht, Franklin Township, Portage County, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

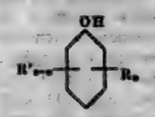
No Drawing. Filed Aug. 27, 1956, Ser. No. 606,218

11 Claims. (Cl. 260—45.95)

3. An oxidizable diene rubber containing as an antioxidant in an antioxidant amount a mixture of alkylated monohydroxy phenols comprised of (1) from 90 to 10 percent by weight of aralkyl phenols conforming to the following structural formula



wherein R is selected from the group consisting of hydrogen and alkyl radicals having from 1 to 9 carbon atoms, n is selected from 0, 1 and 2 and x is selected from 1, 2 and 3 and wherein the value of n is always at least 1 less than the value of x and (2) from 10 to 90 percent by weight of tertiary alkylated phenols conforming to the following structural formula



wherein x is selected from 2 and 3 and n is selected from 0, 1, 2 and 3 but not exceeding the value of x and wherein R is selected from the group consisting of tertiary butyl and tertiary amyl radicals and R' is selected from the group consisting of tertiary octyl and tertiary nonyl radicals, R and R' being attached to the benzene ring in the 2, 4 and 6 positions.

2,945,002

2,2'-DIHYDROXY-4,4'-DIMETHOXYBENZIL AS AN ULTRAVIOLET STABILIZER

James A. Van Allan, Rochester, N.Y., and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 31, 1957, Ser. No. 662,567

7 Claims. (Cl. 260—45.95)

1. A polyester made from 1,5-pentanediol, sebacic acid and p,p'-dicarboxy diphenyl sulfone containing 0.1–10% of 2,2'-dihydroxy-4,4'-dimethoxybenzil.

2,945,003

NOVEL COPOLYMERS

Melvin M. Olson, Minneapolis, Minn., and Roger M. Christenson, Richland Township, Allegheny County, Pa., assignors to Pittsburgh Plate Glass Company

No Drawing. Filed Dec. 14, 1953, Ser. No. 398,264

2 Claims. (Cl. 260—47)

1. A method of forming a copolymer resin which is soluble in toluene, said method comprising heating to a temperature of about 50° C. to about 200° C., a mixture of (A) about 0.2 to about 5 percent by weight based upon the mixture of an organic peroxide catalyst of interpolymerization of the mixture; (B) about 10 to about 90 percent by weight based upon the mixture of a polymerizable monomeric compound containing a $>C=CH_2$ group, the rest of the mixture being a polysiloxane which is soluble in aromatic hydrocarbon solvents and which consists of units which are of the average empirical formula:

$$RSiO_{\frac{4-x}{2}}(OR)_x$$

wherein R is a group selected from the class consisting of allyl and methallyl, x being a number from 1.5 to 2.5, and continuing to heat the mixture until said interpolymer is formed.

2,945,004

EPOXIDE RESINS REACTED WITH POLYHYDRIC PHENOLS

Sylvan Owen Greenlee, Racine, Wis., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York

No Drawing. Continuation of application Ser. No. 315,424, Oct. 17, 1952. This application May 29, 1956, Ser. No. 587,958

2 Claims. (Cl. 260—47)

1. The three-step process of producing long chain polymers and insoluble, infusible products, which comprises first reacting a dihydric phenol free from reactive groups other than phenolic hydroxyl groups with more than 1 mol and not more than about 2 mols of a chlorhydrin selected from the class which consists of epichlorhydrin and glycerol dichlorhydrin in the presence of caustic alkali to form a low melting point epoxide resin, admixing with the epoxide resin a dihydric phenol free from reactive groups other than phenolic hydroxyl groups, with the proportion of dihydric phenol to epoxide resin less than that corresponding to the epoxide equivalent of the resin, heating to effect reaction of the dihydric phenol with said epoxide resin to form a higher molecular weight and higher melting point epoxide resin, and further reacting the resulting resin with a dihydric phenol in a sufficient proportion to produce an insoluble, infusible product.

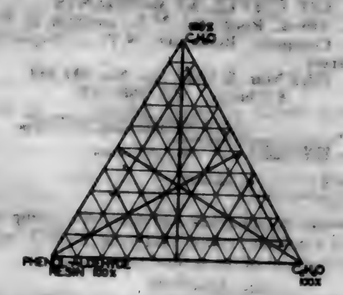
2,945,005

LACTONE-DERIVED COMPOUNDS OF CERTAIN OXYALKYLATED RESINS AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Kwan-Ting Shen, Brentwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Original application Oct. 5, 1953, Ser. No. 384,307. Divided and this application Dec. 6, 1956, Ser. No. 626,616

9 Claims. (Cl. 260—63)

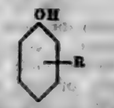


1. The chemical manufacturing process which includes reacting

(AA) hydrophile synthetic products; said hydrophile synthetic products being oxyalkylated resins formed by reaction of

(A) an alpha-beta alkylene oxide having not more than 4 carbon atoms and selected from the class consisting of ethylene oxide, propylene oxide, butylene oxide glycide and methylglycide; and

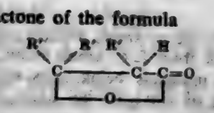
(B) an oxyalkylation-susceptible, fusible, organic solvent-soluble, water-insoluble phenol-aldehyde resin; said resin being derived by reaction between a difunctional monohydric phenol and an aldehyde having not over 8 carbon atoms and reactive toward said phenol; said resin being formed in the substantial absence of trifunctional phenols; said phenol being of the formula



in which R is a hydrocarbon radical having at least 4 and not more than 18 carbon atoms and substituted in the 2,4,6 position; said oxyalkylated resins being characterized by the introduction into the resin molecule of a plurality of divalent radicals having the formula $(R_1O)_n$, in which R_1 is a member selected from the class consisting of ethylene radicals, propylene radicals, butylene radicals, hydroxypropylene radicals, and hydroxybutylene radicals and n is a numeral varying from 1 to 40; with the proviso that at least 2 moles of alkylene oxide be introduced for each phenolic nucleus;

with

(BB) a beta-lactone of the formula



wherein R' is a radical selected from the group consisting of hydrogen and unreactive lower alkyl, phenyl, benzyl and cyclohexyl radicals; said reaction being conducted in a substantially anhydrous state in the presence of an acid catalyst and at a temperature at least about 100° C., and below the point of pyrolysis;

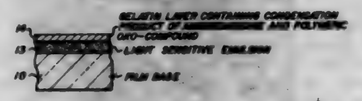
the products of reaction being organic solvent-soluble, the molar ratio of reactants being at least 2 moles of the lactone for each mole of oxyalkylated resin and not in excess of 6 moles of the lactone for each hydroxyl group present in the oxyalkylated phenol-aldehyde resin.

2,945,806

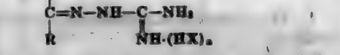
REACTION PRODUCTS OF CARBONYL CONTAINING POLYMERS AND AMINOGUANIDINE THAT ARE USEFUL AS MORDANTS

Louis M. Minsk, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Mar. 5, 1959, Ser. No. 797,358
6 Claims. (Cl. 260—65)



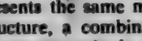
1. A vinyl polymer selected from the group consisting of (1) a polymer comprising from 30–90% by weight of a recurring unit of the geenral structure:



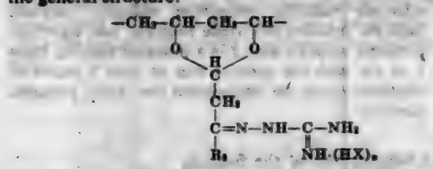
and from 70–10% by weight of a recurring unit of the structure:



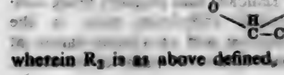
wherein n represents a digit of from 0 to 1, R represents a member selected from the group consisting of a hydrogen atom and an alkyl group of from 1–4 carbon atoms, X represents the radical of an acid selected from the group consisting of hydrochloric acid, lactic acid, glycolic acid, an alkanesulfonic acid containing from 1–4 carbon atoms and a monobasic saturated aliphatic acid containing from 2–4 carbon atoms and R_1 represents a recurring unit selected from the group consisting of an oxo-compound unit of the structure



wherein R represents the same member as in the above said general structure, a combination of said oxo-compound units and styrene units in the proportions of from 10–15% by weight of said oxo-compound units and 90–85% by weight of said styrene units, and a combination of said oxo-compound units and alkyl methacrylate units containing from 1–4 carbon atoms in the proportions of from 10–15% by weight of said oxo-compound units and from 90–85% by weight of said alkyl methacrylate units, and (2) a polymer comprising of at least 30% by weight of a recurring unit of the general structure:



wherein n and X are as above defined and R_2 represents an alkyl group of from 1–4 carbon atoms, the remainder of the polymer molecule being units selected from the group consisting of vinyl alcohol units, vinyl ketoacetal units of the formula:



wherein R_3 is as above defined, and combinations thereof in any proportions with units of a vinyl ester of a monobasic saturated fatty acid containing from 2–4 carbon atoms.

2,945,897

LINEAR CONDENSATION POLYMERS FROM p-CARBOXYCARBANILIC ACID

John R. Caldwell and Russell Gilkey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 17, 1956, Ser. No. 598,255
16 Claims. (Cl. 260—75)

1. A highly polymeric linear polyester of (I) a dicarboxylic acid composed of (A) from 10 to 100 mole percent of p-carboxycarbanilic acid, (B) from 0 to 90 mole percent of a hexacarbocyclic acid selected from the group consisting of terephthalic acid, hexahydroterephthalic acid, p,p'-sulfonyldibenzoic acid, 4,4'-diphenic acid, 1,2-di(p-carboxyphenoxy)ethane, and 1,2-di(p-carboxyphenyl)ethane and (C) a dicarboxylic acid different from said (A) and (B) acids which is a bifunctional organic acid containing from 6 to 20 carbon atoms, the amount of acid (C) being the mole percentage remaining from a minimum of 10 mole percent of acid (A) and 50 mole percent of acid (B) so that acid (C) is only present when there is at least 50 mole percent of acid (B) whereby the mole percentage of acid (C) has a maximum value of 40 mole percent, the sum of the mole percentages of acid (A), acid (B) and acid (C) being 100 mole percent, and (II) a glycol having the formula HO—R—OH wherein R is an aliphatic hydrocarbon radical containing from 2 to 10 carbon atoms, said polyester being characterized by melting at from about 100° C. to about 300° C. and having a minimum inherent viscosity of about 0.6 in 60% phenol and 40% tetrachloroethane and the structure of said polyester being characterized by containing from 10 to about 100 mole percent of recurring groups connected at both ends by ester linkages and having the following structure containing a urethane moiety:



wherein R is said aliphatic hydrocarbon radical.

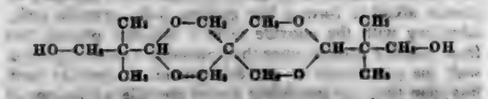
2,945,906

CONDENSATION POLYMERS DERIVED FROM SPIROGLYCOLS

John R. Caldwell, Russell Gilkey, and Benjamin S. Meeks, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 23, 1956, Ser. No. 605,714
16 Claims. (Cl. 260—75)

1. A high melting linear highly polymeric condensation polymer of (A) at least one bifunctional compound selected from the group consisting of carbonic acid, a dicarboxylic acid containing from 2 to 20 carbon atoms and an organic diisocyanate containing from 6 to 23 carbon atoms and (B) at least one bifunctional glycol composed of from 50 to 100 mole percent of a spiro glycol having the following formula:



and from 0 to 50 mole percent of an aliphatic glycol having from 2 to 12 carbon atoms, the relative proportions of (A) and (B) constituents being such as to constitute a polymer selected from the group consisting of polyesters and polyurethanes, which polymer melts at between about 150° C. and about 270° C.

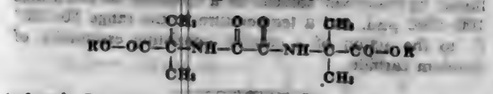
2,945,909

OXALYL DIIMINO BIS(2,2-DIMETHYL ACETIC ACID), ESTERS AND CONDENSATION POLYMERS

John R. Caldwell and Clarence C. Donnelly, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 1, 1956, Ser. No. 612,987
5 Claims. (Cl. 260—75)

1. A compound having the formula:



wherein R represents a member selected from the group consisting of a hydrogen atom and an alkyl radical containing from 1 to 8 carbon atoms.

2,945,910

PREPARING POLYESTER FIBERS OF IMPROVED DYEABILITY USING AROMATIC AMINES

John R. Caldwell and Russell Gilkey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Oct. 24, 1956, Ser. No. 617,904
9 Claims. (Cl. 260—75)

1. A process for preparing polyester fibers which can be readily dyed with metallizable dyes comprising the following steps, (1) forming a mixture of (A) a linear, highly polymeric, condensation polyester of (*a*) at least one bifunctional dicarboxylic acid comprising at least 50 mole percent of an acid selected from the group consisting of terephthalic acid, 4,4'-sulfonyldibenzoic acid, 4,4'-benzophenonedicarboxylic acid, 4,4'-ethylenedioxydibenzoic acid, 4,4'-ethylenedibenzoic acid, 4,4'-diphenic acid and trans-1,4-cyclohexanedicarboxylic acid and (*b*) at least one bifunctional glycol containing from 2 to 12 carbon atoms, said polyester being fiber-forming and having a melting point of at least 150° C., with (B) a non-metallized aromatic compound having from 6 to 20 carbon atoms and from 1 to 2 carbocyclic rings, which aromatic compound is entirely composed of carbon atoms, hydrogen atoms, at least one amino group directly connected to a benzene ring and only those other substituents selected from the group consisting of (*a*) halide atoms, (*b*) nitro radicals, (*c*) alkoxy radicals, (*d*) carbonyl radicals, (*e*) hydrocarbon radicals, (*f*) sulfonyl radicals each of which substituents is directly connected to a benzene ring, and (*g*) hydrogen atoms, said mixture containing from about 2 to about 10% by weight of said compound (B), (2) forming a fiber of said mixture of (A) and (B) and (3) bringing said fiber into intimate contact with an aqueous solution of a water-soluble mordant salt of a metal selected from the group consisting of chromium, cobalt, nickel and copper, said contact being at a temperature of from about 80° C. up to the boiling point of said aqueous solution whereby there is formed a fiber which can be readily dyed with a metallizable dye, said fiber containing from about 1% to about 10% based on the weight of the fiber of said mordant salt.

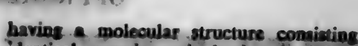
2,945,911

POLYAMIDES FROM OXAMIC ACIDS

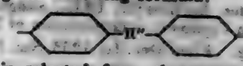
John R. Caldwell and Russell Gilkey, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 23, 1956, Ser. No. 605,715
4 Claims. (Cl. 260—78)

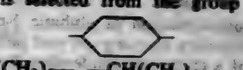
1. A readily dyeable, water-insoluble fiber of a highly polymeric, linear condensation polymer melting at above 200° C., having an intrinsic viscosity of at least 0.4 and having a molecular structure consisting essentially of identical recurring units having the following formula:



wherein R' represents an aliphatic radical containing from 4 to 15 carbon atoms which contains at least one ether linkage in the chain of atoms separating the —NH— groups, and R represents an aromatic radical containing from 6 to 20 carbon atoms selected from the group consisting of 1,4-phenylene, 1,4-naphthalene, 1,5-naphthalene, 2,6-naphthalene, 4,4'-diphenylene and 4,4'-bis phenyl radicals having the following formula:



wherein R'' is selected from the group consisting of



—CH_2—, —$(CH_2)_2$—, —$CH(CH_3)$—, —$CH(C_2H_5)$—, —$CH(C_2H_7)$—, —$C(CH_3)_2$—, —O—, —O—CH_2—, —O—$(CH_2)_2$—O—, —O—$(CH_2)_4$—O—, —S— and —SO_2—.

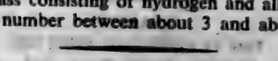
2,945,912

POLYMERIZABLE POLYESTERS AND POLYMERS THEREOF

Alan R. Berens, Hudson, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 8, 1958, Ser. No. 707,684
7 Claims. (Cl. 260—78.3)

1. A copolymer of a monomeric mixture consisting of (1) from 50 to 98%/wt. of a haloethylene selected from the class consisting of vinyl chloride, vinyl bromide, vinyl fluoride, vinylidene chloride, vinylidene bromide and vinylidene fluoride and (2) from 2 to 50%/wt. of a mono-unsaturated mono-ester of a poly-caprolactone polyester, said mono-unsaturated ester having the structure:



wherein R, R' and Z are each independently selected from the class consisting of hydrogen and alkyl and n is an average number between about 3 and about 23.

2,945,913

WATER-SOLUBLE INTERPOLYMERS OF ACRYLIC ACIDS AND 2-ETHYLHEXYL ESTERS OF ACRYLIC ACIDS AND METHOD OF MAKING SAME

John B. Ott, Northampton, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 22, 1956, Ser. No. 573,069
8 Claims. (Cl. 260—86.1)

1. Water-soluble interpolymers consisting of 93.5–98.5 mol percent of an acidic monomer of the group consisting of acrylic acid, methacrylic acid and mixtures thereof and, correspondingly, 6.5–1.5 mol percent of a monomer of the group consisting of 2-ethylhexyl acrylate, 2-ethylhexyl methacrylate and mixtures thereof.

2,945,914

ESTERS OF BORIC ACID AND COPOLYMERS CONTAINING A PLURALITY OF HYDROXYL GROUPS

James Hartley, Wirral, and John D. Downer, Newton, England, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Jan. 27, 1958, Ser. No. 711,181
Claims priority, application Great Britain Feb. 1, 1957
11 Claims. (Cl. 260—87.3)

1. A boric acid ester of a polymeric compound containing a plurality of non-acidic hydroxyl groups, said

polymeric compound having a molecular weight of at least 1000, and having been prepared by copolymerization of an alpha-alkene having at least 8 carbon atoms per molecule and a vinyl ester of a lower fatty acid, and thereafter hydrolyzing the resulting copolymer to hydrolyze at least a part of the vinyl ester linkages to hydroxyl groups.

2,945,015

CATALYST AND PROCESS FOR PRODUCING OLEFIN POLYMERS

Clyde V. Detter, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 16, 1955, Ser. No. 553,436
10 Claims. (Cl. 260—88.2)

1. In the polymerization of aliphatic 1-olefins the improvement comprising carrying out said polymerization in the presence of a chromium oxide-phosphorus oxide supported catalyst, said catalyst containing a phosphorus to chromium atomic ratio in the range 0.1:1 to 4:1 and at least a portion of the chromium being in the hexavalent state.

2,945,016

SEPARATION OF POLYMERS

Bruce C. Benedict, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 27, 1956, Ser. No. 567,455
12 Claims. (Cl. 260—94.9)

1. A process for fractionating a normally solid polymer of an aliphatic 1-olefin to obtain at least two fractions which differ from each other in physical properties which comprises contacting a solution of said polymer in a naphthenic hydrocarbon having from 5 to 6 carbon atoms in naphthenic ring with a paraffinic hydrocarbon containing up to and including 16 carbon atoms per molecule, said contacting occurring at a temperature at least as high as the upper cloud point of the solution of said polymer in said naphthenic and paraffinic hydrocarbons, thereby causing the formation of a polymer-rich phase and a solvent-rich phase; and separately recovering said phases.

2,945,017

POLYETHYLENE PROCESS

Gaetano F. D'Alelio, South Bend, Ind., assignor, by mesne assignments, to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 30, 1957, Ser. No. 693,231
13 Claims. (Cl. 260—94.9)

1. The method of polymerizing ethylene that includes the step of subjecting ethylene in an inert solvent to the action of a catalyst comprising titanium and a reaction product of titanium and $SbCl_5$ prepared by heating together titanium and $SbCl_5$ as the sole catalyst forming reactants to a temperature of 130–1800° C. for a time insufficient to consume all the titanium metal.

2,945,018

OLEFIN POLYMERIZATION

Rudolph F. Fischer, Oakland, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed Jan. 21, 1958, Ser. No. 710,177
13 Claims. (Cl. 260—94.9)

1. The process which comprises polymerizing a mono alphaolefin at temperatures ranging from about 100° C. to about 200° C. at elevated pressures up to 1000 p.s.i.g. and in the presence of a composition consisting essentially of the reaction product of aluminum and aluminum alkyl sesquihalide, the mole ratio thereof being from about 1:1 to about 5:1.

2,945,019

ETHYLENE POLYMERIZATION

Walter R. Wamsley, Ellicott City, Md., assignor to W. R. Grace & Co., Clarksville, Md., a corporation of Connecticut

No Drawing. Filed June 9, 1959, Ser. No. 819,919
9 Claims. (Cl. 260—94.9)

1. The process of forming normally solid polymers of ethylene which comprises subjecting ethylene in an inert liquid hydrocarbon solvent at a pressure in the range 100–1000 p.s.i. and a temperature in the range 50–300° C. to the action of a catalyst consisting essentially of titanium carbide.

2,945,020

METHOD OF FORMING FINE POLYETHYLENE POWDERS

Wade E. Hall, Millersville, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 13, 1959, Ser. No. 833,483
7 Claims. (Cl. 260—94.9)

1. A method for reducing the particle size of polyethylene which comprises admixing relative proportions of 5–25 parts by weight polyethylene at a temperature less than the melting point of the polyethylene in the range of 80°–135° C. with 100 parts by weight of a solvent-nonsolvent mixture, and agitating the resulting mixture at said temperature for a period of 5–45 minutes to form finely-divided polyethylene, said solvent-nonsolvent mixture consisting essentially of 75%–95% by weight of a hydrocarbon solvent for polyethylene selected from the group consisting of benzene, toluene, xylene, pentane, neopentane, hexane, cyclohexane, heptane, octane and mixtures thereof, the balance being a polar nonsolvent for polyethylene selected from the group consisting of methanol, ethanol, propanol, butanol, ethylene glycol, glycerol, acetone, methyl ethyl ketone, methyl isobutyl ketone, and mixtures thereof.

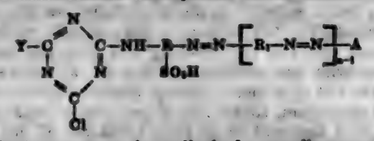
2,945,021

MONOAZO AND DISAZO TRIAZINE DYES

Alfred Fasciati, Bottmingen, Raymond Genet, Binningen, Henri Rist, Arlesheim, and Karl Seitz, Neu-Allschwil, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed Sept. 5, 1957, Ser. No. 682,582
Claims priority, application Switzerland Sept. 14, 1956
14 Claims. (Cl. 260—153)

1. A water-soluble azo dyestuff of the formula



wherein A represents the radical of a coupling component containing a water-solubilizing group and also a member selected from the group consisting of the hydroxyl and amino groups, said radical being bound to the adjacent azo linkage in a position vicinal to said member and being selected from the group consisting of pyrazolone, quinoline, benzene and naphthalene radicals, n represents a whole positive number up to 2, R_1 represents a member selected from the group consisting of a benzene and a naphthalene radical, R represents a benzene radical, and Y represents a member selected from the group consisting of the NH_2— group, the radical of a primary aliphatic amine having less than 12 carbon atoms and bound to the triazine nucleus by its nitrogen atom, the radical of an aromatic at most bicyclic amino sulfonic acid bound to the triazine nucleus by its amino group, and the radical of an aminobenzene-carboxylic acid bound to the triazine nucleus by its amino group.

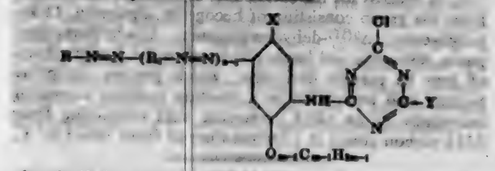
2,945,022

MONOAZO AND DISAZO TRIAZINE DYES

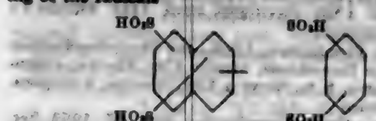
Alfred Fasciati, Bottmingen, Raymond Genet, Binningen, Henri Rist, Arlesheim, and Karl Seitz, Neu-Allschwil, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed Sept. 9, 1957, Ser. No. 683,583
Claims priority, application Switzerland Sept. 14, 1956
9 Claims. (Cl. 260—153)

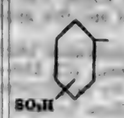
1. An azo dyestuff of the formula



wherein R is a member selected from the group consisting of the radicals



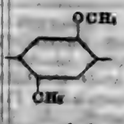
and



R_1 is a member selected from the group consisting of the radicals



and



n and m each represents a whole positive number of at most 2; X is a member selected from the group consisting of the methyl group, the acetylamino group, the propionylamino group, the methanesulfonylamino group and the $H_2N—CO—NH—$ group; and Y represents a member selected from the group consisting of the NH_2— group, the methylamino group, ethylamino group, n-butylamino group, hexylamino group, isobutylamino group, diethylamino group, hydroxyethylamino group, hydroxybutylamino group, morpholino group, γ-methoxypropylamino group, benzylamino group, hydroxypropylamino group, sulfophenylamino group, sulfonaphthylamino group, carboxymethylamino group and the m-sulfophenyl —NH—NH— group.

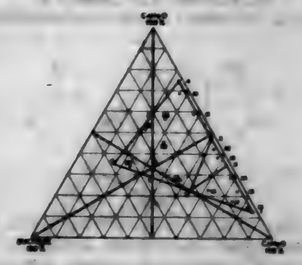
2,945,023

CERTAIN OXYALKYLATED SUCROSES AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Owen H. Pettingill, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Original application May 24, 1954, Ser. No. 431,782, now Patent No. 2,819,215, dated Jan. 7, 1958. Divided and this application Apr. 10, 1957, Ser. No. 651,946
7 Claims. (Cl. 260—209)

1. A cogeneric mixture of a homologous series of glycol ethers of sucrose; said cogeneric mixture being derived exclusively from sucrose, butylene oxide, propylene oxide, and ethylene oxide in such weight proportions so that the average composition of said cogeneric mixture, stated in terms of the initial reactants, is such



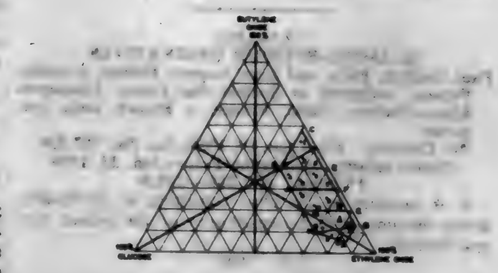
that the percentage of ethylene oxide is within the limits of 2% to 39.5% by weight, and the remaining three initial reactants recalculated to 100% basis lie approximately within the triangle defined in Figure 2 by points 1, 4, and 6.

2,945,024

CERTAIN OXYALKYLATED GLUCOSES AND METHOD OF MAKING SAME

Melvin De Groote, St. Louis, and Owen H. Pettingill, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Original application May 24, 1954, Ser. No. 431,789. Divided and this application Apr. 17, 1957, Ser. No. 653,447
7 Claims. (Cl. 260—209)



1. A cogeneric mixture of a homologous series of glycol ethers of glucose; said cogeneric mixture being derived exclusively from glucose, ethylene oxide and butylene oxide in such weight proportions so the average composition of said cogeneric mixture, stated in terms of initial reactants, lies approximately within the 5-sided figure of the accompanying drawing in which the minimum glucose content is at least 1.5% and which 5-sided figure is identified by the fact that its area lies within the straight lines connecting A, B, C, D, and H.

2,945,025

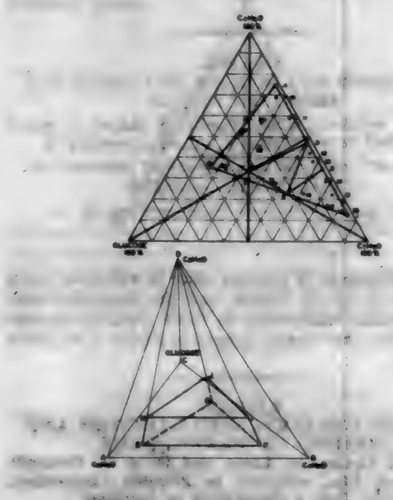
CERTAIN OXYALKYLATED GLUCOSES

Melvin De Groote, St. Louis, and Owen H. Pettingill, Kirkwood, Mo., assignors to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Original application May 24, 1954, Ser. No. 431,790. Divided and this application May 27, 1957, Ser. No. 661,738
10 Claims. (Cl. 260—209)

1. A cogeneric mixture of a homologous series of glycol ethers of glucose; said cogeneric mixture being derived exclusively from glucose, butylene oxide, pro-

pylene oxide and ethylenecoxide in such weight proportions, so that the average composition of said cogeneric mixture stated in terms of the initial reactants, lies approximately within the truncated triangular pyramid identified as E, H, F, I, G and J in Figure 1, with the



proviso that the percentage of ethylene oxide is within the limits of 2% to 39.5%, by weight, and the remaining three initial reactants recalculated to 100% basis, lie approximately within the triangle defined in Figure 2 by points 1, 4 and 6.

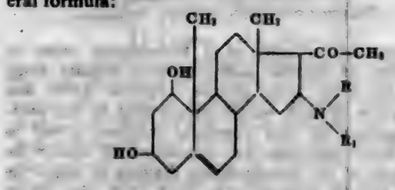
2,945,026

16-AMINO-STEROID DERIVATIVES

Paul Galibot, Paris, and Jean Auguste Robert, Gentilly, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a French body corporate

No Drawing. Filed Jan. 19, 1959, Ser. No. 787,336
Claims priority, application France Jan. 23, 1958
9 Claims. (Cl. 260—239.5)

9. A member of the class consisting of 1β:3β-dihydroxy-16α-amino-pregn-5-en-20-ones of the planar general formula:



and their acid addition salts, wherein the grouping



is selected from the class consisting of monoalkylamino, dialkylamino, mono (hydroxyalkyl) amino and N-alkyl-N-hydroxyalkyl amino in each of which the alkyl residues contain at most 8 carbon atoms; aralkylamino containing at most 8 carbon atoms; pyrrolidino, piperidino, morpholino, piperazino, alkylpiperazino groups in which the alkyl group contains up to 4 carbon atoms, the said groups containing hydroxy substituents and the said groups containing hydroxyalkyl substituents in which the alkyl residue contains up to 4 carbon atoms.

2,945,027

PROCESS FOR THE PREPARATION OF PSEUDOSAPOGENINS

George Francis Harold Green, London, John Christopher Hamlet, Ulverston, and Alan Gibson Long, Groomford, England, assignors to G.N.R.D. Patent Holdings Limited, London, England, a British company

No Drawing. Filed Dec. 3, 1956, Ser. No. 625,621
2 Claims. (Cl. 260—239.55)

1. A process for the conversion of a compound selected from the group consisting of hecogenin, tigogenin, 11-ketotigogenin, $\Delta^{9(11)}$-dehydrotigogenin, 11α-hydroxy-tigogenin, diosgenin and lower alkyl carboxylic 3-esters thereof into its pseudo derivative, which process comprises heating said compound in a reaction medium consisting essentially of an alkyl carboxylic acid containing from 6–12 carbon atoms at a temperature of from 160–350° C.

2,945,035

Δ^4-22a-SPIROSTEN-3α-ol-7,11 DIONE AND ESTERS THEREOF AND PROCESS FOR THE PRODUCTION THEREOF

Carl Djerassi, Birmingham, Mich., and Franz Sondheimer and George Rosenkranz, Mexico City, Mexico, assignors to Syntex, S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Original application Nov. 27, 1953, Ser. No. 394,904, now Patent No. 2,790,799, dated Apr. 30, 1957. Divided and this application Feb. 4, 1957, Ser. No. 642,921
Claims priority, application Mexico Nov. 27, 1952
12 Claims. (Cl. 260—239.55)

1. A process for the preparation of esters of Δ^4-22a-spirosten-3α-ol-7,11-dione selected from the group consisting of lower fatty acid esters and the benzoic acid ester which comprises treating the corresponding esters of $\Delta^{7,9(11)}$-22a-spirostadiene-3α-ol with sodium dichromate, whereby oxidative attack is produced at positions C–7 and C–11 of the molecule with simultaneous introduction of a new double bond in position 8,9.

3. A new compound selected from the group consisting of Δ^4-22a-spirosten-3α-ol-7,11-dione lower fatty esters thereof and the benzoic acid ester thereof.

2,945,029

PROCESS FOR THE PRODUCTION OF 3α-ACETOXY-17α-HYDROXY-16α-METHYL-$\Delta^{9(11)}$-PREGNENE-20-ONE AND INTERMEDIATES

Gerard Nominé, Noisy-le-Sec, France, assignor to Les Laboratoires Francais de Chimiotherapie, Paris, France, a corporation of France

No Drawing. Filed Dec. 31, 1959, Ser. No. 863,110
Claims priority, application France January 7, 1959
9 Claims. (Cl. 260—239.55)

1. 3α - acetoxy - 16 - methyl - 20 - dioxolane - Δ^{16}-pregnene-11-one.

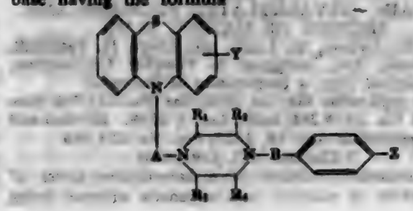
2,945,030

SUBSTITUTED ARALKYL PHENOTHIAZINYL-ALKYL PIPERAZINES

Maxwell Gordon, Elkins Park, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed July 24, 1958, Ser. No. 750,587
5 Claims. (Cl. 260—243)

1. A chemical compound of the class consisting of a free base and its nontoxic acid addition salts, said free base having the formula



in which Y is a member selected from the group consisting of hydrogen, chlorine, trifluoromethyl, methyl, methoxy, trifluoromethoxy, acetyl, trifluoroacetyl, methylmercapto, trifluoromethylmercapto, methylsulfonyl, trifluoromethylsulfonyl, and cyano; A is a divalent alkylene chain containing 2 to 4 carbon atoms, separating the two nitrogens to which it is attached by at least two carbon atoms; R_1, R_2, R_3, and R_4 are members selected from the group consisting of hydrogen, methyl, and ethyl; B is a member selected from the group consist- of a divalent alkylene chain containing 1 to 4 carbon atoms and a divalent alkenyl chain containing 3 to 4 carbon atoms; and Z is a member selected from the group consisting of amino, mono methylamino, dimethylamino, alkanoylamino containing 2 to 6 carbon atoms, benzoylamino, nitro, methoxy, and methylmercapto.

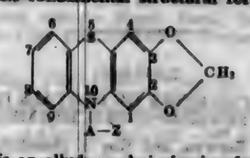
2,945,031

METHYLENEDIOXY SUBSTITUTED PHENOTHIAZINES

Maxwell Gordon, Elkins Park, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Oct. 13, 1958, Ser. No. 766,658
7 Claims. (Cl. 260—243)

1. Chemical compounds of the class consisting of a free base and its nontoxic pharmaceutically acceptable organic and inorganic acid addition salts, the free base containing the fundamental structural formula:



in which A is an alkylene chain having from 2 to 4 carbon atoms and separating the nitrogens to which it is attached by at least 2 carbon atoms; and Z is a member selected from the group consisting of dimethylamino, diethylamino, N-formylpiperazinyl, piperazinyl, N-methylpiperazinyl, N-hydroxyethylpiperazinyl, N-acetoxyethylpiperazinyl, N-hydroxyethoxyethylpiperazinyl, N-pyrrolidinyl, N-p-nitrophenethylpiperazinyl, and N-p-aminophenethylpiperazinyl.

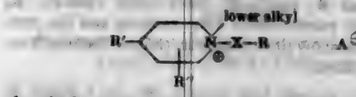
2,945,032

NEW PIPERIDINIUM COMPOUNDS

Adrian Marxer, Basel, Switzerland, assignor to Ciba Pharmaceutical Products Inc., Summit, N.J., a firm

No Drawing. Filed Jan. 28, 1957, Ser. No. 636,502
Claims priority, application Switzerland Jan. 30, 1956
13 Claims. (Cl. 260—247.5)

1. Compounds of the formula



wherein R represents a member selected from the group consisting of tri-lower alkyl-quaternary ammonium, N-lower alkyl-N-lower alkylene-imino-quaternary ammonium and N-lower alkyl-morpholinium, X stands for a lower alkylene radical, R′ stands for a member selected from the group consisting of phenyl, chloro phenyl, bromo phenyl, iodo phenyl, hydroxy-phenyl, lower alkoxy-phenyl, lower alkyl-phenyl and methylenedioxy-phenyl and R″ for a member selected from the group consisting of hydrogen and lower alkyl and A⊖ represents a member selected from the group consisting of the hydroxyl ion and the anion of a therapeutically useful, non-toxic acid.

8. 1 - (N - methyl - morpholinium - ethyl) - 4 - (2′,4′ dichlorophenyl)-piperidinium diiodide.

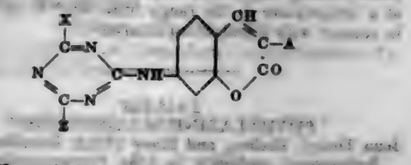
2,945,033

7-TRIAZINYLAMINO-3-PHENYL COUMARINS

Heinrich Hinsvermann, Basel, Switzerland, assignor to J. R. Geigy A.-G., Basel, Switzerland

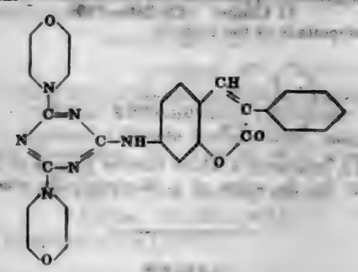
No Drawing. Filed May 12, 1958, Ser. No. 734,446
Claims priority, application Switzerland May 29, 1957
9 Claims. (Cl. 260—247.5)

1. 7-triazinylamino-3-phenyl coumarins of the formula



wherein X stands for a member selected from the group consisting of amino, alkylamino, lower dialkylamino, cyclohexylamino, monoethanolamino, diethanolamino, N-phenylamino, morpholino, piperidino, Cl, Br, hydroxy, lower alkoxy, phenoxy, lower alkylphenoxy, chlorophenoxy, phenylthio, chlorophenylthio, hydroxycyclohexylamino, lower alkylaminoalkylamino, N-lower alkylphenylamino, N-lower alkoxyphenylamino, N-chlorophenylamino, benzylamino, N-pyridylamino, N-thiazolylamino, N-dihydro-imidazolylamino, N-triazolylamino and N-tetrazolylamino, Z stands for a member selected from the group consisting of amino, alkylamino, lower dialkylamino, cyclohexylamino, monoethanolamino, diethanolamino, N-phenylamino, morpholino and piperidino, and A represents a member selected from the group consisting of phenyl, chlorophenyl, methylphenyl and dimethylphenyl.

7. The 7-triazinylamino-3-phenyl coumarin of the formula:



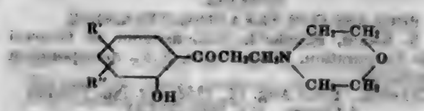
2,945,034

ORTHO-HYDROXY-N-BETA-MORPHOLINO-PROPIOPHENONE FUNGICIDES

Carlo Giuseppe Alberti, Alberto Vercellone, Aurelio Di Marco, and Mario Ghione, all of Milan, Italy, assignors to Societa Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed Dec. 9, 1958, Ser. No. 779,675
Claims priority, application Italy Mar. 12, 1955
4 Claims. (Cl. 260—247.7)

1. As fungicidal compounds, the compounds of the group consisting of ortho hydroxy N-beta-morpholino-propiophenones of the following formula:



in which R′, R″ represent members of the group consisting of hydrogen, halogen, and lower alkyl radicals, and the hydrochloride salts thereof.

2,945,035
PREPARATION OF MELAMINE
William R. Ballingrud, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed July 21, 1958, Ser. No. 749,636
4 Claims. (Cl. 260—249.7)

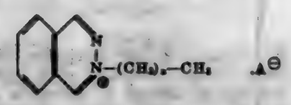
1. The process for preparing melamine which comprises heating together hydrogen cyanide and nitric oxide at a temperature in the range from 400° C. to 800° C. in contact with a palladium catalyst.

2,945,036
PHTHALAZINIUM COMPOUNDS
Jean Druey, Riehen, and Hans Ulrich Daeniker, Basel, Switzerland, assignors to Ciba Pharmaceutical Products, Inc., Summit, N.J.
No Drawing. Filed Dec. 13, 1957, Ser. No. 702,520
Claims priority, application Switzerland Jan. 18, 1957
17 Claims. (Cl. 260—250)

1. A member selected from the group consisting of quaternary 2:2'-R-bis-phthalazinium salts, wherein the quaternary ammonium anion is an anion of a therapeutically acceptable acid, wherein R is a saturated alkylene radical having at most 30 carbon atoms, and the pseudobases derived therefrom and their anhydro compounds.

2,945,037
NEW PHTHALAZINIUM COMPOUNDS
Jean Druey, Riehen, and Hans Ulrich Daeniker, Basel, Switzerland, assignors to Ciba Pharmaceutical Products, Inc., Summit, N.J.
No Drawing. Filed Dec. 13, 1957, Ser. No. 702,543
Claims priority, application Switzerland Jan. 18, 1957
11 Claims. (Cl. 260—250)

1. Compounds of the formula



wherein n represents a whole number from 9 to 21 and A stands for the anion of a therapeutically acceptable acid.

2,945,038
5-FLUOROCYTOSINE AND PREPARATION THEREOF
Robert Duschinsky, Essex Fells, N.J., and Charles Heidelberger, Madison, Wis.; said Duschinsky assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Original application Sept. 26, 1956, Ser. No. 612,008, now Patent No. 2,802,005, dated Aug. 6, 1957. Divided and this application May 27, 1957, Ser. No. 661,602
3 Claims. (Cl. 260—256.4)

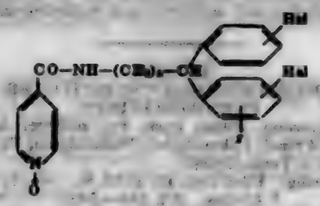
1. A compound selected from the group consisting of 5-fluorocytosine and acid addition salts thereof.

2,945,039
PROCESS FOR TREATING THIAMINE
Abner S. Saleet, Plainfield, N.J., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 11, 1958, Ser. No. 754,160
4 Claims. (Cl. 260—256.6)

1. The process which comprises adding thiamine to an aqueous acidic dispersion of carrageheen at a pH of about 3.5, said thiamine being added in amounts of 0.5–25% by weight of the carrageheen.

2,945,040
CERTAIN ISONICOTINIC ACID-N-OXIDE POLYHALOGEN DIPHENYL ALKYL AMIDES
Heinrich Ledlechlike, Frankfurt am Main, Heinrich Reilly, Kelkheim (Taunus), and Heinz Schmidt-Ruppin, Bad Soden (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Dec. 2, 1958, Ser. No. 777,575
Claims priority, application Germany Dec. 6, 1957
3 Claims. (Cl. 260—295)

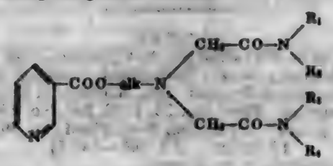
1. Isonicotinic acid-N-oxide-amides of the general formula



wherein Hal represents a halogen atom having a molecular weight up to 35.5, n is an integer from 1 to 2, and x is a member of the group consisting of hydrogen, halogen and methyl.

2,945,041
NICOTINIC ACID ESTER OF CERTAIN HYDROXYALKYLENEIMINO-DIACETAMIDES
Joseph Sellter, Berwyn, and Roy S. Hendrick and Meier E. Freed, Philadelphia, Pa., assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 7, 1958, Ser. No. 753,634
2 Claims. (Cl. 260—295.5)

1. A compound of the group consisiting of di-fatty acid amides and the non-toxic acid-addition salts thereof, said amides having the general formula



wherein R_1 and R_3 represent lower alkyl radicals, R_2 and R_4 stand for phenyl-lower alkyl radicals and the term "alk" represents a divalent alkylene radical having from 2 to 4 carbon atoms.

2,945,042
NICOTINOYL HYDANTOINS
Edgar A. Ferguson, Jr., 150 Woodruff Ave., Brooklyn 26, N.Y.
No Drawing. Filed July 28, 1958, Ser. No. 751,121
6 Claims. (Cl. 260—296)

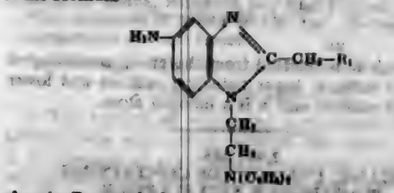
1. As a new composition of matter, a compound selected from the group consisting of 5-nicotinoyl, 5-phenyl hydantoin, the sodium salt thereof, 5-nicotinoyl, 5-ethyl hydantoin, the sodium salt thereof, 5,5-dinicotinoyl hydantoin, the sodium salt thereof, and 5,5, 1 N, 3 N-tetranicotinoyl hydantoin.

2,945,043
1-(DILOWERALKYLAMINOLOWERALKYL)-5-NITRO, 2-NAPHTHYLMETHYL (AND CERTAIN SUBSTITUTED NAPHTHYLMETHYL) BENZIMIDAZOLES
Karl Hoffmann, Binningen, and Alfred Hunger, Friedrich Kobrle, and Alberto Rossi, Basel, Switzerland, assignors to Ciba Pharmaceutical Products, Inc., Summit, N.J.
No Drawing. Filed June 19, 1958, Ser. No. 743,084
Claims priority, application Switzerland July 17, 1957
5 Claims. (Cl. 260—309.2)

3. A member of the group consisting of 1-(β-diethylaminoethyl)-5-nitro-benzimidazole, containing in 2-position a member selected from the group consisting of α-naphthyl-methyl), (halogeno-α-naphthyl)-methyl, (lower alkyl-α-napthyl)-methyl, and (lower alkoxy-α-naphthyl)-methyl and therapeutically useful acid addition salts thereof.

2,945,044
CERTAIN 1-(DIETHYL-AMINOETHYL), 5-AMINO, 2-BENZYL OR SUBSTITUTED BENZYL, BENZIMIDAZOLES
Karl Hoffmann, Binningen, and Alfred Hunger, Friedrich Kobrle, and Alberto Rossi, Basel, Switzerland, assignors to Ciba Pharmaceutical Products, Inc., Summit, N.J.
No Drawing. Filed June 19, 1958, Ser. No. 743,086
Claims priority, application Switzerland July 12, 1957
5 Claims. (Cl. 260—309.2)

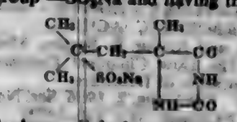
1. A member of the group consisting of benzimidazoles of the formula



wherein R_1 stands for a member of the group consisting of unsubstituted phenyl and phenyl substituted solely in one of the positions 3 and 4 by halogen, lower alkyl and lower alkoxy, and therapeutically acceptable acid addition salts.

2,945,045
CHLORINATED 2-METHYL, 3-HYDANTOIN-PROPANE (2)-SULFONIC ACID
M Frank Levy, St. Albans, and George A. Seubert, Jr., Brooklyn, N.Y., assignors to Argus Chemical Corporation, Brooklyn, N.Y., a corporation of New York
No Drawing. Filed Apr. 3, 1959, Ser. No. 803,843
3 Claims. (Cl. 260—309.5)

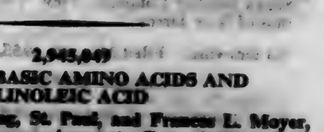
1. An alkyl substituted hydantoin containing the water-solubilizing group $—SO_3Na$ and having the formula:



wherein the hydrogen linked to nitrogen is at least partly substituted by chlorine.

2,945,046
PROCESS FOR PREPARING 5 HYDROXY-TRYPTAMINE THROUGH NEW INTERMEDIATES
Remo Jucker, Milan, and Raffaele Pontin, Cinisello-Balsamo, Italy; said Pontin assignor to Francesco Vismara Società per Azioni, Cinisello Balsamo, Italy
No Drawing. Original application Feb. 21, 1956, Ser. No. 566,776. Divided and this application Feb. 18, 1957, Ser. No. 640,704
2 Claims. (Cl. 260—319)

1. The compound β(5-benzyloxy-2-carboxyindolyl-3)-propionic acid of formula:



2,945,047
THIOSEMICARBAZIDES
William E. Sherman, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 29, 1958, Ser. No. 783,163
5 Claims. (Cl. 260—347.2)

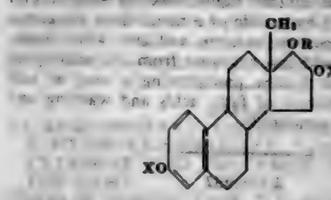
1. A compound represented by the formula:



wherein R represents a member of the group consisting of hydrogen, phenyl and lower alkyl containing from 1 to 4 carbon atoms, inclusive.

2,945,048
17-ALKOXY-1,3,5(10)-ESTRATRIEN-3,16-DIOLS AND THE PRODUCTION THEREOF
Max N. Huffman, Colorado Springs, Colo., assignor to Lasdon Foundation, Inc., Yonkers, N.Y., a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,210
7 Claims. (Cl. 260—397.5)

1. A compound of the formula



wherein R is a lower alkyl radical containing 1 to 5 carbon atoms and X is a member of the group consisting of hydrogen and hydrocarbon acyl radicals containing 1 to 18 carbon atoms.

2,945,049
SALTS OF BASIC AMINO ACIDS AND LINOLEIC ACID
Robert W. H. Chang, St. Paul, and Frances L. Meyer, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
No Drawing. Filed May 25, 1959, Ser. No. 815,247
5 Claims. (Cl. 260—404)

1. A salt of linoleic acid and an edible basic amino acid.

2,945,850

OXIDATION PROCESS

Norman W. Franke, Penn Township, Allegheny County, Charles M. Selwitz, Monroeville, and Arthur C. Whitaker, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed May 21, 1957, Ser. No. 660,466

3 Claims. (Cl. 260—413)

1. A process for preparing fatty acids which comprises reacting an olefin with hydrogen and carbon monoxide in the presence of a metallic hydroformylation reaction catalyst at an elevated temperature and an elevated pressure to obtain a mixture containing an aldehyde having one more carbon atom than said olefin, removing the hydroformylation reaction catalyst from said mixture, subjecting said demetalled mixture to hydrogenation to convert said aldehyde to the corresponding alcohol, recovering desired alcohol from the hydrogenated mixture, oxidizing the remainder of said hydrogenated mixture with nitric acid to obtain a reaction mixture comprising an organic layer containing fatty acids and a nitric acid layer and thereafter separating said layers from each other in order to recover said organic layer.

2,945,851

METALLIC SALTS OF COMMERCIAL STEARIC ACID

Gerald M. Davis, Clark Township, Union County, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Oct. 19, 1955, Ser. No. 541,323

4 Claims. (Cl. 260—414)

1. A method of producing a coarsely crystalline metallic soap composition having an average crystal size of from about 1 to 7 microns in diameter with not more than 5% less than 1 micron in diameter from a mixture of commercial fatty acids of from 12 to 22 carbon atoms containing less than 20% by weight of unsaturated fatty acids and having an iodine value of less than 20 which comprises supporting a continuous phase layer of said mixture of fatty acids in molten condition on an underlying body of a hot aqueous liquid, reacting therewith an aqueous slurry of a hydroxide of a metal from the group consisting of magnesium, calcium and zinc while maintaining the fatty acid layer distinct from the underlying aqueous layer and thereby precipitating a soap of said metal and said mixture of fatty acids and washing and drying the soap so produced.

2,945,852

PREPARATION OF DIALKENYL PHENYL PHOSPHONATES

Charles H. Alexander, Bethany, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 10, 1955, Ser. No. 493,539

3 Claims. (Cl. 260—461)

1. In a method of preparing dialkenyl phenyl phosphonates from an alkenol and phenyl phosphorus oxydichloride in the presence of an inert solvent medium, the improvement which consists in reacting the alkenol with the said oxydichloride in the inert solvent medium in the presence of a concentrated aqueous solution of alkali metal hydroxide, at a temperature not in excess of about 30° C.

2,945,853

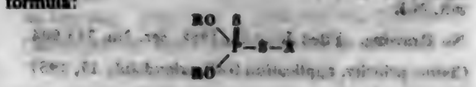
PHOSPHOROTHIOLOTHIONATES DERIVED FROM ESTERS OF HALOGEN-CONTAINING ACIDS

Richard L. McConnell and Thomas H. Wicker, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

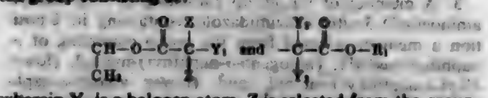
No Drawing. Filed Dec. 16, 1957, Ser. No. 702,813

8 Claims. (Cl. 260—461)

1. Organophosphorus compounds having the structural formula:



wherein R is a lower alkyl radical and X is selected from the group consisting of:



wherein Y_1 is a halogen atom, Z is selected from the group consisting of hydrogen and halogen atoms, Y_2 is a halogen atom selected from the group consisting of chlorine and bromine and R_1 is selected from the group consisting of vinyl and ethyl.

2,945,854

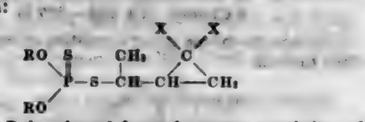
O,O-DIALKYL S-(1-(2,2-DIHALOCYCLOPROPYL) ETHYL) PHOSPHOROTHIOLOTHIONATES

Marvin A. McCall and Harry W. Coover, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Aug. 21, 1958, Ser. No. 756,307

6 Claims. (Cl. 260—461)

1. The organophosphorus compounds having the structural formula:



wherein each R is selected from the group consisting of lower alkyl radicals, lower haloalkyl radicals and lower alkoxyalkyl radicals and X is a halogen atom.

2,945,855

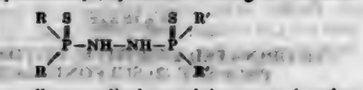
ORGANIC COMPOUNDS CONTAINING PHOSPHORUS AND SULPHUR

Henry Tolkmith, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 27, 1958, Ser. No. 769,588

6 Claims. (Cl. 260—461)

1. Bis(phosphinothioyl)hydrazines having the formula:



wherein R is an alkoxy radical containing up to 4 carbon atoms and R' is selected from the group consisting of alkoxyl radicals and dialkylamino radicals each alkyl and alkoxy group containing up to 4 carbon atoms and R and R' have different values.

2,945,856

SALTS OF SULFO-LOWER-ALKYL ESTERS OF CHLOROARYLOXY - LOWER - ALIPHATIC-MONOCARBOXYLIC ACIDS

Lee H. Horsley and Arthur R. Sexton, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 2, 1956, Ser. No. 601,646

2 Claims. (Cl. 260—473)

1. Sodium salt of the sulfopropyl ester of 2,4-dichlorophenoxyacetic acid.

2,945,857

PREPARATION OF METHYL METHACRYLATE

Edgar L. McDaniel and Howard S. Young, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 1, 1959, Ser. No. 803,545

19 Claims. (Cl. 260—486)

1. The process which comprises heating methyl isobutyrate in the vapor phase at a temperature of 400°–800° C. in the presence of a catalyst comprising an activated alumina and dehydrogenating a substantial amount of said methyl isobutyrate to methyl methacrylate.

2,945,858

MANUFACTURE OF CROTONIC ACID

Richard M. Watson and Gaylord K. Fisch, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Sept. 11, 1957, Ser. No. 683,213

7 Claims. (Cl. 260—530)

1. A process for the production of crotonic acid comprising the oxidation of crotonaldehyde in the absence of an added catalyst by incorporating a mixture of crotonaldehyde and water which contains 5–15% water in an inert solvent selected from the class consisting of hexane, heptane and toluene so that 20–60% of the resulting liquid by weight is the inert solvent, and contacting with an oxygen containing gas having 1–25% molecular oxygen at a temperature of 15–25° C.

2,945,859

MEVALONIC ACID

Clifford H. Shunk, Westfield, and Karl Folkers, Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,830

2 Claims. (Cl. 260—535)

1. The method of recovering α-mevalonic acid from αβ-mevalonic acid which includes the steps of mixing in the presence of a solvent (+)-α-phenyl-1-naphthalenemethylamine with the αβ-mevalonic acid lactone at elevated temperatures, removing said solvent and recovering the resulting mixture of the (+)-α-phenyl-1-naphthalenemethylamides of the α- and the β-mevalonic acids, adding said mixture of amides to benzene to thereby obtain a selective precipitation of the amide of α-mevalonic acid, recovering the precipitated amide of the α-mevalonic acid and hydrolyzing it to remove the amide component, and recovering the α-mevalonic acid.

2,945,860

PROCESS FOR GLUTARIC ACID MANUFACTURE

James C. Martin and Robert H. Hasek, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 16, 1957, Ser. No. 659,463

5 Claims. (Cl. 260—537)

1. The process for producing glutaric acid which comprises reacting crotonic acid with carbon monoxide and hydrogen in the presence of a cobalt catalyst at a temperature of 120–170° C. and a pressure of 1000–15,000 p.s.i. to form glutaraldehydic acid and contacting resulting reaction mixture with oxygen at a temperature of 30–80° C. to oxidize said glutaraldehydic acid to glutaric acid.

2,945,861

PROCESS FOR THE PRODUCTION OF BIGUANIDE DERIVATIVES CONTAINING ACTIVE CHLORINE

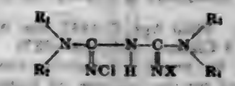
Valentin Habernickel, Bergheim, Sieg, Germany, assignor to Henkel & Cie, G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed May 19, 1959, Ser. No. 814,139

Claims priority, application Germany Jan. 7, 1954

10 Claims. (Cl. 260—551)

1. Compounds selected from the group consisting of chlorinated N-substituted biguanides having the structural formula



wherein R_1 is lower alkyl, R_2, R_3 and R_4 are selected from the group consisting of hydrogen and lower alkyl, and X is selected from the group consisting of hydrogen and chlorine, and their hydrochloride salts.

2,945,862

N-LOWER-ALKYL-N-NITROSO-3,5-DINITRO-o-TOLUAMIDES

Charles W. Hinman, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 4, 1958, Ser. No. 753,186

6 Claims. (Cl. 260—558)

1. N-lower-alkyl-N-nitroso-3,5-dinitro-o-toluamide.

2,945,863

PREPARATION OF CYCLOHEXANE METHYLAMINE

John F. Quinn and Maurice A. Terpstra, Kirkwood, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 26, 1956, Ser. No. 600,177

4 Claims. (Cl. 260—563)

1. In the process for the preparation of cyclohexane methylamine by the catalytic reduction of benzonitrile the steps comprising: heating at a temperature above 50° C. and at superatmospheric hydrogen pressure a mixture containing benzyl nitrile and hydrogen in the presence of a finely divided nickel catalyst until the benzonitrile is reduced to benzyl amine and thereafter heating at temperatures of from 130° C. and above and at pressures above 500 pounds per square inch a mixture comprising benzyl amine and hydrogen in the presence of a nickel catalyst promoted with a small amount of barium hydroxide and an alkali metal hydroxide until cyclohexane methylamine has been formed.

2,945,864

2,4-DIHYDROXY-3-METHYLPHENACYLAMINE, 2-HYDROXY-4-METHOXY-3-METHYLPHENACYLAMINE AND PROCESSES OF PREPARING THE SAME

Charles H. Stammer, Clark, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 29, 1958, Ser. No. 731,614

3 Claims. (Cl. 260—566)

1. A compound from the group consisting of 3-methyl-ω-oximinoresacetophenone, 2-hydroxy-3-methyl-4-methoxy-ω-oximinoacetophenone.

2,945,865

PROCESS FOR THE REDUCTION OF NITROCYCLOHEXANE TO CYCLOHEXANONE OXIME

Lorraine Guy Donaruma, Media, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed July 30, 1958, Ser. No. 751,819

7 Claims. (Cl. 260—566)

1. A process for the production of cyclohexanone oxime which comprises reacting an alkaline salt of nitro-

cyclohexane with at least equimolar amounts of carbon monoxide and an alkanol containing one to four carbon atoms at temperatures between about 150 and about 200° C. and pressures between about 500 and about 900 p.s.i.g.

2,945,046
HYDROGENATION OF HYDROCHLORINATED VERBENONE AND PRODUCT OBTAINED THEREBY
Eugene A. Klein, West Los Angeles, Calif., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 5, 1957, Ser. No. 651,111
5 Claims. (Cl. 260—587)

1. A process for producing reaction products from a mixture obtained by the addition of hydrogen chloride to verbenone in acetic acid solution which comprises the steps of contacting said mixture with hydrogen in the presence of a hydrogenation catalyst selected from the group consisting of platinum, palladium and nickel and thereafter recovering fractions enriched in 5-chloro-epicamphor and 6-chloro-epiisofenchone.

5. 6-chloro-epiisofenchone.

2,945,067
CONVERSION OF VERBANONE
Eugene A. Klein, West Los Angeles, Calif., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Apr. 26, 1957, Ser. No. 655,183
6 Claims. (Cl. 260—587)

1. A process for converting verbanone to a mixture comprising cis-8,9-ortho-mesthane-3-one which comprises heating said verbanone at temperatures above about 350° C. and thereafter recovering a fraction comprising said cis-8,9-ortho-menthene-3-one.

2,945,068
PYROLYSIS OF LIMONENE OXIDE
Albert B. Booth, Houston, Tex., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 31, 1957, Ser. No. 706,292
3 Claims. (Cl. 260—587)

1. A process which comprises pyrolyzing limonene-1,2-oxide at temperatures of from about 200° C. and to about 550° C. and recovering therefrom fractions comprising carveol, carvone, and dihydrocarvone.

2,945,069
SYNTHESIS OF β-CAROTENE
Max H. Stern, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Jan. 31, 1958, Ser. No. 712,317
7 Claims. (Cl. 260—396.5)

1. The process which comprises reacting a retrovitamin A halide with a triaryl phosphine to form a retrovitamin A triaryl phosphonium halide, converting the resulting phosphonium halide to a triaryl phosphorous-ylid having the vitamine A carbon structure with a strong organic base, and reacting the said phosphorous-ylid with vitamin A aldehyde to form β-carotene.

2,945,070
STABILIZATION OF CHLORINATED HYDROCARBONS
Fred W. Stehn, Kenmore, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 23, 1958, Ser. No. 710,619
2 Claims. (Cl. 260—652.5)

1. The method of stabilizing a chlorinated hydrocarbon selected from the group of trichlorethylene and perchlorethylene which comprises supplying thereto 0.1 to 5% of di-n-butyl sulfone to stabilize said hydrocarbon against decomposition induced by metals and metallic salts.

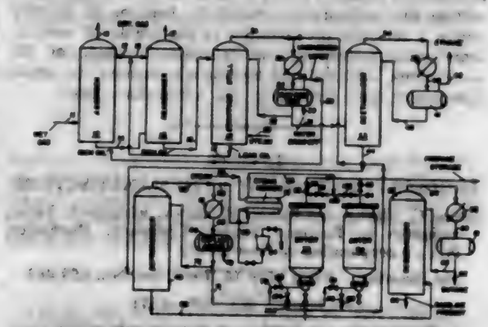
2,945,071
PROCESS FOR THE PREPARATION OF DEUTERATED HYDROCARBON COMPOUNDS
Hendrik Eleuterius and Willem J. Pieters, both of Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed June 25, 1957, Ser. No. 667,993
Claims priority, application Netherlands Nov. 16, 1956
1 Claim. (Cl. 260—666)

Process for the production of deuterated hydrocarbon of the nature of coke which comprises deuterating a hydrogen-absorbing catalyst selected from the group consisting of solid acidic cracking catalysts and solid hydrogenation-dehydrogenation catalysts by passing through a relatively stationary bed of said catalyst a gas mixture produced by the pyrolysis of deuterated hydrocarbons, then passing through the thus deuterated catalyst in the absence of said gas mixture vapors of a hydrocarbon, collecting the resulting deuterated hydrocarbon and pyrolyzing the same under conditions to produce the above mentioned deuterium containing gas mixture and a deuterated solid hydrocarbon of the nature of coke.

2,945,072
ALKYLATION AND DEALKYLATION PROCESSES
George G. Joris, Madison, N.J., assignor to Allied Chemical Corporation, a corporation of New York
Filed Apr. 11, 1956, Ser. No. 577,986
12 Claims. (Cl. 260—671)

1. A process for producing propylated benzenes which comprises reacting an aromatic compound of the group consisting of benzene and halo-substituted benzenes with propylene in liquid phase in the presence of an acid-activated, non-swellable, bentonite-type clay having a base exchange capacity of at least about 20 and at a temperature of about 70° to 130° C.

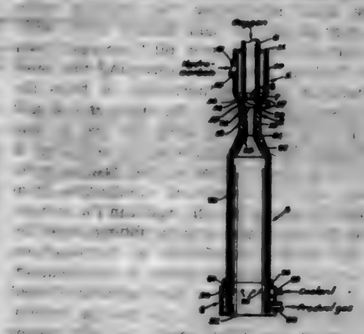
2,945,073
RECOVERY OF PROPANE FROM NATURAL GAS
Brunner C. Barnes and Rudkini H. Parekh, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 28, 1957, Ser. No. 636,626
4 Claims. (Cl. 260—676)



1. In a process for the recovery of propane from natural gas containing methane, ethane, propane, and higher hydrocarbons wherein said natural gas is contacted with an absorption oil in an absorption zone under absorption conditions to absorb said ethane, propane, and higher hydrocarbons from said natural gas in said absorption oil, the improvement comprising blowing steam through said absorption oil containing said absorbed ethane, propane, and higher hydrocarbons in a stripping zone whereby a product containing said ethane, propane, and higher hydrocarbons and said steam is separated from said absorption oil, recyling said absorption oil to said absorption zone, partially condensing said product containing said ethane, propane, and higher hydrocarbons and said steam in a condensation zone to condense at least a portion of said ethane, propane, and higher hydrocarbons and said steam to obtain a product containing liquid ethane, propane, and higher hydrocarbons, water dissolved in said liquid hydrocarbons, and entrained liquid water, separating said entrained liquid water from said product to obtain a product containing said liquid ethane, propane, and higher hydrocarbons, and water dissolved in said liquid hydrocarbons, recycling a portion of said last-named product as reflux to said stripping zone, vaporizing ethane from the remainder of said last-named product in a fractionating zone to separate it from said propane and higher hydrocarbons whereby a greater portion but not all of said dissolved water is vaporized from said last-named product along with said ethane, vaporizing propane thereafter from the remainder of said last-named product in a fractionating zone to separate it from said higher hydrocarbons whereby at least a portion of said dissolved water is vaporized from the remainder of said last-named product along with said propane, removing a stream containing said vaporized propane and said water from said last-named fractionating zone, condensing a portion of said stream containing said vaporized propane and said water to form liquid propane containing dissolved water, recycling a portion of said liquid propane containing dissolved water as reflux to said last-named fractionating zone, passing the remainder of said liquid propane containing said dissolved water through a bed of solid desiccant contained in a drying zone whereby said dissolved water is removed from said liquid propane, recovering said liquid propane passed through said bed of solid desiccant contained in said drying zone, discontinuing passing said liquid propane containing said dissolved water through said bed of solid desiccant when said solid desiccant has absorbed sufficient water that it can no longer remove water from said liquid propane to bring its dissolved water content to a desired value, heating another portion of said stream containing said vaporized propane and water to a temperature above the boiling point of water at the partial pressure of water in said drying zone, passing said heated stream through said bed of solid desiccant contained in said drying zone whereby absorbed water is removed from said solid desiccant, recovering propane and water as a stream from said drying zone, and passing said last-mentioned stream to said first mentioned condensation zone along with said product containing ethane, propane, and higher hydrocarbons and said steam separated from said absorption oil in said stripping zone.

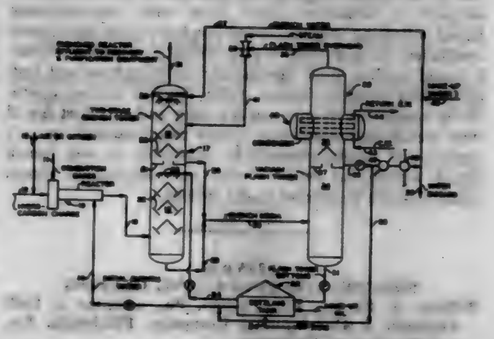
2,945,074
PRODUCTION OF ACETYLENE BY THE PARTIAL OXIDATION OF HYDROCARBONS
Jack Elliott and Holmes H. McClure, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 5, 1958, Ser. No. 733,039
3 Claims. (Cl. 260—679)

1. A process for the production of acetylene by partial oxidation of a paraffinic hydrocarbon with oxygen, which comprises separately heating the paraffinic hydrocarbon and oxygen to a temperature of at least 700° C. and not more than 1200° C., injecting the heated paraffinic hydrocarbon and oxygen into a mixing chamber of circular cross section and a given diameter, said hydrocarbon stream being injected in said mixing chamber as a hollow fronto-conical shaped gaseous stream converging at an angle of 10° to 45° at a velocity equal to at least 90 percent of sonic velocity and said oxygen stream being injected in said mixing chamber as a gaseous stream within the hydrocarbon stream at a velocity equal to at least 90 percent of sonic velocity, confining the injected hydrocarbon and oxygen gases in the mixing chamber to pass said gases through the mixing chamber at a velocity equal



to at least 90 percent of sonic velocity for a length of time of from 0.0001 to 0.002 second to mix the gases, subsequently passing the mixed hydrocarbon gas and oxygen gas into a cylindrical reactor having a diameter such that the ratio of the diameter of the reactor to the diameter of the mixing chamber is in the range of 2.5:1 to 5:1 and a length of 3 to 7 times its diameter to react the hydrocarbon with the oxygen, and quenching the resulting reaction gases with a cooling medium at the exit of the reactor.

2,945,075
PREPARATION OF REACTOR EFFLUENT FOR RECOVERY OF ACETYLENE AND THE LIKE THEREFROM
Raymond C. Seofield, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,282
16 Claims. (Cl. 260—679)



1. A process for quenching and scrubbing a high temperature cracked gas containing acetylene recovered from the thermal conversion of hydrocarbons to produce acetylene, which comprises passing said high temperature cracked gas into the lower portion of a two-stage quenching zone; initially contacting said cracked gas in the lower portion of said quenching zone with relatively cooler quench oil in countercurrent flow; finally contacting said cracked gas with quench water in the upper portion of said quenching zone in countercurrent flow; withdrawing the resulting quenched, relatively tar-free cracked

gas containing acetylene as overhead from said upper portion of said quenching zone; withdrawing liquid condensate from said upper portion of said quenching zone; withdrawing spent oil from said lower portion of said quenching zone; passing said liquid condensate and spent oil to the lower portion of a sub-atmospheric flashing zone to effect evaporation of a minor portion of said liquid condensate and cause said spent oil and a major portion of said liquid condensate to settle in the lower portion of said flashing zone; condensing the resulting water vapor in the upper portion of said flashing zone; withdrawing water and said settled spent oil from said lower portion of said flashing zone and conveying the same to a liquid separation zone; withdrawing oil from the latter zone and passing the same to the upper end of said lower portion of said quenching zone for use as said quench oil; collecting liquid condensate accumulating in the lower end of said upper portion of said flashing zone; and withdrawing said last-mentioned condensate from said flashing zone for use as quench media in the system.

10. Apparatus for quenching and scrubbing a gas recovered from the thermal conversion of hydrocarbons from a thermal reactor, which comprises, in combinatoin; a two-stage gas-liquid contact tower intermediately divided by liquid collecting means, having a gas passage therein, into lower and upper quenching zones; gas-inlet means in the lower part of said lower quenching zone; gas-outlet means in the upper part of said upper quenching zone; first liquid inlet means in the upper end of said lower quenching zone; second liquid inlet means in the upper end of said upper quenching zone; first liquid withdrawal outlet means in the lower end of said lower quenching zone; second liquid withdrawal outlet means in the lower end of said upper quenching zone and adapted to withdraw liquid from said liquid collecting means; first conduit means operatively connected to first and second liquid withdrawal outlet means; a sub-atmospheric flash tower intermediately divided by liquid collecting means into and upper and lower zones; liquid inlet means in the lower part of said lower zone of said flash tower and operatively connected to said first conduit means; an indirect heat exchanger disposed in said upper zone of said flash tower; third liquid withdrawal outlet means in the lower end of said lower zone of said flash tower; fourth liquid withdrawal outlet means in the lower end of said upper zone of said flash tower and operatively adapted to withdraw liquid from said last-mentioned liquid collecting means; second conduit means operatively connected to said third liquid withdrawal outlet means; a liquid settling tank operatively connected to said last-mentioned conduit means; third conduit means operatively connected to said settling tank and said first liquid inlet means and adapted to supply the same with quench media; and means operatively connected to said fourth liquid withdrawal outlet means and adapted to return quench media therefrom to the system.

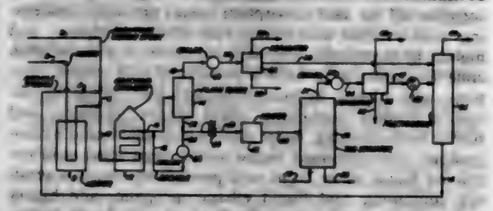
2,945,076

PROCESS FOR PRODUCING OLEFINS

William A. Pardee, Fox Chapel, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Filed Apr. 15, 1957, Ser. No. 652,946
5 Claims. (Cl. 260—683)

1. A method for producing normal alpha-olefins which comprises vaporizing a waxy charge by admixing therewith at least about 2 percent by weight of steam at a temperature of about 900° to about 1200° F., heating the resulting mixture at a temperature of about 1000° to about 1250° F. and a pressure of about one to about three atmospheres for about 0.2 to about 6.0 seconds, whereby the wax charge is cracked and a mixture predominating in normal alpha-olefins is produced, cooling said latter mixture to a temperature of about 600° to about 800° F. in less than about 3 seconds, passing said cooled mixture into a flash tower, separating and removing a light hydrocarbon fraction from said flash tower, removing the remainder of said cooled mixture



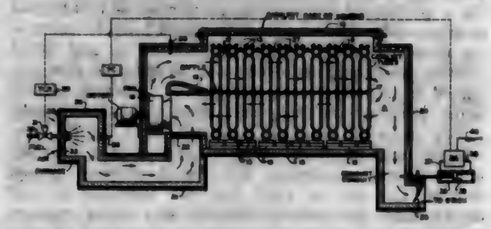
from said tower, cooling and recycling a portion of the said remainder to constitute the sole means whereby the cracked products are cooled prior to their entry into said flash tower, and thereafter separating the cracked product into selected olefinic fractions.

2,945,077

PROCESS AND APPARATUS FOR PRESSURE AND TEMPERATURE CONTROL SYSTEM

Walter B. Polk, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 1, 1955, Ser. No. 550,269
9 Claims. (Cl. 260—683.3)



1. In a hydrocarbon conversion system wherein the catalyst within a conversion zone is alternately on process and on regeneration and wherein hot combustion gases from a combustion zone are passed to said conversion zone, circulated in a cycle within said conversion zone around a first end portion and then around the other end portion of a catalyst bed therein, and withdrawn from said conversion zone, and wherein it is desired to protect the walls of said combustion zone from excessive temperatures, the improvement which comprises: controlling the amount of fuel burned in said combustion zone responsive to the temperature within said conversion zone; and separately controlling the withdrawal of said gases from said conversion zone responsive to the temperature of a wall of said combustion zone by withdrawing more of said gases from said conversion zone and admitting more excess air into said combustion zone when said wall temperature increases and withdrawing less of said gases from said conversion zone and admitting less excess air into said combustion zone when said wall temperature decreases.

7. Apparatus for carrying out chemical reactions which comprises, in combination: a housing; a catalyst tube positioned within said housing; a furnace communicating with one end of said housing for supplying hot combustion gases to said housing; means within said housing for circulating said combustion gases in a cycle around a first end portion and then around a second end portion of said catalyst tube; an exhaust conduit at the opposite end of said housing; flow control means in said exhaust conduit; fuel inlet means for supplying fuel to said furnace; air inlet means for supplying combustion air and excess air to said furnace; a first temperature sensing means within said housing; temperature control means connected to said first temperature sensing means and operatively connected to said fuel inlet means for controlling the amount of fuel supplied to said furnace responsive to the temperature within said housing; a second temperature sensing means positioned in a wall of said furnace; pressure controlling means connected to said second temperature sensing means and operatively connected to said flow control means in said exhaust conduit for controlling the amount of said combustion gases withdrawn from said housing responsive to the temperature of said wall of said furnace by withdrawing more of said gases from said housing and admitting more excess air into said furnace when said wall temperature increases and withdrawing less of said gases from said housing and admitting less excess air into said furnace when wall temperature decreases.

ELECTRICAL

2,945,078

ALKALINE ELECTRIC CELLS

Christopher L. C. Chapman, Sutton, and Peggy Jane Skinner, New Malden, England, assignors to Yardney International Corp., New York, N.Y., a corporation of New York

No Drawing. Filed Dec. 3, 1956, Ser. No. 625,627
Claims priority, application Great Britain Dec. 16, 1955
4 Claims. (Cl. 136—29)

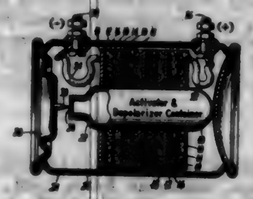
1. An electrochemical cell of the alkaline type comprising at least one negative electrode and at least one positive electrode, said positive electrode including a combination of silver oxide and silver halide as its active material, said halide being present in a proportion of substantially 5% to 33% of said active material.

2,945,079

GAS-ACTIVATED AND GAS-DEPOLARIZED DEFERRED ACTION CELL

Richard E. Johnson, Cleveland, Nelson C. Cahoon, Fairview Park, and Hugh F. Schaefer, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed June 19, 1957, Ser. No. 666,730
4 Claims. (Cl. 136—90)



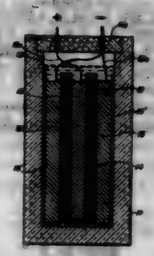
1. A deferred action battery comprising a container and in said container a frangible ampule containing activating and depolarizing gases, means for fracturing said ampule, at least one cell unit comprising a metallic base and on said base a conductive carbon coating, an electronically conductive water-proofed diffuser adjacent said coating in contact therewith, an electronically conductive converter layer adjacent to said diffuser in contact therewith, a dry fibrous gas-permeable separator in contact with said converter layer, and consisting of finely divided crystals of an inorganic hydrated salt of a metal selected from the group consisting of the alkali metals and the alkaline earth metals, said crystals being supported by means of an inert fibrous material, said crystals providing water and electrolyte upon reaction with activating gas; and a consumable anode in contact with said separator.

2,945,080

METHOD OF MAKING BATTERY SEPARATORS

Christopher Lionel Carter Chapman, Sutton, and Antonio Howard, Durham City, England, assignors to Yardney International Corp., New York, N.Y., a corporation of New York

Filed Apr. 19, 1957, Ser. No. 653,796
Claims priority, application Great Britain Apr. 19, 1956
3 Claims. (Cl. 136—148)



1. A method of producing an electrode assembly for electric batteries which comprises the steps of coating a permeable carrier with a film of polyvinyl acetate, forming an electrode assembly by interposing said carrier between electrodes of opposite polarities, immersing said electrode assembly in an alkaline electrolyte and subjecting said assembly to the action of said electrolyte until said film has been hydrolyzed to a degree upwards of approximately 35%.

2,945,081

PROTECTIVE MOULDING FOR ELECTRICAL WIRE INSTALLATION

Stephen B. Bogese and Charles R. Lemon, Roanoke, and Lawrence F. Stoner, Salem, Va., assignors to Virginia Plastics Company, a corporation of Virginia

Filed Oct. 21, 1958, Ser. No. 768,702
7 Claims. (Cl. 174—45)



4. In a ground wire assembly which includes a line pole and a ground wire extending from adjacent the top of the pole to a ground rod that is anchored in the

ground, means for protectively mounting the ground wire on the pole and comprising headed nails driven into the pole with their heads spaced outwardly from the surface of the pole, a moulding formed from inherently flexible material and being substantially channel-shaped in cross-section and within which the ground wire is axially housed, said moulding having opposing leg portions adapted to be spread apart for the lateral passage of the moulding over the ground wire, said leg portions having inner ends and outer free ends and having inner confronting sides, said sides being inclined inwardly from the outer ends toward the inner ends of the leg portions to provide cam surfaces for the lateral passage of the legs over the nail heads and locking shoulders formed laterally on the leg portions at the inner ends of the cam surfaces to grip behind the nail heads and lock the moulding on the nail heads, and said outer ends of the leg portions defining abutments held in contact with the surface of the pole by the engagement of the locking shoulders with the nail heads.

2,945,082
HIGH PRESSURE INSULATING SEAL FOR ELECTRICAL CABLE SYSTEM
Franz T. Geyling, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 5, 1957, Ser. No. 670,851
9 Claims. (Cl. 174—50.61)



2. A coaxial lead-in vapor seal for withstanding deep sea pressures and separating two regions having a pressure differential, the seal having at least one surface on which a higher pressure is incident, said seal comprising a vitreous body generated by revolving a plane figure through a complete revolution about an axis outside of said plane figure, said plane figure having opposite edges curving concavely toward each other, said vitreous body being disposed so that the first and second surfaces generated by said concavely curving edges taper inward toward each other adjacent a surface on which the higher pressure is incident, an inner conductive means secured to the first of the concavely curving surfaces and conforming thereto, and an outer conductive means electrically insulated from said inner conductive means secured to the second of said concavely curving surfaces and conforming thereto, whereby the curving interfaces between said vitreous body and said inner and outer conductive means mitigate shear stresses within the vitreous body and improve the seal between said inner and outer conductive means and said body.

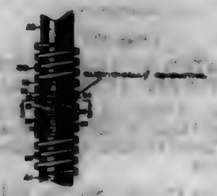
2,945,083
ELECTRIC TERMINAL AND METHOD OF MAKING THE SAME
Kingston E. Gaaske and Richard F. Anderson, Columbus, Ind., assignors to Arvin Industries, Inc., Columbus, Ind., a corporation of Indiana
Filed June 10, 1959, Ser. No. 819,403
3 Claims. (Cl. 174—68.5)

1. An electric terminal for a foil grid of the type comprising a thin strip of metallic foil, comprising a metallic strip of greater rigidity than the foil and having a retroverted end interlockingly received in an oppositely retroverted end of the foil strip, the retroverted end of said metallic strip having a surface-to-surface contact with a pair of faces on the retroverted end of the foil strip, the opposite end of said metallic strip extending outwardly beyond the interlocking ends of said metallic and foil strips, and a plurality of interlocking



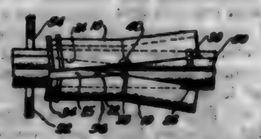
deformations formed in the interlocking ends of said strips to rigidly hold the same together, wherein said foil grid is interposed between a pair of sheets of insulating material with one of said sheets being removed from the retroverted end of said grid and the other of said sheets being interposed between one face of said foil strip and the metallic strip.

2,945,084
FLEXIBLE CONNECTOR FOR AERIALS OR THE LIKE
Billy E. Daggett, Campbell, Calif., assignor of fifty per cent to Donal C. Weaver, San Jose, Calif.
Filed Jan. 24, 1958, Ser. No. 711,018
7 Claims. (Cl. 174—86)



1. A flexible connector for tubular aerial sections or the like which comprises a pair of conductors formed for pressed insertion in the respective aerial sections, said conductors having complementary surfaces arranged for engagement in a manner such that universal pivotal movement therebetween is enabled, and spring means embracing both aerial sections adjacent the pivotal connection for maintaining the sections resiliently in substantial alignment.

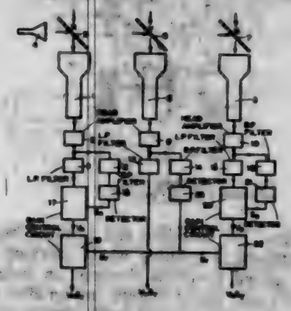
2,945,085
THROUGH-WALL DIVIDED CONNECTOR
James O. Billups, Manhattan Beach, Calif., assignor to Northern Union, Inc., Arcadia, Calif., a corporation of California
Filed Sept. 15, 1958, Ser. No. 761,250
11 Claims. (Cl. 174—153)



1. A connector part which comprises: semi-circular shell-like body sections joined to each other at an obtuse angle, said sections having side edges located with respect to one another at said angle and each having an end located away from the juncture of said sections; a shaft attached to said body sections at the juncture thereof at one side of said body sections, the axis of said shaft

being aligned with the juncture of said side edges; a bearing attached to said body sections at the juncture thereof on the side of said body sections remote from said shaft, the axis of said bearing being aligned with the axis of said shaft and with the junction of said side edges; holding means located on the outside of one of said body sections at one of said ends, said holding means being adapted to be used in securing a pair of said connector parts to a supporting member; and locking means located on the outside of the other of said sections at one of said ends, said locking means being adapted to co-act with similar locking means on another connector part so as to secure said connector parts together.

2,945,086
CORRECTING FOR TRANSMISSION VARIATIONS IN COLOUR TELEVISION CHANNELS
Eric Wilfred Taylor, The Uplands, Gerrards Cross, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Dec. 14, 1956, Ser. No. 628,334
Claims priority, application Great Britain Dec. 16, 1955
4 Claims. (Cl. 178—5.4)



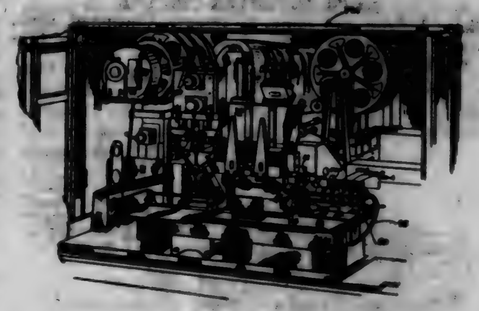
2. Colour television apparatus comprising a first signal channel for a signal component of relatively large luminance content, second and third signal channels respectively for signal components representing different colours of relatively small luminance content, said further channels respectively including variable gain amplifiers, means for deriving a signal representing transmission variations of said first signal channel, means for deriving signals respectively representing transmission variations of said second and third signal channels, means for varying the gain of said amplifier in said second channel in accordance with the ratio of the signal representing transmission variations in said first channel to the signal representing transmission variations in said second channel, and means for varying the gain of said third channel in accordance with the ratio of the signal representing transmission variations in said first channel to the signal representing transmission variations in said third channel.

2,945,087
INDEXING IN COLOUR TELEVISION RECEIVERS
Reginald Graham and John Kenneth Oxenham, both of 105–109 Judd St., London, England
Filed Oct. 7, 1958, Ser. No. 765,757
7 Claims. (Cl. 178—5.4)



7. A color television receiver for reproducing color television signals comprising a screen, parallel color stripes on a surface of said screen, said stripes being in repeating groups of N stripes, a first set of index stripes on said surface disposed parallel to said color stripes at uniform spacing, the spacing of said index stripes being different from the spacing of said groups, a second set of index stripes on said surface disposed parallel to said color stripes at a uniform spacing differing from that of said first set, means for generating a beam of radiant energy and directing said beam upon said surface, means for scanning said beam over said surface in a direction transverse with respect to said stripes, said color stripes of each group emitting light of different colors when impinged upon by said beam, means for modulating the intensity of said beam, means for applying said color television signal to said modulating means, said color television signal containing modulating components corresponding to different color which when said signal is in proper phase relation to said scanning correspond to the respective colors of said color stripes, generating means including a gate and responsive to the scanning of said index stripes to generate a control signal, said control signal including a first signal component generated by the scanning of said first index stripes and a second signal component generated by the scanning of said second index stripes, selective means separating said first and second signals, means for applying said first signal component to said gate, means for applying said second signal component to open said gating means for the passage therethrough of said first signal component, means for generating from said control signal an indexing signal having a frequency equal to that of scanning said groups, and means for applying said signal to control said phase relation.

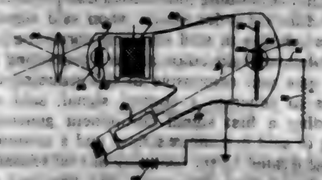
2,945,088
PRINTING MACHINES
John H. Grover, Cleveland Heights, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Aug. 29, 1955, Ser. No. 531,225
2 Claims. (Cl. 178—6.6)



1. In a machine of the kind described adapted to reproduce data appearing in a plurality of lines on each of a series of individual instruments, a scanning station to and through which the instruments are passed one by one in flat abutting or overlapping relation, scanning means at the scanning station comprising a plurality of photocell-controlled signal-transmitting circuits including a signal-transmitting circuit for each line of data carried by such an instrument and adapted to translate these respective lines of data in to signals and to transmit individually the signals for each line to signally operated printing means at a printing station in the machine for printing the individual lines of data on a sheet or the like, and a timing switch in each signal-transmitting circuit operable in each cycle of the machine while an instru-

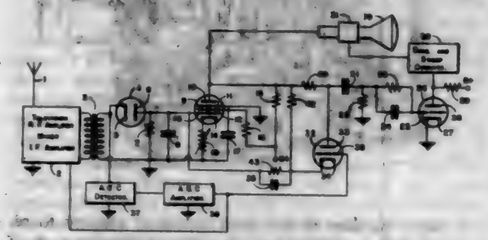
ment is passing through the scanning station to render each of said transmitting means ineffective for a predetermined time interval during which it is desired that there be no signals transmitted to the printing station, said time interval including at least the period in which the leading edge of said instrument traverses said scanning station.

2,945,089
MICROWAVE TELEVISION SYSTEM
John M. Cage, Upper Montclair, N.J., assignor to Sturdy-Cage Projects, Inc., Los Angeles, Calif., a corporation of California
Filed Aug. 30, 1943, Ser. No. 506,577
15 Claims. (Cl. 178—7.2)



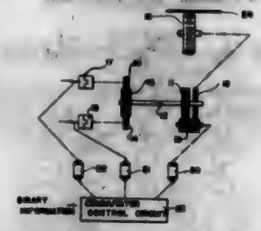
11. The method of reception of microwaves that comprises, forming said microwaves into an optical image, casting said image onto a layer of fine metal particles dimensioned to respond by electrical oscillation to said microwaves, whereby said particles function as a multiplicity of dipoles whose lobes go alternately positive and negative in response to the changing phases of the microwaves forming the image, positioning a signal plate adjacent to but out of electrical contact with said particles, scanning said image with an electron beam whereby the positive lobes of the dipoles existent at the instant of scanning are neutralized, and removing excess electrons from the particles by creating in proximity thereto a positively potentiated zone.

2,945,090
NOISE INVERTER CIRCUIT
Victor J. Scott and James C. Dapper, Cincinnati, Ohio, assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed May 29, 1957, Ser. No. 662,482
3 Claims. (Cl. 178—7.3)



1. In a receiver, the combination comprising: a source of demodulated signals, said signals fortuitously containing noise; an amplifier for amplifying said demodulated signals, said amplifier having a first plate, a first cathode, and a first control grid, said demodulated signals being coupled across said first control grid and cathode; a direct current source connected across said first plate and cathode for operatively biasing said amplifier; means for cancelling noise appearing across said first plate and cathode, said means comprising a triode having a second plate, a second cathode, and a second control grid, said second cathode being connected through a first resistor to said first grid, said second plate being connected through a second resistor to said first plate; manual control means connected to said amplifier for adjusting the gain of said amplifier; a source of automatic gain control connected to said second control grid for biasing said second control grid to prevent conduction of said triode until the magnitude of said noise exceeds a predetermined level; and means in circuit with said amplifier and said triode, and responsive to the change of gain of said amplifier for automatically and instantaneously adjusting the voltage relationship between said second plate and said second cathode so as to maintain substantially constant the magnitude of noise required to cause conduction of said triode as the gain of said amplifier is varied.

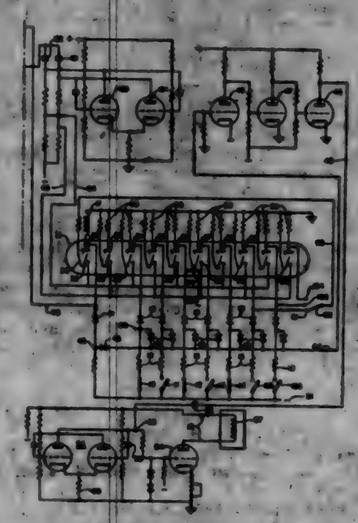
2,945,091
DECODING-PRINTING APPARATUS
Michele Canepa, South Norwalk, Conn., assignor to Olivetti Corporation of America, New York, N.Y., a corporation of Massachusetts
Filed June 10, 1955, Ser. No. 514,631
4 Claims. (Cl. 178—34)



1. Apparatus for decoding and printing binary information comprising a printing wheel carrying characters at angular spaced positions thereon, an indexing shaft having a main gear keyed thereto and an idler gear freely rotatable thereon, gear means intercoupling said printing wheel with said idler gear, step-clutch means to impart a series of angular displacements to said shaft corresponding to the successive weights of a binary coded-decimal binary system, a stop gear engageable with both said idler gear and main gear to prevent rotation thereof, a coupling gear simultaneously engageable with said idler gear and said main gear to effect an operative coupling between said main gear and said printing wheel, and electromagnetic means responsive to said binary information selectively to shift said coupling gear into operative engagement and simultaneously to withdraw said stop gear in accordance with the significances of the successive digits in said binary information, whereby said printing wheel is angularly displaced in a series of steps to a position representative of said information.

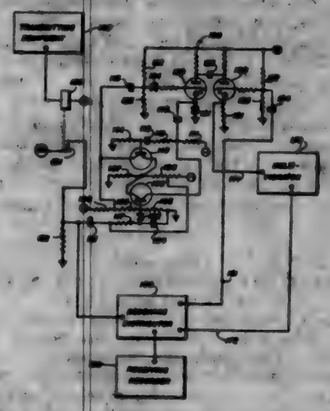
2,945,092
START-STOP TELEGRAPH SIGNAL GENERATOR WITH TWO OSCILLATORS
Joseph Gardberg, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 27, 1956, Ser. No. 624,590
9 Claims. (Cl. 178—53.1)

6. An apparatus for connecting signals from a multi-wire source of telegraph intelligence signals to a single transmission line, which comprises a plurality of sensing means, each of the sensing means connected to an associated one of the multi-wire signal sources, means for conditioning the sensing means with marking and spacing potentials indicative of the signals to be transmitted, a multi-stage distributor having a stage connected to an associated one of each of the sensing means with two stages so connected to the sensing means that the sensing means is conditioned with potentials indicative of stop and start signals, an output circuit connected to the transmission line, means for applying the output from the sensing means to the output circuit, a pair of continuously-running oscillators of different frequency for operating the distributor stages successively such that start, intelligence and stop signals are impressed on the transmission line successively, a gating circuit including two pentode vacuum tubes, means connecting the distributor



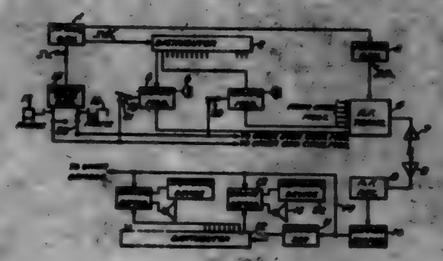
stage associated with the stop impulse to the suppressor grids of the pentodes such that one of the pentodes is conditioned to potential variations impressed on its control grid during the transmission of the stop signal and the other is conditioned similarly during the transmission of the remaining signals, and means for applying each of the oscillator outputs to an associated one of the pentode control grids.

2,945,093
RANGE SELECTOR (TELEGRAPH SWITCHING)
Gerald R. Paul, Webster, and Charles R. Fisher, Jr., Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Feb. 21, 1957, Ser. No. 641,745
9 Claims. (Cl. 178—53.1)



4. In a data processing system having a distributor operated by a signal source to distribute a code signal including a control signal, an electronic switch means having two stable states and including at least one electronic device having two control electrodes, said electronic switch means controlling said signal source in one stable state to render said signal source effective and in the other stable state to render the signal source ineffective, and means controlled by said control signals for simultaneously applying signals to both of said control electrodes to operate said electronic switch means to said one stable state.

2,945,094
PULSE SIGNALLING SYSTEM
Sidney Metzger, Trenton, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Sept. 7, 1954, Ser. No. 454,573
9 Claims. (Cl. 179—15)

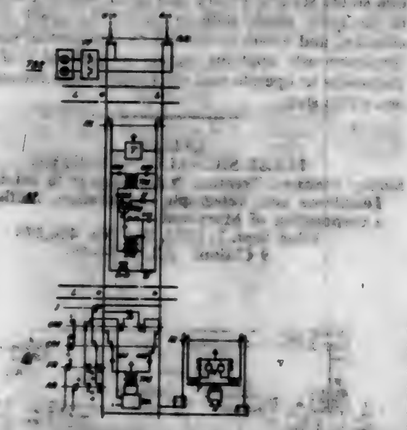


9. In a transmission system, a transmitter comprising a source of pulses recurrent at a given pulse repetition frequency, a square wave generator coupled to said source of pulses to divide said given pulse repetition frequency by two, modulator means, means coupling said modulator means to said source of pulses to provide a first pulse train at the output of said modulator having a repetition frequency equal to said given repetition frequency, switching means to selectively couple said modulator means to the output of said square wave generator to provide a second pulse train at the output of said modulator means having a repetition frequency equal to one half of said given repetition frequency, a source of intelligence signals, and means coupling said source of intelligence signals to said modulator means to modulate both of said first and second pulse trains by the intelligence signals thereof.

2,945,095
PARTY-LINE TELEPHONE SYSTEM
Erik Leonart Skogberg, Domnarvsgatan 13, Hedemora, Sweden
Filed Mar. 14, 1956, Ser. No. 571,434
Claims priority, application Sweden Apr. 2, 1955
6 Claims. (Cl. 179—17)

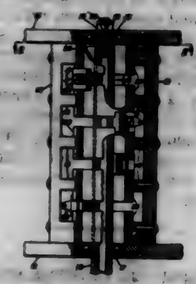
1. In a telephone system, a two conductor line; a central exchange coupled to said line and having an electrical energy source for energizing said line in an initial polarity, first circuit closure means actuable for reversing the initial polarity of said energized line, a plurality of normally unactuated indicator means, signal frequency amplifier and second circuit closure means for selectively actuating one of said indicator means in response to the signal transmitted thereto; a plurality of party stations, each having manually operable third circuit closure means for operatively coupling said station across said line, a transistor oscillator tuned to generate a particular frequency signal individual to said station, unidirectional conductive circuit means for rendering said oscillator operable upon reversal of the initial polarity of said en-

ergized line, subsequent to the coupling of said station thereto thereby enabling transmission of said particular



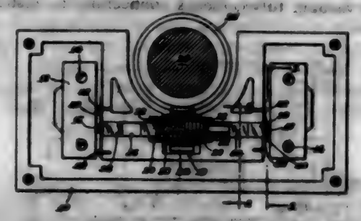
frequency signal to said signal frequency amplifier means at said central exchange.

2,945,096
SEQUENTIAL COMMUTATOR SWITCH
Francis C. South, Glenmont, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 9, 1959, Ser. No. 792,235
1 Claim. (Cl. 200—25)



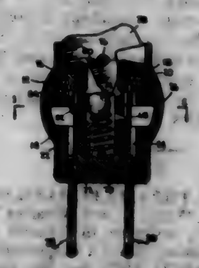
An improvement in a rotary switch, comprising, a pair of body elements in spaced relation and having a plurality of inwardly depending flanges thereon, the flanges of one of said elements being directly opposite the flanges of the other of said elements to form pairs of opposing flanges, a commutator rotatable between said elements and carrying a longitudinal contact member, a plurality of support rings, said rings being positioned in spaced relation to one another and defining annular tracks therebetween, individual support rings being secured to individual pairs of opposing flanges, contacts slidably mounted in said annular tracks and engageable therewith throughout the entire 360 degrees thereof, said contacts being engageable with said longitudinal contact member on said commutator, locking means on said contacts for fixing the position thereof on any point of said annular tracks, and means for rotating said commutator.

2,945,097
ROTARY LIMIT SWITCH
Walter Thomas Hahn, Cincinnati, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed Feb. 4, 1959, Ser. No. 791,899
8 Claims. (Cl. 200—47)



1. A limit switch arrangement comprising: a pair of limit switches, a rotatable member therebetween; means to rotate the rotatable member in either direction; a screw rotatably received in said member for movement axially thereof when the member is rotated, said screw having axial extensions engageable with the limit switches for actuating the latter in response to rotation of the member.

2,945,098
ELECTRICAL DEVICES
Louis Ludwig, New York, N.Y. (% Eagle Electric Mfg. Co., Inc., 23—10 Bridge Plaza S., Long Island City 1, N.Y.)
Filed June 15, 1959, Ser. No. 820,169
2 Claims. (Cl. 200—51)

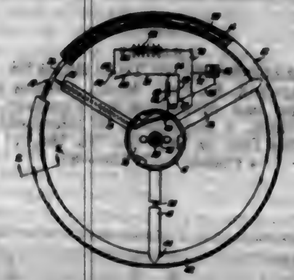


1. An electrical device comprising a hollow casing, including two sections abutted against one another and having wells, said wells facing the zone of abutment, at least one electrical contact having at least a portion thereof located within said casing and including resilient protuberances inclined toward one another and integral with said contact, one of said protuberances being uni-directionally frictionally received in the well of one section and the other protuberance being uni-directionally frictionally received in the well of the other section, whereby said protuberances lockingly engage both said sections and retain them in abutment with one another.

2,945,099
STEERING WHEEL SWITCH MECHANISM FOR AWAKENER ALARM
Henry G. Mayhew, 2906 Indiana, Topeka, Kans.
Filed Feb. 17, 1959, Ser. No. 793,787
10 Claims. (Cl. 200—61.57)

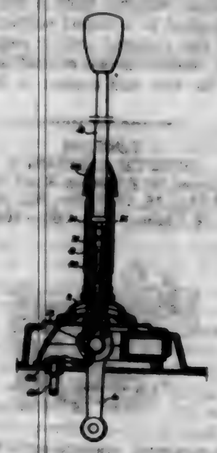
1. Steering wheel switch mechanism for controlling an awakener alarm system for a vehicle and including a signal device electrically coupled with a source for energizing the same upon opening of the switch of said mechanism, said switch including in combination with

the steering wheel of the vehicle an annular conductor on the rim member of the steering wheel; a plurality of spaced contact pins secured to said element and extending outwardly therefrom; means electrically coupling the element to the device; structure carried by the rim member, substantially coextensive in length with the element and normally maintained in spaced relationship to said pins prior to gripping of the wheel by the driver, individual areas of the structure being movable into electrically contacting relationship to the pins in response to the driver's gripping the portions of the rim member



of the steering wheel adjacent thereto, said rim member having an annular groove therein permitting said structure to move into electrically contacting relationship to said pins, there being means within the groove and interposed between the element and said structure for biasing the latter away from said pins; and means electrically connecting the structure to said source whereby the device is energized when the driver's grip on said wheel relaxes sufficiently to permit all areas of the structure to move out of electrically contacting relationship to the pins.

2,945,100
GEAR-CHANGING CONTROL
Jean Maurice and Michel Riot, Paris, France, assignors to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France
Filed Feb. 14, 1956, Ser. No. 565,479
Claims priority, application France Feb. 14, 1955
8 Claims. (Cl. 200—61.88)



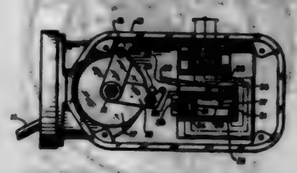
8. An electrical switch structure comprising a first member, a second member, said first member being mounted movably with respect to said second member over a limited travel, abutment means on each of said members for insuring that beyond said limited travel said second member is rigid with said first member two contact elements constituting a switch and being carried from the two members respectively, one of said elements being rigid with its corresponding member, the other element being mounted rockable on the other member, and a spring means between said last mentioned element and member.

2,945,101
ROTATIONAL SPEED GOVERNOR
Kenneth J. Chichester, Stamford, and Edward M. Crocco, Greenwich, Conn., assignors to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Filed Mar. 25, 1959, Ser. No. 801,536
1 Claim. (Cl. 200—80)



A speed control device comprising: a rotatable body which includes a pair of similar concentric arcuate segments electrically insulated one from the other forming a part of the body, a pair of resilient fingers, there being one finger attached to each of the segments, each finger being attached at one end thereof to its respective segment, the other end of the fingers being in resilient engagement one with the other when the rotational speed of the body is below a predetermined value, centrifugal forces causing separation of the fingers when the rotational speed of the body is above a predetermined value, a pair of contact brushes in contact with the segments, each segment provided with support means adapted to be fitted with adjustable screw means which engage the associated contact finger for selectively effecting a bias thereon, said bias opposing the forces caused by centrifugal forces on one of the respective contact fingers, and said bias being capable to be rendered effective upon the contact finger which depending upon the direction of rotation is disposed at the leading edge of the rotating body.

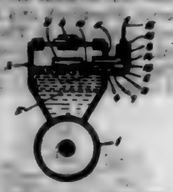
2,945,102
ACTUATING LINKAGE FOR A SWITCH
Lyndall K. Smith, Tulsa, Okla., assignor to Instruments, Inc., Tulsa, Okla., a corporation of Oklahoma
Filed Nov. 6, 1958, Ser. No. 772,292
7 Claims. (Cl. 200—84)



1. A device for manifesting two different values of a variable including, an element moved in space by a variable, a switch mounted at a location whereby its spring-urged actuating arm is mechanically engaged from two different directions by the element as the element moves under the influence of the variable to position the switch contacts in manifestation of different values of the variable, and a magnetic body which is first positioned by the element to develop a magnetic force on the actuating arm to overcome the spring force and hold the contacts of the switch in one position against the spring force and

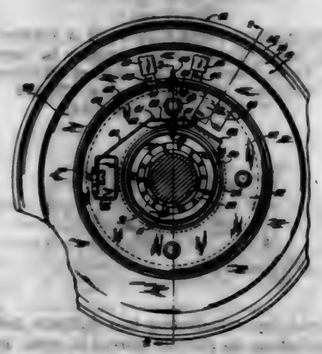
secondly positioned to eliminate the magnetic force on the actuating arm to permit its spring to return the contacts of the switch to their alternate position.

2,945,103
BRAKE FLUID LEVEL INDICATOR
Guido Collavoli, 7101 Cartier St., Montreal, Quebec, Canada
Filed May 12, 1959, Ser. No. 812,742
1 Claim. (Cl. 200—84)



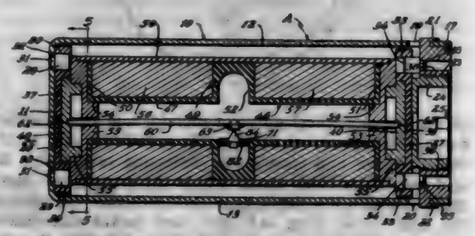
An electrical signalling device comprising an elbow shaped conduit member having a threaded end adapted to be threadedly connected within a tapped hole of a liquid reservoir, a plug of insulating material closing the right angle branch of said elbow, an electrical wire passing through said plug secured in position thereby and insulated from the elbow, a head at the lower end of said wire forming a stationary electrical contact, a lever pivoted intermediate its ends on a cross pin secured to and extending within the threaded branch of said elbow, said lever arm projecting outwardly of said elbow at one end, and having its inner end forming a movable electrical contact adapted to abut said stationary contact within said elbow, and a float member attached to the projecting outer end of said lever arm, said float member having a cylindrical shape of a diameter not greater than the maximum diameter of the threaded part of the branch of said elbow.

2,945,104
ELECTRICALLY CONTROLLED CLUTCHES
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 26, 1957, Ser. No. 680,242
15 Claims. (Cl. 200—87)



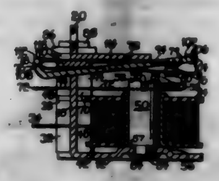
1. In an electrically controlled clutch, a pair of cooperating relatively rotatable clutch members, electrically energizable means for producing a clutch-engaged relation between said clutch members, current supply means connected with said energizable means and including a control switch rotatable with one of said clutch members, said switch comprising cooperating relatively stationary and relatively movable contact members and a switch member carrying the movable contact member and being centrifugally shiftable for causing switching actuation of said movable contact member from a first switch position to a second switch position, said switch member being resiliently biased for moving said movable contact member toward said first switch position, and holding means effective on said switch member and comprising a permanent magnet rotatable with said one clutch member, said switch member being in direct engagement with said magnet and being subject to holding thereby in response to magnetic attraction provided by said magnet, when said movable contact member is in one of said switch positions.

2,945,105
MAGNETOSTRICTION RELAYS
Ward H. Ingersoll, St. Paul, Minn., assignor to Nobles Engineering and Manufacturing Company, Ramsey County, Minn., a corporation of Minnesota
Filed Dec. 30, 1957, Ser. No. 706,113
4 Claims. (Cl. 200—87)



1. A magnetostriction relay including an armature comprising an elongated strip of a material capable of varying in dimension when subjected to a magnetic field, a coil encircling said armature, a sleeve of magnetic material encircling said coil, end members of magnetic material at the ends of said sleeve and at the ends of said armature including fulcrums between which said armature is pivotally supported, means for adjusting the distance between said end members, said end members holding said armature under longitudinal compression in a slightly arcuate position, a contact on said armature intermediate the ends thereof, said armature varying in the degree of arcuation when said coils are energized, said contact being movable from a first position when said coil is energized to a second position when said coil is deenergized, and a second contact engageable with the first mentioned contact in one of said positions and disengaged from the first said contact in the other of said positions.

2,945,106
SWITCH ASSEMBLY
David F. Moyer, 94 Patterson Road, Dayton, Ohio
Filed May 15, 1957, Ser. No. 659,429
16 Claims. (Cl. 200—104)



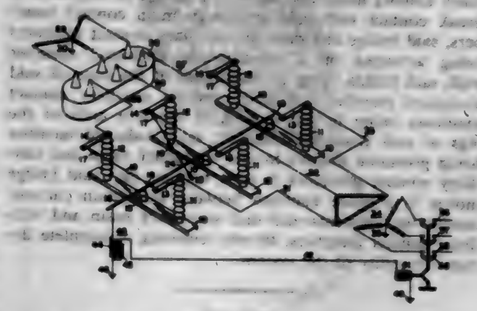
1. A switch assembly comprising a base, a plurality of spaced-apart post members attached to the base and extending normal thereto, the post members being in parallel alignment adjacent one edge of the base, there being a pair of outer post members and an intermediate post member, a pair of insulating sleeve members, there being an insulating sleeve member encompassing each of the outer post members, a support plate provided with a pair of apertures therein each of which encompasses one of the outer post members, spacer members encircling the outer post members and engaging the base and the support plate maintaining the support plate in parallel spaced relation from the base, a coil of electric conductor material attached to the support plate and disposed between the base and the support plate, a magnetic core attached to the base and extending through the coil, the coil having a pair of electric connection leads extending therefrom, each of the electric connection leads including a connection lug, each connection lug closely encircling one of the outer post members, a plurality of resilient contact stems, there being a plurality of contact stems encircling each of the outer post members, each of the stems having a portion normally extending substantially parallel to the support plate, spacer means encircling each of the outer post members and interposed among the contact stems which encircle the post members for separation thereof, a magnetizable actuator pivotally carried by the intermediate post member, a leaf spring member carried by the intermediate post member in spaced relation from the actuator and having an extending portion in resilient engagement with the actuator, the spring member urging the actuator in a direction away from the core, the actuator being engageable with the core upon energization of the coil, means attached to the actuator and engageable with at least one contact stem carried by each post member for movement thereof with respect to the other contact stems.

2,945,107
ELECTRICAL RELAYS
Andrew Hufnagel, Penn Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1957, Ser. No. 702,342
3 Claims. (Cl. 200—104)



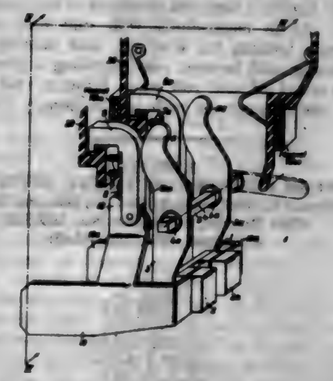
1. A contact stack comprising at least one fixed contact spring and at least one movable contact spring, an insulating wafer disposed between said springs, said insulating wafer having a laterally projecting ear at one end thereof, each of said contact springs including a support portion and a cantilever portion offset from said support portion and extending laterally beyond one side of said wafer, said cantilever portion having an end affixed to said support portion and a free end extending past said ear of said wafer, the free end of said cantilever portions of said fixed contact spring bearing on said ear of said wafer and said ear providing a stop therefor, and contact buttons on said free ends, said cantilever portion of said fixed contact spring being bent at a point intermediate said affixed end and the point where said cantilever portion bears on said ear for prestressing said cantilever portion to engage the edge of said ear adjacent said contact buttons whereby precise adjustment can be made between the contact buttons on said movable contact spring and the contact buttons of said fixed contact spring.

2,945,108
POLYPHASE FUSE CONSTRUCTION
Carroll H. Walsh, 2002 Cherry St., Pine Bluff, Ark.
Filed Dec. 8, 1958, Ser. No. 778,582
6 Claims. (Cl. 200—114)



1. A polyphase high voltage fuse construction for use between a grounded polyphase source and a polyphase load; comprising at least three laterally spaced fuse assemblies each including insulating means supporting a source fuse terminal and a load fuse terminal, a fuse link fastened at its respective ends to said source and load terminals and electrically connnecting said terminals, said fuse link embodying a load fusible element disposed adjacent said load terminal and a source fusible element disposed adjacent said source terminal, and an intermediate conducting portion joining the fusible elements and swingably movable in response to the fusing of either of said fusible elements and completely releasable in response to the fusing of both of said fusible elements, a conducting member, and insulating means supporting said conducting member in the paths of movement of all of said intermediate fuse link portions.

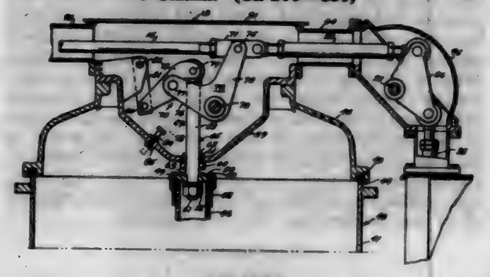
2,945,109
CIRCUIT BREAKER
Heinz Fehling, Neumuenster, Holstein, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
Filed Sept. 3, 1958, Ser. No. 758,814
Claims priority, application Germany Sept. 4, 1957
5 Claims. (Cl. 200—147)



1. In a circuit breaker system for electrical currents, having main contact means, an auxiliary arc-forming contact means, and magnetic arc-blowing means, the arrangement comprising two main current conducting elements, a plurality of stationary main contact members and a movable contact bridge for making contact therewith

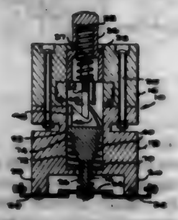
and forming therewith said main contact means, at least two partial movable auxiliary contact members conductively connected to said contact bridge, and a corresponding number of stationary auxiliary contact members adapted for forming arcs with said movable auxiliary contact members, when said bridge is displaced to break contact with said stationary main contact members, said bridge and movable auxiliary contact members being arranged on a substantially U-shaped member with said bridge being in the region of the base of said U-shaped member and said movable auxiliary contact members being in the regions of the free ends of the legs of said U-shaped member, said U-shaped member being pivotable relative to said stationary main and auxiliary contact members in such manner that said bridge moves in a space confined between said main current-conducting elements and said stationary main and auxiliary contact members, thereby ensuring a complete dynamic stability of the system.

2,945,110
POLE UNIT MECHANISM
James R. McCloud, Los Angeles, Calif., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 15, 1958, Ser. No. 767,340
7 Claims. (Cl. 200—150)



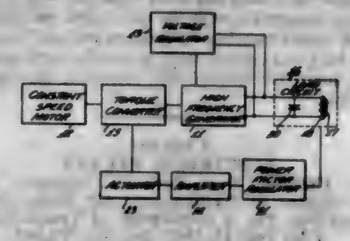
1. A pole unit of an oil circuit breaker comprising a stationary and a movable contact, a tank wherein said contacts are disposed, a reciprocative rod extending through an opening in said tank and having said movable contact secured thereto, and operating means disposed externally of said tank for imparting reciprocating motion to said rod; said contacts being immersed in a dielectric liquid; a ring seal mounted to said tank at said opening and in engagement with said rod; said tank including a housing for said seal, said housing defining said opening; said housing also providing a positive stop limiting travel of said rod when bringing said movable contact into engagement with said stationary contact.

2,945,111
PUSH BUTTON ELECTRICAL SWITCH
Thomas C. McCormick, Box 32, Klamath, Oreg.
Filed Oct. 24, 1958, Ser. No. 769,358
4 Claims. (Cl. 200—160)



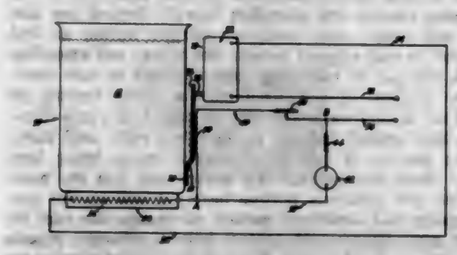
1. In an electric switch, a housing, a spindle movably mounted in said housing, a switch element fixed on one end of said spindle, fixed contacts carried by said housing and cooperatively related to said switch element, a depressible and releasable push plunger positioned in said housing adjacent the other end of said spindle and in axial alignment with said spindle, and means connecting said plunger to said spindle so that successively depressing and releasing said plunger causes alternately stationary engagement of said switch element with said fixed contacts and momentary engagement of said switch element with said fixed contacts followed by disengagement of said switch element with said fixed contacts, said means embodying a pair of opposed actuating fingers on the end of said plunger adjacent said spindle and two opposed pairs of working cam faces on said spindle, the faces of each pair being of different configuration, said opposed pairs of faces being adapted to be successively engaged and disengaged by said fingers on successive alternately depressing and releasing said plunger.

2,945,112
MOTOR GENERATOR INDUCTION HEATING SYSTEM
Donald B. Scott, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed July 28, 1958, Ser. No. 751,517
6 Claims. (Cl. 219—10.77)



1. In a motor generator high frequency heating system: a load circuit; a variable torque converter coupling said motor and generator; a phase sensitive device associated with said load circuit, said phase sensitive device producing an output signal responsive to the direction of the phase angle of the current in said load circuit; and means for varying the torque transmission of said torque converter to speed up or slow down said generator in response to said output signal to operate said generator at unity power factor.

2,945,113
SENSITIVE THERMAL-CONTROL DEVICE
Milton H. Pelavin, Forest Hills, N.Y., assignor, by mesne assignments, to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York
Filed May 9, 1957, Ser. No. 658,143
5 Claims. (Cl. 219—20)



1. In a heating receptacle provided with an electric heater, temperature control means therefor comprising a thermostatic element in heat exchange relation with said receptacle, auxiliary heating means having lower heating capacity than said heating receptacle in heat exchange relation with said thermostatic element, means connected to said auxiliary heating means for maintaining the heat produced thereby constant, and switch means operable under the control of said thermostatic element for closing and opening the circuits of said heater and said auxiliary heating means in unison, whereby to accelerate the heating and cooling of said thermostatic element to cause a relatively high frequency cyclic actuation of said switch means and thus reduce temperature variations of said receptacle from a predetermined value set therefor.

2,945,114
HEATING DEVICE
Frederick John Mathews, P.O. Box 184, Beloit, Wis.
Filed July 29, 1957, Ser. No. 674,809
9 Claims. (Cl. 219—43)



2. A heating device comprising a housing having a body member and a top member, said top member being detachably secured to said bottom member and having an opening defined centrally therethrough; a heater shell disposed within said housing and having an inner surface, an outer surface, and a beveled surface, said inner and said outer surfaces coacting with said beveled surface to define an intermediate shell portion therebetween and bounded thereby, said intermediate portion having adjacent the intersection of said inner surface with said beveled surface an annular ridge extending upwardly from said beveled surface, the edge of said inner surface defining a shell opening substantially in register with said opening in said top member; an electric heating element helically embedded in said intermediate section and having a pair of spaced lead portions extending outwardly therefrom and adapted for operative connection to an electric power supply; a support member intimately interposed between said body member and a lower portion of said shell for supporting in compression said shell in spaced relationship to said body member, said shell and said body member coactively defining a void therebetween, a plurality of insulating members disposed in and substantially filling said void for substantially inhibiting the passage of heat from said shell to said housing; and an annular thermal seal operatively interposed between said beveled surface and said top member and circumscribing said annular ridge.

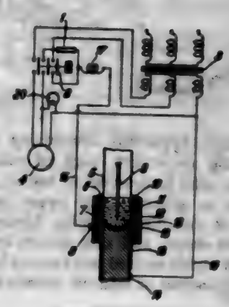
2,945,115
KNITTED HAIR DRYING CAP
Edward W. Weltzel, 30 4th St. NE., Hickory, N.C.
Filed July 19, 1956, Ser. No. 598,820
7 Claims. (Cl. 219—46)

1. An electric hair drier having a body portion formed of a single insulated resistance wire formed into a series of rings formed of interconnected loops, each series of loops being interlaced with the preceding series and terminating in a series at the bottom and the top, the top series of loops having the wire extending through each loop and drawn into a ring and secured to hold the loops in a ring-like form and passing down through some of the other loops in the several series, the bottom series



being secured against raveling, and a connector to which both ends of the wire are connected.

2,945,116
METHOD FOR CONTROLLING THE TRAVEL OF WELDING MACHINE USED FOR ELECTRICAL ARC WELDING INTO MOLTEN SLAG
Martin Masný, 14 Zahradnicka, and Vilem Pavelka, 9 Jerusalemska, both of Bratislava, Czechoslovakia
Filed May 14, 1958, Ser. No. 735,326
Claims priority, application Czechoslovakia June 17, 1957
5 Claims. (Cl. 219—73)



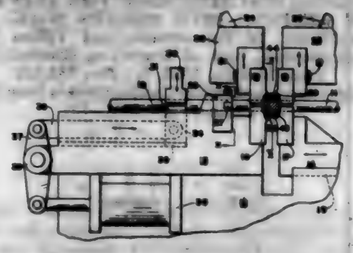
1. In apparatus for electric welding in a bath of molten flux along edges of work pieces which extend at a substantial angle to the horizontal; the combination of a welding machine movable upwardly along the edges of the work pieces as the welding proceeds and including a welding electrode projecting downwardly into the gap between the edges of the work pieces and supplied with welding current to deposit molten weld metal in said gap under a bath of molten slag, cooling side plates spanning the gap between the edges of the work pieces at the opposite sides of the latter and adapted to contain the molten slag and weld metal in the gap, and an electric motor operative to move the welding machine upwardly along the edges of the work pieces, the distance between said side plates being slightly greater than the thickness of the work pieces so that layers of slag are deposited on the opposite sides of the weld metal; an auxiliary electric circuit connected to the solidified weld metal in the gap and to a conductive probe carried by one of said side plates and located with respect to the

latter, in the direction of movement of the welding machine, so as to be disposed immediately below the top surface of the molten weld metal when said side plates are in their uppermost position in relation to the baths of molten slag and weld metal, said probe being in contact with the layer of slag deposited between the inner surface of the related side plate and the adjacent side of the weld metal so that the layer of slag contacting said probe and the weld metal are included in said auxiliary circuit to complete the latter when the layer of slag is molten, and therefore conductive, at the point of contact with said probe and to interrupt said auxiliary circuit when the layer of slag is in the solid state, and therefore nonconductive, at the point of contact with said probe; and control means for said electric motor actuated by said auxiliary circuit to operate said motor when the auxiliary circuit is interrupted by contact of the probe with slag in the solid state, thereby to move the welding machine upwardly until said probe is disposed immediately below the top surface of the molten weld metal where the high temperature melts the slag layer in contact with said probe for again completing said auxiliary circuit.

2,945,117
METHOD AND APPARATUS FOR REMOVING WELDING FLASH

Jean F. Harris and Harry W. Horlacher, Warren, Ohio, assignors to The Taylor-Winfield Corporation, Warren, Ohio, a corporation of Ohio

Filed Jan. 28, 1958, Ser. No. 711,636
15 Claims. (Cl. 219—97)

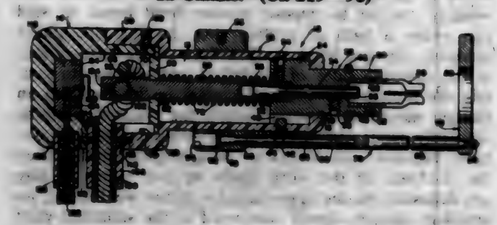


1. Flash welding apparatus comprising a pair of opposed welding die assemblies, each of said welding die assemblies being split to provide an upper and lower die member, means to separate said upper and lower die members, each of said die assemblies having an end face of predetermined shape, and said shapes being such that the welding flash about welded workpieces is broken away therefrom by separation of said die members.

2,945,118
STUD WELDING APPARATUS

Frank K. Kelemen and Ralph K. Ritter, Haddonfield, N.J., assignors to KSM Products, Inc., Merchantville, N.J., a corporation of New Jersey

Filed Aug. 22, 1958, Ser. No. 756,655
12 Claims. (Cl. 219—98)

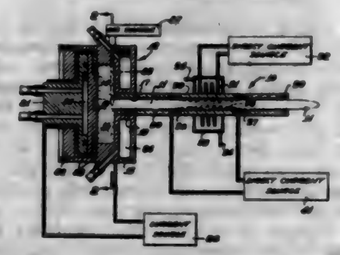


1. Stud welding apparatus comprising, in combination, a housing formed of an electrically nonconducting material and having a bore open at its forward end and closed at its rear end, a spindle mounted for movement forwardly and rearwardly within said bore, said spindle projecting from the forward end of said bore, being formed of an electrically conductive material, and having a stud-holding means mounted on its forward end, resilient means within the forward portion of said bore for biasing said spindle forwardly within said bore, an electrical conductor for supplying welding current to said spindle, said conductor being led into the rear portion of said bore, being connected at its end within said rear portion of said bore to said rear portion of said spindle and being secured to said housing at its point of entry into said housing, the portion of said conductor between its point of entry and its point of attachment to said spindle being located within said rear portion of said bore, a contact member fixedly mounted within said bore at the rear of said bore in the path of rearward movement of said spindle for making contact with said spindle and completing an electrical circuit through said spindle, and an electrical conductor connected to said contact member and extending from said housing.

2,945,119
STABILIZED MAGNETIC NOZZLE FOR PLASMA JETS

Vernon H. Blackman, Laguna Beach, Calif., assignor to Plasmadyne Corporation, Santa Ana, Calif., a corporation of California

Filed Sept. 8, 1959, Ser. No. 838,692
10 Claims. (Cl. 219—123)



1. Stabilized magnetic nozzle means for a substantially arc-free stream of ionized gas, which comprises means to create a magnetic field through which said stream passes, and means to maintain an electric arc in said stream adjacent said magnetic field.

2,945,120
INDICATING INSTRUMENT

Thomas A. Green, Willoughby, Harvard H. Gerrie, Cleveland Heights, Jack F. Shannon, Euclid, and Trevor Flatt, University Heights, Ohio, assignors to Bailey Meter Company, a corporation of Delaware

Application June 10, 1954, Ser. No. 435,883, now Patent No. 2,885,536, dated May 5, 1959, which is a division of application Ser. No. 176,382, July 28, 1950. Divided and this application July 7, 1958, Ser. No. 747,025
5 Claims. (Cl. 240—52.1)

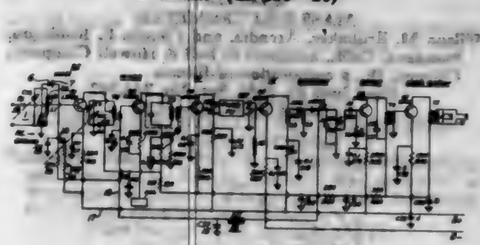


4. A support structure for an illumination means providing illumination for a scale of an indicating instrument including, a housing for supporting the scale and having a side with several apertures therethrough, a plate means for substantially parallel external cooperation with the side of said housing, an incandescent source attached to said plate and extending through a first of said apertures into the housing interior to illuminate said scale, a pair of prong members fixed to said plate extending therefrom and into the housing interior by way of said first aperture and having hook portions engaging the interior of the housing side, and a resiliently expansible member spaced from said prongs and extending from said plate for engagement with a second of said apertures for releasably locking said plate to the housing side.

2,945,121
RADIO FREQUENCY TRANSISTOR RECEIVERS PROVIDED WITH AUTOMATIC GAIN CONTROL

Richard W. Bradmiller, Springfield Township, Hamilton County, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Filed Mar. 21, 1956, Ser. No. 572,852
1 Claim. (Cl. 250—20)



In a radio receiver of the type having a signal translating stage provided with a high potential terminal and a low potential terminal connected to a point of reference potential, and at least one transistorized stage coupled in cascade to said signal translating stage, the combination of: an attenuating circuit comprising an attenuating diode and a radio frequency by-pass capacitor connected in series between said terminals, with the anode of said attenuating diode connected to said high potential terminal and in circuit with said point of reference potential, and said capacitor connected between the cathode of the attenuating diode and said point of reference potential; a source of biasing potential; a voltage divider comprising first, second, and third resistors connected across said source, the first resistor being connected between the positive terminal of said source and the cathode of said attenuating diode for applying to said attenuating diode a reverse bias which renders the attenuating diode nonconductive in the absence of input signals and in the presence of output signals below a predetermined magnitude; a detector stage comprising a detecting diode poled with its anode connected to the junction of the second and third resistors and its cathode in circuit with said point of reference potential, so that the third resistor portion of the voltage divider applies to the detector anode a forward bias, currents in the third resistor flowing by reason of the detection of input signals in excess of said predetermined magnitude developing across said third resistor an AGC potential which is applied to a transistorized stage and to the cathode of the attenuating diode to overcome the positive bias on the attenuating diode and render the attenuating diode conductive, currents in said attenuating diode developing across the first-mentioned resistor a supplemental automatic gain control potential which is also applied to said transistorized stage so that both diodes cause to be applied to said transistorized stage complementary gain control effects, thereby minimizing power drain from the detector.

2,945,122
CRYSTAL RECTIFIER TUBE

Daniel A. Lauciani, West Medford, Mass., assignor to Microwave Associates, Inc., Boston, Mass., a corporation of Massachusetts

Filed Oct. 11, 1955, Ser. No. 539,786
6 Claims. (Cl. 250—31)

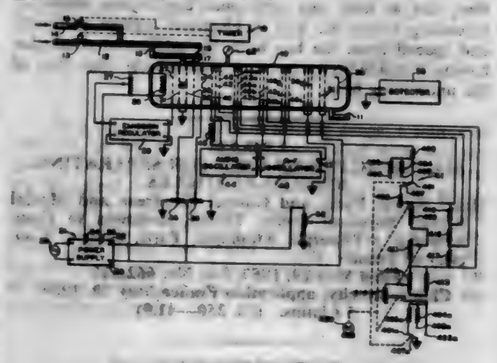


1. A crystal millimeter rectifier mounting device for use with a rectangular waveguide comprising a cartridge having a cylindrical central opening adjacent the rectangular guide and in sequence thereafter, a cylindrical dielectric sealing element matching the circular wave guide impedance to that of the rectangular guide, a circular to coaxial transforming fin conductively mounted to said cartridge, an axially mounted crystal-whisker assembly, one element of which is conductively mounted to said fin and the other element of which is electrically isolated from the cartridge, and connecting means for the IF crystal output.

2,945,123
MASS SPECTROMETER

James R. Parsons and Dale A. Fluegel, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

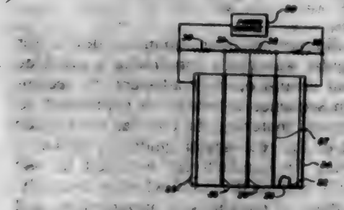
Filed Apr. 30, 1954, Ser. No. 426,768
19 Claims. (Cl. 250—41.9)



1. A mass spectrometer comprising a gas impermeable envelope enclosing an ion source; a collector plate spaced from said soure; a plurality of groups of grids spaced between said ion source and said collector plate, each of said groups comprising three equally spaced grids, the spacings between adjacent groups being $n+0.3183-(2s+t)$ inches, where n is an integral number, s is the spacing between adjacent grids in each group, and t is the thickness of each grid, all of said dimensions being in inches; first and second spaced grids positioned between said collector plate and the group of said grids adjacent said collector plate; a first source of alternating potential of a first frequency, one terminal of said first source being connected to the center grid in each of said groups, the second terminal of said first source being connected to a point of reference potential; a second source of alternating potential of a second frequency which is lower than said first frequency; means to modulate said first source by said second source; means to apply a potential of polarity opposite the polar-

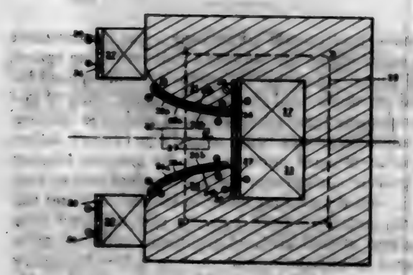
ity of the ions being analyzed to said first grid; and means to apply a potential of polarity the same as the polarity of the ions being analyzed to said second grid.

2,945,124
FORMATION OF ELECTRICAL FIELDS
Lawrence G. Hall, West Covina, and Wilson M. Brubaker, Arcadia, Calif., assignors, by mesne assignments, to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 4, 1955, Ser. No. 526,356
4 Claims. (Cl. 250—41.9)



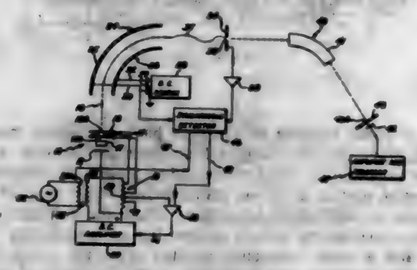
1. Apparatus for establishing an electrical field of predetermined configuration in a given region which comprises an enclosure circumscribing and forming boundaries of the region, the enclosure having at least one uninterrupted insulating wall surface, a conductive film coated on a given area of said surface, bus bars adhered to said surface adjacent opposite boundaries of said area and in electrically conductive contact with the film, a voltage source, means for connecting the voltage source to the bus bars to apply a potential gradient across the film, and at least one additional continuous conductor extending across the film in electrical contact therewith and spaced from the bus bars, the additional conductor having a conductivity per unit area greater than that of the underlying film.

2,945,125
MAGNETIC PRISMS USED FOR SEPARATING IONIZED PARTICLES
Henri Bruck, Paris, and Gabriel Gendrons and Marcel Salvat, Bures-sur-Yvette, France, assignors to Commissariat a l'Energie Atomique, Paris, France, a society of France
Filed May 29, 1957, Ser. No. 662,525
Claims priority, application France May 30, 1956
5 Claims. (Cl. 250—41.9)



1. A magnetic prism for separating the particles of a beam of ionized particles which comprises, in combination, an electro-magnet, said electro-magnet including a magnetic core in the form of a body having a plane of symmetry, the sections of said core by transverse planes passing through a line at right angles to said plane of symmetry being C-shaped, and the sections of said core by planes parallel to said plane of symmetry being in the form of circular arcs for the open portion of the C, so that this core is provided with a central recess of semi-circular section by said planes parallel to said plane of symmetry, the pole faces of said core, facing each other, on opposite sides respectively of said plane of symmetry, limiting between them a gap of general semi-circular shape, and main magnetizing windings disposed in said central recess longitudinally thereof, means forming an accurate vacuum chamber in said gap for the beam of ionized particles, insulated conductors running side by side, on said pole faces, said conductors extending along semi-circular lines having their centers on said lines at right angles to said plane of symmetry, and means for passing through said conductors currents modifying the main magnetic field in such manner as to obtain an improved focussing of the ionized particles.

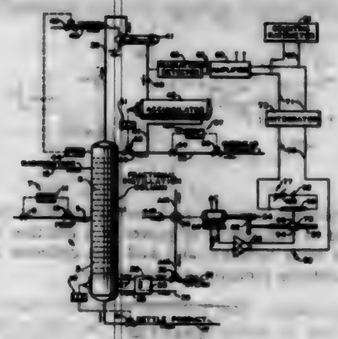
2,945,126
MASS SPECTROMETER
Wilson M. Brubaker, Arcadia, and Charles F. Robinson, Pasadena, Calif., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed June 23, 1953, Ser. No. 743,902
8 Claims. (Cl. 250—41.9)



1. In a mass spectrometer the combination comprising in serial arrangement an ion source including ion accelerating electrodes, an electric sector adapted to pass only ions within a predetermined energy band, a mass analyzer adapted to separate ions in said given energy band according to mass, an apertured sensing electrode interposed between the electric sector and the mass analyzer, a regulated voltage source for supplying potentials to the electric sector, means for developing a voltage control signal by adding a signal from said source and a signal derived from the sensing electrode representative of any de-centering of said given ion beam thereon, accelerating voltage supply means for applying voltages to the accelerating electrodes, and means regulating the accelerating voltage supply means as a function of said voltage control signal.

2,945,127
AUTOMATIC PROCESS CONTROL WITH RADIOISOTOPES
George H. Hanson, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 25, 1954, Ser. No. 464,286
20 Claims. (Cl. 250—43.5)

2. A method for controlling a process variable in a fractionation process for separating a mixture of materials including a hydrocarbon, which comprises, introducing into said process a radioisotope of said hydrocarbon, detecting the concentration of said radioisotope in a stream of the process and controlling said process variable in response to the concentration of said radioisotope in said stream to maintain a constant predetermined concentration of said radioisotope in said stream.



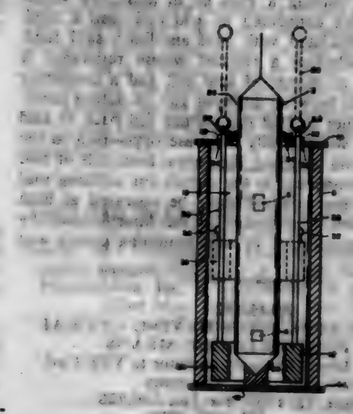
2,945,128
FLUORESCENT STRUCTURES AND METHOD OF MANUFACTURE
Kuan-Han Sun and Paul R. Malmberg, Wilkinsburg, and Frances A. Pocjak, Millvale, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 29, 1955, Ser. No. 556,173
18 Claims. (Cl. 250—80)



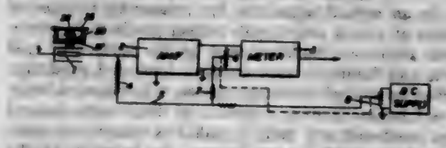
7. A phosphor for a scintillation counter comprising, a disk shaped transparent mold having a grooved face on one side, said grooves being arranged to form substantially parallel circular ridges therebetween, the other face of said mold being substantially flat, said grooves being filled with a fluorescent material so as to fill said grooves and to cover said one side, said material comprising silver-activated zinc sulphide and a transparent boron compound in the ratio by weight of between 1:1 to 1.9:1, said boron compound having a fusion point of between 150° C. and 250° C., and a metallic foil backing capable of reflecting light mounted on said fluorescent material, whereby the light transmission efficiency of the phosphor is substantially increased.

2,945,129
CALIBRATOR FOR RADIOACTIVITY WELL LOGGING INSTRUMENTS
Gilbert Swift and Dale E. Barkalow, Tulsa, Okla., assignors to Well Surveys, Incorporated, a corporation of Delaware
Filed Aug. 16, 1956, Ser. No. 604,385
12 Claims. (Cl. 250—83)

1. A calibrator for radioactivity well logging instruments having a source and a detector, said calibrator comprising radiation scattering means for scattering radiations emitted by said source in such a manner that radiations to which said detector is sensitive will be returned to the vicinity of said detector, and means movable axially of the instrument being calibrated between said instrument and said radiation scattering means for altering by a predetermined amount the flux of radiations reaching said detector.

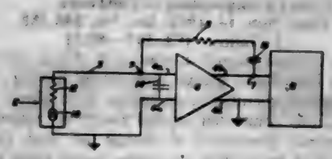


2,945,130
THICKNESS MEASURING GAUGES USING RADIOACTIVE MATERIAL
Willie Ellis Thompson and Laurence E. Taylor, Rayleigh, England, assignors to Elco Electronics Limited, Southend-on-Sea, England
Filed Dec. 29, 1954, Ser. No. 478,306
Claims priority, application Great Britain Jan. 13, 1954
13 Claims. (Cl. 250—83.6)



1. In a beta ray thickness measuring gauge, a source of beta ray, an ionisation chamber associated with said ray source, a source of standard voltage, means for impressing the output from the ionisation chamber and the standard voltage on the input of an amplifier to produce a difference signal, a utilisation circuit coupled to said amplifier, and means for jointly varying the standard voltage and the sensitivity of the amplifier to compensate for effects of decay and contamination associated with the radioactive source.

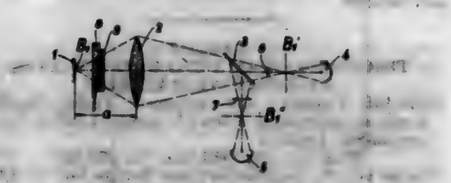
2,945,131
MATCHING CIRCUIT FOR RADIATION DETECTORS
Robert W. Astheimer, Springdale, Conn., assignor to Barnes Engineering Company, Stamford, Conn.
Filed Dec. 7, 1955, Ser. No. 551,491
8 Claims. (Cl. 250—214)



1. A radiation detector matching circuit for matching a radiation sensitive cell which provides a varying electrical signal when radiation of varying intensity impinges thereon to a circuit to utilize the signals from said cell

comprising, in combination, a high impedance high frequency radiation sensitive cell, a high gain alternating current amplifier having a gain of at least 150 whose input terminals are connected to said cell; and a feedback network associated with said amplifier, said feedback network including a resistor whose resistance is smaller than the resistance of said cell and a condenser connected in series between an input and an output terminal of said amplifier so that the voltage fed back to said input terminal is substantially in phase opposition to the input voltage to said terminal; the output terminals of said amplifier being connected to the circuit for utilizing said cell signals whereby said cell may be operated at high frequencies without attenuation by the filter formed by the distributed capacitance of said matching circuit and said resistor.

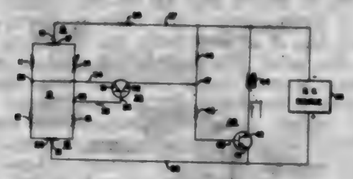
2,945,133
MEASURING APPARATUS HAVING OPTICAL AND PHOTOELECTRIC MEANS
Kurt Schöch, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Germany
Filed Mar. 18, 1957, Ser. No. 646,928
3 Claims. (Cl. 250—220)



1. In an optical apparatus for measuring changes of position of a near object with utmost precision, a photoelectric device, a luminous spot on the surface of said object, said luminous spot emitting light and producing an effect on said photoelectric device, a lens system imaging said luminous spot, a system of diaphragms located in the image-side ray path of said lens system and splitting said ray path in two beams, the intensity of the light impinging from said beams on said photoelectric device being changed by means of said diaphragms upon displacement of said spot along the optical axis of said ray path and producing changes of voltage in the output of said photoelectric device, and a compensating device disposed in the ray path, said compensating device so influencing said ray path that the partial ray-pencils in the rear of said diaphragms are of equal intensity in the direction of the incident light and that no changes of voltage arise in the output of said photoelectric device and the position of said compensating device is a measure of the position of the object relative to a definite zero position.

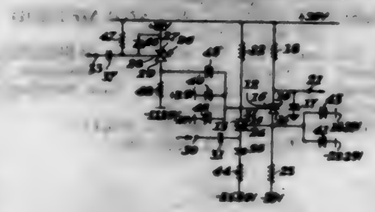
2,945,133
TRANSISTOR CIRCUIT
Balthasar Hubert Pinckaers, Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 14, 1955, Ser. No. 546,588
5 Claims. (Cl. 307—88.5)

1. In a control circuit: a source of direct current potential; an impedance bridge type circuit having a condition responsive member, said bridge type circuit having input junctions connected to said source of potential and having output junctions, a change of said condition being effective to provide an output signal from said circuit without any change in the potential of said source; a PNP transistor having an emitter, a collector, and a base wherein said base and emitter are connected to said bridge output junctions; a second PNP transistor having an emitter, a base, and a collector wherein said emitter and collector form a series circuit with a relay winding and are connected across said source; a serially connected



pair of resistors joined to said second transistor base electrode and to said source of power at a junction common with said relay winding; and said first collector connected to a common junction of said resistors.

2,945,134
BISTABLE SEMICONDUCTOR CIRCUIT
Norman F. Moody, Ottawa, Ontario, and Charles D. Florida, Merivale Gardens, Ontario, Canada; said Florida assignor to Her Majesty the Queen in right of Canada
Filed Sept. 14, 1956, Ser. No. 610,002
21 Claims. (Cl. 307—88.5)

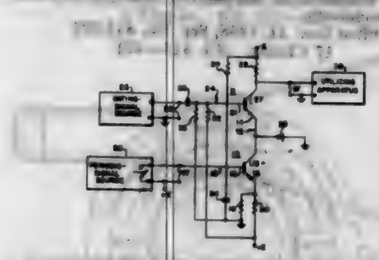


1. A two-state apparatus having at least one output connection and at least one input connection, said apparatus comprising, a junction type semiconductor unit having an effective emitter electrode, an effective first base electrode, an effective second base electrode, and an effective collector electrode; a first clamping means adapted to maintain the semiconductor unit in a cut-off state; a second clamping means adapted to maintain the semiconductor unit in a state of conduction and including means adapted to prevent the semiconductor unit from reaching a bottomed state; means adapted to clamp said effective collector electrode at a first predetermined potential when the semiconductor is in a state of non-conduction; means adapted to clamp said effective collector electrode at a second predetermined potential when the semiconductor unit is in a state of conduction; an output connection taken from said effective collector electrode; and an input connection taken from at least one of the effective electrodes of the semiconductor unit; for switching the semiconductor unit from one said state to the other in response to an input signal.

2,945,135
SIGNAL-TRANSLATING SYSTEM
Carl R. Wilhelmsen, Huntington Station, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 12, 1957, Ser. No. 652,577
8 Claims. (Cl. 307—88.5)

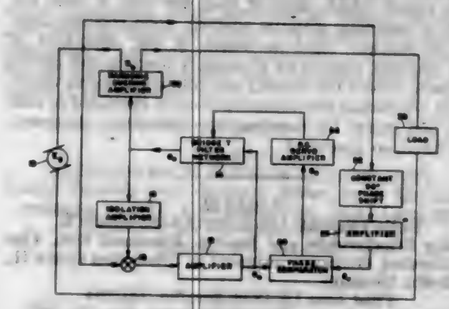
1. A signal-translating system comprising: means effectively including a pair of transistors of like conductivity type and each effectively including an emitter, a base, and a collector; means effectively connecting the collector of the first of said pair directly with the emitter of the second thereof; a first signal-translating channel including

said transistors in cascade and output circuit means coupled between the emitter of said first and the collector of said second of said pair of transistors; and a second signal-translating channel including unidirectionally con-



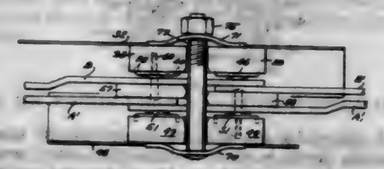
ductive means coupled between said connecting means and said emitter of said first transistor of said pair of transistors for controlling a signal-translating characteristic in said first signal-translating channel.

2,945,136
HARMONIC DISTORTION ELIMINATOR FOR A.C. GENERATOR
Jules H. Poirier, Lemon Grove, Calif., assignor to Ryan Aeronautical Co., San Diego, Calif.
Filed Nov. 20, 1959, Ser. No. 854,385
6 Claims. (Cl. 307—105)



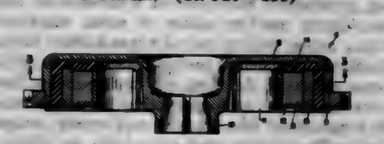
5. An A.C. harmonic distortion eliminator, comprising: a primary, distorted A.C. voltage input; a tunable, bridge T filter network having an input connected to said primary input; a phase shifter connected to said primary input and providing a reference voltage 90 degrees out of phase with the distorted A.C. voltage; a reference transformer connected to said phase shifter and having a pair of reference outputs providing reference voltages opposite in phase; a phase comparator connected to said primary input and including a transformer having a pair of secondary outputs providing voltages opposite in phase; a pair of diode bridge rectifiers each connected between one of said secondary outputs and one of said reference outputs; said rectifiers having rectified outputs being capacitance coupled to a common ground, whereby changes in phase between the voltages at said secondary and reference outputs causes a D.C. differential voltage to appear between said rectified outputs; said filter network including an inductor having a pair of cores, each having a load winding thereon; said load windings being identical and connected in series; a bias winding superimposed on said load windings; and a pair of control windings superimposed on said bias winding; said bias winding being connected to a source of bias voltage to maintain a bias flux in said cores sufficient to cause rejection of the fundamental frequency of the distorted A.C. voltage; said load windings being connected to said rectified outputs, whereby changes in the differential voltage cause changes in inductance of said inductor and tune said filter network to reject the changing fundamental frequency while passing the distorted portion of the A.C. voltage as a distorted voltage input; and means connecting said distorted voltage output to said primary input with the distorted voltage opposite in phase to the A.C. input voltage, whereby the distorted voltages cancel each other.

2,945,137
BUS BAR JOINT FOR LOW IMPEDANCE TYPE BUS DUCT
George H. Farnsworth, Detroit, Mich., assignor, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 1, 1957, Ser. No. 643,463
10 Claims. (Cl. 307—147)



1. A bus duct unit for a three phase bus duct system; said bus duct unit comprising a first and second bus for each phase supported within a housing; each of said buses having a relatively flat cross-section; one bus of each of said three phases being coplanar in a first plane; the other bus of each of said three phases being coplanar in a second plane parallel to said first plane; each bus in said first plane being positioned adjacent to a bus in said second plane; the currents through the buses of each pair of buses positioned adjacent to one another being substantially 180° phase displaced with respect to one another; a resilient biasing means positioned in registry with each of said buses and supported by said bus housing at one end thereof; and a support means of insulating material; said support means being carried with respect to said duct housing and carrying a jumper means of current conducting material; said jumper means being positioned to electrically engage one of said buses; said resilient biasing means being positioned to bias and maintain said one of said buses into electrical engagement with said jumper means independently of bolt means to retain the complete cross-sectional area of said one of said buses.

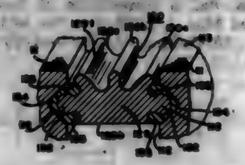
2,945,138
FLYWHEEL ALTERNATOR FOR AN INTERNAL-COMBUSTION ENGINE
Charles D. Strang, Oshkosh, Wis., assignor to Kiekhaefer Corporation, Cedarburg, Wis., a corporation of Wisconsin
Filed Jan. 2, 1958, Ser. No. 706,755
3 Claims. (Cl. 310—153)



1. In an internal-combustion engine having a crankshaft and flywheel carried by said shaft, a flywheel alternator associated with said flywheel and adapted to generate the electrical energy for engine ignition and includ-

ing a magnet rotor assembly, and resilient means connecting the rotor assembly to the flywheel, said rotor assembly being adapted to serve as an inertia member and oscillate relative to the flywheel during operation of the engine to dampen torsional vibrations set up in the crankshaft.

2,945,139
METHOD AND WEDGES FOR CONDUCTING HEAT FROM SLOTS OF DYNAMOELECTRIC MACHINE
Willard R. Stigler, Western Springs, and Walter Drabik, Downers Grove, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 15, 1957, Ser. No. 696,822
6 Claims. (Cl. 310—214)



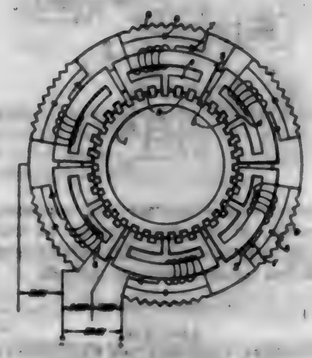
1. A slot wedge for retaining dynamoelectric machine conductors firmly in place in lamination slots, comprising, a central longitudinal member of extruded metal having a high thermal conductivity, heat radiating fins integral with said member and extending outwardly from one surface of said member opposite to a smooth surface to be forced over conductors in each slot, at least one lateral flange extending outwardly on each of opposite sides of said member and located above the smooth surface and below said heat radiating fins, side rail means of insulating material secured to said lateral flange on opposite sides and extending longitudinally of and supporting said central member of metal having high thermal conductivity.

2,945,140
DYNAMOELECTRIC MACHINE SLOT WEDGES
Walter Drabik, Downers Grove, and Willard R. Stigler, Western Springs, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 15, 1957, Ser. No. 696,822
3 Claims. (Cl. 310—214)



1. An expansion-spring slot-closing wedge for maintaining conductors imbedded in a lamination slot of a dynamoelectric machine stator or rotor, comprising, an insulating means having lateral edges located adjacent to longitudinal side grooves provided in opposite surfaces of an upper space of the slot, and spring means having a plurality of bends and connecting loop-legs transverse to the longitudinal side grooves, said spring means being longitudinally resilient and extendable to effect lateral contraction of said bends and legs to a dimension less than slot width and expanding laterally when released longitudinally for engaging the lateral edges of said insulating means against the longitudinal side grooves at a dimension greater than slot width.

2,945,141
UNIDIRECTIONAL HIGH-VOLTAGE GENERATOR
Robert J. Van de Graaff, Lexington, and John G. Trump, Winchester, Mass., assignors to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts
Filed Dec. 31, 1956, Ser. No. 631,702
17 Claims. (Cl. 313—62)



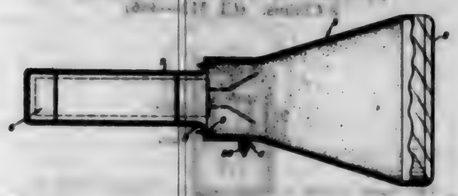
1. A unit for the generation of unidirectional-voltage power comprising in combination a plurality of coils; a plurality of stator elements of magnetized magnetic material each forming a mutually independent open magnetic circuit which links at least one coil; a rotor element of magnetic material adapted, upon rotation thereof, to produce rapid variations in the reluctance of said magnetic circuits by alternately opening and closing the same; means for rotating said rotating element, whereby an alternating electromotive force is generated in each coil; and means for rectifying the alternating electromotive forces so generated.

2,945,141
ELECTRONIC LINE STORAGE DEVICE
Walter Schaffernicht and Joachim Eberhardt Otto, Ulm (Donaubr), Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed June 13, 1958, Ser. No. 741,984
Claims priority, application Germany June 22, 1957
3 Claims. (Cl. 313—69)



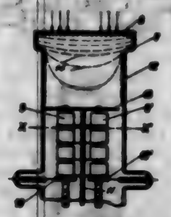
1. An electronic line storage and read-out device comprising electron gun means for emitting a writing beam for depositing information in the form of electrical charges along a trace and a reading beam adapted to derive information from said charges by scanning along said trace, wherein at least said writing beam is strip-shaped and has its major dimension disposed in a direction transverse to said trace.

2,945,143
COMPACT CATHODE RAY TUBE
Jack Stanton, New York, N.Y.
(5 Lynn Drive, Englewood Cliffs, N.J.)
Filed Apr. 3, 1958, Ser. No. 726,880
4 Claims. (Cl. 313—62)



1. A cathode ray tube comprising a forward chamber having a transparent front face plate portion with a fluorescent screen on the inside surface thereof and side wall terminating in a rearward opening; a tubular electron gun chamber, of smaller diameter than said opening closed at the rear and opening at the front into the forward chamber; a pre-formed annular glass header portion extending substantially radially outward from the forward opening of the gun chamber to the rearward opening of the forward chamber, said header containing a plurality of accurately spaced pre-positioned and pre-formed rigid conductive male terminal pins extending therethrough and hermetically sealed therein; an electron gun supported in and by said tubular gun chamber and containing a plurality of electrically separate electrode elements, said elements comprising electron-producing means, electron-beam defining electrode means, and beam-deflecting electrode means, and respective leads from said elements to said terminal pins whereby said elements may be connected to external circuits.

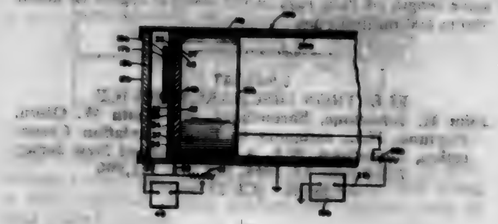
2,945,144
SECONDARY ELECTRON MULTIPLIERS
Lothar Schmidt and Eberhard Hahn, Jena, Germany, assignors to VEB Carl Zeiss Jena, Jena, Germany
Filed July 11, 1958, Ser. No. 748,101
8 Claims. (Cl. 313—95)



1. A secondary electron multiplier for amplifying the photoelectric current of at least two separate beams of light, comprising in an evacuated vessel a common photocathode, a separate dynode system for each of said beams, and deflecting means disposed in close proximity to said cathode, said deflecting means having a great directional-ray effect and directing the photo-electrons released by said separate beams from said photocathode into the corresponding of said separate dynode systems.

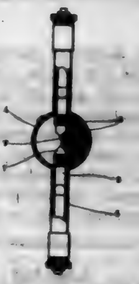
2,945,145
INSTRUMENT LIGHTING DEVICES
Edwin A. Neugass, Poteau, Okla.
Filed Apr. 22, 1957, Ser. No. 654,111
9 Claims. (Cl. 313—108)

1. In an indicating device; the combination of a dial having indicia thereon, an indicator in front of said dial and movable relative to the latter, a cover glass in front of said indicator, said indicator containing electro-luminescent materials, and means operative to produce an electric field across the path of movement of said indicator



and including a transparent conductive coating on the back surface of said cover glass acting as an electrode for the electric field so that said said electro-luminescent materials are thereby energized to glow and illuminate said indicator.

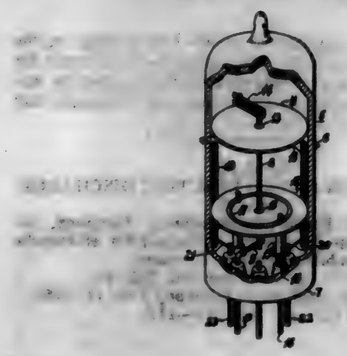
2,945,146
GAS- OR VAPOR-FILLED ELECTRIC DISCHARGE LAMPS
Wilfried Meyer, Berlin-Charlottenburg, Germany, assignor to Patent-Treuhand-Gesellschaft für elektrische Glühlampen m.b.H., Munich, Germany
Filed Feb. 10, 1959, Ser. No. 792,449
Claims priority, application Germany Feb. 19, 1958
2 Claims. (Cl. 313—113)



1. An electric discharge lamp comprising a sealed transparent bulb, an ionizable atmosphere having a high pressure and superpressure during the operation of the lamp, spaced electrodes with a short discharge arc therebetween, a reflecting coating on the outside of a hemispherical bulb portion, the center of such hemispherical portion being in the center of said discharge arc, the circumscribing plane of the great circle of said hemispherical portion passing through the axis of said discharge arc, said coating being permeable to IR-radiation emitted by said discharge arc in order to prevent any overheating of said electrodes and of said ionizable atmosphere, said coating consisting of a semi-transparent reflecting main layer of germanium and means for increasing its reflectivity for visible light rays, said germanium layer having a thickness such that it will transmit about 1% to 30% of the light rays of about 435 millimicrons being incident upon it, said means for increasing its reflectivity comprising at least one pair of superposed films of material deposited on the outside of said bulb portion, said superposed films having alternately higher and lower refractive indices than their adjacent films respectively, the film in contact with said bulb being formed of zinc sulphide and having a higher refractive index than its adjacent film, said adjacent film

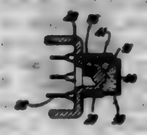
being formed of a metallic fluoride, said two films representing one pair of said superposed films, further pairs of said superposed films being formed in the same manner and of the same materials, each of said films having an optical thickness of the order of one-fourth of the wave length of light rays in the spectral region of about 500 to 600 millimicrons.

2,945,147
ELECTRON DISCHARGE DEVICE
John H. Johnstone, Shrewsbury, and Keith W. Olson, Neptune, N.J., assignors to Bendix Aviation Corporation, Eatontown, N.J., a corporation of New Jersey
Filed June 13, 1958, Ser. No. 741,900
4 Claims. (Cl. 313—217)



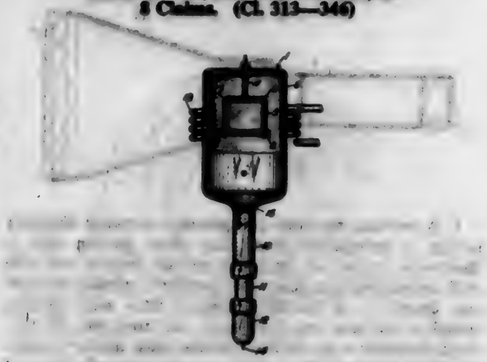
1. An electron discharge device comprising a gas filled envelope, a rod like anode, a ring like molybdenum cathode concentric with said anode, pin means for making electrical connections to said anode and cathode, a pair of diametrically opposite conducting strips on the interior surface of said envelope, and other pin means for making electrical connections to said conducting strips whereby the resistance of sputtered material from said cathode on said envelope may be measured.

2,945,148
ELECTRICAL DEVICE
Ross K. Gemford, Seneca Falls, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Apr. 30, 1958, Ser. No. 732,845
2 Claims. (Cl. 313—318)



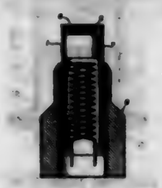
1. A stem for an electrical device having a plurality of electrodes comprising a header having electrical leads passing therethrough formed to provide electrical connections for the electrodes, said leads terminating in exterior pins, an exhaust tubulation projecting exteriorly from a junction with said header and disposed intermediate said pins, an exteriorly arranged indexing protrusion formed on said header terminating at the juncture, and a cylindrical cap attached to and substantially enclosing said tubulation only, said cap being formed with an internal recess for meshing at the juncture with said protrusion.

2,945,149
GAS DISCHARGE TUBE
John F. Henry, Bloomfield, and Patrick R. Dorney, Essex, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Dec. 13, 1954, Ser. No. 474,639
8 Claims. (Cl. 313—346)



1. A gas discharge tube comprising a hermetically sealed dielectric envelope, a cathode having major and minor portions disposed internally of said envelope, said major portion being attached in overlying coated relationship with a surface area of said envelope and adapted to operate as a thermionic cathode, said minor portion having a low thermal mass being disposed internally of said major portion and adapted to operate as a cold and therminonic cathode and an anode disposed internally of said envelope and in spaced relationship to said cathode portions.

2,945,150
THERMIONIC CATHODES AND METHODS OF MAKING
Vincent J. De Santis and John H. Affleck III, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 11, 1958, Ser. No. 779,701
18 Claims. (Cl. 313—346)



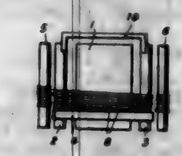
1. A thermionic cathode comprising a sintered compressed porous body substantially wholly formed of metal particles alloyed together by a metal selected from the group consisting of titanium, zirconium, and tantalum, the metal particles of said body being densely compact and the interconnecting pores of said body being uniformly distributed and essentially uniformly minute throughout at least a surface portion of said body for affording an extremely smooth outer surface on said body, an emissive oxide material disposed in the pores of said body and an extremely smooth emissive oxide coating on said smooth outer surface of said body and being more uniform and of greater density than the oxide impregnating said body.

2,945,151
COLD CATHODE FOR ELECTRON DISCHARGE DEVICES
Bernard G. Firth, Newark, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,618
8 Claims. (Cl. 313—346)



1. A cold cathode comprising: a metal base and a coating thereon, said coating including magnesium oxide and sodium oxide, the amount of magnesium oxide being at least 50 times greater in weight than the amount of sodium oxide.

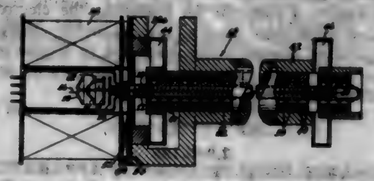
2,945,152
ELECTRODE STRUCTURE
Georg F. Marx, Ulm (Danube), Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed May 22, 1959, Ser. No. 815,225
Claims priority, application Germany May 22, 1958
1 Claim. (Cl. 313—350)



An electrode assembly for an electrical discharge tube, said assembly comprising a tension grid structure having supporting wires, tensioned grid wire turns wound on the supporting wires, and spacer means maintaining the separation between the supporting wires, at least one of said spacer means comprising a spacer member disposed in the common plane of the supporting wires and extending therebetween, said spacer member being fixed at its ends to said supporting wires and being of a thickness no greater than the thickness thereof; said assembly further comprising other electrodes including a cathode; said assembly still further comprising inner and outer spaced insulated plates; the electrodes, the cathode and grid supporting wires being mounted at their inner ends in one plate, and said plates at the outer end comprising two plates of insulating material, one of said plates having a cutout corresponding to the grid structure profile adjacent said spacer member, and the other of said plates being divided into two parts and having cutouts exactly fitting the electrode supports and serving primarily to secure the outer end of the cathode.

2,945,153
ELECTRON BEAM TUBE
Kern K. N. Chang, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 31, 1956, Ser. No. 607,362
7 Claims. (Cl. 315—3.5)

1. An electron beam tube comprising an electron gun including a cathode for projecting a parallel flow electron beam along a given path, means for producing a constant first magnetic focusing field of a given strength along a first region of said path including said cathode, means for producing a periodic magnetic second beam focusing field along a second region of said path spaced from said first region and having a peak strength at the end of said second region nearest to said first region substantially greater than said given strength of said first magnetic field, and magnetic field producing means, separate from said first and second named means, for producing a transition magnetic beam focusing field along a third region extending between the adjacent ends of said spaced regions.

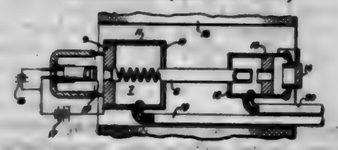


2,945,154
TRAVELLING WAVE TUBE
Loran R. Bittman, Fresh Meadows, Norman M. Gutlove, Bronx, and Richard D. Geyer, Manhasset, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 18, 1957, Ser. No. 635,042
2 Claims. (Cl. 315—3.5)



1. An electron beam tube comprising a vacuum envelope that contains means for producing and directing an electron stream along a predetermined path within said envelope, a magnetic pole piece forming part of said envelope, said pole piece having a first aperture in said path for passage of the stream through the pole piece, means including said pole piece for producing a magnetic field that maintains the diameter of said stream substantially constant along an appreciable portion of said path, said pole piece having a second aperture that extends from said first aperture to the exterior of the pole piece in a transverse direction, a section of transmission line supported in said second aperture in vacuum sealed relationship with the wall of said second aperture, a slow wave propagating structure for carrying electromagnetic energy which interacts with said stream, and means for coupling one end of said slow wave propagating structure to one end of said section of transmission line.

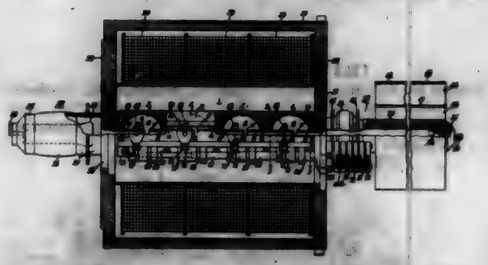
2,945,155
RESONATOR AND VELOCITY MODULATION DEVICE USING SAME
Marvin Chodorow, Menlo Park, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California
Filed June 21, 1954, Ser. No. 437,947
26 Claims. (Cl. 315—5.39)



1. A velocity modulation tube comprising a buncher cavity, a catcher cavity aligned with said buncher cavity

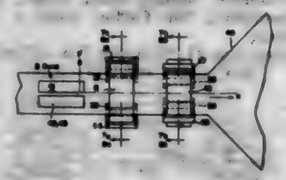
and separated therefrom by a drift space, means for injecting an electron beam into said cavities for successive traverse of said buncher cavity, said drift space and said catcher cavity, a collector for collecting the electrons in said beam after their traverse, said buncher cavity constituting means topologically equivalent to a cross-wound helix provided with reflective discontinuities to form a distributed field cavity.

2,945,156
TUNABLE HIGH-FREQUENCY APPARATUS
Charles Alois Arnold, Palo Alto, and James Norvell Lind, Los Altos, Calif., assignors to General Electric Company, a corporation of New York
Filed June 7, 1956, Ser. No. 589,899
18 Claims. (Cl. 315—5.47)



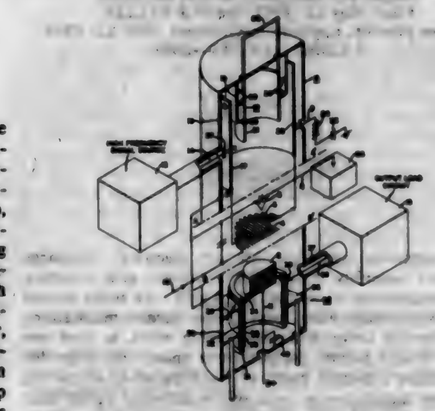
6. A high-frequency electric discharge device of the electron velocity-modulation type comprising; an envelope including means defining a cavity resonator having a gap therein, means to produce and direct an electron stream through said resonator and across said gap, said resonator being adapted to effect velocity modulation of the electrons comprising said stream, tuning means including a tuning member mounted wholly within the cavity of said resonator and out of contact with the interior surface of said cavity, and means for adjustably positioning said tuning member in said resonator, said tuning means having a shape for affecting the frequency of said resonator at each adjustment position thereof for effecting a substantially linear relationship between frequency variations and adjustment positions of said tuning means.

2,945,157
PICTURE TUBES FOR THREE-COLOUR TELEVISION SYSTEMS COMPRISING DEFLECTION COILS
Johan Haantjes and Gerrit Jan Lubben, Eindhoven, Netherlands, assignors to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 16, 1958, Ser. No. 767,675
Claims priority, application Netherlands Dec. 11, 1957
10 Claims. (Cl. 315—13)



1. A color cathode-ray tube comprising a substantially planar screen located substantially perpendicular to the axis of and at one end of the tube, two electron gun arranged at the other end of the tube spaced from the tube axis and directed toward the screen and at which a straight line in a plane parallel to that of the screen joining the two guns is spaced from the axis, and a deflection coil system for deflecting the electron beams produced by the two guns in two orthogonal directions, one of said orthogonal directions extending parallel to the said straight line joining two of the said guns, said coil system being operable to cause the beams from said two guns to form a linearly elongated cross-section whose longest dimension is perpendicular to said one deflection direction and which is located in a meridional image plane which substantially coincides with the plane of said screen for said one deflection direction, and to form a linearly elongated cross-section whose longest dimension is parallel to the other deflection direction and which is located in a sagittal image plane which substantially coincides with the plane of said screen for said other deflection direction.

2,945,158
SIGNAL PROCESSING ARRANGEMENT
Robert E. Carson, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 7, 1957, Ser. No. 644,599
9 Claims. (Cl. 315—39)

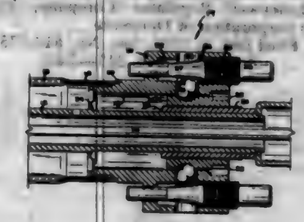


7. A cavity resonator comprising a tubular outer conductor closed at one end by a wall portion, a control electrode positioned within said outer conductor, a folded open-ended transmission line coupled between said tubular outer conductor and said control electrode comprising a pair of concentric tubular inner conductors mounted within said outer conductor, the outer most of said inner conductors having one end connected to said control electrode and the other end spaced from said wall portion forming with said outer conductor a first transmission line portion, the inner most of said inner conductors having one end connected to said wall portion and the other end forming with said outer most conductor a second transmission line portion.

2,945,159
MAGNETRON DEVICE
Robert M. Scannell, Beverly, Mass., assignor to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts
Filed Mar. 25, 1957, Ser. No. 648,140
2 Claims. (Cl. 315—39.61)

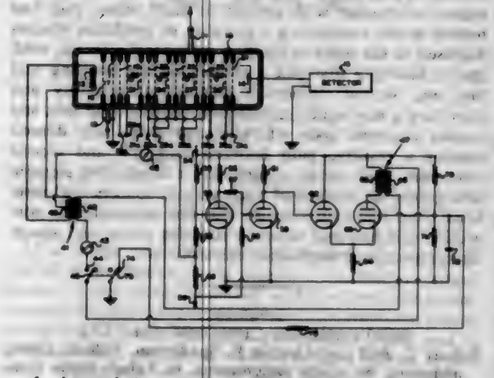
1. A magnetron tube comprising a multicavity anode member having a central opening, magnetic pole pieces positioned at opposite ends of said anode member, cathode supporting means secured to one of said pole pieces, a cathode electrode extending axially through said pole

piece and supporting means with its inner end concentrically positioned within said central opening, means for positioning and adjusting said cathode electrode mounted on said supporting means, said adjusting means comprising a cylindrical housing member having a plurality of radial hubs circumferentially disposed thereon, each hub having an axially movable threaded stud having a tapered intermediate portion, a rotatable member threadably se-



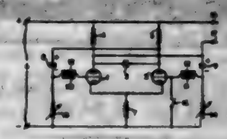
cured to said cathode electrode in the region adjacent to said cylindrical housing member, a plurality of ball bearing members positioned within said cylindrical housing in contact with said rotatable member and the tapered portion of each of said threaded studs, said cathode electrode being displaced axially by rotation of said rotatable member and laterally by axial movement of said threaded studs.

2,945,160
EMISSION REGULATOR
Marvin C. Burt, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 29, 1957, Ser. No. 674,739
4 Claims. (Cl. 315—106)



1. An emission regulator comprising an electron emitting filament, a source of current, a switch, a saturable reactor having a primary winding and a secondary winding, circuit means connecting said filament to said source through said switch and the secondary winding of said reactor, a vacuum tube having an anode, a cathode and a control grid, means connecting the primary winding of said reactor in the anode-cathode circuit of said tube, first means responsive to electron emission from said filament to control the potential on the cathode of said tube to tend to maintain constant electron emission from said filament, and second means responsive to said switch to control the potential on the control grid of said tube so that the full application of current to said filament as permitted by said first means is delayed a predetermined time following closure of said switch.

2,945,161
CIRCUIT ARRANGEMENT FOR THE CONTROL OF WELDING VOLTAGE
Henri Joseph Antonius Marie Jacobs, Leonardus Franciscus van de Weijdeven, and Lambertus Wilhelmus Roosendaal, all of Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 8, 1958, Ser. No. 733,877
Claims priority, application Netherlands June 3, 1957
4 Claims. (Cl. 315—285)



1. A circuit arrangement comprising first and second gas discharge tubes each having an anode, a cathode and a control grid, said cathodes being connected together, means for supplying a direct voltage having a positive polarity terminal and a negative polarity terminal, a first resistor connecting the anode of said first tube to said positive terminal, a second resistor connecting the anode of said second tube to said positive terminal, a third resistor connecting the common cathode connection to said negative terminal, means for deriving an output voltage across said first resistor, first ignition pulse supplying means, a first capacitor connected in series circuit arrangement with said first pulse means between the control electrode of said first tube and the anode of said second tube, said first pulse source being interposed between said first capacitor and said control grid, a first variable resistor connected between a point in said series circuit arrangement interposed between said first capacitor and said first pulse means and said negative terminal, second ignition pulse supplying means, a second capacitor connected in series circuit arrangement with said second pulse means between the control electrode of said second tube and the anode of said first tube, said second pulse source being interposed between said second capacitor and said control grid, a second variable resistor connected between a point in said last-mentioned series circuit arrangement interposed between said second capacitor and said second pulse means and said negative terminal, and means for interrupting the supply of ignition pulses to said second tube whereby the conductive condition of each of said tubes is controlled, said tubes being alternately conductive for periods determined by the discharge times of the associated first and second capacitors.

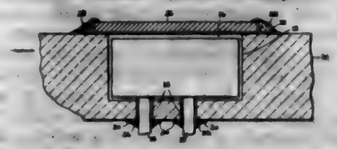
2,945,162
METHOD AND APPARATUS FOR ASSEMBLING AND INTERCONNECTING ELECTRONIC APPARATUS
William Flour, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed May 28, 1954, Ser. No. 433,106
35 Claims. (Cl. 317—101)

1. In electronic apparatus, the combination of a resilient support base, a plurality of hard pellets arranged in a predetermined pattern on the base, a plurality of conductor wires of relatively small transverse section extending across the respective pellets, a locating member, a plurality of electrical elements mounted on one side of the locating member, a plurality of contacts on the side of the locating member opposite from the electrical elements and connected electrically with the elements, the respective contacts presenting generally convex contact surfaces having short radii of curvature, the contacts being arranged in a pattern correlated with that of the pellets, and means for pressing the locating member con-

tacts firmly into engagement with portions of the conductor wires resting on the pellets to create high unit pressure engagement therebetween sustained by the force of the resilient support base on the pellets.



2,945,163
COMPONENT MOUNTING FOR PRINTED CIRCUITS
Jack S. Kilby and Le Roy E. Diiger, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 10, 1955, Ser. No. 480,686
4 Claims. (Cl. 317—101)



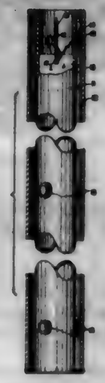
1. A mounting and electrically conductive seal for an electrical component connected with printed circuitry comprising, an insulating base of ceramic having an electrical impedance element bonded to a surface thereof, a recess in said base having an opening, terminal-receiving holes extending from said recess to a surface of said base, metalized areas on said base surrounding said opening and said holes, at least one of said areas surrounding said holes being electrically connected to said electrical impedance element, an electrical component within said recess, said component having terminals extending through said holes, cover means for said component, sealing means between said cover means and the metalized area surrounding said opening, and solder sealing means between said terminals and the metalized area surrounding said holes, whereby said component is sealed in said recess and an electrical connection established by said solder sealing means between one of said terminals and said impedance element.

2,945,164
ELECTROLYTE AND CAPACITOR UTILIZING THE SAME
Walter H. Taylor, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Sept. 30, 1955, Ser. No. 537,812
2 Claims. (Cl. 317—230)



1. In an electrolytic capacitor, a convolutely wound anode foil of formed valve metal and a porous spacer impregnated with a solution of an ionizable compound at a concentration of between 0.1 and 20% by weight in a solvent consisting essentially of a stable liquid unsubstituted simple nitrile.

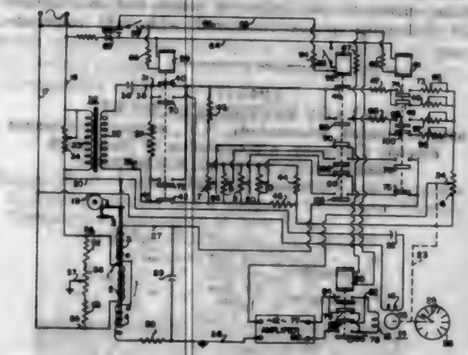
2,945,165
LIQUID LEVEL MEASURING CAPACITOR
Richard M. Franzel, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 8, 1956, Ser. No. 614,575
3 Claims. (Cl. 317—246)



1. A capacitor for use in liquid measuring apparatus comprising, in combination: a first cylindrical element comprising a first electrode and having a plurality of holes at predetermined spaced points throughout the length thereof; a second cylindrical element comprising a second electrode and mounted in concentric relationship with respect to said first element; means spacing said first and second electrodes with respect to each other, said last named means comprising a plurality of insulative spacers disposed in the holes in the first cylindrical element, each spacer having a first and a second portion abutting said first and second cylindrical elements respectively and providing a mechanical connection between said first and second elements upon which contaminants may deposit causing a resistive path between said first and second electrodes; and means comprising a conductive element contiguous the surface of each of said spacers and insulated from said electrodes so that any contaminants connecting said first and second electrodes across any spacer also contact said conductive element.

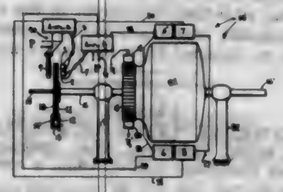
2,945,166
SERVOMOTOR CONTROL CIRCUIT
Robert E. Bell and Charles F. Spademan, Toledo, Ohio, assignors, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed June 5, 1957, Ser. No. 663,739
8 Claims. (Cl. 318—28)

2. A load measuring system comprising a signal source, a primary winding connected to said source, a pair of secondary windings inductively coupled to said primary and connected in phase opposition, a magnetic core movable with respect to said windings to alter the inductive coupling between said primary and respective secondary windings, means balancing the ends of the primary winding to ground, means displacing said core with respect to said windings from a no load position as a function of applied load selectively in a forward or a reverse direction, a potentiometer, an excitation circuit for said potentiometer developing an output signal therein in phase with the signal from said opposed secondaries, a network for combining into a net signal the signal from said secondaries and from the potentiometer, a translator issuing a signal to said network to establish a predetermined relationship of signals from said potentiometer and said secondaries under predetermined conditions, an excitation circuit for said translator developing



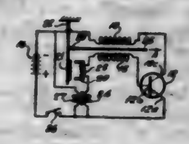
an output signal therein in phase with the signal from said opposed secondaries, a servomotor coupled to said potentiometer to adjust its output signal, a control circuit for said servomotor responsive to said network signal, and means selectively to invert the phase of the signals exciting said potentiometer and said translator and the signal in said control circuit.

2,945,167
POWER AMPLIFYING SERVOMECHANISMS
Roland E. Gauther, Cranbury Road, Princeton Junction, N.J.
Filed July 31, 1957, Ser. No. 675,332
1 Claim. (Cl. 318—28)



In a power amplifying servomechanism the combination of a mechanical input means, a mechanical output means, an electromotive means, said electromotive means connected to said output means, said electromotive means comprising a forward-motion producing section and a reverse-motion producing section, a light source, a primary electrically responsive light sensitive element, a primary electrical amplifying means, said primary electrical amplifying means connected between said primary light sensitive element and said forward-motion producing section of said electromotive means, a secondary electrically responsive light sensitive element, said secondary light sensitive element being essentially identical with said primary light sensitive element, a secondary electrical amplifying means, said secondary electrical amplifying means being essentially identical with said primary electrical amplifying means, said secondary electrical amplifying means connected between said secondary light sensitive element and said reverse-motion producing section of said electromotive means, two similar shutter means, each of said shutter means comprising a pair of identical superimposed Ronchi rulings, said rulings in each of said pair of rulings being laterally displaceable with respect to each other, a motion limiting means, said motion limiting means limiting lateral displacement between said superimposed pairs of rulings to a distance equal to the width of one line of said rulings, one ruling in each said pair of rulings being laterally movable by said input means, the other ruling of each of said pair of rulings being laterally movable by said output means, each of said shutter means being in condition of maximum opening when lines of both of a said pair of superimposed rulings are in coincidence, and each of said shutter means being in closed condition when the lines of one of a said pair of superimposed rulings are coincident with the spaces between the lines of the other of said pair of rulings, one of said shutter means being here designated as primary, said primary shutter means being interposed between said light source and said primary light sensitive element, said primary shutter means being openable by relative forward motion of said input with respect to said output, the other of said two shutter means being here designated as secondary, said secondary shutter means being interposed between said light source and said secondary light sensitive element, and said secondary shutter means being openable by relative forward movement of said output with respect to said input.

2,945,168
VIBRATORY ELECTROMAGNETIC DEVICE
Leo Steinke, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Mar. 25, 1958, Ser. No. 723,760
Claims priority, application Germany Apr. 12, 1957
14 Claims. (Cl. 318—128)

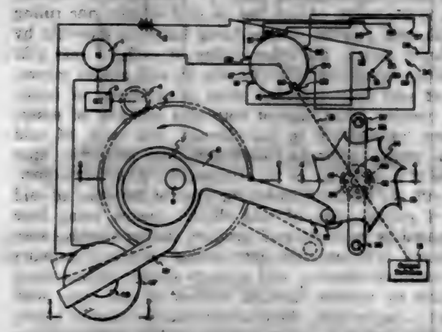


1. In an electromagnetic vibrator including a vibratory member and an exciting winding to control said member; operating means comprising a saturable amplifier having output electrodes and a control electrode, an output circuit including a source of direct current in series with said winding and connected to said output electrodes, regenerative coupling means between said output circuit and said control electrode, to cause a rapid build-up and decay of the output current between zero and full saturation of said amplifier, upon initial application of a relatively small control potential pulse to said control electrode, and means separate from and synchronized with said member, to produce and apply a periodic pulse potential to said control electrode, to maintain said member in sustained vibrating condition by consecutive output current build-ups of said amplifier.

2,945,169
REMOTE SHAFT POSITIONER
William F. Carr, Santa Monica, Calif., assignor, by mesne assignments, to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 25, 1958, Ser. No. 763,319
5 Claims. (Cl. 318—467)

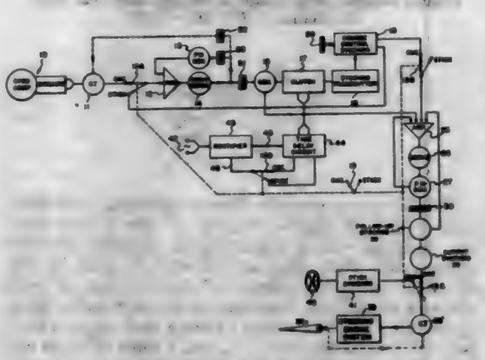
1. In combination, an n-position rotary switch, an n-tooth ratchet gear connected to drive said switch, a rotatable shaft, eccentric means attached to said shaft, follower means frictionally engaging said eccentric means and having an arm periodically engaging said ratchet gear to rotate it one tooth position for each revolution of said shaft, a second arm on said eccentric means, plunger means normally engaging said second arm to prevent said first arm from engaging said ratchet gear, solenoid means

for disengaging said plunger means when energized, a motor driving said shaft, and switch means operable by said



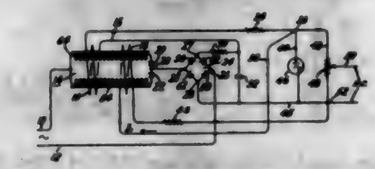
ratchet gear for energizing said motor and solenoid until said ratchet gear has been rotated to a predetermined position.

2,945,170
STEERING SYSTEMS FOR NAVIGATIONAL CRAFT
Grandville R. Jones and Jerome Bestkowsky, Charlottesville, Va., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 8, 1957, Ser. No. 695,432
7 Claims. (Cl. 318—489)



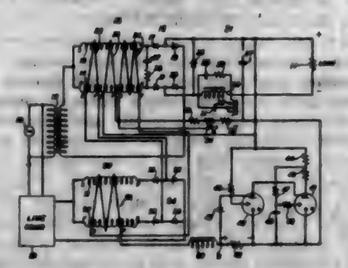
7. A steering system for navigable craft having servomotor means for controlling the operation of a steering control surface of the craft and adapted to control the course of the craft from a plurality of course control devices, said system comprising a first course control device connected to control said servomotor means and including a course reference apparatus and a follow-up means controlled thereby for defining a reference course, course correcting means normally coupled to said follow-up means for providing an output in accordance with a desired change in the course defined by said reference means, a second course control device, selective means for selectively controlling said servomotor means in accordance with said first or second course control device including first switch means responsive to an operation of said selective means to a position which renders said second course control means effective to control said servomotor for disconnecting said follow-up means from said reference apparatus and for connecting the output of said course correcting means as an input to said follow-up means whereby to reduce any output signal therefrom to zero, and second switch means including time delay means controlled thereby and responsive to an operation of said selective means to a position which renders said first course control means effective to control said servomotor for decoupling said course correcting means from said follow-up means and for connecting said follow-up means in follow-up on said reference device for a predetermined time interval whereby to synchronize said follow-up means with said reference means, and after said predetermined time period to re-couple said course correcting means to said follow-up means and to maintain said follow-up means connected with said reference means.

2,945,171
VOLTAGE REFERENCE CIRCUIT
Victor J. London, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 19, 1957, Ser. No. 647,107
9 Claims. (Cl. 321—19)



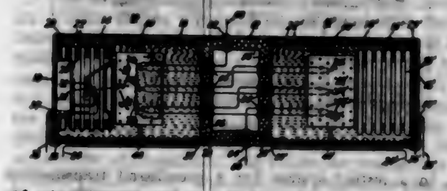
1. An improved voltage reference circuit for converting a fluctuating source of A.-C. voltage to a constant D.-C. voltage output comprising a magnetic amplifier connected in one line of said A.-C. source, a rectifier bridge connected across said A.-C. source at the output of said magnetic amplifier for converting the output of the magnetic amplifier to D.-C., a feedback winding for said magnetic amplifier connected in the output of said rectifier bridge, a number of parallel circuits connected in series with said feedback winding and forming a return circuit to said rectifier bridge, said parallel circuits including a control winding for said magnetic amplifier, a voltage regulator device and an output impedance, the relation between the feedback winding and the control winding being such that the current in the parallel circuits is maintained constant, whereby a constant D.-C. voltage may be obtained from the output impedance.

2,945,172
CURRENT SUPPLY APPARATUS
William H. Bixby, Columbus, Ohio, assignor to Power Equipment Company, Galion, Ohio, a corporation of Michigan
Filed May 16, 1957, Ser. No. 659,720
13 Claims. (Cl. 321—19)



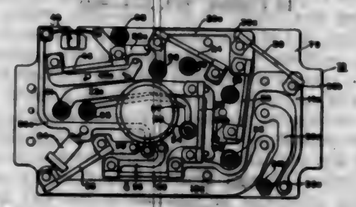
1. Apparatus comprising rectifying means for supplying rectified current from an alternating-current supply source to a load circuit including a load, said apparatus comprising a saturable reactor having an impedance winding in a path for supplying said rectified current to said load circuit and having a plurality of windings to which currents are supplied for controlling the impedance of said impedance winding, one of said plurality of windings being a stabilizing winding and another of said plurality of windings being a first control winding, the number of turns of said stabilizing winding being several times at least the number of turns of said first control winding, a magnetic amplifier for supplying current from its output to said first control winding, said magnetic amplifier having a second impedance winding and a second control winding, said means for impressing upon a circuit comprising said stabilizing winding and said second control winding in series a voltage having variations corresponding to load voltage changes.

2,945,173
VOLTAGE REFERENCE SOURCE
Harold H. P. Lemmermann, Schenectady, and Weyman S. Crocker, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Dec. 4, 1956, Ser. No. 626,179
8 Claims. (Cl. 322—2)



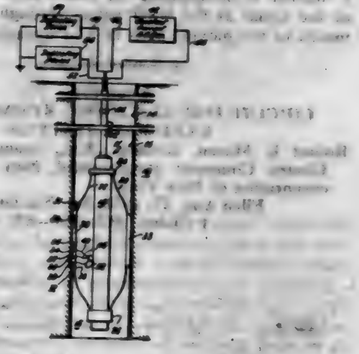
1. A voltage reference source comprising a first thermocouple junction and a second thermocouple junction, said first and second thermocouple junctions being connected to provide a voltage output, means for heating said first thermocouple junction to one temperature and said second thermocouple junction to a different temperature, said means comprising first and second housings, said first housing containing a substance in a solid-liquid state at said one temperature and said second housing containing a substance in a solid-liquid state at said different temperature, and means for maintaining said temperatures of said substances substantially constant.

2,945,174
TRANSISTOR REGULATOR
Lewis R. Hetzler, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 6, 1958, Ser. No. 707,240
5 Claims. (Cl. 323—22)



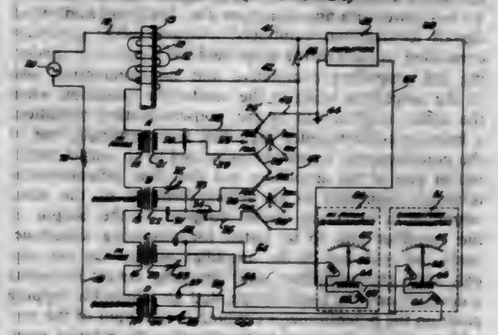
3. A regulator comprising, a metal base member, a metal cover member removably secured to said base member and having integrally formed fins, an insulator board having a printed circuit on one side thereof, a metal heat sink member on the opposite side of said board, a transistor resting on said heat sink member, a fastener for holding said transistor, board and heat sink member in fixed relationship with one another, said transistor having at least one electrode extending through said heat sink member and board and connected with said printed circuit, and fastener means for securing said board to said cover member with at least a portion of said heat sink member being in good thermal exchange relationship with said cover member.

2,945,175
ELECTRICAL LOGGING SYSTEM FOR EXPLORING SUBSURFACE FORMATIONS
Edmund F. Egan, Houston, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 21, 1956, Ser. No. 629,914
3 Claims. (Cl. 324—10)



3. An electrical logging system for exploring subsurface formations in a borehole having a wall on which mud cake has formed comprising an electrode for electrically contacting said subsurface formations, an insulating pad for supporting said electrode having a given width several times greater than the width of said electrode, said pad having a leading edge of share-like configuration for removing a strip of said given width of said mud cake formed on the wall of the borehole, means for mounting said pad for movement through the borehole and urging said pad against the wall of the borehole and means for detecting an electrical signal at said electrode.

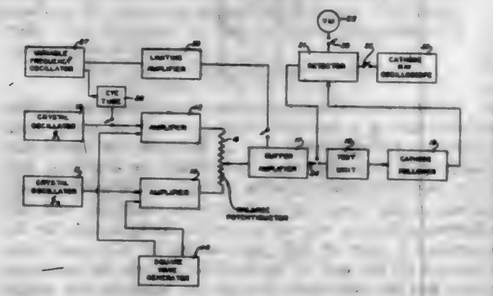
2,945,176
INDUCED FLUX METHOD AND APPARATUS FOR TESTING METALS
Emmett M. Irwin, 2179 Lorain Road, San Marino, Calif.
Filed Oct. 2, 1956, Ser. No. 613,462
12 Claims. (Cl. 324—34)



1. In an analyzer device for determining properties of metals by the induced flux method, said device being of the type having test coil means adapted to be energized from an alternating current source to create a cyclic flux field through a portion of the test specimen and to have a counterelectromotive force induced in said coil means characteristic of properties of the specimen,

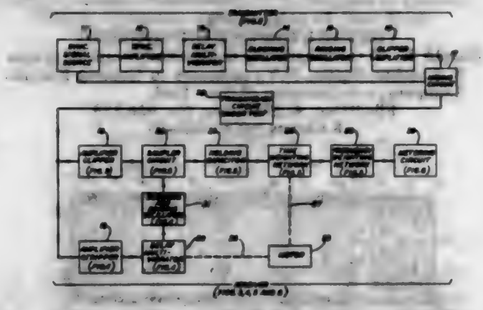
a pair of dynamometers energized from said alternating current source and having movable coils responsive respectively to the in-phase and quadrature-phase components of said characteristic induced counterelectromotive force, and means for amplifying said in-phase and quadrature phase components; that improvement which comprises means for exciting the field coils of said dynamometers by energy derived from the energizing alternating current flowing in said test coil means, said last-named means including means to adjust the phase relation of the voltage impressed on said field coils with respect to the current flowing in said test coil means in a manner to compensate for phase shift in components of the signal as the latter passes through said amplifier means to the moving coils of said dynamometers.

2,945,177
CIRCUIT FOR ADJUSTING SYMMETRICAL BAND-PASS SYSTEMS
Robert E. Moren, Graham, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 27, 1956, Ser. No. 606,362
1 Claim. (Cl. 324—57)



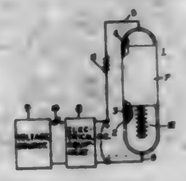
A testing apparatus for visually indicating on an oscilloscope the frequency response characteristics of an amplifier unit designed to operate about a central frequency, which comprises two oscillators for applying input signals, one of the oscillators being stable and sharply tuned at a frequency that is a predetermined number of cycles below the central frequency, and the other oscillator being stable and sharply tuned at a frequency that is said predetermined number of cycles above the central frequency, two amplifiers, means for applying said input signals to said two amplifiers, a square wave generator connected to each of the amplifiers for alternately rendering the amplifiers conductive and non-conductive, one of the amplifiers being in the conductive condition when the other amplifier is in the non-conductive condition, a balance potentiometer including two terminals, one of the potentiometer terminals connected to an output terminal of one of the amplifiers and the other potentiometer terminal connected to an output terminal of the other amplifier, a detecting circuit coupled to the output of the amplifier unit to be tested for observing simultaneously the response of the amplifier unit to the two signals from the oscillators, said detecting circuit including a detector and the oscilloscope, and an adjustable tapping point on the potentiometer coupled to the input of the amplifier unit for simultaneously adjusting the relative magnitudes of the outputs of the amplifiers to simultaneously vary said outputs until they obtain an initial condition displayed on the oscilloscope by a series of visual flattop envelopes of equal shapes and magnitudes, the tops of said envelopes defining a straight line, said envelopes remaining in the initial condition if the amplifier unit responds equally with respect to both of said frequency signals and if said amplifier unit does not respond equally with respect to both of said frequency signals, said tops of adjacent envelopes varying in height to define on the oscilloscope a series of broken, staggered lines.

2,945,178
TELEVISION TRANSMISSION EVALUATOR
Stephen Doba, Jr., Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 13, 1956, Ser. No. 628,147
12 Claims. (Cl. 324—57)



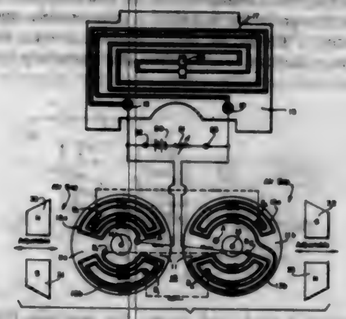
8. In a testing system for a broadband transmission circuit, the combination of means for generating a recurring test signal having frequency components covering the transmission band of said transmission circuit, means for applying said test signal to one end of said transmission circuit, means at the other end of said transmission circuit for deriving only distortion energy from said test signal, and means for measuring the derived distortion energy comprising at least a first circuit means for weighting said derived distortion energy in accordance with the time of occurrence of said derived distortion energy in said recurring test signal, second circuit means for weighting said derived distortion energy in accordance with the frequency components of said recurring test signal, and means for indicating the total derived distortion energy after said time and frequency weighting thereof.

2,945,179
ELECTRICAL MEASURING ARRANGEMENT
Oliver H. Winn, Whitesboro, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1953, Ser. No. 399,921
16 Claims. (Cl. 324—68)



1. A tubular vessel containing a separate length of electrode of like diameter fitted at each end, an electrolyte within said tube contacting only one surface of each of said electrodes, said electrodes and electrolyte comprising materials adapted to become electrolytically active in response to a current source being connected between said electrodes, said vessel containing graduated markings associated with one of said electrodes to indicate the amount of change in length thereof in response to an electrolytic action.

2,945,180
SHUNTS FOR PRINTED CIRCUIT METERS
Louis W. Parker, 130 Cutter Mill Road, Great Neck, N.Y.
Filed Apr. 17, 1957, Ser. No. 653,469
7 Claims. (Cl. 324—126)



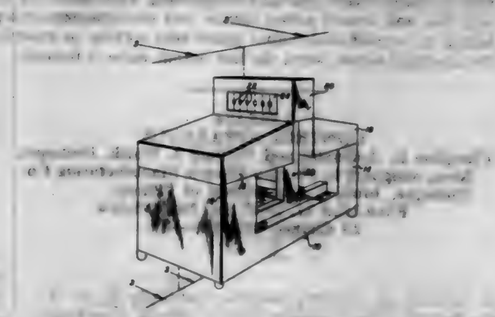
1. In combination, a measuring instrument comprising a rotor having a printed circuit meter coil thereon, means for varying the sensitivity of said instrument comprising a shunt including a printed circuit shunt resistance of substantially the same material as said meter coil, said shunt having a mass-to-surface ratio approximating the mass-to-surface ratio of said rotor whereby said shunt and rotor have respective thermal inertias in the same order of magnitude, and means for connecting said printed circuit meter coil and said printed circuit shunt resistance in parallel with one another.

2,945,181
MEASURING APPARATUS
Delmar W. Claussen, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 25, 1957, Ser. No. 648,160
2 Claims. (Cl. 324—154)



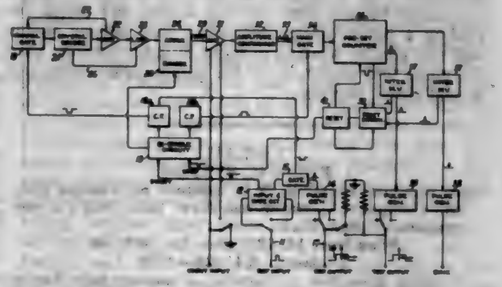
1. In an oscillatory-type galvanometer having low inertia, high natural frequency, and satisfactory sensitivity: an elongated coil of fine wire having straight side portions and arcuate end portions and mounted for movement about an axis of oscillation and comprising a single cylindrical central portion having a disc-shaped cross section transversely of its longest axis and of said axis of oscillation and having straight side portions and comprising two hemi-spherical end portions, said coil having no voids in it and being made up of a single fine wire having a number of straight portions laid side-by-side and connected at their ends by arcuate end portions laid side-by-side, a pair of cylindrical ferrules which are larger in transverse cross-section than the coil and each having a disc-shaped cross section transversely of its longest axis and of said axis of oscillation and having straight side portions and a flat end portion with a hemispherical recess therein and receiving one end of said coil, in said hemi-spherical recess and covering said end of said coil, cement securing said recesses and said ends of said coil together, a pair of suspending members each secured to one end of the associated one of the ferrules, which end is opposite to the end of said ferrules attached to said coil, leads constituting the ends of said coil and accessible for connecting into an electric circuit, and a mirror connected to said suspension system between the ends thereof.

2,945,182
GALVANOMETER MOUNTING ARRANGEMENT
Donald N. Montgomery, Glendora, Calif., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 12, 1957, Ser. No. 677,575
4 Claims. (Cl. 324—154)



1. A device for mounting galvanometers comprising a frame including horizontally extending upper and lower support members with vertical support members therebetween; a plurality of galvanometers each including a spring, coil and mirror of like dimensions and weight suspended by suspensions of equal length, said suspensions being separately anchored at opposite ends to the horizontally extending upper and lower support members of the frame respectively; individual means mounted on the frame for adjusting the tension of each suspension galvanometer; means slidably connecting one horizontally extending support member to said vertical support members and enabling transverse horizontal displacements of one horizontally extending support member relative to the other horizontally extending support member, said horizontal displacements acting to adjust the angle of tilt of the plurality of galvanometers as a group; a magnet; and a pair of pole pieces, said pole pieces being associated with said magnet and being disposed on opposite sides of the coil of each suspended galvanometer, whereby a family of galvanometers having substantially identical responses is provided.

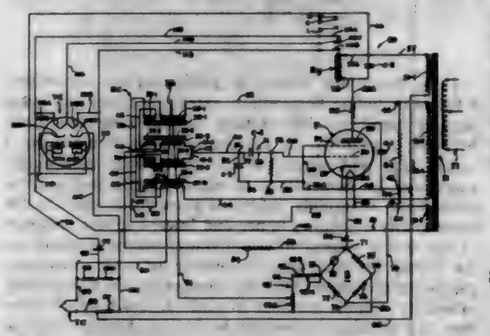
2,945,183
DELAY GENERATOR
Dexter Hartke, Saratoga, and Marvin J. Willrodt, Menlo Park, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed Aug. 8, 1956, Ser. No. 602,741
2 Claims. (Cl. 328—48)



1. A delay generator comprising a pulsed oscillator serving to generate pulsed sinusoidal oscillations, first gating means for initiating said oscillations, means connected to receive said oscillations and serving to produce

pulses each time the sinusoidal oscillations reach a predetermined amplitude, counting means adapted to be pre-set to a plurality of predetermined counts connected to receive and count said pulses and serving to form an output pulse each time a pre-set count is reached, second gating means to control the application of said pulses to said counting means, means for actuating simultaneously said first and second gating means, and reset means connected to receive said output pulses and serving to reset the counting means when the last output pulse is formed.

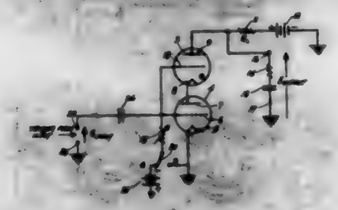
2,945,184
CONTROL APPARATUS
Cleophas E. Anderson and William J. Walsh, Dubuque, Iowa, assignors to Therme Electric Manufacturing Co., Dubuque, Iowa, a corporation of Illinois
Filed Mar. 21, 1955, Ser. No. 495,694
20 Claims. (Cl. 328—89)



1. In a control apparatus of the potentiometer type for controlling a selected condition, a phase-sensitive thermionic tube normally biased non-conductive, a control relay having its operating coil connected in the plate circuit of said tube, a reactor converter comprising ferromagnetic core means a set of output windings mounted on said core, and output terminals therefor, a coupling network connecting said terminals to the control grid of said tube to render said tube conductive when the output of said output windings is of a particular phase, said reactor converter having a set of bias windings mounted on said core means, means for applying alternating current to one set of said windings, means for applying direct current to said bias windings, and a common control winding mounted on said core means, a voltage producing sensing means for sensing said condition, a transformer operating at full saturation and having a secondary with a rectifier in series therewith to afford a constant voltage direct current source, and means including a potentiometer connecting said sensing means and said control winding in series to said source to vary the phase and amplitude of the output signal developed in said output windings.

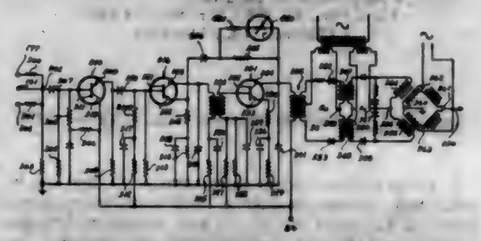
2,945,185
PULSING SYSTEM
Jaan Raamot, Crosshill, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 19, 1957, Ser. No. 697,368
1 Claim. (Cl. 328—199)

A pulse generator comprising a vacuum tube having at least a cathode, a grid, and plate, a thyratron tube, an external load circuit connected to the plate of the thyratron, a conductive connection between the plate of of the vacuum tube and the cathode of the thyratron, a low resistance conductive connection between the grids, means for biasing the grids so that the vacuum tube grid is below cut-off value, and the thyratron is below its firing point, auxiliary biasing means for the grids for rendering the tubes normally conducting, a switch for selectively connecting the biasing means or the auxiliary biasing means to the grids for bistable or monostable operation respectively, a source of direct current energy for supplying space current to the tubes and operating potential



to the external load, and means for applying triggering pulses to the grids to selectively render the tubes conducting or non-conducting depending on the polarity of the pulses when the switch is positioned to connect the biasing means to the grids and for interrupting conduction of the tubes when pulses of a particular polarity are applied to the grids and the switch is positioned to connect the auxiliary biasing means to the grids.

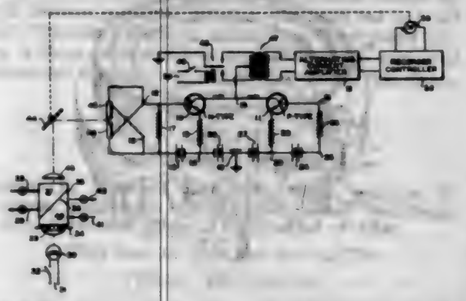
2,945,186
TRANSISTOR AMPLIFIER WITH VARIABLE FEEDBACK
Samuel A. Barnak, New York, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed June 24, 1955, Ser. No. 517,813
3 Claims. (Cl. 330—20)



1. An amplifier for a control system subject to variations in ambient temperature conditions comprising a pair of transistors providing successive stages for amplifying a voltage, a feedback loop from the output of one transistor to said other transistor, and means operatively connected in said feedback loop for varying the feedback voltage level as a function of ambient temperature to temperature stabilize the amplifier output, said means including a parallel circuit having a temperature sensitive resistor in one leg thereof which increases the amount of feedback in accordance with increases in ambient temperature.

2,945,187
TEMPERATURE COMPENSATED TRANSISTOR AMPLIFIER
Kenneth A. McCollum, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 24, 1956, Ser. No. 605,972
1 Claim. (Cl. 330—24)

A transistor circuit comprising, in combination, an "N" type transistor having a base, collector, and emitter electrodes; a "P" type transistor having base, collector and emitter electrodes; a fixed resistance, a first direct current bias source, and an input resistance connected in series between the emitter and base of said "N" type transistor; a pair of input terminals connected across said last-mentioned resistance; a fixed resistance, a second direct current bias source, and a fixed resistance connected in series between the emitter and base of said "P" type transistor; a pair of output terminals; leads connecting one of said pair of output terminals to the collector electrode of both



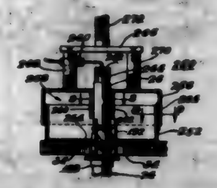
transistors; a third direct current bias source of one polarity connecting the other output terminal of said pair to the junction between said first bias source and the first resistance adjoining the emitter of said "N" type transistor; and a fourth direct current bias source of opposite polarity connecting said other output terminal to the junction between said second bias source and the fixed resistance connected to the emitter of said "P" type transistor.

2,945,188
TRANSISTOR CIRCUIT
William W. Lancaster, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 27, 1957, Ser. No. 680,497
4 Claims. (Cl. 330—24)



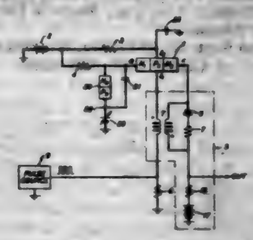
1. In a transistor circuit, a transistor comprising a semiconductor body and emitter and collector electrodes of substantial area joined to said body, an input circuit connected to said body and to said emitter electrode, an output circuit connected to said electrodes, means for supplying to said input circuit an input signal of alternating polarity, means providing in said input circuit a forward bias of a magnitude greater than the normal amplitude of said signal, whereby normally current flows in said input circuit continually in the forward direction established by said bias, with the result that said signal normally causes variation of the amplitude of said current about the bias level and the collector current is distributed over the outer portions of said electrodes, there being the possibility however that at times the input signal may exceed said bias and cause reversal of the current in said input circuit with resulting concentration of the collector current centrally of said electrodes which may cause burn-out of the transistor, and a unilaterally-conductive means serially included in said input circuit connected between the input source and the transistor to prevent such reversal of current while permitting substantially unimpeded flow of the current in the forward direction.

2,945,189
ULTRA HIGH FREQUENCY TUNER
Harry C. Rowe, Cincinnati, Ohio, assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Original application Sept. 21, 1951, Ser. No. 247,627, now Patent No. 2,770,723, dated Nov. 13, 1956. Divided and this application Jan. 16, 1956, Ser. No. 563,495
2 Claims. (Cl. 331—98)



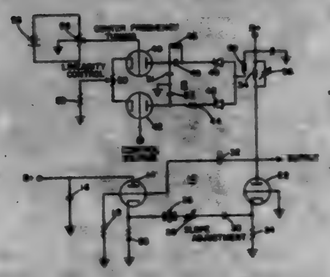
1. In an ultra high frequency tuner, an electron oscillator tube having a plate cylinder and a coaxial grid disc, a first cylindrical cup having its closed end positioned adjacent the grid disc, a second cylindrical cup telescoping with the first and insulated therefrom, and a sleeve carried axially by the second cup and slidably positioned on the plate cylinder, and means insulating said sleeve from said plate cylinder.

2,945,190
TRANSISTOR CIRCUIT TEMPERATURE COMPENSATING DEVICE
Roy H. Mattson, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 22, 1956, Ser. No. 605,582
3 Claims. (Cl. 331—112)



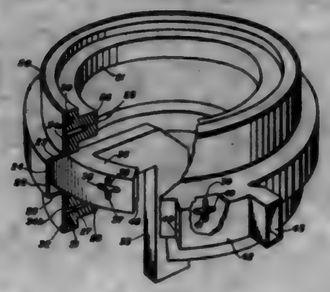
1. In combination, a junction transistor comprising a first zone and a second zone of a given conductivity type material and a third zone of opposite conductivity type material, said third zone being interposed between said first and second zones to form first and second rectifying junctions therewith, respectively, a semiconductor diode comprising a first zone of said given conductivity type material and a second zone of said opposite conductivity type material, first means for connecting said transistor first zone in common with said diode first zone, first means for biasing said first rectifying junction in a forward direction, and means for maintaining the response of said transistor to signals applied across said first rectifying junction independent of temperature variations, said maintaining means comprising second means for connecting said first biasing means in serial circuit with said transistor first zone and said transistor second zone and third means for connecting said first biasing means in serial circuit with said diode first and second zones, said third connecting means comprising second biasing means cooperatively poled with said first biasing means for biasing said diode in a forward direction.

2,945,191
VOLTAGE-CONTROLLED OSCILLATOR
Richard P. Mathisen, Altadena, Dean W. Slaughter, La Canada, and Lee W. Randolph, San Gabriel, Calif., assignors to California Institute Research Foundation, Pasadena, Calif., a corporation of California
Filed Feb. 24, 1958, Ser. No. 717,170
6 Claims. (Cl. 332—16)



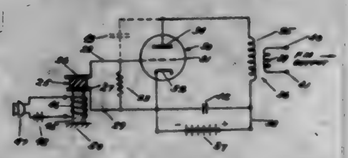
1. A voltage-controlled oscillator comprising an oscillator having a tank circuit tuned to a desired frequency of oscillation, and means to vary the reactance of said tank circuit to vary the frequency of oscillation of said oscillator comprising a differential amplifier, reactance means for varying said tank circuit reactance in circuit with said differential amplifier, and means to apply a control voltage to said differential amplifier to vary the current drawn by said differential amplifier through said reactance means to vary said tank circuit reactance accordingly.

2,945,193
ROTARY WAVEGUIDE JOINT AND SWITCHING STRUCTURE
Leland D. Swan, Dallas, Dallas County, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Feb. 2, 1954, Ser. No. 407,485
17 Claims. (Cl. 333—7)



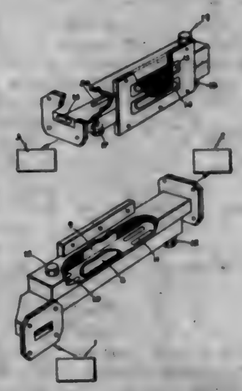
1. A rotary waveguide joint of the type wherein high frequency energy is coupled from at least one input waveguide to at least one other relatively rotatable output waveguide, said joint comprising a first annular wall member, a second annular wall member which is rotatable with respect to the first annular wall member and which is placed coaxially with and in close concentric proximity to said first annular wall member to form a substantially enclosed annular waveguide cavity, means adapted to direct energy from said input waveguide into said annular waveguide, at least one opening in said annular waveguide, and means adapted to direct energy from said annular waveguide into said output waveguide, said directing means being characterized by a structural arrangement lying wholly outside said annular waveguide and communicating with said at least one opening.

2,945,192
FREQUENCY MODULATED CRYSTAL GENERATOR
Antoni Szymanski, Los Angeles, Calif., assignor to Standard Coil Products Co., Inc., Melrose Park, Ill., a corporation of Illinois
Filed Sept. 16, 1957, Ser. No. 684,836
1 Claim. (Cl. 332—26)



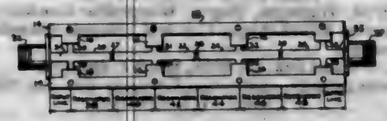
An audio frequency modulated signal generator of the character described comprising an oscillator circuit including a crystal resonator with conductive plates on opposed faces thereof to determine the mean frequency of the oscillator circuit, an output winding for the oscillator circuit, a magnetostriction rod of ferrite material mechanically secured to one of said plates, circuit means for actuating said rod in accordance with modulating audio frequency signals, said rod being proportioned to correspondingly alter the resonance frequency of said resonator and thereby the frequency of said oscillator circuit whereby the oscillator circuit output signal is frequency modulated in accordance with the modulating signals, and a C-clamp with two opposed arms, said crystal and rod being aligned in a linear relation with the unsecured crystal and rod end regions being pressed between the C-clamp arms, said C-clamp arms being predeterminedly spaced to constrain said crystal resonator at a mean frequency pressure and thereby emphasize its frequency modulation action in the oscillator circuit.

2,945,194
TRANSMITTER-RECEIVER SWITCHES
Daniel Reverdin, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Apr. 25, 1956, Ser. No. 580,660
Claims priority, application France May 9, 1955
6 Claims. (Cl. 333—10)



1. An ultra high frequency transmitter-receiver switch comprising: two identical air filled wave guides, having a common wall, said guides each having one end closed and the other open for respective connection to a pulse modulated transmitter and to an aerial; two wave guides filled with ionizable gas having a common wall portion, one of said gas filled guides having at one end means for transferring energy to a receiver; said air filled and gas filled guides having other common walls adjacent to each other, and respective total directional couplers in said common walls; a dielectric material closing said couplers; said air filled guides having a three decibel hybrid junction positioned between each open end and said total directional couplers; and said gas filled guides having a three decibel hybrid junction between said total directional couplers and said energy transferring means.

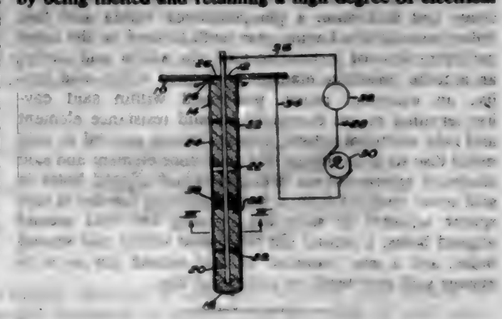
2,945,195
MICROWAVE FILTER
George L. Matthaei, Inglewood, Calif., assignor, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Mar. 25, 1958, Ser. No. 723,770
1 Claim. (Cl. 333—73)



A bandpass elongated microwave strip transmission line filter capable of reducing low order harmonic losses and having a predetermined mid-frequency, comprising: elongated conductors arranged in lineal adjacent spaced-apart relationship between ends of the elongated filter; said conductors including a base portion extending in the aforesaid lineal relationship and stub portions placed midway of the base portions and extending on opposite sides of, and perpendicular to, said base portion and the spaces between adjacent conductors defining lumped capacitances with the spaces between conductors being greater at a position midway of the ends; each of said conductors having a length corresponding to the order of a half length of said mid-frequency with the stub portions acting as inductive elements of less than one-quarter wave length of the mid-frequency with the stub portions being shorter midway between the ends; parallel ground bars with oppositely disposed, inwardly projecting blocks; said stub portions being connected to said blocks so as to form the sole support for said conductors, whereby each of said conductors form two quarter-wave length bandpass filter sections at said mid-frequency, thereby to minimize electric field losses adjacent to the neighboring ends of said conductor bodies and minimize losses due to low order harmonics.

2,945,196
ELECTRICAL TEMPERATURE RESPONSIVE DEVICE
Edward S. Shanley, Kenmore, N.Y., assignor to Food Machinery and Chemical Corporation, San Jose, Calif.
Filed Jan. 9, 1957, Ser. No. 633,340
2 Claims. (Cl. 338—28)

1. Electrically operative temperature responsive hermetically sealed device comprising 2 electrodes, a salt hydrate which is substantially a non-conductor of electricity disposed between and in contact with said electrodes, and means hermetically sealing said salt hydrate from the atmosphere, said salt hydrate being convertible to a permanently, highly electrically conductive system by being melted and retaining a high degree of electrical conductivity upon cooling to a temperature below that temperature at which it melted and become conductive.

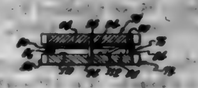


2,945,197
PRECISION POTENTIOMETER
John Moorhouse Chilton, Harborne, Birmingham, England, assignor to W. & T. Avery Limited, Birmingham, England, a British company
Filed Aug. 4, 1958, Ser. No. 752,957
5 Claims. (Cl. 338—143)



1. A rotary type potentiometer comprising a cylindrical former having a helical groove formed therein; a single complete helical turn of precision drawn resistance wire having overlapping sections mounted in the groove on the former; terminal means for connecting the ends of the resistance wire to a source of electricity; a wiper mechanism including a spindle mounted on the axis of the turn of resistance wire for rotation through 360°, a finger carried by said spindle and adapted for spring contact with the turn of resistance wire during rotation of the spindle, and means involving a collector and brush for establishing electrical connection to the wiper finger; and means for preventing contact of the wiper finger simultaneously with said overlapping sections of the resistance wire throughout the permitted 360° movement of the wiper finger over the resistance wire comprising a construction at each end of the resistance wire whereby the outer segments of the wire cross section have been removed to leave slightly less than a single complete helical turn of the wire having a full diameter.

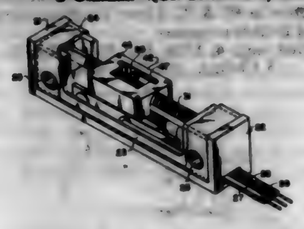
2,945,198
ELECTRICAL RESISTOR
Marian E. Bourns, Riverside, Calif.
Original application July 5, 1955, Ser. No. 519,847. Divided and this application Sept. 14, 1959, Ser. No. 839,766
3 Claims. (Cl. 338—150)



1. A new and improved potentiometer which includes: a base; a cover positioned upon said base, said cover in-

cluding an opening formed therein so as to define an internal cavity; means defining first aligned holes in said cover and said base; a pin positioned within said first holes; a metal disc having gear teeth formed on the outer periphery thereof secured to said pin within said cavity; an arcuate resistance element positioned within said cavity; an electrical return positioned within said cavity; terminal means connected to said resistance element and said electrical return, contact means secured to said metal disc so as to engage said resistance element and said electrical return; means defining second aligned holes in said cover and said base; a second opening formed in said spacer adjacent to said first opening and said second aligned holes; a second pin positioned within said second holes; and a gear mounted on said second pin so as to engage said gear teeth on said metal disc.

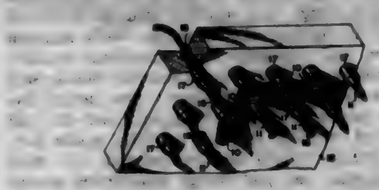
2,945,199
POTENTIOMETER
George J. Mucher, Strafford County, and Salvatore N. Zarrillo, Salmon Falls, N.H., assignors to Clarostat Mfg. Co., Inc., Dover, N.H., a corporation of New York
Filed Oct. 24, 1957, Ser. No. 692,227
5 Claims. (Cl. 338—180)



1. In a potentiometer of the type having a base formed of non-conducting material with upstanding end portions spaced from one another, a threaded shaft extending between said end portions and rotatably mounted thereby, a resistance element mounted on said base and disposed substantially parallel to said threaded shaft, a conducting element mounted on said base and disposed substantially parallel to said resistance element that improvement including, in combination, a contact carrier formed with openings therein encompassing said shaft, a conducting element mounted on said contact carrier and contacting said resistance element and said conducting element, a guiding member internally mounted in said contact carrier provided with a single engaging member on said guiding member having a width less than the distance between two threads of said threaded shaft and vertically disposed between said two threads, said guiding member further including spring means preventing movement of said single engaging member with respect to said contact carrier, said spring means being parallel to said threaded shaft and said guiding member further including means yieldingly urging said single engaging member perpendicularly toward said threaded shaft whereby longitudinal movement of said contact carrier is achieved as said threaded shaft is rotated and the single engaging member is free to move away from said threaded shaft to disengage therefrom when said contact carrier is prevented from longitudinal movement.

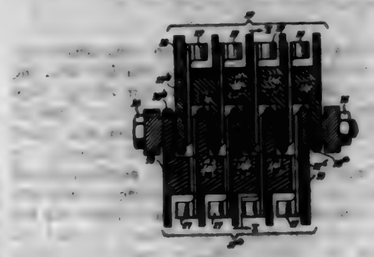
2,945,280
COILED SPRING ELECTRICAL CONNECTOR
Robert R. Tarbuck, West Chester, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 30, 1955, Ser. No. 550,885
4 Claims. (Cl. 339—18)

3. A terminal board comprising a panel of insulating material, a plurality of electrically conductive terminal pins extending from said panel, and a resilient connector being formed of convolutions of spring material normally defining an axis, groups of said convolutions along the length of said connector being flexed to positions encircling said pins wherein the axes of said groups of con-



volutions are transverse to said axis and are generally parallel to the axes of the pins, and with the convolutions between said groups exerting a force in tension to cause said groups to make good mechanical and electrical connection with said pins.

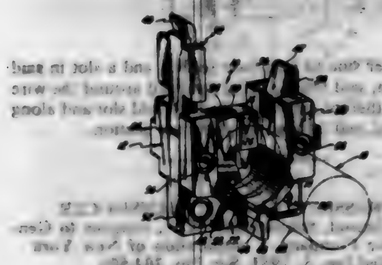
2,945,291
MULTI-POLAR TERMINAL CONNECTION FOR ELECTRIC CONDUCTORS
Gilbert M. Wenniger, Siegen, Westphalia, Germany, assignor to Kabelschlepp G.m.b.H., Siegen, Westphalia, Germany
Filed Feb. 18, 1955, Ser. No. 489,139
Claims priority, application Germany Feb. 26, 1954
5 Claims. (Cl. 339—49)



1. A multi-polar terminal connection for electric circuits, which includes in combination: a plurality of first contact members arranged in spaced relationship with regard to each other and having at least one lateral edge thereof provided with a groove, first insulating members respectively interposed between each two adjacent contact members and having the lateral edges thereof provided with a groove, first latching means arranged to engage with play the grooves of said contact members and of said insulating members, a plurality of second contact members arranged in spaced relationship with regard to each other and having at least one lateral edge thereof provided with a groove, said first and second contact members being substantially identical to each other, second insulating members respectively interposed between said second contact members and having the lateral edges thereof provided with a groove, said first and second insulating members being substantially identical to each other, second latching means arranged to engage with play said second contact members in response to the insertion of said second contact members between the respective adjacent second insulating members, said first and second contact members having their adjacent ends provided with an inclination for automatically and respectively holding said first and second latching means in retracted position prior to said first and second contact members reaching their latched position during the insertion of said first and second contact members respectively between the first and second insulating members pertaining thereto, and clamping means arranged to clamp the

adjacent portions of said first and second contact members together for establishing electrical contact therebetween.

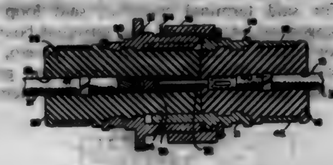
2,945,202
ELECTRICAL SOCKET
Raymond R. Roney, Arcadia, and Philip E. Mauch, Culver City, Calif., assignors to Day-Ray Products Inc., South Pasadena, Calif., a corporation of California
Filed Aug. 22, 1957, Ser. No. 679,616
3 Claims. (Cl. 339—50)



1. An electrical socket for supporting and connecting a light tube having an end terminal located in each end of the tube and a side terminal located in the lateral side of the tube adjacent each end thereof, said socket comprising a first body member of insulating material including a pair of parallel side wall portions and a bottom portion defining an open U-shaped chamber for receiving the terminal end of the tube, and also including an end portion extending across the back of the U-shaped chamber, a second body member of insulating material disposed adjacent the front of the first body member and including a pair of parallel side wall portions and a bottom portion defining an open U-shaped chamber that is substantially coextensive with the chamber formed by said first body member, the adjacent side portions of said first and second body members having aligned holes therein, means extending through each of said holes in the adjacent side portions to secure said first and second body members together, an arm pivotally mounted between one of the adjacent side wall portions of said first and second body members and being arranged to close the top of the chamber formed by said body members, a first wiping contact disposed adjacent the said end portion that extends across the back of said U-shaped chamber of said first-body member for engaging the end terminal of the tube, a second wiping contact disposed adjacent said second body member for engaging the side terminal of the tube, a pair of electrical terminals, each of said electrical terminals being, supported on one of said first and second body members, each of said wiping contacts including extensions connected to a respective terminal, said extension of said second wiping contact extending between said first and second body members.

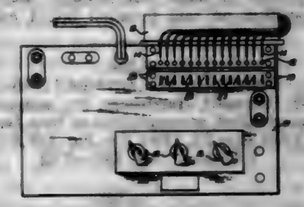
2,945,203
CONNECTOR CONSTRUCTION
Edward Clarke Quackenbush, Hamden, Conn., assignor to The Whitney Blake Company, New Haven, Conn., a corporation of Connecticut
Filed Nov. 13, 1956, Ser. No. 631,957
4 Claims. (Cl. 339—59)

1. A connector of the axial mating type which comprises a resilient body having a bore therethrough, a first elongated contact member disposed in said bore for axially mating at one end with a second contact member correspondingly disposed in a complementary connector, said first contact member being axially slidable in said bore, a conductor extending into said bore affixed to the other end of said first contact member, an insulated covering about said conductor extending into said bore, a rigid band tightly positioned over said insulated covering in said bore spaced from said first contact member, thereby leaving a portion of said conductor extending in said bore between said band and said first contact member, said band being of a size tightly received in said bore, said conductor being of a size



loosely received in said bore whereby said portion of said conductor is spaced from the walls of said bore, and means positioned in said bore surrounding said portion of said conductor abutting said other end of said first contact member and filling the space between said portion of said conductor and the walls of said bore to support said portion of said conductor in said bore between said band and said first contact member.

2,945,284
DESIGNATION STRIPS FOR APPARATUS
Bryajolf Berger, Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 5, 1957, Ser. No. 663,785
2 Claims. (Cl. 339—113)

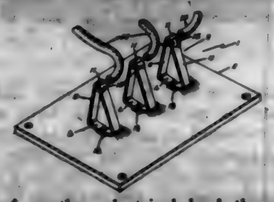


1. A designation strip for an apparatus having aligned terminals at spaced positions to receive in a predetermined order color coded insulated wires, the designation strip comprising a backing member having portions of insulated wires, corresponding in color codes to the insulated wires of the units, disposed thereon in positions spaced for alignment with the terminals which are to receive the insulated wires of their respective code colors, a transparent cover for the backing member and the wire portions to complete the strip, means to mount the strip on the apparatus to position the color coded wire portions adjacent their respective terminals to facilitate attachment of the color coded wires to their respective terminals, the backing member and the transparent cover being formed of suitable plastic strips, with pockets in the backing member to receive and position the color coded insulated wire portions, and the strips bonded together.

2,945,285
ELECTRICAL TERMINAL AND TERMINAL BOARD ASSEMBLY
Roy H. Dierstein, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York
Filed Oct. 18, 1956, Ser. No. 616,718
2 Claims. (Cl. 339—198)

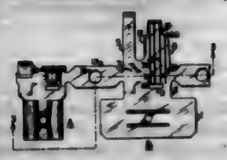
1. An electrical terminal board assembly comprising a terminal board member formed of relatively thin sheet insulating material and having an opening formed therein, and a terminal member formed of a single elongated

strip of relatively narrow and thin conductive material, said terminal having a generally triangular shaped loop portion formed therein with an apex for providing a connection for at least one electrical lead and a base having a pair of transversely adjacent substantially straight leg portions depending therefrom dividing said base into a pair of laterally extending base members to provide support for said terminal member, said loop portion being arranged on one side of said terminal board member for connection of an electrical lead thereto, said leg portions extending through said opening and projecting on the other side of said terminal board member for



connection of another electrical lead thereto, each of said portions having a notch formed in an edge thereof, said notches being formed in opposite edges of said strip and respectively engaging opposite edges of said terminal board member opening, said terminal member being formed so that said leg portions are normally out of axial alignment whereby said leg portions may be deformed in substantially parallel planes toward axial alignment for insertion in said terminal board member opening and thereafter resiliently bias said notches into engagement with said opposite edges of said terminal board member opening thereby to hold said terminal member in assembled position on said terminal board member.

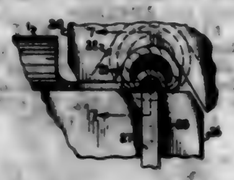
2,945,206
ELECTRICAL CONNECTORS
Kemper M. Hammell, Harrisburg, Pa., assignor to AMP Incorporated, a corporation of New Jersey
Filed May 24, 1954, Ser. No. 431,870
9 Claims. (Cl. 339—276)



1. A sheet metal electrical connector comprising a ferrule-forming portion including a base section and a tongue extending laterally from one side of said base section, a contact member having a shank extending from the other side of said base section, a slot in said shank adjacent said base section for receiving the end of said tongue upon formation of the ferrule, and a pair of opposed tabs struck down from and along the longitudinal axis of said base section in substantial transverse alignment with said slot and said tongue, said end adapted to be disposed between and locked by said tabs in ferrule-forming position upon centrally indenting the formed ferrule across said tabs, the width of said end between said tabs being slightly greater than the distance between the points from which said tabs were struck.

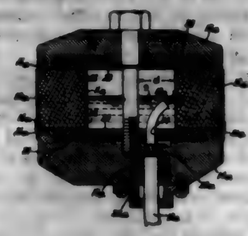
2,945,207
ELECTRICAL CONNECTORS
Karlis Dukis, Harrisburg, Pa., assignor to AMP Incorporated, a corporation of New Jersey
Filed May 24, 1954, Ser. No. 431,871
6 Claims. (Cl. 339—276)

1. Means for connecting a contact member to an electrical wire comprising a sheet metal connector having a ferrule portion which includes a base section and a tongue extending laterally from one side of said base section, said contact member having a shank portion extending



from the other side of said base section and a slot in said shank portion, said tongue being wrapped around the wire with the end thereof extending through said slot and along the bottom of and bonded to said base section.

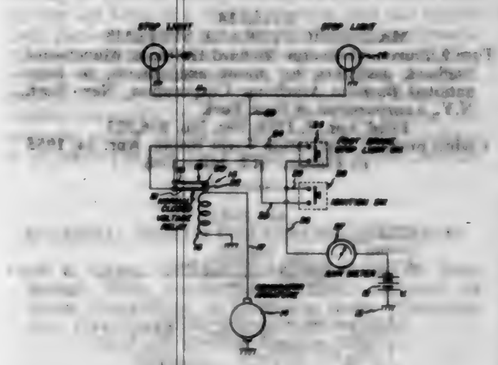
2,945,208
COMPRESSIONAL WAVE TRANSDUCER
Richard W. Sanssel, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 5, 1951, Ser. No. 204,900
9 Claims. (Cl. 340—10)



1. A transducer for receiving or transmitting a toroidal pattern of high frequency compressional wave energy in a fluid medium comprising, a hollow polycrystalline ferroelectric ceramic cylinder having radial mode piezoelectric properties and having high frequency mechanical resonance, a pair of electrodes in conductive relation with the inner and outer cylindrical surfaces respectively of said cylinder, separate connections to each electrode, and a pair of end plates covering opposite ends of said cylinder in a fluid tight manner preventing passage of fluid to the interior of said cylinder, the electroded outer cylindrical surface of said cylinder being exposed for contact with a fluid medium sustaining the compressional waves.

2,945,209
VEHICLE AUTOMATIC STOP LIGHT
Frank R. Berg, 140 Franklin St., Vallejo, Calif.
Filed June 4, 1958, Ser. No. 739,801
1 Claim. (Cl. 340—71)

In an electrical system for the stop lights of an automobile, a pair of stop lights electrically connected together, a source of electrical energy, and a generator armature, an automatic switch including a voltage coil connected to said generator armature, said switch further including a normally closed relay, said relay embodying a stationary bar provided with a terminal, a movable arm provided with a contact mounted for movement into and out of engagement with said terminal, a foot brake stop light switch electrically connected to said arm and also electrically connected to said stop lights and also electrically connected to said source of electrical energy, a conductor connecting said foot brake stop light switch to said source of electrical energy, and an ignition switch connected to said conductor and electrically connected to said bar, said foot brake stop light switch and said ignition switch being connected in parallel to said stop lights

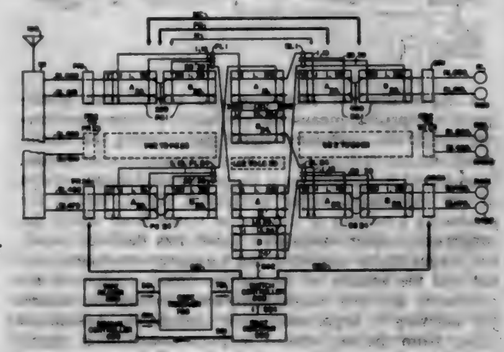


providing an open circuit whereby the actuation of either of said switches energizes said stop lights.

2,945,210
ROTATING TAILLIGHT REFLECTOR
Gilbert H. Davis, 1406 Greenleaf Drive, Royal Oak, Mich.
Filed Apr. 4, 1957, Ser. No. 650,631
2 Claims. (Cl. 340—72)

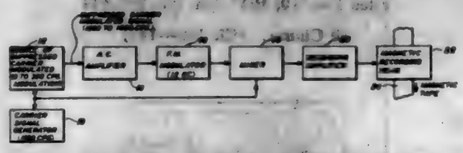
1. A signal device adapted to be inserted in the taillight bulb receptacle of a motor vehicle comprising a housing having a base projecting therefrom for engagement with said bulb receptacle, a terminal on said base for the electrical connection of said signal device in the brakelight circuit of said motor vehicle, a cavity in said housing having an inside diameter substantially equal to the inside diameter of said bulb receptacle and longitudinally aligned therewith, a light source in said cavity, a plurality of spaced field poles supported by said housing and disposed concentrically with respect to said cavity and radially outwardly spaced therefrom, means for inducing a magnetic flux in said field poles, an armature operably related for rotation with respect to said field poles, and concentrically disposed with respect to said cavity, bearing means for supporting said armature in operable relation with said field poles, and a reflector coupled with said armature for rotation therewith and about said cavity and reflecting light from said source.

2,945,211
NON-BLOCKING LINK-ACCESS SWITCHING SYSTEM
John C. Gibson, Oak Lawn, and Theron L. Bowers, Western Springs, Ill., assignors to International Telephone and Telegraph Corporation, New York, N.Y., a corporation of Maryland
Filed Dec. 18, 1957, Ser. No. 703,824
50 Claims. (Cl. 340—147)



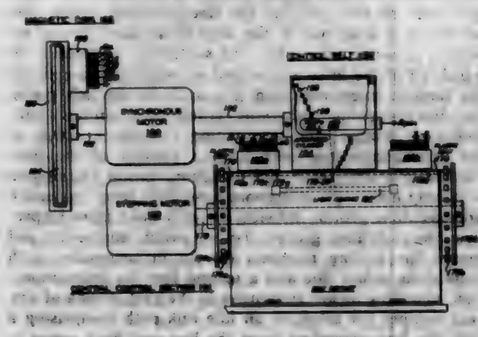
1. A switching system for effecting, over respective idle link paths, line-to-line connections limited in number only by the number of lines served by the switching system, where each link path comprises a pair of links in tandem, the switching system comprising (*a*) line-switching apparatus comprising line-switching groups each terminating a separate group of the lines, each line-switching group also terminating a separate group of equivalent links, each line-switching group comprising switching means for interconnecting any line terminated thereat with any link terminated thereat, the links terminated at a line-switching group being substantially greater in number than the number of lines terminated at the line-switching group, whereby there is always substantially more than one of the links of the line-switching group idle whenever at least one of the lines terminated thereat remains unconnected, (*b*) link-switching apparatus to which all of the links extend and at which they terminate for tandem interconnection to constitute the link paths, the link-switching apparatus comprising similar link-switching groups each terminating a separate group of the links comprising links from a number of the line-switching groups, each link-switching group comprising switching means for interconnecting links from respective line-switching groups individually with links from respective line-switching groups, (*c*) a switch controller and means for storing numbers therein in succession each identifying a first line and a second line for interconnection, matching means responsive to the said storing of any said number for selecting an idle link path comprising a first idle link extending from the line-switching group at which the identified first line terminates to a link-switching group and further comprising a second idle link extending from the line-switching group at which the identified second line terminates to the same link-switching group, means for operating the switching means in the line-switching apparatus to connect the identified first line with the first idle link of the selected path and to connect the identified second line with the second idle link of the selected path, and means for operating the switching means in the link-switching apparatus to connect together the two links of the selected link path.

2,945,212
APPARATUS FOR REPRODUCING INTELLIGENCE BY COMPOUND MODULATION
Howard D. Shelton, Dayton, Ohio, and George B. Newhouse, Pasadena, Calif., assignors, by mesne assignments, to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 2, 1954, Ser. No. 447,352
8 Claims. (Cl. 340—174)



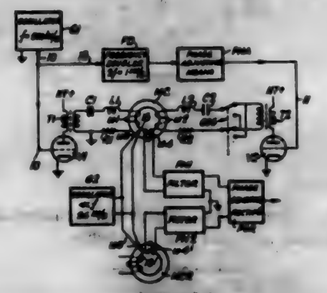
1. Apparatus for recording and reproducing intelligence comprising means for producing a suppressed-carrier amplitude modulated signal representing the intelligence, means responsive to the suppressed-carrier modulated signal for producing a frequency-modulated version of the suppressed-carrier modulated signal, means for producing a version of the carrier signal from which the suppressed-carrier modulated signal was derived, means for magnetically recording the frequency-modulated signal and the version of the carrier signal, means for reproducing the two magnetically-recorded signals, means for deriving a suppressed-carrier amplitude modulated signal from the reproduced frequency-modulated signal, means for deriving a signal corresponding to the carrier signal from the other reproduced signal, and a detector for suppressed-carrier amplitude modulated signals coupled to receive the derived suppressed-carrier modulated signal and the derived signal which corresponds to the carrier signal for producing an output signal which represents the original intelligence.

2,945,213
ELECTRONIC CALCULATOR
Samuel Lubkin, Bayside, N.Y., assignor, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Filed Feb. 24, 1956, Ser. No. 567,566
16 Claims. (Cl. 340—174)



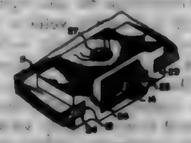
1. Apparatus for storing and selecting data represented by signals, said apparatus comprising a rotatable storage device having a channel containing a plurality of data storage registers, a data transcribing device adjacent said channel, rotating means for rotating said rotatable storage device past said data transcribing device, a register selecting medium independent of said rotatable storage device and having a group of indicia positions, each indicia position corresponding to a predetermined register on said rotatable storage device, and scanning means movable by said rotating means in synchronism with said rotatable storage device for sequentially scanning said indicia positions to activate said data transcribing device.

2,945,214
MAGNETIC STORAGE SYSTEMS
Tom Kilburn and George Richard Hoffman, Manchester, England, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 9, 1956, Ser. No. 576,972
Claims priority, application Great Britain Apr. 14, 1955
13 Claims. (Cl. 340—174)



1. Apparatus for producing controlled magnetisation of a magnetic storage core in either one of its two opposite directions of magnetisation which includes a first winding on said core, a first source of a first alternating current of symmetrical waveform, said source having a frequency in excess of the maximum frequency at which the core material will be changed in magnetisation direction by each successive half cycle when said current is applied to said first winding, means for supplying a current from said first current source to said winding whose amplitude is in excess of that which would produce a change of magnetisation direction by each successive half cycle when the frequency of the applied first alternating current is below said maximum frequency, whereby said core is subjected to a corresponding alternating magnetising force of symmetrical waveform and means for producing an asymmetry in said magnetising force waveform whereby those peaks thereof which are of the polarity appropriate to effect magnetisation of the core material in the required direction are of appreciably greater amplitude than those peaks which are of opposite polarity.

2,945,215
MOUNTING FOR MAGNETIC CORES
Edgar O. Sprade, Overbrook, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed June 6, 1956, Ser. No. 589,623
3 Claims. (Cl. 340—174)



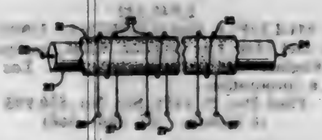
1. In a memory storage assembly for computers and the like comprising in combination, a panel having a plurality of spaced openings therein, a plurality of housings mounted in said openings, each housing being of resilient insulating material and having a compartment adapted to substantially enclose a memory storage unit therein, said housing consisting of an elongated tubular body portion and inwardly extending top and bottom end portions contiguous therewith for substantially closing the ends of said tubular portion, each end portion including an aperture axially aligned with the tubular body portion and being of a smaller diameter than said tubular body portion, a magnetic memory unit of larger diameter than said apertures received in said compartment, electrical windings around said unit and extending therefrom through one of said apertures, and grooved flanges extending outwardly from the tubular body portion and centered axially therewith, said flanges being received in an opening of said panel to mount said housing therein.

2,945,216
INTERNAL SHIELD FOR ELECTROMAGNETIC HEAD
Cecil E. Gyger, Littleton, Colo., and Alfred D. Scarbrough, Palos Verdes Estates, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 13, 1958, Ser. No. 708,519
14 Claims. (Cl. 340—174)



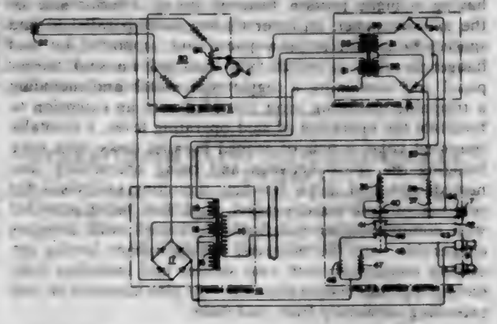
10. In a multiple electromagnetic head of the type including a recording head, a sensing head and a conductive casing, an internal shield comprising: a pair of D-shaped hollow cylinders of conductive material, one positioned to substantially surround each head and capable of fitting within the casing, the flattened areas of said cylinders facing each other and having opposed longitudinal slits at the approximate lateral center thereof and extending from the ends of said cylinders towards the approximate longitudinal center thereof; and insulation means also extending through the slits and positioned between the flattened areas.

2,945,217
MAGNETIC DATA STORAGE DEVICES
Robert D. Fisher, Jerome S. Sallo, and Ignatius Tsu, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Nov. 7, 1958, Ser. No. 827,412
13 Claims. (Cl. 340—174)



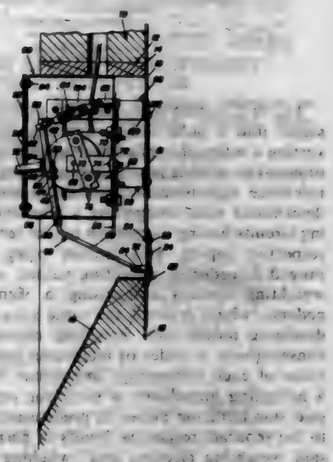
1. A magnetic data storage device comprising an elongated electrically conductive substrate and a ferromagnetic electrodeposit disposed on the surface of said substrate, said electrodeposit being substantially free from mechanically imparted torsional strain and having a preferred direction of crystal orientation which produces a skewed easy direction of magnetization of said electrodeposit with respect to the longitudinal axis of said substrate.

2,945,218
MONITORING SYSTEM INCLUDING A MAGNETIC AMPLIFIER
George R. Markow, Endicott, N.Y., assignor to Bailey Meter Company, a corporation of Delaware
Filed May 19, 1955, Ser. No. 509,628
7 Claims. (Cl. 340—222)



1. A condition responsive system including, a balanceable network responsive to the condition and establishing an output signal representative of the magnitude of the condition, a magnetic amplifier circuit receiving the output signal of the balanceable network as an input and in turn establishing an output signal representative of the output signal from the balanceable network, electromechanical motive means responsive to the output of the magnetic amplifier to actuate manifesting means at one value of the input to the amplifier circuit during an increase in the magnitude of the input and at a different value during a decrease in the magnitude of the input to the amplifier, and means in the circuit between the magnetic amplifier circuit and motive means for establishing a predetermined differential between the two values of the input to the magnetic amplifier circuit.

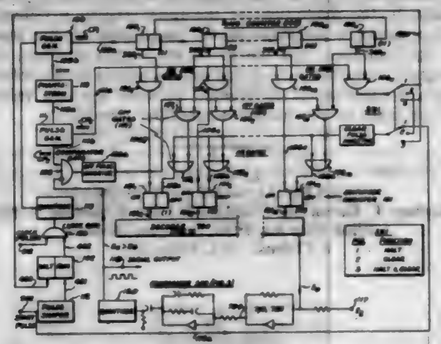
2,945,219
ELECTRICAL MAILBOX SIGNAL
Stephen T. Dean, 3434 Balboa St., San Francisco, Calif.
Filed May 14, 1958, Ser. No. 735,286
8 Claims. (Cl. 340—281)



5. For use in conjunction with a mail chute access opening in a wall provided for delivery of mail, mail delivery signalling means comprising an exterior panel

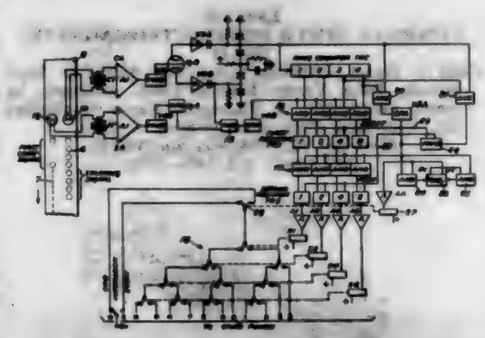
adapted to be fixedly mounted on an exterior surface of the wall in registry with said opening, said panel having an opening, a mail-slot frame mounted on said panel and having a slot aligned and cooperating with said opening, a hingedly mounted closing shutter hingedly mounted on the inner side of said panel and cooperable with the slot in said frame, at least one U-shaped hanger bracket having a bight portion fastened on an interior side of the exterior panel, an inner master panel parallel to and spaced from said exterior panel and supported by said hanger bracket, a switch box mounted on said master panel and containing a toggle type switch and including a trippable operating lever provided with an extension to facilitate the operation of said operating lever, a pivotally mounted yoke, a pair of spaced parallel disks, said yoke bridging the space between and being operatively connected with said disks, brackets mounting said disks for rotation on said master panel, said disk being provided with counterweights and further provided with bumpers cooperable with the brackets, linkage means having operating connection with said shutter and including links having trip lugs cooperable with trip pins mounted on and extending outwardly from said disks.

2,945,220
ANALOGUE-DIGITAL CONVERTER
Arnold Lesti, Arlington, Va., and Andrew Robert Baechtel, Wheaton, Md., assignors to the United States of America as represented by the Secretary of Commerce
Filed Mar. 9, 1955, Ser. No. 493,314
10 Claims. (Cl. 340—347)



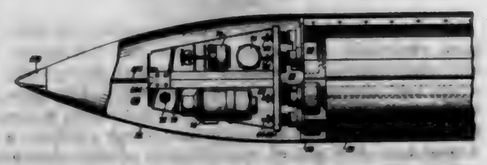
10. In a coding apparatus for converting an analogue signal into a pulse-coded representation means for converting a series of applied time spaced standardizing pulses of equal amplitude into a corresponding series of weighted reference signals each differing in amplitude by a predetermined ratio comprising a plurality of signal weighting circuits having a common output terminal and separate respective inputs, said circuits being consecutively arranged in order of weighting values, each of said signal weighting circuits comprising a signal weighting impedance which presents the same impedance to the standardizing pulses, said weighting circuits being arranged consecutively in order of increasing impedance value, the value of each consecutive impedance being twice that of a preceding impedance, a staticizor register for applying said standardizing pulses in predetermined periodic order to the separate respective inputs of corresponding ones of said weighting circuits, and switching means connected to each weighting circuit and energizable by each of said standardizing pulses for applying a voltage of predetermined value to each of said weighting circuits, a high gain stabilized D.-C. amplifier connected to said output terminal, a feedback impedance connecting the output of said amplifier to said output terminal and means for applying said analogue signal to said output terminal.

2,945,221
TAPE TO CARD CONVERTER
Raymond C. P. Hinton, Teaneck, Boris Dmla, Clifton, and Alfred L. M. Fettweis, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed June 27, 1956, Ser. No. 594,187
11 Claims. (Cl. 340—347)



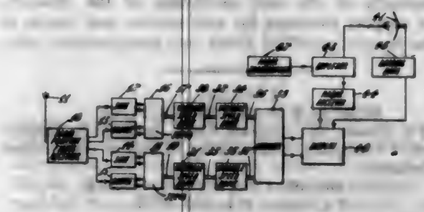
1. A device for transferring code signals from a tape to a register wherein the tape is provided with two tracks of recordings, one track containing bits of code signals arranged in serial order and the other having sync signals corresponding to the bit positions of the code; comprising a first detector for detecting sync signals on said tape, a second detector for detecting bits of code signal on said tape, means to drive said tape past said detectors, an electronic ring counter having a step position for each bit position of said code, means to apply the detected sync signals from said first detector to said counter, a plurality of gates corresponding in number to the number of said step positions, means coupling said counter to said gates to apply a potential to each gate when the counter is stepped to the corresponding position, a register having a plurality of cells, each coupled to the output of one of said gates, and gating means to apply the code bits from said second detector to each of said gates whereby coincidence between a code bit and an operated position potential of said counter will cause the corresponding gate to conduct said bit to a corresponding cell of said register and means connected to the register and ring counter for resetting said register for registration of a succeeding code signal.

2,945,222
MULTIPLE SMOKE-SIGNAL UNIT
Bruce E. Del Mar, Los Angeles, Calif., assignor to Del Mar Engineering Laboratories, Inc., Los Angeles, Calif., a corporation
Filed Dec. 5, 1955, Ser. No. 550,995
10 Claims. (Cl. 340—346)



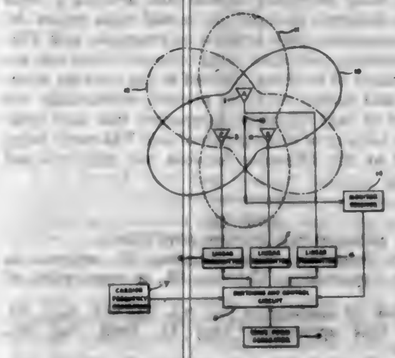
1. A multiple-signal unit having in combination: an elongated central housing section for mounting on an airborne vehicle, said housing section having a plurality of longitudinal compartments open at the rear of the housing section; a tail housing section mounted on the rear end of said central housing section, said tail housing section having a plurality of discharge passages leading rearwardly from said longitudinal compartments respectively, said tail housing section being removable for access to said longitudinal compartments; a plurality of signal guns in said longitudinal compartments for discharge of signal material through said discharge passages; and a nose housing section mounted on the forward end of said central housing section, said nose housing section being removable for access to the interior thereof; and control means enclosed by said nose housing section for operation of said guns sucessively by remote control.

2,945,223
RADAR DISPLAYS
Maurice Henry Easy, London, England, assignor to The Decca Record Company Limited, London, England, a British company
Filed Sept. 19, 1956, Ser. No. 608,729
21 Claims. (Cl. 343—6)



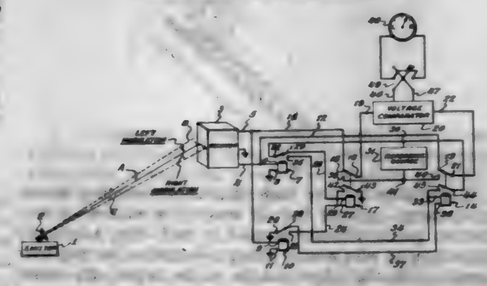
1. In combination in a mobile craft; radar apparatus having a directional scanning antenna and a cathode ray tube plan position indicator scanned in synchronism with the scanning by the antenna, deflection means for deflecting the beam of the cathode ray tube, a radio position fixing system arranged to provide an output in accordance with the changes in position of the craft, and means controlled by said output for controlling said deflection means to stabilize the display against displacement thereof on the cathode ray tube screen due to motion of the craft.

2,945,224
PHASE AND AMPLITUDE CORRECTION SYSTEM AND NAVAGLOBE BEACON UTILIZING SAME
Richard H. Myers, West Caldwell, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 8, 1957, Ser. No. 670,431
8 Claims. (Cl. 343—102)



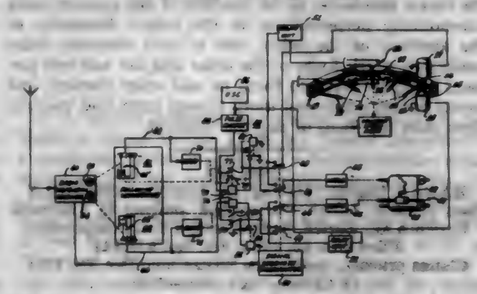
1. A system for bringing a plurality of electrical signals into phase and amplitude agreement comprising a plurality of sources of electrical signals, means for detecting the vector sums of each of different groups of said electrical signals with each group having at least two signals therein and with each signal appearing in at least one group, a reference signal source, means coupled to said reference signal source and said vector sum detector for comparing each of the detected vector sums with the reference signal and producing a resultant error signal, and means for applying the error signal from each comparison to at least one of the sources whose signals enter into that comparison to bring each of said vector sums and said reference signal into agreement.

2,945,225
APPARATUS FOR RADIO BEAM GUIDANCE OF A MOBILE CRAFT
Andrew O. Sperber, Glendale, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed June 15, 1956, Ser. No. 593,019
13 Claims. (Cl. 343—107)



9. Receiving apparatus including demodulating means discriminatively responsive to first and second mutually distinctive signals and producing first and second voltages each having an amplitude proportional to the value of a predetermined characteristic of a respective one of said signals, a comparator adapted to receive said first and second voltages and to produce normally a first output representative of the algebraic difference therebetween, auxiliary means to produce a second output from said comparator related to said first output last obtaining and in lieu thereof, and means responsive to the simultaneous presence of said first and said second voltages to prevent the operation of said auxiliary means.

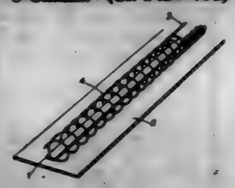
2,945,226
INDICATING APPARATUS FOR RADIO NAVIGATION SYSTEMS
Alfred Thomas Holden, London, England, assignor to The Decca Record Company Limited, London, England, a British company
Filed Sept. 7, 1955, Ser. No. 532,969
Claims priority, application Great Britain Sept. 10, 1954
16 Claims. (Cl. 343—112)



1. In an indicating apparatus for radio navigation systems in which an index movement relative to a chart is

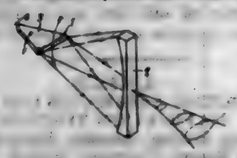
effected in steps corresponding to signals provided by a radio navigation system receiver during its normal operation, the combination of: a storing means for storing for a given period the rate and direction of said steps during an immediately preceding period; and control means operating during times of signal failure of said radio navigation system receiver for switching the control of said index movement to said storing means for operation thereby in accordance with information stored in said storing means.

2,945,227
IMPROVEMENTS IN ULTRA SHORT WAVE DIRECTIVE AERIALS
Georges Broussaud, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Nov. 4, 1957, Ser. No. 694,251
Claims priority, application France Nov. 21, 1956
5 Claims. (Cl. 343—731)



2. Directional ultra high frequency radiating device, comprising: a planar strip of conductive material, a conductive planar element parallel to said strip, a helically shaped metal wire wound about said conductive strip over substantially the whole length of the latter and means for feeding ultra high frequency energy to said strip and said wire.

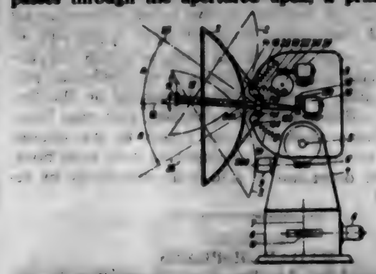
2,945,228
ANTENNA HAVING TWO FOCUSING ELEMENTS
John Forrest Ramsay and John Arthur Cyril Jackson, Great Baddow, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Filed Aug. 16, 1954, Ser. No. 450,012
Claims priority, application Great Britain Aug. 21, 1953
6 Claims. (Cl. 343—753)



1. An aerial system comprising two focussing aerial elements each having an aperture with one dimension much longer than the dimension perpendicular thereto, the longer dimension of the aperture of one element being substantially perpendicular to the longer dimension of the aperture of the other, one of said elements being positioned at the focus of the other and the said one element being arranged to focus on said other element, and source means positioned more remote from said one element than the focus of said one element.

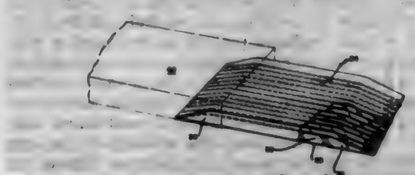
2,945,229
RADAR DIRECTIONAL ANTENNA ASSEMBLY
Hans Klauser, Zurich, Switzerland, assignor to Albiswerk Zurich A.G., Zurich, Switzerland, a Swiss corporation
Filed Oct. 10, 1956, Ser. No. 615,141
Claims priority, application Switzerland Oct. 28, 1956
12 Claims. (Cl. 343—754)

1. A radar directional antenna apparatus comprising a mechanical system, a radar-beam reflector forming part of the system, the reflector having an apertured apex, a focal point, and an axis of symmetry passing through the apex and focal point, means for oscillating the reflector about a point behind the reflector, the oscillation being such that the said axis moves upwardly-downwardly in a plane, a wave guide conductor which passes through the apertured apex, a primary radiator



mounted upon the forward end of the conductor, pivot means for the conductor which is behind the reflector, independent means for moving the conductor on its pivot to move the radiator about the focal point of the reflector independently of the said oscillation of the reflector, pivoted support structure for said system, and means to turn the support structure about two perpendicular axes.

2,945,230
SURFACE WAVE STRUCTURE
Robert S. Elliott, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 31, 1956, Ser. No. 619,516
7 Claims. (Cl. 343—772)



1. A surface wave structure adapted to support and to propagate a surface wave having a TM-mode and a TE-mode component comprising: a metallic member defining a ground plane; a slab of dielectric material of predetermined thickness bonded to said member and adapted to provide a propagation path for said TE-mode component, the velocity of propagation of said TE-mode component being established by said predetermined thickness; and a plurality of thin elongated metallic septa of predetermined height, said height being less than said thickness, said septa being imbedded in said slab defining a septa region, the dielectric material above said septa region defining a propagation path adapted to propagate said TM-mode component, said septa being separated from one another a distance of less than one-half of the working wavelength of said surface wave to prevent substantially the penetration of said TE-mode component into said septa region, the velocity of propagation of said TM-mode being established by the difference between said thickness and said height.

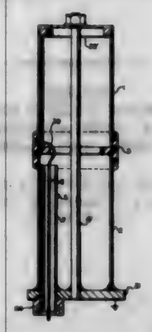
2,945,231
COMMUNICATION ANTENNA
Marvel W. Scheiderf, Palos Heights, Ill., assignor to Andrew Corporation, Chicago, Ill., a corporation of Illinois
Continuation of application Ser. No. 534,569, Sept. 15, 1955. This application May 12, 1958, Ser. No. 735,090
16 Claims. (Cl. 343—900)

1. An antenna comprising a supporting mast having a polygonal cross-section with a vertical conductive member at each corner of the polygon, a plurality of half wavelength radiation suppressors located at alternate half wavelength intervals along each vertical member, the remaining alternate half wavelength comprising radiating portions, each suppressor comprising a shield conductor



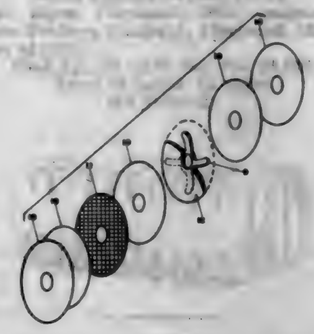
spaced parallel to said vertical member and insulated therefrom, said shield conductor being connected to two one-quarter wavelength shield conductors spaced parallel thereto, a choke isolating the remainder of said vertical member from those radiating and non-radiating portions, and a feed point intermediate said non-radiating portions.

2,945,233
ANTENNA STRUCTURE
Henry Jasik, Flushing, N.Y., assignor to Andrew Alford, Boston, Mass.
Original application Mar. 7, 1949, Ser. No. 79,969. Divided and this application Mar. 5, 1954, Ser. No. 414,416
9 Claims. (Cl. 343—807)



1. A broad band non resonant antenna system comprising two radiating sleeves, means providing a low impedance gap between said sleeves including an insulating collar positioned between adjacent edges of the sleeves and against which said edges rest, a metallic tie rod extending into the sleeves, conductive supporting means secured within each sleeve to support said tie rod for compressing the sleeves against said collar in a longitudinal direction and means contained within the sleeve for feeding the sleeves at a point closely across said collar with one of the other ends of the sleeves maintained at a neutral potential.

2,945,235
HIGH FREQUENCY ANTENNA WITH LAMINATED REFLECTOR
Norman R. Wild, Hollis, and Robert L. Williston, Milford, N.H., assignors, by mesne assignments, to Sanders Associates, Incorporated, Nashua, N.H., a corporation of Delaware
Filed Jan. 26, 1954, Ser. No. 406,134
4 Claims. (Cl. 343—840)



1. A composite parabolic antenna comprising in combination successive parabolic layers of resin-impregnated glass cloth; a parabolic conductive reflecting member; a metallic supporting web adapted to carry an antenna and having a substantial part thereof disposed between said layers of glass cloth and behind said reflecting member; a foam resin binding together said layers of glass cloth, said reflecting member and said metallic web to form a composite parabolic reflector; a radiator secured to and accurately centered by said metallic web; and a plurality of supporting rods mechanically connecting said radiator to said metallic web.

2,945,234
COLLAPSIBLE REFLECTING STRUCTURE FOR ELECTRIC WAVES
Dale J. Driscoll, Fairfield, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed May 5, 1958, Ser. No. 732,948
8 Claims. (Cl. 343—915)



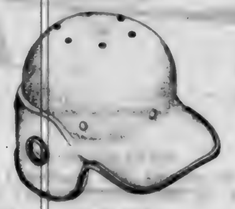
1. A mobile reflector comprising: a cylindrical hub having a dished surface at an end thereof comprised of a conducting metal to provide a reflecting surface; means mounting said hub for directionally orientating the axis of reflection of said surface in space; a plurality of rigid, self-supporting elongated spars, each of said spars being pivoted at one end from a point on said hub at the periphery of said surface for rotation in a plane parallel to said axis, said elongated spars being rotated for storage to a position substantially parallel to said axis; actuating means mounted on the other end of said hub for rotating said spars for operation to a position substantially per-

pendicular to said axis whereby said spars extend radially from said hub, each of said spars having an edge adjacent to and cooperating with said surface when in said radially extending position; means securing to said edges of said spars a continuous, collapsible material comprised of a conducting metal, whereby said material and said surface form a substantially continuous reflector; and latching means mounted on said hub and on said spars for rigidly latching each of said spars in said radially extending position.

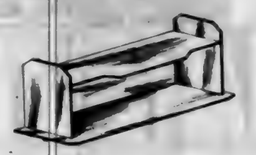
DESIGNS

JULY 12, 1960

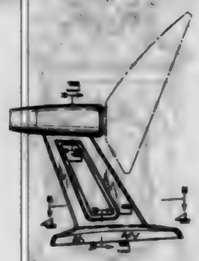
188,368
SPORTS HELMET
Creighton J. Hale, Williamsport, Pa., assignor to Little League Baseball, Inc., Williamsport, Pa., a corporation of New York
Filed Apr. 21, 1959, Ser. No. 55,593
Term of patent 14 years
(Cl. D3—13)



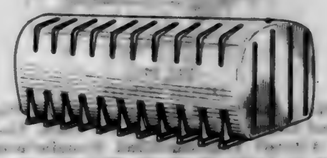
188,369
SHELF CABINET FOR A TOILET TANK
David A. Elliott, 617 N. 17th Drive, Phoenix, Ariz.
Filed Mar. 2, 1959, Ser. No. 54,794
Term of patent 3½ years
(Cl. D4—3)



188,370
AUTOMOBILE REAR VIEW MIRROR
Robert Grove, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 17, 1959, Ser. No. 56,389
Term of patent 7 years
(Cl. D14—6)



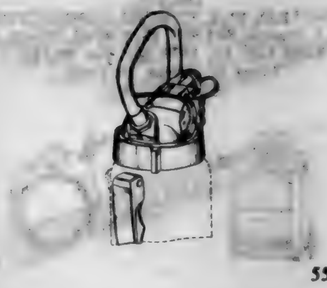
188,371
BEER FERMENTING TANK
August H. Bayer, Cincinnati, Ohio, assignor to The Bishopric Products Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 29, 1959, Ser. No. 55,699
Term of patent 14 years
(Cl. D16—2)



188,372
FIRE EXTINGUISHER
Robert L. Pass, Chicago, and Clyde Forrester, Glenview, Ill., assignors to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Filed Apr. 28, 1959, Ser. No. 55,586
Term of patent 14 years
(Cl. D16—3)



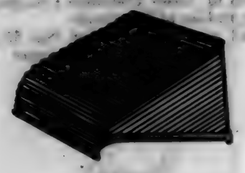
188,373
FIRE EXTINGUISHER
Clyde Forrester, Glenview, and Robert L. Pass, Chicago, Ill., assignors to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Filed Apr. 20, 1959, Ser. No. 55,585
Term of patent 14 years
(Cl. D16—2)



188,374
DOOR HOOD
Donald Macy, Richmond Heights, Joseph F. Weaver, St. Ann, and Grant E. Knoblauch, St. Louis, Mo., assignors to Artcraft Venetian Blind Manufacturing Company of St. Louis, St. Louis, Mo., a corporation of Missouri
Filed Aug. 15, 1958, Ser. No. 52,221
Term of patent 14 years
(Cl. D21—6)



188,375
DOOR HOOD
Donald Macy, Richmond Heights, Joseph F. Weaver, St. Ann, and Grant E. Knoblauch, St. Louis, Mo., assignors to Artcraft Venetian Blind Manufacturing Company of St. Louis, St. Louis, Mo., a corporation of Missouri
Filed Aug. 15, 1958, Ser. No. 52,222
Term of patent 14 years
(Cl. D21—6)



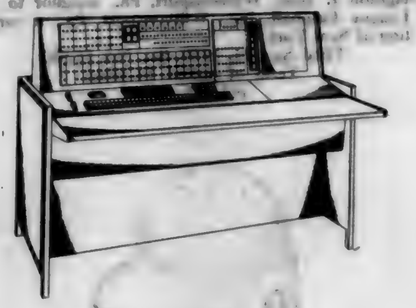
188,376
AMUSEMENT DRIVING DEVICE OR SIMILAR ARTICLE
Ralph Hotkins, New York, N.Y. (2531 E. 7th St., Brooklyn, N.Y.), and Charles Shankman, New York, N.Y. (2955 Ocean Parkway, Brooklyn, N.Y.)
Filed Mar. 7, 1960, Ser. No. 59,640
Term of patent 14 years
(Cl. D25—1)



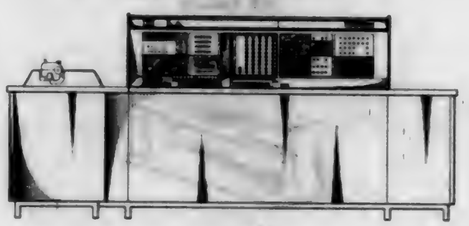
188,377
JUNCTION BOX TUBING CONNECTOR
Frank J. Martin, 801 SW. 23rd Road, Miami, Fla.
Filed Feb. 15, 1957, Ser. No. 44,883
Term of patent 14 years
(Cl. D26—5)



188,378
COMPUTER CONSOLE
Walter F. Kraus and James J. La Duc, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 12, 1959, Ser. No. 56,322
Term of patent 14 years
(Cl. D26—5)



188,379
CONSOLE FOR A DATA PROCESSING SYSTEM
Walter S. McCormick, Jr., Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 21, 1960, Ser. No. 59,997
Term of patent 14 years
(Cl. D26—5)



188,380
WALL SWITCH COVER PLATE
George A. Abraham, 7902 Brinemade St., Cleveland, Ohio
Filed June 29, 1959, Ser. No. 56,585
Term of patent 14 years
(Cl. D26—13)



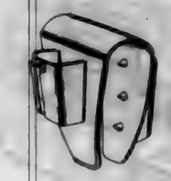
188,381
DISPLAY PLAQUE FOR VEHICLES
Clifford W. McLeod, P.O. Box 16, Jackson's Gap, Ala.
Filed June 29, 1959, Ser. No. 56,583
Term of patent 14 years
(Cl. D29—11)



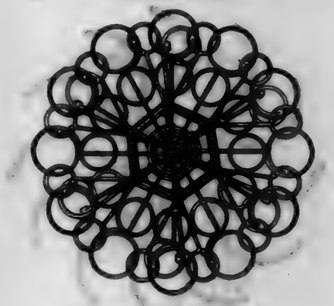
188,382
GUN HOLSTER
Frank A. Stella, Lyndhurst, N.J., assignor to The Hubley Manufacturing Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Oct. 23, 1959, Ser. No. 58,047
Term of patent 14 years
(Cl. D30—1)



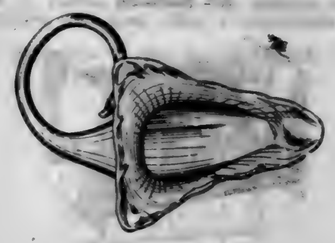
188,383
HAND GRIPPER FOR HOLDING FISH
Arnold L. Gravning, 1150 E. Shelley St., Manhattan Beach, Calif.
Filed Oct. 19, 1959, Ser. No. 57,978
Term of patent 14 years
(Cl. D31—4)



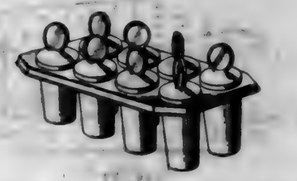
188,384
FLOWER HOLDER
Wanda Mauer, 4809 E. Patricia Jane Drive, Phoenix, Ariz.
Filed Aug. 6, 1958, Ser. No. 52,869
Term of patent 14 years
(Cl. D35—3)



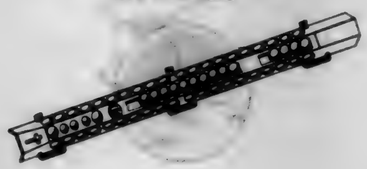
188,385
CENTER PIECE VASE
Orville C. Hanson, Cedars, Okla. (P.O. Box 813, Fort Smith, Ark.)
Filed Feb. 24, 1960, Ser. No. 59,493
Term of patent 14 years
(Cl. D36—2)



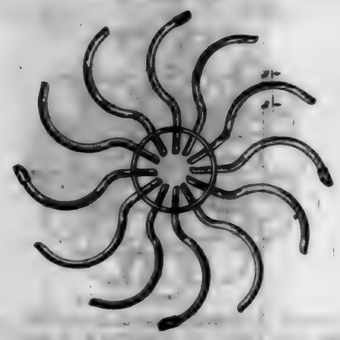
188,386
MOLD FOR FROZEN CONFECTIONS
Harold D. Halterstrum, Baraboo, and Jack Collins, Milwaukee, Wis., assignors to Flambeau Plastics Corporation, Baraboo, Wis., a corporation of Wisconsin
Filed Feb. 23, 1960, Ser. No. 59,479
Term of patent 14 years
(Cl. D44—1)



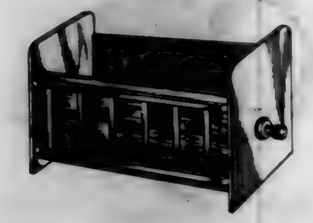
188,387
MOVABLE BEAD ROSARY
Albert J. Hoban, 200 Essex Road, North Kingstown, R.I.
Filed Dec. 14, 1959, Ser. No. 58,657
Term of patent 14 years
(Cl. D45—16)



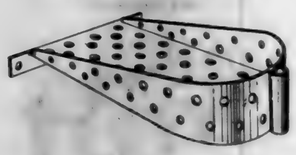
188,388
ILLUMINATION DIFFUSER
Arnold Goldstein, 3363 Trexler Road, Allentown, Pa.
Filed Sept. 12, 1958, Ser. No. 52,633
Term of patent 14 years
(Cl. D48—16)



188,389
NIGHT LIGHT
Nick Shubert, 1692 Mahoning Ave., Youngstown, Ohio
Filed Feb. 18, 1959, Ser. No. 54,665
Term of patent 7 years
(Cl. D48—20)



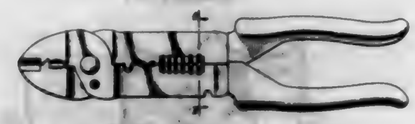
188,390
FLATIRON HOLDER
Lucille L. Bold, 3204 Birkshire Way, Sacramento, Calif.
Filed May 11, 1959, Ser. No. 55,859
Term of patent 7 years
(Cl. D49—6)



188,391
COMBINED CONTROL KNOB AND ESCUTCHEON
Monte Levin, Roslyn Heights, N.Y., assignor to International Associates, Rockville Centre, N.Y., a partnership
Filed Nov. 13, 1959, Ser. No. 58,337
Term of patent 14 years
(Cl. D50—3)



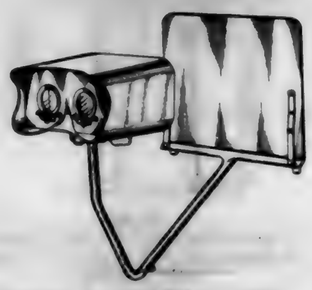
188,392
CRIMPING TOOL
David J. Crimmins, Nutley, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Jan. 22, 1959, Ser. No. 54,266
Term of patent 14 years
(Cl. D54—13)



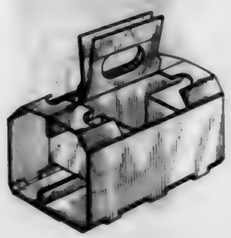
188,393
CASE FOR A CONTACT SPECTACLE LENS OR SIMILAR ARTICLE
Murray H. Fagan, Boston, Mass., assignor to American Stay Company, Malden, Mass., a corporation of Massachusetts
Filed July 27, 1959, Ser. No. 56,953
Term of patent 14 years
(Cl. D57—1)



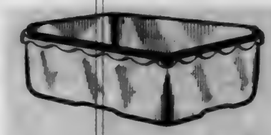
188,394
ORTHOPTIC INSTRUMENT
Alfred W. Sorenson, Racine, Wis., assignor to Visual Therapy Products Corporation, Racine, Wis., a corporation of Wisconsin
Filed Dec. 19, 1957, Ser. No. 48,956
Term of patent 14 years
(Cl. D57—1)



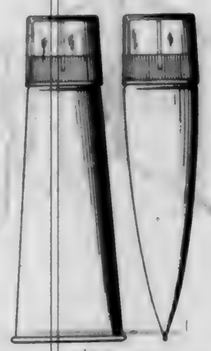
188,395
BOTTLE CARRIER
Costis J. Paps, 806 W. Van Buren St., Chicago, Ill.
Filed Nov. 9, 1959, Ser. No. 58,281
Term of patent 14 years
(Cl. D58—5)



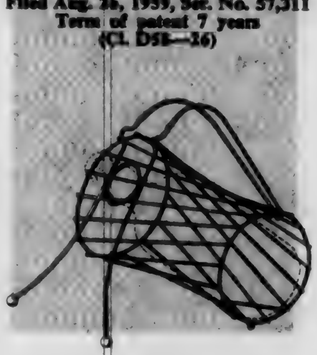
188,396
HOUSEHOLD FAN OR SIMILAR ARTICLE
Charles O. Bliss, 6474 Santa Monica Blvd., Los Angeles, Calif.
Filed Apr. 14, 1958, Ser. No. 50,456
Term of patent 14 years
(Cl. D58—12)



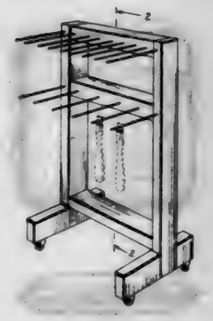
188,397
COMBINED COLLAPSIBLE TUBE DISPENSER AND CAP
Sheldon David Hulsh, 530 Park Ave., New York, N.Y.
Filed May 7, 1959, Ser. No. 55,811
Term of patent 14 years
(Cl. D58—17)



188,398
WINE BOTTLE HOLDER
Louis G. Bissell, Jr., Weston, Conn., assignor to Add-A-Comb, Inc., New York, N.Y., a corporation of New York
Filed Aug. 26, 1959, Ser. No. 57,311
Term of patent 7 years
(Cl. D58—26)



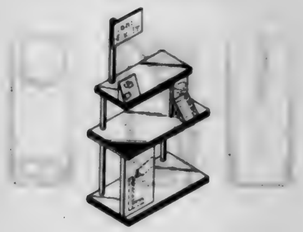
188,399
DISPLAY RACK FOR TOOL HANDLES
Norman Link, Salem, Ind., assignor to O. P. Link Handle Company, Inc., Salem, Ind., a corporation of Indiana
Filed Dec. 19, 1957, Ser. No. 48,968
Term of patent 14 years
(Cl. D80—9)



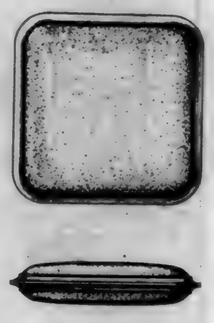
188,400
COMBINED DISPLAY AND STORAGE RACK FOR MAGAZINES OR THE LIKE
Theodore V. Purvin, Riverside, Ill., assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Filed Nov. 7, 1958, Ser. No. 53,293
Term of patent 14 years
(Cl. D80—9)



188,401
DISPLAY STAND
Philip G. Lux, 315 W. Franklin St., Elkhart, Ind.
Filed July 1, 1959, Ser. No. 56,611
Term of patent 3½ years
(Cl. D86—9)



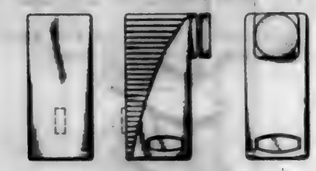
188,402
BODY VIBRATOR
John F. Wahl, Sterling, Ill., assignor to Wahl Clipper Corporation, Sterling, Ill., a corporation of Illinois
Filed Sept. 15, 1958, Ser. No. 62,641
Term of patent 14 years
(Cl. D83—1)



188,403
APPARATUS FOR APPLYING AND REMOVING MAKE-UP
Antoine Francois Peyron, 4 Rue de Londres, Paris, France
Filed May 25, 1959, Ser. No. 56,040
Term of patent 14 years
(Cl. D66—10)



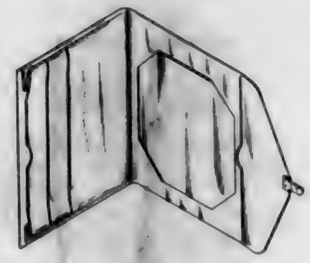
188,404
APPARATUS FOR APPLYING AND REMOVING MAKE-UP
Antoine Francois Peyron, 4 Rue de Londres, Paris, France
Filed May 25, 1959, Ser. No. 56,041
Term of patent 14 years
(Cl. D66—10)



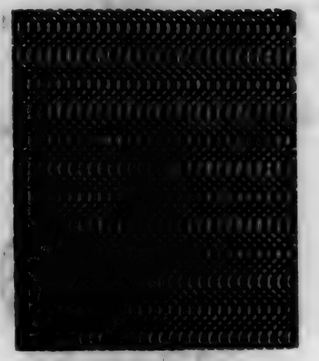
188,405
HANDLE ATTACHMENT LOOP FOR LUGGAGE
Abraham Levine, Mendham, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Filed June 3, 1958, Ser. No. 51,179
Term of patent 14 years
(Cl. D87—3)



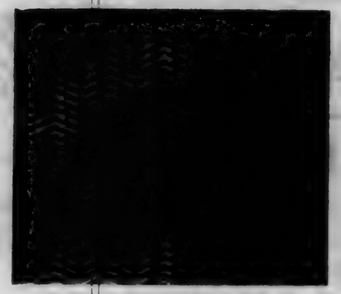
188,406
COMBINATION BRIEF CASE AND WRITING SUPPORT
Peter H. Berg, 143 W. 29th St., New York, N.Y.
Filed June 2, 1959, Ser. No. 56,231
Term of patent 14 years
(Cl. D87—3)



188,407
PLASTIC COATED FABRIC
John C. Siegmann, Toledo, Ohio, assignor to The Landers Corporation, Toledo, Ohio, a corporation of Ohio
Filed Sept. 2, 1959, Ser. No. 57,411
Term of patent 14 years
(Cl. D87—3)



188,408
PLASTIC COATED FABRIC
John C. Siegmann, Toledo, Ohio, assignor to The Landers Corporation, Toledo, Ohio, a corporation of Ohio
Filed Sept. 2, 1959, Ser. No. 57,412
Term of patent 14 years
(Cl. D87—3)



188,409
LIFT KNOB FOR PLUMBING FIXTURE OR SIMILAR ARTICLE
Herbert V. Kohler, Kohler, Wis., assignor to Kohler Co., Kohler, Wis., a corporation of Wisconsin
Filed Jan. 9, 1959, Ser. No. 54,104
Term of patent 14 years
(Cl. D91—3)





LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 12TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bouchard, Marie V.: *See*—
Bouchard, Ovide. Re. 24,844.

Bouchard, Ovide, deceased, by M. V. Bouchard, legal representative, to D. N. Crowley and A. A. Gauthier. Combustion gas recuperator and smell and smoke consumer. Re. 24,844, 7–12–60, Cl. 110—8.

Crowley, Daniel N.: *See*—
Bouchard, Ovide. Re. 24,844.

Gauthier, Aime A.: *See*—
Bouchard, Ovide. Re. 24,844.

Jeddeloh, Otto G. Sheet loading mechanism for multideck conveyor. Re. 24,843, 7–12–60, Cl. 271—64.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 1,958, 7–12–60, Cl. 47—61.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 1,958.

Lee, Walter, to Monrovia Nursery Co. Pyracantha plant. 1,959, 7–12–60, Cl. 47—59.

Monrovia Nursery Co.: *See*—
Lee, Walter. 1,959.

LIST OF DESIGN PATENTEES

Abraham, George A. Wall switch cover plate. 188,380, 7–12–60, Cl. D26—13.

Add-A-Comb, Inc.: *See*—
Bissell, Louis G., Jr. 188,398.

American Stay Co.: *See*—
Fagan, Murray H. 188,393.

Ansul Chemical Co.: *See*—
Forrester, Clyde, and Paus. 188,373.
Paus, Robert L., and Forrester. 188,372.

Arteraft Venetian Blind Mfg. Co. of St. Louis: *See*—
Macy, Donald, Weaver, and Knoblauch. 188,374.
Macy, Donald, Weaver, and Knoblauch. 188,375.

Bayer, August H., to The Bishopric Products Co. Beer fermenting tank. 188,371, 7–12–60, Cl. D16—2.

Berg, Peter H. Combination brief case and writing support. 188,406, 7–12–60, Cl. D87—3.

Bishopric Products Co., The: *See*—
Bayer, August H. 188,371.

Bissell, Louis G., Jr., to Add-A-Comb, Inc. Wine bottle holder. 188,398, 7–12–60, Cl. D58—26.

Bliss, Charles O. Household pan or similar article. 188,396, 7–12–60, Cl. D58—12.

Bold, Lucille L. Flatiron holder. 188,390, 7–12–60, Cl. D49—6.

Chrysler Corp.: *See*—
Grove, Robert. 188,370.

Collins, Jack: *See*—
Hulterstrum, Harold D., and Collins. 188,386.

Crimmins, David J., to The Thomas & Betts Co. Crimping tool. 188,392, 7–12–60, Cl. D54—13.

Elliott, David A. Shelf cabinet for a toilet tank. 188,369, 7–12–60, Cl. D4—3.

Fagan, Murray H., to American Stay Co. Case for a contact spectacle lens or similar article. 188,393, 7–12–60, Cl. D57—1.

Flambeau Plastics Corp.: *See*—
Hulterstrum, Harold D., and Collins. 188,386.

Forrester, Clyde: *See*—
Paus, Robert L., and Forrester. 188,372.

Forrester, Clyde, and R. L. Paus, to Ansul Chemical Co. Fire extinguisher. 188,378, 7–12–60, Cl. D16—2.

Goldstein, Arnold. Illumination diffuser. 188,388, 7–12–60, Cl. D48—16.

Gravning, Arnold L. Hand gripper for holding fish. 188,383, 7–12–60, Cl. D31—4.

Grove, Robert, to Chrysler Corp. Automobile rear view mirror. 188,370, 7–12–60, Cl. D14—6.

Hale, Creighton J., to Little League Baseball, Inc. Sports helmet. 188,368, 7–12–60, Cl. D3—13.

Hamon, Orville C. Center piece vase. 188,385, 7–12–60, Cl. D36—2.

Hoban, Albert J. Movable bead rosary. 188,387, 7–12–60, Cl. D45—16.

Hotkins, Ralph, and C. Shankman. Amusement driving device or similar article. 188,376, 7–12–60, Cl. D25—1.

Hubley Mfg. Co., The: *See*—
Stella, Frank A. 188,382.

Hulsh, Sheldon D. Combined collapsible tube dispenser and cap. 188,397, 7–12–60, Cl. D58—17.

Hulterstrum, Harold D., and J. Collins, to Flambeau Plastics Corp. Mold for frozen confections. 188,386, 7–12–60, Cl. D44—1.

Hupp Corp.: *See*—
Purvin, Theodore V. 188,400.

International Associates: *See*—
Levin, Monte. 188,391.

International Business Machines Corp.: *See*—
Kraus, Walter F., and La Due. 188,378.
McCormick, Walter S., Jr. 188,379.

Knoblauch, Grant E.: *See*—
Macy, Donald, Weaver, and Knoblauch. 188,374.
Macy, Donald, Weaver, and Knoblauch. 188,375.

Kohler Co.: *See*—
Kohler, Herbert V. 188,409.

Kohler, Herbert V., to Kohler Co. Lift knob for plumbing fixture or similar article. 188,409, 7–12–60, Cl. D91—3.

Kraus, Walter F., and J. J. La Due, to International Business Machines Corp. Computer console. 188,378, 7–12–60, Cl. D26—5.

La Due, James J.: *See*—
Kraus, Walter F., and La Due. 188,378.

Landers Corp., The: *See*—
Siegmann, John C. 188,407.
Siegmann, John C. 188,408.

Levin, Monte, to International Associates. Combined control knob and escutcheon. 188,391, 7–12–60, Cl. D50—3.

Levine, Abraham, to Presto Lock Co. Handle attachment loop for luggage. 188,405, 7–12–60, Cl. D87—2.

Link, Norman, to O. P. Link Handle Co., Inc. Display rack for tool handles. 188,399, 7–12–60, Cl. D60—9.

Link, O. P., Handle Co., Inc.: *See*—
Link, Norman. 188,399.

Little League Baseball, Inc.: *See*—
Hale, Creighton J. 188,368.

Lux, Philip G. Display stand. 188,401, 7–12–60, Cl. D60—9.

Macy, Donald, J. F. Weaver, and G. E. Knoblauch, to Artcraft Venetian Blind Mfg. Co. of St. Louis. Door hood. 188,374, 7–12–60, Cl. D21—6.

Macy, Donald, J. F. Weaver, and G. E. Knoblauch, to Artcraft Venetian Blind Mfg. Co. of St. Louis. Door hood. 188,375, 7–12–60, Cl. D21—6.

Martin, Frank J. Junction box tubing connector. 188,377, 7–12–60, Cl. D26—5.

McCormick, Walter S., Jr., to International Business Machines Corp. Console for a data processing system. 188,379, 7–12–60, Cl. D26—5.

McLoud, Clifford W. Display plaque for vehicles. 188,381, 7–12–60, Cl. D29—11.

Messer, Wanda. Flower holder. 188,384, 7–12–60, Cl. D35—3.

Pape, Costis J. Bottle carrier. 188,395, 7–12–60, Cl. D58—5.

Paus, Robert L.: *See*—
Forrester, Clyde, and Paus. 188,373.

Paus, Robert L., and C. Forrester, to Ansul Chemical Co. Fire extinguisher. 188,372, 7–12–60, Cl. D16—2.

Peyron, Antoine F. Apparatus for applying and removing make-up. 188,403, 7–12–60, Cl. D86—10.

Peyron, Antoine F. Apparatus for applying and removing make-up. 188,404, 7–12–60, Cl. D86—10.

Presto Lock Co.: *See*—
Levine, Abraham. 188,405.

Purvin, Theodore V., to Hupp Corp. Combined display and storage rack for magazines or the like. 188,400, 7–12–60, Cl. D80—9.

Shankman, Charles: *See*—
Hotkins, Ralph, and Shankman. 188,376.

Shubert, Nick. Night light. 188,389, 7–12–60, Cl. D48—20.

Siegmann, John C., to The Landers Corp. Plastic coated fabric. 188,407, 7–12–60, Cl. D87—3.

Siegmann, John C., to The Landers Corp. Plastic coated fabric. 188,408, 7–12–60, Cl. D87—3.

Sorenson, Alfred W., to Visual Therapy Products Corp. Orthoptic instrument. 188,394, 7–12–60, Cl. D57—1.

Stella, Frank A., to The Hubley Mfg. Co. Gun holster. 188,382, 7–12–60, Cl. D30—1.

Thomas & Betts Co., The: *See*—
Crimmins, David J. 188,392.

Visual Therapy Products Corp.: *See*—
Sorenson, Alfred W. 188,394.

Wahl Clipper Corp.: *See*—
Wahl, John F. 188,402.

Wahl, John F., to Wahl Clipper Corp. Body vibrator. 188,402, 7–12–60, Cl. D83—1.

Weaver, Joseph F.: *See*—
Macy, Donald, Weaver, and Knoblauch. 188,374.
Macy, Donald, Weaver, and Knoblauch. 188,375.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 12TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Fontaine, Robert R., Whitby, and White. 2,944,347.
Quick, George R. 2,944,348.

AMP Inc.: *See*—
Duka, Karlis. 2,945,207.
Hammel, Kemper M. 2,945,206.

Abbott Laboratories: *See*—
Sherman, William R. 2,945,047.

Abbruscato, Francis J., to American Cyanamid Co. Resinous compositions light stabilized with a 2,4-diamino-6-(p-alkoxy-styryl)-s-triazine. 2,944,999, 7–12–60, Cl. 260—45.8.

Acetylene Cylinder Corp.: *See*—
Muller, Nathan W., and Long. 2,944,911.

Acme Steel Co.: *See*—
Coleman, Bestor P. 2,944,337.
Wilson, Allen B., and Stanius. 2,944,503.

Acosta, Tracy. Citrus fruit reamer. 2,944,576, 7–12–60, Cl. 146—3.

Adams, Richard F., to Olin Mathieson Chemical Corp. Method of making heat exchanger. 2,944,328, 7–12–60, Cl. 29—157.3.

Addressograph-Multigraph Corp.: *See*—
Cheeseman, Leslie H. 2,944,483.
Freedson, Joseph. 2,944,649.
Gruver, John H. 2,945,088.

Aerojet-General Corp.: *See*—
Moe, George, Schuitz, Shepherd, and Cromwell. 2,944,951.

Affleck, John H., III: *See*—
De Santis, Vincent J., and Affleck. 2,945,150.

Agfa Aktiengesellschaft: *See*—
Riester, Oskar. 2,944,896.

Ahonen, Raymond M., to Century Die & Mfg. Co. Metal stretch bending apparatus. 2,944,582, 7–12–60, Cl. 153—40.

Aiello, Peter M.: *See*—
David, Eric, and Aiello. 2,944,643.

Aikins, William E.: *See*—
Teters, Emily S., Aikins, and Strader. 2,944,652.

Air Preheater Corp., The: *See*—
Muller, Robert H. 2,944,798.

Air Reduction Co., Inc.: *See*—
Dietrich, Harold A., and Hay. 2,944,545.

Aktiebolaget Electrolux: *See*—
Otto, Carl L., and Gronqvist. 2,944,304.

Alberti, Carlo G., A. Vercellone, A. Di Marco, and M. Ghione, to Societa Farmaceutici Italia. Ortho-hydroxy-N-beta-morpholino-propiophenone fungicides. 2,945,034, 7–12–60, Cl. 260—247.7.

Albiswerk Zurich A.G.: *See*—
Klauser, Hans. 2,945,229.

Alexander, Charles H., to United States Rubber Co. Preparation of dialkenyl phenyl phosphonates. 2,945,052, 7–12–60, Cl. 260—461.

Alexander, Robert H., to Sylvania Electric Products Inc. Injection instrument. 2,944,549, 7–12–60, Cl. 128—216.

Alford, Andrew: *See*—
Jasik, Henry. 2,945,232.

Allen Iron & Steel Co., The: *See*—
Bell, Francis J. 2,944,676.

Allen, Lloyd R., and D. H. Woodard, to Kenmore Research Co. Lapping compound. 2,944,879, 7–12–60, Cl. 51—304.

Allen, Lloyd R., and D. H. Woodard, to Kenmore Research Co. Lapping compound. 2,944,880, 7–12–60, Cl. 51—306.

Aller, Claes, to Carl Allers Etablissement A/S. Rotary printing press for offset printing with three or more colours. 2,944,482, 7–12–60, Cl. 101—177.

Allers, Carl, Etablissement A/S: *See*—
Aller, Claes. 2,944,482.

Allied Chemical Corp.: *See*—
Joris, George G. 2,945,072.

Allied Research Products, Inc.: *See*—
Borodin, Daniel J. 2,944,557.

Allis-Chalmers Mfg. Co.: *See*—
Odell, Robert C., Frentzel, Scag, and Netzler. 2,944,753.
Scott, Donald B. 2,945,112.

Allison, Paul R., to General Motors Corp. Electroplating. 2,944,945, 7–12–60, Cl. 204—15.

Alsobrook, Benjamin R.: *See*—
Herman, Hartley R., and Alsobrook. 2,944,504.

Amara, Dominic, to Lockheed Aircraft Corp. Stabilized platform reference device. 2,944,426, 7–12–60, Cl. 74—5.34.

Amercoat Corp.: *See*—
Morris, Lester, and Lombardo. 2,944,919.

American Brake Shoe Co.: *See*—
Burkhardt, George R. 2,944,740.

American Cyanamid Co.: *See*—
Abbruscato, Francis J. 2,944,999.
Davis, Gerald M. 2,945,051.
Hart, William P. 2,944,991.
Storch, Henry H. 2,944,553.

American Home Products Corp.: *See*—
Seifter, Joseph, Hanslick, and Freed. 2,945,041.

American Machine & Foundry Co.: *See*—
Dearsley, George, and Erstad. 2,944,659.
Elsmann, Oswald E. 2,944,629.
Patterson, Morehead, and Schon. 2,944,819.
Pavlecka, Vladimir H. 2,944,397.
Simpson, Arthur P. 2,944,672.
Wells, Willis L. 2,944,818.
Wintermantel, Norman G., and Erstad. 2,944,833.

American Metal Products Co.: *See*—
Thomas, Paul P. 2,944,831.

American Smelting and Refining Co.: *See*—
Yeck, Robert P. 2,944,954.

American Steel Foundries: *See*—
Hake, Walter T. 2,945,097.

American Thermos Products Co., The: *See*—
Darmstadt, Louis J. 2,944,690.

Ampatco Laboratories Corp.: *See*—
Patin, Albert C., and Massmann. 2,944,770.

Ampco Metal, Inc.: *See*—
Klement, John F. 2,944,800.

Anderson, Archie C., to A. O. Smith Corp. Coupling for reinforced plastic pipe. 2,944,839, 7–12–60, Cl. 285—45.

Anderson, Carlton C., to Phillips Petroleum Co. Receipt and storage of liquefied gases. 2,944,406, 7–12–60, Cl. 62—54.

Anderson, Cleophas E., and W. J. Walsh, to Thermo Electric Mfg. Co. Control apparatus. 2,945,184, 7–12–60, Cl. 328—85.

Anderson, Peter B. Spring release mounting for cultivator shank. 2,944,613, 7–12–60, Cl. 172—266.

Anderson, Richard F.: *See*—
Ganske, Kingston E., and Anderson. 2,945,083.

Anderson, Robert J.: *See*—
Angell, Pierce T., Anderson, and Hopper. 2,944,786.

Andrew Corp.: *See*—
Scheidorf, Marvel W. 2,945,231.

Angell, Pierce T., R. J. Anderson, and M. M. Topper, to Thompson Ramo Wooldridge Inc. Super and subsonic vaneless nozzle. 2,944,786, 7–12–60, Cl. 253—55.

Anheuser-Busch, Inc.: *See*—
Commerford, John D., and Scallet. 2,944,913.

Anik, Bernard: *See*—
Katz, Robert, Nebgen, and Anik. 2,944,801.

Ankud, Stanley. Multiplicate writing instrument. 2,944,519, 7–12–60, Cl. 120—42.13.

Anthon, Borwin F. Transparency equipment. 2,944,856, 7–12–60, Cl. 40—106.1.

Anthony, Russel W., to National Broach & Machine Co. Drive means including a slip clutch. 2,944,343, 7–12–60, Cl. 33—179.5.

Antonidis, John E., and R. A. Ulm, to General Motors Corp. Engine starter drive. 2,944,427, 7–12–60, Cl. 74—7.

Antonidis, John E., and R. A. Ulm, to General Motors Corp. Engine starter. 2,944,428, 7–12–60, Cl. 74—7.

Arborelius, Mans M.: *See*—
Lundgren, Claes E. G., and Arborelius. 2,944,544.

Architectural Tiling Co., Inc.: *See*—
Corban, Wilbur H., and Davidson. 2,944,315.

Argus Chemical Corp.: *See*—
Levy, M Frank, and Seubert. 2,945,045.

Armour and Co.: *See*—
Fisher, Joseph D., Thompson, and Kottemann. 2,944,940.

Armstrong Cork Co.: *See*—
Hall, Wade E. 2,945,020.

Armstrong, Edward T., and F. H. Highley, to The Goodyear Tire & Rubber Co. Apparatus for modulating brake pressure. 2,944,772, 7–12–60, Cl. 244—111.

Arneson, Edwin L., to Federal Paper Board Co., Inc. Container. 2,944,719, 7–12–60, Cl. 229—31.

Arnold, Charles A., and J. N. Lind, to General Electric Co. Tunable high-frequency apparatus. 2,945,156, 7–12–60, Cl. 315—5.47.

Arnot, Alfred E. R., to E. Kaye, and J. R. Sharp. Lift truck with auxiliary truck pickup. 2,944,680, 7–12–60, Cl. 214—620.

Arrighini, Artil, and R. Bell, to Rockwall Co. Cork tool. 2,944,334, 7–12–60, Cl. 29—238.

Arvin Industries, Inc.: *See*—
Ganske, Kingston E., and Anderson. 2,945,083.
Sellon, Raymond N., Jr. 2,944,354.

Ashe, John M.: *See*—
Malloy, John E., and Ashe. 2,944,414.

Ashton, Benjamin N., to Electrol Inc. Self-contained power actuator. 2,944,400, 7–12–60, Cl. 60—52.

Astheimer, Robert W., to Barnes Engineering Co. Matching circuit for radiation detectors. 2,945,181, 7–12–60, Cl. 250—214.

Athens Plow Co.: *See*—
Shipp, John W. 2,944,614.

Atkinson, John E., G. Booth, E. L. Johnson, and W. P. Mills, to Imperial Chemical Industries Ltd. New colouring process. 2,944,870, 7–12–60, Cl. 8—39.

Atkinson, John E., G. Booth, E. L. Johnson, and W. P. Mills, to Imperial Chemical Industries Ltd. New colouring process. 2,944,871, 7–12–60, Cl. 8—41.

Austin, Kenneth L., to Burroughs Corp. Data conversion system. 2,944,733, 7–12–60, Cl. 235—61.6.

Austin Motor Co. Ltd., The: *See*—
Payne, Eric R. 2,944,530.
Weaving, John H. 2,944,800.

"Automatic" Sprinkler Corp. of America: *See*—
Katis, William R. 2,944,778.

Auto-Soler Co., The: *See*—
Wright, John G., Chafin, and Wynn. 2,944,758.

Avalon, George M.: *See*—
Kaspari, Albert R., Rutherford, and Avalon. 2,944,553.

Avco Mfg. Corp.: *See*—
Bradmiller, Richard W. 2,945,121.
Driscoll, Dale J. 2,945,224.
Scott, Victor J., and Dapper. 2,945,090.

Avery, Morris A. Frame structure for lights or ventilators in doors. 2,944,305, 7–12–60, Cl. 20—36.

Avery, W. & T., Ltd.: *See*—
Chilton, John M. 2,945,187.

B.B.T. Automatic, Inc.: *See*—
Bader, Charles L. 2,944,710.

Bach, John W., R. L. Peet, Jr., and H. F. Miller, to Pitney-Bowes, Inc. Letter flap moistener. 2,944,511, 7–12–60, Cl. 118—243.

Bader, Charles L., to B.B.T. Automatic, Inc. Pants pressing machine. 2,944,710, 7–12–60, Cl. 222—73.

Baechtel, Andrew R.: *See*—
Lesti, Arnold, and Baechtel. 2,945,220.

Bailey, Lawrence H., and H. F. Gabriel, to F. J. Stokes Corp. Multi-layer tablet manufacture. 2,944,493, 7–12–60, Cl. 107—17.

Bailey Meter Co.: *See*—
Green, Thomas A., Gorrie, Shannon, and Fink. 2,945,120.
Markow, George R. 2,945,218.

Baker Oil Tools, Inc.: *See*—
Baker, Reuben C. 2,944,604.
Baker, Reuben C. 2,944,607.
Baker, Reuben C. 2,944,796.
Baker, Reuben C., Ragan, and Wentz. 2,944,603.
Conrad, Martin B. 2,944,793.

Baker, Reuben C., T. M. Ragan, and C. W. Wentz, to Baker Oil Tools, Inc. Subsurface electric current generating apparatus. 2,944,603, 7–12–60, Cl. 166—65.

Baker, Reuben C., to Baker Oil Tools, Inc. Retrievable well packer. 2,944,604, 7–12–60, Cl. 166—131.

Baker, Reuben C., to Baker Oil Tools, Inc. Tubing tester and circulating valve. 2,944,607, 7–12–60, Cl. 166—226.

Baker, Reuben C., to Baker Oil Tools Inc. Rotary expansible drill bits. 2,944,796, 7–12–60, Cl. 255—76.

Baker, Thomas R.: *See*—
Lefief, Frank M., and Baker. 2,944,724.

Bakke, Hans A., to General Electric Co. Window assembly for exposure meters. 2,944,466, 7–12–60, Cl. 88—23.

Baldwin, Francis P., and R. M. Thomas, to Esso Research and Engineering Co. Pneumatic tire. 2,944,578, 7–12–60, Cl. 152—330.

Balfour, Lionel M. J. Seat structure for mounting on the roofs of motor cars and the like. 2,944,580, 7–12–60, Cl. 155—5.

Baljak Corp.: *See*—
Lefief, Frank M., and Baker. 2,944,724.
Lynch, Walton D. 2,944,717.

Balkema, Bertrand B. Storage apparatus. 2,944,656, 7–12–60, Cl. 198—33.

Ballard, Wiley P.: *See*—
McIntosh, Claude H., and Ballard. 2,944,962.

Banks, William L., Jr. Cargo hoisting apparatus. 2,944,680, 7–12–60, Cl. 212—3.

Barabas, John J., and S. C. Willis, to Castro Convertible Corp. Power operated reclining chair. 2,944,595, 7–12–60, Cl. 155—106.

Barash, Samuel A., to Bendix Aviation Corp. Transistor amplifier with variable feedback. 2,945,186, 7–12–60, Cl. 330—20.

Barbour Welting Co.: *See*—
Greene, Percy W. 2,944,269.

Barham, William L.: *See*—
Basore, Cleburne A., and Barham. 2,944,405.

Barkalow, Dale E.: *See*—
Swift, Gilbert, and Barkalow. 2,945,129.

Barnes, Brunner C., and R. H. Parekh, to Socony Mobil Oil Co., Inc. Recovery of propane from natural gas. 2,945,073, 7–12–60, Cl. 260—676.

Barnes Engineering Co.: *See*—
Astheimer, Robert W. 2,945,131.

Barnes, Gerald L.: *See*—
Doesmann, Lucian P., and Barnes. 2,944,995.

Barnett, Claude C., and H. J. Dana, to Research Corp. Detecting and recording physiological changes accompanying emotion stresses. 2,944,542, 7–12–60, Cl. 128—2.06.

Bartkowiak, Stanley A. Automatic towline release. 2,944,506, 7–12–60, Cl. 114—235.

Bartlett, Christopher L., to Bristol Aero-Engines, Ltd. Measuring apparatus. 2,944,342, 7–12–60, Cl. 33—174.

Barton, Daniel M., H. W. Schoeffel, and F. J. Zimmermann, to Sterling Drug Inc. Process and apparatus for complete liquid-vapor phase oxidation and high enthalpy vapor production. 2,944,396, 7–12–60, Cl. 60—39.05.

Bartsch, Cornelius. Rotary loading and scraping machine. 2,944,350, 7–12–60, Cl. 37—4.

Basore, Cleburne A., and W. L. Barham, to Union Tank Car Co. Conservation arrangement. 2,944,405, 7–12–60, Cl. 62—54.

Bassett, John W., C., to General Electric Co. Toroid winding apparatus. 2,944,765, 7–12–60, Cl. 242—4.

Batty, Harry A., and T. G. Pullen III, to James Lees and Sons Co. Uptwister. 2,944,382, 7–12–60, Cl. 57—62.

Bayer, Frank C., to Thompson Ramo Wooldridge Inc. Air atomizing spray bar. 2,944,388, 7–12–60, Cl. 60—35.6.

Beach, Frank A. Detachable and foldable container carrier. 2,944,713, 7–12–60, Cl. 224—45.

Beacon Production Equipment Corp.: *See*—
Fenton, Frank W. 2,944,702.

Beal, John P. Water ski towing assembly. 2,944,507, 7–12–60, Cl. 114—235.

Beaulac, Raymond E.: *See*—
Engiehardt, Gustave O., and Beaulac. 2,944,635.

Beavers, Dorothy J.: *See*—
Carroll, Burt H., Sagal, and Beavers. 2,944,902.

Beavers, Dorothy J., C. V. Wilson, and J. L. Graham, to Eastman Kodak Co. Sensitization of photographic emulsions. 2,944,898, 7–12–60, Cl. 96—56.

Beck, Walter, to Montgomery Elevator Co. Hydraulic elevator leveling system. 2,944,401, 7–12–60, Cl. 60—52.

Beech, Austin S., to Foundry Equipment Ltd. Apparatus for filling and ramming foundry flasks. 2,944,308, 7–12–60, Cl. 22—36.

Bell, Francis J., to The Allen Iron & Steel Co. Storage rack. 2,944,676, 7–12–60, Cl. 211—148.

Bell & Howell Co.: *See*—
Brubaker, Wilson M., and Robinson. 2,945,126.
Hall, Lawrence G., and Brubaker. 2,945,124.
Montgomery, Donald N. 2,945,182.
Shekels, Howard D., and Newhouse. 2,945,212.

Bell, Robert: *See*—
Arrighini, Artil, and Bell. 2,944,334.

Bell, Robert E., and C. F. Spademan, to Toledo Scale Corp. Servomotor control circuit. 2,945,166, 7–12–60, Cl. 318—28.

Bell Telephone Laboratories, Inc.: *See*—
Dobe, Stephen, Jr. 2,945,178.
Geyling, Frank T. 2,945,082.
Mattson, Roy H. 2,945,190.
Weutberg, Richard W. 2,944,321.

Bendix Aviation Corp.: *See*—
Barash, Samuel A. 2,945,186.
Brandstadter, Jack M., and McWilliams. 2,944,524.
Johnstone, John H., and Olson. 2,945,147.
Peterson, Merle E. 2,944,700.
Spencer, Glenn S. 2,944,443.

Benedict, Bruce C., to Phillips Petroleum Co. Separation of polymers. 2,945,016, 7–12–60, Cl. 260—94.9.

Benson, Walter L., and N. C. Dahl, to Constock Liquid Methane Corp. Expansible container for fluids at low temperature. 2,944,693, 7–12–60, Cl. 220—9.

Bentkowsky, Jerome: *See*—
Jones, Grandville R., and Bentkowsky. 2,945,170.

Berenbaum, Morris B., to Thiokol Chemical Corp. Resinous condensation product of a polyepoxy-polyether resin and a hydroxyl-terminated polyester and method of making same. 2,944,996, 7–12–60, Cl. 260—45.4.

Berens, Alan R., to The B. F. Goodrich Co. Polymerizable polyesters and polymers thereof. 2,945,012, 7–12–60, Cl. 260—78.3.

Berg, Frank R. Vehicle automatic stop light. 2,945,209, 7–12–60, Cl. 340—71.

Berge, Jacques M. A. C. Catamaran sail boat. 2,944,505, 7–12–60, Cl. 114—39.

Berger, Brynjulf, to Western Electric Co., Inc. Designation strips for apparatus. 2,945,204, 7–12–60, Cl. 339—113.

Berkley Machine Co.: *See*—
Winkler, Richard, and Dunnebier. 2,944,812.

Bernard, George R., and C. F. Falkenberg, to Lazy Boy Lawn Mower Co., Inc. Power driven lawn mower. 2,944,616, 7–12–60, Cl. 180—19.

Bernhardt, Ernest C., J. A. Boxler, and P. E. Prince, to E. I. du Pont de Nemours and Co. Coating the interior surfaces of tubular articles. 2,944,298, 7–12–60, Cl. 18—59.

Berning, Donald F.: *See*—
Munn, Jay A., Schweikert, Sphar, and Berning. 2,944,331.

Berns, Otto, Co., Inc.: *See*—
Kachergis, Henry J. 2,944,743.
Le Blanc, Gerald A. 2,944,742.

Bertelsen, Svend I. Closet construction. 2,944,863, 7–12–60, Cl. 312—238.

Bertin, Jean H.: *See*—
Paris, Francois G., Bertin, and Salmon. 2,944,391.

Bertin, Jean H., and H. P. Schmitt, to Societe Bertin & Cie. Device for increasing the impulsion of a fluid, especially applicable as a lift or propulsion device. 2,944,386, 7–12–60, Cl. 60—35.5.

Bers, Max. Ring and roller pulverising apparatus. 2,944,744, 7–12–60, Cl. 241—132.

Best, Bernard H. Rotary spool rack. 2,944,761, 7–12–60, Cl. 242—139.

Billups, James D., to Northern Union, Inc. Through-wall divided connector. 2,945,085, 7–12–60, Cl. 174—153.

Bittman, Loran R., N. M. Gutiove, and R. D. Geyer, to Sperry Rand Corp. Travelling wave tube. 2,945,134, 7–12–60, Cl. 315—3.5.

Bixby, William H., to Power Equipment Co. Current supply apparatus. 2,945,172, 7–12–60, Cl. 321—19.

Black, John B., to Murray Corp. Tangential hose clamp. 2,944,314, 7–12–60, Cl. 24—279.

Black, John W., to Pemco Wheel Co. Caster swivel construction. 2,944,280, 7–12–60, Cl. 16—21.

Blackman, Vernon H., to Plasmadyne Corp. Stabilised magnetic nozzle for plasma jets. 2,945,119, 7–12–60, Cl. 219—123.

Blake, William T. Shock absorber with vacuum compensator. 2,944,639, 7–12–60, Cl. 188—97.

Blake, William T. Railway draft appliance. 2,944,681, 7–12–60, Cl. 213—43.

Blalock, James L., to Piedmont Machine Shop, Inc. Roll support for textile apparatus. 2,944,301, 7–12–60, Cl. 19—134.

Blaw-Knox Co.: *See*—
Kullgren, Gilbert V., and Stephenson. 2,944,280.

Blue, Robert D., and M. P. Neipert, to The Dow Chemical Co. Chlorine cell having protected diaphragm. 2,944,956, Cl. 7–12–60, Cl. 204—266.

Bobo, Melvin: *See*—
Stadthaus, Kurt R., Bobo, and Schaefer. 2,944,326.

Bodine, Albert G., Jr. Jet engine noise reducer. 2,944,623, 7–12–60, Cl. 181—43.

Boeing Airplane Co.: *See*—
Freeding, John W., Hincz, and Varhanik. 2,944,766.

Bogese, Stephen B., C. R. Lemon, and L. F. Stoner to Virginia Plastics Co. Protective moulding for electrical wire installation. 2,945,081, 7–12–60, Cl. 174—45.

Bogg, Lawrence A., and A. J. Wiley, to Sulphite Products Corp. Treatment of spent sulphite liquor. 2,944,922, 7–12–60, Cl. 127—37.

Bomac Laboratories Inc.: *See*—
Scanzani, Robert M. 2,945,139.

Bondi, Henry S.: *See*—
Spitzer, Joseph G., Nasarevich, Lange, and Bondi. 2,944,906.

Bontecue, Frederic C., to Plastic Precision Parts Co. Self-leveling foot structure. 2,944,367, 7–12–60, Cl. 45—139.

Booth, Albert B., to The Glidden Co. Pyrolysis of limonene oxide. 2,945,068, 7–12–60, Cl. 260—587.

Booth, Gerald: *See*—
Atkinson, John R., Booth, Johnson, and Mills. 2,944,870.
Atkinson, John R., Booth, Johnson, and Mills. 2,944,871.

Borodin, Daniel J., to Allied Research Products, Inc. Plating apparatus. 2,944,557, 7–12–60, Cl. 134—164.

Borodin, Daniel J., to Wagner Brothers, Inc. Plating machine. 2,944,953, 7–12–60, Cl. 204—198.

Bosch, Robert, G.m.b.H.: *See*—
Steinke, Leo. 2,945,168.

Bouligny, R. H., Inc.: *See*—
Wilson, Robert W., and Rowe. 2,944,495.

Bourbeau, Francis J., J. Greenhalgh, and C. F. Valle, Jr., to Polaroid Corp. Methods for treating polymeric plastic surfaces. 2,944,294, 7–12–60, Cl. 18—58.

Bourns, Marian E. Electrical resistor. 2,945,198, 7–12–60, Cl. 338—150.

Bowers, Theron L.: *See*—
Gibson, John C., and Bowers. 2,945,211.

Boxler, John A.: *See*—
Bernhardt, Ernest C., Boxler, and Prince. 2,944,298.

Braats, Willi, to Canadian Ingersoll-Rand Co., Ltd. Can operated forging machine. 2,944,448, 7–12–60, Cl. 78—21.

Bradmiller, Richard W., to Avco Mfg. Corp. Radio frequency transistor receivers provided with automatic gain control. 2,945,121, 7–12–60, Cl. 250—20.

Brandstadter, Jack M., and C. W. McWilliams, to Bendix Aviation Corp. Engaging means for hydraulic servo system. 2,944,524, 7–12–60, Cl. 121—38.

Brebner, Donald L., W. M. Edwards, I. M. Robinson, E. N. Squire, and H. W. Starkweather, Jr., to E. I. du Pont de Nemours and Co. Glass-reinforced thermoplastic resin compositions based on synthetic linear polypyromellitimides. 2,944,993, 7–12–60, Cl. 260—37.

Breer, Carl. Body appliance. 2,944,551, 7–12–60, Cl. 128—295.

Brewington, Philip J. Pipe fitting removal device. 2,944,453, 7–12–60, Cl. 81—121.

Bristol Aero-Engines, Ltd.: *See*—
Bartlett, Christopher L. 2,944,342.
Markham, Basil G. 2,944,645.
Peregrine, Edgar P. 2,944,394.

Bristol Siddeley Engines Ltd.: *See*—
Lane, Raymond J., and Sargent. 2,944,764.
Lane, Raymond J., and Sargent. 2,944,765.

Brobston, Scott. Facing for concrete building blocks. 2,944,372, 7–12–60, Cl. 50—193.

Bronson, Arthur H., to Richfield Oil Corp. Powdered composition consisting essentially of pentachlorophenol and a member of the group of metal naphthenates and mahogany sulfonates. 2,944,936, 7–12–60, Cl. 167—31.

Broussaud, Georges, to Compagnie Generale de Telegraphie Sans Fil. Improvements in ultra short wave directive aerials. 2,945,227, 7–12–60, Cl. 343—731.

Brown, Bernard J.: *See*—
Gagne, Oscar J., and Brown. 2,944,264.

Brown, Bernard J. Toy firearm and game therefor. 2,944,822, 7–12–60, Cl. 273—101.

Brown, Cicero C. Triple production packers. 2,944,602, 7–12–60, Cl. 166—46.

Brown, James O.: *See*—
Glasgow, Clarence O., and Brown. 2,944,562.

Brubaker, Wilson M.: *See*—
Hall, Lawrence G., and Brubaker. 2,945,124.

Brubaker, Wilson M., and C. F. Robinson, to Bell & Howell Co. Mass spectrometer. 2,945,126, 7–12–60, Cl. 250—41.9.

Bruce, John K., to Albert Van Luit & Co. Printing apparatus. 2,944,484, 7–12–60, Cl. 101—425.

Bruck, Henri, G. Gendreau, and M. Salvat, to Commissariat a l'Energie Atomique. Magnetic prisms used for separating ionized particles. 2,945,125, 7–12–60, Cl. 250—41.9.

Buckley, Herman T.: *See*—
Shields, William H., and Buckley. 2,944,920.

Bugosh, John, to E. I. du Pont de Nemours and Co. Method of esterifying the surface of alumina monohydrate platelets and product thereof. 2,944,914, 7–12–60, Cl. 106—308.

Bullard, Jack L. Rotary shoe brushing and polishing apparatus. 2,944,278, 7–12–60, Cl. 15—311.

Bunge, Fred H., and I. G. Poernich, to The M. A. Hanna Co. Ore beneficiation. 2,944,690, 7–12–60, Cl. 209—5.

Burt, Marvin C., to Phillips Petroleum Co. Emission regulator. 2,945,160, 7–12–60, Cl. 315—106.

Burkhardt, George R., to American Brake Shoe Co. Adjustable rail brace. 2,944,740, 7–12–60, Cl. 238—292.

Burkland, Charles W.: *See*—
Smith, Thomas R., and Burkland. 2,944,415.

Burns, William E., to Curtiss-Wright Corp. Rotary speed reducer. 2,944,444, 7–12–60, Cl. 74—801.

Burroughs Corp.: *See*—
Austin, Kenneth L. 2,944,733.
Smith, John G. 2,944,813.
Sprode, Edgar O. 2,945,215.
Tarbuck, Robert R. 2,945,200.

Bush, Arthur B., Jr., and A. C. Weil, to The Celotex Corp. Fiberboard. 2,944,930, 7–12–60, Cl. 162—145.

Bush, Orville J., to The Martin Co. Air mat bumper pad. 2,944,771, 7–12–60, Cl. 244—100.

Buttke, Richard A., Rockwell Mfg. Co. Grinder attachment for woodworking machines. 2,944,376, 7–12–60, Cl. 51—249.

Buxbaum, Edwin C., to E. I. du Pont de Nemours and Co. Stabilized cured polyurethanes. 2,944,998, 7–12–60, Cl. 260—45.8.

Caddell, Alfred M. Compressor with compressed air reactive drive. 2,944,730, 7–12–60, Cl. 230—127.

Cadillac Gage Co.: *See*—
Jarvis, John. 2,944,526.

Cage, John M., to Sturdy-Cage Projects, Inc. Microwave television system. 2,945,089, 7–12–60, Cl. 178—7.2.

Cahne, Armand, to M. Gregoire. Method of coating a metal base with polytetrafluoroethylene. 2,944,917, 7–12–60, Cl. 117—49.

Cahoon, Nelson C.: *See*—
Johnson, Richard E., Cahoon, and Schaefer. 2,945,079.

Cail, Roland A., and E. M. Payne, to Electric & Musical Industries Ltd. Improvements relating to control systems for automatic machine tools. 2,944,737, 7–12–60, Cl. 235—151.

Caldwell, John R., and R. Gilkey, to Eastman Kodak Co. Linear condensation polymers from p-carboxycarbanilic acid. 2,945,007, 7–12–60, Cl. 260—75.

Caldwell, John R., and R. Gilkey, to Eastman Kodak Co. Polyamides from oxamic acids. 2,945,011, 7–12–60, Cl. 260—78.

Caldwell, John R., R. Gilkey, and B. S. Meeks, Jr., to Eastman Kodak Co. Condensation polymers derived from spiroglycols. 2,945,008, 7–12–60, Cl. 260—75.

Caldwell, John R., and C. C. Danneily, to Eastman Kodak Co. Oxalyl diimino bis(2,2-dimethyl acetic acid), esters and condensation polymers. 2,945,009, 7–12–60, Cl. 260—75.

Caldwell, John R., and R. Gilkey, to Eastman Kodak Co. Preparing polyester fibers of improved dyeability using aromatic amines. 2,945,010, 7–12–60, Cl. 260—75.

California Institute Research Foundation: *See*—
Mathison, Richard P., Slaughter, and Randolph. 2,945,191.

California Packing Corp.: *See*—
Kugler, Albert H. 2,944,577.

Calmy, Ralph, to D. O. Malafouris. Wire forming apparatus. 2,944,584, 7–12–60, Cl. 153—66.

Canada, Her Majesty the Queen in right of: *See*—
Moody, Norman F., and Florida. 2,945,134.

Canadian Ingersoll-Rand Co., Ltd.: *See*—
Braats, Willi. 2,944,448.

Canepa, Michele, to Olivetti Corp. of America. Decoding-printing apparatus. 2,945,091, 7–12–60, Cl. 178—34.

Cannon, Jack A., to R. B. Wilk. Surgical instrument. 2,944,552, 7–12–60, Cl. 128—304.

Cape, Arthur T., to Coast Metals, Inc. Brazing alloys. 2,944,891, 7–12–60, Cl. 75—170.

Carkhuff, Edwin D., and P. A. Tuerck, to The Wm. S. Merrell Co. Tri-p-anisyl-chloroethylene composition. 2,944,938, 7–12–60, Cl. 167—55.

Carmichael, Bruce. Collapsible sink stopper structure. 2,944,265, 7–12–60, Cl. 4—206.

Carnagua, Harold E., and J. F. Tye, to Tokheim Corp. Hose braking mechanism. 2,944,748, 7–12–60, Cl. 242—47.5.

Carpenter, Robert H., to Flexonics Corp. Hose clamp. 2,944,841, 7–12–60, Cl. 285—243.

Carr, William F., to Motorola, Inc. Remote shaft positioner. 2,945,169, 7–13–60, Cl. 318—467.

Carrier Corp.: *See*—
McGrath, William L. 2,944,411.

Carroll, Burt H., H. S. Ellis, J. L. Graham, and C. V. Wilson, to Eastman Kodak Co. Sensitization of photographic emulsions with ionic polyalkylene oxide salts. 2,944,900, 7–12–60, Cl. 96—100.

Carroll, Burt H., to Eastman Kodak Co. Multicontrast photographic emulsions. 2,944,901, 7–12–60, Cl. 96—102.

Carroll, Burt H., J. Sagal, Jr., and D. J. Beavers, to Eastman Kodak Co. Sensitization of photographic emulsions with ionic polyalkylene oxide salts. 2,944,902, 7–12–60, Cl. 96—107.

Carson, Robert E., to General Electric Co. Signal processing arrangement. 2,945,158, 7–12–60, Cl. 315—39.

Carter, Austin G., to The Power Gas Corp. Ltd. Heating gases and vapours. 2,944,806, 7–12–60, Cl. 263—52.

Carter Products, Inc.: *See*—
Spitzer, Joseph G., Nasarevich, Lange, and Bondi. 2,944,906.

Cartinhour, John W.: *See*—
Frisch, Martin, Cartinhour, Tinbergen, Stern, and Tidd. 2,944,537.

Casanov, Raymond C., to Teletype Corp. Fast acting tail-stock. 2,944,467, 7–12–60, Cl. 90—23.

Case, Carlton L., G. D. Harkey, and F. P. Miller. Gas meter. 2,944,421, 7–12–60, Cl. 73—230.

Castro Convertible Corp.: *See*—
Barabas, John J., and Willis. 2,944,395.

Catlett, John C.: *See*—
Gulick, John A., and Catlett. 2,944,281.

Cavalier Corp.: *See*—
Womack, Jack M. 2,944,703.

Cecil, Tom A.: *See*—
Powell, Manly J., and Cecil. 2,944,980.

Cejka, Joseph B., to General Bronze Corp. Antenna mounting means. 2,944,777, 7–12–60, Cl. 248—43.

Celanese Corp. of America: *See*—
Waters, Elmer E., Shatynski, and Koch. 2,944,976.

Celotex Corp., The: *See*—
Bush, Arthur B., Jr., and Weil. 2,944,930.

Century Die & Mfg. Co.: *See*—
Ahonen, Raymond M. 2,944,682.

Cerulli, Charles J.: *See*—
Bistoni, Harry A., and Cerulli. 2,944,482.

Chadowski, Joseph P., to New-Tronics Corp. Replacement antenna staff assembly or unit. 2,944,847, 7–12–60, Cl. 287—117.

Chafin, James M.: *See*—
Wright, John G., Chafin, and Wynn. 2,944,758.

Chain Belt Co.: *See*—
Longenecker, Charles I. 2,944,489.

Champion Spark Plug Co.: *See*—
Schuerecht, Harry G. 2,944,810.

Chang, Kern K. N., to Radio Corp. of America. Electron beam tube. 2,945,153, 7–12–60, Cl. 315—3.5.

Chang, Robert W. H., and F. L. Moyer, to General Mills, Inc. Salts of basic amino acids and linoleic acid. 2,945,049, 7–12–60, Cl. 260—404.

Chapman, Christopher L. C., and P. J. Skinner, to Yardney International Corp. Alkaline electric cells. 2,945,078, 7–12–60, Cl. 136—28.

Chapman, Christopher L. C., and A. Howard, to Yardney International Corp. Method of making battery separators. 2,945,080, 7–12–60, Cl. 136—148.

Charle, Roger R. Ritter, and G. Kalopissis, to Societe Anonyme Dite Societe Monsavon-L'Oreal. Methylthyl mercaptoacetates and their use in treating hair. 2,944,942, 7–12–60, Cl. 167—87.1.

Charlesworth, John A.: *See*—
Sauter, Erwin R., McDonald, and Charlesworth. 2,944,988.

Chausson, Andre, to Societe Anonyme des Usines Chausson. Equipment for cooling various fluids and more particularly air in aircraft flying at high speed. 2,944,409, 7–12–60, Cl. 62—169.

Cheeseman, Leslie H., to Addressograph-Multigraph Corp. Printing and retaining device. 2,944,483, 7–12–60, Cl. 101—368.

Chenicek, Joseph A., to Universal Oil Products Co. Process for stabilizing crops and the resulting product. 2,944,903, 7–12–60, Cl. 99—6.

Cherry-Burrell Corp.: *See*—
Walsh, John C. 2,944,487.
Walsh, John C., and Hamilton. 2,944,479.

Cherry, George J. N., and D. R. Thomas, to Foundry Services International Ltd. Production of multilayer compacted granular products. 2,944,307, 7–12–60, Cl. 22—9.

Chicago Railway Equipment Co.: *See*—
Boddy, Thomas C. 2,944,640.
Uphues, Gerard T. 2,944,303.

Chichester, Kenneth J., and R. M. Crocco, to The Reflectone Corp. Rotational speed governor. 2,945,101, 7–12–60, Cl. 200—80.

Chilton, John M., to W. & T. Avery Ltd. Precision potentiometer. 2,945,197, 7–12–60, Cl. 338—143.

Choate, James R., to Riverside Mfg. Co., Inc. Paperboard berry box. 2,944,721, 7–12–60, Cl. 229—34.

Chodorow, Marvin, to Varian Associates. Resonator and velocity modulation device using same. 2,945,155, 9–12–60, Cl. 315—5.39.

Christenson, Roger M.: *See*—
Olson, Melvin M., and Christenson. 2,945,005.

Christiansen, Robert J., R. J. Nevsimal, and H. F. Volkert, to F. N. Volkert & Co. Automatic stitcher trimmer. 2,944,458, 7–12–60, Cl. 83—151.

Church, Frank W., Jr., to A. O. Smith Corp. Shielding device for a drive unit. 2,944,686, 7–12–60, Cl. 214—17.

Ciba Ltd.: *See*—
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,021.
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,022.
Salimann, Richard. 2,944,983.

Ciba Pharmaceutical Products Inc.: *See*—
Druey, Jean, and Daeniker. 2,945,036.
Druey, Jean, and Daeniker. 2,945,037.
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,043.
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,044.
Marxer, Adrian. 2,945,032.

Cincinnati Shaper Co., The: *See*—
Hazelton, Merrill W., Griesheimer, and Allnutt. 2,944,468.

Clark, David A., to Clark Mfg. Co. Support and transporting structure for harrows. 2,944,615, 7–12–60, Cl. 172—456.

Clark Mfg. Co.: *See*—
Clark, David A. 2,944,615.

Clark, Richard U. Method of making hermetically sealed electric terminals. 2,944,325, 7–12–60, Cl. 29—155.55.

Clarostat Mfg. Co., Inc.: *See*—
Mucher, George J., and Zarrillo. 2,945,199.

Claussen, Delmar W., to Minneapolis-Honeywell Regulator Co. Measuring apparatus. 2,945,181, 7–12–60, Cl. 324—154.

Clayton, Temple, to Minnesota Mining and Mfg. Co. Pyrrolidone purification. 2,944,944, 7–12–60, Cl. 202—52.

Clejan, Deodat, to General American Transportation Corp. Railway cars for transporting road vehicles. 2,944,492, 7–12–60, Cl. 105—368.

Coast Metals, Inc.: *See*—
Cape, Arthur T. 2,944,891.

Coates, Donald B. H.: *See*—
Smith, Donald R., and Coates. 2,944,357.

Coats & Clark Inc.: *See*—
Morin, Louis H. 2,944,757.

Coburn, Richard, and J. M. Hedlun. Three-coordinate radar simulator. 2,944,346, 7–12–60, Cl. 35—10.4.

Cohen, Maurice. Garment hanger. 2,944,675, 7–12–60, Cl. 211—124.

Cohn, Eugene: *See*—
Cohn, Samuel, J., and E. 2,944,317.

Cohn, Joseph: *See*—
Cohn, Samuel, J., and E. 2,944,317.

Cohn, Samuel, J., and E., to Samcoe Holding Corp. Method and apparatus for treating tubular fabrics. 2,944,317, 7–12–60, Cl. 26—18.5.

Colby, George E., to Magnetic Seal Corp. Spring loaded seal. 2,944,843, 7–12–60, Cl. 286—11.14.

Coleman, Bestor P., to Acme Steel Co. Method of forming flexible tubing. 2,944,337, 7–12–60, Cl. 29—417.

Colgate, Harry R., to Philco Corp. Method of manufacture of cathode ray tubes. 2,944,322, 7–12–60, Cl. 29—25.14.

Colgate-Palmolive Co.: *See*—
Compa, Russell E. 2,944,977.

Collavoli, Guido. Brake fluid level indicator. 2,945,103, 7–12–60, Cl. 200—84.

Coltex Ltd.: *See*—
Colton, Lewis H. 2,944,662.

Colton, Lewis H., to Coltex Ltd. Packaging means for blade-like elements of textile machines and the like. 2,944,662, 7–12–60, Cl. 206—16.

Colton, Raymond R.: *See*—
Kibrick, Andre C., Scopp, and Colton. 2,944,928.

Commercial Solvents Corp.: *See*—
Topps, Emory E., Jr. 2,944,383.

Commerford, John D., and B. L. Scallet, to Anheuser-Busch, Inc. Starch dextrins and method of making same. 2,944,913, 7–12–60, Cl. 106—213.

Commissariat a l'Energie Atomique: *See*—
Bruck, Henri, Gendreau, and Salvat. 2,945,125.

Compa, Russell E., to Colgate-Palmolive Co. Process for preparing aqueous soap-synthetic detergent mixtures in ribbon form. 2,944,977, 7–12–60, Cl. 252—121.

Compagnie Generale de Telegraphie Sans Fil: *See*—
Broussaud, Georges. 2,945,227.
Reverdin, Daniel. 2,945,194.

Compson, Evo S. Windshield cover. 2,944,601, 7–12–60, Cl. 160—368.

Conrad, Martin B., to Baker Oil Tools, Inc. Drill pipe float valve apparatus. 2,944,793, 7–12–60, Cl. 255—24.

Comstock Liquid Methane Corp.: *See*—
Benson, Walter L., and Dahl. 2,944,693.
Farrell, James H., and Pastuhov. 2,944,692.

Conway, Edward F., and R. W. Puta, to Magnaflux Corp. Lubrication system for chain saws. 2,944,538, 7–12–60, Cl. 123—196.

Cooper, Benjamin. Auxiliary bicycle seat. 2,944,580, 7–12–60, Cl. 155—5.12.

Cooper Bessemer Corp., The: *See*—
Miller, Carl D. 2,944,844.

Coover, Harry W., Jr.: *See*—
McCall, Marvin A., and Coover. 2,945,054.

Corban, Wilbur H., and A. W. Davidson, to Ferro Corp., and Architectural Tiling Co., Inc. Tile setter. 2,944,315, 7–12–60, Cl. 25—153.

Cosmos Dental Products, Inc.: *See*—
Taylor, Philander B. 2,944,293.

Coulter, Thomas W. Fishing rod holder. 2,944,361, 7–12–60, Cl. 43—16.

Cowden, Herbert B.: *See*—
Damschroder, Rudolph E., and Cowden. 2,944,899.

Cowles, Warren H.: *See*—
Stroh, George B., Ensinger, and Cowles. 2,944,537.

Craig, Allen G., to General Electric Co. Spray metal process for making precision articles. 2,944,338, 7–12–60, Cl. 29—423.

Crocco, Edward M.: *See*—
Chichester, Kenneth J., and Crocco. 2,945,101.

Crocker, Weyman S.: *See*—
Lemmerman, Harold H. P., and Crocker. 2,945,173.

Cromwell, Thomas M.: *See*—
Moe, George, Schultz, Shepherd, and Cromwell. 2,944,951.

Crosby, Charles H., F. Wahl, and R. R. Wahlberg, to Western Electric Co., Inc. Multi-unit binder. 2,944,376, 7–12–60, Cl. 57—12.

Crouset, Henri, to Moulinage et Retarderie de Chavanas. Heating device for filaments. 2,944,319, 7–12–60, Cl. 28—62.

Crown Zellerbach Corp.: *See*—
Yang, Christen H. C. 2,944,931.

Curran, Bernard R., to H. H. Robertson Co. Building and air distributing structure. 2,944,478, 7–12–60, Cl. 98—38.

Curtis 1000, Inc.: *See*—
Whitman, Harlan M. 2,944,728.

Curtiss-Wright Corp.: *See*—
Burns, William E. 2,944,444.
Eberhardt, Herman W. 2,944,447.
Hall, John L., Mergen, and Elliott. 2,944,387.
Lubkin, Samuel. 2,945,213.
Meyer, Marvin. 2,944,488.
Speer, Cleaver C., and Frank. 2,944,327.

Daeniker, Hans U.: *See*—
Druey, Jean, and Daeniker. 2,945,036.
Druey, Jean, and Daeniker. 2,945,037.

Daggett, Billy E., 50% to D. C. Weaver. Flexible connector for aerials or the like. 2,945,084, 7–12–60, Cl. 174—86.

Dahl, Norman C.: *See*—
Benson, Walter L., and Dahl. 2,944,693.

Dahl, Robert R., to The Dole Valve Co. Actuator valve. 2,944,565, 7–12–60, Cl. 137—620.

Dahlhauser, Anthony H., and A. H. Yaeger, to Keystone Steel & Wire Co. Crate stacker. 2,944,722, 7–12–60, Cl. 229—34.

D'Alelio, Gaetano F., to W. R. Grace & Co. Polyethylene process. 2,945,017, 7–12–60, Cl. 260—94.9.

Dalton Foundries, Inc., The: *See*—
Matthews, Cleil R. 2,944,536.

Dalton, Frank. Accelerator pedals for motor vehicles. 2,944,439, 7–12–60, Cl. 74—562.

Daman, Arthur C., to Denver Equipment Co. Froth flotation and aeration apparatus. 2,944,802, 7–12–60, Cl. 261—87.

Damschroder, Rudolph E., and H. B. Cowden, to Eastman Kodak Co. Stabilization of photographic silver halide emulsions. 2,944,899, 7–12–60, Cl. 96—95.

Dana, Homer J.: *See*—
Barnett, Claude C., and Dana. 2,944,542.

Daniel, David W.: *See*—
Mentley, Max B., Kokorsycki, and Daniel. 2,944,373.

Donnelly, Clarence C.: *See*—
Caldwell, John R., and Donnelly. 2,945,009.

Dapper, James C.: *See*—
Scott, Victor J., and Dapper. 2,945,090.

Darman, Joseph: *See*—
Zissi, Joseph L. 2,944,880.

Darmstadt, Louis J., to The American Thermos Products Co. Closure for vacuum insulated vessels. 2,944,690, 7–12–60, Cl. 215—48.

Dasch, Robert E., to Draper Corp. Shuttle threading block. 2,944,572, 7–12–60, Cl. 139—217.

David, Eric, and P. M. Aiello, to L. A. D. Industries, Inc. Retaining device for removable panel. 2,944,643, 7–12–60, Cl. 189—88.

Davidson, Albert W.: *See*—
Corban, Wilbur H., and Davidson. 2,944,315.

Davis, David A., F. L. Smith, and J. H. Snodgrass, to Link-Belt Co. High capacity bucket elevator. 2,944,657, 7–12–60, Cl. 198—152.

Davis, Gerald M., to American Cyanamid Co. Metallic salts of commercial stearic acid. 2,945,061, 7–12–60, Cl. 260—414.

Davis, Gilbert H. Rotating taillight reflector. 2,945,210, 7–12–60, Cl. 340—72.

Davis, Harry E. Drawing and twisting apparatus. 2,944,379, 7–12–60, Cl. 57—31.

Davis, Howard C.: *See*—
Francis, Gerald A., Davis, and Smith. 2,944,333.

Day-Ray Products Inc.: *See*—
Roney, Raymond B., and Massie. 2,945,202.

Dearsley, George, and T. I. Erstad, to American Machine & Foundry Co. Roller belt conveyor for mouthpiece cigarette assemblies. 2,944,659, 7–12–60, Cl. 198—183.

De Blasio, James J., H. Podsiadlo, and A. Sansone. Safety oil tank. 2,944,563, 7–12–60, Cl. 137—312.

Decca Record Co. Ltd., The: *See*—
Easy, Maurice H. 2,945,223.
Holden, Alfred T. 2,945,226.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated pentaerythritols. 2,944,978, 7–12–60, Cl. 252—331.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated glucoses. 2,944,980, 7–12–60, Cl. 252—331.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated glucoses. 2,944,981, 7–12–60, Cl. 252—331.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated acyclic diglycerols. 2,944,982, 7–12–60, Cl. 252—331.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated tris (hydroxymethyl) aminomethanes. 2,944,983, 7–12–60, Cl. 252—344.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated tris(hydroxymethyl) aminomethanes. 2,944,984, 7–12–60, Cl. 252—344.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Process for breaking petroleum emulsions employing certain oxyalkylated triethylene tetramines. 2,944,985, 7–12–60, Cl. 252—344.

De Groote, Melvin, and K. Shen, to Petrolite Corp. Lactone-derived compounds of certain oxyalkylated resins and method of making same. 2,945,005, 7–12–60, Cl. 260—53.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Certain oxyalkylated sucroses and method of making same. 2,945,023, 7–12–60, Cl. 260—209.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Certain oxyalkylated glucosans and method of making same. 2,945,024, 7–12–60, Cl. 260—209.

De Groote, Melvin, and O. H. Pettingill, to Petrolite Corp. Certain oxyalkylated glucoses. 2,946,025, 7–12–60, Cl. 260—209.

Del Mar, Bruce E., to Del Mar Engineering Laboratories, Inc. Multiple smoke-signal unit. 2,945,222, 7–12–60, Cl. 340—366.

Del Mar Engineering Laboratories, Inc.: *See*—
Del Mar, Bruce E. 2,945,222.

De Malvilain, Gilbert C. Embossing press. 2,944,481, 7–12–60, Cl. 101—27.

Dennis, Clement O.: *See*—
Lawson, Melbourne R. 2,944,283.

Dennis, David H., to Specialties Development Corp. Pneumatic conveyor. 2,944,684, 7–12–60, Cl. 214—1.

Dennis, George T., to E. W. Edmund. Underwater camera housing with operating means. 2,944,474, 7–12–60, Cl. 95—11.

Denver Equipment Co.: *See*—
Daman, Arthur C. 2,944,802.

De Santis, Vincent J., and J. H. Affleck III, to General Electric Co. Thermionic cathodes and methods of making. 2,945,150, 7–12–60, Cl. 313—346.

Detter, Clyde V., to Phillips Petroleum Co. Catalyst and process for producing olefin polymers. 2,945,018, 7–12–60, Cl. 260—88.2.

Devoe & Raynolds Co., Inc.: *See*—
Greenlee, Sylvan O. 2,945,004.

Dexter, Robert G., to Easy Day Research & Engineering Corp. Mop with built-in shaking device. 2,944,431, 7–12–60, Cl. 74—89.

Dickens, Samuel P., to Texaco Inc. Acetylene making and heavy oil coking process. 2,944,960, 7–12–60, Cl. 208—55.

Dierstein, Roy H., to General Electric Co. Electrical terminal and terminal board assembly. 2,945,205, 7–12–60, Cl. 339—198.

Dietrich, Harold A., and W. W. Hay, to Air Reduction Co., Inc. Vaporizer mounting with automatic shutoff. 2,944,543, 7–12–60, Cl. 128—191.

Dilger, LeRoy E.: *See*—
Kilby, Jack S., and Dilger. 2,945,163.

Dill Mfg. Co., The: *See*—
Ness, Roger H. 2,944,580.

Di Marco, Aurelio: *See*—
Alberti, Carlo G., Vercellone, Di Marco, and Ghione. 2,945,034.

Dixon, Jack B. Recreational apparatus. 2,944,810, 7–12–60, Cl. 273—26.

Djerassi, Carl, F. Sondheimer, and G. Rosenkranz, to Syntex, S.A. Δ^5-22a-spirosten-3a-ol-7,11-dione and esters thereof and process for the production thereof. 2,945,028, 7–12–60, Cl. 260—239.55.

Doak Aircraft Co., Inc.: *See*—
Doak, Edmond B. 2,944,395.

Doak, Edmond B., to Doak Aircraft Co., Inc. Means and methods of neutralizing and converting thrust components. 2,944,395, 7–12–60, Cl. 60—35.54.

Doba, Stephen, Jr., to Bell Telephone Laboratories, Inc. Television transmission evaluator. 2,945,178, 7–12–60, Cl. 324—57.

Dobbins, Mark, to Fenestra, Inc. Sound absorbing structure. 2,944,622, 7–12–60, Cl. 181—33.

Dodge, Frederick D., to Minneapolis-Honeywell Regulator Co. Controller. 2,944,558, 7–12–60, Cl. 137—82.

Doetsch, Wilhelm. Method and apparatus for the production of envelopes with gummed closing flaps. 2,944,470, 7–12–60, Cl. 93—62.

Dole Valve Co., The: *See*—
Dahl, Robert R. 2,944,565.
Streeter, Victor L. 2,944,420.

Dollinson, William W., to Otis Engineering Corp. Means for carrying out a removable flow tube program. 2,944,605, 7–12–60, Cl. 166—143.

Donaruma, Lorraine G., to E. I. du Pont de Nemours and Co. Process for the reduction of nitrocyclohexane to cyclohexanone oxime. 2,945,045, 7–12–60, Cl. 260—566.

Donovan, Gordon L., to Triangle Conduit & Cable Co., Inc. Wire stand. 2,944,750, 7–12–60, Cl. 242—129.

Dorney, Patrick E.: *See*—
Heney, John P., and Dorney. 2,945,149.

Dosmann, Lucian P., to United States Rubber Co. Cure of chlorofluorocarbon elastomer. 2,944,927, 7–12–60, Cl. 154—100.

Dosmann, Lucian P., and G. L. Barnes, to United States Rubber Co. Acceleration of the peroxide cure of hexafluoropropylene-vinylidene fluoride elastomer with methylene bis-acrylamide. 2,944,998, 7–12–60, Cl. 260—41.

Douglas, Henry H., E. H. Folliwell, and R. R. Tiefenthaler, to Pittsburgh Plate Glass Co. Degassing fluids. 2,944,626, 7–12–60, Cl. 183—2.5.

Douglas, Joseph: *See*—
Maxwell, William A., and Douglas. 2,944,316.

Dovre Ski Binding, Inc.: *See*—
Nashe, Leif. 2,944,828.

Dow Chemical Co., The: *See*—
Blue, Robert D., and Neipert. 2,944,950.
Elliott, Jack, and McClure. 2,945,074.
Hammer, Oscar H. 2,944,935.
Hanson, Alden W. 2,944,803.
Hinman, Charles W. 2,945,002.
Horsley, Lee H., and Sexton. 2,945,050.
Mays, William A. 2,944,897.
Moyle, Clarence L., and Wade. 2,944,937.
Tolkmith, Henry. 2,945,055.

Downer, John D.: *See*—
Hartley, James, and Downer. 2,945,014.

Doyle, Richard H., to Fastener Corp. Fastener driving apparatus. 2,944,522, 7–12–60, Cl. 121—30.

Drabik, Walter: *See*—
Stigler, Willard R., and Drabik. 2,945,130.

Drabik, Walter, and W. R. Stigler, to General Motors Corp. Dynamoelectric machine slot wedges. 2,945,140, 7–12–60, Cl. 310—214.

Draper Corp.: *See*—
Dasch, Robert E. 2,944,572.

Drillick, Jacob H., to The Phototypograph Corp. Composing apparatus. 2,944,471, 7–12–60, Cl. 95—4.5.

Driscoll, Dale J., to Avco Mfg. Corp. Collapsible reflecting structure for electric waves. 2,945,234, 7–12–60, Cl. 343—915.

Druey, Jean, and H. U. Daeniker, to Ciba Pharmaceutical Products, Inc. Phthalazinium compounds. 2,945,036, 7–12–60, Cl. 260—250.

Druey, Jean, and H. U. Daeniker, to Ciba Pharmaceutical Products Inc. New phthalazinium compounds. 2,945,037, 7–12–60, Cl. 260—250.

Duks, Karlis, to AMP Inc. Electrical connectors. 2,945,207, 7–12–60, Cl. 339—276.

Dulmage, George A. Bale lifters. 2,944,851, 7–12–60, Cl. 294—26.

Dumes, Pierre: *See*—
Jacque, Leon, and Dumes. 2,944,878.

Dunbar, Elvan H., Jr.: *See*—
Smith, Charles W., Jr., Mead, and Dunbar. 2,944,575.

Dunklin, Edward W., and M. K. Moudry, to United States Movidyn Corp. Methods for treating liquid circulating systems and compositions therefor. 2,944,967, 7–12–60, Cl. 210—64.

Dunn, Stephen T. Electrical mailbox signal. 2,945,219, 7–12–60, Cl. 340—281.

Dunnebier, Kurt: *See*—
Winkler, Richard, and Dunnebier. 2,944,812.

Duphar Corp., The: *See*—
Lawrence, Charles S., and Strub. 2,944,383.

Du Pont de Nemours, E. I., and Co.: *See*—
Bernhardt, Ernest C., Boxler, and Prince. 2,944,795.
Brebner, Donald L., Edwards, Robinson, Squire, and Starkweather. 2,944,993.
Bugosh, John. 2,944,914.
Buxbaum, Edwin C. 2,944,998.
Donaruma, Lorraine G. 2,945,063.
Green, Charles P., and Jenks. 2,944,344.
Jennings, Charles O. 2,944,754.
Keidel, Frederick A. 2,944,957.
Mitchell, James A., and Hinkle. 2,944,396.
Nagel, Herbert, and Hatt. 2,944,918.
Starks, Fred W. 2,945,070.

Duschinsky, Robert, and C. Heidelberger, said Duschinsky assor. to Hoffmann-La Roche Inc. 5-fluorocytosine and preparation thereof. 2,945,038, 7–12–60, Cl. 260—256.4.

Duvall, Thomas R., and H. Ehrensaft. Control knob cluster for a TV receiver or the like. 2,944,429, 7–12–60, Cl. 74—10.8.

Daula, Boris: *See*—
Hinton, Raymond C. P., Daula, and Fettweis. 2,945,221.

Easterday, Floyd W.: *See*—
Tillotson, Wesley T., and Easterday. 2,944,284.

Eastman Kodak Co.: *See*—
Beavers, Dorothy J., Wilson, and Graham. 2,944,898.
Caldwell, John R., and Donnelly. 2,945,009.
Caldwell, John R., and Gilkey. 2,945,007.
Caldwell, John R., and Gilkey. 2,945,010.
Caldwell, John R., and Gilkey. 2,945,011.
Caldwell, John R., Gilkey, and Meeks. 2,945,008.
Carroll, Burt H. 2,944,901.
Carroll, Burt H., Elins, Graham, and Wilson. 2,944,900.
Carroll, Burt H., Sagal, and Beavers. 2,944,902.
Damschroder, Rudolph E., and Cowden. 2,944,899.
Fisher, Webster E., and O'Brian. 2,944,886.
Knowles, M B, and Pridgen. 2,944,906.
Long, Selma H., Tamblyn, and Moore. 2,945,000.
Martin, James C., and Hanck. 2,945,060.
McCall, Marvin A., and Coover. 2,945,054.
McConnell, Richard L., and Wicker. 2,945,033.
McDaniel, Edgar L., and Young. 2,945,037.
Minsk, Louis M. 2,945,006.
Stern, Max H. 2,945,069.
Thompson, William M., Jr., Kron, and Smith. 2,944,457.
Van Allan, James A., and Tamblyn. 2,945,002.
Watson, Richard M., and Finch. 2,945,058.
West, Lloyd E., and Hutchins. 2,944,895.

Easy Day Research & Engineering Corp.: *See*—
Dexter, Robert G. 2,944,431.

Easy, Maurice H., to The Decca Record Co. Ltd. Radar displays. 2,945,223, 7–12–60, Cl. 343—6.

Eaton Mfg. Co.: *See*—
Jaeschke, Ralph L. 2,945,104.
Pipes, George R., and Kramen. 2,944,698.
Russell, Robert C. 2,944,402.
Russell, Robert C. 2,944,441.

Eberhardt, Herman W., to Curtiss-Wright Corp. Hole chamfering tool. 2,944,447, 7–12–60, Cl. 77—73.5.

Edmund, Everett W.: *See*—
Dennis, George T. 2,944,474.

Edwards, Walter M.: *See*—
Brebner, Donald L., Edwards, Robinson, Squire, and Starkweather. 2,944,993.

Effgen, Anton. Machine for mounting rhinestones on fabric. 2,944,260, 7–12–60, Cl. 1—3.

Effgen, Anton. Grid tray. 2,944,696, 7–12–60, Cl. 220—22.

Egan, Edmond F., to Texaco Inc. Electrical logging system for exploring subsurface formations. 2,945,176, 7–12–60, Cl. 324—10.

Ehrensaft, Harry: *See*—
Duvall, Thomas R., and Ehrensaft. 2,944,429.

Eickmeyer, Allen G. Method for separation of fluid mixtures. 2,944,966, 7–12–60, Cl. 208—352.

Eisemann, Oswald E., to American Machine & Foundry Co. Tobacco separating apparatus. 2,944,629, 7–12–60, Cl. 183—34.

Elco Electronics Ltd.: *See*—
Thompson, Willie E., and Taylor. 2,945,130.

Electric Eye Equipment Co.: *See*—
Sandgren, Find, and Giseski. 2,944,644.

Electric & Musical Industries Ltd.: *See*—
Call, Roland A., and Payne. 2,944,737.
Taylor, Eric W. 2,945,086.

Electricite de France: *See*—
Mary, Francis J. 2,944,494.
Mary, Francis J. 2,944,531.

Electroacustic Gesellschaft mit beschrankter Haftung: *See*—
Richter, Friedrich. 2,944,868.

Electrol Inc.: *See*—
Ashton, Benjamin N. 2,944,460.

Elins, Herbert S.: *See*—
Carroll, Burt H., Elins, Graham, and Wilson. 2,944,900.

Ellicott Machine Corp.: *See*—
Kaufmann, Carl P. 2,944,352.

Elliott, Douglas A.: *See*—
Hall, John L., Mergen, and Elliott. 2,944,387.

Elliott, Jack, and H. H. McClure, to The Dow Chemical Co. Production of acetylene by the partial oxidation of hydrocarbons. 2,945,074, 7–12–60, Cl. 260—679.

Elliott, Robert S., to Hughes Aircraft Co. Surface wave structure. 2,945,230, 7–12–60, Cl. 343—772.

Elms, James C., and F. H. Gardiner, to North American Aviation, Inc. Air density computer. 2,944,736, 7–12–60, Cl. 235—151.

Ely, Albert R., J. D. Hayes, and R. W. Lawrence, to Hercules Powder Co. Explosive device. 2,944,485, 7–12–60, Cl. 102—24.

Emery Industries, Inc.: *See*—
Piepmeyer, Joseph A. 2,944,964.
Shields, William H., and Buckley. 2,944,920.

Engelhardt, Heinz, to Hartmann & Braun Aktiengesellschaft. Instrument for gas analysis. 2,944,418, 7–12–60, Cl. 73—27.

Engelsted, John N. Work support having independent tilting adjustments about a plurality of axes. 2,944,858, 7–12–60, Cl. 311—88.

Engineering Research and Application Ltd.: *See*—
Hodkin, David. 2,944,534.

Englehardt, Gustave O., and R. E. Beaulac. Boat trailer. 2,944,838, 7–12–60, Cl. 280—462.

Ensinger, Raymond L.: *See*—
Streb, George R., Ensinger, and Cowles. 2,944,537.

Erstad, Teunes I.: *See*—
Dearsley, George, and Erstad. 2,944,659.
Wintermantel, Norman G., and Erstad. 2,944,833.

Esch, Howard G.: *See*—
Segur, Asa B., and Esch. 2,944,687.

Esso Research and Engineering Co.: *See*—
Baldwin, Francis P., and Thomas. 2,944,578.
Skarstrom, Charles W. 2,944,627.

Establissements Neyrpic: *See*—
Gras, Charles. 2,944,782.

Ethyl Corp.: *See*—
Pentress, Arthur L. 2,944,955.
Giraitis, Albert P. 2,944,948.
Hayes, Glenn O. 2,944,960.

Eusepi, Martin W., to The Singer Mfg. Co. Sewing machines with adjustable flange couplings. 2,944,845, 7–12–60, Cl. 287—52.

Evans, Lyle W., to Sylvania Electric Products Inc. Processing of image display devices. 2,944,916, 7–12–60, Cl. 117—33.5.

Evans, Robert C. Dismantleable framing structures. 2,944,642, 7–12–60, Cl. 189—36.

Fabrizio, Nicholas: *See*—
Richman, Oscar and S., Weissenberg, and Fabrizio. 2,944,262.

Faeber, Harry W., to Time, Inc. Drive mechanism for web threading apparatus. 2,944,345, 7–12–60, Cl. 34—68.

Fagge, Ralph D., deceased; S. A. Fagge, administratrix. Fixture-mounted spot welding gun. 2,944,526, 7–12–60, Cl. 121—36.

Fagge, Sophie A.: *See*—
Fagge, Ralph D. 2,944,525.

Fairchild Camera and Instrument Corp.: *See*—
Politick, Berthold, and Hennessey. 2,944,476.

Falco Products Co.: *See*—
Shore, Charles, and Lesher. 2,944,625.

Falk, Harold W. Door latch. 2,944,849, 7–12–60, Cl. 292—92.

Falkenberg, Charles F.: *See*—
Bernard, George R., and Falkenberg. 2,944,616.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Leditschke, Heinrich, Reilly, and Schmidt-Ruppin. 2,945,040.

Farnsworth, George H., to I-T-E Circuit Breaker Co. Bus bar joint for low impedance type bus duct. 2,945,187, 7–12–60, Cl. 307—147.

Farrell, James H., and A. Pastuhov, to Comstock Liquid Methane Corp. Expansible container for low-temperature fluid. 2,944,402, 7–12–60, Cl. 220—9.

Fasciati, Alfred, R. Gunst, H. Riat, and K. Seitz, to Ciba Ltd. Monoazo and disazo triazine dyes. 2,945,021, 7–12–60, Cl. 260—153.

Fasciati, Alfred, R. Gunst, H. Riat, and K. Seitz, to Ciba Ltd. Monoazo and disazo triazine dyes. 2,945,022, 7–12–60, Cl. 260—153.

Fastener Corp.: *See*—
Doyle, Richard H. 2,944,522.

Fau, Maurice. Baggage rack. 2,944,674, 7–12–60, Cl. 211—90.

Faulks, W. M. Portable electric jiffy duster. 2,944,385, 7–12–60, Cl. 43—148.

Federal Paper Board Co., Inc.: *See*—
Arneson, Edwin L. 2,944,719.
Williamson, Marshall L. 2,944,718.

Fehling, Heinz, to Licentia Patent-Verwaltungs-G.m.b.H. Circuit breaker. 2,945,109, 7–12–60, Cl. 200—147.

Feist, Anton, and D. E. Taylor, to United States Rubber Co. Curing bags for repairing tires. 2,944,290, 7–12–60, Cl. 18—48.

Fenestra, Inc.: *See*—
Dobbins, Mark. 2,944,622.

Fenton, Frank W., to Beacon Production Equipment Corp. Pallet unloading machine. 2,944,702, 7–12–60, Cl. 221—13.

Pentress, Arthur L., to Ethyl Corp. Purification device for alkali metal cells. 2,944,955, 7–12–60, Cl. 204—245.

Ferguson, Edgar A., Jr. Nicotinoyl hydantoins. 2,945,042, 7–12–60, Cl. 260—296.

Ferro Corp.: *See*—
Corban, Wilbur H., and Davidson. 2,944,315.

Ferro Stamping Co.: *See*—
Pickles, Joseph. 2,944,436.
Pickles, Joseph. 2,944,437.

Fettweis, Alfred L. M.: *See*—
Hinton, Raymond C. P., Daula, and Fettweis. 2,945,221.

Fibreboard Paper Products Corp.: *See*—
Moore, Norman H. 2,944,727.

Fidelitone, Inc.: *See*—
Kaspari, Albert R., H. C. Rutherford, and G. M. Avalon. 2,944,663.

Fikse, Tyman H., to Stewart-Warner Corp. Free piston engine. 2,944,536, 7-12-60, Cl. 123—46.

Finch, Gaylord K.: *See*—
Watson, Richard M., and Finch. 2,945,058.

Fink, Trevor: *See*—
Green, Thomas A., Gerrie, Shanonn, and Fink. 2,945,120.

Firma Gebr. Happich G.m.b.H.: *See*—
Hammesfahr, Willy. 2,944,865.

Firma Lommers-Werke G.m.b.H.: *See*—
Lommers, Paul. 2,944,502.

First American National Bank of Nashville: *See*—
Parker, Charles B., and Houston. 2,944,855.

Firth, Bernard G., to Tung-Sol Electric Inc. Cold cathode for electron discharge devices. 2,945,151, 7-12-60, Cl. 313—346.

Fischer, John J.: *See*—
Rayburn, Donald H., Pedersen, and Fischer. 2,944,263.

Fischer, Rudolph F., to Shell Oil Co. Olefin polymerization. 2,945,018, 7-12-60, Cl. 260—94.9.

Fish, Marion F., to Sumner Iron Works, Inc. Hydraulic log barkers. 2,944,741, 7-12-60, Cl. 220—134.

Fisher, Charles E., Jr.: *See*—
Paul, Gerald R., and Fisher. 2,945,093.

Fisher, Joseph D., R. E. Thompson, and J. B. Kottemann, to Armour and Co. Adrenocorticotrophin and zinc composition. 2,944,940, 7-12-60, Cl. 167—74.

Fisher, Robert D., J. S. Sallo, and I. Tan, to The National Cash Register Co. Magnetic data storage devices. 2,945,217, 7-12-60, Cl. 340—174.

Fisher, Webster B., and J. R. O'Brian, to Eastman Kodak Co. Reduction of silver loss in burning photographic waste. 2,944,886, 7-12-60, Cl. 75—83.

Flexonics Corp.: *See*—
Carpenter, Robert H. 2,944,841.

Florida, Charles D.: *See*—
Moody, Norman F., and Florida. 2,945,134.

Flour, William, to Stewart-Warner Corp. Method and apparatus for assembling and inter-connecting electronic apparatus. 2,945,162, 7-12-60, Cl. 317—101.

Fluegel, Dale A.: *See*—
Parsons, James R., and Fluegel. 2,945,128.

Folberth, Otto G., to Siemens-Schuckertwerke Aktiengesellschaft. Method for producing and re-melting compounds having high vapor pressure at the melting point. 2,944,975, 7-12-60, Cl. 252—62.3.

Foley, John R., and C. B. Smith, to United Aircraft Corp. Induction and discharge means for effective camber control. 2,944,729, 7-12-60, Cl. 230—122.

Folkers, Karl: *See*—
Shunk, Clifford H., and Folkers. 2,945,059.

Follwell, Edward H.: *See*—
Douglas, Henry H., Follwell, and Tiefenthaler. 2,944,626.

Fontaine, Robert R., C. M. Whitby, and H. D. White, Jr., to ACF Industries, Inc. Hydraulic pressure simulation. 2,944,347, 7-12-60, Cl. 35—12.

Food Machinery and Chemical Corp.: *See*—
Shanley, Edward S., 2,945,196.

Foster, Arthur G., to Western Electric Co., Inc. Cut-over mechanism for advancing strands. 2,944,755, 7-12-60, Cl. 242—80.

Foster, Elmer C., F. O., and L., to Fremlee Development Corp. Pot cleaning devices. 2,944,271, 7-12-60, Cl. 15—28.

Foster, Frances O.: *See*—
Foster, Elmer C., F. O., and L. 2,944,271.

Foster, Leo: *See*—
Foster, Elmer C., F. O., and L. 2,944,271.

Foster Wheeler Corp.: *See*—
Frisch, Martin, Cartinhour, Tinbergen, Stern, and Tidd. 2,944,532.

Fotheringham, Douglas. Aircraft towing device. 2,944,837, 7-12-60, Cl. 280—503.

Foundry Equipment Ltd.: *See*—
Beech, Austin S. 2,944,308.

Foundry Services International Ltd.: *See*—
Cherry, George J. N., and Thomas. 2,944,307.

Fox, Homer M., to Phillips Petroleum Co. Aerodynamic braking of jet engine aircraft. 2,944,393, 7-12-60, Cl. 60—35.54.

Fraim, Clinton W.: *See*—
Huntley, Frederick H., and Fraim. 2,944,598.

Francesco Vismara Societa Per Azioni: *See*—
Justoni, Romeo, and Pessina. 2,945,046.

Francis, Gerald A., H. C. Davis, and C. E. Smith, to Hurd Lock & Mfg. Co. Assembly apparatus. 2,944,333, 7-12-60, Cl. 29—211.

Frank, Wilbert W.: *See*—
Speer, Cleaver C., and Frank. 2,944,327.

Franke, Norman W., C. M. Selwitz, and A. C. Whitaker, to Gulf Research & Development Co. Oxidation process. 2,945,050, 7-12-60, Cl. 260—413.

Frankel, Adolf, to Richardsons, Westgarth & Co., Ltd. Flash evaporator. 2,944,599, 7-12-60, Cl. 159—2.

Franzel, Richard M., to Minneapolis-Honeywell Regulator Co. Liquid level measuring capacitor. 2,945,165, 7-12-60, Cl. 317—246.

Freed, Meier E.: *See*—
Seifter, Joseph, Hanslick, and Freed. 2,945,041.

Freeding, John W., G. M. Hincs, and H. J. Varhanik, to Boeing Airplane Co. Aircraft engine installation. 2,944,766, 7-12-60, Cl. 244—54.

Freedson, Joseph, to Addressograph-Multigraph Corp. Printing device work holder. 2,944,649, 7-12-60, Cl. 197—6.6.

Fremlee Development Corp.: *See*—
Foster, Elmer C., F. O., and L. 2,944,271.

Frentzel, Herman C.: *See*—
Odell, Robert C., Frentzel, Seag, and Netzker. 2,944,753.

Frieburg, John L. Side delivery hay rake. 2,944,377, 7-12-60, Cl. 56—376.

Frisch, Martin, J. W. Cartinhour, W. Tinbergen, T. Stern, and G. W. Tidd, to Foster Wheeler Corp. Vapor generator. 2,944,532, 7-12-60, Cl. 122—235.

Fritts, Robert W., to Minnesota Mining and Mfg. Co. Thermoelectric dehumidifying apparatus. 2,944,404, 7-12-60, Cl. 62—3.

Fruendt, Adel J. Actuating mechanism for expanding an inflatable article. 2,944,268, 7-12-60, Cl. 9—8.

G.N.R.D. Patent Holdings Ltd.: *See*—
Green, George F. H., Hamlet, and Long. 2,945,027.

Gabriel, Harry F.: *See*—
Bailey, Lawrence H., and Gabriel. 2,944,493.

Gagne, Oscar J., and R. J. Brown. Prefabricated swimming pool. 2,944,264, 7-12-60, Cl. 4—172.

Galliliot, Paul, and J. A. Robert, to Societe des Usines Chimiques Rhone-Poulenc. 16-amino-steroid derivatives. 2,945,024, 7-12-60, Cl. 260—239.5.

Galmer, Romey A., to Libbey-Owens-Ford Glass Co. Electrically conductive windshield. 2,944,926, 7-12-60, Cl. 154—2.73.

Gamble, James G.: *See*—
Strang, Peter M., and Gamble. 2,944,381.

Ganske, Kingston E., and R. F. Anderson, to Arvin Industries, Inc. Electric terminal and method of making the same. 2,945,083, 7-12-60, Cl. 174—68.5.

Gardberg, Joseph, to Teletype Corp. Start-stop telegraph signal generator with two oscillators. 2,945,092, 7-12-60, Cl. 178—53.1.

Gardner, Edgar J. Work indexing mechanism. 2,944,496, 7-12-60, Cl. 112—65.

Gardner, Frederick H.: *See*—
Elms, James C., and Gardner. 2,944,786.

Gates, Stephen, and D. H. Mullins, to Union Carbide Corp. Blend of chlorotrifluoroethylene homopolymer and chlorotrifluoroethylene vinylidene fluoride copolymer. 2,944,997, 7-12-60, Cl. 260—45.5.

Gateway Engineering Co.: *See*—
Reiland, Frank D. 2,944,313.

Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Waldemar T. 2,944,473.

Geigy, J. R., A.-G.: *See*—
Hausermann, Heinrich. 2,945,033.

Gelderman, H. P., & Zonen N.V.: *See*—
Vermijs, Hendrikus C. 2,944,873.

Geluso, Lawrence J. Hanger for ironing tables. 2,944,673, 7-12-60, Cl. 211—86.

Gendreau, Gabriel: *See*—
Bruck, Henri, Gendreau, and Salvat. 2,945,125.

General American Transportation Corp.: *See*—
Clejan, Deodat. 2,944,492.

General Bronze Corp.: *See*—
Cejka, Joseph B. 2,944,777.

General Dynamics Corp.: *See*—
Paul, Gerald R., and Fisher. 2,945,093.
Persson, Sten I., and Leet. 2,944,804.

General Electric Co.: *See*—
Arnold, Charles A., and Lind. 2,945,156.
Bakke, Hans A. 2,944,460.
Bassett, John W. C. 2,944,745.
Carson, Robert E. 2,945,158.
Craig, Allen G. 2,944,388.
De Santis, Vincent J., and Affleck. 2,945,150.
Dierstein, Roy H. 2,945,205.
Hall, Howard T. 2,944,289.
Klapper, John J., and Smith. 2,944,350.
Lemmerman, Harold H. P., and Crocker. 2,945,173.
Louden, Victor J. 2,945,171.
McCardle, Arthur, Jr., and Shackelford. 2,944,399.
Munn, Jay A., Schweikert, Sphar, and Berning. 2,944,331.
Samsel, Richard W. 2,945,208.
Stadthaus, Kurt R., Bobo, and Schaefer. 2,944,326.
Winn, Oliver H. 2,945,179.

General Foods Corp.: *See*—
Salant, Abner S. 2,945,039.

General Mills, Inc.: *See*—
Chang, Robert W. H., and Moyer. 2,945,049.

General Motors Corp.: *See*—
Allison, Paul R. 2,944,945.
Antonidis, John E., and Ulm. 2,944,427.
Antonidis, John E., and Ulm. 2,944,428.
Drabik, Walter, and Stigler. 2,945,140.
Hetzler, Lewis R. 2,945,174.
Luechauer, Holle C. 2,944,947.
Mann, Leonard J., Murphy, and Wurts. 2,944,410.
Moyer, David F. 2,944,324.
Rossman, Edwin F. 2,944,638.
Schjolin, Hans. 2,944,618.
Stigler, Willard R., and Drabik. 2,945,139.

Gessford, Ross K., to Sylvania Electric Products Inc. Electrical device. 2,945,148, 7-12-60, Cl. 313—318.

Geyer, Richard D.: *See*—
Bittman, Loran R., Gutlove, and Geyer. 2,945,154.

Geyling, Franz T., to Bell Telephone Laboratories, Inc. High pressure insulating seal for electrical cable system. 2,945,082, 7-12-60, Cl. 174—50.61.

Ghilardi, Giuliana: *See*—
Kalopissis, Gregoire, and Ghilardi. 2,944,869.

Ghione, Mario: *See*—
Alberti, Carlo G., Vercellone, Di Marco, and Ghione. 2,945,034.

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Giddings & Lewis Machine Tool Co.: *See*—
Jones, Gordon H. 2,944,465.

Gilbert, Normand W. Game ball. 2,944,823, 7-12-60, Cl. 273—143.

Gilkey, Russell: *See*—
Caldwell, John R., and Gilkey. 2,945,007.
Caldwell, John R., and Gilkey. 2,945,010.
Caldwell, John R., and Gilkey. 2,945,011.
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Gingras, Richard E., to United Aircraft Corp. Compressor blade limit stops. 2,944,787, 7-12-60, Cl. 253—77.

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Giseski, Terrence: *See*—
Sandgren, Find, and Giseski. 2,944,544.

Glasgow, Clarence O., and J. O. Brown, to National Tank Co. Fluid pressure control system. 2,944,562, 7-12-60, Cl. 137—270.

Glenny, Clarence S., to The Washburn Co. Bicycle baskets. 2,944,712, 7-12-60, Cl. 224—32.

Glidden Co., The: *See*—
Booth, Albert B. 2,945,068.
Klein, Eugene A. 2,945,066.
Klein, Eugene A. 2,945,067.

Globe-Union Inc.: *See*—
Kilty, Jack S., and Dilger. 2,945,163.
Weideman, Bernard A., and Groff. 2,944,573.

Gluharoff, Eugene M., to United Aircraft Corp. Rotor blade counterbalance means. 2,944,610, 7-12-60, Cl. 170—160.27.

Godden, Thomas E., and E. H. Morris, to Rotol Ltd. Variable pitch airscrews. 2,944,769, 7-12-60, Cl. 244—81.

Goldberg, Herbert E., to The Kalart Co. Inc. Photographic range finder. 2,944,475, 7-12-60, Cl. 95—44.

Goldenberg, Lucien, to Vazico, Inc. Method and dentifrice for reducing gingival inflammation. 2,944,941, 7-12-60, Cl. 167—78.

Golding, Richard G.: *See*—
Stuettig, David R., Jonse, and Golding. 2,944,810.

Goldstein, Gilbert. Contact lens container. 2,944,661, 7-12-60, Cl. 206—5.

Goldstern, Norbert. Record medium for registration of administrative data. 2,944,735, 7-12-60, Cl. 235—61.12.

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Goodhue, Lyle D., and J. N. Short, to Phillips Petroleum Co. Insect repellent method and composition. 2,944,934, 7-12-60, Cl. 167—30.

Goodrich, B. F., Co., The: *See*—
Berens, Alan R. 2,945,012.

Goodyear Tire & Rubber Co., The: *See*—
Armstrong, Edward T., and Highley. 2,944,772.
Highley, Frank H. 2,944,773.
Spacht, Ronald B. 2,945,001.

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Gorrie, Harvard H.: *See*—
Green, Thomas A., Gorrie, Shannon, and Fink. 2,945,120.

Grace, W. R., & Co.: *See*—
D'Alello, Gaetano F. 2,945,017.
Wszolek, Walter R. 2,945,019.

Graham, James L.: *See*—
Beavers, Dorothy J., Wilson, and Graham. 2,944,898.
Carroll, Burt H., Elins, Graham, and Wilson. 2,944,900.

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Grandgent, Roland, and T. Petrides, to Republic Aviation Corp. Guidance system. 2,944,763, 7-12-60, Cl. 244—14.

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Greene, Percy W., to Barbour Welting Co. Method of making a beaded shoe welt. 2,944,269, 7-12-60, Cl. 12—146.

Greenhalgh, John: *See*—
Bourbeau, Francis J., Greenhalgh, and Valle. 2,944,294.

Greenlee, Sylvan O., to Devoe & Raynolds Co., Inc. Epoxide resins reacted with polyhydric phenols. 2,945,004, 7-12-60, Cl. 260—47.

Gregoire, Marc: *See*—
Cahne, Armand. 2,944,917.

Gregory, Richard L. Recording device. 2,944,867, 7-12-60, Cl. 346—59.

Griesheimer, Richard E.: *See*—
Haselton, Merrill W., Griesheimer, and Allnutt. 2,944,468.

Griffith Laboratories, Inc., The: *See*—
Ziegler, John A. 2,944,909.

Griswold, Walter E., to A. O. Smith Corp. Apparatus for unloading articles from a moving conveyor. 2,944,685, 7-12-60, Cl. 198—35.

Groff, Jerome J.: *See*—
Weideman, Bernard A., and Groff. 2,944,573.

Groll, Alvin F. Device for feeding strip metal to power presses having positive works clamp releasing means. 2,944,458, 7-12-60, Cl. 83—437.

Gronqvist, Borje B.: *See*—
Otto, Carl L., and Gronqvist. 2,944,304.

Gros, Charles, to Etablissements Neyrpic. Turbines for drilling and coring. 2,944,792, 7-12-60, Cl. 253—4.

Groves, Leonard H., J. A. Hall, and J. W. Roberts, to Imperial Chemical Industries Ltd. Process for the production of water-repellent finishes on textiles and composition therefor. 2,944,921, 7-12-60, Cl. 117—161.

Gruver, John H., to Addressograph-Multigraph Corp. Printing machines. 2,945,088, 7-12-60, Cl. 178—6.6.

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Welsh, Charles B. 2,944,972.

Gulf Research & Development Co.: *See*—
Franke, Norman W., Selwitz, and Whitaker. 2,945,050.
Goldthwait, Richard G., and Lehrian. 2,944,958.
Kline, Robert E., Starnes, and Zabor. 2,944,959.
McAfee, Jerry. 2,944,961.
Pardee, William A. 2,946,076.

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Fisciati, Alfred, Gunst, Riat, and Seitz. 2,945,021.
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,022.

Gunther, Roland E. Power amplifying servomechanisms. 2,945,167, 7-12-60, Cl. 318—28.

Gutlove, Norman M.: *See*—
Bittman, Loran R., Gutlove, and Geyer. 2,945,154.

Gyger, Cecil E., and A. D. Scarbrough, to Thompson Ramo Wooldridge Inc. Internal shield for electromagnetic head. 2,945,216, 7-12-60, Cl. 340—174.

Haanstra, John W.: *See*—
Maron, Melvin E., and Haanstra. 2,944,738.

Haantjes, Johan, and G. J. Lubben, to North American Philips Co. Inc. Picture tubes for three-colour television systems comprising deflection coils. 2,945,157, 7-12-60, Cl. 315—13.

Habernickel, Valentin, to Henkel & Cie. G.m.b.H. Process for the production of biguanide derivatives containing active chlorine. 2,945,061, 7-12-60, Cl. 260—561.

Hadlock Clarence R.: *See*—
Bood, William E., Jr., and Williams. 2,944,612.

Hadlock Welding and Machine Works: *See*—
Bood, William E., Jr., and Williams. 2,944,612.

Hahn, Eberhard: *See*—
Schmidt, Lothar, and Hahn. 2,945,144.

Haines, Malcolm P., to Marx Engineering, Inc. Tilting plate segregator. 2,944,648, 7-12-60, Cl. 193—39.

Hake, Walter T., to American Steel Foundries. Rotary limit switch. 2,945,097, 7-12-60, Cl. 200—47.

Hall, Buford C., Jr. Tape recorder indicator attachment. 2,944,750, 7-12-60, Cl. 242—55.12.

Hall, Howard T., to General Electric Co. Reaction vessel. 2,944,289, 7-12-60, Cl. 18—34.

Hall, John A.: *See*—
Groves, Leonard H., Hall, and Roberts. 2,944,921.

Hall, John L., J. M. Mergen, and D. A. Elliott, to Curtiss-Wright Corp. Jet engine speed and nozzle controls. 2,944,387, 7-12-60, Cl. 60—35.6.

Hall, Lawrence G., and W. M. Brubaker, to Bell & Howell Co. Formation of electrical fields. 2,945,124, 7-12-60, Cl. 250—41.9.

Hall, Lee C.: *See*—
Hultenius, Sture A., and Hall. 2,944,455.

Hall, Wade E., to Armstrong Cork Co. Method of forming fine polyethylene powders. 2,945,020, 7-12-60, Cl. 260—94.9.

Halter, Ludwig. Chair for hydrotherapeutic treatment. 2,944,592, 7-12-60, Cl. 155—28.

Halvorson, Gaylord H., to United States Steel Corp. Method of beneficiating, reducing and briquetting iron ore. 2,944,884, 7-12-60, Cl. 75—33.

Hamlet, John C.: *See*—
Green, George F. H., Hamlet, and Long. 2,945,027.

Hammell, Kemper M., to AMP Inc. Electrical connectors. 2,945,206, 7-12-60, Cl. 339—276.

Hammer, Oscar H., to The Dow Chemical Co. Parasiticide composition of reduced phytotoxicity. 2,944,935, 7-12-60, Cl. 167—30.

Hammesfahr, Willy, to Firma Gebr. Happich G.m.b.H. Ash trays for vehicles. 2,944,865, 7-12-60, Cl. 312—241.

Hampl, Walter. Tensioning stirrup for lower aprons of drawing systems in textile spinning machines. 2,944,990, 7-12-60, Cl. 19—131.

Hanley, John A., deceased (M. C. Hanley, executrix of said J. A. Hanley), ½ to A. J. Slimak. Revolver loading device. 2,944,359, 7-12-60, Cl. 42—89.

Hanley, Margaretta C.: *See*—
Hanley, John A. 2,944,359.

Hanna, M. A., Co., The: *See*—
Bunge, Fred H., and Poernich. 2,944,666.

Hansen, Asgar, to Mikroverk A/S. Conveyor arrangement in plants for moulding chocolate and similar masses. 2,944,653, 7-12-60, Cl. 198—20.

Hanslick, Roy S.: *See*—
Seifert, Joseph, Hanslick, and Freed. 2,945,041.

Hanson, Alden W., to The Dow Chemical Co. Treatment of subterranean formations containing water-soluble minerals. 2,944,803, 7-12-60, Cl. 252—8.

Hanson, George H., to Phillips Petroleum Co. Automatic process control with radioisotopes. 2,945,127, 7-12-60, Cl. 250—43.5.

Harkey, George D.: *See*—
Case, Carlton L., Harkey, and Miller. 2,944,421.

Harkness, Andrew S., Ltd.: *See*—
Harkness, Thomas S. 2,944,462.

Harkness, Thomas S., to Andrew S. Harkness, Ltd. Cinematograph screens. 2,944,462, 7–12–60, Cl. 88—28.9.

Harris-Intertype Corp., The: *See*—
Hooven, Frederick J., and O'Brien. 2,944,472.

Harris, Jean F., and H. W. Horlacher, to The Taylor-Winfield Corp. Method and apparatus for removing welding flash. 2,943,117, 7–12–60, Cl. 219—97.

Harris, Stephen W., to Lucky Tiger Mfg. Co. Combination container and massage brush. 2,944,273, 7–12–60, Cl. 15—105.

Harris, William E. Differential mounting for a motor vehicle. 2,944,617, 7–12–60, Cl. 180—42.

Hart, William F., to American Cyanamid Co. Process for post-bodying styrenated oil-modified alkyd resins. 2,944,-991, 7–12–60, Cl. 260—22.

Hartke, Dexter, and M. J. Willrodt, to Hewlett-Packard Co. Delay generator. 2,945,183, 7–12–60, Cl. 328—48.

Hartley, James, and J. D. Downer, to Shell Oil Co. Esters of boric acid and copolymers containing a plurality of hydroxyl groups. 2,945,014, 7–12–60, Cl. 260—67.3.

Hartmann & Braun Aktiengesellschaft: *See*—
Engelhardt, Heins. 2,944,418.

Harvel Research Corp.: *See*—
Harvey, Mortimer T., and Rosamilia. 2,944,980.

Harvey, Mortimer T., and P. L. Rosamilia, to Harvel Research Corp. Acetone-formaldehyde-glycol resins and blends with other polymers. 2,944,980, 7–12–60, Cl. 260—3.

Hasek, Robert H.: *See*—
Martin, James C., and Hasek. 2,945,060.

Haselton, William M.: *See*—
Walsh, John C., and Haselton. 2,944,479.

Hatanaka, Tad, to Union Tank Car Co. Liquid fill structure for LP gas tanks. 2,944,701, 7–12–60, Cl. 220—85.

Hatt, Lawrence R.: *See*—
Nagel, Herbert, and Hatt. 2,944,918.

Hauni-Werke Korber & Co. K.G.: *See*—
Koch, Hans. 2,944,854.
Schubert, Bernhard. 2,944,854.

Hausermann, Heinrich, to J. R. Geigy, A.-G. 7-triazinyl-amino-3-phenyl coumarins. 2,945,033, 7–12–60, Cl. 260—247.3.

Hawaiian Development Co., Ltd.: *See*—
Knapp, Samuel B., and Wethern. 2,944,929.

Hawkeye Products Corp.: *See*—
Wittkuhns, Bruno A. 2,944,635.

Hawks, Huron B. Lariat holder and guide. 2,944,518, 7–12–60, Cl. 119—153.

Hay, Wayne W.: *See*—
Dietrich, Harold A., and Hay. 2,944,545.

Hayes, Edmund W. Pie shield. 2,944,725, 7–12–60, Cl. 220—43.

Hayes, Glenn O., to Ethyl Corp. Operation and discharge of sodium cells. 2,944,950, 7–12–60, Cl. 204—68.

Hayes, Jack D.: *See*—
Ely, Albert R., Hayes, and Lawrence. 2,944,485.

Hazeltine Research, Inc.: *See*—
Wilhelmsen, Carl R. 2,945,135.

Hazelton, Merrill W., R. E. Griesheimer, and J. M. Allnutt, to The Cincinnati Shaper Co. Shaper. 2,944,408, 7–12–60, Cl. 90—48.

Hedberg, Gosta: *See*—
Wennerbo, Erik, and Hedberg. 2,944,824.

Hedlun, James M.: *See*—
Coburn, Richard, and Hedlun. 2,944,340.

Heidelberger, Charles: *See*—
Duschinsky, Robert, and Heidelberger. 2,945,038.

Heil, Theodore, to Heilite Trailers. Portable packing scales. 2,944,809, 7–12–60, Cl. 265—65.

Heil, Theodore, to Heilite Trailers. Portable kitchen. 2,944,-862, 7–12–60, Cl. 312—237.

Heilite Trailers: *See*—
Heil, Theodore. 2,944,809.
Heil, Theodore. 2,944,862.

Heinzer, Hans, to Schweizerische Industrie-Gesellschaft. Machines for the production of bags consisting at least on their inside of thermoplastic material. 2,944,469, 7–12–60, Cl. 93—8.

Hellermann, Paul: *See*—
Kabel, Heinrich. 2,944,335.

Hellermann, Paul, Fabrik elektrotechnischer Spezialartikel: *See*—
Kabel, Heinrich. 2,944,335.

Hendrickson, George W., to Hendrickson Mfg. Co. Gear shift. 2,944,435, 7–12–60, Cl. 74—335.

Hendrickson Mfg. Co.: *See*—
Hendrickson, George W. 2,944,435.

Heney, John F., and P. E. Dorney, to International Telephone and Telegraph Corp. Gas discharge tube. 2,945,149, 7–12–60, Cl. 313—346.

Henkel & Cie. G.m.b.H.: *See*—
Habernickel, Valentin. 2,945,061.

Hennessey Raymond G.: *See*—
Pollick, Berthold, and Hennessey. 2,944,476.

Heraeus, W. C. G.m.b.H.: *See*—
Lorenz, Albert. 2,944,732.

Herbenar, Edward J., to Thompson Ramo Wooldridge Inc. Self-adjusting pivot joint for vehicle steering linkage. 2,944,829, 7–12–60, Cl. 280—95.

Hercules Powder Co.: *See*—
Ely, Albert R., Hayes, and Lawrence. 2,944,485.

Herman, Hartley R., and B. R. Alsobrook, to Rohr Aircraft Corp. Fixture for making honeycomb panel. 2,944,804, 7–12–60, Cl. 113—99.

Hetzler, Lewis R., to General Motors Corp. Transistor regulator. 2,945,174, 7–12–60, Cl. 323—22.

Hewlett-Packard Co.: *See*—
Hartke, Dexter, and Willrodt. 2,945,183.

High Voltage Engineering Corp.: *See*—
Stiff, Bernard G. E. 2,944,842.
Van de Graaff, Robert J., and Trump. 2,945,141.

Highley, Frank H.: *See*—
Armstrong, Edward T., and Highley. 2,944,772.

Highley, Frank H., to The Goodyear Tire & Rubber Co. Means for automatically adjusting aircraft brake pressure. 2,944,773, 7–12–60, Cl. 244—111.

Hill, George L. Tractor trailer detachable gooseneck. 2,944,-834, 7–12–60, Cl. 280—426.

Hillerich & Bradsby Co.: *See*—
Paullius, Clarence L. 2,944,820.

Hines, George M.: *See*—
Freeding, John W., Hines, and Varhanik. 2,944,786.

Hingson, Robert A.: *See*—
Ziberl, Frank A., Kish, and Hingson. 2,944,546.
Ziberl, Frank A., Kish, and Hingson. 2,944,547.

Hinkle, Barton L.: *See*—
Mitchell, James A., and Hinkle. 2,944,296.

Hinman, Charles W., to The Dow Chemical Co. N-lower-alkyl-N-nitroso-3,5-dinitro-o-toluamides. 2,945,062, 7–12–60, Cl. 260—558.

Hinton, Raymond C. P., B. Dsula, and A. L. M. Fettweis, to International Telephone and Telegraph Corp. Tape to card converter. 2,945,221, 7–12–60, Cl. 340—347.

Hodkin, David, to Engineering Research and Application Ltd. Internal combustion engines. 2,944,534, 7–12–60, Cl. 123—41.31.

Hoerner, Eric. Air line filter and automatic drain valve. 2,944,630, 7–12–60, Cl. 183—42.

Hoffman, George E.: *See*—
Kilburn, Tom, and Hoffman. 2,945,214.

Hoffmann, Karl, A. Hunger, J. Kebrle, and A. Rossi, to Ciba Pharmaceutical Products Inc. 1-(diloweralkylaminolower-alkyl),5-nitro,2-naphthylmethyl (and certain substituted naphthylmethyl) benzimidazoles. 2,945,043, 7–12–60, Cl. 260—309.2.

Hoffmann, Karl, A. Hunger, J. Kebrle, and A. Rossi, to Ciba Phamaceutical Products, Inc. Certain 1-(diethyl-aminoethyl), 6-amino-2-benzyl or substituted benzyl, benzimidazoles. 2,945,044, 7–12–60, Cl. 260—309.2.

Hoffmann-La Roche Inc.: *See*—
Duschinsky, Robert, and Heidelberger. 2,945,038.

Hofmann, E., & Cie S.A.: *See*—
Hofmann, Ernst. 2,944,446.

Hofmann, Ernst, to E. Hofmann & Cie S.A. Apparatus for carrying out borings, threadings and millings. 2,944,446, 7–12–60, Cl. 77—64.

Holden, Alfred T., to The Decca Record Co. Ltd. Indicating apparatus for radio navigation systems. 2,945,226, 7–12–60, Cl. 343—112.

Holley Carburetor Co.: *See*—
Stroh, George B., Ensinger, and Cowles. 2,944,537.

Holm, Kurt A.: *See*—
Wiklundh, Leif S.-E., Persson, and Holm. 2,944,924.

Hoogstoel, Leon E., to Norton Co. Packaging device. 2,944,-716, 7–12–60, Cl. 229—14.

Hooven, Frederick J., and R. C. O'Brien, to The Harris-Intertype Corp. Photographic type composition. 2,944,472, 7–12–60, Cl. 95—4.5.

Hopkins, Cecil L. Fountainbrushes for mobile material. 2,944,274, 7–12–60, Cl. 15—139.

Hopper, Malcom M.: *See*—
Angell, Pierce T., Andersont, and Hopper. 2,944,786.

Horlacher, Harry W.: *See*—
Harris, Jean F., and Horlacher. 2,945,117.

Horsley, Lee H., and A. R. Sexton, to The Dow Chemical Co. Salts of sulfe-lower-alkyl esters of chloroaryloxy-lower-aliphatic-monocarboxylic acids. 2,945,056, 7–12–60, Cl. 260—473.

Hotchkiss-Brandt: *See*—
Jasse, Joseph R. 2,944,486.

Houdaille Industries, Inc.: *See*—
Ramsey, Rollin D. 2,944,559.
Sandberg, Ray A. 2,944,339.

Houston Oil Field Material Co., Inc.: *See*—
Myers, William D. 2,944,794.

Houston, P. D., Jr.: *See*—
Parker, Charles B., and Houston. 2,944,855.

Houston, Persis D., Sr.: *See*—
Parker, Charles B., and Houston. 2,944,855.

Howard, Antoale: *See*—
Chapman, Christopher L. C., and Howard. 2,945,080.

Howell, Thomas B., and M. Rogin. Projection equipment. 2,944,461, 7–12–60, Cl. 88—24.

Hoyez, Ekkehard: *See*—
Muegerl, Thomas, and Hoyer. 2,944,442.

Huang, Hsing T., to Chas. Pfizer & Co., Inc. Preparation of DL-lysine with lysine racemase. 2,944,943, 7–12–60, Cl. 195—29.

Huber, Matthew W., to The New York Air Brake Co. Bearing. 2,944,430, 7–12–60, Cl. 74—60.

Hubley Mfg. Co., The: *See*—
Weimer, John H. 2,944,288.

Huffman, Max N., to Lasdon Foundation, Inc. 17-alkoxy-1,3,5(10)-estratrien-3,16-diols and the production thereof. 2,945,048, 7–12–60, Cl. 260—397.5.

Hufnagel, Andrew, to Westinghouse Air Brake Co. Electrical relays. 2,945,107, 7–12–60, Cl. 200—104.

Hufnagel, Georg, Werkzeugfabrik: *See*—
Stadler, Karl H. 2,944,323.

Hughes Aircraft Co.: *See*—
Elliott, Robert S. 2,945,230.

Hughes, William B.: *See*—
Stromberg, Verner L., and Hughes. 2,944,968.

Hultenius, Sture A., and L. C. Hall. Lathe center. 2,944,-455, 7–12–60, Cl. 82—33.

Hunger, Alfred: *See*—
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,043.
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,044.

Huntley, Frederick H., and C. W. Fraim, to Motor Wheel Corp. Ignition means for vaporizing type of oil burner. 2,944,595, 7–12–60, Cl. 158—91.

Hurd Lock & Manufacturing Co.: *See*—
Francis, Gerald A., Davis, and Smith. 2,944,333.

Hutchinson, Alexander M., to Thompson Bros. (Bilston) Ltd. Means for accelerating the separation of water and solid impurities from liquid fuel for aircraft. 2,944,670, 7–12–60, Cl. 210—152.

Hutchins, Bernard A.: *See*—
West, Lloyd E., and Hutchins. 2,944,895.

Hutchison, Charles B., to Petrolite Corp. Method for preventing corrosion of ferrous metals. 2,944,968, 7–12–60, Cl. 252—8.55.

I–T–E Circuit Breaker Co.: *See*—
Farnsworth, George H. 2,945,187.
McCloud, James E. 2,945,110.

Illinois Tool Works: *See*—
MacKay, Kenneth C. 2,944,829.
Swick, Edwin O. 2,944,330.

Imperial Chemical Industries Ltd.: *See*—
Atkinson, John R., Booth, Johnson, and Mills. 2,944,-870.
Atkinson, John R., Booth, Johnson, and Mills. 2,944,-871.
Gray, James J. 2,944,887.
Groves, Leonard H., Hall, and Roberts. 2,944,921.
Leech, Harry R. 2,944,949.
Quin, James P. 2,944,888.
Stanton, Charles B. 2,944,501.

Industriaktiebolaget Luxor: *See*—
Wennerbo, Erik, and Hedberg. 2,944,824.

Ingersoll, Ward H., to Nobles Engineering and Mfg. Co. Magnetostriction relays. 2,945,105, 7–12–60, Cl. 200—87.

Instruments, Inc.: *See*—
Smith, Lyndall K. 2,945,102.

International Business Machines Corp.: *See*—
Kilburn, Tom, and Hoffman. 2,945,214.
Maron, Melvin E., and Haanstra. 2,944,738.
Martin, Harold F. 2,944,734.

International Nickel Co., Inc., The: *See*—
Queneau, Paul E., Townsend, and Young. 2,944,863.

International Telephone and Telegraph Corp.: *See*—
Gibson, John C., and Bowers. 2,945,211.
Heney, John F., and Dorney. 2,945,149.
Hinton, Raymond C. P., Dsula, and Fettweis. 2,945,221.
Metzger, Sidney. 2,945,094.
Myers, Richard H. 2,945,224.

Irvine, John W., Jr., to Raytheon Co. Preparation of silicon. 2,944,874, 7–12–60, Cl. 23—223.5.

Irwin, Emmett M. Induced flux method and apparatus for testing metals. 2,945,176, 7–12–60, Cl. 324—34.

Isoleringaktiebolaget WME: *See*—
Norrhede, Lars S. R. 2,944,292.

Ivanoff, Peter D. Device for holding individually identifiable discs. 2,944,859, 7–12–60, Cl. 312—15.

Jackson, John A. C.: *See*—
Ramsay, John F., and Jackson. 2,945,228.

Jacobs, Henri J. A. M., L. F. Van De Weijdeven, and L. W. Roosendaal, to North American Philips Co. Inc. Circuit arrangement for the control of welding voltage. 2,945,161, 7–12–60, Cl. 315—205.

Jacque, Leon, and P. Dumes, to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques. Process for the separation of substances by vaporization. 2,944,878, 7–12–60, Cl. 23—294.

Jaeschke, Ralph L., to Eaton Mfg. Co. Electrically controlled clutches. 2,945,104, 7–12–60, Cl. 200—87.

Jaros, Stanley F. Gas cock with safety detent. 2,944,784, 7–12–60, Cl. 251—110.

Jarvis, John, to Cadillac Gage Co. Hydraulic accelerometer. 2,944,526, 7–12–60, Cl. 121—41.

Jasik, Henry, to A. Alford. Antenna structure. 2,945,232, 7–12–60, Cl. 343—807.

Jasharsec, Maurice. Valve for high-pressure gas container. 2,944,587, 7–12–60, Cl. 137—625.3.

Jasse, Joseph R., to Hotchkiss-Brandt. Self-propelled projectile. 2,944,486, 7–12–60, Cl. 102—49.

Jenkins, Fred W.: *See*—
Monson, Louis T., and Jenkins. 2,944,978.

Jenks, William R.: *See*—
Green, Charles P., and Jenks. 2,944,244.

Jennings, Charles O., to E. I. du Pont de Nemours and Co. Slit machine windup mechanism. 2,944,754, 7–12–60, Cl. 242—68.3.

Jeremiah, Earl E., to National Can Corp. Machine for applying wax to can ends. 2,944,510, 7–12–60, Cl. 118—233.

Jeremiah, Earl E., to United Can & Glass Co. Method for handling cans. 2,944,688, 7–12–60, Cl. 214—152.

Joabson, Arthur H. Furniture supporting device. 2,944,366, 7–12–60, Cl. 45—137.

Johnson, Alfred C.: *See*—
Severinsen, Arne R. 2,944,530.

Johnson, Alvin L., to Johnson Enterprises, Inc. Adjustable hacksaw frame. 2,944,574, 7–12–60, Cl. 145—34.

Johnson Enterprises, Inc.: *See*—
Johnson, Alvin L. 2,944,574.

Johnson, Eric L.: *See*—
Atkinson, John R., Booth, Johnson, and Mills. 2,944,870.
Atkinson, John R., Booth, Johnson, and Mills. 2,944,871.

Johnson, Erik A., to B. Lofgren. Valve particularly for use in an electro-metallizing pistol. 2,944,568, 7–12–60, Cl. 137—630.22.

Johnson Gear & Mfg. Co., Ltd.: *See*—
Pamphilon, George. 2,944,440.

Johnson, Joel R., W. Lach, and W. F. Stephen, to Western Electric Co., Inc. Apparatus for assembling operating cards onto wire spring relays. 2,944,332, 7–12–60, Cl. 29—203.

Johnson, Richard E., N. C. Cahoon, and H. F. Schaefer, to Union Carbide Corp. Gas-activated and gas-depolarized deferred action cell. 2,945,076, 7–12–60, Cl. 136—90.

Johnston, Clair R. Perforated conveyor for potato diggers and the like. 2,944,660, 7–12–60, Cl. 198—195.

Johnston Testers, Inc.: *See*—
O'Neill, Frank E. 2,944,606.

Johnstone, John H., and K. W. Olson, to Bendix Aviation Corp. Electron discharge device. 2,945,147, 7–12–60, Cl. 313—217.

Jones, Gordon H., to Giddings & Lewis Machine Tool Co. Chip collector for milling machine. 2,944,465, 7–12–60, Cl. 90—11.

Jones, Grandville R., and J. Bentkowsky, to Sperry Rand Corp. Steering systems for navigational craft. 2,945,370, 7–12–60, Cl. 318—489.

Jones, Robert C.: *See*—
Lorenzen, Lyman K., Zachar, and Jones. 2,944,974.

Jones, Robert E., to Sierra Engineering Co. Controlled cold flow plastic bearing for swivel joints. 2,944,846, 7–12–60, Cl. 287—91.

Jones, Virgil D.: *See*—
Stuettig, David R., Jones, and Golding. 2,944,810.

Joris, George G., to Allied Chemical Corp. Alkylation and dealkylation processes. 2,945,072, 7–12–60, Cl. 260—671.

Joseph, Harold J. Car uncoupler for toy trains. 2,944,683, 7–12–60, Cl. 213—211.

Justoni, Romeo, and R. Pessina; said Pessina assor. to Francesco Vismara Societa Per Azioni. Process for preparing 5 hydroxy-tryptamine through new intermediates. 2,945,046, 7–12–60, Cl. 260—319.

KSM Products, Inc.: *See*—
Kalemen, Frank K., and Ritter. 2,945,116.

Kabel, Heinrich, to P. Hellermann, trading as Paul Hellermann Fabrik elektrotechnischer Spezialartikel. Device for widening pipes, tubes, spouts or the like made of rubber, synthetic rubber, or artificial resilient material. 2,944,335, 7–12–60, Cl. 29—235.

Kabelschlepp G.m.b.H.: *See*—
Wanninger, Gilbert M. 2,945,201.

Kachergis, Henry J., to Otto Berns Co., Inc. Adjustable nozzles. 2,944,743, 7–12–60, Cl. 239—458.

Kahart C. Inc., The: *See*—
Goldberg, Herbert B. 2,944,475.

Kaloptsis, Gregoire: *See*—
Charles, Roger, Ritter, and Kaloptsis. 2,944,942.

Kaloptsis, Gregoire, and G. Ghilardi, to Societe Anonyme dite: Societe Monsavon-l'Oreal. Process for dyeing keratineous material with ortho-diphenols. 2,944,866, 7–12–60, Cl. 8—11.

Kamm, Wunibald I. E., K. Staiger, and W. F. Krautter, to United States of America, Army. Tire pressure control device. 2,944,579, 7–12–60, Cl. 152—416.

Kaspari, Albert R., H. C. Rutherford, and G. M. Avalon, to Fidelitone, Inc. Phonograph needle package. 2,944,663, 7–12–60, Cl. 206—45.19.

Kastan, Howard, to Lockheed Aircraft Corp. Debris traps for engine-air inlets. 2,944,731, 7–12–60, Cl. 230—132.

Katis, William R., to "Automatic" Sprinkler Corp. of America. Pipe hanger. 2,944,778, 7–12–60, Cl. 248—62.

Katz, Robert W. H. Nebgen, and B. Anik. Rotary interchanger with direct interfacial fluid contact. 2,944,801, 7–12–60, Cl. 261—24.

Katzin, Eugene M. Venting structure. 2,944,548, 7–12–60, Cl. 128—214.

Kaufman Advertising Co., Inc.: *See*—
Kaufman, Harold G. 2,944,349.

Kaufman, Harold G., to Kaufman Advertising Co., Inc. Comparison device. 2,944,349, 7–12–60, Cl. 35—54.

Kaufmann, Carl P., to Ellicott Machine Corp. Portable dredge. 2,944,352, 7–12–60, Cl. 37—54.

Kaye, Emmanuel: *See*—
Arnot, Alfred E. R. 2,944,689.

Keathley, Anthony C., and N. A. Kimmel, to Phillips Petroleum Co. Termination of thrust in solid-propellant rockets. 2,944,390, 7–12–60, Cl. 60—35.6.

Kebrle, Jindrich: *See*—
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,043.
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,044.

Keeler, Lawrence M.: *See*—
Strang, Peter M., and Gamble. 2,944,281.

Keeler, Robert J., to Minneapolis-Honeywell Regulator Co. Aircraft automatic control apparatus having non-linear characteristics. 2,944,767, 7–12–60, Cl. 244—77.

Keely, Donald O. Apparatus for fish culture. 2,944,513, 7–12–60, Cl. 119—3.

Keidel, Frederick A., to E. I. du Pont de Nemours and Co. Electrolytic drying apparatus. 2,944,967, 7–12–60, Cl. 204—275.

Kelemen, Frank K., and R. K. Ritter, to KSM Products, Inc. Stud welding apparatus. 2,945,116, 7–12–60, Cl. 219—98.

Kellogg, M. W., Co., The: *See*—
Mirabile, Frank A. 2,944,965.

Kelly, Lewis B. Rodent control feeding stations. 2,944,364, 7–12–60, Cl. 43—131.

Kenmore Research Co.: *See*—
Allen, Lloyd R., and Woodard. 2,944,879.
Allen, Lloyd R., and Woodard. 2,944,880.

Kennedy, Raymond L.: *See*—
Lindell, John F., and Kennedy. 2,944,353.

Kerry, Thomas H., and P. A. Ward, to Rolls-Royce Ltd. Retractable guards for air intakes. 2,944,631, 7–12–60, Cl. 183—62.

Kesel, Robert E.: *See*—
Macleish, Kenneth G., and Kesel. 2,944,783.

Keystone Steel & Wire Co.: *See*—
Dahlhauser, Anthony H., and Yaeger. 2,944,722.

Kibbe, Mike W., Jr., to Plane Parts, Inc. Pneumatic pecning and marking tool. 2,944,521, 7-12-60, Cl. 121—17.

Kibrick, Andre C., I. W. Scopp, and R. E. Colton; said Colton assor. to said Kibrick and said Scopp. Method of preparing paper pulp. 2,944,928, 7-12-60, Cl. 162—32.

Kiecker, Erwin A., and T. G. Lange. Snow plow. 2,944,351, 7-12-60, Cl. 37—43.

Kiekhaefer Corp.: *See*—
Strang, Charles D. 2,945,138.

Kiekhaefer, Elmer C. Outboard motor and starting means therefor. 2,944,508, 7-12-60, Cl. 115—18.

Kiesel, Joseph E. Pneumatic apparatus for turning and stacking hosiery. 2,944,709, 7-12-60, Cl. 223—43.

Kilburn, Tom, and G. R. Hoffman, to International Business Machines Corp. Magnetic storage systems. 2,945,214, 7-12-60, Cl. 340—174.

Kilby, Jack S., and L. E. Dilger, to Globe-Union Inc. Component mounting for printed circuits. 2,945,163, 7-12-60, Cl. 317—101.

Kimmel, Norman A.: *See*—
Keathley, Anthony C., and Kimmel. 2,944,890.

Kinsey, Walter C. TV-party snack server. 2,944,694, 7-12-60, Cl. 220—17.

Kish, Arthur S.: *See*—
Ziberi, Frank A., Kish, and Hingson. 2,944,546.
Ziberi, Frank A., Kish, and Hingson. 2,944,547.

Klapper, John J., and C. C. Smith, Jr., to General Electric Co. Wire twisting machine. 2,944,280, 7-12-60, Cl. 57—34.

Klauser, Hans, to Albiswerk Zurich A.G. Radar directional antenna assembly. 2,945,229, 7-12-60, Cl. 343—754.

Klein, Eugene A., to The Glidden Co. Hydrogenation of hydrochlorinated verbenone and product obtained thereby. 2,945,066, 7-12-60, Cl. 260—587.

Klein, Eugene A., to The Glidden Co. Conversion of verbanone. 2,945,067, 7-12-60, Cl. 260—587.

Kleinholz, Milton P., to Sinclair Refining Co. Stable anti-corrosive lubricant composition. 2,944,971, 7-12-60, Cl. 252—32.7.

Klement, John F. Aluminum bronze alloy containing chromium and having improved wear resistance. 2,944,880, 7-12-60, Cl. 75—162.

Klement, John F., to Ampco Metal, Inc. Aluminum bronze alloy having improved wear resistance by the addition of cobalt and chromium. 2,944,890, 7-12-60, Cl. 75—162.

Kline, Robert E., W. C. Starnes, and R. C. Zabor, to Gulf Research & Development Co. Process for upgrading a wide range gasoline. 2,944,959, 7-12-60, Cl. 208—79.

Kloosterziel, Hendrik, and W. J. Pieters, to Shell Oil Co. Process for the preparation of deuterated hydrocarbon compounds. 2,945,071, 7-12-60, Cl. 260—668.

Knapp, Samuel B., and J. D. Wethern, to Hawaiian Development Co., Ltd. Rapid soda process for pulping bagasse and other non-woody plant lignocellulose. 2,944,929, 7-12-60, Cl. 162—90.

Knowles, John G. Hydraulic brake systems. 2,944,637, 7-12-60, Cl. 188—78.

Knowles, M. B. and H. S. Pridgen, to Eastman Kodak Co. Solvents for fat and oil antioxidants. 2,944,908, 7-12-60, Cl. 99—163.

Koch, Hans, to Haunt-Werke Korber & Co. K.G. Apparatus for supplying fibrous materials to machines. 2,944,854, 7-12-60, Cl. 302—17.

Koch, John E., Jr.: *See*—
Waters, Elmer E., Shatynski, and Koch. 2,944,076.

Koehring Co.: *See*—
Lindell, John F., and Kennedy. 2,944,353.

Koenig, Peter J., to Sintercast Corp. of America. Method for producing tool steels containing titanium carbide. 2,944,893, 7-12-60, Cl. 75—204.

Kokorzycki, Zenon: *See*—
Mentley, Max B., Kokorzycki, and Daniel. 2,944,373.

Kopley, James P., to Printing Arts Research Laboratories, Inc. Ultraviolet absorbing watercolor paint compositions. 2,944,912, 7-12-60, Cl. 106—193.

Kopners Co., Inc.: *See*—
Nilsson, Sven A. 2,944,480.

Kottemann, James B.: *See*—
Fisher, Joseph D., Thompson, and Kottemann. 2,944,940.

Kramen, Frank H.: *See*—
Pipes, George R., and Kramen. 2,944,696.

Kraus, Gerard, to Phillips Petroleum Co. Vinylpyridine polymer adhesive composition containing boric oxide and a hetero-nitrogen compound as a stabilizer. 2,944,992, 7-12-60. Cl. 260—82.6.

Krautter, Willy F.: *See*—
Kamm, Wunibald J. E., Staiger, and Krautter. 2,944,579.

Kreeger, Donald E. Pork-rind jacket lure. 2,944,362. 7-12-60, Cl. 43—42.06.

Krivulka, Albert S., to South Chester Corp. Chassis and rack apparatus. 2,944,864, 7-12-60, Cl. 312—320.

Kron, Martin: *See*—
Thompson, William M., Jr., Kron, and Smith. 2,944,457.

Kruck, George, R. R. Metcalf, and E. H. Pines, to Merck & Co., Inc. Water-insoluble molybdenum salts of neomycin and process of using same in the purification of neomycin. 2,944,939. 7-12-60, Cl. 167—65.

Kruijer, Geert G., to Shell Oil Co. Process for supplying heat to a bed of finely divided refractory material. 2,944,807, 7-12-60, Cl. 263—52.

Kugler, Albert H., to California Packing Corp. Pear slicing machine. 2,944,577, 7-12-60, Cl. 146—169.

Kullgren, Gilbert V., and D. W. Stephenson, to Blaw-Knox Co. Extrusion screw adjusting mechanism. 2,944,280, 7-12-60, Cl. 18—12.

Kurts, Mark, to United States of America, Navy. Buoy. 2,944,267, 7-12-60, Cl. 9—8.

L.A.D. Industries, Inc.: *See*—
David, Eric, and Aiello. 2,944,643.

Lach, Walter: *See*—
Johnson, Joel R., Lach, and Stephen. 2,944,332.

Lacy, Franklin R., III. Pin fastener. 2,944,312, 7-12-60, Cl. 24—161.

Lancaster, William W., to Philco Corp. Transistor circuit. 2,945,188, 7-12-60, Cl. 330—34.

Lanciani, Daniel A., to Microwave Associates, Inc. Crystal rectifier tube. 2,945,122, 7-12-60, Cl. 250—31.

Land, Edwin H., to Polaroid Corp. Photographic processes utilising screen members. 2,944,894, 7-12-60, Cl. 96—3.

Landis Machine Co.: *See*—
Moeltzner, Ernst F. W., and Liedtke. 2,944,450.

Lane, Bernard F. A., and G. R. Strickland, to D. Napier & Son Ltd. Catalytic element and method of manufacturing such elements. 2,944,946, 7-12-60, Cl. 204—24.

Lane, Henry M. Dental forceps. 2,944,341, 7-12-60, Cl. 32—62.

Lane, Raymond J., and R. F. Sargent, to Bristol Siddeley Engines Ltd. Jet-propelled aircraft. 2,944,764, 7-12-60, Cl. 244—15.

Lane, Raymond J., and R. F. Sargent, to Bristol Siddeley Engines Ltd. Jet-propelled aircraft. 2,944,765, 7-12-60, Cl. 244—15.

Lane, Thomas R., to Thompson Ramo Wooldridge Inc. Aircraft. 2,944,762, 7-12-60, Cl. 244—12.

Lang, Delmer T., to D. T. Lang. Temperature sensing by pressurized liquid mixtures. 2,944,423, 7-12-60, Cl. 73—368.

Lange, Joseph L.: *See*—
Spitzer, Joseph G., Nasarevich, Lange, and Bondi. 2,944,906.

Lange, Theodore G.: *See*—
Kiecker, Erwin A., and Lange. 2,944,351.

Langer, Theodore W., and B. F. Mago, to Union Carbide Corp. Di-ester fluids with improved water tolerance. 2,944,973, 7-12-60, Cl. 252—47.5.

Larson, Karl O. Cement mixer. 2,944,799, 7-12-60, Cl. 259—177.

Lasden Foundation, Inc.: *See*—
Huffman, Max N. 2,945,048.

L'Auxiliaire de l'Industrie et des Mines Auxim: *See*—
Modrin, Louis. 2,944,566.

Lawrence, Charles S., and H. M. Strub, Jr., to The Duplan Corp. Composite yarn and method of producing same. 2,944,383, 7-12-60, Cl. 57—140.

Lawrence, Robert W.: *See*—
Ely, Albert R., Hayes, and Lawrence. 2,944,485.

Lawson, Melbourne R., to C. O. Dennis. Centering device. 2,944,283, 7-12-60, Cl. 18—2.

Lawson, Robert A.: *See*—
Wheeler, Walter G., Van Camp, Wood, and Lawson. 2,944,449.

Lazy Boy Lawn Mower Co., Inc.: *See*—
Bernard, George R., and Falkenberg. 2,944,616.

Le Blanc, Gerald A., to Otto Berns Co., Inc. Hose nozzle with plastic tip and flip ring. 2,944,742, 7-12-60, Cl. 239—458.

Le Bus, Franklin L., Sr., to Le Bus Royalty Co. Combined coring and reaming apparatus. 2,944,795, 7-12-60, Cl. 255—72.

Le Bus, Jake H., to PGAC Development Co. Sample taking apparatus. 2,944,791, 7-12-60, Cl. 255—1.4.

Le Bus Royalty Co.: *See*—
Le Bus, Franklin L., Sr. 2,944,795.

Leditschke, Heinrich, H. Rolly, and H. Schmidt-Ruppin, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Certain isonicotinic acid-N-oxide polyhalogen diphenyl alkyl amides. 2,945,040, 7-12-60, Cl. 260—295.

Leech, Harry R., to Imperial Chemical Industries Ltd. Process for the electrolytic separation of titanium from titanium scrap. 2,944,949, 7-12-60, Cl. 204—99.

Lees, James, and Sons Co.: *See*—
Batty, Harry A., and Pullen. 2,944,382.

Leet, William A.: *See*—
Persson, Sten L., and Leet. 2,944,804.

Lefief, Frank M., and T. R. Baker, to Baljak Corp. Hinge cover folding boxes. 2,944,724, 7-12-60, Cl. 229—36.

Le Fiell, Sidney. Overhead switch unit employing spring toggle. 2,944,491, 7-12-60, Cl. 104—103.

Le Gate, Osborne W. Automatic controls for well drills. 2,944,780, 7-12-60, Cl. 254—173.

Lehrian, William R.: *See*—
Goldthwait, Richard G., and Lehrian. 2,944,958.

Lemmerman, Harold H. F., and W. S. Crocker, to General Electric Co. Voltage reference source. 2,945,173, 7-12-60, Cl. 322—2.

Lemmers, Paul, to Firma Lemmers-Werke G.m.b.H. Apparatus for manufacturing wheel rims for road vehicles. 2,944,502, 7-12-60, Cl. 113—49.

Lemon, Charles R.: *See*—
Bogese, Stephen B., Lemon, and Stoner. 2,945,081.

Leshner, Ervin: *See*—
Shore, Charles, and Leshner. 2,944,625.

Les Laboratoires Francais de Chimiotheraphie: *See*—
Nomine, Gerard. 2,945,029.

Lessin, Maurice. Private conference desks. 2,944,861, 7-12-60, Cl. 312—196.

Lesti, Arnold, and A. R. Baechtel, to United States of America, Commerce. Analogue-digital converter. 2,945,220, 7-12-60. Cl. 340—347.

Lever Brothers Co.: *See*—
Taylor, William E., Jr. 2,944,704.

Leverton, Walter F., to Raytheon Co. Crystal-growing apparatus and methods. 2,944,875, 7-12-60, Cl. 23—273.

Levkoff, David, ¼ to E. S. Levkoff, ¼ to H. S. Levkoff, and ½ to E. L. Sennet. Cartons. 2,944,720, 7-12-60, Cl. 229—31.

Levkoff, Evelyn S.: *See*—
Levkoff, David. 2,944,720.

Levkoff, Henry S.: *See*—
Levkoff, David. 2,944,720.

Levy, M Frank, and G. A. Seubert, Jr., to Argus Chemical Corp. Chlorinated 2-methyl, 3-hydantoin-propane (2)-sulfonic acid. 2,945,045, 7-12-60, Cl. 260—306.5.

Libbey-Owens-Ford Glass Co.: *See*—
Gaiser, Romay A. 2,944,926.

Libman, Max L.: *See*—
Rabinow, Jacob. 2,944,384.

Licentia Patent-Verwaltungs G.m.b.H.: *See*—
Fehling, Heinz. 2,945,109.

Liedtke, Kurt: *See*—
Moeltzner, Ernst F. W., and Liedtke. 2,944,450.

Lind, James N.: *See*—
Arnold, Charles A., and Lind. 2,945,158.

Lindell, John F., and H. L. Kennedy, to Koehring Co. Bucket cleaner. 2,944,353, 7-12-60, Cl. 37—91.

Link-Belt Co.: *See*—
Davis, David A., Smith, and Snodgrass. 2,944,637.

Lipkins, Morton. Lapping machine. 2,944,375, 7-12-60, Cl. 51—117.

Lipton, Thomas J., Inc.: *See*—
Seltzer, Edward. 2,944,904.

Littell, Charles C., Jr. Oven. 2,944,540, 7-12-60, Cl. 126—275.

Lockheed Aircraft Corp.: *See*—
Amara, Dominic. 2,944,426.
Kastan, Howard. 2,944,731.
Naegele, Robert J., Jr. 2,944,398.

Loffler, Walther H. Floor drain. 2,944,671, 7-12-60, Cl. 210—166.

Lofgren, Bo: *See*—
Johnson, Erik A. 2,944,508.

Lombardo, Flora: *See*—
Morris, Lester, and Lombardo. 2,944,919.

Long, Alan G.: *See*—
Green, George F. H., Hamlet, and Long. 2,945,027.

Long, Charles S.: *See*—
Muller, Nathan W., and Long. 2,944,911.

Long, Selma H., J. W. Tamblyn, and L. D. Moore, Jr., to Eastman Kodak Co. Linear polyester compositions containing an alkyl gallate as a heat stabilizer. 2,945,000, 7-12-60, Cl. 260—45.85.

Longenecker, Charles L., to Chain Belt Co. Self-priming centrifugal pump. 2,944,489, 7-12-60, Cl. 103—113.

Longley Corp.: *See*—
Mandolf, Henry L. 2,944,848.

Loofbourrow, Robert J., to Texaco Inc. Testing device for acoustical logging system. 2,944,621, 7-12-60, Cl. 181—5.

Lorensen, Lyman E., J. Zachar, and R. C. Jones, to Shell Oil Co. Lubricating oil compositions. 2,944,974, 7-12-60, Cl. 252—51.5.

Lorenz, Albert, to W. C. Heraeus, G.m.b.H. Vacuum pumps. 2,944,732, 7-12-60, Cl. 230—141.

Lorens, Anton. Article of repose for supporting the body of a person. 2,944,594, 7-12-60, Cl. 155—106.

Louden, Victor J., to General Electric Co. Voltage reference circuit. 2,945,171, 7-12-60, Cl. 321—19.

Louthan, Rector P.: *See*—
Stansbury, Roy E., and Louthan. 2,944,932.

Low, Hans, and W. W. Reynolds, to Shell Oil Co. Preparation of odorless solvent from a propylene tetramer composition. 2,944,915, 7-12-60, Cl. 106—311.

Lowe Paper Co.: *See*—
Yanulis, Michael. 2,944,586.

Lubben, Gerrit J.: *See*—
Heantjes, Johan, and Lubben. 2,945,157.

Lubkin, Samuel, to Curtiss-Wright Corp. Electronic calculator. 2,945,213, 7-12-60, Cl. 340—174.

Lucky Tiger Mfg. Co.: *See*—
Harris, Stephen W. 2,944,273.

Ludwig, Louis. Electrical devices. 2,945,098, 7-12-60, Cl. 200—51.

Luechauer, Hollie C., to General Motors Corp. Electroplating method and apparatus. 2,944,947, 7-12-60, Cl. 204—26.

Lundgren, Claes E. G., and M. M. Arborelius. Respirators, particularly for submarine use. 2,944,544, 7-12-60, Cl. 128—142.

Luther, Herbert G.: *See*—
Sacchi, Eduardo M., and Luther. 2,944,541.

Luwa Ltd.: *See*—
Bauter, Karl. 2,944,028.

Lynch, Carl R. to United States Steel Corp. Method of coating hot-dip galvanized pipe. 2,944,925, 7-12-60, Cl. 148—16.

Lynch, Walton D., to Baljak Corp. Tray package and method of making it. 2,944,717, 7-12-60, Cl. 229—23.

Lyon, George A. Wheel cover. 2,944,853, 7-12-60, Cl. 301—37.

Mac & Lai Co. (Malaya) Ltd.: *See*—
McCall, David. 2,944,990.

MacKay, Kenneth C., to Illinois Tool Works. Terminal clip structure. 2,944,329, 7-12-60, Cl. 29—193.5.

Macleish, Kenneth G., and R. E. Kesel, to United States of America, Navy. Optical mounting device. 2,944,783, 7-12-60, Cl. 248—358.

MacSinger, Joseph A., to Small Business Administration. Tape deck for non-rewinding tape recorder. 2,944,825, 7-12-60, Cl. 274—4.

Magee, John E. Predicted stop demand. 2,944,634, 7-12-60, Cl. 187—29.

Magid, Sidney H. Thermoplastic garments. 2,944,550, 7-12-60, Cl. 128—287.

Magnaflux Corp.: *See*—
Conway, Edward F., and R. W. Puts. 2,944,538.

Magness, Albert H., to Standard Equipment, Inc. Balustrade. 2,944,797, 7-12-60, Cl. 256—21.

Magnetic Seal Corp.: *See*—
Colby, George E. 2,944,843.

Mago, Blake F.: *See*—
Langer, Theodore W., and Mago. 2,944,973.

Maier, Anton P. Dispenser for rolled paper. 2,944,749, 7-12-60, Cl. 242—55.2.

Makara, Frank. Roller skates. 2,944,827, 7-12-60, Cl. 280—11.28.

Malafouris, Dannie O.: *See*—
Calmy, Ralph. 2,944,584.

Malarkey, Paul J. Building construction. 2,944,370, 7-12-60, Cl. 50—52.

Malcolm, Donald H., and D. W. Martin, to Sperry Rand Corp. Format control. 2,944,651, 7-12-60, Cl. 197—133.

Malick, Dell M.: *See*—
O'Brian, Edward D., Malick, and Whitteker. 2,944,368.

Malloy, John E., and J. M. Ashe. Vacuum yarn feeding device. 2,944,414, 7-12-60, Cl. 66—125.

Malloy, William M., Sr. Bird feeder. 2,944,516, 7-12-60, Cl. 119—52.

Malmberg, Paul R.: *See*—
Sun, Kuan-Han, Malmberg, and Pecjak. 2,945,128.

Mandolf, Henry L., to Longley Corp. Latch. 2,944,848, 7-12-60, Cl. 292—181.

Manistee Engineering Co.: *See*—
Tobey, William A. 2,944,600.

Mann, Leonard J., J. M. Murphy, and C. H. Wurtz, to General Motors Corp. Refrigerating apparatus. 2,944,410, 7-12-60, Cl. 62—186.

Marco, John. Chemical apparatus for continuous reactions, heat exchange, mixing, cooking and other chemical processes. 2,944,877, 7-12-60, Cl. 23—290.5.

Marconi's Wireless Telegraph Co. Ltd.: *See*—
Ramsay, John F., and Jackson. 2,945,228.

Margulees, Anton. Smoking articles. 2,944,554, 7-12-60, Cl. 131—198.

Marino, Joseph A., and L. Mayer, to Owens-Illinois Glass Co. Interlocked carton. 2,944,723, 7-12-60, Cl. 229—34.

Markham, Basil G., to Bristol Aero-Engines Ltd. Throttle control systems for engines driving forward and reverse gears. 2,944,645, 7-12-60, Cl. 192—098.

Markow, George R., to Bailey Meter Co. Monitoring system including a magnetic amplifier. 2,945,218, 7-12-60, Cl. 340—222.

Markusen, Jimmie. Roller scraper. 2,944,275, 7-12-60, Cl. 15—236.

Maron, Melvin E., and J. W. Haanstra, to International Business Machines Corp. Logical computing device. 2,944,738, 7-12-60, Cl. 235—156.

Martin Co., The: *See*—
Bush, Orville J. 2,944,771.
Wilson, Harold E., Jr. 2,944,512.

Martin, Donald W.: *See*—
Malcolm, Donald H., and Martin. 2,944,651.

Martin, Harold F., to International Business Machines Corp. Test scoring machine. 2,944,734, 7-12-60, Cl. 235—61.7.

Martin, James. Ejection seats for aircraft. 2,944,774, 7-12-60, Cl. 244—122.

Martin, James C., and R. H. Hasek, to Eastman Kodak Co. Process for glutaric acid manufacture. 2,945,060, 7-12-60, Cl. 260—537.

Martin, Samuel M., to Western Electric Co., Inc. Apparatus for taking up and supplying strand material. 2,944,746, 7-12-60, Cl. 242—25.

Marx, Georg F., to Telefunken G.m.b.H. Electrode structure. 2,945,152, 7-12-60. Cl. 313—350.

Marxer, Adrian, to Ciba Pharmaceutical Products Inc. New piperidinium compounds. 2,945,032, 7-12-60, Cl. 260—247.5.

Mary, Francis J., to Electricite de France. Fire-boxes operating on atomized fuel. 2,944,494, 7-12-60, Cl. 110—165.

Mary, Francis J., to Electricite de France. Fire-boxes operating on atomized fuel. 2,944,531, 7-12-60, Cl. 122—4.

Mason, George, to Modern Plastics Research and Sales, Inc. Plastic articles of controlled specific gravity having a wear-resistant outer surface and method of preparing the same. 2,944,821, 7-12-60, Cl. 273—82.

Massie, Philip E.: *See*—
Roney, Raymond B., and Massie. 2,945,202.

Massmann, Werner F.: *See*—
Patin, Albert C., and Massmann. 2,944,770.

Masters, George E. Hanger clip. 2,944,781, 7-12-60, Cl. 248—228.

Mathews, Frederick J. Heating device. 2,945,114, 7-12-60, Cl. 219—43.

Mathison, Richard P., D. W. Slaughter, and L. W. Randolph, to California Institute Research Foundation. Voltage-controlled oscillator. 2,945,191, 7-12-60, Cl. 332—16.

Matthael, George L., to Thompson Ramo Wooldridge Inc. Microwave filter. 2,945,195, 7-12-60, Cl. 333—73.

Matthews, Cleil R., to The Dalton Foundries, Inc. Retractable trailer hitches. 2,944,836, 7-12-60, Cl. 280—491.

Mattson, Roy H., to Bell Telephone Laboratories, Inc. Transistor circuit temperature compensating device. 2,945,190, 7-12-60. Cl. 331—112.

Maurice, Jean, and M. Rist, to Societe Anonyme Francaise du Ferodo. Gear-changing control. 2,945,100, 7-12-60, Cl. 200—61.88.

Mauser Kommandit-Gesellschaft: *See*—
Muhlhoff, Friedrich. 2,944,714.

Maxwell, William A., and J. Douglas, to United States of America, National Aeronautics and Space Administration. Process of casting heavy slips. 2,944,316, 9-12-60, Cl. 25—156.

Mayer, Louis: *See*—
Marino, Joseph A., and Mayer. 2,944,723.

Mayhew, Henry G. Steering wheel switch mechanism for awakener alarm. 2,945,099, 7-12-60, Cl. 200—61.57.

Maynard, John T., to A. O. Smith Corp. Method of forming a power lead connection for plastic potted stater windings. 2,944,297, 7-12-60, Cl. 18—59.

Mays, William A., to The Dow Chemical Co. High pressure bomb. 2,944,697, 7-12-60, Cl. 220—89.

Maytag Co., The: *See*—
Smith, Thomas R., and Burkland.

McAfee, Jerry, to Gulf Research & Development Co. Destructive hydrogenation process and apparatus. 2,944,981, 7-12-60, Cl. 208—108.

McCall, David, to Mac & Lai Co. (Malaya) Ltd. Dried rubber latex sheeting and process for preparing same. 2,944,990, 7-12-60, Cl. 260—3.

McCall, Marvin A., and H. W. Coover, Jr., to Eastman Kodak Co. O,O-dialkyl S- [1-(2,2-dihalocyclopropyl)ethyl] phosphorothiolothionates. 2,945,054, 7-12-60, Cl. 260—461.

McCardle, Arthur, Jr., and M. H. Shackelford, to General Electric Co. Afterburner combustion means. 2,944,398, 7-12-60, Cl. 60—39.82.

McCauley, Wayne W. Flip-top package. 2,944,726, 7-12-60, Cl. 229—44.

McCloud, James R., to I-T-E Circuit Breaker Co. Pole unit mechanism. 2,945,110, 7-12-60, Cl. 200—150.

McClure, Holmes H.: *See*—
Elliott, Jack, and McClure.

McCollom, Kenneth A., to Phillips Petroleum Co. Temperature compensated transistor amplifier. 2,945,187, 7-12-60, Cl. 330—24.

McConnell, Richard L., and T. H. Wicker, Jr., to Eastman Kodak Co. Phosphorothiolothionates derived from esters of haloges-containing acids. 2,945,053, 7-12-60, Cl. 260—461.

McCormick, Thomas C. Push button electrical switch. 2,945,111, 7-12-60, Cl. 200—160.

McDaniel, Edgar L., and H. S. Young, to Eastman Kodak Co. Preparation of methyl methacrylate. 2,945,057, 7-12-60, Cl. 260—488.

McDonald, Angus F.: *See*—
Sauter, Erwin E., McDonald, and Charlesworth.

McGrath, William L., to Carrier Corp. Refrigeration system control. 2,944,411, 7-12-60, Cl. 62—196.

McIntosh, Claude H., and W. P. Ballard, to Texaco Inc. Fluid contact coking of hydrocarbon oils. 2,944,962, 7-12-60, Cl. 208—127.

McKay Machine Co., The: *See*—
Hohlfs, John H.

McMinn, Talmage D., Jr., to Monsanto Chemical Co. Polymer removal. 2,944,982, 7-12-60, Cl. 204—180.

McNeil Machine & Engineering Co., The: *See*—
Phinney, Donald G.

McWilliams, Charles W.: *See*—
Brandstadter, Jack M., and McWilliams.

Mead, Francis X.: *See*—
Smith, Charles W., Jr., Mead, and Dunbar.

Meeks, Benjamin S., Jr.: *See*—
Caldwell, John R., Gilkey, and Meeks.

Menasco Mfg. Co.: *See*—
Wheeler, Walter G., Van Camp, Wood, and Lawson.

Menendez, Raymond C. Cleaning machine. 2,945,272, 7-12-60, Cl. 15—50.

Mentley, Max B., Z. Kokorzycki, and D. W. Daniel, to National Broach & Machine Co. Grinder with compensating trimming mechanism. 2,944,373, 7-12-60, Cl. 51—5.

Merck & Co., Inc.: *See*—
Kruck, George, Metcalf, and Pines.
Shunk, Clifford H., and Folkers.
Stammer, Charles H.

Mergen, Joseph M.: *See*—
Hall, John L., Mergen, and Elliott.

Merrell, Wm. S., Co., The: *See*—
Carthuff, Edwin D., and Tuerck.

Mers Engineering, Inc.: *See*—
Haines, Malcolm P.

Metcalf, Richard R.: *See*—
Kruck, George, Metcalf, and Pines.

Metzger, Sidney, to International Telephone and Telegraph Corp. Pulse signalling system. 2,945,094, 7-12-60, Cl. 179—15.

Meyer, Marvin, to Curtiss-Wright Corp. Pump control systems. 2,944,488, 7-12-60, Cl. 103—16.

Meyer, Wilfried, to Patent-Treuhand-Gesellschaft fur elektrische Gluhlampen m.b.H. Gas- or vapor-filled electric discharge lamps. 2,945,146, 7-12-60, Cl. 313—113.

Microwave Associates, Inc.: *See*—
Lanciani, Daniel A.

Midland-Ross Corp.: *See*—
Nesbitt, John D., and Munford.

Mikrovaerk A/S: *See*—
Hansen, Asgar.

Miller, Carl D., to The Cooper Bessemer Corp. Resilient coupling. 2,944,844, 7-12-60, Cl. 287—53.

Miller, Fred P.: *See*—
Case, Carlton L., Harkey, and Miller.

Miller, Harry F.: *See*—
Bach, John W., Peet, and Miller.

Miller, Joseph A., to Minneapolis-Honeywell Regulator Co. Tension controller. 2,944,747, 7-12-60, Cl. 242—45.

Mills, Walter P.: *See*—
Atkinson, John R., Booth, Johnson, and Mills.
Atkinson, John R., Booth, Johnson, and Mills.

Minerals & Chemicals Corp. of America: *See*—
Powell, Manly J., and Cecil.

Minneapolis-Honeywell Regulator Co.: *See*—
Claussen, Delmar W.
Dodge, Frederick D.
Fransel, Richard M.
Keeler, Robert J.
Miller, Joseph A.
Pinckaers, Balthasar H.
Weber, Robert G.

Minnesota Mining and Mfg. Co.: *See*—
Clayton, Temple.
Fritts, Robert W.

Minsk, Louis M., to Eastman Kodak Co. Reaction products of carbonyl containing polymers and aminoguanidine that are useful as mordants. 2,945,009, 7-12-60, Cl. 260—95.

Mirabile, Frank A., to The M. W. Kellogg Co. Method of treating metal containing hydrocarbon oils. 2,944,960, 7-12-60, Cl. 208—284.

Mitchell, James A., and B. L. Hinkle, to E. I. du Pont de Nemours and Co. Process for the production of improved regenerated cellulose films. 2,944,296, 7-12-60, Cl. 18—57.

Modern Plastics Research and Sales, Inc.: *See*—
Mason, George.

Modrin, Louis, to L'Auxiliaire de l'Industrie et des Mines Auxim. Control valves having fluid-tight distributor members, particularly for vehicle braking circuits. 2,944,560, 7-12-60, Cl. 137—620.

Moe, George, R. D. Schultz, J. L. Shepherd, and T. M. Cromwell, to Aerojet-General Corp. Method of preparing tetralower alkyl diborane compounds. 2,944,951, 7-12-60, Cl. 204—165.

Moeltaner, Ernst F. W., and K. Liedtke, to Landis Machine Co. Apparatus for feeding and rolling workpieces. 2,944,450, 7-12-60, Cl. 80—66.

Mohasco Industries, Inc.: *See*—
Rice, Walter A. 2,944,412.
Rice, Walter A. 2,944,413.
Rice, Walter A. 2,944,570.

Monk, Sterling N. Furniture joint. 2,944,780, 7-12-60, Cl. 248—221.

Monsanto Chemical Co.: *See*—
McMinn, Talmage D., Jr. 2,944,952.
Ott, John B. 2,945,013.
Quinn, John F., and Terpstra. 2,945,063.
Rollingson, William R. 2,945,035.

Monson, Louis T., and F. W. Jenkins, to Petrolite Corp. Process for breaking emulsions of the oil-in-water class. 2,944,978, 7-12-60, Cl. 252—342.

Montgomery, Donald N., to Bell & Howell Co. Galvanometer mounting arrangement. 2,945,182, 7-12-60, Cl. 324—154.

Montgomery Elevator Co.: *See*—
Beck, Walter. 2,944,401.

Moody, Norman F., and C. D. Florida; said Florida assor. to Her Majesty the Queen in Right of Canada. Bistable semiconductor circuit. 2,945,134, 7-12-60, Cl. 307—88.5.

Moore, Alfred A. Collapsible container and dispensing holder therefor. 2,944,706, 7-12-60, Cl. 222—105.

Moore Drop Forging Co.: *See*—
Voss, Robert W. 2,944,452.

Moore, James E., to United States of America, Atomic Energy Commission. Single-step conversion of UO_3 to UF_4. 2,944,873, 7-12-60, Cl. 23—14.5.

Moore, Louis D., Jr.: *See*—
Long, Selma H., Tamblyn, and Moore.

Moore, Norman R., to Fibreboard Paper Products Corp. Carton with snap-lock closure. 2,944,727, 7-12-60, Cl. 229—45.

Moran, Jesse K., to Phillips Petroleum Co. Apparatus for and method of extruding plastic materials. 2,944,287, 7-12-60, Cl. 18—14.

Moren, Robert E., to Western Electric Co., Inc. Circuit for adjusting symmetrical band-pass systems. 2,945,177, 7-12-60, Cl. 324—57.

Morin, Louis H., to Coats & Clark Inc. Rimmed plastic spool. 2,944,757, 7-12-60, Cl. 242—118.4.

Morley, Frederick W. W., to Rolls-Royce Ltd. Jet noise suppressor nozzle. 2,944,624, 7-12-60, Cl. 181—51.

Morrill, Harry L., Jr. Swivel seat attachment. 2,944,591, 7-12-60, Cl. 155—10.

Morris Clay Products Co.: *See*—
Segur, Asa B., and Esch.

Morris, Edward H.: *See*—
Godden, Thomas E., and Morris.

Morris, Lester, and F. Lombardo, to Amercoat Corp. Method of applying a protective coating to a ferrous metal surface. 2,944,919, 7-12-60, Cl. 117—127.

Moseley, F. L., Co.: *See*—
Moseley, Francis L.

Moseley, Francis L., to F. L. Moseley Co. Graphical recorders. 2,944,866, 7-12-60, Cl. 346—8.

Mosny, Martin, and V. Pavelka. Method for controlling the travel of welding machine used for electrical arc welding into molten slag. 2,945,116, 7-12-60, Cl. 219—73.

Motor Wheel Corp.: *See*—
Huntley, Frederick H., and Fraim.

Motorola, Inc.: *See*—
Carr, William F.

Mott, Carl W., to Mott Corp. Pulley. 2,944,434, 7-12-60, Cl. 74—230.17.

Mott Corp.: *See*—
Mott, Carl W.

Moudry, Marie K.: *See*—
Dunklin, Edward W., and Moudry.

Moulinage et Retarderie de Chavanas: *See*—
Crouset, Henri.

Moyer, Austin S. Mounting of gymnastic equipment. 2,944,815, 7-12-60, Cl. 272—60.

Moyer, David P., to General Motors Corp. Method of assembling a circuit breaker. 2,944,324, 7-12-60, Cl. 29—155.5.

Moyer, David P. Switch assembly. 2,945,106, 7-12-60, Cl. 200—104.

Moyer, Frances L.: *See*—
Chang, Robert W. H., and Moyer.

Moyle, Clarence L., and L. I. Wade, to The Dow Chemical Co. Phosphoramidates. 2,944,857, 7-12-60, Cl. 167—53.

Mucher, George J., and S. N. Lavrille, to Clarostat Mfg. Co., Inc. Potentiometer. 2,945,199, 7-12-60, Cl. 338—180.

Muegerl, Thomas, and E. Hoyer, to Volkswagenwerk G.m.b.H. Differential gears. 2,944,442, 7-12-60, Cl. 74—713.

Muhlhoff, Friedrich, to Mauser Kommandit-Gesellschaft. Quadrangular receptacle structures. 2,944,714, 7-12-60, Cl. 229—5.5.

Muhr, John. Roof construction. 2,944,871, 7-12-60, Cl. 50—64.

Muller, Nathan W., and C. S. Long, to Acetylene Cylinder Corp. Acetylene container filler and methods. 2,944,911, 7-12-60, Cl. 106—120.

Muller, Robert H., to The Air Preheater Corp. Guide plates for rotary regenerator. 2,944,796, 7-12-60, Cl. 257—270.

Mullins, Dennis H.: *See*—
Gates, Stephen, and Mullins.

Munford, Theodore W.: *See*—
Nesbitt, John D., and Munford.

Munn, Jay A., J. W. Schweikert, J. E. Sphar, and D. F. Berning to General Electric Co. Engine installation frame. 2,944,331, 7-12-60, Cl. 29—200.

Mura, Joseph H. Colony birdhouse. 2,944,518, 7-12-60, Cl. 119—23.

Murphy, John M.: *See*—
Mans, Leonard J., Murphy, and Wurts.

Murray Corp.: *See*—
Black, John B.

Myers, Richard H., to International Telephone and Telegraph Corp. Phase and amplitude correction system and navigation beacon utilizing same. 2,945,224, 7-12-60, Cl. 343—102.

Myers, Thomas G., to U.S. Electrical Motors, Inc. Variable ratio transmission mechanism. 2,944,433, 7-12-60, Cl. 74—230.17.

Myers, William D., to Houston Oil Field Material Co., Inc. Drilling mud by-pass for rotary drill bits. 2,944,794, 7-12-60, Cl. 255—24.

Sarmanashi, Antoni, to Standard Coil Products Co., Inc. Frequency modulated crystal generator. 2,945,192, 7-12-60, Cl. 332—26.

Naegele, Robert J., Jr., to Lockheed Aircraft Corp. Combustion chamber for jet propulsion motors. 2,944,398, 7-12-60, Cl. 60—39.82.

Nagel, Herbert, and L. E. Hatt, to E. I. du Pont de Nemours and Co. Polyethylene terephthalate film having an adherent wax coating. 2,944,918, 7-12-60, Cl. 117—68.5.

Napier, D., & Son Ltd.: *See*—
Lane, Bernard F. A., and Strickland.

Nardon, Carl J., to Nardon Mfg. Co. Accounting board. 2,944,838, 7-12-60, Cl. 282—29.

Nardon Mfg. Co.: *See*—
Nardon, Carl J.

Nasarevich, Leo S.: *See*—
Spitzer, Joseph G., Nasarevich, Lange, and Boadi.

Nashe, Leif, to Dovre Ski Binding, Inc. Automatically releasable ski binding. 2,944,828, 7-12-60, Cl. 280—11.35.

National Broach & Machine Co.: *See*—
Anthony, Russel W.
Mentley, Max B., Kokorzycki, and Daniel.

National Can Corp.: *See*—
Jeremiah, Earl E.
Renard, Roland E.

National Cash Register Co., The: *See*—
Fisher, Robert D., Salle, and Tsu.

National Malleable and Steel Castings Co.: *See*—
Williams, Donald.

National Tank Co.: *See*—
Glasgow, Clarence O., and Brown.

Nebgen, William H.: *See*—
Katz, Robert, Nebgen, and Anik.

Neco, Roger H., to The Dill Mfg. Co. Side wall valve and method of manufacture therefor. 2,944,580, 7-12-60, Cl. 152—429.

Neipert, Marshall P.: *See*—
Blue, Robert D., and Neipert.

Nesbitt, John D., and T. W. Munford, to Midland-Ross Corp. Heating method and apparatus. 2,944,805, 7-12-60, Cl. 263—7.

Nesmith, Clifford A. Tent cup inflation. 2,944,514, 7-12-60, Cl. 119—14.49.

Netsler, John M.: *See*—
Odell, Robert C., Frentsel, Scag, and Netsler.

Neugass, Edwin A. Instrument lighting devices. 2,945,145, 7-12-60, Cl. 313—108.1.

Nevsimal, Rudolph J.: *See*—
Christiansen, Robert J., Nevsimal, and Volkert.

Newcomb, Florabelle R. Supports for draperies, curtains, window shades and the like. 2,944,782, 7-12-60, Cl. 248—241.

Newcomb, Robert K., to Rotebond. Laminating machines. 2,944,587, 7-12-60, Cl. 154—36.

Newcombe, Harold J. Vibrator and massager for use over spine. 2,944,543, 7-12-60, Cl. 128—32.

Newhouse, George B.: *See*—
Shekels, Howard D., and Newhouse.

New-Tronics Corp.: *See*—
Chadowski, Joseph P.

New York Air Brake Co., The: *See*—
Huber, Matthew W.
Vander Kaay, Henry A.

Nicolazzi, John J. Motor conveyor and stripper. 2,944,685, 7-12-60, Cl. 214—6.

Nilsson, Sven A., to Koppers Co., Inc. Article imprinter. 2,944,480, 7-12-60, Cl. 101—11.

Noblen Engineering and Mfg. Co.: *See*—
Ingersoll, Ward H.

Nomine, Gerard, to Les Laboratoires Francais de Chimiotherapie. Process for the production of 3α-acetoxy-17α-hydroxy-16α-methyl-$\Delta^{5(10)}$-pregnane-20-one and intermediates. 2,945,029, 7-12-60, Cl. 260—239.55.

Norrbode, Lars E. R., to Isoleringsaktiebolaget WMB. Method for pre-expanding expandable granules of a synthetic thermoplastic material. 2,944,292, 7-12-60, Cl. 18—48.

North American Aviation, Inc.: *See*—
Elias, James C., and Gardner.
Weaver, Jerald D.

North American Philips Co. Inc.: *See*—
Haantjes, Johan, and Lubben.
Jacobs, Henry J. A. M., Van De Weijdeven, and Roosendaal.

Northern Union, Inc.: *See*—
Billups, James O.

Norton Co.: *See*—
Hoogstoel, Leon E.

Obeck, Ferdinand J., to Pittsburgh Plate Glass Co. Brush display card. 2,944,665, 7-12-60, Cl. 206—79.

Obermaier & Cie.: *See*—
Scholl, Mario, Obermaier, and Scharfenberger.

Obermaier, Walter: *See*—
Scholl, Mario, Obermaier, and Scharfenberger.

O'Brian, Edward D., D. M. Mallek, and W. C. Whittaker. Toy doll structures. 2,944,368, 7-12-60, Cl. 46—156.

O'Brian, John E.: *See*—
Fisher, Webster E., and O'Brian.

O'Brien, Richard C.: *See*—
Hoover, Frederick J., and O'Brien.

Ochello, Thomas J.: *See*—
Ochello, Thomas J. and Thomas J.

Ochello, Thomas J. and Thomas J. Side-mounted rear view mirror for vehicles having wiper means thereon. 2,944,277, 7-12-60, Cl. 15—250.6.

Odell, Robert C., H. C. Frentsel, D. T. Scag, and J. M. Netsler, to Allis-Chalmers Mfg. Co. Capacitor pack winding machine. 2,944,753, 7-12-60, Cl. 242—67.3.

Oetiker, Hans. Safety device for container cover. 2,944,699, 7-12-60, Cl. 220—44.

Olin Mathieson Chemical Corp.: *See*—
Adams, Richard F.
Pagano, Joseph F., Temple, and Yacowitz.

Olivetti Corp. of America: *See*—
Canepa, Michele.

Olsen, Helen N. Hair covering cap with spacer. 2,944,556, 7-12-60, Cl. 132—46.

Olson, Keith W.: *See*—
Johnstone, John H., and Olson.

Olson, Melvin M., and R. M. Christenson, to Pittsburgh Plate Glass Co. Novel copolymers. 2,945,003, 7-12-60, Cl. 260—47.

O'Neill, Frank E., to Johnston Testers, Inc. Filling device. 2,944,606, 7-12-60, Cl. 166—194.

Onsrud Machine Works, Inc.: *See*—
Onsrud, Rudolph F.

Onsrud, Rudolph F., to Onsrud Machine Works, Inc. Boring fixture. 2,944,445, 7-12-60, Cl. 77—5.

Osborne, Charles V. Four wheel steering mechanism for a mine car. 2,944,830, 7-12-60, Cl. 280—96.

Otis Engineering Corp.: *See*—
Dollison, William W.

Ott, John B., to Monsanto Chemical Co. Water-soluble interpolymers of acrylic acids and 2-ethylhexyl esters of acrylic acids and method of making same. 2,945,013, 7-12-60, Cl. 260—86.1.

Otto, Carl L., and B. B. Grongvist, to Aktiebolaget Electrolux. Refrigerator door. 2,944,304, 7-12-60, Cl. 20—35.

Otto, Joachim E.: *See*—
Schaffernicht, Walter, and Otto.

Owens-Illinois Glass Co.: *See*—
Marino, Joseph A., and Mayer.
Sherman, Orville B.

Oxenham, John K.: *See*—
Graham, Reginald, and Oxenham.

PGAC Development Co.: *See*—
Le Bus, Jake H.

Paalu, Alex, to A. O. Smith Corp. Speed and acceleration detection of a rotating shaft. 2,944,419, 7-12-60, Cl. 73—116.

Package Machinery Co.: *See*—
Sloan, Francis J.

Pagano, Joseph F., A. E. Temple, and H. Yacowitz, to Olin Mathieson Chemical Corp. Retarding the spoilage of meat products. 2,944,907, 7-12-60, Cl. 99—157.

Pamphilon, George, to Johnson Gear & Mfg. Co., Ltd. Shaft drive structure. 2,944,440, 7-12-60, Cl. 74—665.

Pardee, William A., to Gulf Research & Development Co. Process for producing olefins. 2,945,076, 7-12-60, Cl. 260—683.

Parekh, Rasiklal H.: *See*—
Barnes, Brunner C., and Parekh.

Paris, Francois G., J. H. Bertin, and B. J. M. Salmon, to Societe Bertin & Cie. Ram-jet unit. 2,944,391, 7-12-60, Cl. 60—35.6.

Park, Robert E. Internal combustion engine. 2,944,533, 7-12-60, Cl. 123—13.

Parker, Charles B., and P. D. Houston, Sr., deceased; by First American National Bank of Nashville, and P. D. Houston, Jr., co-executors. Vehicle brake system. 2,944,855, 7-12-60, Cl. 303—8.

Parker, Louis W. Shunts for printed circuit meters. 2,945,180, 7-12-60, Cl. 324—126.

Parkinson, Morris D. Office organization board. 2,944,355, 7-12-60, Cl. 40—63.

Parse, Claude J.: *See*—
Parse, Eugene R. and C. J.

Parne, Eugene R. and C. J. Depth finder for fishermen. 2,944,279, 7-12-60, Cl. 16—1.

Parsons, James R., and D. A. Fluegel, to Phillips Petroleum Co. Mass spectrometer. 2,945,123, 7-12-60, Cl. 250—41.9.

Pastuhov, Alexis: See—
Farrell, James H., and Pastuhov. 2,944,692.

Patent-Treuhand-Gesellschaft fur elektrische Gluhlampen m.b.H.: See—
Meyer, Wilfried. 2,945,146.

Patin, Albert C., and W. F. Massmann, to Ampatco Laboratories Corp. Aircraft control system. 2,944,770, 7-12-60, Cl. 244—83.

Patterson, Morehead, and C. E. Schon, to American Machine & Foundry Co. Bowling pin removing apparatus. 2,944,819, 7-12-60, Cl. 273—43.

Paul, Gerald R., and C. H. Fisher, Jr., to General Dynamics Corp. Range selector (telegraph switching). 2,945,093, 7-12-60, Cl. 178—53.1.

Paulius, Clarence L., to Hillerich & Bradsby Co. Ball-striking implement. 2,944,820, 7-12-60, Cl. 273—72.

Pavelka, Viktam: See—
Mosny, Martin, and Pavelka. 2,945,116.

Pavlecka, Vladimir R., to American Machine & Foundry Co. Combustion chambers for gas turbine power plants. 2,944,397, 7-12-60, Cl. 60—39.36.

Payne, Edwin M.: See—
Cail, Roland A., and Payne. 2,944,737.

Payne, Eric R., to The Austin Motor Co. Ltd. Overhead valve internal combustion engines. 2,944,536, 7-12-60, Cl. 123—55.

Pearse, John J. Revolving and folding mobile floating bridge. 2,944,270, 7-12-60, Cl. 14—27.

Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques: See—
Jacque, Leon, and Dumes. 2,944,578.

Pecjak, Frances A.: See—
Sun, Kuan-Han, Malmberg, and Pecjack. 2,945,128.

Pedersen, Olaf J.: See—
Rayburn, Donald H., Pedersen, and Fischer. 2,944,263.

Peel, Clyde A., R. O., and D. G. Folding cigarette box with ash receptacle. 2,944,555, 7-12-60, Cl. 131—238.

Peel, Donald G.: See—
Peel, Clyde A., R. O., and D. G. 2,944,555.

Peel, Richard O.: See—
Peel, Clyde A., R. O., and D. G. 2,944,555.

Peet, Robert L., Jr.: See—
Bach, John W., Peet, and Miller. 2,944,511.

Pelavin, Milton H., to Technicon Instruments Corp. Sensitive thermal-control device. 2,945,118, 7-12-60, Cl. 210—20.

Pemco Wheel Co.: See—
Black, John W. 2,944,280.

Peregrine, Edgar P., to Bristol Aero-Engines Ltd. Jet engine thrust reverser. 2,944,394, 7-12-60, Cl. 60—35.54.

Persson, Henry. Grinding tool. 2,944,374, 7-12-60, Cl. 51—110.

Persson, Sten I., and W. A. Leet, to General Dynamics Corp. Coal-rock sensing system. 2,944,804, 7-12-60, Cl. 262—7.

Persson, Sven H.: See—
Wiklundh, Leif S.-E., Persson, and Holm. 2,944,924.

Pessina, Raffaele, See—
Justoni, Romeo, and Pessina. 2,945,046.

Pester, William B., to Sylvania Electric Products Inc. Projector tilt adjustment. 2,944,776, 7-12-60, Cl. 248—11.

Peterson, Gerald D. Wall construction. 2,944,641, 7-12-60, Cl. 189—34.

Peterson, Merle E., to Bendix Aviation Corp. Pendulous rotary bobbin holder. 2,944,760, 7-12-60, Cl. 242—130.2.

Peterson, Walter H., to Shell Oil Co. High temperature grease compositions containing salicyclic acid derivatives. 2,944,970, 7-12-60, Cl. 252—18.

Petrides, Thracy: See—
Grandgent, Roland, and Petrides. 2,944,763.

Petrolite Corp.: See—
De Groote, Melvin, and Pettingill. 2,944,979–85.
De Groote, Melvin, and Pettingill. 2,945,023.
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De Groote, Melvin, and Pettingill. 2,945,025.
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Hutchison, Charles B. 2,944,968.
Monson, Louis T., and Jenkins. 2,944,978.
Stromberg, Verner L., and Hughes. 2,944,980.

Pettey, Thomas M., Jr., to United States of America, Army. Pressure relief valve with remote calibration change. 2,944,564, 7-12-60, Cl. 137—529.

Pettingill, Owen H.: See—
De Groote, Melvin, and Pettingill. 2,944,979–85.
De Groote, Melvin, and Pettingill. 2,945,023.
De Groote, Melvin, and Pettingill. 2,945,024.
De Groote, Melvin, and Pettingill. 2,945,025.

Pettis, Wendell W. Refrigeration and heating apparatus of the absorption type for use on internal combustion engines including a muffler. 2,944,407, 7-12-60, Cl. 62—144.

Pfarrwaller, Erwin, to Sulzer Freres S.A. Heddle frame. 2,944,571, 7-12-60, Cl. 139—91.

Pfizer, Chas. & Co., Inc.: See—
Huang, Hsing T. 2,944,943.
Sacchi, Eduardo M., and Luther. 2,944,541.
Smith, Charles W., Jr., Mead, and Dunbar. 2,944,575.

Philco Corp.: See—
Colgate, Harry R. 2,944,822.
Lancaster, William W. 2,945,168.

Phillips Petroleum Co.: See—
Andersen, Carlton C. 2,944,406.
Benedict, Bruce C. 2,945,016.
Burk, Marvin C. 2,945,160.
Detter, Clyde V. 2,945,015.
Fox, Homer M. 2,944,325.
Goodhue, Lyle D., and Short. 2,944,934.
Hanson, George H. 2,945,127.
Keathley, Anthony C., and Kimmel. 2,944,390.
Kraus, Gerard. 2,944,982.
McCollom, Kenneth A. 2,945,187.
Moran, Jesse N. 2,944,287.
Parsons, James R., and Fluegel. 2,945,123.
Polk, Walter B. 2,944,876.
Polk, Walter B. 2,945,077.
Scofield, Raymond C. 2,945,075.
Stansbury, Roy E., and Louthan. 2,944,932.

Phinney, Donald G., to The McNeil Machine & Engineering Co. Air distributing valves. 2,944,528, 7-12-60, Cl. 121—40.6.

Phototypograph Corp., The: See—
Drillick, Jacob H. 2,944,471.

Pickles, Joseph, to Ferro Stamping Co. Non-jamming actuated screw and nut combination. 2,944,434, 7-12-60, Cl. 74—424.8.

Pickles, Joseph, to Ferro Stamping Co. Method of making feed screw stop. 2,944,437, 7-12-60, Cl. 74—424.8.

Piedmont Machine Shop, Inc.: See—
Bialock, James L. 2,944,301.

Piepmeyer, Joseph A., to Emery Industries, Inc. Removing odor from petroleum-based dry cleaning solvent with diglycolic acid. 2,944,964, 7-12-60, Cl. 208—180.

Pieters, Willem J.: See—
Kloosterziel, Hendrik, and Pieters. 2,945,071.

Pinckaers, Balthasar H., to Minneapolis-Honeywell Regulator Co. Transistor circuit. 2,945,133, 7-12-60, Cl. 307—88.5.

Pines, Seemon H.: See—
Kraak, George, Metcalf, and Pines. 2,944,930.

Pipes, George R., and F. H. Kramen, to Eaton Mfg. Co. Closure device. 2,944,698, 7-12-60, Cl. 220—40.

Pitney-Bowes, Inc.: See—
Bach, John W., Peet, and Miller. 2,944,511.

Pittsburgh Plate Glass Co.: See—
Douglas, Henry H., Pollwell, and Tiefenthaler. 2,944,626.
Obeck, Ferdinand J. 2,944,665.
Olson, Melvin M., and Christenson. 2,945,003.

Plane Parts, Inc.: See—
Kibbe, Milo W., Jr. 2,944,521.

Plasmadyne Corp.: See—
Blackman, Vernon H. 2,945,110.

Plastic Precision Parts Co.: See—
Bontecue, Frederic C. 2,944,367.

Pleuger, Friedrich W., and J. Schneider, said Schneider assor. to said Pleuger. Membrane pump. 2,944,490, 7-12-60, Cl. 103—152.

Pneumatic Scale Corp., Ltd.: See—
Vergobbi, John G. 2,944,715.

Pocono Fabricators, Inc.: See—
Rayburn, Donald H., Pedersen, and Fischer. 2,944,263.

Pocrnich, Ivan G.: See—
Bunge, Fred H., and Pocrnich. 2,944,666.

Podsiadlo, Henry: See—
De Biasio, James J., Podsiadlo, and Sansone. 2,944,563.

Poe, Milton D. Fishing lure. 2,944,363, 7-12-60, Cl. 43—42.22.

Poirier, Jules H., to Ryan Aeronautical Co. Harmonic distortion eliminator for A.C. generator. 2,945,136, 7-12-60, Cl. 307—105.

Polaroid Corp.: See—
Bourbeau, Francis J., Greenhalgh, and Valle. 2,944,294.
Land, Edwin H. 2,944,894.

Polk, Walter B., to Phillips Petroleum Co. Catalyst tube assembly. 2,944,876, 7-12-60, Cl. 23—288.

Polk, Walter B., to Phillips Petroleum Co. Process and apparatus for pressure and temperature control system. 2,945,077, 7-12-60, Cl. 260—683.3.

Pollick, Berthold, and R. G. Hennessey, to Fairchild Camera and Instrument Corp. Photographic shutter. 2,944,476, 7-12-60, Cl. 95—55.

Potter, Donald A., and K. Staiger, to Stewart-Warner Corp. Method and means for generating purge gases. 2,944,987, 7-12-60, Cl. 252—372.

Powell, Manly J., and T. A. Cecil, to Minerals & Chemicals Corp. of America. Apparatus for forming spherical masses. 2,944,986, 7-12-60, Cl. 252—359.

Power Equipment Co.: See—
Bixby, William H. 2,945,172.

Power Gas Corp. Ltd., The: See—
Carter, Austin G. 2,944,806.

Presser, Leiser. Window cleaning device. 2,944,276, 7-12-60, Cl. 15—250.24.

Pridgen, Herman S.: See—
Knowles, M B, and Pridgen. 2,944,908.

Prince, Philip E.: See—
Bernhardt, Ernest C., Boxler, and Prince. 2,944,298.

Printing Arts Research Laboratories, Inc.: See—
Kopley, James P. 2,944,912.

Prior, William L., and H. J. Snelson, to Tectum Corp. Process for steam treating magnesium cement fibrous panels. 2,944,291, 7-12-60, Cl. 18—47.5.

Pullen, Thomas G., III: See—
Batty, Harry A., and Pullen. 2,944,382.

Puta, Ruben W.: See—
Conway, Edward F., and Puta. 2,944,538.

Quackenbush, Edward C., to The Whitney Blake Co. Connector construction. 2,945,208, 7-12-60, Cl. 339—59.

Queneau, Paul E., S. C. Townshend, and R. S. Young, to The International Nickel Co., Inc. Treatment of nickel-containing sulfide ores. 2,944,853, 7-12-60, Cl. 75—5.

Quick, George R., to ACF Industries, Inc. Simulated turn and bank indicator. 2,944,348, 7-12-60, Cl. 35—12.

Quin, James F., to Imperial Chemical Industries Ltd. Manufacture of titanium. 2,944,888, 7-12-60, Cl. 75—84.5.

Quinn, John F., and M. A. Terpstra, to Monsanto Chemical Co. Preparation of cyclohexane methylamine. 2,945,063, 7-12-60, Cl. 260—562.

Raamot, Jaan, to Western Electric Co., Inc. Pulsing system. 2,945,185, 7-12-60, Cl. 328—190.

Rabinow, Jacob, ½ to M. L. Libman. Self-actuated automatic regulation of timepieces. 2,944,384, 7-12-60, Cl. 58—100.

Radio Corp. of America: See—
Chang, Kern K. N. 2,945,153.

Ragan, Thomas M.: See—
Baker, Reuben C., Ragan, and Wents. 2,944,608.

Railway Appliance Research Ltd.: See—
Swanson, Robert E. 2,944,856.

Ramsay, John F., and J. A. C. Jackson, to Marconi's Wireless Telegraph Co., Ltd. Antenna having two focusing elements. 2,945,228, 7-12-60, Cl. 343—753.

Randolph, Lee W.: See—
Mathison, Richard F., Slaughter, and Randolph. 2,945,191.

Rantsch, Kurt, to C. Zeiss. Illuminating device particularly for objects in microscopes. 2,944,463, 7-12-60, Cl. 88—39.

Rayburn, Donald H., O. J. Pedersen, and J. J. Fischer, to Pocono Fabricators, Inc. Safety helmet with face guard. 2,944,263, 7-12-60, Cl. 2—9.

Raymond International Inc.: See—
Smith, Edward A. 2,944,403.

Raynes, Burt F., to Rohr Aircraft Corp. Machine for forming sheet metal. 2,944,500, 7-12-60, Cl. 113—43.

Raytheon Co.: See—
Irvine, John W., Jr. 2,944,874.
Leverton, Walter F. 2,944,875.

Reflectone Corp., The: See—
Chichester, Kenneth J., and Crocco. 2,945,101.

Regent Plastics, Inc.: See—
Strumor, Mathew A. 2,944,705.

Reiland, Frank D., to Gateway Engineering Co. Anchor slot channel attachment clip. 2,944,313, 7-12-60, Cl. 24—214.

Reiners, Walter: See—
Wiggermann, Georg. 2,944,529.

Renard, Roland E., to National Can Corp. Can body maker interchangeable for long and short strokes. 2,944,498, 7-12-60, Cl. 113—11.

Rentschler, Waldemar T., to Alfred Gauthier, G.m.b.H. Photographic intra-lens shutter coupled with an exposure meter. 2,944,473, 7-12-60, Cl. 95—10.

Republic Aviation Corp.: See—
Grandgent, Roland, and Petrides. 2,944,763.

Research Corp.: See—
Barnett, Claude C., and Dana. 2,944,542.

Reverdin, Daniel, to Compagnie Generale de Telegraphie Sans Fil. Transmitter-receiver switches. 2,945,194, 7-12-60, Cl. 333—10.

Reynolds, William W.: See—
Low, Haus, and Reynolds. 2,944,915.

Rhodes, Thomas J., to United States Rubber Co. Apparatus for processing elastomeric material. 2,944,285, 7-12-60, Cl. 18—12.

Riat, Henri: See—
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,021.
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,022.

Ricards, Charles L.: See—
Tollison, Paul L., and Ricards. 2,944,306.

Rice, Walter A., to Mohasco Industries, Inc. Method of making pile fabrics. 2,944,412, 7-12-60, Cl. 66—85.

Rice, Walter A., to Mohasco Industries, Inc. Apparatus for making pile fabrics. 2,944,413, 7-12-60, Cl. 66—85.

Rice, Walter A., to Mohasco Industries, Inc. Method and apparatus for making loop pile fabric. 2,944,570, 7-12-60, Cl. 139—38.

Richards, Philip. Load elevating apparatus. 2,944,633, 7-12-60, Cl. 187—8.

Richardsons, Westgarth & Co., Ltd.: See—
Frankel, Adolf. 2,944,590.

Richfield Oil Corp.: See—
Bronson, Arthur H. 2,944,936.

Richman, Oscar and S., and B. Weissenberg, and and N. Fabrizio; said S. Richman assor. to said O. Richman. Corner crimper. 2,944,262, 7-12-60, Cl. 1—260.

Richman, Solomon: See—
Richman, Oscar and S., Weissenberg, and Fabrizio. 2,944,262.

Richter, Friedrich, to Electroacustic Gesellschaft mit beschrankter Haftung. Recording instrument. 2,944,868, 7-12-60, Cl. 346—74.

Riehm, Theodor, to Udic Societe Anonyme. Concentration of wood sugar solutions. 2,944,923, 7-12-60, Cl. 127—37.

Riester, Oskar, to Agfa Aktiengesellschaft. Process for sensitising silver halide emulsions. 2,944,896, 7-12-60, Cl. 96—65.

Rintoul, Harry A., and C. J. Cerulli, to Sperry Rand Corp. Pressure-responsive altitude control device. 2,944,432, 7-12-60, Cl. 74—96.

Riat, Michel: See—
Maurice, Jean, and Riat. 2,945,100.

Ritter, Ralph K.: See—
Kelemen, Frank K., and Ritter. 2,945,118.

Ritter, Roger: See—
Charle, Roger, Ritter, and Kalopissis. 2,944,942.

Riverside Mfg. Co., Inc.: See—
Choate, James R. 2,944,721.

Robbins & Myers, Inc.: See—
Rush, Robert M. 2,944,608.

Robert, Jean A.: See—
Gaillot, Paul, and Robert. 2,945,026.

Roberts, James W.: See—
Groves, Leonard H., Hall, and Roberts. 2,944,921.

Robertson, H. H. Co.: See—
Curran, Bernard E. 2,944,478.
Singleton, Fred G., and Schafer. 2,944,894.

Robinson, Charles F.: See—
Brubaker, Wilson M., and Robinson. 2,945,126.

Robinson, Ivan M.: See—
Brehmer, Donald L., Edwards, Robinson, Squire, and Starkweather. 2,944,993.

Robra, Helmut, to Schloemann Aktiengesellschaft. Equipment for forging the cranks of crankshafts in consecutive operations. 2,944,320, 7-12-60, Cl. 29—6.

Rockwall Co.: See—
Arrighini, Artil, and Bell. 2,944,334.

Rockwell Mfg. Co.: See—
Buttke, Richard A. 2,944,376.

Rockwell-Standard Corp.: See—
Rockwell, Willard F. 2,944,636.

Rockwell, Willard F., to Rockwell-Standard Corp. Emergency brake. 2,944,636, 7-12-60, Cl. 188—29.

Roethel, John H. Door lock. 2,944,850, 7-12-60, Cl. 292—223.

Rogin, Milton: See—
Howell, Thomas E., and Rogin. 2,944,461.

Rohlfs, John H., to The McKay Machine Co. Profile milling machine. 2,944,466, 7-12-60, Cl. 90—13.

Rohr Aircraft Corp.: See—
Herman, Hartley R., and Alsobrook. 2,944,504.
Raynes, Burt F. 2,944,500.

Rolingson, William R., to Monsanto Chemical Co. Preparation of melamine. 2,945,035, 7-12-60, Cl. 260—249.7.

Rollins, Eugene C. Beet harvester and cleaner. 2,944,611, 7-12-60, Cl. 171—58.

Rolls-Royce Ltd.: See—
Kerry, Thomas H., and Ward. 2,944,631.
Morley, Frederick W. W. 2,944,624.

Rolly, Heinrich: See—
Leditschke, Heinrich, Rolly, and Schmidt-Ruppin. 2,945,040.

Roney, Raymond B., and P. E. Massie, to Day-Ray Products Inc. Electrical socket. 2,945,202, 7-12-60, Cl. 339—50.

Rood, William E., Jr., and J. D. L. Williams, to C. S. Hadlock, d.b.a. Hadlock Welding and Machine Works. Irrigation furrow former. 2,944,612, 7-12-60, Cl. 172—118.

Roosendaal, Lambertus W.: See—
Jacobs, Henri J. A. M., Van De Weijdeven, and Roosendaal. 2,945,161.

Rosamilia, Peter L.: See—
Harvey, Mortimer T., and Rosamilia. 2,944,989.

Rosenkranz, George: See—
Djerassi, Carl, Sondheimer, and Rosenkranz. 2,945,028.

Rosin, Seymour, to Scanoptic, Inc. Anamorphic lens system. 2,944,464, 7-12-60, Cl. 88—57.

Rossi, Alberto: See—
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,043.
Hoffmann, Karl, Hunger, Kebrle, and Rossi. 2,945,044.

Rossman, Edwin F., to General Motors Corp. Device to prevent movement beyond predetermined rate. 2,944,638, 7-12-60, Cl. 188—96.

Rotobond: See—
Newcomb, Robert K. 2,944,587.

Roto-Swing Door Co., Inc.: See—
Gulick, John A., and Catlett. 2,944,281.

Rotol Ltd.: See—
Godden, Thomas E., and Morris. 2,944,769.

Rowe, Harry C., to Stewart-Warner Corp. Ultra high frequency tuner. 2,945,199, 7-12-60, Cl. 331—98.

Rowe, Oliver R.: See—
Wilson, Robert W., and Rowe. 2,944,495.

Rubenstein, Harry J. Wire display rack. 2,944,679, 7-12-60, Cl. 211—181.

Rumsey, Rollin D., to Houdaille Industries, Inc. Linear positioning servo mechanism. 2,944,559, 7-12-60, Cl. 137—85.

Rush, Robert M., to Robbins & Myers, Inc. Centralizing spider for wells. 2,944,608, 7-12-60, Cl. 166—241.

Ruskin, Simon L., to Union Carbide Corp. Preparation of rocket propellants. 2,944,881, 7-12-60, Cl. 52—.5.

Russell, Robert C., to Eaton Mfg. Co. Variable reactor hydraulic torque converter. 2,944,402, 7-12-60, Cl. 60—54.

Russell, Robert C., to Eaton Mfg. Co. Multiple-turbine torque converter. 2,944,441, 7-12-60, Cl. 74—677.

Rutherford, Henry C.: See—
Kaspari, Albert E., Rutherford, and Avalon. 2,944,663.

Ryan Aeronautical Co.: See—
Poirier, Jules H., and Grove. 2,945,136.

Sacchi, Eduardo M., and H. G. Luther, to Chas. Pfizer & Co., Inc. Process for stimulating conception in animals. 2,944,541, 7-12-60, Cl. 128—1.

Saco-Lowell Shops: See—
West, Paul B. 2,944,302.

Sagal, John, Jr.: See—
Carroll, Burt H., Sagal, and Beavers. 2,944,902.

Sagar, Paul B. Induced draft gas fired space heating system. 2,944,596, 7-12-60, Cl. 158—7.

Sage, Philip G. Garment hanger structure. 2,944,711, 7-12-60, Cl. 223—94.

Saiant, Abner S., to General Foods Corp. Process for treating thiamine. 2,945,039, 7-12-60, Cl. 260—256.6.

Sallmann, Richard, to Ciba Ltd. Thiophosphoric acid ester. 2,944,933, 7-12-60, Cl. 167—22.

Sallo, Jerome S.: See—
Fisher, Robert D., Sallo, and Teu. 2,945,217.

Salmon, Benjamin J. M.: See—
Paris, Francois G., Bertin, and Salmon. 2,944,991.

Salvat, Marcel: *See*—
Bruck, Henri, Gendreau, and Salvat. 2,945,125.

Samcoe Holding Corp.: *See*—
Cohn, Samuel J., and E. 2,944,317.

Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Impeller for turbine engine and the like. 2,944,786, 7-12-60, Cl. 252—40.

Samuel, Richard W., to General Electric Co. Compressional wave transducer. 2,945,209, 7-12-60, Cl. 340—10.

Sandberg, Ray A., to Houdaille Industries, Inc. Method of brazing refrigerator evaporators. 2,944,338, 7-12-60, Cl. 29—493.

Sanders Associates, Inc.: *See*—
Wild, Norman E., and Williston. 2,945,233.

Sandgren, Find, and T. Giscehl, to Electric Eye Equipment Co. Multi-unit printing-press drive. 2,944,844, 7-12-60, Cl. 192—.02.

Sanitor Mfg. Co.: *See*—
Thomasma, John C. and C. W. 2,944,664.

Sannipoli, Alfred L., and E. E. Thomas, to Seamless Covers, Inc. Method of mounting fabric sleeves on hollow cores to form paint rollers. 2,944,588, 7-12-60, Cl. 154—41.

Sansone, Alfred: *See*—
De Blasio, James J., Podsiadlo, and Sansone. 2,944,563.

Sargent, Raymond F.: *See*—
Lane, Raymond J., and Sargent. 2,944,764.
Lane, Raymond J., and Sargent. 2,944,765.

Sauter, Erwin E., A. F. McDonald, and J. A. Charlesworth, to South African Coal, Oil and Gas Corp. Ltd. Process for production of an iron catalyst. 2,944,988, 7-12-60, Cl. 252—443.

Sauter, Karl, to Luwa Ltd. Air conditioning apparatus. 2,944,628, 7-12-60, Cl. 183—32.

Scag, Dane T.: *See*—
Odell, Robert C., Frantzel, Scag, and Netzler. 2,944,753.

Scallet, Barrett L.: *See*—
Commerford, John D., and Scallet. 2,944,912.

Scanoptic, Inc.: *See*—
Rosin, Seymour. 2,944,464.

Scansani, Robert M., to Bomac Laboratories Inc. Magnetron device. 2,945,150, 7-12-60, Cl. 315—39.61.

Scarbrough, Alfred D.: *See*—
Gyger, Cecil E., and Scarbrough. 2,945,216.

Schaaber, Otto. Rotary field chill-mold. 2,944,309, 7-12-60, Cl. 22—57.2.

Schaaf, Arthur A. Effluent regulator for septic tanks. 2,944,669, 7-12-60, Cl. 210—121.

Schaefer, Hugh F.: *See*—
Johnson, Richard E., Cahoon, and Schaefer. 2,945,079.

Schaefer, Robert H.: *See*—
Stadthaus, Kurt R., Bobo, and Schaefer. 2,944,326.

Schaefer, Rudolph. Wire stretcher. 2,944,786, 7-12-60, Cl. 254—161.

Schafer, Kenneth A.: *See*—
Singleton, Fred G., and Schafer. 2,944,994.

Schaffernicht, Walter, and J. E. Otto, to Telefunken G.m.b.H. Electronic line storage device. 2,945,142, 7-12-60, Cl. 313—68.

Scharfenberger, Friedrich: *See*—
Scholl, Mario, Obermaier, and Scharfenberger. 2,944,318.

Schaufelberger, Henry W., to Western Electric Co., Inc. Article feeding fixture. 2,944,499, 7-12-60, Cl. 113—38.

Scheidorf, Marvel W., to Andrew Corp. Communication antenna. 2,945,231, 7-12-60, Cl. 343—800.

Schjolin, Hans, to General Motors Corp. Hydraulic cooling system for brakes, transmission, torque converter and differential. 2,944,618, 7-12-60, Cl. 180—54.

Schloemann Aktiengesellschaft: *See*—
Robra, Helmut. 2,944,320.

Schmidt, Lothar, and E. Haba, to VEB Carl Zeiss Jena. Secondary electron multipliers. 2,945,144, 7-12-60, Cl. 313—95.

Schmidt-Ruppin, Heins: *See*—
Leditschke, Heinrich, Kolly, and Schmidt. 2,945,040.

Schmitt, Henri F.: *See*—
Bertin, Jean H., and Schmitt. 2,944,386.

Schneckenberger, Adolf. Detachable fastening device. 2,944,311, 7-12-60, Cl. 24—104.

Schneider, Edgar C., to United Aircraft Corp. Bearing mounting and lubrication. 2,944,857, 7-12-60, Cl. 308—187.

Schneider, Johann: *See*—
Pleuger, Friedrich W., and Schneider. 2,944,490.

Schneider, Jos., & Co., Optische Werke: *See*—
Tesch, Karl. 2,944,477.

Schoeffel, Eugene W.: *See*—
Barton, Daniel M., Schoeffel, and Zimmermann. 2,944,396.

Scholl, Mario, W. Obermaier, and F. Scharfenberger, to Obermaier & Cie. Material carrier for wet treatment of textiles. 2,944,318, 7-12-60, Cl. 26—58.

Schon, Charles E.: *See*—
Patterson, Morehead, and Schon. 2,944,819.

Schraegle, Fritz. Automatic handweaving loom device. 2,944,569, 7-12-60, Cl. 139—33.

Schubert, Bernhard, to Hauni-Werke Korber & Co. K.G. Device for aligning filter rod portions in filter tip cigarette making machines. 2,944,654, 7-12-60, Cl. 198—32.

Schuch, Kurt, to VEB Carl Zeiss Jena. Measuring apparatus having optical and photoelectric means. 2,945,132, 7-12-60, Cl. 250—220.

Schultz, Robert D.: *See*—
Moe, George, Schultz, Shepherd, and Cromwell. 2,944,561.

Schulz, Walter E., and G. I. Seitz; said Seitz assor. to said Schulz. Method of driving studs into bodies by high pressure gases. 2,944,261, 7-12-60, Cl. 1—80.

Schurecht, Harry G., to Champion Spark Plug Co. Ceramic spark plug insulator. 2,944,910, 7-12-60, Cl. 106—46.

Schwartz, Sol. Packing device for pile fabrics. 2,944,751, 7-12-60, Cl. 242—62.

Schwartz, Sol. Machine for packing pile fabrics. 2,944,752, 7-12-60, Cl. 242—62.

Schweikert, John W.: *See*—
Munn, Jay A., Schweikert, Sphar, and Berning. 2,944,331.

Schweißerliebe Industrie-Gesellschaft: *See*—
Heisner, Hans. 2,944,468.

Schwinn, Frederick H. Anti-creeper for railway rails. 2,944,738, 7-12-60, Cl. 238—217.

Scobeld, Raymond C., to Phillips Petroleum Co. Preparation of reactor effluent for recovery of acetylene and the like therefrom. 2,945,075, 7-12-60, Cl. 260—679.

Scopp, Irwin W.: *See*—
Kilbrick, Andre C., Scopp, and Colton. 2,944,926.

Scott, Donald B., to Allis-Chalmers Mfg. Co. Motor generator induction heating system. 2,945,112, 7-12-60, Cl. 219—10.77.

Scott, Victor J., and J. C. Dapper, to Avco Mfg. Corp. Noise inverter circuit. 2,945,090, 7-12-60, Cl. 178—7.3.

Seamless Covers, Inc.: *See*—
Sannipoli, Alfred L., and Thomas. 2,944,583.

Sedgfield, Hugh B., to The Sperry Gyroscope Co. Ltd. Gyroscopic apparatus. 2,944,428, 7-12-60, Cl. 74—5.

Segar, Asa B., and H. G. Esch, to Morris Clay Products Co. Method of hacking brick. 2,944,687, 7-12-60, Cl. 214—152.

Seiffer, Joseph, R. S. Haastick, and M. B. Freed, to American Home Products Corp. Nicotinic acid ester of certain hydroxyalkylenesaminodiacetamides. 2,945,041, 7-12-60, Cl. 260—295.5.

Seitz, Georg L.: *See*—
Schulz, Walter E., and Seitz. 2,944,261.

Seitz, Karl: *See*—
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,021.
Fasciati, Alfred, Gunst, Riat, and Seitz. 2,945,022.

Sellati, Jack. Lawn sprinkler system attachment. 2,944,561, 7-12-60, Cl. 137—268.

Selleck, Robert W. Kite string traverse device. 2,944,775, 7-12-60, Cl. 244—155.

Sellon, Raymond N., Jr., to Arvin Industries, Inc. Supports for ironing tables. 2,944,254, 7-12-60, Cl. 38—12.

Seltzer, Edward, to Thomas J. Lipton, Inc. Process for preparing quick-cooking barley. 2,944,904, 7-12-60, Cl. 99—80.

Selwitz, Charles M.: *See*—
Franke, Norman W., Selwitz, and Whitaker. 2,945,080.

Senger, Werner I. Stroboscopic determination of angle of unbalance in rotary workpieces. 2,944,424, 7-12-60, Cl. 73—466.

Sennet, Edith L.: *See*—
Levkoff, David. 2,944,720.

Serio, Anthony W. Receptacle and cover therefor. 2,944,691, 7-12-60, Cl. 215—63.

Seubert, George A., Jr.: *See*—
Levy, M Frank, and Seubert. 2,945,045.

Severinsen, Arne R., ½ to A. C. Johnson. Pneumatic control means for reciprocable pistons. 2,944,530, 7-12-60, Cl. 121—158.

Sexton, Arthur R.: *See*—
Horsley, Lee H., and Sexton. 2,945,056.

Shackelford, Milton H.: *See*—
McCardle, Arthur, Jr., and Shackelford. 2,944,390.

Shanley, Edward S., to Food Machinery and Chemical Corp. Electrical temperature responsive device. 2,945,196, 7-12-60, Cl. 338—28.

Shannon, Jack F.: *See*—
Green, Thomas A., Gorrie, Shannon, and Fink. 2,945,120.

Shapiro, Jack. Compact cathode ray tube. 2,945,143, 7-12-60, Cl. 313—82.

Sharp, John R.: *See*—
Arnot, Alfred R. R. 2,944,889.

Shatynski, John J.: *See*—
Waters, Elmer E., Shatynski, and Koch. 2,944,976.

Shekels, Howard D., and G. B. Newhouse, to Bell & Howell Co. Apparatus for reproducing intelligence by compound modulation. 2,945,212, 7-12-60, Cl. 340—174.

Shell Oil Co.: *See*—
Fischer, Rudolph F. 2,945,018.
Hartley, James, and Downer. 2,945,014.
Kloosterziel, Hendrik, and Pieters. 2,945,071.
Kruijer, Geert G. 2,944,807.
Lorenzsen, Lyman E., Zachar, and Jones. 2,944,974.
Low, Hans, and Reynolds. 2,944,815.
Peterson, Walter H. 2,944,970.
Van Dijck, Willem J. D. 2,944,620.
Wilson, Raymond A. 2,944,883.

Shen, Kwan-Ting: *See*—
De Groote, Melvin, and Shen. 2,945,005.

Shepherd, Joseph L.: *See*—
Moe, George, Schultz, Shepherd, and Cromwell. 2,944,951.

Sherman, Orville R., to Owens-Illinois Glass Co. Combination plasticizer, extruder and injection cylinder with recirculation. 2,944,288, 7-12-60, Cl. 18—30.

Sherman, William R., to Abbott Laboratories. Thiosemicarbazides. 2,945,047, 7-12-60, Cl. 260—247.2.

Shields, William H., and H. T. Buckley, to Emery Industries, Inc. Process for lubricating and promoting the cohesion of textile fibers. 2,944,920, 7-12-60, Cl. 117—139.5.

Shintaku, Keiichi. Horn device. 2,944,500, 7-12-60, Cl. 116—142.

Shipp, John W., to Athens Plow Co. Offset harrow. 2,944,614, 7-12-60, Cl. 172—316.

Shirk, Newman S. Reversal film method. 2,944,897, 7-12-60, Cl. 96—64.

Shore, Charles, and E. Leshner, to Falco Products Co. Extension ladder. 2,944,625, 7-12-60, Cl. 182—106.

Short, James N.: *See*—
Goodhue, Lyle D., and Short. 2,944,934.

Shunk, Clifford H., and K. Folkers, to Merck & Co., Inc. Mevalonic acid. 2,945,062, 7-12-60, Cl. 260—535.

Shymanski, Adolph A., to Zephyr Mfg. Co. Dimpling tool. 2,944,531, 7-12-60, Cl. 153—21.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Folberth, Otto G. 2,944,072.

Sierra Engineering Co.: *See*—
James, Robert K. 2,944,846.

Sigrist, George. Feed hopper and dispensing device. 2,944,517, 7-12-60, Cl. 119—52.

Sikorsky, Igor I., to United Aircraft Corp. Helicopter power transmission system. 2,944,609, 7-12-60, Cl. 170—135.4.

Silagi, George. Baby bottle holder. 2,944,779, 7-12-60, Cl. 248—103.

Simmonds, Charles G. Moulded plastic article. 2,944,459, Cl. 84—380.

Simpson, Arthur P., to American Machine & Foundry Co. Self-leveling dispenser. 2,944,672, 7-12-60, Cl. 211—49.

Sinclair Refining Co.: *See*—
Kleinholz, Milton P. 2,944,971.

Singer Mfg. Co., The: *See*—
Eusepi, Martin W. 2,944,845.
Waterman, Max L. 2,944,497.

Singleton, Fred G., and K. A. Schafer, to H. H. Robertson Co. Method of making transparent unsaturated polyester-styrene-glass fiber composition. 2,944,994, 7-12-60, Cl. 260—40.

Sintercast Corp. of America: *See*—
Koenig, Peter J. 2,944,893.

Sippel, Hans, to Triumph Werke Nurnberg A.G. Shifting arrangement for typewriters. 2,944,666, 7-12-60, Cl. 197—74.

Skarstrom, Charles W., to Esso Research and Engineering Co. Method and apparatus for fractionating gaseous mixtures by adsorption. 2,944,627, 7-12-60, Cl. 183—4.7.

Skinner, Peggy: *See*—
Chapman, Christopher L. C., and Skinner. 2,945,078.

Skogsberg, Erik L. Party-line telephone system. 2,945,095, 7-12-60, Cl. 179—17.

Slaughter, Dean W.: *See*—
Mathison, Richard P., Slaughter, and Randolph. 2,945,191.

Slimak, Albert J.: *See*—
Hanley, John A. 2,944,359.

Sloan, Francis J., to Package Machinery Co. Forming containers. 2,944,295, 7-12-60, Cl. 18—56.

Smeaton, Frederick W. B., Retainer for use on collapsible squeeze type container. 2,944,706, 7-12-60, Cl. 222—553.

Smith, A. O., Corp.: *See*—
Anderson, Archie C. 2,944,830.
Church, Frank W., Jr. 2,944,686.
Griswold, Walter R. 2,944,655.
Maynard, John T. 2,944,297.
Paulu, Alex. 2,944,619.
Welndit, Theodore O. 2,944,583.

Smith, Charles R.: *See*—
Foley, John R., and Smith. 2,944,729.

Smith, Charles E.: *See*—
Francis, Gerald A., Davis, and Smith. 2,944,333.

Smith, Charles W., Jr., F. X. Mead, and E. H. Dunbar, Jr., to Chas. Pfizer & Co., Inc. Device for opening eggs. 2,944,575, 7-12-60, Cl. 146—2.

Smith, Claude C., Jr.: *See*—
Klapper, John J., and Smith. 2,944,380.

Smith, David S.: *See*—
Thompson, William M., Jr., Kron, and Smith. 2,944,457.

Smith, Donald R., and D. B. H. Coates, to Western Follower Corp. Cartridge magazine follower for automatic pistols. 2,944,367, 7-12-60, Cl. 42—50.

Smith, Edward A., to Raymond International Inc. Hydraulic jacking assembly for marine platforms. 2,944,403, 7-12-60, Cl. 61—46.5.

Smith, Frederick L.: *See*—
Davis, David A., Smith, and Snodgrass. 2,944,657.

Smith, John G., to Burroughs Corp. Document handling apparatus. 2,944,813, 7-12-60, Cl. 271—71.

Smith Kline & French Laboratories: *See*—
Gordon, Maxwell. 2,945,030.
Gordon, Maxwell. 2,945,031.

Smith, Lyndall K., to Instrumentals, Inc. Actuating linkage for a switch. 2,945,102, 7-12-60, Cl. 200—84.

Smith, Thomas R., and C. W. Burkland, to The Maytag Co. Filter for washing machine. 2,944,416, 7-12-60, Cl. 68—18.

Snelson, Howard J.: *See*—
Prior, William L., and Snelson. 2,944,291.

Snodgrass, James H.: *See*—
Davis, David A., Smith, and Snodgrass. 2,944,657.

Snyder, Vilas L. Vertically collapsible and telescoping trailer body. 2,944,852, 7-12-60, Cl. 296—23.

Societe Anonyme dite Societe Monsavon-L'Oreal: *See*—
Charle, Roger, Ritter, and Kalopissis. 2,944,942.

Societa Farmaceutici Italia: *See*—
Alberti, Carlo G., Vercellone, Di Marco, and Ghione. 2,945,034.

Societe Anonyme des Usines Chausson: *See*—
Chausson, Andre. 2,944,409.

Societe Anonyme dite: Societe Monsavon-L'Oreal: *See*—
Kalopissis, Gregoire, and Ghilardi. 2,944,969.

Societe Anonyme Francaise du Ferodo: *See*—
Maurice, Jean, and Riat. 2,945,100.

Societe Bertin & Cie: *See*—
Bertin, Jean H., and Schmitt. 2,944,386.
Paris, Francois G., Bertin, and Salmon. 2,944,891.

Societe des Usines Chimiques Rhone-Poulenc: *See*—
Gailliot, Paul, and Robert. 2,945,026.

Socony Mobil Oil Co., Inc.: *See*—
Barnet, Brunner C., and Parekh. 2,945,073.

Soddy, Thomas C., to Chicago Railway Equipment Co. Railway brake beam structure. 2,944,640, 7-12-60, Cl. 188—207.

Sondheimer, Franz: *See*—
Djerassi, Carl, Sondheimer, and Rosenkranz. 2,945,623.

Soule, Everett I. Sap collection apparatus and method. 2,944,369, 7-12-60, Cl. 47—82.

South African Coal, Oil and Gas Corp. Ltd.: *See*—
Sauter, Erwin R., McDonald, and Charlesworth. 2,944,988.

South Chester Corp.: *See*—
Krivulka, Albert S. 2,944,864.

South, Francis C., to United States of America, Navy. Sequential commutator switch. 2,945,096, 7-12-60, Cl. 200—23.

Spacht, Ronald E., to The Goodyear Tire & Rubber Co. Synergistic antioxidants. 2,945,001, 7-12-60, Cl. 260—45.95.

Spademan, Charles F.: *See*—
Bell, Robert R., and Spademan. 2,945,166.

Spademan, Charles F., to Toledo Scale Corp. Auxiliary load mechanism for weighing scales. 2,944,806, 7-12-60, Cl. 265—5.

Specialties Development Corp.: *See*—
Deasis, David H. 2,944,624.

Speer, Cleaver C., and W. W. Frank, to Curtiss-Wright Corp. Method of making hollow blades for turbine engines. 2,944,327, 7-12-60, Cl. 29—156.8.

Spencer, Glenn S., to Bendix Aviation Corp. Two speed hub for velocipedes and the like. 2,944,443, 7-12-60, Cl. 74—750.

Sperber, Andrew O., to Sperry Rand Corp. Apparatus for radio beam guidance of a missile craft. 2,945,226, 7-12-60, Cl. 343—107.

Sperry Gyroscope Co. Ltd., The: *See*—
Sedgfield, Hugh B. 2,944,428.

Sperry Rand Corp.: *See*—
Hittman, Lorran E., Gutlove, and Geyer. 2,945,154.
Jones, Grandville R., and Bentkowsky. 2,945,170.
Malcolm, Donald H., and Martin. 2,944,651.
Rintoul, Harry A., and Cerulli. 2,944,432.
Sperber, Andrew O. 2,945,226.

Sphar, James E.: *See*—
Munn, Jay A., Schweikert, Sphar, and Berning. 2,944,331.

Spitzer, Joseph G., L. S. Nazarevich, J. L. Lange, and H. S. Bondi, to Carter Products, Inc. Mayonnaise product and method of manufacture. 2,944,906, 7-12-60, Cl. 99—144.

Sprague Electric Co.: *See*—
Taylor, Walter H. 2,945,164.

Sprude, Edgar O., to Burroughs Corp. Mounting for magnetic cores. 2,945,215, 7-12-60, Cl. 340—174.

Squire, Edward N.: *See*—
Brebner, Donald L., Edwards, Robinson, Squire, and Starkweather. 2,944,993.

Stadler, Karl H., to Georg Hufmayel Werkzeugfabrik. Compound tool. 2,944,323, 7-12-60, Cl. 29—95.

Stadthaus, Kurt R., M. Bobo, and R. H. Schaefer, to General Electric Co. Method of staking blades. 2,944,326, 7-12-60, Cl. 29—156.8.

Staiger, Kurt: *See*—
Kamm, Wunibald I. E., Staiger, and Krautter. 2,944,579.
Potter, Donald A., and Staiger. 2,944,987.

Stamicarbon N. V.: *See*—
Van Den Berg, Pieter J., and Steeman. 2,944,862.

Stammer, Charles H., to Merck & Co., Inc. 2,4-dihydroxy-3-methylphenacylamine, 2-hydroxy-4-methoxy-3-methylphenacylamine and processes of preparing the same. 2,945,064, 7-12-60, Cl. 260—566.

Stancliff, Clifton L. and G. N. Method of reparing and preventing thermal damage in combustion region wall structures of liquid cooled internal combustion engines. 2,944,336, 7-12-60, Cl. 29—402.

Stancliff, Gerald N.: *See*—
Stancliff, Clifton L. and G. N. 2,944,336.

Stand, Maximillian, to The Venture Corporation. Silver alloys. 2,944,892, 7-12-60, Cl. 75—173.

Standard Cold Products Co., Inc.: *See*—
Szymanski, Antoni. 2,945,192.

Standard Equipment, Inc.: *See*—
Magness, Albert H. 2,944,797.

Stanius, Godfrey: *See*—
Wilson, Allen B., and Stanius. 2,944,503.

Stansbury, Roy E., and R. P. Louthan, to Phillips Petroleum Co. Insect combatting agent. 2,944,932, 7-12-60, 167—22.

Stanton, Charles B., to Imperial Chemical Industries Ltd. Apparatus for making branched pipe fittings. 2,944,501, 7-12-60, Cl. 113—44.

Starks, Fred W., to E. I. du Pont de Nemours and Co. Stabilization of chlorinated hydrocarbons. 2,945,070, 7-12-60, Cl. 260—652.5.

Starkweather, Howard W., Jr.: *See*—
Brebner, Donald L., Edwards, Robinson, Squire, and Starkweather. 2,944,993.

Starnes, William C.: *See*—
Kline, Robert R., Starnes, and Zabor. 2,944,880.

Steeman, Johannes W. M.: *See*—
Van Den Berg, Pieter J., and Steeman. 2,944,862.

Steinke, Lee, to Robert Bosch G. m. b. H. Vibratory electromagnetic device. 2,946,168, 7-12-60, Cl. 318—128.

Steinmetz, William J. Dispensing device. 2,944,707, 7-12-60, Cl. 222—254.

Stephan, Joseph. Placer type units for the recovery of mineral values. 2,944,668, 7-12-60, Cl. 209—443.

Stephen, William F.: *See*—
Johnson, Joel R., Lach, and Stephen. 2,944,332.

Stephenson, Daniel W.: *See*—
Kullgren, Gilbert V., and Stephenson. 2,944,236.

Sterling Drug Inc.: *See*—
Barton, Daniel M., Schoeffel, and Zimmermann. 2,944,396.

Stern Max H., to Eastman Kodak Co. Synthesis of β-carotene. 2,945,060, 7–12–60, Cl. 260—600.5.

Stern, Tobias: *See*—
Frisch, Martin, Cartinhour, Tinbergen, Stern, and Tidd. 2,944,543.

Stevens, Samuel N., to The Timken Roller Bearing Co. Electronic inspection apparatus. 2,944,667, 7–12–60, Cl. 209—111.

Stevenson, Betty F. Milk carton drip receptacle. 2,944,700, 7–12–60, Cl. 220—85.

Stewart-Warner Corp.: *See*—
Pikus, Tyman H. 2,944,535.
Fleasr, William. 2,945,162.
Potter, Donald A., and Staiger. 2,944,987.
Rowe, Harry C. 2,945,189.

Stiff, Bernard G. R., to High Voltage Engineering Corp. Vacuum-tight flanged pipe coupling. 2,944,842, 7–12–60, Cl. 285—368.

Stigler, Willard R.: *See*—
Drabik, Walter, and Stigler. 2,945,140.

Stigler, Willard R., and W. Drabik, to General Motors Corp. Method and wedges for conducting heat from slots of dynamoelectric machine. 2,945,139, 7–12–60, Cl. 310—214.

Stiller, Kenneth S. Tethered ball amusement device. 2,944,817, 7–12–60, Cl. 273—20.

Stokes, F. J., Corp.: *See*—
Bailey, Lawrence H., and Gabriel. 2,944,493.

Stoner, Lawrence F.: *See*—
Bogese, Stephen B., Lemon, and Stoner. 2,945,061.

Storch, Henry H., to American Cyanamid Co. Cigarette wrappers. 2,944,553, 7–12–60, Cl. 131—15.

Strader, William E., *See*—
Teters, Emily S., Aikins, and Strader. 2,944,652.

Strang, Charles D., to Kiekhaefer Corp. Flywheel alternator for an internal-combustion engine. 2,945,138, 7–12–60, Cl. 310—153.

Strang, Peter M., and J. G. Gamble, to L. M. Keeler. Apparatus for use in assembling and intertwining discrete fibers. 2,944,331, 7–12–60, Cl. 57—58.91.

Streeter, Victor L., to The Dole Valve Co. Flow meter. 2,944,420, 7–12–60, Cl. 73—209.

Strickland, Gordon R.: *See*—
Lane, Bernard F. A., and Strickland. 2,944,946.

Stroh, George E., R. L. Emminger, and W. H. Cowles, to Holley Carburetor Co. Pressure carburetor. 2,944,537, 7–12–60, Cl. 123—119.

Strom, Leland D., to Texas Instruments Inc. Rotary waveguide joint and switching structure. 2,945,193, 7–12–60, Cl. 333—7.

Stromberg, Verner L., and W. B. Hughes, to Petrolite Corp. Prevention of rust and corrosion. 2,944,969, 7–12–60, Cl. 252—8.55.

Strub, Henry M., Jr.: *See*—
Lawrence, Charles S., and Strub. 2,944,383.

Strumor, Mathew A., to Regent Plastics, Inc. Dispenser for paste material. 2,944,705, 7–12–60, Cl. 222—94.

Stuettig, David R., V. D. Jones, and R. G. Golding, to Zeta Electronics. Door operating mechanism. 2,944,810, 7–12–60, Cl. 268—59.

Stumpf, Howard, Jr., to West Virginia Pulp and Paper Co. Shelf extender display or storage device. 2,944,077, 7–12–60, Cl. 211—153.

Stupp, Bernard C. Apparatus for making friction tests. 2,944,417, 7–12–60, Cl. 73—9.

Sturdy-Cage Projects, Inc.: *See*—
Cage, John M. 2,945,089.

Sulphite Products Corp.: *See*—
Boggs, Lawrence A., and Wiley. 2,944,922.

Sulzer Freres, S.A.: *See*—
Pfarrwaller, Erwin. 2,944,571.

Sumner Iron Works, Inc.: *See*—
Fish, Marion F. 2,944,741.

Sun, Kuan-Han, P. R. Malmberg, and F. A. Pecjak, to Westinghouse Electric Corp. Fluorescent structures and method of manufacture. 2,945,128, 7–12–60, Cl. 250—80.

Swanson, Bernard A. Fluid motor with rotary and/or rectilinear movable piston. 2,944,520, 7–12–60, Cl. 121—17.

Swanson, Kenneth P. Top roll cradle. 2,944,300, 7–12–60, Cl. 19—131.

Swanson, Robert E., to Railway Appliance Research Ltd. Safety valve for automotive air brake systems. 2,944,856, 7–12–60, Cl. 303—84.

Swick, Edwin G., to Illinois Tool Works. Terminal clip structure and method and apparatus for applying same. 2,944,330, 7–12–60, Cl. 29—193.5.

Swift, Gilbert, and D. E. Barkalow, to Well Surveys, Inc. Calibrator for radioactivity well logging instruments. 2,945,129, 7–12–60, Cl. 250—83.

Sylvania Electric Products Inc.: *See*—
Alexander, Robert H. 2,944,549.
Evans, Lyle W. 2,944,916.
Gessford, Ross K. 2,945,148.
Pester, William B. 2,944,776.

Syntex, S.A.: *See*—
Djerassi, Carl, Sondheimer, and Rosenkranz. 2,945,028.

Taber, George H. Running gear and spring suspension for motor vehicles. 2,944,832, 7–12–60, Cl. 280—124.

Tamblyn, John W.: *See*—
Long, Selma H., Tamblyn, and Moore. 2,945,000.
Van Allan, James A., and Tamblyn. 2,945,002.

Tarbuck, Robert R., to Burroughs Corp. Coiled spring electrical connector. 2,945,200, 7–12–60, Cl. 339—18.

Tarmann, Bruno. Method of continuous casting. 2,944,310, 7–12–60, Cl. 22—200.1.

Taylor, Delbert E.: *See*—
Feist, Anton, and Taylor. 2,944,290.

Taylor, Eric W., to Electric & Musical Industries Ltd. Correcting for transmission variations in colour television channels. 2,945,086, 7–12–60, Cl. 178—5.4.

Taylor, Laurence R.: *See*—
Thompson, Willie E., and Taylor. 2,945,130.

Taylor, Philander E., to Cosmos Dental Products, Inc. Denture material composition and method of producing dentures. 2,944,330, 7–12–60, Cl. 18—55.1.

Taylor, Walter E., to Sprague Electric Co. Electrolyte and capacitor utilizing the same. 2,945,164, 7–12–60, Cl. 317—230.

Taylor, William E., Jr., to Lever Brothers Co. Striping dispenser. 2,944,704, 7–12–60, Cl. 222—94.

Taylor-Winfield Corp., The: *See*—
Harris, Jean F., and Horlacher. 2,945,117.

Technicon Instruments Corp.: *See*—
Polaris, Milton H. 2,945,113.

Tectum Corp.: *See*—
Prior, William L., and Snelson. 2,944,291.

Telefunken G.m.b.H.: *See*—
Marx, Georg F. 2,945,152.
Schafernicht, Walter, and Otto. 2,945,142.

Teletype Corp.: *See*—
Casanov, Raymond C. 2,944,467.
Gardberg, Joseph. 2,945,092.

Temple, Arthur E.: *See*—
Pagano, Joseph F., Temple, and Yacowitz. 2,944,907.

Templin, Gail H. Nail clinching apparatus. 2,944,250, 7–12–60, Cl. 1—1.

Terpstra, Marrine A.: *See*—
Quinn, John F., and Terpstra. 2,945,063.

Tesch, Karl, to Jos. Schneider & Co., Optische Werke. Objective diaphragm composed of swingable leaves. 2,944,477, 7–12–60, Cl. 95—63.

Teters, Emily S., W. A. Aikins, and W. E. Strader; said Aikins and Strader assors. to said Teters. Typewriter eraser. 2,944,652, 7–12–60, Cl. 197—181.

Texaco Inc.: *See*—
Dickens, Samuel P. 2,944,960.
Egan, Edmond F. 2,945,175.
Loofbourrow, Robert J. 2,944,621.
McIntosh, Claude H., and Ballard. 2,944,962.

Texas Instruments Inc.: *See*—
Strom, Leland D. 2,945,193.

Thermo Electric Mfg. Co.: *See*—
Anderson, Cleophas E., and Walsh. 2,945,184.

Thiokol Chemical Corp.: *See*—
Berenbaum, Morris B. 2,944,986.

Thoeming, George E., to Wonder Products Co. Plastic horse. 2,944,814, 7–12–60, Cl. 273—82.

Thomas, David R.: *See*—
Cherry, George J. N., and Thomas. 2,944,307.

Thomas, Earl E.: *See*—
Sannipoli, Alfred L., and Thomas. 2,944,588.

Thomas, Paul P., to American Metal Products Co. Control arm mounting for vehicle wheel suspension. 2,944,831, 7–12–60, Cl. 280—96.1.

Thomas, Robert M.: *See*—
Baldwin, Francis P., and Thomas. 2,944,578.

Thomasma, Charles W.: *See*—
Thomasma, John C. and C. W. 2,944,664.

Thomasma, John C. and C. W., to Sanitor Mfg. Co. Disposable seat covers. 2,944,684, 7–12–60, Cl. 206—37.

Thompson Brothers (Bilston) Ltd.: *See*—
Hutcheson, Alexander M. 2,944,670.

Thompson Ramo Wooldridge Inc.: *See*—
Angell, Pierce T., Anderson, and Hopper. 2,944,786.
Bayer, Frank C. 2,944,988.
Gyger, Cecil E., and Scarbrough. 2,945,216.
Herbenar, Edward J. 2,944,829.
Lane, Thomas R. 2,944,782.
Matthaei, George L. 2,945,195.
Sampietro, Achilles C. 2,944,785.
Wilson, Robert W. 2,944,597.

Thompson, Robert E.: *See*—
Fisher, Joseph D., Thompson, and Kottemann. 2,944,940.

Thompson, William M., Jr., M. Kron, and D. S. Smith, to Eastman Kodak Co. Film perforating machine. 2,944,457, 7–12–60, Cl. 83—221.

Thompson, Willie E., and L. R. Taylor, to Ekco Electronics Ltd. Thickness measuring gauges using radioactive material. 2,945,130, 7–12–60, Cl. 250—83.6.

Tidd, George W.: *See*—
Frisch, Martin, Cartinhour, Timbergen, Stern, and Tidd. 2,944,532.

Tiefenthaler, Robert R.: *See*—
Douglas, Henry H., Follwell, and Tiefenthaler. 2,944,626.

Tillotson, Wesley T., and F. W. Easterday, to United States Gypsum Co. Binder distribution and atomizing system for fiberizing apparatus. 2,944,284, 7–12–60, Cl. 18—2.5.

Time, Inc.: *See*—
Faeber, Harry W. 2,944,345.

Timken Roller Bearing Co., The: *See*—
Stevens, Samuel N. 2,944,667.

Tinbergen, William: *See*—
Frisch, Martin, Cartinhour, Timbergen, Stern, and Tidd. 2,944,532.

Tobey, William A., to Manistee Engineering Co. Multi-blade circulator and evaporator construction. 2,944,600, 7–12–60, Cl. 159—23.

Tokheim Corp.: *See*—
Carnagua, Harold E., and Tye. 2,944,748.

Toledo Scale Corp.: *See*—
Bell, Robert E., and Spademan. 2,945,166.
Spademan, Charles F. 2,944,808.

Tolkmith, Henry, to The Dow Chemical Co. Organic compounds containing phosphorus and sulphur. 2,945,055, 7–12–60, Cl. 260—461.

Tollison, Paul L., and C. L. Ricards, to Wood Newspaper Machinery Corp. Machine for casting printing plates. 2,944,306, 7–12–60, Cl. 22—3.

Toope, Emory E., Jr., to Commercial Solvents Corp. Stable monopropellants. 2,944,385, 7–12–60, Cl. 60—35.4.

Townshend, Stanley C.: *See*—
Quenseau, Paul E., Townshend, and Young. 2,944,883.

Triangle Conduit & Cable Co., Inc.: *See*—
Donovan, Gordon L. 2,944,759.

Triumph Werke Nurnberg A.G.: *See*—
Sippel, Hans. 2,944,650.

Trump, John G.: *See*—
Van de Graaff, Robert J., and Trump. 2,945,141.

Tsu, Ignatius: *See*—
Fischer, Robert D., Sallo, and Tsu. 2,945,217.

Tuerck, Paul A.: *See*—
Carkhuff, Edwin D., and Tuerck. 2,944,936.

Tung-Sol Electric Inc.: *See*—
Firth, Bernard G. 2,945,151.

Twyman, L. Raymond. Air cooled clutch-brake. 2,944,647, 7–12–60, Cl. 192—18.

Tye, Joseph F.: *See*—
Carnagua, Harold E., and Tye. 2,944,748.

Tyler, John M., to United Aircraft Corp. Hollow vane exhaust silencer affecting thrust generation. 2,944,392, 7–12–60, Cl. 60—35.6.

Uddeholms Aktiebolag: *See*—
Wiklundh, Leif S.-E., Persson, and Holm. 2,944,924.

Udic Societe Anonyme: *See*—
Riehm, Theodor. 2,944,923.

Ulm, Robert A.: *See*—
Antonidis, John E., and Ulm. 2,944,427.
Antonidis, John E., and Ulm. 2,944,428.

Ungerer, Fritz. Method of manufacturing curved structural members from sheet metal. 2,944,585, 7–12–60, Cl. 153—107.

Union Carbide Corp.: *See*—
Gates, Stephen, and Mullins. 2,944,997.
Johnson, Richard E., Cahoon, and Schaefer. 2,945,079.
Langer, Theodore W., and Mago. 2,944,973.
Ruskin, Simon L. 2,944,881.

Union Tank Car Co.: *See*—
Basore, Cleburne A., and Barham. 2,944,405.
Hatamaka, Tad. 2,944,701.

United Aircraft Corp.: *See*—
Foley, John R., and Smith. 2,944,729.
Gingras, Richard E. 2,944,787.
Gluharef, Eugene M. 2,944,610.
Schneider, Edgar C. 2,944,857.
Sikorsky, Igor I. 2,944,609.
Tyler, John M. 2,944,392.

United Can & Glass Co.: *See*—
Jeremiah, Earl E. 2,944,688.

U.S. Electrical Motors, Inc.: *See*—
Myers, Thomas G. 2,944,433.

United States Gypsum Co.: *See*—
Tillotson, Wesley T., and Easterday. 2,944,284.

United States Movidyn Corp.: *See*—
Dunklin, Edward W., and Moudry. 2,944,967.

United States of America
Army: *See*—
Kamm, Wunibald I. E., Staiger, and Krautter. 2,944,579.
Pettey, Thomas M., Jr. 2,944,564.
Wolff, Guenter A. 2,944,885.
Atomic Energy Commission: *See*—
Moore, James E. 2,944,873.
Commerce: *See*—
Lesti, Arnold, and Baechtel. 2,945,220.
National Aeronautics and Space Administration: *See*—
Maxwell, William A., and Douglas. 2,944,816.
Navy: *See*—
Kurts, Mark. 2,944,267.
Macleish, Kenneth G., and Kesel. 2,944,783.
South, Francis C. 2,945,096.
Weinland, Clarence E. 2,944,880.

United States Rubber Co.: *See*—
Alexander, Charles H. 2,945,052.
Doomann, Lucian P. 2,944,927.
Doomann, Lucian P., and Barnes. 2,944,995.
Feist, Anton, and Taylor. 2,944,290.
Rhodes, Thomas J. 2,944,285.

United States Steel Corp.: *See*—
Halvorson, Gaylord H. 2,944,884.
Lynch, Carl R. 2,944,925.

Universal Oil Products Co.: *See*—
Chenicek, Joseph A. 2,944,903.

Uphues, Gerard T., to Chicago Railway Equipment Co. Railway car flush type side door. 2,944,303, 7–12–60, Cl. 20—23.

VEB Carl Zeiss Jena: *See*—
Schmidt, Lothar, and Hahn. 2,945,144.
Schuch, Kurt. 2,945,132.

Valle, Claude P., Jr.: *See*—
Bourbeau, Francis J., Greenhalgh, and Valle. 2,944,294.

Van Allan, James A., and J. W. Tamblyn, to Eastman Kodak Co. 2,2'-dihydroxy-4,4'-dimethoxybenzil as an ultraviolet stabilizer. 2,945,002, 7–12–60, Cl. 260—45.95.

Van Camp, Lincoln: *See*—
Wheeler, Walter G., Van Camp, Wood, and Lawson. 2,944,449.

Vandament, Claude W. Valve keeper tool. 2,944,451, 7–12–60, Cl. 81—5.1.

Van de Graaff, Robert J., and J. G. Trump, to High Voltage Engineering Corp. Unidirectional high-voltage generator. 2,945,141, 7–12–60, Cl. 313—62.

Van Den Berg, Pieter J., and J. W. M. Steeman, to Stamicarbon N.V. Process of producing a phosphate fertiliser. 2,944,882, 7–12–60, Cl. 71—39.

Vander Kaay, Henry A., to The New York Air Brake Co. Flow rate compensated valve. 2,944,527, 7–12–60, Cl. 121—46.6.

Van De Weijdeven, Leonardus F.: *See*—
Jacobs, Henri J. A. M., Van De Weijdeven, and Roosendaal. 2,945,161.

Van Dijck, Willem J. D., to Shell Oil Co. Method of recording seismograms and of preparing derived seismograms. 2,944,620, 7–12–60, Cl. 181—5.

Van Essen, Bonifacius G. Record player. 2,944,826, 7–12–60, Cl. 274—10.

Van Luit, Albert, & Co.: *See*—
Bruce, John K. 2,944,484.

Varhanik, Harold J.: *See*—
Freeding, John W., Hincs, and Varhanik. 2,944,766.

Varian Associates: *See*—
Chodorow, Marvin. 2,945,155.

Vasselli, Anthony J. Centering device for lathes and the like. 2,944,454, 7–12–60, Cl. 82—15.

Vaxico, Inc.: *See*—
Goldenberg, Lucien. 2,944,941.

Venture Corp., The: *See*—
Stand, Maximilian. 2,944,892.

Vercellone, Alberto: *See*—
Alberti, Carlo G., Vercellone, Di Marco, and Ghione. 2,945,034.

Vergobbi, John G., to Pneumatic Scale Corp., Ltd. Package. 2,944,715, 7–12–60, Cl. 229—14.

Vermija, Hendrikus C., to H. P. Gelderman & Zonen N.V. Process for bleaching textile materials pregnated with sodium chlorite. 2,944,872, 7–12–60, Cl. 8—108.

Virginia Plastics Co.: *See*—
Bogese, Stephen B., Lemon, and Stoner. 2,945,061.

Vis, Robert W. Veterinary medicament dispenser. 2,944,560, 7–12–60, Cl. 137—101.25.

Volkert, F. N., & Co.: *See*—
Christiansen, Robert J., Nevaimal, and Volkert. 2,944,456.

Volkswagenwerk G.m.b.H.: *See*—
Muegerl, Thomas, and Hoyer. 2,944,442.

Vosbikian, Peter S. and T. S. Shears. 2,944,340, 7–12–60, Cl. 30—248.

Vosbikian, Thomas S.: *See*—
Vosbikian, Peter S. and T. S. 2,944,340.

Voss, Robert W., to Moore Drop Forging Co. Chain link pipe wrench with plural handle-jaw surfaces. 2,944,452, 7–12–60, Cl. 81—68.

Wade, Linby L.: *See*—
Moyle, Clarence L., and Wade. 2,944,937.

Wagner Brothers, Inc.: *See*—
Borodin, Daniel J. 2,944,953.

Wahl, Frank: *See*—
Crosby, Charles H., Wahl, and Wahlberg. 2,944,378.

Wahlberg, Roger R.: *See*—
Crosby, Charles H., Wahl, and Wahlberg. 2,944,378.

Wald, Herman. Electric measuring device for mixed air temperature. 2,944,422, 7–12–60, Cl. 73—342.

Wallum, Alferd A. Automatic steering control for garden tractors or the like. 2,944,619, 7–12–60, Cl. 180—79.

Walsh, Carroll H. Polyphase fuse construction. 2,945,106, 7–12–60, Cl. 200—114.

Walsh, John C., and W. M. Haselton, to Cherry-Burrell Corp. Vacuum-steam processor. 2,944,479, 7–12–60, Cl. 99—251.

Walsh, John C., to Cherry-Burrell Corp. Gear pump. 2,944,487, 7–12–60, Cl. 103—7.

Walsh, William J.: *See*—
Anderson, Cleophas E., and Walsh. 2,945,184.

Waninger, Gilbert M., to Kabelschlepp G.m.b.H. Multi-polar terminal connection for electric conductors. 2,945,201, 7–12–60, Cl. 339—49.

Ward, Peter A.: *See*—
Kerry, Thomas H., and Ward. 2,944,631.

Washburn Co., The: *See*—
Glenny, Clarence S. 2,944,712.

Waterman, Max L., to The Singer Mfg. Co. Work feeding attachment for sewing machines. 2,944,497, 7–12–60, Cl. 112—212.

Waters, Elmer E., J. J. Shatynski, and J. E. Koch, Jr., to Celanese Corp. of America. Functional fluids. 2,944,976, 7–12–60, Cl. 252—76.

Watson, Richard M., and G. K. Finch, to Eastman Kodak Co. Manufacture of crotonic acid. 2,945,058, 7–12–60, Cl. 260—530.

Weaver, Donal C.: *See*—
Daggett, Billy E. 2,945,084.

Weaver, Jerald D., to North American Aviation, Inc. Caging device. 2,944,438, 7–12–60, Cl. 74—470.

Weaving, John H., to The Austin Motor Co. Ltd. Fuel economisers for petrol engines of the reciprocating piston type. 2,944,800, 7–12–60, Cl. 261—18.

Weber, Robert G., to Minneapolis-Honeywell Regulator Co. Automatic pilot. 2,944,768, 7–12–60, Cl. 244—77.

Weideman, Bernard A., and J. J. Groff, to Globe-Union Inc. Apparatus for filling receptacles. 2,944,573, 7–12–60, Cl. 141—87.

Weil, Alice C.: *See*—
Bush, Arthur B., Jr., and Weil. 2,944,980.

Weimer, John H., to The Hubley Mfg. Co. Toy cap revolver. 2,944,358, 7–12–60, Cl. 42—58.

Weinland, Clarence E., to United States of America, Navy. Rotating rocket motor and method of making same. 2,944,389, 7–12–60, Cl. 60—35.6.

Weissenberg, Bruno: *See*—
Richman, Oscar and S., Weissenberg, and Fabrizio. 2,944,262.

Weitsel, Edward W. Knitted hair drying cap. 2,945,115, 7–12–60, Cl. 219—46.

Welindt, Theodore O., to A. O. Smith Corp. Die structure for tangent bending of corrugated sheet metal. 2,944,583, 7–12–60, Cl. 153—46.

Well Surveys, Inc.: *See*—
Swift, Gilbert, and Barkalow. 2,945,129.

Wells, Willis L., to American Machine & Foundry Co. Bowling pin setting machine. 2,944,618, 7–12–60, Cl. 273—43.

Welsh, Charles B., to Gulf Oil Corp. Mixed metal salts of organic thiophosphates and process for preparing the same. 2,944,972, 7–12–60, Cl. 252—32.7.

Wennerbo, Erik, and G. Hedberg, to Industriaktiebolaget Luxor. Tone arm locking device. 2,944,824, 7–12–60, Cl. 274—1.

Wentz, Cecil W.: *See*—
Baker, Reuben C., Ragan, and Wentz. 2,944,608.

Werstein, Frank A. Dust protector cap for percussive hammers. 2,944,523, 7–12–60, Cl. 121—32.

Wertheimer, Kurt. Pillow or cushion. 2,944,266, 7–12–60, Cl. 5—341.

West, Lloyd R., and B. A. Hutchins, to Eastman Kodak Co. Regeneration of photographic silver bleach solutions. 2,944,895, 7–12–60, Cl. 96—60.

West, Paul B., to Saco-Lowell Shops. Drawing frame control mechanism. 2,944,302, 7–12–60, Cl. 19—166.

Westberg, Richard W., to Bell Telephone Laboratories, Inc. Method of fabricating semiconductor devices. 2,944,321, 7–12–60, Cl. 29—25.3.

West Virginia Pulp and Paper Co.: *See*—
Stumpf, Howard, Jr. 2,944,677.

Western Electric Co., Inc.: *See*—
Berger, Brynjulf. 2,945,204.
Crosby, Charles H., Wahl, and Wahlberg. 2,944,378.
Foster, Arthur G. 2,944,755.
Johnson, Joel R., Lach, and Stephen. 2,944,332.
Martin, Samuel M. 2,944,746.
Moren, Robert R. 2,945,177.
Raamot, Jaan. 2,945,135.
Schaufelberger, Henry W. 2,944,489.

Western Follower Corp.: *See*—
Smith, Donald R., and Coates. 2,944,357.

Westinghouse Air Brake Co.: *See*—
Hufnagel, Andrew. 2,945,107.

Westinghouse Electric Corp.: *See*—
Gun, Kuan-Han, Malmberg, and Pocjak. 2,945,138.

Wethern, James D.: *See*—
Knapp, Samuel B., and Wethern. 2,944,929.

Wheeler, Colin. Archery bows. 2,944,539, 7–12–60, Cl. 124—22.

Wheeler, Walter G., L. Van Camp, W. G. Wood, and R. A. Lawson, to Menasco Mfg. Co. Pressure welding apparatus. 2,944,449, 7–12–60, Cl. 78—82.

Whitaker, Arthur C.: *See*—
Franke, Norman W., Selwitz, and Whitaker. 2,945,050.

Whitby, Clyde M.: *See*—
Fontaine, Robert R., Whitby, and White. 2,944,347.

White, Hosea D., Jr.: *See*—
Fontaine, Robert R., Whitby, and White. 2,944,347.

Whitman, Harlan M., to Curtis 1000, Inc. Envelope for banking use. 2,944,728, 7–12–60, Cl. 229—80.

Whitmore, Charles H. Centrifugal dust collector. 2,944,632, 7–12–60, Cl. 183—77.

Whitney Blake Co., The: *See*—
Quackenbush, Edward C. 2,945,203.

Whitteker, Walter C.: *See*—
O'Brian, Edward D., Mallick, and Whitteker. 2,944,668.

Wicker, Thomas H., Jr.: *See*—
McConnell, Richard L., and Wicker. 2,945,063.

Wiggermann, Georg ¼ to W. Reinera. Rotary slide valves for hydraulic piston machines. 2,944,529, 7–12–60, Cl. 121—82.

Wiklundh, Leif S.-E., S. H. Persson, and K. A. Holm, to Uddeholms Aktiebolag. Method of cleaning storage and transport tanks, especially ship's tanks, from oil, fat, wax and the like. 2,944,924, 7–12–60, Cl. 134—11.

Wild, Norman R., and R. L. Williston, to Sanders Associates, Inc. High frequency antenna with laminated reflector. 2,945,233, 7–12–60, Cl. 343—840.

Wiley, Averill J.: *See*—
Boggs, Lawrence A., and Wiley. 2,944,922.

Wilhelmsen, Carl R., to Haseltine Research, Inc. Signal-translating system. 2,945,135, 7–12–60, Cl. 307—88.5.

Wilk, Richard S.: *See*—
Cannon, Jack A. 2,944,552.

Williams, James D. L.: *See*—
Rood, William E., Jr., and Williams. 2,944,612.

Williamson, Marshall L., to Federal Paper Board Co., Inc. Multicellular folding boxes. 2,944,718, 7–12–60, Cl. 229—28.

Willis, Eldredge. Water flow-regulating valve for a heat pump. 2,944,406, 7–12–60, Cl. 62—160.

Willis, Sumner C.: *See*—
Barabas, John J., and Willis. 2,944,595.

Willison, Donald, to National Malleable and Steel Castings Co. Draft rigging. 2,944,682, 7–12–60, Cl. 213—46.

Williston, Robert L.: *See*—
Wild, Norman R., and Williston. 2,945,233.

Willmer, Victor G. Carburettor vacuum control device. 2,944,646, 7–12–60, Cl. 192—3.

Willrodt, Marvin J.: *See*—
Hartke, Dexter, and Willrodt. 2,945,183.

Wilson, Allen B., and G. Stanius, to Acme Steel Co. Crimping tool for forming roof deck. 2,944,503, 7–12–60, Cl. 113—54.

Wilson, Charles V.: *See*—
Beavers, Dorothy J., Wilson, and Graham. 2,944,898.
Carroll, Burt H., Eilus, Graham, and Wilson. 2,944,900.

Wilson, Harold E., Jr., to The Martin Co. Method and apparatus for spray painting small articles. 2,944,512, 7–12–60, Cl. 118—303.

Wilson, Irvin A. Laundry system. 2,944,416, 7–12–60, Cl. 68—27.

Wilson, John H. Resilient fastage for drum flanges. 2,944,756, 7–12–60, Cl. 242—117.

Wilson, John H. Drum assembly. 2,944,790, 7–12–60, Cl. 254—187.

Wilson, Raymond A., to Shell Oil Co. Conversion of heavy oils to gasoline using the Zeldinel catalyst technique. 2,944,963, 7–12–60, Cl. 208—149.

Wilson, Robert W., and O. R. Rowe, to R. H. Bouligny, Inc. Plant setting machine. 2,944,495, 7–12–60, Cl. 111—2.

Wilson, Robert W., to Thompson Ramo Wooldridge Inc. Fuel system. 2,944,597, 7–12–60, Cl. 158—36.4.

Wiltse, Sumner D. Tube coupling having a reinforced sealing and locking ring. 2,944,840, 7–12–60, Cl. 285—232.

Winkler, Richard, and K. Dannenbler, to Berkley Machine Co. Method and apparatus for registering and timing envelope blanks and similar work pieces in the processing thereof. 2,944,812, 7–12–60, Cl. 271—1.

Winn, Oliver H., to General Electric Co. Electrical measuring arrangement. 2,945,179, 7–12–60, Cl. 324—68.

Wintermantel, Norman G., and T. I. Erstad, to American Machine and Foundry Co. Tricycle frame. 2,944,833, 7–12–60, Cl. 280—282.

Wittmuhns, Bruno A., to Hawbers Products Corp. Safety controls for elevators. 2,944,635, 7–12–60, Cl. 187—85.

Wolf, Joseph M. Bicycle repair and service stand. 2,944,811, 7–12–60, Cl. 269—145.

Wolff, Guenter A., to United States of America, Army. Method of purifying arsenic and antimony. 2,944,885, 7–12–60, Cl. 75—60.

Womack, Jack M., to Cavalier Corp. Carbonated beverage dispenser. 2,944,703, 7–12–60, Cl. 222—76.

Wonder Products Co.: *See*—
Thoeming, George E. 2,944,814.

Wood Newspaper Machinery Corp.: *See*—
ToHison, Paul L., and Ricardo. 2,944,306.

Wood, Wilbur G.: *See*—
Wheeler, Walter G., Van Camp, Wood, and Lawson. 2,944,449.

Woodard, Dudley H.: *See*—
Allen, Lloyd R., and Woodard. 2,944,879.
Allen, Lloyd R., and Woodard. 2,944,880.

Wright, John G., J. M. Chafin, and G. M. Wynn, to The Autoboler Co. Wire package and support. 2,944,758, 7–12–60, Cl. 242—129.

Wurtz, Clifford H.: *See*—
Mann, Leonard J., Murphy, and Wurtz. 2,944,410.

Wynn, George M.: *See*—
Wright, John G., Chafin, and Wynn. 2,944,758.

Wesolek, Walter R. to W. R. Grace & Co. Ethylene polymerization. 2,945,018, 7–12–60, Cl. 260—94.9.

Yacowits, Harold: *See*—
Pagano, Joseph F., Temple, and Yacowits. 2,944,907.

Yaeger, Adolph H.: *See*—
Dahlhauser, Anthony H., and Yaeger. 2,944,722.

Yang, Christen H. C., to Crown Zellerbach Corp. Sanitary paper and process of making the same. 2,944,931, 7–12–60, Cl. 162—179.

Yanulis, Michael, to Lowe Paper Co. Extrusion coating apparatus. 2,944,536, 7–12–60, Cl. 154—1.

Yardney International Corp.: *See*—
Chapman, Christopher L. C., and Skinner. 2,945,078.
Chapman, Christopher L. C., and Howard. 2,945,080.

Yeck, Robert P., to American Smelting and Refining Co. Electrolytic production of metal sheet. 2,944,954, 7–12–60, Cl. 204—216.

Young, Howard S.: *See*—
McDaniel, Edgar L., and Young. 2,945,057.

Young, Roland S.: *See*—
Queneau, Paul E., Townshend, and Young. 2,944,883.

Yuss, Daniel P. Bottle container. 2,944,695, 7–12–60, Cl. 220—21.

Z and W Machine Products, Inc.: *See*—
Ziberl, Frank A., Kish, and Hingson. 2,944,547.

Z and W Mfg. Corp.: *See*—
Ziberl, Frank A., Kish, and Hingson. 2,944,546.

Zabor, Robert C.: *See*—
Kline, Robert E., Starnes, and Zabor. 2,944,959.

Zachar, John: *See*—
Lorenzen, Lyman E., Zachar, and Jones. 2,944,974.

Zarnke, Albert H. Collapsible seat for golfers. 2,944,593, 7–12–60, Cl. 155—78.

Zarrillo, Salvatore N.: *See*—
Mucher, George J., and Zarrillo. 2,945,109.

Zebley, Donald D. Conveyor construction. 2,944,658, 7–12–60, Cl. 198—177.

Zeiss, Carl: *See*—
Rantsch, Kurt. 2,944,463.

Zephyr Mfg. Co.: *See*—
Shymanski, Adolph A. 2,944,581.

Zeta Electronics: *See*—
Stuettig, David R., Jones, and Golding. 2,944,810.

Ziegler, John A., to The Griffith Laboratories, Inc. Method of smoking sausage meat. 2,944,909, 7–12–60, Cl. 99—220.

Ziberl, Frank A., A. S. Kish, and R. A. Hingson, to Z and W Mfg. Corp. Portable respirations for anesthesia and other purposes. 2,944,546, 7–12–60, Cl. 128—203.

Ziberl, Frank A., A. S. Kish, and R. A. Hingson, to Z and W Machine Products, Inc. Portable anesthesia machine, oxygen inhalator and resuscitator. 2,944,547, 7–12–60, Cl. 128—203.

Zimmermann, Frederick J.: *See*—
Barton, Daniel M., Schoeffel, and Zimmermann. 2,944,394.

Zissl, Joseph L., to J. Darman. Loading plate for towel dispensers. 2,944,860, 7–12–60, Cl. 312—38.

CLASSIFICATION OF PATENTS

ISSUED JULY 12, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 1: 2,944,289
2: 2,944,290
60: 2,944,261
260: 2,944,262
2— 9: 2,944,262
4— 172: 2,944,264
206: 2,944,265
5— 241: 2,944,266
8— 11: 2,944,269
30: 2,944,270
41: 2,944,271
106: 2,944,272
9— 8: 2,944,267
9: 2,944,268
12— 146: 2,944,269
14— 27: 2,944,270
15— 28: 2,944,271
60: 2,944,272
105: 2,944,273
120: 2,944,274
236: 2,944,275
220.24: 2,944,276
220.3: 2,944,277
311: 2,944,278
16— 1: 2,944,279
21: 2,944,280
55: 2,944,281
87: 2,944,282
18— 2: 2,944,283
2.5: 2,944,284
12: 2,944,285
2,944,286
14: 2,944,287
20: 2,944,288
24: 2,944,289
45: 2,944,290
47.5: 2,944,291
48: 2,944,292
55.1: 2,944,293
56: 2,944,294
2,944,295
57: 2,944,296
58: 2,944,297
2,944,298
19— 121: 2,944,299
2,944,300
124: 2,944,301
166: 2,944,302
20— 23: 2,944,303
35: 2,944,304
56: 2,944,305
21— 3: 2,944,306
7: 2,944,307
26: 2,944,308
57.2: 2,944,309
200.1: 2,944,310
23— 14.5: 2,944,372
222.5: 2,944,374
273: 2,944,375
282: 2,944,376
290.5: 2,944,377
294: 2,944,378
24— 104: 2,944,311
161: 2,944,312
214: 2,944,313
270: 2,944,314
25— 133: 2,944,315
186: 2,944,316
26— 18.5: 2,944,317
28— 58: 2,944,318
62: 2,944,319
29— 6: 2,944,320
55.14: 2,944,322
78.3: 2,944,321
80: 2,944,323
155.3: 2,944,324
155.55: 2,944,325
155.6: 2,944,326
2,944,327
157.3: 2,944,328
165.5: 2,944,329
2,944,330
202: 2,944,331
208: 2,944,332
211: 2,944,333
265: 2,944,334
2,944,335
402: 2,944,336
417: 2,944,337
425: 2,944,338
493: 2,944,339
50— 245: 2,944,340
52— 62: 2,944,341
53— 174: 2,944,342
179.5: 2,944,343
54— 17: 2,944,344
55: 2,944,345
56— 10.4: 2,944,346
12: 2,944,347
2,944,348
54: 2,944,349
57— 4: 2,944,350
45: 2,944,351
54: 2,944,352
91: 2,944,353
59— 121: 2,944,354
60— 62: 2,944,355
105.1: 2,944,356
80: 2,944,357
62— 52: 2,944,358
80: 2,944,359
63— 10: 2,944,360
2,944,361
62.05: 2,944,362
63.22: 2,944,363
121: 2,944,364
142: 2,944,365
64— 127: 2,944,366
130: 2,944,367
66— 156: 2,944,368
67— 52: 2,944,369
80: P.P. 1,959
81: P.P. 1,958
69— 22: 2,944,370
64: 2,944,371
198: 2,944,372
2,944,373
110: 2,944,374
117: 2,944,375
248: 2,944,376
264: 2,944,377
265: 2,944,378
70— 5: 2,944,379
71— 39: 2,944,380
73— 9: 2,944,381
27: 2,944,382
116: 2,944,383
300: 2,944,384
320: 2,944,385
342: 2,944,386
368: 2,944,387
466: 2,944,388
74— 5: 2,944,389
5.36: 2,944,390
7: 2,944,391
2,944,392
10.5: 2,944,393
60: 2,944,394
89: 2,944,395
2,944,396
220.17: 2,944,397
2,944,398
223: 2,944,399
494.5: 2,944,400
2,944,401
470: 2,944,402
2,944,403
2,944,404
2,944,405
2,944,406
2,944,407
2,944,408
2,944,409
2,944,410
2,944,411
2,944,412
2,944,413
2,944,414
2,944,415
2,944,416
2,944,417
2,944,418
2,944,419
2,944,420
2,944,421
2,944,422
2,944,423
2,944,424
75— .5: 2,944,425
2,944,426
2,944,427
2,944,428
10.5: 2,944,429
60: 2,944,430
89: 2,944,431
2,944,432
220.17: 2,944,433
2,944,434
223: 2,944,435
494.5: 2,944,436
2,944,437
470: 2,944,438
2,944,439
2,944,440
2,944,441
2,944,442
2,944,443
2,944,444
76— .5: 2,944,445
2,944,446
2,944,447
2,944,448
77— 5: 2,944,449
60: 2,944,450
81— 5.1: 2,944,451
2,944,452
2,944,453
82— 16: 2,944,454
83: 2,944,455
83— 181: 2,944,456
231: 2,944,457
437: 2,944,458
84— 260: 2,944,459
86— 33: 2,944,460
36: 2,944,461
2,944,462
30: 2,944,463
2,944,464
2,944,465
11: 2,944,466
12: 2,944,467
2,944,468
88— 8: 2,944,469
62: 2,944,470
95— 4.8: 2,944,471
2,944,472
10: 2,944,473
11: 2,944,474
44: 2,944,475
55: 2,944,476
62: 2,944,477
98— 3: 2,944,894
80: 2,944,895
2,944,896
2,944,897
2,944,898
2,944,899
2,944,900
2,944,901
2,944,902
99— 88: 2,944,478
90— 8: 2,944,903
80: 2,944,904
144: 2,944,905
167: 2,944,907
168: 2,944,908
229: 2,944,909
261: 2,944,479
101— 11: 2,944,480
27: 2,944,481
177: 2,944,482
368: 2,944,483
433: 2,944,484
103— 24: 2,944,485
40: 2,944,486
105— 7: 2,944,487
10: 2,944,488
127: 2,944,919
130.5: 2,944,920
161: 2,944,921
115— 283: 2,944,510
343: 2,944,511
362: 2,944,512
119— 3: 2,944,504
14.49: 2,944,514
23: 2,944,515
32: 2,944,516
56: 2,944,517
153: 2,944,518
120—42.19: 2,944,519
121— 17: 2,944,520
2,944,521
26: 2,944,522
33: 2,944,523
38: 2,944,524
2,944,525
41: 2,944,526
46.5: 2,944,527
2,944,528
48: 2,944,529
188: 2,944,530
123— 4: 2,944,531
185: 2,944,532
125— 13: 2,944,533
41.31: 2,944,534
46: 2,944,535
55: 2,944,536
119: 2,944,537
195: 2,944,538
124— 22: 2,944,539
126— 273: 2,944,540
127— 37: 2,944,922
2,944,923
129— 1: 2,944,541
2.08: 2,944,542
22: 2,944,543
142: 2,944,544
161: 2,944,545
203: 2,944,546
2,944,547
214: 2,944,548
216: 2,944,549
287: 2,944,550
295: 2,944,551
304: 2,944,552
131— 15: 2,944,553
198: 2,944,554
238: 2,944,555
133— 46: 2,944,556
134— 11: 2,944,924
164: 2,944,557
136— 30: 2,945,078
80: 2,945,079
148: 2,945,080
137— 82: 2,944,558
85: 2,944,559
101.24: 2,944,560
268: 2,944,561
270: 2,944,562
312: 2,944,563
326: 2,944,564
330: 2,944,565
2,944,566
625.3: 2,944,567
630.22: 2,944,568
139— 33: 2,944,569
36: 2,944,570
91: 2,944,571
46: 2,944,572
48: 2,944,573
54: 2,944,574
2: 2,944,575
3: 2,944,576
109: 2,944,577
142— 18: 2,944,578
143— 330: 2,944,579
416: 2,944,580
439: 2,944,581
21: 2,944,582
40: 2,944,583
48: 2,944,584
66: 2,944,585
107: 2,944,586
154— 1: 2,944,587
2.75: 2,944,588
91: 2,944,589
2: 2,944,590
25: 2,944,591
160— 268: 2,944,592
169— 22: 2,944,593
90: 2,944,594
148: 2,944,595
179: 2,944,596
166— 46: 2,944,597
65: 2,944,598
121: 2,944,599
143: 2,944,600
164: 2,944,601
239: 2,944,602
241: 2,944,603
167— 22: 2,944,582
2,944,583
30: 2,944,584
2,944,585
81: 2,944,586
53: 2,944,587
55: 2,944,588
65: 2,944,589
74: 2,944,590
78: 2,944,591
87.1: 2,944,592
129— 1: 2,944,541
2.08: 2,944,542
22: 2,944,543
142: 2,944,544
161: 2,944,545
203: 2,944,546
2,944,547
214: 2,944,548
216: 2,944,549
287: 2,944,550
295: 2,944,551
304: 2,944,552
131— 15: 2,944,553
198: 2,944,554
238: 2,944,555
133— 46: 2,944,556
134— 11: 2,944,924
164: 2,944,557
136— 30: 2,945,078
80: 2,945,079
148: 2,945,080
179— 15: 2,945,094
17: 2,945,095
180— 19: 2,944,816
62: 2,944,817
84: 2,944,818
79: 2,944,819
181— .5: 2,944,820
2,944,821
2,944,822
2,944,823
2,944,824
182— 103: 2,944,825
183— 2.5: 2,944,826
4.7: 2,944,827
2,944,828
2,944,829
2,944,830
2,944,831
184— 2: 2,944,832
2,944,833
2,944,834
2,944,835
2,944,836
2,944,837
186— 9: 2,944,838
2,944,839
2,944,840
2,944,841
187— 84: 2,944,842
2,944,843
2,944,844
2,944,845
2,944,846
189— 34: 2,944,847
2,944,848
2,944,849
190— 20: 2,944,850
2,944,851
2,944,852
2,944,853
2,944,854
2,944,855
2,944,856
2,944,857
191— 67: 2,945,096
61.55: 2,945,097
2,945,098
2,945,099
2,945,100
2,945,101
2,945,102
2,945,103
2,945,104
2,945,105
2,945,106
2,945,107
2,945,108
2,945,109
2,945,110
2,945,111
202— 82: 2,944,944
204— 15: 2,944,945
2,944,946
2,944,947
2,944,948
2,944,949
2,944,950
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2,944,960
2,944,961
2,944,962
2,944,963
2,944,964
170—134.4: 2,944,908
160.27: 2,944,910
171— 58: 2,944,911
173— 118: 2,944,912
2,944,913
2,944,914
2,944,915
174— 45: 2,945,081
80.61: 2,945,082
2,945,083
2,945,084
2,945,085
2,945,086
178— 5.4: 2,944,598
2,944,599
2,944,600
2,944,601
2,944,602
206— 2: 2,944,603
2,944,604
2,944,605
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2,944,672
2,944,673
2,944,674
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2,944,692
2,944,693
2,944,694
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2,944,699
2,944,700
2,944,701
2,944,702
2,944,703
2,944,704
2,944,705
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2,944,712
2,944,713
2,944,714
2,944,715
2,944,716
2,944,717
2,944,718
2,944,719
2,944,720
2,944,721
2,944,722
2,944,723
2,944,724
2,944,725
2,944,726
2,944,727
2,944,728
2,944,729
2,944,730
2,944,731
2,944,732
2,944,733
2,944,734
2,944,735
2,944,736
2,944,737
2,944,738
2,944,739
2,944,740
2,944,741
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2,944,744
2,944,745
2,944,746
2,944,747
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2,944,750
2,944,751
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2,944,758
2,944,759
2,944,760
2,944,761
2,944,762
2,944,763
2,944,764

204— 204: 2,944,956
302: 2,944,955
8: 2,944,956
111: 2,944,957
462: 2,944,958
210— 64: 2,944,957
121: 2,944,959
122: 2,944,960
165: 2,944,671
211— 48: 2,944,672
95: 2,944,673
97: 2,944,674
124: 2,944,675
142: 2,944,676
153: 2,944,677
177: 2,944,678
181: 2,944,679
212— 3: 2,944,680
213— 43: 2,944,681
45: 2,944,682
211: 2,944,683
214— 1: 2,944,684
6: 2,944,685
17: 2,944,686
152: 2,944,687
2,944,688
630: 2,944,689
215— 48: 2,944,690
62: 2,944,691
219—10. 77: 2,945,112
20: 2,945,113
43: 2,945,114
46: 2,945,115
73: 2,945,116
97: 2,945,117
98: 2,945,118
123: 2,945,119
220— 9: 2,944,692
2,944,693
17: 2,944,694
21: 2,944,695
23: 2,944,696
59: 2,944,697
61: 2,944,698
64: 2,944,699
85: 2,944,700
2,944,701
221— 19: 2,944,702
222— 76: 2,944,703
94: 2,944,704
2,944,705
105: 2,944,706
254: 2,944,707
553: 2,944,708
223— 43: 2,944,709
78: 2,944,710
94: 2,944,711
224— 22: 2,944,712
45: 2,944,713
229— 8. 5: 2,944,714
14: 2,944,715
2,944,716
23: 2,944,717
29: 2,944,718
31: 2,944,719
2,944,720
34: 2,944,721
2,944,722
2,944,723
36: 2,944,724
43: 2,944,725
44: 2,944,726
45: 2,944,727
80: 2,944,728
230— 122: 2,944,729
127: 2,944,730
128: 2,944,731
141: 2,944,732
181—81. 12: 2,944,733
82. 6: 2,944,734
82. 7: 2,944,735
181: 2,944,736
2,944,737
188: 2,944,738
238— 217: 2,944,739
282: 2,944,740
239— 184: 2,944,741
486: 2,944,742
2,944,743
240— 32. 1: 2,944,120
241— 182: 2,944,744
242— 4: 2,944,745
35: 2,944,746
45: 2,944,747
47. 5: 2,944,748
55. 12: 2,944,750
55. 3: 2,944,749
62: 2,944,751
2,944,752
67. 3: 2,944,753
68. 5: 2,944,754
80: 2,944,755
117: 2,944,756
118. 4: 2,944,757
120: 2,944,758
2,944,759
130. 2: 2,944,760
130: 2,944,761
244— 12: 2,944,762
14: 2,944,763
15: 2,944,764
2,944,765
54: 2,944,766
77: 2,944,767
2,944,768
81: 2,944,769
83: 2,944,770
100: 2,944,771
111: 2,944,772
2,944,773
122: 2,944,774
155: 2,944,775
248— 11: 2,944,776
43: 2,944,777
62: 2,944,778
103: 2,944,779
221: 2,944,780
238: 2,944,781
261: 2,944,782
288: 2,944,783
250— 20: 2,945,121
31: 2,945,122
41. 9: 2,945,123
2,945,124
2,945,125
2,945,126
43. 5: 2,945,127
80: 2,945,128
83: 2,945,129
83. 6: 2,945,130
214: 2,945,131
220: 2,945,132
251— 110: 2,944,784
252— 8. 55: 2,944,966
2,944,969
18: 2,944,970
32. 7: 2,944,971
2,944,972
260— 47. 5: 2,944,973
51. 5: 2,944,974
62. 2: 2,944,975
70: 2,944,976
123: 2,944,977
231: 2,944,979
2,944,980
2,944,981
2,944,982
342: 2,944,978
344: 2,944,983
2,944,984
2,944,985
359: 2,944,986
372: 2,944,987
443: 2,944,988
263— 48: 2,944,785
55: 2,944,786
77: 2,944,787
254— 161: 2,944,788
173: 2,944,789
187: 2,944,790
265— 1. 4: 2,944,791
4: 2,944,792
24: 2,944,793
2,944,794
72: 2,944,795
76: 2,944,796
266— 21: 2,944,797
267— 270: 2,944,798
269— 177: 2,944,799
280— 8: 2,944,960
2,944,990
22: 2,944,991
32. 6: 2,944,992
37: 2,944,993
40: 2,944,994
41: 2,944,995
43. 4: 2,944,996
45. 5: 2,944,997
45. 8: 2,944,998
2,944,999
45. 83: 2,945,000
45. 85: 2,945,001
2,945,002
47: 2,945,003
2,945,004
53: 2,945,005
65: 2,945,006
75: 2,945,007
2,945,008
2,945,009
2,945,010
78: 2,945,011
78. 3: 2,945,012
86. 1: 2,945,013
87. 3: 2,945,014
88. 2: 2,945,015
94. 9: 2,945,016
2,945,017
2,945,018
2,945,019
2,945,020
183: 2,945,021
2,945,022
209: 2,945,023
2,945,024
2,945,025
239. 5: 2,945,026
239. 55: 2,945,027
2,945,028
2,945,029
243: 2,945,030
2,945,031
269—347. 2: 2,945,032
2,945,033
347. 7: 2,945,034
348. 7: 2,945,035
350: 2,945,036
2,945,037
355. 4: 2,945,038
355. 6: 2,945,039
395: 2,945,040
395. 2: 2,945,041
396: 2,945,042
399. 2: 2,945,043
2,945,044
399. 5: 2,945,045
419: 2,945,046
347. 3: 2,945,047
397. 5: 2,945,048
404: 2,945,049
413: 2,945,050
414: 2,945,051
461: 2,945,052
2,945,053
2,945,054
2,945,055
473: 2,945,056
486: 2,945,057
530: 2,945,058
535: 2,945,059
537: 2,945,060
551: 2,945,061
558: 2,945,062
563: 2,945,063
586: 2,945,064
2,945,065
567: 2,945,066
2,945,067
2,945,068
606. 5: 2,945,069
602. 5: 2,945,070
666: 2,945,071
671: 2,945,072
676: 2,945,073
679: 2,945,074
2,945,075
683: 2,945,076
683. 3: 2,945,077
261— 18: 2,944,800
24: 2,944,801
67: 2,944,802
262— 3: 2,944,803
7: 2,944,804
263— 7: 2,944,805
82: 2,944,806
2,944,807
265— 5: 2,944,808
68: 2,944,809
268— 89: 2,944,810
269— 146: 2,944,811
271— 1: 2,944,812
64: Re.24,843
71: 2,944,813
272— 82: 2,944,814
80: 2,944,815
273— 26: 2,944,816
2,944,817
43: 2,944,818
2,944,819
72: 2,944,820
82: 2,944,821
101: 2,944,822
143: 2,944,823
274— 1: 2,944,824
4: 2,944,825
10: 2,944,826
280—11. 33: 2,944,827
11. 35: 2,944,828
66: 2,944,829
80: 2,944,830
95. 1: 2,944,831
126: 2,944,832
282: 2,944,833
425: 2,944,834
443: 2,944,835
451: 2,944,836
502: 2,944,837
283— 28: 2,944,838
285— 45: 2,944,839
325: 2,944,840
343: 2,944,841
356: 2,944,842
286—11. 14: 2,944,843
287— 53: 2,944,844
2,944,845
91: 2,944,846
117: 2,944,847
292— 181: 2,944,848
222: 2,944,849
223: 2,944,850
294— 26: 2,944,851
296— 23: 2,944,853
301— 37: 2,944,853
302— 17: 2,944,854
303— 8: 2,944,855
64: 2,944,856
307— 82. 5: 2,945,133
2,945,134
2,945,135
105: 2,945,136
147: 2,945,137
308— 187: 2,944,857
310— 153: 2,945,138
214: 2,945,139
2,945,140
311— 38: 2,944,858
312— 15: 2,944,859
28: 2,944,860
195: 2,944,861
227: 2,944,862
250: 2,944,863
320: 2,944,864
341: 2,944,865
313— 62: 2,945,141
68: 2,945,142
83: 2,945,143
95: 2,945,144
108: 2,945,145
113: 2,945,146
217: 2,945,147
318: 2,945,148
346: 2,945,149
2,945,150
2,945,151
350: 2,945,152
315— 5. 5: 2,945,153
5. 39: 2,945,155
5. 47: 2,945,156
13: 2,945,157
39: 2,945,158
39. 61: 2,945,159
106: 2,945,160
205: 2,945,161
317— 101: 2,945,162
2,945,163
220: 2,945,164
246: 2,945,165
318— 26: 2,945,166
2,945,167
135: 2,945,168
257: 2,945,169
499: 2,945,170
321— 19: 2,945,171
2,945,172
322— 2: 2,945,173
323— 92: 2,945,174
324— 10: 2,945,175
34: 2,945,176
57: 2,945,177
2,945,178
2,945,179
68: 2,945,179
126: 2,945,180
154: 2,945,181
2,945,182
325— 48: 2,945,183
85: 2,945,184
102: 2,945,185
330— 20: 2,945,186
94: 2,945,187
2,945,188
331— 98: 2,945,189
112: 2,945,190
332— 16: 2,945,191
26: 2,945,192
339— 7: 2,945,193
10: 2,945,194
73: 2,945,195
335— 26: 2,945,196
143: 2,945,197
150: 2,945,198
180: 2,945,199
339— 18: 2,945,200
49: 2,945,201
80: 2,945,202
89: 2,945,203
113: 2,945,204
198: 2,945,205
276: 2,945,206
2,945,207
340— 10: 2,945,208
71: 2,945,209
72: 2,945,210
147: 2,945,211
174: 2,945,212
2,945,213
2,945,214
2,945,215
2,945,216
2,945,217
222: 2,945,218
281: 2,945,219
347: 2,945,220
2,945,221
366: 2,945,222
343— 6: 2,945,223
102: 2,945,224
107: 2,945,225
112: 2,945,226
731: 2,945,227
753: 2,945,228
754: 2,945,229
772: 2,945,230
850: 2,945,231
907: 2,945,232
940: 2,945,233
915: 2,945,234
346— 8: 2,944,866
80: 2,944,867
74: 2,944,868

Classification of Designs

D 3— 13: 188,368
D 4— 3: 188,369
D14— 6: 188,370
D16— 2: 188,371
188,372
188,373
D21— 6: 188,374
188,375
D25— 1: 188,376
D26— 5: 188,377
188,378
188,379
12: 188,380
D29— 11: 188,381
D30— 1: 188,382
D31— 4: 188,383
D35— 3: 188,384
D38— 2: 188,385
D44— 1: 188,386
D45— 16: 188,387
D49— 16: 188,388
30: 188,389
D49— 6: 188,390
D50— 3: 188,391
D54— 13: 188,392
D57— 1: 188,393
188,394
D58— 5: 188,395
12: 188,396
D58— 17: 188,397
26: 188,398
D60— 9: 188,399
188,400
188,401
D62— 1: 188,402
D66— 10: 188,403
D86— 188,404
D87— 2: 188,405
3: 188,406
188,407
188,408
D91— 3: 188,409

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 12, 1960 Volume 756 Number 2

TRADEMARKS

NOTICES

Notice of Tentative Recordation of a Trade Name

[T.D. 55157]

Tentative recordation of trade name under section 42 Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT
OFFICE OF THE COMMISSIONER OF CUSTOMS
Washington, D.C., June 16, 1960

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"FREE FILM CO.," a name used by Film Enterprises, Inc., in the film processing business and mail advertising, as well as national advertising. The principal plant of this company is located at 239 Hollywood Avenue, Hillside, Union County, New Jersey. FREE FILM CO., advertises "free film for life." For every exposed roll of film sent to this company, a free same size roll of fresh dated film along with the developed prints will be returned to the sender.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after July 15, 1960, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after July 15, 1960, of any opposition proceeding.

Until 45 days after July 15, 1960, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) RALPH KELLY,
Commissioner of Customs.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,406 (COCA COLA), The Coca-Cola Company, Tonic beverages and syrups for the manufacture of such beverages; **Reg. No. 47,189**, same; **Reg. No. 238,145**, same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146**, same; **Reg. No. 415,735** (COKE), same, Non-alcoholic maltless beverages and the syrups for making such beverages, **filed** May 16, 1960, D.C., S.D.N.Y., Doc. 60/1976, *Coca-Cola Company* v. *Michael Venevento, doing business as Bette Allen's.*

Reg. No. 47,189. (See Reg. No. 22,406.)

Reg. No. 140,845 (INTERNATIONAL), International Harvester Company, Plows, grainbinders, etc.; **Reg. No. 275,762**, same, Automobiles and motor trucks and structural parts thereof; **Reg. No. 615,685**, same, Material handling equipment, such as tractor mounted and wheeled land scrapers, grader blades, etc., **filed** Mar. 25, 1960, D.C., N.D. Wash.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,472
Date of oldest new application	Jan. 5, 1960
Date of oldest amended application	Dec. 1, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50		
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-5-60	12-1-59
Renewals (All Classes)	1-5-60	12-9-59
Sec. 12 (c) Publications (All Classes)	5-3-60	-------
	5-3-60	-------

Applications filed during the month of May 1960—2,017

Registrations Issued ..... 439—No. 700,716 to No. 701,154
Renewals Issued 99

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

(Seattle), Doc. 5030, *International Harvester Company* v. *International Ball & Roller Bearing Corporation et al.* Defendant enjoined May 16, 1960.

Reg. No. 228,145. (See Reg. No. 22,408.)

Reg. No. 228,146. (See Reg. No. 22,408.)

Reg. No. 275,768. (See Reg. No. 160,845.)

Reg. No. 344,139 (LOUIS), Louis Watch Co., Inc., Wrist watches, pocket watches, lapel watches, and fob watches, filed Aug. 12, 1957, D.C., S.D.N.Y., Doc. 123/241, *Louis Watch Co., Inc.* v. *Benjamin Hammerman et al., doing business as Hammerman Bros.* Stipulation and order of discontinuance May 27, 1960.

Reg. No. 415,735. (See Reg. No. 22,408.)

Reg. No. 541,973 (SICLE), Joe Lowe Corporation, Bags made of glassine, vegetable parchment, cellulose film or waxed paper; Reg. No. 552,672, same, Frozen confections on sticks, liquid concentrates for making the same, etc., filed May 17, 1960, D.C., S.D.N.Y., Doc. 60/1991, *Inter-Ocean Trading Corporation* v. *Joe Lowe Corporation.*

Reg. No. 544,315 (WONDER CREME), S. L. Newstead, doing business as Sally Lewis, Cosmetic cream, for use as a skin cleanser; to soften dry, chapped or scaly skin; and as a powder base, filed June 1, 1960, D.C., S.D.N.Y., Doc. 60/2166, *Sally Lewis Newstead, doing business as Sally Lewis* v. *The Lander Co., Inc.*

Reg. No. 552,672. (See Reg. No. 541,973.)

Reg. No. 615,685. (See Reg. No. 160,845.)

Reg. No. 617,131 (VOLKSWAGEN), Volkswagenwerk G.m.b.H., Automobiles and trucks, air craft, boats, and parts and accessories for automobiles, etc.; Reg. No. 621,849 (VW AND DESIGN), same, filed Mar. 10, 1960, D.C.N.J. (Newark), Doc. 274/60, *Volkswagenwerk G.m.b.H.* v. *Hillside Plaza Motors, Inc.* Judgment by consent; injunction granted May 18, 1960.

Reg. No. 621,138 (TRICOFURON), The Norwich Pharmacal Company, Antibacterial preparations for the treatment of vaginal infections, filed July 7, 1959, D.C.N.J. (Newark), Doc. 572/59, *The Norwich Pharmacal Co.* v. *Hoffmann-La Roche, Inc.* Stipulation and order dismissing complaint and counterclaim June 1, 1960.

Reg. No. 621,849. (See Reg. No. 617,131.)

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 81,038. Alginate Industries Limited, London, England. Filed Sept. 9, 1959.

PHYCOL

Owner of British Reg. No. B786,736, dated Feb. 3, 1959.
For Crude Alginate Used as an Additive to Foundry Sands.

SN 86,147. Haveg Industries, Inc., Wilmington, Del. Filed Nov. 27, 1959.



For High Temperature Resistant Plastic Material Used for Making Parts of Jet Missiles.
First use Aug. 4, 1959; Apr. 3, 1957, as part of a composite mark.

SN 87,837. E. R. Carpenter Co., Inc., Richmond, Va. Filed Dec. 22, 1959.

RICHFOAM

For Flexible Urethane Foams.
First use Sept. 1, 1959.

Class 2—Receptacles

SN 87,002. Swank, Inc., Attleboro, Mass. Filed Dec. 9, 1959.

MEMBER OF THE BAR

For Decanters.
First use Aug. 1, 1959.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 79,052. Emms Leather Goods Co. Inc., Jamaica, N.Y. Filed Aug. 5, 1959.

Emm-press

For Luggage.
First use Apr. 1, 1959.

SN 85,448. Lawrence A. Wilson, d.b.a. La-Da-To-Da Products, Fenton, Mo. Filed Nov. 16, 1959.

NEATER EATER

For Animal Feeding Dish With Enclosing Support.
First use Oct. 26, 1959.

SN 88,625. Shwayder Brothers, Inc., Denver, Colo. Filed Jan. 7, 1960.

NEW HORIZON

For Luggage.
First use Oct. 16, 1959.

SN 89,607. Shwayder Brothers, Inc., Denver, Colo. Filed Jan. 25, 1960.

HORIZON

For Luggage.
First use Oct. 16, 1959.

Class 5—Adhesives

SN 79,726. United States Gypsum Company, Chicago, Ill. Filed Aug. 17, 1959.

SHEETROCK

Owner of Reg. Nos. 153,038, 160,705, and 558,406.
For Adhesive for Attaching Wallboards to Framing Members.
First use Mar. 25, 1957.

Class 6—Chemicals and Chemical Compositions

SN 50,552. Texize Chemicals, Inc. (Delaware corporation), Greenville, S.C., assignee of Texize Chemicals, Inc. (South Carolina corporation), Greenville, S.C. Filed Apr. 28, 1958.

THE JANITOR IN THE DRUM

Owner of Reg. Nos. 642,186 and 644,302.
For Concentrated Bowl Cleaner, Disinfectant and Detergent-Disinfectant-Deodorant, Sold Primarily as Disinfectants and Deodorants With Incidental Cleaning Properties.
First use in December 1956 on concentrated bowl cleaner.

SN 53,345. The May Department Stores Company, St. Louis, Mo. Filed June 11, 1958.

ARCROSS

Owner of Reg. No. 625,527.
For Fragrance Spray for Household Use.
First use Jan. 5, 1958.

SN 67,759. Art Couch, d.b.a. Sure-Crop Chemical Co., Bayard, Nebr. Filed Feb. 16, 1959.

Chem-Sure-Grow

For Preparation for Treatment of Seeds and Bulbs.
First use June 1, 1958.

SN 77,144. Ross and White Company, Chicago, Ill. Filed July 6, 1959.

DUAL BRIGHT 35

For Brightening Agent for Aluminum and Stainless Steel With Incidental Cleaning Properties.
First use Apr. 29, 1959.

SN 77,525. Eastman Kodak Company, Rochester, N.Y. Filed July 13, 1959.

DIMEZONE

For Photographic Processing Chemicals.
First use June 16, 1959.

SN 78,308. William Dixon Incorporated, Newark, N.J. Filed July 20, 1959.

BATTERNS

For Self-Pickling Flux for Hardsoldering Precious Metals.
First use Feb. 1, 1933.

SN 79,562. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 14, 1959.

GY-VAP

For Household Deodorants.
First use July 28, 1959.

SN 79,563. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 14, 1959.

GY-FER

For Rust Inhibitors.
First use July 28, 1959.

SN 80,918. Osmose Wood Preserving Co. of America, Inc., Buffalo, N.Y. Filed Sept. 4, 1959.

OSMOSE PFR PRESERVATIVE FIRE RETARDANT FLAME PROOF

The words "Preservative," "Fire Retardant," and "Flame Proof" are disclaimed, apart from the mark as shown. Owner of Reg. Nos. 336,697 and 546,873.
For Chemical Composition for Impregnating Wood and Other Cellulosic Materials To Render the Same Fire Resistant.
First use June 24, 1959.

SN 84,615. Penola Oil Company, New York, N.Y. Filed Nov. 4, 1959.

ENCO

For Hydrocarbon Solvents, Rust Preventatives, Corrosion Inhibitors, and Insecticides.
First use Aug. 28, 1959, on rust preventatives and corrosion inhibitors.

SN 85,122. General Aniline & Film Corporation, New York, N.Y. Filed Nov. 12, 1959.

GAFAC

Owner of Reg. Nos. 658,185 and 679,844.
For Surface-Active Compounds and Compositions Having Wetting, Emulsifying, Dispersing, Foaming, and/or Detergent Properties.
First use Oct. 1, 1959.

SN 87,138. John T. Riddell, Inc., Chicago, Ill. Filed Dec. 11, 1959.

Riddell

Owner of Reg. Nos. 520,239, 654,167, and others.
For Water Repellent Shoe Preserver, Leather Conditioner and Preserver, and Deodorizer and Sanitizer for Use on Athletic Equipment and in Storage Places for Such Equipment.
First use Dec. 7, 1954.

SN 92,516. West Virginia Pulp and Paper Company, New York, N.Y. Filed Mar. 9, 1960.

VACON

For Lignosulfonate Having Surface Active Properties Useful as an Additive to Concrete Mixes.
First use Sept. 13, 1957.

Class 7 — Cordage

SN 82,601. S.A. Etablissements A. Van Haute-Vercauteren, Hamme/Durme, Belgium. Filed Oct. 2, 1959.

ELITE

Owner of Belgian Reg. No. 1098/59, dated Feb. 3, 1959.
For Sisal, Manila, Jute, and Other Textile Ropes, Steel Wire Ropes, and Mixed Ropes (a Combination of Steel Wire and Rope Yarns).

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 59,939. Aircraft Armaments, Inc., Cockeysville, Md. Filed Sept. 30, 1958.

AA INC.

Owner of Reg. No. 582,143.
For Turret Cupolas, Optical Fire Controls, Cartridge Actuated Devices, Guns, Guided Bombs, Practice Bombs, and Missile Components.
First use Mar. 6, 1952, on turret cupolas.

SN 59,942. Aircraft Armaments, Inc., Cockeysville, Md. Filed Sept. 30, 1958.

AA INC.

Owner of Reg. No. 582,143.
For Armored Vehicles and Rocket Sleds.
First use Sept. 26, 1955, on rocket sleds.

Class 10 — Fertilizers

SN 69,909. Pioneer Enterprises, Inc., Cleveland, Ohio. Filed Mar. 19, 1959.

BLACK GOLD

For Peat Humus.
First use Jan. 11, 1959.
Subj. to Intf. with SN 84,673.

SN 84,673. Lewis International Co., Newark, N.J. Filed Nov. 5, 1959.

BLACK GOLD

For Peat Sold as a Soil Conditioner.
First use Aug. 29, 1958.
Subj. to Intf. with SN 69,909.

Class 12 — Construction Materials

SN 68,851. Stran-Steel Corporation, Ecorse, Mich. Filed Mar. 3, 1959.

AIR METER

For Elongated Multiperforate Flexible Sheets Sold in Roll Form for Covering Ventilating Tunnels for Grain Storage Buildings.
First use Jan. 16, 1959.

SN 74,123. Dex Corporation, Akron, Ohio. Filed May 20, 1959.

DEX DOME

The word "Dome" apart from the trademark is disclaimed.
For Geodesic Buildings and Units To Produce Geodesic Buildings.
First use Mar. 3, 1959.

SN 77,051. American-Marietta Company, Chicago, Ill. Filed July 6, 1959.

TOP SEAL

Owner of Reg. No. 693,697.
For Preformed Extruded Ribbons of Mastic Sealing Material.
First use June 8, 1959.

SN 79,356. Sonoco Products Company, Hartsville, S.C. Filed Aug. 11, 1959.

DUROCON

Owner of Reg. Nos. 590,969, 664,271, and others.
For Bituminized Fiber Conduits.
First use May 26, 1959.

SN 81,005. National Wire Products Corporation, Baltimore, Md. Filed Sept. 8, 1959.

N

No claim is made to the illustration of the goods and the word "Mesh" apart from the mark as shown.
For Welded Wire Concrete Reinforcement Fabrics.
First use Aug. 25, 1959.

SN 84,901. Kingsberry Homes Corporation, Fort Payne, Ala. Filed Nov. 9, 1959.

KINGSBERRY

For Prefabricated Homes.
First use Mar. 2, 1959.

SN 85,640. Western Plywood Company Limited, Vancouver, British Columbia, Canada. Filed Nov. 18, 1959.

WESTREE

Owner of Canadian Reg. No. 117,297, dated Mar. 16, 1960.
For Lumber.

SN 86,019. The Conner Lumber and Land Company, Laona, Wis. Filed Nov. 25, 1959.

REZILL CUSH

For Cushioned Floors and Component Parts Thereof Including Spaced Supporting Screeds To Which Rubber Cushions Are Attached, and Conventional Flooring for Use on Such Screeds.
First use Nov. 24, 1958.

SN 86,986. Muench Sash & Door Co., Chicago Heights, Ill. Filed Dec. 9, 1959.

MUENCH-O-MITE

For Millwork—Namely, Doors, Frames, Window Sash, and Building Trim.
First use Dec. 4, 1959.

SN 87,180. Bulldog Construction Specialties Corporation, Lorain, Ohio. Filed Dec. 14, 1959.

BLUE CHIP

For Expansion Shell Fastening Devices.
First use during November 1959.

SN 88,473. Maintenance Inc., Wooster, Ohio. Filed Jan. 5, 1960.

LASTEK 33

For Crack and Joint Sealing Compounds for Pavements and Other Types of Construction.
First use Dec. 28, 1959.

SN 88,474. Maintenance Inc., Wooster, Ohio. Filed Jan. 5, 1960.

VYNATEX 23

For Pigmented Dispersion of Vinyl and Other Resins for Sealing and Coating Bituminous Pavements, Sidewalls, Roofs, and Other Structural Materials.
First use Dec. 28, 1959.

SN 88,604. General Portland Cement Company, Chicago, Ill. Filed Jan. 7, 1960.

PENINSULAR
PORTLAND CEMENT

The drawing is lined for orange. The words "Portland Cement" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 345,632 and 544,230.
For Portland Cement.
First use 1925.

SN 88,605. General Portland Cement Company, Chicago, Ill. Filed Jan. 7, 1960.

VICTOR
PORTLAND CEMENT

The words "Portland Cement" appearing upon the drawing are hereby disclaimed apart from the mark as shown. The shade lines on the drawing indicate an orange color. Owner of Reg. No. 345,633.
For Portland Cement.
First use 1925.

SN 88,752. Hawkins Metal Products Corporation, Montevallo, Ala. Filed Jan. 11, 1960.

DITY

For Metal Fences, Balustrades, Hand Rails, Stairways, and Columns.
First use Nov. 15, 1959.

SN 90,101. Peerless Supply Co., Providence, R.I. Filed Feb. 1, 1960.

CONVERT-A-JAL

For Jalousie Jamb.
First use in or about February 1959.

SN 90,941. Peerless Supply Co., Providence, R.I. Filed Feb. 15, 1960.

PEERLESS

For Jalousies and Associated Hardware, Awning Windows, Picture Windows, Tandem Windows, Combination Windows, and Bathtub Enclosures.
First use in or about April 1953.

SN 91,305. General Portland Cement Company, Chicago, Ill. Filed Feb. 15, 1960.

PENINSULAR
HIGH
EARLY
STRENGTH
PORTLAND CEMENT

No claim is made to the words "High Early Strength Portland Cement" apart from the mark as shown. The drawing is lined for orange. Owner of Reg. Nos. 345,632 and 544,230.
For Portland Cement.
First use September 1959.

SN 91,306. General Portland Cement Company, Chicago, Ill. Filed Feb. 15, 1960.

VICTOR
HIGH
EARLY
STRENGTH
PORTLAND CEMENT

No claim is made to the words "High Early Strength Portland Cement" apart from the mark as shown. The drawing is lined for orange. Owner of Reg. No. 345,633.
For Portland Cement.
First use July 1959.

SN 92,071. Battenfeld Grease & Oil Corporation, Inc., Kansas City, Mo. Filed Mar. 3, 1960.

FORTRESS

For Construction Materials—Namely, Caulking and Sealing Compounds, Bonding and Sealing Cements, Coatings, Mastic, Sash Putties, Glazing Compounds, Patching Compounds, Dry Wall Adhesive, and Joint Compounds.
First use Feb. 17, 1960.

SN 92,235. Fenestra Incorporated, Detroit, Mich. Filed Mar. 7, 1960.

FENWALL

For Panel Sections for Curtain Wall Systems.
First use Nov. 30, 1959.

SN 92,298. Potlatch Forests, Inc., Lewiston, Idaho. Filed Mar. 7, 1960.

PLYLUMBER

For Laminated Lumber Pieces.
First use Aug. 28, 1959.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 85,892. Mediclean, Inc., Los Angeles, Calif. Filed Nov. 23, 1959.

MEDICLEAN

For Apparatus for Attachment to Doors or the Like for the Automatic Dispensing of Aerosol Type Chemicals for Deodorising and Cleansing Purposes.
First use Mar. 23, 1959.

SN 89,821. The Yale & Towne Manufacturing Company, New York, N.Y. Filed Jan. 27, 1960.

TOWNE

For Door Knobs, Drawer Knobs, Escutcheons, Keyhole Covers, Coat Hooks, Door Knockers, and Towel Holders.
First use July 1959.

SN 91,150. Fyton Industries Inc., Waco, Tex. Filed Feb. 18, 1960.

TEND-A-BRUSH

For Paint Brush or Brush Rest for Attachment Upon Paint or Other Commodity Container or Can.
First use Jan. 15, 1956.

SN 91,329. Astro-Nut, Incorporated, Chicago, Ill. Filed Feb. 23, 1960.

astro-nut

For Lock Nuts.
First use Feb. 8, 1960.

SN 91,330. Astro-Nut, Incorporated, Chicago, Ill. Filed Feb. 23, 1960.

ASTRO-NUT

For Lock Nuts.
First use Feb. 8, 1960.

SN 91,549. Melco Foundry & Mfg. Company, Chicago, Ill. Filed Feb. 24, 1960.

MELCO

For Oval Aluminum Sizzle Platters, Round Aluminum Sizzle Platters, and Fish Type Sizzle Platters.
First use Nov. 5, 1951.

SN 91,642. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For Pewter Flatware and Hollow Ware, Generally for Table and Desk Use.
First use January 1937.

SN 91,765. Arthur G. Diack, d.b.a. A. Geo. Diack, Los Angeles, Calif. Filed Feb. 29, 1960.

ARIST-O-CRAFT

For Sliding Glass Door Hardware—Namely, Sliding Door Track, Wheel Assemblies, Shoes for Glass and Wheel Assemblies, Edge Pulls, and Door Stops; and Mirror Frames.
First use Jan. 2, 1959.

SN 91,790. Hays Manufacturing Company, Erie, Pa. Filed Feb. 29, 1960.

STRAITFLO

For Union Coupling Strainer Assemblies To Protect Automatic Equipment and Components Against Foreign Substances in Suspension in a Variety of Fluids.
First use July 18, 1947.

SN 91,791. Hays Manufacturing Company, Erie, Pa. Filed Feb. 29, 1960.

MIDG-O-MATIC

For Solenoid Valves for Fluids Such as Water or Air.
First use July 17, 1956.

SN 91,792. Hays Manufacturing Company, Erie, Pa. Filed Feb. 29, 1960.

ELECTRO-MITE

For Solenoid Valves and Strainers.
First use Dec. 31, 1952.

Class 14—Metals and Metal Castings and Forgings

SN 82,993. National-Standard Company, Niles, Mich. Filed Oct. 9, 1959.

CROSS

For Perforated Metals Used for Ornamental and Industrial Purposes.
First use on or about July 1, 1941.

SN 82,994. National-Standard Company, Niles, Mich. Filed Oct. 9, 1959.

HEXSCREEN

For Perforated Metals Used for Ornamental and Industrial Purposes.
First use on or about Jan. 8, 1941.

SN 83,318. Seaboard Steel Company of America, Inc., New York, N.Y. Filed Oct. 15, 1959.

PROGEN

For Tool Steels.
First use 1930.

Class 15—Oils and Greases

SN 75,807. Universal Oil Products Company, Des Plaines, Ill. Filed June 15, 1959.

CALOR

For Anti-Icing and Anti-Stalling Additive for Gasoline.
First use May 22, 1959.

Class 16—Protective and Decorative Coatings

SN 75,315. The Imperial Flo-Glaze Paints Limited, Toronto, Ontario, Canada. Filed June 8, 1959.

SUPER FLO-TONE

Owner of Canadian Reg. No. 116,677, dated Jan. 22, 1960.
For Paints, Industrial Finishes, and Protective Coatings.

SN 80,714. American-Marietta Company, Chicago, Ill. Filed Sept. 2, 1959.

ACRYSEAL

For Combination Primer, Surfacer, and Sealer.
First use on or about Aug. 1, 1959.

SN 84,616. Penola Oil Company, New York, N.Y. Filed Nov. 4, 1959.

ENCO

For Pigmented, Unpigmented, Transparent, Plastic and Semi-Plastic, Ready Mixed, Paste and Dry Metallic, Bituminous, Asphaltic, Heat Resisting, Rust and Corrosion Inhibiting and Gas Proofing Coatings of the Nature of Paints and Primers, and Thinners, Reducers, and Oil for Use Therewith.
First use at least Aug. 28, 1959.

SN 84,822. United Wallpaper, Inc., Chicago, Ill. Filed Nov. 6, 1959.

MODERNART

Owner of Reg. No. 566,902.
For Coating Materials, Particularly Paints and Enamels, Lead Free Paint for Toys, Implement Paints.
First use on or about Aug. 1, 1930.

SN 91,177. Sentinel Chemicals, Inc., Houston, Tex. Filed Feb. 18, 1960.

METAL GUARD



For Primers for Coating Surfaces.
First use June 1, 1959.
Subj. to Intf. with SN 91,204.

SN 91,550. Meyer Materials, Inc., Indianapolis, Ind. Filed Feb. 24, 1960.

SNAPPY

For Plastic Surface Coating Compositions, Including Polyester Resins for Use on Boat Hulls, Automobile Bodies, and Other Protective and Decorative Applications.
First use Jan. 1, 1960.

SN 91,904. American-Marietta Company, Chicago, Ill. Filed Mar. 1, 1960.

TARPO

For Coating Compositions for Protecting Surfaces Which Have a Tendency To Corrode.
First use on or about Jan. 21, 1960.

SN 92,072. Battenfeld Grease & Oil Corporation, Inc., Kansas City, Mo. Filed Mar. 3, 1960.

FORTRESS

For Paints, Primers, Wood Coatings, Paraffin Oil, Enamels, Varnishes, and Wood Preservers.
First use Feb. 17, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 51,360. Ophthalmos, Inc., Union City, N.J. Filed May 9, 1958.

STERI-TAINER

For Medicament—Namely, Ophthalmic Solutions Sold in Nonrefillable Containers.
First use March 1953.

SN 61,006. Fred R. Wallich, d.b.a. Wallich Laboratories, Los Angeles, Calif. Filed Oct. 20, 1958.

TEENCREEM

For Medicated Skin Cream.
First use May 18, 1958.

SN 67,222. Imperial Chemical Industries Limited, London, England. Filed Feb. 6, 1959.

COOMASSIE

Priority claimed under Sec. 44(d) on British Reg. No. 784,107, dated Nov. 18, 1958.
For Pharmaceutical Preparations for Use in Medical Diagnosis, Not Including Preparations for Laboratory Use.

SN 67,937. Kapco, Inc., Kalamazoo, Mich. Filed Feb. 18, 1959.

SOLEX

For Tablets Containing Vitamins and Minerals.
First use Feb. 20, 1958.

SN 68,320. Reid Laboratories, Inc., Atlanta, Ga. Filed Feb. 24, 1959.

POLYSORBIN

For Vitamin Preparation.
First use Aug. 28, 1958.

SN 71,414. Patents Management Corporation, Atlanta, Ga. Filed Apr. 13, 1959.



FEMMES

For Preparation for the Relief of Premenstrual Tension.
First use in 1956.

SN 73,381. Louis P. Keller, Martinez, Calif. Filed May 11, 1959.

PEP-amins

For Tablets Containing Vitamins and Minerals.
First use Feb. 19, 1959.

SN 78,502. Professional Chemical Corporation, Rochester, N.Y. Filed July 27, 1959.

sor-eez

For Kit Comprising Denture Transfer Paste, Conditioner and Cleaner for the Relief and Healing of Denture Sore Spots.
First use June 12, 1959.

SN 78,503. Professional Chemical Corporation, Rochester, N.Y. Filed July 27, 1959.



For Medicated Oral Spray or Mouth Wash for Deodorizing, Cleaning the Mouth, and for a Hemostatic Agent During Dental Operative Procedures, Denture Transfer Paste, and Denture Conditioner and Cleaner.
First use Apr. 4, 1949.

SN 81,058. Geigy Chemical Corporation, Ardsley, N.Y. Filed Sept. 9, 1959.

TAMBROVID

For Anti-Infectives.
First use Aug. 19, 1959.

SN 82,971. Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 9, 1959.

VERTANIL

For Autonomic Blocking Agents.
First use Aug. 24, 1959.

SN 82,211. Geigy Chemical Corporation, Ardsley, N.Y. Filed Oct. 14, 1959.

TILMAPOR

For Autonomic Blocking Agents.
First use Aug. 26, 1959.

SN 85,479. Foster-Dack Company, Chicago, Ill. Filed Nov. 17, 1959.

AMP-AID

For Ointments for the Prevention and Treatment of Skin Irritations.
First use Dec. 27, 1958.

SN 86,743. Evans Medical Limited, Liverpool, England. Filed Dec. 7, 1959.

EBIMAR

Owner of British Reg. No. 802,705, dated Oct. 4, 1950.
For Pharmaceutical Preparations for Use in the Treatment of Ulcers.

SN 87,014. Victor Drug Company, Chicago, Ill. Filed Nov. 25, 1959.

OINTMENT 500

The word "Ointment" being the name of the goods is disclaimed.
For Ointment for the Treatment of Skin Conditions, Such as Pimples, Acne, and Eczema.
First use in January 1948.

SN 87,782. Campbell Pharmaceuticals, Inc., New York, N.Y. Filed Dec. 22, 1959.

PHOSPHOLINE IODIDE

Applicant makes no claim to the term "Iodide" apart from the mark as shown.
For Anticholinesterase Preparations Used in Medicine.
First use Mar. 12, 1957.

SN 88,825. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Filed Jan. 11, 1960.

EMIVAN

For Pharmaceutical Preparation Used as a Respiratory and Central Nervous System Stimulant.
First use Dec. 2, 1959.

SN 89,192. Norden Laboratories, Inc., Lincoln, Nebr. Filed Jan. 18, 1960.

INVERTOSE

For Source of Readily Assimilable Carbohydrate for Parenteral Use in Treatment of Ketosis, Shock and Other Conditions Where Carbohydrates Are Indicated, Used in Veterinary Medicine.
First use Oct. 26, 1954.

SN 89,227. White Laboratories, Inc., Kenilworth, N.J. Filed Jan. 18, 1960.

INSTAPAK

For Medicinal Ointments in a Dispensing Pressure Container for Treatment of Minor Burns and Skin Irritations, Etc.
First use Dec. 2, 1959.

SN 89,640. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Jan. 26, 1960.

RODIURAN

Owner of German Reg. No. 374,022, dated Sept. 14, 1927.
For Saluretic Preparation.

SN 89,830. Associated Laboratories, Inc., d.b.a. Vitamin-Quota, New York, N.Y. Filed Jan. 28, 1960.

MINERAL - QUOTA

Owner of Reg. No. 400,025.
For Mineral Products—Namely, Tablets Containing Mineral Concentrates.
First use Dec. 1, 1941.

SN 89,884. Alexander-Shaw Corporation, Wellesley Hills, Mass. Filed Jan. 29, 1960.

ESTRO-BIOTIC

For Medicinal Preparation Consisting of a Suspension of Dihydrostreptomycin (Sulfate), Diethylstilbestrol and Penicillin K. (Crystalline) for Veterinary Use.
First use Jan. 8, 1960.

SN 90,531. Lloyd Brothers, Inc., Cincinnati, Ohio. Filed Feb. 8, 1960.

CHERRO-CHEW

For Medicines and Pharmaceutical Preparations—Namely, an Appetite Stimulant.
First use on or about Jan. 28, 1960.

SN 90,750. Gold Coast Laboratories, Inc., Coral Gables, Fla. Filed Feb. 11, 1960.

GOLD COAST HORSEPOWER

For Blood Tonic and Dietary Supplement for Veterinary Use.
First use Mar. 15, 1959.

SN 91,212. G. D. Searle & Co., Skokie, Ill. Filed Feb. 18, 1960.

MITRONAL

For Medicinal Preparation Useful as an Antihistamine, for the Relief of Allergic Phenomena and as an Antinauseant.
First use Feb. 5, 1960.

SN 91,483. White Laboratories, Inc., Kenilworth, N.J. Filed Feb. 23, 1960.

SORBOQUEL

For Preparation Intended for the Treatment of Intestinal Disorders Characterised by Hypermotility, Spasm, Colic, Increased Bowel Fluid Content, and the Like.
First use Feb. 8, 1960.

SN 91,542. International Latex Corporation, Dover, Del. Filed Feb. 24, 1960.

NASALAIRE

For Decongestant.
First use Jan. 11, 1960.

SN 91,581. American Cyanamid Company, New York, N.Y. Filed Feb. 25, 1960.

FERRO-SEQUELS

Owner of Reg. No. 683,164.
For Iron Preparation in Sustained Release Dosage Form.
First use Sept. 24, 1959.

SN 91,582. American Cyanamid Company, New York, N.Y. Filed Feb. 25, 1960.

SUIDEX

For Hematinic for Veterinary Use.
First use Feb. 11, 1960.

SN 91,602. Iowa Cooperative Association, d.b.a. Diamond Laboratories, Des Moines, Iowa. Filed Feb. 26, 1960.

NEACAIN

For Veterinary Ointment for the Treatment of Ocular Inflammations or Non-Specific Dermatosis.
First use Aug. 20, 1958.

SN 91,604. Iowa Cooperative Association, d.b.a. Diamond Laboratories, Des Moines, Iowa. Filed Feb. 26, 1960.

VISTREPCIN

For Water Dispersible Antibiotic, Vitamin Powder Used as a Feed Additive for Therapeutic or Prophylactic Treatment of Enteritic Infections in Calves, Swine, Turkeys, and Chickens.
First use May 31, 1956.

Class 19—Vehicles

SN 47,967. Northrop Corporation, Beverly Hills, Calif., by change of name from Northrop Aircraft, Inc., Beverly Hills, Calif. Filed Mar. 18, 1958.

RADIOPLANE

Owner of Reg. No. 382,711.
For Vehicle Products Comprising: Aircraft, Missiles, Drones and Parts Thereof.
First use Sept. 30, 1938.

SN 87,275. Pickwick Company, Cedar Rapids, Iowa. Filed Dec. 14, 1959.

TRAVELODGE

For Vehicle Bodies—Namely, Camping Coaches Adapted To Be Mounted on a Pick-Up Truck.
First use Oct. 2, 1959.

SN 91,901. Aerotec Industries, Inc., Greenwich, Conn. Filed Mar. 1, 1960.



For Aircraft Seats.
First use Oct. 21, 1959.

SN 92,135. Neway Equipment Company, Muskegon, Mich. Filed Feb. 24, 1960.

NEWAY

For Suspensions and Component Parts of Suspensions for Land Vehicles.
First use Nov. 1, 1948.

SN 92,611. General Foundry & Mfg. Co., Flint, Mich. Filed Mar. 11, 1960.

GENRL

For Brake Drums and Wheels for Motor Vehicles and Trailers.
First use May 6, 1957, on brake drums.

Class 20—Linoleum and Oiled Cloth

SN 60,867. Daniel Nicol, Zurich, Switzerland. Filed Oct. 15, 1958.

ROLLTEX

Owner of Swiss Reg. No. 144,290, dated Dec. 4, 1952.
For Textile Base Floor and Wall Covering With Wood Overlay in Varied Broken Designs.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 45,053. Kay Jewelry Stores, Inc., Washington, D.C. Filed Jan. 31, 1958.

CARLTON

For Radios and Tape Recorders.
First use May 8, 1957, on radios.

SN 50,293. Gould & Eberhardt, Inc., Irvington, N.J. Filed Apr. 24, 1958.

GE Delapena COLD-HEAT

For Electrical High Frequency Induction Heating and Hardening Apparatus for Gear Teeth and Other Metallic Surfaces.
First use Mar. 1, 1957.

SN 71,789. King Bee Manufacturing Co., Chicago, Ill., by change of name from American Automatic Devices Co., Chicago, Ill. Filed Apr. 20, 1959.

HY-POWER

For Clearance Lights, Stop Lights, Tail Lights, and Identification Lights for Vehicles.
First use Feb. 20, 1934.

SN 78,290. KSM Products, Inc., Merchantville, N.J. Filed July 23, 1959.

KSM

Applicant disclaims, apart from the mark as shown, the representation of the stud and arc shield. Owner of Reg. Nos. 542,694 and 674,529.
For Stud Welding Apparatus, Tools and Accessories and, More Particularly, Stud Welding Guns, Stud Welding Controls, Power Converters for Stud Welding, Electric Arc Welding Studs and Arc Shields for Such Studs, and Miscellaneous Tools and Accessories, Such as Arc Shield Holders and Stud Chucks, To Be Used With Stud Welding Equipment.
First use Apr. 25, 1949, on electric arc welding studs and arc shields for such studs.

SN 82,216. General Electric Company, Schenectady, N.Y. Filed Sept. 28, 1959.

PEEK-A-BREW

For Electric Beverage Making Apparatus.
First use Aug. 15, 1958.

SN 85,148. Muntz TV, Inc., Evanston, Ill. Filed Nov. 12, 1959.



The lining is for gold, and color is claimed as an integral portion of the mark.
For Television Sets and Parts Thereof and Record Players and Radios and Parts Thereof.
First use Aug. 27, 1959.

SN 85,639. Weltronic Company, Detroit, Mich. Filed Nov. 18, 1959.

WELTRONARC

Owner of Reg. No. 373,340.
For Arc Welding Apparatus.
First use Sept. 4, 1957.

SN 87,956. International Resistance Company, Philadelphia, Pa. Filed Dec. 24, 1959.

HANDY-PAK

For Packages of Electrical Resistors.
First use Jan. 2, 1959.

SN 88,075. Albert R. Nicolay, d.b.a. Nic-O-Lay Battery Distributors, Indianapolis, Ind. Filed Dec. 28, 1959.

POWER START

For Wet Storage Batteries.
First use Oct. 8, 1959.

SN 88,852. Dumont-Airplane & Marine Instruments, Inc., Clearfield, Pa. Filed Jan. 12, 1960.

RORIS

For Capacitor.
First use Dec. 23, 1959.

SN 90,334. Hays Manufacturing Company, Erie, Pa. Filed Feb. 4, 1960.

SHUR-FLO

For Fluid Switches Interlocking an Electrical Circuit To Protect Electrical and Electronic Equipment Against Insufficient Flow of Fluid Being Used as a Coolant, Rinsing, or Other Critical Fluid Flow Application.
First use Oct. 27, 1949.

SN 92,924. Quincy Products Company, Chicago, Ill. Filed Mar. 15, 1960.

QUI-LINE

For Loudspeakers.
First use in or about December 1959.

Class 22 — Games, Toys, and Sporting Goods

SN 37,811. Production and Marketing Company, Newtown, Conn. Filed Sept. 25, 1957.

PROMARK

For Anagrams.
First use Aug. 31, 1950.

SN 57,639. R & D Associates, Encino, Calif. Filed Aug. 21, 1958.

STOP TEES

The drawing is lined for green, but no claim is made to color. The word "Tees" is disclaimed apart from the mark shown.
For Golf-Tees.
First use Oct. 10, 1957.

SN 58,772. Aurora Plastics Corporation, West Hempstead, N.Y. Filed Sept. 11, 1958.

ZOOMJET

For Flying Toy Plane Propelled by a Rubber Band.
First use June 15, 1958.

SN 67,357. Hoppy Taw Corporation, Salt Lake City, Utah. Filed Feb. 9, 1959.

MOODY CAP

No claim of exclusive right is made to "Cap" as used on a toy beanie cap.
For Toy Beanie Cap.
First use Nov. 1, 1958.

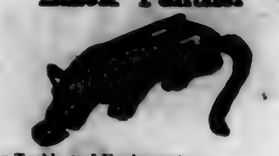
SN 72,962. Peche-Sport, Marseilles, France. Filed May 5, 1959.

COMPENSATOR

For Under Water Masks.
First use Nov. 10, 1958.

SN 73,650. Edward Block, d.b.a. Black Panther Tackle Company, Springfield, Mass. Filed May 14, 1959.

Black Panther



For Fishing Tackle and Equipment.
First use Apr. 1, 1957.

SN 74,353. Yakima Bait Company, Granger, Wash. Filed May 22, 1959.

SPIN-N-GLO

For Fishing Lures.
First use Apr. 1, 1953.

SN 75,409. G and H Industries, Montpelier, Vt. Filed June 9, 1959.

SPRY FRY

For Artificial Fish Lures.
First use in July 1957.

SN 76,339. H. E. "Dick" Rattenbury, Dixon, Calif. Filed June 23, 1959.

DUCK BUTTS

No claim of exclusive right is made to "Duck" as used on decoys.
For Duck Decoys.
First use Apr. 30, 1959.

SN 78,403. Advance Aircraft, Inc., Chicago, Ill. Filed July 27, 1959.

Jeep Oplane

No claim of exclusive right is made to "Plane" as used on toy aeroplanes.
For Toy Aeroplanes.
First use May 21, 1959.

SN 78,771. Eagle Rubber Co., Inc., Ashland, Ohio. Filed July 31, 1959.

FIRE-GLO

For Toy Playballs, Basketballs, Footballs, Playground Balls, and Other Similar Athletic Ball Equipment.
First use Sept. 29, 1958.

SN 81,129. Fawick Flexi-Grip Co., Copley, Ohio. Filed Sept. 10, 1959.

COVER KEEPER

For Stringer for Mounting and Spacing Sets of Eyeletted Golf-Club-Head Protective Covers.
First use Mar. 14, 1959.

SN 83,023. Washington Wood Products Inc., Washington, N.J. Filed Oct. 9, 1959.

Strikee Master

For Bowling Pins.
First use on or about May 1, 1956.

SN 83,853. The Sanctuary, Inc., Effingham, Ill. Filed Oct. 9, 1959.

SMARTEE

For Equipment Sold as a Unit for Playing a Word Puzzle Game.
First use May 1, 1952.

SN 85,060. Twirly Bird, Inc., Norman, Okla. Filed Nov. 10, 1959.



For Toy Helicopters.
First use Aug. 26, 1959.

SN 86,415. Matthew Greene, New York, N.Y. Filed Dec. 1, 1959.

ROLL AROUND

For Equipment Sold as a Unit for Playing a Game of Advancing a Ball Along a Predetermined Tortuous Path.
First use about Sept. 12, 1959.

SN 87,533. L. H. Bengtson, Jr., Oklahoma City, Okla. Filed Dec. 18, 1959.

INSIDE TRACK

For Equipment (or Apparatus) Sold as a Unit for Playing a Board Game.
First use Dec. 3, 1959.

SN 89,319. Aeroplastics Corporation, Venice, Calif. Filed Jan. 20, 1960.

AEROPLASTICS

For Paddle Board Swimming Aid.
First use Nov. 6, 1959.

SN 89,374. R. and H. Specialty Company, Glen Ellyn, Ill. Filed Jan. 20, 1960.

PORT-A-SHUFFLE

For Shuffleboard.
First use about Oct. 1, 1959.

SN 89,734. Beesley Manufacturing Company, Inc., Los Angeles, Calif. Filed Jan. 27, 1960.

POOL LOAFER

No claim is made to the word "Pool" apart from the mark.
For Swimming Pool Raft.
First use Nov. 27, 1959.

SN 91,992. Atlantic Products Corporation, Trenton, N.J. Filed Mar. 2, 1960.

TRI-PARTO

For Golf Bags.
First use Jan. 1, 1960.

SN 91,993. Atlantic Products Corporation, Trenton, N.J. Filed Mar. 2, 1960.

SHAFT-SAVER

For Golf Bags.
First use Jan. 1, 1960.

SN 92,083. Bowl-Mor Company, Inc., Littleton, Mass. Filed Mar. 3, 1960.



For Bowling Pinsetting Machines.
First use December 1958.

SN 92,233. The Enterprise Manufacturing Company, Akron, Ohio. Filed Mar. 7, 1960.

FAS-KAST

For Fishing Reels.
First use Feb. 5, 1960.

SN 92,340. W & J Sales Co., Salt Lake City, Utah. Filed Mar. 7, 1960.

FISHHAND

For Holders for Fishing Poles.
First use on or about May 1959.

SN 92,399. Hazel D. Powers, d.b.a. Powers Industries, West Des Moines, Iowa. Filed Mar. 8, 1960.

ALPHABET VILLAGE

For Toy Blocks.
First use Oct. 9, 1959.

SN 92,500. Silver Horde Fishing Supplies, Inc., Lynnwood, Wash. Filed Mar. 9, 1960.

A--HI

For Plug Type Fish Lure.
First use on or about Apr. 1, 1949.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 53,343. The May Department Stores Company, St. Louis, Mo. Filed June 11, 1953.

ARCROSS

Owner of Reg. No. 625,278.
For Razor Blades, Hair Clippers, and Shears.
First use Feb. 1, 1954, on razor blades.

SN 79,177. Midland Manufacturing Corporation, Columbus, Ohio. Filed Aug. 7, 1959.

GRADEROLL

For Compaction Unit for Use With Any Tandem Drive Grader.
First use on or about Nov. 2, 1953.

SN 81,026. Malcolm B. Sturgis, Kirkwood, Mo., assignee of M. B. Sturgis, Inc., St. Louis, Mo. Filed Sept. 8, 1959.

PACK-HORSE

For Hydraulic Power Packages.
First use Aug. 20, 1959.

SN 87,813. The Lord Baltimore Press, Incorporated, Baltimore, Md. Filed Dec. 22, 1959.

DEX-O-PAK

For Packaging Machines.
First use on or about Nov. 2, 1959.

SN 90,607. Zeno Hydraulic Corporation, Salt Lake City, Utah. Filed Feb. 8, 1960.

ZENO

For Hydraulic Machinery, Including Pumps, Motors, Cylinders, and Valves.
First use Jan. 15, 1960.

SN 91,252. General Controls Co., Glendale, Calif. Filed Feb. 19, 1960.

ISOFORCE

For Actuator Utilizing a Piston and Cylinder and Operated Pneumatically.
First use Jan. 4, 1960.

SN 91,340. Chain Belt Company, Milwaukee, Wis. Filed Feb. 23, 1960.

CHABELCO

Owner of Reg. No. 94,883.
For Power Transmission Drive Chains and Conveyor Chains.
First use Jan. 1, 1912.

SN 91,467. Super-Compactors, Inc., Sacramento, Calif. Filed Feb. 23, 1960.

SUPERCOMPACTOR

Owner of Reg. No. 580,929.
For Pneumatically Tired Rollers Used for Testing or Compaction of Grades, Sub-Grades, Fills, or Paved Surfaces.
First use December 1949.

SN 91,540. Imperial International Corp., New York, N.Y. Filed Feb. 24, 1960.

ALGONQUIN

For Stainless Steel Flatware—Namely, Knives, Forks, and Spoons of All Kinds.
First use Oct. 16, 1959.

SN 91,643. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For Table Utensils.
First use November 1958.

SN 91,811. The Layne and Bowler Company, Houston, Tex. Filed Feb. 29, 1960.

THE LAYNE

Owner of Reg. No. 378,678.
For Well Screens, Well Packers, Set-Shoes, and Gravel.
First use in the year 1926.

SN 91,812. The Layne and Bowler Company, Houston, Tex. Filed Feb. 29, 1960.

FLO-MOR

For Well Screens.
First use Nov. 15, 1958.

SN 92,285. National Twist Drill & Tool Co., Rochester, Mich. Filed Mar. 7, 1960.

HELEX

For Milling Cutters.
First use Apr. 30, 1957.

Class 26—Measuring and Scientific Appliances

SN 89,825. Mauser, Kommandit-Gesellschaft, Koln-Ehrenfeld, Germany. Filed Mar. 18, 1959.

STRATOPLAST

Owner of German Reg. No. 713,571, dated May 5, 1958.
For Surveillance Appliances—Namely, Level Indicators; and Weighing Scales, Adding and Calculating Machines; Cash Registers.

SN 82,083. Compur-Werk Friedrich Deckel OHG, Munich, Germany. Filed Sept. 25, 1959.

COMP

Priority claimed under Sec. 44(d) on German application filed Mar. 25, 1959; Reg. No. 733,274, dated Jan. 28, 1960. Owner of U.S. Reg. Nos. 507,958, 683,648, and others.
For Photographic Apparatus and Parts and Accessories Thereof, Including Photographic Shutters, Photographic Exposure Meters, Flashlamps for Photographic Purposes, and Tele- and Automatic Shutter Releases.

SN 85,220. Fred S. Frankel, New York, N.Y. Filed Nov. 13, 1959.

THE FRANKLIN MAGNIFIER

No claim is made to the word "Magnifier" apart from the mark shown on the drawing.
For Magnifying Reading Glasses.
First use July 1959.

SN 88,085. Pratt & Whitney Company, Incorporated, West Hartford, Conn. Filed Dec. 28, 1959.

DATA-LIMIT

Owner of Reg. Nos. 295,015, 408,129, and 532,678.
For Dimension Gaging and Dimension Gage Data Indicating, Processing, and Recording Equipment.
First use Nov. 22, 1959.

SN 90,280. Stewart-Warner Corporation, Chicago, Ill. Filed Feb. 3, 1960.

STEWART SW WARNER

Owner of Reg. Nos. 238,103, 676,953, and others.
For Wheel Alignment Apparatus.
First use May 1, 1959.

SN 91,525. Computer Systems, Inc., New York, N.Y. Filed Feb. 24, 1960.

DYSTAC

For Analog Computer Amplifiers for Master Electronic Computing Units, Said Amplifiers Being Sold With the Entire Computing Unit.
First use Jan. 11, 1960.

SN 92,731. Denoyer-Geppert Company, Chicago, Ill. Filed Mar. 14, 1960.

BIOCRAFT

Owner of Reg. No. 633,603.
For Biological Science Specimens Embedded in Transparent Plastic Material for Laboratory Demonstration or Scientific Study, and for Microscopes.
First use Aug. 30, 1956, on plastic embedded biological specimens.

Class 27—Horological Instruments

SN 91,644. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For Sundials and Clocks.
First use February 1957.

Class 29—Brooms, Brushes, and Dusters

SN 54,243. The May Department Stores Company, St. Louis, Mo. Filed June 25, 1958.

ARCROSS

For Toothbrushes.
First use May 19, 1958.

Class 30—Crockery, Earthenware, and Porcelain

SN 91,646. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For China and Pottery Tableware, and Decorative and Miscellaneous Pieces of China and Pottery Including Vases, Jardinieres, Jugs, Trays, and Candlesticks.
First use 1937 on china tableware.

Class 31—Filters and Refrigerators

SN 76,154. Black, Sivalls & Bryson, Inc., Kansas City, Mo. Filed June 22, 1959.

AQUA KLEENER

For Water Treating Equipment Including Filters, Oil Skimmers, and Backwash Tanks.
First use Mar. 2, 1959.

SN 88,724. Auto-Flo Corporation, Detroit, Mich. Filed Jan. 11, 1960.

AUTO FLO

For Air Filters.
First use on or about Dec. 1, 1959.

Class 32 — Furniture and Upholstery

SN 63,458. Levin Bros., Inc., Minneapolis, Minn. Filed Dec. 1, 1958.

TORSION-WEB

For Spring Construction for Upholstered Furniture and the Like.
First use Aug. 29, 1958.

SN 88,632. Acme Bedding Company, St. Louis, Mo. Filed Jan. 8, 1960.

HIDE-A-MATIC

For Sofa Beds.
First use July 15, 1959.

SN 88,731. Columbian Bronze Corporation, Freeport, N.Y. Filed Jan. 11, 1960.

SALTERINI

For Dining Room Furniture, Living Room Furniture, Bedroom Furniture, Occasional Furniture, Outdoor Tables and Chairs, Flower Stands, and Bar Furniture, and Accessories Therefor.
First use during 1937.

Class 33 — Glassware

SN 91,647. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For Glassware for Table and Bar Use; and Miscellaneous Glassware Including Pitchers, Jugs, Decanters, Bottles, Rummers, Beakers, Muddlers, Vases, and Hurricane Candle Chimneys or Shades.
First use July 1958.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 88,023. Commercial Controls Corporation, Rochester, N.Y. Filed Dec. 28, 1959.

QUARTZONE

For Radiant Heaters.
First use Oct. 23, 1959.

SN 88,511. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Jan. 6, 1960.

DIE-LOK

For Fan Wheels.
First use Nov. 23, 1959.

SN 89,843. Erico Products, Inc., Cleveland, Ohio. Filed Jan. 28, 1960.

CADWELD

Owner of Reg. Nos. 375,100 and 425,701.
For Welding Apparatus Including Crucibles, Molds, and Supporting Handles and Frames for the Welding of Metal Parts by Means of Molten Metal Produced by an Exothermic Reaction.
First use in or about January 1951 on handles of welding apparatus.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 93,387. United States Pipe and Foundry Company, Birmingham, Ala. Filed Mar. 21, 1960.

TYTON JOINT

Owner of Reg. Nos. 661,920, 689,260, and others.
For Rubber Gaskets for Use in Pipe Joints.
First use Jan. 13, 1960.

Class 36 — Musical Instruments and Supplies

SN 73,754. Welcome Records, Los Angeles, Calif. Filed May 14, 1959.

WELCOME

For Phonograph Records.
First use Apr. 10, 1959.

SN 76,749. Stereoddities, Inc., New York, N.Y. Filed June 29, 1959.

STEREODDITIES

For Phonograph Records.
First use May 15, 1959.

SN 83,878. Gelb, Incorporated, Chicago, Ill. Filed Oct. 23, 1959.

VAC-A-BOND

For Carrying Cases for Portable Musical Instruments.
First use Mar. 15, 1959.

SN 92,157. Hudson Record Co., Inc., Union City, N.J. Filed Mar. 4, 1960.

HUDSON

For Grooved Phonograph Records.
First use Feb. 8, 1960.

SN 92,247. Furniture Merchandising Corporation, New York, N.Y. Filed Mar. 7, 1960.

Tone-master

For Phonographs.
First use July 7, 1959.

SN 92,541. Medical Press, Inc., New York, N.Y. Filed Mar. 10, 1960.

STETHOCLINIC

For Grooved Phonograph Records of Medical Interest.
First use Apr. 20, 1955.

SN 92,686. Aeolian-American Corporation, East Rochester, N.Y. Filed Mar. 14, 1960.

SYMETRIGRAND

For Pianos and Piano Plates.
First use on or about Jan. 11, 1960.

Class 37 — Paper and Stationery

SN 678,359. The May Department Stores Company, St. Louis, Mo., assignee of Affiliated Retailers, Inc., New York, N.Y. Filed Dec. 15, 1954.

ARCROSS

For Toilet Tissue and Facial Cleansing Tissues.
First use Sept. 1, 1953.

SN 81,211. Tuckershapre Pen Company, Incorporated, Richmond, Va. Filed Sept. 11, 1959.

TUCKERSHARPE

Owner of Reg. No. 629,269.
For Ball Point Pens, Fountain Pens, and Mechanical Pencils.
First use Jan. 19, 1959.

SN 84,015. Quality Park Envelope Company, St. Paul, Minn. Filed Oct. 26, 1959.

QUALITY PARK PRODUCTS

Applicant disclaims the term "Products" and the representation of the goods, apart from the mark as shown. Owner of Reg. No. 556,817.
For Envelopes, Filing Folders, Filing Jackets, and Filing Specialties.
First use on or about Oct. 15, 1957.

Class 38 — Prints and Publications

SN 29,289. Lytle Engineering & Mfg. Co., Chicago, Ill. Filed May 2, 1957.

Lytle

For Brochures, Catalogues, and Bulletins.
First use on or about Mar. 1, 1956.

SN 73,442. Hans Schwarzkopf, Hamburg-Altona, Germany. Filed May 11, 1959.

TONSTRINA

Owner of German Reg. No. 683,222, dated Oct. 24, 1955.
For Periodicals.

SN 77,195. Color Corporation of America, Tampa, Fla. Filed July 7, 1959.

Col-Cor-a
COLOR CORPORATION OF AMERICA

Owner of Reg. No. 610,429.
For Photographic Color Prints and Transparencies.
First use July 10, 1954.

SN 77,276. LKB-Produkter Fabriksaktiebolag, Stockholm, Sweden. Filed July 9, 1959.

SCIENCE TOOLS

For Technical Journal.
First use May 15, 1954; in commerce June 15, 1954.

SN 80,719. Coats & Clark Inc., New York, N.Y. Filed Sept. 2, 1959.

COATS & CLARK'S

Owner of Reg. No. 109,517.
For Crochet Books.
First use on or about Feb. 16, 1953.

SN 82,456. Union Carbide Corporation, New York, N.Y. Filed Sept. 30, 1959.

UNION CARBIDE

For Trade Periodicals.
First use on or about Sept. 18, 1957.

SN 85,852. Glenview Products, Inc., Milwaukee, Wis. Filed Nov. 23, 1959.

MINIMURAL
BY GRANDVIEW

Owner of Reg. No. 665,540.
For Lithographed Wall Murals and Pictures.
First use Oct. 15, 1958.

SN 86,720. The Bobbs-Merrill Company, Inc., Indianapolis, Ind. Filed Dec. 7, 1959.

CHILDHOOD

For Series of Books.
First use Sept. 8, 1943.

SN 87,137. The Peoria Journal Star, Inc., Peoria, Ill. Filed Dec. 11, 1959.

SHOOTING TIMES

For Newspaper Relating to Guns.
First use on or about Nov. 20, 1959.

SN 89,115. American Tag Company, Belleville, N.J. Filed Jan. 18, 1960.

AMERCHROME

For Full Color Printed Tags and Labels.
First use August 1959.

SN 89,198. Paramount Paper Products Co., Omaha, Nebr. Filed Jan. 18, 1960.

SUGGEST-A-MEAL

For Printed Labels.
First use Sept. 21, 1954.

SN 89,675. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Jan. 26, 1960.

Metallic Sculpture

For Greeting Cards.
First use July 1, 1958.

SN 89,676. Hallmark Cards, Incorporated, Kansas City, Mo. Filed Jan. 26, 1960.

Silver Light

For Greeting Cards.
First use July 1, 1958.

SN 91,648. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For Maps and Pictorial Prints.
First use Jan. 15, 1959.

Class 39 — Clothing

SN 38,684. Frances Gee Garment Company, Inc., Kansas City, Mo. Filed Oct. 10, 1957.

LA GRACE

For Women's Uniforms.
First use Sept. 12, 1921.

SN 43,170. I. B. Kleinert Rubber Company, New York, N.Y. Filed Dec. 30, 1957.

FROU-FROU

Owner of Reg. No. 599,613.
For Baby Pants, Boudoir Caps, and Make-Up Capes.
First use in January 1954 on baby pants.

SN 45,106. Ben Barrack, Inc., New York, N.Y. Filed Feb. 3, 1958.

TIMELESS ELEGANCE

For Women's and Misses' Dresses.
First use Sept. 1, 1957.

SN 71,451. Sapphire Corporation, New York, N.Y. Filed Apr. 13, 1959.

SIT-FIT

For Full Length Tights for Women and Children.
First use Mar. 3, 1959.

SN 74,799. Singing Needles, Inc., Leola, Pa. Filed May 29, 1959.

B♯ Sharp

For Slips, Petticoats, Pajamas, Nightgowns, Negligees, Panties, Boys' and Men's Briefs, T Shirts, Athletic Shirts, Infants' Shirts, Baby Pants, Children's Pants, Men's and Women's Hosiery, Sweaters and Jackets, Dresses, Outer Shorts, and Blouses.
First use May 15, 1959.

SN 78,357. Lewel Manufacturing Co., Inc., New York, N.Y. Filed July 24, 1959.

HIP AWAY

For Girdles.
First use May 19, 1958.

SN 79,160. Debbi Dobson, Inc., New York, N.Y. Filed Aug. 7, 1959.

DEBBI DOBSON

For Ladies', Misses', and Juniors' Dresses, Shirtwaists, Skirts, Coats, Blouses, Suits.
First use in March 1953.

SN 79,812. Somersworth Manufacturing Company, Inc., Somersworth, N.H. Filed Aug. 18, 1959.

MANDARINS

For Women's Shoes.
First use June 3, 1959.

SN 79,916. Brown Durrell Co., Cambridge, Mass. Filed Aug. 20, 1959.

FOREST MILLS

Owner of Reg. No. 439,499.
For Men's, Women's, and Children's Knitted and Woven Underwear.
First use 1885, on knitted underwear.

SN 79,967. Sel-Mor Garment Co. Inc., St. Louis, Mo. Filed Aug. 20, 1959.

CUDDLAIRE

For Fabrics Made Into Pajamas, Gowns, and Robes.
First use June 1, 1959.

SN 80,513. Eagle Clothes, Inc., Brooklyn, N.Y. Filed Aug. 31, 1959.

EAGLE WAFER WEIGHT

Owner of Reg. Nos. 66,879, 660,172, and others.
For Men's Overcoats, Topcoats, and Suits.
First use December 1957; September 1912 as to the word "Eagle"; June 1883 as to the picture of the eagle.

SN 80,705. A. S. Beck Shoe Corporation, New York, N.Y. Filed Aug. 27, 1959.

BECKETTES BY A.S.BECK

Owner of Reg. Nos. 365,306, 670,967, and others.
For Women's Shoes and Slippers.
First use June 7, 1959; in December 1920 as to "Beck."

SN 81,108. Alchester Mfg. Company, Inc., Magnolia, N.J. Filed Sept. 10, 1959.

MINKIES

For House Slippers.
First use on or about Aug. 27, 1959.

SN 84,700. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Miyakojima-ku, Osaka, Japan. Filed Nov. 6, 1959.

KANEBO

Owner of Japanese Reg. No. 408,640, dated Feb. 18, 1952.
For Men's and Boys' Shirts, Socks, Underwear, and Pajamas; Women's and Girls' Blouses, Pajamas, Underwear, Socks, Stockings, and Dresses, and Scarves, Neckties, Gloves, and Handkerchiefs.

SN 85,242. The Puritan Sportswear Corp., Altoona, Pa. Filed Nov. 13, 1959.

OLE

Owner of Reg. Nos. 143,357, 587,494, and others.
For Sweaters and Shirts.
First use Oct. 15, 1959.

SN 85,921. Shoe Corporation of America, Columbus, Ohio. Filed Nov. 23, 1959.

moc piper

For Women's Shoes.
First use Sept. 24, 1959.

SN 86,278. Jomac, Inc., Philadelphia, Pa. Filed Dec. 1, 1959.

STERLING

For Industrial Work Gloves and Mittens as Used in Industry.
First use before 1939.

SN 87,095. Unitex Limited, Knaresborough, Yorkshire, England. Filed Dec. 10, 1959.

ULON

Owner of British Reg. No. 705,732, dated May 20, 1957; and U.S. Reg. No. 662,934.
For Soles and Heels and Sole and Heel Pads and Sole and Heel Tops.

SN 87,856. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Dec. 23, 1959.

TERRY-TEENS

Owner of Reg. Nos. 372,605, 558,806, and 655,868.
For Shoes for Women and Children.
First use Nov. 25, 1959.

SN 87,917. Edward Shapiro and Herman Shapiro, New York, N.Y. Filed Dec. 23, 1959.

THE PIPER

For Women's Dresses, Jackets, Skirts, Blouses, Slacks, and Shorts.
First use in 1942.

SN 88,892. Alfred Angelo, Inc., Philadelphia, Pa. Filed Jan. 13, 1960.

DANCE-ALLURE

For Dresses.
First use Dec. 11, 1959.

SN 89,431. The House of Perfection, Inc., New York, N.Y. Filed Jan. 21, 1960.

WUNDA-WHIRL

Owner of Reg. No. 620,428.
For Women's Dresses.
First use Jan. 15, 1960.

SN 89,433. The House of Perfection, Inc., New York, N.Y. Filed Jan. 21, 1960.

FLATTER-FIT

For Women's Dresses.
First use Jan. 15, 1960.

SN 91,510. Burlington Industries, Inc., New York, N.Y. Filed Feb. 24, 1960.

JX

For Shirts, Coats, Jackets, Trousers, and Slacks.
First use Dec. 30, 1959.

Class 40—Fancy Goods, Furnishings, and Notions

SN 91,649. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 392,455, 682,904, and others.
For Needlepoint Foundations (That Is, Fabric Base With Partially Worked Needlepoint Design, for Completion by the Buyer).
First use August 1958.

SN 91,657. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.



Owner of Reg. Nos. 392,455, 682,904, and others.
For Needlepoint Foundations (That Is, Fabric Base With Partially Worked Needlepoint Design, for Completion by the Buyer).
First use August 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 75,044. Abraham Silks Company, Inc., New York, N.Y. Filed June 4, 1959.

MIYAKO

The word "Miyako" is believed to signify or denote "foremost" or "leading" in the Japanese language.
For Silk and Synthetic Textile Fabrics in the Piece.
First use October 1947.

SN 79,399. Erbun Fabrics Corporation, New York, N.Y. Filed Aug. 12, 1959.

Demi-Squares

For Swatches of Drapery and Upholstery Fabrics.
First use June 15, 1959.

SN 84,768. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Miyakojima-ku, Osaka, Japan. Filed Nov. 6, 1959.

KANEBO

Owner of Japanese Reg. Nos. 262,085, dated Feb. 12, 1935, and 266,408, dated July 1, 1935.
For Cotton and Silk Textile Piece Goods.
First use Mar. 13, 1930; in commerce Mar. 23, 1934.

SN 85,876. Alexander Lamport & Bro., New York, N.Y. Filed Nov. 23, 1959.

FIBERITE

For Fender Cover Fabric and Fender Covers Made of Fabric.
First use Nov. 11, 1959.

SN 86,134. Chatham Manufacturing Company, Elkin, N.C. Filed Dec. 29, 1959.

Chatham

Owner of Reg. Nos. 150,285, 540,327, and others.
For Blankets and Women's Wear Apparel Cloth, Men's Wear Apparel Cloth, Furniture Upholstery Cloth, and Automobile Upholstery Cloth.
First use Oct. 15, 1959; June 15, 1877, as to "Chatham" on blankets.

SN 90,117. J. P. Stevens & Co. Inc., New York, N.Y. Filed Feb. 1, 1960.

FANTESSA

For Textile Fabrics in the Piece of Synthetic Fibers.
First use Aug. 13, 1959.

SN 91,049. Beaunit Mills, Inc., New York, N.Y. Filed Feb. 17, 1960.

CUPERSIL

For Curtain, Drapery, and Upholstery Fabrics Containing Substantial Amounts of Rayon Yarn.
First use on or about Dec. 15, 1959.

Class 43—Thread and Yarn

SN 60,691. Leo Silverman, Elkins Park, Pa. Filed Oct. 15, 1958.

LOOP-A-LASTIC

For Yarns.
First use Oct. 1, 1958.

SN 84,767. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Miyakojima-ku, Osaka, Japan. Filed Nov. 6, 1959.

KANEBO

Owner of Japanese Reg. No. 284,216, dated Dec. 2, 1936.
For Cotton Yarns and Threads.

Class 44—Dental, Medical, and Surgical Appliances

SN 50,633. The May Department Stores Company, St. Louis, Mo. Filed Apr. 29, 1958.

ARCROSS

Owner of Reg. Nos. 625,527, 629,227, and others.
For Hot Water Bottles, Fountain Syringes and Douche Bags, Feminine Hygienic Syringes, Ice Bags, Ice Caps, Clinical Thermometers (Oral and Rectal), Sanitary Belts, Nylon Elastic Hosiery, Electric Hair Dryers, Electric Heating Pads, Vaporizers, Heat Lamps for Therapeutic Use, Electric Vibrators for Therapeutic Use, Absorbent Cotton, Cotton Swabs, Ear Syringes, Infants' Syringes, Invalid Rings, Protective Surgical Dressings on Plastic Strips, Tampons, and Plastic Pill Dispensers.
First use Jan. 1, 1953.

SN 55,090. Testa Laboratorium A/S, Copenhagen-Vanloese, Denmark. Filed July 10, 1958.

AMBU

Owner of Danish Reg. No. 1056-1958, dated June 7, 1958.
For Lifesaving Apparatus and Instruments—Namely, Respirators for Artificial Breathing, Pressure or Suction Pumps Especially for Medical Purposes.

Class 45—Soft Drinks and Carbonated Waters

SN 87,561. Hawaiian Kitchen, San Francisco, Calif. Filed Dec. 18, 1959.

HAWAIIAN HOSPITALITY

For Non-Alcoholic Cocktail Mix.
First use Dec. 8, 1959.

Class 46—Foods and Ingredients of Foods

SN 53,344. The May Department Stores Company, St. Louis, Mo. Filed June 11, 1958.

ARCROSS

For Saccharin and Liquid Food Sweeteners.
First use Aug. 1, 1955.

SN 72,177. Barrack Poultry Corp., New York, N.Y. Filed Apr. 24, 1959.

NATHAN HALE

For Fresh Poultry.
First use Sept. 8, 1958.

SN 73,928. George F. Kay, d.b.a. Dietionics Laboratories and Vista Food Products Co., Los Angeles, Calif. Filed May 18, 1959.

EXOTIC

For Fruit Jams and Preserves, Orange Marmalade, Barbecue Sauce, and the Following Items in Jars and Bottles—Mayonnaise, Bleu Cheese Dressing, Sweet Relish, Sandwich Spread, Mustard, Peanut Butter, Onions, Cherries, Peanut Oil, Papaya Nectar, Sweet Pickle Chips, and Soya Oil.
First use Nov. 30, 1958.

SN 75,590. Taylor & Sledd, Inc., Richmond, Va. Filed June 11, 1959.

POCAHONTAS

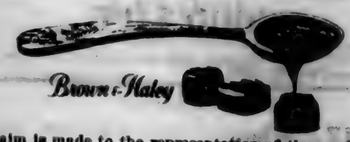
Owner of Reg. Nos. 508,211, 336,457, and 66,059.
For Flour.
First use Feb. 17, 1950.

SN 76,151. Dorothy L. Beresic, d.b.a. Dorothy K Products, Phoenix, Ariz. Filed June 22, 1959.

Dorothy K

For Gelatine Powders With Flavoring Tablets for Use in Making Gelatine Desserts and Gelatine Food Drinks.
First use Nov. 1, 1958.

SN 81,872. Brown & Haley, Tacoma, Wash. Filed Sept. 23, 1959.



No claim is made to the representation of the candy shown in the drawing.
For Chocolate Candies.
First use Nov. 8, 1957.

SN 85,604. J. R. Short Milling Company, Chicago, Ill. Filed Nov. 19, 1959.

SHORT'S SPECIAL 70

No claim is made to the word "Special" apart from the mark as shown. Owner of Reg. No. 692,903.
For Dough Conditioner for Bakery Use for Drying Doughs and Increasing Water Absorption.
First use Feb. 17, 1959.

SN 86,407. Elais, S.A. Oleaginous Products, Piraeus, Greece. Filed Dec. 1, 1959.

FLORINA

For Edible Olive Oil.
First use Oct. 1, 1959; in commerce Oct. 1, 1959.

SN 87,560. Hawaiian Kitchen, San Francisco, Calif. Filed Dec. 18, 1959.

HAWAIIAN HOSPITALITY

For Pineapple Relish.
First use Dec. 8, 1959.

SN 88,885. Wise Potato Chip Company, Berwick, Pa. Filed Jan. 12, 1960.



The drawing is lined for yellow or gold but no claim is made to color. Owner of Reg. Nos. 669,985, 540,249, and others.
For Potato Chips.
First use Nov. 23, 1959.

SN 91,206. New England Confectionery Company, Cambridge, Mass. Filed Feb. 18, 1960.

SCAMPERS

For Candy.
First use Feb. 10, 1960.

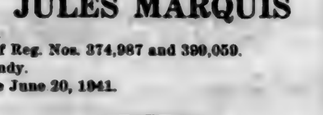
SN 91,417. Louis Milani Foods, Inc., Los Angeles, Calif. Filed Feb. 23, 1960.

GOOD LIFE

For Matzo Ball Mix.
First use Feb. 12, 1960.

Class 47 — Wines

SN 72,531. S.A. Champagne Mercier, Epernay, Marne, France. Filed Apr. 29, 1959.



The word "Epernay" is disclaimed apart from the mark as shown. Owner of French Reg. No. 9,689, dated Dec. 5, 1957 (Epernay); Natl. Inst. No. 100,090.
For Champagne.
First use 1858.

Class 48 — Malt Beverages and Liquors

SN 80,870. Frydenlunds Bryggeri, d.b.a. Frydenlunds Brewery, Oslo, Norway. Filed Sept. 4, 1959.



Owner of U.S. Reg. Nos. 562,999 and 652,497.
For Beer.
First use July 1957; in commerce July 1957.

Class 49 — Distilled Alcoholic Liquors

SN 75,489. London & Company, Inc., Elizabeth, N.J. Filed June 10, 1959.

SQUIRE JONES

For Whiskey.
First use May 27, 1959.

SN 80,040. Arrow Liqueurs Corporation, Detroit, Mich. Filed Aug. 24, 1959.

JULES MARQUIS

Owner of Reg. Nos. 374,987 and 390,059.
For Brandy.
First use June 20, 1941.

SN 90,262. Mr. Boston Distiller Inc., Boston, Mass. Filed Feb. 3, 1960.

KING'S MEN

For Distilled Dry Gin.
First use Jan. 8, 1960.

Class 50 — Merchandise Not Otherwise Classified

SN 80,618. Wood Flong Corporation, Hoosick Falls, N.Y. Filed Aug. 26, 1959.



The words "One-Piece" and "No-Pack-Mat" are disclaimed apart from the mark as shown.
For Dry Mats for Stereotyping Purposes.
First use May 21, 1959.

SN 89,767. James G. Hamm, East Bangor, Pa. Filed Jan. 27, 1960.

HAMM-PENN

For Slate Blackboards.
First use Nov. 16, 1959.

Class 51 — Cosmetics and Toilet Preparations

SN 58,404. Clairol Incorporated (Delaware corporation), New York, N.Y., assignee of Clairol Incorporated (Connecticut corporation), Stamford, Conn. Filed Sept. 5, 1958.

FASHION FOILS

Applicant disclaims the word "Foils."
For Metallic Foils Used in Conjunction With Hair Tints and Bleaching Preparations.
First use July 31, 1958.

SN 62,273. Daggett & Ramsdell, Inc., New York, N.Y. Filed Nov. 12, 1958.

MISS TEEN

For Cologne.
First use Sept. 3, 1958.

SN 73,169. Woodlets, Inc., Buffalo, N.Y. Filed May 7, 1959.

YONDER

For Perfumes.
First use Nov. 14, 1958.

SN 77,328. Shulton, Inc., Clifton, N.J. Filed July 8, 1959.

YORK TOWN
* 1781 *

For Men's Cologne.
First use June 26, 1959.

SN 79,355. Societe Technique de Parfumerie, F. Millot, Paris, France. Filed Aug. 11, 1959.

GANTELINE

"Ganteline" in French is a botanical term and designates a species of plants having a common feature, namely, the form of the finger of a glove. Owner of French Reg. No. 480,719, dated May 29, 1959 (Paris); Natl. Inst. No. 126,711.
For Perfume, Toilet Water, Lipstick, Rouge, Face Powder, and Cosmetic Creams and Lotions.

SN 84,709. Crystal Products Company Limited, Surbiton, Surrey, England. Filed Oct. 19, 1959.

OUTDOOR GIRL

Owner of British Reg. No. 657,693, dated Mar. 27, 1947.
For Cosmetic and Toilet Preparations—Namely, Astringents, Skin Creams, Skin Lotions, Lipsticks, Rouge, Nail Polish and Nail Polish Remover, Face Powder, Deodorants, Depilatory Preparations, Hair Dyes and Tints, Hair Grooming Preparations, and Eye Make-Up—Namely, Eyebrow Pencils, Eye Shadow and Mascara.

SN 87,113. Cippy Inc., Clifton, N.J. Filed Dec. 11, 1959.

lipisienne

For Lipsticks.
First use Nov. 12, 1959.

SN 87,179. Botany Industries, Inc., d.b.a. Ridley Co., South San Francisco, Calif. Filed Dec. 14, 1959.

INSPIRATION

For Perfume.
First use on or about Dec. 1, 1945.

SN 87,465. Burma-Bibas, Inc., New York, N.Y. Filed Nov. 24, 1959.



Prince Igor

For Men's Toiletries—Namely, Men's Cologne and After-Shave Lotion.
First use Oct. 29, 1958.

SN 87,933. Coty, Inc., New York, N.Y. Filed Dec. 24, 1959.
Owner of Reg. Nos. 146,719, 180,226, and 180,540.

LITTLE MISS COTY

For Toilet Water, Perfume, Lipstick, Nail Polish and Face Cream.
First use Dec. 16, 1959.

SN 88,103. Schratz Products, Detroit, Mich. Filed Dec. 28, 1959.

SOFT MAGIC

For Bubble Bath, Bath Powder, Bath Crystals, Bath Oil, Cologne, and Perfume.
First use June 1, 1952.

SN 88,514. B. T. Babbitt, Inc., New York, N.Y. Filed Jan. 6, 1960.

BIDETTE

For Disposable Fibrous Pads Impregnated With a Skin Cleansing Antiseptic and Deodorizing Preparation.
First use Apr. 2, 1955.

SN 89,243. Bristol-Myers Company, New York, N.Y. Filed Jan. 19, 1960.

LANOSIL

For Combination of Lanolin and Silicones Incorporated as an Ingredient in a Hand and Skin Lotion.
First use Dec. 16, 1959.

SN 90,801. Roux Laboratories, Inc., New York, N.Y. Filed Feb. 3, 1960.



Owner of Reg. Nos. 311,636, 675,826, and others.
For Hair Coloring Preparations.
First use Dec. 17, 1959.

Class 52 — Detergents and Soaps

SN 50,817. The May Department Stores Company, St. Louis, Mo. Filed May 1, 1958.

ARCROSS

For Soaps, Hair Shampoos, and Detergents for Household Use.
First use Sept. 1, 1953.

SN 61,810. P. H. Helle Co., Inc., Worcester, Mass. Filed Nov. 3, 1958.

HELICO

For Synthetic Soaps for Wool Scouring and To Prevent the Attraction of Dust by Plastic Articles, and a Soap Additive for Removing Mineral Oil From Textiles.
First use Jan. 3, 1956.

SN 77,675. Les Parfums Chypron S.A., Bois-Colombes, France. Filed July 14, 1959.

SANICUTAN

Owner of French Reg. No. 477,830, dated Jan. 28, 1959 (Seine); Natl. Inst. No. 119,994.
For Soaps and Hair Shampoo.

SN 79,567. Geigy Chemical Corporation, Ardsley, N.Y. Filed Aug. 14, 1959.

GY-GLASS

For Cleaning Compounds for Domestic Use.
First use July 28, 1959.

SN 83,348. The W. E. Bassett Company, d.b.a. The Kemkat Company, Derby, Conn. Filed Oct. 16, 1959.



For Liquid Cleaners for Automobile Bodies, Whitewall Tires, Chromium, and Upholstery.
First use Apr. 13, 1959.

SN 83,377. Linco Products Corporation, Chicago, Ill. Filed Oct. 16, 1959.

LINCO

Owner of Reg. No. 296,042.
For Liquid Detergent.
First use 1956; in or about December 1928 on cleaning compounds.

SN 84,544. Linco Products Corporation, Chicago, Ill. Filed Nov. 3, 1959.



Owner of Reg. No. 296,042.
For Liquid Detergent.
First use 1956; in or about December 1928 on cleaning compounds.

SN 86,542. The Diversey Corporation, Chicago, Ill. Filed Dec. 3, 1959.

DIVERSEY

Owner of Reg. Nos. 388,267, 673,812, and others.
For Granular Metal Phosphatizing Compounds, Various Granular and Liquid Compounds Used in Plant and Building Maintenance, for Water, Oil and Grease Absorbents, Bottle-washing and Cleaning of Utensils and Equipment by Farms, Hospitals, Hotels, Schools, Other Institutions, Dairies, Bakeries, Breweries, Food Plants, Beverage Plants and in Food Serving Operations.
First use Jan. 21, 1949.

SN 90,128. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 1, 1960.

DEVAPOSAL

For Cleaning Composition for Cleaning Equipment Used in Sugar Industry.
First use Oct. 30, 1959.

SN 90,257. Last-O-Lon, Inc., Boston, Mass. Filed Feb. 3, 1960.

Lastolon

For Cold Water Wash in Liquid Form for Washing Elasticised Garments and Fabrics.
First use Dec. 12, 1959.

SERVICE MARKS

Class 101 — Advertising and Business

SN 54,042. Hōm, Incorporated, Walnut Creek, Calif. Filed June 23, 1958.



Applicant disclaims exclusive right to the words "Home Owners Mart" apart from the mark.
For Services Guaranteeing the Sale Price of Real Estate Held by a Client Who Has Purchased or Desires To Purchase Other Real Estate Through Applicant's Brokerage Services.
First use Jan. 10, 1958.

SN 87,852. Calo Pet Food Company, Oakland, Calif. Filed Dec. 23, 1959.



For Rescue of Persons Lost or Stranded in Mountainous and Other Geographic Areas.
First use Sept. 1, 1956.

Class 102 — Insurance and Financial

SN 54,350. Security Trust Company of Rochester, Rochester, N.Y. Filed June 26, 1958.

SENSITRONIC

For Checking Account Services.
First use June 7, 1958.

SN 56,518. American Institute of Real Estate Appraisers of the National Association of Real Estate Boards, Chicago, Ill. Filed Aug. 4, 1958. COLLECTIVE MARK.



For Real Estate Appraisal Services Rendered by Applicant's Members.
First use June 30, 1932.

SN 90,348. Meridian Mutual Insurance Company, Indianapolis, Ind. Filed Feb. 4, 1960.

PACEMAKER

For Underwriting of Automobile Insurance.
First use Oct. 1, 1934.

Class 105 — Transportation and Storage

SN 89,623. Western Air Lines, Inc., Los Angeles, Calif. Filed Jan. 25, 1960.

WESTERN AIRLINES

Owner of Reg. Nos. 628,441, 654,916, and 557,092.
For Transportation of Passengers, Freight, and Mail by Airplane.
First use Mar. 1, 1943.

SN 91,038. Trans-American Van Service, Inc., Chicago, Ill. Filed Feb. 16, 1960.

TRANS-PACK

Owner of Reg. Nos. 545,362 and 673,659.
For Packaging, Moving and Shipping Household and Industrial Goods and Articles in Specially Designed Containers Provided by Applicant.
First use Jan. 2, 1958.

Class 107 — Education and Entertainment

SN 78,628. Independent Television Corporation, New York, N.Y. Filed July 29, 1959.

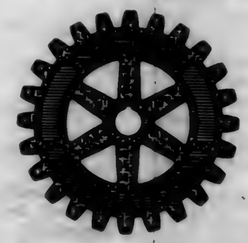


For Leasing Filmed Entertainment Shows—Namely, Westerns, Musicals, Children's Shows and Similar Types of Entertainment.
First use Feb. 9, 1959.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 89,803. Rotary International, Evanston, Ill. Filed Jan. 27, 1960.



For Indicating Membership in Applicant's Organization.
First use in 1919.

CERTIFICATION MARKS

Class A — Goods

SN 76,902. Turn-A-Bore Equipment Company, Fort Worth, Tex. Filed July 2, 1959.



The mark certifies that the goods are manufactured with applicant's machinery.
For Wooden Door Assembly Units.
First use Mar. 1, 1958.

SN 82,966. Florida Egg Commission, Tampa, Fla. Filed Oct. 9, 1959.



The mark certifies regional origin of the goods.
For Florida Eggs.
First use Dec. 26, 1958.

TM 76

Class B—Services

SN 53,252. William J. Garrity, Jr., d.b.a. W. J. Garrity, Jr., La Crosse, Wis. Filed June 10, 1958.



The mark, as used by parties authorized by applicant, certifies that the services meet standards of quality established by applicant.
For Automobile Service Station Services.
First use Jan. 8, 1958.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

700,716. RADNOR ESTATES. American Stores Company. SN 55,205. Pub. 4-26-60. Filed 7-14-58.

700,717. B. J. BURNLEY "ALWAYS GROWING" AND DESIGN. B. J. Burnley Inc., assignee of Benjamin J. Burnley. SN 55,309. Pub. 4-26-60. Filed 7-15-58.

700,718. ROLAWN. Rolawn, Inc. SN 59,989. Pub. 4-26-60. Filed 10-2-58.

700,719. ASAHI KASEI. Asahi Kasei Kogyo Kabushiki Kaisha. SN 67,431. Pub. 4-26-60. Filed 2-10-59.

700,720. VAREZ. McCloskey Varnish Co. SN 68,583. Pub. 4-26-60. Filed 2-27-59.

700,721. VARAQUA. McCloskey Varnish Co. SN 68,585. Pub. 4-26-60. Filed 2-27-59.

700,722. VARKYD. McCloskey Varnish Co. SN 68,586. Pub. 4-26-60. Filed 2-27-59.

700,723. BEARGLAS. Bear Archery Company. SN 75,057. Pub. 4-26-60. Filed 6-4-59.

700,724. MIMX. Mimx Corporation, assignee of Fleming and Fite. SN 79,774. Pub. 4-26-60. Filed 8-18-59.

700,725. JATTAN. Edgar Joseph. SN 84,429. Pub. 4-26-60. Filed 11-2-59.

700,726. GARRISON. Albert Trostel & Sons Company. SN 86,220. Pub. 4-26-60. Filed 11-27-59.

700,727. FORMAL. Albert Trostel & Sons Company. SN 86,225. Pub. 4-26-60. Filed 11-27-59.

700,728. GANDER. Albert Trostel & Sons Company. SN 86,226. Pub. 4-26-60. Filed 11-27-59.

700,729. HOBBY. Albert Trostel & Sons Company. SN 86,228. Pub. 4-26-60. Filed 11-27-59.

700,730. ATASKIT. Albert Trostel & Sons Company. SN 86,229. Pub. 4-26-60. Filed 11-27-59.

700,731. BAMBINO. Albert Trostel & Sons Company. SN 86,234. Pub. 4-26-60. Filed 11-27-59.

700,732. PONY VISTA. Floyd E. Diemer. SN 87,041. Pub. 4-26-60. Filed 12-10-59.

700,733. POLLY DOWN AND DESIGN. Chas. V. Dehner Co., Inc. SN 87,209. Pub. 4-26-60. Filed 12-14-59.

700,734. PRAIRIE BLEND. Pride Hybrid Company (Northern Division). SN 87,276. Pub. 4-26-60. Filed 12-14-59.

700,735. LUSTRESKIN. Armour and Company. SN 87,965. Pub. 4-26-60. Filed 12-24-59.

700,736. LAMOPAKE. Arvey Corporation. SN 88,637. Pub. 4-26-60. Filed 1-8-60.

700,737. JACKSEAL AND DESIGN. Kingseal Company, Inc. SN 89,688. Pub. 4-26-60. Filed 1-26-60.

700,738. CAB-O-THERM. Godfrey L. Cabot, Inc. SN 89,739. Pub. 4-26-60. Filed 1-27-60.

700,739. PROSPAN. The Dow Chemical Company. SN 90,027. Pub. 4-26-60. Filed 2-1-60.

700,740. ELEPOX. Electro Coil Corporation. SN 90,038. Pub. 4-26-60. Filed 2-1-60.

700,741. PRESTOVIN. J. P. Frank Chemical Corp. SN 90,246. Pub. 4-26-60. Filed 2-3-60.

Class 2—Receptacles

700,742. COR-A-VURE. Alton Box Board Company. SN 66,004. Pub. 4-26-60. Filed 1-19-59.

700,743. 4-POSTER. West Virginia Pulp and Paper Company. SN 68,860. Pub. 4-26-60. Filed 3-3-59.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

700,744. DELICATO. Markay Bags, Inc. SN 86,899. Pub. 4-26-60. Filed 12-8-59.

Class 4—Abrasives and Polishing Materials

700,745. WASH AND WEAR. Chemical Service of Baltimore, Inc. SN 87,545. Pub. 4-26-60. Filed 12-18-59.

700,746. ZECOL AND DESIGN. Zecol, Inc. SN 87,605. Pub. 4-26-60. Filed 12-18-59.

Class 6—Chemicals and Chemical Compositions

700,747. SURE-MINT. Joseph F. Uddo, d.b.a. F. Uddo & Sons Company. SN 61,974. Pub. 4-26-60. Filed 11-5-58.

700,748. THERMOS. The American Thermos Products Company. SN 65,880. Pub. 4-26-60. Filed 1-15-59.

700,749. TINUVIN. Geigy Chemical Corporation. SN 86,545. Pub. 4-26-60. Filed 1-27-59.

700,750. SNAIL-RAN. Nutrilite Products, Inc. SN 68,164. Pub. 4-19-60. Filed 2-20-59.

700,751. SULFOLAN. Dehydag Deutsche Hydrierwerke GmbH. SN 68,886. Pub. 4-26-60. Filed 3-4-59.

700,752. PARA-FUME. Klasco Products Co., Inc., d.b.a. Claimor Products Div. SN 72,439. Pub. 4-26-60. Filed 4-28-59.

700,753. CORR-SHIELD. Betz Laboratories, Inc. SN 74,367. Pub. 4-26-60. Filed 5-25-59.

700,754. DOOM. Howard A. Chittick, d.b.a. Fairfax Biological Laboratory. SN 75,235. Pub. 4-26-60. Filed 5-25-59.

700,755. AHIG. Allgemeine Holzimpragnierung, Dr. Wolman G.m.b.H. SN 75,595. Pub. 4-26-60. Filed 6-12-59.

700,756. KLOR-O-BRITE. Britex Corporation. SN 75,900. Pub. 4-26-60. Filed 6-17-59.

700,757. PROFILE. Warner-Lambert Pharmaceutical Company. SN 76,905. Pub. 4-26-60. Filed 7-1-59.

700,758. TENN-BRITE. Tennessee Products & Chemical Corporation. SN 76,990. Pub. 4-26-60. Filed 7-2-59.

700,759. ROOST NO MORE. Joseph H. Fink, d.b.a. National Bird Control Laboratories. SN 83,495. Pub. 4-26-60. Filed 10-19-59.

700,760. CYZATE. American Cyanamid Company. SN 84,374. Pub. 4-26-60. Filed 11-2-59.

700,761. CYURAM. American Cyanamid Company. SN 84,375. Pub. 4-26-60. Filed 11-2-59.

700,762. IRRICLEAR. Shell Oil Company, assignee of Shell Chemical Corporation. SN 84,466. Pub. 4-26-60. Filed 11-2-59.

700,763. SURETY. Surety Oil Corporation. SN 84,700. Pub. 4-26-60. Filed 11-5-59.

700,764. REACTONE. Geigy Chemical Corporation. SN 86,496. Pub. 4-26-60. Filed 12-3-59.

700,765. ANSUL H.A. Ansul Chemical Company. SN 87,328. Pub. 4-26-60. Filed 12-15-59.

700,766. JET-DRY. Economics Laboratory, Inc. SN 87,337. Pub. 4-26-60. Filed 12-15-59.

700,767. MINABAL. Koppers Company, Inc. SN 88,673. Pub. 4-26-60. Filed 1-8-60.

TM 77

Class 7—Cordage

700,768. JAGUAR. C. T. Takahashi & Co., Inc. SN 84,573. Pub. 4-26-60. Filed 11-3-59.

Class 9—Explosives, Firearms, Equipments, and Projectiles

700,769. GOLD-N-LINE. Pachmayr Gun Works, Inc. SN 87,271. Pub. 4-26-60. Filed 12-14-59.

Class 10—Fertilizers

700,770. AGRISTIM. Chas. Pfizer & Co., Inc. SN 40,490. Pub. 4-29-58. Filed 11-12-57.

700,771. MR. BONE'S. WEC, Inc. SN 83,335. Pub. 4-26-60. Filed 10-15-59.

700,772. MR. FISH. WEC, Inc. SN 83,336. Pub. 4-26-60. Filed 10-15-59.

Class 11—Inks and Inking Materials

700,773. GARVEY. Garvey Corporation. SN 87,668. Pub. 4-26-60. Filed 12-21-59.

700,774. GARVEY AND DESIGN. Garvey Corporation. SN 87,670. Pub. 4-26-60. Filed 12-21-59.

Class 12—Construction Materials

700,775. DAYLITE. Wasco Products, Inc. SN 55,545. Pub. 4-26-60. Filed 7-17-58.

700,776. KWIK-KLIP. Penn Metal Company, Inc. SN 66,079. Pub. 4-26-60. Filed 1-19-59.

700,777. FOREMAN AND DESIGN. Arkansas Cement Corporation. SN 68,453. Pub. 4-26-60. Filed 2-26-59.

700,778. FOREMAN. Arkansas Cement Corporation. SN 68,455. Pub. 4-26-60. Filed 2-26-59.

700,779. AXCOMATIC. Axinn & Sons Lumber Co., Inc. SN 69,234. Pub. 4-26-60. Filed 3-10-59.

700,780. AXCO. Axinn & Sons Lumber Co., Inc. SN 69,235. Pub. 4-26-60. Filed 3-10-59.

700,781. STRUC.-INT C REP D ETC. AND DESIGN. Douglas Fir Plywood Association. SN 69,621. COLLECTIVE MARK. Pub. 4-26-60. Filed 3-16-59.

700,782. DFPA TESTED QUALITY AND DESIGN. Douglas Fir Plywood Association. SN 69,622. COLLECTIVE MARK. Pub. 4-26-60. Filed 3-16-59.

700,783. SUN BOW. Sonne & Bohn, Inc. SN 71,896. Pub. 4-26-60. Filed 4-20-59.

700,784. WET WELD. Taylor & Art, Inc. SN 71,908. Pub. 4-26-60. Filed 4-20-59.

700,785. CARICATURE OF BIRD. Robinson Plywood and Timber Co. SN 75,583. Pub. 4-26-60. Filed 6-11-59.

700,786. FILTER-RITE. Carthage Mills Incorporated. SN 81,167. Pub. 4-26-60. Filed 9-11-59.

700,787. FILTER-X. Carthage Mills Incorporated. SN 81,168. Pub. 4-26-60. Filed 9-11-59.

700,788. ALPHA A CEMENTS. Alpha Portland Cement Company. SN 81,608. Pub. 4-26-60. Filed 9-18-59.

700,789. SOUNDGUARD. Holcomb & Hoke Mfg. Co., Inc. SN 85,342. Pub. 4-26-60. Filed 11-16-59.

700,790. PORCE COTE. Porce Cote Corp. SN 85,904. Pub. 4-26-60. Filed 11-23-59.

700,791. J3 AND DESIGN. The Lovell Clay Products Company, Inc. SN 85,980. Pub. 4-26-60. Filed 11-24-59.

700,792. C.R.L. Canadian Refractories Limited. SN 86,109. Pub. 4-26-60. Filed 11-27-59.

700,793. AIR KOOL. Air-Kool Aluminum Awning Co. SN 86,251. Pub. 4-26-60. Filed 11-30-59.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

700,794. CABLEHITCH. Air Reduction Company, Incorporated. SN 54,978. Pub. 4-26-60. Filed 7-9-58.

700,795. SERV-ALL. Bridgeport Brass Company. SN 73,651. Pub. 4-26-60. Filed 5-14-59.

700,796. LIVE WATER SWIMMING POOL. Polk Pools' Products, Inc. SN 76,824. Pub. 4-26-60. Filed 6-30-59.

700,797. TAJ MAHAL. United Silver & Cutlery Company. SN 80,211. Pub. 4-26-60. Filed 8-25-59.

700,798. AIRSTOP. David Magowan, Jr., d.b.a. The Gowan Co. SN 86,167. Pub. 4-26-60. Filed 11-27-59.

700,799. DELTA. L. R. Nelson Mfg. Co., Inc. SN 87,899. Pub. 4-26-60. Filed 12-23-59.

700,800. DELTA JET. L. R. Nelson Mfg. Co., Inc. SN 87,900. Pub. 4-26-60. Filed 12-23-59.

Class 14—Metals and Metal Castings and Forgings

700,801. M MEEHANITE. Meehanite Metal Corporation. SN 81,829. Pub. 4-26-60. Filed 9-22-59.

700,802. CLIMELT. American Metal Climax, Inc. SN 82,061. Pub. 4-26-60. Filed 9-25-59.

700,803. ACCUTRONIC. Detroit Steel Corporation. SN 82,088. Pub. 4-26-60. Filed 9-25-59.

700,804. LEDLOY. Inland Steel Company. SN 82,427. Pub. 4-26-60. Filed 9-30-59.

700,805. ATLOY. Atlantic Steel Corp. SN 83,344. Pub. 4-26-60. Filed 10-16-59.

700,806. ATSCO. Atlantic Steel Corp. SN 83,345. Pub. 4-26-60. Filed 10-16-59.

700,807. FORCAST. Forcast Steel Corporation. SN 83,715. Pub. 4-26-60. Filed 10-21-59.

Class 15—Oils and Greases

700,808. JO DESIGN. E. Eltridge Belch, d.b.a. Jass Oil Co. SN 70,637. Pub. 4-26-60. Filed 4-1-59.

700,809. MOLYSPEED. Molyspeed Corporation. SN 71,222. Pub. 4-26-60. Filed 4-9-59.

700,810. TRIANGLE AND DESIGN. Triangle Refineries, Inc. SN 72,163. Pub. 4-26-60. Filed 4-23-59.

700,811. HI-PO. Stewart-Warner Corporation. SN 84,254. Pub. 4-26-60. Filed 10-29-59.

Class 16—Protective and Decorative Coatings

700,812. DAIRYSEAL. Sun Oil Company. SN 75,223. Pub. 4-26-60. Filed 6-5-59.

700,813. SPARKLE FLOC. Floc-Flo Corporation. SN 85,573. Pub. 4-26-60. Filed 11-18-59.

700,814. FAS-TRAX. The Reardon Company. SN 85,611. Pub. 4-26-60. Filed 11-18-59.

700,815. MOORGARD. Benjamin Moore & Co. SN 86,306. Pub. 4-26-60. Filed 11-30-59.

700,816. BUDIUM. E. I. du Pont de Nemours and Company. SN 86,642. Pub. 4-26-60. Filed 12-4-59.

700,817. SEC-KOOL-KOTE. Sec Manufacturing Company. SN 86,684. Pub. 4-26-60. Filed 12-4-59.

Class 18—Medicines and Pharmaceutical Preparations

700,818. REVLON. Revlon, Inc. SN 67,987. Pub. 4-26-60. Filed 2-18-59.

700,819. ATOMETER. The Upjohn Company. SN 78,224. Pub. 4-26-60. Filed 7-22-59.

700,820. MEDROXINE. The Upjohn Company. SN 81,102. Pub. 4-26-60. Filed 9-9-59.

700,821. DIMETAPP. A. H. Robins Company, Inc. SN 81,439. Pub. 4-26-60. Filed 9-17-59.

700,822. SACRO-DISC-30. Sigmund Sinskey, d.b.a. Armisyl Products. SN 81,836. Pub. 4-26-60. Filed 9-23-59.

700,823. BIMEX. Imperial Chemical Industries Limited. SN 82,113. Pub. 4-26-60. Filed 9-25-59.

700,824. PARLONE. The Upjohn Company. SN 83,575. Pub. 4-26-60. Filed 10-19-59.

700,825. NOVABIOSOL. The Upjohn Company. SN 83,578. Pub. 4-26-60. Filed 10-19-59.

700,826. ORINASE DIAGNOSTIC. The Upjohn Company. SN 83,756. Pub. 4-26-60. Filed 10-21-59.

700,827. STREP-COMBIOTIC. Chas. Pfizer & Co., Inc. SN 84,089. Pub. 4-26-60. Filed 10-27-59.

700,828. TRAVERT. Baxter Laboratories, Inc. SN 84,204. Pub. 4-26-60. Filed 10-29-59.

700,829. ADOCARDIN. Aktiebolaget Hässle, Apotekare Paul Nordströms Fabriker. SN 84,499. Pub. 4-26-60. Filed 11-3-59.

700,830. ALLERGY 5. Vick Chemical Company. SN 84,705. Pub. 4-26-60. Filed 11-5-59.

700,831. PRIMES. Vick Chemical Company. SN 84,706. Pub. 4-26-60. Filed 11-5-59.

700,832. BALNEOL. Foster-Milburn Company. SN 84,883. Pub. 4-26-60. Filed 11-9-59.

700,833. FORTOGEN. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 85,843. Pub. 4-26-60. Filed 11-23-59.

700,834. DITRIOKON. Mallinckrodt Chemical Works. SN 85,886. Pub. 4-26-60. Filed 11-23-59.

700,835. PANOLOG. Olin Mathieson Chemical Corporation. SN 86,190. Pub. 4-26-60. Filed 11-27-59.

700,836. STUARTINIC. The Stuart Company. SN 86,457. Pub. 4-26-60. Filed 12-1-59.

700,837. CAN-O-VAX. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,571. Pub. 4-26-60. Filed 12-3-59.

700,838. SILANOX. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,574. Pub. 4-26-60. Filed 12-3-59.

700,839. VITATONE. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,576. Pub. 4-26-60. Filed 12-3-59.

700,840. ALPHADROL. The Upjohn Company. SN 86,618. Pub. 4-26-60. Filed 12-3-59.

700,841. RYNATUS. Irwin, Neisler & Co. SN 86,665. Pub. 4-26-60. Filed 12-4-59.

700,842. DECONGESTOL. Carter Products, Inc. SN 86,927. Pub. 4-26-60. Filed 12-9-59.

700,843. DIFOLIN. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,949. Pub. 4-26-60. Filed 12-9-59.

700,844. D-CA-FOS. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,950. Pub. 4-26-60. Filed 12-9-59.

700,845. L.A.T. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,951. Pub. 4-26-60. Filed 12-9-59.

700,846. LACTIMENE. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,952. Pub. 4-26-60. Filed 12-9-59.

700,847. PARIFORT. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,953. Pub. 4-26-60. Filed 12-9-59.

700,848. ARDSLIN. Geigy Chemical Corporation. SN 87,054. Pub. 4-26-60. Filed 12-10-59.

700,849. ARDSOLAN. Geigy Chemical Corporation. SN 87,055. Pub. 4-26-60. Filed 12-10-59.

700,850. DISTOVAX. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 87,117. Pub. 4-26-60. Filed 12-11-59.

700,851. PLAQUEPRIN. Sterling Drug Inc. SN 87,740. Pub. 4-26-60. Filed 12-21-59.

700,852. CEREBEL. Xttrium Laboratories, Inc. SN 87,739. Pub. 4-26-60. Filed 12-21-59.

700,853. CARDENZ. The Miller Pharmacal Co. SN 88,781. Pub. 4-26-60. Filed 1-11-60.

700,854. LYSMINS. The Miller Pharmacal Co. SN 88,782. Pub. 4-26-60. Filed 1-11-60.

700,855. ULCIMINS. The Miller Pharmacal Co. SN 88,783. Pub. 4-26-60. Filed 1-11-60.

700,856. UNIPAQUE. E. Fougera & Co., Inc. SN 89,264. Pub. 4-26-60. Filed 1-19-60.

700,857. TRANALEXIN. Irwin, Neisler & Co. SN 89,270. Pub. 4-26-60. Filed 1-19-60.

700,858. RYNADYNE. Irwin, Neisler & Co. SN 89,271. Pub. 4-26-60. Filed 1-19-60.

700,859. PHORPANE. Irwin, Neisler & Co. SN 89,273. Pub. 4-26-60. Filed 1-19-60.

Class 19—Vehicles

700,860. BILT-WELL. Bilt-Well Trailer Company. SN 74,368. Pub. 4-26-60. Filed 5-25-59.

700,861. T AND DESIGN. Truckstell Manufacturing Company. SN 85,423. Pub. 4-26-60. Filed 11-16-59.

Class 21—Electrical Apparatus, Machines, and Supplies

700,862. FROSTY PEARL. Raylite Electric Corp. SN 72,362. Pub. 4-26-60. Filed 4-27-59.

700,863. GUDE NYLACE. Gudebrod Bros. Silk Co., Inc. SN 75,627. Pub. 4-26-60. Filed 6-12-59.

700,864. MIGET. Air Reduction Company, Incorporated. SN 76,455. Pub. 4-26-60. Filed 6-25-59.

700,865. IEZ EYE-EASY. R. A. Manning Company, Inc. SN 82,687. Pub. 4-26-60. Filed 10-5-59.

700,866. N-KAP. Edwin H. Brandenburg, d.b.a. Magnetic Holding Devices. SN 83,944. Pub. 4-26-60. Filed 10-26-59.

700,867. RADAR-MATE. Servel, Inc. SN 84,179. Pub. 4-26-60. Filed 10-28-59.

700,868. BULOVA AND DESIGN. Bulova Watch Company, Inc. SN 87,184. Pub. 4-26-60. Filed 12-14-59.

700,869. WASTE KING UNIVERSAL AND DESIGN. Waste King Corporation. SN 88,115. Pub. 4-26-60. Filed 12-28-59.

700,870. HORNET. Air Reduction Company, Incorporated. SN 88,279. Pub. 4-26-60. Filed 12-31-59.

700,871. THE ROBERT DOLLAR CO. ELECTRONICS AND DESIGN. The Robert Dollar Co. SN 88,368. Pub. 4-26-60. Filed 1-4-60.

700,872. REPRESENTATION OF A FLAG. The Robert Dollar Co. SN 86,869. Pub. 4-26-60. Filed 1-4-60.

700,873. PERMALEX. General Electric Company. SN 88,351. Pub. 4-26-60. Filed 1-4-60.

700,874. LGH. AMP Incorporated. SN 88,631. Pub. 4-26-60. Filed 1-8-60.

700,875. CAP-SIL. General Instrument Corporation. SN 88,659. Pub. 4-26-60. Filed 1-8-60.

Class 22—Games, Toys, and Sporting Goods

700,876. TRANSOGRAM IN TRIANGLE DESIGN. Transogram Company, Inc. SN 46,780. Pub. 4-26-60. Filed 2-27-58.

700,877. SILHOUETTE OF GOLF CLUB. John Reuter, Jr. SN 59,339. Pub. 4-26-60. Filed 9-23-58.

700,878. RINK-ETTE. Transogram Company, Inc. SN 61,876. Pub. 4-26-60. Filed 11-3-58.

700,879. UNI-SKI. Henry S. Barch, d.b.a. Barch Manufacturing Co. SN 67,740. Pub. 4-26-60. Filed 2-16-59.

700,880. DUNCAN YO-YO. Donald F. Duncan, Incorporated. SN 70,583. Pub. 4-26-60. Filed 3-31-59.

700,881. MEDALLION AND DESIGN. Shoe Corporation of America. SN 71,445. Pub. 4-26-60. Filed 4-13-59.

700,882. PARABOW. Shakespeare Company. SN 72,742. Pub. 4-26-60. Filed 5-14-59.

700,883. DRYPER. International Latex Carporation. SN 77,017. Pub. 4-26-60. Filed 7-3-59.

700,884. SAIL SHARK. Julius S. Black, d.b.a. Demon Lure Co. SN 77,992. Pub. 4-26-60. Filed 7-20-59.

700,885. PYRAMID. Schaper Manufacturing Co., Inc. SN 78,310. Pub. 4-26-60. Filed 7-23-59.

700,886. ORIENT. General Sportcraft Company, Ltd. SN 79,480. Pub. 4-26-60. Filed 8-13-59.

700,887. JY WITHIN A SQUARE. Jones and Yandell Manufacturing Co., Inc. SN 79,579. Pub. 4-26-60. Filed 8-14-59.

700,888. VARIGAME. Cecil Darwin Alberts, d.b.a. Spin-A-Test Company. SN 80,219. Pub. 4-26-60. Filed 8-12-59.

700,889. LITTLE RICH FURNITURE. Anita Bartless. SN 80,775. Pub. 4-26-60. Filed 9-2-59.

700,890. NORTH BAY. Dexter Shoe Co. SN 81,467. Pub. 4-26-60. Filed 9-16-59.

700,891. THE BOOK OF KNOWLEDGE. Grolier Incorporated, by change of name from The Grolier Society, Inc. SN 82,576. Pub. 4-26-60. Filed 10-2-59.

700,892. TURFMOBILE. A. G. Spalding & Bros., Inc. SN 82,927. Pub. 4-26-60. Filed 10-8-59.

700,893. LITTLE TOOT. Crown Metal Products Company. SN 83,603. Pub. 4-26-60. Filed 10-20-59.

700,894. PACESETTER. The Brunswick-Balke-Collender Company. SN 83,772. Pub. 4-26-60. Filed 10-22-59.

700,895. SPIN WONDER. Shakespeare Company. SN 84,180. Pub. 4-26-60. Filed 10-28-59.

700,896. FLOATEX. Protection Equipment Co. SN 84,339. Pub. 4-26-60. Filed 10-30-59.

700,897. K'ZOOM AND DESIGN. Keen-Eye Company, Inc. SN 86,159. Pub. 4-26-60. Filed 11-27-59.

700,898. FLOW-TROLL. Cosom Industries, Inc. SN 86,540. Pub. 4-26-60. Filed 12-3-59.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

700,899. SCR. Structural Clay Products Research Foundation. SN 36,338. COLLECTIVE MARK. Pub. 4-26-60. Filed 8-19-57.

700,900. POLICY MATIC AND DESIGN. Policy-Matic Corporation of America. SN 44,837. Pub. 4-26-60. Filed 1-25-58.

700,901. GENIE. Consolidated Electronics Industries Corp. SN 70,908. Pub. 4-26-60. Filed 4-6-59.

700,902. AIR-TROL. Deere & Company. SN 72,800. Pub. 4-26-60. Filed 5-4-59.

700,903. WARDCO. Ward Tool & Machine Co., Inc. SN 76,256. Pub. 4-26-60. Filed 6-23-59.

700,904. C. SCHLIEPER AND DESIGN. Carl Schlieper. SN 79,428. Pub. 4-26-60. Filed 8-12-59.

700,905. TAJ MAHAL. United Silver & Cutlery Company. SN 80,210. Pub. 4-26-60. Filed 8-25-59.

700,906. CONOMATIC AND DESIGN. Cone Automatic Machine Company, Inc. SN 83,701. Pub. 4-26-60. Filed 10-21-59.

700,907. DYNATROL. The Bullard Company. SN 84,724. Pub. 4-26-60. Filed 11-6-59.

700,908. FLEX-O-DRIVE AND DESIGN. Page & Page Company. SN 84,795. Pub. 4-26-60. Filed 11-6-59.

700,909. DISPERSA-PULPER. E. D. Jones Corporation. SN 84,898. Pub. 4-26-60. Filed 11-9-59.

700,910. YEOFLO. Yeomans Brothers Company. SN 85,068. Pub. 4-26-60. Filed 11-10-59.

700,911. GABCO. W. E. Gabriel Fabrication Co. SN 85,229. Pub. 4-26-60. Filed 11-16-59.

700,912. MGD AND DESIGN. Mishle-Goss-Dexter, Inc. SN 85,601. Pub. 4-26-60. Filed 11-18-59.

700,913. GORDIAN. Strappings Limited. SN 85,789. Pub. 4-26-60. Filed 11-20-59.

700,914. MICRO-EDGE. Myer Bald Limited. SN 85,605. Pub. 4-26-60. Filed 11-23-59.

700,915. EMERSON. John W. Bolton & Sons, Inc. SN 85,820. Pub. 4-26-60. Filed 11-23-59.

700,916. BRUNNER. Dunham-Bush, Inc. SN 85,906. Pub. 4-26-60. Filed 11-24-59.

700,917. JETWRAP. Hansella-Werke Albert Henkel A.G. SN 86,244. Pub. 4-26-60. Filed 10-9-59.

700,918. FIX 'N' SAVE. The Spiegel Brothers Corporation. SN 86,689. Pub. 4-26-60. Filed 12-4-59.

700,919. LOWELL RED RATCHET WRENCHES AND DESIGN. Lowell Wrench Company. SN 87,066. Pub. 4-26-60. Filed 12-10-59.

700,920. USE. Unit Service Exchange Company. SN 87,092. Pub. 4-26-60. Filed 12-10-59.

700,921. ME AND DESIGN. Unit Service Exchange Company, d.b.a. Mechanic Engineered Unit Co. SN 87,094. Pub. 4-26-60. Filed 12-10-59.

700,922. FIBREMATIC. Fibreboard Paper Products Corporation. SN 87,116. Pub. 4-26-60. Filed 12-11-59.

700,923. INTERVULC. Stahlgruber Otto Gruber and Co. SN 87,515. Pub. 4-26-60. Filed 12-17-59.

700,924. GARVEY. Garvey Corporation. SN 87,607. Pub. 4-26-60. Filed 12-21-59.

700,925. GARVEY IN A DIAMOND DESIGN. Garvey Corporation. SN 87,660. Pub. 4-26-60. Filed 12-21-59.

700,926. MAGIRUS. Klöckner-Humboldt-Deutz Aktiengesellschaft. SN 87,812. Pub. 4-26-60. Filed 12-22-59.

700,927. PARISIENNE. Imperial Knife Associated Companies, Inc. SN 87,951. Pub. 4-26-60. Filed 12-24-59.

Class 24—Laundry Appliances and Machines

700,928. "SPEED WASH." McGraw-Edison Company. SN 74,676. Pub. 11-3-59. Filed 5-28-59.

Class 26—Measuring and Scientific Appliances

700,929. TOWER AND DESIGN. Sears, Roebuck and Co. SN 72,544. Pub. 4-26-60. Filed 4-29-59.

700,930. CHEKAR. General Railway Signal Company. SN 83,365. Pub. 4-26-60. Filed 10-16-59.

700,931. EVALTORK. Edward Valves, Inc. SN 84,399. Pub. 4-26-60. Filed 11-2-59.

700,932. MILAPPE. Milton Appel, d.b.a. Milton Appel & Co. SN 84,501. Pub. 4-26-60. Filed 11-3-59.

700,933. THERMATRON. Mine Safety Appliances Company. SN 84,549. Pub. 4-26-60. Filed 11-3-59.

700,934. SECRETARY. Minnesota Mining and Manufacturing Company. SN 84,551. Pub. 4-26-60. Filed 11-3-59.

700,935. ELF. Gas Material Supplies Inc. SN 84,752. Pub. 4-26-60. Filed 11-6-59.

700,936. AURICON. Audio Company of America. SN 84,886. Pub. 4-26-60. Filed 11-9-59.

700,937. LIQUIBONIC. Custom Controls, Inc. SN 84,862. Pub. 4-26-60. Filed 11-9-59.

700,938. THERMA-NODE. Kay Electric Company. SN 85,017. Pub. 4-26-60. Filed 11-10-59.

700,939. BILLION-AIRE. Mine Safety Appliances Company. SN 85,032. Pub. 4-26-60. Filed 11-10-59.

700,940. IDEAL. Burke & James, Inc. SN 85,096. Pub. 4-26-60. Filed 11-12-59.

700,941. FUTURA. The Lufkin Rule Co. SN 85,231. Pub. 4-26-60. Filed 11-13-59.

Class 27—Horological Instruments

700,942. DARIEN. General Time Corporation. SN 73,553. Pub. 4-26-60. Filed 5-13-59.

700,943. CATHAY. General Time Corporation. SN 73,559. Pub. 4-26-60. Filed 5-13-59.

700,944. CANEWOOD. General Time Corporation. SN 73,560. Pub. 4-26-60. Filed 5-13-59.

700,945. MANAGER. General Time Corporation. SN 73,562. Pub. 4-26-60. Filed 5-13-59.

700,946. SOUTHBURY. General Time Corporation. SN 76,083. Pub. 4-26-60. Filed 6-19-59.

700,947. RIVOLI. General Time Corporation. SN 76,086. Pub. 4-26-60. Filed 6-19-59.

700,948. RUDDER. General Time Corporation. SN 76,087. Pub. 4-26-60. Filed 6-19-59.

700,949. SPLENDOR. General Time Corporation. SN 76,088. Pub. 4-26-60. Filed 6-19-59.

700,950. TRAVADATE. General Time Corporation. SN 76,089. Pub. 4-26-60. Filed 6-19-59.

700,951. SEVERN. General Time Corporation. SN 76,092. Pub. 4-26-60. Filed 6-19-59.

700,952. VISTA. General Time Corporation. SN 76,461. Pub. 4-26-60. Filed 6-25-59.

700,953. FROLIC. General Time Corporation. SN 80,534. Pub. 4-26-60. Filed 8-31-59.

700,954. WALLMATE. General Time Corporation. SN 80,535. Pub. 4-26-60. Filed 8-31-59.

700,955. LELAND. General Time Corporation. SN 80,537. Pub. 4-26-60. Filed 8-31-59.

700,956. GLENDALE. General Time Corporation. SN 80,542. Pub. 4-26-60. Filed 8-31-59.

700,957. SHELBY. General Time Corporation. SN 80,545. Pub. 4-26-60. Filed 8-31-59.

Class 28—Jewelry and Precious-Metal Ware

700,958. WINSOME. Oneida Ltd. SN 77,384. Pub. 4-26-60. Filed 7-9-59.

700,959. MANSION. Oneida Ltd. SN 77,386. Pub. 4-26-60. Filed 7-9-59.

700,960. LJ AND DESIGN. Lazarus Jewelers, Inc. SN 86,162. Pub. 4-26-60. Filed 11-27-59.

Class 29—Brooms, Brushes, and Dusters

700,961. B. Burgess Cellulose Company. SN 80,051. Pub. 4-26-60. Filed 8-24-59.

700,962. DANLINE. Newark Brush Company. SN 80,257. Pub. 4-26-60. Filed 8-26-59.

700,963. FAVORITE. Johnson & Johnson. SN 83,222. Pub. 4-26-60. Filed 10-14-59.

Class 31—Filters and Refrigerators

700,964. STRATA FREEZE. Pol-Air, Inc. SN 62,607. Pub. 4-26-60. Filed 11-17-58.

700,965. RAYNE. Rayne Corporation. SN 81,832. Pub. 4-26-60. Filed 9-14-59.

700,966. FILTROS AND DESIGN. Filtros, Incorporated. SN 86,127. Pub. 4-26-60. Filed 11-27-59.

700,967. MILLIPORE. Millipore Filter Corporation. SN 86,811. Pub. 4-26-60. Filed 12-7-59.

Class 32—Furniture and Upholstery

700,968. STARLINE. Airway Products Corporation. SN 84,632. Pub. 4-26-60. Filed 11-5-59.

700,969. BENTON COUNTY. B. P. John Furniture Corporation. SN 89,169. Pub. 4-26-60. Filed 1-18-60.

700,970. INVITATION. Broyhill Furniture Factories. SN 89,244. Pub. 4-26-60. Filed 1-19-60.

700,971. TRIANON. Broyhill Furniture Factories. SN 89,246. Pub. 4-26-60. Filed 1-19-60.

700,972. CLEVELANDER. Cleveland Chair Company, Inc. SN 89,553. Pub. 4-26-60. Filed 1-25-60.

700,973. SERVAROUND. Callaway Mills Company. SN 89,643. Pub. 4-26-60. Filed 1-26-60.

700,974. DOMINO. The Troy Sunshade Company. SN 89,880. Pub. 4-26-60. Filed 1-28-60.

Class 34—Heating, Lighting, and Ventilating Apparatus

700,975. COOL-VAPOR. Hankscraft Company. SN 86,778. Pub. 4-26-60. Filed 12-7-59.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

700,976. BANTAMDUCT. Callahan Mining Corporation. SN 79,758. Pub. 4-26-60. Filed 8-18-59.

700,977. SKY CHAMPION. The Firestone Tire & Rubber Company. SN 85,326. Pub. 4-26-60. Filed 11-16-59.

700,978. VANGUARD. Lee Rubber & Tire Corporation, d.b.a. Republic Rubber Division. SN 85,758. Pub. 4-26-60. Filed 11-20-59.

700,979. INTERVULC. Stahlgruber Otto Gruber and Co. SN 87,516. Pub. 4-26-60. Filed 12-17-59.

Class 37—Paper and Stationery

700,980. MEM-O-LITE. Ronald E. Adler, d.b.a. Ronac Associates. SN 66,683. Pub. 4-26-60. Filed 1-29-59.

700,981. SENSO-MARK. The Waterbury Pen Company. SN 70,765. Pub. 4-26-60. Filed 4-2-59.

700,982. THERMO-RITER. The Waterbury Pen Company. SN 70,766. Pub. 4-26-60. Filed 4-2-59.

700,983. SNO-BRITE. International Paper Company. SN 70,898. Pub. 10-20-59. Filed 4-6-59.

700,984. STOCK-AIDE. Peck Industries Inc. SN 74,537. Pub. 4-26-60. Filed 5-26-59.

700,985. JAYO. Jayo Perfect Bookmark Inc. SN 85,016. Pub. 4-26-60. Filed 11-10-59.

700,986. TIMESCRIBE. T. D. Cook Company, Incorporated. SN 85,960. Pub. 4-26-60. Filed 11-24-59.

Class 38—Prints and Publications

700,987. JEPCO. Jeppesen & Co. SN 71,387. Pub. 4-26-60. Filed 4-13-59.

700,988. GEOGRAPHIC. National Geographic Society. SN 72,874. Pub. 4-26-60. Filed 5-4-59.

700,989. AUTOSPORT. G.P. (Publications) Limited. SN 73,909. Pub. 4-26-60. Filed 5-18-59.

700,990. ENGINEERS' PRODUCT FILE AND DESIGN. Domestic Engineering Company. SN 75,708. Pub. 4-26-60. Filed 6-15-59.

700,991. PUNCHED CARD DATA PROCESSING. Gille Associates, Inc. SN 78,021. Pub. 4-26-60. Filed 7-20-59.

700,992. BUSINESSMAN'S READER. Farnsworth Publishing Company, Inc. SN 81,551. Pub. 4-26-60. Filed 9-17-59.

700,993. PROCESS DYNAMICS ETC. AND DESIGN. Putman Publishing Company. SN 84,455. Pub. 4-26-60. Filed 11-2-59.

700,994. PARTS-MASTER. Master Publications, Inc. SN 84,918. Pub. 4-26-60. Filed 11-9-59.

700,995. SUPERMARKET EQUIPMENT. Boston Publishing Company, Inc. SN 85,094. Pub. 4-26-60. Filed 11-12-59.

700,996. TOWN AND COUNTRY. Fairfield Publishing Company. SN 85,321. Pub. 4-26-60. Filed 11-16-59.

700,997. ROSEBUD TAPESTRY. Norcross, Inc. SN 85,378. Pub. 4-26-60. Filed 11-16-59.

700,998. THE BLUE ROSE. Norcross, Inc. SN 85,379. Pub. 4-26-60. Filed 11-16-59.

700,999. ROSE BOUQUET. Norcross, Inc. SN 85,380. Pub. 4-26-60. Filed 11-16-59.

701,000. ROSE PARFAIT. Norcross, Inc. SN 85,381. Pub. 4-26-60. Filed 11-16-59.

701,001. THE CHAMPAGNE ROSE. Norcross, Inc. SN 85,382. Pub. 4-26-60. Filed 11-16-59.

701,002. ROSA BELLISSIMA. Norcross, Inc. SN 85,383. Pub. 4-26-60. Filed 11-16-59.

701,003. THE BURGUNDY BEAUTY. Norcross, Inc. SN 89,449. Pub. 4-26-60. Filed 1-21-60.

701,004. RED SAILS. Norcross, Inc. SN 90,555. Pub. 4-26-60. Filed 2-8-60.

Class 39—Clothing

701,005. JR. SOCIETY. Daryl Dress Company. SN 45,314. Pub. 4-26-60. Filed 2-5-58.

701,006. SALLY CLOVER. Foodland, Inc. SN 62,920. Pub. 4-26-60. Filed 11-21-58.

701,007. PRONUPTIA. Henri Michmacher. SN 63,950. Pub. 4-26-60. Filed 12-9-58.

701,008. VINYLON. Plastex Protective Products, Inc. SN 65,376. Pub. 4-26-60. Filed 1-6-59.

701,009. LEAF LITE AND DESIGN. Joseph Kanner Hat Co., Inc. SN 69,532. Pub. 4-26-60. Filed 3-13-59.

701,010. CAXTON AND DESIGN. Joseph Kanner Hat Co., Inc. SN 69,535. Pub. 4-26-60. Filed 3-13-59.

701,011. CAXTON ALL-AMERICAN. Joseph Kanner Hat Co., Inc. SN 70,228. Pub. 4-26-60. Filed 3-25-59.

701,012. DE LAETA. Tir-Oen Limited. SN 71,056. Pub. 4-26-60. Filed 4-7-59.

701,013. DECTON. Cluett, Peabody & Co., Inc. SN 72,481. Pub. 4-26-60. Filed 4-29-59.

701,014. SIGNOR GIOVELLI AND DESIGN. Carafiol-Silverman Company. SN 72,577. Pub. 4-26-60. Filed 4-30-59.

701,015. PLASTICON. Cordé-de Paris Corset Co., Inc. SN 72,582. Pub. 4-26-60. Filed 4-30-59.

701,016. WILLOWSPUN. Garland Knitting Mills. SN 72,827. Pub. 4-26-60. Filed 5-4-59.

701,017. NORTHERLY. Pendleton Woolen Mills. SN 72,963. Pub. 4-26-60. Filed 5-5-59.

701,018. CARICATURE OF LITTLE MAN. Robert Hall Clothes, Inc. SN 74,309. Pub. 4-26-60. Filed 5-22-59.

701,019. TIDY BABY. Concord Baby Products Inc. SN 74,650. Pub. 4-26-60. Filed 5-28-59.

701,020. PALL MALL. Friedman Bros. Inc. SN 78,195. Pub. 4-26-60. Filed 7-22-59.

701,021. BRAHMA BULL AND DESIGN. Good Luck Glove Company. SN 78,280. Pub. 12-29-59. Filed 7-23-59.

701,022. FIREBIRD. N.V. Verenigde Nederlandse Kleermakerijen Gebr. Iberlings. SN 80,192. Pub. 4-26-60. Filed 8-25-59.

701,023. FROSTGARD. Burstein Bros. & Goldberg. SN 81,536. Pub. 4-26-60. Filed 9-17-59.

701,024. SWING! ETC. The Enro Shirt Company, Inc. SN 81,797. Pub. 4-26-60. Filed 9-21-59.

701,025. SWING SPORTSTER ETC. The Enro Shirt Company, Inc. SN 81,798. Pub. 4-26-60. Filed 9-21-59.

701,026. KWIK-KLIP. The Electric Storage Battery Company. SN 82,335. Pub. 4-26-60. Filed 9-29-59.

701,027. SLIPPERETTE. Ripon Knitting Works. SN 82,535. Pub. 4-26-60. Filed 10-1-59.

701,028. LAURY MAR. Melvyn Sotto. SN 82,544. Pub. 4-26-60. Filed 10-1-59.

701,029. KINGS RAIMENT. The Bernhard Altmann Corporation. SN 84,048. Pub. 4-26-60. Filed 10-27-59.

701,030. TARALAN-PLUS. Talbott, Inc. SN 84,256. Pub. 4-26-60. Filed 10-29-59.

701,031. STRAPSTER. Esquire Sportswear Mfg. Co. SN 84,300. Pub. 4-26-60. Filed 10-30-59.

701,032. CAL-VAGS. Rough Rider, Inc. SN 84,505. Pub. 4-26-60. Filed 11-3-59.

701,033. CERVINO. Robert Hall Clothes, Inc. SN 85,127. Pub. 4-26-60. Filed 11-12-59.

701,034. HIGHCROFT. Robert Hall Clothes, Inc. SN 85,128. Pub. 4-26-60. Filed 11-12-59.

701,035. ARCADIA. Auerbach Bath Robe Corp. SN 85,272. Pub. 4-26-60. Filed 11-16-59.

701,036. MASK-A-RAMA. Collegeville Flag & Mfg. Co. SN 85,303. Pub. 4-26-60. Filed 11-16-59.

701,037. FRENCHILLA. Monarch Garment Corp. SN 85,370. Pub. 4-26-60. Filed 11-16-59.

701,038. STORK QUEEN. Peggy Reed Fashions, Inc. SN 85,396. Pub. 4-26-60. Filed 11-16-59.

701,039. THREAD-ONS. Hauser & Reisfeld, Inc. SN 85,488. Pub. 4-26-60. Filed 11-17-59.

701,040. RICHARD COLE. Richard J. Cole, Inc. SN 85,563. Pub. 4-26-60. Filed 11-18-59.

701,041. FIGURFIT. Indera Mills Company. SN 85,594. Pub. 4-26-60. Filed 11-18-59.

701,042. LARK. Flamingo Products, Inc. SN 85,636. Pub. 4-26-60. Filed 11-23-59.

701,043. LAUGHTER. The Formfit Company. SN 86,129. Pub. 4-26-60. Filed 11-27-59.

Class 42—Knitted, Netted, and Textile Fabrics; and Substitutes Therefor

701,044. SUN AND 3 TOWERS DESIGN. Lanificio di Maratea S.p.A. SN 71,856. Pub. 4-26-60. Filed 4-20-59.

701,045. M AND SUN DESIGN. Lanificio di Maratea S.p.A. SN 71,959. Pub. 4-26-60. Filed 4-21-59.

701,046. INDOSHAH. Albert Alfandari. SN 84,571. Pub. 4-26-60. Filed 11-2-59.

701,047. PLASTI-SHIELD. Will Ross, Inc. SN 85,399. Pub. 4-26-60. Filed 11-16-59.

701,048. VAN CRAFT. Thorndike Mills, Inc. SN 85,626. Pub. 4-26-60. Filed 11-18-59.

701,049. SUPERIOR QUALITY AND DESIGN. Centrotex, Podnik Zahranicniho Obchodu pro Dovoz a Vyvoz Textilniho a Konfekcniho Zbozi. SN 85,955. Pub. 4-26-60. Filed 11-24-59.

701,050. SATIN DE LYS. The Jaunty Fabric Corporation. SN 86,156. Pub. 4-26-60. Filed 11-27-59.

701,051. TOWLET. Myrtle L. Michaud, d.b.a. Towlet Products Co. SN 86,182. Pub. 4-26-60. Filed 11-27-59.

701,052. GOODALL. Goodall Sanford Incorporated, d.b.a. Goodall-Sanford and Goodall Fabrics. SN 86,281. Pub. 4-26-60. Filed 11-30-59.

701,053. AMERICAN IDEA. Celanese Corporation of America. SN 86,296. Pub. 4-26-60. Filed 12-1-59.

Class 43—Thread and Yarn

701,054. SUN AND 3 TOWERS DESIGN. Lanificio di Maratea S.p.A. SN 71,855. Pub. 4-26-60. Filed 4-20-59.

701,055. M AND SUN DESIGN. Lanificio di Maratea S.p.A. SN 71,960. Pub. 4-26-60. Filed 4-21-59.

701,056. GOLDEN PLY. Bemis Bro. Bag Company. SN 75,589. Pub. 4-26-60. Filed 6-12-59.

701,057. SMOOTH-SEAM. Grover B. Turner Co., Inc. SN 85,425. Pub. 4-26-60. Filed 11-16-59.

701,058. MAGNELON. Celanese Corporation of America. SN 86,016. Pub. 4-26-60. Filed 11-25-60.

Class 45—Soft Drinks and Carbonated Waters

701,059. DOUBLE-CREAM SODA. Seminole Flavor Company. SN 60,771. Pub. 4-26-60. Filed 10-16-59.

701,060. TEEM. Pepsi-Cola Company. SN 83,644. Pub. 4-26-60. Filed 10-20-59.

Class 46—Foods and Ingredients of Foods

701,061. MACKINTOSH'S MUNCHIES. John Mackintosh & Sons Limited. SN 63,047. Pub. 4-26-60. Filed 12-8-58.

701,062. GILL'S GOLDEN BLEND ETC. AND DESIGN. The James G. Gill Company, Inc. SN 67,123. Pub. 4-26-60. Filed 2-5-59.

701,063. TUNA TIME. American Tuna Canning Co., by change of name from American Tuna Canning, Inc. SN 68,794. Pub. 4-26-60. Filed 3-3-59.

701,064. HEP. Wilbur-Ellis Company. SN 74,350. Pub. 4-26-60. Filed 5-22-59.

701,065. FARM HOUSE AND DESIGN. Connecticut Pie Baking Co., Inc. SN 75,173. Pub. 4-26-60. Filed 6-5-59.

701,066. CATLAP. Talbott Foods, Inc. SN 75,511. Pub. 4-26-60. Filed 6-10-59.

701,067. PETLAP. Talbott Foods, Inc. SN 75,512. Pub. 2-2-60. Filed 6-10-59.

701,068. CROWLEY'S ETC. AND DESIGN. Crowley's Milk Company, Inc. SN 76,315. Pub. 4-26-60. Filed 6-22-59.

701,069. VENIKELOS. T & A Coffee Co., Inc. SN 77,474. Pub. 4-26-60. Filed 7-10-59.

701,070. BLOSSOM COUNTY. Blossom County Foods, Inc. SN 77,507. Pub. 4-26-60. Filed 7-13-59.

701,071. DUBUQUE AND DESIGN. Dubuque Packing Company. SN 77,522. Pub. 4-26-60. Filed 7-13-59.

701,072. HAM-PHOS. Madison Laboratories, Inc. SN 78,182. Pub. 4-26-60. Filed 7-21-59.

701,073. GREEN CASTLE AND DESIGN. A. F. Ross, Inc. SN 79,060. Pub. 4-26-60. Filed 8-5-59.

701,074. HENS DELIGHT. Delight Egg Farms. SN 79,924. Pub. 4-26-60. Filed 8-20-59.

701,075. GOLDEN H AND DESIGN. Haddad Brothers Farms, d.b.a. Haddad Bros. Farms. SN 79,901. Pub. 4-26-60. Filed 8-21-59.

701,076. BUTTER-NILLA. Jewell Wilson Co., Inc. SN 80,466. Pub. 2-2-60. Filed 8-28-59.

701,077. CHRISTINES. Pilot Candy Company. SN 81,582. Pub. 4-26-60. Filed 9-17-59.

701,078. BOUNTY. Pepperidge Farm Incorporated. SN 81,942. Pub. 4-26-60. Filed 9-23-59.

701,079. GUERNSEY. Pepperidge Farm Incorporated. SN 81,985. Pub. 4-26-60. Filed 9-23-59.

701,080. VAL-E-PEP. The Merchants Company, d.b.a. The Valley Mills. SN 83,994. Pub. 4-26-60. Filed 10-26-59.

701,081. FLAVORIPE. J. C. Robinson Company. SN 84,096. Pub. 4-26-60. Filed 10-27-59.

701,082. WHIZ. Buenaventura Lemon Co., Inc. SN 84,386. Pub. 4-26-60. Filed 11-2-59.

701,083. VALLEY BOY. Valley Fruit Distributors, d.b.a. Valley Fruit Distributors, Inc. SN 84,578. Pub. 4-26-60. Filed 11-3-59.

701,084. COBURG. Eugene Fruit Growers Association. SN 84,742. Pub. 4-26-60. Filed 11-6-59.

701,085. JIFAROO. The Procter & Gamble Company. SN 84,801. Pub. 4-26-60. Filed 11-6-59.

701,086. DANDICADO. Eagle Produce Company, d.b.a. Eagle Produce Co. SN 84,875. Pub. 4-26-60. Filed 11-9-59.

701,087. TOWN & COUNTRY. Plus Poultry, Inc. of NW. Arkansas, d.b.a. Plus Poultry, Inc. SN 84,939. Pub. 4-26-60. Filed 11-9-59.

701,088. WESTIE. Earl C. Recker, d.b.a. Earl C. Recker Co. SN 84,942. Pub. 4-26-60. Filed 11-9-59.

701,089. GULF PEARL AND DESIGN. Orleans Seafood Company. SN 85,768. Pub. 4-26-60. Filed 11-20-59.

701,090. BO-BO AND REPRESENTATION OF A DOG. Beaver Valley Canning Company. SN 85,810. Pub. 4-26-60. Filed 11-23-59.

701,091. C-LECT. The Acerola Corporation. SN 85,849. Pub. 4-26-60. Filed 11-24-59.

701,092. SPACE-SHIPS. Wallace & Co. SN 86,082. Pub. 4-26-60. Filed 11-25-59.

Class 47—Wines

701,093. SUPREME AND DESIGN. Supreme Wine Co., Inc. SN 39,845. Pub. 4-26-60. Filed 10-30-57.

701,094. STOCK. Distillerie Stock, S.p.A. SN 43,848. Pub. 4-26-60. Filed 2-17-58.

Class 48—Malt Beverages and Liquors

701,095. HEY MABEL—BLACK LABEL! Carling Brewing Company, Incorporated. SN 35,629. Pub. 4-26-60. Filed 8-16-57.

701,096. SCHAEFER ETC. AND DESIGN. The F. & M. Schaefer Brewing Co. SN 47,788. Pub. 4-26-60. Filed 3-14-58.

701,097. SIERRA. Louis Mint, James G. Quinn, Jr., and William H. Quinn. SN 72,260. Pub. 4-26-60. Filed 5-4-59.

Class 49 — Distilled Alcoholic Liquors

701,098. JULIUS MARCUS. Arrow Liqueurs Corporation, d.b.a. Julius Marcus Liquer Co. SN 81,522. Pub. 4-26-60. Filed 9-16-59.

701,099. KING HENRY VIII. H. Stenham Ltd., d.b.a. Highland Blending Co. SN 83,918. Pub. 4-26-60. Filed 10-28-59.

701,100. GLEN-HARDY AND DESIGN. Colin Forbes Ross & Company Limited. SN 85,049. Pub. 4-26-60. Filed 11-10-59.

Class 50 — Merchandise Not Otherwise Classified

701,101. PERSONA-PLATE. Colbert Die Cast Co., Inc. SN 72,483. Pub. 4-26-60. Filed 4-29-59.

701,102. PLAQUE MAGIC. Plaque Craft, Incorporated. SN 82,580. Pub. 4-26-60. Filed 10-1-59.

701,103. STA-RITE. Georgia Cushion & Wrapper Company. SN 83,306. Pub. 4-26-60. Filed 10-16-59.

701,104. RECIPRO-MATIC. Montgomery and Crawford Company, Inc. SN 83,539. Pub. 4-26-60. Filed 10-19-59.

Class 51 — Cosmetics and Toilet Preparations

701,105. GENTLE TOUCH. The Andrew Jergens Company. SN 59,297. Pub. 4-26-60. Filed 9-22-58.

701,106. EDM. Aids, Inc. SN 65,998. Pub. 4-26-60. Filed 1-15-59.

701,107. REPRESENTATION OF SHIP. Shulton, Inc. SN 68,441. Pub. 4-26-60. Filed 2-25-59.

701,108. MAYBELLINE MAGIC. Maybelline Co. SN 69,158. Pub. 4-26-60. Filed 3-9-59.

701,109. EMPRESS DILENE AND DESIGN. Nu-Vita Laboratories, Inc. SN 76,111. Pub. 2-23-60. Filed 6-19-59.

701,110. STA-WAVE. Sta-Wave, Inc. SN 76,748. Pub. 4-26-60. Filed 6-29-59.

701,111. DERSE. Derse Products Inc. SN 77,085. Pub. 4-26-60. Filed 7-6-59.

701,112. SPONGE CAKE. Revlon, Inc. SN 79,600. Pub. 4-26-60. Filed 8-14-59.

701,113. GO 'WAY. Richard Hudnut. SN 82,579. Pub. 4-26-60. Filed 10-2-59.

701,114. FELICITY. Maison de Wyndham. SN 84,913. Pub. 4-26-60. Filed 11-9-59.

701,115. FELICITIF. Maison de Wyndham. SN 84,914. Pub. 4-26-60. Filed 11-9-59.

Class 52 — Detergents and Soaps

701,116. S IN DIAMOND DESIGN. Sargeant Arnold Pharmaceutical Co., Inc. SN 65,268. Pub. 4-26-60. Filed 1-2-59.

701,117. FLOWS. Ralph Stone, d.b.a. Stone Soap Company. SN 81,597. Pub. 4-26-60. Filed 9-17-59.

701,118. PRINCESS DIAL. Armour and Company. SN 84,720. Pub. 4-26-60. Filed 11-6-59.

701,119. WILGLEAM. Wilson Products Co., Inc. SN 86,067. Pub. 4-26-60. Filed 11-10-59.

701,120. BOL MAID. The Beteo Corporation. SN 85,091. Pub. 4-26-60. Filed 11-12-59.

Service Marks

Class 100 — Miscellaneous

701,121. CHLORINILOG. Dresser Industries, Inc. SN 71,822. Pub. 4-26-60. Filed 4-20-59.

701,122. DIPLOG. Dresser Industries, Inc. SN 73,081. Pub. 4-26-60. Filed 5-7-59.

701,123. GERMAN AMERICAN ETC. AND DESIGN. German American Chamber of Commerce, Inc. SN 78,961. Pub. 4-26-60. Filed 8-3-59.

701,124. PARTY TIME AND DESIGN. Benjamin Weingarten, d.b.a. The Academy Chair Renting Company. SN 82,617. Pub. 4-26-60. Filed 10-2-59.

Class 101 — Advertising and Business

701,125. MUSICAL TRADEMARK AND DESIGN. Musical Trademarks, Inc. SN 53,358. Pub. 4-26-60. Filed 6-11-58.

701,126. HOLDEN RED STAMPS ETC. AND DESIGN. Holden Trading Stamp Co. SN 54,723. Pub. 4-26-60. Filed 6-30-58.

701,127. AMBASSADOR SERVICES. Ambassador Services, Inc. SN 68,207. Pub. 4-26-60. Filed 2-24-59.

701,128. MULTICARD SURVEY. National Family Opinion, Inc. SN 71,504. Pub. 4-26-60. Filed 4-14-59.

Class 103 — Construction and Repair

701,129. FACT-O-BAKE. Jack Robert Taylor, d.b.a. Fact-O-Bake. SN 86,211. Pub. 4-26-60. Filed 11-27-59.

Class 105 — Transportation and Storage

701,130. ABC SPEED VAN SERVICE AND DESIGN. Arthur J. Brown. SN 53,232. Pub. 4-26-60. Filed 6-10-58.

701,131. SUNSHINE SERVICE. Western Truck Lines, Ltd. SN 81,784. Pub. 4-26-60. Filed 9-21-59.

701,132. B & O LINKING 12 GREAT STATES WITH THE NATION AND DESIGN. The Baltimore and Ohio Railroad Company. SN 87,625. Pub. 4-26-60. Filed 12-21-59.

Class 107 — Education and Entertainment

701,133. TOM (HANS) BRINKER AND DESIGN. Thomas M. Brinker. SN 62,670. Pub. 4-26-60. Filed 11-18-58.

701,134. TALENTSVILLE U.S.A. The Coca-Cola Company. SN 80,498. Pub. 4-26-60. Filed 8-31-59.

Certification Mark

Class A — Goods

701,135. GALVANIZED WARE QUALITY GUARANTEE AND DESIGN. Galvanized Ware Manufacturers Council. SN 87,556. Pub. 4-26-60. Filed 12-18-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

701,136. Rexhit Leather Goods, Inc., New York, N.Y. SN 43,341. Filed P.R. 1-2-58; Am. S.R. 5-2-60.

CARD-CADDY

For Leather Carrying Cases and Portfolios, Carrying Cards, Boards and the Like.
First use Nov. 14, 1957.

Class 8 — Smokers' Articles, Not Including Tobacco Products

701,137. Eugene Magidson, d.b.a. Bradberry Briar Pipe Company, New York, N.Y. SN 71,858. Filed P.R. 4-20-59; Am. S.R. 3-3-60.

BRADBERRY

For Smoking Pipes.
First use in February 1956.

Class 10 — Fertilizers

701,138. Kerr Chemicals, Inc., Des Plaines, Ill. SN 46,953. Filed P.R. 3-3-58; Am. S.R. 7-6-59.

MIN-R-ALL

For Soil Conditioners.
First use Nov. 21, 1957.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

701,139. Bettie J. Fitzgerald, North White Plains, N.Y. SN 66,870. Filed P.R. 2-2-59; Am. S.R. 5-18-60.

BATHE-A-TOT

For Infant's Bathing Support.
First use Jan. 20, 1959.

Class 22 — Games, Toys, and Sporting Goods

701,140. Burke Flexo-Products Company, Traverse City, Mich., assignee of Charles L. Burke, d.b.a. Burke Flexo-Products Co., Traverse City, Mich. SN 52,856. Filed P.R. 6-4-58; Am. S.R. 4-4-60.

Jig-N-Eel

For Artificial Fish Lures.
First use Apr. 2, 1958.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

701,141. Worthington Corporation, Harrison, N.J. SN 80,040. Filed P.R. 3-5-59; Am. S.R. 5-12-60.

MULTI-PITCH

For Adjustable Pitch Sheaves.
First use Feb. 11, 1959.

701,142. Universal Machine Co., Inc., Baltimore, Md. SN 73,165. Filed P.R. 5-7-59; Am. S.R. 5-12-60.

TWIN FILLER

For Machines for Manufacturing Confectionery Products.
First use on or about Feb. 9, 1959.

Class 37 — Paper and Stationery

701,143. Brandt Automatic Cashier Company, Watertown, Wis. SN 45,947. Filed P.R. 2-17-58; Am. S.R. 5-16-60.

NO-MOIST

For Partially Gummed Paper Bands, Strips, or Sheets for Use as Wrappers for Shirts, Currency, Mail, or Other Merchandise.
First use Jan. 31, 1958.

Class 39 — Clothing

701,144. Lea-Wayne Knitting Mills, Inc., Morristown, Tenn. SN 71,296. Filed P.R. 4-10-59; Am. S.R. 5-20-60.

Hi-Hose

For Misses' Hosiery.
First use July 1, 1958.

Class 44 — Dental, Medical, and Surgical Appliances

701,145. Antoine Francois Peyron, Paris, France. SN 67,974. Filed P.R. 2-18-59; Am. S.R. 5-9-60.

MAQUILLAGE ELECTRIQUE

The trademark when translated from the French means "Electric Make-Up." Priority claimed under Sec. 44(d) on French Reg. No. 475,705, dated Nov. 13, 1958 (Seine); Natl. Inst. No. 119,949.
For Electric Make-Up Applicators.

Class 46—Foods and Ingredients of Foods

701,146. Lactima S.A. Lausanne, Lausanne, Vaud, Switzerland. SN 72,223. Filed P.R. 6-22-60; Am. S.R. 1-12-60.

DRY-LAC

Priority claimed under Sec. 44(d) on Swiss Reg. No. 112,797, dated Jan. 16, 1958.

For Food Products, Dietetics of Any Kind and in Any Form.

701,147. Easy Products, Inc., Easthampton, Mass. SN 76,861. Filed P.R. 7-1-59; Am. S.R. 4-18-60.

SQUEEZE-N-BAKE

For Prepared Batters in Squeeze Type Dispensers.
First use Feb. 27, 1959.

Class 49—Distilled Alcoholic Liquors

701,148. H. Underberg-Albrecht, Rheinberg, Germany. SN 84,203. Filed 10-7-59.



Owner of U.S. Reg. Nos. 624,157 and 632,009.
For Alcoholic Bitters.
First use Jan. 1, 1952; in commerce in March 1952.

Class 51—Cosmetics and Toilet Preparations

701,149. Revlon, Inc., New York, N.Y. SN 74,257. Filed P.R. 5-21-59; Am. S.R. 5-9-60.

ORANGE PARFAIT

For Lipstick.
First use Apr. 15, 1959.

701,150. The Princess Marcella Borghese, Inc., New York, N.Y. SN 74,951. Filed 6-2-59.

LIP BRILLANTE

For Lipstick.
First use Apr. 3, 1958.

Class 52—Detergents and Soaps

701,151. Arnold E. Schnapp, d.b.a. Schnapp Enterprises, Brooklyn, N.Y. SN 68,606. Filed P.R. 2-27-59; Am. S.R. 4-25-60.

NEVER-MIST

For Eyeglass Cleaner, Anti-Fogger, De-Icer, and Lens Cleaner.
First use May 15, 1955.

Service Marks

Class 101—Advertising and Business

701,152. Lomert Associates, Kansas City, Mo. SN 50,809. Filed P.R. 5-1-58; Am. S.R. 5-18-60.

"Friendliest—Most Courteous" Employee Awards

For Formulation and Preparing for Others of Publicity and Editorial Materials for Use in Newspaper Promotional Contests.
First use Jan. 20, 1957.

Class 106—Material Treatment

701,153. Lee Dyeing Company of Johnstown, Inc., Johnstown, N.Y. SN 84,437. Filed P.R. 11-2-59; Am. S.R. 4-12-60.

JOHNSON FORMULA

For Scientific Predetermination of Length Factor in Nylon Tricot Greige Goods Production.
First use July 17, 1958.

Class 107—Education and Entertainment

701,154. Bowling Proprietors Association of Greater Chicago, Chicago, Ill. SN 28,026. Filed P.R. 4-12-57; Am. S.R. 5-16-60.

WORLD'S INVITATIONAL MATCH GAME CHAMPIONSHIPS

For Staging an Annual Bowling Tournament That Is Broadcast on Both Radio and Television.
First use in March 1957.

TRADEMARK REGISTRATIONS RENEWED

130,659. LYS. Cl. 39. 5-4-20.
130,508. LOG CABIN. Cl. 46. 5-4-20.
130,999. TYPOCOUNT. Cl. 37. 5-4-20.
131,056. BRIDGEPORT AND DIAMOND DESIGN. Cl. 14. 5-4-20.
131,197. SALTINA. Cl. 46. 5-4-20.
131,490. FOUNTAINAID. Cl. 21. 5-18-20.
131,631. GS AND DESIGN OF HORSE. Cl. 6. 5-18-20.
132,171. RUST VETO. Cl. 15. 6-15-20.
132,262. TIFFANY. Cl. 27. 6-15-20.
132,836. AMOLE. Cl. 52. 6-29-20.
133,068. TIFFANY. Cl. 26. 7-6-20.
133,574. BI-LATERAL. Cl. 35. 8-3-20.
133,575. RED-INJUN. Cl. 23. 8-3-20.
133,806. RUSSELL. Cl. 23. 8-3-20.
133,807. RUSSELL GREEN RIVER WORKS. Cl. 23. 8-3-20.
133,990. MRS. TUCKER'S AND DESIGN. Cl. 46. 8-10-20.
134,043. THE NEWS. Cl. 38. 8-10-20.
135,451. GOOD LUCK AND DESIGN. Cl. 46. 10-12-20.

135,487. MASCO PRODUCTS. Cl. 23. 10-12-20.
135,633. GRACELIN. Cl. 39. 10-19-20.
135,747. SECURITY. Cl. 1. 10-19-20.
135,784. LAVENDER LABEL. Cl. 39. 10-19-20.
136,079. MONDAE. Cl. 46. 10-26-20.
136,246. REVOL. Cl. 40. 10-26-20.
136,304. DURHAM AND REPRESENTATION OF A BULL. Cl. 17. 11-2-20.
374,990. LARK. Cl. 45. 2-6-40.
375,292. POLLY PEPPER. Cl. 39. 2-13-40.
375,304. MIX-UPS. Cl. 39. 2-13-40.
375,392. WAVEMAGNET. Cl. 21. 2-20-40.
375,733. TORFLEX. Cl. 23. 2-27-40.
377,165. REPRESENTATION OF A MAN SAWING A TREE TRUNK. Cl. 23. 4-23-40.
377,413. CRANITE. Cl. 31. 5-7-40.
377,419. OTODYNE. Cl. 18. 5-7-40.
377,561. HARINA ESPIGA DE ORO MBR AND DESIGN. Cl. 46. 5-7-40.
377,596. RAPITAN. Cl. 51. 5-7-40.
377,648. COTILLION. Cl. 39. 5-7-40.
377,650. BODY-WINE. Cl. 51. 5-7-40.
377,711. MATRIX. Cl. 23. 5-14-40.
377,714. DEBUTANTE. Cl. 39. 5-14-40.
377,771. BOB-LOC. Cl. 25. 5-14-40.
377,828. SASSY. Cl. 46. 5-14-40.
378,034. BRUINS. Cl. 39. 5-21-40.
378,177. PIONEER. Cl. 26. 5-28-40.
378,178. REGENT. Cl. 26. 5-28-40.
378,179. VIKING. Cl. 26. 5-28-40.
378,343. ESKIMO. Cl. 44. 6-4-40.
378,387. CERTORA. Cl. 46. 6-11-40.
378,389. WHO'S WHO IN AMERICA. Cl. 38. 6-11-40.
378,589. PACE MAKER. Cl. 19. 6-11-40.
378,652. SANDSWEPT. Cl. 42. 6-11-40.
378,744. W WITHIN CIRCLE. Cl. 34. 6-18-40.
378,900. KROMEKOTE. Cl. 37. 6-25-40.
378,910. ESKIMO. Cl. 21. 6-25-40.
379,149. KASHLI. Cl. 39. 7-2-40.
379,167. PEPPER TREE. Cl. 46. 7-2-40.
379,235. CO-OP ETC. AND DESIGN. Cl. 18. 7-9-40.
379,285. FLEXOPULSE. Cl. 21. 7-9-40.
379,297. OIL-O-MATIC. Cl. 26. 7-9-40.
379,365. TRAXCAVATOR. Cl. 23. 7-9-40.
379,481. OETROGYM. Cl. 18. 7-9-40.
379,538. CO-OP ETC. AND DESIGN. Cl. 23. 7-30-40.
379,893. KROGO. Cl. 46. 7-30-40.
380,019. OVA-KAL. Cl. 18. 8-6-40.
380,280. CO-OP ETC. AND DESIGN. Cl. 12. 8-20-40.
380,368. INSL-COTTON. Cl. 1. 8-20-40.
380,452. PENTALYN. Cl. 1. 8-20-40.
380,653. BOSTON BELTS. Cl. 39. 8-27-40.
380,774. CEMCO AND DESIGN. Cl. 21. 9-3-40.
381,005. SQUARE AND RIBBON DESIGN. Cl. 46. 9-10-40.
381,095. TENDERTWIST. Cl. 46. 9-10-40.
381,130. DEMEROL. Cl. 18. 9-10-40.
381,199. FLASH AND DESIGN. Cl. 46. 9-17-40.
381,205. AGUA. Cl. 27. 9-17-40.
381,328. SUREHATCH. Cl. 46. 9-17-40.
381,402. R-V-LITE. Cl. 50. 9-24-40.
381,404. COURTESY CLUB. Cl. 49. 9-24-40.
381,510. DECORETTES. Cl. 46. 9-24-40.
381,615. RAU KLIKIT. Cl. 40. 10-1-40.
381,811. THE STRIDERITE SHOE AND DESIGN. Cl. 39. 10-8-40.
381,830. ENTICING. Cl. 46. 10-8-40.
382,014. GRIZZLY SYNCRO-SET. Cl. 35. 10-15-40.
382,065. DUBON. Cl. 46. 10-15-40.
382,085. PROVEX. Cl. 46. 10-15-40.
382,089. ORTAZOL. Cl. 6. 10-15-40.
382,129. TALPA. Cl. 15. 10-15-40.
382,130. TALPEX. Cl. 15. 10-15-40.
382,210. HI-TEMP. Cl. 21. 10-22-40.
382,254. SOX-SPANSION. Cl. 39. 10-22-40.
382,280. REPRESENTATION OF A CARTON. Cl. 46. 10-22-40.
382,294. FISHERMAN. Cl. 39. 10-22-40.
382,303. SMARTAIRE FOOTWEAR. Cl. 39. 10-22-40.
382,310. CONQUEST. Cl. 35. 10-22-40.
382,311. MANITEX. Cl. 20. 10-22-40.
382,332. BRAKE-KING. Cl. 35. 10-22-40.
382,335. MAYBREATH. Cl. 51. 10-22-40.
382,472. DIOTHOID. Cl. 18. 10-29-40.
382,474. BOKER RAZOR BRAND. Cl. 23. 10-29-40.
382,519. BUTTER RUM AND LABEL DESIGN. Cl. 46. 10-29-40.
382,542. BEMBERG WITHIN LETTER B. Cl. 42. 10-29-40.

TRADEMARK REGISTRATIONS CANCELED

Section 8

213,607. RED OWL AND DESIGN. Cl. 35. 6-1-26.
328,002. DECORETTES. Cl. 37. 9-10-35.
343,955. FREEM'S LTD. Cl. 39. 3-9-37.
383,906. THE ELECTROSWIG. Cl. 44. 12-24-40.
413,294. STRONGMAN. Cl. 24. 4-17-45.
565,058. BACCO-BAN. Cl. 18. 10-7-52.
573,407. MERIT ETC. AND DESIGN. Cl. 21. 4-21-53.
580,009. OINTMENT 500. Cl. 18. 9-15-53.
586,012. WYOMISSING AND DESIGN. Cl. 37. 2-23-54.

The following registrations issued May 25, 1954

590,131. J C HIGGINS. Cl. 50.
590,135. GUILDHALL. Cl. 39.
590,136. KWILTS. Cl. 39.
590,142. A'G'ASWITCH. Cl. 21.
590,143. HAGLEY'S SWISS VELVA. Cl. 46.
590,144. GLASFLOSS. Cl. 21.
590,146. TOP-SAVER. Cl. 23.
590,150. PERIMA-FLO 410. Cl. 34.
590,152. TELE-CHEK. Cl. 26.
590,162. CATHLYNN. Cl. 39.
590,165. ECONOMY. Cl. 23.
590,177. BRENDA-BELLE. Cl. 46.
590,178. STA-LOC. Cl. 13.
590,179. STEPLOC AND DESIGN. Cl. 2.
590,181. SANIZE. Cl. 18.
590,186. THE HOUSE OF WAKEFIELD AND DESIGN. Cl. 51.
590,187. TEMCON. Cl. 24.
590,189. SLUMBER NEST AND DESIGN. Cl. 39.
590,193. VISCOFIL. Cl. 1.
590,196. ZOOZ AND DESIGN. Cl. 39.
590,197. TUFSPUN. Cl. 43.
590,200. VANESSA. Cl. 39.
590,207. PACIFIC KING. Cl. 46.
590,209. POPSHOP. Cl. 23.
590,214. PRO-DERNA. Cl. 51.
590,222. G-I JOE AND DESIGN. Cl. 39.
590,223. ANN LOY ORIGINAL. Cl. 39.
590,224. PRIZE CATCH. Cl. 46.
590,226. RAIN-WAY. Cl. 13.
590,227. OWL BRAND MAGIC RAYON MOP AND DESIGN. Cl. 29.
590,234. 8 to 1. Cl. 52.
590,236. CRES-CAPS. Cl. 51.
590,241. MARBETH. Cl. 42.
590,246. BRISKEES. Cl. 39.
590,247. CORBILLE AND DESIGN. Cl. 39.
590,248. EASTEX. Cl. 39.
590,252. SVENGALI. Cl. 51.
590,253. 24-5. Cl. 6.
590,259. SAMARITANAS BY RHYTHM STEP. Cl. 39.
590,260. FASHIONATIONS. Cl. 39.
590,266. TREWS. Cl. 39.
590,270. MAGNAHIB. Cl. 6.
590,278. FIESTA. Cl. 21.
590,279. COTTONTAIL. Cl. 46.
590,280. CALSO-MATIC. Cl. 50.
590,281. MORNINDEW. Cl. 42.

590,283. KRIMPTEX. Cl. 44.
590,294. TROJANTLON AND DESIGN. Cl. 44.
590,300. PRODEKALIN. Cl. 18.
590,305. RHAPSODY NOCTURNE. Cl. 107.
590,309. VACUUM PLUS. Cl. 24.
590,312. SET RITE. Cl. 51.
590,318. CHEXBOT. Cl. 5.
590,319. CHEXBOT. Cl. 16.
590,323. CHROMETTE. Cl. 50.
590,325. NYLON-PLUS. Cl. 51.
590,327. MIGHTY-LITE. Cl. 50.
590,329. SAVIT. Cl. 23.

Section 19

377,858. FILTERMASTER. Cl. 31. 5-14-40.
391,816. RUTA. Cl. 46. 11-25-41.
412,436. REGAL. Cl. 60. 3-6-45.
418,886. SKY-RITE. Cl. 11. 1-15-46.
423,800. RANCHO DEL CIERVO. Cl. 46. 9-10-46.
425,823. THE CLOTHES HORSE. Cl. 30. 12-3-46.
425,884. FEED-A-BABE. Cl. 44. 12-3-46.
635,154. TWIN-MASTER. Cl. 23. 10-2-56.
644,255. SITZER ETC. AND DESIGN. Cl. 44. 4-10-57.
689,527. DESIGN OF FISH. Cl. 39. 12-8-59.

INDEX OF REGISTRANTS

JULY 12, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

AMP Inc., Harrisburg, Pa. 700,674, pub. 4-26-60. Cl. 21.
Academy Chair Renting Co., The: *See*—
Weingarten, Benjamin.
Acerola Corp., The, Sabana Seca, Puerto Rico. 701,091, pub. 4-26-60. Cl. 46.
Adler, Ronald E., d.b.a. Bonac Associates, Newport, R.I. 700,980, pub. 4-26-60. Cl. 37.
Afriat, James J., Madisonville, Ky. 344,255, canc. Cl. 44.
Agency Paper Co., New York, N.Y. 418,884, canc. Cl. 11.
Alda, Inc., Palm Beach, Fla. 701,106, pub. 4-26-60. Cl. 51.
Air-Kool Aluminum Awning Co., Los Angeles, Calif. 700,793, pub. 4-26-60. Cl. 12.
Air Reduction Co., Inc., New York, N.Y. 700,794, pub. 4-26-60. Cl. 13.
Air Reduction Co., Inc., New York, N.Y. 700,864, pub. 4-26-60. Cl. 21.
Air Reduction Co., Inc., New York, N.Y. 700,870, pub. 4-26-60. Cl. 21.
Airway Products Corp., Schiller Park, Ill. 700,968, pub. 4-26-60. Cl. 32.
Akron Brass Mfg. Co., Inc., Wooster, Ohio. 590,178, canc. Cl. 13.
Aktiebolaget Hassle, Apotekare Paul Nordstroms Fabriker, Goteborg, Sweden. 700,829, pub. 4-26-60. Cl. 18.
Alba Pharmaceutical Co., Inc., to Sterling Drug Inc., New York, N.Y. 331,130, ren. 7-12-60. Cl. 18.
Alberto, Cecil D., d.b.a. Spin-A-Test Co., Hermosa Beach, Calif. 700,888, pub. 4-26-60. Cl. 22.
Alfandari, Albert, New York, N.Y. 701,046, pub. 4-26-60. Cl. 42.
Allgemeine Holzimprägnierung, Dr. Wolman G.m.b.H., Sinsheim, near Baden-Baden, Germany. 700,758, pub. 4-26-60. Cl. 6.
Alpha Portland Cement Co., Easton, Pa. 700,788, pub. 4-26-60. Cl. 12.
Alton Box Board Co., Alton, Ill. 700,742, pub. 4-26-60. Cl. 2.
Ambassador Services, Inc., Westfield, N.J. 701,127, pub. 4-26-60. Cl. 101.
American Bemberg Corp., to Beaunit Mills, Inc., New York, N.Y. 382,542, ren. 7-12-60. Cl. 42.
American Chicle Co., Long Island City, N.Y. 382,230, ren. 7-12-60. Cl. 46.
American Cyanamid Co., New York, N.Y. 700,760-1, pub. 4-26-60. Cl. 6.
American Gas Accumulator Co.: *See*—
Elastic Stop Nut Corp. of America.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,832, pub. 4-26-60. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,837-8, pub. 4-26-60. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,839, pub. 4-26-60. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,843-7, pub. 4-26-60. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 700,850, pub. 4-26-60. Cl. 18.
American Laundry Machinery Co., The, Cincinnati, Ohio. 590,187, canc. Cl. 24.
American Metal Climax, Inc., New York, N.Y. 700,802, pub. 4-26-60. Cl. 14.
American Stores Co., Philadelphia, Pa. 700,716, pub. 4-26-60. Cl. 1.
American Thermos Products Co., The, Norwich, Conn. 700,748, pub. 4-26-60. Cl. 6.
American Tobacco Co., The, New York, N.Y. 136,304, ren. 7-12-60. Cl. 17.
American Tuna Canning, Inc.: *See*—
American Tuna Canning Co.
American Tuna Canning Co., by change of name from American Tuna Canning, Inc., Terminal Island, Calif. 701,062, pub. 4-26-60. Cl. 46.
American Viscose Corp., Philadelphia, Pa. 590,193, canc. Cl. 1.
Amole, Inc.: *See*—
Tipp, Whip Co., The.
Anderson, Clayton & Co.: *See*—
Interstate Cotton Oil Refining Co.
Andrew Jergens Co., The, Cincinnati, Ohio. 701,105, pub. 4-26-60. Cl. 51.
Ansul Chemical Co., Marinette, Wis. 700,765, pub. 4-26-60. Cl. 6.
Appel, Milton, & Co.: *See*—
Appel, Milton.
Appel, Milton, d.b.a. Milton Appel & Co., New York, N.Y. 700,932, pub. 4-26-60. Cl. 26.
Arkansas Cement Corp., Foreman, Ark. 700,777-8, pub. 4-26-60. Cl. 12.
Arkwright, Inc., New York, N.Y. 378,589, ren. 7-12-60. Cl. 19.
Armlayl Products: *See*—
Sinskey, Sigmund.
Armour and Co., Chicago, Ill. 700,735, pub. 4-26-60. Cl. 1.
Armour and Co., Chicago, Ill. 701,118, pub. 4-26-60. Cl. 52.
Arrow Liqueurs Corp., d.b.a. Julius Marcus Liquer Co., Detroit, Mich. 701,098, pub. 4-26-60. Cl. 49.
Art-Tex Adhesive Products Inc., Brooklyn, N.Y. 380,019, ren. 7-12-60. Cl. 16.
Arvey Corp., to Arvey Corp., Chicago, Ill. 331,402, ren. 7-12-60. Cl. 50.
Arvey Corp., Chicago, Ill. 700,736, pub. 4-26-60. Cl. 1.
Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. 700,719, pub. 4-26-60. Cl. 1.
Atlantic Steel Corp., New York, N.Y. 700,805-6, pub. 4-26-60. Cl. 14.
Audio Co. of America, Phoenix, Ariz. 700,936, pub. 4-26-60. Cl. 26.
Auerbach Bath Robe Corp., New York, N.Y. 701,085, pub. 4-26-60. Cl. 39.
Axinn & Sons Lumber Co., Inc., Northport, N.Y. 700,779-80, pub. 4-26-60. Cl. 12.
B & W, Inc., Montgomery, Ala. 590,246, canc. Cl. 39.
Baird, Cassius M. C., to Bi-Lateral Fire Hose Co., Chicago, Ill. 133,574, ren. 7-12-60. Cl. 35.
Bald, Myer, Ltd., Toronto, Ontario, Canada. 700,914, pub. 4-26-60. Cl. 23.
Baltimore and Ohio Railroad Co., The, Baltimore, Md. 701,-132, pub. 4-26-60. Cl. 105.
Barch, Henry S., d.b.a. Barch Mfg., Proctor, Vt. 700,879, pub. 4-26-60. Cl. 22.
Barch Mfg.: *See*—
Barch, Henry S.
Bartless, Anita, Hicksville, N.Y. 700,839, pub. 4-26-60. Cl. 22.
Baxter Laboratories, Inc., Morton Grove, Ill. 700,828, pub. 4-26-60. Cl. 18.
Bear Archery Co., Grayling, Mich. 700,723, pub. 4-26-60. Cl. 1.
Bear Brand Hosiery Co., Kankakee, Ill. 378,034, ren. 7-12-60. Cl. 39.
Beaunit Mills, Inc.: *See*—
American Bemberg Corp.
Beaver Valley Canning Co., Grimes, Iowa. 701,090, pub. 4-26-60. Cl. 46.
Beech-Nut Life Savers, Inc.: *See*—
Life Savers Corp.
Bemis Bro. Bag Co., St. Louis, Mo. 701,056, pub. 4-26-60. Cl. 43.
Bernhard Altmann Corp., The, New York, N.Y. 701,029, pub. 4-26-60. Cl. 39.
Beich, E. Eltridge, d.b.a. Jazz Oil Co., Tampa, Fla. 700,808, pub. 4-26-60. Cl. 15.
Beechcraft, Inc., St. Louis, Mo. 590,209, canc. Cl. 23.
Bersted Mfg. Co., Fostoria, Ohio, to McGraw-Edison Co., Boonville, Mo. 378,343, ren. 7-12-60. Cl. 44.
Bersted Mfg. Co., Fostoria, Ohio, to McGraw-Edison Co., Boonville, Mo. 378,910, ren. 7-12-60. Cl. 21.
Betco Corp., The, Toledo, Ohio. 701,120, pub. 4-26-60. Cl. 52.
Betz Laboratories, Inc., Philadelphia, Pa. 700,753, pub. 4-26-60. Cl. 6.
Bi-Lateral Fire Hose Co.: *See*—
Baird, Cassius M. C.
Bilt-Well Trailer Co., Philadelphia, Pa. 700,860, pub. 4-26-60. Cl. 19.
Black, Julius S., d.b.a. Demon Lure Co., San Antonio, Tex. 700,884, pub. 4-26-60. Cl. 22.
Blossom County Foods, Inc., Buchanan, Mich. 701,070, pub. 4-26-60. Cl. 46.
Boker Cutlery & Hardware Co. Inc., to H. Boker & Co., Inc., New York, N.Y. 133,575, ren. 7-12-60. Cl. 23.
Boker, H., & Co., Inc.: *See*—
Boker Cutlery & Hardware Co. Inc.
Boker, H., & Co., Inc., New York, N.Y. 382,474, ren. 7-12-60. Cl. 23.
Bolton, James W., & Sons, Inc., Lawrence, Mass. 700,915, pub. 4-26-60. Cl. 23.
Borden Co., The: *See*—
Casein Co. of America, Inc.
Borghese, Marcella, Princess, Inc., The, New York, N.Y. 701,150. Cl. 51.
Boston Publishing Co., Inc., Boston, Mass. 700,995, pub. 4-26-60. Cl. 38.
Botany Mills, Inc., Passaic, N.J. 590,268, canc. Cl. 39.
Bowling Proprietors Association of Greater Chicago, Chicago, Ill. 701,154. Cl. 107.
Boyce, Henrietta E., Glen Rock, N.J., to Colgate-Palmolive Co., New York, N.Y. 377,596, ren. 7-12-60. Cl. 51.
Brace Process Corp., New York, N.Y. 377,858, canc. Cl. 31.
Bradberry Briar Pipe Co.: *See*—
Maridson, Eugene.
Brandenburg, Edwin H., d.b.a. Magnetic Holding Devices, Cleveland, Ohio. 700,886, pub. 4-26-60. Cl. 21.
Brandt Automatic Cashier Co., Watertown, Wis. 701,143. Cl. 37.
Bridgeport Brass Co., Bridgeport, Conn. 131,056, ren. 7-12-60. Cl. 14.
Bridgeport Brass Co., Bridgeport, Conn. 700,785, pub. 4-26-60. Cl. 13.
Brinker, Thomas M., Aldan, Pa. 701,133, pub. 4-26-60. Cl. 107.

Britex Corp., Boston, Mass. 700,756, pub. 4–26–60. Cl. 6.
Broderick, Frank W., Summit, N.J., to Brown & Bailey Co., Philadelphia, Pa. 590,179, canc. Cl. 2.
Brown, Arthur J., New York, N.Y. 701,130, pub. 4–26–60. Cl. 105.
Brown & Bailey Co.: *See*— Broderick, Frank W.
Brown Shoe Co., Inc.: *See*— Milius Shoe Co.
Broyhill Furniture Factories, Lenoir, N.C. 700,970–1, pub. 4–26–60. Cl. 32.
Brun, Louis, Fils, to Etablissements Brun d'Arre "Le Bas Lys" et Societe Lanquedocienne de Teinturerie Reunis, Arre, France. 130,650, ren. 7–12–60. Cl. 39.
Brunswick-Balke-Collender Co., The, Chicago, Ill. 700,894, pub. 4–26–60. Cl. 22.
Buenaventura Lemon Co., Inc., Saticoy, Calif. 701,082, pub. 4–26–60. Cl. 46.
Bullard Co., The, Bridgeport, Conn. 700,907, pub. 4–26–60. Cl. 23.
Bulova Watch Co., Inc., Flushing, N.Y. 700,868, pub. 4–26–60. Cl. 21.
Burgess Cellulose Co., Freeport, Ill. 700,961, pub. 4–26–60. Cl. 29.
Burke, Charles I.: *See*— Burke Flexo-Products Co.
Burke Flexo-Products Co., from Charles I. Burke, d.b.a. Burke Flexo-Products Co., Traverse City, Mich. 701,140. Cl. 22.
Burke & James, Inc., Chicago, Ill. 700,940, pub. 4–26–60. Cl. 26.
Burnley, Benjamin J.: *See*— Burnley, B. J., Inc.
Burnley, B. J., Inc., from Benjamin J. Burnley, Elkins Park, Pa. 700,717, pub. 4–26–60. Cl. 1.
Burstein Bros. & Goldberg, Philadelphia, Pa. 701,023, pub. 4–26–60. Cl. 39.
Busse, Lyman L., Lawrenceville, to Robert E. Carson, d.b.a. Carson Food Co., Danville, Ill. 381,199, ren. 7–12–60. Cl. 46.
Cabot, Godfrey L., Inc., Boston, Mass. 700,738, pub. 4–26–60. Cl. 1.
California Milling Corp.: *See*— Fisher, Wm.
California Oil Co., The, Wilmington, Del. 590,280, canc. Cl. 50.
Callahan Mining Corp., New York, N.Y. 700,976, pub. 4–26–60. Cl. 35.
Callaway Mills Co., La Grange, Ga. 700,973, pub. 4–26–60. Cl. 32.
Canadian Refractories Ltd., Montreal, Quebec, Canada. 700,792, pub. 4–26–60. Cl. 12.
Capital Elevator and Mfg. Co., Columbus, Ohio. 380,774, ren. 7–12–60. Cl. 21.
Carafiol-Silverman Co., St. Louis, Mo. 701,014, pub. 4–26–60. Cl. 39.
Cardinet Candy Co., Inc., Oakland, Calif. 379,167, ren. 7–12–60. Cl. 46.
Carling Brewing Co., Inc., Cleveland, Ohio. 701,095, pub. 4–26–60. Cl. 48.
Carson Food Co.: *See*— Busse, Lyman L.
Carson, Robert E.: *See*— Busse, Lyman L.
Carter Products, Inc., New York, N.Y. 700,842, pub. 4–26–60. Cl. 18.
Carthage Mills Inc., Cincinnati, Ohio. 700,786–7, pub. 4–26–60. Cl. 12.
Casein Co. of America, Inc., to The Borden Co., to The Borden Co., New York, N.Y. 378,587, ren. 7–12–60. Cl. 46.
Caterpillar Tractor Co.: *See*— Trackson Co.
Celanese Corp. of America, New York, N.Y. 378,652, ren. 7–12–60. Cl. 42.
Celanese Corp. of America, New York, N.Y. 701,053, pub. 4–26–60. Cl. 42.
Celanese Corp. of America, New York, N.Y. 701,058, pub. 4–26–60. Cl. 43.
Centrotex, Podnik Zahranicniho Obchodu pro Dovoz a Vyvoz Textilniho a Kozeneho Zbozi, Prague, Czechoslovakia. 701,049, pub. 4–26–60. Cl. 42.
Cerro de Pasco Corp.: *See*— Rockbestos Products Corp.
Chadco Chemical Corp., Greensboro, N.C. 590,186, canc. Cl. 51.
Champion Paper and Fibre Co., The, Hamilton, Ohio. 378,900, ren. 7–12–60. Cl. 37.
Chatten, C. H., d.b.a. Dallas Broom & Mop Co., Dallas, Tex. 590,227, canc. Cl. 29.
Chemical Service of Baltimore, Inc., Baltimore, Md. 700,745, pub. 4–26–60. Cl. 4.
Chipman Knitting Mills, Easton, Pa., to Chas. Chipman's Sons Co., Inc., New York, N.Y. 135,633, ren. 7–12–60. Cl. 39.
Chipman's, Chas., Sons Co., Inc.: *See*— Chipman Knitting Mills.
Chipman's, Chas., Sons Co. Inc., New York, N.Y. 382,254, ren. 7–12–60. Cl. 39.
Chittick, Howard A., d.b.a. Fairfax Biological Laboratory, Clinton Corners, N.Y. 700,754, pub. 4–26–60. Cl. 6.
Cissell, Wm. C.: *See*— Stoop & Livesay Mfg. Co.
Claimor Products Div.: *See*— Klasco Products Co., Inc.
Cleveland Chair Co., Inc., Cleveland, Tenn. 700,972, pub. 4–26–60. Cl. 32.
Clevite Harris Products, Inc.: *See*— Harris Products Co.
Closures, Inc., Waterbury, Conn. 590,323, canc. Cl. 50.
Clothes Horse, Inc., The, Washington, D.C. 425,823, canc. Cl. 39.
Cluett, Peabody & Co., Inc., New York, N.Y. 701,013, pub. 4–26–60. Cl. 39.
Coca-Cola Co., The, Atlanta, Ga. 701,124, pub. 4–26–60. Cl. 107.
Colbert Die Cast Co., Inc., South Gate, Calif. 701,101, pub. 4–26–60. Cl. 50.
Cole, Richard J., Inc., New York, N.Y. 590,162, canc. Cl. 39.
Cole, Richard J., Inc., New York, N.Y. 701,040, pub. 4–26–60. Cl. 39.
Coles, William A., Upper Darby, Pa. 383,906, canc. Cl. 44.
Colgate-Palmolive Co.: *See*— Boyce, Henrietta E.
Collegeville Flag & Mfg. Co., Collegeville, Pa. 701,036, pub. 4–26–60. Cl. 39.
Concord Baby Products Inc., New York, N.Y. 701,019, pub. 4–26–60. Cl. 39.
Cone Automatic Machine Co., Inc., Windsor, Vt. 700,906, pub. 4–26–60. Cl. 23.
Connecticut Pie Baking Co., Inc., Wethersfield, Conn. 701,065, pub. 4–26–60. Cl. 46.
Consolidated Electronics Industries Corp., Alliance, Ohio. 700,901, pub. 4–26–60. Cl. 23.
Cook, T. D., Co., Inc., Boston, Mass. 700,986, pub. 4–26–60. Cl. 37.
Corbin-Billington Co., Inc., New York, N.Y. 590,247, canc. Cl. 39.
Corde-de Paris Corset Co., Inc., New York, N.Y. 701,015, pub. 4–26–60. Cl. 39.
Corey Candles, Inc., Toledo, Ohio. 590,177, canc. Cl. 46.
Cosom Industries, Inc., Minneapolis, Minn. 700,898, pub. 4–26–60. Cl. 22.
Cotillion Formals Inc.: *See*— Steinman, Will, Inc.
Coty, Inc., New York, N.Y. 377,450, ren. 7–12–60. Cl. 51.
Coventry Gauge & Tool Co. Ltd., Coventry, England. 377,711, ren. 7–12–60. Cl. 23.
Cover-Tite, Inc., Middletown, Ohio. 590,329, canc. Cl. 23.
Crescent Research Laboratory Inc., New Orleans, La. 590,236, canc. Cl. 51.
Crowley's Milk Co., Inc., Binghamton, N.Y. 701,068, pub. 4–26–60. Cl. 46.
Crown Metal Products Co., Wyano, Pa. 700,893, pub. 4–26–60. Cl. 22.
Custom Controls, Inc., Odessa, Tex. 700,937, pub. 4–26–60. Cl. 26.
Dalar Medical Laboratories, Inc., New York, N.Y., to White Laboratories, Inc., Kenilworth, N.J. 377,419, ren. 7–12–60. Cl. 18.
Dallas Broom & Mop Co.: *See*— Chatten, C. H.
Daryl Dress Co., St. Louis, Mo. 701,005, pub. 4–26–60. Cl. 39.
Debutante Furs, Inc.: *See*— Salsberg, Saul, Inc.
Decker, Alfred, & Cohn, Inc., to Hart Schaffner & Marx, Chicago, Ill. 379,149, ren. 7–12–60. Cl. 39.
Deere & Co., Moline, Ill. 700,902, pub. 4–26–60. Cl. 23.
Dehner, Chas. V., Co., Inc., North Kansas City, Mo. 700,733, pub. 4–26–60. Cl. 1.
Dehydag Deutsche Hydrierwerk G.m.b.H., Dusseldorf, Germany. 700,751, pub. 4–26–60. Cl. 6.
Delight Egg Farms, Memphis, Tenn. 701,074, pub. 4–26–60. Cl. 46.
Demon Lure Co.: *See*— Black, Julius S.
Derse Products Inc., Pasadena, Calif. 701,111, pub. 4–26–60. Cl. 51.
Detroit Steel Corp., Detroit, Mich. 700,803, pub. 4–26–60. Cl. 14.
Dexalin Products Corp., Los Angeles, Calif. 590,300, canc. Cl. 18.
Dexter Shoe Co., Dexter, Maine. 700,890, pub. 4–26–60. Cl. 22.
Diemer, Floyd E., Pekin, Ill. 700,732, pub. 4–26–60. Cl. 1.
Distillerie Stock, S.p.A., Trieste, Italy. 701,094, pub. 4–26–60. Cl. 47.
Domestic Engineering Co., Chicago, Ill. 700,990, pub. 4–26–60. Cl. 38.
Douglas Fir Plywood Association, Tacoma, Wash. 700,781–2, pub. 4–26–60. Cl. 12.
Dow Chemical Co., The, Midland, Mich. 700,739, pub. 4–26–60. Cl. 1.
Dresser Industries, Inc., Dallas, Tex. 701,121–2, pub. 4–26–60. Cl. 100.
Dubuque Packing Co., Dubuque, Iowa. 701,071, pub. 4–26–60. Cl. 46.
Duke and Benedict (partnership), New York, N.Y. 590,252, canc. Cl. 51.
Duncan, Donald F., Inc., Chicago, Ill. 700,880, pub. 4–26–60. Cl. 22.
Dunham-Bush, Inc., West Hartford, Conn. 700,916, pub. 4–26–60. Cl. 23.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 700,816, pub. 4–26–60. Cl. 16.
Duro Mfg. Co., The, Libertyville, Ill. 590,136, canc. Cl. 39.
Dutch Cheese Importers: *See*— Rosenberg, Alexander.
Eagle Produce Co., Los Angeles, Calif. 701,086, pub. 4–26–60. Cl. 46.
Eagle Signal Corp., to The Gamewell Co., Moline, Ill. 379,285, ren. 7–12–60. Cl. 21.
Easy Products, Inc., Easthampton, Mass. 701,147. Cl. 46.
Economics Laboratory, Inc., St. Paul, Minn. 700,760, pub. 4–26–60. Cl. 6.
Economy Sewing Machine Center, Philadelphia, Pa. 590,165, canc. Cl. 23.
Edward Valves, Inc., East Chicago, Ind. 700,931, pub. 4–26–60. Cl. 26.

Elastic Stop Nut Corp. of America, by merger from American Gas Accumulator Co., Union, N.J. 590,142, canc. Cl. 21.
Electric Storage Battery Co., The, Philadelphia, Pa. 701,026, pub. 4–26–60. Cl. 39.
Electro Coil Corp., Erie, Pa. 700,740, pub. 4–26–60. Cl. 1.
Ellis & Goldstein Ltd., London, England. 590,248, canc. Cl. 39.
"Elon of California": *See*— Taliaferro, E. H.
Euro Shirt Co., Inc., The, Louisville, Ky. 701,024–5, pub. 4–26–60. Cl. 39.
Esquire Sportswear Mfg. Co., New York, N.Y. 701,031, pub. 4–26–60. Cl. 39.
Etablissements Brun d'Arre "Le Bas Lys" et Societe Languedocienne de Teinturerie Reunis: *See*— Brun, Louis, Fils.
Eugene Fruit Growers Association, Eugene, Oreg. 701,084, pub. 4–26–60. Cl. 46.
Eureka Williams Corp.: *See*— Williams Oil-O-Matic Heating Corp.
Fact-O-Bake: *See*— Taylor, Jack R.
Fairfax Biological Laboratory: *See*— Chittick, Howard A.
Fairfield Publishing Co., Chicago, Ill. 700,896, pub. 4–26–60. Cl. 38.
Fan Sea Foods, Inc., Seattle, Wash. 590,224, canc. Cl. 46.
Farnsworth Publishing Co., Inc., New York, N.Y. 700,992, pub. 4–26–60. Cl. 38.
Fearn Foods Inc.: *See*— Fearn Laboratories, Inc.
Fearn Laboratories, Inc., Chicago, to Fearn Foods Inc., Franklin Park, Ill. 382,065, ren. 7–12–60. Cl. 46.
Federated Department Stores, Inc., d.b.a. Wm. Filene's Sons Co., Cincinnati, Ohio. 590,260, canc. Cl. 39.
Fibreboard Paper Products Corp., San Francisco, Calif. 700,922, pub. 4–26–60. Cl. 23.
Filene's, Wm., Sons Co.: *See*— Federated Department Stores, Inc.
Filtros, Inc., East Rochester, N.Y. 700,906, pub. 4–26–60. Cl. 31.
Fink, Joseph H., d.b.a. National Bird Control Laboratories, Skokie, Ill. 700,759, pub. 4–26–60. Cl. 6.
Firestone Tire & Rubber Co., The, Akron, Ohio. 700,977, pub. 4–26–60. Cl. 35.
Fisher, Wm., & Co.: *See*— Fisher, Wm.
Fisher, Wm., d.b.a. Wm. Fisher & Co., San Francisco, to California Milling Corp., Los Angeles, Calif. 377,551, ren. 7–12–60. Cl. 46.
Fitzgerald, Bettie J., North White Plains, N.Y. 701,139. Cl. 18.
Flamingo Products, Inc., Danville, Ill. 701,042, pub. 4–26–60. Cl. 39.
Fleming and Fite: *See*— Minx Corp.
Floc-Flo Corp., Chicago, Ill. 700,813, pub. 4–26–60. Cl. 16.
Foodland, Inc., Cleveland, Ohio. 701,006, pub. 4–26–60. Cl. 39.
Forcast Steel Corp., New York, N.Y. 700,807, pub. 4–26–60. Cl. 14.
Formfit Co., The, Chicago, Ill. 701,043, pub. 4–26–60. Cl. 39.
Fort Dodge Laboratories, Inc.: *See*— American Home Products Corp.
Foster-Milburn Co., d.b.a. Westwood Pharmaceuticals, Buffalo, N.Y. 590,214, canc. Cl. 51.
Foster-Milburn Co., Buffalo, N.Y. 700,832, pub. 4–26–60. Cl. 18.
Fougera, E., & Co., Inc., Hicksville, N.Y. 700,856, pub. 4–26–60. Cl. 18.
Fraering Brokerage Co. Inc., New Orleans, La. 382,065, ren. 7–12–60. Cl. 46.
Frank, J. P., Chemical Corp., Brooklyn, N.Y. 700,741, pub. 4–26–60. Cl. 1.
Freem's Ltd., New York, N.Y. 343,958, canc. Cl. 39.
French, R. T., Co., The: *See*— Good Luck Food Co., Inc.
Friedman Bros. Inc., Easton, Pa. 700,020, pub. 4–26–60. Cl. 39.
Frost, George, Co., Shirley, Mass. 380,653, ren. 7–12–60. Cl. 39.
G.P. (Publications) Ltd., London, England. 700,889, pub. 4–26–60. Cl. 38.
Gabriel, W. E., Fabrication Co., Portland, Oreg. 700,911, pub. 4–26–60. Cl. 23.
Galvanized Ware Manufacturers Council, Cleveland, Ohio. 701,135, pub. 4–26–60. Cl. A.
Gamewell Co., The: *See*— Eagle Signal Corp.
Garland Knitting Mills, Jamaica Plain, Mass. 701,016, pub. 4–26–60. Cl. 39.
Garvey Corp., St. Louis, Mo. 700,773–4, pub. 4–26–60. Cl. 11.
Garvey Corp., St. Louis, Mo. 700,924–5, pub. 4–26–60. Cl. 23.
Gas Material Supplies Inc., West New York, N.J. 700,925, pub. 4–26–60. Cl. 26.
Gates Rubber Co., The, Denver, Colo. 382,310, ren. 7–12–60. Cl. 35.
Geigy Chemical Corp., Ardsley, N.Y. 700,749, pub. 4–26–60. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 700,764, pub. 4–26–60. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 700,948–9, pub. 4–26–60. Cl. 18.
General Aniline & Film Corp., New York, N.Y. 378,177–9, ren. 7–12–60. Cl. 26.
General Electric Co., Pittsfield, Mass. 700,673, pub. 4–26–60. Cl. 21.
General Instrument Corp., Newark, N.J. 700,875, pub. 4–26–60. Cl. 21.
General Mills, Inc., Minneapolis, Minn. 381,065, ren. 7–12–60. Cl. 46.
General Mills, Inc., Minneapolis, Minn. 381,325, ren. 7–12–60. Cl. 46.
General Railway Signal Co., Rochester, N.Y. 700,930, pub. 4–26–60. Cl. 26.
General Sportcraft Co., Ltd., Bergenfield, N.J. 700,886, pub. 4–26–60. Cl. 22.
General Time Corp., New York, N.Y. 700,942–57, pub. 4–26–60. Cl. 27.
Genua, Marc G., d.b.a. Marc Jennings, Huntington, W. Va. 590,305, canc. Cl. 107.
Georgia Cushion & Wrapper Co., Woodland, Ga. 701,103, pub. 4–26–60. Cl. 50.
German American Chamber of Commerce, Inc., New York, N.Y. 701,123, pub. 4–26–60. Cl. 100.
Gill, James G., Inc., The, Norfolk, Va. 701,063, pub. 4–26–60. Cl. 46.
Glile Associates, Inc., Detroit, Mich. 700,991, pub. 4–26–60. Cl. 38.
Ginsburg Mfg. Co., Inc., New York, N.Y. 590,200, canc. Cl. 39.
Glick, R. E., & Sons, to R. E. Glick & Sons, Corning, Calif. 381,830, ren. 7–12–60. Cl. 46.
Globe Products of Florida, Inc., Clearwater, Fla. 590,234, canc. Cl. 52.
Golden West Estates, Inc., Santa Barbara, Calif. 428,900, canc. Cl. 46.
Goodall-Sanford and Goodall Fabrics: *See*— Goodall Sanford Inc.
Goodall Sanford Inc., d.b.a. Goodall-Sanford and Goodall Fabrics, Reading, Mass. 701,052, pub. 4–26–60. Cl. 42.
Good Luck Food Co., Inc., to The R. T. French Co., Rochester, N.Y. 135,451, ren. 7–12–60. Cl. 46.
Good Luck Glove Co., Carbondale, Ill. 701,021, pub. 12–29–59. Cl. 39.
Gosse, P. A., Co., Seattle, Wash. 590,207, canc. Cl. 46.
Gowan Co., The: *See*— Magowan, David, Jr.
Great Lakes Solvents, Inc., Chicago, Ill. 590,318–19, canc. Cl. 6.
Green Shoe Mfg. Co., The, Boston, Mass. 381,611, ren. 7–12–60. Cl. 39.
Grolier Inc., by change of name from The Grolier Society, Inc., New York, N.Y. 700,891, pub. 4–26–60. Cl. 22.
Grolier Society, Inc., The: *See*— Grolier Inc.
Gudebrod Bros. Silk Co., Inc., Philadelphia, Pa. 700,863, pub. 4–26–60. Cl. 21.
Haddad Bros.: *See*— Haddad Brothers Farms.
Haddad Brothers Farms, d.b.a. Haddad Bros. Farms, Los Angeles, Calif. 701,075, pub. 4–26–60. Cl. 46.
Hagley Candy Co.: *See*— Hagley, Olive L.
Hagley, Olive L., d.b.a. Hagley Candy Co., Chicago, Ill. 591,143, canc. Cl. 46.
Hall, Robert, Clothes, Inc., New York, N.Y. 701,033–4, pub. 4–26–60. Cl. 39.
Hankscraft Co., Reedsburg, Wis. 700,975, pub. 4–26–60. Cl. 44.
Hansella-Werke Albert Henkel A.G., Viersen, Rhineland, Germany. 700,917, pub. 4–26–60. Cl. 23.
Harris Products Co., Akron, to Clevite Harris Products, Inc., Milan, Ohio. 375,733, ren. 7–12–60. Cl. 23.
Hart Schaffner & Marx: *See*— Decker, Alfred, & Cohn, Inc.
Hauser & Reinfeld, Inc., New York, N.Y. 701,039, pub. 4–26–60. Cl. 39.
Heide-Babe Products, Chicago, Ill. 425,884, canc. Cl. 44.
Hercules Powder Co., Wilmington, Del. 380,482, ren. 7–12–60. Cl. 1.
Highland Blending Co.: *See*— Stenham, E., Ltd.
Hobart Mfg. Co., The, Troy, Ohio. 181,490, ren. 7–12–60. Cl. 21.
Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Ind. 700,789, pub. 4–26–60. Cl. 12.
Holden Trading Stamp Co., Detroit, Mich. 701,126, pub. 4–26–60. Cl. 101.
Honan-Crane, Inc., to Indiana Commercial Filters Corp., Lebanon, Ind. 377,413, ren. 7–12–60. Cl. 31.
Houghton, E. F., & Co., Philadelphia, Pa. 132,171, ren. 7–12–60. Cl. 15.
Hudnut, Richard, Morris Plains, N.J. 701,113, pub. 4–26–60. Cl. 51.
Hunt Foods and Industries, Inc.: *See*— Los Angeles Sales Co.
Imperial Chemical Industries Ltd., London, England. 700,823, pub. 4–26–60. Cl. 18.
Imperial Knife Associated Companies, Inc., Providence, R.I. 700,927, pub. 4–26–60. Cl. 23.
Indera Mills Co., Winston-Salem, N.C. 701,041, pub. 4–26–60. Cl. 39.
Indiana Commercial Filters Corp.: *See*— Honan-Crane, Inc.
Indianapolis Glove Co., Inc.: *See*— Indianapolis Glove Co.
Indianapolis Glove Co., to Indianapolis Glove Co., Inc., Indianapolis, Ind. 382,294, ren. 7–12–60. Cl. 39.
Inland Steel Co., Chicago, Ill. 700,804, pub. 4–26–60. Cl. 14.
International Latex Corp., Dover, Del. 700,883, pub. 4–26–60. Cl. 22.
International Paper Co., New York, N.Y. 700,983, pub. 10–20–59. Cl. 37.

Interstate Cotton Oil Refining Co., Sherman, Tex., to Anderson, Clayton & Co., Dallas, Tex. 133,999, ren. 7-12-60. Cl. 46.
Irwin, Neisler & Co., Decatur, Ill. 700,841, pub. 4-26-60. Cl. 18.
Irwin, Neisler & Co., Decatur, Ill. 700,857-9, pub. 4-26-60. Cl. 18.
Jaunty Fabric Corp., The, Scranton, Pa. 701,050, pub. 4-26-60. Cl. 42.
Jayo Perfect Bookmark Inc., New York, N.Y. 700,985, pub. 4-26-60. Cl. 37.
Jax Oil Co.: See—
Belch, E. Eldridge.
Jennings, Marc: See—
Genua, Marc G.
Jeppesen & Co., Denver, Colo. 700,987, pub. 4-26-60. Cl. 39.
John, B. P., Furniture Corp., Portland, Oreg. 700,962, pub. 4-26-60. Cl. 32.
Johnson & Johnson, New Brunswick, N.J. 700,963, pub. 4-26-60. Cl. 29.
Johnson, Stephens and Shinkle Shoe Co., St. Louis, Mo. 590,259, canc. Cl. 39.
Johnson's Inc., Dalton, Ga. 590,241, canc. Cl. 42.
Jones, E. D., Corp., Pittsfield, Mass. 700,909, pub. 4-26-60. Cl. 23.
Jones and Yandell Mfg. Co., Inc., Canton, Miss. 700,887, pub. 4-26-60. Cl. 22.
Joseph, Edgar, San Antonio, Tex. 700,725, pub. 4-26-60. Cl. 1.
Joyce-Cridland Co., The, Dayton, Ohio. 626,154, canc. Cl. 23.
Kadison Laboratories, Inc., Chicago, Ill. 701,072, pub. 4-26-60. Cl. 46.
Kanner, Joseph, Hat Co., Inc., South Norwalk, Conn. 701,009-11, pub. 4-26-60. Cl. 39.
Kaufmann Department Stores, Inc., Pittsburgh, Pa., to The May Department Stores Co., St. Louis, Mo. 375,304, ren. 7-12-60. Cl. 39.
Kay Electric Co., Pine Brook, N.J. 700,938, pub. 4-26-60. Cl. 26.
Keen-Eye Co., Inc., Butler, Wis. 700,897, pub. 4-26-60. Cl. 22.
Kerr Chemicals, Inc., Des Plaines, Ill. 701,138. Cl. 10.
Klasco Products Co., Inc., d.b.a. Claimor Products Div., Downey, Calif. 700,752, pub. 4-26-60. Cl. 6.
Klockner-Humboldt-Deutz Aktiengesellschaft, Koln-Deutz, Germany. 700,928, pub. 4-26-60. Cl. 23.
Kingsteal Co., Inc., San Antonio, Tex. 700,737, pub. 4-26-60. Cl. 1.
Koppers Co., Inc., Pittsburgh, Pa. 700,767, pub. 4-26-60. Cl. 6.
Kraft Cheese Co., to National Dairy Products Corp., Chicago, Ill. 381,005, ren. 7-12-60. Cl. 46.
Kroger Co., The: See—
Kroger Grocery & Baking Co., The.
Kroger Grocery & Baking Co., The, to The Kroger Co., Cincinnati, Ohio. 379,893, ren. 7-12-60. Cl. 46.
Kruglick, Charles, New York, N.Y. 590,152, canc. Cl. 26.
Lactiana S.A. Lausanne, Lausanne, Canton of Vaud, Switzerland. 701,146. Cl. 46.
Lander Co. Inc., The, New York, N.Y. 590,325, canc. Cl. 51.
Lanificio di Maratea S.p.A., Maratea, Potenza, Italy. 701,044-45, pub. 4-26-60. Cl. 42.
Lanificio di Maratea S.p.A., Maratea, oPtenza, Italy. 701,054-8, pub. 4-26-60. Cl. 43.
Lazarus Jewelers, Inc., New York, N.Y. 700,960, pub. 4-26-60. Cl. 28.
Lea-Wayne Knitting Mills, Inc., Morristown, Tenn. 701,144. Cl. 39.
Lee Dyeing Co. of Johnstown, Inc., Johnstown, N.Y. 701,-153. Cl. 109.
Lee Rubber & Tire Corp., d.b.a. Republic Rubber Division, Youngstown, Ohio. 700,978, pub. 4-26-60. Cl. 35.
Lennox Furnace Co., The, Marshalltown, Iowa. 590,150, canc. Cl. 34.
Lever Brothers Co.: See—
Pepsodent Co., The.
Life Savers Corp., Port Chester, to Beech-Nut Life Savers, Inc., Canajoharie, N.Y. 382,519, ren. 7-12-60. Cl. 46.
Lockwood Hardware Mfg. Co., Fitchburg, Mass. 377,771, ren. 7-12-60. Cl. 25.
Log Cabin Candy Co.: See—
Mahan, Cyril C.
Lohr, William, to Jersey Biscuit Co., of Newark, N.J., New York, to The Nestlé Co., Inc., White Plains, N.Y. 136,079, ren. 7-12-60. Cl. 46.
Lomert Associates, Kansas City, Mo. 701,152. Cl. 101.
Los Angeles Sales Co., also d.b.a. Sassy Brand Dog Food Co., Harbor City, to Hunt Foods and Industries, Inc., Fullerton, Calif. 377,828, ren. 7-12-60. Cl. 46.
Lovell Clay Products Co., Inc., The, Lovell, Wyo. 700,781, pub. 4-26-60. Cl. 12.
Lowell Wrench Co., Worcester, Mass. 700,918, pub. 4-26-60. Cl. 32.
Loy, Ann, Original, Stillwater, Okla. 590,223, canc. Cl. 39.
Lufkin Rule Co., The, Saginaw, Mich. 700,941, pub. 4-26-60. Cl. 26.
MacKintosh, John, & Sons Ltd., Yorkshire, England. 701,061, pub. 4-26-60. Cl. 46.
Magidson, Eugene, d.b.a. Bradberry Briar Pipe Co., New York, N.Y. 701,137. Cl. 6.
Magna Products, Inc., Santa Fe Springs, Calif. 590,270, canc. Cl. 6.
Magnetic Holding Devices: See—
Brandenburg, Edwin H.
Magowan, David, Jr., d.b.a. The Gowan Co., San Francisco, Calif. 700,798, pub. 4-26-60. Cl. 13.
Mahan, Cyril C., to B. F. Rudell, d.b.a. Log Cabin Candy Co., Baltimore, Md. 130,806, ren. 7-12-60. Cl. 46.
Mallinckrodt Chemical Works, St. Louis, Mo. 700,824, pub. 4-26-60. Cl. 18.
Manning, R. A., Co., Inc., Sheboygan, Wis. 700,845, pub. 4-26-60. Cl. 21.
Manuington Mills, Inc., Salem, N.J. 382,311, ren. 7-12-60. Cl. 20.
Marcus, Julius, Liquor Co.: See—
Arrow Liqueurs Corp.
Marfay Bags, Inc., New York, N.Y. 700,744, pub. 4-26-60, Cl. 3.
Marquis, A. N., Co., The, to Marquis-Who's Who, Inc., Chicago, Ill. 378,389, ren. 7-12-60. Cl. 38.
Marquis-Who's Who, Inc.: See—
Marquis, A. N., Co., The.
Massasoit Co.: See—
Massasoit Mfg. Co.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laureltop, N.J. 135,437, ren. 7-12-60. Cl. 29.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laureltop, N.J. 135,747, ren. 7-12-60. Cl. 1.
Master Publications, Inc., Los Angeles, Calif. 700,894, pub. 4-26-60. Cl. 38.
May Department Stores Co., The, St. Louis, Mo. 375,292, ren. 7-12-60. Cl. 39.
May Department Stores Co., The: See—
Kaufmann Department Stores, Inc.
Maybelline Co., Chicago, Ill. 701,108, pub. 4-26-60. Cl. 51.
McCloskey Varnish Co., Philadelphia, Pa. 700,720-2, pub. 4-26-60. Cl. 1.
McCoy, Jones & Co., Inc., Chicago, Ill. 412,436, canc. Cl. 40.
McGraw-Edison Co.: See—
Bersted Mfg. Co.
McGraw-Edison Co., Elgin, Ill. 700,928, pub. 11-3-59. Cl. 24.
Mechanic Engineered Unit Co.: See—
Unit Service Exchange Co.
Medical Fabrics Co., Inc., Paterson, N.J. 590,283, canc. Cl. 44.
Meehanite Metal Corp., Rochelle, N.Y. 700,801, pub. 4-26-60. Cl. 14.
Merchants Co., The, d.b.a. The Valley Mills, Hattiesburg, Miss. 701,060, pub. 4-26-60. Cl. 46.
Merit Transformer Corp., Chicago, Ill. 373,407, canc. Cl. 21.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 382,472, ren. 7-12-60. Cl. 18.
Michaud, Myrtle L., d.b.a. Towlet Products Co., Minneapolis, Minn. 701,051, pub. 4-26-60. Cl. 42.
Michmacher, Henri, Joinville-le-Pont, France. 701,007, pub. 4-26-60. Cl. 39.
Michle-Gose-Dexter, Inc., Chicago, Ill. 700,912, pub. 4-26-60. Cl. 22.
Millus Shoe Co., to Brown Shoe Co., Inc., St. Louis, Mo. 382,303, ren. 7-12-60. Cl. 39.
Miller Chemical & Fertilizer Corp., Baltimore, Md. 382,089, ren. 7-12-60. Cl. 6.
Miller Pharmacal Co., The, West Chicago, Ill. 700,852-5, pub. 4-26-60. Cl. 18.
Millipore Filter Corp., Bedford, Mass. 700,967, pub. 4-26-60. Cl. 31.
Mine Safety Appliances Co., Pittsburgh, Pa. 700,933, pub. 4-26-60. Cl. 26.
Mine Safety Appliances Co., Pittsburgh, Pa. 700,989, pub. 4-26-60. Cl. 26.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 700,984, pub. 4-26-60. Cl. 26.
Mint, Louis, James G. Quinn, Jr., and William H. Quinn, Oakland, Calif. 701,097, pub. 4-26-60. Cl. 46.
Minx Corp., from Fleming and Fite, Glendale, Calif. 700,724, pub. 4-26-60. Cl. 1.
Mitchell Mfg. Co., Chicago, Ill. 590,278, canc. Cl. 21.
Modern Magnesium Products, Inc., Palmer, Mass. 590,327, canc. Cl. 50.
Molyspeed Corp., Clifton, N.J. 700,809, pub. 4-26-60. Cl. 15.
Monarch Garment Corp., New York, N.Y. 701,037, pub. 4-26-60. Cl. 39.
Montgomery and Crawford Co., Inc., Decatur, Ala. 701,104, pub. 4-26-60. Cl. 50.
Montres Rolex S.A., Geneva, Switzerland. 381,205, ren. 7-12-60. Cl. 27.
Moore, Benjamin, & Co., New York, N.Y. 700,815, pub. 4-26-60. Cl. 16.
Musical Trademarks, Inc., New York, N.Y. 701,125, pub. 4-26-60. Cl. 101.
Mutual Orange Distributors, to Real Gold Co., Redland, Calif. 374,590, ren. 7-12-60. Cl. 45.
N.V. Verenigde Nederlandse Kleermakerijen Gebr., Iberlings, The Hague, Netherlands. 701,022, pub. 4-26-60. Cl. 39.
National Bird Control Laboratories: See—
Fink, Joseph H.
National Biscuit Co., New York, N.Y. 131,197, ren. 7-12-60. Cl. 46.
National Cooperatives, Inc.: See—
National Co-Operatives, Inc.
National Co-Operatives, Inc., Chicago, Ill., and Indianapolis, Ind., to National Cooperatives, Inc., Albert Lea, Minn. 379,235, ren. 7-12-60. Cl. 18.
National Co-Operatives, Inc., Chicago, Ill., and Indianapolis, Ind., to National Cooperatives, Inc., Albert Lea, Minn. 379,538, ren. 7-12-60. Cl. 23.
National Co-Operatives, Inc., Chicago, Ill., and Indianapolis, Ind., to National Cooperatives, Inc., Albert Lea, Minn. 380,280, ren. 7-12-60. Cl. 13.
National Dairy Products Corp.: See—
Kraft Cheese Co.
National Family Opinion, Inc., Toledo, Ohio. 701,128, pub. 4-26-60. Cl. 101.

National Geographic Society, Washington, D.C. 700,966, pub. 4-26-60. Cl. 38.
Nelson, L. E., Mfg. Co., Inc., Peoria, Ill. 700,790-800, pub. 4-26-60. Cl. 13.
Nestle Co., Inc., The: See—
Lohr, William.
Newark Brush Co., Kenilworth, N.J. 700,962, pub. 4-26-60. Cl. 29.
News Syndicate Co., Inc., New York, N.Y. 134,042, ren. 7-12-60. Cl. 38.
Norcross, Inc., New York, N.Y. 700,997-701,004, pub. 4-26-60. Cl. 28.
Norland, Daniel O., Cypress, Calif. 590,226, canc. Cl. 12.
Nutrilite Products, Inc., Buena Park, Calif. 700,750, pub. 4-19-60. Cl. 6.
Nu-Vita Laboratories, Inc., Hancock, Wis. 701,109, pub. 3-23-60. Cl. 51.
Olin Mathieson Chemical Corp., New York, N.Y. 700,885, pub. 4-26-60. Cl. 18.
Oneida Ltd., Oneida, N.Y. 700,958, pub. 4-26-60. Cl. 23.
Oneida Ltd., Oneida, N.Y. 700,959, pub. 4-26-60. Cl. 23.
Orleans Seafood Co., New Orleans, La. 701,086, pub. 4-26-60. Cl. 46.
Pachmayr Gun Works, Inc., Los Angeles, Calif. 700,760, pub. 4-26-60. Cl. 9.
Page & Page Co., Portland, Oreg. 700,908, pub. 4-26-60. Cl. 22.
Pease Woodwork Co., Inc., Cincinnati, Ohio. 590,146, canc. Cl. 22.
Peck Industries Inc., Flushing, N.Y. 700,994, pub. 4-26-60. Cl. 37.
Penny Read Fashions, Inc., New York, N.Y. 701,038, pub. 4-26-60. Cl. 39.
Pendleton Woolen Mills, Portland, Oreg. 701,017, pub. 4-26-60. Cl. 39.
Penn Metal Co., Inc., Boston, Mass. 700,776, pub. 4-26-60. Cl. 12.
Pepperidge Farm Inc., Norwalk, Conn. 701,078-8, pub. 4-26-60. Cl. 46.
Pepsi-Cola Co., New York, N.Y. 701,080, pub. 4-26-60. Cl. 46.
Pepsodent Co., The, Chicago, Ill., to Lever Brothers Co., New York, N.Y. 382,335, ren. 7-12-60. Cl. 51.
Peyron, Antoine F., Paris, France. 701,145. Cl. 44.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 700,770, pub. 4-26-60. Cl. 10.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 700,827, pub. 4-26-60. Cl. 18.
Phillips, Ed., & Sons Co., Minneapolis, Minn. 381,404, ren. 7-12-60. Cl. 49.
Pittsburgh Plate Glass Co.: See—
Tile Leading Co., Inc.
Plaque Craft, Inc., Baltimore, Md. 701,102, pub. 4-26-60. Cl. 50.
Plastex Protective Products, Inc., Clifton, N.J. 701,008, pub. 4-26-60. Cl. 39.
Plus Poultry, Inc.: See—
Plus Poultry, Inc. of NW. Arkansas.
Plus Poultry, Inc. of NW. Arkansas, d.b.a. Plus Poultry, Inc., Siloam Springs, Ark. 701,087, pub. 4-26-60. Cl. 46.
Pol-Air, Inc., Morgan City, La. 700,964, pub. 4-26-60. Cl. 31.
Polo Sprayers, Inc., Buffalo, N.Y. 590,253, canc. Cl. 6.
Polley-Matic Corp. of America, Atlanta, Ga. 700,900, pub. 4-26-60. Cl. 23.
Polk Pools' Products, Inc., South Miami, Fla. 700,796, pub. 4-26-60. Cl. 13.
Porce Cote Corp., Uniondale, N.Y. 700,790, pub. 4-26-60. Cl. 12.
Pratt Industries, Inc.: See—
Smith, E. M., Co.
Price Candy Co., Kansas City, Mo. 701,077, pub. 4-26-60. Cl. 46.
Pride Hybrid Co., Dassel, Minn. 700,734, pub. 4-26-60. Cl. 1.
Procter & Gamble Co., The, Cincinnati, Ohio. 701,085, pub. 4-26-60. Cl. 46.
Protection Equipment Co., Sunbury, Pa. 700,896, pub. 4-26-60. Cl. 22.
Putnam Publishing Co., Chicago, Ill. 700,883, pub. 4-26-60. Cl. 38.
Quatricide Distributing Co., Inc., New York, N.Y. 590,181, canc. Cl. 18.
Quinn, James G., Jr.: See—
Mint, Louis, James G. Quinn, Jr. & William H. Quinn.
Quinn, William H.: See—
Mint, Louis, James G. Quinn, Jr. & William H. Quinn.
Rap Fastener Co., Providence, R.I. 381,615, ren. 7-12-60. Cl. 40.
Raylite Electric Corp., New York, N.Y. 700,982, pub. 4-26-60. Cl. 21.
Rayne Corp., Santa Barbara, Calif. 700,995, pub. 4-26-60. Cl. 31.
Real Gold Co.: See—
Mutual Orange Distributors.
Reardon Co., The, St. Louis County, Mo. 700,814, pub. 4-26-60. Cl. 16.
Becker, Earl C., Co.: See—
Becker, Earl C.
Becker, Earl C., d.b.a. Earl C. Becker Co., Mesa, Ariz. 701,088, pub. 4-26-60. Cl. 46.
Rees, A. F., Inc., Greencastle, Pa. 701,073, pub. 4-26-60. Cl. 46.
Red Owl Stores, Inc., Minneapolis, Minn. 213,607, canc. Cl. 35.
Rein, Robert, & Co., New York, N.Y. 135,784, ren. 7-12-60. Cl. 39.
Republic Rubber Division: See—
Lee Rubber & Tire Corp.
Reuter, John, Jr., Phoenix, Ariz. 700,877, pub. 4-26-60. Cl. 22.
Revlon, Inc., New York, N.Y. 700,818, pub. 4-26-60. Cl. 18.
Revlon, Inc., New York, N.Y. 701,112, pub. 4-26-60. Cl. 51.
Revlon, Inc., New York, N.Y. 701,149. Cl. 51.
Rexhilt Leather Goods, Inc., New York, N.Y. 701,126. Cl. 3.
Ripon Knitting Works, Ripon, Wis. 701,027, pub. 4-26-60. Cl. 39.
Robert Dollar Co., The, San Francisco, Calif. 700,871-2, pub. 4-26-60. Cl. 21.
Robert Hall Clothes, Inc., New York, N.Y. 701,018, pub. 4-26-60. Cl. 39.
Robins, A. H., Co., Inc., Richmond, Va. 700,821, pub. 4-26-60. Cl. 18.
Robinson, J. C., Co., Baltimore, Md. 701,081, pub. 4-26-60. Cl. 46.
Robinson Plywood and Timber Co., Everett, Wash. 700,785, pub. 4-26-60. Cl. 12.
Rochester Products Corp., New Haven, Conn., to Cerro de Pasco Corp., New York, N.Y. 382,210, ren. 7-12-60. Cl. 21.
Rockwood Chocolate Co., Inc.: See—
Rockwood & Co.
Rockwood & Co., to Rockwood Chocolate Co., Inc., Brooklyn, N.Y. 381,516, ren. 7-12-60. Cl. 46.
Rohm & Haas Co., to Rohm & Haas Co., Philadelphia, Pa. 379,481, ren. 7-12-60. Cl. 18.
Rolawn, Inc., South River, N.J. 700,712, pub. 4-26-60. Cl. 1.
Ronne Associates: See—
Adler, Ronald E.
Rosenberg, Alexander, d.b.a. Dutch Cheese Importers, New York, N.Y. 381,516, canc. Cl. 46.
Ross, Colin Forbes, & Co. Ltd., Glasgow, Scotland. 701,100, pub. 4-26-60. Cl. 49.
Rost, Will, Inc., Milwaukee, Wis. 701,047, pub. 4-26-60. Cl. 42.
Rough Rider, Inc., Napa, Calif. 701,062, pub. 4-26-60. Cl. 39.
Rozel Development Corp., Elmont, N.Y. 590,312, canc. Cl. 51.
Rudell, Bernard F.: See—
Mahan, Cyril C.
Russell Harrington Cutlery Co.: See—
Russell, John, Cutlery Co.
Russell, John, Cutlery Co., Turners Falls, to Russell Harrington Cutlery Co., Southbridge, Mass. 133,806-7, ren. 7-12-60. Cl. 23.
Salzberg, Saul, Inc., to Debutante Furs, Inc., New York, N.Y. 377,714, ren. 7-12-60. Cl. 39.
Sandvikens Jernverks Aktiebolag, Sandviken, Sweden. 377,165, ren. 7-12-60. Cl. 23.
Sargeant Arnold Pharmaceutical Co., Inc., Highland Mills, N.Y. 701,116, pub. 4-26-60. Cl. 52.
Sassy Brand Dog Food Co.: See—
Los Angeles Sales Co.
Saunders, Bob, Co.: See—
Saunders, Robert D.
Saunders, Robert D., d.b.a. Bob Saunders Co., Soledad, Calif. 590,279, canc. Cl. 46.
Schaefer, F. & M., Brewing Co., The, Brooklyn, N.Y. 701,066, pub. 4-26-60. Cl. 48.
Schaper Mfg. Co., Inc., Minneapolis, Minn. 700,885, pub. 4-26-60. Cl. 22.
Schlieper, Carl, Remscheid-Hasten, Germany. 700,904, pub. 4-26-60. Cl. 23.
Schnapp, Arnold H., d.b.a. Schnapp Enterprises, Brooklyn, N.Y. 701,151. Cl. 52.
Schnapp Enterprises: See—
Schnapp, Arnold H.
Sears, Roebuck and Co., Chicago, Ill. 590,151, expd. Cl. 35.
Sears, Roebuck and Co., Chicago, Ill. 700,929, pub. 4-26-60. Cl. 26.
Sec Mfg. Co., Miami, Fla. 700,817, pub. 4-26-60. Cl. 16.
Seminole Flavor Co., Chattanooga, Tenn. 701,068, pub. 4-26-60. Cl. 45.
Servel, Inc., Evansville, Ind. 700,887, pub. 4-26-60. Cl. 21.
Shakespeare Co., Kalamazoo, Mich. 700,883, pub. 4-26-60. Cl. 22.
Shakespeare Co., Kalamazoo, Mich. 700,886, 4-26-60. Cl. 22.
Shell Chemical Corp.: See—
Shell Oil Co.
Shell Oil Co.: See—
Shell Oil Co., Inc.
Shell Oil Co., Inc., St. Louis, Mo., to Shell Oil Co., New York, N.Y. 382,129-30, ren. 7-12-60. Cl. 15.
Shell Oil Co., to Shell Chemical Corp., New York, N.Y. 700,762, pub. 4-26-60. Cl. 6.
Shirtcraft Co., Inc., The, New York, N.Y. 590,135, canc. Cl. 39.
Shoe Corp. of America, Columbus, Ohio. 700,831, pub. 4-26-60. Cl. 22.
Shoop & Livesay Mfg. Co., Escondito, Calif., to Wm. C. Cissell Mfg. Co., Louisville, Ky. 590,309, canc. Cl. 24.
Shulton, Inc., Clifton, N.J. 701,107, pub. 4-26-60. Cl. 51.
Siegle, G., Co., to G. Siegle Corp. of America, Rosebank, to Sun Chemical Corp., New York, N.Y. 131,621, ren. 7-12-60. Cl. 6.
Siegle, G., Corp. of America: See—
Siegle, G., Co.
Sinaker, Sigmund, d.b.a. Armiyl Products, Baltimore, Md. 700,822, pub. 4-26-60. Cl. 16.
Smith, E. M., Co., Los Angeles, Calif., to Pratt Industries, Inc., Chicago, Ill. 382,014, ren. 7-12-60. Cl. 25.
Smith, E. M., Co., Los Angeles, Calif., to Pratt Industries, Inc., Chicago, Ill. 382,332, ren. 7-12-60. Cl. 25.
So-Lo Works, Inc., Loveland, Ohio. 590,196, canc. Cl. 39.
Soune & Bokn, Inc., Detroit, Mich. 700,782, pub. 4-26-60. Cl. 12.

Seitz, Melvyn, New York, N.Y. 701,028, pub. 4-26-60. Cl. 39.
Southern Galvanizing Co., Baltimore, Md. 413,294, canc. Cl. 24.
Spalding, A. G., & Bros., Inc., Chicopee, Mass. 700,902, pub. 4-26-60. Cl. 22.
Spiegel Brothers Corp., The, New York, N.Y. 700,918, pub. 4-26-60. Cl. 22.
Spin-A-Test Co.: See—
Alberts, Cecil D.
Stahlgruber Otto Gruber und Co., Munich, Germany. 700,-923, pub. 4-26-60. Cl. 23.
Stahlgruber Otto Gruber und Co., Munich, Germany. 700,-975, pub. 4-26-60. Cl. 35.
Sta-Wave, Inc., Eugene, Oreg. 701,110, pub. 4-26-60. Cl. 31.
Steinman, Will, Inc., to Cotillion Formals Inc., New York, N.Y. 377,645, ren. 7-12-60. Cl. 39.
Stenham, H., Ltd., d.b.a. Highland Blending Co., London, England. 701,009, pub. 4-26-60. Cl. 49.
Sterling Drug Inc.: See—
Ahlen Pharmaceutical Co., Inc.
Sterling Drug Inc., New York, N.Y. 700,851, pub. 4-26-60. Cl. 18.
Stewart-Warner Corp., Chicago, Ill. 700,811, pub. 4-26-60. Cl. 15.
Stone, Ralph, d.b.a. Stone Soap Co., Detroit, Mich. 701,117, pub. 4-26-60. Cl. 52.
Stone Soap Co.: See—
Stone, Ralph.
Strappings Ltd., Greenford, England. 700,913, pub. 4-26-60. Cl. 22.
Structural Clay Products Research Foundation, Geneva, Ill. 700,839, pub. 4-26-60. Cl. 23.
Stuart Co., The, Pasadena, Calif. 700,836, pub. 4-26-60. Cl. 18.
Sun Chemical Corp.: See—
Siegle, G., Co.
Sun Oil Co., Philadelphia, Pa. 700,812, pub. 4-26-60. Cl. 16.
Suppiger Wine Co., Inc., Boston, Mass. 701,083, pub. 4-26-60. Cl. 47.
Surety Oil Corp., Springfield, Ohio. 700,782, pub. 4-26-60. Cl. 6.
T & A Coffee Co., Inc., New York, N.Y. 701,092, pub. 4-26-60. Cl. 46.
Tablet & Ticket Co., Chicago, Ill. 328,002, canc. Cl. 37.
Tahanaki, C. T., & Co., Inc., Seattle, Wash. 700,768, pub. 4-26-60. Cl. 1.
Talbott Foods, Inc., Tiburon, Calif. 701,066-7, pub. 4-26-60. Cl. 46.
Talbott, Inc., New York, N.Y. 701,066, pub. 4-26-60. Cl. 39.
Taliaferro, E. H., Mfg. Co.: See—
Taliaferro, E. H.
Taliaferro, E. H., d.b.a. E. H. Taliaferro Mfg. Co., and "Host of California," San Diego, Calif. 689,527, canc. Cl. 39.
Taylor & Art, Inc., Oakland, Calif. 700,784, pub. 4-26-60. Cl. 12.
Taylor Bedding Mfg. Co., Tayler, Tex. 380,363, ren. 7-12-60. Cl. 1.
Taylor, Jack R., d.b.a. Fact-O-Bake, Mobile, Ala. 701,129, pub. 4-26-60. Cl. 103.
Tennessee Products & Chemical Corp., Nashville, Tenn. 700,-758, pub. 4-26-60. Cl. 6.
Thorndike Mills, Inc., Palmer, Mass. 701,048, pub. 4-26-60. Cl. 42.
Tiffany & Co., New York, N.Y. 132,262, ren. 7-12-60. Cl. 27.
Tiffany & Co., New York, N.Y. 133,062, ren. 7-12-60. Cl. 28.
Tile Roofing Co., Inc., New York, N.Y., to Pittsburgh Plate Glass Co., Pittsburgh, Pa. 590,144, canc. Cl. 21.
Tipp Whip Co., The, Tippecanoe City, to Amole, Inc., Dayton, Ohio. 132,834, ren. 7-12-60. Cl. 52.
Tir-Oss Ltd., Dungannon, Tyrone, Northern Ireland. 701,-012, pub. 4-26-60. Cl. 39.
Tovlet Products Co.: See—
Michaud, Myrtle L.
Tractaon Co., Milwaukee, Wis., to Caterpillar Tractor Co., Peoria, Ill. 379,305, ren. 7-12-60. Cl. 23.
Transogram Co., Inc., New York, N.Y. 700,878, pub. 4-26-60. Cl. 22.
Transogram Co., Inc., New York, N.Y. 700,878, pub. 4-26-60. Cl. 22.
Triangle Industries, Inc., Houston, Tex. 700,810, pub. 4-26-60. Cl. 15.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 700,726-31, pub. 4-26-60. Cl. 1.
Troy Sunshade Co., The, Troy, Ohio. 700,974, pub. 4-26-60. Cl. 52.
Trucksteil Mfg. Co., Cleveland, Ohio. 700,861, pub. 4-26-60. Cl. 19.
Turco, Joseph J., Franklin, Mass. 590,188, canc. Cl. 39.
Turner, Grover B., Co., Inc., Indianapolis, Ind. 701,057, pub. 4-26-60. Cl. 43.
Udde, Joseph F., d.b.a. F. Udde & Sons Co., New Orleans, La. 700,747, pub. 4-26-60. Cl. 6.
Udde, F., & Sons Co.: See—
Udde, Joseph F.
Underberg-Albrecht, H., Rheinberg, Germany. 701,165. Cl. 49.
Upjohn Co., The, Kalamazoo, Mich. 700,839-50, pub. 4-26-60. Cl. 15.
Upjohn Co., The, Kalamazoo, Mich. 700,834-5, pub. 4-26-60. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 700,840, pub. 4-26-60. Cl. 18.
Unit Service Exchange Co., Atlanta, Ga. 700,920, pub. 4-26-60. Cl. 23.
Unit Service Exchange Co., d.b.a. Mechanic Engineered Unit Co., Atlanta, Ga. 700,921, pub. 4-26-60. Cl. 23.
United States Rubber Co., New York, N.Y. 590,197, canc. Cl. 42.
United Silver & Cutlery Co., Los Angeles, Calif. 700,797, pub. 4-26-60. Cl. 13.
United Silver & Cutlery Co., Los Angeles, Calif. 700,903, pub. 4-26-60. Cl. 26.
Universal Machine Co., Inc., Baltimore, Md. 701,142. Cl. 23.
Valley Fruit Distributors, Inc.: See—
Valley Fruit Distributors.
Valley Fruit Distributors, d.b.a. Valley Fruit Distributors, Inc., Victor, Calif. 701,063, pub. 4-26-60. Cl. 46.
Valley Mills, The: See—
Merchants Co., The.
Vick Chemical Co., New York, N.Y. 700,830-1, pub. 4-26-60. Cl. 18.
Victor Drug Co., Chicago, Ill. 590,009, canc. Cl. 18.
Walden & Co., Prague, Bohemia, to Walden Koh-i-noor, Inc., Long Island City, N.Y. 134,344, ren. 7-12-60. Cl. 40.
Walden Koh-i-noor, Inc.: See—
Walden & Co.
Wallace & Co., Brooklyn, N.Y. 701,092, pub. 4-26-60. Cl. 46.
Ward Tool & Machine Co., Inc., Alden, N.Y. 700,905, pub. 4-26-60. Cl. 23.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 700,787, pub. 4-26-60. Cl. 6.
Waseo Products, Inc., Cambridge, Mass. 700,775, pub. 4-26-60. Cl. 12.
Waste King Corp., Los Angeles, Calif. 700,809, pub. 4-26-60. Cl. 21.
Waterbury Pen Co., The, Stratford, Conn. 700,861-2, pub. 4-26-60. Cl. 37.
WBC, Inc., Seattle, Wash. 700,771-2, pub. 4-26-60. Cl. 10.
Weingarten, Benjamin, d.b.a. The Academy Chair Renting Co., Elmhurst, N.Y. 701,124, pub. 4-26-60. Cl. 100.
West Virginia Pulp and Paper Co., New York, N.Y. 700,742, pub. 4-26-60. Cl. 2.
Western Truck Lines, Ltd., Vernon, Calif. 701,131, pub. 4-26-60. Cl. 105.
Westinghouse Electric Corp.: See—
Westinghouse Electric & Mfg. Co.
Westinghouse Electric & Mfg. Co., East Pittsburgh, to Westinghouse Electric Corp., Pittsburgh, Pa. 378,744, ren. 7-12-60. Cl. 34.
Weston, Byron, Co., Dalton, Mass. 130,890, ren. 7-12-60. Cl. 37.
Westwood Pharmaceuticals: See—
Foster-Milburn Co.
White Laboratories, Inc.: See—
Delar Medical Laboratories, Inc.
Wilbur-Ellis Co., San Francisco, Calif. 701,064, pub. 4-26-60. Cl. 46.
Williams Oil-O-Matic Heating Corp., to Burnka Williams Corp., Bloomington, Ill. 379,297, ren. 7-12-60. Cl. 26.
Wilson, Jewell, Co., Inc., Dallas, Tex. 701,076, pub. 2-2-60. Cl. 46.
Wilson Products Co., Inc., Cincinnati, Ohio. 701,119, pub. 4-26-60. Cl. 52.
Worthington Corp., Harrison, N.J. 701,141. Cl. 23.
Worumbo Mfg. Co., Lisbon Falls, Maine. 590,231, canc. Cl. 42.
Wyndham, Maison de, Atlanta, Ga. 701,114-15, pub. 4-26-60. Cl. 51.
Wyomissing Glazed Paper Co., West Reading, Pa. 590,012, canc. Cl. 37.
Xenotech, Inc., Van Nuys, Calif. 363,066, canc. Cl. 18.
Xttrium Laboratories, Inc., Chicago, Ill. 700,882, pub. 4-26-60. Cl. 18.
Yeomans Brothers Co., Melrose Park, Ill. 700,916, pub. 4-26-60. Cl. 23.
Young's Rubber Corp., New York, N.Y. 590,296, canc. Cl. 44.
Zocol, Inc., Milwaukee, Wis. 700,746, pub. 4-26-60. Cl. 4.
Zenith Radio Corp., to Zenith Radio Corp., Chicago, Ill. 378,392, ren. 7-12-60. Cl. 21.
Ziff-Davis Publishing Co., New York, N.Y. 590,222, canc. Cl. 39.

U.S. GOVERNMENT PRINTING OFFICE: 0—1960

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 19, 1960 Volume 756 Number 3

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of June 1960

Examiner affirmed	178
Examiner affirmed in part	31
Examiner reversed	59
Total	268

Disclaimers

2,778,631.—*Philip G. Goate*, St. Paul, Minn. GARAGE DOOR ACTUATING MECHANISM. Patent dated Jan. 22, 1957. Disclaimer filed June 2, 1960, by the inventor and the assignee, *Liftronic, Inc.*

Hereby enter this disclaimer to claim 10 of said patent.

2,907,858.—*Edward C. Distler*, Rydal, Pa. SYSTEM FOR TREATING SHELL CASINGS AND THE LIKE. Patent dated Oct. 6, 1959. Disclaimer filed June 13, 1960, by the assignee, *Jennings Machine Corporation.*

Hereby enters this disclaimer to claim 3 of said patent.

Patents Available for Licensing or Sale

2,835,736. Remote Control for Television and Radio Apparatus. Domenick A. M. Sansotta, 4625 Liberty Ave., Pittsburgh 24, Pa.

2,939,238. Fishing Apparatus. Gutert Quality Products Inc., of Milwaukee. Correspondence to: Frank S. Andrus, 735 North Water St., Milwaukee 2, Wis.

Design Pat. 187,441. Portable Raft or the Like. Raymond D. Berendt, 6103 Amherst Ave., Springfield, Va.

Patents Withdrawn From Register

The General Electric Company hereby withdraws the following 11 patents from the Register of Patents Available for Licensing or Sale. These patents were listed in the OFFICIAL GAZETTE as indicated below:

2,362,796.	Electric Switchgear. July 10, 1951.
2,375,642.	Electric Circuit Interrupter. July 10, 1951.
2,401,963.	Electric Circuit Breaker. July 10, 1951.
2,411,010.	Electrical Measuring Instrument. Dec. 4, 1951.
2,411,741.	Color Matching Apparatus. Apr. 30, 1957.
2,539,175.	Liquid Blast Interrupter for Electric Breaker. Nov. 27, 1951.
2,542,692.	Armature Lock. Nov. 27, 1951.
2,660,631.	Side Break Disconnecting Switch. Mar. 13, 1956.
2,727,204.	Voltage Stabilising Systems. May 7, 1957.
2,739,110.	Method of Forming Oxide Films on Electrodes for Electrolytic Capacitors. Oct. 20, 1956.
2,741,672.	Dual Axis Rotatable Blade Switch. June 12, 1956.

New Applications Received During May 1960

Patents	7,228
Designs	419
Plant Pats	7
Reissues	24
Total	7,678

Issue

Patents	824—No.	2,945,235 to No.	2,946,058, incl.
Designs	48—No.	188,410 to No.	188,453, incl.
Plant Patents	1—No.	1,960	
Reissues	3—No.	24,865 to No.	24,865, incl.
Total	870		

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1960

Total number of pending applications (excluding Designs)	198,233
Total number of pending Design applications	6,105
Total number of applications awaiting action (excluding Designs)	81,125
Total number of Design applications awaiting action	1,400
Date of oldest new application	Feb. 2, 1959
Date of oldest amended application	Feb. 9, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 23, 26, 46, 48, 49, 52, 53, 55, 59, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 20, 27, 41, 43, 44, 49, 51, 54, 65.
(III) YUNG KWAI, R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 27, 35, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES	7, 11, 17, 37, 34, 39, 20, 59, 63.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 9, 33, 35, 38, 56, 60, 73, 95.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 8, 10, 12, 32, 33, 34, 45, 47.
(VII) KAUFFMAN, H. B., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE	3, 14, 19, 28, 30, 31, 42, 44, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brake; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	11-8-59	10-26-59
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-9-59	11-17-59
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	11-20-59	11-20-59
4. (VI) FALLER, R. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Slide, Guides and Ways	10-5-59	10-7-59
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Commutators; Fences; Gates; Music; Signals and Indicators; Acoustics	5-5-59	5-5-59
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, Organic Organic Processes, Amides	10-15-59	10-15-59
7. (IV) ANDERSON, E. G., Optics	9-1-59	9-6-59
8. (V) BREHM, C. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Dentists and Collapsible Receptacles; Scaffolds	10-13-59	10-27-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-12-59	10-7-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-5-59	12-1-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Classing; Card, Picture and Sign Exhibiting; Cutlery; Pipe and Tobacco Combats	10-15-59	9-4-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-4-59	12-3-59
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-13-59	10-13-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-6-59	7-17-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-4-59	12-17-59
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	7-1-59	6-1-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-9-59	11-6-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmission; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-9-59	10-9-59
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-4-60	12-17-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Boat Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-10-59	12-10-59
21. (III) MADER, E. C., Textiles	10-28-59	11-6-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Displacement and Bellows	10-13-59	10-6-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	3-3-59	1-6-60
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	9-4-59	9-3-59
25. (VII) NEVIUS, E. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	9-3-59	9-1-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Movers; Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	9-30-59	8-12-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	11-5-59	10-20-59
28. (VI) BRAUNER, E. E., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Clutches or Brakes; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	10-20-59	11-4-59
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-6-59	11-25-59
30. (VII) O'LEARY, R. A., Conveyorizers; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-8-59	12-10-59

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	12-31-59	12-29-59
32. (VII) EHRMAN, H., Centrifugal Liquid Contact Apparatus; Fluid Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	11-16-59	11-17-59
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Rock; Building Structures	9-4-59	9-6-59
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Cleaners; Electricity, Transmission to Vehicles; Damping Vehicles; Vehicle Fenders; Hand and Road Line Implements; Separating and Assorting Solids (part)	6-29-59	8-31-59
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	11-5-59	11-6-59
36. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	9-24-59	9-28-59
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	9-28-59	9-15-59
38. (I) PARKER, G. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthracene, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	9-3-59	9-3-59
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	10-26-59	10-21-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-59	12-3-59
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Telephone; Telegraphy (part)	11-23-59	10-23-59
42. (II) REYNOLDS, B. R., Electric Signaling; Telegraphy (part)	10-1-59	10-1-59
43. (I) KNIGHT, W. D. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	9-11-59	9-29-59
44. (II) JUSTUS, G. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-23-59	9-9-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	11-16-59	11-13-59
46. (I) WILES, W. G., Actinide Series (e.g., Plutonium) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-13-59	11-6-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Load Vehicles; Education	11-16-59	11-13-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	9-9-59	9-15-59
49. (VII) BENDETT, S., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	7-6-59	7-13-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	8-3-59	8-17-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detection	10-1-59	10-1-59
52. (V) LE ROY, C. A., Supports and Racks	1-20-60	1-20-60
53. (IV) MINAR, C. A., Label Posting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	10-29-59	10-15-59
54. (II) NILSON, H. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	11-24-59	12-5-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	10-13-59	9-30-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-7-59	12-9-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-19-59	8-11-59
58. (III) BRONAUGH, P. H. (BAILEY, P. H., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Racks, Chucks, Stocks, and Spinners; Boring and Drilling; Paper Manufacture; Selective Punching	9-16-59	10-6-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizer; Gas, Heating and Illuminating	9-6-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	9-15-59	9-23-59
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	12-1-58	11-27-59
62. (IV) LOWE, D. R., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	11-26-59	11-13-59
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	9-23-59	10-5-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	8-11-59	7-17-59
65. (II) SAX, E. J., Wave Guides; Electric Motors; Conductors; Insulators; Amplifiers	11-16-59	11-6-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	7-1-59	6-17-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	8-26-59	8-5-59
81. (III) MONCURE, J. A., Industrial Arts	3-4-60	3-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-16-60	3-15-60
91. BAILEY, J. R., Communications	9-16-60	9-9-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	1-4-60	1-9-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	12-5-58	12-1-59
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	12-3-59	12-4-59
95. ANGEL, C. D., Masonry and Concrete Structures; Packed Rod Joints; Joint Packings	10-5-59	10-1-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e.g., Steroids; Synthetic Resins (part), i.e., Polyethylenes	12-2-59	11-9-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 216 as amended by 65 Stat. 221) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1952*.

Patents	Numbers 2,923,257 to 2,926,370, inclusive
Plant Patents	Numbers 804 to 808, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

UGO MONACO AND MONTECATINI SOCIETA GENERALE PER L'INDUSTRIA MINERARIA E CHIMICA ANONIMA v. ROBERT C. WATSON, COMMISSIONER OF PATENTS

No. 14,937. Decided August 27, 1959

[— U.S.App.D.C. —; 270 F.2d 835; 122 USPQ 564]

1. CIVIL ACTION IN CASE OF INTERFERENCE—35 U.S.C. 135 AND 146—COMMISSIONER MAY ISSUE PATENT.

"The statute provides that the 'question of priority of invention shall be determined by a Board of Patent Interferences . . . and the Commissioner may issue a patent to the applicant who is adjudged the prior inventor.' 35 U.S.C. § 135. We think this means just what it says. We see nothing to suggest that applicants who, like these appellants, are adjudged not to be prior inventors, can require the Commissioner to withhold the patent while they sue for it under § 146."

2. SAME—SAME—SAME.

"The policy of the statute is clear. The decision of the Board of Patent Interferences is presumably, though not conclusively, correct. If Hoffman, to whom the Board awarded priority, gets the patent, he gets no more than is presumably his. To withhold the patent from him for the benefit of applicants who presumably are not entitled to it would serve no useful purpose. If the appellants win their suit under § 146 their rights will be protected, even if the Commissioner has issued the patent to Hoffman in the meantime, for § 135 provides that a 'final judgment adverse to a patentee . . . shall constitute cancellation of . . . the patent . . . .'"

3. SAME—SAME—SAME—*In re Allen* NOT CONTROLLING.

"Pursuant to *In re Allen*, 115 F.2d 984, 28 CCPA 792, the Commissioner withholds patents while appeals from the Patent Office are pending in the Court of Customs and Patent Appeals. That decision and that practice do not concern us. Appellants' suit under § 146 'is de novo and not an appeal.' *Knutson v. Gallowcorthy*, 82 U.S.App.D.C. 304, 314, 164 F.2d 497, 507. 'It is an application to the court to set aside the action of one of the executive departments of the Government.' *Morgan v. Daniels*, 153 U.S. 120, 124."

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Harry A. Toulmin, Jr., with whom *F. E. Drummond* was on the brief, for Ugo Monaco et al.

Clarence W. Moore (*George C. Roeming*, of counsel) for Robert C. Watson, Commissioner of Patents.

Before EDGERTON, FAHY, and BURGER, *Circuit Judges*

PER CURIAM:

Appellants had been the losing parties in a Patent Office proceeding in which the Board of Patent Interferences adjudged a different applicant, Paul H. Hoffman, to be the prior inventor. Instead of appealing to the Court of Customs and Patent Appeals, appellants elected to sue in the District Court under 35 U.S.C. § 146 to require the Commissioner to issue the patent to them. That suit is pending in the District Court and is not before us. In a second suit, appellants seek to restrain the Commissioner from issuing the patent to Hoffman while the first suit is pending. The present appeal is from a judgment for the defendant in the second suit.

[1] The statute provides that the "question of priority of invention shall be determined by a board of patent interferences . . ., and the Commissioner may issue a patent to the applicant who is adjudged the prior inventor." 35 U.S.C. § 135. We think this means just what it says. We see nothing to suggest that applicants who, like these appellants, are adjudged *not* to be prior inventors, can require the Commissioner to withhold the patent while they sue for it under § 146.

[2] The policy of the statute is clear. The decision of the Board of Patent Interferences is presumably, though not conclusively, correct. If Hoffman, to whom the Board awarded priority, gets the patent, he gets no more than is presumably his. To withhold the patent from him for the benefit of applicants who presumably are not entitled to it would serve no useful purpose. If the appellants win their suit under § 146 their rights will be protected, even if the Commissioner has issued the patent to Hoffman in the meantime, for § 135 provides that a "final judgment adverse to a patentee . . . shall constitute cancellation of . . . the patent . . . ."

[3] Pursuant to *In re Allen*, 115 F.2d 986, 28 CCPA 792, the Commissioner withholds patents while appeals from the Patent Office are pending in the Court of Customs and Patent Appeals. That decision and that practice do not concern us. Appellants' suit under § 146 "is de novo and not an appeal." *Knutson v. Gallowcorthy*, 82 U.S.App.D.C. 304, 314, 164 F.2d 497, 507. "It is an application to the court to set aside the action of one of the executive departments of the Government." *Morgan v. Daniels*, 153 U.S. 120, 124.

AFFIRMED.

BURGER, *Circuit Judge* (dissenting):

Under the holding of the Court of Customs and Patent Appeals in *In re Allen*, 28 C.C.P.A. (Patents), 115 F.2d 986 (1940), the Commissioner of Patents has *no jurisdiction* to issue a patent to a winning party in an interference proceeding during the pendency of the loser's appeal to the CCPA. It is not a matter of discretion, and so the Commissioner conceded in the District Court, although he argues to the contrary here.

For purposes of the Commissioner's interim jurisdiction I can see no difference between an appeal to the CCPA under 35 U.S.C. § 141 and a suit for review in a District Court under 35 U.S.C. § 146. Before *In re Allen* but subsequently to *Whipple v. Minor*, 115 Fed. 117 (D. Mass. 1883) (relied on here by the Commissioner), the act of 1927 had amended Rev. Stat. § 4915 (1875) so that an appeal to the CCPA or a bill in equity in the District Court were mutually exclusive remedies with identical time limitations. 44 Stat. 1336 (1927). These are provisions analogous in every material respect to present 35 U.S.C. §§ 141 and 146. Thus, although there have historically been differences between these two methods for reviewing a decision in an interference proceeding, the two routes are now procedurally the same and should therefore have the same effect upon the jurisdiction of the Commissioner.

The statute which the Commissioner contends compels him to issue the patent without delay, 35 U.S.C. § 155, had an exact counterpart in force when the CCPA decided *In re Allen*. Rev. Stat. § 4904, as amended, 53 Stat. 1212 (1939). This statute clearly makes no distinction between the two routes for review, nor does reason suggest why any such distinction should be made.

I would therefore hold that the Commissioner of Patents does not have jurisdiction to issue a patent until after the termination of proceedings brought under 35 U.S.C. § 146.

United States Court of Appeals
District of Columbia Circuit

PREFORMED LINE PRODUCTS COMPANY v. ROBERT C. WATSON, COMMISSIONER OF PATENTS

No. 15,270. Decided June 9, 1960

[— U.S.App.D.C. —; — F.2d —; 125 USPQ 626]

1. REVIEW BY THE U.S. DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—JURISDICTION—RAISING AND DECIDING ISSUE OF PATENTABILITY VEL NON.

"Upon re-examination of the issue of the propriety of the District Court's action in raising and deciding the issue of patentability vel non, we conclude as we did in the prior appeal that such action was authorized in law."

2. PATENTABILITY — PARTICULAR SUBJECT MATTER — "HELICALLY PREFORMED WIRE ENVELOPE AND METHODS OF USE."

Upon review of applications entitled "Helically Preformed Wire Envelope and Methods of Use," disclosing preformed helical (spiral) elements and certain kinds of tube-like metal structures produced from the helical elements, *Held* that "the findings of the District Court on the issue of patentability, both as to those claims in which it agreed with the Patent Office and also those where it ruled sua sponte, were justified."

3. SAME — SAME — SAME — INVENTION — OBVIOUSNESS — SIGNIFICANT ADVANCE.

In regard to method claims upon which the District Court made sua sponte findings of unpatentability over a patent issued to one Moxham, *Held* that "these methods, mainly concerning the assembling of the preformed helical elements either to form a hollow tube or a tube over a core, suggest no significant advance from what would be obvious to one skilled in the art upon the disclosure of Moxham."

4. REVIEW BY THE U.S. DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—MOTION FOR NEW TRIAL—EVIDENCE—PATENTABILITY.

". . . the proffer of evidence submitted by appellant in his motion for new trial and affidavit in support thereof, did not in the circumstances require the court to grant a new trial. Aside from his proffer of the prosecutional history of the Bodendieck patent in the Patent Office, appellant offered only 'expert testimony,' unspecified as to source or content, to support his claim of patentability over Moxham. The possible relevance of the Bodendieck history was not shown and the proffer of expert testimony was in terms too general to require the grant of a new trial."

5. APPEAL TO U.S. COURT OF APPEALS, DISTRICT OF COLUMBIA CIRCUIT—DISTRICT COURT'S JUDGMENT REINSTATED—MOTION FOR NEW TRIAL.

Where, in dismissing on March 13, 1957, appellant's complaint under 35 U.S.C. 145, the District Court, as a second or alternative holding, had held that all of appellant's claims before it on the merits lacked the requisite novelty over the teaching of the prior art; and where the Court of Appeals, on remand of the case on a previous appeal (*Preformed Line Prods. Co. v. Watson*, 103 U.S.App.D.C. 286, 257 F.2d 944, cert. denied, 358 U.S. 945), had ordered that the District Court's judgment be conditionally vacated "in the interest of justice," with permission given to appellant to apply within sixty days for a new trial "based on a proffer of evidence on the issue of patentability," since the second or alternative holding of nonpatentability was not framed as an issue before the District Court at the outset of the proceeding; and where appellant moved within the proper time for a new trial in the District Court and that motion was denied, *Held* that the "order of the District Court denying appellant's motion for a new trial is affirmed, and the judgment entered by the District Court in this cause on March 13, 1957, is reinstated."

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Patrick H. Hume, with whom *Messrs. C. Willard Hayes* and *George M. Sirilla* were on the brief, for Preformed Line Products Company.

Clarence W. Moore (*George C. Roeming*, of counsel) for Robert C. Watson, Commissioner of Patents.

Before PRETTYMAN, *Chief Judge*, and BASTIAN and FAHY, *Circuit Judges*.

FAHY, *Circuit Judge*:

This is an appeal from an order of the District Court denying appellant's motion for a new trial after our remand of the case on a previous appeal. *Preformed Line Prods. Co. v. Watson*, 103 U.S.App.D.C. 286, 257 F.2d 944, cert. denied, 358 U.S. 945. We then vacated conditionally the judgment of the District Court of March 13, 1957, dismissing appellant's complaint under 35 U.S.C. § 145 (1958), which had sought issuance of a patent.

In the former case the District Court had rejected appellant's claims on two alternative grounds: first, it agreed with the Patent Office in holding that certain of appellant's claims were barred because of res judicata growing out of various proceedings in the Patent Office,[1] and that the other claims were barred because of lack of novelty; second, it held that all the claims before the court on the merits lacked the requisite novelty over the teaching of the prior art. Since, however, the second or alternative holding of nonpatentability was not framed as an issue before the court at the outset of the proceeding, on remand of the case we ordered that the District Court's judgment be conditionally vacated "in the interest of justice," with permission given to appellant to apply within sixty days for a new trial "based on a proffer of evidence on the issue of patentability vel non." Appellant moved within the proper time for a new trial in the District Court and that motion was denied. Involved are applications[2] for a patent entitled "Helically Preformed Wire Envelope and Methods of Use." The applications disclose preformed helical (spiral) elements and certain kinds of tube-like metal structures which are produced from these helical elements. In various combinations and lengths depending on their purpose these preformed helices are used for the reinforcement, splicing, armoring and deadending of electrical transmission lines and other wires and cables.

[1] Specifically the holding was that in the absence of a perfected appeal to the Court of Customs and Patent Appeals, the non-vacated decision of the Board of Interference Examiners adverse to appellant was a final judgment as to claims involved in the interference proceedings and therefore res judicata.

[2] Two applications are involved. Serial No. 698,313 and Serial No. 2,200. The latter is a continuation-in-part of the former.

The prior art upon which the District Court primarily relied in rejecting all of appellant's claims on the merits was a patent issued to one Moxham in 1886. That patent discloses the same basic helically preformed element as found in appellant's applications and a plurality of these preformed elements indefinite in length which could be useful as a traction cable for cable railways. In another form of the Moxham patent helically preformed elements of the same diameter and pitch could be assembled to form a hollow flexible tube.

[1] Upon re-examination of the issue of the propriety of the District Court's action in raising and deciding the issue of patentability vel non, we conclude as we did in the prior appeal that such action was authorized in law. *Preformed Line Prods. Co. v. Watson*, 108 U.S.App.D.C. at 288, 257 F.2d at 666 (footnote 2 and cases therein cited).

[2] We think, moreover, that the findings of the District Court on the issue of patentability, both as to those claims in which it agreed with the Patent Office and also those where it ruled sua sponte, were justified. Differences appellant claims between the disclosures of the two patents are differences only of degree and use which would be obvious from Moxham to one having ordinary skill in the art. [3] For instance, the claims upon which the District Court made sua sponte findings of unpatentability over Moxham were so-called "method claims." But these methods, mainly concerning the assembling of the preformed helical elements either to form a hollow tube or a tube over a core, suggest no significant advance from what would be obvious to one skilled in the art upon the disclosure of Moxham.

[4] Finally, the proffer of evidence submitted by appellant in his motion for new trial and affidavit in support thereof, did not in the circumstances require the court to grant a new trial. Aside from his proffer of the prosecutional history of the Bodendieck patent[3] in the Patent Office, appellant offered only "expert testimony," unspecified as to source or content, to support his claim of patentability over Moxham. The possible relevance of the Bodendieck history was not shown and the proffer of expert testimony was in terms too general to require the grant of a new trial.

Since we find no error in the holding of the District Court on the issue of patentability over the prior art, and since all of appellant's claims on the merits were rejected by the District Court on the basis of the prior art, we need not rule on other questions raised.

[5] The order of the District Court denying appellant's motion for a new trial is affirmed, and the judgment entered by the District Court in this cause on March 13, 1957, is reinstated.

It is so ordered.

AFFIRMED.

[3] With reference to certain of appellant's claims an interference was declared in the Patent Office between appellant's applications and that of one Bodendieck.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,986,088, A. H. Binder, Grate bars, filed May 26, 1960, D.C., E.D. Wash. (Spokane), Doc. 1953, *St. Louis Brass & Iron Works, Inc. v. Union Iron Works.*

2,435,698, L. G. Ketcham, Tuned transformer assembly, filed May 27, 1960, D.C., W.D. Mich. (Grand Rapids), Doc. 3896, *General Instrument Corporation v. Adams Electronics, Inc.*

2,450,662, G. Davenport, Garment structure, filed July 23, 1957, D.C., N.D. Ohio (Cleveland), Doc. 33801, *Gertrude Davenport, Inc. v. The Horn Manufacturing Company.* Consent decree; patent held valid; injunction granted May 27, 1960.

2,466,676, Boling and Tigges, Liquid cooling unit, filed Oct. 8, 1959, D.C. Md. (Baltimore), Doc. 11692, *Heat-X, Inc. v. The Vendomet Corporation.* Dismissed by stipulation without prejudice (notice June 6, 1960).

2,482,676, H. T. Keish, Stereoscopic projection map-making instrument, filed Sept. 23, 1959, C.C.A., 4th Cir., Doc. 7979, *O.M.I. Corporation of America et al. v. Keish Instrument Company, Inc.* Judgment of District Court affirmed May 20, 1960.

2,651,802, G. Shaw, Filament package and method of producing same; 2,696,026, same, Process for melt spinning and orienting polystyrene filaments, filed May, 10, 1960, D.C. Vt. (Burlington), Doc. 2951 *Gilbert Shaw et al. v. C. Poige Heid.* Order of discontinuance June 3, 1960.

2,640,768, Easley and Swayne, Etching; 2,653,104, Hopkins and Easley, Etching, filed July 13, 1959, D.C., S.D. Ohio (Columbus), Doc. 4291, *The Dow Chemical Company v. The Cincinnati Publishing Company.* Order of dismissal with prejudice May 4, 1960.

2,934,424, J. T. Calleton, Apparatus for drying excavations, filed May 26, 1960, D.C., S.D. Tex. (Houston), Doc. 13/379, *Pacific Pumping Company v. U.S. Bellows Construction Corporation et al.*

2,951,740, E. A. Corallo, Wig construction, filed June 1, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 617/60-Y, *Emil A. Corallo et al. v. Celia Bernie, doing business as Celia's Creations.*

2,679,214, S. M. Nampa, Freight loading; 2,894,304, Chapman and Dunlap, Freight loading apparatus; 2,873,695, K. J. Tobin, same; Re. 24,118, F. Fahland, Cross bar support for vehicles, Suit for Declaratory Judgment, filed July 12, 1957, D.C., E.D. Mich. (Detroit), Doc. 16875, *Sparton Corporation v. Evans Products Co.* Plaintiff and counter-defendant Sparton Corporation's complaint granted in the respect that Sparton Corporation has not infringed Patent No. 2,679,214. In other respects said complaint is dismissed with prejudice May 24, 1960. Defendant and counter-claimant Evans Products Company's counterclaim is granted with respect to Claims 1, 3, 5, and 6 of Patent 2,834,304 and Claims 1, 2, 4, 5, and 7 of Patent 2,873,695, and injunction issued enjoining plaintiff and Sparton Corporation but injunction denied as to Patent 2,679,214, May 24, 1960.

2,749,510, L. Thompson et al., Scanning mechanism for magnetic tape recorders; 2,750,449, same, Long playing magnetic tape recorder; 2,855,843, Lyon and Thompson, Eraser for magnetically recorded bulk tape in roll form; 2,865,626, W. H. Lyon, Long playing tape recording apparatus; 2,866,668, same, Rotary magnetic transducer means, having yieldable heads, filed June 6, 1960, D.C.N.J. (Newark), Doc. 506/60, *The Soundscriber Corporation v. Ampex Corporation et al.*

2,747,944, G. Lippman, Process of and apparatus for producing applique ornamentations, filed June 3, 1960, D.C., S.D.N.Y., Doc. 60/2212, *Cosmos Electronic Machine Corporation v. Thermo-Dielectric Machine Co., Inc.*

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2,760,668. (See 2,743,219.)

2,770,648, R. S. Murphey, Methoxyphenoxy-2-hydroxypropyl carbamates, filed May 31, 1960, D.C., S.D.N.Y., Doc. 60/2153, *A. H. Robins Company, Inc. v. American Roland Corporation.*

2,820,813, R. Aronstein, Optical device for therapeutic and other purposes, filed June 3, 1960, D.C., S.D.N.Y., Doc. 60/2301, *Tyrosimire Products Corporation v. General Electric Company.*

2,838,642. (See 2,743,219.)

2,839,104. (See 2,840,700.)

2,839,699, J. Zuckerman, Cover for garment hanger, filed July 2, 1956, D.C., E.D.N.Y. (Brooklyn), Doc. 18/837, *Timber Plastics Inc. v. Nathan Mill et al.* Order of discontinuance (notice May 31, 1960).

2,839,194, Mastantuono and Vilardi, Grass catcher mount, filed Dec. 11, 1956, D.C., S.D.N.Y., Doc. 152/370, *John F. Mastantuono and Frank Vilardi v. Jacobsen Manufacturing Company.* Action dismissed June 2, 1960.

2,864,204. (See 2,679,214.)

2,880,600, J. E. Morgan, Knitted fabric, filed June 2, 1960, D.C., W.D.N.C. (Charlotte), Doc. 3524, *John E. Morgan Patents, Inc. v. General Knitting Mills, Inc.*

2,845,496. (See 2,743,219.)

2,866,622. (See 2,743,219.)

2,875,856. (See 2,679,214.)

2,878,702, F. H. Tennis, Control valve for fluid pressure operated mechanisms, filed May 26, 1960, D.C., E.D. Wis. (Milwaukee), Doc. 60-C-83, *Parker-Hannifin Corporation v. Hydraulic Unit Specialties Company.*

2,877,992, Chase and James, Oil filters, filed June 3, 1960, D.C.R.I. (Providence), Doc. 2637, *Fram Corporation v. Palmer Spring Company.*

2,882,112, Schwartz and Lindheim, Ceiling and lighting construction, filed May 24, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39163, *United Lighting and Ceiling Co. et al. v. Commercial Lighting & Maintenance Company et al.*

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2,908,077, I. Kamlukin, Self tilting device, filed May 23, 1960, D.C., E.D. Wis. (Milwaukee), Doc. 60-C-78, *Simplicity Manufacturing Company v. Gilson Brothers Company et al.*

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2,921,809, A. Cotumaccio, Method of and apparatus for splitting of lace webs, filed June 1, 1960, D.C., S.D.N.Y., Doc. 60/2183, *Arthur Cotumaccio v. Concord Dyeing & Finishing Co., Inc.*

2,923,457, M. D. Welsh, Baby chair bed, filed May 18, 1960, D.C., E.D. Mo. (St. Louis), Doc. 60-C-157(1), *Matilda D. Welsh v. Stix Baer & Fuller Co.*

2,923,944, H. W. Shumaker, Wind deflectors, filed June 1, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c878, *Hugh W. Shumaker v. Gem Manufacturing Company et al.*

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Des. 179,781, B. Edson, Lace, filed May 5, 1956, D.C., S.D.N.Y., Doc. 133/78, *North American Lace Co., Inc. v. Sterling Laces, Inc.* Patent held invalid May 31, 1960.

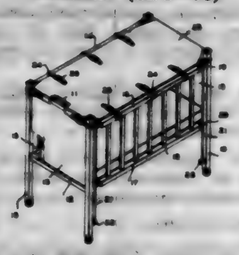
Des. 186,899. (See 2,908,021.)

REISSUES

JULY 19, 1960

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

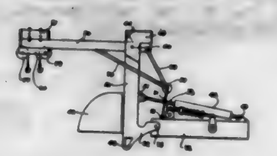
24,845
CRIB CANOPY
Margaret M. Hoffmann and John J. Hoffmann, New Canaan, Conn.
Original No. 2,883,678, dated Apr. 28, 1959, Ser. No. 733,319, May 14, 1958. Application for reissue Oct. 6, 1959, Ser. No. 844,841
2 Claims. (Cl. 5—93)



1. A crib cover comprising a rectangular flexible sheet member, a plurality of buckle elements secured in spaced relation on one side of the sheet member along opposite side edges thereof, said sheet member converging angularly from said opposite side edges toward the ends thereof for accommodating the ends of the cover between the cornerposts of a crib, strap elements equal in number to the buckle elements and secured on the other side of said sheet member in opposed relation to the buckle elements, additional buckle elements secured immediately adjacent the edges of the ends of said sheet member at the intersection with said converging portions, and additional strap elements secured on the other side of said sheet member in angular relation to said converging portions for connection to said additional buckle elements to facilitate the formation of turned down edges of said sheet member when installed on a crib.

24,846
LOG TRANSPORTING VEHICLE
Bruce J. McColl, Strathmore, Quebec, Canada, assignor to Clark Equipment Company, Buchanan, Mich., a corporation of Michigan
Original No. 2,720,988, dated Oct. 18, 1955, Ser. No. 418,493, Mar. 25, 1954. Application for reissue Sept. 16, 1957, Ser. No. 684,382
Claims priority, application Canada Mar. 25, 1953
9 Claims. (Cl. 214—77)

1. In a vehicle for loading and transporting a rectangularly stacked pile of articles, a sling adapted to be passed around said articles, grip sling means attached to one end of said sling and adapted to grip the sling adjacent to the other end thereof so as to permit movement of said other end of the sling in one direction to tighten the sling around the pile while preventing movement of said other end of the sling in a direction opposite to said one direction, a loading arm on said vehicle, sling tightening means at the end of said loading arm, said sling tightening means including means for engaging said grip sling means, means for engaging a portion of said sling spaced from said grip sling means in a direction away from said other end, and means for drawing said means engaging the grip sling means and said means engaging a portion of said sling together to tighten the sling, said means for drawing including a cross-head mounted at the end of the loading arm, sheaves mounted in the cross-head, said means for engaging the grip sling means passing over one of said sheaves and said means for engaging a portion of the sling passing over another of said sheaves, and a hydraulically



actuated piston adapted to move each of said engaging means in a direction away from said sheaves to tighten said sling, said hydraulic piston being anchored at one end of said cross-head, a cross-piece slidably mounted adjacent to the other end of said cross-head, each of said engaging means being attached to said cross-piece and said hydraulic piston acting to move said cross-piece towards said other end to tighten the sling, said sheaves including two pairs of sheaves one of which pairs is mounted with its axis perpendicular to the direction of movement of said cross-piece and the sheaves of the other pair being mounted with their axes parallel to the direction of movement of said cross-piece, each of said engaging means passing from the cross-piece over one of the sheaves having its axis perpendicular to the direction of movement of the cross-piece and then over one of the sheaves having its axis parallel to the direction of movement of the cross-piece, and means for moving said loading arm to transfer said pile into load transporting position on the vehicle.

PLANT PATENTS

GRANTED JULY 19, 1960

1,960
EUONYMUS PLANT
Clifford D. Carlin, Gloucester, Mass., assignor to Carlin Bros. Incorporated, Gloucester, Mass., a corporation of Massachusetts
Filed Oct. 6, 1959, Ser. No. 844,839
1 Claim. (Cl. 47—59)

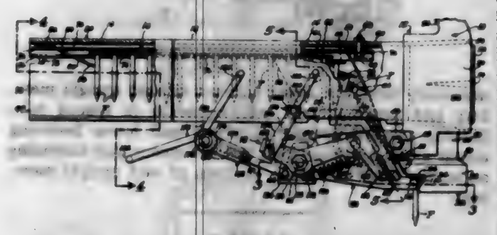
The new and distinct variety of *Euonymus fortunei* plant, substantially as herein shown and described, characterized particularly by its shapely, erect, shrub growth from a central stem; its thick foliage of rich, dark green leaves having pronounced white to cream colored margins of irregular depth, and having in late fall a slight pinkish cast; its ability to withstand unusually low winter temperatures; and its apparent resistance to disease and drought condition.

PATENTS

GRANTED JULY 19, 1960

GENERAL AND MECHANICAL

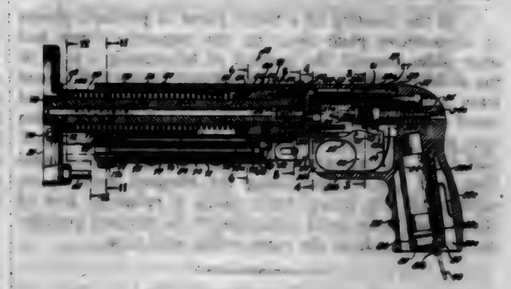
2,945,235
NAILER
Ralph C. Wilson, 675 N. Perry St., Pontiac, Mich.
Filed Sept. 7, 1954, Ser. No. 454,454
3 Claims. (Cl. 1—45)



1. A magazine nailer comprising a handle member, a nail driving head member on said handle member having a nail driving end with a nail driving surface thereon, said head member having a nail head abutment disposed adjacent said nail driving surface but spaced rearwardly away from said nail driving surface by a distance shorter than the lengths of shanks of the nails to be driven, a nail magazine secured to said handle and including a stationary nail chute extending forwardly toward said abutment but spaced away from said abutment, a movable nail feed chute movably connected to one of said members and having an open rearward end communicating with the forward end of said stationary nail chute and having an open forward end movable into close proximity to said abutment, a nail feeder movable in said movable nail feed chute into and out of nail feeding engagement with nails in said movable nail feed chute, and operating means under the control of the user for moving said movable nail feed chute relatively to said stationary nail chute toward and away from said abutment and also for moving said nail feeder relatively to said movable nail feed chute.

2,945,236
EXPLOSIVELY ACTUATED TOOLS
Rowland J. Kopf and Robert W. Henning, Rocky River, and Roger Marsh, Hudson, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed May 14, 1953, Ser. No. 355,834
40 Claims. (Cl. 1—106)

1. In a powder actuated firing device, a housing with a bore extending inwardly from its front, a breech block in said bore and secured to a barrel, means mounting said breech block and housing permitting relative axial movement therebetween in said bore, a firing pin in said housing behind said breech block and resiliently biased to move toward said breech block in the same general axial direction and to align with a firing pin hole in said breech block, said firing pin having a depressible pawl movable in a direction angularly disposed with the direction of firing pin movement, said breech block being normally disposed in a first safety position within said bore with the muzzle end of the barrel extending forwardly from the front of said housing said housing and breech block being relatively movable to locate said breech block in a second ready-to-fire position within said bore with said muzzle end of the barrel disposed adjacent the front of said housing, a movable firing trigger on said housing and operative to release said firing pin only when said breech block is in said ready-



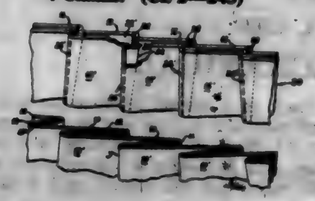
to-fire position and means on said breech block for exerting a force against said pawl in the direction opposite to firing pin cocking travel for cocking said firing pin in response to said relative movement between said housing and breech block effective to locate said breech block in said ready-to-fire position.

2,945,237
GEARED PLIERS
Randall E. Smith, 703 Belmont Road, Ridgewood, N.J.
Filed May 11, 1959, Ser. No. 812,346
2 Claims. (Cl. 1—228)



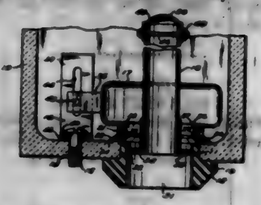
1. A pliers comprising, in combination, a relatively elongated channel-shape body having a pair of aligned apertured ears projecting from its flanges at each end of the body; a rack bar slidable along said body; first and second jaws having apertured hub portions receiving pivot means in the aligned apertures of the ears at one end of the body, the first jaw being relatively stationary and the second jaw being relatively movable and having a hub portion formed with gear teeth meshing with said rack bar; a relatively stationary first handle extending from the other end of said body; a relatively movable second handle pivoted on pivot means in the apertured ears at said other end of said body for coaction with said first handle and having a hub portion formed with gear teeth meshing with said rack bar; whereby movement of said second handle will effect corresponding movement of said second jaw; and a second bar juxtaposed in said body with said rack bar, said first jaw having angularly related flat surfaces on its hub portion selectively positionable against said second bar.

2,945,238
PLEATING
David Weiser, 2515 Bathhurst St., Toronto, Ontario, Canada
Filed Apr. 15, 1957, Ser. No. 652,767
4 Claims. (Cl. 2—243)



1. In the pleating of a fabric panel to produce groups of consecutive pleat faces on the respective inner and outer sides thereof, the method of fabricating a zone of the panel between an edge thereof and a zone line spaced from said edge which includes the steps of incising said panel to release the portions of the said pleat faces within said zone from the remainder of said panel zone, each said pleat face remaining attached to said panel at said zone line and of assembling the released portions on each panel side into a band which is relatively free of attachment to the band comprised of the released portions on the other side of the panel within said zone.

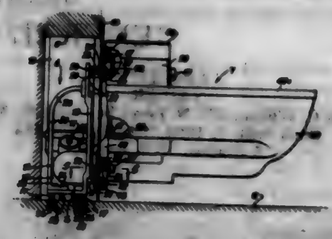
2,945,239
FLUSH VALVE ASSEMBLY
Howard A. Fulton and Ira Glenn Henry, Perrysville, Ohio, assignors to Mansfield Sanitary Pottery, Inc., Big Prairie, Ohio, a corporation of Ohio
Filed Sept. 8, 1958, Ser. No. 759,452
4 Claims. (Cl. 4—59)



1. A flush valve assembly for a water closet comprising a water tank having an outlet opening in the base thereof, a smooth flat integral floor in the tank circumambient said outlet opening constituting a valve seat, a rubber valve disc of the poppet valve type seated on the portion of the floor surrounding said outlet opening, the lower face of said valve being normally concave and deformed into a substantially flat disc when the valve is disposed in its seated position, a hollow annular float secured upon the upper face of said valve, a tube having openings in each end thereof secured to said float, said tube constituting a valve stem and an overflow pipe, means pivotally connected to the top of said valve stem to lift said valve from its seat, a bracket affixed to the floor of said tank remote said outlet opening, and a horizontal arm pivotally connected to said float for and attached to said bracket guiding said valve stem in a substantially vertical path upon elevation of said valve stem.

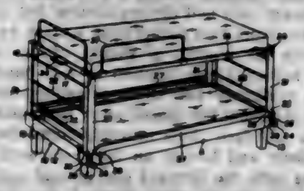
2,945,240
WALL HUNG WATER CLOSET
Willard G. Young, Robinson, Ill., assignor, by mesne assignments, to Ogden Corporation, New York, N.Y., a corporation of Delaware
Filed May 5, 1959, Ser. No. 811,116
4 Claims. (Cl. 4—252)

1. In a wall hung water closet carrier having laterally spaced upright members, the combination therewith comprising bracket means including laterally extending upright plate means spanning the upper portions of said upright members and having lug means attached to said plate means and extending upwardly and outwardly of said upright members from one side of said plate means toward the upper edge thereof, upper means extending



outwardly from the upper portions of said upright members and fastening said bracket means in spaced relationship to said upright members, and lower fastening means arranged below said bracket means and extending outwardly from the lower portions of said upright members.

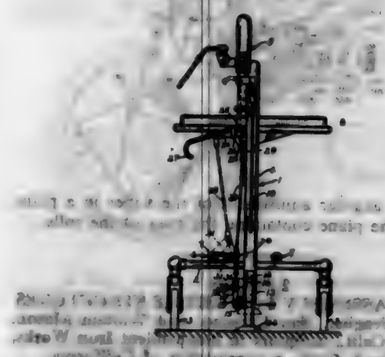
2,945,241
CONVERTIBLE BED
Jerome Sideroff, 4383 Ely Ave., New York 66, N.Y.
Filed Apr. 26, 1957, Ser. No. 655,483
3 Claims. (Cl. 5—4)



2. A manually expandible bed assembly comprising a bottom frame and a movable top frame, each of said frames including end rails and side rails, the side rails of said bottom frame including longitudinally extending, laterally directed channeled tracks, means for supporting said top frame in a double deck position over said bottom frame comprising normally lengthwisely disposed structs having free ends including laterally directed means engaging said tracks pivotally to guide the ends along the racks, and ends pivotally affixed to the corners of said top frame, and strut sockets positioned at the corners of said bottom frame deflector means on said tracks adjacent said sockets comprising downwardly directed portions at the end of said tracks leading toward said sockets arranged to cooperate with said struts as said top frame is raised to double deck position sequentially to limit upward movement of said frame by engagement of said laterally directed means and said downwardly directed means of said tracks, to align said ends of said struts with respect to said sockets and direct said ends downwardly into said sockets.

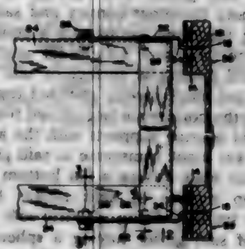
2,945,242
PATIENT ELEVATING DEVICE AND STABILIZING MECHANISM THEREFOR
Louis W. Hebden, % Lutheran Hospital and Home Society, Hot Springs, S. Dak.
Filed Jan. 27, 1958, Ser. No. 711,346
3 Claims. (Cl. 5—86)

1. In a device of the class described, a frame including a pair of longitudinally spaced transverse frame members having wheels at their opposite ends, a pair of supporting posts one each secured to the intermediate portion of said transverse frame members, and a longitudinally extended frame member connecting said transverse members in laterally spaced relation to said posts, a patient supporting pallet extending between said posts and mounted for raising and lowering movements with respect thereto, means for imparting raising and lowering movements to said pallet, said posts terminating at their lower ends in upwardly spaced relationship to the ground



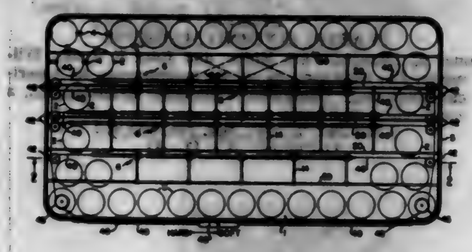
and there defining downwardly opening recesses, stabilizer legs mounted in said recesses for extending and retracting movements, suction cup elements formed from yieldable rubber-like material on the lower ends of said legs, means for raising and lowering said legs, and valve means for admitting air to the interior of said cups to render same inoperative, said valve means being operatively and integrally coupled to said leg raising and lowering means and responsive to initial raising movements thereof to admit air to said cups.

2,945,243
BED RAIL HOOK ADJUSTMENT
Draper P. Royce, Springfield, Mass., assignor to Gem Crib and Cradle Company, Gardner, Mass., a corporation of Massachusetts
Filed June 6, 1958, Ser. No. 740,382
3 Claims. (Cl. 5—296)



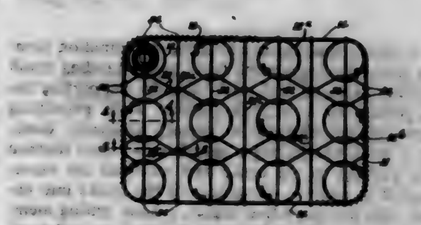
1. A bed rail hook comprising a plate normally having a lateral adjustment, a hook on the plate, a fastener for the plate remote from the hook to loosely secure the plate to a bed rail or the like, and interengaging means between the plate and the bed rail holding the plate against pivoting on the fastener, said fastener being adapted to be tightened to move the plate toward the bed rail when the hook is properly engaged, said interengaging means being in the form of a lateral extension on the plate engageable in a hole in the bed rail.

2,945,244
MATTRESS HAVING ADJUSTABLE RESILIENCY
John W. Lincoln, Lincoln, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed Jan. 13, 1959, Ser. No. 787,320
14 Claims. (Cl. 5—346)



1. A mattress comprising top and bottom walls, series of elongate torsion springs between said walls, actuating means bridging the space between said walls for twisting one end of each spring relatively to its other end in response to movement of one wall toward the other wall, and adjusting means for varying the effective length of said springs thereby to vary their resistance to said actuating means, said adjusting means including an actuator extending outside the mattress.

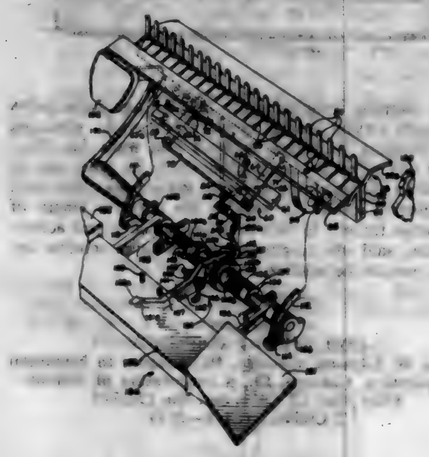
2,945,245
COIL SPRING ASSEMBLY
William W. Gleason, Chicago, Ill., assignor to Nachman Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 17, 1958, Ser. No. 721,715
3 Claims. (Cl. 5—351)



1. A spring assembly comprising a plurality of coil springs arranged in a series of spaced crosswise and lengthwise rows, a border wire extending continuously about the spring coils adjacent the outer edges of the upper coil of the outer coil springs, means interconnecting the border wires with the adjacent portion of the upper terminal coil of the coil springs, a first group of tie wires extending continuously from the border wire on one side to the border wire on the opposite side and in alignment with the spring coils in one direction and in between the spring coils in the same direction with the wires in alignment with the spring coils passing beneath the terminal coils of the coil springs, a second group of crossing tie wires extending in pairs in the direction transverse to the first group of tie wires from the border wire on the one side to the border wire on the opposite side, said second group of tie wires engaging the adjacent inner edges of the terminal coils in adjacent rows of the coil springs at non-crossover points and engaging each other at the crossover points between the aligned coil springs in the rows with the wires at the non-crossover points passing over the terminal coils and under the first tie wire extend-

ing in opposite direction beneath the terminal coils and with the wires at the crossover points crossing each other about the tie wire extending in the opposite direction between the coil springs thereby to interconnect the terminal coils of the coil spring one with the other and the border wires in a protective network.

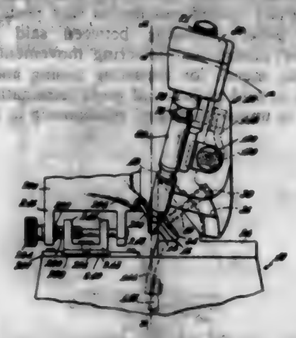
2,945,246
PLASTIC BINDING MACHINE
James E. Duncan, Park Ridge, and John E. Jones, Wilmette, Ill., assignors, by mesne assignments, to American Photocopy Equipment Company, Evanston, Ill., a corporation of Illinois
Filed Jan. 9, 1957, Ser. No. 633,312
21 Claims. (Cl. 11—1)



1. In a plastic binding machine the combination comprising a frame having a work table, an upstanding comb member at the rear of said work table for supporting the backing portion of a binding element while permitting the fingers of the element to project forwardly therethrough, a hook bar having a set of hooks fixed thereon extending parallel to the comb and mounted for movement limited to endwise movement of the hooks into engagement with the respective fingers, a hook setting member coupled to said hook bar and mounted on said work table forwardly of said comb, means for moving said comb so that the backing portion of the binding element is carried rearwardly with the tips of the binding fingers being restrained by said hooks and presented upwardly for assembly of punched paper thereon, means for latching said comb in its rearward position, a friction connection interposed between said comb member and said latching means so that the comb may be inched forwardly by said comb moving means in spite of latching by said latching means and means including a trip member for releasing said latching means and restoring the comb and hook bar to their initial positions for removal of the assembled binder from the machine.

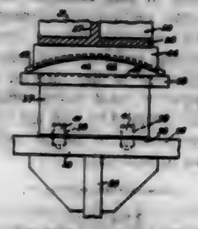
2,945,247
LASTING MACHINE
Jacob S. Kamberian, West Newton, and Thomas A. Weiss, Plymouth, Mass., assignors, by mesne assignments, to said Jacob S. Kamberian
Filed Aug. 18, 1955, Ser. No. 529,247
14 Claims. (Cl. 12—8.3)

1. In a lasting machine a pair of oppositely turning tapering rolls for applying uninterrupted progressive lasting stresses to the lasting margin of a shoe, a rotary wiper adjacent the discharge side of the rolls and means



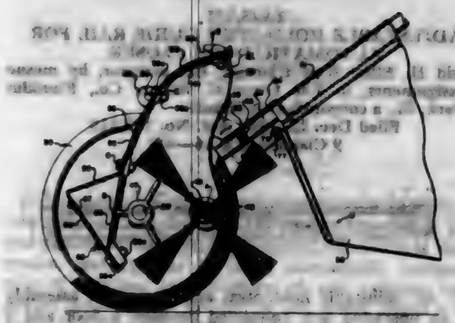
for effecting angular adjustment of the wiper in a plane parallel to the plane containing the axes of the rolls.

2,945,248
BEARING ASSEMBLY FOR BRIDGE STRUCTURES
David R. Meagher, San Lorenzo, and William Mason, Oakland, Calif., assignors to Independent Iron Works, Inc., Oakland, Calif., a corporation of California
Filed Mar. 2, 1955, Ser. No. 491,872
3 Claims. (Cl. 14—16)



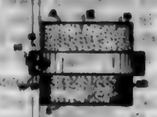
1. A method of erecting a bridge structure comprising, providing a girder and bearing supports for each end of said girder, fixing a bearing bar having a spheroidal top surface on the top of one bearing support, fixing a sole plate having a spheroidal bottom surface on the bottom of one end of said girder, one said spheroidal surface being concave and the other convex and said spheroidal surfaces having the same radius and a common center, adjustably supporting said spheroidal surface of said sole plate on said spheroidal surface of said bearing bar, providing a rocker block having rounded top and bottom surfaces resting the bottom surface of said rocker block on the other of said bearing supports with the axis of curvature of said rocker block transverse to said girder, providing a second sole plate having a flat bottom surface resting on the top surface of said rocker block and a spheroidal top surface, fixing a third sole plate to the opposite end of said girder having a spheroidal bottom surface, the spheroidal surfaces of said second and third sole plates having the same radius and a common center and one being concave and the other convex, adjustably supporting said spheroidal surface of said third sole plate on said spheroidal surface of said second sole plate, and adjustably turning said girder to the desired inclination relative to said bearing supports by moving the spheroidal surfaces about their centers as focal points for adjustment and alignment to provide proper bearing for said girder, whereby the one end of said girder may rock on said rocker block to permit longitudinal movement of said girder.

2,945,249
LAWN SWEEPING MACHINE
Richard W. Parker and Edwin F. Oblinger, Springfield, Ohio, assignors to The Parker Sweeper Company, Springfield, Ohio, a corporation of Ohio
Filed July 12, 1956, Ser. No. 603,855
8 Claims. (Cl. 15—79)



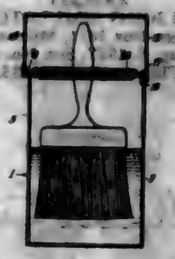
1. A lawn sweeper comprising, in combination, a main frame including side plates and means including a hood bridging the side plates; supporting wheels journaled in said side plates, the rotational axis of the wheels being in transverse relationship to said plates; a rotatable, cylindrical brush having its axis of rotation arranged parallel to the axis of the wheels; a rearwardly and upwardly extending handle for manipulating the sweeper, said handle having the lower end thereof connected with the main frame; means for adjustably securing the handle and frame together, at least one of said handle and frame having means for changing the relative vertical distance between the ground level and the axis of the brush including a position in which the axis of the brush is in the same horizontal plane as the axis of the wheels upon adjustment of the handle with respect to the frame, the hood in vertical cross-section at right angles normal to the axis of the wheels being in the form of a plurality of segments beginning at the lower outermost portion in a substantially planar segment and gradually increasing in a series of segmented arcs thereafter, each arc having a radius less than the preceding one and terminating in an outermost upper portion that is substantially planar.

2,945,250
COMBINATION DAUBING AND POLISHING DEVICE OR THE LIKE
Samuel L. Worthington, 287 Crestone Ave., Salt Lake City, Utah
Filed Oct. 28, 1958, Ser. No. 768,249
6 Claims. (Cl. 15—118)



3. A daubing and polishing device including, in combination, first and second cap members each having a base and a peripheral side wall integral therewith; a retainer ring having a medial, inwardly directed flange; and a single, resilient, cellular member provided with an annular recess cooperatively disposed with respect to said flange and having a daubing portion preimpregnated with paste polish and a polishing portion unimpregnated therewith, both of said portions having work surfaces positioned outwardly of said retainer ring, said first and second cap members being in releasable engagement with said ring member and disposed over said daubing and polishing portions, respectively, of said cellular member.

2,945,251
PAINT BRUSH HOLDING DEVICE
George A. Eichner, 1786 White St., Des Plaines, Ill.
Filed June 18, 1958, Ser. No. 742,841
1 Claim. (Cl. 15—121.3)



A paint brush holding device comprising a fluid retaining receptacle having a bottom and four upwardly extending and joined side walls, two opposing parallel guide shoulders each integral with one of said sides, a rectangular tray supported vertically on said shoulders and having a central rectangular opening, a plurality of tightly coiled adjacent coil spring members extending across said opening for receiving the handle of a paint brush therebetween and for squeezing out excessive solvent when the brushes are removed vertically from said tray, and a lid hingedly secured to one of said side walls for covering the receptacle and brushes in sealing relationship to prevent evaporation of said solvent, wherein said guide shoulders permit said tray to be lifted vertically upwardly over said retainer to receive subsequent brush handles inserted from the under side.

2,945,252
LIQUID CONTAINER AND APPLICATOR
Arthur G. Martineau, Jr., 2043 Bellevue Ave., Syracuse, N.Y.
Filed Dec. 29, 1958, Ser. No. 783,531
6 Claims. (Cl. 15—136)



1. In a combined liquid container and applicator: a hollow, compressible body member open only at its upper end, a nozzle member forming a top closure for said body member and having an axial passage therethrough, a tubular element positioned in said body and extending up into said nozzle passage, a brush supported by the upper end of said tubular element within said nozzle passage, a rod telescopically secured in the lower end of said tubular element and extending downwardly through the bottom of said body member, and a cap threadedly mounted on the exterior of said body member and operably connected to said rod whereby rotation of the cap serves to extend the brush to a position such that at least a portion thereof projects from the nozzle or

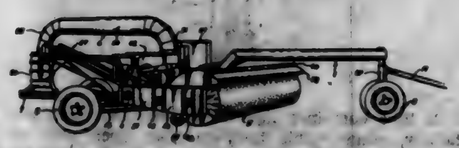
retracts the brush to a position entirely within the nozzle, said tubular element forming a liquid-tight seal with said nozzle member when said brush is in extended position, said tubular element being in communication with the interior of said body member and also with the interior of said brush whereby liquid in the body member is forced through the element to the brush when the body member is compressed.

2,945,253
MORTAR JOINT SIMULATOR TOOL
Ray O. Billings, Box 2611, Milwaukee 14, Wis.
Filed Aug. 8, 1957, Ser. No. 677,881
1 Claim. (Cl. 15—235.3)



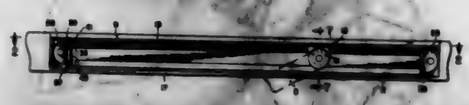
A tool for straightening and finishing simulated mortar line grooves on building walls comprising: a skate-like runner having top, bottom and side portions, said runner having its ends curved upwardly to permit its facile insertion and movement in the grooves; a rearwardly projecting handle mounted directly above said runner and forming the sole gripping member, said handle having a forwardly and downwardly angled front portion joining the same to said runner at a location spaced rearwardly from the front end of the runner and forwardly of a midpoint in the length of said runner; a longitudinally extending protrusion on one side of said runner having a longitudinal recess; a spirit level-indicator mounted in said recess of the side protrusion; a transversely extending enlargement in the top portion of said runner forwardly of said handle front portion and projecting laterally from each side of said skate-like runner and having a recess which extends transversely of the runner; and a spirit level-indicator transverse to the first-mentioned spirit level-indicator mounted in said last recess, the mountings of both spirit level-indicators and the angled nature of the handle front portion making both level-indicators visible to a person holding the tool in operative position.

2,945,254
RUNWAY SWEEPER
Rosaldo Boisseau, Montreal, Quebec, Canada, assignor to Sicard Inc., Montreal, Quebec, Canada
Filed Oct. 7, 1957, Ser. No. 688,767
13 Claims. (Cl. 15—328)



1. In a machine for simultaneously sweeping a road surface and blowing loose particles therefrom, in combination, an elongated wheeled frame having a longitudinal axis, a subframe pivotally mounted in a horizontal plane on said wheeled frame, hydraulic means for pivoting said subframe, a rotary brush and an air blower mounted on said subframe, said air blower having an air discharge nozzle mounted on said sub-frame and located at a distance behind said rotary brush and having its discharge opening directed at a slight angle downwardly to the horizontal, said nozzle being arranged for pivotal movement is a horizontal plane, and power means to operate said brush and blower, and to actuate said hydraulic means, whereby said nozzle may direct a blast of air transversely across the path swept by said rotary brush at a predetermined range of inclinations of said rotary brush with respect to the longitudinal axis of said wheeled frame.

2,945,255
ADJUSTABLE HOLD-OPEN GUIDE RAIL FOR AUTOMATIC DOOR CLOSER
David H. Ellis, West Chicago, Ill., assignor, by mesne assignments, to The Oscar C. Hinson Co., Franklin Park, Ill., a corporation of Illinois
Filed Dec. 22, 1958, Ser. No. 782,318
9 Claims. (Cl. 16—49)



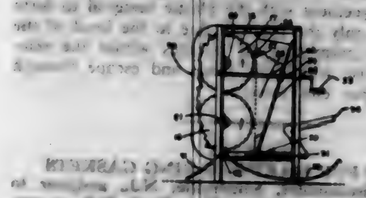
2. An adjustable hold open and guide rail assembly for an operating arm connected between a door and a head jamb associated with said door and having one end movable lengthwise of the assembly in response to the opening and closing movements of the door, said assembly comprising an elongated housing having side walls, an elongated guide member in said housing having a bearing surface extending along one side wall, a guide roller attached to the said one end of the operating arm and having a peripheral surface positioned to roll on and along said bearing surface, one of said aforesaid surfaces being resilient, means on said guide roller for holding said guide roller in rolling engagement with said bearing surface, and stop means adjustable longitudinally of said guide member for engaging the periphery of said guide roller, the resiliency of said one surface retaining said guide roller in the position of engagement with said stop means.

2,945,256
FISH AND GAME HOLDING CLAMP
Ted J. Harper, Box 51, Hamburg, Minn.
Filed May 19, 1958, Ser. No. 736,322
4 Claims. (Cl. 17—4)



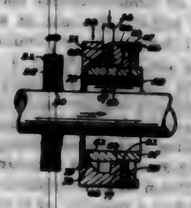
1. For use in holding fish, game birds and the like while scaling, cleaning and otherwise preparing the same for use comprising an elongated lower arm, a companion upper arm opposed in spaced relation to said lower arm, spaced plates operatively connecting like inward ends of said arms to each other, one arm being fixed to said plates, the other arm pivotally connected to said plates, cooperating jaws fixed on like outward ends of said arms, a U-shaped stirrup-like slide embracing and slidingly mounted on median portions of said arms, a lever pivotally mounted on and carried by said slide and having a pressure applying and clamping cam operatively cooperating with a median portion of said upper arm, and means for swivelly and removably anchoring the plates on a stationary support, said means comprising an L-clip and a connecting member having one end pivoted between said plates and the other end separably and swivelly connected with one limb of said L-clip, the other limb of said L-clip having a keyhole-shaped slot therein.

2,945,257
POULTRY PROCESSING EQUIPMENT
Frederick C. Corey and Robert D. Pitts, Cedar Rapids, Iowa, assignors to Fitchwick Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 7, 1957, Ser. No. 638,864
3 Claims. (Cl. 17—11.1)



1. A poultry picking device comprising a support, an upwardly inclined shield means on said support, at least one picking cylinder on said support adjacent said shield means, said cylinder having a substantially horizontal axis of rotation, the periphery of said cylinder being spaced from a lower portion of said shield means a distance less than the minimum dimension of the poultry being picked and said cylinder being rotatable with its periphery adjacent said shield means movable in an upward direction.

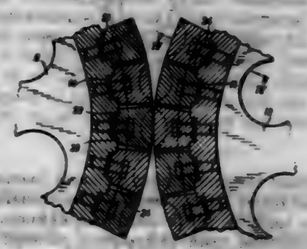
2,945,258
APPARATUS FOR PRODUCING PLASTIC MATERIAL
John C. Houston, Beaver Falls, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Apr. 22, 1958, Ser. No. 730,153
8 Claims. (Cl. 18—14)



1. Apparatus for smoothing the outside of heated semi-self-sustaining thermoplastic pipe of predetermined inside and outside diameters to as to produce a smooth, shiny surface on its outside without substantially changing its dimensions comprising a brush having an annular array of bristles fixed at one end in a ring and free at the other end to form an aperture for evenly contacting the outside of said pipe and spray means for forming a solid stream of water in the shape of a hollow cone whose sides converge with said aperture whereby said brush evenly distributes said water around the outside of said pipe thereby to cool the outside surface of said pipe and to produce a smooth, shiny surface on its outside without substantially changing the dimensions thereof.

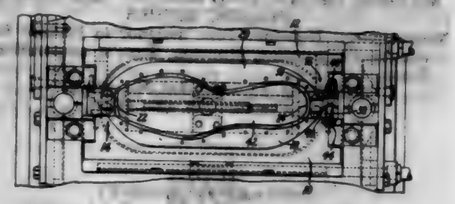
2,945,259
ROLLER BRIQUETTING PRESS FOR THE BRIQUETTING OF ORE, COAL OR SIMILAR MATERIALS
Johannes Bernhard Decker, Köln-Bayenthal, Heinz Mader, Köln-Dünnwald, and Karl Müller, Köln-Bruck, Germany, assignors to Klöckner-Humboldt-Deutz Aktiengesellschaft, Köln-Deutz, Germany, a German corporation
Filed Sept. 25, 1957, Ser. No. 686,212
4 Claims. (Cl. 18—31)

2. A roller briquetting press for the briquetting of ore, coal and similar materials, comprising two cooperating press rollers mounted for rotation in opposite rotational directions, a plurality of mold segments removably bolted to the outer periphery of each of said rollers, said segments each being of a hard, highly wear-resistant material and having mold cavities in the outer face thereof for forming the briquettes, an inner face of each of said segments being axially and coextensively contiguous with an outermost peripheral surface of one of said rollers, the contiguous surfaces forming mating tongue and groove



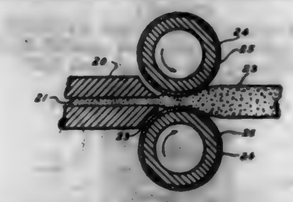
means between each segment and the outer periphery of a respective roller for preventing peripheral movement of the respective segment and for radial removal of the latter, the mutually opposed lateral surfaces of peripherally adjacent segments being spaced from each other sufficiently for as-cast tolerances in the maximum peripheral width of each segment and defining separation gaps between said segments so as to provide no mutual peripheral support between peripherally adjacent segments.

2,945,260
MOLD ASSEMBLIES
Neville Ivan Bell, Leicester, England, assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed June 19, 1957, Ser. No. 666,653
Claims priority, application Great Britain July 13, 1956
3 Claims. (Cl. 18—42)



1. A shoe sole molding assembly comprising a sole mold member, a first side mold member, a second side mold member, a toe mold member formed with a cam surface, a fulcrum element mounted in the first side mold member and providing a support for the toe mold member on which said toe mold member swings about an axis between a molding position and a retracted position, means for biasing the toe mold member to its retracted position, and an adjustable cam member mounted in the second side mold member and arranged to engage said cam surface during relative movement of the side mold members toward each other in a direction parallel to said axis to effect the advancement of the toe mold member from its retracted position to its molding position.

2,945,261
PREPARATION OF FOAMED THERMOPLASTIC RESIN FORMS HAVING WRINKLE-FREE PROFILE SURFACES
Archelaus A. Ayknayian, Indian Orchard, and Frank A. Carlson, Jr., Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed May 31, 1956, Ser. No. 588,377
6 Claims. (Cl. 18—48)



1. A method for preparing continuous foamed thermoplastic resin forms having smooth, substantially wrinkle-free profile surfaces which comprises extruding a foamable thermoplastic resin composition through an orifice into a forming die adapted to apply pressure on the profile of the extruded form, said forming die being defined by a plurality of surfaces which are driven in the direction of extrusion, the resin foam contacting surfaces of said forming die carrying a coating of a polymer of the group consisting of chlorotrifluoroethylene, tetrafluoroethylene and mixtures thereof; the extrusion temperature of the foamable thermoplastic resin composition being sufficiently high to expand the extruded form beyond the profile limits of the forming die, the resin foam contacting surfaces of the forming die being maintained between 140° F. and about 180° F. and the distance between the face of the extruder die orifice and the forming die being sufficiently short so that when the extruded thermoplastic resin form contacts the forming die its profile is substantially a uniform expansion of the profile of the extruder die orifice; said foamable thermoplastic resin composition comprising a thermoplastic resin and, as a foaming agent, a non-reactive organic liquid which has not more than a slight solvent action on the thermoplastic resin and which boils below the softening point of the thermoplastic resin.

2,945,262
METHOD OF FORMING HOLLOW REINFORCED PLASTIC BODIES
Macon Putty, Houston, Tex., assignor to Hudson Engineering Corporation, Houston, Tex., a corporation of Texas
Filed Aug. 23, 1955, Ser. No. 529,977
3 Claims. (Cl. 18—59)



1. In a method of forming a hollow reinforced plastic body, the steps of disposing a hollow flexible mold member within a relatively rigid outer mold member having an inner cavity corresponding to the outer contour of said body, to provide a substantially upright space therebetween which is vented at its upper end, containing the reinforcement within the space and a liquid plastic material in a pool at the lower end of the space, and gradually filling the flexible mold member with a rising level of mercury to progressively impregnate the reinforcement with the plastic material to form the body with only the pressure due to the head of the mercury while permitting air bubbles within the reinforcement to rise within the space and escape through the vented upper end thereof.

2,945,263
METHOD FOR MAKING O-RING GASKETS
George P. Lobtenmeier, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Filed Oct. 30, 1956, Ser. No. 619,196
2 Claims. (Cl. 18—55)



1. The method of simultaneously forming a plurality of elastic O-rings suitable for use as sealing members, which comprises: calendaring and simultaneously circumferentially lapping and compressing a moldable plastic mixture comprising thermosetting binder and filler material upon an undulated mandrel to form thereon a jointless tubular preform having an undulated inner surface; and pressure molding and thermocuring said preform in an undulated die in a manner to form an undulated outer surface on said preform which complements the undulated inner surface to define a plurality of O-rings on said mandrel of final shape and dimensions.

2,945,264
METHOD FOR PRODUCING MASSIVE SOLID HOMOGENEOUS BODIES OF POLYETHYLENE HAVING A THICKNESS OF THE ORDER OF SEVERAL INCHES
Michael Ricciello, Fairfax, S.C., and Joseph J. Wachter, Doylestown, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1957, Ser. No. 639,645
1 Claim. (Cl. 18—55)

A method for producing massive solid bodies of polyethylene having a thickness of the order of several inches which comprises (1) passing particles of polyethylene having an average molecular weight of from about 10,000 to 40,000 into an extruder wherein the polyethylene is heated under pressure and agitated whereby air is expelled and the polyethylene melted and brought to a temperature of from about 200° C. to 300° C. to form a molten viscous mass of polyethylene substantially free from pores and gas bubbles, (2) flowing the molten polyethylene out of the extruder in a hot viscous continuous stream, (3) depositing the hot viscous stream of molten polyethylene into an open mold in layers until the mold is filled to the desired extent, each layer of polyethylene coalescing with the previously deposited layer, said flowing and depositing being done at atmospheric pressure and in contact with air, (4) placing the mold containing the hot molded polyethylene into a heated oven maintained at a temperature of from about 10° C. to 100° C. above the softening temperature of the polyethylene for a period of time of the order of one hour, (5) thereafter cooling the mold containing the polyethylene body slowly to room temperature, and (6) removing the formed massive body of polyethylene from the mold, said massive body of polyethylene being formed without the application of external pressure and being substantially homogeneous and free from voids and gas pockets.

2,945,265
METHOD FOR MAKING INSULATED WIRE
John Sell, Jr., Robert W. Anderson, and Leonard H. Murray, Wallingford, Conn., assignors to Revere Corporation of America, Wallingford Conn., a corporation of New Jersey
Filed Feb. 25, 1957, Ser. No. 642,161
5 Claims. (Cl. 18—59)



4. Method for applying to wire vari-colored insulating coating of polytetrafluorethylene material and the like which comprises: preforming an integral body of such material with a central opening therethrough by compressing masses of such material which are of contrasting colors and are initially in finely divided form and are located in contact with each other respectively at different angular positions about said opening; advancing the wire to be insulated through said opening while progressively extruding material from said integral body onto the wire to form an integral insulating coating thereon with body portions of the contrasting colors which extend along on the wire; sintering said coating; also twisting such insulating coating relative to the axis of the wire whereby the contrasting colored portions of the insulation assume a helical formation; said wire being advanced at a predetermined speed and the insulating material being extruded at a rate to apply a coating on the wire which at the points of extrusion advances at a speed slightly greater than the speed of advance of the wire and not more than about 0.2% faster than the speed of the wire.

2,945,266
PROCEDURE FOR THE MANUFACTURE OF TUBULAR CONTAINERS
Teresa Maisardi, % Ing. Armando Giambrocono, Via Durini 4, Milan, Italy
Filed June 6, 1957, Ser. No. 664,124
Claims priority, application Italy June 12, 1956
1 Claim. (Cl. 18—59)

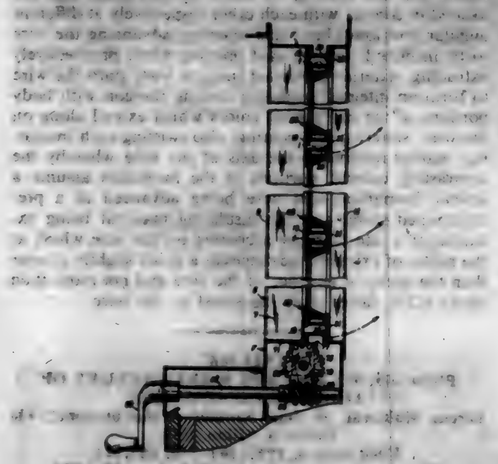


A process for the manufacture of plastic containers from a plastic tube comprising the steps of inserting a cap into a mold having an opening formed in its bottom for the passage of plastic material and a shoulder portion, said mould fitting loosely said cap and having said bottom provided with projections so as to space the cap from the bottom, inserting a mandrel having a shoulder portion and having the plastic tube mounted thereon into said mold until the head portion of said mandrel engages said cap and a leading edge of said plastic tube is supported by said shoulder portion of said mold, forming the container head on the said leading edge and a thin film covering said cap by injecting a plastic material through said opening into the space defined by said cap, the mould wall, said leading edge and said head portion of the mandrel.

2,945,267
CLOSURE-OPERATORS
Michael J. Tracy, Edgeworth and Millard, Maryland Heights, Mo.
Filed July 3, 1958, Ser. No. 746,467
7 Claims. (Cl. 20—42)

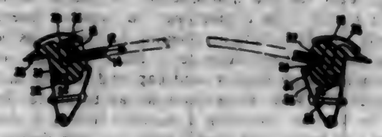
1. Operating mechanism for a plurality of awning type window sashes, said sashes being mounted in a frame, comprising a plurality of levers, one for each sash, each of said levers being pivoted intermediate its ends on a fixed horizontal transverse axis at one side of the frame, each lever having one end thereof connected to a respective sash, a plurality of members, one for each lever, mounted for up and down sliding movement at said side of the frame adjacent the respective levers, each slidable member being connected to the other end of the respective lever by a link, means connecting the slidable members for conjoint movement thereof, and means connected to the

slidable member for one of the males for reciprocating this slidable member and, through said means which



connects the slidable members for conjoint movement, reciprocating the remainder of the slidable members.

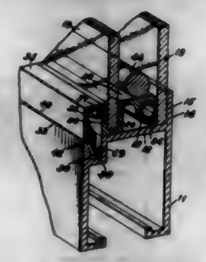
2,945,268
LAMINATED ASSEMBLY
Fred T. Tabanaka, Sewickley, and Oscar D. Engelsbert, Brackenridge, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Mar. 12, 1956, Ser. No. 570,971
11 Claims. (Cl. 20—56.4)



1. A laminated glass-plastic assembly comprising a pair of matched glass sheets, a thermoplastic interlayer between said pair of matched glass sheets, a frame member having a pair of spaced channels coextensive longitudinally therewith, each channel comprising spaced opposed flanges, said frame member mounted about the periphery of said assembly so that one of said pair of channels encompasses the peripheral edge of the assembly in spaced relation thereto and its flanges overlap the outer surfaces of the glass sheets at their margins only to provide an encompassing channel about said assembly and a closable passage connected to said one encompassing channel and extending therefrom laterally of the frame member to its surface out of communication with said second channel.

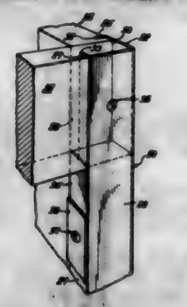
2,945,269
DOUBLE PANE WINDOW STRUCTURE
Raymond James Dennis, 475 Main St., Belleville, Mich.
Filed Apr. 2, 1956, Ser. No. 575,969
9 Claims. (Cl. 20—56.4)

1. Window structure comprising, a window pane, a window frame, means providing a glazing element removably mounting said pane on said frame, a clip for detachably securing said glazing element in pane mounting relation on said frame, said glazing element having a face portion, said frame having a shoulder which is spaced from said face portion and which extends generally in a plane transverse to the plane of the window pane, said clip having a shoulder extending generally in the same direction as the frame shoulder, said shoulders being in interfacial engagement, said clip having a surface engaging a surface of said frame adjacent the interfacing shoulders, said clip having a face portion engaging said face portion of said glazing element, said clip being stressed between its said surface and face portion so that said surfaces and face portions frictionally resist move-



ment of said clip relative to said glazing element and frame, said surface of said clip and said face portion of said glazing element lying in generally parallel planes so that said interengaged surfaces and said interengaged face portions are generally rectilinearly slidably relative to each other for detaching said clip from said frame and glazing element, said interfacing shoulders defining a crack exposed at an outer face of said window structure into which a tool can be inserted to produce generally rectilinear relative movements of said surfaces and face portions.

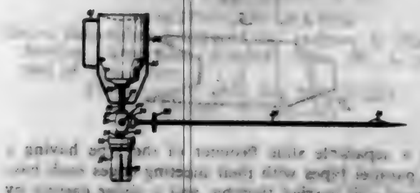
2,945,270
CABINET CORNER CONSTRUCTION
George E. Schaefer, Muskegon, Mich., assignor to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Filed Feb. 27, 1957, Ser. No. 643,758
1 Claim. (Cl. 20—92)



In cabinet corner construction, a wood side member, a wood cross member of less vertical dimension than the side member, said side member being cut out at its top front corner for a vertical distance corresponding to the vertical dimension of the cross member and receiving the end portion of said cross member in said cut-out flush with the front edge and with the outer side face of the side member, an upright metallic channel member having a pair of integral angularly related walls, angularly inwardly turned flanges on the channel walls snugly entered into slots in said side member and said cross member respectively, said side member being slotted therefor on its said outer side face at the rear of said cross-member and said cross-member being similarly

slotted in a plane coinciding with the inner side face of the side member, the one of said flanges entering the cross member being extended immediately below the cross member to lap the inner face of the side member below the cross member providing a shoulder underlying the cross member, a hinge leaf lapping the said flange extension, and a fastener screw passing through said hinge leaf and said flange extension and into said side member, whereby a door closure may be attached to said hinge leaf and supported below said cross member by both the channel member and the side member, and said corner is reinforced both by the cross member and by the channel member, a screw-hole in the channel member in the region of said cross member, and a retainer screw in said last mentioned screw-hole passing through said cross member and into the side member, whereby said screws are right angularly transversely disposed while both engaging the channel member.

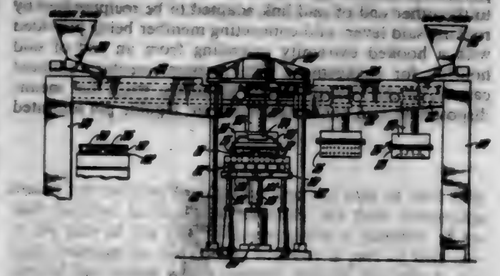
2,945,271
BULK STORAGE SYSTEM
William D. Coe and Howard S. Murray, Milton-Freewater, Oreg., said Murray assignor to said Coe
Filed July 1, 1957, Ser. No. 669,158
2 Claims. (Cl. 21—109)



1. A bulk storage system including the combination of a hollow open topped box for the storage of seed grain and means for fumigating the seed grain while stored in said box, said box being formed with an inspection hole on one side thereof near said top and a pair of parallel laterally spaced skids for supporting said box with its bottom above a support for said skids, said combination including means adapted selectively to screen said hole to allow said box to breathe while excluding vermin from said box and to cover said hole with a self closing puncturable diaphragm, and cover means removably sealable over the top of said box, said fumigating means including a hollow needle adapted to be pressure entered into said box through said diaphragm, said needle having a blunt open end a closed pointed end and an outlet hole through a side wall thereof near its pointed end, together with a storage container for liquid fumigant, a dose measuring container below said storage container for liquid fumigant, conduit means connecting the lower end of said storage container with the upper end of said dose container, said conduit including means for alternately filling said dose measuring container from said storage container and emptying said dose measuring container of fluid fumigant through said needle into said box, said storage container including therewith a carrying handle for maintaining said storage container at a higher elevation than said dose container.

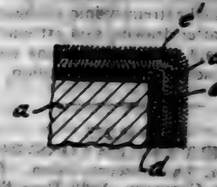
2,945,272
PROCESS AND APPARATUS FOR FORMING REINFORCED THIN-WALLED SHELL MOLDS
Alfred L. Boegehold, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 28, 1956, Ser. No. 579,583
7 Claims. (Cl. 22—99)

1. A method of forming a reinforced shell mold which comprises applying to a heated metal pattern a mixture comprising 1% to 5% by weight of thermosetting resin and the balance finely divided refractory material to thereby fuse the resin and form a relatively porous shell of refractory material and resin adhering to the heated pattern, simultaneously applying sufficient heat and die pressure to the back of said shell to cure the resin and



reduce the thickness of the said shell by approximately 15% to 25%, thereafter placing an unheated flask adjacent the back surface of said shell so as to provide a substantially completely enclosed cavity between said shell and a wall of said flask, and subsequently blowing green sand into said cavity so as to fully occupy it employing said flask as a blowhead.

2,945,273
CASTING MOLD AND METHOD OF PREPARATION
Nicolas Hermanek, Ville la Rasse, Clarens-Montreux, Switzerland, and Auguste Lecchot, Paris, France; said Lecchot assignor to said Hermanek
Filed Apr. 23, 1958, Ser. No. 730,481
Claims priority, application Switzerland Apr. 25, 1957
11 Claims. (Cl. 22—193)

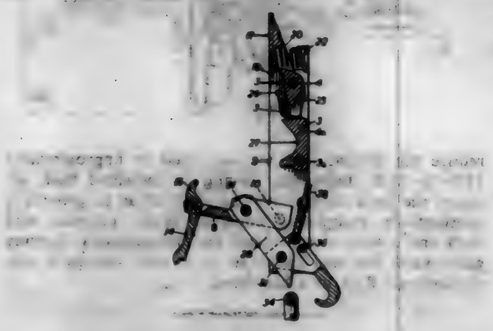


1. A shell mold for investment casting consisting essentially of a comminuted refractory material and a silica binder for said refractory material, said mold comprising at least one inner layer in which the major portion of said binder is present in the form of silica gel, the balance being alkali metal silicate, and at least one outer layer containing the binder essentially in the form of alkali metal silicate, said inner layer imparting to the mold porosity and elasticity and said outer layer imparting strength and rigidity.

2,945,274
TOGGLE FASTENERS
Gavin Dykes Paterson, Hillington, Glasgow, Scotland, assignor to K.A.C. Limited, Glasgow, Scotland, a British company
Filed Oct. 24, 1958, Ser. No. 769,434
Claims priority, application Great Britain Nov. 15, 1957
9 Claims. (Cl. 24—68)

1. A toggle fastener for securing two members together, said fastener comprising a recessed housing adapted to be carried by a first of said members with its front face flush with the front surface of said first member, a locking lever pivoted adjacent one of its ends to said housing and rockable between a locking position in which the front

surface of said lever lies flush with the front face of said housing to partially close the recess therein and an unlocked position in which the free end of said lever projects forwardly from said recess, a link pivoted at one of its ends between the ends of said lever and adapted to be positioned in said recess, a connecting member articulated to the other end of said link adapted to be reciprocated by rocking said lever, said connecting member being provided with a hooked extremity extending from an end of said housing for engagement with a complementary element carried by the second of said members, guide slot means disposed on said connecting member, a guide pin mounted



on said housing and positioned in said slot means, said slot means being shorter than the longitudinal distance moved by the axis of articulation between said link and said connecting member during rocking of said lever between its locking and unlocked positions and being disposed parallel to and spaced from the reciprocal line of said axis to cause said connecting member to swing about said pin during such rocking of said lever, said lever when rocked from its unlocked to its locking position swinging said hooked extremity into engagement with said element and thereafter drawing said extremity toward said housing wherein said lever and said link pass over-center as said lever approaches its locking position.

2,945,275
SAFETY BELT SYSTEM CONSTRUCTION
Lewis L. Almeter, La Crescent, Minn. (% La Crosse Metal Products Company, 1800 Rose St., La Crosse, Wis.)
Filed Sept. 27, 1956, Ser. No. 612,445
10 Claims. (Cl. 24—170)



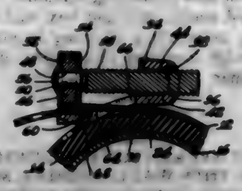
1. A safety belt construction comprising an elongated flexible belt, and anchor means for detachable engagement with one end of said belt, said anchor means including an elongated tubular member for receiving said belt, cam lock means carried by the tubular member and preventing withdrawal of the belt after insertion thereof, and means for releasing said cam lock means thereby releasing said belt, said release means being manually actuated, said cam lock means including a pivotal cam member having serrations thereon for engagement with said belt, said tubular member having an offset portion for coacting with the cam member for locking the belt, said means for releasing said cam lock means including an actuating arm secured to said cam member, a pivotal trip lever engageable with said arm for operation thereof and spring means urging said trip lever to a normal reset position, and means connecting with the trip lever for delaying the return thereof to a normal position until such time as the belt is withdrawn from the tubular member.

2,945,276
STARTING PIECE FOR SPIRAL WIRE ZIP FASTENERS
Hans Porepp, Essen, Germany, assignor to Opti-Werk G.m.b.H., Essen, Germany
Filed Feb. 19, 1957, Ser. No. 641,155
3 Claims. (Cl. 24—205.11)



1. In a separable slide fastener of the type having a pair of parallel tapes with their meeting edges each having a spiral coil carried thereby, and a slider carried by said coils to interlock and open said coils by movement in one direction or the other along the length of the tapes, means for clamping the terminal end of each coil to its respective tape, said clamping means comprising a strip having a truncated cone male portion at one end and a female corresponding recurrant portion at the other end, the sides of the strip at the female end forming prongs, said strip being clamped around the coil member with the said male portion engaging the surface of the tape on one side thereof, and with said female portion engaging the tape on the other side thereof, the pronged portions penetrating the tape and spanning the cone portion at the other end of the strip.

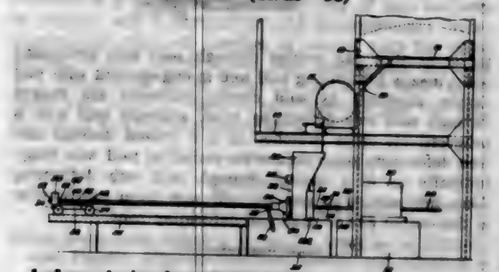
2,945,277
HOSE CLAMP
Joseph A. Wiora, Almond, Wis., assignor to Wiora Products Corporation, Almond, Wis., a corporation of Wisconsin
Filed Apr. 2, 1958, Ser. No. 725,974
4 Claims. (Cl. 24—281)



1. A clamping device comprising an elongated flexible band having a predetermined thickness for substantially encircling a workpiece, and securing means connected with opposite end portions of said band for relatively shifting said portions in overlapping relationship for tightening the band around a workpiece, said securing

means including a member comprising projecting means extending into aperture means in a first end portion of said band for anchoring said first end portion, said member including a section supporting said projecting means, said first end portion extending beneath and being bent around a margin of and extending over said section, said projecting means including an element projecting upwardly from said section, and screw means supported by and axially shiftable along a predetermined axis relative to said member and connected with a second portion of said band for advancing said second portion closely over and within a distance equal to said thickness from a part of said first end portion overlying said section and engaging said upwardly projecting element for positively retaining said first end portion in engagement with said projecting means without substantial interference between said portions, said second portion extending substantially straight throughout its length from and along a line tangent to an area of contact with a workpiece and above said first end portion so as to avoid undue frictional engagement with said first end portion, and said screw means axis being disposed substantially parallel to said second portion when said clamping device is applied to the workpiece.

2,945,278
COATING APPARATUS
Evans Robertson, Lombard, Ill., assignor to Pipe Line Service Corporation, Franklin Park, Ill., a corporation of New Jersey
Filed Apr. 10, 1956, Ser. No. 577,228
7 Claims. (Cl. 25—38)



1. In a device for applying an external coating to a pipe which is being advanced through the device, the combination of a frame, an extrusion conduit carried by said frame and having an outlet end, hopper means to feed the coating material to said conduit, an extrusion cone releasably secured to said conduit at the outlet end thereof, a hollow screw type conveyor rotatably carried in said conduit for advancing the coating material therethrough and adapted to receive the pipe internally thereof, a hollow adapter screw secured to said first-mentioned screw at the end thereof adjacent said cone, said adapter screw projecting partially into said cone and serving to compact said material in said cone and around said pipe, said adapter screw being adapted to receive said pipe therethrough and support said pipe centrally thereof and of said cone, means to rotate said screws, and movable means to support the leading end of the finished coated pipe after the coating thereof.

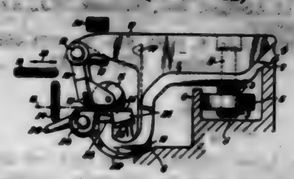
2,945,279
PASSAGE CONTINUOUS KILN FOR FIRING CERAMIC MATERIAL
Adriano Bonetti, % Rachelli Bonetti & C., Via P. Verri 6, Milan, Italy
Filed July 26, 1956, Ser. No. 600,297
Claims priority, application Italy July 28, 1955
5 Claims. (Cl. 25—142)

1. In a tunnel kiln for the firing of ceramics of the type having at least one sole or floor consisting essentially of a horizontal series of parallel supporting rollers extending transversely of and through the sides of said kiln and each of said rollers having means at the corresponding end thereof for positively rotating the same to propel plates placed on the floor of said kiln therethrough, the improvement comprising at least one chamber affixed to and extending along said kiln between the



means for rotating said rollers and the side of said kiln, said chamber having a substantially gas tight connection to the side of the kiln and comprising a plurality of gas tight bearings for the rollers whereby a part of that portion of the rollers which extends outside the kiln is surrounded by said chamber through which cooling gas under pressure is adapted to be introduced and means for introducing cooling gas to said chamber.

2,945,280
CHAIN WITH CLIPS AND PIN BARS FOR TENTERING AND DRYING MACHINES
Horst Liebert, Gronbottwar, Germany, assignor to Trockentechnik Kurt Brückner K.G., Stuttgart-Leonberg, Germany
Filed May 25, 1956, Ser. No. 587,404
Claims priority, application Germany May 26, 1955
3 Claims. (Cl. 26—62)

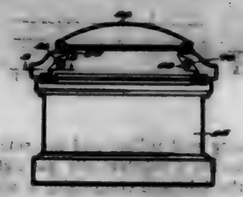


1. A chain for tentering and drying machines, comprising clips and associated pin bars, each of said clips comprising a clip table and a clip lever, each clip table and associated pin bar being mounted on a single pivotable supporting member, said supporting member forming a rocker plate which is pivotable through an angle of approximately 180° from one to another of two end positions, said clip table and pin bar being disposed at opposite sides of said rocker plate, said rocker plate and clip lever being mounted on a single body and at one side thereof, each clip lever forming a feeler arm mounted above the clip table, the length of said feeler arm exceeding the distance between the clip table and the horizontal axis of said feeler arm, so that the free end of said feeler arm is adapted to engage said clip table by its own weight within a line spaced in the direction toward said body from a plane passing through the pivotal axis of said rocker plate vertically to said clip table, and locking means adapted to maintain the feeler arm in an inoperative position so as to permit said rocker plate to be pivoted from one end position to the other.

2,945,281
DOUBLE ACTION LOCK FOR CASKETS
Jim P. Wilkerson, 3025 Trice Ave., Waco, Tex.
Filed Nov. 18, 1957, Ser. No. 697,034
10 Claims. (Cl. 27—17)

1. In a casket having a body, an open molding removably supported on the top edges of the body, and a lid removably supported on said molding to close the opening therein; plastic sealing means fixed to the top

edges of said body; a second plastic sealing means fixed to the under edges of the molding and contacting the first-named plastic sealing means; a third plastic sealing means fixed to the upper edges of the molding; a fourth plastic sealing means fixed to the under edges of said lid and contacting said third plastic sealing means; all four of said sealing means being compressible vertically; and latch means located inside the casket but operable from

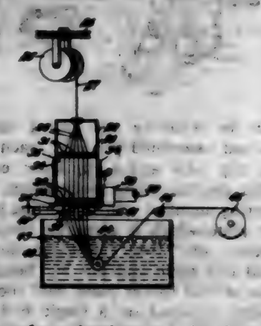


outside the casket to simultaneously latch the lid to the molding and the molding to the casket body; said latch means including pairs of swingable latches each of which is carried inside said molding, and keepers fixed to the lid and body respectively and engaged individually by the latches to draw the lid down upon the molding and the molding down upon the body, with all of said sealing means compressed to make a secure seal for the casket.

2,945,262
APPARATUS FOR CRIMPING SYNTHETIC FILAMENTS

Herman Freiberger, Glen Rock, N.J., assignor, by mesne assignments, to The Elwood Research Company, a Division of Ansilgar, Inc., Newark, N.J., a corporation of New Jersey

Filed Apr. 5, 1956, Ser. No. 576,466
2 Claims. (Cl. 28—1)



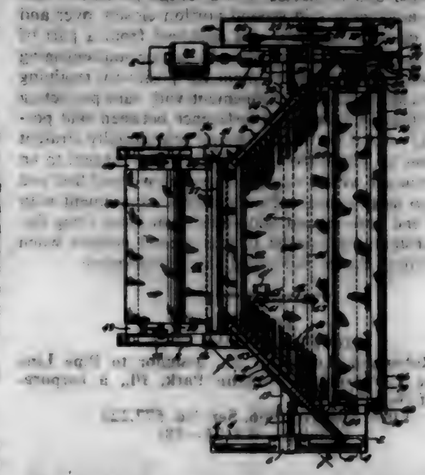
1. Apparatus for crimping strands of synthetic polymerizable substances comprising a heating chamber for said strands, strand guide means positioned at an end of said heating chamber, said guide means having a plurality of spaced passages therethrough, a vibration transmitting member having spaced passages formed therethrough and positioned immediately forward of said guide means and a vibration transmitting means connected to said vibration transmitting member, whereby said strands are vibrated in passing through said guide means.

2,945,283
MACHINE FOR AND METHOD OF CROSS STRETCHING NONWOVEN WEBS

Carlyle Harmon, Scotch Plains, and Franklin Wells Shoemaker, Princeton, N.J., assignors to Chicopee Manufacturing Corporation, a corporation of Massachusetts

Filed Oct. 30, 1956, Ser. No. 619,289
25 Claims. (Cl. 28—76)

2. A cross stretching apparatus comprising a carrier consisting of a plurality of spaced, parallel, extensible carrier elements, rotatable means for moving said carrier elements, means for confining said moving carrier elements in a closed path eccentric to the axis of rotation of said rotatable means, a portion of said closed path constituting a web deforming zone having a feed end and an output end, means for moving a nonwoven web into engagement with one of said carrier elements at said feed end, means for progressively stretching said carrier elements in a direction transverse to the direction of web



travel as they are moved through said web deforming zone, means for holding said web in engagement with said carrier elements as said carrier elements are moved through said web deforming zone, whereby said web is progressively cross stretched as it is moved through said web deforming zone, means for shrinking said web longitudinally as it is moved through said web deforming zone, and means to remove said web from said carrier at the output end of said web deforming zone.

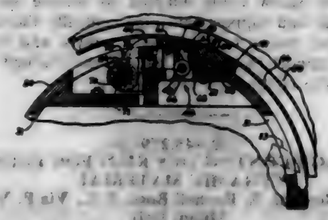
ERRATUM

For Claim 28—30 see:
Patent No. 2,946,058

2,945,284
PLATE LOCATING MECHANISM FOR STEREOTYPE PLATE FINISHING MACHINE

Curtis S. Crafts, Oak Park, Ill., assignor to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware

Filed Apr. 15, 1957, Ser. No. 652,759
10 Claims. (Cl. 29—21)



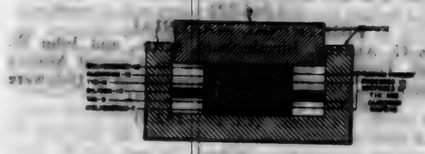
3. In a machine for milling tension lock-up pockets in semi-cylindrical printing plates, the combination comprising, a saddle providing a semi-cylindrical reference surface conforming to the curvature of such plates, means

overlying said reference surface and engageable with a plate carried on said reference surface for clamping said plate on said saddle, and means for positioning a tabloid size plate having the same curvature as the semi-cylindrical plate on said saddle while said clamping means is engaged, said positioning means including a row of plate locating members carried on the crown of the saddle and extending above the surface of the latter to be received in tension pockets adjacent one edge of the tabloid size plate so as to define the desired location for the latter.

2,945,288
BONDING OF SEMICONDUCTOR CONTACT ELECTRODES

Bernard Jacobs, Norwalk, Conn., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed June 3, 1957, Ser. No. 663,078
8 Claims. (Cl. 29—25.3)

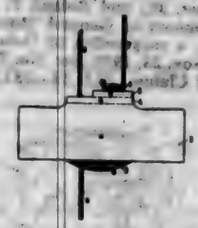


1. The method of producing a junction between a silicon semiconductor body and an aluminum electrode member, comprising the steps of applying titanium to the surfaces of a wafer of tin, placing one of said surfaces in contact with a surface of said semiconductor body, placing said electrode member in contact with the other surface of said fusible wafer, and heating said surfaces to a temperature in the range of 550° C. to 850° C. to cause said wafer to dissolve said titanium and wet said surface of said semiconductor body.

2,945,286
DIFFUSION TRANSISTOR AND METHOD OF MAKING IT

Heinz Dorendorf, Munich, Germany, assignor to Siemens and Halske Aktiengesellschaft Berlin and Munich, a corporation of Germany

Filed July 10, 1957, Ser. No. 671,861
Claims priority, application Germany July 23, 1956
1 Claim. (Cl. 29—25.3)

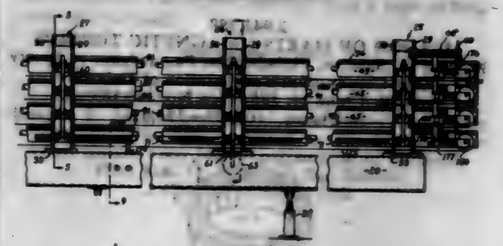


A method of producing a semiconductor arrangement having at least three zones of different conduction type, wherein two mutually adjacent zones are relatively very thin as compared with the third zone, and wherein the areas occupied by said zones increase stepwise from zone to zone in the direction of said third zone, said method comprising, forming upon a relatively thick semiconductor crystal forming said third zone two relatively thin layers forming zones of different conduction type, placing solder upon the topmost relatively thin layer and masking said solder and an area immediately adjacent thereto, etching away the corresponding top layer extending laterally outside said masked area to expose the intermediate relatively thin layer disposed under such top layer, masking a portion of said intermediate layer, etching away the unmasked portion of said intermediate layer to expose the surface of the relatively thick crystal layer disposed thereunder and continuing said last named etching step to remove a portion of the material of said crystal so as to reset the corresponding crystal surface with respect to said intermediate layer, each of said etching steps being applied intermittently in intervals of about five seconds duration, controlling the amount of layer material etched off in each etching step by testing thermally dependent voltage connected to said crystal, alloying to said intermediate layer at least one electrode made of gold containing a relatively small amount of gallium, placing solder upon the free surface of said crystal which faces away from said relatively thin mutually adjacent zones, and connecting a copper wire with the solder respectively placed upon said top layer and upon the free surface of said crystal.

2,946,397
AUTOMATIC BAR FEED

Bernard C. Harney, Syracuse, N.Y., assignor to Lipe-Rollway Corporation, a corporation of New York

Filed Feb. 13, 1956, Ser. No. 567,168
3 Claims. (Cl. 29—93)



1. A stock bar feed mechanism for metal bar working machines having a plurality of work spindles arranged in a vertical series, said mechanism including a frame, a series of supporting structures mounted in spaced apart relation along the frame, a vertically disposed series of stock bar tubes mounted in said supporting structures, said tubes comprising a rear breech section and a loading section, the loading section of each tube including a tube portion movable to open and closed position, a stock bar magazine carried by said supporting structures and associated with each of said tubes for supporting a supply of stock bars, each of said magazines inclining downwardly toward its respective bar tube whereby to provide movement of the stock bars toward the tubes by gravity, a bar loading mechanism carried by each of said supporting structures and mounted intermediate each bar tube and the lower end of the associated magazine and operable when the movable portion of the tube is moved to open position to transfer the lowermost bar in the magazine to the open tube, motion transmitting means operable to simultaneously actuate all of said bar loading mechanisms and the movable portion of all of said tubes in timed relation, a stock bar pusher movable from the breech section of each of said tubes forwardly to feed the stock bars through said tubes to the spindles of the bar working machine, and power means operable to so advance each of said pushers and upon exhaustion of the bars in all of said tubes to return the pusher in each of said tubes to the breech section of the tubes, and power means connected to said motion transmitting means and operable when all of said pushers have returned to the breech sections of the tubes to actuate said mechanism.

2,945,288
MILLING CUTTER
Robert W. Berry, Jr., Ferndale, Mich., assignor to Wesson Company, Ferndale, Mich., a corporation of Michigan
Filed June 16, 1958, Ser. No. 742,171
5 Claims. (Cl. 29—105)



1. In combination, a prismatic insert of cutting material having cutting edges at various corners thereof, a tool body supporting said insert comprising, a body portion, passages formed in said body spaced laterally from each other and extending in directions angled to each other but intersecting adjacent a surface of said body, the area of intersection forming a receiving pocket for said prismatic insert, the side walls of said passages away from the surface serving as locating surfaces for insert, and means in said body adjacent said passages for exerting pressure between said body and said insert to lock said insert in said pocket.

2,945,289
METHOD OF MAKING MAGNETIC TOROIDS
Richard W. Spencer, Philadelphia, Pa., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed June 21, 1954, Ser. No. 438,163
14 Claims. (Cl. 29—155.57)



1. The method of making a substantially toroidal magnetic structure which comprises the steps of inserting an elongated tube of non-magnetic material having appreciable structural strength into a tube of magnetic material whereby the internal surface of said magnetic tube is supported on the external surface of said non-magnetic tube attaching said tube of magnetic material to said tube of non-magnetic material, reducing the external diameter of said tube of magnetic material, while it is supported on said non-magnetic tube, to a final thickness of magnetic material normally having little structural strength per se, whereby the composite structural strength of said reduced diameter of magnetic tube supported on said non-magnetic tube is derived substantially entirely from said non-magnetic tube, and thereafter slicing said tube of non-magnetic material in a direction substantially transverse to the major axis thereof.

2,945,290
STATOR VANE HALF RING ASSEMBLIES
Edward Joseph Walsh, Beverly, Mass., assignor to General Electric Company, a corporation of New York
Filed Sept. 16, 1957, Ser. No. 684,136
5 Claims. (Cl. 29—156.8)

2. A method of making a segmental stator vane ring adapted to be supported in a stator vane casing by a substantially circular supporting surface of a substantially circular casing rabbet associated with said casing, said method comprising forming a substantially circular, flexible ring having a substantially circular ring rabbet with a substantially circular supported surface, cutting said ring in at least two places and into at least two segments, the circular supported surface of said ring before it is cut having a circumference greater than the circumference of said supporting surface of said casing rabbet by an amount equal to the sum of the circumferential thicknesses



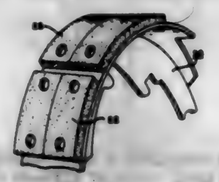
of said cuts, inserting said flexible segments in said casing, and forcing the supported surfaces thereof into engagement with, and to conform to the contour of, said supporting surface of said casing rabbet.

2,945,291
FRICTIONAL MATERIAL
Thomas G. Ankney, Birmingham, Mich., and John W. Arnett, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 26, 1958, Ser. No. 776,973
8 Claims. (Cl. 29—182.5)



1. A new article of manufacture, comprising, a friction facing consisting essentially of a compacted and sintered body formed from a powdered mixture of 20% to 25% graphite, 2% to 6% molybdenum disulfide and the balance iron.

2,945,292
FRICTION MATERIAL
William A. Luther, Jr., and Roland P. Kosbring, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,978
18 Claims. (Cl. 29—182.5)



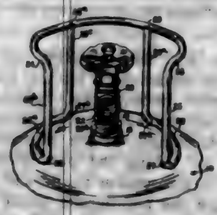
1. A friction material for use as a friction facing element, consisting essentially of: a sintered ferrous base having dispersed therethrough graphite in quantities of from 20% to 30% by weight, together with at least one metal taken from the class consisting of: bismuth, bismuth-lead and bismuth-cadmium alloys wherein the melting point of the alloys does not exceed the melting point of bismuth, said last-mentioned metal being present in quantities of from 3% to 10% by weight.

2,945,293
PROCESS FOR JACKETING A CORE
George A. Last, Bountiful, Utah, assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 13, 1956, Ser. No. 631,973
1 Claim. (Cl. 29—422)



In a process for closing the open end of a cup-shaped aluminum jacket projecting beyond one end of a cylindrical uranium-containing core snugly fitted in the jacket, by the steps of forcing the said open end of the jacket radially inwardly over the said one end of the core perpendicularly to the axis thereof and welding to one another the portions of the open end of the jacket meeting at the axis of the core; the combination with said last step, of the step of working and axially displacing the said meeting portions simultaneously in opposite directions to form an external projection of small diameter on the axis of the core and an internal projection of small diameter entering a small axial recess in the said one end of the core.

2,945,294
METHOD OF MAKING GUARD RINGS FOR GAS CYLINDERS
Louis B. Courtot, Euclid, and George E. Tasker, South Euclid, Ohio, assignors to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Filed June 14, 1957, Ser. No. 665,761
4 Claims. (Cl. 29—475)



1. That method of making a tank valve guard ring which comprises cutting a length of rod stock, curving the mid-portion of said rod stock to provide a circular horizontal portion enclosing a valve on a tank for about 270° and bending the end portions of the stock at right angles to said mid-portion and thence generally parallel to the circular mid-portions of the ring and conforming to a tank surface and thence upwardly from the tank and welding the extreme end portions of the rod stock to the circular mid-portions to provide a circular mid-portion spaced from the tank by four spaced legs and thereafter welding the lower extremity of each leg to the tank.

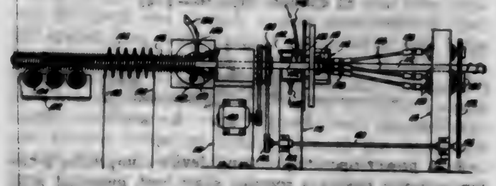
2,945,295
HIGH TEMPERATURE METALLIC JOINT
Gene R. Fenter, Horseheads, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 26, 1957, Ser. No. 704,155
3 Claims. (Cl. 29—494)

1. In the process of joining a porous metal matrix member to a metallic support member in a thermionic cathode suitable for use in an electron discharge device, the steps comprising forming a mixture consisting essentially of a thermally removable non-reactive organic binder material and a metallic oxide selected from at least one of the group consisting of the oxides of nickel, cobalt and iron, coating said mixture on at least one of said porous metal matrix member and said support member in the area where said members are to be joined,



placing said members in the position in which they are to be joined, heating said members, at least part of said heating step being performed in a reducing atmosphere, so that all of the binder material is removed and substantially all of said metallic oxide is directly reduced to the pure metal without reaching the melting point of the reduced metal thereby joining said porous metal matrix member and support member with a high-melting-point metallic bond.

2,945,296
METHOD OF AFFIXING FINS TO TUBING
Deegan L. Jones, Lees Summit, and Cornelis Langewis, Hickman Mills, Mo., assignors to The Marley Company, Kansas City, Mo., a corporation of Delaware
Filed Feb. 13, 1956, Ser. No. 565,806
3 Claims. (Cl. 29—496)



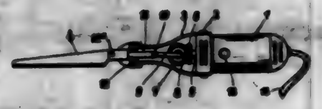
1. A method of brazing an aluminum fin to a tube having an outer surface of copper, said method including the steps of initially placing a substantially fluid coating on said outer surface of the tube and including by weight, 10% to 20% of zinc oxide, 50% to 70% of zinc chloride, 2% to 5% of ammonium chloride, 1% to 3% of sodium fluoride and 15% to 20% of water; applying the fin to the tube with the inner edge surface thereof in close abutting relationship to said outer surface of the tube; heating the finned tubing to a brazing temperature within the range of 750° F. to 850° F., said zinc compounds reacting with the fin to produce an intermediate bonding alloy capable of flowing into the joint between the inner edge surface of the fin and said outer surface of the tube by capillary action and uniting with the fin and the tube to thereby present, upon cooling of the components, a sound interconnection of high heat conductivity between the fin and the tube; and rotating the finned tubing on its longitudinal axis simultaneous with heating of the same to said temperature at a speed sufficient to prevent running of said substance when the latter is in a molten state and to cause the same to form fillets along opposed sides of the fin adjacent said edge.

2,945,297
SAFETY RAZOR AND BLADE LOADING DEVICE THEREFOR
Glenn T. Reddel, 2nd and Pearl Sts., P.O. Box 53, Mountain Lake Park, Md.
Filed Jan. 15, 1957, Ser. No. 634,197
3 Claims. (Cl. 30—50)



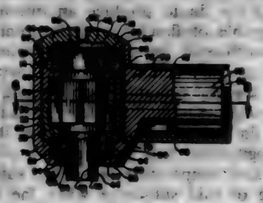
1. A safety razor for use with a blade having a cutting edge opposite a dull butt edge, a blade platform member and a blade clamping member adapted to receive such blade therebetween, said members being movable relatively to one another and to a fixed handle, resilient means biasing said members toward one another for engagement with such blade, abutment means on said platform member engageable by such blade; the improvement which comprises: manually actuatable means including cam mechanism movably mounted on said handle between said members for effecting relative separation of the latter against the bias of said resilient means to a position wherein said platform member is advanced relatively to said handle, in response to actuating said manual means.

2,945,298
POWER OPERATED CUTTING DEVICE
Ernest Guinemer, Paris, France, assignor to Lamalite Co., Inc., Miami, Fla., a corporation of Florida
Filed Aug. 1, 1956, Ser. No. 601,595
Claims priority, application France Aug. 3, 1955
11 Claims. (Cl. 30—272)



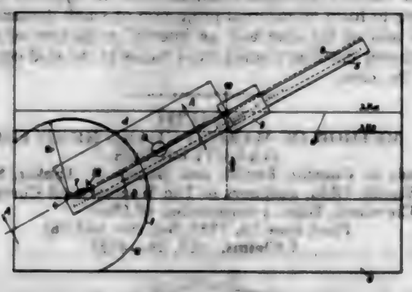
1. A power operating cutting device comprising a casing, a motor having a rotating shaft both mounted within the casing, cutting means supported by the casing, and means connecting said motor with the cutting means to oscillate said cutting means at high frequency of at least 5,000 to 14,000 oscillations per minute and to give the cutting means a stroke from 7 to 12 mm.

2,945,299
DENTAL HANDPIECE
Carroll S. Fritz, 1574 Clover Lane, York, Pa.
Filed Aug. 22, 1957, Ser. No. 679,553
19 Claims. (Cl. 32—37)



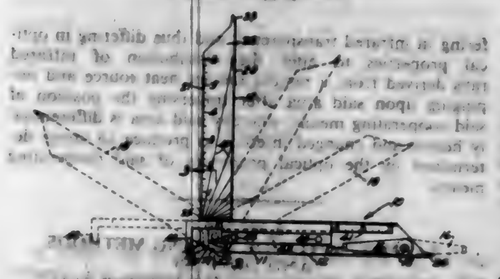
1. A dental handpiece comprising in combination, a handle having a housing on one end thereof connected thereto and provided with an opening therein; a fluid operated turbine rotor cartridge assembly comprising a fluid operated turbine rotor having vanes intermediately of the ends thereof, anti-friction bearing units having inner and outer races, the inner races thereof respectively receiving concentrically the opposite ends of said rotor, a casing surrounding the vanes of said rotor, the opposite end portions of said casing having seats respectively receiving the outer races of said bearings to maintain the same coaxial with said casing and maintain said races spaced axially a predetermined precise distance, said cartridge assembly being removably mounted operatively within said housing and positionable therein as a unit by insertion thereof through said opening; and means engaging said housing and assembly and operable to secure said cartridge assembly in operative position within said housing.

2,945,300
APPARATUS FOR THE EVALUATION OF X-RAY PHOTOGRAPHS
František Kheil, 834 Benesovo, Lysa n/Labem, Czechoslovakia, and Zdeněk Tahal, 4 Karlovo nam., Prague II, Czechoslovakia
Filed Apr. 4, 1957, Ser. No. 650,589
Claims priority, application Czechoslovakia Apr. 12, 1956
1 Claim. (Cl. 33—1)



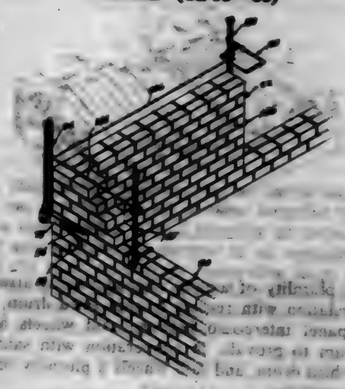
An apparatus for the evalution of X-ray photographs of the fine structure of matter, more particularly of Debye-Scherrer photographs, whereby the lattice parameter d is determined for any diffraction ring with regard to the wavelength of the characteristic X-radiation employed for taking the photograph, comprising, in combination, a transparent cylindrical wall defining a chamber in which the photograph under investigation is inserted so as to be against the transparent cylindrical wall, the radius of said chamber equalling the diameter of the camera used for taking the photograph, a transparent measuring plate on the top of said chamber in a plane perpendicular to its axis, a rotary pivot arranged in the axis of said chamber, a rule attached to the upper end of said pivot and lying on the upper side of said measuring plate, said rule having a calibrated scale thereon, a lamp connected with said pivot and arranged so as to illuminate the photograph in a direction parallel to said rule, an arm attached to said pivot and extending parallel to said rule, a mirror arranged at the end of said arm outside said chamber in a position opposite said lamp so as to reflect the illuminated area of the photograph perpendicularly up to said measuring plate, a sight arranged in connection with the rule directly above said mirror and bearing a straight trace extending along a line which is parallel to the rule and intersects the axis of said pivot representing the virtual axis of the rule, a movable sliding member enclosing the rule so as to leave said scale visible, a transparent member attached to said sliding member and provided with a cross mark consisting of two mutually perpendicular lines which respectively indicate the virtual axis of the rule and extend across said sliding member as far as the scale, and a system of lines traced on the measuring plate parallel to the basic position of the virtual axis of the rule, the ratio of the distance of each of said lines from said basic position to one half of the corresponding wavelength of the X-radiation employed being equal to the ratio of the unit of the calibrated scale of the rule to 1 Angstrom.

2,945,301
MULTI-PURPOSE TOOL
Oscar Peterson, Dent, Minn.
Filed Nov. 7, 1958, Ser. No. 772,490
1 Claim. (Cl. 33—1)



A multi-purpose tool comprising a sheet metal body member bent back upon itself to define a blade-receiving slot, said body member having an open side and a closed side and having out-turned flanges at said open side and in a plane lying normal to the blade-receiving slot and said body member also having a notch through one end and intersecting the closed side to define a shoulder surface, a measuring and straight edge blade extending at right angles to the sides of the body member and having an apertured inner end extending into the slot, a pivot bolt on the body member adjacent the notch therein and extending through the aperture in the inner end of the blade, said aperture and pivot bolt being of such relative size as to allow limited longitudinal movement of the blade, the inner end of the blade having a rounded end edge with a notch therein defining an abutment surface engaging the shoulder surface of the body member and holding the blade at right angles with respect to the sides of the body member, the longitudinal shifting of the blade permitting disengagement of said abutment and shoulder surfaces to permit swinging of the blade into parallel relation with the sides of the body member, the spacings between the outer edge of the blade and the pivot bolt and between the closed side of the body and the pivot bolt being equal to facilitate alignment of said outer edge with the closed side, the inner end of the blade having a curvature to permit alignment of the outer edge of the blade with said closed side of the body member, to thereby define a continuous straight edge along the blade and body member the pivot bolt having a thumb nut on one end thereof to clamp the body member against the blade and thereby hold the blade in a predetermined position, the pivot bolt having a head with a flat surface spaced from one of the flanges, an elongated bar lying against the outer surface of the body member and disposed between the flat surface of the bolt head and the lower surface of the adjacent flange and being guided in longitudinal reciprocating movement thereby, said bar having a caliper head on the end thereof and disposed in spaced and opposed relation with one end of the body member, means retaining the bar against the body member, and the outer ends of the blade and body member being tapered to points to permit the tool to be used as a divider.

2,945,302
MASON'S GUIDE AND LINE HOLDING APPARATUS
Ira M. Brown, P.O. Box 247, and Alton H. Brown, P.O. Box 232, both of St. Simons Island, Ga.
Filed Dec. 6, 1957, Ser. No. 701,027
4 Claims. (Cl. 33—46)

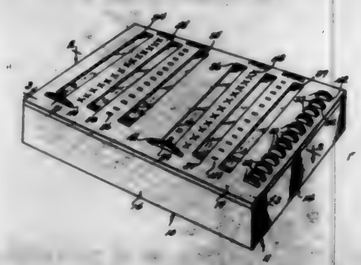


1. In a mason's guide and line holding apparatus, a vertical base adapted to be positioned exteriorly of and adjacent to a corner of a partially erected building wall, a horizontally disposed plate projecting from one side of said base adjacent the upper end thereof and adapted to have a portion remove from said base to extend over and rest upon the corner of said wall, an anchoring means embodying a pair of horizontally disposed elongated plates arranged at a right angle with respect to each other positioned below and attached to said horizontally disposed plate and each adapted to extend exteriorly along and engage each of the meeting walls of said corner when said base has been mounted adjacent said corner, a ledge projecting from the other side of said base adjacent the lower end thereof, a table superimposed upon and spaced from said ledge and connected to said ledge for tilting movement about a vertical axis, means operatively connected to said table and ledge for holding said table in a selected position of its tilting movement, a post fixedly carried by said table, a transversely disposed support element extending slidably through the upper end of said post and adjustably secured to said post, a standard arranged in vertical spaced relation with respect to said post and supported within said support element for rotary movement, a securing member carried by said support element and engageable with said standard for holding said standard in any position of its rotary movement within said support element, a building block gauge mounted on said standard for up an down movement, a guide rod secured to said standard, and releasable latch means on said gauge and guide rod for holding said gauge in a selected position of its up and down movement.

2,945,303
APPARATUS FOR THE PRACTICE AND STUDY OF MATHEMATICAL TABLES
Robert D. Parkhurst, 2217 Chevrolet Ave., Flint, Mich.
Filed Feb. 10, 1959, Ser. No. 792,290
3 Claims. (Cl. 35—9)

1. Apparatus for the study and practice of mathematical tables comprising a generally rectangular container, a pair of spaced parallel drums, each carrying indicia, journalled in said container, means connecting said drums for simultaneous equal turning, a cover secured to said container, said cover having an elongated slot overlying each of said drums, said cover carrying an indicia panel intermediate said slots with said indicia panel cooperat-

ing with said rows of indicia carried by said drums to provide a plurality of mathematical problems and answers upon rotation of said drums, a third drum having indicia thereon journalled in said container, said cover being provided with a third slot overlying said third



drum, a plurality of axially aligned wheels arranged in spaced relation with respect to said third drum, and an indicia panel interposed between said wheels and said third drum to provide, in cooperation with said indicia on said third drum, and said wheels a plurality of mathematical problems.

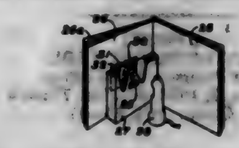
2,945,304
PERIOSOMATIC TRAINING DEVICES
John V. Nitrauer, Bethesda, Md., and Robert B. Walden, Greenport, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 29, 1959, Ser. No. 809,889
3 Claims. (Cl. 35—17)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a surgical simulacrum for teaching first aid, a flexible moulage constructed to conform to a portion of the body for which an injury is simulated, said moulage being in the shape of a human face and including a mouth, a plurality of apertures in said mouth, a capillary tube extending across said moulage and terminating in said mouth apertures, and a connector mounted on said moulage and housing a portion of said tube and adapted to connect a supply of simulated blood to said capillary tube whereby an oral hemorrhage may be simulated.

2,945,305
THERMOSENSITIVE APPARATUS FOR DEMONSTRATING HEAT PHENOMENA
Allen Strickler, 620 N. Brighton St., Burbank, Calif.
Filed Aug. 3, 1953, Ser. No. 371,902
21 Claims. (Cl. 35—19)

1. An experimental and demonstration device in the form of a book for experiments in heat phenomena including: page binding means; a plurality of pages bound by said binding means including at least one page surface bound permanently as a part of said book and provided with an area of thermosensitive material responding reversibly to temperature change by change of color; and cooperating shadow-producing means collapsible within said book and secured thereto as a part thereof and adjoining said area of thermosensitive material, said cooperating shadow-producing means bounding zones dif-



fering in infrared transparency and thus differing in optical properties to alter the distribution of infrared rays derived from a remote radiant heat source and impinging upon said area after traversing the position of said cooperating means, whereby said area is differentially heated and changed in color to produce an image determined by the optical properties of said cooperating means.

2,945,306
TAPPING APTITUDE TESTING METHODS AND DEVICES
John Clemens Flanagan, 410 Amberson Ave., Pittsburgh 32, Pa.
Filed Mar. 10, 1959, Ser. No. 798,452
3 Claims. (Cl. 35—22)



1. A method for testing digital dexterity comprising the steps of temporarily attaching a plurality of absorbent pads to the finger tips of a person to be tested, absorbing a different colored ink in each of said pads, and tapping with the finger tips upon an indicia bearing surface while attempting to conform to the pattern and sequence of said indicia, whereby variation from said pattern and sequence are detectable by color.

2,945,307
TALKING BOOK HAVING MAGNETIC RECORDING MEANS AND SHIELDING MEANS THEREFOR
Heinz E. Kallmann, 417 Riverside Drive, New York 25, N.Y.
Filed Oct. 31, 1955, Ser. No. 543,698
5 Claims. (Cl. 35—35)



1. In an arrangement of the character described, in combination, a book having alternating imprint and recording pages; a plurality of perceptible imprint means representing information located on said imprint pages; adjacent magnetic recording medium means with a plurality of magnetic sound track means located on said recording pages, each of said sound track means corresponding to one of said imprint means; and magnetic shielding means located between any two sound track means and spaced from said magnetic recording medium.

2,945,308
METAL SNAKE GUARD
Alfred Pence, 110 Olive Terrace, Porterville, Calif.
Filed Oct. 19, 1956, Ser. No. 766,513
1 Claim. (Cl. 36—2)



A metal leg protector to encompass the leg of the wearer, said protector comprising two aluminum alloy sides hinged together in the back by a heavy leather strap riveted to the metal side of the protector by a series of flush rivets, a leather flange is secured to the bottom and a leather cap is secured around the top of said protector by a series of flush rivets, a leather flap is secured by flush rivets to the front of said protector to insure comfort to the wearer, a strip of foam rubber is adhesively secured to the inside part of the top and bottom of the protector to assure comfort to the wearer, and three belt and buckle fastening means is secured to respective sides of the aluminum protector to adjustably retain the protector on the leg of the wearer.

2,945,309
ANKLE SUPPORTING ATHLETIC SHOE
Martin Shapiro, 7021 Brentwood Road, Philadelphia 31, Philadelphia County, Pa.
Filed Apr. 16, 1959, Ser. No. 806,843
3 Claims. (Cl. 36—8.5)



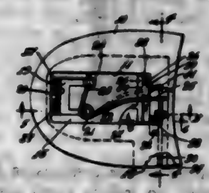
1. A shoe comprising an upper of height adapted to terminate proximate the ankle bone of the wearer and slitted from its upper edge at spaced points between the vamp and counter on each side of the shoe to provide an outer series of flaps, a lining at least coextensive with the upper rearwardly of the vamp and similarly slitted to provide spaced series of inner flaps respectively registering with those in the upper, elastic material interposed between the upper and lining covering the area defined by each series of inner and outer flaps, and means uniting each pair of registering flaps with the interposed material to form a unitary tongue.

2,945,310
FOOTWEAR
Beth Levine, 59 W. 12th St., New York, N.Y.
Filed Jan. 27, 1953, Ser. No. 711,261
3 Claims. (Cl. 36—11.5)



2. A shoe assembly comprising an insole and outsole having toe, shank and heel portions bounded by lateral edges in combination with a plurality of looped straps, each of said straps being secured to an opposing lateral edge of the shoe, said straps comprising loops each encircling the instep and sole of the foot of the wearer and having portions disposed intermediate the shoe sole and the sole of the foot of the wearer.

2,945,311
REPLACEABLE HEELS FOR SHOES
Frank Costa, 795 S. 9th St., Vineland, N.J.
Filed Nov. 13, 1959, Ser. No. 852,692
9 Claims. (Cl. 36—36)



1. A heel construction comprising a heel base portion and a heel tread portion with interior facing parts, one of said portions having a plate secured on its facing part, said plate having spaced openings therethrough at opposite ends thereof, said plate having a spring mounted thereon on a side face thereof opposite its facing part, said spring having a leg extending over said side face and in intersecting relation to one of said openings, the other of said portions having members projecting therefrom for pivotal engagement with marginal portions of one of said openings in said plate and a ledge spaced from said members projecting therefrom and insertable through the other of said openings in said plate, said ledge having a transverse slot for locking engagement by said spring leg.

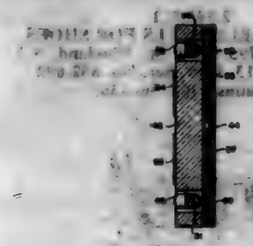
2,945,312
MEMORY AID
Austin R. Book, Blairsville, Pa.
Filed Sept. 22, 1958, Ser. No. 762,365
1 Claim. (Cl. 40—68)



A memory aid device of the class described comprising a casing having a body member and a cover member,

the body member having a trough-like formation and a back flange, transverse webs in the trough end end walls for the trough providing partitions dividing the trough into a series of compartments, the top edges of each partition being provided with bearing grooves therein, a wheel in each compartment having shaft elements resting in the bearing grooves in the partition at each side of the wheel, each wheel having an indicia bearing cylindrical portion and a knurled flange portion of greater diameter than the cylindrical portion, the cover member covering the trough having an inclined panel portion with slots therein through which the knurled flanges project and a series of windows through which a restricted portion of the indicia bearing portion of each wheel is visible, the cover confining the wheels in position, said cover and back flange having an interfitting tongue and groove connection for joining them together.

2,945,313
POLYCHROMATIC SELECTIVE DISPLAY PANEL
George K. C. Hardesty, P.O. Box 186, Mayo, Md.
Filed Aug. 29, 1958, Ser. No. 758,167
17 Claims. (Cl. 40—130)
(Granted under Title 35, U.S. Code (1952), sec. 266)



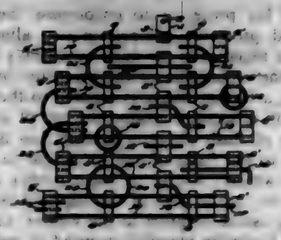
1. An illuminating device comprising a light-transmitting panel assembly, an indicia panel assembly mounted in front of the light-transmitting panel assembly, said indicia panel assembly having indicia formed thereon and selectively visible from an obverse surface thereof, said light-transmitting panel assembly having particular surface areas thereof for specularly reflecting light rays through the panel and at least one other surface thereof disposed to divert light rays out of said panel and into the indicia panel, a source of light for introducing light rays into the light-transmitting panel assembly for transmission therethrough, and optical color filter means arranged in the path of light transmission between the source of light and the obverse surface of the indicia panel, said optical filter means including a plurality of elements each associated with different indicia on the indicia panel and each having different color filter characteristics for filtering and transmitting light rays of a certain spectral band while blocking light rays of other spectral bands, whereby certain of the indicia are illuminated by light rays of one spectral band and other indicia are illuminated by light rays of another spectral band, in accordance with the filter characteristics of the filters in the path of light transmission between the source of light and the obverse surface of the indicia panel.

2,945,314
DISPLAY DEVICE
Brian E. Baldwin, 2942 Central St., Evanston, Ill.
Filed Oct. 17, 1957, Ser. No. 690,645
3 Claims. (Cl. 40—324)

1. A display device comprising a receptacle for material including a lens means defined in its bottom, a support for supporting said receptacle and including a transparent base and an upstanding wall which transmits light, an object member to be viewed supported from said case for viewing through said lens means from above the display device, and a sleeve member on which advertising or the like material is displayed supported on said base adjacent to the inner surface of said wall for viewing through the wall of said support, one of said members transmitting light and the other of said members substantially obstructing light, whereby said sleeve member facilitates the viewing of said object member through said lens means.



2,945,315
DESIGN FORMING APPARATUS
Raymond F. Stockton, Rowland, Calif.
(500 W. Avenue K, Lancaster, Calif.)
Filed Feb. 12, 1957, Ser. No. 639,721
1 Claim. (Cl. 41—16)

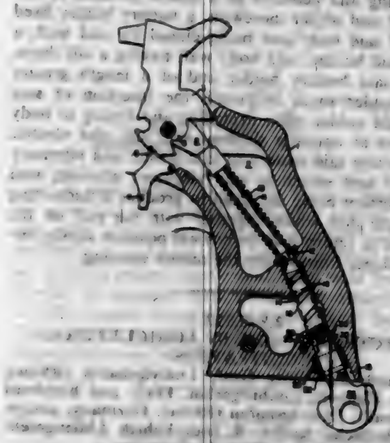


In a design forming apparatus including pluralities of groups of rod-like design forming elements of different lengths and other pluralities of groups of rod-like elements having different configurations, the combination of a plurality of connector elements effective to interconnect parallel portions of selected ones of said rod-like elements in the formation of plural interconnected designs including at least one design superimposed on another; said connector elements each having a flat surface and having a plurality of parallel, rod receiving holes extending therethrough in lines parallel to said flat surface and parallel to each other, certain of said holes in each of the connector elements being spaced a uniform lesser distance from the plane of said flat surface and certain other of said holes in each of said connector elements being spaced a uniform greater distance from said flat surface whereby said connector elements and said rod-like elements may be combined in a first design based on said first named holes and other rod-like elements combined with said other holes in said connectors in a second design superimposed on said first design; each of said connector elements being in the form of a segmental portion of a torus of rectangular cross section and said rod receiving holes in said connector elements extending only parallel to the axis of generation of the torus.

2,945,316
SAFETY LOCK FOR FIREARMS
Lester F. Molso, Worcester, Mass., assignor to Harrington & Richardson, Inc., Worcester, Mass., a corporation of Massachusetts
Filed May 9, 1958, Ser. No. 734,186
16 Claims. (Cl. 42—66)

1. In a firearm having a frame, a hammer supported by said frame so as to move to and from cocked position,

a spring-loaded guide stem within said frame acting on said hammer when in cocked position to urge it to firing position, and trigger means carried by said frame for releasably holding said hammer in cocked position, releasable locking means carried by said frame comprising a threaded locking member including a part movable toward and away from the lower end of said stem, the



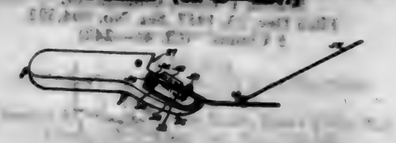
locking means being engageable with said stem for preventing it from moving to cocked position, the threaded member being movable within said frame for moving said part to and from locking position, and key means engageable with and disengageable from the outer end portion of said threaded member for turning it to and from locking position.

2,945,317
FISHING LURE
Joseph J. Wittmann, Jr., 4657 E. 14th St., Tucson, Ariz.
Filed Nov. 7, 1958, Ser. No. 772,628
1 Claim. (Cl. 43—42.5)



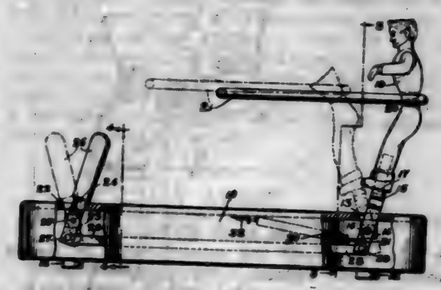
A fishing lure comprising a horizontally disposed flat sheet-like forward section having a leading end and a trailing end, an inverted V-shaped sheet-like rear section having sides which are substantially flat and which form legs, one of the legs of said rear section being longer than the other leg, said rear section being behind the trailing end of said forward section with the longer leg adjacent the trailing end and having the lower edge of the longer leg merging into the trailing end of said forward section along a first line drawn obliquely to the longitudinal centerline of said forward section, the shorter leg remote from the trailing end of said forward section, and the apex lying along a second line drawn obliquely to said longitudinal centerline of said forward section, complemental one ends of said first and second lines merging together at one of the side edges of said rear section, the lower edge of the shorter leg of said rear section lying to one side of said longitudinal centerline and below the plane of said forward section.

2,945,318
FISHING LURE
James Ware Lassiter, 1520 Boone St., Bryan, Tex.
Filed June 6, 1957, Ser. No. 664,142
1 Claim. (Cl. 43—42.47)



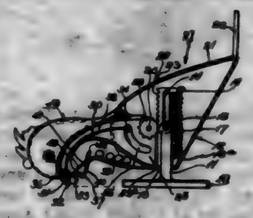
In a fish lure, the combination which comprises an elongated body, substantially cylindrical in cross-section, and having a bill located on the front end of said body, said bill having a downwardly inclined upper surface on the leading end, the trailing end of the upper surface of the bill terminating at a point spaced downwardly from the upper surface of the body providing an over-hanging lip with an end surface inclined rearwardly from the upper surface of the body to meet the upper surface of the bill, the upper surface of the bill having a screw eye and a pin extended therefrom and the screw eye and pin being in spaced relation, a plate positioned in a plane substantially parallel to a horizontal plane through the longitudinal axis of the body, and spaced downwardly from said plane through the body, said plate being positioned forwardly of the bill and having an inclined section positioned on the upper surface of the bill, said inclined section of the plate having a slot therein for receiving the screw eye of the bill and also an opening positioned to receive the pin extended from the bill, the screw eye and pin providing positioning means for retaining the plate in alignment with the body, a line attaching eye extended from the plate and spaced rearwardly from the leading edge of the plate, a hook attaching eye extended from the lower surface of the bill, and a fastener extended through the eye positioned in the slot of the upwardly inclined section of the plate.

2,945,319
HULA HOOP SPINNER TOY
Charles K. Rhodes, 1129 Acton Road, Columbus 24, Ohio
Filed Mar. 31, 1959, Ser. No. 803,196
2 Claims. (Cl. 46—47)



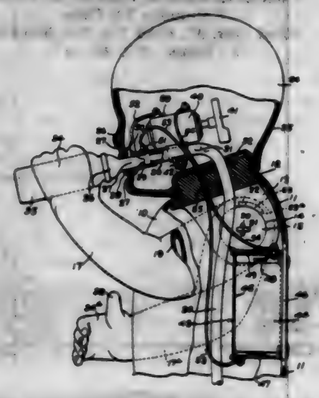
1. A simulated hula hoop spinner toy, comprising, a base, said base having spaced elongated slots, a lever pivoted in one of said slots for fore and aft pivotal movement, a toy figure connected to the lever and extending upwardly from the base, a second lever pivoted in the other slot and having a handle thereon, a link rod pivotally connecting the lower ends of the levers so that the handle lever may work the figure lever and a plastic simulated hula hoop extended about said toy figure to be maintained in spinning motion upon fore and aft movement of the handle and the figure.

2,945,320
DYNAMIC TOY SIMULATING A FEEDING BIRD OR ANIMAL
Albert W. King, Richmond Hill, N.Y., assignor to Marvin I. Glass, Chicago, Ill.
Filed Dec. 23, 1957, Ser. No. 704,392
5 Claims. (Cl. 46—242)



5. A mechanical toy which includes a body, a head pivoted on said body so as to rock said head on said body downwardly from an inactive upper position into a lower feeding position simulating that of a live animal, said head having a feeding mouth, an element carried in said head, operating means connecting said element with said body for moving said element outwardly in said mouth as an incident to the downward movement of the head into its lower feeding position, and for retracting said element when the head is rocked into its inactive position, a magnet carried on the outer end of said element and adapted to attract and pick up a magnetizable object when said head is in its lower position, and a stripper carried by said head for detaching said object from the magnet as an incident to the retractive movement of said element, said head being provided with a pocket for receiving and storing a plurality of said objects.

2,945,321
IMITATIVE NURSING DOLL
Richard S. Carter, Flint, Mich., assignor of one-fourth to Dale A. Hicks, 1439 Sun Terrace Drive, Flint, Mich.
Filed July 16, 1959, Ser. No. 827,479
14 Claims. (Cl. 46—247)



14. A doll comprising a hollow body portion with the wall thereof constructed of resilient material, a neck block in said body, a hollow head on said body and supported by said neck block, said head being of similar material to that of said body and having a face with a mouth opening therein, an arm having a hand portion thereon, an object on said hand portion and of a size and shape so as to be received and frictionally maintained in said mouth opening, said arm being resiliently movable towards said face so as to permit the object on its hand portion to be manually forced in said mouth opening, a tubular member extending through and supported by said neck block and having its upper end connected to said head and communicating with said mouth opening, said tubular member having its other end portion extending downwardly in said body and open exteriorly thereof, an electrically operated vibratory element mounted on the portion of said tubular member between said neck block and said mouth opening, an electric contact switch in said mouth opening and actuated to a closed position by engagement of said object therewith, a battery holder fixed to a wall of said body and being closed by said wall, a battery in said holder, said body wall having a slit therethrough at said battery holder and of a length greater than said holder so as to permit the insertion of said battery in said holder upon stretching and flexing of body wall portions at opposite sides of said slit, and electric wires connecting said battery to said switch and vibratory element and said switch to said vibratory element, said vibratory element being arranged to produce a fluctuating motion to the doll which together with the pull on the resilient arm to return it to its normal position slowly dislodges the object from within the mouth opening.

2,945,322
PROTECTION OF SOIL IN AGRICULTURAL CULTIVATION
Rudolf Gesth and Fritz Graf, Ludwigshafen (Rhine), Valentin Huppert, Limburgerhof, Pfalz, and Bernhard Wurzschmitt, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Dec. 18, 1957, Ser. No. 703,486
Claims priority, application Germany Dec. 21, 1956
6 Claims. (Cl. 47—9)

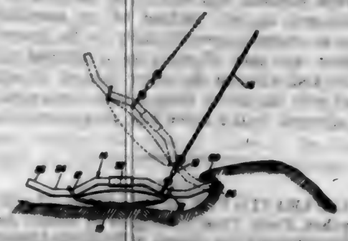
1. A process for protection of soil in agricultural cultivation which comprises covering the surface of said soil with a layer of a formed aqueous solution of about 15 to 35% by weight of a water-soluble, hardenable aminoplast resin, said solution containing an acid hardening agent and a surface-active wetting agent, and hardening the foamed layer by condensation of said resin to form a porous solid covering over the surface of said soil.

2,945,323
BULB BASKET AND MARKER
William D. Pratt, Atlanta General Depot, Forest Park, Ga.
Filed Mar. 26, 1959, Ser. No. 800,899
3 Claims. (Cl. 47—37)
(Granted under Title 35, U.S. Code (1952), sec. 266)



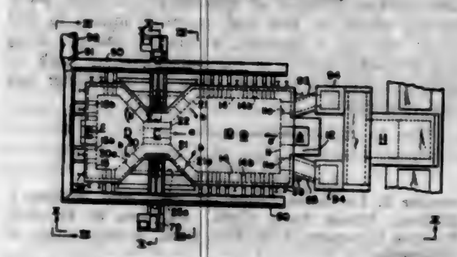
1. A bulb basket for containing a bulb planted in the ground with the basket, said basket including a handle bail pivoted thereto for movement from a horizontal inoperative position to a substantially vertical operative position, said basket being adapted to be buried in the ground with said bail in said inoperative position and slightly below the surface of the ground, a bail locating marker carried by said bail and extending upwardly of the same when said bail is in said inoperative position, said marker having an upper end, and said marker having sufficient length so that said upper end thereof projects slightly above the surface of the ground when said basket and bail are buried as aforesaid.

2,945,324
FISHING SINKER
Erven H. Miller, Box 4-422, Spenard, Alaska
Filed Oct. 28, 1958, Ser. No. 770,136
6 Claims. (Cl. 43—44.97)



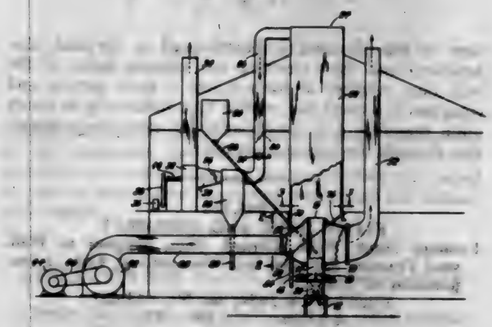
1. A non-fouling sinker for fishing lines comprising an elongated, weighted body having secured at its opposite ends an elongated guard member disposed longitudinally of said body with an intermediate upwardly offset portion spaced above said body, said guard member having its opposite ends protruding outwardly and upwardly beyond the opposite ends of said body, a fishing line secured to said intermediate portion and slidable thereon between said ends of said body.

2,945,325
RECIRCULATING FURNACE
William B. Delble, Knox, and Harold A. Youkers, Oil City, Pa., assignors to Knox Glass, Inc., Knox, Pa., a corporation of Pennsylvania
Filed May 7, 1957, Ser. No. 657,516
2 Claims. (Cl. 49—54)



1. An improved furnace construction for melting, conditioning, and refining material that is to be shaped or formed at a raised temperature which comprises, refractory means defining a melting floor, walls and a roof of the construction; a structural framework supporting said refractory means, opposed inwardly-converging oblique side walls formed intermediate the ends of the furnace, a bridge wall projecting upwardly from said refractory floor between said oblique side walls to a height above the normal depth of molten material within the furnace and being open at its top to provide a flow of heat along the furnace, said bridge wall and said oblique side walls dividing the furnace into a melting chamber and the refining chamber, heating means in both the melting chamber and the refining chamber for heating the material in the furnace substantially along its full extent, a flow duct extending substantially centrally through said bridge wall along said floor for forward movement of molten material from said melting chamber to said refining chamber, a pair of upper level ducts extending through the oblique side walls and spatially disposed from opposite ends of said bridge wall for return flow of molten material from the melting to the refining chamber, an enclosed flow passageway in each of said upper level ducts extending entirely through said oblique walls at a level below the normal level of the material within the furnace, and means operatively positioned within the return flow ducts to recycle the molten material backwardly from the refining to the melting chamber and set up convection current flow in said chambers.

2,945,326
APPARATUS FOR MANUFACTURING GLASS BEADS
Thomas K. Wood, Devon Road, Essex Fells, N.J.
Filed May 9, 1958, Ser. No. 734,251
3 Claims. (Cl. 49—58)



1. Apparatus for producing glass beads of small diameter comprising a vertically disposed draft tube containing heating means, an air inlet at the lower end of said draft tube, means for introducing a stream of glass particles into said tube above the source of heat, an expansion chamber communicating with and extending vertically above said draft tube and having cross sectional dimensions substantially greater than the cross sectional dimensions of said draft tube, bead collecting means located at the base of said expansion chamber and extending laterally of the upper end of said draft tube, a conduit communicating with said expansion chamber in an upper region thereof, a suction fan connected with said conduit adapted to withdraw gases from said expansion chamber, first regulating means for varying the rate of withdrawal of gases from said expansion chamber by said suction fan, means for admitting relatively cool air to said expansion chamber adjacent the upper end of said draft tube, and second regulating means operable independently of said first regulating means for varying the rate of admission of air to said expansion chamber, said first and second regulating means being mutually adjustable to establish any desired combination of velocities of the flow of gases through said draft tube and said expansion chamber respectively.

2,945,327
METHOD OF MANUFACTURING ELECTRIC LAMPS OR SIMILAR DEVICES
Robert N. Malm, Mentor, and Vincent Vodicka, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Original application Nov. 28, 1955, Ser. No. 549,424, now Patent No. 2,904,716, dated Sept. 15, 1959. Divided and this application May 8, 1957, Ser. No. 657,774
4 Claims. (Cl. 49—78)

1. In the manufacture of an electrical device, the method of sealing an end portion of a glass exhaust tube into a surrounding glass member which comprises applying to the inner wall of the said end portion of the exhaust tube a coating of an inorganic material of the group consisting of magnesium oxide and the oxide and silicates of zirconium, heating the surrounding glass

member and the inserted coated end portion of the exhaust tube to a temperature sufficient to soften and fuse them together and at which the said coating will react with the underlying inner wall surface of the glass tube to raise the softening point thereof to a degree effective to prevent collapsing of the glass tube and closure of the passageway therethrough at the said temperature, and then pinching the softened glass of the said glass member to form it into a press portion and compress it around the exhaust tube sufficiently to firmly unite therewith but insufficiently to close the passageway through the said exhaust tube.



2,945,328
FLOOR JOIST AND ASSEMBLY
Leonard Hugh Webb, Girard, Ohio, assignor to Wehsteel Framing Systems, Inc., Youngstown, Ohio, a corporation of Ohio
Filed Mar. 2, 1954, Ser. No. 413,637
6 Claims. (Cl. 50—283)



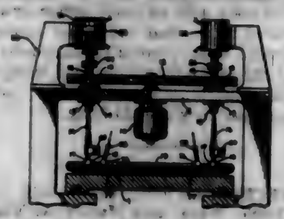
1. A reinforced concrete building floor structure comprising spaced parallel formed sheet metal joists of generally U-shape cross section defining a bottom wall and having upwardly and outwardly divergent side walls each capped by a continuous outwardly directed flange, said side walls having transversely aligned L-shaped apertures spaced downwardly from said flanges and upwardly from said bottom wall, angle sections threaded through said apertures and said joists and each being of a length to span a multiplicity of said joists, metal lath clipped to said angle sections and lying below the level of said flanges, sheet metal covers positioned in said joists and also lying on said angle sections, and poured concrete supported on said lath and said covers in continuous slab form and wholly encompassing said flanges.

2,945,329
LATHING CLIPS
Joseph W. Schneller, Eggertsville, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Filed Aug. 23, 1955, Ser. No. 530,179
5 Claims. (Cl. 50—479)



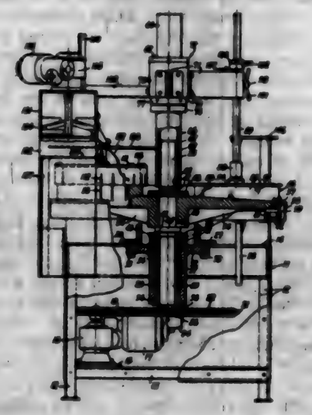
1. A clip of formed wire for attaching a sheet of lath to a structural framing element comprising loop means for attaching said clip to a framing element, said loop means lying substantially in a first plane, one end of said loop means forming an end leg, an offsetting leg extending substantially perpendicularly from the outer end of said end leg, and a prong formed for receiving and holding a straight tail portion of another clip, said prong extending angularly from the opposite end of said offsetting leg, said offsetting leg and said prong being in a common second plane which is substantially perpendicular to said end leg, said second plane being substantially perpendicular to said first plane, whereby when in operative position said end leg is adapted to be disposed adjacent an end surface of an associated lath sheet and to extend perpendicularly to the general plane of the sheet, and said offsetting leg is adapted to extend parallel to and adjacent the outer face of an associated lath sheet with the prong being adapted to extend parallel and adjacent to the outer face of an associated lath sheet.

2,945,330
APPARATUS FOR SURFACING GLASS
Ivan Peyches, Paris, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France
Filed Jan. 17, 1957, Ser. No. 634,665
16 Claims. (Cl. 51—119)



1. Apparatus for surfacing glass in sheet form that comprises means to move a sheet of glass along a path, a glass working member of substantially uniform width extending across the path and means to impart to said working member a periodic translatory motion along closed directing curves, in particular circular, with an amplitude comprised between about one millimeter and several centimeters.

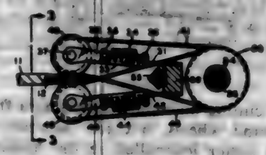
2,945,331
LAPPING MACHINE
Lawrence J. La Barre, Mountain View, and William I. Gardner, Menlo Park, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed May 16, 1957, Ser. No. 659,513
4 Claims. (Cl. 51—131)



1. A lapping machine comprising a frame-like structure, a turntable rotatably mounted on said frame-like

structure and having an annular lapping surface, means for driving said turntable, work holding means spaced from the surface of said table and including work receiving openings, means for rotatably mounting said work holding means, means preventing movement of the work holding means with the turntable, a conditioning ring extending over the inner and outer edges of said surface, means for rotatably mounting said conditioning ring, said mounting means including a stem, means pivotally mounting said stem, and a weight bar carried by the other end of said stem and adapted to receive weights which urge the stem to pivot about the pivotal mounting means to thereby control the pressure between the inner and outer edges of said surface and the conditioning ring.

2,945,332
KNIFE SHARPENER FOR CUTTING MACHINE
John B. Gary, Jr., 1220 Arch Terrace, Richmond Heights 17, Mo.
Filed Sept. 17, 1958, Ser. No. 761,626
6 Claims. (Cl. 51—246)



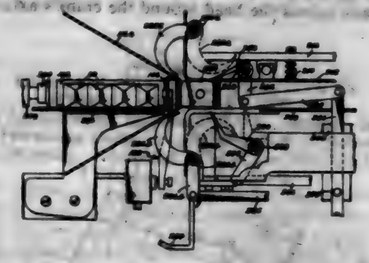
2. A knife sharpening mechanism for cutting machines having a knife guided for reciprocal movement, a grinder carriage movable up and down along said knife, a pair of driving pulleys mounted on said carriage for rotation on a common vertical axis, an idler pulley supported on said carriage opposite each of said driving pulleys, a sharpening belt on each pair of said driving and idler pulleys, said belts have adjacent inner edges and opposite outer edges, said idler pulleys being disposed on opposite sides of the knife, and means slidably engaging said idler pulleys to tilt said idler pulleys from the vertical in same direction so that the adjacent inner edges of said belts are urged against said knife with a pressure greater than the outer edges of the said belts.

2,945,333
METHOD AND APPARATUS FOR POLISHING
Robert Tourray and Philippe Tommy Martin, Paris, France, assignors to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France
No Drawing. Filed June 2, 1950, Ser. No. 168,858
9 Claims. (Cl. 51—283)

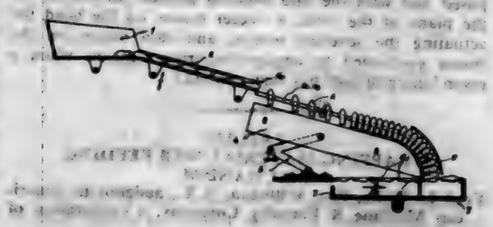
2. A polishing material in sheet form adapted to the polishing of glass consisting of substantially equal parts by weight of poplar sawdust between 6–10 and 30–60 mesh per linear inch, polyvinyl chloride, and tricresylphosphate, and having a hardness circa Shore 84–92.

2,945,334
MACHINE FOR PACKAGING SOFT PRINTED BUTTER
Arthur Perrault, Forest Lake, Minn., assignor, by direct and mesne assignments, to Burch O. Gustafson, White Bear Lake, Minn., and an undivided fractional interest to Ralph L. Dugger, Minneapolis, Minn.
Filed Nov. 18, 1957, Ser. No. 697,102
40 Claims. (Cl. 53—64)

1. In a butter packaging machine, means for positioning a carton blank in a substantially vertical plane, means movable into an adjacent relation with a portion of one face of said carton blank, said second-mentioned means having upper and lower edges about which said carton blank is to be bent, means engageable with the opposite face of said carton blank for bearing against said carton blank at elevations above and below said upper and lower edges of said second-mentioned means to effect a bending operation about said edges, and transfer means for positioning the printed butter in close proximate relationship to the engageable means and between the positions assumed by the bent portions of the carton when the carton is bent by said second mentioned means and the engageable means.



2,945,335
APPARATUS FOR HANDLING SUPPOSITORIES AND SIMILAR ARTICLES
Charles Nicolle, 54 Avenue Foch, Paris (16e), France
Filed June 2, 1955, Ser. No. 512,944
Claims priority, application France June 3, 1954
13 Claims. (Cl. 53—142)

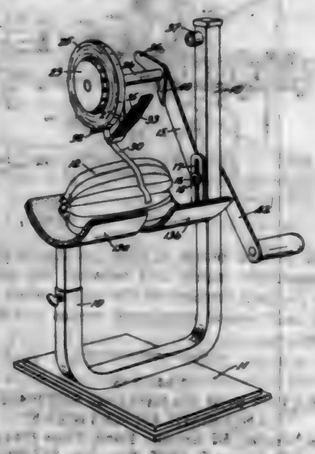


1. In an apparatus for feeding in a uniformly oriented array to a packaging station and assembling with packaging thereat a plurality of similar articles having the shape of bodies of revolution of vary diameter lengthwise thereof with their cross section of greatest diameter spaced lengthwise from their centers of gravity and closer to one end than to the other, a pair of parallel supports spaced apart a distance less than the maximum diameter of said articles but greater than the diameter thereof containing their centers of gravity, means for feeding each article successively on to said supports in general alignment therewith so that said articles become uniformly oriented by gravity with their heavier ends lowermost, means for advancing said articles along said supports to a delivery station, means for moving a socketed packaging member past said delivery station, and means for causing each article as it reaches said station to be inserted in a socket of said packaging member.

2,945,336
CIRCUMFERENTIAL TAPE APPLYING
Arthur A. Anderson, Falcon Heights, and Donald A. Schmidt, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Apr. 4, 1957, Ser. No. 650,644
5 Claims. (Cl. 53—198)

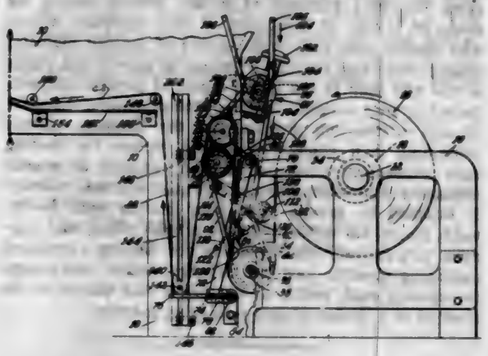
1. An apparatus for applying a length of tape around an article comprising a frame, a tape applying crank

mounted in the frame for rotation about an axis, a tape applying head attached to the crank in spaced relation to the crank's axis, the head having tape roll mounting means and severing means, and the head being positioned with the planar extent of a mounted roll of tape determined by the plane of the circular orbit of the roll as the crank moves the head around the crank's axis, means



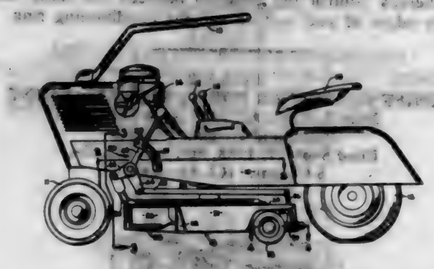
attached to the frame for supporting the article within the orbit with the portion of the article to be taped exposed and with the said exposed portion intersected by the plane of the orbit, a trigger means on the head for actuating the severing means, and cam means on the frame positioned to engage the trigger means when a given length of tape has been applied.

2,945,337
WRAPPING MATERIAL WEB FEEDING MECHANISM
Fred L. Waite, East Williston, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Sept. 21, 1956, Ser. No. 611,107
12 Claims. (Cl. 53—389)



1. In combination with a wrapping machine provided with a source of material for the wrapping of articles, drive means for the feeding of wrapping material from said source, support means for said wrapping material fed by said drive means, a power source coupled to and actuating said drive means and said support means to feed said material to said wrapping machine, and sensing means responsive to the feeding of wrapping material to said wrapping machine in excess of the demand therefor for decoupling said support means from said power source, whereby the feeding of said wrapping material by said drive means and said support means is interrupted.

2,945,338
ROTARY CUTTER TYPE LAWN MOWER
Milford D. Burrows, Fayetteville, John W. Graham, Syracuse, and William F. Barbour, Pulaski, N.Y., assignors to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of New York
Filed Mar. 24, 1958, Ser. No. 723,548
4 Claims. (Cl. 56—25.4)



1. A grass cutting machine comprising a frame mounted upon ground wheels, a cutter assembly comprising a housing, a cutter journalled in the housing for rotation about a vertical axis, a ground contacting housing supporting member mounted on one end of said cutter housing for vertical movement relative thereto, an actuating member carried by said frame, linkage connecting said actuating member to said housing supporting member and to the opposite end of said housing and being operable upon actuation to move said supporting member and said opposite end of the housing vertically and in opposite directions of equal magnitude, whereby said housing is maintained in substantially parallel relation to the ground during such vertical movement, a motor mounted on the frame and being operatively connected to said cutter to effect rotation thereof.

2,945,339
DEVICE FOR LATERALLY DISPLACING GRASS, HAY, OR OTHER MATERIAL LYING ON THE GROUND
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely, N.V., Maasland, Netherlands, a Dutch limited company
Original application Dec. 3, 1953, Ser. No. 395,958, now Patent No. 2,861,413, dated Nov. 25, 1958. Divided and this application Oct. 13, 1958, Ser. No. 766,744
10 Claims. (Cl. 56—377)



1. A raking member comprising a hub rotatable about an axis, a rim member spaced outwardly from said hub and substantially concentric therewith, connecting means connecting said hub and said rim member, arms pivotably connected at one end to said rim member and extending outwardly therefrom, an endless undulated resilient band

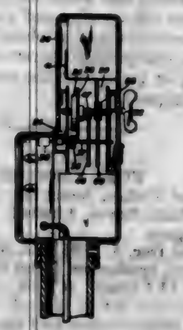
spaced outwardly from said rim member, said arms being connected at their end opposite from said rim to said band, and a plurality of outwardly extending individual teeth mounted on said band.

2,945,340
SELF-CLEANING RAKE
Joseph J. Dickiel, Rte. 2, Box 150B, Waupaca, Wis.
Filed Sept. 23, 1958, Ser. No. 762,825
1 Claim. (Cl. 56—400.2)



A self-cleaning rake comprising a pair of opposing forwardly and outwardly diverging elements terminating respectively in opposing arms laterally-spaced from each other, a handle rigidly secured to the diverging elements, a cross bar having rake tines depending therefrom and spanning the diverging elements and lying adjacent to the outer faces of the opposing arms, sleeves of trapezoidal shape and section having a larger upper base side and a smaller lower base side, said sleeves loosely pivotally joining the cross bar to the opposing arms to permit the cross bar and tines to pivot rearwardly as the rake is used to pull the leaves, soil and the like and to pivot in the opposite direction by a pushing movement of the rake to dislodge any leaves, soil or the like disposed between the tines, the joined cross sections of the arms and cross bar spanning the inner width of the smaller lower base side of the sleeve with the upper edges of the arms and cross bar lying short of the internal width of the larger upper base of the sleeve and means for securing the cross bar to the arms to hold the cross bar to the arms to hold the cross bar against movement longitudinally of the arms.

2,945,341
PARKING METER
Anthony L. Griffin, 107 Davidson St., Amsterdam, N.Y., and Earl G. Chatwynd, 6 Steele Ave., Gloversville, N.Y.
Filed Sept. 17, 1956, Ser. No. 610,170
2 Claims. (Cl. 58—142)

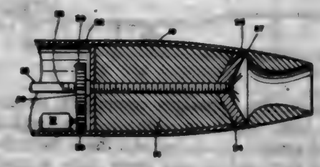


1. A parking meter comprising a housing, a clockwork mechanism in said housing for actuating a signal, said clockwork mechanism including a main spring and escapement means, variable ratio gear transmission train means connecting said main spring and escapement means for varying the rate of energy escape from said main spring, said gear transmission train means including a small gear on said main spring shaft, a large gear on said main spring shaft, a large gear on a driven shaft adapted to engage said small spring shaft gear, a small gear on said driven shaft adapted to engage said large spring shaft gear and means for moving said driven shaft so that a selective gear ratio engagement is established.

2,945,342
THERMAL STABILITY ADDITIVE IN HYDROCARBON JET FUELS
Robert M. Schirmer, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed May 9, 1958, Ser. No. 734,121
7 Claims. (Cl. 60—35.4)

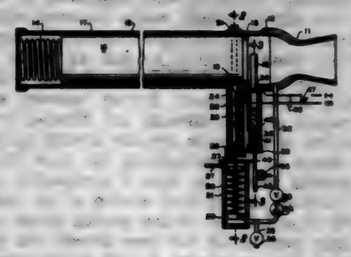
1. A method of operating a reaction engine in which the fuel is subjected to elevated temperatures before combustion which comprises supplying to said engine a hydrocarbon fuel containing as an additive from 1 to 1000 parts per million of the hydrocarbon soluble extract from an oily carbon black which before extraction had a photelometer reading less than 50, subjecting said fuel to a temperature in excess of 400° F. prior to combustion, and burning said fuel in the combustion chamber of said engine.

2,945,343
CHARGE
Calvin A. Gongwer, Glendora, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Filed Nov. 16, 1953, Ser. No. 392,080
11 Claims. (Cl. 60—35.5)



1. A device for producing propulsion comprising a housing having an exhaust nozzle, a substantially totally enclosed body of solid metallic lithium having an exposed reacting face within the housing, an inlet opening into the housing, a ram-water duct connected with said opening within the housing, and means for applying water from the duct to the reacting face, within the housing.

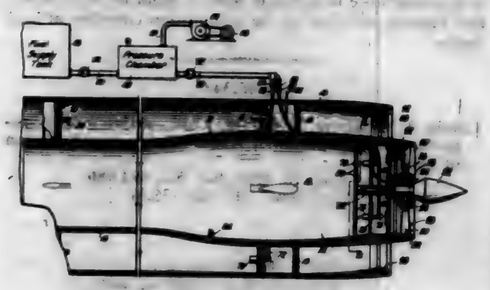
2,945,344
GAS GENERATOR ADAPTED FOR ON-OFF OPERATION
William M. Hutchinson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 23, 1956, Ser. No. 617,882
9 Claims. (Cl. 60—35.6)



1. A rocket motor, adapted for on-off operation, comprising, in combination: a cylindrical combustion cham-

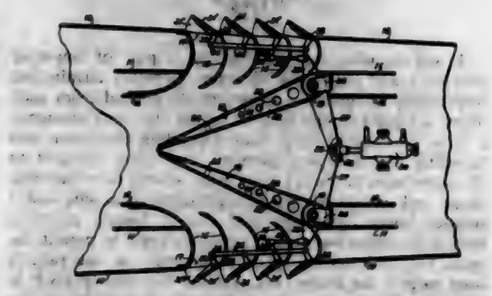
ber having an axially disposed exhaust nozzle; holding means disposed within said chamber adjacent to and a predetermined fixed distance from said nozzle; spring biasing means in said chamber on the other side of said holding means from said nozzle; a solid rocket propellant grain disposed between said holding means and said spring biasing means; igniting means positioned on the other side of said holding means from said propellant and adjacent to said holding means; cutting means adapted to cut through said propellant grain at a predetermined distance from said holding means and isolate the remainder of said grain of propellant thereby stopping burning of said propellant; and means for actuating said cutting means.

2,945,345
AIR FLOW CONTROL FOR JET PROPELLED CRAFT
George R. Hoffmann, 8145 Craig, Overland Park, Kans.
Original application Aug. 2, 1951, Ser. No. 239,875. Divided and this application July 3, 1957, Ser. No. 669,774
3 Claims. (Cl. 60—35.6)



1. Jet propulsion apparatus comprising an elongated, cylindrical inner tube; an elongated, cylindrical outer tube of substantially equal diameter throughout the length thereof and surrounding said inner tube in spaced, coaxial relationship thereto, said outer tube being of streamlined configuration, said tubes being of substantially equal length and having proximally disposed, circular margins at corresponding ends thereof defining respective air intakes, a rear portion of the inner tube having a smaller diameter than the forward portion thereof to present a cylindrical region of greater transverse cross-sectional area in surrounding relationship to said rear portion of the inner tube between the latter and the opposed inner surface of the outer tube, than the cross-sectional area of the annular region defined between said forward portion of the inner tube and the opposed inner surface of the outer tube, said front portion of the inner tube merging smoothly with said rear portion thereof; adjustable air control means within the air intake of said inner tube for selectively varying the amount of air permitted to pass thereinto during forward movement of said apparatus; fuel and air diffuser means mounted within said forward portion of the inner tube transversely thereof and in relatively close proximity to said air intake of the same; a plurality of fuel injectors mounted within the inner tube circumferentially thereof between said air control means and the diffuser, and disposed to direct individual jets of fuel under pressure directly against said diffuser means to thereby aspirate the same from said intake opening thereof to form a combustible mixture within a zone of said forward portion of the inner tube rearwardly of said diffuser means; ignition means mounted on the inner tube within said zone thereof and disposed in relatively close proximity to said diffuser means for igniting the combustible mixture within said zone; a plurality of fuel injectors within the part of said outer tube surrounding said forward portion of the inner tube, disposed circumferentially around the inner tube and discharging rearwardly of the outer tube to aspirate air passing into the space between the inner and outer tubes to form a combustible mixture; and ignition means within the outer tube adjacent the outlet end of the inner tube for igniting the combustible mixture in said outer tube.

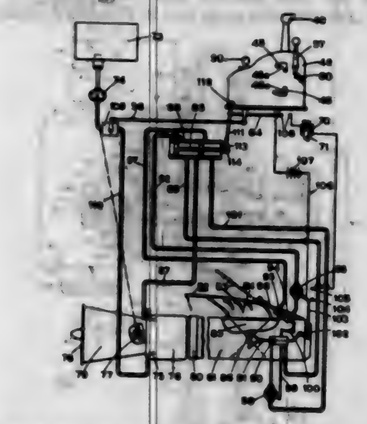
2,945,346
REVERSE THRUST BRAKE
Henry E. Arnaux, Amityville, N.Y., assignor to Republic Aviation Corporation, near Farmingdale, N.Y., a corporation of Delaware
Filed Oct. 4, 1954, Ser. No. 459,886
3 Claims. (Cl. 60—35.54)



1. In an aircraft the combination with a component thereof having a jet engine therein terminating in an exhaust pipe for the discharge of gases produced by said engine at the aft end of said exhaust pipe whereby forward thrust of the aircraft is obtained, of a pair of outlet assemblies disposed between said exhaust pipe and the wall of said component one in each opposed corresponding side wall thereof for the discharge of gases from the engine therethrough and out of said component in substantial opposition to the discharge end of said exhaust pipe whereby reverse thrust of the aircraft is obtained, a movable door disposed in the exhaust pipe and operable from the exterior thereof in one direction to open said exhaust pipe for the unrestricted passage of gases therethrough and simultaneously close said outlet assemblies in unison and in the other direction to effect the reverse operation, an extensible nozzle individual to each outlet assembly and operative concurrently with said door to protract and retract said outlet assemblies relative to the component upon the opening and closing respectively of said outlet assemblies, and a plurality of vents in said door to permit the passage therethrough of a predetermined quantity of gases from the engine when said door is closed as aforesaid.

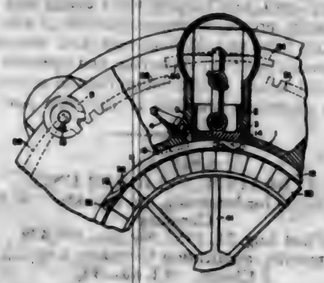
2,945,347
FUEL CONTROL
Rowan Herbert Colley, Sunnyhill, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Dec. 5, 1956, Ser. No. 626,439
Claims priority, application Great Britain Dec. 13, 1955
11 Claims. (Cl. 60—35.54)

1. A fuel control for an aircraft jet-propulsion engine having a fuel control valve and means for reversing the direction of thrust of the engine comprising, in combination, fuel control lever means, pivot point means for said lever means, means adapted to transmit control lever movement to said fuel control valve, quadrant means comprising two quadrant portions over which said lever is selectively movable in arcuate paths by the pilot to control fuel flow to the engine, means intermediate the quadrant means to guide movement of the lever in a path different from that of movement in either of the quadrants for guidance there by one quadrant portion on the other, said pivot point means and said means adapted to transmit control lever movement to said fuel control valve being constructed and arranged such that movement of



the lever in said different path changes the relative locations, with respect to the end of the control lever gripped by the pilot, of said pivot point means and the connection of the lever to the mains transmitting control lever movement, whereby movement of the lever in either quadrant portion away from said path increases fuel flow and reverse movement decreases it.

2,945,348
COMBUSTION APPARATUS FOR A GAS TURBINE OF THE REACTION TYPE
Kasimierz Tycheon, City of Duesseldorf Consulate General, Duesseldorf, Germany
Filed Nov. 26, 1958, Ser. No. 776,576
7 Claims. (Cl. 60—39.36)



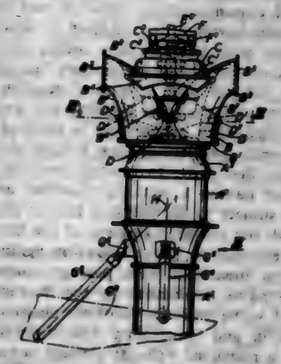
1. The combustion apparatus for an exhaust gas turbine comprising a first member; a plurality of cylinders carried by said first member, said cylinders each having a piston mounted for reciprocation therein; a second member positioned adjacent to said first member, said second member having a plurality of intake and exhaust ducts formed therein; means for rotating one of said members relative to the other; and actuating means for reciprocating each of said pistons in timed relationship with the relative rotary motion of said members, said actuating means comprising gear means for reciprocating each of said pistons through a major portion of a full reciprocatory cycle, and cam means operable to complete the reciprocatory cycle, said cam means being operatively in control of said pistons during the time when the exhaust ducts of said second member are in communication with said cylinders.

2,945,349
MINIATURE GAS TURBINE
Emil Ehni, Manhattan Beach, Calif., assignor to Lear, Incorporated
Filed Nov. 12, 1957, Ser. No. 696,781
6 Claims. (Cl. 60—39.36)



1. A gas turbine engine comprising an outer wheel having a flat central circular disc open at the center, structure incorporating radial diffuser means on one side of said disc, centripetal flow turbine blades on the other side of said disc, a first shaft, inducer blades supporting said disc on said shaft, an inner wheel fitting within the opening in said disc and having a central circular diaphragm, compressor blades on one side of said diaphragm and arranged to supply air to said diffuser means, turbine means on the other side of said diaphragm and receiving gases from the turbine blades on said outer wheel, a second shaft bearingly supported on said first shaft and supporting said diaphragm, fixed diffuser means located radially outward from said outer wheel and receiving air from said radial diffuser means, means receiving said air for producing hot combustion gases, nozzle means feeding said combustion gases to said centripetal flow turbine blades, and fixed casing means enclosing said wheels and bearingly supporting same.

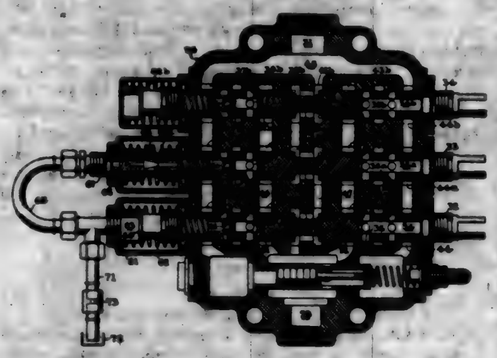
2,945,350
COMBUSTION TURBINE POWER UNITS
Ronald Albert Gilbert, North Wembley, England, assignor to D. Napier & Son Limited, London, England, a British company
Filed Apr. 4, 1956, Ser. No. 576,101
Claims priority, application France Apr. 7, 1955
4 Claims. (Cl. 60—39.73)



1. A combustion turbine power unit comprising at least one combustion chamber having an inlet end and

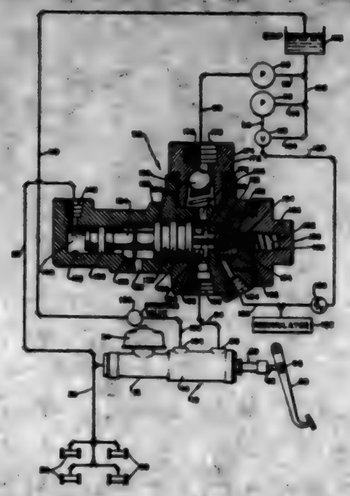
an outlet end, a compressor disposed at the inlet end of said combustion chamber and adapted to deliver combustion air thereto, a power turbine disposed at the outlet end of said combustion chamber to receive combustion products therefrom, a casing containing said power turbine, said turbine casing having an inlet side adjacent said combustion chamber and an exhaust side away from said combustion chamber, a reduction gear forming part of said power unit, a casing containing said power unit reduction gear disposed on the exhaust side of said turbine casing and having an input side adjacent said turbine casing and an output side away from said turbine casing, an input shaft which enters the input side of said power unit reduction gear casing and which is connected to said power turbine, an output shaft projecting from the output side of said power unit reduction gear casing, exhaust ducting disposed on the exhaust side of said turbine casing between said turbine casing and said power unit reduction gear casing, and a plurality of circumferentially spaced stress-transmitting members connecting said power unit reduction gear casing directly to said turbine casing independently of said exhaust ducting.

2,945,351
CONTROL VALVE
Robert C. Westveer, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Apr. 22, 1959, Ser. No. 808,143
2 Claims. (Cl. 60—52)



2. In combination, first and second control valves, each having a housing containing an inlet port, an exhaust port, and two motor ports, and a movable element carrying valve heads which cooperate with seats in the housing to control communication between said ports, each movable element having a first position in which it establishes a supply path between one motor port and the inlet port and an exhaust path between the other motor port and the exhaust port, a second position in which these supply and exhaust paths are reversed, and a neutral position in which each motor port is isolated from the other three ports; resilient means biasing the movable element of the first valve to neutral position; a piloted pressure motor having a working chamber and a movable member subject to the pressure in that chamber and connected with the movable element of the first valve for shifting that element to its first position against the bias of the resilient means; a pilot passage connecting one of the supply paths established by the movable element of the second valve with the working chamber; a relief valve located in and controlling flow through the pilot passage; and a restricted exhaust passage connected with the pilot passage at a point between the relief valve and the working chamber.

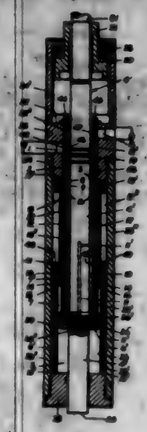
2,945,352
FLUID PRESSURE BOOSTER SYSTEM
William Steiner, Bloomfield, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,214
13 Claims. (Cl. 60—54.6)



1. A fluid pressure booster system comprising a source of circulating fluid and a source of pressurized fluid, a fluid motor including a pressure responsive unit dividing said motor to form inlet and outlet chambers respectively having an inlet and an outlet port, a chamber including a discharge port, fluid displacing means movable in said chamber and connected to said pressure responsive unit, operator-operated control means in said motor normally affording communication between said inlet and outlet chambers and operable for throttling fluid passing from said inlet chamber to said outlet chamber for actuating said pressure responsive unit and said fluid displacing means for urging pressurized fluid out of said discharge port, and a transfer valve connected to said sources of circulating and pressurized fluid, said inlet port and said discharge port, said transfer valve comprising control means normally providing communication of said source of circulating fluid to said inlet port and isolating said source of pressurized fluid therefrom and operable upon a failure of said source of circulating fluid to communicate said source of pressurized fluid to said inlet port.

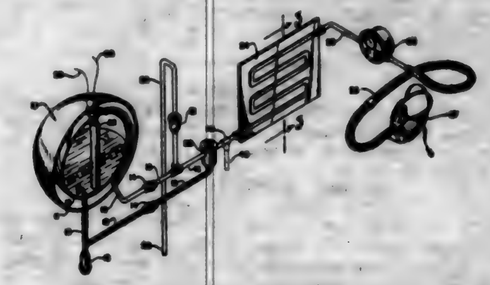
2,945,353
HYDRAULIC CYLINDER UNIT
Maurus Glas, Jordanstrasse, 16, Frankfurt am Main, Germany
Filed Aug. 21, 1957, Ser. No. 679,478
Claims priority, application Germany Aug. 23, 1956
8 Claims. (Cl. 60—97)

1. A hydraulic cylinder unit comprising an external cylinder having a part of greater inner diameter and a main cylinder part of less inner diameter, a rapid feed cylinder of less outer diameter than said inner diameter of said external cylinder and being concentrically arranged within said external cylinder part of greater inner diameter and partly penetrating into said main cylinder part thereby forming a first annular cylinder chamber between said external cylinder part of greater inner diameter and said rapid feed cylinder, and a second annular cylinder chamber between a portion of said main cylinder part and said rapid feed cylinder, a partition at the end of said main cylinder part surrounding said rapid feed cylinder, said partition having an annular opening connecting said main cylinder part and said first annular cylinder chamber, a double piston having a larger piston slidable in said main cylinder part and a smaller piston slidable in said rapid feed cylinder, a piston rod connecting both pistons and penetrating one front wall of said rapid feed cylinder and having an extension part penetrating one front wall of said main cylinder part for work performance externally of said main cylinder part, a pressure



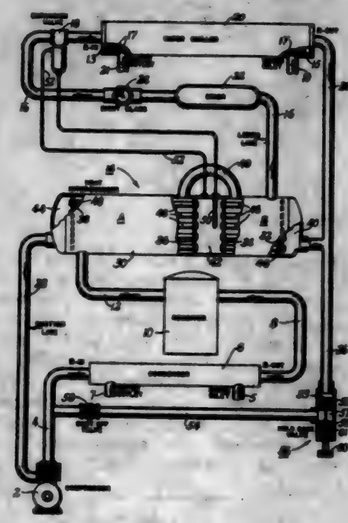
transmitting piston having an annular head slidable in said first annular cylinder chamber on said rapid feed cylinder, and an integral tubular portion of less outer diameter than said annular head and surrounding said rapid feed cylinder in spaced relation thereto, said tubular portion projecting into said annular opening and being adapted when sliding to enter said second annular cylinder chamber, and said external cylinder and said rapid feed cylinder being provided with connections for supplying a pressure medium for acting selectively upon either side of said pistons.

2,945,354
LIQUID OXYGEN CONVERSION SYSTEM
Arthur Moskowitz, Reynoldsburg, Ohio, assignor to North American Aviation, Inc., Columbus, Ohio
Filed Mar. 18, 1957, Ser. No. 646,894
5 Claims. (Cl. 62—51)



1. A gravity flow liquid oxygen conversion system comprising: a liquid oxygen storage container, a heat exchanger for converting liquid oxygen to gaseous oxygen, normally continuously open liquid oxygen conducting means connected to said storage container and connected to the inlet of said heat exchanger, normally-open pressure-responsive valve means in said liquid oxygen conducting means to regulate the flow of liquid oxygen from said container to said heat exchanger, and continuously-open line means venting gaseous oxygen from said storage container, said open line means having one extreme connected to said liquid oxygen conducting means intermediate said valve means and said heat exchanger.

2,945,355
CAPACITY CONTROL OF REFRIGERATION SYSTEM
Cecil Boling, West Hartford, Conn., assignor to Heat-X, Inc., Bronxville, N.Y.
Filed Dec. 26, 1955, Ser. No. 554,251
14 Claims. (Cl. 62—117)

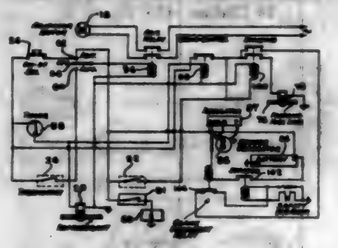


1. In a refrigeration system having a compressor, a condenser, an expansion valve and an evaporator interconnected for the flow of refrigerant in a refrigeration cycle, the combination with said system of a heat interchange unit having a liquid path along which liquid refrigerant flows from the condenser to the evaporator in heat interchange with a gas and vapor refrigerant path along which refrigerant flows from the evaporator to the compressor, said heat interchange unit having an intermediate sensing zone through which refrigerant flows from the evaporator and which is not in heat-exchange relationship with the liquid refrigerant flowing to the evaporator, a thermostat positioned in said sensing zone of said heat interchange unit in direct heat exchange relationship with the stream of refrigerant flowing from the evaporator after the evaporation thereof during flow through a portion of said heat interchange unit, said thermostat being effective to actuate the expansion valve to maintain a supply of liquid refrigerant throughout the entire evaporator, and means to further heat the refrigerant after its temperature is sensed by said thermostat.

2,945,356
REFRIGERATED MILK STORAGE TANK
Melvin P. Schultz, Paul L. Larson, and George E. Mussey, Tomahawk, Wis., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Filed Aug. 15, 1958, Ser. No. 755,302
5 Claims. (Cl. 62—157)

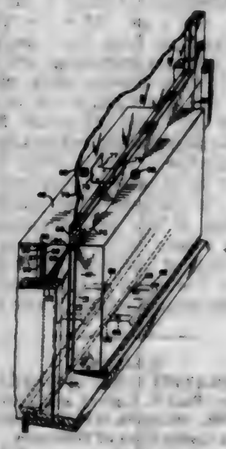
1. An apparatus of the class described comprising a storage tank, refrigerating means connected to said tank for cooling it, said refrigerating means including cooling

coils mounted in said tank and a compressor, a L.P. gas engine connected to said compressor for driving it, a control circuit, said control circuit including a source of electric power and a thermoswitch, a portion of said thermoswitch comprising a temperature-sensing element mounted inside the tank, an electrical system for the L.P. gas engine, said electrical system including a starter motor connected to said L.P. gas engine, said control circuit connecting said starter motor to said power source when said thermoswitch is closed so that the starter motor is actuated and drives the L.P. gas engine to start



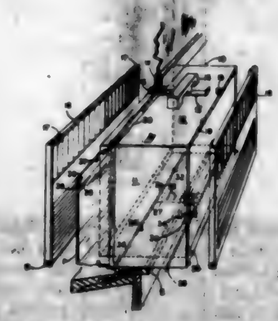
it, said electrical system adapted to generate electric power when said L.P. gas engine is operating, means in said control circuit for automatically substituting the generated electrical power for the source of electric power to energize said control circuit when the L.P. gas engine is operating whereby the refrigerating mechanism and the L.P. gas engine may be controlled by the temperature in said tank, and means for by-passing the thermoswitch to permit the L.P. gas engine and the compressor to continue to operate after the thermoswitch has opened whereby refrigerant is removed from the cooling coils.

2,945,357
PORTABLE AIR CONDITIONING UNITS
David Earle MacLeod, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,316
14 Claims. (Cl. 62—262)



7. A portable air conditioner having a casing constructed and arranged to be reversibly mounted in a window with either the condenser chamber or the evaporator chamber thereof communicating with an area to be conditioned comprising alignment means connected to said casing and adapted to abut the rear surface of a window stool, fastening means connected to said casing and adapted to coact with said alignment means to clamp a window stool therebetween, a side panel, and means on the side of said casing for mounting said side panel so that the portion of said alignment means which abuts said window stool and the point of connection between said side panel and casing lie in substantially the same plane.

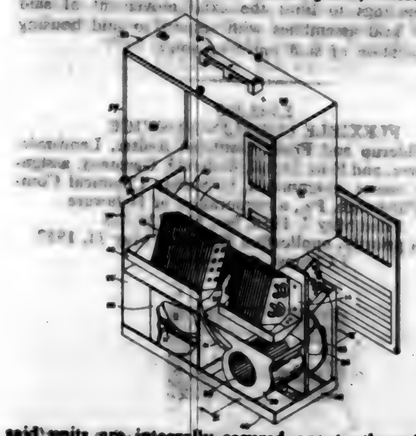
2,945,358
AIR CONDITIONING UNIT AND MOUNTING MEANS THEREFOR
David Earle MacLeod, Syracuse, and Howard James Tyler, Salina, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,596
10 Claims. (Cl. 62—262)



1. In an air conditioning unit having a heat dissipating condenser on one side and a heat absorbing evaporator on the other, means for mounting said unit with either the condenser or evaporator in heat exchange relation with the area to be conditioned, said means comprising means for enclosing said unit, window sash engaging means on the top of said enclosing means, window stool engaging means on the bottom of said enclosing means, said stool engaging means comprising guide means secured to said enclosing means, a clamp reversibly secured to said enclosing means, said guide means and clamp cooperating with one another so that said unit may be mounted in a window with either the condenser or evaporator facing the area to be conditioned.

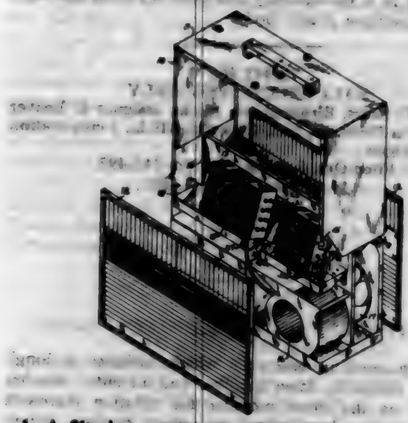
2,945,359
SELF-CONTAINED AIR CONDITIONING UNITS
David Earle MacLeod, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,543
5 Claims. (Cl. 62—296)

1. In an air conditioning unit, means for facilitating assembly and maintenance of the components of said unit, said means comprising a partition panel functioning to separate the conditioned atmosphere from the ambient atmosphere; a compressor secured to said partition panel; an evaporator coil mounted on said partition panel above said compressor; a condensate collection trough secured to said partition panel beneath said evaporator; a condenser secured to said panel on a face thereof opposite to that upon which said evaporator is mounted; a fan motor mounted on said panel; an evaporator fan driven by said fan motor; a condenser fan driven by said fan motor, said fans being on opposite sides of said panel; a base pan forming a sump and extending beneath said panel and supporting said panel in a vertical plane, whereby all of



said units are integrally secured one to the other in a compact manner.

2,945,360
AIR CONDITIONING UNITS INCLUDING FILTER MOUNTING MEANS
Howard James Tyler, Salina, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Sept. 22, 1958, Ser. No. 762,326
13 Claims. (Cl. 62—317)



1. A filtering arrangement for filtering an air stream prior to its passage through a heat exchange element including return bend conduits having spaced fins thereon extending the effective heat transfer surface of the conduits, said arrangement comprising filter mounting means; a filter, filter guide means secured on said mounting means and supporting and orienting the filter in position over the air entry surface of the heat exchange element; and releasing means extending between the fins of the heat exchange element for selectively releasing the filter.

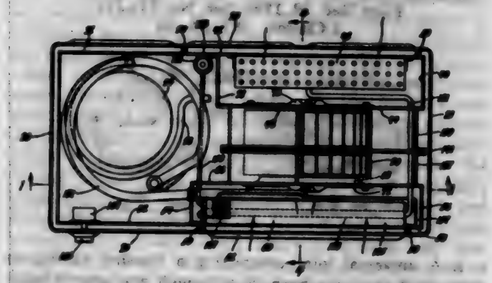
2,945,361
CONGELATION APPARATUS
Frederick W. Miller, 5846 Bellona Ave., Baltimore 12, Md.
Filed June 9, 1958, Ser. No. 740,733
1 Claim. (Cl. 62—356)

A molding arrangement for forming a disposable frosted vessel, comprising, a ceramic male mold, a metallic female mold, and a metallic member for positioning said male mold with respect to said female mold, said female mold being of substantially tapered shape and open at its upper end and closed at its lower end, said male mold being of conical shape and having its apex in the form of a dome, the base of said male mold being arranged in a plane passing through the open end of said tapered female mold, said member being disk-shaped and having a pair of spaced, annular shoulders extending transversely thereto,



the upper end of said female mold being positioned between said shoulders, with the upper end of said conical-shaped mold being positioned on the inside of and adjacent to the innermost of said pair of annular shoulders, whereby said male mold is centrally positioned with respect to said female mold so that when a liquid medium is placed in the chamber between said molds and the molding arrangement is cooled by a refrigerant, a disposable frosted vessel is obtained.

2,945,362
AIR CONDITIONER
Ira L. Gould, Hamilton, and Richard E. Thompson, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 6, 1957, Ser. No. 657,269
7 Claims. (Cl. 62—429)



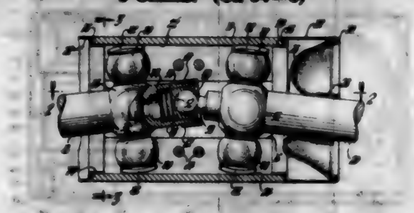
1. Air conditioning apparatus including a casing having a first wall adapted to be exposed to outside air and a second wall on the opposite side of the casing adapted to be exposed to inside air, said first and second walls each having air inlets located substantially opposite each other, an evaporator located in series with the inlet in said second wall and a condenser located in series with the inlet in said first wall, a set of blower wheels fastened together, heat insulating means between said blower wheels, one of said wheels having its interior communicating with the inside face of said evaporator and the other having its interior communicating with the inside face of said condenser, a dividing means of heat insulating material in a plane between said wheels and separating the discharge of the wheels, a discharge scroll section for each of said wheels located on opposite sides of said dividing means, said casing having discharge outlets communicating with each of said scroll sections, and means for driving said blower wheels.

2,945,363
HINGED JEWELRY CLASP WITH MEANS BLOCKING DISASSEMBLY
Louis V. Cataldi, 54 Imperial Ave., Cranston 9, R.I.
Filed June 30, 1958, Ser. No. 745,708
1 Claim. (Cl. 63—14)



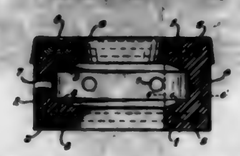
A sheet metal jewelry clasp having a body member comprising a floor, ears on opposite sides of the floor projecting in planes at generally right angles to the plane of the floor in one direction, each ear being provided with a bearing opening adjacent the free end of the ear, bridge portions offset in the other direction from the plane of the floor connecting respective ears to the floor with said ears extending from said bridge portions at an acute angle to the length of the floor, a jaw member having one end bifurcated to form resilient side arms normally disposed outwardly of opposite edges of said floor and movable toward each other and provided at their ends with outwardly extending trunnions in said bearing openings and abutments bent up in the direction that the ears extend from the floor from the opposite edges of the floor adjacent the free ends of the ears and of a sufficient extent to overlap said bearing openings so as to be located in the path of movement of said resilient side arms toward each other to block inward movement thereof and thus prevent detachment of said members.

2,945,364
UNIVERSAL JOINT
Donald P. Marquis, Saginaw, and Raymond J. Schultz, Bay City, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 29, 1953, Ser. No. 783,312
3 Claims. (Cl. 64—8)



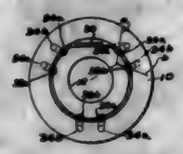
1. A universal joint comprising a housing having an axial shaft receiving bore therethrough and spaced bearing receiving openings therethrough on either side of said shaft receiving bore, first and second shafts extending into said bore, a trunnion and bearing and bearing cap assembly secured in the end of each of said shafts and within said housing, a plurality of thrust buttons secured in said assemblies and bearing against the surfaces of said bearing receiving openings, said first shaft terminating within said housing in a tubular extension, a block slidably disposed in said tubular extension and having a spherical cavity formed therein, resilient means in said tubular extension and abutting said block to bias said block in an outward direction, said second shaft terminating within said housing in a ball portion receivable in said tubular extension and in said spherical cavity in said block, means retaining said ball portion in said tubular extension and in said cavity, said resilient means maintaining said block in engagement with said ball portion to properly space said first and second shafts with respect to each other within said housing and to compensate for wear between said ball portion and said block, and stop pins extending transversely through said bearing receiving openings to limit the axial movement of said shafts and said assemblies with respect to said housing during operation of said universal joint.

2,945,365
FLEXIBLE COUPLING DEVICE
Jurgen Ulderup and Franz Gottfried Reiter, Lauferde, Hannover, and Fritz Jäckel, Bielefeld, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed May 7, 1958, Ser. No. 733,736
Claims priority, application Germany May 11, 1957
7 Claims. (Cl. 64—11)



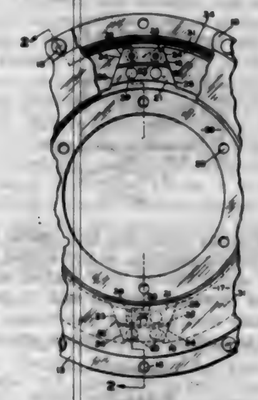
1. A shaft coupling comprising a flexible coupling device adapted to be inserted between a flange on one shaft and a flange on a second shaft, means comprising spaced rigid perforated rings adjacent the mating ends of the device and having tapped holes for connecting the flexible coupling device with said flanges, said tapped holes having I-shaped bulges which protrude in the direction of the flange of the adjacent mating shaft and recede behind the mating surface of the flexible coupling device, said rings being substantially completely embedded in a substantially non-porous rubber-like flexible polyurethane plastic body.

2,945,366
BALL SPLINE ASSEMBLY
Richard E. Sears, Birmingham, Mich., assignor to Beaver Precision Products, Inc., Clawson, Mich., a corporation of Michigan
Filed Oct. 6, 1958, Ser. No. 765,493
19 Claims. (Cl. 64—33)



1. In a rotating assembly which includes a longitudinally extending inner member and an outer member mounted on the inner member for rotation therewith and for relative longitudinal movement thereon, means interconnecting said members for preventing relative angular movement between the members comprising a pair of longitudinally extending grooves on the outer surface of the first member and a pair of longitudinally extending grooves in the second member, the grooves in the first member being juxtaposed to the grooves in the second member, the circumferential distance between the grooves on the outer member being slightly different than the circumferential distance between the grooves in the inner member, and ball members disposed in each of said juxtaposed pair of grooves, said ball members having a diameter such that relative angular movement between said inner and outer members in one direction is prevented by the inter engagement of the ball members with one pair of said juxtaposed grooves and relative angular movement between said inner and outer members in the opposite direction is prevented by the interengagement of the ball members with the other pair of juxtaposed grooves.

2,945,367
TORSIONAL VIBRATION DAMPENER
William F. Michell, Toledo, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Filed June 24, 1958, Ser. No. 744,286
15 Claims. (Cl. 64—27)



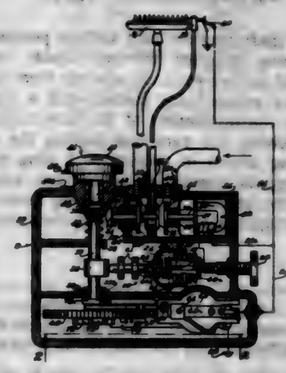
1. A vibration dampening means comprising, a driving member, a driven member adapted for rotation in the same direction with said driving member, said members having relative angular movement about their axis of rotation, a plurality of flexible coupling means, annular abutment means on at least one of said members defining a plurality of annular spaces for individually receiving said flexible coupling means for limiting the amount of expansion of the flexible coupling means whereby the amount of relative angular movement between the said driving and driven members is limited, said flexible coupling means operatively connecting said driving and driven members together for unitary rotation, a plurality of adjoining pairs of lugs one of each pair on each of said members for relative angular movement, said flexible coupling means having free ends in engagement with adjacent sides of the aforementioned lugs whereby the load on the driving and driven members is uniformly distributed and balanced.

2,945,368
NEEDLE CYLINDER FOR SINKER-TYPE CIRCULAR KNITTING MACHINES
Benjamin Fried, 2197 Cruger Ave., Bronx, N.Y.
Filed Feb. 14, 1958, Ser. No. 715,297
7 Claims. (Cl. 66—115)



1. A needle cylinder for a circular knitting machine, comprising a substantially smooth upper ledge, a plurality of sinkers radially arranged and riding on said ledge with an inner portion of the sinkers extending inwardly from the ledge, and annular guide slot means defining a plurality of radially extending slots opening into the interior of the cylinder and guiding the inner portions of said sinkers, the guide slots being spaced and extending inwardly from said cylinder ledge and guide slot means and the cylinder adjacent the ledge defining an open space inwardly of the ledge.

2,945,369
BURNER CONTROL APPARATUS
Neal Seegert, Elm Grove, Wis., assignor to Base, Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 24, 1956, Ser. No. 567,593
7 Claims. (Cl. 67—5.1)

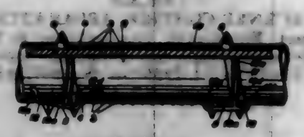


2. In a timing control device for fluid fuel burning apparatus including main and pilot burners, flow control means for said burners biased to a first and movable to a second position with respect to the fluid flow, holding means operable to hold said flow control means in its second position against said bias when moved thereto but incapable of effecting movement of said flow control means to its second position, thermoelectric generating means for energizing said holding means, timing means also connected in circuit with said thermoelectric generating means, said timing means comprising a constant speed motor means, and circuit controlling means, under the control thereof, said circuit controlling means affording deenergization of said holding means at one position and permitting energization of the latter at another position, unitary reset-timeset means cooperating with said flow control means and said timing means, one movement of said reset-timeset means being operable to reset said holding means and move said flow control means to its second position, and a second movement of said reset-timeset means being adapted to selectively set said timing means, wherefore said flow control means will be released for movement toward its first position upon deenergization of said thermoelectric generating means or upon actuation of said circuit controlling means to said one position by said timing means.

2,945,370
YARN GUIDING AND TREATING APPARATUS
Robert Steiger, Muri, near Bern, Switzerland, and Friedrich Luethy, Wankdorffeldstr. 97, and Alfred Haemmerle, Dammweg 3, both of Bern, Switzerland
Filed Mar. 11, 1958, Ser. No. 720,746
Claims priority, application Switzerland Apr. 15, 1957
10 Claims. (Cl. 68—205)

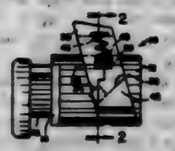
1. In an apparatus for guiding yarn and treating the same with different treating liquids, in combination, a

pair of rotary shafts spaced from and substantially parallel to each other for advancing an endless loop extending between and passing partly around both of said shafts and a yarn connected at one end to said loop and wound partly around both shafts and extending therebetween so that the rotary shafts advance the loop and the yarn connected thereto along said shafts while contacting the same, one of said shafts having a pair of consecutive outer surface portions adapted to have different treating liquids applied thereto for treating the yarn as it advances along said surface portions; and sling ring means carried



by said one shaft between said surface portions thereof for maintaining different treating liquids respectively located at said surface portions separate from each other, said sling ring means being formed with a gap inclined oppositely to the inclination of the convolutions of the yarn for receiving the yarn and guiding the same past said sling ring means to prevent said sling ring means from retarding the movement of the yarn axially along said shafts, the ends of said sling ring means adjacent said gap overlapping each other in circumferential direction.

2,945,371
LOCK CONSTRUCTION
Robert D. Gregan, Detroit, Mich., assignor to Hurd Lock & Manufacturing Co., Detroit, Mich., a corporation of Michigan
Filed May 21, 1958, Ser. No. 736,891
9 Claims. (Cl. 70—78)



7. In a lock construction, a housing having an opening in one of its sides, an inverted U-shaped latch part straddling said housing, a cylinder part for a key plug member axially movable in said housing, one of said parts having an inclined ramp and the other part having a projecting lug extending through said opening and slidable on said ramp, said ramp and said lug being arranged so that on axial movement in one direction of said cylinder part the latch part can be moved downwardly and on axial movement in the other direction of said cylinder part the latch part can be moved upwardly.

2,945,372
DOOR LATCH MECHANISM
Roland D. Reed, Rensselaer, Ind., assignor, by mesne assignments, to Evelyn Reed and Phyllis R. Gunter
Filed Mar. 3, 1958, Ser. No. 718,917
11 Claims. (Cl. 70—92)

1. A panic lock for exit doors, comprising a casing having a base adapted to be secured to a door and having a pair of horizontally disposed shelves, a locking bolt, means pivotally mounting said locking bolt between said shelves, means biasing said bolt to project from said casing into locking position, an actuating lever, means pivotally mounting said actuating lever between said shelves, said locking bolt having an inwardly facing recess bounded by an overchanging lip and said actuating lever having a forwardly extending tongue projecting into said recess and engageable with the underside of said lip, said actuating lever having an arm projecting from said casing on that side of its pivotal mounting opposite said tongue which, when depressed, causes said tongue to withdraw said bolt from locking position, means acting be-



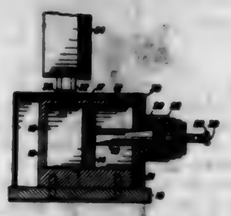
tween said actuating lever and said casing base biasing said lever to locking position, an upstanding boss on said base adjacent said actuating lever tongue, and a key operated member threaded through said tongue and movable against said boss to cause said tongue to withdraw said bolt and to hold it in withdrawn position.

2,945,373
TWO PIECE KEY
George N. Powers, 53 Campiche St., East Springfield, Mass.
Filed May 29, 1958, Ser. No. 736,698
1 Claim. (Cl. 70—396)



In a two piece key, the combination which comprises a head having a recess with a shoulder therein in one side and a shank with a T-shaped tongue thereon extended therefrom, an insert having pin aligning protuberances in one edge, a T-shaped groove in the opposite edge for receiving the tongue of the shank, and a finger extended from one end and positioned in the recess of the head, said finger having a substantially semi-circular recess in the end thereof, and an opening extended inwardly of said recess and communicating therewith, a spring positioned in said opening, and a ball in the recess in the finger in engagement with said spring and actuated thereby for locking the insert in position on the key.

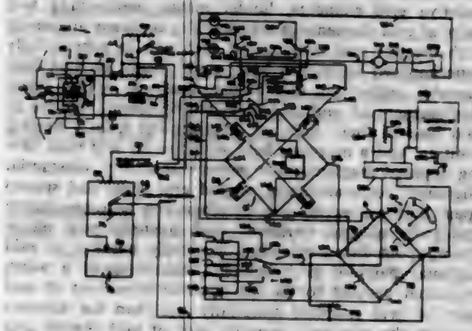
2,945,374
TORQUE INDICATING GAUGE
Charles M. Shumeese, 1 Franklin Ave., White Plains, N.Y.
Filed Sept. 27, 1956, Ser. No. 612,434
2 Claims. (Cl. 73—1)



1. Apparatus for measuring the torque exerted by a power tool, comprising a cylinder which is closed at one end, a piston reciprocable in said cylinder, said one end of said cylinder forming with the adjacent, opposed side of said piston a chamber, the volumetric capacity of

which varies with the reciprocation of said piston, means for preventing leakage of liquid from said opposed side of said piston to the other side thereof, a pressure gauge, liquid conducting means connecting said pressure gauge to said chamber, a body of liquid filling said chamber and said liquid conducting means so that movement of the body of liquid between said chamber and said conducting means during reciprocation of said piston is measured by said gauge, a closure for said other end of said cylinder, a rod secured at its inner end to said piston and projecting from said other side of said piston but having its outer end disposed within said closure, a rotatable stud rotatably threaded into said closure in axial alignment with said rod, said stud having a head projecting externally beyond said closure for engagement and rotation by a power tool whose torque is to be measured, and an antifriction thrust bearing disposed between the inner end of said stud and the opposed outer end of said rod to transmit directly to said rod the rectilinear movement of said stud as it is threaded into said closure.

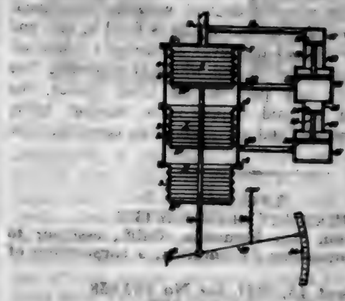
2,945,375
AIRPLANE INSTRUMENTS
Leonard M. Greene, Scarsdale, and Dale H. Nelson, White Plains, N.Y., assignors to Safe Flight Instrument Corporation, White Plains, N.Y., a corporation of New York
Filed Feb. 5, 1954, Ser. No. 408,582
40 Claims. (Cl. 73—178)



1. An airplane instrument comprising an electrical element having a variable electrical characteristic, a vane projecting from the nose of an airplane wing in the region of influence of the shifting stagnation point on said nose and mounted to move responsive to change in magnitude of air pressure caused by movement of said stagnation point, means elastically urging the vane toward an idle position in a direction opposite to that in which it is urged to move by the air pressure acting thereon, whereby the orientation of the vane with respect to the airplane wing is a function of the location of the stagnation point on the wing, and means for continuously varying said electrical characteristic responsive to the orientation of the vane.

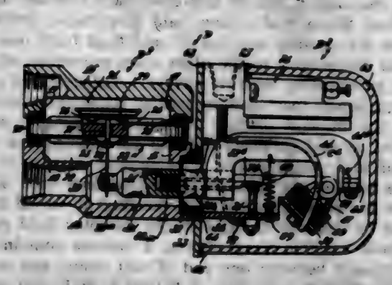
2,945,376
PRESSURE MEASURING DEVICE
Hans Gehre, Bernhard-Strasse 63, Oberkassel (Siegkreis), Germany
Filed Dec. 24, 1953, Ser. No. 400,251
Claims priority, application Germany Jan. 2, 1953
18 Claims. (Cl. 73—407)

1. A fluid pressure measuring device adapted to be connected to a fluid system for measuring service pressure of fluid in the system with reference to a reference pressure, said device comprising a plurality of membranes arranged in a series, at least a portion of each membrane being flexible, including a first membrane at one end and a last membrane at the other end, means including at least the flexible portion of said membranes defining a succession of fluid-filled chambers adapted to exert a pressure counter to the pressure exerted by the service pressure against at least the flexible portion of said first membrane, means connecting all of said membranes for simultaneous movement in response to a pressure difference applied thereacross, said first membrane having the service pressure applied to the side thereof remote from its next adjacent membrane, said last membrane having the reference pressure applied to the side thereof remote from its next preceding membrane, means for applying a pressure intermediate the service pressure and the refer-



ence pressure in at least one chamber intermediate said service pressure and said reference pressure so that the pressure differential across at least the flexible portion of each membrane is less than the difference in pressure between the service pressure and the reference pressure, and so that the pressure changes from the service pressure to the reference pressure by increments along the succession of chambers from each chamber to the next adjacent chamber, and means for sensing the motion of the membranes, whereby a large pressure difference between a service pressure and a reference pressure can be measured without the large pressure difference being applied across any one membrane so that relatively weak and non-rigid membranes can be used permitting the obtaining of high sensitivity.

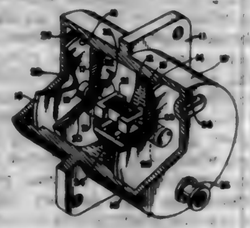
2,945,377
DIFFERENTIAL PRESSURE APPARATUS
Robert C. DuBois, Fairfield, Conn., assignor to Manning, Maxwell & Moore, Incorporated, Stratford, Conn., a corporation of New Jersey
Filed Apr. 9, 1956, Ser. No. 576,946
9 Claims. (Cl. 73—407)



1. In differential pressure apparatus of the kind which comprises pressure-sensitive means operative to create a force proportional to the instant difference between two fluid pressures, an air relay which is supplied with air at substantially constant pressure, a delivery nozzle which

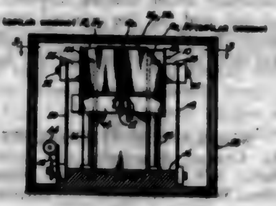
receives air from the relay, a feed-back motor having a movable part, a flapper valve movable toward or from the nozzle thereby to determine the effective air pressure at any instant for operating the feed-back motor, an elongate, rigid lever device comprising a substantially rectilinear portion, means providing a fulcrum for the lever device at a point intermediate the ends of said rectilinear portion of the latter, the lever device also comprising an elongate, rigid portion fixed to one end of said rectilinear portion and offset from but parallel to the axis of said rectilinear portion, means for transmitting force from the pressure-sensitive means directly to the other end of said rectilinear portion of the lever device, means for transmitting force directly from the movable member of the feed-back motor to the free end of said offset portion of the lever device, in combination, an elongate, rigid, flapper-valve support coaxial with the rectilinear portion of the lever device and which is fixed at one end to the rectilinear part of the lever device at a point adjacent to the fulcrum means but which is otherwise free from contact with any part of the lever device, the free end portion of said flapper-valve support being opposite to the nozzle and of a shape to constitute the flapper valve.

2,945,378
LINEAR ACCELEROMETER
Robert W. Martin, San Fernando, Calif., assignor to Physical Measurements Corporation, a corporation of Delaware
Filed Sept. 13, 1957, Ser. No. 683,958
1 Claim. (Cl. 73—497)



An accelerometer comprising, in combination: a casing having a cylindrical interior portion of reduced diameter defining first and second annular shoulders spaced inwardly from opposite ends of the casing; first and second circular flexible diaphragms having their peripheries respectively secured to said annular shoulders; a mass disposed between and having its opposite ends secured to said central portions of said diaphragms so that said mass is restrained by said diaphragms to rectilinear motion along the central axis of said cylindrical interior; damping fluid filling said casing, said diaphragms including orifices for passing portions of said fluid from one side of said diaphragms to the other upon movement of said mass; an eclipsing member having a wedge-shaped opening positioned over and in partial registration with at least one of said orifices; thermally responsive means coupled to said eclipsing member for altering the position of said wedge-shaped opening with respect to said orifice so that the effective cross sectional area of the orifice for passing portions of the fluid is varied in response to viscosity changes in the damping fluid resulting from variable temperatures; a capsule containing a gas disposed between one end of said casing and one of said diaphragms, said capsule having a small vent means therein passing through said casing to place the interior of the capsule in communication with the atmosphere exterior of said casing so that said capsule accommodates changes in the volume of said fluid in the casing; E-type detecting coils secured to said casing within said reduced diameter cylindrical portion between said diaphragms juxtaposed said mass, said mass including an electrical flux carrier positioned directly over said coils when said mass is in a neutral position, whereby changes in signals in said coils are a function of changes in position of said mass.

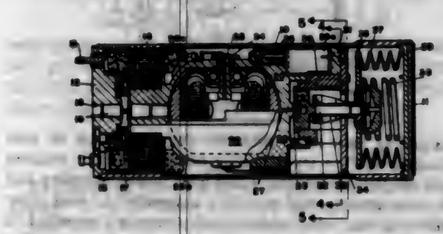
2,945,379
ACCELEROMETER AND MAGNETO-RESISTIVE ELECTROMECHANICAL TRANSDUCER USED THEREIN
Fredrik R. Barnes, Kent, and Leonard R. Greenaway, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Aug. 25, 1955, Ser. No. 530,478
3 Claims. (Cl. 73—517)



1. In a lineal displacement transducer device, the combination comprising two pairs of generally flat magneto-resistive grid elements, holder means maintaining said pairs of grid elements in substantially coplanar alignment with the two grid elements of each pair in substantially superimposed registry, a base, guide means on said base movably supporting said holder means to permit lineal displacement of said grid elements conjointly relative to said base in their direction of alignment from a neutral position, and a magnetic field structure on said base having opposed magnetic pole pieces disposed in substantial alignment perpendicularly to said grid plans and spaced apart to form an air gap therebetween accommodating said pairs of grid elements, said magnetic pole pieces having pole faces extending generally parallel to said coplanar pairs of grid elements and being of a width measured parallel to the direction of alignment of said pairs of grid elements materially less than the distance between the relatively opposite ends of said aligned grid element pairs, whereby only a fraction of the area in said plane occupied by each pair of grid elements is traversed by the magnetic field extending directly between said pole faces with said grid elements neutrally positioned, such fractional area progressively increasing in one pair and decreasing in the other pair with lineal displacement of such grid elements out of neutral position in one sense, thereby to produce an increase of resistance in one such grid element pair and a corresponding decrease of resistance in the other pair.

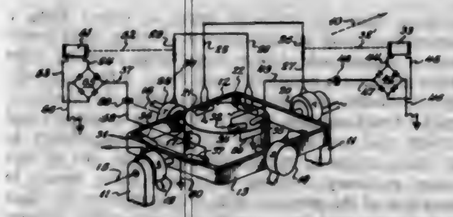
2,945,380
INERTIAL GUIDANCE DEVICE
Harold W. Pope, Paul F. Hayner, and Richard B. Henderson, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Oct. 2, 1957, Ser. No. 687,791
7 Claims. (Cl. 74—5.9)

1. An inertial guidance device, comprising: a member whose motion with respect to an axis provides an indication of movement of said device with respect to a set of reference co-ordinates, said member having a natural resonant frequency requiring damping; a housing for said member for supporting it for motion with respect to said axis; a viscous fluid within said housing in contact with said member for damping motion of said member resulting from said natural frequency, said fluid being subject to viscosity changes and changes in temperature; a pumping means coupled to said member for movement with said member in relation to said axis against the restraint of said fluid; a chamber in said housing mating with said pumping means for constraining said fluid against motion of said pumping means; a fluid passageway connected to said chamber for controlling flow of said fluid from said chamber in response to motion of said pumping means; an expansible volume compensating device within said housing having an end member movable along an axis in accordance with temperature variations; a piston coupled to said end member for



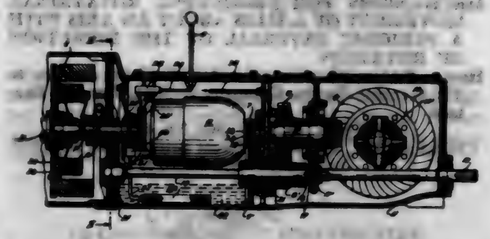
movement therewith along the second said axis, said piston having a control surface so shaped that motion of said piston into said fluid passageway, in accordance with temperature changes varies the effective opening thereof substantially in accordance with the inverse of the viscosity versus temperature relation, thereby to minimize the effects of variations in the viscosity of said fluid and maintain a constant damping characteristic over a predetermined temperature range; and guide means coupled to said housing for maintaining said piston concentric with said axis at all times while permitting said piston to translate along said axis.

2,945,381
REFERENCE SYSTEMS FOR A DIRIGIBLE CRAFT
John D. Weir, Huntington, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 29, 1958, Ser. No. 711,998
9 Claims. (Cl. 74—5.4)



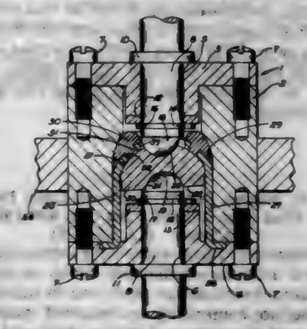
1. In a system providing a vertical reference for dirigible craft, a universally supported stable element having respective mutually perpendicular, normally horizontal axes, a normally closed circuit operable to maintain the element in an erected condition about one of its axes including a device responsive to the effect of gravity providing an electrical output in accordance with tilt of the element about the one of its axes and a torque motor at the other of the axes of the element controlled by the output of the device, and means for opening said circuit including a normally open switch of the liquid level type with capsule, electrode and fluid parts, the capsule being fixed in relation to the element and the parts being arranged to sense components of acceleration along the other axis and close only at a predetermined acceleration value.

2,945,382
DRIVE ARRANGEMENT FOR VEHICLES SUCH AS TRACTORS AND THE LIKE
Kasper Ritter, Kirchheim (Teck), and Wolfgang Haetter, Bezgenrieth, Wurttemberg, Germany, assignors to Allgaier-Werke G.m.b.H., Uhingen-Wurttemberg, Germany
Filed Feb. 3, 1958, Ser. No. 712,855
Claims priority, application Germany Feb. 4, 1957
13 Claims. (Cl. 74—15.8)



1. A drive for a vehicle such as a tractor or the like, comprising, in combination, torque converter means having an input end and an output end; first transmission means connected operatively with said input end of said torque converter means for transmitting a drive from an engine to said torque converter means; second transmission means connected operatively with said output end of said torque converter means for transmitting the drive from said torque converter means to wheels of the vehicle; a power take-off shaft; third transmission means by-passing said torque converter means, operatively connected with said first transmission means to be driven thereby, and terminating adjacent said power take-off shaft; and operator-actuated means cooperating with said second and third transmission means and operable at the will of the operator for optionally connecting said power tak-off shaft with said third transmission means for driving said shaft at a speed proportional to the speed of the engine and independent of the speed of the vehicle or with said second transmission means for driving said shaft at a speed proportional to the speed of the vehicle.

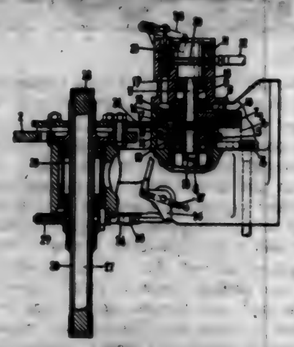
2,945,383
HERMETICALLY-SEALED COUPLING ASSEMBLY
Harold W. Aschinger, 422 Oak St., Ridgefield, N.J.
Filed Aug. 11, 1959, Ser. No. 833,028
8 Claims. (Cl. 74—18.1)



1. A hermetically sealed coupling assembly comprising a casing, a pair of coaxial shafts journalled in the casing and spaced from each other within the casing, the ends of the spaced shafts within the casing each having an eccentric spherical-surfaced head, a motion transmission body between the heads and in contact there-

with, spherical depressions in said motion transmission body in frictional contact with the eccentric heads, a cup-shaped elastic diaphragm secured internally of the casing, the motion-transmitting body being positioned internally of the cup-shaped elastic diaphragm, one of the shafts contacting one of said depressions through an aperture through said diaphragm.

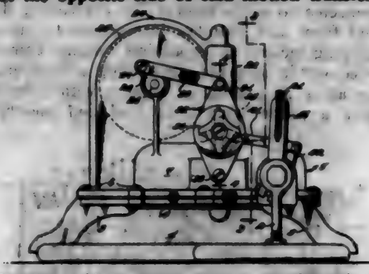
2,945,384
MECHANISMS FOR PRODUCING ROTATIONAL MOVEMENT OF A MASS ABOUT AN AXIS WITH A PERIODIC REVERSAL OF THE DIRECTION OF ROTATION
Horace Brinton, Kingsbury, London, England, assignor to The General Electric Company Limited, London, England
Filed Sept. 25, 1957, Ser. No. 686,167
Claims priority, application Great Britain Sept. 27, 1957
10 Claims. (Cl. 74—31)



1. A mechanism for producing rotational movement of a mass about an axis with a periodic reversal of the direction of rotation comprising an arm which is arranged to support a mass and which is mounted for rotation so as to enable the said mass to swing to and fro in an arc of a circle, a source of power for driving the said arm through a clutch device which is arranged so that the said arm can be driven by the said source of power in either direction, means arranged to operate the said clutch device to disconnect the drive to the said arm before the completion of each swing, a spring which is arranged to store at least the major part of the kinetic energy of the said arm and the said mass as strain energy in the spring when the said means arranged to disconnect the drive from the said source of power to the said arm has operated, the subsequent release of this strain energy of the said spring causing the said arm and the said mass to start the swing back in the reverse direction, and means arranged to reoperate the said clutch device after such a reversal to reconnect the drive to the said arm in the opposite direction.

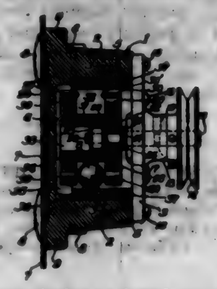
2,945,385
SPRINKLER
Burton R. Nelson, 816 W. Fairlawn Lane, Peoria, Ill.
Filed Aug. 26, 1957, Ser. No. 680,189
2 Claims. (Cl. 74—75)

1. Linkage mechanism operatively connecting a driven shaft and a member oscillatable about an axis parallel with the axis of said driven shaft and in laterally spaced relation thereto; comprising an elongated motion transfer lever disposed between said driven shaft and said oscillatable member and having one end thereof pivoted on a fixed axis, a crank secured to said driven shaft, a connecting rod having one end thereof pivotally connected to said crank and the other end thereof pivotally connected to the other end of said motion transfer lever, a shaft rotatably supported by said motion transfer lever intermediate the ends thereof in parallel relation to said axis of said driven shaft and the axis of said oscillatable member, a lever member having one end thereof secured to said last named shaft at one side of said motion transfer lever, an adjusting knob secured to said last named shaft at the opposite side of said motion transfer lever,



for adjusting said lever member about the axis of said last named shaft, a lever having one end thereof secured to said oscillatable member and a second connecting rod having one end thereof pivotally connected to said lever member and the other end thereof pivotally connected to the opposite end of said oscillatable member engaging lever.

2,945,386
MAGNETICALLY IMPELLED BALL VIBRATOR
Edwin F. Peterson, P.O. Box 151, Neponset, Ill.
Filed Mar. 10, 1958, Ser. No. 720,222
16 Claims. (Cl. 74—87)



1. In a vibratory device to impel an object along a predetermined path of operation to develop unbalanced forces to vibrate said device, comprising coacting units together forming a continuous guideway, a free magnetically attractable element disposed within the guideway formed by said coacting units, a structure to support and to orient said coacting units for movement relative to each other, magnetic means connected with one of said coacting guideway forming units, and drive means to actuate one of the coacting units with respect to the other unit and to set said free magnetically attractable element in motion within said continuous guideway under the influence of said magnetic means.

2,945,387
ROTARY ACTUATOR
Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 19, 1959, Ser. No. 794,280
16 Claims. (Cl. 74—89)

1. A fluid pressure operated rotary actuator, including, a cylinder, a reciprocable piston assembly disposed within said cylinder capable of fluid pressure actuation in both directions, an output element rotatably supported in said cylinder, a pair of sleeves having external helical spline teeth and disposed within said cylinder, one of said sleeves being restrained against rotation relative to said cylinder and the other of said sleeves being supported for rotation relative to said cylinder, said piston assembly having spaced sets of internal helical spline



teeth mating with said sleeves whereby reciprocation of said piston assembly imparts rotation to said rotatably mounted sleeve, and means connecting said rotatable sleeve and said output element.

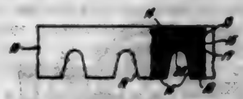
2,945,388
PLURAL SPEED PHONOGRAPH MECHANISM
Emmor V. Schneider, Alliance, Ohio, assignor to Consolidated Electronics Industries Corp., a corporation of Delaware
Filed Mar. 18, 1959, Ser. No. 800,294
14 Claims. (Cl. 74—199)



1. A plural speed phonograph mechanism, comprising, in combination, a frame, a turntable journalled on said frame, a drive motor carried on said frame, a drive shaft driven from said motor, a plurality of coaxial steps of different diameters on said drive shaft, a drive train selectably engageable with any one of said drive shaft steps and connecting with said turntable, first and second cams movably carried on said frame, at least one sloping surface and two plateaus on each of said first and second cams and extending substantially parallel to each other, first and second cam followers cooperating with said first and second cams, respectively, first motion transmitting means connected to said first cam follower to impart generally axial movements to said drive shaft as said first cam is moved from one plateau to another in cooperation with said first cam follower, second motion transmitting means cooperating with said second cam follower to impart a lateral movement to said drive shaft as said second cam is moved from one plateau to another in cooperation with said second cam follower, whereby as said first and second cams are moved, the second cam follower first laterally moves the drive shaft to disengage said drive train at one of said shaft steps and second the cooperation of the first cam follower on the sloping surface of the first cam effects generally axial movement of said drive shaft from one plateau to another and third the second cam follower in cooperation with another plateau permits lateral movement of the drive shaft to engage said drive train at another shaft step.

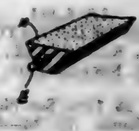
2,945,389
V-TRANSMISSION BELT
John J. Cannon, Jr., Philadelphia, Pa., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed May 21, 1958, Ser. No. 736,850
2 Claims. (Cl. 74—233)

1. An endless transmission belt having a truncated V transverse cross-sectional shape comprising a pull member, a longitudinally flexible and transversely stiff layer of material adjacent to said pull member and lying on the side thereof nearest to the truncated side of said belt, a layer of flexible soft rubber adjacent to said transversely stiff layer of material, a layer of stiff sections adjacent to



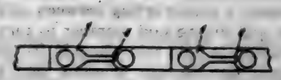
said soft layer of rubber, said stiff sections being separated from each other by grooves extending through the thickness of said sections and into said soft rubber layer, and said pull member and all of the foresaid layers being bonded together.

2,945,390
TRANSMISSION BELT AND THE LIKE
Russell J. Bush and Orville C. De Weese, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 24, 1956, Ser. No. 630,198
6 Claims. (Cl. 74—237)



1. An article of manufacture comprising, a body of elastomeric material adapted at least to be flexible longitudinally, a ball-chain reinforcing means embedded in said elastomeric body and including a plurality of hollow members as well as a plurality of individual link members having enlarged end portions adapted to fit inside said hollow members which are interconnected in pairs relative to each other by said link members, said enlarged end portions being free of encumbrance by said elastomeric body which can be elongated resiliently to limits governed by engagement of said end portions relative to said hollow members adjacent to openings in said hollow members through which said link members project.

2,945,391
SPROCKET CHAINS
Eric Cookson, 14 Wilkinson Ave., Blackpool, Lancashire, England
Filed Oct. 22, 1958, Ser. No. 769,000
Claims priority, application Great Britain Nov. 15, 1957
7 Claims. (Cl. 74—250)



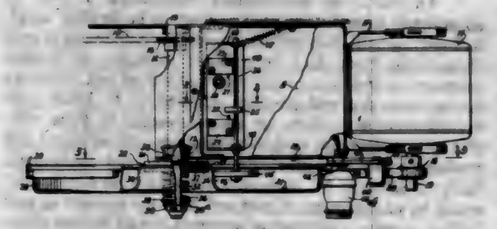
1. A sprocket chain comprising a plurality of links, pivot members pivotally joining successive links, at least each alternate link having a slot therein intermediate its ends and at least one adjacent link having a slot in its end portion registering with said first mentioned slot when said links are aligned, a spring associated with each of said first mentioned links and secured by one of said pivot members, a projection carried by said spring and extending into said slots to lock said links in alignment, and means for retracting said projection to release said links.

2,945,392
RESILIENT BALL RETURN
Walter E. Folkerts, Hazel Park, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,375
10 Claims. (Cl. 74—459)



1. In a power steering unit having a threaded worm shaft threadably mounted in a threaded power steering piston on ball bearings positioned in the threads of said shaft and piston, a ball bearing recirculator positioned on said shaft and forming a ball bearing crossover channel across the land of one thread of said shaft, and spring means engaging said recirculator and resiliently urging it against said worm shaft.

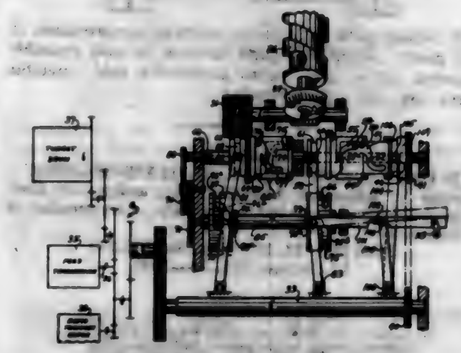
2,945,393
POWER OPERATOR
William A. Paulson, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Filed Jan. 26, 1956, Ser. No. 561,428
3 Claims. (Cl. 74—472)



1. In a power operator, the combination of, a frame, a driven shaft journaled on said frame, a pulley connected to said shaft and having a hub with a peripheral surface concentric with the shaft, a motor operable to turn said pulley and thereby turn said shaft, a member pivotally mounted on said frame to turn about an axis extending transversely of said shaft, an elongated rotary element journaled on said member and disposed generally parallel to said shaft with an end portion of the element disposed alongside said hub, a wheel secured to said end portion, a spring acting between said frame and said member and urging said member to turn about said axis in a direction to hold said wheel in frictional engagement with said hub surface whereby said pulley turns said element, and a device responsive to turning of said element and operable to control the actuation of said motor.

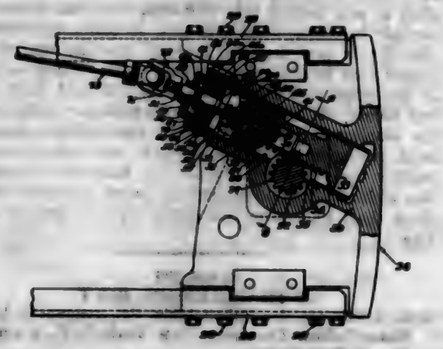
2,945,394
MACHINE TOOL
Harry Schoepe, Seven Hills, and Robert C. Ebersold, Chagrin Falls, Ohio, assignors to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed July 22, 1957, Ser. No. 673,465
16 Claims. (Cl. 74—472)

1. In a machine tool having an element to be advanced from an initial position and returned, a drive for advancing and returning said element comprising a drive member rotatable in one direction and reversed after a predetermined angular rotation and rotated in a direction opposite to said one direction, means connecting said drive member to drive said element to advance and return said element respectively upon rotation of said shaft in its said one and opposite directions respectively, and clutch means for connecting and disconnecting said drive to and from said member and including a clutch actuating member movable in a first direction to a clutch-engaged position wherein said drive member is effective to drive said element and in a second direction to a disengaged position wherein said drive is ineffective to



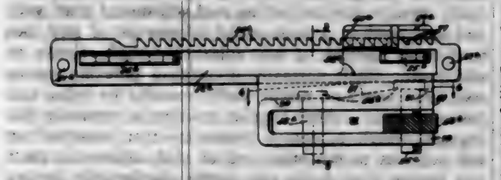
drive said element, a control member, means for rotating said control member in timed relation to said drive member and in a direction dependent upon the direction of rotation of said drive member, and operating means cooperating with said control member and operatively connected to said actuating member to actuate the latter in its said first and second directions respectively to its said positions upon movement in respective directions opposite to each other, said control member comprising means for actuating said operating means in one direction only upon rotation of said control member in one direction and in the opposite direction only upon rotation in the opposite direction.

2,945,395
ADJUSTABLE STEERING MECHANISM
Joseph F. Zidal, Sprotborough, Doncaster, England, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 19, 1959, Ser. No. 787,435
9 Claims. (Cl. 74—499)



1. In a vehicle steering mechanism adapted for connection at one end to an operator's control wheel and at the other end thereof to a vehicle steerable wheel assembly, the combination, comprising: a reciprocable driving member; motion transmitting means connectable between said reciprocable driving member and the operator's control wheel and operable for converting rotary motion of the operator's wheel to reciprocatory movement of the driving member; a shaft connectable at one end to the steerable wheel assembly and having a driven member mounted thereon and constrained for rotation therewith; said driven member being disposed in driving relation with said reciprocable driving member and operable for converting reciprocatory motion of the driving member to rotary motion for steering the steerable wheel assembly; and eccentric means engageable with said reciprocable driving member and adjustable for varying the distance between the axis along which said driving member reciprocates and the axis about which said driven member rotates so as to improve the driving relationship between said driving and driven members.

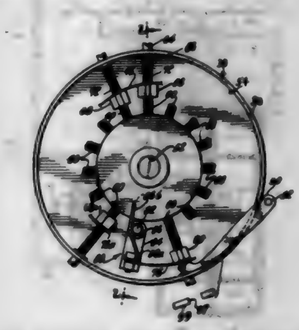
2,945,396
SLACK ADJUSTER FOR THE FOUNDATION BRAKES OF RAILWAY FREIGHT CARS
Percy G. Stultz, Jr., Roanoke, Va., assignor to Charles M. O'Boyle, Wilmington, Del.
Original application Dec. 5, 1955, Ser. No. 550,939. Divided and this application Jan. 28, 1957, Ser. No. 639,601
3 Claims. (Cl. 74—533)



1. A slack adjuster for the foundation brakes of railway freight cars comprising a rack bar adapted to be affixed to a stationary part of the car, a pawl housing longitudinally and vertically movable on the rack bar with freedom to move in slack take-up direction but restrained against movement in slack restoring direction, said housing having a lost-motion slot therein extending in the direction of longitudinal movement of the housing on the rack bar, said housing having an inclined surface adjacent the slot having its high portion at the slack restoring end of the slot, and a headed pin slidable longitudinally and vertically in the slot and adapted to be slidably connected for movement to a movable part of the brake rigging and with the head riding upon the inclined surface, said inclined surface and pin head so positioned relatively to the rack bar that when the head occupies the high portion of the inclined surface such head engages the rack bar to restrain substantial upward vertical movement of the housing to an extent that would free the pawl from the rack bar and when the head is on the low portion of the inclined surface such head is free of the rack bar permitting vertical upward movement of the housing and the release of its pawl from the rack bar.

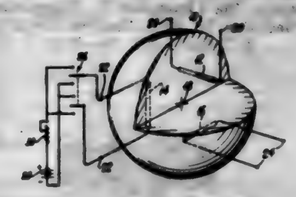
2,945,397
ADJUSTABLE CAM
Herschel R. Caler, Baltimore, Md., and Matthew Russo, Brooklyn, and Edward N. Singer, Queens Village, N.Y., assignors to the United States of America as represented by the Secretary of the Navy
Original application Aug. 26, 1957, Serial No. 680,368. Divided and this application Jan. 30, 1959, Ser. No. 795,884
1 Claim. (Cl. 74—568)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An element having a transversely adjustable, linearly extending reference surface comprising a support, an elongated laterally flexibly resilient member which is substantially nonextensible and noncontractible lengthwise under normal use, disposed along said support, a plurality of means arranged at intervals along said support and individually embracing and slidingly coupled to local sections of said member for holding said local sections of said member in a selected relation to said support, and each individually operable to adjust positively in both directions transversely of the length of the member the local section of said member to which it is coupled, means carried by said support and coupled to one



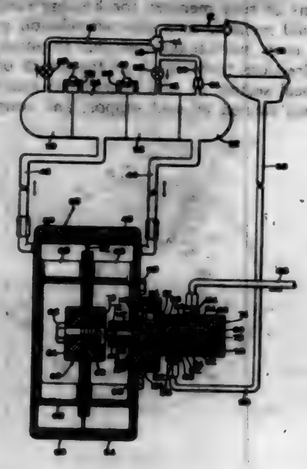
end of said member for anchoring it, and additional means also carried by said support and coupled to the other end of said member and applying thereto a lengthwise pull sufficient to hold said member taut under different conditions of adjustment of said local sections of said member and permit lengthwise adjustment of said member, said additional means including an arm pivoted to said support and at a part thereof which is spaced from its pivot, connected to an end of said member and rockable in a direction to pull said member taut, and resilient means for rocking said arm in said direction to pull said member taut.

2,945,398
WEIGHT BALANCING ARRANGEMENT
Edward J. Mallarkey, 5995 Shore Parkway, Brooklyn 36, N.Y.
Filed Oct. 2, 1957, Ser. No. 687,833
6 Claims. (Cl. 74—573)



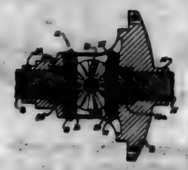
1. An arrangement for precisely balancing a body comprising in combination: a body having a center of gravity, and means carried by said body to shift said center of gravity comprising a totally enclosed chamber having walls which are electrically insulating and liquid proof, a quantity of liquid electrolyte within said chamber, two spaced metal electrodes in said chamber in intimate contact with said electrolyte, said electrolyte being free of voids between said electrodes, means including conductive members for applying an electric current through said electrolyte to alter the relative weights of said electrodes and thereby shift the center of gravity of said body, and resilient means to permit said electrolyte and said housing to expand and contract without creating voids in the electrolyte.

2,945,399
AUTOMATIC COUNTERBALANCE
Edgar W. Patterson, 10710 Hanton Ave., Downey, Calif.
Filed Dec. 15, 1955, Ser. No. 553,299
9 Claims. (Cl. 74—599)



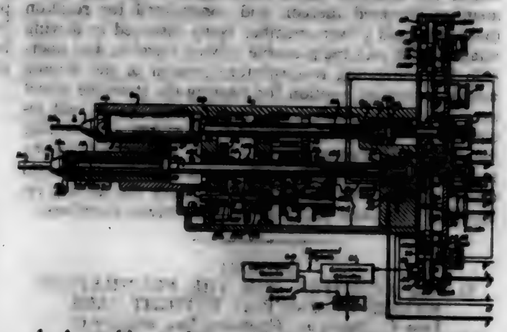
1. Apparatus for automatically balancing a reciprocating unit having an air-balancing system including a first pressure chamber, periodic means for operatively connecting said first chamber to said air-balancing system at substantially a fixed point in the cycle of said reciprocating unit to establish a pressure in said first chamber corresponding to a fixed point in the reciprocation cycle of said reciprocating unit, a second pressure chamber operatively connected to said air-balancing system to establish substantially the average pressure of said air-balancing system in said second chamber, and an output member operatively connected to both of said pressure chambers, said output member being operatively connectable to means for balancing said balancing system.

2,945,400
SELF LOCKING DIFFERENTIAL
Louis Dupras, 704 Champion St., Marquette, Mich.
Filed Mar. 18, 1959, Ser. No. 800,293
4 Claims. (Cl. 74—711)



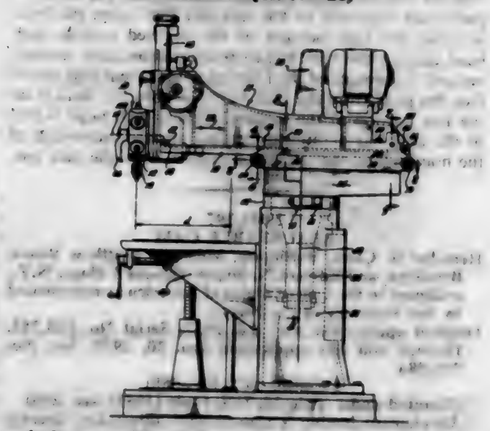
1. A power transmission assembly comprising a rotatable case having a pair of output shafts journaled therein along the rotational axis of said case, a pair of side gears respectively threadedly mounted on said shafts by convolutions of the same hand and disposed within said case and spaced from one another, a pinion shaft supported within said case and extending perpendicularly of the rotational axis of said case, pinions rotatably mounted on said pinion shaft and cooperable with diametrically opposed geared peripheral portions of each of said side gears, and means for effecting rotatable movement of said case.

2,945,401
MACHINE TOOL
Charles E. Hovey, Torrance, and Reid L. Watts, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Apr. 1, 1959, Ser. No. 803,496
10 Claims. (Cl. 77—2)



1. A machine tool comprising: a tool head; rotatable, coaxially disposed power and tool adjustment shafts; a tool head support adjacent one end of said power shaft, mounting said tool head on said power shaft for rotation therewith and for displacement radially of said power shaft; drive means connecting said adjustment shaft with said tool head to provide radial adjustment of said tool head upon rotation of said adjustment shaft relative to said power shaft; normally disengaged indexing means associated with said power shaft, operable to index said power shaft in a fixed angular position; a normally disengaged clutch having a driven member mounted on and adjacent to the other end of said adjustment shaft and having a rotatable and axially displaceable driving member, friction means frictionally engaging said adjustment shaft with said power shaft to cause rotation of said adjustment shaft with said power shaft when said clutch is disengaged; means connected to said driving member to axially displace said driving member into engagement with said driven member; and drive means connected to said driving member to drive said driving member.

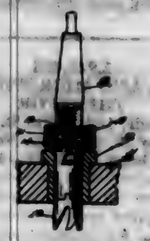
2,945,402
MOVABLE MOUNTING FOR MACHINE TOOL
Fred G. Burg, 4131 Don Bueno Place, Los Angeles 8, Calif.
Filed Nov. 4, 1957, Ser. No. 694,384
11 Claims. (Cl. 77—38)



1. In a machine tool structure: a support forming a

rectilinear guide; a tool member received in said guide for rectilinear movement therein; said guide including a pair of opposed surfaces between which the member is movable; one of said surfaces being plane; and means for clamping the tool member against movement, including means for urging the tool member toward said plane surface.

2,945,403
FRICTIONLESS STOP COLLAR FOR THE ARBOR OF A DRILL PRESS OR OTHER MACHINES
Ernest Egger, 404 Illinois St., Joliet, Ill.
Filed Feb. 19, 1958, Ser. No. 716,089
1 Claim. (Cl. 77—53)



In combination with a drill press having a fixture component, a piece part supported on the fixture component, a cutter removably attached to the lower end of the piece part, an arbor extending through the fixture component, and a drill bushing surrounding the arbor and supported on top of the fixture component, a frictionless stop collar comprising a hollow body member with a central screw threaded opening for removable attachment to the arbor, said body member having a flat bottom portion and a surrounding wall, said bottom portion having a plurality of spaced holes, a like number of balls rotatably mounted in said bottom portion with one ball extending partially through each hole, a plate positioned in said hollow body member on top of said balls, a cap removably engaging said body member, a plurality of screws extending into and between said cap and said body member for removably attaching them together, said collar movable with the arbor and said balls rotatable on the top surface of the drill bushing.

2,945,404
GROOVING AND RECESSING TOOL
Leopold Bannastark, Jr., Beaumont, and Roland G. Rawlings, Beaumont, Calif.; said Rawlings assignor to said Bannastark
Filed July 1, 1958, Ser. No. 746,824
3 Claims. (Cl. 77—58)

1. A grooving tool of the character described, comprising:

a body having a bore, the axis of which is coplanar with the axis of said body and inclined at an angle thereto, the body also having a slot extending axially of and communicating with said bore;

a tool post slidable within and co-axial of said bore;

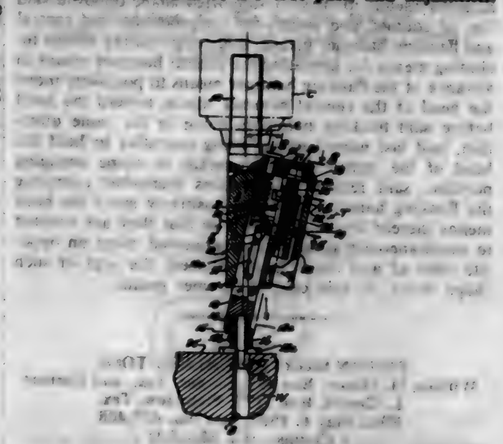
a keyway having upper and lower limiting boundaries cut into said tool post parallel with the axis thereof;

a pin attached to said body projecting into said keyway and adapted to engage the upper and lower limiting boundaries thereof;

said tool post projecting beyond the tool body and slidable therewithin between the limits determined by the limiting boundaries of said keyway;

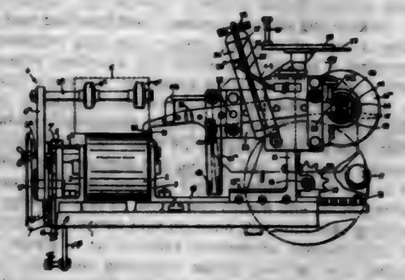
a cutting tool mounted on the lower end of said tool post;

abutment means fixed relative to said tool post and adapted to bear against a work piece being cut by said tool bit to cause relative movement of the tool post and the body as the body approaches the work piece; a traveling block having a lug movable within said slot and extending therethrough into said bore, said lug being adapted to abut against one end of the tool post; and adjustment



screw means engaging threads cut into said traveling block, said screw means being rotatably mounted in said body but constrained from axial movement relative thereto; and lock means operable to secure the position of said lug member along said slot.

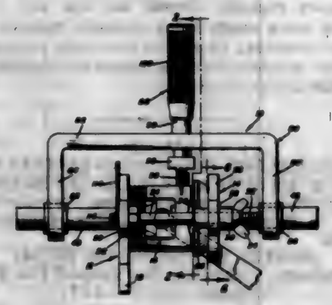
2,945,405
APPARATUS FOR EXPANDING METALS WITH CURVED SURFACES SUCH AS PISTONS
Philip Charlton, Kelburn, Wellington, New Zealand, assignor to Motor Specialties Limited, Auckland, New Zealand
Filed Feb. 13, 1956, Ser. No. 565,240
Claims priority, application New Zealand Feb. 22, 1955
7 Claims. (Cl. 78—13.1)



1. Apparatus for expanding metal shapes of concavo-convex configuration comprising an anvil having a convex shape supporting surface, means adapted to hold a shape to be expanded on said surface with the convex face of the shape engaging said surface along a tangential line of contact, a plurality of reciprocable hammer means adapted to be reciprocated relative to the convex surface of the anvil, said hammer means including a central hammer means having a striking head adapted to produce a depression in the concave face of such a supported shape and to cause metal to flow to form protuberances projecting from the concave face of a supported shape at least on opposite sides of the depression, and flanking hammer means having a striking head means disposed immediately adjacent each side of the head of the central hammer, the shape of the striking head means of the flanking hammer means being such as to be adapted to

depress the protuberances to cause the metal to flow laterally away from the depression to expand the shape, means for supporting and positioning the hammer means relative to the anvil to dispose the head of the central hammer means to strike a supported shape opposite said line of contact, and means for reciprocating said central and flanking hammer means, said reciprocating means including means for operating the central hammer means in advance of the flanking hammer means to positively move the head of the central hammer means toward the anvil before said flanking hammers move in the same direction, said last named means being operative to hold the head of the central hammer means in shape engaging position, said reciprocating means thereafter operating the flanking hammer means to positively move the head means thereof toward the anvil so that they are adapted to simultaneously strike such a supported shape on opposite sides of and immediately adjacent the area of such shape struck by said central hammer means.

2,945,486
PISTON SKIRT KNURLING TOOL
William H. Moore, Box 991, Borger, Tex., and Herbert L. Gerald, Box 1177, Plainview, Tex.
Filed May 6, 1957, Ser. No. 657,488
3 Claims. (Cl. 80—5.1)



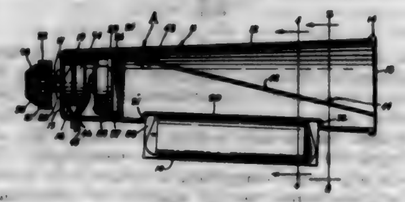
1. A knurling tool for pistons, said knurling tool comprising a pair of opposed piston clamping members for supporting a piston in position for knurling, means adjustably urging said piston clamping members into piston clamping relation, aligned shafts extending in opposite directions from said piston clamping members, a carrier, said carrier bridging the space between said piston clamping members and having end portions journaled on said shafts for rotational and longitudinal movement, a knurling head, and means connected to said knurling head mounting said knurling head on said carrier for rotational and longitudinal movement relative to a piston being knurled, one of said piston clamping members having an extension receivable in a support structure, such as a vise, whereby the knurling tool may be readily supported.

2,945,487
SHIELDED WIRE DIELECTRIC EJECTOR
Emilio A. Beltrani, 2173 W. 9th St., Brooklyn 23, N.Y.
Filed Sept. 23, 1959, Ser. No. 841,896
2 Claims. (Cl. 81—3)



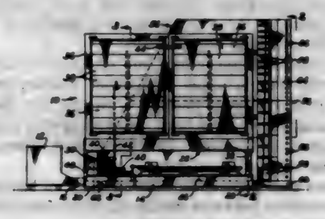
1. An ejector tool, particularly adapted for stripping the shielding braided of shielded wire cable from an inner conductor, comprising a handle, an elongated tubular shielding braid piercing member terminally carried by said handle, said piercing member having a flat rounded point at the end remote from said handle, said flat rounded point having an open arcuate cross-section adapted to partially circumscribe said inner conductor, a slidable ejector rod concentrically carried within said piercing member, a cavity in said handle, said ejector rod extending into said cavity, a collar detachably fixed on said rod and adapted to slide in said cavity, a cavity cap removably and terminally fixed in said cavity, an aperture in said cavity cap, said rod slidably extending through said aperture, and a helical spring concentrically fitted about said rod between said rod collar and said cavity cap for urging said rod toward said flat rounded point.

2,945,488
HARMONICA AND MICROPHONE PICK-UP THEREFOR
Edward H. Turlinde, 184 W. 7th St., St. Paul 2, Minn.
Filed May 28, 1954, Ser. No. 537,692
4 Claims. (Cl. 84—1.04)



1. In combination, an elongated tubular member having a closed end and an open end, a microphone supported within said tubular body adjoining said closed end, said tubular body having an elongated slot therein between said microphone and the open end of said body, a harmonica releasably supported within said elongated slot, said slot supporting said harmonica with one side thereof projecting into said tubular body, a baffle extending diagonally across said tubular body, said baffle being relatively close to said harmonica near the open end of said tubular body and relatively far from said harmonica near the opposite end of said baffle.

2,945,489
PIPE ORGAN
Val Holsinger, 3944 Walnut Grove, South San Gabriel, Calif.
Filed Apr. 1, 1957, Ser. No. 649,782
9 Claims. (Cl. 84—348)



1. In a pipe organ, the combination of: a blower; an elongated reservoir connected to said blower; a pipe chest in fluid communication with said reservoir; a tremolo bellows; and an elongated tremolo conduit located within

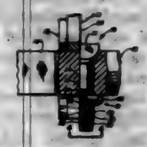
and extending through said reservoir along the major axis thereof and having one end terminating at said pipe chest and its other end terminating at said tremolo bellows.

2,945,410
COMBINATION MOISTURE DEHYDRATOR AND WIND-BLOWN MUSICAL INSTRUMENT
John J. Rander, 1500 Skyway Road, Storm Lake, Iowa
Filed May 16, 1957, Ser. No. 659,542
4 Claims. (Cl. 84—397)



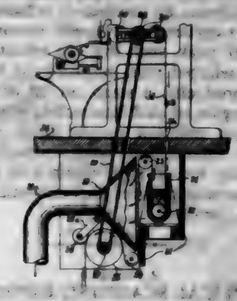
1. In combination with a windblown musical instrument having a tube, a moisture release valve opening in said tube, and a spring actuated means secured to said tube for closing said valve opening; an elongated disposable flexible element with moisture absorbing capabilities having a portion of its surface adjacent one of its ends in communication with the outside of said valve opening, said disposable element being held in compression against said valve opening by said spring actuated means, and a coating means impervious to moisture on the exterior surface of said element except at the area of contact with the valve opening.

2,945,411
DRAW BAR PIN HAVING A SPRING OPERATED ABUTMENT ELEMENT
Theodore F. Thompson, Des Moines, Iowa, assignor of one-half to Harry H. Hartupee, Des Moines, Iowa
Filed July 2, 1957, Ser. No. 669,652
1 Claim. (Cl. 85—7)



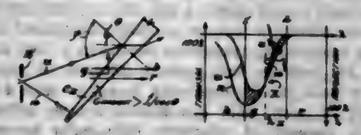
A connecting unit comprising an elongated cylindrical body member having an enlarged head portion at one end thereof, the underside of said portion having an arcuate bearing surface formed about an axis transverse to and extending laterally from said body member, one side of said body member and said head portion being flat and in a single plane parallel to the axis of said body member, a transversely extending bore formed in said body member and spaced longitudinally from said head portion, an abutment pin element movably inserted in said bore for axial movement therethrough, one end of said pin element adjacent said flat side being flat and the other end being rounded, said body member having further a passage formed internally thereof and extending longitudinally therein from the free end, said passage intersecting at its inner end with said bore, a two-legged U-shaped spring element inserted in said passage and having the bight portion thereof placed at the end of said passage opposite the bore end, one leg of said spring element being shorter than the other leg and interlocked with said body member along one side of said passage, and the other leg being retractably forced against the opposite side of said passage and extending into said bore wherein it operatively contacts said pin element to force said rounded end outwardly of the bore.

2,945,412
SLIP-FREE FISH NETTING AND METHOD OF MAKING SAME
Roland Johnson, Drummondville, Quebec, Canada, assignor to Dominion Textile Company Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Mar. 27, 1956, Ser. No. 574,173
Claims priority, application Canada Mar. 1, 1956
5 Claims. (Cl. 87—1)



1. A method of making fish netting which comprises forming netting on a netting machine from twine of a continuous filament high polymer synthetic resin by knotting and keeping such netting after knotting under a tension sufficient to maintain the knots tight, then continuing to keep the netting under tension after formation and advancing the netting while still under tension from the loom through an impregnating bath at room temperature containing a solution of a solvent in which the high polymer synthetic resin is insoluble and rosin in amount from about 1% to about 10% by weight thereby to impregnate the netting with the solution and removing the netting from the impregnating bath, while still under tension, and removing the solvent to leave a deposit of rosin impregnated in the twine of the netting whereby the form of the knots is retained, the formation, impregnation and solvent removal being carried out at a temperature which will not heat-modify the twine.

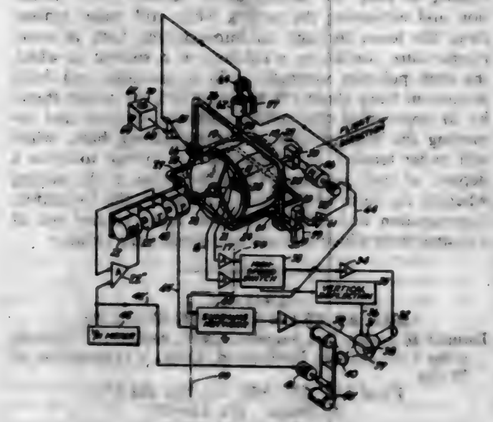
2,945,413
OPTICAL BEAM LINKING SYSTEMS
Donald H. Kelly, Los Angeles, Calif., assignor to Technicolor Corporation, Hollywood, Calif., a corporation of Maine
Filed Aug. 16, 1954, Ser. No. 448,874
4 Claims. (Cl. 88—1)



1. In a color selective optical device wherein rays of an imaging system follow divergent paths through said device; a planar transparent support oriented obliquely to said rays; on said support a dichroic coating having several layers of dielectric material of alternatingly different indexes of refraction and capable of reflecting a selected color band and of transmitting the remaining colors of the visible spectrum due to interference effects, said rays striking said support at different angles of incidence between two rays of greatest and smallest angles of in-

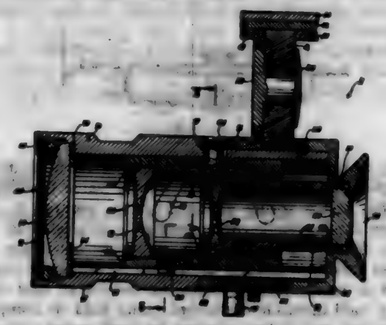
cidence, respectively, and said dichroic coating having a tapered thickness varying approximately inversely with the cosine of the incident angles of said rays but deviating significantly therefrom to an amount which presents, to a selected one of said divergent rays striking the said coating at said greatest angle of incidence, an effective optical thickness to produce a reflected range having a peak at a certain wave length within said reflected band, and which presents to a second selected ray striking the said coating, at said smallest angle of incidence, an effective optical thickness to produce a reflected range having a peak at a certain wave length removed from said first wave length peak, such that the reflection characteristics for said selected rays, respectively, have an intersection point producing a steep cut off of said reflected ranges at the region of said intersection point; and means for limiting said reflected ranges to an effective band including said intersection point; whereby essentially uniform intensity for all rays within said effective band and a reflection-transmission characteristic with a steep cut off can be obtained.

2,945,414
OPTICAL SCANNING DEVICE
Henry Blackstone, Northport, N.Y., assignor to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed Mar. 16, 1956, Ser. No. 572,079
16 Claims. (Cl. 88—1)



1. Optical scanning and display means mounted on a body subject to roll about a roll axis comprising energy-responsive means, a scanner including an optical element imaging said energy-responsive means in a field of view, means for moving said optical element to cause the image of said energy-responsive means to scan a line in the field of view, said last-defined means including a rotatable support of relatively high polar moment of inertia journalled for rotation about a scan axis extending substantially in the direction of the roll axis, frame means supporting said scanner for rotation about said scan axis, video-display means responsive to the output of said energy-responsive means and including a sweep synchronized with scan rotation, and electrical means responsive to the orientation of said frame means about said scan axis and in biasing relation with said sweep, whereby, in the presence of roll of said frame means about said axis, successive lines detected by said scanner may be presented in properly correlated relation on said display means.

2,945,415
VIEW FINDER FOR ZOOM LENS
Edwin W. Rockwell, Middle Village, Marvin Kaplow, Peekskill, and Alex J. Weinstein, Mount Vernon, N.Y., assignors to The Educalite Optical Company, Inc., Peekskill, N.Y., a corporation of New York
Original application Dec. 6, 1956, Ser. No. 627,502. Divided and this application May 31, 1957, Ser. No. 662,721
3 Claims. (Cl. 88—1.8)

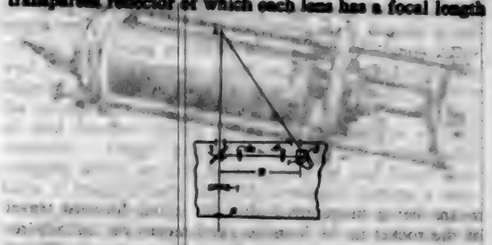


1. In a viewfinder for use with a zoom-effect lens, a barrel adapted to be disposed longitudinally alongside of said zoom-effect lens, said barrel being formed with a through slot extending partially circumferentially of said barrel intermediate the ends thereof, said barrel being formed with an internal groove extending longitudinally of said barrel, a bracket clamped about said barrel adjacent to and spaced from said slot and adapted for attachment to a zoom-effect lens, spur-gear means carried by said bracket on one side of the barrel for operative connection to a zoom-effect lens, an external ring gear rotatably circumposed about said barrel in meshing engagement with spur gear, a pin carried by said ring gear and projecting radially inward therefrom through said barrel slot and interiorly of said barrel for rotation with said ring gear relative to said barrel, positive-lens means fixed in said barrel adjacent to each of its opposite ends, a tubular lens mount longitudinally and slidably received in said barrel, said tubular lens mount being formed with a generally spiral cam groove slidably receiving the projecting end of said pin, a second pin projecting radially outward from said lens mount slidably into said longitudinal barrel groove to constrain said lens mount to longitudinal movement in said barrel upon rotation of said ring gear, and a negative lens carried by said tubular lens mount for movement therewith toward and away from said respective positive lens means.

2,945,416
RANGE FINDER OF THE OVERLAPPING IMAGE TYPE FOR CAMERAS AND THE LIKE
Masahiko Fukuta, Nakano-ku, Tokyo, and Saburo Murakami, Kawasaki, Japan, assignors to Nippon Kogaku K.K., Tokyo, Japan, a corporation of Japan
Filed May 16, 1955, Ser. No. 509,196
In Japan June 2, 1949
Public Law 619, Aug. 23, 1954
Patent expires June 2, 1969
2 Claims. (Cl. 88—2.4)

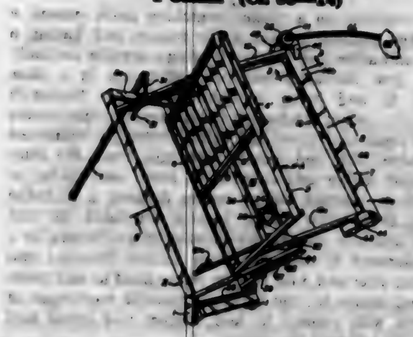
1. A range finder of the overlapping image type comprising a first viewing aperture, a semitransparent reflector fixed in position, an objective, an eyepiece aligned with the objective, the reflector and the first aperture to pass the incident light rays from an object viewed in substantially a straight path to the eyepiece, a second viewing aperture spaced from the first aperture a fixed distance, a pentagonal prism having a roof for inversion

receiving the light from the second aperture and reflecting it in reverted condition to the semitransparent reflector, the reflector reflecting the light from the prism through the objective to the eyepiece in superimposed relation to the light from the first aperture, and a pair of spaced convex lenses between the prism and the semitransparent reflector of which each lens has a focal length



equal to one quarter the difference in the lengths of the light paths from the object viewed directly through the semi-transparent reflector and indirectly therethrough by way of the pentagonal prism, the lenses of the pair being at equal distances from the prism and reflector respectively and spaced a distance equal to twice their focal length from each other.

2,945,417
APPARATUS AND MECHANISM FOR CONCENTRATING SOLAR RAYS ON OBJECTS TO BE TESTED
Coleman R. Caryl, Maricopa County, near Phoenix, Ariz. (7740 N. 15th Ave., Phoenix, Ariz.), and Walter E. Helmick, 920 Rosbury Road, San Marino, Calif.
Filed May 12, 1958, Ser. No. 734,681
1 Claim. (Cl. 88—14)



Apparatus for concentrating solar rays on samples of material to be tested as to color fading, composed of a base supporting frame, a mirror-holding frame pivotally mounted on said base frame so that said mirror-holding frame may be adjusted on its axis according to its latitudinal position on the earth and according to the season of the year, a plurality of mirrors mounted on said mirror holding frame at angles so that the rays of the sun striking said mirrors will converge and concentrate above the mirrors on said frame, means for adjusting the angle of the axis of said pivotal support including mechanical means attached to one end of said pivotal support to raise and lower said end relative to a horizontal plane at the point where said base frame is mounted, mechanism for tilting said mirror frame on its pivotal supports to cause said frame, and the mirrors thereon, to follow the apparent movement of the sun from dawn until sunset, a target surface supported centrally above said mirror frame and having a narrow strip extending parallel to said axial supports of said frame and means for supporting samples of material to be tested on said target surface and mechanism for blowing ambient air over the surfaces of said samples to be tested in order to remove excess heat caused by the concentration of the orange, red and infra-red rays of the solar spectrum.

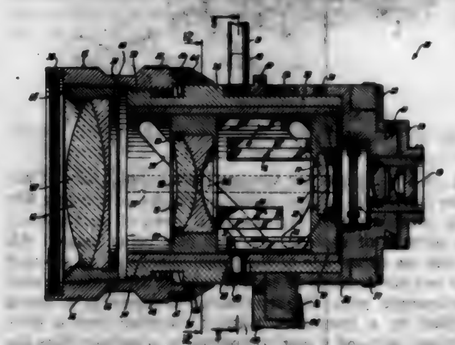
2,945,418
STEREOSCOPIC FILM STRIP VIEWER
Edouard Hudsley, Clichy, France, assignor, by mesne assignments, to Librairie Hachette, Paris, France, a corporation of France
Filed Mar. 14, 1958, Ser. No. 721,584
Claims priority, application France Mar. 14, 1957
3 Claims. (Cl. 88—31)



1. A stereoscope for viewing stereoscopic pairs of pictures carried by a usual kinematographic supporting film strip provided with two marginal rows of perforations, the pictures of each stereoscopic pair being located side by side on either side of the longitudinal axis of the strip and two perforations of each row being associated to each stereoscopic pair, the stereoscope comprising a casing divided by a transverse vertical partition into a front compartment and a rear compartment, a presser plate disposed within said front compartment, and spaced from said partition, said partition defining with the presser plate a guideway for slidably receiving the film strip, said partition and presser plate being each provided with two openings located for registering with any pair of pictures of the film, and being further each provided with two lateral elongated slots each facing one of the rows of perforations in the film, optic means rigid with the side of the partition over which the film is to be engaged, a driving mechanism lodged within said rear compartment comprising a slidable system adapted to be moved between an upper position and a lower position, said mechanism also comprising actuating means for moving said system towards said lower position, return means for moving back said system towards said upper position, and stop means for limiting the movements of said system between said positions, said slidable system comprising a carrier plate sliding along said partition and carrying two rearwardly directed studs disposed on a horizontal line, said carrier plate being provided with a central hole and with a pair of lower apertures located below said line and each facing one of the slots in the partition, said slidable system further comprising a driving member provided with a central hole facing the central hole of said carrier plate and with two recesses each receiving the free end of one of said studs, said driving member further carrying a pair of driving projections passing through said pair of lower apertures, said studs and recesses defining an axis around which said driving member is adapted to rock between an operative position in which said projections engage the perforations in the film and an inoperative position in which said projections release the perforations, said driving member further carrying two rearwardly directed abutments on either side of said rocking axis, said actuating means comprising a lever pivotally secured to a side of the casing and extending across said partition beyond the opposite side of the casing, a section of said lever constituting a push

member disposed between said abutments in the driving member, said push member carrying a forwardly directed rod passing with some clearance through the central holes of said carrier plate and driving member, said carrier plate carrying a bent spring extending across the central hole of this plate above said rod of the lever for limiting the rocking of the driving member during the return movement of the slidable system, said return means comprising a spring for upwardly urging said lever.

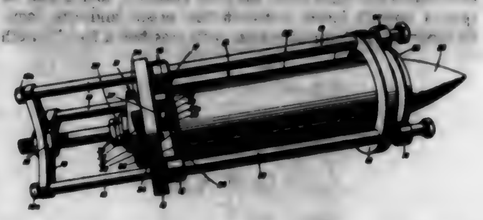
2,945,419
VARIABLE FOCAL LENGTH LENS SYSTEM FOR MOVIE CAMERAS
Edwin W. Bechtold, Middle Village, Marvin Kaplow, Peekskill, and Alex J. Wahastuk, Mount Vernon, N.Y., assignors to The Educalite Optical Company, Inc., Peekskill, N.Y., a corporation of New York
Filed Dec. 6, 1955, Ser. No. 551,302
3 Claims. (Cl. 88—57)



1. In a lens system for a camera, the combination comprising a tubular outer shell formed with at least one longitudinally extending internal guideway, a tubular inner liner rotatably supported in said outer shell and shaped to define a pair of cam surfaces, a pair of lens mounts slidably in said liner, a lug on each of said lens mounts each engaging one of said cam surfaces and received in a guideway of said shell, said lugs serving to constrain said lens mounts to movement longitudinally of said shell in a relation determined by said cam surfaces when said liner is rotated in said shell, and a group of spaced slide bars extending from each of said lens mounts toward the other of said lens mounts and slidably engaging said liner to prevent canting of said lens mounts in said liner, the slide bars of one group being offset out of alignment with the slide bars of the other group, each of said lens mounts being formed with a plurality of spaced openings in respective alignment with the slide bars of the other lens mount to receive the latter when said mounts are slid toward each other.

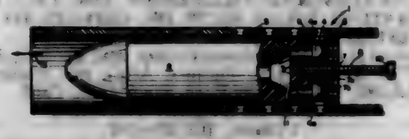
2,945,420
ROCKET LAUNCHER
Horace W. Babcock, Pasadena, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed June 13, 1946, Ser. No. 999,160
2 Claims. (Cl. 89—1.7)

1. In combination, a spin-stabilized rocket, a rocket launcher having bearings in planetary disposition around the forward and rear ends of the rocket, the rocket being larger in diameter at its forward end portion whereby the rear end portion of the rocket clears the forward bearings in passing through said bearings and the rocket is in free flight immediately upon movement of said forward and rear portions clear of the respective bearings, a reaction turbine rotatably mounted on the launcher and operable by the blast from the rocket, coupling means initially connecting the rocket and turbine for transmitting rotation of the turbine to the rocket, the coupling



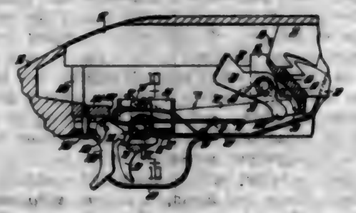
means being inoperative after an initial forward travel of the rocket in the launcher, and means for initially restraining the rocket against forward movement sufficient to clear said bearings while permitting rotation of the rocket.

2,945,421
SPIN ROCKET AND ROTATING SCREW TYPE LAUNCHING APPARATUS
Noel W. Pion, Covina, Calif., assignor to North American Aviation, Inc.
Filed Nov. 30, 1956, Ser. No. 625,549
7 Claims. (Cl. 89—1.7)



1. In combination a rocket launching guide means, a spin rocket located in said guide means and having a forward and after end, a screw having a section coaxially threaded into the after end of said rocket in a close tolerance fit and being rotatable forwardly therewith throughout a rocket pre-launch spin phase, a torque means threaded upon said screw and being abuttingly connected to, rotatable with and axially separable from the after end of said rocket and adapted to cause said rocket to spin, a screw adapter having means defining a threaded aperture, said screw being loosely threaded in said threaded aperture rearwardly of said torque means in a looser tolerance fit than the screw section threaded into said rocket after end, said adapter being fixed to said guide means and means to stop forward rotatable movement of said screw with respect to said adapter and cause said rocket to be released therefrom.

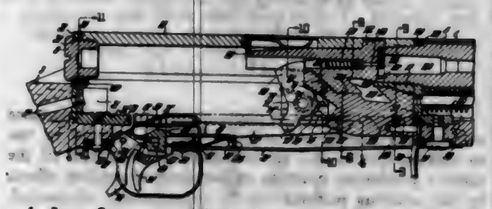
2,945,422
FIREARM
Harold D. Allyn, 10 Sumner Ave., Springfield, Mass.
Filed June 19, 1956, Ser. No. 592,430
4 Claims. (Cl. 89—154)



1. In a firearm including a stock, a receiver, a breech bolt reciprocable within the receiver and slide block

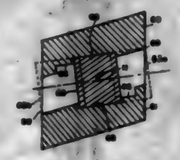
reciprocable beneath the breech bolt with the breech bolt and slide block having complemental cam means for effecting unlocking and locking between the breech bolt and slide block in rearward and forward movements, the improvement in a fire control mechanism including, a spring-biased hammer having a tail portion and being pivotally mounted on the slide block and having a sear notch on a forward face thereof, a sear having a tail portion and being pivotally mounted on the slide block and having a hammer point on a rearward extremity thereof complemental to the sear notch of said hammer for releasable engagement therewith against the tension of said hammer spring in the cocked position of said hammer, a trigger pivoted relative to the receiver for swinging about an axis between normal and firing positions, a longitudinally movable connector having a rearward portion mating with said trigger and having a forward portion operatively related to the tail of said sear for impelling said sear to hammer releasing position for effecting the fall of said hammer upon actuation rearwardly of said connector by the movement of said trigger to firing position, a spring means for biasing said connector upwardly and forwardly as said trigger assumes normal position and said sear assumes cocked position, a buffer plate fixed to the stock rearwardly of said connector for camming said hammer against the tension of said hammer spring into cocked relationship with said sear on the rearward reciprocation of the slide block with the tail of said hammer abutting said buffer plate and effecting rotation of said hammer on its pivotal connection with the slide block and for retarding the rearward travel of the slide block to a stop at the extreme limit of its rearward stroke.

2,945,423
FIREARM
Harold D. Allyn, 10 Sumner Ave., Springfield, Mass.
Filed June 25, 1957, Ser. No. 667,883
4 Claims. (Cl. 89—199)



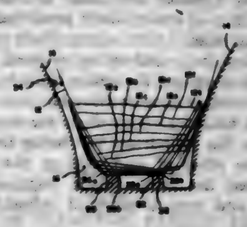
1. In a firearm and including a stock and barrel and receiver and breech bolt, the improvement of a dual means for holding the receiver and barrel relative to the stock comprising: a first means including, a slotted buffer plate fixed to the stock and having an opening extending therethrough, the rearward end of the receiver having a rearwardly facing annular tongue circumferentially disposed adjacent an annular opening in the receiver, an annular rear cap threadedly engageable through the opening in said buffer plate with the rearward end of the receiver for holding the receiver and stock in locked engagement and having a plurality of detent cuts in circumferentially spaced relation on the outer periphery thereof, and a rear cap detent yieldingly held by said buffer plate and having a portion selectively receivable in one of the detent cuts on said rear cap; and a second means including, the breech end of the barrel being threadedly engageable with the receiver, a front bedding plate having an opening extending therethrough, said front bedding plate being receivable over the breech end of the barrel and held in abutting relation between the forward end of the receiver and the barrel, and a stock attaching member for extending through the stock and threadedly engaging said front bedding plate for attaching the stock to the barrel.

2,945,424
GEAR FINISHING WITH LEAD CORRECTION
Max R. Munday, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Jan. 16, 1956, Ser. No. 559,197
8 Claims. (Cl. 90—1.6)



1. A method of finishing gears to correct lead errors which comprises meshing a gear member and a gear-like tool member narrower than the gear member with their axes crossed to cause the teeth of the tool member to extend relative to the gear member at the desired lead and with the tool member located substantially midway between opposite sides of the gear member, rotating one of said members directly and the other member solely by the meshed engagement between said members, relatively feeding said tool member into said gear member radially thereof to a depth such that the teeth of the tool member are engaged from end to end, thereafter while continuing rotation relatively traversing said members in a plane parallel to the axes of both of said members in opposite directions, terminating such traverse while guiding action continues between the teeth of said members, thereafter repeating radial feed without traverse and successive reverse traverse to extend the finishing action to the ends of the gear teeth.

2,945,425
METHOD AND APPARATUS FOR DEBURRING GEARS
John J. Sigmon, Jr., and Warren C. McNabb, Detroit, and Henry O. Verschaeve, St. Clair Shores, Mich., assignors to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 30, 1956, Ser. No. 619,234
5 Claims. (Cl. 90—1.6)



1. A tool for deburring the top side edges of the teeth of a gear comprising a toothed gear-like tool generally conjugate to the gear and having a pair of laterally spaced deburring ribs extending longitudinally of the bottoms of the spaces between its teeth in position to engage the top side edges of the gear teeth, each of said ribs having cutting edges at the intersection between its top and side surfaces.

3. The method of removing burrs from the crests of gear teeth which comprises rotating the gear in mesh with a gear-like tool having a pair of circumferentially spaced ribs each provided with oppositely directed cutting edges located adjacent the bottom of the tooth spaces of the cutter.

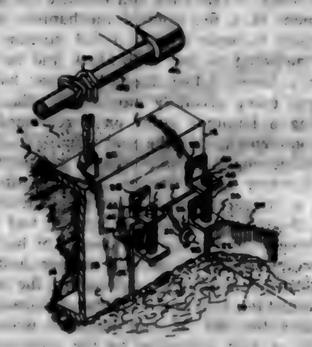
2,945,426
FLY CUTTER TOOL
Clifford A. Buchan, 1611 Fremont, Marshalltown, Iowa
Filed July 2, 1956, Ser. No. 595,191
1 Claim. (Cl. 90—11)



A fly cutter tool comprising an elongated tool holder having bifurcated end portions at one end and oppositely disposed pin receiving recesses in sides thereof adjacent the other end, a cutter blade received between the bifurcated end portions and pivotally secured thereto at one end of the bifurcations, a cylindrical bar in which said holder is axially adjustable, said cylindrical bar having parallel cutter blade receiving slots longitudinally disposed on either side of its lower end and terminating in seats at their bottom ends, said cylindrical bar also having a pair of oppositely disposed elongated pin receiving slots extending lengthwise in the upper portion thereof, a pair of semi-cylindrical sleeves having inwardly extending pin means thereon extending through said pin receiving slots and into said respective pin receiving recesses in the tool holder as said sleeves are placed about said cylindrical bar, a ring member received over said cylindrical bar and housing said pair of semi-cylindrical sleeves and a readily detachable lock means for securing said ring on said sleeves, a closure plug closing the lower end of the cylindrical bar, a spring pressed piston member reciprocal axially within the plug and adapted to be contacted by said cutter in its downward movement whereby the cutter is guided in pivoting outwardly in said cutter blade receiving slots to dispose the cutting edges of the cutter blade on either side of the cylindrical bar, said spring pressed piston yielding downwardly to permit the cutter blade to move downwardly into seating engagement with said seats at the bottom of said blade receiving slots, the top edge of one of said slots in the cylindrical bar being lower than the top edge of the other of said slots so that as said tool holder is raised the cutter blade engages said lower edge to pivot and retract into said cylindrical bar.

2,945,427
WIPER BLADE ATTACHMENT FOR SCREED BOARDS
Joseph C. Gerk, Denver, Colo., assignor of one-fourth to Thomas A. Cox, and one-fourth to Delbert M. Cox, both of Denver, Colo.
Filed Jan. 3, 1958, Ser. No. 706,952
3 Claims. (Cl. 94—45)

1. The combination, with the screed board of a concrete paving finishing machine, of a wiper blade assembly for cleaning excess concrete from an adjacent, previously paved surface in advance of the screed board, comprising a wing projecting forwardly laterally from the screed board; and means connecting the wing to said screed board, including a main plate mounted on the screed board for up-and-down movement in face-to-face contact with the screed board, said main plate being connected



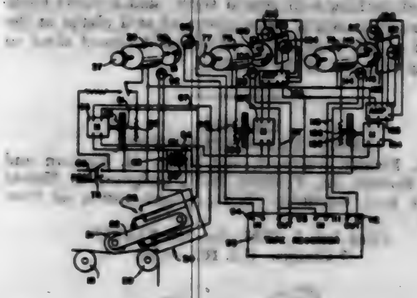
at one side to the wing, and resilient, yielding means interposed between the main plate and the screed board and tensioned to bias the main plate in a downward direction.

2,945,428
CAMERA STABILIZER
Howard K. Dearborn, 31 Manning Drive, Barre, Ohio
Filed Mar. 24, 1958, Ser. No. 723,423
7 Claims. (Cl. 95—86)

1. Apparatus for use in photography to carry a camera and afford control and stability for the camera in use so that horizontal and vertical angular movement of the camera producing blurring or detrimental motion effects in the resulting pictures can be substantially eliminated, said apparatus comprising a hand supported frame adapted to be carried in one's hands at a level above one's shoulders, said frame having a camera mounting portion and counterbalance means comprising elongated substantially parallel side members spaced apart to receive the head of the operator and extending rearwardly from the camera mounting portion, the center of gravity of the frame being at a location removed from said camera mounting portion and along the length of the side members and the mass of the frame being in proportion to the mass of the camera so that the balance point of the frame is spaced from the camera mounting portion when a camera is mounted on the frame.

2,945,429
PHOTOGRAPHIC FILM DEVELOPING APPARATUS
Garnet Peter Grant, Jr., Cleveland, Ohio, assignor to Grant Photo Products Incorporated, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,330
7 Claims. (Cl. 95—94)

1. A developing apparatus for photographic tape comprising, a tank which contains fluid media which chemically processes the tape, a first roller conveying means which moves the tape into the tank, a second roller conveying means which moves the tape out of the tank after being processed, a first and second power means coupled respectively to said first and second roller means for controlled rotation, a first control means associated with said first power means to control the speed of the tape into the tank at a delivered speed from external



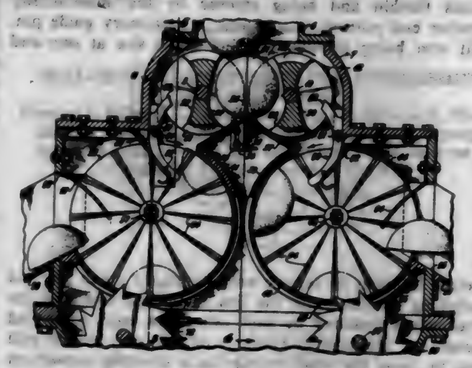
apparatus, a second control means associated with said second power means which controls both the speed of the tape out of the tank and the relative rotational position of said second conveying means with respect to the first conveying means, said second power means controlled to regulate the difference in speed into and out of the tank to change the length of tape in the tank whenever the delivered speed changes, said first and second power means controlled to retain any portion of the tape in the tank for a predetermined constant length of time.

2,945,430
INTERFERENCE-ELIMINATING DISTRIBUTOR CAP VENT MEANS
Fred S. Slick, Rockford, Ill., assignor, by mesne assignments, to said Slick and to Arthur C. Johnson and Chester A. Lander, all of Rockford, Ill.
Filed May 7, 1957, Ser. No. 657,689
6 Claims. (Cl. 98—1)



1. A vent means, for an electrical device having an enclosure provided with an inner chamber and internally threaded aperture, the improvement comprising a cylindrical body threaded into said threaded aperture and having a first and a second cylindrical recess about the axis of said body facing said chamber, and defining an end wall, said second recess being of a diameter larger than said first recess resulting in a ledge at the juncture of said first and second recesses, a plurality of vent apertures being provided in said wall and spaced outwardly from said axis, a foraminated cup-shaped member fitted in said first recess of a diameter less than said recess, and having a flange resting on said ledge, a porous felt disk fitted in said cup-shaped member and a closing ring fitted into said second recess and having a central opening of a diameter less than the diametrical distance between said vent apertures, said ring being of concave form on the face thereof toward said disk and being pressed into place so that the circumferential edges of said opening compresses said porous disk and expands it into intimate contact with the periphery of said cup-shaped member and said face.

2,945,431
APPARATUS FOR EXTRACTING JUICE FROM CITRUS FRUITS
Robert D. Wehr, P.O. Box 1196, Lakeland, Fla.
Filed Dec. 30, 1958, Ser. No. 783,737
5 Claims. (Cl. 100—97)

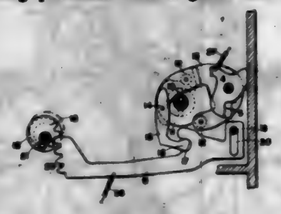


1. Apparatus for extracting juice from citrus fruit comprising a pair of horizontally disposed rollers having horizontally spaced, parallel axes, means for rotating said rollers in synchronism in opposite directions, said rollers having matching fruit receiving cavities in their peripheral surfaces for receiving whole fruit and advancing the same between the rollers, a stationary cutting blade lying in a plane parallel to the axes of said rollers and positioned in the path of fruit passing between the rollers to slice such fruit in half, a pair of opposed, generally frusto-conical disks positioned below and on each side of said blade with the tapering surfaces of the disks of each pair facing each other, means for rotating said disks of each pair about axes extending outwardly and downwardly from the larger ends thereof to position the tapering surfaces of the disks of each pair closer together at their lower positions than at their upper positions to provide a squeezing action on fruit halves descending between each pair of rotating disks, a downwardly sloping ramp on each side of said blade for engaging the cut faces of the fruit halves and guiding such fruit halves between the upper portions of said disks, a curved and perforated strainer plate extending from the end of each of said ramps around the lower portions of the peripheries of the adjacent pair of disks, and a deflection member positioned between the upper portions of each pair of disks in the paths of fruit halves leaving the lower ends of said ramps for deflecting such fruit halves to position the cut faces thereof in engagement with said strainer plates.

2,945,432
METHOD FOR MARKING PERIOD CARDS SUCH AS WEEKLY OR MONTHLY PERIOD CARDS FOR RAILWAYS, BUSES OR THE LIKE AND A DEVICE FOR CARRYING THE METHOD INTO EFFECT
Nils Evert Johan Stål, Stockmund, and Oscar Uno Larsson, Hagersten, Sweden, assignors to AB Almex, Stockholm, Sweden
Filed Nov. 14, 1957, Ser. No. 696,426
Claims priority, application Sweden Nov. 15, 1956
4 Claims. (Cl. 101—66)

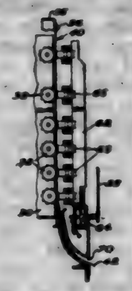
1. In a ticket feeding machine having a ticket feeding mechanism and adapted for use in marking period cards, a torsional axle, cam discs secured to the latter, antifriction rollers cooperating with said cam discs, a joint lever having the antifriction rollers arranged thereon, an axle, said lever being turnably mounted on the latter

and being of an S shape in longitudinal section, said lever having an automatically reciprocating action imparted thereto by the turning of said cam discs, a link pivoted to the free end of the lever and having a substantially circular end portion, an arm formed with a recess therein and being entered by the substantially circular end portion of said link, a stationary guide pin, said arm being provided with a guide slot at one end



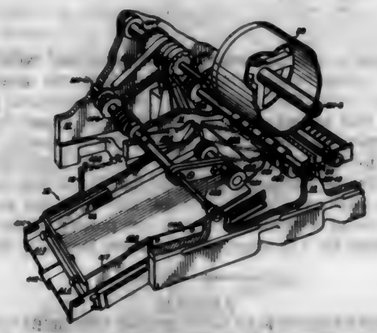
thereof adapted to receive said stationary guide pin and partaking together with the link in the movement of the lever when actuated by said cam discs, said controlled means for blocking movements of said one end of said arm to cause the latter to execute a swinging movement about said stationary guide pin, and means actuated by said swinging movement of said arm to disable said ticket feeding mechanism.

2,945,433
VOTING MACHINE PROOF AND RECORD SHEET PACK
Oscar F. Swanson, Jamestown, N.Y., assignor to Automatic Voting Machine Corporation, Jamestown, N.Y.
Filed Apr. 9, 1958, Ser. No. 727,453
4 Claims. (Cl. 101—90)



1. In a voting machine having a bank of counter columns arranged in upright side-by-side alignment with the counterwheels thereof arranged in horizontally aligned rows and with peripheral segment portions thereof protruding rearwardly beyond adjacent structure of the voting machine, a voting return printing device comprising, in combination a support mounted upon said voting machine marginally of said bank of counter columns and arranged to be vertically shiftable relative thereto, a record sheet pack comprising a record sheet and a proof sheet in back-to-face relation with inking means therebetween, means mounting said record sheet pack upon said support to cover the rear surfaces of said protruding mounterwheels, a printing platen comprising a member mounting a series of concave-faced rollers, said platen being mounted upon said machine so as to be shiftable from end-to-end thereof across the rear faces of said counterwheels, said rollers being dimensioned and arranged upon said platen so as to be carried thereby in horizontally traveling directions and to press said record sheet pack against the exposed segment portions of said counterwheels thereby impressing upon said record and proof sheets facsimiles of the readings of said counterwheels, said support being operable automatically upon arrival of said platen at one end of said machine to shift vertically to thereby cause said record sheet pack to be positioned at an elevation different from that during travel of said platen from one end of said machine to the other thereof preliminary to return travel of said platen, said proof sheet being of longer extent in the direction of said shift and thereby being displaced to a position making it available to be manually pulled out of the machine without disturbing said record sheet, said support being operable automatically upon return of said platen at the first end of the machine to release said record sheet to fall by gravity out of the machine.

2,945,434
SHEET FEED MECHANISM
Rolf W. Eichler, Fairport, and Roger H. Eichorn and John Ruthus, Jr., Pittsford, N.Y., assignors to Haloid Xerox Inc., Rochester, N.Y., a corporation of New York
Filed July 2, 1959, Ser. No. 824,659
7 Claims. (Cl. 101—232)

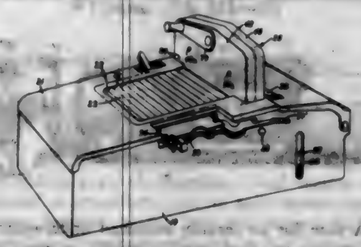


4. In a xerographic machine, the combination of a frame, a xerographic drum journaled in said frame, a tray mounted on said frame for supporting a pile of sheet material, a shaft rotatably mounted on said frame, paper feed means connected to said shaft adapted by engagement with a top sheet of a pile to move a top sheet from a pile in said tray, feed rollers journaled in said frame adjacent said xerographic drum adapted by rotation to forward a sheet delivered to said rollers by said paper feed means into contact with said xerographic drum, drive means connected to said xerographic drum for rotating said xerographic drum, a first clutch element operatively connected to said paper feed means, a second clutch element operatively connected to said feed rollers, a third clutch element connected to said drive means adapted to be selectively coupled in a first position to said first clutch element and in a second position to said second clutch element, and clutch shifter means connected to said third clutch element to selectively move said third clutch element to said first position and said second position whereby said paper feed means and said feed rollers are sequentially driven.

2,945,435
RIBBON INKER IN BED AND CYLINDER PRINTING DEVICE
John T. Davidson, Dayton, Ohio, assignor to The Standard Register Company, Dayton, Ohio, a corporation of Ohio
Original application Feb. 28, 1952, Ser. No. 274,021, now Patent No. 2,782,714, dated Feb. 26, 1957. Divided and this application Aug. 30, 1956, Ser. No. 607,124
3 Claims. (Cl. 101—274)

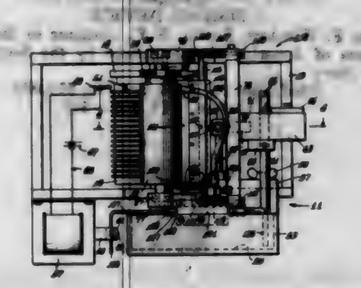
1. In an imprinting mechanism, an inking ribbon, oppositely disposed spools in which said ribbon is wound,

ratchets on said spools, a reciprocable pawl carrier having opposite ends extending toward respective spools, pawls on said ends engageable with respective ratchets, a reciprocable actuating member providing a mount for said carrier, and means for effecting limited reciprocating motion of said member, said carrier being mounted on said member for intermittent feeding engagement with one only of said spools in response to reciprocation of said actuating member, the mounting for said carrier on said actuating member including a pin and slot connec-



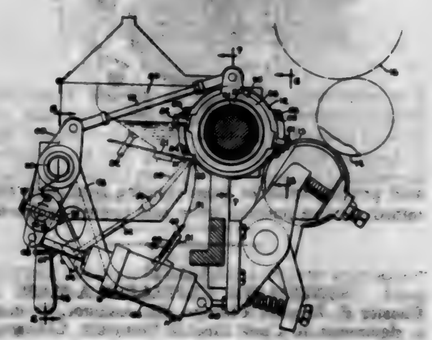
tion therebetween for relative positioning of said carrier to select said spools for feeding, and further including a detent connection having plural detenting positions, said member moving relatively to said carrier to change the effective detenting position in response to predetermined resistance by said inking ribbon to advance.

2,945,436
VERTICAL PRINTING
John D. Van Benkirk, Southport, Conn., assignor to Van Benkirk & Co., Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed July 6, 1956, Ser. No. 596,329
13 Claims. (Cl. 101—350)



1. In combination, a frame; a substantially vertically disposed printing drum rotatably carried on the frame; a source of motive power on said frame; a detachable inking assembly for cooperation with said drum comprising a base element, an ink reservoir, means connecting said base element to said frame so as to be supported thereon but readily disassembled therefrom, an ink distributing system including a substantially vertically disposed inking roller carried on said base element and positioned thereon for direct inking contact with the printing drum when said base element is connected to the frame, means carried by the base element for providing both a continuous enclosed ink conduit extending from said reservoir to said ink distributing system and an ink propulsion element associated therewith; and means for operating said ink propulsion element from said motive power source to move ink through said conduit including a connection readily detachable to permit removal of said entire inking assembly from said frame and from said motive power source when said base element connecting means is released, whereby detachment of said inking assembly effects separation of the inking roller from the printing drum and thus provides free access to the surface of said printing drum, by carrying of the inking roller away from the surface of the same.

2,945,437
SEAL-OFF ARRANGEMENT FOR UNDERSHOT INK FOUNTAIN
Vernon J. Hilgus, Lombard, and Carl J. Hornuth, Westchester, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Filed May 5, 1958, Ser. No. 732,848
7 Claims. (Cl. 101—350)

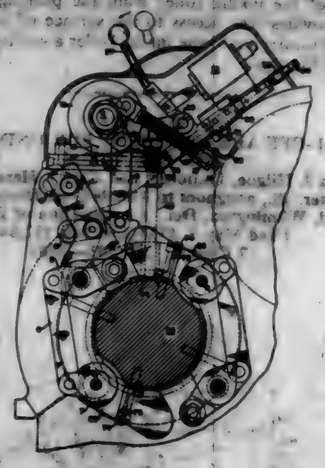


1. In a printing press an ink fountain arrangement comprising, in combination, a fountain roller, a fountain blade arranged parallel to the roller and having means for adjusting the gap between the blade and the roller, means for containing a body of ink above said blade, means for rotating said roller in a direction downwardly from said fountain blade so that a film of ink is carried by said roller of a thickness controlled by said adjusting means, a longitudinal sealing member for blocking the gap between the edge of the fountain blade and the fountain roller, means for mounting the sealing member for movement between a sealing position in said gap and a retracted position in which the sealing member is removed from said gap, and means for moving said mounting means from its retracted position to its sealing position incident to silencing the fountain.

2,945,438
PLATE LOCKING MECHANISM
Charles L. Ricards, South Plainfield, Paul L. Tollison, North Plainfield, Leonard R. Campbell, New Brunswick, and Sam Odorman, West Deal, N.J., assignors to Wood Newspaper Machinery Corporation, Plainfield, N.J., a corporation of Virginia
Filed May 28, 1956, Ser. No. 587,635
10 Claims. (Cl. 101—378)

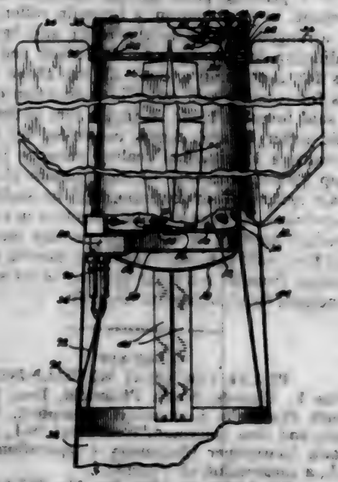
1. A tension lock for attaching printing plates to printing cylinders comprising an oscillating shaft extending axially of said cylinder adjacent its perimeter, lock-up hooks mounted on said shaft, a movable member for oscillating said shaft mounted on the end of said cylinder, a power operated member positioned to engage and shift said movable member in a direction to release said lock-up hooks, a normally inoperative control for said power operated member, and means carried by said cylinder and co-operating with said control for rendering said control operative to move said power operated member

in a direction to release said hooks when said cylinder is in a predetermined rotative position; said means locking



said printing cylinder from rotating from said predetermined rotative position when said control is operative.

2,945,439
SYSTEM FOR EXPELLING A MASS
Chester F. Bissell, Chicago, Ill., assignor, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed May 11, 1945, Ser. No. 597,530
11 Claims. (Cl. 102—6)



1. A system for expelling a mass comprising a substantially rigid cylindrical enclosure having one end closed, a flexible low porosity cylindrical receiver having one end closed, annular means engaging the open end of said enclosure and sealing the open end of said receiver thereagainst about substantially the entire periphery thereof, said receiver defining a mass receiving cavity within said enclosure, the closed end of said receiver defining an aperture of predetermined size, means for sealing said aperture whenever such mass is in said cavity, and explosive means within said enclosure, said flexible receiver being disposed between said cavity and said explosive means whereby a mass disposed in said cavity will be forcefully expelled by the central portion of said receiver to a position substantially removed from said enclosure by the expansion of said explosive means.

2,945,440
DISCRIMINATING FUZE
Charles C. Vogt, 7208 Denton Road, Bethesda 14, Md.
Filed Dec. 16, 1949, Ser. No. 133,461
11 Claims. (Cl. 102—16)
(Granted under Title 35, U.S. Code (1952), sec. 266)



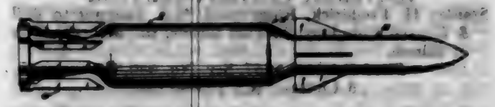
1. A fuze for an aerially launched underwater ground mine adapted to selectively distinguish between the landing of the mine upon land or in water exceeding a predetermined depth, including, in combination, a housing adapted for mounting within the casing of the mine, a powder train arranged within said housing, a source of electrical energy, an electro-responsive primer adapted when energized to effect the burning of said train, a booster charge disposed for being ignited by said train to effect the exploding of said mine, means responsive to the impact of the mine falling either upon land or water for energizing said primer from said source, and pressure responsive means operatively connected to said train for interrupting the burning thereof when the mine sinks to a predetermined depth within a body of water.

2,945,441
TIMING DEVICE
Arthur F. Winslow, Scotia, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 31, 1944, Ser. No. 529,008
9 Claims. (Cl. 102—16)



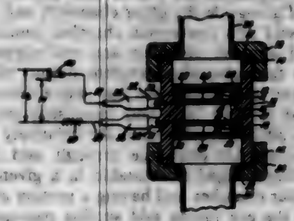
1. A timing device for an underwater item of ordnance comprising a housing, means for admitting sea water into said housing, a quantity of material in such housing which generates heat when contacted by such water, a fusible link of electrical conducting material in said housing, a first electrical circuit including said fusible link, a second electrical circuit in parallel with said first circuit and including firing means for said item of ordnance, a source of electrical power for said circuits, said first circuit being a low resistance shunt for said source of electrical power, said generated heat fusing said link and interrupting said first circuit whereby said firing means in said second circuit is actuated.

2,945,442
EXPLOSIVE SEPARATION DEVICE
Barnet R. Adelman, Los Angeles, and James D. Burke, Altadena, Calif., assignors to the United States of America as represented by the Secretary of the Army
Filed Jan. 2, 1958, Ser. No. 706,876
4 Claims. (Cl. 102—49)



1. In an explosive separation device, a booster rocket motor including a motor chamber, a tail section and a nose portion, a propellant liner in said motor chamber, a mounting member having first and second peripheral bearing surfaces detachably secured on said nose portion, an inert missile having first and second axial bores adapted to encircle said first and second bearing surfaces respectively on said mounting member, a slidable piston mounted axially in said mounting member and an explosive powder train disposed between said piston and said propellant liner, said slidable piston to be urged forwardly upon ignition of said powder train by burning of said propellant liner to separate and propel said inert missile from said mounting member.

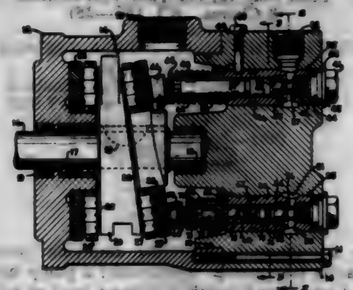
2,945,443
PUMP OPERATION
Peter L. Auer, Schenectady, and Amandus H. Sharbaugh, Scotia, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 23, 1957, Ser. No. 679,575
3 Claims. (Cl. 103—1)



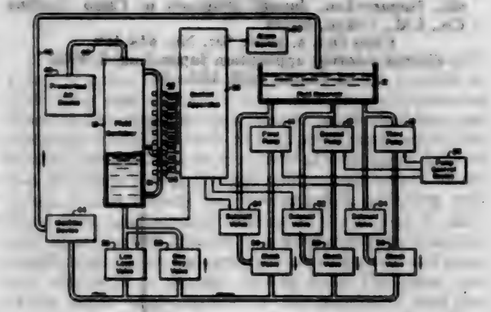
1. The method of pumping a dielectric liquid which comprises immersing a pair of conducting metal screen electrodes in parallel, spaced relationship in said liquid, striking an arc between said electrodes, thereafter extinguishing said arc, and subsequently maintaining a direct current potential between said electrodes, said direct current potential being below the potential at which breakdown of said liquid occurs.

2,945,444
HYDRAULIC PUMP
William R. Lalonner, Milwaukee, Wis., assignor to Dynex, Inc., Pewaukee, Wis., a corporation of Wisconsin
Filed Sept. 23, 1957, Ser. No. 685,441
12 Claims. (Cl. 103—3)

12. A multiple piston hydraulic pump having a housing defining a plurality of circumferentially spaced bores and a common outlet communicable with said bores, an isolating cartridge assembly comprising, a sleeve adapted to be inserted in said housing from the outside thereof and be accurately and securely positioned in at least one of said bores and having a cylinder therein, and having means thereon adapted to be engaged by means on said housing for securing said sleeve against axial movement in said housing, said sleeve being imperforate so as to block flow from its piston to said common outlet, a pumping piston in said cylinder, a plug threadably engaging said sleeve and having means for connection to a conduit, said plug also having a passage extending therethrough, and an outlet check valve in said sleeve between said cylinder and said passage whereby fluid pumped by said piston is diverted through said sleeve and discharged through said passage in said plug.



2,945,445
CONTROL APPARATUS FOR A PUMP DEVICE
Joseph W. Smith, Tonawanda, and George E. King, Eggertsville, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 31, 1957, Ser. No. 706,349
13 Claims. (Cl. 103—11)



1. In control apparatus for a fluid pump, said pump being operative to supply fluid to a fluid storage member, the combination of a pump control device operatively connected to said pump and operative to provide a first control signal to initiate the operation of said pump, a first fluid sensing device operatively connected to said storage member for producing a second control signal in accordance with a first predetermined fluid condition relative to said storage member, a second fluid sensing device operatively connected to said storage member for producing a third control signal in accordance with a second predetermined fluid condition relative to said storage member, with said pump control device having an ON control input operative with said first fluid sensing device and responsive to said second control signal for providing said first control signal to initiate the operation of said pump and having an OFF control input operative with said second fluid sensing device and responsive to said third control signal to terminate said first control signal and thereby terminate the operation of said pump.

2,945,446
PRESSURE SENSITIVE RESERVOIR EMPTYING SYSTEM AND APPARATUS THEREFOR
William G. Mason, 201 E. Kirby, Detroit 2, Mich., and Frederick J. Mason, 2898 Yorkshire, Birmingham, Mich.
Filed May 15, 1957, Ser. No. 659,368
8 Claims. (Cl. 103—25)



1. In an automatic reservoir emptying system, the combination comprising: a reservoir; a pump having an inlet and an outlet beneath the lowest level of said reservoir, the inlet of said pump receiving contents from said reservoir; a pressure actuated diaphragm; plunger means in contact with said diaphragm on the atmospheric pressure side; a conduit receiving contents discharged from the outlet side of said pump and communicating a part of said contents to the pressure side of said diaphragm; a by-pass conduit connected to the inlet side of said pump and said diaphragm on the pressure side; a switch acted upon by said plunger; a motor drivably connected to said pump; and an electrical circuit selectively energizing said motor in response to the opening and closing of said switch.

2,945,447
HYDRAULIC RAM
Teruichi Yamaguchi, Tokyo, and Isamu Miyazawa, Ueda-shi, Nagano-ken, Japan, assignors to Chuo Trading Co., Ltd., Tokyo, Japan
Filed Oct. 8, 1956, Ser. No. 614,469
Claims priority, application Japan Aug. 2, 1956
1 Claim. (Cl. 103—77)



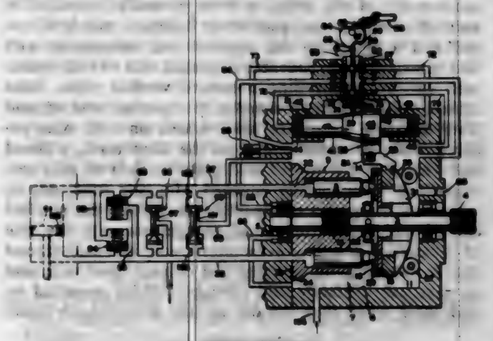
A water pump comprising a penstock for receiving water at a first level and for delivering water to a drain pool, said penstock having a valve chamber at an end thereof, a drain hole in said valve chamber, a drain valve pivotally mounted in said valve chamber for closing said drain hole, said drain valve being arranged so as to be opened by its own weight and to be closed by flowing water in said penstock, a buffer tank positioned above said valve chamber, said valve chamber having an inlet hole communicating said valve chamber with said buffer tank, an elastic spherical lifting valve disposed in said buffer tank for closing said hole, said lifting valve being filled with a light-weight gas to make the specific gravity of said lifting valve to be barely greater than water, a lifting pipe extending outwardly from said buffer tank and having a discharge level above said first level, said lifting pipe including an air pipe disposed therein and extending into said buffer tank, and a cup-shaped air pipe cover within said buffer tank and overlying said air pipe; said cover having a depending portion coinciding with the water level in said buffer tank when in an equilibrium state.

2,945,448
UNIVERSAL CENTRIFUGAL PUMP
Stanley H. Frederick, Ridgewood, N.J., assignor to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois
Filed Feb. 15, 1957, Ser. No. 640,548
8 Claims. (Cl. 103—113)



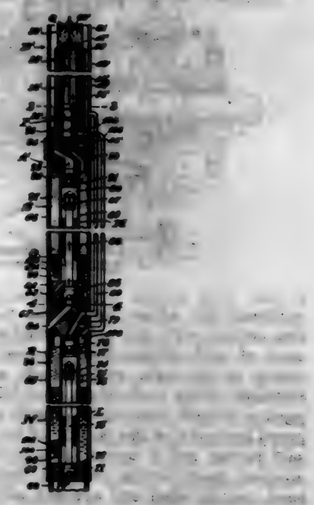
1. In a centrifugal pump of the type including a casing having a discharge outlet and a suction passage terminating at a suction inlet with said suction passage and said suction inlet cooperating to define a liquid drain level; internal surface portions carried by said casing to form an impeller chamber communicating with the suction passage, a flow conversion chamber surrounding the periphery of the impeller chamber, and a plenum chamber occupying the remainder of said casing and communicating with said discharge outlet, said plenum chamber being located alongside the other chambers and extending therebelow, said flow conversion chamber communicating between said impeller chamber and said plenum chamber to form the relatively turbulent output of said impeller chamber into stream-like flow while decreasing the velocity head of such flow and increasing the pressure head and to direct this flow into the relatively quiescent plenum chamber for discharge through said discharge; and a centrifugal impeller rotatable in a given direction in said impeller chamber and having a suction eye around its axis with the eye facing said suction passage: the improvement wherein said internal surface portions include a first wall having an inner surface portion of generally annular shape and an outer surface portion of generally annular shape connected to the outer periphery of said inner surface portion and extending radially outwardly therefrom, said inner surface portion surrounding said suction passage and cooperating with said casing to form the end walls of a generally cylindrical impeller chamber, one of said end walls having priming passage means extending therethrough and connecting a region adjacent the periphery of said impeller chamber to a region of said plenum chamber located beneath said drain level, a third generally annular surface, of substantially the same size and shape as said outer surface portion, spaced from and facing the same, and a plurality of vanes spaced uniformly about the periphery of said impeller chamber with their inner ends cooperating with the impeller to provide a plurality of uniformly spaced peeling points, said vanes extending between said outer surface portion and said third annular surface to define therewith a plurality of divergent intermediate liquid passages that have inlets terminating adjacent the periphery of the impeller chamber and that have outlets extending outwardly and forwardly in the direction of impeller rotation, one of said vanes projecting outwardly of the periphery of the outlets of said last mentioned passages and connecting to one end of an arcuate wall portion the other end of which is free and extends from said one end in the direction of impeller rotation, said arcuate wall portion projecting above said drain level and extending around the upper portion of the periphery of said intermediate liquid passage outlets in outwardly spaced relation thereto with its opposite sides in sealing cooperation with the outer edges of said outer surface portion and said third annular surface to form a channel that collects the fluid streams discharged from the intermediate passage outlets associated therewith, and that delivers such streams into the plenum chamber at the open free end of said arcuate wall portion, said channel cooperating with said one vane to form an enclosed hood extending from a point on one side of the vertical plane of the axis of the impeller to a point on the opposite side of said vertical plane, said points being beneath said drain level, said channel and said intermediate liquid passages comprising the flow conversion chamber that supplies the output of said impeller chamber to said plenum chamber.

2,945,449
HYDRAULIC CONTROL PUMP
Arthur H. LeFebvre, Washington Township, Bergen County, and John R. Wiseman, Paterson, N.J., assignors to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed June 3, 1954, Ser. No. 434,273
5 Claims. (Cl. 103—162)



1. In a hydraulic control pump of the character described including a piston block rotatable by a drive shaft and including a plurality of pistons successively discharging fluid from one end of the block into a common outlet and successively intaking fluid at said end from a common inlet, a circular block plate having an axial opening about the drive shaft of a diameter greater than the latter and including a thrust face at one end and a convexed back at the other, each piston including in the opposite end a spherical socket containing a ball pivotable therein and connected by a relatively short neck portion to a shoe adapted to ride over the thrust face, a retaining plate joined universally directly to the shaft and adapted to be carried about with the latter, the retaining plate including a plurality of apertures, each freely collaring a neck of a shoe, a peripheral flange about the retaining plate in which the peripheral portion of the thrust end of the circular plate is freely received, whereby the retaining plate serves to hold the shoes in riding contact with the thrust face of the plate and is rotatable relative to the plate, roller means continuously supporting opposed portions of the convexed back end of the circular plate whereby the circular plate is supported for tilting movement thereon and the thrust face of the tilt plate is retained in the flange of the retaining plate, and hydraulically operated control means for tilting the circular plate whereby the stroke of the pistons is controlled.

2,945,450
DOUBLE ACTING MERCURY PISTON OIL WELL PUMP
Benjamin F. Schmidt, Los Angeles, Calif. (450 Fairview Ave., Sierra Madre, Calif.)
Filed Sept. 24, 1956, Ser. No. 611,511
3 Claims. (Cl. 103—165)

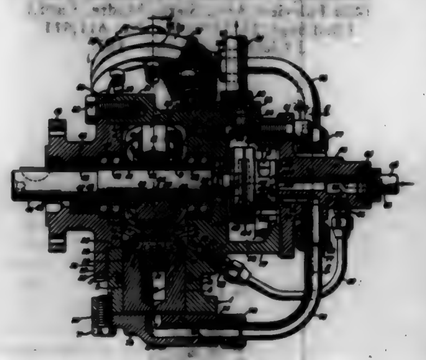


1. In an oil well pump; a pump housing having therein a pair of pump chambers disposed in tandem relation to each other one above the other and having a pressure chamber encompassing each of said pump chambers and a passage connecting each of said pump chambers to the adjacent pressure chamber; a body of mercury in each of said chambers leading through said passage; valved intake means in said housing for independently delivering well liquid into superimposed relation to the bodies of mercury in said pump chambers; a discharge tube extended longitudinally from the uppermost of said pump and pressure chambers; a passage leading from the upper end of the upper pump chamber to the interior of said discharge tube; a conduit leading from the upper end of the lower pump chamber to the interior of said discharge tube; a pump cylinder in said tube a conduit connecting the interior of one end of said pump cylinder with the upper end of one of said pressure chambers; a conduit connecting the interior of the other end of said pump cylinder to the upper end of the other of said pressure chambers; a reciprocal piston in said cylinder; and bodies of refined lubricating oil superimposed on the bodies of mercury in said pressure chambers and occupying the spaces thereabove leading into said pump cylinder and extending on opposite sides of said piston.

2,945,451
HYDRAULIC MOTOR AND/OR PUMP
David E. Griswold, 2330 Monterey Road, San Marino, Calif.
Filed Apr. 20, 1953, Ser. No. 349,787
15 Claims. (Cl. 103—174)

1. In a device of the character described, a housing having a crankcase and a plurality of cylinders disposed

radially relative to said crankcase; a head closing the outer end of each cylinder; a shaft extending through said crankcase and being rotatably supported in said housing; a piston in each of said cylinders; a pin carried by each of said pistons adjacent the inner end thereof; a roller mounted on each pin; an eccentric secured to said shaft and engageable by the rollers of the respective pistons, the cylinders providing the only guide means for the pistons and rollers whereby said pistons are free in their associated cylinders to allow said rollers to



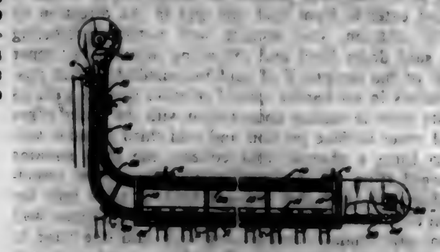
automatically adjust themselves to make substantially line contact with the outer periphery of said eccentric, each of said pistons having a wall portion defining a recess in the outer end thereof; a filler member substantially filling each recess, said filler member having a portion thereof removed to provide an annular space disposed inwardly of the portion of the piston wall defining said recess; and a compression spring mounted in each annular space having one end thereof engaged with a head and its other end engaged with a filler member.

2,945,452
CONVEYOR TROLLEY TRACKWAY
Kenneth D. Schreyer, Williamsville, and Allan E. Eldridge, Eggertsville, N.Y., assignors to Columbus McKinnon Chain Corporation, Tonawanda, N.Y.
Filed Mar. 20, 1959, Ser. No. 800,705
7 Claims. (Cl. 104—168)



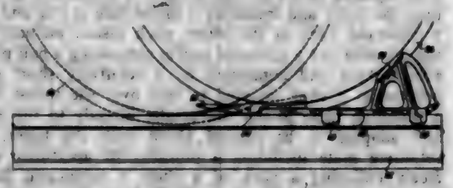
1. A conveyor trolley trackway including a substantially closed-sectioned rail having opposed side, top, and bottom wall portions adapted to accommodate interiorly thereof a travelling trolley device, said rail being interrupted to provide an access opening to the interior thereof, splice plates spanning said opening and interconnecting corresponding side wall portions of said rail, a gate device of sectional form similar to that of said rail and longitudinally formed to complement said opening, a hinge device interconnecting one end of said gate and said trackway at one end of said opening, means limiting downward and upward pivoting movements of said gate between open and closed positions, and crank arm means extending from the top wall portion of said gate device and controllable to move said gate device between open and closed positions.

2,945,453
CONVEYOR SYSTEM
Rudolph R. Adams, 4021 E. 59th St., Cleveland, Ohio
Filed July 10, 1957, Ser. No. 671,681
6 Claims. (Cl. 104—172)



6. A conveyor assembly comprising an upper and a lower track disposed in vertically spaced parallel relation with each other, each track embodying pairs of horizontally spaced parallel rails with one pair being vertically spaced with respect to the other, sprocket wheels mounted at the opposed ends of said track and said spaced rails, an endless chain entrained about said sprocket wheels, means for driving said sprocket wheels, wheels carried by certain of the links of said chain engaged with the rails of said lower track of each pair, a third track constituting an accumulator track subtended from said lower track and disposed in vertically spaced parallel relation therewith, cams on said lower track, depending arms on certain of the links of said chain, tubes having an axial slot throughout the length of the lower face thereof pivotally connected to said arms, a bearing mounted on each of said tubes and extending transversely of the tubes, a lever pivotally journaled in each of said bearings, each lever having a notch in one end and a wheel on the opposed end engageable with said cams, carriages movable over said rails of said tracks, each carriage comprising a central vertical plate, axles affixed thereon normal thereto, the notched end of said lever engaging a carriage axle, wheels on said axles engaged with the upper track and the third track, a lineal rod welded to the top of said plate in each of said carriages and telescopically engaged with said tube, one of said cams being of a configuration to elevate the notched end of said lever arm out of engagement with the axle of a carriage in said accumulator track, and said second cam to interlock the notched end of said lever with said carriage axle whereby said carriage will be propelled by said chain when they are out of said accumulator track.

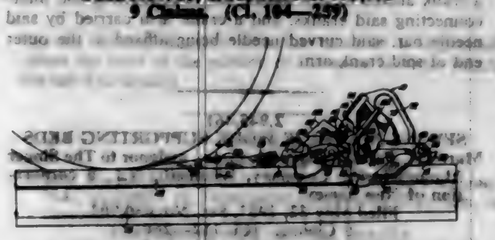
2,945,454
UNIVERSAL SKATE
Samuel Jones Beck, Kansas City, Kans., assignor, by mesne assignments, to Clem W. Fairchild, trustee, Kansas City, Mo.
Filed Feb. 24, 1956, Ser. No. 566,497
7 Claims. (Cl. 104—259)



1. In a railway skate, a slide bar adapted to rest upon a rail; an upstanding, wheel-receiving abutment on the bar at one end thereof; a pair of opposed jaws adapted to clamp said rail therebetween; universal joints mounting the jaws on the bar for swinging movement toward

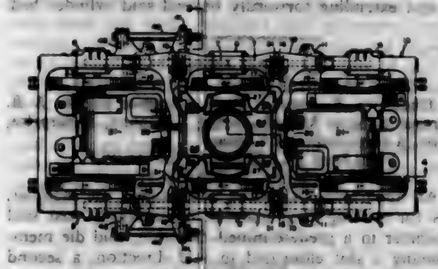
and away from each other and vertical swinging movement to a position above the level of the rail; means yieldably holding the jaws against spreading apart away from each other; and means overlying the bar and mounted thereon for downward swinging movement between the jaws to spread the same apart and out of engagement with the rail as the wheel rolls upon said means and against the abutment.

2,945,455
SKATE FOR RAILROAD CARS
Samuel Jones Beck, Mahaffie, Kans., assignor to Clem W. Fairchild, trustee, Kansas City, Mo.
Filed Nov. 10, 1958, Ser. No. 772,763
9 Claims. (Cl. 104—259)



1. A railway skate comprising a skid bar adapted to slide along a rail when a car wheel rolls thereupon and having an upstanding head against which the wheel abuts; a pair of opposed guides normally embracing the rail, each guide being mounted on the bar for vertical swinging movement; a clamp including a pair of opposed jaws normally embracing the rail, and resilient means yieldably holding the jaws clamped against the rail, each jaw being mounted on a corresponding guide for vertical swinging movement therewith and horizontal swinging movement relative thereto, each jaw having means normally locking the same against vertical swinging movement; and a trip mounted on the bar for vertical swinging movement downwardly to a position between the jaws to swing the same horizontally apart out of engagement with the rail and to release said locking means, said trip being disposed for engagement and downward actuation by the wheel after the latter rolls onto the bar and before the wheel abuts the head.

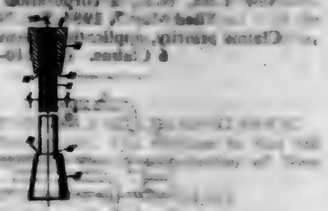
2,945,456
RAILWAY MOTOR TRUCKS
James C. Traville, Ladue, and Julius J. Zoch, St. Louis, Mo., assignors to General Steel Castings Corporation, Granite City, Ill., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,514
9 Claims. (Cl. 105—182)



1. A railway vehicle truck comprising three wheel and axle assemblies, a frame supported therefrom and including longitudinally-extending side members laterally outboard of the wheels and a single transverse transom connecting said side members between the middle assembly and each end assembly, a bolster including a central member having at its ends a pair of transverse arms, the mid-

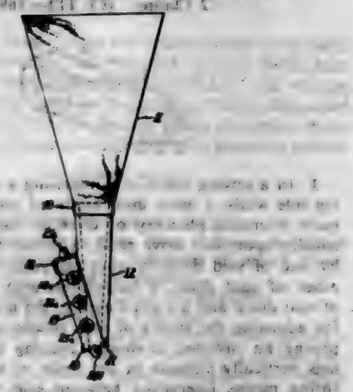
die portions of said arms being spaced longitudinally of the truck from said transoms and the end portions of said arms underlying the ends of said transoms and adjacent portions of said side members, swing hangers supported from said frame at the intersection of said transoms and said side members and outboard of the wheels and inboard of the side members, the end portions of each of said bolster arms being supported from the frame by said swing hangers for lateral movement relative to the frame.

2,945,457
RAIL VEHICLE SUSPENSION CABLE
Ralph W. Avery, Erie, and Fred B. Schneider, Wesleyville, Pa., assignors to General Electric Company, a corporation of New York
Filed Oct. 1, 1956, Ser. No. 613,873
3 Claims. (Cl. 105—199)



2. For use in supporting a rail vehicle body over a truck while allowing both limited pivotal and transverse motion of the truck relative to the body, a flexible multiple wire filament cable, terminal sleeves attached to each end of said cable adapted to support said cable in tension between the vehicle body and truck, an extension on each of said terminal sleeves surrounding the cable and extending toward the other terminal sleeve, said extension being flared beyond a predetermined length to facilitate gradiated lateral displacement of the filaments thereby whereby any bending of the cable is limited by the flared portion to reduce stress concentrations at the end of the sleeves, and a resilient material forming a sheath around the filaments and interspersed between the filaments to protect the cable against corrosion and to act as a permanent lubricant for the filaments to minimize the abrading action of adjacent filaments.

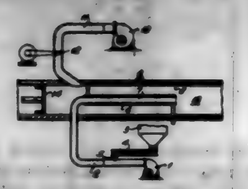
2,945,458
CONFECTIONER'S DECORATING DEVICE
John C. Setecha, 1931 S. Austin Blvd., Cicero 50, Ill.
Filed Jan. 17, 1958, Ser. No. 709,543
4 Claims. (Cl. 107—53)



1. A confectioner's decorating device comprising a body having a container therein, said body having an opening

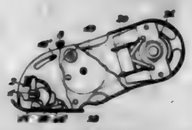
therein for the introduction of decorating material into said container, an elongated tapered relatively narrow rigid nozzle communicatively connected to said body; an outlet port at an end of said nozzle to permit flow of material from said container; track means carried by said body and extending transversely therefrom; a track member on the discharge end of said nozzle; a rotatable belt in said track means and in said track member adjacent said outlet port, said belt having a plurality of apertures therein, and a passaged decoration forming die mounted on said belt in association with each belt aperture.

2,945,459
PULSATING COMBUSTION METHOD AND APPARATUS
Wolfgang Fenhertmann, Oberhausen, Rhineland, Germany, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 7, 1954, Ser. No. 428,285
Claims priority, application Germany May 23, 1953
5 Claims. (Cl. 110—28)



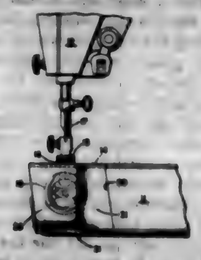
1. In a combustion system, means presenting a tubular chamber including a combustion zone, a fuel feeder normally conducting a coal containing fluid stream to the combustion zone, said fluid stream containing coal particles in suspension, air supply means normally conducting a stream of air to the combustion chamber for mixture therein with the coal particles, a rapidly rotating valve for setting up initial longitudinal vibrations in the air stream before it reaches the tubular chamber, means for varying the natural frequency of the fluid within the tubular chamber to amplify the effects of the initial vibrations, and a coal burning cyclone chamber to which the outlet of the tubular chamber is substantially tangentially connected.

2,945,460
SEWING MACHINE
Kosuke Kagiyama, 3938 Oba-Honmachi, Nichinan City, Miyazaki-Prefecture, Japan
Filed Jan. 4, 1957, Ser. No. 632,577
Claims priority, application Japan Apr. 11, 1956
2 Claims. (Cl. 112—169)



1. In a sewing machine comprising a main frame having side walls, a drive shaft mounted transversely in said main frame, a plurality of circular discs affixed eccentrically upon said drive shaft, a thread take up operable by one of said discs, a work advancer operable by another of said discs, a looper operable by still another of said discs, and a curved needle, the provision of means for adjusting the stroke of said needle, said means comprising an inverted U-shaped bearing frame having its legs vertically slidable in the walls of said main frame, spring means interposed between said main frame and said bearing frame for urging the latter upwardly, a needle bar rotatably mounted in said legs of said bearing frame and extending in a direction parallel to said drive shaft, a first lever substantially centrally and pivotally mounted in said main frame for oscillatory movement in a vertical plane, said first lever having its forward end abutting the bight portion of said bearing frame, a second lever pivoted to the rearward end of said first lever and extending beneath said first lever and having a dependent projection formed integrally therewith, a set screw threadably extending through said first lever and abutting the upper side of said second lever, a circular plate affixed concentrically upon said drive shaft and having a cam projection formed integrally therewith and having its periphery in contact with the projection on said second lever, a crank affixed to said drive shaft, a crank affixed to said needle bar, a connecting rod interconnecting said cranks, and a crank arm carried by said needle bar, said curved needle being affixed to the outer end of said crank arm.

2,945,461
SEWING MACHINE WORK-SUPPORTING BEDS
Martin R. Perin, Bridgeport, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed May 22, 1957, Ser. No. 660,902
5 Claims. (Cl. 112—260)

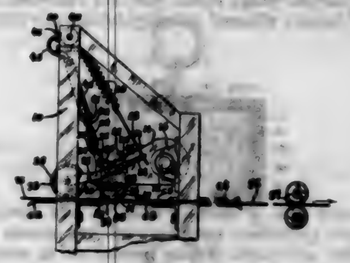


1. A free-ended cylinder bed for a sewing machine, a flat throat plate carried on said cylinder bed, means defining a stitching point on the throat plate of said cylinder bed, a work-feeding mechanism adapted to advance a work fabric in a direction transversely of the longitudinal axis of said cylinder bed to define a line of stitch formation across said cylinder bed, and means for facilitating the manipulation of a tube of fabric up the cylinder bed as the fabric is being stitched into a tube across the cylinder bed, said means comprising a member carried by said cylinder bed and projecting forwardly from said cylinder bed in front of the stitching point considered in the line of stitch formation, said member being formed with a flat top surface disposed flush with said throat plate and extending forwardly beyond said cylinder bed.

2,945,462
SPLICING MACHINE AND METHOD
John Oberauer, Enterprise, Kans., assignor to The J. B. Ehrsam & Sons Manufacturing Company, Enterprise, Kans., a corporation of Kansas
Filed June 17, 1955, Ser. No. 516,293
17 Claims. (Cl. 113—1)

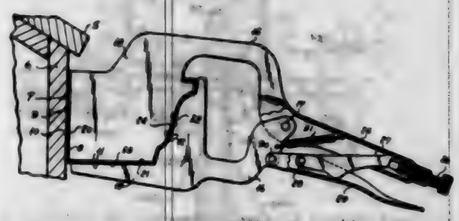
1. An apparatus comprising a stationary die member, means for moving strip material continuously past said die member in a predetermined direction, said die member having a slot elongated in said direction, a second die member adjacent said stationary die member and including a projecting portion, and means mounting said projecting portion for arcuate movement generally in said direction and substantially at the lineal velocity of material movement past said stationary die member, to enter, traverse and withdraw from said slot, the mutually adjacent edges of said slot and said projection, as said

projection approaches said slot, providing material severing edges whereby the trailing edge of a tab which is



thereby formed integral with the material is depressed below the level of the portion of the material from which the tab was formed.

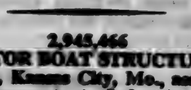
2,945,463
CLAMPING DEVICE
Walter H. Kuchinsky and David T. Radzyle, Paterson, N.J., assignors to Montgomery Specialty Co., Inc., a corporation of New Jersey
Filed Feb. 6, 1956, Ser. No. 563,717
2 Claims. (Cl. 113—101)



1. In a device for clamping nested inner and outer sections of a gutter together for soldering while the rear walls of the sections are secured to the eaves of a building and without detaching or spacing the walls from said eaves to permit said clamping, a pair of pivoted inner and outer jaws operable to clamping and open positions, said inner jaw having gutter-wall engaging front, rear, and bottom surfaces and adapted to be angularly inserted and shifted to a clamping position within the confines of and against the inner section of the gutter and with said front surface adapted to be disposed in adpressed relation with the inner face of the rear wall of the inner section for maintaining said latter wall clamped against the inner face of the rear wall of the outer section when said jaws are in clamping position, said outer jaw being provided with gutter-wall engaging surfaces adapted to transversely embrace and engage the outer faces of the bottom and front walls of said outer section, said outer jaw terminating, at one end, subjacent said inner jaw and in proximity to said front surface thereof, said surfaces of said outer jaw coacting with said rear and bottom surfaces of said inner jaw to maintain said pair of sections in clamped relation therebetween for soldering when said jaws are disposed in said clamping position.

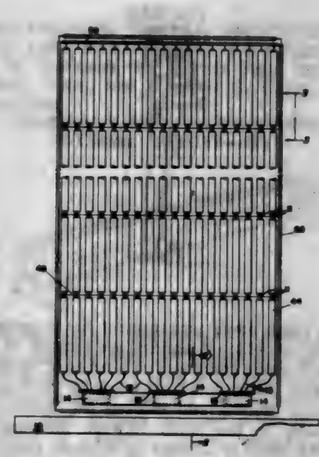
2,945,464
JACKETED SOLDERING STRIP
Akio Tomeda, Lynwood, Calif.
(1109 State St., San Mateo, Calif.)
Filed Jan. 22, 1954, Ser. No. 405,636
4 Claims. (Cl. 113—110)

1. A manually bendable soldering strip including an elongated core of solder in and filling a ductile manually bendable, substantially nonresilient, elongated, generally channel-shaped jacket of metal foil open on one side to expose one side of said core, said strip being adapted to be placed against an object to be soldered with said open side of said jacket facing the object so that said exposed side of said core is in contact with the object, said ex-



posed side of said core being flush with said open side of said jacket so that the edges of said jacket also contact the object, and said jacket being formed of a metal capable of withstanding the melting temperature of the solder, whereby said jacket retains said solder in contact with the object when said strip is heated to the melting temperature of said solder.

2,945,465
CRUDE OIL STORAGE AND LOADING DOCK
Paul D. Burton, Phoenixville, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Apr. 18, 1958, Ser. No. 729,462
5 Claims. (Cl. 114—5)

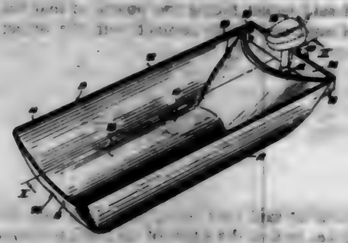


1. A floating fluid storage and loading dock comprising a plurality of floating cells adapted to store fluid, inlet and discharge means operably connected to said storage cells, permanently positioned pumping means connected to said inlet and discharge means, and a stationary floating bulkhead enclosing said cells and said pumping means.

2,945,466
MOTOR BOAT STRUCTURE
Luther L. Shelton, Kansas City, Mo., assignor, by direct and mesne assignments, to Industrial Research Company, Kansas City, Mo., a partnership
Filed Mar. 15, 1957, Ser. No. 646,299
1 Claim. (Cl. 114—62)

A boat comprising an elongated, open top hull having a bottom provided with a median, downwardly-facing, longitudinal groove of constant depth throughout the length thereof, and a transversely convexo-concave bow wall extending upwardly and forwardly from the forwardmost end of said bottom, the lowermost face of said bow

being substantially concave transversely thereof, and substantially the same width as the longitudinal groove; and



a motor mount bridging the uppermost and forwardmost ends of the bow.

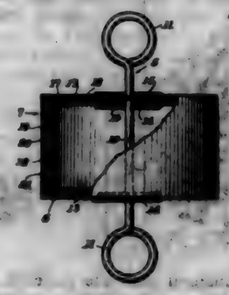
2,945,467
ARRANGEMENT FOR SHIPS' HATCHES
Aasmund Wigeland, Tordenskjoldsgate 4, Oslo, Norway
Filed May 7, 1956, Ser. No. 583,168
Claims priority, application Norway May 12, 1955
5 Claims. (Cl. 114—202)



1. In a hatch cover arrangement for covering a hatch at the edge of which coamings are located, in combination, a hatch cover composed of a series of interconnected sections; and guide means arranged in the region of the coamings for guiding said sections for horizontal movement relative to the hatch between different positions wherein the hatch is covered to different extents, respectively, said guide means being mounted for vertical movement relative to the hatch between lowered and raised positions and having lower and upper engaging means which cooperate with said sections in such a manner that the same, when they overlie the hatch, are supported upon said lower engaging means during raising and lowering of said guide means and that when said guide means is in said lowered position thereof, said upper engaging means abuts against overlying sections and presses the same downwardly against the coamings.

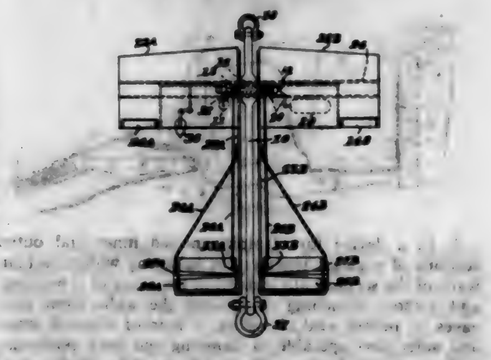
2,945,468
BOAT MOORING
Eugene L. Payne, 225 21st St., Newport Beach, Calif.
Filed Sept. 22, 1958, Ser. No. 762,643
5 Claims. (Cl. 114—230)

1. In a boat mooring having a through rod with eyes at each end, a hollow float having opposed walls through which said rod extends, said float comprising a thin-walled, hollow core and a laminated cover over said core and comprising sheets of fiber glass impregnated with a bonding resin, and enlargements on the rod and disposed between laminations of the float so hold the rod and float against relative displacement, said core having



end walls and the enlargements on the rods being disposed outward of the end walls of the core.

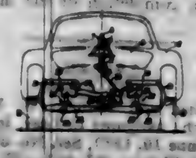
2,945,469
TRAWLING DEVICE
Orville R. Poindexter, 207 Roy Bldg., P.O. Box 911, Halifax, Nova Scotia, Canada
Filed Jan. 27, 1958, Ser. No. 711,274
3 Claims. (Cl. 114—235)



1. Apparatus for controlling the depth at which an object is towed in water, comprising a draw-bar adapted to connect between a tow cable and an object to be towed, a main frame pivotally connected to said draw-bar adjacent the end adapted to be connected to the tow cable and extending on either side of said draw-bar, a pair of main hydrofoils rigidly attached to said main frame adjacent the connection of said main frame to said draw-bar and extending outwardly from said frame on either side of said draw-bar, stabilizing means comprising roll control means mounted on the main hydrofoils and roll-deviation sensing means operatively connected to said control means for stabilizing the main hydrofoils in substantially horizontal planes during towing of the apparatus, a pair of elevator planes mounted on either side of said main frame at the end thereof remote from said main hydrofoils, and hydrostatic elevator control means operatively connected to said elevator planes and adapted to control said elevator planes thereby to control the depth at which said apparatus is towed.

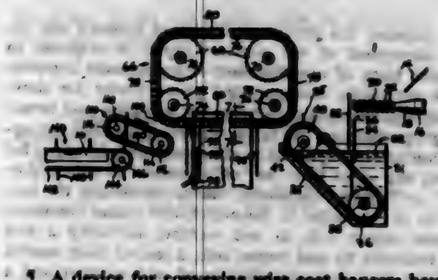
2,945,470
BANKING INDICATOR FOR MOTOR VEHICLES
Joachim Kolbe, R.R. 2, Box 179, Menomonee Falls, Wis.
Filed July 15, 1957, Ser. No. 672,089
9 Claims. (Cl. 116—28)

1. In a vehicle having a superstructure, and a wheel supported running gear having resilient means for the support of the superstructure upon the wheels and providing for vertical oscillation of the wheels relative to the superstructure; stationary indicator means rigidly carried by the superstructure, a second indicator hingedly carried by the



superstructure and movable relative to said stationary indicator means, and linkage means connecting said second indicator to the running gear to actuate the indicator and indicate vertical oscillation of at least one of the wheels relative to the superstructure.

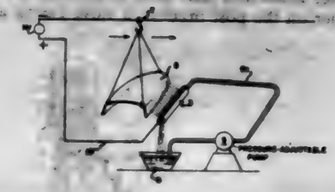
2,945,471
CONVEYOR AND COATING MECHANISM
Willis L. Harrold, 4305 Lincoln Way East, Mishawaka, Ind.
Filed June 10, 1957, Ser. No. 664,663
5 Claims. (Cl. 118—58)



5. A device for conveying wire coat hangers having a hook portion, shoulder runs diverging angularly from said hook and a cross-bar connecting said shoulder runs, comprising a tank containing coating material, a conveyor unit including similar endless carrier members having spaced parallel inclined runs each having a portion immersed in said tank and a downturned discharge portion projecting above said tank, means on said carrier members for supporting said hangers in said tank in inverted position resting on the ends of said shoulder runs, a drying chamber adjacent said tank, a second conveyor unit extending through said chamber and including spaced similar endless carriers having parallel lower runs above the level of the discharge end of said first conveyor unit and downwardly extending runs vertically aligned with the discharge portion of said first conveyor, the carriers of said second unit mounting hooks, said second unit including a curved portion positioned spaced above the discharge end of said first conveyor unit and from which said hooks project divergently in the path of travel of the cross-bars of hangers at the downturned discharge portion of said first conveyor to pick up said cross bars.

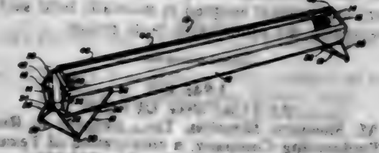
2,945,472
APPARATUS FOR ELECTROSTATICALLY SPRAYING PAINT
Otto Gemmenbach and Horst Schanz, Sindelfingen, Kreis Boblingen, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Jan. 23, 1956, Ser. No. 560,225
Claims priority, application Germany Feb. 9, 1955
10 Claims. (Cl. 118—626)

1. An apparatus for electrostatically spraying objects comprising supply means of paint, paint spray means connected to said supply means including a nozzle, means for continuously circulating said paint under pressure from said supply to said paint spray means and back to said supply means, said nozzle being formed by two relatively fixed elongated concentric members of which the inner member has a laterally exposed liquid discharge gap and forms the discharge nozzle and the outer member an over-flow channel, said circulating means including a liquid supply line connected to one end of said inner member, said inner member being so constructed



that substantially all of the liquid supplied thereto is discharged through said gap, said inner member having closely spaced walls defining said discharge gap with at least one of the walls having an electrically conducting edge, and means for establishing an electrostatic field in the region of said nozzle between said edge and an object to be coated to produce a spray discharge of said paint from the edge of the walls of said inner member forming said gap.

2,945,473
POULTRY FEEDING TROUGH WITH VERTICALLY ADJUSTABLE SUPPORTING LEG ASSEMBLIES
William W. Robinson, Jr., Forrest Park Drive, Signal Mountain, Tenn., and Demopolo C. Camp, Box 296, Dunlap, Tenn.
Filed Sept. 9, 1959, Ser. No. 838,866
8 Claims. (Cl. 119—61)

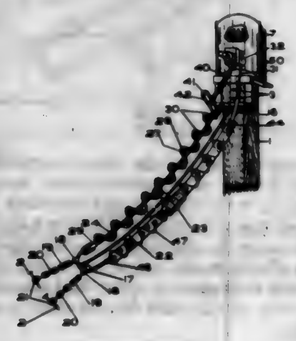


1. A poultry feeder comprising an elongated trough and means connected with said trough adjacent each end thereof for supporting the same in a plurality of positions of vertical adjustment, each of said supporting means comprising a first support member pivotally connected to said trough at a position spaced inwardly of the associated end for movement about a transverse horizontal axis, a second support member pivotally connected at its lower end to the outer end of said first member about a parallel horizontal axis for movement therewith in a generally vertical direction, said second member having an upwardly and inwardly extending element formed on the upper end thereof, and means on the associate end of said trough defining a plurality of vertically spaced openings for selectively receiving said element, the arrangement being such that said first and second members serve to support the trough in different positions of vertical adjustment as determined by the engagement of said elements within selected openings.

2,945,474
ANIMAL SCRATCHER AND OILER
William John McIntyre, Swift Current, Saskatchewan, Canada
Filed Jan. 23, 1959, Ser. No. 788,697
5 Claims. (Cl. 119—157)

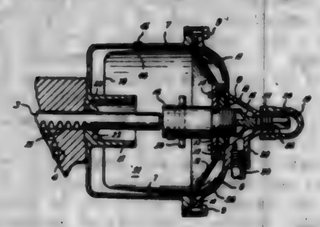
1. An animal oiler and scratcher for suspension between a post and stakes driven into the ground, said oiler

and scratcher including a bracket fixed to the post, a further bracket and means attaching the further bracket to the stakes, a stiffener bar suspended between the brackets, an oiler sock suspended between the brackets separate from the stiffener bar, a scratcher suspended between the brackets separate from the oiler sock and stiffener bar, said scratcher consisting of a cable and a scratching element wound on the cable, a clamp securing the scratcher cable and oiler sock to the stiffener bar, an oil container on the post bracket, a valve casing attached



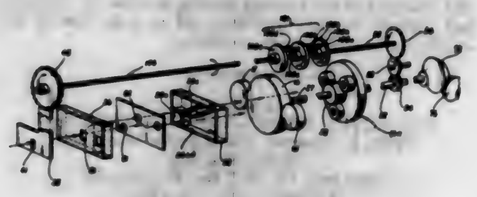
to the container, said casing having a tubular connection for delivery of oil to the sock, a valve body in the casing connected to receive oil from the container, said valve body having two outlets discharging into the casing, a manually operable valve stem controlling the flow of oil from the one valve body outlet, a further valve stem, a bracket in which the further valve stem is carried, an arm on the scratching cable, and spring means between said arm and bracket adapted to normally hold said valve stem seated in the other valve body outlet.

2,945,475
ACTUATING DEVICE
John M. Shoesley, Houston, Tex., assignor to Research Engineering Company, a corporation of Texas
Filed May 4, 1956, Ser. No. 582,690
11 Claims. (Cl. 121—38)



1. An actuating device comprising two chambers separated by a diaphragm, valve means disposed through the center of said diaphragm and supported thereby, a conduit means communicating with only one of said chambers, and shaft means connected to said diaphragm and slidingly received through a sealing means in a wall of one of said chambers; said diaphragm being flexible and capable of being flexed alternately into each of the two chambers and imparting a longitudinal movement to said shaft means, said conduit means supplying compressed gas to only one of said chambers to flex said diaphragm, said valve means equalizing the pressure in the two chambers after full flexure of the diaphragm into either of said chambers, said conduit means venting said one of said chambers to a lower pressure so that the compressed gas in the other chamber flexes said diaphragm back in the other direction, said valve means and conduit means venting both chambers to a lower pressure after the completion of the diaphragm flexure cycle.

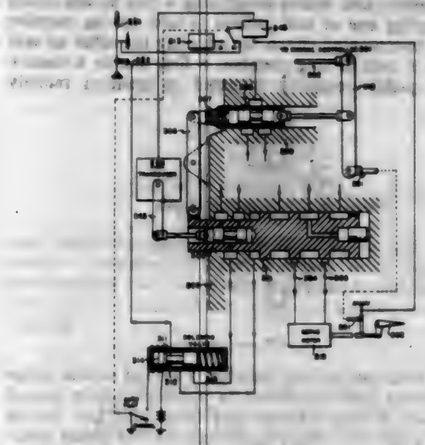
2,945,476
ACTUATOR
Lavern P. Garfield and William W. Williams, Grand Rapids, Mich., assignors to Lear, Incorporated
Filed June 10, 1957, Ser. No. 664,705
1 Claim. (Cl. 121—39)



An actuator for providing alternated forward and reverse movement of the actuated object in response to an input force of one direction or its opposite comprising: a reversible, fluid-operated prime mover for moving the actuated object, a valve for initiating and terminating operation of the prime mover, a member for application of the input force connected to said valve for moving the valve from an "off" position to either "forward" or "reverse" positions, means connecting the output side of the motor to the object, and means connnecting said output side to said member including a first shaft rotatable by said output side, a second shaft coaxial with said first shaft for rotation of said member and a plurality of tandem-arranged, rotatably-supported, lost motion discs positioned between said shafts, a first one of said discs being secured to said first shaft, a second one of said discs being secured to said second shaft, the remainder of said plurality being mounted intermediate said first and second discs, one face of each of said first and second discs carrying mutually confronting axially-extending pins, both faces of the intermediate discs carrying an axially-extending pin, all of said pins being positioned for successive abutment upon rotation of said first disc, the initial angular displacement of the pins being such as to provide a desired delay between rotation of said first disc and rotation of said second disc, whereby said member and the valve operated thereby are restored to "off" position following a predetermined delay period measured from the time of application of the input force.

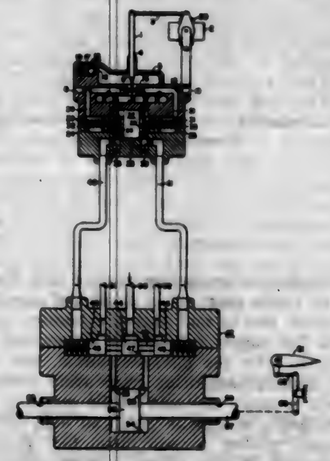
2,945,477
CONTROL SYSTEMS FOR AIRCRAFT
Ruben Hadekel, London, England, assignor to The Sperry Gyroscope Company Limited, Brentford, England, a company of Great Britain
Filed July 18, 1956, Ser. No. 598,685
Claims priority, application Great Britain July 29, 1955
8 Claims. (Cl. 121—41)

1. A dual electro and mechanical control for hydraulic systems, including a hydraulic master control valve, a hydraulic servo-motor controlled therefrom, two pilot valves, hydraulic means for moving said control valve to follow the movements of either one of the two pilot valves, one of said pilot valves being within said control valve, a sleeve in which the other pilot valve is mounted, a signal means from which one of said pilot valves is moved, a signal means from which the other of said valves is moved, alternative hydraulic means for causing movement of said control valve from either the one or the other pilot valve, and means connecting the one pilot valve to



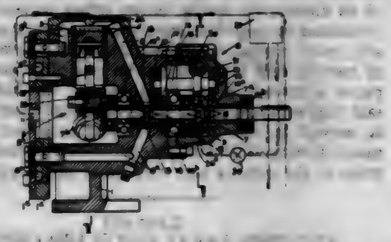
the sleeve of the other pilot valve to move said sleeve from said control valve.

2,945,478
HIGH FREQUENCY RESPONSE VALVE
Clinton R. Hanna, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 19, 1957, Ser. No. 666,736
7 Claims. (Cl. 121—41)



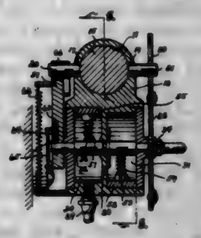
2. A high frequency responsive valve comprising a pair of opposing fluid flow orifices, a control member positioned between said orifices for varying fluid flow through said orifices, control pressure pipes connected to said orifices, said control member fluid flow variations causing fluid pressure variations in said control pressure pipes, dynamic pressure responsive means capable of providing output control pressures during pressure changes within said pressure control pipes, said pressure responsive means comprising a piston having control areas capable of providing an output only during pressure changes in said control pressure pipes.

2,945,479
FLUID ENGINES
Karl Pallo, 96 Courtenay Place, Wellington, New Zealand
Filed May 31, 1957, Ser. No. 663,658
Claims priority, application New Zealand June 8, 1956
13 Claims. (Cl. 121—126)



1. A fluid engine comprising a body, radially disposed cylinders in said body, a piston in each cylinder, a centrally located driven shaft capable of rotation in opposite directions, a connecting rod and crank means operably connecting each piston to the driven shaft, a fluid distribution means incorporated in the driven shaft, means for controlling a fluid supply from said fluid distributing means, means defining one set of passages for the supply and exhaust of fluid to and from the cylinders for one direction of rotation of said driven shaft, and means defining another set of passages for the other direction of rotation of the shaft whereby the direction of rotation of the driven shaft can be reversed by moving said controlling means from a position in which fluid is supplied and exhausted to and from said one set of passages to a position in which fluid is supplied and exhausted to and from said another set of passages.

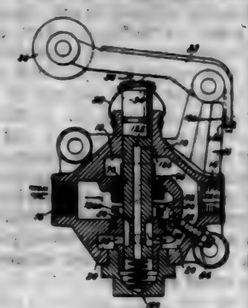
2,945,480
FLUID PRESSURE ACTUATED RECIPROCATING MECHANISM
James T. Toman, Des Moines, Iowa, assignor of one-half to David H. Lipsey, Des Moines, Iowa
Filed Apr. 10, 1959, Ser. No. 805,427
8 Claims. (Cl. 121—164)



1. In a fluid pressure actuated reciprocating mechanism, a base having a bore closed at each of its ends, a slot in said base communicating with said bore and parallel therewith, a single free piston slidable in said bore, a radial member on said piston and extending through said slot, an inlet passageway in said base communicating with the inside of one end area of said bore, a second inlet passageway in said base communicating with the inside of the other end area of said bore, an exhaust passageway in said base communicating with the inside of one end area of said bore, a second exhaust passageway in said base communicating with the inside of the other end area of said bore, a movable valve means adapted to be in communication with a source of fluid pressure and capable of communicating with said first mentioned inlet passageway when in one position

of its movement and capable of communicating with said second passageway when in a different position of its movement, a second movable valve means having an exhaust outlet and capable of communicating with said first mentioned exhaust passageway when in one position of its movement and capable of communicating with said second exhaust passageway when in a different position of its movement, spring loaded toggle means operatively connected to said first mentioned and said second movable valve means, means on said radial member capable of moving said toggle means in one direction when said piston is moved in one direction and capable of moving said toggle means in the other direction when said piston is moved in the other direction; said last mentioned means having substantial free movement in both directions prior to the moving and tripping of said toggle means.

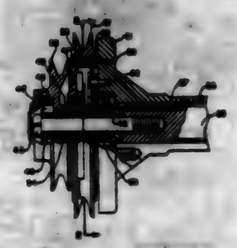
2,945,481
CONTROL VALVE FOR FLUID CIRCUITS
William Carls, Highland, Mich.
Filed June 29, 1959, Ser. No. 823,596
3 Claims. (Cl. 121—164)



1. A speed control valve for controlling a fluid motor which comprises a housing having a bore and two ports leading to said bore, one intersecting the bore at two spaced areas and one intersecting the bore between said spaced areas, a valve spool slidable in said bore adapted in one position to connect said ports to each other through one of said spaced areas, a sleeve in said bore arranged for a sliding fit relative to said housing and said spool adapted to connect said ports through the other of said spaced areas regardless of the position of said spool, said sleeve being shiftable by pressure of fluid in said ports and being yieldingly biased independently of said pressure to permit unidirectional fluid flow from one of said ports to another through said other of said spaced areas when the ports are closed to each other by said spool, said spool being shaped to meter fluid in the other direction between said ports in relation to said first spaced area in said housing as said spool is moved, and means on said housing for actuating said valve comprising a lever pivoted on said housing, cam means on one end of said lever adapted to be actuated to move said valve toward a closed position, means between said pivot and said cam member for contacting said valve and means on said lever on the other side of said pivot for contacting a portion of said housing to limit the motion of said lever and the upward movement of said valve.

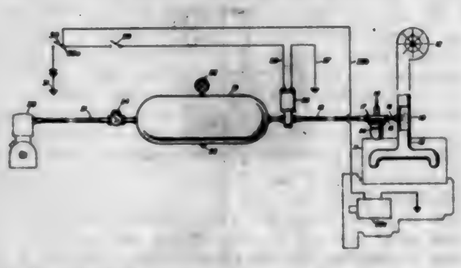
2,945,482
VARIABLE SPEED DRIVES
Edwin C. McRae, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 23, 1956, Ser. No. 573,617
15 Claims. (Cl. 123—41.11)

2. In a two speed accessory drive, a driving member, a first pulley rotatably mounted upon said driving member, a second pulley having a diameter less than said first pulley rotatably mounted upon said driving member, means for selectively coupling said pulleys to said driving member, said means comprising a coil spring clutch for coupling one of said pulleys to said driving member and an overrunning clutch for coupling the other of said pulleys to said driving member, a first double accessory driving pulley rotatably mounted in position radially



spaced from said driving member, a second double accessory driving pulley mounted in position radially spaced from said driving member and from said first double pulley, a first belt extending around the first pulley rotatably mounted upon said driving member and said first double pulley and said second double pulley, and a second belt extending around said second pulley rotatably mounted upon said driving member and said first double pulley and said second double pulley.

2,945,483
DIESEL ENGINE STARTING MEANS AND METHOD
Jack M. Howell, Round Bay Road, Severna Park, Md.
Filed May 27, 1955, Ser. No. 511,588
8 Claims. (Cl. 123—179)

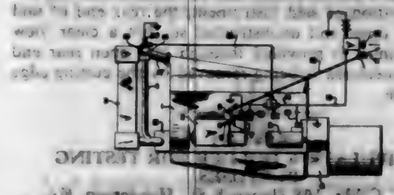


1. A method of promoting starting of a diesel engine having an intake manifold, a diesel fuel supply for supplying diesel fuel to said engine, a booster starting system, said fuel supply and starting system each being interconnected with the intake manifold, and an engine starting system, comprising introducing under superatmospheric pressure into said intake manifold from said booster starting system an atomized fluid of low firing temperature relative to said diesel fuel simultaneously with actuation of said engine starting system.

2,945,484
MIXTURE VARYING MEANS FOR INTERNAL COMBUSTION ENGINES
Hans O. Scherenberg, Stuttgart-Heumaden, and Karl-Heinz R. Geoschel, Stuttgart-Untertürkheim, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed June 11, 1956, Ser. No. 590,765
Claims priority, application Germany June 18, 1955
10 Claims. (Cl. 123—179)

1. In an internal combustion engine particularly of the spark-ignition type employing fuel injection, a fuel charge

forming means and means for varying the mixture of said fuel charge, a starter motor, control means for operating said starting motor and means controlled by said control means for enriching the fuel charge formed by



said charge forming means only as long as said starting motor is operating together with time delay means for retaining said fuel charge forming means in enriched mixture condition momentarily after said starting motor has stopped.

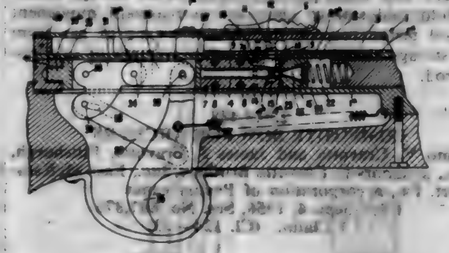
2,945,485
MECHANICAL PROJECTOR
Hans Sherebeng, Box 1, Milton, Mass.
Filed Nov. 6, 1957, Ser. No. 695,466
1 Claim. (Cl. 124—4)



A projector for an annular playing disc, comprising a vertical stake-like supporting means, a throwing lever pivoted to the upper part on one side of said supporting means, a stop secured to the same side of the supporting means as the throwing lever and having a first edge engaging the under edge of the throwing lever to retain its normal position and having a second edge normally spaced from the throwing lever to limit its movement when depressed by a playing stick, said throwing lever having a concave section provided with disc-guiding members at each side thereof at its extreme outer end while its opposite end has an anvil section, and additional means for guiding the playing disc comprising a strip having its upper free end spaced apart from the supporting member, the said strip secured to the pivot of the throwing lever and at its lower end to the stop.

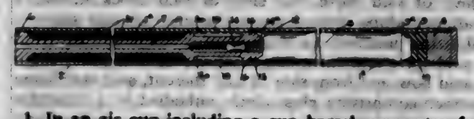
2,945,486
SEALING AND VALVING MEANS FOR USE IN AIR GUNS
Clive Nelson Webby, Riverlea, Taranaki, New Zealand
Filed Sept. 16, 1957, Ser. No. 684,243
Claims priority, application New Zealand Sept. 19, 1956
5 Claims. (Cl. 124—11)

1. In an air gun, a cylindrical casing a portion of which is enclosed to form a storage chamber for gas under pressure, a gas discharge passage in communication with said storage chamber having side walls converging toward said storage chamber, a resilient cup slidably positioned within said storage chamber including a bottom adjacent one end of said gas discharge passage and side walls in contact with the walls of said storage chamber, an axial orifice through said bottom of said cup in line with and of slightly less diameter than said passage, a releasable piston positioned within said casing including an end having surfaces converging axially outwardly thereof, said end projecting into said storage chamber through said passage, said converging end surfaces of said piston contacting said converging walls of said passage to form a first seal to prevent the escape of gas from said chamber



through said passage and resilient means within said storage chamber for biasing said cup into contact with said end of said piston within said chamber around the periphery of said orifice to form a second seal to prevent the escape of gas through said passage.

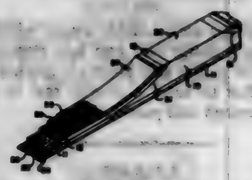
2,945,487
AIR GUNS
Clive Nelson Webby, Riverlea, Taranaki, New Zealand
Filed Sept. 16, 1957, Ser. No. 684,242
Claims priority, application New Zealand Sept. 19, 1956
5 Claims. (Cl. 124—13)



1. In an air gun including a gun barrel, apparatus for compressing and storing air comprising an elongated cylindrical casing situated alongside of and parallel to and fixed to the gun barrel, said casing having a closed outer end and an open inner end, a storage chamber for gas under pressure positioned in communication with said open end of said casing, a one-way valve within said storage chamber and adjacent the open end of said casing, a hollow piston rod positioned within said casing for axial reciprocation therein, said piston rod having an outer piston head adjacent said outer end of said casing and an inner piston head adjacent said inner end of said casing and also having a central section of enlarged diameter, means associated with each said piston head to provide a seal between said casing and each piston head, a longitudinal slot centrally located in said casing, a hand piece secured through said slot to said enlarged central section and operable on reciprocation thereof longitudinally of said casing to reciprocate said piston rod within said casing, air intake means associated with said outer piston head operable to allow air to enter into said casing between the outer end thereof and said outer piston head on rearward movement of said piston rod, and to prevent the reverse flow of air through said air intake means on forward movement of said piston rod, a low pressure one-way valve positioned in said outer piston head operable to allow air to pass from the space between the outer end of said casing and said outer piston head into the interior of said hollow piston rod on forward movement of said piston rod and to prevent passage of gas in the opposite direction through said low pressure one-way valve on rearward movement of said piston rod, a high pressure one-way valve positioned in said inner piston head operable to allow gas to pass from the interior of said hollow piston rod into the space between said inner piston head and said storage chamber

on forward movement of said piston rod and to prevent gas from passing in the opposite direction into the interior of said piston rod on rearward movement of said piston rod, said one-way valve within said storage chamber being operable to allow gas to pass from the space between said inner piston head and said storage chamber into said storage chamber on rearward movement of said piston rod and to prevent escape of gas from said storage chamber on forward movement of said piston rod.

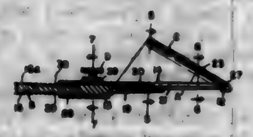
2,945,488
COMPOSITE BOW FOR ARCHERS
Cosmo V. Cravotta and James J. Cravotta, Pittsburgh, Pa., assignors to Cravotta Brothers, Inc., East McKeesport, Pa., a corporation of Pennsylvania
Filed Sept. 4, 1956, Ser. No. 607,876
1 Claim. (Cl. 124—23)



A composite bow for archers, comprising, in combination, a transversely laminated wooden stave, said laminations being bonded to each other, a backing strip extending from end to end of said bow bonded to the adjoining lamination, a center block bonded to the center of said stave, the ends of said block having a graduated slope toward respective ends of said stave, a stabilizing member in strip form bonded to the front of said stave and extending substantially along the length of said bow and from side to side thereof, said stabilizing member comprising glass cloth embodied in a bendable plastic, said glass cloth having relatively longitudinal and transverse fibers in interengaging relation, said stabilizing member further having appreciable thickness sufficient to resist deformation due to twisting tendencies in other components of said bow, and a facing strip bonded to said stabilizing member and extending from end to end of said bow, said backing and facing strips comprising longitudinally extending glass fibers encased in bendable plastic, whereby said bow is protected against stress and deterioration including warping.

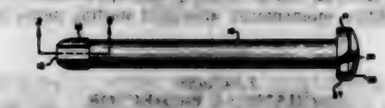
2,945,489
WITHDRAWN

2,945,490
SURGICAL INSTRUMENT FOR CERVICAL BIOPSY
George W. Westcott, 1515 Congress Ave., Ypsilanti, Mich.
Filed Feb. 25, 1958, Ser. No. 717,391
11 Claims. (Cl. 128—2)



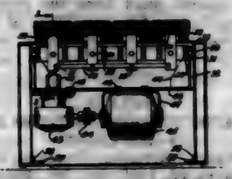
1. In a surgical instrument for removing a specimen of tissue from the cervix uteri, the combination with an elongated handle, an elongated tongue connected to and projecting endwise from said handle, and an elongated blade detachably connected to and carried by said tongue and having a longitudinally extending cutting edge, of a hollow elongated specimen receiving cone detachably connected to said handle and extending lengthwise of said tongue and of said blade, the tip of said cone projecting forwardly beyond and serving as a pilot for said blade, one side of said cone adjacent said blade being provided lengthwise of said cutting edge with a longitudinally extending slot through which the specimen removed by said cutting edge is adapted to enter the interior of said cone during operation of said instrument, the rear end of said cone being open and unobstructed so that a clear view of the specimen is provided through said open rear end while said specimen is being removed by the cutting edge of said blade.

2,945,491
MANIPULATIVE HOLDER FOR TESTING PURPOSES
Cleo A. Gibbs, 105 Hancock St., Henderson, Ky.
Filed Oct. 27, 1958, Ser. No. 769,687
3 Claims. (Cl. 128—2)



1. A holder of the class described comprising an elongated stem member having a smooth external surface and mounting at one end a detachable head member, said head member having a convex outer end and a continuous recess extending axially along opposite sides and across the convex outer end thereof for receiving therein a detachable testing strip, and threaded means for detachably joining said head and stem members and including a circumferential inner thread at said one end of said stem member and a pair of circumferentially spaced interrupted external thread portions on an axial extension of said head member adapted to fit within said stem member, the interruptions between said external thread portions being respectively in axial alignment with said recess portions on the two sides of said head member and forming spaces sufficient to receive the respective end portions of said strip during the engagement of said head and stem members, said head and stem members having cooperating surfaces thereon shaped to hold said strip securely against removal when said head and stem members are fully engaged.

2,945,492
THERAPEUTIC APPLICATOR
Joseph E. Harvey, 1916 Santa Anita Road, Orlando, Fla.
Filed Dec. 2, 1958, Ser. No. 777,652
4 Claims. (Cl. 128—33)



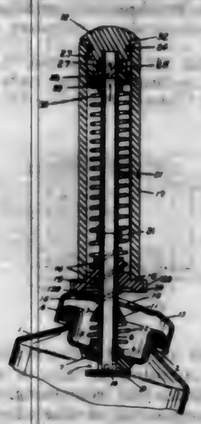
3. A therapeutic applicator comprising a table having a padded top with a recess intermediate its ends, a plurality of pads disposed along said recess in side-by-side relation, upwardly extending levers supporting said pads at their upper ends, a cross bar pivotally connected to and mounting said levers intermediate their ends, support means along said recess pivotally mounting said cross bar whereby oscillation of the cross bar will cause the levers to move in one plane and pivoting of the levers on the cross bar will cause the levers to move in a plane substantially at right angles to the first to thereby impart orbital movement to said pads, and driving means for imparting orbital movement to the ends of the levers remote from the pads.

2,945,493
BREATHING ATTACHMENT FOR SWIMMERS
Harry H. Herman, Jr., Denver, Colo.
Original application Mar. 16, 1956, Ser. No. 149,957, now Patent No. 2,893,799, dated Nov. 9, 1954. Divided and this application Oct. 28, 1954, Ser. No. 465,226
4 Claims. (Cl. 128—146)



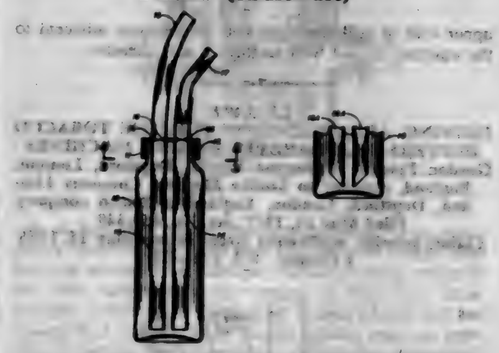
1. A breathing attachment for swimmers, comprising a body formed of resilient, rubber-like material and having a generally cylindrical outer portion constructed and arranged to fit within a nostril of a user, said body having an inner portion connected at its rear end with said outer portion and extending outwardly within said outer portion, said inner portion being formed as a flattened tube adapted to provide a valve to permit discharge of air from the nostril but prevent flow of fluid into the nostril.

2,945,494
PRESSURIZED DOUCHE APPLICATOR
Max E. Bowen, 49230 W. 14 Mile Road, Wixom, Mich.
Filed Feb. 17, 1958, Ser. No. 715,783
13 Claims. (Cl. 128—248)



1. A dispensing applicator and closure mounted on a pressurized container having a tiltable threaded nozzle and valve comprising a tubular barrel of translucent material having a shoulder at its lower end adapted to seat against the top of said container around said nozzle, an internally threaded boss formed on said barrel in the lower end of the barrel and threadedly engaged with the thread on said nozzle, a discharge tube secured to the end of said nozzle and extending through said barrel in spaced relation to the interior of the barrel, a closure cap on the outer end of said tube projecting into the barrel and extending over the outer end of said barrel, the outer end of said tube having a laterally opening hole formed therethrough, a flexible valve sleeved over the outer end of said tube and covering said hole, a flexible O-ring on the underside of said cap received in the end of said barrel, an annular piston of deformable material slidably mounted between said barrel and said tube and sealingly engaged with the walls thereof below said hole, said cap having a depending cylindrical flange spaced from said flexible valve and engageable with the center of said piston, and a helical spring disposed around said tube and engaged at its ends between the underside of said piston and the bottom of said barrel, said barrel having visible graduation indicia disposed along its length for measuring the depression of said piston in said barrel.

2,945,495
NASAL IRRIGATOR
Waldo R. Griffin, Box 530A, Rte. 2, Morgan Hill, Calif.
Filed Mar. 5, 1958, Ser. No. 719,259
1 Claim. (Cl. 128—250)

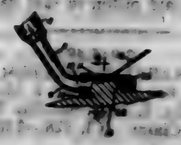


A hand-held, self-administrable nasal passage irrigator that is lung-power limited to the user thereof comprising a hand-holdable reservoir bottle for containing a nasal irrigating fluid, a cover member threadably engaging said bottle to form a sealing wall for said reservoir bottle, said cover member having at least a pair of passageways formed therein, a pair of elongated, resilient hoses in said passageways having outer diameters that are slightly greater than said passageways to form an air-pressure seal therearound but small enough to permit vertical adjustment by applying tension to either end of said hoses, one of said hoses extending from adjacent the bottom of said bottle and terminating at a length above said cover member sufficient only to permit upward pressure on said bottle by the user to force deep entry into one nostril to make a fluid seal therewith during use, the end of said hose within said bottle being severed on the bias to prevent closure of said end when against the bottom of said bottle, the upper end of said hose for engaging the user's nostril having an integrally formed cap portion to prevent scraping of the user's nasal membrane, and the other of said hoses extending into said reservoir bottle sufficient only to permit air pressure to be exerted on the upper portion of said bottle, said other hose terminating adjacent the end of said nostril engaging hose to form a mouth piece for ready entry into the user's mouth whereby the user can control the pressure applied to the fluid while holding said nostril engaging hose in contact with his nasal passage by holding said reservoir bottle in his hand.

2,945,496
DENTAL INSTRUMENT FOR IMMOBILIZING TISSUE
Alfred Fosdal, Rte. 4, Box 398, Medford, Oreg.
Filed Aug. 18, 1958, Ser. No. 755,048
7 Claims. (Cl. 128—297)

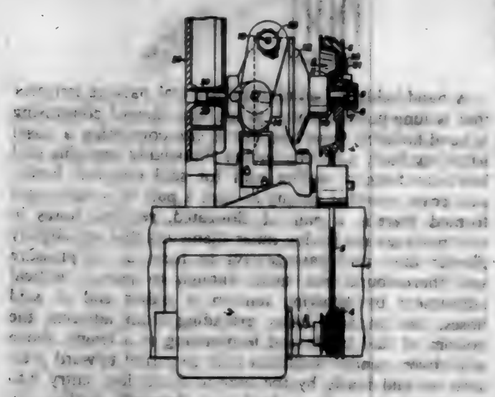
5. A dental instrument adapted to firmly hold body tissue taut and immovable at the site of a prospective hypodermic needle injection in order to minimize the pain of entry of said hypodermic needle, to be used in combination with a hypodermic needle, said instrument comprising an elongated tubular body forming the handle of said instrument, a flatwise hollow foot angularly connected to said tubular body and in communication therewith, said tubular body being flattened to the same degree as said foot at its juncture therewith, said foot

having a pair of opposed openings in its upper and lower walls, and a self-sealing cover disposed upon the



upper wall of said foot over and immediately adjacent to the opening in said wall to form a seal therefor.

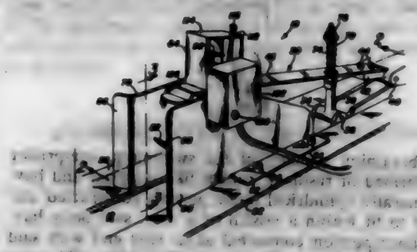
2,945,497
DRIVING ARRANGEMENTS FOR THE TOBACCO HOPPERS OF CIGARETTE-MAKING MACHINES
Gordon Francis Wellington Powell, Deptford, London, England, assignor to Molins Machine Company Limited, Deptford, London, England, a British company
Filed May 15, 1957, Ser. No. 659,349
Claims priority, application Great Britain May 15, 1956
2 Claims. (Cl. 131—21)



1. In a cigarette making machine of the class having a radiation gauge which measures the mass of the tobacco filler produced by the machine and mechanism for altering the speed of the hopper to cause more, or less tobacco to be fed to form the filler, said mechanism being operated by a motor in an electrical controlling circuit associated with and controlled by said gauge, the combination with hopper driving mechanism comprising a stepless variable ratio drive gear, of a regulating device for altering the ratio of said gear and coupled to said motor whereby the ratio of the gear is altered in response to currents in the controlling circuit, a slippable clutch interposed between the motor and the regulating device, and a handwheel attached to said device whereby the gear ratio can be altered manually to alter the tobacco feed rate and override the gauge control, said clutch slipping to permit such manual regulation.

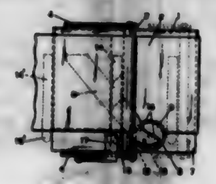
2,945,498
FEEDING CONTROL FOR CIGAR MACHINES
José O. Trujillo Valdespino, Infanta 456, Havana, Cuba
Filed July 14, 1958, Ser. No. 748,241
3 Claims. (Cl. 131—21)

1. A feed control for use in controlling the compactness of material being fed to a machine utilizing material of a controlled density comprising means for feeding said material, feed channel means through which material is mechanically fed, a control member at said feed channel subject to engagement by the material fed therethrough, a housing connected to said control member and adapted to move therewith, a toggle switch mounted on said machine adapted to stop said feeding means when actuated, a C-shaped member having a pair of outstanding legs mounted in said housing, a lever connected to said toggle switch and extending between the legs of said C-shaped member whereby when said housing descends due to an underload of material being



fed, the upper leg of said C-shaped member actuates the lever of said toggle switch to stop the feeding means, and means for manually resetting said switch when said underload has been corrected thereby actuating said toggle switch by contact of said lower leg with said switch lever and restarting the feeding means.

2,945,499
APPARATUS FOR MAKING CIGARS
Martinus Verbakel, Eindhoven, Netherlands, assignor to N.V. Vereenigde Tabaksindustrieen Mignot & De Block, Eindhoven, Netherlands, a company of the Netherlands
Filed Feb. 11, 1958, Ser. No. 714,629
Claims priority, application Netherlands Feb. 15, 1957
4 Claims. (Cl. 131—29)

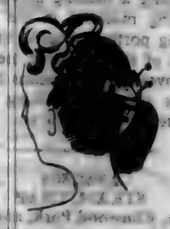


1. An apparatus for the manufacture of a cigar-shaped tobacco product consisting at least of a body of filler tobacco and a binder leaf, comprising, in combination, means defining a supporting surface adapted to receive a leaf thereon with said leaf deposited on said supporting surface in a predetermined position, a rolling device movable to and fro over said supporting surface and adapted to receive the tobacco body and to wind the leaf around the tobacco body, and a movable auxiliary member having a surface substantially flush with said supporting surface, and adapted to be moved with its surface substantially parallel to said supporting surface and to support and to at least partially hold the last portion of the leaf, whereby to locally stretch said last portion of the leaf to permit said leaf portion to nestle closely into the head-end of said tobacco body.

2,945,500
PONY TAIL HOLDER AND METHOD OF MAKING THE SAME
George Neal Bellinger, Shelbyville, Ill., assignor to Sta-Rite Glamo-Loc, Inc., Shelbyville, Ill., a corporation of Illinois
Filed Jan. 31, 1958, Ser. No. 712,348
2 Claims. (Cl. 132—47)

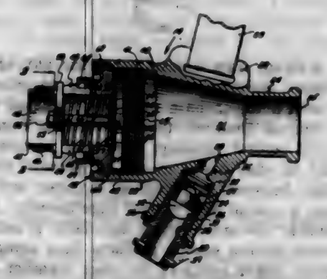
1. A pony tail holder comprising a pair of strips of flexible material each having longitudinal edges and each

provided with a straight fold intermediate its ends at an acute angle and extending to said longitudinal edges of both strips, the folds in the two strips being substantially equally spaced from one end of the strips whereby, when said folds are arranged in registering contacting relation, said ends of the strips diverge upwardly to form decorative wing-like portions, and the other ends of the strips



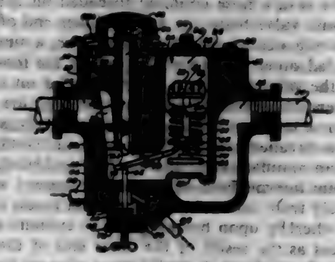
diverge downwardly to be wrapped around the strand of hair, a line of stitching passing through said folds from edge to edge of the strips to attach the strips together at said folds, and means adjacent the extremities of said other ends of the strips to secure them together when said other ends of the strips are wrapped around the strand of hair.

2,945,501
AUXILIARY TANK RELIEF VALVE
Aaron Bloom, Pasadena, Calif., assignor to Sierra Engineering Co., Sierra Madre, Calif., a corporation of California
Filed Dec. 22, 1958, Ser. No. 782,133
3 Claims. (Cl. 137—64)



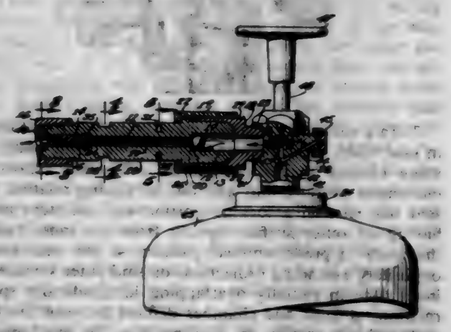
1. An auxiliary tank relief valve for breathing apparatus comprising a body having a chamber therein, a main supply connection thereto comprising a base forming one end of said body and having a connection therewith, a bore through said base communicating between the chamber and the exterior, opening means in the base communicating between the bore and the exterior, a valve seat at the inside end of said bore and a valve assembly in said bore comprising a valve element seating on said seat, a valve stem on said element extending outwardly and a retainer on the outer end of the stem loosely slidable in said opening means between closed and open positions of said valve element, a shoulder on said base, and a spring of relatively greater strength between the shoulder and said retainer and acting in a direction urging said valve element to seated position, means forming an auxiliary passageway through said valve element, an auxiliary valve element on the outside of said first valve element in a position normally closing said auxiliary passageway, and a spring of relatively lesser strength acting between the auxiliary valve element and the valve assembly whereby normally to hold said auxiliary valve element in closed position and to enable exhaustion of air from the chamber when said first identified valve element is in a seated position.

2,945,502
FLOW CONTROL DEVICES
Russell B. Matthews, Wauwatosa, Wis., assignor to Rexo Inc., a corporation of Wisconsin
Filed Oct. 4, 1956, Ser. No. 616,169
8 Claims. (Cl. 137—60)



3. A fluid flow control device comprising, in combination, a valve body formed with separate and independent first and second fluid passages, rotatable valve means in said first fluid passage for control of fluid flow therethrough, a separate valve member in each of said first and second fluid passages each biased toward one and movable to another flow controlling position for respectively controlling fluid flow through said passages, electromagnetic holding means operatively related to one of said valve members for directly holding said one valve member in its said another flow controlling position when moved thereto, means interconnecting said valve members to position the other of said valve members in its said another flow controlling position whenever said one valve member is in its said another flow controlling position, and operating means for said valve means and valve members having a first portion engageable with said interconnecting means to effect movement of said valve members to their said another flow controlling positions and a second portion having an engagement with said rotatable valve means for rotation thereof independent of movement of said valve members.

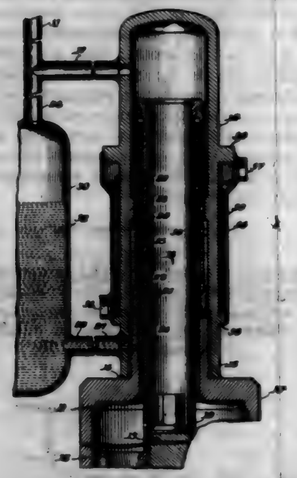
2,945,503
SAFETY CONNECTOR FOR HIGH PRESSURE GAS, STEAM, OR LIQUID CONTAINERS
Kenneth Atkinson, 30 E. Hartsdale Ave., Hartsdale, N.Y.
Filed Apr. 26, 1957, Ser. No. 655,296
2 Claims. (Cl. 137—68)



1. A pressure actuated valve assembly comprising an elongated cylindrical body having a longitudinally disposed bore extended therethrough, said cylindrical body having an arcuate inner end and an externally threaded outer end, said arcuate inner end of the body having a counterbore therein and said counterbore providing a valve chamber with a valve seat at the intersection of the

bore and counter-bore, a ball in the valve chamber, a valve stem extended through the bore of said cylindrical body, a filter positioned in the outer end of the bore of the cylindrical body and having an opening therein for receiving an end of said valve stem for retaining said valve stem in position whereby the ball is spaced from the valve seat, a hose coupling threaded on the threaded end of said valve body, the arcuate inner end of the valve body having a collar on the outer surface, a nipple having a threaded outer surface positioned on the inner arcuate end of the valve body, and a nut threaded on said nipple and extended over said collar for clamping the nipple on the arcuate inner end of said cylindrical body, said nipple having a threaded extended end, and said cylindrical body having an annular recess therein for weakening the body at a point intermediate of the length thereof and spaced outwardly from said valve seat and said recess being positioned whereby upon breaking of the cylindrical body at the recess as the result of the outer end of the body engaging a fixed object the valve stem releases the ball and the ball is seated upon the valve seat by fluid under pressure in the valve chamber in the counter-bore of the cylindrical body.

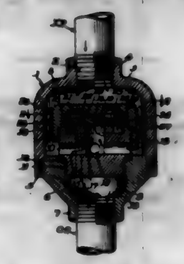
2,945,504
VALVE LOCK
Kurt B. Brodtschneider and Frank M. Ozak, Chicago, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 17, 1956, Ser. No. 616,488
15 Claims. (Cl. 137—72)



7. In a valve comprising a valve body, valve seat means in said body, valve stem means movable in the body, and valve closure means carried by said stem means for movement thereby into and out of closing relation with said seat means, a locking portion on said stem means having an outer surface spaced from the inner face of the body in predetermined position of the stem means, oppositely extending projections on said outer surface and inner face in radially overlapping longitudinally spaced relation, at least one chamber defined between the body and locking portion in said position by overlappingly related projections, material substantially filling each said chamber solidifiable to hold the locking portion secured to the body for preventing movement of the stem means from said position and fluidizable to allow stem means movement, and means to change the temperature of said material for varying the phase thereof between solid and fluid.

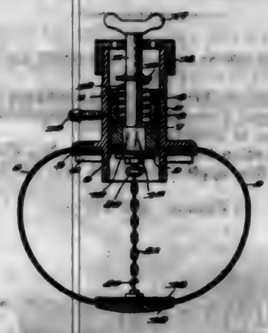
9. A valve comprising a valve body, valve seat means in said body, valve closure means operable to open and close said seat means, closure operating means movable in the body connected to said closure means for movement thereof between opening and closing positions, means within the body defining a pocket therewith open to pressures in the body, an extension fixed on said operating means having a locking portion engaging within said pocket, locking material in the pocket solidifiable to hold the locking portion secured to the body for preventing movement of the operating means and fluidizable to permit such movement and means for equalizing pressure in the pocket about the locking portion to prevent ejection of the material in fluid phase.

2,945,505
STEAM TRAP
George E. Hansen, Elmwood Park, and Frank J. Sanoica, Chicago, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Filed July 24, 1957, Ser. No. 673,888
2 Claims. (Cl. 137—183)



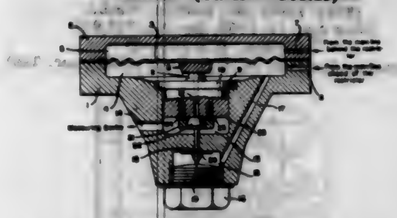
1. In a steam trap, a casing therefor having inlet and outlet means, the said casing including an upper housing portion and a lower base portion connected thereto to form a central chamber therebetween, a cage member within said central chamber having a portion sealingly connected to said outlet means to prevent direct communication between said central chamber and said outlet means, a central port in said cage member and a pair of concentric upwardly facing annularly projecting seats therearound having seating surfaces in a common plane defining the upper limits of the cage member, said seats defining an annular fluid passage therebetween, a cap member attached to said cage member and overlying said annularly projecting seats to provide an inner chamber therebetween, a plate-like closure member snugly fitted within and reciprocally movable within said cap member to predeterminately abuttingly engage said seating surfaces, said cage member having an inner projecting stop for limiting the movement of the said closure member in the central chamber in a direction away from the said seat, the said cap and cage members substantially filling the casing central chamber except for having an annular chamber formed around the side of the cage and cap members and a space across the top of the cap member adjoining the casing inlet, the cage member having substantially vertical passage means directly connecting the annular fluid passage with the casing outlet means, transversely extending passage means in the cage member communicating at one end thereof with the casing inlet through the said annular chamber formed around the side of the cage and cap members and the space extending across the top of the cap member adjoining the casing inlet, the said transversely extending passage means communicating at the other end thereof with the central port of the cage member, the said cap member encircling the periphery of the plate-like closure member to guide the latter member in its reciprocal movement.

2,945,506
CONTROL VALVE, PARTICULARLY FOR AIR JACKETS
Knut Wilhelm Svensson, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo, Sweden, a corporation of Sweden
Filed June 22, 1956, Ser. No. 593,163
Claims priority, application Sweden June 23, 1955
3 Claims. (Cl. 137—226)



1. In combination, a control valve and an air jacket comprising, a valve housing having a gas inlet and a gas outlet, said valve housing being mounted in a wall of the air jacket, a piston slidably disposed between two end positions within said housing, means responsive to the volume of gas within said jacket for moving the piston from one end position in which said gas inlet is in communication with the air jacket to the other end position in which the gas inlet is closed, a central axial bore in said piston providing a communication to said gas outlet, an outlet valve mounted on said piston for closing said axial bore and connected to said volume responsive means, said outlet valve being actuated by said volume responsive means for opening said outlet valve when said volume exceeds a predetermined value.

2,945,507
FLOW DIVIDER
Gustav K. Neuhaus, Sandersbusch 29, Essen-Stadtwald, Germany
Filed May 26, 1955, Ser. No. 511,335
Claims priority, application Germany June 3, 1954
8 Claims. (Cl. 137—505.13)



1. In a flow divider for connection with a restrictor-equipped flow pipe, the combination of: a casing, a diaphragm supported by said casing and subdividing the same into a first and a second chamber, said first chamber having passage means for connection with said flow pipe behind said restrictor, and said second chamber having passage means for connection with said flow pipe ahead of said restrictor, a valve seat member arranged in said casing and having a conduit therethrough for discharging a branch current from said second chamber, a valve member supported by said diaphragm for cooperation with said valve seat member to control the discharge of said branch current from said second chamber into said conduit, said casing being provided with an outlet for discharging said branch current and for connection with a measuring device, a stop valve member interposed between said outlet and said conduit and adapted to move into closing position for closing said conduit to prevent communication between the latter and said outlet and to create a pressure head for said branch current in said conduit, and channel means conveying the pressure prevailing in said second chamber to said valve member for causing the latter to close said conduit, said stop valve member being so designed that the maximum force adapted to be exerted thereupon for moving the same into closing position when said valve member is subjected to the pressure in said second chamber is less than the force exerted upon said valve member by said branch current when said conduit communicates with said second chamber.

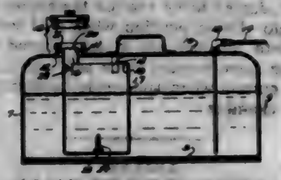
2,945,508
PRESSURE RELIEF VALVE
Frederick G. Schweidtfeal, Skokie, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Apr. 26, 1957, Ser. No. 655,324
1 Claim. (Cl. 137—515)



An axial flow fluid pressure relief valve comprising a body assembly having an axial chamber therein, an axial inlet and an axial outlet for said chamber, a ball check in the chamber, structure in said body assembly defining a seat for the ball check at the inlet end of the chamber, an axially elongated thin-wall cup-shaped element in the chamber downstream of the ball check having a base normal to the axis of the chamber and having a concave depression in the central portion of the base for receiving and guiding the ball check, the outer peripheral wall of the element being spaced from the adjacent peripheral wall of the chamber, an axially elongated helical spring disposed within the element and engaging the base thereof, enlarged aperture means in the base of the element positioned at least partially radially inwardly from the spring, and structure in the body assembly surrounding the outlet defining abutment surfaces normal to the axis of the chamber for the end of the element opposite its base and for the spring end adjacent the said end of the element whereby the spring normally urges the element away from its abutment surface to seat the ball check, the ends of the spring being flat in planes perpendicular to the axis of the chamber and the peripheral surfaces of the spring and element facing each other being closely adjacent to maintain the element substantially coaxial with the chamber axis and spaced from the chamber wall during movement of the element to and from its ball check seating position, the axial length of the element being substantially greater than the axial length of the spring when fully compressed so that in the open position of the ball check the element

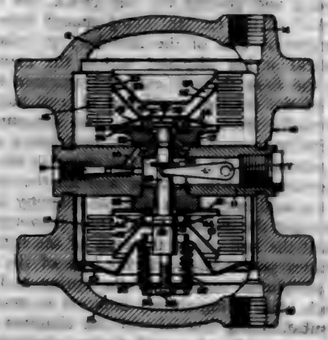
engage its abutment surface prior to full compression of the spring, whereby the force of the spring resisting opening movement of the ball check is substantially constant and accurate over a long period of use.

2,945,509
TANK WITH PROPORTIONING MEANS
Thomas E. Tuttle, 1674 N. 122nd St., Wauwatosa, Wis.
Filed Aug. 28, 1957, Ser. No. 680,896
4 Claims. (Cl. 137—576)



1. A proportioned measuring and mixing fuel container for internal combustion engines comprising, a primary fuel tank for a gasoline and oil mixture, said tank having an upper fuel supply inlet, a removable cap normally closing said inlet, an oil measuring receptable approximately co-extensive in height with said tank secured therein in communication with said inlet, said receptacle having a transverse sectional area at all levels thereof in substantially constant predetermined proportion to the transverse sectional area of said tank at corresponding levels, and means providing an air vent passage leading from the interior of said tank exteriorly of said receptacle and through said tank inlet to the atmosphere, said receptacle also having a bleed hole adjacent the bottom thereof for constantly permitting restricted fluid communication between said tank and said receptacle, said bleed hole being sized to permit equalization of fluid levels between the interiors of said tank and receptacle at maximum normal rates of fuel withdrawal from said tank while not materially varying the differential in fluid levels therebtween during normal introduction of oil to said receptacle.

2,945,510
VALVE RELEASE FOR DIFFERENTIAL PRESSURE RESPONSIVE DEVICES
Burton Jones, 580 Monterey Pass Road, Monterey Park, Calif.
Filed Sept. 10, 1957, Ser. No. 683,690
4 Claims. (Cl. 137—796)



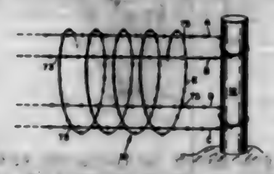
1. In a device responsive to differential pressures wherein there is a liquid-filled bellows subjected internally and externally to the pressures and which has a valve closure connected thereto engageable with a seat when the differential in pressures becomes excessive to entrap the liquid in the bellows and thus prevent damage to the bellows, a spring associated with the bellows and valve closure and normally disposed in unstressed condition, and means engageable by the spring as the closure approaches its seat for causing the spring to be stressed and loaded to urge the closure to disengage its seat when the differential in pressures returns from excessive conditions to normal conditions.

2,945,511
METHOD OF MAKING AXMINSTER-TYPE CARPET
Henry A. Reinhardt, Bryn Mawr, Pa., assignor to Bigelow-Sanford Carpet Company, Inc., Thompsonville, Conn., a corporation of Delaware
Original application Oct. 26, 1957, Ser. No. 691,814. Divided and this application Sept. 16, 1959, Ser. No. 840,341
3 Claims. (Cl. 139—7)



1. The method of weaving a pile fabric floor covering of the Axminster type having a backing including binder warp threads and a series of pile tuft holding weft shots in the same weft plane, which comprises, in each weaving cycle, forming a shed of warp threads including binder warp threads, wiping-in a weftwise row of pile yarns between binder warp threads at the fell of the fabric with each pile yarn at the end of the wipe-in extending less than a pile tuft length below the holding weft shot inserted in the preceding weaving cycle, inserting a holding weft shot through the shed, beating-up said last-inserted holding weft shot against said pile yarns while said yarns are so extending, and cutting the pile yarns above said holding weft shots to provide from each pile yarn only a single pile tuft leg secured in said backing.

2,945,512
BARBED WIRE LAYING DEVICE
Ronald G. Puckett, Claflin, Kans.
(6944 100th St., Renton, Wash.)
Filed Apr. 16, 1958, Ser. No. 729,038
7 Claims. (Cl. 140—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A mobile barbed wire obstacle laying cart comprising a chassis, a plurality of vertically spaced-apart first wire dispensing means supported on the chassis for paying out a plurality of correspondingly spaced-apart horizontally extending wires as the cart travels along the ground adapted to be anchored to a support, said wires being stiff and freely suspended between said dispensing means and the support, a second wire dispensing means supported on the chassis for paying out a wire transverse to said horizontal wires, said first and second wire dispensing means each being provided with a wire supply, said second wire

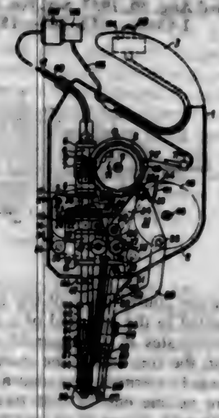
dispensing means being revolvable about said first wire dispensing means concurrently with cart movements to wrap said transverse wire around said horizontal wires, means for rotating said second wire dispensing means, and means for securing said transverse wire to the horizontal wires at their crossing portions forming a hollow freely standing barbed wire pattern.

2,945,513
METHOD OF PRODUCING SEAT FRAMES
Napoleon P. Boretti, Detroit, and Lorrabee T. Kendall, Huntington Woods, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 14, 1954, Ser. No. 436,589
6 Claims. (Cl. 140—71)



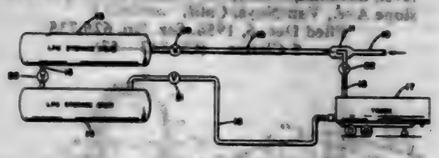
1. A method of producing wire seat frames comprising, fabricating a wire mesh blank by welding longitudinal and transverse wire members together at the intersections thereof, rigidly holding said wire members together at at least one pair of successive welded intersections thereof to maintain the fabricated spatial relationship of said successive welded intersections and prevent breaking of the welds thereat, and die forming a portion of one of said wire members intermediate said successive welded intersections being held to form contours in said one of said wire members solely by the elongation of said portion being die formed, whereby the fabricated spatial relationship of said successive welded intersections remains constant.

2,945,514
TYING APPARATUS FOR RODS, WIRES OR THE LIKE PREFERABLY FOR TYING REINFORCING RODS CROSSING EACH OTHER
Eugen Wyss, Adliswil near Zurich, Switzerland, assignor to Ernst Schoch A.-G., Basel, Switzerland
Filed Feb. 7, 1957, Ser. No. 638,830
Claims priority, application Switzerland Feb. 17, 1956
10 Claims. (Cl. 140—93)



1. Apparatus for automatically feeding and tying a wire around rods such as are used as reinforcements in concrete, including a housing having mounted therein a drive shaft, a driven shaft in axially alignment therewith and projecting with one end from said housing, a wire twisting member mounted on said end of said driven shaft, a manually controllable friction clutch between said drive shaft and said driven shaft, two axially aligned cams in said housing, means operated by one of said cams for controlling said clutch, a driving connection between said drive shaft and said two cams, a wire supply reel within said housing, wire feeding means in said housing, lever means connected to said wire feeding means, said lever means being actuated by one of said cams for feeding wire from said supply reel downwardly to one side of said wire twisting member and beyond the outermost end thereof, a support extending outside said housing to a point adjacent said wire twisting member, a hook pivotally attached to said support movable toward and away from the end of said wire twisting member to bend and guide the wire around the rods to be tied and in the form of a loop toward the other side of said wire twisting member after passing around said rods, a linkage operated by said other cam and pivotally connected to said hook to tilt the same toward and away from said rods to be tied, and means for cutting the loop-shaped portion of the wire from the supply wire when said twisting member starts to rotate.

2,945,515
LIQUEFIED GAS HANDLING SYSTEM
Martin U. Zimmerman, Jr., Shaker Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed June 4, 1956, Ser. No. 729,871
3 Claims. (Cl. 141—67)

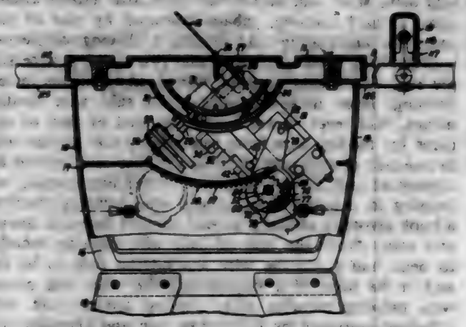


1. A system for handling liquefied gas comprising a first conduit connecting a source of liquefied gas with a first storage vessel, said first conduit having an eductor operably associated therewith, a second conduit connecting the liquid-filled section of said first storage vessel with a second storage vessel, and a third conduit operably connecting the vapor-filled section of said second storage vessel with said eductor whereby the flow of liquefied gas through said first conduit and said eductor into said first storage vessel causes liquefied gas in said first storage vessel to be educted into said second storage vessel forcing any vapor in said second vessel into said first storage vessel.

2,945,516
TILTING ARBOR TABLE SAW WITH COAXIAL CONTROL OF ELEVATION AND TILT
John W. Edgewood, Jr., Los Altos, and John J. O'Connor, Menlo Park, Calif., assignors, by mesne assignments, to Yuba Consolidated Industries, Inc., San Francisco, Calif., a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 631,820
1 Claim. (Cl. 143—36)

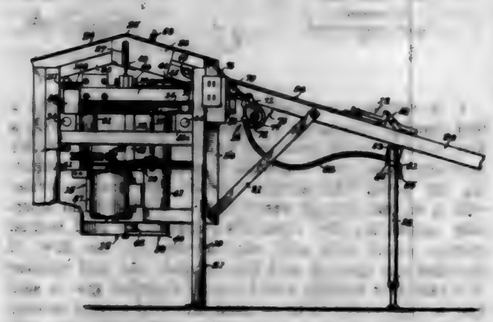
A casting forming the front of a tub support for a table saw in which the saw cradle may be tiltably mounted in an arcuate front trunnion, in which the controls for raising and lowering and tilting the saw extend through an arcuate slot, in which the means for tilting the saw comprises a fixed arcuate rack arranged to mesh with a ro-

table pinion, in which the saw may be locked in a predetermined raised or lowered position by a locking shoe adjacent said controls and engaging a locking surface, and in which the angle of tilt is limited by a pair of



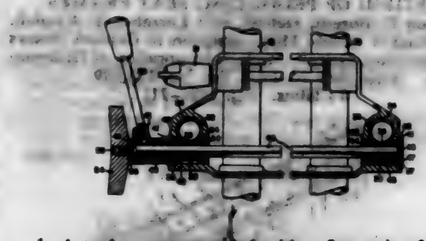
stops; said casting being characterized in that the front trunnion, the arcuate slot, the arcuate rack, and the locking surface are concentric and the stops are formed in a predetermined position with respect to said trunnion, slot, rack, and locking surface.

2,945,517
PLURAL PANEL STRIP-CUTTING MACHINE WITH TRAVELING SAW
Albert J. Sewer, North Hollywood, Calif. (1021 Isabel Ave., Burbank, Calif.), and Samuel J. Kent, 6432 Sunnyslope Ave., Van Nuys, Calif.
Filed Dec. 6, 1956, Ser. No. 626,738
5 Claims. (Cl. 143—47)



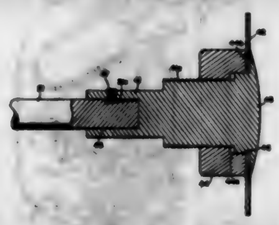
1. In a strip-producing machine, a straight trackway; a strip-cutting unit mounted on the trackway and comprising an outer cage engaged with the trackway to move therealong in both directions, alternately, an inner cage carried by the outer cage and mounted for rotation on an axis normal to the extent of the trackway, and a toothed, rotary saw carried by the inner cage and disposed on an axis intersecting the axis of rotation of the inner cage and transverse to the extent of the trackway; means to releasably lock the cages to hold the saw in a plane parallel to the path of extent of the trackway and during movement therealong; and a chain drive to move the unit bodily along the trackway when the cages are locked together, and at the end of such bodily movement to move the inner cage through one-half of a revolution when the cages are unlocked to, thereby, reverse the saw.

2,945,518
APPARATUS FOR RAISING AND LOWERING A SAW TABLE OR TOOL REST
John W. Edgemond, Jr., Los Altos, and Hans Goldschmidt, Atherton, Calif., assignors, by mesne assignments, to Yuba Consolidated Industries, Inc., San Francisco, Calif., a corporation of Delaware
Original application May 15, 1956, Ser. No. 494,468. Divided and this application Aug. 30, 1957, Ser. No. 681,390
3 Claims. (Cl. 143—132)



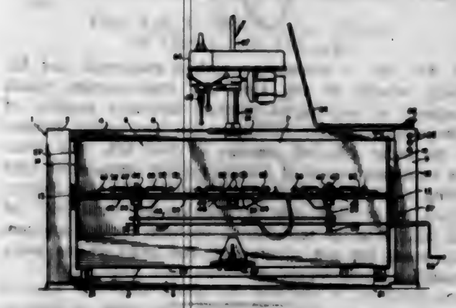
1. A tool mount provided with a first pair of parallel transversely spaced bearings; a pair of posts, each of said posts being provided with a rack and slidably mounted in one of said bearings; a second pair of transversely spaced coaxial bearings formed in said tool mount in intersecting relationship with said first pair of bearings; a pinion drum journaled in each of said second pair of bearings, each of said drums being provided with a pinion arranged to mesh with the rack formed on its cooperating post and with a conical shoe, said conical shoes being disposed on opposite sides of the posts thereby locating the posts therebetween; a shaft slidably supported in said pinion drums and keyed thereto; means for rotating said shaft comprising a hub keyed thereto and slidably mounted thereon adjacent the outer end of one of said drums; means for operating said hub, and means for urging the conical shoes longitudinally along said shaft toward each other and into locking engagement with said posts comprising a nut threaded on said shaft adjacent said hub, and a stop means on the opposite end of said shaft adjacent the outer end of said other drum.

2,945,519
SAW ARBOR
John W. Edgemond, Jr., Los Altos, and Hans Goldschmidt, Atherton, Calif., assignors, by mesne assignments, to Yuba Consolidated Industries, Inc., San Francisco, Calif., a corporation of Delaware
Filed Aug. 30, 1957, Ser. No. 681,372
1 Claim. (Cl. 143—155)



In a saw arbor construction of the type which is operatively connected to the free end of a driven shaft whose other end terminates in a source of power such as an electric motor, the free end of the shaft having a flat portion, an enlarged exteriorly threaded member, a centrally disposed bore at one end of said threaded member cooperating with said driven shaft and fitting over the free end of the same, a threaded hole in the wall of said bore, threaded means cooperating with said threaded hole in the wall of said bore and engaging said flat on said driven shaft to secure said driven shaft and said enlarged exteriorly threaded member in cooperative relationship, a shallow rounded head formed on that portion of said threaded member remote from said bore, an interiorly threaded nut member threaded on said exteriorly threaded member and adapted to be urged toward and away from said shallow rounded head, an enlarged shoulder provided on said threaded member adjacent said head, said threaded nut member being provided with an internal annular recess whose diameter is slightly larger than the diameter of said shoulder, a saw blade positioned on said shoulder between said head and said nut whereby when said nut is tightened said saw blade is firmly positioned on said shoulder between said nut and said shallow rounded head and, whereby when said nut is loosened and disengaged from said shoulder and from said enlarge exteriorly threaded member said saw blade may not be removed from said arbor and driven shaft assembly in a direction away from said shallow rounded head.

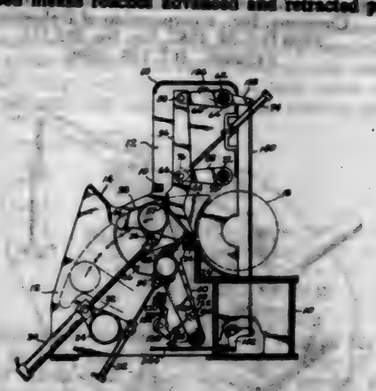
2,945,520
DOOR AND JAMB MORTISING MACHINE
Kenneth Wayne Grubb, Fort Worth, Tex., assignor to Turn-A-Bore Equipment Company, a corporation of Texas
Filed June 30, 1958, Ser. No. 745,787
6 Claims. (Cl. 144—27)



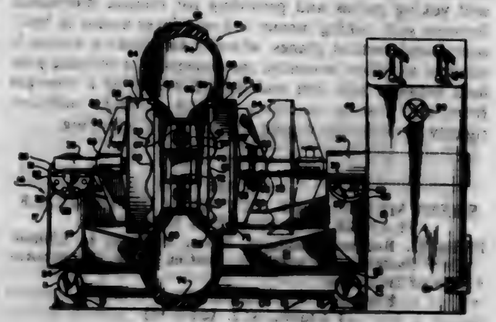
1. A door and jamb mortising machine comprising a cradle-like structure consisting of a supporting frame and a carriage rotatably mounted on the frame whereby it may be rotated in the vertical plane, drive means capable of acting upon the carriage whereby it may be selectively rotated to and from either of two operating positions which are spaced circumferentially 180 degrees apart from each other, and door and jamb supporting means carried by the carriage and capable of supporting a door and a jamb in fixed positions relative to each other, for mortising the corresponding edges thereof to receive the hinges, while the carriage is in one of its operating positions, and for mortising the opposite edge of the door and to receive the front plate of the lock, and for drilling a hole therein for the lock bolt, when the carriage is in the other of its operating positions.

2,945,521
RAM TYPE WOOD REDUCING APPARATUS
Harold E. Erickson, Auburn, Wash., assignor of one-half to Dale L. Schubert, and one-half to Industrial Development Co., Tacoma, Wash., a corporation of Washington
Filed Mar. 3, 1959, Ser. No. 796,805
6 Claims. (Cl. 144—162)

1. Wood reducing apparatus comprising a cutter, ram feed means reciprocatable between advanced and retracted positions for feeding a piece of wood to the cutter, hold down means positioned for holding the wood piece down as it is reduced by the cutter, first control means for reversing the direction of motion of the ram feed means as the feed means reaches advanced and retracted positions and second control means for throttling down the speed of the ram feed means during its working cycle and for accelerating the speed thereof during its non-working cycle.

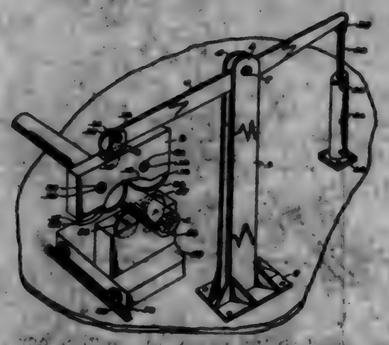


2,945,522
POWER ACTUATED WHEEL ELEVATING AND SUPPORTING STAND
Melvin E. Nelson, Santa Barbara, Calif., assignor, by mesne assignments, to The Hufford Corporation, El Segundo, Calif., a corporation of California
Filed June 28, 1957, Ser. No. 668,722
2 Claims. (Cl. 144—288)



1. Apparatus for supporting a wheel and tire assembly comprising the combination of, a base, a yoke having a pair of parallel outwardly projecting legs from a common member pivotally mounted on the base, the legs of the yoke extending at least from the periphery of the tire assembly to the central axis thereof, the wheel and tire assembly manually positionable between the parallel legs, powered means pivotally connecting at least one leg of the yoke to the base for elevating the projected legs from a normal position of rest on the base, a mounting bar secured to the projected end of each leg of the yoke extending toward each other between the legs, a pair of identical wheel or tire engaging attachments, each attachment detachably carried on each mounting bar, and powered mechanism carried by at least one mounting bar for urging the attachments into forcible engagement with opposite sides of the assembly to support the assembly centrally.

2,945,223
HOLD-DOWN APPARATUS
Sterling E. Jenkins, Charleston, S.C., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Oct. 29, 1957, Ser. No. 693,171
3 Claims. (Cl. 144—309)



1. A hold-down device adapted to receive a rotating pole from a pole rossing machine which rotates and feeds a pole in an axial direction comprising an axially movable pole supporting tram having two tangentially opposed first rotatable wheels, yoking means having two tangentially opposed second rotatable wheels for cooperation with said first wheels for holding a rotating pole between said first and second wheels by contact of said first and second wheels on opposite sides of the rotating pole, a loading lever means for positively and yieldably holding said yoking means in contact with a rotating pole, and means pivotally and swivelly connecting said yoking means and said lever means for transmitting a load to said yoking means and providing for relative movement between said yoking means and said lever means in horizontal and vertical planes whereby said yoking means is adapted to follow eccentric movements of a rotating pole held between said first and second wheels as it emerges from said rossing machines and to maintain sufficient rigidity to constrain a pole so held from whipping.

2,945,524
SHEET METAL LOCK NUT WITH DEFORMABLE FLANGE AND SEALING MATERIAL
Philip D. Bochar, Hingham, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed July 5, 1951, Ser. No. 519,823
1 Claim. (Cl. 151—38)



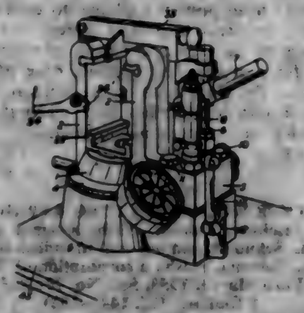
A sealing nut device for assembly onto a threaded member extending through a panel opening comprising a preassembled sheet metal nut and a thread sealer forming a two-piece assembly only, said nut having an outer barrel portion, an inner barrel portion disposed within said outer barrel portion in spaced, substantially parallel relationship therewith, said inner and outer barrel portions being united at one end thereof by an imperforate portion, the inner surface of said inner barrel portion being threaded forming an axially extending threaded central bore in the nut for receiving a threaded bolt therein, and an outwardly and downwardly extending deformable flange portion joined to the opposite end of said outer barrel portion and lying below the free end of said inner barrel portion, and a rim of adhesive mastic sealing compound seated on and extending between the free end of the inner barrel portion and the outer barrel portion and the inside face of said flange portion, thereby forming a closed air chamber between said inner and outer barrel portions, said sealing compound being confined within the flange when the flange contacts the panel and being of sufficient volume to be squeezed inwardly around the threaded nut and into the closed air chamber between the inner and outer barrel portions when the flange is flattened by tightening the nut against the panel, whereby the air trapped in said closed air chamber acts as a compressible fluid accommodating displaced matter and exerting pressure thereon to aid in forcing said mastic into small spaces around said threaded member.

2,945,525
IMPROVED CONCTURE STRUCTURE
Giuseppe Luigi, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed Dec. 27, 1955, Ser. No. 555,713
Claims priority, application Italy Jan. 15, 1955
11 Claims. (Cl. 152—361)



1. For use in connection with a pneumatic tire for vehicle wheels of any kind, the improvement which comprises a ring-shaped cincture structure capable of withstanding tension stresses when put under tension by the inner inflation pressure of said tire, said structure being composed of a substantially inextensible strip having a plurality of circumferential coils and characterized by at least one interruption for each 360° of said coils with the terminating portions located adjacent each other but not superposed, the interruptions being circumferentially staggered.

2,945,526
MANUALLY CONTROLLED PORTABLE HYDRAULIC COMPRESSORS
Severino Cristiani, Milan, Italy, assignor to A. Salvi & Co. già I.F.I., Milan, Italy
Filed Aug. 10, 1956, Ser. No. 527,699
Claims priority, application Italy Aug. 18, 1954
3 Claims. (Cl. 153—1)



1. In a portable hydraulic press for crimping fittings to cables, hoses and the like, a unitary monoblock forming a cylinder for containing a pressure medium, two shoulders integral with said cylinder and monoblock and

extending upwards from opposite sides of said cylinder, a piston slidable in said cylinder, a toed-in channel shaped head for carrying a bottom die, said head being integral with said piston and slidable between said two shoulders, a flange laterally projecting from the periphery of said monoblock, a reservoir supporting said monoblock by said flange, said cylinder being positioned at least partially in said reservoir, a tension spring coaxial with said piston and interposed between said cylinder and said piston for the retraction of said piston for the completion of a working cycle, holding and guiding means in said shoulders for removably engaging a counter die therein, a counter die carried by said toed-in channel and provided with slots, detachable holding elements mating with said holding and guiding means in said shoulders for engaging said slots, said holding elements serving also as reaction elements for the piston pressure on said counter die, a closing bar hingedly connected to one of said shoulders and adapted to engage the other of said shoulders for resisting stresses applied to said shoulders, and a forked guide on said closing bar for engaging said fixed counter die to prevent the displacement thereof with said other shoulder engaged by said closing bar.

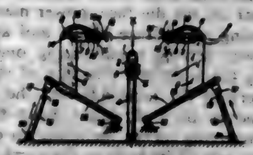
2,945,527
DEFORMATION OF RESILIENT MATERIAL WITH ELECTRONIC YIELD POINT DETERMINATION
John L. Bower, Downey, and Kenneth H. Beers, Lakewood, Calif., assignors to North American Aviation, Inc.
Filed Apr. 3, 1957, Ser. No. 650,396
16 Claims. (Cl. 153—16)



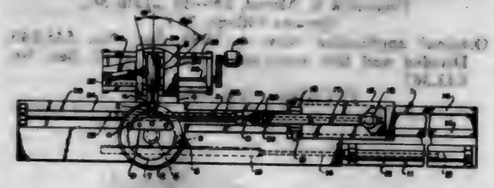
15. Apparatus for straining a resilient workpiece through its yield strain to produce a predetermined amount of permanent strain therein comprising means for generating an error signal indicative of said predetermined amount of permanent strain, actuating means responsive to said error signal for straining said workpiece, means for generating a measured signal indicative of the actual strain in said workpiece, means for generating a yield signal indicative of the yield strain of said workpiece, means responsive to said measured and yield signals for producing a correction signal indicative of the amount by which said actual strain exceeds said yield strain, and means responsive to the relation between said error and correction signals for stopping said actuating means.

2,945,528
MACHINES FOR SHAPING SHEET METAL
Pierre Roux, Paris, France, assignor to Etablissements L. Morane Societe Anonyme, Paris, France
Filed Apr. 19, 1957, Ser. No. 654,022
Claims priority, application France Apr. 30, 1956
1 Claim. (Cl. 153—32)

A machine for shaping metal sheets comprising, in combination, a movable forming member; means for displacing said forming member in a substantially vertical plane; two sets of gripping members respectively arranged on opposite sides of said vertical plane and adapted to hold a metal sheet while resisting the forces resulting from the displacement of said forming member; a movable support for each of said gripping members; connecting means for connecting each of said gripping members to its support for turning movement about three axes substantially normal to each other so that said gripping members may follow the direction of tension of the metal sheet; guide means for guiding the movements of said supports, said guide means forming respectively inclined guides sloping downwardly towards said vertical plane and being pivotally mounted at their lower ends thereof adjacent said vertical plane for turning movement about horizontal axes; means for varying the inclination of each of said guides independently of the other said guides; first moving means for moving each of said supports independently along said guide means thereof, and independent of said means for displacing said forming member, toward and away from said vertical plane; and second moving means operatively connected to said gripping members and said supports, respectively, for independently moving said gripping members toward and away from said supports.



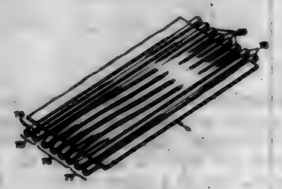
2,945,529
STRETCH FORMING MACHINE
Henry W. Hehn, Chardon, Ohio, assignor to The Cyril Bath Company, Solon, Ohio, a corporation of Ohio
Continuation of application Ser. No. 687,052, Sept. 30, 1957. This application Sept. 22, 1958, Ser. No. 762,655
4 Claims. (Cl. 153—40)



1. In a stretch forming machine comprising a horizontal frame, a table mounted thereon for rotation about a predetermined upright axis, power driving means for rotatably driving the table, a side face die and a means for securing one end of a length of stock in fixed position relative to the die, said securing means and die being mounted on the table with the side face of the die generally upright, said die face being curvilinear about said upright axis, a guideway in fixed position on the frame, a carriage mounted on the frame for movement freely in opposite directions, independently of operation of the table driving means, along said guideway in a predetermined horizontal path extending generally endwise of the frame toward and away from the table, connecting means on the carriage including a stock gripping head connectible to the stock for applying tension to the stock when the carriage is urged along said path in a direction away from the table, an elongated fluid pressure operated stretch forming piston and cylinder assemblage including a piston member and a cylinder member and operatively disassociated from the driving means, one of said members being connected to the carriage with its axis parallel to said path, and the other of the members being connected to the frame for yieldably urging the

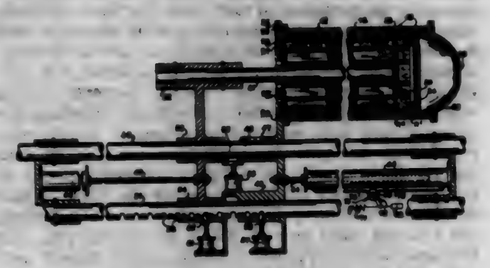
carriage away from the table during the travel of the carriage along said path, means to supply yieldable fluid pressure to said assemblage for yieldably urging the carriage away from the table, a wipe forming assemblage mounted on the frame, a pressure applying tool mounted on the wipe forming assemblage and movable thereby, in one position of the wipe forming assemblage, along a horizontal path extending substantially through the table axis and at substantially a right angle to the direction of the carriage path, into wipe forming engagement with stock on the die face, power means to operate the wipe forming assemblage in the tool applying direction, said power driving means being operable for rotatably driving the table in a direction of rotation wherein the periphery of the table adjacent the wipe forming assemblage moves in a direction away from the carriage, said connecting means including an elongated arm connected near one of its ends to the carriage for swivelling about a pivotal axis parallel to said predetermined upright axis and said arm extending from its pivoted end back toward the table in overhanging relation to the carriage and normally parallel to the carriage path, said stock gripping head being connected to the arm near the other end of the arm, and said guideway and pivotal axis being offset in a direction transversely of the guideway from said predetermined upright axis in a direction toward the wipe forming assemblage whereby the instantaneous line of contact of the stock and die resulting from the force applied by the stretch forming assemblage is positioned, circumferentially of the table, approximately at the instantaneous line of contact at which the stock is being pressed against the die by said tool while the arm is parallel to the carriage path, and the wipe forming assemblage is in said one position.

2,945,530
METHOD OF TREATING SHEET AND STRIP MATERIAL
Frederick K. Maust, 85—36 212th St., Queens Village, N.Y.
Original application Nov. 4, 1955, Ser. No. 545,045. Divided and this application Mar. 1, 1957, Ser. No. 643,367
11 Claims. (Cl. 153—106)



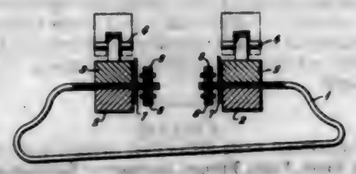
8. The method of treating sheet and strip material in a roller leveler, comprising, in a single pass of the material through the leveler, bending the material in a first succession of waves transverse to the direction of movement of the material, said waves of said first succession having amplitudes varying across the width of the material and said waves increasing in amplitude in the direction of travel of the material, thereafter bending the material in a second succession of waves transverse to the direction of movement of the material, at least alternate half-waves of said second succession having amplitude varying across the width of the material, and thereafter bending the material in a third succession of waves, the waves of said third succession having amplitudes varying across the width of the material, the amplitudes of the waves of that third succession being different from those of said second succession and decreasing in the direction of travel of the material.

2,945,531
APPARATUS FOR MAKING A REINFORCED FIBER GLASS TUBE
George A. Balcom, Cleveland, and Arthur J. Wiltshire, Richmond Heights, Ohio, assignors to White Sewing Machine Corporation, Lakewood, Ohio, a corporation of Delaware
Filed Jan. 8, 1958, Ser. No. 707,891
5 Claims. (Cl. 154—1)



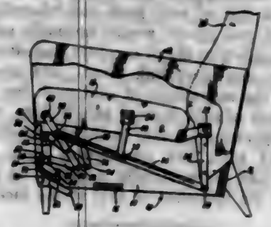
2. Apparatus for making a resin-bonded fiber glass tube which comprises a cylindrical mold to receive a cylindrical fiber glass mat telescoped within said mold, a cylindrical guide sheath telescoped within said cylindrical mat, said sheath comprising flat metal strips substantially the length of the mold and disposed longitudinally within the cylindrical mat to form an expansible liner for the cylindrical mat, one end portion of each of said strips projecting from one end of said mold, each of said projecting end portions flaring outwardly to form an entrance mouth at said one end of the mold, a rib carrier comprising a plunger having a circular head and a shaft extending from the head at one side thereof, said head having an annular rib seat formed at the periphery of the head on that side thereof remote from the shaft to receive a reinforcing rib, means to move the rib carrier into the sheath to position a rib longitudinally within the sheath, means to withdraw the sheath from the mold while said rib is held in position and is engaged with the inner wall of said cylindrical mat.

2,945,532
METHOD AND APPARATUS FOR SPLICING ARTICLES
Elio de Filippo, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Filed Dec. 22, 1954, Ser. No. 477,018
Claims priority, application Italy Dec. 30, 1953
10 Claims. (Cl. 154—9)



1. Method of joining the two ends of an unvulcanized inner tube which includes the steps of clamping the flattened ends of the tube in spaced relation under a pressure which remains constant during the successive steps and in a manner designed so that the ends project slightly beyond the area of clamping, cutting each of the projecting ends convexly in an area slightly beyond the area of the clamping, supporting each of the projecting ends during cutting on the opposite side of the cutting area from the clamping area and urging the so-supported projecting ends in a direction opposite to the direction of cutting, reciprocally moving the cut ends toward each other to bring same into intimate contact, applying pressure to the contacting cut ends to cause them to adhere, and releasing the clamped ends.

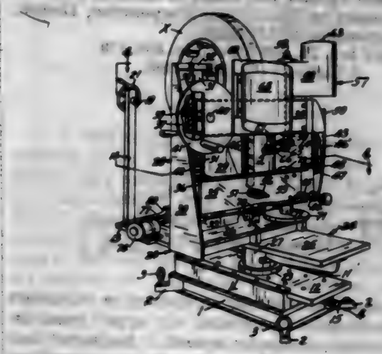
2,945,533
IMPROVED LEG-REST AND ACTUATING MECHANISM
Peter S. Fletcher, Boynton Beach, Fla., assignor to Anton Lorenz, Boynton Beach, Fla.
Filed Apr. 23, 1956, Ser. No. 579,926
6 Claims. (Cl. 155—106)



1. A reclining chair comprising a support, body-supporting means pivotally mounted on said support for reclining movement through successive partially reclined positions and into a fully reclined position, a leg-rest, a linkage mechanism connected between said leg-rest and said body-supporting means for elevating said leg-rest in response to reclining movement of said body-supporting means, a leg-rest extension pivotally mounted on the lower end of said leg-rest and normally disposed in a stored position folded behind said leg-rest, and a toggle linkage connected between said leg-rest and said leg-rest extension and controlled by said linkage mechanism for bringing said leg-rest extension into an extended position substantially in alignment with said leg-rest in response to movement of said body-supporting means into a partially reclined position, said toggle linkage including a driving link operatively connected to said linkage mechanism and a connecting link pivotally connected to said driving link and coupled to said leg-rest extension serving as a driven member, said driving link and said connecting link being disposed at an angle with respect to each other in said stored position of said leg-rest extension, said toggle linkage being effective in response to uniform motion imparted to said driving member from said linkage mechanism to initially bring about a rapid movement of said leg-rest extension from said stored position to said extended position as said body-supporting means moves into said partially reclined position and with said driving link and said connecting link moving into a substantially aligned position, said toggle linkage permitting said leg-rest and said leg-rest extension to be elevated as a unit in substantial alignment with each other in response to continued uniform motion imparted to said driving member between said partially reclined position and said fully reclined position with said driving link and said connecting link remaining substantially in said aligned position.

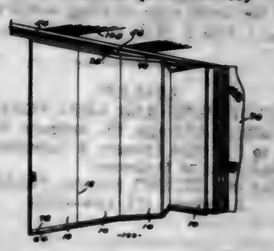
2,945,534
TIRE BUFFING MACHINE
Earle W. Hawkinson, Minneapolis, Minn., assignor to Paul E. Hawkinson Company, Minneapolis, Minn., a corporation of Minnesota
Filed Feb. 13, 1959, Ser. No. 793,157
5 Claims. (Cl. 157—13)

1. In a tire buffing machine, a base, rotary means mounted on said base for supporting a tire for rotation on its own axis, a slide mounted on said base for movement in opposite directions transversely with respect to the axis of said tire supporting means, a frame mounted on said slide for common movements therewith and for rotation on an axis normal to the direction of movement of said slide and to the axis of rotation of said tire supporting means, a pair of arms each independently mounted at one end on said frame for swinging movements on a common axis parallel to the axis of rotation of said frame and generally toward and away from the axis of said tire supporting means, means connecting said arms together for common swinging movements permitting limited angular movement of one of said arms relative to the other thereof about the axis of swinging move-



ment, thereof, means for adjusting the angular relationship between said arms about said last-mentioned axis, a template fixedly mounted on said slide, tire-buffing mechanism including a rotary buffing wheel carried by one of said arms, a template follower carried by the other of said arms and engaging said template, and yielding means urging said other one of the arms in a direction of swinging movement whereby the follower engages said template, said buffing wheel being moved in a path corresponding to the contour of said template responsive to rotation of said frame.

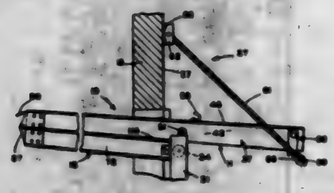
2,945,535
FOLDABLE PARTITION
Ernest R. Haws, 15722 Telegraph Road, Detroit, Mich.
Filed May 7, 1959, Ser. No. 811,758
20 Claims. (Cl. 160—40)



1. In a movable partition structure for dividing a room or the like into two sections sealed from one another, the combination comprising an overhead support, a vertically movable track structure supported from said overhead support, a panel, means supporting the panel for movement longitudinally of the track structure and for limited vertical movement relative to the track structure, sealing means at the lower edge of the panel, sealing means interposed between the upper edge of the panel and the track structure, there being a vertical clearance space between the track structure and the upper edge of the panel which normally permits movement of the panel longitudinally along the track without interference from said last mentioned sealing means, and means for

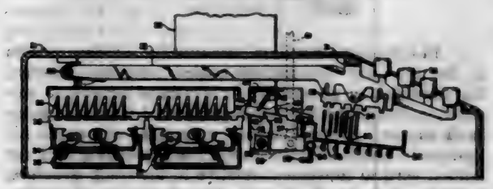
moving the track structure downwardly and effective to shift the panel downwardly to bring the sealing means at the lower edge of the panel into sealing engagement with a floor surface and to shift the track structure downwardly relative to the upper edge of the panel to render the second mentioned sealing means operative.

2,945,536
FOLDABLE CANOPY-TYPE DOOR
Wesley A. Smith, Detroit, and Roger E. Günther, Leonard, Mich., assignors to Tilt-A-Door Corporation, Detroit, Mich., a corporation of Michigan
Filed Jan. 23, 1957, Ser. No. 635,370
6 Claims. (Cl. 160—189)



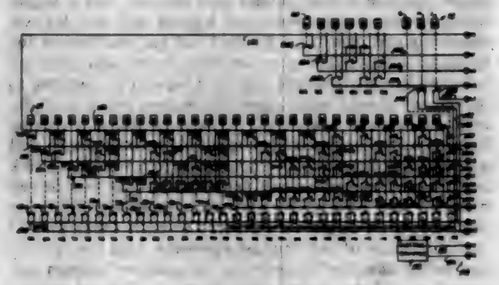
1. In a closure structure for an opening in an upright wall, the combination comprising: an upper panel arranged for pivotal movement around a horizontal axis intermediate its upper and lower edges for movement into open and closed positions, said upper panel having a counterweight at its upper edge and being tapered convergingly downwardly; a lower panel having its upper edge pivotally affixed to the lower edge of the upper panel and having its lower edge arranged for vertically sliding movement in a vertical plane substantially passing through said horizontal axis, said lower panel having a hollow structural member arranged along its lower edge and rigidly affixed thereto, said lower panel tapering convergingly upwardly; hinge structure between said upper and lower panels for hingedly connecting same, said hinge structure being positioned interiorly of the interior surface of said panels whereby said panels when in full open position may lie substantially against each other with the outer surface of the upper panel sloping outwardly and downwardly and the outer surface of the lower panel sloping downwardly and inwardly, the pivot line of said hinge structure, said horizontal axis and a point near the outer part of the lower edge all lying within said vertical plane when said door is in its closed position.

2,945,537
SELECTOR PUSH BAR ARRANGEMENT
Arthur F. Lindberg, Chicago, Ill., assignor, by mesne assignments, to Fairchild Camera & Instrument Corporation, a corporation of Delaware
Filed Dec. 27, 1957, Ser. No. 705,558
2 Claims. (Cl. 164—112)



1. In a keyboard apparatus, a series of keylevers, a universal operating bar, a counting code blade corresponding to each keylever, a counting code blade selector unit comprising a plurality of push bar mechanisms, each push bar mechanism comprising a plurality of spaced pivots, a push bar mounted pivotally on one of said pivots, said push bar having an abuttal portion impingable against its associated counting code blade and a hook portion engageable with said universal operating bar, a pivot link mounted on another of said pivots, said push bar and pivot link oppositely directed from their respective pivots in confronting and overlapping manner, spacer means interposed between said push bar and said link and articulated thereto at the other of said pivots respectively at the overlapping portions thereof, spring means distended between each push bar and its associated pivot link for attributably biasing said overlapping push bar and pivot link against said spacer means on the abuttal side of said push bar whereby said push bar, pivot link and spacer means normally seek to attain a state of equilibrium about a center line drawn through said push bar and pivot link pivots, and up-stop means for arresting the movement of said push bar mechanism at a point short of said state of equilibrium, whereby following the operation of said push bar mechanism by a keylever, said push bar mechanism upon the release thereof will seek automatically to return to said up-stop means under the influence of said spring means.

2,945,538
CODING APPARATUS FOR INFORMATION STORAGE TAPES AND THE LIKE
Howard M. Little and Johannes Karl Nottkoff, Los Angeles, Calif., assignors to Unicorn Engineering Corporation, Los Angeles, Calif., a corporation of California
Filed July 1, 1957, Ser. No. 669,348
10 Claims. (Cl. 164—113)

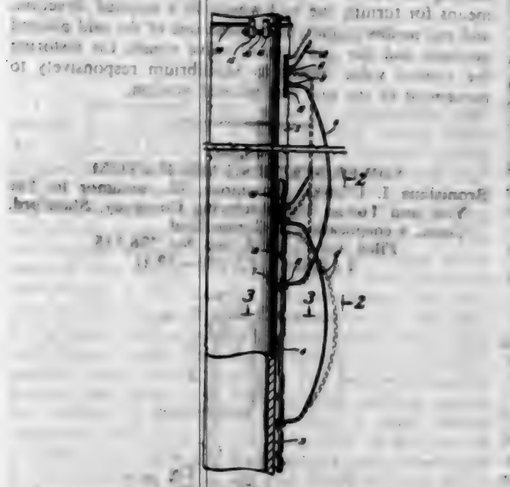


1. In tape coding apparatus of the character described, a plurality of electrically presettable, selectively operable coding means for coding a tape, each coding means having a normal inoperative condition wherein the respective coding means is deactivated against operation to code a tape and being preset for operation to code a tape by momentary energizing of the respective coding means; electrical drive means for operating those coding means which are preset; a keyboard device including a plurality of selectively operable keys each associated with preselected coding means; circuit means for momentarily energizing the coding means associated with each key upon actuation of the latter to preset the associated coding means, said circuit means including switch means operated by each key for conditioning the coding means associated with the respective key for energization by partially completing energizing circuits through said associated coding means, electrical relay means for momentarily completing the energizing circuits of the coding means so conditioned upon operation of the relay means, and circuit means including switch means operated by each key for operating said relay means; circuit means including said relay means for energizing said drive means upon operation of said relay means whereby to operate the preset coding means; and means operated by said drive means for resetting said preset coding means to normal condition after operation thereof by said drive means.

2,945,539
CEMENTING COMPOSITION AND METHOD OF USE
Louis H. Ellers, Tulsa, Okla., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed July 31, 1958, Ser. No. 752,197
4 Claims. (Cl. 166—33)

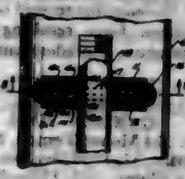
3. The method of cementing off a zone in a subterranean formation traversed by a well consisting of injecting down the well and positioning therein a gel cementing aqueous slurry consisting of 100 parts by weight of an hydraulic cement selected from the class consisting of aluminous and Portland cement, between 8 and 25 parts of bentonite and between 0.1 and 1.0 part of accroides gum (calculated on a dry weight basis), and sufficient water admixed therewith to make a pumpable slurry.

2,945,540
ROTARY WELL BORE CLEANER
Granison T. Alexander, Jr., and Leroy Q. Gresham, Houma, La., assignors, by mesne assignments, to Gem Oil Tool Company, Inc., Houma, La., a corporation of Louisiana
Filed Apr. 7, 1953, Ser. No. 726,930
12 Claims. (Cl. 166—173)



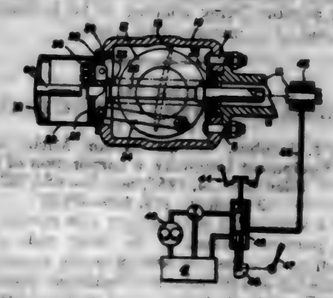
1. In a well bore cleaner assembly to be mounted on and rotated by a casing, a pintle pin mounting member, a series of scraper loops, means pivotally joining the loops at their opposite ends on said mounting member for swinging travel from a retracted position to an outwardly projected position and each loop arranged in vertically spaced succession with a portion of each loop vertically overlapping a portion of the next adjoining loop, said loops each having an upwardly and outwardly projected extension angularly related to the loop and in trailing relation thereto with respect to the direction of casing rotation, each extension being arranged to project outwardly for bore wall contact to maintain the loops retracted during casing descent and to respond to casing rotation by swinging backwardly and thereby causing the loops to swing outwardly for rotational drag engagement with the bore wall.

2,945,541
WELL PACKER
George F. Maly and Roland F. Krueger, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Oct. 17, 1955, Ser. No. 540,873
16 Claims. (Cl. 166—187)



1. A well tool comprising an elongated body portion adapted to be lowered into a well bore; at least two spaced rigid retaining members affixed to said body portion and extending outwardly from the longitudinal axis thereof, the opposed faces of adjacent retaining members extending over a substantial portion of the cross-sectional area of the well bore; an inert resilient expansible packing element of continuous annular shape extending between the opposed faces of adjacent retaining members adjacent the peripheries thereof and surrounding said body portion at a distance therefrom; a body of liquid-swellable material positioned between the opposed faces of adjacent retaining members and between said body portion and said packing element; and means for directing a swelling liquid into intimate contact with said body of liquid-swellable material.

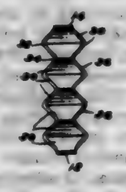
2,945,542
CONTROLLABLE PITCH PROPELLER
Walter E. Burnham, Wichita, Kans., assignor to McCauley Industrial Corporation, Dayton, Ohio, a corporation of New York
Filed Jan. 8, 1958, Ser. No. 707,742
5 Claims. (Cl. 170—160.32)



1. In a control system for the blades of an adjustable pitch propeller, the combination of a rotary hub structure including adjustable supporting means for said blades, a hydraulic motor within said hub structure including a stationary cylinder and a movable piston, means connecting said piston with said supporting means to decrease the pitch of said blades in response to movement of said piston outwardly of said cylinder, means defining the minimum pitch limit position for said outward movement of said piston, a control spring arranged to bias said piston inwardly of said cylinder, means for supplying hydraulic pressure fluid to said cylinder to move said piston against said control spring, a stop mechanism for selectively blocking increase in the pitch of said blades beyond a predetermined low pitch including a latching member supported within said hydraulic motor for movement generally radially with respect to the propeller axis

of rotation between an outer position offering no resistance to the movement of said piston and an inner position blocking said piston from movement inwardly of said cylinder beyond a position adjacent said limit position and corresponding to said predetermined low blade pitch, and spring means biasing said latching member to said inner position and providing for movement of said latching member thereagainst to said outer position in response to centrifugal force resulting from rotation of said hub structure above a predetermined speed.

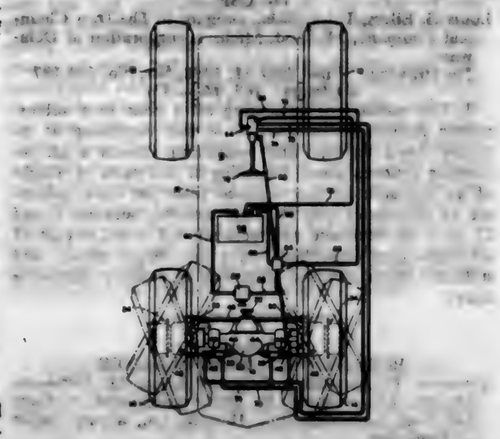
2,945,543
GARDEN TOOL
Fred K. Beyer, 314 Mount Vernon, Royal Oak, Mich.
Filed Mar. 31, 1958, Ser. No. 725,419
1 Claim. (Cl. 172—376)



A garden earth-working tool comprising a U-shaped member having legs and a bight portion, the bight portion extending in general direction normal to the two legs to work as a horizontal member and being shaped in a series of flat, generally trapezoidal pieces integrally joined alternately at the narrow and the wide parallel sides, the narrow sides being joined to the narrow sides and the wide sides being joined to the wide sides, the sides each being disposed at an angle to each other to provide a saw-tooth sectional configuration and saw-tooth fore and aft edge configuration, said edges being cut to an angle from the plane of the pieces to provide a sharpened edge for fore and aft working into garden earth, the apices of the saw-tooth sectional configuration being widest fore and aft at the bottoms of the bight portion, said leg portions being adapted to be fastened to a bifurcate end of a manipulating handle.

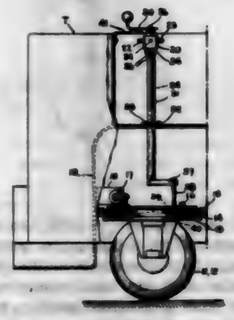
2,945,544
HYDRAULIC POWER STEERING FOR LAND VEHICLE
Charles J. Jacobus, Benton Harbor, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Apr. 24, 1957, Ser. No. 654,702
3 Claims. (Cl. 180—79.2)

3. In a vehicle, an intermediate axle portion, a pair of pivoted portions located at the outer ends of the said intermediate axle portion and pivotally connected thereto, a pair of wheels rotatably mounted respectively on the said pivoted portions, a pair of oppositely disposed piston and cylinder actuators coanected respectively between the said intermediate axle portion and the said pivoted portions, each of the said actuators having a cylinder member and a piston slidable therein and a piston rod connected to the piston and extending out only one end of the said cylinder member, the cylinder members of the said actuators being connected to the said intermediate axle portion and the piston rods of the said actuators being connected to the said pivoted portions, the distance between the two connections of the piston rods with the respective pivoted portions being greater than the distance between the connections of the said two pivoted portions wtih the said intermediate axle portion, a tie rod connected between the said pivoted portions, the distance between the connections of the tie rod with the said pivoted portions being less than the said distance between the connections of the said pivoted portions with the said intermediate axle portion, first fluid conduit means for supplying fluid simultaneously to the rod end of a first one of the said cylinder members and the opposite end of the said second cylinder member, second fluid conduit means for supplying fluid simultaneously to the rod end of the said second cylinder member and the opposite end of the said first cylinder



member, a source of fluid under pressure, control valve means operated by an operator's steering wheel for admitting fluid selectively to one of the said fluid conduit means for turning the said wheels in a selected direction, and rod means connected between one of the said pivoted portions and the said control valve means for restoring the control valve means to equilibrium responsively to movement of the said one pivoted portion.

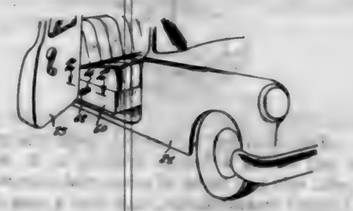
2,945,545
POWER STEERING MECHANISM
Bronislaus L. Ulinski, Flossmoor, Ill., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Apr. 3, 1958, Ser. No. 726,135
2 Claims. (Cl. 180—79.2)



2. In a truck of the class described having a main frame, a ground engaging wheel, means mounting said wheel for rotation about a steering axis relatively to the main frame of the truck, a hydraulic ram arranged to act relatively to the wheel mounting for rotating the mounting and wheel about said steering axis, a hydraulic valve housing, an indicating pointer attached to said main frame adjacent said housing, a valve member mounted to rotate in said housing, a steering handle on said valve member for rotating said member relatively to a neutral position on the housing whereby to apply fluid

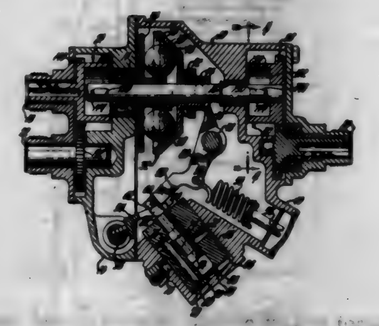
pressure to the ram to steer the truck, a spring pressing said valve member toward neutral position on said housing and yielding as said valve member is rotated to steer the truck, means mounting said valve housing for rotation on the truck frame, said means supporting the housing with its valve member in position to rotate substantially in the steering axis about which said steering wheel rotates, a shaft secured to said valve housing to rotate therewith, a portion on said shaft extending at one side of the axis in which said wheel is steered, a slip joint between said portion and the wheel mounting whereby said mounting when rotated will rotate said part and valve housing while allowing some movement of adjustment between the wheel mounting and truck frame, said valve housing by its rotation indicating at all times the steering position of the wheel, and said steering handle by its position relatively to neutral on said valve housing indicating whether the wheel is in a steering position corresponding to the particular handle position.

2,945,546
SAFETY BRAKE
Henry Niederoost, 72 Hillside Ave., Metuchen, N.J.
Filed Feb. 16, 1959, Ser. No. 793,414
5 Claims. (Cl. 188—82)



1. A door control safety brake for automobiles comprising, in combination, a main housing having means for attachment to a vehicle fire wall, a plunger slidably supported within said main housing for reciprocating longitudinal movement between a normally retracted and an adjusted extended position, linkage connecting one outer end of said plunger to the hand brake of the automobile, said plunger in said retracted position permitting movement of said linkage to a hand brake released position, said plunger in said extended position adjusting the position of said linkage to effect engagement of said hand brake to an applied position, spring means acting upon said plunger to effect movement thereof to said extended position, detent means carried by said housing releasably securing said plunger in said retracted position against the action of said spring means, a push button supported upon a part of the automobile in the path of movement of a door, and flexible cable means connected between said push button and said detent means to retain said detent means in securing engagement with said plunger while the door is in a closed position, and pressure means acting against said push button and flexible cable means to release said detent means from engagement with said plunger and permit movement of said plunger to said extended position for actuating said hand brake in response to the opening of the door, said spring means comprising a compression coil spring supported within said main housing seated at one end against the bottom of said main housing and seated at its opposite end against said plunger, said compression coil spring urging said plunger toward an outwardly extended position, said detent means comprising a pair of levers pivotally mounted upon said housing for movement between a first position and a second position, said levers in said first position having inner ends extending to the interior of said housing into blocking engagement with said plunger, and said levers in said second position retracting said inner ends out of blocking engagement with said plunger to permit outward movement thereof by said compression coil spring.

2,945,547
ENGINE AND VEHICLE SPEED CONTROL GOVERNOR
Ward Bunker, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 12, 1957, Ser. No. 665,165
3 Claims. (Cl. 180—82.1)

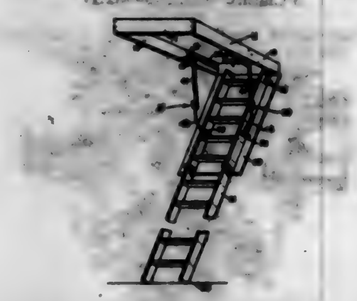


1. In a vehicle driven by an internal combustion engine having a throttle, an engine speed control for said throttle comprising speed sensitive means and a source of pressure and a servomotor connected therewith and operable to move said throttle toward the closed position, said servomotor including a power piston and a power piston control valve received within and carried by said piston, said speed sensitive means including one speed sensitive member and a plurality of speed sensitive member independent drive means including first drive means sensitive to vehicle speed and second drive means sensitive to engine speed, means interconnecting said drive means to said speed sensitive member so that only the fastest one of said drive means is driving said speed sensitive member, means connecting said speed sensitive member with said control valve and responsive to said speed sensitive member to cause said power piston to be energized to move said throttle toward the closed position when either a predetermined vehicle speed or a predetermined engine speed is exceeded until the effective speed of the one of the plurality of said drive means is reduced below the one of two said predetermine speeds being exceeded.

2,945,548
FOLDING STAIRWAY CONSTRUCTION
Gerald L. Tapp, 6 Fair Oakes, Jackson, Tenn.
Filed Apr. 8, 1958, Ser. No. 727,206
4 Claims. (Cl. 182—77)

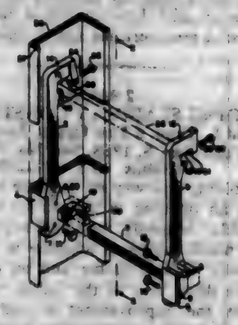
1. In a folding stairway of the type including a frame mounted in an opening in the ceiling of a room and a foldable ladder hingedly mounted adjacent one end to said frame which ladder is adapted to be disposed in a folded position in said frame and an extended position in which the distal end of the ladder rests on the floor of the room, the improvement in said folding stairway comprising an attachment member having holes therein, fastening means extending through the holes in said attachment member and into said frame whereby attaching the member to said frame, said attachment member being disposed at an angle relative to said frame for providing an even load distribution, a stud fixedly attached to said attachment member and projecting therefrom, an upper arm including a bifurcated end portion at the

upper end thereof, said bifurcated end portion having aligned apertures in the forks thereof, said stud extending through said aligned apertures to pivotally support said upper arm from said frame, a bar fixedly attached to said upper arm and extending forwardly therefrom, elastic means attached at one end to said bar and attached at the other end to said frame for urging said upper arm upwardly in pivoting movement about said stud, when said stairway is in said extended position said elastic means being disposed over said stud between the forks of said bifurcated end portion whereby rendering inactive a part of the force of said elastic means, a



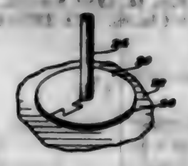
C-shaped bracket pivotally attached to said upper arm adjacent the lower end thereof, said bracket including bores, a lower arm pivotally attached adjacent the lower end thereof to said ladder at a point intermediate the ends thereof, said lower arm being threaded adjacent the upper end thereof and extending through the bores in said bracket, a nut threadedly engaged on the threaded portion of said lower arm, said nut engaging said bracket to limit separating movement of said lower arm relative to said bracket and to couple said lower arm to said upper arm through said bracket whereby providing an adjustable brace adapted to accommodate the folding stairway to various rooms having various heights of ceilings.

2,945,949
DETACHABLE LADDER STEP
Paul L. Gagnon, 34 Harrington Terrace, West Orange, N.J.
Filed Dec. 1, 1958, Ser. No. 777,401
1 Claim. (Cl. 182—128)



A temporary ladder rung suitable for replacing missing rungs of metal ladders which comprises a metal rung, two laterally spaced hanger arms each substantially perpendicular to the metal rung and each rigidly connected to the metal rung, the assembly of metal rung and hanger arms being sized for reception between the frames of a ladder, a frame-abutting extension rigidly connected to each hanger arm at a location adjacent to the metal rung, clamping means in connection with each hanger arm at a location adjacent to the metal rung for securing the metal rung-hanger arm assembly to the ladder frames, a rigid hook shaped member at the extremity of each hanger arm adapted for enclosing an existing ladder rung, said rigid hook shaped member having bearing surfaces positioned to contact upper and lower surfaces of the existing rung when the rigid hook shaped member encloses the existing rung and when the hanger arms are in vertical alignment with the ladder frames and movable means in connection with the extremity of the rigid hook shaped member providing an additional bearing surface for contact with the existing rung and for maintaining the existing rung in contact with bearing surfaces of the rigid hook shaped member.

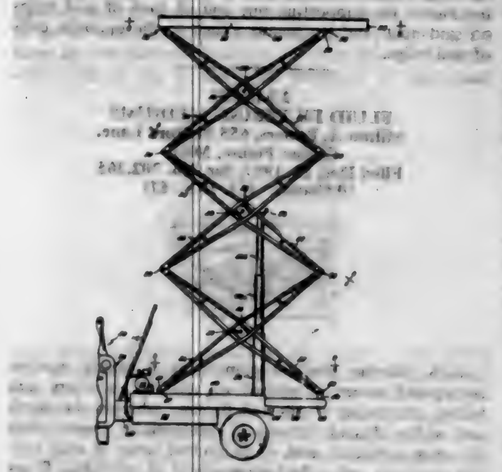
2,945,950
SAFETY PLATFORM FOR SLIDING POLES
Norman H. Andresen, 5229 N. Kimball Ave., Chicago, Ill.
Filed Apr. 12, 1954, Ser. No. 422,329
4 Claims. (Cl. 182—137)



1. A safety platform for sliding poles comprising a resilient pad having a central opening to fit around a sliding pole, said pad being of substantial diameter, relative to a man's measurements, such that a man descending on it in sliding down the pole engages it with his feet normally and most often at an inner area near the pole and adjacent the center thereof, the pad thus having an outer area surrounding the inner area, said pad having a slit from its central opening to its outer periphery to permit mounting the pad around the sliding pole, and resilient knobs protruding from the under side of said pad to space it from a floor base and to permit air circulation thereunder and provide cushioning means for initial shock, said knobs being located about said pad at closer proximity to each other in said inner area and thus in the area receiving greatest impact shock than at said outer area.

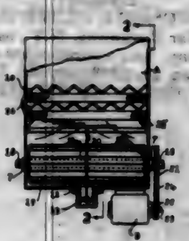
2,945,951
PORTABLE PLATFORM ELEVATING DEVICE
Mark H. Austin and Conrad A. La Salle, both of P.O. Box 488, Hamilton, Mont.
Filed Aug. 5, 1957, Ser. No. 676,268
11 Claims. (Cl. 182—141)

1. A portable platform elevating device comprising a supporting frame including transversely spaced tubular frame members, a yoke member having transversely spaced horizontal legs slidably received in said tubular frame members, a pair of vertical lazy tong frames each including pairs of truss members pivotally connected together at their ends, the truss members of each pair being pivoted together at their centers, said lazy tong frames being vertically extensible and retractable by movement of the ends of said truss members horizontally toward and away from each other, one of the truss members of the lowermost pair of each lazy tong frame being pivoted to the supporting frame, and the other of the truss members of said lowermost pair being pivoted to said yoke, whereby to cause said lazy tong frame to be vertically extended and retracted upon movement of the yoke toward and away from the supporting frame, means connected between the supporting frame and the yoke to move the yoke toward and away from the supporting



frame, and a platform supported at the upper ends of the lazy tong frames.

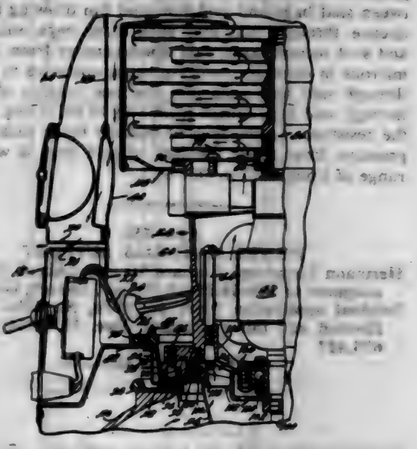
2,945,552
AIR CONDITIONER
Harry Howell Hays, 2530 San Diego St., El Paso, Tex.
Filed Sept. 29, 1958, Ser. No. 763,944
9 Claims. (Cl. 183—14)



1. An air conditioner selectably operable in wet or dry condition comprising a housing having an air inlet and an air outlet, a unitary fan and distributor rotatably mounted in the housing adjacent the air inlet, air screening and scrubbing means between the fan and distributor and the air outlet, a constant level water trough movably suspended below said housing, manually operated means determining the dry or wet running of the air conditioner, and means responsive to the last said means to automatically cut off or deliver liquid from the trough to the distributor during the operation of the air conditioner.

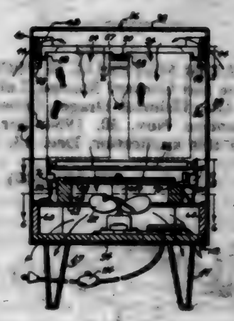
2,945,553
VACUUM CLEANER CONSTRUCTION
Clarence A. Brock, Toledo, Ohio, assignor, by mesne assignments, to Remair, Inc., Detroit, Mich., a corporation of Michigan
Original application Feb. 14, 1956, Ser. No. 565,336, now Patent No. 2,886,127, dated May 12, 1959. Divided and this application Aug. 18, 1958, Ser. No. 755,563
3 Claims. (Cl. 183—24)

1. In a vacuum cleaner, a water pan adapted to contain water for trapping dust in the air entering said pan, said pan having an air entrance and having a central aperture in the upper surface thereof, a housing disposed above said pan, a motor supported in said housing, a rotatable cup-shaped separator element disposed adjacent the central aperture in said pan and rotatably driven by said motor and having a flange portion, a fan disposed within said housing for drawing air into said pan through the air entrance therein and out of said pan through said separator element, a wall in closely spaced proximity to a peripheral surface of said element, means comprising fan means rotatable with said element for forcing a portion of the air processed by said element to flow in a generally downward direction through the space between said



peripheral surface and said wall to thereby oppose and reduce the flow of unprocessed air through said space in a generally upward direction, said fan means including a blade having a plurality of tip portions spaced from said flange portion of said separator element, and means for preventing water and water-laden air from passing through said space in a generally upward direction and into engagement with said fan means and for tending to keep said fan means dry comprising baffle means interposed said tip portions of said fan means and said flange portion of said element.

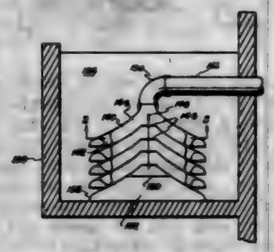
2,945,554
AIR CLEANING DEVICES AND COMPONENTS THEREFOR
Edward M. Batty, 149 Christina Ave., Newton Highlands, Mass.
Filed Jan. 11, 1957, Ser. No. 633,774
10 Claims. (Cl. 183—37)



1. An air cleaning device comprising a housing defining a compartment having first ports and second ports, means between said first ports and said second ports providing a plurality of openings except for which said means sub-

stantially seals the portion of said compartment providing said first ports from the portion of said compartment providing said second ports, a plurality of filter bags composed of highly dispersed non-woven fibers, the mouth portion of one each of said filter bags joining the portion of said means defining one each of said openings, the closed portion of said one each of said filter bags extending into said portion of said compartment defining said second ports, and a fan in said portion of said compartment defining said second ports, a matrix of dispersed granules of activated inorganic material positioned between said bags and said fan, said fan drawing air in sequence through said first ports, said bags, said matrix and said second ports, said fibers ranging from 0.5 to 15 microns in diameter, said fan being operative to draw air through said bags such that the face velocity of said air through said bags ranges from 1 to 40 cu. ft./sq. ft./min., the resistance to the flow of said air being such that the pressure drop across the face of said bags is within the range of from .0007 to .007 p.s.i.

2,945,535
FILTER MATERIAL SUPPORT
Hermann Tietze and Gerhard Stumpe, Lubeck, Germany, assignors to Otto Heinrich Dragee, Lubeck, Germany
Original application Nov. 30, 1954, Ser. No. 472,082. Divided and this application Dec. 19, 1956, Ser. No. 630,427
2 Claims. (Cl. 183—69)



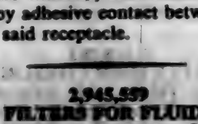
1. A filter material support comprising bell-shaped strips of material superimposed and having aligned apertured apexes forming a vertical air passageway entirely through said support, and leg means for spacing said strips from each other at a distance such that loose flowable solid filter material when poured over the support will settle at rest on the upper surface of a lower strip and extend upwardly to the lower edge of an adjacent upper strip at an angle with respect to the horizontal which is less than the natural slope angle of the filter material.

2,945,536
FILTER MATERIAL SUPPORT
Hermann Tietze and Gerhard Stumpe, Lubeck, Germany, assignors to Otto Heinrich Dragee, Lubeck, Germany
Original application Nov. 30, 1954, Ser. No. 472,082. Divided and this application Dec. 13, 1957, Ser. No. 707,874
4 Claims. (Cl. 183—69)



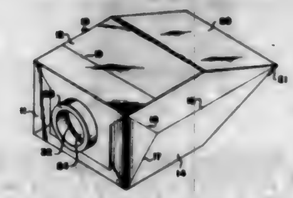
1. A filter material support comprising inverted V-shaped strips vertically spaced from each other to form open air passages between adjacent strips and arranged in tiers with a plurality of tiers assembled in parallel rows, an outlet air duct common to said tiers and having openings communicating with said air passages, connecting means for supporting one end of each of said strips on said duct, and leg means joined to the opposite ends of said strips.

2,945,557
FLUID FILTERING MEDIUMS
Milton A. Powers, 455 Bedford Lane, Grosse Pointe, Mich.
Filed Dec. 12, 1957, Ser. No. 702,305
10 Claims. (Cl. 183—51)



1. A filtering medium comprising a planar meshed corrugated screen composed of rod-like members and having alternating ridges and furrows wherein the depth and width of said furrows is substantially greater than the cross-sectional area of individual ones of said rod-like members and a flocking material of individual fibers extending between the sides of said furrows to substantially completely fill up the furrows between said ridges on at least one side of the screen, said fibers being secured to said screen and in said furrows whereby a fibrous body is formed of predetermined depth and with a substantially continuous exposed surface.

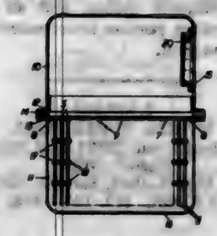
2,945,558
DISPOSABLE FILTER BAG
Martin Cordell, Far Rockaway, N.Y., assignor to Stadley Paper Company, Inc., a corporation of New York
Filed Jan. 21, 1958, Ser. No. 710,364
3 Claims. (Cl. 183—51)



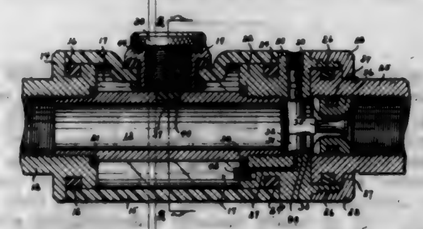
1. A dust receptacle for a vacuum cleaning device having an inlet conduit, said receptacle comprising a bag-like enclosure formed of a filtering material and being provided with an inlet aperture, an annular collar carried by said receptacle and surrounding said aperture adapted to be engaged with said inlet conduit, said collar comprising an annulus of laminated sheet material the edges of said sheets lying in a trans-axial plane and forming a planar end face therefor, said collar being secured to said receptacle by adhesive contact between said end face and the wall of said receptacle.

2,945,559
FILTERS FOR FLUIDS
Kenneth Ernest Beckman, Redbridge, Southampton, England, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 2, 1959, Ser. No. 796,344
Claims priority, application Great Britain Mar. 12, 1958
3 Claims. (Cl. 183—71)

1. An air filter, comprising a filter housing formed of two hollow parts removably secured together at flanged peripheral portions on each, a filter element located within the housing and formed of a strip of synthetic resin-impregnated filter paper folded about a series of transverse fold lines to form a series of accordion pleats, the ends of each of which are adhesively sealed at the edges so as to form the pleats into a series of pockets in the form of a rectangular panel at one face of which are the open ends of the pockets, the periphery of said panel face being adhesively sealed at the edges to and within the entire periphery of a support sheet of impermeable material formed with perforations lying within the periphery of the panel sealed thereto, and the periphery of the support sheet being removably clamped between the flanged peripheral portions of the housing parts for ready replacement of the filter element.



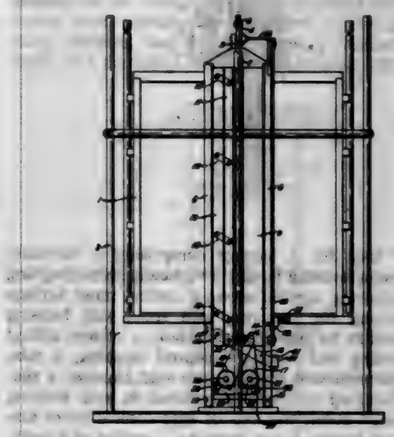
2,945,560
ADJUSTABLE AUTOMATIC OILER FOR AIR CONDUITS
Jerry P. Malec, Omaha, Nebr., assignor, by mesne assignments, to Comet Industries, Inc., Omaha, Nebr., a corporation of Nebraska
Filed Jan. 13, 1958, Ser. No. 708,459
4 Claims. (Cl. 184—55)



1. In a device for furnishing a lubricating oil into the air stream of an air line conduit, a housing, a pipe means extending through said housing having an outside diameter substantially less than that of the inside diameter of said housing to provide an oil supply compartment between the inside of said housing and the outside of said pipe means, an oil passageway having one end communicating with the oil supply compartment between said housing and said pipe means, a nozzle in said pipe means communicating with the other end of said passageway, and having its outlet end surface enlarged, curved and concave whereby oil passing through the nozzle will flow outwardly on its curved and concave end surface in a progressively thinning oil film, and a restricting collar adjustably threaded into said pipe means and capable of loosely embracing said nozzle.

2,945,561
ELEVATOR OVERSPEED BRAKE
Oscar E. Moyer, Zelienople, Pa., assignor to Universal Manufacturing Corporation, Zelienople, Pa., a corporation of Pennsylvania
Filed June 1, 1959, Ser. No. 817,178
7 Claims. (Cl. 187—89)

1. An elevator overspeed brake, comprising an elevator cage running on guide rails, brake shoes carried by opposite sides of the cage for application to the rails, brake actuating means pivotally carried by the cage, springs urging said means toward brake-applying position, a member pivoted to the cage and normally holding said actuating means in brake-released position but urged away from said means, rollers carried by the cage adapted to roll along the guide rails, a speed governor carried by the cage, means operated by the rollers for driving the governor, and a movable stop in the cage separated from said brake actuating means and normally holding said pivoted member and controlled by the governor for releasing said member if the governor reaches a predetermined maximum speed, whereby the springs will move said actuating means to brake-applying position.



2,945,562
TREAD BRAKE ARRANGEMENT
Walter R. Polasin, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed Oct. 24, 1955, Ser. No. 542,435
3 Claims. (Cl. 188—52)



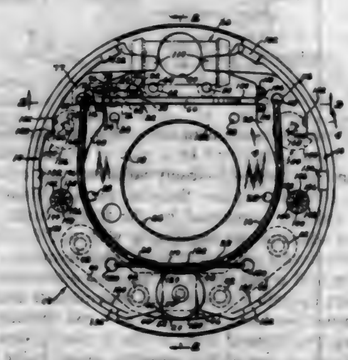
2. In a brake arrangement for a railway car truck comprising a frame supported by a pair of spaced wheel and axle assemblies disposed closely adjacent each other with rotatable friction surfaces thereon, the combination of: a power cylinder supported by the frame, brake means positioned adjacent and engageable with said friction surfaces, brake levers connected to said brake means, means to fulcrum said brake levers for rotative movement, actuating levers operatively connected intermediate their ends to the respective brake levers, a pull rod directly interconnecting the inboard ends of the actuating levers, the outboard end of one of the actuating levers being directly connected to the power cylinder and means to fulcrum the outboard end of the other actuating lever to the frame.

2,945,563
SAFETY LOCKS FOR HARNESS
John J. O'Hara, 316 W. 14th St., New York 3, N.Y.
Filed May 14, 1958, Ser. No. 735,364
1 Claim. (Cl. 188—65.1)



A safety lock for a harness comprising a vertically hanging rope, a housing having a vertically through-going channel narrowing upward along a conical inner surface of said housing for receiving said rope, said housing being adapted to be engaged by a hook, a bottom affixed to said housing and having a central opening, a tube extending through said opening into said channel, a plurality of clamping members positioned in said housing and distributed about the axis of said conical inner surface and each having a part forming a section of a vertical cylinder and a part extending from said section outward through a slot of said tube into contact with said conical inner surface, a leaf spring mounted in each part with the opposite ends of the spring contacting said tube to urge said parts toward said conical inner surface, and a spring positioned between said bottom and said members and urging said members upward, the edges of the extended parts conforming in shape to the conical inner surface of said housing so that when said spring urges said members upwardly the complementary surfaces of the housing and the extended parts move said clamping members into contact with said rope to retain said harness in selected adjusted positions on said rope.

2,945,564
VEHICLE BRAKE
Bryan E. House, Ralph K. Super and George P. Mathews, Ashtabula, Ohio, assignors to Rockwell-Standard Corporation, a corporation of Pennsylvania
Filed Feb. 15, 1955, Ser. No. 488,186
4 Claims. (Cl. 188—78)



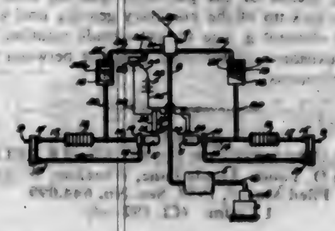
1. In a brake mechanism for use with a rotatable drum, a support, abutment means on said support, brake shoes pivotally mounted on said abutment means for movement toward and away from said drum, actuating means on said support operatively connected between said shoes for moving said shoes toward engagement with said drum, a substantially U-shaped spring connected to normally urge said shoes away from said drum, said spring comprising spaced legs connected at their free ends to said shoes and a bridge portion overlying said shoes adjacent said abutment means, and an anchor spring overlying said bridge portion interconnecting said shoes adjacent said abutment.

2,945,565
WHEEL STRUCTURE
George Albert Lyon, 13831 W. Chicago Blvd., Detroit, Mich.
Filed May 5, 1955, Ser. No. 506,243
1 Claim. (Cl. 188—264)



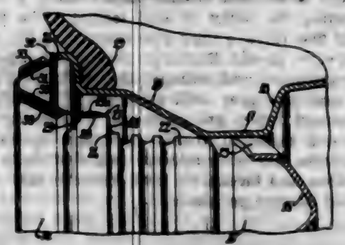
In a wheel structure, a wheel including tire rim and body parts having circumferentially spaced wheel openings generally at the juncture of the parts, the tire rim having a generally radially inwardly facing flange provided with inwardly projecting rigid cover-retaining protrusions, a circular cover member for overlying protective disposition upon the wheel and having a body provided with an axially inwardly dished annular portion to lie adjacent to said openings and defined at its radially outer side by a generally radially outwardly facing annular portion having resiliently deflectable shoulder means engageable in press-on, pry-off relation with said protrusions for maintaining same on the wheel, said cover member having formed in said dished portion in close proximity to the wheel openings enlarged, circumferentially spaced, axially outwardly extending, arcuately tapered air scoops with said scoops each having an enlarged circumferentially opening orifice axially offset from the cover member to facilitate air flow therethrough, said scoops being shaped so as to progressively compress the air in the forward movement of the wheel assembly while directing the air in a centripetal direction through the wheel openings, said enlarged scoops being limited in number and positioned circumferentially to substantially eliminate interference between said scoops in blocking air flow by moving each spaced scoop out of the effective air stream so that the succeeding scoop is not subject to turbulent air flow interference from the preceding scoop as the cover rotates, the shoulder means being in generally radial alignment with the enlarged orifices and with only a narrow portion of said radially outwardly facing annular portion intervening therebetween in each instance to enhance the resilient deflectability of the shoulder means.

2,945,566
FLUID PRESSURE BRAKE MECHANISM
Roy S. Sanford, Woodbury, and James O. Emmes, Washington, Conn., assignors to Roy S. Sanford, Woodbury, Roger H. Cosier and James O. Emmes, Washington, and Wilfred A. Raben and Erling D. Soderguen, Woodbury, Conn.
Filed June 2, 1955, Ser. No. 512,692
28 Claims. (Cl. 188—264)



1. Liquid cooled and fluid pressure operated frictional mechanism including an endless liquid circuit having a liquid pressure operated actuator connected in series therein having a movable friction member having a friction surface on one side and a surface on the other side thereof directly exposed to liquid in said actuator and means associated therewith responsive to the pressure of the liquid in the actuator for moving said member, a circulator connected in series in said circuit operable for forcibly circulating liquid in said endless liquid circuit to cool said friction member, a separate source of cooling liquid having a connection with said endless circuit at a low pressure region in the circuit, and means for pumping additional liquid from said source into said circuit to increase the pressure therein and actuate said pressure responsive means to move said friction member.

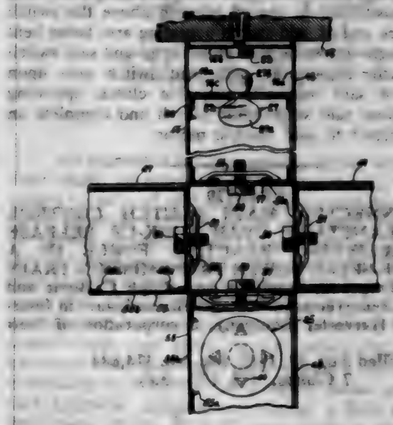
2,945,567
WHEEL STRUCTURE WITH BRAKE DRUM COOLING MEANS
George Albert Lyon, 13831 W. Chicago Blvd., Detroit, Mich.
Filed July 22, 1955, Ser. No. 523,756
10 Claims. (Cl. 188—264)



1. A brake drum cooling ring for encircling the base of the brake drum to stimulate air flow about the brake drum having annular diverging portions each having circumferentially spaced protruding louvers for promoting air circulation through the ring, and resilient spring means on the ring to maintain the ring in detachable assembly with the brake drum.

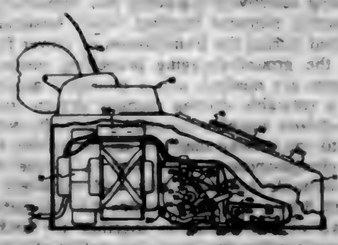
2,945,568
PARTITION STRUCTURE
Ruth Goodhue Chautauqua, 277 Park Ave., New York, N.Y., and Stanley Pankstein, P.O. Box 356, Tappan, N.Y.
Filed Jan. 28, 1954, Ser. No. 405,168
3 Claims. (Cl. 189—34)

1. A relocatable partition structure comprising a plurality of connected rectangular panels hollow at both vertical edges, a series of spaced-apart openings in one side of each panel along and in proximity to both vertical edges to provide access to the interior of the panel behind the vertical edges thereof, snap-on removable covers inserted in the openings and interlocking with the panel, a hollow connector post of rectangular cross-section to which the vertical edges of adjacent panels are attached, a series of spaced-apart openings in at least one side of the connector post, snap-on removable covers inserted in the openings and interlocking with the connector post, fastener devices, each including two coupling elements, one of said coupling elements having a shank and the other element interlocking with the shank,



and corresponding aligned holes in the vertical edges of each of the panels and in the connector post which receive the shank of the one coupling element of a fastener device, the holes in the panels and in the connector post being located at the same height as the covered openings in the respective panel and connector post, the removal of the snap-on cover for the opening nearest a particular hole in the vertical edge of the panel and the removal of the snap-on cover for the opening nearest a corresponding hole in the connector post facilitating the insertion of the shank of the one coupling element through the aligned holes and the attachment of the other coupling element thereto.

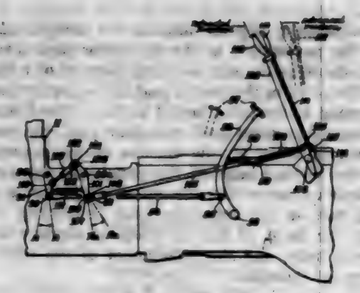
2,945,569
DRIVE CONTROL ARRANGEMENT FOR PORTABLE ADDING MACHINES
Paul C. Chambers, 210 S. Poplar St., Charlotte, N.C.
Filed Apr. 23, 1957, Ser. No. 654,556
3 Claims. (Cl. 192—.02)



1. In a portable adding machine having an electric actuating motor, a gear reduction unit connected to said electric motor, an output drive shaft on said reduction unit operatively connected to the calculating mechanism of said adding machine, a one revolution clutch in said

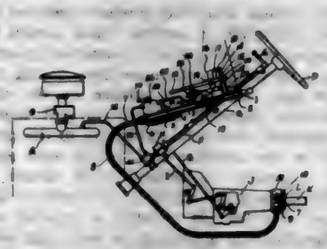
gear reduction unit, manually operable means for activating said one revolution clutch to transmit rotation from said motor to said output drive shaft, knock-off means actuated by rotation of said output drive shaft to disengage said one revolution clutch and stop rotation of said output drive shaft upon completion of one revolution, the combination therewith of a switch actuating arm operatively connected at one end to said manually operable clutch operating means, an electrical snap-action switch, a switch operating plunger in said switch normally resiliently urged to the open position, a switch arm mounted on said switch and engaging said plunger, said switch actuating arm and said switch arm being in parallel relationship to each other with the switch actuating arm being normally positioned in spaced relation above the switch arm, the free end of said switch actuating arm being bent at a right angle to overlie said switch arm, and said switch actuating arm engageable with said switch arm upon operation of said manually operable clutch operating means to close said snap-action switch and complete an electrical circuit to said electric motor.

2,945,570
INTERCONNECTED MAIN CLUTCH CONTROL AND PLANETARY GEAR LOCK-UP RELEASE FOR RELIEVING REACTIVE FORCE IN A CHANGE-SPEED POWER TRANSMISSION TRAIN
Henry A. Ferguson, Loveland, and Ralph C. Boyle and Edmund Jedrzykowski, Chicago, Ill., assignors to International Harvester Company, a corporation of New Jersey
Filed Aug. 17, 1953, Ser. No. 374,634
7 Claims. (Cl. 192—3.6)



1. In an engine-driven vehicle; a frame; ground-engaging propelling means attached to said frame and operable from said engine; an engine-driven disengageable main friction clutch, a change-speed gearing unit drivable from said clutch when the latter is engaged, said gearing unit being in driving relation with the propelling means and including selectively meshable and demeshable relatively rotatable elements between which torsional force is transmitted during the transmission of power from the clutch to the ground-engaging propelling means while said elements are meshed, and a planetary gearing unit including a rotatable driving member driven from said clutch, a driven member rotatable coaxially with and relatively to the driving member and in driving relation with the change-speed gearing unit, a torque reaction member rotatable coaxially with and relatively to the driving and driven members, means for releasably connecting two of said members together for locking up the planetary gearing unit to cause rotation of all of such members in a forward direction about their coincident axes, and an overrunning-brake device disposed between the frame and said torque reaction member to accommodate such forward rotation thereof but operable to prevent retrograde rotation of such torque reaction member to adapt the planetary gearing unit for rotating the driven member at a speed differing from that of the driving member during release of the releasable connecting means from between said two members; means selectively operable responsively to advancive motion imparted thereto to release the main friction clutch; and means operable by the main clutch releasing means attendant to advancive movement thereof to release the releasable connecting means of the planetary gearing unit to terminate the lock-up of the planetary gearing unit whereby the driven element is free for retrograde rotation to preclude the existance of torsional pressure between the demeshable elements.

2,945,571
AUTOMATIC VEHICLE HAND BRAKE RELEASE
John D. Yanda, Maple Lane, Wheeling, W. Va.
Filed Mar. 5, 1957, Ser. No. 644,099
1 Claim. (Cl. 192—4)

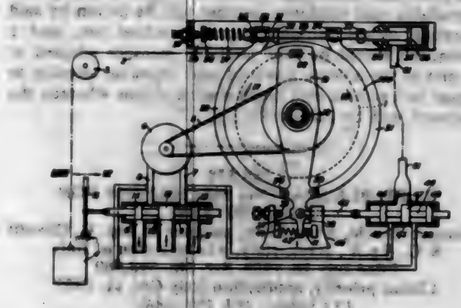


In apparatus for the automatic release of a parking brake on an automotive vehicle, a gear shift selector, an engine having an intake manifold, a brake control shaft, means for urging said control shaft into brake release position, locking means for locking said shaft in brake applying position, pneumatic diaphragm means having an operated piston rod connected to operate said locking means, a first control valve mounted and arranged for operation by displacements of said shaft, a second control valve mounted and arranged for operation by displacement of said gear shift selector, a first pipe connecting said manifold to an inlet of said second valve, a second pipe connecting the outlet of said second valve to the inlet of said first valve, a third pipe connecting the outlet of said first valve to said diaphragm means, the apparatus being so constructed and arranged that when said brake is applied and said gear shift selector is in gear, said first and second valves are open and provide an open path from said manifold to said diaphragm means, and when said brake has been released said first valve is in closed position and blocks the path between said manifold and said diaphragm means.

2,945,572
HYDRAULIC CONTROL OF BRAKES
John L. Rye, Allesley, Coventry, England, assignor to The Kealavite Company Limited, Coventry, England, a company of Great Britain
Filed Mar. 10, 1958, Ser. No. 720,375
Claims priority, application Great Britain Mar. 12, 1957
12 Claims. (Cl. 192—8)

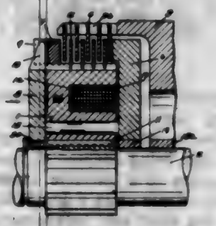
1. A power transmission system including a motor, a driven member arranged to be driven by driving torque generated by the motor, a brake arranged to apply a braking force to the driven member, brake release means, power control means for controlling the said motor, a fixed part to receive the reaction due to braking, at least one anchoring member operatively interconnecting the brake and said fixed part to transmit such reaction and having limited movement relatively to said fixed part, and brake-release control means operated by the anchoring

member to cause operation of the brake release means to release the brake on the occurrence of such relative move-



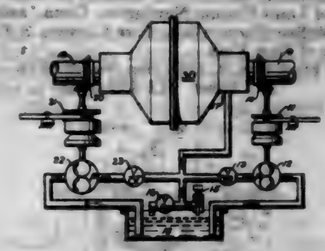
ment due to the driving torque overcoming the reverse torque applied to the driven member by a load thereon.

2,945,573
ELECTROMAGNETIC CLUTCH WITH AUTOMATICALLY ADJUSTABLE AIR GAP
Ludwig Wiedemann, Friedrichshafen, Germany, assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 11, 1957, Ser. No. 639,423
8 Claims. (Cl. 192—84)



1. An electromagnetic clutch comprising a driving member and a driven member, a first plurality of laminations connected to said driving member to be rotatable therewith and axially movable thereon, a second plurality of laminations connected to said driven member to be rotatable therewith and axially movable thereon; said laminations of said first and second plurality of laminations being interleaved with respect to one another; a magnet body holding an energizing winding, an armature of magnetic material and a retaining means; said armature and said retaining means being positioned on opposite sides of said first and second plurality of laminations, said magnet body being positioned to create a magnetic flux responsive to energization of said energizing coil to drive said armature towards said retaining means to compact said interleaved laminations between said retaining means and said armature; and adjusting means being operatively connected to said retaining means; said adjusting means including measuring means operatively connected to said armature to measure the position achieved by said armature when said interleaved laminations are compressed; said adjusting means automatically moving said retaining means to maintain a predetermined air gap between said armature and said magnet body when said interleaved laminations wear and cause said air gap to be decreased.

2,945,574
AUTOMATIC HYDRAULIC CONTROL FOR CLUTCH
William F. Plume, Audubon, N.J., assignor, by mesne assignments, to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed July 9, 1954, Ser. No. 442,384
2 Claims. (Cl. 192—85)



1. An apparatus for transmitting power comprising an input shaft, an output shaft, friction driving means connected to each of said shafts, one of said friction means being movable with respect to said other friction means to permit engagement and disengagement of said friction driving means, spring means connected to said movable friction means to yieldingly hold it out of engagement with said other friction means, a hydraulic actuator connected to said movable friction means to force it into contact with said other friction means for transmittal of torque from said input shaft to said output shaft, and continuous hydraulic pressure supply means connected to said hydraulic actuator comprising, a fluid reservoir, a first pump driven by said input shaft, a second pump driven by said output shaft, said pumps being connected to said hydraulic actuator, means for regulating the pressure delivered to said actuator and manually operated means for controlling independently the operation of either of said pumps, said manually operated means comprising disconnectible driving connections between said input shaft and first pump and between said output shaft and second pump, respectively.

2,945,575
ADJUSTABLE CHUTE FOR BUTTON FEEDERS
Oscar Halbreich, Forest Hills, N.Y., assignor to Kem Button Corporation, Brooklyn, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,535
2 Claims. (Cl. 193—38)



1. In an adjustable track for use in conjunction with a button feeding device or similar structure, the improvement comprising: a base member of generally elongated planar configuration, a pair of elongated track forming members defining a track therebetween and disposed in substantially mutually parallel relation with respect to said base member, a first hinge arm mounted upon said base member and extending from said base member in a direction toward said track members, a second hinge arm interconnected with said track members substantially at a first end thereof and pivotally interconnected with said first hinge arm at a second end of said hinge arm, and

threaded means interconnecting said second hinge arm and said base member for adjusting the relative position of said track forming members with respect to said base member.

2,945,576
ROTARY PRINTING DEVICE
Lloyd J. Lapointe, Manchester, Anthony D'Onofrio, Hartford, and Louis Cotrna, Newington, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Sept. 9, 1958, Ser. No. 759,974
12 Claims. (Cl. 197—12)



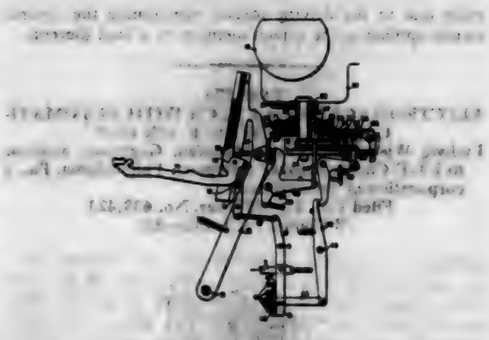
1. In a printing device; a printing head having a plurality of type formed on the periphery thereof, a printing hammer movably mounted for cooperation with said type, a plurality of stops selectively positionable to arrest the movement of said head, a main drive shaft, means intermittently rotating said shaft so that the latter has a predetermined cyclic acceleration and deceleration, one revolution detent control means for controlling the initiation and termination of the successive single revolutions of said shaft rotating means, and means for yieldably coupling said shaft to said printing head.

2,945,577
KEYBOARD LOCK MECHANISM
Leo P. Frechette, Jr., West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Feb. 26, 1959, Ser. No. 795,445
4 Claims. (Cl. 197—17)



1. In a typewriter or like machine having a keyboard, a keyboard locking blade, means normally biasing said blade into keyboard locking position, electrically powered typewriter operating means, mechanism comprising a rotatable member engageable with said electrically powered typewriter operating means, manually operable means for simultaneously initiating the operation of said for permitting the engagement of said rotatable member with said typewriter operating means, whereby if electric power is available said rotatable member will be driven by said operating means through a predetermined arc, and a camming element on said rotatable member adapted at the end of the arcuate travel of said rotatable member to engage and actuate said blade biasing means whereby the keyboard will be unlocked.

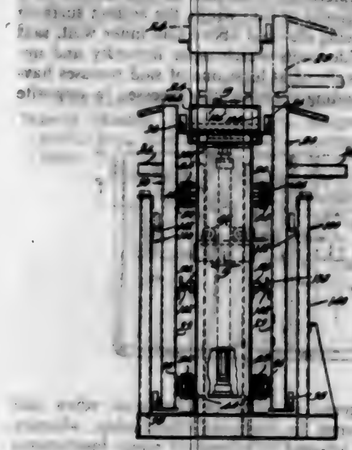
2,945,578
VARIABLE SPACING MECHANISM FOR TYPEWRITERS
Giuseppe Beccio, Ivrea, Italy, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Filed July 18, 1956, Ser. No. 598,569
Claims priority, application Italy Oct. 21, 1957
13 Claims. (Cl. 197—84)



1. In a variable spacing mechanism, an escapement member having teeth spaced apart at unit intervals of spacing, a movable dog normally engaging the escapement member and being adapted to be disengaged therefrom to retrograde to a variable extent according to a variable number of said units, a dog rocker for disengaging said movable dog from said escapement member, means for reengaging said movable dog with said escapement member, and means movably mounted with respect to said dog rocker and cooperating therewith for retarding the action of said reengaging means to enable said movable dog to complete its retrograde movement before reengaging said escapement member.

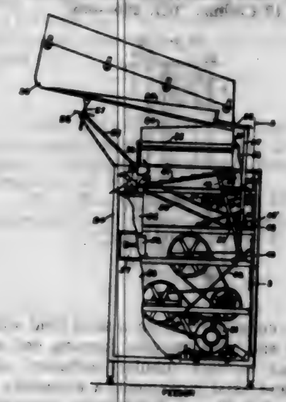
2,945,579
PLATING MACHINE
James Bertsch, Detroit, Mich., assignor to Frederic B. Stevens, Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 23, 1954, Ser. No. 573,378
13 Claims. (Cl. 198—19)

1. Apparatus for moving workpieces through a series of treating stations including a central frame, guideway means on said frame defining a closed pathway adjacent to the stations, and a plurality of vertically disposed carriage units mounted for travel on said guideway means around said pathway and outside said central frame, each one of said carriage units comprising a pair of slidably engaged members adapted to telescope one within the other with one such telescoping member vertically fixed to said guideway means and the other such member free to move in a vertical direction, a vertically-movable lifting structure mounted on top of said central frame for vertical travel thereabove, engaging means secured to said vertically movable telescoping member of each of said carriage units in a position to be selectively engaged by said lifting structure, means on said lifting structure for selectively engaging said lifting means, and means



for lifting said lifting structure and said selected telescoping members carried thereby above said central frame.

2,945,580
VIBRATING-AGITATING TYPE FEEDER
Daniel E. Woodman, Decatur, Ga., assignor to The Woodman Company, Inc.
Original application Dec. 17, 1948, Ser. No. 65,775, now Patent No. 2,749,677, dated June 5, 1956. Divided and this application June 4, 1956, Ser. No. 589,244
3 Claims. (Cl. 198—89)



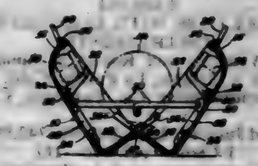
1. In a machine of the class described, a main hopper having an end arranged for vertical adjustment and being provided with a kicker plate, means for imparting a longitudinal reciprocating movement to said kicker plate for advancing material through said main hopper, a primary feeder located below said main hopper for receiving material therefrom, a baffle plate in said primary feeder, means for imparting a rocking movement to said baffle plate for advancing material through said primary feeder, a secondary feeder located below said primary feeder for receiving material therefrom, said secondary feeder being provided with a step plate, means for imparting a longitudinal reciprocating motion to said step plate for advancing material through said secondary feeder, an inclined shaker hopper located below said secondary feeder for receiving material therefrom, a feed roller adjacent the discharge end of said secondary feeder for lifting the material from said secondary feeder into said shaker hopper, means for imparting a sidewise reciprocating movement to said shaker hopper to advance the material therethrough, and means to counter balance the movement of said shaker hopper.

2,945,581
ROLL CLEANER FOR BELT CONVEYORS
Wilbur H. Claudeau, Downers Grove, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Apr. 5, 1957, Ser. No. 650,879
5 Claims. (Cl. 198—229)



1. In a blower of the type comprising a trough pivotally mounted at one end for vertical swinging movement and having a foundation structure, roller means, a shaft mounting said roller means on said structure, a belt supported on said roller means and having top and bottom runs, and means for cleaning said roller means comprising a pair of arms swingably mounted on the shaft at opposite ends of said roller means, a scraper blade and tray assembly supported on said arms between said runs and including a scraper blade portion having an edge disposed against the periphery of said roller means and extending tangentially downwardly and outwardly of the roller means, a tray portion connected to said blade portion and extending horizontally away from said blade portion, and an extension tray mounted on said structure and having a bottom wall underposed with respect to said tray and having a far wall with respect thereto diagonally disposed with respect to the longitudinal center line of said conveyor and extending transversely of said runs and having a trailing end disposed to discharge material through an opening in an adjacent side of the structure.

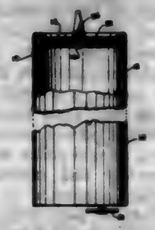
2,945,582
BOWLING BALL CARRYING CASE
Paul Abrahams, 1345 W. Thorndale, and Romain Metzger, 1310 W. Roscoe, both of Chicago, Ill.
Filed Mar. 24, 1959, Ser. No. 801,522
13 Claims. (Cl. 206—1)



1. In a bowling ball carrying case, the combination of: a pair of complementary hollow mating sections each comprising a top wall, a bottom wall, and a side wall joined by a pair of end walls to form an enclosure open on one side, said sections being disposed with the open sides of their enclosures facing each other to form a single compartment where the case is closed; hinge means interconnecting adjacent edges of the bottom walls of respective sections; the bottom walls of the sections being co-planer when the case is closed and converging upwardly toward the center of the case when the case is

open; a pair of elongated arms rigidly secured to the upper surface of the bottom wall of one section, said arms being spaced from each other and having free ends extending parallel over the upper surface of the bottom wall of the other section toward the side wall of said other section; another pair of similar arms rigidly secured to the upper surface of the bottom wall of said other section and having free ends extending parallel over the upper surface of said one section toward the side wall of said one section; the ends of the arms of one section being disposed immediately adjacent corresponding sides of the ends of the arms of the other section and being co-planer therewith when the case is closed and diverging upwardly therefrom from the center of the case in a scissor-like manner when the case is open to form a cradle therewith for supporting and elevating a bowling ball disposed thereon; handle means on the top walls of the sections; and self-locking latch means interconnecting the end walls of the sections operable to maintain the case in a predetermined open position so that the ball will be supported on said cradle in an elevated position.

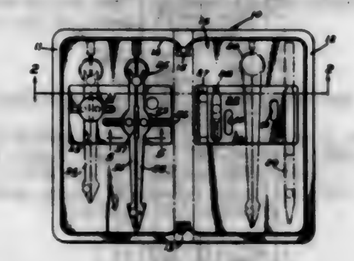
2,945,583
SIMULATED CANDLE DEVICE AND PACKAGE
Edouard M. Sire, 461 6th Ave., New York, N.Y.
Filed Dec. 22, 1959, Ser. No. 861,358
7 Claims. (Cl. 206—1.5)



1. A novelty package device comprising a base, a hollow cylinder removably mounted on said base, an elongated outer cap covering said hollow cylinder, said cylinder and said cap each having a roof, a compression spring normally maintained in compressed form between the said roofs, a lug extending upwardly from said cylinder roof, and a holder connected to said lug and extending outwardly of said cap roof and holding said roofs adjacent to each other against the action of said spring whereby when said holder is incapacitated, said cap will fly away from said cylinder under the action of said spring becoming decompressed.

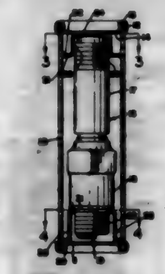
2,945,584
POCKET CASE WITH HOLDERS FOR INSTRUMENTS
Christine U. Vaughan and Robert E. Bond, Pasadena, and Kenneth A. Milletto, La Puente, Calif., assignors to V. & E. Manufacturing Co., Pasadena, Calif., a partnership
Filed June 18, 1958, Ser. No. 742,984
1 Claim. (Cl. 206—16)

A case for instruments, such as drawing instruments, which comprises a pair of wing sections extending on opposite sides of a hinged intersection which extends longitudinally of said wing sections and permits movement of the wing sections between an open position and a closed position in which one wing section overlies the other, each of said wing sections having an inner wall and an instrument holding pad comprising an insert member of thin walled resilient sheet material, said pad having an upper surface raised above said inner wall and extending laterally across the wing section, said pad being substantially smaller than said inner wall in a direction longitudinally of said wings and being substantially centered longitudinally of said wings, each of said pads having at least one recess extending from end to end thereof in a direction longitudinally of said wings, the bottom surfaces of said recesses being elevated above said inner wall, said recesses having side walls which taper inwardly and upwardly, the side walls of at least one of said recesses having laterally extending recesses, the recesses in opposite



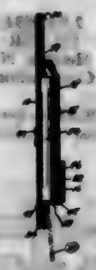
pads being staggered so as to be disaligned when said wings are positioned in overlying relationship, whereby said recesses are adapted to grippingly retain instruments of such length as to protrude substantially beyond both sides of said pad with the protruding ends of the instruments held in elevated positions above said inner walls and said laterally extending recesses accommodate protruding parts of an instrument to anchor it against longitudinal removal.

2,945,585
TUBULAR CONTAINER
Jack T. Whalen and John H. Franck, both of Hills and Dales Village, Canton, Ohio
Filed Nov. 1, 1957, Ser. No. 693,232
10 Claims. (Cl. 206—46)



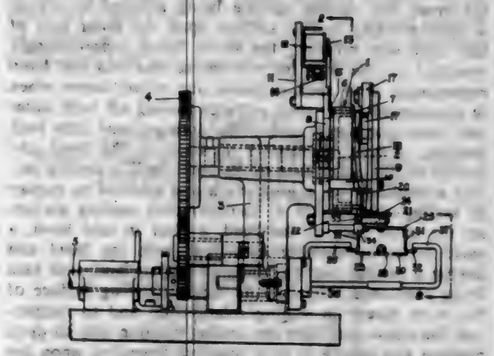
1. A tubular container having a semi-rigid wall structure and metal end seals therefor forming end walls, at least one object in said tubular container supported against radial and axial movement, a protective bushing between one end wall and the tubular container walls and said supported object having a radially engaging portion adapted to contact both the end wall and tubular container walls, a cylindrical portion connected to said radial portion projecting a distance from the end wall, a further radial portion projecting from the opposite end of said cylindrical portion inwardly towards the object supported, an opening in said bushing terminated by said inwardly projecting radial portions to suspend the object against radial and longitudinal movement, and a flanged surface on said object adjacent said radially engaging portion to limit the axial movement of the object in relation to said container and bushing, a further bushing element at the opposite end wall supporting the object between the tubular container walls and said end wall, said bushing having a radially engaging portion in radial contact with the tubular container, a cylindrically engaging portion connected thereto in contact with the supported object, and a further radially engaging portion projecting inwardly in contact with the metal end seal to support the object against longitudinal movement.

2,945,586
RECLOSABLE PLASTIC BUBBLE PACKAGE
Harold Maclean, Nazareth, Pa., assignor to Binney & Smith Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 8, 1958, Ser. No. 759,524
4 Claims. (Cl. 206—78)



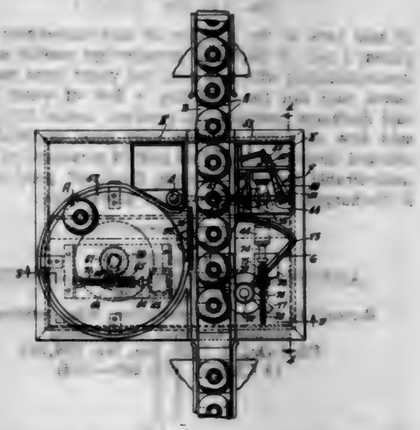
4. Reclosable plastic bubble package construction comprising: a frame element having an opening, a body element receivable in said opening, said body opening having a free edge with a raised lip spaced from said frame element forming an entrance to said body element; a base element associated with said frame element; a movable closure element on said frame element having at least two positions, one in which said closure element engages the inner surface of said raised lip, and another position in which said closure element is spaced from said edge to afford a passage through said entrance to the area between the body element and said base element, and latch means associated with said closure element and said raised lip.

2,945,587
DEFECTIVE ARTICLE REJECTOR
Arthur Bell and George Daniel Horgan, London, England, assignors to American Machine & Foundry Company, a corporation of New Jersey
Filed Dec. 20, 1955, Ser. No. 554,344
Claims priority, application Great Britain Dec. 23, 1954
4 Claims. (Cl. 209—74)



1. A defective article rejector for segregating articles from a succession thereof in accordance with a detected property of such articles, comprising a conveyor for conveying discrete articles along a predetermined path of travel, at least one air nozzle disposed adjacent said article conveyor having air supplied thereto and adapted to divert said articles from said path of travel by a stream of air from said nozzle, a movable shutter adapted to be selectively interposed between said nozzle and said articles to interrupt said stream of air, a disc rotating in synchronism with the travel of said articles and having a plurality of movable pins disposed about the outer periphery thereof, and means for laterally displacing said pins each in response to the detection of a defective article, said shutter having an outwardly extending actuating arm movable in a plane parallel to the plane of rotation of said disc and directly engageable by any of said pins when displaced to interpose said shutter between said nozzle and said moving articles to effect segregation of a defective article from articles displaced from said path of travel by said air stream.

2,945,588
BOTTLE INSPECTION APPARATUS AND METHOD
George C. Fenn, 219 Linden Ave., Verona, N.J., and Joseph Trope, 12 Evelyn Place, Hanover, N.J.
Filed Mar. 1, 1957, Ser. No. 643,331
12 Claims. (Cl. 209—111)

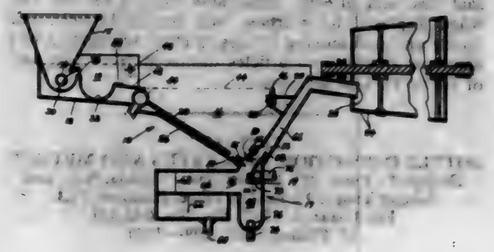


1. A container inspection apparatus to be used in connection with a conveyor for transparent or translucent containers, comprising in combination: a plurality of photo-electric cells for positioning adjacent one side of a container conveyor, light-producing means for positioning at the other side of said conveyor opposite said photo-electric cells and providing a plurality of separate light beams corresponding in number to said photo-electric cells with one beam for each photo-electric cell, to simultaneously direct said beams on their respective cells through different portions of the containers while the containers are in translatory motion on said conveyor; an electrical detection circuit interconnecting said cells and providing for no flow of current in said circuit during movement through said light beams of a transparent or translucent container devoid of relatively opaque matter and providing for current flow in said circuit when light in one of said beams is intercepted by relatively opaque matter carried by a container moving through said beams.

2,945,589
VEGETABLE SEPARATING MACHINE
George J. Olney, Westernville, N.Y., assignor to George J. Olney, Inc., Westernville, N.Y.
Filed June 9, 1955, Ser. No. 514,195
12 Claims. (Cl. 209—164)

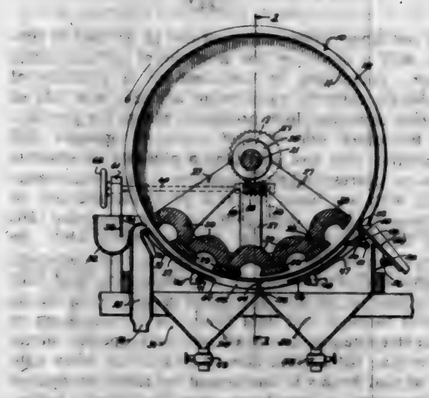
1. In a vegetable cleaner and separator of the water using type the combination of a main separating tank having smooth ends and converging, substantially ma-

broken bottom plates; said ends and bottom plates forming a wide unobstructed tank of triangular cross section; a multi-dam input chamber mounted at the top edge of one of said bottom plates on one end of said tank for distributing the input uniformly across said tank, a discharge trough mounted in the other end of said tank adjacent to the top edge of the other bottom plate; an adjustable discharge slot extending across the full width



of said tank at the junction of said converging bottom plates; a pair of discharge passageways outside said tank communicating with said slot; and water input means adjacent said slot for providing a flow of water through said discharge passageways, reservoir means for directing said flow of water whereby only good material is discharged through one of said pair of passageways and the undesirable material, heavier than said good material, is discharged through said other passageway.

2,946,590
ADJUSTABLE PERMANENT MAGNETIC SEPARATOR
Roswell H. Stearns, Warwaukee, Wis., assignor to Indiana General Corporation
Filed Oct. 7, 1955, Ser. No. 539,162
14 Claims. (Cl. 209—223)



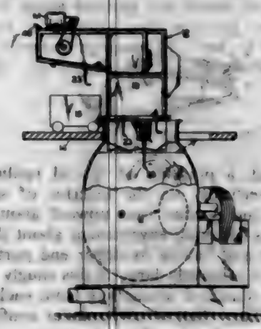
1. In a magnetic separator the combination with a drum mounted for rotation and means for feeding to the periphery of the drum material having a separable magnetic content, of a frame disposed within the drum and with respect to which the drum is normally rotatable, the frame comprising end segments spaced axially of the drum and polar bars spaced circumferentially of the inner periphery of the drum and in close proximity thereto and connected with respective end segments, and permanent magnets of channeled form in cross-section alongated axially of the drum and having polar ends mounted upon and supported by the polar bars of the frame, proximate ends of the magnets being of like polarity and being mounted on the same polar bar, said frame ends having mounting means projecting at opposite ends of the drum and provided with supports to which the mounting means is adjustably fixed, the drum having eccentric bearings rotatably adjustable respecting the mounting means and the drum being supported on the eccentric bearings in a position of eccentricity with regard to said polar bars, the extent and direction of eccentricity being adjustable by the rotation of said bearing means.

2,946,591
FILTER
David B. Pall, Roslyn Heights, N.Y., assignor, by mesne assignments, to Pall Corporation, a corporation of New York
Filed Sept. 20, 1956, Ser. No. 610,917
4 Claims. (Cl. 210—234)



1. A filter comprising, in combination, a head, two channels for fluid passage therethrough, respectively communicating with two open-ended inner and outer concentric chambers separated by a cylindrical wall, a valve stop member mounted on said head and disposed across the open end of the inner chamber, a cylindrical valve sleeve having sealing surfaces upon its outer and inner side faces, and upon its bottom face, the outer side sealing surface being adapted to engage a corresponding sealing surface upon the outer wall of the outer chamber, and the inner side sealing surface being adapted to engage a corresponding sealing surface upon the outer face of the valve stop member, the sleeve being reciprocatingly mounted on the wall for movement into and out from engagement with such surfaces, the valve sleeve when in engagement with such surfaces closing off both outer and inner chambers, and being spring-biased into such position, a bowl removably attached to the head and having on the inner face of its outer wall a sealing surface extending over a long reach and adapted to engage in sealing relationship a corresponding sealing surface on the outer face of the head, a filter in said bowl, a valve actuating member associated with the bowl and having a sealing surface upon its upper face, said face being positioned to engage the bottom sealing surface of the valve sleeve in sealing relationship and to reciprocate the sleeve out from the sealing position into an open position and hold it in such position dependent upon the position of the bowl over the long reach of the sealing surfaces between the bowl and the head, the valve actuating member being so placed as to reciprocate the valve sleeve out from the closing off position only after the bowl has been sealed to the head through engagement of the aforesaid sealing surfaces therebetween.

2,946,592
REMOVER FOR RAGS AND THE LIKE FOR A PULP TREATING MACHINE
Robert Blakeley Honeyman, Portland, Oreg., assignor to Morden Machines Company, Portland, Oreg., a corporation of Oregon
Filed Dec. 1, 1958, Ser. No. 777,343
4 Claims. (Cl. 210—543)



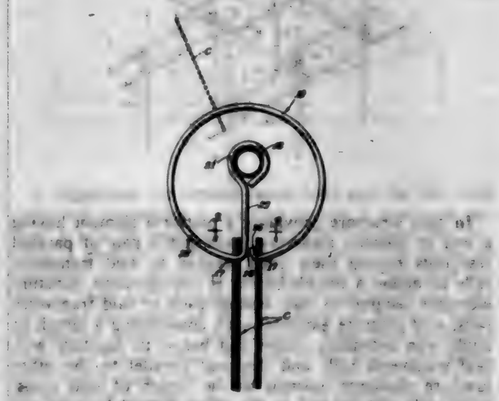
1. In a pulp treating machine having a tank and a rotor producing circulation of pulp material in said tank, removing means for rags and the like, said removing means including a driven endless conveyor located in a substantially vertical plane extending down into said tank, a series of hooks carried by said conveyor and moved successively down into said tank into the path of the material circulating in said tank and then up out of said tank, said plane of said conveyor being arranged out of parallelism with the direction of flow of said material in said tank, a swivel support member for each of said hooks on said conveyor, each hook having a shank attached at its end to said swivel support member by a substantially universal joint, means including a stationary positioning element for imparting a partial rotation of each swivel support member and therewith to the attached hook shank as the swivel support member approaches the bottom of its course into said tank, said rotation imparting means so arranged as to turn the hook into parallelism with said direction of flow of said material in said tank, and related means including a further stationary positioning element for imparting reverse partial rotation of each swivel support member and attached hook shank as the swivel support member moves upwardly from said tank, said latter mentioned rotation imparting means so arranged as to turn the hook into parallelism with said plane of said conveyor.

2,946,593
ARTICLE SUPPORTING DEVICE
Wally Urman, 2633 30th St. SE., Washington, D.C.
Filed Oct. 25, 1954, Ser. No. 464,747
15 Claims. (Cl. 211—1)



13. An article supporting device comprising supporting structure including a plurality of spaced curved portions in the form of a coil presenting elongated surface metal on the outer peripheral surface of the curved portions, the elongated surface means including receiving means adapted to receive an elongated flexible member, an elongated flexible member having a length greater than the length of the elongated surface means and having opposite ends joined to the supporting structure adjacent opposite ends of the elongated surface means, supporting means adapted to receive an intermediate portion of the elongated flexible member, and means maintaining the intermediate portion of the elongated flexible member in spaced relation with the supporting structure and non-intermediate portions of the elongated flexible member in contact with receiving means of the elongated surface means, the last-named means including means for mounting the supporting means in spaced relation with the supporting structure.

2,946,594
CHART SUPPORT RING
Clifford Parker, Chicago, Ill., assignor to Ideal School Supply Company, Chicago, Ill., a corporation of Illinois
Filed July 30, 1958, Ser. No. 752,606
4 Claims. (Cl. 211—46)

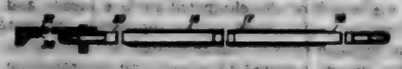


1. The combination of a horizontal bar, and a chart support ring adapted to be mounted on said bar for supporting one or more charts at a perforated edge thereof for flip-over movement about said bar, said chart support ring comprising a supporting eye portion freely engaging said bar for rotation thereon, a ring portion of greater diameter than and extending about said eye portion, and a radial portion connecting said eye portion with said ring portion, said ring portion having a gap to permit the ring portion to be inserted through a perforation of a chart for suspending the latter therefrom, the ring being rotatable about the bar by the free engagement of the eye portion with the bar, whereby a set of charts when flipped over from the front portion of the ring to the rear portion thereof may be readily shifted to the front portion by rotation of the ring about the bar without shifting the charts.

2,946,595
CLOTHES HANGER
Charles Gardner, Jr., 119 W. 23rd St., Owensboro, Ky.
Filed Jan. 3, 1958, Ser. No. 707,006
2 Claims. (Cl. 211—105.3)

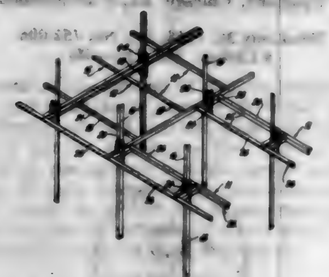
1. A clothes hanger for automobiles comprising a rigid elongated tube including a plurality of telescopically related sections, a pair of flexible straps, each of said straps having a relatively wider portion and a relatively narrower portion, a pair of screw clamps, each of said screw

clamps surrounding a terminal section and one of said straps at said narrower portions for maintaining said straps and sections in fixed relationship, said relatively



wider portion including a portion sewn back upon itself and grooves formed in said tube for receiving hangers to prevent sliding movement along said tube.

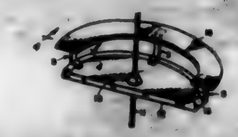
2,945,596
EXTENDIBLE RACK STRUCTURE FOR STORAGE, EMBODYING WING EXTENSIONS
William J. Higgins, 12 Capp St., Shore Crest, Carteret, N.J.
Filed Aug. 1, 1958, Ser. No. 752,677
1 Claim. (Cl. 211—134)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In rack structure providing a platform element having a pair of parallel transverse rails and a pair of parallel rest rails having their ends secured to said transverse rails to define a double-barrel H configuration, juncture elements secured to each end of each of said transverse rails, said juncture elements each constituting a length of angle iron extending above and below its juncture with said transverse rails and disposed parallel to the other juncture elements, normal to the length of said transverse rails and normal to the plane defined by said rest rails, wing extensions for said rack structure, said wing extensions comprising a pair of parallel rails, rails extending from each end of each of said parallel rails normal to the length of said parallel rails and in the plane defined by said parallel rails, a first juncture element coupling the end of a first of said extending rails distal its parallel rail to the end of a second of said extending rails distal its parallel rail, a second juncture element coupling the end of a third of said extending rails distal its parallel rail to the end of a fourth of said extending rails distal its parallel rail, said juncture elements each constituting a length of angle iron extending above and below its juncture with said extending rails and disposed parallel to and adapted to mate with and be coupled to the juncture elements of the platform element, whereby a pallet can be supported by the adjacent rails of adjacent wing extensions, and such adjacent rails of adjacent wing extensions define an aisle for access to said platform element.

2,945,597
AUXILIARY TRAY FOR REFRIGERATOR SHELVES
Albert F. Romano, 1706 W. Steigers St., Norristown, Pa.
Filed Apr. 9, 1957, Ser. No. 651,726
2 Claims. (Cl. 211—139)

1. A refrigerator construction comprising a generally planar horizontally disposed main shelf having a generally semicircular edge and a straight edge extending between the ends of said semicircular edge, means mounting said main shelf for rotation about a generally vertical axis generally through the center of curvature of said semicircular edge, an upstanding relatively wide bead extending along said semicircular edge and having a transversely arcuate upper surface, a relatively narrow skirt extending along and depending from the outer re-



gion of said bead, a plurality of spaced resilient clips each extending vertically on the exterior of said skirt having its lower end portion bent upward about a relatively short radius for snug engagement about the lower edge of said skirt and having its upper end portion bent downward about a relatively large radius snugly engaged over said bead, a standard upstanding from each of said clips, and an auxiliary shelf of semiannular configuration seated on the upper ends of said standards.

2,945,598
ROTARY FOOD HOLDER FOR COOKING MACHINE
Constantine M. Rallis, 4341 Standish Ave. S., Minneapolis, Minn.
Filed Oct. 27, 1958, Ser. No. 769,626
1 Claim. (Cl. 211—144)



A device of the class described, a vertically disposed spindle, an upright zigzag supporting frame carried by said spindle, said supporting frame being formed from a single length of metallic rod stock and bent only at right angles at spaced points therealong to define a plurality of connected horizontally disposed mounting members in overlying vertically spaced relationship, and endless frame elements one each mounted on one of said mounting members in concentric relationship to each other and to the spindle.

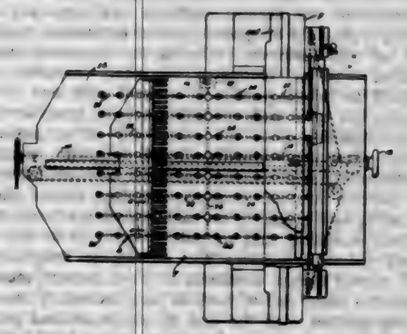
2,945,599
BOOKCASE HAVING VERTICALLY ADJUSTABLE SHELVES
Harry A. Simpson, Jr., Portsmouth, Va., assignor to the United States of America as represented by the Secretary of the Navy
Original application Jan. 24, 1958, Ser. No. 711,109. Divided and this application Nov. 13, 1958, Ser. No. 777,887
1 Claim. (Cl. 211—147)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A bookcase comprising opposite side walls, a pair of channel members mounted in spaced relation on each of said sidewalls, said channel members being formed with vertically spaced and horizontally aligned openings therein; a bookshelf including a ledge extending across the front thereof formed of a lower portion fixed to the shelf and an upper portion hinged to the lower portion, and securing means for releasably securing the upper portion of the ledge in vertical alignment with the lower portion thereof to allow access to books on said shelf while holding the books in place when said ledges are in position; said securing means including a channel member mounted on each of the side walls in line with the ledge and formed with a plurality of



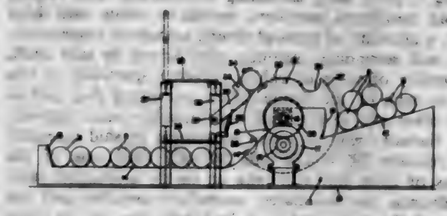
spaced openings therein, a tubular member formed on the upper portion of the upper ledge and a pair of spring pressed bolts mounted in opposite ends of the tubular member and having outer ends thereof adapted to engage selected openings in the last named channel members; means mounting said bookshelf on the first named channel members for vertical adjustment relative to said side walls, said mounting means including a pair of U-shaped members pivotally mounted on an under surface of the shelf at each side thereof and each of said U-shaped members having free ends thereof adapted to enter selected openings in the first named channel members for adjustably supporting the shelf thereon.

2,945,600
CUTTING MACHINE AND TABLE THEREFOR
Carl Thamlin, Westbury, N.Y., assignor to E. P. Lawson Co., Inc., New York, N.Y., a corporation of New York
Filed Dec. 4, 1956, Ser. No. 626,214
1 Claim. (Cl. 214—1)



In a cutting machine, a paper support table, a plurality of ports in said table for admitting air to the surface of said table, each of said ports having a housing secured therein, a bushing threadedly carried in said housing, said bushing having a surface flush with the surface of said table and having a retaining lip surrounding a centrally disposed passage in said bushing, a sleeve carried in said housing, a lock nut threadedly secured to said sleeve and engaging said bushing, a threaded engagement between said sleeve and said bushing whereby said lock nut firmly positions said sleeve with respect to said bushing, a valve threadedly secured within said sleeve, said valve having an actuator extending upwardly in said bushing, resilient means urging said actuator to normally maintain said valve closed and an actuating element in said bushing and engageable with said valve actuator, said actuating element having a spherical surface protruding above the surface of said table and having a cylindrical body within said bushing and spaced from the walls thereof and engaged therewith, whereby said actuating element is restrained against rotation.

2,945,601
APPARATUS FOR TURNING ROUND BARS
Frederick H. Evans, Massillon, Ohio, assignor to Evans Enterprises, Inc., Massillon, Ohio, a corporation of Ohio
Filed Apr. 30, 1959, Ser. No. 810,805
10 Claims. (Cl. 214—1)



1. Apparatus for turning round bars and the like, said apparatus comprising a charging station, a discharge station, a pair of rotatable discs located between said stations, a portion of the periphery of each disc being of relatively large diameter, a notch in the periphery of the disc at each end of said large diameter peripheral portion, the remainder of the periphery of the disc being of smaller diameter, spring-loaded stop arms normally contacting the peripheral portions of the discs, and means for rotating said discs in unison to pick up a bar from the charging station in one set of said notches and moves the bar into contact with said stop arms, then turn the bar axially, and then deposit the bar in the other set of notches and deliver it to the discharge station.

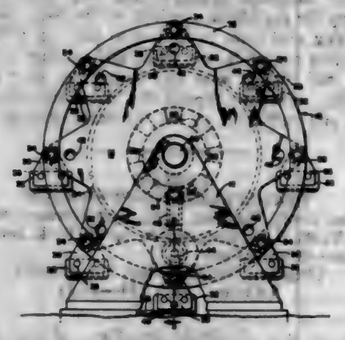
2,945,602
TRANSFERRING APPARATUS
Cornelius Kroll, Houston, Tex., and Norman M. Kroll, New York, N.Y., assignors to Speed Park, Inc., a corporation of New York
Filed Jan. 29, 1957, Ser. No. 636,995
6 Claims. (Cl. 214—16.1)



1. An installation for transferring automobiles, comprising a vertical supporting structure, a horizontal platform comprising a plurality of parallel alternating troughs and crests extending outwardly from said support, means extending transversely across said platform supporting the latter near its outer end, a second horizontal platform, means to effect vertical movement of said second platform with respect to said first platform, a conveyor mounted on said second platform, said conveyor comprising a plurality of spaced parallel horizontal members, each of said members including an elongated primary member

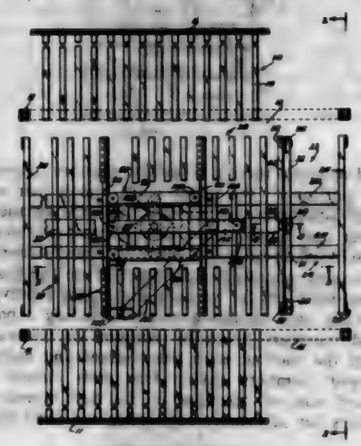
and an elongated secondary member, both adapted to be longitudinally aligned with one of said troughs, the outer ends of said horizontal members being in juxtaposition with the outer end of an associated trough when longitudinally aligned therewith, means interconnecting said primary members adjacent their central portion to form a rigid assembly, means slidably mounting said assembly on said second platform, means slidably mounting said secondary members on the associated primary member for movement longitudinally with respect thereto to extend outward thereof, means to retain the inner end of each of said secondary members in engagement with the end of the associated primary member when said secondary member has been extended, means to effect movement of said rigid assembly and drive means associated with each of said secondary members and controlled by the movement of said assembly to effect simultaneous individual horizontal movement thereof when said rigid assembly is moved, whereby each of the secondary members and a portion of the associated primary member will be moved into an associated trough, said drive means comprising a drive shaft extending transversely with respect to said horizontal members, means to rotate said drive shaft, a plurality of pairs of drums associated respectively with said secondary members and driven by said shaft, a plurality of pairs of cables affixed respectively at one end to each of the drums of an associated pair and at their other end to the secondary members near opposite ends thereof, whereby upon movement of said assembly and rotation of said drums by said shaft one of the drums of each pair will take up on its associated cable to advance the associated secondary member and the other of the drums of each pair will play out its associated cable.

2,945,683
VEHICLE-PARKING FACILITIES
Bernard A. McGuinness, 397 Harvard St., Cambridge, Mass.
Filed Feb. 27, 1957, Ser. No. 642,896
1 Claim. (Cl. 214—16.1)



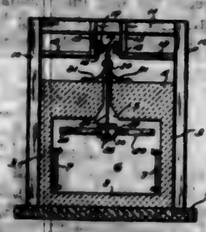
A vehicle parking facility comprising a carrier wheel, said wheel having on a surface portion an annular series of recesses, means supporting the wheel for rotation in a generally vertical plane, vehicle receptacles pivotally suspended on said wheel, said receptacles distributed around said wheel in uniform relation to said recesses, each said receptacle being adapted to hang by gravity with its lower wall constantly maintained generally in a horizontal plane as the said receptacles are carried around said axis in response to rotation of said wheel, detent means carried by said supporting means and constantly biased into engagement with said surface portion and entering said recesses in succession in response to said rotation to maintain the carrier at rest whenever a said receptacle is in its lowermost position, a gear mounted for rotation with the wheel and having on an outer surface portion an annular series of depressions corresponding to said wheel surface recesses, a motor for driving said wheel and having a pinion meshing with said gear, and a normally closed switch controlling said motor and having an arm biased to engage said outer surface portion of said gear, said arm entering said depressions to open the switch and stop the motor each time a said receptacle reaches its lower-most position.

2,945,684
TRANSFERRING APPARATUS
Cornelius Kroll, Houston, Tex., and Norman M. Kroll, New York, N.Y., assignors to Speed Park, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 10, 1958, Ser. No. 714,243
10 Claims. (Cl. 214—16.1)



1. An installation for transferring automobiles, comprising a vertical supporting structure, a horizontal platform comprising a plurality of parallel alternating troughs and crests extending outwardly from said support, means extending transversely across said platform supporting the latter near its outer end, a second horizontal platform, means to effect vertical movement of said second platform with respect to said first platform, a conveyor mounted on said second platform, said conveyor comprising a plurality of spaced parallel horizontal members, each of said members including an elongated primary member and an elongated secondary member, both adapted to be longitudinally aligned with one of said troughs, the outer ends of said horizontal members being in juxtaposition with the outer end of an associated trough when longitudinally aligned therewith, means interconnecting said primary members adjacent their central portion to form a rigid assembly, means slidably mounting said assembly on said second platform, means slidably mounting said secondary members on the associated primary member for movement longitudinally with respect thereto to extend outward thereof, means to retain the inner end of each of said secondary members in engagement with the end of the associated primary member when said secondary member has been extended, means to effect movement of said rigid assembly and drive means associated with each of said secondary members and controlled by the movement of said assembly to effect simultaneous individual horizontal movement thereof when said rigid assembly is moved, whereby each of the secondary members and a portion of the associated primary member will be moved into an associated trough.

2,945,685
CARRIER FOR ARTICLES BEING HEAT TREATED
Paul S. Mumaugh, 19770 Roslyn Drive, Rocky River, Ohio
Filed May 7, 1959, Ser. No. 811,789
5 Claims. (Cl. 214—18)



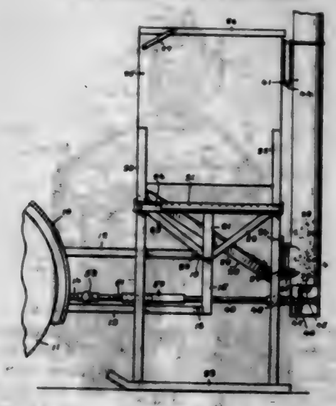
1. Apparatus for carrying articles through a heat treating furnace comprising a saddle having an upper part, a lower part having parallel, spaced apart sides provided with a vertical slot and an elongated transverse stirrup at the upper end of said slot, blades extending into the space between said sides, means for engaging said blades and holding them in substantially horizontal position, and means for supporting said saddle and maintaining it in substantially vertical position.

2,945,686
CENTERING AND CLAMPING DEVICE
Albert Manchoot, Park Ridge, Harry W. Schroeder, Oak Lawn, and Marvin G. Thomsen, Prospect Heights, Ill., assignors to Link-Belt Company, a corporation of Illinois
Filed Aug. 8, 1955, Ser. No. 783,348
6 Claims. (Cl. 214—63)



1. In a box car unloader, or the like, including a platform for supporting a box car, means for vibrating said platform to alternately elevate opposite ends of a car supported thereon, and means for clamping a car in a central position upon said platform; the improvement wherein said clamping means comprises a pair of oppositely disposed clamp members movable into and out of clamping engagement with a car located on said platform, a reversible hydraulic motor connected to each of said clamp members for moving the associated clamp member into and out of clamping engagement with said car, a reversible first positive displacement pump means connected to each of said motors, both of said first pump means being drivable in a first direction to actuate the associated motor in clamp engaging movement and drivable in the opposite direction to actuate the associated motor in clamp retracting movement, a common reversible first drive means connected to both of said first pump means to simultaneously drive both of said first pump means in the same direction, a second positive displacement pump means connected to each of said motors, a common second drive means connected to both of said second pump means and operable to simultaneously drive both of said second pump means to actuate the associated motor in clamp engaging movement, and control means comprising means operable to actuate said second drive means when said first drive means is actuated to drive said first pump means in clamp engaging movement, and means for stopping said first drive means after a predetermined clamp engaging pressure is achieved in both of said motors while maintaining said second drive means in operation to continue to apply clamp engaging pressure to both of said motors.

2,945,687
MATERIAL HANDLING DEVICE
Dwight Blosser, Blosser Turkey Farms, Wellman, Iowa
Filed Apr. 29, 1958, Ser. No. 731,745
3 Claims. (Cl. 214—83.36)

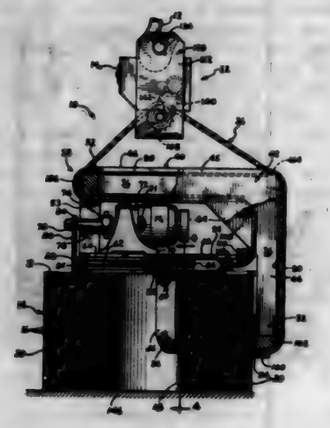


1. In combination with a tractor having a power take-off and a pair of lower rearwardly disposed lift arms and an upper lift arm, a pair of spaced parallel vertically disposed posts having their lower ends pivotally connected to said lower arms, a horizontally disposed beam secured to the upper ends of said posts, inclined braces extending between said posts and beam and secured thereto, ears extending forwardly from said beam and pivotally connected to the rear of said upper arm, a vertically disposed support piece extending upwardly from each end of the beam, inclined braces extending between said support pieces and beam and secured thereto, pairs of angularly arranged support members having their lower ends secured to the lower ends of said support pieces, and a pair of horizontally disposed bars secured to the upper ends of said support pieces and support members.

2,945,688
COIL LIFTING AND POSITIONING MECHANISM
Robert J. Beier, Pittsburgh, Pa., assignor to Cullen-Friestedt Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 23, 1959, Ser. No. 808,357
5 Claims. (Cl. 214—638)

1. In a lifter mechanism adapted to operatively receive an article supported at one location on a supporting surface in one predetermined position of orientation and transport the article to another location and deposit the same on a supporting surface at said latter location in a different predetermined position of orientation, said lifter mechanism comprising in combination a lifter assembly proper, a traction hoist assembly, and an interconnecting, elongated, linear, flexible suspension member between the lifter assembly proper and the traction hoist assembly, said lifter assembly comprising a framework providing a fixed clamping jaw, a movable clamping jaw carried by said framework and movable toward and away from said fixed clamping jaw for article-

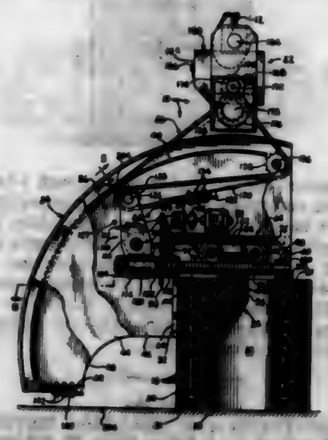
clamping and article-releasing purposes respectively, a feed screw rotatably mounted on said framework and having a threaded connection with said movable clamping jaw, means including said threaded connection establishing a lost motion connection between said feed screw and said movable jaw whereby limited axial sliding movment of the movable jaw relative to the feed screw may take place independent of said threaded connection, a reversible motor mounted on said framework, a power train operatively connecting the motor and feed screw in driving relationship, said flexible member having one end thereof fixedly secured to said framework and having its other end secured to said movable jaw, the intermedi-



ate reach of the flexible member being normally slack, guide means for said intermediate reach of the flexible member whereby, upon application of upward lifting force to said intermediate reach at various points intermediate the ends of the flexible member, the latter will be drawn taut and a degree of tensioning pull will be applied to said movable jaw tending to move the latter toward said fixed jaw, said traction hoist assembly including a traction drive wheel underlying said intermediate reach of the flexible member and over which the flexible member is adapted to pass in opposite directions respectively, and a reversible motor operatively connected to said traction drive wheel in driving relationship.

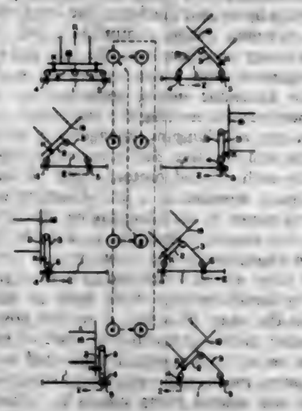
2,945,609
COIL LIFTING AND POSITIONING MECHANISM
William S. Bones, Riverside, and Louis G. Kaplan, Evanston, Ill., assignors to Cullen-Friestedt Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 23, 1959, Ser. No. 808,358
7 Claims. (Cl. 214—650)

1. A lifter mechanism adapted to receive an article supported at one location on a supporting surface in one position of orientation and transport the article to another location and deposit the same on a supporting surface at said latter location in a different position of orientation, said lifter mechanism comprising in combination a lifter assembly proper, a traction hoist assembly, and an interconnecting elongated flexible linear supporting member between said lifter assembly proper and said traction hoist assembly, said lifter assembly proper comprising a frame providing a fixed clamping jaw, a movable clamping jaw carried by said frame and movable toward and away from said fixed clamping jaw, a feed screw rotatably mounted on said frame and having a threaded connection with said movable clamping jaw, said feed screw also being capable of limited sliding movement axially in the direction of movement of the movable clamping jaw, a reversible motor mounted on said frame, means establishing a power train between said motor and feed screw, said flexible member having one end region fixed to said frame and having its other end region operatively connected to said feed screw, the intermediate reach of said flexible member being normally slack, guide means for said intermediate reach whereby, upon application of upward lifting force to said intermediate reach at various points therealong, the flexi-



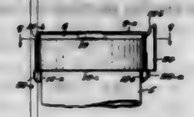
ble member will be drawn taut and a degree of tensioning pull will be applied to said feed screw in a direction tending to move the movable jaw toward said fixed jaw, said traction hoist assembly including a traction drive wheel underlying said intermediate reach and over which the flexible member is adapted to pass in opposite directions upon rotation of the traction wheel in opposite directions respectively, and a reversible electric motor operatively connected to said traction drive wheel in driving relationship.

2,945,610
METHOD AND MEANS FOR EMPLOYING INDUSTRIAL TRUCKS
Hermann Wendt, Hamburg, Germany, assignor to Clark Equipment Company, a corporation of Michigan
Filed Oct. 29, 1956, Ser. No. 618,989
Claims priority, application Germany Nov. 19, 1955
37 Claims. (Cl. 214—730)



1. In combination, a guide means, hinged means having elongated flaps or lever arms which are pivotally joined together at adjacent ends thereof, the opposite end of each of said lever arms being operatively connected to said guide means, said operative connection including means about which each of said lever arms may pivot relative to said guide means and at least one of said operative connections including a guide member which is movable with the respective end of one of said lever arms in a direction longitudinal of said guide means, carriage means pivotally connected to said hinged means adjacent the joined ends thereof, and means spaced from said joined ends for securing the carriage means to at least one of said lever arms.

2,945,611
PAINT CAN SHIELD
Harry W. Wolfenbuch, P.O. Box 505, Old Boston Post Road, Old Saybrook, Conn.
Filed May 22, 1958, Ser. No. 737,838
6 Claims. (Cl. 220—85)



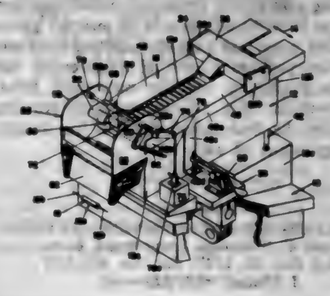
4. A shield for paint cans and the like having annular rims, said shield being formed from a normally flat foldable blank of sheet material including a central portion having an opening therein, securing tabs extending from the front and rear edges of said central portion and bendable downwardly therefrom, webs extending from the opposite side edges of said central portion and bendable downwardly therefrom, side bands joined intermediate their ends to said webs and extending substantially parallel to said securing tabs, means for joining the front ends of said side bands together over said front securing tab, means inwardly of the rear ends of said side bands for securing said ends together over said rear securing tab and in crossing relation, said side bands forming a depending skirt adapted to encircle the upper end of a paint can, said webs spacing the upper edges of said side bands from said central portion whereby said upper edges may engage the underside of the rim on said paint can to secure said shield thereto, said securing tabs being of a length to extend below the lower edges of said side bands and having flaps on their free ends foldable outwardly into engagement with said lower edges to hold said central portion down upon the top of said can, and upwardly extending wings at the rear end portions of said side bands forming an upwardly extending crotch when said blank is folded and adapted to support the handle of a brush resting upon said central portion.

2,945,612
PAINT CAN SHIELD
Harry W. Wolfenbuch, P.O. Box 505, Old Boston Post Road, Old Saybrook, Conn.
Filed July 1, 1957, Ser. No. 669,154
5 Claims. (Cl. 220—90)



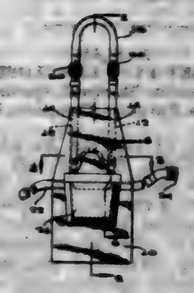
1. A shield for paint cans and the like having an annular groove to receive a cover; said shield being constructed from a foldable blank including a central portion having an opening therein, side portions forming bands joined to opposite sides of said central portion, means for securing the ends of said side bands together to retain them in position to provide a skirt around the under side of said central portion for receiving the upper end of the paint can, and means on said side portions for forming a crotch on said shield to retain a brush thereon.

2,945,613
METHOD AND APPARATUS FOR FEEDING ELONGATED OBJECTS FROM A CONTAINER
Benjamin F. Gerding, Chalfont, and Anthony F. Labrozzi, Philadelphia, Pa., assignors to International Resistance Company, Philadelphia, Pa.
Filed Dec. 2, 1955, Ser. No. 550,549
12 Claims. (Cl. 221—198)



1. Apparatus for feeding elongated objects from a container in which they are arranged substantially parallel to one end thereof comprising the combination of holding means for the container comprising a substantially rectangular bottom plate on which the container is adapted to sit and which is tilted so that its front end is lower than its other end, a pair of opposed substantially parallel side walls extending from the sides of the bottom, a front wall at the front end of the bottom, against which the one end of the container is adapted to rest, said front wall having an upper edge, and a cover extending over and between said side walls and being spaced from the upper edge of said front wall to provide an opening between said cover and the upper edge of said front wall, means for reciprocating said holding means from side to side and means for urging said objects toward the front wall whereby the objects will flow over the upper edge of said front wall.

2,945,614
COMBINATION PAINT BUCKET AND APRON
Joseph J. Williamson, Jr., 638 St. Louis Ave., Pass Christian, Miss.
Filed Nov. 29, 1957, Ser. No. 699,621
2 Claims. (Cl. 224—5)



1. An article of the class described comprising a vertically elongated, wide body formed of flexible sheet ma-

terial; a neck strap having parallel vertically extending end portions secured to the body in face-to-face contact therewith over the full length of said end portions, from the upper end of the body to a location spaced downwardly a substantial distance from said upper end of the body, the neck strap having an intermediate portion connecting the end portions and disposed beyond the upper end of the body; rows of grommets on the respective end portions extending longitudinally and centrally of said end portions, the grommets of each row extending through both the body and their associated end portions, each grommet having end flanges between which the body and associated end portion are clampably engaged; a bucket overlying said body and projecting forwardly therefrom, said bucket extending transversely of the body between the end portions and having hooks adjacent its sides projecting rearwardly from the bucket and opening downwardly so as to be engageable in selected grommets of the respective rows; and a waist-encircling strap secured to the body in position extending transversely thereof with its ends projecting laterally outwardly from the opposite sides of the body, said second strap crossing the end portions of the first-named strap at the location of at least one grommet of each row.

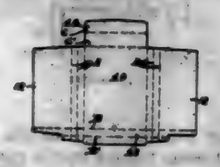
2,945,615
BAG CLOSURE AND OPENING DEVICE
Elmer C. Swanson, Larchwood, Iowa
Filed Oct. 28, 1957, Ser. No. 692,831
1 Claim. (Cl. 229—66)



A bag closure and opening device comprising a pair of stitching cords stitched along a normally opening end of a bag, one of said cords passing through the bag plies and including integral loops, the other of said cords looped engaging about and through said integral loops consecutively and thus continuing successively and retaining the same, a resilient member attached at the end of said continued stitching and resiliently retaining the integral loops of said cord of the stitching thus formed, the portion of said cords looped engaging about and through said integral loops being pulled within the last stitching opening, whereby all of the cords so formed will be tightly restricted thereby, said resilient member being spaced from a side edge of said bag.

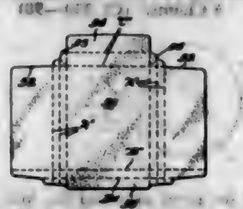
2,945,616
GUSSET TYPE ENVELOPES
William O. Normandin, Montreal, Quebec, Canada, assignor to Canada Envelope Company, Montreal, Quebec, Canada
Filed Nov. 23, 1956, Ser. No. 624,943
1 Claim. (Cl. 229—68)

A preformed flat folded envelope of the fully expansible type made from a one-piece flat blank adapted to be scored, folded, gummed and assembled in continuous in-line sequence on an automatic envelope machine, said envelope comprising coextensive rectangular front and back panels, side panels interconnecting respective opposite side edges of the front and back panels by side folds and said side panels each having an intermediate fold parallel with and in reverse to the side folds to divide the side panels into inwardly folded side sections lying substantially flatly between said front and back panels when the envelope is in flat condition, a bottom panel having a part joining with the bottom edge of the front panel on a transverse line of fold and having a width corresponding with the width of the side panels, said part of the bottom panel having an intermediate fold extending parallel with the transverse line of fold to provide bottom sections overlying each other and projecting outwardly from bottom portions of the front and back panels when the envelope is in said flat condition, said bottom panel also including parts comprising continuations of the sections of the side panels and parts depending from the back panel and engaged between the sections of said first named part of the bottom panel when the envelope is in said flat condition and having lines of fold forming continuations of the said transverse line of fold and having folds forming continuations of the intermediate fold of the first named part of the bottom panel, said extensions of the side sections of the side panels being of different lengths to provide sealing portions for contact with parts



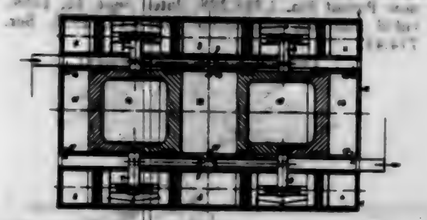
of the bottom panel that depend from the back panel, and an adhesive connecting the sealing portions of the extensions of the side sections and the overlying section of the first named panel to the part depending from the back panel to complete the bottom panel whereby when the envelope is fully expanded a flat bottom is provided by the hinging of the bottom and side panels on said folds while the front, back and side panels break along said transverse lines of fold and the portions of the extensions of the side sections which are located between the transverse score and the transverse fold are breaking inwardly to provide triangular gussets to bring the bottom panel in a right-angular plane with respect to planes of the front, back and side panels, a top panel having a part joining with the top edge of the front panel on a transverse line of fold and being of equal width to said front panel, said top panel part having an intermediate fold extending parallel with said transverse line of fold spaced from said first fold a distance equal to the width of said side panels, and a flap portion extending beyond said intermediate fold and adapted to overlie the upper marginal edge of said back panel.

2,945,617
GUSSET TYPE ENVELOPES
William O. Normandin, Montreal, Quebec, Canada, assignor to Canada Envelope Company, Montreal, Quebec, Canada
Filed June 3, 1957, Ser. No. 663,213
2 Claims. (Cl. 229—68)



1. A one-piece blank adapted for machine scoring and folding in continuous in-line assembly on automatic envelope machines to form a fully expansible gusset type envelope, comprising a sheet of flexible material shaped to provide when scored and folded a main portion constituting an envelope front panel of substantially rectangular outline, side portions extending outwardly from said main portion at each side to constitute when longitudinally scored and folded double fold gusset side panels and an overlapped back panel for said envelope, a top portion of graduated width extending from one end of said main and side portions to constitute when transversely scored and folded a top closure flap and end closure flaps for said envelope, said blank top portion having a width at the juncture with said main and side portions equal to the combined width of said main and side portions, a minimum width at the upper marginal edge equal to the width of said main portion, and an intermediate width along a transverse fold line between said juncture and said marginal edge equal to the combined width of said main portion and a portion of said side portions at each side extending to a central longitudinal fold line of said gusset side panels, and a bottom portion of graduated width extending from the other end of said combined main and side portions to constitute when scored and folded a bottom panel for said envelope, said blank bottom portion at the point of juncture with said main and side portions having a width equal to said main and side portions, at its lower terminal edge a width equal to said main portion, and at a folding point intermediate said juncture with said main and side portions and said lower terminal edge a width greater than said blank main portion but lesser than the combined width of said main and side portions.

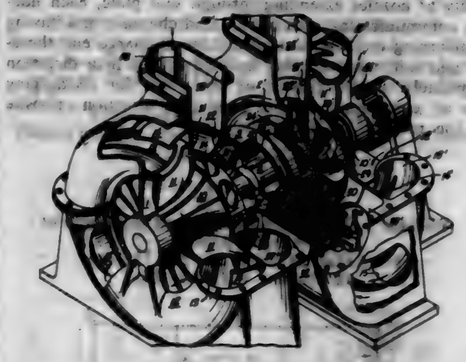
2,945,618
FREE-PISTON COMPRESSORS
Johann Endres, Weckersberg, near Bad Tolz, Germany, assignor to The Messerschmitt A.G., Augsburg, Germany
Filed June 20, 1957, Ser. No. 666,843
Claims priority, application Germany Dec. 15, 1956
7 Claims. (Cl. 230—56)



1. A free-piston compressor system comprising a free-piston compressor including a cylindrical compressor wall having slits therein and having a plurality of compressor pistons disposed therein forming a plurality of compression chambers, a plurality of double acting free-piston engines disposed radially about said compressor and including cylinders having slots therethrough, a plurality of engine pistons disposed in said cylinders forming combustion chambers, and radial coupling elements extending through said slits and said slots interconnecting said compressor pistons and said engine pistons.

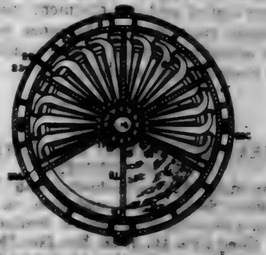
2,945,619
STAGE EXPANSION REACTION TURBINES
Carl Ballard McLaren, 2649 37th Ave. W., Seattle, Wash.
Filed Sept. 21, 1954, Ser. No. 457,232
2 Claims. (Cl. 230—116)

1. In an internal combustion reaction turbine, a unitary rotor having on one side thereof generally radial centrifugal blower vanes with outlets from the spaces between their outer ends and on the same side of said rotor an air inlet leading to the spaces between said blower vanes, and said rotor having on the other side thereof a plurality of tubular reaction turbine passages extending generally



radially of said rotor having inlet means at their inner end portions and with their outer end portions directed rearwardly in the direction of rotation of said rotor, and said tubular reaction turbine passages flaring from inner portions toward outer portions.

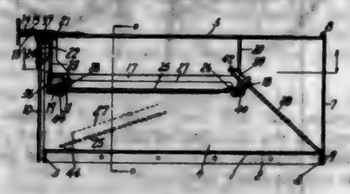
2,945,620
CENTRIFUGAL FLUID COMPRESSOR WITH AXIAL DELIVERY
Alfred M. Caddell, 3117 N. Broad St., Philadelphia, Pa.
Filed Apr. 11, 1956, Ser. No. 577,567
10 Claims. (Cl. 230—127)



1. In a centrifugal fluid compressor, a casing, a rotor mounted therein for powered rotation and adapted to be assisted by ram pressure of air induced by the forward motion of said casing therethrough and by the discharge of air compressed therein in a direction opposite to that of rotation of said rotor, said rotor comprising a disc having a forward and a rear wall, a plurality of recesses formed in said forward wall, a like number of concavo-concave structures having inner and outer radial ends, said structures having bases removably secured in said recesses, each of said structures projecting forwardly into free air and having opposite sides, a curved vane facing in the direction of rotation on one side of each of said structures for pumping air radially outward and on the opposite side of each of said structures a concave surface for deflecting ram pressure air encountered in the forward movement of said casing into the pumping vane following next in rotation, each of said pumping vanes curving at the outer radial end to form a right angular tubular hood for the compression of air pumped by said concaved vane, said hood having a discharge end open to form an orifice thereat and said hood having an intake end of a cross sectional area larger than

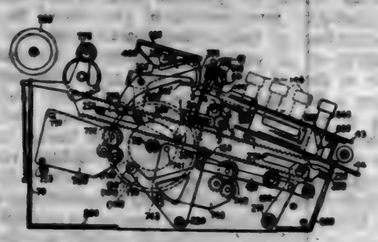
that of said discharge end, a plurality of channels extending diagonally through said disc one communicating with each of said orifices, an annular recess formed in the rear wall of said disc adjacent the periphery thereof and an annular plate formed to fit said recess, a plurality of nozzles extending through said plate, each nozzle communicating with one of said channels and having a diverging cross section toward the discharge end thereof and said nozzles being inclined axially in a direction oppositely of the rotation of said rotor for discharging the air compressed in said hood in a direction opposite to the rotation of said rotor.

2,945,621
MAIL BOX
William A. Kapperich and Clifford Nyn, both of Allegan, Mich.
Filed Mar. 31, 1958, Ser. No. 725,224
10 Claims. (Cl. 232—24)



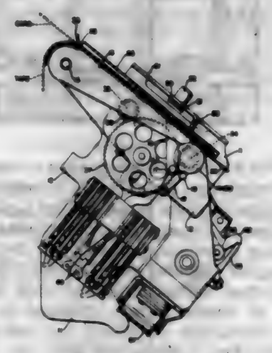
10. A mail box or the like comprising a casing open at its front end and provided with a closure for its open end, a compartment member disposed within said casing and including a bottom hingedly mounted at its rear end to swing downwardly into facing relation to the open end of the casing, said casing being provided with an abutment member with which the front end of said compartment member is supportedly engaged, a supporting strut for the inner end of said compartment member releasably and adjustably connected to the inner end thereof, and means for adjusting the said strut accessible only from within the compartment member.

2,945,622
TEN-KEYS KEY BOARD FOR CALCULATING MACHINES
Werner Heinze, Schwerzenbach, and Werner Jülich, Wallisellen, Switzerland, assignors to Precisa A.G., Rechenmaschinenfabrik, Zurich, Switzerland, a firm
Filed Feb. 10, 1956, Ser. No. 564,811
Claims priority, application Germany Feb. 11, 1955
4 Claims. (Cl. 235—60)



1. In a calculating machine, a casing, a ten-key keyboard, a denominational series of parallel gear racks slidably mounted in said casing, accumulator mechanisms pivotally mounted in said casing adjacent to said gear racks, said accumulator mechanisms including gear members engageable with said racks, means operable to move said gear members into meshing engagement with said gear racks, a setting mechanism including denominational pairs of gears differentially settable from a normal position by said keyboard and engageable with said racks for controlling differential movement thereof, pivotally mounted support means in said casing supporting said setting mechanism for denominational sliding movement transversely of said gear racks, means mounted in said casing for pivoting said support means for moving said setting mechanism into and out of operating engagement with said gear racks, means for positively restoring said gear pairs to normal position to differentially advance said racks, means for restoring said racks, an escapement mechanism for controlling denominational movement of said setting mechanism, a spring-urged control shaft rotatably mounted in said casing, said control shaft including a series of helically arranged stop fingers and a zero stop finger, a setting gear on said control shaft operatively engaging a gear pair of said setting mechanism when said setting mechanism is out of operative engagement with said gear racks, means controlled by the keys of said keyboard for releasing said zero stop and intercepting a stop of said helical series to control differential rotation of said control shaft and for controlling operation of said escapement mechanism, a drive motor, a planet gear device, means operatively connecting said planet gear device with said drive motor, contact means operatively connected with said planet gear device for starting and stopping said drive motor, spring means connecting said planet gear device with said control shaft and adapted to be continuously tensioned by said planet gear device, latch means for said keyboard engageable with a depressed key to retain said depressed key in partially depressed position and to prevent concurrent depression of more than one key, and means operatively connected to said latch means and said control shaft to engage said latch means upon rotation of said shaft.

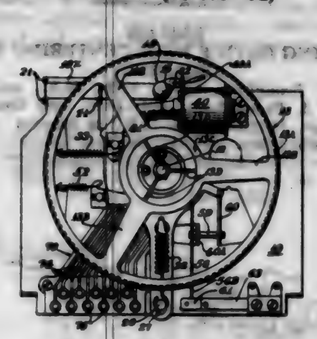
2,945,623
TAPE AND CARD RECORD MEDIA READER
Edwin O. Blodgett and Wilbur C. Ahrns, Rochester, N.Y., assignors to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware
Original application Sept. 20, 1955, Ser. No. 535,497, now Patent No. 2,905,298, dated Sept. 22, 1959. Divided and this application Nov. 17, 1958, Ser. No. 774,412
14 Claims. (Cl. 235—61.11)



14. A reader for reading information code-recorded on tape and card record media having prepunched feed holes comprising: fixedly spaced and united base and sub-base support members; code reading means supported between said members; sprocket drive means supported between said members and having teeth engageable with said feed holes for moving tape and card media past said reading means to read the information recorded thereon; a guide platform assembly having planar members united

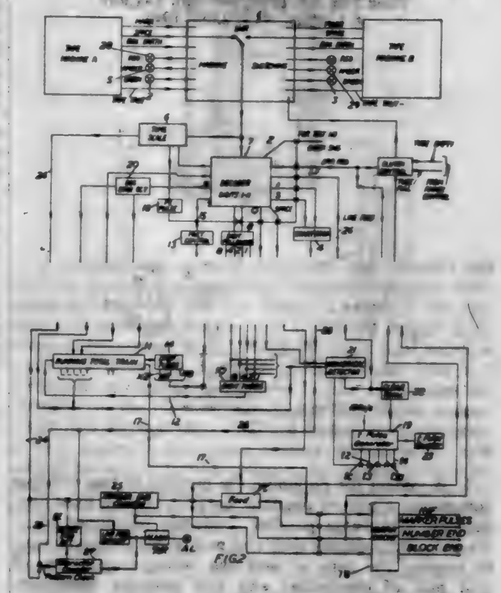
along one edge with, and spaced by, an intervening record-media edge-guide member of thickness selected to provide light frictional contact between said planar members and a record medium inserted therebetween; means including a shaft supported by transversely of said members to pivot said platform assembly for manual movement to, and retention by over-center-spring bias at, a first loading position at which said media is loaded into said reader out of engagement with said feed means and a second read position at which the feed holes of said media are drivingly engaged by the teeth of said sprocket drive means, fixed stop means supported by one of said base members in extending relation across said platform assembly to engage the surface of the lower of said planar members when said platform assembly is in said first position thereof and thereby effect initially prepositioning of the leading edge of a card media and registration between said reading means and the first recording of said card media when said platform assembly is moved to said second position thereof; and detent means carried by the upper of said planar members for engaging a feed hole of said record media and restrain movement thereof as said platform assembly is moved from said first to said second position thereof.

2,945,624
COUNTING NUMBER REGISTER
Frank G. Nicolaus, Chicago, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased
Filed Apr. 24, 1954, Ser. No. 425,381
10 Claims. (Cl. 235—92)



2. A display counter of the class described including a hollow one-piece drum bearing number indicia and having connected at one axial end thereof an integral hub disposed substantially within the drum and with a cylindrical surface concentric with the rotative axis of the drum and having integrally formed ratchet teeth on said surface, said hub having a surrounding integral ledge in which are formed cam surfaces; a base plate and spindle means carried thereby upstanding from the plane thereof and engaging in said hub to rotatably support the drum close to the plate; stationary electrical contact means carried on said base plate concentrically of said spindle means opposite an axial end of said hub; wiper contact means on said axial end of the hub engageable with said stationary contact means; electromechanical stepping mechanism on said base plate including driving-pawl means drivingly engageable with said ratchet teeth on the hub and disposed substantially entirely within said drum; a lever mounted on said base and including a cam follower riding said ledge and cam surfaces thersin, a major portion of said lever being enclosed in the hollow of the drum; and switch means operated by said lever in accordance with the movements thereof effected by said cam surfaces, said electromechanical mechanism and said switch means being adapted for connection in a counting circuit.

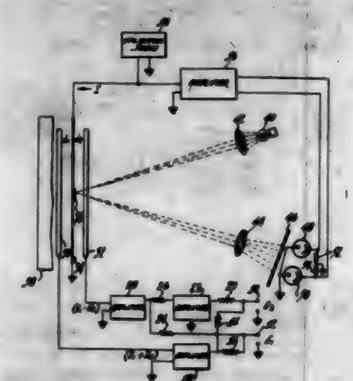
2,945,625
INFORMATION HANDLING EQUIPMENT
Esmond Philip Goodwin Wright, Donald Adams Weir, and Joseph Rice, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Aug. 16, 1954, Ser. No. 450,184
Claims priority, application Great Britain Dec. 2, 1949
5 Claims. (Cl. 235—155)



1. In information handling equipment, input equipment over which electrical signals representing information from a plurality of sources are received, an output circuit over which electrical signals representing information from said sources may be transmitted, a converter for converting said signals from one form of presentation to another having a plurality of sequentially arranged signal bits, means for transmitting said information signals from said input equipment to said converter at a first rate of transmission, said transmitting means comprising a plurality of information record positions, switching means for connecting said record positions to said converter in turn, means for transferring to said converter at said first rate of speed said information signals from a record position to which said converter is connected under control of said switching means, said converter comprising means for producing signals representing said bits, one at a time, at spaced intervals of time, and means for transmitting said information from said converter to said output circuit after conversion at a second rate of transmission greater than said first rate, said means comprising a stepping register, means controlled by said converter for causing said register to step in successive cycles, one cycle for each of said signal bits, means controlled by said converter for transferring to and inserting into said register, during each cycle, information signals in said other form representing the value of the total number of signal bits thus far transferred to said register, said signals being transferred to said storage means at said other speed, and

means including means for stepping said register through one cycle for transferring electrical information signals representing the total number of signal bits stored in said register from said register to said output circuit during one cycle of said register.

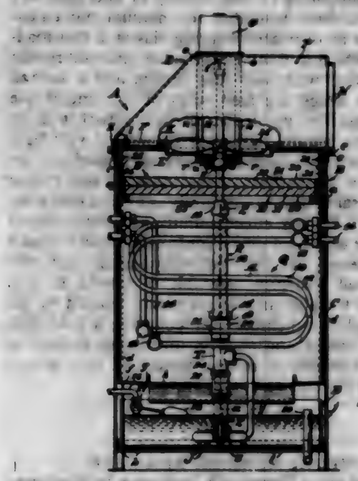
2,945,626
QUARTER-SQUARE MULTIPLIER
Arthur W. Vance, Union Valley, and Edwin A. Goldberg, Princeton Junction, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 28, 1958, Ser. No. 141,837
6 Claims. (Cl. 235—194)



1. A system for obtaining the product of two voltages comprising a pair of opposed, parallel, spaced, fixed conductors, a movable parallel conductor positioned intermediate and coplanar with said pair of conductors, means to impress the sum of said two voltages upon one of said pair of conductors and said movable conductor, means to impress the difference of said two voltages upon the other of said pair of conductors and said movable conductor, means to detect motion of said movable conductor effected by said sum and difference voltages, and means controlled by said detecting means to apply a force to said movable conductor having an amplitude sufficient to oppose motion effected by said impressed sum and difference voltages, the amplitude of said force being proportional to the product of said two voltages.

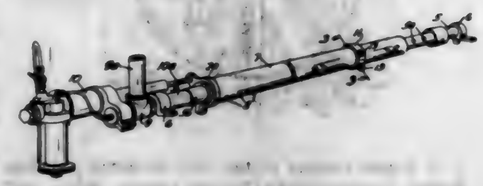
2,945,627
HEAT TRANSFER APPARATUS
Benjamin L. McDermott, 1612 Fargo, Los Angeles, Calif.
Filed Feb. 11, 1957, Ser. No. 639,340
7 Claims. (Cl. 239—225)

1. In a water distributing mechanism for heat exchange apparatus the combination of a vertically extending rotatable shaft, having a lower end, a tubular cylinder encompassing said shaft in spaced relation thereto and affixed thereon, said cylinder being closed at its upper end and having an open lower end spaced above the lower end of said shaft and having a series of discharge orifices spaced apart along its length; a rotary pump spaced below the lower end of said shaft having an upright impeller spindle connected to and driven by said shaft, said pump having an inlet and an outlet, a pipe encompassing said spindle in spaced relation thereto having a lower end connected to said pump and having an open upper end encompassing and spaced from the lower end of said shaft and terminating in spaced relation to the open lower end of said cylinder; a sleeve bearing in said pump encompassing said spindle co-operating with the connection between said pump and the lower end of said pipe to close



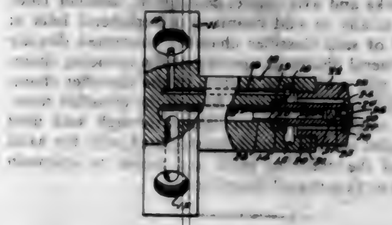
the latter to said pump; and a tube leading from said pump outlet to the interior of said pipe.

2,945,628
SPRAYING DEVICE WITH CENTERING SLIDE BEARING
Arthur E. Broughton, Glens Falls, N.Y., assignor to Frances I. Broughton, Glens Falls, and Douglas H. Newcomb, Hudson Falls, N.Y., as trustees
Filed Dec. 23, 1957, Ser. No. 704,492
7 Claims. (Cl. 239—266)



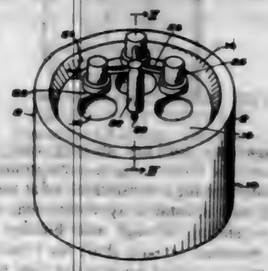
1. In an oscillating shower assembly, an elongated supporting conduit adapted to be mounted in fixed stationary position, a shower tube mounted for oscillation relative to said conduit and disposed in concentric spaced relation around an intermediate portion of said conduit, sealing means between the ends of said tube and said conduit, defining an annular liquid supply chamber between said conduit and said shower tube, a plurality of spray nozzles provided in said tube to discharge liquid from said chamber, a multiplicity of circumferentially spaced bearing and supporting elements mounted in said shower tube intermediate the ends thereof and extending through said tube into engagement with said supporting conduit to maintain the desired concentric spaced relation between said tube and said conduit, whereby said conduit provides support for the tube, said bearing and supporting elements being constructed of a material to provide low-friction engagement with the engaged areas surrounding said conduit.

2,945,629
FUEL INJECTION NOZZLE FOR A GAS TURBINE ENGINE
Richard Chute, Huntington Woods, and Ernest J. Rousing, Ferndale, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed May 12, 1955, Ser. No. 734,637
15 Claims. (Cl. 299—624)



5. A fuel-air atomizing nozzle comprising a body, a distributor element received within said body and having an endwise converging terminal portion extending to the exterior of said body, said terminal portion having grooves in its outer surface extending to the exterior of said body, branch passages in said element and discharging into said grooves at locations exteriorly of said body, means for connecting said grooves and branch passages with separate sources of fuel and air respectively, and a spray plate portion extending across each groove generally in parallelism with the direction of discharge of the associated branch passage into said groove and blocking said groove at a location adjacent and exteriorly of the location of discharge of said associated branch passage thereinto.

2,945,630
SPRAY NOZZLE
Frederick C. Mullins, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Dec. 18, 1957, Ser. No. 701,741
9 Claims. (Cl. 239—498)



1. A spray nozzle for producing a single cone of spray substantially filled with droplets comprising a longitudinally extending housing threaded at one end for attachment to a liquid source, a plate fixed transversely of said housing and having a plurality of apertures for receiving a stream of fluid and for dividing it into a plurality of smaller streams, stationary spatter plates coaxially spaced from said apertures for breaking up said plurality of streams into a multitude of droplets, means having arms in cross section substantially teardrop-shaped for holding said spatter plates at a fixed distance from said plate, said housing having a frustro-conical shaped skirt thereon cooperating with said spatter plates for deflecting and directing said droplets into a single cone-shaped spray which is substantially filled with droplets.

2,945,631
SHOWER HEAD
Alfred A. Hutchinson, 709 N. Central Ave., Chicago, Ill.
Filed Feb. 15, 1957, Ser. No. 640,826
1 Claim. (Cl. 239—548)

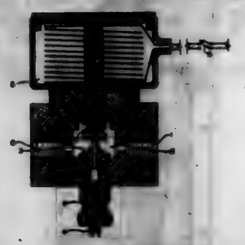


In a temperature control device for bath showers and the like, the combination of an elongated generally cylindrical hollow body member having a generally circular inlet and an outlet therein, said cylindrical hollow body member having an internal diameter of at least substantially five times the diameter of the circular inlet and having an internal axial length of at least eight times the diameter of the circular inlet to provide, under normal water flow through the cylindrical hollow body member, a heat reservoir for water passing therethrough, said cylindrical hollow body member being formed as a cylindrical tubular member having open ends, which are closed by respective top and bottom closure members, detachable means complementally formed to the top closure member and upper open end of the elongated cylindrical hollow body member for detachably connecting the cylindrical elongated hollow body member to the top closure member, second detachable means complementally formed on the bottom closure member and the lower open end of said cylindrical hollow body member for detachably connecting the bottom closure member to the cylindrical hollow body member, said outlet comprising a plurality of small openings, agitator means comprising a cantilever-shaped member operatively connected to said top closure member, said cantilever-shaped member including a tongue-shaped deflector portion and a connecting portion depending from and operatively affixed to the top closure member and to the tongue-shaped deflector portion, said tongue-shaped deflector portion axially and longitudinally spaced from the inlet and substantially concentrically spaced with respect to said cylindrical side wall of the elongated cylindrical hollow body member, said tongue-shaped deflector portion also intersecting the axis of the inlet along a diameter of the elongated cylindrical hollow body member transverse to the axis thereof.

2,945,633
SOLENOID OPERATED SPRAY APPARATUS
Henry A. Ball, Glenshaw, Pa., assignor to The Clemco Company, Glenshaw, Pa., a corporation of Pennsylvania
Filed Oct. 21, 1955, Ser. No. 541,988
4 Claims. (Cl. 239—533)

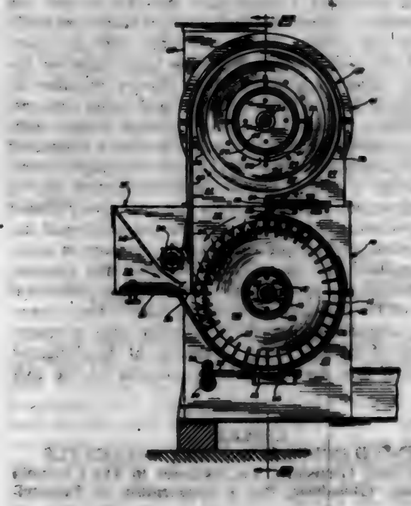
1. In a high pressure airless spray device for applying a thin film of coating material to an object, a housing having interior walls defining a chamber therein and having an inlet for coating material extending through one of said walls, a valve member engaging said housing

and projecting into said chamber, said valve member having a seat spaced from one of said walls and having a central passage extending therethrough, said valve member being formed of rigid unyielding material, a spray nozzle member mounted in said housing extending outwardly therefrom and having a passage communicating with said passage in said valve member and having an orifice so restricted that under pressure delivery of the said coating material therefrom issuance tends to resolve



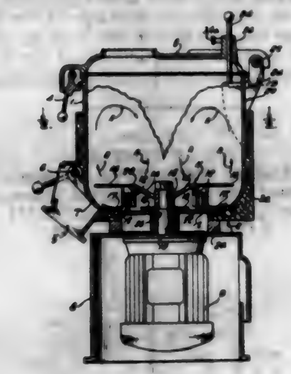
the said coating material into the condition of a propelled free cloud, a spring loaded valve stem projecting into said chamber and having a resilient portion cooperating with the said valve seat to cause said valve stem to engage said seat to interrupt the flow of coating material therethrough, and mechanical operative means for actuating said valve stem away from said seat, said means engaging the said housing and cooperating therewith to entirely enclose the component parts of the said valve.

2,945,633
INTEGRATED DRY MATERIAL REDUCING AND CLASSIFYING MEANS
Henry G. Lykken, Minneapolis, and William H. Lykken, Edina, Minn., assignors to The Microcyclomat Co., Minneapolis, Minn., a corporation of Delaware
Filed Dec. 19, 1955, Ser. No. 553,792
15 Claims. (Cl. 241—41)



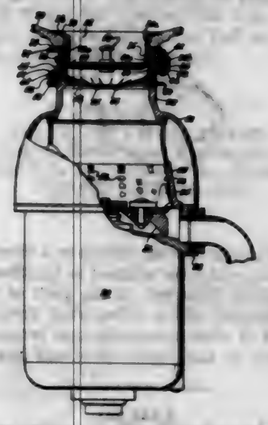
1. Integrated means for processing dry material which comprises a horizontal open rotor unit having a generally cylindrical rotor chamber, said rotor comprising a plurality of closed end radial blade units having peripheral suction intake and peripheral discharge, said rotor constituting a peripheral suction intake fan, a tangential air and material inlet port at one side of said rotor chamber the full length of the rotor, means for regulating the intake of material and air through said inlet, a peripheral discharge opening at the top of said rotor chamber over about one quadrant thereof, an air inlet port at the top of said rotor chamber for admitting a flow of air tangential to the periphery of the rotor, means for controlling the air intake through said inlet port, a classifier unit superimposed upon said rotor unit and having a horizontal and generally cylindrical classifier chamber, a peripheral intake and axial outlet centripetal classifier rotor journalled axially in said chamber, a peripheral inlet at the bottom of said classifier chamber connected directly to the peripheral discharge opening of the reducing chamber, an air inlet port at the bottom of the classifier chamber tangential to the peripheral flow of the classifier rotor, means for controlling the air intake through said inlet port, an outlet suction chamber associated with the axial discharge of the classifier rotor and means to maintain a regulated suction in said chamber.

2,945,634
MACHINE FOR MIXING AND COMMINUTING MATERIALS
Erich Beck, Augsburg, and Hans Bode, Kassel, Germany, assignors, by mesne assignments, to Henschel-Werke Gesellschaft mit beschraenkter Haftung
Filed May 21, 1956, Ser. No. 586,189
Claims priority, application Germany May 28, 1955
7 Claims. (Cl. 241—98)



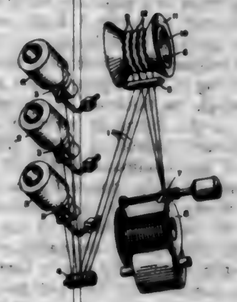
3. An apparatus for dry mixing and comminuting granular materials comprising a substantially cylindrical mixing chamber having a substantially flat normally closed bottom wall and substantially cylindrical side walls, a rotor shaft extending through said bottom wall, a rotor mixing tool mounted on said shaft for rotation therewith, said mixing tool including an annular ring portion spaced outwardly from said shaft, and a plurality of outwardly extending thin flat blades each being uniformly and closely spaced from said side walls of said chamber and being spaced from and substantially parallel to said bottom wall, said rotor blades being located and arranged to rotate in a plane spaced from said bottom wall to describe a diameter of rotation at least equal to the effective height of said chamber, and means to rotate said rotor shaft and said rotor at high peripheral blade velocity whereby a charge of granular material within said chamber will be moved outwardly and at the same time air within said chamber above said granular material will be propelled downwardly along the axis of said chamber and then upwardly to mix with said granular material and effect a swirling substantially homogeneous mixture of the air with said granular material within said chamber.

2,945,635
RESILIENT HANGING DEVICE FOR WASTE DISPOSAL APPARATUS
Hans Jordan, Los Angeles, Calif., assignor to Given Machinery Company, Los Angeles, Calif., a copartnership
Filed May 30, 1959, Ser. No. 814,639
10 Claims. (Cl. 241—100.5)



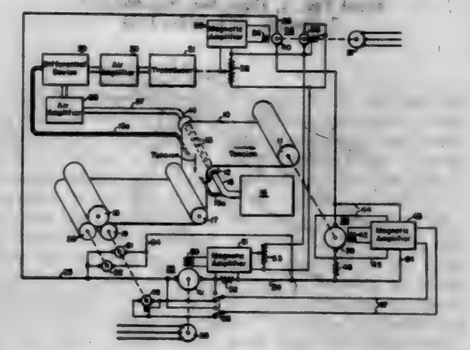
1. A kitchen appliance device for use in connection with apparatus having a drain opening, said device having a housing containing motor-driven means therein which vibrate when driven and provided with an upper tubular end, means for resiliently suspending said device from said apparatus at said drain opening and including a resilient vibration-absorbing ring disposed on a vertical axis and having first means connecting its lower end to said tubular end and having its upper end provided with second means connected to said apparatus around said drain opening, the complete intermediate annular portion of said resilient ring between its upper and lower end connections being in tension and directly supporting the weight of said device pendulously therebelow, said second means including rigid means above said vibration-absorbing ring, said ring being thus connected to such rigid means and said upper end of said housing.

2,945,636
METHOD AND APPARATUS FOR WINDING A PLURALITY OF THREADS
Walter Lenk, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Filed Aug. 1, 1956, Ser. No. 601,393
Claims priority, application Germany Aug. 4, 1955
7 Claims. (Cl. 242—42)



1. The combination for winding together on one package in ribbon form a plurality of threads from individual thread supplies which comprises a take-up packaging device for winding a plurality of threads in the form of a package, reciprocating means adjacent said device for laying said threads at a common winding point on said package, a roller having a plurality of thread guide means defining identical undulating paths for invidual threads around the circumference of the roller to eliminate slippage of each thread relative to said roller, said roller adapted to be rotated by the threads running over said roller to said take-up packaging device in non-slipping relationship with said roller, and means for supplying a plurality of individual threads at substantially equal tensions to said roller.

2,945,637
PAPER MILL WINDER DRIVES
Robert P. Derrick, Wilkinsburg, and Sylvester J. Campbell, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 19, 1957, Ser. No. 672,936
7 Claims. (Cl. 242—75.51)

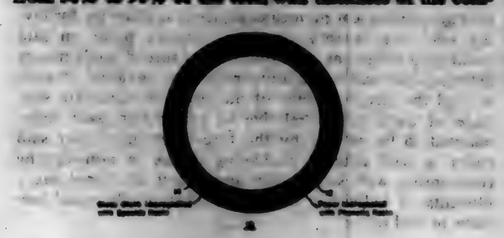


1. In a tension control system for a sheet drive having a parent roll, a wind drum, a motor for driving said drum and a main generator for energizing said motor, the combination of a braking generator connected to said roll so as to be driven thereby, a booster generator connected in series with said main and braking generators, sheet tension sensing means for contacting a sheet in its movement between said roll and drum, and voltage control means using tension signals from said sheet tension sensing means for increasing the voltage from said booster generator when an increase in sheet tension occurs and for reducing the voltage from said booster generator when a decrease in sheet tension occurs.

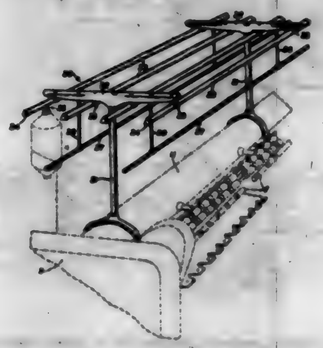
2,945,638
COMPOSITE LAMINATED TUBE
Thomas G. Crawford and John K. Allen, Hampton, S.C., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 19, 1956, Ser. No. 598,947
3 Claims. (Cl. 242—118.32)

1. A pirn comprising a composite tubular member having high strength capable of withstanding high tensile strength synthetic resin fibers wound thereon and having a smooth snag-free surface for winding said fibers thereon, said composite tubular member comprising (A) an inner layer comprising a plurality of plies of glass fiber sheeting impregnated and bonded together by a thermoset epoxide resin, and (B) an outer layer comprising a plurality of plies of paper sheeting impregnated and bonded together by a thermoset phenolic resin, the resins of said inner layer and said outer layer forming a strong

bond at the interface thereof, said inner layer comprising from 50% to 90% of the total wall thickness of the composite tubular member, and said outer layer having a smooth snag-free surface.



2,945,639
SUPPORTING STRUCTURE
David L. Bohannon, Charlotte, N.C., assignor to Pneumafil Corporation, Charlotte, N.C., a corporation of Delaware
Filed Feb. 2, 1956, Ser. No. 563,915
7 Claims. (Cl. 242—131)



1. In a textile apparatus for the processing of textile fibers having means for inducing the flow of air over the apparatus, a bobbin supporting creel comprising: a vertically extending stanchion; a horizontally extending supporting member supported on said stanchion, said supporting member having two downwardly divergent surfaces whereby foreign matter impinging on said supporting member is deflected therefrom and an air stream may readily be passed thereover to remove any lint or other foreign matter; and engaging means between said divergent surfaces from which a bobbin may be vertically depended.

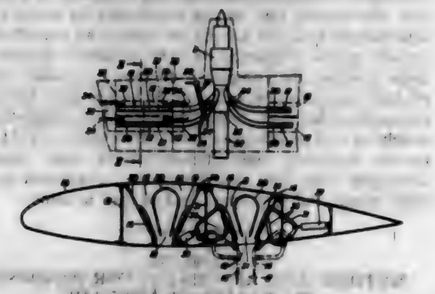
2,945,640
VALVE ARRANGEMENT FOR PNEUMATIC DISPATCH TUBE SYSTEMS
Joachim Müller, Berlin, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 17, 1959, Ser. No. 799,945
Claims priority, application Germany Mar. 27, 1958
3 Claims. (Cl. 243—22)

1. In a multi-pressure pneumatic tube system, the combination of a pair of tubes operating at different pressures, an airtight housing coupling the ends of said tubes, a triangular-shaped lever pivotally mounted adjacent an angle thereof to said housing on an axis normal to the longitudinal axes of said tubes, a J-shaped valve flap extending over the end of the first tube of said pair and which tube is operated at the lowest of said pressures, said flap being made of pliable material, the straight end of said flap being fastened to said first tube and the outer surface of the J-shaped end of said flap being fastened adjacent another angle of said lever, the side of said lever opposite said last mentioned angle extending into the other tube of said pair and which tube is operated at the highest of said pressures and being within the path



of a dispatch carrier moving therein in a direction toward said other tube, said lever adapted to be actuated by such a carrier and to pivot out of the path of said carrier whereby said valve flap is rolled away from the end of said first tube to allow communication between said tube pair and entry of said carrier into said first tube.

2,945,641
AIRCRAFT WITH WING CONTAINING LIFTING JETS
Edwin Prikram, Hayes, England, assignor, by mesne assignments, to Fairey Aviation Limited, Hayes, England, a company of Great Britain
Filed Sept. 17, 1957, Ser. No. 684,468
Claims priority, application Great Britain Sept. 20, 1956
3 Claims. (Cl. 244—12)



1. An aircraft having in combination a sustaining wing affording aerodynamic lift during forward flight, the wing being formed with elongated intake and discharge apertures respectively formed in its upper and lower surfaces and extending spanwise thereof, a horizontal thrust generator providing thrust in a generally horizontal direction to propel the aircraft in forward flight, and a vertical thrust generator mounted in a housing in the wing and comprising an elongated duct extending spanwise of the wing, the duct being of converging section and extending transversely through the thickness of the wing from the intake aperture to the discharge aperture, an elongated fluid delivery conduit extending within the duct longitudinally thereof and communicating with a source of high-velocity gaseous fluid, nozzle means in the lower wall of the delivery conduit communicating with its interior to deliver an elongated jet of the high-velocity fluid downwardly through the discharge aperture of the wing, a pair of spaced elongated nozzle flaps of blade-like form movably mounted in the duct with their longitudinal axes parallel to the longitudinal axis of the duct, and flap actuating mechanism connected mechanically to the two flaps to move them generally vertically between a

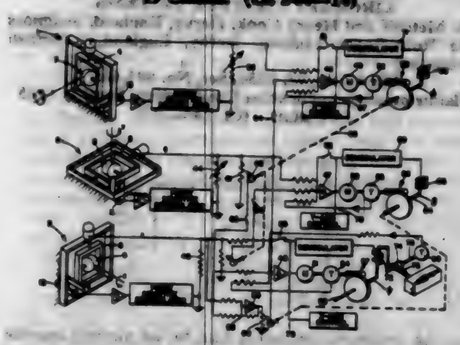
withdrawn position in which they are both housed within the wing in the air duct on either side of the conduit and an operative position in which they project downwardly below the lower surface of the wings from the discharge aperture, the two flaps when in their said operative position being spaced apart to define between them an elongated discharge nozzle constituting an extension to the air duct, and means for injecting fuel into the said delivery conduit and for burning the fuel to increase the thrust of the vertical thrust generator.

2,945,642
STATIC LIFT WING PLANE
Peter Nefi, 66 Sunset Ave., Farmingdale, N.Y.
Filed Feb. 26, 1958, Ser. No. 717,699
5 Claims. (Cl. 244—12)



1. A static lift wing aircraft including a substantially ring-shaped static wing having an airfoil section upon its upper profile with a central opening with the crest thereof intermediate the outer periphery and the central opening, driven means for forcing air down through the opening, a pair of hinged opposite wings mounted upon the static wing with the wings opening outward in opposite side directions when raised to present openings between said wings and the static wing leading down into said central opening but forming complementary airfoil portions when closed down upon the crest portion of the static wing adapting the aircraft for horizontal flight, and means for driving said aircraft forward horizontally when the wings are closed down.

2,945,643
CONTROL SYSTEM
John M. Slater, Fullerton, Calif., assignor to North American Aviation, Inc.
Filed Nov. 28, 1956, Ser. No. 549,253
19 Claims. (Cl. 244—14)



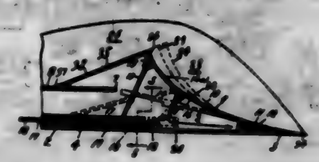
15. In combination with a missile, a plurality of rate gyroscopes each having an operable angular velocity over a range from the magnitude of missile angular velocities to earth angular velocity, the input axes of said gyroscopes oriented along orthogonal axes with respect to each other, computer means connected to receive and integrate the output signals from said gyroscopes to produce flight control signals of attitude and angular velocity, a missile attitude control for each of said axes, and means for feeding said flight control signals to said attitude controls to automatically reduce said signals to zero.

2,945,644
WING STRUCTURE INCORPORATING BOUNDARY LAYER CONTROL
Philip A. Colman, Beverly Hills, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Oct. 9, 1953, Ser. No. 385,138
2 Claims. (Cl. 244—42)



1. A boundary layer control system for an airplane having a turbo compressor power plant comprising an air intake chamber through which air is supplied to the power plant, a wing, nose and trailing edge flaps hingedly mounted adjacent the lower skin of said wing, separately operable means for deflecting said flaps downwardly to increase the camber of the wing section, boundary layer air removal ducts arranged along the hinge lines of said flaps and opening into the intake chamber of the turbo compressor power plant whereby high velocity air in the intake chamber sucks air through the ducts during operation of the boundary layer control system, supplementing the air supply to the power plant from the intake chamber, said ducts having arcuate porous metal walls disposed opposite to the hinge lines of the flaps and arranged to form continuations of the upper skin of the wing when the flaps are deflected, skin flaps overlying said arcuate porous metal walls in the flap retracted position whereby deflection of the flaps exposes the arcuate porous metal walls of the ducts in proportion to the flap deflection, and check valves carried in said ducts to prevent back flow from the turbo compressor power plant.

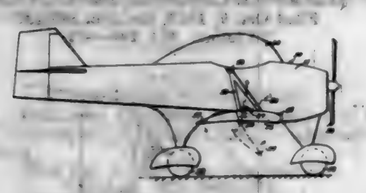
2,945,645
AIRCRAFT VARIABLE LIFT WING
Ludwig Schwanmayr, 2493 California St., San Francisco 15, Calif.
Filed June 19, 1956, Ser. No. 592,374
2 Claims. (Cl. 244—42)



1. An aircraft wing comprising, in combination, a wedge-shaped leading edge member, a flat lower surface member extending rearwardly from said leading edge member, an upper surface member extending forwardly from the trailing edge of the wing to a point spaced rearward of said leading edge member, a flexible sheet member fixed at one end to said leading edge member

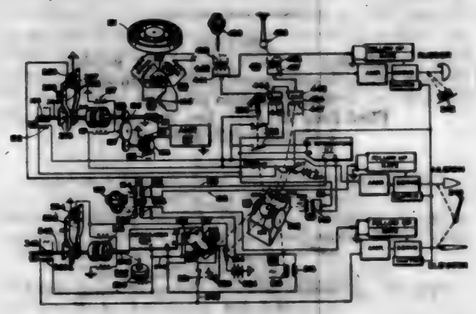
and extending rearwardly and upwardly, means connected with said sheet member to selectively flex said sheet member to various positions relative to said lower surface member, and means to prevent movement of air under atmospheric pressure to said upper surface member from outside the end of the upper surface member of the wing.

2,945,646
CONVERTIBLE AIRPLANE
Thomas E. Sturgeon, Sauk Prairie Ranches, Darrington, Wash.
Filed June 4, 1957, Ser. No. 663,417
3 Claims. (Cl. 244—49)



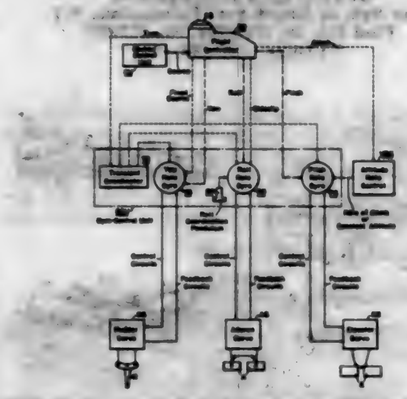
3. In a device of the character described, a fuselage, wings including first and second portions hingedly connected together, brackets having pins thereon mounted on each of said first portions, rotating shafts mounted in each of said second portions, hook members mounted on said shafts and adapted to be moved into engagement with the pins on said brackets for maintaining said first and second portions in a substantially coplanar position, said hook members being releasable from the pins to permit the first and second portions to move to a side by side position, and pivot means for permitting the first and second portions to move to a position wherein the longitudinal axis of the first and second portions is parallel to the longitudinal axis of the fuselage.

2,945,647
AUTOMATIC PILOT SYSTEM
Charles R. Bell, Bergenfield, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed May 18, 1953, Ser. No. 355,812
33 Claims. (Cl. 244—77)



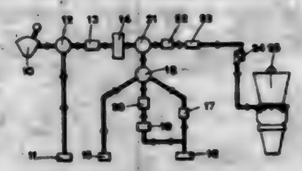
19. An automatic pilot system for a craft having a movable control surface, for controlling the craft about its roll axis, comprising means for developing a heading signal corresponding to the deviation of said craft from a predetermined heading, a servomotor for moving said surface to maintain the craft on a predetermined heading, means responsive to said heading signal for developing a control signal corresponding to an integral of said heading signal to operate said servomotor to trim said craft about said axis, and means connecting said signals to operate said servomotor.

2,945,648
CONTROL ARRANGEMENTS FOR CRAFT OPERABLE IN SPACE
Kirt A. Oplinger, Verona, Pa., and Ivar M. Holliday, Venice, Calif., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 16, 1953, Ser. No. 398,565
23 Claims. (Cl. 244—77)



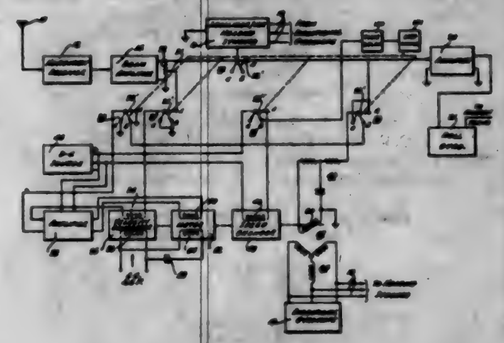
12. Flight control apparatus for a craft comprising a maneuver means for effecting control of said craft, a flight controller having a movable manually operable member, control means adapted to actuate said maneuver means and controlled by said manually operable member, motor means connected to drive said manually operable member; circuit means responsive to operation of said maneuver means, electromagnetically operated detent means engageable with said manually operable member upon energization of said electromagnetically operated detent means, selector switch means operable in one position to connect said circuit means to said motor means, and operable in a second position to disconnect said circuit means from said motor means and to energize said electro magnetically operated detent means and to connect said control means to said maneuver means, said control means including an automatic pilot.

2,945,649
AIRCRAFT CONTROL SYSTEMS
Eric Metcalf and Henry Cook, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company
Filed Aug. 22, 1956, Ser. No. 605,665
Claims priority, application Great Britain Sept. 1, 1955
15 Claims. (Cl. 244—77)



1. An automatic control system for an aircraft capable of direct vertical ascent, descent and hovering which comprises means manually operable to select the height at which it is desired to position the aircraft and constructed to produce an electrical signal whose magnitude is a measure of the desired height, altimeter means responsive to the actual height of the aircraft and constructed to produce an electrical signal whose magnitude is a measure of the actual height, comparator means connected to receive the signals from the selector means and from the altimeter means and constructed to produce an output which is a measure of the difference between the two signals, means to amplify said output, vertical-velocity-measuring means responsive to the vertical velocity of the aircraft and adapted to produce an electrical signal whose amplitude is a measure of said vertical velocity, means to add the algebraic sum of the amplified output from the comparator means and the signal from the vertical-velocity-measuring means, means to amplify the output from said adding means, actuator means operated by the amplified signal output in accordance with its magnitude, and vertical-thrust-producing means connected to the actuator means to be controlled thereby to vary the vertical thrust acting on the aircraft, the actuator, thrust-producing connection being such that signals due to a positive difference between the selected height and the actual height result in an increase of the vertical thrust, and that signals due to upward vertical velocity result in a decrease of the vertical thrust.

2,945,650
AUTOMATIC HEADING CONTROL FOR AIRCRAFT
William F. Horton, Malibu, and Wesley D. Wegley, Canoga Park, Calif., assignors to Lear, Incorporated
Filed June 28, 1957, Ser. No. 668,983
7 Claims. (Cl. 244—77)



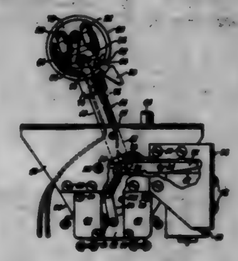
6. In an autopilot having a directional gyroscope, navigation receiver, heading synchro and aileron command means, a synchro device having a stator connected to the directional gyroscope, said synchro device having a rotor and a winding supported thereon, said rotor winding being electrically coupled to said stator, electromechanical means adapted to develop in said rotor winding a voltage proportional to signals from the receiver, switching means in a first position providing connections simultaneously from the receiver to said electro-mechanical means and from the receiver, heading synchro and rotor winding to the command means, said switching means in a second position connecting only said rotor winding to the command means, means operable upon switching from said first position to delay for a predetermined period the control of the command means through the rotor winding alone, means to connect said rotor winding to said electro-mechanical means during the delay period, and said electro-mechanical means during said delay period positioning said rotor so as to reduce any voltage across said rotor winding to zero.

2,945,651
AIRCRAFT CONTROL SURFACE INTERNAL AIR PRESSURE BALANCES
Earl L. Jensen and Reginald E. Washington, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed July 11, 1955, Ser. No. 521,162
14 Claims. (Cl. 244—90)



1. In aircraft control mechanism, a stabilizer having a hollow trailing portion, a control surface pivotally supported behind said stabilizer and having a vane extending forward therefrom into the hollow trailing portion of said stabilizer, a balance panel received within the hollow trailing portion of said stabilizer, means on said stabilizer supporting said balance panel independently of said vane and said control surface, hinge means interconnecting the trailing edge of said balance panel and the leading edge of said vane, and means interengaged between said stabilizer and said balance panel independently of said vane and said control surface and guiding said balance panel for movement transversely thereof within said stabilizer as said control surface swings about its pivot, said hinge means being operable to transmit force from said balance panel to said vane produced by a difference in air pressures on opposite sides of said balance panel.

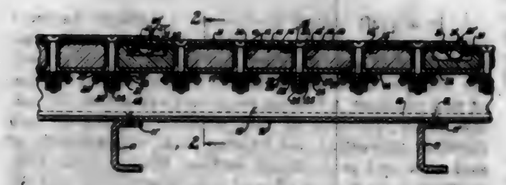
2,945,653
LANDING GEAR CONTROL INCORPORATING SAFEGUARDS AGAINST ERRONEOUS OPERATION
James N. Dupree, Hollywood, Calif., assignor to California Pintock, Inc., Los Angeles, Calif., a corporation
Filed Nov. 22, 1955, Ser. No. 548,319
2 Claims. (Cl. 244—102)



1. A manual control unit for incorporation in a landing gear control system of an aircraft comprising: a support structure; a manual control lever pivotally mounted on said support structure for movement to a down position to lower the landing gear and to an up position to raise the landing gear; two cooperative means, one on said lever and one on said support structure to latch said lever at its up position; manually operable means on the lever to release said latch means to permit the control lever to be moved to its down position; locking means pivotally mounted on said support structure for movement between a release position and a locking position to

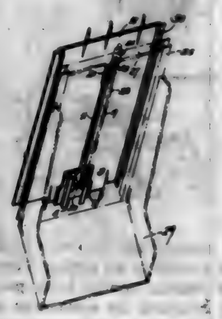
engage and lock said lever automatically at its down position; spring means interconnecting said locking means and said support structure to urge the locking means to its locking position; a solenoid carried by said support structure to rotate said locking means out of its locking position in opposition to said yielding means; means to rotate said locking means out of its locking position in the absence of energization of said solenoid; a plurality of control switches; and means to actuate said switches in response to movement of the control lever between its up and down positions.

2,945,633
AIRCRAFT SKIN CONSTRUCTION
Edgar H. Atkin, Baldwin, N.Y., assignor to Republic Aviation Corporation, near Farmingdale, N.Y., a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,140
16 Claims. (Cl. 244—119)



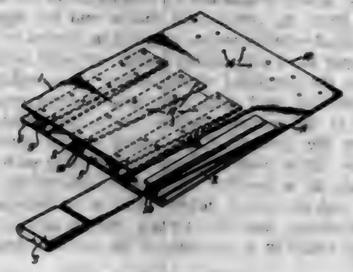
1. A supplemental skin for an aircraft component including a skin and internal structure comprising a plurality of overlapping sheets of high heat-resistant material disposed in spaced relation to said component and enclosing and housing the component, expansion means connecting said sheets one to another and floating connections between said sheets and the component whereby the several sheets are capable of limited movement relative both to each other and to the component.

2,945,634
PILOT AND EJECTION SEAT ENERGY ABSORPTION SYSTEM
Clifford C. Woodward, 7 Rampart W., Media, Pa., and Chris T. Koochembere, 414 E. Wilson Ave., Norwood, Pa.
Filed May 14, 1957, Ser. No. 659,189
4 Claims. (Cl. 244—122)
(Granted under Title 35, U.S. Code (1952), sec. 266)



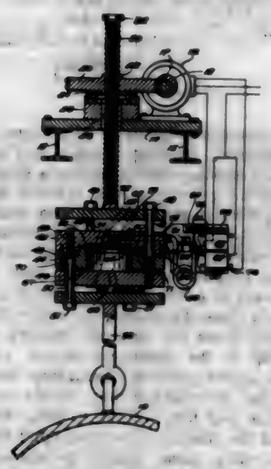
1. The combination of a seat, a support, a track secured to said support; a slide moveable in said track, seat ejection means mounted on said slide and secured to said seat by which a vertical upward force may be applied to said seat for ejection thereof, an elongatable, non-resilient energy absorbing, metallic strap fixed at one end to said support and at its other end to said slide so that impact loads applied to said strap by said ejection means will be absorbed by elongation thereof.

2,945,655
DOUBLE SKIN AIRFOIL STRUCTURE
Howard E. Snyder, Mercer Island, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 28, 1956, Ser. No. 560,445
5 Claims. (Cl. 244—123)



4. A lightweight structure useful as the trailing edge of an airfoil, and in use extending along such trailing edge, comprising a plurality of pairs of troughs, the troughs of each pair being disposed back to back, and the pairs being spaced along the trailing edge, oriented transversely thereto, an upper skin and a lower skin applied to and sandwiching the several pairs of troughs, said skins defining surfaces that converge at the trailing edge, and the troughs being of progressively lesser depth towards such trailing edge, in consonance with the convergence of the skins, to maintain contact with the latter, and the skins and the troughs being bonded together, to constitute a rigid, unitary structure.

2,945,656
CONSTANT SUPPORT HANGERS
Philip C. Sherburne, Rumford, R.I., assignor to Grinnell Corporation, Providence, R.I., a corporation of Delaware
Filed June 12, 1957, Ser. No. 665,329
10 Claims. (Cl. 248—58)



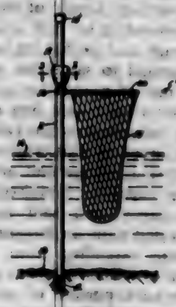
1. A constant support hanger comprising a supported member to which a force is adapted to be applied by a load, anchor means for supporting said supported member, means for adjusting the effective length of said hanger between the load and said anchor means, means for actuating said length adjusting means, a body of hydraulic fluid to which at least a portion of said force is adapted to be applied, means responsive to changes in said force applied to said supported member by said load for changing the force applied to said body of hydraulic fluid, said body of hydraulic fluid being responsive to said changes in force exerted thereon to actuate said means for actuating said length adjusting means, to thereby automatically adjust the effective length of said hanger between the load and anchor means and to compensate for said changes in force applied by said load.

2,945,657
RESILIENT GOLF BAG SUPPORT
Edward R. Jarman, Portland, Oreg., assignor to Jarman-Williamson Company, Portland, Oreg., a partnership
Filed Sept. 21, 1959, Ser. No. 841,240
3 Claims. (Cl. 248—96)



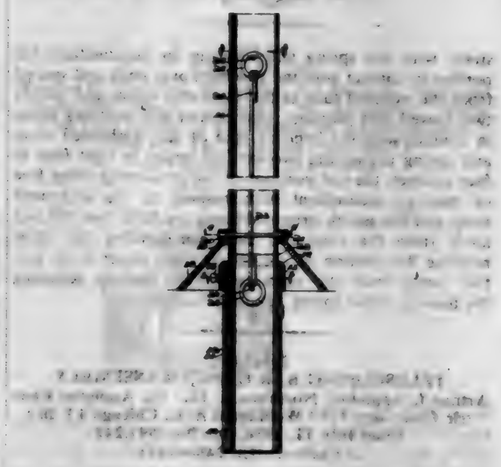
1. A two part separable means for resiliently suspending a golf club supporting bag on a cart for transporting said bag, one part of said separable means being secured to said bag and the other part to said cart, each of said parts including respective hook parts separably engageable one with the other and said one part including a resilient section secured to said bag for resiliently supporting said bag on the respective hook section of said one part.

2,945,658
SUPPORTING MEANS FOR FISH NETS
Gerald C. Hayslip, 5535 Thrill Place, Denver, Colo.
Filed Aug. 13, 1958, Ser. No. 754,819
4 Claims. (Cl. 248—125)



4. In a cantilever article support, the combination of a slender cylindrical upright post, a vertically elongated and substantially semi-tubular clamp member positioned laterally against said post and adjustable vertically thereon, said clamp member including an upper portion and a lower portion of a circumferentially greater length than said upper portion whereby opposite side edge regions of the lower portion project circumferencially beyond corresponding opposite side edges of the upper portion, the inside radius of said clamp member corresponding to one-half the diameter of said post whereby the clamp member snugly embraces the post with said lower portion of the clamp member embracing a circumferentially larger span than half the circumference of the post, a substantially spherical locking member of resilient material provided with a cylindrical bore receiving therein said post and the upper portion of said clamp member, the diameter of the bore in said locking member initially corresponding to the diameter of the post whereby the locking member is unstrained to accommodate the post and the upper portion of the clamp member therethrough and whereby the clamp member is frictionally retained in a vertically adjusted position on the post, and an article supporting member secured to and projecting laterally from the lower portion of the clamp member.

2,945,659
PARKING METER POST CONSTRUCTION
Earl McDonald, 655 Walnut St., Coshocton, Ohio
Filed Oct. 10, 1957, Ser. No. 689,447
7 Claims. (Cl. 248—156)



1. A parking meter support comprising, in combination, a base adapted to be fixed in a payment and presenting an upwardly opening recess; a post whose lower end is inserted in said recess; the upper end of the post being adapted to support a parking meter; means securing the lower end of the post to the base; a hood surrounding and extending below said securing means for concealing the joint between the post and the base; and means rigidly secured to the post directly above the hood and locking the hood with its lower end and adapted to rest on the pavement.

2,945,660
DISPLAY STAND
Robert J. Slavsky and John R. Slavsky, Detroit, Mich., assignors to Shaw & Slavsky, Inc., Detroit, Mich., a corporation of Michigan
Filed Aug. 12, 1957, Ser. No. 677,724
1 Claim. (Cl. 248—161)

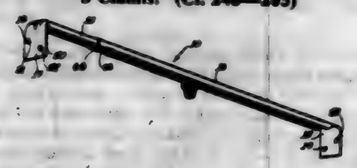
An adjustable standard comprising four pieces of thin, flat, strap metal, namely, a vertically extending lower strap having a support base means formed on the bottom thereof; a vertically extending upper strap aligned with and having its lower end overlapping and in face to face contact with the upper end of the lower strap and having a sign supporting means secured on its upper

end; a horizontally extending cross-strap having a middle portion and two end portions, with said middle portion being in face to face contact with and secured to the exposed face of one of the two vertical straps adjacent to its overlapped end, and said two end portions being bent around and spaced a short distance from the exposed face of the other strap, wherein said cross-strap is secured to one of the straps and loosely embraces the other strap with the two straps being in face to face contact between the cross-strap; a vertically extending spring strap disposed between the bent over ends of the cross-strap and the exposed face of the loosely embraced



strap, with the spring strap having an intermediate flat portion in contact with the two bent over ends and spaced from the exposed face of the embraced strap, and having two bowed end portions, said bowed end portions being in contact with the exposed face of said embraced strap and spring urging the two vertical straps in tight face to face contact; the end portions of the cross-strap being free of positive securement with respect to the embraced strap and the spring strap and being bendable towards and away from the embraced strap for holding the intermediate flat portion of the spring strap closer to or further away from the embraced strap, thereby adjusting the tension of the spring strap.

2,945,661
TELESCOPING BAR HANGER ASSEMBLY
Arthur L. Appleton, Northbrook, Ill. (% Appleton Electric Company, 1713 Wellington Ave., Chicago 13, Ill.)
Filed July 11, 1956, Ser. No. 597,242
3 Claims. (Cl. 248—295)



3. A bar hanger for supporting an outlet box or the like between a pair of laterally spaced supports such as floor joists, said bar hanger comprising, in combination, a pair of generally tubular members slideably telescoped together for varying the overall length of the assembled members; means for securing the free ends of said members to said spaced supports to erect the bar hanger; each member being formed from thin gauge sheet material bent up to an arched shape including a top and a bottom wall, and having a relatively narrow slot longitudinally of the members in the bottom walls thereof, the members when telescoped together being arranged so that the slots are uninterruptedly alined the combined length of the members; a headed fixture stud inserted within the alined slots and adjustable longitudinally the full combined length of the members, the headed portion thereof being wider than the slots for overhanging inside the members and engaging the bottom wall material laterally of the slots; a box retaining nut threaded on the stud to the exterior of the telescoped members, said stud constituting a combined outlet box connector and anchor to fix the outlet box at a given point longitudinally of the members; and an interlock effective between the overlapping ends of said assembled members of the bar hanger when the latter is erected and subject to bending stresses tending to pull the members apart, said interlock including teeth of limited longitudinal extent projecting laterally from the sides of said channel members toward the longitudinal center line thereof and formed by cutting away the bottom wall of each of said channel members for a longitudinal extent at least as great as the spacing of the cut away portion from the ends of said members, so that said teeth interengage as the overlapping ends approach each other to prevent complete separation of said members.

2,945,662
ADJUSTABLE BRACE CONNECTOR UNIT
William A. Jennings, Des Moines, Iowa, assignor to Economy Forms Corporation, Des Moines, Iowa, a corporation of Iowa
Filed Mar. 7, 1955, Ser. No. 492,367
1 Claim. (Cl. 248—354)

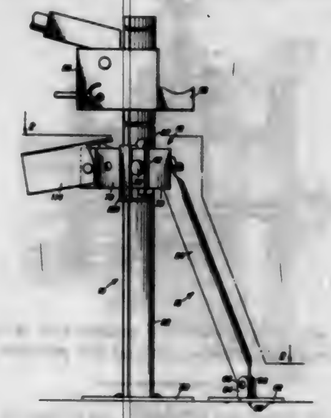


An adjustable brace connector for leveling concrete forms by varying the distance between a form and an angular brace member comprising jack screw means including a bearing member having an upwardly extending bifurcated section secured thereto and a shaft rotatably held within said bearing member, said shaft being formed with a threaded portion arranged outwardly of said bearing member, link means including a twisted linkage unit pivotably connected to said bifurcated section about an axis which is perpendicular to said shaft, and first and second connecting members removably attached to said concrete form and angular brace member, said connecting members being of U-shaped configuration and having a substantially flat base section, a pair of slotted leg sections held in spaced relationship by said base section and a wedge inserted through said slotted leg sections for movement in a plane parallel to said base section, said base section including a pair of projections at the ends thereof extended toward said wedge, said first connecting member being pivotally connected to the twisted linkage unit of said link means about an axis which is perpendicular to the axis between said linkage unit and said bifurcated section so as to be capable of bidirectional movement through multiple planes, and said second connecting member being provided with an integrally formed internally threaded means extending from said base section thereof, said internally threaded means adjustably receiving therein the threaded portion of said shaft whereby the distance between said first and second connecting members may be varied by rotation of said shaft.

2,945,663
BUMPER JACK SUPPORT
William E. Stevens, 2617 Taft St., Hollywood, Fla.
Filed Oct. 14, 1957, Ser. No. 689,840
5 Claims. (Cl. 248—170)

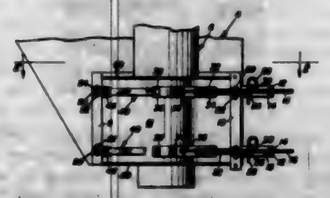
1. A support for a bumper jack comprising a housing adapted for sliding movement on a jack, a plurality of

legs connected to said housing, lock means for selectively locking said housing to said jack, said lock means including an overbalanced, pivoted wedge mounted on the housing and having teeth on the overbalanced portion thereof, said wedge adapted for engagement with the sur-



face of a jack positioned interiorly of said housing, said release means including a pawl mounted on the housing and engageable with the teeth of a jack for raising the jack and permitting release of said wedge.

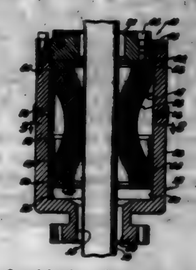
2,945,664
GRAIN TANK AND ELEVATOR CLAMP
Le Roy G. Zimmer, Rte. 1, Two Rivers, Wis.
Filed Nov. 4, 1957, Ser. No. 694,181
2 Claims. (Cl. 248—3.6)



1. A clamp for removably securing a grain elevator vertically on a grain tank, said clamp including a pair of vertical bars on the tank on opposite sides of the elevator, bolts securing one of the bars to the tank, eyebolts securing the other of said bars to said tank, arms on said other bar, hooks on said arms, levers journalled on the eyebolts, straps having one end swivelly connected to the first named bolts and engageable circumferentially with the elevator for clamping same against the tank, and coiled springs connecting the other ends of said straps to the lever for tightening said straps on the elevator, said levers being engageable in the hooks for retention thereby in operative position.

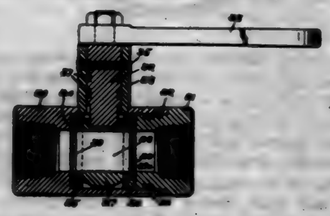
2,945,665
PACKER
Louis M. Regan, Redondo Beach, and Darrell L. Sims, Rolling Hills, Calif., assignors to Regan Forge and Engineering Company, San Pedro, Calif., a corporation of California
Filed July 22, 1958, Ser. No. 750,243
4 Claims. (Cl. 251—1)

1. In combination: a housing having a passage therethrough and having internally thereof an enlarged packer chamber between the ends of said passage; tubular packer means in said chamber in register with said passage and having an over-all length less than the length of said chamber, including an elastomeric sleeve, an annular piston connected to one end of said sleeve and slidable in said chamber longitudinally thereof, and an annular member connected to the other end of said sleeve and engaging the



peripheral wall of said chamber; and port means in said housing communicating with said chamber externally of said sleeve and intermediate said annular piston and said annular member for applying fluid pressure to the exterior of said sleeve to reduce the diameter thereof.

2,945,666
BALL VALVE
Howard G. Freeman, Worcester, and Oscar R. Vaudreuil, Leicester, Mass., assignors to Jamesbury Corp., Worcester, Mass., a corporation of Massachusetts
Filed Feb. 14, 1958, Ser. No. 715,372
10 Claims. (Cl. 251—172)

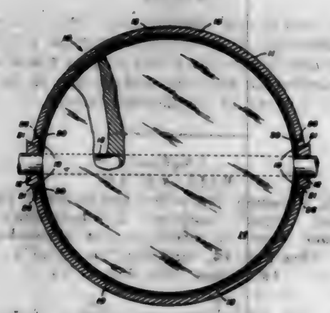


1. A ball valve comprising: a casing adapted to be connected to a pipe line and having a valve chamber and inlet and outlet openings; a ball mounted in said chamber and having a cylindrical internal passage with ports at each end; a pair of sealing rings mounted on opposite sides of the ball one around each of said openings, the ball being rotatable between an open position in which said ports are centered on said rings and a closed position in which said ports are disposed between said rings, each of said rings having a lip which engages said ball around and spaced from one of said ports when the ball is in said open position said lips having inner edge portions curving away from the ball, each of said lips being free to bend in the axial direction of the respective ring and increasing in thickness from its edge portion outward in the radial direction of the respective ring, and said rings having opposed faces spaced from one another by a distance greater than the diameter of said passage.

2,945,667
FLEXIBLE SEAL FOR VALVES
Carmen Bibbo, Parma, Ohio, and Rowland E. Browning, Redlands, Calif., assignors, by mesne assignments, to the United States of America as represented by the Administrator of the National Aeronautics and Space Administration
Filed Dec. 8, 1955, Ser. No. 551,961
1 Claim. (Cl. 251—173)
(Granted under Title 35, U.S. Code (1952), sec. 266)

In a butterfly valve, including a casing, a pair of oppositely disposed bores in said casing, a shaft rotatably

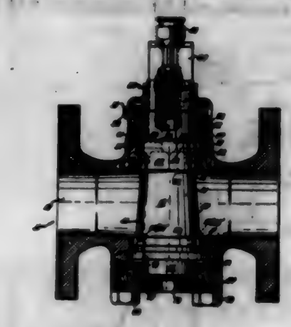
mounted within said bores, and a vane member rigidly connected to said shaft and rotatable to bring its outer peripbery into and out of juxtaposition to the inner peripherial surface of said casing thereby to substantially restrain or allow fluid flow through said casing, the improvement comprising; a pair of continuous grooves formed within said inner peripherial surface of said casing and opening inwardly of said casing adjacent said vane member when said vane member is in said juxtaposition, said grooves having ends terminated adjacent said bores, single-ply flexible seal means secured to said casing adjacent said grooves and overlying the grooves in fluid tight relation thereto, a pair of U-shaped two-ply flexible seal means partially circumjacent said shaft on the upstream side thereof, corresponding plies of each of the two-ply seal means having ends connected to the casing in said grooves on the respective opposite sides of the



shaft, the other remaining ply of each of the two-ply seal means having ends respectively interconnecting with said single-ply seal means whereby said ends of the plies of said two-ply seal means are in fluid tight communication with said groove and said single-ply seal means, the U-shaped plies of said two-ply seal means having an inner edge adjacent the shaft and an outer edge in spaced relation to said shaft, means for sealing together the plies of said two-ply seal means at their inner edge and means for securing the outer edge of said two-ply seal means together and to said casing, said single-ply and two-ply seal means forming a continuous seal between the outer periphery of said vane member and said inner peripherial surface of said casing, and fluid pressure means for inflating and deflating said continuous seal to effect engagement and disengagement of said continuous seal with said vane member when said vane member is in said juxtaposition.

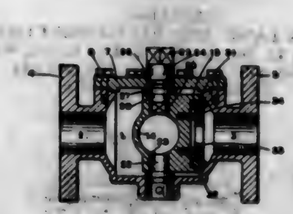
2,945,668
PLUG VALVES
Charles V. Staller and Nick W. Kish, Barberton, Ohio, assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 3, 1955, Ser. No. 526,246
6 Claims. (Cl. 251—175)

2. In a balanced plug valve assembly, a body having a fluid flow passage therethrough, a tapered bore in said body intersecting said passage, a tapered ported plug rotatably mounted in said bore for movement between positions where it closes or aligns its port with said passage, said plug being mounted for limited axial displacement in said bore, a first axially extending valve stem at the smaller end of the plug, a second axially projecting valve stem at the larger end of the plug, both of said valve stems having horizontal cross sectional end areas exposed to ambient atmospheric pressure, means surrounding both of said stems and sealing against the outward escape of line fluid pressure, and means for applying line fluid pressure to the upper and lower ends of the plug within the body and inwardly of said sealing means over such relative areas as to exert a net hydraulic



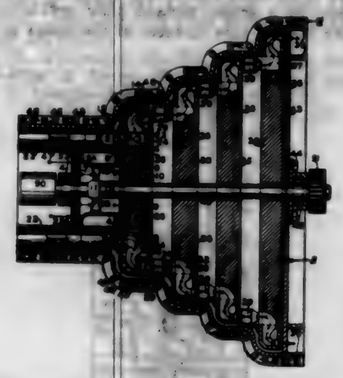
force on said plug toward the smaller end of the plug that increases with increases in said line pressure.

2,945,669
FLUID VALVES
Harry Gallagher, Embsay, Skipton, England, assignor to J. Brookshank Limited, Skipton, England, a body corporate of Great Britain
Filed Nov. 24, 1958, Ser. No. 776,021
5 Claims. (Cl. 251—309)



1. A fluid valve comprising a housing having a main body portion provided with a hollow interior, said housing having inlet and outlet ports leading to said hollow interior, the inner surface of said main body portion being provided with a spherical concave land surrounding one of said ports, a rotatable valve plug disposed within the interior of said main body portion of the housing, said plug being provided with diametrically opposed bores and with the major portion of said plug being offset laterally with respect to the axis of said bores, said laterally offset portion of the plug being provided with a convex generally spherical surface, a resilient ring mounted concentrically of such convex spherical surface and protruding slightly therefrom, said main body portion of the housing being opened on one side thereof, a cover plate normally closing such open side of the housing, a first spindle mounted in said cover plate and extending inwardly into one of the bores in said plug, a second spindle mounted diametrically opposed to the first mentioned spindle and projecting interiorly of the housing into the other bore of said plug whereby said plug is rotatably mounted within said housing, said resilient ring being firmly seated against said concave land in the housing in one position of rotation of said plug, said plug having a passage completely therethrough extending axially at right angles to said generally spherical convex surface of the plug so as to interconnect said ports in another position of rotation of said plug, said cover and spindles being removable to permit removal of said plug.

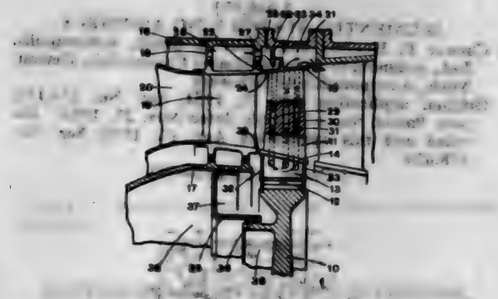
2,945,670
ACTIVE-REACTIVE ENERGY APPLICATIONS FOR PRIME MOVERS
Alfred M. Caddell, 3117 N. Broad St., Philadelphia, Pa.
Filed July 21, 1958, Ser. No. 823,689
11 Claims. (Cl. 253—39)



1. In an engine for converting the energy in an elastic fluid into power, an assembly of turbine wheels mounted on a shaft in increasing diametered stages, a first-stage wheel and a plurality of structures mounted peripherally thereupon, each structure being comprised of a shell-like inner and a shell-like outer bucket with an air space therebetween, said first-stage wheel having a central hub portion, a plurality of channels in said hub portion opening to atmosphere and extending radially through the periphery of said wheel, said outer buckets having a base straddling the periphery of said wheel and having a front and a rear side and an advancing and a trailing end wall relative to the direction of rotation, a conduit forming an intake aperture in the front side of said outer bucket facing a supply of said fluid, said conduit extending into said inner bucket, openings in the base of the outer bucket matching said channels in said wheel for permitting air induced by centrifugal suction pressure to flow around said conduit into the space between said buckets, said inner bucket likewise having walls comprising a base, a front and a rear side, an advancing and a trailing end, said advancing end having a pocket formed in the basal section thereof facing said conduit aperture for receiving the impingement of said fluid thereagainst, said advancing end and the bucket's other walls thereafter continuing arcuately and helically toward the peripheral juncture of the rear side and the trailing end of the outer bucket, a nozzle secured between the radial ends of the inner and outer buckets at said juncture for the mixing therein of said fluid and air, an orifice formed at the peripheral edge of said outer bucket and said nozzle having a diverging terminus protruding therethrough for the discharge of said mixture in a direction diagonally opposite from that of said impingement and partially rearward and partially opposite to the rotational direction of said wheel.

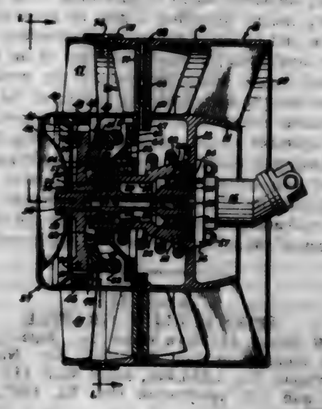
2,945,671
BLADED ROTOR CONSTRUCTIONS FOR FLUID MACHINES
James Alexander Petrie, Littleover, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Jan. 30, 1956, Ser. No. 562,313
Claims priority, application Great Britain Feb. 10, 1955
8 Claims. (Cl. 253—39.15)

1. A bladed rotor and housing construction for a gas turbine engine including in combination; a rotor disc, a plurality of rotor blades radially disposed about the periphery of the disc and having airfoil portions provided with tips, a circumferentially extending, gas-flow confining annular shroud mounted on the blade tips, stationary structure on said housing radially spaced from and cooperating with said shroud so as to provide an annular chamber between the structure and the shroud, duct means in communication with said chamber for introducing cooling fluid under pressure thereto, a low pressure chamber downstream of said stationary structure which co-operates with the shroud to form the annular chamber, root fixings securing the blades to the disc, an elongated



stem connecting each blade airfoil portion to the root fixing, a platform at the junction of each airfoil portion and its stem, said platforms abutting to constitute a gas-flow defining annulus and said stems being spaced apart circumferentially to provide intervening axially extending spaces beneath said annulus, said blades being formed each with at least one lengthwise passage having its outer end terminating at said annular shroud and communicating with said annular chamber and its inner end terminating at and communicating with one of said intervening spaces, and means on each blade fluidly connecting said intervening spaces to said low pressure chamber.

2,945,672
GAS TURBINE UNIT
William A. Wagner, Sepulveda, and Walter J. Koerner, Granada Hills, Calif., assignors to The Marquardt Corporation, a corporation of California
Filed Oct. 5, 1956, Ser. No. 614,224
11 Claims. (Cl. 253—59)



1. A gas turbine unit comprising a circular casing defining a fluid passage, a turbine rotor having blades positioned at the inlet of said casing to be driven by fluid flow through said casing, movable throttle vanes

located downstream of said blades for varying the flow area of said casing, governor means responsive to the speed of said rotor for changing the position of said vanes upon any change in speed sensed by said governor means in order to change the flow area of said casing and control the speed of said turbine rotor, and continually open orifice means located in said casing between said blades and said vanes for bleeding to atmosphere a portion of the air discharged from said blades, the size of the open area of said orifice means serving to determine the effective rate of said governor means.

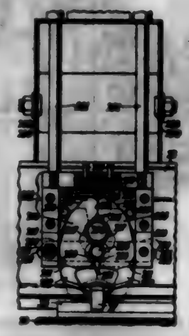
2,945,673
SEGMENTED STATOR RING ASSEMBLY
Chester E. Hockert and Leslie R. Smith, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Oct. 31, 1951, Ser. No. 254,143, now Patent No. 2,772,069, dated Nov. 27, 1956. Divided and this application Apr. 17, 1956, Ser. No. 578,654
1 Claim. (Cl. 253—78)



A segmented stator ring structure for a fluid machine of the dynamic type comprising, in combination, a plurality of arcuate bands arranged to form a segmented outer ring, a plurality of arcuate bands arranged to form a segmented inner ring substantially concentric with said outer ring, and a plurality of stator vanes mounted between the bands of said outer and inner rings, each of the bands of said inner ring comprising an outer channel member and an inner channel member concentric with said outer channel member, said channel members having superimposed webs connecting inwardly directed flanges, the flanges of said outer channel being spaced more than a predetermined distance from the corresponding flanges of said inner channel, and means for detachably interconnecting adjacent bands of said inner ring, said interconnecting means including a pair of projecting fingers secured to and located between corresponding flanges of the outer and inner channel members of an inner ring band, said fingers being received in the predetermined space between the corresponding flanges of the outer and inner channel members at the apposed extremity of the channel member of an adjacent inner ring band, said fingers having a width less than said predetermined distance between corresponding flanges of said inner and outer channel members, whereby said fingers will interconnect said adjacent bands even through the corresponding flanges of the adjacent bands are not exactly aligned.

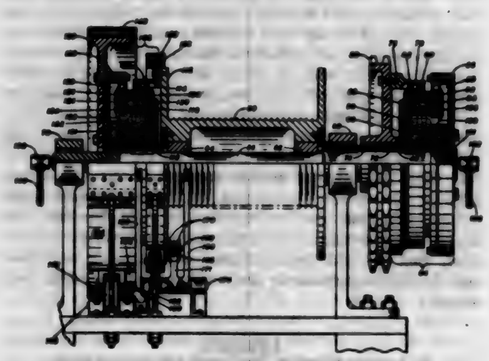
2,945,674
SPIKE PULLING GRAPPLE
Samuel R. Hursh, 423 Bryn Mawr Ave., Bala-Cynwyd, Pa.
Original application Jan. 28, 1954, Ser. No. 406,645, now Patent No. 2,826,446, dated Mar. 11, 1958. Divided and this application Oct. 14, 1957, Ser. No. 689,807
6 Claims. (Cl. 254—18)

4. A grapple, for use in a device for withdrawing spikes from track ties, comprising a housing, means for lowering and raising the housing incident to removing the spike, a pair of opposed vertically arranged spike engaging hooks slidably mounted in the housing for up and down movement therein, said hooks having camming surfaces at their tops and also at their inner and outer sides, a pin by which the hooks are inter-pivoted, a link fulcrumed at one end to the housing and having a slotted connection at its other end with said pin, resilient means in the form of a spring pressed plate operative by coaction with the top cam surfaces of the hooks to depress



said hooks in the housing, means fixed within the housing and operative by coaction with the cam surfaces at the inner sides of the hooks to spread the upper ends of said hooks as they are depressed in the housing, means for actuating the link in response to rise of the housing to raise the hooks in opposition to the spring means, and other means within the housing and operative by coaction with the cam surfaces at the outer sides of the hooks to spread the lower ends of the hooks apart upon withdrawal of the spike.

2,945,675
DRAWWORKS
William Fischer, Fullerton, Calif., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Oct. 24, 1957, Ser. No. 692,069
7 Claims. (Cl. 254—185)



1. In a drawworks comprising a driving motor, a multi-speed transmission having an automatically controlled preselected torque output and connected to said motor for operation thereby, and a winch drum operably connected to said transmission to be rotated by the output torque thereof, the improvement comprising a brake separable from said winch drum, a brake drum in said brake, a clutch means selectively operable to connect said brake drum to said winch drum for rotation therewith and to

disconnect said brake drum from said winch drum, and means to operate said clutch means and said brake simultaneously to engage said brake drum with said winch drum as braking action is applied to said brake.

2,945,676
HYDRAULIC WEIGHT CONTROL AND COMPENSATING APPARATUS FOR SUBSURFACE WELL BORE DEVICES
Archer W. Kammerer, Jr., Fullerton, Calif., assignor of three-fifths to Archer W. Kammerer and one-fifth to Jean K. Lamphere, both of Fullerton, Calif.
Filed Nov. 8, 1956, Ser. No. 621,158
4 Claims. (Cl. 255—19)



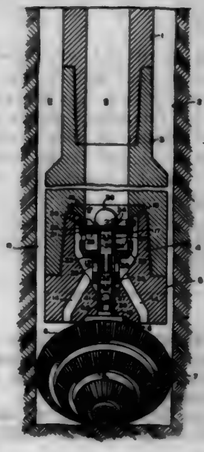
1. In an apparatus for maintaining a predetermined stress in a running-in string disposed in a well bore which is supported by a rig including a suspension mechanism: elongate cylinder means; piston means slidable in said cylinder means; one of said means having a device thereon for operative connection to the running-in string; the other of said means having a device thereon for operative connection to the suspension mechanism, whereby said cylinder means and piston means are disposed between the suspension mechanism and running-in string; means for constantly feeding fluid under pressure to said cylinder means, whereby the stress of the running-in string and of said one means is transmitted through the fluid to said other means and suspension mechanism; and means for constantly conducting such fluid from said cylinder means, said conducting means including flow restricting instrumentalities for creating a back pressure in the fluid in said cylinder means.

2,945,677
HYDRAULIC WEIGHT COMPENSATING APPARATUS FOR WELL BORE DEVICES
Archer W. Kammerer, Jr., Fullerton, Calif., assignor of three-fifths to Archer W. Kammerer and one-fifth to Jean K. Lamphere, both of Fullerton, Calif.
Filed Nov. 8, 1956, Ser. No. 621,159
14 Claims. (Cl. 255—19)

1. An apparatus having cylinder means and piston means slidable therein and adapted to be disposed between and connected to a suspension device thereabove and a running-in string therebelow to maintain a predetermined stress in the running-in string; a source of fluid; a pump connected to said source and cylinder means for forcing fluid under pressure into said cylinder means, whereby the stress on one of said means is transmitted through the fluid to the other of said means; means for constantly conducting the fluid supplied by said pump to said cylinder means back to said source of fluid; and check valve means in said conducting means for maintaining the pressure in said cylinder means substantially constant.



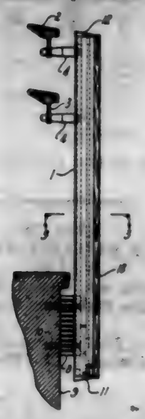
2,945,678
BOTTOM HOLE DRILLING FLUID CONTROL VALVE
George S. Boudreaux and Roy A. Bobo, Houston, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Feb. 21, 1957, Ser. No. 641,587
9 Claims. (Cl. 255—61)



1. A valve structure comprising, in combination, a body having a first fluid-conducting passageway therethrough, the latter having a first inlet and a first outlet, a displaceable sleeve disposed in said first passageway and movable within said first passageway from a first position to a second position, releasable holding means holding said sleeve in its first position, at least one second fluid-conducting passageway in said body having a second inlet and a second outlet, said second passageway adapted to communicate through said second inlet with said first passageway through a first set of ports in said body when said sleeve is in its first and second positions and through a second set of ports in said body when said sleeve is in its second position, first displaceable obturating means associated with one end of said sleeve and adapted to initially divert flow of fluid through said body through said second outlet of said second passageway when said

sleeve is in its first position, and second obturating means associated with the other end of said sleeve and adapted to obstruct flow of fluid through said sleeve, said second means adapted to release said holding means when a predetermined pressure differential acts upon the former, whereby said sleeve moves to its second position and fluid is permitted to flow through said first and second outlets.

2,945,679
COMPOSITE METAL AND WOOD POST STRUCTURE
Louis Blum, Pittsburgh, Pa., assignor to Blumcraft of Pittsburgh, Pittsburgh, Pa., a firm
Filed Mar. 18, 1958, Ser. No. 722,293
2 Claims. (Cl. 256—65)



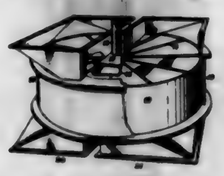
1. A composite metal and wood post structure for mounting ornamental rails and the like comprising an extruded metal strip having slots at opposite faces for receiving sliding rail mounting brackets and filler strips on one side and a wooden ornamental strip on the other, said extruded metal structure having screw holes receiving the shanks of wood screws which extended to and into the wood strip, rail mounting brackets and filler strips alternately disposed in the slot on one side of said strip and a wooden ornamental strip mounted in the slot in the opposite face of said metal strip.

2,945,680
HEAT EXCHANGER
Arthur J. Siesmeyer, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 504,628
14 Claims. (Cl. 257—245)



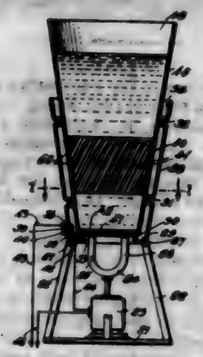
1. A heat exchanger core structure comprising a pleated sheet, the individual pleats of said sheet forming a plurality of adjacent heat transfer surfaces, said pleats substantially defining a regular hexahedron with a plurality of gas flow passages interposed between the adjacent surfaces thereof, a first conduit means defined by alternate ones of said passages on one side of said pleated sheet, a second conduit means defined by the other passages on the other side of said pleated sheet, the entrance and exit portions of said first conduit means being located on one side of said hexahedron adjacent opposite ends thereof, the entrance and exit portions of said second conduit means being located on the opposite side of said hexahedron adjacent opposite ends thereof, the spacing between the adjacent heat transfer surfaces defining said alternate passages varying from a minimum at said one side to a maximum at the opposite side, the spacing between the adjacent heat transfer surfaces defining said other passages varying from a maximum at said one side to a minimum at the opposite side, each of said passages being closed along the side at which the spacing of the associated heat transfer surfaces are a maximum.

2,945,681
FLOATING SECTOR SEALS
Arden L. Burchfield, Wellsville, N.Y., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York
Filed Apr. 19, 1956, Ser. No. 579,258
9 Claims. (Cl. 257—269)



1. Regenerative heat exchange apparatus having a rotor including a cylindrical shell joined to a rotor post by radial partitions forming compartments that carry heat transfer material, a housing surrounding the rotor and provided opposite the latter with end plates formed with circumferentially spaced apertures between imperforate portions which permit the flow of heating gases and air to and through the rotor; and sectional sealing means pivotally supported along a radially extending edge thereof by the imperforate portions of the end plates adapted to preclude fluid flow between circumferentially spaced apertures.

2,945,682
MIXERS AND CONTAINERS
R Lee Hollingsworth, 514 Hempstead Ave., West Hempstead, N.Y.
Filed Nov. 4, 1957, Ser. No. 694,411
11 Claims. (Cl. 259—81)



1. A mixer comprising a support, a container detachably and rotatably mounted on said support, stirring

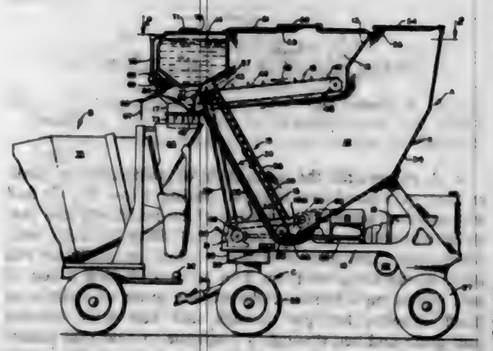
means provided in said container, a driving motor mounted on said support, a magnet connected to said motor for being rotated thereby and positioned adjacent said container, and at least a portion of said container includes material attracted to said magnet for rotating said container with said magnet.

2,945,683
MOBILE ASPHALT PLANT
Edwin O. Martineau, Brantford, Ontario, Canada, assignor to Koehring Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Feb. 28, 1957, Ser. No. 643,639
Claims priority, application Canada Apr. 3, 1956
3 Claims. (Cl. 259—159)



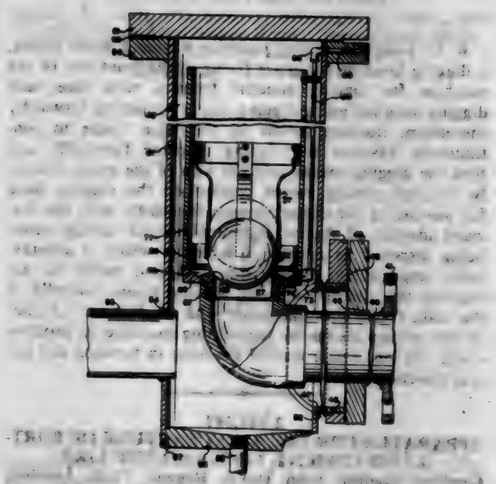
1. A mobile asphalt plant comprising, in combination, a first frame section having material processing means thereon; a second frame section having material processing means thereon; means for conveying materials between said first and said second sections; means for securing said two sections together to form a single frame unit for transport; and means for supporting said second section in a cantilevered elevated vertical position, said last mentioned means including means for swinging said second section between its transport position and said elevated position.

2,945,684
PRE-BATCH TRAILER FOR CONCRETE MAKING INGREDIENTS
Robert B. Soldini, 13 Corte Dorado, Millbrae, Calif.
Filed Mar. 31, 1958, Ser. No. 724,966
4 Claims. (Cl. 259—169)



1. A pre-batch trailer for towing behind a loaded concrete mixing truck for transporting an extra pre-measured batch of concrete making material to a remote job site, and comprising a wheeled highway type trailer, a trailer hitch on the forward end of said trailer for towing connection to a concrete mixing truck, a box-like body on said trailer, said body being closed and sand-tight on its sides and bottom to provide an aggregate compartment, and of a size to receive therein a pre-measured quantity of sand and gravel for one batch of concrete for a towing, mixing truck, the bottom and sides of said compartment sloping convergently downward to a low point, a dust-proof, weather-proof cement compartment in said body of a size to receive therein a pre-measured quantity of cement proportionate to the sand and gravel for such batch of concrete and sealed off from the aggregate compartment therein, a separate filling opening in the top of the body for each compartment to receive said measured quantities from a batch plant, a discharge spout on the forward end of the body at a height to discharge into the loading opening of a concrete mixing truck used for hauling the trailer, power driven conveyor means in each compartment and extending from a low point therein to the discharge spout for discharging the contents of said aggregate and cement compartments simultaneously through the discharge spout, a prime mover mounted on the trailer and in controlled driving relation with each of said conveyor means, a water tank mounted on the body at a height to discharge the contents thereof by gravity into the discharge spout, a measuring gauge for indicating the water level in said tank, and valve means mounted to control the discharge of water from said tank through said spout and into a concrete mixing truck along with the contents of the aggregate and cement compartments.

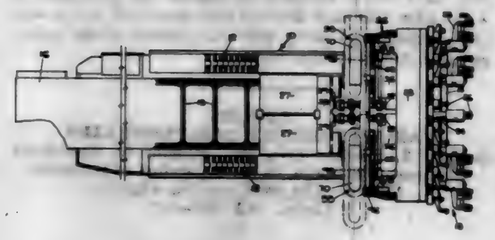
2,945,685
VARIABLE ORIFICE DESUPERHEATER
Sanford S. Bowles, Erie, Pa., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 26, 1956, Ser. No. 630,642
1 Claim. (Cl. 261—62)



A desuperheater device adapted to be installed in a horizontally extending fluid line for high temperature gaseous fluid such as superheated steam whereby the temperature of said fluid may be reduced by admixing cooling water with the fluid and highly atomizing said cooling water due to a pressure drop in said line created by and maintained substantially constant by said device despite wide variation in rates of fluid flow, said device comprising an upright tube adapted to communicate with a fluid inflow line and a fluid outflow line whereby all fluid flowing between the inflow and outflow lines traverses said tube, said tube having and L shaped lower extension adapted to connect with a downstream portion of the line, the said tube being open at the top, a second tube closed at the top and encircling the said first tube in spaced relation to form a chamber therearound adapted to receive an admixture of fluid and cooling water flow-

ing from the first tube, the second tube being formed with an outlet adapted to connect with an upstream portion of the fluid line, means disposed in said first tube providing a restricted and variable orifice during fluid flow, said means being self-regulating to provide a substantially constant pressure drop across said orifice despite wide variation in rates of fluid flow, and cooling water supply means adapted to deliver water to said first tube at the pressure drop zone whereby the cooling water will be entrained in the fluid and highly atomized due to turbulence created by fluid passing through said zone.

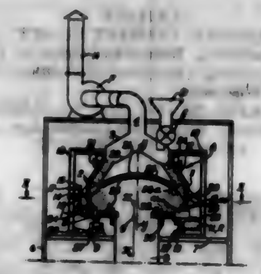
2,945,686
MINING MACHINE HAVING MEANS FOR CUTTING SIDE WALL HOLES FOR ROOF TIMBERS
Sterling C. Moon, Dublin, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio
Filed Nov. 23, 1956, Ser. No. 623,915
10 Claims. (Cl. 262—7)



6. In a mobile mining machine having a main frame, a digging head on the main frame at the front end of the machine for digging material from a mine face, said digging head including digging means projecting forwardly therefrom, traction means on the main frame to continuously advance the mining machine forwardly and feed the digging means into the face of the mine, laterally directed cutting means carried on the digging head for advancing the cutting means forwardly with the forward advance of the mining machine, said cutting means being disposed to operate in an orbit which is substantially tangential to a mine side wall, and means for advancing the laterally directed cutting means laterally of the main frame simultaneously with the forward advance of the cutting means by the mining machine to progressively cut into a side wall of the mine in forward and lateral directions.

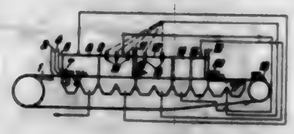
2,945,687
APPARATUS FOR THE MANUFACTURE OF PORTLAND CEMENT, LIME AND THE LIKE
Geoffrey George John Davis, Regents Park, London, England, assignor to The Associated Portland Cement Manufacturers Limited, London, England, a company of Great Britain
Filed May 14, 1957, Ser. No. 659,142
Claims priority, application Great Britain May 16, 1956
10 Claims. (Cl. 263—32)

1. Heat treatment apparatus comprising a treatment chamber part having openings at the top and bottom thereof respectively to permit throughflow of gas, feed means located above said chamber part, for charging material into the top of said chamber part, a substantially flat base part below said chamber part providing a hearth adapted to receive material from said bottom opening in the chamber part so that said material may build up on the hearth in the form of a bed, a discharge outlet for treated material positioned to receive material discharged from said hearth and communicating with the bottom opening in said chamber part so as to provide an inlet for gas into said chamber part, exhaust means connected to said opening in the top of the chamber part for removal of exhaust gas therefrom, means mounting said chamber part and means mounting said base part for independent relatively eccentric rotation about horizontally spaced vertical axes, means for rotating one of said parts, and means mechanically coupling said chamber part and said base part for rotating the other of said



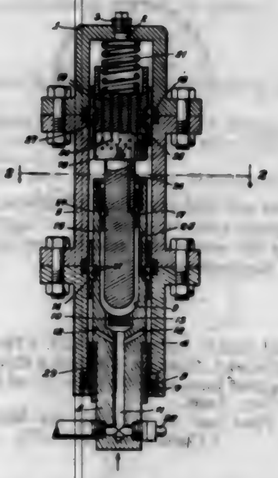
parts conjointly with and at substantially the same rate as said one of said parts, whereby material is discharged from said hearth into said discharge outlet upon rotation of said chamber part and base part by relative displacement of said chamber part and said base part in the radial direction, said discharge taking place in a uniform manner from all points on a perimeter of the hearth.

2,945,688
PROCESS FOR MANUFACTURING WHITE CEMENT
Horst Pajenkamp, Wiesbaden, Alfred Rau and Heinrich zur Strassen, Wiesbaden-Biebrich, Kurt Meyer, Frankfurt am Main, and Hans Rausch, Oberursel, Germany, assignors to Dyckerhoff Zementwerke Aktiengesellschaft, Wiesbaden-Amoneburg, and Metallgesellschaft Aktiengesellschaft, Frankfurt, Germany
Filed Feb. 6, 1959, Ser. No. 791,697
Claims priority, application Germany Mar. 18, 1958
9 Claims. (Cl. 263—53)



1. A process for the production of white cement clinker from powdered raw material having a low Fe, Cr and Mn content comprising forming green pellets of said material with the individual pellets not differing from each other more than plus or minus 1.5 mm. in diameter and lying in the range of from 2 to 15 mm., laying a bed of said pellets on a horizontally moving grate of a sintering band, drawing hot gas through said bed while moving said grate and bed through a first zone to heat said pellets to a sintering temperature, drawing hot reducing gases through the heated pellets while moving said grate and bed through a second zone to burn and sinter said pellets, moving said grate and bed into an after-treatment zone while subjecting said bed to contact with reducing gases cooler than the gases in said second zone, drawing cool reducing gases composed of waste gas from said second zone through said bed while moving said grate and bed through a third zone to cool said pellets in a reducing atmosphere to a temperature below their oxidizing temperature, and then further moving said grate and bed to a final zone to cool said pellets to atmospheric temperature.

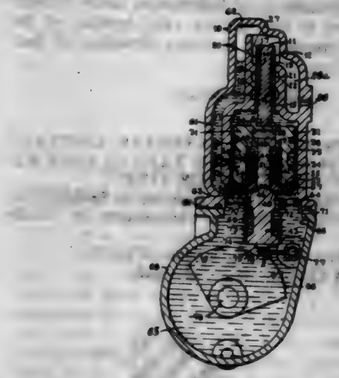
2,945,689
EXTERNAL SEAL SHOCK ABSORBER
Karl A. Klinger, 111 S. Wright, Naperville, Ill.
Filed Mar. 18, 1957, Ser. No. 646,462
5 Claims. (Cl. 267—34)



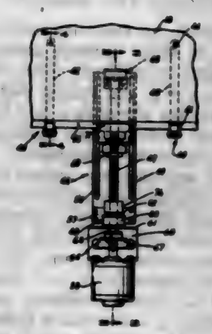
3. A metering valve including a hollow cylinder, a plunger mounted for longitudinal movement therein, a rolling packing bag encircling the plunger, anchored on opposed sides on the opposed surface of plunger and cylinder and extending in opposite directions from the anchorage along the annular space between the plunger and cylinder, ports in the wall of the plunger on one side of the packing communicating through the plunger with the space on the opposite side of the packing, the packing and ports being so positioned that as the plunger moves longitudinally an end of the packing bag rolls off the wall of the cylinder into contact with the wall of the plunger and vice versa depending upon the direction of relative movement to open and close the ports.

2,945,690
CONTROL VALVE DEVICE FOR VEHICLE AIR SPRINGS
Harry C. May, East McKeesport, and Joseph F. Frola, Braddock, Pa., assignors to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Feb. 27, 1956, Ser. No. 568,113
4 Claims. (Cl. 267—65)

1. A control device comprising a casing providing one chamber containing hydraulic fluid and a second chamber, flow-restricting means interposed between said chambers for controlling the rate of displacement of fluid therebetween, one longitudinally movable element the longitudinal position of which is to be controlled, piston means operatively connected to said one element for controlling the position thereof, said piston means having one side exposed to pressure of fluid in said second chamber and having at the opposite side a recess providing axially spaced shoulders, a follower element arranged coaxially with said piston means and projecting into said recess and having two outwardly directed flanges, a spring and a pair of spring plates surrounding said follower element, said spring plates normally being spread axially by said spring such that each of said plates engages a respective one of said flanges and shoulders, said follower element being axially movable by a control force relative to said piston for operatively compressing said spring, and said piston means thereupon being operative by the power stored in said spring to displace hydraulic fluid from either one of said chambers to the other of said chambers at the rate controlled by said flow-restricting means until said piston means and thereby said one element have assumed positions corresponding to the longitudinal position of said follower element whereby rapid change of position of said follower element will produce a corresponding but slower change of position of said one element.



2,945,691
WINDOW LIFT MECHANISM
Harvey C. Swift, 875 Stanley, Birmingham, Mich., and Cecil M. Peter, 1036 Bishop Road, Grosse Pointe, Mich.
Filed May 14, 1956, Ser. No. 584,557
15 Claims. (Cl. 268—124)



1. The improvement in a screw and nut type power transmission mechanism for regulating the reversing movements of a window or like moving member relative to a frame or like structure, which mechanism is characterized by an elongated screw element having a nut element in relatively rotatable and axially shiftable, threaded engagement therewith, one element of the pair being mounted on and movable with said member and the other being mounted on said structure, said improvement comprising the combination of a compensated anti-vibratory flexible connection to couple the rotative element for drive by a rotative motor driven actuator, and a constant torque type biasing device connected between said member and structure to assist movement of the former along the latter in one direction, said device comprising a coiled tape unit acting under torsion and operatively connected at one end thereof to said member and at the other end thereof to said structure to bias the member in one direction along the structure, under control of said rotative actuator, said anti-vibratory flexible connection comprising an angularly yieldable member

adapted to be disposed coaxially of said screw element and having means to drivingly connect the same to the rotative element of said first named pair and to said actuator device, said yieldable member acting to produce a substantially uniform centrifugal action having a gyratory effect in compensating said elongated screw element against radial whip in any relative axial position of the nut and screw elements and in either direction of their relative axial movement.

2,945,692

MEANS FOR PROVIDING INTIMATE CONTACT BETWEEN A SURFACE AND TAPE IN TAPE RECORDER DEVICES AND THE LIKE

Paul F. Mueller, Rumford, R.I., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island

Filed Aug. 16, 1957, Ser. No. 678,733
14 Claims. (Cl. 271—2.3)



1. In a mechanism for recording intelligence by means of a tape and in which intimate contact between the tape and a surface is required, means for placing said tape under tension over and against said surface, means located on said surface providing a fluid flow working passage between said tape and said surface at least when said tape is being moved longitudinally under tension, one side of said passage being formed by said tape, the leading end of said one side, with respect to said longitudinal movement of said tape, forming with another side of the passage adjacent to said leading end a first angle, the trailing end of said one side, with respect to said longitudinal movement of said tape, forming with another side of said passage adjacent said trailing end a second angle which is substantially larger than said first angle, whereby said passage diverges in the direction from the leading end to the trailing end thereof, the tangential component of the force exerted on the tape by said surface being in a direction generally from the trailing to the leading ends of said passage, said movement of said tape causing fluid to flow from said leading end to said trailing end of said passage, said first angle being less than the minimum angle at which separation of said fluid flow from the sides of said passage occurs, whereby said flow of fluid through said passage from the leading end thereof to the trailing end thereof creates a suction on said tape.

2,945,693

REINFORCED BALL

Jack W. Way, Garden Grove, Calif., assignor to W. J. Voit Rubber Corporation, Los Angeles, Calif., a corporation of California

Filed June 3, 1957, Ser. No. 663,169
28 Claims. (Cl. 273—65)

1. An athletic ball comprising a bladder, a reinforcing layer comprising windings of cord or thread surrounding the bladder, and a wear resistant cover therefor, said bladder, reinforcing layer and cover being joined together to form a uniform, unitary and integral assembly,



said bladder and said cover being composed of layers of a thermoplastic synthetic resin bonded together by fusion of each to the other with said reinforcing layer being embedded therebetween.

2,945,694

HAND HELD CAPTIVE BALL APPARATUS

Rudolph Heinrich Heimers, Friedrich Otomar Heimers, and Siegfried Immanuel Heimers, all of 2001 Main St., Chula Vista, Calif.

Filed Sept. 16, 1957, Ser. No. 684,187
3 Claims. (Cl. 273—95)



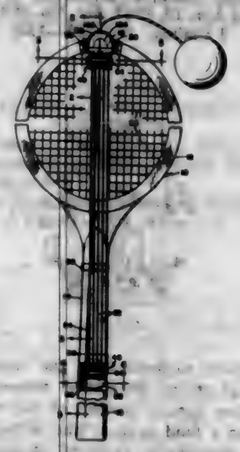
1. A hand held captive ball apparatus comprising: an elongated, rigid support member; inner pulley blocks on said member and disposed on opposite sides of a central portion of the member; outer pulley blocks on said member on the remote sides of said inner pulley blocks; all said pulley blocks having pulleys and said pulleys having their axes substantially on a common plane; the pulleys of the outer pulley blocks being coplanar with and being greater in diameter than the corresponding pulleys of the inner pulley blocks; a single elastic cord wound serially in adjacent loops on the pulleys of the inner pulley blocks and also having outer loops wound serially upon the pulleys of the outer pulley blocks with the outer loops spanning the inner pulley blocks and out of contact therewith; a captive ball secured to one end of said elastic cord; and means to secure the other end of the elastic cord; said support member having a pair of parallel arms at each end thereof; said pulley blocks being slidably inserted and removably supported on and between said arms; said inner pulley blocks being retained by said outer pulley blocks against movement in one direction longitudinally of the support member; all said pulley blocks being frictionally engaged with said arms; and means removably secured to the extremities of said arms and also engaging said outer pulley blocks for further securing that the latter be held in place.

2,945,695

TENNIS RACKET WITH CAPTIVE BALL APPARATUS

Rudolph Heinrich Heimers, Friedrich Otomar Heimers, and Siegfried Immanuel Heimers, all of 2001 Main St., Chula Vista, Calif.

Filed Sept. 16, 1957, Ser. No. 684,188
4 Claims. (Cl. 273—97)



1. Apparatus including a captive element, a pair of pulley blocks each comprising a plurality of parallel spaced opposed plates, a spacer member on which one end of each of said plates is fixed, a plurality of pulleys having grooves to receive a linear element, means for mounting said pulleys on said blocks for free rotation and with said grooves disposed between said plates, said plates having portions at the other ends thereof extending beyond the corresponding pulleys and extending in the direction of the other block and also extending on opposite sides of each block to define runways, a length of elastic cord wound serially around said pulleys in adjacent loops and extending through said runways, one end of said elastic cord being attached to said captive element, said means for mounting comprising an axis member on which said pulleys are mounted, and means for terminally mounting said axis member in fixed relation to said pulley block, means for holding said pulley blocks in spaced relation, and means for securement of the other end of said elastic cord; said means for holding said pulley blocks in spaced relation comprising a tennis racket having a frame and a handle, one of said pulley blocks being secured to said handle adjacent the end thereof remote from the frame and the other pulley block being secured to the frame at a point remote from said handle; and roller guide means secured to said frame adjacent to the pulley block on the frame, said guide means comprising a set of freely rotatable guide rollers defining an aperture for the elastic cord offset from the common plane of said pulley blocks to hold the inner portion of the free part of the elastic cord out of contact with the pulleys of the pulley block on the frame while it is being fed into and payed out from the pulley block on the handle.

2,945,696

MATCH BOOK SPINNER

Charles E. Johanningmeier, 812 N. Edwards, Carlsbad, N. Mex.

Filed May 13, 1959, Ser. No. 812,913
5 Claims. (Cl. 273—147)



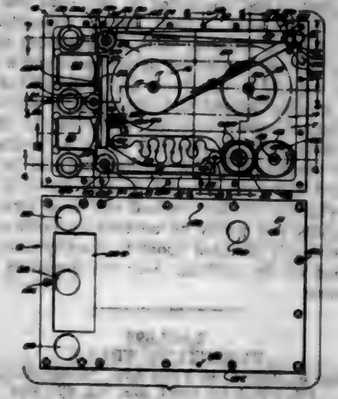
1. A paper match book comprising a match strip with a base and a plurality of match stems projecting therefrom, a cover sheet folded over said strip to form a front cover and a back cover and secured at one end to said base with its other end detachably seated against said base, there being aperture-forming punch-outs in the front and back covers of said cover sheet generally intermediate the end and side edges of the book and aligned with each other when said cover sheet is closed, the punch-outs being of a diameter corresponding to the width of one of the match stems to frictionally and releasably engage a match stem when it is inserted through the punch-outs.

2,945,697

MEANS FOR RENDERING TAPE RECORDERS AND THE LIKE OPERATIVE UNDER HIGH ACCELERATION AND DECELERATION CONDITIONS

Paul F. Mueller, Rumford, R.I., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island

Filed Aug. 16, 1957, Ser. No. 678,983
15 Claims. (Cl. 274—11)



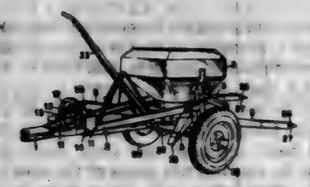
1. In a device for recording intelligence, a sealed cavity containing a liquid having fully immersed therein tape stored in said cavity and wound in multiple layers in contact with each other, said device also including an intelligence transmitting head and a transport mechanism comprising means for transporting the tape past said head and thence to means for storage, said liquid being effective to reduce inertia effects on said tape layers, the specific gravity of said liquid being equal to

$$S.G.T.\frac{A.I.F.-E.I.F.}{A.I.F.}$$

where S.G.T. represents the specific gravity of the tape, A.I.F. represents the actual inertia force to which the device is intended to be subjected and E.I.F. represents an effective inertia force on the tape at which the tape will

be satisfactorily transported, said liquid being chemically inert with respect to the parts with which it comes in contact.

2,945,698
DISTRIBUTOR MACHINE FOR THE DISTRIBUTION OF FERTILIZER
Johan Sigurd Keller, Vadsuppsten 2A, Linkoping, Sweden
Filed Dec. 11, 1956, Ser. No. 627,616
Claims priority, application Sweden Dec. 13, 1955
3 Claims. (Cl. 275—3)



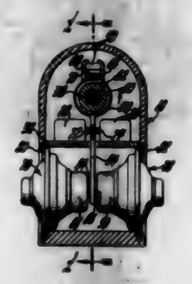
1. A distribution machine for the distribution of commercial fertilizer and the like, comprising a movable frame, a hopper including a bottom portion mounted in said frame, a feeding device and a spreading device disposed underneath said bottom portion of said hopper, said feeding device including a fixedly mounted vertical hollow axle, a driven conical feeding plate rotatably mounted on said axle, a driven fan wheel rotatably mounted below said feeding plate, a source of power on said frame, a hub rotatably mounted on said axle, means connecting said hub to said source of power to rotate the same, means connecting said fan wheel to said hub, and a gear train operatively connected between said fan wheel and said hollow axle to rotate said feeding plate at a lower angular velocity than the fan wheel, a vertically adjustable circular slide surrounding said feeding plate, a rod connected to said slide and slidably mounted in the axle, a lever, means connected to the lever and the rod allowing vertical adjustment of the rod and slide, the said spreading device including a plurality of spouts secured to the frame and disposed tangentially at equal spacing around said fan wheel, a pair of oppositely directed spouts directed transverse to the direction of motion of the machine being of greater length than the remaining spouts, orifices formed in all said spouts and deflectors secured to each spout at the end thereof whereby fertilizer spread out from forwardly directed spouts will partly be covered by fertilizer spread by a rearwardly directed spout to thereby obtain a fair distribution of the fertilizer over the spreading range of the machine.

2,945,699
FURNITURE TRUCK
Milton K. Berlye, 36 York Ave., Monticello, N.Y.
Filed Oct. 16, 1957, Ser. No. 690,486
5 Claims. (Cl. 280—79.3)



1. In a truck of the character described a dolly, means for carrying a plurality of folding chairs or the like, said means comprising a pair of loading platforms which have their inner ends pivotally mounted on said dolly in spaced parallel relation and which, in loading position, extend outwardly beyond said dolly in opposite directions, and means comprising a pair of substantially rectangular frame member pivotally mounted on said dolly for forming a frame that extends upwardly between said platforms and has inclined sides to support folding chairs or the like stacked on either of said platforms.

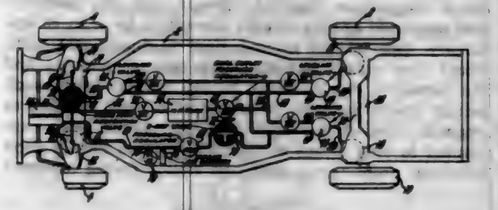
2,945,700
FLUID SUSPENSION HAVING QUICK CENTERING CONTROL FOR ELECTRICALLY ACTUATED VALVES
Von D. Palmerton, Franklin, and William C. McIntyre, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 19, 1957, Ser. No. 653,768
3 Claims. (Cl. 280—124)



1. In a vehicle suspension of the type including an expansible fluid spring interposed between each wheel and the adjacent sprung portion of the vehicle, a fluid intake line and a fluid exhaust line communicating with each spring, electrically operated intake and exhaust valves disposed in the respective lines, a control device for actuating said intake and exhaust valve, said device comprising a housing mounted on the sprung portion of the vehicle, a shaft rotatably disposed in sad housing, means connecting said shaft to said wheel in a manner whereby variation in displacement between said wheel and the adjacent sprung portion of the vehicle imparts rotary movement to said shaft, a driven member extending radially from and swingable on said shaft, a resilient torque transmitting device connecting said shaft and said driven member, a pair of switches disposed at opposite sides of said driven member, and a pair of unidirectionally active dampers one at either side of said member, each damper being effective to delay response of said driven member to rotary movement of said shaft from a neutral position in a direction approaching the switch at the corresponding side.

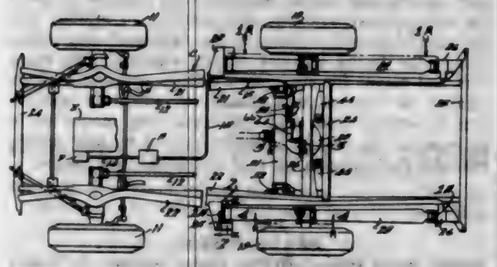
2,945,701
PNEUMATIC VEHICLE SUSPENSION SYSTEM
Eric R. Dietrich, Lapeer, and Edwin Gail Peckham, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 17, 1957, Ser. No. 672,425
10 Claims. (Cl. 280—124)

1. In a vehicle air suspension system of the type including a plurality of expansible springs controlled by leveling valves movable to intake or exhaust positions responsive to displacement between the sprung and unsprung mass of the vehicle, a source of high pressure air, a high pressure conducting network connecting said source with said leveling valves, a low pressure return network connecting said leveling valves with said source, a constant pressure outlet valve in said high pressure network, and a constant pressure relief valve in said low pressure return network, said last mentioned valves providing a pressure differential between the high pressure network and the springs and between the springs and the



low pressure network which is substantially equal whereby the volume of air introduced or exhausted from said springs during corresponding time intervals is substantially equal.

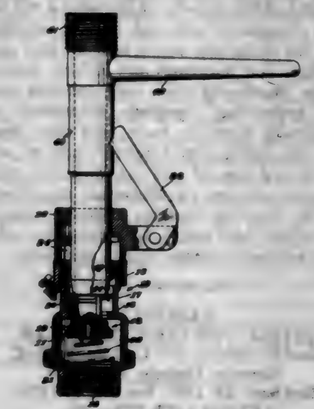
2,945,702
COMBINATION AIR SPRING-LEAF SPRING SUSPENSION
Otto J. Winkelmann, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Sept. 9, 1957, Ser. No. 682,737
5 Claims. (Cl. 280—124)



1. A vehicle wheel suspension comprising a body supporting frame, axle means extending transversely of the frame mounting transversely spaced road wheels, a pair of transversely spaced leaf springs extending longitudinally of the frame having their opposite end portions connected to the frame with the axle means connected to the springs intermediate the ends thereof, a pair of transversely spaced, air filled, resilient, springs arranged in parallel with said leaf springs between said axle means and said frame, an air reservoir interconnecting said air springs, an air supply system connected to said reservoir, and a frame load leveling valve arranged in the air supply system, said valve interconnecting the frame and axle means so that relative vertical movement therebetween controls the air admitted to and bled from said air springs, said leaf springs each comprising a single leaf element that is of relatively narrow width at its point of connection to the axle means and of a relatively wide width at its end connections to the frame.

2,945,703
VALVE AND KEY THEREFOR
Walter W. Ballard, % L. R. Nelson Mfg. Co., 1725 S. Washington St., Peoria, Ill.
Filed June 6, 1958, Ser. No. 740,294
2 Claims. (Cl. 284—18)

1. In a valve structure including a valve body provided with a valve seat, a valve member in said valve body beneath said seat, a spring in said valve body biasing said valve member upwardly toward said seat, a cylindrical retaining nut disposed above and removably connected with said valve body, a tubular key member having one end thereof disposed within said retaining nut and constantly engaging the upper end of said valve member, and a handle projecting from said key member for imparting rotation thereto; the improvement which comprises a spiral groove in the inner wall of said cylindrical retaining nut, said spiral groove having a mouth opening through the upper end of the cylindrical retaining nut, the bottom wall of said groove being uniformly inclined downward from the mouth thereof for a substantial length of the groove and being horizontal for the remaining portion thereof, the upper wall of said groove comprising a portion in spaced parallel relation to said inclined bottom wall, the remainder of said upper wall comprising spaced downwardly facing horizontal seat portions which are disposed at successively greater distances from the upper end of the cylindrical retaining nut, downwardly inclined portions, between the horizontal portions, and convex stop shoulders between the horizontal and inclined portions, and said key member being provided with a lug movable through said groove and being selectively engageable with said horizontal seat portions and said convex stop shoulders, whereby as the key member is advanced downwardly in the groove, the valve member is correspondingly moved downwardly and away from said valve seat, and the valve being retainable in successive positions beneath said valve seat at distances corresponding to the vertical distances between the successive horizontal portions in the said spiral groove for varying the flow of fluid through the valve.



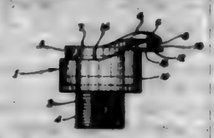
2,945,704
NOSE SECTION-QUICK DISCONNECT
Bernard B. Korn, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed July 23, 1957, Ser. No. 675,795
1 Claim. (Cl. 285—18)



In a cylindrical container divided transversely into a plurality of sections, means for removably connecting adjacent sections together, comprising: a plurality of

threaded securing members symmetrically positioned about and through the forward end of at least one of said sections; a plurality of slots, arranged to receive said securing means slidably, formed in the rear end of at least one of said sections; a buttress formed within at least one of such sections adjacent to the forward end thereof and in longitudinal alignment with each of said securing members; an inclined face formed rearwardly on each of said buttresses; an annular locking groove having an inclined face formed within the rear end of at least one of said sections; a plurality of cap members apertured to fit about said threaded securing members, said cap members being recessed on the outwardly directed portions thereof to define inclined surfaces arranged to cooperate with the inclined surfaces of said buttresses and of said locking groove; means for forcing said cap members against said buttresses and locking grooves, comprising a nut arranged to cooperate threadably with each of said securing members; means for resiliently urging each of said cap members away from said buttresses and locking groove when said nuts are unscrewed from said securing members; means for preventing complete separation of said threaded securing members from said nuts; means for maintaining the connection between each of said nuts and the associated one of said cap members while permitting relative rotation therebetween; rotation-preventing means for securing together adjacent ones of said securing members; and means for producing a hermetic seal between adjacent sections of said container.

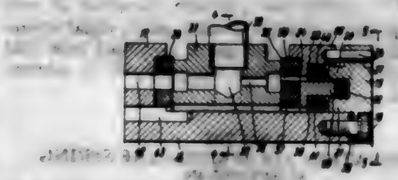
2,945,705
FITTING FOR CONCRETE SLAB
Victor S. Murray, 357 Courtleigh Blvd., Toronto, Ontario, Canada
Filed Sept. 20, 1957, Ser. No. 685,095
2 Claims. (Cl. 285—18)



1. A building slab fitting for passage of electrical wires and the like comprising an externally threaded tubular member, a ring threadedly mounted on one end portion thereof and having an annular rib engageable with the end edge of said tubular member, said ring also having a laterally extending wing, said wing having a slab-engageable surface lying in a plane spaced outwardly from the plane of said end edge of said tubular member, and a second ring encircling said first ring and having an annular shoulder engaging the end edge of said first ring, said second ring also having a wing extending laterally therefrom and being rotatable to vary the position of said wings with respect to each other, said second wing having a slab-engageable surface lying in a plane spaced outwardly from the plane of said end edge of said tubular member, each said wing having a width not greater than the external diameter of said second ring, and means for locking said rings against rotation with respect to said tubular member.

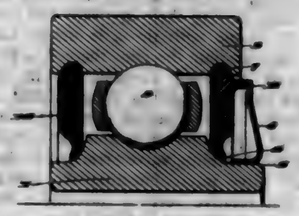
2,945,706
SEALING DEVICE FOR SEALING BETWEEN CO-OPERATING MACHINE ELEMENTS ROTATABLE RELATIVE EACH OTHER
Enver Franked, Borlänge, Sweden, assignor to Aktiebolaget Anderssons Berkmaskin, Gavle, Sweden
Filed Jan. 21, 1958, Ser. No. 710,322
Claims priority, application Sweden Feb. 9, 1957
7 Claims. (Cl. 285—96)

1. In a sealing arrangement for providing a seal between relatively rotatable components, a rotatable machine element, a pair of ring members, one of said ring members being fixed with respect to said machine element, the other ring member being spaced from the first ring member and mounted for axial movement along and rotation with said rotatable machine element, an additional ring means disposed between said ring members and supported against turning movement so as to be stationary with respect to said ring members, said additional ring means having axially spaced surfaces and the respective ring members having surfaces facing such axially spaced surfaces, at least two of said surfaces at opposite sides of said additional ring means being constituted by ring means of inelastic material having good frictional property, at least one elastic O-ring mounted



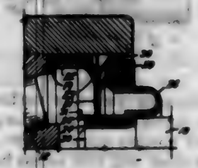
on the side of said axially movable ring member remote from said additional ring means for contact therewith, a mechanically, axially adjustable means carried by said machine element for applying axial pressure against said O-ring to thereby apply an adjustable initial sealing pressure against said axially movable ring member to move the same toward said one ring member to initially seal the axially spaced surfaces of the additional ring means against the facing surfaces of the respective ring members and means for applying a gaseous pressure medium against the face of said axially movable ring member that is remote from said additional ring means so as to increase the sealing pressure exerted by said axially movable ring member on said additional ring means.

2,945,707
BEARING SEAL
Arthur Justin Wasley, Bristol, Conn., assignor to Wasley Products, Incorporated, Plainville, Conn., a corporation of Connecticut
Filed Oct. 15, 1956, Ser. No. 615,997
1 Claim. (Cl. 286—5)



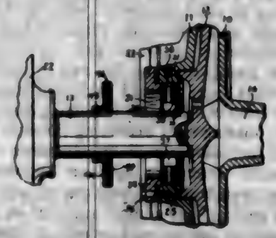
A resilient seal for a bearing having inner and outer races, the inner race having a shoulder portion and the outer race having a recess therein, the seal comprising a ring shaped resilient member having an outer peripheral enlarged portion adapted to fit within the recess in the outer race, a tapered inner peripheral portion adapted to engage the shoulder portion of the inner race, a metallic member completely embedded within said resilient member, said member having one end portion extending normally with respect to the resilient member, said end portion forming a flange adjacent the enlarged portion, said member extending between a point adjacent said enlarged portion and a point adjacent said tapered portion, said enlarged portion and said portion engaging the shoulder being solely of resilient material, a slinger fixedly mounted on the inner race, the flange on the metallic member extending over and outside the outer peripheral edge of the slinger, said slinger and the flange forming a labyrinth sealing passage for the bearing.

2,945,708
WHEEL HUB SEALING UNITS
Allen J. Stephens, 1144 Broadway, Denver, Colo.
Filed July 25, 1958, Ser. No. 751,056
4 Claims. (Cl. 286—5)



1. A lubrication sealing unit for resisting the escape of fluid lubricant between a wheel hub and an axle comprising: an inner sealing ring adapted to be inserted into, and into sealing engagement with said hub; an outer sealing ring; a cylindrical sleeve in said outer sealing ring adapted to be fitted over, and into sealing engagement with, said axle; a roll of resilient material joining said sleeve to said outer ring and acting to urge said outer ring axially toward said inner sealing ring; a single annular skirt formed on the outer face of the outer sealing ring and extending toward said outer sealing ring; and two annular skirts formed on the inner surface of said outer ring and extending toward said inner sealing ring, all of said skirts flexing axially inward as said rings approach each other to prevent the escape of fluid between said sealing rings.

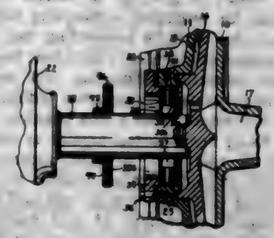
2,945,709
PUMP ROTARY SEAL ASSEMBLY AND METHOD OF ASSEMBLING AND SERVICING SAME
Jacob B. Freed and Robert F. Sharpe, Dayton, Ohio, assignors to The Duriron Company, Inc., Dayton, Ohio, a corporation
Filed July 17, 1958, Ser. No. 749,118
5 Claims. (Cl. 286—7)



1. A rotary seal construction for the junction between a drive shaft and one end of a housing, comprising means defining a cavity in said end of said housing, bearing means supporting said shaft in concentric relation with said cavity, an adapter of open construction securing said bearing means in spaced relation with said housing to leave a substantial length of said shaft exposed between said bearing means and said cavity, at least one annular seal member received in said cavity in sealing relation with the surface of said shaft, gland means for maintaining said seal member in sealing relation with the wall of said cavity, said gland means including a pair of arcuate members providing for removal and replacement thereof by generally radial movement with respect to said shaft, a carrier member, secured to said exposed portion of said shaft for rotation therewith, a plurality of additional seal members encircling said exposed portion of said shaft between said carrier member and said gland means, selectively releasable means fastening said additional seal members to said carrier member for rotation therewith in stationary relation with said shaft preventing wear of the portions thereof engaging said shaft, and means forming a readily releasable connection between said gland means and said housing providing for removal of said gland means and then for removal of said one seal member by destruction followed by release of one of said additional seal members from said fastening means and axial movement thereof along said shaft into said cavity before replacement of said gland means and while retaining said shaft in operative relation with said bearing means and said housing.

5. The method of assembling and servicing a pump of the character described including a drive shaft supporting an impeller within a housing having a seal cavity in one end thereof which comprises the steps of mounting the driven end of said shaft in fixed spaced relation with said end of said housing with the driving end thereof projecting into said housing through said cavity, assembling a plurality of annular sealing members on said driving end of said shaft, closing said housing, sliding at least one of said sealing members along said shaft into said cavity, securing said one sealing member in sealing position within said cavity by means including a two-piece gland member providing for removal and replacement thereof by generally radial movement with respect to said shaft, fastening the remaining said sealing members to said shaft for rotation therewith preventing wear of the portions thereof engaging said shaft, thereafter removing said gland member, removing said one sealing member from said cavity and said shaft by severing thereof, sliding at least the adjacent one of said remaining sealing members along said shaft into said cavity, and replacing said gland member.

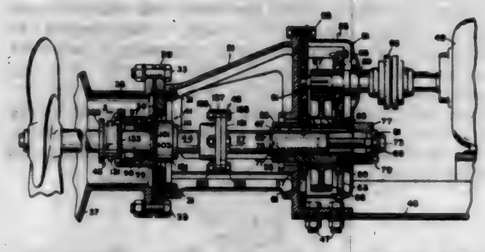
2,945,710
PUMPS
Jacob B. Freed and Robert F. Sharpe, Dayton, Ohio, assignors to The Duriron Company, Inc., Dayton, Ohio, a corporation of New York
Filed Dec. 15, 1958, Ser. No. 780,467
3 Claims. (Cl. 286—8)



1. A rotary seal assembly for the junction between a rotary shaft and the wall of a housing enclosing a chamber wherein the pressure may be different from atmospheric pressure, comprising means defining a cavity in the outer surface of said wall having an annular shoulder at the inner end thereof receiving said shaft therethrough, a pair of thin sealing disks of deformable material received over said shaft and of smaller initial inner diameter than the diameter of said shaft for expansion and deflection of the inner marginal portions thereof into annular lips overlying said shaft in sealing engagement therewith, said disks having said lips turned in opposite directions away from each other to prevent transfer of differential pressure along said shaft from either side of said pair of disks to the other side thereof, an annular spacer of rigid material received between said disks and of slightly greater inner diameter than the diameter of said shaft to support said disks in close proximity to said lips, a third sealing disk of deformable

material received over said shaft outwardly of said pair of disks and including a similar annular lip facing said pair of disks in sealing engagement with said shaft, an annular cage received between said third disk and said pair of disks and of substantially larger inner diameter than the diameter of said shaft for cooperation therewith and with the adjacent said disks to define an annular compartment overlying said shaft, means supporting said third disk in close proximity to said lip thereon and for clamping all of said disks and said spacer and said cage against said shoulder with the innermost said disk having a portion of the inner surface thereof in sealing engagement with said shoulder, and means for supplying fluid to said compartment at a pressure greater than atmospheric pressure to maintain said lips on said third disk and the outer of said pair of disks in sealing engagement with said shaft.

2,945,711
DRIVING UNIT
Milton Dykman, Rochester, N.Y., assignor to Mixing Equipment Co., Inc., Rochester, N.Y., a corporation of New York
Filed Oct. 5, 1956, Ser. No. 614,223
13 Claims. (Cl. 286—11.15)



1. A sealed shaft construction for use with a fluid containing receptacle having an opening therein, said construction comprising a supporting frame; rotatable shaft means including a plurality of axially aligned sections one of which is adapted to extend through said opening; means for separably connecting adjacent shaft sections; means for radially supporting the driving end of said shaft means comprising a member; bearing means on said frame rotatably supporting said member; said shaft means being slidably supported within said member for axial movement from a first position to a second position and being unsupported axially at the inner end thereof when in said first position; means preventing axial movement of said member relative to said frame; means connecting said shaft means and said member for transmitting rotary movement of said member to said shaft means while allowing axial movement of said shaft means relative to said member; a closure member attachable to a receptacle adjacent the opening therein and having an opening therethrough for the reception of said shaft means; sealing means associated with said shaft means and said closure member for sealing said opening in said closure member; and means for holding said shaft means in said second position thereof, said shaft sections being separable at said connecting means for removal and replacement of said sealing means.

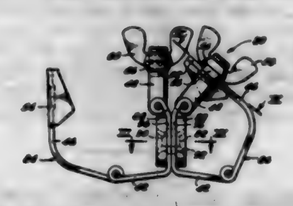
2,945,712
HUB AND SHAFT ARRANGEMENT
Edward F. Lewis, Newfane, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 17, 1957, Ser. No. 653,449
4 Claims. (Cl. 287—53)

1. A hub and shaft arrangement including a shaft element and a rigid hub element mounted on said shaft element, the latter having a flat surface on one side, a shoulder on said shaft element extending outwardly from said flat surface and engaging one end of said hub element, a recess spaced from said shoulder and extending into said shaft element from said surface, a spring mem-



ber interposed between said flat surface and said hub element with an intermediate portion extending into said recess and an end portion engaging the other end of said hub element as a stop, and said recess being proportioned for flexing of said intermediate portion therein.

2,945,713
SWIVEL TYPE CLAMP
Hartley M. Sears, Pasadena, Calif., assignor to Hyval Products Co., Pasadena, Calif., a corporation of California
Filed Sept. 24, 1956, Ser. No. 611,596
5 Claims. (Cl. 287—54)



1. An adjustable clamp of simple construction, including a swivel axis and adapted to receive and lockingly hold an elongated cylindrical object in any desired angle traversing said swivel axis comprising: a pair of abutment members in spaced relation, each provided with an aperture including an outwardly flaring conical surface, the apertures being in axial alignment with their conical surfaces oppositely and outwardly directed and their common axis constituting a swivel axis, opposing faces of said abutment members being flat and in parallel planes, each of the outer faces of said abutment members being adapted to directly contact an elongated cylindrical object; a spacing and holding rivet extending through said aligned apertures and including a radially extending intermediate spacing shoulder extending between opposing faces of said abutment members, end portions of said rivet being firmly seated against said conical surfaces to irremovably hold said members against said radially extending spacing shoulder; and a clamp assembly including a ported element journaled about said spacing shoulder and having a positioning surface in parallel relation to the opposing face of an abutment member and adjustable means connected to said element for encircling a cylindrical object to hold said object against said outer face of said abutment member and simultaneously force the positioning surface and said opposing face into firm holding engagement.

2,945,714
FLEXIBLE CONNECTING MEANS FOR A ROD JOINT
Ernest Egger, 404 Illinois St., Joliet, Ill.
Filed Feb. 24, 1959, Ser. No. 794,500
3 Claims. (Cl. 287—86)

1. A flexible connecting means for a rod joint comprising a closely coiled spring having opposite open ends, a ball positioned within each open end of said spring,

said spring having a diameter slightly less than the diameter of each ball before their insertion in the open ends so that after insertion therein said balls are tightly but



pivotally held within said spring, a rod connected to and extending outwardly from each ball, said rod being adapted to be pivoted with its ball to extend and be held by said spring in a desired direction.

2,945,715
FLUID SEAL
Gilbert Burrell, Lansing, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 18, 1957, Ser. No. 653,660
9 Claims. (Cl. 288—23)



1. A fluid seal adapted to seal between two mating surfaces wherein one of the surfaces includes a plurality of spaced apertures therethrough, comprising; an elongated main body portion formed from elastomeric material, an elongated metallic reinforcement at least partially embedded in said body portion, a raised seal surface extending outwardly and longitudinally of one side of the body portion and a plurality of spaced outwardly extending lugs integrally formed with said body portion from the side opposite to the side carrying the seal surface, each including depending cylindrical portions thereon of progressively smaller diameter, said lugs being adapted to be pulled through said apertures and one of said mating surfaces for holding the seal in predetermined position relative to said surface.

2,945,716
TWINE KNOTTER MECHANISM
Robert H. Collins, Rte. 1, Brownsville, Oreg.
Filed Feb. 14, 1958, Ser. No. 715,325
6 Claims. (Cl. 289—14)



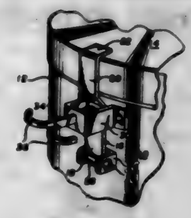
1. In a twine knotter mechanism having a rotatable disc assembly, a pivoted twine holder having a longitudinal edge adjacent the disc assembly for compressing twine against the disc assembly, said edge being beveled through a portion of its length for forming a slack pulling path for the twine, spring means urging said twine holder toward said disc assembly, and spring abutment means for limiting the pivoting movement of said holder.

2,945,717
SEALING CONSTRUCTION FOR CASKETS
William L. Trice, Waco, Tex., assignor to Jim P. Wilkinson, Waco, Tex.
Filed Oct. 17, 1955, Ser. No. 540,972
1 Claim. (Cl. 292—36)



A latching mechanism suitable for caskets and the like comprising a set of latches pivoted to swing in a vertical plane and adapted to engage keepers on the casket cap; a link pivotally connected to each of said latches below their pivots and forming therewith a parallel motion linkage; another link pivotally connected at one end to one of the latches at a point between its pivot and its pivotal connection with the first named link; a lever one end of which is coupled to the other end of said other link so that when the lever swings it causes said set of latches to move in unison; means pivoting said lever at an intermediate point and supporting it on the foot wall of the casket; a screw; a screw support; a nut on the screw; a nut guide; pivotal means connecting the nut with the lever at the end thereof which is remote from said coupled end; and a hand crank for turning said screw to operate the set of latches.

2,945,718
LATCH FOR CONTAINER COVERS
Joseph E. Smith, P.O. Box 578, Ridgeland, S.C.
Filed July 15, 1958, Ser. No. 748,704
4 Claims. (Cl. 292—127)

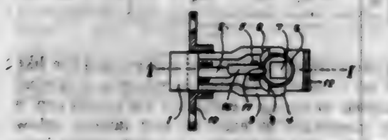


2. A latch device for container covers comprising a swinging latch bolt member pivoted at one end to the body of a container, spring biased operating means for said swinging bolt comprising a push-pull latch bolt operating means connected to said swinging bolt member intermediate the ends thereof and a compression spring concentrically mounted with respect to said latch bolt operating means for biasing said swinging bolt into contact with said container, said swinging bolt having a U-shaped container cover engaging section at its other end, said U-shaped section having an elongated outer arm extending over the upper surface of said container cover when said swinging bolt member is in juxtaposition with said container.

2,945,719
DOOR HANDLE LOCK
Aulis Saarnato, Helsinki, Finland, assignor to Ansaln Oy., Helsinki, Finland, a company of Finland
Filed Feb. 21, 1958, Ser. No. 716,713
Claims priority, application Finland Feb. 26, 1957
5 Claims. (Cl. 292—169)

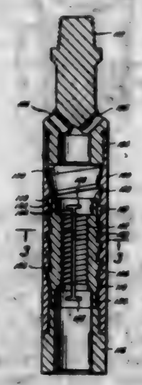
1. In door lock construction including a spring loaded latch bolt, a guiding piece therefor, a bushing for actu-

ating said bolt and interconnecting means between said bushing and said bolt for effecting the actuation of said bolt on the turning of said bushing, means for rotatably mounting said bushing in fixed relationship with respect to said guiding piece, with the axis of said bushing extending transversely with respect to the direction of movement of said latch bolt, said bushing, on the side thereof opposed to said latch bolt, being formed with a longitudinally extending recess in the peripheral surface thereof, actuating portions formed on said bushing and extending radially outwardly from the peripheral



surface of said bushing at either side of said recess, said actuating portions being formed with symmetrical convexly curved actuating surfaces on their peripheral faces, guide means extending between said latch bolt and said bushing for guiding said latch bolt for movement toward and away from said bushing, spring means overlying said guide means and extending between said latch bolt and said bushing, and a head member on said guide means normally seated in said recess in said bushing whereby on the turning of said bushing about its axis said head will ride out of said slot along one of said curved surfaces.

2,945,720
GRAPPLING TOOL
Dean W. Gunnes, 5338 Fieldwood St., Houston, Tex.
Continuation of application Ser. No. 292,849, June 11, 1952. This application May 28, 1956, Ser. No. 587,533
6 Claims. (Cl. 294—96)



1. A grappling tool of the character described comprising a tubular support, means on the support for connecting the support to an operating string for rotation with the string, said support having a spiraled seat tapering radially downwardly and inwardly toward the axis of the support and terminating at its lower edge in a downwardly facing shoulder, an expansible grappling member mounted on the support for longitudinal movement relative thereto and having a tapering spiraled face to conform to the contour of and seat upon said seat and terminating at its upper edge in an upwardly facing shoulder, abutment means on the support positioned for engagement with said grappling member upon relative longitudinal movement between the support and member in a direction to disengage said face and seat to limit such relative longitudinal movement in said disengaging direction, the internal diameter of said member when the member is in an unexpanded and uncontracted condition being smaller than the external diameter of an object in a wall with which the member is to be engaged, whereby the member will be expanded by the object when the member is moved into surrounding relation to the object, said seat being movable in contact with said face upon relative rotation of the support and member when said one end of said member is in engagement with said abutment means to contract said member into gripping engagement with said object.

2,945,721
TRUCK BODY CONSTRUCTION
Donal W. Chaney, Cambridge City, Ind., assignor to Converto Mfg. Co., Inc., Cambridge City, Ind. a corporation of Indiana
Filed Oct. 8, 1957, Ser. No. 688,933
1 Claim. (Cl. 296—28)

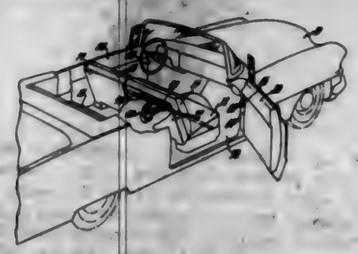


A metal truck body construction comprising a plurality of floor carrying cross members; a planar floor fixed on top sides of said cross members and terminating short of the ends of said cross members; a flange along each side edge of said floor turned upwardly and vertically therefrom a distance; a side wall extending upwardly from and joined to an upper edge portion of said flange in each instance; an inclined planar wall joined by its upper edge portion to and along said wall and flange at said flange upper edge portion and sloping therefrom outwardly and downwardly to and fixed to the outer ends of said cross members, said inclined wall merging through a bend into a portion extending downwardly across the ends of said cross members, and thence around thereunder by a foot fixed to those cross members; a plurality of straight line, vertically disposed, and horizontally spaced apart posts located along and fixed to the outer side of each side wall, and bearing by lower ends on and fixed to said inclined wall above its said downwardly extending portion; and a gusset under said inclined wall across said bend and along said cross member ends and fixed to the inclined wall, said wall portion, and a cross member end portion, resisting bending in said bend.

2,945,722
SEAT ADJUSTER
George B. Horton, Garden City, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,625
6 Claims. (Cl. 296—65)

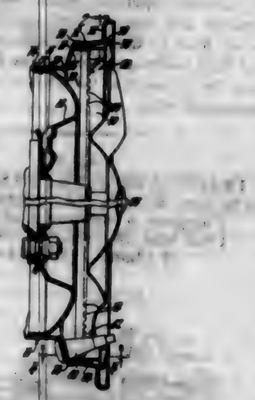
5. In combination with a vehicle, a body including a seat and a door, the seat being mounted on the body by a seat position adjusting mechanism, a power actuator connected with the mechanism for displacing the seat in the body, a manually operable control for energization of the power actuator to displace the seat to various positions, an element secured to the body, another element

secured to the seat, means for storing information of a particular selected position comprising a solenoid secured to the body element and a magnetizable member having a frictional coupling with the seat element and adapted to move adjacent the solenoid with movements of the seat element, and door actuable means associated with the storage means and responsive to door opening and door closing for energizing the power actuator with-



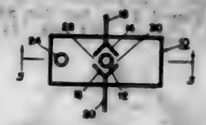
out energizing the solenoid to displace the seat to a rearward terminal position and to the selected position set by the magnetizable member, displacement of the seat from the selected position through operation of the manually operable control energizing the solenoid so that the magnetizable member is restrained from following the seat displacement to thereby establish a new selected position.

2,945,723
WHEEL COVER
Elliott M. Estes, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 21, 1957, Ser. No. 641,684
2 Claims. (Cl. 301—37)



1. In a wheel structure including a wheel body and a wheel rim having a generally axially inwardly extending flange joined at its axial inner portion to a generally radially extending flange, a cover for said wheel including a cover body and cover retaining flange structure extending axially inwardly therefrom in radially spaced relationship to said axially inwardly extending flange of said wheel rim, and cover retention means on said flange structure for retaining said cover on said wheel and spacing said cover with respect to said radially extending wheel rim flange, said cover retention means including a plurality of axially spaced circumferential rows of spaced teeth lying in spaced generally parallel radial planes, one of said rows of teeth having their distal portions in gripping biting engagement with said axially extending flange to thereby retain said cover on said wheel against axially outward movement therefrom, and the other of said rows having their proximal portions in engagement with said radially extending flange and their distal portions in gripping biting engagement with said axially extending flange in wedging engagement therebetween to additionally retain said cover on said wheel against axially outward movement therefrom and space said cover with respect to said radially extending wheel rim flange, said one row of teeth being divided into a plurality of spaced quadrants of teeth around the periphery of said cover, said quadrants being spaced apart by intervening flange structure merging into the teeth of said other of said rows to stagger said rows of teeth circumferentially with respect to each other.

2,945,724
DISENGAGING GRANULAR SOLIDS FROM LIFTING GAS
William L. McClure, Toledo, Ohio, assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Mar. 6, 1958, Ser. No. 719,525
4 Claims. (Cl. 302—59)

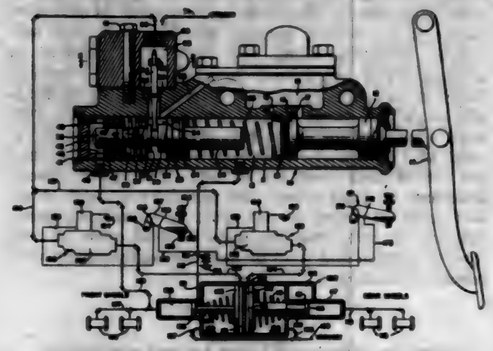


1. Apparatus for disengaging granular solids from lifting fluid which comprises a lift conduit adapted to discharge solids upwardly into an enclosed disengaging vessel, a first vertically extending baffle within said vessel and outside the space occupied by the imaginary upward projection of the lift conduit within said vessel, a second vertically extending baffle within said vessel and facing the first baffle, the second baffle also being situated outside said space, said baffles comprising a baffle assembly which in horizontal cross section subtends a major portion, but less than all, of the circumference of said upward projection, and providing between said baffles a vertically extending aperture for egress of solids from the space between the baffles, and means for moving the first and second baffles horizontally within said vessel thereby to change the horizontal distance between them, and thereby to change the area of said aperture and change the height of rise of solids in said space at otherwise constant conditions.

2,945,725
BOOSTER BRAKE SYSTEM
Edward Govan Hill, Birmingham, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Jan. 31, 1957, Ser. No. 637,582
12 Claims. (Cl. 303—24)

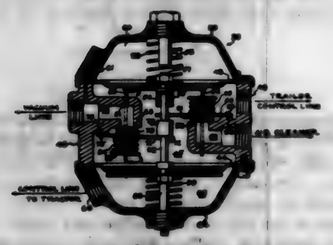
8. A booster brake system for a motor vehicle having front and rear sets of wheel cylinders, comprising a pair of hydraulic cylinders each connected to one set of wheel cylinders, a plunger operable in each hydraulic cylinder to displace fluid therefrom, power means connected to said plungers to operate them, a control mechanism connected between said power means and a source of power and operable for energizing said power means, first means responsive to operation upon a predetermined degree of vehicle deceleration for limiting the capability of said power means for generating pressure for one

set of wheel cylinders, and second means responsive to a higher degree of vehicle deceleration for limiting the



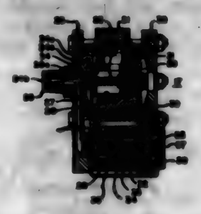
capability of said power means for generating pressure for the other set of wheel cylinders.

2,945,726
TRACTOR-TRAILER BRAKE SYSTEM
William Stelzer, Summit, N.J., assignor to Kelsey-Hayes Company, a corporation of Delaware
Filed May 4, 1956, Ser. No. 582,838
14 Claims. (Cl. 303—31)



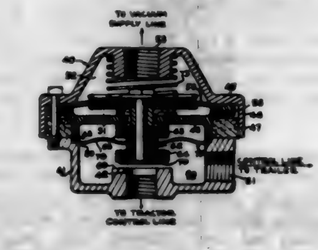
1. In a remote control vacuum operated brake system having a control line to transmit pressure impulses from a source of pressure to control remote brakes, and remote means normally subject to vacuum and responsive to said pressure impulses in said control line to control a vacuum source to cause the application of said brakes, in combination, an amplifying relay valve interposed in said control line and dividing said control line into a primary control line normally subject to a vacuum and adapted to receive pressure impulses from said source and a secondary control line normally subject to a vacuum and connected to said remote means, said amplifying relay valve comprising a chamber connected to said secondary control line, a normally open vacuum valve and a normally closed air valve controlling communication of said chamber respectively with a source of vacuum and the atmosphere, an expansible chamber motor mechanism including a normally vacuum suspended pressure responsive portion responsive to a control pressure impulse in said primary control line to close said vacuum valve and open said air valve to admit air into said chamber and into said secondary line to operate said remote means to apply the brakes, said pressure responsive portion of said motor mechanism being subject to pressure in said chamber to react against pressure in said primary control line to urge said vacuum valve to open position and said air valve to closed position, a device engaging said pressure responsive portion and providing a net biasing force normally tending to open said vacuum valve and close said air valve, and pressure responsive means for rendering said device ineffective when a predetermined increase in pressure occurs in said chamber.

2,945,727
EMERGENCY BRAKING SYSTEMS
Clyde La Dean, Prospect Road, Pittsburgh 27, Pa.
Filed Oct. 28, 1955, Ser. No. 543,336
8 Claims. (Cl. 303—63)



1. A vehicle brake system comprising a source of fluid under pressure, fluid flow control means, brake actuator means receiving fluid from the source of fluid under pressure through the fluid flow control means, a fluid pressure reservoir non-returnably receiving fluid from the source of fluid under pressure, differential pressure valve means movable from closed position connecting the brake actuator means with the fluid pressure reservoir to an open position connecting the source of fluid under pressure to the brake actuator means, said differential pressure valve means including resilient means normally urging the valve to the closed position, fluid pressure actuated operator means acting to overcome said resilient means, connections from the fluid pressure reservoir to said fluid pressure actuated operator means delivering fluid thereto whereby to create a differential pressure on the valve to hold the valve in the open position, solenoid valve means controlling the differential pressure on the fluid pressure actuated operator means, and electrical means responsive to a drop in pressure below a predetermined level actuating the solenoid valve means whereby to close said connections whereby to vary the differential pressure on the fluid pressure actuated operator means whereby the resilient means moves the valve to the closed position shifting the flow of fluid to the brake actuator means from the source of fluid under pressure to the fluid pressure reservoir when the pressure at the source of fluid drops below a predetermined level.

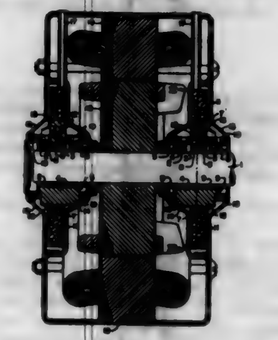
2,945,728
TRACTOR-TRAILER BRAKE SYSTEM
William Stelzer, Summit, N.J., assignor to Kelsey-Hayes Company, a corporation of Delaware
Filed Mar. 28, 1956, Ser. No. 574,469
16 Claims. (Cl. 303—63)



1. In a remote control brake system having power means including a vacuum line providing vacuum power for applying the brakes, a control line to be normally subjected to a vacuum condition to provide a released brake condition and providing a brake-applied condition when subjected to higher pressure, remote means responsive to pressures in one end of said control line to control said power means, and means connected to the other

end of said control line for effecting variations in pressure therein, in combination, a valve device between said ends of said control line comprising a control chamber directly communicating with said one end of said control line and having a port normally connecting it to said other end of said control line, a normally open first valve controlling said port, an atmospheric chamber having a valve seat between such chamber and said control chamber, a normally closed second valve engaging said seat and connected to said first valve, and means connected to said valves and subject to a predetermined drop in vacuum in said vacuum line for closing said first valve and opening said second valve to disconnect said control chamber from said other end of said control line and connect said atmospheric chamber to said first chamber to increase pressure in said one end of said control line to operate said brakes.

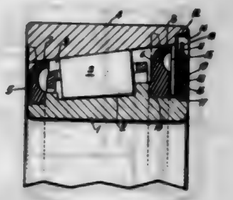
2,945,729
LUBRICATING OIL RETURN SYSTEM FOR SLEEVE BEARINGS
William H. Mitchell, Lima, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 15, 1957, Ser. No. 696,859
4 Claims. (Cl. 308—132)



1. In an oil lubricating system, a bearing supporting a shaft, said bearing having a window to said shaft, an oil return wick disposed circumferentially around said bearing, said oil return wick having an annular surface extending beyond the ends of the bearing, said oil return wick having an opening therethrough in alignment with said window, an oil feed wick positioned intermediate the ends of and disposed circumferentially around said oil return wick, said oil feed wick having a radial portion extending through said opening and window and making engagement with said shaft at the center of the bearing, said radial portion being in contact with the oil return wick in said opening, and at least one annular reservoir wick mounted on the outer periphery of said oil feed wick in contact therewith, the oil return wick and the reservoir wick being of lower density than the oil feed wick.

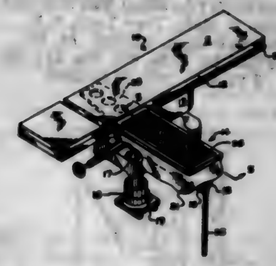
2,945,730
SEAL FOR A SEPARABLE BEARING THAT LOCKS THE BEARING PARTS INTO A UNIT
Alfred S. Murray, Haverford, and Joseph L. Bruneo, Cheltenham, Pa., assignors to Tyson Bearing Corporation, Massillon, Ohio, a corporation of Delaware
Filed Aug. 24, 1956, Ser. No. 606,005
14 Claims. (Cl. 308—187.2)

1. In an anti-friction bearing comprising co-axial radially spaced inner and outer rings and rolling elements in the annular space between said rings, a pair of resilient annular radially extended seal elements mounted one at each end of one of the said rings and having its relatively remote peripheral edge portion in frictional engagement with the confronting peripheral surface of the other ring to seal the said annular space on opposite sides of the rolling elements, the normal radial extent of the annular elements being greater than that of the said space and



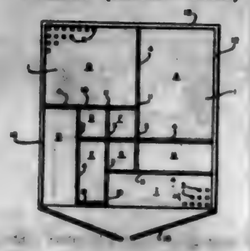
the frictionally engaged edge portions thereof being deflected laterally by said engagement both in the same axial direction whereby one of said seal elements acts to prevent escape of lubricant from said space while the said lubricant is permitted to escape from said space past the deflected lip of the other element.

2,945,731
SURGICAL DRAINAGE ATTACHMENT
David A. Tutrone, 249 West Shore Drive, Massapequa, N.Y.
Filed July 23, 1959, Ser. No. 829,130
1 Claim. (Cl. 311—9)



A bedside operating table for surgery of the corporeal extremities comprising a longitudinal metal basin of V-shaped cross-section having an integral V-shaped element forming side walls and a trough sloping downwardly from the rear of said V-shaped element to the front thereof, said basin having a relatively small rear triangular end wall fixedly secured to the rear edge of said element and also having a relatively large front triangular wall fixedly secured to the front edge of said element, said basin having an outlet opening in the trough of the V-shaped element adjacent said front triangular wall, said basin having a rectangular top opening formed by said side and end walls; a pair of opposed longitudinal L-shaped metal flanges fixedly secured to the exterior surface of each of said side walls of said V-shaped element in suitable spaced relationship to the respective edges, said longitudinal L-shaped flanges extending suitably beyond the front triangular wall; a relatively small L-shaped flange fixedly secured to the exterior surface of said rear triangular end wall adjacent the top edge thereof; a holder board having at least one large aperture removably secured to and between the extending portions of said longitudinal flanges in spaced relationship to the front end wall of said basin; a rectangular wire screen assembly having a substantially peripheral depending skirt disposed over the rectangular opening of said basin and adapted to seize a sterilized cloth disposed upon said opening of said basin and a telescopic leg fixedly secured to the exterior surface of the rear end wall.

2,945,732
SUPPORT WITH ADJUSTABLE FORM-FITTING COMPARTMENTATION
Charles S. B. Edmondson, Jr., 5600 Morton Place SE., Washington, D.C.
Filed Aug. 7, 1956, Ser. No. 602,583
1 Claim. (Cl. 312—140.3)



A support for storing articles comprising a board provided with a plurality of equally spaced holes forming rows at right angles to each other, a plurality of differently shaped dividers having a wall and provided with a plurality of integral similarly spaced pegs on their undersides inserted in the holes to adjustably position the dividers on the board with the walls extending vertically above the board to provide compartmented storage areas, at least one divider including walls forming a right angle to provide rectangular storage areas of different sizes.

2,945,733
COMPARTMENTALIZED REFRIGERATOR
John F. Mails, New York, N.Y.
(36 E. Division, Chicago 10, Ill.)
Filed Oct. 26, 1956, Ser. No. 618,582
5 Claims. (Cl. 312—200)



1. A refrigerator unit comprising the combination of at least one section and at least two movable sections, arranged face-to-face to form a sandwich having a front section, at least one middle section, and a back section; at least one of said sections containing a refrigerating unit and being capable of quick freezing; at least one of said sections being open at its front and back faces; at least two of said sections each being closed on one face and open on one face, said two closed sections each respectively being hinged upon said open section front and back, at at least one side, for opening about their respective vertical axes, so that said three sections may be selectively each or in combinations of adjacent sections rotated to provide access to themselves and to adjacent sections.

2,945,734
GAS FILLED DOSIMETER AND METHOD OF MANUFACTURING THE SAME
Ole G. Landverk and Delbert L. Mertiner, Glendale, Calif., assignors to Landverk Electrometer Company, Glendale, Calif., a corporation of California
Filed Aug. 12, 1955, Ser. No. 754,599
3 Claims. (Cl. 316—20)



1. A method of manufacturing a dosimeter containing an ionization chamber so that said dosimeter has a predetermined sensitivity to radioactive radiation, said method comprising: measuring the sensitivity of said dosimeter with air at atmospheric pressure in said ionization chamber; replacing the air in said chamber by a gas mixture having an effective atomic number sufficient to cause the sensitivity of said dosimeter to have a desired value; and sealing said gas mixture within said ionization chamber.

CHEMICAL

2,945,735
MOTHPROOFING OF KERATINACEOUS MATERIALS
Lloyd M. Koskoff, Chicago, Ill., assignor, by direct and mesne assignments, of seventy percent to Hightower-Morse & Company, Chicago, Ill., a corporation of Delaware, ten percent to Bernard Wolnak, Highland Park, and five percent to Joseph P. Antonow, Chicago, Ill.
No Drawing. Filed Dec. 17, 1957, Ser. No. 703,265
12 Claims. (Cl. 8—17)

12. A process of mothproofing and dyeing wool which comprises contacting wool with an aqueous solution containing acid wool dyes and pyridine-3-sulfonic acid under acid conditions to produce a dyed wool having pyridine-3-sulfonic acid impregnated therein.

2,945,736
MOTHPROOFING OF KERATINACEOUS MATERIALS
Lloyd M. Koskoff, Chicago, Ill., assignor, by direct and mesne assignments, of seventy percent to Hightower-Morse & Company, Chicago, Ill., a corporation of Delaware, ten percent to Bernard Wolnak, Highland Park, and five percent to Joseph P. Antonow, Chicago, Ill.
No Drawing. Filed Dec. 17, 1957, Ser. No. 703,289
4 Claims. (Cl. 8—17)

4. A method of controlling the larvae of *Tineola bisselliella* which comprises contacting the wool habitat of said larvae with an aqueous solution containing acid wool dyes and benzimidazole wherein said solution is maintained at a pH of less than about 2, to produce a dyed wool containing at least about 0.5% benzimidazole by weight thereof.

2,945,737
METHOD OF DEHAIRING HIDES
Thomas C. Thorstenson, Chelmsford, Mass., assignor to Tanners' Council of America, Inc., New York, N.Y., a corporation of New York
No Drawing. Filed Apr. 25, 1957, Ser. No. 654,993
5 Claims. (Cl. 8—94.16)

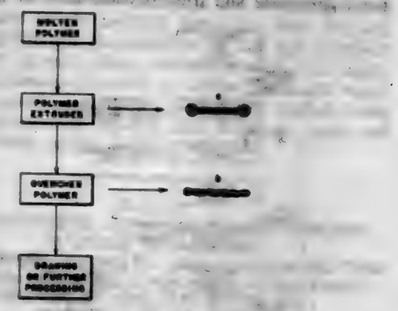
1. The process of dehairing cattle, sheep and goat hides in such fashion as to produce recoverable hair without damage to the hides, which comprises treating wet hides with a first, lime-free, bath comprising an aqueous alkaline solution of 2 to 10%, based on hide weight, of an alkali metal salt which has a reducing action strong enough to reduce the S—S linkage in cystine, for a period of at least an hour, the pH of the bath being maintained at a point not above 11.0 for substantially but not necessarily the entire treatment period, removing the first bath, treating the hides for a few hours at ordinary ambient temperatures with a second bath comprising a lime-free aqueous alkaline solution containing ammonium ions representing at least 0.15% NH_3 and sodium ions, and maintained during the treatment at a pH of at least 10 and under 12.0, and then mechanically separating the loosened recoverable hair from the hides.

2,945,738
LOW COVER FACTOR WOVEN CELLULOSE TEXTILE MATERIAL RESISTANT TO CORRUGATION IN WASHING AND TUMBLE DRYING
Carlyle Harmon, Scotch Plains, N.J., assignor to Chicopee Manufacturing Corporation, a corporation of Massachusetts
No Drawing. Filed Jan. 29, 1958, Ser. No. 711,985
11 Claims. (Cl. 8—116)

1. A diaper resistant to corrugation in washing and tumble- or centrifugal drying while substantially preserving its original softness, hand and absorbency, said diaper being the product resulting from the heating of a low cover factor woven cellulose textile material with an acetal as hereinafter defined, until a reaction between the cellulose and the acetal is effected and the dry weight of the starting cellulose material is thereby increased by an amount between about 3% and about 15%, said acetal having a boiling point above about 125° C. and being the product of condensation of an aldehyde selected from the group consisting of formaldehyde, acetaldehyde, propanal, butanal, glyoxal and mixtures thereof, and an aliphatic hydroxyl-bearing compound selected from the group consisting of aliphatic monohydric alcohols containing from 1 to 5 carbon atoms, monoalkylene and polyalkylene glycols in which the alkylene radical has from 2 to 4 carbon atoms in a straight chain, and aliphatic polyhydric alcohols containing from 3 to 6 hydroxyl groups and from 3 to 6 carbon atoms and mixtures of the aforesaid aliphatic hydroxyl-bearing compounds.

2,945,739
PROCESS OF MELT SPINNING
David J. Lehmicke, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 23, 1955, Ser. No. 517,434
5 Claims. (Cl. 18—54)

1. A melt spinning process for the formation of a textile filament which comprises extruding a molten polymer selected from the group consisting of a polycarbonamide and a polyester wherein the amide and ester units are integral parts of the main polymer chain through a spinneret to form a polymer stream, the cross-section of the said stream being expanded from 2 to 5 times its narrowest width on each of its extremities and having a length of at least 5 times its narrowest width, quenching the said polymer stream to form a modified filament in which the expanded portions are substantially absent from the cross-sectional extremities of the filament and thereafter drawing the said filament.



2,945,740
RUTHENIUM DECONTAMINATION METHOD
Alan T. Gresky, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Jan. 27, 1956, Ser. No. 561,962
12 Claims. (Cl. 23—14.5)

1. In a solvent extraction process for the decontamination of neutron-irradiated uranium which includes the extraction of said uranium from an aqueous mineral acid feed solution with an organic solvent, the improvement of adding a low molecular weight organic ketone to said solution in the amount of at least 0.5 percent, by volume, and digesting the resulting solution at a temperature of at least approximately 85° C. prior to said extraction.

2,945,741
RECOVERY OF URANIUM VALUES
Ronald Edwin Stedman, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Apr. 3, 1956, Ser. No. 575,708
Claims priority, application Great Britain Apr. 29, 1955
3 Claims. (Cl. 23—14.5)

1. In a process for the recovery of uranium values from rock phosphate which has been opened up with a reactant consisting essentially of a mineral acid and in which the resulting reaction mixture has been neutralized to a pH value in the range of 3.5 to 5.0, the further and subsequent step of precipitating uranium values in the presence of an inorganic filter aid, by means of a reducing agent consisting essentially of the following compound:

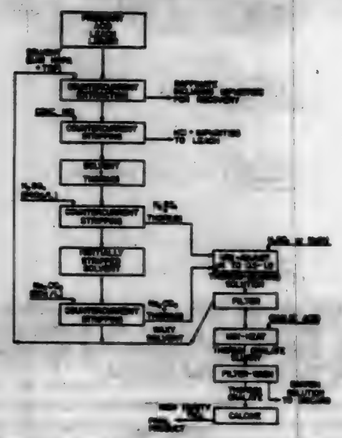
$$R.SO.O.R_1.H$$

wherein R is selected from the group consisting of the alkali metals and ammonium and R_1 is selected from the group consisting of formaldehyde, acetaldehyde and acetone.

2,945,742
LIQUID-LIQUID EXTRACTION PROCESS FOR THE RECOVERY OF HIGH PURITY THORIUM OXIDE
Charles C. Christensen and John D. Prater, Salt Lake City, Utah, assignors to Kennecott Copper Corporation, New York, N.Y., a corporation of New York
Filed May 16, 1958, Ser. No. 735,735
11 Claims. (Cl. 23—14.5)

8. In a liquid-liquid, solvent extraction process, wherein a thorium-bearing, alkyl phosphate solvent, extract

solution is derived, the process of stripping thorium from said extract solution, comprising adjusting organic phosphate content (selected from the group consisting of dibutyl phosphate and tributyl phosphate) of said extract



solution to about 5% by weight; partially stripping thorium from said extract solution by sulfuric acid; and completing the stripping of thorium from said extract solution by an alkali carbonate solution.

2,945,743

PROCESS FOR PURIFYING IMPURE RHENIUM-BEARING SOLUTIONS BY ION EXCHANGE

Stuart R. Zimmerley and John D. Prater, Salt Lake City, Utah, assignors to Kennecott Copper Corporation, New York, N.Y., a corporation of New York

Filed Feb. 27, 1958, Ser. No. 717,997

6 Claims. (Cl. 23—24)

1. In an ion exchange process for purifying crude, acidic, aqueous solutions containing both rhenium and molybdenum values, at least a part of the molybdenum values being in a lower valence state, said process comprising the steps of making the solution basic, passing the solution through an anionic exchange material, eluting molybdenum ions from said exchange material by the passage of a solution of an alkali metal hydroxide therethrough, and thereafter eluting rhenium ions from said exchange material by the passage of a strong and highly ionized mineral acid therethrough, resulting in a rhenium-bearing solution of high purity, the improvement comprising oxidizing the solution by the addition thereto of an oxidizing agent to bring said rhenium and molybdenum values in said solution to their highest valence states prior to passing the solution through the exchange material.

3. The process of claim 1, wherein the solution contains an iron salt as an impurity; wherein the step of making said solution basic includes the addition thereto of an alkali metal carbonate following the addition of the oxidizing agent, whereby an iron salt is precipitated in a form most advantageous for removal from the solution; and wherein said precipitated iron salt is separated from the solution prior to passage of the latter through the exchange material.

2,945,744

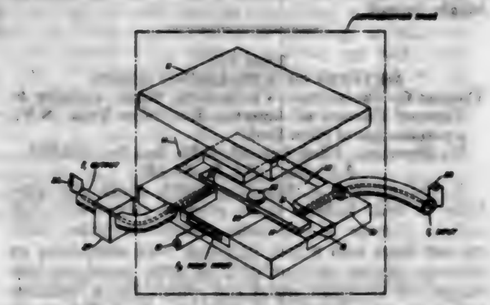
MAGNETIC MATERIALS

Kerro Knox, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 14, 1958, Ser. No. 715,415

4 Claims. (Cl. 23—59)

1. A class of ferrimagnetic materials having the formula $Na_2X_3F_{14}$, wherein X is a trivalent metallic ion



chosen from a group consisting of chromium, cobalt, and iron ions.

2,945,745

PREPARATION OF FLUORINE COMPOUNDS

David H. Reeve, Lakeland, Fla., assignor to International Minerals & Chemicals Corporation, a corporation of New York

No Drawing. Filed Dec. 30, 1957, Ser. No. 705,766

4 Claims. (Cl. 23—88)

1. In a process for preparing substantially phosphorus-free fluorine material from an aqueous fluosilicic acid solution containing phosphorus in solution, the steps comprising adding ammonia to said fluosilicic acid solution to obtain a pH within the range of from 2.5 to 7.0 and below the pH where a substantial amount of ammonium fluoride is formed, to effect the formation of ammonium fluorosilicate, and separating ammonium fluosilicate crystals from the ammoniated solution.

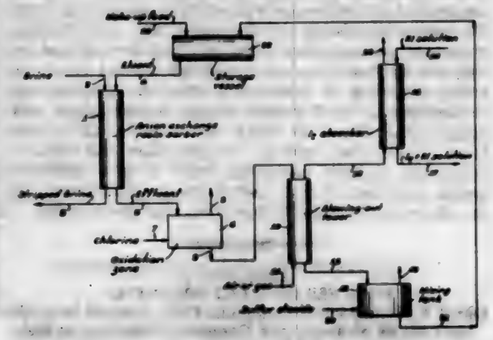
2,945,746

PROCESS FOR RECOVERING IODIDES FROM AQUEOUS SOLUTIONS BY ION EXCHANGE AND CONVERSION OF THE IODIDES TO IODINE

Kernal Glenn Shaw, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 28, 1959, Ser. No. 816,474

8 Claims. (Cl. 23—216)



6. In a process for separating and recovering iodide ions as iodine from an aqueous solution wherein a brine containing iodide ions is brought into contact with a quaternary ammonium anion exchange resin and the iodide ions are adsorbed on the resin, and wherein the adsorbed iodide ions are eluted from the resin and subsequently converted to iodine, the improvement which consists in eluting the adsorbed iodide ions from the resin by washing the anion exchange resin containing the adsorbed iodide ions with an aqueous acidic solution having a pH between 2 and 3 and containing an alkali metal halide salt of the group consisting of chloride and bromide, in a concentration between 5 percent by weight and that of a substantially saturated solution, and from about 10 to about 50 parts by weight of sulfur dioxide per million parts by weight of the solution and collecting effluent liquid containing the displaced iodide ions.

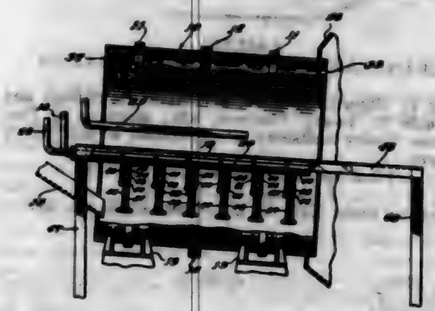
2,945,747

APPARATUS FOR THE GRANULATION OF FERTILIZERS

Francis T. Nielsen, Morton Grove, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

Filed June 17, 1958, Ser. No. 742,635

9 Claims. (Cl. 23—259.1)



1. In an apparatus for the preparation of granular ammonia-containing fertilizer comprising in combination a rotary cylindrical drum having open ends, two retaining rings singly disposed at the ends of the drum and along the axis thereof, a stationary ammonia manifold disposed within the drum adjacent to and parallel to the longitudinal axis thereof, said ammonia manifold being closed at one end and communicating at the other end with a valved conduit adapted to introduce ammonia-containing fluid into the ammonia manifold at a controlled rate, a stationary acid manifold disposed within the drum adjacent and parallel to the ammonia manifold, said acid manifold being closed at one end and communicating at the other end with a valved conduit adapted to introduce acid into the acid manifold at a controlled rate, said ammonia manifold and said acid manifold each having a length substantially equal to the length of the drum between the retaining rings, and means for passing a current of air through the drum, the improvement which comprises an ammonia manifold provided with a series of orifices on the underside thereof, each orifice being positioned substantially equidistant from adjacent orifices, the area of orifices in the central portion of the ammonia manifold being larger than the area of the orifices in each end portion of the ammonia manifold, a series of ammonia supply conduits depending from the ammonia manifold positioned perpendicular to the ammonia manifold and parallel to each other, the longitudinal axis of each ammonia supply conduit forming an angle of between about 30 and about 60° with a vertical diameter of the ammonia manifold, one end of each ammonia supply conduit communicating with an orifice in the ammonia manifold, the opposite end of each ammonia supply conduit being open and positioned adjacent to the inner wall of the drum, said opening being positioned substantially in the direction of rotation of the drum, an acid manifold provided with a series of orifices on the underside thereof, each orifice being positioned substantially equidistant from adjacent orifices, the area of said orifices increasing from the feed end of said drum to the discharge end of said drum, a series of acid supply conduits depending from the acid manifold positioned perpendicular to the acid manifold and parallel to each other, one end of each acid supply conduit communicating with an orifice in the acid manifold, the opposite end of each acid supply conduit being open and positioned adjacent and above the open end of an ammonia supply conduit.

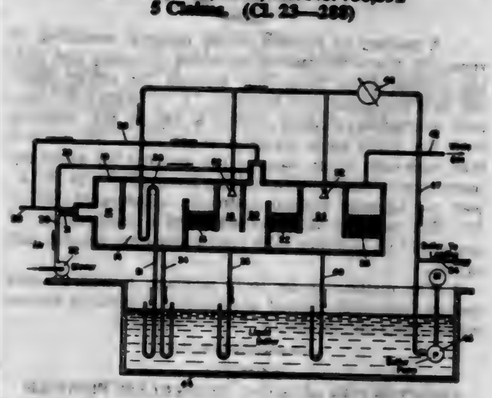
2,945,748

APPARATUS FOR CONVERTING HYDROGEN SULFIDE TO SULFUR

Lloyd G. Magill, Berwyn, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed Apr. 23, 1958, Ser. No. 730,292

5 Claims. (Cl. 23—225)



1. In apparatus for converting hydrogen sulfide to sulfur and which comprises a first combustion zone, a first heat exchanging zone, a first catalyst bed, a second heat exchanging zone, a second combustion zone, a second catalyst bed, a third heat exchanging zone, and a coalescer, the improvement which comprises a single horizontally elongated insulated vessel enclosing all of said elements longitudinally spaced along said vessel in the order named, and means in said vessel for admitting hydrogen sulfide and oxygen to each of said combustion zones, means for admitting a coolant to each of said first, second, and third heat exchanging zones, means for removing said coolant, means for removing molten sulfur from said vessel, and means for removing waste gas.

2,945,749

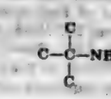
STABILIZED FUEL OIL CONTAINING TERTIARY ALKYL PRIMARY AMINES

Harry J. Andress, Jr., Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

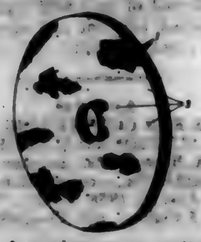
No Drawing. Filed Apr. 18, 1956, Ser. No. 578,881

7 Claims. (Cl. 44—72)

1. A distillate fuel oil, containing a minor amount, sufficient to increase the color stability thereof and inhibit the formation of sediment therein during storage, of a tertiary alkyl primary monoamine containing from 4 to about 24 carbon atoms and characterized by the structural unit



2,945,750
POLISHING BODIES OF VEGETABLE FIBROUS MATERIAL, IN PARTICULAR POLISHING WHEELS, GRINDSTONES AND SLIDING CONTACT DISCS
Erich Gerds, Malmo, Sweden, assignor, by mesne assignments, to Firma Hi-flex Birkenstock K.G., Wuppertal, Germany, a corporation of Germany
Filed July 12, 1957, Ser. No. 671,529
2 Claims. (Cl. 51—298)



1. A method of treating woven material consisting of vegetable fibers for making polishing, grinding and sliding contact discs, comprising treating the woven material first for about two hours at 75° C. with a 0.2 percent α-amylase solution having a pH of 6.5, washing with hot water of a temperature of about 55° C. and then with cold water, treating the material for about ten minutes at a temperature ranging from 15° C. to 50° C. with an aqueous sodium hydroxide solution of 35° to 50° Bé., washing with hot water of a temperature of about 55° C. and then with cold water until neutral, and drying.

2. The method as set forth in claim 1, wherein said sodium hydroxide treated and washed material is treated with a dispersion of silica.

2,945,751
PROCESS FOR MAKING SMOKELESS POWDER
John J. O'Neill, Jr., Rexton, Ill., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Feb. 24, 1951, Ser. No. 212,667
5 Claims. (Cl. 52—39)

1. In the art of making powder by a process in which a smokeless powder base dissolved in a solvent therefor is agitated in a non-solvent vehicle containing a protective colloid and the solvent is subsequently removed to yield hardened powder grains, the step of incorporating therein a pulverulent modifier insoluble in said solvent and vehicle which comprises first wetting said insoluble modifier with a solvent for the smokeless powder base which has a boiling point less than that of the vehicle, and then introducing said wet insoluble modifier into said vehicle.

2,945,752
CONTROL OF WILD OATS
Dorsey R. Mussell, Clare, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 8, 1956, Ser. No. 570,211
5 Claims. (Cl. 71—2.3)

1. A method which comprises applying to and mixing with soil infested by the seeds of wild oats, a growth inhibiting amount of 1,2,4,5-tetrachlorobenzene.

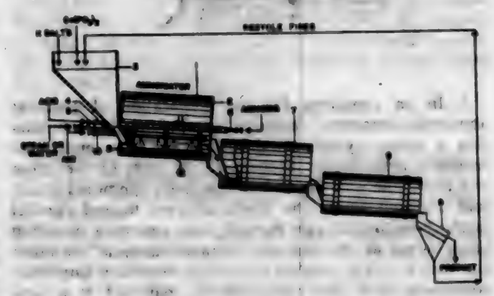
2,945,753
DEFOLIATING WITH OXIDIZED WHITE OIL EMULSIONS
William H. Brugmann, Jr., Milltown, and Howard L. Yowell, Westfield, N.J., and Louis A. Mikeska, Dunedin, Fla., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 21, 1955, Ser. No. 554,395
10 Claims. (Cl. 71—2.7)

1. A method of defoliating a plant which comprises applying to said plant an aqueous emulsion comprising an organic composite of from 5 to 50 wt. percent of an active ingredient selected from the group consisting of oxidized white oils having a peroxide number in the range of 10 to 100 and an oxygen content in the range of 1 to 20 wt. percent and their esters, the starting white oils being naphthenic, aromatic-free oils having the following physical properties:

Molecular weight	200–500
Specific gravity, 60/60° F.	0.75–0.90
Saybolt viscosity @ 100° F.	50–200
Unsulfonated residue, percent	95–100
Pour point, ° F.	<0

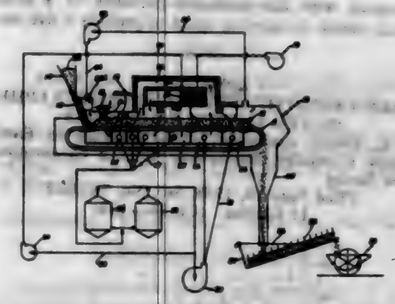
from 40 to 90 wt. percent of a relatively non-toxic horticultural mineral spray oil, from 1 to 10 wt. percent of an oil soluble emulsifying agent, said organic composite constituting from 10 to 50 wt. percent of the total aqueous emulsion said emulsion being applied at a rate of 5 to 40 gallons per acre.

2,945,754
GRANULAR FERTILIZER FROM CALCIUM METAPHOSPHATE
Travis P. Hignett, Sheffield, and Alvin B. Phillips and Ronald D. Young, Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States
Filed Apr. 19, 1956, Ser. No. 579,413
2 Claims. (Cl. 71—37)
(Granted under Title 35, U.S. Code (1952), sec. 266)



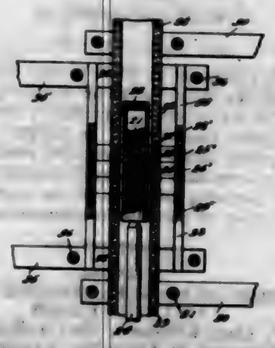
1. A process for the production of a granular, non-hygroscopic, free-flowing fertilizer containing an ammonium salt, calcium metaphosphate, incompletely hydrolyzed metaphosphate, and calcium orthophosphate which comprises introducing a solid fertilizer material comprising calcium metaphosphate into a rotating drum; maintaining a rolling bed of solid material within the drum; introducing a concentrated acid selected from the group consisting of sulfuric acid, phosphoric acid, and nitric acid and mixtures thereof beneath the surface of the rolling bed in the initial half of the drum; introducing an ammoniating fluid beneath the surface of the rolling bed in the final half of the drum in quantity substantially sufficient to neutralize the acid introduced; maintaining the temperature of the material within the drum in the range from about 160° to 215° F.; introducing water beneath the surface of the rolling bed; controlling the quantity of water introduced so that the total water introduced less that evaporated is not more than about two-thirds that required for complete hydrolysis of calcium metaphosphate fed; passing the bed of material through the drum at a rate of flow to provide a retention time in the drum of about 3 to 8 minutes; and withdrawing at least partially granulated fertilizer from the drum.

2,945,755
MAGNETIC ROASTING PROCESS AND APPARATUS
Norman F. Schulz, Minneapolis, Minn., assignor to Regents of the University of Minnesota, Minneapolis, Minn., a corporation of Minnesota
Filed Oct. 31, 1956, Ser. No. 619,443
18 Claims. (Cl. 75—1)



1. A process for roasting ores which comprises the steps of crushing the ore, moistening and rolling the damp crushed material to agglomerate the fines, distributing the resulting ore compacts in a relatively thin layer of substantially uniform thickness on the upper surface of a horizontally moving grate adapted to move the bed in sequence through a drying zone, a reaction zone and a cooling zone, passing warm non-oxidizing gases through the bed of ore in the drying zone to dry and preheat the ore compacts, passing hot reducing gases through the bed of ore in the reaction zone to decrease the oxygen content of the ore, cooling and partially dehydrating the spent non-oxidizing and reducing gases from the drying and reaction zones, recirculating a portion of said cooled and dehydrated spent gases to said cooling zone for passage through the reduced ore to cool the same, discharging said cooled reduced compacts from said grate and recirculating the spent gases from said cooling zone to the drying zone.

2,945,756
ELECTRIC ARC RESISTANCE FURNACE AND METHOD OF MELTING REFRACTORY MATERIALS
James S. Ballantine, 121 North Shore Road, Absecon, N.J.
Filed Apr. 20, 1959, Ser. No. 807,673
7 Claims. (Cl. 75—10)

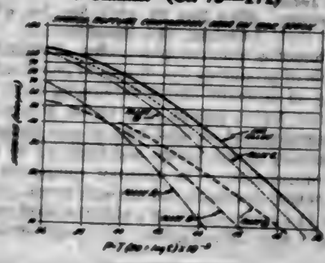


1. An electric arc resistance furnace, comprising a plurality of refractory combined arcing and resistor rings arranged in contact end to end in a stack, terminals connected at each end to the stack of rings, a source of electric current connected to the terminals across through the stack, and means for maintaining pressure on the stack in the range between 10 and 150 p.s.i.

2,945,757
RECOVERY OF NOBLE METALS FROM CATALYTIC COMPOSITES
James Hoekstra, Evergreen Park, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Nov. 2, 1956, Ser. No. 619,940
16 Claims. (Cl. 75—121)

1. A method for recovering a noble metal from a noble metal-refractory inorganic oxide composite which comprises dissolving the inorganic oxide out of the composite with hydrochloric acid in the presence of an organic reducing agent in sufficient amount to prevent dissolution of the noble metal, and separating the resulting solution from the undissolved noble metal.

2,945,758
NICKEL BASE ALLOYS
Louis Prahu Jahnke, Cincinnati, Ohio, and Marvin A. Pohlman, Muskegon, Mich., assignors to General Electric Company, a corporation of New York
Filed Feb. 17, 1958, Ser. No. 715,645
6 Claims. (Cl. 75—171)



1. An improved nickel base alloy suitable for use at elevated temperatures comprising in percent by weight: 0.06–0.20 carbon; 18–20 chromium; 9–12 cobalt; 9–10.7 molybdenum; 3.0–3.3 titanium; 1.3–1.9 aluminum; with the balance essentially nickel and impurities.

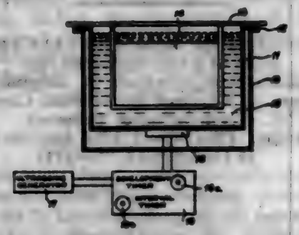
2,945,759
METHOD FOR MEASURING THE STRENGTH OF SINTERED FERROUS ARTICLES
Arthur R. Shaw and Frederick W. Sampson, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Filed Sept. 19, 1957, Ser. No. 684,853
4 Claims. (Cl. 75—201)

1. In a method for increasing the strength of sintered ferrous articles made from briquetted and sintered metal powder including graphite in quantities of from 20% to 32% by weight, the step of adding graphite in quantities of from 20% to 32% by weight to the metal powder prior to briquetting and sintering, consisting of; a mixture of powdered artificial graphite of —325 mesh and natural flake graphite of 20 to 30 mesh wherein proportions of one of said graphite components varies between 16⅔% to 83⅓% by weight of the total graphite mixture with the other component making up the remainder.

2,945,760
PHOTOGRAPHIC PROCESSING METHOD
Martin P. Ostergaard, Jr., Avenel, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Jan. 8, 1957, Ser. No. 633,887
4 Claims. (Cl. 96—48)

1. The method of procesing exposed photographic materials which comprises placing the material to be proc-

essed in the processing solution and subjecting the solution while the material is immersed therein to alternating cycles of agitation and quiescence, the agitation being by



means of ultrasonic waves having a frequency of the order of 41 kc. and being carried on for approximately 5 seconds in length out of every minute of time that the material is immersed in the solution.

2,945,761

REACTIVITY OF COUPLERS INCORPORATED IN PHOTOGRAPHIC EMULSIONS

Arnold Weissberger, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed July 29, 1957, Ser. No. 674,621
7 Claims. (Cl. 96—55)

1. An aqueous photographic color developing solution capable of producing dye images of increased density, comprising an aromatic amine developing agent containing only two amino groups, said amino groups being in para relationship and at least one of said amino groups being a primary amino group, and from 0.1 to 15 grams per liter of solution of a hydroxy compound selected from the class consisting of p-alkylphenols containing from 7 to 11 carbon atoms, in which the alkyl group contains from 1 to 5 carbon atoms, an n-octyl alcohol.

2,945,762

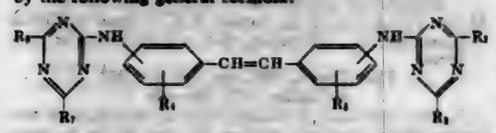
SUPERSENSITIZATION OF PHOTOGRAPHIC EMULSIONS USING TRIAZINES

Bart H. Carroll, Jean E. Jones, and John Spence, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Filed Oct. 12, 1955, Ser. No. 540,052
16 Claims. (Cl. 96—100)



16. A photographic silver emulsion capable of producing a dye image comprising a photographic silver halide emulsion containing (1) a dispersion of a color-forming compound selected from the group consisting of (*a*) a phenol compound capable of coupling with the oxidation products of a primary aromatic amine developing agent to provide a cyan image and (*b*) a pyrazolone compound capable of coupling with the oxidation products of a primary aromatic amine developing agent to provide a magenta dye image, and (2) a bis(s-triazin-2-ylamino)-stilbene compound selected from the class represented by the following general formula:



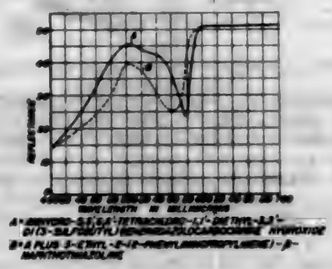
wherein R_2, R_3, R_6 and R_7 each represents a member selected from the group consisting of a hydrogen atom, a hydroxyl group, an aryloxyl group, an alkoxyl group, a halogen atom, a heterocyclic radical, an alkylthio group, an arylthio group and an amino group, and R_4 and R_5 each represents a member selected from the group consisting of a hydrogen atom and a sulfo group, said bis-(s-triazin-2-ylamino)stilbene compound being incapable of coupling with the oxidation products of a primary aromatic amine developing agent to provide a dye image.

2,945,763

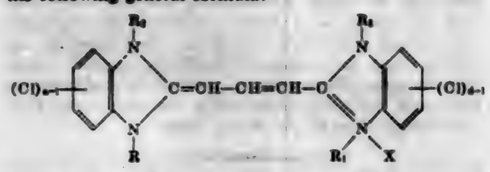
GREEN SENSITIZATION OF PHOTOGRAPHIC SILVER HALIDE EMULSIONS

Jean E. Jones, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

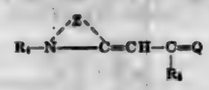
Filed June 19, 1958, Ser. No. 743,869
11 Claims. (Cl. 96—104)



1. A photographic silver halide emulsion containing (1) a sensitizing dye selected from those represented by the following general formula:



wherein R and R_1 each represents an alkyl group, R_2 and R_3 each represents a member selected from the group consisting of an alkyl group and an aryl group, *d* and *n* each represents a positive integer of from 1 to 3, and X represents an acid radical, and (2) a compound selected from those represented by the following general formula:



wherein R_4 represents an alkyl group, R_5 represents a member selected from the group consisting of an alkyl group and an aryl group, Q represents a member selected from the group consisting of an oxygen atom and an arylimino group, and Z represents the nonmetallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the naphthothiazoline series and those of the naphthoselenazoline series.

2,945,764

METHOD OF MANUFACTURING STABLE PELLETED FOODS

George T. Lanz, Kirkwood, Mo., assignor to Ralston Purina Company, St. Louis, Mo., a corporation of Missouri

Filed July 15, 1957, Ser. No. 671,782
10 Claims. (Cl. 99—3)

1. The process of manufacturing feed for animals, poultry and the like, comprising pelleting comminuted

feed under pressure from a finely divided state into pellets, heating the pellets to drive off a substantial amount of any contained moisture to produce a relatively low moisture content in the material of the pellets at least at and near their surfaces, and spraying hot liquid fat on the pellets while hot.

2,945,765

PROCESS OF FEEDING POULTRY AND COMPOSITION USEFUL THEREIN

John M. Snyder, Cayuga, and Olin A. Rowoth and Clarence E. Lee, Auburn, N.Y., assignors to The Beacon Milling Company, Inc., Cayuga, N.Y., a corporation of New York

No Drawing. Filed Mar. 15, 1957, Ser. No. 646,285
15 Claims. (Cl. 99—4)

1. A method of stimulating egg production in poultry, said method comprising administering, continuously, as a part of the diet of said poultry throughout a predetermined period of lifespan, said period being at least measured in terms of weeks, a predetermined quantity per pound of diet of a cyclopentenophenanthrene derivative, of which the extreme hexacarbon nucleus has a keto-oxygen substituent at position 3 and a double bond between positions 4 and 5, said predetermined quantity possessing from 0.1 to 25.0 international units of progesterone activity.

9. A poultry feed formulation containing hormone and nutrient materials that coact to stimulate egg production in poultry, said formulation comprising, in a predetermined quantity per pound of said formulation, a cyclopentenophenanthrene derivative, the extreme hexacarbon nucleus of which has a keto-oxygen substituent at position 3 and a double bond between positions 4 and 5, said predetermined quantity possessing from 0.1 to 25.0 international units of progesterone activity.

2,945,766

METHOD OF FERMENTING MEAT PRODUCTS AND COMPOSITION THEREFOR

Louis Chalet, Newark, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Apr. 29, 1957, Ser. No. 655,525
3 Claims. (Cl. 99—107)

1. The method of fermenting meat products which involves adding a bacterial fermentative culture to the meat up to ¼% of the meat, together with a manganese salt, the manganese being present in the amount of at least 0.5% of the weight of the culture but less than 4% and adding heat to keep at a temperature of 80°–110° F. until the desired taste is obtained.

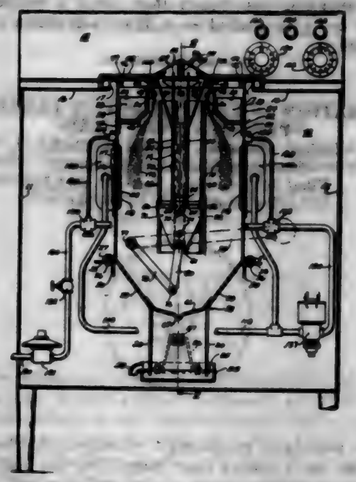
2,945,767

PROCESS FOR BROILING FOOD

Louis A. M. Phelan, Roscoe, and John W. Vos, Rockton, Ill.; said Vos assignor to said Phelan

Filed Apr. 21, 1958, Ser. No. 729,788
8 Claims. (Cl. 99—107)

1. The process of broiling meat by subjecting it to intense radiant heat in an atmosphere that is substantially



free of excess oxygen whereby the meat will not be burned and its surface will be quickly seared.

2,945,768

VITREOUS REFRACTORY COMPOSITION AND METHOD FOR MAKING SAME

Ralph E. Grim, Urbana, Ill., assignor to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland

No Drawing. Filed Sept. 25, 1958, Ser. No. 763,173
8 Claims. (Cl. 106—52)

1. The method of making a vitreous refractory composition which comprises mixing the silica residue produced by removal of cations other than silica from a mineral structure in which there is a continuous silica skeleton, phosphoric acid in an amount such that the P_2O_5 content of the mixture, on a volatile-free basis, is within the range of about 0.25% to about 15%, and firing said mixture at a temperature sufficient to melt said mixture and cooling the molten mixture.

2,945,769

CEMENT COMPOSITION

Armando R. Gann, Whittier, and Wendell G. Markham, Downey, Calif., assignors to BJ Service, Inc., Long Beach, Calif., a corporation of Delaware

Filed Aug. 6, 1957, Ser. No. 677,096
12 Claims. (Cl. 106—98)

1. An improved cement slurry for cementing casings in the borehole of a well consisting essentially of Portland cement, a pozzolanic material in the relative proportion of from 10 through 100% by weight of said cement, a gelatinous clay in the relative proportion of from 10 through 40% by weight of said cement and water to provide a pumpable slurry.

2,945,770

NACREOUS MOLYBDENUM DISULFIDE

Lawrence Sachow, New York, N.Y., assignor to Francis Earle Laboratories, Inc., Peekskill, N.Y., a corporation of New York

No Drawing. Filed Dec. 4, 1957, Ser. No. 700,558
4 Claims. (Cl. 106—148)

1. A nacreous composition comprising a paste having as a nacre-producing substance therein molybdenum di-

sulfide crystals having a length in the range of about 1 to 50 microns, a width not greater than about 12 microns, and a thickness not greater than about 1 micron, said crystals being suspended in a light-transmitting supporting medium.

2,945,771
FORMATION OF LIGHT-SENSITIVE LAYERS ON PHOTOGRAPHIC FILMS
Hubert Mansfeld, Eduard-Steinle-Str. 7, Stuttgart-Sillenbuch, Germany
Filed May 3, 1958, Ser. No. 505,723
7 Claims. (Cl. 117—34)

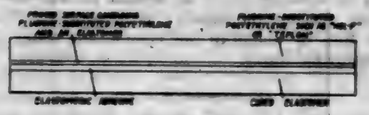


1. A process of producing a photographic photosensitive layer on a carrier base; comprising the steps of vaporizing by heating under a vacuum silver and bromine to form vapors thereof, directing onto said base said vapors for chemical inter-reaction, while unidirectionally and substantially continuously moving said base within said vacuum at predetermined speed, and bringing to condensation said vapors to thereby form silver bromide on said base.

2,945,772
CELLULOSIC SPONGE
George Martin James, Columbia, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 24, 1958, Ser. No. 710,862
14 Claims. (Cl. 117—98)

1. A cellulosic sponge impregnated with 0.1–3.0%, based on the dry weight of cellulose, of a mixture of a rosin amine and a quaternary ammonium halide, the halogen in the quaternary ammonium halide being a member of the group consisting of chlorine and bromine, the quaternary ammonium halide comprising 15–75% of said mixture and the rosin amine comprising the remainder.

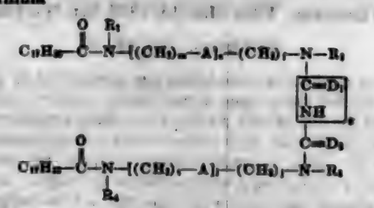
2,945,773
LAMINATION OR COATING OF FLUORINE-SUBSTITUTED POLYETHYLENES WITH OR ON OTHER SUBSTANCES
Ahmed Pasagrout, North Haven, Conn., Ray L. Hauser, Boulder, Colo., and Francis C. Fusco, Hamden, Conn., assignors to The Connecticut Hard Rubber Company, New Haven, Conn., a corporation of Connecticut
Filed Mar. 14, 1958, Ser. No. 494,838
4 Claims. (Cl. 117—138.8)



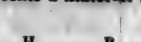
1. A product comprising a fluorine-substituted polyethylene plastic selected from the group consisting of tetrafluoroethylene and trifluoro-monochloro-ethylene, said plastic having fused to at least a portion of its surface particles of the fluorine-substituted polyethylene plastic and particles of silicone rubber.

2,945,774
METHOD OF FINISHING TEXTILE FIBERS WITH PHOSPHATE ANTISTATIC AGENTS
Calvin J. Waltham, Decatur, Ala., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Apr. 4, 1956, Ser. No. 578,928
6 Claims. (Cl. 117—139.5)

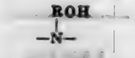
1. A method of finishing cellulose acetate textile fibers which comprises lubricating the same and inhibiting the accumulation of electrostatic charges thereon by applying to said cellulose acetate textile fibers a composition comprising a mineral oil and about 5 to 25% by weight of the reaction product of an acid from the group consisting of phosphoric acid and alkyl phosphoric acids wherein the alkyl radical contains 1 to 8 carbon atoms with a substituted carbamyl compound having the general formula



wherein R_1, R_2, R_3 and R_4 are selected from the group consisting of hydrogen and alkyl and hydroxyalkyl radicals of 1 to 4 carbon atoms, D_2 and D_3 represent a material selected from the group consisting of oxygen, sulfur and amino groups, g is not a fraction and varies from 0 to 3, A represents a material from the group consisting of



wherein R is an alkyl group of 1 to 4 carbon atoms,

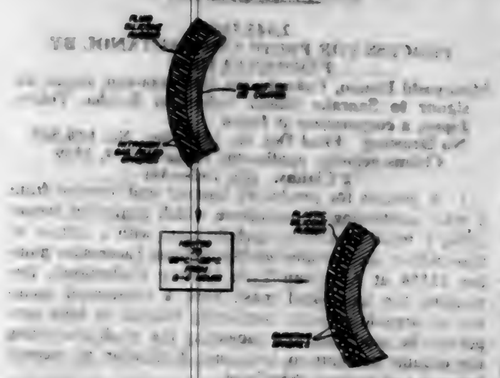


wherein —ROH is an alkylol group of 1 to 4 carbon atoms, oxygen and sulfur, f and j vary from 1 to 6, e and l vary from 0 to 6, and m and t vary from 1 to 6, f, j, e, l, m and t all being whole numbers.

2,945,775
SIZING OF PAPER WITH ACRYLAMIDE POLYMERS
Freeman R. Lehmann, Lloyd H. Silvernail, and Elmer K. Silbert, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 18, 1955, Ser. No. 502,191
5 Claims. (Cl. 117—155)

1. In a method for simultaneously increasing the resistance of paper to penetration by grease and oil and by water-based inks, the step of applying to a preformed paper product an aqueous solution of an acrylamide polymer, said polymer being characterized by a viscosity of at least about 3 centipoises for an aqueous 0.5 percent by weight solution of the polymer in distilled water adjusted to a pH of 3 to 3.5 and at a temperature of 25° C. and being employed in the amount of from about 0.2 to 10 pounds per TAPPI ream and said applied solution comprising from about 0.1 to 5 percent by weight of the polymer, the exact percent being inversely proportional to the viscosity of the polymer.

2,945,776
POTTING COMPOSITION AND PROCESS
Dominick R. Campbell, Dumont, and Donald J. Mellman, Garfield, N.J., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Dec. 26, 1957, Ser. No. 704,019
4 Claims. (Cl. 117—201)



1. The method of potting an electronic component which comprises, mixing hollow gas-filled resinous spheres with a fluid silicone rubber compound to form a plastic potting composition having gas cells therein, coating the component with the plastic potting composition, heating the coated component in an oven to cure the potting composition to expand the gas within said spheres until they burst, and encapsulating said coated component in a resin.

2,945,777
PROCESS FOR THE SACCHARIFICATION OF SOFTWOOD SAWDUST
Theodor Richter, Mannheim, Germany, assignor to Udic Société Anonyme, Lausanne, Switzerland
No Drawing. Filed Dec. 27, 1957, Ser. No. 705,515
1 Claim. (Cl. 127—37)

A process for the saccharification of soft wood sawdust comprising subjecting the sawdust at a temperature of about 15 to 30° C. to a prehydrolysis with hydrochloric acid containing 34 to 37 percent of HCl by weight for a time sufficient to dissolve substantially the hemicelluloses in an amount corresponding to about 22 to 26 percent of the dry wood substance, separating the obtained solution from the solid residue, subsequently treating in a main hydrolysis step the solid residue of said prehydrolysis with hydrochloric acid of about 40 to 42% HCl content, and recovering crystalline glucose from the sugar syrup obtained in said main hydrolysis.

2,945,778
TREATMENT OF ALUMINUM AND COMPOSITION THEREFOR
Richard J. Lipinski, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Mar. 7, 1957, Ser. No. 644,487
9 Claims. (Cl. 148—6.24)



1. The method of improving the bondability of an aluminum surface to organic polymeric material which comprises contacting said surface with a solution, at a pH below 4, consisting essentially of a nitrosulfonic acid until said aluminum surface is visibly altered through formation of a film thereon, and recovering the aluminum with said film on the surface thereof.

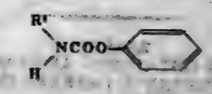
2,945,779
TREATMENT OF TITANIUM AND PRODUCT, AND COMPOSITION THEREFOR
Richard J. Lipinski, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Mar. 7, 1957, Ser. No. 644,499
9 Claims. (Cl. 148—6.24)



1. The method of improving the bondability of a titanium surface toward organic polymeric material which comprises contacting said titanium surface with a solution, at a pH below 4, of a nitrosulfonic acid and fluoride ions in an amount between about 0.1% and about 10%, by weight, based on the weight of said nitrosulfonic acid, said solution being substantially free of strong acid other than said nitrosulfonic acid, nitric acid and hydrofluoric acid in an amount to provide said fluoride ions, until said titanium surface is visibly altered through formation of a film thereon and recovering the titanium with said film on the surface thereof.

2,945,780
SYNERGISTIC INSECTICIDAL COMPOSITIONS
Howard A. Jones and John A. Garmon, Baltimore, Md., and Burton C. Dickinson, Lyndonville, N.Y., assignors to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Original application May 24, 1955, Ser. No. 496,596. Divided and this application Oct. 15, 1958, Ser. No. 767,255
12 Claims. (Cl. 167—22)

2. The method of killing insects which comprises applying to the insects and their habitat a synergistic insecticidal composition comprising O,O-dimethyl S-(1,2-dicarbethoxyethyl) dithiophosphate, and an organic carbamate ester of the following general formula



wherein R^4 is selected from the group consisting of ethyl, isopropyl, butyl, n-butyl, tert-butyl and dodecyl radicals, and wherein said components are present in the ratio of about two parts of said carbamate per part of said dithiophosphate.

2,945,781
METHOD OF CONTROLLING NEMATODES EMPLOYING ALKALI METAL SALT OF N-(n-PROPYL) DITHIOCARBAMATE
Phillip H. Santmyer, Florissant, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 12, 1958, Ser. No. 779,812
4 Claims. (Cl. 167—22)

1. The method of controlling nematodes in soils wherein crops are growing which comprises applying to the said soil an alkali metal salt of N-(n-propyl) dithiocarbamate at a nematocidal level of application below the threshold of phytotoxicity level.

2,945,782
DISINFECTANT COMPOSITIONS
Ernst Schraufstetter, Wuppertal-Elberfeld, Ernst Gottacker, Wuppertal-Barmen, and Hermann Wolz, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Aug. 7, 1956, Ser. No. 602,518
Claims priority, application Germany Aug. 11, 1955
3 Claims. (Cl. 167—30)

1. An aqueous composition which comprises water, a disinfecting amount of dichlorobenzyl alcohol, an alcohol solvent for said dichlorobenzyl alcohol, and an anion-surfactant selected from the group consisting of an alkyl sulfate, an alkyl sulfonate, an aralkyl sulfonate and an alkyl aryl sulfonate.

2,945,783
ALUMINUM PROTEIN ANTACID AND PROCESS OF MAKING
Stewart M. Beckmann, Berkeley Heights, N.J., and John E. Garside, Garden City, N.Y., assignors to Rehnis Company, Inc., a corporation of New York
No Drawing. Filed June 20, 1957, Ser. No. 667,060
9 Claims. (Cl. 167—55)

1. A process for making an antacid composition which comprises forming an aqueous dispersion of a water-dispersible protein selected from the group consisting of casein, gelatin, lactalbumin, egg albumin and solubilized soya protein and a water-dispersible basic aluminum hydroxy salt gel at a pH at which aluminum proteinate does not precipitate, and removing sufficient water from the dispersion at a temperature below the heat denaturation temperature of the protein to recover a solid product effective as an antacid.

2,945,784
STREPTOMYCIN AND DIHYDROSTREPTOMYCIN SALTS
Gustavo A. Weltmeer, Torre Annunziata, Naples, Italy, assignor to Lepetit S.p.A., Milan, Italy
No Drawing. Filed Mar. 25, 1957, Ser. No. 647,963
Claims priority, application Italy Mar. 29, 1956
8 Claims. (Cl. 167—65)

1. The crystalline calcium glucoheptonate complex of the formula:

$$(Str)_3.(H_2SO_4)_3.[Ca(C_7H_{15}O_8)_2]_3$$

wherein Str is a member of the class consisting of streptomycin and dihydrostreptomycin.

2,945,785
METHOD OF OBTAINING ADRENOCORTICOTROPIC HORMONE PREPARATION OF ENHANCED POTENCY
Wilfrid F. White, Lombard, Wendell A. Landmann, Clarendon Hills, and William L. Fierce, Algonquin, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 15, 1952, Ser. No. 309,586
4 Claims. (Cl. 167—74)

1. The chromatographic separation method for obtaining an adrenocorticotropic hormone preparation of enhanced potency from a mixture of ACTH-active and ACTH-inactive components obtained from pituitary glands, characterized by the steps of percolating said mixture in an aqueous solution at an alkaline pH up to 9.0 through a finely-divided bed of the salt form of a carboxylic-type cation exchange resin, said resin being characterized by having carboxylic acid groups in the salt form as the only active exchange centers, thereby adsorbing the ACTH-active component on said resin in preference to said ACTH-inactive component, removing a substantial portion of the unadsorbed ACTH-inactive component from said resin with the percolate while leaving the ACTH-active component on said resin, and then eluting the ACTH-active component from said resin by percolating an aqueous solution at an alkaline pH above 8.0 through said resin, thereby obtaining in the percolate from said last-mentioned percolation an ACTH preparation of enhanced potency.

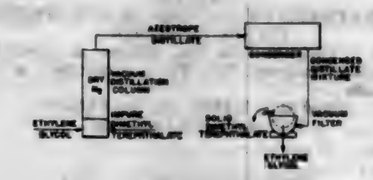
2,945,786
PROCESS FOR PRODUCING BUTANOL BY FERMENTATION
Motoyuki Hongo, Fukuoka-shi, Fukuoka-ken, Japan, assignor to Seureka Shuzo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
No Drawing. Filed Oct. 15, 1959, Ser. No. 846,568
Claims priority, application Japan Apr. 4, 1959
2 Claims. (Cl. 195—44)

1. A process for producing butanol and acetone from a mash containing carbohydrate which comprises inoculating a mash containing carbohydrate with a culture of *Clostridium saccharoperbutylacetonicum* (accession number 13564 at American Type Culture Collection), fermenting the inoculated mash until a substantial quantity of organic solvents containing butanol at high proportion be produced, and subjecting the mash containing the organic solvents to fractional distillation to recover butanol and acetone therefrom.

2,945,787
GLUTAMIC ACID SYNTHESIS
Robert C. Good and Oscar L. Norman, Northbrook, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed June 27, 1957, Ser. No. 668,296
11 Claims. (Cl. 195—47)

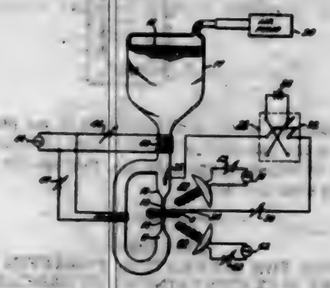
1. A process for preparing L-glutamic acid which comprises aerobically fermenting a substance selected from the group consisting of L-alpha-hydroxyglutarate and substances affording L-alpha-hydroxyglutarate under the fermentation conditions in aqueous admixture with a nitrogen source comprising essentially a substance selected from the group consisting of ammonia, ammonium salts, and urea and a biological catalytic system produced by a microorganism selected from a genus of the group consisting of Pseudomonas and Aeromonas at a temperature at least about 5° C. above the optimum growth temperature of said microorganism.

2,945,788
PROCESS FOR THE PURIFICATION OF DIMETHYLTEREPHTHALATE
Anton Wutzl, Kleinwallstadt (Ufr.), and Erhard Siggel, Landesbach (Main), Germany, assignors to Vereinigte Glanzstoff-Fabriken A.G., Wuppertal-Elberfeld, Germany
Filed Nov. 19, 1956, Ser. No. 622,778
4 Claims. (Cl. 202—42)



1. A process for purification of dimethylterephthalate characterized by azeotropic, vacuum distillation at about 44 mm. Hg and about 120° C. of dimethylterephthalate in the presence of ethylene glycol.

2,945,789
METHOD FOR FABRICATING METAL-SEMICONDUCTOR ALLOYED REGIONS
Richard A. Williams, Collingswood, N.J., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 25, 1955, Ser. No. 549,062
7 Claims. (Cl. 204—15)



1. A method for producing an accurately-located localized junction between two regions of semiconductive material of different conductivities, comprising directing against a portion of a body of semiconductive material a jet of an electrolyte containing ions of a metal which, when alloyed with said semiconductive material, modifies the conductivity thereof, while passing an electric current between said body portion and said jet in a direction to effect electrodeposition of said metal ions upon said body portion, simultaneously maintaining the temperature of said jet, at the point of its impingement upon said body, above the eutectic temperature for said metal and said semiconductive material whereby said metal is deposited in molten form and alloys immediately with said semiconductive material, and subsequently cooling said body portion below said eutectic temperature to form a recrystallized region of said semiconductive material which is of altered conductivity.

2,945,790
METHOD OF ELECTROPLATING LEAD DIOXIDE
John C. Grigger, Springfield Township, Montgomery County, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
No Drawing. Filed Dec. 14, 1955, Ser. No. 552,969
20 Claims. (Cl. 204—57)

1. In the anodic electrodeposition of lead dioxide from an acid aqueous solution of lead nitrate the improvement comprising conducting the electrodeposition with at least about 0.5 gram per liter of an alkylaryloxy polyoxyethylene ethanol having from 4 to 40 ethylene oxide units dissolved in said solution.

2,945,791
INERT LEAD DIOXIDE ANODE AND PROCESS OF PRODUCTION
Fred D. Gibson, Jr., Box 797, Henderson, Nev.
Filed Mar. 5, 1958, Ser. No. 719,224
11 Claims. (Cl. 204—57)

1. In the process of electro-depositing a lead dioxide coating on a graphite anode, the electrolyte consisting essentially of an aqueous acid solution of lead nitrate in a concenration, and at a temperature that will deposit lead dioxide on the graphite anode and a surface active agent, the improvement comprising varying the anode current density for at least two successive periods of electro-deposition, the anode current density varying from about 75 to 150 amperes per square foot for the prior period of electro-deposition to about 20 to 60 amperes per square foot for the succeeding period of electro-deposition, to completely cover the graphite anode with a compact, hard, dense, smooth coating having randomly oriented crystals firmly bound to the graphite base.

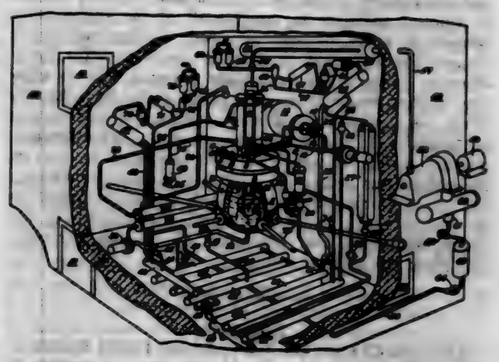
2,945,792
POLYOLEFINS
Alexander A. Miller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 28, 1957, Ser. No. 660,125
12 Claims. (Cl. 204—154)

1. A process of enhancing the cross-linking effectiveness of high energy irradiation which comprises irradiating a polymer selected from the group consisting of polyethylene and polypropylene in the presence of at least 10% of a chlorobenzene based on the weight of the polymer with ionizing radiation having energy equivalent to at least 50,000 electron volts to a radiation dose of 1×10^6 to 1×10^8 REP.

2,945,793
PROCESS FOR COLORING DIAMONDS
Ronald Arthur Dugdale, Harwell, England, assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Continuation of application Ser. No. 340,137, Mar. 3, 1953. This application Apr. 28, 1958, Ser. No. 732,775
2 Claims. (Cl. 204—154)

1. The process of coloring substantially colorless diamonds comprised of the steps of subjecting the colorless diamonds to irradiation by electrons having an energy of 1 mev. for approximately 1 hour giving an integrated electron flux of between 1 and 2×10^{18} electrons/cm.^{2}, whereby the diamonds take on a blue color with a slight green tint, and then heating the irradiated diamonds at 500° C. for half an hour whereby they become pure blue.

2,945,794
NEUTRONIC REACTOR OPERATIONAL METHOD AND CORE SYSTEM
Charles E. Winters, Clifton B. Graham, Joseph S. Culver, and Robert H. Wilson, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 18, 1952, Ser. No. 321,078
33 Claims. (Cl. 204—154.2)



1. In a neutronic reactor comprising a liquid containing fissionable material adapted to continuously flow as a stream through a container means and to engage in self-sustaining chain fission reaction, with concomitant substantial gas evolution, while maintained in a compact amassment within said container means, improved container means which comprises: an internally-unobstructed

closed container geometrically defining as its interior a volume of revolution about a principal axis through said interior; a liquid-inlet duct means communicating substantially tangentially with the interior of said container in a direction generally approximating that of the geometric revolution of said volume; means defining a gas-outlet port substantially axially concentric with, and at an axial extremity of, said container; and means defining an annular liquid-outlet port substantially axially concentric with, at the same axial extremity with container as, and surrounding, said means defining a gas-outlet port.

2,945,795

PROCESS FOR INCREASING THE HARDNESS OF FLEXIBLE RESINOUS COMPOSITION SHEETS BY IRRADIATING THE SAME

Alfred S. Cassuto, Glens Falls, N.Y., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

No Drawing. Filed May 6, 1955, Ser. No. 506,678
12 Claims. (Cl. 204—158)

1. A process for increasing the hardness of flexible resinous composition sheets useful in the manufacture of floor coverings, said sheets having a thickness of about 1/10 to about 1/4 inch, said resinous composition being selected from the group consisting of oleoresinous compositions comprising about 20 to about 50 percent binder comprising partially oxidized and polymerized drying oil and about 80 to about 50 percent filler and rubbery elastomeric compositions comprising about 15 to about 35 percent rubber binder and about 85 to about 65 percent filler, which comprises exposing said sheets to atomic radiation having a particle range of at least substantially of the order of gamma rays in the amount of at least about 8,000,000 Roentgens to yield hardened sheets showing a Mandrel test value of less than 5 inches.

2,945,796

PROCESS OF PURIFYING CARBON TETRACHLORIDE

Erik Salkr, Tonawanda, N.Y., assignor to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware

Filed June 15, 1959, Ser. No. 820,363
8 Claims. (Cl. 204—163)

1. A method of purifying crude carbon tetrachloride containing as impurities carbon bisulfide, sulfur chloride and chloroform, which comprises adding chlorine thereto in amount sufficient to convert all of the sulfur compounds to sulfur hexachloride and reacting said sulfur compounds with said chlorine to produce sulfur hexachloride, agitating the chlorinated material with an alkaline solution to effect removal of the sulfur hexachloride from the carbon tetrachloride, separating the carbon tetrachloride from the alkaline solution, photochlorinating the carbon tetrachloride thus separated to convert the chloroform present to carbon tetrachloride, washing the photochlorinated material with an alkaline solution to neutralize the hydrogen chloride formed during the photochlorination and separating the carbon tetrachloride from the alkaline solution.

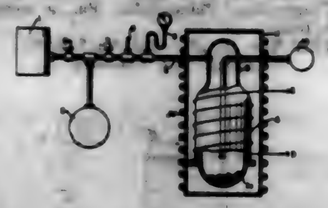
2,945,797

MANUFACTURE OF METALS OF HIGH PURITY

Claude Michel Cherrier, St. Maude, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de St. Gobain, Chauny and Cirey, Paris, France

Filed May 9, 1957, Ser. No. 658,129
Claims priority, application France May 12, 1956
8 Claims. (Cl. 204—164)

1. The method of producing elementary metals and metalloids in a state of high purity which comprises flowing through an inert reaction zone, which is protected from contact with contaminating substances by an inert wall, a continuous current of a hydride of an element



from the class of metals and metalloids in gas phase, and inducing in the gas itself within the zone an electrodeless discharge by imposing upon the gas, through the wall, an alternating electrical field.

2,945,798

PROCESS FOR SEPARATING PARAFFIN WAX FROM WAX-CONTAINING HYDROCARBON OILS

Alfred Hoppe, Frankfurt am Main, Germany, assignor to Edeleanu Gesellschaft m.b.H., Frankfurt am Main, Germany, a body corporate of Germany

Filed May 25, 1956, Ser. No. 587,326
Claims priority, application Germany May 27, 1955
2 Claims. (Cl. 208—28)



2. A process for separating paraffin wax from a mixture of wax and a hydrocarbon oil, which comprises spraying an oil-wax mixture at a temperature above its pour point downwardly in a tower by means of a plurality of separate spraying nozzles located in the upper part of the tower and so distributed over the cross section of the tower that the sprays coming from adjacent nozzles do not intersect one another, simultaneously causing a stream of cooling air to ascend through the finely divided particles of the sprayed mixture solely due to the chimney-like action of the tower, the said air stream having a temperature below the melting point of the oil-wax mixture to convert the sprayed particles into a solid granular material.

2,945,799

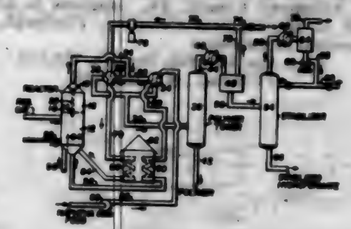
CATALYTIC CONVERSION OF HYDROCARBONS WITH REMOVAL OF FOULED MATERIAL FROM HEAT EXCHANGERS

Kenneth A. Ross, John Joseph Pasterek, and Leonard Milton Williams, Baton Rouge, La., and Charles E. Hermon, Madison, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed May 16, 1956, Ser. No. 584,969
11 Claims. (Cl. 208—48)

1. In a hydroforming process wherein naphtha feed is hydroformed in a hydroforming zone and wherein heat exchange zones are provided for indirect heat exchange between hot hydroformate vaporous products and naphtha feed and a hydrogen-containing gas and one of the heat exchange zones becomes fouled after a period of use by materials depositing from the hydroformate vaporous products and thereafter poor heat exchange is obtained and hydroformate vaporous products are fractionated in a fractionating zone to separate polymer liquid as bottoms and an unstabilized hydroformate as

an intermediate fraction which is further treated to produce stabilized hydroformate product, the improvement which comprises introducing at intervals a hydrocarbon liquid selected from the group consisting of naphtha feed, unstabilized hydroformate, hydroformate polymer liquid bottoms and hydrocarbon liquid having a boiling point range between about 184° F. and 707° F. and consisting of a mixture of hydrocarbons including aromatic hydrocarbon compounds, into the stream of hot hydroformate vaporous products passing to said fouled



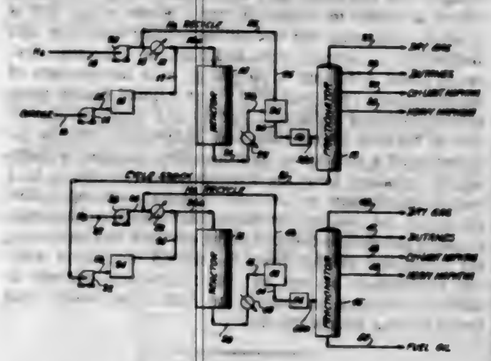
heat exchange zone without stopping the hydroforming process and in a sufficient amount to lower the temperature of said heat exchange zone so that said solvent contacts the fouling deposited material as a liquid and softens and loosens the fouling material and continuing the introduction of said hydrocarbon solvent until the fouling material is removed by the continued passage of hot hydroformate vaporous products through said heat exchange zone and into said fractionating zone and then stopping the introduction of said hydrocarbon liquid.

2,945,800

MULTIPLE PASS CATALYTIC CRACKING

Frank G. Ciapetta, Upper Darby, Pa., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed June 6, 1955, Ser. No. 513,972
4 Claims. (Cl. 208—89)



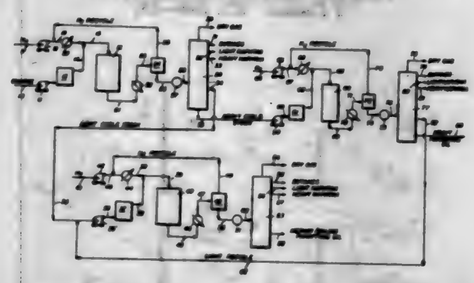
1. A process for hydrocracking hydrocarbon fractions in a manner which produces lower dry gas yield, lower C_5+ light naphtha yield, higher heavy naphtha yield and a fuel oil with a higher diesel index as compared to once-through operations, which comprises: contacting, in a first reaction zone, a hydrocarbon fraction having an initial boiling point of at least about 400° F., a 50 percent point of at least 500° F. and an end boiling point of at least about 600° F., with a catalyst comprising between about 0.05 percent and about 20 percent, by weight of the catalyst, of at least one metal of the platinum and palladium series deposited upon a synthetic composite of oxides of at least two metals of groups IIA, IIIB and IV of the Periodic Arrangement of the Elements having an activity index of at least 25 in the presence of hydrogen and under hydrocracking conditions which effect a portion of the desired ultimate conversion of said hydrocarbon fraction into products boiling below 390° F. with a net consumption of hydrogen by said fraction; contacting at least the portion of the effluent of said first reaction zone which boils above 390° F. with a catalyst of the same type used in the first reaction zone in a second reaction zone under hydrocracking conditions milder than those of the first reaction zone, which conditions include a temperature substantially below the temperature used in the first reaction zone, to effect the remainder of the desired conversion to products boiling below 390° F. with a net consumption of hydrogen in said second reaction zone and the reaction conditions in both of said zones including temperatures within the range about 400 to about 825° F., hydrogen pressures within the range about 100 to 2500 pounds per square inch gauge, a molar ratio of hydrogen to hydrocarbon charge within the range about 2 to about 80 and a liquid hourly space velocity within the range about 0.1 to about 10.

2,945,801

CATALYTIC CRACKING

Frank G. Ciapetta, Silver Spring, Md., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

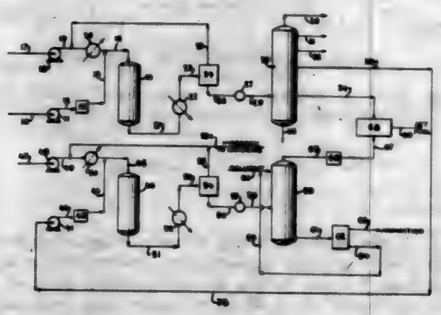
Filed Aug. 11, 1959, Ser. No. 832,930
3 Claims. (Cl. 208—89)



1. A process for producing valuable hydrocarbon products which comprises contacting in a first reaction zone, a petroleum fraction having an initial boiling point of at least about 400° F., a 50 percent point of at least about 500° F. and an end boiling point of at least about 600° F. and boiling substantially continuously between said initial boiling point and said end boiling point, with a catalyst comprising between about 0.05 percent and about 20 percent, by weight of the catalyst, of at least one metal selected from the group consisting of metals having atomic numbers of 44 to 46, inclusive, and 76 to 78, inclusive, deposited upon a synthetic composite of at least two solid refractory oxides of elements of groups IIA, IIIB and IV of the periodic arrangement of the elements, said composite having an activity index of at least 25, in the presence of hydrogen in amounts, expressed in molar ratio of hydrogen to hydrocarbon charge, within the range about 2 to about 80, at a pressure within the range about 100 pounds per square inch gauge to about 2500 pounds per square inch gauge, at a liquid hourly space velocity within the range about 0.1 to about 10, and at a temperature within the range about 500° F. to about 825° F., to effect conversion into products boiling at temperatures lower than about 390° F. within the range about 5 volume percent and about 50 volume percent and to produce an effluent material comprising prod-

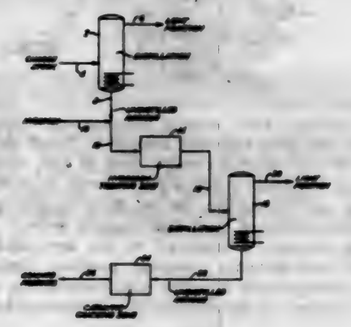
ucts boiling at temperatures lower than about 390° F., a product boiling at temperatures higher than about 390° F. and a gaseous fraction rich in hydrogen; separating said product boiling at temperatures higher than about 390° F. into a lower boiling fraction and a higher boiling fraction, said lower boiling fraction having a boiling range within the range about 390° F. to about 450°–750° F. and said higher boiling fraction having a boiling range within the range about 450°–750° F. to the end boiling point of said product boiling at temperatures higher than about 390° F., contacting each of said fractions in a separate reaction zone with a catalyst of the type used in said first reaction zone, in the presence of hydrogen in amounts, expressed in molar ratio of hydrogen to hydrocarbon charge, within the range about 2 to about 80, at a pressure within the range about 100 pounds per square inch gauge to about 2500 pounds per square inch gauge, at a liquid hourly space velocity within the range about 0.1 to about 10, and at a temperature within the range about 400° F. to about 825° F. to produce from said lower boiling fraction, a naphthenic naphtha and a medium boiling range paraffinic stock and to produce from said higher boiling fraction a naphthenic naphtha and a high boiling range paraffinic stock.

2,945,802
PRODUCTION OF HIGH QUALITY LIGHT JET FUEL
Frank G. Ciapetta, Silver Spring, Md., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Dec. 16, 1957, Ser. No. 701,747
2 Claims. (Cl. 208—65)



1. A method for producing a jet combustion fuel and aromatic hydrocarbons which comprises: contacting a hydrocarbon charge stock under hydrocracking conditions in the presence of a hydrocracking catalyst and hydrogen in amounts, expressed in molar ratio of hydrogen to hydrocarbon charge, within the range about 2 to about 80, to convert at least a portion of the hydrocarbon charge into jet fuel boiling range material with an initial boiling point of at least 160° F. and an end boiling point within the range about 450° F. to about 550° F.; separating said jet fuel boiling range material into a cracked naphtha fraction and a hydrocracked fraction having an initial boiling point within the range about 300 to about 400° F. and an end boiling point within the range about 450° F. to about 550° F.; reforming said cracked naphtha fraction in the presence of a reforming catalyst and under reforming conditions to produce a reformate; removing aromatic hydrocarbons from said reformate to produce an aromatic fraction and a non-aromatic fraction; combining said non-aromatic fraction with said hydrocracked fraction having an initial boiling point within the range about 300° F. to about 400° F. and an end boiling point within the range about 450° F. to about 550° F. to produce thereby a finished jet fuel, and recovering aromatic hydrocarbons from said aromatic fraction.

2,945,803
PROCESS FOR HYDROGEN TREATMENT AND CATALYTIC CRACKING OF PETROLEUM HYDROCARBONS
Harold Beuther and Richard A. Flinn, Penn Hills Township, Allegheny County, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Apr. 14, 1958, Ser. No. 728,102
7 Claims. (Cl. 208—89)

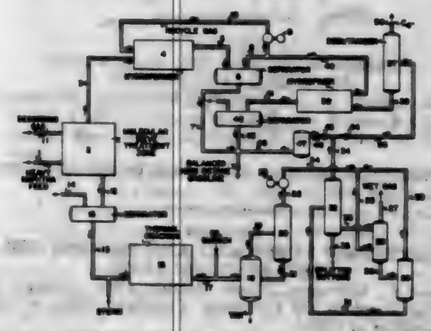


1. The process which comprises in combination subjecting a member of the group consisting of crude petroleum and residual fractions thereof which contain vanadium in amounts above 2 and below 1500 parts per million and sulfur in amounts between about 0.20 and 10.0 percent by weight and which has a sulfur-to-vanadium ratio above 200 to a first distillation to remove lower boiling straight run fractions, said distillation being terminated before a sulfur to vanadium ratio below about 200 is reached, subjecting the undistilled residue from the first distillation to contact with hydrogen at a pressure between about 1750 and 4500 p.s.i.g., at a temperature of between about 750° and 815° F., at a liquid hourly space velocity between about 0.25 and 10 at a hydrogen recycle rate of between about 1000 and 20,000 s.c.f./bbl. in the presence of a sulf-active hydrogenation catalyst, subjecting the product from the hydrogenation treatment to a second distillation to remove materials boiling below about gas oil and to obtain an undistilled residue constituting gas oil and higher boiling portions and subjecting the undistilled residue from the second distillation without elimination of any of the components thereof to catalytic cracking to convert the undistilled residue into lower boiling hydrocarbons.

2,945,804
HYDROFORMATE FEED IMPROVED BY ADSORPTION OF NORMAL PARAFFINS
Charles E. Hemminger, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Mar. 11, 1957, Ser. No. 645,112
7 Claims. (Cl. 208—91)

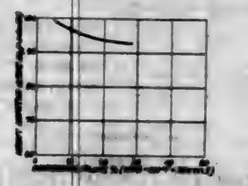
1. A method for upgrading a heavy virgin naphtha fraction boiling above about 160°–175° F. to a high octane gasoline product having a balanced high octane number rating for its lower boiling as well as for its higher boiling components, which comprises vaporizing

the heavy virgin naphtha fraction, passing the resulting vapors of said fraction through a bed of molecular sieves having a pore diameter of about 5 angstrom units which selectively adsorb normal paraffins from said vapors, recovering a remaining vapor stream of the naphtha fraction essentially free of normal paraffins, hydroforming the thus recovered naphtha hydrocarbons freed of the normal paraffins in said remaining vapor stream by contact with a hydroforming catalyst in the presence of hydrogen at from 750°–1050° F. and at pressures of from 50–1000 p.s.i.g. for a period sufficient to raise the octane number of the hydroforming product to above about 95



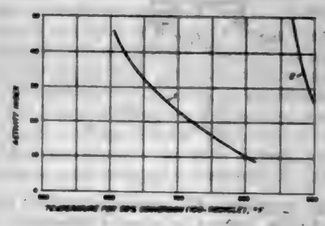
Research octane number, desorbing the adsorbed normal paraffins from the molecular sieves, thermally steam cracking the normal paraffins desorbed from the sieves to produce lower boiling C_5+ naphtha hydrocarbons which are highly olefinic, gaseous olefins and tars, fractionating and treating the thermal cracking product to remove tars, gaseous components and to recover said lower boiling C_5+ olefinic naphtha hydrocarbons substantially free of diolefins, and blending the recovered lower boiling C_5+ highly olefinic naphtha products of the thermal cracking boiling in the range of 100° to 200° F. with the naphtha product from the hydroforming to obtain the high octane gasoline product.

2,945,805
PRODUCTION OF HIGH QUALITY GASOLINE AND DIESEL FUEL BY HYDROCRACKING A REFRACTORY CYCLE OIL
Frank G. Ciapetta, Silver Spring, Md., and Harry L. Coonradt, Woodbury, and William E. Garwood, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Feb. 14, 1957, Ser. No. 640,204
2 Claims. (Cl. 208—110)



1. A process for hydrocracking refractory cycle stocks which have been produced in conventional catalytic cracking and which contain at least one percent, by weight, sulfur to produce directly a naphtha having a leaded (3 ml.) octane rating of at least 95 without reforming and a diesel fuel having a cetane index of at least 35, which comprises: contacting said refractory cycle stock from conventional catalytic cracking which has a sulfur content of at least one percent, by weight, an initial boiling point within the range about 300° F. to 500° F. and an end boiling point within the range about 600° F. to 900° F., with a catalyst which includes 0.05 percent to 20 percent, by weight, of the catalyst, of at least one metal selected from the group consisting of metals having atomic numbers of 44 to 46, inclusive, and 76 to 78, inclusive, deposited upon a synthetic composite of the solid oxides of at least two elements of groups IIA, IIIB and IV of the periodic arrangement of the elements, said composite having an activity index of at least 25, in the presence of hydrogen in amounts expressed as the molar ratio of hydrogen to hydrocarbon charge, within the range about 10 to about 40, at a liquid hourly space velocity within the range about 0.25 to about 5, under a hydrogen pressure within the range about 500 to about 3000 p.s.i.g. and at a temperature within the range about 600° F. to about 900° F., and correlating said temperature and space velocity to maintain the amount of conversion to products boiling below 410° F. within the range about 5 to 25 volume percent.

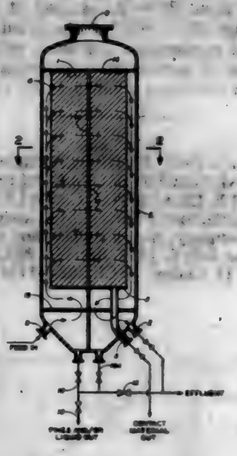
2,945,806
HYDROCRACKING HYDROCARBONS WITH A PLATINUM GROUP METAL DEPOSITED ON AN ACTIVE CRACKING CATALYST BASE
Frank G. Ciapetta, Silver Spring, Md., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 6, 1959, Ser. No. 825,016
11 Claims. (Cl. 208—110)



1. A catalytic process for hydrocracking a relatively high boiling distillate hydrocarbon fraction, having an initial boiling point of at least about 400° F., a 50 percent point of at least about 500° F., and an end point of at least about 600° F., and boiling substantially continuously between said initial boiling point and said end point, into hydrocarbon products selected from the group consisting of substantially fuel oil, substantially gasoline, and a mixture of substantially gasoline and substantially fuel oil, wherein there is substantially no coke formation and the production of C_1, C_2 and C_4 gaseous hydrocarbons is less than about 10 percent by weight of said relatively high boiling petroleum hydrocarbon fraction, which comprises contacting said relatively high boiling petroleum hydrocarbon fraction with a catalyst that includes between 0.05 percent, by weight, and about 20 percent, by weight, of a metal selected from the group of metals having atomic numbers of 44 to 46, inclusive, and 76 to 78, inclusive, deposited upon a synthetic composite that has an activity index greater than 25 and which is selected from the group consisting of silica-alumina, silica-zirconia, silica-alumina-zirconia, silica-alumina-thoria, alumina-boria, silica-magnesia, silica-alumina-magnesia and silica-alumina-fluorine, at a temperature within the range about 400° F. to about 825° F.; at a hydrogen pressure, and with a net consumption of hydrogen, within the range about 100 pounds per square inch gauge to about 2500

pounds per square inch gauge, at a liquid hourly space velocity within the range about 0.1 to about 10, and at ratios of hydrogen to hydrocarbon within the range about 2 to about 80; and correlating said temperature with said liquid hourly space velocity to produce less than about 10 percent C_1, C_2 and C_3 gaseous hydrocarbons and to produce hydrocarbon products selected from the group consisting of substantially fuel oil, substantially gasoline, and a mixture of substantially gasoline and substantially fuel oil.

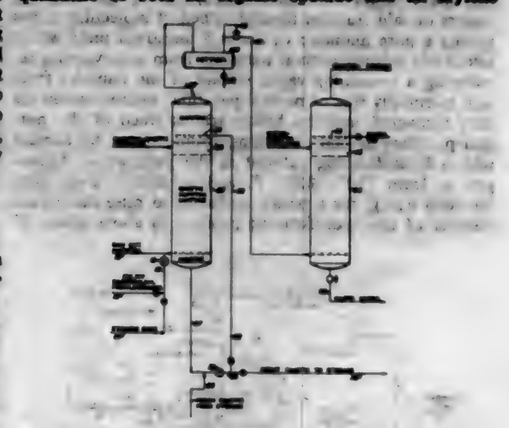
2,945,907
RADIAL FLOW REACTOR
Robert A. Farnham, Novato, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Sept. 12, 1958, Ser. No. 760,786
7 Claims. (Cl. 208—146)



5. In the operation of a vertical elongated radial flow reactor wherein contact is effected between a reactant stream and a vertical elongated solid bed of particulate material surrounded by a reactor housing, by passing said stream from spaces between said housing and said bed radially into said bed and withdrawing reaction products from said bed, the improvement which comprises introducing said stream into inlet longitudinal spaces located between said housing and said bed along a first side of said bed only, passing substantially all of said stream from said inlet spaces radially into said bed, thence through a narrow, elongated vertical slot in a vertical plate traversing said bed and separating said bed into two vertical portions, said slot being located about on the longitudinal axis of said bed, thence radially and outwardly through said bed into outlet longitudinal spaces located between said housing and said bed along a second side of said bed, said stream on arriving at said outlet spaces comprising reaction products, and withdrawing reaction products from said outlet spaces.

2,945,886
SWEETENING AND STABILIZING OF NAPHTHAS
Charles O. Petty, Tyler, Tex., assignor of one-half to La Gloria Oil and Gas Company, Tyler, Tex., a corporation of Delaware
Filed Nov. 14, 1958, Ser. No. 773,897
13 Claims. (Cl. 208—204)

1. Process of sweetening and stabilizing sour cracked naphtha comprising contacting said naphtha with small quantities of both an organic epoxide and an arylene



diamine in the presence of aqueous caustic alkali containing acid oils.

2,945,909
THICKENED LUBRICANT AND PROCESS FOR PREPARING THE SAME
Ernest C. Milberger, Maple Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 5, 1954, Ser. No. 448,693
4 Claims. (Cl. 252—28)

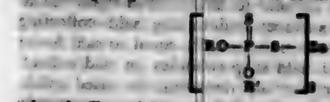
1. A thickened lubricant of good temperature susceptibility properties, consisting essentially of (1) a mineral lubricating oil of lubricating viscosity as the major component and (2) as the minor component a silica aerogel thickening agent in an amount sufficient to impart a grease consistency to the oil, said silica aerogel having been prepared from a hydrogel containing from 3 to about 8% SiO_2 by converting the hydrogel into an alcogel, volatilizing liquid contained in the alcogel to form an aerogel by heating at a temperature and pressure above the critical temperature and pressure of alcohol in the alcogel to convert the alcohol into a gas without destroying the gel structure, devolatilizing the aerogel by heating at a temperature of from about 1200° to about 1800° F. and then reducing the devolatilized aerogel to a secondary agglomerate particle size of from one to six microns, said silica aerogel being characterized by the following properties:

pH	2.5–3.0 (4 g. in 100 g. H_2O).
Average secondary agglomerate particle size before simple mixing with the oil	1–6 microns.
Average particle size after simple mixing with the oil	Not over about 0.25 micron.
SiO_2	93–96%.
Total volatiles	0.5 to 4.0% (after heating at 800° C. for ½ hour).

2,945,910
LUBRICATING OIL COMPOSITIONS CONTAINING BI-METAL DITHIOPHOSPHATES
James H. Walker, Richmond, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Dec. 31, 1956, Ser. No. 631,464
9 Claims. (Cl. 252—32.7)

1. A lubricating oil composition comprising a major proportion of a mineral lubricating oil, and from about

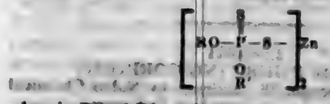
0.25% to about 20%, by weight, of a bi-metal salt of a dithiophosphoric acid, wherein said bi-metal salt is prepared by reacting barium oxide with a zinc salt of a diester of dithiophosphoric acid of the formula:



wherein R and R' are hydrocarbon radicals containing a total of from 12 to 70 carbon atoms, wherein the mol ratio of said barium to said zinc has a value from 3.9 to 4.6, said bi-metal salt having a molecular weight in the range of 150,000 to 550,000.

2,945,911
OXIDATION AND SILVER CORROSION RESISTANT LUBRICANTS
Andrew D. Abbott, Reno, and James H. Walker, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed Dec. 31, 1956, Ser. No. 631,474
4 Claims. (Cl. 252—32.7)

1. A lubricating oil composition consisting essentially of a major proportion of an oil of lubricating viscosity and a carbonated bi-metal salt of a dithiophosphoric acid in an amount of about 0.25% to 20%, by weight, wherein said bi-metal salt is prepared by reacting a metal material selected from the group consisting of barium oxide and barium hydroxide with a zinc dithiophosphate of the formula:



wherein R' and R" are hydrocarbon radicals selected from the group consisting of alkyl and alkaryl radicals, each radical containing from 12 to 25 carbon atoms, wherein said reaction is at a temperature of 200° F. to 450° F., followed by filtration, and carbonating at temperatures from 60° F. to 300° F., wherein said carbonated bi-metal salts of diester of dithiophosphoric acid have a molecular weight ranging from 150,000 to 500,000, and wherein the mol ratio of barium to zinc ranges from 3.7:1 to 4.6:1.

2,945,912
FILTERABLE DISPERSION OF GLYCOXIDES IN LUBRICATING OILS
Frank A. Stuart, 329 La Espiral, Orinda, Calif., and Oliver R. Brashear, 30 Alvin Road, Walnut Creek, Calif.
No Drawing. Filed Sept. 30, 1958, Ser. No. 764,226
10 Claims. (Cl. 252—33.3)

1. In the process of preparing lubricating oil compositions containing an alkaline earth metal glycoxide by forming an admixture of a lubricating oil, a dihydric alcohol containing less than 5 carbon atoms, from 0.2% to 7%, by weight, of an inorganic substance selected from the group consisting of alkaline earth metal oxides and hydroxides, an alpha-hydroxy carboxylic acid containing no more than 3 carbon atoms, and from 0.1% to 10%, by weight, of an oil soluble alkaline earth metal sulfonate, heating to remove dihydric alcohol, and filtering said admixture, the improvement comprising the process of blending into said admixture prior to filtration, a non-hydroxy monobasic carboxylic acid selected from the group consisting of formic acid and acetic acid, wherein said non-hydroxy carboxylic acid and said alpha-hydroxy carboxylic acid are present in a mol ratio of 35:65 to 80:20, wherein the mol ratio of the combination of alpha-hydroxy carboxylic acid and non-hydroxy carboxylic acid to said glycoxide has a value from 0.2 to 0.5, wherein the mol ratio of said inorganic substance to said sulfonate has a value from 1.75 to 4.0, and wherein the mol ratio of said dihydric alcohol to said inorganic substance is from 50:1 to 2:1.

2,945,913
COPPER CORROSION RESISTANT GREASE COMPOSITIONS
John L. Dreher, Berkeley, and Crawford F. Carter, Concord, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware
No Drawing. Filed July 17, 1957, Ser. No. 672,340
15 Claims. (Cl. 252—33.6)

1. A grease composition comprising a major proportion of a lubricating oil, a minor proportion, sufficient to thicken said oil to the consistency of a grease, of a metal salt of a terephthalamic acid and, in an amount sufficient to inhibit copper corrosion, a metal soap of a hydroxy-substituted fatty acid, wherein said metal, in each instance, is a metal selected from the group consisting of alkali metals and alkaline earth metals.

2,945,914
LUBRICANT COMPOSITION
Peter William Brett Sansome and James Denis Sansome-Smith, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Feb. 27, 1956, Ser. No. 567,744
Claims priority, application Great Britain Mar. 11, 1955
6 Claims. (Cl. 252—49.9)

1. A boundary lubricant selected from the group consisting of lubricant compositions consisting essentially of between about 3 and 80% cetyl trimethyl ammonium dihydrogen orthophosphate dissolved in mineral oil, between about 3 and 80% of di(cetyl trimethyl ammonium) monohydrogen orthophosphate dissolved in mineral oil, between about 3 and 80% cetyl trimethyl ammonium dihydrogen orthophosphate dispersed in petroleum jelly, between about 3 and 80% di(cetyl trimethyl ammonium) monohydrogen orthophosphate dispersed in petroleum jelly, and between about 3 and 80% di(cetyl pyridinium) monohydrogen orthophosphate dissolved in castor oil.

2,945,915
ABRASIVE DETERGENT COMPOSITIONS
Ramon Bruno Diaz, Douglas Manor, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 2, 1957, Ser. No. 632,925
6 Claims. (Cl. 252—138)

1. An abrasive detergent composition which is substantially non-scratching to porcelain and is of excellent cleaning power, which consists essentially of a major proportion of silica, the particle sizes of which are distributed throughout the range from about 6 microns to the maximum size which will pass a 140 mesh sieve, the weight distribution of the silica particles being that obtained by size-reducing sand so that a major proportion of the sand subjected to size reduction will pass a 200 mesh sieve and then removing particles outside the 6 micron to 140 mesh sieve range, and a minor proportion, up to about 20%, of a water soluble synthetic organic detergent.

2,945,916
PROCESS FOR PREPARING DETERGENT BARS
Irving Rudolf Schmolka, Long Island City, N.Y., assignor to Colgate-Palmolive Company, Jersey City, N.J., a corporation of Delaware
No Drawing. Filed Sept. 28, 1955, Ser. No. 537,269
4 Claims. (Cl. 252—161)

1. A process for the preparation of slough-resistant detergent bars comprising preparing a water soluble fatty

acid monoglyceride sulfate detergent salt from fatty material, said detergent salt containing more than about 1% free fatty acid and less than about 10% of inorganic salt, removing said free fatty acid in excess of 1% so as to produce a fatty acid monoglyceride sulfate detergent salt containing less than about 1% of said free fatty acid, plasticizing the resulting detergent salt, and shaping said plasticized detergent salt into bar form.

2,945,817
SILICA-SILICONE AEROGELS AND THEIR PREPARATION
Kenneth B. Goldblum, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 4, 1956, Ser. No. 607,591
6 Claims. (Cl. 252—317)

1. A process for preparing an aerogel which comprises (1) acidifying an aqueous solution of an alkali-metal silicate and an alkali-metal organo-siliconate, in which the organo group is selected from the class consisting of alkyl and aryl groups, to form an aqueous sol, the amount of siliconate not exceeding 85%, by weight, of the total weight of the silicate and siliconate, (2) replacing the water from the aqueous sol with a non-aqueous solvent by distilling the water therefrom with an azeotrope comprising an aliphatic monohydric alcohol having a critical temperature below 300° C., said azeotropic distillation being carried out until substantially all the water has been removed from the aqueous sol, and (3) removing the alcohol at a temperature and pressure of at least the critical temperature and pressure of the alcohol.

2,945,818
PROCESS FOR PREPARING SURFACE ACTIVE COMPOSITIONS
Raymond L. Castles, New Castle, and Robert W. Behrens, Wilmington, Del., assignors to Atlas Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Feb. 1, 1955, Ser. No. 485,584
7 Claims. (Cl. 252—353)

1. The process of preparing a salt of an orginac compound selected from the group consisting of an alkylaryl sulfonic acid containing from 8 to 18 carbon atoms in the alkyl radical and a sulfated hydroxy compound containing at least one hydrocarbon chain having from 8 to 18 carbon atoms which comprises adding to a hydrocarbon solvent solution of said organic compound containing sulphuric acid an aqueous slurry of an inorganic base and a synthetic non-ionic surface active agent in an amount sufficient to provide a weight ratio of said surface active agent to said organic compound between about 40/60 to about 75/25 whereby a composition composed of an inorganic compound and a homogeneous reaction mixture of solvent, surface active agent and salt of an organic compound is produced, and filtering precipitated inorganic sulfate from said reaction mixture.

2,945,819
PROCESS OF DRYING SOAP
Giuseppe Mazzoni, Viale Trentino 10–12, Busto Arsizio, Milan, Italy
Filed Oct. 16, 1951, Ser. No. 251,559
In Italy Nov. 3, 1945
Section 1, Public Law 690, Aug. 8, 1946
Patent expires Nov. 3, 1965
6 Claims. (Cl. 252—367)

1. A process of drying soap, comprising the steps of heating an aqueous-soap mass to a predetermined elevated temperature above the temperature at which said aqueous soap mass is substantially fluid; spraying a continuous stream of the thus heated fluid aqueous-soap mass against a collecting surface a sufficient distance through a partial vacuum to evaporate a sufficient portion of the water therefrom to dry the same to a fatty acid content in the range of laundry and toilet soaps and be cooled to a sufficiently low temperature during passage through said partial vacuum to be solidified upon reaching said collecting surface; maintaining said collecting surface at a temperature substantially equal to said lower temperature at which said soap solidifies on said collecting surface; and continuously removing the dried solidified soap from said collecting surface so as to continuously obtain a homogeneously dried, solid soap of uniform fatty acid content.

2,945,820
PRODUCTION OF EXFOLIATED VERMICULITE
George E. Ziegler, Evanston, Ill., assignor to Zonolite Company, Chicago, Ill., a corporation of Montana
No Drawing. Filed Jan. 3, 1957, Ser. No. 632,275
3 Claims. (Cl. 252—378)

1. A process of producing exfoliated vermiculite comprising the steps of continuously feeding vermiculite ore to a furnace, heating the ore to an exfoliating temperature in the furnace, discharging the exfoliated vermiculite in a stream from the furnace, maintaining the heat in the furnace at a degree to afford a predetermined temperature of the discharging stream, periodically determining the percent shrinkage of the vermiculite in the discharging stream by subjecting a specimen taken from the stream to at least one wetting and drying cycle, adjusting the heat in the furnace to a degree providing a predetermined percent shrinkage of the vermiculite in the discharging stream, and maintaining the heat in the furnace at said adjusted degree.

2,945,821
PROCESS OF INHIBITING CORROSION
Aaron Sterlin, Chicago, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Oct. 24, 1956, Ser. No. 617,933
7 Claims. (Cl. 252—392)

1. A method of inhibiting corrosion of metals caused by the presence of water in aqueous and non-aqueous liquids which comprises applying to said metals a salt of an organic aliphatic dicarboxylic acid containing at least 10 carbon atoms in a hydrocarbon structure and a glyoxalidine wherein the carbon atom in the 2-position is linked to a higher aliphatic hydrocarbon group containing at least 8 carbon atoms, the carbon atom in the 4-position is linked to a member from the group consisting of hydrogen and lower aliphatic hydrocarbon groups containing not more than 6 carbon atoms, the carbon atom in the 5-position is linked to a member from the group consisting of hydrogen and lower aliphatic hydrocarbon groups containing not more than 6 carbon atoms, there being at least one hydrogen atom on each of the carbon atoms in the 4- and 5-positions, and the nitrogen atom in the 1-position is linked to a member from the group consisting of hydrogen and lower aliphatic groups containing not more than 6 carbon atoms, said last named lower aliphatic groups being composed of atoms from the group consisting of hydrogen, carbon, nitrogen and oxygen.

2,945,822
REACTIVATION OF SOLID PHOSPHORIC ACID CATALYST
Lawrence N. Jacob, Toledo, Ohio, assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Dec. 6, 1957, Ser. No. 700,963
5 Claims. (Cl. 252—414)

1. Process for reactivating solid phosphoric acid catalyst which comprises: contacting solid phosphoric acid catalyst, which has been employed in the polymerization of gaseous olefins containing nitrogenous impurities, in a

first treatment step at room temperature with a contacting agent selected from the group consisting of (*a*) a mixture of a fatty acid containing 1 to 3 carbon atoms per molecule and a hydrocarbon having 5 to 15 carbon atoms, each component of said mixture being present in at least 10 volume percent concentration, and (*b*) a lower aliphatic ketone containing up to 6 carbon atoms, whereby substantially all of the free phosphoric acid in the catalyst and a minor amount of the basic nitrogen compounds in the catalyst are removed, subsequently treating the catalyst in a second treatment step at room temperature with the said fatty acid alone and separating fatty acid from catalyst having reduced content of nitrogen compounds as a result of said contacting.

2,945,823
STABILIZED DEHYDROGENATION CATALYST
Edward B. Cornelius, Swarthmore, Thomas H. Milliken, Jr., Moylan, and George Alexander Mills, Swarthmore, Pa., assignors to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 22, 1957, Ser. No. 660,751
2 Claims. (Cl. 252—450)

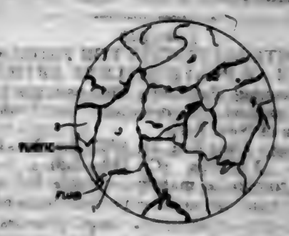
1. The method of preparing a stabilized catalyst characterized by the presence of a minor amount of chromia in a predominantly alumina carrier, comprising: dispersing a swelling, water-dispersible sodium bentonite in a dilute solution of aqueous nitric acid; forming a mixture of alumina trihydrate powder and said dispersion of bentonite in aqueous nitric acid, said mixture containing sufficient bentonite to provide from 0.5% to 2% bentonite in the alumina; subjecting said mixture to extrusion to form pellets; converting the extruded pellets to gamma alumina pellets by an elevated temperature partial dehydration treatment; reducing the surface area of the gamma alumina pellets to the range from about 60 $m.^2/g.$ to about 100 $m.^2/g.$ by treatment at temperature conditions more severe than employed in preparing said gamma alumina carrier particles; impregnating the stabilized alumina carrier particles of reduced surface area with chromic acid solution; and calcining the chromic acid impregnated alumina pellets.

2,945,824
VANADIUM HYDROCARBON CONVERSION CATALYSTS
Raymond N. Fleck, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
No Drawing. Filed Mar. 5, 1956, Ser. No. 569,240
6 Claims. (Cl. 252—455)

1. A method for preparing a coprecipitated, carrier-supported vanadium catalyst which comprises forming an aqueous ammonium sulfide solution of a vanadium compound selected from the group consisting of vanadium oxides, vanadium sulfides and ammonium metavanadate, adding thereto an aqueous solution of a soluble base-precipitatable compound of the desired carrier, and sufficient excess base to precipitate said carrier, thereby effecting coprecipitation of a hydrous oxide of said carrier plus insoluble sulfided vanadium compounds, drying and calcining the resulting coprecipitate to convert sulfide vanadium compounds therein to vanadium oxide and to reduce the sulfur content of said catalyst to below about 2%, by weight, said carrier being selected from the group consisting of alumina, silica, zirconia, titania, thoria and magnesia.

2,945,825
CONDUCTIVE PLASTIC STRUCTURE
Myron A. Coler, 56 Secor Road, Scarsdale, N.Y.
Filed Oct. 21, 1957, Ser. No. 691,364
20 Claims. (Cl. 252—500)

1. For use in electrochemical cells, an electrically conductive solid electrolyte member having a specific resistivity between about 10^8 and 10^{13} ohm-centimeters and being substantially free from voids comprising a molded body of a molding plastic having a fine lacy network of electrically conductive organic fluid extending therethrough so as to provide a multiplicity of electrically conductive paths through said molded body, said fluid be-



ing characterized by an electrical conductivity in excess of 1×10^{-4} mhos/cm., a vapor pressure less than 760 mm. at 175° C., said plastic and said fluid being mutually substantially insoluble in and chemically non-reactive with the other, said fluid being present in the said fine lacy network of said member to the extent of 0.1% to 50% of the weight of said plastic.

2,945,826
PREPARATION OF FOAMED RUBBER LATEX CONTAINING GELATINIZED STARCH
Lilian F. Everett, Biddenham, England, assignor to The Halrick Company Limited, Bedford, England
No Drawing. Filed Nov. 3, 1955, Ser. No. 544,831
Claims priority, application Great Britain Dec. 21, 1954
8 Claims. (Cl. 260—2.5)

1. A method of producing a foam rubber which comprises providing a foamable and coagulable liquid mix containing rubber in suspension, adding to the mix from about 1 to 8% of a finely-divided ungelantinized starch based on the total weight of the solid ingredients, forming the mix into a foam, setting the foam to form a coagulated cellular mass at temperatures insufficient to cause the gelatinization of the starch, and thereafter heating the mass to a temperature sufficient to cause bursting of the starch grains and gelatinization of the starch.

2,945,827
POLYETHYLENE COATED WITH WAX AND POLYSTYRENE OR POLYTETRAFLUOROETHYLENE AND PREPARATION OF CELLULAR ARTICLE THEREFROM
George E. Heuning, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Jan. 5, 1956, Ser. No. 557,439
6 Claims. (Cl. 260—2.5)

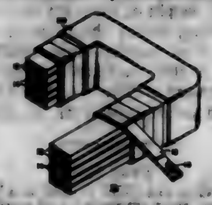
4. The method of producing cellular plastic articles, which method comprises the steps of: admixing thoroughly from about 90% to about 80% by weight of solid polyethylene in the form of cubes of the order of $\frac{1}{16}$" on a side with from about 10% to about 20% by weight of a finely divided hardening plastic for polyethylene, said hardening plastic being selected from the group consisting of polystyrene and polytetrafluoroethylene and having a particle size of the order of about 60 mesh; adding to the mixture of polyethylene and the hardening plastic a molten microcrystalline wax having a melting point between about 152° F. and about 156° F. in an amount sufficient to coat the surfaces of each cube of polyethylene with a thin film of the wax, so that a composite material is formed consisting essentially of the cubes of polyethylene coated with a thin film of the wax with the particles of the hardening plastic being adhered to the polyethylene cubes by the film of wax; mixing the composite material so formed with from about 1% to about

2% by weight, based on the total mixture, of dinitroso-pentamethylene-tetramine blowing agent in the form of particles having a particle size of the order of about 60 mesh; and extruding the resultant mixture of polyethylene, wax, hardening plastic, and dinitroso-pentamethylene-tetramine at an elevated temperature and pressure into the form of a cellular plastic article.

2,945,818
COMPOSITE MATERIALS FOR PRODUCING CELLULAR POLYETHYLENE ARTICLES
George E. Heasley, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Filed Feb. 20, 1957, Ser. No. 641,275
3 Claims. (Cl. 260—2.5)

1. A dry composite material suitable for use in the production of extruded cellular polyethylene, which comprises a plurality of relatively large granules of polyethylene, a film of polystyrene coating substantially uniformly the surfaces of each granule of polyethylene, and a minor amount of a blowing agent for polyethylene in the form of extremely finely-divided particles thereof adhered to the granules of polyethylene by the polystyrene films, the blowing agent being of a type which is thermally decomposable during the extrusion of polyethylene into gaseous products leaving no polar residue, said minor amount of the blowing agent being at least sufficient to produce the desired expansion and less than about 15 parts by weight of the blowing agent to 100 parts by weight of the polyethylene.

2,945,829
HIGH TEMPERATURE ALKYD RESIN VARNISH
Lawrence W. Frost, Murrysville, and Morris A. Mendelsohn, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 5, 1958, Ser. No. 753,184
9 Claims. (Cl. 260—31)



1. A composition of matter comprised of (A) from 98% to 90% by weight of the reaction product of (*a*) from 5 mols to 8 mols glycerol, (*b*) from 2 mols to 5 mols salicylic acid, (*c*) from 4 mols to 6 mols isophthalic acid and (*d*) from .7 mol to 1.3 mols dehydrated castor oil, there being sufficient alcohol present to provide about a 30% to 50% stoichiometric excess of hydroxyl groups to carboxyl groups and (B) from 2% to 10% by weight of at least one compound selected from the group consisting of (*a*) butylated melamine-formaldehyde resin, (*b*) butylated urea-formaldehyde resin and (*c*) pyromellitic dianhydride.

2,945,830
CATALYST FOR THE PREPARATION OF IMPROVED ALKYD RESINS
William M. Kraft, Verona, N.J., assignor to Hayden Newport Chemical Corporation, a corporation of Delaware
No Drawing. Filed Sept. 13, 1955, Ser. No. 534,148
16 Claims. (Cl. 260—22)

1. The process of producing reaction products of pentaerythritol comprising partially esterifying pentaerythritol with at least one mole of a monocarboxylic acid containing 6 to 18 carbon atoms per mole of pentaerythritol and heating and dehydrating the pentaerythritol ester in the presence of a catalytic amount of a nuclear sulfonated polystyrene cation exchange resin in the hydrogen cycle and removing from 0.6 to 0.8 mole of water of esterification per mole of pentaerythritol to form an esterified dipentaerythritol-containing pentaerythritol reaction product.

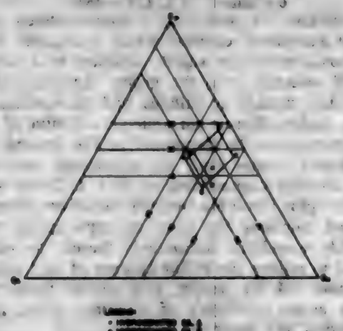
2,945,831
DISPERSIONS OF ORGANIC POLYMERS AND CHRYSOTILE ASBESTOS, PROCESS OF PREPARING FILM THEREFROM AND PRODUCT THEREOF
Evan Franklin Evans, West Chester, Pa., and Dale Edward Jackson, Newark, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 13, 1956, Ser. No. 591,030
4 Claims. (Cl. 260—29.6)

1. A liquid coating composition consisting essentially of an aqueous medium containing from 5 to 60% of colloidally dispersed polytetrafluoroethylene based on the combined weight of the liquid medium and polymer and from 1 to 20% by weight of said colloidally dispersed polytetrafluoroethylene of a colloidally dispersed chrysotile asbestos fiber having an electronegative charge.

2,945,832
POLYVINYL CHLORIDE PLASTISOL CONTAINING AN ALKYLBIPHENYL AND ALKYL ESTER OF A DICARBOXYLIC ACID
Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 5, 1957, Ser. No. 663,682
6 Claims. (Cl. 260—31.8)

1. A plastisol comprising polyvinyl chloride particles of from 0.03 to 2.0 microns diameter together with a combination plasticizer composed of an alkylbiphenyl in which the alkyl group has from 2 to 4 carbon atoms and an alkyl ester of a dicarboxylic acid, the ester having from 14 to 40 carbon atoms.

2,945,833
RUBBER COMPOSITIONS CONTAINING HYDROGENATED MINERAL OIL AND METHOD OF PREPARATION
Archie B. Hoel, Drexel Hill, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New York
Filed May 24, 1956, Ser. No. 587,024
10 Claims. (Cl. 260—33.6)



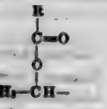
1. As a new composition of matter, rubber selected from the group consisting of natural rubber, synthetic homopolymers of conjugated dienes, and copolymers of conjugated dienes with ethylenically unsaturated monomers, plasticized with hydrogenated mineral oil containing at least 20 weight percent of aromatic hydrocarbons, and prepared by contacting a normally liquid mineral oil fraction containing not more than 50 weight percent of aromatic hydrocarbons with hydrogen to obtain 2 to 50 percent reduction in the weight percent of aromatic hydrocarbons.

2,945,834
VULCANIZABLE RUBBER COMPOSITION AND PROCESS FOR VULCANIZING SAME
David James Bryans Coulter and Vincent Kerrigan, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Feb. 4, 1957, Ser. No. 637,860
Claims priority, application Great Britain Jan. 30, 1957
7 Claims. (Cl. 260—41.5)

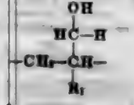
1. A process for vulcanizing a rubbery polymer of a monomer selected from the group consisting of butadiene-1:3 and 2-methyl butadiene-1:3 which comprises heating said polymer at a vulcanizing temperature in the presence of between about 1 and about 3 percent of a rubber vulcanizing agent, up to about 2 percent of a rubber vulcanizing accelerator containing the thiazole nucleus and between about 0.2 and 3 percent of a compound selected from the group consisting of sulphamic acid, salts of sulphamic acid, 4:4-sulphonyldimorpholine, 1:4-bis (dimethylsulphamyl) piperazine, 2:4-dichlorophenyl dimethylsulphamate, p-cyclohexylphenyl dimethylsulphamate and cyclohexyl sulphamic acid.

2,945,835
ALIPHATIC ESTER GROUP AND HYDROXYL GROUP CONTAINING INTERPOLYMERS
Earl C. Chapin, Springfield, Mass., and Richard F. Smith, Delmar, N.Y., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 20, 1956, Ser. No. 592,499
6 Claims. (Cl. 260—43)

1. A binary interpolymer having combined therein only polymerized monomer units (*a*) of the formula:



where R is selected from the group consisting of hydrogen and alkyl groups containing 1–3 carbon atoms and polymerized monomer units (*b*) of the formula:



where R_1 is selected from the group consisting of hydrogen and methyl radicals; said polymerized monomer units (*a*) and (*b*) being present in such proportions that the interpolymer contains 1.5–12.0 weight percent hydroxyl groups.

3. A coating composition comprising an organic solvent solution of a binary interpolymer of claim 1 and a thermosetting resin of the group consisting of alkyd resins, epoxy resins and the phenol-, urea-, and melamine-formaldehyde condensates.

2,945,836
PROCESS OF POLYMERIZING MONOMERIC STYRENE IN THE PRESENCE OF A COPOLYMER OF ETHYLENE AND VINYLENE CARBONATE
Ival O. Salyer and James A. Herbig, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Dec. 11, 1953, Ser. No. 397,793
2 Claims. (Cl. 260—45.5)

1. A process which comprises intimately dispersing from 1 to 10 parts by weight of a solid ethylene/vinylene carbonate copolymer containing from 1 to 30 weight percent of combined vinylene carbonate in said copolymer, in from 99 to 90 parts by weight liquid monomeric styrene, and heating to polymerize the resulting material in the presence of an added free-radical polymerization catalyst to form a high impact strength composition having a molecular weight of at least 100,000 and an alcohol soluble content of less than 5 percent.

2,945,837
STABILIZED POLYMETHACROLEIN COMPOSITIONS WITH PHENOLS OR MERCAPTOBENZIMIDAZOLES
Robert Lee Elfert and Bernard Mitchel Marks, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 2, 1958, Ser. No. 706,589
15 Claims. (Cl. 260—45.8)

1. A resinous composition having increased thermal and oxidative stability comprising an additional polymer of methacrolein selected from the class consisting of homopolymers of methacrolein and copolymers of methacrolein with vinyl ester comonomers containing at least 75% by weight of methacrolein, having therein dispersed from 0.01 to 5 weight percent of a stabilizer selected from the class consisting of phenolic compounds and mercaptobenzimidazoles of the class consisting of unsubstituted, methyl-substituted and phenyl-substituted mercaptobenzimidazole.

2,945,838
AMIDE STABILIZED ORGANOPOLYSILOXANE COMPOSITIONS AND THEIR PREPARATION
Maurice Prober, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Oct. 27, 1955, Ser. No. 543,251
13 Claims. (Cl. 260—45.9)

1. A composition comprising (1) an organopolysiloxane convertible to the cured solid elastic state and having the average structure

$$(R)_aSiO_{\frac{4-a}{2}}$$

where R is a member selected from the class consisting of alkyl, alkenyl, aryl, aralkyl, chloroalkyl and chloroaryl radicals and *a* has a value of from 1.98 to 2.01, inclusive, and (2) from 0.05 to 5 percent, by weight, based on the weight of (1) of an amide selected from the class consisting of (*a*) urea, (*b*) diphenyl urea, (*c*) diamides of oxalic, malonic, succinic, glutaric, adipic, pimelic, suberic, azelaic, and sebacic acids, (*d*) ditolyl urea, (*e*) dibenzoyl amide, (*f*) benzamide, (*g*) *o*-benzylacetamide, and (*h*) β-benzylpropionamide.

2,945,839
REACTIVE GROUP CONTAINING STYRENE HOMOPOLYMERS
Joseph A. Blanchette, East Longmeadow, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 22, 1957, Ser. No. 660,747
6 Claims. (Cl. 260—63)

1. A substituted vinyl aromatic hydrocarbon homopolymer wherein there are as substituents on the aromatic rings of an unsubstituted homopolymer a total of from 0.1 to 7 acetyl and carboxyl groups per aromatic ring, the carboxyl groups constituting from 10 to 95% of the total of said substituent groups, the unsubstituted vinyl aromatic hydrocarbon homopolymer being selected from the group consisting of homopolymers of styrene, divinyl benzene, alpha-methyl styrene, and aryl mono- and di-substituted derivatives thereof wherein the aryl substituent is an aliphatic hydrocarbon radical containing from 1 to 4 carbon atoms.

2,945,840

PROCESS FOR MANUFACTURE OF A POLYETHYLENE TEREPHTHALATE IN FINELY DIVIDED FORM

John Francis Lloyd Roberts, Harry James Twitchett, and Arthur Scott Wild, all of Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Oct. 27, 1958, Ser. No. 769,594
Claims priority, application Great Britain Oct. 30, 1957
3 Claims. (Cl. 260—75)

1. A process for the manufacture of polyethylene terephthalate in a finely divided particulate form which comprises adding a dilute aqueous solution of a halogenated acetic acid containing between 20% and 40% by weight of the halogenated acetic acid to a solution of polyethylene terephthalate in a solvent selected from the group of solvents consisting of halogenated acetic acids and concentrated aqueous solutions of halogenated acetic acids containing not less than 80% by weight of halogenated acetic acid, said dilute aqueous solution being added to said polyethylene terephthalate solution in and amount so that the resulting mixture contains between 50% and 65% by weight of halogenated acetic acid, and thereafter isolating the finely divided particulate polyethylene terephthalate which is precipitated.

2,945,841

POLYMERS FROM BORIC ACID AND ORGANIC DIISOCYANATES

Robert S. Aries, 41 E. 42nd St., New York 17, N.Y.

No Drawing. Filed July 31, 1957, Ser. No. 675,263
9 Claims. (Cl. 260—77.5)

1. A method of preparing boron nitrogen polymers which comprises reacting as the sole reactants anhydrous boric acid and a compound of the formula R(NCO)$_3$ wherein R is a hydrocarbon radical, in proportions sufficient to form a spatial nonlinear polymer, at a temperature above about 65° C.

2,945,842

SULFONATION OF FINELY DIVIDED POLYMERS WITH SULFONATION AGENTS IN GAS PHASE

Jacob Eichhorn and James M. Steinmetz, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 9, 1956, Ser. No. 621,215
5 Claims. (Cl. 260—79.3)

1. A method which comprises contacting solid particles of a resinous polymer of an alkenylaromatic hydrocarbon, which particles have diameters not greater than 25 microns, with a body of gas comprising at least one sulfonation agent selected from the group consisting of sulfur trioxide and chlorosulfonic acid and maintaining such solid particles of polymer in contact with such gas at temperatures in the range from —40° C. to 200° C. when the sulfonation agent is sulfur trioxide and from 30° C. to 200° C. when the sulfonation agent is chlorosulfonic acid until the resinous polymer is appreciably sulfonated.

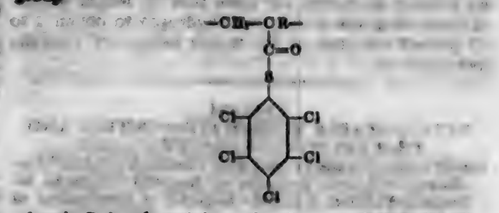
2,945,843

PENTACHLOROPHENYLTHIOACRYLATES AND POLYMERS THEREOF

Ardy Armen, Concord, and Robert E. Gentry, Jr., Pleasant Hill, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

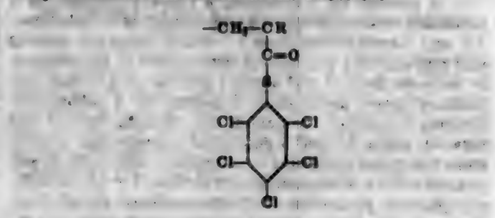
No Drawing. Filed Mar. 28, 1957, Ser. No. 649,261
10 Claims. (Cl. 260—79.7)

1. A composition of matter comprising a normally solid polymer selected from the group consisting of pentachlorophenylthioacrylate polymers and pentachlorophenylthiomethacrylate polymers, said polymer containing material interpolymerized proportions of the recurring group



wherein R is selected from the class consisting of hydrogen and methyl.

10. A composition of matter comprising an ethylenically unsaturated monomer of the structure:



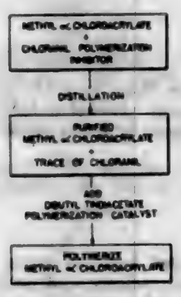
wherein R is selected from the class consisting of hydrogen and methyl.

2,945,844

PROCESS FOR INHIBITING THE POLYMERIZATION OF α-CHLORACRYLATE ESTERS AND THE RESULTANT COMPOSITIONS

Harry D. Anspon, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 29, 1957, Ser. No. 649,305
1 Claim. (Cl. 260—96.1)



A process which comprises distilling methyl α-chloracrylate containing from about 0.001% to about 1% by weight based on the weight of the methyl α-chloracrylate of chloranil and thereafter polymerizing the distillate containing chloranil with a polymerization catalyst of dibutyl tin diacetate.

2,945,845

POLYMERIZATION OF OLEFINS WITH COMPLEX CATALYST COMPRISING PLATINUM OR PALLADIUM

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,139
8 Claims. (Cl. 260—93.7)

1. In the catalytic polymerization of an alpha-monoolefinic hydrocarbon of from 2 to about 12 carbon atoms

per molecule in the presence of a catalyst consisting essentially of a titanium tetrahalide and aluminum, the improvement which comprises adding to said catalyst a metal selected from the group consisting of platinum and palladium.

2,945,846

POLYMERIZATION OF OLEFINS WITH CATALYST OF ALUMINUM TRIBUTENYL AND TITANIUM TETRACHLORIDE

Karl Wiseroth and Ernst-Gunther Kistning, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen am Rhine, Germany

No Drawing. Filed July 13, 1956, Ser. No. 597,592
Claims priority, application Germany July 19, 1955
1 Claim. (Cl. 260—94.9)

A process for polymerizing ethylene which comprises contacting ethylene with a polymerization catalyst of a mixture of aluminum tributenyl and titanium tetrachloride.

2,945,847

SALT COMPLEXES OF 3:3'-UREIDO-BIS-[8-(3-BENZAMIDO-p-TOLUIDO)-1:3:5-NAPHTHALENE SULPHONIC ACID]

James Williamson, Plateau Province, Northern Nigeria, assignor to National Research Development Corporation, London, England, a corporation of Great Britain

No Drawing. Filed May 1, 1958, Ser. No. 732,136
Claims priority, application Great Britain Mar. 27, 1956
14 Claims. (Cl. 260—96.5)

1. A complex of low solubility in water of (*a*) a water-soluble salt of 3:3'-ureido-bis-[8-(3-benzamide-p-toluido)-1:3:5-naphthalene sulphonic acid] and a water-soluble salt of a basic trypanocidal drug selected from the group consisting of (*b*) 4-amino-6-(2'-amino-1':6'-dimethylpyrimidyl-4'-amino)-quinaldine, (*b'*) 2:7-diamino-9-phenyl-10-ethylphenanthridine, (*b''*) 2-amino-7-(2'-amino-1':6'-dimethylpyrimidyl-4'-amino)-9-p-aminophenyl-10-methylphenanthridine, and (*b'''*) 2-amino-7-(2'-amino-1':6'-dimethylpyrimidyl-4'-amino)-9-phenyl-10-ethylphenanthridine, the ratio of the reactants being such that for each molecule of the first reactant the product of the number of molecules of the second reactant and the number of cationic centers therein is six.

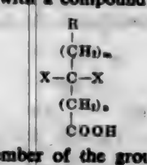
2,945,848

AZO DYESTUFFS AND PRODUCTION THEREOF

Francis K. Cole, Woodstock, Ill., assignor to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

No Drawing. Filed Aug. 20, 1957, Ser. No. 679,138
4 Claims. (Cl. 260—172)

1. The azo dye coupling product of a member of the group consisting of diazonium salts of the benzene and naphthalene series with a compound having the formula



wherein R is a member of the group consisting of hydrogen and carboxyl radicals; *m* is an integer from 0 to 15, *n* is an integer from 0 to 4, and X is a radical of a member of the group consisting of phenol, resorcinol, phloroglucinol and beta-naphthol.

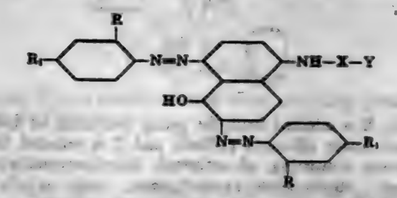
2,945,849

DISAZO COMPOUNDS CONTAINING A QUATERNARY AMMONIUM GROUP

Winfried Kranchenberg, Leverkusen-Bayerwerk, and Konrad Weis, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,468
Claims priority, application Germany Mar. 4, 1957
5 Claims. (Cl. 260—185)

1. A disazo dyestuff corresponding to the formula



wherein R and R_1 stand for members selected from the group consisting of cyanogen and nitro, X means a lower alkylene bridging member, and Y stands for a tri-lower alkyl ammonium group.

2,945,850

PURIFICATION PROCESS

Alfred E. Jurist, Brooklyn, N.Y., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Mar. 25, 1959, Ser. No. 801,733
4 Claims. (Cl. 260—210)

1. A process which comprises treating at a pH of about 7 a boron containing solution of dihydrostreptomycin with an ion exchanger which is an insoluble resin of a polyhydroxyalkamino-alkylated-styrene copolymer, and recovering the dihydrostreptomycin.

2,945,851

PROCESS FOR OBTAINING AN ACTIVE SUBSTANCE WITH ACTION ON THE HEART FROM PLANTS OF THE VOACANGA GENUS

Ulrich Renner, Biberach (Riss), Wurttemberg, Germany, assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed June 19, 1958, Ser. No. 743,008
Claims priority, application Switzerland June 21, 1957
15 Claims. (Cl. 260—236)

1. Process for recovering a new cardio-active substance and its salts from the total extract of parts from plants of the genus *Voacanga africana*, comprising separating accompanying substances by extraction of an aqueous solution of the extract at a pH value between 2.8 and 3.8 with an organic solvent immiscible with water selected from the group consisting of benzene, diethyl ether and lower fatty acid ester, adjusting the aqueous phase to a pH value between 4.5 and 8, thus liberating the mixture of crude bases and separating said crude bases, dissolving them in a lower alkanol, allowing to crystallise, rejecting the crystals and recovering the new cardio-active substance from the alkanolic filtrate.

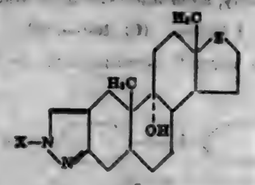
2,945,862

17-OXYGENATED 5α-SUBSTITUTED ANDROSTANO [3,2-c] PYRAZOLES AND DERIVATIVES

Clarence G. Bergstrom, Chicago, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 20, 1959, Ser. No. 814,382
8 Claims. (Cl. 260—239.5)

1. A compound of the structural formula



wherein X is selected from the group consisting of hydrogen and lower alkanoyl radicals and Z is selected from the group consisting of carbonyl, β-hydroxymethylene, α-(lower alkyl)-β-hydroxymethylene, and α-(lower alkyl)-β-(lower alkanoyl)-oxymethylene radicals.

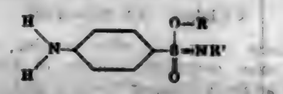
2,945,863

BACTERIOSTATIC COMPOUNDS AND PROCESSES FOR THEIR PREPARATION

Remsen Ten Eyck Schenck, Bangor, Pa., assignor to Keystone Chemurgic Corporation, Bethlehem, Pa., a corporation of Pennsylvania

No Drawing. Filed Sept. 18, 1958, Ser. No. 761,692
14 Claims. (Cl. 260—239.69)

1. Water-soluble essentially neutral compounds having bacteriostatic properties, consisting of the alkali metal salts of substances characterized by the formula



where R is selected from the group consisting of γ-sulfopropyl, δ-sulfobutyl, and o-sulfobenzyl, and R' is selected from the group consisting of 2-pyridyl, 2-thiazolyl, 4-methyl-2-pyrimidyl, and 2-(5-ethyl-1,3,4-thiadiazolyl).

2,945,854

CERTAIN BETA-PYRIDYL, DIALKOXY ACRYLOPHENONES

John Koo and Werner Richard Boehme, Somerville, N.J., assignors to Ribicon, Inc., a corporation of New Jersey

No Drawing. Filed February 17, 1959, Ser. No. 793,694
11 Claims. (Cl. 260—246)

1. A member of the group consisting of 2-R_1-3,6-dilower alkoxy-β-R_2-acrylophenone wherein R_1 is a member of the group consisting of hydrogen and hydroxy and R_2 is pyridyl and therapeutically useful acid addition salts thereof.

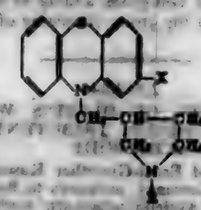
2,945,885

10-(1-SUBSTITUTED-3-PYRROLIDYLMETHYL) PHENOTHIAZINES

Rolland Frederick Feldkamp and Yao Hua Wu, Evansville, Ind., assignors to Mead Johnson & Company, Evansville, Ind., a corporation of Indiana

No Drawing. Filed Oct. 21, 1958, Ser. No. 768,548
11 Claims. (Cl. 260—243)

1. A compound selected from the group consisting of the 10-(1-substituted-3-pyrrolidylmethyl) phenothiazine having the formula



and the nontoxic pharmacologically acceptable acid addition and the nontoxic, pharmacologically acceptable lower alkyl halide quaternary ammonium salts thereof wherein X is selected from the group consisting of hydrogen, halogen and lower alkoxy and wherein R is selected from the group consisting of lower alkyl, lower alkenyl and lower alkyl phenyl.

2,945,886

2,4,6,8-TETRA-TERTIARYBUTYLPHENOXAZINE

Herbert R. Richert, Midland, and Werner M. Geiger, Saginaw, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 7, 1958, Ser. No. 753,618
2 Claims. (Cl. 260—244)

1. 2,4,6,8-tetra-tertiarybutylphenoxazine.

2,945,857

PYRIDAZINONES

William C. Hamaker, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed May 6, 1955, Ser. No. 506,659
1 Claim. (Cl. 260—250)

5-methyl-6-propyl-3(2H)-pyridazinone.

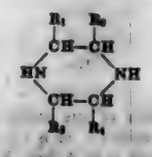
2,945,858

PRODUCTION OF PYRAZINES

Stanley D. Turallo, Windsor, Ontario, Canada, assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich., a corporation of Michigan

No Drawing. Filed June 22, 1959, Ser. No. 821,660
8 Claims. (Cl. 260—250)

1. A process for producing a pyrazine compound, which comprises, heating, vaporizing and passing a piperazine compound over a copper chromite catalyst at a temperature of about 300–375° C. and at a superatmospheric pressure in the range of about 5–65 p.s.i.g., said piperazine corresponding to the formula



wherein R_1, R_2, R_3 and R_4 are members selected from the group consisting of hydrogen, methyl and ethyl radicals.

2,945,859

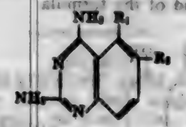
DIAMINOQUINAZOLINES AND METHOD OF MAKING

George H. Hitchings, Yonkers, and Elvira A. Falco and Kurt W. Ledig, New Rochelle, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y., a corporation of New York

No Drawing. Filed Dec. 15, 1958, Ser. No. 780,220
9 Claims. (Cl. 260—256.4)

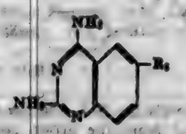
6. A compound selected from the class consisting of

A.



and

B.



wherein R_1 is lower alkyl, R_2 is selected from the class consisting of lower alkyl and hydrogen and wherein R_1 and R_2 together constitute a cycloalkyl chain of from three to four carbon atoms and R_3 is a lower alkyl group.

2,945,860

NEW PIPERAZINE-CARBOXYLIC ACID ESTERS AND PROCESS OF PREPARING THEM

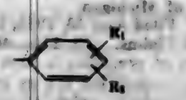
Dieter Schmidt-Barbo, Hofheim (Taunus), Friedrich Hampe, Bad Soden (Taunus), and Manfred Scherr and Georg Lämmler, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Mar. 7, 1958, Ser. No. 719,757
Claims priority, application Germany Mar. 8, 1957
7 Claims. (Cl. 260—268)

6. Piperazine-carboxylic acid esters of the general formula



in which Hal is a member selected from the group consisting of chlorine and bromine, and R is a member of the group consisting of lower alkyl, lower alkoxyalkyl, chloroethyl, diethylaminoethyl, and the radical



wherein R_1 is a member of the group consisting of hydrogen, halogen, methyl, and methoxy, and R_2 is a member of the group consisting of hydrogen, hydroxy, methyl, tertiary butyl, isobutyl, isooctyl, nonyl, isododecyl, allyl, carboxyl, carbomethoxy vinyl, and carbalkoxy radicals of lower alkoxy compounds.

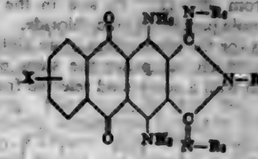
2,945,861

DYES OF THE 1,4-DIAMINO-2,3-ANTHRAQUINONE-DICARBOXIMIDE SERIES

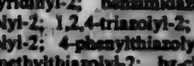
Fritz Baumann, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 4, 1958, Ser. No. 718,909
Claims priority, application Germany Mar. 12, 1957
11 Claims. (Cl. 260—373)

11. An anthraquinone dyestuff of the formula



wherein X is a radical selected from the group consisting of H, Cl, NO_2



and CH_3O; R_1 is a radical selected from the group consisting of H and lower alkyl; and R_2 and R_3 are each a radical selected from the group consisting of bz-ethoxybenzthiazolyl-2; pyridinyl-2; benzimidazolyl-2; 1(N)-methyl-benzimidazolyl-2; 1,2,4-triazolyl-2; methylpyrimidinyl-2; benzthiazolyl-2; 4-phenylthiazolyl-2; 4-methylthiazolyl-2; 4,5-dimethylthiazolyl-2; bz-chlorobenzimidazolyl-2; bz-methoxy-benzimidazole, and benzoxazolyl-2; and the methylation and ethylation products thereof.

2,945,862

PROCESS FOR THE PRODUCTION OF ALDEHYDES

Georges Mignonac and Pierre Jules André Bourbon, Toulouse, France, assignors to Compagnie Française des Matières Colorantes, Paris, France, a French company

No Drawing. Filed Apr. 11, 1958, Ser. No. 727,800
Claims priority, application France Apr. 12, 1957
2 Claims. (Cl. 260—297)

1. Process for the preparation of an aldehyde selected from the group consisting of pyridine aldehyde, benzaldehyde and benzene ortho-dialdehyde which comprises subjecting the corresponding nitrile to hydrogenation in the presence of an aqueous phase maintained at an acid pH and in the presence of a nickel-containing catalyst.

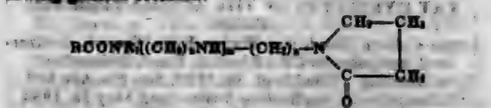
2,945,863

AMIDES OF AMINOALKYL PYRROLIDONES

Saul R. Buc, Easton, and Earl P. Williams, Pen Argyl, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 24, 1958, Ser. No. 744,982
6 Claims. (Cl. 260—326.3)

1. Amides of aminoalkyl pyrrolidones having the following general formula:

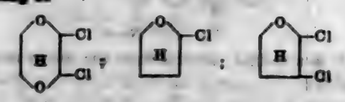


wherein R represents at least one hydrocarbon group containing from 5 to 22 carbon atoms, R_1 represents a member selected from the class consisting of hydrogen, lower alkyl and hydroxyalkyl of 1 to 5 carbon atoms, m represents a numeral ranging from 0 and 1 to 3 and n represents a positive integer of 2 to 3.

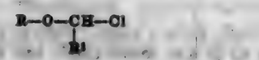
2,945,864
METHOD OF PREPARING ACETAL AND ACETAL-LIKE COMPOUNDS
Nicholas B. Lorette, Lake Jackson, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Mar. 21, 1958, Ser. No. 722,855
3 Claims. (Cl. 260—340.9)

1. A process for the preparation of 2,3-bis-(4-chlorobutoxy)-p-dioxane which comprises the steps of contacting tetrahydrofuran and 2,3-dichloro-p-dioxane at a temperature of from 50°–125° C. and in the presence of about 2 to 20 mole percent of zinc chloride.

3. A process for the preparation of an alpha (4-chlorobutoxy) ether which comprises the steps of contacting tetrahydrofuran with a compound selected from the group consisting of



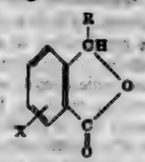
and



wherein R represents an alkyl radical having from 1 to 8 carbon atoms inclusive, and R' represents a member selected from the group consisting of hydrogen and alkyl radicals having from 1 to 8 carbon atoms, inclusive, at a temperature of from 50° to 125° C. in the presence of about 2 to 20 mole percent of zinc chloride, based on the compound employed, to replace the chlorine of the compound with an omega-chlorobutoxy radical.

2,945,865
PHTHALIDES
Donald D. Wheeler and David C. Young, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 29, 1958, Ser. No. 757,933
5 Claims. (Cl. 260—343.3)

1. A phthalide having the formula



wherein R represents a substituted anilino radical, said substituted anilino radical having a hydrogen atom in at least one position ortho to the amino nitrogen and selected from the group consisting of monophenylanilino, monochloroanilino, trichloroanilino, monobenzylanilino and mono-lower-alkanoylanilino, and wherein X is a member of the group consisting of hydrogen and chlorine.

2,945,866
VAT DYESTUFFS OF THE ACEDIANTHRONE SERIES
Armin Calicel, Basel, and Walter Kern, Stanch, Switzerland, assignors to Ciba Limited, Basel, Switzerland
No Drawing. Filed Sept. 30, 1957, Ser. No. 686,829
Claims priority, application Switzerland May 26, 1954
5 Claims. (Cl. 260—351)

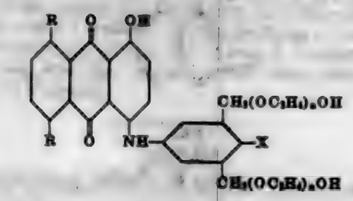
1. A vat dyestuff of the formula

Ac—NH—Aq—NH—Ac

in which Ac indicates an acedianthrone radical in which the —NH-group occupies the same position as the nitro group in the mononitro-acedianthrone obtained by mononitration of acedianthrone and reduction of the resulting nitro compound, and Aq stands for a member selected from the group consisting of the anthraquinonyl and benzanthronyl radicals.

2,945,867
ANTHRAQUINONE DYESTUFFS
Milton L. Hoolle, David I. Randall, and Edgar E. Renfrew, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 30, 1952, Ser. No. 328,816
3 Claims. (Cl. 260—380)

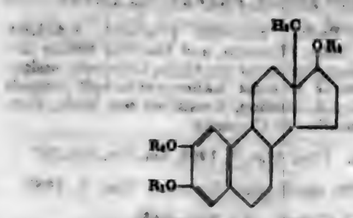
1. A compound of the formula



wherein one R stands for NO_2 and the other R stands for OH, X is selected from the group consisting of hydrogen, halogen and lower alkyl, and *n* has a value of 1 to 3.

2,945,868
2,3,17-TRIHYDROXYESTRA-1,3,5(10)-TRIENE ETHERS AND ESTERS
Willard M. Hoehn, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 8, 1959, Ser. No. 797,327
9 Claims. (Cl. 260—397.5)

1. A compound of the structural formula:



wherein R_1 is a member of the group consisting of lower alkyl and benzyl radicals, R_2 is selected from the group consisting of lower alkyl and lower alkanoyl radicals, and R_3 is a lower alkanoyl radical.

2,945,869
PHOSPHATIDE EMULSIFYING AGENT AND PROCESS OF PREPARING SAME
Curtis E. Meyer, Charleston Township, Kalamazoo County, James A. Fuscher, Kalamazoo, and Paul E. Schurr, Portage Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo Mich., a corporation of Michigan
No Drawing. Filed Apr. 30, 1956, Ser. No. 581,269
6 Claims. (Cl. 260—403)

1. The process of preparing a soya phosphatide fraction which is well-suited for use as an emulsifier in an intravenous fat product, which process comprises (1) contacting one part by weight of the monatomic, lower molecular weight aliphatic alcohol-dissolved soya phosphatides with about two parts by weight of an adsorbent selected from the group consisting of aluminum oxide, magnesium oxide and activated carbon, (2) removing the solids, and (3) recovering the desired soya phosphatide fraction from the solvent.

2,945,870
METHOD FOR PREPARING N-ACYL-p-AMINO PHENOLS
David W. Young, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Oct. 24, 1958, Ser. No. 769,297
4 Claims. (Cl. 260—404)

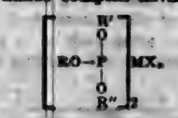
1. In the N-acylation of a p-amino phenol by condensation with a monocarboxylic acid of 2 to 21 carbon atoms, the improvement which comprises carrying out the condensation reaction in an atmosphere of sulfur dioxide and in the presence of a catalyst selected from the group consisting of boron trioxide and metaboric acid of 176° C. melting point.

2,945,871
PREPARATION OF ARYL ESTERS
James G. Murray, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Jan. 30, 1958, Ser. No. 712,872
6 Claims. (Cl. 260—410.9)

1. The process for producing aryl esters which comprises reacting an olefinic hydrocarbon, carbon monoxide, and an organic compound selected from the group consisting of halophenols, nitrohalophenols and nitrophenols in the presence of a mineral acid catalyst.

2,945,872
PREPARATION OF METALLO ALKYL XANTHATE-TRIALKYL PHOSPHITE COMPLEXES
Gail H. Birum, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 26, 1954, Ser. No. 432,593
3 Claims. (Cl. 260—431)

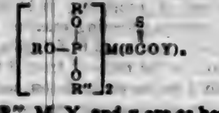
1. The method which comprises contacting a trialkyl phosphite-metal halide complex having the formula



in which R, R' and R" are alkyl radicals of from 1 to 8 carbon atoms, X is halogen, M is selected from the class consisting of the monovalent I–B metals and the divalent II–B metals of the periodic table, and *n* is an integer of from 1 to 2, with an alkali metal o-alkyl xanthate having the formula



in which Z is alkali metal and Y is an alkyl radical of from 1 to 8 carbon atoms and recovering from the resulting reaction product a metallo complex having the formula



in which R, R', R", M, Y, and *n* are as herein defined.

2,945,873
PROCESS FOR SEPARATING MIXTURES OF CHLOROSILANES
Lloyd H. Shaffer and Arthur N. Pines, Snyder, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed May 15, 1957, Ser. No. 659,228
21 Claims. (Cl. 260—448.2)

1. A process for separating chlorosilane mixtures containing a first chlorosilane part and a second chlorosilane part, the first chlorosilane part being more rapidly alcoholizable than the second chlorosilane part, said process comprising contacting the chlorosilane mixture with an alcohol, said contact time being less than that required to completely alcoholize all chlorosilanes in said mixture thereby forming an alcoholized chlorosilane part and an unalcoholized chlorosilane part, and thereafter separating the unalcoholized chlorosilane part from the alcoholized chlorosilane part.

2,945,874
ALKYLATION OF CHLORINATED SILANES
Herbert Jenkner, Hannover-Wülfel, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany
No Drawing. Filed Aug. 20, 1957, Ser. No. 679,154
Claims priority, application Germany Aug. 28, 1956
5 Claims. (Cl. 260—448.2)

1. A process for the alkylation of a silicon compound of the formula

R_aSiCl_{4-a}

wherein R is alkyl, and *a* is an integer from 0 to 3, said process comprising reacting said compound with an organoaluminum compound of the formula

$R_b^1AlCl_{3-b}$

wherein R^1 is alkyl and *b* is an integer from 1 to 3, at a temperature of about 150 to 500° C. in the presence of an alkali metal chloride in an amount substantially sufficient to convert the aluminum chloride formed during the reaction to $MeAlCl_4$, Me being alkali metal, cooling so as to precipitate said $MeAlCl_4$, and separating the obtained alkylated silanes from said precipitated $MeAlCl_4$.

2,945,875
CHLORINATION OF AROMATIC POLYISOCYANATES
James Junkichi Tazuma, Trenton, N.J., assignor to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 1, 1957, Ser. No. 649,621
8 Claims. (Cl. 260—453)

1. The method of preparing mono- and di-nuclear halogenated aromatic diisocyanates which comprises reacting a halogen selected from the group consisting of chlorine and bromine with a molten mass of an unsubstituted aromatic diisocyanate selected from the group consisting of phenyl, biphenyl and methylene bisphenyl diisocyanates at a temperature above the melting point and below the boiling point of the diisocyanate, and in the absence of solvent, thereby substituting halogen on the aromatic nucleus of the diisocyanate to produce said nuclear halogenated diisocyanate.

2,945,876
VITAMIN A INTERMEDIATES AND PROCESS FOR OBTAINING SAME
Howard C. Klein, Brooklyn, N.Y., assignor to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey
No Drawing. Filed Sept. 4, 1957, Ser. No. 681,899
15 Claims. (Cl. 260—456)

1. Crystalline quaternary salts of high purity of an amine compound which has (1) vitamin A activity, (2) an absorption maximum in the ultra-violet region of the spectrum at 3250 A. and an extinction coefficient thereat of about 1000, (3) an infra-red pattern having the characteristic amine band, (4) when treated with hydrobromic acid, gives a product having an absorption maximum in the ultra-violet region of the spectrum at 3300 A., (5) when treated with phosphoric acid gives a product having an absorption maximum in the ultra-violet region

of the spectrum of 3280–3300 A., (6) contains the vitamin A chromophoric system, (7) contains a hexamethylene tetramine fragment, (8) has a Kjeldahl nitrogen content of about 9.6%, (9) when treated with acetic anhydride gives a product which shows an amide band when subjected to infra-red analysis, (10) when treated with iodine is converted to vitamin A aldehyde and (11) when treated with aluminum isopropoxide is converted to vitamin A amine.

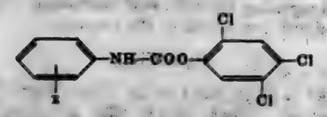
2,945,877

CARBAMIC ACID ESTERS OF 2,4,5-TRICHLORO-PHENOL

Otto Zima, Darmstadt-Eberstadt, and Ernst Jacobi, Darmstadt, Germany, assignors to E. Merck, Aktiengesellschaft, Darmstadt, Germany, a corporation of Germany

No Drawing. Filed Nov. 26, 1957, Ser. No. 698,924
Claims priority, application Germany Dec. 4, 1956
10 Claims. (Cl. 260—471)

1. Compounds having the general formula



wherein X designates a member of the group consisting of hydrogen, methyl, NO_2 and chlorine.

2,945,878

VINYL N,N-DIBUTYL ADIPAMATE

John L. Ohlson, Bedford, and Elmer K. Wilp, Cambridge, Mass., assignors to W. R. Grace & Co., Cambridge, Mass., a corporation of Connecticut

No Drawing. Filed Sept. 18, 1959, Ser. No. 839,991
1 Claim. (Cl. 260—483)

Vinyl N,N-dibutyl adipamate.

2,945,879

RESOLUTION OF DL-GLUTAMIC ACID

Ingmar Sollis, Morton Grove, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Dec. 29, 1955, Ser. No. 556,653
4 Claims. (Cl. 260—801)

1. A process for resolving racemic glutamic acid which comprises preparing a solution of racemic glutamic acid and at least about an equivalent weight of an optically active form of tyrosinhydrazide in a mixture of water and isopropanol, the ratio of water to isopropanol being between about 4:7 and about 1:2, agitating the solution at a temperature between about 15° C. and about 40° C., whereby a tyrosinhydrazide glutamic salt forms and precipitates from said solvent mixture, said salt having its acid and basic components of opposite steric configuration, and separating said salt from the reaction mixture.

2,945,880

PROCESS FOR THE PREPARATION OF THIOGLYCOLIC ACID AND SALTS THEREOF

David G. De Pree and William R. Eller, Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,250
4 Claims. (Cl. 260—526)

1. A process for the preparation of metal salts of thioglycolic acid which comprises reacting an alpha-metallo-metallic acetate containing two carbon atoms wherein said metallo and metallic elements are selected from the group consisting of alkali and alkaline earth metals with sulfur at a temperature between about 100 to 250° C. in the presence of a solvent for the sulfur.

2,945,881

PRODUCTION OF ALKYLENES AND ALKANOL AMINE POLYACETATE SALTS

William P. Cohnen, Stamford, and Leonard A. Calla, Norwalk, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 6, 1957, Ser. No. 682,319
5 Claims. (Cl. 260—534)

1. A process of producing alkali metal salts of ethylenediaminetetraacetic acid in good yield and free of objectionable color which comprises: forming a reaction medium comprising from about 50% to about 80% water having dissolved therein ethylene diamine and an alkali metal hydroxide, said amine and hydroxide being in a mol ratio range of about 1.0:4.1–5.1; adding thereto an amount of HCN and a lesser amount of formaldehyde so as to provide total mol ratios to amine within the ranges of 1:4.05–5.05 and 1:4.0–5.0, respectively; said additions being made in a manner so that at least about 30% of said HCN is added prior to any formaldehyde addition and the remaining HCN and the formaldehyde are concomitantly added at such rates as to maintain an excess of cyanide over formaldehyde; and maintaining the reaction medium at atmospheric boiling temperature greater than about 100° C. and less than about 120° C. to substantially complete the reaction and evolve water vapor whereby a resulting reaction mass having a total solids content of about 40 to about 60% is obtained; the total amounts of alkali metal hydroxide, HCN and formaldehyde added being such as to provide an alkali cyanide concentration in said resulting reaction mass of about 0.1–1.0%.

2,945,882

METHOD OF PREPARING N,N',N''-TRIPHENYLBORAZOLE

Stanley F. Stafiej, Stamford, Conn., and Stephen J. Groszos, Cincinnati, Ohio, assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 7, 1958, Ser. No. 726,634
4 Claims. (Cl. 260—551)

1. The method of preparing N,N',N''-triphenylborazole which comprises effecting reaction between lithium aluminum hydride and a B,B',B''-trihalogeno-N,N',N''-triphenylborazole in the ratio of from 3 to 8 moles of the former for each 4 moles of the latter, said reaction being effected while the said reactants are contained in an inert, anhydrous, volatilizable, liquid, reaction medium at a temperature ranging from about 1° C. up to the boiling point at atmospheric pressure of the said reaction medium; and isolating N,N',N''-triphenylborazole from the resulting reaction mass by first precipitating the solid matter suspended therein by adding to said mass a saturated aqueous solution of an acidic ammonium salt of an acid having a pK value of less than 4.75, separating the precipitated solids, and recovering N,N',N''-triphenylborazole from the resulting liquid medium containing the same in dissolved state by at least partly evaporating the said liquid medium.

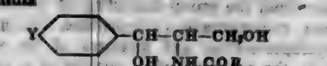
2,945,883

PROCESS FOR CONVERTING OPTICALLY ACTIVE AMINODIOLS INTO RACEMIC AMINODIOLS BY OXIDATION FOLLOWED BY RACEMIZATION

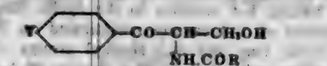
Carlo Giuseppe Alberti, Luigi Bernardi, Giovanni Lorini, and Alberico Vercellone, all of Milan, Italy, assignors to Societa Farmaceutici Italia, Milan, Italy, a corporation of Italy

No Drawing. Filed Aug. 14, 1956, Ser. No. 603,669
Claims priority, application Italy May 28, 1953
11 Claims. (Cl. 260—562)

1. The process which comprises treating a compound of the formula



wherein Y is a radical of the group consisting of H and NO_2, and the COR group is an acyl radical taken from the group consisting of benzoyl, acetyl, propionyl, and monochloracetyl, with an agent of the class consisting of bromine and alkali metal bromates in aqueous solution at a temperature between 0° and +50° C., to obtain a compound of the formula



2,945,884

HYDRAZINIUM SALTS

George M. Omietanski, Tonawanda, N.Y., assignor to The Ohio State University Research Foundation, Columbus, Ohio

No Drawing. Filed Aug. 7, 1958, Ser. No. 753,633
6 Claims. (Cl. 260—566)

1. Compounds having the general formula:

$$(RR'R''NNH_3)^+Cl^-$$

wherein R is a member selected from the group consisting of primary amino lower alkyl and arylidene amino lower alkyl radicals and R' and R'' are lower alkyl radicals.

2,945,885

CYCLO-OCTANONE OXIME HYDROCHLORIDES WHICH ARE LIQUID AT ROOM TEMPERATURE, AND A PROCESS FOR THEIR PRODUCTION

Otto von Schickh and Horst Metzger, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Aug. 29, 1958, Ser. No. 757,932
Claims priority, application Germany Sept. 3, 1957
7 Claims. (Cl. 260—566)

1. A cyclo-octanone oxime hydrochloride which is liquid at room temperature and in which from 1.4 to 2 mols of hydrogen chloride are combined with each mol of oxime, said cyclo-octanone oxime hydrochloride being prepared by introducing hydrogen chloride at a temperature of about 20° C. to 100° C. into a liquid reaction medium consisting essentially of cyclo-octanone oxime and its oxime-hydrogen chloride reaction products until at least 1.4 mols up to about 2 mols of hydrogen chloride have been absorbed for each mol of cyclo-octanone oxime.

2,945,886

METHOD FOR REDUCING CHEMICAL COMPOUNDS BY REACTING WITH ALKALI METAL BOROHYDRIDES

Herbert C. Brown, 1849 Garden St., West Lafayette, Ind.

No Drawing. Filed Feb. 26, 1957, Ser. No. 641,272
11 Claims. (Cl. 260—570.9)

1. In the reduction of an organic compound having a nitrile group wherein the reduction is effected in an inert liquid carrier by an alkali metal borohydride selected from the group consisting of sodium borohydride, potassium borohydride and lithium borohydride, said organic compound being free of olefinic bonds and acetylenic bonds, the method of modifying the reducing properties of the alkali metal borohydride which comprises introducing a boron halide into the inert liquid carrier containing the alkali metal borohydride while simultaneously maintaining in the liquid carrier an amount of said organic compound at least corresponding stoichiometrically to at least one of the other two reactants.

2,945,887

PREPARATION OF BORON ALKYLS

Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany

No Drawing. Filed Mar. 11, 1958, Ser. No. 720,565
Claims priority, application Germany Mar. 13, 1957
5 Claims. (Cl. 260—606.5)

1. The process of preparing organosubstituted borines of the formula

$$BR_3$$

wherein R is a member of the group consisting of alkyl and cycloalkyl radicals, comprising heating a boron-halogen compound selected from the group consisting of boron trichloride, diboron tetrachloride, alkyl boron chlorides, alkoxy boron chlorides, with an alkali metal hydride and a member of the group consisting of alkenes and cycloalkenes at a temperature of about 50 to 220° C. in the presence of an amine selected from the group consisting of lower secondary and tertiary alkylamines, piperidine, morpholine, and the N-alkyl derivatives of said piperidine and morpholine and an organo-metal compound activating said alkali metal hydride, said compound being selected from the group consisting of lower alkyls, lower alkyl hydrides, and lower alkoxides of boron, aluminum, and gallium, and separating the obtained BR_3 compound.

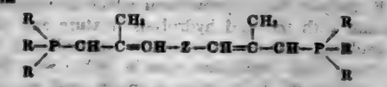
2,945,888

UNSATURATED DI(PHOSPHONIUM HALIDE) COMPOUNDS AND DIPHOSPHINE COMPOUNDS AND PREPARATION THEREOF

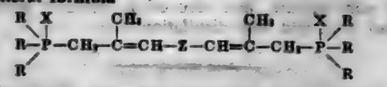
Joseph Donald Surmatis, West Caldwell, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Oct. 24, 1958, Ser. No. 769,323
6 Claims. (Cl. 260—606.5)

1. A compound selected from the group consisting of diphosphine compounds represented by the general formula



and di(phosphonium halide) compounds represented by the general formula



wherein, in the foregoing formulas, the symbol Z represents a divalent radical selected from the group consisting of —CH=CH— and —C≡C—, the symbol R represents a monovalent aryl radical, and the symbol X represents a halogen.

2,945,889

REGENERATION OF SPENT CAUSTIC

Charles O. Petty, Tyler, Tex., assignor to La Gloria Oil and Gas Company, Tyler, Tex., a corporation of Delaware

Original application Dec. 21, 1955, Ser. No. 565,289, now Patent No. 2,862,804, dated Dec. 2, 1958. Divided and this application Oct. 29, 1957, Ser. No. 693,585
4 Claims. (Cl. 260—609)

1. The process of regenerating spent aqueous caustic soda solution containing alkali metal phenolates and

alkali metal mercaptides, the quantity of alkali phenolates being at least 5% by weight, comprising dissolving an organic epoxide in a liquid hydrocarbon solvent and selectively reacting by intimately contacting the solvent solution of epoxide with the said spent caustic solution to form a substantially aqueous mercaptan-free solution of caustic soda and phenolic oils and a water immiscible solvent solution of epoxide-mercaptan reaction product and separating the solutions.

2,945,890

PRODUCTION OF 2:4-DINITRORESORCINOL

William Gordon Allan, Ardrossan, Scotland, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Filed June 23, 1953, Ser. No. 363,695
Claims priority, application Great Britain Aug. 15, 1952
4 Claims. (Cl. 260—622)

1. A method for the production of 2:4 dinitroresorcinol which comprises effecting the sulphonation of resorcinol by heating it with 95% sulphuric acid, cooling the solution of sulphuric acid so obtained, adding 95% nitric acid in amount slightly in excess of a 2:1 molecular ratio, adding water, removing any undissolved matter, and refluxing the solution at a temperature between 130 and 135° C. in the presence of sulphuric acid in an amount between 10 and 20 times the weight of the resorcinol.

2,945,891

PROCESS FOR THE RECOVERY OF SECONDARY ALCOHOLS

Frederik H. Van Hoel, Rhoon, Netherlands, assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed July 11, 1958, Ser. No. 747,843
Claims priority, application Netherlands July 12, 1957
10 Claims. (Cl. 260—639)

1. In a process for preparing a secondary alcohol by absorption of an aliphatic olefin in an aqueous solution of a strong polybasic inorganic acid, hydrolysis with water of the resulting esters of said acid and stripping of secondary alcohol from the mixture resulting from such hydrolysis, the improvement which comprises mixing steam with the said hydrolysis mixture and passing the resulting mixture substantially immediately thereafter into a flash distillation zone in such a way that the liquid portion of the mixture is maintained as a liquid film in that zone while vaporous materials are flashing from said mixture, and recovering vaporous secondary alcohol from said flash distillation zone.

2,945,892

9,10-ENDO-NITROETHYLENE ANTHRACENE

Karl Klager, Monrovia, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio

No Drawing. Filed Oct. 19, 1953, Ser. No. 387,022
4 Claims. (Cl. 260—645)

1. 9,10-endo-nitroethylene-anthracene having the formula:



2. The method of preparing 9,10-endo-nitroethylene-anthracene which comprises condensing nitroethylene with anthracene in the presence of an inert organic solvent.

2,945,893

CONTINUOUS PRODUCTION OF HEXACHLORCYCLOPENTADIENE

Adolf Stahlhofer and Manfred Mindanger, Ludwigshafen (Rhine), and Herbert Friedrich, Worms (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Nov. 7, 1958, Ser. No. 772,415
Claims priority, application Germany Nov. 26, 1957
17 Claims. (Cl. 260—648)

1. A process for the continuous production of hexachlorcyclopentadiene by the reaction of an aliphatic hydrocarbon from the group consisting of normal pentane, isopentane, cyclopentane, cyclopentene, cyclopentadiene, and dicyclopentadiene and mixtures of the same, with chlorine in the presence of a catalyst at a temperature of about 300° C. to 500° C., wherein the vapor of the initial hydrocarbon is continuously brought together in a reaction zone heated to the reaction temperature with chlorine and, as catalyst, with the vapor of at least one nitrogenous compound from the group consisting of oxides of nitrogen, nitrogen oxychlorides, alkyl amines wherein the alkyl groups having 1–8 carbons, cycloalkyl amines having 5–6 carbons in the cyclic ring with 0–2 alkyl groups of 1–4 carbons substituted on the carbons of the cyclic ring and 0–2 N-alkyl groups of 1–4 carbons, anilines with 0–2 N-alkyl groups of 1–4 carbons, heterocyclic amines having 4–5 carbons and an amino nitrogen in the heterocyclic ring with 0–1 alkyl group of 1–4 carbons, benzonitrile, alkanyl and alkenyl nitriles with up to 8 carbons, formamides containing 0–2 N-alkyl groups of 1–4 carbons, pyrrolidone, and N-alkylpyrrolidone wherein the alkyl group contains 1–4 carbons so that the reaction components and the catalyst migrate simultaneously through the zone in homogeneous vapor phase, the reaction mixture leaving the zone in vapor phase is cooled and hexachlorcyclopentadiene is separated from the condensate.

2,945,894

TRICHLOROMETHYLATED AROMATIC

Harold W. Earhart and William G. de Pierri, Jr., Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

No Drawing. Filed July 14, 1959, Ser. No. 826,926
1 Claim. (Cl. 260—651)

α^1, α^2, α^3-trichlorohexamethylbenzene.

2,945,895

STABILIZATION OF CHLORINATED HYDROCARBONS WITH A SYNERGISTIC COMBINATION OF A TERTIARY ACETYLENIC MONOHYDRIC ALCOHOL AND 2,6 - DI - TERT - BUTYL - PARA - CRESOL

Robert J. Burch, Berkeley Heights, and Morton W. Loeds, Union, N. J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Filed Feb. 8, 1956, Ser. No. 564,119
7 Claims. (Cl. 260—652.5)

1. A composition of matter comprising a chlorinated hydrocarbon solvent and a small but stabilizing amount of 2,6-di-tert-butyl-para-cresol and 3-methyl-1-pentyn-3-ol.

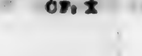
2,945,896

FLUOROISOPRENES

Paul Tarrant, Gainesville, Fla., and Raymond P. Lutz, Louisville, Ky., assignors to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Feb. 29, 1956, Ser. No. 568,434
5 Claims. (Cl. 260—653.9)

1. A method of making polymerizable fluoroisoprenes of the formula



wherein the X's are selected from the group consisting of hydrogen and fluorine, which comprises heating a perhalogenated pentafluoropropane of the formula



wherein Y' is selected from the group consisting of bromine and chlorine and Y'' is selected from the group consisting of iodine, bromine and chlorine, and with an olefin of the formula



in the presence of a carboxylic acid peroxide to produce a halogenated fluoroisopentane of the formula



dehydrohalogenating the halogenated fluoroisopentane by heating with an aqueous alkali to produce a halogenated fluoro isopentene of the formula



and dehalogenating the halogenated fluoroisopentene by heating with metallic zinc to the corresponding fluoroisoprene.

2,945,897

RECOVERY OF 1,1-DICHLOROETHANE

Douglas H. Ehrenfeld, Barberton, Ohio, assignor to Columbia-Southern Chemical Corporation, Allegheny, Pa., a corporation of Delaware

Filed Oct. 28, 1958, Ser. No. 770,836
10 Claims. (Cl. 260—663)

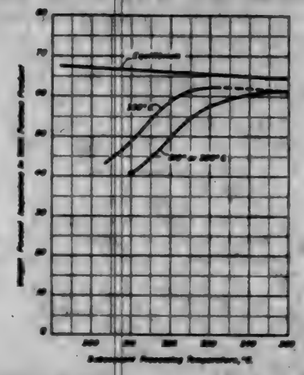
1. A method of recovering 1,1-dichloroethane from an organic liquid medium containing metal chloride comprising stripping said medium with gaseous HCl to thereby obtain a gaseous mixture of 1,1-dichloroethane and hydrogen chloride and condensing 1,1-dichloroethane.

2,945,898

HYDROISOMERIZATION PROCESS

George R. Donaldson, Barrington, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Dec. 11, 1958, Ser. No. 779,790
17 Claims. (Cl. 260—666)



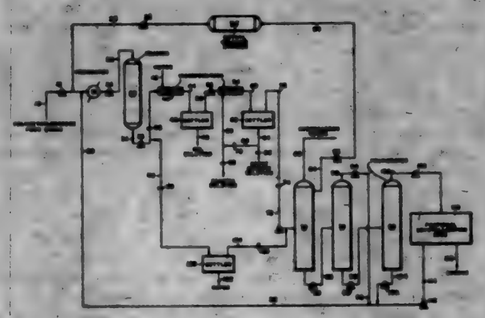
1. In a process for the hydroisomerization of an isomerizable hydrocarbon at hydroisomerization conditions in the presence of hydrogen and a catalyst comprising a refractory metal oxide, a platinum group metal, and from about 2.0 to about 5.0% by weight fluorine, the improvement which comprises initially hydroisomerizing said hydrocarbon within the temperature range of from about 320° C. to about 340° C. for a period of from about 1 to about 24 hours and thereafter continuing the hydroisomerization at a lower temperature in the range of from about 250° C. to about 320° C.

2,945,899

POLYMETHYLBENZENE TREATING PROCESS

Delos E. Bown, Baytown, Harold W. Earhart, Houston, and Robert H. Perry, Jr., and Daniel E. Nicholson, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Mar. 25, 1957, Ser. No. 648,383
3 Claims. (Cl. 260—668)



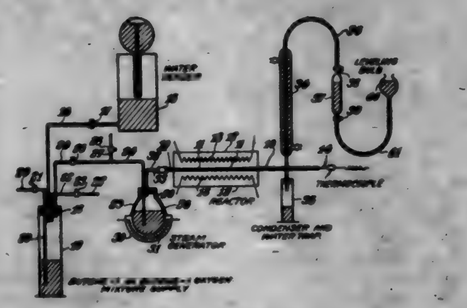
1. A process which comprises treating a polymethylbenzene feed stock containing an average of from about 8.5 to 9.5 carbon atoms per molecule in a combination methylation, disproportionation and transmethylation reaction zone with about 1 mol of a methylating agent per mol of feed stock in vapor phase at about atmospheric pressure in the presence of a silica-alumina alkylation catalyst at a temperature within the range of about 650° to 950° F. at a liquid flow rate of about 0.2 to 1 v./v./hr. and recovering durene from the products of said reaction.

2,945,900

CATALYTIC DEHYDROGENATION OF HYDROCARBONS

Douglas Sadler Alexander and John Firbo, Sarnia, Ontario, Canada, assignors to Polymer Corporation Limited, Sarnia, Ontario, Canada, a body corporate and politic

Filed Sept. 3, 1957, Ser. No. 681,799
Claims priority, application Canada Aug. 1, 1957
20 Claims. (Cl. 260—669)



1. In the process of dehydrogenating a hydrocarbon selected from the class consisting of mono-olefins and alkylated aromatics which comprises passing said hydrocarbon together with steam at a dehydrogenation temperature over a dehydrogenation catalyst, the active ingredient of which is calcium nickel phosphate, the improvement which comprises carrying out said dehydrogenation in the presence of between about 5 and about 40 percent uncombined oxygen, based on the volume of said hydrocarbon.

2,945,981

PRODUCTION OF POLYISOPROPYL BENZENE

Albert J. Shankli, Crosby, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed June 6, 1958, Ser. No. 740,280
9 Claims. (Cl. 260—671)

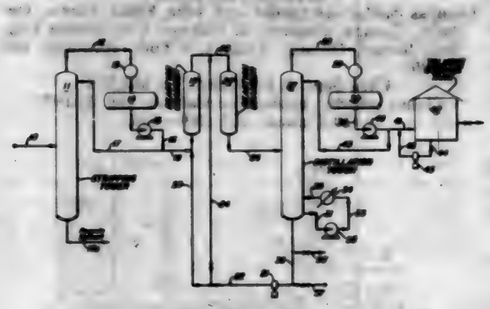
1. A method for producing a polyalkylated benzene which comprises forming a reaction mixture of propylene and an aromatic hydrocarbon selected from the group consisting of benzene and isopropyl benzene in a ratio of propylene to aromatic hydrocarbon in the range from about 2 to about 4 molar volumes per volume, contacting said mixture with a silica-alumina catalyst at a temperature within the range from about 300° to about 450° F. for a sufficient length of time to form a product containing a substantial amount of 1,3,5 tri-isopropyl benzene, distilling said product to recover said tri-isopropyl benzene, forming a solution of said tri-isopropyl benzene in a liquid saturated aliphatic hydrocarbon having a boiling point different from that of the tri-isopropyl benzene, adding an alkylation amount of propylene at least 1 molar volume of propylene per molar volume of tri-isopropyl benzene to said solution, contacting the propylene-containing solution at a temperature within the range from about 60° to about 80° F. with a sulfuric acid catalyst having a strength within the range from about 85% to about 92% H_2SO_4 to form a product containing a substantial amount of 1,2,4,5 tetra-isopropyl benzene and recovering substantially purified 1,2,4,5 tetra-isopropyl benzene from said product.

2,945,982

METHOD OF IMPROVING THE COLOR OF AN AROMATIC HYDROCARBON OBTAINED FROM A HYDROFORMATE EXTRACT BY TREATMENT WITH MALEIC ANHYDRIDE

Robert T. Remsen, Texas City, Tex., assignor to The American Oil Company, Texas City, Tex., a corporation of Texas

Filed Apr. 23, 1956, Ser. No. 579,996
3 Claims. (Cl. 260—674)



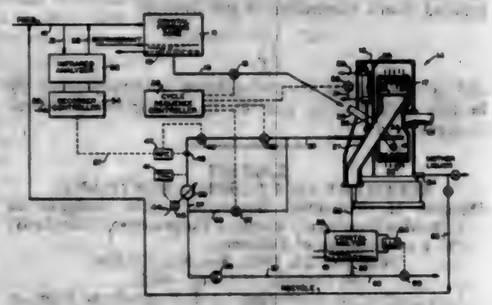
1. The method of improving both the color and color stability of a mono-nuclear aromatic hydrocarbon obtained as a component of a naphtha hydroformate extract which contains olefinic hydrocarbon contaminants normally present in said extract, which method consists essentially of treating a naphtha hydroformate extract containing said mono-nuclear aromatic hydrocarbon and said olefinic hydrocarbon contaminants in a contacting zone with a hydrocarbon solution of maleic anhydride which contains an amount of maleic anhydride greater than 0.2 weight percent based on total extract hydrocarbons present in the contacting zone, distilling at least a part of said treated naphtha extract to obtain the mono-nuclear aromatic hydrocarbon substantially free of said olefinic contaminants as an overhead hydrocarbon product and a bottoms fraction containing maleic anhydride, mono-nuclear aromatic hydrocarbon and said olefinic hydrocarbon contaminants, removing a part of the bottoms fractions for purging olefinic hydrocarbon contaminants from the system and recycling the remainder of the bottoms fraction as said hydrocarbon solution to the treating step together with sufficient maleic anhydride to provide at least about 0.2 weight percent concentration thereof based on total extract hydrocarbons in said contacting zone.

2,945,983

FRACTIONAL CRYSTALLIZATION PROCESS AND APPARATUS

Robert A. Findley, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Dec. 26, 1956, Ser. No. 630,661
9 Claims. (Cl. 260—674)



1. In a process for separating a component from a liquid multicomponent mixture which comprises introducing said mixture into a crystal forming zone, cooling said mixture in said zone so as to form a slurry of crystals of said component in mother liquor, centrifuging said slurry so as to remove mother liquor therefrom and form a cake of said crystals, and recovering said crystals as a product of the process, the improvement comprising melting at least a portion of said recovered crystals; heating a portion of the resulting melt to a temperature in the range from 100° to 250° F. above the melting point of said component; prior to recovering said crystals, supplying heated melt to the surface of said crystal cake at a predetermined rate while centrifuging said cake; continuously measuring the concentration of said component in said mixture; and adjusting the rate at which said heated melt is supplied to said crystal cake in direct proportion to and in response to variations in said measured concentration of said component in said mixture.

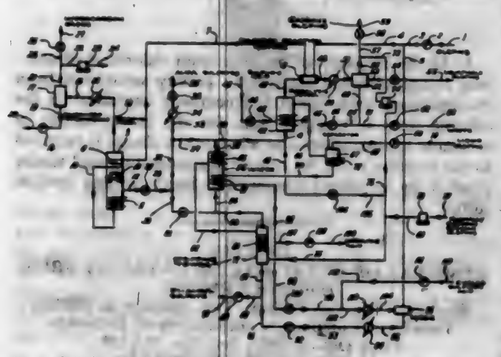
2,945,984

RECOVERY OF OLEFINS

Claude W. Watson, deceased, late of Port Arthur, Tex., by Myrtle H. Watson, executrix, 5000 Lakeshore, Port Arthur, Tex.

Filed Dec. 30, 1957, Ser. No. 706,003
14 Claims. (Cl. 260—677)

1. A process for the recovery of olefins other than ethylene in relatively high purity from a mixture containing olefins, other hydrocarbons and other substances by reacting the mixture with a recycled stream of aqueous sulfuric acid containing at least 85% sulfuric acid by weight liberated in a hydrolysis stage of the process in which hydrolysis stage a recycle stream of hydrolysis acid is combined with a recycle stream of di-alkyl sulfates obtained from a dehydration stage of the process, and in which hydrolysis stage the proportion of the two recycled streams is such that for each mol of water in the combined recycle stream there are not less than 1.5 mols of sulfuric acid per mol of water counting as such the sulfuric acid in the hydrolysis stream and the acid consumed in the formation of the di-alkyl sulfates, and proportioning the combined recycle stream to the reactant olefin in the olefin feed stream in the preparation of the sulfation reaction mixture of the process so that on completion of the sulfation reaction in the formation of the alkyl sulfates at a temperature not less than 175° F. in the sulfation stage, there remains no more than a detectable amount of the olefins selected for reaction in the hydrocarbons and other non-reactive substances which are completely vaporized and separated in the sulfation stage from the alkyl sulfates of which a portion is directed into a dehydration stage of the process in which the alkyl sulfates are contacted counter-currently with a recycle stream of normally gaseous olefins from the hydrolysis stage, proportioning the stream of alkyl sulfates and gaseous olefins so that the reaction is substantially complete in the formation of di-alkyl sulfates, and maintaining the temperature in the dehydration stage so that simultaneously substantially all the water contained in the alkyl sulfate stream is vaporized therefrom in admixture with the unreacted portion of recycled olefin stream and this admixture then directed into the hydrolysis reactor along with a portion of the alkyl sulfates from the sulfation stage and with the further addition of water to the hydrolysis reactor as required for the substantial completion of the hydrolysis reaction in the destruction of the alkyl sulfates with the addition of heat as required



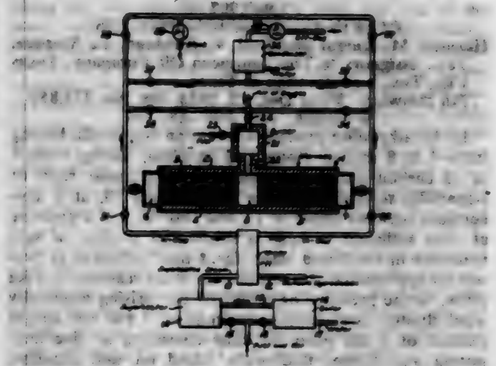
to maintain the hydrolysis reactor at a temperature above 200° F. with a residence time of not more than 30 minutes of the acid phase of reaction mixture undergoing hydrolysis with the formation of aqueous sulfuric acid containing not less than 1.0 mol of sulfuric acid for each mol of water corresponding to 85% sulfuric acid by weight and with the evolution of vapors in the hydrolysis reactor consisting in part of the recycled gaseous olefin so proportioned to the other reactants in the hydrolysis reaction that the specified concentration of the hydrolysis acid is maintained at the temperature selected for the hydrolysis reaction with another part of the vapors from the hydrolysis reactor being water vapor at a partial pressure equal to the vapor pressure of the hydrolysis acid at the selected temperature and with the remaining part of the vapor being the product olefins with the total pressure of the hydrolysis resultants being greater than that of the atmosphere with the subsequent cooling and condensation of the total vapors with the recovery of the product olefins and with the delivery of the normally gaseous recycle olefins to the dehydration stage in which the recycle olefins are so proportioned that there is substantially no retention of the recycled olefins in solution in the product di-alkyl sulfates which are recycled from the dehydration stage for admixture with the recycled stream of hydrolysis acid after its separation from olefins not vaporized in the hydrolysis reactor with both streams being so reduced in temperature if required for the avoidance of polymerization during the effective mixing of the two recycle streams as evidenced by no temperature rise in the preparation of the combined recycle stream of di-alkyl sulfates and hydrolysis acid.

2,945,985

PROCESS OF AND APPARATUS FOR GAS PHASE PYROLYSIS OF LIQUID HYDROCARBONS

Clarence J. Coberly, San Marino, Calif., assignor to Wulff Process Company, Huntington Park, Calif., a corporation of California

Filed June 11, 1956, Ser. No. 590,690
1 Claim. (Cl. 260—679)



1. A process of producing an off-gas containing a desired hydrocarbon from an in-gas containing a suitable hydrocarbon, which includes the steps of:

mixing a suitable hydrocarbon which is normally liquid at atmospheric temperatures and pressures, has a molecular weight between 80 and 400, and is in a liquid state, with superheated steam to completely vaporize the suitable hydrocarbon and to form an in-gas having a temperature substantially above the dew point of the suitable hydrocarbon but at a temperature at which substantially no cracking of the suitable hydrocarbon occurs;

conveying the in-gas through piping to a furnace containing a heated regenerative mass, the superheated steam in said in-gas maintaining the in-gas above the dew point of the suitable hydrocarbon therein during such conveyance to prevent the deposition of hydrocarbons in such piping;

passing the in-gas through the heated regenerative mass to crack the suitable hydrocarbon and produce a cracked-gas containing a desired hydrocarbon, tars, and superheated steam;

cooling said cracked gas in the furnace to a temperature at which the desired hydrocarbon therein is stable but above the condensation temperature of said tars;

conveying said cracked gas from said furnace to a condenser and therebetween maintaining the temperature of the cracked gas above the dew point of tars therein; and

condensing the steam from said cracked gas to form an off-gas containing the desired hydrocarbon.

2,945,986

CRACKING OF OLIGOMERS OF ISOBUTENE IN THE PRESENCE OF SILICA-MAGNESIA CATALYSTS

Hugo Kroepel, Heidelberg, and Rolf Plate, Mannheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Filed Oct. 8, 1956, Ser. No. 614,354
Claims priority, application Germany Oct. 15, 1955
6 Claims. (Cl. 260—683)

1. A process for the production of isobutene which is essentially free of normal-butenes by cracking oligomers

of isobutane at elevated temperature in the presence of a catalyst which comprises subjecting a composition including a depolymerizable hydrocarbon consisting essentially of an oligomer of isobutene selected from the group consisting of diisobutene, triisobutene and tetraisobutene to a heat treatment at a temperature between 200° C. and 550° C. in the presence of a synthetic silica-magnesia catalyst, the said catalyst containing from 1 to 20% by weight of magnesium expressed as magnesium oxide, said percentage with reference to the total weight of the catalyst.

2,945,907
OLEFIN CONVERSION PROCESS
Harmon M. Knight and Earl V. Kirkland, La Marque, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas
No Drawing. Filed Dec. 12, 1958, Ser. No. 779,855
6 Claims. (Cl. 260—683.64)

1. An alkylation process wherein an isoparaffin having from 4 to 8 carbon atoms and an olefin having from 2 to 12 carbon atoms are contacted, in a molar ratio of isoparaffin to olefin between about 2 and 50, at a temperature between about 0° C. and 100° C. and a pressure at least sufficient to keep a substantial portion of said reactants in the liquid state, for a time sufficient to permit an appreciable amount of alkylation reaction to take place, in the presence of a catalyst comprising essentially a gel alumina containing between about 5 and 100 weight percent of a salt from the class consisting of zinc fluoborate and copper fluoborate, based on said alumina, and boron trifluoride, a product hydrocarbon mixture is removed from said contacting zone and an alkylate hydrocarbon product is separated from said mixture.

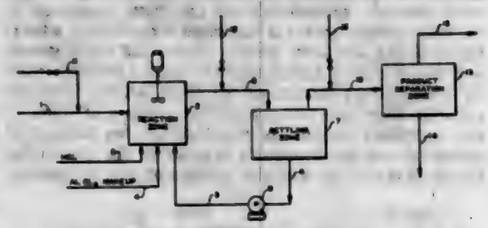
2,945,908
ISOMERIZATION PROCESS AND CATALYST THEREFOR
Harrison M. Stine, Lyndhurst, and James L. Callahan, Bedford, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 30, 1955, Ser. No. 556,449
6 Claims. (Cl. 260—683.65)

1. A process for isomerizing a C_5–C_7 normal alkane, which comprises contacting the same with a catalyst consisting essentially of the dried and heat treated mixed wet gels of alumina-silica and chromia in the proportions of 60–90 mol percent alumina, 5–35 mol percent silica and 5–35 mol percent chromia obtained by (1) effecting the co-precipitation of silica and alumina, filtering the same and washing the filter cake; (2) effecting the precipitation of chromia, filtering the same and washing the filter cake; (3) mixing the silica-alumina and chromia filter cakes, drying the mixture and heat treating the same; said contacting taking place at a temperature of from 700 to 1050° F., and at a pressure from atmospheric to 750 pounds per square inch gauge, to convert a substantial amount of said normal alkane to iso-alkanes.

2,945,909
ISOMERIZATION PROCESS AND CATALYST THEREFOR
Harrison M. Stine, Lyndhurst, and James L. Callahan, Bedford, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 30, 1955, Ser. No. 556,450
2 Claims. (Cl. 260—683.65)

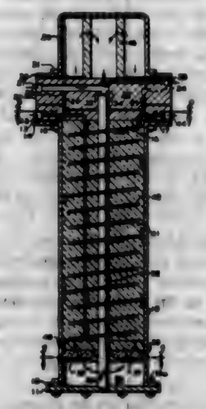
1. A process of isomerizing a C_5–C_7 normal alkane, which comprises contacting the same with a catalyst comprising a base having a silica-alumina ratio of about 95:5 to 50:50 percent by weight impregnated with chromia to provide 1 to 6% chromium by weight, obtained by (1) heating a high surface area silica-alumina base of the above-defined silica-alumina ratio to reduce the surface area to from 110 to 235 square meters per gram and (2) impregnating the reduced surface area base with chromia in the amount above recited; said contacting taking place at a temperature of 700 to 1050° F., in the presence of hydrogen in an amount of from 0 to 5 mols of hydrogen per mol of hydrocarbon, and at a pressure of from 0 to 750 pounds per square inch gauge, to convert a substantial amount of said normal alkane to iso-alkane.

2,945,910
ALUMINUM CHLORIDE-HYDROCARBON COMPLEX SLUDGE CATALYST SEPARATION
Ivan A. Peterson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 9, 1958, Ser. No. 740,759
5 Claims. (Cl. 260—683.74)



1. In the recovery of an aluminum chloride-hydrocarbon complex sludge catalyst by gravity separation from its admixture with liquid hydrocarbons contained in the effluent from a reaction zone for the isomerization of n-hexane to isohexanes and wherein the sludge is recycled to the reaction zone, the step of agglomerating said sludge catalyst by admixing therewith a finely divided barium sulfate.

2,945,911
REMOVAL OF METAL HALIDE CATALYST FROM HYDROCARBONS
Stephen J. Murray, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 3, 1958, Ser. No. 765,130
20 Claims. (Cl. 260—683.74)



17. The process which comprises intimately contacting the reaction effluent from a hydrocarbon conversion catalyzed by a Friedel-Crafts type metal halide catalyst, which effluent contains some of said metal halide and hydrocarbon, with an excess of an alkali metal halide in finely divided form having dispersed therein a double salt of a Friedel-Crafts type metal halide and an alkali metal halide, said contacting being effected at an elevated temperature in the range of 100° C. to 350° C., for a period of time sufficient to effect substantially complete removal of said catalyst from said effluent without effecting substantial removal of said hydrocarbon.

19. A filter for removing Friedel-Crafts type metal halide catalyst from a fluid stream comprising an enclosed casing having inlet and outlet means for the introduction of said fluid stream into said casing and removal therefrom, a filter medium of finely divided alkali metal halide having dispersed therein a double salt of a Friedel-Crafts type metal halide and an alkali metal halide disposed within said casing and arranged for the passage of said fluid stream therethrough, and a heat exchanger means arranged to maintain said fluid stream at an elevated temperature.

ELECTRICAL

2,945,912
HIGH VOLTAGE INSULATOR
Alfred Imhof, Zurich, Switzerland, assignor to Messer-Glaser & Co. A.G., Muttenz, near Basel, Switzerland, a corporation of Switzerland
Filed June 14, 1954, Ser. No. 436,656
Claims priority, application Switzerland June 18, 1953
11 Claims. (Cl. 174—30)



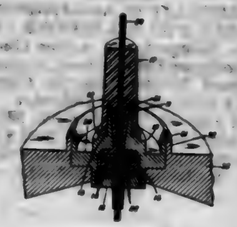
1. A multiple insulation for a high voltage current conductor comprising an oil impregnated insulating fibrous web surrounding said conductor, a metal sleeve enclosing part of said web, and a sleeve consisting substantially of a casting resin, said resin sleeve enclosing said metal sleeve and said insulating web projecting from said metal sleeve and being integrally united with said metal sleeve and web.

2,945,913
PREFABRICATED STRESS RELIEF CONE
Amado Cenzagie, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1956, Ser. No. 581,148
2 Claims. (Cl. 174—73)



1. A prefabricated stress relief cone for the terminal end of a high voltage ground shielded cable to prevent electrical breakdown of said cable; said ground shielded cable comprising a central conductor, a tube of solid insulation surrounding said central conductor and a ground shield of conductive material surrounding said tube of solid insulation; said stress relief cone consisting of a sheath of conductive material and an epoxy resin; said epoxy resin being molded around said conductive material and having a cylindrical opening along its axis; said sheath of conductive material having substantially smooth surfaces for its entire length; said sheath of conductive material having a generally conical shape which diverges along the complete length thereof from the axis of the cone; said epoxy resin forming a mass of homogeneous insulating material and encapsulating said conductive sheath; said conductive sheath having connecting means extending therefrom to electrically connect said conductive sheath to said ground shield; said connecting means comprising an extending portion of said cone at the small diameter thereof; said terminal end of said high voltage cable having said ground shield removed therefrom to expose the outer surface of said tube of solid insulation; said prefabricated stress relief cone being removably connected to said terminal end of said high voltage cable and receiving said exposed surface of said solid insulation in said cylindrical opening of said stress relief cone; said extending portion of said cone having an inner diameter substantially equal to the inner diameter of said ground shield; the end of said extending portion of said cone being adjacent the end of said ground shield.

2,945,914
VAPOR SEAL LEADIN
Thorulf Aasmodt, Liberty Corner, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 16, 1958, Ser. No. 780,870
9 Claims. (Cl. 174—151)

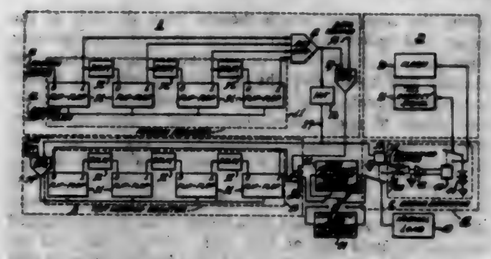


6. A coaxial lead-in vapor seal comprising a generally cylindrical outer conductor having an axially directed flange at one end, an annularly grooved shoulder around said flange, and an axial orifice therethrough; said orifice including a frusto-conical section having its larger end toward the flange; a center conductor extending axially through said orifice and including a frusto-conical protuberance within said orifice section; and a body of molded plastic insulation filling the remainder of the orifice and extending over said flange into the annularly grooved shoulder.

2,945,915
OPERATIONAL CHECKOUT OF DATA HANDLING EQUIPMENT
Joseph Strip, Haddonfield, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 28, 1958, Ser. No. 711,760
2 Claims. (Cl. 178—69)

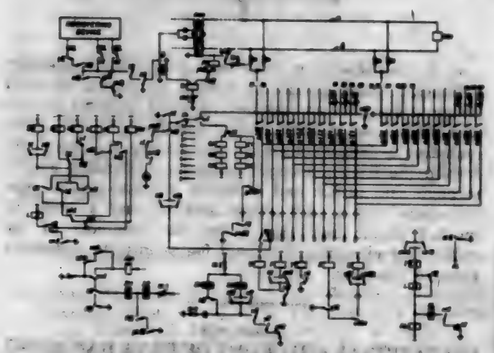
1. Apparatus for testing a high speed data processing system for correct manipulation of continuous input data

during actual operation of said system comprising address register means for receiving the address portion of messages directed to said data processing system, detecting means responsive to the output of said address register means for sensing the absence of input data in a continuous message train addressed to said data processing system, a test message register, means responsive to and synchronized with the output of said detecting means for activating said test message register and connecting the test data output of said test message register as input to said data processing system, a normal output load



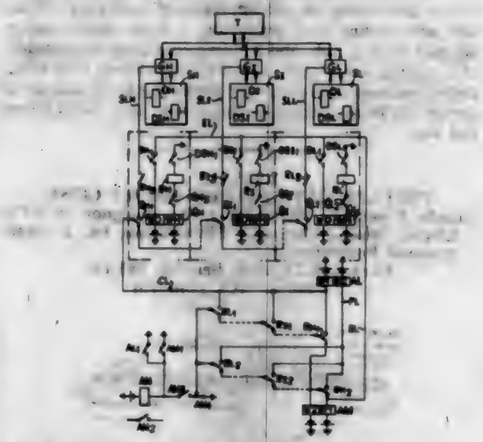
connected to said data processing system, a reference signal source, comparator means connected to said reference signal source for comparing the reference signal from said reference signal source with the test data output signals from said data processing system, switching means responsive to the output of said detecting means for switching the output of said data processing system from said normal output load to said comparator means, and indicating means responsive to the output of said comparator means for indicating the correctness of functioning of said data processing system.

2,945,916
LINE IDENTIFICATION ARRANGEMENTS PARTICULARLY FOR TELEPHONE SYSTEMS
Helmut Stobbe, Stuttgart, and Arthur Glas and Herbert Heitmann, Stuttgart-Zuffenhausen, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 30, 1955, Ser. No. 549,210
(Filed under Rule 47(a) and 35 U.S.C. 116)
Claims priority, application Germany Sept. 1, 1954
9 Claims. (Cl. 179—18)



1. Line identification arrangements for telephone exchange and like systems, wherein the subscriber lines are assembled in groups of ten, each ten of said tens groups being assembled to form a hundreds group, comprising a tens coupling wire for each tens group, a hundreds coupling wire for each hundreds group, a first decade counting device, a second decade counting device, a source of test potential, test means at said exchange for responding to said test potential, first means including said first decade counting device for connecting said source of test potential successively to said hundreds coupling wires, registering means for said hundreds groups, means controlled by said first source-connecting means for operating said hundreds registering means at each successive connection of said source to said hundreds coupling wires, switch means intermediate said test means and said hundreds coupling wires for connecting said hundreds coupling wires to said test means when in a first position, means responsive to the response of said test means for causing said switch means to shift to a second position, second means including said second decade counting device for thereafter connecting said source of test potential successively to said tens coupling wires, registering means for said tens groups, means controlled by said second source-connecting means for operating said tens registering means at each successive connection of said source to said tens coupling device, said switch means connecting said tens coupling wires to said test means when in said second position, whereby said test means at said exchange responds to said potentials as such potential is detected in each line group, and the numbers of said line groups are registered.

2,945,917
ARRANGEMENTS FOR CONTROLLING THE ACCESS OF A NUMBER OF EQUIPMENTS TO A COMMON APPARATUS
John Brownlie Clark, Bexleyheath, and Percy William Hicks, Wilmington, near Dartford, England, assignors to Siemens Edison Swan Limited, London, England, a British company
Filed Mar. 17, 1958, Ser. No. 722,081
Claims priority, application Great Britain Mar. 26, 1957
9 Claims. (Cl. 179—27)



1. In an arrangement for controlling the access of a number of equipments one at a time, in batches, to a common apparatus, demand means associated individually with each of said equipments and operable to indicate a demand by the equipment for access to the common apparatus, storage means individually operable by the operated demand means for storing such demands from those equipments that are awaiting access at a given instant, which equipments constitute a batch, inhibiting means effective, in response to the operated condition of any storage means and after a delay sufficient for operation of the slowest responding storage means, to inhibit the operation of the storage means for the other equipments not included in said batch, means governed by the operated storage means for establishing access between the common apparatus and the equipments of a batch one at a time in a predetermined order of priority, and further means effective to restore the storage means to their normal conditions after their stored demands have been met, thereby to cause removal of the inhibition on the storage means after all the equipments of the batch have had access to the common apparatus.

2,945,918
PUSH BUTTON TELEPHONE DIALING MECHANISM
Paul H. Stehbach, Skokie, Ill., assignor, by mesne assignments, of one-half to Francis N. Stehbach
Filed Apr. 21, 1958, Ser. No. 729,848
10 Claims. (Cl. 179—90)



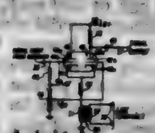
2. A telephone dialing device comprising, in combination, a pivotable actuator having a pre-selected range of pivoting, a gear segment operatively associated with said pivotable actuator and adapted to have its range of pivoting proportioned to the existing range of pivoting of the dial of a dial telephone, ten reciprocable actuators each being disposed at a different pitch relative to the pivot axis of said pivotable actuator and being uniformly incrementally pitched relative to each other to correspond with each aliquot one-tenth increment of the range of pivoting of said pivotable actuator, and an elongated first member carried by said pivotable actuator and being spaced from and parallel to the pivot axis of said pivotable actuator and extending transversely of the path of movement of said reciprocable actuators, said first member being positioned to be directly engaged and moved by a selected reciprocable actuator to directly effect pivoting of said pivotable actuator through a selected aliquot-tenth part of the range of pivoting of said pivotable actuator.

2,945,919
FERRITE MAGNETIC HEADS
Helmut Neumann, Karlsruhe, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a corporation of Germany
Filed Jan. 19, 1956, Ser. No. 560,255
Claims priority, application Germany Aug. 5, 1955
6 Claims. (Cl. 179—100.2)



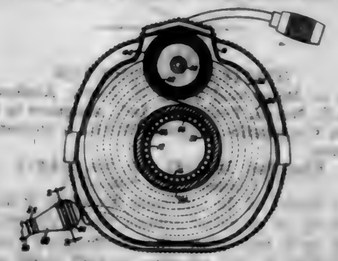
1. A ferrite magnetic head for operation within a wide frequency range comprising a pair of ferrite ceramic members having lateral opposing gap surfaces, wherein fissures and crevices of said ferrite ceramic gap surfaces are filled by gap-defining layers of a finely granular ferromagnetic material of a permeability which is substantially equal to or higher than that of the said members.

2,945,920
ELECTRONIC HYBRID
Weldon Vlasak, Phoenix, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 17, 1958, Ser. No. 709,682
7 Claims. (Cl. 179—170)



6. An electronic hybrid for connecting a signal input unit and a signal output unit to a wire transmission line for providing directional transfer of energy therebetween, said hybrid including in combination, first amplifier circuit means for translating a signal applied thereto from the input unit and applying an amplified signal to the transmission line, said first amplifier circuit means including a first amplifying electron device having an input electrode for receiving the signal from the input unit and a charge emitting output electrode, coupling circuit means having low impedance connecting said charge emitting output electrode to the transmission line, said coupling circuit means providing degenerative action and developing an output voltage thereacross which follows the voltage produced at said input electrode by the signal applied thereto, second amplifier circuit means including a second amplifying electron device for translating a signal from the transmission line and applying an amplified signal to the signal output unit, said second electron device having a charge emitting input electrode and having an output circuit portion for applying the signal amplified thereby to the signal output unit, means connecting said charge emitting input electrode of said second electron device to said charge emitting output electrode of said first electron device and to said coupling circuit means, whereby an amplified signal supplied to the transmission line from said first electron device is also supplied to said input electrode of said second electron device and the signal from the transmission line is applied to said input electrode of said second electron device, and balancing circuit means energized by the signal from the signal input unit and applying a signal to said second electron device counteracting the signal supplied thereto from said first electron device, thereby establishing a balanced condition wherein substantially no energy is transferred from the signal input unit to the signal output unit, with the degenerative action of said first amplifier circuit means stabilizing the balanced condition.

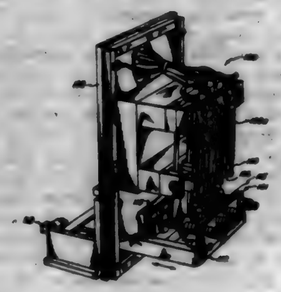
2,945,921
CORDWINDER BUMPERS
Michael E. Belicka, Greenwich, and Allen P. Cawl, New Canaan, Conn., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed May 18, 1959, Ser. No. 813,926
3 Claims. (Cl. 191—12.4)



1. In a cordwinder, a housing, a winding drum rotatably mounted therein, a flexible electric cord having one end

secured to said drum, a substantially constant torque spring motor for rotating said drum to wind said cord thereon, said housing being formed with an opening in radial alignment with said drum through which said cord runs during withdrawal and retraction, an electric plug secured to the other end of said cord, a hollow bumper made of yieldable resilient material surrounding said cord adjacent to said plug, said bumper being larger than said opening to thereby arrest retraction of said cord when the bumper strikes the portion of the casing surrounding said opening, and means for anchoring the end of said bumper adjacent to said plug to said cord independently of said plug so as to prevent transmission of impact from the bumper to the plug.

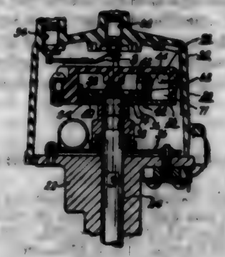
2,945,922
MICRO-ADJUSTABLE SWITCH
Ray K. Bryan, 2117 SW. 61st Terrace, Oklahoma City, Okla.
Filed June 2, 1958, Ser. No. 739,444
5 Claims. (Cl. 200—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A control switch for precisely determining the energization of an associated electrical circuit comprising a contactor of the type having a contact blade and a contactor blade movable relative thereto, linkage means for actuating said contactor blade relative to said contact blade, said linkage means comprising a pivotally mounted lever having first and second portions, said first portion positioned for engagement with and normally disengaged from said blades, striker means comprising a plurality of spools adapted to actuate said linkage, a carrier comprising a carriage, spindles independently mounting each of said spools on said carriage, means for selectively adjusting each of said spindles on said carriage for positioning the respective spool relative to the second portion of said linkage, means mounting said carrier for movement in a path intersecting the second portion of said linkage, and means for displacing said carrier for actuating said linkage into operative engagement with said blades.

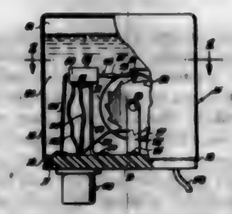
2,945,923
IGNITION DISTRIBUTOR
Clarence L. Julian and Keith W. Epply, Anderson, and James C. Norris, Pendleton, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 28, 1955, Ser. No. 524,916
4 Claims. (Cl. 200—31)

3. In a device of the character described, a distributor rotor having an electrical contact and a chamber therein closed by a base plate, the combination comprising; a weight plate in said chamber located above said base plate, a pair of weights having integral projections disposed in apertures in said weight plate, and a plurality of ribs integral with said rotor and located within said chamber for maintaining said projections from displace-



ment from said apertures, said weights being located between said ribs and said weight plate.

2,945,924
CYCLIC MULTI-CIRCUIT INTERRUPTER MECHANISM
Floyd B. Harman, 406 McHenry Ave., Crystal Lake, Ill.
Filed Apr. 24, 1958, Ser. No. 730,592
6 Claims. (Cl. 200—33)

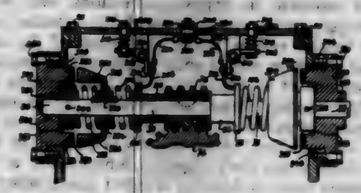


1. An electric circuit interrupter mechanism for independently interrupting the flow of electric energy in each circuit of a plurality of high potential circuits in sequence relation comprising a base, a movable contactor member having a ratchet operably connected thereto mounted on said base, said contactor member having a plurality of circuit closing elements disposed in spaced relation, a circuit opening element disposed adjacent each of said circuit closing elements on said contactor member, a plurality of electric switch actuating contact fingers electrically insulated from each other mounted on said base in spaced relation, each of said contact fingers being positioned in engageable relation with at least one of said circuit closing elements, said mechanism being immersed in a liquid electrical insulating media, motion imparting means mounted on said base and a source of power therefor adapted to move intermittently in timed cyclic relation said contactor member, said means comprising a solenoid operably engageable with said ratchet for movement thereof in one direction and a thermally operable bi-metal cyclic switch serially connected with said solenoid and said source of power for energizing said solenoid at predetermined cyclic intervals of time.

2,945,925
LOAD-RESPONSIVE MOTOR SHUTOFF SYSTEM AND OPERATOR THEREFOR
Glenn F. Gemell, 930 Lake Shore Road, Grosse Pointe Shores, Mich.
Filed Jan. 21, 1958, Ser. No. 710,222
9 Claims. (Cl. 200—47)

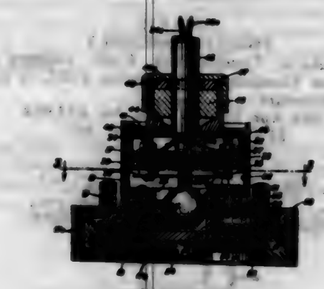
1. An overload-responsive circuit-operating device for interposition between an electrically-controlled driving motor and a driven apparatus, said device comprising a supporting structure, rotary power input and output shafts journaled in said structure and adapted to be

drivingly connected to the driving motor and driven apparatus, respectively, means for holding said input shaft against axial motion during rotation thereof, driving mechanism movable axially of said input shaft and including a substantially straight worm axially slidably mounted on said input shaft with a sliding driving connection therebetween and resiliently-urged means including a thrust element slidably mounted on said input shaft in engagement with said worm and a spring yieldingly engaging said thrust element in axial-motion-resisting relationship therewith; a worm gear drivingly con-



nected to said output shaft and disposed in meshing engagement with said worm, and electric switch means disposed in the path of travel of said driving mechanism and actuated thereby upon axial travel of said worm along said input shaft relatively to said worm gear in response to the imposition of an overload on said output shaft, said switch means including a switch mount adjustably mounted on said supporting structure, said switch means also including a pair of engageable and disengageable switch contacts, one of said switch contacts being mounted on and movable with said thrust element, the other of said switch contacts being mounted on and adjustably movable with said switch mount.

2,945,926
SWITCH
Ben W. Sewell, Tulsa, Okla., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 4, 1945, Ser. No. 608,955
2 Claims. (Cl. 200—61.41)



1. In a switch comprising a spring having an electrical contact thereon, an adjustable relatively stationary contact coacting therewith, and normally spaced therefrom, to control a circuit, an abutment carried by said spring, a spherical member in mechanical contact with said abutment, an anvil having a surface tangential to said member at the other end of the diameter of said member terminating at the abutment, the member being free to rotate in any direction, and means for transmitting mechanical impulses to said anvil; in combination, means for short-circuiting said switch contacts at will, and means operable to move said short-circuiting means.

2,945,927
ROTARY SWITCH WITH COMMON ADVANCING AND PRESSURE SPRINGS
Howard F. Mason, Los Angeles, Calif., assignor to Mason Electric Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 20, 1959, Ser. No. 800,873
8 Claims. (Cl. 200—66)



1. In a switch, the combination of: an arcuate contact path having a center of curvature and having circumferentially spaced, stationary contacts thereon; a contact carrier movable adjacent and parallel to said contact path; a movable contact carried by said contact carrier and engageable with each of said stationary contacts; actuating means movable about said center of curvature of said contact path for moving said contact carrier adjacent and parallel to said contact path, said actuating means including a rotor and a rotary actuator rotatable relative to said rotor about said center of curvature of said contact path, said contact carrier being carried by said rotor and being movable relative thereto toward and away from said contact path along a path extending radially from said center of curvature; and spring means mounted on said rotor and interconnecting said rotor, said rotary actuator and said contact carrier, and providing a resilient lost-motion connection between said rotor and said rotary actuator, for transmitting rotation of said rotary actuator to said rotor after limited rotation of said rotary actuator relative to said rotor, and for biasing said contact carrier toward said contact path so as to bias said movable contact into engagement with said contact path, said spring means including at least one spring mounted on said rotor and having one arm engaging said contact carrier and another arm engaging said rotary actuator and said rotor, said other arm engaging said rotary actuator at a point spced from said center of curvature a distance approaching the distance said contact path is spaced therefrom.

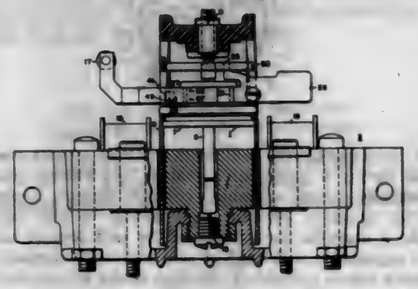
2,945,928
MAGNETIC SWITCHES
Roy W. Hosner, Anaheim, Calif., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed July 1, 1958, Ser. No. 745,855
10 Claims. (Cl. 200—87)



1. In a switch, the combination comprising magnetizable means including a pair of members each arcuately bent to form an armature leg and a contact leg, a contact formed on each of said contact legs, magnetizing means, and means for moving said magnetizing means toward said armature legs to induce magnetism in said magnetizable means, said induced magnetism causing said

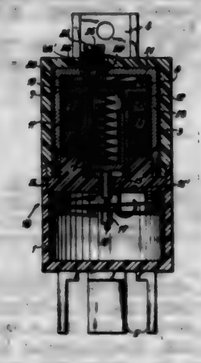
contact legs to move substantially at right angles to the movement of said magnetizing means to close said contacts.

2,945,929
CONTACT MAKING DEVICES
Howard J. Calhoun, Bayreville, and Walter L. Hinman, Jr., Plainfield, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 15, 1958, Ser. No. 767,421
8 Claims. (Cl. 200—87)



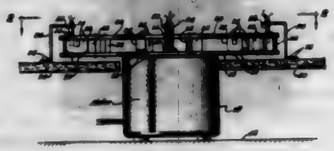
2. In a relay device for controlling an electrical circuit, a stator structure including a fixed electrical contact, a rotor structure mounted for a first revolution relative to the stator structure about a first axis, a movable contact, and mounting means mounting the movable contact on the rotor structure for actuation by the rotor structure into and out of engagement with the fixed electrical contact, said mounting means mounting the movable contact for revolution about an axis relative to the rotor structure, and said mounting means including friction means for increasing the friction acting between the movable contact and the rotor structure as the rotor structure revolves about the first axis in contact-engaging direction, said mounting means including means for limiting revolution of the movable contact relative to the rotor structure as the rotor structure revolves about the first axis in contact-disengaging direction.

2,945,930
SELF INTERRUPTING RELAY
Wolfgang Friesenmuth, Itzehoe-Tegelhorn, Danziger Strasse 35, Hamburg, Germany
Filed June 22, 1959, Ser. No. 821,966
Claims priority, application Germany June 23, 1958
8 Claims. (Cl. 200—87)



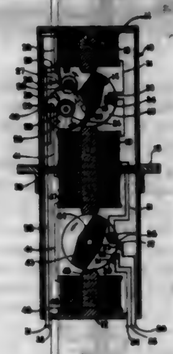
1. In a self interrupting relay for intermittently energizing a load, of the type comprising a solenoid, a plunger movable in one direction to a first defined limit in response to energization of the solenoid and yieldingly biased to move in the opposite direction to a second defined limit upon de-energization of the solenoid, and unidirectional damper means providing for substantially free movement of the plunger in said one direction but retarding movement thereof in said opposite direction: first switch means having fixed and movable contacts connectable with a source of current and with the solenoid, a contact carrier by which the movable contact is carried, movable between two defined positions, in one of which the movable contact engages the fixed contact, an actuator movable in opposite directions, and an overcenter toggle spring connected with the actuator and the contact carrier and by which movement of the actuator in either direction effects snap action of the contact carrier from one of its positions to the other; means providing a lost motion connection between the plunger and the actuator of said first switch means, whereby the contact carrier of said first switch means is moved to its said one position when the plunger is substantially at its second defined limit of motion, to effect energization of the solenoid, and is held in said position until the plunger has substantially reached its first defined limit; second switch means having fixed and movable contacts connectable with a source of current and with a load, a contact carrier by which the movable contact is carried, movable to and from a position in which the movable contact is engaged with the fixed contact, and an actuator movable in opposite directions and by which the contact carrier is moved to and releasably held in said position in consequence of movement of the actuator in one direction to a predetermined point; and means providing a lost motion connection between the plunger and the actuator of said second switch means whereby the actuator of said second switch means is moved in its said one direction to said predetermined point to move the contact carrier of said second switch means to its said defined position, energizing the load, when the plunger moves in its said one direction and whereby the contact carrier of said second switch means is moved out of its said position when the plunger is intermediate its limits of motion and is moving in said opposite direction, so that the load remains energized during a portion of such opposite direction movement of the plunger.

2,945,931
SWITCH ASSEMBLY
Glenn A. Reese, Canoga Park, Calif., assignor to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed Apr. 15, 1957, Ser. No. 652,968
22 Claims. (Cl. 200—90)



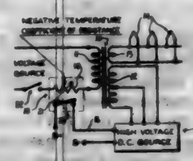
1. A switching assembly including: means including first and second walls spaced to define a continuous air gap between the walls and having contours to define a displacement in said air gap in at least one position along said walls and having properties to produce in said air gap a field exhibiting variations at the position of displacement, means coupled to the first and second walls for producing a magnetic field in the air gap in accordance with the disposition of the air gap at successive positions, switching means disposed in said air gap and responsive to such variations in said field to be actuated from one operating condition to another, and means for producing relative motion between said walls and said switching means to bring said switching means periodically under the influence of the variations in the field.

2,945,932
ELECTROMAGNETIC TIMING DEVICE
Otto R. Nemeth, 2225 S. Carmelina Ave., Los Angeles, Calif.
Filed Apr. 24, 1957, Ser. No. 655,226
5 Claims. (Cl. 200—97)



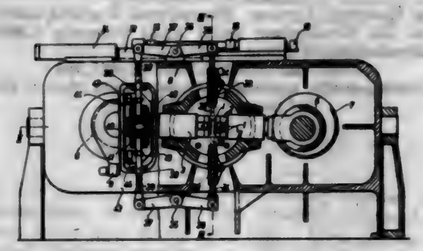
1. An electromagnetic timing device comprising: an armature balanced for rotation about a given axis; electromagnetic means in said device adapted to effect movement of said armature from a first position to a second position; force means co-axially coupled to said armature, said force means acting to return said armature from said second position to said first position; main circuit means connected from a source of electric power to said electromagnetic means; first contact means in said main circuit means normally closed when said armature is in said first position; movable means coupled for movement with said armature, said movable means effecting an opening of said first contact means in response to movement of said armature from a first position to a second position, whereby said force means may freely return said armature to said first position; and, rotatable driven means coupled for angular step-wise rotation in a given direction from an initial position in response to movement of said armature from said first position to said second position.

2,945,933
ELECTRIC CIRCUIT CONTROLLING DEVICE
Joseph Di Girolamo, Mishawaka, and Wilbert H. Budd, Elkhart, Ind., assignors to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Nov. 14, 1957, Ser. No. 696,376
13 Claims. (Cl. 200—122)



1. In an electric circuit controlling device of the character described: a base of insulating material having substantially flat upper and lower faces; a thermal switch comprising a bimetallic blade flatwise overlying the upper face of the base, said blade having one end fixed with respect to the base and having a free end portion spaced above and flexible toward and from the base, and a stationary contact fixed to the base beneath the free end of the blade to be engaged thereby as a consequence of flexure of the blade toward the base upon heating of the blade to a predetermined value; switch terminals connected to the fixed end of the blade and to said stationary contact to provide for connection of the switch in a circuit to be controlled; a disc-like resistance element providing an electric heater for the bimetallic blade; a pair of terminal members for connecting the resistance element in a heating circuit, said terminal members having opposing body portions between which the disc-like resistance element is flatwise confined; and common means mounting said disc-like resistance element on the base in a position overlying but spaced from the bimetallic blade, and for maintaining the resistance element tightly clamped between the body portions of its terminal members, comprising a pair of flanges on each terminal member projecting downwardly from the body portion thereof toward the base and abutting the upper face thereof, the flanges on each terminal member straddling the bimetallic blade and being spaced therefrom and from the flanges of the other terminal member, and tongues projecting downwardly from the outermost flanges and gripping the base.

2,945,934
MACHINE FOR HOT-FORMING BAR STOCK
Bruno Kralowetz, Reisenwirklerstrasse 13, Steyr-Gleink, Austria
Filed Sept. 12, 1958, Ser. No. 760,771
Claims priority, application Austria Sept. 14, 1957
23 Claims. (Cl. 219—7.5)

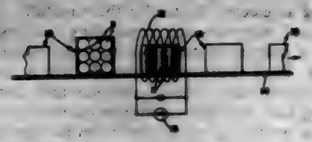


1. A machine for hot-forming bar stock, which comprises hot-forming tools, feeding means for feeding bar stock along a feed path to expose successive portions of said stock to said tools, an electric induction heater disposed around said feed path before said tools, temperature-responsive means adapted to detect the temperature of said bar stock adjacent to said heater and arranged to start said feeding means when said temperature has reached a predetermined value, said feeding means when thus started being arranged to perform a forward movement whereby a portion of the bar stock is moved from a position adjacent to said heater along said feed path to expose said portion to said tools, and control means arranged to cause said tools to perform a predetermined forming action on said portion thus exposed and to retract said tools from said bar stock when said action has been completed.

2,945,935
INDUCTION HEATING OF CANNED GOODS
Harlan A. Messner, San Marino, Calif., and Harry B. Osborn, Jr., Cleveland, Ohio, assignors to The Ohio Crankshaft Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 11, 1957, Ser. No. 683,368
4 Claims. (Cl. 219—10.41)

1. A method of preventing moisture condensation on a plurality of thin-walled cans contained in a carton which

had been in cold storage at a temperature substantially below the temperature of a new environment where the cans are to be stored, said method comprising the steps of: removing the cartons with the cans therein from cold storage to a new environment having a temperature substantially higher than that of the cold storage environ-

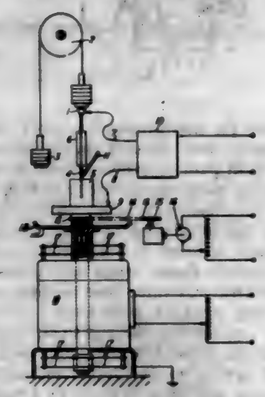


ment; and, while the thin-walled cans remain in the carton and are at a temperature substantially below that of the new environment, subjecting the plurality of thin-walled cans in the carton to induction heating at a frequency of the order of 60 cycles per second for a time sufficient to raise the temperature of the thin-walled cans to a value above the dew point of said new environment.

ERRATUM

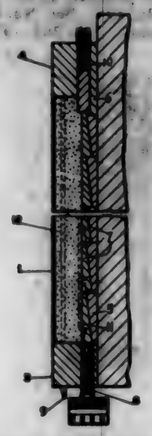
For Class 219—19 see:
Patent No. 2,945,938

2,945,936
SPARK-MACHINING
Eric Hewstone Carman, Birmingham, England, assignor to The Birmingham Small Arms Company Limited, Birmingham, England
Filed Mar. 1, 1957, Ser. No. 643,384
Claims priority, application Great Britain Mar. 2, 1956
3 Claims. (Cl. 219—69)



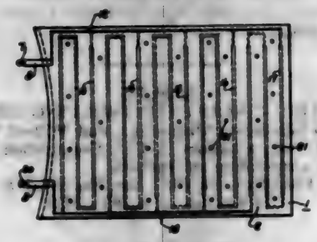
1. A method of spark machining for producing a deep cylindrical plain hole in a workpiece comprising applying to the workpiece the end of an electrode having integrally formed spiral flutes, effecting sparking between the end of the electrode and the workpiece, supplying a flow of dielectric fluid to the sparking position, rotating the electrode and workpiece continuously in a direction corresponding to the hand of the spiral flutes, and maintaining a rate of feed to keep the end of the electrode in sparking position at the end of the hole produced by the electrode.

2,945,937
SUBMERGED-ARC WELDING
Antony Brian Tinsley, Stourport-on-Severn, and Kenneth Grant, Bewdley Hill, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
Filed Sept. 9, 1958, Ser. No. 760,638
Claims priority, application Great Britain Sept. 9, 1957
3 Claims. (Cl. 219—73)



1. A submerged-arc welding apparatus comprising a trough for containing flux, an adjustable base portion in said trough, said base portion consisting of a slidable member resting on an inclined surface, means for imparting relative sliding movement between said member and surface whereby said member is moved towards or away from the trough opening, and means for positively locating said member in an adjusted position.

2,945,938
HEATED LINER FOR TROUGH FEEDERS
Grove D. Alvord, Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Filed June 10, 1958, Ser. No. 741,103
11 Claims. (Cl. 219—19)



5. A heated liner for sheet members to be vibrated such as conveyor troughs comprising a face wearing sheet, insulation means comprising two outer layers of mica sheets and two inner layers of asbestos sheets, a heating element means in the form of a flat sinuous wire mounted between the asbestos sheets and passing back and forth across the same, mounting means including members distributed in spaced relation over said sheets and securing said sheets and the heating element in clamped relation to the member to be vibrated, parallel bus members, and terminals exterior of said liner connected to said bus members, said heating element means also including sinuous wire being connected in parallel paths across said buses.

2,945,939
ROTARY WELDING ELECTRODES
John D. Russell, 6830 Alta Loma Terrace, Hollywood, Calif.
Filed Mar. 13, 1958, Ser. No. 721,256
4 Claims. (Cl. 219—82)



1. A hand-guided welding electrode unit comprising a hollow handle; an electrode mounting head secured to one end of said handle; electrical motor means mounted in said handle and having an output shaft extending through said mounting head; a shaft mounted in said head, the axis of said shaft being angularly disposed with respect to the axis of said output shaft; gear means carried by said shaft and rotatable about the axis thereof; a gear secured to said output shaft, and engaging said gear means to cause said gear means to rotate about the axis of said shaft; bearing means mounted on said shaft and rotatable about the axis thereof; a roller type electrode rotatably mounted on said bearing means; and a gear secured to said electrode and operatively engaged with said gear means.

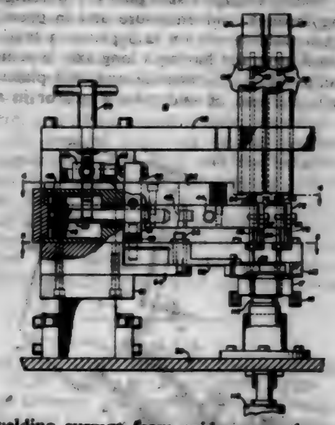
2,945,940
RESISTANCE WELDING PROCESS
Hans A. Schlatter, Zollikon, Zurich, Switzerland, assignor to H. A. Schlatter, Aktiengesellschaft, Zollikon, Zurich, Switzerland
Filed Oct. 9, 1958, Ser. No. 766,295
Claims priority, application Switzerland Oct. 11, 1957
2 Claims. (Cl. 219—100)



1. In a flash-butt resistance welding process, the steps of: flashing by applying current to two pieces to be welded together and feeding them towards each other, the portion of each of said members substantially adjacent the area of contact between the same being in semi-liquid condition and the portion adjacent thereto being in forgeable condition, and the boundary plane between these portions of each of the members moving during said flashing away from the area of contact at a certain speed; and moving during such flashing said members toward each other first at a first feeding speed faster than said certain speed of the momement of said boundary layers away from each other, and after a certain period of flashing moving said members toward each other at a second feeding speed substantially increased over said first feeding speed so as to move said boundary layers substantially into contact with each other and weld said portions being in forgeable condition directly to each other.

2,945,941
RESETTABLE WELDER
David Kalish, Alliance, Ohio, assignor to The Alliance Manufacturing Company, Division of Consolidated Electronics Industries Corporation, Wilmington, Del.
Filed Jan. 23, 1957, Ser. No. 635,799
20 Claims. (Cl. 219—124)

1. A welder for welding a workpiece, comprising, an electrode to cooperate with said workpiece, a welding station, resetting means for resetting the distance of said electrode relative to a workpiece at said welding station, a welding current source, means connected to control the



flow of welding current from said source through said electrode to said workpiece, and means to cause actuation of said control means a plurality of times between actuation of said resetting means.

2,945,942
METHOD OF WELDING
Thomas J. Flynn, Verona, and Walter G. Sylvester, West Caldwell, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed July 18, 1958, Ser. No. 747,757
3 Claims. (Cl. 219—137)

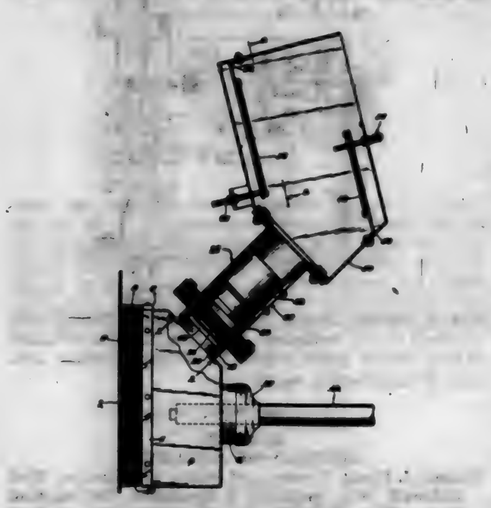


1. The method of electric arc welding together the opposed edges of adjacent wall members composed of ferrous metal each having at its edge a lower portion of reduced thickness providing an upwardly facing recess portion and terminating in a relatively short depending portion formed with a chamfer at its outer upper end and a flat zone at its lower outer end, which method comprises placing the flat zones in abutment with each other to provide a space between the chamfers and a groove between said recess portions, applying an inert gas shielded metal electrode to the members and producing an electric arc at the space between the chamfers for a sufficient duration to melt and puddle the depending portions, moving the electrode in a direction to follow the groove while maintaining the arc at the space whereby as the members cool the puddle is drawn upwardly to provide a substantially smoother continuous surface at the underside of the members at the weld, placing ferrous metal having substantially the same composition and physical properties as the members in the groove, melting the ferrous metal, and filling the groove with molten ferrous metal to butt weld the members together.

2,945,943
WELDING SHIELDING AND CONTROL DEVICE
Ansel R. Meyer, Griffith, Ind., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed June 19, 1957, Ser. No. 666,607
1 Claim. (Cl. 219—147)

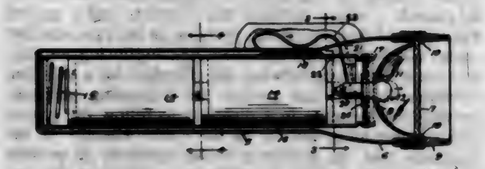
In a device for use in the arc welding of metallic plates under an inert gas shield, the combination of a

box-like enclosure having an open side extending toward said plates, means peripherally mounted along said open side for flexibly engaging said plates, a welding electrode extending through said enclosure and in operative relation with a welding site on said plates, a tube mounted on said enclosure and having a long axis in acute angular relationship with said electrode and said plates, a viewing lens in the end of said tube, a mirror in alignment



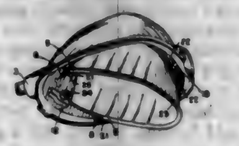
with said axis and spaced from said lens, a screen operatively aligned with said mirror to receive an image of the welding arc at said welding site, means to deliver inert gas to said enclosure including a delivery pipe extending into said tube and surrounding said axis, said pipe being adjacent said lens and having a plurality of apertures for directing said inert gas into said tube and over the inner surface of said lens.

2,945,944
FLASHLIGHT
James Flowers Gillespie, 2605 Wise St., Portsmouth, Va.
Filed Sept. 11, 1958, Ser. No. 760,344
1 Claim. (Cl. 240—10.68)



A flashlight comprising an outer casing having a stationary reflector formed with a central opening, disposed at one end thereof, said outer casing having a longitudinally disposed opening arranged adjacent to said reflector, an inner casing having an opening registering with said longitudinally disposed opening of the outer casing mounted for restricted longitudinal movement within said outer casing, a light bulb secured to said inner casing at one end thereof, projecting through said central opening of said reflector, said inner casing housing batteries in circuit with said light bulb, a substantially long switch arm having one of its ends secured to said inner casing, the intermediate portion of said switch arm being laterally curved and extended through said elongated opening of said outer casing beyond the wall of said outer casing, the free end of said switch arm passing through said opening of the inner casing, adapted to contact said bulb completing the circuit to said light bulb, and said switch arm providing means for effecting movement of said inner casing and light bulb with respect to said reflector, and said switch arm being movable under one end wall of said elongated opening, temporarily holding said inner casing and light bulb against movement longitudinally of said outer casing, varying the position of said lamp bulb with respect to the reflector.

2,945,945
LUMINAIRE
Charles H. Rex, Hendersonville, N. C., assignor to General Electric Company, a corporation of New York
Original application Oct. 24, 1958, Ser. No. 542,267. Divided and this application Apr. 28, 1958, Ser. No. 732,773
3 Claims. (Cl. 240—25)



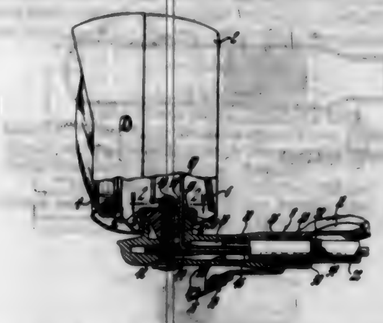
1. A luminaire comprising an inverted bowl-shaped casing, an inverted bowl-shaped reflector having means defining shoulder portions projecting outwardly from its rim at opposite sides of and toward the rear of the reflector, and support means for holding said reflector in said casing in nesting relationship relative thereto comprising bracket members attached to the inside of said casing on opposite sides and toward the rear thereof, said bracket members having notched sides engaged by said shoulder portions at the rim of said reflector, and a spring clip member attached to said casing at the front thereof and having its free end engaging the rim of said reflector and urging it toward and holding it in the notched sides of said bracket members.

2,945,946
LAMP
Dillon W. Moffatt, 4824 Triton Drive, Minneapolis 22, Minn.
Filed July 22, 1957, Ser. No. 673,368
3 Claims. (Cl. 240—47)



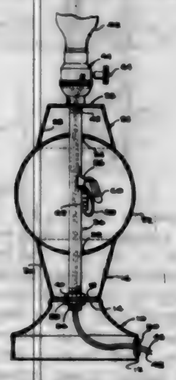
2. A lamp having an outer shade, a socket mounted on said outer shade, an electric bulb mounted in said socket, a resilient grommet in air tight sealing relationship to and depending from said bulb at position adjacent and spaced from said socket, and an inner shade in air tight sealing relationship to and depending from said grommet and in reflecting relationship to said bulb, said outer shade being provided with an opening therein adjacent said socket, and said inner shade being in spaced relationship to said outer shade.

2,945,947
SPOTLIGHT
Robert L. Zook, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 13, 1957, Ser. No. 645,833
4 Claims. (Cl. 240—61.13)



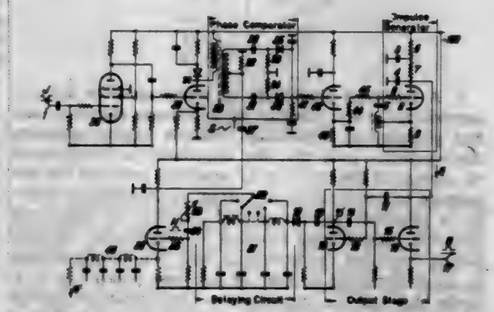
1. A dirigible lamp structure including a lamp body, a support for said body including an enclosed housing, drive means for manually positioning said body, said drive means including a driving member mounted within said housing, a rotatable driven member formed by a portion of said housing and operatively connected to said driving member and body, an elongate curved passageway through said driven member spaced from the axis of rotation of the latter and in open communication with the interiors of said housing and lamp body, a tang fixed on said housing said extending through and beyond said passageway into the interior of said lamp body, a current feed wire mounted within said housing and extending through said passageway adjacent said tang and operatively connected to said lamp, and a cap plate positioned over said driven member covering the end of said passageway exteriorly of said housing and having a relatively small aperture therein overlying a portion of said passageway through which tang and said wire extend, said tang being received through said aperture with slight clearance to retain said cap plate substantially stationary as said driven member is rotated.

2,945,948
LAMP ASSEMBLY
Rudolph A. Maffei, 2165 SW. 23rd Terrace, Miami, Fla.
Filed Oct. 10, 1958, Ser. No. 766,478
6 Claims. (Cl. 240—81)



1. In a lamp assembly, a base having a bottom surface adapted to rest upon a supporting surface and having on the upper surface a shelf, an upstanding cup positioned so that the bottom is supported upon said shelf, a transparent sphere supported upon the free edge of said cup, an inverted cup superimposed upon said sphere and having the free edge of the inverted cup engaging a portion of said sphere, a vertically disposed hollow tube adapted to receive electrical connections extending through said shelf, the bottom of said cup, said cup, said sphere, and through said inverted cup and the bottom of said inverted cup, and having the lower end fixedly supported in said shelf and the bottom of said upstanding cup and having the portion adjacent the upper end fixedly supported in the bottom of said inverted cup, the upper end of said tube being exteriorly of and spaced above the bottom of said inverted cup, and a glow bulb within said sphere and exteriorly of and supported on the portion of said tube within said sphere.

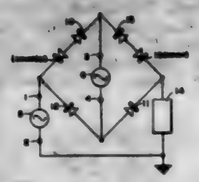
2,945,949
METHOD AND ARRANGEMENT FOR PRODUCING ELECTRIC ADVANCE IMPULSES
Edmund Jauernik, Darmstadt, Germany, assignor to Fernseh G.m.b.H., Darmstadt, Germany
Filed Dec. 12, 1957, Ser. No. 702,333
Claims priority, application Germany Dec. 14, 1956
9 Claims. (Cl. 250—27)



1. An arrangement for producing advance rectangular impulses related to a sequence of primary impulses, comprising, in combination, an input section having input and output terminals and including at least a forming stage, for receiving the input of said sequence of primary impulses; a phase comparator means having a first input terminal connected to said output of said input section, and an output terminal, and a second input terminal, said phase comparator being adapted to compare the phase of said primary rectangular impulses with that of any sequence of impulses introduced through said second input terminal and to obtain from any appearing phase difference between said sequences of impulses a control voltage; an impulse generator having an input terminal connected in circuit with the output of said phase comparator and operating at a pulse frequency identical with that of said sequence of primary rectangular impulses so as to furnish generated impulses at said pulse frequency, the phase relation of said generated impulses relative to said primary impulses depending upon said control voltage supplied by said phase comparator, said impulse generator further including an output stage having a first output terminal for delivering said generated impulses, and a second output terminal; a delaying circuit means having an input terminal connected with said second output terminal of said impulse generator, and an output terminal, for shifting the phase of said generated impulses furnished by said impulse generator, said delaying circuit means including an adjustable delaying chain combination adapted to adjust, de-

pending upon operating conditions, the amount of phase shift produced by said delaying chain combination; and transmitter means for transmitting said generated impulses after their passing through said delaying circuit means with their original frequency but subject to a predetermined amount of phase shift to said second input terminal of said phase comparator, whereby the sequence of generated impulses delivered from the first output terminal of said impulse generator are made the desired advance impulses leading said primary impulses by an amount of lead time depending on the amount of phase shift determined by the characteristics of said delaying circuit means.

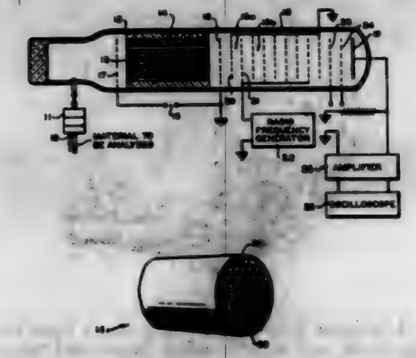
2,945,950
BALANCED PHASE SENSING CIRCUITRY
Raymond L. Midkiff, Hamilton, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Oct. 14, 1958, Ser. No. 767,122
6 Claims. (Cl. 250—27)



1. A balanced diode type of phase sensitive detector comprising: a first plurality of impedance elements, said first plurality of impedance elements having operating characteristics such that the impedance to conductivity of current of one polarity is relatively low and the impedance to conductivity of current of an opposite polarity is relatively high; a second plurality of impedance elements, said second plurality of impedance elements having operating characteristics such that the impedance to conductivity of current of said one polarity is relatively high and the impedance to conductivity of current of said opposite polarity is relatively low; a load connected in a first conducting path with said first plurality of impedance elements, and in a second conducting path with said second plurality of impedance elements; non-linear impedance devices connected, respectively, in said first and second conducting paths, said non-linear impedance device in said first conducting path comprising a diode amplifier having operating characteristics such that impedance is relatively high to conductivity of current of said one polarity until said current exceeds a predetermined value, after which its impedance is relatively low, said non-linear impedance device in said second conducting path comprising a diode amplifier having operating characteristics such that impedance is relatively high to conductivity of current of said opposite polarity until said current exceeds a predetermined value, after which its impedance is relatively low.

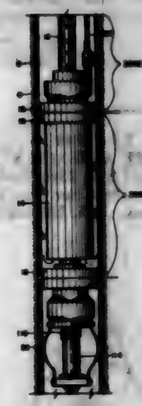
2,945,951
ION SOURCE AND MASS SPECTROMETER UTILIZING SAME
Glenn O. Bright, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 23, 1954, Ser. No. 451,331
4 Claims. (Cl. 250—41.9)

1. In a mass spectrometer, in combination, an evacuated vessel, a cylindrical bundle of longitudinally extensive tubes disposed within said vessel, each tube being plated with a radio-active material which emits alpha particles, and a coating of an absorption material overlying said plating of radio-active material, said coating being formed from a material having a high scattering cross section for alpha particles, means for feeding material to be analyzed to said vessel at one end of said tube bundle, a pair of electrodes disposed, respectively, at opposite ends of said bundle, means for establishing a field



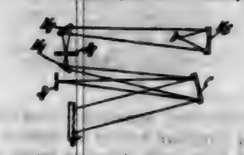
within said bundle to propel ions out of the tube bundle, said tube bundle constituting an ionization zone, a collecting electrode spaced from said tube bundle, and means for establishing a field between said zone and said collecting electrode of such character that ions of a particular mass are preferentially transmitted to said collecting electrode.

2,945,952
METHOD AND APPARATUS FOR LOCATING PRODUCING ZONES IN WELLS
Henry A. Bourne, Preston L. Gest, and Jack J. Reynolds, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
Filed Apr. 23, 1956, Ser. No. 579,790
7 Claims. (Cl. 250—43.5)



1. An apparatus for studying the composition of fluids produced from various zones in a well through a tubing string suspended in the well and having a plurality of perforations therethrough opposite the zones to be investigated, comprising an elongated housing having a longitudinal bore therethrough and a flow channel extending transversely therethrough in communication with the longitudinal bore, said housing being telescopically received on said tubing string through said longitudinal bore, packers around the housing above and below the flow channel for loosely contacting the walls of the well and inhibiting vertical migration of fluids around the housing, measuring apparatus carried by the housing for determining the composition of fluids flowing through said flow channel, and means independent of the tubing string of said well for telescopically moving the housing through the various zones in the well, whereby the fluid produced in each zone of the well is selectively directed through said flow channel and studied without materially affecting the back-pressure on the zone being investigated.

2,945,953
GRATING SPECTROMETERS
Albert E. Martin, Newcastle-upon-Tyne, England, assignor to Sir Howard Grubb Parsons & Company Limited, Newcastle-upon-Tyne, England
Filed Mar. 18, 1958, Ser. No. 722,347
Claims priority, application Great Britain Mar. 19, 1957
7 Claims. (Cl. 250—43.5)



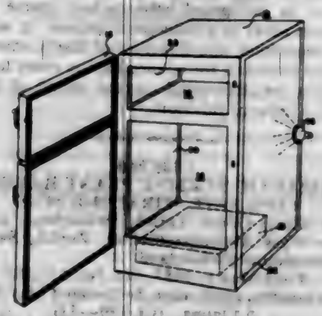
1. An infra-red monochromator in which one or more diffraction gratings of the reflecting type are used as radiation dispersion means, at least one of said gratings being used simultaneously as wavelength discrimination means for retaining the first order and suppressing the second and higher orders in respect of a selected wavelength interval.

2. An infra-red monochromator as claimed in claim 1 wherein parallel radiation is directed on a diffraction grating of the reflecting type said grating having a saw tooth groove form, the arrangement being that the diffracted radiation from said grating lies on the same side of a normal to the surface of an individual groove as the incident radiation and the smaller of the two angles made by the incident and diffracted radiation with said normal has a value in degrees greater than

$$\frac{\lambda N}{5000}$$

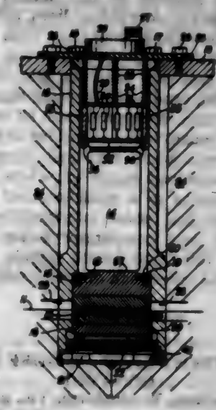
where λ is the first order wavelength to which the grating is set and N is the number of lines per inch on the grating.

2,945,954
REFRIGERATING APPARATUS
Richard S. Gaugler, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,691
2 Claims. (Cl. 250—71)



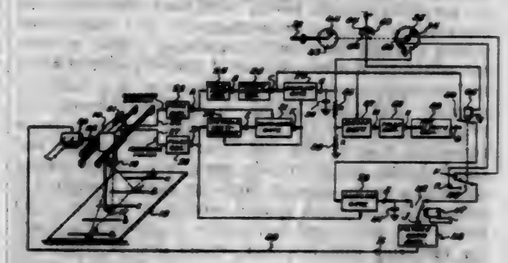
2. The method of testing temperature differentials in different parts of refrigerator cabinets which comprises electrostatically adhering to the wall of a refrigerator a flexible sheet having thereon a coating of thermographic phosphorous material, directing ultraviolet light onto said thermographic material and observing the light intensity on different portions of said thermographic material.

2,945,955
APPARATUS FOR DETECTING RADIOACTIVE PARTICLE EMISSION
Innes Alan Mowat, Seascale, Cumberland, Philip Benson Fay, Egremont, Cumberland, and Gordon Packman, Risley, Warrington, England, assignors to The United Kingdom Atomic Energy Authority, London, England
Filed Nov. 6, 1956, Ser. No. 620,638
Claims priority, application Great Britain Nov. 12, 1955
3 Claims. (Cl. 250—71.5)



1. Apparatus for detecting radioactive particle emission from a wire or tape inside a pressure vessel, comprising a scintillation-emitting, particle-sensitive phosphor inside the vessel shaped to embrace the wire or tape and a scintillation guide surrounding the phosphor so that the phosphor is embedded in the scintillation guide, the mating surfaces of said phosphor and said scintillation guide being joined by a light-transparent, thermosetting resin, and said guide being sealed in the wall of the vessel.

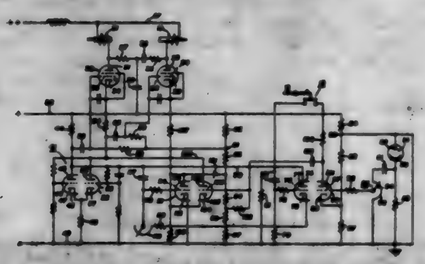
2,945,956
COURSE PLOTTER
Robert L. Frank, Great Neck, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed May 28, 1956, Ser. No. 588,269
16 Claims. (Cl. 250—202)



13. Apparatus for comparing the location of a first point with respect to a chart representing an area with the position of a second point with respect to said area, the position of said second point with respect to said area being described by its location relative to an arbitrary

coordinate system fixed with respect to said area, said coordinate system comprising at least one set of spaced lines, said chart having superimposed thereon a plurality of spaced grid lines corresponding to said coordinate lines, said apparatus receiving an input first signal representing the position of said second point with respect to two adjacent coordinate lines between which said second point lies and wherein a second signal is generated representing the position of said first point with respect to two adjacent grid lines between which said first point lies, comprising in combination, means for generating a third signal representing the position of said first point relative to two adjacent grid lines after said first point and said grid lines have been displaced relative to each other by a distance less than the separation between said adjacent grid lines, means for generating a fourth signal representing the position of said second point relative to said two adjacent coordinate lines after said second point and said coordinate lines have been displaced relative to one another by said distance less than the separation between said two adjacent grid lines, and comparator means for producing an error signal corresponding to the difference between a pair of received signals, said comparator means being connected to receive said first and second signals when said first signal has a value within a predetermined range of values, said range of values corresponding to a predetermined range of positions of said second point intermediate two adjacent coordinate lines, said comparator means being adapted to receive said third and fourth signals when said first signal has a value other than one with said predetermined range of values.

2,945,957
INTERMITTENT FEED CUT-OFF REGISTER CONTROL
Leroy U. C. Kelling, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Apr. 21, 1958, Ser. No. 729,627
12 Claims. (Cl. 250—219)



12. A control system for a blank cutting machine employing a cyclically operating blanking die and apparatus for supplying material having index marks thereon to said blanking die in synchronism therewith, said system comprising a clutch for selectively coupling a drive member for said apparatus to a source of motive power, a brake for selectively coupling said drive member to a stationary member, said brake having an electrically energizable brake control winding, a first gaseous discharge device connected in series with said brake control winding, said clutch having an electrically energizable clutch control winding, a second gaseous discharge device connected in series with said clutch control winding, a flip-flop circuit having first and second stable states of conduction, means for rendering said first and second devices conductive when said flip-flop circuit obtains its first and second stable states of conduction, respectively, transfer means for discontinuing conduction of each of said devices when the other is rendered conductive, a normally open switch, means for closing said switch upon movement of said blanking die away from said material, first circuit means for causing said flip-flop to assume its second stable state when said switch is closed, a photoelectric system for producing a predetermined signal in response to said index marks, second circuit means responsive to said predetermined signal by said photoelectric system for causing said flip-flop to assume its first stable state and timing means responsive to said flip-flop circuit assuming its second stable state for rendering said second circuit means unresponsive to said photoelectric system for a predetermined length of time.

2,945,958
LIGHT COLLECTOR
Jean Morton Morris, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 25, 1956, Ser. No. 618,343
3 Claims. (Cl. 250—234)



1. A light collecting apparatus comprising a hollow tapered tubular structure having an interior surface highly reflective of light, said structure being truncated and having one open end and at the opposite end from said open end a smaller closed end having an interior surface highly reflective of light, and having a slot in the side of said structure, said slot being located with its longer dimension in the direction of taper of said tapered structure.

2,945,959
PICKOFF RESPONSIVE TO DISPLACEMENT BETWEEN RELATIVELY MOVABLE MEMBERS
Donald L. Atkinson, Grand Rapids, Mich., assignor to Lear, Incorporated
Filed May 3, 1957, Ser. No. 656,859
8 Claims. (Cl. 250—237)

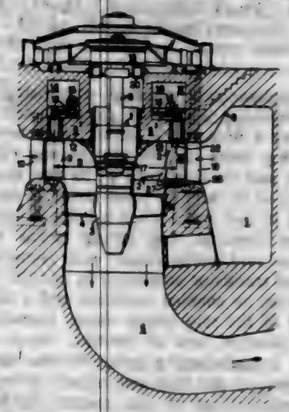


1. A transducer for sensing the magnitude and direction of displacement of two relatively movable objects comprising a fixed hollow cylindrical part mounted for movement with one of the objects having two adjacent, separated zones of photovoltaic material on the interior surface thereof, a light source within and on the axis of said cylindrical part, a movable part mounted for movement with the other object having an opaque area adapted to be interposed between said source and said photovoltaic zones in a differential manner in accordance with the magnitude and direction of displacement of the objects and terminals for connecting the zones to a device for utilizing the differential current output of the transducer for a control function.

2,945,960
HYDRAULIC TURBINE PLANT HAVING A CONCRETE SPIRAL HOUSING
Heinrich Albert Obrist, Zurich, Switzerland, assignor to Escher Wyss Aktiengesellschaft, Zurich, Switzerland, a corporation of Switzerland
Filed May 6, 1957, Ser. No. 657,385
Claims priority, application Switzerland May 19, 1956
5 Claims. (Cl. 290—52)

1. In an hydro-electric power plant including a generator, a vaned runner of the propeller type which turns

on a vertical axis and has a central hub and adjustable lateral extending vanes, a drive shaft connecting the runner with the generator, and means for feeding a coaxially whirling body of water against the upstream faces of said vanes to cause rotation of said runner, said means including a spiral chamber and adjustable guide vanes that are mounted on rotatable shafts whose axes are arranged in a circle around the turbine axis, the improvement which comprises a monolithic concrete housing



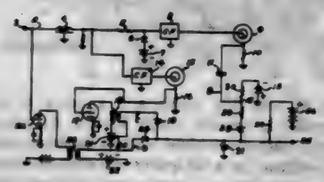
enclosing said spiral chamber and having an inward projecting collar which is axially adjacent the adjustable guide vanes and which defines a central opening whose diameter is smaller than the diameter of said guide vane circle, the collar being positioned below the generator so that the drive shaft extends through said central opening; an annular series of openings formed in the collar, there being one opening aligned with each of said rotatable shafts; and bearings for said rotatable shafts located within said openings.

2,945,961
CURRENT BALANCING REACTORS FOR DIODES
George A. Heath, Palmyra, N.J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 5, 1958, Ser. No. 732,868
13 Claims. (Cl. 307—58)



13. A current balancing reactor means for a plurality of parallel connected circuits; said current balancing reactor means comprising a stack of magnetic laminations; each of said circuits having conductors extending therefrom; each of said conductors being positioned adjacent another of said conductors; said stack of magnetic laminations being comprised of a first and second portion; each of said first and second portions of said stack of magnetic laminations including a first and second row of apertures extending parallel to one another; each of said conductors and a first conductor adjacent thereto extending through a respective aperture of said first portion of said stack of laminations; each of said conductors and a second conductor adjacent thereto extending through a respective aperture of said second portion of said stack of magnetic laminations; each of said adjacent conductors carrying current in an opposite direction; each of said conductors terminating on a common bus conductor means; said stack of laminations being supported from said bus conductor means; said bus conductor means being comprised of a first and second portion positioned adjacent a first and second face of said stack of magnetic laminations; alternately positioned circuit conductors passing current through said stack in a first direction terminating at said first bus portion; the other of said circuit conductors passing current through said stack in a direction opposite said first direction terminating at said second bus portion.

2,945,962
PULSE AMPLITUDE WIDTH DISCRIMINATOR
Frederick William Marschall, Turin Road M.R., Rome, N.Y.
Filed May 20, 1959, Ser. No. 814,652
3 Claims. (Cl. 307—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)

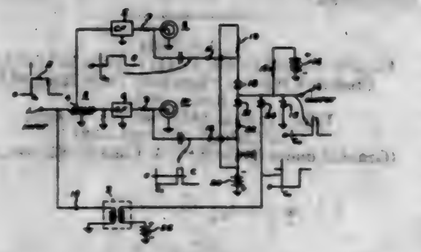


2. An amplitude-width discriminator for serially applied input pulses that are positive relative to a predetermined reference potential, said discriminator comprising; first and second series circuits each consisting of a saturable core reactor and a resistor; means for limiting said input pulses to a predetermined magnitude and for applying said limited pulses to said first series circuit to produce a first voltage waveform across the resistor of said series circuit; means for applying said input pulses without magnitude limitation to said second series circuit and means for inverting the resulting voltage across the resistor to produce a second voltage waveform; means for biasing said first voltage waveform negatively relative to said reference potential; means for biasing said second voltage waveform positively relative to said reference potential; means for inverting said input pulses; and means responsive to said first and second waveforms and said inverted input pulses to produce an output signal whenever at any instant not concurrent with an inverted input pulse said first and second waveforms are positive relative to said reference potential.

2,945,963
SIGNAL SELECTIVE CIRCUIT
Frederick William Marschall, Turin Road M.R., Rome, N.Y.
Filed May 20, 1959, Ser. No. 814,653
2 Claims. (Cl. 307—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)

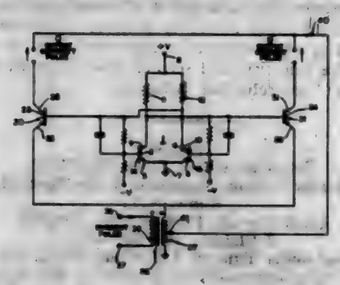
2. An amplitude-width discriminator for serially applied input pulses comprising; first and second saturable core reactors; means for delaying said input pulses by a predetermined interval T_1; means having an internal impedance high relative to the winding resistance of said first reactor for applying said T_1 delayed pulses to said first reactor for producing a voltage pulse thereacross; means for delaying said input pulses by a predetermined interval T_2 greater than T_1; means having an internal impedance high relative to the winding resistance of said second reactor for applying said T_2 delayed pulses to said second reactor for producing a voltage pulse thereacross;

means for inverting said input pulses; and means responsive to the voltages across said reactors and to said inverted input pulses for producing an output signal when at any instant not concurrent with said inverted input pulses the voltages across said reactors both exceed a predetermined reference potential; said last named means comprising an output terminal; a resistor connected between said output terminal and a point of positive potential relative to said reference potential; a first diode having its anode connected to said output terminal and its cathode connected through a resistor to a point of negative potential relative to said reference potential; means for applying the voltage across said first reactor between



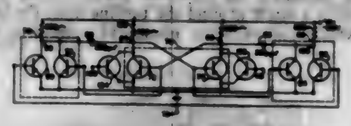
the cathode of said first diode and a point at said reference potential; a second diode having its anode connected to said output terminal and its cathode connected through a resistor to said point of negative potential; means for applying the voltage across said second reactor between an intermediate point on the last named resistor and a point at said reference potential; a third diode having its anode connected to said output terminal; means for applying said inverted input pulses between the cathode of said third diode and a point of positive potential relative to said reference potential; and a fourth diode having its anode connected to a point at said reference potential and its cathode connected to said output terminal.

2,945,964
PULSED OUTPUT TRANSISTOR FLIP-FLOP
Peter Vutz, Manhattan Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 31, 1956, Ser. No. 619,919
1 Claim. (Cl. 307—88.5)



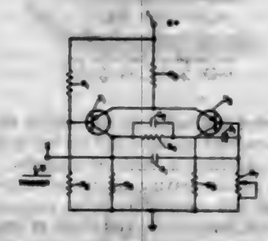
In a bistable flip-flop circuit having a first output transistor and a second output transistor connected thereto, means for controlling the base potentials of said transistors, comprising a bistable circuit, and means for introducing pulsed power to said output transistors including a transformer having its secondary connected to the emitters of said output transistors and having a primary connected to the source of pulsed power, and means for returning a portion of the output currents to the secondary of said transformer.

2,945,965
COMPLEMENTING FLIP-FLOPS
Edward Gary Clark, Oreland, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 20, 1956, Ser. No. 629,570
5 Claims. (Cl. 307—88.5)



1. A complementing flip-flop comprising a master flip-flop comprising a pair of cross-coupled transistors and including a first and a second input terminal, said master flip-flop being capable of assuming either of two stable states and assuming one of its two states when a pulse is applied to the first input terminal and assuming the other of its two states when a pulse is applied to the second input terminal, first gating means and second gating means, said gating means each comprising a first and a second transistor connected in parallel and having two conditions, an enabled condition and a disabled condition, each of the said gating means transistors having a base, a collector, and an emitter, circuit means for applying a complementing pulse to the base of each first transistor of the first and second gating means to effect complementing of the master flip-flop, circuit means forming a direct-current connection between the base of each second transistor of the first and second gating means and the base of a different one of the transistors of the master flip-flop so that when one gating means is enabled, the other gating means is disabled, each of said gating means being enabled when its second transistor is cut off and being disabled when its second transistor is conducting, the potential of the collectors of the transistors of an enabled gate changing suddenly to produce a pulse when a complementing pulse is applied to the gating means, and circuit means for coupling the change in potential at the collectors of the transistors of the enabled gating means to the master flip-flop to cause the master flip-flop to change state.

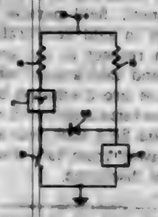
2,945,966
TRANSISTORIZED MONOSTABLE MULTIVIBRATOR
Arthur Bruce Davenport, Owings Mills, Md., assignor to Bendix Aviation Corporation, Towson, Md., a corporation of Delaware
Filed Mar. 22, 1957, Ser. No. 647,903
1 Claim. (Cl. 307—88.5)



In a monostable multivibrator comprising a pair of transistors each having an input circuit and an output circuit, regenerative feedback means coupling said transistors including, capacitive means coupling the output circuit of a first of said transistors to the input circuit of the second, resistive means providing a discharge path for said capacitive coupling means, means normally biasing

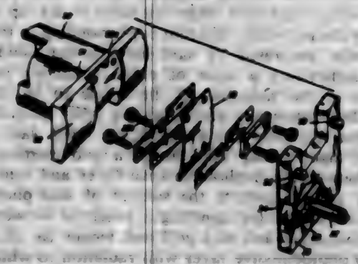
said first transistor to cut-off, and means applying voltage impulses to said capacitive coupling means and said output circuit of said first transistor of a magnitude and polarity to reverse the quiescent conductive states of said transistors; the improvement which comprises a network shunting said capacitive coupling means, said network comprising a series arrangement of a resistor and a diode, and a capacitor shunting said resistor.

2,945,967
LOAD SWITCHING CIRCUIT
Joseph L. Modoff, Cambridge, Mass., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Dec. 12, 1957, Ser. No. 702,412
3 Claims. (Cl. 307—112)



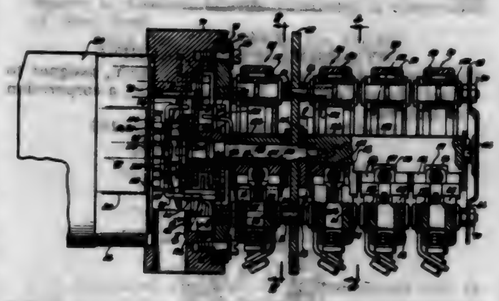
1. A load switching device comprising a bridge network having a first serial arm including a switching means, a second serial arm including a first load device and a first impedance, a third serial arm including a second impedance, a fourth serial arm including a second load device, a source of unidirectional potential connected between the junctions of said first with said fourth serial arms and said second with said third serial arms, and a bridge arm including a non-linear current flow device connected between the junctions of said first with said second serial arm and said third with said fourth serial arm, said non-linear device being connected with its current carrying terminals in series with said switching means and said second impedance to provide the lowest resistance to current flow through said switching means and said second impedance, wherein with said switching means in a closed position current flow is preponderantly from said source through said first load device and said switching means, and with said switching means in an open position the current flow is preponderantly through said second load device.

2,945,968
MOUNTING SYSTEM FOR THE MOVING ELEMENT OF A VIBRATION TABLE EXCITER
Donald S. McCluskey, Northford, and Harry N. Cottle, Jr., Orange, Conn., assignors, by mesne assignments, to Textron Electronics, Inc., Providence, R.I., a corporation of Delaware
Filed Mar. 28, 1957, Ser. No. 649,221
2 Claims. (Cl. 310—27)



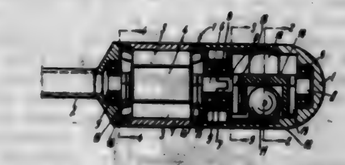
1. Means for connecting the end of a rolling suspension element of a vibration exciter to a fixed support and a movable element, comprising a damping pad having a plate bonded to said pad, a flexible resilient band secured at one end to said plate and securable at its other end to said rolling suspension element.

2,945,969
ROTARY SWITCHING APPARATUS
Howard F. Mason, Los Angeles, Calif., assignor to Mason Electric Corporation, Los Angeles, Calif., a corporation of California
Filed Feb. 3, 1958, Ser. No. 712,785
16 Claims. (Cl. 310—37)



7. In combination: a rotary solenoid; a rotary interrupter switch coaxial with and electrically connected in series with said rotary solenoid; coupling means coupling said interrupter switch to said rotary solenoid for movement therewith, said coupling means including a resilient lost-motion connection; a rotary, multi-position control switch coaxial with and electrically connected in series with said interrupter switch and said rotary solenoid, whereby said rotary solenoid is energizable only when said interrupter switch is closed and said control switch is in a closed position; and another, unidirectional coupling means coupling said control switch to said rotary solenoid to be driven thereby, said other coupling means including a resilient lost-motion connection.

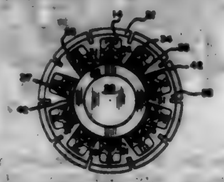
2,945,970
VIBRATORS, MORE PARTICULARLY AN IMMERSION VIBRATOR
Sven-Åke Nordegren, Ljungby, Sweden, assignor to Aktiebolaget Vibro-Verken, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 6, 1956, Ser. No. 620,759
Claims priority, application Sweden Nov. 11, 1955
5 Claims. (Cl. 310—81)



1. In a vibrator, the combination of a driving motor comprising a stator member and a rotor, said rotor having a shaft journaled in bearings supported by said stator member, and a vibration generator unit driven by said motor and capable of generating rotary vibrations of a frequency determined by the speed of said driving motor, said vibration generator unit comprising a rotary driver mechanically coupled to said rotor of the driving motor, a stator body, and a circular roller track located within the stator body of said vibration generator unit and rigidly connected thereto, a rolling body being imparted

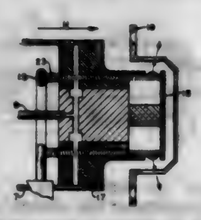
a rolling movement along said track by means of said rotary driver, said stator body of the vibration generator unit being rigidly connected to the stator member of the driving motor so that said stator member is compelled to participate in the oscillatory movements of the vibration generator unit, the center of gravity of said rotor of the driving motor being eccentrically displaced in such a manner that the rotor itself during its rotation will be caused to oscillate substantially in synchronism and in phase with said stator member and said vibration generator unit rigidly connected thereto to reduce stresses on the rotor bearings and damping of the vibrations by the rotor.

2,945,971
DYNAMOELECTRIC MACHINE
Theodore G. Apostoleris, Ann Arbor, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,102
9 Claims. (Cl. 310—234)



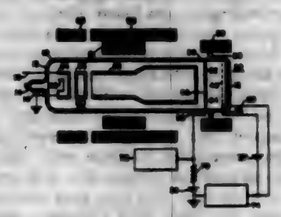
1. An armature for a dynamoelectric machine comprising a shaft, an armature core mounted upon said shaft, a plurality of armature coils wound upon said core, said coils having loops extending therefrom, a sleeve having a plurality of electrically insulating radial projections extending therefrom mounted upon said shaft adjacent one end of said armature core, said loops being positioned around said radial projections, a commutator having a plurality of segments and a plurality of slots telescopically fitted over said sleeve, with the slots of the commutator receiving the radial projections on said sleeve and the loops of said coils, said loops being electrically connected to said commutator segments.

2,945,972
ION SOURCE
Clarence W. Blue, Knoxville, and John S. Luce, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 3, 1959, Ser. No. 838,669
8 Claims. (Cl. 313—63)



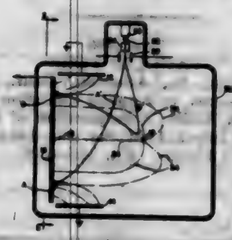
1. An improved ion source comprising a support flange, a ground flange, a T-shaped insulating support and vacuum connection affixed to and disposed between said flanges, a support tube affixed to said support flange and extending through said ground flange in spaced relation thereto, a source tube disposed within and spaced from said support tube, an ion source head affixed to said source tube, means disposed within said source head for initiating a gas-fed refluxing arc discharge therewithin, comprising a heated filament electrode, an electrically floating anode disposed in spaced relation to said filament electrode, an apertured arc defining electrode disposed between said filament electrode and said anode in spaced relation thereto, means for connecting a potential gradient between said filament electrode and said arc defining electrode, a cup-shaped accelerating electrode disposed around said anode and provided with a plurality of radial openings, means connecting said accelerating electrode to ground, a source of gas, a gas feed tube, means for feeding gas from said source and through said gas feed tube into the aperture of said arc defining electrode, said gas being ionized by electrons drawn from said filament electrode by said potential gradient to thus form a refluxing arc discharge through said arc defining electrode and between said filament electrode and said anode, means for establishing a magnetic field parallel to said discharge, said radial openings in said accelerating electrode being slightly off-set with respect to the spacing between said defining electrode and said anode, whereby ions are accelerated out of said arc discharge by said accelerating electrode and at a traverse angle with respect to the direction of said magnetic field such that said ions will spiral into said field and away from said discharge and will not return to strike said discharge.

2,945,973
IMAGE DEVICE
Arthur E. Anderson, Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 18, 1957, Ser. No. 672,647
4 Claims. (Cl. 313—65)



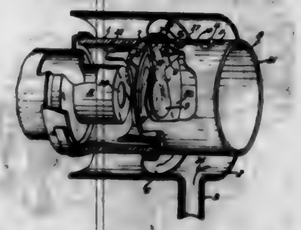
1. An electron discharge device comprising a target member including a film of material exhibiting the property of electron bombardment induced conductivity above a predetermined value of electron energy, means for generating an electron beam having energies below said predetermined value to bombard one surface of said film to establish an equilibrium potential on the surface of said film, an electrical conductive sheet in contact with the opposite surface of said film to maintain the opposite surface at a fixed potential different from said equilibrium potential, an input screen spaced from said target for projecting electrons having energies above said predetermined value onto said target member to set up a conductivity image within said film corresponding to the electron image generated by said input screen, said input screen comprising a layer of photoconductive material sensitive to the radiation of the image to be detected sandwiched between a photoemissive layer insensitive to said input radiation and a conductive layer, said photoemissive layer facing said target, a grid member positioned between said photoemissive layer and said target member and adjacent to the surface of said photoemissive layer, means for applying a potential between said conductive layer and said grid and means for illuminating said photoemissive layer with radiation to which said photoemissive layer is sensitive and to which said photoconductive layer is insensitive.

2,945,974
ELECTRONIC DEVICE
William Ross Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada
Filed Jan. 14, 1957, Ser. No. 633,930
8 Claims. (Cl. 313—92)



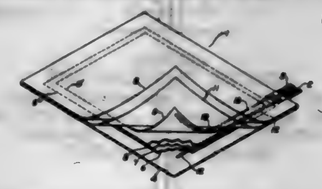
1. An electron discharge device comprising an electron sensitive target, an electron beam source for delivering a beam along a path which is at least initially substantially parallel to said target, a first deflection set operable to bend the beam to different trajectories in adjacent relation with said target, a second deflection means for bending said beam from said trajectories through angles acute and obtuse relative to the initial beam path in the direction of said target, and a third deflection means including at least a first and a second deflection member disposed between said second deflection means and said target and on opposite sides of the beam paths which occur subsequent to deflection of the beam by said second deflection means operable to apply deflecting forces to said beam to further adjust with said second deflection means the point of registration of said beam with said target.

2,945,975
IMAGE CONVERTER TUBE
Joseph Bruhin, Zurich, Switzerland, assignor to Albiswerk Zurich, A.G., Zurich, Switzerland, a corporation of Switzerland
Filed Apr. 28, 1958, Ser. No. 731,434
7 Claims. (Cl. 313—94)



1. In an image converter tube wherein electrons are adapted to flow along a preselected path, in combination, an hermetically sealable envelope; at least one accelerating electrode arranged in said envelope and being formed with an opening in the preselected path of the electrons so that the electrons may pass therethrough; blocking means mounted within said envelope and adapted to be moved between a blocking position wherein said opening of said accelerating electrode is closed and an open position wherein the electrons may pass through said opening; and a passage passing through the blocking means, a slideable element locking means movably mounted within said envelope in contact with peripheral portions of said blocking means for releasably supporting said blocking means in the blocking position, and for allowing movement of the blocking means toward the open position by an impact upon the envelope insufficient to cause rupture of the tube; biasing means for moving said slideable element locking means within said envelope, said movement of the biasing means being in response to movement of said blocking means to the open position, said biasing means moving said slideable locking means to a position positively engaging said passage of said blocking means for locking said blocking means in the open position.

2,945,976
ELECTROLUMINESCENT LAMP AND MANUFACTURE THEREOF
Elmer G. Fridrich and Paul A. Dell, Cleveland, Ohio, assignors to General Electric Company, a corporation of New York
Filed Dec. 10, 1957, Ser. No. 701,906
9 Claims. (Cl. 313—108)



1. A laminated evacuated electroluminescent cell assembly comprising an outer envelope of thermoplastic sheets of which at least the front sheet has a light-transmitting portion enclosing and overreaching at their marginal edges an electrically active assembly including a conducting foil coated with an electroluminescent phosphor dispersed in a plastic matrix to which is cemented a sheet of conductive fibers penetrated by thermoplastic material fused to the outer light-transmitting envelope sheet.

2,945,977
FLUORESCENT GLOW DISCHARGE LAMP
Fritz Schönherr, Berlin-Dahlem, Germany, assignor to Patent-Treuhand-Gesellschaft für elektrische Glühlampen m.b.H.
Filed Feb. 19, 1958, Ser. No. 716,141
Claims priority, application Germany Mar. 28, 1957
5 Claims. (Cl. 313—217)

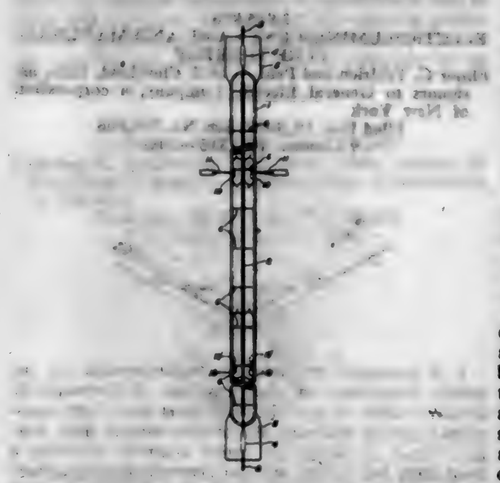


1. A negative glow discharge lamp comprising a sealed light-transmitting bulb containing an inert starting gas at low pressure and a small quantity of mercury, said bulb having a bowl end coated with a luminescent material, and a single pair only of closely spaced linear wire cold electrodes sealed into the end of the bulb opposite the said bowl end thereof and sustaining therebetween the glow discharge in said lamp, said wire electrodes having an essential portion of their lengths extending in parallel side-by-side relation in a direction transverse to the bulb axis and being disposed substantially symmetrically with respect to the center of said bowl end.

2,945,978
TUBULAR INCANDESCENT LAMP DEVICE
William F. Hedge, Lyndhurst, Ohio, assignor to General Electric Company, a corporation of New York
Filed Mar. 19, 1959, Ser. No. 800,424
3 Claims. (Cl. 313—279)

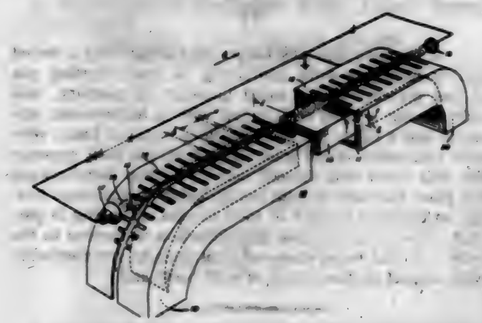
1. An incandescent electric lamp device comprising a sealed elongated tubular envelope of vitreous material,

current supply terminals sealed in the respective ends of said envelope, a helically coiled wire filament extending longitudinally within said envelope and electrically connected at its ends to said terminals, means supporting said filament in spaced relation from the walls of said envelope comprising a plurality of transverse support members spaced along the length of said filament and fixedly secured thereto and peripherally engageable with



the inner wall of said envelope, said envelope having indentations in portions of its walls contiguous to at least one side of at least some of said support members, said indentations forming inwardly projecting shoulders adapted to be located under and engaged by peripheral portions of said support members when the lamp device is vertically disposed whereby to support the coiled filament against sagging longitudinally during operation at incandescence.

2,945,979
TRAVELING WAVE TUBE STRUCTURE
Arthur Karp, Red Bank, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1953, Ser. No. 328,625
10 Claims. (Cl. 315—3.5)



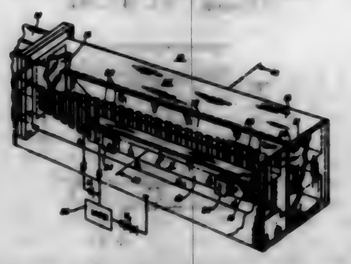
1. An electronic device comprising a wave guide for propagating an electric wave, a section of one wall of said wave guide including a plurality of discrete transverse slot-like openings extending therethrough and spaced apart in a series parallel to the direction of wave propagation to form a succession of discrete slot-resonators, each of said slot resonators extending across said wall substantially in the plane thereof, means for forming and projecting an electron stream parallel to the direction of wave propagation and in coupling relation to said succession of resonators for achieving electron stream electromagnetic wave interaction, and a conductive member extending along a major portion of said series in capacitive coupling with said slot-like openings.

2,945,980
VACUUM TUBE
Wilson S. Gelaber, Jr., Alhambra, Calif., assignor, by mesne assignments, to Applied Radiation Corporation, Walnut Creek, Calif., a corporation of California
Filed July 2, 1954, Ser. No. 441,667
3 Claims. (Cl. 315—3.5)



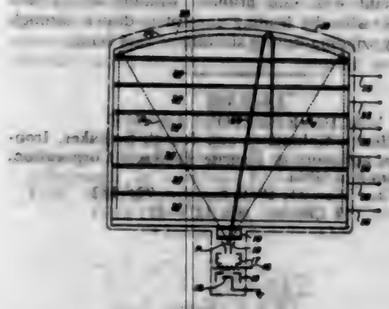
3. A traveling wave tube comprising an evacuated envelope, an electron gun having a plurality of elements, a slow wave structure adapted to be axially traversed by a beam of electrons from said gun, a collector electrode adapted to collect the electrons after such traversal, and means including a plurality of tubular ceramic insulating members and conducting members arranged in alternate stacked relation for supporting the elements of said gun, said slow wave structure, and said collector electrode in spaced relation, and forming said evacuated envelope of said tube.

2,945,981
MAGNETRON-TYPE TRAVELING WAVE TUBE
Arthur Karp, Red Bank, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 13, 1955, Ser. No. 514,885
19 Claims. (Cl. 315—3.5)



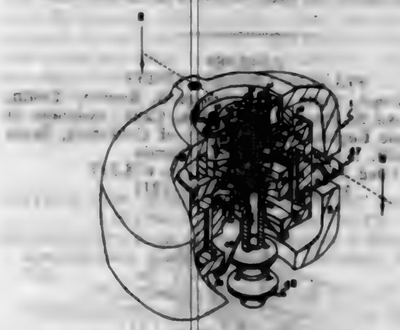
19. In a device which utilizes the interaction between an electron beam and an electromagnetic wave to amplify the wave or create oscillations over a predetermined frequency band, a periodic slow wave circuit for propagating an electromagnetic wave therealong in a predetermined direction, said slow wave circuit characterized in that its effective interaction impedance increases with frequency at all frequencies below the highest frequency of said predetermined frequency band, means for forming and projecting an electron beam in coupling relation with said electromagnetic wave, means for forming a magnetic field prependicular to the direction of wave propagation along a major portion of the length of the slow wave circuit, and means for forming an electric field in a direction perpendicular to said magnetic field along a major portion of the length of said slow wave circuit.

2,946,982
ELECTRONIC DEVICE
Leigh C. Foster, Westmount, Quebec, Canada, assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada
Filed Sept. 21, 1955, Ser. No. 535,977
10 Claims. (Cl. 315—21)



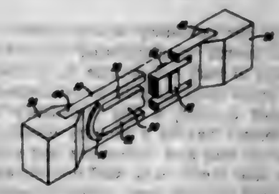
10. An electron space discharge device comprising an electron sensitive target, a beam bending electron lens having a non-linear longitudinal axis disposed adjacent said target, an electron beam source for selectively directing a beam along different ones of a plurality of non-parallel paths in the direction of correspondingly different points on said lens, said lens being of a configuration at said different points to deflect said beam to correspondingly different parallel paths adjacent a surface of said target, and deflection means disposed along said parallel paths for applying signals to said beam to effect selective deflection thereof into registration with correspondingly different points on said target.

2,945,983
ELECTRODE SUPPORT FOR ELECTRON DISCHARGE DEVICES
Herbert H. Chun, Marblehead, and Louis W. Roberts, Boston, Mass., assignors to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts
Filed May 8, 1959, Ser. No. 811,121
5 Claims. (Cl. 315—39.3)



1. In an electron discharge device of the circular backward wave type comprising a cylindrical body member having end closure members disposed normal to the axis of the cylinder to define an envelope, concentrically disposed conductors enclosed within said envelope including a circular multifingered interdigital delay line supported by said body member and an inner negatively biased electrode spaced from said delay line to define an interaction space, said inner electrode being externally adjustable by mechanical means supported by an end closure member, said mechanical means comprising a metallic member of non-magnetic metal secured to a planar surface of said inner electrode, a non-conductive member secured to said metallic member, a rod secured to said metallic member and extending axially through an end closure member, a deformable bellows structure joining said rod and end closure member to provide a vacuum tight seal, an adjusting mechanism secured to the top wall of said end closure member and communicating with the external end of said rod, said adjusting means comprising a plurality of radially disposed ball bearing members and means for moving said bearing members normal to the envelope axis to thereby contact said rod and displace said inner electrode radially and screw means threadably engaging the external end of said rod to axially displace said inner electrode to thereby alter the concentric alignment between said circular delay line and said inner electrode and optimize the electrical characteristics of the device.

2,945,984
PIEZOELECTRIC DEVICE
Stephen Yando, Huntington, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed July 17, 1959, Ser. No. 827,991
13 Claims. (Cl. 315—66)



1. A device comprising a sheet of piezoelectric material, said sheet having at least two separated parallel slots extending in a given direction along a portion of said sheet; and a pair of curved electrodes secured to opposite surfaces of said sheet in registration with each other and positioned adjacent one end of said sheet, said electrodes having a focal point falling within a region of said sheet intermediate said slots.

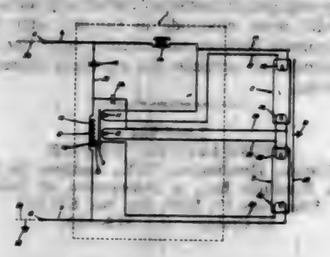
2,945,985
DUAL COLOR HEADLAMP FOR VEHICLES
Andrew Madson, 17255 Via Jaso, San Lorenzo, Calif.
Filed Apr. 23, 1958, Ser. No. 730,451
2 Claims. (Cl. 315—82)



1. In a sealed beam headlamp for vehicles comprising a housing, a parabolic reflector surface associated therewith, an electrical white light-emitting filament disposed forwardly of the center of said reflector surface, and a lens closure for said housing; a transparent sleeve normally disposed forwardly of said filament within said housing, a support bracket therefor carried by said housing and comprising a pair of superposed electrically resistive strips having varying coefficients of thermal expansion, and electrical means associated with said bracket for heating the same and imparting a warping movement thereto to bring said sleeve into laterally enveloping re-

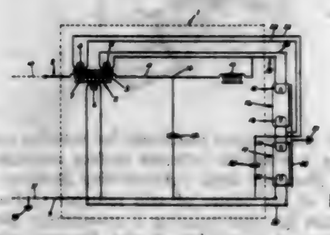
lation with said filament, said sleeve being tinted with a selected color corresponding to the color of light which is desired to be emitted from said headlamp.

2,945,986
ELECTRIC DISCHARGE APPARATUS
Wesley W. Brooks, Danville, Ill., and Charles E. Strecker, deceased, late of Danville, Ill., by Jeanne E. Strecker, executrix, Danville, Ill., assignors to General Electric Company, a corporation of New York
Filed May 27, 1959, Ser. No. 816,340
7 Claims. (Cl. 315—100)



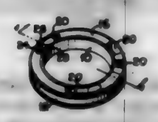
1. Apparatus for operating heated cathode discharge lamps from a source of alternating current supply of sufficient voltage to start and operate the lamps, comprising a pair of input leads adapted to be connected to the source of supply current, a first impedance, a cathode heating transformer having a primary winding, a series circuit connecting said first impedance and said primary serially across said input leads, said first impedance providing a sufficient voltage drop during operation of said lamps to substantially limit the voltage across said primary winding, secondary windings associated with said primary winding and having leads for supplying cathode heating current to the cathodes of said lamps, an inductive current limiting impedance, a junction joining one end of said series circuit and said inductive current limiting impedance with one of said input leads, and circuit means for connecting said lamps in series with said inductive current limiting impedance across the said source of supply current and in parallel relation to the series circuit of the transformer primary winding and said first impedance.

2,945,987
ELECTRICAL DISCHARGE APPARATUS
Charles E. Strecker, deceased, late of Danville, Ill., by Jeanne E. Strecker, executrix, Danville, Ill., assignor to General Electric Company, a corporation of New York
Filed May 27, 1959, Ser. No. 816,341
6 Claims. (Cl. 315—100)



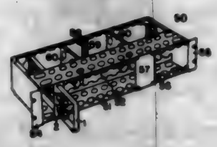
1. Apparatus for operating at least one heated cathode discharge lamp from a source of alternating current of insufficient voltage to start and operate the lamp, comprising input means adapted to be connected to the source of supply current, a cathode heating transformer having a magnetic core, a primary winding on said core, means for connecting said lamp in series with said primary winding across said input means, cathode heating secondary windings on said core having leads for supplying cathode heating current to the cathodes of said lamp, and a capacitive reactor of greater capacitive reactance than the inductive reactance of said transformer at least during starting of said lamp and connected across said lamp in a series circuit with said primary winding across said input means, whereby leading current is drawn through said primary winding during starting of said lamp.

2,945,988
MACHINE SUPPORT DEVICE
Robert L. Henry, Columbus, and Joseph L. Baker, Ironton, Ohio, assignors to Homelite Products Corporation, a corporation of Ohio
Filed Mar. 31, 1958, Ser. No. 725,182
2 Claims. (Cl. 317—3)



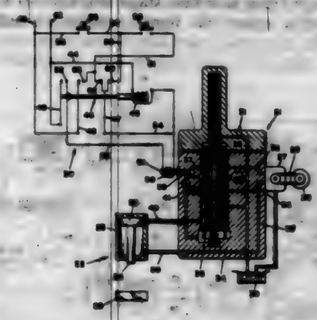
1. A support member for a machine having a bearing housing comprising an inner ring engageable with the housing, an annular body of resilient material bonded to the outer surface of the inner ring and concentric therewith, an outer ring concentric with the annular body and with the inner ring and having its inner surface bonded to the annular body, each of the rings having a first edge portion and a second edge portion, a U-shaped conductor member having a pair of leg portions and a cross portion joining the leg portions one to the other, the U-shaped member extending through the annular body at a position intermediate the rings, the cross portion being exterior of the annular body adjacent the first edge portion of the rings, each of said leg portions extending through said resilient material, the end of each leg portion being directly permanently attached one to said inner ring and one to said outer ring at the second edge portions thereof, the U-shaped conductor member thus being visible at each of the edge portions of the rings.

2,945,989
PLUG-IN CIRCUIT UNITS
Otto F. Vogel, Santa Ana, Robert B. Bonney, Tustin, and Lloyd S. Preston, La Habra, Calif., assignors to Electronic Engineering Company of California, Santa Ana, Calif., a corporation of California
Filed Aug. 15, 1957, Ser. No. 678,399
3 Claims. (Cl. 317—101)



1. A plug-in computer structure comprising a plurality of structurally narrow plug-in units, an open frame housing having only a plurality of spaced aligned notches front and back transversely arranged to hold said units vertically adjacent therein, each of said units having a structurally stiff rectilinearly shaped outer electrically conductive flat strap frame, one structurally stiff electrical connection insulating plug of square cross-section positioned at the rear of said frame, only one insulating surface rigidly connected only to opposite sides of said frame assymetrically at one edge thereof to form a hollow volume for only passive electrical elements on one side thereof, a narrow panel rigidly transversely attached to and enclosing opposite sides of said frame away from said plug, a socket for detachably mounting at least one vacuum tube oriented away from said insulating surface, said socket attached to said panel, the side of said frame opposite said plug constituting an aligned mechanical and electrical shield for vacuum tubes mounted on said panel.

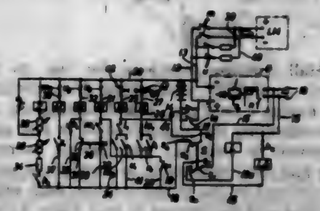
2,945,990
ELECTRIC CONTROL CIRCUIT
George M. Hipple, Columbus, Ohio, assignor, by mesne assignments, to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Feb. 23, 1956, Ser. No. 567,256
3 Claims. (Cl. 317—123)



1. An electrically operated control means including an armature; a coil for moving said armature; circuit means through which said coil is energized, said circuit means including two switch means operated by said armature, one of said switch means including normally closed and normally open contacts and operating to close its normally open contacts prior to opening its normally closed contacts, and the other of said switches having normally open contacts; a pair of switches connectible in series through said normally closed contacts to one side of said coil when the latter is unenergized and connectible individually through said normally open contacts and the contacts of said other switch with said one side of said coil when the latter is energized whereby said pair of switches must be closed at the same time to energize said coil initially and after which one only of said pair of switches need be maintained closed to maintain said coil energized.

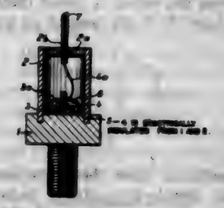
2,945,991
DEVICE FOR SUPPLYING CURRENT TO LOAD-LIFTING ELECTROMAGNETS
Herbert Tacke, Koln, Germany, assignor to Steinert Elektromagnetbau, Koln-Bramsfeld, Germany, a German firm
Filed Nov. 21, 1957, Ser. No. 697,857
Claims priority, application Germany Nov. 29, 1956
11 Claims. (Cl. 317—123)

1. In an electrical system for supplying current to a load-lifting electromagnet; the combination of a source of alternating current, a rectifier for receiving alternating current from said source and having an output of rectified current, a first circuit for supplying rectified current from said output of the rectifier to the electromagnet, a battery, a second circuit for connecting said battery to said first circuit in parallel with said rectifier as an emergency supply of current for the electromagnet in the event of a failure in said source, a first relay having normally open contacts interposed in said first circuit which are closed by energization of said first relay, alternative circuits for energizing said first relay from said battery, a manually operable, normally open starting switch in one of said alternative circuits, a normally open holding contact in the other of said alternative circuits which is closed in response to energization of said first relay by operation of said starting switch, a second relay, a circuit for energizing said second relay from said battery and having a normally open contact therein which is closed by energization of said first relay, a third relay, a circuit for energizing said third relay from said battery and having a normally open contact therein closed by energization of said second relay, said third relay having a normally open holding contact connected in parallel with said contact in the energizing circuit of the third



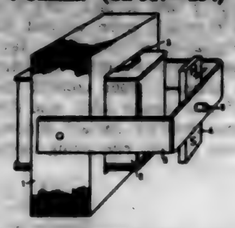
relay and closed by energization of said third relay and a normally open battery control contact interposed in said second circuit and also closed by energization of said third relay so that said battery is connected in parallel with said rectifier only after said first relay has been energized to complete said first circuit between the rectifier and the electro-magnet, and a manually operable shut-off switch having a normally closed contact in series with said holding contact in said other alternative circuit for energizing said first relay so that opening of said normally closed contact of the shut-off switch causes deenergizing of said first relay to interrupt said first circuit and to effect successive deenergizing of said second and third relays for interrupting said second circuit.

2,945,992
SEMI-CONDUCTOR DEVICE
Gerhard Fritz Bolkert, Walter Otto Ramser, and Dietrich Wieland, all of Nurnberg, Germany, assignors to Eberle & Kohler, Nurnberg, Germany, a corporation of Germany
Filed Mar. 16, 1959, Ser. No. 799,561
Claims priority, application Germany Mar. 18, 1958
17 Claims. (Cl. 317—234)



1. A semi-conductor device comprising a hermetically sealed means defining a housing having a base means and a first cap means, said first cap means being hermetically sealed to said base means, a semi-conductor body, having an electrode means, disposed in said housing means, an electrically conductive intermediate second cap means disposed over said semi-conductor body and electrically insulatedly fixed to said base means and electrically connected to said electrode means, and means for conduction of electricity from said intermediate second cap means through said first cap means to the exterior of said hermetically sealed housing means.

2,945,993
COMPENSATED HALL VOLTAGE GENERATOR
Friedrich Kobet, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed Apr. 15, 1958, Ser. No. 806,697
Claims priority, application Germany Apr. 22, 1958
4 Claims. (Cl. 317—234)

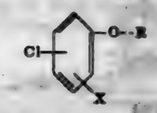


1. A Hall voltage generator for use as multiplier particularly modulator, comprising a magnetizable core structure having a field gap, a field winding on said structure for controlling the magnetic field in said gap, a Hall plate disposed in said gap and having current supply terminals and Hall electrodes to provide an output voltage proportional to the product of the field excitation of said structure and the current in said plate, a rigid holder of non-magnetic material secured to said structure, a permanent magnet mounted on said holder in spaced relation to said structure and positionally adjustable relative thereto for compensating the null component of said output voltage.

2,945,994
ELECTRICAL DEVICES
Joachim Danzl, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,804
4 Claims. (Cl. 317—258)



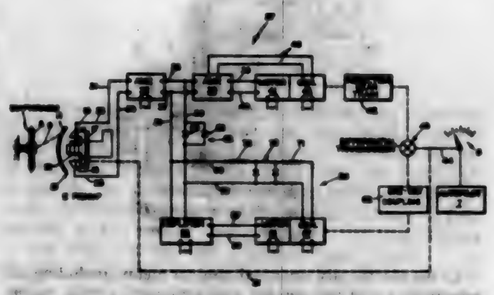
1. Electrical apparatus comprising, in combination, metallic conducting elements disposed in spaced relationship to each other and adapted during operation of the apparatus to have a difference in electrical potential therebetween and, interposed between said elements for insulating one from the other, a liquid dielectric medium consisting of at least 50% by weight of an ether of the formula



in which R is selected from the class consisting of the furfuryl and the tetrahydrofurfuryl radicals and X is selected from the class consisting of chlorine and the radical —O—R.

2,945,995
VARIABLE DAMPED, HIGH GAIN, LOW PHASE SHIFT TWO MOTOR SERVO SYSTEM
Norman Wall, Whitestone, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed Dec. 23, 1957, Ser. No. 704,493
2 Claims. (Cl. 318—19)

1. For use in controlling a variably positioned member; a servo system comprising a first servo motor, a second servo motor, a control device for effecting a variable voltage output signal, a first stage amplifier having an input and an output, a second stage amplifier having an input and an output, first means operatively connecting the variable voltage signal to the input of the first stage amplifier, second means operatively connecting the output of the first stage amplifier to the input of the second stage amplifier, third means operatively connecting the output of the second stage amplifier to the first servo motor, a third stage amplifier having an input and an output, third means operatively connecting the output of the third stage amplifier to the second servo motor, fourth means operatively connecting the output of the first stage amplifier to the input of the third stage amplifier, said fourth connecting means including signal limiting means so arranged as to prevent passage of a signal voltage from said first stage amplifier to said third stage amplifier upon the signal voltage being within a predetermined limited range while permitting passage of the signal voltage from said first stage amplifier to said third stage amplifier upon the signal voltage exceeding said



predetermined range so as to effectively energize the second servo motor, a generator driven by said second servo motor, the fourth connecting means including means for applying output voltage from said generator to the input of the third stage amplifier, said output voltage acting in opposing relation to the signal voltage, and having a braking effect on the second servo motor upon the signal limiting means preventing the passage of the signal voltage from the first stage amplifier to the third stage amplifier, shunting means operatively connected across the output of the generator to divert generator output voltage in excess of a predetermined value from the input of said third stage amplifier, means including a differential transmission means to effectively connect said first servo motor and said second servo motor so as to drive said variably positioned member in additive relation, and said last-mentioned connecting means including follow up means to reposition the variable voltage device with change of position of the variably positioned member in a sense to cause said device to reduce the signal voltage to a null upon a cessation of the changes in the signal voltage.

2,945,996
SERVO AMPLIFIER SYSTEM
Clyde J. Nerton, Sepulveda, Calif., and Donald F. Dineen, Las Vegas, Nev., assignors to Lear, Incorporated, Santa Monica, Calif.
Filed Nov. 28, 1956, Ser. No. 624,786
8 Claims. (Cl. 318—28)

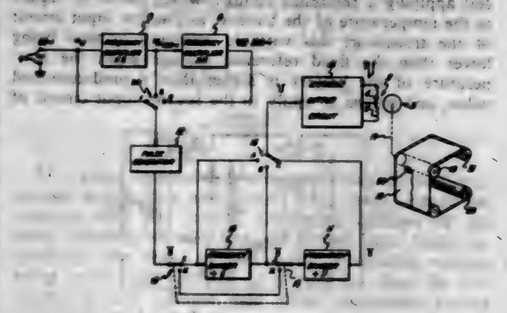
1. In combination with a rotatable device having a predetermined position, and a two-phase motor being operable in response to a reference square wave voltage and a control square wave voltage, which are 90° out of phase and are of the same predetermined frequency, to rotate the device from any other position to the predetermined position: means for applying a square wave reference voltage of the predetermined frequency to the motor, means for developing a square wave error signal of the predetermined frequency which represents the position of the device with respect to the predetermined position thereof, first and second and third pairs of transistors, each of said transistors having a base electrode, an emitter electrode and a collector electrode, respective means for biasing the base and emitter electrodes of said first and second transistors for minimum emitter- to collector current flow in the absence of error signal, means to apply the error signal to the base electrode of one of said first pair of transistors, means to prevent the error signal appearing on the base electrode on the other of said first pair of transistors, respective direct current connections between the emitter electrodes of said first and second pairs of transistors, a first signal translating network coupled to the collector electrodes of said first pair of transistors and to the base electrodes of said second pair of transistors, a second signal translating network coupled to the collector electrodes of said second pair of transistors and to the base electrodes of said third pair of transistors, the emitter and collector electrodes



of said third pair of transistors being connected with the emitter-to-collector current paths in series between first and second points of D.-C. potential, whereby the emitter of one and the collector of the other of said third pair of transistors are directly connected together and have a common junction, said second signal translating network applying amplified square wave signals in opposite phase to the base electrodes of said third pair of transistors, each transistor of said third pair being non-conductive in the absence of square wave signals on the base electrodes thereof, one transistor of said third pair being conductive and the other being non-conductive during each half cycle of square wave signals applied to the base electrodes thereof, whereby the transistors of said third pair are rendered alternately conducting to vary the voltage at said common junction between said first and second points of D.-C. potential, means to convert the potential variations at said common junction to a square wave control voltage of constant magnitude and to apply said control voltage to the motor, and phase control means associated with at least one of said signal translating networks to cause said control voltage to be applied to the motor 90° out of phase with the reference voltage.

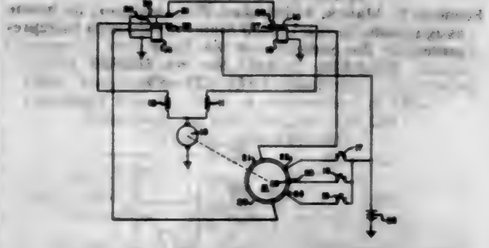
2,945,997
GRAPHICAL RECORDER CHART MOTOR DRIVE SYSTEM
Charles J. Kennedy, Pasadena, Calif., assignor to F. L. Moseley Co., a corporation of California
Filed Nov. 1, 1957, Ser. No. 693,923
11 Claims. (Cl. 318—341)

1. In a graphical recorder, means for transporting a record medium past a fixed station, including the combination of a stepping motor, a pair of terminals for receiving an alternating current wave of a fixed frequency from a power source, means connected between the terminals and the stepping motor for selectively generating alternating current waves having frequencies bearing selected fractional and multiple relationships with respect



to the frequency of the wave applied to the input terminal, and a record medium drive mechanism linked to the stepping motor whereby a record medium may be transported over a range of speeds in accordance with the frequency of the alternating current wave applied to the stepping motor.

2,945,998
DYNAMIC BRAKING OF ELECTRIC MOTORS
Lawrence J. Vanderberg, Ann Arbor, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed June 25, 1958, Ser. No. 744,381
6 Claims. (Cl. 318—373)

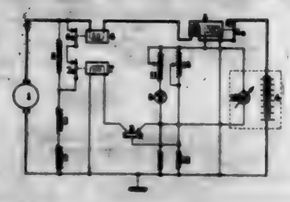


1. An electrical circuit for the operation of an electric motor having a pair of fields operable upon individual energization thereof to effect either clockwise or counter-clockwise rotation of the motor armature comprising circuit make and break means operable to energize one of said fields, and means operable prior to the break of said first-named means to momentarily produce a reverse current through a closed path including the other field.

2,945,999
GENERATOR ELECTRONIC REGULATING DEVICE WITH DUAL REFERENCE VOLTAGE
Marcel Dreyfus, Rueil-Malmaison, France, assignor to Societe Anonyme dite: Etablissements Ducellier, Paris, France
Filed Nov. 4, 1957, Ser. No. 694,285
Claims priority, application France Nov. 6, 1956
3 Claims. (Cl. 320—35)

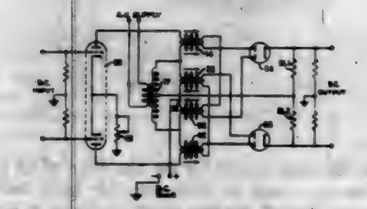
1. Electronic regulating device for the maximum voltage applied by a dynamo to a battery so as to vary the voltage in relation to the temperature of said battery, comprising means for varying the voltage of the dynamo, a

transistor with first and second input circuits and one output circuit, a connection between said output circuit and the means for modifying the voltage of the dynamo, so as to control said means in regard to the state of the transistor, a first cell applying a reference voltage of fixed value to the first input circuit of the transistor, a second cell applying a reference voltage, which varies in regard to the temperature of the battery, to the first input circuit of the transistor, this variable reference voltage being lower than the fixed reference voltage when the temperature of the battery is higher than a predetermined value, and means to apply to the second input circuit of



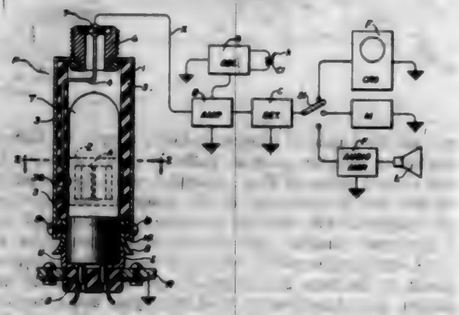
the transistor a potential which is proportional to the voltage of the dynamo, in such a way that the state of the transistor is determined by the voltage applied to the first and second input circuits respectively, whereby when the temperature of the battery is higher than a predetermined value, the cell giving the variable reference voltage determines the maximum voltage of the dynamo, and that, when the temperature becomes lower than this predetermined value, the cell giving the fixed reference voltage determines the maximum value which the voltage of the dynamo can reach, whatever the value of the temperature of the battery.

2,946,000
MAGNETIC AMPLIFIERS
Franklin S. Malick, Milwaukee, Wis., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed May 13, 1955, Ser. No. 508,330
2 Claims. (Cl. 323—89)



1. A magnetic amplifier for amplifying a direct-current of either polarity comprising: a power supply having a center-tapped secondary winding, said secondary winding provided with two connecting leads; a center-tapped load element; means electrically coupling the center taps of said secondary winding and said local element; a first and a second pair of saturable reactors, each of said pair of saturable reactors having power windings and two regulatory windings; means electrically coupling the power windings of said first pair of saturable reactors to one of said two connecting leads of the secondary winding, and means electrically coupling the power windings of said second pair of saturable reactors to the other of said two connecting leads; means electrically coupling the power windings of each of said pairs of saturable reactors in series with the load element; a dual triode tube, said triode tube having its grids coupled across a control voltage source, one triode having its anode coupled in series through one of the two regulatory windings of each pair of saturable reactors in reversed current relation to each other to provide a first reversed current pair of regulatory windings, and the other triode having its anode coupled in series with the other of the two regulatory windings of each pair of reactors in reversed current relation to each other to provide a second reversed current pair of regulatory windings, said first and second reversed current pairs of regulatory windings on said first and second pairs of saturable reactors being connected together at a juncture, the juncture of said first and said second reversed current pairs of regulatory windings being coupled to a direct-current biasing voltage providing a biasing current producing oppositely-polarized magnetic fields in each of said first and said second reversed current pairs of regulatory windings as well as in each pair of saturable reactors and providing anode potential for said dual triode; and an unbypassed variable impedance in a common coupling of the cathodes of said dual triode tube to a constant potential level for providing a self-biasing potential variable to control the magnitude of said biasing current through said first and second reversed current pairs of regulatory windings to said direct-current biasing voltage whereby the regulatory and biasing characteristics of the magnetic amplifier is controllable for alternating power currents.

2,946,081
SIGNAL-PICKUP TEST PROBE
Allan D. Russell, Medford, Mass., assignor to Kingston Electronic Corporation, Medfield, Mass., a corporation of Massachusetts
Filed Mar. 26, 1958, Ser. No. 724,137
4 Claims. (Cl. 324—20)

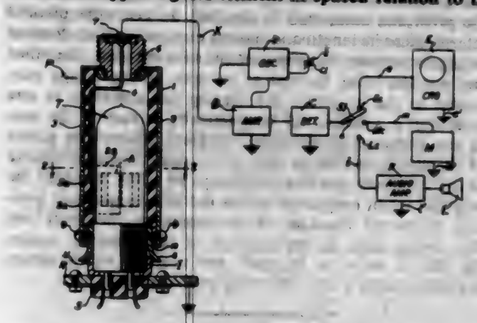


1. For detecting a signal in an electron tube operating in an electronic circuit, a pickup device comprising an annular shield of conducting material for telescoping over and enclosing the tube, a conducting element extending parallel to the inner wall of the shield inside the shield for capacitively picking up the signal carried by said electron tube, dielectric material supporting the element in spaced relation to the shield, an insulated terminal supported by the shield for connecting the element to an indicating device, and a connection supported by said dielectric material between said element and terminal.

2,946,082
SIGNAL-PICKUP TEST PROBE
Allan D. Russell, Medford, Mass., assignor to Kingston Electronic Corporation, Medfield, Mass., a corporation of Massachusetts
Filed Feb. 17, 1958, Ser. No. 715,607
4 Claims. (Cl. 324—24)

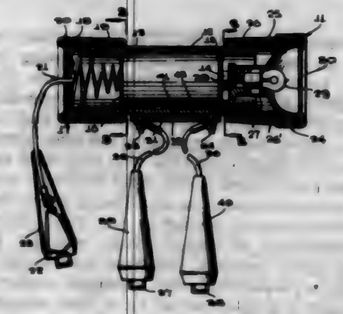
4. For detecting a signal in an electron tube operating in an electronic circuit, a unitary pickup device comprising an annular shield of conducting material for telescoping over and enclosing the tube, a crescent-shaped

conducting element extending parallel to the inner wall of the shield inside the shield for capacitively picking up the signal carried by said electron tube, dielectric material supporting the element in spaced relation to the



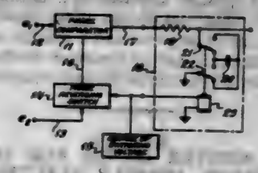
shield, said dielectric material having a passage therethrough, and an output conductor connected to said element and supported in said passage in predetermined spaced relation to said shield.

2,946,803
PORTABLE TESTER FOR REGULATORS AND GENERATORS
La Verne A. Pryer, 867 Wayne St., Jackson, Mich.
Filed Aug. 24, 1956, Ser. No. 606,006
1 Claim. (Cl. 324—53)



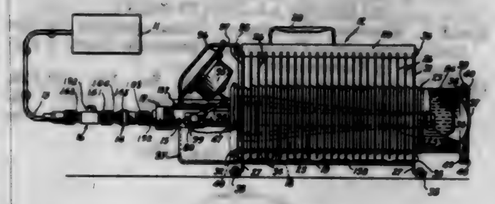
A device for testing the electrical resistance of contact points comprising a housing, a flashlight battery in said housing, a lamp mounted at one end of the housing, said lamp having a substantially higher voltage rating than the voltage of said battery, whereby the lamp is energized at only partial brilliance when connected to the battery, a darkened background member mounted in said one end of the housing surrounding the lamp, said lamp and background member being exposed to view at said one end of the housing, whereby small differences in brilliance of said lamp in contrast with said background member may be detected readily, means connecting one terminal of said lamp to one pole of the battery, a first terminal member at the other end of the housing, means connecting said first terminal member to the other pole of the battery, a resistor of relatively low value mounted longitudinally on said housing, a second terminal member secured to said housing at one end of and being connected to said one end of said resistor, a third terminal member secured to the housing at the other end of and being connected to said other end of the resistor, said resistor being provided with a center terminal, means connecting the center terminal of said resistor to the remaining terminal of the lamp, and respective flexible test conductors connected to said first, second and third terminal members.

2,946,004
PHASE COMPARATOR CIRCUITS
Robert L. Frank, Great Neck, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Feb. 28, 1956, Ser. No. 568,948
6 Claims. (Cl. 324—83)



5. A phase responsive system comprising a phase comparator having first and second input leads, means for applying first and second alternating voltages of the same frequency to said first and second input leads, respectively, the phase of said second alternating voltage being recurrently reversed at a rate less than the frequency of said voltages, said phase comparator having an output lead whereat a voltage is produced whose polarity recurrently reverses in synchronism with the phase reversals of said second alternating voltage, an integrating circuit comprising resistance means and a condenser, means for connecting one end of said resistance means to the output lead of said phase comparator, means for periodically connecting and disconnecting the other end of said resistance means with one side of said condenser in synchronism with the phase reversals of said second alternating voltage, means for connecting the other side of said condenser to ground during the period said one side is connected to said resistance means, and means for coupling the other end of said resistance means to ground during the periods said other end is disconnected from said one side of said condenser.

2,946,005
HIGH FREQUENCY THERMOCOUPLE METER
Clayton F. Waterfield, Cleveland, Henry J. Calderhead, Euclid, and Herbert H. Heller, Cleveland Heights, Ohio, assignors to The Bird Electronic Corporation, Cuyahoga County, Ohio, a corporation of Ohio
Filed Sept. 14, 1955, Ser. No. 534,226
17 Claims. (Cl. 324—95)



1. A radio frequency measuring system comprising in combination a coaxial line unit having a shunt choke and inner and outer conductors to which the shunt choke is connected for connection to a radio frequency generator, a coaxial line thermocouple unit comprising an outer conductor, an inner conductor including a pair of butted wires of dissimilar metals forming a thermojunction where they abut each other, said thermocouple unit being coupled to the inner and outer conductors of the shunt choke unit, a direct-current measuring unit comprising inner and outer conductors coupled to the inner and outer conductors of the thermocouple unit, a lateral direct-current millivoltmeter fitting having inner and outer conductors, the outer conductor being connected to the outer conductor of the direct-current measuring unit, a choke coil connecting the inner con-

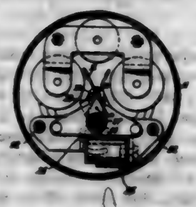
ductors of the millivoltmeter fitting and the direct-current measuring unit, a through type annular condenser connected between the inner and outer conductors of the millivoltmeter fitting, a termination unit comprising an outer conductor tapering from a larger diameter at an input end to a smaller diameter at a terminal end, connected at the input end to the outer conductor of the direct-current measuring unit and a resistor rod connected between the terminal end of the outer conductor and the inner conductor of the direct-current measuring unit.

2,946,906
MOVABLE POINTER HANDS FOR MEASURING INSTRUMENTS, CHIEFLY ELECTROMETERS
Dimitro Z. Fiszer, 6 Ave. Hoche, L'Hay Les Roses, France
Filed Mar. 22, 1956, Ser. No. 573,265
5 Claims. (Cl. 324—154)



1. In a suspension for a combined electrometer pointer and movable electrode comprising a very thin suspension wire, a narrow elongated hollow pointer device, said pointer device being formed from a single plane sheet of metal into a hollow body of triangular cross section with the edges of the sheet projecting inwardly of the hollow body, a first narrow strip carrying the pointer device and extending longitudinally along a section of the wire on one side thereof, at least one further narrow strip extending along said wire section on the side opposed to that facing the first strip, said strips having concave surfaces facing each other, the upper and lower inner edges of said strips having protrusions which extend inwardly transversely of the wire axis and engage corresponding sides of the wire, and the axially extending side edge portions of said strips contacting each other and being welded at the outermost edge.

2,946,907
ELECTRICAL INSTRUMENT
Knud J. Knudsen, Woodbury, Conn., assignor to The Lewis Engineering Company, Naugatuck, Conn., a corporation of Connecticut
Original application July 17, 1951, Ser. No. 237,128, now Patent No. 2,802,908, dated Aug. 13, 1957. Divided and this application May 21, 1957, Ser. No. 660,528
2 Claims. (Cl. 324—154)



1. A large deflection electrical instrument comprising a shaft, a pair of coils on said shaft, a magnetic field structure for each coil, an indicator connected to the shaft, and energizing means for the coils, whereby upon variation in the energization of the coils the indicator is caused to move thereby and upon deenergization of the coils the indicator remains stationary in its last position; and means for causing the indicator to be moved to a non-indicating position, said means including a projection carried by the shaft, a link mounted on a pivot for pivotal movement and engageable with the projection for rotating the shaft, a gear carried by the pivot and connected to the link, an armature pivoted intermediate its length and having one end portion formed as a gear segment for engagement with the gear, the other end portion being formed as an arm, spring means connected to the armature for forcing the armature in one direction; a solenoid for magnetically attracting the arm of the armature to pivot the armature against the action of the spring and cause over a two right angle movement of the link from one end position to its other, whereby the solenoid when energized moves the link to one end position to permit freedom of movement of the shaft and the spring upon de-energization of the solenoid, causes the link to move to its other end position which moves the indicator to a non-indicating position.

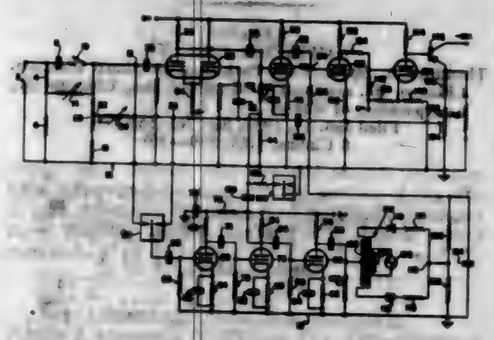
2,946,908
CURRENT GAIN MEASURING DEVICE
Heinz E. Kallmann, 417 Riverside Drive, New York 25, N.Y.
Filed Oct. 31, 1958, Ser. No. 770,946
9 Claims. (Cl. 324—158)



1. Current gain measuring device, comprising, in combination, an electronic amplifier means having an input electrode, an output electrode and a common electrode; a source of direct current potential having two terminals, one of said terminals being connected to said common electrode; circuit means connecting the other terminal of said source of electric potential with said input electrode for feeding bias current to said input electrode; adjustable resistor means connected in said circuit means for varying the bias potential applied to said input electrode; a series-combination of switch means movable between open and closed positions and fixed bias resistor means connected in parallel with said adjustable resistor means for changing said bias current by a fixed amount when said twitch means is moved from one to its other position; and meter means connected between said output electrode and said other terminal of said source for indicating such change in the output current of said amplifier means as may be caused by changing said bias current by moving said switch means from one to its other position, whereby the factor beta indicating the current amplification ratio between said bias current change and said output current change may be determined.

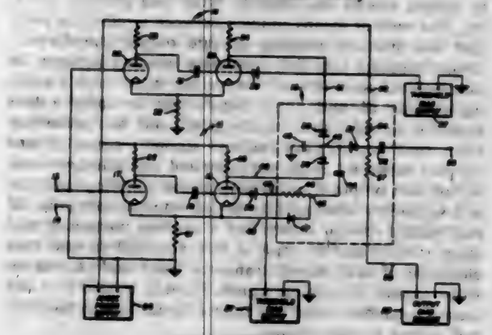
2,946,909
CONTROL APPARATUS
Abraham J. Gelles, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 9, 1957, Ser. No. 682,842
5 Claims. (Cl. 328—71)

1. An electronic controller for producing a direct current control signal which is a function of a direct current input signal, said controller comprising, in combination, an input circuit, a signal differentiating means connected to said input circuit to produce a signal which is a function of the rate of change of the input signal, an amplifier having a pair of input terminals connected to said differentiating means, said amplifier including a first amplifier section connected to said input terminals, a second amplifier section connected to said terminals in parallel with said first section, and a third amplifier section connected to the output of both of said first and said second amplifier sections and constituting an output amplifier section, said first amplifier section being an R-C coupled amplifier responsive to rapid signal changes, said second section being a chopper-stabilized amplifier responsive to slow changes



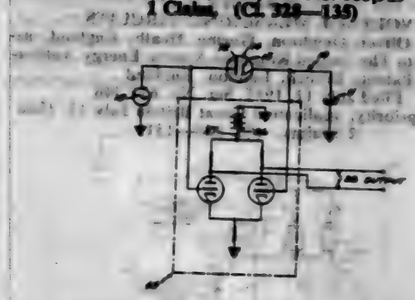
in signal and including a synchronous rectifier in its output, said third section being a direct coupled amplifier responsive to the output signals of said first and second sections, an output circuit connected to the output of said third section, and variable feedback means coupled between said output circuit and the input to said first mentioned amplifier to produce a proportional band adjustment of said controller.

2,946,910
INHIBITOR CIRCUIT
Zoltan Tarczy-Hornoch, Berkeley, Calif., assignor to Eldorado Electronics Co., Berkeley, Calif., a corporation of California
Filed Aug. 18, 1958, Ser. No. 755,767
19 Claims. (Cl. 328—116)



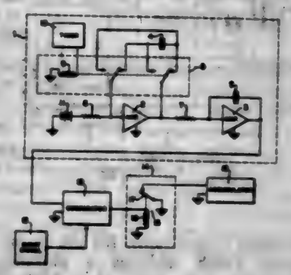
1. An inhibitor circuit comprising input means for receiving a first pulse, second input means for receiving a second pulse initiated subsequent to initiation of said first pulse and terminating prior to termination of said first pulse, third input means for receiving a third pulse initiated and terminated prior to termination of said first pulse, inhibitor pulse generating means coupled between said first and second input terminals for generating an inhibitor pulse in response to initiation of said second pulse and terminating said inhibitor pulse in response to termination of said first pulse, and anti-coincidence means coupled between said third input means and said inhibitor pulse generating means for producing an output pulse in response to occurrence of said third pulse in the absence of said inhibitor pulse and zero output in the presence thereof.

2,946,911
ELECTRONIC CLIPPING CIRCUIT
Norman Nesmoff, Flushing, N.Y., assignor to The Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Sept. 11, 1957, Ser. No. 683,919
1 Claim. (Cl. 328—135)



A clipping circuit system for generating pulses of a time duration which commences at different voltage or clipping levels in a variable voltage function, said system comprising an input circuit adapted to have a continuously variable voltage function impressed thereon, a unidirectional vacuum tube diode and a condenser interposed in series in said input circuit, a pair of vacuum tube triodes, the grid of one of said triode tubes being connected to the plate of said diode tube and the grid of the other triode tube being connected to the cathode of said diode tube, a conductor having a resistor therein by which the plate of one of said triode tubes is connected to a D.C. source, another conductor having a resistor therein by which the plate of the other of said triode tubes is connected to said D.C. source, conductor means by which the cathodes of said triode tubes are grounded through a resistor, and an output circuit which comprises a pair of leads one of which is connected to the plate of one of said triode tubes and the other of which is connected to the plate of the other of said triode tubes.

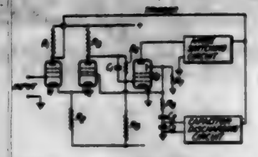
2,946,912
SIGNAL GENERATOR
Thomas A. Patchell, Havertown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,983
4 Claims. (Cl. 328—144)



1. A function generator comprising, in combination, a first and a second operational amplifier, each of said amplifiers having a capacitor connected in feedback association therewith, a unidirectional signal supply means, means connecting said supply means as input signal to said first amplifier, said second amplifier being connected in cascade relation with respect to said first amplifier, and control means for periodically reversing, with respect to said first amplifier, the connection of said capacitor

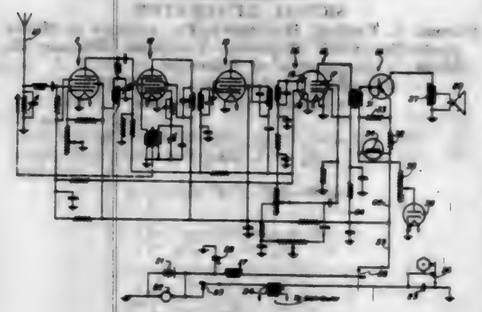
associated with said first amplifier thereby to produce an output signal from said second amplifier, said output signal having a predetermined non-linear relationship with respect to the input signal of said first amplifier.

2,946,013
VOLTAGE MEASURING CIRCUITS
Michael Oliver Deighton, Goring Heath, England, assignor to The United Kingdom Atomic Energy Authority of Patents Branch, London, England
Filed July 11, 1957, Ser. No. 671,348
Claims priority, application Great Britain July 13, 1956
2 Claims. (Cl. 328—151)



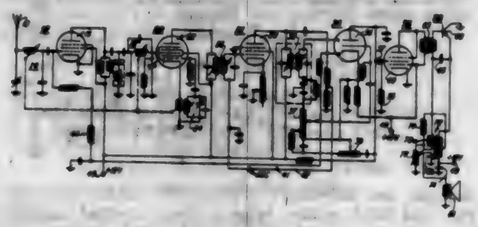
1. A voltage measuring circuit comprising a differential amplifier connected in cascade with a secondary emission pentode having a dynode, a capacitor connected between said dynode and a neutral point, a feedback connection between said capacitor and said differential amplifier and means for switching the anode voltage of said pentode between a voltage above and a voltage below that of said dynode to control the sign of said feedback, the arrangement being such that said capacitor is charged to substantially the peak voltage of an input pulse to said differential amplifier with the feedback made negative, and the circuit detects when the voltage on said capacitor has been reduced to substantially its initial value in a controlled manner with said feedback made positive.

2,946,014
WARM UP NOISE SILENCER
Theodore A. Byles, Villa Park, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 4, 1957, Ser. No. 694,168
5 Claims. (Cl. 330—3)



1. A transistor output stage for use in an automobile ratio receiver which includes a plurality of series coupled stages supplied with power having noise components therein from the electrical system of the automobile, and in which the radio receiver includes a thermionic electron discharge device in one of the stages and a signal circuit for supplying received signals to said transistor output stage, said transistor output stage including a transistor device, impedance means coupled to said transistor device and forming a biasing circuit path independent of said signal circuit for applying biasing potential to said transistor device for rendering the same conductive, and thermionic diode means having an anode series coupled to said impedance means and a cathode coupled to a point of reference potential, said diode means having substantially the same warm up characteristics as the aforesaid electron discharge device so that the biasing potential for said transistor device is not applied thereto during the warm up period.

2,946,015
AMPLIFIER CIRCUIT
Theodore A. Byles, Villa Park, and Bernhard Birkenes, Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 13, 1956, Ser. No. 558,875
8 Claims. (Cl. 330—15)

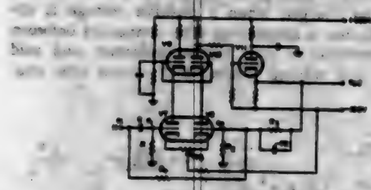


4. A push-pull transistor amplifier including in combination first and second transistors having respective base emitter and collector electrodes, potential supply means, means directly coupling said collector electrodes to a reference point, an input transformer having winding portions respectively coupled across the base and emitter electrodes of said first and second transistors for supplying input signals to said transistors, an output transformer having a primary winding coupled between the emitter electrodes of said first and second transistors and having a tap point coupled to said potential supply means, said output transformer further including first and second secondary windings in which appear signals corresponding to output signals and induced from said primary winding, first resistor means coupled between a reference point and said primary winding of said output transformer, means coupling said first secondary winding between an intermediate point of said first resistor means and a winding portion of said input transformer to apply a bias potential to said base electrode of said first transistor from said first resistor means, second resistor means coupled between a reference point and said primary winding of said output transformer, means coupling said second secondary winding between an intermediate point of said second resistor means and a winding portion of said input transformer to apply a bias potential to said base electrode of said second transistor from said second resistor means, so that the signals induced in said first and second secondary windings reduce signal loss in said first and second resistor means.

2,946,016
ALL-PASS NETWORK AMPLIFIER
Maurice A. Meyer, Natick, Mass., assignor to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Original application Oct. 26, 1954, Ser. No. 464,697. Divided and this application Mar. 12, 1956, Ser. No. 571,857
11 Claims. (Cl. 330—69)

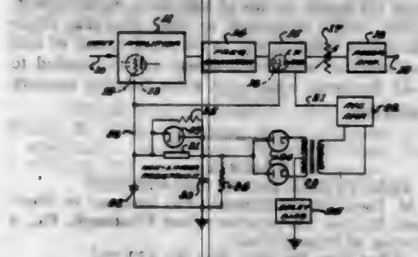
2. An all-pass phase-shift network comprising, an input terminal, a differential amplifier having first and second inputs, a common terminal, a first frequency-sensitive impedance connected between said input terminal and the first input of said differential amplifier, a second impedance connected between said first input and said common

terminal, a first resistance connected between said input terminal and the second input to said differential amplifier, a second resistance connected between said second input and said common terminal, and a third resistance coupling the output of said differential amplifier to the



second input thereof, said first and second resistances being approximately equal and the product of the gain of said differential amplifier and said third resistance being markedly greater than the value of said second resistance.

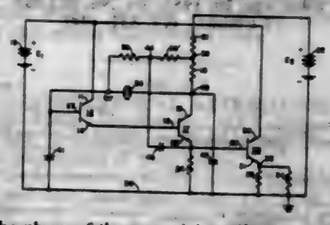
2,946,017
AUTOMATIC VOLUME CONTROL
Francis J. Murphree, Jr., Panama City, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 28, 1956, Ser. No. 631,378
2 Claims. (Cl. 330—133)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An amplifier of variable gain having input and output stages and a volume control circuit, said volume control circuit comprising a rectifier connected to an output stage of the amplifier to provide a detected voltage corresponding to the signal level in said output stage, a capacitor connected to be charged by the detected voltage, a nonlinear resistor having a negative voltage-resistance characteristic connected in series only with the charging path of the capacitor, means coupling the capacitor to at least one input stage of the amplifier to provide variations in the gain of said amplifier in response to variations in the voltage across said capacitor, and a discharge path for the capacitor including a diode connected in shunt to the nonlinear resistor.

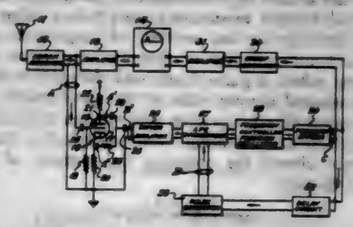
2,946,018
CRYSTAL-CONTROLLED TRANSISTOR OSCILLATOR
Sidney K. Benjamin, New Rochelle, and Theodore W. Kwap, Brewster, N.Y., assignors to General Precision, Inc., a corporation of Delaware
Filed Sept. 24, 1958, Ser. No. 762,968
5 Claims. (Cl. 331—116)

1. A crystal-controlled transistor oscillator comprising, a first transistor, a common collector circuit therefor, a second transistor, a common emitter circuit therefor, a piezoelectric crystal for operation at a selected frequency having an equivalent circuit represented by a reactance in series with an equivalent resistance, said reactance being inductive at said selected frequency, a connection from the emitter of said first transistor to the base of said second transistor, a connection from the collector of said second transistor to one terminal of said piezoelectric crystal, a connection from the other terminal of said piezoelectric crystal, to the base of said first transistor, a resistor connected between the emitter of said second transistor and a common conductor, direct-current source means connected between said common conductor and said common emitter and common collector circuits, a capacitor connected between the base of said first transistor and said common conductor which in combination with said equivalent resistance of the piezoelectric crystal substantially



retards the phase of the potential applied from the crystal to the base of the first transistor, and a capacitor connected between the collector of said second transistor and said common conductor which in combination with the internal collector resistance of the second transistor substantially retards the phase of the potential applied by the collector to said one terminal of the piezoelectric crystal, whereby the sum of the phase retardations through said second transistor, said piezoelectric crystal operating in its inductive mode, and through said two capacitor phase-retarding circuits equals 360 degrees.

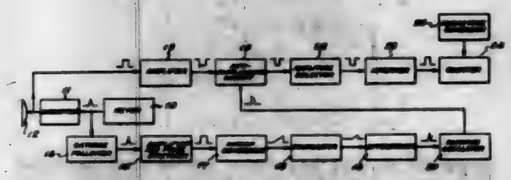
2,946,019
PULSE SYNCHRONIZING SYSTEM
Robert Lee Frank, Great Neck, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 26, 1954, Ser. No. 471,170
3 Claims. (Cl. 331—18)



1. A pulse shaping circuit for producing synthesized bidirectional output pulses from applied recurrent unidirectional pulses having sloping edges comprising in combination, a source for producing said unidirectional pulses having said sloping edges, an electron discharge tube having a control electrode, a cathode, and an anode, means connected to said source and to said control electrode for applying said recurrent unidirectional pulses to said control electrode, first impedance means coupled to said anode, second impedance means coupled to said cathode, said electron discharge tube producing an amplified and inverted version of said recurrent unidirectional pulses across said first impedance means and producing an attenuated version of said unidirectional pulses across said second impedance means, differentiating means including a condenser and a resistor coupled in series between said anode and said cathode, said condenser, resistor and second impedance means differentiating the unidirectional pulses across said first impedance means to produce bidirectional pulses, said con-

denser, resistor and second impedance means further combining said differentiated bidirectional pulses and the unidirectional pulses across said second impedance means for producing synthesized bidirectional output pulses, said synthesized bidirectional output pulses appearing at the junction of said condenser and resistor means.

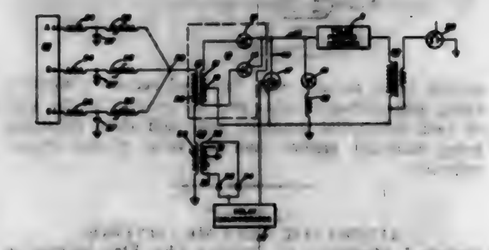
2,946,020
MISSING PULSE INDICATOR
Kenneth Hudson, Plainview, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Apr. 30, 1958, Ser. No. 732,603
7 Claims. (Cl. 331—44)



7. In a system for indicating when a magnetron misfires, the combination including means for providing a series of trigger pulses to trigger the magnetron and thereby produce a series of magnetron output pulses, an anti-coincidence circuit having two input terminals and one output terminal, means for applying to the first of said input terminals a version of said magnetron pulses, said version being of a first polarity, variable delay means coupled to said trigger means for providing a delayed version of said trigger pulses, said last-named means including sweep voltage generating means, voltage comparator means, and a pulse generating means responsive to said comparator means for generating pulses of lesser time duration than said version of magnetron pulses, means for coupling the delayed version of said trigger pulses to the second input terminal of the anti-coincidence means, said delayed version of trigger pulses being of the opposite polarity to the version of magnetron output pulses, said anti-coincidence circuit producing an output pulse only when a pulse from said delayed version of pulses is applied thereto without the simultaneous application thereto of a pulse from said version of magnetron output pulses, and counting means coupled to the anti-coincidence circuit for counting the number of pulses produced thereby.

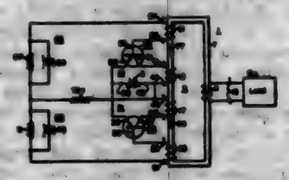
2,946,021
PULSING CIRCUIT FOR MAGNETRON
Melvin F. Stedhead, Baltimore, John M. Hirst, Glen Burnie, and Raymond Casey, Baltimore, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 10, 1958, Ser. No. 743,709
1 Claim. (Cl. 331—87)

In a radar modulator, the combination including a source of alternating voltage, a first circuit including an inductance and capacitor series connected across said voltage source, a second circuit including a saturable reactor, a primary winding of a first transformer, and a primary winding of a saturable transformer connected in series between the junction of said inductance and capacitor and one side of said voltage source, said first transformer having a secondary winding, said saturable transformer having a secondary winding, first and second diodes, the plate of said first diode connected to one end of said first transformer secondary winding, the plate of said second diode being connected to the other end of said first transformer secondary winding, the cathodes of said diodes being connected to a common junction, an auto-transformer having a primary winding and an output terminal, a pulse forming network connected in series with the primary winding of said auto-transformer between said common junction and the mid-point of said first transformer secondary winding, whereby said pulse forming network will be charged when a positive voltage is applied to said diodes, a magnetron tube connected between said output terminal of said auto-transformer and said other side of said voltage source, a thyratron tube con-



nected across said series connected pulse forming network and auto-transformer primary winding for discharging said pulse forming network, a delay multivibrator having input and output means, means coupling the grid of said thyratron to the output means of said delay multivibrator, and rectifier means connected to said saturable transformer secondary winding and to the input means of said delay multivibrator whereby a signal will be applied to trigger said thyratron when said pulse forming network is fully charged.

2,946,022
ELECTRICAL INVERTER CIRCUIT
Edward M. Davis, Jr., Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 20, 1956, Ser. No. 623,357
7 Claims. (Cl. 331—113)



1. In an oscillator, first and second current paths, switching means cooperating with said current paths for establishing periodically a current conductive condition of the first path and a current blocking condition of the second path followed by a current blocking condition of the first path and a current conductive condition of the second path, and means for minimizing overlap of current conductive conditions of the two paths, said means comprising auxiliary means effective when a blocking condition is to be established for increasing the rate of establishment of the blocking condition, said means being substantially ineffective to decrease the rate of establishment of the conducting condition.

ERRATUM

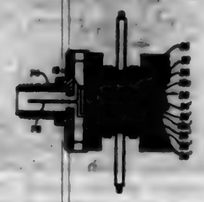
For Class 331-116 see:
Patent No. 2,946,018

2,946,023
BALANCED MODULATOR
Robert F. Casey, 22 Prospect Ave., Pompton Plains, N.J.
Continuation of application Ser. No. 447,743, Aug. 4, 1954. This application June 14, 1957, Ser. No. 666,503
22 Claims. (Cl. 332—13)



1. A stable balanced modulator comprising in combination a pair of electron tubes each having a cathode, an accelerator electrode, a limiter grid, a quadrature grid and an anode, a source of operating potential for said tubes, the anode of the first tube being directly connected to said source, and the anode of the second tube being connected to said source through a resistor, a connection between said limiter grids, a connection from the accelerator electrode of said second tube to said source, a gating signal input connection to the limiter grid of said first tube, a connection from the quadrature grid of said first tube to its cathode, a modulation signal input connection to the quadrature grid of said second tube, and an output circuit connected to the anode of said second tube and the accelerator electrode of said first tube.

2,946,024
STRIP TRANSMISSION LINE SWITCH
Walter B. Mills, Needham, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Nov. 25, 1953, Ser. No. 776,343
3 Claims. (Cl. 333—7)



1. A double pole-double throw strip transmission line switch comprising first, second and third flat metallic plates lying in spaced parallel planes, first and second branched metallic strips each having a trunk and two arms joined at a junction and respectively lying in planes between said first and second plates and between said second and third plates, and parallel thereto, and each equidistantly spaced from its corresponding flat plates by dielectric material, the trunks and arms of said two strips overlying each other, the arms of each of said strips having a short section removed therefrom at equal short distances from the junction to provide high impedance gaps to radio frequency energy applied to their respective trunks, said first and third plates and the dielectric material respectively spacing said first and third plates from said first and second strips having openings therein in register with said gaps, a plunger fitted in each of said openings for movement therein normal to said planes from a position to engage its corresponding section of flat strip to a position removed from the opening, each of said plungers comprising a block of dielectric material of a thickness substantially equal to the spacing between said first or third plate and its corresponding flat strip, a metallic plate of a thickness substantially equal to the thickness of said first and third plates secured to the outer surface of said block, a conductive film on the surface of the block confronting the gap and a film of dielectric material covering said conductive film, said plungers when said film of dielectric material is in contact with its corresponding flat strip being operative to close the gap to radio frequency energy, first and second separate input couplers respectively connected to the extremities of the trunks of said first and second flat strips, first and second transmission lines respectively connecting corresponding arms of said first and second strips together, and first and second output couplers respectively connected to said first and second transmission lines.

2,946,025
NONRECIPROCAL ATTENUATOR
Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Original application June 17, 1953, Ser. No. 362,193. Divided and this application Dec. 17, 1956, Ser. No. 628,996
18 Claims. (Cl. 333—24)



1. In combination, an electromagnetic wave guiding structure, means including an element of material which has low dissipation loss for propagating electromagnetic wave energy for providing a first electric field intensity distribution for wave energy propagating through a region of said wave guiding structure in one direction and for providing a second electric field intensity distribution different from said first distribution for wave energy propagating through said region of said wave guiding structure in a direction opposite to said one direction while maintaining the direction of the electric field vectors of said wave energy in said region substantially the same for both directions of propagation, and means responsive to the difference between said first and second electric field distributions for converting said difference into a non-reciprocal attenuation of said wave energy.

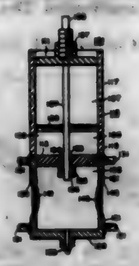
2,946,026
TUNED TRANSFORMER UNIT
Karl E. Rollefson, Evanston, Ill., assignor to The Muter Company, Chicago, Ill., a corporation of Illinois
Filed May 10, 1955, Ser. No. 507,338
4 Claims. (Cl. 333—78)



1. A tuned transformer unit comprising a first bare ferromagnetic slug, a second bare ferromagnetic slug, a

first coil wound directly on said first slug and fixed in position relative thereto, a second coil wound directly on the second slug and fixed in position relative thereto, a plurality of separate insulating and non-magnetic mounting members fixed at the ends of said slugs and having abutment means engaging said slugs for positioning thereof in predetermined fixed relation with said coils in inductive relation, said separate insulating members alternating in stacked relationship with the bare ferromagnetic slugs, a pair of capacitors, means connecting one of said capacitors across one coil, and means connecting the other capacitor across the other coil.

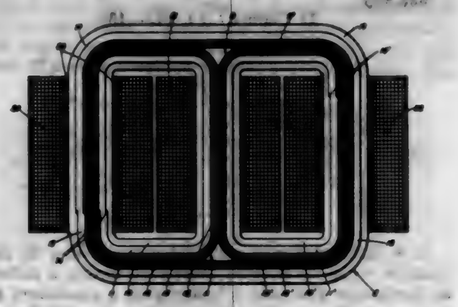
2,946,017
CAVITY RESONATOR
William A. Gerard and Rodger G. Larson, Horseheads, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 8, 1956, Ser. No. 602,831
12 Claims. (Cl. 333—83)



1. A resonant cavity comprising side wall means, first end wall means and second end wall means forming a hollow chamber, said first end wall means having an aperture therein and having an outer nose portion adjacent to and surrounding said aperture, said outer nose portion protruding into said hollow chamber, a temperature compensating strut member for keeping the frequency of said resonant cavity substantially constant in accordance with changes in the ambient temperature, said temperature compensating strut member extending through said aperture and being positioned within said outer nose portion and forming a substantially quarter wavelength choke joint therewith, said temperature compensating strut member being made substantially of a first material, said wall means being made substantially of a second material, said first material and second material having different coefficients of thermal expansion, said temperature compensating strut member including an inner nose portion which protrudes slightly into said hollow chamber, said hollow chamber having energy coupling means.

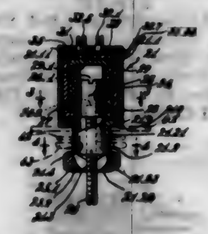
2,946,028
POLYPHASE TRANSFORMER
John L. Anderson and James G. Everhart, Zanesville, Ohio, assignors to McGraw-Edison Company, a corporation of Delaware
Filed Apr. 12, 1954, Ser. No. 422,374
4 Claims. (Cl. 336—5)

1. Three phase electromagnetic induction apparatus comprising three electrical coils each having a winding window and adapted to be connected to one of the phases of a three phase electrical system and a unitary magnetic core having a first loop portion spirally wound of magnetic strip material passing through the winding window of a first and a second of said coils disposed adjacent each other and magnetically linking said coils, having a second loop portion spirally wound of magnetic strip material passing through the winding window of the second of said coils and the winding window of a third of said coils which is disposed adjacent said second coil and magnetically interlinking said second and third coils, and having a third loop portion spirally wound from



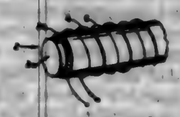
magnetic ribbon continuous with the magnetic ribbon of said first and second portions, said third portion passing through the winding window of said first and third coils and magnetically interlinking said first and third coils.

2,946,029
IMPEDANCE ASSEMBLY
Ralph Abrams, Sharon, Danforth W. Cousins, Jr., Concord, and William A. Melanson, Lexington, Mass., assignors to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Dec. 22, 1955, Ser. No. 554,872
3 Claims. (Cl. 336—136)



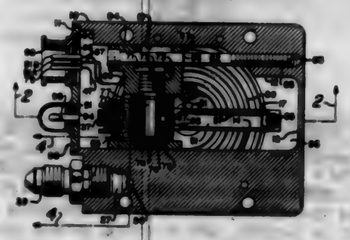
1. A tunable impedance device of the type having an adjustable core member, comprising: smoothly tubular form means; a housing which has at one end stud means with fastening means on the outside and with a cavity that fits said form means, and which housing has at the other end integrally therewith a chamber that is wider than said form means, said cavity being contracted at the extreme end of the stud means and communicating on the opposite end with said chamber with a shoulder, said form means extending from said cavity into said chamber; in said chamber a cup-shaped core with its bottom resting on said shoulder and having in said bottom an opening for said form means, the clearance between said core and said form means accommodating a winding; a disk-shaped core cap fitting into the open end of said cup-shaped core and resting on said form means; loosely inserted into said chamber elastic washer means extending over both core and core gap; means including a terminal board secured to the outer end of said chamber for compressing and confining said core, core cap, and washer means; and axially threaded into said extreme end of said stud means and penetrating into the space within said form means, a spindle for carrying said core member and for axially adjusting it within said form means; whereby said core means can be substantially fully withdrawn from the chamber region of said form means into its stud cavity region, such as essentially to disassociate said core means from said chamber.

2,946,030
SUPERCONDUCTIVE SWITCHING ELEMENT
Albert E. Slade, Cochituate, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass.
Filed July 2, 1957, Ser. No. 669,669
17 Claims. (Cl. 336—155)



8. A switching element comprising, in combination, a conductor, means for varying the inductance of said conductor, said means comprising a ferromagnetic core with a shell formed thereabout, said shell being superconductive at the temperature of operation of said element in the absence of an applied magnetic field and adapted to transfer to a resistive state upon application of the magnetic field thereto, means other than said conductor for applying to said shell a magnetic field of sufficient intensity to render it resistive and thereby increase the permeability of said inductance varying means, said inductance varying means being disposed in close proximity to said conductor, whereby changes in the conductive state of said shell effected by said field applying means vary the magnetic flux developed by current in said conductor, thereby to vary its inductance.

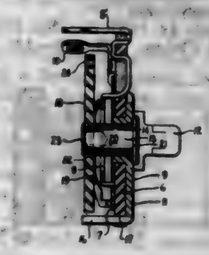
2,946,031
PRESSURE TRANSDUCER
Harry M. Steele, Jr., Phoenix, Ariz., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed May 5, 1958, Ser. No. 733,146
15 Claims. (Cl. 338—42)



1. A fluid pressure transducer comprising: a housing; a set of movable walls disposed in said housing and cooperating therewith to define a pair of fluid pressure chambers; reference means to oppose the pressure actuated movement of said movable walls; passage means to establish communication between said fluid pressure chambers and connect them with a source of fluid pressure to be measured; movable signal-producing means disposed in said housing; and motion-transmitting means engaged by said movable walls and actuated by movement thereof to operate said movable signal-producing means.

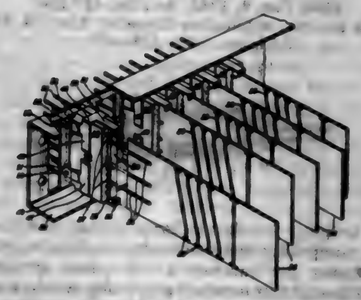
2,946,032
VARIABLE RESISTOR
Arthur M. Daily, Edwardsburg, Mich., assignor to CTS Corporation, Elkhart, Ind., a corporation of Indiana
Filed Sept. 11, 1957, Ser. No. 683,239
4 Claims. (Cl. 338—174)

3. A variable resistor having a stator assembly including means providing a resistance path and a collector path concentrically located at one side of a base of insulating material, and a rotatable contactor assembly at said one side of the base and comprising an operating shaft and spring contact fingers which press upon the resistance and collector paths and thereby impose end thrust upon said contactor assembly in the direction tending to separate the two assemblies, characterized by: a stamped metal mounting plate having a hole with an extruded lip providing a bearing for the operating shaft; means connecting the mounting plate and stator assembly in fixed relation to one another with the mounting plate overlying and supportingly engaging a substantial area of the base at the side thereof remote from the contactor



assembly, and with said shaft bearing accurately centered with respect to the resistance and collector paths and projecting into the base, the operating shaft passing through the bearing and having an exposed end by which rotation may be imparted to the contactor assembly; and further characterized by abutment means on the contactor assembly bearing against the mounting plate at the side thereof remote from the contactor assembly to transmit to the mounting plate the end thrust imposed upon the contactor assembly by the spring contact fingers as well as any end thrust that may be externally applied to the exposed end of the shaft.

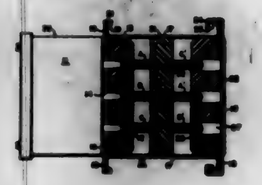
2,946,033
POLARIZED CONNECTOR FOR PRINTED CIRCUIT CARDS
Henry J. Wirth, Jr., Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 15, 1956, Ser. No. 584,994
14 Claims. (Cl. 339—17)



1. An electrical connector for circuit cards having a plurality of terminal tabs thereon and having coding recesses thereon located between said tabs, said connector comprising a connector housing having an elongated opening therein adapted to receive said card and having a plurality of contact member recesses, a plurality of contact members enclosed in said housing and insulatedly separated from each other, each of said contact members having a terminal portion extending through one of said contact member recesses and having a contact portion adjacent said elongated opening and adapted to engage one

of said tabs, and a plurality of polarizing elements integral with said housing and mounted in said elongated opening between contact members to polarize the connecter without the loss of a contact position and adapted to engage corresponding coding recesses on said card in accordance with a predetermined code.

2,946,834
BUS DUCT STRUCTURE
Joseph Washburn, Livonia, Mich., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 19, 1957, Ser. No. 673,031
8 Claims. (Cl. 339—22)



1. A bus duct section comprising a generally rectangular housing having spaced openings in opposite sides thereof, an insulator at each opening in the housing, each insulator having openings therein for receiving stab connectors of a plug-in unit, at least six substantially flat bus bars disposed in the housing in three pairs, the bars in each pair being of different phases and lying in a single plane which extends at right angles to the sides of the housing having the openings therein, additional insulators disposed between adjacent edges of said bars, said insulators having transverse grooves therein for receiving the edges of the bus bars, and one bar of each pair being engageable by a stab connector of a plug-in unit on one side of the housing and the other bar of each pair being engageable by a stab connector of a plug-in unit on the opposite side of the housing.

2,946,835
COUPLINGS FOR ELECTRIC CONDUCTORS
Ulrich Tschel, Bismarckstr. 107, Heilbronn (Neckar), Germany
Filed Feb. 9, 1955, Ser. No. 487,186
Claims priority, application Germany Mar. 28, 1950
5 Claims. (Cl. 339—89)



1. A coupling for electric cords, cables, and like conductors; comprising first and second terminal supporting means facing one another, a first group of terminals mounted in said first terminal supporting means, a second group of terminals mounted in said second terminal supporting means, each terminal of said second group of terminals being constructed to complement a respective terminal of said first group of terminals, each terminal being provided with contact means to which a portion of a conductor may be connected, first and second inner sleeves surrounding said first and said second terminal supporting means, respectively, engageable means on each of said first and second terminal supporting means and on each of said first and second inner sleeves, respectively, to prevent relative rotation between each of said terminal supporting means and its respective inner sleeve, first and second outer sleeves made of synthetic plastic material and rotatably surrounding said first and said second inner sleeves, respectively, first and second metallic extension sleeves fixedly mounted on the adjacent ends of and coaxially with said first and said second outer sleeves, respectively, said second extension sleeve being provided with a plurality of substantially helical guide slots in its periphery, said first extension sleeve being provided with a corresponding plurality of fingers to slide in said slots, said fingers and said slots constituting bayonet locking means and being operable to move said outer sleeves toward one another, means within each of said outer sleeves and engageable with said inner sleeves to move the latter together with said terminal supporting means toward one another when said fingers are moved into said slots during relative rotation of said first and second outer sleeves, and a resilient ring mounted on said second terminal supporting means and between said first and said second inner sleeves, whereby said resilient ring will be compressed when said inner sleeves approach one another to thereby exert a counter force on said outer sleeves tending to maintain said fingers in said slots in locked position.

2,946,836
ELECTRIC SWITCH WITH TERMINAL PLATE AND WIRE GRIP THEREFOR
Theodore R. Bettencourt, New Bedford, Mass., assignor to John I. Paulding, Inc., New Bedford, Mass., a corporation of Massachusetts
Filed June 22, 1956, Ser. No. 593,125
3 Claims. (Cl. 339—95)



1. An electric switch comprising an insulating casing having a chamber, opposed walls and a base, a wire grip comprising a pair of angularly related legs one of which is rigidly pressed against one of said walls, the other leg extending toward the opposite wall and being rigidly anchored in position, and a spring portion extending diagonally from said one leg toward the other leg and opposite wall and having an end portion bent back toward said one leg, and a terminal plate slidable against said opposite wall and having a projecting tab pressing down the end of said other leg and springing said other leg to a bowed shape, said casing having a hole through said bottom for insertion therethrough of a terminal wire between said spring portion and terminal plate to be gripped therebetween and means pressing said terminal plate downwardly to distort said other leg from its unstressed shape and to clamp said grip and plate in seated position against the base of said chamber.

2,946,837
ELECTRIC RECEPTACLE
Elwood T. Platz, Detroit, John B. Cataldo, Birmingham, and John A. Herrmann, Grosse Pointe Farms, Mich., assignors, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 10, 1955, Ser. No. 527,621
9 Claims. (Cl. 339—154)

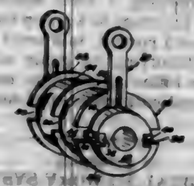
9. An electrical receptacle being comprised of a housing; a locking member, a pair of contacts; each of said

contacts including a line connector and a load contactor; said contacts being disposed within said housing and being secured thereto to move in unison therewith; said housing including prong openings adjacent to each of said load contactors; said locking member being mounted within said housing and journalled thereby for limited rotation with respect thereto; said locking member including a collar having notches cut therein; said notches being in alignment with said prong openings when said locking member is rotated to a first position to thereby permit the mounting of a plug cap to said receptacle; said collar being interposed between said load contactors and said prong openings when said locking member is rotated to a second position to thereby prevent the mounting of a plug cap to said receptacle; said line contactors being operatively positioned, when said locking member



is in said second position, to permit said receptacle to be installed in a continuous outlet electrical distribution system; said line contactors being operatively positioned, when said receptacle is installed in a continuous outlet electrical distribution system and said locking member is in said first position, to contact the conductors of said system and cooperate with said system to prevent the removal of said receptacle from said system; said locking member including a portion generally rectangular in shape having a notch therein positioned parallel to and spaced from the major axis of said rectangle, said notch adapted to cooperate with a polarizing rib of a continuous outlet electrical distribution system.

2,946,838
TERMINAL LUG FOR WIRE WOUND RESISTOR
Charles Janik, 44 Overlook Road, Great Neck, N.Y., and Lawrence Jay Matzen, 194—31A 64th Circle, Flushing, N.Y.
Filed Sept. 19, 1955, Ser. No. 610,795
4 Claims. (Cl. 339—217)



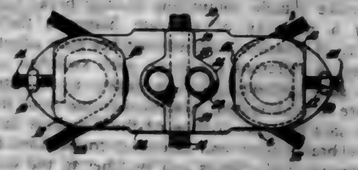
1. In a wire wound resistor, a bobbin, a terminal element comprising a yoke having resilient relatively movable legs, said bobbin having a formation engageable by said legs wherein said legs grip said bobbin by virtue of their resilience, said legs being provided with shoulders lockingly engageable with said formation, said formation comprising a peripheral groove formed in the material of said bobbin, said legs when being so engaged substantially conforming to said peripheral groove; said formation further comprising at least one radial slot extending longitudinally from an end of said bobbin to said groove, a wall of said slot forming a shoulder lockingly engageable by the shoulder of one of said legs.

2,946,839
ELECTRICAL TERMINAL
Arthur A. Grunwald, Edwardsburg, Mich., and Raymond Ostrom, Mishawaka, Ind., assignors to Dunsmoor, Incorporated, Elkhart, Ind., a corporation of Indiana
Filed Nov. 6, 1957, Ser. No. 694,796
1 Claim. (Cl. 339—269)



An electrical terminal comprising, a base member, means affording a threaded opening extending through said base member, a first washer fixed against rotation relative to said base member and encircling said threaded opening, a screw having threaded engagement in said threaded opening, a second washer rotatably mounted about said screw and movable toward and away from said first washer upon inward and outward movement, respectively, of said screw in said threaded opening, said first and second washers having opposed inner annular portions for securing a conductor therebetween and radially outwardly extending teeth disposed in oblique relation relative to said inner annular portions, and opposed faces of said teeth of said first and second washers lockingly interengaging with each other when the conductor is secured between said annular portions to limit relative rotation between said first and second washer.

2,946,840
SPOOL GRIP CONNECTOR
Irving F. Mattlyne, Stamford, Conn., assignor to Burndy Corporation, a corporation of New York
Filed Dec. 14, 1956, Ser. No. 628,289
2 Claims. (Cl. 339—272)

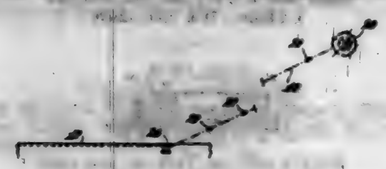


1. A stub type connector for electrically and mechanically joining two wires together, comprising: two circular spool-like bodies formed side by side and having a common wall therebetween; each spool having a groove extending around its periphery; a major portion of each said groove being of substantially V shape and adapted to retain a wire disposed therein by snubbing action; a minor portion of each said groove being of substantially U shape and adapted to conform to the surface of the therein disposed wire; and a pressure-applying means mounted on each side of said wall adjacent the respective U portions; each said pressure-applying means being adapted to independently apply pressure substantially perpendicularly to the surface of the respective wire to retain said wire against its respective U surface.

2,946,841
AIRCRAFT LANDING AID
Jacob S. Kamberlen, % International Shoe Machine Corp., West Newton, Mass. (292 Main St., Cambridge, Mass.)
Filed June 7, 1956, Ser. No. 589,951
12 Claims. (Cl. 340—26)

1. Aircraft guiding means for assisting in bringing a plane down to the landing end of a landing strip when

visibility is low, comprising a light track rising along a rearwardly and upwardly extending path from the landing end of the strip to approximately normal flight level, the inclination of the path corresponding to the normal glide path of a plane, said track being constituted by a



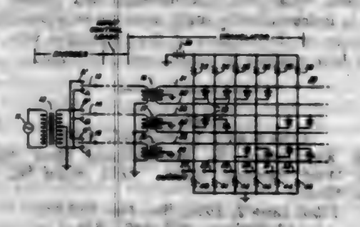
plurality of finite bodies travelling one after another through space above the landing strip which luminesce at such time as to define the limits of the glide path, and means for projecting said bodies at frequent enough intervals to maintain a continuously visible track throughout the time required for the plane to make a landing.

2,946,842
CAUTIONARY SIGNAL FOR AUTOMOTIVE VEHICLES
William Arthur Beasley, 13119 132 Ave., Edmonton, Alberta, Canada
Filed June 19, 1958, Ser. No. 743,067
2 Claims. (Cl. 340—69)



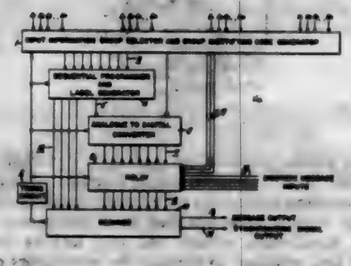
1. In an automotive vehicle having a hydraulic braking system with a manually operable brake pedal to increase pressure in the hydraulic braking system and a source of electric current a cautionary signal for such automotive vehicle comprising electric brake lights each having a plurality of separate filaments therein, the plurality of pressure actuated switches each adapted to be actuated at different pressures, such switches connected in the said hydraulic braking system to be actuated by pressure in such system, electrical connections from each of the said switches to one of the filaments in the said electric brake lights and electrical connections from the said electric brake lights and switches to the said source of electric current whereby actuation of the switches will light the filaments in the electric brake lights.

2,946,843
A.C. CODING SYSTEMS FOR MULTIPLE LOAD SELECTION
Willard A. Roemstra, Rutherford, and Weston J. Ritchie, Morris Plains, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 16, 1953, Ser. No. 398,589
8 Claims. (Cl. 340—147)



2. An alternating current operated coding system comprising means for encoding input information into pertination code groups constructed from at least two elements each having one of three possible signaling conditions, namely, an alternating current signal of a given phase, an alternating current signal of a phase opposite that of the given phase, and no signal, means for transmitting said code groups, means for receiving said code groups and comparing the phases of the elements of each code group to detect elements of related phase, said last-named means comprising a multi-input gate circuit for selecting an output representative of a particular code group of said elements of related phase.

2,946,844
SIGNAL PROCESSING SYSTEM
Ralph Bolgiano, Jr., Ithaca, Daniel T. Hurley, Syracuse, and William R. Kraft, Whitesboro, N.Y., assignors to General Electric Company, a corporation of New York
Filed Aug. 9, 1954, Ser. No. 448,446
21 Claims. (Cl. 340—174)

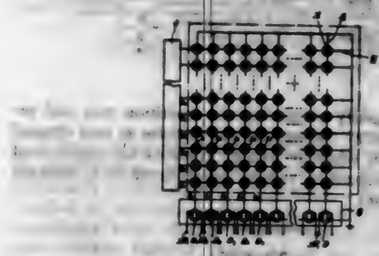


15. An arrangement for communicating the value of a plurality of analog functions available at various groups of inputs terminals to selected groups of output terminals comprising means for successively sampling the functions at said input terminals and deriving the values thereof, a source of a plurality of label signals, means for combining said derived values and said label signals into a plurality of function messages, each of said function messages comprising a label signal followed by a related derived function value, means for transmitting said function messages in a desired, non-overlapping time sequence, each of said label signals identifying the input terminal within a group associated with its related function, means for generating a group identifying message, means for transmitting said group identifying message as the first message in said transmitted sequence, said group identifying message comprising a label signal identifying the group identifying message as a group identifying message following by a word portion, said word portion comprising a first part identifying the group with which the information in the following function messages are associated and a second part comprising discrete message information.

2,946,845
DIGITAL MEMORY SYSTEM
Eiichi Goto, 1416, 4-Chome, Nakameguro, Meguro-ku, Tokyo-to, Japan
Filed Apr. 20, 1956, Ser. No. 579,573
Claims priority, application Japan Apr. 28, 1955
13 Claims. (Cl. 340—174)

2. A digital storage device comprising a plurality of nonlinear reactors each having an hysteresis characteristic related to the electromagnetic field supplied thereto and each storing one binary digit in accordance with the polarity of the electromagnetic residual induction thereof, a source of information signals having a frequency f, means for connecting each of said reactors with said source of information signals, a source of auxiliary signal energy having a frequency different from the frequency f of the information signals, means for connecting each

of said reactors with said source of auxiliary signals, the input of the information into each said reactor being effected by applying two signals to each reactor, one of the signals being the said information signal having its phase modulated by substantially 180° in accordance with the digit to be stored and the other signal being the auxiliary signal having constant phase, said source of information signals including a source of exciting energy of frequency $2f$, a source of weak control signal energy of frequency f, and an output resonant circuit having a



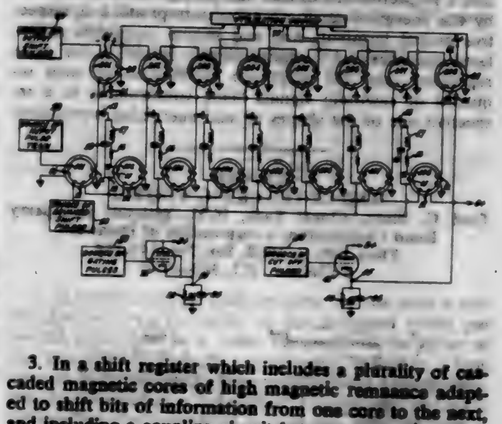
substantially resonant frequency f and including means for varying its resonance frequency, means to connect said source of exciting energy to said output resonant circuit through said resonance varying means, and means to connect said source of weak control signal energy to said output resonant circuit whereby an oscillation of frequency f is generated in said resonant circuit and the phase of said oscillation is controlled by the phase of the weak control signal when the generated oscillation is restarted after interruption.

2,946,846
MAGNETIC DIGITAL COMPUTER CIRCUIT
Ephraim W. Hegue, Bethesda, Md., assignor to the United States of America as represented by the Secretary of Commerce
Filed Nov. 16, 1956, Ser. No. 622,723
8 Claims. (Cl. 340—174)



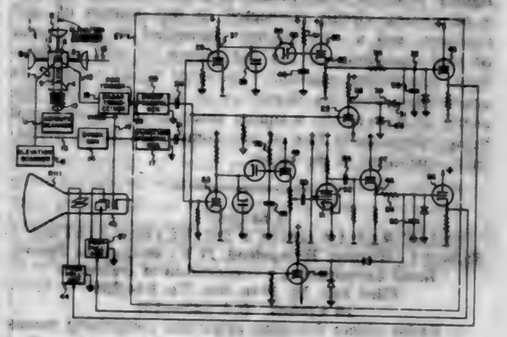
1. A saturable core logical circuit comprising a saturable core reactor of the type including a core having a square loop hysteresis characteristic and a primary and secondary winding, an energizing circuit including said primary winding for magnetizing said core to either one of two remnant states of magnetization, said energizing circuit comprising a source of magnetizing current, impedance means connecting said source to one terminal of said primary winding, the other terminal of said primary winding being grounded, gating means for controlling the magnitude of current in said energizing circuit, said gating means comprising asymmetrical conducting means having one electrode connected to said source of magnetizing current, said asymmetrical conducting means being poled to be normally conducting with respect to said magnetizing current source, said gating means including means connected to the other electrode of said asymmetrical conducting means and to ground for cyclically biasing said asymmetrical conducting means to alternate states of cut-off and conductivity with respect to said source, and means for applying a constant potential bias to one terminal of said secondary winding.

2,946,847
MAGNETIC MEMORY AND SWITCHING CIRCUIT
Walter Leroy Morgan II, Maple Shade, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Apr. 30, 1957, Ser. No. 656,473
3 Claims. (Cl. 340—174)



3. In a shift register which includes a plurality of cascaded magnetic cores of high magnetic remanance adapted to shift bits of information from one core to the next, and including a coupling circuit between successive cores having unilateral impedance means, an improved switching circuit comprising a valve with a low-impedance output circuit, said output circuit having a long time constant relative to the length of bits of information shifted along said register, means to selectively render said valve inoperative, and means for coupling said output circuit to said coupling circuit.

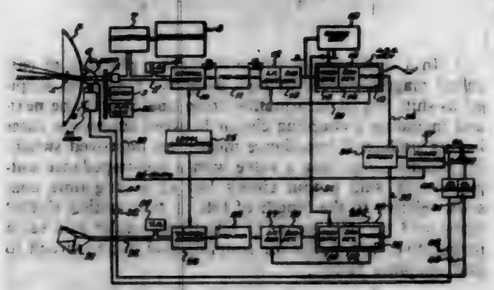
2,946,848
SWEEP GENERATOR FOR QUADRANT-SCANNING RADAR
Milton H. Greenfield, Bronx, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,243
6 Claims. (Cl. 343—5)



1. An electronic sweep generator for use in a quadrant-scanning radar, said sweep generator comprising means for generating a control waveform substantially coextensive with the radar pulse repetition interval and having the radar pulse repetition rate, means for generating first and second energizing waveforms each having a

duration substantially coextensive with the radar quadrant-scanning interval, said first energizing waveform further having a shape conformable to the curvature of a sine wave in a predetermined quadrant and said second energizing waveform further having a shape conformable to the curvature of a cosine wave in said quadrant, and first and second sawtooth generators for producing respective series of sawtooth signals in response to said energizing and control waveforms, means for applying said control waveform to each of said sawtooth generators and means for applying to each of said sawtooth generators a respective one of said energizing waveforms whereby the energized sawtooth generators produce at respective output terminals first and second amplitude modulated sequences of sawtooth signals at said radar pulse repetition rate, the amplitude modulation of each sequence of sawtooth signals being conformable to a respective one of the shapes of said energizing waveforms.

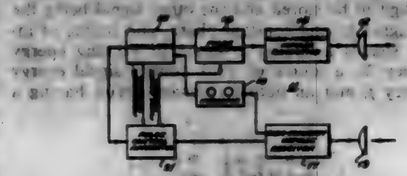
2,946,049
RADAR TRACKING SYSTEM
Carl C. Stotz, Floral Park, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Feb. 9, 1956, Ser. No. 143,214
6 Claims. (Cl. 343—7.4)



1. A radar tracking system comprising a scanning antenna, an auxiliary antenna, means for supplying said scanning antenna with pulsed ultra-high-frequency energy for radiation into space, receivers connected to be supplied from said scanning antenna and from said auxiliary antenna respectively for detecting and amplifying signals received after reflection from a remote target, a combining circuit connected to the outputs of said receivers and a demodulator connected to the output of said combining circuit the output of said demodulator constituting essentially an error signal variable in accordance with the departure of the target from the center of scan of the scanning antenna, said error signal being substantially free of any component due to reflectivity variations of the target.

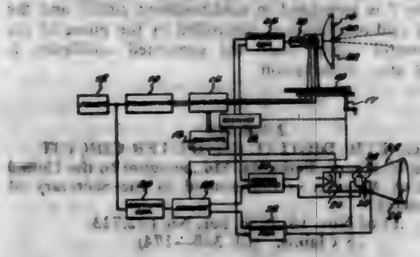
2,946,050
PULSE RADAR OBJECT DETECTION SYSTEM
Robert L. Wathen, Hempstead, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 30, 1946, Ser. No. 644,285
10 Claims. (Cl. 343—13)

1. Radar object detection apparatus comprising means for recurrently transmitting a series of short impulses of radio energy separated by relatively long intervals between successive impulses, means for receiving radio energy impulses reflected from the object, said transmitting means being operative independently of said receiving means, the time delay between transmission of an impulse and reception of the corresponding reflected energy impulse being a measure of the distance to the object, said means coupled to said transmitting means and to said receiving means and responsive to variation of the elapsed time between transmission of an impulse and reception of the corresponding reflected energy impulse



for simultaneously increasing the repetition rate and reducing the energy transmitted per impulse as said elapsed time decreases, whereby weaker impulses are transmitted at a greater repetition rate as the distance to a detected object decreases.

2,946,051
ANGLE SENSING INDICATOR FOR NUTATING BEAM RADAR SYSTEM
Elmer D. Cooper, Huntington Station, and Curtis M. Jansky, New York, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Mar. 23, 1955, Ser. No. 496,283
4 Claims. (Cl. 343—16)



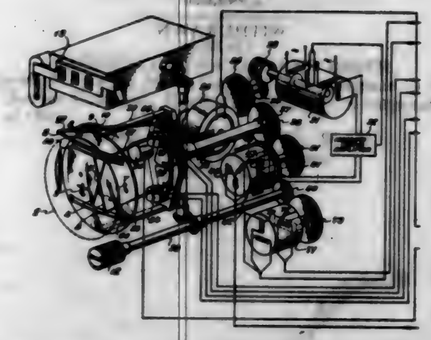
1. Radar apparatus comprising directional antenna means including a motor for nutating the antenna, means for moving the antenna about two perpendicular axes, a pulsed transmitter and receiver coupled to the antenna for radiating energy pulses and receiving echoes from targets in space, a cathode ray indicator including beam intensity controlling means and beam deflecting means, the beam intensity controlling means being coupled to the receiver output for modulating the beam intensity in response to received signals, first sweep generating means synchronized with the pulsed transmitter and coupled to the beam deflecting means of the cathode ray indicator, second sweep generating means actuated in response to movement of the antenna about one of said axes and coupled to the beam deflecting means of the cathode ray indicator, a reference generator driven by the nutating motor, the reference generator producing two alternating current signals of the same period as that of the nutating antenna and in phase quadrature to each other, a resolver connected in series with the two output signals of the reference generator, the two output signals being coupled via said resolver to the beam deflecting means to produce a circular sweep of the beam of said cathode ray indicator in synchronism with the nutating movement of the antenna, and means for actuating the resolver in response to movement of the antenna about said one of said axes, whereby the phase relationship between the circular sweep of the beam of said cathode ray indicator and the nutating movement of the antenna is shifted in response to changes in the orientation of the antenna about said one of said axes.

2,946,052
DETECTOR CIRCUIT FOR LORAN RECEIVERS
Ronald K. Rockwell, Yuma, Ariz., and Edward J. Sussuris, Hawthorne, Calif., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Nov. 7, 1955, Ser. No. 545,293
8 Claims. (Cl. 343—103)



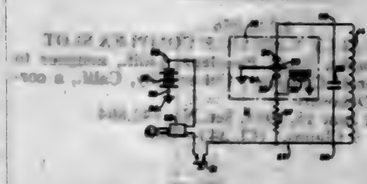
1. In a loran receiver, a detector circuit comprising in combination, an input circuit for receiving pulse-modulated loran signals to be detected, a rectifier element coupled to said input circuit for rectifying said pulse-modulated loran signals, a load impedance coupled to said rectifier element across which said rectified loran pulses are produced, and means including a source of bias voltage coupled to said rectifier element for biasing said rectifier element in a direction to prevent rectification of said pulse-modulated signals until the magnitude of said pulse-modulated signals exceeds the magnitude of the bias voltage, the magnitude of said bias voltage being determined according to the average value of the output voltage across said load impedance due to the rectification of noise alone.

2,946,053
PICTORIAL DEVIATION INDICATOR
Edward Riesdorph Dayton, Huntington Station, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Feb. 9, 1955, Ser. No. 487,945
18 Claims. (Cl. 343—108)



1. Apparatus for producing a visual display representing the distance of an aircraft from a radio station, the deviation in heading of the aircraft from a selected line of bearing to the radio station, and the relative magnitude and sense of displacement of the aircraft from said selected line of bearing, comprising a reference index representing the aircraft, an indicator comprising a pair of bars adapted to intersect and thereby define an angle, the bisector of said angle representing said selected line of bearing, means for producing relative rotation between said bisector and said reference index in accordance with the deviation in heading of the aircraft from said selected line of bearing, means for producing relative translatory motion between the point of intersection of said indicator and said reference index in a direction perpendicular to said bisector in accordance with the relative magnitude and sense of displacement of the aircraft from said selected line of bearing, and means for producing relative translatory motion between said point of intersection and said reference index in a direction parallel to said bisector in accordance with the distance of the aircraft from the radio station.

2,946,054
REMOTE CONTROL RADIO SYSTEM
Emmer V. Schneider, Alliance, Ohio, assignor to The Alliance Manufacturing Company, division of Consolidated Electronics Industries Corporation, Wilmington, Del.
Filed Apr. 16, 1956, Ser. No. 578,261
3 Claims. (Cl. 343—225)

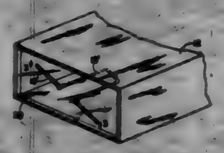


1. A remote control radio receiver for use with a carrier frequency in the order of five thousand cycles per second interrupted at a lower frequency in the order of one hundred fifteen cycles per second, comprising, a loop antenna with two connections, an iron core step-up input transformer having a secondary winding and having a primary winding connected to said two antenna connections, an RF by-pass capacitor connected in parallel with said primary, shielding in said transformer between said windings connected to ground, a thyratron having cathode, grid, and plate, means for connecting said cathode to ground, an energizing transformer having primary and secondary windings, means for connecting said energizing transformer primary winding to an alternating current source of a frequency lower than said interrupting frequency, first and second end connections and an intermediate connection on said energizing transformer secondary, means for connecting said intermediate connection to ground, a grid current limiting resistor for connecting said first end connection to one end of said input transformer secondary, means for connecting the other end of said input transformer secondary to said grid, a tuned first relay having contacts and an energizing coil and tuned to said interrupting frequency, a plate current limiting resistor connecting one end of said relay coil to said second end connection of said energizing transformer secondary, means for connecting said plate to the other end of said relay coil, whereby, when a sufficient value of said carrier frequency interrupted at said interrupting frequency is received on said antenna, it is passed by said step-up input transformer to bias said grid positive during at least part of the period when said plate is positive relative to said cathode to fire said thyratron periodically at said energizing source frequency to periodically close said relay contacts at said interrupting frequency, a voltage source, and a second relay controlled in energization from said voltage source through said first relay contacts.

2,946,055
PARASITIC DIPOLE SLOT ANTENNA
Carl E. Fallick, Lexington, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Dec. 29, 1958, Ser. No. 783,560
4 Claims. (Cl. 343—727)

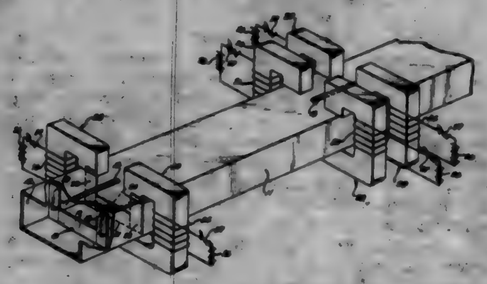
1. A circularly polarized antenna system including a conductive plate having a rectangular aperture therein, a

rectangular waveguide connected to said plate behind said aperture and open at said aperture, a dipole disposed in the plane of said aperture and tilted relative to the longer



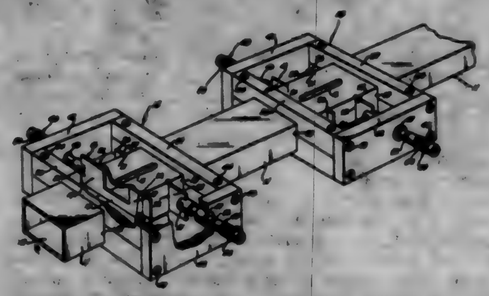
axis of said aperture, and a short-circuited quarter-wavelength transmission line connected to said dipole and extending into said waveguide.

2,946,856
ELECTRICALLY VARIABLE COMPLEX SLOT
Howard E. Shanks, South Pasadena, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 18, 1958, Ser. No. 743,264
9 Claims. (Cl. 343—768)



1. An electrically variable waveguide slot coupler comprising a rectangular waveguide having a resonant slot through a broad wall along the longitudinal centerline thereof, a pair of iris means respectively disposed in said waveguide at either end of said slot and having ferrite inductive elements, and variable means disposed adjacent said elements for establishing differential values of static magnetic field therethrough transverse to the direction of propagation of energy through said waveguide to control amplitude and phase of radiation from said slot.

2,946,857
MECHANICALLY VARIABLE COMPLEX SLOT
Howard E. Shanks, South Pasadena, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed June 18, 1958, Ser. No. 743,265
8 Claims. (Cl. 343—768)



1. A variable conductance waveguide slot coupler comprising a rectangular waveguide having a resonant slot in a broad wall thereof, first and second iris means mounted within said waveguide and respectively disposed at opposite ends of said slot, and means coupled to said first and second iris means for individually varying the positions thereof to alter current distribution of energy propagated through said waveguide and control radiation from said slot.

2,946,858
WITHDRAWN

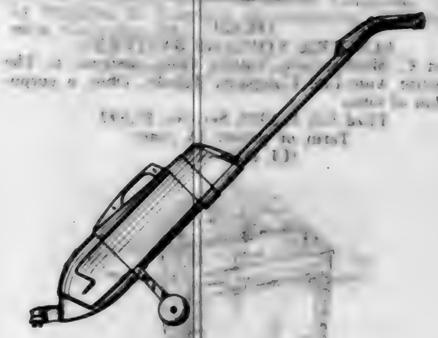
DESIGNS

JULY 19, 1960

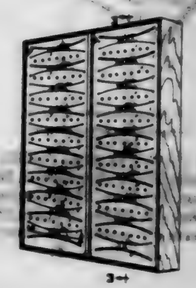
188,410
FLOOR POLISHER
Edward L. Verhagen, Rahway, N.J., assignor to Regina Corporation, Rahway, N.J., a corporation of Delaware
Filed Dec. 22, 1958, Ser. No. 53,856
Term of patent 14 years
(Cl. D9—2)



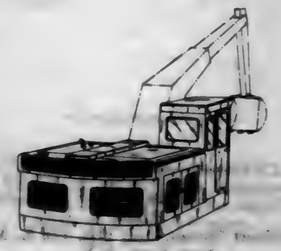
188,411
COMBINED CLEANER AND DRIER
Carroll M. Gantz, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Filed June 16, 1959, Ser. No. 56,381
Term of patent 14 years
(Cl. D9—2)



188,412
ILLUMINABLE PANEL
Charles A. Dempsey, 2436 Bonnieview Ave., Dayton, Ohio
Filed June 9, 1958, Ser. No. 51,268
Term of patent 14 years
(Cl. D13—1)



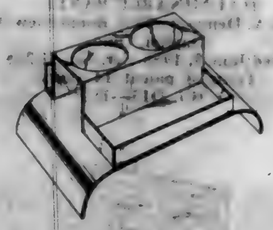
188,413
BOOM TURNTABLE
Daniel F. Przybylski, Winona, Minn., assignor to The Warner & Swasey Company, Cleveland, Ohio, a corporation of Ohio
Filed July 16, 1959, Ser. No. 56,805
Term of patent 14 years
(Cl. D14—3)



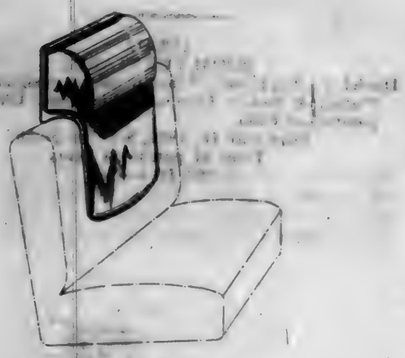
188,414
AUTOMATIC HEADLIGHT DIMMER FOR AUTOMOBILES
Arthur G. B. Metcalf, Milton, and Burton E. Shaw, South Lynnfield, Mass., assignors to Electronics Corporation of America, Cambridge, Mass., a corporation of Massachusetts
Filed Sept. 23, 1959, Ser. No. 57,658
Term of patent 14 years
(Cl. D14—6)



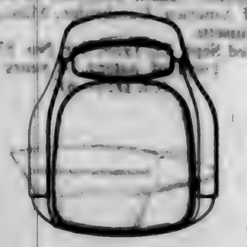
188,415
ARTICLE HOLDER FOR AUTOMOBILES AND THE LIKE
Paul P. Schoerer, 1318 8th St., Wichita Falls, Tex.
Filed Jan. 18, 1960, Ser. No. 59,076
Term of patent 14 years
(Cl. D14—6)



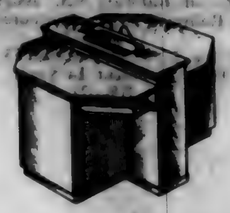
188,416
AUTOMOBILE SEAT HEADREST
Karl Ramm, West St., Southington, Conn.
Filed May 19, 1959, Ser. No. 55,971
Term of patent 14 years
(Cl. D15—8)



188,417
CHAIR
Ernest Gilbert Mason, Apt. 11E, 120 E. 36th St., New York, N.Y.
Filed Oct. 27, 1958, Ser. No. 53,159
Term of patent 14 years
(Cl. D18—3)



188,418
LABORATORY TABLE UNIT
Arthur R. Salvesen, Garden City, N.Y., assignor to Norbute Corporation, New York, N.Y., a corporation of Delaware
Continuation of design applications Ser. Nos. 55,742 and 55,732, May 1, 1959. This application Feb. 10, 1960, Ser. No. 59,336
Term of patent 14 years
(Cl. D16—2)



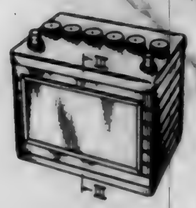
188,419
CORD CONNECTOR
Paul P. Danesi, Attleboro Falls, Mass., assignor to Royal Electric Corporation, Pawtucket, R.I., a corporation of Delaware
Filed July 22, 1959, Ser. No. 56,887
Term of patent 14 years
(Cl. D26—1)



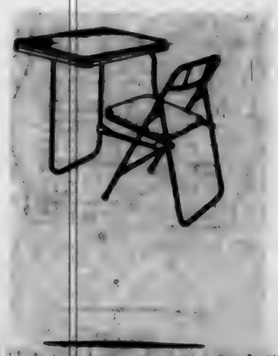
188,420
WELDING APPARATUS HOUSING
Thayer R. Brunson and Harold G. Davis, Denver, Colo., assignors to Rocky Mountain Metal Products Co., Denver, Colo., a corporation of Colorado
Filed Aug. 5, 1957, Ser. No. 47,237
Term of patent 14 years
(Cl. D26—1)



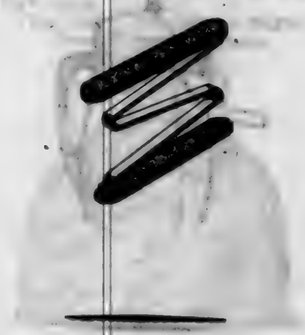
188,421
ELECTRIC STORAGE BATTERY
Robert C. Shutterbeck, Toledo, Ohio, assignor to The Electric Auto-Lite Company, Toledo, Ohio, a corporation of Ohio
Filed July 8, 1958, Ser. No. 51,697
Term of patent 14 years
(Cl. D26—6)



188,422
COMBINED DESK AND CHAIR
Samuel E. Middlebrook, New Bedford, Mass. (25 Kenilworth St., Newton, Mass.)
Filed Apr. 14, 1959, Ser. No. 55,806
Term of patent 14 years
(Cl. D33—11)



188,423
HAND GRIP EXERCISER
Terry J. Fox, Hunt Lane, North Salem, N.Y.
Filed June 13, 1958, Ser. No. 51,336
Term of patent 14 years
(Cl. D34—5)



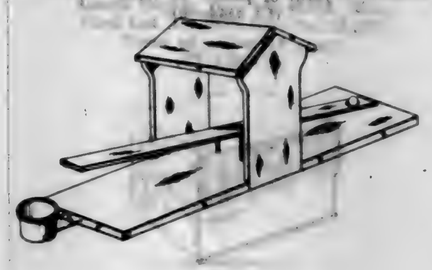
188,424
CAB FOR AMUSEMENT RIDE
Ralph A. Stapelins, deceased, late of Columbus, Ohio, by Margaret R. Stapelins, administratrix, 3073 Rightmire, Columbus, Ohio
Filed Dec. 21, 1959, Ser. No. 59,725
Term of patent 14 years
(Cl. D34—5)



188,425
DESCENT RETARDER
Paul M. Lewis, South Gate, Calif.
Filed Oct. 16, 1959, Ser. No. 57,961
Term of patent 3½ years
(Cl. D34—15)



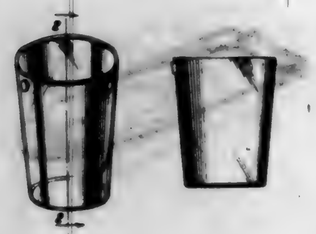
188,426
BALL PROJECTILE GAME DEVICE
Albert S. Hayden, Darlington, Md.
Filed Sept. 8, 1959, Ser. No. 57,458
Term of patent 7 years
(Cl. D34—18)



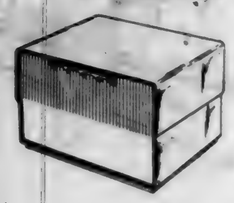
188,427
TUMBLER OR SIMILAR ARTICLE
Michael Glaser, 12 Maple Drive, Roosevelt, N.Y.
Filed Dec. 30, 1957, Ser. No. 48,977
Term of patent 14 years
(Cl. D26—3)



188,428
TUMBLER OR SIMILAR ARTICLE
Michael Glaser, 12 Maple Drive, Roosevelt, N.Y.
Filed Dec. 20, 1957, Ser. No. 48,978
Term of patent 14 years
(Cl. D36—8)



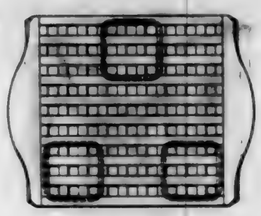
188,429
BREAD BOX
John W. Ehstein, Roslyn Heights, N.Y., assignor to Federal Enameling & Stamping Co., Pittsburgh, Pa., a corporation of Michigan
Filed Mar. 30, 1960, Ser. No. 59,955
Term of patent 14 years
(Cl. D44—6)



188,430
CHAFING DISH STAND
Victor J. Bergeron, Orinda, Calif.
(20 Commo Place, San Francisco, Calif.)
Filed Mar. 28, 1960, Ser. No. 59,892
Term of patent 14 years
(Cl. D44—10)



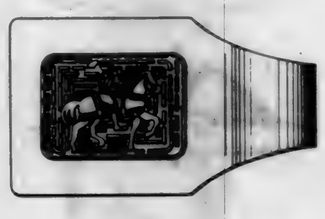
188,431
TRAY
Jens H. Quistgaard, Copenhagen, Denmark, assignor to Dansk Designs, Inc., Great Neck, N.Y., a corporation of New York
Filed June 23, 1959, Ser. No. 56,580
Term of patent 14 years
(Cl. D44—16)



188,432
COMBINED JUICER AND PITCHER
Jean O. Reinecke, Los Angeles, Calif., assignor to The Plas-Tex Corporation, Los Angeles, Calif., a corporation of California
Filed Jan. 12, 1960, Ser. No. 59,023
Term of patent 14 years
(Cl. D44—21)



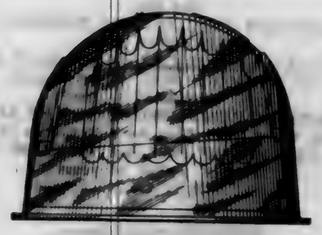
188,433
TEA BAG SQUEEZER
Nick C. Nikitas, 9 Bentley St., Salem, Mass.
Filed Mar. 7, 1960, Ser. No. 59,650
Term of patent 14 years
(Cl. D44—29)



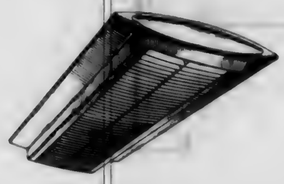
188,434
LACE
Aaron S. Stall, New York, N.Y., assignor to Textron Mills, Incorporated, Ridgefield, N.J., a corporation of New Jersey
Filed Dec. 14, 1959, Ser. No. 58,646
Term of patent 7 years
(Cl. D47—6)



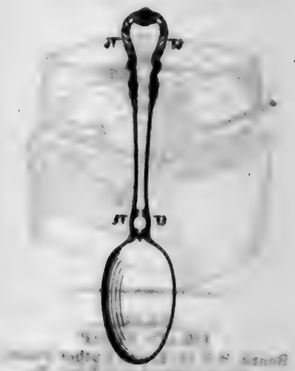
188,435
LENS UNIT FOR AIRPORT RUNWAY SIGNAL LIGHTS
Robert L. Nagel, Skokie, Ill., assignor to Elastic Stop Nut Corporation of America, Union, N.J., a corporation of New Jersey
Filed May 9, 1958, Ser. No. 50,826
Term of patent 14 years
(Cl. D48—16)



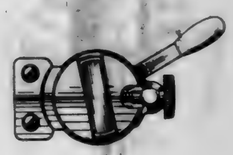
188,436
FLUORESCENT LIGHTING FIXTURE
Ernst Budke and Robert J. Romand, Pittsburgh, Pa., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed Nov. 2, 1959, Ser. No. 58,155
Term of patent 14 years
(Cl. D48—23)



188,437
SPOON OR SIMILAR ARTICLE
Amedio J. Germain, Yalesville, Conn., assignor to Wallace Silversmiths, Inc., Wallingford, Conn., a corporation of Connecticut
Filed June 4, 1959, Ser. No. 56,159
Term of patent 14 years
(Cl. D64—12)



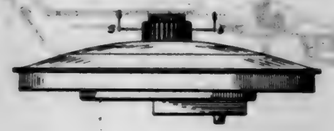
188,438
SNARE DRUM STRAINER
Josephus B. Thompson, Covington, Ohio, assignor to Joseph Rogers, Inc., Cleveland, Ohio
Filed Oct. 26, 1959, Ser. No. 58,051
Term of patent 14 years
(Cl. D56—1)



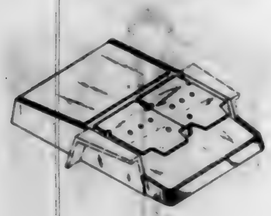
188,439
BOX OR SIMILAR ARTICLE
Martin Schnur, 1480 Pleasant Valley Way, West Orange, N.J., and Mel Appel, 198 Oakwood Drive, Murray Hill, N.J.
Filed Jan. 12, 1960, Ser. No. 59,016
Term of patent 14 years
(Cl. D58—12)



188,440
DIAPER PAIL LID
Mark S. James, Jr., Pittsburgh, Pa., assignor to Mark Laboratories, Inc., Pittsburgh, Pa.
Filed Jan. 21, 1958, Ser. No. 49,342
Term of patent 14 years
(Cl. D58—17)



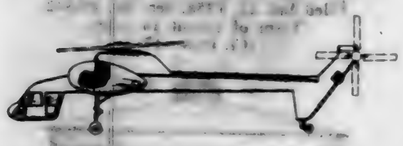
188,441
FILM SPLICING DEVICE OR SIMILAR ARTICLE
Robert H. Rafbel, Croton-on-Hudson, Eugene Martinez, Irvington-on-Hudson, and Marvin Kapilow, Croton-on-Hudson, N.Y.
Filed July 1, 1959, Ser. No. 56,612
Term of patent 14 years
(Cl. D61—1)



188,442
DRAIN PUMP
William D. Beard, R.F.D. 1, and Luther Peters, Manor St., both of Washington Boro, Pa.
Filed Oct. 27, 1959, Ser. No. 52,981
Term of patent 14 years
(Cl. D65—1)



188,443
HELICOPTER
Igor I. Sikorsky, Easton, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Aug. 28, 1958, Ser. No. 52,429
Term of patent 14 years
(Cl. D71—1)



188,444
AIR CUSHION VEHICLE
Melville W. Beardsley, Severna Park, Md., assignor to National Research Associates, Inc., Laurel, Md., a corporation of Maryland
Filed May 2, 1960, Ser. No. 29,421
Term of patent 14 years
(Cl. D71—1)



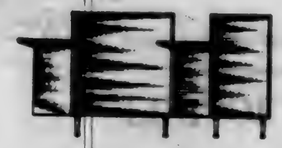
188,445
PEN SET BASE
Jacob S. Sherman, Chicago, Ill., assignor to Park Sherman Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 3, 1958, Ser. No. 49,883
Term of patent 3½ years
(Cl. D74—1)



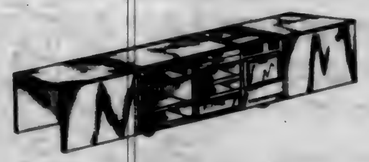
188,446
MAGNETIC PEN SUPPORT OR THE LIKE
Jacob M. Weiss, 5216 13th Ave., Brooklyn 19, N.Y.
Filed Mar. 10, 1958, Ser. No. 49,980
Term of patent 14 years
(Cl. D74—1)



188,447
SECTIONAL COUNTER FOR TELLERS OR THE LIKE
Francis C. Kapel, North Tonawanda, N.Y. (238 Ferndale Ave., Kenmore, N.Y.), and Joseph L. Homesberger, 153 Raleigh Ave., Kenmore, N.Y.
Filed Oct. 23, 1959, Ser. No. 53,044
Term of patent 14 years
(Cl. D86—2)



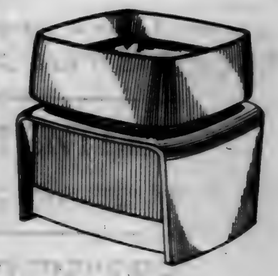
188,448
COMBINED FOOD COOKER, SERVER, AND CABINET
Harry S. Freiberg, 8808 Alcott, Los Angeles, Calif.
Filed Mar. 23, 1959, Ser. No. 55,168
Term of patent 7 years
(Cl. D81—10)



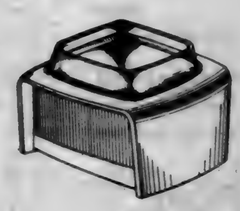
188,449
MACHINE FOR COATING POPCORN OR THE LIKE
Dick R. Westfall, 171 Grand Blvd., Long Beach, N.Y.
Filed Aug. 31, 1959, Ser. No. 57,374
Term of patent 14 years
(Cl. D81—10)



188,450
COMBINED FOOD AND BOTTLE WARMER
John W. Davies, Milwaukee, Wis., assignor to Hankscraft Company, Reedsburg, Wis., a corporation of Wisconsin
Filed July 2, 1959, Ser. No. 56,644
Term of patent 14 years
(Cl. D81—10)

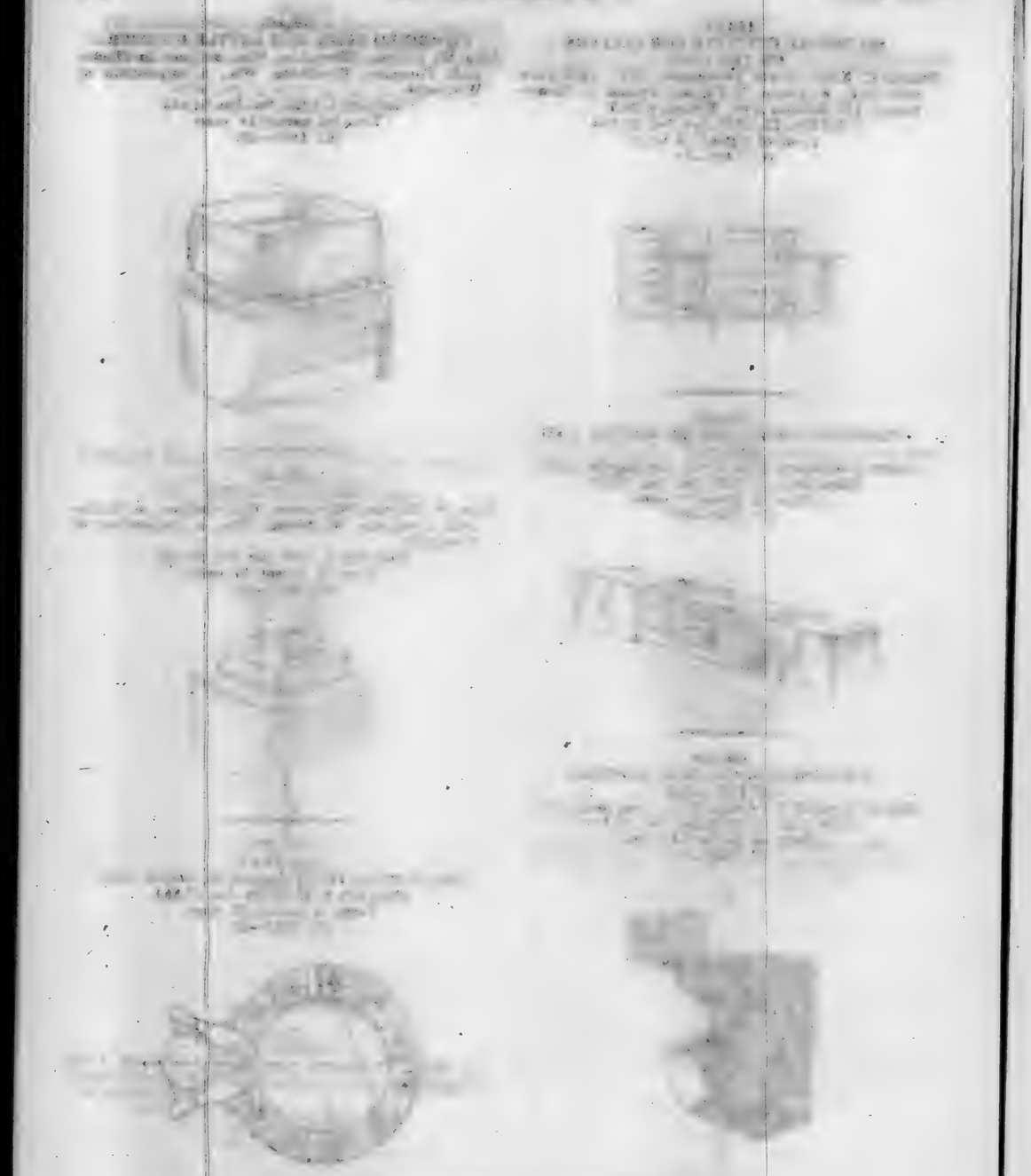


188,451
BOTTLE WARMER
John W. Davies, Milwaukee, Wis., assignor to Hankscraft Company, Reedsburg, Wis., a corporation of Wisconsin
Filed July 2, 1959, Ser. No. 56,645
Term of patent 14 years
(Cl. D81—10)



188,452
ASH TRAY
John Gottfried, 2123½ Summit St., Toledo, Ohio
Filed Oct. 8, 1959, Ser. No. 57,864
Term of patent 14 years
(Cl. D85—2)





LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 19TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Clark Equipment Co.: *See*—
McColl, Bruce J. Re. 24,846.

Heffernan, John J.: *See*—
Heffernan, Margaret M. and J. J. Re. 24,845.

Heffernan, Margaret M. and J. J. Crib canopy. Re. 24,845, 7–19–60, Cl. D—93.

McColl, Bruce J., to Clark Equipment Co. Log transporting vehicle. Re. 24,846, 7–19–60, Cl. 214—77.

LIST OF PLANT PATENTEES

Corliss Bros. Inc.: *See*—
Corliss, Clifford D. 1,960.

Corliss, Clifford D., to Corliss Bros. Inc. Euonymus plant. 1,960, 7–19–60, Cl. 47—59.

LIST OF DESIGN PATENTEES

Appel, Mel: *See*—
Schnur, Martin, and Appel. 188,439.

Beard, William D., and L. Peters. Drain pumps. 188,442, 7–19–60, Cl. D65—7.

Beardsley, Melville W., to National Research Associates, Inc. Air cushion vehicle. 188,444, 7–19–60, Cl. D71—1.

Bergeron, Victor J. Chafing dish stand. 188,430, 7–19–60, Cl. D44—10.

Brunson, Thayer R., and H. G. Davis, to Rocky Mountain Metal Products Co. Welding apparatus housing. 188,420, 7–19–60, Cl. D26—1.

Budke, Ernst, and R. J. Renaud, to Sylvania Electric Products Inc. Fluorescent lighting fixture. 188,436, 7–19–60, Cl. D48—23.

Danesi, Paul P., to Royal Electric Corp. Cord connector. 188,419, 7–19–60, Cl. D26—1.

Dansk Designs, Inc.: *See*—
Quistgaard, Jens H. 188,431.

Davies, John W., to Hankscraft Co. Combined food and bottle warmer. 188,450, 7–19–60, Cl. D61—10.

Davies, John W., to Hankscraft Co. Bottle warmer. 188,451, 7–19–60, Cl. D61—10.

Davis, Harold G.: *See*—
Brunson, Thayer R., and Davis. 188,420.

Dempsey, Charles A. Illuminable panel. 188,412, 7–19–60, Cl. D13—1.

Ebstein, John W., to Federal Enameling & Stamping Co. Bread box. 188,429, 7–19–60, Cl. D44—6.

Elastic Stop Nut Corp. of America: *See*—
Nagel, Robert L. 188,435.

Electric Auto-Lite Co., The: *See*—
Slautterback, Robert C. 188,421.

Electronics Corp. of America: *See*—
Metcalf, Arthur G. B., and Shaw. 188,414.

Federal Enameling & Stamping Co.: *See*—
Ebstein, John W. 188,429.

Fox, Terry J. Hand grip exerciser. 188,422, 7–19–60, Cl. D34—5.

Freiberg, Harry S. Combined food cooker, server and cabinet. 188,449, 7–19–60, Cl. D61—10.

Gantz, Carroll M., to The Hoover Co. Combined cleaner and and drier. 188,411, 7–19–60, Cl. D6—2.

Germain, Amedie J., to Wallace Silversmiths, Inc. Spoon or similar article. 188,437, 7–19–60, Cl. D54—12.

Glaser, Michael. Tumbler, or similar article. 188,427, 7–19–60, Cl. D38—8.

Glaser, Michael. Tumbler, or similar article. 188,428, 7–19–60, Cl. D38—8.

Gottfried, John. Ash tray. 188,452, 7–19–60, Cl. D85—2.

Hankscraft Co.: *See*—
Davies, John W. 188,450.
Davies, John W. 188,451.

Harden, Albert S. Ball projectile game device. 188,426, 7–19–60, Cl. D34—15.

Homesberger, Joseph L.: *See*—
Kegel, Francis C., and Homesberger. 188,447.

Hoover Co., The: *See*—
Gantz, Carroll M. 188,411.

James, Mark S., Jr., to Mark Laboratories, Inc. Diaper pail lid. 188,440, 7–19–60, Cl. D58—17.

Kaplow, Marvin: *See*—
Reibel, Robert H., Martines, and Kaplow. 188,441.

Kegel, Francis C., and J. L. Homesberger. Sectional counter for tellers or the like. 188,447, 7–19–60, Cl. D90—2.

Lewis, Paul M. Descent retarder. 188,425, 7–19–60, Cl. D34—15.

Mark Laboratories, Inc.: *See*—
James, Mark S., Jr. 188,440.

Martines, Eugene: *See*—
Reibel, Robert H., Martines, and Kaplow. 188,441.

Mason, Ernest G. Chair. 188,417, 7–19–60, Cl. D15—8.

Metcalf, Arthur G. B., and B. E. Shaw, to Electronics Corp. of America. Automatic headlight dimmer for automobiles. 188,414, 7–19–60, Cl. D14—6.

Mickelson, Samuel H. Combined desk and chair. 188,422, 7–19–60, Cl. D83—11.

Nagel, Robert L., to Elastic Stop Nut Corp. of America. Lens unit for airport runway signal lights. 188,435, 7–19–60, Cl. D48—16.

National Research Associates, Inc.: *See*—
Beardsley, Melville W. 188,444.

Nikitas, Nick C. Tea bag squeezer. 188,433, 7–19–60, Cl. D44—29.

Norbute Corp.: *See*—
Salveson, Arthur R. 188,418.

Park Sherman Co.: *See*—
Sherman, Jacob S. 188,445.

Peters, Luther: *See*—
Beard, William D., and Peters. 188,442.

Pla-Tex Corp., The: *See*—
Reinecke, Jean O. 188,432.

Praybylski, Daniel F., to The Warner & Swasey Co. Boom turntable. 188,413, 7–19–60, Cl. D14—2.

Quistgaard, Jens H., to Dansk Designs, Inc. Tray. 188,431, 7–19–60, Cl. D44—10.

Ramm, Karl. Automobile seat head rest. 188,416, 7–19–60, Cl. D15—8.

Regina Corp.: *See*—
Verhagen, Edward L. 188,410.

Reibel, Robert H., E. Martines, and M. Kaplow. Film splicing device or similar article. 188,441, 7–19–60, Cl. D61—1.

Reinecke, Jean O., to The Pla-Tex Corp. Combined juicer and pitcher. 188,432, 7–19–60, Cl. D44—21.

Renaud, Robert J.: *See*—
Budke, Ernst, and Renaud. 188,436.

Rocky Mountain Metal Products Co.: *See*—
Brunson, Thayer R., and Davis. 188,420.

Rogers, Joseph, Inc.: *See*—
Thompson, Josephus B. 188,438.

Royal Electric Corp.: *See*—
Danesi, Paul P. 188,419.

Salveson, Arthur R., to Norbute Corp. Laboratory table unit. 188,418, 7–19–60, Cl. D16—2.

Schoerer, Paul P. Article holder for automobiles and the like. 188,415, 7–19–60, Cl. D14—6.

Schnur, Martin, and M. Appel. Box or similar article. 188,439, 7–19–60, Cl. D58—12.

Shaw, Burton E.: *See*—
Metcalf, Arthur G. B., and Shaw. 188,414.

Sherman, Jacob S., to Park Sherman Co. Pen set base. 188,445, 7–19–60, Cl. D74—1.

Sikorsky, Igor I., to United Aircraft Corp. Helicopter. 188,443, 7–19–60, Cl. D71—1.

Simpkins, Margaret R.: *See*—
Simpkins, Ralph A. 188,424.

Simpkins, Ralph A., deceased, by M. R. Simpkins. Cab for amusement ride. 188,424, 7–19–60, Cl. D34—5.

Slautterback, Robert C., to The Electric Auto-Lite Co. Electric storage battery. 188,421, 7–19–60, Cl. D26—6.

Staff, Aaron S., to Texagon Mills, Inc. Lace. 188,434, 7–19–60, Cl. D47—6.

Sylvania Electric Products Inc.: *See*—
Budke, Ernst, and Renaud. 188,436.

Texagon Mills, Inc.: *See*—
Staff, Aaron S. 188,434.

Thompson, Josephus B., to Joseph Rogers, Inc. Snare drum strainer. 188,438, 7–19–60, Cl. D65—1.

United Aircraft Corp.: *See*—
Sikorsky, Igor I. 188,443.

Verhagen, Edward L., to Regina Corp. Floor polisher. 188,410, 7–19–60, Cl. D6—2.

Wallace Silversmiths, Inc.: *See*—
Germain, Amedie J. 188,437.

Warner & Swasey Co., The: *See*—
Praybylski, Daniel F. 188,413.

Weiss, Jacob M. Magnetic pen support or the like. 188,446, 7–19–60, Cl. D74—1.

Westfall, Dick R. Machine for coating popcorn or the like. 188,449, 7–19–60, Cl. D61—10.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 19TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Almex: *See*—
Stähl, Nils E. J., and Larsson. 2,945,432.

ACF Industries, Inc.: *See*—
Conguisti, Dominick R., and Mullane. 2,945,776.

Aamodt, Thoralf, to Bell Telephone Laboratories, Inc. Vapor seal leadin. 2,945,914, 7-19-60, Cl. 174—151.

Abbott, Andrew D., and J. E. Walker, to California Research Corp. Oxidation and silver corrosion resistant lubricants. 2,945,811, 7-19-60, Cl. 252—32.7.

Abraham, Paul, and R. Metzger. Bowling ball carrying case. 2,945,582, 7-19-60, Cl. 206—1.

Abrams, Ralph, D. W. Comins, Jr., and W. A. Meinzen, to Cambridge Thermionic Corp. Impedance assembly. 2,946,029, 7-19-60, Cl. 336—136.

Adams, Rudolph R. Conveyor system. 2,945,685, 7-19-60, Cl. 104—172.

Adelman, Barnet R., and J. D. Burks, to United States of America, Army. Explosive separation device. 2,945,442, 7-19-60, Cl. 102—49.

Aerojet-General Corp.: *See*—
Gongwer, Calvin A. 2,945,342.
Klager, Karl. 2,945,892.

Ahrns, Wilbur C.: *See*—
Blodgett, Edwin O., and Ahrns. 2,945,625.

Aiken, William R., to Kaiser Industries Corp. Electronic device. 2,945,974, 7-19-60, Cl. 313—69.

Air Preheater Corp., The: *See*—
Burchfield, Arden L. 2,945,681.

Air Reduction Co., Inc.: *See*—
Burch, Robert J., and Leeds. 2,945,895.

Aktiebolaget Anderssons Barkmaskin: *See*—
Franked, Enver. 2,945,706.

Aktiebolaget Vibro-Verken: *See*—
Nordegren, Sven-Ake. 2,945,970.

Alberti, Carlo G., L. Bernardi, G. Larini, and A. Verzellone, to Societa Farmaceutici Italia. Process for converting optically active aminodiols into racemic aminodiols by oxidation followed by racemization. 2,945,863, 7-19-60, Cl. 260—562.

Aktiewerk Zurich, A.G.: *See*—
Bruhin, Joseph. 2,945,975.

Alexander, Douglas S., and J. Firko, to Polymer Corp. Ltd. Catalytic dehydrogenation of hydrocarbons. 2,945,900, 7-19-60, Cl. 260—669.

Alexander, Granison T., Jr., and L. Q. Gresham, to Gem Oil Tool Co., Inc. Rotary well bore cleaner. 2,945,540, 7-19-60, Cl. 166—178.

Allan, William G., to Imperial Chemical Industries Ltd. Production of 2:4-dinitroresorcinol. 2,945,890, 7-19-60, Cl. 260—622.

Allen, John K.: *See*—
Crawford, Thomas G., and Allen. 2,945,688.

Allgaier-Werke G.m.b.H.: *See*—
Ritter, Kaspar, and Huetter. 2,945,382.

Alliances Mfg. Co., Division of Consolidated Electronics Industries Corp., The: *See*—
Kalish, David. 2,945,941.
Schneider, Emmor V. 2,946,054.

Allyn, Harold D. Firearm. 2,945,422, 7-19-60, Cl. 89—154.

Allyn, Harold D. Firearm. 2,945,423, 7-19-60, Cl. 89—199.

Almeter, Lewis L. Safety belt system construction. 2,945,275, 7-19-60, Cl. 24—170.

Alvord, Grove D., to Syntron Co. Heated liner for trough feeders. 2,945,925, 7-19-60, Cl. 219—19.

American Brake Shoe Co.: *See*—
Hipple, George M. 2,945,960.

American Cyanamid Co.: *See*—
Colman, William F., and Cullo. 2,945,851.
Stasiel, Stanley F., and Groseck. 2,945,882.

American Machine & Foundry Co.: *See*—
Bell, Arthur, and Horgan. 2,945,857.
Waite, Fred L. 2,945,257.

American National Bank and Trust Co. of Chicago: *See*—
Nicolaus, Frank G. 2,945,624.

American Oil Co., The: *See*—
Knight, Harmon M., and Kirkland. 2,945,907.
Romans, Robert T. 2,945,902.

American Photocopy Equipment Co.: *See*—
Duncan, James K., and Jones. 2,945,246.

American Steel Foundries: *See*—
Polasin, Walter R. 2,945,562.

American Viscose Corp.: *See*—
Waitkus, Calvin J. 2,945,774.

Anderson, Arthur A., and D. A. Schuldt, to Minnesota Mining and Mfg. Co. Circumferential tape applying. 2,945,336, 7-19-60, Cl. 53—198.

Anderson, Arthur E., to Westinghouse Electric Corp. Image device. 2,945,973, 7-19-60, Cl. 313—65.

Anderson, John L., and J. G. Everhart, to McGraw-Edison Co., Polyphase transformer. 2,946,028, 7-19-60, Cl. 336—5.

Anderson, Robert W.: *See*—
Sell, John, Jr., Anderson, and Murray. 2,945,265.

Andreasen, Norman H. Safety platform for sliding poles. 2,945,559, 7-19-60, Cl. 182—137.

Andreen, Harry J., Jr., to Socony Mobil Oil Co., Inc. Stabilized fuel oil containing tertiary alkyl primary amines. 2,945,749, 7-19-60, Cl. 44—72.

Ankeny, Thomas G., and J. W. Arnett, to General Motors Corp. Friction material. 2,945,291, 7-19-60, Cl. 29—182.5.

Annin, Mark H., and C. A. La Salle. Portable platform elevating device. 2,945,551, 7-19-60, Cl. 182—141.

Ansola Oy: *See*—
Saarento, Aulis. 2,945,719.

Anspon, Harry D., to General Aniline & Film Corp. Process for inhibiting the polymerization of α-chloracrylate esters and the resultant compositions. 2,945,844, 7-19-60, Cl. 260—86.1.

Antunes, Joseph F.: *See*—
Kozlof, Lloyd M. 2,945,735.
Kozlof, Lloyd M. 2,945,736.

Apostoleris, Theodore G., to Ford Motor Co. Dynamoelectric machine. 2,945,971, 7-19-60, Cl. 310—234.

Appleton, Arthur J. Telescoping bar hanger assembly. 2,945,661, 7-19-60, Cl. 248—205.

Applied Radiation Corp.: *See*—
Geisler, Wilson S., Jr. 2,945,980.

Aries, Robert S. Polymers from boric acid and organic diisocyanates. 2,945,841, 7-19-60, Cl. 260—77.5.

Armen, Ardy, and R. E. Gentry, Jr., to The Dow Chemical Co. Pentachlorophenylthioacrylates and polymers thereof. 2,945,843, 7-19-60, Cl. 260—79.7.

Armour and Co.: *See*—
White, Wilfrid F., Landmann, and Fierce. 2,945,785.

Arnett, John W.: *See*—
Ankeny, Thomas G., and Arnett. 2,945,291.

Arnaud, Henry E., to Republic Aviation Corp. Reverse thrust brake. 2,945,346, 7-19-60, Cl. 60—35.54.

Aschinger, Harold W. Hermetically-sealed coupling assembly. 2,945,363, 7-19-60, Cl. 74—18.1.

Associated Portland Cement Manufacturers Ltd., The: *See*—
Davis, Geoffrey G. J. 2,945,627.

Atkin, Edgar H., to Republic Aviation Corp. Aircraft skin construction. 2,945,653, 7-19-60, Cl. 244—119.

Atkinson, Donald L., to Lear, Inc. Pickoff responsive to displacement between relatively movable members. 2,946,950, 7-19-60, Cl. 250—237.

Atkinson, Kenneth. Safety connector for high pressure gas, steam or liquid containers. 2,945,502, 7-19-60, Cl. 137—68.

Atlas Powder Co.: *See*—
Costine, Raymond L., and Behrens. 2,945,818.

Auer, Peter L., and A. H. Sharbaugh, to General Electric Co. Pump operation. 2,945,442, 7-19-60, Cl. 103—3.

Automatic Voting Machine Corp.: *See*—
Swanson, Oscar F. 2,945,439.

Avco Mfg. Corp.: *See*—
Midkiff, Raymond L. 2,945,960.

Avery, Ralph W., and F. D. Schneider, to General Electric Co. Rail vehicle suspension cable. 2,945,057, 7-19-60, Cl. 105—199.

Aykanian, Ardashus A., and F. A. Carlson, Jr., to Monsanto Chemical Co. Preparation of foamed thermoplastic resin forms having wrinkle-free profile surfaces. 2,945,261, 7-19-60, Cl. 18—48.

BJ Service, Inc.: *See*—
Gama, Armando R., and Markham. 2,945,769.

Babcock, Horace W., to United States of America, Navy. Rocket launcher. 2,945,420, 7-19-60, Cl. 89—1.7.

Babcock & Wilcox Co., The: *See*—
Junkermann, Wolfgang. 2,945,459.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Gaeth, Rudolf, Graf, Huppert, and Wurmschmitt. 2,945,372.
Kroeper, Hugo, and Platz. 2,945,906.
Steinhofer, Adolf, Minsinger, and Friederich. 2,945,868.
Wasserath, Karl, and Kastning. 2,945,846.
Von Schickh, Otto, and Metzger. 2,945,855.

Baker, Joseph L.: *See*—
Henry, Robert L., and Baker. 2,945,585.

Balcom, George A., and A. J. Wiltshire, to White Sewing Machine Corp. Apparatus for making a reinforced fiber glass tube. 2,945,531, 7-19-60, Cl. 154—1.

Baldwin, Brian E. Display device. 2,945,814, 7-19-60, Cl. 40—324.

Ball, Henry A., to The Chanels Co. Solenoid operated spray apparatus. 2,945,632, 7-19-60, Cl. 239—583.

Ballantine, James S. Electric arc resistance furnace, and method of melting refractory materials. 2,945,756, 7-19-60, Cl. 75—10.

Ballard, Walter W. Valve and key therefor. 2,945,703, 7-19-60, Cl. 284—18.

Barber-Colman Co.: *See*—
Paulson, William A. 2,945,893.

Barbour, William P.: *See*—
Burrows, Milford D., Graham, and Barbour. 2,945,332.

Barmer Maschinenfabrik Aktiengesellschaft: *See*—
Laak, Walter. 2,945,698.

Barnes, Fredrik R., and L. R. Greenaway, to Boeing Airplane Co. Accelerometer and magneto-resistive electromechanical transducer used therein. 2,945,379, 7-19-60, Cl. 73—517.

Barton, James, to Frederic R. Stevens, Inc. Plating machine. 2,945,979, 7-19-60, Cl. 198—19.

Barton, Paul D., to Sun Oil Co. Crude oil storage and loading dock. 2,945,455, 7-19-60, Cl. 114—5.

Base Inc.: *See*—
Matthews, Russell B. 2,945,502.
Seegert, Neal S. 2,945,959.

Bath, Cyril, Co., The: *See*—
Heis, Henry W. 2,945,529.

Baumann, Fritz, to Farbenfabriken Bayer Aktiengesellschaft. Dyes of the 1,4-diamino-2,3-anthraquinone-dicarboximide series. 2,945,861, 7-19-60, Cl. 260—272.

Baumstark, Leopold, Jr., and R. G. Rawlings; said Rawlings assor. to said Baumstark. Grooving and recessing tool. 2,946,494, 7-19-60, Cl. 77—58.

Beacon Milling Co., Inc., The: *See*—
Snyder, John M., Howorth, and Lee. 2,945,765.

Beasley, William A. Cautionary signal for automotive vehicles. 2,946,042, 7-19-60, Cl. 340—69.

Beaver Precision Products, Inc.: *See*—
Sears, Richard E. 2,945,300.

Beccio, Giuseppe, to Ing. C. Olivetti & C. S.p.A. Variable spacing mechanism for typewriters. 2,945,578, 7-19-60, Cl. 197—84.

Bechtold, Edwin W., M. Kaplow, and A. J. Weinstein, to The Bimalite Optical Co., Inc. View finder for zoom lens. 2,946,415, 7-19-60, Cl. 88—1.8.

Bechtold, Edwin W., M. Kaplow, and A. J. Weinstein, to The Bimalite Optical Co., Inc. Variable focal length lens system for movie cameras. 2,945,419, 7-19-60, Cl. 88—57.

Beck, Erich, and H. Bode, to Henschel-Werke Gesellschaft mit beschraenkter Haftung. Machine for mixing and comminuting materials. 2,945,634, 7-19-60, Cl. 241—39.

Beck, Samuel J., to C. W. Fairchild, trustee. Universal skate. 2,945,454, 7-19-60, Cl. 104—259.

Beck, Samuel J., to C. W. Fairchild, trustee. Skate for railroad cars. 2,945,455, 7-19-60, Cl. 104—259.

Becker, Philip D., to United-Carr Fastener Corp. Sheet metal lock nut with deformable flange and sealing material. 2,945,524, 7-19-60, Cl. 151—38.

Beekman, Stewart W., and J. E. Garlisi, to Rohsis Co., Inc. Aluminum protein antacid and process of making. 2,945,785, 7-19-60, Cl. 167—55.

Beers, Kenneth H.: *See*—
Bower, John L., and Beers. 2,945,527.

Behrens, Robert W.: *See*—
Costine, Raymond L., and Behrens. 2,945,818.

Beier, Robert C., to Cullen-Friestedt Co. Coil lifting and positioning mechanism. 2,945,608, 7-19-60, Cl. 214—658.

Belicka, Michael E., and A. P. Cuwi, to Electrolux Corp. Cordwinder bumper. 2,945,921, 7-19-60, Cl. 191—12.4.

Bell, Arthur, and G. D. Horgan, to American Machine & Foundry Co. Detective article rejector. 2,945,857, 7-19-60, Cl. 209—74.

Bell, Charles R., to Bendix Aviation Corp. Automatic pilot system. 2,945,647, 7-19-60, Cl. 244—77.

Bell & Gossett Co.: *See*—
Frederick, Stanley H. 2,945,448.

Bell, Neville L., to United Shoe Machinery Corp. Mold assembly. 2,945,260, 7-19-60, Cl. 18—42.

Bell Telephone Laboratories, Inc.: *See*—
Aamodt, Thoralf. 2,945,914.
Karp, Arthur. 2,945,979.
Karp, Arthur. 2,945,901.
Knox, Harry. 2,945,144.
Miller, Stewart E. 2,944,025.
Reenstra, Willard A., and Ritchie. 2,946,043.
Wirth, Henry J., Jr. 2,944,023.

Beltrami, Emilio A. Shielded wire dielectric ejector. 2,945,407, 7-19-60, Cl. 81—3.

Bendix Aviation Corp.: *See*—
Bell, Charles R. 2,945,647.
Davenport, Arthur B. 2,945,903.
Le Febvre, Arthur H., and Wiseman. 2,945,449.
Wall, Norman. 2,945,986.

Bence, William G., and L. G. Kaplan, to Cullen-Friestedt Co. Coil lifting and positioning mechanism. 2,945,609, 7-19-60, Cl. 214—658.

Benjamin, Sidney K., and T. W. Kwap, to General Precision, Inc. Crystal-controlled transistor oscillator. 2,946,018, 7-19-60, Cl. 331—116.

Bergstrom, Clarence G., to G. D. Searle & Co. 17-oxygenated 9A-substituted androstane[3,2-C]pyrazoles and derivatives. 2,945,863, 7-19-60, Cl. 260—239.5.

Berlye, Milton K. Furniture truck. 2,945,699, 7-19-60, Cl. 280—79.2.

Berly, Edward M. Air cleaning devices and components therefor. 2,945,554, 7-19-60, Cl. 183—37.

Bernardi, Emilio: *See*—
Alberti, Carlo G., Bernardi, Larini, and Verzellone. 2,945,863.

Berry, Robert W., Jr., to Wesson Co. Milling cutter. 2,945,288, 7-19-60, Cl. 29—105.

Bettencourt, Theodore R., to John I. Paulding, Inc. Electric switch with terminal plate and wire grip therefor. 2,945,036, 7-19-60, Cl. 338—95.

Beuther, Harold, and R. A. Flinn, to Gulf Research & Development Co. Process for hydrogen treatment and catalytic cracking of petroleum hydrocarbons. 2,945,803, 7-19-60, Cl. 208—89.

Bayer, Fred K. Garden tool. 2,946,543, 7-19-60, Cl. 172—378.

Bibbo, Carmen, and R. R. Browning, to United States of America, National Aeronautics and Space Administration. Flexible seal for valves. 2,945,667, 7-19-60, Cl. 251—173.

Bigelow-Sanford Carpet Co., Inc.: *See*—
Reinhardt, Henry A. 2,945,511.

Bilinski, Chester F., to Cook Electric Co. System for expelling a mass. 2,945,439, 7-19-60, Cl. 102—4.

Billings, Roy O. Mortar joint simulator tool. 2,945,288, 7-19-60, Cl. 15—235.3.

Binney & Smith Inc.: *See*—
Mackee, Harold. 2,945,586.

Bird Electronic Corp., The: *See*—
Waterfield, Clayton F., Calderhead, and Heller. 2,946,006.

Birkmaier, Bernhard: *See*—
Byles, Theodore A., and Birkmaier. 2,945,015.

Birmingham Small Arms Co. Ltd., The: *See*—
Carman, Eric H. 2,945,936.

Birum, Gail H., to Monsanto Chemical Co. Preparation of metallic alkyl xanthate-trialkyl phosphite complexes. 2,945,872, 7-19-60, Cl. 260—431.

Blackstone, Henry, to Servo Corp. of America. Optical scanning device. 2,945,414, 7-19-60, Cl. 88—1.

Blanchette, Joseph A., to Monsanto Chemical Co. Reactive group containing styrene homopolymers. 2,945,839, 7-19-60, Cl. 260—83.

Blaw-Knox Co.: *See*—
Bowles, Sanford S. 2,945,685.

Blodgett, Edwin O., and W. C. Ahrns, to Commercial Controls Corp. Tape and card record media reader. 2,945,622, 7-19-60, Cl. 235—61.11.

Bloom, Aaron, to Sierra Engineering Co. Auxiliary tank relief valve. 2,945,501, 7-19-60, Cl. 137—64.

Bloomer, Dwight. Material handling device. 2,945,607, 7-19-60, Cl. 214—83.26.

Blue, Clarence W., and J. S. Love, to United States of America, Atomic Energy Commission. Ion source. 2,945,972, 7-19-60, Cl. 313—63.

Blum, Louis, to Blumcraft of Pittsburgh. Composite metal and wood post structure. 2,945,679, 7-19-60, Cl. 256—65.

Blumcraft of Pittsburgh: *See*—
Blum, Louis. 2,945,679.

Bobo, Roy A.: *See*—
Boudreaux, George S., and Bobo. 2,945,675.

Bode, Hans: *See*—
Beck, Erich, and Bode. 2,945,634.

Boegehold, Alfred L., to General Motors Corp. Process and apparatus for forming reinforced thin-walled shell molds. 2,945,272, 7-19-60, Cl. 22—36.

Boehme, Werner R.: *See*—
Koo, John, and Boehme. 2,946,894.

Boeing Airplane Co.: *See*—
Barnes, Fredrik R., and Greenaway. 2,945,379.
Jensen, Earl L., and Washington. 2,945,551.
Plane, William V. 2,945,574.
Snyder, Howard M. 2,945,685.

Bohannon, David L., to Pneumatil Corp. Supporting structure. 2,945,630, 7-19-60, Cl. 242—121.

Boisseau, Ronaldo, to Sicard Inc. Runway sweeper. 2,945,254, 7-19-60, Cl. 15—328.

Bolgiano, Ralph, Jr., D. T. Hurley, and W. R. Kraft, to General Electric Co. Signal processing system. 2,946,044, 7-19-60, Cl. 340—174.

Boling, Cecil, to Heat-X Inc. Capacity control of refrigeration system. 2,945,355, 7-19-60, Cl. 62—117.

Bolinger, George N., to Sta-Rite Glassie-Loc, Inc. Pony tail holder and method of making the same. 2,945,500, 7-19-60, Cl. 132—47.

Bollert, Gerhard F. W., O. Ramsay, and D. Wishard, to Eberle & Kohler, Semi-conductor device. 2,945,992, 7-19-60, Cl. 317—234.

Bomac Laboratories Inc.: *See*—
Cina, Herbert H., and Roberts. 2,945,983.

Bond, Robert E.: *See*—
Vaughan, Christine U., Bond, and Milette. 2,945,394.

Bonney, Robert B.: *See*—
Vogel, Otto F., Bonney, and Preston. 2,945,986.

Book, Austin E. Memory aid. 2,945,312, 7-19-60, Cl. 40—68.

Boretti, Napoleon P., and L. T. Kendall, to General Motors Corp. Method of producing seat frames. 2,945,513, 7-19-60, Cl. 140—71.

Bonsetti, Adriano. Passage continuous kiln for firing ceramic material. 2,946,279, 7-19-60, Cl 25—142.

Boudreaux, George S., and E. A. Bobo, to Phillips Petroleum Co. Bottom hole drilling fluid control valve. 2,945,678, 7-19-60, Cl. 255—31.

Bourbon, Pierre J. A.: *See*—
Mignonac, Georges, and Bourbon. 2,945,882.

Bourne, Henry A., P. L. Gant, and J. J. Reynolds, to Continental Oil Co. Method and apparatus for locating producing zones in wells. 2,945,906, 7-19-60, Cl. 250—43.5.

Bowen, Max E. Pressurized douche applicator. 2,945,494, 7-19-60, Cl. 128—248.

Bower, John L., and K. H. Beers, to North American Aviation, Inc. Deformation of resilient material with electronic yield point determination. 2,945,527, 7-19-60, Cl. 153—16.

Bowles, Sanford S., to Blaw-Knox Co. Variable orifice desuperheater. 2,945,685, 7-19-60, Cl. 261—62.

Bown, Delos E., H. W. Barhart, R. H. Perry, Jr., and D. E. Nicholson, to Esso Research and Engineering Co. Polymethylhexanone treating process. 2,945,809, 7-19-60, Cl. 260—593.

Boyle, Ralph C.: *See*—
Fergusson, Henry A., Boyle, and Jedrzykowski. 2,945,570.

Brashear, Oliver R.: *See*—
Stuart, Frank A., and Brashear. 2,945,512.

Breitschneider, Kurt B., and F. M. Onak, to Crane Co. Valve lock. 2,945,504, 7-19-60, Cl. 137—72.

Briden, Horace, to The General Electric Co. Ltd. Mechanisms for producing rotational movement of a mass about an axis with a periodic reversal of the direction of rotation. 2,945,384, 7–19–60, Cl. 74—25.

Bright, Glenn O., to Phillips Petroleum Co. Ion source and mass spectrometer utilising same. 2,945,961, 7–19–60, Cl. 250—41.9.

Brock, Clarence A., to Rexair, Inc. Vacuum cleaner construction. 2,945,553, 7–19–60, Cl. 183—24.

Brooks, Wesley W., and C. E. Strecker, deceased (by J. E. Strecker, executrix), to General Electric Co. Electric discharge apparatus. 2,945,986, 7–19–60, Cl. 315—100.

Brooksbank, J., Ltd.: *See*—
Gallagher, Harry. 2,945,639.

Broughton, Arthur E., to F. J. Broughton and D. H. Newcomb, as trustees. Spraying device with centering slide bearing. 2,945,628, 7–19–60, Cl. 239—284.

Broughton, Frances J.: *See*—
Broughton, Arthur E. 2,945,628.

Brown, Alton E.: *See*—
Brown, Ira M. and A. E. 2,945,302.

Brown, Herbert C. Method for reducing chemical compounds by reacting with alkali metal borohydrides. 2,945,886, 7–19–60, Cl. 260—570.9.

Brown, Ira M. and A. E. Mason's guide and line holding apparatus. 2,945,302, 7–19–60, Cl. 33—85.

Browning, Rowland E.: *See*—
Bibbo, Carmen, and Browning. 2,945,667.

Brugmann, William H., Jr., H. L. Yowell, and L. A. Mikeska, to Esso Research and Engineering Co. Defoliating with oxidized white oil emulsions. 2,945,755, 7–19–60, Cl. 71—2.7.

Bruhin, Joseph, to Albiswerk Zurich, A.G. Image converter tube. 2,945,975, 7–19–60, Cl. 313—94.

Brusca, Joseph L.: *See*—
Murray, Alfred S., and Brusca. 2,945,730.

Bryan, Ray K. Micro-adjustable switch. 2,945,922, 7–19–60, Cl. 200—18.

Buc, Saul R., and E. P. Williams, to General Aniline & Film Corp. Amides of aminoalkyl pyrrolidones. 2,945,863, 7–19–60, Cl. 260—326.5.

Buchan, Clifford A. Fly cutter tool. 2,945,426, 7–19–60, Cl. 90—11.

Buckman, Kenneth E., to General Motors Corp. Filters for fluids. 2,945,559, 7–19–60, Cl. 183—71.

Budd, Wilbert H.: *See*—
Di Girolamo, Joseph, and Budd. 2,945,933.

Bunker, Ward, to General Motors Corp. Engine and vehicle speed control governor. 2,945,547, 7–19–60, Cl. 180—82.1.

Bunning, Ernest J.: *See*—
Chute, Richard, and Bunning. 2,945,629.

Burch, Robert J., and M. W. Leeds, to Air Reduction Co., Inc. Stabilization of chlorinated hydrocarbons with a synergistic combination of a tertiary acetylenic monohydric alcohol and 2,6-di-tert-butyl-para-cresol. 2,945,895, 7–19–60, Cl. 260—632.5.

Burchfield, Arden L., The Air Preheater Corp. Floating sector seals. 2,945,681, 7–19–60, Cl. 257—269.

Burg, Fred G. Movable mounting for machine tool. 2,945,402, 7–19–60, Cl. 77—28.

Burke, James D.: *See*—
Adelman, Barnet R., and Burke. 2,945,442.

Burndy Corp.: *See*—
Matthysse, Irving F. 2,946,040.

Burnham, Walter M., to McCauley Industrial Corp. Controllable pitch propeller. 2,945,542, 7–19–60, Cl. 170—160.32.

Burrell, Gilbert, to General Motors Corp. Fluid seal. 2,945,715, 7–19–60, Cl. 288—23.

Burroughs Corp.: *See*—
Clark, Edward G. 2,945,965.
Medoff, Joseph L. 2,945,967.

Burroughs Wellcome & Co. (U.S.A.) Inc.: *See*—
Hitchings, George H., Falco, and Ledig. 2,945,859.

Burrows, Milford D., J. W. Graham, and W. F. Barbour, to The Porter-Cable Machine Co. Rotary cutter type lawn mower. 2,945,336, 7–19–60, Cl. 56—25.4.

Bush, Russell J., and C. C. De Weese, to General Motors Corp. Transmission belt and the like. 2,945,390, 7–19–60, Cl. 74—237.

Byles, Theodore A., to Motorola, Inc. Warm up noise silencer. 2,945,014, 7–19–60, Cl. 330—9.

Byles, Theodore A., and E. Birkenes, to Motorola, Inc. Amplifier circuit. 2,946,015, 7–19–60, Cl. 330—15.

CTS Corp.: *See*—
Daily, Arthur M. 2,946,032.
Di Girolamo, Joseph, and Budd. 2,945,933.

Caddell, Alfred M. Centrifugal fluid compressor with axial delivery. 2,945,620, 7–19–60, Cl. 230—127.

Caddell, Alfred M. Active-reactive energy applications for prime movers. 2,945,670, 7–19–60, Cl. 253—39.

Calderhead, Henry J.: *See*—
Waterfield, Clayton F., Calderhead, and Heller. 2,946,005.

Caler, Herschel R., M. Russo, and E. N. Singer, to United States of America, Navy. Adjustable cam. 2,945,397, 7–19–60, Cl. 74—568.

Calhoun, Howard J., and W. L. Hinman, Jr., to Westinghouse Electric Corp. Contact making devices. 2,945,929, 7–19–60, Cl. 200—87.

Calleri, Armin, and W. Kern, to Ciba Ltd. Vat dyestuffs of the acedianthrone series. 2,945,866, 7–19–60, Cl. 260—351.

California Plasteck, Inc.: *See*—
Dupree, James N. 2,945,552.

California Research Corp.: *See*—
Abbot, Andrew D., and Walker. 2,945,811.
Dreher, John L., and Carter. 2,945,813.
Farnham, Robert A. 2,945,807.
Fischer, William. 2,945,675.
Walker, James H. 2,945,810.

Callahan, James L.: *See*—
Stine, Harrison M., and Callahan. 2,945,906.
Stine, Harrison M., and Callahan. 2,945,909.

Cambridge Thermionic Corp.: *See*—
Abrams, Ralph, Camins, and Melanson. 2,946,029.

Camp, Dempsie C.: *See*—
Robinson, William W., Jr., and Camp. 2,945,472.

Campbell, Leonard R.: *See*—
Ricards, Charles L., Tollieen, Campbell, and Oderman. 2,945,438.

Campbell, Sylvester J.: *See*—
Derrick, Robert F., and Campbell. 2,945,637.

Canada Envelope Co.: *See*—
Normandin, William O. 2,945,616.
Normandin, William O. 2,945,617.

Carls, William. Control valve for fluid circuits. 2,945,481, 7–19–60, Cl. 121—164.

Carlson, Frank A., Jr.: *See*—
Aykanian, Ardashus A., and Carlson. 2,945,261.

Carman, Eric H., to The Birmingham Small Arms Co. Ltd. Spark-machining. 2,945,936, 7–19–60, Cl. 219—69.

Carrier Corp.: *See*—
MacLeod, David E. 2,946,357.
MacLeod, David E. 2,945,359.
MacLeod, David E., and Tyler. 2,945,358.
Tyler, Howard J. 2,945,360.

Carroll, Burt H., J. E. Jones, and J. Spence, to Eastman Kodak Co. Supersensitisation of photographic emulsions using triazines. 2,945,762, 7–19–60, Cl. 96—100.

Carter, Crawford F.: *See*—
Dreher, John L., and Carter. 2,945,813.

Carter, Richard S., Jr., to D. A. Hicks. Imitative nursing doll. 2,945,321, 7–19–60, Cl. 46—247.

Carpi, Coleman R., and W. E. Helmick. Apparatus and mechanism for concentrating solar rays on objects to be tested. 2,945,417, 7–19–60, Cl. 88—14.

Caserza, John J., Jr., to United States Rubber Co. V-transmission belt. 2,945,389, 7–19–60, Cl. 74—233.

Casey, Raymond: *See*—
Siedband, Melvin P., Hirst, and Casey. 2,946,021.

Casey, Robert F. Balanced modulator. 2,946,023, 7–19–60, Cl. 332—13.

Casler, Roger H.: *See*—
Sanford, Roy S., and Eames. 2,945,506.

Cataldi, Louis V. Hinged jewelry clasp with means blocking disassembly. 2,945,363, 7–19–60, Cl. 63—14.

Cataldo, John B.: *See*—
Platz, Elwood T., Cataldo, and Herrmann. 2,946,037.

Cawl, Allen P.: *See*—
Belicka, Michael E., and Cawl. 2,945,921.

Cesta, Frank. Replaceable heels for shoes. 2,945,311, 7–19–60, Cl. 36—36.

Cetran, Louis: *See*—
Lapointe, Lloyd J., D'Onofrio, and Cetran. 2,945,576.

Chalet, Louis, to Merck & Co., Inc. Method of fermenting meat products and composition therefor. 2,945,766, 7–19–60, Cl. 99—107.

Chambers, Paul C. Drive control arrangement for portable adding machines. 2,945,560, 7–19–60, Cl. 192—.02.

Chaney, Donal W., to Converto Mfg. Co., Inc. Truck body construction. 2,945,721, 7–19–60, Cl. 296—28.

Chapin, Earl C., and R. F. Smith, to Monsanto Chemical Co. Aliphatic ester group and hydroxyl group containing interpolymers. 2,945,835, 7–19–60, Cl. 260—43.

Charlton, Phillip, to Motor Specialties Ltd. Apparatus for expanding metals with curved surfaces such as pistons. 2,945,405, 7–19–60, Cl. 78—13.1.

Chastenay, Ruth G., and E. Paukstelis. Partition structure. 2,945,568, 7–19–60, Cl. 189—34.

Cherrier, Claude M., to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de St. Gobain, Chauny and Cirey. Manufacture of metals of high purity. 2,945,797, 7–19–60, Cl. 204—164.

Chetwynd, Earl G.: *See*—
Griffin, Anthony L., and Chetwynd. 2,945,341.

Chicopee Mfg. Corp.: *See*—
Harmon, Carlyle. 2,945,738.
Harmon, Carlyle, and Shoemaker. 2,945,283.

Christensen, Charles C., and J. D. Prater, to Kennecott Copper Corp. Liquid-liquid extraction process for the recovery of high purity thorium oxide. 2,945,742, 7–19–60, Cl. 23—14.5.

Christiani, Severino, to A. Salvi & Co. gia I.F.I. Manually controlled portable hydraulic compressors. 2,945,520, 7–19–60, Cl. 153—1.

Chrysler Corp.: *See*—
Chute, Richard, and Bunning. 2,945,629.
Folkerts, Walter E. 2,945,392.
Slemmons, Arthur J. 2,945,680.
Winkelmann, Otto J. 2,945,703.

Chun, Herbert H., and L. W. Roberts, to Bomac Laboratories Inc. Electrode support for electron discharge devices. 2,945,983, 7–19–60, Cl. 316—39.3.

Chuo Trading Co., Ltd.: *See*—
Yamaguchi, Teruichi, and Miyazawa. 2,945,447.

Chute, Richard, and E. J. Bunning, to Chrysler Corp. Fuel injection nozzle for a gas turbine engine. 2,945,629, 7–19–60, Cl. 239—424.

Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Multiple pass catalytic cracking. 2,945,800, 7–19–60, Cl. 208—59.

Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Catalytic cracking. 2,945,801, 7–19–60, Cl. 208—59.

Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Production of high quality light jet fuel. 2,945,802, 7–19–60, Cl. 208—65.

Ciapetta, Frank G., H. L. Coonradt, and W. E. Garwood, to Socony Mobil Oil Co., Inc. Production of high quality gasoline and diesel fuel by hydrocracking a refractory cycle oil. 2,945,805, 7–19–60, Cl. 208—10.

Ciapetta, Frank G., to Socony Mobil Oil Co., Inc. Hydrocracking hydrocarbons with a platinum group metal deposited on an active cracking catalyst base. 2,945,806, 7–19–60, Cl. 208—110.

Ciba Ltd.: *See*—
Calleri, Armin, and Kern. 2,945,866.

Clark, Edward G., to Burroughs Corp. Complementing flip-flops. 2,945,965, 7–19–60, Cl. 307—88.5.

Clark Equipment Co.: *See*—
Jacobus, Charles J. 2,945,544.
Wendt, Hermann. 2,945,610.

Clark, John B., and P. W. Hicks, to Siemens Edison Swan Ltd. Arrangements for controlling the access of a number of equipments to a common apparatus. 2,945,917, 7–19–60, Cl. 179—27.

Cleanola Co., The: *See*—
Ball, Henry A. 2,945,632.

Clendenin, Wilbur H., to International Harvester Co. Roll cleaner for belt conveyors. 2,945,581, 7–19–60, Cl. 198—179.

Coberly, Clarence J., to Wulff Process Co. Process of and apparatus for gas phase pyrolysis of liquid hydrocarbons. 2,945,905, 7–19–60, Cl. 260—679.

Coe, William D., and E. E. Murray; said Murray assgr. to said Coe. Bulk storage system. 2,945,271, 7–19–60, Cl. 21—109.

Cole, Francis K., to The Quaker Oats Co. Azo dyestuffs and production thereof. 2,945,848, 7–19–60, Cl. 260—172.

Coler, Myron A. Conductive plastic structure. 2,945,825, 7–19–60, Cl. 252—500.

Colgate-Palmolive Co.: *See*—
Diaz, Ramon B. 2,945,815.
Schmolka, Irving R. 2,945,816.

Collet, Rowan H., to Rolls-Royce Ltd. Fuel control. 2,945,347, 7–19–60, Cl. 60—35.54.

Collins, Robert H. Twine knotter mechanism. 2,945,716, 7–19–60, Cl. 289—14.

Colman, Phillip A., to Lockheed Aircraft Corp. Wing structure incorporating boundary layer control. 2,945,644, 7–19–60, Cl. 244—42.

Colman, William P., and L. A. Cullo, to American Cyanamid Co. Production of alkylenes and alkanol amine polyacetate salts. 2,945,881, 7–19–60, Cl. 260—534.

Columbia-Southern Chemical Corp.: *See*—
Eisenlohr, Douglas H. 2,945,897.

Columbus McKinnon Chain Corp.: *See*—
Schreyer, Kenneth D., and Eldridge. 2,945,452.

Comet Industries, Inc.: *See*—
Malec, Jerry P. 2,945,560.

Comins, Danforth W., Jr.: *See*—
Abrams, Ralph, Comins, and Melanson. 2,946,029.

Commercial Controls Corp.: *See*—
Blodget, Edwin O., and Ahrns. 2,945,623.

Compagnie Francaise des Matieres Colorantes: *See*—
Migeonac, Georges, and Bourdon. 2,945,862.

Conangla, Amado, to I-T-E Circuit Breaker Co. Prefabricated stress relief cone. 2,945,913, 7–19–60, Cl. 174—73.

Congoleum-Nairn Inc.: *See*—
Cummin, Alfred S. 2,945,795.

Conquisti, Dominick R., and D. J. Mullane, to ACF Industries, Inc. Potting composition and process. 2,945,776, 7–19–60, Cl. 117—201.

Connecticut Hard Rubber Co., The: *See*—
Panagrossi, Ahmed, Haneer, and Fusco. 2,945,773.

Consolidated Electronics Industries Corp.: *See*—
Schneider, Emmor V. 2,945,598.

Continental Oil Co.: *See*—
Bourne, Henry A., Gant, and Reynolds. 2,945,952.

Converto Mfg. Co., Inc.: *See*—
Chaney, Donal W. 2,945,721.

Cook Electric Co.: *See*—
Bilinski, Chester F. 2,945,439.

Cook, Henry: *See*—
Metcalf, Eric, and Cook. 2,945,649.

Cookson, Eric. Sprocket chains. 2,945,391, 7–19–60, Cl. 74—250.

Coonradt, Harry L.: *See*—
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,800.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,801.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,802.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,805.

Cooper, Elmer D., and C. M. Jansky, to Sperry Rand Corp. Angle sensing indicator for nutating beam radar system. 2,946,051, 7–19–60, Cl. 343—16.

Cordell, Martin, to Studley Paper Co., Inc. Disposable filter bag. 2,945,558, 7–19–60, Cl. 183—51.

Corey, Frederick C., and R. D. Pitts, to Pickwick Co. Poultry processing equipment. 2,945,257, 7–19–60, Cl. 17—11.1.

Cornelius, Edward B., T. H. Milliken, Jr., and G. A. Mills, to Houdry Process Corp. Stabilized dehydrogenation catalyst. 2,945,828, 7–19–60, Cl. 252—450.

Costine, Raymond L., and R. W. Behrens, to Atlas Powder Co. Process for preparing surface active compositions. 2,945,818, 7–19–60, Cl. 252—353.

Cottle, Harry N., Jr.: *See*—
McCluskey, Donald R., and Cottle. 2,945,968.

Coultar, David J. E., and V. Kerrigan, to Imperial Chemical Industries Ltd. Vulcanisable rubber composition and process for vulcanising same. 2,945,834, 7–19–60, Cl. 260—41.5.

Courtot, Louis B., and G. E. Tanker, to The Weatherhead Co. Method of making guard rings for gas cylinders. 2,945,294, 7–19–60, Cl. 29—475.

Cox, Delbert M.: *See*—
Gerk, Joseph C. 2,945,427.

Cox, Thomas A.: *See*—
Gerk, Joseph C. 2,945,427.

Crafts, Curtis E., to Miehle-Goss-Dexter, Inc. Plate locating mechanism for stereotype plate finishing machine. 2,945,284, 7–19–60, Cl. 29—21.

Crane Co.: *See*—
Breditschneider, Kurt B., and Onak. 2,945,504.
Hansen, George E., and Sanoica. 2,945,503.

Cravotta Brothers, Inc.: *See*—
Cravotta, Cosimo V. and J. J. 2,945,488.

Cravotta, Cosimo V. and J. J., to Cravotta Brothers, Inc. Composite bow for archers. 2,945,488, 7–19–60, Cl. 124—23.

Cravotta, James J.: *See*—
Cravotta, Cosimo V. and J. J. 2,945,488.

Crawford, Thomas G., and J. K. Allen, to Westinghouse Electric Corp. Composite laminated tube. 2,945,638, 7–19–60, Cl. 242—116.32.

Cullen-Friestedt Co.: *See*—
Beier, Robert J. 2,945,608.
Benes, William S., and Kapian. 2,945,609.

Cullo, Leonard A.: *See*—
Colman, William P., and Cullo. 2,945,881.

Culver, Joseph S.: *See*—
Winters, Charles E., Graham, Culver, and Wilson. 2,945,794.

Cummin, Alfred S., to Congoleum-Nairn Inc. Process for increasing the hardness of flexible resinous composition sheets by irradiating the same. 2,945,795, 7–19–60, Cl. 204—158.

Daily, Arthur M., to C T S Corp. Variable resistor. 2,946,032, 7–19–60, Cl. 338—174.

Daimler-Benz Aktiengesellschaft: *See*—
Gengenbach, Otto, and Schene. 2,945,472.
Scherenberg, Hans O., and Goeschel. 2,945,484.

Dana Corp.: *See*—
Michell, William P. 2,945,367.

Davenport, Arthur E., to Bendix Aviation Corp. Transistorized monostable multivibrator. 2,945,966, 7–19–60, Cl. 307—88.5.

Davidson, John T., to The Standard Register Co. Ribbon inker in bed and cylinder printing device. 2,945,435, 7–19–60, Cl. 101—274.

Davis, Edward M., Jr., to Westinghouse Electric Corp. Electrical inverter circuit. 2,946,022, 7–19–60, Cl. 331—113.

Davis, Geoffrey G. J., to The Associated Portland Cement Manufacturers Ltd. Apparatus for the manufacture of Portland cement, lime and the like. 2,945,687, 7–19–60, Cl. 263—32.

Dayton, Edward R., to Sperry Rand Corp. Pictorial deviation indicator. 2,946,053, 7–19–60, Cl. 343—108.

Dazzi, Joachim, to Monsanto Chemical Co. Polyvinyl chloride plastisol containing an alkylbiphenyl and alkyl ester of dicarboxylic acid. 2,945,832, 7–19–60, Cl. 260—31.8.

Dazzi, Joachim, to Monsanto Chemical Co. Electrical devices. 2,945,994, 7–19–60, Cl. 317—258.

Dearborn, Howard E. Camera stabilizer. 2,945,428, 7–19–60, Cl. 95—86.

Decker, Johannes B., H. Meder, and K. Müller, to Klöckner-Humboldt-Deutz Aktiengesellschaft. Roller briquetting press for the briquetting of ore, coal or similar materials. 2,945,259, 7–19–60, Cl. 18—21.

De Filippo, Elio, to Pirelli S.p.A. Method and apparatus for splicing articles. 2,945,532, 7–19–60, Cl. 154—9.

Deible, William B., and H. A. Youkers, to Knox Glass, Inc. Recirculating furnaces. 2,945,335, 7–19–60, Cl. 49—54.

Deighton, Michael O., to The United Kingdom Atomic Energy Authority of Patents Branch. Voltage measuring circuit. 2,946,013, 7–19–60, Cl. 328—151.

Dell, Paul A.: *See*—
Fridrich, Elmer G., and Dell. 2,945,976.

De Pierri, William G., Jr.: *See*—
Earhart, Harold W., and De Pierri. 2,945,894.

De Pree, David O., and W. E. Eller, to Ethyl Corp. Process for the preparation of thioglycolic acid and salts thereof. 2,945,880, 7–19–60, Cl. 260—526.

Derrick, Robert F., and S. J. Campbell, to Westinghouse Electric Corp. Paper mill winder drives. 2,945,637, 7–19–60, Cl. 242—75.51.

De Weese, Orville C.: *See*—
Bush, Russell J., and De Weese. 2,945,390.

Dias, Ramon B., to Colgate-Palmolive Co. Abrasive detergent compositions. 2,945,815, 7–19–60, Cl. 252—138.

Dickinson, Berton C.: *See*—
Jones, Howard A., Garman, and Dickinson. 2,945,780.

Dicktel, Joseph J. Self-cleaning rake. 2,945,340, 7–19–60, Cl. 56—400.2.

Dietrich, Eric R., and E. G. Peckham, to General Motors Corp. Pneumatic vehicle suspension system. 2,945,701, 7–19–60, Cl. 280—124.

Di Girolamo, Joseph, and W. H. Budd, to CTS Corp. Electric circuit controlling device. 2,945,933, 7–19–60, Cl. 200—122.

Dimon, Donald F.: *See*—
Norton, Clyde J., and Dimon. 2,945,926.

Domen, Raymont J. Double pane window structure. 2,945,269, 7–19–60, Cl. 20—56.4.

Dominion Textile Co. Ltd.: *See*—
Johnson, Roland. 2,945,412.

Donaldson, George R., to Universal Oil Products Co. Hydroisomerization process. 2,945,898, 7–19–60, Cl. 260—666.

D'Onofrio, Anthony: *See*—
Lapointe, Lloyd J., D'Onofrio, and Cetran. 2,945,576.

Dorendorf, Heinz, to Siemens and Halske Aktiengesellschaft Berlin and Munich. Diffusion transistor and method of making it. 2,945,286, 7–19–60, Cl. 29—25.3.

Dow Chemical Co., The : *See*—
Arnsen, Ardy, and Gentry. 2,945,842.
Richhorn, Jacob, and Steinmetz. 2,945,842.
Eilers, Louis H. 2,945,536.
Lehman, Freeman R., Silverwall, and Stilbert. 2,945,775.
Loretta, Nicholas P. 2,945,864.
Mussell, Dorsey R. 2,945,782.
Rickert, Herbert R., and Geiger. 2,945,856.
Shaw, Kernal G. 2,945,746.
Wheeler, Donald D., and Young. 2,945,865.

Drager, Otto H. : *See*—
Tietze, Hermann, and Stampe. 2,945,555.
Tietze, Hermann, and Stampe. 2,945,556.

Dreher, John L., and C. F. Carter, to California Research Corp. Copper corrosion resistant grease compositions. 2,945,813, 7-19-60, Cl. 252—33.6.

Dreyfus, Marcel, to Societe Anonyme dite : Etablissements Ducellier. Generator electronic regulating device with dual reference voltage. 2,945,999, 7-19-60, Cl. 290—38.

Du Bois, Robert C., to Manning, Maxwell & Moore, Inc. Differential pressure apparatus. 2,945,377, 7-19-60, Cl. 73—407.

Dugdale, Ronald A., to United States of America, Atomic Energy Commission. Process for coloring thermopde. 2,945,792, 7-19-60, Cl. 204—154.

Dugger, Ralph L. : *See*—
Perrault, Arthur. 2,945,324.

Duncan, James K., and J. E. Jones, to American Photocopy Equipment Co. Plastic binding machine. 2,945,240, 7-19-60, Cl. 11—4.

Du Pont de Nemours, E. I., and Co. : *See*—
Elfert, Robert L., and Marks. 2,945,537.
Evans, Evan F., and Jackson. 2,945,831.
James, George M. 2,945,772.
Lehmicke, David J. 2,945,729.
Morris, Jean M. 2,945,958.

Dupraz, Louis. Self locking differential. 2,945,499, 7-19-60, Cl. 74—711.

Dupree, James N., to California Plastcok, Inc. Landing gear control incorporating safeguards against erroneous operation. 2,945,552, 7-19-60, Cl. 244—102.

Durakool, Inc. : *See*—
Grunwald, Arthur A., and Ostrem. 2,946,039.

Duriron Co., Inc., The : *See*—
Freed, Jacob E., and Sharpe. 2,945,709.
Freed, Jacob E., and Sharpe. 2,945,710.

Dyckerhoff Zementwerke Aktiengesellschaft : *See*—
Pajenkamp, Horst, Buss, Zur Strassen, Meyer, and Rausch. 2,945,632.

Dykman, Milton, to Mixing Equipment Co., Inc. Driving unit. 2,945,711, 7-19-60, Cl. 366—11.15.

Dynex, Inc. : *See*—
Leissner, William H. 2,945,444.

Eames, James O. : *See*—
Sanford, Roy S., and Eames. 2,945,566.

Earhart, Harold W. : *See*—
Brown, Delos E., Earhart, Perry, and Nicholson. 2,945,808.

Earhart, Harold W., and W. G. De Pierri, Jr., to Esso Research and Engineering Co. Trichloromethylated aromatic. 2,945,894, 7-19-60, Cl. 260—651.

Eastman Kodak Co. : *See*—
Carroll, Burt H., Jones, and Spence. 2,945,762.
Jones, Jean E. 2,945,763.
Weissberger, Arnold. 2,945,761.

Eaton, Wilfred A., assignee : *See*—
Sanford, Roy S., and Eames. 2,945,566.

Eberle & Kohler : *See*—
Bollert, Gerhard F., Ramser, and Wieland. 2,945,902.

Ebersold, Robert C. : *See*—
Schoepe, Harry, and Ebersold. 2,945,394.

Economy Forms Corp. : *See*—
Jennings, William A. 2,945,662.

Edelmann Gesellschaft m.b.H. : *See*—
Hoppe, Alfred. 2,945,795.

Edgemond, John W., Jr., and J. J. O'Connor, to Yuba Consolidated Industries, Inc. Tilting arbor table saw with coaxial control of elevation and tilt. 2,945,516, 7-19-60, Cl. 143—36.

Edgemond, John W., Jr., and H. Goldschmidt, to Yuba Consolidated Industries, Inc. Apparatus for raising and lowering a saw table or tool rest. 2,945,518, 7-19-60, Cl. 143—120.

Edgemond, John W., Jr., and H. Goldschmidt, to Yuba Consolidated Industries, Inc. Saw arbor. 2,945,519, 7-19-60, Cl. 143—155.

Edmondson, Charles S. E., Jr. Support with adjustable formfitting compartmentation. 2,945,782, 7-19-60, Cl. 312—140.3.

Edualite Optical Co., Inc., The : *See*—
Bechtold, Edwin W., Kaplow, and Weinstein. 2,945,-415.
Bechtold, Edwin W., Kaplow, and Weinstein. 2,945,-419.

Egger, Ernest. Frictionless stop collar for the arbor of a drill press or other machines. 2,945,603, 7-19-60, Cl. 77—55.

Egger, Ernest. Flexible connecting means for a rod joint. 2,945,714, 7-19-60, Cl. 287—86.

Ehrsam, J. B., & Sons Mfg. Co., The : *See*—
Oberauer, John. 2,945,462.

Eichhorn, Jacob, and J. M. Stillmetz, to The Dow Chemical Co. Sulfonation of finely divided polymers with sulfonation agents in gas phase. 2,943,842, 7-19-60, Cl. 260—79.3.

Eichler, Kolf W., R. H. Hebern, and J. Rothus Jr., to Haloid Xerox Inc. Sheet feed mechanism. 2,946,454, 7-19-60, Cl. 101—232.

Eichner, George A. Paint brush holding device. 2,945,251, 7-19-60, Cl. 15—121.3.

Eichorn, Roger H. : *See*—
Eichler, Rolf W., Eichorn, and Suting. 2,945,434.

Elfert, Robert L., and E. E. Marks, to E. I. du Pont de Nemours and Co. Stabilized polyurethanerolefe compositions with phenols or mercapto benzimidazoles. 2,945,837, 7-19-60, Cl. 260—45.8.

Eilers, Louis H., to The Dow Chemical Co. Cementing composition and method of use. 2,945,530, 7-19-60, Cl. 106—13.

Eisenhour, Douglas H., to Columbia-Southern Chemical Corp. Recovery of 1,1-dichloroethane. 2,945,897, 7-19-60, Cl. 260—662.

Eldorado Electronics Co. : *See*—
Tarany-Horvoch, Koltan. 2,946,610.

Eldridge, Allan R. : *See*—
Schreyer, Kenneth D., and Eldridge. 2,945,452.

Electrolux Corp. : *See*—
Bellina, Michael E., and Cawl. 2,945,921.

Electronic Engineering Co. of California : *See*—
Vogel, Otto F., Kenney, and Preston. 2,945,969.

Elter, William R. : *See*—
De Free, David O., and Elter. 2,945,880.

Ellis, David H., to The Oscar Bixson Co. Adjustable hold-open guide rail for automatic door closer. 2,945,258, 7-19-60, Cl. 16—48.

Elwood Research Co. : *See*—
Freiberger, Herman. 2,945,981.

Endres, Johann, to The Messerschmitt A.G. Free-piston compressors. 2,945,618, 7-19-60, Cl. 230—56.

Englehart, Oscar D. : *See*—
Takenaka, Fred T., and Englehart. 2,945,266.

Epply, Keith W. : *See*—
Julian, Clarence L., Epply, and Norris. 2,945,923.

Erickson, Harold E., ½ to D. L. Schubert and ½ to Industrial Development Co. Rasp type wood reducing apparatus. 2,945,821, 7-19-60, Cl. 144—162.

Escher Wyss Aktiengesellschaft : *See*—
Christ, Heinrich A. 2,945,660.

Esso Research and Engineering Co. : *See*—
Bown, Delos E., Earhart, Perry, and Nicholson. 2,945,-808.
Brugmans, William H., Jr., Yowell, and Mikuska. 2,945,-763.
Earhart, Harold W., and De Pierri. 2,945,894.
Hemminger, Charles S. 2,945,804.
Rees, Kenneth A., Pastorek, Williams, and Herman. 2,945,799.
Shmidl, Albert J. 2,945,901.

Estes, Elliott M., to General Motors Corp. Wheel cover. 2,945,723, 7-19-60, Cl. 301—37.

Etablissements L. Morane Societe Anonyme : *See*—
Roux, Pierre. 2,945,928.

Ethicon, Inc. : *See*—
Koo, John, and Boehme. 2,945,554.

Ethyl Corp. : *See*—
De Free, David O., and Elter. 2,945,880.

Evans Enterprises, Inc. : *See*—
Evans, Frederick H. 2,945,601.

Evans, Evan F., and D. E. Jackson, to E. I. du Pont de Nemours and Co. Dispersions of organic polymers and chrysotile asbestos, process of preparing film therefrom and product thereof. 2,945,831, 7-19-60, Cl. 260—29.6.

Evans, Frederick H., to Evans Enterprises, Inc. Apparatus for turning round bars. 2,945,601, 7-19-60, Cl. 214—1.

Everett, Lillian F., to The Hairlok Co., Ltd. Preparation of foamed rubber latex containing gelatinized starch. 2,945,-826, 7-19-60, Cl. 260—2.5.

Everhart, James G. : *See*—
Anderson, John L., and Everhart. 2,946,038.

Fadick, Carl E., to Sylvania Electric Products Inc. Parasitic dipole slot antenna. 2,945,055, 7-19-60, Cl. 343—727.

Fairchild Camera & Instrument Corp. : *See*—
Lindberg, Arthur F. 2,945,857.

Fairchild, Clem W. : *See*—
Beck, Samuel J. 2,945,654.
Beck, Samuel J. 2,945,655.

Fairey Aviation Ltd. : *See*—
Fribram, Edwin. 2,945,841.

Falco, Elvira A. : *See*—
Hitchings, George H., Falco, and Ledig. 2,945,859.

Faucher, James A. : *See*—
Meyer, Curtis E., Faucher, and Schurr. 2,945,668.

Farbenfabriken Bayer Aktiengesellschaft : *See*—
Baumann, Fritz. 2,945,661.
Kruckenberg, Winfried, and Weis. 2,945,849.
Schraufstatter, Ernst, Gottsacker, and Wolz. 2,945,762.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning : *See*—
Schmidt-Barbo, Dieter, Hampe, Schorr, and Lämmler. 2,945,880.

Farnham, Robert A., to California Research Corp. Radial flow reactor. 2,945,807, 7-19-60, Cl. 208—146.

Fay, Philip R. : *See*—
Mosscop, Isaac A., Fay, and Packman. 2,945,955.

Feaster, Gene R., to Westinghouse Electric Corp. High temperature metallic joint. 2,945,286, 7-19-60, Cl. 29—494.

Feldkamp, Rolland F., and T. H. Wu, to Mead Johnson & Co. 10 - (1 - substituted - 3 - pyrrolidylmethyl) phenothiazines. 2,945,855, 7-19-60, Cl. 260—243.

Fenn, George C., and J. Trope. Bottle inspection apparatus and method. 2,945,588, 7-19-60, Cl. 209—111.

Ferguson, Henry A., R. C. Boyle, and E. Jedrzykowski, to International Harvester Co. Interconnected main clutch control and planetary gear lock-up release for relieving reactive force in a change-speed power transmission train. 2,945,570, 7-19-60, Cl. 192—3.6.

Fermeh G.m.b.H. : *See*—
Jauernik, Edmund. 2,945,943.

Fierce, William L. : *See*—
Waite, Wilfrid F., Landsman, and Fierce. 2,945,765.

Findley, Robert A., to Phillips Petroleum Co. Fractional crystallization process and apparatus. 2,945,903, 7-19-60, Cl. 260—674.

Firke, John : *See*—
Alexander, Douglas S., and Firke. 2,945,900.

Firma bi-flex Hirtenstock K.G. : *See*—
Garcia, Erich. 2,945,794.

Fischer, William, to California Research Corp. Fireworks. 2,945,475, 7-19-60, Cl. 254—135.

Flanagan, John C. Tapping aptitude testing methods and devices. 2,945,306, 7-19-60, Cl. 35—22.

Fleck, Raymond N., to Union Oil Co. of California. Vanadium hydrocarbon conversion catalysts. 2,945,824, 7-19-60, Cl. 252—455.

Flescher, Peter S., to A. Lorenz. Improved leg-rest and actuating mechanism. 2,945,583, 7-19-60, Cl. 155—106.

Flinn, Richard A. : *See*—
Beuther, Harold, and Flinn. 2,945,808.

Flynn, Thomas J., and W. G. Sylvester, to Specialties Development Corp. Method of welding. 2,945,942, 7-19-60, Cl. 219—137.

Folkerts, Walter E., to Chrysler Corp. Resilient ball return. 2,945,692, 7-19-60, Cl. 74—459.

Food Machinery and Chemical Corp. : *See*—
Jones, Howard A., Garman, and Dickinson. 2,945,780.
Saller, Erik. 2,945,796.
Tsouma, James J. 2,945,875.

Ford Motor Co. : *See*—
Apostolaris, Theodore G. 2,945,971.
McKee, Edwin C. 2,945,482.
Vandenberg, Lawrence J. 2,945,966.

Foodal, Alfred. Dental instrument for immobilizing tissue. 2,945,496, 7-19-60, Cl. 128—297.

Foster, Leigh C., to Kaiser Industries Corp. Electronic device. 2,945,963, 7-19-60, Cl. 315—21.

Francis Earle Laboratories, Inc. : *See*—
Suchow, Lawrence. 2,945,779.

Frank, Robert L., to Sperry Rand Corp. Course plotter. 2,945,956, 7-19-60, Cl. 250—202.

Frank, Robert L., to Sperry Rand Corp. Phase comparator circuits. 2,946,004, 7-19-60, Cl. 324—83.

Frank, Robert L., to Sperry Rand Corp. Pulse synchronizing system. 2,946,019, 7-19-60, Cl. 331—18.

Franked, Enver, to Aktiebolaget Andersonns Bartmaskin. Sealing device for sealing between cooperating machine elements rotatable relative each other. 2,945,706, 7-19-60, Cl. 285—96.

Frechette, Leo P., Jr., to Royal McBee Corp. Keyboard lock mechanism. 2,945,577, 7-19-60, Cl. 197—17.

Frederick, Stanley H., to Bell & Gossett Co. Universal centrifugal pump. 2,945,443, 7-19-60, Cl. 103—113.

Freed, Jacob E., and K. F. Sharpe, to The Duriron Co., Inc. Pump rotary seal assembly and method of assembling and servicing same. 2,945,709, 7-19-60, Cl. 286—7.

Freed, Jacob E., and K. F. Sharpe, to The Duriron Co., Inc. Pumps. 2,945,710, 7-19-60, Cl. 286—8.

Freeman, Howard G., and O. E. Vaudreuil, to Jamesbury Corp. Ball valve. 2,945,660, 7-19-60, Cl. 251—172.

Freiberger, Herman, to The Elwood Research Co., a Division of Audiger, Inc. Apparatus for crimping synthetic filaments. 2,945,282, 7-19-60, Cl. 28—1.

French, John H. : *See*—
Whelan, Jack T., and French. 2,945,585.

Fridrich, Elmer G., and P. A. Dell, to General Electric Co. Electroluminescent lamp and manufacture thereof. 2,945,-976, 7-19-60, Cl. 313—108.

Fried, Benjamin. Needle cylinder for sinker-type circular knitting machines. 2,945,364, 7-19-60, Cl. 66—116.

Friederich, Herbert : *See*—
Steinhofer, Adolf, Mieslager, and Friederich. 2,945,883.

Fritz, Carroll S. Dental handpiece. 2,945,299, 7-19-60, Cl. 32—27.

Frola, Joseph F. : *See*—
May, Harry C., and Frola. 2,945,690.

Frost, Lawrence W., and M. A. Mendelsohn, to Westinghouse Electric Corp. High temperature alkyd resin varnish. 2,945,829, 7-19-60, Cl. 260—21.

Fubata, Masahiko, and S. Murakami, to Nippon Kogaku K.K. Range finder of the overlapping image type for cameras and the like. 2,945,416, 7-19-60, Cl. 88—2.4.

Fulton, Howard A., and I. G. Neary, to Mansfield Sanitary Pottery, Inc. Flush valve assembly. 2,945,238, 7-19-60, Cl. 4—56.

Fusco, Francis C. : *See*—
Panagrossi, Ahmed, Hauser, and Fusco. 2,945,775.

Gaeth, Rudolf, F. Graf. V. Huppert, and H. Warmschmitt, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Protection of soil in agricultural cultivation. 2,945,223, 7-19-60, Cl. 47—9.

Gagnon, Paul L. Detachable ladder step. 2,945,549, 7-19-60, Cl. 182—120.

Gallagher, Harry, to J. Brookshaw Ltd. Fluid valves. 2,945,649, 7-19-60, Cl. 251—309.

Gama, Armando R., and W. G. Markham, to B J Service, Inc. Cement composition. 2,945,769, 7-19-60, Cl. 106—89.

Gant, Preston L. : *See*—
Bourne, Henry A., Gant, and Reynolds. 2,945,952.

Gardner, Charles, Jr. Clothes hanger. 2,945,595, 7-19-60, Cl. 211—108.3.

Garcia, Erich, to Firma bi-flex Hirtenstock K.G. Polishing bodies of vegetable fibrous material, in particular polishing wheels, grindstones and sliding contact discs. 2,945,790, 7-19-60, Cl. 51—206.

Garfield, Lavern F., and W. W. Williams, to Leaf, Inc. Actuator. 2,945,476, 7-19-60, Cl. 121—38.

Garlick, John K. : *See*—
Beckman, Stewart M., and Garlick. 2,945,783.

Garman, John A. : *See*—
Jones, Howard A., Garman, and Dickinson. 2,945,780.

Garrett Corp., The : *See*—
Steele, Harry M., Jr. 2,946,031.

Garwood, William : *See*—
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,300.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,301.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,302.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,305.

Gaugler, Richard S., to General Motors Corp. Refrigerating apparatus. 2,945,934, 7-19-60, Cl. 250—71.

Gehre, Hans. Pressure measuring device. 2,945,376, 7-19-60, Cl. 73—407.

Geiger, Werner M. : *See*—
Rickert, Herbert R., and Geiger. 2,945,856.

Geigy Chemical Corp. : *See*—
Renner, Ulrich. 2,945,851.

Geisler, Wilson S., Jr., to Applied Radiation Corp. Vacuum tube. 2,945,955, 7-19-60, Cl. 315—3.5.

Gelles, Abraham J., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,946,009, 7-19-60, Cl. 235—71.

Gem Crib and Cradle Co. : *See*—
Boyce, Draper P. 2,945,243.

Gem Oil Tool Co., Inc. : *See*—
Alexander, Granison T., Jr., and Gresham. 2,945,540

General Aniline & Film Corp. : *See*—
Anspon, Harry D. 2,945,844.
Buc, Saul R., and Williams. 2,945,863.
Hoehn, Milton L., Randall, and Renfrew. 2,945,867.

General Electric Co. : *See*—
Auer, Peter L., and Sharbaugh. 2,945,443.
Avery, Ralph W., and Schneider. 2,945,487.
Bolgiano, Ralph, Jr., Hurley, and Kraft. 2,946,044.
Brooks, Wesley W., and Strachan. 2,945,986.
Fridrich, Elmer G., and Dell. 2,945,976.
Goldblum, Kenneth B. 2,945,817.
Hodge, William F. 2,946,978.
Jahnke, Louis P., and Pohlman. 2,945,758.
Kelling, Leroy U. C. 2,945,987.
Malm, Robert W., and Vodicka. 2,945,327.
Miller, Alexander A. 2,945,792.
Probst, Maurice. 2,945,535.
Rez, Charles H. 2,945,945.
Stracker, Charles E. 2,945,987.
Walsh, Edward J. 2,945,290.

General Electric Co. Ltd., The : *See*—
Briden, Horace. 2,945,384.

General Motors Corp. : *See*—
Ankeny, Thomas G., and Arnett. 2,945,291.
Boegehold, Alfred L. 2,945,272.
Boretti, Napoleon P., and Kendall. 2,945,513.
Buckman, Kenneth E. 2,945,559.
Bunker, Ward. 2,945,547.
Burrell, Gilbert. 2,945,718.
Buss, Russell J., and De Weese. 2,945,390.
Dietrich, Eric R., and Packham. 2,945,701.
Estes, Elliott M. 2,945,723.
Gaugler, Richard S. 2,945,964.
Geyer, Howard M. 2,945,387.
Gould, Ira L., and Thompson. 2,945,362.
Hockert, Chester E., and Smith. 2,945,673.
Horton, George B. 2,945,732.
Julian, Clarence L., Epply, and Norris. 2,945,923.
Lewis, Edward F. 2,945,712.
Lather, William A., Jr., and Koehring. 2,945,392.
Marquis, Donald P., and Schultz. 2,945,564.
Polhemus, Von D., and McIntyre. 2,945,700.
Shaw, Arthur R., and Sampson. 2,945,759.
Sook, Robert L. 2,945,947.

General Precision, Inc. : *See*—
Benjamin, Sidney K., and Kwap. 2,946,016.

General Steel Castings Corp. : *See*—
Travilla, James C., and Zach. 2,945,456.

Gengenbach, Otto, and H. Scherm, to Daimler-Benz Aktiengesellschaft. Apparatus for electrostatically spraying paint 2,946,472, 7-19-60, Cl. 118—628.

Gentry, Robert E., Jr. : *See*—
Arnsen, Ardy, and Gentry. 2,945,842.

Gerald, Herbert L. : *See*—
Moore, William H., and Gerald. 2,945,406.

Gerard, William A., and R. G. Larson, to Westinghouse Electric Corp. Cavity resonator. 2,946,027, 7-19-60, Cl. 333—83.

Gerding, Benjamin F., and A. F. Labreod, to International Resistance Co. Method and apparatus for feeding elongated objects from a container. 2,944,613, 7-19-60, Cl. 221—196.

Gerk, Joseph C., ¼ to T. A., One and ¼ to D. M. Coy. Wiper blade attachment for screed boards. 2,945,427, 7-19-60, Cl. 94—46.

Gessell, Glenn F. Load-responsive motor shutoff system and operator therefor. 2,945,525, 7-19-60, Cl. 200—47.

Geyer, Howard M., to General Motors Corp. Rotary actuator. 2,945,387, 7-19-60, Cl. 74—89.

Gibbs, Cleo A. Manipulative holder for testing purposes. 2,945,491, 7-19-60, Cl. 128—2.

Gibson, Fred D., Jr. Inert lead dioxide anode and process of production. 2,945,751, 7-19-60, Cl. 204—57.

Gilbert, Ronald A., to D. Napier & Son Ltd. Combustion turbine power units. 2,945,350, 7-19-60, Cl. 60—39.75.

Gillespie, James F. Flashlight. 2,945,944, 7-19-60, Cl. 240—10.66.

Ginther, Roger E. : *See*—
Smith, Wesley A., and Ginther. 2,945,536.

Girdner, William I. : *See*—
La Barre, Lawrence J., and Girdner. 2,945,331.

Given Machinery Co. : *See*—
Jordan, Hans. 2,945,635.

Glas, Arthur: *See*—
Stobbe, Helmut, Glas, and Heitmann. 2,945,916.
Glas, Maurus. Hydraulic cylinder unit. 2,945,253, 7-19-60, Cl. 60—97.
Glass, Marvin I.: *See*—
Ring, Albert W. 2,945,320.
Gleason, William W., to Nachman Corp. Coil spring assembly. 2,945,245, 7-19-60, Cl. 5—351.
Goeschel, Karl-Heinz R.: *See*—
Scherenberg, Hans O., and Goeschel. 2,945,484.
Goldberg, Edwin A.: *See*—
Vance, Arthur W., and Goldberg. 2,945,636.
Goldblum, Kenneth B., to General Electric Co. Silica-silicone aerogels and their preparation. 2,945,817, 7-19-60, Cl. 252—317.
Goldschmidt, Hans: *See*—
Edgemond, John W., Jr., and Goldschmidt. 2,945,518.
Edgemond, John W., Jr., and Goldschmidt. 2,945,519.
Gongwer, Calvin A., to Aerojet-General Corp. Charge. 2,945,343, 7-19-60, Cl. 60—35.5.
Good, Robert C., and O. L. Norman, to International Minerals & Chemical Corp. Glutamic acid synthesis. 2,945,787, 7-19-60, Cl. 195—47.
Goto, Eiichi. Digital memory system. 2,946,045, 7-19-60, Cl. 340—174.
Gottmacker, Ernst: *See*—
Schraufstatter, Ernst, Gottmacker, and Wolz. 2,945,782.
Gould, Ira L., and R. E. Thompson, to General Motors Corp. Air conditioner. 2,945,362, 7-19-60, Cl. 62—429.
Grace, W. R., & Co.: *See*—
Ohlson, John L., and Wilip. 2,945,878.
Graf, Fritz: *See*—
Gaeth, Rudolf, Graf, Huppert, and Wurmschmitt. 2,945,322.
Graham, Clifton B.: *See*—
Winters, Charles E., Graham, Culver, and Wilson. 2,945,794.
Graham, John W.: *See*—
Barrows, Milford D., Graham, and Barbour. 2,945,238.
Grant, Garnet P., Jr., to Grant Photo Products Inc. Photographic film developing apparatus. 2,945,429, 7-19-60, Cl. 95—94.
Grant Photo Products Inc.: *See*—
Grant, Garnet P., Jr. 2,945,429.
Greenaway, Leonard R.: *See*—
Barnes, Fredrik E., and Greenaway. 2,945,379.
Greene, Leonard M., and D. H. Nelson, to Safe Flight Instrument Corp. Airplane instruments. 2,945,376, 7-19-60, Cl. 73—178.
Greenfield, Milton H., to Sperry Rand Corp. Sweep generator for quadrant-scanning radar. 2,946,048, 7-19-60, Cl. 343—5.
Gresham, Leroy Q.: *See*—
Alexander, Granison T., Jr., and Gresham. 2,945,540.
Gresky, Alan T., to United States of America, Atomic Energy Commission. Ruthenium decontamination method. 2,945,740, 7-19-60, Cl. 23—14.5.
Griffin, Anthony L., and H. G. Chetwynd. Parking meter. 2,945,341, 7-19-60, Cl. 58—142.
Griffin, Waldo R. Nasal irrigator. 2,945,495, 7-19-60, Cl. 128—250.
Grigger, John C., to Pennsalt Chemicals Corp. Method of electroplating lead dioxide. 2,945,790, 7-19-60, Cl. 204—57.
Grim, Ralph E., to Minerals & Chemicals Corp. of America. Vitreous refractory composition and method for making same. 2,945,768, 7-19-60, Cl. 106—52.
Grinnell Corp.: *See*—
Sherburne, Philip C. 2,945,656.
Griswold, David E. Hydraulic motor and/or pump. 2,945,451, 7-19-60, Cl. 103—174.
Grogan, Robert D., to Hurd Lock & Mfg. Co. Lock construction. 2,945,371, 7-19-60, Cl. 70—75.
Grosso, Stephen J.: *See*—
Stafiej, Stanley F., and Grosso. 2,945,882.
Grube, Kenneth W., to Turn-A-Bore Equipment Co. Door and jamb mortising machine. 2,945,530, 7-19-60, Cl. 144—27.
Grunwald, Arthur A., and R. Ostrom, to Durakool, Inc. Electrical terminal. 2,946,039, 7-19-60, Cl. 339—209.
Guest, Kenneth: *See*—
Tinsley, Anthony B., and Guest. 2,945,937.
Gulf Research & Development Co.: *See*—
Beuther, Harold, and Flinn. 2,945,808.
Gulton Industries, Inc.: *See*—
Ostergaard, Martin P., Jr. 2,945,760.
Gunter, Phyllis R.: *See*—
Reed, Roland D. 2,945,372.
Gurr, John B., Jr. Knife sharpener for cutting machine. 2,945,332, 7-19-60, Cl. 51—246.
Gustafson, Burch G.: *See*—
Perrault, Arthur. 2,945,334.
Guttmann, Ernest, to Lenslite Co., Inc. Power operated cutting device. 2,945,298, 7-19-60, Cl. 30—272.
Hadekel, Ruben, to The Sperry Gyroscope Co. Ltd. Control systems for aircraft. 2,945,477, 7-19-60, Cl. 121—41.
Haemmerle, Alfred: *See*—
Steiger, Robert, Luethy, and Haemmerle. 2,945,370.
Hairlok Co. Ltd., The: *See*—
Everett, Lilian F. 2,945,226.
Halbreich, Oscar, to Kem Button Corp. Adjustable chute for button feeders. 2,945,575, 7-19-60, Cl. 198—38.
Haloid Xerox Inc.: *See*—
Eichler, Rolf W., Bichorn, and Ruthus. 2,945,434.
Hamilton Mfg. Co.: *See*—
Schaefer, George E. 2,945,270.
Hammann, William C., to Monsanto Chemical Co. Pyridasinones. 2,945,857, 7-19-60, Cl. 260—250.
Hampe, Friedrich: *See*—
Schmidt-Barbo, Dieter, Hampe, Schorr, and Lämmler. 2,945,860.
Hanna, Clinton R., to Westinghouse Electric Corp. High frequency response valve. 2,945,478, 7-19-60, Cl. 121—41.
Hansen, George E., and F. J. Sanoica, to Crane Co. Steam trap. 2,945,506, 7-19-60, Cl. 137—183.
Hardesty, George K., C. Polychromatic selective display panel. 2,945,313, 7-19-60, Cl. 40—130.
Harman, Floyd B. Cyclic multi-circuit interrupter mechanism. 2,945,924, 7-19-60, Cl. 200—33.
Harmon, Carlyle, and F. W. Shoemaker, to Chicopee Mfg. Corp. Machine for and method of cross stretching nonwoven webs. 2,945,283, 7-19-60, Cl. 28—76.
Harmon, Carlyle, to Chicopee Mfg. Corp. Low cover factor woven cellulose textile material resistant to corrugation in washing and tumble drying. 2,945,788, 7-19-60, Cl. 8—116.
Harney, Bernard C., to Lipe-Rollway Corp. Automatic bar feed. 2,945,287, 7-19-60, Cl. 29—93.
Harper, Ted J. Fish and game holding clamp. 2,946,256, 7-19-60, Cl. 17—8.
Harrington & Richardson, Inc.: *See*—
Mulno, Lester F. 2,945,316.
Harroid, Willis L. Conveyor and coating mechanism. 2,945,471, 7-19-60, Cl. 118—58.
Hartupee, Harry H.: *See*—
Thompson, Theodore F. 2,945,411.
Harvey, Joseph E. Therapeutic applicator. 2,945,492, 7-19-60, Cl. 128—23.
Hauser, Ray L.: *See*—
Panagrossi, Ahmed, Hauser, and Vasco. 2,945,773.
Hawkinson, Earle W., to Paul E. Hawkinson Co. Tire buffing machine. 2,945,534, 7-19-60, Cl. 157—12.
Hawkinson, Paul E., Co.: *See*—
Hawkinson, Earle W. 2,945,534.
Haws, Ernest R. Foldable partition. 2,945,535, 7-19-60, Cl. 160—40.
Haynes, Paul F.: *See*—
Pope, Harold W., Haynes, and Henderson. 2,945,380.
Hays, Harry H. Air conditioner. 2,946,562, 7-19-60, Cl. 183—14.
Hayslip, Gerald C. Supporting means for fish nets. 2,945,656, 7-19-60, Cl. 248—125.
Healin, George A., to I-T-E Circuit Breaker Co. Current balancing reactors for diodes. 2,945,961, 7-19-60, Cl. 307—58.
Heat-X, Inc.: *See*—
Boling, Cecil. 2,945,385.
Heiden, Louis W. Patient elevating device and stabilizing mechanism therefor. 2,945,242, 7-19-60, Cl. 5—24.
Heimers, Friedreich O.: *See*—
Heimers, Rudolph H., F. O., and S. L. 2,945,694.
Heimers, Rudolph H., F. O., and S. L. 2,945,695.
Heimers, Rudolph H., F. O., and S. L. Hand held captive ball apparatus. 2,945,694, 7-19-60, Cl. 272—95.
Heimers, Rudolph H., F. O., and S. L. Tennis racket with captive ball apparatus. 2,945,695, 7-19-60, Cl. 272—97.
Heimers, Siegfried L.: *See*—
Heimers, Rudolph H., F. O., and S. L. 2,945,694.
Heimers, Rudolph H., F. O., and S. L. 2,945,695.
Hein, Henry W., to The Cyril Bath Co. Stretch forming machine. 2,945,929, 7-19-60, Cl. 153—40.
Heinze, Werner, and W. Jülich, to Precisia A.G. Rechenmaschinenfabrik. Ten-keys key board for calculating machines. 2,945,622, 7-19-60, Cl. 235—60.
Heitmann, Herbert: *See*—
Stobbe, Helmut, Glas, and Heitmann. 2,945,916.
Heller, Herbert H.: *See*—
Waterfield, Clayton F., Calderhead, and Heller. 2,946,008.
Helmick, Walter E.: *See*—
Caryl, Coleman E., and Helmick. 2,945,417.
Hemminger, Charles E., to Esso Research and Engineering Co. Hydroformated feed improved by adsorption of normal paraffins. 2,945,804, 7-19-60, Cl. 208—91.
Henderson, Richard E.: *See*—
Pope, Harold W., Hayner, and Henderson. 2,945,380.
Henning, George E., to Western Electric Co., Inc. Polyethylene coated with wax and polystyrene or polytetrafluoroethylene and preparation of cellular article therefrom. 2,945,827, 7-19-60, Cl. 260—2.5.
Henning, George E., to Western Electric Co., Inc. Composite materials for producing cellular polyethylene articles. 2,945,828, 7-19-60, Cl. 260—2.5.
Heuning, Robert W.: *See*—
Kopf, Rowland J., Henning, and Marsh. 2,945,236.
Henrite Products Corp.: *See*—
Henry, Robert L., and Baker. 2,945,988.
Henry, Ira G.: *See*—
Fulton, Howard A., and Henry. 2,945,239.
Henry, Robert L., and J. L. Baker, to Henrite Products Corp. Machine support device. 2,945,988, 7-19-60, Cl. 317—2.
Henschel-Werke Gesellschaft mit beschraenkter Haftung: *See*—
Beck, Erich, and Bode. 2,945,634.
Herbig, James A.: *See*—
Salyer, Ival O., and Herbig. 2,945,836.
Hermach, Carl J.: *See*—
Hilgoe, Vernon J., and Hermach. 2,945,437.
Herman, Charles B.: *See*—
Rees, Kenneth A., Pastorek, Williams, and Herman. 2,945,790.
Herman, Harry H., Jr. Breathing attachment for swimmers. 2,945,493, 7-19-60, Cl. 128—146.
Herrmann, John A.: *See*—
Platz, Elwood T., Cataldo, and Herrmann. 2,946,037.

Herrmark, Nicolas, and A. Leschot; said Leschot assor. to said Herrmark. Casting mold and method of preparation. 2,945,273, 7-19-60, Cl. 22—193.
Hewlett-Packard Co.: *See*—
La Barre, Lawrence J., and Girdner. 2,945,931.
Hayden Newport Chemical Corp.: *See*—
Kraft, William M. 2,945,630.
Hicks, Dale A.: *See*—
Carter, Richard S. 2,945,321.
Hicks, Percy W.: *See*—
Clark, John B., and Hicks. 2,945,917.
Higgins, William J. Extendible rack structure for storage, embodying wing extensions. 2,945,596, 7-19-60, Cl. 211—134.
Hightower-Morse & Co.: *See*—
Kosloff, Lloyd M. 2,945,735.
Kosloff, Lloyd M. 2,945,736.
Hignett, Travis P., A. B. Phillips, and R. D. Young, to Tennessee Valley Authority. Granular fertilizer from calcium metaphosphate. 2,945,754, 7-19-60, Cl. 71—37.
Hilgoe, Vernon J., and C. J. Hermach, to Miehle-Goss-Dexter, Inc. Seal-off arrangement for undershot ink fountain. 2,945,437, 7-19-60, Cl. 101—350.
Hill, Edward G., to Kelsey-Hayes Co. Booster brake system. 2,945,725, 7-19-60, Cl. 303—24.
Hinman, Walter L., Jr.: *See*—
Calhoun, Howard, and Hinman. 2,945,925.
Hipple, George M., to American Brake Shoe Co. Electric control circuit. 2,945,990, 7-19-60, Cl. 317—133.
Hirst, John M.: *See*—
Siedband, Melvin P., Hirst, and Casey. 2,946,021.
Hitchings, George H., E. A. Falco, and K. W. Ledig, to Burroughs Wellcome & Co., (U.S.A.) Inc. Diaminoquinazolines and method of making. 2,945,859, 7-19-60, Cl. 260—256.4.
Hockert, Chester E., and L. R. Smith, to General Motors Corp. Segmented stator ring assembly. 2,945,673, 7-19-60, Cl. 253—78.
Hodge, William F., to General Electric Co. Tubular incandescent lamp device. 2,945,978, 7-19-60, Cl. 313—279.
Hoefle, Milton L., D. I. Randall, and E. E. Renfrew, to General Aniline & Film Corp. Anthraquinone dyestuffs. 2,945,867, 7-19-60, Cl. 260—380.
Hoehn, Willard M., to G. D. Searle & Co. 2,3,17-trihydroxyestra-1,3,5(10)-triene ethers and esters. 2,945,865, 7-19-60, Cl. 260—397.5.
Hoekstra, James, to Universal Oil Products Co. Recovery of noble metals from catalytic composites. 2,945,757, 7-19-60, Cl. 75—121.
Hoel, Archie B., to Sun Oil Co. Rubber compositions containing hydrogenated mineral oil and method of preparation. 2,945,833, 7-19-60, Cl. 260—33.6.
Hoffmann, George R. Air flow control for jet propelled craft. 2,945,345, 7-19-60, Cl. 60—35.6.
Hoffmann-La Roche Inc.: *See*—
Burmatis, Joseph D. 2,945,868.
Hogue, Ephraim W., to United States of America, Commerce. Magnetic digital computer circuit. 2,946,046, 7-19-60, Cl. 340—174.
Holliday, Ivar M.: *See*—
Oplinger, Kirk A., and Holliday. 2,945,648.
Hollingsworth, R Lee. Mixers and containers. 2,945,682, 7-19-60, Cl. 259—81.
Helsinger, Val. Pipe organ. 2,945,409, 7-19-60, Cl. 84—348.
Honeyman, Robert B., to Marden Machines Co. Remover for rags and the like for a pulp treating machine. 2,945,592, 7-19-60, Cl. 210—542.
Hongo, Motoyoshi, to Sanraku Shuso Kabushiki Kaisha. Process for producing butanol by fermentation. 2,945,786, 7-19-60, Cl. 195—44.
Hoppe, Alfred, to Edeleanu Gesellschaft m.b.H. Process for separating paraffin wax from wax-containing hydrocarbon oils. 2,945,798, 7-19-60, Cl. 208—28.
Horgan, George D.: *See*—
Bell, Arthur, and Horgan. 2,945,587.
Horton, George B., to General Motors Corp. Seat adjuster. 2,945,722, 7-19-60, Cl. 296—65.
Horton, William F., and W. D. Wegley, to Lear, Inc. Automatic heading control for aircraft. 2,945,650, 7-19-60, Cl. 244—77.
Houdry Process Corp.: *See*—
Cornelius, Edward R., Milliken, and Mills. 2,945,823.
House, Bryan E., E. R. Super, and G. P. Mathews, to Rockwell-Standard Corp. Vehicle brake. 2,945,564, 7-19-60, Cl. 188—78.
Houser, Roy W., to Robertshaw-Fulton Controls Co. Magnetic switches. 2,945,923, 7-19-60, Cl. 200—87.
Houston, John C., to Koppers Co., Inc. Apparatus for producing plastic material. 2,945,258, 7-19-60, Cl. 18—14.
Howell, Jack M. Diesel engine starting means and method. 2,945,483, 7-19-60, Cl. 123—179.
Howey, Charles K., and R. L. Watts, to Hughes Aircraft Co. Machine tool. 2,945,401, 7-19-60, Cl. 77—3.
Hudeley, Edouard, to Librairie Hachette. Stereoscopic film strip viewer. 2,945,418, 7-19-60, Cl. 88—31.
Hudson Engineering Corp.: *See*—
Petty, Macon. 2,945,262.
Hudson, Kenneth, to Sperry Rand Corp. Missing pulse indicator. 2,946,020, 7-19-60, Cl. 331—44.
Huetter, Wolfgang: *See*—
Ritter, Kaspar, and Huetter. 2,945,382.
Hufford Corp., The: *See*—
Nelson, Melvin E. 2,945,522.
Hughes Aircraft Co.: *See*—
Howey, Charles K., and Watts. 2,945,401.
Korn, Bernard B. 2,945,704.
Shanks, Howard E. 2,946,056.
Shanks, Howard E. 2,946,057.
Vuts, Peter. 2,945,964.
Huppert, Valetin: *See*—
Gaeth, Rudolf, Graf, Huppert, and Wurmschmitt. 2,945,322.
Hurd Lock & Mfg. Co.: *See*—
Grogan, Robert D. 2,945,371.
Hurley, Daniel T.: *See*—
Bolgiano, Ralph, Jr., Hurley, and Krafft. 2,946,044.
Hurst, Samuel R. Spike pulling grapple. 2,945,674, 7-19-60, Cl. 254—18.
Hutchinson, Alfred A. Shower head. 2,945,631, 7-19-60, Cl. 239—548.
Hutchinson, William M., to Phillips Petroleum Co. Gas generator adapted for on-off operation. 2,945,344, 7-19-60, Cl. 60—35.6.
Huser, Dmetro Z. Movable pointer hands for measuring instruments, chiefly electrometers. 2,946,006, 7-19-60, Cl. 324—154.
Hyval Products Co.: *See*—
Sears, Hartley M. 2,945,713.
I-T-E Circuit Breaker Co.: *See*—
Conangla, Amado. 2,945,913.
Healin, George A. 2,945,961.
Platz, Elwood T., Cataldo, and Herrmann. 2,946,037.
Wiedmann, Ludwig. 2,945,673.
Ideal School Supply Co.: *See*—
Parker, Clifford. 2,945,594.
Imhof, Alfred, to Moser-Glaser & Co. A.G. High voltage insulator. 2,945,912, 7-19-60, Cl. 174—30.
Imperial Chemical Industries Ltd.: *See*—
Allan, William G. 2,945,890.
Coulter, David J. B., and Kerrigan. 2,945,834.
Roberts, John F. L., Twitchett, and Wild. 2,945,840.
Semmens, Peter W. B., and Summers-Smith. 2,945,814.
Stedman, Ronald E. 2,945,741.
Tinsley, Antony B., and Guest. 2,945,937.
Independent Iron Works, Inc.: *See*—
Meagher, David R., and Mason. 2,945,248.
Indiana General Corp.: *See*—
Stearns, Roswell H. 2,945,590.
Industrial Development Co.: *See*—
Erickson, Harold E. 2,946,521.
Industrial Research Co.: *See*—
Shelton, Luther L. 2,945,468.
International Harvester Co.: *See*—
Clendenin, Wilbur H. 2,945,581.
Ferguson, Henry A., Boyle, and Jedrzykowski. 2,945,570.
Ziskal, Joseph F. 2,945,395.
International Minerals & Chemical Corp.: *See*—
Good, Robert C., and Norman. 2,945,787.
Nielsson, Francis T. 2,945,747.
Reeve, David H. 2,945,745.
Sollin, Ingmar. 2,945,879.
International Resistance Co.: *See*—
Gerding, Benjamin F., and Labrossi. 2,945,613.
International Standard Electric Corp.: *See*—
Müller, Joachim. 2,945,640.
Stobbe, Helmut, Glas, and Heitmann. 2,945,916.
Wright, Esmond P. G., Weir, and Rice. 2,945,625.
Jackel, Fritz: *See*—
Ulderup, Jurgen, Reuter, and Jackel. 2,945,365.
Jackson, Dale E.: *See*—
Evans, Evan F., and Jackson. 2,945,831.
Jacob, Lawrence N., to Sun Oil Co. Reactivation of solid phosphoric acid catalyst. 2,945,822, 7-19-60, Cl. 252—414.
Jacobi, Ernst: *See*—
Zima, Otto, and Jacobi. 2,945,877.
Jacobs, Bernard, to Sperry Rand Corp. Bonding of semiconductor contact electrodes. 2,945,285, 7-19-60, Cl. 29—25.3.
Jacobus, Charles J., to Clark Equipment Co. Hydraulic power steering for land vehicle. 2,945,544, 7-19-60, Cl. 180—79.2.
Jahnke, Louis P., and M. A. Pohlman, to General Electric Co. Nickel base alloys. 2,945,758, 7-19-60, Cl. 75—171.
James, George M., to E. I. du Pont de Nemours and Co. Cellulosic sponge. 2,945,772, 7-19-60, Cl. 117—96.
Jamesbury Corp.: *See*—
Freeman, Howard G., and Vaudreuil. 2,945,666.
Jansky, Curtis M.: *See*—
Cooper, Elmer D., and Jansky. 2,946,051.
Jarman, Edward R., to Jarman-Williamson Co. Resilient golf bag support. 2,945,657, 7-19-60, Cl. 248—36.
Jarman-Williamson Co.: *See*—
Jarman, Edward R. 2,945,657.
Jasik, Charles, and L. J. Merson. Terminal lug for wire wound resistor. 2,946,038, 7-19-60, Cl. 339—217.
Jasernik, Edmund, to Pernseh G.m.b.H. Method and arrangement for producing electric advance impulses. 2,945,949, 7-19-60, Cl. 250—27.
Jedrzykowski, Edmund: *See*—
Ferguson, Henry A., Boyle, and Jedrzykowski. 2,945,570.
Jeffrey Mfg. Co., The: *See*—
Moon, Sterling C. 2,945,886.
Jenkins, Starling E., to Koppers Co., Inc. Hold-down apparatus. 2,945,523, 7-19-60, Cl. 144—200.
Jenkner, Herbert, to Kali-Chemie Aktiengesellschaft. Alkylation of chlorinated silanes. 2,945,874, 7-19-60, Cl. 260—448.2.
Jenkner, Herbert, to Kali-Chemie Aktiengesellschaft. Preparation of boron alkyls. 2,945,887, 7-19-60, Cl. 260—606.5.
Jennings, William A., to Economy Forms Corp. Adjustable brace connector unit. 2,945,662, 7-19-60, Cl. 248—354.
Jensen, Earl L., and R. E. Washington, to Boeing Airplane Co. Aircraft control surface internal air pressure balances. 2,945,651, 7-19-60, Cl. 244—99.

Johanningmeier, Charles E. Match book spinner. 2,946,696, 7-19-60, Cl. 273—147.

Johns-Manville Corp. : *See*—
Leistenschneider, George P. 2,945,363.

Johnson, Arthur C. : *See*—
Slick, Fred S. 2,945,430.

Johnson, Roland, to Dominion Textile Co. Ltd. Slip-free fish netting and method of making same. 2,945,413, 7-19-60, Cl. 87—1.

Jones, Barton. Valve release for differential pressure responsive devices. 2,945,510, 7-19-60, Cl. 137—780.

Jones, Dougan L., and C. Langewis, to The Marley Co. Method of affixing fins to tubing. 2,945,296, 7-19-60, Cl. 29—498.

Jones, Howard A., J. A. Garman, and R. C. Dickinson, to Food Machinery and Chemical Corp. Synergistic insecticidal compositions. 2,945,780, 7-19-60, Cl. 167—22.

Jones, Jean E. : *See*—
Carroll, Burt E., Jones, and Spangot. 2,945,762.

Jones, Jean E., to Eastman Kodak Co. Green sensitization of photographic silver halide emulsions. 2,945,763, 7-19-60, Cl. 96—104.

Jones, John E. : *See*—
Duncan, James K., and Jones. 2,945,246.

Jordan, Hans, to Given Machinery Co. Resilient hanging device for waste disposal apparatus. 2,945,635, 7-19-60, Cl. 241—100.5.

Julian, Clarence L., K. W. Epply, and J. C. Norris, to General Motors Corp. Ignition distributor. 2,945,923, 7-19-60, Cl. 200—41.

Jülich, Werner : *See*—
Heinze, Werner, and Jülich. 2,945,622.

Junkermann, Wolfgang, to The Babcock & Wilcox Co. Pulsating combustion method and apparatus. 2,945,459, 7-19-60, Cl. 110—28.

Jurist, Alfred E., to Olin Mathieson Chemical Corp. Purification process. 2,945,850, 7-19-60, Cl. 260—210.

K.A.C. Ltd. : *See*—
Paterson, Gavin D. 2,945,274.

Kariyama, Kosuke. Sewing machine. 2,945,460, 7-19-60, Cl. 112—169.

Kaiser Industries Corp. : *See*—
Aiken, William E. 2,945,974.
Foster, Leigh C. 2,945,962.

Kali-Chemie Aktiengesellschaft : *See*—
Jenkner, Herbert. 2,945,874.
Jenkner, Herbert. 2,945,887.

Kaliah, David, to The Alliance Mfg. Co., Division of Consolidated Electronics Industries Corp. Resettable welder. 2,945,941, 7-19-60, Cl. 219—124.

Kaller, Johan S. Distributor machine for the distribution of fertiliser. 2,945,696, 7-19-60, Cl. 276—2.

Kallmann, Heinz E. Talking book having magnetic recording means and shielding means therefore. 2,945,307, 7-19-60, Cl. 35—35.

Kallmann, Heinz E. Current gain measuring device. 2,945,-008, 7-19-60, Cl. 324—158.

Kamborian, Jacob S. Aircraft landing aid. 2,946,041, 7-19-60, Cl. 340—26.

Kamborian, Jacob S., and T. A. Weiss, to said J. S. Kamborian. Lasting machine. 2,945,247, 7-19-60, Cl. 12—8.2.

Kammerer, Archer W. : *See*—
Kammerer, Archer W., Jr. 2,945,976.

Kammerer, Archer W. : *See*—
Kammerer, Archer W., Jr. 2,945,977.

Kammerer, Archer W., Jr., ¾ to A. W. Kammerer and ¼ to J. E. Lamphere. Hydraulic weight control and compensating apparatus for subsurface well bore devices. 2,945,676, 7-19-60, Cl. 255—19.

Kammerer, Archer W., Jr., ¾ to A. W. Kammerer and ¼ to J. E. Lamphere. Hydraulic weight compensating apparatus for well bore devices. 2,945,677, 7-19-60, Cl. 255—19.

Kapilow, Marvin : *See*—
Bechtold, Edwin W., Kapilow, and Weinstein. 2,945,415.
Bechtold, Edwin W., Kapilow, and Weinstein. 2,945,419.

Kaplan, Louis G. : *See*—
Benes, William S., and Kaplan. 2,945,809.

Karp, Arthur, to Bell Telephone Laboratories, Inc. Traveling wave tube structure. 2,945,979, 7-19-60, Cl. 315—3.5.

Karp, Arthur, to Bell Telephone Laboratories, Inc. Magnetron-type traveling wave tube. 2,945,981, 7-19-60, Cl. 315—8.5.

Kastning, Ernst-Gunther : *See*—
Wissenfels, Karl, and Kastning. 2,945,546.

Keelavite Co. Ltd., The : *See*—
Rye, John L. 2,945,572.

Kelling, Leroy U. C., to General Electric Co. Intermittent feed cut-off register control. 2,945,967, 7-19-60, Cl. 250—219.

Kelly, Donald H., to Technicolor Corp. Optical beam linking systems. 2,945,413, 7-19-60, Cl. 88—1.

Kelsey-Hayes Co. : *See*—
Hill, Edward G. 2,945,725.
Steiner, William. 2,945,352.
Steiner, William. 2,945,799.
Steiner, William. 2,945,126.

Kem Button Corp. : *See*—
Halbevick, Oscar. 2,945,775.

Kendall, Larrabee T. : *See*—
Boretti, Napoleon P., and Kendall. 2,945,513.

Kennecott Copper Corp. : *See*—
Christensen, Charles C., and Prater. 2,945,742.
Zimmerley, Stuart R., and Prater. 2,945,743.

Kennedy, Charles J., to F. L. Moseley Co. Graphical recorder chart motor drive system. 2,945,997, 7-19-60, Cl. 318—341.

Kent, Samuel J. : *See*—
Bower, Albert J., and Kent. 2,945,517.

Kern, Walter : *See*—
Coulter, Armin, and Kern. 2,945,988.

Kerrigan, Vincent : *See*—
Coulter, David J. R., and Kerrigan. 2,945,554.

Keystone Chemargic Corp. : *See*—
Schenck, Benson T. R. 2,945,852.

Khol, Frantisek, and Talat. Apparatus for the evaluation of X-ray photographs. 2,946,906, 7-19-60, Cl. 35—1.

King, George E. : *See*—
Smith, Joseph W. and King. 2,945,445.

Kingston Electronic Corp. : *See*—
Russell, Allan D. 2,946,001.
Russell, Allan D. 2,946,002.

Kirkland, Earl V. : *See*—
Kalph, Hampton M., and Kirkland. 2,945,907.

Kish, Nick W. *See*—
Hiniker, Charles V., and Kish. 2,945,686.

Kleiger, Emil, to Aerojet-General Corp. 3,10-endo-nitrotetracene anthracene. 2,945,884, 7-19-60, Cl. 260—345.

Klein, Howard C., to Nopco Chemical Co. Vitamin A intermediates and process for obtaining same. 2,945,876, 7-19-60, Cl. 260—632.

Klingler, Karl A. External seal shock absorber. 2,945,689, 7-19-60, Cl. 267—34.

Klöckner-Humboldt-Deutz Aktiengesellschaft : *See*—
Docker, Johannes B., Meder, and Müller. 2,945,358.

Knight, Harmon M., and E. V. Kirkland, to The American Oil Co. Olefin conversion process. 2,945,907, 7-19-60, Cl. 260—683.15.

Knorr Gizza, Inc. : *See*—
Dubbe, William E., and Yonkers. 2,945,325.

Knorr, Kerre, to Bell Telephone Laboratories, Inc. Magnetic materials. 2,945,744, 7-19-60, Cl. 23—30.

Knudsen, Knud J., to The Lewis Engineering Co. Electrical instrument. 2,945,607, 7-19-60, Cl. 324—154.

Koehring Co. : *See*—
Martinson, Edwin O. 2,945,683.

Koehring, Roland P. : *See*—
Luther, William A., Jr., and Koehring. 2,945,295.

Koerner, Walter : *See*—
Wagner, William, and Koerner. 2,945,470.

Kolbe, Joachim, Banking indicator for motor vehicles. 2,945,470, 7-19-60, Cl. 116—28.

Koo, John, and W. E. Boehme, to Ethicon, Inc. Certain beta-pyrrolyl, dialkoxy acrylophenones. 2,945,854, 7-19-60, Cl. 260—340.

Koochembere, Chris T. : *See*—
Woodward, Clifford C., and Koochembere. 2,945,654.

Kopf, Rowland J., R. W. Henning, and R. Marsh, to Olin Mathieson Chemical Corp. Explosively actuated tools. 2,945,236, 7-19-60, Cl. 1—186.

Koppers Co., Inc. : *See*—
Houston, John C. 2,945,383.
Jenkins, Starling R. 2,945,722.
Mullins, Frederick C. 2,945,550.

Kopperud, William A., and C. Nye. Mail box. 2,945,621, 7-19-60, Cl. 232—34.

Korn, Bernard S., to Hughes Aircraft Co. Near section-quick discrepancy. 2,945,104, 7-19-60, Cl. 235—18.

Kosloff, Lloyd M. 70% to Hightower-Morse & Co., 10% to B. Wolnak, and 5% to J. F. Antonow. Mothproofing of keratinaceous materials. 2,945,738, 7-19-60, Cl. 8—17.

Kosloff, Lloyd M., 10% to Hightower-Morse & Co., 10% to B. Wolnak, and 5% to J. F. Antonow. Mothproofing of keratinaceous materials. 2,945,738, 7-19-60, Cl. 8—17.

Kraft, William E. : *See*—
Reigiano, Ralph, Jr., Hurley, and Kraft. 2,946,044.

Kraft, William M., to Hayden Newport Chemical Corp. Catalyst for the preparation of improved alkyd resins. 2,945,-830, 7-19-60, Cl. 260—20.

Kralowetz, Bruno. Machine for hot-forming bar stock. 2,945,554, 7-19-60, Cl. 219—7.5.

Kratzert, Hugo, and R. Pleis, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Cracking of oligomers of isobutene in the presence of silica-magnesia catalysts. 2,945,-909, 7-19-60, Cl. 260—683.

Kroll, Cornelius and N. M., to Speed Part, Inc. Transferring apparatus. 2,945,608, 7-19-60, Cl. 214—16.1.

Kroll, Cornelius and N. M., to Speed Part, Inc. Transferring apparatus. 2,945,604, 7-19-60, Cl. 214—16.1.

Kroll, Norman M. : *See*—
Kroll, Cornelius and N. M. 2,945,602.
Kroll, Cornelius and N. M. 2,945,604.

Kruckenberg, Winfried, and K. Weis, to Farbenfabriken Bayer Aktiengesellschaft. Disease compounds containing a quaternary ammonium group. 2,945,849, 7-19-60, Cl. 260—186.

Krueger, Roland F. : *See*—
Maly, George P., and Krueger. 2,945,541.

Kucklinsky, Walter H., and D. T. Badenoch, to Montgomery Specialty Co., Inc. Clamping device. 2,945,463, 7-19-60, Cl. 113—101.

Kuhrt, Friedrich, to Siemens-Schuckertwerke Aktiengesellschaft. Compensated hall voltage generator. 2,945,996, 7-19-60, Cl. 317—234.

Kwap, Theodore W. : *See*—
Benjamin, Sidney K., and Kwap. 2,946,018.

La Barre, Lawrence J., and W. I. Girdner, to Hewlett-Packard Co. Lapping machine. 2,945,331, 7-19-60, Cl. 51—181.

Laboratory for Electronics, Inc. : *See*—
Meyer, Maurice A. 2,946,018.

Labrozzi, Anthony F. : *See*—
Gerding, Benjamin F., and Labrozzi. 2,945,613.

La Dona, Clyde, Emergency braking systems. 2,946,727, 7-19-60, Cl. 303—63.

La Gloria Oil and Gas Co. : *See*—
Petty, Charles O. 2,945,802.
Petty, Charles O. 2,945,699.

Lamphere, Jean K. : *See*—
Kammerer, Archer W., Jr. 2,945,676.
Kammerer, Archer W., Jr. 2,945,677.

Landmann, Wendell A. : *See*—
White, Wilfred F., Landmann, and Fleece. 2,945,785.

Landvoert Electrometer Co. : *See*—
Landvoert, Ole G., and Merriner. 2,945,734.

Landvoert, Ole G., and D. L. Merriner, to Landvoert Electrometer Co. Gas filled dosimeter and method of manufacturing the same. 2,945,734, 7-19-60, Cl. 316—29.

Langewis, Cornelis : *See*—
Jones, Dougan L., and Langewis. 2,945,296.

Lapp, George T., to Ralston Purina Co. Method of manufacturing stable pelleted feeds. 2,945,764, 7-19-60, Cl. 99—2.

Lapointe, Lloyd J., A. D'Onofrio, and L. Cetran, to Royal McBee Corp. Rotary printing device. 2,945,576, 7-19-60, Cl. 197—12.

Larini, Giovanni : *See*—
Alberti, Carlo G., Bernardi, Larini, and Vercellone. 2,945,683.

Larson, Rodger G. : *See*—
Gerard, William A., and Larson. 2,946,027.

Larsson, Oscar U. : *See*—
Stihl, Nils E. J., and Larsson. 2,945,472.

La Salle, Conrad A. : *See*—
Asnin, Mark H., and La Salle. 2,945,851.

Lassiter, James W. Fishing lure. 2,945,216, 7-19-60, Cl. 43—42.47.

Last, George A., to United States of America, Atomic Energy Commission. Process for jacketing a core. 2,945,253, 7-19-60, Cl. 29—422.

Lawson, H. P., Co., Inc. : *See*—
Thumin, Carl. 2,945,600.

Lear, Inc. : *See*—
Atkinson, Donald L. 2,945,969.
Garfield, Lavern F., and Williams. 2,945,476.
Horton, William F., and Wegley. 2,945,650.
Norton, Clyde J., and Dimon. 2,945,906.
Ritzi, Emil. 2,945,349.

Ledig, Kurt W. : *See*—
Hitchings, George H., Falco, and Ledig. 2,945,809.

Lee, Clarence E. : *See*—
Snyder, John M., Howoth, and Lee. 2,945,765.

Leeds, Morton W. : *See*—
Burch, Robert J., and Leeds. 2,945,895.

Le Febvre, Arthur H., and J. E. Wiseman, to Bendix Aviation Corp. Hydraulic control pump. 2,945,449, 7-19-60, Cl. 103—162.

Lehman, Freeman R., L. H. Silversall, and E. K. Stilbert, to The Dow Chemical Co. Sizing of paper with acrylamide polymers. 2,945,775, 7-19-60, Cl. 117—155.

Lehmicke, David J., to E. I. du Pont de Nemours and Co. Process of melt spinning. 2,945,739, 7-19-60, Cl. 18—54.

Leissner, William E., to Dynex, Inc. Hydraulic pump. 2,946,444, 7-19-60, Cl. 103—2.

Leistenschneider, George P., to Johns-Manville Corp. Method for making O-ring gaskets. 2,945,283, 7-19-60, Cl. 18—58.

Lender, Chester A. : *See*—
Slick, Fred S. 2,945,430.

Lenk, Walter, to Barmer Maschinenfabrik Aktiengesellschaft. Method and apparatus for winding a plurality of threads. 2,945,636, 7-19-60, Cl. 242—42.

Lesaffre Co., Inc. : *See*—
Guttmann, Ernest. 2,945,298.

Lepetit S.p.A. : *See*—
Weitmauer, Gustavo A. 2,945,784.

Leschot, Auguste : *See*—
Hermanek, Nicolas, and Leschot. 2,945,273.

Levine, Beth. Footwear. 2,945,816, 7-19-60, Cl. 36—11.5.

Lewis, Edward F., to General Motors Corp. Hub and shaft arrangement. 2,945,712, 7-19-60, Cl. 287—53.

Lewis Engineering Co., The : *See*—
Knudsen, Knud J. 2,946,007.

Librairie Hachette : *See*—
Hudeley, Edouard. 2,945,416.

Liebert, Horst, to Trockentechnik Kurt Bruckner K.G. Chute with cline and rib bars for tentering and drying machines. 2,945,290, 7-19-60, Cl. 26—82.

Lincoln, John W., to Arthur D. Little, Inc. Mattress having adjustable resiliency. 2,945,244, 7-19-60, Cl. 5—345.

Lindberg, Arthur F., to Fairchild Camera & Instrument Corp. Selector push bar arrangement. 2,945,537, 7-19-60, Cl. 164—112.

Link-Belt Co. : *See*—
Musschoot, Albert, Schroeder, and Thomson. 2,945,604.

Lipe-Rollway Corp. : *See*—
Harney, Bernard C. 2,945,387.

Lipinski, Richard J., to Lord Mfg. Co. Treatment of aluminum and composition therefor. 2,945,778, 7-19-60, Cl. 148—6.24.

Lipinski, Richard J., to Lord Mfg. Co. Treatment of titanium and product, and composition therefor. 2,945,779, 7-19-60, Cl. 148—6.24.

Lipsey, David H. : *See*—
Toman, James T. 2,945,480.

Little, Arthur D., Inc. : *See*—
Lincoln, John W. 2,945,244.
Slade, Albert E. 2,946,030.

Little, Howard M., and J. K. Notthoff, to Unicorn Engineering Corp. Coding apparatus for information storage tapes and the like. 2,945,538, 7-19-60, Cl. 164—113.

Lockheed Aircraft Corp. : *See*—
Colman, Philip A. 2,945,644.

Lord Mfg. Co. : *See*—
Lipinski, Richard J. 2,945,778.

Lord Mfg. Co. : *See*—
Lipinski, Richard J. 2,945,779.

Lorenz, Anton : *See*—
Fletcher, Peter S. 2,945,533.

Loretta, Nicholas R., to The Dow Chemical Co. Method of preparing acetal and acetaldike compounds. 2,945,864, 7-19-60, Cl. 260—340.6.

Luce, John S. : *See*—
Blue, Clarence W., and Luce. 2,945,972.

Ludwig, Friedrich : *See*—
Steiger, Robert, Lauthy, and Hasmanorte. 2,945,370.

Lugli, Giuseppe, to Pirelli S.p.A. Improved elastane structure. 2,945,523, 7-19-60, Cl. 139—341.

Luther, William A., Jr., and E. P. Kechring, to General Motors Corp. Friction material. 2,945,292, 7-19-60, Cl. 29—182.5.

Lutz, Raymond P. : *See*—
Tarrant, Paul, and Lutz. 2,945,906.

Luxon, Paul L. : *See*—
Schultz, Melvin P., Luxon, and Mussey. 2,945,284.

Lykken, Henry G. and W. H., to The Microcyclomat Co. Integrated dry material reducing and classifying means. 2,945,632, 7-19-60, Cl. 241—41.

Lykken, William H. : *See*—
Lykken, Henry G. and W. H. 2,945,623.

Lyon, George A. Wheel structure. 2,945,565, 7-19-60, Cl. 188—264.

Lyon, George A. Wheel structure with brake drum cooling means. 2,945,567, 7-19-60, Cl. 188—264.

Macfee, Harold, to Binney & Smith Inc. Reclosable plastic bubble package. 2,945,606, 7-19-60, Cl. 206—74.

MacLeod, David E., to Carrier Corp. Portable air conditioning units. 2,945,357, 7-19-60, Cl. 62—262.

MacLeod, David E., and H. J. Tyler, to Carrier Corp. Air conditioning unit and mounting means therefor. 2,945,358, 7-19-60, Cl. 62—262.

MacLeod, David E., to Carrier Corp. Self-contained air conditioning units. 2,945,360, 7-19-60, Cl. 62—280.

Madsen, Andrew. Dual color headlamp for vehicles. 2,945,-965, 7-19-60, Cl. 315—82.

Maeder, Paul F., to Speidel Corp. Means for providing intimate contact between a surface and tape in tape recorder devices and the like. 2,945,692, 7-19-60, Cl. 271—2.2.

Maeder, Paul F., to Speidel Corp. Means for rendering tape recorders and the like operative under high acceleration and deceleration conditions. 2,945,697, 7-19-60, Cl. 274—11.

Maffei, Rudolph A. Lamp assembly. 2,945,945, 7-19-60, Cl. 240—81.

Magill, Lloyd G., to Sun Oil Co. Apparatus for converting hydrogen sulfide to sulfur. 2,945,748, 7-19-60, Cl. 23—288.

Magnavox Co., The : *See*—
Reese, Glenn A. 2,945,931.

Mainardi, Teresa. Procedure for the manufacture of tubular containers. 2,945,284, 7-19-60, Cl. 18—59.

Malec, Jerry P., to Comet Industries, Inc. Adjustable automatic oiler for air conduits. 2,945,580, 7-19-60, Cl. 184—55.

Malis, John P. Compartmentalized refrigerator. 2,945,723, 7-19-60, Cl. 312—200.

Mallick, Franklin S., to United States of America, Navy. Magnetic amplifiers. 2,945,000, 7-19-60, Cl. 323—89.

Malm, Robert N., and V. Vedicka, to General Electric Co. Method of manufacturing electric lamps or similar devices. 2,945,327, 7-19-60, Cl. 49—78.

Maly, George P., and R. F. Krueger, to Union Oil Co. of California. Well packer. 2,945,541, 7-19-60, Cl. 166—187.

Manning, Maxwell & Moore, Inc. : *See*—
Du Bois, Robert C. 2,945,877.

Mansfeld, Hubert. Formation of light-sensitive layers on photographic films. 2,945,771, 7-19-60, Cl. 117—34.

Mansfeld Sanitary Pottery, Inc. : *See*—
Fulton, Howard A., and Henry. 2,945,289.

Marden Marbines Co. : *See*—
Honeyman, Robert B. 2,945,592.

Markham, Wendell G. : *See*—
Gama, Armando E., and Markham. 2,945,769.

Marks, Burnard M. : *See*—
Eifert, Robert L., and Marks. 2,945,837.

Marley Co., The : *See*—
Jones, Dougan L., and Langewis. 2,945,296.

Marquardt Corp., The : *See*—
Wagner, William, and Koerner. 2,945,977.

Marquis, Donald P., and E. J. Schultz, to General Motors Corp. Universal joint. 2,945,364, 7-19-60, Cl. 64—8.

Marschall, Frederick W. Pulse amplitude width discriminator. 2,945,962, 7-19-60, Cl. 307—88.

Marschall, Frederick W. Signal selective circuit. 2,945,963, 7-19-60, Cl. 307—88.

Marsh, Roger : *See*—
Kopf, Rowland J., Henning, and Marsh. 2,945,236.

Martin, Albert E., to Sir Howard Grubb Parsons & Co. Ltd. Grating spectrometers. 2,945,963, 7-19-60, Cl. 250—43.5.

Martin, Robert W., to Physical Measurements Corp. Linear accelerometer. 2,945,278, 7-19-60, Cl. 73—497.

Martineau, Arthur G., Jr. Liquid container and applicator. 2,945,252, 7-19-60, Cl. 15—136.

Martinson, Edwin O., to Koehring Co. Mobile asphalt plant. 2,945,683, 7-19-60, Cl. 259—159.

Mason Electric Corp. : *See*—
Mason, Howard F. 2,945,927.
Mason, Howard F. 2,945,963.

Mason, Frederick J. : *See*—
Mason, William G. and F. J. 2,945,446.

Mason, Howard F., to Mason Electric Corp. Rotary switch with common advancing and pressure springs. 2,945,927, 7-19-60, Cl. 200—66.

Mason, Howard F., to Mason Electric Corp. Rotary switching apparatus. 2,945,969, 7-19-60, Cl. 310—37.

Mason, William: *See*—
Meagher, David E., and Mason. 2,945,248.

Mason, William G. and F. J. Pressure sensitive reservoir emptying system and apparatus therefor. 2,945,446, 7-19-60, Cl. 103—25.

Mathews, George F.: *See*—
House, Bryan E., Super, and Mathews. 2,945,564.

Matthews, Russell E., to Baso Inc. Flow control devices. 2,945,562, 7-19-60, Cl. 137—66.

Matthysse, Irving F., to Burndy Corp. Spool grip connector. 2,946,040, 7-19-60, Cl. 339—272.

Maust, Frederick E. Method of treating sheet and strip material. 2,945,530, 7-19-60, Cl. 153—106.

May, Harry C., and J. F. Frola, to Westinghouse Air Brake Co. Control valve device for vehicle air springs. 2,945,690, 7-19-60, Cl. 267—65.

Massoni, Giuseppe. Process of drying soap. 2,945,819, 7-19-60, Cl. 252—367.

McCauley Industrial Corp.: *See*—
Burnham, Walter E. 2,945,542.

McClure, William L., to Sun Oil Co. Disengaging granular solids from lifting gas. 2,945,724, 7-19-60, Cl. 302—59.

McCluskey, Donald S., and H. N. Cottle, Jr., to Textron Electronics, Inc. Mounting system for the moving element of a vibration table exciter. 2,945,968, 7-19-60, Cl. 310—37.

McDermott, Benjamin L. Heat transfer apparatus. 2,945,627, 7-19-60, Cl. 259—225.

McDonald, Earl. Parking meter post construction. 2,945,650, 7-19-60, Cl. 248—156.

McGraw-Edison Co.: *See*—
Anderson, John L., and Everhart. 2,946,028.

McGuinness, Bernard A. Vehicle-parking facilities. 2,945,603, 7-19-60, Cl. 214—16.1.

McIntyre, William C.: *See*—
Polhemus, Von D., and McIntyre. 2,945,700.

McIntyre, William J. Animal scratcher and oiler. 2,945,474, 7-19-60, Cl. 119—157.

McLure, Carl E. Stage expansion reaction turbines. 2,945,619, 7-19-60, Cl. 230—116.

McNabb, Warren C.: *See*—
Sigman, John J., Jr., McNabb, and Verschaeve. 2,945,425.

McRae, Edwin C., to Ford Motor Co. Variable speed drives. 2,946,482, 7-19-60, Cl. 123—41.11.

Mead Johnson & Co.: *See*—
Feldkamp, Rolland F., and Wu. 2,945,855.

Meagher, David E., and W. Mason, to Independent Iron Works, Inc. Bearing assembly for bridge structures. 2,945,248, 7-19-60, Cl. 14—16.

Meder, Heinz: *See*—
Decker, Johannes B., Meder, and Müller. 2,945,259.

Medoff, Joseph L., to Burroughs Corp. Load switching circuit. 2,945,967, 7-19-60, Cl. 307—113.

Melansson, William A.: *See*—
Abrams, Ralph, Comins, and Melansson. 2,946,029.

Mendelsohn, Morris A.: *See*—
Frost, Lawrence W., and Mendelsohn. 2,945,829.

Menough, Paul S. Carrier for articles being heat treated. 2,945,605, 7-19-60, Cl. 214—18.

Mentley, Max B., to National Broach & Machine Co. Gear finishing with lead correction. 2,945,424, 7-19-60, Cl. 90—1.6.

Merck & Co., Inc.: *See*—
Chaiet, Louis. 2,945,766.

Merck, E., Aktiengesellschaft, Darmstadt: *See*—
Zima, Otto, and Jacobi. 2,945,877.

Merriner, Delbert L.: *See*—
Landsverk, Ole G., and Merriner. 2,946,734.

Merson, Lawrence J.: *See*—
Jasik, Charles, and Merson. 2,946,038.

Messerschmitt A.G., The: *See*—
Endres, Johann. 2,945,618.

Messner, Harlan A., and H. E. Osborn, Jr., to The Ohio Crankshaft Co. Induction heating of canned goods. 2,945,935, 7-19-60, Cl. 219—10.41.

Metallgesellschaft Aktiengesellschaft: *See*—
Palenkamp, Horst, Russ, sur Strassen, Meyer, and Rausch. 2,945,668.

Metcalf, Eric, and H. Cook, to Rolls-Royce Ltd. Aircraft control systems. 2,945,649, 7-19-60, Cl. 244—77.

Metzger, Horst: *See*—
Von Schickh, Otto, and Metzger. 2,945,885.

Metzger, Romain: *See*—
Abraham, Paul, and Metzger. 2,945,582.

Meyer, Amel R., to Union Tank Car Co. Welding shielding and control device. 2,945,943, 7-19-60, Cl. 219—147.

Meyer, Curtis E., J. A. Fancher, and P. E. Schorr, to The Upjohn Co. Phosphatide emulsifying agent and process of preparing same. 2,945,869, 7-19-60, Cl. 260—403.

Meyer, Kurt: *See*—
Palenkamp, Horst, Russ, sur Strassen, Meyer, and Rausch. 2,945,668.

Meyer, Maurice A., to Laboratory for Electronics, Inc. All-pass network amplifier. 2,946,016, 7-19-60, Cl. 330—69.

Michell, William P., to Dana Corporation. Torsional vibration dampener. 2,945,367, 7-19-60, Cl. 64—27.

Microcyclomat Co., The: *See*—
Lykken, Henry G. and W. H. 2,946,633.

Midkiff, Raymond L., to Avco Mfg. Corp. Balanced phase sensing circuitry. 2,945,980, 7-19-60, Cl. 250—27.

Miehle-Goss-Dexter, Inc.: *See*—
Crafts, Curtis S. 2,945,284.
Hilgoe, Vernon J., and Hermach. 2,945,437.

Mignonac, Georges, and P. J. A. Bourbon, to Compagnie Francaise des Matieres Colorantes. Process for the production of aldehydes. 2,945,862, 7-19-60, Cl. 260—297.

Mikeska, Louis A.: *See*—
Brugmann, William H., Jr., Yowell, and Mikeska. 2,945,753.

Milberger, Ernest C., to The Standard Oil Co. Thickened lubricant and process for preparing the same. 2,945,809, 7-19-60, Cl. 252—33.

Milette, Kenneth A.: *See*—
Vaughan, Christine U., Bond, and Milette. 2,945,554.

Miller, Alexander A., to General Electric Co. Polyolefins. 2,945,792, 7-19-60, Cl. 204—154.

Miller, Ervan H. Fishing sinker. 2,945,324, 7-19-60, Cl. 43—44.97.

Miller, Frederick W. Coagulation apparatus. 2,945,361, 7-19-60, Cl. 62—355.

Miller, Stewart E., to Bell Telephone Laboratories, Inc. Nonreciprocal attenuator. 2,946,025, 7-19-60, Cl. 333—24.

Milliken, Thomas H., Jr.: *See*—
Cornelius, Edward B., Milliken, and Mills. 2,945,823.

Mills, George A.: *See*—
Cornelius, Edward, Milliken, and Mills. 2,945,823.

Mills, Walter E., to Sylvania Electric Products, Inc. Strip transmission line switch. 2,946,024, 7-19-60, Cl. 333—7.

Minerals & Chemicals Corp. of America: *See*—
Grim, Ralph E. 2,945,768.

Minneapolis-Honeywell Regulator Co.: *See*—
Gelles, Abraham J. 2,946,009.
Patchell, Thomas A. 2,946,012.

Minnesota Mining and Mfg. Co.: *See*—
Anderson, Arthur A., and Schmidt. 2,945,336.

Minsinger, Manfred: *See*—
Steinhofer, Adolf, Minsinger, and Friederich. 2,945,893.

Mitchell, William H., to Westinghouse Electric Corp. Lubricating oil return system for sleeve bearings. 2,945,729, 7-19-60, Cl. 308—132.

Mixing Equipment Co., Inc.: *See*—
Dykman, Milton. 2,945,711.

Miyasawa, Isamu: *See*—
Yamaguchi, Teruichi, and Miyasawa. 2,945,447.

Mobay Chemical Co.: *See*—
Ulderup, Jurgen, Reuter, and Jachel. 2,945,563.

Moffatt, Dillon W. Lamp. 2,945,946, 7-19-60, Cl. 240—47.

Molins Machine Co. Ltd.: *See*—
Powell, Gordon F. 2,945,497.

Moloney, Raymond T.: *See*—
Nicolaus, Frank G. 2,945,624.

Monsanto Chemical Co.: *See*—
Aykanian, Ardashes A., and Carlson. 2,945,761.
Braun, Gail E. 2,945,872.
Blanchette, Joseph A. 2,945,539.
Chapin, Earl C., and Smith. 2,945,836.
Dansi, Joachim. 2,945,832.
Dansi, Joachim. 2,945,994.
Hammann, William C. 2,945,857.
Murray, James G. 2,945,871.
Salyer, Ival O., and Herbig. 2,945,836.
Santmyer, Philip H. 2,945,761.

Montgomery Specialty Co., Inc.: *See*—
Rucklidge, Walter H., and Rodewyk. 2,945,463.

Moon, Sterling C., to The Jeffrey Mfg. Co. Mining machine having means for cutting side wall holes for roof timbers. 2,945,886, 7-19-60, Cl. 262—7.

Moore, William H., and H. L. Gerald. Piston skirt knurling tool. 2,945,406, 7-19-60, Cl. 80—5.1.

Morgan, Walter L. II, to United States of America, Navy. Magnetic memory and switching circuit. 2,946,047, 7-19-60, Cl. 340—174.

Morris, Jean M., to E. I. du Pont de Nemours and Co. Light collector. 2,945,958, 7-19-60, Cl. 250—230.

Moseley, F. L., Co.: *See*—
Kennedy, Charles J. 2,945,997.

Moser-Glaser & Co. A.G.: *See*—
Imhof, Alfred. 2,945,912.

Moskowits, Arthur, to North American Aviation, Inc. Liquid oxygen conversion system. 2,945,354, 7-19-60, Cl. 62—51.

Mossop, Isaac A., F. S. Fay, and G. Packman, to The United Kingdom Atomic Energy Authority. Apparatus for detecting radioactive particle emission. 2,945,955, 7-19-60, Cl. 250—71.5.

Motor Specialties Ltd.: *See*—
Charlton, Philip. 2,945,408.

Motorola, Inc.: *See*—
Byles, Theodore A. 2,946,014.
Byles, Theodore A., and Birkenes. 2,946,015.
Vlcnak, Weldon. 2,945,920.

Moyer, Oscar E., to Universal Mfg. Corp. Elevator overspeed brake. 2,945,561, 7-19-60, Cl. 187—89.

Mullane, Donald J.: *See*—
Congiusti, Dominick R., and Mullane. 2,945,776.

Mullarkey, Edward J. Weight balancing arrangement. 2,945,398, 7-19-60, Cl. 74—573.

Müller, Joachim, to International Standard Electric Corp. Valve arrangement for pneumatic dispatch tube systems. 2,945,640, 7-19-60, Cl. 243—22.

Müller, Karl: *See*—
Decker, Johannes B., Meder, and Müller. 2,945,259.

Mullins, Frederick C., to Koppers Co., Inc. Spray nozzle. 2,945,630, 7-19-60, Cl. 239—498.

Mulne, Lester F., to Harrington & Richardson, Inc. Safety lock for firearms. 2,945,316, 7-19-60, Cl. 42—66.

Murakami, Saburo: *See*—
Fukata, Masahiko, and Murakami. 2,945,416.

Murphree, Francis J., Jr., to United States of America, Navy. Automatic volume control. 2,946,017, 7-19-60, Cl. 330—133.

Murray, Alfred S., and J. L. Bruseo, to Tyson Bearing Corp. Seal for a separable bearing that locks the bearing parts into a unit. 2,945,730, 7-19-60, Cl. 308—187.2.

Murray, Howard S.: *See*—
Coe, William D., and Murray. 2,945,271.

Murray, James G., to Monsanto Chemical Co. Preparation of aryl esters. 2,945,871, 7-19-60, Cl. 260—410.6.

Murray, Leonard H.: *See*—
Sell, John, Jr., Anderson, and Murray. 2,945,265.

Murray, Stephen J., to Phillips Petroleum Co. Removal of metal halide catalyst from hydrocarbons. 2,945,911, 7-19-60, Cl. 260—683.74.

Murray, Victor S. Fitting for concrete slab. 2,945,705, 7-19-60, Cl. 285—18.

Musschoot, Albert, H. W. Schroeder, and M. G. Thomson, to Link-Belt Co. Centering and clamping device. 2,945,606, 7-19-60, Cl. 214—63.

Mussell, Dorsey R., to The Dow Chemical Co. Control of wild oats. 2,945,762, 7-19-60, Cl. 71—2.3.

Mussey, George E.: *See*—
Schultz, Melvin P., Luxem, and Mussey. 2,945,356.

Muter Co., The: *See*—
Rolleston, Karl E. 2,946,026.

N.V. Vereenigde Tabaksindustrieen Mignot & De Block: *See*—
Verbakel, Martinus. 2,945,490.

Nachman Corp.: *See*—
Gleason, William W. 2,945,245.

Nalco Chemical Co.: *See*—
Sterlin, Aaron. 2,945,821.

Napier, D., & Son Ltd.: *See*—
Gilbert, Ronald A. 2,945,350.

National Broach & Machine Co.: *See*—
Mentley, Max B. 2,945,424.
Sigman, John J., Jr., McNabb, and Verschaeve. 2,945,425.

National Gypsum Co.: *See*—
Schlegliter, Joseph W. 2,945,329.

National Research Development Corp.: *See*—
Williamson, James. 2,945,847.

Nelson, Bartee R. Sprinkler. 2,945,385, 7-19-60, Cl. 74—75.

Nelson, Dale H.: *See*—
Greene, Leonard M., and Nelson. 2,945,375.

Nelson, Melvin E., to The Hufford Corp. Power actuated wheel elevating and supporting stand. 2,945,522, 7-19-60, Cl. 144—288.

Nemeth, Otto H. Electromagnetic timing device. 2,945,932, 7-19-60, Cl. 200—27.

Nesmoe, Norman, to Sperry Rand Corp., Ford Instrument Co. Division. Electronic clipping circuit. 2,946,011, 7-19-60, Cl. 328—135.

Neuhaus, Gustav K. Flow divider. 2,945,507, 7-19-60, Cl. 137—606.13.

Neumann, Helmut, to Siemens & Halske Aktiengesellschaft. Ferrite magnetic heads. 2,945,919, 7-19-60, Cl. 179—100.2.

Newcomb, Douglas H.: *See*—
Broughton, Arthur E. 2,945,628.

New York Air Brake Co., The: *See*—
Westveer, Robert C. 2,945,351.

Nicholson, Daniel E.: *See*—
Bown, Delos E., Earhart, Perry, and Nicholson. 2,945,899.

Nicolaus, Frank G., to R. T. Moloney, deceased; American National Bank and Trust Co. of Chicago, executor. Counting number register. 2,946,694, 7-19-60, Cl. 235—92.

Nicolle, Charles. Apparatus for handling suppositories and similar articles. 2,945,335, 7-19-60, Cl. 53—142.

Niedereest, Henry. Safety brake. 2,945,546, 7-19-60, Cl. 180—82.

Nielson, Francis T., to International Minerals & Chemical Corp. Apparatus for the granulation of fertilizers. 2,945,747, 7-19-60, Cl. 23—259.1.

Nitranen, John V., and R. B. Welden, to United States of America, Navy. Pneumomatic training devices. 2,945,304, 7-19-60, Cl. 35—17.

Nippon Kogaku K. K.: *See*—
Fukata, Masahiko, and Murakami. 2,945,416.

Ned, Peter. Static lift wing plane. 2,945,642, 7-19-60, Cl. 244—12.

Nopco Chemical Co.: *See*—
Klein, Howard C. 2,945,876.

Nordegren, Sven-Ake, to Aktiebolaget Vibro-Verken. Vibrators, more particularly an immersion vibrator. 2,945,970, 7-19-60, Cl. 310—81.

Norman, Oscar L.: *See*—
Good, Robert C., and Norman. 2,945,787.

Normandin, William O., to Canada Envelope Co. Gusset type envelopes. 2,945,616, 7-19-60, Cl. 229—68.

Normandin, William O., to Canada Envelope Co. Gusset type envelopes. 2,945,617, 7-19-60, Cl. 229—68.

Norris, James C.: *See*—
Julian, Clarence L., Epply, and Norris. 2,945,923.

North American Aviation, Inc.: *See*—
Bower, John L., and Beers. 2,945,627.
Moskowits, Arthur. 2,945,354.
Pica, Noel W. 2,945,421.
Slater, John M. 2,945,643.

Norton, Clyde J., and D. F. Dixon, to Lear Inc. Servo amplifier system. 2,945,996, 7-19-60, Cl. 318—28.

Notthoff, Johannes K.: *See*—
Little, Howard M., and Notthoff. 2,945,538.

Nye, Clifford: *See*—
Koppersach, William A., and Nye. 2,945,621.

Oberauer, John, to The J. B. Ehrsam & Sons Mfg. Co. Splicing machine and method. 2,945,462, 7-19-60, Cl. 113—1.

Oblinger, Edwin F.: *See*—
Parker, Richard W., and Oblinger. 2,945,249.

O'Boyle, Charles M.: *See*—
Stults, Posy G., Jr. 2,945,396.

Obrist, Heinrich A., to Escher Wyss Aktiengesellschaft. Hydraulic turbine plant having a concrete spiral housing. 2,945,960, 7-19-60, Cl. 290—52.

O'Connor, John J.: *See*—
Edgemond, John W., Jr., and O'Connor. 2,946,516.

Oderman, Sam: *See*—
Ricards, Charles L., Tollison, Campbell, and Oderman. 2,945,438.

Ogden Corp.: *See*—
Young, Willard G. 2,945,240.

O'Hara, John J. Safety locks for harness. 2,945,563, 7-19-60, Cl. 188—65.1.

Ohio Crankshaft Co., The: *See*—
Messner, Harlan A., and Osborn. 2,945,935.

Ohio State University Research Foundation, The: *See*—
Omietanski, George M. 2,945,884.

Ohlson, John L., and E. K. Wilip, to W. R. Grace & Co. Vinyl N,N-dibutyl adipamate. 2,945,678, 7-19-60, Cl. 260—482.

Olin Mathieson Chemical Corp.: *See*—
Jurist, Alfred E. 2,945,850.
Kopf, Rowland J., Henning, and Marsh. 2,945,236.
O'Neill, John J., Jr. 2,945,751.

Olivetti Ing. C. & C. S.p.A.: *See*—
Beccia, Giuseppe. 2,945,578.

Olney, George J., to George J. Olney, Inc. Vegetable separating machine. 2,945,589, 7-19-60, Cl. 209—164.

Olney, George J., Inc.: *See*—
Olney, George J. 2,945,589.

Omietanski, George M., to The Ohio State University Research Foundation. Hydrazinium salts. 2,945,884, 7-19-60, Cl. 260—566.

Onak, Frank M.: *See*—
Bredtschneider, Kurt E. and Onak. 2,945,504.

O'Neill, John J., Jr., to Olin Mathieson Chemical Corp. Process for making smokeless powder. 2,945,751, 7-19-60, Cl. 52—20.

Oplinger, Kirk A., and I. M. Holliday, to Westinghouse Electric Corp. Control arrangements for craft operable in space. 2,945,648, 7-19-60, Cl. 244—77.

Opti-Werk G.m.b.H.: *See*—
Porepp, Hans. 2,945,276.

Osborn, Harry B., Jr.: *See*—
Messner, Harlan A., and Osborn. 2,945,935.

Osmun, Dean W. Grappling tool. 2,945,720, 7-19-60, Cl. 294—86.

Ostergaard, Martin P., Jr., to Gulton Industries, Inc. Photographic processing method. 2,945,760, 7-19-60, Cl. 96—48.

Ostrom, Raymond: *See*—
Grunwald, Arthur A., and Ostrom. 2,946,039.

Packman, Gordon: *See*—
Mossop, Isaac A., Fay, and Packman. 2,945,955.

Pajenkamp, Horst A. Russ, H. zur Strassen, K. Meyer, and H. Rausch, to Dyckerhoff Zementwerke Aktiengesellschaft, and Metallgesellschaft Aktiengesellschaft. Process for manufacturing white cement. 2,945,685, 7-19-60, Cl. 263—53.

Pall Corp.: *See*—
Pall, David B. 2,945,591.

Pall, David B., to Pall Corp. Filter. 2,945,591, 7-19-60, Cl. 210—234.

Pallo, Karl. Fluid engines. 2,945,479, 7-19-60, Cl. 121—120.

Panagrossi, Ahmed, R. L. Hauser, and F. C. Fusco, to The Connecticut Hard Rubber Co. Lamination or coating of fluorine-substituted polyethylenes with or on other substances. 2,945,773, 7-19-60, Cl. 117—138.8.

Parker, Clifford, to Ideal School Supply Co. Chart support ring. 2,945,594, 7-19-60, Cl. 211—46.

Parker, Richard W., and E. F. Oblinger, to The Parker Sweeper Co. Lawn sweeping machine. 2,945,249, 7-19-60, Cl. 15—79.

Parker Sweeper Co., The: *See*—
Parker, Richard W., and Oblinger. 2,945,249.

Parkhurst, Robert D. Apparatus for the practice and study of mathematical tables. 2,945,303, 7-19-60, Cl. 35—9.

Parsons, Sir Howard Grubb, & Co. Ltd.: *See*—
Martin, Albert E. 2,945,953.

Pastorek, John J.: *See*—
Rees, Kenneth A., Pastorek, Williams, and Herman. 2,945,796.

Patchell, Thomas A., to Minneapolis-Honeywell Regulator Co. Signal generator. 2,946,012, 7-19-60, Cl. 328—144.

Patent-Treuhand-Gesellschaft fur elektrische Gluhlampen m.b.H.: *See*—
Schönherr, Fritz. 2,945,977.

Paterson, Gavin D., to K.A.C. Ltd. Toggle fasteners. 2,945,274, 7-19-60, Cl. 24—68.

Patterson, Edgar W. Automatic counterbalance. 2,945,299, 7-19-60, Cl. 74—569.

Paukstela, Stanley: *See*—
Chasteney, Ruth G., and Paukstela. 2,945,568.

Paulding, John L., Inc.: *See*—
Bettencourt, Theodore R. 2,946,036.

Paulson, William A., to Barber-Colman Co. Power operator. 2,945,393, 7-19-60, Cl. 74—472.

Payne, Eugene L. Boat mooring. 2,945,448, 7-19-60, Cl. 114—230.

Peckham, Edwin G.: *See*—
Dietrich, Eric R., and Peckham. 2,945,701.

Pence, Alfred. Metal-snake guard. 2,945,306, 7-19-60, Cl. 56—2.

Pennsalt Chemicals Corp.: *See*—
Grieger, John C. 2,945,780.

Perin, Martin R., to The Singer Mfg. Co. Sewing machine work-supporting beds. 2,945,461, 9-19-60, Cl. 112—260.

Perrault, Arthur to B. O. Gustafson and an undivided fractional interest to R. L. Dugger. Machine for packaging soft printed butter. 2,945,334, 7-19-60, Cl. 53—64.

Perry, Robert H., Jr.: *See*—
Bown, Delos E., Earhart, Perry, and Nicholson. 2,945,899.

Peter, Cecil M.: *See*—
Swift, Harvey C., and Peter. 2,945,691.

Petersen, Edwin F. Magnetically impelled ball vibrator. 2,945,366, 7-19-60, Cl. 74—87.

Petersen, Ivan A., to Phillips Petroleum Co. Aluminum chloride-hydrocarbon complex sludge catalyst separation. 2,945,910, 7-19-60, Cl. 260—683.74.

Peterson, Oscar. Multi-purpose tool. 2,945,301, 7-19-60, Cl. 33—1.

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Petty, Charles O., ⅓ to La Gloria Oil and Gas Co. Sweetening and stabilizing of naphthas. 2,945,803, 7-19-60, Cl. 208—204.

Petty, Charles O., to La Gloria Oil and Gas Co. Regeneration of spent caustic. 2,945,889, 7-19-60, Cl. 260—609.

Petty, Macon, to Hudson Engineering Corp. Method of forming hollow reinforced plastic bodies. 2,945,242, 7-19-60, Cl. 18—56.

Peyches, Ivan, to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey. Apparatus for surfacing glass. 2,945,350, 7-19-60, Cl. 51—115.

Phelan, Louis A. M., and J. W. Vos; said Vos assor. to said Phelan. Process for broiling food. 2,945,767, 7-19-60, Cl. 99—107.

Philco Corp.: *See*—
Williams, Richard A. 2,945,789.

Phillips, Alvin R.: *See*—
Hignett, Travis P., Phillips, and Young. 2,945,754.

Phillips Petroleum Co.: *See*—
Boudreaux, George F., and Bobo. 2,945,678.
Bright, Glenn O. 2,945,951.
Findlay, Robert A. 2,945,903.
Hutchinson, William M. 2,945,344.
Murray, Stephen J. 2,945,911.
Peterson, Ivan A. 2,945,910.
Schirmer, Robert M. 2,945,342.

Physical Measurements Corp.: *See*—
Martin, Robert W. 2,945,378.

Pickwick Co.: *See*—
Corey, Frederick C., and Pitts. 2,945,257.

Pines, Arthur N.: *See*—
Shaffer, Lloyd H., and Pines. 2,945,874.

Pion, Noel W., to North American Aviation, Inc. Spin rocket and rotating screw type launching apparatus. 2,945,421, 7-19-60, Cl. 89—1.7.

Pipe Line Service Corp.: *See*—
Robertson, Evans. 2,945,278.

Pirelli S.p.A.: *See*—
De Filippo, Elio. 2,945,522.
Loghi, Giuseppe. 2,945,525.

Pitts, Robert D.: *See*—
Corey, Frederick C., and Pitts. 2,945,257.

Pittsburgh Plate Glass Co.: *See*—
Takenaka, Fred T., and Englehart. 2,945,268.

Platz, Elwood T., J. B. Cataldo, and J. A. Herrmann, to I-T-E Circuit Breaker Co. Electric receptacle. 2,946,037, 7-19-60, Cl. 339—154.

Platz, Rolf: *See*—
Kroeper, Hugo, and Platz. 2,945,906.

Plume, William F., to Boeing Airplane Co. Automatic hydraulic control for clutch. 2,945,374, 7-19-60, Cl. 192—85.

Pneumatil Corp.: *See*—
Bohannon, David L. 2,945,689.

Pohlman, Marvin A.: *See*—
Jahnke, Louis P., and Pohlman. 2,945,738.

Polania, Walter R., to American Steel Foundries. Tread brake arrangement. 2,945,562, 7-19-60, Cl. 188—52.

Polhemus, Von D., and W. C. McIntyre, to General Motors Corp. Fluid suspension having quick centering control for electrically actuated valves. 2,945,700, 7-19-60, Cl. 280—124.

Polymer Corp. Ltd.: *See*—
Alexander, Douglas S., and Firke. 2,945,900.

Pope, Harold W., P. F. Hayner, and R. B. Henderson, to Sanders Associates, Inc. Inertial guidance device. 2,945,380, 7-19-60, Cl. 74—5.6.

Poresp, Hans, to Opti-Werk G.m.b.H. Starting piece for spiral wire zip fasteners. 2,945,276, 7-19-60, Cl. 24—205.11.

Porter-Cable Machine Co., The: *See*—
Burrows, Milford D., Graham, and Barbour. 2,945,338.

Powell, Gordon F., to Molins Machine Co. Ltd. Driving arrangements for the tobacco hoppers of cigarette-making machines. 2,945,497, 7-19-60, Cl. 131—21.

Powers, George N. Two piece key. 2,945,273, 7-19-60, Cl. 70—395.

Powers, Milton A. Fluid filtering mediums. 2,943,557, 7-19-60, Cl. 183—61.

Prater, John D.: *See*—
Christensen, Charles C., and Prater. 2,945,742.
Simmerley, Stuart R., and Prater. 2,945,743.

Pratt, William D. Bulb basket and marker. 2,945,323, 7-19-60, Cl. 47—37.

Precisia A.G. Rechenmaschinenfabrik: *See*—
Heinse, Werner, and Jülich. 2,945,622.

Preston, Lloyd S.: *See*—
Vogel, Otto F. Bonney, and Preston. 2,945,902.

Pribram, Edwin, to Fairey Aviation Ltd. Aircraft with wing containing lifting jets. 2,945,641, 7-19-60, Cl. 244—12.

Priesemuth, Wolfgang. Self interrupting relay. 2,945,930, 7-19-60, Cl. 200—87.

Probert, Maurice, to General Electric Co. Amide stabilized organosiloxylane compositions and their preparation. 2,945,834, 7-19-60, Cl. 260—46.5.

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Puckett, Ronald G. Barbed wire laying device. 2,945,512, 7-19-60, Cl. 140—2.

Pulsifer, Orville R. Trawling device. 2,945,468, 7-19-60, Cl. 114—235.

Quaker Oats Co., The: *See*—
Coig, Francis K. 2,945,848.

Rallis, Constantine M. Rotary feed holder for coating machine. 2,945,558, 7-19-60, Cl. 211—144.

Raleigh Patent Co.: *See*—
Lane, George T. 2,945,764.

Ramser, Walter O.: *See*—
Eckert, Gerhard F., Ramser, and Wieland. 2,945,922.

Randall, David L.: *See*—
Hoefle, Milton L., Randall, and Renfrew. 2,945,867.

Randel, Glenn T. Safety razor and blade feeding device therefor. 2,945,297, 7-19-60, Cl. 30—58.

Rauch, Hans: *See*—
Pajenkamp, Horst, Rass, nee Strassen, Meyer, and Rauch. 2,945,686.

Rawlings, Roland G.: *See*—
Baumstark, Leopold, Jr., and Rawlings. 2,945,494.

Read, Evelyn: *See*—
Read, Roland D. 2,945,372.

Read, Roland D., to E. Read and P. E. Gensler. Door latch mechanism. 2,945,372, 7-19-60, Cl. 70—62.

Reenstra, Willard A., and W. J. Ritchie, to Bell Telephone Laboratories, Inc. A.C. coding systems for multiple load selection. 2,946,043, 7-19-60, Cl. 340—147.

Rees, Kenneth A., J. J. Pasterek, L. M. Williams, and C. B. Herman, to Esso Research and Engineering Co. Catalytic conversion of hydrocarbons with removal of fouled material from heat exchangers. 2,945,798, 7-19-60, Cl. 208—48.

Reese, Glenn A., to The Magnavox Co. Switch assembly. 2,945,931, 7-19-60, Cl. 200—80.

Reeve, David H., to International Minerals & Chemical Corp. Preparation of fluorine compounds. 2,945,748, 7-19-60, Cl. 23—58.

Regan Forge and Engineering Co.: *See*—
Regan, Louis M., and Sims. 2,945,665.

Regan, Louis M., and D. L. Sims, to Regan Forge and Engineering Co. Packer. 2,945,665, 7-19-60, Cl. 251—1.

Reheis Co., Inc.: *See*—
Beckman, Stewart M., and Garinis. 2,945,783.

Reichardt, Henry A., to Bigelow-Sanford Carpet Co., Inc. Method of making Axminster-type carpet. 2,945,311, 7-19-60, Cl. 139—7.

Renfrew, Edgar M.: *See*—
Hoefle, Milton L., Randall, and Renfrew. 2,945,867.

Renner, Ulrich, to Geigy Chemical Corp. Process for obtaining an active substance with action on the heart from plants of the Vocanga genus. 2,945,851, 7-19-60, Cl. 260—236.

Republic Aviation Corp.: *See*—
Arnson, Henry E. 2,945,540.
Atkin, Edgar H. 2,946,052.

Research Corp.: *See*—
Tarrant, Pinal, and Lutz. 2,945,896.

Research Engineering Co.: *See*—
Rheesley, John H. 2,945,475.

Ressler, John J. Combination moisture dehydrator and wind-blown musical instrument. 2,945,410, 7-19-60, Cl. 84—297.

Reuter, Franz G.: *See*—
Uiderup, Jorgen, Reuter, and Jockel. 2,945,360.

Revere Corporation of America: *See*—
Sell, John, Jr., Anderson, and Murray. 2,945,285.

Rex, Charles H., to General Electric Co. Luminaire. 2,945,945, 7-19-60, Cl. 240—35.

Rexair, Inc.: *See*—
Brock, Clarence A. 2,945,559.

Reynolds, Jack J.: *See*—
Bourne, Henry A., Gant, and Reynolds. 2,945,953.

Rhodes, Charles K. Hula hoop spinner toy. 2,945,319, 7-19-60, Cl. 46—47.

Ricards, Charles L., P. L. Tollison, L. R. Campbell, and S. Odorman, to Wood Newspaper Machinery Corp. Plate locking mechanism. 2,945,435, 7-19-60, Cl. 101—378.

Riccitiello, Michael, and J. J. Wachter, to Westinghouse Electric Corp. Method for producing massive solid homogeneous bodies of polyethylene having a thickness of the order of several inches. 2,945,264, 7-19-60, Cl. 18—56.

Rice, Joseph: *See*—
Wright, Esmond P. G., Weir, and Rice. 2,945,635.

Rickert, Herbert R., and W. H. Geiger, to The Dow Chemical Co. 2,4,4,2-tetra-tertiarybutylphenoxyethoxyethyl. 2,945,856, 7-19-60, Cl. 260—246.

Riehm, Theodor, to Udis Societe Anonyme. Process for the saccharification of softwood sawdust. 2,945,777, 7-19-60, Cl. 127—37.

Ring, Albert W., to M. I. Glass. Dynamic toy simulating a feeding bird or animal. 2,945,320, 7-19-60, Cl. 46—242.

Ritchie, Wesson J.: *See*—
Reenstra, Willard A., and Ritchie. 2,946,043.

Ritter, Kaspar, and W. Hoetter, to Allgaier-Werke G.m.b.H. Drive arrangement for vehicles such as tractors and the like. 2,945,389, 7-19-60, Cl. 74—15.8.

Ritzi, Emil, to Lear, Inc. Miniature gas turbine. 2,945,349, 7-19-60, Cl. 60—39.36.

Rixson, Oscar, Co., The: *See*—
Ellis, David H. 2,945,253.

Roberts, John F. L., H. J. Twitchett, and A. S. Wild, to Imperial Chemical Industries Ltd. Process for manufacture of polyethylene terephthalate in finely divided form. 2,945,840, 7-19-60, Cl. 260—75.

Roberts, Louis W.: *See*—
Chus, Herbert H., and Roberts. 2,945,262.

Robertshaw-Fulton Controls Co.: *See*—
Houser, Roy W. 2,945,598.

Robertson, Evans, to Pipe Line Service Corp. Coating apparatus. 2,945,278, 7-19-60, Cl. 26—98.

Robinson, William W., Jr., and D. C. Camp. Poultry feeding trough with vertically adjustable supporting leg assemblies. 2,945,473, 7-19-60, Cl. 119—61.

Rockwell Mfg. Co.: *See*—
Stoller, Charles V., and Rink. 2,945,966.

Rockwell, Ronald K., and R. J. Samario, to Sperry Rand Corp. Detector circuit for loran receivers. 2,945,662, 7-19-60, Cl. 343—206.

Rockwell-Standard Corp.: *See*—
Hesse, Bryan E., Sager, and Mathews. 2,945,564.

Rolfsohn, Karl R., to The Muter Co. Tuned transformer unit. 2,946,026, 7-19-60, Cl. 333—78.

Rolls-Royce Ltd.: *See*—
Colley, Rowan H. 2,945,247.
Metcalf, Eric, and Cook. 2,945,949.
Petrie, James A. 2,945,671.

Romano, Albert P. Auxiliary tray for refrigerator shelves. 2,945,897, 7-19-60, Cl. 311—139.

Romans, Robert T., to The American Oil Co. Method of improving the color of an arsenatic hydrocarbon obtained from a hydrofluoric extract by treatment with maleic anhydride. 2,945,902, 7-19-60, Cl. 260—674.

Roux, Pierre, to Etablissements L. Moreau Societe Anonyme. Machines for shaping sheet metal. 2,945,528, 7-19-60, Cl. 153—32.

Rowoth, Otis A.: *See*—
Snyder, John M., Rowoth, and Lee. 2,945,795.

Royal McBee Corp.: *See*—
Prechette, Leo P., Jr. 2,945,577.
Lapointe, Lloyd J., D'Onofrio, and Cotran. 2,945,576.

Royse, Draper P., to Gem Crib and Cradle Co. Bed rail hook adjustment. 2,945,243, 7-19-60, Cl. 5—296.

Rudegeair, David T.: *See*—
Kucklinsky, Walter H., and Rudegeair. 2,945,463.

Russ, Alfred: *See*—
Pajenkamp, Horst, Russ, nee Strassen, Meyer, and Rauch. 2,945,686.

Russell, Allan D., to Kingston Electronic Corp. Signal-pick-up test probe. 2,946,001, 7-19-60, Cl. 324—30.

Russell, Allan D., to Kingston Electronic Corp. Signal-pick-up test probe. 2,946,002, 7-19-60, Cl. 324—34.

Russell, John D. Rotary welding electrodes. 2,945,939, 7-19-60, Cl. 219—92.

Russo, Matthew: *See*—
Caley, Herschel R., Russo, and Singer. 2,945,397.

Ruthig, John, Jr.: *See*—
Eichler, Rolf W., Eichorn, and Ruthig. 2,945,454.

Rys, John L., to The Kooleavite Co. Ltd. Hydraulic control of brakes. 2,945,572, 7-19-60, Cl. 192—8.

Saarnato, Aulis, to Ansola Oy. Door handle lock. 2,945,719, 7-19-60, Cl. 292—169.

Safe Flight Instrument Corp.: *See*—
Grose, Leonard M., and Nelson. 2,945,375.

Sailer, Erik, to Food Machinery and Chemical Corp. Process of purifying carbon tetrachloride. 2,945,796, 7-19-60, Cl. 204—163.

Salvi, A., & C. s.p.a. I.F.: *See*—
Christiani, Severino. 2,945,528.

Salyer, Ival O., and J. A. Herbig, to Monsanto Chemical Co. Process of polymerizing monomeric styrene in the presence of a copolymer of ethylene and vinylene carbonate. 2,945,836, 7-19-60, Cl. 260—45.5.

Samario, Edward J.: *See*—
Rockwell, Ronald K., and Samario. 2,946,052.

Sampson, Frederick W.: *See*—
Shaw, Arthur R., and Sampson. 2,945,759.

Sanders Associates, Inc.: *See*—
Pope, Harold W., Hayner, and Henderson. 2,945,380.

Sanford, Roy S., and T. D. Hames, to R. S. Sanford, R. H. Caster, J. O. Hames, W. A. Bates, and E. D. Sodergren. Fluid pressure brake mechanism. 2,945,566, 7-19-60, Cl. 188—264.

Sanoica, Frank J.: *See*—
Hansen, George E., and Sanoica. 2,945,505.

Sanraku Shuzo Kabushiki Kaisha: *See*—
Hongo, Motoyoshi. 2,945,766.

Santmyer, Philip H., to Monsanto Chemical Co. Method of controlling nematodes employing alkali metal salt of N-(a-propyl) dithiocarbamate. 2,945,781, 7-19-60, Cl. 167—22.

Schaefer, George E., to Hamilton Mfg. Co. Cabinet corner construction. 2,945,270, 7-19-60, Cl. 20—93.

Schenck, Ramon T. E., to Keystone Chemurgic Corp. Bactericidal compounds and processes for their preparation. 2,945,853, 7-19-60, Cl. 260—239.65.

Scherer, Horst: *See*—
Gengenbach, Otto, and Scherer. 2,945,472.

Scherenberg, Hans O., and K.-H. R. Gosechel, to Daimler-Benz Aktiengesellschaft. Mixture varying means for internal combustion engines. 2,945,484, 7-19-60, Cl. 123—179.

Schirmer, Robert M., to Phillips Petroleum Co. Thermal stability additive in hydrocarbon jet fuels. 2,945,342, 7-19-60, Cl. 60—35.4.

Schlatter, H. A., Aktiengesellschaft: *See*—
Schlatter, Hans A. 2,945,940.

Schlatter, Hans A., to H. A. Schlatter Aktiengesellschaft. Resistance welding process. 2,945,940, 7-19-60, Cl. 219—100.

Schmerling, Louis, to Universal Oil Products Co. Polymerization of olefins with complex catalyst comprising platinum or palladium. 2,945,845, 7-19-60, Cl. 260—93.7.

Schmidt, Benjamin F. Double acting mercury piston oil well pump. 2,945,450, 7-19-60, Cl. 103—165.

Schmidt-Barpe, Dieter, F. Haupp, M. Schorr, and H. Lämmer, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. New piperazine-carboxylic acid esters and process of preparing them. 2,945,860, 7-19-60, Cl. 260—243.

Schmolka, Irving R., to Colgate-Palmolive Co. Process for preparing detergent bars. 2,945,816, 7-19-60, Cl. 252—161.

Schneider, Ernest V., to Consolidated Electrodynamics Corp. Floral spoid phonograph mechanism. 2,945,395, 7-19-60, Cl. 74—199.

Schneider, Ernest V., to The Alltronic Mfg. Co., Division of Consolidated Electronics Industries Corp. Remote control radio system. 2,946,064, 7-19-60, Cl. 343—225.

Schneider, Fred B.: *See*—
Avery, Ralph W., and Schneider. 2,945,487.

Schneller, Joseph W., to National Gypsum Co. Lathing clips. 2,945,329, 7-19-60, Cl. 50—479.

Schoch, Ernst A.-G.: *See*—
Wyss, Hugo. 2,945,514.

Schoepe, Harry, and R. C. Eberzold, to The Warner & Swasey Co. Machine tool. 2,945,394, 7-19-60, Cl. 74—572.

Schönherr, Fritz, to Patent-Treuhand-Gesellschaft fur Elektrische Glühlampen m.b.H. Fluorescent glow discharge lamp. 2,945,977, 7-19-60, Cl. 313—217.

Schorr, Manfred: *See*—
Schmidt-Barpe, Dieter, Haupp, and Schorr. 2,945,860.

Schranzhofer, Ernst, K. Gottacker, and H. Wolz, to Farbenfabriken Bayer Aktiengesellschaft. Disinfectant compositions. 2,945,782, 7-19-60, Cl. 167—30.

Schreyer, Kenneth D., and A. R. Eldridge, to Columbus McKinnon Chain Corp. Conveyor trolley trackway. 2,945,452, 7-19-60, Cl. 104—106.

Schroeder, Harry W.: *See*—
Muenchoff, Albert, Schroeder, and Thomsen. 2,945,606.

Schubert, Dale L.: *See*—
Erickson, Harold R. 2,945,521.

Schuldt, Donald A.: *See*—
Anderson, Arthur A., Schuldt. 2,945,236.

Schultz, Melvin P., P. L. Lucas, and G. E. Mussey, to U.S. Industries, Inc. Refrigerated milk storage tank. 2,945,-256, 7-19-60, Cl. 62—137.

Schultz, Raymond J.: *See*—
Marquis, Donald P., and Schultz. 2,945,264.

Schulz, Norman F., to Regents of the University of Minnesota. Magnetic roasting process and apparatus. 2,945,755, 7-19-60, Cl. 75—1.

Schurr, Paul E.: *See*—
Meyer, Curtis B., Pancher, and Schurr. 2,945,869.

Schwarzmayr, Ludwig. Aircraft variable lift wing. 2,945,-645, 7-19-60, Cl. 244—42.

Schweichel, Frederick G., to Stewart-Warner Corp. Pressure relief valve. 2,945,506, 7-19-60, Cl. 137—515.

Searle, G. D. & Co.: *See*—
Bergstrom, Clarence G. 2,945,852.
Hoehn, Willard M. 2,945,868.

Sears, Hartley M., to Hyval Products Co. Swivel type clamp. 2,945,713, 7-19-60, Cl. 287—54.

Sears, Richard E., to Beaver Precision Products, Inc. Ball spline assembly. 2,945,366, 7-19-60, Cl. 64—23.

Sedergren, Erling D.: *See*—
Stanford, Roy S., and Hames. 2,945,566.

Seegert, Neal, to Beso Inc. Burner control apparatus. 2,945,569, 7-19-60, Cl. 67—2.1.

Sell, John, Jr., R. W. Anderson, and L. H. Murray, to Revere Corp. of America. Method of making insulated wire. 2,945,265, 7-19-60, Cl. 18—59.

Semmens, Peter W. B., and J. D. Symmers-Smith, to Imperial Chemical Industries Ltd. Lubricant composition. 2,945,814, 7-19-60, Cl. 252—49.9.

Serve Corp. of America: *See*—
Blackstone, Henry. 2,945,414.

Seseka, John C. Confectioners' decorating device. 2,945,456, 7-19-60, Cl. 107—52.

Sewell, Ben W., to United States of America, Navy. Switch. 2,945,928, 7-19-60, Cl. 200—61.41.

Shaffer, Lloyd H., and A. N. Pines, to Union Carbide Corp. Process for separating mixtures of chloroalkanes. 2,945,873, 7-19-60, Cl. 260—448.2.

Shanks, Howard R., to Hughes Aircraft Co. Electrically variable complex slot. 2,946,056, 7-19-60, Cl. 343—768.

Shanks, Howard R., to Hughes Aircraft Co. Mechanically variable complex slot. 2,946,057, 7-19-60, Cl. 343—768.

Shapiro, Martin. Ankle supporting athletic shoe. 2,945,309, 7-19-60, Cl. 36—8.5.

Sharbaugh, Annabee H.: *See*—
Aser, Peter L., and Sharbaugh. 2,945,442.

Sharpe, Robert F.: *See*—
Freed, Jacob B., and Sharpe. 2,945,709.
Freed, Jacob B., and Sharpe. 2,945,710.

Shaw, Arthur R., and F. W. Sampson, to General Motors Corp. Method for measuring the strength of sintered ferrous articles. 2,945,759, 7-19-60, Cl. 73—101.

Shaw, Kersal G., to The Dow Chemical Co. Process for recovering iodides from aqueous solutions by ion exchange and conversion of the iodides to iodine. 2,945,748, 7-19-60, Cl. 23—216.

Shaw & Slavsky, Inc.: *See*—
Slavsky, Robert J. and J. R. 2,945,660.

Sheesley, John M., to Research Engineering Co. Actuating device. 2,945,476, 7-19-60, Cl. 121—38.

Shell Oil Co.: *See*—
Van Hoei, Frederick H. 2,945,891.

Shelton, Luther L., to Industrial Research Co. Motor boat structure. 2,945,466, 7-19-60, Cl. 114—62.

Sherburne, Philip C., to Grinnell Corp. Constant support hangers. 2,945,659, 7-19-60, Cl. 248—58.

Shmidl, Albert J., to Esso Research and Engineering Co. Production of polyisopropyl benzene. 2,945,901, 7-19-60, Cl. 260—671.

Shoemaker, Franklin W.: *See*—
Harmon, Carlyle, and Shoemaker. 2,945,253.

Siegel Inc.: *See*—
Buttenmanult, Rosaldo. 2,945,254.

Sidorof, Jerome. Convertible bed. 2,945,241, 7-19-60, Cl. 5—6.

Siedband, Melvin P., J. M. Hirst, and R. Casey, to United States of America, Navy. Pulsing circuit for magnetron. 2,946,021, 7-19-60, Cl. 331—87.

Siemens Edison Swan Ltd.: *See*—
Clark, John B., and Hicks. 2,945,917.

Siemens & Halske Aktiengesellschaft: *See*—
Neumann, Helmut. 2,945,919.

Siemens and Halske Aktiengesellschaft Berlin and Munich: *See*—
Dorendorf, Heinz. 2,945,286.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Kuhrt, Friedrich. 2,945,903.

Sierra Engineering Co.: *See*—
Bloom, Aaron. 2,945,501.

Siggel, Erhard: *See*—
Watzl, Anton, and Siggel. 2,945,788.

Sigman, John J., Jr., W. C. McNabb, and H. G. Verschoore, to National Broach & Machine Co. Method and apparatus for deburring gears. 2,945,425, 7-19-60, Cl. 90—1.6.

Silvernail, Lloyd H.: *See*—
Lehman, Freeman R., Silvernail, and Stilbert. 2,945,775.

Simmons, Charles M. Torque indicating gauge. 2,945,374, 7-19-60, Cl. 73—1.

Simpson, Harry A., Jr., to United States of America, Navy. Bookcase having vertically adjustable shelves. 2,945,599, 7-19-60, Cl. 211—147.

Sims, Darrell L.: *See*—
Regan, Louis M., and Sims. 2,945,085.

Sinclair Refining Co.: *See*—
Young, David W. 2,945,870.

Singer, Edward M.: *See*—
Caler, Herschel E., Russo, and Singer. 2,945,297.

Singer Mfg. Co., The: *See*—
Ferla, Martin R. 2,945,481.

Sire, Edouard M. Simulated candle device and package. 2,945,583, 7-19-60, Cl. 206—1.5.

Skreberg, Hans. Mechanical projector. 2,945,485, 7-19-60, Cl. 179—4.

Slade, Albert E., to Arthur D. Little, Inc. Superconductive switching element. 2,946,030, 7-19-60, Cl. 326—155.

Slater, John M., to North American Aviation, Inc. Control system. 2,945,642, 7-19-60, Cl. 244—14.

Slavsky, John R.: *See*—
Slavsky, Robert J. and J. R. 2,945,660.

Slavsky, Robert J. and J. R., to Shaw & Slavsky, Inc. Display stand. 2,945,660, 7-19-60, Cl. 248—161.

Slemmons, Arthur J., to Chrysler Corp. Heat exchanger. 2,945,680, 7-19-60, Cl. 257—245.

Slick, Fred S., to said Slick, and A. C. Johnson, and C. A. Lender. Interference-eliminating distributor cap vent means. 2,945,430, 7-19-60, Cl. 58—1.

Smith, Joseph E. Latch for container covers. 2,945,718, 7-19-60, Cl. 292—127.

Smith, Joseph W., and G. E. King, to Westinghouse Electric Corp. Control apparatus for a pump device. 2,945,445, 7-19-60, Cl. 106—11.

Smith, Leslie R.: *See*—
Hochert, Chester E., and Smith. 2,945,673.

Smith, Randall E. General pliers. 2,945,237, 7-19-60, Cl. 1—220.

Smith, Richard F.: *See*—
Chapin, Earl C., and Smith. 2,945,835.

Smith, Wesley A. and E. E. Ginther, to Tilt-A-Door Corp. Foldable canopy-type door. 2,945,536, 7-19-60, Cl. 160—189.

Snyder, Howard E., to Boeing Airplane Co. Double skin airfoil structure. 2,945,655, 7-19-60, Cl. 244—123.

Snyder, John M., O. A. Rowoth, and C. E. Lee, to The Beacon Milling Co., Inc. Process of feeding poultry and composition useful therein. 2,945,768, 7-19-60, Cl. 99—4.

Societa Farmaceutici Italia: *See*—
Alberti, Carlo G., Bernardi, Larini, and Vercellone. 2,945,882.

Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey: *See*—
Cherrier, Claude M. 2,946,797.
Peyches, Ivan. 2,945,530.
Touvay, Robert, and Martin. 2,945,333.

Societe Anonyme dite: Etablissements Ducellier: *See*—
Dreyfus, Marcel. 2,945,999.

Socony Mobil Oil Co., Inc.: *See*—
Andress, Harry J., Jr. 2,945,749.
Ciapetta, Frank G. 2,945,906.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,500.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,501.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,502.
Ciapetta, Frank G., Coonradt, and Garwood. 2,945,505.

Soldini, Robert B. Pre-batch trailer for concrete making ingredients. 2,945,684, 7-19-60, Cl. 259—165.

Sollin, Ingmar, to International Minerals & Chemical Corp. Resolution of DL-glutamic acid. 2,945,879, 7-19-60, Cl. 260—501.

Sower, Albert J., and E. J. Kent. Plural panel strip-cutting machine with traveling saw. 2,945,517, 7-19-60, Cl. 143—47.

Specialties Development Corp.: *See*—
Flynn, Thomas J., and Sylvester. 2,945,942.

Speed Park, Inc.: *See*—
Kroll, Cornelius and N. M. 2,945,602.
Kroll, Cornelius and N. M. 2,945,604.

Speidel Corp.: *See*—
Maeder, Paul F. 2,945,692.
Maeder, Paul F. 2,945,697.

Spence, John: *See*—
Carroll, Bart H., Jones, and Spence. 2,945,762.

Spencer, Richard W., to Sperry Rand Corp. Method of making magnetic toroids. 2,945,289, 7-19-60, Cl. 29—155.57.

Sperry Gyroscope Co. Ltd., The: *See*—
Hadekel, Ruben. 2,945,477.

Sperry Rand Corp.: *See*—
Cooper, Elmer D., and Jansky. 2,946,061.
Dayton, Edward R. 2,946,053.
Frank, Robert L. 2,946,004.
Frank, Robert L. 2,946,004.
Frank, Robert L. 2,946,019.
Greenfield, Milton H. 2,946,048.
Hudson, Kenneth. 2,945,930.
Jacobs, Bernard. 2,945,285.
Rockwell, Ronald E., and Samaris. 2,946,052.
Spencer, Richard W. 2,945,289.
Stotz, Carl C. 2,946,040.
Wathen, Robert L. 2,946,050.
Weir, John D. 2,945,231.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Nesenoff, Norman. 2,946,011.

Stabel, Stanley F., and S. J. Grocoss, to American Cyanamid Co. Method of preparing N,N',N''-triphenylborasole. 2,946,802, 7-19-60, Cl. 260—551.

Stahl, Nils E. J., and O. U. Larsson, to AB Almex. Method for marking period cards such as weekly or monthly period cards for railways, buses or the like and a device for carrying the method into effect. 2,945,432, 7-19-60, Cl. 101—93.

Staller, Charles V., and N. W. Kisk, to Rockwell Mfg. Co. Plug valves. 2,945,668, 7-19-60, Cl. 251—178.

Stampe, Gerhard: *See*—
Tietze, Hermann, and Stampe. 2,945,555.
Tietze, Hermann, and Stampe. 2,945,556.

Standard Oil Co. (Ohio), The: *See*—
Milberger, Ernest C. 2,945,809.
Stine, Harrison M., and Callahan. 2,945,902.
Stine, Harrison M., and Callahan. 2,945,906.
Zimmerman, Marlin U., Jr. 2,945,518.

Standard Register Co., The: *See*—
Davidson, John T. 2,945,435.

Sta-Rite Glass-Lok, Inc.: *See*—
Bolinger, George N. 2,945,500.

Stearns, Roswell H., to Indiana General Corp. Adjustable permanent magnetic separator. 2,945,590, 7-19-60, Cl. 209—223.

Stedman, Ronald E., to Imperial Chemical Industries Ltd. Recovery of uranium values. 2,945,741, 7-19-60, Cl. 23—14.5.

Steele, Harry M., Jr., to The Garrett Corp. Pressure transducer. 2,946,031, 7-19-60, Cl. 338—42.

Steiger, Robert, F. Luethy, and A. Haemmerle. Yarn guiding and treating apparatus. 2,945,370, 7-19-60, Cl. 68—205.

Steinbach, Francis N.: *See*—
Steinbach, Paul H. 2,945,918.

Steinbach, Paul H., ½ to F. N. Steinbach. Push button telephone dialing mechanism. 2,945,918, 7-19-60, Cl. 179—90.

Steinert Elektromagnetbau: *See*—
Tacke, Herbert. 2,945,991.

Steinhofer, Adolf, M. Minsinger, and H. Friederich, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Continuous production of hexachlorocyclopentadiene. 2,945,893, 7-19-60, Cl. 260—648.

Steinmetz, James M.: *See*—
Eichhorn, Jacob, and Steinmetz. 2,945,842.

Stelzer, William, to Kelsey-Hayes Co. Fluid pressure booster system. 2,945,352, 7-19-60, Cl. 60—54.6.

Stelzer, William, to Kelsey-Hayes Co. Tractor-trailer brake system. 2,945,726, 7-19-60, Cl. 303—21.

Stelzer, William, to Kelsey-Hayes Co. Tractor-trailer brake system. 2,945,728, 7-19-60, Cl. 303—63.

Stephens, Allen J. Wheel hub sealing units. 2,945,708, 7-19-60, Cl. 286—3.

Sterlin, Aaron, to Nalco Chemical Co. Process of inhibiting corrosion. 2,945,821, 7-19-60, Cl. 252—392.

Stevens, Frederic B., Inc.: *See*—
Barton, James. 2,945,579.

Stevens, William E. Bumper jack support. 2,945,663, 7-19-60, Cl. 248—170.

Stewart-Warner Corp.: *See*—
Schweisthal, Frederick G. 2,945,508.

Stilbert, Elmer K.: *See*—
Lehman, Freeman R., Silvernail, and Stilbert. 2,945,775.

Stine, Harrison M., and J. L. Callahan, to The Standard Oil Co. Isomerization process and catalyst therefor. 2,945,906, 7-19-60, Cl. 260—683.65.

Stine, Harrison M., and J. L. Callahan, to The Standard Oil Co. Isomerization process and catalyst therefor. 2,945,909, 7-19-60, Cl. 260—683.65.

Stobbe, Helmut, A. Glas, and H. Holtmann, to International Standard Electric Corp. Line identification arrangements particularly for telephone systems. 2,945,916, 7-19-60, Cl. 179—18.

Stockton, Raymond F. Design forming apparatus. 2,945,815, 7-19-60, Cl. 41—10.

Stotz, Carl C., to Sperry Rand Corp. Radar tracking system. 2,946,049, 7-19-60, Cl. 343—7.4.

Strecker, Charles E.: *See*—
Brooks Wesley W., and Strecker. 2,945,986.

Strecker, Charles E., deceased, by J. E. Strecker, executrix, to General Electric Co. Electrical discharge apparatus. 2,945,987, 7-19-60, Cl. 315—100.

Strecker, Jeanne E.: *See*—
Brooks, Wesley W., and Strecker. 2,945,986.
Strecker, Charles E. 2,945,987.

Strickler, Allen. Thermosensitive apparatus for demonstrating heat phenomena. 2,945,306, 7-19-60, Cl. 35—19.

Strip, Joseph, to United States of America, Navy. Operational checkout of data handling equipment. 2,945,915, 7-19-60, Cl. 178—69.

Stuart, Frank A., and G. R. Brashear. Filterable dispersion of glycerides in lubricating oils. 2,945,812, 7-19-60, Cl. 252—33.1.

Studley Paper Co., Inc.: *See*—
Cordell, Martin. 2,945,558.

Stults, Posy G., Jr., to C. M. O'Boyle. Slack adjuster for the foundation brakes of railway freight cars. 2,945,396, 7-19-60, Cl. 74—538.

Sturgeon, Thomas E. Convertible airplane. 2,945,645, 7-19-60, Cl. 244—49.

Suchow, Lawrence, to Francis Earle Laboratories, Inc. Nacrdous molybdenum disulfide. 2,945,770, 7-19-60, Cl. 106—145.

Summers-Smith, James D.: *See*—
Semmens, Peter W. B., and Summers-Smith. 2,945,914.

Sun Oil Co.: *See*—
Barton, Paul D. 2,945,465.
Hoel, Archie B. 2,945,833.
Jacob, Lawrence N. 2,945,822.
Magill, Lloyd G. 2,945,746.
McClure, William L. 2,945,724.

Super, Ralph K.: *See*—
House, Bryan E., Super, and Mathews. 2,945,564.

Surmatis, Joseph D., to Hoffmann-La Roche Inc. Unsaturated di(phosphonium halide) compounds and diphosphine compounds and preparation thereof. 2,945,885, 7-19-60, Cl. 260—606.5.

Svenska Aktiebolaget Gasaccumulator: *See*—
Svensson, Knut W. 2,945,506.

Svensson, Knut W., to Svenska Aktiebolaget Gasaccumulator. Control valve, particularly for air jackets. 2,945,600, 7-19-60, Cl. 137—236.

Swanson, Elmer C. Bag closure and opening device. 2,945,615, 7-19-60, Cl. 229—66.

Swanson, Oscar F., to Automatic Voting Machine Corp. Voting machine proof and record sheet pack. 2,945,488, 7-19-60, Cl. 101—90.

Swift, Harvey C., and C. M. Peter. Window lift mechanism. 2,945,691, 7-19-60, Cl. 268—124.

Sylvania Electric Products Inc.: *See*—
Faflick, Carl E. 2,944,055.
Mills, Walter B. 2,946,024.
Yando, Stephen. 2,945,584.

Sylvester, Walter G.: *See*—
Flynn, Thomas J., and Sylvester. 2,945,942.

Syntron Co.: *See*—
Alvord, Grove D. 2,945,823.

Tacke, Herbert, to Steinert Elektromagnetbau. Device for supplying current to load-lifting electromagnets. 2,945,991, 7-19-60, Cl. 317—123.

Takenaka, Fred T., and O. D. Englehart, to Pittsburgh Plate Glass Co. Laminated assembly. 2,945,268, 7-19-60, Cl. 20—56.4.

Talas, Jaroslav: *See*—
Khol, Frantisek, and Talas. 2,945,300.

Tanker, George E.: *See*—
Conrot, Louis B., and Tanker. 2,945,294.

Tanners' Council of America, Inc.: *See*—
Thorstensen, Thomas C. 2,945,737.

Tapp, Gerald L. Folding stairway construction. 2,945,545, 7-19-60, Cl. 182—77.

Tarallo, Stanley D., to Wyandotte Chemical Corp. Production of pyrazines. 2,945,858, 7-19-60, Cl. 260—250.

Tarczy-Hornoch, Zoltan, to Eldorado Electronics Co. Inhibitor circuit. 2,946,010, 7-19-60, Cl. 328—116.

Tarrant, Paul, and R. P. Lutz, to Research Corp. Fluoroisoprenes. 2,945,896, 7-19-60, Cl. 260—653.5.

Tasuma, James J., to Food Machinery and Chemical Corp. Chlorination of aromatic polyisocyanates. 2,945,875, 7-19-60, Cl. 260—453.

Technicolor Corp.: *See*—
Kelly, Donald H. 2,945,413.

Tennessee Valley Authority: *See*—
Hignett, Travis P., Phillips, and Young. 2,945,754.

Terlinde, Edward H. Harmonica and microphone pick-up therefor. 2,945,408, 7-19-60, Cl. 84—1.04.

Textron Electronics, Inc.: *See*—
McCluskey, Donald S., and Cottle. 2,945,968.

Thompson, Richard E.: *See*—
Gould, Ira L., and Thompson. 2,945,362.

Thompson, Theodore F., ½ to H. H. Hartupee. Draw bar pin having a spring operated abutment element. 2,945,411, 7-19-60, Cl. 85—7.

Thomson, Marvin G.: *See*—
Musschoot, Albert, Schroeder, and Thomson. 2,945,606.

Thorstensen, Thomas C., to Tanners' Council of America, Inc. Method of dehairing hides. 2,945,737, 7-19-60, Cl. 8—94.16.

Thumim, Carl, to E. P. Lawson Co., Inc. Cutting machine and table therefor. 2,945,600, 7-19-60, Cl. 214—1.

Tietze, Hermann, and G. Stampe, to O. H. Drager. Filter material support. 2,945,555, 7-19-60, Cl. 183—49.

Tietze, Hermann, and G. Stampe, to O. H. Drager. Filter material support. 2,945,556, 7-19-60, Cl. 183—49.

Tilt-A-Door Corp.: *See*—
Smith, Wesley A., and Ginther. 2,945,536.

Tinsley, Antony B., and K. Guest, to Imperial Chemical Industries Ltd. Submerged-arc welding. 2,945,937, 7-19-60, Cl. 219—73.

Tollison, Paul L.: *See*—
Ricards, Charles L., Tollison, Campbell, and Oderman. 2,945,438.

Toman, James T., ½ to D. H. Lipsey. Fluid pressure actuated reciprocating mechanism. 2,945,480, 7-19-60, Cl. 121—164.

Tommy Martin, Philippe: *See*—
Touvay, Robert, and Tommy Martin. 2,945,333.

Tomoda, Jichio. Jacketed soldering strip. 2,945,444, 7-19-60, Cl. 113—110.

Touvay, Robert, and P. Tommy Martin, to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey. Method and apparatus for polishing. 2,945,353, 7-19-60, Cl. 51—283.

Tracy, Michael J. Closure operators. 2,945,297, 7-19-60, Cl. 20—42.

Travilla, James C., and J. J. Zach, to General Steel Castings Corp. Railway motor trucks. 2,945,454, 7-19-60, Cl. 105—182.

Trice, William L., to J. P. Wilkinson. Sealing construction for cabinets. 2,945,717, 7-19-60, Cl. 292—36.

Trockentechnik Kurt Bruckner K.G.: *See*—
Lobbert, Horst. 2,945,280.

Tropp, Joseph: *See*—
Pace, George C., and Tropp. 2,945,538.

Trujillo Valdespino, Jose O. Feeding control for cigar machines. 2,945,492, 7-19-60, Cl. 131—21.

Tuchel, Ulrich. Couplings for electric conductors. 2,945,035, 7-19-60, Cl. 339—60.

Turn-A-Bore Equipment Co.: *See*—
Grabb, Kenneth W. 2,945,520.

Tutrone, David A. Surgical drainage attachment. 2,945,-731, 7-19-60, Cl. 311—9.

Tuttle, Thomas S. Tank with proportioning means. 2,945,-509, 7-19-60, Cl. 137—576.

Twitchett, Harry J.: *See*—
Roberts, John F. L., Twitchett, and Wild. 2,945,840.

Tychets, Kazimiers. Combustion apparatus for a gas turbine of the reaction type. 2,945,348, 7-19-60, Cl. 60—39.24.

Tyler, Howard J.: *See*—
MacLeod, David E., and Tyler. 2,945,358.

Tyler, Howard J., to Carrier Corp. Air conditioning units including filter mounting means. 2,945,360, 7-19-60, Cl. 62—317.

Tyson Bearing Corp.: *See*—
Murray, Alfred S., and Brasee. 2,945,730.

Udic Societe Anonyme: *See*—
Richn, Theodor. 2,945,777.

Ulderup, Jurgen, F. G. Reuter, and F. Jackel, to Mobay Chemical Co. Flexible coupling device. 2,945,966, 7-19-60, Cl. 64—11.

Ulinski, Bronislaus I., to The Yale and Towne Mfg. Co. Power steering mechanism. 2,945,548, 7-19-60, Cl. 180—79.2.

Unicorn Engineering Corp.: *See*—
Little, Howard M., and Notthoff. 2,945,538.

Union Carbide Corp.: *See*—
Shaffer, Lloyd H., and Pines. 2,945,573.

Union Oil Co. of California: *See*—
Fleck, Raymond N. 2,945,824.
Maly, George P., and Krueger. 2,945,541.

Union Tank Car Co.: *See*—
Meyer, Amel R. 2,945,948.

United-Carr Fastener Corp.: *See*—
Becker, Phillip D. 2,945,524.

United Kingdom Atomic Energy Authority of Patents Branch, The: *See*—
Deighton, Michael O. 2,946,013.

United Kingdom Atomic Energy Authority, The: *See*—
Mossop, Isaac A., Fay, and Packman. 2,945,955.

United Shoe Machinery Corp.: *See*—
Bell, Neville I. 2,945,380.

U.S. Industries, Inc.: *See*—
Schultz, Melvin P., Luxem, and Massey. 2,945,356.

United States of America, Army: *See*—
Adelman, Barnet R., and Burke. 2,945,442.

United States of America, Atomic Energy Commission: *See*—
Blue, Clarence W., and Luce. 2,945,972.
Dugdale, Ronald A. 2,945,793.
Greeley, Alan T. 2,945,740.
Last, George A. 2,945,293.
Winters, Charles E., Graham, Culver, and Wilson. 2,945,794.

United States of America, Commerce: *See*—
Hogue, Ephraim W. 2,945,046.

United States of America, National Aeronautics and Space Administration: *See*—
Bibbo, Carmen, and Browning. 2,945,667.

United States of America, Navy: *See*—
Babcock, Horace W. 2,945,420.
Caler, Herschel E., Russo, and Singer. 2,945,297.
Malick, Franklin S. 2,946,000.
Morgan, Walter L., II. 2,946,047.
Murphree, Francis J., Jr. 2,946,017.
Milransen, John V., and Welden. 2,945,304.
Sewell, Bep W. 2,945,926.
Siedband, Melvin P., Hirst, and Casey. 2,946,021.
Simpson, Harry A., Jr. 2,945,599.
Strip, Joseph. 2,945,915.
Vance, Arthur W., and Goldberg. 2,945,626.
Winslow, Arthur F. 2,945,441.

United States Rubber Co.: *See*—
Casassa, John J., Jr. 2,945,389.

Universal Mfg. Corp.: *See*—
Meyer, Oscar E. 2,945,561.

Universal Oil Products Co.: *See*—
Donaldson, George R. 2,945,898.
Hoekstra, James. 2,945,757.
Schmerling, Louis. 2,945,845.

University of Minnesota, Regents of the: *See*—
Schuls, Norman F. 2,945,755.

Upjohn Co., The: *See*—
Meyer, Curtis E., Fanchar, and Schurr. 2,945,869.

Urman, Wally. Article supporting device. 2,945,583, 7-19-60, Cl. 211—1.

V. & E. Mfg. Co.: *See*—
Vaughan, Christine U., Bond, and Milette. 2,945,564.

Van Buskirk & Co., Inc.: *See*—
Van Buskirk, John D. 2,945,436.

Van Buskirk, John D., to Van Buskirk & Co., Inc. Vertical printing. 2,945,434, 7-19-60, Cl. 101—350.

Vance, Arthur W., and E. A. Goldberg, to United States of America, Navy. Quarter-square multiplier. 2,945,626, 7-19-60, Cl. 235—194.

Vanderberg, Lawrence J., to Ford Motor Co. Dynamic braking of electric motors. 2,945,998, 7-19-60, Cl. 318—372.

Van der Loly, Arr : *See*—
Van der Loly, Cornelis and A. 2,945,139.

Van der Loly, C., N.V. : *See*—
Van der Loly, Cornelis and A. 2,945,123.

Van der Loly, Cornelis and A., to C. van der Loly, N.V. Device for laterally displacing grass, hay, or other material lying on the ground. 2,945,339, 7-19-60, Cl. 56—377.

Van Hool, Frederick H., to Shell Oil Co. Process for the recovery of secondary alcohols. 2,945,892, 7-19-60, Cl. 260—638.

Vandrevill, Oscar R. : *See*—
Freeman, Howard G., and Vandrevill. 2,945,066.

Vaughan, Christine D., R. E. Bond, and K. A. Milone, to V. & E. Mfg. Co. Pointer case with brackets for instruments. 2,945,584, 7-19-60, Cl. 206—16.

Verbakel, Martinus, to N.V. Vereenigde Tabaksindustrieen Mignot & De Block. Apparatus for making cigars. 2,945,-466, 7-19-60, Cl. 131—38.

Verceilese, Alberto : *See*—
Alberti, Carlo G., Bernardi, Lartal, and Verceilese. 2,945,883.

Vereinigte Glanzstoff-Fabriken A.G. : *See*—
Wattl, Anton, and Siegel. 2,945,768.

Verschoore, Henry O. : *See*—
Sigman, John J., Jr., McNabb, and Verschoore. 2,945,-420.

Vlasak, Weldon, to Motorola, Inc. Electronic hybrid. 2,945,-920, 7-19-60, Cl. 179—170.

Vodicka, Vincent : *See*—
Malm, Robert N., and Vodicka. 2,945,227.

Vogel, Otto F., R. B. Bonney, and L. E. Preston, to Electronic Engineering Co. of California. Plug-in circuit units. 2,945,960, 7-19-60, Cl. 317—101.

Vogt, Charles C. Discriminating fuse. 2,945,440, 7-19-60, Cl. 102—16.

Volz, W. J., Rubber Corp. : *See*—
Way, Jack W. 2,945,666.

Von Sokich, Otto, and H. Metzger, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Cyclo-octanone oximes hydrochlorides which are liquid at room temperature, and a process for their production. 2,945,885, 7-19-60, Cl. 260—566.

Von, John W. : *See*—
Phelan, Louis A. M., and Von. 2,945,787.

Vutz, Peter, to Hughes Aircraft Co. Pulsed output transistor flip-flop. 2,945,984, 7-19-60, Cl. 307—88.5.

Wachter, Joseph J. : *See*—
Ricciitello, Michael, and Wachter. 2,945,204.

Wagner, William, and W. J. Koerper, to The Marquardt Corp. Gas turbine unit. 2,945,672, 7-19-60, Cl. 253—39.

Wall, Norman, to Bendix Aviation Corp. Variable damped, high gain, low phase shift two motor servo system. 2,945,-966, 7-19-60, Cl. 318—19.

Waite, Fred H., to American Machine & Foundry Co. Wrapping material web feeding mechanism. 2,945,127, 7-19-60, Cl. 53—389.

Walkins, Calvin J., to American Viscose Corp. Method of finishing textile fibers with phosphate antistatic agents. 2,945,774, 7-19-60, Cl. 117—138.8.

Walker, James H. : *See*—
Abbott, Andrew D., and Walker. 2,945,811.

Walker, James H., to California Research Corp. Lubricating oil compositions containing di-metal dithiophosphates. 2,945,819, 7-19-60, Cl. 252—32.7.

Walsh, Edward J., to General Electric Co. Stator vane half ring assemblies. 2,945,290, 7-19-60, Cl. 29—156.8.

Warner & Swasey Co., The : *See*—
Schoepe, Harry, and Eberrold. 2,945,394.

Washburn, Joseph, to Westinghouse Electric Corp. Bus duct structure. 2,945,054, 7-19-60, Cl. 228—21.

Washington, Reginald R. : *See*—
Jones, Earl L., and Washington. 2,945,451.

Wasley, Arthur J., to Wasley Products, Inc. Bearing seal. 2,945,707, 7-19-60, Cl. 286—8.

Wasley Products, Inc. : *See*—
Wasley, Arthur J. 2,945,707.

Waterfield, Clayton H., H. J. Calderhead, and H. H. Heller, to The Bird Electronic Corp. High frequency thermocouple meter. 2,946,006, 7-19-60, Cl. 324—95.

Wathen, Robert L., to Sperry Rand Corp. Pulse radar object detection system. 2,945,050, 7-19-60, Cl. 343—13.

Watson, Claude W., deceased, by M. E. Watson, executrix. Recovery of olefins. 2,945,904, 7-19-60, Cl. 260—677.

Watson, Myrtle H. : *See*—
Watson, Claude W. 2,945,904.

Watts, Reid L. : *See*—
Hervey, Charles E., and Watts. 2,945,401.

Wattl, Anton, and E. Siegel, to Vereinigte Glanzstoff-Fabriken A.G. Process for the purification of dimethylterephthalate. 2,945,768, 7-19-60, Cl. 202—42.

Way, Jack W., to W. J. Volz Rubber Corp. Reinforced ball. 2,945,663, 7-19-60, Cl. 272—26.

Weatherhead Co., The : *See*—
Courtot, Louis E., and Tucker. 2,945,294.

Webb, Leonard H., to Webstool Framing Systems Inc. Floor joist and assembly. 2,945,328, 7-19-60, Cl. 52—283.

Webby, Clive N. Sealing and valving means for use in air guns. 2,945,486, 7-19-60, Cl. 124—11.

Webby, Clive N. Air guns. 2,945,487, 7-19-60, Cl. 124—13.

Webstool Framing Systems, Inc. : *See*—
Webb, Leonard H. 2,945,328.

Wegley, Wesley D. : *See*—
Horton, William F., and Wegley. 2,945,080.

Wehr, Robert D. Apparatus for extracting juice from citrus fruits. 2,945,421, 7-19-60, Cl. 100—97.

Weichbrodt, Harry W. Paint gun shield. 2,945,611, 7-19-60, Cl. 239—96.

Weichbrodt, Harry W. Paint gun shield. 2,945,612, 7-19-60, Cl. 239—96.

Weinstein, Alex J. : *See*—
Bechtold, Edwin W., Kapilow, and Weinstein. 2,945,415.
Bechtold, Edwin W., Kapilow, and Weinstein. 2,945,419.

Weiz, Donald A. : *See*—
Wright, Esmond P. G., Weiz, and Rice. 2,945,625.

Weir, John D., to Sperry Rand Corp. Reference systems for a dirigible craft. 2,945,381, 7-19-60, Cl. 74—5.41.

Weis, Konrad : *See*—
Krechenberg, Winfried, and Weis. 2,945,949.

Weiser, David. Planting. 2,945,333, 7-19-60, Cl. 2—243.

Weisenberger, Arnold, to Eastman Kodak Co. Reactivity of couplers incorporated in photographic emulsions. 2,945,-761, 7-19-60, Cl. 96—53.

Weiss, Thomas A. : *See*—
Kamberian, Jacob S., and Weiss. 2,945,947.

Weitmann, Gustave A., to Leandri S.p.A. Streptomycin and dihydrostreptomycin salts. 2,945,784, 7-19-60, Cl. 167—65.

Welden, Robert B. : *See*—
Nilmeier, John V., and Welden. 2,945,904.

Wendt, Hermann, to Clark Equipment Co. Method and means for employing industrial trucks. 2,945,610, 7-19-60, Cl. 214—750.

Wesson Co. : *See*—
Berry, Robert W., Jr. 2,945,896.

Westcott, George W. Surgical instrument for cervical biopsy. 2,945,490, 7-19-60, Cl. 128—2.

Western Electric Co., Inc. : *See*—
Henning, George R. 2,945,827.
Hensler, Owens E. 2,945,832.

Westinghouse Air Brake Co. : *See*—
May, Harry C., and From. 2,945,690.

Westinghouse Electric Corp. : *See*—
Anderson, Arthur S. 2,945,973.
Calhoun, Howard J., and Hinman, Jr. 2,945,929.
Crawford, Thomas G., and Allen. 2,945,432.
Davis, Edward M., Jr. 2,946,022.
Derrick, Robert F., and Campbell. 2,945,937.
Feaster, Gene R. 2,945,295.
Frost, Lawrence W., and Mendelsohn. 2,945,829.
Gerard, William A., and Larsen. 2,946,027.
Hanna, Clinton R. 2,945,618.
Mitchell, William H. 2,945,729.
Oplinger, Kirt A., and Holliday. 2,945,643.
Ricciitello, Michael, and Wachter. 2,945,204.
Smith, Joseph W., and King. 2,945,445.
Washburn, Joseph. 2,945,054.

Westveer, Robert C., to The New York Air Brake Co. Control valve. 2,945,351, 7-19-60, Cl. 60—52.

Wheeler, Donald D., and D. C. Young, to The Dow Chemical Co., Pathalides. 2,945,865, 7-19-60, Cl. 260—343.3.

Whelan, Jack T., and J. H. French. Tubular container. 2,945,585, 7-19-60, Cl. 206—46.

White Sewing Machine Corp. : *See*—
Balcom, George A., and Wiltshire. 2,945,831.

White, Wilfrid F., W. A. Landmann, and W. L. Fierce, to Armour and Co. Method of obtaining adrenocorticotropic hormone preparation of enhanced potency. 2,945,780, 7-19-60, Cl. 167—74.

Wiedmann, Ludwig, to I-T-E Circuit Breaker Co. Electromagnetic clutch with automatically adjustable air gap. 2,945,573, 7-19-60, Cl. 192—84.

Wieland, Dietrich : *See*—
Bollert, Gerhard F., Ramser, and Wieland. 2,945,892.

Wigeland, Amund. Arrangement for ships' hatches. 2,945,-467, 7-19-60, Cl. 114—202.

Wild, Arthur E. : *See*—
Roberts, John F. L., Twitchett, and Wild. 2,945,640.

Wilg, Elmer K. : *See*—
Olson, John L., and Wilg. 2,945,878.

Wilkinson, Jim F. : *See*—
Trice, William L. 2,946,717.

Wilkinson, Jim F. Double action lock for caskets. 2,945,-281, 7-19-60, Cl. 27—17.

Williams, Earl P. : *See*—
Boe, Saul R., and Williams. 2,945,863.

Williams, Leonard M. : *See*—
Rose, Kenneth A., Pasterek, Williams, and Herman. 2,945,709.

Williams, Richard A., to Philco Corp. Method for fabricating zonal-semiconductor alloyed regions. 2,945,780, 7-19-60, Cl. 204—15.

Williams, William W. : *See*—
Garfield, Lavern P., and Williams. 2,945,478.

Williamson, James, to National Research Development Corp. Salt complexes of 8:3'-oxydi-bis-[8-(3-dimethylaminopropylamido)-1:3:5-naphthalene sulphonic acid]. 2,945,847, 7-19-60, Cl. 260—56.5.

Wilson, Ralph C. Nailer. 2,945,232, 7-19-60, Cl. 1—43.

Wilson, Robert H. : *See*—
Winters, Charles E., Graham, Culver, and Wilson. 2,945,794.

Wiltshire, Arthur J. : *See*—
Balcom, George A., and Wiltshire. 2,945,831.

Winkelmann, Otto J., to Chrysler Corp. Combination air spring-leaf spring suspension. 2,945,708, 7-19-60, Cl. 280—124.

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Wiora Products Corp. : *See*—
Wiora, Joseph A. 2,945,277.

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Wiseman, John R. : *See*—
Le Febvre, Arthur H., and Wiseman. 2,945,449.

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Wolnak, Bernard : *See*—
Kosloff, Lloyd M. 2,945,735.

Wolnak, Bernard : *See*—
Kosloff, Lloyd M. 2,945,736.

Wols, Hermann : *See*—
Schraufstatter, Ernst, Gottsacker, and Wols. 2,945,762.

Wood Newspaper Machinery Corp. : *See*—
Ricards, Charles L., Tollison, Campbell, and Oderman. 2,945,438.

Wood, Thomas K. Apparatus for manufacturing glass beads. 2,945,326, 7-19-60, Cl. 49—58.

Woodman Co., Inc., The : *See*—
Woodman, Daniel E. 2,945,580.

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Wu, Yao H. : *See*—
Feldkamp, Rolland F., and Wu. 2,945,855.

Wulff Process Co. : *See*—
Coberly, Clarence J. 2,945,905.

Wurzschmitt, Bernhard : *See*—
Gaeth, Rudolf, Graf, Huppert, and Wurzschmitt. 2,945,322.

Wyandotte Chemicals Corp. : *See*—
Tarallo, Stanley D. 2,945,858.

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Yale and Towne Mfg. Co., The : *See*—
Ulinski, Bronislaus I. 2,945,545.

Yamaguchi, Teruichi, and I. Miyazawa, to Chuo Trading Co., Ltd. Hydraulic ram. 2,945,447, 7-19-60, Cl. 103—77.

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Yando, Stephen, to Sylvania Electric Products Inc. Piezoelectric device. 2,945,984, 7-19-60, Cl. 315—55.

Youkers, Harold A. : *See*—
Deible, William B., and Youkers. 2,945,325.

Young, David C. : *See*—
Wheeler, Donald D., and Young. 2,945,865.

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Young, Ronald D. : *See*—
Hignett, Travis P., Phillips, and Young. 2,945,754.

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Yowell, Howard L. : *See*—
Brugmann, William H., Jr., Yowell, and Mikeska. 2,945,753.

Yuba Consolidated Industries, Inc. : *See*—
Edgemond, John W., Jr., and Goldschmidt. 2,945,518.
Edgemond, John W., Jr., and Goldschmidt. 2,945,519.
Edgemond, John W., Jr., and O'Connor. 2,945,516.

Zach, Julius J. : *See*—
Travilla, James C., and Zach. 2,945,456.

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Zimmer, Le Roy G. Grain tank and elevator clamp. 2,945,664, 7-19-60, Cl. 248—316.

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Ziegler, George E. 2,945,820.

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CLASSIFICATION OF PATENTS

ISSUED JULY 19, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 45: 2,945,235
106: 2,945,236
220: 2,945,237
2— 243: 2,945,238
4— 58: 2,945,239
252: 2,945,240
5— 8: 2,945,241
86: 2,945,242
93: Re.24,845
266: 2,945,243
345: 2,945,244
351: 2,945,245
8— 17: 2,945,735
2,945,736
94.16: 2,945,737
116: 2,945,738
11— 1: 2,945,246
12— 8.3: 2,945,247
14— 16: 2,945,248
15— 79: 2,945,249
118: 2,945,250
121.3: 2,945,251
126: 2,945,252
235.3: 2,945,253
328: 2,945,254
16— 49: 2,945,255
17— 8: 2,945,256
11.1: 2,945,257
18— 14: 2,945,258
21: 2,945,259
42: 2,945,260
48: 2,945,261
54: 2,945,739
55: 2,945,262
2,945,263
58: 2,945,264
59: 2,945,265
2,945,266
20— 42: 2,945,267
85.4: 2,945,268
2,945,269
92: 2,945,270
21— 109: 2,945,271
22— 36: 2,945,272
193: 2,945,273
23— 14.5: 2,945,740
2,945,741
2,945,742
24: 2,945,743
50: 2,945,744
88: 2,945,745
216: 2,945,746
259.1: 2,945,747
288: 2,945,748
24— 68: 2,945,274
170: 2,945,275
205.11: 2,945,276
281: 2,945,277
25— 38: 2,945,278
142: 2,945,279
26— 62: 2,945,280
27— 17: 2,945,281
28— 1: 2,945,282
76: 2,945,283
80: 2,946,058
29— 21: 2,945,284
25.3: 2,945,285
2,945,286
93: 2,945,287
105: 2,945,288
155.57: 2,945,289
156.8: 2,945,290
182.5: 2,945,291
2,945,292
422: 2,945,293
475: 2,945,294
496: 2,945,295
496: 2,945,296
30— 58: 2,945,297
272: 2,945,298
32— 27: 2,945,299
33— 1: 2,945,300
2,945,301
55: 2,945,302
35— 9: 2,945,303
17: 2,945,304
19: 2,945,305
22: 2,945,306
35: 2,945,307
36— 2: 2,945,308
8.5: 2,945,309
36— 11.5: 2,945,310
36: 2,945,311
40— 68: 2,945,312
130: 2,945,313
224: 2,945,314
41— 10: 2,945,315
42— 66: 2,945,316
43— 42.47: 2,945,318
42.5: 2,945,317
44.97: 2,945,324
44— 72: 2,945,749
46— 47: 2,945,319
242: 2,945,320
247: 2,945,321
47— 9: 2,945,322
27: 2,945,323
59: P.P.1,960
49— 84: 2,945,325
88: 2,945,326
78: 2,945,327
50— 283: 2,945,328
479: 2,945,329
51— 119: 2,945,330
131: 2,945,331
246: 2,945,332
283: 2,945,333
295: 2,945,750
52— 20: 2,945,751
53— 64: 2,945,334
142: 2,945,335
196: 2,945,336
389: 2,945,337
54— 25.4: 2,945,338
377: 2,945,339
400.2: 2,945,340
56— 142: 2,945,341
60— 35.4: 2,945,342
35.5: 2,945,343
35.54: 2,945,346
2,945,347
35.6: 2,945,344
2,945,345
39.34: 2,945,348
39.36: 2,945,349
39.75: 2,945,350
52: 2,945,351
54.6: 2,945,352
97: 2,945,353
62— 51: 2,945,354
117: 2,945,355
157: 2,945,356
262: 2,945,357
2,945,358
280: 2,945,359
317: 2,945,360
355: 2,945,361
429: 2,945,362
63— 14: 2,945,363
64— 8: 2,945,364
11: 2,945,365
23: 2,945,366
27: 2,945,367
66— 115: 2,945,368
67— 2.1: 2,945,369
68— 205: 2,945,370
70— 78: 2,945,371
92: 2,945,372
395: 2,945,373
71— 2.3: 2,945,752
2.7: 2,945,753
37: 2,945,754
73— 1: 2,945,374
178: 2,945,375
407: 2,945,376
2,945,377
497: 2,945,378
517: 2,945,379
74— 5.4: 2,945,381
5.5: 2,945,380
15.8: 2,945,382
18.1: 2,945,383
25: 2,945,384
75: 2,945,385
87: 2,945,386
89: 2,945,387
199: 2,945,388
233: 2,945,389
237: 2,945,390
250: 2,945,391
459: 2,945,392
472: 2,945,393
74— 472: 2,945,394
499: 2,945,395
533: 2,945,396
598: 2,945,397
573: 2,945,398
589: 2,945,399
711: 2,945,400
75— 1: 2,945,758
10: 2,945,756
121: 2,945,757
171: 2,945,758
201: 2,945,759
77— 3: 2,945,401
28: 2,945,402
55: 2,945,403
58: 2,945,404
78— 13.1: 2,945,405
80— 5.1: 2,945,406
81— 3: 2,945,407
84— 1.04: 2,945,408
343: 2,945,409
397: 2,945,410
85— 7: 2,945,411
87— 1: 2,945,412
88— 1: 2,945,413
2,945,414
1.5: 2,945,415
2.4: 2,945,416
14: 2,945,417
31: 2,945,418
57: 2,945,419
89— 1.7: 2,945,420
2,945,421
154: 2,945,424
199: 2,945,423
90— 1.6: 2,945,424
2,945,425
11: 2,945,426
94— 45: 2,945,427
95— 86: 2,945,428
96— 2,945,429
98: 2,945,760
55: 2,945,761
100: 2,945,762
104: 2,945,763
98— 1: 2,945,430
99— 2: 2,945,764
4: 2,945,765
107: 2,945,766
2,945,767
100— 97: 2,945,431
101— 66: 2,945,432
90: 2,945,433
232: 2,945,434
274: 2,945,435
350: 2,945,436
2,945,437
378: 2,945,438
102— 4: 2,945,439
16: 2,945,440
2,945,441
49: 2,945,442
103— 1: 2,945,443
2: 2,945,444
11: 2,945,445
25: 2,945,446
77: 2,945,447
113: 2,945,448
162: 2,945,449
165: 2,945,450
174: 2,945,451
104— 108: 2,945,452
172: 2,945,453
259: 2,945,454
2,945,455
105— 188: 2,945,456
199: 2,945,457
106— 52: 2,945,768
98: 2,945,769
148: 2,945,770
107— 52: 2,945,458
110— 28: 2,945,459
112— 169: 2,945,460
260: 2,945,461
113— 1: 2,945,462
101: 2,945,463
110: 2,945,464
114— .5: 2,945,465
62: 2,945,466
202: 2,945,467
230: 2,945,468
114— 235: 2,945,469
116— 28: 2,945,470
117— 34: 2,945,771
96: 2,945,772
138.8: 2,945,773
139.5: 2,945,774
155: 2,945,775
201: 2,945,776
118— 58: 2,945,471
626: 2,945,472
119— 61: 2,945,473
157: 2,945,474
121— 38: 2,945,475
39: 2,945,476
41: 2,945,477
2,945,478
120: 2,945,479
164: 2,945,480
2,945,481
123—41.11: 2,945,482
179: 2,945,483
2,945,484
124— 4: 2,945,485
11: 2,945,486
13: 2,945,487
23: 2,945,488
127— 37: 2,945,777
128— 2: 2,945,490
2,945,491
33: 2,945,492
148: 2,945,493
248: 2,945,494
250: 2,945,495
297: 2,945,496
131— 21: 2,945,497
2,945,498
29: 2,945,499
132— 47: 2,945,500
137— 64: 2,945,501
66: 2,945,502
68: 2,945,503
72: 2,945,504
183: 2,945,505
220: 2,945,506
505.13: 2,945,507
515: 2,945,508
576: 2,945,509
700: 2,945,510
139— 7: 2,945,511
140— 2: 2,945,512
71: 2,945,513
93: 2,945,514
141— 59: 2,945,515
143— 36: 2,945,516
47: 2,945,517
132: 2,945,518
155: 2,945,519
144— 27: 2,945,520
162: 2,945,521
288: 2,945,522
290: 2,945,523
148— 6.24: 2,945,778
2,945,779
151— 35: 2,945,524
152— 361: 2,945,525
153— 1: 2,945,526
16: 2,945,527
32: 2,945,528
40: 2,945,529
106: 2,945,530
154— 1: 2,945,531
9: 2,945,532
155— 106: 2,945,533
157— 13: 2,945,534
160— 40: 2,945,535
189: 2,945,536
164— 112: 2,945,537
113: 2,945,538
166— 33: 2,945,539
173: 2,945,540
167: 2,945,541
167— 22: 2,945,780
2,945,781
30: 2,945,782
55: 2,945,783
65: 2,945,784
74: 2,945,785
170—160.32: 2,945,542
172— 376: 2,945,543
174— 30: 2,945,912
73: 2,945,913
174— 151: 2,945,914
178— 69: 2,945,915
179— 18: 2,945,916
27: 2,945,917
90: 2,945,918
100.2: 2,945,919
170: 2,945,920
180— 79.2: 2,945,544
2,945,545
82: 2,945,546
82.1: 2,945,547
182— 77: 2,945,548
120: 2,945,549
137: 2,945,550
141: 2,945,551
183— 14: 2,945,552
24: 2,945,553
37: 2,945,554
49: 2,945,555
2,945,556
51: 2,945,557
2,945,558
71: 2,945,559
184— 55: 2,945,560
187— 89: 2,945,561
188— 52: 2,945,562
65.1: 2,945,563
78: 2,945,564
264: 2,945,565
2,945,566
2,945,567
189— 94: 2,945,568
191—12.4: 2,945,921
192— .02: 2,945,569
3.6: 2,945,570
4: 2,945,571
8: 2,945,572
84: 2,945,573
85: 2,945,574
193— 38: 2,945,575
195— 44: 2,945,786
47: 2,945,787
197— 12: 2,945,576
17: 2,945,577
84: 2,945,578
198— 19: 2,945,579
59: 2,945,580
229: 2,945,581
200— 18: 2,945,922
31: 2,945,923
33: 2,945,924
47: 2,945,925
61.41: 2,945,926
66: 2,945,927
87: 2,945,928
2,945,929
2,945,930
90: 2,945,931
97: 2,945,932
122: 2,945,933
202— 42: 2,945,788
204— 15: 2,945,789
57: 2,945,790
2,945,791
154: 2,945,792
2,945,793
154.2: 2,945,794
158: 2,945,795
163: 2,945,796
164: 2,945,797
206— 1: 2,945,582
1.5: 2,945,583
16: 2,945,584
46: 2,945,585
78: 2,945,586
208— 26: 2,945,798
48: 2,945,799
50: 2,945,800
2,945,801
65: 2,945,802
89: 2,945,803
91: 2,945,804
110: 2,945,805
2,945,806
146: 2,945,807
204: 2,945,808
209— 74: 2,945,587
111: 2,945,588
164: 2,945,589
223: 2,945,590
210— 234: 2,945,591
542: 2,945,592
211— 1: 2,945,593
46: 2,945,594
105.3: 2,945,595
134: 2,945,596
139: 2,945,597
144: 2,945,598
147: 2,945,599
214— 1: 2,945,600
2,945,601
10.1: 2,945,602
2,945,603
2,945,604
18: 2,945,605
53: 2,945,606
77: Re.24,846
88.26: 2,945,607
658: 2,945,608
2,945,609
730: 2,945,610
219— 7.8: 2,945,934
10.41: 2,945,935
19: 2,945,938
69: 2,945,936
73: 2,945,937
82: 2,945,939
100: 2,945,940
124: 2,945,941
137: 2,945,942
147: 2,945,943
220— 85: 2,945,611
90: 2,945,612
221— 198: 2,945,613
224— 5: 2,945,614
229— 66: 2,945,615
68: 2,945,616
2,945,617
230— 56: 2,945,618
116: 2,945,619
127: 2,945,620
232— 24: 2,945,621
235— 60: 2,945,622
61.11: 2,945,623
92: 2,945,624
155: 2,945,625
194: 2,945,626
239— 225: 2,945,627
264: 2,945,628
424: 2,945,629
498: 2,945,630
548: 2,945,631
583: 2,945,632
240—10.68: 2,945,944
25: 2,945,945
47: 2,945,946
61.13: 2,945,947
81: 2,945,948
241— 41: 2,945,633
98: 2,945,634
100.5: 2,945,635
242— 42: 2,945,636
75.51: 2,945,637
118.32: 2,945,638
131: 2,945,639
243— 22: 2,945,640
244— 12: 2,945,641
2,945,642
14: 2,945,643
42: 2,945,644
2,945,645
49: 2,945,646
77: 2,945,647
2,945,648
2,945,649
2,945,650
90: 2,945,651
102: 2,945,652
119: 2,945,653
122: 2,945,654
123: 2,945,655
248— 58: 2,945,656
96: 2,945,657
125: 2,945,658
156: 2,945,659
161: 2,945,660
170: 2,945,663
205: 2,945,661
316: 2,945,664
354: 2,945,662
250— 27: 2,945,949

250— 27: 2,945,950
41.9: 2,945,951
43.5: 2,945,952
2,945,953
71: 2,945,954
71.5: 2,945,955
202: 2,945,956
219: 2,945,957
230: 2,945,958
237: 2,945,959
251— 1: 2,945,665
172: 2,945,666
173: 2,945,667
175: 2,945,668
309: 2,945,669
252— 28: 2,945,809
32.7: 2,945,810
2,945,811
33.3: 2,945,812
33.6: 2,945,813
49.9: 2,945,814
138: 2,945,815
161: 2,945,816
317: 2,945,817
353: 2,945,818
367: 2,945,819
378: 2,945,820
392: 2,945,821
414: 2,945,822
450: 2,945,823
455: 2,945,824
500: 2,945,825
253— 39: 2,945,670
39.15: 2,945,671
59: 2,945,672
78: 2,945,673
254— 18: 2,945,674
185: 2,945,675
255— 19: 2,945,676
2,945,677
61: 2,945,678
256— 65: 2,945,679
257— 245: 2,945,680
269: 2,945,681
259— 81: 2,945,682
159: 2,945,683
165: 2,945,684
260— 2.5: 2,945,826
2,945,827
2,945,828
21: 2,945,829
22: 2,945,830
29.6: 2,945,831
31.8: 2,945,832
33.6: 2,945,833
41.5: 2,945,834
43: 2,945,835
45.5: 2,945,836
45.8: 2,945,837
45.9: 2,945,838
63: 2,945,839
75: 2,945,840
77.5: 2,945,841
79.3: 2,945,842
79.7: 2,945,843
86.1: 2,945,844
93.7: 2,945,845
94.9: 2,945,846
95.5: 2,945,847
172: 2,945,848
185: 2,945,849
210: 2,945,850
236: 2,945,851
239.5: 2,945,852
239.65: 2,945,853
240: 2,945,854
243: 2,945,855
244: 2,945,856
250: 2,945,857
2,945,858
256.4: 2,945,859
268: 2,945,860
272: 2,945,861
297: 2,945,862
326.3: 2,945,863
340.6: 2,945,864
343.3: 2,945,865
351: 2,945,866
380: 2,945,867
397.5: 2,945,868
403: 2,945,869
404: 2,945,870
410.5: 2,945,871
431: 2,945,872
260—448.2: 2,945,873
2,945,874
453: 2,945,875
456: 2,945,876
471: 2,945,877
482: 2,945,878
501: 2,945,879
526: 2,945,880
534: 2,945,881
551: 2,945,882
562: 2,945,883
566: 2,945,884
2,945,885
570.9: 2,945,886
606.5: 2,945,887
2,945,888
609: 2,945,889
622: 2,945,890
639: 2,945,891
645: 2,945,892
648: 2,945,893
651: 2,945,894
652.5: 2,945,895
653.5: 2,945,896
663: 2,945,897
666: 2,945,898
668: 2,945,899
669: 2,945,900
671: 2,945,901
674: 2,945,902
2,945,903
677: 2,945,904
679: 2,945,905
683: 2,945,906
683.44: 2,945,907
683.65: 2,945,908
2,945,909
683.74: 2,945,910
2,945,911
261— 62: 2,945,685
262— 7: 2,945,686
263— 32: 2,945,687
53: 2,945,688
267— 34: 2,945,689
65: 2,945,690
268— 124: 2,945,691
271— 2.3: 2,945,692
273— 65: 2,945,693
95: 2,945,694
97: 2,945,695
147: 2,945,696
274— 11: 2,945,697
275— 2: 2,945,698
280— 79.3: 2,945,699
124: 2,945,700
2,945,701
2,945,702
284— 15: 2,945,703
285— 19: 2,945,704
2,945,705
90: 2,945,706
286— 5: 2,945,707
2,945,708
7: 2,945,709
8: 2,945,710
11.15: 2,945,711
287— 53: 2,945,712
54: 2,945,713
80: 2,945,714
288— 23: 2,945,715
289— 14: 2,945,716
290— 52: 2,945,900
292— 26: 2,945,717
127: 2,945,718
169: 2,945,719
294— 96: 2,945,720
296— 28: 2,945,721
65: 2,945,722
301— 37: 2,945,723
302— 59: 2,945,724
303— 24: 2,945,725
31: 2,945,726
63: 2,945,727
2,945,728
307— 88: 2,945,961
88: 2,945,962
2,945,963
88.5: 2,945,964
2,945,965
2,945,966
112: 2,945,967
308— 132: 2,945,729
187.2: 2,945,730
310— 27: 2,945,968
310— 37: 2,945,969
81: 2,945,970
234: 2,945,971
311— 9: 2,945,731
312—140.3: 2,945,732
200: 2,945,733
313— 63: 2,945,972
65: 2,945,973
92: 2,945,974
94: 2,945,975
108: 2,945,976
217: 2,945,977
270: 2,945,978
315— 3.5: 2,945,979
2,945,980
2,945,981
21: 2,945,982
39.3: 2,945,983
55: 2,945,984
83: 2,945,985
100: 2,945,986
2,945,987
316— 20: 2,945,734
317— 2: 2,945,988
101: 2,945,989
123: 2,945,990
2,945,991
234: 2,945,992
2,945,993
258: 2,945,994
318— 19: 2,945,995
28: 2,945,996
341: 2,945,997
373: 2,945,998
320— 35: 2,945,999
323— 89: 2,946,000
324— 20: 2,946,001
24: 2,946,002
53: 2,946,003
83: 2,946,004
95: 2,946,005
134: 2,946,006
2,946,007
158: 2,946,008
328— 71: 2,946,009
116: 2,946,010
135: 2,946,011
328— 144: 2,946,012
151: 2,946,013
330— 3: 2,946,014
15: 2,946,015
60: 2,946,016
133: 2,946,017
331— 18: 2,946,019
44: 2,946,020
87: 2,946,021
113: 2,946,022
116: 2,946,018
332— 13: 2,946,023
333— 7: 2,946,024
24: 2,946,025
78: 2,946,026
83: 2,946,027
336— 5: 2,946,028
136: 2,946,029
155: 2,946,030
338— 42: 2,946,031
174: 2,946,032
339— 17: 2,946,033
22: 2,946,034
80: 2,946,035
95: 2,946,036
154: 2,946,037
217: 2,946,038
269: 2,946,039
272: 2,946,040
340— 26: 2,946,041
69: 2,946,042
147: 2,946,043
174: 2,946,044
2,946,045
2,946,046
2,946,047
343— 5: 2,946,048
7.4: 2,946,049
13: 2,946,050
16: 2,946,051
103: 2,946,052
108: 2,946,053
225: 2,946,054
727: 2,946,055
708: 2,946,056
2,946,057

Classification of Designs

D 9— 2: 188,410
188,411
D13— 1: 188,412
D14— 3: 188,413
6: 188,414
188,415
D15— 8: 188,416
188,417
D16— 2: 188,418
D26— 1: 188,419
188,420
6: 188,421
D33— 11: 188,422
D34— 5: 188,423
188,424
D34— 15: 188,425
188,426
D36— 8: 188,427
188,428
D44— 6: 188,429
10: 188,430
188,431
D44— 21: 188,432
29: 188,433
D47— 6: 188,434
D48— 16: 188,435
23: 188,436
D54— 12: 188,437
D56— 1: 188,438
D56— 12: 188,439
17: 188,440
D61— 1: 188,441
D65— 1: 188,442
D71— 1: 188,443
188,444
D74— 1: 188,445
D74— 1: 188,446
D80— 2: 188,447
D81— 10: 188,448
188,449
188,450
188,451
D85— 2: 188,452

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 19, 1960 Volume 756 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 334,715 (LITTLE LEAGUE), Lubin-Weeker Co., Inc., Pajamas; **Reg. No. 566,626 (LITTLE LEAGUE BASEBALL AND DESIGN)**, Little League Baseball, Inc., Juvenile baseball; **Reg. No. 590,551**, same, T-shirts and sweatshirts; **Reg. No. 600,748 (LITTLE LEAGUER)**, same, Magazines; **Reg. No. 621,335 (LITTLE LEAGUE)**, Same, Pen and pencil sets; **Reg. No. 642,468 (LITTLE LEAGUE BASEBALL)**, same, Planned program of baseball for young boys, filed Feb. 3, 1960, D.C., S.D.N.Y., Doc. 60/461, *Little League Baseball, Inc. v. Craftwear Associates, Inc., Amelyn Manufacturing Corporation and Hy Pershin and/or John Doe, doing business as Hy Pershin Associates.* Stipulation and order dismissing action as to Craftwear Associates without prejudice and stipulation and order dismissing action as to Amelyn Manufacturing Corporation May 16, 1960. Notice of voluntary dismissal as to remaining defendants June 1, 1960. Same, filed Apr. 21, 1960, D.C., E.D. Mich. (Detroit), Doc. 20054, *Little League Baseball, Inc. v. Northwest Little Football and Athletics, Inc. et al.* Order enjoining defendants June 1, 1960.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 10,472
Date of oldest new application ..... Jan. 5, 1960
Date of oldest amended application ..... Dec. 1, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	1-5-60	12-1-59
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-5-60	12-9-59
Renewals (All Classes)	5-3-60	-------
Sec. 12 (c) Publications (All Classes)	5-6-60	-------

Applications filed during the month of May 1960—2,017

Registrations Issued ..... 397—No. 701,155 to No. 701,551
Renewals Issued 101

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 66,318. W. Atlee Burpee Company, Philadelphia, Pa. Filed Jan. 23, 1959.

CURLILOCKS

For Aster Seeds.
First use Nov. 12, 1958.

SN 71,334. Avco Corporation, Wilmington, Mass., by change of name from Avco Manufacturing Corporation, Wilmington, Mass. Filed Apr. 13, 1959.

AVCOITE

For Reinforced Ceramic Material and Special Shapes Fabricated Therefrom for General Use in the Industrial Arts.
First use Jan. 31, 1959.

SN 79,146. The Chemstrand Corporation, Decatur, Ala. Filed Aug. 7, 1959.

A

Owner of Reg. Nos. 545,734 and 583,831.
For Acrylic Fibers.
First use Nov. 11, 1952.

SN 79,147. The Chemstrand Corporation, Decatur, Ala. Filed Aug. 7, 1959.

ACRILAN

Owner of Reg. Nos. 545,734 and 583,831.
For Acrylic Fibers.
First use Oct. 16, 1950.

SN 80,073. The Dow Chemical Company, Midland, Mich. Filed Aug. 24, 1959.

DORVON

For Thermoplastic Synthetic Resins in the Form of Molding Granules and Molding Powders.
First use July 29, 1959.

SN 90,387. Bittle Enterprises, Incorporated, St. Petersburg, Fla. Filed Feb. 5, 1960.

Bittle

No claim is made to exclusive use of the words "Quality Products" apart from the mark as shown.
For Fire Starting Fuel in Solid Form.
First use June 1, 1958.

SN 90,409. Cooperative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

COLONIAL

For Roses.
First use December 1953.

SN 91,522. The Chemstrand Corporation, Decatur, Ala. Filed Feb. 24, 1960.

CUMULOFT

For Synthetic Filaments and Fibers.
First use Nov. 25, 1949.

SN 92,452. B. D. Eisendrath Tanning Co., Chicago, Ill. Filed Mar. 9, 1960.

CUSTOM CALF

Exclusive use of the word "Calf" apart from the mark as shown is hereby disclaimed. Owner of Reg. No. 378,874.
For Leather.
First use Nov. 1, 1930.

SN 94,234. Argenta Products Co., Eastport, Maine. Filed Apr. 4, 1960.

ASTRALUCINE

For Natural Pearl Essence.
First use Aug. 7, 1941.

SN 94,357. Celanese Corporation of America, New York, N.Y. Filed Apr. 4, 1960.

AMIFIL

For Cellulose Acetate Fibers.
First use Mar. 24, 1960.

SN 94,968. The Dow Chemical Company, Midland, Mich. Filed Apr. 13, 1960.

BUOYACEL

For Expanded Synthetic Resins.
First use Mar. 10, 1960.

SN 94,969. The Dow Chemical Company, Midland, Mich. Filed Apr. 13, 1960.

CASACEL

For Expanded Synthetic Resins.
First use Mar. 10, 1960.

SN 94,970. The Dow Chemical Company, Midland, Mich. Filed Apr. 13, 1960.

DOMACEL

For Expanded Synthetic Resins.
First use Mar. 10, 1960.

Class 2—Receptacles

SN 79,751. G. H. Wood and Company Limited, Toronto, Ontario, Canada. Filed Aug. 17, 1959.

AIR-SAN

Owner of Canadian Reg. No. 116,871, dated Feb. 5, 1960.
For Sanitary Waste Receptacles Having an Air Spraying Device in the Lid.

SN 82,185. American Package Corporation, Portsmouth, Va. Filed Sept. 28, 1959.

WISE-PAK

For Wrappers of Kraft Paper Containing Cushioning Materials Consisting of Cellulose Macerated Fillers for Use in Connection With Shipping Containers; Liners Made of Paper for Use in Shipping Containers; and Shipping Containers Made of Fiber, of Wood Veneer, and of Kraft Paper Covered Wood Veneers.
First use Aug. 24, 1959.

SN 83,381. Creath Q. Linville, Phoenix, Ariz. Filed Oct. 16, 1959.

FACE-PAK

For Cartons for Holding Vegetables and Fruit.
First use Oct. 1, 1959.

SN 87,028. Bloomer Bros. Company, Newark, N.Y. Filed Dec. 10, 1959.

BLOOMER

Owner of Reg. No. 459,281.
For Paper Board Cartons.
First use Oct. 23, 1959.

SN 88,818. Springfield Casket Manufacturing Company, Incorporated, Crane, Mo. Filed Jan. 11, 1960.

Gold Shield

For Burial Caskets.
First use Nov. 2, 1959.

SN 89,586. J.B.M. Achievements, Inc., New York, N.Y. Filed Jan. 25, 1960.

TISSUER

For Dispenser of Facial Tissue in the Roll.
First use Dec. 29, 1959.

Class 4—Abrasives and Polishing Materials

SN 77,537. The Granwood Flooring Company Limited, Riddings, England. Filed July 13, 1959.

GRANSPRAY

Priority is claimed under Sec. 44(d) on British Reg. No. 789,162, dated Apr. 3, 1959.
For Floor Waxes and Polishes.

Class 6—Chemicals and Chemical Compositions

SN 45,490. Odor-Aire, Inc., Wichita, Kans. Filed Feb. 7, 1958.

Odor-Aire

Owner of Reg. No. 556,183.
For Perfumed and Unperfumed Paradichlorobenzene in Block and Crystal Form for Use as an Insecticide, Mildew Preventive, Insect Repellent, Disinfectant and Deodorant.
First use on or about Oct. 8, 1957.

SN 58,166. Chase Products Co., Broadview, Ill. Filed Sept. 2, 1958.

CHASES MILDEW

Owner of Reg. Nos. 540,465, 671,060, and others.
For Chemical Composition for Treating Surfaces To Prevent and Curtail Mildew and Mold Rot, Packed in Aerosol Bomb and Applied by Spraying Directly Therefrom.
First use on or about May 2, 1958.

SN 60,315. Howard A. Chittick, d.b.a. Fairfax Biological Laboratory, Clinton, Corners, N.Y. Filed Mar. 11, 1959.

DANDELION DOOM

Owner of Reg. Nos. 52,157, 221,911, and 425,119.
For Herbicide.
First use on or about August 1956.

SN 60,316. Howard A. Chittick, d.b.a. Fairfax Biological Laboratory, Clinton Corners, N.Y. Filed Mar. 11, 1959.

DOOM

Owner of Reg. Nos. 52,157, 425,119, and others.
For Herbicide.
First use in or about August 1956.

SN 72,358. K. J. Quinn & Co. Inc., Malden, Mass. Filed Apr. 27, 1959.

QUTHANE

For Leather Finisher.
First use Feb. 17, 1959.

SN 82,201. Tuscarora Chemical Works, Chittenango, N.Y. Filed Sept. 28, 1956.



TUSCARORA QUALITY

The word "Quality" is disclaimed apart from the mark as shown.
For Iodides.
First use June 1, 1957.

SN 84,633. American Cyanamid Company, New York, N.Y. Filed Nov. 5, 1959.

CYANATEX

Owner of Reg. Nos. 589,706, 641,228, and others.
For Rayon Oil Used as a Spin or Fiber Finish and Also as a Coning Oil To Lubricate and Reduce the Static in Yarns.
First use June 1, 1953.

SN 85,635. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Nov. 18, 1959.

PELFORM

For Accelerators for Use in Vulcanizing Natural Rubber and Synthetic Rubber.
First use Oct. 27, 1959.

SN 85,707. Atlas Supply Company, Newark, N.J. Filed Nov. 20, 1959.

ATLAS

Owner of Reg. Nos. 236,698, 671,325, and others.
For Chemical Solution for Use in Removing Ice From Automobile Windshields and Windows and Sold and Distributed Through Automobile Service Stations.
First use Oct. 31, 1959.

SN 82,893. Donald E. Lawrence, d.b.a. Can't Miss Co., Montclair, Calif. Filed Mar. 15, 1960.

CAN'T MISS

For Laundry Starch Marketed in Pressure Containers.
First use June 24, 1959.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 81,452. James T. Beck, Sr., Washington, Pa. Filed Sept. 16, 1959.

ROCK & ROLL

For Ashtrays.
First use Aug. 31, 1959.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 95,342. Western Auto Supply Company, Kansas City, Mo. Filed Apr. 18, 1960.

REVELATION

Owner of Reg. No. 575,184.
For Firearms, Including Shoulder Arms and Shotguns.
First use Dec. 8, 1959.

Class 10—Fertilizers

SN 95,477. California Spray-Chemical Corporation, Richmond, Calif. Filed Apr. 21, 1960.

KLEENUP

Owner of Reg. No. 292,628.
For Fertilizer.
First use Dec. 29, 1959.

SN 96,211. Gillette Inhibitor Co., Chicago, Ill. Filed May 2, 1960.

AROUND THE CLOCK

For Plant Nutrients and Fertilizers.
First use Mar. 1, 1960.

Class 12—Construction Materials

SN 76,019. Rockwell Lime Company, Chicago, Ill. Filed June 18, 1959.



The drawing is lined for red and blue but color is not an essential feature of the mark. Applicant claims no right to register "E-Z Spread" apart from the mark as shown. Owner of Reg. No. 671,386.
For Building Lime.
First use Mar. 3, 1958.

SN 88,888. Penn Metal Company, Inc., Boston, Mass. Filed Jan. 28, 1960.

PERMA LOCK

For Studs and Bridging for Use in Building Construction.
First use Apr. 18, 1956.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 88,023. Elkay Manufacturing Company, Chicago, Ill. Filed Aug. 28, 1958.

SINK-ETTE

For Sink Bowl and Drainboard.
First use Apr. 7, 1958.

SN 89,307. Superior Shower Door Co., Los Angeles, Calif. Filed Jan. 19, 1960.

"TRILITE GLIDE-AWAY"

For Bath Tub Enclosures.
First use Nov. 24, 1958.

SN 89,411. Crane Co., Chicago, Ill. Filed Jan. 21, 1960.

"PRESTO"

For Shower Head.
First use Oct. 1, 1946.

Class 14—Metals and Metal Castings and Forgings

SN 73,131. National Steel Corporation, Pittsburgh, Pa. Filed May 7, 1959.

DUAS BANDEIRAS

The words "Duas Bandeiras" mean "two flags" in the Portuguese language.
For Sheet Steel—Namely, Flat Galvanized Sheets or Corrugated Galvanized Sheets.
First use Oct. 31, 1958.

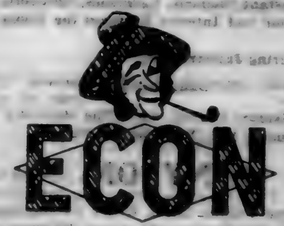
SN 82,140. Pacific Steel Casting Company, Berkeley, Calif. Filed Sept. 25, 1959.



For Carbon and Low Alloy Steel Castings.
First use May 14, 1959.

Class 15—Oils and Greases

SN 91,530. Econ Gasoline Corporation, Hobbs, N. Mex. Filed Feb. 24, 1960.



For Gasoline.
First use Nov. 15, 1958.

Class 16—Protective and Decorative Coatings

SN 87,147. Dr. Heinrich Schöwitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESOLUX

Owner of German Reg. No. 684,563, dated Nov. 22, 1955; and U.S. Reg. No. 688,595.
For Dyestuffs, Paints, Lacquer Colours, Metals in Foil, Varnishes, Lacquers, Varnish Primers, Coloured Enamel Lacquers, Light-Coloured Lacquers, Varnish Thinners, Polishing Lacquers, Mordants, Resins, Shoe Polish, Preparations for Polishing and for the Protection of Leathers, Dressing and Tanning Substances, Floor Waxes.

SN 87,148. Dr. Heinrich Schöwitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESOVIT

Owner of German Reg. No. 680,180, dated Aug. 9, 1955; and U.S. Reg. No. 688,595.
For Dyestuffs, Paints, Lacquer Colours, Metals in Foil, Varnishes, Lacquers, Varnish Primers, Coloured Enamel Lacquers, Light-Coloured Lacquers, Varnish Thinners, Polishing Lacquers, Mordants, Resins, Adhesive Substances, Shoe Polish, Preparations for Polishing and for the Protection of Leather, Dressing and Tanning Substances, Floor Waxes.

SN 87,149. Dr. Heinrich Schöwitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESOTAL

Owner of German Reg. No. 531,875, dated Apr. 18, 1941; and U.S. Reg. No. 688,595.
For Painting Preparations, Lacquer Colours, Lacquers, Varnish Primers, Coloured Enamel Lacquers, Light-Coloured Lacquers, Varnish Thinners, Polishing Lacquers.

SN 89,844. Everseal Manufacturing Co., Inc., Ridgefield, N.J. Filed Jan. 28, 1960.

EVERSEAL-CORROSIUM

For Anti-Corrosive Paint.
First use Dec. 1, 1959.

SN 92,047. Isidore Rodbell, d.b.a. The Marvelite Paint Company, Baltimore, Md. Filed Mar. 2, 1960.

NUPOXY

For Oil Type Paints, Latex Water Paints, Epoxy Paints, Chemical Resistant Enamels, Varnishes, Thinners, and Paints for All Exterior and Interior Surfaces for Home and Industrial Use.
First use during January 1941.

SN 92,048. Isidore Rodbell, d.b.a. The Marvelite Paint Company, Baltimore, Md. Filed Mar. 2, 1960.

NYPON

For Oil Type Paints, Latex Water Paints, Epoxy Paints, Chemical Resistant Enamels, Varnishes, Thinners, and Paints for All Exterior and Interior Surfaces for Home and Industrial Use.
First use on or about January 1941.

SN 92,230. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 7, 1960.

SCOTCHRAP

Owner of Reg. No. 587,579.
For Primer.
First use Dec. 22, 1954.

Class 17—Tobacco Products

SN 87,790. Douwe Egberts Koninklijke Tabaksfabriek-Koffiebranderijen-Theehandel N.V., Joure, Netherlands. Filed Dec. 22, 1959.

PRESTIGE

Owner of U.S. Reg. No. 678,340.
For Pipe Tobacco.
First use June 3, 1958; in commerce Dec. 15, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 67,882. Musher Foundation, Incorporated, New York, N.Y. Filed Feb. 17, 1959.

SEPTIDERM

For Topical Cream Application Useful as a Microbicide Effective Against Primary Pyogenic Infections, Secondarily Infected Dermatoses and Wound Infections.
First use on or about Jan. 29, 1959.

SN 67,883. Musher Foundation, Incorporated, New York, N.Y. Filed Feb. 17, 1959.

SEPTICORT

For Topical Cream Application Useful as a Microbicide Effective Against Pyogenic Infections, Secondarily Infected Dermatoses and Wound Infections.
First use on or about Jan. 29, 1959.

SN 75,366. Carlo Erba S.p.A., Milan, Italy. Filed June 9, 1959.

MEBINOL

Owner of Italian Reg. No. 139,205, dated Jan. 15, 1958.
For Pharmaceutical and Veterinary Products.

SN 83,795. International Latex Corporation, Dover, Del. Filed Oct. 22, 1959.

ISODINE

Owner of Reg. Nos. 369,250 and 648,591.
For Medicated Applications, Athlete's Foot Treatment Kit and Medicated Powder for Treating the Feet.
First use June 7, 1957.

SN 86,088. Yardley of London, Inc., d.b.a. Yardley, Union City, N.J. Filed Nov. 25, 1959.

FAIR AND CLEAR

For Medicated Cream for Treating Skin Blemishes.
First use Sept. 4, 1959.

SN 88,551. Lloyd Brothers, Inc., Cincinnati, Ohio. Filed Jan. 6, 1960.

SURFAKTONE

Owner of Reg. No. 695,947.
For Laxative.
First use on or about Oct. 7, 1959.

SN 89,831. Associated Laboratories, Inc., d.b.a. Vitamin-Quota, New York, N.Y. Filed Jan. 28, 1960.

VITAMIN-QUOTA

Owner of Reg. No. 394,129.
For Vitaminic Products—Namely, Capsules Containing Vitamin Concentrates.
First use Dec. 30, 1940.

SN 91,720. The Upjohn Company, Kalamazoo, Mich. Filed Feb. 26, 1960.

PENSONE

Owner of Reg. No. 658,105.
For Appetite Depressant.
First use Nov. 16, 1959.

SN 92,130. The Wander Company, d.b.a. Smith-Dorsey, Chicago, Ill. Filed Mar. 3, 1960.

KANULASE

For Digestant, To Relieve the Discomforts of Excessive Gas.
First use Feb. 25, 1960.

SN 92,141. Commerce Drug Company, Inc., Brooklyn, N.Y. Filed Mar. 4, 1960.

DON'T

For Anti Thumb Sucking and Nail Biting Preparation.
First use May 5, 1960.

SN 92,210. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Mar. 7, 1960.

J DI-GORT

For Topical Gel Ointment for Use in Gingival Inflammatory Problems.
First use Dec. 14, 1959.

SN 92,215. George A. Breon & Company, New York, N.Y. Filed Mar. 7, 1960.

BRONKOTAB

Owner of Reg. Nos. 604,751 and 669,048.
For Antiasthmatic Preparation.
First use Feb. 16, 1960.

SN 92,245. Foster-Milburn Company, Buffalo, N.Y. Filed Mar. 7, 1960.

LOWILA

Owner of Reg. Nos. 393,885 and 414,128.
For Therapeutic Preparation for the Treatment of Minor Skin Disorders.
First use March 1944.

SN 92,260. Horton & Converse, Los Angeles, Calif. Filed Mar. 7, 1960.

RESTORA

For Pharmaceutical Preparation Used as an Aid in Inducing Sleep.
First use on or about Feb. 19, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 79,543. Everett C. Young, d.b.a. Young Enterprises, Cleveland, Ohio. Filed Aug. 13, 1959.

PEEL KING

No claim is made for the word "Peel" apart from the mark as shown.
For Electrical Vegetable Peeler.
First use July 22, 1959.

SN 79,792. Joe Lowe Corporation, New York, N.Y. Filed Aug. 18, 1959.

SICLE

Owner of Reg. No. 534,602.
For Electric Clocks and Flashlights.
First use during the month of January 1907.

SN 80,993. Industrial Electronics Corporation, Newark, N.J. Filed Sept. 8, 1959.

CATH-O-GUARD

For Fluorescent Lamps.
First use Aug. 26, 1959.

SN 84,041. Diamond Power Specialty Corporation, Lancaster, Ohio. Filed Sept. 21, 1959.

UTILISCOPE

Owner of Reg. No. 510,611.
For Television Transmitting and Receiving Apparatus.
First use June 22, 1946.

SN 89,351. General Time Corporation, New York, N.Y. Filed Jan. 20, 1960.

HAYDON

Owner of Reg. No. 442,270.
For Electric Motors and Electric Switches.
First use 1887.

SN 93,350. The Pyramid Rubber Company, Ravenna, Ohio. Filed Mar. 21, 1960.

IDEAL

Owner of Reg. No. 645,479.
For Electrically Operated Heating Equipment, Including Sterilizers, Vaporizers, and Bottle Warmers.
First use Dec. 28, 1959.

SN 93,358. The Regina Corporation, Rahway, N.J. Filed Mar. 21, 1960.

VAC-U-WASH

For Electric Household Appliance That Applies a Liquid to a Floor Surface or Covering and Creates a Vacuum To Then Pick Up the Liquid.
First use Aug. 27, 1959.

SN 93,380. Tennessee Stove Works, Inc., Chattanooga, Tenn. Filed Mar. 21, 1960.

MODERN MAID

Owner of Reg. No. 665,968.
For Electric Dishwashers.
First use Mar. 7, 1960.

Class 22—Games, Toys, and Sporting Goods

SN 59,193. Irwin Corporation, New York, N.Y. Filed Sept. 19, 1958.

TWIRLAHOOP

For Hoop Toys.
First use Aug. 18, 1958.

SN 67,202. Central Tablet Manufacturing Company, Columbus, Ohio. Filed Feb. 6, 1959.

MURALTONE

For Play Modeling or Art Clay for Children.
First use Feb. 5, 1958.

SN 75,788. H. & A. Selmer Inc., Elkhart, Ind. Filed June 15, 1959.

SLIMSTER

Owner of Reg. Nos. 224,583, 610,703, and others.
For Batons for Twirling.
First use in July 1955.

SN 79,102. Empire Plastic Corp., Pelham Manor, N.Y. Filed Aug. 6, 1959.

HUMWINGER

For Vertical Flying Toy.
First use Apr. 2, 1959.

SN 79,303. Mrs. Jean Stadler, Fort Bragg, Calif. Filed Aug. 10, 1959.

MENTAL BLOCKS

No claim of exclusive right is made to "Blocks" as used on toy blocks for playing a game apart from the use of the word as a part of the mark shown.
For Equipment Sold as a Unit for Playing a Mathematical Game To Solve Problems and Execute Predetermined Forms.
First use June 10, 1959.

SN 79,677. Joe Lowe Corporation, New York, N.Y. Filed Aug. 17, 1959.

SICLE

Owner of Reg. No. 553,756.
For Toy Train and Track Set, Football Helmet, Footballs, Baseballs, Soft Balls, Baseball Gloves, Beach Balls, Fishing Set, Toy Boats, Toy Soldiers, Hobby Kits for Building Plastic Scale Models, Water Pistols, Plastic Toys, Dolls of All Kinds, Satellite Rockets, and Notched Wooden Construction Sticks.
First use during the month of January 1957.

SN 82,255. Clifford J. Vogt, Cleveland, Ohio. Filed Oct. 14, 1959.

CROQUER

For Golf Clubs.
First use Aug. 23, 1959.

SN 85,624. Starman Division of Manufacturer's Laboratory, Sun Valley, Calif. Filed Nov. 18, 1959.

STARMAN

For Artificial Fishing Lures.
First use June 1, 1953.

SN 87,022. Ashaway Line & Twine Mfg. Co., Ashaway, R.I. Filed Dec. 10, 1959.

TEFLEX

For Finish Incorporated in Fishing Lines.
First use on or about Nov. 27, 1959.

SN 88,441. Vulcan Corporation, Portsmouth, Ohio. Filed Jan. 4, 1960.

VULTEX

Owner of Reg. Nos. 576,473, 576,474, and 584,702.
For Bowling Pins.
First use January 1959.

SN 88,493. John T. Riddell, Inc., Chicago, Ill. Filed Jan. 5, 1960.

SNUG-LIFT

For Bowling Shoes, Football Shoes, Baseball Shoes, and Track Shoes.
First use on or about Oct. 19, 1959.

SN 88,701. W. J. Voit Rubber Corp., Los Angeles, Calif. Filed Jan. 8, 1960.

VIKING

For All Apparatus and Accessories Used in Skin and Scuba Diving.
First use January 1955.
Subj. to Intf. with SN 80,805.

SN 90,993. Chipman Corporation, Chester Springs, Pa. Filed Feb. 16, 1960.

SNEL-A-FLY

For Leader Devices for Attaching Flies and Similar Lures and Hooks to Fishing Lines.
First use Feb. 9, 1960.

SN 92,540. Longfellow Products, Inc., Fraser, Mich. Filed Mar. 10, 1960.

Longfellow

Owner of Reg. No. 602,671.
For Fishing Rods, Fishing Reels, and Parts Thereof.
First use about Jan. 26, 1953.

SN 92,756. B. F. Gladding & Company, Inc., South Otselic, N.Y. Filed Mar. 14, 1960.

RANGELEY

For Fishing Lines.
First use Jan. 20, 1959.

SN 92,758. B. F. Gladding & Company, Inc., South Otselic, N.Y. Filed Mar. 14, 1960.

GOLD CUP

For Fishing Lines.
First use Jan. 9, 1960.

SN 92,759. B. F. Gladding & Company, Inc., South Otselic, N.Y. Filed Mar. 14, 1960.

MAGNET

For Fishing Lines.
First use July 20, 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 46,437. Gardner-Denver Company, Quincy, Ill. Filed Feb. 24, 1958.

STIKONTROL

For Pendent Control Mechanisms for Operating Trolley Mounted Hoists and Associated Power Trolleys.
First use Feb. 10, 1956.

SN 68,925. Marbet Manufacturing Company, Incorporated, Sun Valley, Calif. Filed Mar. 4, 1960.

MARBET

For Hydraulic Remote Power Control Units for Motors.
First use Apr. 26, 1959.

SN 69,782. A-S-K Corporation, Berkeley, Calif. Filed Mar. 18, 1959.

A-S-K

For Hand-Operated Rope Tying Machine for Tying Tree Limbs and the Like.
First use Dec. 8, 1958.

SN 79,747. Western Pump Distributors, Inc., Lubbock, Tex. Filed Aug. 17, 1959.

Gold Crown

For Irrigation Pumps, Transmission Means for Irrigation Pumps, and Parts Thereof.
First use Feb. 1, 1955.

SN 82,338. Filotecnica Salmoiraghi, S.p.A., Milan, Italy. Filed Sept. 29, 1959.

SALMOIRAGHI

Priority claimed under Sec. 44(d) on Italian application filed Apr. 10, 1959; Reg. No. 145,198, dated Sept. 12, 1959.
For Sewing Machines, Knitting Machines, Embroidery Machines.

SN 82,339. Filotechnica Salmoiraghi S.p.A., Milan, Italy. Filed Sept. 29, 1959.

FILOTECNICA SALMOIRAGHI

Priority claimed under Sec. 44(d) on Italian application filed July 15, 1959; Reg. No. 145,850, dated Oct. 29, 1959.
For Sewing Machines, Knitting Machines, Embroidery Machines.

SN 83,261. Aero-Motive Manufacturing Co., Kalamazoo, Mich. Filed Oct. 15, 1959.

AERO-MOTIVE

For Cord Reels, Cable Reels, and Hose Reels.
First use at least as early as Jan. 1, 1949.

SN 87,703. Monadnock Novelty Corp., Winchendon, Mass. Filed Dec. 21, 1959.

SPEED A LOOP

For Automatic Machines for Making Belt Holding Loops on Garments.
First use Sept. 11, 1959.

SN 87,727. Scholle Container Corp., Northlake, Ill. Filed Dec. 21, 1959.

SCHOLLE AUTO-FILL

For Automatic Bag Filling Machine.
First use Dec. 11, 1959.

SN 88,056. Link Research Corporation, Beverly Hills, Calif. Filed Dec. 28, 1959.

MAGI-CUTTER

For Styrofoam Hot Wire Cutting Tool.
First use Nov. 24, 1959.

SN 88,808. Roovers-Lotsch Corporation, Old Forge, Pa. Filed Jan. 11, 1960.

MIDGIE MATIC

For Embossing and Stamping Seals and Devices.
First use Oct. 28, 1959.

SN 89,078. Cherry-Burrell Corporation, Cedar Rapids, Iowa. Filed Jan. 28, 1960.

FLEXFLO

For Sanitary Pumps for Fluid Products.
First use April 1954.

SN 91,706. Leslie B. Ratliff, d.b.a. Ratliff Distributing Company, St. Louis, Mo. Filed Feb. 26, 1960.

E-Z Pleat

For Drapery Pleating Attachment for Sewing Machines.
First use Feb. 15, 1960.

SN 91,742. Bamco Products Company, Brea, Calif. Filed Feb. 29, 1960.



The drawing is lined for blue and yellow but color is not claimed as a feature of the mark.
For Pump Rotors or Impellers of Machines for Pumping Viscous Materials.
First use Oct. 7, 1959.

SN 91,869. Spraying Systems Co., Bellwood, Ill. Filed Feb. 29, 1960.

AUTOJET

For Servo Control and Spray Nozzle Assembly.
First use on or about Oct. 28, 1959.

SN 91,896. Wilmot Engineering Company, White Haven, Pa. Filed Feb. 25, 1960.

W
WILMOT

For Hydrotators, Classifiers, Froth Units, Conveyors, Crusher Rolls, Dewatering Screens, Hydro-Separators, and Jigs.
First use October 1933.

SN 91,898. Young Spring & Wire Corporation, Detroit, Mich. Filed Feb. 29, 1960.

Commando

For Power-Operated Vehicles for Mounting Trailer Connections, Earth Moving Shovels Such as Backhoes and Drop Hammers and the Like.
First use Aug. 7, 1959.

SN 91,928. Elk Engineering Works Inc., St. Marys, Pa. Filed Mar. 1, 1960.

ELK-O-MATIC

For Vibratory Parts Feeders.
First use Jan. 20, 1960.

SN 92,012. Grand Specialties Company, Chicago, Ill. Filed Mar. 2, 1960.

ERECT-A-LIFT

For Lifts.
First use on or about Feb. 12, 1960.

SN 92,034. Muskegon Tool Industries, Inc., Muskegon, Mich. Filed Mar. 2, 1960.

MICRO-FLOTE

For Machine Tools—Namely, Cutting Tools for Reaming, Boring and Other Cutting Operations.
First use Oct. 5, 1959.

SN 92,149. Eversharp, Inc., New York, N.Y. Filed Mar. 4, 1960.

SILAKEEN

For Safety Razors, Safety Razor Blades and Dispensing Devices for Safety Razor Blades.
First use Feb. 3, 1960.

SN 92,892. The Lapointe Machine Tool Company, Hudson, Mass. Filed Mar. 15, 1960.

LAPOINTE

Owner of Reg. Nos. 621,275, 656,068, and others.
For Broaches, Broaching Machines, Broach Sharpeners, and Precision Index Tables.
First use during 1913 on broaches and broaching machines.

Class 25—Locks and Safes

SN 88,297. The H. B. Ives Company, New Haven, Conn. Filed Jan. 4, 1960.

WEATHER-TITE

Owner of Reg. No. 596,296.
For Sash Locks.
First use on or about Mar. 6, 1952.

SN 92,381. Koh-I-Noor Bilovec, Narodni Podnik, Bilovec, Czechoslovakia. Filed Mar. 8, 1960.

MASSAG

Owner of Czechoslovakian Reg. No. 153,067, dated July 18, 1947.
For Hardware for Suitcases, Briefcases, Bags and Trunks—Namely, Buckles, Clasps, Hinges, Catches, Snap Locks.

Class 26—Measuring and Scientific Appliances

SN 79,791. Joe Lowe Corporation, New York, N.Y. Filed Aug. 18, 1959.

SICLE

Owner of Reg. No. 544,291.
For Cameras and Compass Telescopes.
First use during the month of January 1957.

Class 27—Horological Instruments

SN 81,413. Lucien Piccard Watch Corp., New York, N.Y. Filed Sept. 15, 1959.

DA VINCI

For Watches.
First use Aug. 11, 1959.

SN 87,347. General Time Corporation, New York, N.Y. Filed Dec. 15, 1959.

WALLTONE

For Clocks.
First use Jan. 23, 1959.

Class 28—Jewelry and Precious-Metal Ware

SN 79,790. Joe Lowe Corporation, New York, N. Y. Filed Aug. 18, 1959.

SICLE

Owner of Reg. No. 540,734.
For Key Chains, Charm Bracelets, Chain Necklace, Finger Rings, Identification Bracelets, Pearl Sets Including Beads, Earrings and Bracelet and Foreign Coins.
First use during the month of January 1957.

Class 29—Brooms, Brushes, and Dusters

SN 86,816. Theron V. Mims, d.b.a. South Eastern Cordage, Cleveland, Ohio. Filed Dec. 7, 1959.



For Mop Heads.
First use Oct. 26, 1959.

Class 31—Filters and Refrigerators

SN 80,190. The McKaye Company, St. Paul, Minn. Filed Aug. 25, 1959.

McKaye

For Water Treating Equipment Consisting of Domestic and Commercial Water Softeners Including Brine Tanks and Iron Filters.
First use July 20, 1959.

SN 88,746. Flavor Fast Foods, Inc., Rockton, Ill. Filed Jan. 11, 1960.

FREEZMASTER

Owner of Reg. No. 587,169.
For Freezers.
First use about Dec. 1, 1936.

SN 89,781. Melchior, Armstrong, Dessau Co. of Delaware, Inc., Ridgefield, N.J. Filed Jan. 27, 1960.

MELCO

Owner of Reg. Nos. 307,740, 620,013, and others.
For Condensing Units for Electric Domestic and Commercial Refrigerators and Air Conditioning Units and Replacement and Repair Parts Therefor; Coil-Pan Combinations for Electric Domestic and Commercial Refrigeration and Replacement Repair Parts Therefor; Replacement and Repair Parts for Electric Domestic and Commercial Refrigeration; Coolers-Carbonators and Unit Coolers for Refrigeration.
First use June 28, 1932.

SN 90,304. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 4, 1960.

POROMESH

Owner of Reg. No. 638,690.
For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Aug. 10, 1955.

SN 92,083. Advanced Engineering Corp., Milwaukee, Wis. Filed Mar. 3, 1960.

COMPRESS-O-VAC

For Controlled Refrigeration System.
First use July 10, 1956.

Class 32—Furniture and Upholstery

SN 86,358. The Stearns & Foster Company, Cincinnati, Ohio. Filed Nov. 30, 1959.

LADY HUNTINGDON

For Mattresses.
First use June 1, 1947.

SN 86,360. The Stearns & Foster Company, Cincinnati, Ohio. Filed Nov. 30, 1959.

BERKELEY

For Mattresses.
First use 1945.

SN 86,363. The Stearns & Foster Company, Cincinnati, Ohio. Filed Nov. 30, 1959.

LADY MADISON

For Mattresses.
First use June 1, 1947.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 89,782. Melchior, Armstrong, Dessau Co. of Delaware, Inc., Ridgefield, N.J. Filed Jan. 27, 1960.

MELCO

Owner of Reg. Nos. 307,740, 620,013, and others.
For Heating Units, Gas and Oil Fired; Cooling or Air-Conditioning Units, Said Units Consisting of Coil, Condensing Unit and Necessary Controls for a Complete Cooling System; Heating Coil for Steam or Hot Water Heating Medium; Air Fans Powered by Electricity; Electric Motor and Air Filters, Housed in One Casing; Evaporative Condensers and Parts Thereof, and Combinations of Such Heating and Cooling Units, for Domestic, Commercial and Industrial Use.
First use June 28, 1932.

SN 89,788. Nated Corp., Forest Hills, N.Y. Filed 1-27-60.

CRYSTALABRA

For Decorative Members for Candlesticks, Sconces, Candelabra, Light Fixtures, and the Like.
First use Nov. 7, 1959.

SN 89,832. Baker Bros., Inc., Jacksonville, Fla. Filed 1-28-60.

LA SALLE

The drawing is lined for blue and silver-gray.
For Air Conditioning Units, Air Handling Units Comprising an Air Conditioning Coil and Blower, Air Conditioning Coil Units, and Gas and Oil Fired Furnaces.
First use Mar. 3, 1959.

SN 90,286. American Radiator & Standard Sanitary Corporation, New York, N.Y. Filed Feb. 4, 1960.

INDUCTOR

For Air Conditioning Units.
First use during 1957.

SN 90,427. Link-Belt Company, Chicago, Ill. Filed Feb. 5, 1960.

LINK-BELT

FLUID-FLO

Owner of Reg. Nos. 63,503, 630,845, and others.
For Dryers of the Type in Which a Bed of Flowable Solids Confined in a Chamber on a Grate Is Subjected to a Vertical Stream of Heated Air Under Sufficient Pressure To Fluidize the Bed and Drive Off Moisture From the Solids; and Repair and Replacement Parts Therefor.
First use Oct. 30, 1959.

SN 90,523. R. E. Kramig & Company, Inc., Cincinnati, Ohio. Filed Feb. 8, 1960.

Cool-Core

For Cores for Use in Cooling Towers of Air Conditioning Systems.
First use July 17, 1957.

SN 90,528. Leslie Welding Co., Inc., Chicago, Ill. Filed Feb. 8, 1960.

VERSACAP

For Adjustable Flue Covers.
First use Dec. 1, 1959.

SN 91,370. A. Reynolds Morse, d.b.a. Injection Molders Supply Co., Cleveland, Ohio. Filed Feb. 2, 1960.

VRF

For Vented Reverse Flow Heating Cylinders.
First use Dec. 18, 1959.

SN 91,676. Dry Manufacturing Company, Winters, Tex. Filed Feb. 26, 1960.

Air Mate

For Grilles, Registers and Diffusers.
First use Sept. 1, 1959.

SN 91,714. Structo Manufacturing Company, Freeport, Ill. Filed Feb. 26, 1960.

GRID-MASTER

For Barbecue Grills.
First use Nov. 18, 1959.

SN 91,770. Edgewood Manufacturing Company, El Monte, Calif. Filed Feb. 29, 1960.

AQUAGLAS

For Water Heaters and Boilers.
First use Feb. 23, 1960.

SN 93,351. The Pyramid Rubber Company, Ravenna, Ohio. Filed Mar. 21, 1960.

IDEAL

Owner of Reg. No. 645,479.
For Non-Electrical Apparatus for Heating Infant Feeding Equipment.
First use Feb. 2, 1960.

Class 36 — Musical Instruments and Supplies

SN 81,660. Farfisa, Ancona, Italy. Filed July 6, 1959.

Pianorgan

For Reed Organs.
First use Dec. 6, 1958; in commerce Dec. 6, 1958.

SN 93,541. Nilo Santos Pinto, Rio de Janeiro, Brazil. Filed Mar. 23, 1960.

MAGIC STRINGS

Owner of Brazilian Reg. No. 429,849, dated Oct. 15, 1959.
For Grooved Phonograph Records.

Class 37 — Paper and Stationery

SN 61,679. Western Tablet & Stationery Corporation, Dayton, Ohio. Filed Oct. 30, 1958.

PURSE-PAK

For Packaged Writing Paper and Envelopes.
First use Sept. 30, 1958.

SN 71,020. Longlife Pen Company, Arcadia, Calif. Filed Apr. 7, 1959.

LONGLIFE

For Ball Point Writing Pens.
First use Mar. 6, 1959.

SN 75,434. Murray Bag & Paper Corp., Vernon, Calif. Filed June 9, 1959.

For Paper Bags and Wrapping Paper.
First use on or about Nov. 1, 1949.

SN 76,508. Paragon Rubber Corporation, Easthampton, Mass. Filed June 25, 1959.

BLUE RIBBON Rubber Bands

No claim is made to the words "Rubber Bands" constituting the name of the goods or to the slogan "The Badge of Quality" apart from the mark.
For Rubber Bands.
First use Jan. 28, 1959.

SN 77,667. L. & C. Hardtmuth, Inc., Bloomsbury, N.J. Filed July 14, 1959.

NEOGRAPH

For Pens.
First use Mar. 25, 1959.

Class 38 — Prints and Publications

SN 66,014. Business News Publishing Company, Detroit, Mich. Filed Jan. 19, 1959.

AIR ENGINEERING

For Trade Paper.
First use December 1958.

SN 72,847. Knox-Bergman-Shearer, Denver, Colo. Filed May 4, 1959.

GEOBASE

For Map—Namely, an Areal Geology and Structural Interpretation Map.
First use on or about Apr. 2, 1959.

SN 76,743. Standard Associates, Inc., Hutchinson, Kans. Filed June 29, 1959.

CHANNEL CHATTER

For Pamphlets for Distribution by Others.
First use Feb. 12, 1959.

SN 79,679. Joe Lowe Corporation, New York, N.Y. Filed Aug. 17, 1959.

SICLE

Owner of Reg. No. 564,906.
For Philatelic Stamp Outfits, Domestic and Foreign Stamps, Foreign Coin Kits, Story Books, and Trading Cards.
First use during the month of January 1957.

SN 83,188. Alfred J. Zachringer, d.b.a. American Rocket Company, Wyandotte, Mich. Filed Oct. 12, 1959.

For Technical Periodical and Supplements Thereto.
First use Apr. 22, 1959.

SN 83,154. Alfred J. Zachringer, d.b.a. American Rocket Company, Wyandotte, Mich. Filed Oct. 12, 1959.

ROCKET REVIEWS

For Technical Periodical.
First use Apr. 22, 1959.

SN 84,473. Sonopresse, S.A.R.L., Paris, France. Filed Nov. 2, 1959.

SONORAMA

Priority is claimed under Sec. 44(d) on French Reg. No. 481,051, dated June 12, 1959 (Seine); Natl. Inst. No. 127,437.
For Periodical Publication Including Records.
First use Oct. 1, 1958; in commerce Oct. 7, 1958.

SN 89,704. Rotary International, Evanston, Ill. Filed Jan. 26, 1960.

For Magazines and Pamphlets.
First use 1919.

SN 90,095. The New York Marine News Co., Inc., New York, N.Y. Filed Feb. 1, 1960.

MARINE NEWS

For Magazine, Published Every Month.
First use June 16, 1914.

SN 90,164. Herbert A. Ireland, Watertown, Mass. Filed Feb. 2, 1960.

SALES PROSPECTOR

For Monthly Periodical Business Newsletter.
First use July 1954.

SN 90,381. Random House, Inc., New York, N.Y. Filed Feb. 4, 1960.

LEGACY

For Books Published From Time to Time in Series.
First use Sept. 11, 1959.

SN 90,385. Audivox, Inc., Boston, Mass. Filed Feb. 5, 1960.

THE HEARING DIGEST

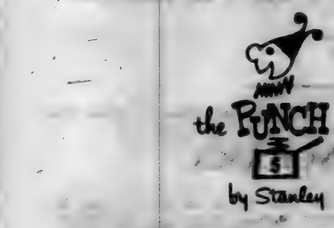
For Periodical for the Hard-of-Hearing.
First use June 19, 1959.

SN 90,433. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Feb. 5, 1960.

SOUND TALK

For Periodical Bulletin.
First use During May 1952.

SN 90,661. Stanley Greetings, Inc., Dayton, Ohio. Filed Feb. 9, 1960.



Owner of Reg. No. 643,616.
For Greeting Cards.
First use July 27, 1959.

SN 90,818. California Test Bureau, Los Angeles, Calif. Filed Feb. 12, 1960.

CAL-CARD

For Printed Publications Consisting of Answer Cards for Use in Answering Applicant's Test Material.
First use Feb. 10, 1959.

SN 91,283. The Rockefeller Institute, New York, N.Y. Filed Feb. 19, 1960.

THE JOURNAL OF BIOPHYSICAL AND BIOCHEMICAL CYTOLOGY

For Bi-Monthly Journal.
First use Jan. 25, 1955.

SN 91,284. The Rockefeller Institute, New York, N.Y. Filed Feb. 19, 1960.

THE JOURNAL OF EXPERIMENTAL MEDICINE

For Monthly Journal.
First use January 1896.

SN 91,285. The Rockefeller Institute, New York, N.Y. Filed Feb. 19, 1960.

THE JOURNAL OF GENERAL PHYSIOLOGY

For Bi-Monthly Journal.
First use Sept. 20, 1918.

Class 39—Clothing

SN 30,448. Rombro Brothers Inc., Baltimore, Md. Filed May 21, 1957.

FROST PROOF

For Work Shirts and Rough Sport Shirts.
First use in or about January 1938.

SN 52,767. Richfield Oil Corporation, Los Angeles, Calif. Filed June 2, 1958.



For Uniform Garments for Truck Drivers and Service Station Operators.
First use Jan. 12, 1939.

SN 67,429. Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. Filed Feb. 10, 1959.

ASAHI KASEI

The word "Asahi" means "morning sun," and the word "Kasei" has no specific meaning. Priority claimed under Sec. 44(d) on Japanese application filed Dec. 19, 1958; Reg. No. 550,197, dated Mar. 24, 1959.

For Suits, Overcoats, Raincoats, Sweaters, Waistcoats, Blouses, Skirts, Underwear, Night Clothes, Hats, Gloves, Socks, Stockings, Neckties, Mufflers, Scarves, and Handkerchiefs, All for Men, Women, Children, and Babies.

SN 71,479. Fresher Manufacturing Corporation, New York, N.Y. Filed May 4, 1960.

Fresher
hug-fit

For Baby Pants.
First use Apr. 13, 1959.

SN 77,355. Gayle H. Carter, Ottumwa, Iowa. Filed July 9, 1959.

koo
shoulders

For Protective Pad Placed on Shoulders of Beauty Parlor Patrons.
First use Apr. 20, 1959.

SN 75,655. Proban Limited, London, England. Filed July 29, 1959.

IMMACULA

Owner of British Reg. No. 791,450, dated May 29, 1959.
For Men's Slacks, Trousers, Overcoats, Headwear, and Ties and Women's and Children's Slacks, Coats, Jackets, Dresses, Skirts, and Headwear.

SN 78,761. Character Foundations, Inc., New York, N.Y. Filed July 31, 1959.

SILK CHIFFON

For Lightweight Corsets, Brassieres, and Corselettes Made of Fabric Including Silk Yarns.
First use November 1948.

SN 82,734. Tri-Con International, Inc., Worcester, Mass. Filed Oct. 5, 1959.

TRI-CON

For Men's, Women's, and Children's Rubber Footwear and Rubber Soled Footwear With Canvas Uppers.
First use Sept. 2, 1959.

SN 82,832. Kobacker Stores, Inc., Toledo, Ohio. Filed Oct. 7, 1959.

GENEE KAY

For Women's and Children's Hosiery, Lingerie, and Sportswear—Namely, Coats, Jackets, Skirts, Blouses, Dresses, Sweaters, Shorts, Slacks.
First use Feb. 26, 1960.

SN 83,024. Zimco Sportswear, Inc., New York, N.Y. Filed Oct. 9, 1959.

ROUND HILL

For Ladies' Sportswear—Namely, Skirts, Slacks, Blouses, and Skirts.
First use Oct. 7, 1959.

SN 84,029. Stylecraft Corp., New York, N.Y. Filed Oct. 26, 1959.

STYLECRAFT

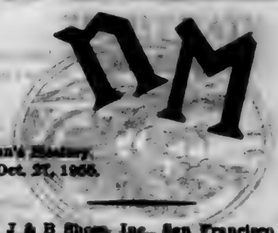
Owner of Reg. No. 430,707.
For Ladies', Misses', and Women's Sportswear—Namely, Various Lengths of Pants or Bottoms Such as Shorts, Capris, and Slacks; Various Types of Tops, Such as Blouses, Cardigans, Vests, Jackets, and Coats.
First use Jan. 1, 1953.

SN 85,535. United States Rubber Company, New York, N.Y. Filed Nov. 17, 1959.

STREAMWOOD

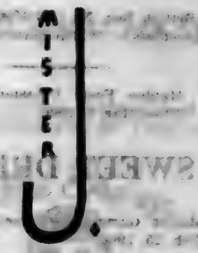
For Outer Footwear for Sportsmen and Related Uses—for Example, Waterproof Boots, Waders, Wading Shoes, and Pacs.
First use Jan. 1, 1932 or earlier.

SN 85,765. Neiman-Marcus Company, Dallas, Tex. Filed Nov. 20, 1959.



For Women's Hosiery.
First use Oct. 21, 1958.

SN 86,881. J & B Shoes, Inc., San Francisco, Calif. Filed Dec. 8, 1959.



For Women's Shoes.
First use Sept. 3, 1957.

SN 87,169. Cable Raincoat Company, Boston, Mass. Filed Dec. 14, 1959.



The words "Stormy," "Rain," "Winds," and "Fair" are disclaimed apart from the mark as shown.
For Raincoats.
First use Dec. 9, 1937.

SN 87,246. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 14, 1959.

TOUCH-DOWN

For Foundation Garments—Namely, Brassieres.
First use Oct. 16, 1959.

SN 87,340. I. H. Elfenbein, Inc., New York, N.Y. Filed Dec. 15, 1959.

"SLIMTITE"

Owner of Reg. No. 637,906.
For Pantie-Girdles and Girdles, Sleepwear and Underwear.
First use July 28, 1955.

SN 91,617. Marion Rohr Corp., Hornell, N.Y. Filed Feb. 29, 1960.

MARION-ROHR

For Lingerie Panties.
First use January 1951.

SN 92,058. Stonebridge Cotton Manufacturing Company Limited, Manchester, England. Filed Mar. 2, 1960.



Owner of British Reg. No. 757,199, dated May 1, 1958.
For Handkerchiefs of Textile Materials.

SN 92,386. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Mar. 8, 1960.

SWEET DREAMS

For Foundation Garments—Namely, Brassieres.
First use Feb. 25, 1960.

SN 92,842. Gem-Dandy, Inc., Madison, N.C. Filed Mar. 15, 1960.

NEW YORK

Owner of Reg. Nos. 50,787 and 377,092.
For Garters, Suspenders, Belts, and Ties.
First use 1879.

SN 92,981. William Glynn, d.b.a. Mar-Clay Hosiery Mills, Philadelphia, Pa. Filed Mar. 16, 1960.

Cindy Sue

For Ladies' Hosiery.
First use during August 1957.

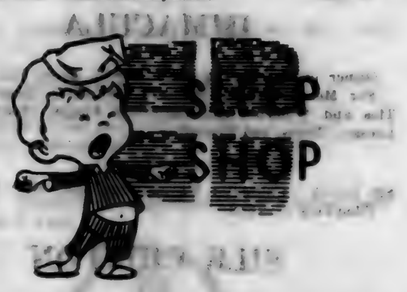
Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 59,026. The Chemstrand Corporation, Decatur, Ala. Filed Sept. 17, 1958.



Applicant claims no exclusive rights in the word "Carpet" as the name of the goods identified herein. Owner of Reg. Nos. 545,734 and 563,881.
For Textile Rugs and Carpets.
First use July 21, 1958.

SN 84,737. Nouveau Sales, Incorporated, d.b.a. Sleep Shop, Denver, Colo. Filed Dec. 22, 1958.



The drawing is lined for shading and to reproduce lines in the mark on the specimens.
For Bedding Products—Namely, Bed Spreads, Mattress Pads, Blankets, and Sheets.
First use Sept. 26, 1958.

SN 73,636. Troy Blanket Mills, Troy, N.H. Filed Apr. 28, 1959.

TROYFELT

Owner of Reg. Nos. 209,688 and 593,965.
For Mechanically Interlocked, Non-Woven Synthetic Felt.
First use Jan. 1, 1959.

SN 81,099. United Merchants and Manufacturers, Inc., New York, N.Y. Filed Sept. 9, 1959.

SILK 'N' SPLENDOR

Applicant disclaims exclusive right to use the word "Silk" except as part of the mark as shown.
For Piece Goods Made Wholly or in Part of Silk.
First use on or about Aug. 13, 1959.

SN 91,270. William J. Pappas, d.b.a. Southland Importing and Exporting Company, High Point, N.C. Filed Feb. 19, 1960.

FLEX-O-WEB

For Upholstery Webbing.
First use January 1960.

SN 91,624. Roll-O-Graphic Corporation, New York, N.Y. Filed Feb. 25, 1960.

TRI MOL

For Molleton Fabrics of Cotton and Synthetic Fibers, Sold in Bolts, Rolls, and by the Yard, Made Especially for Use With Lithographic Rolls.
First use April 1951.

SN 91,683. Fruit of the Loom, Inc., Providence, R.I. Filed Feb. 26, 1960.

YARDARM

For Cotton Piece Goods.
First use Sept. 22, 1959.

SN 92,054. Stonebridge Cotton Manufacturing Company Limited, Manchester, England. Filed Mar. 2, 1960.



Owner of British Reg. No. 142,961, dated May 15, 1934.
For Piece Goods Composed Wholly or Mainly of Cotton.

SN 92,126. Staron, Inc., New York, N.Y. Filed Mar. 3, 1960.

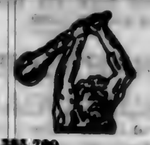
ALASKINE

For Silk and Wool Fabrics.
First use Feb. 23, 1955.

Class 43—Thread and Yarn

SN 88,186. Textile Thread Company, Watertown, Mass. Filed Dec. 29, 1959.

STURDY



Owner of Reg. No. 385,709.
For Thread.
First use July 1, 1940.

SN 91,868. Spinnerin Yarn Co., Inc., South Hackensack, N.J. Filed Feb. 29, 1960.

FROSTLON

For Yarn of Mohair and Synthetic Fibers.
First use Nov. 16, 1959.

Class 44—Dental, Medical, and Surgical Appliances

SN 86,629. Protecto Ear Plugs, Inc., Jersey City, N.J. Filed Dec. 7, 1959.



For Ear Protection Plugs for Deadening Noises.
First use July 23, 1959.

SN 90,274. The Seamless Rubber Company, New Haven, Conn. Filed Feb. 2, 1960.

DAMSEL

For Bulb Syringes Made of Rubber.
First use Jan. 12, 1960.

SN 90,416. Florida Brace Corporation, Winter Park, Fla. Filed Feb. 5, 1960.

CER-VENT

For Cervical Collars and the Like.
First use Jan. 20, 1960.

Class 45—Soft Drinks and Carbonated Waters

SN 85,760. Ma Cherie Sales Corporation of America, d.b.a. Ma-Cherie Sales Corporation, St. Louis, Mo. Filed Nov. 20, 1959.



For Flavoring Bases Adapted for Use in Making Soft Drinks.
First use Oct. 20, 1959.

SN 90,829. The Chicago Dietetic Supply House, Inc., Chicago, Ill. Filed Feb. 12, 1960.

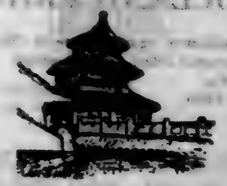
Featherweight

For Artificially Sweetened Carbonated Beverage.
First use Feb. 1, 1960.

Class 46—Foods and Ingredients of Foods

SN 58,319. Peking Restaurant, Inc., Washington, D.C. Filed Sept. 2, 1958.

北京樓
Peking Restaurant



The Chinese characters in the mark are the equivalent of the words "Pei Ching Lew" and these words and characters mean "Peking Restaurant." Applicant disclaims right to use of the word "Restaurant" apart from the mark as shown.
For Tea Balls.
First use Jan. 16, 1957; November 1947 as to the Peking Restaurant portion of the mark.

SN 65,449. Arnold Reuben, Inc., New York, N.Y. Filed Jan. 7, 1959.

REUBEN'S

For Coffee.
First use July 1918.

SN 72,943. Fritzsche Brothers, Inc., New York, N.Y. Filed May 5, 1959.

TYROLEAN CREAM

Applicant disclaims the use of the word "Cream."
For Flavor for Food, Confectionery, and Dessert Products.
First use Apr. 27, 1959.

SN 75,143. Standard Candy Company, Nashville, Tenn. Filed June 4, 1959.

HI-BALL

For Candy.
First use May 1927.

SN 75,266. Carnation Company, Los Angeles, Calif. Filed June 8, 1959.

N-ZYM-A

For Poultry Feed.
First use June 12, 1958.

SN 78,363. Northwest Wholesale Incorporated, Wenatchee, Wash. Filed July 24, 1959. COLLECTIVE MARK.

NUCHIEF APPLES

Applicant claims no exclusive rights in "Apples" or the representation of an apple. Owner of Reg. No. 400,969.
For Fresh Apples.
First use June 30, 1959; May 25, 1944, as to "Nuchief."

SN 79,079. Prima Foods Inc., New York, N.Y. Filed Aug. 5, 1959.

HOLLAND PRIDE

No claim of exclusive right is made to "Holland," it being the place of geographic origin of the product.
For Canned Ham.
First use June 1955.

SN 79,392. Corn Products Company, New York, N.Y. Filed Aug. 12, 1959.

MOM 'N PUP

Applicant disclaims the word "Pup" apart from the mark as shown.
For Dog Food.
First use at least as early as June 3, 1959.

SN 83,826. S.A.P.R. Societe Anonyme, Paris, France. Filed Oct. 22, 1959.

ORLY

Priority claimed under Sec. 44(d) on French Reg. No. 428,711, dated Sept. 11, 1959 (Seine); Nati. Inst. No. 121,484.
For Cheeses, Butter, Fluid, Canned and Dried Milk, Yogurt, and Cream.

SN 85,236. Milwaukee Cheese Co., Milwaukee, Wis. Filed Nov. 13, 1959.

CHEEZEETA

For Pasteurized Process Cheese Spread.
First use Mar. 25, 1959.

SN 86,197. Red Star Yeast and Products Company, Milwaukee, Wis. Filed Nov. 27, 1959.

BREWBUF

For Mixture of Calcium Carbonate, Ammonium Chloride, Flour, Sodium Chloride and Gypsum, Employed in a Pre-Ferment of Resuspended Bakers' Yeast To Maintain Proper Acidity and To Supply Nutrients to Yeast in the Process of White Bread Manufacture.
First use Nov. 12, 1959.

SN 86,198. Red Star Yeast and Products Company, Milwaukee, Wis. Filed Nov. 27, 1959.

BREWPEP

For Mixture of Monocalcium Phosphate, Potassium Iodate and Starch, Employed as an Oxidant in the Manufacture of White Bread by the Brew-Dough System.
First use Nov. 12, 1959.

SN 87,659. Evergreen Mills, Inc., Ada, Okla. Filed Dec. 21, 1959.

SHUR-BLUME

For Livestock Feed.
First use Nov. 11, 1959.

SN 88,820. Aron Streit, Inc., New York, N.Y. Filed Jan. 11, 1960.

STREIT'S

Owner of Reg. No. 326,595.
For Matzos, Matzoh Meal, Cake Meal, and Matzoh Farfel.
First use Dec. 22, 1959, on cake meal; Jan. 1, 1927, as to the word "Streit's."

SN 88,922. Kellogg Company, Battle Creek, Mich. Filed Jan. 12, 1960.

SELECT PACK

The word "Pack" is disclaimed apart from the mark as shown.
For Ready-to-Eat Cereal Foods.
First use Jan. 9, 1960.

SN 89,258. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed Jan. 19, 1960.

TRIM-MAKER

For Mixed Feed for Poultry Kept for Breeders and for Breeding Swine.
First use Jan. 6, 1960.

SN 89,315. Will's Incorporated, Bismarck, N. Dak. Filed Jan. 19, 1960.

WILL'S

For Roasted and Salted Sunflower Seeds and Roasted and Salted and Peeled Pumpkin Seeds, Sold Only in the Confection Trade.
First use Oct. 29, 1957.

SN 89,935. The John Mueller Licorice Company, Cincinnati, Ohio. Filed Jan. 29, 1960.

CHOCO-STIX

For Candy.
First use Jan. 25, 1960.

SN 89,988. A. Arena & Co., Ltd., Los Angeles, Calif. Filed Feb. 1, 1960.

CARNATION

Owner of Reg. Nos. 192,750, 200,374, and others.
For Fresh Vegetables, Fresh Citrus Fruits, and Fresh Melons.
First use at least as early as 1905 on fresh oranges.

Class 49—Distilled Alcoholic Liquors

SN 63,157. Federal Liquors Ltd., d.b.a. C. H. Graves & Sons Co., Boston, Mass. Filed Nov. 25, 1958.

ICE BOX

Owner of Reg. No. 577,763.
For Bottled Alcoholic Cocktails.
First use Feb. 28, 1949.

SN 90,705. Schenley Industries, Inc., New York, N.Y. Filed Feb. 10, 1960.

GOLD STAMP BY SCHENLEY

Owner of Reg. Nos. 313,434, 677,810, and others.
For Whiskey.
First use Jan. 11, 1960; in or about December 1892 as to "Schenley."

SN 90,706. Schenley Industries, Inc., New York, N.Y. Filed Feb. 10, 1960.

SCHENLEY'S GOLD STAMP

Owner of Reg. Nos. 313,434, 677,810, and others.
For Whiskey.
First use Jan. 11, 1960; in or about December 1892 as to "Schenley."

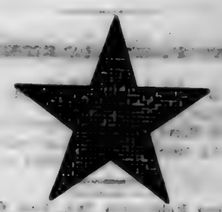
SN 90,772. Mt. Benton Distiller Inc., d.b.a. Enoch Bottlers, Boston, Mass. Filed Feb. 11, 1960.

PENNSWOODS

For Whiskey, Vodka, and Distilled Dry Gin.
First use Feb. 2, 1960.

Class 50—Merchandise Not Otherwise Classified

SN 87,300. Wamaco, Inc., Waynesboro, Pa. Filed Dec. 14, 1959.



The drawing is lined for gold.
For Cemetery Monuments.
First use Oct. 22, 1959.

SN 88,786. Northern Manufacturing Associates, Gonvick, Minn. Filed Jan. 11, 1960.

E-Z-UP FISHUT

For Ice Fishing Houses.
First use Sept. 28, 1959.

SN 89,442. Lowell Industries, Inc., Boston, Mass. Filed Jan. 21, 1960.

LOWELL INDUSTRIES INC.

For Vibration Damping Pads.
First use Nov. 25, 1959.

SN 89,618. Verreries Pochet et du Courval and Jacques Julien Augros, Paris, France. Filed Jan. 25, 1960.

PLASTEMERI

Owner of French Reg. No. 478,590, dated Feb. 26, 1959 (Seine); Natl. Inst. No. 121,624.
For Steppers Made of Glass or Synthetic Materials.

Class 51 — Cosmetics and Toilet Preparations

SN 65,822. Colgate-Palmolive Company, New York, N.Y. Filed Jan. 14, 1960.

PALMOLIVE
Prime

The drawing is lined for red and gold. Owner of Reg. Nos. 113,591, 369,533, and others.
For Pre-Electric Shave Lotion.
First use Nov. 12, 1958.

SN 67,969. Helena Rubinstein, Inc., New York, N.Y. Filed Feb. 18, 1960.

WOOD FERN

For Cologne.
First use Oct. 28, 1958.

SN 68,279. The Lashtint Company, Inc., Rochester, N.Y. Filed Feb. 24, 1959.

LASHTINT AUTOMAGIC MASCARA

Applicant disclaims the word "Mascara" apart from the mark as shown. Owner of Reg. No. 592,283.
For Mascara.
First use Jan. 12, 1959.

SN 79,674. Joe Lowe Corporation, New York, N.Y. Filed Aug. 17, 1959.

SICLE

Owner of Reg. No. 661,461.
For Lipstick.
First use July 21, 1959.

SN 81,672. Charles Bain, d.b.a. Industrial Chemical Products Co., Philadelphia, Pa. Filed Sept. 21, 1959.

CLEAN-O-RAMA

Owner of Reg. No. 647,611.
For Cosmetic Cold Creams.
First use Aug. 23, 1956.

SN 83,349. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Oct. 16, 1959.

VACO

Owner of German Reg. No. 728,000, dated Aug. 13, 1959.
For Hair Lotion.

SN 85,784. Saks & Company, New York, N.Y. Filed Nov. 20, 1959.

"Wee Moderns"

For Dusting Powder, Liquid Bubble Bath, Hand Lotion, and Toilet Water.
First use June 15, 1959.

SN 87,650. Eastern Craft Center Inc., New York, N.Y. Filed Dec. 21, 1959.

Gion

For Perfume.
First use Nov. 23, 1959.

SN 89,888. Arrivals, Ltd., Chicago, Ill. Filed Jan. 29, 1960.

NAIL NUDE

Applicant disclaims the word "Nail" apart from the mark as shown.
For Nail Polish Remover.
First use Nov. 4, 1959.

SN 90,338. Edith Jordan, Inc., Fayetteville, N.C. Filed Feb. 4, 1960.

EDITH JORDAN

For Shampoo, Deodorants for Personal Use, Colognes and Sachets, Skin Creams and Lotions, Lipstick.
First use Nov. 25, 1959.

SN 90,585. Southwest Pharmacal Co., Dallas, Tex. Filed Feb. 8, 1960.

NUTRADERM

For Cosmetic Skin Lotion.
First use Jan. 21, 1960.

SN 91,106. Nutrilite Products, Inc., Buena Park, Calif. Filed Feb. 17, 1960.

CALIBER

For Cologne and After Shave Lotion.
First use Sept. 14, 1959.

SN 91,107. Nutrilite Products, Inc., Buena Park, Calif. Filed Feb. 17, 1960.

JUVALITE

For Cosmetic Face Cream.
First use June 1, 1959.

SN 91,142. Harry Benet, d.b.a. Dara Products, Cincinnati, Ohio. Filed Feb. 18, 1960.

CLESK

For Antiseptic Lotion Formulated for Cleaning Oily or Greasy Skin.
First use on or about May 15, 1958.

SN 91,341. Clairol Incorporated, New York, N.Y. Filed Feb. 23, 1960.

MISTER CLAIROL

Owner of Reg. Nos. 202,399, 620,097, and others.
For Hair Tinting, Dyeing, and Coloring Preparations.
First use Nov. 24, 1959.

SN 91,379. Delph V. Haynie, d.b.a. Haynie Products, Durango, Colo. Filed Feb. 23, 1960.

DESERT MAGIC

For Cosmetic Cream for Dry Hands and Skin.
First use Nov. 17, 1959.

SN 91,564. Tan-O-Rama, Inc., Newark, N.J. Filed Feb. 24, 1960.

TAN-O-RAMA

For Lotion for Producing a Tan.
First use Jan. 25, 1960.

Class 52 — Detergents and Soaps

SN 72,491. Fels and Company, Philadelphia, Pa. Filed Apr. 29, 1959.

SaniGard

For Alkylolamide Condensate (Surface Protecting Agent) Incorporated as an Ingredient in a Detergent.
First use Apr. 5, 1959.

SN 84,447. Peck's Products Company, St. Louis, Mo. Filed Nov. 2, 1959.

PURAPHEN

Owner of Reg. No. 626,014.
For Germicidal Detergent.
First use Sept. 2, 1959.

SN 90,582. Tower Oil Company, Chicago, Ill. Filed Feb. 8, 1960.

RUSTBEAT

For Cleaning Compounds and Rust Inhibiting Chemicals for Ferrous Metal and Surfaces.
First use during June 1959.

SN 90,724. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 10, 1960.

DELVAK

For Detergent Composition, Especially for Cleaning Glass and Metal Containers and Equipment.
First use Jan. 4, 1960.

SN 90,725. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 10, 1960.

DECLARE

For Detergent Composition, Especially for Washing Dishes.
First use Jan. 15, 1960.

SN 90,726. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 10, 1960.

ALKAWAY

For Paint Removing Composition.
First use Jan. 13, 1960.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

701,155. LONGHORN AND DESIGN. Cudahy Tanning Co., Inc. SN 48,402. Pub. 5-3-60. Filed 3-25-58.

701,156. CEE-BEE METALAR. Cee Bee Mfg. Co. Inc., d.b.a. The Cee-Bee Manufacturing Company, Inc. SN 52,386. Pub. 5-3-60. Filed 5-27-58.

701,157. VANTRESS CROSS. Chas. Vantress Farms, Inc. SN 67,642. Pub. 5-3-60. Filed 2-12-59.

701,158. MILANO. Albert Trostel & Sons Company, SN 86,232. Pub. 5-3-60. Filed 11-27-59.

701,159. SOFT TOUCH. Amalgamated Leather Companies, Inc. SN 88,716. Pub. 5-3-60. Filed 1-11-60.

Class 2—Receptacles

701,160. CHEST OF MEMORIES. Perry Reichman, d.b.a. Perry's Valet Service. SN 55,590. Pub. 5-3-60. Filed 7-17-58.

701,161. BRUSH-O-MAT. Pre-pay-lab-tie Brush Company. SN 66,736. Pub. 5-3-60. Filed 1-29-59.

701,162. RAP-IT-RAP. Hudson General Paper Corporation. SN 70,148. Pub. 5-3-60. Filed 3-24-59.

701,163. SNAP-OFF. Lion Packaging Products Co., Inc. SN 77,757. Pub. 5-3-60. Filed 7-15-59.

701,164. ROTEX. Hartleys (Stoke-on-Trent) Limited. SN 83,792. Pub. 5-3-60. Filed 10-22-59.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

701,165. MR. CHIPS JR. North Bergen Leather Products Co. SN 87,709. Pub. 5-3-60. Filed 12-21-59.

Class 5—Adhesives

701,166. CHAMP. Champion Manufacturing Company, Inc. SN 69,480. Pub. 5-3-60. Filed 3-13-59.

Class 6—Chemicals and Chemical Compositions

701,167. CHLOROGEN. Waverly Chemical Co., Inc. SN 61,094. Pub. 5-3-60. Filed 10-21-58.

701,168. ALGI-CURE AND DESIGN. Great Lakes Biochemical Co., Inc. SN 65,952. Pub. 5-3-60. Filed 1-16-59.

701,169. PRE-KILL. Vaughan's Seed Company. SN 71,917. Pub. 5-3-60. Filed 4-20-59.

701,170. EEG SOL. The Lyndale Company. SN 72,047. Pub. 5-3-60. Filed 4-22-59.

701,171. OROBENE. Technic, Inc. SN 72,087. Pub. 5-3-60. Filed 4-22-59.

701,172. PATH-O-CYTE. Pentex Incorporated. SN 72,885. Pub. 5-3-60. Filed 5-4-59.

701,173. WIZARD. American Home Products Corporation, d.b.a. Boyle-Midway. SN 75,963. Pub. 5-3-60. Filed 6-18-59.

701,174. HUMMINGBIRD DESIGN. Haarmann & Reimer G.m.b.H. SN 76,806. Pub. 5-3-60. Filed 6-30-59.

701,175. CHEVRON. Standard Oil Company of California. SN 76,996. Pub. 5-3-60. Filed 7-2-59.

701,176. SALTUS. Leslie Salt Co., d.b.a. California Salt Company. SN 78,293. Pub. 5-3-60. Filed 7-23-59.

701,177. ZEPAR. E. I. du Pont de Nemours and Company. SN 78,697. Pub. 5-3-60. Filed 7-30-59.

701,178. BIR. J. I. Holcomb Manufacturing Company, Inc. SN 80,426. Pub. 5-3-60. Filed 8-28-59.

701,179. UCET. Union Carbide Corporation. SN 82,934. Pub. 5-3-60. Filed 10-8-59.

701,180. WARRENGAS. Warren Petroleum Corporation. SN 85,189. Pub. 5-3-60. Filed 11-13-59.

Class 7—Cordage

701,181. UNION WIRE ROPE AND DESIGN. Armco Steel Corporation. SN 82,953. Pub. 5-3-60. Filed 10-9-59.

Class 9—Explosives, Firearms, Equipments, and Projectiles

701,182. KING KULLEN AND DESIGN. King Kullen Grocery Co., Inc. SN 84,432. Pub. 5-3-60. Filed 11-2-59.

Class 10—Fertilizers

701,183. MINRAL-GEO. The Buffalo Slag Co., Inc. SN 74,984. Pub. 5-3-60. Filed 6-3-59.

701,184. VITA-LIFE. The Vita Life Corporation. SN 83,841. Pub. 5-3-60. Filed 10-22-59.

Class 12—Construction Materials

701,185. PAR-TEX. Pacqua, Inc. SN 67,143. Pub. 5-3-60. Filed 2-5-59.

701,186. PAR-WOOD. Pacqua, Inc. SN 67,144. Pub. 5-3-60. Filed 2-5-59.

701,187. DIAMOND-RIB. Kaiser Aluminum & Chemical Corporation. SN 68,275. Pub. 3-22-60. Filed 2-24-59.

701,188. PARWELD. The Parr Paint & Color Company. SN 68,513. Pub. 5-3-60. Filed 2-26-59.

701,189. PARBOND. The Parr Paint & Color Company. SN 68,514. Pub. 5-3-60. Filed 2-26-59.

701,190. METRIC ALUMINUM SIDING AND DESIGN. Consolidated Enterprise Distributing Corp. SN 70,043. Pub. 5-3-60. Filed 3-23-59.

701,191. GEM-DANDY. The Butler Hardware Co. SN 73,883. Pub. 5-3-60. Filed 5-18-59.

701,192. DORSEAL. Mohawk Flush Door Corporation. SN 73,960. Pub. 5-3-60. Filed 5-18-59.

701,193. STAR AND DESIGN. Aktiebolaget Jonkoping-Vulcan. SN 75,147. Pub. 5-3-60. Filed 6-5-59.

701,194. DENSYL. Winn & Coales Limited. SN 78,749. Pub. 5-3-60. Filed 7-30-59.

701,195. FALCON PRODUCTS AND DESIGN. Falcon Line Products Corp. SN 80,725. Pub. 5-3-60. Filed 9-2-59.

701,196. SANI-DOR. Arthur V. Geringer. SN 84,412. Pub. 5-3-60. Filed 11-2-59.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

701,197. K-G. Air Products, Inc. SN 43,812. Pub. 5-3-60. Filed 12-21-57.

701,198. K-G AND DESIGN. Air Products, Inc. SN 45,001. Pub. 5-3-60. Filed 1-31-58.

701,199. POLY-FLO. The Imperial Brass Manufacturing Company. SN 62,300. Pub. 2-2-60. Filed 11-13-58.

701,200. WORD DOT ON CIRCLE. United-Carr Fastener Corporation. SN 65,799. Pub. 5-3-60. Filed 1-13-59.

701,201. UV AND DESIGN. Universal Valve Co., Inc. SN 71,709. Pub. 5-3-60. Filed 4-16-59.

701,202. RACINE-SECO. Racine Hydraulics & Machinery, Inc. SN 76,254. Pub. 10-20-59. Filed 6-22-59.

701,203. TURFCO. Washington Turf & Irrigation Co. SN 78,615. Pub. 11-24-59. Filed 6-26-59.

701,204. R IN A SQUARED CIRCLE. The Rewiping Co., Inc. CONSOLIDATED CERTIFICATE. SN 84,560, pub. 4-26-60, filed 11-3-59, Cl. 13; SN 91,842, pub. 4-26-60, filed 2-29-60, Cl. 23.

701,205. P AND DESIGN. The Powers Regulator Company. SN 85,192. Pub. 5-3-60. Filed 11-6-59.

701,206. TRIM LINE. International Basic Economy Corporation, assignee of Hunt Valve Company. SN 85,591. Pub. 3-29-60. Filed 11-16-59.

Class 14—Metals and Metal Castings and Forgings

701,207. CARBORID. Ateliers Partiot, S.A. SN 74,150. Pub. 5-3-60. Filed 5-20-59.

701,208. INVACUTRODE. Allegheny Ludlum Steel Corporation. SN 82,949. Pub. 5-3-60. Filed 10-8-59.

701,209. MICRO LUSTRE. Midvale-Heppenstall Company. SN 83,812. Pub. 5-3-60. Filed 10-22-59.

Class 15—Oils and Greases

701,210. GROTESQUE OF DRAGON BREATHING FIRE. Berry Refining Company. SN 67,923. Pub. 5-3-60. Filed 2-18-59.

701,211. LUB-A-LITE. Panef Manufacturing Co., Inc. SN 86,591. Pub. 5-3-60. Filed 12-3-59.

701,212. SMASH AND DESIGN. Panef Manufacturing Co., Inc. SN 86,592. Pub. 5-3-60. Filed 12-3-59.

701,213. MULTIGEAR. Texaco Inc. SN 86,947. Pub. 5-3-60. Filed 12-7-59.

Class 16—Protective and Decorative Coatings

701,214. LIVING COLOR. Paint Fair Stores, Inc. SN 67,468. Pub. 5-3-60. Filed 2-10-59.

701,215. MAGIC MIST. Garry Laboratories, Inc. SN 71,367. Pub. 12-8-59. Filed 4-13-59.

701,216. NO-OX-ID. Dearborn Chemical Company. SN 86,940. Pub. 5-3-60. Filed 12-9-59.

Class 18—Medicines and Pharmaceutical Preparations

701,217. LEOLA MAY'S EPSOM SALT POULTICE AND DESIGN. Leola Batteries, d.b.a. Leola May's. SN 58,580. Pub. 5-3-60. Filed 9-3-58.

701,218. SUPER EXTRAFORT. Caribe Vitamin Corporation. SN 66,370. Pub. 5-3-60. Filed 2-25-59.

701,219. METATROPIC. Foods Plus, Inc. SN 73,212. Pub. 10-27-59. Filed 5-5-59.

701,220. AJ AND DESIGN. Arthur G. Schuck, d.b.a. A/J Drug Company. SN 74,547. Pub. 5-3-60. Filed 5-26-59.

701,221. UNITY. Frankford Grocery Company. SN 75,077. Pub. 5-3-60. Filed 6-4-59.

701,222. ILP. Catharine S. Lichtenstein, d.b.a. ILP. SN 75,191. Pub. 5-3-60. Filed 6-5-59.

701,223. FIBRINITOL. Ortho Pharmaceutical Corporation. SN 79,801. Pub. 5-3-60. Filed 8-18-59.

701,224. PYRODIONE. Searle Chemicals, Inc. SN 80,825. Pub. 5-3-60. Filed 9-3-59.

701,225. SPECIAL FORMULA 17900-FORTE. The Upjohn Company. SN 81,101. Pub. 5-3-60. Filed 9-9-59.

701,226. PYRIPYRIL. Johann G. W. Opfermann & Sohn. SN 82,997. Pub. 5-3-60. Filed 10-9-59.

701,227. D.A.S. Dennis A. Smith. SN 83,854. Pub. 5-3-60. Filed 10-14-59.

701,228. REPRESENTATION OF MORTAR AND PESTLE. Bristol-Myers Company, by merger from Bristol Laboratories, Inc. SN 85,095. Pub. 5-3-60. Filed 11-12-59.

701,229. CATASTRINGO. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,568. Pub. 5-3-60. Filed 12-3-59.

701,230. FD-35. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,569. Pub. 5-3-60. Filed 12-3-59.

701,231. ARSENOX. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,572. Pub. 5-3-60. Filed 12-3-59.

701,232. SOXIPOUR. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,783. Pub. 5-3-60. Filed 12-7-59.

701,233. SOXIPENT. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,784. Pub. 5-3-60. Filed 12-7-59.

701,234. DEKATAL. Wyan Pharmacal Corporation. SN 87,164. Pub. 5-3-60. Filed 12-11-59.

701,235. CALCIMELS. C. H. Boehringer Sohn. SN 87,780. Pub. 5-3-60. Filed 12-22-59.

701,236. SULFADUBOL. C. F. Boehringer & Soehne G.m.b.H. SN 87,781. Pub. 5-3-60. Filed 12-22-59.

701,237. COBA-TETRABON. Chas. Pfizer & Co., Inc. SN 88,534. Pub. 5-3-60. Filed 1-6-60.

701,238. COBA-TETRABON. Chas. Pfizer & Co., Inc. SN 88,535. Pub. 5-3-60. Filed 1-6-60.

701,239. CYFER. Lloyd Brothers, Inc. SN 88,548. Pub. 5-3-60. Filed 1-6-60.

701,240. REQUIN. Lloyd Brothers, Inc. SN 88,549. Pub. 5-3-60. Filed 1-6-60.

701,241. P AND P. Tom W. Parks, d.b.a. New Day Products Co. SN 88,682. Pub. 5-3-60. Filed 1-8-60.

701,242. CHRONOTABS. White Laboratories, Inc. SN 89,226. Pub. 5-3-60. Filed 1-18-60.

701,243. DAPTREN. Irwin, Neisler & Co. SN 89,274. Pub. 5-3-60. Filed 1-19-60.

701,244. REDWATRIN. American Scientific Laboratories, Inc. SN 89,325. Pub. 5-3-60. Filed 1-20-60.

701,245. ES-A-CORT. Dome Chemicals, Inc. SN 89,420. Pub. 5-3-60. Filed 1-21-60.

701,246. SARCOPHEN. Dome Chemicals, Inc. SN 89,421. Pub. 5-3-60. Filed 1-21-60.

701,247. CORT-QUIN. Dome Chemicals, Inc. SN 89,424. Pub. 5-3-60. Filed 1-21-60.

701,248. MUREL. American Home Products Corporation, d.b.a. Ayerst Laboratories. SN 89,539. Pub. 5-3-60. Filed 1-25-60.

701,249. DICOPHEN. Buffington's Incorporated. SN 89,540. Pub. 5-3-60. Filed 1-25-60.

701,250. SWEETCELL. M. Gancel Co., Inc. SN 89,370. Pub. 5-3-60. Filed 1-25-60.

701,251. FORHISTAL. Ciba Pharmaceutical Products Inc. SN 89,644. Pub. 5-3-60. Filed 1-26-60.

701,252. SEIDRIX-K. Ciba Pharmaceutical Products Inc. SN 88,645. Pub. 5-3-60. Filed 1-26-60.

701,253. SER-AP-ES. Ciba Pharmaceutical Products Inc. SN 89,647. Pub. 5-3-60. Filed 1-26-60.

Class 19—Vehicles

701,254. POST-A-GAS. W. E. Anderson Inc. SN 70,628. Pub. 5-3-60. Filed 3-23-59.

701,255. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 85,504. Pub. 5-3-60. Filed 11-17-59.

701,256. TRIANGULAE SHAPED DESIGN. Matsushita Denki Sangyo Kabushiki Kaisha. SN 85,506. Pub. 5-3-60. Filed 11-17-59.

701,257. SOCK. Sock Boat Corporation. SN 86,060. Pub. 5-3-60. Filed 11-24-59.

701,258. TOURNAMENT. August Spindler & Sons, Inc. SN 86,001. Pub. 5-3-60. Filed 11-24-59.

701,259. NICKEY. Nickey Chevrolet, Inc. SN 86,167. Pub. 5-3-60. Filed 11-27-59.

701,260. MAEO. Columbian Bronze Corporation. SN 86,268. Pub. 5-3-60. Filed 11-30-59.

701,261. VORTEX-RING. Pioneer Parachute Company, Inc. SN 86,447. Pub. 5-3-60. Filed 12-1-59.

701,262. NICKEY. Nickey Chevrolet, Inc. SN 87,372. Pub. 5-3-60. Filed 12-15-59.

Class 20—Linoleum and Oiled Cloth

701,263. CONCEPT '70. Congoleum-Nairn Inc. SN 75,170. Pub. 5-3-60. Filed 6-5-59.

Class 21—Electrical Apparatus, Machines, and Supplies

701,264. AQUA-LITE. Servel, Inc., assignee of Burgess Battery Company. SN 50,449. Pub. 9-8-59. Filed 8-1-58.

701,265. CIRCULAR DEVICE. Hitachi Limited. SN 65,557. Pub. 5-3-60. Filed 1-9-59.

701,266. HITACHI. Hitachi Limited. SN 65,558. Pub. 5-3-60. Filed 1-9-59.

701,267. FILTERSCAN. Philco Corporation. SN 72,072. Pub. 5-3-60. Filed 4-22-59.

701,268. AUDIO/BATON. Blonder-Tongue Laboratories, Inc. SN 72,696. Pub. 5-3-60. Filed 5-1-59.

701,269. PAK-TROL. Vickers Incorporated. SN 73,949. Pub. 5-3-60. Filed 5-18-59.

701,270. TEMPENSATOR. National Resistance Corporation. SN 83,541. Pub. 5-3-60. Filed 10-19-59.

701,271. CHEMTRONIC AND DESIGN. The Lofstrand Company. SN 83,805. Pub. 5-3-60. Filed 10-22-59.

701,272. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,677. Pub. 5-3-60. Filed 11-5-59.

701,273. ULTRONIX. Ultronix, Inc. SN 85,260. Pub. 5-3-60. Filed 11-13-59.

701,274. BEAM-X. Burroughs Corporation. SN 88,012. Pub. 5-3-60. Filed 12-28-59.

701,275. INVISA-LINE. Arvin Industries, Inc. SN 89,729. Pub. 5-3-60. Filed 1-27-60.

701,276. MINCON. Connector Seals Corporation. SN 89,746. Pub. 5-3-60. Filed 1-27-60.

Class 22—Games, Toys, and Sporting Goods

701,277. SOCKET POCKET. William Barnett. SN 41,229. Pub. 5-3-60. Filed 11-25-57.

701,278. CAPE CANAVERAL. Louis Marx & Company, Inc. SN 49,295. Pub. 5-3-60. Filed 6-14-58.

701,279. KODIAK SPECIAL. Bear Archery Company. SN 70,850. Pub. 10-20-59. Filed 4-6-59.

701,280. ACE DELUXE. The Amerace Corporation. SN 72,265. Pub. 5-3-60. Filed 4-27-59.

701,281. PHYS-EXERCISER. Fred Medart Products, Inc. SN 72,689. Pub. 5-3-60. Filed 4-30-59.

701,282. PHYS-EDUCATOR. Fred Medart Products, Inc. SN 72,690. Pub. 5-3-60. Filed 4-30-59.

701,283. DUBO-VINYL. Ben Cooper, Inc. SN 72,709. Pub. 5-3-60. Filed 5-1-59.

701,284. SHIPMATE. Abercrombie & Fitch Company. SN 76,138. Pub. 5-3-60. Filed 6-29-59.

701,285. POLYFORM. Polyform, Beyer-Olsen og Stefuessen. SN 77,637. Pub. 5-3-60. Filed 7-7-59.

701,286. SLAP-STIK. Keen-Eye Company, Inc. SN 78,632. Pub. 5-3-60. Filed 7-29-59.

701,287. RAM AND DESIGN. Brass Ram Corporation. SN 80,225. Pub. 5-3-60. Filed 8-26-59.

701,288. ELY CHORDETTE. T. J. Ely Manufacturing Company. SN 81,692. Pub. 5-3-60. Filed 9-21-59.

701,289. POT SHOT. Mattel, Incorporated. SN 81,917 Pub. 5-3-60. Filed 9-23-59.

701,290. HAR-CO. The Hart Manufacturing Co. SN 82,577. Pub. 5-3-60. Filed 10-2-59.

701,291. LUCT MAE. R. Dakin & Company—Importers. SN 82,633. Pub. 5-3-60. Filed 10-5-59.

701,292. AIR-SPAN. F & N Products, Inc. SN 82,886. Pub. 5-3-60. Filed 10-8-59.

701,293. JUMP-A-LOOP. Willoughby Enterprises, Inc. SN 85,642. Pub. 5-3-60. Filed 11-18-59.

701,294. I.C.U. Etablissements Clodrey "Polyflex." SN 86,487. Pub. 5-3-60. Filed 12-2-59.

701,295. PLAYSAFE. Standard Playground Equipment Co., Inc. SN 86,606. Pub. 5-3-60. Filed 12-3-59.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

701,204. CONSOLIDATED CERTIFICATE. See Class 13.

701,296. TOWNECRAFT. Townecraft Industries, Inc. SN 16,843. Pub. 5-3-60. Filed 10-2-56.

701,297. TI AND DESIGN. Thomas Industries, Inc. SN 51,081. Pub. 6-23-59. Filed 5-5-58.

701,298. TI. Thomas Industries, Inc. SN 51,082. Pub. 6-23-59. Filed 5-5-58.

701,299. PAR AIR AND DESIGN. Peters & Russell, Inc. SN 66,299. Pub. 5-3-60. Filed 1-22-59.

701,300. SILVER KING. Edward Elwell Limited. SN 69,250. Pub. 5-3-60. Filed 3-10-59.

701,301. FLEX ROTOR. Hypro Engineering, Inc. SN 69,339. Pub. 5-3-60. Filed 3-11-59.

701,302. FLEX ROLLER. Hypro Engineering, Inc. SN 69,340. Pub. 5-3-60. Filed 3-11-59.

701,303. UPERISATION. Alpura A.G. (Alpura S.A., and Alpura Ltd). SN 75,679. Pub. 5-3-60. Filed 6-15-59.

701,304. RACINE SECO. Racine Hydraulics & Machinery, Inc. SN 76,255. Pub. 10-20-59. Filed 6-22-59.

701,305. P.I.D.G. AMP Incorporated. SN 84,109. Pub. 5-3-60. Filed 10-28-59.

701,306. REFUND-O-MATIC. Aktiebolaget Wiesadens Korkfabriker. SN 84,110. Pub. 5-3-60. Filed 10-28-59.

701,307. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,678. Pub. 5-3-60. Filed 11-5-59.

701,308. DPS AND DESIGN. Detroit Power Screwdriver Company. SN 86,404. Pub. 5-3-60. Filed 12-1-59.

701,309. L & E. L & E Manufacturing Company. SN 86,886. Pub. 5-3-60. Filed 12-8-59.

Class 24—Laundry Appliances and Machines

701,310. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,676. Pub. 5-3-60. Filed 11-5-59.

Class 26—Measuring and Scientific Appliances

701,311. SINCE 1888 "THE STANDARD OF ACCURACY." Streeter-Amet Company. SN 23,359. Pub. 5-3-60. Filed 1-26-57.

701,312. SAFELITE. Robert C. Graham, d.b.a. The Safelite Company. SN 24,395. Pub. 5-27-57. Filed 2-13-57.

701,313. GYDEWAY. Taylor Instrument Companies. SN 30,119. Pub. 5-3-60. Filed 5-15-57.

701,314. CARY. Applied Physics Corporation. SN 57,590. Pub. 5-3-60. Filed 5-21-58.

701,315. BERYLLIATITE. Engelhard Industries, Inc., assignee of Charles Engelhard, Inc. SN 61,276. Pub. 5-3-60. Filed 10-24-58.

701,316. OPTIKA. Aetna Optic. SN 61,348. Pub. 5-3-60. Filed 10-27-58.

701,317. RAPTAR AUTO ZOOM LENS. Wollensak Optical Company. SN 61,756. Pub. 4-28-59. Filed 10-31-58.

701,318. DIMASWITCH. W. C. Dillon & Co., Inc. SN 63,641. Pub. 5-3-60. Filed 12-4-58.

701,319. BALDWIX. The Baldwin Piano Company. SN 64,451. Pub. 5-3-60. Filed 12-17-58.

701,320. METZ. Burleigh Brooks Inc. SN 64,865. Pub. 5-3-60. Filed 12-24-58.

701,321. SIGHT-SAFE. Foote Grant Co., Inc. SN 69,048. Pub. 5-3-60. Filed 2-19-59.

701,322. REX-O-FADER. Paillard Incorporated. SN 68,169. Pub. 5-3-60. Filed 2-20-59.

701,323. MOVIMATIC. Zeiss Ikon A.G. SN 68,764. Pub. 5-3-60. Filed 3-2-59.

701,324. CC CIRCUM-CHANNELED AND DESIGN. Circum-Channeled Contact Lens Specialists, Inc. SN 68,799. Pub. 5-3-60. Filed 3-3-59.

701,325. CIRCUM-CHANNELED. Circum-Channeled Contact Lens Specialists, Inc. SN 68,800. Pub. 5-3-60. Filed 3-3-59.

701,326. SLUMBER SHADE. Oscar Meyer, d.b.a. Occidental Mfg. Co. SN 71,501. Pub. 5-3-60. Filed 4-14-59.

701,327. ARGUS. Sylvania Electric Products Inc. SN 73,750. Pub. 5-3-60. Filed 5-14-59.

701,328. ELITE 8 TALKIE PROJECTOR. Tandberg of America, Inc. SN 73,751. Pub. 5-3-60. Filed 5-14-59.

701,329. B/A. Baird-Atomic, Inc. SN 74,824. Pub. 5-3-60. Filed 6-1-59.

701,330. SPEX MIXER/MILL. Spex Industries Inc. SN 75,033. Pub. 5-3-60. Filed 6-3-59.

701,331. FILTER-FLAG. Minneapolis-Honeywell Regulator Company. SN 76,106. Pub. 5-3-60. Filed 6-19-59.

701,332. EXACTA-CONTINENTAL. Exacta-Continental Bureaumaschinenwerk Gesellschaft mit beschraenkter Haftung. SN 76,664. Pub. 5-3-60. Filed 6-29-59.

701,333. NASARE ETC. AND DESIGN. North American Aviation, Inc. SN 77,381. Pub. 5-3-60. Filed 7-8-59.

701,334. SPHERTINTS. The Plastic Contact Lens Company. SN 77,587. Pub. 5-3-60. Filed 7-13-59.

701,335. CAM EYE. United Electronics Laboratories, Inc. SN 79,526. Pub. 5-3-60. Filed 7-27-59.

701,336. NALCO. Nalco Chemical Company. SN 79,849. Pub. 5-3-60. Filed 8-11-59.

701,337. PET LINE AND DESIGN. Pets-Emery Inc. SN 81,090. Pub. 5-3-60. Filed 9-9-59.

701,338. GRAYSON. Robertshaw-Fulton Controls Company. SN 81,591. Pub. 5-3-60. Filed 9-17-59.

701,339. PLAY-TEMPS. F. E. Ford & Co., Inc. SN 82,098. Pub. 5-3-60. Filed 9-25-59.

701,340. EXACT-A-LOAD. Worthington Corporation. SN 83,241. Pub. 5-3-60. Filed 10-15-59.

701,341. INGENTO. Burke & James, Inc. SN 83,351. Pub. 5-3-60. Filed 10-16-59.

701,342. KERN-DUOMATIC. Kern & Co. Ltd. SN 85,631. Pub. 5-3-60. Filed 10-30-59.

701,343. REPROLINE. General Aniline & Film Corporation. SN 86,879. Pub. 5-3-60. Filed 10-23-59.

701,344. AUTOPOT. Daystrom Incorporated. SN 84,519. Pub. 5-3-60. Filed 11-3-59.

701,345. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,680. Pub. 5-3-60. Filed 11-5-59.

701,346. NALGENE. Nalge Company, Inc. SN 85,898. Pub. 5-3-60. Filed 11-23-59.

701,347. KALFAX. Kalvar Corporation. SN 86,428. Pub. 5-3-60. Filed 12-1-59.

701,348. TRIXIE. Burroughs Corporation. SN 86,912. Pub. 5-3-60. Filed 12-7-59.

701,349. ANSCOMARK M. General Aniline & Film Corporation. SN 87,066. Pub. 5-3-60. Filed 12-16-59.

701,350. MERIDIAN. Biddle Purchasing Company, d.b.a. Meridian Distributors. SN 87,399. Pub. 5-3-60. Filed 12-16-59.

701,351. DATEX AND DESIGN. Datex Corporation. SN 87,644. Pub. 5-3-60. Filed 12-21-59.

701,352. COINRITE. News Equipment Sales Corporation. SN 87,708. Pub. 5-3-60. Filed 12-21-59.

701,353. ECCENTRICATOR. Federal Products Corporation. SN 88,374. Pub. 5-3-60. Filed 1-4-60.

701,354. DATX. Radio Corporation of America. SN 88,402. Pub. 5-3-60. Filed 1-5-60.

701,355. THERMO-GRAV. American Instrument Company, Inc. SN 88,510. Pub. 5-3-60. Filed 1-6-60.

701,356. MULTISCOPE. Sylvania Electric Products Inc. SN 88,606. Pub. 5-3-60. Filed 1-6-60.

701,357. SEA FUME. Multi-Products Company. SN 88,788. Pub. 5-3-60. Filed 1-11-60.

701,358. SEA-DEEP AND DESIGN. Multi-Products Company. SN 88,790. Pub. 5-3-60. Filed 1-11-60.

Class 27—Horological Instruments

701,359. LE MARC. Lawrence M. Cohen, d.b.a. Marc Nicolet Watch Company and Le Marc Watch Company. SN 76,651. Pub. 5-3-60. Filed 6-29-59.

701,360. SCEPTER. General Time Corporation. SN 80,531. Pub. 5-3-60. Filed 8-31-59.

701,361. CALICO HORSE. General Time Corporation. SN 80,536. Pub. 5-3-60. Filed 8-31-59.

701,362. WT. Gottlieb Weber AG (Gottlieb Weber, S.A.) (Gottlieb Weber Ltd). SN 80,966. Pub. 5-3-60. Filed 9-5-59.

701,363. ROBANNE. Robanne Corporation. SN 85,161. Pub. 5-3-60. Filed 11-12-59.

701,364. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 85,503. Pub. 5-3-60. Filed 11-17-59.

Class 28—Jewelry and Precious-Metal Ware

701,365. GALAXY. Louis Perloff. SN 58,570. Pub. 5-3-60. Filed 9-8-58.

701,366. EDCO. Elite Distributing Co. SN 59,670. Pub. 5-3-60. Filed 9-26-58.

701,367. FRANCISCAN. Granat Bros. SN 77,013. Pub. 5-3-60. Filed 7-8-59.

701,368. CULTURETTE. Manon Pearls. SN 85,502. Pub. 5-3-60. Filed 11-17-59.

701,369. MIGNONETTE. Rogers, Lunt & Bowlen Company, d.b.a. Lunt Sterling. SN 85,612. Pub. 5-3-60. Filed 11-12-59.

701,370. CLASSIC ANTIQUE. Wallace Silversmiths, Inc. SN 85,938. Pub. 5-3-60. Filed 11-23-59.

701,371. L. Union Carbide Corporation. SN 86,060. Pub. 5-3-60. Filed 11-25-59.

701,372. SWAN LAKE. The International Silver Company. SN 86,154. Pub. 5-3-60. Filed 11-27-59.

701,373. HAPPINESS. Irving Klampert Company. SN 86,293. Pub. 5-3-60. Filed 11-30-59.

Class 29—Brooms, Brushes, and Dusters

701,374. CHARM HOUSE AND DESIGN. Artwright Merchandising Corporation. SN 69,223. Pub. 5-3-60. Filed 3-10-59.

Class 31—Filters and Refrigerators

701,375. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,681. Pub. 5-3-60. Filed 11-5-59.

701,376. BRUNNER. Dunham-Bush, Inc. SN 85,965. Pub. 5-3-60. Filed 11-24-59.

701,377. TRIPHANE. Pall Corporation. SN 86,822. Pub. 5-3-60. Filed 12-7-59.

Class 32—Furniture and Upholstery

701,378. BOOTHETTE. Gladwin Plastics, Inc. SN 73,910. Pub. 5-3-60. Filed 5-18-59.

701,379. BISHOP BUILT AND DESIGN. Bishop Furniture Corporation. SN 75,837. Pub. 5-3-60. Filed 6-16-59.

701,380. NARCO. Nardon Mfg. Co. SN 76,239. Pub. 5-3-60. Filed 6-22-59.

701,381. MULTI-BED. Wilshire Bedding Company, Inc., d.b.a. Wilshire Bedding Co. SN 90,974. Pub. 5-3-60. Filed 2-15-60.

701,382. GRECIAN ETCHINGS. Glissade, Inc. SN 91,375. Pub. 5-3-60. Filed 3-22-60.

701,383. GOLDSPUN. Douglas Furniture Corporation. SN 91,767. Pub. 5-3-60. Filed 3-29-60.

Class 33—Glassware

701,384. LOBMEYR AND DESIGN. Hans Harald Rath, d.b.a. J. & L. Lobmeyr. SN 71,993. Pub. 5-25-59. Filed 4-22-59.

Class 34—Heating, Lighting, and Ventilating Apparatus

701,385. K-G. Air Products, Inc. SN 43,912. Pub. 5-3-60. Filed 12-31-57.

701,386. K-G AND DESIGN. Air Products, Inc. SN 69,002. Pub. 5-3-60. Filed 1-31-58.

701,387. CLIMATE CENTER. Carrier Corporation. SN 73,319. Pub. 5-3-60. Filed 5-11-59.

701,388. PLACAIR. Air Devices, Inc. SN 77,240. Pub. 11-10-59. Filed 7-8-59.

701,389. PERIM-AIR-PAC. Temco, Inc. SN 78,828. Pub. 5-3-60. Filed 7-31-59.

701,390. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,662. Pub. 5-3-60. Filed 11-5-59.

Class 35—Rolling, Hose, Machinery Packing, and Nonmetallic Tires

701,391. EIRTIRE. Beardsley Airway Corporation. SN 61,769. Pub. 5-3-60. Filed 11-2-58.

701,392. BS AND DESIGN. Bridgestone Tire Company Limited. SN 80,689. Pub. 5-3-60. Filed 12-9-58.

Class 37—Paper and Stationery

701,393. VUE-FILE. Lee S. Sheely, d.b.a. Vue-File Company. SN 61,326. Pub. 5-3-60. Filed 10-24-58.

701,394. "HIGHLANDER." Highland Supply Corporation. SN 78,934. Pub. 5-3-60. Filed 8-20-59.

701,395. EXPANDA KRAFT. Scott Paper Company. SN 82,720. Pub. 5-3-60. Filed 10-5-59.

701,396. LEVELPLATE. Crocker, Burbank Papers Inc. SN 82,286. Pub. 5-3-60. Filed 10-15-59.

701,397. DOVER. Mainco Trading Company. SN 83,729. Pub. 5-3-60. Filed 10-21-59.

701,398. WARWICK. Mainco Trading Company. SN 83,730. Pub. 5-3-60. Filed 10-21-59.

701,399. EXCELLO. Mainco Trading Company. SN 83,731. Pub. 5-3-60. Filed 10-21-59.

701,400. MAINCO. Mainco Trading Company. SN 83,732. Pub. 5-3-60. Filed 10-21-59.

701,401. S. H. Kress and Company. SN 86,973. Pub. 5-3-60. Filed 12-9-59.

Class 38—Prints and Publications

701,402. LITHO-MATIC. The Photo-Matic Corp. SN 67,887. Pub. 5-3-60. Filed 2-17-59.

701,403. NUCLEAR REACTIONS. Westinghouse Electric Corporation. SN 71,067. Pub. 5-3-60. Filed 4-7-59.

701,404. INDUSTRIAL DEVELOPMENT ETC. AND DESIGN. Conway Publications, Inc. SN 72,290. Pub. 5-3-60. Filed 4-27-59.

701,405. NATIONAL GEOGRAPHIC. National Geographic Society. SN 72,873. Pub. 5-3-60. Filed 5-4-59.

701,406. SEMAC. Tavor Aids. SN 72,902. Pub. 5-3-60. Filed 5-4-59.

701,407. THE SANTA GERTRUDIS JOURNAL. The Lets Co. SN 80,231. Pub. 5-3-60. Filed 8-27-59.

701,408. PLASTIPS. Tri-Point Plastics, Inc. SN 81,352. Pub. 5-3-60. Filed 9-14-59.

701,409. SPECTACOLOR. Universal Pictures Company, Inc. SN 81,779. Pub. 5-3-60. Filed 9-21-59.

701,410. AIR TRAVEL. American Aviation Publications, Inc. SN 81,882. Pub. 5-3-60. Filed 9-23-59.

701,411. 3M TARTAN. Minnesota Mining and Manufacturing Company. SN 82,130. Pub. 5-3-60. Filed 9-25-59.

701,412. A MESSENGER CARD AND DESIGN. Messenger Corporation. SN 82,966. Pub. 5-3-60. Filed 10-8-59.

701,413. READER-SERVICES BOOKLETTER. Reader-Services Company. SN 84,603. Pub. 5-3-60. Filed 11-6-59.

701,414. KWIK-DIP. The Meyercord Co. SN 85,386. Pub. 5-3-60. Filed 11-16-59.

701,415. L'AMOUR. E. Errett Smith, Inc. SN 87,079. Pub. 5-3-60. Filed 12-10-59.

Class 39—Clothing

701,416. MR. EDD. Mr. Edd, Inc. (New York corporation, a new corporation), assignee, by mesne assignments, of Mr. Edd, Inc. (New York corporation). SN 53,524. Pub. 1-12-60. Filed 6-13-58.

701,417. HONEYCOMB. Peter Pan Foundations, Inc. SN 85,036. Pub. 10-27-59. Filed 7-8-59.

701,418. CARICATURE OF BEE. Peter Pan Foundations, Inc. SN 86,496. Pub. 5-3-60. Filed 8-1-58.

701,419. GYM CHAMP. Robinson Manufacturing Co. SN 87,232. Pub. 11-3-59. Filed 8-14-58.

701,420. THE REGENT BY AFTER SIX. S. Rudofker's, Inc. SN 86,770. Pub. 5-31-59. Filed 8-29-58.

701,421. CONTINENTAL CLUB. Robert Hall Clothes, Inc. SN 63,042. Pub. 5-3-60. Filed 11-24-58.

701,422. TOP NOTCH GRIPS AND DESIGN. United States Rubber Company. SN 84,667. Pub. 5-3-60. Filed 12-19-58.

701,423. MOON GOON. Michael G. Madeja. SN 66,793. Pub. 5-15-60. Filed 1-30-58.

701,424. PETER PAN HONEYCOMB. Peter Pan Foundations, Inc. SN 87,471. Pub. 11-17-59. Filed 2-10-59.

701,425. GLOBE DESIGN. Jantzen Inc. SN 70,062. Pub. 5-3-60. Filed 2-23-60.

701,426. LASARA. Hickey-Freeman Company. SN 78,785. Pub. 5-3-60. Filed 7-31-59.

701,427. BARODA. Hickey-Freeman Company. SN 78,786. Pub. 5-3-60. Filed 7-31-59.

701,428. KITTY KOLLIER. William Collier & Son, Inc. SN 84,292. Pub. 5-3-60. Filed 10-30-59.

701,429. SEE-CEE. See-Cee Girdle Co., Inc. SN 85,621. Pub. 5-3-60. Filed 11-18-59.

701,430. SANI-PAN. Murray Salk, Inc. SN 86,455. Pub. 5-3-60. Filed 12-1-59.

701,431. BIBAS. Burma-Bibas, Inc. SN 86,478. Pub. 5-3-60. Filed 12-2-59.

701,432. GIFTHANKS. I. C. Herman & Company, Inc. SN 86,661. Pub. 5-3-60. Filed 12-4-59.

701,433. ALBURY. Max Shrage Co., Inc. SN 86,839. Pub. 5-3-60. Filed 12-7-59.

Class 41—Canes, Parasols, and Umbrellas

701,434. SOUTHERN BELLE. Frankford Umbrella Manufacturing Company. SN 86,412. Pub. 5-3-60. Filed 12-1-59.

701,435. ROYAL GENT. Frankford Umbrella Manufacturing Company. SN 86,413. Pub. 5-3-60. Filed 12-1-59.

701,436. ROYAL GENT AND DESIGN. Frankford Umbrella Manufacturing Company. SN 86,494. Pub. 5-3-60. Filed 12-2-59.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

701,437. MARVELITE. Marvel Quilting Co., Inc. SN 70,602. Pub. 9-29-59. Filed 3-31-59.

701,438. RENAITRE. Northfield Mills, Inc. SN 73,416. Pub. 5-3-60. Filed 5-11-59.

701,439. EMBRACE. Northfield Mills, Inc. SN 73,417. Pub. 5-3-60. Filed 5-11-59.

701,440. EBONATA. Northfield Mills, Inc. SN 73,418. Pub. 5-3-60. Filed 5-11-59.

701,441. CASHALAINE. Wain Shiell & Son, Ltd. SN 74,072. Pub. 5-3-60. Filed 5-19-59.

701,442. STAR AND DESIGN. Aktiebolaget Jonkoping-Vulcan. SN 75,148. Pub. 5-3-60. Filed 6-5-59.

701,443. VISCANA. Courtaulds, Limited. SN 81,535. Pub. 12-22-59. Filed 7-10-59.

701,444. TRINIDAD. Stein-Tex, Inc. SN 86,808. Pub. 5-3-60. Filed 12-3-59.

Class 43—Thread and Yarn

701,445. THOMASTON. Thomaston Cotton Mills. SN 89,372. Pub. 5-3-60. Filed 3-11-59.

701,446. PARISIENNE. Parisienne Yarn Company. SN 72,251. Pub. 5-3-60. Filed 4-24-59.

701,447. ORDELETTE. E. I. du Pont de Nemours and Company. SN 86,551. Pub. 5-3-60. Filed 12-3-58.

Class 44—Dental, Medical, and Surgical Appliances

701,448. KADOMAX. Matsushita Denki Sangyo Kabushiki Kaisha. SN 84,679. Pub. 5-3-60. Filed 11-5-59.

701,449. KAYVE. The Gillette Company. SN 86,141. Pub. 5-3-60. Filed 11-27-59.

Class 45—Soft Drinks and Carbonated Waters

701,450. UNITY. Frankford Grocery Company. SN 75,078. Pub. 5-3-60. Filed 6-4-59.

701,451. CAL-FAME. Paramount Citrus Association, Inc. SN 86,321. Pub. 5-3-60. Filed 11-30-59.

Class 46—Foods and Ingredients of Foods

701,452. ANZIO. H. P. Hood & Sons, Inc., assignee, by mesne assignments, of Gordon-Allen Co. SN 28,250. Pub. 4-28-59. Filed 4-16-57.

701,453. FLEISCHMANN'S AND DESIGN. Standard Brands Incorporated. SN 39,287. Pub. 5-3-60. Filed 10-21-57.

701,454. MISS DIXIE AND DESIGN. Dixie Dairy Company. SN 56,764. Pub. 4-28-59. Filed 8-7-58.

701,455. EMPEROR CITY. Floyd J. Harkness Co., Inc., d.b.a. United Packing Co. SN 63,044. Pub. 5-3-60. Filed 11-24-58.

701,456. PLAIN AND FANCY AND DESIGN. Albert W. Taft, d.b.a. Plain and Fancy Dutch Products. SN 63,365. Pub. 5-3-60. Filed 11-28-58.

701,457. CURLY-RONI. American Beauty Macaroni Co. SN 66,195. Pub. 5-3-60. Filed 1-21-59.

701,458. MINERVA. Minerva Societe Oleicole, d.b.a. Minerva Olive Oil Co. SN 66,261. Pub. 5-3-60. Filed 1-21-59.

701,459. POLLYPHOS. Houston Corporation (Butler Chemical Company Division). SN 67,220. Pub. 5-3-60. Filed 2-6-59.

701,460. "HERE'S HOWE." George J. Howe Company, Inc. SN 67,221. Pub. 5-3-60. Filed 2-6-59.

701,461. PENN PANTRY. Penn Fruit Co., Inc., d.b.a. Penn Fruit Company and Penn Fruit Co. SN 69,441. Pub. 5-3-60. Filed 3-12-59.

701,462. DONA. Wiccopee Farms, Inc. SN 70,127. Pub. 5-3-60. Filed 3-23-59.

701,463. VITASHAKE. Fountain Foods. SN 71,661. Pub. 5-3-60. Filed 4-16-59.

701,464. RICQLES AND DESIGN. Société à Responsabilité Limitée Le Bec Fin. SN 72,551. Pub. 5-3-60. Filed 4-29-59.

701,465. MARY-LOU POTATO BOATS. Prepackage Sales Corp., d.b.a. Kitcheneat Products and Kitcheneat Foods. SN 73,005. Pub. 5-3-60. Filed 5-13-59.

701,466. HANS DE STRASBOURG. Maison Olida, Societé Anonyme. SN 74,143. Pub. 5-3-60. Filed 5-20-59.

701,467. VERI-ESSENCE. Food Materials Corporation. SN 74,576. Pub. 5-3-60. Filed 5-27-59.

701,468. McDONNELL AND DESIGN. McDonnell Seed Co. SN 76,962. Pub. 5-3-60. Filed 7-6-59.

701,469. TWO LITTLE PIGS. John Engelhorn & Sons. SN 79,269. Pub. 5-3-60. Filed 8-12-59.

701,470. MOUNTAIN FARM BRAND. A. H. Martin, d.b.a. Mountain Farm Products. SN 79,885. Pub. 5-3-60. Filed 8-17-59.

701,471. WONDER WHEAT. S. S. Pierce Co. SN 80,450. Pub. 5-3-60. Filed 8-25-59.

701,472. RED WINDMILL AND DESIGN. Woodward & Dickerson, Inc. SN 80,702. Pub. 5-3-60. Filed 9-1-59.

701,473. BLUE WINDMILL AND DESIGN. Woodward & Dickerson, Inc. SN 80,703. Pub. 5-3-60. Filed 9-1-59.

701,474. SHER-STAY. National Dairy Products Corporation. SN 80,738. Pub. 5-3-60. Filed 9-2-59.

701,475. SCOTCH BRAND. Meat Industry Suppliers, Inc. SN 80,808. Pub. 5-3-60. Filed 9-3-59.

701,476. S AND P SWEET AND PURE. Moore-Lowry Flour Mills, Inc., d.b.a. Rea-Patterson Flour Mills. SN 80,809. Pub. 5-3-60. Filed 9-3-59.

701,477. SHIVER. Malt-A-Plenty, Inc. SN 80,895. Pub. 5-3-60. Filed 9-4-59.

701,478. GOLDEN KOSHER. Wallaces Kosher Foods. SN 81,033. Pub. 5-3-60. Filed 9-8-59.

701,479. SUNLIGHT. Booth Fisheries Corporation, d.b.a. Sunlight Fisheries, Inc. SN 81,114. Pub. 5-3-60. Filed 9-10-59.

701,480. DRI-FOND. American Molasses Company. SN 81,377. Pub. 5-3-60. Filed 9-15-59.

701,481. EL CANARIO AND DESIGN. Delano Corporation of America. SN 82,205. Pub. 5-3-60. Filed 9-28-59.

701,482. DUTCH VALLEY. Weis Markets, Inc. SN 82,206. Pub. 5-3-60. Filed 10-28-59.

701,483. VALLEY FLAME. Valley Fruit Distributors, d.b.a. Valley Fruit Distributors, Inc. SN 84,579. Pub. 5-3-60. Filed 11-3-59.

701,484. FLAVOR-MASTER. V. & E. Kohnstramm, Inc. SN 84,902. Pub. 5-3-60. Filed 11-9-59.

701,485. CHEWY LOUIE. Fox-Cross Candy Company. SN 85,574. Pub. 5-3-60. Filed 11-18-59.

701,486. DUTCH DELIGHT AND DESIGN. Martin H. Cope Company. SN 85,961. Pub. 5-3-60. Filed 11-24-59.

701,487. CHLOROSEPTIC. F & F Laboratories, Inc. SN 86,128. Pub. 5-3-60. Filed 11-27-59.

701,488. LITTLE ITALY. Dairy King, Inc. SN 86,541. Pub. 5-3-60. Filed 12-3-59.

701,489. SEA BREEZE. Louis Authement, d.b.a. Sea Breeze Restaurant. SN 86,628. Pub. 5-3-60. Filed 12-4-59.

701,490. FARMINGTON. General Foods Corporation. SN 86,654. Pub. 5-3-60. Filed 12-4-59.

701,491. LITTLE KING AND DESIGN. King Kullen Grocery Co., Inc. SN 86,791. Pub. 5-3-60. Filed 12-7-59.

701,492. VILLAGE SQUARE. Robert A. Johnston Company. SN 86,883. Pub. 5-3-60. Filed 12-8-59.

Class 47 — Wines

701,493. MARLBORO. Marlboro Industries Ltd. SN 76,232. Pub. 5-3-60. Filed 6-22-59.

701,494. JAZZ. Schenley Industries, Inc., d.b.a. Weston Winery. SN 86,520. Pub. 5-3-60. Filed 12-2-59.

701,495. STARDUST. Schenley Industries, Inc., d.b.a. Weston Winery. SN 86,521. Pub. 5-3-60. Filed 12-2-59.

Class 48 — Malt Beverages and Liquors

701,496. ADOLF'S HALF N' HALF. Carl Schlichtinger. SN 74,692. Pub. 5-3-60. Filed 5-28-59.

Class 49 — Distilled Alcoholic Liquors

701,497. EL TORO. The American Distilling Company, d.b.a. The American Distilling Co., (Inc.). SN 79,089. Pub. 5-3-60. Filed 8-5-59.

701,498. KORCHMA. Affiliated Distillers Brand Corp., d.b.a. Park & Tilford. SN 83,431. Pub. 5-3-60. Filed 10-19-59.

Class 50 — Merchandise Not Otherwise Classified

701,499. WING-KING. Multiplex Display Fixture Co. SN 57,397. Pub. 5-3-60. Filed 6-18-58.

701,500. REPRESENTATION OF LITTLE MAN. Waljohn Plastics, Inc. SN 58,478. Pub. 5-3-60. Filed 9-5-58.

701,501. NYLONOLYN. C.S.W. Plastic Types, Incorporated. SN 59,685. Pub. 5-3-60. Filed 9-22-58.

701,502. ECONOMARKER. Economarker Safety Corporation. SN 67,766. Pub. 5-3-60. Filed 2-16-59.

701,503. WINDSOR AND DESIGN. Viscount of England, Inc. SN 71,533. Pub. 5-3-60. Filed 4-2-59.

701,504. PRESSOMATIC VALET. Viscount of England, Inc. SN 71,534. Pub. 5-3-60. Filed 4-2-59.

701,505. FABULACE. B. F. Neell Industries, Inc. SN 73,593. Pub. 5-3-60. Filed 5-13-59.

701,506. INSTEUCTO. Jasronda Manufacturing Company. SN 75,865. Pub. 5-3-60. Filed 6-16-59.

701,507. DRIPOMAT. Edton, Inc. SN 82,763. Pub. 5-3-60. Filed 10-6-59.

701,508. PROTECT-O-PLATE. General Motors Corporation. SN 83,788. Pub. 5-3-60. Filed 10-22-59.

Class 51 — Cosmetics and Toilet Preparations

701,509. TEMPO. Helene Curtis Industries, Inc. SN 52,994. Pub. 5-3-60. Filed 6-2-58.

701,510. OXIGENTA. Hans Schwarzkopf. SN 57,098. Pub. 5-3-60. Filed 8-12-58.

701,511. MASCARA EYE MAGIC. Irving J. Halperin, d.b.a. Winston Cosmetics. SN 60,519. Pub. 5-3-60. Filed 10-13-58.

701,512. GLO-TAN AND DESIGN. Juanita Johns, d.b.a. Johns Enterprises. SN 68,970. Pub. 5-3-60. Filed 3-3-59.

701,513. GANJAH. Gustav Lohse A.G. SN 73,090. Pub. 5-3-60. Filed 5-7-59.

701,514. PREGNA-PAPER. Orchard Paper Co., d.b.a. Rich Products Co. SN 77,582. Pub. 5-3-60. Filed 7-13-59.

701,515. DIORISSIMO. Parfums Christian Dior Societe a Responsabilite Limitee. SN 81,142. Pub. 5-3-60. Filed 9-10-59.

701,516. RINCELESS TIZ AND DESIGN. M. Pier Company, Inc., d.b.a. M. Pier Company. SN 81,833. Pub. 5-3-60. Filed 9-22-59.

701,517. RINSELESS TIZ AND DESIGN. M. Pier Company, Inc., d.b.a. M. Pier Company. SN 81,834. Pub. 5-3-60. Filed 9-22-59.

701,518. VENT VERT. Pierre Balmain. SN 83,269. Pub. 5-3-60. Filed 10-15-59.

701,519. JOLIE MADAME. Pierre Balmain. SN 83,270. Pub. 5-3-60. Filed 10-15-59.

701,520. TAME. The Gillette Company, d.b.a. The Toni Company. SN 84,886. Pub. 5-3-60. Filed 11-9-59.

Class 52 — Detergents and Soaps

701,521. COSMEDERM. Richard Hudnut. SN 58,349. Pub. 5-3-60. Filed 9-4-58.

701,522. KRYSTALLEX. Krystall Chemical Company. SN 67,800. Pub. 5-3-60. Filed 2-16-59.

701,523. QUADRA-SOLV. Texas Refinery Corp., by change of name from Panther Oil & Grease Mfg. Co. SN 86,444. Pub. 5-3-60. Filed 12-1-59.

701,524. QUADRA-SHEEN. Texas Refinery Corp. by change of name from Panther Oil & Grease Mfg. Co. SN 86,445. Pub. 5-3-60. Filed 12-1-59.

701,525. LIVELY. Automatic Enterprises, Inc. SN 86,719. Pub. 5-3-60. Filed 12-7-59.

Service Marks

Class 100 — Miscellaneous

701,526. D&M. Southwestern Drug Corporation. SN 68,940. Pub. 5-3-60. Filed 3-4-59.

701,527. MARKET DAYS, U.S.A. National Surplus Dealers Association. SN 76,241. Pub. 5-3-60. Filed 6-22-59.

Class 101 — Advertising and Business

701,528. NATIONAL FOOD SERVICE ASSOCIATION AND REPRESENTATION OF OUTLINE OF UNITED STATES. The National Food Service Association. SN 59,557. Pub. 5-3-60. Filed 9-25-58.

701,529. SCOTCH SAVER. Paul M. McGregor, d.b.a. Scotch Saver Stamp Company. SN 82,845. Pub. 5-3-60. Filed 9-29-59.

701,530. THE BOX OF BOOKS AND DESIGN. Harold Armitage, d.b.a. The Box of Books. SN 87,177. Pub. 5-3-60. Filed 12-14-59.

Class 102 — Insurance and Financial

701,531. IC AND DESIGN. Inter-Continental Automotive Service Co., Inc. SN 41,020. Pub. 5-3-60. Filed 11-20-57.

701,532. SCRIBERLIFE. Deane Weinberg & Co. SN 45,294. Pub. 5-3-60. Filed 2-4-58.

701,533. SCRIBERSURANCE. Deane Weinberg & Co. SN 45,295. Pub. 5-3-60. Filed 2-4-58.

701,534. FEDERATED. Federated Mutual Implement and Hardware Insurance Company. SN 85,323. Pub. 5-3-60. Filed 11-16-59.

701,535. SF AND EAGLE DESIGN. N. Marshall Seeburg and Sons, Inc. SN 85,406. Pub. 5-3-60. Filed 11-16-59.

701,536. CONSTELLATION ETC. AND DESIGN. Constellation Life Insurance Company. SN 80,138. Pub. 5-3-60. Filed 1-18-60.

Class 103 — Construction and Repair

701,537. VOGEL-RITT. Vogel-Ritt, Inc. SN 85,167. Pub. 5-3-60. Filed 11-12-59.

Class 105 — Transportation and Storage

701,538. SKY FREIGHT. Northwest Airlines, Inc. SN 78,901. Pub. 5-3-60. Filed 8-3-59.

Class 107 — Education and Entertainment

701,539. SPOTLITE ON HOMES. Masco Productions, Inc. SN 72,636. Pub. 5-3-60. Filed 4-30-59.

701,540. UA ETC. AND DESIGN. United Artists Television, Inc. SN 86,486. Pub. 5-3-60. Filed 11-2-59.

Collective Membership Mark

Class 200

701,541. MEMBER NATIONAL PEST CONTROL ASSOCIATION AND DESIGN. National Pest Control Association, Incorporated. SN 83,803. Pub. 5-3-60. Filed 10-15-59.

Certification Marks

Class A — Goods

701,542. TWINOLIZED WITH TWINOL 335 ETC. AND DESIGN. Polaquimia S.A. de C.V. SN 4,256. Pub. 5-3-60. Filed 3-12-56.

701,543. FINE WOOLLENS WOVEN IN SCOTLAND AND DESIGN. The Scottish Woollen Trade Mark Association, Limited. SN 70,398. Pub. 5-3-60. Filed 3-27-59.

701,544. CERTIFIED PROCESS 82 ETC. AND DESIGN. Ro-Search, Inc. SN 83,562. Pub. 5-3-60. Filed 10-19-59.

701,545. TECO. TESTED ETC. AND DESIGN. Timber Engineering Company. SN 85,929. Pub. 5-3-60. Filed 11-23-59.

701,546. TECO TESTED. Timber Engineering Company. SN 85,930. Pub. 5-3-60. Filed 11-23-59.

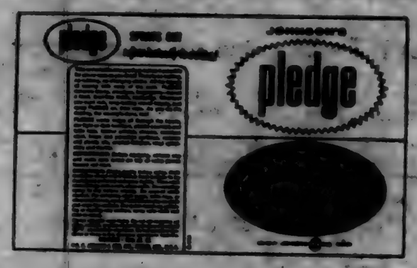
701,547. TECO TESTED ETC. AND DESIGN. Timber Engineering Company. SN 86,603. Pub. 5-3-60. Filed 12-4-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 4—Abrasives and Polishing Materials

701,542. S. C. Johnson & Son, Inc., Racine, Wis. SN 83,105. Filed P.R. 10-12-59; Am. S.R. 5-23-60.



For Furniture Polish and Cleaner.
First use on or about Mar. 15, 1959; on or about Mar. 15, 1956, in substantially identical display; on or about Jan. 31, 1956, as to "Pledge."

Class 12—Construction Materials

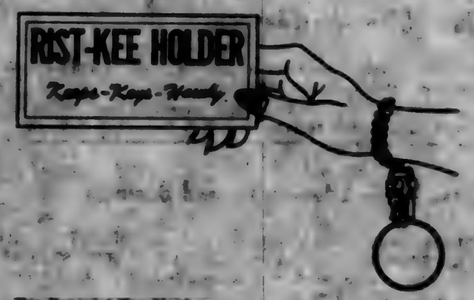
701,549. William Allan Gerrard, d.b.a. W. A. Gerrard Co., Minneapolis, Minn. SN 83,030. Filed P.R. 11-24-58; Am. S.R. 5-18-60.

SCHOOLFLOR

For Unfinished Wood Flooring, and Materials for Installing and Finishing It, Namely—Cork Board Underlayment, Mastic, Wood Sealer and Wood Finish.
First use Oct. 29, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

701,550. Rose Ring, Dallas, Tex. SN 69,555. Filed P.R. 3-13-59; Am. S.R. 5-25-60.



For Bracelet Key Holder.
First use Jan. 21, 1959.

Class 32—Furniture and Upholstery

701,551. J. Canamood Limited, d.b.a. The Clatique Chair Company, London, England. SN 77,726. Filed P.R. 7-15-59; Am. S.R. 5-13-60.

SITTING IS BELIEVING!

For Furniture—Namely, Chairs, Settees, Couches, Stools and Benches.
First use on or about Dec. 31, 1949.

TRADEMARK REGISTRATIONS RENEWED

129,363. MOHAWK LA MAZORCA AND REPRESENTATION OF AN INDIAN. Cl. 46. 2-17-20.
130,638. THE BILLINGS & SPENCER CO. Cl. 22. 5-4-20.
131,393. ADLAKE. Cl. 21. 5-18-20.
131,663. VULCAN. Cl. 23. 5-18-20.
131,733. B.G. Cl. 21. 5-25-20.
131,950. ADLAKE. Cl. 34. 6-8-20.
132,865. IMMAC. Cl. 51. 6-22-20.
132,927. OLD STRATFORD. Cl. 37. 6-29-20.
132,984. GOLDEN WEST. Cl. 1. 7-6-20.
133,301. ADLAKE. Cl. 25. 7-20-20.
133,263. FLOGLAZE. Cl. 16. 7-20-20.
133,641. BIG BUCK. Cl. 39. 8-3-20.
133,642. EUREKA. Cl. 20. 8-3-20.
134,305. KING PIN. Cl. 6. 9-14-20.
134,906. REPRESENTATION OF A KING. Cl. 6. 9-14-20.
135,066. SAFETHI GLASS. Cl. 33. 9-21-20.
135,363. SANDY ANDY. Cl. 22. 9-28-20.
135,948. HYVIS. Cl. 15. 10-26-20.
136,046. INBRACO. Cl. 13. 10-26-20.
136,315. BEAR. Cl. 45. 11-2-20.
136,455. CLAUSS. Cl. 23. 11-2-20.
136,456. CLAUSS. Cl. 44. 11-2-20.
136,681. VAN DORN. Cl. 21. 11-2-20.
374,281. FLEX-O-FORM. Cl. 32. 1-2-40.
376,238. NORMAC. Cl. 13. 3-19-40.
376,474. WHALEBONE. Cl. 23. 3-26-40.
376,737. WHIPCORD. Cl. 23. 4-2-40.
377,261. MARAVILLE CURATIVA. Cl. 18. 4-23-40.
377,402. SASSOS. Cl. 18. 5-7-40.
377,425. OVER THE TOP THE RANCHO AND DESIGN. Cl. 39. 5-7-40.
377,501. MILKY WAY. Cl. 39. 5-7-40.
377,695. MYSTERY. Cl. 21. 5-14-40.
377,696. MYSTERY CONTROL. Cl. 21. 5-14-40.
377,767. WRAP-TURE. Cl. 39. 5-14-40.
377,965. CELASTRAW. Cl. 1. 5-21-40.
378,164. KIGGER. Cl. 32. 5-28-40.
378,172. CAPTAIN. C. 26. 5-28-40.
378,173. CHAMPION. Cl. 26. 5-28-40.
378,174. CHIEF. Cl. 26. 5-28-40.
378,175. COMMANDER. Cl. 26. 5-28-40.
378,176. MAJOR. Cl. 26. 5-28-40.
378,228. BTU-TY. Cl. 13. 6-4-40.
378,262. BONDACT. Cl. 23. 6-4-40.
378,283. HY-FLEX. Cl. 23. 6-4-40.
378,297. FILTER-QUEEN. Cl. 21. 6-4-40.
378,350. CALED PACE. Cl. 32. 6-4-40.
378,460. KING OF THE ROOF AND DESIGN. Cl. 12. 6-11-40.
378,474. CELUCOTE. Cl. 16. 6-11-40.
378,520. PAUL McCOY ETC. AND DESIGN. Cl. 18. 6-11-40.
378,602. 346 AND DESIGN. Cl. 17. 6-11-40.
378,645. CLARITE. Cl. 6. 6-11-40.
378,751. CHAMPION. Cl. 23. 6-18-40.
378,835. FORWAY. Cl. 13. 6-18-40.
378,894. HEXCAST. Cl. 13. 6-18-40.
378,979. NATIONAL HOSPITAL ASSOCIATION AND DESIGN. Cl. 44. 6-25-40.

378,963. GRASALO. Cl. 1. 6-25-40.
379,212. ANN DELAFIELD. Cl. 22. 7-9-40.
379,302. BORDEN'S. Cl. 46. 7-9-40.
379,372. COSOL. Cl. 6. 7-9-40.
379,395. THANITE. Cl. 6. 7-9-40.
379,619. OIL-O-MATIC. Cl. 23. 7-16-40.
379,641. MOBILAIRE. Cl. 34. 7-16-40.
379,752. DR. SWETT'S. Cl. 45. 7-23-40.
379,865. CANVAS-BACK. Cl. 21. 7-30-40.
380,022. RESILAFOAM. Cl. 22. 8-6-40.
380,063. STILLITE. Cl. 12. 8-6-40.
380,075. DESIRE. Cl. 28. 8-6-40.
380,394. FLYTIMER. Cl. 27. 8-20-40.
380,459. HAIR GLOWER. Cl. 51. 8-20-40.
380,573. ANCHOR BRAND AND DESIGN. Cl. 23. 8-27-40.
380,612. THE FISHING DIGEST. Cl. 38. 8-27-40.
380,626. FARBERTITE. Cl. 1. 8-27-40.
380,784. GOOSENECK AND DESIGN. Cl. 23. 9-3-40.
380,936. BLP STUCCRATH. Cl. 16. 9-10-40.
381,015. NARRAGANSETT. Cl. 39. 9-10-40.
381,210. SATINORE. Cl. 28. 9-17-40.
381,215. SPEEDRAFT. Cl. 26. 9-17-40.
381,406. ABSO-DRY. Cl. 24. 9-24-40.
381,429. 76 BRAND. Cl. 16. 9-24-40.
381,475. LEISURLAINE. Cl. 42. 9-24-40.
381,481. SEALZ-LUBE. Cl. 35. 9-24-40.
381,502. BORDEN'S. Cl. 46. 9-24-40.
381,586. GRACIOUS LADY. Cl. 29. 10-1-40.
381,690. FLAGSHIP. Cl. 11. 10-1-40.
381,876. EMPIRE. Cl. 25. 10-15-40.
382,045. W AND DESIGN. Cl. 26. 10-15-40.
382,049. WORKMAN AND DESIGN. Cl. 26. 10-15-40.
382,060. INLUSOL. Cl. 15. 10-15-40.
382,116. DURADERM. Cl. 42. 10-15-40.
382,128. REPRESENTATION OF A LAUGHING TIGER. Cl. 51. 10-15-40.
382,146. THERANATES. Cl. 18. 10-15-40.
382,290. PERK-UP. Cl. 46. 10-29-40.
382,418. TRI-VITA. Cl. 51. 10-29-40.
382,457. MYSTIC. Cl. 43. 10-29-40.
382,472. MISS AMERICA. Cl. 39. 10-29-40.
382,503. CARRY-LITE. Cl. 22. 10-29-40.
382,506. HEPTOBEE. Cl. 18. 10-29-40.
382,554. REPRESENTATION OF A CROW. Cl. 49. 10-29-40.
382,603. THERMOTROL. Cl. 44. 11-5-40.
382,656. PHOENIX. Cl. 37. 11-5-40.
382,842. S.T. 37. Cl. 37. 11-12-40.

TRADEMARK REGISTRATIONS CANCELED

Section 8

309,598. SPARVA. Cl. 42. 1-22-34.
383,905. THE ELECTRODENT. Cl. 44. 12-24-40.
433,948. EASYDO. Cl. 51. 11-4-47.

The following registrations issued June 1, 1954

590,332. J. C. HIGGINS. Cl. 5.
590,340. IDEAL. Cl. 46.
590,341. WILLAPOINT. Cl. 46.
590,348. GUIDE-MASTER. Cl. 21.
590,350. ECP. Cl. 23.
590,351. GREAT STONE AND DESIGN. Cl. 12.
590,355. KEY-RITE. Cl. 26.
590,366. AEROFLOW. Cl. 31.
590,368. MONMOUTH ENGINEERED AND SLIDE RULE SYMBOL. Cl. 19.
590,375. X-PANDO. Cl. 26.
590,374. ESS-WOOD. Cl. 12.
590,377. TRI-PAK. Cl. 46.
590,380. CAPRICHO AND DESIGN. Cl. 46.
590,388. SHOW-OFF. Cl. 50.
590,390. GREEN QUEEN. Cl. 1.
590,395. CHAMPOO. Cl. 51.
590,396. MAGI-CALC. Cl. 26.
590,397. MIGHTY MIDGET. Cl. 26.
590,398. FARMWELL AND DESIGN. Cl. 23.
590,400. COOPER'S UNIVERSAL. Cl. 16.
590,401. MILLER'S UNIVERSAL. Cl. 18.
590,410. GAIETY ETC. AND DESIGN. Cl. 46.
590,414. NONA-SALT. Cl. 46.
590,418. FIGURE WITH AN EAR OF CORN. Cl. 46.
590,422. AUTOVIAL. Cl. 18.
590,423. DYNA START AND DESIGN. Cl. 21.
590,425. SQUIRT. Cl. 22.
590,433. NUCEL. Cl. 1.
590,436. PE-RO. Cl. 23.
590,437. ADJUSTOCRANK. Cl. 23.
590,442. JUGOSLAVIJA MIRNA-ROVINJ AND DESIGN. Cl. 46.
590,445. WELLIT. Cl. 12.
590,448. ERYTHROGUENT. Cl. 18.
590,449. HUDSON BAY. Cl. 46.
590,451. LANORICA. Cl. 51.
590,457. ALLIED TUBE CORP., AND DESIGN. Cl. 22.
590,459. KEN-KAY. Cl. 23.
590,461. VANCROMSIL. Cl. 14.
590,466. FLAIR. Cl. 36.
590,471. SKILL-SLING. Cl. 22.
590,474. TURBO. Cl. 21.
590,481. HUCK FINN DONUTS AND DESIGN. Cl. 46.
590,483. B AND LION DESIGN. Cl. 23.
590,509. 5 WAY. Cl. 46.
590,513. MAR-LIN-SNAP. Cl. 22.
590,515. APPLE CREST. Cl. 46.
590,517. TROJAN. Cl. 12.
590,518. GLICK-O. Cl. 18.
590,521. PEBELE. Cl. 51.
590,527. TONALARM. Cl. 27.
590,536. RED FOX. Cl. 14.
590,540. BERNITE. Cl. 23.
590,542. LEAK-TEC. Cl. 6.
590,548. SLEEPTIN. Cl. 18.
590,550. INDEXECO AND DESIGN. Cl. 15.
590,556. GOLDEN CREST AND DESIGN. Cl. 46.
590,558. UNIGEL. Cl. 18.
590,560. STRIKE IT RICH. Cl. 46.
590,561. READICILLIN. Cl. 18.
590,563. BOXER. Cl. 46.
590,571. FROZEN ASSETS. Cl. 51.
590,574. SUBDAMINE. Cl. 18.
590,575. HI-DRAMATIC. Cl. 39.
590,576. BUTTONS & BOWS. Cl. 28.
590,586. HOME NEW YORK. Cl. 102.
590,588. DESIGN OF A HEAD AND CAP. Cl. 107.
590,589. FOCUS AND DESIGN. Cl. 100.
590,597. TRU-SEAL AND DESIGN. Cl. 12.
590,598. CUSHIONAIRE. Cl. 13.
590,608. KLEEN-AIRE. Cl. 21.
590,609. PRODUCER LITE. Cl. 21.
590,612. MILL MORE. Cl. 23.
590,614. ROCK MAPLE AND DESIGN. Cl. 23.
590,615. PINCOR SNO-MOVER. Cl. 23.
590,617. FLEETWOOD. Cl. 23.
590,618. PIX-UP. Cl. 23.
590,619. ASHLEY. Cl. 23.
590,624. JUSTIN. Cl. 27.
590,626. GEMS OF PARIS AND DESIGN. Cl. 28.
590,627. AIR-O-VANE. Cl. 34.
590,631. SATIN STRIPE IT SEEMS A SEAM. Cl. 39.
590,634. JAMA-JEANS. Cl. 39.
590,641. ALASKA COLDRINK AND DESIGN. Cl. 45.
590,642. KRYSTAL AID. Cl. 45.
590,644. WAFFLETTES. Cl. 46.
590,645. MELL-O-BRAN. Cl. 46.
590,646. CLANCY'S AND DESIGN. Cl. 46.
590,654. KEITH SYSTEM ETC. AND DESIGN. Cl. 107.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

128,939. CHALLENGE AND DESIGN. Cl. 46. 1-20-20. Borden Company, New York, N.Y. Restricted under the provisions of Sec. 18, of the Trademark Act of 1946 to that area of the United States comprising the States of California, Washington, Oregon, Idaho, Montana, Utah, Wyoming, Colorado, New Mexico, Texas, Arizona, Nevada, Alaska and Hawaii, by order of the Commissioner dated Dec. 15, 1959, following decision on Cancellation Proceeding Nos. 6450, 6451, and 6452, *The Borden Company* v. *Challenge Cream & Butter Association*.

406,158. BIO-DYNE. Cl. 6. 7-25-44. Sperti, Inc. American Home Products Corporation, New York, N.Y. Amended: In the statement, column 1, lines 9 and 10, the description of goods, "sterile dressing for use in the treatment of burns and wounds", is deleted and *skin respiratory factor used as an ingredient in pharmaceutical preparations for topical application to injuries to epithelial tissue* is inserted.

561,227. COLUMBIA. Cl. 23. 10-20-53. Columbia Machinery & Engineering Corp. The Lodge & Shipley Company, Cincinnati, Ohio. Amended: In the statement, column 1, lines 7 and 8, "power squaring shears, power press brakes, metal forming presses" are deleted.

597,879. HASET AND DESIGN. Cl. 23. 11-9-54. Haset-Werk Hermann Zerver, Remscheid-Vieringhausen, Germany. Corrected: In the certificate, line 4, and in the statement, column 1, line 1, "corporation" should be deleted and *partnership* should be inserted.

655,243. WILKERSON CORPORATION AND DESIGN. Cl. 31. 12-3-57. Wilkerson Corporation, Englewood, Colo. Amended: In the statement, column 2, lines 6 and 7 are deleted, and the drawing is amended to appear:



664,051. HARMET. Cl. 23. 7-8-58. Hard Metals Limited, Nuffield Township, Springs, Union of South Africa. Amended: In the statement, column 2, lines 1 through 5, the description of goods, "mining equipment, drills, rock-drilling machinery, grinding, knurling, milling machines, machine tools and accessories for the foregoing equipment" is deleted and *percussion drilling bits for mining (either integral with or detachable from a stem) and machines for use in connection therewith* is inserted.

665,724. DONACLONE. Cl. 31. 8-12-58. Donaldson Company, Inc., St. Paul, Minn. Amended: In the statement, column 2, lines 2 and 3, "and industrial grinding machines" is deleted.

665,725. DONACLONE. Cl. 31. 8-12-58. Donaldson Company, Inc., St. Paul, Minn. Amended: In the statement, column 2, lines 2 and 3, "and industrial grinding machines" is deleted.

666,896. MPH ETC. AND DESIGN. Cl. 15. 10-28-58. Bayou State Oil Corporation, Shreveport, La. Amended: In the statement, column 2, lines 5 and 6 are deleted, and the drawing is amended to appear:



686,109. WONDERWARE AND DESIGN. Cl. 2. 10-6-59. Wonderware Home Parties, Inc., Bronx, N.Y. Amended to appear:



688,239. ERTMA. Cl. 23. 11-17-59. Ertma S.A., Carouge, Geneva, Switzerland. Corrected: In the statement, column 2, line 3, "306" should be deleted and *173,044* should be inserted and "Dec. 30" should be deleted and *Nov. 18* should be inserted.

690,784. TEXTRACT. Cl. 18. 1-5-60. The Texas Company, New York, N.Y. Corrected: In the statement, column 1, line 1, after "(Delaware corporation)", *now by change of name Texaco Inc.* should be inserted.

693,506. COROPLEAT. Cl. 31. 2-23-60. Fram Corporation, Providence, R.I. Corrected: In the statement, column 2, line 1, "caburetor" should be deleted and *carburetor* should be inserted.

694,318. NEW HORIZON FOODS. Cl. 46. 3-8-60. General Foods Corporation, White Plains, N.Y. Corrected: In the statement, column 2, line 2, after "rice", the comma should be deleted.

694,850. PERKO. Cl. 19. 3-22-60. Perkins Marine Lamp and Hardware Corp., Brooklyn, N.Y. Corrected: In the statement, column 2, line 3, after "vents," *marine windows, mounts, frames and screens therefor,* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(e), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

239,663. KESBEC. Cl. 15. Kesbec Sales Company. 3-6-28. New Cert. Sec. 7(e) to Humble Oil & Refining Company, Houston, Tex.

406,158. BIO-DYNE. Cl. 6. Sperti, Inc. 7-25-44. New Cert. Sec. 7(e) to American Home Products Corporation, New York, N.Y.

440,371. MONOMADE. Cl. 32. Monroe Upholstering Company. 8-24-48. New Cert. Sec. 7(e) to Monroe Upholstering Company, Baltimore, Md.

530,740. SPORBAN. Cl. 46. Sche Rose Mfg. Corp. 9-12-50. New Cert. Sec. 7(e) to Red Star Yeast and Products Company, Milwaukee, Wis.

555,813. SAM CLAY. Cl. 49. Minnie Brumfield Haddix, administratrix of the estate of M. Cornelius Haddix, deceased, doing business under the name of Lexington Distributing Co. 3-11-52. New Cert. Sec. 7(e) to The Parnell Co., Inc., Cincinnati, Ohio.

561,785. BONDETTE. Cl. 28. Bondette. 11-6-53. New Cert. Sec. 7(e) to Bondette, Ltd., New York, N.Y.

668,839. HAZEBAN. Cl. 6. Food Industries Company, Inc. 10-28-58. New Cert. Sec. 7(e) to Red Star Yeast and Products Company, Milwaukee, Wis.

676,703. PILFER. Cl. 32. Norman Bell, doing business as Bell Enterprises. 4-7-59. New Cert. Sec. 7(e) to Norbell Enterprises, Inc., Brooklyn, N.Y.

678,848. CIRLYPTIC. Cl. 23. Hobam, Inc. 5-19-59. New Cert. Sec. 7(e) to Entoleter, Inc., Hamden, Conn.

INDEX OF REGISTRANTS

JULY 19, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A/J Drug Co.: *See*—
Schuck, Arthur G.
Abercrombie & Fitch Co., New York, N.Y. 701,284, pub. 5-3-60. Cl. 22.
Acme Steel Co.: *See*—
Hoffert Machine Co., Inc.
Adams & Westlake Co., The, Chicago, Ill. 131,398, ren. 7-19-60. Cl. 21.
Adams & Westlake Co., The, Chicago, Ill. 131,950, ren. 7-19-60. Cl. 34.
Adams & Westlake Co., The, Chicago, Ill. 133,201, ren. 7-19-60. Cl. 25.
Aetna Optix, New York, N.Y. 701,316, pub. 5-3-60. Cl. 26.
Affiliated Distillers Brand Corp., d.b.a. Park & Tilford, New York, N.Y. 701,496, pub. 5-3-60. Cl. 49.
Aids Development Co., Inc., Cleveland, Ohio. 590,355, canc. Cl. 26.
Air Devices, Inc., New York, N.Y. 701,388, pub. 11-10-59. Cl. 34.
Air Products, Inc., Emmaus, Pa. 701,197-8, pub. 5-3-60. Cl. 13.
Air Products, Inc., Emmaus, Pa. 701,385-6, pub. 5-3-60. Cl. 34.
Ajax Corp. of America, Evansville, Ind. 590,521, canc. Cl. 31.
Aktiebolaget Bofors, Bofors, Sweden. 590,488, canc. Cl. 23.
Aktiebolaget Jonkoping-Vulcan, Jonkoping, Sweden. 701,193, pub. 5-3-60. Cl. 12.
Aktiebolaget Jonkoping-Vulcan, Jonkoping, Sweden. 701,442, pub. 5-3-60. Cl. 42.
Aktiebolaget Wicanders Korkfabriker, Linkoping, Sweden. 701,306, pub. 5-3-60. Cl. 23.
Alexander, E. E., & Son, Wylie, Tex. 590,410, canc. Cl. 46.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa. 701,208, pub. 5-3-60. Cl. 14.
Allied Carbon and Ribbon Mfg. Corp., New York, N.Y. 381,690, ren. 7-19-60. Cl. 11.
Allied Tube Corp., Philadelphia, Pa. 590,457, canc. Cl. 22.
Alpura A.G. (Alpura S.A., and Alpura Ltd.), Berne, Switzerland. 701,303, pub. 5-3-60. Cl. 23.
Amalgamated Leather Companies, Inc., Wilmington, Del. 701,159, pub. 5-3-60. Cl. 1.
Amerace Corp., The, New York, N.Y. 701,280, pub. 5-3-60. Cl. 22.
American Aviation Publications, Inc., Washington, D.C. 701,410, pub. 5-3-60. Cl. 38.
American Beauty Macaroni Co., Kansas City, Kans. 701,457, pub. 5-3-60. Cl. 46.
American Cyanamid Co., New York, N.Y. 590,574, canc. Cl. 18.
American Distilling Co., Inc., The: *See*—
American Distilling Co., The.
American Distilling Co., The, d.b.a. The American Distilling Co., Inc., New York, N.Y. 701,497, pub. 5-3-60. Cl. 46.
American Home Products Corp.: *See*—
Lawry, Rolla C.
Sperti, Inc.
American Home Products Corp., d.b.a. Ayerst Laboratories, New York, N.Y. 701,248, pub. 5-3-60. Cl. 18.
American Home Products Corp., d.b.a. Boyle-Midway, New York, N.Y. 701,173, pub. 5-3-60. Cl. 6.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 701,229-33, pub. 5-3-60. Cl. 18.
American Instrument Co., Inc., Silver Spring, Md. 701,355, pub. 5-3-60. Cl. 26.
American Lighting Equipment Co., Hollywood, Calif. 590,608, canc. Cl. 21.
American Molasses Co., New York, N.Y. 701,480, pub. 5-3-60. Cl. 46.
American Scientific Laboratories, Inc., Madison, Wis. 701,244, pub. 5-3-60. Cl. 18.
American Stores Co., Philadelphia, Pa. 590,340, canc. Cl. 46.
American W.M.B., Inc.: *See*—
Isoleringsaktiebolaget WMB.
AMP Inc., Harrisburg, Pa. 701,305, pub. 5-3-60. Cl. 23.
Anderson, W. E., Inc., Kansas City, Mo. 701,254, pub. 5-3-60. Cl. 19.
Applied Physics Corp., Monrovia, Calif. 701,314, pub. 5-3-60. Cl. 26.
Artwright Merchandising Corp., New York, N.Y. 701,374, pub. 5-3-60. Cl. 29.
Armco Steel Corp., Middletown, Ohio. 701,181, pub. 5-3-60. Cl. 7.
Armitage, Harold, d.b.a. The Box of Books, Washington, D.C. 701,530, pub. 5-3-60. Cl. 101.
Arvin Industries, Inc., Columbus, Ind. 701,275, pub. 5-3-60. Cl. 21.
Ateliers Partiot, S.A., Rueil-Malmaison, Seine, France. 701,207, pub. 5-3-60. Cl. 14.
Authement, Louis Houma, La. 701,489, pub. 5-3-60. Cl. 46.
Automatic Draft & Stove Co., Inc., Lynchburg, Va. 590,619, canc. Cl. 23.
Automatic Enterprises, Inc., Lancaster, Pa. 701,525, pub. 5-3-60. Cl. 52.
Ayerst Laboratories: *See*—
American Home Products Corp.
B.G. Corp., The: *See*—
Brewster-Goldsmith Corp.
Babbitt, B. T., Inc.: *See*—
Sinclair Mfg. Co., The.
Babine, John W., Wilmington, Mass. 378,963, ren. 7-19-60. Cl. 1.
Baird-Atomic, Inc., Cambridge, Mass. 701,329, pub. 5-3-60. Cl. 26.
Baldwin Piano Co., The, Cincinnati, Ohio. 701,319, pub. 5-3-60. Cl. 28.
Balmain, Pierre, Paris, France. 701,518-19, pub. 5-3-60. Cl. 51.
Barber-Greene Co., Aurora, Ill. 380,784, ren. 7-19-60. Cl. 28.
Barmon Brothers Co., Inc., Buffalo, N.Y. 381,588, ren. 7-19-60. Cl. 39.
Barnett, William, Chicago, Ill. 701,277, pub. 5-3-60. Cl. 22.
Bay State Power Equipment, Inc., Cambridge, Mass. 590,617, canc. Cl. 23.
Bayou State Oil Corp., Shreveport, La. 666,896. Am. 7(d). Cl. 15.
Bear Archery Co., Grayling, Mich. 701,279, pub. 10-20-59. Cl. 22.
Bear Lithia Springs Co., to Great Bear Spring Co., New York, N.Y. 136,315, ren. 7-19-60. Cl. 45.
Bearfoot Airway Corp., Wadsworth, Ohio. 701,391, pub. 5-3-60. Cl. 35.
Bell Enterprises: *See*—
Bell, Norman.
Bell, Norman, d.b.a. Bell Enterprises, to Norbell Enterprises, Inc., Brooklyn, N.Y. 676,703, new cert. Cl. 32.
Berry Refining Co., Chicago, Ill. 701,210, pub. 5-3-60. Cl. 15.
Biddle Purchasing Co., d.b.a. Meridian Distributors, New York, N.Y. 701,350, pub. 5-3-60. Cl. 26.
Billings & Spencer Co., The, Hartford, Conn. 130,638, ren. 7-19-60. Cl. 23.
Bishop Furniture Corp., North Kansas City, Mo. 701,379, pub. 5-3-60. Cl. 32.
Black and Decker Mfg. Co., The: *See*—
Van Dorn Electric Tool Co., The.
Blonder-Tongue Laboratories, Inc., Newark, N.J. 701,268, pub. 5-3-60. Cl. 21.
Boehringer, C. F., & Soehne G.m.b.H., Mannheim-Waldhof, Germany. 701,236, pub. 5-3-60. Cl. 18.
Boehringer, C. H., Sohn, Ingelheim am Rhein, Germany. 701,235, pub. 5-3-60. Cl. 18.
Bondact, Kansas City, Kans., to Bondact, Kansas City, Mo. 378,263, ren. 7-19-60. Cl. 28.
Booth Fisheries Corp., d.b.a. Sunlight Fisheries, Inc., Chicago, Ill. 701,472, pub. 5-3-60. Cl. 46.
Borden Co., New York, N.Y. 129,939, restricted. Cl. 46.
Borden Co., The, New York, N.Y. 379,802, ren. 7-19-60. Cl. 46.
Borden Co., The, New York, N.Y. 381,502, ren. 7-19-60. Cl. 46.
Bourjois, Inc., New York, N.Y. 590,571, canc. Cl. 51.
Box of Books, The: *See*—
Armitage, Harold.
Boyle-Midway: *See*—
American Home Products Corp.
Brass Ram Corp., Bay City, Mich. 701,287, pub. 5-3-60. Cl. 22.
Brewster-Goldsmith Corp., Inc., The, New York, N.Y., to The B. G. Corp., Ridgefield, N.J. 131,713, ren. 7-19-60. Cl. 21.
Bridgestone Tire Co. Ltd., Chuo-ku, Tokyo, Japan. 701,392, pub. 5-3-60. Cl. 35.
Bristol Laboratories, Inc.: *See*—
Bristol-Myers Co.
Bristol-Myers Co., New York, by merger from Bristol Laboratories, Inc., Syracuse, N.Y. 701,228, pub. 5-3-60. Cl. 18.
Brooks Brothers, to Julius Garfinckel & Co., Inc., New York, N.Y. 378,603, ren. 7-19-60. Cl. 17.
Brown Shoe Co., Inc.: *See*—
Millius Shoe Co.
Bubble Up Corp.: *See*—
Swett's, Dr., Root Beer Co., Inc.
Buffalo Slag Co., Inc., The, Buffalo, N.Y. 701,183, pub. 5-3-60. Cl. 10.
Buffington's Inc., Worcester, Mass. 701,248, pub. 5-3-60. Cl. 18.
Burke & Jamers, Inc., Chicago, Ill. 701,341, pub. 5-3-60. Cl. 26.
Burleigh Brooks Inc., New York, N.Y. 701,320, pub. 5-3-60. Cl. 28.
Burlington Industries, Inc.: *See*—
Ely & Walker Dry Goods Co.
Pacific Mills.
Burnac-Bihac, Inc., New York, N.Y. 701,451, pub. 5-3-60. Cl. 39.
Burroughs Corp., Detroit, Mich. 701,274, pub. 5-3-60. Cl. 21.
Burroughs Corp., Detroit, Mich. 701,348, pub. 5-3-60. Cl. 26.

Butter Hardware Co., The, Butler, Wis. 701,191, pub. 5–3–60. Cl. 12.
C.S.W. Plastic Types, Inc., Rocky Hill, Conn. 701,501, pub. 5–3–60. Cl. 50.
Caled Products Co., Inc., Brentwood, Md. 378,350, ren. 7–19–60. Cl. 52.
California Salt Co.: *See*— Leslie Salt Co.
Campbell Soup Co.: *See*— Tolson-Davies Co., Inc.
Canton Cotton Mills, Canton, Ga. 382,116, ren. 7–19–60. Cl. 42.
Cargille Scientific, Inc., New York, N.Y. 590,543, canc. Cl. 6.
Caribe Vitamin Corp., New York, N.Y. 701,218, pub. 5–3–60. Cl. 18.
Carrier Corp., Syracuse, N.Y. 701,387, pub. 5–3–60. Cl. 34.
Cee-Bee Mfg. Co., Inc., The: *See*— Cee Bee Mfg. Co. Inc.
Cee Bee Mfg. Co. Inc., d.b.a. The Cee-Bee Mfg. Co., Inc., Brooklyn, N.Y. 701,156, pub. 5–3–60. Cl. 1.
Celanese Corp. of America, New York, N.Y. 377,965, ren. 7–19–60. Cl. 1.
Champion Mfg. Co., Inc., Charlotte, N.C. 701,160, pub. 5–3–60. Cl. 5.
Chaplin, Andrew, Brooklyn, N.Y. 590,513, canc. Cl. 18.
Chemex Corp.: *See*— Schlumbohm, Peter.
Chr. Heurich Brewing Co., Washington, D.C. 590,566, canc. Cl. 48.
Ciba Pharmaceutical Products Inc., Summit, N.J. 701,251–3, pub. 5–3–60. Cl. 18.
Cinnamon, J., Ltd., d.b.a. The Cintique Chair Co., London, England. 701,551. Cl. 32.
Cintique Chair Co., The: *See*— Cinnamon, J., Ltd.
Circum-Channeled Contact Lens Specialists, Inc., Philadelphia, Pa. 701,324–5, pub. 5–3–60. Cl. 26.
Clancy, Bernard A., d.b.a. Veterans Fishery, Wilmington, Calif. 590,646, canc. Cl. 46.
Clark, Fred G., Co., The, Cleveland, Ohio, to Sinclair Refining Co., New York, N.Y. 135,948, ren. 7–19–60. Cl. 15.
Clauss Cutlery Co.: *See*— Henkel-Clauss Co., The.
Cleveland Graphite Bronze Co., The, now by change of name Clevite Corp., Cleveland, Ohio. 590,368, canc. Cl. 19.
Clevite Corp.: *See*— Cleveland Graphite Bronze Co., The.
Cohen, Lawrence M., d.b.a. Marc Nicolet Watch Co., and Le Marc Watch Co., Greensboro, N.C. 701,359, pub. 5–3–60. Cl. 27.
Coles, William A., Upper Darby, Pa. 383,905, ren. 7–19–60. Cl. 44.
Collier, William, & Son, Inc., Boston, Mass. 701,428, pub. 5–3–60. Cl. 39.
Columbia Machinery & Engineering Corp., The Lodge & Shipley Co., Cincinnati, Ohio. 581,227. Am. 7(d). Cl. 23.
Columbian Bronze Corp., Freeport, N.Y. 701,260, pub. 5–3–60. Cl. 19.
Compoleum-Nairn Inc., Kearny, N.J. 701,263, pub. 5–3–60. Cl. 20.
Connector Seals Corp., Rosemead, Calif. 701,276, pub. 5–3–60. Cl. 21.
Conserverra Marroqui, S.A., Tetuan, Spanish Morocco. 590,380, canc. Cl. 46.
Consolidated Cosmetics, to Consolidated Cosmetics, a Co-partnership consisting of James L. Younghusband and Karl K. Kaempfer, Chicago, Ill., to Saint Cornelius The Centurian Chapel of Valley Forge Military Academy, Wayne, Pa. 590,451, canc. Cl. 51.
Consolidated Enterprise Distributing Corp., Erie, Pa. 701,190, pub. 5–3–60. Cl. 12.
Constellation Life Insurance Co., Norfolk, Va. 701,536, pub. 5–3–60. Cl. 102.
Conway Publications, Inc., Atlanta, Ga. 701,404, pub. 5–3–60. Cl. 38.
Cooper, Ben, Inc., Brooklyn, N.Y. 701,283, pub. 5–3–60. Cl. 22.
Cope, Martin H., Co., Rheems, Pa. 701,486, pub. 5–3–60. Cl. 46.
Corn Products Co.: *See*— Independent Starch Co.
Courtaulds, Ltd., London, England. 701,443, pub. 12–22–59. Cl. 42.
Cousino Visual Education Service, Inc., Toledo, Ohio. 590,588, canc. Cl. 107.
Crocker, Burbank Papers Inc., Fitchburg, Mass. 701,396, pub. 5–3–60. Cl. 37.
Cudahy Tanning Co., Inc., Cudahy, Wis. 701,155, pub. 5–3–60. Cl. 1.
Curtis, Helene, Industries, Inc., Chicago, Ill. 701,509, pub. 5–3–60. Cl. 51.
Dairy King, Inc., Baltimore, Md. 701,488, pub. 5–3–60. Cl. 46.
Dakin, R., & Co.—Importers, San Francisco, Calif. 701,291, pub. 5–3–60. Cl. 22.
Datex Corp., Monrovia, Calif. 701,351, pub. 5–3–60. Cl. 26.
Daystrom Inc., Murray Hill, N.J. 701,344, pub. 5–3–60. Cl. 20.
Dearborn Chemical Co., Chicago, Ill. 701,216, pub. 5–3–60. Cl. 16.
Delano Corp. of America, New York, N.Y. 701,481, pub. 5–3–60. Cl. 46.
Detroit Power Screwdriver Co., Detroit, Mich. 701,308, pub. 5–3–60. Cl. 23.
Dillon, W. C., & Co., Inc., Van Nuys, Calif. 701,318, pub. 5–3–60. Cl. 26.
Distributors Trucking Corp., New York, N.Y. 590,449, canc. Cl. 46.
Dixie Dairy Co., Chicago, Heights, Ill. 701,454, pub. 4–28–59. Cl. 46.
Dome Chemicals, Inc., New York, N.Y. 701,245–7, pub. 5–3–60. Cl. 18.
Donaldson Co., Inc., St. Paul, Minn. 665,724–5. Am. 7(d). Cl. 31.
Douglas Furniture Corp., Chicago, Ill. 701,383, pub. 5–3–60. Cl. 32.
Dunham-Bush, Inc., West Hartford, Conn. 701,376, pub. 5–3–60. Cl. 31.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 701,177, pub. 5–3–60. Cl. 6.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 701,447, pub. 5–3–60. Cl. 43.
Dyment Co., The, Cleveland, Ohio. 378,474, ren. 7–19–60. Cl. 16.
Eastern Clay Products, Inc., Jackson, Ohio, to International Minerals & Chemical Corp., Chicago, Ill. 590,350, canc. Cl. 23.
Easydo, Inc., Chicago, Ill. 433,948, canc. Cl. 51.
Economarker Safety Corp., Cincinnati, Ohio. 701,502, pub. 5–3–60. Cl. 50.
Edd, Mr., Inc., from Mr. Edd, Inc., New York, N.Y. 701,416, pub. 1–12–60. Cl. 39.
Edton, Inc., Long Beach, Calif. 701,507, pub. 5–3–60. Cl. 50.
Eisenberg, Jack, Miami, Fla. 590,548, canc. Cl. 15.
Elite Distributing Co., Hawthorne, Calif. 701,366, pub. 5–3–60. Cl. 28.
Elwell, Edward, Ltd., Wednesbury, England. 701,300, pub. 5–3–60. Cl. 23.
Ely & Walker Dry Goods Co., St. Louis, Mo., to Burlington Industries, Inc., Greensboro, N.C. 153,641–2, ren. 7–19–60. Cl. 39.
Ely, T. J., Mfg. Co., Girard, Pa. 701,288, pub. 5–3–60. Cl. 22.
Endo Laboratories Inc.: *See*— Endo Products, Inc.
Endo Products, Inc., New York, to Endo Laboratories Inc., Richmond Hill, N.Y. 382,506, ren. 7–19–60. Cl. 18.
Engelhard, Charles, Inc.: *See*— Engelhard Industries, Inc.
Engelhard Industries, Inc., Newark, from Charles Engelhard, Inc., East Newark, N.J. 701,315, pub. 5–3–60. Cl. 26.
Engelhorn, John, & Sons, Newark, N.J. 701,469, pub. 5–3–60. Cl. 46.
Entoleter, Inc.: *See*— Hoham, Inc.
Ertma S.A., Carouge, Geneva, Switzerland. 688,239, cor. Cl. 23.
Ess-Wood Corp., New York, N.Y. 590,374, canc. Cl. 12.
Etablissements Clodroy "Polyflex," Paris, France. 701,294, pub. 5–3–60. Cl. 22.
Euclid Candy Co., Inc., The, Brooklyn, N.Y. 590,560, canc. Cl. 46.
Exacta-Continental Bureaumaschinenwerk Gesellschaft mit Beschraenkter Haftung, Koeln-Deutz, Germany. 701,382, pub. 5–3–60. Cl. 26.
F & F Laboratories, Inc., Chicago, Ill. 701,487, pub. 5–3–60. Cl. 46.
F & N Products, Inc., Evanston, Ill. 701,292, pub. 5–3–60. Cl. 22.
Feberge, Inc.: *See*— Rubin, Samuel.
Falcon Line Products Corp., Kearny, N.J. 701,195, pub. 5–3–60. Cl. 12.
Farber, John D., Philadelphia, Pa. 380,626, ren. 7–19–60. Cl. 1.
Farmwell Welded Products Co., Ironia, Wis. 590,398, canc. Cl. 23.
Federal Products Corp., Providence, R.I. 701,353, pub. 5–3–60. Cl. 26.
Federated Mutual Implement and Hardware Insurance Co., Owatonna, Minn. 701,534, pub. 5–3–60. Cl. 102.
Finkelstein, Jacob, & Sons, to Jacob Finkelstein & Sons Inc., Woonsocket, R.I. 381,015, ren. 7–19–60. Cl. 39.
Finkelstein, Jacob, & Sons Inc.: *See*— Finkelstein, Jacob, & Sons.
Finley, Robert V., Philadelphia, Pa. 590,589, canc. Cl. 100.
Flair Recording Corp., Plainview, Tex. 590,468, canc. Cl. 36.
Food Industries Co., Inc., to Red Star Yeast and Products Co., Milwaukee, Wis. 668,839, new cert. Cl. 6.
Food Materials Corp., Chicago, Ill. 701,467, pub. 5–3–60. Cl. 46.
Foods Plus, Inc., New York, N.Y. 701,219, pub. 10–27–59. Cl. 18.
Ford, P. R., & Co., Inc., New York, N.Y. 701,339, pub. 5–3–60. Cl. 26.
Forsberg Mfg. Co., The, Bridgeport, Conn. 378,283, ren. 7–19–60. Cl. 23.
Fort Dodge Laboratories, Inc.: *See*— American Home Products Corp.
Foster Grant Co., Inc., Leominster, Mass. 701,321, pub. 5–3–60. Cl. 26.
Fountain Foods, Brooklyn, N.Y. 701,463, pub. 5–3–60. Cl. 46.
Fox-Cross Candy Co., Everett, Mass. 701,435, pub. 5–3–60. Cl. 46.
Fox, Samuel, & Co. Ltd., Sheffield, England. 590,536, canc. Cl. 14.
Fram Corp., Providence, R.I. 693,506, cor. Cl. 31.
Frankford Grocery Co., Philadelphia, Pa. 701,221, pub. 5–3–60. Cl. 18.
Frankford Grocery Co., Philadelphia, Pa. 701,450, pub. 5–3–60. Cl. 46.
Frankford Umbrella Mfg. Co., Philadelphia, Pa. 701,434–6, pub. 5–3–60. Cl. 41.
Friedman, Abe A., Augusta, Ga. 590,624, canc. Cl. 27.
Gagnon Plating & Mfg. Co., Colorado Springs, Colo. 590,540, canc. Cl. 23.

Ganesl, M., Co., Inc., New York, N.Y. 701,250, pub. 5–3–60. Cl. 18.
Garfinckel, Julius & Co., Inc.: *See*— Brooks Brothers.
Garry Laboratories, Inc., Buffalo, N.Y. 701,215, pub. 12–8–59. Cl. 16.
Gems of Paris Mfg. Co. Inc., New York, N.Y. 590,626, canc. Cl. 28.
General Aniline & Film Corp., New York, N.Y. 378,172–6, ren. 7–19–60. Cl. 26.
General Aniline & Film Corp., New York, N.Y. 701,343, pub. 5–3–60. Cl. 26.
General Aniline & Film Corp., New York, N.Y. 701,349, pub. 5–3–60. Cl. 26.
General Foods Corp., White Plains, N.Y. 694,318, cor. Cl. 46.
General Foods Corp., White Plains, N.Y. 701,490, pub. 5–3–60. Cl. 46.
General Motors Corp., Detroit, Mich. 701,508, pub. 5–3–60. Cl. 50.
General Time Corp., New York, N.Y. 701,360–1, pub. 5–3–60. Cl. 27.
Geringer, Arthur V., Tarzana, Calif. 701,196, pub. 5–3–60. Cl. 12.
Gerrard, W. A., Co.: *See*— Gerrard, William A.
Garrard, William A., d.b.a. W. A. Gerrard Co., Minneapolis, Minn. 701,549. Cl. 12.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 701,449, pub. 5–3–60. Cl. 44.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 701,520, pub. 5–3–60. Cl. 51.
Gladding, McBean & Co., Los Angeles, Calif. 590,517, canc. Cl. 12.
Gladwin Plastics, Inc., Atlanta, Ga. 701,378, pub. 5–3–60. Cl. 32.
Glissade, Inc., Brooklyn, N.Y. 701,382, pub. 5–3–60. Cl. 32.
Gordon-Allen Co.: *See*— Hood, H. P., & Sons, Inc.
Gottlieb Weber Ag (Gottlieb Weber, S.A.) (Gottlieb Weber Ltd.), Titterten, Bale-Campagne, Switzerland. 701,362, pub. 5–3–60. Cl. 27.
Gould, Milton J., New York, N.Y. 590,351, canc. Cl. 12.
Graham, Robert C., d.b.a. The Safelite Co., Pasadena, Calif. 701,312, pub. 8–27–57. Cl. 26.
Granat Bros., San Francisco, Calif. 701,367, pub. 5–3–60. Cl. 28.
Great Bear Spring Co.: *See*— Bear Lithia Springs Co.
Great Lakes Biochemical Co., Inc., Milwaukee, Wis. 701,168, pub. 5–3–60. Cl. 6.
Green Giant Co., Le Sueur, Minn. 590,418, canc. Cl. 46.
Gruppo Olcario Novaro & C.: *See*— Sasso, P., e Figli.
Gun Digest Co.: *See*— Outboard, Marine & Mfg. Co.
Gustav Lohse, A.G., Berlin-Charlottenburg, Germany. 701,513, pub. 5–3–60. Cl. 51.
Haarmann & Reimer GmbH, Holzminden, Germany. 701,174, pub. 5–3–60. Cl. 6.
Haddix, M. Cornelius: *See*— Haddix, Minnie B.
Haddix, Minnie B., administratrix of the estate of M. Cornelius Haddix, deceased, d.b.a. Lexington Distributing Co., to The Parnell Co., Inc., Cincinnati, Ohio. 555,818, new cert. Cl. 49.
Halben Food Mfg. Co., Inc., St. Louis, Mo. 590,641, canc. Cl. 46.
Hall, Robert, Clothes, Inc., New York, N.Y. 701,421, pub. 5–3–60. Cl. 39.
Halperin, Irving J., d.b.a. Winston Cosmetics, Natick, Mass. 701,511, pub. 5–3–60. Cl. 51.
Hard Metals Ltd., Nuffield Township, Springs, Union of South Africa. 664,051. Am. 7(d). Cl. 23.
Harkness, Floyd J. Co., Inc., d.b.a. United Packing Co., Fresno, Calif. 701,455, pub. 5–3–60. Cl. 46.
Hart Mfg. Co., The, St. Paul, Minn. 701,290, pub. 5–3–60. Cl. 22.
Hartleys (Stoke-on-Trent) Ltd., Stoke-on-Trent, England. 701,164, pub. 5–3–60. Cl. 2.
Hazek-Werk Hermann Zerver, Remschid-Vieringhausen, Germany. 597,879, cor. Cl. 23.
Health-Mor, Inc.: *See*— Health-Mor Sanitation Systems, Inc.
Health-Mor Sanitation Systems, Inc., to Health-Mor, Inc., Chicago, Ill. 378,297, ren. 7–19–60. Cl. 21.
Henchman of Hollywood, Hollywood, Calif. 590,388, canc. Cl. 50.
Henkel-Clauss Co., The, to Clauss Cutlery Co., Fremont, Ohio. 136,455, ren. 7–19–60. Cl. 23.
Henkel-Clauss Co., The, to Clauss Cutlery Co., Fremont, Ohio. 136,456, ren. 7–19–60. Cl. 44.
Henry Valve Co., Chicago, to Henry Valve Co., Melrose Park, Ill. 381,406, ren. 7–19–60. Cl. 34.
Hercules Powder Co., Wilmington, Del. 379,396, ren. 7–19–60. Cl. 6.
Herman, I. C., & Co., Inc., New York, N.Y. 701,432, pub. 5–3–60. Cl. 39.
Hickey-Freeman Co., Rochester, N.Y. 701,426–7, pub. 5–3–60. Cl. 39.
Highland Supply Corp., Highland, Ill. 701,394, pub. 5–3–60. Cl. 37.
Hitachi Ltd., Chiyoda-ku, Tokyo, Japan. 701,365–6, pub. 5–3–60. Cl. 21.
Hoham, Inc., to Entoleter, Inc., Hamden, Conn. 678,848, new cert. Cl. 23.
Hoffert Machine Co., Inc., Racine, Wis., to Acme Steel Co., Chicago, Ill. 378,751, ren. 7–19–60. Cl. 23.
Hogsett, Robert N., Jr., Hartsdale, N.Y. 590,396, canc. Cl. 26.
Holcomb, J. L., Mfg. Co., Inc., Indianapolis, Ind. 701,178, pub. 5–3–60. Cl. 6.
Holeproof Hosiery Co., Milwaukee, Wis. 590,621, canc. Cl. 39.
Hood, H. P., & Sons, Inc., Boston, to Gordon-Allen Co., Quincy, Mass. 701,452, pub. 4–28–59. Cl. 46.
Home Insurance Co., The, New York, N.Y. 590,585, canc. Cl. 102.
Houston Corp. (Butler Chemical Co. Division), Galena Park, Tex. 701,459, pub. 5–3–60. Cl. 46.
Howe, George J., Co., Inc., Grove City, Pa. 701,460, pub. 5–3–60. Cl. 46.
Hudnut, Richard, Morris Plains, N.J. 701,521, pub. 5–3–60. Cl. 52.
Hudson General Paper Corp., Englewood, N.J. 701,182, pub. 5–3–60. Cl. 2.
Humble Oil & Refining Co.: *See*— Kenbec Sales Co.
Humphreys' Homeopathic Medicine Co., to Humphreys Medicine Co., Inc., New York, N.Y. 377,261, ren. 7–19–60. Cl. 18.
Humphreys Medicine Co., Inc.: *See*— Humphreys' Homeopathic Medicine Co.
Hunt Valve Co.: *See*— International Basic Economy Corp.
Hypro Engineering, Inc., Minneapolis, Minn. 701,301–2, pub. 5–3–60. Cl. 23.
Illinois Baking Corp., Chicago, Ill. 590,377, canc. Cl. 46.
ILP: *See*— Lichtenstein, Catharine S.
Imperial Brass Mfg. Co., The, Chicago, Ill. 701,199, pub. 2–2–60. Cl. 13.
Imperial Flo-Glaze Paints Ltd., The: *See*— Imperial Varnish and Color Co., Ltd., The.
Imperial Varnish and Color Co., Ltd., The, to The Imperial Flo-Glaze Paints Ltd., Toronto, Ontario, Canada. 133,263, ren. 7–19–60. Cl. 16.
Independent Pneumatic Tool Co., now by change of name Thor Power Tool Co., Aurora, Ill. 590,618, canc. Cl. 23.
Independent Starch Co., to Corn Products Co., New York, N.Y. 129,363, ren. 7–19–60. Cl. 46.
Indiana Brass Co., Inc., The: *See*— Indiana Brass Co., The.
Indiana Brass Co., The, to The Indiana Brass Co., Inc., Frankfort, Ind. 136,046, ren. 7–19–60. Cl. 13.
Industrial Machine Tool Co., Inc., Fenton, Mich. 590,597, canc. Cl. 12.
Inter-Continental Automotive Service Co., Inc., Flushing, N.Y. 701,531, pub. 5–3–60. Cl. 102.
International Basic Economy Corp., New York, N.Y., from Hunt Valve Co., Salem, Ohio. 701,206, pub. 3–29–60. Cl. 13.
International Distributing Export Co., Inc., New York, N.Y. 590,550, canc. Cl. 15.
International Lubricant Corp., Southport, La. 382,060, ren. 7–19–60. Cl. 15.
International Minerals & Chemical Corp.: *See*— Eastern Clay Products, Inc.
International Silver Co., The: *See*— International Silver Co.
International Silver Co., to The International Silver Co., Meriden, Conn. 380,075, ren. 7–19–60. Cl. 28.
International Silver Co., The, Meriden, Conn. 701,372, pub. 5–3–60. Cl. 28.
Irish Brothers Co., Buckfield, Maine. 590,614, canc. Cl. 23.
Irwin, Neisler & Co., Decatur, Ill. 701,248, pub. 5–3–60. Cl. 18.
Isaacs, I. C., & Co., Inc., Baltimore, Md. 377,825, ren. 7–19–60. Cl. 39.
Isoleringaktiebolaget WMB, Goteborg, Sweden, to American W.M.B., Inc., New York, N.Y. 590,446, canc. Cl. 12.
Jacronda Mfg. Co., Philadelphia, Pa. 701,506, pub. 5–3–60. Cl. 50.
Jantzen Inc., Portland, Oreg. 701,425, pub. 5–3–60. Cl. 39.
Jelenko, J. F., & Co., Inc., New York, N.Y. 382,603, ren. 7–19–60. Cl. 44.
Johns Enterprises: *See*— Johns, Juanita.
Johns, Juanita, d.b.a. Johns Enterprises, West Palm Beach, Fla. 701,512, pub. 5–3–60. Cl. 51.
Johnson Motors: *See*— Outboard, Marine & Mfg. Co.
Johnson, S. C., & Son, Inc., Racine, Wis. 701,548. Cl. 4.
Johnston, Robert A., Co., Milwaukee, Wis. 701,492, pub. 5–3–60. Cl. 46.
Kaempfer, Karl K.: *See*— Consolidated Cosmetics.
Kaiser Aluminum & Chemical Corp., Oakland, Calif. 701,187, pub. 5–3–60. Cl. 12.
Kalvar Corp., New Orleans, La. 701,347, pub. 5–3–60. Cl. 26.
Keen-Eye Co., Inc., Butler, Wis. 701,286, pub. 5–3–60. Cl. 22.
Keith, Donald C., Washington, D.C. 590,654, canc. Cl. 107.
Kern & Co. Ltd., Aarau, Switzerland. 701,342, pub. 5–3–60. Cl. 26.
Kenbec Sales Co., to Humble Oil & Refining Co., Houston, Tex. 239,663, new cert. Cl. 15.
Kessling, D. L., d.b.a. Republic Paint Co. of California, Los Angeles, Calif. 381,429, ren. 7–19–60. Cl. 16.
Keuffel & Esser Co.: *See*— Martin, Raymond I.
Keuffel & Esser Co., Hoboken, N.J. 382,656, ren. 7–19–60. Cl. 37.
King Kullen Grocery Co., Inc., Jamaica, N.J. 701,182, pub. 5–3–60. Cl. 9.
King Kullen Grocery Co., Inc., Jamaica, N.Y. 701,491, pub. 5–3–60. Cl. 46.
Kitchenette Products and Kitchenette Foods: *See*— Prepackage Sales Corp.

Klampert, Irving, Co., New York, N.Y. 701,378, pub. 5–3–60. Cl. 28.
Koholt, George E.: *See*—
Kokemuller, Regina.
Kohnstamm, V. & E., Inc., New York, N.Y. 701,484, pub. 5–3–60. Cl. 46.
Koke, Gene: *See*—
Kokemuller, Regina.
Kokemuller, Regina, d.b.a. Gene Koke, Lake View Trust and Savings Bank, trustee of G. E. Koholt, deceased, Chicago, Ill. 382,413, ren. 7–19–60. Cl. 51.
Kress, S. H., and Co., New York, N.Y. 701,401, pub. 5–3–60. Cl. 37.
Kroeger Air Conditioning Co., Tucson, Ariz. 590,627, canc. Cl. 34.
Krystall Chemical Co., Chicago, Ill. 701,522, pub. 5–3–60. Cl. 52.
Kullman, Salz & Co., to Pacific Industries, Inc., San Francisco, Calif. 132,984, ren. 7–19–60. Cl. 1.
L & E Mfg. Co., Arlington, N.J. 701,309, pub. 5–3–60. Cl. 23.
Lake View Trust and Savings Bank: *See*—
Kokemuller, Regina.
La Resista Corset Co., The, Bridgeport, Conn. 377,767, ren. 7–19–60. Cl. 39.
Lausen, Fred W., d.b.a. Lausen Specialty Co., Gainesville, Tex. 590,423, canc. Cl. 21.
Lausen Specialty Co.: *See*—
Lausen, Fred W.
Lawry, Rolla C., St. Louis, Mo., to American Home Products Corp., New York, N.Y. 132,505, ren. 7–19–60. Cl. 51.
Leslie Salt Co., d.b.a. California Salt Co., San Francisco, Calif. 701,176, pub. 5–3–60. Cl. 6.
Lets Co., The, Fort Worth, Tex. 701,407, pub. 5–3–60. Cl. 38.
Lexington Distributing Co.: *See*—
Haddix, Minnie B.
Lichtenstein, Catharine S., d.b.a. ILP, Baldwin, N.Y. 701,222, pub. 5–3–60. Cl. 18.
Li-on Bedding Co., Milwaukee, Wis., to Restonic Corp., Chicago, Ill. 374,281, ren. 7–19–60. Cl. 32.
Lion Packaging Products Co., Inc., Brooklyn, N.Y. 701,163, pub. 5–3–60. Cl. 2.
Lloyd Brothers, Inc., Cincinnati, Ohio. 701,239–40, pub. 5–3–60. Cl. 18.
Lobmeyr, J. & L.: *See*—
Rath, Hans H.
Lodge & Shipley Co., The: *See*—
Columbia Machinery & Engineering Corp.
Lofstrand Co., The, Rockville, Md. 701,271, pub. 5–3–60. Cl. 21.
Lunt Sterling: *See*—
Rogers, Lunt & Bowlen Co.
Lynndale Co., The, Stratford, Conn. 701,170, pub. 5–3–60. Cl. 6.
M & L Tackle Co., Detroit, Mich. 590,513, canc. Cl. 22.
MacGregor, May, Pacific Palisades, Calif. 379,212, ren. 7–19–60. Cl. 22.
Madeja, Michael G., Pittsburgh, Pa. 701,423, pub. 3–15–60. Cl. 39.
Maeco Productions, Inc., Dallas, Tex. 701,539, pub. 5–3–60. Cl. 107.
Mainco Trading Co., Kennebunkport, Maine. 701,397–400, pub. 5–3–60. Cl. 37.
Mall Tool Co., Chicago, Ill. 590,348, canc. Cl. 21.
Malt-A-Plenty, Inc., Tulsa, Okla. 701,477, pub. 5–3–60. Cl. 46.
Manon Pearls, New York, N.Y. 701,368, pub. 5–3–60. Cl. 28.
Marc Nicolet Watch Co.: *See*—
Cohen, Lawrence M.
Marlboro Industries Ltd., Marlboro, N.Y. 701,496, pub. 5–3–60. Cl. 47.
Martin, A. H., d.b.a. Mountain Farm Products, Atlanta, Ga. 701,470, pub. 5–3–60. Cl. 46.
Martin, Raymond L., South Bend, Ind., to Keuffel & Esser Co., Hoboken, N.J. 381,215, ren. 7–19–60. Cl. 26.
Marvel Quilting Co., Inc., Brooklyn, N.Y. 701,437, pub. 9–29–59. Cl. 42.
Marx, Louis, & Co., Inc., New York, N.Y. 701,278, pub. 5–3–60. Cl. 22.
Mathieson Chemical Corp., Baltimore, Md. 590,422, canc. Cl. 18.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,255–6, pub. 5–3–60. Cl. 19.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,272, pub. 5–3–60. Cl. 21.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,307, pub. 5–3–60. Cl. 23.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,310, pub. 5–3–60. Cl. 24.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,345, pub. 5–3–60. Cl. 26.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,364, pub. 5–3–60. Cl. 27.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,375, pub. 5–3–60. Cl. 31.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,390, pub. 5–3–60. Cl. 34.
Matsushita Denki Sangyo Kabushiki Kaisha, Kitakawachi-gun, Osaka, Japan. 701,448, pub. 5–3–60. Cl. 44.
Mattel, Inc., Los Angeles, Calif. 701,289, pub. 5–3–60. Cl. 22.
May's, Leola: *See*—
Satterlee, Leola.
McCoy's Products, Inc., New York, N.Y. 378,520, ren. 7–19–60. Cl. 18.
McDonnell Seed Co., Spokane, Wash. 701,468, pub. 5–3–60. Cl. 46.
McGregor, Paul M., d.b.a. Scotch Saver Stamp Co., Clarksville, Tenn. 701,529, pub. 5–3–60. Cl. 101.
Meat Industry Suppliers, Inc., Northfield, Ill. 701,475, pub. 5–3–60. Cl. 46.
Medart Co., The, St. Louis, Mo. 590,437, canc. Cl. 23.
Medart, Fred, Products, Inc., St. Louis, Mo. 701,281–2, pub. 5–3–60. Cl. 22.
Melody Bra & Girdle Co. Inc., New York, N.Y. 590,575, canc. Cl. 39.
Merck & Co., Inc.: *See*—
Sharp & Dohme, Inc.
Meridian Distributors: *See*—
Biddle Purchasing Co.
Merit Watch Co., Inc., New York, N.Y. 590,527, canc. Cl. 27.
Messenger Corp., Auburn, Ind. 701,412, pub. 5–3–60. Cl. 38.
Meyer, Jos. H., Bros., Brooklyn, N.Y. 381,210, ren. 7–19–60. Cl. 28.
Meyer, Oscar, d.b.a. Occidental Mfg. Co., Los Angeles, Calif. 701,326, pub. 5–3–60. Cl. 26.
Meyercord Co., The, Chicago, Ill. 701,414, pub. 5–3–60. Cl. 38.
Midvale-Heppenstall Co., Philadelphia, Pa. 701,209, pub. 5–3–60. Cl. 14.
Millius Shoe Co., St. Louis, Mo., to Brown Shoe Co., Inc., New York, N.Y. 383,473, ren. 7–19–60. Cl. 39.
Milky Way Products Co., Dover, Del. 377,593, ren. 7–19–60. Cl. 39.
Minerva Olive Oil Co.: *See*—
Minerva Societa Oleicole.
Minerva Societa Oleicole, d.b.a. Minerva Olive Oil Co., Athens, Greece. 701,458, pub. 5–3–60. Cl. 46.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 701,331, pub. 5–3–60. Cl. 26.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 701,411, pub. 5–3–60. Cl. 38.
Mirna, Poduzece Za Preradbu Ribe, Rijeka, Yugoslavia. 590,442, canc. Cl. 46.
Mobile Paint Mfg. Co., Mobile, Ala. 378,460, ren. 7–19–60. Cl. 12.
Mobile Paint Mfg. Co., Mobile, Ala. 380,936, ren. 7–19–60. Cl. 16.
Mohawk Flush Door Corp., Sunbury, Pa. 701,192, pub. 5–3–60. Cl. 12.
Monroe Upholstering Co., to Monroe Upholstering Co., Baltimore, Md. 440,371, new cert. Cl. 32.
Moore-Lowry Flour Mills, Inc., d.b.a. Rea-Patterson Flour Mills, Cadeyville, Kans. 701,476, pub. 5–3–60. Cl. 46.
Mountain Farm Products: *See*—
Martin, A. H.
Multiplex Display Fixture Co., St. Louis, Mo. 701,499, pub. 5–3–60. Cl. 50.
Multi-Products Co., Oak Park, Mich. 701,357–8, pub. 5–3–60. Cl. 26.
Nachman Corp.: *See*—
Nachman Spring-Filled Corp.
Nachman Spring-Filled Corp., to Nachman Corp., Chicago, Ill. 378,164, ren. 7–19–60. Cl. 32.
Nachman Spring-Filled Corp., to Nachman Corp., Chicago, Ill. 380,023, ren. 7–19–60. Cl. 32.
Naico Chemical Co., Chicago, Ill. 701,336, pub. 5–3–60. Cl. 26.
Naipo Co., Inc., Rochester, N.Y. 701,340, pub. 5–3–60. Cl. 26.
Nardon Mfg. Co., Alhambra, Calif. 701,380, pub. 5–3–60. Cl. 32.
National Dairy Products Corp., Chicago, Ill. 701,474, pub. 5–3–60. Cl. 46.
National Distillers and Chemical Corp.: *See*—
National Distillers Products Corp.
National Distillers Products Co.: *See*—
National Distillers Products Corp.
National Distillers Products Corp., to National Distillers and Chemical Corp., d.b.a. National Distillers Products Co., New York, N.Y. 382,554, ren. 7–19–60. Cl. 49.
National Electric Products Corp., Pittsburgh, Pa., to H. K. Porter Co., Inc., Pittsburgh, Pa. 379,865, ren. 7–19–60. Cl. 21.
National Food Service Association, The, Columbus, Ohio. 701,523, pub. 5–3–60. Cl. 101.
National Geographic Society, Washington, D.C. 701,405, pub. 5–3–60. Cl. 38.
National Hospital Association, Portland, Oreg. 378,879, ren. 7–19–60. Cl. 44.
National Pest Control Association, Inc., Elizabeth, N.J. 701,541, pub. 5–3–60. Cl. 200.
National Resistance Corp., Pearl River, N.Y. 701,270, pub. 5–3–60. Cl. 21.
National Surplus Dealers Association, Chicago, Ill. 701,527, pub. 5–3–60. Cl. 100.
Neumann, Morton G., d.b.a. Valmor Products Co., to Valmor Products Co., Chicago, Ill. 380,459, ren. 7–19–60. Cl. 51.
Neville Chemical Co.: *See*—
Neville Co., The.
Neville Co., The, to Neville Chemical Co., Neville Island, Pittsburgh, Pa. 378,645, ren. 7–19–60. Cl. 6.
Neville Co., The, to Neville Chemical Co., Pittsburgh, Pa. 379,372, ren. 7–19–60. Cl. 6.
New Day Products Co.: *See*—
Parks, Tom W.
News Equipment Sales Corp., Oakland, Calif. 701,352, pub. 5–3–60. Cl. 26.
Nickey Chevrolet, Inc., Chicago, Ill. 701,259, pub. 5–3–60. Cl. 19.
Nickey Chevrolet, Inc., Chicago, Ill. 701,262, pub. 5–3–60. Cl. 19.
Nite Kraft Corp., The, New York, N.Y. 590,634, canc. Cl. 39.
Noell, B. F., Industries, Inc., New York, N.Y. 701,505, pub. 5–3–60. Cl. 50.

Nerval Enterprises, Inc.: *See*—
Bell, Norman.
North American Aviation, Inc., Los Angeles, Calif. 701,333, pub. 5–3–60. Cl. 28.
North Bergen Leather Products Co., North Bergen, N.J. 701,168, pub. 5–3–60. Cl. 3.
Northfield Mills, Inc., Northfield, Vt. 701,438–40, pub. 5–3–60. Cl. 42.
Northwest Airlines, Inc., St. Paul, Minn. 701,538, pub. 5–3–60. Cl. 105.
Norton-McMurray Mfg. Co., Chicago, Ill. 376,238, ren. 7–19–60. Cl. 13.
Nucel Corp., Syracuse, N.Y. 590,433, canc. Cl. 1.
Occidental Mfg. Co.: *See*—
Meyer, Oscar.
Olida, Maison, Societe Anonyme, Paris, France. 701,468, pub. 5–3–60. Cl. 46.
Olsson, Arnold W., d.b.a. Van Lee Pump & Machine Works, Portland, Oreg. 590,598, canc. Cl. 13.
Opfermann, Johann G. W., & Sohn, Bergisch-Gladbach, Germany. 701,226, pub. 5–3–60. Cl. 18.
Orchard Paper Co., d.b.a. Rich Products Co., St. Louis, Mo. 701,514, pub. 5–3–60. Cl. 51.
Ortho Pharmaceutical Corp., Raritan, N.J. 701,223, pub. 5–3–60. Cl. 18.
Outboard, Marine & Mfg. Co., d.b.a. Johnson Motors, Waukegan, to Gun Digest Co., Chicago, Ill. 380,612, ren. 7–19–60. Cl. 38.
Pacific Industries, Inc.: *See*—
Kullman, Salz & Co.
Pacific Mills, Lawrence and Boston, Mass., to Burlington Industries, Inc., Greensboro, N.C. 381,475, ren. 7–19–60. Cl. 42.
Pacqua, Inc., Dillard, Oreg. 701,185–6, pub. 5–3–60. Cl. 12.
Paillard Inc., New York, N.Y. 701,322, pub. 5–3–60. Cl. 26.
Paint Fair Stores, Inc., Long Island City, N.Y. 701,214, pub. 5–3–60. Cl. 16.
Pall Corp., Glen Cove, N.Y. 701,377, pub. 5–3–60. Cl. 31.
Panef Mfg. Co., Inc., Milwaukee, Wis. 701,211–12, pub. 5–3–60. Cl. 15.
Panther Oil & Grease Mfg. Co.: *See*—
Texas Refinery Corp.
Paramount Citrus Association, Inc., San Fernando, Calif. 701,451, pub. 5–3–60. Cl. 45.
Parfums Christian Dior Societe a Responsabilite Limitee, Paris, France. 701,515, pub. 5–3–60. Cl. 51.
Parisienne Yarn Co., Detroit, Mich. 701,446, pub. 5–3–60. Cl. 43.
Park & Tilford: *See*—
Affiliated Distillers Brand Corp.
Parks, Tom W., d.b.a. New Day Products Co., Anderson, S.C. 701,241, pub. 5–3–60. Cl. 18.
Parnell Co., Inc., The: *See*—
Haddix, Minnie B.
Parr Paint & Color Co., The, Cleveland, Ohio. 701,188–9, pub. 5–3–60. Cl. 12.
Penn Fruit Co.: *See*—
Penn Fruit Co., Inc.
Penn Fruit Co., Inc., d.b.a. Penn Fruit Company and Penn Fruit Co., Philadelphia, Pa. 701,461, pub. 5–3–60. Cl. 46.
Pentex Inc., Kankakee, Ill. 701,172, pub. 5–3–60. Cl. 6.
Perkins Marine Lamp and Hardware Corp., Brooklyn, N.Y. 694,850, cor. Cl. 19.
Perloff, Louis, Philadelphia, Pa. 701,365, pub. 5–3–60. Cl. 28.
Perry's Valet Service: *See*—
Reichman, Perry.
Peter Pan Foundations, Inc., New York, N.Y. 701,417–18, pub. 10–27–59. Cl. 39.
Peter Pan Foundations, Inc., New York, N.Y. 701,424, pub. 11–17–59. Cl. 39.
Peters & Russell, Inc., Springfield, Ohio. 701,299, pub. 5–3–60. Cl. 23.
Petz-Emery Inc., Pleasant Valley, N.Y. 701,337, pub. 5–3–60. Cl. 26.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 701,257–8, pub. 5–3–60. Cl. 18.
Philco Corp.: *See*—
Philco Radio and Television Corp.
Philco Corp., Philadelphia, Pa. 701,267, pub. 5–3–60. Cl. 21.
Philco Radio and Television Corp., to Philco Corp., Philadelphia, Pa. 377,695–6, ren. 7–19–60. Cl. 21.
Photo-Matic Corp., The, Chicago, Ill. 701,402, pub. 5–3–60. Cl. 38.
Pier, M., Co.: *See*—
Pier, M., Co., Inc.
Pier, M., Co., Inc., d.b.a. M. Pier Co., Crystal Lake, Ill. 701,516–17, pub. 5–3–60. Cl. 51.
Pierce, S. S., Co., Boston, Mass. 701,471, pub. 5–3–60. Cl. 46.
Pioneer Gen-E-Motor Corp., Chicago, Ill. 590,615, canc. Cl. 23.
Pioneer Parachute Co., Inc., Manchester, Conn. 701,261, pub. 5–3–60. Cl. 19.
Pittsburgh Forgings Co.: *See*—
Vulcan Plow Co., The.
Plain and Fancy Dutch Products: *See*—
Taft, Albert W.
Plastic Contact Lens Co., The, Chicago, Ill. 701,334, pub. 5–3–60. Cl. 26.
Plopla, Karl, New York, N.Y., to Superior Watch Corp., Pelham, N.Y. 380,394, ren. 7–19–60. Cl. 27.
Polaquimia S.A. de C.V., Mexico City, Mex. 701,542, pub. 5–3–60. Cl. A.
Polyform, Beyer-Olsen og Steffensmen, Alesund, Norway. 701,285, pub. 5–3–60. Cl. 22.
Porter, H. K., Co., Inc.: *See*—
National Electric Products Corp.
Powers Regulator Co., The, Skokie, Ill. 701,266, pub. 5–3–60. Cl. 13.
Prepackage Sales Corp., d.b.a. Kitchenest Foods and Kitchenest Foods, Denver, Colo. 701,465, pub. 5–3–60. Cl. 46.
Pro-phy-lac-tic Brush Co., Florence, Mass. 701,161, pub. 5–3–60. Cl. 2.
Pulp Reproduction Co., Milwaukee, Wis. 382,563, ren. 7–19–60. Cl. 22.
Racine Hydraulics & Machinery, Inc., Racine, Wis. 701,303, pub. 10–20–59. Cl. 13.
Racine Hydraulics & Machinery, Inc., Racine, Wis. 701,304, pub. 10–20–59. Cl. 23.
Radio Corp. of America, New York, N.Y. 701,384, pub. 5–3–60. Cl. 26.
Ransom, D., Son and Co., Buffalo, N.Y. 590,400–1, canc. Cl. 16.
Rath, Hans H., d.b.a. J. & L. Lobmeyr, Vienna, Austria. 701,384, pub. 5–25–59. Cl. 33.
Rawlplug Co., Inc., The, New Rochelle, N.Y. 701,204, pub. 4–26–60. (Consolidated certificate, Classes 13 and 23.)
Reader-Services Co., Drexel Hill, Pa. 701,413, pub. 5–3–60. Cl. 38.
Rea-Patterson Flour Mills: *See*—
Moore-Lowry Flour Mills, Inc.
Red Star Yeast and Products Co.: *See*—
Food Industries Co., Inc.
Schoe Rose Mfg. Corp.
Refrigeration Engineering Co., Minneapolis, Minn. 590,459, canc. Cl. 23.
Reichman, Perry, d.b.a. Perry's Valet Service, Cincinnati, Ohio. 701,160, pub. 5–3–60. Cl. 2.
Republic Paint Co. of California: *See*—
Kessling, D. L.
Restonic Corp.: *See*—
Li-on Bedding Co.
Rich Products Co.: *See*—
Orchard Paper Co.
Robanne Corp., Washington, D.C. 701,363, pub. 5–3–60. Cl. 27.
Robertshaw-Fulton Controls Co., Richmond, Va. 701,338, pub. 5–3–60. Cl. 26.
Robinson Mfg. Co., Dayton, Tenn. 701,419, pub. 11–3–59. Cl. 39.
Rode, Heins, Newtown, Pa. 590,436, canc. Cl. 23.
Rogers, Lunt & Bowlen Co., d.b.a. Lunt Sterling, Greenfield, Mass. 701,369, pub. 5–3–60. Cl. 28.
Rondette, Ltd.: *See*—
Rondette.
Rondette, to Rondette, Ltd., New York, N.Y. 581,785, new cert. Cl. 28.
Rose Ring, Dallas, Tex. 701,550. Cl. 13.
Ro-Search, Inc., Waynesville, N.C. 701,544, pub. 5–3–60. Cl. A.
Rubin, Samuel, to Faberge, Inc., New York, N.Y. 382,128, ren. 7–19–60. Cl. 51.
Rudofker's, S., Inc., Philadelphia, Pa. 701,420, pub. 3–31–59. Cl. 39.
Ruko Co., New York, N.Y. 590,373, canc. Cl. 26.
Safelite Co., The: *See*—
Graham, Robert C.
Safetee Glass Co.: *See*—
Super-Glass Co., The.
Saint Cornelius The Centurion Chapel of Valley Forge Military Academy: *See*—
Consolidated Cosmetics.
Salk, Murray, Inc., Boston, Mass. 701,430, pub. 5–3–60. Cl. 39.
Sasso, P., e Figli, to Gruppo Olearia Novare & C., Onegtia, Italy. 377,402, ren. 7–19–60. Cl. 10.
Satterlee, Leola, d.b.a. Leola May's, San Francisco, Calif. 701,217, pub. 5–3–60. Cl. 18.
Schafer, Jack, Detroit, Mich. 590,645, canc. Cl. 46.
Sche Rose Mfg. Corp., to Red Star Yeast and Products Co., Milwaukee, Wis. 580,740, new cert. Cl. 46.
Schenley Industries, Inc., d.b.a. Weston Winery, New York, N.Y. 701,494–5, pub. 5–3–60. Cl. 47.
Schlictinger, Carl, Staten Island, N.Y. 701,496, pub. 5–3–60. Cl. 48.
Schlumbohm, Peter, to Chemex Corp., New York, N.Y. 378,228, ren. 7–19–60. Cl. 13.
Schuck, Arthur G., d.b.a. A/J Drug Co., Dayton, Ohio. 701,220, pub. 5–3–60. Cl. 18.
Schwarskopf, Hans, Hamburg-Altona, Germany. 701,510, pub. 5–3–60. Cl. 51.
Scotch Saver Stamp Co.: *See*—
McGregor, Paul M.
Scott Paper Co., Chester, Pa. 701,395, pub. 5–3–60. Cl. 37.
Scottish Woollen Trade Mark Association, Ltd., The, Edinburgh, Scotland. 701,543, pub. 5–3–60. Cl. A.
Searle Chemicals, Inc., Skokie, Ill. 701,224, pub. 5–3–60. Cl. 18.
Sears, Roebuck and Co., Chicago, Ill. 590,332, canc. Cl. 5, canc. Cl. 46.
Sebastopol Cooperative Cannery, Sebastopol, Calif. 590,516, canc. Cl. 46.
Seeburg, N. Marshall, and Sons, Inc., Chicago, Ill. 701,535, pub. 5–3–60. Cl. 102.
Sek-Cee Girdle Co., Inc., Brooklyn, N.Y. 701,429, pub. 5–3–60. Cl. 39.
Servel, Inc., Evansville, Ind., from Burgess Battery Co., Freeport, Ill. 701,264, pub. 9–8–59. Cl. 21.
Sharp & Dohme, Inc., Philadelphia, Pa., to Merck & Co., Inc., Rahway, N.J. 382,842, ren. 7–19–60. Cl. 97.
Sharrow, James C., New York, N.Y. 590,481, canc. Cl. 46.
Shealy, Lon S., d.b.a. Vue-File Co., Franklin, Ohio. 701,268, pub. 5–3–60. Cl. 37.
Shrage, Max, Co., Inc., New York, N.Y. 701,433, pub. 5–3–60. Cl. 39.

Sinclair Mfg. Co., The, Toledo, Ohio, to B. T. Babbitt, Inc., New York, N.Y. 134,805–6, canc. Cl. 6.
Sinclair Refining Co.: *See*—
Clark, Fred G., Co., The.
Skill-Sling Novelties, Des Plaines, Ill. 590,471, canc. Cl. 22.
Smith, Dennis A., Blytheville, Ark. 701,227, pub. 5–3–60. Cl. 18.
Smith, E. Ernett, Inc., New York, N.Y. 701,415, pub. 5–3–60. Cl. 38.
Smith, Kline & French Laboratories, Philadelphia, Pa. 382,140, ren. 7–19–60. Cl. 18.
Snow Bowl Corp., The, Chicago, Ill. 590,642, canc. Cl. 45.
Societe a Responsibilite Limittee Le Boc Fin, Marseilles, Bouches de Rhone, France. 701,464, pub. 5–3–60. Cl. 46.
Sock Boat Corp., Cold Spring Harbor, N.Y. 701,257, pub. 5–3–60. Cl. 19.
Solar Light Mfg. Co., Chicago, Ill. 590,609, canc. Cl. 21.
Southwestern Drug Corp., Waco, Tex. 701,520, pub. 5–3–60. Cl. 100.
Sparrow Hardwick & Co. Ltd., Manchester, England. 309,606, canc. Cl. 42.
Speedlight Center, New York, N.Y. 590,387, canc. Cl. 26.
Speidel Corp., Providence, R.I. 590,576, canc. Cl. 28.
Sperti, Inc., to American Home Products Corp., New York, N.Y. 403,153, new cert. Cl. 6.
Sperti, Inc. American Home Products Corp., New York, N.Y. 408,158. Am. 7(d). Cl. 6.
Spex Industries Inc., Scotch Plains, N.J. 701,330, pub. 5–3–60. Cl. 26.
Spindler, August, & Sons, Inc., Jersey City, N.J. 701,258, pub. 5–3–60. Cl. 19.
Squirt Co., The, Beverly Hills, Calif. 590,425, canc. Cl. 22.
Standard Brands Inc., New York, N.Y. 701,453, pub. 5–3–60. Cl. 46.
Standard Oil Co. of California, San Francisco, Calif. 701,175, pub. 5–3–60. Cl. 6.
Standard Playground Equipment Co., Inc., Anderson, Ind. 701,295, pub. 5–3–60. Cl. 22.
Star Pump and Cooler Corp., St. Louis, Mo. 590,366, canc. Cl. 31.
Stein-Tex, Inc., New York, N.Y. 701,444, pub. 5–3–60. Cl. 42.
Stillite Products Ltd., London, England. 380,062, ren. 7–19–60. Cl. 12.
Strathmore Paper Co., West Springfield, Mass. 132,827, ren. 7–19–60. Cl. 37.
Streeter-Amet Co., Grayslake, Ill. 701,311, pub. 5–3–60. Cl. 26.
Sunlight Fisheries, Inc.: *See*—
Booth Fisheries Corp.
Superior Piston Ring Co., Inc., Detroit, Mich. 381,481, ren. 7–19–60. Cl. 35.
Superior Watch Corp.: *See*—
Piepia, Karl.
Swett's, Dr., Root Beer Co., Inc., Jersey City, N.J., to Bubble Up Corp., Peoria, Ill. 379,782, ren. 7–19–60. Cl. 45.
Sylvania Electric Products Inc., Wilmington, Del. 701,327, pub. 5–3–60. Cl. 26.
Sylvania Electric Products Inc., Wilmington, Del. 701,356, pub. 5–3–60. Cl. 26.
Taft, Albert W., d.b.a. Plain and Fancy Dutch Products, Lititz, Pa. 701,456, pub. 5–3–60. Cl. 46.
Tandberg of America, Inc., Pelham, N.Y. 701,328, pub. 5–3–60. Cl. 26.
Tavor Aida, New York, N.Y. 701,406, pub. 5–3–60. Cl. 38.
Taylor Instrument Companies, Rochester, N.Y. 701,313, pub. 5–3–60. Cl. 26.
Technic, Inc., Providence, R. I. 701,171, pub. 5–3–60. Cl. 6.
Temco, Inc., Nashville, Tenn. 701,389, pub. 5–3–60. Cl. 34.
Templeton, James, & Son, Ltd., Ayr, Scotland. 382,457, ren. 7–19–60. Cl. 43.
Texaco Inc., New York, N.Y. 701,213, pub. 5–3–60. Cl. 15.
Texas Co., The, New York, N.Y. 690,784, cor. Cl. 15.
Texas Refinery Corp., by change of name from Panther Oil & Grease Mfg. Co., Fort Worth, Tex. 701,523–4, pub. 5–3–60. Cl. 52.
Thoma, Edwin L., River Forest, Ill. 590,509, canc. Cl. 46.
Thomas Industries, Inc., Louisville, Ky. 701,297–8, pub. 6–23–59. Cl. 23.
Thomaston Cotton Mills, Thomaston, Ga. 701,445, pub. 5–3–60. Cl. 43.
Thor Power Tool Co.: *See*—
Independent Pneumatic Tool Co.
Timber Engineering Co., Washington, D.C. 701,545–7, pub. 5–3–60. Cl. A.
Timothy Titus Morrow: *See*—
Younghusband, James L.
Toledo Tire Corp., Toledo, Ohio. 381,876, ren. 7–19–60. Cl. 35.
Tolson-Davies Co., Inc., Brownsville, Tex., to Campbell Soup Co., Camden, N.J. 382,390, ren. 7–19–60. Cl. 46.
Toni Co., The: *See*—
Gillette Co., The.
Towncraft Industries, Inc., New York, N.Y. 701,296, pub. 5–3–60. Cl. 23.
Tri-Point Plastics, Inc., Albertson, N.Y. 701,408, pub. 5–3–60. Cl. 38.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 701,158, pub. 5–3–60. Cl. 1.
Turner, Day and Woolworth Handle Corp.: *See*—
Turner, Day & Woolworth Handle Co.
Turner, Day & Woolworth Handle Co., to Turner, Day and Woolworth Handle Corp., Louisville, Ky. 376,474, ren. 7–19–60. Cl. 23.
Turner, Day & Woolworth Handle Co., to Turner, Day and Woolworth Handle Corp., Louisville, Ky. 376,767, ren. 7–19–60. Cl. 23.
Turner, Day and Woolworth Handle Corp.: *See*—
Turner, Day & Woolworth Handle Co.
Turner, Day & Woolworth Handle Co., to Turner, Day and Woolworth Handle Corp., Louisville, Ky. 380,273, ren. 7–19–60. Cl. 23.
Ultronix, Inc., San Mateo, Calif. 701,273, pub. 5–3–60. Cl. 21.
Union Carbide Corp., New York, N.Y. 701,179, pub. 5–3–60. Cl. 6.
Union Carbide Corp., New York, N.Y. 701,271, pub. 5–3–60. Cl. 23.
United Artists Television, Inc., New York, N.Y. 701,540, pub. 5–3–60. Cl. 107.
United-Carr Fastener Corp., Cambridge, Mass. 701,200, pub. 5–3–60. Cl. 13.
United Electronics Laboratories, Inc., Louisville, Ky. 701,-335, pub. 5–3–60. Cl. 26.
United Packing Co.: *See*—
Harkness, Floyd J., Co., Inc.
U.S. Expansion Bolt Co., York, Pa. 378,835–6, ren. 7–19–60. Cl. 13.
United States Rubber Co., New York, N.Y. 701,422, pub. 5–3–60. Cl. 39.
Universal Pictures Co., Inc., New York, N.Y. 701,409, pub. 5–3–60. Cl. 38.
Universal Valve Co., Inc., Elizabeth, N.J. 701,201, pub. 5–3–60. Cl. 13.
Upjohn Co., The, Kalamazoo, Mich. 590,414, canc. Cl. 46.
Upjohn Co., The, Kalamazoo, Mich. 590,445, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 590,561, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 701,226, pub. 5–3–60. Cl. 18.
Valley Fruit Distributors, d.b.a. Valley Fruit Distributors, Inc., Victor, Calif. 701,483, pub. 5–3–60. Cl. 46.
Valley Fruit Distributors, Inc.: *See*—
Valley Fruit Distributors.
Valmor Products Co.: *See*—
Neumann, Morton G.
Vanadium Corp. of America, New York, N.Y. 590,461, canc. Cl. 14.
Van Dorn Electric Tool Co., The, Cleveland, Ohio, to The Black and Decker Mfg. Co., Towson, Md. 136,681, ren. 7–19–60. Cl. 21.
Van Loop Pump & Machine Works: *See*—
Olsson, Arnold W.
Vantress, Chas., Farms, Inc., Duluth, Ga. 701,157, pub. 5–3–60. Cl. 1.
Vaughan's Seed Co., Chicago, Ill. 701,169, pub. 5–3–60. Cl. 6.
Veterans Fishery: *See*—
Clancy, Bernard A.
Vickers Inc., Detroit, Mich. 701,269, pub. 5–3–60. Cl. 21.
Viscount of England, Inc., New York, N.Y. 701,503–4, pub. 5–3–60. Cl. 50.
Vita Life Corp., The, Enid, Okla. 701,184, pub. 5–3–60. Cl. 10.
Vogel-Bitt, Inc., Philadelphia, Pa. 701,537, pub. 5–3–60. Cl. 103.
Vue-File Co.: *See*—
Shealy, Lon S.
Vulcan Plow Co., The, Evansville, Ind., to Pittsburgh Forgings Co., Coraopolis, Pa. 131,663, ren. 7–19–60. Cl. 23.
Wain Shiell & Son, Ltd., London, England. 701,441, pub. 5–3–60. Cl. 42.
Waljohn Plastics, Inc., Brooklyn, N.Y. 701,500, pub. 5–3–60. Cl. 50.
Wallace Silversmiths, Inc., Wallingford, Conn. 701,370, pub. 5–3–60. Cl. 28.
Wallaces Kosher Foods, Charlotte, N.C. 701,478, pub. 5–3–60. Cl. 46.
Warner-Hudnut, Inc., New York, N.Y. 590,558, canc. Cl. 16.
Warren Petroleum Corp., Tulsa, Okla. 701,180, pub. 5–3–60. Cl. 6.
Washington Turf & Irrigation Co., Seattle, Wash. 701,203, pub. 11–24–59. Cl. 13.
Waverly Chemical Co., Inc., Mamaroneck, N.Y. 701,167, pub. 5–3–60. Cl. 6.
Weinberg, Deane, & Co., Los Angeles, Calif. 701,582–3, pub. 5–3–60. Cl. 102.
Weis Markets, Inc., Sunbury, Pa. 701,482, pub. 5–3–60. Cl. 46.
Welch Nurseries, Inc., The, Shenandoah, Iowa. 590,390, canc. Cl. 1.
Wenzel, Clifford O., Bellvidere, Ill. 590,612, canc. Cl. 23.
Western Star Mill Co., The, Salina, Kans. 590,556, canc. Cl. 46.
Westinghouse Electric Corp.: *See*—
Westinghouse Electric & Mfg. Co.
Westinghouse Electric Corp., Pittsburgh, Pa. 701,403, pub. 5–3–60. Cl. 38.
Westinghouse Electric & Mfg. Co., East Pittsburgh, Pa., to Westinghouse Electric Corp. 379,641, ren. 7–19–60. Cl. 34.
Weston Winery: *See*—
Scheasley Industries, Inc.
White Laboratories, Inc., Kenilworth, N.J. 701,242, pub. 5–3–60. Cl. 18.
Wiccipee Farms, Inc., Manteca, Calif. 701,462, pub. 5–3–60. Cl. 46.
Wilkerson Corp., Englewood, Colo. 655,243. Am. 7(d). Cl. 31.
Willapoint Oysters, Inc., Seattle, Wash. 590,341, canc. Cl. 46.
William Brand and Co. Inc., The, Willimantic, Conn. 590,-474, canc. Cl. 21.
Williams, Eureka, Corp.: *See*—
Williams Oil-O-Matic Heating Corp.
Williams Oil-O-Matic Heating Corp., to Eureka Williams Corp., Bloomington, Ill. 379,619, ren. 7–19–60. Cl. 23.

Willoughby Enterprises, Inc., Potter, Nebr. 701,236, pub. 5–3–60. Cl. 22.
Wilshire Bedding Co.: *See*—
Wilshire Bedding Co., Inc.
Wilshire Bedding Co., Inc., d.b.a. Wilshire Bedding Co., Montebello, Calif. 701,381, pub. 5–3–60. Cl. 32.
Winn & Coales Ltd., London, England. 701,194, pub. 5–3–60. Cl. 12.
Winston Cosmetics: *See*—
Halperin, Irving J.
Wollensak Optical Co., Rochester, N.Y. 701,317, pub. 4–25–60. Cl. 26.
Wolverine Supply & Mfg. Co., Pittsburgh, Pa. 135,363, ren. 7–19–60. Cl. 22.
Wonderware Home Parties, Inc., Bronx, N.Y. 696,109. Am. 7(d). Cl. 2.
Woods Bakeries, Inc., Evanston, Ill. 590,644, canc. Cl. 46.
Woodward & Dickerson, Inc., Philadelphia, Pa. 701,472–6, pub. 5–3–60. Cl. 46.
Workman, Samuel L., Chicago, Ill. 382,048, ren. 7–19–60. Cl. 26.
Workman, Samuel L., to Workman Service, Inc., Chicago, Ill. 382,049, ren. 7–19–60. Cl. 26.
Workman Service, Inc.: *See*—
Workman, Samuel L.
Worthington Corp., Harrison, N.J. 701,340, pub. 5–3–60. Cl. 26.
Wynn Pharmacal Corp., Philadelphia, Pa. 701,234, pub. 5–3–60. Cl. 18.
Younghusband, James L.: *See*—
Consolidated Cosmetics.
Younghusband, James L., to T. T. Morrow, Chicago, Ill. 590,395, canc. Cl. 51.
Zeiss Ikon A.G., Stuttgart, Germany. 701,533, pub. 5–3–60. Cl. 26.

U.S. GOVERNMENT PRINTING OFFICE: 0—1960

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July 26, 1960 Volume 756 Number 4

PATENTS

NOTICES

Assignment Information to be Added to Trademark Application and Registration Files

On July 11, 1960, the Patent Office will begin the practice of entering assignment information in trademark application and registration files. The information to be added to the files will supplement the records maintained in the Assignment Branch which consist of a microfilm copy of each assignment document and separate indexes maintained by Registration and Application Serial Numbers, Assignor, and Assignee.

The addition of assignment information to trademark application and registration files will be accomplished by preparing an extra copy of the assignment index card used in the Assignment Branch and inserting this copy in each file at the time each new assignment is recorded. When the first Title Report is ordered or the first index card is made for a file after July 11, 1960, a Title Record form will also be prepared and placed in the file. This form will identify and briefly describe all assignments of prior record. By reviewing the information on the Title Record form and on the index cards in the files, a person desiring title information will be able to trace recorded transfers of title.

A number of years may elapse before this useful information will be found in all of the appropriate registration files, since these entries will not be made unless and until an assignment is received for recording or a Title Report is ordered for a Registration.

June 22, 1960.

C. A. KALK,
Director of Administration.

Erratum

All references to Patent No. 2,944,041 to Arthur C. Hecker, Mark W. Pollock, and Iocheved Rabinovici, assignors to Argus Chemical Corporation, for Neopentyl Glycol Alkyl Phthalates and Polyvinyl Chloride Compositions Plasticized Therewith, appearing in the OFFICIAL GAZETTE of July 7, 1960, should be deleted as the application was withdrawn from issue and the patent was not issued.

Disclaimers

2,803,515.—*Semi Joseph Begun*, Cleveland Heights, Ohio, *Everett E. Horvatt*, Paterson, N.J., and *John F. Blake*, North Royalton, and *Dean E. Christian*, Medina, Ohio. RECORDING APPARATUS. Patent dated Aug. 20, 1957. Disclaimer filed June 16, 1960, by the assignee, *Clevite Corporation*.

Hereby enters this disclaimer to claims 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, and 13 of said patent.

2,906,688.—*Thomas Samuel Gardner*, Rutherford, *John Lee*, Essex Fells, and *Edward Wenis*, Leonia, N.J. 5-METHYL-3-ISOXAZOLE CARBOXYLIC ACID HYDRAZIDES. Patent dated Oct. 13, 1959. Disclaimer filed June 17, 1960, by the assignee, *Hoffmann-La Roche Inc.*

Hereby enters this disclaimer to claim 6 of said patent.

Board of Appeals Decisions Rendered in the Month of June 1960

Examiner affirmed	178
Examiner affirmed in part	31
Examiner reversed	59
Total	268

Decisions of the Commissioner of Patents

The 1959 edition of the Decisions of the Commissioner of Patents has been released from the printer and is available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price $2.75.

Classification Order No. 304

Classification Order No. 304, dated June 30, 1960 incorporates changes in the following classes:

15	
20	
25	
50	BUILDING STRUCTURES (New Class—Bulletin No. 436)
72	(Abolished)
108	(Abolished)
178	
189	
224	
294	
340	

The above changes will be incorporated in the Manual of Classification replacement pages dated October 1960.

M. C. ROSA,
Director, Patent Examining Operation.

Patents Available for Licensing or Sale

2,762,939. Electric Drive Transmission. Frank E. Hodgson, Box 963, Port Orange, Fla.

2,919,619. Chord Player Attachment for Musical Instruments. Karl H. Munsfeld, Route 8, Box 300B, Lenoir, N.C.

New Applications Received During May 1960

Patents	7,228
Designs	419
Plant Pats	7
Reissues	24
Total	7,678

Issue

Patents	942—	No. 2,946,059 to No.	2,947,000, incl.
Designs	28—	No. 188,453 to No.	188,480, incl.
Plant Patents	2—	No. 1,961 to No.	1,962, incl.
Reissues	4—	No. 24,847 to No.	24,850, incl.
Total	976		

2,913,280. Target Tracking Computing Device. Contraves A.G., Schaffhauserstrasse 580, Zurich 52, Switzerland. Correspondence to: Michael S. Striker, 909 Lexington Ave., New York 17, N.Y.

2,900,247. Power Steering Mechanism. Manvel K. Zias, 154 Rockwood Road, Manhasset, N.Y.

2,900,238. Fishing Apparatus. Gutsrt Quality Products, Inc., of Milwaukee. Correspondence to: Frank S. Andrus, 735 N. Water St., Milwaukee 2, Wis.

General Electric Company is prepared to grant non-exclusive licenses under the following 12 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: General Electric Company, Housewares Division, 1285 Boston Ave., Bridgeport 2, Conn.

2,822,848. Electric Connector.

2,854,916. Heat Control Device.

2,854,918. Temperature Control System for Electric Heating Devices.

2,863,291. Heat Control Device.

2,868,896. Temperature Responsive Control Circuit.

2,611,854. Control Circuit With Temperature and/or Humidity Compensation.

2,634,325. Temperature Control Circuit.

2,831,090. Temperature Responsive Electrical Control System.

2,847,846. Vaporizer Steam Dry Control.

2,847,847. Vaporizer With Steam Generator.

2,847,848. Vaporizer.

2,862,996. Strain Relief Device.

CONDITION OF PATENT APPLICATIONS AS OF MAY 31, 1960

Total number of pending applications (excluding Designs)	198, 233
Total number of pending Design applications	6, 108
Total number of applications awaiting action (excluding Designs)	81, 125
Total number of Design applications awaiting action	1, 400
Date of oldest new application	Feb. 2, 1959
Date of oldest amended application	Feb. 9, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 39, 43, 45, 50, 56, 59, 60, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 20, 27, 41, 42, 44, 48, 51, 54, 58.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 37, 38, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 52, 82.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 30, 33, 36, 40, 53, 60.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 15, 23, 28, 46, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 57.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	11-5-59	10-26-59
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	11-2-59	11-17-59
3. (VII) MARMELSTEIN, N. (WINDHAM, R. E., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	11-30-59	11-30-59
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	10-5-59	10-7-59
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-5-59	8-5-59
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	10-19-59	10-19-59
7. (IV) ANDERSON, E. G., Optics	9-1-59	9-8-59
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	10-19-59	10-27-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-15-59	10-7-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-5-59	12-1-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clinching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	10-19-59	9-4-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-4-59	12-3-59
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-12-59	10-13-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-8-59	7-17-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-4-59	12-17-59
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	7-1-59	6-1-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-2-59	11-5-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-9-59	10-9-59
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-4-60	12-17-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-10-59	12-10-59
21. (III) MADER, R. C., Textiles	10-26-59	11-6-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-12-59	10-6-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	2-2-59	1-9-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	9-4-59	9-3-59
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	9-3-59	9-1-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	9-30-59	9-15-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	11-2-59	10-20-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	10-26-59	11-4-59
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-6-59	11-10-59
30. (VII) O'LEARY, B. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-5-59	12-10-59

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application New	Oldest Application Amended
21. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	12-31-59	12-22-59
22. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	11-16-59	11-17-59
23. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	9-4-59	9-8-59
24. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	3-31-59
25. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	11-6-59	11-6-59
26. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	9-28-59	9-23-59
27. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	9-29-59	9-16-59
28. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Aza, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-3-59	8-3-59
29. (IV) WEIL, L., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	10-30-59	10-21-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-59	12-2-59
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television; Telegraphy (part)	11-23-59	10-22-59
42. (II) REYNOLDS, E. B., Electric Signaling; Telegraphy (part)	10-1-59	10-1-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	9-14-59	9-24-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	8-22-59	6-8-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	11-16-59	11-13-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	10-12-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-16-59	11-16-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Translators, Barrier Layer Rectifiers	8-9-59	8-19-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	7-6-59	7-13-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-2-59	8-17-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	10-1-59	10-1-59
52. (V) LE ROY, C. A., Supports and Racks	1-20-60	1-26-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	10-28-59	10-12-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	11-24-59	12-3-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	10-13-59	9-30-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-7-59	12-3-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	8-19-59	8-11-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	9-16-59	10-6-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-8-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	9-15-59	9-21-59
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	12-1-59	11-27-59
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	11-24-59	11-13-59
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	9-23-59	10-5-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	8-11-59	7-17-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	11-16-59	11-6-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	7-7-59	6-17-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	8-25-59	8-5-59
81. (III) MONCURE, J. A., Industrial Arts	3-4-60	3-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	3-14-60	3-15-60
91. BAILEY, J. S., Ornamentation	2-16-60	2-9-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	1-4-60	1-7-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	12-9-59	12-1-59
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	12-3-59	12-4-59
95. ANGEL, C. D., Masonry and Concrete Structures; Packed Rod Joints; Joint Packings	10-5-59	10-1-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	12-3-59	11-9-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents..... Numbers 2,823,287 to 2,825,576, inclusive
Plant Patents..... Numbers 994 to 996, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

ESSO STANDARD OIL COMPANY *v.* E. F. DREW & CO., INC.

No. 6538. Decided April 6, 1960

[47 CCPA —; 277 F.2d 171; 125 USPQ 404]

1. TRADEMARK—OPPOSITION—GOODS—GOODS EMBRACED BY APPLICATION MUST BE CONSIDERED.

In an opposition by appellant, based on a number of prior registrations of the trademark "Acto" and on prior use of that mark on petroleum sulphonates for various industrial purposes, to an application by appellee to register "Acto-Vate" for water softeners, where the evidence for appellee indicated that it applied its mark only to a specific composition used in laundering, and appellee had requested leave to amend its application to limit the goods to "sequestering agents for use as adjuncts to detergents in laundering operations," *Held* that "the application is not now so limited and we must therefore consider it as embracing 'water softeners' generally, that being the present designation of the goods to which the 'Acto-Vate' mark is applied."

2. SAME—SAME—SAME—GOODS ACTUALLY MARKETED UNDER MARK.

"Appellant's registrations include petroleum sulphonates and other products to which the 'Acto' mark is applied, and for which a wide variety of uses are stated in the registrations, but none of them makes reference to use as a water softener nor, in our opinion, to any use closely related to water softening. Accordingly, the registrations are not so pertinent to appellee's application as is the evidence of actual use, in which reference is made to water softening."

3. SAME—CONFUSING SIMILARITY—CHANNELS OF TRADE.

"The record indicates that 'Acto' sulphonates are normally sold in large quantities and are used by the purchasers as ingredients of other products which they either use themselves or sell under some other name. Applicant's ["Acto-Vate"] water softener, on the other hand, is sold in relatively smaller quantities and exclusively to laundries. It is true that trade practices may vary in the future, but we agree with the Board that opposer's 'Acto' products, so far as they have water softening properties, are essentially ingredients in the manufacture of various products, whereas water softeners per se would usually be sold to the ultimate consumer."

4. SAME—SAME—DISCRIMINATING PURCHASERS.

"It is conceivable that the same purchaser might buy both an 'Acto' sulphonate and 'Acto-Vate' water softener, but that would certainly not be expected to occur in many instances. Such a purchaser, moreover, would in all probability be a discriminating one since he would be buying specialized products in a technical field and, at least in the case of the 'Acto' product, he would probably be buying in comparatively large volumes."

5. SAME—SAME—SUGGESTIVENESS—"ACTO" AND "ACTO-VATE."

Upon review of the dismissal by the Trademark Trial and Appeal Board of an opposition by appellant, based on a number of prior registrations of the trademark "Acto" and on prior use of that mark on petroleum sulphonates for various industrial purposes, to an application by appellee to register "Acto-Vate" for water softeners, *Held* that "It is * * * to be noted that the marks are not identical and that 'Acto,' which is the part common to them, is not purely arbitrary but is suggestive of action or activation"; and *Held* that "Upon consideration of all the circumstances of this case, including the specific differences in the goods, the methods of marketing, and the marks themselves, we agree with the Board that sale of the goods of the parties under their respective marks would not be likely to cause confusion within the meaning of section 2(d) of the Lanham Act (Trademark Act of 1946)."

6. SAME—OPPOSITION—EVIDENCE—EFFECT OF FAILURE TO PRODUCE WITNESS.

"Appellant also contends that appellee should be denied registration because of its failure to produce its president, one E. F. Drew, as a witness upon demand of appellant. It appears that Drew was abroad when the demand was made, and that appellee offered to consent to a postponement of the completion of appellant's testimony until his return if advised as to the nature of the testimony expected, and if such testimony appeared proper and necessary. Apparently appellant did not seek such a postponement. In our opinion those circumstances are not grounds for refusing registration of appellee's mark."

APPEAL from the Patent Office. Opposition No. 37,112.

AFFIRMED.

Mead, Browne, Schuyler & Beveridge, William E. Schuyler, Jr., Andrew B. Beveridge (Francis C. Browne of counsel) for Esso Standard Oil Company.

Bierman and Bierman, Harry C. Bierman (Jordan B. Bierman of counsel) for E. F. Drew & Co., Inc.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board of the United States Patent Office, dismissing an opposition by appellant to appellee's application for registration of "Acto-Vate" as a trademark for water softeners. The opposition was based on a number of prior registrations of the trademark "Acto," owned by appellant, and on prior use of that mark on petroleum sulphonates for various industrial purposes. It is not disputed that appellant's registrations and use of the "Acto" mark preceded any use of "Acto-Vate" by appellee.

[1] While appellee's evidence indicates that it applies the mark only to a specific composition used in laundering, and appellee has requested leave to amend its application to limit the goods to "sequestering agents for use as adjuncts to detergents in laundering operations," the application is not now so limited and we must therefore consider it as embracing "water softeners" generally, that being the present designation of the goods to which the "Acto-Vate" mark is applied.

[2] Appellant's registrations include petroleum sulphonates and other products to which the "Acto" mark is applied, and for which a wide variety of uses are stated in the registrations, but none of them makes reference to use as a water softener nor, in our opinion, to any use closely related to water softening. Accordingly, the registrations are not so pertinent to appellee's application as is the evidence of actual use, in which reference is made to water softening.

Appellant's evidence shows that it has marketed under its "Acto" mark petroleum sulphonates which it has recommended for a wide variety of uses including "water treatment" and "softener (industrial water)." There is no evidence, however, that any "Acto" product has been sold for use, by itself, as a water softener;

rather, as stated by the Board, they appear to have been sold "for use as ingredients in the manufacture of a wide variety of chemical compounds including industrial water softeners, and preparations for dry cleaning and laundering."

[3] The record indicates that "Acto" sulphonates are normally sold in large quantities and are used by the purchasers as ingredients of other products which they either use themselves or sell under some other name. Applicant's water softener, on the other hand, is sold in relatively smaller quantities and exclusively to laundries. It is true that trade practices may vary in the future, but we agree with the Board that opposer's "Acto" products, so far as they have water softening properties, are essentially ingredients in the manufacture of various products, whereas water softeners per se would usually be sold to the ultimate consumer.

[4] It is conceivable that the same purchaser might buy both an "Acto" sulphonate and "Acto-Vate" water softener, but that would certainly not be expected to occur in many instances. Such a purchaser, moreover, would in all probability be a discriminating one since he would be buying specialized products in a technical field and, at least in the case of the "Acto" product, he would probably be buying in comparatively large volumes.

[5] It is also to be noted that the marks are not identical and that "Acto," which is the part common to them, is not purely arbitrary but is suggestive of action or activation.

Upon consideration of all the circumstances of this case, including the specific differences in the goods, the methods of marketing, and the marks themselves, we agree with the Board that sale of the goods of the parties under their respective marks would not be likely to cause confusion within the meaning of section 2(d) of the Lanham Act (Trademark Act of 1946).

[6] Appellant also contends that appellee should be denied registration because of its failure to produce its president, one E. F. Drew, as a witness upon demand of appellant. It appears that Drew was abroad when the demand was made, and that appellee offered to consent to a postponement of the completion of appellant's testimony until his return if advised as to the nature of the testimony expected, and if such testimony appeared proper and necessary. Apparently appellant did not seek such a postponement. In our opinion those circumstances are not grounds for refusing registration of appellee's mark.

The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

MILWAUKEE NUT COMPANY *v.* BREWSTER FOOD SERVICE

No. 6589. Decided April 6, 1960

[47 CCPA —; 277 F.2d 190; 125 USPQ 390]

1. TRADEMARK—CONFUSING SIMILARITY—WORDS SUGGESTIVE OF THE USE OF THE GOODS.

In an opposition by appellee, owner of the registered mark "BEER NUTS" for use on shelled and salted nuts, to an application by appellant to register "Schnaps" for use on the same goods, usually purchased by patrons of taverns for consumption on the premises with various forms of liquid refreshment, *Held* that "The goods are identical as is the class of purchasers of the merchandise"; that "'BEER NUTS' and 'SCHNAPS' nuts are different in sound, appearance and meaning"; and that "The only similarity resides in the suggestiveness of the use of the goods, i.e., to eat the nuts when imbibing beer or liquor"; and *Held* that "Obviously it was the purpose of both parties to employ words that are suggestive of the use of the merchandise"; and that "In doing so appellee necessarily foreclosed the possibility of obtaining the scope of protection that a purely arbitrary mark would deserve."

2. SAME—SAME—EVIDENCE.

"Appellee's testimony that one of the partners in the firm was sold packages of 'Schnaps' nuts when requesting 'BEER NUTS' in various taverns in the common trade area of the parties merely shows that appellee, in adopting a word which is highly suggestive to the trade to which it was catering, ran the risk of having similar merchandise sold by others for the same purpose to the same trade offered to the witness when he requested 'BEER NUTS.'"

3. SAME—SAME—SAME.

"We do not believe that confusion as to source is the significant factor in this case. Rather, it appears to us that the dominant feature of this controversy is the lack of trademark significance inherent in 'BEER NUTS.' We believe this to be so irrespective of the fact that appellee has sold 20 million bags of its nuts having 'BEER NUTS' thereon and has advertised its mark in various trade journals."

4. SAME—SAME—TRADEMARK SUGGESTIVE OF THE MOST APPEALING USE OF THE GOODS.

"* * *, if we permitted appellee to prevail here, we would be saying, in effect, that no one else could sell this type of merchandise employing a trademark suggestive of the most appealing use of the goods. We do not believe that appellee's mark warrants such protection."

APPEAL from the Patent Office. Opposition No. 36,773.

REVERSED.

Wheeler, Wheeler & Wheeler (*S. L. Wheeler* of counsel) for Milwaukee Nut Company.

James R. McKnight for Brewster Food Service.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

Milwaukee Nut Company filed an application to register "Schnaps nuts," which was amended to "Schnaps" by deleting "nuts,"[1] for use on shelled salted nuts. An opposition to that registration was filed by Brewster Food Service, owner of the registered mark "BEER NUTS"[2] for use on shelled and salted nuts. That opposition was sustained by the Trademark Trial and Appeal Board which found that "Schnaps," when applied to the goods of appellant, was likely to cause confusion or mistake or to deceive purchasers. This appeal is from that decision.

Both parties took testimony. The evidence shows that the goods sold by the parties under the respective marks are salted redskin peanuts having a sweetened coating. Each sells its peanuts in cellophane bags, primarily in a ten cent size, through the same channels, jobbers and route men, for ultimate sale to the tavern trade. It has been shown that the parties' peanuts are usually purchased by patrons of taverns for consumption on the premises with various forms of liquid refreshment. The evidence also establishes that appellant knew of appellee's use of "BEER NUTS" on packages of sweetened nuts prior to the time it adopted its mark, and that the "Schnaps" nuts package, besides the mark, has the figure of a glass of beer and the phrase "'SO GOOD WITH BEER'" on its face.

The Board found that the marks neither looked nor sounded alike, and that "Schnaps," unlike beer, means a strong liquor. However, it stated that—

> * * * the mark "SCHNAPS," as used in conjunction with the word "nuts," conveys the same general commercial impression as "BEER NUTS," that is to say, nuts intended to be consumed with alcoholic beverages. In addition, applicant features the slogan "SO GOOD WITH BEER" and the representation of a glass of beer on its packages of "SCHNAPS" nuts.

For those reasons the Board concluded that there was a "reasonable likelihood" of confusion, mistake or purchaser deception within the meaning of section 2(d) of the Lanham Act.

The Board dismissed certain testimony which tends to show that "BEER NUTS" is the common descriptive name for salted redskin peanuts as being, if anything, "a localism restricted to certain small town areas in Wisconsin."

Appellant argues that such testimony should not have been summarily dismissed, contending that the confusion, if any, which may exist is engendered by appellee's use of "BEER NUTS" as a mark and is *not* due to any confusion between the marks of the parties. Appellant also asserts that the marks are sufficiently different to preclude likelihood of confusion.

It is appellee's position that the marks are confusingly similar because they convey the same impression. In support of its position, appellee alleges that "Schnaps" is sometimes used synonymously with beer by the "common man," points out that the goods are substantially identical, and argues that the goods are cheap items quickly sold for immediate consumption. Appellee further asserts that appellant has deliberately designed its package and mark to cause confusion, and that the evidence shows actual confusion. Appellee maintains that we may not consider evidence which may tend to show that its mark is descriptive or generic, and that in any event the evidence that "BEER NUTS" may be descriptive is merely a localism. Finally, appellee reminds us that if any doubt as to confusion should arise in our minds, in accordance with well established principles, that doubt must be resolved against the newcomer.

[1] The goods are identical as is the class of purchasers of the merchandise. "BEER NUTS" and "Schnaps" nuts are different in sound, appearance and meaning. The only similarity resides in the suggestiveness of the use of the goods, i.e., to eat the nuts when imbibing beer or liquor.

Obviously it was the purpose of both parties to employ words that are suggestive of the use of the merchandise. In doing so appellee necessarily foreclosed the possibility of obtaining the scope of protection that a purely arbitrary mark would deserve.

[2] Appellee's testimony that one of the partners in the firm was sold packages of "Schnaps" nuts when requesting "BEER NUTS" in various taverns in the common trade area of the parties merely shows that appellee, in adopting a word which is highly suggestive to the trade to which it was catering, ran the risk of having similar merchandise sold by others for the same purpose to the same trade offered to the witness when he requested "BEER NUTS."[3]

[3] We do not believe that confusion as to source is the significant factor in this case. Rather, it appears to us that the dominant feature of this controversy is the lack of trademark significance inherent in "BEER NUTS." We believe this to be so irrespective of the fact that appellee has sold 20 million bags of its nuts having "BEER NUTS" thereon and has advertised its mark in various trade journals.

[4] Furthermore, if we permitted appellee to prevail here, we would be saying, in effect, that no one else could sell this type of merchandise employing a trademark suggestive of the most appealing use of the goods. We do not believe that appellee's mark warrants such protection.

Appellee has cited *Hancock v. The American Steel & Wire Co. of New Jersey, Etc.*, 40 CCPA 961, 203 F.2d 737, 97 USPQ 330, in support of its contention. There the marks "Cyclone" and "Tornado," used on wire fencing and similar articles, were held to be confusingly similar. We believe that case is distinguishable from the one at bar. This court held that "Cyclone" and "Tornado" as used on the respective merchandise were essentially arbitrary and that they had identical dictionary meanings. Here "Schnaps" and "BEER" do not have similar dictionary meanings nor are they entirely arbitrary terms as applied to nuts intended for sale in taverns to be eaten with drinks.

For the above reasons we reverse the decision of the Trademark Trial and Appeal Board.

REVERSED.

[1] Application Serial No. 662,483, filed August 4, 1955, first use alleged October 20, 1954, first use in commerce alleged January 5, 1955.

[2] Registration 605,905 issued May 10, 1955, filed April 30, 1955.

U.S. Court of Customs and Patent Appeals

DAGGETT & RAMSDELL, INC. *v.* I. POSNER, INC.

No. 6525. Decided May 3, 1960

[47 CCPA —; —F.2d —; 125 USPQ 236]

1. TRADEMARK — CONFUSING SIMILARITY — GOODS — DIFFERENCES IN GOODS.

Applicant's product, described in its application as "A hair treatment kit consisting of a pressing cream, a cosmetic scalp and a cream curl," and registrant's goods, identified in its registration as "After Shaving Lotions, Hair Tonics and Perfumes, Cologne, Deodorants and Talcum," *Held* not so different in composition and use that no confusion as to origin could possibly arise in the minds of the public, no matter how similar the marks of applicant and registrant might be.

2. SAME—SAME—ENVIRONMENT OF SALES.

"The applicant * * * argues that confusion is improbable, irrespective of similarity of marks, because its product is sold exclusively through stores while D & R's [registrant's] products are sold door-to-door by the Fuller Brush Company. Neither party is restricted by its registration or application to a particular channel of trade, however. Under these circumstances, the present sales methods are not conclusive in this type of proceeding."

[3] The memoranda which the witness made following his visits to the taverns indicate that of the 21 he entered, in 20 of them he asked for "Beer nuts," and in the other there is no indication of what was requested. When testifying, the witness stated that "In each of these calls I asked for BEER NUT peanuts." At least once in his testimony, however, the witness stated that upon entering one of the taverns he "asked for BEER NUTS." Since he testified that the memoranda were made "after each call in the taverns," they are probably more accurate recollections of what was requested than is the testimony given more than three months later.

3. SAME—SAME—WEIGHT GIVEN TO ADDITION OF SURNAME TO FANCIFUL MARK—*Menendez v. Holt* CONSTRUED.

"D & R [registrant] asserts that it is improper to give any weight to the addition of the surname 'Posner's' to the fanciful mark 'ebonaire' in determining the question of confusing similarity to its own mark, 'Debonair,' citing *Menendez v. Holt*, 128 U.S. 514 (1888). This decision has not been construed as absolutely prohibiting consideration of a surname on the issue of similarity. Instead, the courts state that it is proper to consider the entire mark, including the surname, but recognize that parts of a mark may be more dominant than others in the sense that they are more likely to remain in the public's mind and are, therefore, entitled to more weight in deciding the likelihood of confusion."

4. SAME—SAME—SAME.

"* * *, it is apparent that a surname can be a significant or co-equal portion of a trademark and must not always be totally disregarded in deciding a question of confusing similarity."

APPEAL from the Patent Office. Opposition No. 35,747.

AFFIRMED.

Mead, Browne, Schuyler & Beveridge, William E. Schuyler, Jr., Andrew B. Beveridge (*Francis C. Browne* of counsel) for Daggett & Ramsdell, Inc.

Howard A. Rosenberg for I. Posner, Inc.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge FRANCIS L. VAN DUSEN, *United States District Judge for the Eastern District of Pennsylvania*, designated to participate in place of JUDGE O'CONNELL.

VAN DUSEN, *J.*, delivered the opinion of the court.

On March 17, 1955, I. Posner, Inc. (hereinafter "Posner") filed an application for the registration of the following mark for a "Pressing Cream for the Hair":



The description of the goods in the application was later amended to read, "A hair treatment kit consisting of a pressing cream, a cosmetic scalp cream and a cream curl."[1] Use of the mark since January 1954 was alleged. The registration was opposed by Daggett & Ramsdell, Inc. (hereinafter "D & R"), as owner of the registered trademark, "Debonair," for "After Shaving Lotions, Hair Tonics and Perfumes, Cologne, Deodorants and Talcum,"[2] asserting that Posner's proposed mark so resembles its own registered mark as to be likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers.[3] The Trademark Trial and Appeal Board unanimously decided on December 17, 1958, that "Considering the differences between both the marks and goods involved, it is concluded that confusion in trade would not be likely." Accordingly, the opposition was dismissed and this appeal was taken pursuant to section 21 of the Lanham Act.

[1] The appropriateness of the use of the word "kit" has been questioned by the Trademark Trial and Appeal Board (R–63, fn. 2).

[2] Reg. No. 538,612, issued February 27, 1951. There is also evidence that "Debonair" was used on a "Hair Cream Lotion" and a "Dandruff Control Hair Dressing" (R–58).

[3] 15 U.S.C. 1052(d).

[1] Posner has urged upon this court that its product is so substantially different in its composition and use from that of the opposer that no confusion as to origin could possibly arise in the mind of the public, no matter how similar the marks may be. Posner asserts that its product is designed for use by Negro women to remove kinks from their hair and must be used in connection with a heavy comb and a hot curling iron. It was admitted at oral argument, however, that its creams are not sold exclusively in kits with the necessary equipment for application. Therefore, one would have to read the directions in order to discover that the heavy comb and curling iron were necessary. Furthermore, Posner's Cosmetic Scalp Cream does not require this unique equipment for application. Also, neither trademark indicates that the goods on which it appears are for use by members of one sex rather than the other. Under these circumstances, it does not appear to this court that Posner's goods are so different from D & R's Cream Hair Lotion that confusion is improbable for this reason alone.

[2] The applicant also argues that confusion is improbable, irrespective of similarity of marks, because its product is sold exclusively through stores while D & R's products are only sold door-to-door by the Fuller Brush Company. Neither party is restricted by its registration or application to a particular channel of trade, however. Under these circumstances, the present sales methods are not conclusive in this type of proceeding.[4] This was pointed out in *In re Fleet-Wing Corporation*, 38 CCPA 1039, 188 F.2d 476, 89 USPQ 369, where it was stated:

> The emphasis placed by appellant on the environment of sales is not appropriate because the application for registration does not limit sales in any particular manner or to any particular stores or stations and it is well established that sales methods are subject to change at any time.

Thus, it is clear that the final resolution of this dispute hinges on whether or not the marks in question differ sufficiently so that, when applied to the parties' products, it is not likely that purchasers will be confused. [3] D & R asserts that it is improper to give any weight to the addition of the surname "Posner's" to the fanciful mark "ebonaire" in determining the question of confusing similarity to its own mark, "Debonair," citing *Menendez* v. *Holt*, 128 U.S. 514 (1888).[5] This decision has not been construed as absolutely prohibiting consideration of a surname on the issue of similarity. Instead, the courts state that it is proper to consider the entire mark, including the surname, but recognize that parts of a mark may be more dominant than others in the sense that they are more likely to remain in the public's mind and are, therefore, entitled to more weight in deciding the likelihood of confusion. This clearly represents the approach taken in *Celanese Corp.* v. *E. I. du Pont de Nemours & Co.*, 33 CCPA 857, 154 F.2d 143, 69 USPQ 69, on which opposer relies, as is indicated by the following language appearing at page 860:

[4] Posner's contention, which is not supported by the record (R–16, 20–22), that Fuller does not sell in Negro neighborhoods is subject to this same infirmity.

[5] The only question presently before this court is the registrability of the mark "Posner's ebonaire" as shown on the application (R–9). We are not concerned with any variations on that mark. Posner's right to use "Ebonaire" alone, as it has done on its labels (R–5), is for another forum to consider at another time. See *Benjamin D. Smith* v. *Tobacco By-Products & Chemical Corp.*, 44 CCPA 880, 243 F.2d 188, 190, 113 USPQ 339.

> It is a matter of common knowledge that in the purchase of goods people generally do not stop to scrutinize marks nor retain a vivid recollection of their diversified features. Each of the contested marks, therefore, is to be considered in its entirety and viewed as the general public would view and remember it in making a purchase of the merchandise to which it is attached.

In applying this principle in the *Celanese case*, this court decided that, "while trademarks must be considered as a whole in determining the question of similarity, and while the name 'Du Pont' may be more conspicuous in appellee's mark than 'Clar-apel,' nevertheless the public in making purchases of the goods would be likely to remember and use the word 'Clar-apel' as indicating origin of the goods. For that reason, 'Clar-apel' must be regarded as the dominant portion of appellee's mark."[6] We then concluded that "Clar-apel" and "Clarifoil" were so similar that confusion in the mind of the public was likely to result if they were used concurrently in the sale of substantially identical goods.

[4] On several other occasions various courts have disregarded the surname in a trademark because it was determined that the rest of the mark was dominant. See *California Prune & Apricot Growers Association* v. *Dobry Flour Mills, Inc.*, 26 CCPA 910, 101 F.2d 838, 40 USPQ 616; *Ambassador East, Inc.* v. *Orsatti, Inc.*, 257 F.2d 79 (3rd Cir. 1958); *Miles Shoes, Inc.* v. *R. H. Macy & Co., Inc.*, 199 F.2d 602 (2nd Cir. 1952).[7] On the other hand, in a number of instances the surname has been found to be the dominant part of the mark, or at least significant (and perhaps no less dominant than the rest of it), and has, accordingly, been considered by the courts in determining the issue of the likelihood of confusion. *Yard-Man, Inc.* v. *Savage Arms Corp.*, 42 CCPA 862, 220 F.2d 782, 105 USPQ 284; *Best & Co.* v. *Miller*, 167 F.2d 374 (2nd Cir. 1948); *New Yorker Hotel Corporation* v. *Pusateri et al.*, 87 F. Supp. 294 (W.D. Mo. 1949). Thus, it is apparent that a surname can be a significant or co-equal portion of a trademark and must not always be totally disregarded in deciding a question of confusing similarity.

This court is not prepared to say that there is some magic in a fanciful word such as "ebonaire" which causes it to stick in the public's mind any more than "Posner's" or "Posner's ebonaire" under all possible circumstances. Each case must be decided on its own facts. In this case it is noted that, while "ebonaire" is printed in larger letters than "Posner's" in applicant's trademark, the former is written with each letter higher than the preceding one in an ascending manner and is, consequently, difficult to read, whereas the latter is written on a horizontal line and, because it appears first and requires less effort to read, is more likely to come to the purchaser's attention first. Under these circumstances, it would appear that the "Posner's" portion of the mark is at least as likely to remain in the public's mind as "ebonaire." Since the mark must be considered in its entirety, this court has no difficulty in concluding that likelihood of confusion in the mind of the public is remote, although the goods are of similar descriptive qualities. We are reassured in our judgment by the fact that it is in accord with the unanimous decision of the three members of the Trademark Trial and Appeal Board. Cf. *Rex Shoe Company* v. *Juvenile Shoe Corp. of America*, 47 CCPA 750, 273 F.2d 179, 180, 124 USPQ 173; *Montgomery Ward & Co., Inc.* v. *Sears, Roebuck & Co.*, 18 CCPA 1386, 49 F.2d 842, 843, 9 USPQ 524. The decision of the Trademark Trial and Appeal Board dismissing the opposition is affirmed.

AFFIRMED.

[6] *Celanese Corp.* v. *E. I. du Pont de Nemours & Co.*, supra.

[7] See also, *Frankfort Distilleries, Inc.* v. *Kasko Distillers Prod. Corp.*, 27 CCPA 1189, 111 F.2d 481, where the same principle was applied but no surname was involved.

RICH, *J.* (concurring):

I agree with the result reached in Judge Van Dusen's opinion. I also agree with Judge Martin's view that the trademark significance of the mark sought to be registered resides primarily in the word "ebonaire," yet I am without doubt that confusion is not likely to result from the concurrent use of applicant's mark and "Debonair," taking into account, as the statute requires, both the marks and the involved goods.

Particularly in the present case do I feel that the outcome depends on the facts which, as usual, are not "on all fours" with any other case I know of, contrary to opposer's contention.

The factor which chiefly influences me is the *meaning* attributable to the marks. We are not dealing with marks which are "arbitrary" in the sense of not stimulating any ideas at all in the minds of the beholders. "Debonair" is one of the several spellings of a common English word with a French origin and flavor. The portion "ebonaire" of applicant's mark is one of those hybrids which, when contemplated as it would be, in connection with the goods to which it is applied, is clearly calculated to stimulate thoughts. Thus each is pregnant with meaning.

"Debonair" is a word which I think would mean something fairly definite to any one sufficiently literate to comprehend a movie, and that would include most everyone. It connotes a person who is affable and courteous, graceful and gay. As applied to toiletries it is suggestive of aids to the creation of such a personality.

The portion "ebonaire" applied to applicant's hair pressing cream or hair straightening kits is a sort of anglicized version of the Chinese ideogram. It is inescapable that as used it is a play on the word "ebony," which Negroes have taken to themselves in several connections, and applicant's goods go primarily to the Negro market. The suffix "-aire" is a common one. Why it was used I have no way of knowing but I will assume, arguendo, that it was coupled with "ebon" to suggest the word "debonaire." If that was the purpose, I think there is only a 50% chance the idea would get across because of the many other uses of "-aire." Considering the market for the goods, I believe the predominant impression is bound, in any case, to be *ebony*, with a fancy ending, like those used in the names of cars and real estate developments. Appellant says the mark "suggests a debonaire negro." That is good advocacy, but to the public I think "ebonaire" would suggest, rather, a product *for* negroes. "Debonair" carries no such suggestion.

Let me illustrate my point by expanding the field. Suppose we had the following trademarks: Yvonneaire, Devonair, Ebonaire, and Debonair. While it can be said they all sound somewhat alike and some of them even look alike, each is dominated by or is a name or word which has meaning, conveys an idea, and

hence raises associations in the mind of the public. The first suggests a French girl, the second English countryside, the third (when used on a product sold primarily to Negroes) ebony or the Negro race, and the last is simply a word with its own meaning, which is quite different from the meanings suggested by the other three.

It is my opinion that even though purchasers of applicant's products should sense in its mark the suggestion of the common *word* "debonaire," they would not for that reason be confused and think that there was a relationship, with respect to origin, with other toiletries sold under the trademark "Debonair." This is because of the predominant suggestion of "ebony" in applicant's mark and its unique relationship to the products on which it is used. The primary meanings engendered by perception of applicant's and opposer's marks, according to my view of the matter, are poles apart and I think that is enough to preclude confusion.

For these reasons I agree with the decision to affirm.

MARTIN J. (dissenting), with whom SMITH, J., joins:

Although applicant's mark includes "Posner's" I believe that the trademark significance to the public would reside in "ebonaire" and there is sufficient similarity between "ebonaire" and "Debonair" to raise some doubt in my mind as to the likelihood of confusion. Therefore, I would *reverse* the decision of the Trademark Trial and Appeal Board.

U.S. Court of Customs and Patent Appeals

THE GREEN SHOE MANUFACTURING CO. *v.* NATIONAL SHOES, INC.

No. 6500. Decided May 3, 1960

[— 47 CCPA —; — F.2d —; — USPQ —]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—SUBSEQUENT DECISION IN ANOTHER COURT—TRADEMARK—OPPOSITION—REMAND.

Where it came to the attention of the Court of Customs and Patent Appeals that subsequent to the dismissal below of an opposition by appellant, based on its prior registrations of "StrideRite" for shoes, to appellee's application for the registration of "STRIDE WELL" for children's shoes, a Federal district court had entered a consent judgment holding that appellee's mark "STRIDE WELL" infringed upon appellant's registered marks and had permanently enjoined appellee from using its mark, and that subsequent to that judgment appellee had filed in the Patent Office a formal abandonment of its application, *Held* "that this case should be further considered by the Patent Office prior to a decision by this court, and accordingly the case is *remanded* to the Patent Office for consideration of the matters stated above, and for such further action, if any, as may be considered proper in view thereof."

Opposition No. 23,548.

MOTION TO REMAND GRANTED.

Kenway, Jenny, Witter & Hildreth, R. W. Kenway, Dos T. Hatfield for The Green Shoe Manufacturing Co.

Henry L. Burkitt for National Shoes, Inc.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of JUDGE O'CONNELL.

PER CURIAM:

This appeal is from the decision of the Assistant Commissioner sustaining the dismissal of appellant's opposition to the registration of "STRIDE WELL" by National Shoes, Inc. as a trademark for children's shoes. The opposition was based upon The Green Shoe Manufacturing Company's prior registrations of "StrideRite" as a trademark for shoes.

It has come to our attention that subsequent to the Assistant Commissioner's decision in this case, the United States District Court for the Southern District of New York, in *The Green Shoe Manufacturing Co. v. National Shoes Inc.*, Civil Action 147—215, entered a consent judgment on September 10, 1959 holding that appellee's mark "STRIDE WELL" infringes upon appellant's registered marks; that the court permanently enjoined appellee from using its said mark; and that subsequent to that judgment, appellee filed in the Patent Office a formal abandonment of the application involved in this appeal.

In view of those facts, it is thought that this case should be further considered by the Patent Office prior to a decision by this court, and accordingly the case is *remanded* to the Patent Office for consideration of the matters stated above, and for such further action, if any, as may be considered proper in view thereof.

REMANDED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,926,939, W. M. Camp, Plastic travelers, filed Feb. 3, 1960, D.C., W.D.S.C. (Greenville), Doc. 2705, *Coats & Clark, Inc. v. U.S. Ring Traveler Company*. Consent judgment validating patent and dismissing complaint with prejudice June 9, 1960.

2,868,185, J. G. Oetzel, Electromagnetic friction device, filed June 30, 1958, D.C., E.D. Wis. (Milwaukee), Doc. 58-C-180, *Warner Electric Brake & Clutch Company v. Eaton Manufacturing Company*. Stipulation and order dismissing action June 8, 1960.

2,418,494, J. C. Wilson, Synchronizing-signal separator, filed Sept. 14, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1486, *Hazeltine Research, Inc. v. Philco Distributors, Inc.* Cause dismissed by agreement June 2, 1960.

2,449,972, R. Beach, Elimination of static electricity, filed Sept. 9, 1959, D.C.N.J. (Newark), Doc. 764/59, *Herman H. Sticht Co., Inc. et al. v. J. B. Ward & Sons*. Consent judgment; patent held valid and infringed; injunction granted June 6, 1960.

2,888,808, J. C. Webber, Well swab; **2,719,708**, same, Well tools and sealing means therefor, filed June 8, 1960, D.C., S.D. Tex. (Houston), Doc. 12/196, *Jack C. Webber et al. v. Borg-Warner Corporation et al.*

2,892,899, L. R. Flaxman, Hair drying hood construction, filed June 6, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 628/60-WB, *Lillian R. Flaxman v. General Electric Company*.

2,896,898, Marshall and Fredd, Well device; **2,888,704**, J. V. Fredd, Well devices, filed Jan. 28, 1960, D.C., S.D. Tex. (Houston), Doc. 13/003, *Otis Engineering Corporation v. Camco, Incorporated*. Complaint and counterclaims dismissed with prejudice May 31, 1960.

2,719,708. (See 2,633,808.)

2,725,808, C. L. Tansel, Photographic composing apparatus; **2,904,883**, same, Phototypograph, filed Mar. 15, 1960, D.C., S.D.N.Y., Doc. 60/1059, *Harris-Intertype Corporation v. Photon, Inc. et al.* Suit transferred to D.C. Mass. (Boston) June 8, 1960.

2,731,888, E. L. Tunsen, Apparatus for forming concrete pipe in situ, filed June 7, 1960, D.C., E.D. Wash. (Spokane), Doc. 1958, *No-Joint Concrete Pipe Co. v. R. A. Hansen et al.*

2,784,900, H. C. Wernecke, Clinch nut fastener, filed Oct. 21, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1684, *Victor Supply Company v. Indraline Corporation*. Dismissed by stipulation without prejudice June 1, 1960.

2,795,258, Berry and Wells, Bag, filed Feb. 9, 1960, D.C., S.D.N.Y., Doc. 60/536, *Morris J. Berry and Louis Wells, doing business as Fashioncraft Products v. Empire Shield Corporation*. (Stipulation and order adding Empire Bag Company as party defendant June 6, 1960.) Consent judgment; patent held infringed, injunction granted June 6, 1960.

2,945,356, D. A. Battiste, Process of preparing an in-can baked canned cake product, filed Aug. 6, 1956, D.C.N.J. (Newark), Doc. 882/58, *Donald A. Battiste v. Vacuum Baking Corporation*. Consent order of dismissal of complaint and counterclaim with prejudice June 8, 1960.

2,906,871, W. L. Tancred, Relay, filed June 8, 1960, Ct. Cls., Doc. 220/60, *W. N. Berg v. The United States*.

2,867,187, Wilbur R. Joy, Cutting tools and method of making same; Reg. No. 668,899 (HILLBILLY BITS), Coal Bit Company, Coal cutting machine bits, filed Oct. 12, 1959, D.C., E.D. Ky. (Lexington), Doc. 580, *Wilbur R. Joy and Coal Bit Company v. Logan Bit Company*. Consent order of dismissal May 12, 1960.

2,878,978, E. Carlson, Driving mechanism for retractable antennae, filed Mar. 31, 1959, D.C., E.D. Mich. (Detroit), Doc. 18973, *Pioneer Specialty Company v. Casco Products Corporation*. Stipulation and consent judgment against defendant June 3, 1960.

2,883,764, H. F. Jurgeleit, Transfer molding apparatus, filed June 8, 1960, D.C., N.D. Ind. (Hammond), Doc. 2734, *United States Rubber Company v. Tie Mold Design Service Co., Inc. et al.*

2,896,822. (See 2,725,803.)

2,896,881, J. B. Straley, Apparatus for spraying substances onto fruit surfaces, filed June 9, 1960, D.C., S.D. Fla. (Jacksonville), Doc. 3861-T, *Brogdex Company v. American Machinery Corporation et al.*

2,928,784. (See 2,696,054.)

2,934,287, W. P. Henderson, Valves, filed June 7, 1960, D.C., N.D. Tex. (Fort Worth), Doc. 8507, *Walter P. Henderson v. Robert P. Mitchell, Inc. et al., doing business as Colonial Motor Company*. Same, filed same, Doc. 8508, *Walter P. Henderson v. Hall Sprinkler Company*.

Re. 23,609 (of 2,396,493), A. T. Comiskey, Sr., Motorcycle windshield, filed June 6, 1960,, D.C., E.D. Mich. (Detroit), Doc. 20201, *Comiskey Engineering Co., Inc. v. Joseph Buegeleisen Co., Inc. et al.*

Des. 176,681, R. L. Dourfler, Spoon or other similar article of flatware, filed Dec. 30, 1957, D.C., S.D.N.Y., Doc. 128/175, *The International Silver Company v. Wellingware, Inc.* Consent judgment; defendants enjoined June 3, 1960.

REISSUES

JULY 26, 1960

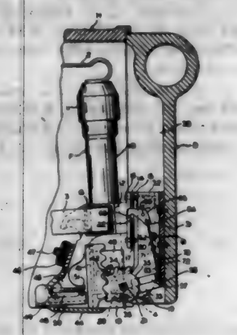
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,847
LOAD INTERRUPTER FUSE CUTOUT

George R. McCloud, Cudahy, Wis., assignor to McGraw-Edison Company, a corporation of Delaware

Original No. 2,810,803, dated Jan. 21, 1958, Ser. No. 537,456, Sept. 29, 1955. Application for reissue Oct. 1, 1958, Ser. No. 765,270

12 Claims. (Cl. 200—114)



1. A load interrupter fuse cutout comprising in combination, an insulating supporting structure, a pair of terminals mounted on said support in insulated spaced relation, hinge members carried by said support, a fuse tube pivoted at one end on said hinge members and including a pair of spaced contacts normally engaged respectively with said terminals, a fuse link in said tube having a fusible section electrically connecting said contacts and projecting from said tube adjacent the pivoted end thereof, and mechanism engageable with the projecting portion of said fuse link for mechanically rupturing the fusible section of said link, said mechanism comprising an element movable in a longitudinal direction relative to said tube and parallel with the axis of said tube and into stressing engagement with said link, and a manually operable lever interacting with said element to move it in said longitudinal direction and movable about a pivot axis in fixed position relative to said supporting structure, whereby rotative movement of said lever is translated to a linear movement of said element parallel to the axis of said tube.

24,848
CATALYTIC OXIDATION OF AROMATIC CARBOXYLIC ACIDS TO PHENOLS

Warren W. Kaeding and Robert O. Lindblom, Concord, and Robert G. Temple, Palo Alto, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Original No. 2,727,926, dated Dec. 20, 1955, Ser. No. 483,864, Jan. 8, 1954. Application for reissue Feb. 8, 1960, Ser. No. 9,411

17 Claims. (Cl. 260—621)

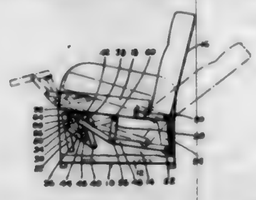
1. The method which comprises bringing at least one compound from the group consisting of monocarboxylic acids of the benzene series and anhydrides, salts and esters thereof, in liquid state, into contact with a copper compound which is soluble therein at least at reaction temperature, and maintaining the mixture at a temperature at which carbon dioxide is evolved, to produce a phenolic compound, the reaction being carried out [at least in part, in the presence of water vapor] *while passing at least intermittently an otherwise inert gas containing elemental oxygen into intimate contact with at least part of the liquid reaction mixture to maintain at least part of the copper compound in the cupric condition, and while introducing a stream of steam into intimate contact with at least a part of the liquid reaction mixture.*

24,849
ARTICLE OF REPOSE FOR SUPPORTING THE BODY OF A PERSON

Johannes Luckhardt, deceased, by Wanlli Luckhardt, administrator, Berlin-Dahlem, Germany, assignor, by mesne assignments, to Anton Lorenz, Ocean Ridge, Boynton Beach, Fla.

Original No. 2,750,988, dated June 19, 1956, Ser. No. 478,019, Dec. 28, 1954. Application for reissue Oct. 7, 1957, Ser. No. 689,826

17 Claims. (Cl. 155—166)



17. In a reclining chair including a support, body-supporting means including a seat and back-rest mounted on said support for movement into various reclined positions, and a leg-rest positioned beneath said seat and adapted to be moved upwardly and outwardly relative to said seat, the improvement comprising control means for moving said leg-rest in response to reclining movement of said back-rest including a first link pair having first and second links pivotally connected to each other, means operatively connected to said first link and pivotally mounting said first link pair at a first location on said chair, a second link pair having third and fourth links pivotally connected to each other, means operatively connected to said third link and pivotally mounting said second link pair at a second location on said chair spaced from said first location, said first link pair having said first and second links positioned respectively forwardly and above said third and fourth links of said second link pair, a connecting link rigid with one link of said first link pair and having a pivotal connection to one link of said second link pair for effecting movement of said first and second link pairs in coordination with each other, said second link of said first link pair being pivotally connected to said leg-rest at a first location, said fourth link of said second link pair being pivotally connected to said leg-rest at a second location spaced from said first location.

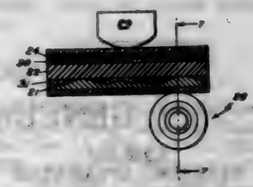
24,850
ELECTROSTATIC TAPE AND METHODS OF CONSTRUCTION

Albert J. Devaud, Wayne, Pa., assignor, by mesne assignments to Minneapolis-Honeywell Regulator Company, a corporation of Delaware

Original No. 2,825,558, dated Mar. 4, 1958, Ser. No. 503,752, Apr. 25, 1955. Application for reissue Mar. 25, 1959, Ser. No. 801,980

9 Claims. (Cl. 154—121)

9. A tape for use in the recording of magnetic signals comprising a base member formed of a non-conductive plastic material having a first thickness dimension, a second member formed of a non-conductive plastic material having a thickness dimension substantially less than that of said base member, a magnetic recording material formed directly on one surface of said second member, and means bonding said second member to said base member so that



said magnetic material is between said base and said second members.

PLANT PATENTS

GRANTED JULY 26, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,961
ROSE PLANT

Hendrikus Antonie Maria Verscheuren, Hapz, Netherlands, assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Oct. 16, 1959, Ser. No. 847,834

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a free blooming habit and attendant suitability for greenhouse cut-flower production, strong flower stems, a distinctive Capucine Buff, lightly overcast with Orange-Pink general color tonality of the flowers, and a substantially uniform and prolonged flower color retention from beginning to end.

1,962
ROSE PLANT

Dennison H. Morey, Jr., Pleasanton, Calif., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Filed Oct. 19, 1959, Ser. No. 847,449

1 Claim. (Cl. 47—61)

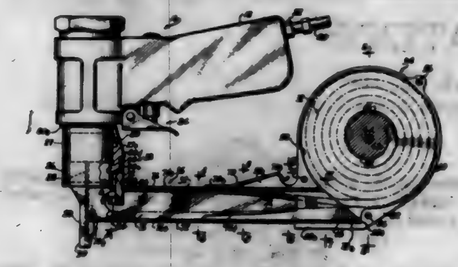
A new and distinct variety of rose plant of the floribunda class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a distinctive contrast between the foliage color and flower color, the relatively large size of the flowers, unusual sepals which form a hood over the bud, with one sepal being unusually broad and serrated and the other sepals deeply serrated, and a distinctive Geranium Pink, lightly overcast with Scarlet-Red general color tonality of the flowers.

PATENTS

GRANTED JULY 26, 1960

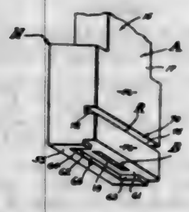
GENERAL AND MECHANICAL

2,946,859
STAPLING APPARATUS
Oscar A. Wendel, Mundelein, Ill., assignor to Fastener Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 29, 1956, Ser. No. 574,870
3 Claims. (Cl. 1—49)



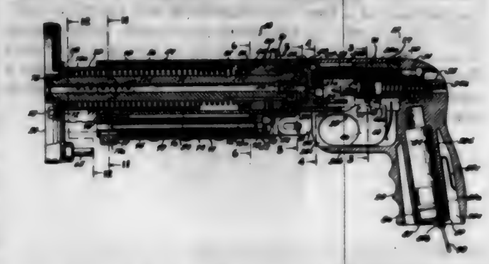
1. In a fastener driving apparatus using a reciprocable fastener driver element, structure defining a drive track lying substantially within a single plane and adapted to slidably receive said driver element, a magazine carried on said apparatus and including means for supporting a coil of staples for rotation about an axis parallel to said plane and transverse to said drive track, said coil of staples including a plurality of individual U-shaped staples flexibly joined together in a strip that is coiled with the legs of the individual staples disposed parallel to said axis and transverse to said drive track, guide means positioned between said magazine and said drive track and receivable between the legs of the staples for displacing said staples about an axis perpendicular to said drive track to move the legs of the staples from a position transverse to said drive track to a position parallel to said drive track, and means engaging said staples for feeding said staples into said drive track from said guide means in synchronism with reciprocation of said drive element.

2,946,860
CLIP POSITIONING HEAD FOR FASTENER DRIVING TOOL
Richard E. Powers, Monterey Park, Calif., assignor to Powers Wire Products Company, Inc., Monterey Park, Calif., a corporation of California
Filed Apr. 7, 1958, Ser. No. 726,795
5 Claims. (Cl. 1—49)



1. A fastener driving tool with a head for positioning a ferrous clip having a flat base and a flat lip joined by a connecting flange to and overlying the base and for the application of a fastener to the base to anchor the clip and for the application of a fastener to the lip to close the clip to engage the lip and base, and including, an elongate body with a fastener driveway passage extending therethrough and opening at a bottom face normal to the body, and a head at the bottom of the body with a recess formed therein to position the base and lip of the clip for reception of a fastener, a second recess in the head to accommodate the lip of the clip, and a magnet carried by the head and with a face exposed at said second recess and engaging the lip and retaining the clip in position on the head during the driving of the fastener.

2,946,861
EXPLOSIVELY ACTUATED TOOLS
Rowland J. Kopf and Robert W. Henning, Rocky River, and Roger Marsh, Hudson, Ohio, assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Original application May 14, 1953, Ser. No. 355,034. Divided and this application Jan. 7, 1959, Ser. No. 796,999
4 Claims. (Cl. 1—186)



1. In a tool for explosively driving fasteners into a surface, comprising a barrel through which the fastener is driven by a powder actuated charge, a deflector pad shield telescopically mounted over said barrel with the shield at the barrel muzzle, said shield including an adjustable gauge with rotatable indicia thereon for aligning the tool for any desired fastener spacing, and means detachably connecting said shield and barrel at spaced arcuate intervals so as to position the indicia in the best workable position and including means preventing relative rotation at each interval between said shield and barrel.

2,946,862
PROTECTIVE HOOD
Bernard Spooner, deceased, late of New York, N.Y., by Pearl Spooner, 817 West End Ave., and S. Lawrence Atkins, executors, both of New York, N.Y., assignors to Pearl Spooner, New York, N.Y.
Filed Oct. 21, 1957, Ser. No. 691,331
2 Claims. (Cl. 2—3)

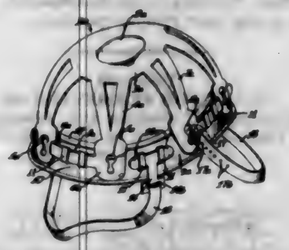
1. A protective hood comprising a front protective member consisting of a front panel having lateral edges and at least one side panel hingedly secured to each of said lateral edges of said front panel, said front panel comprising two individual portions spaced apart from each other to form a horizontal slot therebetween, means for connecting said portions in spaced apart position, all

said panels including steel plates of predetermined thickness in order to withstand a bomb blast, first strap means secured to the top of said front panel and extending rearwardly and downwardly, two second strap means disposed crosswise and parallel to each other and secured to the rear edge of said first side panels, said second strap means interlocking said first strap means, and two third strap means disposed crosswise and parallel to each other substantially at the same level as that of said second strap means, the latter being adapted to engage the back of the head of the user and said third strap means being permanently secured to the rear edges of said side panels and being adapted to engage the front of the head of the



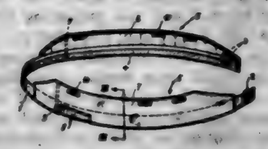
user in order to space apart said front panel from the face of the user of said hood, and a rear protective member comprising a rear panel having lateral edges and at least one second side panel hingedly secured to each of said lateral edges of said rear panel and engaging the corresponding one of said first side panels, and fourth strap means secured to the top of said rear panel and adapted to be releasably connected with the top of said front panel, and fifth strap means secured to the free front edges of said second side panels, the free edges of said fifth strap member being joined over the front face of said front panel to retain said rear protective member in operative position in connection with said front protective member.

2,946,863
MOLDED SUSPENSION FOR SAFETY HAT
Charles J. Boyer, West Reading, Pa., assignor to The Electric Storage Battery Company, Philadelphia, Pa.
Filed Apr. 28, 1959, Ser. No. 809,434
6 Claims. (Cl. 2—3)



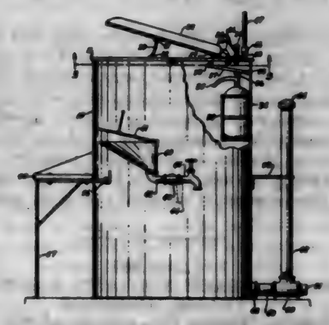
1. A suspension for a safety hat comprising an integrally molded crown portion of flexible plastic material, comprising a central, substantially circular portion and a plurality of triangular portions extending substantially radially outwardly from said circular portion and each terminating in an apex portion, said circular portion forming the bases of said triangular portions, a keyhole slot formed in each of said apex portions, said triangular portions being in pairs, one triangular portion of each pair having an integral strap extending substantially tangentially from the apex portion, and the other triangular portion of each pair having a loop formed in the apex portion through which said strap may be adjustably extended and into which it is snugly and frictionally fitted for adjusting the distance between the apices of said pair and thereby adjust the crown portion to fit the wearer's head.

2,946,864
BELT
Charles Disteris, Morges, Switzerland
(58–64 rue du Lac, Morges, Canton of Vaud, Switzerland)
Filed Nov. 14, 1956, Ser. No. 622,215
Claims priority, application Switzerland Nov. 23, 1955
1 Claim. (Cl. 2—312)



In a detachable belt intended for supporting a garment internally and for being placed at the level of the wearer's hips, in combination: an elastic strap, two widened portions secured to said strap, each of a length slightly less than half the length of said strap, said widened portions being arranged substantially symmetrically relatively to the ends of said strap and extending above the upper edge of said strap and intended to be situated at the level of the wearer's waist, each of said widened portions being formed by a band of faille secured only to the upper portion of said strap and by a satinette lining covering said band of faille and secured to the lower portion of said strap, whereby said widened portions are reinforced thus preventing the said portions from folding over under the action of the garment's weight, the lower edge of the lining of each of said widened portions having one cut-away portion exposing said strap and enabling the strap to be deformed elastically, and means on the upper portion of said widened portions for fixing the belt to said garment, whereby the said garment is adapted to be held at the height of the wearer's waist whilst the strap is supported on the wearer's hips.

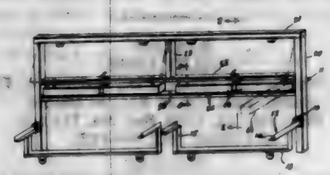
2,946,865
TOILET UNIT
Daniel L. Smith, Fort Myers, Fla., assignor to Daniel L. Smith, Fort Myers, Fla., as trustee
Filed Jan. 28, 1958, Ser. No. 711,650
3 Claims. (Cl. 4—115)



1. In a device of the class described, a self-supporting receptacle having a fixed cover at its upper end, said cover being formed with an open mouth and the rear end of said mouth being significantly spaced from the adjacent rearward wall of said receptacle, a seat member having an opening therethrough hingedly mounted upon an axis

located between the rear end of said open mouth and said rearward receptacle wall for movement into and out of overlying relation to said mouth, a pair of doors, respectively hinged adjacent the opposite edges of said mouth upon axes angularly related to, and below, the hinge axis of said seat, the edges of said doors remote from their hinge axes meeting, when elevated, to close said receptacle mouth, spring hinge means for each of said doors yieldably holding said doors in such elevated positions, means projecting from the lower surface of said seat and engageable with said doors to force the said remote edges of said doors downwardly, when said seat is moved into use position, to open said mouth, lever means secured to said seat and projecting therefrom beyond the hinge axis of said seat, a headed post stationarily upstanding from said cover at a point disposed rearwardly of said seat axis, said lever means straddling said post, spring means confined between the head of said post and said lever means and effective to hold said seat yieldably in an elevated position in which said projecting means permits full closure of said doors, a container for fluid mounted within said receptacle closely adjacent the rearward wall of said receptacle and embodying pump mechanism including a spring-loaded, upwardly-projecting plunger effective, upon depression against its spring load, to discharge a quantity of fluid from said container to the interior of said receptacle, a lever pivotally mounted upon an axis closely adjacent said receptacle rearward wall and projecting forwardly therefrom beyond the vertical plane including said seat hinge axis to overlie said plunger in operative engagement therewith, and reciprocating means actuated by movement of said seat, against the tendency of said spring means, into use position, to engage said lever adjacent the forward end thereof to swing said lever and to depress said plunger.

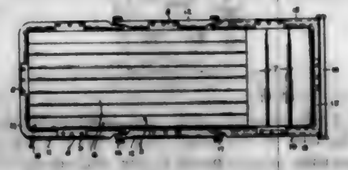
2,946,066
BED WITH TILTING HEADBOARD
Ruth R. Hopkins, 10315 Shoreham Court, San Jose, Calif.
Filed July 1, 1957, Ser. No. 669,116
9 Claims. (Cl. 5—327)



1. A headboard of the character described comprising a frame having upper and lower, spaced horizontal frame members, a back rest hinged along its upper edge to said upper member and normally assuming a vertical position with its lower edge adjacent said lower member, and a crank member for swinging said head rest from its normal, vertical position to an inclined position, said crank member being journaled in said lower frame member and serving also to support the head rest in its inclined position.

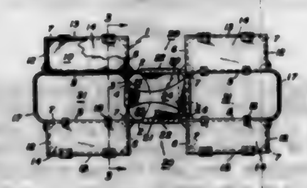
2,946,067
INFLATABLE BEACH MAT AND A SUPPORTING FRAME THEREFOR
Louis Wolshin, Hialeah, Fla., assignor of fifty percent to Stanley Axelrod, Miami Beach, Fla.
Filed Jan. 30, 1959, Ser. No. 790,243
2 Claims. (Cl. 5—344)

1. A frame device for supporting a beach mat against flexing when the mat is floatingly supported in the water, the frame being rectangular in shape and comprising end sections and an intermediate section that are hingedly connected together, means carried by the beach mat and whereby to fixedly connect the marginal edge portions of the mat with respect to the several frame members, the beach mat having a head rest, the frame members being foldable upon their hinge joints and whereby one end section is connected to the opposite end section for angularly disposing the opposite end section, means telescopic within the last named end section that is extendable and foldable over the head rest and whereby to support a flexible shade thereover and means to limit the downward swinging movement of the extended section whereby it is disposed above and in overlying relation to the head rest, the said frame embodying a U-shaped foot section, a U-shaped head section and connecting intermediate members, the foot and head sections being hingedly connected through the intermediate sections, clamping nuts carried by the hinges and whereby to rigidly support the frame in an extended position to embrace the marginal edges of the mat, the mat being provided with a plurality of flexible



tabs and with each of the tabs being provided with snap fasteners that have mating engagement with snap fasteners carried by the several frame members, a shade holding device that is telescopic within parallel sides of the head section, the telescopic sections being connected by a cross rail, the said foot section and the intermediate sections being shiftable upon their hinge joints and with the foot section being adjustably connected to the head section and whereby to form a triangle with the head section being angularly supported, the head section in its angularity supporting the head rest in an angular position, the said telescopic sections being extendable and hingedly connected whereby to angle the extended portion downwardly in overlying relation to the head rest of the mat and means to limit the downward movement of the extended section and whereby to support the shade covering in upper spaced relation with respect to the head rest of the mat, the said foot frame and the intermediate frame members being disconnected with respect to the mat during their folding operation.

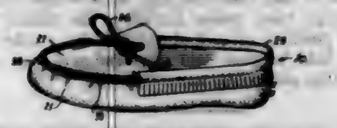
2,946,068
FLOAT FOR PERSONAL USE
Harry Jasper, 737 Madison Ave., Albany, N.Y.
Filed May 2, 1957, Ser. No. 656,554
1 Claim. (Cl. 9—347)



A float for supporting a person on the surface of a body of water comprising a plurality of framing strips arranged in two spaced parallel pairs secured in right-angularly intersecting relation to provide a rectangular central opening with right-angularly related strip portions extending outwardly from each of the four corners of the opening and defining the sides and ends of a buoyant-

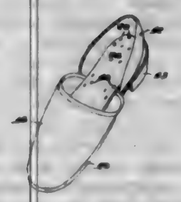
element enclosure disposed diagonally outwardly beyond each corner of the central opening, an occupant-supporting seat mounted in the opening, and a buoyant element secured in each of said enclosures.

2,946,069
METHOD OF MANUFACTURING MOCCASINS
Joseph D. Bozza, Jersey City, N.J., assignor to The Jo-An Shoe Manufacturing Co. Inc., Fair Lawn, N.J., a corporation of New Jersey
Filed Dec. 17, 1956, Ser. No. 628,928
8 Claims. (Cl. 12—142)



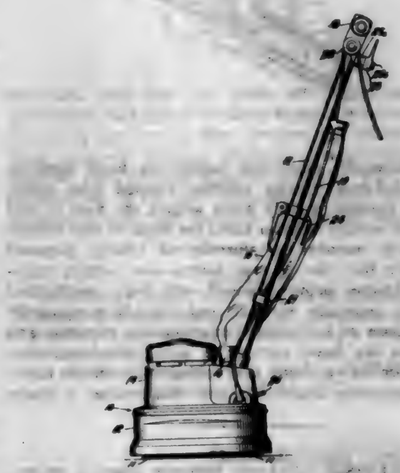
1. The method of manufacturing footwear from a first relatively highly flexible piece having a sole portion and a portion extending upwardly therefrom to form part of an upper, and from a second piece providing a further part of said upper, said method comprising the steps of forming a toe pocket in said first piece with the ultimately inside surface of said pocket facing outwardly, securing said second piece to said first piece about the periphery of said pocket with the respective edges of said pieces in contiguous edge-to-edge alignment under tension appropriate to permit said pieces being turned into edge-abutting relationship and with said second piece having its ultimately outside surface in face-to-face relationship with the ultimately outside surface of said first piece, and turning the article thus made inside out to place said pieces in said edge-abutting relationship.

2,946,070
METHOD OF MAKING TURNED SLIPPERS
Earl H. Spaulding, Wakefield, Mass., assignor to L. B. Evans' Son Company, Wakefield, Mass., a corporation of Massachusetts
Original application Jan. 17, 1956, Ser. No. 559,677, now Patent No. 2,845,724, dated Aug. 5, 1958. Divided and this application Apr. 15, 1958, Ser. No. 728,583
4 Claims. (Cl. 12—142)



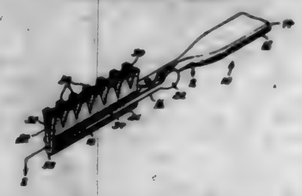
1. In the method of making turned slippers, the steps comprising providing a vamp having rearwardly extended wing portions, an outsole and a separate quarter, lasting and stitching the vamp to the outsole inside out and cutting the stitches back to free the wings from the outsole, then removing the last and turning the vamp right side out, assembling a shank piece with its forward portion within the vamp, securing the forward portion of the shank piece to and upon the upper surfaces of said free wings, inserting the forward end of the quarter under the wing portions and under the attached shank piece to dispose the rear portion of the shank piece within the quarter, and then securing the rear portion of the shank piece to the outsole leaving the forward portions of the shank piece and the quarter, respectively, unattached to the sole.

2,946,071
LIFTING AND CARRYING HANDLE FOR DOMESTIC APPLIANCE
Bengt Erik Nilsson, Hagersten, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 25, 1957, Ser. No. 648,273
Claims priority, application Sweden Mar. 29, 1956
1 Claim. (Cl. 15—49)



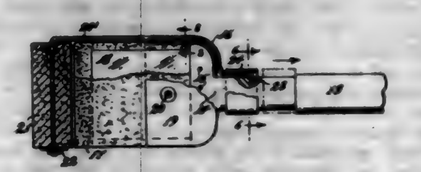
A motor-driven appliance of the class described having structure adapted to be positioned on a surface and be moved thereover and an electrical cord for connecting the appliance to a source of electrical supply, an elongated rod comprising first and second pipe sections having apertured ends which telescopically fit one within the other, said first pipe section being pivotally mounted on said structure, means providing a hand grip at the outer free end of said second pipe section for controlling the appliance and manipulating said structure about the surface, said rod being angularly movable on the structure and inclined upwardly and rearwardly therefrom during normal operation of the appliance, a mounting bracket having an apertured collar encircling said rod at the telescopically fitted ends of said pipe sections, means including a part which is received by the apertures in said collar and said pipe sections for attaching said bracket to said rod and connecting said pipe sections to one another at the telescopically fitted ends thereof, a carrying handle, means pivotally mounting said handle on said bracket for angular movement in a plane which passes through said rod and is perpendicular to the surface upon which said structure is adapted to be positioned, said handle being movable between a first position closely adjacent to and alongside said rod to a second position substantially perpendicular to said rod and extending forwardly from said rod toward the front of said structure, said pivotal mounting means including provisions for holding said carrying handle at said second position when moved thereto from said first position, a pair of elements on said rod and about which the electrical cord is adapted to be wound, said elements being disposed in said plane and extending rearwardly from said rod and said structure in a direction diametrically opposite from that of said carrying handle in its second position, one of said elements being fixed to said second pipe section at a region thereof which is nearer to said hand grip than to said collar, and said other element being carried by said bracket.

2,946,072
MASSAGE AND BRUSH TYPE SINGLE-USE TOOTHBRUSH
Edward Z. Piller, 16 Westwood Circle, Roslyn Heights, N.Y., and Joseph J. Keller, 269 86th St., Brooklyn, N.Y.
Filed Nov. 26, 1957, Ser. No. 699,695
5 Claims. (Cl. 15—110)



5. A disposable single-use toothbrush head comprising a folded-over outside member formed from material which expands greatly when wetted, the base of said folded-over outside member being the bight of said folded-over outside member, a pluratily of bristles disposed intermediate the plies of said folded-over outside member, said bristles being disposed with their longitudinal axis being generally vertical and extending upwardly from the base of said folded-over outside member, and stitching in the basal portion of said folded-over outside member for retaining said folded-over outside member in folded-over disposition and said bristles in place.

2,946,073
BRUSH HAVING A MAIN BRUSH AND A FLEXIBLY MOUNTED ROLL IN ADVANCE OF SAID MAIN BRUSH
Peter S. Vosbikian and Thomas S. Vosbikian, both of Malvern, Pa.
Filed June 13, 1957, Ser. No. 665,481
4 Claims. (Cl. 15—118)



1. A brush comprising an applicator in the form of a substantially rectangular block of absorbent, resilient material having a slit spaced from its front and opening through its rear end, a flat, flexible spring substantially filling said slit with its front and side edges spaced from the front and side walls of the applicator, a handle, means to secure the applicator and spring to the handle, a roll mounting rod having its inner end detachably connected with the handle and having a stretch extending along a side of the applicator and terminating in a lateral stretch in front of the applicator, and an absorbent roll mounted on the lateral stretch.

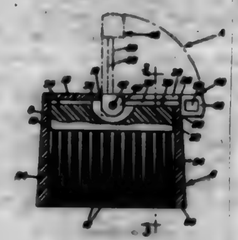
2,946,074
BATHING ACCESSORY
Charles W. Caldwell, 261 Mulberry St., New York, N.Y.
Filed Feb. 11, 1959, Ser. No. 792,513
4 Claims. (Cl. 15—122)

1. A bathing accessory comprising, in combination, a container having a bottom wall containing a number of small apertures, brush elements formed integrally with and extending downward from said bottom wall, and side walls containing opposite apertures; a sponge base extending over opposite side walls and containing apertures near each end; a handle thrust through the apertures in said side walls, through the apertures in said base, and passing over said base between the apertures in said base, said handle having means to secure it within said container; and a sponge retaining strip extending



from one of said apertured side walls to the other across said sponge base, means including the handle securing the end portions of said strip, whereby a cake of soap may be held between said strip and said base and partially within said container.

2,946,075
CLOTHES BRUSH
Walter Hardy Slaughter, Jr., 4314 Donald Ave., San Diego, Calif.
Filed Apr. 15, 1959, Ser. No. 806,511
2 Claims. (Cl. 15—184)



1. A pocket-size apparel brush comprising a hollow brush receiving and enclosing sheath having the additional function of a handle, said sheath having side walls, end walls, and a top wall and being open at the bottom, said top wall having an imperforate half-portion and a complemental half-portion provided centrally with a lengthwise slot, said slot being open at its ends, a projectible and retractible brush having a back telescoping and sliding in the hollow portion of the sheath and provided along the bottom with extensible and retractible bristles, and a brush operating and latching handle having an end portion hingedly connected to a median portion of said back, and a shank portion registrable and cooperable with the aforementioned slot, the longitudinal edges of said slot being beveled, the shank of said brush having corresponding bevels matching and cooperating with the first named bevels, said back being provided with a groove opening through at least one end of the back, said groove being adapted to accommodate a keying rib, and said shank being provided along one side with a keying rib which is projectible through the slot and adapted to fold into said groove.

2,946,076
ICE-SCRAPING TOOL
Sidney C. Morgan, 28345 Middlebelt, Livonia, Mich.
Filed Mar. 20, 1959, Ser. No. 800,486
2 Claims. (Cl. 15—236)

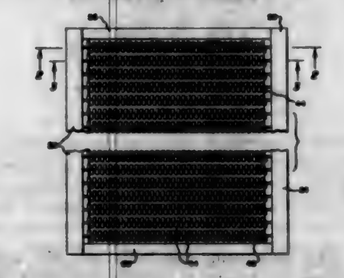
1. An ice-scraping tool comprising an elongated handle having a neck portion, a concave groove defining the end of said handle adjacent said neck portion, a threaded axial bore in said handle, said bore intersecting said concave groove, a generally U-shaped blade member of substantial thickness providing spaced apart inner and outer surfaces, said blade member having a bridge portion

curved in cross section and two outwardly flaring arm portions, and being connected to said handle by means of a screw extending through a central aperture in said bridge portion and into said bore, said bridge portion being seated in said concave groove, and said screw also extending through an aperture in a spacer strip positioned



within said bridge portion between said arm portions, said screw having a head in holding position relative to said spacer strip, each of said arm portions having a sharp, knife-edge defining an ice scraping means provided by a beveled, curved surface flaring outwardly from the inner surface of said U-shaped member to its outer surface.

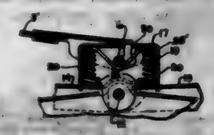
2,946,077
SHOE CLEANING APPARATUS
Arthur M. Dyer, 523 N. Graves, El Cajon, Calif.
Filed Aug. 19, 1957, Ser. No. 678,876
9 Claims. (Cl. 15—236)



1. A shoe cleaner comprising base means having camming surfaces; a plurality of closely spaced, substantially horizontal extending strip means the top sides thereof lying in substantially a single horizontal plane and adapted to be engaged by the sole of a shoe of a wearer of the shoe, the top sides of said strip means forming the sole supporting means for the wall of the shoe, said strip means each having camming surfaces cooperating with the camming surfaces on the base means, alternate camming surfaces of one of said means being inclined in the opposite direction for guiding all of said strip means for downward movement and for simultaneously guiding adjacent strip means for horizontal movement in opposite directions upon pressure being applied to all of said strip means through the shoe sole of the wearer; and means normally urging said strip means in directions opposite the first mentioned directions of movements.

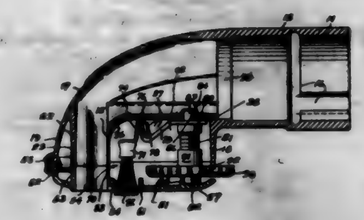
2,946,078
WINDSHIELD WIPER
Raymond A. Delbel, Cheektowaga, and Anthony C. Scinta, Hamburg, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Jan. 23, 1957, Ser. No. 635,860
9 Claims. (Cl. 15—250.32)

4. For use in attaching a windshield wiper element to its actuating arm element, a coupler mountable on one element for interlocking engagement with a part on the other element, said one element including a pressure distributing member movable relative to said coupling, said coupler having an entranceway leading over a retaining shoulder to a seat, and a keeper member spring-pressed toward the retaining shoulder for maintaining the part in-



terlocked with said seat while being substantially free of the part, said keeper member being displaceable against the spring urge by the other element part during its movement thereover in either direction to selectively shift the element part through manual guidance into either the entranceway or the seat the keeper member spring means reacting against said pressure distributing means.

2,946,079
SUCTION TOOL FOR VACUUM CLEANERS
George M. Kelly, Sturgis, Mich., assignor to Kingston Products Corporation, Kokomo, Ind., a corporation of Indiana
Filed Sept. 16, 1957, Ser. No. 684,220
6 Claims. (Cl. 15—371)



4. In a suction nozzle, an adjusting screw, a positioning member threadedly carried on said screw and being offset on the end of a lever arm extending away from the axis of said screw, said lever arm having an acutely bent portion on its free end and further including offset wings oppositely spaced on said bent portion, and an elongated brush having at its center portion a clip securely fastened thereto, said clip having a struck out rib extending upwardly and outwardly from said clip and terminating in an outer leg portion bent at an angle to be received between said wings and overlying said acutely bent portion of said lever arm, thereby to restrict the lateral movement of the brush while permitting adjustment in the direction of the axis of said screw.

2,946,080
SUCTION OPERATED FLOOR AND RUG CONDITIONING AND CLEANING TOOL
Willie D. Burch, 1138 NW. 13th St., Oklahoma City 6, Okla.
Filed June 26, 1956, Ser. No. 593,940
1 Claim. (Cl. 15—375)

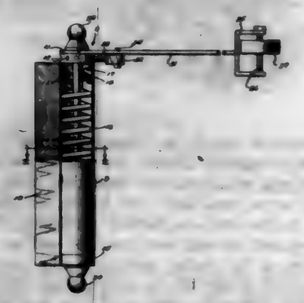
A cleaning appliance comprising a housing structure including a top wall, a parallel bottom wall, and surrounding side walls, a horizontal partition wall substantially paralleling the top and bottom walls and subdividing said housing into an upper shallow compartment and a lower shallow compartment, said partition and said bottom wall terminating in attached edges short of the adjacent side wall at the front of the cleaning appliance to define a space open to the upper compartment, a brush

head rotatably mounted in said space between the attached edges of the partition and bottom walls and the adjacent side wall and extending transversely across the front of said housing, a vertically shallow turbine having peripheral blades rotatably mounted on a vertical axis upon said partition wall and located in the lower compartment, said bottom wall adjacent to the brush head having a duct therein located immediately below a segmental portion of the outer peripheral portions of said



blades whereby air sucked into the tool will pass through the duct and onto the turbine blades for rotating the turbine, said partition wall immediately above said duct having an opening therein providing communication between the upper and lower compartments, drive means in the upper compartment connecting said brush and turbine for rotation, and tubular means connected to the housing for receiving air under suction and drawing it through the upper compartment, around the brush head, and through the turbine by way of said ducts.

2,946,081
DOOR CLOSING DEVICE
Fred W. Juergens, 654 Newton St., Waterloo, Iowa
Filed Nov. 2, 1956, Ser. No. 619,985
7 Claims. (Cl. 16—80)



2. A door closer comprising a casing, mounting means on said casing for connection with a door frame, a rotary member on said casing, means retaining the rotary member on the casing, spring means in said casing connected to said rotary member and biasing the same, an arm received upon the retaining means and connected to said rotary member and extending therefrom, link means connecting the arm to the rotary member whereby said arm and member rotate in unison, and door bearing means on the free end of said arm.

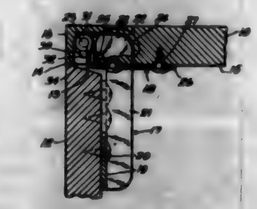
2,946,082
BOX SPRING HANDLE
Ongjen Jules Pompitch, Itasca, Ill., assignor to Illinois Tool Works, Chicago, Ill. a corporation of Illinois
Filed Sept. 30, 1957, Ser. No. 686,961
14 Claims. (Cl. 16—125)

7. A handle structure for application to a workpiece comprising a one-piece plastic handle member including a looped handle portion having spaced opposite end sections and attachment portions integral with and extending between said opposite end sections of said looped portion, and a sheet material clip member including elements engaging opposite sides of said attachment portions for retaining said members in assembled relationship, said clip member and said attachment portions having aligned aperture means therethrough for accommodating a fastener, said clip member including a section overlying and



engaging edges of said attachment portions facing inwardly of said looped handle portion, and one of said members including laterally projecting means engageable with the workpiece for preventing the handle structure from pivoting around the fastener when the handle structure is fully applied to the workpiece.

2,946,083
DROP-LEAF HINGES
Ken Fryar, Michigan City, Ind., and Leslie Diamond, Gardner, Mass., assignors to Conant Ball Company, Gardner, Mass., a corporation of Massachusetts
Filed Apr. 28, 1958, Ser. No. 731,230
6 Claims. (Cl. 16—135)

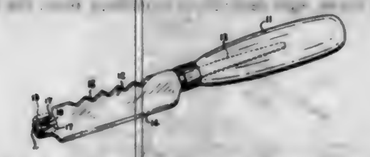


1. A hinge comprising two butts, one butt comprising an elongated bar having a laterally extending mounting plate arranged at right angles thereto, the bar projecting from one surface of the plate, the bar having, at its free end, a hook-shaped arm spaced from the mounting plate, the free end of said arm extending beyond the other surface of said plate, the other butt comprising an attaching plate, the plane of said arm being at right angles to the plane of said plate, offset parts extending integrally from an end edge of said attaching plate, said offset parts terminating in spaced cylindrical pintle bearings, the end of said hook-shaped arm having a bearing positioned between said spaced cylindrical pintle bearings, the axes of the pintle bearings being offset with respect to said offset parts, a pintle in the bearing of said arm and arranged axially of said cylindrical pintle bearings for hingedly coupling said butts, the second named butt having an elongated aperture, bifurcating one end thereof to form said cylindrical bearings and offset parts, and said arm operating in said elongated aperture in movement of the butts into open and closed position.

2,946,084
SKINNING DEVICES
Raymond P. Boutillette, 239 High St., Webster, Mass.
Filed July 3, 1958, Ser. No. 746,459
3 Claims. (Cl. 17—7)

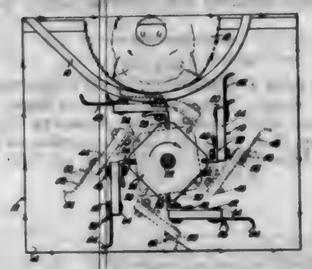
3. A skinning device of the character described comprising the combination of a relatively long and narrow

thin blade portion lying in a relatively flat single plane having a longitudinal outwardly tapering sharp edge portion along one side thereof, a serrated edge along its opposed side and having a terminal end of a width less than the width of said blade portion extending outwardly intermediate said opposed edge portions of said blade



with a portion thereof lying in the plane of said blade portion and the remainder thereof curving outwardly and inwardly in a rearward direction and terminating in a bifurcated hooklike portion having spaced relatively pointed ends and a handgrip portion secured to the opposed end of said blade portion.

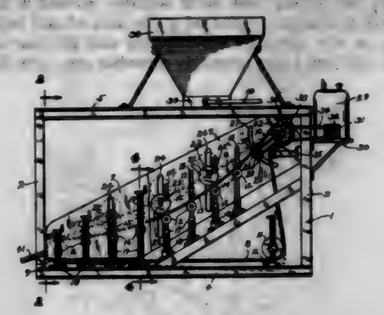
2,946,085
SCRAPER FOR HOG DEHAIRING MACHINE
Roy H. Farchmin, 9819 Jarboe St., Kansas City, Mo.
Filed May 29, 1958, Ser. No. 736,570
4 Claims. (Cl. 17—18)



1. A paddle for use in a hog dehairing machine or the like, comprising a normally flat, elongated, flexible, resilient, rubber-like body having opposite end portions, said body having attaching means operatively associated with one end portion thereof; and at least one flexible, resilient, elongated blade member attached to the opposite end portion of said body, said blade being of substantially the same length as that of said body and having an arcuate terminal portion on its free end, whereby a substantial portion of the flexing of said paddle is assumed by said blade.

2,946,086
APPARATUS FOR FORMING PELLETS FROM PULVERULENT MATERIAL
Abe W. Mathews and Joseph J. Banko, both % Abe W. Mathews Engineering Co., 555 W. 27th St., Hibbing, Minn.
Filed Jan. 21, 1959, Ser. No. 788,087
2 Claims. (Cl. 18—1)

1. Apparatus for forming pellets from compactible material comprising, frame structure, an endless belt mounted in said frame structure and defining an upper service flight, means for positioning and retaining the belt in said service flight in an increasingly upturned path of travel including a plurality of longitudinally spaced supporting rollers underlying said belt and a plurality of independent longitudinally spaced hold down rollers engageable with the upper face of said belt and retaining said belt in engagement with said supporting rollers, said hold down rollers each comprising a plurality of transversely spaced relatively narrow roller elements mounted on common axes, means for imparting vertical adjustments individually to each of said supporting and hold down rollers, means for uniformly depositing a mass of said material on the upper surface of the belt defining said service flight inter-



mediate the upper and lower limits thereof, and power means for imparting movements to said belt at varying rates of speed.

2,946,087
APPARATUS AND METHOD FOR CALENDERING PLASTIC SHEET MATERIAL
Arthur H. Haroldson, Newark, Edward A. Mahoney, Jr., New Castle, and William Paul Hogan, Newark, Del., assignors to Continental-Diamond Fibre Corp., Newark, Del., a corporation of Delaware
Filed July 26, 1957, Ser. No. 674,465
8 Claims. (Cl. 18—2)

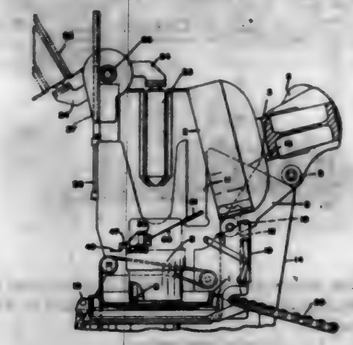


1. Apparatus for calendering plastic sheet material which tends to pucker at the center of the calender rolls and which will take a permanent set in creases and adhere to itself in folds when pressed by the rolls if not fed in smoothly, such as unsintered polytetrafluoroethylene, comprising in combination, driven calender rolls which positively draw the sheet material through between them against back tension, and a guide device disposed closely adjacent and in front of the calender rolls for smoothly guiding the sheet material into the rolls along a line lying near the medial line or plane between the rolls, said guide device including guide members disposed in transverse axial alignment on opposite sides of a longitudinal center line of the sheet travel which are arcuately convex in the direction of movement of the sheet material and which are tapered upwardly from the ends toward the center, and circumferentially spaced sheet retaining and guiding elements disposed above and near the arcuate convex surface of said guide members and parallel thereto for causing the sheet material to travel in an arcuate path over the arcuate convex surfaces of said guide members, the arc of contact being less than 180 degrees.

2,946,088
ACCESSORY FOR TIRE SHAPING AND CURING PRESSES
Leslie E. Soderquist, Silver Lake, Ohio, assignor to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 21, 1957, Ser. No. 679,433
4 Claims. (Cl. 18—2)

1. In a tire press for shaping and curing unvulcanized tire bands within separable upper and lower mold sections,

said press being adapted when open to receive an uncured band in registry with a lower mold section and having means for closing said mold sections around a band, a detector mechanism mounted at the side of said mold sections, an arm pivotally mounted on said detector mechanism, said arm being arcuately movable angularly through



a portion of the space lying immediately above the upper edge of a band whose lower edge is registered with a mold section and in close proximity past that portion of the upper edge of said band nearest said detector mechanism, and means connecting said detector mechanism to said press actuated by said arm to interrupt closing of the mold sections upon misalignment of the band.

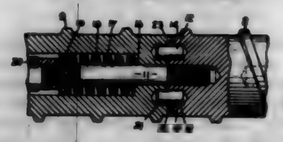
2,946,089

EXTRUDER WITH JOINTED FEED SCREW

Eugene E. Heaton, Akron, Ohio, assignor to National Rubber Machinery Company, Akron, Ohio, a corporation of Ohio

Filed Nov. 27, 1957, Ser. No. 699,283

4 Claims. (Cl. 18—12)



4. A feed screw for plastic and the like extruder comprising adjacent sections, a driving connection between said sections radially inward of the root diameter of the screw and resilient sealing means between equal root diameter juxtaposed end portions of said sections radially outward of said connection for isolating the driving connection from the material being conveyed by said screw, said driving connection being arranged to permit axial aligning movement of said sections while said sealing means accommodates the relative aligning movement between said adjacent sections, and spring means within the root diameters of said sections yieldably drawing said sections axially together to exert sealing pressure on said sealing means.

2,946,090

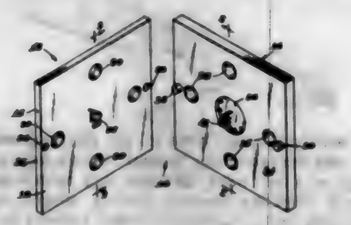
DIE ASSEMBLY

Irving S. Houvener, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed June 4, 1959, Ser. No. 818,668

4 Claims. (Cl. 18—12)

1. A multiple part die assembly comprising a first plate and a second plate, each of said plates having an entry face and an exit face, the entry face of the first plate being adapted to bear against the exit face of the second plate, said plates having means for indexing themselves with respect to one another and for locking the plates together, said first plate having a die orifice extending between its entry and exit faces, said second plate having a mixing chamber which surrounds said die orifice when the plates are indexed and bearing against one another, the mixing chamber extending inwardly from the exit face of the second plate, a plurality of feed bores, said feed bores extending from the entry



face of the second plate into the mixing chamber, an array of bores, said bores extending from the entry face of the second plate into the mixing chamber and being aligned with said die orifice of the first plate when said first and second plate are indexed with respect to one another, and a plurality of flow control elements disposed in said array of bores and extending into said mixing chamber.

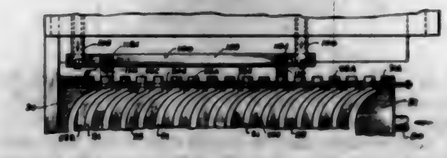
2,946,091

PRESSES FOR THERMOSETTING COMPOSITIONS

William S. Francis, Ridgewood, N.J., and Harry M. King, Dearborn, Mich., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

Filed July 2, 1954, Ser. No. 441,694

8 Claims. (Cl. 18—17)



1. In a press adapted to cure thermosetting compositions under pressure, a pair of platens arranged to have a die containing the composition to be subjected to pressure disposed therebetween, means to close one platen on the other to clamp the die, a ram arranged to apply pressure against the sides of the die in a direction normal to the closing direction of the one platen on the other, means to advance and retract said ram, means operative after said ram has been retracted to eject the die from between the platens, a table mounted on the press and disposed forward of one of the platens and substantially in the plane thereof to receive an end of the die being ejected, said table being mounted and supported in the press for advancing movement away from said one platen and means to advance the table parallel with the die to disclose an unloading cavity forward of said one platen and through which the cured composition in the die is adapted to drop.

2,946,092

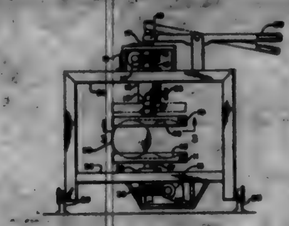
APPARATUS FOR ROTATIONALLY DISTRIBUTING A LIQUID CHARGE WITHIN A MOLD

Alfred F. Yoder, Sandusky, Ohio, assignor to The Burr Rubber Products Company, Sandusky, Ohio, a corporation of Ohio

Filed Aug. 4, 1958, Ser. No. 752,932

8 Claims. (Cl. 18—26)

1. Apparatus for distributing a liquid charge in a mold comprising a pair of facing drive plates, means for rotating said drive plates at different speeds with reference to a common axis vertical to the faces of said drive plates, a spherical member drivingly engageable between said drive plates, and mold means included within said spherical member whereby a liquid charge within said mold means will be distributed in the mold means by the motion about a plurality of axes caused by the rotation of said drive plates at different speeds.



2,946,093

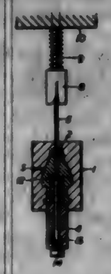
HYPODERMIC NEEDLES

Samuel James Everett, Surrey, England, assignor to S. & R. J. Everett & Company Limited, Surrey, England, a British company

Filed Mar. 21, 1958, Ser. No. 723,083

Claims priority, application Great Britain Mar. 27, 1957

3 Claims. (Cl. 18—36)



1. A mold for a mount for a hypodermic needle, said mould comprising a mould body having a hole at one side for the insertion of the rear end of a needle and an opening at the opposite side for the insertion of a core pin, a core pin adapted to fit within said opening, said core pin having a resilient sealing member at the tip thereof and adapted to close the bore of a needle inserted in said hole, an axially slidable rod within said core pin, one end of said rod engaging said sealing member, and means for adjusting said rod to compress said sealing member.

2,946,094

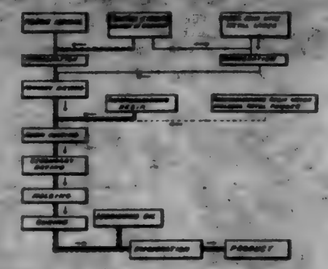
PROCESS OF MAKING OIL-IMPREGNATED MACHINE PARTS FROM SYNTHETIC RESIN AND THE ARTICLES MANUFACTURED BY SAID PROCESS

Seno Kawanbi, 10 Shiba Akebonocho, Minatoku, Tokyo, Japan

Filed June 11, 1956, Ser. No. 590,430

6 Claims. (Cl. 18—47.5)

1. The process of manufacturing oil-impregnated machine parts from thermohardening synthetic resin which comprises first impregnating a fibrous material with a solution of paraffin chloride in a solvent, drying the impregnated material to remove the solvent, next applying a thermo-hardening synthetic resin to said impregnated fibrous material, next drying and molding under heat and pressure the material to which the resin has been applied to provide a porous structure having minute holes therein,



and finally immersing said molded material in a bath of lubricating oil to impregnate the same with said oil.

2,946,095

PROCESS FOR PREPARING POROUS FILMS OF VINYL CHLORIDE POLYMERS

Ludwig A. Baer, Agawam, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Apr. 15, 1957, Ser. No. 653,673

4 Claims. (Cl. 18—57)

1. In a process for preparing a film of a plasticized vinyl chloride polymer in which a dispersion of a vinyl chloride polymer in a plasticizer therefor is cast into a thin film and fused by heating to a temperature of at least 150° C. at atmospheric pressure; the improvement which comprises incorporating in the dispersion of the vinyl chloride polymer a water-resin solution containing from about 20 weight percent to about 65 weight percent water and the balance a resin from the group consisting of an aminoplast resin, a phenoplast resin and mixtures thereof, the quantity of the water-resin solution included in the dispersion of the vinyl chloride polymer being sufficient to provide 2–20 parts of water per 100 parts of combined vinyl chloride polymer and plasticizer.

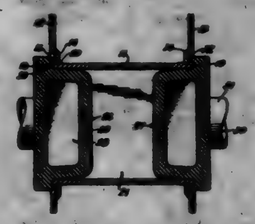
2,946,096

METHOD OF MAKING A COIL FORM

William F. Stahl, 423 Abbotsford Road, Kenilworth, Ill.

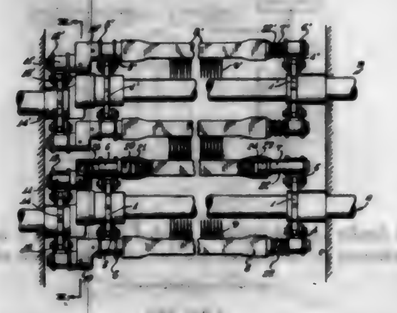
Filed Aug. 19, 1954, Ser. No. 450,931

3 Claims. (Cl. 18—59)



1. In a method of making a coil form, the steps of impregnating a core with a thermosetting resin, partially curing the impregnated core to a manipulatable state characterized by the absence of tackiness and stickiness, mounting a flange upon said core in a predetermined position, and substantially simultaneously locking said flange upon said core by deforming said core while curing substantially to completion the impregnating resin, at least in the area of the core adjacent said flange.

2,946,097
GILL BOX
Martin Hoppner, Ottendorf, Alfred Schuster, Karl-Marx-Stadt, and Erwin Schafer, Mittweida, Germany, assignors to VEB Spinnereimaschinenbau Karl-Marx-Stadt, Karl-Marx-Stadt, Germany
Filed Oct. 4, 1956, Ser. No. 613,246
12 Claims. (Cl. 19—127)



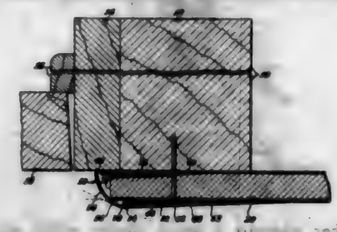
1. In a gilling machine having a plurality of pairs of opposing endless carrier chains each including a plurality of links, a pair of sprockets for mounting each chain so that each chain is formed into a pair of straight extended portions and a pair of circular portions, a plurality of needle bars adapted to be pivotally supported between a pair of said chains, a plurality of needles projecting from said needle bars, crank members connected to each of said bars, and sprocket-mounted guide chain means connected to said crank members whereby said guide chain means rotates said crank members so that said needle bars are continuously oriented in a direction perpendicular to the straight portions of said carrier chains during movement of said carrier chains, the improvement which comprises a plurality of outwardly extensive brackets mounted on said chain links, whereby the distance between the ends of adjacent ones of said brackets are spaced more closely on the straight extended portions of said chains than at the circular portions of said chains, and means at the outer ends of said brackets for pivotally supporting said bars.

2,946,098
PANEL PROTECTIVE DEVICE FOR SASHLESS WINDOWS
Romuald Mignault and Fernand W. Mignault, both of 332 St. Andre St., Gatineau, Quebec, Canada
Filed May 4, 1959, Ser. No. 810,784
2 Claims. (Cl. 20—52)



1. In a sashless window having a headpiece, a sill, each said headpiece and sill having a panel receiving groove, a center glass panel and a pair of side glass panels mounted in said grooves, a protective device for said panels comprising a housing mounted in said headpiece, and a body of yieldable material carried by said housing and having a side surface in contact with said center panel, said body also having a pair of end surfaces exteriorly of said housing and bridging said groove in said headpiece for engagement by the inner edges of said side panels in responsive to a predetermined degree of sliding movement thereof.

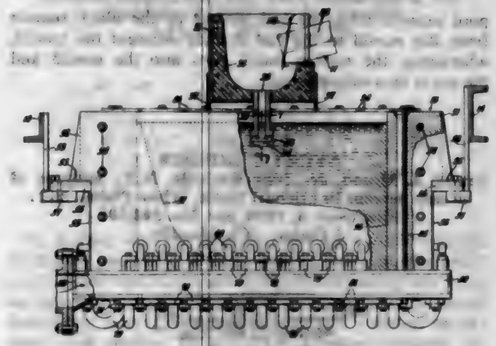
2,946,099
TRIM MEMBER
Reed C. Lawlor, Altadena, Calif., assignor to Angeles Metal Trim Co., Los Angeles, Calif., a corporation of California
Filed Jan. 14, 1957, Ser. No. 633,926
3 Claims. (Cl. 20—74)



1. In combination:
a structural member of a building;
a piece of wallboard overlying said structural member;
an elongated substantially U-shaped unitary trim member disposed about a free edge of said piece of wallboard, said trim member having a first elongated straight substantially curved trim section having a parallel elongated edges and serving as an arcuate side trim section;
a second elongated straight substantially flat trim section having parallel elongated edges and serving as a front trim section;
a third elongated straight substantially concave trim section having parallel elongated edges and serving as a rear trim section;
an elongated rearwardly projecting convex bead formed integrally with each of said curved side and rear trim sections and joining said rear and side trim section, said rearwardly projecting bead being disposed adjacent one side of said piece of wallboard and spaced forwardly of the free edge of said wallboard, one side of said first elongated rearwardly projecting convex bead being substantially coplanar with a rear plane of tangency of curvature of the said arcuate side trim section at the rear edge thereof, said rear plane of tangency being substantially orthogonal to said rear trim section whereby said bead extends beyond the intersection of the plane extended from said rear trim section to said curved side trim section in a substantially upstanding configuration relative to said rear trim section;
an elongated forwardly projecting rounded angular bead joining said front and said curved side trim section and formed integrally with each of said side and front trim sections, said forwardly projecting bead overlying the other side of said piece of wallboard at a position spaced rearwardly of the free edge thereof, one side of said elongated forwardly projecting angular rounded bead being substantially coplanar with a front plane of tangency of the curvature of said arcuate side trim section at the front edge thereof, said front plane of tangency meeting the plane extended from the front trim section at an acute angle, the other side of said elongated forwardly projecting angular bead being extended to meet the front trim section at an obtuse angle whereby said rounded angular bead extends in a substantially upstanding configuration relative to said front trim section, the free edges of said front and rear trim sections projecting in the same direction away from said arcuate side trim section, said free edge of said wallboard lying between said front and rear trim sections;
fasteners projecting through said front trim section and said wallboard into said structural member holding said wallboard in place with said rearwardly projecting convex bead pressed against the wall face of said structural member; and

a body of filler material covering said front trim section and the adjacent part of said wallboard, said body of filler material being flush with the front edge of said arcuate side trim section whereby the said edge of said wallboard is faired into said structural member.

2,946,100
BLOCK GRAPHITE MOLD FOR CONTINUOUS CASTING
Richard Baier, New Brunswick, John Stuart Smart, Jr., Westfield, and Albert J. Phillips, Plainfield, N.J., assignors to American Smelting and Refining Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 27, 1956, Ser. No. 606,518
16 Claims. (Cl. 22—57.3)

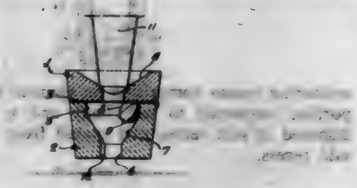


9. The method of continuously casting metal in a mold, said mold having a mold pocket whose walls converge downstream with respect to metal flow through the mold, said method comprising feeding molten metal into the mold at such rate, in relation to the degree of taper, that the casting shrinks, as it moves downstream, at a rate corresponding to the degree of taper, whereby to maintain heat transmitting contact between casting and mold wall for a substantial length of the mold, and reciprocating the mold lengthwise of the casting.

16. A continuous casting mold for continuously casting metal, said mold comprising a graphite block having a mold pocket open at the top to receive molten metal and open at the bottom to discharge the congealed casting, said block having walls with internal straight machined passages therein, the surfaces of said passages being smooth, straight metal tubes lining said passages, the wall of said tubes being elastic and having sufficient temper to exert pressure against said smooth surfaces to promote heat transfer therebetween, said tubes expanding more than the graphite with temperature rise, thus maintaining heat transfer contact between said tubes and block, means for permitting the walls of said tubes to move relative to said smooth surfaces to relieve pressure on the graphite block exerted by the tubes due to thermal expansion of the tubes, and means for supplying coolant to said tubes.

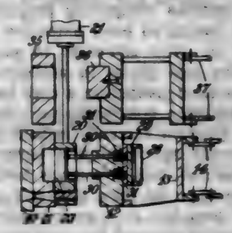
2,946,101
PROCEDURE FOR VACUUM CASTING AND ARRANGEMENT INTENDED THEREFOR
Bengt Ludvig Fredrik Liljekvist and Lars Olof Uhrus, both of Hofors, Sweden, assignors to Aktiebolaget Svenska Kullagerfabrikes, Gotrborg, Sweden, a corporation of Sweden
Filed May 29, 1958, Ser. No. 738,731
Claims priority, application Sweden June 1, 1957
7 Claims. (Cl. 22—84)

1. A charging nozzle having an interior wall therein defining a flow passage through the nozzle, said nozzle having a discharge opening in communication with said flow passage and including a first portion of predetermined cross-sectional flow area and a second portion of substantially smaller cross-sectional flow area, a flow-restricting element within the flow passage of said nozzle engageable with said first portion of said discharge opening to reduce the flow area through said nozzle and attenuate the discharging stream of metal therethrough, and means



to retain said flow-restricting element in a retracted, non-restricting position remote from said discharge opening, said means comprising a member subject to heating by molten metal flowing through the nozzle and operable in response to said heat to release the said flow-restricting element from its retracted, non-restricting position for engagement with said first portion of the discharge opening.

2,946,102
DIE CASTING MACHINES
Aubrey Robert Mills, River Works, 152, Green Lanes, Palmers Green, London N. 13, England
Filed June 17, 1958, Ser. No. 769,963
6 Claims. (Cl. 22—94)



1. A die casting machine comprising a pair of relatively movable dies movable into engagement to complete a die cavity, said dies being separable and one die carrying the casting away from the other die upon separation of the dies; a casting holder movable laterally between the dies only when the latter are separated and having an opening to receive the casting; said casting holder being retractable from between the dies before the latter can be moved into engagement to complete the die cavity; ejector means associated with said one die to eject the casting into such opening; and a punch spaced laterally from said dies; said casting holder being movable laterally to align said punch with said opening, and said punch being movable into said opening to eject the casting therefrom.

2,946,103
HOT TOPS
Ean Vallak, 26 Ave. Krieg, Geneva, Switzerland
Filed Aug. 4, 1958, Ser. No. 752,958
2 Claims. (Cl. 22—147)

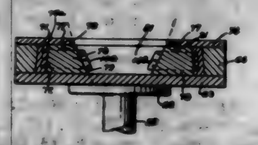
1. A hot top, for use in connection with a mold for casting metal and adapted to be placed near the top of said mold, comprising in combination, a body, and anchoring means extending from said body into the mold interior adjacent the internal mold wall surface and adapted to be immersed in the rapidly solidifying outer portion of the molten mass adjacent the internal mold

surface and to be frozen thereto when said outer portion solidifies in form of a shell prior to the completion of casting, said body having a recess in its lower edge, said



anchoring means comprising an element including a first portion connected to said body and a second portion disposed in said recess and spaced from the surfaces of said recess.

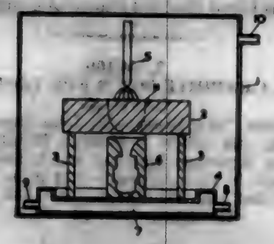
2,946,104
METHOD OF MAKING CORES FOR CASTING BLADED MEMBERS
Thomas B. Martin, 182 Cross Road, Danville, Calif.
Filed June 3, 1957, Ser. No. 663,620
3 Claims. (Cl. 22—194)



1. A method of preparing a core for a cast bladed hub and annulus wherein a plurality of blades interconnect said hub and annulus comprising preparing a plurality of blades each having an inner extension to project into said hub and an outer extension to project into said annulus, locating said blades in predetermined position relative to each other, preparing a core box dimensioned to receive said blades, positioning said blades located in predetermined position centrally in said core box, positioning a centrally apertured first cover on said core box, the aperture of said first cover having a diameter substantially equal to the inner diameter of said annulus, revolving said core box at a predetermined first speed, pouring first casting material into said core box, partially filling said core box, discontinuing filling said core box when said casting material runs out the aperture in said first cover while continuing to revolve said core box at said first speed until said first casting material has set, applying parting compound to said first casting material, positioning a centrally apertured second cover on said core box, the aperture of said second cover having a diameter substantially equal to the outer diameter of said hub, revolving said core box at a predetermined second speed, pouring second casting material into said core box until said second compound runs out the aperture in said second cover while continuing to revolve said core box at said second speed until said second casting material has set, and breaking away said first compound.

2,946,105
CASTING METALS
Albert Ronald Clifton Westwood, Birmingham, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Jan. 30, 1959, Ser. No. 790,688
Claims priority, application Great Britain Mar. 31, 1958
3 Claims. (Cl. 22—209)

1. A method of casting metal in a mould which comprises supporting, above the mould, a block of the metal to be cast so that no portion of the block lies within the mould, striking an arc between an electrode located above the block and the end surface of the block remote from the mould, melting, by means of the arc, part of the block in such manner that the molten part is contained by a solid wall of the metal, until the molten



pool extends from the end surface of the block remote from the mould to the end surface adjacent the mould, whereupon the molten metal runs into the mould and the arc is then extinguished.

2,946,106
NECKTIE HOLDER
Arnold J. Morse, Jr., New Rochelle, N.Y., assignor of twenty percent to Michael Stella, White Plains, N.Y.
Filed Nov. 3, 1955, Ser. No. 544,707
1 Claim. (Cl. 24—49)



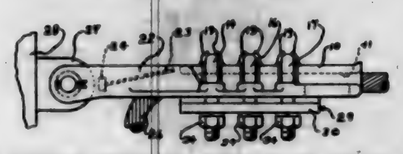
A necktie holder comprising a rigid insert adapted to be carried by a rear flap of a large end of a necktie, and a removable retainer, said insert being tubular, said retainer including a clip, a shank portion permanently connected to said clip, said shank portion freely passing through said insert, and means on said shank portion retaining said shank portion in said insert, said means including a lug pivotally connected to said shank to facilitate removal of said retainer from said insert.

2,946,107
DRAPERY HOOKS
Stanley A. White, % White Industries, 304 S. Mears Ave., Whitehall, Mich.
Filed Apr. 9, 1958, Ser. No. 727,496
1 Claim. (Cl. 24—66)



A supporting hook for draperies comprising an upright substantially straight leg element adapted to be secured to a header portion of a drapery, an inverted generally U-shaped suspending hook at the rear of said leg element, the base of the U providing the point of suspension, said point of suspension being disposed very close to an intermediate portion of said leg element with the two arms of the U extending downwardly and rearwardly to dispose their major portions rearward of the point of suspension of the hook, and a substantially straight lever arm having one end fixed to the lower end of said leg element and its other end fixed to the end of the lower arm of said hook, said lever arm extending rearwardly from the leg element to dispose a major portion of its length rearwardly of a vertical plane passing through the point of suspension of the hook, whereby the weight of said rearwardly disposed major portion of said lever arm and hook and the extent thereof rearwardly of said point of suspension will tend to counter-balance the leg element and hold it substantially perpendicular.

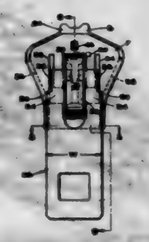
2,946,108
CABLE CLAMP
Malcolm Bethea, P.O. Box 1407, Birmingham, Ala.
Filed Mar. 8, 1957, Ser. No. 644,888
1 Claim. (Cl. 24—135)



In a dead end cable clamp, an upper body member having at one end portion a cable groove on the under side thereof and having downwardly extending bolt holes on opposite sides of the cable groove and laterally spaced therefrom, laterally spaced vertical side portions on the other end portion of the body member adjacent the groove, a cable guide mounted at one end between the side portions at a position in generally longitudinal alignment with the cable groove, the other end of said cable guide being free and extending toward the cable groove, said guide being, selectively, bent upwardly to be engaged by the upper surface of a cable being inserted in the cable groove thereby to direct the cable downwardly from the clamp or bent downwardly to be engaged by the lower surface of the cable being inserted thereby to direct the cable upwardly from the clamp, means at the outer end of the side portions to secure the body member to a stationary support, a keeper member mounted beneath the body member and having bolt holes therethrough along its sides aligned with the bolt holes in the body member, U-bolts straddling the body member and extending downwardly through the aligned bolt holes, an upwardly extending rib on the keeper member having a cable seat on its upper surface for engaging a cable in the cable groove, and nuts on the lower ends of the U-bolts to draw the keeper seat into engagement with the cable in the cable groove.

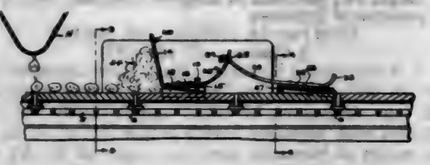
2,946,109
SLIDE FASTENERS
Albert Rashover, Newark, N.J., assignor to Conmar Products Corporation, Newark, N.J., a corporation of New Jersey
Continuation of application Ser. No. 167,132, June 9, 1950. This application Feb. 19, 1953, Ser. No. 337,786
23 Claims. (Cl. 24—205.15)

1. A slider for slide fasteners of the type comprising a pair of tapes having spaced, interlockable fastener elements with jaws securing them to said tapes, said slider comprising a body having a pair of spaced wings of substantially the same dimensions connected to each other at one end by a post in rigidly fixed spaced relationship to one another, the fastener elements of both tapes being received and being guided by said wings, said wings being so formed that a side of the body is provided with a tape slot which is too large to enable the body to laterally retain the fastener elements for interlockable engagement, and a member disposed upon and overlying one of the wings of said body and retractable with respect thereto in a direction transverse to the plane of the wing and member, said member having an inturned flange located outside the adjacent wing and extending toward the remote wing, said member in its down or normal fastener operating position reducing the size of the tape slot by



placing the inturned flange immediately outside the ends of the jaws of the fastener elements in position to laterally retain the fastener elements and permit the slider to interlockably engage the fastener elements, said member in its retracted position acting to open up the tape slot to the extent that the slider will not laterally retain the fastener elements for interlockable engagement.

2,946,110
DEVICE FOR TROWELLING COATINGS UPON MOVING TILES
Gus W. Lang, 3323 Pembroke Road, Hollywood, Fla.
Filed Feb. 1, 1957, Ser. No. 637,666
6 Claims. (Cl. 25—1)

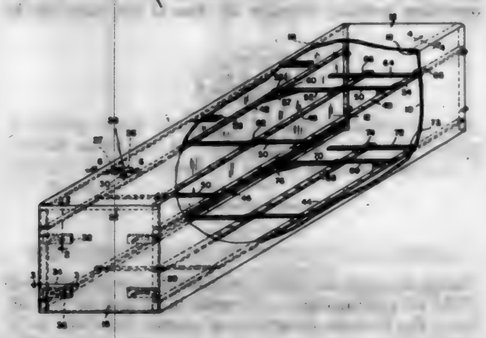


1. In combination with a machine for forming cement roofing tiles of the character in which a traveling conveyer conducts tiles newly formed of Portland cement, along a path, a paste receiving means disposed in said path through which the tiles travel, a two step troweling mechanism mounted to straddle said path and the line of travel of said tiles, said troweling mechanism comprising a first and coarse troweling device disposed within the paste receiving means, means for feeding a relatively stiff coating paste to said paste receiving means and to the first troweling device, means embodied in the first and coarse troweling device for troweling said paste upon the tiles as said tiles move past the coarse troweling device, a second and fine troweling device, likewise straddling the line of travel of the tiles and means for floatingly supporting the fine troweling device for movement in a vertical plane, said fine troweling device comprising means for collecting surplus paste which leaves the coarse troweling mechanism and pressing said surplus paste toward vertical portions of the traveling tiles.

2,946,111
COLLAPSIBLE CORE FORM
John G. Francis, Jr., Detroit, Mich., assignor to Thomas Steel Forms, Inc., Detroit, Mich., a corporation of Michigan
Filed Jan. 27, 1958, Ser. No. 711,511
5 Claims. (Cl. 25—128)

3. A collapsible form comprising a pair of side plates movable toward and away from each other from an op-

erating position in which said plates are vertical and spaced apart a maximum amount and a collapsed position in which said plates are closer together and inclined to reduce their overall vertical dimension, actuating means connected to said side plates to move said plates



between said operating and collapsed positions, an end plate of less height than said side plates located beyond the ends of said side plates, cam means connecting said side plates to said end plate and operable to raise said end plate in a clearance position upon inward movement of said side plates.

2,946,112
PROCESS OF PRODUCING LIGHT WEIGHT AGGREGATE
Linwood G. Tucker, Jr., and Andrew J. Kantor, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed July 18, 1956, Ser. No. 596,922
5 Claims. (Cl. 25—157)

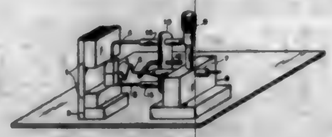
1. A process for forming a light weight aggregate from fly ash derived from the combustion of coal comprising the steps of treating fly ash of approximately 300 mesh fineness with bentonite having proportions of ½ to 2% by weight of bentonite based on weight of the dry mix, approximately 23% to approximately 26% by weight of water and remaining portions of the fly ash, pelletizing said binder and fly ash mixture to form porous fly ash agglomerates in the form of discrete pellets of substantially uniform size, and sintering a multi layer mass of said pellets to form hardened light weight aggregate.

2,946,113
REMOVABLE HANDLE CONSTRUCTION FOR BURIAL CASKETS
George M. Clark, Box 2, Brookville, Ind.
Filed Sept. 17, 1958, Ser. No. 761,596
2 Claims. (Cl. 27—27)



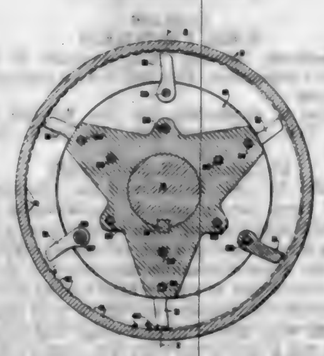
1. A removable handle construction for mounting on a burial casket having casket side and casket end walls interconnected at their ends to provide upwardly and outwardly flaring corner portions for the casket body, including in combination, a plate embracing and in surface mounted contact with each corner portion of the casket body, a first ear projecting from one end of each plate and disposed in an upstanding plane at right angles to the casket end wall, a second ear projecting from the opposed end of each plate and positioned in an upstanding plane at right angles to the casket side wall, an elongated handle having internally threaded, tubular end portions and extending between the first ears and between the second ears of adjacent corner plates, a draw-up bolt journalled in each ear against axial displacement and having a threaded end portion projecting into and in threaded engagement with the adjacent end portion of a handle, and tool operated means on the opposite end portion of the bolt for axially rotating the bolt.

2,946,114
METHOD OF ASSEMBLING JUNCTION TRANSISTOR
Elmer Berg, Maywood, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Apr. 3, 1957, Ser. No. 650,346
1 Claim. (Cl. 29—25.3)



A method for assembling electrodes to grown junction transistors comprising the steps of: firmly positioning a transistor junction block; slidably holding a gold wire of predetermined length by surrounding a predetermined lineal portion thereof to prevent lateral movement and with a predetermined free end portion; forming a point on the free end of the wire; thereafter forming a sigmoid curve between said point and said lineal portion; applying a longitudinal force substantially along the axis of said lineal portion against said curved portion to bring said point into firm contact with a surface of said transistor junction block; applying a lateral force along the entire lineal portion to impart lateral movement to the entire wire relative to said transistor junction block for positioning said point at the precise junction layer thereof; bonding said point to said junction block at said junction layer; exposing part of said lineal portion; and forming a permanent electrical connection between said exposed portion of said wire and a terminal on a header.

2,946,115
METHOD OF PRODUCING ROUND METAL PELLETS
Walter G. Firm, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 13, 1957, Ser. No. 645,809
5 Claims. (Cl. 29—148.4)



1. The method of preparing metal spheres having a predetermined diameter which includes the steps of introducing discrete metal stock members having a dimension which exceeds said predetermined diameter into a certain annular treating zone, said zone being defined between a pair of relatively movable surfaces, exerting a yieldable impact of substantial force against said stock members which have a dimension exceeding said predetermined diameter, and impeding the free motion of said stock members along said treating zone.

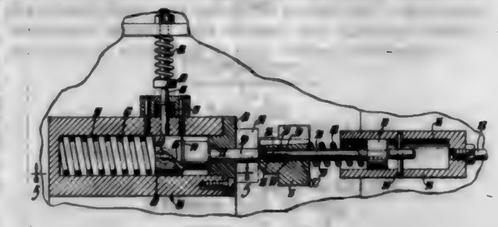
2,946,116
TUBULAR WALL CONSTRUCTION
William C. Norris, Bellmore, N.Y., Waldemar Rupinski, Fort Lee, N.J., and Konrad S. Svenkeus, Bellerose, N.Y., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 14, 1954, Ser. No. 455,912
7 Claims. (Cl. 29—157.4)



2. A method of constructing a fluid cooled tubular wall by aligning tube panels tube end to tube end, each panel being composed of a row of parallel tubes, comprising the steps of forming at least two tube panels, each by aligning a plurality of tube lengths in side by side parallel relationship; securing each tube of each panel to an adjacent tube thereof including at a point of said tube remote from the ends thereof; subjecting at least one selected panel to exterior forces whereby to cause the simultaneous bending of the tubes of said panels to a predetermined contour characteristic of said wall; freeing and subsequently springing the ends of adjacent tubes of said one panel and corresponding ends of adjacent tubes of said other panel out of position an equal distance in a direction lateral to said panel while keeping respective tube ends in alignment; raising said panels into the desired wall position so that the tube ends of one panel abut and are aligned with the tube ends of an adjacent panel; welding the tube ends of one panel to the corresponding abutting tube ends of the adjacent panel while thus aligned; and releasing said tube ends to allow said alternate tubes to resume their original positions.

2,946,117
ASSEMBLY MACHINE
William J. Horvath, Inkster, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 26, 1955, Ser. No. 524,321
8 Claims. (Cl. 29—201)

1. In a roller bearing assembly machine, means for receiving an annulus of roller bearings and for engaging and axially moving said roller bearings within a bearing receiving receptacle, retractable means for receiving and supporting said bearing receiving receptacle adjacent said first-mentioned means, said last-mentioned means being axially displaced from said receptacle by said first-mentioned means in disposing said roller bearings within said receptacle and in engagement therewith, and means en-



gaging one of said aforementioned means for rotating said one means during axial travel thereof, said one means circumferentially displacing the ends of said roller bearings engaged therewith and displacing opposite ends of said roller bearings in opposite relative directions and radially outward for more positively keystoning said roller bearings within said receptacle.

2,946,118
METHOD OF REPAIRING DENTS
George L. Stock, 1312 Bolander Ave., Dayton 8, Ohio
Filed Dec. 22, 1955, Ser. No. 554,779
5 Claims. (Cl. 29—401)

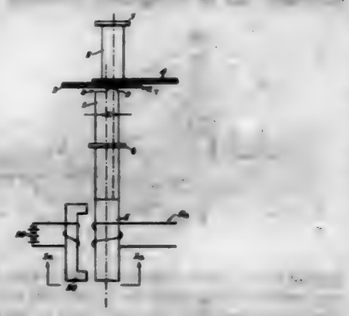


1. The process of working a deformed metal sheet with a mallet and tools having anvil portions, said process including the steps of drilling holes in the metal sheet, inserting the anvil portions of the tools in the holes, pulling the metal of the sheet outwardly with the tools while simultaneously pounding the metal remote from said tools inwardly with the mallet, repeating the above operation by inserting the tools into other holes until the sheet is worked to the desired contour, and filling the drilled holes with solder.

2,946,119
METHOD AND APPARATUS EMPLOYING VIBRATORY ENERGY FOR BONDING METALS
James Byron Jones, William C. Elmore, and Carmine F. De Prisco, West Chester, Pa., assignors to Aeroprojects, Inc., West Chester, Pa., a corporation of Pennsylvania
Filed Apr. 23, 1956, Ser. No. 579,780
60 Claims. (Cl. 29—470)

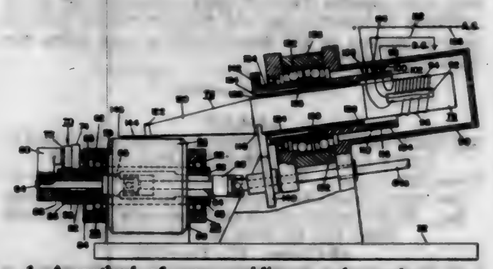
1. A non-fusion method for welding metal members together which method comprises placing to-be-welded faces of the metal members together, applying a force to the metal members in a direction and of a magnitude to hold the contacting to-be-welded faces of the metal members in intimate contact at the intended weld zone and to couple mechanical vibratory energy into said zone, and introducing through a vibrating element contacting one of the to-be-welded metal members adjacent the weld

zone mechanical vibration having a frequency of between about 59 and 300,000 cycles per second, said mechanical vibration comprising a vibration component in a direction substantially perpendicular to the direction of applied force, and with such component being of an energy level sufficient to weld the metal members to each other.



27. Apparatus for non-fusion welding contacting metal members together comprising a force-applying member, means for impelling an end portion of said force-applying member against an outer face of one of said contacting metal members with a force in a direction and of a magnitude to hold the to-be-welded faces of the metal members in intimate contact at the intended weld zone and to couple mechanical vibratory energy into the intended weld zone, and means for vibrating said end portion of said member at a frequency of between about 59 and 300,000 cycles per second in a path substantially perpendicular to the direction of the applied force while such to-be-welded faces of the metal members are being held in intimate contact by engagement with said end portion of said member, with said vibrating means furnishing sufficient power so that the mechanical vibration delivered by said end portion in said path is at a sufficient energy level to weld the metal members together.

2,946,120
SEAM VIBRATORY WELDING APPARATUS AND METHOD
James Byron Jones, West Chester, William C. Elmore, Media, and Carmine P. De Prisco, Glen Mills, Pa., assignors to Aeroprojects Incorporated, West Chester, Pa., a corporation of Pennsylvania
Filed May 4, 1959, Ser. No. 810,611
53 Claims. (Cl. 29—470)



1. A method of seam welding metal members comprising contacting the to-be-welded faces of the metal members against each other, forcefully engaging an outer face of one of the metal members adjacent the weld zone with a part of the periphery of a circularly cross-sectioned end portion of a vibrating element, with said force being in a direction and of a magnitude sufficient to hold the contacting to-be-welded faces of the metal members in intimate contact at the intended weld zone and to couple mechanical vibratory energy into said weld zone, and rotatively engaging said circularly cross-sectioned end portion of said vibrating element with said outer face of said one of the metal members while introducing to the metal members through said end portion of said vibrating element mechanical vibratory energy having a frequency of between about 59 and 300,000 cycles per second while said force is being applied to produce a seam weld between the metal members, said vibratory energy comprising a vibration component in a direction substantially perpendicular to the direction of applied force, such component being of an energy level sufficient to seam weld the metal members to each other with the temperature in the weld zone (such temperature being that which can be determined with a thermocouple) during the introduction of the vibratory energy being below the melting temperature of any of the metal members.

28. A seam welding device for non-fusion welding contacting metal member together including a pair of spaced jaws between which a plurality of metal members to be seam welded are placed, at least one of said jaws having a circularly cross-sectioned end portion for engaging one of the contacting metal members with part of said end portion's periphery, means for impelling a jaw towards the opposite jaw with sufficient force to hold the to-be-welded faces of the metal members in intimate contact at the intended weld zone and to couple mechanical vibration into the intended weld zone when the to-be-welded metal members are interposed between the part of the periphery of said end portion of said one jaw and said other jaw, vibrating means for vibrating said circularly cross-sectioned end portion of said one jaw at a frequency of between about 59 and 300,000 cycles per second and so that at least a portion of the mechanical vibration introduced to the metal members by said one jaw is in a direction substantially perpendicular to the direction of applied force while the metal members are interposed between the part of the periphery of said end portion of said one jaw and said other jaw, the mechanical vibration delivered in a direction substantially perpendicular to the direction of applied force being at a sufficient energy level to weld the metal members together, and means for rotating said end portion of said one jaw while it is engaged with the metal members and while the vibratory energy is being introduced to the metal members so as to provide a seam weld between the metal members.

2,946,121
ELECTRIC SHAVER
Paul Marach, 79 Ducrochet St., Laval-des-Rapides, Quebec, Canada
Filed Jan. 14, 1960, Ser. No. 2,453
7 Claims. (Cl. 30—29.5)



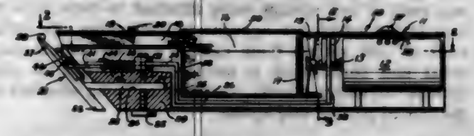
1. An electric shaver comprising a housing, an electric motor disposed within said housing and having a motor shaft, a shaving head removably attached to said housing and including an elongated grille of finger like shape having a tip of reduced width adaptable to be inserted in the nostrils and ears, a cutter shaft removably attached to the motor shaft and extending axially within said grille, and a cutter blade mounted on said cutter shaft, said cutter blade being formed of a thin resilient strip bent into an inverted U with its cross portion in sliding contact with the end tip portion of the grille, and with its legs in sliding contact with the side wall of the grille, said legs being twisted such that the outer ends of the legs extend in a plane lying at a substantial angle to the plane containing the cross portion of said blade.

2,946,122
ATTACHMENT FOR BARBER'S SHEARS
Leonard W. Gaddis, 1306 Dickinson Ave., Greenville, N.C.
Filed Oct. 21, 1958, Ser. No. 768,614
2 Claims. (Cl. 30—133)



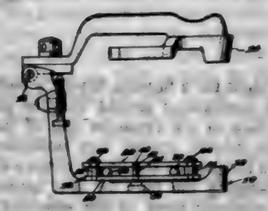
1. An attachment for a pair of clippers that has a body with a longitudinal axis, blades at one end of said body and at an angle to said axis, said attachment comprising a housing having walls constituting a nozzle with an air inlet opening at one end positioned in spaced relation with the clipper blades, means on said housing for attaching a conductor to the housing to draw air through said nozzle, an adjustable cover carried by said housing and having a guide at one end forming an extension at said air inlet of said nozzle and located adjacent to the clipper blades, said guide comprising a flange at an angle to said axis and terminating in a straight line parallel to and adjacent to the clipper blades and movable rectilinearly toward and away from said clipper blades thereby providing a substantially uniform spacing between said flange and the blades regardless of the size of blades that are used on the clippers, sides attached to said cover rearwardly of the flange and movable therewith to form effective extensions of the housing sides when said cover is extended, and means for holding said cover in selected adjusted positions with respect to said housing thereby holding said flange in corresponding adjusted positions with respect to the clipper blades.

2,946,123
COMBINATION HAIR CLIPPER
Murel B. Bray, 6213 Cherbourg Ave., El Paso, Tex.
Filed Feb. 27, 1959, Ser. No. 796,011
1 Claim. (Cl. 30—219)



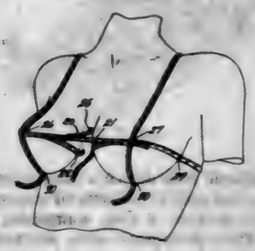
A hair clipper comprising a housing, a motor in said housing, a shaft driven by said motor, a cam on said shaft, a cutting mechanism contiguous to the front end of the housing, said cutting mechanism embodying a stationary body member and a movable cutter member, a bar extending from said body member, said housing embodying a support member having a slot for receiving said bar, a screw member extending through said support member and engaging said bar, a pivot pin connected to said support member, a bearing mounted on said pin, an arm having one end connected to said bearing and having a U-shaped bracket on its other end engaging said cam, a finger extending forwardly from said bearing and provided with a slot therein, a link adjustably connected to said finger and including a portion connected to the cutter member, a securing element extending through the slot in said finger and connected to said link, a coil spring interposed between said bearing and securing element, and a guard connected to said cutting mechanism.

2,946,124
SWALLOWING COORDINATOR
Lucius G. Coble, 330 Jefferson Standard Bldg., Greensboro, N.C.
Filed Mar. 8, 1957, Ser. No. 644,826
6 Claims. (Cl. 32—32)



1. In a dental articulator having upper and lower bases mounted for relative pivotal movement, a denture supporting device comprising a mounting member, a denture supporting member, means for attaching said mounting member to one of the bases, and anti-friction means supporting said denture supporting member on said mounting member for limited movement in a direction parallel to the plane of said denture supporting member and normal to the pivotal axis of the bases.

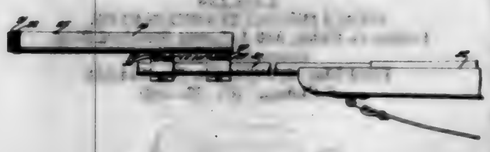
2,946,125
BUST MEASURING DEVICE
Bernard Gittelson, Cedarhurst, N.Y., assignor, by mesne assignments, to Triumph-Universa G.m.b.H., Bern, Switzerland, a company of Switzerland
Filed Dec. 17, 1957, Ser. No. 703,397
5 Claims. (Cl. 33—2)



1. A bust measuring device comprising a flexible bust band having calibrated free end sections in the front portion thereof whereby the circumferential dimensions of the bust may be taken, said bust band being formed with slits adjacent the free ends thereof, two shoulder bands secured at spaced points to the bust band intermediate the ends thereof and passing through the slits in the bust band, each of said shoulder bands being a continuously extending unitary element forming a loop supporting the bust band and having calibrations whereby the vertical dimension of the bust from the rear of the bust band to the slits in the front portion thereof may be measured,

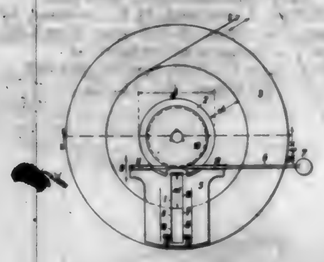
and a calibrated tape secured to the butt band adjacent one of the slits therein adapted to provide a measurement of the straight line distance between the nipples.

2,946,126
DUAL RANGE FRONT SIGHT
Archie Leon Simmons, Kilgore, Tex., and Walter H. Wemnch, Shreveport, La.; said Simmons assignor to said Wemnch
Filed Mar. 25, 1958, Ser. No. 723,737
3 Claims. (Cl. 33—58)



1. A front sight for a firearm having a barrel extended from a stock comprising spaced tongues positioned on the upper surface of the extended end of the barrel, an elongated tube having spaced lugs positioned to correspond with the tongues on the upper surface of the barrel, means for clamping the lugs on said tongues, a sleeve mounted by eccentric rings in the extended end of the tube, a disc having a sight opening therein positioned in the sleeve in abutting relation with one of said rings, a bushing having a collar threaded on said one ring in abutting relation to said disc, a gripping ring mounted on said sleeve, and a lock nut threaded on the tube and positioned in abutting relation to said gripping ring to lock the sleeve in adjusted positions in the tube.

2,946,127
MAGNETIC TAPE INDEXING
Siegmund Loewe, 68 Ridge Road, Yonkers 5, N.Y.
Filed Jan. 17, 1955, Ser. No. 482,063
4 Claims. (Cl. 33—128)

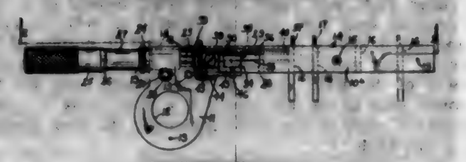


1. In a magnetic tape device a mechanism for continuously indexing the radial thickness of magnetic tape turns wound on the core of a reel, comprising a cylindrical guide-part with a peripheral outer surface mounted on said reel core concentrically to its axis, a movable lever pivotally mounted on a fixed point of said device, a spring pressing the free part of said lever to said peripheral outer surface of said guide-part, an indicator table lying perpendicularly to said reel core axis and being fastened on said lever, and a scale provided on said table, said scale indicating the radius of the helix formed by the wound-on turns of said magnetic tape and being radially arranged with respect to said tape turns.

ERRATUM

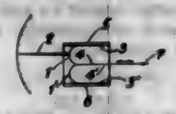
For Class 33—132 see:
Patent No. 2,946,136

2,946,128
GAGE MECHANISM
Samuel P. Caldwell, Hamden, Conn., assignor to The Geist Manufacturing Company, New Haven, Conn., a corporation of Connecticut
Filed Jan. 6, 1959, Ser. No. 789,224
7 Claims. (Cl. 33—147)



7. In a gage of the micrometer type for measuring an internal diameter, a bar, a stationary feeler on the bar, a screw micrometer mounted on one end of the bar, a spindle on the bar operable upon manipulation of the screw micrometer for adjustment toward and away from the feeler, a second feeler, a slide intermediate the first feeler and the spindle and carrying the second feeler for movement therewith, the slide being slidably supported on the bar for movement toward the first feeler or the spindle and being spring biased toward the latter, the slide having a part thereof projecting from the bar, and an indicating device supported from said part of the slide for movement therewith and indicating when, as the spring-biased slide moves away from the first feeler following the spindle during the taking of a measurement, movement of the second feeler becomes obstructed by impingement of the last-mentioned feeler with the article which is being measured, said indicating device comprising a spring-biased movably mounted actuating part which is normally engaged with both the spindle and the slide part but which disengages the slide when said movement of the second feeler becomes obstructed, the indicating device also comprising a pointer and a dial, the former cooperating with the latter to indicate the degree of separation of the actuating part from the slide, and the actuating part being operably connected to the pointer.

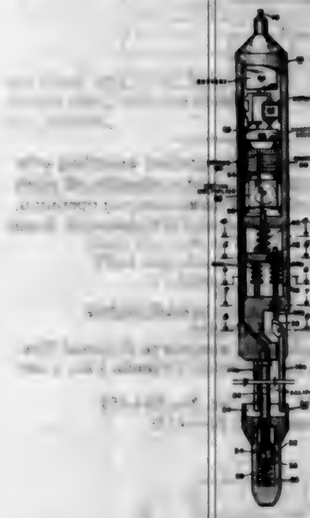
2,946,129
MEASURING DEVICES
Herbert Kortum and Karl Papello, Jena, Germany, assignors to VEB Carl Zeiss Jena, Jena, Germany
Filed Nov. 13, 1957, Ser. No. 696,290
1 Claim. (Cl. 33—172)



A measuring device for direct micrometer measurement having measuring elements consisting of two U-shaped band springs and two parallel fixed guides, the one ends of said springs being attached to those sides of said guides which are opposite to each other, the other ends of said springs lying against and supporting each other and constituting a tactile element, one of said springs carrying a pointer, said pointer being attached to the bowed part of said spring.

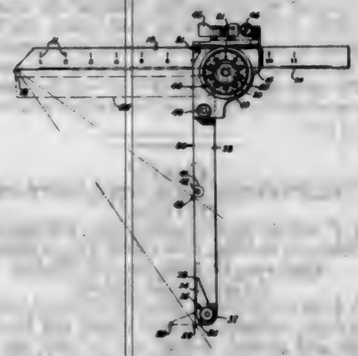
2,946,130
WELL BORE CALIPER
Edward L. Grosse and Luther Joe Herndon, Jr., Duncan, Okla., assignors, by mesne assignments, to Welex, Inc., a corporation of Delaware
Filed Mar. 29, 1957, Ser. No. 649,352
5 Claims. (Cl. 33—178)

3. A caliper tool adapted to determine variations in effective diameter within a well bore comprising; a plurality of caliper feeler arms adapted to angularly extend from said tool into contact with a well bore wall; each of said feeler arms in direct coupling with a resilient force inducing means, each of said feeler arms adapted to linearly displace its respective force inducing means to induce a force of magnitude directly responsive to the radial displacement of the respective feeler arm; a displaceable deflection means in force transmitting coupling with said force inducing means of said feeler



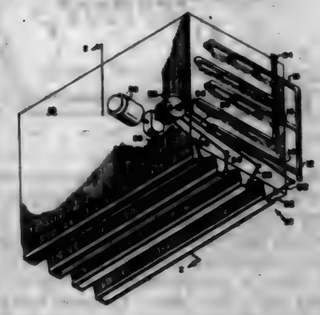
arms; a resiliently deflectable force opposing means connected in force transmitting coupling to said deflection means adapted to impose an opposing force equal to the summation of forces of said feeler arm force inducing means, said deflection means adapted to be displaced in direct response to the deflection of said force opposing means; and displacement indication means to indicate the displacement variation of said deflection means.

2,946,131
DEVICE FOR MEASURING INCLINATIONS
Bertil W. Klag, Brooklyn, N.Y.
(17 Battery Place, New York, N.Y.)
Filed Feb. 6, 1956, Ser. No. 563,721
6 Claims. (Cl. 33—214)



1. A device for measuring inclinations comprising a horizontal bar having a contact edge at one end thereof, equally spaced tenths graduations carried by the horizontal bar, ten such spaced graduations being a unit length, a frame slidably mounting the horizontal bar, a dial member rotatably mounted on the frame, connecting means carried by the horizontal bar and the dial member connecting the same together for movement of the horizontal bar in the frame and rotation of the dial member, the connecting means moving the horizontal bar the distance between successive graduations on the horizontal bar for one revolution of the dial member, dial graduations of 100 equally spaced divisions circularly disposed on the dial member, a pointer carried by the frame adjacent to the dial divisions, a vertical bar carried at one end by the frame and extending at right angles to the horizontal bar, a contact edge at the remote end of the vertical bar from the frame, and the contact edge of the vertical bar being of unit length distance from a projection from the contact edge of the horizontal bar to a line in alignment with the edge of the vertical bar, a first and a second level carried by the frame each having an axis, the axis of the first level being parallel with the horizontal bar, the axis of the second level being at right angles to the axis of the first level and at right angles to the vertical bar, an arm mounted upon the end of the vertical bar spaced from the frame for positioning the same to and from a position projecting laterally from the vertical bar, the arm having a contact edge when projecting laterally a distance equal to the spacing between two adjacent graduations on the horizontal bar from the contact edge at the remote end of the vertical bar and in horizontal alignment therewith, and means to retain the arm in projected position.

2,946,132
GRAIN DRIER AND VALVE THEREFOR
George W. Armstrong, Fairborn, Ohio, assignor to O. B. Armstrong and Sons Company, Fairborn Ohio, a corporation of Ohio
Filed Oct. 14, 1957, Ser. No. 689,884
8 Claims. (Cl. 34—170)

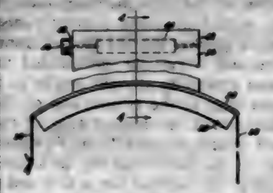


1. In a grain valve or the like; an inwardly tapering inlet portion, a cylindrical discharge portion connected to the inlet portion, a plate pivoted on the axis of said cylindrical portion, and being of about the same length as the diameter of said cylinder portion, a member upstanding at right angles from the plate in about the center thereof, an arcuate head on the end of said member concentric with said cylindrical portion but spaced therefrom, and a resilient sealing means carried by said inlet portion and engaging said arcuate head.

2,946,133
MEDITATION DEVICE
Fred A. Williams, 476 S. Firestone Blvd., Akron, Ohio
Filed July 20, 1959, Ser. No. 828,256
3 Claims. (Cl. 35—23)

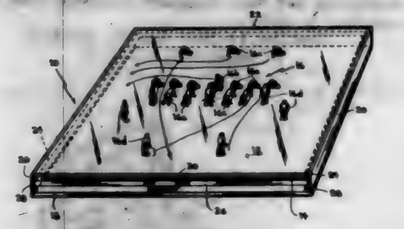
2. A member for facilitating human meditation comprising a body having a portion contoured to fit over a

human being's eyes and bridge of the nose, an endless element of resilient material and having a hollow center secured to the contoured portion and conforming therewith and adapted to effect a light-tight seal against a human being's forehead, temples, cheekbones and nose around the entire periphery of the contoured portion, strap means for securing the body over a human being's eyes but out of engagement therewith, said body having a



box-like shape extending outwardly from the contoured portion, a block rotatively mounted in the body, light-absorbing phosphorescent images on only certain sides of the block, means outside the body for changing the rotative position of the block inside the body, said body, contoured portion, and endless element forming a light-tight enclosure over the eyes of the human being wearing the member whereby meditation in total darkness with or without the images viewable is achieved.

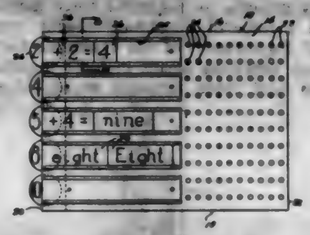
2,946,134
GAME INSTRUCTION APPARATUS
Roger D. Nellson, 39 Bridge St., Pulaski, N.Y.
Filed Oct. 15, 1959, Ser. No. 846,653
7 Claims. (Cl. 35—29)



1. In an instruction apparatus for team type athletic games: a sheet indicating player assignments, a substantially rigid transparent sheet representing the playing area and overlying said player assignment sheet, and a plurality of player simulating figurettes positioned on said playing area sheet in predetermined relation to said player assignment sheet, said player figurettes being formed in a number of different stances to indicate the different playing positions filled by the players.

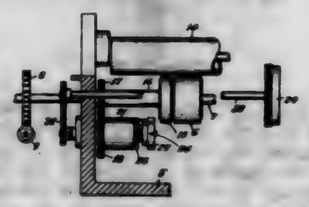
2,946,135
EDUCATIONAL DEVICE
Otto R. Eichmeyer and Catherine J. Pitt, Jr., both of 1212 18th Ave., Menominee, Mich.
Filed Jan. 29, 1960, Ser. No. 5,522
6 Claims. (Cl. 35—31)

1. An educational device comprising a board having a front face and a back face and including a top, a bottom, and a side extending between adjacent ends of said top and bottom, a plurality of slideways arranged in superimposed vertical spaced relation positioned on one of said faces so that they extend inwardly from one side thereof, a disc positioned contiguous to said one board side so that a half portion projects outwardly from said one board side with the other half portion concealed by said one face and underlying an adjacent slideway and connected at its midpoint to said board for rotary movement about an axis transversely of said board, the face of each of said discs adjacent said board one face having an indicia designation extending over one half of said disc face



and having a different indicia designation extending over the other half of said disc face, and a plurality of cards each bearing indicia symbolic of an educational operation, said cards being insertable into and withdrawable from said slideways.

2,946,136
STRIP FEEDING AND MEASURING MECHANISM
Carl T. Nations, Orlando, Fla., assignor to National Electronics Distributors, Incorporated, Orlando, Fla., a corporation of Florida
Filed Dec. 21, 1955, Ser. No. 554,458
7 Claims. (Cl. 33—132)

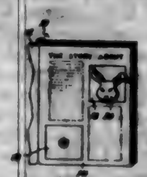


1. In a machine including a feed roll for feeding a strip therethrough, an electric circuit, and a motor in said circuit for driving said feed roll, the combination of measuring means including a measuring roll in contact with said strip and driven thereby, a measuring device including a rotatable member driven by said measuring roll, a separate member adjacent to the rotatable member, means in said circuit for magnetizing said rotatable member to connect the separate member thereto for rotation thereby, an electric switch in said circuit, means carried by the separate member for opening the said switch, a clutch between said motor and the feed roll, means in said circuit for causing engagement of said clutch to connect the motor to the feed roll, and means operable upon the opening of said switch to cause disengagement of the clutch to disconnect the motor from the feed roll.

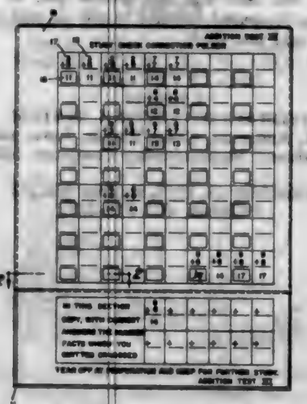
2,946,137
CHILD'S STORY BOOK WITH SHIFTABLE PICTURES
Sidney V. Worth, 8041 Mansfield Ave., Philadelphia, Pa., and Robert C. Rebling, 2140 Curtis Ave., Abington, Pa.
Filed Aug. 10, 1959, Ser. No. 832,548
5 Claims. (Cl. 35—35)

1. A book comprising a plurality of bound pages, some of said pages containing printed matter and blank spaces adjacent said printed matter, and at least one of said pages having cut-out pictures thereon, said cut-out pictures having a pressure sensitive adhesive on the back surface thereof by which the cut-out pictures are removably adhered to said one page and can be removably adhered

to the blank spaces on the other pages, the page having the cut-out pictures comprising a paper backing sheet, a transparent plastic sheet secured across the paper backing sheet, and a top sheet secured across the transparent plastic sheet, said top sheet being cut to provide the cut-out pictures.



2,946,138
EDUCATIONAL TEST FOLDER FOR TEACHING ARITHMETIC
Sue J. Convery, 1761 16th Ave., and Elda Convery, 885 Head St., both of San Francisco, Calif.
Filed Aug. 17, 1959, Ser. No. 834,139
6 Claims. (Cl. 35—48)



1. In an educational device, a backing member of relatively stiff material and a cover member of relatively stiff material hinged to said backing member for swinging movement to and from a position overlying the backing member, the cover member being provided with a plurality of spaced sight openings formed therein, said cover member bearing indicia adjacent the sight openings and constituting problems, said cover member also bearing additional indicia constituting problems identical to said first-named problems and answers to the problems, the identical problems being positioned side-by-side so that the answers to the problems are disposed on one side of the sight openings underlying the problems.

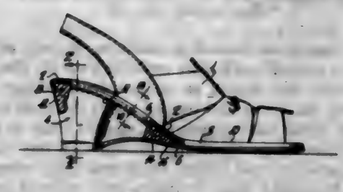
2,946,139
MOLDED PLASTIC HEEL CUP WITH RETAINING WALL FEATURE
Duncan E. Slade, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed June 25, 1959, Ser. No. 822,852
1 Claim. (Cl. 36—7.3)

A new article of manufacture for use with a plastic overshoe having a heel member with a base portion and upstanding sidewalls rising from each edge of the base portion, a plastic cup having thin flexible walls, the bottom surface of said cup having an area substantially equal to the inside area of the heel base and having a shape which conforms to the inner surface of the overshoe, whereby the walls of said cup may bear against the inner heel wall to hold the cup in place, the back portion of the flexible wall being curved, a thin plastic web of substantially the same thickness as the sidewalls rising up from the bottom surface and being



fixed in spaced apart relation with respect to the front and sidewalls, said web being joined to the sidewalls only at its opposite two ends, the height of the sidewalls and the said web being substantially more than the thickness of the base of the heel cup, and the height of the sidewalls of said heel cup being substantially more than the height of the web.

2,946,140
SHOE
Robert S. Lockridge, Lynchburg, Va., assignor to Craddock-Terry Shoe Corporation, Lynchburg, Va., a corporation of Virginia
Filed Oct. 24, 1957, Ser. No. 692,201
6 Claims. (Cl. 36—19.5)

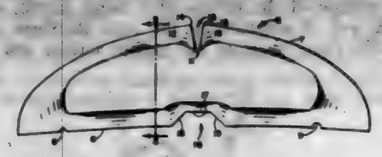


6. In a slip lasted platform shoe of the inside heel type, an upper and a platform, a platform cover strip about the forward part of the shoe and pulled over the platform to form a rolled platform cover, a heel, heel covering material in two parts about the heel area of the shoe from the ends of the platform cover strip and extending downwardly from the upper, the cover material being in joined upper and lower sections with the upper section being substantially the width of the rolled platform cover to appear as a continuation thereof, the covering material being pulled over the heel, and an outer sole secured to the platform and heel, the upper and lower sections of the cover material being joined by having their adjacent edges turned inwardly and stitched together, and said heel having a groove extending about it spaced and parallel to the top edge to receive the joined inturned edges of the cover material sections.

2,946,141
FLEXIBLE MOLDED FLANGED COUNTER STIFFENER HAVING A VENTILATING OPENING
William F. Herlihy, Haverhill, Mass., assignor to Lowell Counter Company, Lowell, Mass., a copartnership
Filed Oct. 2, 1958, Ser. No. 764,819
1 Claim. (Cl. 36—68)

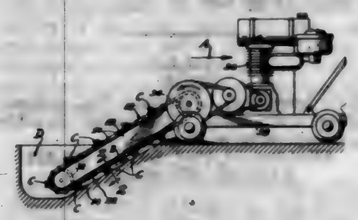
A molded counter stiffener for incorporation in a shoe upper and whose upper edge is substantially continuous, but which has at its center rear portion a ventilating opening of teardrop shape whose side edges converge upwardly and meet at the upper edge of the counter, the counter having a marginal bottom flange of generally conventional

type except that it has, at the center of its rear portion, a recess of rectangular shape extending inwardly from its forward edge to its rear edge and of a transverse width



to accommodate the entire width of the back seam of a shoe upper with which the counter stiffener may be employed.

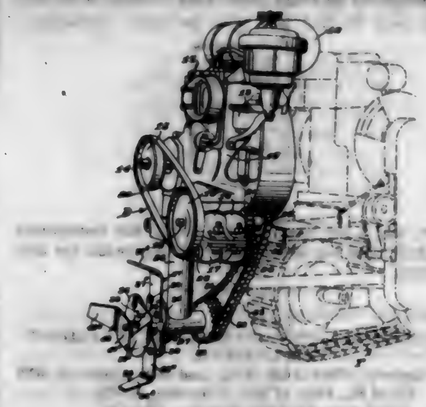
2,946,142
TRENCHING MACHINE CUTTER
Russel Swanson, Merrill, Iowa, assignor to Wind-King Electric Mfg. Co., Merrill, Iowa, a corporation of Iowa
Filed Sept. 9, 1957, Ser. No. 682,778
2 Claims. (Cl. 37—91)



1. For use in a trenching machine having a boom arranged to extend rearwardly and downwardly therefrom into the earth and having an endless driven digger chain surrounding the boom and trained about the ends thereof, said digger chain having special L-shaped links at spaced intervals therealong; trenching machine cutters adapted to be mounted on said digger chain and each comprising a pair of U-shaped strap elements only secured together intermediate their length and thereby providing upper mounting flanges and lower digging flanges which are substantially parallel to each other in a lateral direction, and means for mounting said mounting flanges on said L-shaped links of the digger chain, said digging flanges having their leading edges sharpened for digging.

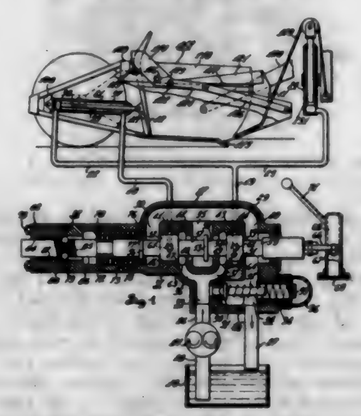
2,946,143
DITCHING MACHINE
Sam A. Beachy, Alvin S. Beachy, and Menno S. Beachy, Salisbury, Pa., assignors to Sam Beachy & Sons, Salisbury, Pa., a partnership
Filed Dec. 16, 1958, Ser. No. 780,757
2 Claims. (Cl. 37—92)

1. A ditching machine comprising a frame, a motor driven shaft rotatably supported by said frame, a second shaft rotatably supported by said frame in parallel relation to said first shaft, a drive connection between said motor driven shaft and said second shaft, a third shaft rotatably supported by said frame adjacent said second shaft and parallel therewith, gear drive connections between said second and said third shafts for opposite rotation thereof, a support depending from said frame, a bearing sleeve rigidly secured to the lower end of said support, a second sleeve rotatably supported within said bearing sleeve and being disposed in parallel relation with said first, second and third shafts, a shaft rotatably supported within said rotatable sleeve, drive connections between said second and said third shafts and said rotatable sleeve and said last shaft for opposite rotation thereof, a pair of ditching blades secured to said rotatable sleeve and disposed diametrically thereof, and a pair of ditching blades secured to said last shaft and disposed diametrically



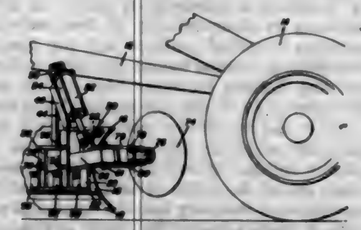
ly thereof, and said first and second pair of ditching blades being in spaced relation axially of said rotatable sleeve and said last shaft.

2,946,144
HYDRAULIC CONTROL SYSTEM
Reynold M. Anderson, Cedar Rapids, Iowa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 28, 1957, Ser. No. 662,272
9 Claims. (Cl. 37—129)



1. A four way control valve for a hydraulic system including a double acting hydraulic jack, a single acting hydraulic jack, a fluid reservoir, a pump having a suction and a discharge side, a first conduit means connected with one end of said double acting hydraulic jack, a second conduit means having a first branch connected with the other end of said double acting hydraulic jack and a second branch connected with said single acting hydraulic jack, said control valve comprising: a housing defining therein an elongated bore, inlet and return chambers formed within said housing and communicating with said bore, a first conduit port connecting with said first conduit means and communicating with said bore, a second conduit port connecting with said second conduit means and communicating with said bore, a valve spool slidably and centrally disposed within said bore, said valve spool being selectively settable in four control positions, successively, "ejector return," "float," "hold" and "eject," said "ejector return" position of said valve spool directing the flow of pressure fluid from said discharge side of said pump to said first conduit port and for simultaneously directing the flow of pressure fluid from said second conduit port to said return chamber, said "float" position of said valve spool directing the flow of pressure fluid from said discharge side of said pump and from said first and second conduit ports into said return chamber of said valve, said "hold" position of said valve spool directing the flow of pressure fluid from said inlet chamber of said valve to said return chamber and simultaneously blocking off said first and second conduit ports, said "eject" position of said valve spool directing the flow of pressure fluid from the inlet chamber of said valve to said second conduit port and simultaneously directing the flow of fluid from said second cylinder conduit to said return chamber, detent means engaging said valve spool in said "ejector return" and "float" positions, and spring means returning said valve spool from said "eject" position to said "hold" position.

2,946,145
ROTARY DISC SHOULDER CUTTER
Paul L. Winkel, Glen Elder, Kans.
Filed July 19, 1957, Ser. No. 673,025
2 Claims. (Cl. 37—143)



1. An attachment for a moldboard for cutting a smooth shoulder at one end of the moldboard on a road comprising a frame including an elongated base plate, a pair of bifurcated upstanding brackets fixed on said plate at opposite ends thereof, a beam overlying and extending longitudinally of said plate and straddled by said brackets with an inner end pivoted to one bracket for raising and lowering of the beam and an outer end projecting outwardly beyond said plate, a rotary shoulder cutting disc laterally adjustably, pivotally mounted on the outer end of the beam, a hydraulic cylinder and piston rod for raising and lowering the beam inclining upwardly and rearwardly of said beam with the piston rod operatively pivotally connected to the beam, means mounting said cylinder for raising and lowering together with the piston rod to compensate for raising and lowering of the beam comprising an upright on top of one bracket having a lateral upper arm to which said cylinder is terminally pivoted, and a pair of brace bars inclining downwardly from said upright and fixed to the top of the other bracket, said plate having means thereon for attaching the frame to a moldboard.

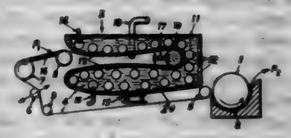
2,946,146
PORTABLE SWIMMING POOL DIGGER
Vernon L. Bartley, 801 Charlston St., Mobile, Ala.
Filed Dec. 6, 1957, Ser. No. 701,240
6 Claims. (Cl. 37—192)

1. In an excavating machine, the combination of a supporting frame including a center member and a plurality of elongated frame sections connected to and extending radially outwardly from said center member, means at the outer ends of said frame sections for anchoring the same to the ground, a carrier rotatable in a horizontal plane at the underside of said center member, means for rotating said carrier, an endless conveyor type digger pivoted at one end thereof to said carrier for raising and lowering movement, means for driving said digger whereby the same may excavate a substantially semi-spherical cavity in the ground under said frame when said carrier is rotated, an annular track provided at the under-



side of said frame sections concentrically with said center member, means movable along said track and connected to the outer end of said digger for suspending the same therefrom, and conveyor means connected to said carrier for rotation therewith and communicating with the pivoted end of said digger, said conveyor means extending radially outwardly from said carrier beyond the outer end of the digger whereby to transfer earth from the digger to the ground exteriorly of the stated cavity.

2,946,147
IRONING APPARATUS
Jakob Rothenberger, 49 Kronleinstrasse, Zurich, Switzerland
Filed Mar. 26, 1957, Ser. No. 648,676
Claims priority, application Switzerland Mar. 27, 1956
2 Claims. (Cl. 38—2)

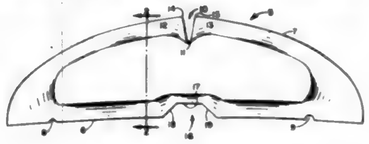


1. An apparatus for continuously drying clothes, comprising a drying chamber having an outer surface, heating means including a heating fluid in said drying chamber for heating said outer surface, said heating means further including a network of tubes in intimate contact with said heating fluid within said drying chamber, means for delivering steam to said tubes to heat said heating fluid, endless perforated belt conveyor means disposed adjacent said drying chamber and having a portion conforming to and disposed immediately adjacent said outer surface, and means for driving said conveyor means connected thereto, said drying chamber having a plurality of curved sections, each of said sections having a mirror-finished metal housing thereabout, said portion of said conveyor means including loops extending between said curved sections and being resiliently urged taut between said curved sections.

2,946,148
VARIABLE DISPLAY DEVICE
Emery Mihalek, Chicago, Ill., assignor to Hershey Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 8, 1958, Ser. No. 778,691
4 Claims. (Cl. 40—34)

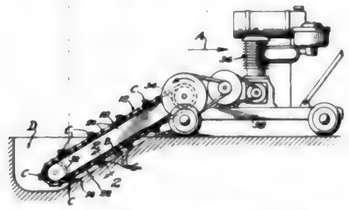
1. A display device, comprising a vertical disk rotatable about a horizontal axis and having a plurality of display messages spaced around the front face thereof, a member in front of said disk and having a window therein for exposing each of said display messages in turn as said disk is rotated, a swingable lever pivoted above said disk and having a downwardly extending

type except that it has, at the center of its rear portion, a recess of rectangular shape extending inwardly from its forward edge to its rear edge and of a transverse width



to accommodate the entire width of the back seam of a shoe upper with which the counter stiffener may be employed.

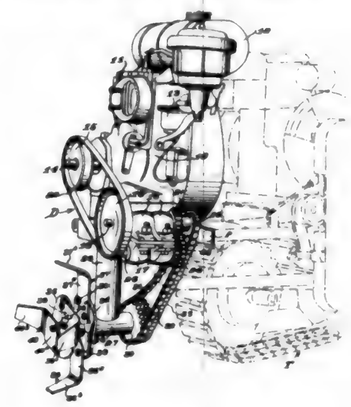
2,946,142
TRENCHING MACHINE CUTTER
Russel Swanson, Merrill, Iowa, assignor to Wind-King Electric Mfg. Co., Merrill, Iowa, a corporation of Iowa
Filed Sept. 9, 1957, Ser. No. 682,778
2 Claims. (Cl. 37—80)



1. For use in a trenching machine having a boom arranged to extend rearwardly and downwardly therefrom into the earth and having an endless driven digger chain surrounding the boom and trained about the ends thereof, said digger chain having special L-shaped links at spaced intervals therealong; trenching machine cutters adapted to be mounted on said digger chain and each comprising a pair of U-shaped strap elements only secured together intermediate their length and thereby providing upper mounting flanges and lower digging flanges which are substantially parallel to each other in a lateral direction, and means for mounting said mounting flanges on said L-shaped links of the digger chain, said digging flanges having their leading edges sharpened for digging.

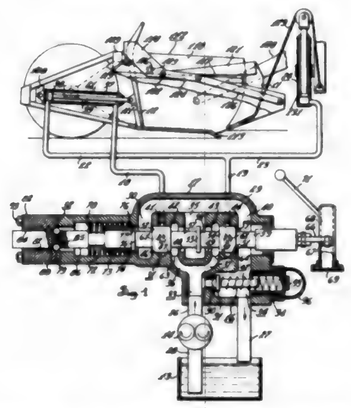
2,946,143
DITCHING MACHINE
Sam A. Beachy, Alvin S. Beachy, and Menno S. Beachy, Salisbury, Pa., assignors to Sam Beachy & Sons, Salisbury, Pa., a partnership
Filed Dec. 16, 1958, Ser. No. 780,757
2 Claims. (Cl. 37—92)

1. A ditching machine comprising a frame, a motor driven shaft rotatably supported by said frame, a second shaft rotatably supported by said frame in parallel relation to said first shaft, a drive connection between said motor driven shaft and said second shaft, a third shaft rotatably supported by said frame adjacent said second shaft and parallel therewith, gear drive connections between said second and said third shafts for opposite rotation thereof, a support depending from said frame, a bearing sleeve rigidly secured to the lower end of said support, a second sleeve rotatably supported within said bearing sleeve and being disposed in parallel relation with said first, second and third shafts, a shaft rotatably supported within said rotatable sleeve, drive connections between said second and said third shafts and said rotatable sleeve and said last shaft for opposite rotation thereof, a pair of ditching blades secured to said rotatable sleeve and disposed diametrically thereof, and a pair of ditching blades secured to said last shaft and disposed diametrical-



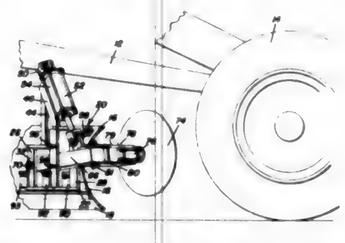
ly thereof, and said first and second pair of ditching blades being in spaced relation axially of said rotatable sleeve and said last shaft.

2,946,144
HYDRAULIC CONTROL SYSTEM
Reynold M. Anderson, Cedar Rapids, Iowa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 28, 1957, Ser. No. 662,272
9 Claims. (Cl. 37—129)



1. A four way control valve for a hydraulic system including a double acting hydraulic jack, a single acting hydraulic jack, a fluid reservoir, a pump having a suction and a discharge side, a first conduit means connected with one end of said double acting hydraulic jack, a second conduit means having a first branch connected with the other end of said double acting hydraulic jack and a second branch connected with said single acting hydraulic jack, said control valve comprising: a housing defining therein an elongated bore, inlet and return chambers formed within said housing and communicating with said bore, a first conduit port connecting with said first conduit means and communicating with said bore, a second conduit port connecting with said second conduit means and communicating with said bore, a valve spool slidably and centrally disposed within said bore, said valve spool being selectively settable in four control positions, successively, "ejector return," "float," "hold" and "eject," said "ejector return" position of said valve spool directing the flow of pressure fluid from said discharge side of said pump to said first conduit port and for simultaneously directing the flow of pressure fluid from said second conduit port to said return chamber, said "float" position of said valve spool directing the flow of pressure fluid from said discharge side of said pump and from said first and second conduit ports into said return chamber of said valve, said "hold" position of said valve spool directing the flow of pressure fluid from said inlet chamber of said valve to said return chamber and simultaneously blocking off said first and second conduit ports, said "eject" position of said valve spool directing the flow of pressure fluid from the inlet chamber of said valve to said second conduit port and simultaneously directing the flow of fluid from said second cylinder conduit to said return chamber, detent means engaging said valve spool in said "ejector return" and "float" positions, and spring means returning said valve spool from said "eject" position to said "hold" position.

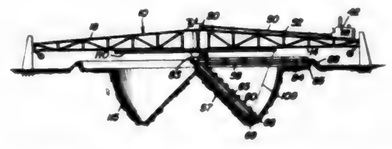
2,946,145
ROTARY DISC SHOULDER CUTTER
Paul L. Winkel, Glen Elder, Kans.
Filed July 19, 1957, Ser. No. 673,025
2 Claims. (Cl. 37—143)



1. An attachment for a moldboard for cutting a smooth shoulder at one end of the moldboard on a road comprising a frame including an elongated base plate, a pair of bifurcated upstanding brackets fixed on said plate at opposite ends thereof, a beam overlying and extending longitudinally of said plate and straddled by said brackets with an inner end pivoted to one bracket for raising and lowering of the beam and an outer end projecting outwardly beyond said plate, a rotary shoulder cutting disc laterally adjustably, pivotally mounted on the outer end of the beam, a hydraulic cylinder and piston rod for raising and lowering the beam inclining upwardly and rearwardly of said beam with the piston rod operatively pivotally connected to the beam, means mounting said cylinder for raising and lowering together with the piston rod to compensate for raising and lowering of the beam comprising an upright on top of one bracket having a lateral upper arm to which said cylinder is terminally pivoted, and a pair of brace bars inclining downwardly from said upright and fixed to the top of the other bracket, said plate having means thereon for attaching the frame to a moldboard.

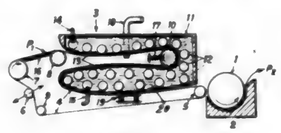
2,946,146
PORTABLE SWIMMING POOL DIGGER
Vernon L. Bartley, 801 Charlston St., Mobile, Ala.
Filed Dec. 6, 1957, Ser. No. 701,240
6 Claims. (Cl. 37—192)

1. In an excavating machine, the combination of a supporting frame including a center member and a plurality of elongated frame sections connected to and extending radially outwardly from said center member, means at the outer ends of said frame sections for anchoring the same to the ground, a carrier rotatable in a horizontal plane at the underside of said center member, means for rotating said carrier, an endless conveyor type digger pivoted at one end thereof to said carrier for raising and lowering movement, means for driving said digger whereby the same may excavate a substantially semi-spherical cavity in the ground under said frame when said carrier is rotated, an annular track provided at the under-



side of said frame sections concentrically with said center member, means movable along said track and connected to the outer end of said digger for suspending the same therefrom, and conveyor means connected to said carrier for rotation therewith and communicating with the pivoted end of said digger, said conveyor means extending radially outwardly from said carrier beyond the outer end of the digger whereby to transfer earth from the digger to the ground exteriorly of the stated cavity.

2,946,147
IRONING APPARATUS
Jakob Rothenberger, 49 Kronleinstrasse, Zurich, Switzerland
Filed Mar. 26, 1957, Ser. No. 648,676
Claims priority, application Switzerland Mar. 27, 1956
2 Claims. (Cl. 38—2)

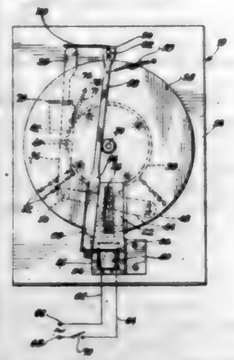


1. An apparatus for continuously drying clothes, comprising a drying chamber having an outer surface, heating means including a heating fluid in said drying chamber for heating said outer surface, said heating means further including a network of tubes in intimate contact with said heating fluid within said drying chamber, means for delivering steam to said tubes to heat said heating fluid, endless perforated belt conveyor means disposed adjacent said drying chamber and having a portion conforming to and disposed immediately adjacent said outer surface, and means for driving said conveyor means connected thereto, said drying chamber having a plurality of curved sections, each of said sections having a mirror-finished metal housing thereabout, said portion of said conveyor means including loops extending between said curved sections and being resiliently urged taut between said curved sections.

2,946,148
VARIABLE DISPLAY DEVICE
Emery Mihalek, Chicago, Ill., assignor to Hershey Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed Dec. 8, 1958, Ser. No. 778,691
4 Claims. (Cl. 40—34)

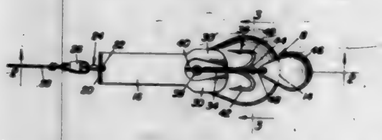
1. A display device, comprising a vertical disk rotatable about a horizontal axis and having a plurality of display messages spaced around the front face thereof, a member in front of said disk and having a window therein for exposing each of said display messages in turn as said disk is rotated, a swingable lever pivoted above said disk and having a downwardly extending

vertical arm with a lower shutter portion swingable in front of said window to obscure the disk from view, a toothed wheel secured to the rear of said disk and rotatable therewith, a generally vertical bar having a pin thereon engageable with said toothed wheel, a generally horizontal actuating lever having its outer end pivotally connected to the lower end of said bar, a solenoid connested to said actuating lever for moving said lever downwardly, said bar and said pin thereby being pulled downwardly to rotate said toothed wheel and said disk, a guide member engaging one edge of said bar, a spring biasing said bar upwardly and also edgewise against said guide member, said edge of said bar having a cam portion engageable with said guide member upon down-



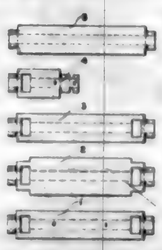
ward movement of said bar and angling upwardly and laterally to swing said bar away from the axis of said disk so as to disengage said pin from said toothed wheel and thereby release said toothed wheel for free spinning movement, said cam providing for re-engagement of said pin with said toothed wheel for definitely indexing said wheel upon upward return movement of said bar, said first mentioned lever having a generally horizontal arm for engagement by the upper end of said bar upon upward return movement thereof to swing such lever in a direction to move said shutter portion away from said window, said shutter portion being swingable in front of said window by the weight of said first mentioned lever upon downward movement of said bar away from said arm.

2,946,149
WEEDLESS FISHING SPOON
Lester A. Baker, 3235 Redding Road, Columbus, Ohio
Filed Feb. 10, 1958, Ser. No. 714,382
1 Claim. (Cl. 43—42.18)



A fishing device comprising: a generally U-shaped shank including substantially flat upper and lower legs, a concavo-convex spoon integral with the free end of said lower leg, a hook pivotally connected to said lower leg and freely swingable in the spoon, furcations integral with the free end of the upper leg and straddling the shank of said hook for limiting the lateral swinging movement of said hook in the spoon, said hook being swingable into and out of the spoon between the furcations, said furcations being rearwardly convergent and terminating in downwardly bent, longitudinally twisted free end portions projecting into the spoon for guiding the hook thereinto and, in conjunction therewith, preventing the escape of the hook from between said furcations, and a drag for the hook comprising a spinner loosely connected thereon and adapted to rest on the rear end portion of the spoon when inactive.

2,946,150
TOY LOG CABIN
Robin H. Houk, 2562 36th St. NW., Washington, D.C.
Filed Oct. 21, 1955, Ser. No. 542,045
1 Claim. (Cl. 46—28)



A simulated log construction made from sheet material adapted to be cut, shipped and stored in flat condition for occupying a minimum of space, the simulated log comprising an elongated strip of sheet material having a tendency to unfold provided with two longitudinal fold lines defining a center section and side sections, said fold lines also defining the inner edges of the side sections, the outer edges of said side sections being free, said center section and an adjacent portion of each side section being cut completely through in transverse lines to form a notch adjacent at least one end, the tranverse cut lines being spaced the width of said center section, the transverse cut lines extending into the inner edge portions of the side sections adjacent the center section whereby the sheet material may be folded on the longitudinal fold lines so that the side sections are substantially parallel and the notch is open so that an adjacent simulated log may be placed in the open notch formed by the transverse cut lines and the ends of the open notch will contact the free edges of the side sections of such adjacent simulated log to maintain the side sections of such adjacent simulated log in folded relation and the tendency of the side sections of such simulated log to return to flat condition will cause resilient frictional contact with the ends of the open notch assuring effective retention of assembly of two or more logs in overlapping transverse relation so that the free edge portions of one simulated log may be received in the open notch of a cooperating adjacent simulated log.

2,946,151
ROCKET AND SATELLITE TOY APPARATUS
Charles H. Traylor, Jr., P.O. Box 145, Wakefield, Va.
Filed May 29, 1958, Ser. No. 738,763
4 Claims. (Cl. 46—74)

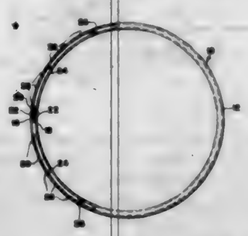
1. A rocket and satellite toy apparatus comprising a base adapted to rest upon a supporting surface, a support carried by said base, an upstanding launching member positioned upon said base so that the lower end rests upon said support with the upper end spaced above and in vertical spaced alignment with said support, a vertically disposed spring-loaded plunger positioned within said launching member adjacent to and below the upper end of said launching member and having the upper end normally resting upon the upper end of said launching member, releasable latch means for holding said plunger in the normal position, a rocket toy normally bridging the upper end of said plunger and supported upon said launching

member, an openable and closable door on said rocket toy, a miniature satellite in said rocket toy, propelling means within said rocket toy for ejecting said satellite out of said door when the latter has been moved to the open position, thrust imparting means carried by said base and operatively connected to said launching member for projecting said launching member from the position of rest upon said support vertically upwardly from said base, and a tripping element carried by said thrust imparting



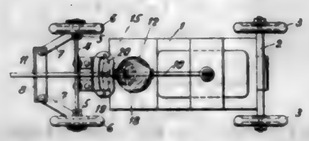
means and operable upon execution of the upward movement of said launching member to shift said latch means to the released position and permit the unloading of said plunger and the upper end of said plunger to be forcibly ejected against the rocket toy and launch the rocket toy into space, the door of said rocket toy being shiftable to open position upon contact by the launched rocket toy of an overhead object and permit actuation of the propelling means to eject the satellite into space.

2,946,152
MUSICAL TOY HOOP
Leonard R. Rubin, Wynnewood, Pa., assignor to Harry Rubin & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 15, 1958, Ser. No. 761,025
1 Claim. (Cl. 46—175)



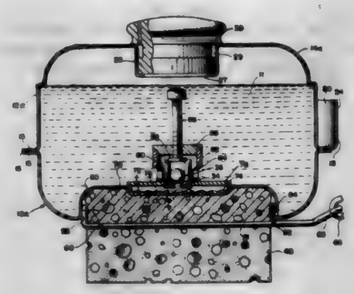
A toy hoop comprising a substantially circular closed loop of a light weight durable plastic hollow tubing, the ends of said tubing being joined together in endwise abutting relation by a plug fitting disposed within the interior of the two ends and frictionally engaging the interior wall surface of the ends, said hoop having an internal diameter of at least 12 inches, a plurality of circumferentially spaced compartmentation plugs press fitted within the interior of the hollow tubing, said plugs cooperating with said tubing to form closed compartments within said tubing and thereby prevent communication between adjacent compartments, means for creating sound upon the rotation of the hoop disposed within the hollow tubing and between the compartmentation plugs, and ridges extending along the entire length of the outer surface of the hollow tubing.

2,946,153
SELF-STEERED TOY VEHICLE
Heinrich Ernst, Sihlstrasse 45, Zurich, Switzerland
Filed Oct 5, 1955, Ser. No. 538,715
Claims priority, application Switzerland Oct. 6, 1954
5 Claims. (Cl. 46—202)



1. A self-steering toy vehicle having a frame mounted on at least three wheels; comprising steering means connected to at least one of said wheels, an axle carried by said frame and extending upwardly therefrom, a steering lever pivotally mounted on said axle and operatively connected to said steering means, a weight provided with a convex outer surface and mounted to be longitudinally fixed upon and coaxially rotatable about said steering lever, a guide track provided with a concave surface curving in crosswise direction of said frame, said weight being adapted to be guided by the convex surface thereof sliding within said concave surface of said guide track, whereby, when said frame is laterally inclined with respect to the longitudinal direction of movement of said toy vehicle, said weight will be guided transversely to the frame along said concave surface of said guide track and said steering lever will pivot about said axle, thereby causing said lever to actuate said steering means for directing said wheels toward said inclination.

2,946,154
LIQUID DISPENSER WITH METERING MEANS AND POROUS APPLYING MEANS
William C. Bornemann, Villa Park, Ill., assignor, by mesne assignments, to Fleming Sales Company, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 3, 1958, Ser. No. 765,215
14 Claims. (Cl. 47—1)



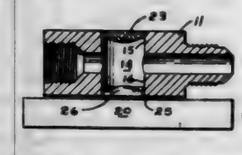
1. In a liquid dispenser, a tank for receiving a weed killer liquid therein, a resilient sponge member supporting said tank and having parallel ridges on the bottom adapted to engage the ground, valves for metering liquid from said tank to said sponge member, and means for

propelling said porous element over the ground with weight of the tank and liquid thereon in a wiping liquid transfer relationship to vegetation on said ground, said ridges being angled to the direction of movement of the tank over the ground.

2,946,155
METHOD FOR IMPROVING SOIL TEXTURE
George B. Barnhill, Oakland, Calif., assignor of twenty-five percent to John N. Adams, Oakland, Calif., and thirty-seven and one-half percent to M. Craig Friel, Oakland, Calif.; Louise S. Barnhill, administratrix of said George B. Barnhill, deceased
No Drawing. Filed Aug. 29, 1952, Ser. No. 307,169
1 Claim. (Cl. 47—58)

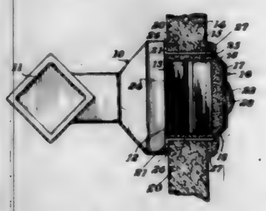
A method of treating soils which comprises providing an equous dispersion of an alkali metal salt of an alkyl substituted phosphorus acid and applying said dispersion to soil in a quantity sufficient to alter substantially the texture of the soil.

2,946,156
MANUFACTURE OF A WINDOWED ARTICLE
William D. Bailey, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Aug. 30, 1956, Ser. No. 607,190
4 Claims. (Cl. 49—81)



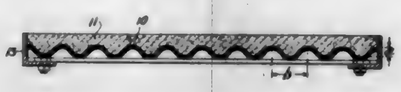
1. The method of providing a metal fitting passage, oppositely disposed from a windowed passage in such fitting, with a window, which includes closing one end of the passage by supporting the fitting on a surface thereof that closes the one end of such passage and supports the fitting on the portions thereof bordering such passage end; placing a pellet of glass, having a melting temperature below that in the existing window, in the fitting passage at its closed end and heating such supporting surface, fitting and pellet until the pellet is melted into a pool which when cooled comprises a window laterally confined by the surrounding passage bordering surface, and subsequently cooling the fitting to a temperature below the strain point of the glass.

2,946,157
CLIP FOR BATHROOM FIXTURES
Earl E. Franz and Earl E. Franz, Jr., both of 4137 David Ave. NW., Canton, Ohio
Filed Dec. 8, 1958, Ser. No. 778,939
5 Claims. (Cl. 50—22)



1. A plaster-retaining clip for attaching a fixture bracket having a rearwardly extending lug to a wall having a rectangular hole therein to receive said lug, said clip comprising a substantially rectangular pan portion of smaller size than the hole in the wall, said pan having an angular continuous, unbroken marginal flange thereon, and forwardly disposed fingers at opposite marginal edges of the pan and terminating in oppositely disposed angular ends, said fingers being so spaced as to frictionally fit within opposite sides of the hole in the wall and said angular ends of the fingers being so located that they will contact the front surface of the wall to position the pan spaced rearwardly from the rear surface of the wall so as to retain plaster within the hole in the wall around the lug of the bracket, whereby surplus plaster will be squeezed out between the marginal flange of the pan and the rear surface of the wall forming an anchor to secure to the clip to the wall.

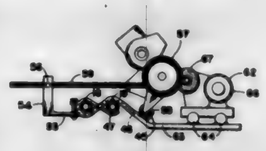
2,946,158
COMPOSITE BUILDING UNIT
Willard R. Seipt, North Wales, Pa., assignor to Keasbey & Mattison Company, Ambler, Pa., a corporation of Pennsylvania
Filed June 7, 1954, Ser. No. 435,089
11 Claims. (Cl. 50—413)



5. A composite structural unit comprising a strength element comprising hydrous calcium silicate having micropores making up not more than 35% of the total volume of the strength element, and an insulating element comprising hydrous calcium silicate having micropores making up between 75% and 95% of the total volume of the insulating element, said unit being further characterized by an inter-element bond consisting essentially of hydrous calcium silicate.

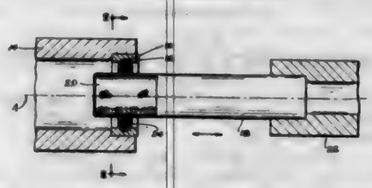
7. A structural unit in accordance with claim 5 in which the strength element extends in at least one direction beyond the edge of the insulating element.

2,946,159
LAWN MOWER SERVICE DEVICE
Robert K. Bramley, 16722 Grovewood, Cleveland, Ohio
Filed June 25, 1957, Ser. No. 667,765
3 Claims. (Cl. 51—48)



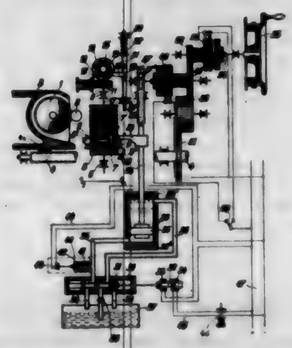
1. A service device for a lawn mower which includes a rearward roller, a handle and a cutter blade comprising a base having vertical side rails, a carriage formed with guide means engaging said rails, winch means connected between said base and carriage operable to move said carriage vertically along said rails, a pair of spaced mower supports on said carriage each formed with a notch adapted to receive said roller and lock means engageable with said handle when said mower is supported by said support with its roller in said notches, said lock means preventing rotation of said mower about said roller, and a grinder on said carriage adapted to grind the blade of a mower supported by said carriage.

2,946,160
METHOD AND APPARATUS FOR FINISHING ANNULAR GROOVES
Charles N. Hay, Sandusky, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 29, 1959, Ser. No. 790,007
10 Claims. (Cl. 51—58)



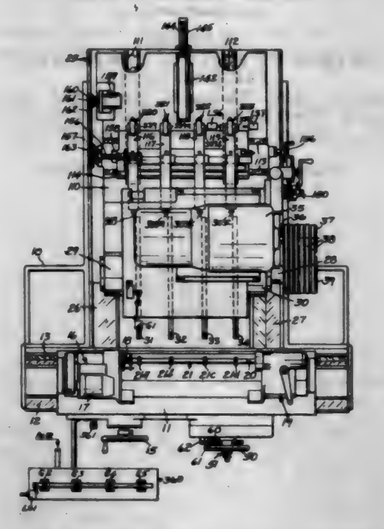
4. In a device for lapping a surface of revolution on a ring, said surface having a transversely arcuate curvature, a chuck arranged to be rotated about its longitudinal axis, means on said chuck demountably gripping the ring coaxial of said axis for rotation of the ring, an elongated yieldable lapping member of circular cross section arcuately seated against said surface of revolution, a supporting member arranged to be reciprocated longitudinally of said axis, said supporting member having a cylindrical portion frictionally engaging the lapping member and holding it in yieldably seated conforming relation with said surface.

2,946,161
FEED DEVICE FOR THREAD GRINDING MACHINES
Kurt H. Schultze, Berlin-Frohnau, and Otto Jaeckel, Berlin-Tegel, Germany, assignors to Herbert Lindner G.m.b.H., Berlin-Wittenau, Germany
Filed Feb. 25, 1958, Ser. No. 717,446
Claims priority, application Germany Apr. 17, 1957
13 Claims. (Cl. 51—165)



1. A feed device for a thread grinding machine including means for supporting a work piece, a grinding means mounted for movement toward and away from and laterally in respect to said work piece supporting means, means for moving said grinding means to and fro laterally, means for advancing said grinding means toward said work piece supporting means whereby to grind a work piece supported thereon during each lateral feeding movement of said grinding means in one direction and away from said work piece supporting means during lateral movement of said grinding means in the opposite direction, means for controlling said advancing means, and means responsive to said controlling means during each grinding cycle to alter said controlling means and effect change in the extent of movement of said advancing means toward said work piece supporting means during the next grinding cycle.

2,946,162
MULTIPLE WHEEL GRINDING MACHINE
Stewart S. Mader, Worcester, and John W. Johnson, Holden, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed May 19, 1958, Ser. No. 736,204
14 Claims. (Cl. 51—165)



1. A grinding machine having a base, a rotatable work support thereon for supporting a work piece having a plurality of spaced portions to be ground, a transversely movable wheel slide, a plurality of spaced rotatable grinding wheels thereon which are spaced simultaneously to grind spaced portions on the work piece, a feeding mechanism to feed said slide transversely in either direction, means including an in-process work gauge operatively connected to control said feeding mechanism so as to terminate the grinding cycle when a portion of the work piece has been ground to a predetermined size, means including a post-process gauge including a plurality of spaced independent gauging means for gauging each portion of the ground work piece, and operative connections between said post-process gauges and said feeding means to terminate a grinding cycle when any portion or portions of the ground work piece are ground oversize or undersize.

2,946,163
GRINDERS
James K. Ely, Pittsburgh, Pa., assignor to Allegheny Ludlum Steel Corporation, Brackenridge Pa., a corporation of Pennsylvania
Filed May 1, 1958, Ser. No. 732,217
8 Claims. (Cl. 51—188)



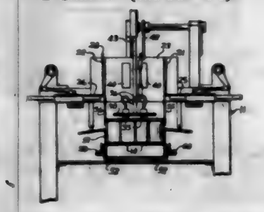
1. In a belt grinder having rolls adapted to utilize an endless belt of the grinding and polishing type having a predetermined width, the combination therewith of, an endless belt of the grinder and polishing type having a width less than said predetermined width, said belt being formed of a plurality of layers of fibrous material integrally secured together throughout their adjacent surfaces and having an outer and underside surface, an abrasive material carried on said outer surface layer, at least the layer forming the underside surface of the endless belt being of a width greater than the width of said

outer surface layer, said underside surface layer being disposed to extend beyond each of the edges of said outer surface layer to form flexible edges integral with the belt disposed to engage the rolls of the grinder and prevent scoring thereof whereby the rolls may be later used with a belt having said predetermined width.

2,946,164
METHOD OF PLACING CARTONS INTO PACKING CASES

William M. Potts, William E. Hartls, and Jerome O. Darbolt, Charlotte, N.C., assignors to Decam Corporation, Charlotte, N.C., a corporation of North Carolina

Filed May 3, 1955, Ser. No. 505,604
1 Claim. (Cl. 53—26)

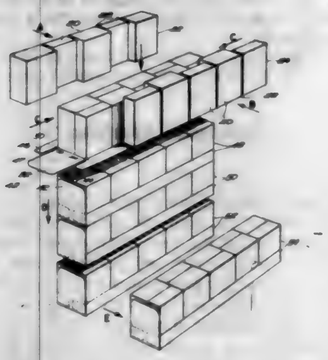


A method of packaging a plurality of substantially rectangular articles in a packing case comprising the steps of feeding a pair of side-by-side rows of articles in parallel straight paths of travel, stopping the leading ends of the two rows of articles, separately supporting a predetermined number of the leading articles in each row from beneath, suspendingly supporting the predetermined number of leading articles from above, feeding a row of packing cases in a step-by-step manner beneath and parallel to the side-by-side rows of articles, the feeding of the row of packing cases being timed with the feeding of the side-by-side rows of articles so that the leading packing case is positioned beneath the leading articles in each row, simultaneously releasing the support from beneath the separately supported articles in each row, and lowering the suspendingly supported articles into an open packing case positioned therebeneath.

2,946,165
METHOD OF AND MACHINE FOR FORMING PACKAGES

Omer E. Cote, Providence, R.I., assignor to United States Automatic Box Machinery Co., Inc., Boston, Mass., a corporation of Massachusetts

Filed June 12, 1956, Ser. No. 590,937
15 Claims. (Cl. 53—26)

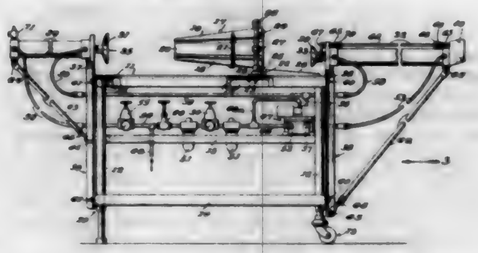


1. In a packaging machine, means for successively forming flat blanks having adhesive applied to selected areas thereof about the bottom and sides only of articles to be packaged, thereby combining the blanks and the articles into packages, a delivery conveyor having opposed vertical faces between which said packages may be held to maintain the portions of the formed blanks having adhesive thereon under pressure while the adhesive sets, and means for transferring the packages from the forming means to the conveyor.

2,946,166
POULTRY PACKAGING MACHINE AND METHOD

Thomas R. Baxter, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed July 5, 1956, Ser. No. 595,941
5 Claims. (Cl. 53—124)

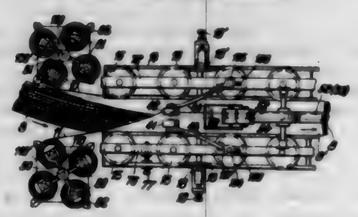


1. A poultry bagging machine comprising a support, a hollow tapered expansible horn mounted on said support and of a size to be expanded by forcing of a fowl therethrough, said horn being adapted for reception in an elastic bag and being of a length to extend from the bag mouth to the bag bottom to stretch the entire bag side wall and the bag bottom when said horn is expanded, a fowl pusher mounted on said support for movement into the larger end of said horn to push a dressed fowl through said horn into the elastic bag and gradually move the bag from said horn for tight contraction around the fowl, means connected with said pusher for advancing and retracting the same, and a yieldable abutment mounted on said support in the path along which the fowl is pushed from said horn by said pusher, said yieldable abutment being positioned to abut the bag bottom and remain in engagement with the bag until the fowl clears said horn while providing sufficient resistance to insure longitudinal compression of the fowl into shortened chunky form as the fowl is moved through said horn by said pusher and the bag progressively grips the fowl.

2,946,167
MACHINE FOR THE MANUFACTURE OF PACKAGES FOR CUT MATERIALS

Ludwig Clemens, Wilhelmstrasse 44/46, Wiesbaden, Germany

Filed Apr. 8, 1959, Ser. No. 804,898
Claims priority, application Germany July 22, 1958
16 Claims. (Cl. 53—137)



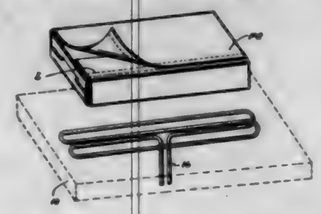
1. In a machine, for use in the manufacture of packages from packaging material such as corrugated paper

or corrugated cardboard, the combination of two rows of guide cylinders including input cylinders, each row including at least two guide cylinders having parallel axes and disposed adjacent each other, said rows being disposed parallel to each other with a predetermined spacing for advancing a band of stacked layers of the packaging material, at least one first supply roll actuatable for supplying packing material disposed in front of the input cylinders and having its axis disposed parallel to those of said guide cylinders, guide means disposed between said first supply roll and the space defined between said rows and operable for wrapping the packing material about the band of stacked layers to be packaged in such a manner that the edges of the packing material overlap about the band, and a device operable for supplying and applying a closure strip to the overlapping edges of the packing material and including at least one second supply roll for supplying the closure strip.

2,946,168
METHOD AND APPARATUS FOR SEALING METAL FOIL

Joshua G. D. Manwaring, Needham, and Raymond H. Cote, Saugus, Mass., assignors of one-half to Radio Frequency Company, Inc., Medfield, Mass, a corporation of Massachusetts

Filed Oct. 8, 1957, Ser. No. 688,963
13 Claims. (Cl. 53—230)



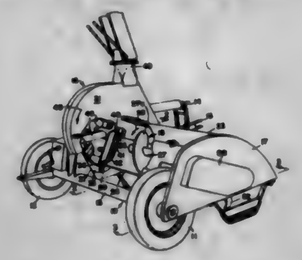
1. An induction heating apparatus for sealing metal foil, said apparatus comprising a sealing unit consisting of a supporting base and a work coil embedded in the supporting base, said supporting base presenting an upper flat surface for receiving a foil wrapped package with overlapping foil portions occurring at the underside of the package, said embedded work coil means including two elongated inner coil sides occurring in parallel spaced relation to one another in close proximity to the surface of the supporting base thereby to form inner current paths of high intensity and said coil further including two outer coil sides which provide high heat dissipating paths and said inner coil sides being spaced to define a narrow elongated zone of heating which substantially corresponds to the area along which the said foil portions overlap and electrical transformer means for energizing said work coil.

2,946,169
FIELD FORAGE HARVESTER

Gust Soteropulos, Ottumwa, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed May 2, 1957, Ser. No. 656,694
6 Claims. (Cl. 56—16)

1. In a field forage harvester having a mobile frame carrying an elongated conveyor trough including a discharge end and a conveyor in the trough for moving crops past said discharge end, the improvement comprising: a crop-receiving housing on the frame and having a wall transverse to the length of the trough at the discharge end thereof, said wall having a crop inlet opening in register with said discharge end and portions of said wall defining said opening and portions of said trough defining said discharge end combining to afford a crop-transfer junction between the trough and housing across which the conveyor moves crops into said housing; and a combined chopper and blower fly wheel rotatable in the housing on an axis substantially parallel to the rotor axis and including at least one chopper element movable in a radial chopping plane past and in crop-shearing relation to said junction to chop crops transferred across said junction, said chopper element having a leading edge and being positioned on the fly wheel with said edge generally

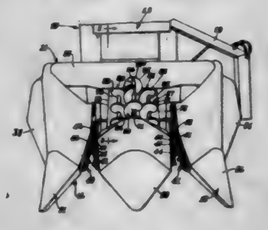


parallel to a radius of said fly wheel, and said junction being generally U-shaped, having a curved lower shear portion and further having a straight shear portion extending upwardly from said curved portion, said portions being cooperative with said cutting edge as said element passes said junction, said straight portion including a straight shearing edge diverging radially outwardly as respects said leading edge when said leading edge approaches said shearing edge whereby to afford a shearing action between said edges.

2,946,170
CONVEYOR MEANS FOR CORN HARVESTER

Sidney E. Anderson, Polk City, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed Nov. 18, 1957, Ser. No. 697,278
15 Claims. (Cl. 56—18)



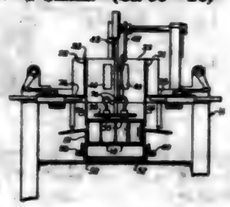
1. On a corn harvester movable forwardly over a field of row planted corn of the type having a rearwardly disposed crop treating unit mounted on a main frame and a pair of transversely spaced forwardly extending row units adapted to harvest corn from adjacent rows of stalks and to feed the corn inwardly, conveying means moving the corn rearwardly from the row units to the corn treating unit comprising: a pair of fore-and-aft extending troughs supported by the main frame adjacent to and transversely inwardly of the respective row units, each of the troughs having an outer edge positioned adjacent to and for receiving the corn from its respective adjacent row unit and an inner edge adjacent the inner edge of the other trough; a junction interconnecting the inner edges; a pair of augers having lower portions seated in the troughs and upper portions exposed to one another across the junction, the upper portions including at least that portion of the augers above the

outer surface layer, said underside surface layer being disposed to extend beyond each of the edges of said outer surface layer to form flexible edges integral with the belt disposed to engage the rolls of the grinder and prevent scoring thereof whereby the rolls may be later used with a belt having said predetermined width.

2,946,164
METHOD OF PLACING CARTONS INTO PACKING CASES

William M. Potts, William E. Hartle, and Jerome O. Durholt, Charlotte, N.C., assignors to Decam Corporation, Charlotte, N.C., a corporation of North Carolina

Filed May 3, 1955, Ser. No. 505,604
1 Claim. (Cl. 53—26)

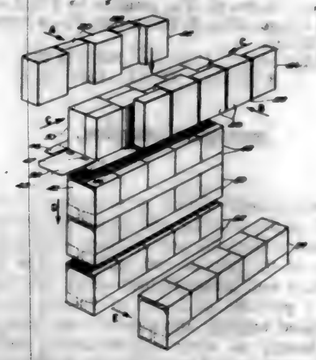


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2,946,165
METHOD OF AND MACHINE FOR FORMING PACKAGES

Omer E. Cote, Providence, R.I., assignor to United States Automatic Box Machinery Co., Inc., Boston, Mass., a corporation of Massachusetts

Filed June 12, 1956, Ser. No. 590,937
15 Claims. (Cl. 53—26)

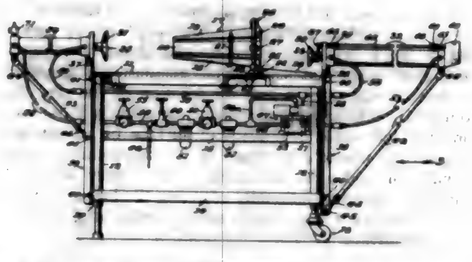


1. In a packaging machine, means for successively forming flat blanks having adhesive applied to selected areas thereof about the bottom and sides only of articles to be packaged, thereby combining the blanks and the articles into packages, a delivery conveyor having opposed vertical faces between which said packages may be held to maintain the portions of the formed blanks having adhesive thereon under pressure while the adhesive sets, and means for transferring the packages from the forming means to the conveyor.

2,946,166
POULTRY PACKAGING MACHINE AND METHOD

Thomas R. Baxter, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Filed July 5, 1956, Ser. No. 595,941
5 Claims. (Cl. 53—124)

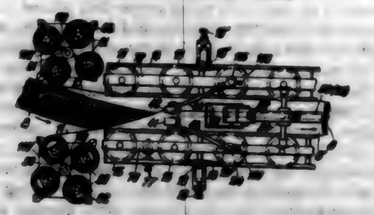


1. A poultry bagging machine comprising a support, a hollow tapered expansible horn mounted on said support and of a size to be expanded by forcing of a fowl therethrough, said horn being adapted for reception in an elastic bag and being of a length to extend from the bag mouth to the bag bottom to stretch the entire bag side wall and the bag bottom when said horn is expanded, a fowl pusher mounted on said support for movement into the larger end of said horn to push a dressed fowl through said horn into the elastic bag and gradually move the bag from said horn for tight contraction around the fowl, means connected with said pusher for advancing and retracting the same, and a yieldable abutment mounted on said support in the path along which the fowl is pushed from said horn by said pusher, said yieldable abutment being positioned to abut the bag bottom and remain in engagement with the bag until the fowl clears said horn while providing sufficient resistance to insure longitudinal compression of the fowl into shortened chunky form as the fowl is moved through said horn by said pusher and the bag progressively grips the fowl.

2,946,167
MACHINE FOR THE MANUFACTURE OF PACKAGES FOR CUT MATERIALS

Ludwig Clemens, Wilhelmstrasse 44/46, Wiesbaden, Germany

Filed Apr. 8, 1959, Ser. No. 804,898
Claims priority, application Germany July 22, 1958
16 Claims. (Cl. 53—137)

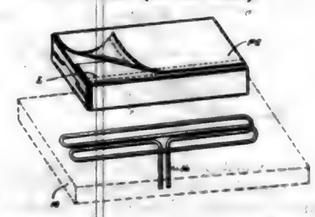


1. In a machine, for use in the manufacture of packages from packaging material such as corrugated paper or corrugated cardboard, the combination of two rows of guide cylinders including input cylinders, each row including at least two guide cylinders having parallel axes and disposed adjacent each other, said rows being disposed parallel to each other with a predetermined spacing for advancing a band of stacked layers of the packaging material, at least one first supply roll actuatable for supplying packing material disposed in front of the input cylinders and having its axis disposed parallel to those of said guide cylinders, guide means disposed between said first supply roll and the space defined between said rows and operable for wrapping the packing material about the band of stacked layers to be packaged in such a manner that the edges of the packing material overlap about the band, and a device operable for supplying and applying a closure strip to the overlapping edges of the packing material and including at least one second supply roll for supplying the closure strip.

2,946,168
METHOD AND APPARATUS FOR SEALING METAL FOIL

Joshua G. D. Manwaring, Needham, and Raymond H. Cota, Saugus, Mass., assignors of one-half to Radio Frequency Company, Inc., Medfield, Mass., a corporation of Massachusetts

Filed Oct. 8, 1957, Ser. No. 688,963
13 Claims. (Cl. 53—230)



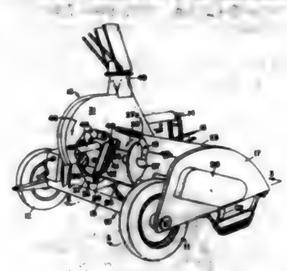
1. An induction heating apparatus for sealing metal foil, said apparatus comprising a sealing unit consisting of a supporting base and a work coil embedded in the supporting base, said supporting base presenting an upper flat surface for receiving a foil wrapped package with overlapping foil portions occurring at the underside of the package, said embedded work coil means including two elongated inner coil sides occurring in parallel spaced relation to one another in close proximity to the surface of the supporting base thereby to form inner current paths of high intensity and said coil further including two outer coil sides which provide high heat dissipating paths and said inner coil sides being spaced to define a narrow elongated zone of heating which substantially corresponds to the area along which the said foil portions overlap and electrical transformer means for energizing said work coil.

2,946,169
FIELD FORAGE HARVESTER

Gust Soteropulos, Ottumwa, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed May 2, 1957, Ser. No. 656,694
6 Claims. (Cl. 56—16)

1. In a field forage harvester having a mobile frame carrying an elongated conveyor trough including a discharge end and a conveyor in the trough for moving crops past said discharge end, the improvement comprising: a crop-receiving housing on the frame and having a wall transverse to the length of the trough at the discharge end thereof, said wall having a crop inlet opening in register with said discharge end and portions of said wall defining said opening and portions of said trough defining said discharge end combining to afford a crop-transfer junction between the trough and housing across which the conveyor moves crops into said housing; and a combined chopper and blower fly wheel rotatable in the housing on an axis substantially parallel to the rotor axis and including at least one chopper element movable in a radial chopping plane past and in crop-shearing relation to said junction to chop crops transferred across said junction, said chopper element having a leading edge and being positioned on the fly wheel with said edge generally

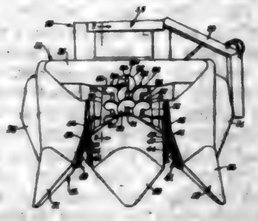


parallel to a radius of said fly wheel, and said junction being generally U-shaped, having a curved lower shear portion and further having a straight shear portion extending upwardly from said curved portion, said portions being cooperative with said cutting edge as said element passes said junction, said straight portion including a straight shearing edge diverging radially outwardly as respects said leading edge when said leading edge approaches said shearing edge whereby to afford a shearing action between said edges.

2,946,170
CONVEYOR MEANS FOR CORN HARVESTER

Sidney E. Anderson, Polk City, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

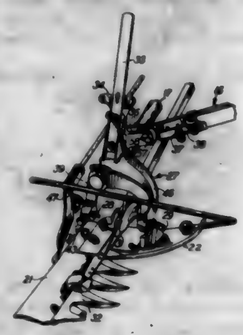
Filed Nov. 18, 1957, Ser. No. 697,278
15 Claims. (Cl. 56—18)



1. On a corn harvester movable forwardly over a field of row planted corn of the type having a rearwardly disposed crop treating unit mounted on a main frame and a pair of transversely spaced forwardly extending row units adapted to harvest corn from adjacent rows of stalks and to feed the corn inwardly, conveying means moving the corn rearwardly from the row units to the corn treating unit comprising: a pair of fore-and-aft extending troughs supported by the main frame adjacent to and transversely inwardly of the respective row units, each of the troughs having an outer edge positioned adjacent to and for receiving the corn from its respective adjacent row unit and an inner edge adjacent the inner edge of the other trough; a junction interconnecting the inner edges; a pair of augers having lower portions seated in the troughs and upper portions exposed to one another across the junction, the upper portions including at least that portion of the augers above the

axes of the augers; and a third auger supported by the main frame positioned centrally between, above, and proximate to the pair of augers.

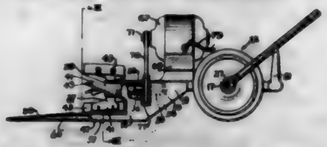
2,946,171
ADJUSTABLE MOUNTING MEANS FOR A RECIPROCATING MOWER
Laurel R. Yeske, Loves Park, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed May 1, 1957, Ser. No. 656,362
1 Claim. (Cl. 56—25)



In an agricultural mower comprising, a frame means adapted to be mounted adjacent the rear end of a tractor, a drag bar swivelly attached at one end to said frame means and disposed transversely thereof, a pitman operatively associated with said frame means and disposed transversely thereof, a cutting assembly pivotally connected at its inner end to the free end of said drag bar, said pitman being connected to said cutting assembly for operating the latter, in combination, a pull bar extending between said tractor and said cutting means, comprising a longitudinal member adapted to be flexibly connected at one end to said tractor and connected at its other end to the inner end of said cutting means, and means connecting said other end to said inner end of said cutting means comprising spaced brackets on said inner end of said cutting means extending generally in the direction of said pull bar and receiving between them said other end of said pull bar, a ball journaled in said other end of said pull bar between said brackets and providing an opening therein displaced from an axis of said ball and having a polygonal cross section, said brackets providing an opening of similar polygonal cross section disposed transverse to the direction of said elongated member, a pin of a cross section complementary to that of said openings and engaged in said openings, and means retaining said pin against displacement from said openings, whereby said ball may be retained in a plurality of rotated positions to adjust the effective length of said elongated member and whereby said elongated member may swing, at least to a limited extent, in any direction about said ball.

2,946,172
LAWN EDGE TRIMMER
Theodore A. Hale, 189 N. Rose Road, and Wayne F. Morgan, Larkspur Drive, both of Memphis, Tenn.
Filed Dec. 13, 1957, Ser. No. 702,598
3 Claims. (Cl. 56—25.4)

1. A lawn edge trimmer comprising a wheeled carriage including a carrier body and a pair of wheels rotatably mounted from said body for the support thereof, said trimmer having a side edge adjacent one of said wheels, a handle coupled to said carriage and extending rearwardly thereof whereby said carriage is adapted to be pushed forwardly by hand, said carrier body including a foot member depending from the main portion of the body adjacent said side edge of the trimmer, said foot member including a projection extending forwardly from the main body of the foot member adjacent the lower edge thereof, said projection including an upwardly sloping upper surface with the slope thereof being upwardly toward said one side edge, a drive shaft rotatably mounted in said carrier body and projecting forwardly therefrom, said drive shaft being disposed longitudinally of said carrier body, a cutter head fixedly mounted on said drive shaft for rotation therewith, said cutter head including a plurality of cutter blades, motor means mounted on said carrier body, said motor means including a motor shaft and a first pulley fixedly mounted thereon, said carrier body being provided with a cut-out portion adjacent said drive shaft, said cut-out portion exposing a portion of said drive shaft intermediate the ends thereof, a second pulley fixedly mounted on said drive shaft in said cut-out portion, belt means coupling said first and second pulleys for the rotational drive of said cutter head by said motor means, an elongated fixed blade having an outer edge and an opposite ground engaging edge and having a rearward portion and a tapered forward portion in a twisted disposition relative to said rearward portion, said fixed blade being mounted from said foot member with said rearward portion in face-to-face engagement with said sloping upper surface to

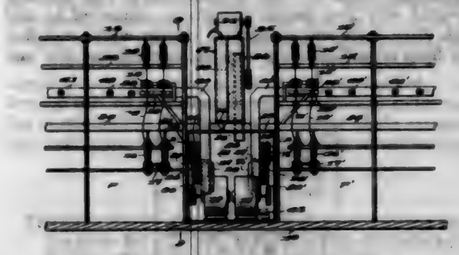


hold said rearward portion in a sloping disposition and with said forward portion extending forwardly from said foot member, the twist of said forward portion being such that the forward portion is twisted from an angle of maximum slope adjacent said rearward portion where said outer edge is higher than said ground engaging edge to a substantially horizontal disposition adjacent the distal end thereof whereby providing a means to lift the blades of grass at the lawn edge from a flat position to a standing position when the carriage is being pushed forwardly with the fixed blade moving under the blades of grass, said cutter blades being disposed to engage successively said outer edge of said elongated fixed blade when said cutter head is rotated, said outer edge of said fixed blade being in substantial alignment with said side edge of the lawn edge trimmer and one of said wheels being disposed inwardly of said outer edge of said fixed blade whereby the trimmer is adapted to be pushed along a sidewalk adjacent the edge thereof with said outer edge of the fixed blade and said side edge of the trimmer being substantially parallel with the sidewalk edge for the cutting of the grass extending over the sidewalk edge, and said wheels being independent of said motor means whereby said carriage is movable at a rate independent of the speed of rotation of said cutter head so that for different degrees of toughness and thickness of the grass the speed at which the carriage is pushed is adapted to be varied to compensate therefor.

2,946,173
TEXTILE PROCESSING MACHINE
Agnew H. Bahnson, Jr., Winston-Salem, N.C., assignor to Wachovia Bank and Trust Company, Winston-Salem, N.C., a corporation of North Carolina, trustee
Filed May 7, 1956, Ser. No. 583,121
15 Claims. (Cl. 57—56)

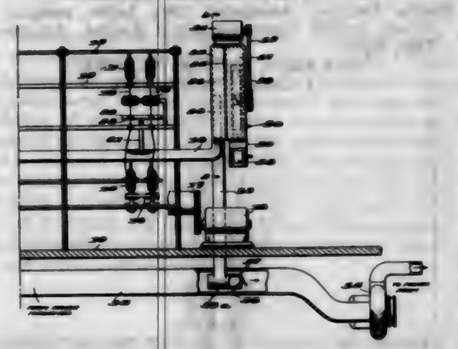
1. The combination with a textile processing machine such as a spinning frame or the like which includes a

plurality of drafting elements disposed longitudinally along the machine establishing a work zone for processing the textile material and an electric drive motor at one end thereof for actuating the moving parts of the machine, said machine also including a vacuum collection system having suction inlets located along said drafting elements and being located in a room wherein a desired humidity is maintained to assure satisfactory working of the textile fibers at said drafting elements and satisfactory cooling of the



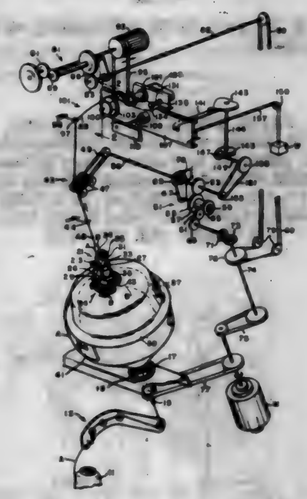
room by a system of the evaporation type; of means for collecting the heat given off by said drive motor and means including a duct extending longitudinally of said machine and provided with outlet means therealong for distributing the collected heat to oppose the downward flow of cooler moist air towards said machine thereby to enable a higher overall level of humidity to be maintained in said room for evaporative cooling without exceeding the permissible humidity level along the work zone of said machine.

2,946,174
APPARATUS FOR DOFFING LINT COLLECTION CHAMBERS
Agnew H. Bahnson, Jr., Winston-Salem, N.C., assignor to Wachovia Bank and Trust Company, Winston-Salem, N.C., a corporation of North Carolina, trustee
Filed June 19, 1957, Ser. No. 666,507
16 Claims. (Cl. 57—56)



1. An assembly for collecting and removing broken thread ends and loose lint in spinning and similar textile fiber strand working machines comprising a collecting duct extending longitudinally of the machine, intake orifice means disposed adjacent the fibrous strands being worked and communicating with said collecting duct, a filter box including a collection chamber for collecting lint and thread ends, said collecting duct being connected to said collection chamber, means establishing a primary suction effective to draw the lint and thread ends through said collecting duct into said collection chamber for accumulation therein, a conveying duct under a secondary suction, a normally closed conduit extending from said collection chamber to said conveying duct, and means for rendering said primary suction ineffective and opening said conduit thereby to place said collection chamber under the suction prevailing in said conveying duct and draw the accumulated lint and thread ends out of said collection chamber into said conveying duct.

2,946,175
TWISTING ARRANGEMENT
Edward J. Wright, Pendleton, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware
Filed Oct. 3, 1956, Ser. No. 613,692
15 Claims. (Cl. 57—58.3)



7. Ply action and twisting apparatus comprising a rotatable shaft having a longitudinal bore and a transverse bore formed therein and connecting between two spaced apart exterior points on the periphery of said shaft, first and second strand equalizer metering capstans mechanically intercoupled for synchronous rotation each about an axis canted with respect to each other and about a common axis coaxial with the axis of said shaft, strand guiding means disposed between said capstans and coaxial with said common axis, a take-up spindle, brake means for said take-up spindle, a ring rail, an annular ring rotatably mounted on said rail and in surrounding relation about said spindle, a strand guide on said ring, means for traversing said rail and ring longitudinally along said spindle, strand feeding means disposed in flow relation between said equalizer, metering capstans and said annular ring and take-up spindle, and means for driving said shaft, feeding means and ring in synchronous relation one with the other.

2,946,176
YARN CONTROL DEVICE FOR UPTWISTERS
Fred Higgins, Dahlonega, Ga., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Jan. 10, 1958, Ser. No. 708,296
1 Claim. (Cl. 57—62)

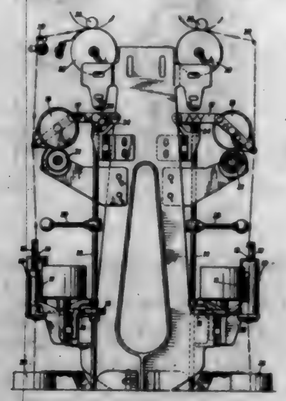
In a yarn uptwister having a spindle, a twist block comprising a lower sleeve, means for non-rotatably securing said lower sleeve to the top of the spindle, a second sleeve positioned above said lower sleeve, bearing means for rotatably journaling said second sleeve with respect to the spindle and the lower sleeve, walls defining an upwardly facing bore in said first sleeve, walls defining an open-ended slot at the top of said second sleeve, and a

pigtail yarn guide supported on a plate detachably secured to the second sleeve inside the bore for changing the



direction of the yarn travel substantially at the center line of the spindle.

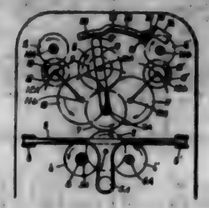
2,946,177
FALSE TWISTING MACHINES
Ernest P. R. Scragg and Austin Dobson, Macclesfield, England, assignors to Ernest Scragg & Sons Limited, Macclesfield, Cheshire, England, a British company
Filed Sept. 17, 1956, Ser. No. 610,426
Claims priority, application Great Britain Sept. 30, 1955
5 Claims. (Cl. 57—77.3)



1. In a false twisting machine, in combination, a false twist spindle having a vertical axis; support means supporting said spindle for turning movement about a second axis parallel to the spindle axis; a horizontal drive belt, said spindle being spring urged to turn around said second axis into engagement with said drive belt to be driven by the latter; stationary heating means located along the axis of said spindle when the latter is in driving engagement with said belt for heating a yarn which passes through said spindle; and manually operable means cooperating with said spindle for turning the latter at the will of the operator around said second axis away from said belt to stop the operation of the spindle, the movement of the latter away from said belt also moving the yarn to a position where it is is not heated by the heating means so that the heating of the yarn also stops when the operator moves the spindle away from the belt.

2,946,178
REVERSIBLE SPINDLE DRIVE FOR TEXTILE MACHINE
Edmund Hamel, Romanshorn, Switzerland
Filed July 30, 1956, Ser. No. 600,979
Claims priority, application Germany July 30, 1955
2 Claims. (Cl. 57—100)

1. A reversible spindle drive for textile machines having oppositely located spindle holders, and oppositely located first and second delivery roll shafts located above said oppositely located spindle holders, a main drive shaft, a first means rotatively connecting said main drive shaft with said oppositely located spindle holders to rotatively drive said spindle holders in a pre-selected direction of rotation, the combination therewith of a first gear train adapted to rotate said first delivery roll shaft, a second gear train adapted to rotate said second delivery roll shaft, said first and second gear train intermeshing, a pivotally mounted arm having a cam follower and provided with gear means operatively connected to said main drive shaft and adapted to engage either said first gear train or said second gear train, to drive said first and



second gear trains in the same direction regardless of the direction of rotation of said main drive shaft, a button actuated pole reversing switch for controlling the direction of rotation of said main drive shaft, a pivotally mounted bell crank lever having a cam surface and a short arm, said short arm engaging to control the position of said button actuated pole reversing switch, said cam follower engaging said cam surface and through manual control of said arm actuating said bell crank lever to position said short arm toward or away from said button actuated pole reversing switch and cause said gear means to engage either said first gear train or said second gear train.

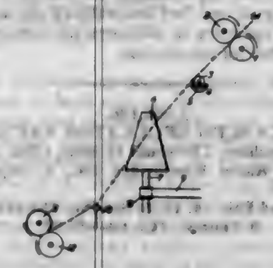
2,946,179
OIL CUSHION BRAKE RING INSERT FOR SPINNING AND LIKE MACHINES
Yoshio Kodama, Amagasaki City, Japan, assignor to Nihon Spindle Seizo Kabushiki Kaisha, Amagasaki City, Japan
Filed Aug. 6, 1957, Ser. No. 676,677
1 Claim. (Cl. 57—134)



An oil cushion brake ring insert assembly for spinning machines and the like comprising a tubular bolster having an annular flange adjacent the upper end thereof adapted to seat against a spindle rail having an opening therein, said bolster having an externally threaded upper portion, and a nut engaging said threaded portion clamping said bolster to said spindle rail, said bolster being internally threaded at its upper portion, an insert tube in said bolster, an oil damping sleeve fixedly secured to the lower portion

of said insert tube, the upper portion of said sleeve forming a shoulder, a bearing cylinder having a flange thereon threadedly engaging the interiorly threaded portion of said bolster, said last-mentioned flange seating against the flange of said bolster, said bearing sleeve having a bore therein slightly in excess of the diameter of said insert tube and in which said insert tube is movable, the lower portion of said bearing sleeve forming a shoulder interiorly of said bolster confronting and spaced from the shoulder formed by said oil damping sleeve, a spring positioned between said first-mentioned and said second-mentioned shoulders, a semispherical concave seat on the entire top surface of said bearing cylinder, and a semispherical convex contact surface on said insert tube seating in said concave seat and covering the entire area thereof, a hollow top part on said convex contact surface, a roller bearing in said hollow top part, and a spindle blade extending into said insert tube and contacting said roller bearing.

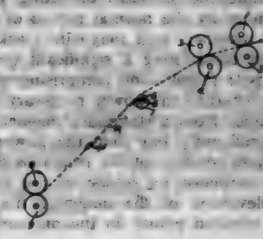
2,946,180
PRODUCTION OF TWISTLESS STAPLE FIBER YARNS BY SIZING UNTWISTED BUNDLES, FALSE TWISTING AND WINDING
Germain Tiset and Emmanuel Talnier, Paris, France, assignors to Societe de Constructions Mecaniques de Staine, Staine (Seine), France, a corporation of France
Filed Dec. 23, 1958, Ser. No. 782,564
Claims priority, application France Jan. 3, 1958
3 Claims. (Cl. 57—156)



1. The method of making twistless threadlike products of twistless fibers, which comprises feeding a top of substantially untwisted staple fibers through an impregnating zone, impregnating said top in said zone with a solution of a water-soluble binder, advancing the impregnated top through a false-twisting zone whereby false twist is imparted in one direction only, whereby the false twist induced feeds back to said impregnating zone and advancing thereafter the false-twisted impregnated top through a drying and untwisting zone, thereby producing a substantially twistless threadlike product and winding said product onto a package.

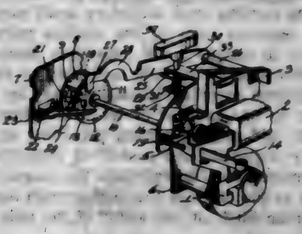
2,946,181
PRODUCTION OF TWISTLESS YARNS BY DIRECT SPINNING TO TOW, SIZING THE TOW, FALSE TWISTING AND WINDING
Germain Tiset and Emmanuel Talnier, Paris, France, assignors to Societe de Constructions Mecaniques de Staine, Staine (Seine), France, a corporation of France
Filed Dec. 23, 1958, Ser. No. 782,565
Claims priority, application France Jan. 3, 1958
1 Claim. (Cl. 57—157)

The method of producing twistless yarns by direct spinning, which comprises stretching a bundle of parallel filaments to breakage to form a twistless sliver composed of discontinuous fibers, sizing and twistless sliver with a small quantity of an aqueous solution of a water soluble binder in an impregnating zone and applying a false twist to the sized sliver to impart a high momentary twist to the sliver which feeds back to said impregnating zone and disappears in an untwisting and drying zone after the



sliver passes the false twisting device, to form thereby a twistless impregnated yarn, and winding the twistless impregnated yarn.

2,946,182
ALARM CLOCK CONTROL MECHANISM
Robert L. Boyles, Wayland, and William C. Wingler, Northboro, Mass., assignors to General Electric Company, a corporation of New York
Filed Mar. 25, 1957, Ser. No. 648,038
5 Claims. (Cl. 58—21.12)



1. A temporary alarm shut-off mechanism comprising: an alarm; a timing mechanism; a stationary supporting structure; a cam member rotatably mounted on said supporting structure, said cam member being axially slidable in one direction to release the alarm at a preselected time and axially slidable in an opposite direction to shut off the alarm; an actuating lever pivoted to said supporting structure; manually operable plunger means connected to said lever for moving said lever to one position; a loosely pivoted member positioned for actuation by said lever, said pivoted member being frictionally engageable with said cam member to slide said cam member in said opposite direction to shut off the alarm when said lever is moved to said one position, said cam member being rotatably driven as a function of time by said timing mechanism for moving said pivoted member to permit said cam member to slide in said one direction to release the alarm after the lapse of a short time interval; and spring means urging said lever to a second position away from said pivoted member for relieving the force of said lever on said pivoted member to permit said cam member to move said pivoted member.

2,946,183
SELF-STARTING MAGNETIC ESCAPEMENT MECHANISMS
Cecil Frank Clifford, Bath, England, assignor to Horstmann Clifford Magnetics Limited, a British company
Filed June 6, 1956, Ser. No. 589,782
Claims priority, application Great Britain June 14, 1955
3 Claims. (Cl. 58—116)

1. A self-starting escapement comprising a rotatable member, an oscillator member urged toward a centered position by forces substantially proportional to the amplitude of displacement from the centered position, magnetic pole salients carried by one of said members, a

magnetic track presented by the other of said members, means associating the pole salients and said magnetic track to regulate the standard operating speed of the rotatable member by the normal period of vibration of the oscillator member, said magnetic track comprising a median path constituting a significant portion of the width of the pole salients and comprising an undulating starting track whereby the power necessary to move the rotatable member from a stationary magnetically locked position is significantly less than the power exerted by the quarter cycle rotation of the rotatable member relatively to the oscillator by reason of the starting track providing a deviation of the magnetic track from the median path between points on the magnetic track cor-



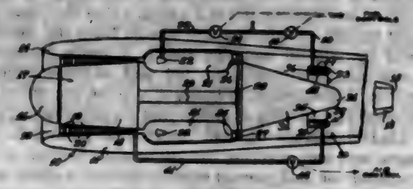
responding to such quarter cycle rotation, the path of magnetic interengagement including said median path and said other member having staggered teeth on either side thereof, the spaces between which provide apertures, said undulating starting track including small starting undulations on opposite sides of the median path of the magnetic track to initiate small amplitude displacement of the oscillator first to one side and then to the other while the rotatable member initially rotates an amount corresponding to one normal cycle of vibration of the oscillator, and said magnetic track providing at successive oppositely disposed teeth a shift of projection from the fixedly centered pole salient upon the magnetic track from one side to the other of the median path more than 1% but less than 70% of the width of the pole salient.

2,946,184
PRESSURE EXCHANGERS AND APPLICATIONS THEREOF
George Jendrassik, London, England; Andre G. T. Bonzor-menyi and Clara Jendrassik, executors of said George Jendrassik, deceased, assignors, by mesne assignments, to Jendrassik Developments Limited, London, England
Filed Nov. 5, 1952, Ser. No. 318,919
Claims priority, application Great Britain Nov. 8, 1951
12 Claims. (Cl. 60—35.6)



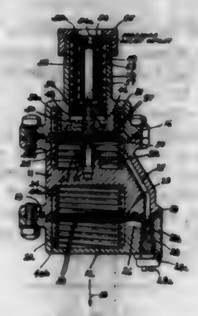
5. Apparatus comprising first and second pressure exchangers, said pressure exchangers comprising cells in which gas expands so compressing another part of that gas with which it is in direct contact, said cells forming a continuous boundary for the gas flowing through them and extending in the direction of gas flow ducting to lead gas to and from the cells at different pressure levels, and means to effect relative motion between the cells and the ducting, the first pressure exchanger receiving gas through said ducting at a first pressure level and discharging said gas through said ducting at two pressure levels one higher and the other lower than said first level, said apparatus further comprising a gas heating system receiving gas at said higher pressure level directly from the first pressure exchanger and discharging hot gas, and the second pressure exchanger receiving said hot gas directly from the heating system together with gas discharged at said lower pressure level from the first pressure exchanger and discharging a stream of hot gas.

2,946,185
FUEL-AIR MANIFOLD FOR AN AFTERBURNER
Frank C. Beyer, Euclid, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Oct. 29, 1953, Ser. No. 389,063
2 Claims. (Cl. 60—35.6)



1. In an afterburner apparatus for a gas turbine power plant having cylindrical casing structure defining an exhaust chamber terminating in an exhaust jet, for exhausting hot gases from the gas turbine to the exhaust jet, the improvement of: an annular manifold ring wholly disposed and mounted within said exhaust chamber in radially spaced relation to said casing structure in a manner wherein exhaust gases may flow past the inner and outer periphery thereof, said ring having separate air and fuel manifold passages therein; means communicating said passages to sources of air and fuel respectively; and a series of injector nozzles removably secured to said ring and having means therein communicating separately with said passages for receiving unmixed air and fuel therefrom and for mixing air and fuel internally of the nozzles, said nozzles being operative to discharge the mixture into the exhaust chamber for combustion.

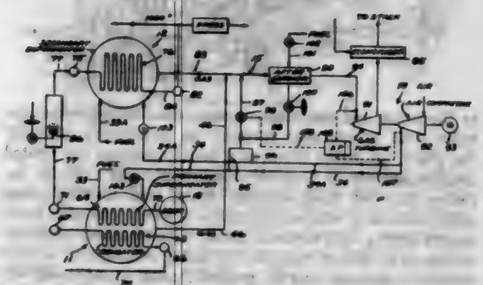
2,946,186
BALANCED REGULATOR VALVE
Donald L. Southam, Cleveland Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Feb. 10, 1956, Ser. No. 564,661
8 Claims. (Cl. 60—39.09)



5. A flow control apparatus adapted to provide a regulated fluid flow from a fluid source having a widely variable pressure which comprises a casing means having an inlet and an outlet for regulated fluid flow, first and second cavities formed in said casing means, a flexible diaphragm extending across each cavity and sealed at the wall of the cavity and forming a force transmitting fluid chamber at the corresponding end of each cavity of substantially the same depth, and a regulated fluid chamber in the other end of each cavity with said regulated fluid chamber in the first cavity communicating with said inlet and in said second cavity with said outlet, a passageway for force transmitting fluid connected to join the force transmitting fluid chambers for the flow of fluid therebetween, a restricted passageway between said inlet and

said regulated fluid chamber in said second cavity, and a variable flow regulating valve between said flow regulating fluid chamber in said second cavity and said outlet and connected to be varied by the position of the diaphragm in said second cavity, whereby gravitational and inertia forces acting on force transmitting fluid placed in said force transmitting fluid chambers will act in opposition and with substantially equal force on said diaphragms and will not disturb flow control.

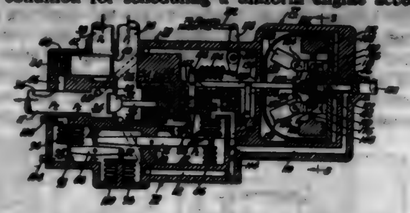
2,946,187
GAS AND STEAM CYCLE POWER PLANT HAVING TWIN SUPERCHARGED VAPOR GENERATORS
Robert J. Zoschak, Rutherford, and Kelvin J. Ray, Ramsey, N.J., assignors to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed May 28, 1958, Ser. No. 738,385
8 Claims. (Cl. 60—39.18)



1. In a gas-steam cycle power plant including steam turbines and at least one gas turbine with a steam generator having fuel burning means, both steam and gas turbines being adapted for delivering useful external power, the combination of an air compressor having an air inlet and an air outlet and driven by the gas turbine, pipe means communicating with the air outlet of said air compressor and the fuel burning means of the steam generator to respectively receive combustion air under pressure and deliver the same to the fuel burning means, duct means communicating with the steam generator to receive combustion gas from the latter and with the gas turbine to deliver combustion gas to the gas turbine, a combustion chamber disposed within said duct means and having a fuel burner, a line in communication at one end with said pipe means and at the opposite end with the combustion chamber to deliver sufficient combustion air for combustion of fuel within the combustion chamber to thereby elevate the combustion gas temperature at the turbine inlet to a predetermined value, second pipe means in communication with the duct means upstream of the combustion chamber and said first pipe means to supply combustion air to said duct means under reduced load on said power plant, and valve means for bypassing combustion air to said duct means in an amount necessary to maintain a predetermined mass flow of combustion gas through said turbine.

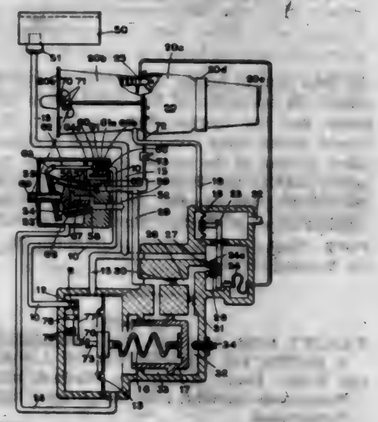
2,946,188
ACCELERATION SCHEDULING AND ISOCHRONOUS GOVERNING FUEL FEED AND POWER CONTROL DEVICE FOR GAS TURBINE ENGINES
James M. Eastman, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Dec. 9, 1954, Ser. No. 474,225
26 Claims. (Cl. 60—39.28)

1. A fuel feed and power control device for a gas turbine engine having a burner and a compressor, comprising first means for controlling the quantity of fuel flowing to the burner, second means operatively connected to said first means and responsive to an engine operating condition for scheduling a uniform engine accelera-



tion rate, and third means operatively connected to said first and second means for generating a fluid pressure signal which is proportional to said acceleration rate for controlling said first means.

2,946,189
FUEL SYSTEMS OF GAS-TURBINE ENGINES
Kenneth Arnold Basford, Alvaston, England, assignor to Rolls-Royce Limited, a British company
Filed June 30, 1955, Ser. No. 519,197
Claims priority, application Great Britain July 14, 1954
7 Claims. (Cl. 60—39.28)

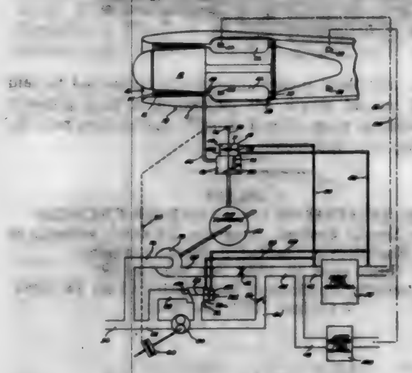


1. A fuel system for a gas turbine engine of the type comprising an air compressor, which fuel system comprises means to supply fuel under pressure to the engine, means for reducing fuel flow when a predetermined engine speed is attained, biasing means rendering said fuel flow reducing means normally inoperative, bias adjusting means, means sensitive to compressor outlet temperature and means sensitive to compressor outlet pressure, means under simultaneous control of said two sensitive means connected to said bias adjusting means to change the action thereof and to overcome said biasing means thus to reduce fuel supply to the engine when the combined output of the means sensitive to compressor outlet temperature and the means sensitive to the compressor outlet pressure tends to exceed a predetermined value.

2,946,190
GAS TURBINE ENGINE FUEL SYSTEM AND METHOD
Marshall J. Corbett, Willoughby, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Mar. 26, 1956, Ser. No. 573,856
6 Claims. (Cl. 60—39.28)

1. A fuel system for gas turbine engines and the like having air compressing means and fuel burning means,

which comprises an air driven first fuel pump energized by air from said compressing means, a second fuel pump, a clutch drive for selectively activating said second pump, a fuel feed control means for regulating fuel flow to said burning means, conduit means for supplying fuel to both pumps and from said pumps to said control means, a by-pass for selectively connecting the inlet and outlet of said second pump during over-capacity output therefrom, a flow regulator in said by-pass, and means responsive to the fuel flow pressure differential across



the feed control means to control the speed of the first pump, the operation of the clutch drive for the second pump and the by-pass flow regulator, said last mentioned means being constructed and arranged to directly effect driving of the second pump and to regulate circulation through the by-pass only when the first pump is not fulfilling the demands of the burning means and to regulate speed of the first pump and declutch the second pump when the first pump is fulfilling the demands of the burning means.

2,946,191

RAMJET FOR A ROTATING MEMBER SUCH AS A ROTOR OR PROPELLER OF AN AIRCRAFT

Jan Meijer Drees, Rotterdam, Netherlands, assignor to Nederlands Instituut voor Vliegtuigontwikkeling, Delft, Netherlands

Filed Mar. 29, 1955, Ser. No. 497,768
Claims priority, application Netherlands Apr. 12, 1954
6 Claims. (Cl. 60—39.35)



1. Ramjet for securing to an outboard end of a rotary member such as an aircraft impeller rotating about an axis of rotation, comprising a propulsive duct rotating about said axis outside said duct, having a leading air intake opening and a trailing outlet opening, fuel injection means in said duct and a flame holder in said duct, said flame holder leaving a greater part of the cross-section of said duct free for the passage of air in the inboard half than in the outboard half of said duct.

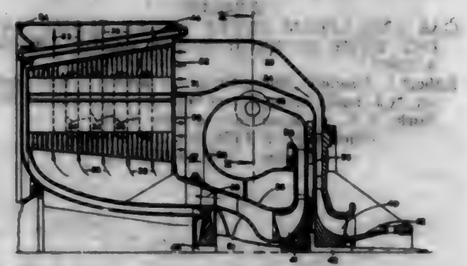
2,946,192

GAS TURBINE POWER PLANT

Stewart K. Hambling, Coventry, England, assignor to The Standard Motor Company Limited, Coventry, England

Filed May 16, 1958, Ser. No. 735,866
6 Claims. (Cl. 60—39.51)

1. A gas turbine power plant comprising turbine means, a compressor, an annular heat-exchanger, coaxial with said turbine and compressor and arranged to exchange heat between exhaust gases delivered by said turbine means and compressed air delivered by the compressor, a first inlet to said heat-exchanger, a first annular duct connecting the compressor delivery to said first inlet, a second inlet to said heat-exchanger, a second annular duct connecting said second inlet to the turbine exhaust, the compressed air and turbine exhaust gases passing through the heat-exchanger in counterflow relation and the two annular ducts being positioned one with-



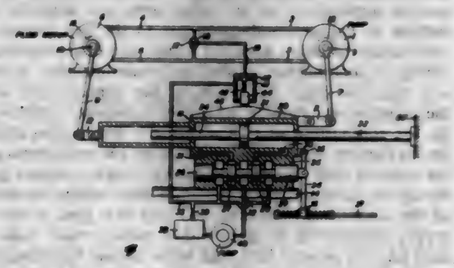
in the other and the outer annular duct having outer annular wall means also forming an enveloping wall for the plant, an outlet from said heat-exchanger for heated compressed air, a toroidal chest positioned radially between the two said annular ducts, said toroidal chest communicating with said outlet, a toroidal chamber positioned within said toroidal chest, a combustion chamber arranged to deliver combustion gases tangentially to said toroidal chamber and to receive heated compressed air from said toroidal chest and said toroidal chamber communicating with said turbine means.

2,946,193

HYDRAULIC MOTOR SYSTEMS

George Edward Chittenden, Alfreley, Coventry, England, assignor to The Keelavite Company Limited, Coventry, England, a British company

Filed Jan. 8, 1959, Ser. No. 785,685
Claims priority, application Great Britain Jan. 8, 1958
18 Claims. (Cl. 60—53)



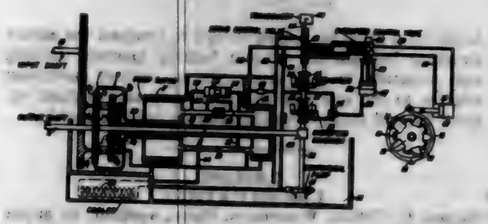
1. Control apparatus for a hydraulic transmission system which includes a power driven pump of the displacement type having inlet and outlet passages, a hydraulic motor of the displacement type which drives a driven member and has inlet and outlet passages, passage means connecting the outlet passage of said pump to the inlet passage of said motor and the outlet passage from said motor to the inlet passage of said pump, and operative transmission ratio varying means between said pump and said motor, including a hydraulic servo motor provided with a hydraulic fluid-in-flow passage and a hydraulic fluid outflow passage and having a movable operating member which is operatively connected to said transmission varying means, a pilot valve, which is operated by a control member, for controlling the movement of said movable operating member, and automatic means operated by the hydraulic pressure in the said passage means, which impose an automatic overriding control on the movement of the movable operating member in said hydraulic servo motor.

2,946,194

CONSTANT SPEED UNITS

Roy Westbury, Bridgnorth, England, assignor to H. M. Hobson Limited, London, England, a British company

Filed Jan. 14, 1959, Ser. No. 786,883
Claims priority, application Great Britain Jan. 14, 1958
4 Claims. (Cl. 60—53)



1. A hydraulic transmission for transmitting power from an input shaft to an output shaft to drive said output shaft at constant speed notwithstanding variations in speed of said input shaft, said transmission comprising a pair of variable displacement rotary hydraulic units coupled in a closed circuit so that one may transmit energy hydraulically to the other and connected so that their displacements are varied inversely, a double differential gear system comprising two portions, each connected to the input shaft, to the output shaft and to one of said hydraulic units, one of said units being operatively connected to the input shaft by said gear system and normally running as a pump and the other of said units being operatively connected to the output shaft by said gear system and normally running as a motor, said pump and motor units reversing their functions when the ratio of the speed of the output shaft to the speed of the input shaft exceeds a predetermined value, a governor driven by the output shaft for controlling the displacement of said units, and means for relieving said pump unit of hydraulic pressure when fluid tends to flow from said motor unit to said pump unit at speed ratios above said predetermined value.

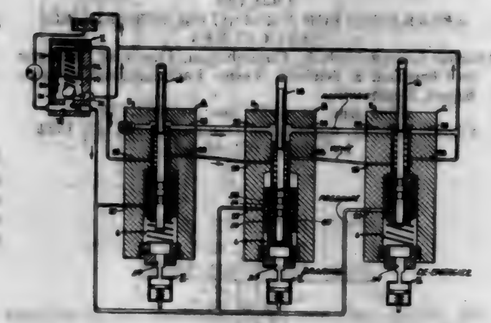
2,946,195

POWER OPERATED MASTER CYLINDER

Richard C. Hare, Wauwatosa, Wis., assignor to Dynex, Inc., Pewaukee, Wis., a corporation of Wisconsin

Filed July 8, 1957, Ser. No. 670,607
3 Claims. (Cl. 60—54.5)

1. A power operated master cylinder unit comprising, a housing defining a cylinder at one of its ends, a constantly open reservoir passageway through the other end of said housing, a bore between said cylinder and said reservoir passageway, a vent passage extending through said housing, a piston having a head and a sleeve adapted to reciprocate in said cylinder and bore respectively, a control spool extending from said housing and slidingly mounted in said piston for limited axial movement relative thereto and for moving said piston between de-energized and braking positions, said sleeve blocking said vent passage when said piston is in said braking position, said sleeve having a groove registrable with said vent passage for opening the latter when said piston is in said de-energized position, said piston being recessed to form an annular chamber with said cylinder, a pressure fluid inlet passageway extending into said housing and in constant communication with said chamber regardless of the positon of said piston, said spool having a pressure control groove and a prefill groove, said piston having a prefill passage adapted to place said cylinder in fluid communication with said reservoir passageway via said prefill groove so as to equalize the pressure therebetween when said spool is in the de-energized position, a control area in



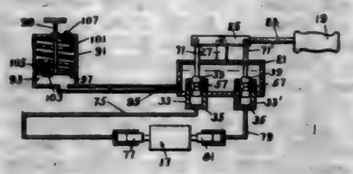
said housing, said piston having passages adapted to place said chamber in fluid communication with said control area via said control groove when said control spool is moved relative to said piston to a fluid pressure delivering position, and means between said spool and said piston and biasing them away from said fluid pressure delivering position.

2,946,196

VALVE MECHANISM FOR CRANE CONTROLS

Lester L. Myers, Fort Wayne, Ind., assignor to Mobile Aerial Towers, Inc., Fort Wayne, Ind., a corporation of Indiana

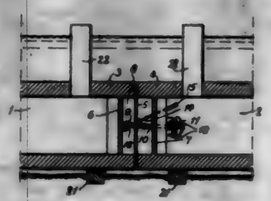
Filed Dec. 10, 1958, Ser. No. 779,455
6 Claims. (Cl. 60—54.5)



1. In a position control system, the combination of a controlled device having a member mounted for movement between a neutral position and either of two limit positions on opposite sides of said neutral position, yieldable means for urging said member towards and holding it in said neutral position, a first fluid motor connected to move said member toward one limit position, a second fluid motor connected to move said member toward the other limit position, separate means for actuating each of said fluid motors, said means each comprising a cylinder element having an inlet and an outlet, a piston element disposed for reciprocation in said cylinder and loosely fitted therein, a seal mounted on one of said elements and extending into sealing engagement with the other element to define therewith a working chamber between said seal and said outlet, said other element defining a groove, disposed for alignment with said sealing means when said piston occupies a predetermined position in said cylinder, said groove having a width and depth sufficient to render said seal ineffective, a tube connecting said outlet with one of said fluid motors, a reservoir for fluid, means connecting the inlet of each cylinder element to said reservoir, a handle mounted for movement in either of two directions from an inter-

mediate position, means connecting said piston elements with said handle for reciprocation thereby in opposite directions when said handle is moved in either direction, the respective piston and cylinder elements being disposed in their predetermined positions when said handle occupies said intermediate position so as to connect said reservoir simultaneously in communication with the working chambers, tubes and fluid motors.

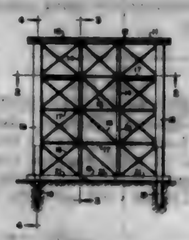
2,946,197
APPARATUS FOR JOINING OF SUBMERGED STRUCTURES
Morten Lassen-Nielsen, Copenhagen, Denmark, assignor to Christiani & Nielsen, Vester Farimagsgade, Copenhagen, Denmark
Filed Apr. 11, 1957, Ser. No. 652,134
Claims priority, application Denmark, Sept. 11, 1956
2 Claims. (Cl. 61—43)



1. The combination with adjacent submerged structures, including separating wall means whereby at least one of said structures presents an air filled chamber enclosed from the surrounding water by said separating wall means, of means for clamping such structures together, said means comprising jack means positioned in the said air filled chamber in one of the structures to be clamped together, each structure having edges projecting beyond the separating wall means to define a space, tension rod means within and extending from said chamber through one of said wall means into the space and the surrounding water and operatively connected to the jack means whereby the jack means serves to pull said tension rod means, a hook hingedly connected to the tension rod means, a double acting jack means provided with controlling means located in the air filled chamber, a link hingedly connecting the double acting jack means and the hook, and an eye lug fixed to the outside of the separating wall means of the other structure and gripped by the hook upon activation of the jack means, the tension rod means, the hook and the eye lug coact to bring the facing projecting edges of the submerged structures into facial engagement.

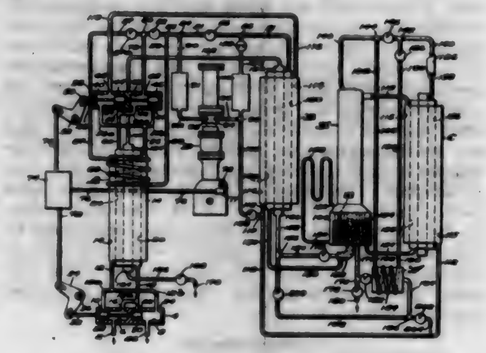
2,946,198
METHOD OF COMPACTING SOIL FOR CONDUCTING OFFSHORE OPERATIONS
Richard P. Knapp, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Original application Dec. 20, 1955, Ser. No. 554,375. Divided and this application Jan. 28, 1957, Ser. No. 636,769
4 Claims. (Cl. 61—46.5)

1. A method for compacting the soil under an offshore marine drilling structure provided with a flat rectangular bottom bearing member which comprises floating the structure into position with the bottom bearing member off marine bottom, sinking said structure until the bottom bearing member rests on marine bottom, anchoring said structure against lateral movement by driving spuds into the marine bottom at the corners of said structure, preloading said bottom bearing member on the corners thereof a sufficient amount to provide a load on the bottom bearing member in excess of the operating load exerted on the bottom bearing member, said preloading being effected by exerting weight on the bottom bearing member from a point above marine bottom with water filled



tanks for a sufficient length of time to compact the earth's structure beneath the bottom bearing member, locking said structure to said spuds against vertical movement relative to the soil, and then removing said preload exerted by said tanks from said bottom bearing member.

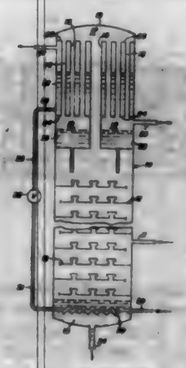
2,946,199
LIQUID OXYGEN
Samuel C. Collins, Watertown, Mass., assignor, by mesne assignments, to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Continuation of application Ser. No. 531,191, Aug. 29, 1955, which is a division of application Ser. No. 661,253, Apr. 11, 1946, now Patent No. 2,716,333, dated Aug. 30, 1955. This application Aug. 26, 1958, Ser. No. 757,427.
5 Claims. (Cl. 62—13)



1. A process for the liquefaction and rectification of air yielding liquid oxygen and waste nitrogen gas, which comprises the simultaneous steps of passing a stream of compressed air at a pressure in the range of 60 to 175 p.s.i. through a first path in a heat exchange zone containing not more than three thermally bonded paths in heat exchange relation with each other along substantially the entire length thereof, flowing a stream of waste nitrogen gas derived from said air stream through a second path of said heat exchange zone in countercurrent relation to said air stream, thereby chilling said air stream and effecting deposition of moisture and carbon dioxide substantially completely from said air stream in said first path, autogenously producing refrigeration required in the process by expanding chilled air with the performance of external work, liquefying and rectifying chilled air to yield said waste nitrogen gas and liquid oxygen, withdrawing from the process at least part of said liquid oxygen as a liquid product, and periodically alternating the flows of said air and waste nitrogen gas to said second

and first paths, respectively, to remove substantially completely moisture and carbon dioxide previously deposited in said first path.

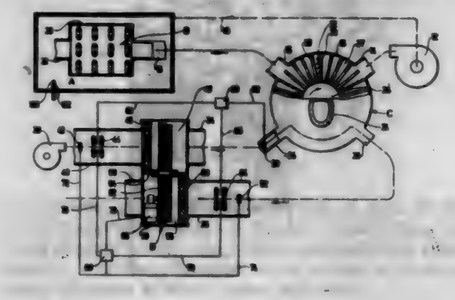
2,946,200
METHOD OF SEPARATING GASEOUS MIXTURES
Clarence J. Schilling, Allentown, Pa., assignor to Air Products Incorporated, a corporation of Michigan
Filed June 9, 1955, Ser. No. 514,213
7 Claims. (Cl. 62—22)



1. The method of producing liquid reflux for a fractionating operation, in which operation a mixture of component gases comprising from 10% to 25% nitrogen, from 1% to 5% hydrogen and the balance argon is fed to a fractionating zone producing a liquid argon fraction and a gaseous fraction including nitrogen and hydrogen components, the method comprising the steps of conducting a stream of gaseous fraction to a first chamber communicating with the upper ends of a plurality of spaced vertically disposed elongated heat exchange passageways, withdrawing a stream of gaseous fraction from a second chamber communicating with the lower ends of the heat exchange passageways and from heat exchange relationship with relatively cold fluid surrounding the heat exchange passageways so that the gaseous fraction in the first chamber flows downwardly through the heat exchange passageways into the second chamber, passing a stream of cold fluid at a temperature below the boiling point of the nitrogen component at the existing pressure in out-of-contact heat exchange relation with the gaseous fraction flowing downwardly in the heat exchange passageways to provide liquefied nitrogen component, the liquefied nitrogen component flowing downwardly in the heat exchange passageways and collecting in the second chamber, and withdrawing a stream of liquefied nitrogen component from the second chamber and introducing the withdrawn liquefied nitrogen component into the fractionating zone as liquid reflux, the stream of gaseous fraction withdrawn from the second chamber including the hydrogen component comprising from 8% to 12% of the withdrawn stream of gaseous fraction.

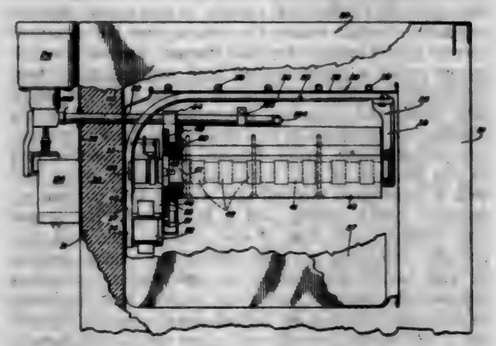
2,946,201
METHOD FOR AVOIDING FROST DEPOSITS ON COOLING MEMBERS
Carl Georg Munters, Dunderydsvagen 3, Stockholm, Sweden
Filed Apr. 21, 1955, Ser. No. 502,852
Claims priority, application Sweden Apr. 23, 1954
1 Claim. (Cl. 62—94)

The method of preventing frost formation on cooling surfaces for a cold storage chamber in which the air has a temperature below the freezing point of water and a high relative humidity, the dew point temperature of the air being higher than the temperature of said surfaces forming part of a refrigerating system, the last-mentioned temperature being lower than said first-mentioned temperature, which comprises circulating a stream of air from the storage chamber and drying it by sorbtion in a regenerative moisture exchanger and consequent release of latent heat to thereby reduce its relative humidity to a point representing a dew point below the tem-



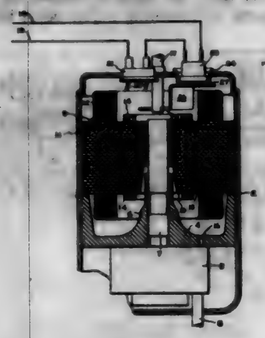
perature of the cooling surfaces, and then cooling the stream anhydrously by heat exchange with said cooling surfaces while preventing access of the humid chamber air thereto, passing the so cooled and dried air back to the cooling chamber thereby circulating a quantity of air for each unit of time sufficient to maintain the predetermined temperature and substantially the high humidity in the chamber.

2,946,202
AUTOMATIC ICE CUBE MAKING MACHINES
Walton F. Boeing, Chicago, Ill., assignor to General Electric Company, a corporation of New York
Filed Jan. 17, 1958, Ser. No. 709,660
25 Claims. (Cl. 62—135)



22. In an automatic ice cube maker for use with a household refrigerator, a shaft fixed in a generally horizontal position with respect to such refrigerator and being provided with a longitudinally extending passage therein, a frezer block mounted for rotation upon said shaft and providing a cavity surrounding the same, said block being provided with a freezer cup adapted to receive liquid therein, said cup being provided with a movable member defining the bottom closure thereof, means connected with said shaft for moving said member in order to eject a frozen cube from said cup when said block is rotated about said shaft, means for rotating said block about said shaft, a refrigerant system including said passage, and a thermal conductive fluid contained within said cavity and surrounding said shaft.

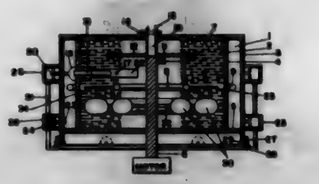
2,946,283
REFRIGERANT COMPRESSOR HAVING THERMAL OVERLOAD PROTECTOR
Robert G. Carver, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Mar. 9, 1959, Ser. No. 797,953
1 Claim. (Cl. 62—230)



In a compressor for a refrigerating system, the combination comprising a sealed casing, a compressor unit disposed within the lower portion of said casing, an electric motor including a rotor and a stator disposed in said casing above said compressor for driving said compressor unit, means for conducting low pressure refrigerant gas from the refrigerating system into said compressor unit, means for discharging compressed refrigerant gas from said compressor unit into said casing, a discharge tube for conducting compressed refrigerant gas from said casing back into said refrigerating system, said discharge tube having an inlet opening in the upper portions of said casing directly over said rotor so that refrigerant gas being discharged by said compressor unit is forced to flow upwardly over said motor to cool said motor prior to being discharged from said casing, means for supplying an electrical current to said motor, thermal responsive switch means for interrupting the electrical current to said motor when said thermal responsive switch means senses a predetermined high temperature, a heat conductive metallic well mounted in the upper portion of said casing and extending downwardly into said casing adjacent the windings of said stator, said thermal responsive switch means being disposed in said metallic well so that the heat of said refrigerant gas surrounding said well is transferred through said well to said thermal responsive switch means, and a heat conductive copper arm bonded to the base of said metallic well, said copper arm extending inwardly toward the central portion of said casing and having an end portion extending downwardly adjacent said rotor so that heat dissipated by said rotor which is not carried away by said refrigerant gas is transmitted through said copper arm to said thermal responsive switch means to promote rapid response of said thermal responsive switch to heat dissipated by said rotor when the flow of refrigerant gas through said case is reduced or stopped.

2,946,284
COMBINED SALT WATER STILL AND FRESH WATER CHILLER
Donald S. Justice, Washington, D.C., assignor to The Justice Company, Washington, D.C., a corporation of the District of Columbia
Filed Apr. 16, 1957, Ser. No. 653,189
5 Claims. (Cl. 62—238)

1. In apparatus for treating liquids, a first container, a second container, means for revolving the containers about an axis, means to position the second container at a greater radial distance from the axis than the first container, means for delivering liquid to be treated into the first container, conduit means communicating between the containers and having its inlet in the first container adjacent the side thereof nearest said axis, a heat transfer circuit having a heat absorbing portion within the second container and a heat dissipating portion within the first container, said dissipating portion being positioned in said first container away from the radially outermost



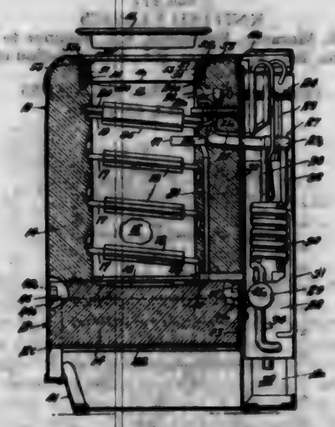
side thereof, the arrangement being such that the liquid in the first container is centrifugally maintained in the first container to present a vaporization surface and vapor formed thereat surrounds said inlet and passes through said conduit means to said second container and condenses to liquid therein delivering heat to said transfer circuit, said heat being delivered via said heat transfer circuit to said liquid in the first container at or near said vaporization surface to enhance vaporization thereat.

2,946,285
AERATING AND REFRIGERATING APPARATUS
Alden H. Wakeman, Lake Mills, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 23, 1958, Ser. No. 710,793
5 Claims. (Cl. 62—304)



2. An apparatus for aerating and refrigerating a readily solidifiable liquid wherein the line pressure downstream of said apparatus is subject to fluctuation, comprising an elongated refrigerated chamber through which such a liquid is circulated longitudinally thereof and simultaneously agitated, a first positive type pump for imparting a substantially uniform rate of flow to such liquid, a second positive type pump serially connected to the discharge side of said first pump, the discharge side of said second pump being directly connected to the inlet side of said chamber, said second pump having a greater capacity than said first pump and maintaining a substantially uniform rate of liquid flow into said chamber, conduit means interconnecting the discharge side of said first pump with the intake side of said second pump, means connected to said conduit means for effecting admission of a gaseous fluid into the liquid flowing from said first to said second pumps, and a third positive type pump having the intake side thereof connected to the outlet side of said chamber, the ratio of capacities of said second and third pumps being constant whereby a uniform positive pressure is continuously maintained in said chamber.

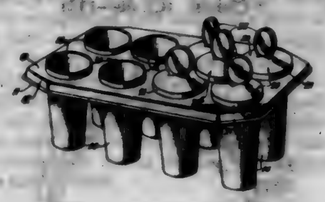
2,946,286
REFRIGERATOR EMPLOYING SECONDARY REFRIGERATION SYSTEM
Axel Gosta Hellstrom, Johanneshov, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden
Filed Aug. 17, 1956, Ser. No. 604,711
Claims priority, application Sweden May 14, 1956
7 Claims. (Cl. 62—334)



1. A refrigerator comprising a cabinet having spaced apart inner and outer shells and insulating material therebetween of which a part thereof is removable, said inner shell defining a space to be cooled, primary refrigeration apparatus comprising a cooling element disposed exteriorly of said space, a secondary heat transfer system disposed exteriorly of said space which contains a refrigerant and includes a condenser in heat exchange relation with said cooling element and an evaporator arranged to abstract heat from said space, the aforementioned parts comprising two units movable into and out of functioning relation, one of said units comprising said outer shell and a major porton of the insulating material and the other of said units comprising unitary structure including said primary refrigeration apparatus and secondary heat transfer system and inner shell, said other unit being movable with respect to said one unit in a path which includes a zone normally occupied by the removable part of the insulating material, said outer shell including a wall member having an opening and a hollow frame fixed to such wall member at the opening therein, said inner shell having an opening which is at the vicinity of said frame when said units are moved into functioning relation, the openings in the inner and outer shells and hollow frame at the vicinity of the openings defining an access passage to said space, said inner shell at the vicinity of the opening therein having an element, and said hollow frame having a surface-engaging part which is engaged by said element when said units are in functioning relation.

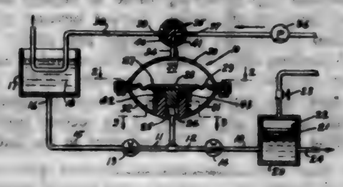
2,946,287
MOLD FOR FROZEN CONFECTIONS
Harold D. Halterstrom, Baraboo, Wis., assignor to Flambeau Plastics Corporation, Baraboo, Wis., a corporation of Wisconsin
Filed Feb. 29, 1960, Ser. No. 11,586
4 Claims. (Cl. 62—355)

1. A mold for preparing frozen confections comprising a group of cups integrally molded with a web from resilient plastic material, each cup having a peripheral flange projecting above the plane of said web, a removable cover for each cup adapted to fit over said flange, an arm depending from said cover and having an opening therethrough, a slit-like passage through said web centrally disposed between the cups comprising said group



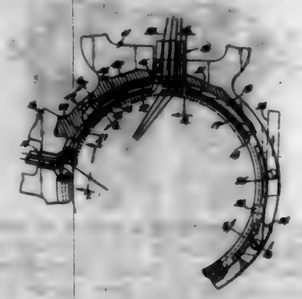
and another cover overlying a portion of each of those covers comprising said group the arm of said other cover being disposed within said passage and resiliently gripped thereby, whereby said other cover serves to hold said group of covers in place against said web.

2,946,288
HYDRAULIC POWER SOURCE PROVIDED WITH COOLING MEANS
Michael M. Schmitz, Inglewood, Calif., assignor to Hi-Shear Rivet Tool Company, Torrance, Calif., a corporation of California
Filed Aug. 26, 1957, Ser. No. 680,233
6 Claims. (Cl. 62—396)



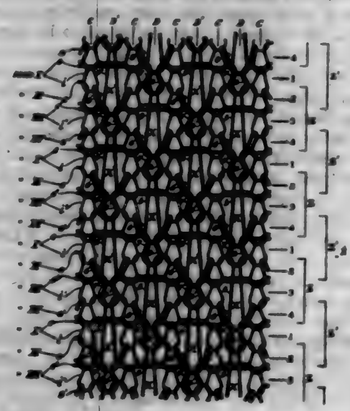
1. A hydraulic power supply comprising: a pump having an inlet and an outlet; a reservoir for containing liquid to be pressurized by said pump; conduit means interconnecting said reservoir and said pump inlet for supplying liquid to said pump; gas-actuated power means connected to said pump for operating the pump, said gas-actuated power means being adapted to be moved in a first direction by gas pressure, and in a second direction opposite to the first; return means for moving the gas-actuated power means in the second direction; a cooling conduit disposed at least partially within said reservoir and adapted to be at least partially submerged in liquid in said reservoir; cycling means including a cycling means inlet adapted to be connected to a source of gas under pressure, a cycling means outlet connected to said cooling conduit, and a connection to said gas-actuated power means, said cooling conduit exhausting to a lower pressure than said source of gas under pressure; whereby said pump is operated by connecting said power means to said source of gas under pressure by connecting the connection and cycling means inlet to move the gas-actuated power means in one of said directions, and then connecting said power means to the cooling conduit by connecting the connection and the cycling means outlet, enabling the return means to move the gas-actuated power means in the other direction, thereby operating the pump through one cycle, expansion of gas from the power means into said cooling conduit serving to reduce the temperature of the liquid contained in the reservoir and in contact with said cooling conduit.

2,946,209
AUXILIARY GAP CLOSING MECHANISM
Paul Haas, Horsham, Pa., assignor to Fidelity Machine Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 31, 1959, Ser. No. 803,186
5 Claims. (Cl. 66—112)



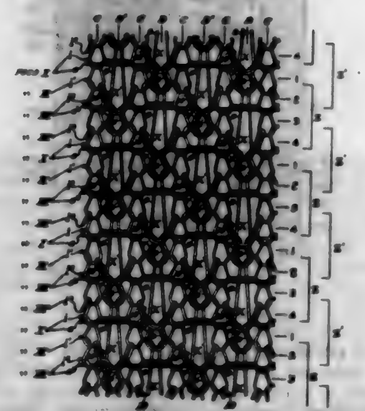
1. For a knitting machine having a latch ring with at least two gaps therein, a first gap closer mounted for circumferential movement in said latch ring between a first position out of registry with the first gap and a second position intersecting said first gap to close the same, an auxiliary gap closer mounted for circumferential movement in said latch ring between a first position out of registry with said second gap and a second position intersecting said second gap to close the same, and means on said second gap closer operable to engage said first gap closer upon displacement thereof beyond said second position to operate said second gap closer toward its second position upon further displacement of said first gap closer beyond its second position toward a third position, said first gap closer in its third position maintaining said second gap closer in its second position to thereby close said first and second gaps in the latch ring.

2,946,210
KNITTED FABRIC
William F. Moraney, Pawtucket, R.I., assignor to Lawson Products, Inc., Pawtucket, R.I., a corporation of Rhode Island
Filed Oct. 8, 1957, Ser. No. 688,953
13 Claims. (Cl. 66—200)



2. In a rib knit fabric having inner face wales and outer face wales, spaced courses of stretch yarn having loops of one course in each of recurrent pairs of such spaced courses doubled with loops of the other course of such pairs of spaced courses to form interstices in selected inner face wales, and the courses intervening between the spaced stretch yarn courses containing inelastic yarn, at least one inelastic yarn course between each recurrent pair of stretch yarn courses also containing elastic yarn knit in the selected wales and floated across the wales intervening between said selected wales.

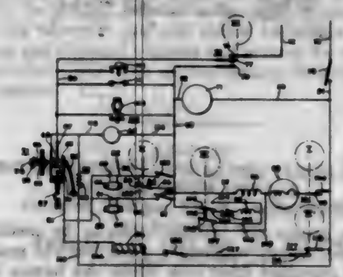
2,946,211
KNITTED FABRICS
William F. Moraney, Pawtucket, R.I., assignor to Lawson Products, Inc., Pawtucket, R.I., a corporation of Rhode Island
Filed Oct. 8, 1957, Ser. No. 688,953
6 Claims. (Cl. 66—200)



1. In a rib knitted elastic net fabric composed of courses of monofilament inelastic yarn and elastic yarn, a plurality of spaced interstices disposed throughout the fabric, said interstices comprising tucked stitches of said monofilament inelastic yarn, and a plurality of spaced undulating elastic strands formed of said elastic yarn, said elastic strands each having a succession of alternating crests and depressions, said depressions comprising unknitted stitches of elastic yarn when the fabric is unstretched, the depressions of alternate elastic strands being disposed in the same wales as the crests of the intervening elastic strands whereby each interstice in the fabric is framed at its opposite ends, respectively, by a crest and a depression disposed in opposing relation, the total denier of said monofilament inelastic yarn per course being 45 denier or less.

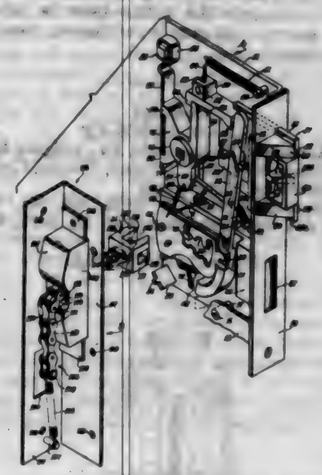
2,946,212
CONTROL SYSTEM FOR WASH WATER STORAGE AND RE-USE SYSTEM
Philip H. Houser, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 24, 1958, Ser. No. 750,653
5 Claims. (Cl. 68—12)

1. In a clothes washing machine, a rotatable water container, washing means in said container, electrically operated valve means for filling said container, means for emptying said container, means for rotating said container and for operating said washing means, manually operable sequence control means for controlling in a predetermined sequence said rotation of said container, and the operation of said washing means, said valve means and said emptying means, means for storing the liquid emptied from said container in a storage reservoir, means including an electrically operated return pump and conduit means for returning the stored liquid from said reservoir back to said container, switch means having first and second positions, manually operable means for moving said switch means from said first to said second position, electrically operated thermal time delay means effective to move said switch means from said second to said first position after a predetermined period of energization thereof, said switch means in said first position completing a circuit to said



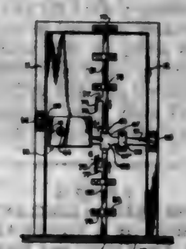
electrically operated valve means, said switch means in said second position completing a circuit to energize said return pump to return liquid from said reservoir and energizing said thermal time delay means, whereby said valve means is de-energized when said switch means is in its second position and is re-energized when said switch means is returned to its first position by said thermal time delay means to stop the return flow.

2,946,213
SAFETY DOOR LOCK
Theodor Reiner, Munich, Germany, assignor to Hans Koenigsdorfer, Freeport, and Helen Lynch, Franklin Square, N.Y.
Filed Feb. 21, 1956, Ser. No. 566,998
18 Claims. (Cl. 70—93)



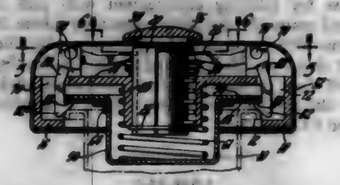
1. A door lock of the class described comprising, in combination: a relatively movable portion adapted to be mortised in a door; a relatively stationary portion adapted to be mortised in a door jamb for cooperation with said movable portion; chain guide means included in said stationary portion; a guard chain freely movable through said guide means; retractile means yieldingly urging said chain inwardly into said stationary portion; stop means for limiting outward movement of said chain; coupling means fixed to the outer end of said chain; strike plate means having a recess formed therein, said recess permitting passage of said coupling means therethrough, said guide means being disposed behind said recess and providing a seat within said door jamb for said coupling means; outwardly spring-pressed door latch means and outwardly spring-pressed chain latch means included in said movable portion, said door latch means being adapted for latching engagement with said strike plate means and said chain latch means being arranged for passage through said recess for latching engagement with said coupling means; and manually operable unlatching means included in said movable portion and selectively actuable either to retract said door latch means alone for limiting opening of said door or to retract both said door latch means and said chain latch means together for permitting said door to be fully opened.

2,946,214
DOUBLE BOLT LOCK MEANS
Erasmo Gotay, 521 W. 122nd St., New York, N.Y.
Filed Apr. 10, 1958, Ser. No. 727,596
1 Claim. (Cl. 70—118)



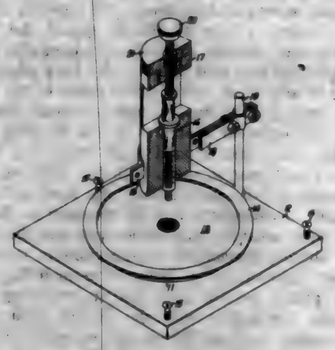
A mechanism for locking a rectangular door at top, bottom and lateral edges simultaneously; comprising, in combination, a door having an opening therein, a rectangular housing secured to the door over said opening, said housing having end openings and opposed apertures centrally thereof, a pair of closely spaced flat bars in opposed parallel relation extending horizontally through the end openings into said housing, the long edges of the bars being in alignment, the opposed edges of the bars on the inner end thereof having teeth, a shaft journalled in one of the opposed apertures in the housing, a spur gear on the inner end of said shaft inside the housing, the teeth of said gear in mesh with the teeth on the flat bars, a handle on the shaft outside the housing for turning the shaft, a cylinder rotatably mounted in the opening in the door, means of connection between the cylinder and gear whereby movement of the cylinder is imparted to the gear, said means of connection including spaced projecting prongs on the gear and a projecting lug on the cylinder interlocked with the prongs, said cylinder having a central keyway therein for receiving a key for turning the cylinder, one of said flat bars having an enlarged cam surface intermediate its ends, a pair of longitudinally aligned flat bars slidably mounted on the door, said latter bars being vertical and perpendicularly arranged relative to the parallel flat bars with their opposed ends in interlocking relation with the cammed surface on said one flat bar so that movement of said one flat bar is imparted to said longitudinally aligned flat bars, and means beyond top, bottom, and opposite lateral edges of the door for engaging ends of said bars, whereby turning of said handle in one direction effects simultaneous projection of all of said bars beyond the top, bottom and opposite lateral edges of the door to engage in said means respectively, and turning the handle in an opposite direction retracts all of said bars simultaneously from said means.

2,946,215
PRESS-ON CLOSURE FOR FILLER PIPES
Jesse E. Eshbaugh, David G. Kell, and Alvin H. Schmidt, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1957, Ser. No. 683,252
4 Claims. (Cl. 70—169)



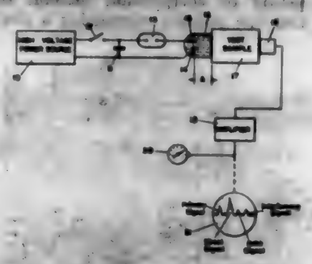
1. A press-on closure for the end of a filler pipe having an outwardly extending circular flange, said closure comprising a frame open at one side to receive said flange, bell crank levers pivotally supported on said frame with opposed latch ends for engaging said flange, the other ends of said levers extending toward the axis of the closure, a lock cylinder releasably mounted in said frame for rotation, spring means acting on said other ends and urging said bell crank levers to rotate into latching positions, and cam means mounted on said lock cylinder and frame for rotating said levers away from latching positions upon rotation of said lock cylinder in one direction.

2,946,216
METHOD FOR ESTIMATING INTERFACIAL TENSION OF A MINERAL OIL
William E. Elliott, Elm Grove, and Richard E. Reinhard, West Allis, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Sept. 13, 1957, Ser. No. 683,749
4 Claims. (Cl. 73—53)



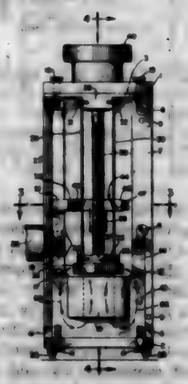
3. A method for estimating the interfacial tension of a mineral oil which comprises the steps of: placing a small quantity of said oil on a level surface of a porous medium sufficient in amount to form an oil spot thereon; and depositing at the approximate center of said oil spot a small quantity of an indicator solution sufficient in amount to form an indicator spot having a lesser area than said oil spot and confined within said oil spot, said indicator solution being insoluble in said oil and having sufficient dipole strength to be attracted by said porous medium, said interfacial tension being determined by measuring the center drying time of said indicator spot and comparing said measured drying time with the center drying times of mineral oils having known interfacial tensions.

2,946,217
SYSTEM FOR PROBING MATERIALS BY SHOCK WAVE SIGNALS
Frank Fraengel, Wittenbergener Weg 79, Hamburg-Rissen, Germany
Filed May 13, 1955, Ser. No. 508,245
5 Claims. (Cl. 73—67.5)



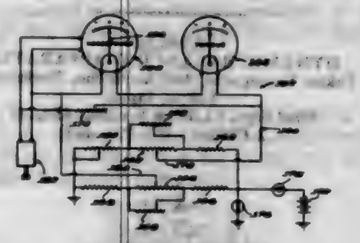
1. In a system for probing material by mechanical shock wave signals originating from electric sparks in liquid, an enclosure filled with liquid and having a wall portion suitable for being placed in intimate contact with a sample of material to be tested, a storage condenser, a high voltage power source, connecting means between said power source and said condenser including switching means to effect charging of said condenser from said source, a discharge circuit for said condenser including spark gap means within said liquid and an auxiliary gaseous spark gap in series arrangement, said auxiliary spark gap being designed for a breakdown voltage lower than the operating voltage of said power source to effect a breakdown surge of extremely short duration through said spark gap means within the liquid in the form of a spark-over through liquid at the instant the condenser voltage reaches the breakdown voltage of said auxiliary spark gap, said spark-over through liquid causing an abrupt pressure shock wave to be radiated through said liquid and said enclosure wall portion into said material sample under test, whereby to draw from the behavior of said shock wave in said sample conclusions about the internal structure thereof.

2,946,218
TUNABLE PICK-UP
Sylvester Karpeluk, Philadelphia, Pa., assignor to Tinius Olsen Testing Machine Company, Willow Grove, Pa., a corporation of Pennsylvania
Original application Dec. 17, 1954, Ser. No. 476,025. Divided and this application Mar. 12, 1956, Ser. No. 570,960
5 Claims. (Cl. 73—70.2)



5. In a tunable pick-up: a housing; a pair of flat elongated strip-like springs arranged with their broad sides facing and generally parallel one another and one end of each spring being fixed to said housing; a permanent magnet interconnecting the other ends of said springs and providing a mass to effect vibration of the springs; a control member slidably engaging each of said springs and movable therealong to vary the effective vibrating lengths thereof; means connected to the control member and to the housing for moving the control member and providing for the control member to be rigid in the direction of spring vibration; and coil means connected with said housing and disposed adjacent said magnet for developing an electrical signal with relative motion between the coil and magnet.

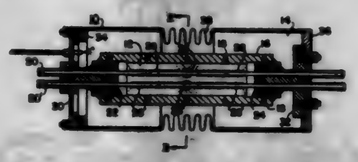
2,946,219
CONTINUOUSLY INDICATING TORQUE AND HORSEPOWER DEVICE
David A. Kemper, 513 N. California St., Los Angeles, Calif.
Filed June 11, 1954, Ser. No. 436,179
3 Claims. (Cl. 73—136)



1. In a horsepower indicating device for an internal combustion engine supported in a vehicle by mounts which permit the deflection of said engine when operating, the combination of: torque detecting and transmitting means connected to said engine for generating a signal proportional to the deflection of said engine on its mounts, said torque detecting means being constituted by a potentiometer connected between said vehicle and said engine to measure the torque-induced deflection of said engine with respect to said vehicle; centrifugal force detecting means electrically connected to said torque detecting potentiometer for cancelling that component of said signal from said torque detecting means which is due to the operation of centrifugal force on said engine, said centrifugal force detecting means being constituted by a potentiometer connected to said engine and having a weight connected thereto responsive to centrifugal force; means for detecting and transmitting a signal proportional to the speed of said vehicle connected to the drive shaft thereof and constituted by an electrical generator driven by said drive shaft; and multiplying means connected to said potentiometers and generator for providing a signal proportional to the road horsepower of said engine constituted by a wattmeter connected to the outputs of said electrical generator and said potentiometers.

2,946,220
DIFFERENTIAL FLOWMETER
Marcel Cognilat, Pierre-Benite, Michel de Fromont, Lyon, and Paul Jacquemier, Marseille, France, assignors to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France
Filed Feb. 24, 1958, Ser. No. 717,173
Claims priority, application France Mar. 1, 1957
2 Claims. (Cl. 73—196)

1. Flowmeter apparatus comprising central lengths of conduit for conducting streams of gas therethrough to be measured and having supported mid-portions and fixed opposite end portions, body halves forming a completed mass of metal when secured together and defining an isothermal chamber in which said lengths are fixed in spaced relation to one another between the halves, shiftable means for heating the supported midportions of each conduit length at a selected point to introduce heat into the associated gas stream at that point, first and second heat sensing means on each conduit length arranged one on each side of said heating means so that the first heat sensing means is cooled by the stream anterior to its heating point



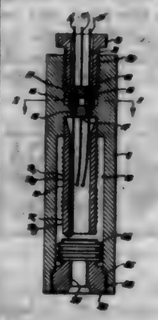
and heat from that heating point is transferred to the second heat sensing means by the heated stream posterior to said point in a manner whereby the magnitude of the temperature differential varies directly with the rate of gas stream flow, circuit means including said sensing means and output junction terminals the potential of which is a function of said stream flow rate and which varies in comparison with a fixed calibrated base reference voltage for each of the potentials, and flow rate comparison means connected to compare the potentials of said junction terminals for deriving an electrical quantity indicative of their sum, difference, or a ratio.

2,946,221
STATOR BLADE MOUNTING OF CONDITION SENSING ELEMENTS IN FLUID FLOW MACHINES
John Douglas Annear, Bristol, and Harry White and Samuel Leonard Holt, Farnborough, England, assignors to Power Jets (Research and Development) Limited, London, England, a British company
Filed July 9, 1954, Ser. No. 442,246
Claims priority, application Great Britain July 14, 1953
4 Claims. (Cl. 73—212)



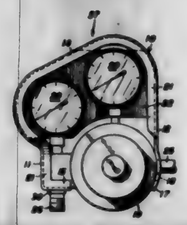
1. A stator guide vane for a fluid flow machine having as part of its leading edge a separately formed hollow member constituting a mounting for a Pitot tube and extending from one end of the vane to a point intermediate its ends, a shroud tube secured to the vane with its axis lying along the fluid path through the machine defining a passage in the leading edge, a Pitot tube mounted on said hollow member with the head of said Pitot tube in said shroud tube and the outlet of said Pitot tube in said hollow member so that said shroud tube affords fluid access to the head of said Pitot tube, and means defining an aperture through the thickness of the vane constituting a fluid outlet of said shroud tube downstream of the head of said Pitot tube.

2,946,223
FLUID PRESSURE SENSITIVE RESISTANCE BRIDGE CIRCUIT
Edward J. Hajnik, 72 Redmond Ave., Buffalo, N.Y.
Filed May 4, 1955, Ser. No. 505,978
10 Claims. (Cl. 73—398)



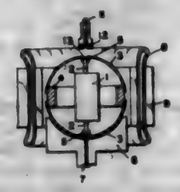
1. A transducer for translating fluid pressure in terms of an electrical quantity, comprising four resistors each composed of a material having an electrical resistance which varies in response to fluid pressure applied directly thereto, said resistors being arranged in the form of a Wheatstone bridge having input and output terminals and being further arranged to be exposed directly to a fluid whose pressure is to be measured so as to be stressed solely by the pressure of said fluid, two of said resistors forming a pair of opposite arms of said bridge having a positive pressure coefficient of resistance and the other two of said resistors forming the other pair of opposite arms of said bridge having a negative pressure coefficient of resistance, whereby when a given voltage is imposed across said input terminals and the pressure of said fluid varies, any change in voltage across said output terminals is due solely to the change in resistance of said resistors caused by the direct application thereto of fluid pressure.

2,946,223
GAUGE GUARD
Albert W. Laier, Jr., Emmaus, Pa., assignor to Air Products Incorporated, a corporation of Michigan
Filed Apr. 9, 1956, Ser. No. 576,929
2 Claims. (Cl. 73—431)



1. A gauge guard for use with pressure regulating and indicating apparatus of the class including a pressure regulator for compressed gases having a housing, at least one gauge for indicating the pressure of gases mounted on the regulator housing, a gas inlet tube leading from a source of compressed gas into the pressure regulator and a gas outlet tube leading from the pressure regulator, the gauge being mounted on one side of the regulator housing, the gas inlet tube and gas outlet tube leading from spaced portions of the other side of the regulator housing, and the gauge, gas inlet tube and gas outlet tube at their points of mounting on the regulator housing lying in approximately the same vertical plane, the gauge guard comprising a body of generally U-shaped configuration and the legs of the body being adapted to be removably mounted on the apparatus at spaced points, one leg of the body having an opening formed therein adjacent the end to receive the gas inlet tube, the other leg of the body having an opening formed therein adjacent the end to receive the gas outlet tube, the legs of the body being formed in spaced relation with the distance between their respective openings being less than the distance between their points of mounting, the legs of the body being flexible outwardly thereby allowing the legs to be flexed and the gauge guard to be held in place without being rigidly connected to the regulator housing and the gauge guard to be supported on the gas inlet tube and gas outlet tube with each leg of the body fitting snugly against the regulator housing, the intermediate portion of the body being formed to surround the gauge in spaced relation thereto and being of U-shaped cross section thereby forming strengthening and protective flanges projecting toward the gauge, and a member extending across the intermediate portion of the body and arranged to cover the rear of the gauge in spaced relation thereto.

2,946,224
DYNAMIC BALANCING APPARATUS
Takao Yanaguchi, 446 Asahi-cho, Nerima-ku, Tokyo, Japan
Filed Sept. 17, 1956, Ser. No. 610,217
2 Claims. (Cl. 73—461)

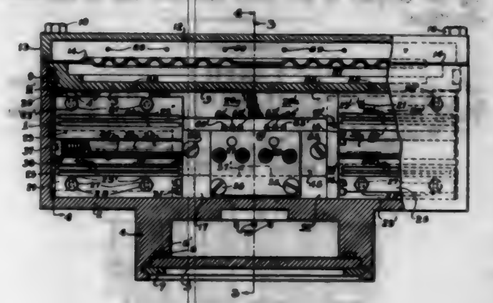


1. A dynamic balancing apparatus comprising means for supporting a body which is statically balanced and has a central portion and two oppositely extending axial shafts, a hollow spherical body divided into upper and lower hemi-spherical metallic shells surrounding said body, projections on said hemi-spherical shells serving as guides or bearings for said shafts so that the axis of said shafts and central portion is substantially vertical, a drill mounted substantially vertically above the upper shaft, a supporting member for adjustably securing together the upper and lower hemi-spherical metallic shells, a bearing member having the same diameter as the hollow spherical body for supporting the lower hemi-spherical metallic shell, an iron core surrounding said hemi-spherical shells, a three phase winding wound on said iron core, a three phase alternating current supplied to said winding, thereby exerting a torque to the hemi-spherical metallic shells whereby the vertical axis of rotation of the body to be balanced is caused to coincide with its main axis of inertia when said drill is pressed down and forced on the upper end of said upper shaft.

2,946,225
ANGULAR ACCELEROMETER
Cecil K. Stedman, Emmaclaw, Wash., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed Apr. 12, 1956, Ser. No. 577,707
8 Claims. (Cl. 73—516)

1. An accelerometer comprising a case, a barrier wall in said case, a liquid in said case, on both sides of said barrier wall, an orifice having a peripheral edge, said orifice being positioned in said barrier wall, a paddle in said

orifice spaced from the peripheral edge of said orifice to form a peripheral orifice, a second orifice spaced from said peripheral orifice in parallel with said first orifice,

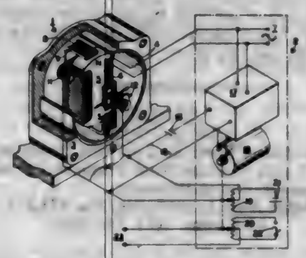


both orifices being in parallel to the flow of the liquid in said case, the width in centimeters of each of said orifices measured in a direction perpendicular to the direction of flow through said orifices being less than

$$\sqrt{\frac{k}{2f_n}}$$

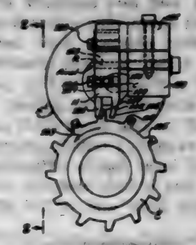
where k is a kinematic viscosity of the liquid in stokes and f_n is the natural frequency of the accelerometer, in cycles per second measured at the temperature at which said kinematic viscosity is measured.

2,946,226
ACCELEROMETERS
Harry C. Wendt, Lynnfield Center, and Clarence A. Haskell, Marblehead, Mass., assignors to General Electric Company, a corporation of New York
Filed Sept. 17, 1957, Ser. No. 684,607
6 Claims. (Cl. 73—517)



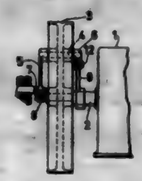
2. An acceleration sensitive instrument comprising: a magnetizable structure defining a magnetic circuit and including an air gap in said circuit; means for producing in said air gap a magnetic field having a unidirectional component and an alternating component; a winding deflectable by acceleration forces from a normal position of zero mutual inductance within said field to positions of varying mutual inductance, whereby acceleration-induced deflections of said winding cause periodically varying potentials to be produced in said winding; means connected to receive said periodically varying potentials for producing a direct current signal related in magnitude to the amplitude of said periodically varying potentials; and means applying said direct current signal to said winding to create a magnetic field reacting with the aforesaid unidirectional component for urging said winding toward said position of zero mutual inductance.

2,946,227
ESCAPEMENT MECHANISM
Robert F. Denton, Los Angeles, and James R. White, Reseda, Calif., assignors to Jamieson Laboratories, Inc., a corporation of California
Filed June 24, 1959, Ser. No. 822,642
1 Claim. (Cl. 74—1.5)



An escapement mechanism comprising: a wheel adapted to be rotatably driven in a particular direction about its longitudinal axis and having provided thereon a plurality of longitudinally extending teeth with a uniform circumferential spacing between the forward surfaces of each two adjacent ones thereof; a pawl comprising an elongated member extending substantially radially outward from the periphery of said wheel, supported for pivotal movement about an axis which lies a substantial distance from the periphery of said wheel at a right angle to the axis of said wheel, and having a spaced pair of teeth on its inner end which project toward said wheel so as to selectively engage said forward surfaces of said wheel teeth, said pawl teeth being in staggered relationship both with respect to said wheel axis and said pawl axis, the distance between the operative surfaces of said pawl teeth measured circumferentially of said wheel being one-half the distance between the forward surfaces of adjacent wheel teeth, said operative surfaces of said pawl teeth not being parallel to each other but bearing the same angular relationship with respect to corresponding radii of said wheel, the distance between said pawl teeth measured parallel to said pawl axis being less than the length of said wheel teeth; and independent means for rocking said pawl back and forth between predetermined limit positions so that first one and then the other of said pawl teeth is interposed in the path of motion of said wheel teeth.

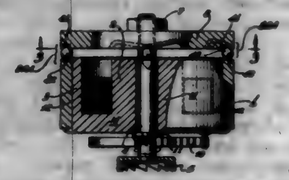
2,946,228
DEVICE FOR CONVERSION OF A PERIODICALLY IRREGULAR ROTARY MOTION TO A REGULAR MOTION OR VICE VERSA
Kaleb Emil Evrell, Eskilstuna, Sweden, assignor to Aktiebolaget Bolinder-Munktell, Eskilstuna, Sweden
Filed Aug. 19, 1957, Ser. No. 678,826
Claims priority, application Sweden Aug. 25, 1956
6 Claims. (Cl. 74—68)



1. A device for the conversion of a periodically non-uniform rotary motion into a substantially uniform rotary motion or vice versa, comprising a main shaft adapted to have a periodically non-uniform rotary motion, a circular transmission element coaxially mounted for free rotation upon said main shaft and adapted to have a

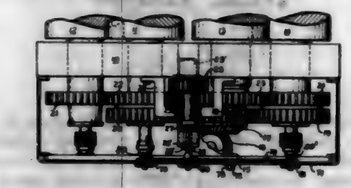
substantially uniform rotary motion, a first auxiliary shaft rotatably mounted in said circular transmission element parallel to and radially spaced from said main shaft, a second auxiliary shaft parallel to and eccentrically arranged with respect to said main shaft, said second auxiliary shaft constituting a reference point, first linkage means connecting said first auxiliary shaft to said second auxiliary shaft comprising a first lever extending radially from said first auxiliary shaft and rigidly secured to the same and a link pivotally connected at one end to said lever and at the other end to said second auxiliary shaft, and second linkage means connecting said first auxiliary shaft to said main shaft comprising a second lever rigidly extending radially from said first auxiliary shaft, a third lever rigidly extending radially from said main shaft, and a link pivotally connected at one end to said second lever and at the other end to said third lever.

2,946,229
ROTARY ACTUATOR
Herbert E. Metcalf, Malibu, Calif.; Carol R. Metcalf, administratrix of said Herbert E. Metcalf, deceased
Filed Apr. 22, 1957, Ser. No. 654,159
9 Claims. (Cl. 74—89)



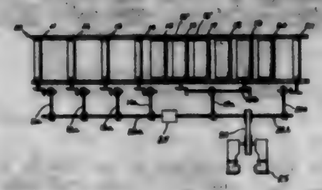
1. A rotary actuator comprising a pair of coaxial members, one of said members being stationary, the other member being mounted to be moved axially and rotatably with respect to the other member, a plurality of slant surfaces on one of said members directed axially and circumferentially, a plurality of slots in said other member opposed to cooperate with said slant surfaces, the edges of said slots being directed generally circumferentially, and a ball positioned between each opposed slot and surface, said ball having three points of contact only, comprising one contact with said slant surface and contact only with the two edges of said opposed slot.

2,946,230
REVERSING GEAR DRIVES FOR PRINTING MACHINES
Charles A. Harlem, Riverside, Conn., and Andrew R. Hegeman, Yonkers, N.Y., assignors to R. Hoe & Co., Inc., a corporation of New York
Filed Feb. 19, 1957, Ser. No. 641,126
10 Claims. (Cl. 74—361)



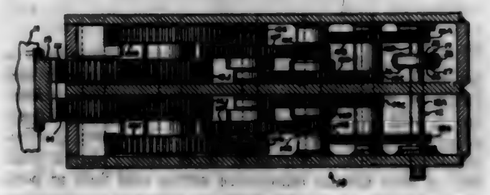
1. In a printing machine unit having a pair of printing couples and a common frame structure supporting the same, a reversing drive comprising gearing and clutch mechanism for selectively driving the said printing couples in the same direction and in opposite directions, a plurality of screw rod control members, each movable between inner and outer positions, one such position corresponding to the drive in the same direction and the other to the drive in opposite directions, and means preventing the setting of the said control members simultaneously in positions corresponding respectively to driving the couples in the same direction and in opposite directions.

2,946,231
PAPER MACHINE DRIVE MECHANISM
Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Sept. 26, 1955, Ser. No. 536,710
4 Claims. (Cl. 74—395)



1. In a machine of the character described, a first driven line shaft, a first plurality of variable speed drive means connecting with said line shaft, a second driven line shaft, a second plurality of variable speed drive means connecting with said second line shaft, a first plurality of driven members each of which connects with one of the first plurality of variable speed drive means and is driven thereby, a second plurality of driven members each of which connects with one of said second plurality of variable speed drive means and is driven thereby, drive means connecting with one of the driven line shafts to drive said shaft at a base speed, a differential gear assembly connected to the first and second line shafts and having three rotary elements, the first of said elements being connected to the line shaft which is connected to the drive means, the second of said elements being connected to the other line shaft, and the third of said elements being a control element connected to the first and second elements, and means applying torque to the control element to establish a speed difference in the other line shaft with respect to the one line shaft.

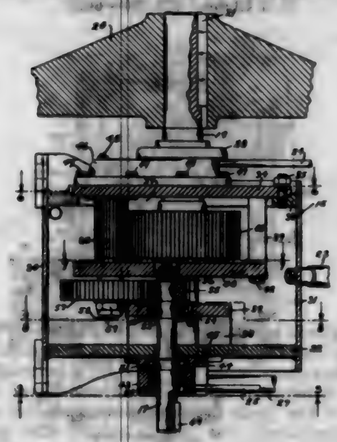
2,946,232
GEAR DRIVE
Gordon H. Jones, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed Aug. 1, 1957, Ser. No. 675,731
10 Claims. (Cl. 74—409)



1. In a reversible gear drive, the combination comprising a rack, parallel gear trains for driving the rack including a pair of drive gears adjustable angularly with relation to each other, sets of spur gears terminating in respective bull gears enmeshed with said rack, said sets of spur gears being arranged to be driven by said drive gears respectively, means for applying torque oppositely to said drive gears for adjusting the same angularly with relation to each other for preloading the sets of gears, by causing deflection of each of the gears in the gear trains

and means for locking the pair of drive gears in fixed relation in a given adjusted relation so that the resilience due to the deflection of the gears is utilized to maintain the preloading.

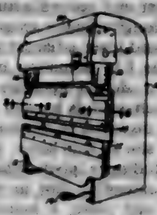
2,946,233
COOLING TOWER FAN DRIVE
Walter F. Schmitter, Waukesha, Wis., assignor to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed May 24, 1957, Ser. No. 661,328
1 Claim. (Cl. 74—421)



A heavy duty speed reduction unit, comprising: an output shaft; a tapered-roller bearing capable of taking radial as well as thrust loads, rotatably supporting the output end of the output shaft; a similar bearing, rotatably supporting the nonoutput end of the output shaft, and oriented oppositely to the first mentioned bearing; a gear on and drivingly keyed to the output shaft; a pinion drivingly meshing with the gear; means for rotating the pinion; means for adjusting to take up bearing free play and means imposing a predominant thrust in one direction on the output shaft; the unit being characterized by the fact that the bearing at the output end of the output shaft is oriented to take the predominant thrust, whereby that bearing is firmly seated with no free play, and whereby the bearing at the nonoutput end of the output shaft contains all the free play of the two bearings; the unit being further characterized by the fact that the gear is adjacent the bearing which is at the output end of the output shaft; the unit being still further characterized by the fact that the adjusting means is accessibly located at the bearing which is at the nonoutput end of the output shaft.

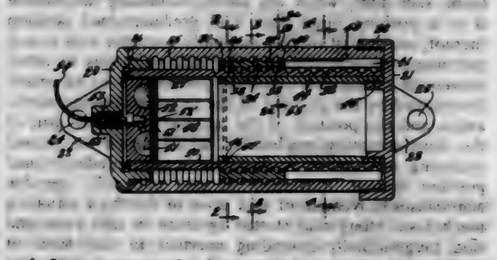
2,946,234
PRESS BRAKE
Robert H. Jahnke, Cincinnati, Ohio, assignor to The Cincinnati Shaper Co., Cincinnati, Ohio, a corporation of Ohio
Original application Jan. 11, 1956, Ser. No. 558,589. Divided and this application July 27, 1959, Ser. No. 829,725
9 Claims. (Cl. 74—421)

1. In a press brake having a frame, a main shaft journaled in said frame, and a drive motor; a transmission comprising a housing secured to said frame, bearings in said housing for said main shaft, a gear secured to said main shaft substantially centrally within said housing, an input shaft journaled in said housing, means to drive said input shaft from said drive motor, a pinion on said input shaft adjacent one side of said housing, an intermediate shaft journaled in said housing, and carrying a gear in meshing relation with said pinion and a pinion in meshing relation with said first named gear, said housing having journals for a second intermediate shaft



at the same distance from said main shaft as said first mentioned intermediate shaft but circumferentially spaced therefrom, whereby said transmission may be reinforced by the addition of a second intermediate shaft, a second gear and pinion for said second intermediate shaft, and a second pinion for said input shaft.

2,946,235
THRUSTER
C Walton Musser, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Aug. 20, 1959, Ser. No. 834,967
15 Claims. (Cl. 74—424.8)

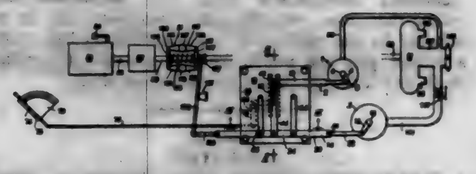


1. In a screw mechanism, an inner screw element having external helical grooves thereon with a helix extending in one direction, a nut outside the inner screw element having internal helical grooves thereon with the helix also extending in said one direction and conforming to the path of the external grooves on the inner screw, the nut also having external helical grooves thereon with the helix extending in the opposite direction, a tubular outer screw element surrounding the nut having internal helical grooves thereon in which the helix extends in said opposite direction and conforming to the path of the external grooves on the nut, bearing elements occupying in part the helical grooves on the inner screw element and the inner helical grooves on the nut and bearing elements occupying in part the outer helical grooves on the nut and the inner helical grooves on the tubular outer screw element.

2,946,236
APPARATUS FOR POSITIONING A FIRST MOVABLE MEMBER IN DEPENDENCE UPON THE POSITION OF A SECOND MOVABLE MEMBER
Alphonse Joseph, London, England, assignor to James Whitson and Company Limited, West Drayton, England, a British company
Filed Mar. 28, 1958, Ser. No. 724,654
Claims priority, application Great Britain May 30, 1957
2 Claims. (Cl. 74—480)

1. Apparatus for positioning a first movable member in dependence upon the position of a second movable

member comprising a first actuating mechanism for effecting positioning of the first movable member and a second actuating mechanism for effecting positioning of the second movable member, linkage means including a lever pivotally connected at opposite ends thereof respectively to said first and second actuating mechanisms, and formed with a longitudinally extending slot disposed towards the end of said lever adjacent the pivotal connection thereof with the first actuating mechanism, a fixed plate formed with a slotted aperture which, when the second actuating mechanism is located in a predetermined position thereof, is disposed in register with said longitudinally extending slot in said lever, and a third actuating mechanism including a pivot which engages within said longitudinally extending slot in said lever and said slotted aperture in said plate, a manually movable arm coupled to said pivot and a graduated plate on which said manually operable arm is pivotally mounted so



that movement of said arm causes movement of said pivot within the slotted aperture in the plate and the longitudinally extending aperture in the lever, the arrangement being such that, when the second actuating mechanism is in a position other than said predetermined position thereof, movement of said manually operable arm causes movement of said lever of the linkage means to effect movement of the first actuating mechanism to an extent determined by the position of the second actuating mechanism and the position of the manually operable arm of the third actuating mechanism, whilst, when the second actuating mechanism is disposed in said predetermined position thereof, movement of said manually operable arm causes movement of said pivot of the third actuating mechanism along said slotted aperture in said plate and said longitudinally extending aperture in said lever of the linkage means without causing movement of the first actuating mechanism.

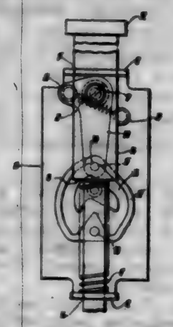
2,946,237

LATCHING DEVICES

Donald G. Hebert, South Windsor, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York

Filed Feb. 10, 1958, Ser. No. 714,406

5 Claims. (Cl. 74—527)



1. A latching device; comprising, a frame, a plunger slidably mounted in said frame, a spring means longitudinally biasing said plunger, a lever pivotally mounted on said plunger, means for rotatably biasing said lever, a cam mounted on said frame, and means on said lever and cooperating with said cam for retaining said plunger in one of two alternate longitudinal positions against the action of said spring means.

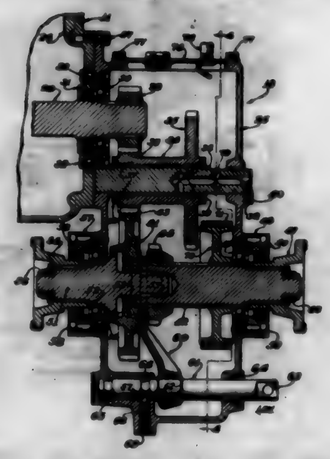
2,946,238

MOTOR VEHICLE TRANSMISSIONS

Ralph L. Beyerstedt, Libertyville, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois

Filed July 21, 1958, Ser. No. 750,029

1 Claim. (Cl. 74—665)



In a vehicle transmission having a substantially sealed housing, an input shaft rotatively carried through one wall of said housing, an output shaft rotatively carried through one wall of said housing, a second output shaft rotatively carried through a wall of said housing opposite from that of said first output shaft, the inner end of said first output shaft being formed to have an extending portion of a reduced diameter which is journalled in bearing means formed in the inner end of said second output shaft, each of said input shaft, and said first and second output shafts being peripherally sealed against the leakage of any lubricating fluid from said housing, gearing means comprising a pair of gears formed on a cylindrical member, said cylindrical member rotatably carried upon a shaft, said shaft carried between opposite walls of said housing, means connecting said input shaft to drive one of said pair of gears, a brake drum splined on said second output shaft within said housing against one wall thereof, a brake band operatively carried in said housing in cooperation with said brake drum for manual operation thereof externally of said housing, second gearing means comprising a sliding gear assembly splined upon said second output shaft inwardly of said brake drum, a first positive clutch member of external clutch teeth formed on said first output shaft, said sliding gear assembly comprising a first gear and a second gear and a second positive clutch member of internal clutch teeth, said first, and second gears and said internal clutch teeth of said sliding gear assembly being formed so that said internal clutch teeth engage said external clutch teeth formed on said first output shaft and said second gear engages said one of said gears of said pair of gears when said sliding gear is moved in one direction and so that said internal clutch teeth are disengaged from said external clutch teeth formed on said first output shaft and said second gear is disengaged from said one gear of said pair of gears and said first gear of said

sliding gear assembly engages the other gear of said pair of gears when said sliding gear assembly is moved in the other direction toward said brake drum.

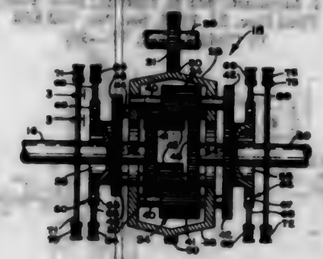
2,946,239

COMBINED POWER TRANSMISSION AND STEERING MECHANISM FOR TRACKLAYING VEHICLES

James Merritt Holt, San Jose, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Filed July 17, 1956, Ser. No. 598,271

17 Claims. (Cl. 74—710.5)



1. In a power transmission of the type having a power driven controlled differential, an output shaft driven by said differential, a brake on said output shaft, and a power transfer brake associated with the differential for controlling the speed of the output shaft, and means for applying each of said brakes, the improvement which comprises a one-direction clutch operatively connected between said power transfer brake and said differential and arranged to permit both of said brakes to remain in applied position at the same time during operation of said differential.

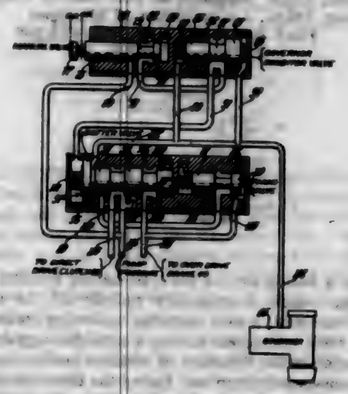
2,946,240

OVERDRIVE UNIT AND CONTROL THEREFOR

Carl F. Kop, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 16, 1954, Ser. No. 449,836

18 Claims. (Cl. 74—752)



1. An overdrive unit for transmitting torque comprising an input shaft, an output shaft, a planetary gear set having an input element connected to said input shaft, an output element connected to said output shaft, and a reaction element, hydraulically operated brake means for holding said reaction element against rotation to condition said gear set for overdrive of said output shaft, hydraulically operated clutch means for connecting together two of the elements of said gear set to cause all of the elements to rotate in unison, a source of hydraulic pressure, shift valve means for connecting either said brake means or said clutch means to said source of hydraulic pressure for the application of one thereof while hydraulic pressure is exhausted from the other thereof, means biasing said shift valve means to position to apply said clutch means and to exhaust said brake means, governor means delivering hydraulic pressure varying with the speed of one of said shafts, and means for supplying said varying hydraulic pressure to said valve means for actuating said valve means to exhaust said clutch means and apply said brake means in response to a predetermined hydraulic pressure from said governor means.

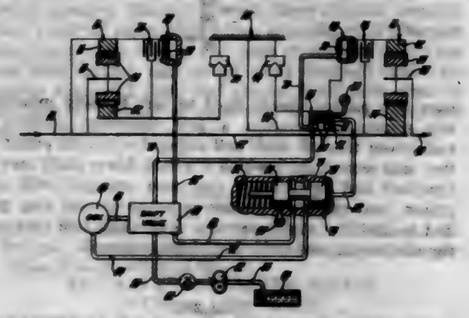
2,946,241

TRANSMISSION

Kenneth E. Snyder, Northville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Aug. 6, 1957, Ser. No. 676,101

16 Claims. (Cl. 74—784)



1. In a transmission, a gear train, first and secondary hydraulically actuated friction engaging devices for conditioning the gear train for transfer of torque therethrough, a source of fluid under pressure for applying the second friction engaging device, control valve means actuated by a predetermined torque transferred by the second friction engaging device during initial application thereof, and fluid pressure actuated valve means operated by fluid pressure supplied from the control valve means when the second friction engaging device is transferring the predetermined torque for controlling the operation of the first friction engaging device.

2,946,242

REVERSING FRICTION DRIVE

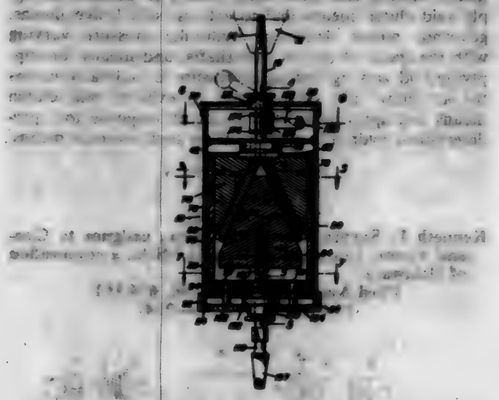
Glenn L. Colson, 1531 Wedgewood Drive, Lawrence, Kans.

Filed Feb. 3, 1959, Ser. No. 790,932

3 Claims. (Cl. 74—792)

1. A power hand tool reversing friction chuck for use with an electric power source, said chuck comprising a housing, a first shaft having an end in said housing and an end adapted to connect with the power source for rotation thereby, a driven power take-off shaft in said housing and axially aligned with said first shaft, a clutch assembly having a first clutch element, a second clutch element and a third clutch element respectively, means connecting said first clutch element to said driven shaft, means connecting said third clutch element to said driven shaft and including a reversing gear assembly, means including a hand crank projecting laterally from said housing and movably connected with said first shaft for moving said second clutch element into frictional contact with

said first and said third clutch elements respectively to drive said driven shaft in the clockwise and selectively the counter-clockwise directions, each of said clutch elements having a conical surface and being friction clutch elements so that controlled slippage between clutch elements operates the power take-off shaft with a selected torque, said means including reversing gearing having at



least one pinion, means fixed to said housing mounting said pinion for rotation, a gear separably attached to said power take-off shaft and engaged with said pinion so that said second shaft which is a tool driver shaft may be removed and replaced, a ring gear engaged with said pinion, and structural means attached to said ring gear and to said first clutch element connecting said ring gear for movement with said first clutch element.

2,946,243

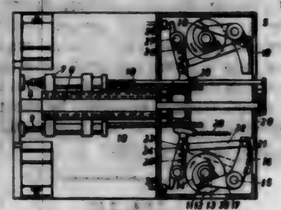
TOOL FEED FOR MULTI-SPINDLE AUTOMATICS

Ernst Gothe, Wolfgartenstrasse 77, Koln-Poll, Germany

Filed Aug. 28, 1956, Ser. No. 606,946

Claims priority, application Germany Sept. 1, 1955

9 Claims. (Cl. 77—22)



1. A tool feed mechanism independently controlling movement of a plurality of tools adapted to each perform a predetermined machining operation on individual workpieces, each said workpiece being supported by an associated spindle of a multiple spindle automatic lathe and the like, comprising a plurality of tool holder means adapted to each support a tool for performing said predetermined machining operation on said individual workpieces, a housing wherein said tool holder means are arranged, at least one vertical rotatable shaft supported by said housing, said vertical rotatable shaft being rotatable about its longitudinal axis, a plurality of individual plates connected to said vertical rotatable shaft, said individual plates each being substantially orthogonally disposed with respect to the longitudinal axis of said rotatable shaft, cam means carried by each of said plates, said plates being provided with an upper and lower face,

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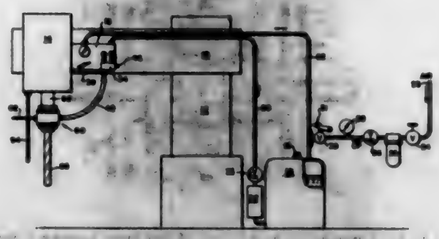
2,946,244

METHOD AND APPARATUS FOR MIST COOLING CUTTING TOOLS

Harlan J. Maynard, 341 E. 33rd St., New York, N.Y.

Filed Dec. 24, 1958, Ser. No. 782,850

10 Claims. (Cl. 77—65)



1. A method of mist cooling a cutting tool which consists in providing and maintaining a source of air under predetermined and constant pressure, conducting air therefrom at reduced pressure to a mist forming station and from thence in a stream at predetermined and constant pressures to a cutting tool, and simultaneously therewith injecting a predetermined flow of liquid into said air at said station at a constant pressure greater than the air pressure in said stream, whereby a uniform flow of air-liquid mist coolant is formed and conducted to said tool.

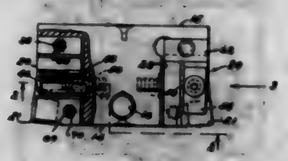
2,946,245

BORING TOOLS WITH INDIVIDUALLY ADJUSTABLE TOOL CARTRIDGES

William Yeges, Birmingham, and Frederick J. Cloutier, Detroit, Mich., assignors to The Valeron Corporation, Detroit, Mich., a corporation of Michigan

Filed July 6, 1959, Ser. No. 825,169

8 Claims. (Cl. 77—58)



1. In a boring tool of the type having a cutter carrying cartridge which is adjustable radially of the rotational axis of the tool, a tool cartridge mounting recess formed in said tool, said recess having a cartridge supporting surface facing in the direction of rotation and a reaction surface transverse thereto and facing the direction of feed, a guideway formed in said tool below said cartridge supporting surface, said guideway consisting of the major portion of a cylinder the axis of which is located below and parallel to said supporting surface a distance less than the radius of said cylinder, a tool cartridge having a side face facing said reaction surface, a bottom face adapted to engage said supporting surface and a depending guide adapted to slidably engage said guideway,

means engaging said guide and tool for precisely adjusting the position of said cartridge longitudinally of said guideway, and means for releasably clamping said cartridge in adjusted position in said recess so that all cutting reaction forces are transmitted to said tool through the said supporting and reaction surfaces thereof.

2,946,246

DRILL FIXTURE

Robert E. Allen, Rochester, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 29, 1957, Ser. No. 685,110

4 Claims. (Cl. 77—62)



1. A drill fixture comprising a vacuum cup adapted to be engaged to a wall member within which a hole is to be drilled, an access provided centrally through said vacuum cup to receive a drill bit, and means operatively engaged with said vacuum cup for extracting air from between said cup and said wall member to form a vacuum pressure on said wall member counteracting the normal dimpling effect of the pressure required to be exerted by said drill bit against said wall member in forming a hole therethrough.

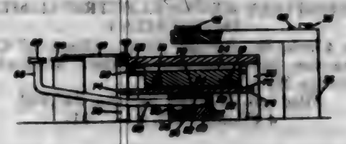
2,946,247

SLIDE FIXTURE WITH TWO-WAY MOTION

Carl Oscar Lassy, 96 Bohemia St., Plainville, Conn.

Filed July 29, 1957, Ser. No. 674,919

6 Claims. (Cl. 77—64)



1. A slide fixture for attachment to a machine table for holding a workpiece in position for receiving a machine tool, said fixture comprising at least one stationary slide rod, means anchoring the stationary rod to the machine table, a slide block slidably mounted on said stationary rod, at least one movable slide rod extending through and slidably received in said block in perpendicular relation to the stationary rod, plate means rigidly connected to said movable rod whereby the plate means may move with the block as it moves longitudinally on the stationary rod and may move transversely of the block with the movable rod as it slides in the block, said plate means including depending legs terminating closely adjacent the surface of the machine table for permitting free movement of the plate means when the machine tool is not engaged with the workpiece, said legs engaging the surface of the machine table upon downward pressure being exerted on the workpiece by the tool thereby providing a rigid support for the workpiece.

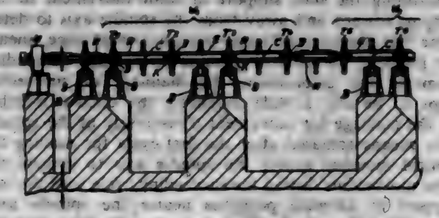
2,946,248

COOLING AND TRANSFER TABLE

Karl Neumann, St. Ingbert (Saar), Germany, assignor to Moeller & Neumann G.m.b.H., St. Ingbert (Saar), Germany, a firm

Filed Apr. 16, 1957, Ser. No. 653,104

1 Claim. (Cl. 80—42)



A cooling bed for cooling and conveying hot metal sheets from a rolling mill, comprising a plurality of parallel shafts, a driving means directly connected to each of said shafts, each shaft comprising a plurality of co-axial sections wherein said sections are connected to each other by expansion couplings, each shaft section having mounted thereon at least three circular transfer disks, a pair of supporting rollers engaging with alternate disks, there being at least two pairs of support rollers for each shaft section, said rollers being disposed below respective supported disks and spaced from each other in the plane of rotation of respective supported disks, and bearing means for rotatively supporting said rollers.

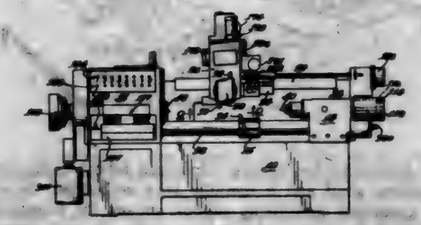
2,946,249

STEP-TURNING LATHES

Fred R. Swanson, John M. Ekelstrom, and Chester F. Pearson, Rockford, Ill., assignors to Sundstrand Corporation, a corporation of Illinois

Filed July 13, 1955, Ser. No. 521,839

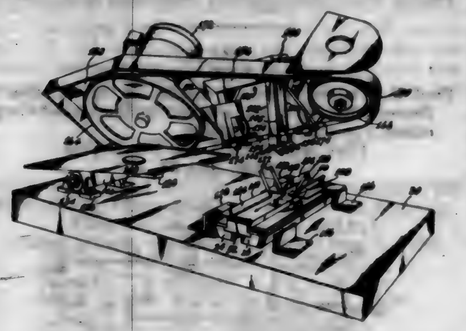
16 Claims. (Cl. 82—11)



1. A step-turning lathe comprising a frame; a bed supported on the frame; a rotary work-supporting spindle on the frame; a variable speed drive for the spindle controllable to rotate the spindle at different predetermined speeds; a carriage mounted on the bed for reciprocal movement longitudinally of the spindle axis; a tool support mounted on the carriage for reciprocal movement transversely of the spindle axis; means controlling the carriage and the tool support to automatically move the same through successive step turning cycles wherein each cycle includes intermittent movements of the carriage from a starting position through a cutting stroke, return movement of the carriage to the starting position after each cutting stroke, and transverse movement of the tool support between the intermittent movements of the carriage in the cutting stroke and wherein the cutting strokes of the carriage in successive cycles are successively longer, said control means including a rotatable control disc, driven in proportion to carriage movement, and having dogs for controlling the carriage to determine the length of intermittent carriage movements and consequently the length of steps cut on a

workpiece, a rotatable control drum, driven in proportion to the carriage movement, and having dogs for controlling the carriage to determine the length of cutting strokes of the carriage in successive cycles, a rotatable control member, mounted on the carriage, and having an annular series of axially adjustable elements for controlling the tool support to limit movement of the support toward and away from the spindle axis to determine the diameter of steps cut on a workpiece, means for indexing the control member to position succeeding elements for determining the diameter of succeeding steps to be cut, a slide mounting the control member on the carriage for movement transversely of the spindle axis, means actuated after the first cycle for moving the control member nearer the spindle axis to control the slide movements during the succeeding cycle with the tool support in advance positions nearer the spindle axis; controlling the spindle drive to automatically rotate the spindle at different predetermined speeds during different steps in one cycle, and during each of the steps in said one cycle, at a speed different from the corresponding steps in another cycle.

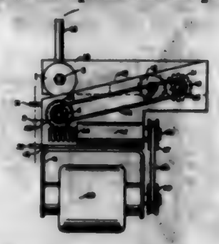
2,946,250
APPARATUS FOR CUTTING REINFORCED TUBING
Morris W. G. Bahr, 732 Riverside Ave., Trenton, N.J.
Filed July 30, 1956, Ser. No. 600,954
8 Claims. (Cl. 83—176)



1. Apparatus for cutting reinforced tubing comprising a resilient shell and a metallic wire embedded therein, said apparatus comprising support means for supporting the tubing to be cut, wire-cutting means on said support means for piercing the resilient shell of said tubing and cutting the metallic wire therein and holding the cut ends of said wire apart, and means movable into and out of contact with said tubing for cutting said resilient shell, said last-named means comprising a saw positioned to cut said shell between the cut ends of the metallic wire.

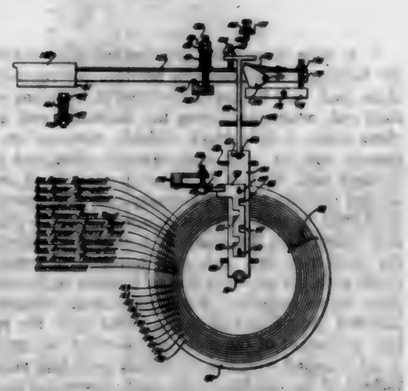
2,946,251
SHEET METAL SHEAR HAVING DUAL TRACTIVE CUTTERS
Charles F. Engel, R.R. 3, Sparta, Ill.
Filed May 13, 1955, Ser. No. 508,108
1 Claim. (Cl. 83—488)

A self-propelled shear for planar material comprising a horizontal planar work surface, a rectilinear track mounted outward of the work surface parallel to its edge, a carriage having means supporting it on said track and having pivot means perpendicular to the plane of the work surface, in combination with a shear frame borne by the carriage and pivotally connected to it by the pivot means, the shear frame having an outer lower rotary cutter and an inner upper rotary cutter, and lateral shafts presenting said cutters in overlapping engagement at the level of said work surface plane in a vertical cutting plane established by the pivot as the carriage moves said tracks, the shear frame further having an outer cutter-mounting portion whose forward end supports the shaft of the outer cutter and lies below the said work surface plane and outward of the cutting plane, said outer cutter-mounting portion having an upper surface sloping upward and aft to project above said work surface plane, the shear frame further having an inner cutter-mounting portion above the work surface plane whose forward end supports the shaft of the upper cutter, the shear frame further having a bridge portion above the work surface plane joining the aft end of the inner cutter-mounting portion to the upward-and-aft projection of the



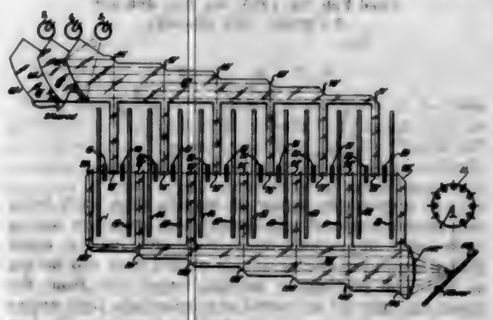
outer cutter-mounting portion, together with a power source mounted below the work surface plane and outward of the cutting plane, and power transmission means to drive said cutters in opposite directions of rotation at the same peripheral speed, said means including a forward rotary member secured on said outer cutter shaft outward of the outer cutter-mounting portion and below the work surface plane, a forward rotary member on the inner cutter shaft inward of the inner cutter-mounting member of the inner cutter-mounting portion and above the work surface plane, outer and inner aft rotary members operatively connected to said outer and inner forward rotary members respectively, the said aft rotary members being shaft-supported on said frame above the work surface plane but below the upper surface of the outer cutter-mounting portion.

2,946,252
PROGRESSIVELY KEYED ELECTRICAL MUSICAL INSTRUMENT
Melville Clark, Jr., Boston, Mass. (Dept. of Chemical Engineering, Massachusetts Institute of Technology, Cambridge 39, Mass.)
Filed Oct. 31, 1955, Ser. No. 543,949
4 Claims. (Cl. 84—1.01)



1. In a keyboard electrical musical instrument of the type having a plurality of keyboard keys, one for playing each note of the musical scale, the one-note tone-generating subcombination comprising one of said keys, a support, said support having thereon a plurality of side-by-side reproducible tone representations, one of said tone representations being that of the designated note, the others being of the same note with progressively different characteristics, a tone selector member operatively associated with said tone representations, said tone representations and said tone selector being uniformly longitudinally movable with respect to each other, and said tone representations and said tone selector being selectively transversely movable with respect to each other, and said one key being operatively connected to said tone selector so as to move said tone selector transversely across said tone representations in uninterrupted succession, whereby when said tone selector is moved across said tone representations to the designated note, a transient effect will be produced.

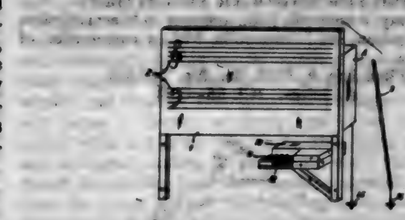
2,946,253
PHOTOELECTRIC APPARATUS FOR GENERATING MUSICAL TONES
Melville Clark, Jr., Boston, Mass. (Dept. of Chemical Engineering, Massachusetts Institute of Technology, Cambridge 39, Mass.)
Filed Oct. 31, 1955, Ser. No. 543,865
6 Claims. (Cl. 84—1.18)



1. An electrical musical instrument comprising at least one uniformly movable uniplanar member having an optical transmittance sound record thereon, a source of light having a beam substantially normal to the plane of said member, a first reflector spaced from said member, slightly offset from the plane thereof and in line with said beam, a second reflector adjacent said member and in line with said first reflector, a third reflector adjacent said member and on the opposite side thereof from said second reflector, a fourth reflector in line with said third reflector, and a photoelectric transducer in line with said fourth reflector.

2,946,254
BLACKBOARD FOR INSTRUCTION IN MUSIC
Robert F. Hauser, Fulachstrasse 34, Schaffhausen, Switzerland
Filed Sept. 7, 1955, Ser. No. 532,957
10 Claims. (Cl. 84—471)

1. A device for audibly producing a plurality of visually represented musical notes, comprising, in combination, a substantially flat panel member having at least one surface adapted to receive marks representing musical notes and having marked on said surface at least one musical staff composed of a set of staff lines; a set of tuned circuit means each including audio-frequency generator means for producing a sound corresponding to one of the musical notes, each of said circuit means being responsive to changes in the respective impedance thereof; a set of electro-conductive rails insulated from each other and each respectively connected into one of said circuit means and mounted on said panel extending along said staff lines and respectively associated therewith and with the spaces between said lines; and manually operated freely movable triggering means structurally separate from said panel and adapted to be brought selectively into proximity with any of said marks made on or between said staff lines



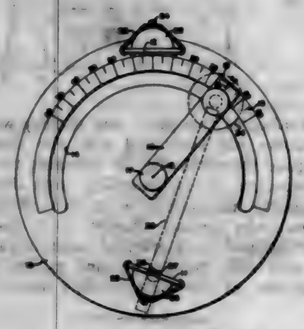
on said surface of said panel and thereby with the electro-conductive rail associated with the respective staff line or space therebetween, for changing the impedance of the respective circuit depending upon the position of said triggering means relative to the rail forming part of the particular circuit, whereby when said triggering means is pointed at a musical note marked on said musical staff said sound-producing means causes audible production of the corresponding musical note.

2,946,255
COMBINED DAY AND NIGHT VIEWING DEVICE
Errol Bolay, Waldegg (Ulttikon), Switzerland, assignor to Albiswerk Zurich, A.G., Zurich, Switzerland, a corporation of Switzerland
Filed Apr. 30, 1956, Ser. No. 581,718
Claims priority, application Switzerland June 2, 1955
2 Claims. (Cl. 88—1)

1. An apparatus for viewing the image of an object, comprising, in combination, a support member having a recess; objective lens means arranged on said support member and having a focal plane in which is formed an image of the object; ocular lens means arranged on said support member along the optical axis of said objective lens means and having a focal plane spaced from said focal plane of said objective lens means; a plurality of mutually exchangeable tubular mounting means each capable of being arranged in said recess on said support member between said focal planes of said objective and ocular lens means for removal in a direction transverse to the optical axis of said lens means, one end of said mounting means when located in said recess being arranged substantially in said focal plane of said objective lens means and in light-tight contact with said objective lens means, the other end of said mounting means when located in said recess being arranged substantially in said focal plane of said ocular lens means and in light-tight contact with said ocular lens means, each of said lens means having gasket members to receive the ends of said mounting means; and image operating means secured in each of said respective mounting means between said focal planes of said objective and ocular lens means for removal with said mounting means, one of said image operating means being a converter responsive to the infrared spectrum of said image formed in said focal plane

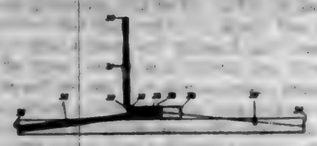
of said objective lens and comprising tube means having a screen in said focal plane of said ocular lens for producing a visible second image; and another one of said image operating means consisting of lens means for the visible spectrum.

2,946,256
ANGULAR BEARING INSTRUMENT AND MECHANISM FOR ANGULAR ADJUSTMENT
Carter Tiffany, Annapolis, Md., assignor to Weems System Of Navigation, Inc., Annapolis, Md., a corporation of Maryland
Filed July 9, 1958, Ser. No. 747,441
4 Claims. (Cl. 88—2.6)



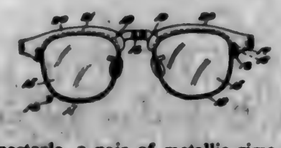
1. A sighting protractor comprising, a base having a circular slot therein, a radius arm pivoted to the upper surface of said base at the circular center of said slot, a support pivoted on said base about an axis normal to said base and spaced from said center the radial distance to the middle of said slot, said support projecting through said base, a member secured to said arm and projecting through said slot, manually operable means attached to the portion of said member which projects below the under surface of said base for clamping said member to said base for restraining said arm, a rigid link having one end pivotally secured to said member between said operable means and the under surface of said base, the opposite end of said rigid link being in sliding engagement with the portion of said support which projects through said base for rotating said support without relative rotation between said support and said link, a first plane mirror mounted on said support adjacent to the upper side of said base and perpendicular to the longitudinal axis of said link, and a second plane mirror mounted on the upper side of said base diametrically opposite said first mirror perpendicular to said diameter.

2,946,257
HIGH SPEED CAMERA
John Martin Strang and Claud Foster, Glasgow, Scotland, assignors to Barr and Stroud Limited, Glasgow, Scotland
Filed Sept. 8, 1954, Ser. No. 454,662
Claims priority, application Great Britain Sept. 9, 1953
7 Claims. (Cl. 88—16)



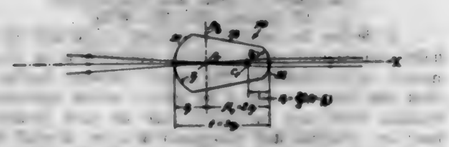
1. Photographic apparatus for providing a series of exposures over a very short time interval of very fast occurrences, comprising means for supporting a length of photographic film in an arcuate path; a rotary reflecting prism having a flat internal reflecting surface adapted for reflection on both sides thereof, and outer prismatic components on opposite sides of said reflecting surface, the outer surfaces of said components being shaped as part of a sphere, said reflecting surface containing the centre of curvature of such sphere, whereby light reflected from the centre of said reflecting surface may enter and leave the prism through and normal to said outer surfaces, means adapted to rotate said prism at high speed about the centre of curvature of the sphere, so that it reflects an image-carrying light beam from the object along a narrow field towards said arcuate path in order to scan same; means for focussing an image of the object on said reflecting surface and on said arcuate path respectively; aperture means for delineating the impact of the light beam on said path at intervals in order to provide separate exposures; and shutter means for limiting the access of rays from the object to the arcuate path to a period of time of a predetermined value in order to prevent double exposure.

2,946,258
SPECTACLE FRAME
Frank W. Lindblom, Warwick, R.I., assignor to Welsh Manufacturing Company, a corporation of Rhode Island
Filed Feb. 24, 1955, Ser. No. 490,335
5 Claims. (Cl. 88—41)



1. In a spectacle, a pair of metallic rims, each being split at the temporal side thereof with each rim having at its ends upper and lower connector lugs, a metal bridge connecting the nasal side of said rims and having at each end portion an integral finger bent from the upper edge thereof to extend at substantially right angles to generally the plane of the bridge, a non-metallic rim part extending along the upper portion of each rim and having top and side walls forming an internal groove within which the rims are seated, said rim part having a slot extending inwardly in said top wall at the nasal end thereof to receive the adjacent bridge portion, said side walls at the slotted end extending downwardly providing ears extending along either side of said bridge, one of said ears having a recess joining said slot for receiving said finger which may be positioned therein by upwardly inclining said rim portion, and means for securing the temporal end of said rim part in position.

2,946,259
SOLID OCULARS
Justin Ruetliger, 1815 Monroe Ave., New York, N.Y.
Filed June 22, 1956, Ser. No. 593,247
1 Claim. (Cl. 88—57)



A solid ocular for an optical instrument and prepared free of coma and astigmatism for all zones, comprising a contour portion, a field-end portion having a spherical convex optical surface, and an eye-end portion having a spherical convex optical surface, said contour portion being coaxial with the optical axis of said ocular, the thickness of said ocular corresponding to three times the value of the radius of curvature of said field-end portion, the value of said radius of curvature of the latter being equal to one-half the value of the focal length of said eye-end portion, said focal length being two-thirds of the thickness of said ocular, and the radius of curvature of said eye-end portion being equal to

$$\frac{2t}{3}\left(1-\frac{1}{n}\right)$$

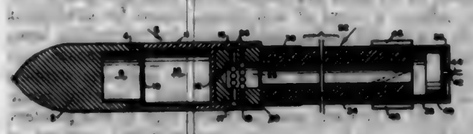
wherein t is the thickness of said ocular and n is about 1.45 to 2.00 as the refractive index of the optical material selected for said ocular for the wave length of light for which the ocular is computed.

2,946,260
BOMB RANGE COMPUTER
John W. Gray, Cambridge, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 14, 1945, Ser. No. 616,395
2 Claims. (Cl. 89—1.5)



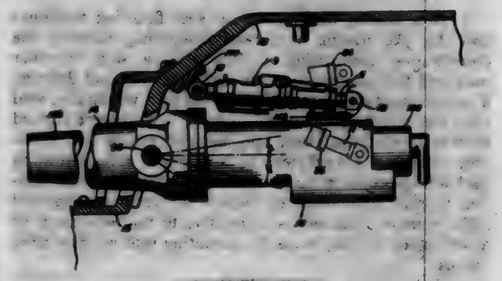
1. A computer for providing an indication of the time at which an explosive object should be released from an aircraft which starts out initially by flying a "heads on" collision course with a moving target and then suddenly executes a steep climb comprising, a signal generator carried by said aircraft for generating a first voltage whose amplitude is proportional to the instantaneous range between said aircraft and said target, a differentiating circuit, means for coupling said first voltage to said differentiating circuit whereby a second voltage whose amplitude is proportional to the rate of change of said range is developed, a function generator for generating a third voltage whose amplitude equals $.38+2.035n$ where n is a numerical factor which when multiplied by g, the acceleration due to gravity, gives the vertical acceleration of the aircraft during said steep climb, means for multiplying the instantaneous amplitude of said second voltage by that of said third voltage to obtain a product voltage, an integrating circuit, means for coupling said product voltage to said integrating circuit and means for providing an indication when the amplitude of said first voltage and the output of said integrator are substantially equal.

2,946,261
PERIPHERAL NOZZLE SPINNER ROCKET
Sydney R. Crockett, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed May 2, 1956, Ser. No. 582,391
2 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A spin stabilized rocket adapted to be launched from a launching tube having a cylindrical bore open at opposite ends thereof, said rocket comprising a nose portion having a maximum diameter slightly less than the diameter of said bore and a portion disposed rearwardly of the nose portion of a diameter to provide an annular space between its outer surface and the bore, a plurality of angularly spaced outwardly extending vanes on said second portion disposed angularly to the longitudinal axis of the rocket, the outer peripheries of the vanes being substantially the same diameter as the maximum diameter of said nose portion, whereby the nose portion and vanes provide guide means for the rocket to rotate about and translate along the axis of said bore, and an annular outwardly and rearwardly flaring nozzle disposed forwardly of said vanes adapted to discharge an envelope of gases rearwardly and through said space for impingement against said vanes to impart relatively high initial spin to the rocket while it is in the tube, said nozzle being constructed and arranged relative to said vanes such that after the rocket leaves the tube the envelope spreads outwardly from the vanes but still partially impinges same, thereby decreasing the spin torque and increasing the effective longitudinal thrust to thereby increase the velocity of the rocket, the envelope being forced inwardly by surrounding ambient air as the rocket further increases in speed to thereby effect impingement of an increased portion of said envelope on said vanes and produce increased spin torque until the envelope ceases, said vanes serving thereafter to continue spin of the rocket by action of ambient air thereon.

2,946,263
COMBINED GUN EQUILIBRATOR AND ELEVATION CYLINDER
Lawrence Brunki, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 12, 1952, Ser. No. 309,344
13 Claims. (Cl. 89—37)

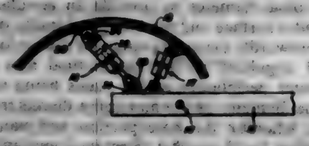


1. An improved equilibrator-elevation cylinder unit of the hydropneumatic type for a pivoted member, comprising a compound cylindrical unit having hydraulic cylinder and piston means for elevating and depressing the member, pneumatic chamber means within said unit for applying equilibrating force to the member, sensing means for determining unbalanced forces on the member, and means associated with said sensing means for regulating the gas pressure of said pneumatic chamber means.

2,946,264
GUN EQUILIBRATOR
Lawrence Brunki, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 12, 1952, Ser. No. 309,345
7 Claims. (Cl. 89—37)

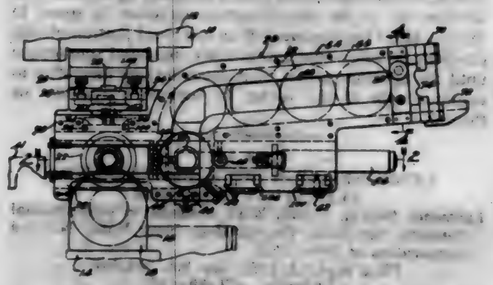
1. An equilibrator of the hydropneumatic type for exerting balancing forces at various angles of elevation of a gun and including in combination, a source of system pressure, detecting means for detecting unbalanced forces which impede elevation of the gun, means controlled by

said detecting means and utilizing system pressure for creating augmenting equilibration pressure, and means



for applying said augmenting pressure to the hydropneumatic system of the equilibrator for the purpose described.

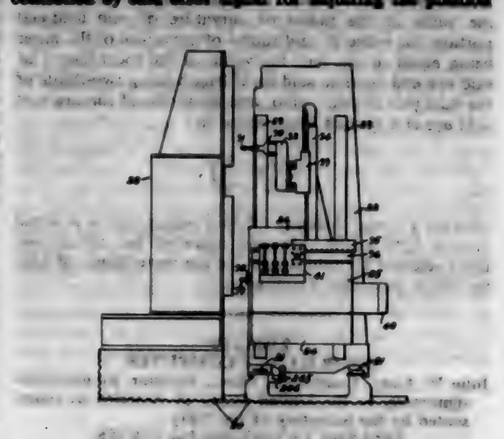
2,946,264
LOADING MECHANISM
Alexander D. F. Moncrieff, Bloomfield Hills, Mich., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware
Filed Nov. 21, 1955, Ser. No. 547,920
15 Claims. (Cl. 90—1.6)



1. In a loading mechanism for gear finishing machines and the like having a toothed machining element, the combination comprising a slide way, a slide member mounted for reciprocation on said slide way and defining a recess adapted to receive a portion of a workpiece, said slide member being actuable to move a workpiece carried thereby into contact with said element, means for releasably retaining a workpiece in said recess and permitting said workpiece to move in a predetermined direction relative to said slide member, means for reciprocating said slide member, and means responsive to the movement of a workpiece in said recess for actuating said reciprocating means.

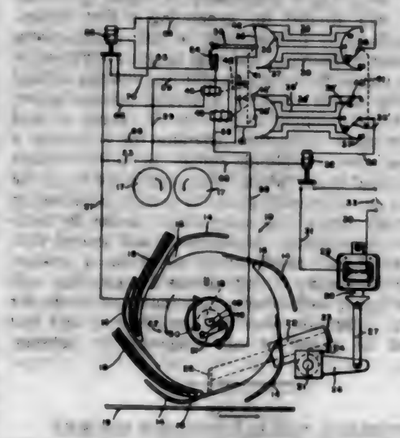
2,946,265
PATTERN CONTROLLED MILLING MACHINE
Herbert M. Fuldner, Fort Thomas, Ky., and John M. Morgan, Jr., Montgomery, and Joseph A. Rave, Jr., and Herman J. Baldwin, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 16, 1958, Ser. No. 728,972
11 Claims. (Cl. 90—13.5)

1. In an automatic tracing apparatus having a pair of slides supported for movement at right angles to one another to provide universal two-dimensional movement between a tracer and a pattern, and a servomotor for operating each of the slides, the combination of a tracing finger adapted to cooperate with said pattern, said finger being supported for both axial movement in the direction of its longitudinal axis and for tilting movement in response to sidewise pressure applied to said finger, a single transducer unit controlled by either of said movements of said finger, or by combinations of the two movements for producing an error signal indicating a departure of said finger from a position of normal deflection, an angularly settable device for conjointly controlling said servomotors to determine the direction of movement of said tracing finger relative to said pattern, and a servomotor controlled by said error signal for adjusting the position



of said settable device to restore said tracing finger to its position of normal deflection and cause the finger to follow the contour of the pattern.

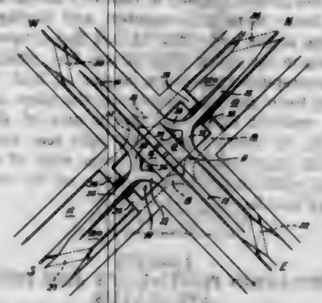
2,946,266
COUNTING AND DISPLACING APPARATUS FOR PRINTING PRESS DELIVERY MECHANISMS
Merle J. Collingwood, 338 Afton Ave., Youngstown, Ohio, and Albert C. Chagnot, 985 Mosier Road, Girard, Ohio
Filed June 7, 1957, Ser. No. 664,244
6 Claims. (Cl. 93—93)



1. In a printing press installation the combination of sheet delivery means, conveyor means, said sheet delivering means depositing sheets on said conveyor means in overlapped relation, means for acting on certain of said sheets as the same are deposited on said conveyor means to indicate a count of said sheets, means for controlling said means for acting, said means for controlling being operated in response to said sheet delivering means, said means for controlling comprising at least one stepping switch having a presettable pointer and a counting pointer, banks of contacts associated with each of said pointers, conductor means connecting corresponding contacts of said banks of contacts, rotary switch means connected with said sheet delivering means, said rotary switch means

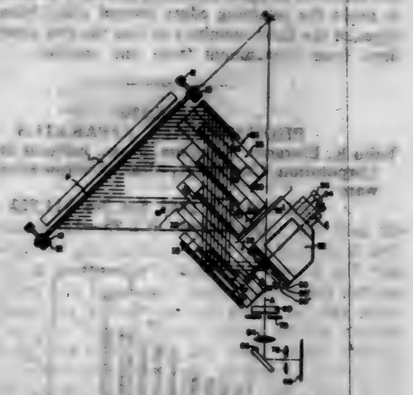
being actuated upon predetermined movement of said sheet delivery means for a predetermined time that is less than the time interval required to complete said predetermined movement, means interconnecting said rotary switch means with said counting pointer whereby said counting pointer is moved from one contact to another contact of said bank of contacts associated therewith in response to each actuation of said rotary switch means, said means for acting comprising a kicking foot, a solenoid for actuating said kicking foot, said stepping switch completing an electrical circuit for energizing said solenoid when said presettable pointer and said counting pointer engage corresponding contacts of said banks of contacts associated therewith, said means for controlling further comprising means for returning said counting pointer to its initial position, said last mentioned means including the normally open contacts of a homing relay, means for energizing the winding of said homing relay when said solenoid is energized to close said contacts, a holding circuit for said winding of said homing relay, said holding circuit including normally open contacts of said homing relay and being operative to maintain said winding of said homing relay energized after said means for energizing has been rendered inoperative, a resetting switch in said holding circuit, and said resetting switch being opened when said counting pointer is returned to its initial position.

2,946,267
TRAFFIC INTERSECTION
Arturo Olivero Cedeno, Monterrey, Mexico. (% Perforadora Latina, Madrid 21, 3rd F., Mexico City 4, Mexico)
Filed Oct. 7, 1957, Ser. No. 688,494
4 Claims. (Cl. 94—1)



1. A street crossing interchange comprising a first street and a second street crossing at different grade levels with the second street crossing below the first street, each of said streets being provided with approach and departure lanes for traffic traveling in opposite directions, said first street being provided with branch lanes extending from the left sides of opposite approach lanes to the lower level, each of said branch lanes branching into left and right turn lanes as each approaches said second street, each of said right turn lanes connected to one set of departure lanes of said second street, each of said left turn lanes extending alongside one approach portion of said second street outboard thereof and crossing said approach portions at different levels at points remote from the crossing of the first and second streets and connecting with one set of departure lanes of said second street, the approach lanes of said second street being provided with branch lanes on the left sides of the approach lanes extending to the upper grade level and branching into a right turn lane and a left turn lane as they approach said first street, each of said last mentioned right turn lanes connected to one set of the departure lanes of said first street, said last mentioned left turn lanes extending along an outboard of the approach lanes of said first street and crossing said approach lanes of said first street at different levels at a point remote from the crossing of the first and second streets and connected with the departure lanes of the first street.

2,946,268
PHOTOCOMPOSING MACHINES
Louis M. Meyerand, West Medford, Mass., assignor to Graphic Arts Research Foundation, Inc., Cambridge, Mass., a corporation of Delaware
Filed June 29, 1955, Ser. No. 518,804
1 Claim. (Cl. 95—4.8)



In photocomposing apparatus, the combination of a support bearing a row of characters on a surface thereof, a first set of reflectors each arranged in a plane perpendicular to said surface, each of said reflectors being rectilinearly translatable in its own plane to a position to reflect diverging light by a single reflection from a corresponding group of characters on said support on to a first light path, a second set of reflectors each perpendicular to said surface, each of said last-mentioned reflectors being rectilinearly translatable in its own plane to a position to reflect light by a single reflection from a part of said first light path on to a second light path, a support for a sensitized sheet, optical projection means adapted to focus light passing down said second light path on to said sheet, and selection means for the characters adapted to translate one selected reflector in each set into position to reflect the light from a selected character to said projection means, said reflectors and projection means being disposed relative to said surface of the character bearing support and to said support for a sensitized sheet to form virtual images of all the characters in a common position in the plane of said surface.

2,946,269
CAMERA LATCH
Karl M. Maierhofer, Norridge, Ill., assignor to G-M Laboratories Inc., Chicago, Ill., a corporation of Illinois
Filed May 25, 1956, Ser. No. 587,352
7 Claims. (Cl. 95—11)

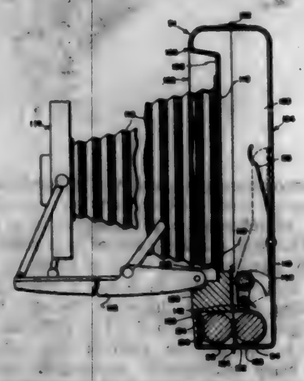
1. In a camera having a pair of relatively separable body portions detachably to be held together, a latching mechanism comprising a pair of oppositely oriented fixed members on one of said portions having cam retaining edges thereon, a pair of substantially Y-shaped sheet metal spring members, each of said spring members having a stem and a pair of arms with a latching edge between the

arms, said members having the ends of the arms thereof mounted on the other of said portions in confronting relation with the fixed members, the latching edges thereof resiliently engaging the cam retaining edges of the fixed members, control members operatively connected to said



Y-shaped members, and cam means operable on said control members to effect deflection of said Y-shaped members to move the retaining edges thereof away from the cam edges of the fixed members to free the two separable portions from detachment from one another.

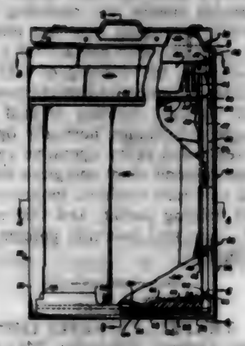
2,946,270
PHOTOGRAPHIC APPARATUS
Valto K. Eloranta, Needham, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Filed May 7, 1959, Ser. No. 811,722
30 Claims. (Cl. 95—13)



1. Photographic apparatus for treating a photographic film assemblage with a fluid composition, said apparatus comprising, in combination, means defining a path along which said assemblage is moved, first means mounted in the path of movement of said film assemblage for engaging said assemblage and spreading a fluid in a layer between superposed layers of said assemblage, second means mounted in said path adjacent said first means for frictionally engaging at least a portion of said film assemblage for advancing said portion along said path into engagement with said first means and for applying compressive pressure to said film assemblage during subsequent movement thereof in engagement with said first means, and means for biasing said second means into engagement with said film assemblage with greater force during advancement of said portion of said film assemblage into engagement with said first means than during subsequent movement of said film assemblage in engagement with said first means.

2,946,271
FILM HOLDER
Carroll C. Craig, 635 Mairfield Road, Los Angeles 5, Calif.
Filed Feb. 1, 1954, Ser. No. 407,122
7 Claims. (Cl. 95—66)

1. A film holder of the class described which includes: a pair of generally channel-shaped spaced side members; a lower transverse member between said side members; an upper transverse member; a resilient light seal adjacent the lower edge of said upper transverse member; a pair of film-receiving septa each having a smooth rear surface, said septa being mounted back-to-back with their rear surfaces abutting and held together over their entire area except at the edges, said pair of septa forming a single integral unit; a tongue centrally located with respect to said side members and connected to said members; said tongue extending toward said septa only and entering between said septa at the side edges thereof to support the same; means extending from said light seal toward said septa and adapted to engage only the upper



edges thereof to support the same; a pair of hinged flaps extending between the lower ends of said side members and interfitting therebetween, each of said flaps having a transverse groove adapted to receive a cooperating ridge of said lower transverse member, and having a transverse ridge at the upper end of said flap adapted to bear directly upon the lower edge of any film which may be in the corresponding septum; a pair of lock rib plates extending from one side member to the other and covering said resilient light seal; and a pair of slides each adapted to be inserted past said light seal and to slide in said side members, with the lower edge of each slide being receivable in the upper portion of the corresponding one of said flaps.

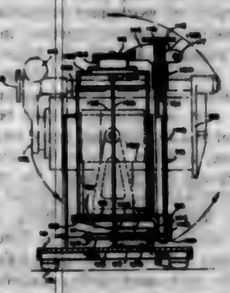
2,946,272
COMBINATION PHOTO-COPY AND PRINTING APPARATUS
Burton D. Elmer and Donald E. Reterman, Chicago, Ill., assignors to American Photocopy Equipment Company, Chicago, Ill., a corporation of Illinois
Filed July 22, 1955, Ser. No. 523,765
2 Claims. (Cl. 95—77.5)



1. A photocopying apparatus for reproducing a subject sheet to be copied, said apparatus comprising a cylinder composed of light-transmitting material, means for conveying a photosensitive sheet and said subject sheet in face-to-face relation therewith around a segment of the exterior surface of said cylinder and adjacent to said

surface, a light source located within said cylinder, a light shield associated with said light source for restricting the radiation of light rays emitted therefrom to a predetermined arcuate angle, means for movably mounting said light shield for movement to any selected one of a plurality of positions in which varying quantities of light will be transmitted from said light source through said segment of the cylinder surface adjacent said sheets, and a manually controlled mechanism for moving said shield to any selected one of said plurality of positions, said manually controlled mechanism comprising a rotatable shaft, a drum securely mounted on said shaft, a transparent sleeve telescoped on said drum, a color chart carried circumferentially by said sleeve and visible therethrough, said color chart having a plurality of differently colored areas circumferentially spaced thereon, said sleeve and its chart being adjustable circumferentially relative to the drum, means to secure the sleeve in adjusted position on said drum, and means drivingly connecting said shaft with said light shield to position said light shield in accordance with the degree of rotation of said shaft, said color chart being arranged around said drum so that when a selected said area thereon having a predetermined color is rotated to a predetermined visible position said shield is positioned for transmission of light in quantities ideal for reproduction of a said subject sheet having substantially the same said color.

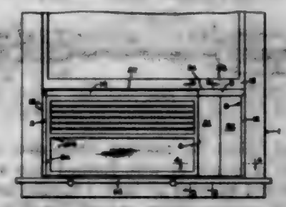
2,946,273
ROLL FILM DEVELOPING MACHINE
Harry Hitzi, 642 McKinley Ave., Fresno, Calif.
Filed Aug. 1, 1958, Ser. No. 752,575
8 Claims. (Cl. 95—89)



3. A film developing machine comprising: a support structure; means mounted thereon for rocking movement about a horizontal axis and adapted for supporting a quantity of film in a developing solution; means mounted on said structure drivingly engaged with the film-supporting means and adapted for rocking the same through an angular distance of approximately 180 degrees first in one direction from a normally upright position to an inverted position, and then in a return direction back to said upright position; and abutment means on said structure positioned to be struck by said film-support means on the return movement thereof, thus to beak up air bubbles within the film-support means.

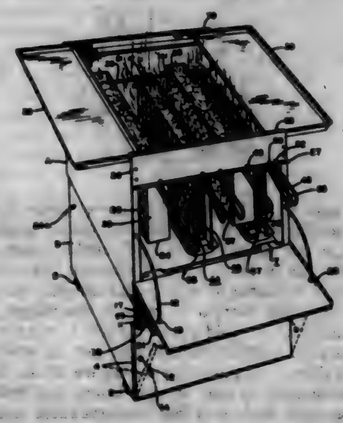
2,946,274
WINDOW CLOSURE FOR ROOM AIR CONDITIONER
Emory H. Grimes, Jr., Sellersburg, Ind., assignor to General Electric Company, a corporation of New York
Filed Dec. 10, 1958, Ser. No. 779,491
3 Claims. (Cl. 98—94)

1. An adjustable window mounting arrangement for closing the space between the case of a room air conditioner and the frame of a window comprising a resilient gasket having upper and lower horizontal sections each connecting at one end with a vertical section to form a three-sided frame structure, said gasket including a base portion having a plurality of spaced-apart flanges extending toward the interior of the frame-like structure and a peripheral sealing portion on the opposite side of said base portion from said flanges adapted to provide a seal between said gasket and the frame and sash of the window, said peripheral sealing portion being depressible toward said base portion, gasket housing members attached to the top and bottom of said case in which said upper and lower horizontal sections of said gasket move inwardly and outwardly with respect to said case, said



gasket housing members having a height less than the overall height of said gasket so that said peripheral sealing portion of said gasket is depressed toward said base portion when said upper and lower horizonatal sections of said gasket are moved into said gasket housing members and so that said peripheral sealing portion extends outwardly beyond said upper and lower gasket housing members respectively when said horizontal sections of said gasket are moved outwardly from said gasket housing members, and panel means adapted to fit into the space between said flanges of said gasket to fill the interior space of said frame-like structure with said flanges of said gasket sealing against the front and rear surfaces of said panel means.

2,946,275
COOKING APPARATUS
Charles E. Compton, Bridgeport, W. Va. (P.O. Box 1946, Clarksburg, W. Va.)
Filed Feb. 12, 1957, Ser. No. 639,652
17 Claims. (Cl. 99—390)



17. A holder for use in cooking apparatus comprising opposed foraminous portions separable to receive food to be cooked and fastenable about the food to hold the same, said portions when fastened about the food forming a generally upright body, a generally horizontally pro-

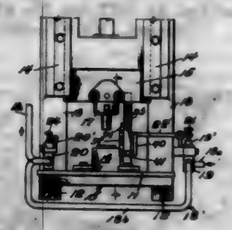
jecting handle connected with the body and a plurality of hook-like members rigidly connected with the upper portion of the body disposed with their planes generally upright adapted to cooperate with supporting means to hang the holder in position in the cooking apparatus.

2,946,276
FOOD HOLDER FOR COOKING FOOD OVER AN OPEN FIRE
Wallace E. Stone, P.O. Box 1288, Kingman, Ariz., assignor of one-half to O. Ellis Everett, Mohave County, Ariz.
Filed June 23, 1959, Ser. No. 822,368
2 Claims. (Cl. 99—419)



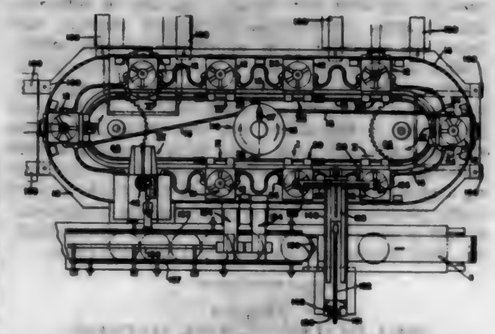
1. A food holder for roasting foods over an open fire consisting of a length of wire formed into an elongated loop at one end adapted to hold a handle and providing strands, said strands being twisted together to form a shank extending from said elongated handle loop to an outer tine supporting end, and thence spread apart to form laterally disposed tine supports; said tine supports being bent back upon themselves by inwardly directed back bends to provide food holding tines having sharpened ends directed toward the said handle holding loop, and said back bends being crossed so that the back bent portions of said tines are resiliently held in position one over the other to provide food holding elements compressively disposed relative to the laterally disposed portions of said tines.

2,946,277
SAFETY DEVICE FOR PRESS
Louis F. Archer, Warwick, R.I., assignor to Mays Manufacturing Company, Inc., a corporation of Rhode Island
Filed Aug. 7, 1958, Ser. No. 753,798
2 Claims. (Cl. 100—53)



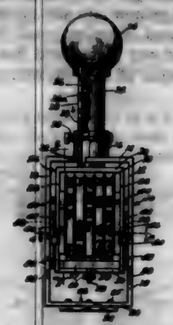
1. In a pneumatically controlled power press having a ram mounted for vertical reciprocation, an air conduit for said press, a pair of valves in said conduit, said valves being positioned in series in said conduit and normally held closed, a rockable lever for each of said valves operatively connected thereto to operate the valves, a bar pivotally mounted on said press in such a manner as to extend generally vertical beneath the ram in position to be engaged thereby to block the downward stroke thereof, a crank connected to one of said levers and extending into engagement with said bar and rockable about an axis parallel to the pivot of said bar by the said levers to which it is connected to move said bar from ram blocking relation, a movable latch carried by said bar, and a relatively fixed keeper positioned at a location to engage said latch upon moving said bar from ram blocking relation and retain said bar out of blocking relation, a spring for urging said bar to ram blocking position, said latch having a portion in the path of movement of said ram to be engaged by the ram and release the latch from the keeper after the ram has moved a predetermined distance downwardly.

2,946,278
DISHWARE DECORATING MACHINE
Howard B. Cummings, New Castle, Pa., assignor to Shenango China, Inc., New Castle, Pa., a corporation of Pennsylvania
Filed Nov. 1, 1957, Ser. No. 693,843
25 Claims. (Cl. 101—44)



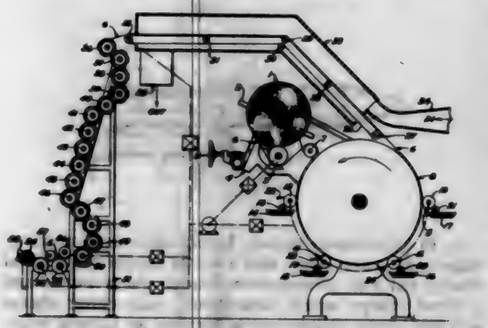
1. Ware decorating apparatus for applying desired combinations of decorations which may be programmed in any desired order for any particular run of ware comprising a plurality of workpiece-supporting nests, linkage means for linking the nests together in a closed loop, drive means engaging the closed loop for successively intermittently advancing the nests to successive dwells at a loading station, decorating stations and an unloading station, each nest comprising a nest body, a rotatable ware chuck carried by the nest body and including ware gripping means, a drive linkage for rotating the chuck, and holding means for positioning the chuck at a datum rotative position with respect to the nest body when said drive linkage for rotating the chuck is not activated whereby said chuck is maintained in datum rotative position prior to and following rotation of the chuck locating pin sockets in each nest body, locating pins at each decorating station, and control means for extending them near the beginning of said dwells and retracting them near the end of said dwells, means for centering the ware on the nests prior to reception of the ware at the decorating stations, a plurality of ware decorating units interchangeably mountable at each of the decorating stations, means associated with each of the decorating stations for activating the controlled operation of any decorating unit attached thereto in timed relationship to the intermittent advance of the closed loop of nests, means associated with each one of said decorating stations for activating the chuck-rotating drive linkage of each nest during its dwell at the decorating station, means to selectively program said last named means for effecting said activation of the chuck-rotating drive linkage of each nest only at one or more decorating stations which are chosen for a particular production run with ware carried in said nests remaining at said datum rotative position during their dwell at decorating stations other than said chosen decorating stations whereby ware being processed is positioned, at each of the several decorating stations, in centered attitude and is either rotated thereat from and to a defined datum rotative position or is maintained in said datum rotative position according to whether or not the particular decorating station is one of the chosen stations.

2,946,279
HAND STAMPS
Charles R. Huppert, 1336 W. Birchwood Ave., Chicago, Ill.
Filed Aug. 8, 1958, Ser. No. 754,073
5 Claims. (Cl. 101—103)



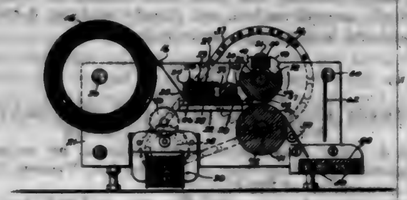
1. A self-inking hand stamp comprising a base frame having a pair of side members each provided with an opening, a depressible frame member supported in said base frame, said depressible frame member having a pair of spaced legs each provided with a channel and each provided with an opening, a detachable printing unit having a pair of spaced side members each having a rib for sliding engagement with said channels, said printing unit carrying a depressible plunger having means engaging the openings in the spaced legs of the depressible frame member for detachably securing said printing unit to said depressible frame member, said depressible frame member when depressed having its openings alined with the openings of the side members of the base frame to permit engagement with the means on the depressible plunger to move said means out of engagement with the openings in the depressible frame.

2,946,280
KNIT GOODS PRINTING MACHINE
Ellis V. Disch, Norwich, Conn., assignor to Plainfield Patents Corporation, Plainfield, Conn., a corporation of Delaware
Original application July 7, 1955, Ser. No. 520,487. Divided and this application Oct. 31, 1958, Serial No. 771,645
2 Claims. (Cl. 101—178)



1. A machine for printing on readily stretchable fabrics and the like with a permanentized ink, comprising a rotary printing drum around which the fabric is wrapped, an inking roll for applying ink to the fabric on said drum, an ink drying oven through which the inked fabric passes substantially immediately after leaving said drum, ink curing means through which the fabric passes after leaving said oven, said curing means including a series of closely adjacent heating rolls around which the printed fabric passes in a sinuous path whereby alternate rolls heat one face of the printed fabric and the intervening alternate rolls heat the opposite face of the printed fabric, and power driving means for driving said inking roll and said curing rolls positively in synchronized speed ratio while driving said drum frictionally by contact with the moving fabric to maintain a uniform continuous linear speed of movement of the fabric through the printing, drying and ink curing stages, and thereby to maintain the fabric free from any substantial stretch or distortion.

2,946,281
APPARATUS FOR FEEDING, PRINTING AND CUTTING A STRIP INTO DISCRETE PRINTED PORTIONS
Allen O. Sohn, 127 Fairview Drive, Plymouth, Wis.
Filed Jan. 12, 1955, Ser. No. 481,374
18 Claims. (Cl. 101—227)

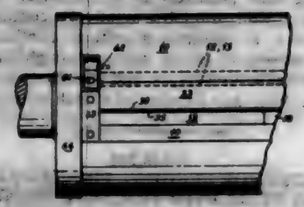


1. A machine for feeding a strip, severing portions from the strip, and delivering the severed portions, said machine comprising a feed roller, means on said roller for feeding said strip, means on said roller for severing said strip into portions, means to deliver said severed portions, a motor, means for driving said feed roll from said motor, and a drive control for turning said roll, an actuator for said control, said drive control comprising a switch having a button, motion transmitting connections from the switch to the actuator whereby said actuator may operate said button to initiate drive, a cam driven by said feed roll, said button being in the path of the cam whereby the cam may operate said button to de-actuate said switch and drive, said switch being provided with a pivotal mounting on which it is bodily swingable, said mounting including biasing means whereby said switch will remain in any position to which it is swung subject to a dislocating force sufficient to overcome said bias, a rotor driven by said feed roll, said rotor being disposed in the path of swinging movement of the switch, said rotor having a smooth surface, said cam comprising a projection from said surface, said actuator comprising means for bodily swinging the switch on its pivotal mounting against the bias of said biasing means to depress said button against the smooth surface of said rotor to initiate drive, said bias being sufficient to hold the button depressed against said smooth surface when the actuator is retracted during rotation of said rotor until said cam engages said switch to bodily swing it away from said rotor to release said button and deactuate said drive.

2,946,282
PRINTING MACHINE PLATE LOCK-UP
Charles A. Harless, Riverside, Conn., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed Apr. 20, 1954, Ser. No. 424,364
7 Claims. (Cl. 101—415.1)

1. In a printing machine plate cylinder for flexible plates and having a gap for receiving the plate ends,

plate holding mechanism comprising a plate holding member forming an edge of the cylinder gap and an adjacent part of the cylinder plate supporting surface, means mounting the member for angular movement between plate holding position and a retracted gap opening position, the plate holding member having a plate end engaging surface which is substantially smooth and which



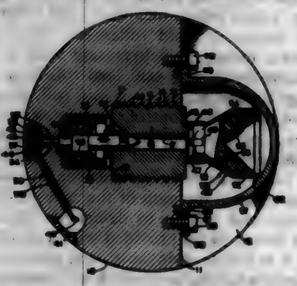
diverges inwardly from a radial plane including the said gap edge when in plate holding position to hold a plate end by wedging action, a plate having an end in the gap and free to move therein and cooperating plate holding means holding the plate end against the said substantially smooth surface and thereby wedging it radially inward and holding it in the cylinder.

2,946,283

METHOD AND APPARATUS FOR PERFORATING WELLBORES AND CASINGS

John J. Udry, Van Nuys, Calif., assignor, by mesne assignments, to Borg-Warner Corporation, Vernon, Calif., a corporation of Illinois

Continuation of application Ser. No. 217,967, Mar. 28, 1951. This application Sept. 2, 1955, Ser. No. 532,148
5 Claims. (Cl. 102—20)



1. A perforating gun comprising: a gun body; a bullet-receiving gun bore in said body; a bullet in said gun bore; a charge of propellant powder arranged to propel said bullet from the outer end of said gun bore; an outwardly facing shaped charge on said body and positioned in coaxial alignment with and adjacent the outer end of said gun bore; and a detonator cap detonable by impact of a bullet propelled from said gun bore and capable upon detonation of detonating said shaped charge, said cap being carried by the rearward end of said shaped charge and positioned to be actuated by impact from a bullet propelled out of said bore.

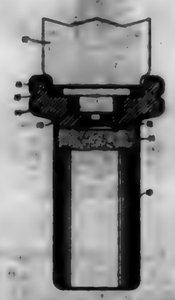
2,946,284

EXPLOSIVE CARTRIDGE

Louis R. Triscoli, Southampton, Hollis L. Muller, Jr., York Springs, and Thomas Q. Ciccone, Langhorne, Pa., assignors to the United States of America as represented by the Secretary of the Army

Filed July 18, 1957, Ser. No. 672,843
1 Claim. (Cl. 102—39)
(Granted under Title 35, U.S. Code (1952), sec. 266)

An explosive cartridge of the type for actuating ejection mechanism of an aircraft and having a metal case closed at one end and closed at its opposite end by a metal head member of larger diameter at least in part than is the major portion of said case and around which said case is fitted, a double base propellant in said case between said head member and its closed end, a primer cup within said head member in its larger diameter portion, a metal membrane between said primer cup and propellant and integral with said metal head member, said head member and membrane being of one piece, said head member having an open recess outside of said primer cup but contiguous



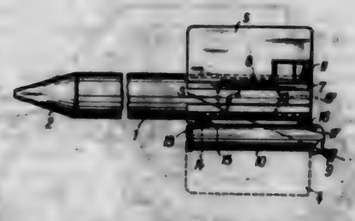
thereto and of larger diameter than said primer cup and larger than the radius of said head member for guiding reception of a firing pin mechanism into axial alinement with said primer cup, the outer edge of said metal head outside said open recess being radially and longitudinally inwardly bevelled and an outer end of said case being bent over said outer edge of said head, whereby any gas from said propellant will pass between the head and case and leak into the air rather than get into the primer cup and whereby a danger of misfire from eccentricity of the firing pin and its mechanism is reduced.

2,946,285

ROCKET PROJECTILES

Peter Nauschütz, Stuttgart-Flughafen, Wilhelm Wessel, Stuttgart-Hohenheim, Günther Kühle, Stuttgart-Bernhausen, Kuno Dreyer, Echterdingen, Filder, and Ludwig Bölkow, Stuttgart-Flughafen, Germany, assignors to Bolkow-Entwicklungen KG, Stuttgart-Flughafen, Germany, a body corporate of Germany

Filed Apr. 1, 1957, Ser. No. 649,969
Claims priority, application Germany Apr. 8, 1956
2 Claims. (Cl. 102—49)



1. In an ordnance missile having two stages, a starter stage and a travel stage, with a starter charge and a travel charge and with corresponding starter charge nozzle and a travel charge nozzle, respectively, said starter charge and said starter charge nozzle forming an integral body, means to position said starter charge nozzle with its orifice away from the direction of said missile at an angle of the axis of the said starter charge nozzle in excess of 15° from the axis of said missile and below it, an array of four guide vanes mounted on the rear periphery of said missile, the planes of said vanes converging in cross-formation upon the longitudinal axis of said missile, the

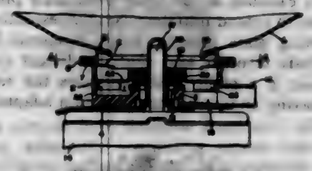
bisector plane of the prism formed by the bottom two vanes with the bottom plane defined by their bottom edges, aligned with the vertical longitudinal cross-sectional plane of said missile, at least said bottom two vanes being of equal size and of a length greater than the distance from the rear of said missile to the center of gravity of said missile, so that the center of gravity of said missile is above the said bottom plane.

2,946,286

VALVELESS TWO WAY PUMP

George T. Shelton, Penn Creek, and Charles T. Maney, Lexington, Ky., assignors to General Electric Company, a corporation of New York

Filed Nov. 21, 1958, Ser. No. 775,463
3 Claims. (Cl. 103—2)



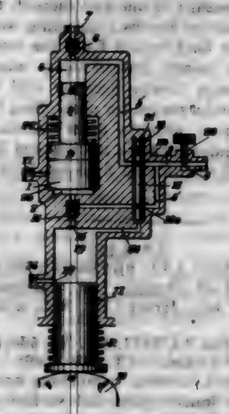
1. A pump comprising wall means defining an annular chamber having an axial inlet opening and a pair of closely adjacent radial discharge openings, a fixed radially disposed barrier wall in said chamber joined with the portion of said wall means between said discharge openings and terminating adjacent the center of the chamber to serve as a divider, and a reversible rotary impeller mounted in said chamber for rotation about the axis thereof and above said barrier wall, said impeller including blade means arranged to pump fluid entering said inlet opening through one or the other of said discharge openings depending upon its direction of rotation.

2,946,287

SELF-REGULATING PISTON PUMPS, IN PARTICULAR FUEL INJECTION PUMPS FOR INTERNAL COMBUSTION ENGINES

Pierre Etienne Bembre, 55, Boulevard Commandant Charcot, Neuilly-sur-Seine, France

Filed Jan. 26, 1959, Ser. No. 788,891
Claims priority, application France Jan. 28, 1958
2 Claims. (Cl. 103—41)



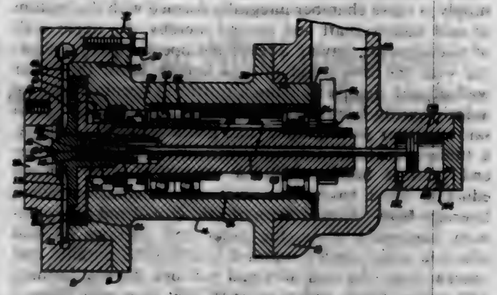
1. A self-regulating reciprocating action pump which comprises, in combination, a main cylinder, a main piston reciprocable in said cylinder, an auxiliary cylinder rigid with the first one, one end of said auxiliary cylinder being in communication with the delivery end of said main cylinder, an auxiliary piston reciprocable in said auxiliary cylinder, said auxiliary cylinder being divided by said auxiliary piston into two chambers, to wit a first chamber located at said above mentioned end of said auxiliary cylinder and a second chamber located at the other end of said auxiliary cylinder, a liquid delivery conduit leading out from said second chamber, a check-valve interposed between said main cylinder and said first chamber of said auxiliary cylinder to prevent liquid from flowing back from said first chamber to said main cylinder, resilient means interposed between said auxiliary cylinder and said auxiliary piston for exerting on said auxiliary piston a return force opposed to that exerted thereon by the liquid pressure from said main cylinder during the delivery stroke of said main piston, a transfer conduit leading from said first chamber to said second chamber, valve means in said transfer conduit operative to close said transfer conduit during the delivery stroke of said main piston, said auxiliary piston and cylinder including a portion of larger diameter forming said first chamber and a portion of smaller diameter forming said second chamber, whereby the amount of liquid delivered from said first chamber during every return stroke of said auxiliary piston is greater than that capable of being received into said second chamber during the same time, a discharge conduit branching off from a point of said transfer conduit upstream of said valve means, and means forming a throttled passage in said discharge conduit.

2,946,288

PUMP

Thomas A. Carter, Jr., Whittier, and Alton V. Hooper, La Puente, Calif., assignors to Thompson Ramo Woolridge Inc., a corporation of Ohio

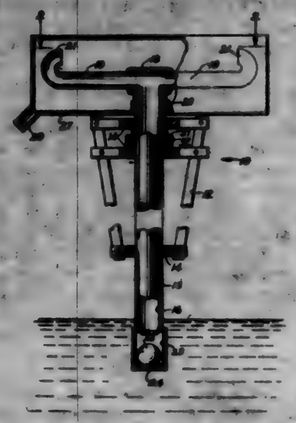
Filed June 25, 1958, Ser. No. 744,365
3 Claims. (Cl. 103—97)



1. A rotary pump adapted for operation at constant speed and for control for varying pressure discharge comprising a driving member, a pump housing enclosing the driving member and having an axial inlet passageway and a peripheral discharge passageway with a communicating chamber enclosing said driving member, a plurality of pump vane elements, pivotal mounting means securing the vane elements to the driving member for pivotal movement about axes parallel to the rotational axis of the driving member, a control element adjacent said driving member mounted for rotation therewith and for controlled rotation relative to the driving member, elongated shaped slots in one of said elements opening in an axial direction, control pins secured to the other of said elements and projecting into said shaped slots, said slots shaped to pivot said vane elements inwardly and outwardly with relative rotation between said driving member and control elements, means defining an axially extending control chamber, a vane element control piston reciprocably mounted in said axially extending chamber,

means for accommodating the flow of a control fluid to said axially extending chamber to control the position of the piston therein, and means connected between the piston and said control element for converting linear control motion to rotary motion whereby the control element adjustably controls the pivotal angle of the vane elements on the driving member to control the discharge pressure of the pump.

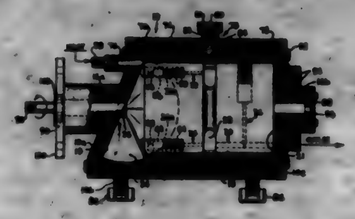
2,946,289
CENTRIFUGAL PUMP
Porter G. Love, Box 292, Nacho, Calif.
Filed Apr. 14, 1958, Ser. No. 728,462
2 Claims. (Cl. 103—109)



1. A centrifugal type vacuum pump of the class described, in combination, a central hollow shaft forming a water conduit communicating with the source of water supply, a valve chamber integrally formed with the bottom of said hollow shaft and carried thereby, the upper wall of said chamber having a restricted opening communicating with the lower end of said hollow shaft, the lower wall of said chamber having a restricted opening forming a downwardly facing seat, a ball member disposed within said chamber to seat upon said downwardly facing seat, a tubular cross-head integrally secured upon the upper end of said hollow shaft, a pair of integral branch eduction arms having the inlet ends thereof extending laterally from opposite sides of said cross-head in a common horizontal plane, the outer end portions of said eduction arms curved, upwardly, inwardly, parallel and spaced above the said inlet end portions thereby forming 180 degree bends and free ends, said free ends thereof forming open non-restricted nozzles in a common horizontal plane for the escape of water therefrom, air passes said free ends at 90 degrees when said arms are rotated, both of said nozzles discharging water inwardly toward and above said cross-head, said nozzles being disposed inwardly from the outer extremities of said 180 degree bends and in an area of lower air pressure above said cross-head effected by rotation of said arms with said 180 degree bends and said shaft, and power means for rotating said shaft and integral parts formed therewith.

2,946,290
FLUID DISTRIBUTION DEVICE
Charles E. Sylvander, Granville Road, North Granby, Conn., and Chester J. Ducki, 96 Higbie Drive, East Hartford, Conn.
Filed May 13, 1957, Ser. No. 658,749
9 Claims. (Cl. 103—142)

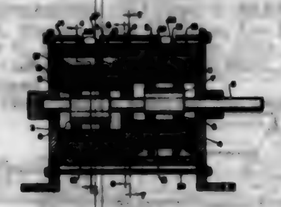
1. A fluid distribution device of the type described comprising a stator member internally recessed to define a bore, said stator member comprising terminal faces at each end of the bore, a rotor member comprising a shaft and a main body element mounted thereon, said main body element comprising an inclined surface portion at one end in the form of a truncated cone and a cylindrical body portion, the respective circumferences of the cylinder and the cone base being coincident, said rotor shaft extending within and suitably supported for rotation within said bore, one of said terminal faces being inclined at an acute angle to the rotor axis, said cylindrical body portion being contiguous with the bore walls in rotational engagement therewith, said inclined stator terminal face and said truncated cone defining a chamber at one end of said device, said truncated cone upon rotation of the shaft being tangent to the said inclined terminal face of the stator member along a line so as to divide said chamber into respective fluid tight compartments for suction and exhaust, at least one oscillating plate member arranged to extend into the chamber respectively, said one oscillating plate member being mounted in a slot which extends through said shaft, and said cylindrical body portion in a plane which includes the rotor axis, said bore having an internal configuration adapted to con-



tiguously engage said one oscillating plate member through 360° of shaft revolution, whereby the said one oscillating plate member is cyclically displaced within the slot upon shaft rotation, the rotor member comprising a pair of fluid conduits positioned therein, one on each side of said one oscillating plate member for receiving fluid under pressure from said chamber, valve means in said fluid conduits for permitting fluid flow in one direction only, the device having outlet port means connected with said fluid conduits, the stator having an inlet passage means and a bypass passage means, said inlet passage means connecting with said chamber and adapted for receiving fluid, said bypass passage means connecting with said inlet passage at one end thereof, the other end of said bypass passage means connecting with said outlet means to provide fluid bypass from the outlet means to said inlet passage means, control means interposed in the said bypass passage means between said inlet passage means and said outlet means for controlling the volume of the said fluid bypass, whereby upon rotation of the rotor member, fluid under pressure is delivered from the said chamber through one of said fluid conduits to the outlet port means.

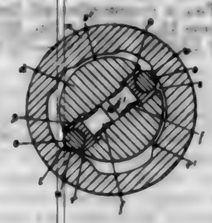
2,946,291
SUCTION AND PRESSURE PUMP
Adolf Roebig, East Orange, N.J., assignor to Roebig-Christ & Co., Inc., Jersey City, N.J., a corporation of New Jersey
Filed Jan. 14, 1957, Ser. No. 634,126
7 Claims. (Cl. 103—149)

1. In a pump, a housing comprising an annular wall portion with an inner cylindrical surface and opposite side walls joined to said annular portion, an inlet and an outlet in said housing, a pressure bushing eccentrically mounted within said housing and being laterally spaced from at least one of said side walls, a flexible and resilient diaphragm having a portion thereof attached to the annular wall of said bushing and another portion attached to said annular wall portion of said housing, a lateral portion of said diaphragm extending laterally beyond said bushing and being circumferentially attached to the housing in the region of the juncture of its said annular wall portion and the adjacent one of said side walls, eccentric means rotatably mounted within said housing, said bushing being operatively connected to said eccentric means and being operable upon said diaphragm whereby upon the operative rotation of said eccentric means said bushing progressively presses the diaphragm against said



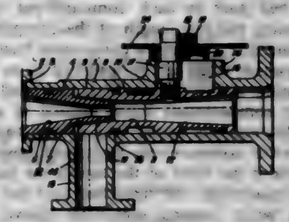
cylindrical surface in a direction from said inlet to said outlet, and adjustable supporting means comprising a plurality of independent adjacent rings mounted for movement in a direction normal to the axis of rotation of said eccentric means and in underlying supporting engagement with said lateral portion of the diaphragm, said rings having their respective outside peripheries in operative engagement with said lateral portion of the diaphragm, the diameters of said rings at their respective outside peripheries increasing progressively in the direction away from said bushing.

2,946,292
LIQUID FUEL PUMPS FOR INTERNAL COMBUSTION ENGINES
Jerzy Chmielecki, London, England, assignor to C.A.V. Limited, London, England
Filed Apr. 4, 1958, Ser. No. 726,507
Claims priority, application Great Britain Apr. 10, 1957
1 Claim. (Cl. 103—160)



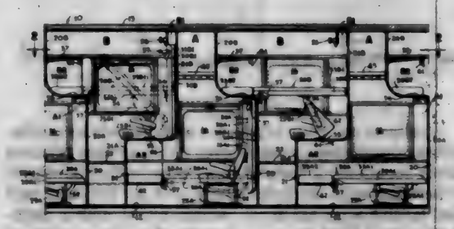
A liquid fuel injection pump comprising in combination a rotary body provided with a diametrical bore, and with a fuel inlet and outlet opening communicating with said bore at a position intermediate the ends thereof, a pair of reciprocatory plungers slidably mounted in opposite ends of said bore, and an annular cam surrounding said body, and provided at its inner periphery with at least one pair of lobes for co-operating with the outer ends of said plungers, one of said lobes having an abruptly sloping flank and rounded crest whereby inward movements are imparted to said plungers during rotation of said body, and the other of said lobes having a dwell diametrically opposite to said first mentioned crest, an abruptly sloping flank, and a rounded crest of substantially the same radius as said first mentioned crest disposed between said dwell and said last mentioned crest whereby during the initial part of the inward movement of either plunger over said first mentioned abruptly sloping flank and rounded crest, sliding movement of the other plunger is prevented by the opposite crest, and thereafter said other plunger is released before the inwardly moving plunger passes said first mentioned crest.

2,946,293
INDUCTORS
Thomas Anthony Hounsow, Brentford, England, assignor to The Pyrene Company Limited, Brentford, England
Filed Apr. 18, 1955, Ser. No. 502,173
7 Claims. (Cl. 103—273)



1. An inductor for producing constant quality foam at varying output, comprising a first tubular member having a lateral port therein, a second tubular member mounted in said first member and having a first end portion adjacent the inside opening of said port, a third tubular member slidably mounted in said first member and having a second end portion with a first surface thereof coplanar with and operatively disposed in said opening to vary the size thereof, said first and second end portions being adapted to form a space therebetween of variable cross-sectional extent commensurate with the sliding movement of said third member, said space communicating with said opening, whereby said sliding movement simultaneously and correspondingly varies the cross-sectional extent of said space and the size of said opening.

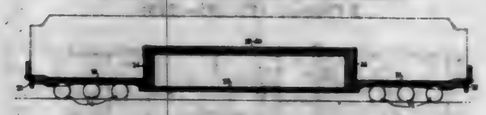
2,946,294
HIGH-CAPACITY PRIVATE COMPARTMENT PASSENGER VEHICLE
Goodrich K. Murphy, New Canaan, Conn., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 3, 1957, Ser. No. 656,800
2 Claims. (Cl. 105—315)



1. In a passenger-carrying vehicle, in combination, a longitudinally extending outer side wall, a longitudinally extending aisle wall, a plurality of longitudinally spaced transverse partition walls dividing the space between said side wall and said aisle wall into a plurality of occupancy compartments of approximately double sitting width, each compartment having a seat and full-length bed accommodations in a bed zone at the outer side wall, the beds and bed zone being slightly wider than half the compartment width, leaving standing and sitting width space between the bed zone and the aisle wall, the compartments being arranged in a group unit or module of two compartments which together are of considerably less length than two bed lengths, one compartment having a floor at

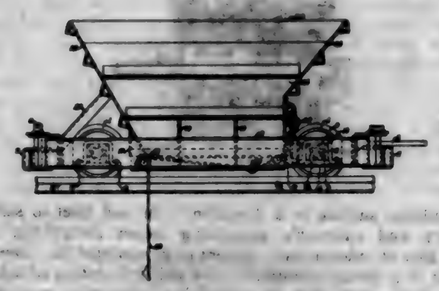
side floor level and the other compartment having a floor at a level above the seat cushion level in the lower compartment, each compartment being of sitting length with knee and foot space throughout its width at the seat, each transverse wall being formed with longitudinally and vertically offset boot-alcoves in the bed zone providing companion paired facing alcoves at opposite transverse walls of each compartment for mating bed parts, a fixed bed part in one of each pair of said companion facing alcoves, and a hinged bed part in the other of each pair of said companion facing alcoves, the hinged bed part being mounted to turn about a transverse horizontal axis, said hinged bed part in each compartment in the use position spanning the full length of the compartment between one transverse wall and a companion fixed bed part, and the companion fixed and hinged bed parts in the use position forming a full length bed, the fixed bed part for the lower compartment being located at about seat cushion height, and the upper end of the foldable bed part in the lower compartment in stowed position being disposed at about the level of the top of the seat back in the upper compartment, the fixed bed part for the upper compartment being located somewhat above the level of the top of the seat back in the upper compartment, and the bottom of the hinged bed part of the upper compartment in the stowed position being disposed near the bottom of the seat cushion of the upper compartment, vertically spaced double hinge means, including a rigid swingable member between the spaced axes of the hinges, for the hinged bed part in the upper compartment, said spaced hinge means providing hinging movement about spaced horizontal transverse axes, the lower hinge means being fixed in position and the upper hinge means carrying the bed part moving in an arc at a distance above the fixed hinge means, and means supporting and holding said hinged bed part for the upper compartment in the horizontal use position.

2,946,295
DOUBLE-DECK RAILWAY CAR STRUCTURE
Albert G. Dean, Narberth, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 28, 1955, Ser. No. 484,672
7 Claims. (Cl. 105—340)



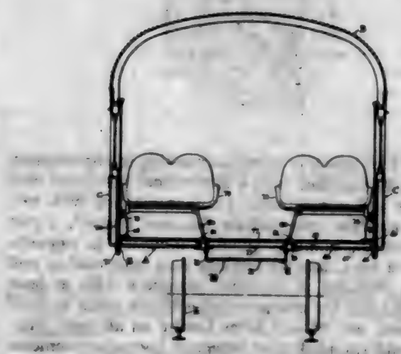
1. A railway car body supported near its ends by trucks, the body comprising: normal-level floors in and adjacent the truck locations; a lower compartment with a low-level floor between said truck locations at a level below said normal-level floors; an upper compartment with a high-level floor at a level above the levels of said normal-level floors and said low-level floor; end center sills extending over and substantially restricted to said truck locations; a pair of vertical center column structures, one each being stress-transmittingly and rigidly connected with one of said end center sills near the junctures of said normal-level floors and said lower compartment, said column structures extending adjacent the high-level and the low-level floors; a pair of stress-transmitting longitudinal structures extending between the inner ends of said end center sills, one of said structures being arranged substantially at the level of said low-level floor and inserted between the lower ends of said center column structures and the other one of said longitudinal structures being inserted between the upper ends of said center column structures and arranged substantially at the level of said high-level floor and means rigidly connecting said longitudinal structures to the ends of said center column structures.

2,946,296
DROP BOTTOM CARS
Robert E. Jones, Knoxville, Tenn., assignor to Sanford-Day Iron Works, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed Aug. 8, 1956, Ser. No. 602,779
9 Claims. (Cl. 105—364)



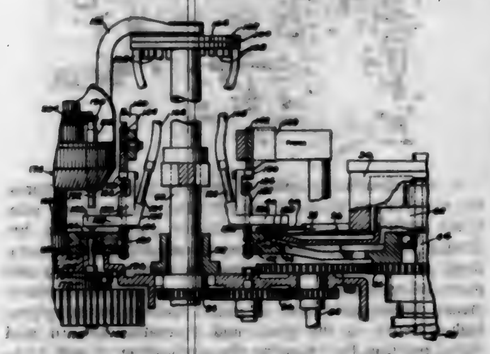
1. In a drop bottom car, the combination of a body having side and end walls and having a bottom opening therebetween, a supporting frame for the body including side and end members, axles connected within the side members of the frame and spaced between the end walls of the body and the end members, supporting wheels on the axles, said bottom opening having its opposite side edges adjacent an upright plane extending lengthwise of the body at the inner faces of the wheels at each side of the body.

2,946,297
UNDERFRAME STRUCTURE FOR RAILWAY CARS
Walter B. Dean, Narberth, and Horace P. Bauer, Huntingdon Valley, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 18, 1956, Ser. No. 592,195
17 Claims. (Cl. 105—397)



7. In a railway car underframe structure, a center sill unit extending longitudinally from one end of the structure to the other and having a pair of transversely spaced sill elements, each sill element having a vertical web, a coupler and draft gear housing unit disposed at each end of said center sill between said webs in flanking relation, each housing unit having at each side a collision post element and an integral horizontal flange, said flanges at the outermost ends of said housing units being recessed adjacent said webs on each of said sill elements, a vertically arranged collision post element extending through one each of said recesses and engaging the side of the web of the adjacent sill element, means securing said collision post element to said hooping unit flange and to said sill element and means securing said flange to the adjacent sill element.

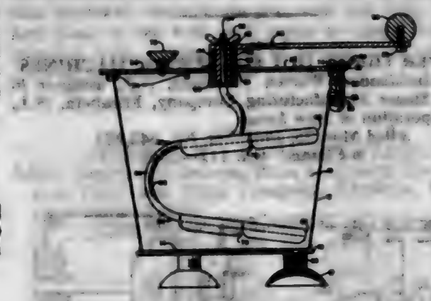
2,946,298
COMPRESSION COATING TABLET PRESS
Wallace A. Deepel, Hugh C. Edgar, Leo P. Gajda, and William E. Fales, all of Detroit, Mich., assignors to Arthur Colton Company, Detroit, Mich., a corporation of Michigan
Filed Nov. 13, 1957, Ser. No. 696,200
27 Claims. (Cl. 107—1)



1. A device for coating formed core tablets with a compressed granular coating which comprises a circumferentially recessed feed table, a circumferentially recessed die table, operating on substantially parallel axes, the peripheries of said tables being spaced from each other, sprocket guide wheels positioned to have peripheries substantially tangential with each of said first tables, and a sprocket chain engaging peripheral formations on each of said tables and wheels wherein all of said wheels and tables operate with the same peripheral speed, and a sprocket chain operates around said sprocket wheels and between said die tables and feed table, a plurality of vacuum transfer means operating on said sprocket spaced to register with the recesses of said pick up table and said die table, means to raise and lower said means as they approach registry with each of said tables, and means for controlling vacuum in said transfer means to cause pick up of cores from said pick up table and for terminating the effect of the vacuum to cause deposit of said cores in said die table.

2,946,299
DOUGH MIXER AND KNEADER
Ivy B. Clifford, New York, N.Y.
(577 Floyd Road, Englewood Cliff, Englewood, N.J.)
Filed Jan. 30, 1958, Ser. No. 713,128
3 Claims. (Cl. 107—38)

1. In a dough mixer and kneader, a paddle kneader with a mounting to turn on a vertical axis, a substantially straight shaft extending transversely from said mounting carrying an upper paddle having substantially vertically disposed blades, a downwardly curved connecting shaft extending from one end of said upper shaft and connected to one end of another shaft carrying a lower paddle having like blades, a portion of said lower paddle being in substantially the same vertical plane as the upper paddle, a reversed V-notch in the lower edge



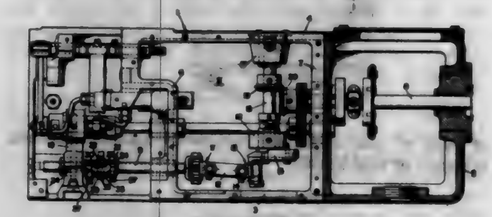
of each of said blades approximately midway between the ends of said blades.

2,946,300
MACHINES FOR FASTENING STRIPS TO OTHER WORK
Edward Quinn, Saugus, Mass., and Wilbur W. Witt, Brewerton, N.Y., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed June 19, 1957, Ser. No. 666,622
10 Claims. (Cl. 112—47)

1. A machine for manufacturing slip-lasted shoes having a main shaft, devices actuated by the main shaft for feeding and fastening one edge of a wrapper strip to other shoe parts, said devices including a work feed dog, a first presser foot acting toward and from the work feed dog to clamp the work parts about the point of fastening operations, a strip-advancing member separate from the feed dog for moving the strip toward the point of fastening operations, a work support and a second presser foot acting toward and from the work support to clamp the work between the first presser foot and the strip-advancing member, in combination with means comprising mechanism driven from the main shaft for actuating the strip-advancing member, including a link connected to the feed dog, an arm connected to the link, to one end of which arm the strip-advancing member is secured and at another end of which is a cam slot and a fixed pin on the machine frame engaging the cam slot to cause a strip advancing movement to be imparted

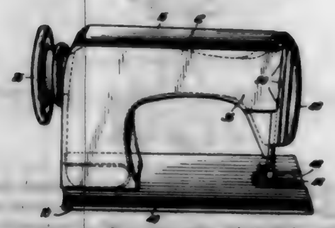
to the advancing member while the first presser foot is clamping the work against the feed dog and while the second presser foot is raised from the work.

2,946,301
LOOPER THROW OUT FOR SEWING MACHINES
Hans Hachlander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Mar. 25, 1957, Ser. No. 648,682
8 Claims. (Cl. 112—206)



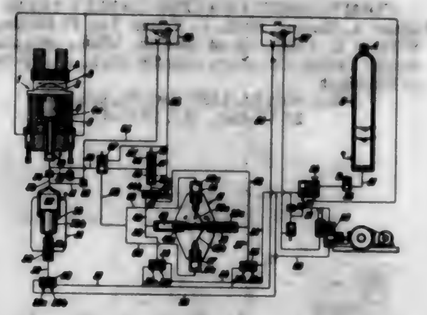
1. In a sewing machine having a bed, a looper bar, spaced bearings journaling said looper in said bed for endwise and angular movement, a pair of elements mounted on said looper bar between said spaced bearings and comprising a looper carrier mounted on said looper bar for pivotal movement relatively thereto and a looper clamp secured on said looper bar, a looper, means for releasably mounting said looper on said looper carrier, and means for releasably securing said elements together for locking said looper carrier against pivotal movement relatively to said looper bar comprising a stop surface formed upon a first one of said elements and means for clamping the second one of said elements against said stop surface comprising a screw threaded into the first one of said elements and having a head engaging the second one of said elements.

2,946,302
ARTISTIC COVER FOR SEWING MACHINES
Jacob Kramitz, 7759 South Shore Drive, Chicago, Ill.
Filed Oct. 28, 1958, Ser. No. 770,832
3 Claims. (Cl. 112—258)



1. A separable cover for a sewing machine head having a base, standard and overhanging bracket arm, said cover comprising a base to cover the base of the machine, an angularly shaped side approximating the shape of the standard and bracket arm, and overlapping a side thereof, a normally disposed top portion extending from the top of said side over the machine head, a U-shaped flange extending normally from the lower edge of said side under said machine head, and an end flange extending normally from one end of said side overlapping the outer end of said standard, a second side overlapping the other side of said head and secured to the edges of said top portion, U-shaped flange, and end flange to cover the other side of said standard and overhanging bracket arm, and an end portion hinged along one side to said second side for covering the other end of said bracket arm, said cover portions when assembled about said standard and bracket arm presenting an artistic appearance for said sewing machine head.

2,946,303
HYDRAULICALLY OPERATED PRESSES
Mathias Schmid, Krefeld, Germany, assignor to G. Siempelkamp and Company, Krefeld, Germany
Filed Nov. 1, 1957, Ser. No. 694,042
Claims priority, application Germany Feb. 1, 1957
18 Claims. (Cl. 113—45)



1. A hydraulically operated press particularly for forming materials at elevated temperatures comprising a relatively stationary part and relatively movable part, hydraulic means including pressure supply means operatively connected with said press for initially closing said press during a first stage of operation and including piston means displaceable from an initial position for supplying high-pressure to the press and thereafter toward said initial position for releasing the application of said high-pressure to the press, a movable actuator means connected to the piston means and movable continuously in one direction for displacing said piston means both from and toward said initial position for thereupon further actuating said relatively movable part relatively rapidly in the closing direction to form said material and for thereafter moving said relatively movable part in the opposite direction during a second stage of operation.

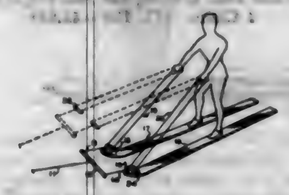
2,946,304
HATCH COVER ASSEMBLY
Edward M. Greer, Great Neck, Bernard S. Appleton, Long Beach, and Kurt Barth, Forest Hills, N.Y., assignors, by mesne assignments, to G.M.E. Corporation, a corporation of New York
Filed Mar. 12, 1956, Ser. No. 570,999
20 Claims. (Cl. 114—202)



1. A cover assembly for a hatchway, comprising a pair of panels adapted to extend over said hatchway, said panels lying in side by side relation in substantially a horizontal plane when in closed position, means pivotally mounting an edge of one of said panels, means pivotally connecting the adjacent edges of said panels for folding movement thereof between closed and open position, a roller at each end of the opposite edge of the other panel, the peripheries of said rollers extending beyond said opposite edge, a track positioned on each side of said hatchway on which said rollers ride to guide the opposite edge of the other of said panels in substantially a horizontal plane, a gasket mounted on the periphery

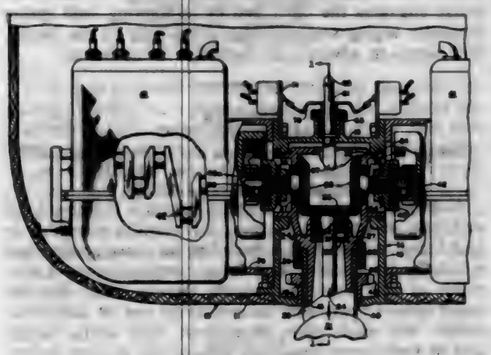
of each of said panels, a sealing rail on each side of the hatchway adapted to be engaged by said gasket, said pivotal connection between adjacent edges of said panels lying below a plane extending between said pivotal mount and the portion of said tracks on which said rollers rest when said panels are in closed position, a camming member rigidly affixed on each side of the hatchway on the side of the rollers remote from the pivotal connection and in the path of movement of an associated roller, each of said camming members having an inclined surface on which an associated roller rides upon initial pivotal movement of said other panel from closed position to move the adjacent portion of said gasket away from the sealing rail.

2,946,305
WATER SKI TOWING DEVICE
Thomas Gardner Hill, 2664 Ridgemore Road NW., Atlanta, Ga.
Filed Oct. 7, 1957, Ser. No. 688,485
11 Claims. (Cl. 114—235)



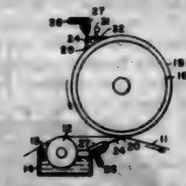
1. In combination with a pair of water skis, a towing rig comprising a pair of keeper members each secured to one of said skis, a pair of latching members each releasably secured to one of said keeper members, selectively operable means for simultaneously releasing each of said latching members from its keeper member, and means interconnecting said latching members for maintaining said latching members in mutually spaced relation when the latching members are disengaged from the keeper members.

2,946,306
TILTABLE AND STEERABLE MARINE PROPELLER UNIT
Edward Leipert, P.O. Box 1102, West Hampton Beach, N.Y.
Filed Jan. 20, 1958, Ser. No. 709,976
23 Claims. (Cl. 115—35)



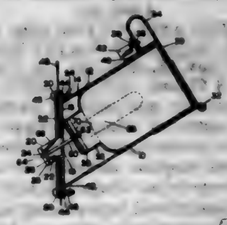
23. A marine propulsion device for a boat comprising, a rigidly mounted engine section consisting of a first housing rigidly secured in a water tight manner to the bottom planking and the stern transom of the boat, and overlying an opening in said boat, and at least one motor secured to the first housing in an athwartship position, a second gear housing within the first housing, rotatably carried by the first housing, a lower propeller drive section rotatably secured to the second housing and swingable therewith through an arc, said arc lying in the keel plane of the boat, and means to rotate the lower propeller drive section about its vertical axis independently of the housings and the motor.

2,946,307
APPARATUS FOR COATING PAPER
Edgar Warner, Middletown, Ohio, assignor to The Champion Paper and Fibre Company, Hamilton, Ohio, a corporation of Ohio
Filed Dec. 23, 1955, Ser. No. 554,969
6 Claims. (Cl. 118—119)



1. A coating apparatus for applying a mineral pigment-adhesive coating composition to both sides of a traveling paper web comprising a large diameter resilient surfaced roll and a substantially smaller diameter flexible rotatable doctor rod yieldingly bearing against said resilient surfaced roll across its entire width and defining therewith a narrow zone of contact through which the paper web passes, means for rotating said large diameter roll in a direction corresponding to the movement of said traveling web, means for rotating said flexible doctor rod, means for applying a uniform layer of coating composition on the surface of said large diameter roll, means for applying an excess of coating composition to that side of the traveling web opposite to that contacted by said large diameter roll, means for passing said web between the surface of the large diameter roll and said doctor rod, and means for drawing said web around said doctor rod and away from said large diameter roll such that the area of contact of the traveling web with said resilient surfaced large diameter roll is limited to the narrow zone of contact defined between said resilient surfaced roll and said doctor rod, whereby the uniform layer of coating composition applied to said resilient surfaced roll will be wiped on one surface of the traveling web and the excess of coating composition applied to the opposite surface of the web will be doctored therefrom, while the coating composition remaining thereon is smoothed by said rotatable flexible doctor rod.

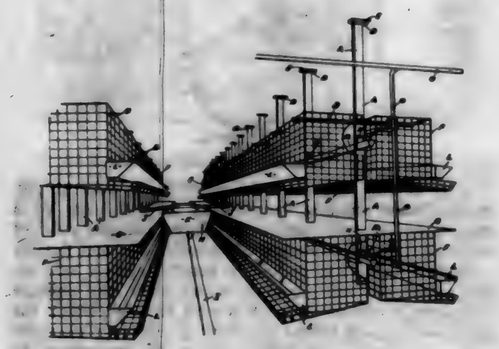
2,946,308
DEVICE FOR PROVIDING WATER AND LIQUID FOOD TO ANIMALS
Jess W. Harris, Madison, Wis.
(Rte. 1, Cottage Grove, Wis.)
Filed Feb. 19, 1958, Ser. No. 716,197
14 Claims. (Cl. 119—18)



1. A device for holding a liquid container with a forwardly extended tube for watering and liquid feeding

animals within a cage comprising, a side wall, a forward plate, said forward plate carrying a guard for said tube, a forwardly extending end of said guard being in radial relation to the end of the tube, means secured to said forward plate for attaching said plate to the cage.

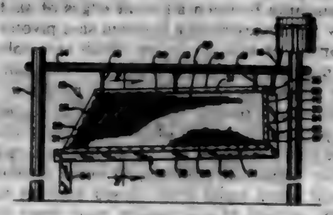
2,946,309
SUPPORTING MEANS FOR CAGE SERIES IN CHICKEN HOUSES
Clarence Page, Southfield, Mich., assignor to Page and Cox, Detroit, Mich., a copartnership
Filed Nov. 29, 1957, Ser. No. 699,672
4 Claims. (Cl. 119—22)



1. Supporting means for a longitudinal series of cages and chicken houses comprising vertically extending members adjacent to the rear face of and at longitudinally spaced points along the series of cages, and lateral members secured to and extending outwardly from said vertical members for directly supporting the cages, leaving a space thereabove open at the front and unobstructed for the length of the series, a plurality of spaced vertically aligned lateral members for supporting tiers of cage series, a platform on a lower tier for receiving the droppings from the fowl in an upper tier, the space between tiers having an unobstructed opening to the front throughout the length thereof, a carriage for traveling the length of the series adjacent said lower tier, a scraper mounted on said carriage extending over said platform and adapted to remove the deposits thereon during continuous travel of said carriage, a receptacle on said carriage for receiving the removed matter, said receptacle being beneath and laterally placed from said lower tier, and said arm laterally and forwardly extending from said carriage and said receptacle and overlying said receptcle so that the removed matter will travel rearwardly along said scraper until it reaches the end of the tire at which time it will drop into the underlying receptacle.

2,946,310
INSECTICIDE APPLICATOR FOR ANIMALS
Raymond E. Rogers, P.O. Box 297, Denver, Colo.
Filed Nov. 18, 1958, Ser. No. 774,689
8 Claims. (Cl. 119—157)

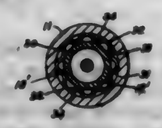
1. In an insecticide applicator for animals having end supports and a source of insecticide supply, the combination of a generally rectangular sheet member suspended between said end supports including at least two coextensive but separate layers of open flexible mesh material with the top edges of said layers being secured together, liquid absorbent conducting means extending at least along the bottom edges of said layers in communication with said insecticide supply source, and the bottom edges of said layers being independently connected to said con-



ducting means to provide for relative movement between said layers upon bending.

2,946,311
WRITING INSTRUMENT
Barnie J. Craig, 1042 La Prem Drive, Pasadena, Calif.
Filed Dec. 1, 1954, Ser. No. 472,419
1 Claim. (Cl. 120—42.05)



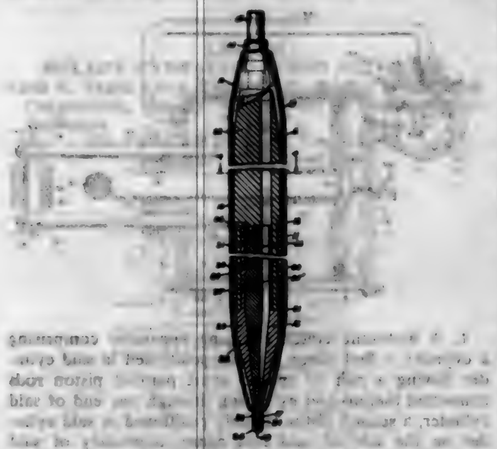


A ball point pen including a barrel having a hole in one end, a cartridge slidably mounted in the barrel, said cartridge having a writing tip at one end, said tip projecting through said hole when the cartridge is advanced in the barrel, said hole being larger than said tip to permit lateral movement of the tip, said barrel having a shoulder therein, a spring surrounding said cartridge and having one end engaging said shoulder, said one end of the spring including sinuous, resilient portions forming convolutions with the crests of the convolutions; engaging the interior of the barrel and the troughs of the convolutions engaging the exterior of the cartridge to cushion lateral movement of the cartridge, means on said cartridge engaging the other end of said spring, said spring normally urging said cartridge rearwardly in the barrel, and means to advance the cartridge in the barrel.

2,946,312
BALL POINT PEN
Barnie J. Craig, 1042 La Prem Drive, Pasadena, Calif.
Filed Dec. 1, 1954, Ser. No. 472,416
2 Claims. (Cl. 120—42.16)

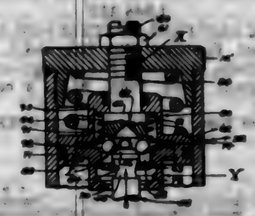
1. In a ball point pen, a barrel having a tapering front end with an aperture therein, a removable cartridge in said barrel, said cartridge including an inner portion and a tubular tip portion, said inner portion having a plurality of ink holding channels therein, said channels being spaced apart and being entirely out of communication with each other throughout their entire length and at their inner ends, said tubular tip portion including a writing tip projecting through said aperture, said writing tip having an inwardly directed ball retaining lip thereon, a ball seat member in said tubular tip portion, the outer wall of said ball seat member conforming to the inner wall of said tubular tip portion, said channels terminating at the upper end of said ball seat

member, said ball seat member having a semi-spherical ball seat at the forward end thereof, a writing ball engaging said ball seat, said lip holding said ball in place, said ball seat member having a plurality of longitudinally extending outwardly directed conduits therein, each



of said conduits being aligned with one of said channels, said conduits being out of communication with each other, said tubular tip portion inner wall forming the outer wall of said conduits, each of said conduits opening into a different area of the ball seat, said writing ball closing the lower end of each of said conduits.

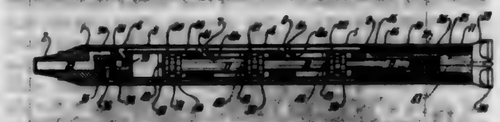
2,946,313
FASTENER DRIVING TOOL AND RELEASE THEREFOR
Richard E. Powers, Monterey Park, and Charles W. Wels, Arcadia, Calif., assignors to Powers Wire Products Company, Inc., Monterey Park, Calif., a corporation of California
Filed Feb. 3, 1958, Ser. No. 712,977
13 Claims. (Cl. 121—13)



1. A fluid operated tool of the character described including, a cylinder, a piston engaged in the cylinder for operation axially thereof, there being a latching stem projecting from the piston, and a releasable latching means comprising, an anchor carried by the cylinder, a radially shiftable ball guided by a longitudinal slot-shaped opening formed in the anchor and controlled by a sleeve to latch onto the stem, and a pressure responsive means to shift the sleeve and to thereby release the ball both radially and longitudinally from latching engagement with the stem.

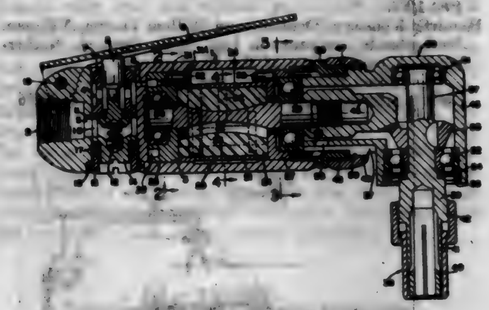
2,946,314
ROCK DRILLS
Paul H. Nant, 1633 Highbridge Road, Cuyahoga Falls, Ohio
Filed Sept. 1, 1955, Ser. No. 533,855
4 Claims. (Cl. 121—15)

1. In a pneumatic piston operated device, a cylinder housing divided into a plurality of cylinder chambers, a plurality of piston hammers disposed in said cylinder chambers with the ends of the pistons in abutting engagement, a reciprocating member at one end of said cylinder housing adapted for engagement by the end piston hammer, the other end of said cylinder housing being provided with means for positioning the unit in relation to the work to be acted upon, said means having an air



flow passage leading to a supply of fluid pressure, and said cylinder housing having ported passages communicating with said air flow passage and with the cylinder chambers on opposite sides of the piston hammers, and a valve disposed between said pressure source and the cylinder ported passages to direct fluid pressure from the source alternately to opposite sides of the piston hammers.

2,946,315
ANGLE DRIVE ATTACHMENT FOR AIR OPERATED HAND TOOL
Roland E. Deeden, Sherwood, Ohio, assignor to Deeden Tool Corporation, Sherwood, Ohio, a corporation of Ohio
Filed Feb. 28, 1957, Ser. No. 643,892
7 Claims. (Cl. 121—34)



1. An angle drive assembly comprising a power device having a bevel drive pinion; an angle drive attachment including a rotary tool mounting shaft having a bevel gear thereon adapted to mesh with said pinion; and means for detachably securing said attachment and device together in any desired relative rotary position; said means comprising a nut formed with threads of opposite hand engaged with threads on said device and attachment respectively and operative upon turning of said nut in one direction relative to said attachment and said device to draw the same together into frictional engagement.

2,946,316
HYDRAULIC CYLINDER AND PISTON
Lawrence Bruehl, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 3, 1953, Ser. No. 340,451
8 Claims. (Cl. 121—38)

3. In a hydraulic cylinder and piston, the combination comprising a piston, a piston rod, a cylinder cooperating with said piston and piston rod for producing relative motion between the cylinder and the piston, said cylinder having a gimbal mounting therefor to allow complete freedom from binding in any position of extension of the

pistons rod, fluid passage means in said gimbal mounting for carrying fluid to and from the cylinder on either side of the piston, a compressed gas chamber surrounding said cylinder and having annular longitudinally slidable end walls, a sleeve-shaped hydraulic piston directly connected to each of said annular end walls and moving therewith, an annular hydraulic fluid chamber containing and being divided by each said sleeve-shaped piston, and hydraulic



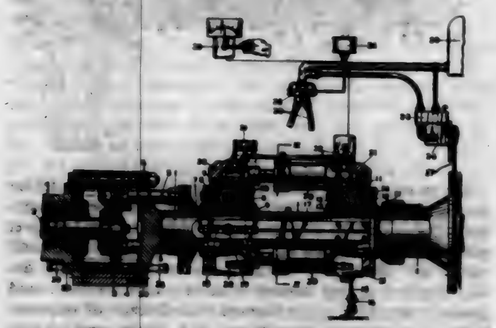
fluid passages connecting the opposite sides of each sleeve-shaped piston with one side of the main piston so that when a predetermined pressure is reached on either side of the main piston, it will be relieved by displacing fluid from that side and adding fluid to the other side which effect will be reversed by the action of the compressed gas upon the reduction in hydraulic fluid pressure below the predetermined magnitude.

2,946,317

ADJUSTING MECHANISM FOR ADJUSTING THE PITCH OF THE BLADES OF A MARINE PROPELLER

Hendrik Klaassen, Drunen, and Willem Danne, Vlijmen, Netherlands, assignors to Lips N.V., Drunen, Netherlands, a corporation of the Netherlands

Filed Nov. 4, 1957, Ser. No. 694,195
Claims priority, application Netherlands Nov. 7, 1956
8 Claims. (Cl. 121—38)



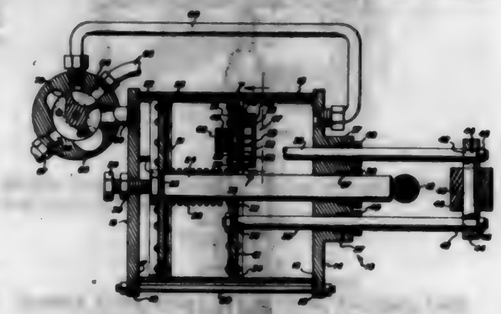
1. Apparatus for adjusting the pitch of the blades of a propeller comprising a hollow propeller shaft, a first ring journalled on said propeller shaft and axially movable with respect thereto, a control rod within said hollow propeller shaft and axially movable with respect thereto, means connecting said first ring and said control rod for conjoint axial movement relative to said propeller shaft, a second ring surrounding said propeller shaft, means for securing said second ring to said propeller shaft to prevent relative axial movement therebetween, and a plurality of servomotors extending between and operatively connected to said two rings and equally placed about the axis of said propeller shaft, whereby when said servomotors are actuated to change the pitch of the propeller blades, reaction forces will be transmitted through said first ring to said control rod and whereby said first ring will move with the propeller shaft as it expands and contracts.

2,946,318

AUTOMATIC CLUTCH ENGAGER

George W. Rutherford, Shreveport, La., assignor to The W. L. Sommer Company, Incorporated, Shreveport, La.

Filed Aug. 6, 1958, Ser. No. 753,576
5 Claims. (Cl. 121—38)



1. A hydraulic clutch engaging apparatus comprising a cylinder, a first piston slidably positioned in said cylinder having a pair of spaced apart parallel piston rods connected thereto and extending through one end of said cylinder, a second piston slidably positioned in said cylinder on the side of said first piston oppositely of said piston rods, a third piston rod connected axially to said second piston and extending through said first piston and through the end of said cylinder parallel to said pair of piston rods, a coil spring encompassing said third piston rod between said first and second pistons normally biasing said first and second pistons apart, means for selectively supplying oil under pressure to each end of said cylinder, and a spring controlled valve mounted in said first piston for equalizing hydraulic pressures on opposite sides of said first piston, said pair of piston rods being adapted to move a clutch lever in one direction upon movement of said first piston, and said third piston rod being adapted to move said clutch lever in the opposite direction, upon opposite movement of said second piston.

2,946,319

HYDRAULIC CONTROL SYSTEM FOR ELEVATORS

Arthur Willard Paulson, Old Greenwich, Conn., and Andrew Fabula, Hoboken, N.J., assignors to Otis Elevator Company, New York, N.Y., a corporation of New Jersey

Filed Nov. 7, 1956, Ser. No. 620,881
7 Claims. (Cl. 121—41)



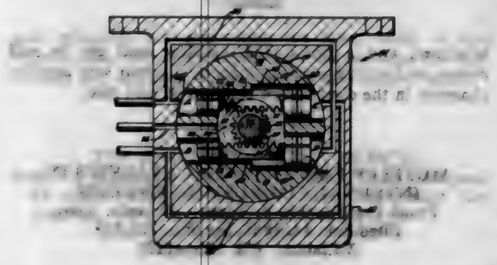
3. A hydraulic control system for a hydraulic hoisting machine, said machine being energized from a fluid source, control valves connecting said fluid source to said machine for controlling the operation of said machine, valve actuating means to open and closed said control valves, a differential mechanism connected to said valve actuating means and being operable in response to the operation of said machine, a fluid motor and reduction gearing also connected to said valve actuating means, directional valve means for connecting said fluid motor to said fluid source to control the direction and speed of rotation of said fluid motor, cam following means on said directional valve means, and cam means positioned on said machine, said directional valve means being controlled in operation by said cam following means engaging said cam means on said machine whereby the speed of said fluid motor is controlled by the operation of said machine and whereby the differential effects of operation between said machine and said fluid motor causes operation of said valve actuating means.

2,946,320

ROTARY HYDRAULIC SERVO ACTUATOR

Alvin R. Vogel, Los Angeles, Calif., assignor to Northrop Corporation, Beverly Hills, Calif., a corporation of California

Filed Dec. 23, 1958, Ser. No. 782,512
4 Claims. (Cl. 121—120)



2. A rotary type fluid actuator comprising: a housing having a cavity formed therein; portions of said housing defining a first pair of axially aligned major and minor bores and a second pair of axially aligned major and minor bores; the inner ends of said first and second pairs of major and minor bores opening into said cavity and being closed at their outer ends; the relative positions and sizes of said pairs of major and minor bores being characterized in that the axes of said first pair of major and minor bores are aligned, the axes of said second pair of major and minor bores are axially aligned and the cross-sectional area of each of said major bores exceeds the cross-sectional area of each of said minor bores; a piston being mounted in each of said bores and cooperating with portions of said housing to define major and minor expandable chambers; means including gear racks respectively connecting the pistons mounted in said first pair of major and minor bores and the pistons mounted in said second pair of major and minor bores; a shaft having a spur gear mounted thereon; said shaft being rotatably mounted in said housing at a position between the axes of said first and second pair of major and minor bores with the teeth of said spur gear meshing with the teeth of said gear racks and at least one end of said shaft extending from said housing; and portions of said housing defining first and second passages through which fluid may be simultaneously directed to and exhausted from nonaligned major and minor expandable chambers to maintain a continuous pressure on the teeth of said spur gear.

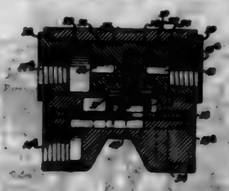
2,946,321

CONTROL SYSTEM FOR FLUID PRESSURE-ACTUATED RECIPROCATING DEVICE

Mathias J. Lieser, Chicago, Ill., assignor to Mead Specialties Company, Inc., Chicago, Ill., a corporation of Illinois

Filed Nov. 21, 1957, Ser. No. 697,989
1 Claim. (Cl. 121—156)

In a control system for a fluid pressure-actuated device, a fluid pressure supply and exhaust valve comprising a generally cylindrically shaped body equipped with a cylindrical chamber and having end exhaust ports and an intermediate supply port, exhaust valves communicating with said end exhaust ports adapted to be actuated by the reciprocation of said device, an elongated slot in the wall of said cylinder aligned with the length thereof, said body having a flat outer side portion about said slot, a piston reciprocably mounted in said cylinder and equipped with a laterally-extending slide valve extending out of said slot, means on said piston urging said slide valve outwardly of said slot, said piston being equipped with passage means for pressurized fluid entering said cylinder through said supply port to communicate said fluid with said exhaust ports and said slot, a generally rectangular cover for said slot secured to said flat outer side portion of said cylinder and providing a bearing surface for said slide valve, said cover having three openings therein aligned in the direction of travel of said slide valve, the center of said three openings being positioned at the center of said cover, said slide valve being equipped with a recessed end bearing against said cover and adapted to



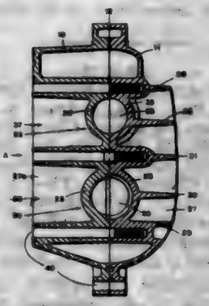
communicate said center opening with one end opening in one extreme position of said slide valve and said center opening with the other end opening at the other extreme position of said slide valve, and a casing secured to said cover and equipped with a port at each end thereof aligned with said end exhaust ports, said casing ports being adapted to be communicated with said device for reciprocating the same, said casing having a flat outer side adjacent said cover, three passages in said casing communicating with said casing flat outer side and arranged to communicate with said three openings, one passage extending transversely away from said casing flat outer side and adapted to communicate with said center opening, the other passages comprising L-shaped depressions in said casing flat outer side, each L-shaped depression connecting an end opening in said cover, with the end port in said casing remote therefrom.

2,946,322

INTERNAL COMBUSTION ENGINES

David Hodkin, Lidlington, England, assignor to Engineering Research and Application Limited, Dunstable, England

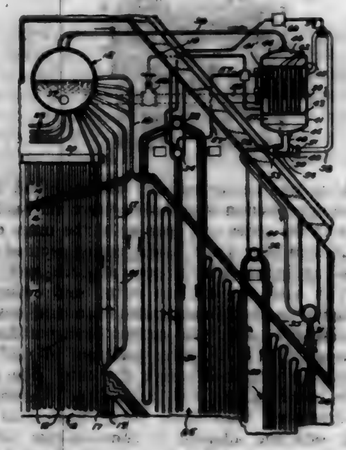
Filed Apr. 3, 1959, Ser. No. 803,958
Claims priority, application Great Britain Apr. 11, 1958
4 Claims. (Cl. 121—194)



1. A housing for parts of an internal combustion engine having cylinders, crankshaft, gear box including mainshaft and layshaft and bearings for the crankshaft, mainshaft and layshaft comprising two cast parts having

meeting surfaces in a plane containing the cylinder and crankshaft axes, which surfaces divide the interior into the required interior cavities, and each part has exterior tapered cavities the walls of which support part cylindrical bearing walls at their inner ends, these exterior cavities being tapered in the direction such that their inner ends are of smaller cross-sectional size than their outer ends.

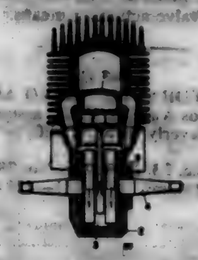
2,946,323
CONTROL OF THE TEMPERATURE OF SUPERHEATED VAPOR
John Sibard, Garden City, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Apr. 15, 1953, Ser. No. 348,235
8 Claims. (Cl. 122—479)



1. A vapor generator comprising a vapor generating section, a superheater, a heat exchanger, means for introducing liquid from the generating section into the heat exchanger, means causing saturated vapors from the generating section to flow in indirect heat exchange relationship with the liquid in the heat exchanger to condense part of the saturated vapor, the level of the liquid in the heat exchanger determining the quantity of vapor condensed, means for introducing the saturated vapor in admixture with substantially all of the resulting condensate produced in the heat exchanger into the superheater, and means responsive to the temperature of the vapor after superheating for controlling the level of the liquid in the heat exchanger to thereby control the quantity of vapor condensed and the temperature of the superheated vapor.

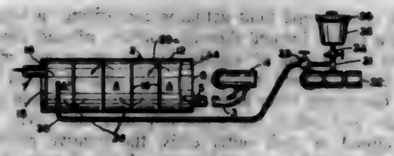
2,946,324
INTERNAL COMBUSTION ENGINE
Vittorio Castoldi, Pisa, Italy, assignor to Piaggio & C. Societa per Azioni, Genoa, Italy
Filed May 20, 1957, Ser. No. 660,204
Claims priority, application Italy June 12, 1956
2 Claims. (Cl. 123—73)

1. A two-stroke-cycle crankcase-compression internal-combustion engine comprising a cylinder, a piston in said cylinder, a crankcase connected to said cylinder and opening into the same, a source of fuel and lubricant connected to said crankcase and opening into the latter, a rotatable crank disc in said crankcase, the periphery of said disc cooperating with the crankcase to define an annular chamber, said annular chamber being adapted to accommodate lubricant to form a seal between the disc and crankcase, said disc having a recess in its periphery for conveying said fuel and lubricant towards said cylinder, a crank pin eccentrically mounted on said disc adjacent the recess and adapted to be cooled by said fuel and



lubricant, and a piston rod coupling said pin to said piston, said source opening tangentially into said annular chamber in the direction of rotation of said disc.

2,946,325
MUFFLER FOR USE WITH CATALYSTS IN INTERNAL COMBUSTION ENGINES
Frank Gentile, 940 E. Turney, Phoenix, Ariz.
Filed Feb. 14, 1958, Ser. No. 715,312
2 Claims. (Cl. 123—119)

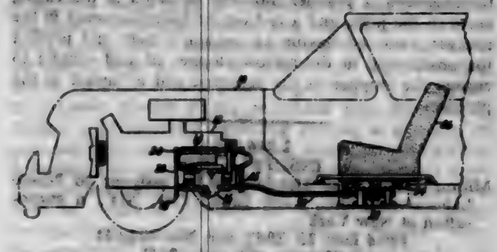


2. Apparatus for reducing the production of noxious gases in an internal combustion engine comprising, an internal combustion engine having an intake manifold, an exhaust manifold and combustion chambers, a catalyst adapted to reduce the volume of noxious gases in the exhaust gases when slightly moistened, a coating of said catalyst on the inner surfaces of said manifolds and combustion chambers, a muffler for expanding and cooling the exhaust gases composed of a tubular body shell closed at each end, a fitting at one end connected to the engine exhaust manifold, an outlet fitting at the other end connected to an exhaust tail pipe, a series of longitudinally spaced transverse baffle plates within said body forming a series of longitudinally disposed expansion chambers; said baffle plates having opening at their edges disposed so as to direct exhaust gases passing through said muffler in zig zag path, and a return pipe to convey expanded, cooled and moist gases from the muffler to the engine intake manifold to activate the catalyst coating the inner surfaces of said manifolds and combustion chambers, said return pipe connecting the compartment adjacent the outlet fitting of said muffler with the intake manifold of said engine, and a gas flow regulating valve in said pipe.

2,946,326
POWER DRIVE APPARATUS
Charles E. Bates, Anderson, Ind., and John Z. De Lorean, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 4, 1959, Ser. No. 797,109
8 Claims. (Cl. 123—179)

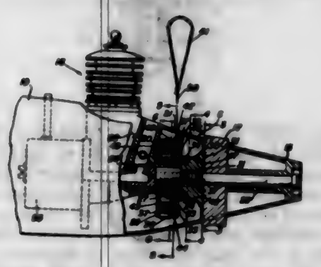
1. In combination, a motor vehicle having an engine, an electric starting motor, power transmitting means for connecting said electric starting motor with said engine to crank the same, means controlling the connection of said starting motor with said engine, a transmission, said transmission having an input shaft connected with said

motor and having an output shaft, a pair of solenoids controlling the operation of said transmission and energization of said starting motor, and means shiftable by



said solenoids for connecting the input shaft of said transmission with the output shaft thereof and for controlling the direction of rotation of said output shaft.

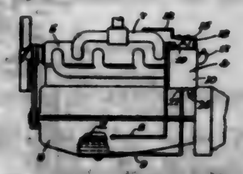
2,946,327
TOY ENGINE STARTING DEVICE
John W. McRoskey, West Los Angeles, Calif., assignor, by mesne assignments, to Wen-Mac Corporation, Los Angeles, Calif., a corporation of California
Filed May 8, 1957, Ser. No. 657,778
8 Claims. (Cl. 123—185)



1. In a toy power plant for a toy vehicle: a toy engine having projecting shaft means; means for securing a propeller on said shaft means; a nonrotatable sleeve supported by said engine concentric to said shaft means; a drivable member secured to said shaft means adjacent said sleeve; starter rotation means rotatable upon said sleeve; a one-way overrunning clutch connecting said rotation means and said drivable member so that forward rotation of said rotation means will be transmitted to said drivable member; a pull cord wound on said rotation means and having an end thereof extending outwardly for manual engagement to effect pulling out of the pull cord whereby it will rotate said rotation means in rearward direction; and spring means connected to said rotation means and to said pull cord and responsive thereto so that the pulling out of said pull cord will wind said spring means and store energy therein and further responsive to said pull cord so that when the pulled out pull cord is released, said spring means will return said pull cord to its initial position and rotate said rotation means forwardly and accomplish forward rotation of said shaft means.

2,946,328
LUBRICATING APPARATUS
Donald Mettetal, Jr., Wauconda, Ill., assignor to Orofino Berry Anderson, Rockford, Ill.
Filed Aug. 13, 1957, Ser. No. 677,888
1 Claim. (Cl. 123—196)

In a device for supplying lubricating oil to the crankcase of an internal combustion engine having a suction manifold whenever the level of the oil in the crankcase outsides below a predetermined level while the engine is running, a closed oil reservoir supported above the crankcase, a gravity feed pipe leading downwardly from an opening in the bottom of the reservoir into the crankcase, said feed pipe having an open lower end located near the bottom of the crankcase, an air pipe leading upwardly from the crankcase to an opening in the top of said reservoir above the level of oil therein, said air pipe having an open lower end located in the crankcase at a level intermediate the bottom of the crankcase and the normal level of oil in the crankcase, a suction pipe having an end adapted to be connected with the engine intake manifold and having another end connected with a restricted opening in the top of said oil reservoir above the



level of oil therein, the improvement which consists in providing the closed oil reservoir with another opening in the top thereof independent of the openings for the air pipe and suction pipe, a flexible diaphragm closing said last named opening, a cap fixed with said diaphragm to the top of said reservoir defining a suction chamber therein having relatively unrestricted communication with the suction pipe, a vertical valve stem inside the reservoir connected at its upper end to the diaphragm and having a tapered lower end arranged to close the opening in the bottom of the reservoir communicating with the gravity feed pipe, and a coiled compression spring caged in said cap normally urging the diaphragm and valve stem downwardly to closed position.

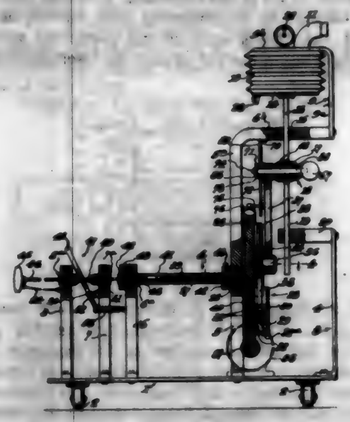
2,946,329
ESCUTCHEON FOR A SPRINKLER HEAD
Paul V. Metcalfe, 1401 Deten Ave., Columbus, Ohio
Filed Sept. 19, 1958, Ser. No. 761,983
1 Claim. (Cl. 126—317)



An escutcheon for a sprinkler head for an automatic sprinkler system arranged for installation between the ceiling of a building and said sprinkler head comprising a cover formed with a frusto conical flaring skirt portion, arranged with the larger diameter of said flaring skirt frusto conical portion contacting the ceiling, with a tubular portion extending downward from the smaller diameter of said frusto conical portion and with an annular ledge integral with said tubular portion and extending inward therefrom perpendicular to the surface of said tubular portion; a cap having one end closed except for a relatively small hole, having a flaring skirt extending outward and upward from said closed end and integral therewith and having a tubular portion integral with the larger diameter of said flaring skirt, extending upwardly therefrom, telescoping over the tubular portion of the cover and snugly fitting said tubular portion of the cover; and a conical spiral spring having a wide end

and a narrow end and having its wide end resting on said ledge and its narrow end contacting the closed end of the cup and compressed between the cover and the cap.

2,946,330
RESPIRATOR APPARATUS
Lyman C. Blair, 1212 Rothwell St., Houston, Tex.
Filed July 31, 1956, Ser. No. 601,141
11 Claims. (Cl. 128—29)



3. Respirator apparatus for effecting pulmonary ventilation of a patient undergoing treatment, said apparatus comprising a pump having a chamber from which fluid may be discharged on one stroke of said pump and into which fluid may be drawn on another stroke of said pump; means communicating with said chamber for connecting the latter to the respiratory system of the patient so as to create alternating positive and negative pressures in the respiratory system in simulation of natural breathing; a driving member; a cylinder fixed on said driving member; a reciprocable piston in said cylinder; a cross-head slidably mounted on said driving member and connected to said piston for movement therewith; means connecting said cross-head to said pump; means operatively connected to said piston for steplessly moving the latter and the cross-head relatively to said driving member so as steplessly to vary the stroke length of said pump, thereby steplessly to vary the intensity of the pressures created in the respiratory system of the patient; and means for driving said driving member.

2,946,331
INJECTION CASING FOR INJECTION SYRINGES
Hans Jüngst, Kelkheim (Taunus), and Paul Kötsch, Stuttgart, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
Filed Oct. 21, 1957, Ser. No. 692,018
2 Claims. (Cl. 128—218)



1. A casing of an injection syringe for detachably receiving an ampule of medicament having a hollow stopper comprising, opposed jaws hinged for movement toward and away from the sides of the ampule and having a contour ot conform to the sides thereof, a member for operating the hinged jaws toward each other to clamp an ampule therebetween, a plunger movably mounted in the casing between the jaws, and a rod eccentrically mounted in the plunger, said rod having an angularly bent end portion for positioning in the hollow stopper of said sample to engage the stopper as the eccentric rod is turned in the plunger.

2,946,332
INSUFFLATOR
Milton Sachs, East Meadow, N.Y., assignor to Nysco Laboratories, Inc., Long Island City, N.Y., a corporation of New York
Filed Dec. 23, 1957, Ser. No. 704,641
6 Claims. (Cl. 128—366)



1. An improved insufflator comprising a tubular barrel having formed in its upper end an elongated, longitudinally extending capsule receiving cavity provided with a capsule seat at the base thereof and having formed in its lower end a bore communicating with said cavity, a source of compressed air communicating with said bore, a tubular nozzle separably secured to said barrel upper end and communicating with said cavity, said tubular nozzle having an axial bore formed therein, and a lance member removably registering with said nozzle bore and having a needle portion extending for at least the full length of said cavity, said lance member terminating at its outer end in a head of greater width than said nozzle bore.

2,946,333
COMBINATION FOUNDATION GARMENT AND BRASSIERE
Gloria Mary Merich, 4326 E. 4th St., Long Beach, Calif.
Filed June 1, 1959, Ser. No. 817,250
2 Claims. (Cl. 128—482)



1. A combination foundation garment and brassiere comprising: a torso fitting foundation section adapted to

fit the wearer extending downwardly from the bust line, the upper marginal edge of said section defining two downwardly extending laterally spaced apart cut-out portions, two breast cups of predetermined size removably engageable with said section, said cut-out portions each being formed in a configuration mateable with the lower peripheral edge of one of said breast cups, fastening means on each of said breast cups, which is a stitched, turned-over portion at the peripheral edge thereof that defines a peripherally extending pocket, a plurality of concentrically arranged fastening means on said section including a turned-over portion extending inwardly from said cut-out portions stitched in spaced apart concentric lines to define a plurality of peripherally extending pockets; and engaging means including a resilient member removably insertable into said peripheral pocket on said cup and one of said pockets on said section to interconnect said cups and section.

2,946,334
BRASSIERE
Rufio F. Bianco, 47 West St., Worcester, Mass.
Filed Apr. 1, 1957, Ser. No. 649,819
3 Claims. (Cl. 128—484)



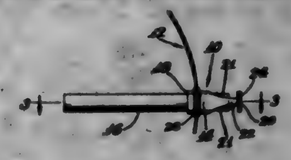
1. A brassiere comprising a pair of fabric cups and including means to secure the same on the body, and an underlay fastened to the brassiere and adapted to engage the body below the bosom and anchor the cups in position to prevent the bosom from slipping from a front position, said underlay comprising elastic webbing extending from a position at one outer side of one cup to a central position between the cups and from the central position to the outer side of the other cup, said webbing when relaxed being shorter than the corresponding fabric of the brassiere, said webbing including a pair of members one of which is in the form of a broad inverted V and the other of which is generally straight across the cup area and below the same, both members being secured to the brassiere at the central position, said elastic web members crossing each other generally below the cups and being substantially spaced centrally of the cups.

2,946,335
SUPPLEMENTAL ARTICLE FOR A FOUNDATION GARMENT
Alma Brack, 1125 Broadway, San Francisco, Calif.
Filed Jan. 19, 1958, Ser. No. 709,166
3 Claims. (Cl. 128—522)



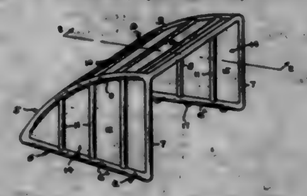
1. A separate article of apparel to be worn underneath a girdle to occupy a space between said girdle and the body of the wearer where such space constitutes a dorsal depression in the surface of the body in a spinal area near the waistline, said article comprising: a pad of uniformly resilient material; said pad having a substantially flat surface on one face and a convex surface on the opposite face; said convex surface being so contoured that the pad tapers to a thin edge along its entire periphery; said convex surface rising more abruptly from a first portion of the edge of said pad than from a second portion opposite said first portion to form a pad which has its portion of greatest thickness nearer to said first portion of said edge than to said second portion of said edge, and with respect to a plane perpendicular to said flat surface and normal to said first and second portions of said edge, is bilaterally symmetrical; said pad being of such size that when worn in said dorsal depression with its convex surface adjacent the body of the wearer it substantially fills said dorsal depression and its flat surface is in a smooth and even contour with the body surface of the wearer along substantially the entire peripheral edge of the pad.

2,946,336
COMBINATION CIGARETTE HOLDER AND SMOKE GUARD
Mose Mathe, 2448 W. Superior St., Chicago, Ill.
Filed Aug. 12, 1955, Ser. No. 527,934
1 Claim. (Cl. 131—179)



A combination cigarette holder and smoke guard comprising a tapered sleeve having a pair of notches formed therein on opposite sides thereof toward the end of least dimension to define a ring at said end of said sleeve and a pair of mutually opposite narrow legs supporting said ring from a larger section of said sleeve and a transparent screen having a hole therein adjacent the bottom edge thereof frictionally binding on said sleeve beyond said notches toward the larger end thereof, said screen extending upward from said sleeve to deflect smoke from the burning end of a cigarette away from the eyes and nose of the smoker, said taper of said sleeve being proportioned to stop the insertion of a cigarette thereinto at a point where the end of the cigarette will be between the lips of a smoker when said ring is immediately behind the teeth of the smoker, said legs being formed to expose major portions of both top and bottom surface of said end of the cigarette.

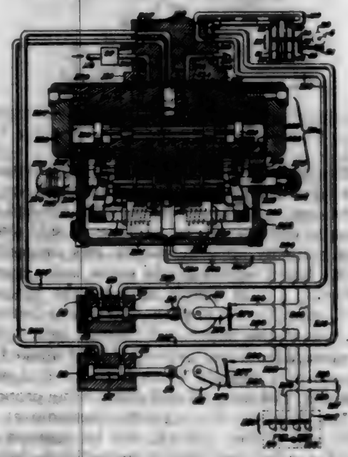
2,946,337
INFLATABLE SHELTER DEVICE
Louis Welshin, Hialeah, Fla., assignor of fifty percent to Stanley Axelrod, Miami Beach, Fla.
Filed Sept. 5, 1958, Ser. No. 759,384
1 Claim. (Cl. 135—1)



An inflatable and collapsible shelter device that comprises end walls and a rearwardly and downwardly curved top wall, the device having an open forward side and an open bottom, vertical tubes defining the forward edges of the end walls and a horizontal tube defining the forward

edge of the top, a continuous tube extending entirely around the open bottom of the device to constitute a base, the upper marginal edges of the end walls being defined by rearwardly and downwardly curved tubes, the end walls being provided with spaced apart vertically arranged tubes that communicate with the bottom defining tubes and also with the rearwardly curved tubes, the top being provided with a plurality of spaced apart parallel tubes that communicate with the downwardly curved tubes, webbing extending between the several tubes and connected thereto, all of the tubes being in communication, an inflation valve connected with one tube and whereby the several tubes may be simultaneously inflated to cause the end walls to be erect and with the webbing between the tubes being extended for completely closing the device upon its ends and top, the webbing between the several tubes being of a double thickness and with the webbing being air tight and water tight.

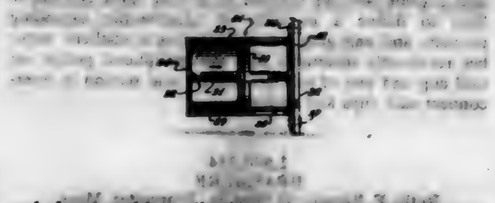
2,946,338
VALVE OPERATING MECHANISM
Russell S. Dubbs, Haddonfield, N.J., assignor to Philadelphia Gear Works, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 25, 1955, Ser. No. 503,450
8 Claims. (Cl. 137—22)



1. Mechanism for controlling a reversible turbine having a rotor with oppositely pitched vanes and separate nozzles respectively directed toward said vanes, said mechanism including channels leading respectively to the nozzles of the turbine; a selector valve having ports in communication respectively with the channels and an inlet port in communication with a source of pressure fluid; auxiliary valves of the slide plunger type interposed in the respective channels; and separate rotary cams having means connecting said cams to said turbine to cause rotation thereof in opposite directions to interrupt flow of pressure fluid to the nozzles by way of the respective channels after the turbine rotor has turned through a definite number of revolutions respectively in opposite directions.

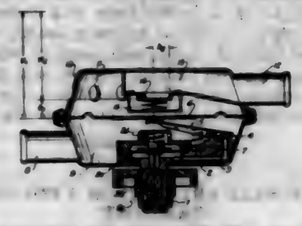
2,946,339
INERTIA VALVE
Merl K. Fairchild, Torrance, Charles W. Maxfield, Los Angeles, and Bernard F. Brady, Torrance, Calif., assignors to Northrop Corporation, a corporation of California
Filed Feb. 27, 1956, Ser. No. 567,785
3 Claims. (Cl. 137—38)

1. In an aircraft the combination comprising: a fuel cell mounted in said aircraft and including a ported partition dividing said cell into fore and aft compartments; a valve assembly including fore and aft unitary valves; said unitary valves include respective fore and aft cylindrical members each having a closed end, an open end, and a plurality of ports formed in the side walls thereof at positions adjacent said open ends; said fore and aft cylindrical members being mounted in said fore and aft compartments, respectively, with their open ends surrounding the port in said partition and secured to the latter in abutting relation; fore and aft sleeve members integrated respectively with said fore and aft cylindrical members for slideable movement between respective open



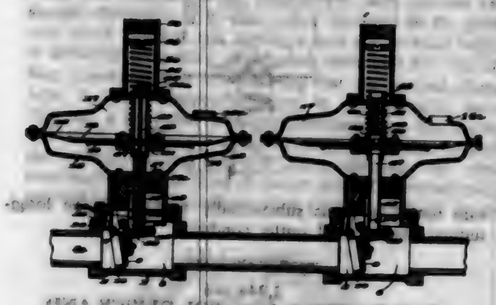
and closed positions allowing and arresting fluid flow between said compartments; resilient means adapted to maintain said sleeve members in their respective open positions at such times as said aircraft does not exceed a predetermined acceleration either in a fore or aft direction; and said sleeve members are responsive to inertial forces in that one of said sleeve members moves to its respective closed position while the other of said sleeve members is in its open position and the other of said sleeve members moves to its respective closed position while said one sleeve member is in its open position at such times as said aircraft exceeds said predetermined acceleration in fore and aft directions, respectively.

2,946,340
LUNG-CONTROLLED BREATHING VALVE
Franz Hoffman and Ernst Warncke, Lubeck, Germany, assignors to Otto Heinrich Dragur, Lubeck, Germany
Filed June 29, 1956, Ser. No. 594,936
Claims priority, application Germany July 1, 1955
1 Claim. (Cl. 137—63)



A lung-controlled diaphragm breathing valve comprising a housing containing an air inlet valve, a disk exhaust valve, an air inlet control diaphragm separating said inlet and disk exhaust valves and spaced from said exhaust valve a distance substantially equal to the effective radius of said disk valve, ports in said container for exposing the exhaust valve side of said diaphragm to water pressure, a lever extending between the center point of said diaphragm and said inlet valve for opening said inlet valve upon deflection of said diaphragm by water pressure, and spring means for urging said lever against said diaphragm, and said disk exhaust valve being axially aligned with the center point of said diaphragm so that the pressure required for opening said exhaust valve is substantially constant for the horizontal and inclined positions of the lung-controlled diaphragm valve.

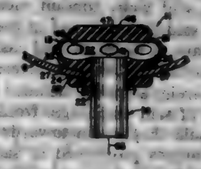
2,946,341
UNIDIRECTIONAL CHECK VALVE
Timothy J. Sullivan, Butte, Mont., assignor to Sullivan Valve and Engineering Company, Butte, Mont., a corporation of Montana
Filed Feb. 21, 1957, Ser. No. 641,648
3 Claims. (Cl. 137—116.5)



1. A uni-directional backflow check valve for a fluid supply line comprising in combination a valve housing having an inlet and an outlet, the interior of said housing being divided into an inlet chamber and an outlet chamber by a transverse wall having a valve seat therein; a main valve member, means for mounting said main valve member within said outlet chamber whereby said valve member is seated upon the valve seat to close the valve passage, said main valve member being freely removable from said valve seat by fluid flow from the inlet chamber to the outlet chamber but being closed upon the valve seat by fluid flow in the reverse direction; pressure motor means for retaining said main valve member upon its seat when the fluid pressure in said inlet chamber drops below a predetermined quantity comprising a pressure motor housing secured to said valve housing, a flexible diaphragm dividing said pressure motor housing into a lower pressure chamber and an upper pressure chamber, a hollow valve closure stem rigidly connected to and extending through said diaphragm, the lower end of said valve stem extending through an opening in the valve housing and terminating adjacent the valve member, said hollow stem providing communication between the valve outlet chamber and the pressure motor upper chamber, and spring means urging said diaphragm in a direction to cause said hollow valve closure stem to close the main valve member upon its seat; conduit means providing communication between said pressure motor lower pressure chamber and said valve inlet chamber to lift said diaphragm for raising said hollow stem from said main valve member when the pressure in said inlet chamber exceeds a predetermined value; said pressure motor housing having a backflow fluid venting opening in the wall of the upper pressure chamber and said hollow stem having means for providing continuous communication between the interior thereof and the valve outlet chamber for all positions of said stem; and pressure release valve means cooperating with said hollow stem for controlling the venting passage of backflow fluid passing therethrough from the valve outlet chamber to the pressure motor upper chamber venting opening.

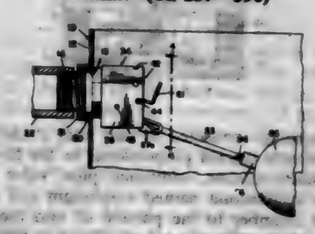
2,946,342
DRAIN VALVE
George Doppmaier, Rte. 1, Box 264B, Orland, Calif.
Filed Feb. 25, 1957, Ser. No. 642,076
5 Claims. (Cl. 137—217)

2. A valve for use in an aperture in the wall of a circular cylindrical pipe comprising a unitary rubber-like member including a plug adapted to be disposed in said aperture and having a channel extending therethrough, an outer flange projecting from said member to underlie said pipe around said aperture, an inner flange projecting from said member to contact said pipe around said aperture, said inner flange having a surface adjacent said pipe, said surface being tapered and conformed substantially to the arcuate curvature of said pipe wall,



a bulb merging with and extending radially beyond said flanges, said bulb having a plurality of apertures therein around the equator thereof, a cap included in said bulb in confronting relationship with said inner flange and of an extent to overlie said channel and to overlie at least a portion of said inner flange which is in contact with said pipe.

2,946,343
VALVE CONSTRUCTION
Vance C. Sterrett, 501 W. Linden Ave., Logansport, Ind., and William H. Peters, 218 N. East St., Montpelier, Ohio
Filed May 29, 1957, Ser. No. 662,477
7 Claims. (Cl. 137—390)

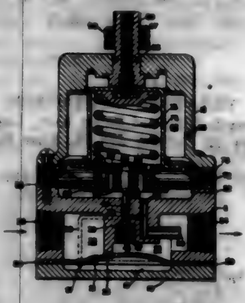


2. A flush tank valve assembly comprising a threaded body adapted for connection to a water inlet line and an actuator mechanism removably mounted on one end of said body, said body having a passageway therethrough, a valve ball carried by the body for limited free movement relative to and for opening and closing said passageway, means on said actuator mechanism to actuate said valve ball, said actuator mechanism including a portion movable toward and away from said end of the body and having a float ball attached thereto for effecting such movement in response to the rise and fall of water in an associated flush tank, said actuator mechanism including a hood removably secured on and maintained against movement relative to the body in the actuation of the valve and by means of which said mechanism is removably mounted on the body, said hood being of generally U-shaped configuration with an open bottom and having a wall thereof with an opening therein to receive said end of the body therein and having opposite side walls straddling and frictionally-resiliently gripping said body whereby the hood may be slipped onto and off of said body.

2,946,344
PRESSURE REGULATING VALVE
Richard C. Mott, Harwood Heights, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 10, 1958, Ser. No. 727,716
2 Claims. (Cl. 137—484.8)

1. A pressure regulator comprising, a casing having inlet and outlet means, a weir integral with said casing

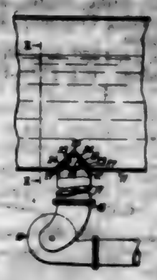
and positioned intermediate said inlet and outlet means, a slack diaphragm positioned within said casing and engaging with said weir to separate said inlet and outlet means and provide a chamber remote from said inlet and outlet means, aperture means in said diaphragm on said inlet side and communicating with said chamber such that inlet pressure may fill said chamber and urge said diaphragm towards said weir, conduit means connected at one extremity to said chamber and at the other extremity to said outlet means, a recess in said casing and a second diaphragm positioned across said recess and defining a pilot chamber therein, a spring included in said recess on the opposite side of said diaphragm from said pilot chamber and urging said diaphragm towards said pilot chamber, pilot valve means positioned in said casing and included in said conduit to said outlet means in said casing to control the inlet pressure in said first named chamber to control the position of said first named diaphragm, an aspirator tube in said casing and extending into said out-



let means being connected to said pilot chamber to provide a pressure therein proportional to the flow pressure at said outlet means, additional pilot valve means included in said second named diaphragm and connecting said pilot chamber to the portion of said recess in said casing in which said spring is positioned to vent said pilot chamber, and setting means positioning the extremity of said spring remote from said diaphragm to adjust the bias of the same on said diaphragm, said pilot valve means being operated by variation in pressure in said pilot chamber causing movement of said diaphragm against said spring to operate said pilot valve means to open said conduit to said outlet means for decreasing pressures in said pilot chamber below a predetermined value and to open said pilot chamber to said portion of said recess above said pilot diaphragm for increasing pressures above a predetermined value which predetermined value is controlled by the adjustment of said setting means positioning the extremity of said spring.

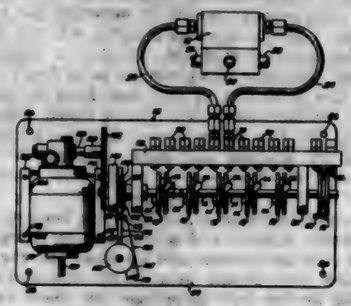
2,946,345
BAFFLE STRUCTURE FOR TANKS
Wilton W. Weltmer, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Jan. 24, 1957, Ser. No. 636,057
5 Claims. (Cl. 137—590)

3. A liquid containing unit comprising a partially filled liquid containing tank having a wall portion defining an outlet, an outlet conduit extending from said outlet, and a baffle structure positioned within said unit between said wall portion and a point over said outlet, said baffle comprising a plurality of spaced apart elbow vanes positioned in gradual inclines extending from said wall portion and converging toward said point; the outer portion of said vanes extending outwardly into said tank for receiving liquid converging on said outlet, the inner portion of said vanes extending in a direction substantially parallel to the longitudinal axis of said conduit, whereby liquid converging on said outlet is deflected by said vanes into



said outlet in paths substantially parallel to the longitudinal axis of said outlet conduit.

2,946,346
CAM-EQUIPPED CONTROL DEVICE AND DRIVE THEREFOR
Theodore E. Mead, Wilmette, Ill., assignor to Mead Specialties Company, Inc., Chicago, Ill., a corporation of Illinois
Filed June 19, 1955, Ser. No. 514,684
6 Claims. (Cl. 137—622)

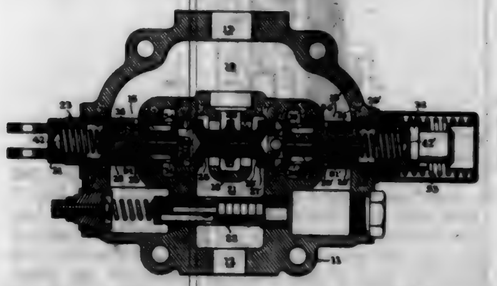


1. In combination, a drive shaft adapted to be continuously rotated, a driven shaft mounted for rotation and connected to said drive shaft by means of a clutch, discs mounted on said driven shaft and equipped with cam elements adapted to be aligned with pairs of movably-mounted valves for actuating said valves to open and closed positions, each of said discs being equipped with a peripheral groove with said cam elements releasably and adjustably secured in said groove and in spaced-apart relation, one of said cam elements extending laterally from said disc in one direction and another of said cam elements extending laterally of said disc in the opposite direction, said clutch comprising an operating lever equipped with a cam, a spring-urged detent normally connecting the driving and driven shafts, and means carried by said detent and engageable with said cam lever for releasing said detent and disconnecting said shafts when the lever is moved in one direction.

2,946,347
CONTROL VALVE HAVING A MOVABLE MEMBER CONTAINING COMBINATION CHECK AND RELIEF VALVE UNIT
Charles A. L. Rubl, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Apr. 22, 1959, Ser. No. 808,141
3 Claims. (Cl. 137—622)

1. A control valve having a housing containing a bore intersected by three ports which are spaced apart by

two fixed valve lands, there being an inlet port, an exhaust port, and an intermediate outlet port; a valve element movable in the bore to control communication between said ports; first and second chambers formed in the movable valve element; first and second passages extending through the surface of the movable valve element and communicating, respectively, with the first and second chambers; a by-pass valve mounted in the movable valve element and having a seat and a head which is shiftable in opening and closing directions for controlling communication between the first and second chambers; a third chamber formed in the movable valve element; a restricted passage interconnecting the second and third chambers; a pilot passage extending through the surface of the movable valve element and communicating with the third chamber; a relief valve normally preventing flow through the pilot passage; resilient means



biasing the by-pass valve head in the closing direction; first and second means responsive, respectively, to the pressures in the first and second chambers and urging the by-pass valve head in the opening direction; and third means responsive to the pressure in the third chamber and urging the by-pass valve head in the closing direction, the parts being so arranged that the movable control valve element has: a first position in which the first passage is closed by the fixed land between the inlet and outlet ports, the second passage communicates with the outlet port, and the pilot passage communicates with the exhaust port; a second position in which the first passage communicates with the inlet port, the second passage communicates with the outlet port, and the land between the exhaust and outlet ports closes the pilot passage; and a third position in which the second passage communicates with the outlet and the exhaust ports.

2,946,348
BALANCED ROTARY HYDRAULIC VALVES
John D. North, Evesley, Bridgnorth, Salop, England
Filed May 24, 1957, Ser. No. 661,345
Claims priority, application Great Britain Jan. 2, 1957
7 Claims. (Cl. 137—624)



1. A rotary hydraulic valve for selectively connecting one side of an actuator to a source of supply of liquid under pressure and the other side of said actuator to a lower pressure outlet, said rotary hydraulic valve comprising a cylindrical housing and a rotor rotatable within said cylindrical housing, said cylindrical housing having two opposed inlet ports, two opposed low pressure outlet ports and two pairs of opposed ports for connection one pair to each side of said hydraulic actuator, said rotor having channels disposed between lands arranged so as to be capable of closing said two pairs of opposed ports, the relative positions of said channels and all said ports being such that when the valve is open both high pressure inlet ports are connected to a corresponding pair of said pairs of opposed ports but only one of the other said pair of opposed ports is connected to one low pressure outlet port at any one time.

2,946,349
FAST OPERATING PLATE VALVE
Leland S. Hamer, Long Beach, Calif., assignor to Chiksan Company, Brea, Calif., a corporation of California
Filed Jan. 13, 1958, Ser. No. 708,510
8 Claims. (Cl. 138—94.3)



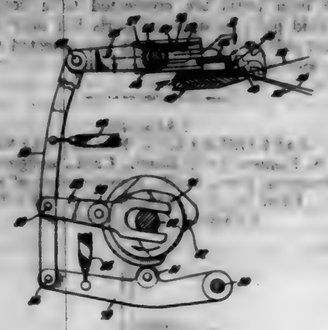
1. A plate valve comprising a body with a longitudinal flow passage extending therethrough, an enlargement intermediate the ends of the body and defining a laterally opening chamber extending transversely of the body and intersecting the flow passage, substantially opposed, longitudinally spaced relatively inclined seating faces in the chamber, a valve member having an imperforate end portion and an apertured end portion, said valve member being adapted to be related to the body with one of said end portions engaged in the chamber adjacent one of said seating faces, a rigid annular wedge shaped clamp element positioned within the chamber between the other seating face and the valve member and movable transversely with respect to said flow passage, and crank and lever actuating means carried by the body and operatively coupled to the clamp member so that the clamp member is moved thereby transversely with respect to said flow passage into tight wedging engagement with the seating face adjacent thereto and into clamped engagement with said valve member.

2,946,350
CUT AND LOOP AXMINSTER LOOM AND METHOD
Maurice W. Worth, Glasgow, Va., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Dec. 24, 1958, Ser. No. 782,972
9 Claims. (Cl. 139—7)

3. In a loom for weaving an Axminster fabric, an upper comb mounted on a shaft positioned transversely above the fell of the fabric being woven, a guide for said shaft, bearing means between the shaft and the guide, a first cam for controlling rotation of said shaft on the bearing means, connecting means between said first cam and the shaft, a second cam for controlling linear movement of the shaft in the guide, and connecting means between said second cam and the shaft.

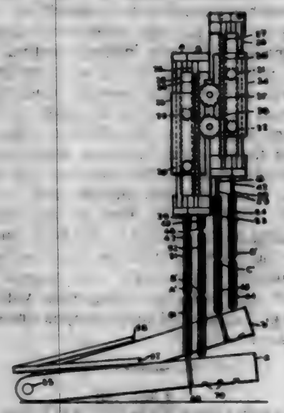
4. The method of weaving a loop pile Axminster fabric which comprises the steps of forming a first shed with at least two chain warps, wiping a series of pile yarns into said shed, inserting a filling weft into the shed in

back of said pile yarns, beating up the filling weft into the fell of the fabric and against the lower extremities of the pile yarns, maintaining the chain warps in the same shed position, severing all of the pile yarns to predetermined lengths, holding the lower extremities of the



pile yarns, folding over the severed pile yarn ends into the shed to form loops, reversing the chain warps to form a subsequent shed, inserting a filling weft in said subsequent shed, and beating up said last-named filling weft into the fell of the fabric.

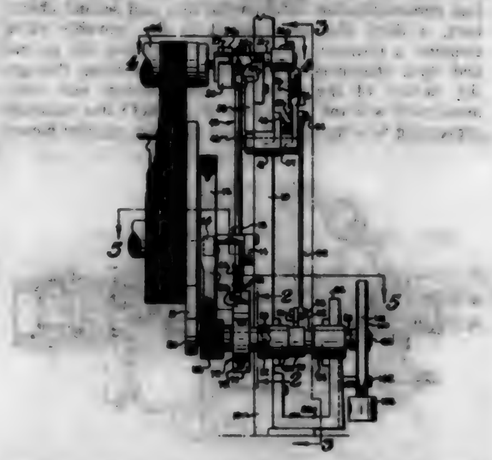
2,946,351
MANUALLY OPERATED LOOM
William C. Wetherill, 1673 E. Willow Grove, Cheltenham Township, Pa.
Filed Apr. 2, 1958, Ser. No. 725,944
2 Claims. (Cl. 139—33)



1. A hand loom comprising a pedal leaf connected by two metal links to a lam thereby depressing said lam when the pedal leaf is depressed, said lam connected by a pair of metal links to an equalizer, said equalizer being depressed when the pedal leaf is depressed, the equalizer being connected by a pair of metal links to a heddle frame which in turn is depressed by said equalizer, the heddle frame having a rack on each end thereof engaging a pinion to control the motion of an opposite heddle frame.

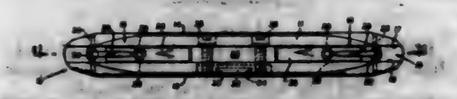
2,946,352
LOOM LET-OFF MECHANISM
Irma B. McKeown, P.O. Box 5091, Charlotte 6, N.C.
Filed Apr. 13, 1959, Ser. No. 806,125
4 Claims. (Cl. 139—110)

1. In a warp beam let-off for a loom having a frame, a warp beam with warp yarns wound thereon, and a movable whip roll over which said warp yarns pass, said whip roll being movable in response to variations in the tension of said warp yarns; said let-off comprising a gear carried by one end of said warp beam, a pinion engaging said gear, an eccentric sleeve oscillatably supported on said frame, a shaft rotatably supported in said eccentric sleeve, said pinion being fixed on one end of said shaft, brake means adjacent the other end of said shaft to frictionally resist rotation of said shaft, a one-way clutch carried by said shaft, an actuating lever connected at one



end to said clutch, actuator means operable in timed relation to operation of said loom, said actuator means being at times engageable with the other end of said actuating lever, link means operatively connecting said actuating lever with said movable whip roll whereby the position of said whip roll determines the position of the other end of said actuating lever in relation to said actuator means, and manually operable means for oscillating said eccentric sleeve to move said pinion into and out of driving engagement with said gear.

2,946,353
PILOTS FOR FILLING THREADS
George W. Dunham, Newtown Turnpike, Wilton, Conn.
Filed Sept. 25, 1958, Ser. No. 763,223
8 Claims. (Cl. 139—125)



5. A pilot for carrying a filling thread through a shed of warps, said pilot comprising an elongated member having ends adapted to receive propulsive force for propelling the pilot, a longitudinal groove in one side of the member, said groove intersecting said ends of said member, thread-gripping means disposed within said groove adjacent each end of said member, each of said thread-gripping means comprising a hooking element secured to said member and having an open end portion extending in the lengthwise direction of the groove above the bottom of the groove and a strip of resilient material disposed at the bottom of said groove and having a portion intermediate its ends normally contacting the underside of said open end portion of the hooking element, whereby a thread extending across said pilot and bending into said groove may be seized between said strip and said open end portion of said hooking element.

2,946,354
WIRE CLOTH SELVAGE FORMING MECHANISM
Clarence Eugene Webber and Jesse C. Smith, York, Pa., assignors to New York Wire Cloth Company, York, Pa., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,568
8 Claims. (Cl. 139—130)



1. Wire cloth selvage forming mechanism comprising a wire cloth weaving loom of the type arranged to position cut weft wires between the warp wires in the shed of said loom, said loom including a stationary frame, a reed bar operable to beat-up each weft wire after insertion thereof in said shed, and means to shift said shed after each weft wire is beat-up within the shed to lock said wire within the weave, the opposite ends of each weft wire initially projecting respectively axially outward beyond the opposite edges of the weave of the cloth when said weft wire is locked into said weave; in combination with shafts supported by said stationary frame adjacent the opposite outer edges of the weave and substantially vertical to the plane of the weave, substantially straight cantilever-type tucking blades respectively supported for rotation at one end about the axes said shafts and extending radially therefrom substantially within the plane of the weave for oscillatory movements of the blades in opposite directions successively into and out of the shed of the weave, one edge of each blade being grooved, and actuating means interengaging said blades and operable to rotate the same simultaneously in one direction while said reed bar is retreating from beat-up position to move said other ends and grooved edges of said blades respectively in directions to bend the projecting ends of said locked weft wire into the shed and to rotate said blades subsequently in the opposite direction simultaneously to remove said blades from the shed before the next inserted weft wire is beat-up into the shed.

2,946,355
AXMINSTER PILE FABRIC
Maurice W. Worth, Glasgow, Va., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Jan. 27, 1959, Ser. No. 789,435
7 Claims. (Cl. 139—401)



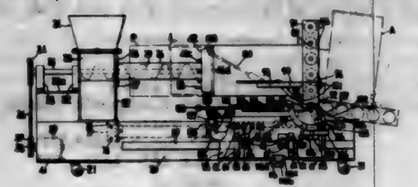
1. A loop pile Axminster fabric comprising a plurality of double filling wefts, rows of loop pile projections secured under and around some of said filling wefts, the leading end of each loop projection being secured under a double filling weft and enclosed within the loop, and the trailing end of each loop being wrapped in the same direction around a succeeding filling weft.

2,946,356
TWISTER-HOOK
Robert G. Young, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Nov. 29, 1956, Ser. No. 625,173
2 Claims. (Cl. 140—119)



1. In a wire tying mechanism, a twister hook comprising a shaft rotatable about its longitudinal axis, said shaft having a body of one diameter and a neck at one end of reduced diameter, said neck having a pair of diametrically opposed flats which form a pair of shoulders at diametrically opposite sides of said shaft where the neck adjoins the body, said shoulders extending perpendicular to said longitudinal axis, an arcuate hook extending transverse to said shaft axis and having a U-shaped portion at one end extending around said neck and engaging said shoulders, a single member extending transversely through said shaft and the respective legs of said U-shaped portion of said hook for pivotally connecting said hook to said shaft, and the legs of said hook each having a rectilinear edge remote from the outer end of said neck engaging its associated shoulder to thereby prevent pivotal movement of said hook about said connecting means.

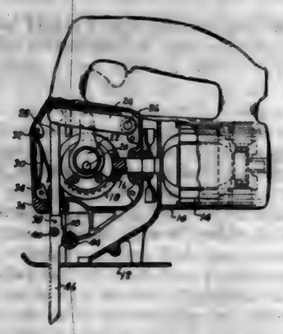
2,946,357
APPARATUS AND METHOD FOR PACKING PULVERULENT MATERIAL
Albert C. Hobbie, Moorestown, and Joseph W. Holdcraft, Oaklyn, N.J., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Mar. 3, 1958, Ser. No. 718,697
15 Claims. (Cl. 141—5)



9. A method of packing a pulverulent material into a container having a bottom and side walls, which method comprises mixing said pulverulent material with air in an amount to obtain a fluent mixture of the two, sealing a filter around a feed tube at the discharge end thereof, the filter having a diameter substantially greater than the diameter of the tube, inserting the outlet end of the tube with the filter thereupon into said container near the bottom thereof, sealing between the outer perimeter of the filter and the inner face of the container wall,

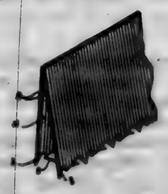
continuously discharging a stream of said fluent mixture through the tube and starting in a zone near the bottom of the container, the material being discharged at a velocity to exert fluent pressure in all directions from the discharge end of the tube, passing the entrapped air through said filter and holding back the pulverulent material, whereby the pulverulent material is packed between the bottom of the container and the inner face of the filter over substantially the entire area of each, backing off the filter at a rate which develops the desired packing pressure and continuing to discharge the fluent mixture between it and the packed material in the bottom of the container until the latter is filled to the desired degree.

2,946,358
SABER SAW
John P. Bruck, Toledo, Ohio, assignor to American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio
Filed Nov. 28, 1958, Ser. No. 777,093
2 Claims. (Cl. 143—68)



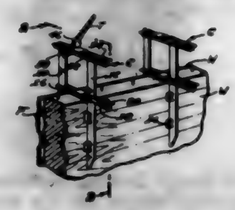
1. In a saber saw having a body and a reciprocating blade holder, the improvement comprising a blade guiding means on said body, a blade removably attached to said holder, said blade having a cutting edge and a back edge thereon, and a projection on the back edge of said blade cooperating with said guiding means, said projection forming a cam surface having a substantially flat portion for maintaining substantially linear motion of said reciprocating blade during a major portion of the stroke and a curved portion at an end of said flat portion extending to the back edge of said blade for imparting a curvilinear movement to said blade during at least a portion of its reciprocation by said blade holder.

2,946,359
BLADES OF SAWS
Paul Debourdeau, 14 Rue Geoffroy-St. Hilaire, Paris V°, France
Filed May 16, 1957, Ser. No. 659,575
3 Claims. (Cl. 143—133)



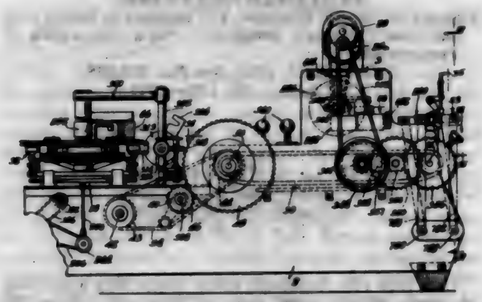
1. A saw blade having a hollow transverse section forming a longitudinal passage along the whole length of said blade, two longitudinal cutting edges formed on said blade, said cutting edges being spaced apart in parallel longitudinal planes, and each cutting edge comprising a plurality of longitudinally disposed saw teeth, a plurality of transversely disposed planing teeth formed in the space between said saw teeth, and a plurality of orifices formed in said blade in the vicinity of said teeth, whereby the sawdust or cuttings pass into said passage and are evacuated through the interior of said saw blade.

2,946,360
CONCRETE FORM CLAMP
Elnar R. Solo, 1830 Temple Ave., Long Beach, Calif.
Filed June 16, 1958, Ser. No. 742,290
2 Claims. (Cl. 144—291)



2. A clamp, to be placed upon a concrete form by a spreading lever, said clamp for supporting the walls of said form, comprising: first and second elongate members for engaging the exterior said walls, said first elongate member having a first connector in one end thereof; first and second transverse members each including a pair of spaced-apart angular-cross section members each having surfaces in a common plane joined by a plate affixed to said surfaces, said first transverse member pivotally-connected to each of said elongate members at locations remote from the ends thereof, said second transverse member having one end pivotally-connected to an end of said second elongate member and having a second connector at the other end thereof, said second connector having a mating contour to said first connector; the plate affixed to said second transverse member comprising a fulcrum member for receiving said lever which also engages said first elongate member and thereby spreads said clamp to enable said connectors to be mated.

2,946,361
FRUIT ORIENTING, TRANSFERRING, SPLITTING, AND PITTING MACHINE
Henry A. Skog, Olympia, Wash., and Richard D. Fox, Richmond, Calif., assignors, by mesne assignments, to Canning Equipment Co., Olympia, Wash., a corporation of Washington
Filed Feb. 10, 1949, Ser. No. 75,602
20 Claims. (Cl. 146—28)



9. In a fruit preparation machine for peaches and like sutured fruit, a conveyor, means operatively associated

with the conveyor for engaging and rotating the fruit about its center until the suture plane of the fruit lies in a predetermined plane, means operatively associated with the rotating means for supporting the fruit after the suture plane of the fruit is so oriented, means for causing a relative displacement between said supporting means and said fruit rotating means to disengage the rotating means from the oriented fruit, and means operatively associated with the fruit supporting means and operable upon said relative displacement to abduct the oriented fruit from the supporting means.

13. In combination, a pair of spaced fruit conveyors operable in paths normal to each other, transfer means operatively associated with said pair of conveyors and including a supporting member shiftable along a path parallel to the path of movement of one conveyor and a fruit carrier mounted for movement relative to said member in a plane parallel to the path of movement of the other conveyor for transferring the fruit from one conveyor to the other conveyor, means for moving the conveyors continuously at predetermined uniform rates, means operatively associated with said one conveyor for orienting the fruit as to suture plane during movement of said one conveyor, means for synchronizing the movement of the supporting member of the transfer means with the movement of said one conveyor and for moving the carrier of the transfer means relative to said member in timed relation to said other conveyor to transfer an oriented whole peach from said one conveyor to said other conveyor without interrupting the movement of either conveyor, means operatively associated with said other conveyor for halving the oriented fruit through its suture plane without interfering with the movement of said other conveyor, and means operatively associated with said other conveyor for thereafter pitting said fruit halves without interrupting the movement of said other conveyor.

2,946,362
FOOD SLICER BLADE ENGAGEMENT
Frank E. Aberer, Fairway, Kans., and Henry J. Talge, Kansas City, Mo.; said Aberer assignor to said Talge, % Rival Manufacturing Co., 36th and Bennington, Kansas City, Mo.
Filed May 11, 1959, Ser. No. 812,316
6 Claims. (Cl. 146—102)



1. In combination, a circular slicer blade, a hollow shaft fixed to the center of one face of said blade, a circumferential rim on the free end of said hollow shaft, a cutting head having a concave inner and a convex outer face, a stub shaft fixed to the inner face of the cutting head adapted to be inserted in the blade hollow shaft, a pair of arms pivotally mounted on the inner face of the cutting head on opposite sides of the stub shaft and spaced outwardly from said inner face a distance at least equal to the circumferential rim thickness on the blade hollow shaft, means resiliently urging the arms normally toward the stub shaft, and means for simultaneously urging the arms away from said stub shaft operable from the outer face of the cutting head.

2,946,363
PLASTIC FOLDERS AND LIKE CONTAINERS FOR FLAT ARTICLES
Walter Lennartz, Stedingstrasse 19, Dachau, Germany
Filed Feb. 18, 1957, Ser. No. 640,973
7 Claims. (Cl. 150—1)



1. A folder made from thermoplastic material comprising a seamless body of thermoplastic material having a pair of cover parts integrally joined by a centrally disposed reinforced ledge, said ledge being preloaded so as to be under tension so as to urge said cover parts towards each other.

2,946,364
HANDBAGS
Morris White, 785 Park Ave., New York, N.Y.
Filed Oct. 16, 1958, Ser. No. 767,667
6 Claims. (Cl. 150—28)



1. A lady's handbag comprising a body including exterior fabric, stiffener and liner and a metallic frame therefor, said frame being U-shaped in transverse cross section and encompassing the edge of the body and clenched thereto, one side wall of the U-shaped frame being inside the bag, a plurality of hollow indentations in the metal frame, extending inward from said side of the frame inside the frame and being spaced at intervals along the length of said frame, said indentations being relatively stiff and each having a sharp entry edge penetrating the liner and embedded in the stiffener of the body for firmly anchoring the rim of the body in the clenched frame.

2,946,365
TIRE CHAIN FASTENER
William J. Tinson, Buffalo, N.Y.
(272 Grattan St., Harrisonburg, Va.)
Filed June 22, 1959, Ser. No. 821,984
13 Claims. (Cl. 152—213)

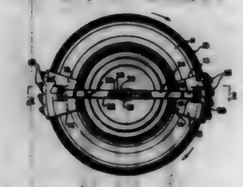
1. A non-skid device for vehicle tires comprising, in combination with a wheel having a tire thereon, a pair of elongated side members extending around said tire on opposite sides thereof, multiple cross members extending across said tire and interconnecting said side members at spaced points therealong, a generally U-shaped end member at each of the opposite ends of said pair of side mem-

bers, said end members being connected to said side members and extending therebetween across said tire, and means for securing said device on said tire including



means carried by said wheel on opposite sides thereof and movable relative thereto to releasably engage at least one of said end members on opposite sides of said wheel.

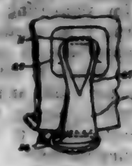
2,946,366
TIRE TRACTION ATTACHMENT
Joel Saperstein, 211—11B Hillside Ave., Queens Village, N.Y.
Filed July 15, 1958, Ser. No. 748,665
6 Claims. (Cl. 152—218)



1. A traction attachment for a vehicle wheel tire casing comprising a pair of cleat members adapted to engage diametrically opposed areas of a tire casing, and a flexible connector assembly of adjustable length extending between the cleat members, said connector assembly including a pair of outer strap sections connected to the respective cleat members, and an intermediate strap section having a detachable connection at one end to one outer strap section and having an adjustable connection at its other end to the other outer strap section, said detachable connection comprising a buckle, said adjustable connection between the intermediate strap section and said other outer strap section comprising a bar pivoted on said outer strap section, said bar having a pivotal connection intermediate its ends to the intermediate strap section, whereby on swinging of the bar about its pivotal connection to the outer strap section, it will move the intermediate strap section into overlapped relation to the bar-supporting outer strap section, said adjustable connection further including a locking sleeve slidable longitudinally of said other outer strap section and movable into overlying relation to the overlapped portions of the sections and to the locking bar to hold the locking bar in its operative, locking position.

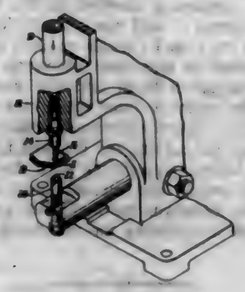
2,946,367
AUTOMOBILE TIRE WITH MEANS FOR ATTACHMENT OF CHAINS, TIRE BOOT, ETC.
Edward J. Zeitlin, Peekskill, N.Y. (Apple Hill, Purdy, N.Y.)
Filed July 10, 1957, Ser. No. 670,894
4 Claims. (Cl. 152—222)

2. The combination of a pneumatic tire and a plurality of resilient tire straps which includes a plurality of separate equally spaced lugs positioned along each wall of said tire and formed integrally with the tire, said tire straps provided with means to attach said strap to one lug on each side of said tire, said straps formed with a



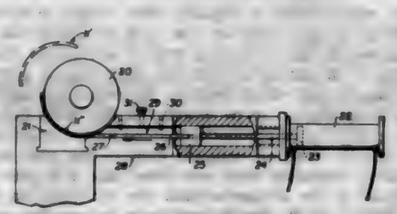
plurality of laterally spaced apertures in the portion of the strap adjacent the tread of the tire and a metal loop mounted through each aperture to form a tread surface.

2,946,368
EYELETING MACHINES FOR WIRE TERMINAL FORMING
Richard D. Dexter, Beverly, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed June 19, 1957, Ser. No. 666,621
5 Claims. (Cl. 153—1)



1. A device for pre-forming a divided loop on the end of a multi-strand electrical conductor wire comprising: an upstanding spindle provided with a pair of contiguous sides tapered to form a sharply defined longitudinal front edge against which the end of the wire may be advanced to divide the strands into two groups that progressively diverge as the strand ends pass rearwards beyond said edge; and deflecting means engageable with said divided ends beyond said spindle sides to bend and guide the ends of each group into converging paths, said means comprising a concaved wall surface spaced apart from but surrounding the rearward portion of the spindle.

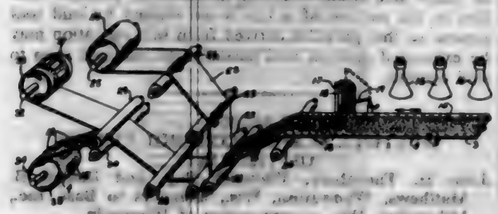
2,946,369
METHOD OF BENDING SINTERED MATERIAL
Robert W. Biggs, Shaker Heights, Ohio, assignor to The S. K. Wellman Company, Bedford, Ohio, an Ohio corporation
Filed June 18, 1957, Ser. No. 666,319
1 Claim. (Cl. 153—48)



The method of bending a sintered compact of powdered materials arranged in a flat strip, which method comprises applying pressure longitudinally to one end

of the strip to force the opposite end thereof and eventually the whole strip lengthwise between curved restraints relatively fixed as regards spacing between them, said spacing being sufficiently less than the thickness of the strip to impose a cross-pressure and place the neutral axis of bending outside the material and on a side opposite the bending fulcrum so that all the sintered compact is placed in compression and cracking thereof is avoided.

2,946,370
TRANSFERRING PRESSURE SENSITIVE MASS
William H. Mattera, Jr., Mequon, Wis., assignor to W. H. Brady Co., Glendale, Wis., a corporation of Wisconsin
Filed May 22, 1957, Ser. No. 660,876
9 Claims. (Cl. 156—1.6)



6. An apparatus for the transfer of adhesive to an article comprising a supply spool for supporting a roll of flexible liner paper; an adhesive applicating roll; an adhesive fountain adjacent said roll for applying a continuous layer of adhesive to liner paper drawn between the applicating roll and fountain; heating means in heating relation to a liner paper drawn past the applicating roll; a dispenser adapted to place a plurality of articles in spaced relation upon an adhesive coated liner that has moved past said heating means; and adhesive removing means that bridges across the articles to bear against both the articles and areas of said liner to the sides of the articles, which adhesive removing means has an adhesive attractive surface adapted to remove adhesive from the liner that is exposed to the sides of the articles.

2,946,371
METHOD OF MAKING THERMAL PIPE INSULATION
Joseph F. Stephens, Kansas City, Mo., and Glenn W. Kerr, Mission, Kans., assignors to Gustin-Bacon Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Original application Nov. 5, 1952, Ser. No. 318,856, now Patent No. 2,778,759, dated Jan. 22, 1957. Divided and this application July 24, 1956, Ser. No. 599,269
9 Claims. (Cl. 154—33)



1. A method of making thermal pipe insulation including the steps of forming glass filaments into ultra-fine glass fibers having an average diameter of less than ten microns by subjecting the filaments to the action of a hot gaseous blast, simultaneously spraying the ultra-fine glass fibers with a binder at a rate to provide between seventeen percent and fifty-five percent by weight of binder based on the weight of the glass fibers, continuously collecting the sprayed ultra-fine glass fibers to form a mat, winding the mat upon itself upon a mandrel to form a hollow cylinder, molding the cylinder while on the mandrel to a density between two pounds and five pounds per cubic foot and simultaneously setting the binder.

2,946,372
BICYCLE SADDLE CLAMP
Harold E. Kaiser, Elyria, Ohio, assignor to Troxel Manufacturing Company, Elyria, Ohio, a corporation of Ohio
Filed Oct. 2, 1957, Ser. No. 687,799
2 Claims. (Cl. 155—5.24)

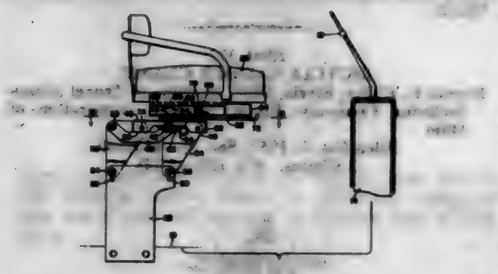


1. A cycle saddle clamp adapted to engage the reach members of a saddle and to be telescoped over a saddle post in a fixed adjusted position on said post, said clamp comprising outer and inner pairs of centrally apertured clutch plates, said clutch plates having radially grooved clutching surfaces whereby said inner clutch plates engage said outer clutch plates in a plurality of circumferentially adjusted positions, said inner clutch plates being integrally united by means of a web at one edge thereof, and having free ends diametrically opposite said web, a spacer member interposed between said clutch plates, said spacer member comprising a pair of generally parallel arm portions having apertured and non-apertured ends and being joined at the non-apertured ends thereof by means of a yoke, said yoke interposed between the free ends of said clutch plates, said yoke adapted to maintain said free ends of said clutch plates in substantially similar interspaced relationship to the opposite ends of said clutch plates, said outer clutch plates adapted to engage apertured reach members of a cycle saddle, a bolt having a nut thereupon projecting through said apertures in said reach members, said outer and inner pairs of clutch plates, and said arms, said saddle post telescopically interfitted within said web and interposed between said web and said bolt whereby the tightening of said bolt and nut effect sufficient inward distortion of said web and said inner clutch plates to firmly grip said post.

2,946,373
BI-POSITIONABLE SEAT
James E. McCanse, Moline, and Albert J. Van Auweleer, East Moline, Ill., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,403
4 Claims. (Cl. 155—90)

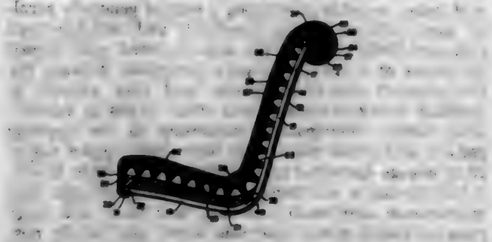
1. In a bi-positionable seat and a support therefor, the improvement residing in means connecting the seat to the support for fore-and-aft shifting between a high rear position and a low forward position, comprising: parallel front and rear levers respectively having fulcrumed ends mounted on the support on front and rear transverse fulcra for swinging between generally upright positions rising from the support and lower positions depending from the support, each lever having a terminal end and including a transverse pivot at its terminal end and a transverse pivot intermediate said ends; each lever being so constructed that its terminal end and intermediate pivots and its fulcrum are triangularly arranged so that

in the high rear position of the seat the terminal end pivots are rearwardmost and the intermediate pivots are forwardmost and in its low forward position the terminal end pivots are forwardmost and the intermediate pivots are rearwardmost; a pair of parallel fore-and-aft links connecting the levers and including a first link connected at opposite ends to said terminal end pivots and a second



link connected at opposite ends to the intermediate pivots for fore-and-aft swinging of the levers about said fulcra, said second link lying below the first link and arranged to engage said first link from below to provide stop means limiting fore-and-aft swinging of the levers and links to achieve the two positions of the seat; and means mounting the seat on one of the links.

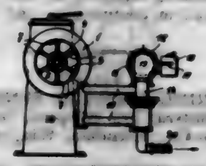
2,946,374
SEAT CONSTRUCTION AND THE LIKE
John W. Dickey, Ridgewood, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Sept. 30, 1957, Ser. No. 687,223
4 Claims. (Cl. 155—179)



1. A seat construction comprising a rigid frame having a seat portion and an integral back rest, said seat portion and back rest having a plurality of continuously extending V-shaped ribs, a seat cushion comprising a block of foamed material resting only on the apices of the ribs of said seat portion, and a cushion member of foamed material having the under surface thereof grooved to form projections to engage the upper surface of said seat cushion and the ribs of said back rest, and wherein said projections extend transversely of said ribs.

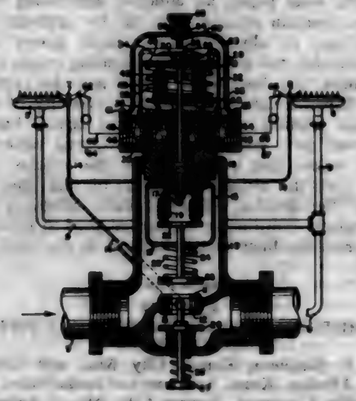
2,946,375
PROCESS OF AND MACHINE FOR TREATING USED TIRES
Karl Zingl, Belgradstrasse 215–217, Munich 13, Germany
Filed Apr. 23, 1956, Ser. No. 580,125
Claims priority, application Germany Oct. 24, 1955
3 Claims. (Cl. 157—13)

1. A machine for treating the surface of a tire comprising a tool supporting frame member including a hollow upright stem and two oppositely positioned suction passageways extending laterally from said stem, said passageways being provided with hoods, respectively, a motor supported by said frame member between said suction passageways, a rotatable shaft operated by said motor and extending into each of said suction passageways, rotatable tire scraping tool means located within said passageways and mounted on said shaft, each hood having an upper portion adapted to extend over said tool means to shield the latter, said suction passageways including a conduit leading away from said stem, and means



for connecting said frame member with a tire support to locate said frame member in operative position relative to the surface of a tire to be treated by said tool means, so that particles derived from said operation may be exhausted through said passageways and said stem to said conduit.

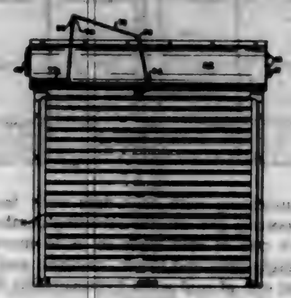
2,946,376
MULTIPLE BURNER CONTROL SYSTEM OR THE LIKE
John H. Thornbery, Whitefish Bay, and Russell B. Matthews, Wauwatosa, Wis., assignors to Base Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Apr. 5, 1954, Ser. No. 421,972
11 Claims. (Cl. 158—131)



8. A control device for connection with any desired number of like control devices to provide a unitary control apparatus sensitive to a corresponding number of conditions comprising in combination, an electrically conductive base provided with an externally threaded projection, an insulated terminal forming with said projection first connector means, said base also being provided with a pair of identical internally threaded recesses complemental to said projection, an insulated terminal within each of said recesses forming therewith second and third connector means, circuit controlling means in series circuit with the terminals of said first and second connector means and having first and second circuit controlling positions, means biasing said circuit controlling means toward said first circuit controlling position, electromagnetic holding means energizable to hold said circuit controlling means in said second circuit controlling position when moved thereto against said biasing means, said holding means comprising an electromagnet winding having one end in circuit with the terminal of said third connector means and having the other end thereof grounded to said base, each of said second and third connector means being adapted to selectively receive therein

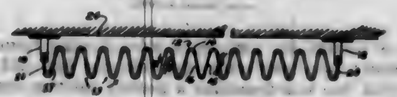
a complemental connector means of a given load connector or the first connector means of a like control device.

2,946,377
TEMPERATURE-OPERATED ROLLING STEEL DOORS
Maurice B. Zoll, Lynnwood, Marshall T. Brown, Norfolk Highlands, and Robert M. Smith, Jr., Virginia Beach, Va., assignors to The J. G. Wilson Corporation, Norfolk, Va., a corporation of Delaware
Filed Mar. 17, 1952, Ser. No. 721,808
12 Claims. (Cl. 160—8)



1. In combination, a rolling door, a supporting shaft about which said door may be rolled, means to counterbalance the weight of said door, means to overcome the action of said counterbalancing means comprising escapement means adjacent one end of said shaft, an extension therefrom towards said shaft, a door-closing spring with one end portion connected to said extension, tensioning means for the door-closing spring movable with respect to said shaft and with an inner end portion connected to the inner end of said spring, means normally checking the action of said overcoming means by stopping movement of said escapement means, and means rendering inoperative said checking means and allowing the door to close when the ambient temperature rises to a predetermined extent.

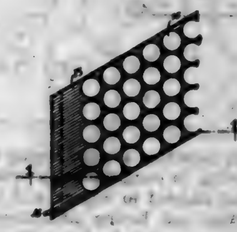
2,946,378
CURTAIN SUPPORT
Carl H. Nordell, Crystal Bay, Nev.
Filed June 20, 1957, Ser. No. 666,844
4 Claims. (Cl. 160—348)



1. A curtain rod for mounting solely between two end brackets comprising an elongated strip of flat steel preformed in corrugated form having return bends and runs between bends extending generally transverse to the linear direction of the strip and the bends formed about axes parallel with the surfaces of the flat sides of the strip, the strip thus formed having a normal operative position in which said runs between bends are disposed horizontally, the strip being sufficiently resilient to be manually extensible a substantial distance in longitudinal direction against the action of said bends and being, in said normal operative position and in any position of extension, of sufficient rigidity as to be self-sustained between said end brackets and to retain said bends therein.

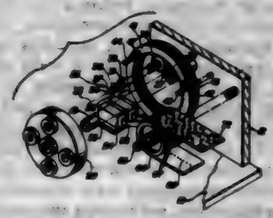
2. A curtain support and bracket assembly comprising a curtain support formed of an elongated resilient strip having preformed manually extensible corrugations therein forming return bends and runs between bends extending generally transversely of the linear direction of the support, the support having flat strap end portions extending generally transversely, and brackets adapted for mounting on a wall, each bracket having a base portion adapted for mounting on the wall and an arm portion extending generally perpendicularly outward from the wall and having a slot in its outer end, the slots in the brackets being inclined vertically relative to each other in diverging directions and the said flat strap end portions of the support being insertable into the openings and when so inserted bent horizontally out of their normal position whereby they are frictionally held in the openings.

2,946,379
COVER FOR THE SUCTION BOX OF PAPER MAKING MACHINES
Henrik Vilmi Asiero Wartsilaan, Objoujantie 36D, Helsinki, Finland
Filed July 13, 1955, Ser. No. 521,906
4 Claims. (Cl. 162—374)



1. A suction box cover block for use in a paper making machine having a conveyor element, said cover block comprising a series of thin elongated strips of wood veneer held assembled together in face to face relationship by a water insoluble adhesive to form said cover block, said cover block having a plurality of suction openings formed therein which extend therethrough in the direction of the thickness thereof, the grain of said wood extending transversely of said strips between the edges thereof and in the direction of the thickness of said cover block to provide an end-of-grain working surface on said cover block adapted for engagement with said conveyor element, said cover block being impregnated with an esterified pine wood resin for enhancing its resistance to wear.

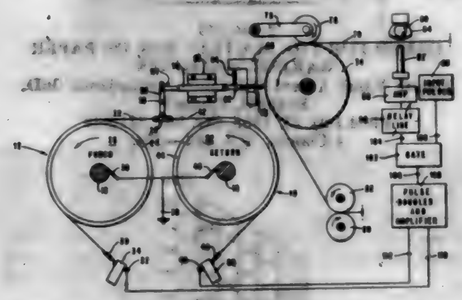
2,946,380
HIGH SPEED PUNCH
Albert W. Scribner, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed June 2, 1958, Ser. No. 739,117
12 Claims. (Cl. 164—111)



1. In a record punch; a frame, a record feeding and supporting means, at least one punch supporting member rotatably mounted in said frame, a plurality of punch elements spaced and rotatably supported about the periphery of said member and adapted to selectively cooperate with

bores formed in the periphery of said record supporting means, a planetary gear connected to each of said punch elements, a plurality of ring gears shiftably mounted in said frame, said ring gears respectively cooperating with said planetary gears, and means for selectively rotatably indexing said ring gears.

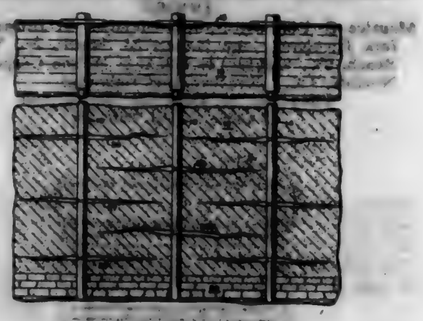
2,946,381
HIGH SPEED TAPE PUNCH
Joseph E. Listwin, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 2, 1957, Ser. No. 687,695
1 Claim. (Cl. 164—115)



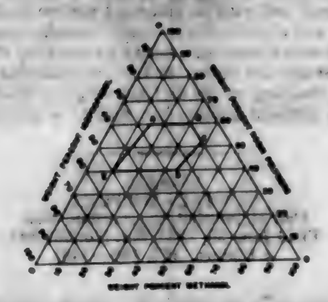
Apparatus for punching a tape, having timing indicia thereon comprising, in combination, a cylinder mounted for rotation and adapted to engage said tape about its peripherial surface and having circumferential grooves about its periphery, means feeding a tape around said cylinder, a plurality of punches, each mounted for movement into and out of a respective one of said grooves in said cylinder and for pivotal movement with respect to direction of movement of said tape and effective to perforate said tape upon entry in a respective one of said grooves, a plurality of pairs of first and second electro-adhesive clutches operable in response to electrical pulses, means coupling each of said punches to one of said pairs of clutches for movement of each respective punch into its groove when its first clutch is operated and movement in the opposite direction out of said groove when its second clutch is operated, and selectively operable means synchronized with said indicia on said tape for sequentially providing pulses to pairs of said first and second clutches.

2,946,382
PROCESS FOR RECOVERING HYDROCARBONS FROM UNDERGROUND FORMATIONS
Mehmet R. Tek and Andrew F. Bertuzzi, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 19, 1956, Ser. No. 610,753
8 Claims. (Cl. 166—11)

1. A process for recovering hydrocarbons from an underground permeable formation containing combustible carbonaceous material comprising providing in said formation a first well and a plurality of wells surrounding said first well, all of said wells extending to and being cased to a lower section of said formation; perforating the casing in said first well at an intermediate level of said formation and fracturing said formation horizontally thru the resulting perforations in said casing to form an intermediate fracture extending to areas adjacent the casings of the surrounding wells; perforating the casings in said surrounding wells at levels above and below said intermediate level and fracturing said formation horizontally thru the resulting perforations in said casings to an area adjacent said first well to form upper and lower fractures so that the fracture systems around said surrounding wells communicate directly with said wells and are sealed from said first well and the fracture system around said first well communicates directly with said first well and is sealed from said surrounding wells; propping the aforesaid fractures open; initiating combustion in said formation along the fracture communicating with said first well; feeding combustion-supporting gas into the resulting combustion zone thru at least one of said wells so as to move same toward both said upper and lower fractures; and recovering from at least one of said wells hydrocarbons driven from the formation by the combustion.



2,946,383
SHUTTING OFF WATER IN WELLS
William G. Reardon, Robert P. Murphy, Jr., and Plathe P. Scott, Jr., Tulsa, Okla., assignors to Pan American Petroleum Corporation, a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,277
6 Claims. (Cl. 166—33)



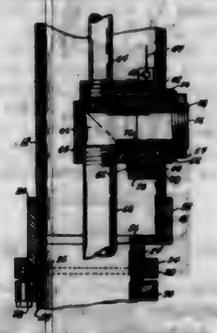
1. A method for plugging a water-bearing formation penetrated by a well comprising injecting into said well and then into said formation a treating solution containing from about 40 to about 60 percent by weight of rosin polymers having an average molecular weight of at least about 450 and a softening point of at least about 100° C., in an oil-soluble solvent for said rosin polymers, said solvent being miscible in all proportions with water.

2,946,384
WELL COMPLETION AND WELL PACKER APPARATUS AND METHOD
Cicero C. Brown, 2216 Campbell St., Houston, Tex.
Filed July 21, 1955, Ser. No. 523,644
11 Claims. (Cl. 166—46)

10. The method of completing a well having a production zone and containing a weighted fluid which consists in, positioning a tubing string having an unset well packer thereon within the well to locate the well packer above the producing zone, thereafter installing well head control equipment at the surface of the well, supporting the tubing string from the well head control equipment, then circulating the weighted fluid out of the well, then setting the well packer while the tubing string remains stationary and the well head control equipment remains in place, and thereafter producing well fluids from the producing zone through said tubing string.

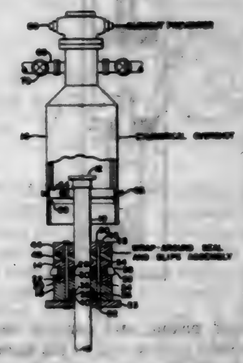


2,946,385
WELL SYSTEM
Robert W. Dicken, Box 41, Arcadia, Okla
Filed Sept. 5, 1956, Ser. No. 608,082
2 Claims. (Cl. 166—88)



1. In a well having a hollow cylindrical casing and a pipe in said casing, means for discharging fluid from the well through said pipe and a port in the casing below the upper terminus thereof, a first structural unit within the casing providing a flat portion with parallel side edges and a tubular nipple extending from said flat portion through said port, means engaging said nipple outside said casing to seal the port about said nipple and fixedly mount said parallel edges of said flat portion against the inner wall of said casing to compensate for casings of different inside diameters; the opposite side of said flat portion of said unit providing a first surface remote from said nipple, and a duct from said nipple through said first surface; a second structural unit providing a second surface and having an elbow duct therein connected to said pipe in said casing and extending through said second surface for registry with the duct in said first structural unit, a channel in one of said surfaces surrounding said duct through that one surface, a deformable gasket in and protruding from said channel, means on one of said structural units for guiding said surfaces in relative parallel movement in and out of alignment of said ducts through said surfaces, said guiding means including a pair of parallel grooves of uniform cross-section throughout their lengths for holding said other of said surfaces into compressing engagement with said gasket, and stop means on said structural units between said parallel grooves for positively and solely supporting said second structural unit and said pipe connected thereto and for limiting said parallel movement of said surfaces to align said ducts through said surfaces.

2,946,386
LATCHING OVERSHOT WELL BLOWOUT CLOSURE DEVICE
Marvin R. Jones, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company
Filed Aug. 2, 1957, Ser. No. 675,971
5 Claims. (Cl. 166—95)



1. A latching overshot well blowout closure device for use in shutting off flow from a cased well having casing extending upwardly out of the well which comprises a slips and seal assembly for sealingly engaging said casing, said slips and seal assembly including an upper sectionalized annular plate and a lower sectionalized annular plate, a sectionalized slip bowl with pipe gripping slips adapted to resist upward movement of said slip assembly, an annular sectionalized member above said bowl, a resilient sectionalized annular sealing means disposed on said annular member and below said upper plate, the sections of said slip bowl, said annular member, said sealing means, said upper plate, and said lower plate being vertically aligned, means for securing the sections of said upper plate together so as to form an annular assembly, connecting members for securing said upper and lower plates together in a substantially fixed space relationship, said annular member being slidably mounted on said connecting members so as to have longitudinal movement with respect to said bowl and said upper plate, a cylindrical overshot of a character to pass over the open end of said casing and around said assembly, means to open and close the end of the overshot protruding beyond the open end of said casing, interengaging means between said overshot and said annular member whereby upward thrusts of the overshot as by pressure of the fluid in the casing forces said annular member against said sealing means whereby said sealing means is compressed against said upper plate and expands laterally against the inner wall of said overshot and the outer wall of said casing.

2,946,387
OIL AND WATER SEPARATING PUMP FOR OIL WELLS
Charles L. Hooker, Jr., P.O. Box 15, Bradley, Fla.
Filed Nov. 7, 1957, Ser. No. 694,960
15 Claims. (Cl. 166—105)

1. In a pump for separating a lighter from a heavier fluid of a mixture of said fluids, tubular means compris-

ing a cylinder having an upper end and a lower end; an inlet valve communicating with the interior of the cylinder and an outlet valve at the lower end thereof; means comprising a reciprocating piston in said cylinder, a valved passage through said piston comprising a valve actuatable to open position in a downward direction of



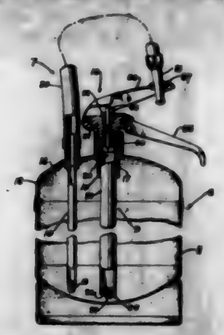
movement of said piston, and conduit means actuated in response to piston motion and in the same direction as said piston and effecting communication between the lower end of said cylinder and said outlet valve for a predetermined portion of travel of said piston in said cylinder and disposed for directing a return flow of heavier fluid to said outlet valve.

2,946,388
WELL APPARATUS
Robert T. Evans, Duncan, Okla., assignor to Halliburton Oil Well Cementing Company, Duncan, Okla.
Filed Sept. 12, 1955, Ser. No. 533,610
16 Claims. (Cl. 166—120)



1. A well packer comprising an elongated hollow case having an upper and a lower chamber therein, means within said case forming a passageway for supplying fluid under pressure to said upper chamber, an operating member mounted for relative longitudinal movement within said upper chamber, said operating member having a lower surface exposed to the fluid pressure in said upper chamber and an upper surface exposed to the space outside said case, whereby the building up of fluid pressure within said upper chamber tends to move said operating member upwardly therein, valve means including the lower portion of said operating member for controlling the passage of fluid between said chambers, said valve means being open and permitting fluid to pass in either direction between said chambers when said operating member is in its downward position and being adapted to close and thereby confine fluid in said lower chamber upon said member being moved upwardly from its downward position, at least one resilient and expansible packing member on said case adapted to be hydraulically set or expanded, means responsive to the fluid pressure in said lower chamber for expanding said packing member, and means for yieldably supporting said operating member in its downward position and thereby holding said valve means open until the fluid pressure in said chambers becomes sufficient to at least partially expand said packing member, whereupon said operating member moves upwardly and said valve means closes automatically to confine fluid in said lower chamber and hold said packing member in an expanded position.

2,946,389
FIRE EXTINGUISHER
Charles H. Barnes, Wilmington, Del., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Nov. 8, 1957, Ser. No. 696,913
6 Claims. (Cl. 169—31)

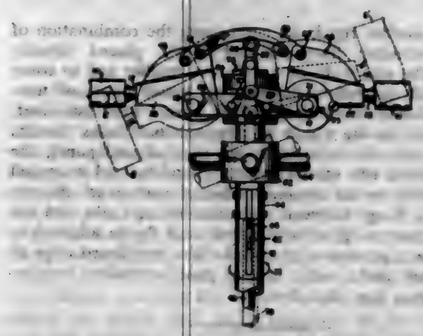


1. A fire extinguisher comprising a receptacle for containing a fire extinguishing liquid, discharge conduit means for said receptacle including a syphon tube, a tubular spud secured to said receptacle terminating in a shoulder externally of said receptacle, and extending downwardly into said receptacle to about the normal filling level thereof and formed with an aperture spaced upwardly from the lower end thereof in fluid flow communication with the interior of said receptacle, a cartridge for containing a fluid under pressure and extending downwardly through said spud, closure means for said cartridge including a flange seated on said shoulder and having aperture means in fluid communication with said aperture in said spud, and a discharge control head secured to said spud to retain said flange on said shoulder, said head including means for puncturing said closure means.

2,946,390
HELICOPTER BLADE CONTROL DEVICE
Carl Joseph Pengry, 96 Gladstone Ave., West Islip, N.Y.
Filed Jan. 30, 1957, Ser. No. 637,251
1 Claim. (Cl. 170—160.13)

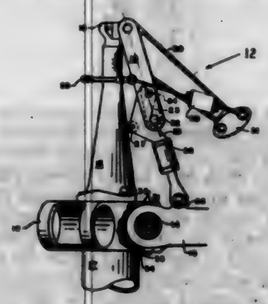
In a helicopter having a main drive shaft which is normally disposed in generally vertical position and a

pair of wing blades which are connected to said main drive shaft for rotation, normally, in a generally horizontal plane, a supporting frame, a second frame rotatably mounted on the first frame coaxially with said drive shaft, connecting means between said second frame and said drive shaft whereby rotary movement of the drive shaft relative to the first frame causes a corresponding rotary movement of the second frame relative to the first frame, a pair of horizontal pivots supported on opposite sides of the second frame, a pair of housings mounted on said horizontal pivots for pivotal movement about said horizontal pivots and relative to said second frame, a pair of shafts projecting radially outwardly



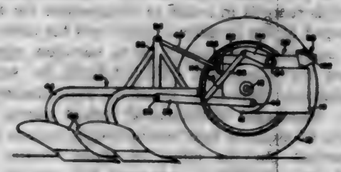
from said housings, said shafts being adapted to rotate about their longitudinal axes relative to their respective housings, a pair of wing blades secured to said shafts, a linkage connecting the two housings, a pair of gears on said shafts, a second pair of gears engaging said first pair of gears, said second pair of gears being coaxial with said pivots, and control means connected to said second pair of gears for rotating them and thereby rotating the first pair of gears in order to change the pitch of the blades, whereby any relative vertical movement between the two blades about their respective axes causes a change in pitch of said blades by reason of the engagement of the first pair of gears with the second pair of gears which are situated coaxially with said pivots.

2,946,391
ROTOR BLADE FLAPPING CONTROL MECHANISM
Harold E. Lemont, Jr., Pottstown, Pa., assignor, by mesne assignments, to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Dec. 29, 1955, Ser. No. 556,252
10 Claims. (Cl. 170—160.55)



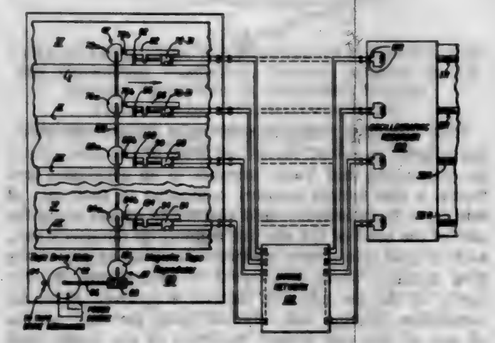
1. In a rotary wing aircraft having a rotor including a hub and at least one blade pivotally attached to said hub for flapping movement, a blade flapping control mechanism comprising structure carried by and rotatable with said hub, a first link pivotally connected to said structure, a second link pivotally connected to said blade, and an intermediate link pivotally connected to said first and said second links, said links being so arranged in an over-center locked position to maintain said blade in a position substantially at right angles to the axis of said hub when the rotational speed of said rotor is below a predetermined critical r.p.m.

2,946,392
DRAFT LOAD CONTROL FOR TRACTORS
Roger J. Nelson, Cedar Falls, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed May 7, 1958, Ser. No. 733,749
11 Claims. (Cl. 172—7)



1. For a tractor having power adjusting means for effecting the adjustment of an associated implement and actuating means for selectively activating and deactivating the power adjusting means: draft load control means comprising a pair of spaced apart supports on the tractor; a pair of elongated parallel inherently resilient bars extending between and each carried at its opposite end portions by the supports for temporary deflection thereof from normal when stressed in bending; a force-receiving element disposed between the supports and carried by the bars and having means thereon connectible to the implement to receive forces therefrom tending to displace said element relative to the supports and thus to stress the bars in bending; signal means including a part engaged by at least one of the bars and having a force-transmitting connection to the actuating means; and means mounting the signal means for movement in response to deflecting of said one bar.

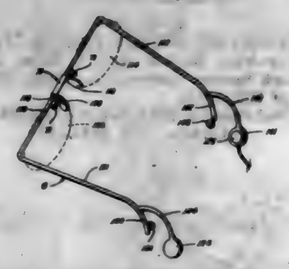
2,946,393
METHOD OF SEISMIC PROSPECTING
James E. Hawkins, Broken Arrow, Okla., assignor to Seismograph Service Corporation, Tulsa, Okla., a corporation of Oklahoma
Filed June 19, 1953, Ser. No. 362,766
5 Claims. (Cl. 181—5)



1. The method of seismic prospecting to produce a visual profile of subsurface earth formations which comprises profiling subsurface strata disposed below the earth's weathering layer by generating seismic waves in the earth at different shot points over said strata, pro-

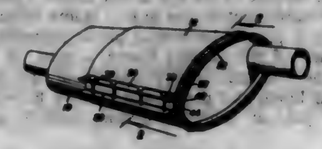
dancing at a plurality of spaced detecting points with means including geophones, individual phonographically reproducible records of the uphole signal and the seismic wave reflections from at least one subsurface interface to said detecting points, each of said records including a plurality of signal traces each corresponding to the seismic wave reflections and refractions arriving at one of said geophones and each record also including an indication representative of a time indexing signal from each of said shot points, separately reproducing said records by reproducing means associated with each of the signal traces of each individual record, translating the reproduced signals into visual records, displacing the reproducing means associated with each of said phonographically reproducible records with respect to each other on a per trace basis during reproduction of said reproducible records in order to compensate for the horizontal spread of the detecting points and for other factors creating undesired time differences between signals appearing on the traces and reflected from the subsurface strata, relatively displacing all of the reproducing means and their associated reproducible record during the reproduction of each of said reproducible records in order to compensate for the effect of those factors causing undesired time differences between the signals on said records reflected from said strata and at the same time introducing a time correction of an amount sufficient to reduce all of the traces on all of the records to a common datum plane, and arranging all of the visual records produced after displacement of the reproducing means in side-by-side relationship for visual inspection and analysis merely by aligning the time indexing signals of all of said records so that the signals corresponding to the reflections from said one interface automatically fall into alignment on said side by side records in accordance with the contour and disposition of said one interface.

2,946,394
AIR-CONDUCTION HEARING AID CLAMPS
Alonzo L. Smith, P.O. Box 6252, Houston, Tex.
Filed Jan. 18, 1954, Ser. No. 404,672
6 Claims. (Cl. 181—23)



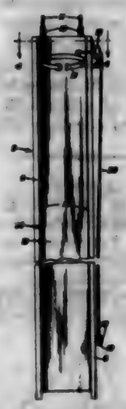
1. A clamping frame comprising, a front frame member adapted to extend across the brow of the user, means for connecting said frame member to an eyeglasses lens frame, a side temple member connected to each end of said front frame member and adapted to extend along the side of the head of the user for support on the user's ears, each of said side temple members carrying an ear cavity plug member which is adapted to extend into the ear cavity of the ear adjacent thereto, a receiver of an air conduction hearing aid mounted upon the rear portion of one of the side temple members of the frame, said frame having an air passage thereon extending from the point at which the receiver is mounted to the ear cavity members whereby sound may be conducted from the receiver through said passage of the frame to both ears of the user so that a balanced hearing is obtained.

2,946,395
MUFFLER REPAIR KIT
Bernard O. Overland, 2939 Rochelm Lane, Billings, Mont.
Filed Sept. 3, 1958, Ser. No. 758,738
4 Claims. (Cl. 181—72)



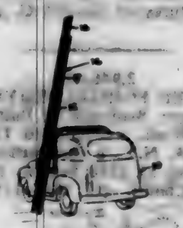
1. A muffler repair kit comprising the combination of a non-burnable liner adapted to be placed directly against the side walls of a defective muffler and to cover the defect thereof, a flexible and pliant panel of non-burnable material adapted to be placed over said liner, said panel having a pair of ribs with bolt holes therein, one of said ribs located at one edge of said panel, the other of said ribs spaced therefrom and located in spaced relationship to the opposite edge of said panel thereby leaving a flange between said other of said ribs and the said opposite edge of said panel, said flange adapted to underline a portion of the of the first mentioned edge of said panel, and a ridge in said panel extending longitudinally near one edge thereof.

2,946,396
FIREMAN'S LADDER
Emeline L. McDougal, 1190 S. 22nd St., Salem, Oreg.
Filed Oct. 23, 1957, Ser. No. 691,908
1 Claim. (Cl. 182—3)



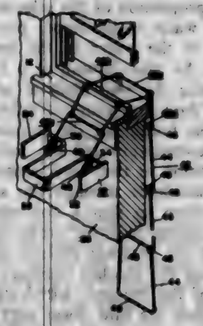
A device of the class described comprising a pair of laterally spaced longitudinal rails, transverse members connecting said rails together in parallel relation, an elongated fire escape chute fixed to and between said rails longitudinally thereof for positioning in upright position and having a solid bottom and outwardly longitudinally extending side flanges for guiding a person sliding down the chute and fixed to said rails to secure the chute to the rails, a belt for attachment to a person sliding down the chute, a pair of pulleys mounted on one side rail adjacent opposite ends thereof, respectively, to dispose the same outwardly of one side flange of the chute, and a cable trained around said pulleys and connected to said belt for lowering the belt down and in front of the chute to lower a person down the chute.

2,946,397
LADDER MOUNT FOR VEHICLES
Wilfred A. Barkwich, 423 W. 11th St., Covington, Ky.
Filed Feb. 6, 1958, Ser. No. 713,712
8 Claims. (Cl. 182—39)



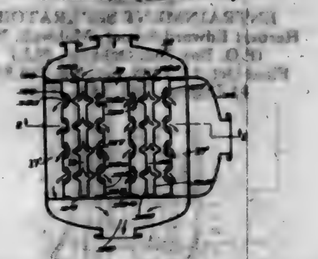
1. Means to mount extension ladders upon the body of a vehicle to convert said vehicle to an aerial ladder vehicle, said means comprising a pair of rails each of which is substantially in the shape of an inverted U providing a horizontal run and two vertical runs at the opposite ends of the horizontal run, means to mount the two rails in spaced parallel relation straddlewise of a vehicle body, a carriage mounted on the rails for movement along the horizontal run and along substantially the full length of each vertical run, a ladder rack, and turntable means attaching the ladder rack to said carriage to permit the ladder rack to be swivelled on the carriage such that ladders in the rack may be swung from a position lengthwise of the vehicle while the carriage is on the horizontal run of the rails and then to an elevated position by moving the carriage from the horizontal run to a vertical run.

2,946,398
COLLAPSIBLE METAL LADDER
Patrick J. McNulty, 203 W. Highland Ave.
Philadelphia, Pa.
Filed Apr. 14, 1958, Ser. No. 728,178
4 Claims. (Cl. 182—95)



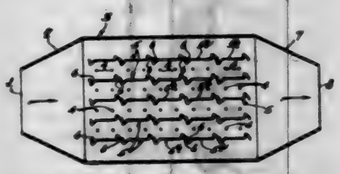
1. In a collapsible escape ladder formed entirely of metal the combination including a bracket, said bracket having a back, spaced forwardly projecting end arms, and a forwardly projecting center rung supporting portion disposed intermediate said end arms and spaced therefrom, a pair of eye bolts for passing through mating openings in the back of said bracket into a vertical supporting surface, a ladder formed of a plurality of articulated U-shaped link rungs, said link rungs having looped ends, with said looped ends of one link rung embracing the base of the adjacent link rung, with the looped ends of the first of said link rungs being secured within the heads of the eye bolts, said center rung supporting portion passing through said link rungs when the same are collapsed in corrugated storage disposition, and a cover disposed over said bracket and link rungs, when said link rungs are collapsed in corrugated storage disposition, said cover frictionally engaging the outside faces of the end arms.

2,946,399
APPARATUS FOR THE SEPARATION OF MIXTURES IN THE GASEOUS OR VAPOR PHASE STATE
Ralf Mannsfeld, Frankfurt am Main, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
Filed July 26, 1957, Ser. No. 674,503
Claims priority, application Germany July 28, 1956
3 Claims. (Cl. 183—2)



1. An apparatus for the separation of vapor phase mixtures in which the mixture to be separated is caused to issue from a nozzle opening in the form of an expanding jet and such expanding jet is separated into a core portion and a peripheral portion by an apertured diaphragm arranged opposite to said nozzle opening comprising a pressure tight vessel containing a gas supply chamber and at least two gas collecting chambers and at least one series of three adjacent relatively narrow chambers separated from each other by apertured walls in which the apertures stand opposite each other, the first of said narrow chambers in said series being connected to the gas supply chamber and the second narrow chamber of said series being connected to one of said gas collecting chambers and the third narrow chamber of said series being connected to another of said gas collecting chambers, the apertures in the wall separating the first narrow chamber in said series from the second forming the nozzle like openings and the apertures in the wall separating the second and third narrow chambers in said series serving to separate the vapor phase mixture issuing from the opposite nozzle like openings into core and peripheral portions.

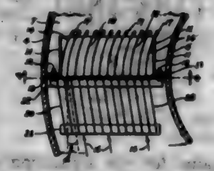
2,946,400
COLLECTING ELECTRODE FOR ELECTROFILTER
Stig Gustafsson, Jonkoping, Sweden, assignor to AB Svenska Flaktfabriken, Stockholm, Sweden
Filed Aug. 26, 1957, Ser. No. 680,046
Claims priority, application Sweden Aug. 27, 1956
4 Claims. (Cl. 183—7)



1. A collecting electrode for electrofilters having horizontal gas flow and collecting electrodes in the form of a plurality of vertical substantially plane collecting plates mounted parallel to the gas flow, each of said collecting plates having a plurality of vertically elongated pockets

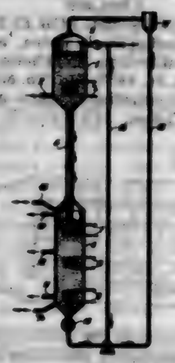
therein extending in spaced parallel relationship and being formed by two similar delta-shaped offset portions of said plates displaced outwardly from the planes of the plates a like distance on opposite sides of said plates in laterally contiguous relation, each of said portions defining a peak on one side of the plate and a valley on the opposite side of the plate whereby the offset portions form a pocket at each side of the plate which extends continuously from the top of the peak of one of said delta-shaped offset portions through the plane of the plate to the bottom of the valley of the contiguous offset portion and has a depth equal to twice the outward displacement of each offset portion.

2,946,481
ENTRAINMENT SEPARATOR
Herbert Edward Sarner, Mahwah, N.J. (P.O. Box 232, Oakland, N.J.)
Filed Oct. 13, 1958, Ser. No. 766,857
11 Claims. (Cl. 183—116)



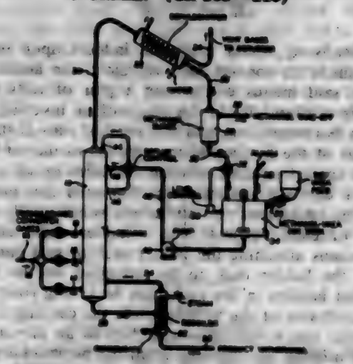
1. Apparatus for separating liquid particles from vapor containing such particles, comprising wall means forming a vapor-conducting passageway, at least one baffle unit disposed in said passageway, each said unit comprising a vertically disposed curved vane and a vertically disposed straight vane, said curved vane having a concave surface, a leading edge, a trailing edge and a vertically disposed liquid-collecting trough at its trailing edge, and said straight vane being located up-stream of said curved vane in horizontally offset relation thereto, and at a small angle of incidence to the tangent of said concave surface at said leading edge, for directing vapor approaching said leading edge against the concave surface only of said curved vane.

2,946,482
PROCESS FOR RECOVERING HYDROCYANIC ACID FROM GAS MIXTURES CONTAINING THE SAME
Erich H. Becker-Boost, Bochum, and Hermann Kronacher, Trostberg, Germany, assignors to Dr. C. Otto & Comp. G.m.b.H., Bochum, Germany
Filed May 28, 1957, Ser. No. 662,241
1 Claim. (Cl. 183—114.2)



A process for the recovery of hydrocyanic acid from gas mixtures of the same with substantial amounts of CO_2 and H_2O by means of active carbon, which comprises impregnating said active carbon with phosphoric acid, adsorbing said gas mixtures thereon at temperatures below 10° C. and at atmospheric pressure, desorbing said gas mixtures and separating them into CO_2, HCN and steam stepwise by raising the temperature, by which means CO_2 is obtained at temperatures of 10–30° C. and HCN at temperatures of 60–80° C. and water above 130° C.

2,946,483
CONCENTRATED FORMALDEHYDE SOLUTION
Bruno Otto Krueger, Benjamin R. Butler, and John M. Hine, Seattle, Wash., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 13, 1958, Ser. No. 754,858
8 Claims. (Cl. 183—115)



1. In the absorption of formaldehyde, the process which comprises passing formaldehyde in gaseous form upwardly through and in intimate contact with a solution of a formaldehyde acceptor selected from the group consisting of urea and melamine and dissolved in a water-alcohol medium, the alcohol being water soluble and of boiling point lower than water and the said solution descending in a column under fractionating conditions countercurrent to the upwardly rising formaldehyde, maintaining the proportion of the selected alcohol higher than that of the water in the upper part of the column and below that of the water in the lower part of the column, heating the said column at a lower part thereof and maintaining the said medium at the top of the column at about the temperature of refluxing for the said alcohol and at the bottom of the column at a point between the said temperature and the boiling point of the water in the solution at that level, continuing the passing of the formaldehyde through the acceptor solution and the said heating so that a concentrated formaldehyde-acceptor solution resulting from the action of the formaldehyde on the acceptor collects in the lower part of the column and the alcohol becomes concentrated in the upper part of the column, withdrawing the concentrated solution from the said lower part and the alcohol in vapor form from the upper part of the column, and supplying to the said column additional amounts of the acceptor as required for accepting the formaldehyde, the acceptor being introduced at a position above that of introduction of the gaseous formaldehyde.

2,946,484
FLANGE LUBRICATOR
Joseph Irving O'Neal, New York, N.Y., assignor, by mesne assignments, to Wagner Machinery Corporation, Long Island City, N.Y., a corporation of New York
Filed Dec. 15, 1955, Ser. No. 553,369
6 Claims. (Cl. 184—3)

1. A railroad wheel flange lubricator comprising in combination a body of solid lubricant, a housing in tight

gripping relationship with said body, said housing having side walls and an end wall, one of said side walls being adapted to extend on the back side of the wheel flange to act as a guide, said side walls adjacent to said guide side wall having contours at the open edges thereof to fit the flange, one dimension of said adjacent side walls being such that the body of lubricant straddles the flange only,



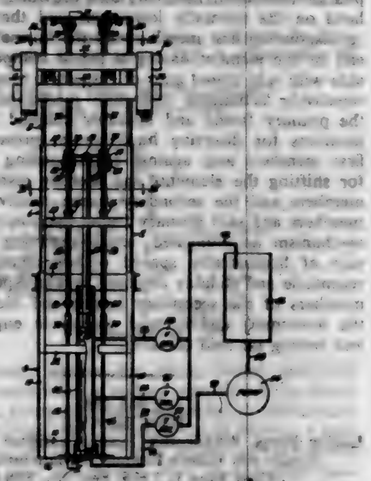
said adjacent side walls having a predetermined thickness to control the rapidity of wear thereof and consequently the amount of deposit of lubricant on the flange, a slot defined in each of said adjacent side walls located over the throat of the flange in order to cause a heavier deposit of lubricant on the throat of the flange and means for positioning the lubricator in flange straddling position and resting in contact with the flange.

2,946,485
APPARATUS FOR CONTROLLING THE OIL LEVEL IN THE CRANKCASE OF A MOTOR VEHICLE
Karl Torbjörn Zachrisson, Fredsgatan 32, Katrineholm, Sweden
Filed Oct. 24, 1958, Ser. No. 769,360
2 Claims. (Cl. 184—103)



1. An apparatus for controlling the oil level in the crankcase of a motor vehicle comprising, a closed vessel mounted at a level above the crankcase in a position to be heated when the motor is in operation, a pipe inserted through the bottom of the vessel and extending within the vessel to a point close to the top of the vessel, a conduit having one end connected to the pipe end outside of the vessel, said conduit having its other end introduced into the crankcase to the desired oil level therein, said pipe being provided with a side opening in it and located within the vessel near the bottom of the vessel, said side opening having a cross sectional area constituting only a fraction of the inner cross sectional area of said pipe and being dimensioned to permit only drops of oil to pass, whereby a heating of the vessel causes an expulsion of air as well as oil down through the pipe and conduit connected thereto, while on a subsequent cooling, the ensuing reduced pressure in the vessel will cause only oil to be sucked up through the conduit and connected pipe at a time when the oil level in the crankcase is too high.

2,946,486
VARIABLE LOAD LIMITING SYSTEM FOR EXTENSIBLE MASTS AND BOOMS
Albert R. Henry, Salina, Kans., assignor to Henry Manufacturing Company, Inc., Topeka, Kans., a corporation of Kansas
Filed Apr. 2, 1958, Ser. No. 727,179
6 Claims. (Cl. 187—9)



1. In combination, an extensible elongated load supporting member adapted to be supported rigidly adjacent its one end and to carry a load adjacent its opposite end, the maximum load which can be safely supported by said member decreasing with the degree of extension thereof, power means operable when energized to extend said load member between minimum and maximum lengths, and load limiting means operable at an intermediate station in the extension of said load member to render said power means ineffective responsively to the load supported whenever the load supported by said load member exceeds a predetermined amount.

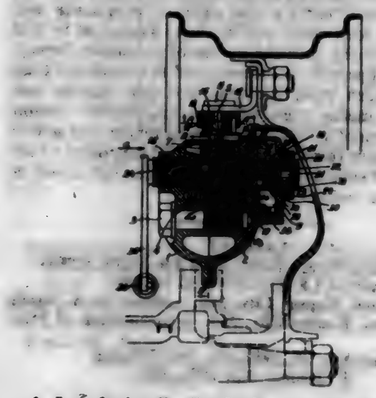
2,946,487
HAND TRUCK HAVING POWER ACTUATED ARTICLE RECEIVING BODY
Walter A. Reich, Kansas City, Mo., assignor to A. Reich & Sons, Inc., Kansas City, Mo., a corporation of Missouri
Filed Apr. 28, 1958, Ser. No. 731,515
4 Claims. (Cl. 187—10)



1. In a hand truck, a primary mobile frame provided with a pair of elongated, normally upright, parallel, horizontally spaced first tubular members open at the uppermost ends thereof; a secondary, U-shaped, article-

supporting frame including a pair of elongated, parallel, horizontally spaced, second tubular members telescoped over, and relatively shiftable with respect to corresponding first tubular members, the normally uppermost ends of the second members being closed and a crossbar interconnecting the lowermost extremities of said second members; an elongated element disposed within each pair of telescoped members and provided with a piston head on the normally lowermost end thereof within a corresponding first member and the normally uppermost end of the element having a thrust component engageable with said closed ends of respective second members; selectively actuatable hydraulic mechanism carried by the primary frame and operably coupled with the first members for directing liquid under pressure into said first members and against corresponding piston heads for shifting the elements and thereby respective second members and the secondary frame relative to the first members and said primary frame upon actuation of said mechanism an elongated, article-receiving receptacle; a pair of horizontally spaced collars connected to said receptacle and slidably disposed on corresponding second members of the secondary frame; and block means on the lowermost end of said receptacle engageable with and resting on said crossbar.

2,946,408
DISC BRAKE
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Filed June 1, 1956, Ser. No. 588,641
Claims priority, application France June 7, 1955
6 Claims. (Cl. 188—73)



1. In a hydraulic disc brake assembly for a wheel, in combination, at least one friction disc rotatable with the wheel and displaceable axially of the wheel, means fixing the disc to the wheel so as to rotate therewith including means to allow lateral displacement of the disc in a direction axially of the wheel, a first and a second friction lining disposed on opposite faces of said brake disc both of which are laterally displaceable in a direction axially of the wheel, a brake housing straddling a portion of said disc and provided with a space forming a cylinder, dual operators for selectively displacing the displaceable linings axially of the wheel thereby to frictionally engage the linings and the brake disc to brake the wheel, said operators comprising a fluid-operated piston operable in said cylinder for selectively applying axially directed pressure to said first displaceable lining to brake the wheel, manually-operated means for selectively applying axially directed pressure to the second laterally displaceable lining and disc simultaneously with and separately from the piston operator and in a direction opposite to the direction which said piston applies pressure, and means cooperating with said piston for automatically maintaining a selected normal play between the piston and the displaceable linings, thereby to compensate for lining wear and for limiting the movement of said piston in a direction away from the disc and first lining when the manually operated means applies pressure to the disc in said opposite direction and separately from the piston operator.

2,946,409
BRAKE MECHANISM FOR CLOTHES WASHING MACHINES
Graham N. Jennings, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Feb. 7, 1958, Ser. No. 713,876
1 Claim. (Cl. 188—134)



Braking apparatus combining rotatable driving and driven members, a rotatable annular brake member positioned substantially concentrically with said driving member and having a pair of parallel slots formed therein, a pair of pins secured to said driven member extending substantially parallel to the axis of rotation of said driven member into said slots whereby said brake member is secured to said driven member to rotate therewith and for limited sliding motion in a direction substantially perpendicular to its axis of rotation, said brake member having an inwardly extending portion secured to said driving member in limited pivotable relation therewith, said brake member initially sliding in a first direction to a first position determined by said slots and said pins in response to one direction of rotation of said driving member transmitted to said inwardly extending portion and thereafter rotating with said driven and driving members to transmit torque from said driving member to said driven member, said brake member sliding in the opposite direction to a second predetermined position determined by said slots and said pins in response to a predetermined torque transmitted from said driven member to said brake member as a result of the momentum of said driven member after application of power to said driving member is stopped, and annular substantially stationary braking means positioned about said brake member and having an inwardly extending portion, said brake member having an outwardly projecting portion engageable by said brake member in its second position whereby engagement of said braking means inwardly extending portion and said brake member outwardly rejecting portion cause rapid stopping of all rotatable members when said brake member is in its second predetermined position.

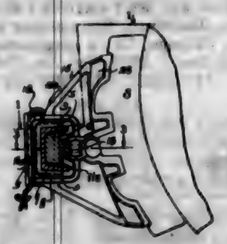
2,946,410
BRAKE BEAM STRUCTURE
Irvin J. Spoth, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed June 6, 1955, Ser. No. 513,235
3 Claims. (Cl. 188—219.6)

1. In a railway truss type brake beam including a compression member of channel cross section and a tension member of the bar cross section, said members being spaced apart at the middle of the beam and converging toward each other at the end of the beam with the end portions of the bar section received be-

tween the flanges of the compression member and contacting end portions of the compression member web and having hook-like ends overlapping the extreme ends of the compression member, a rivet extending through said end portions at each end of the beam transversely of the length of the beam and permanently securing said end portions tightly together, said end portions forming a seat part integral with the remainder of said members, a head of said rivet projecting from the forward face of said tension member and the other head of said rivet projecting from the rear face of said compression member, a separate brake head part having a transverse passage slidably receiving said seat part and first mentioned rivet head when moved lengthwise relative of each other, there being a pair of spaced shoulders defining a recess on the inner face of one wall of said transverse passage adjacent said first mentioned rivet head when said parts are in a predetermined relative position lengthwise of the beam, said head part transverse passage having upper and lower walls provided with substantially aligned vertical openings and a separate retaining means comprising a bifurcated spring key with spaced tongues insertible downwardly at opposite sides of the second mentioned rivet head in said openings and bowed transversely of the beam to bear against said parts and to shift said parts transversely of the beam when said parts are in said relative position and thereby position said first mentioned rivet head in said recess and between said shoulders to positively retain said brake head part against movement lengthwise of said seat part.

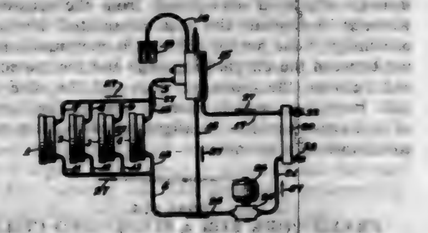


2,946,411
KEYED HEAD BRAKE BEAM
Frank W. Lewis, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 16, 1955, Ser. No. 494,680
4 Claims. (Cl. 188—228.6)



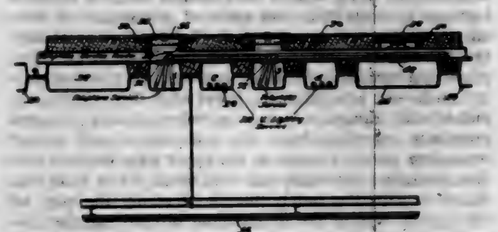
1. In a railway truss type brake beam having a main compression member and a main tension member, both extending lengthwise of the beam, and spaced apart near the middle of the beam, the tension member being inclined toward the compression member from the middle of the beam toward each end of the beam, the end portions of said members at each end of the beam extending parallel and having opposing faces in contact, an elongated strap bent tightly around the top, bottom, front and rear faces of said end portions transversely of the length of the beam and retaining them together, the terminal of the tension member extending beyond the terminal of the compression member outboard of the beam and having front and rear shoulders facing toward the middle of the beam and engaging the outermost end face of the compression member and the outermost edge of the retaining strap, whereby the compression and tension members and the strap are secured against disassembly.

2,946,412
LIQUID COOLED HYDRAULICALLY ACTUATED BRAKE
Warren R. Jansen, Bridgeport, Conn., assignor to Raybestos-Manhattan, Inc., Passaic, N.J., a corporation of New Jersey
Filed Sept. 17, 1956, Ser. No. 610,282
5 Claims. (Cl. 188—264)



1. An hydraulic system for liquid cooled hydraulic brakes which comprises, an endless pipe circuit for liquid, a liquid cooled hydraulic brake connected in said circuit, means in said circuit for circulating liquid therein, a heat exchanger connected in said circuit, an actuator connected in said circuit, and a normally open by-pass pipe connecting said actuator to the inlet of said circulating means, said pipe by-passing substantially all of the liquid in said circuit around said brake when said actuator is not being operated, said actuator including means for decreasing the volumetric capacity of said circuit to thereby substantially statically pressurize the liquid in said circuit, means for closing said by-pass pipe when the liquid in said circuit is statically pressurized by said volumetric capacity reducing means, and means for permitting circulation of substantially all of the liquid in said circuit through said brake connecting means when said by-pass pipe is closed.

2,946,413
BUILDING AND COMBINATION AIR AND WIRE DISTRIBUTING STRUCTURE
Joseph W. Wiesmann, Pittsburgh, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 12, 1955, Ser. No. 521,441
1 Claim. (Cl. 189—34)



A building and combination air and wire distributing structure comprising a cellular metal floor having adjacent metal cellular units erected side by side, one unit having a plurality of cells each of uniform cross sectional dimensions and each constituting a wiring duct, and the other adjacent units having cells of greater sectional dimensions than those of the first unit unit and constituting air carrying cells, means for conducting hot air and cold air from sources of supply to different

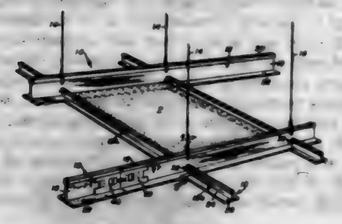
selected of said air carrying cells, and elongated wire carrying crossover ducts extending transversely of the wire carrying and air carrying cells erected above and in contact with the cellular metal floor and in communication with the wire carrying cells, said cool air cells having openings in the upper wall thereof aligned with openings in the lower wall of said crossover duct at the points of intersection with said crossover ducts and communicating therewith for leading cool air into the crossover ducts, said crossover ducts having other openings in the lower wall thereof aligned with openings in the upper walls of selected of said wire carrying cells at the points of intersection thereof for distribution of the wiring from the crossover duct to said cells and through which air also passes from the crossover duct whereby to dissipate the heat transmitted thereto by the proximity of the hot air cells, each communicating opening between the air carrying cells and the crossover duct and between the crossover duct and the wire carrying cells having an access opening unit in the upper wall of said crossover duct in alignment with their respective communicating openings.

2,946,414

FRAMEWORK FOR A SUSPENDED CEILING

Kerwin E. Gordon and William C. Ferguson, Magnolia, Ark., assignors to Southern Extrusions, Incorporated, a corporation of Arkansas

Filed Jan. 20, 1959, Ser. No. 788,010
2 Claims. (Cl. 189—36)



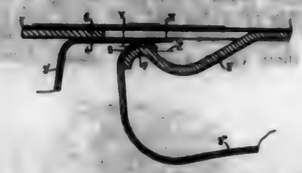
1. A suspended ceiling comprising a longitudinal support member and a pair of colinear transverse support members intersecting said longitudinal support member, each of said support members comprising a vertical web having outwardly extending ceiling-panel-supporting flanges, said longitudinal support member having an opening in the vertical web thereof, said opening comprising a vertical slot and an inclined slot merging at its upper end with the upper end of said vertical slot, the material between the slots below the point of intersection of their adjacent sides being removed down to a horizontal line, the first of said transverse support members having a first projection extending from one end thereof, said first projection having a notch in the lower edge thereof, the second of said transverse support members having a second projection extending from one end thereof, said second projection having a notch in the upper edge thereof, said first projection extending into said vertical slot from one direction with the notch therein receiving the part of the vertical web of the longitudinal support member immediately below the vertical slot, the top of said first projection being substantially coplanar with said horizontal line, and the second projection extending into said vertical slot from the opposite direction and resting on the first projection, said notch on the second projection receiving the part of the vertical web of the longitudinal support member immediately above the vertical slot, the height of the vertical slot being substantially equal to the sum of the heights of the projections at the notches, whereby the ends of the transverse support members are locked in said vertical slot and can be unlocked only by maneuvering said second projection down into the said inclined slot.

2,946,415

ARRANGEMENT IN WALL AND CEILING PANELLINGS CONSISTING OF ELONGATED TROUGH-SHAPED THIN-WALLED ELEMENTS

Jens Fischer, Skt. Clemens, Denmark

Filed Dec. 17, 1957, Ser. No. 703,357
Claims priority, application Denmark Jan. 28, 1957
1 Claim. (Cl. 189—36)



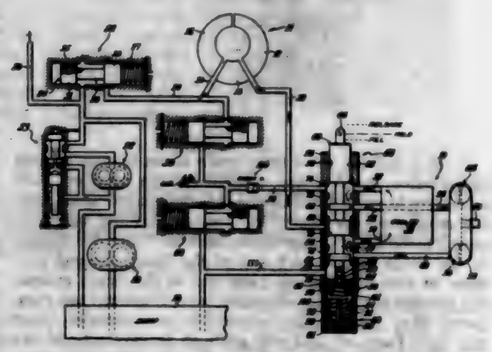
A panelling for an internal surface of a building, comprising a plurality of parallel elongated panel elements of channel formation, carrying rails having a plurality of holding lugs which are slightly resilient, said panel elements each having first and second flanges along opposite edges, the second flanges of each panel element overlying the first flanges of adjacent panel elements, said holding lugs forming pockets within which said overlapping first and second flanges of said elements are received, the height of said holding lugs being substantially less than the depth of the channels of the panel elements, said second flange being substantially plane whereas said first flange comprises a portion the transverse section of which is circular arc shaped such that at its free edge said first flange diverges from the overlapping second flange, and said pockets having a throat of a width corresponding with the total thickness of said overlapping flanges at their point of contact, and a widened portion behind said throat, one side wall of said throat being formed by a holding lug portion which is curved with substantially the same radius of curvature as said portion of said first flange which complementarily overlaps said curved portion of said holding lug and extends into said pocket to a point where the width of the pocket is substantially equal with the width of said throat increased by the thickness of said second flange.

2,946,416

HYDRAULIC RETARDER CONTROL

Joseph B. Snoy, Rockford, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois

Filed Jan. 7, 1959, Ser. No. 785,459
11 Claims. (Cl. 192—4)



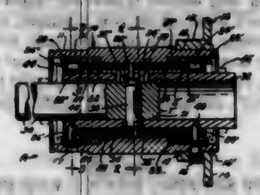
1. A hydraulic retarder control apparatus comprising a source of fluid under pressure, control means for reducing the pressure of said fluid to a predetermined value, a hydrodynamic coupling, a heat exchanger adapted to cool the fluid in said hydrodynamic coupling, a hydrodynamic retarder comprising a rotor and a stator, and control means for selectively sequestering a portion of the fluid of said hydrodynamic coupling into a closed loop system affording communication between said retarder and said cooler.

2,946,417

BIDIRECTIONAL NO-BACK COUPLINGS

Philip C. Hungerford, Jr., Cleveland Heights, Ohio, assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Dec. 16, 1957, Ser. No. 702,846
11 Claims. (Cl. 192—8)



1. In a no-back coupling of the class described, a circular normally stationary drum, relatively angularly movable input and output member coaxial with the drum, a helical friction spring coaxial with the drum means arranged to anchor coils at one end of the spring to the output member in a manner to prevent angular movement of those coils relative thereto, free end coils of the spring being normally in one way locking contact with the drum, means connected with the input member and operative on a free end coil of the spring as a function of a predetermined amount of relative angular movement of the members in one direction to deenergize the spring, said anchoring means including a ring or collar having a circular drum surface against which coils of the spring opposite such free end coil are preloaded for one-way-gripping action, the ring or collar being turnable on a circular surface of the output member coaxial therewith for enabling adjustment, during assembly, of the angular relationship between the input and output members at which deenergization of the spring will commence to take place, and means capable of fastening the ring or collar in angularly adjusted position on the output member against angular movement in either of two directions.

2,946,418

ELECTRICAL CONTROL OF TORQUE TRANSMITTING MECHANISM

James L. Leeson, Jr., Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Illinois

Filed Sept. 23, 1957, Ser. No. 685,248
9 Claims. (Cl. 192—12)



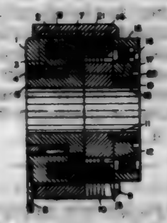
1. In a torque transmitting mechanism with an electromagnetic clutch having a winding energizable for transmitting a driving torque to a driven element and an electromagnetic brake having a winding energizable for applying a retarding torque to the driven element, means for starting and stopping the driven element in response to a single input impulse of given duration which comprises a differentiating network responsive to each such impulse and operable to convert the same to a first alternating voltage signal whose second half wave follows the first at an interval equal to the duration of the impulse, the amplitude of each of said half waves initially increasing abruptly to a peak value and then decreasing exponentially to an intermediate value above zero before dropping abruptly to zero, means for amplifying said signal and applying the same to one of said windings to increase and decrease the energization of the winding during the positive half cycle of the signal, means for inverting said first signal to provide a second signal of the same shape but of opposite phase, and means for amplifying said second signal and applying it to the other of said windings to increase the energization of the other winding following the decrease of energization of said one winding, the voltage applied by each of said amplifying means to the associated winding initially increasing abruptly to a peak value equal to several times the rated voltage of the winding and then decreasing exponentially to an intermediate value below the rated voltage.

2,946,419

ELECTROMAGNETIC FRICTION CLUTCH

Anton Ryba, Bolzano, Italy, assignor, by direct and mesne assignments, to Zahnradfabrik Friedrichshafen, Friedrichshafen, Germany, a corporation of Germany

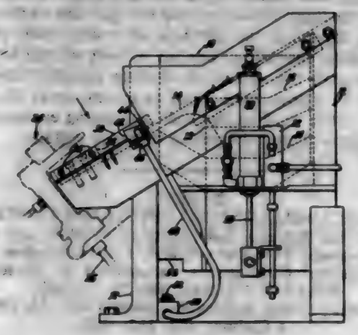
Filed Oct. 15, 1958, Ser. No. 767,451
Claims priority, application Austria Oct. 18, 1957
4 Claims. (Cl. 192—84)



1. A magnetically operated coupling for releasably coupling a driving member with a driven member, said coupling comprising a magnetic body, a first coupling member rotatable in either direction for receiving one of the members to be coupled, a second coupling member rotatable in either direction for receiving the other member to be coupled, at least one pair of frictionally engageable discs, one of said discs being secured to the first coupling member and the other to the second coupling member for joint rotation in either direction, frictional engagement of said two discs coupling the two coupling members, and an armature seated rotatably and axially slidably on one of said coupling members in a position such that magnetic flux lines generated in said magnetic body close through said armature for attracting the same into frictional force transmitting engagement with both said coupling members and toward the friction discs, said armature comprising three concentric ferromagnetic rings, one of said rings coacting with said friction discs to move the same into frictional engagement, the middle one of said rings having outer and inner peripheral threads of the opposite hand engaging corresponding right hand and left hand inner and outer peripheral threads on the outer and inner rings respectively, to provide for turning of the inner and outer rings relative to each other in either direction, and unidirectionally but oppositely acting locking means between the middle ring and inner and outer ring respectively to lock the inner ring to either one of the

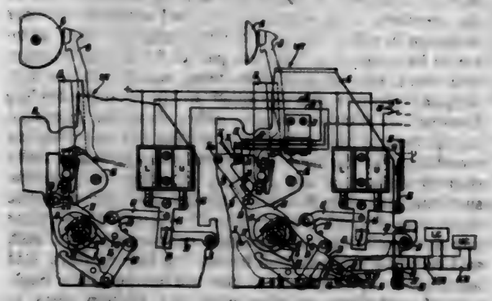
other rings depending upon the rotational direction of the driving member to be coupled, whereby upon magnetic attraction of the armatures the armature ring coupling with said frictional discs is always restricted to turning relative to the other rings in the direction toward said frictional discs to compensate for any wear thereof irrespective of the rotational direction of the driving member to be coupled.

2,945,438
FASTENER INSERTING DEVICES
Shirley Russell Hopkins, Leicester, England, assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Filed Mar. 19, 1958, Ser. No. 722,489
Claims priority, application Great Britain Apr. 25, 1957
8 Claims. (Cl. 193—43)



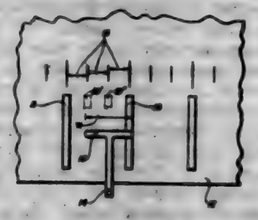
1. In an apparatus for transferring headed fasteners and the like, an inclined raceway for supporting fasteners for downward sliding movement with their heads uniformly oriented with respect to each other, and means for rejecting improperly oriented fasteners from said raceway including means for directing a flow of air opposite to the movement of said fasteners.

2,946,421
CASE SHIFT AND RELATED FEATURES
Salvatore J. Integlista, Windsor, and Richard W. Yerks, Manchester, Conn., assignors to Underwood Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 17, 1959, Ser. No. 807,169
9 Claims. (Cl. 197—5)



7. A machine system comprising a master typewriter and a slave typewriter operatively controllable by the master typewriter and including typing means in the slave typewriter which operate with a given delay in respect to typing means in the master typewriter, said typewriters comprising each a case shift body oppositely movable to take up a lower or an upper case position, an element adapted by respective part turns to case shift said body oppositely between said two case shift positions, a rotative power member for driving the said element, means movable to take up one position and movable oppositely to take up another position and means associated with said element and said power member and controlled by the movable means to cause one of said part turns of such element whenever said movable means is moved to take up said one position and to cause another of said part turns of the same element whenever said movable means is moved to take up said other position, the said slave typewriter comprising further two electromagnetic devices, means to operate the movable means in said slave typewriter to said one and to said other of its two positions, respectively by the operations of one and the other of said electromagnetic devices, said master typewriter comprising further a depressible lower-case key, a depressible upper-case key, means to operate the movable means in said master typewriter respectively to said one and to said other of its two positions by the depressions respectively of said one and said other key, and switch means controlled by the said element of the master typewriter to energize in the respective part turns at given points thereof respectively the said electromagnetic devices.

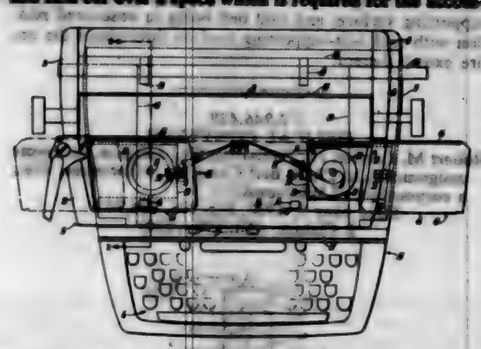
2,946,422
TAB-STOP SETTING DEVICE FOR BUSINESS MACHINES
Harry L. Lambert, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Filed Oct. 23, 1959, Ser. No. 848,483
4 Claims. (Cl. 197—179)



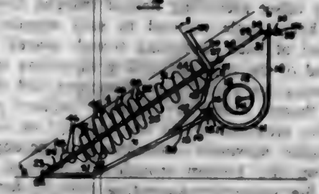
1. In a proportional spacing typewriter having a frame; a carriage movably mounted on said frame; a plurality of settable tab stops and a tab stop setting member, said stops and member being one on said frame and the other on said carriage: the improvement comprising a laterally extending head formed on said member and adapted to selectively set said tab stops, said head having a width which is less than the distance between two adjacent tab stops but at least as great as the length of that number of incremental units of carriage movement which is one less than the number of said units between two adjacent tab stops.

2,946,423
RIBBON SPOOL COVER ARRANGEMENT IN TYPEWRITER
Henry B. Childs, Elmwood, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,982
5 Claims. (Cl. 197—186)

1. In a typewriter having a main frame, a platen roll and a system of front-strike type bars of which the individual bars are operable rearwardly against said platen roll; means on said frame forwardly of said platen roll, at each opposite side of said system of type bars and substantially within the lateral confines of said frame, to accommodate a spool of typewriter ribbon, a carriage on said main frame and supporting the said platen roll, means to guide said carriage on said main frame for travel parallel to the platen roll axis, said carriage having for substantially its full length, forwardly of said spool accommodating means, a bar extending parallel to the platen roll, margin stop means provided in connection with said bar, a separate cover overlying normally each of said spool accommodating means and each covering thereon generally an area between the platen roll and said bar over a space which is required for the accommodation of a ribbon spool, said carriage having at each end of the platen a forwardly reaching arm supporting said bar and being formed to travel with clearance over said ribbon spool covers, and means to mount each of said covers for movement parallel of said platen roll from over the related spool accommodating means, outwardly of said main frame, thereby to facilitate the placement or removal of ribbon spools.



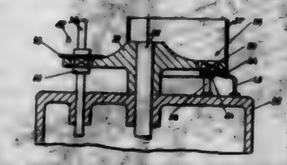
2,946,424
CROP GATHERING DEVICE
Ralph F. Wiebelhaus and William F. Mohr, both of Laurel, Nebr.
Filed Feb. 28, 1958, Ser. No. 718,243
1 Claim. (Cl. 198—7)



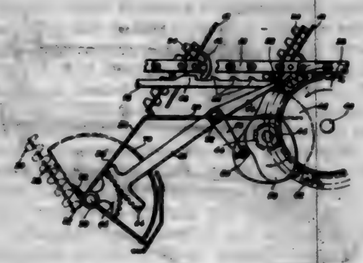
A crop gathering device comprising a pair of laterally spaced shafts, said shafts including helically arranged conveyor blades attached thereto, a portion of said blades including projections for raising crop stalks, said shafts being angularly positioned and converging rearwardly, the portion of said blades having said projections being of increasing diameter progressively rearwardly and thence of decreasing diameter progressively rearwardly, the balance of said conveyor blades being of auger conformation and of uniform diameter.

2,946,425
MECHANISM FOR DISTRIBUTING AND FEEDING ARTICLES INTO A MACHINE
Arisato Serugnoli, 10 Via Pompeana, Bologna, Italy
Filed Dec. 27, 1956, Ser. No. 630,859
Claims priority, application Italy Dec. 30, 1955
10 Claims. (Cl. 198—30)

1. A device for orientating and feeding rectangular-shaped objects into a machine comprising a disc mounted substantially horizontally for axial rotation about its center and provided with a plurality of circular holes therethrough spaced about its periphery at equal radii from said axis, said holes being of sufficient diameter to encompass therewithin the objects to be orientated and fed into a machine, means for intermittently rotating said disc in one direction about said axis, enclosure means fixedly mounted immediately above said disc encompassing a number of said holes and a portion of the upper surface of said disc, whereby a distributing area is formed upon said disc, means supplying said distributing area with objects to be orientated and fed into a machine, a fixed supporting surface positioned immediately below the path described by said holes during rotations of said disc and extending in the direction of rotation of said disc from the entrance of said holes into said distributing area to an end beyond their exit therefrom, whereby such objects as have entered said holes from said distributing area during rotations of said disc are supported therewithin, an orientating guide having an orientating surface concentric with the path described by the axes of said holes during rotations of said disc fixedly positioned around one side of said supporting surface and extending between the latter and said disc so that objects in said holes slidably bear against said supporting surface and said orientating surface during rotation of said disc above said supporting surface, whereby such objects are orientated by cooperation between said holes and said orientating surface, and removal means positioned at said end of said supporting surface and operable in cooperation with said rotating means to remove the orientated objects from said holes during the intermittent pauses between rotations of said disc.



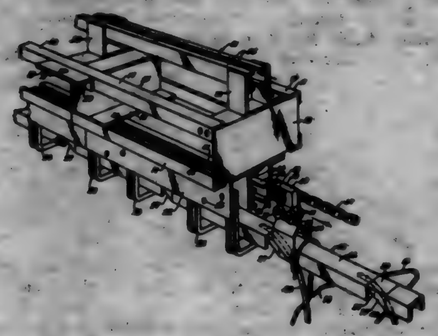
2,946,426
APPARATUS FOR CONVEYING ARTICLES
Louis Martin Hartmann and Albert Bertram Arkadius Hansen, Lyngby, Denmark, assignors to A/S Brodrene Hartmann, Lyngby, Denmark, a Danish joint-stock company
Filed Sept. 16, 1958, Ser. No. 761,325
Claims priority, application Great Britain Sept. 18, 1957
12 Claims. (Cl. 198—32)



9. In an apparatus for conveying articles, including a first conveyor, swingable shelves arranged in at least one row on said conveyor, and means for tilting said shelves at the discharge end of said conveyor, the improvement comprising a transfer member swingably mounted on a horizontal axis perpendicular to said first conveyor at the discharge end thereof and being movable from a slanting position in which said member forms a chute for said articles to a position in which said articles are

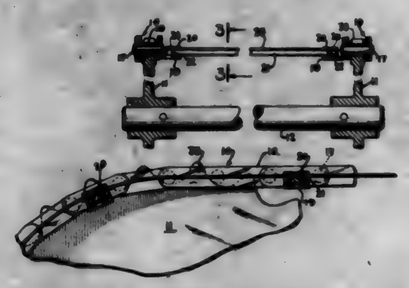
discharged, and a second conveyor arranged at right angles to said first conveyor in a position to receive said discharged articles.

2,946,427
GARMENT SORTING APPARATUS
Merrill P. Friedman, Chicago, Ill., assignor to Identification, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 10, 1958, Ser. No. 766,476
10 Claims. (Cl. 198—38)



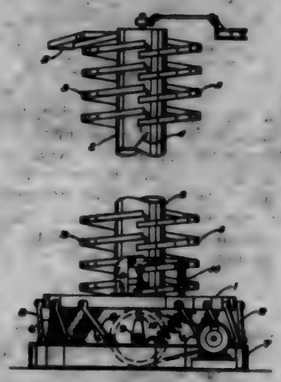
1. A garment supporting apparatus comprising a track for slidably supporting garment hangers by the hooked portions thereof, said track comprising a plurality of longitudinally aligned segments spaced apart at the ends thereof to provide a plurality of hanger release stations therebetween, a plurality of bridging elements pivotally mounted upon said track segments at the ends thereof, means for independently pivoting each of said bridging elements between a first position bridging the space between a pair of adjacent track segments and a second position wherein the space between said pair of segments is opened to release a hanger from said track, means for advancing garment-supporting hangers along said track, and means adjacent each of said release stations for supporting the hangers dropping through each of said spaces.

2,946,428
BELT
David S. Baker, 475 5th Ave., New York, N.Y.
Filed Feb. 5, 1957, Ser. No. 638,306
7 Claims. (Cl. 198—193)



1. Traveling belt apparatus comprising a continuous flexible belt carrier presenting belt-supporting surface, means for mounting said belt carrier for travel of said surface in an orbit at substantially the same speed throughout, a continuous flexible sheet metal belt carried by said supporting surface of said belt carrier in laterally slidable relation therewith throughout the entire length of said belt means for travel in said orbit, and means secured to said carrier for limiting lateral sliding movements of said belt relative to said carrier while permitting a substantial amount of lateral play, said belt consisting essentially solely of a plain sheet metal band of constant width and presenting essentially flat upper and under surfaces, said belt being carried by said belt carrier essentially solely by the under surface of said belt resting on said belt-supporting surface, and said belt being in unsecured relation with said belt-supporting surface throughout the entire extent thereof.

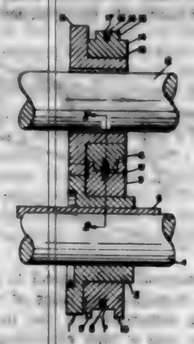
2,946,429
HELICAL CONVEYOR
Robert M. Carrier, Jr., Louisville, Ky., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 9, 1958, Ser. No. 734,363
2 Claims. (Cl. 198—220)



1. A vibratory helical conveyor comprising a vertical support, a series of circumferentially overlapping and vertically offset ascending helical troughs having a prescribed helix angle secured to said support with the upper end of each ascending trough spaced above the lower end of the next succeeding ascending trough, and drive means for vibrating said support and the troughs secured thereto along an upwardly inclined path which is effective progressively to toss material on said ascending troughs upwardly therearound whereby material loaded on the bottom trough is conveyed upwardly around the successive ascending troughs for discharge from the top trough and is periodically cascaded and turned over as it falls from the upper ends of the respective ascending troughs to the lower ends of the successive ascending troughs, thus providing a substantial increase in the total length of the helical material supporting surface without increasing either the diameter or height of the conveyor.

2,946,430
MEANS FOR FEEDING WELD ROD
Harry G. White, Maywood, and Enrico M. Zampieri, Paramus, N.J., assignors to Coast Metals, Inc., Little Ferry, N.J., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 711,363
2 Claims. (Cl. 203—216)

1. Means for feeding a weld rod of predetermined diameter, said means comprising a pair of rotatable rolls, one of said rolls having an annular peripheral surface having an annular groove therein of substantially semicircular cross-section and having a radius substantially the same as the radius of the weld rod, annular flanges disposed at the sides of said annular surface and formed integrally with said roll, the other of said rolls having an annular tongue formed integrally therewith and provided with an annular peripheral surface in engagement with said first-named surface, said last-named annular surface having an annular groove therein of substantially semicircular cross-section, and having a radius substantially the same as the radius of the weld rod, said flanges embracing said tongue, both of said annular grooves being



provided with circumferentially spaced holes of circular cross section, said holes extending radially inwardly from the central portions of the surfaces of said grooves and having circular edges adapted to engage said weld rod to assist in feeding the weld rod, means for maintaining said rolls in a predetermined angular relationship wherein said holes in one roll register with said holes in said other roll.

2,946,431
BLADE DISPENSER
Warren I. Nissen, Topsfield, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Dec. 2, 1957, Ser. No. 699,987
7 Claims. (Cl. 206—16)



1. A blade dispenser comprising a plastic body and a metal cover including means connecting them together, said cover having a finger opening therein, said plastic body and cover being shaped to form together an elongated enclosure, a blade stack therein, and a member of spring metal having a flat portion underlying the blade stack and angular side walls having side flanges, the metal cover including means in engagement with said side flanges to bias said flat portion to urge the blade stack toward the finger opening of the cover.

2,946,432
SAFETY MATCH BOOK HOLDER
William McA. Peacheaux II, 3726 E. College, Las Vegas, Nev.
Filed Nov. 25, 1958, Ser. No. 776,234
1 Claim. (Cl. 206—33)

A match book holder comprising a casing, rectangular in both longitudinal and transverse cross-sections, comprising two separable hollow sections, one section having a closed bottom end and a window in its front wall adjacent to said closed bottom end, the other section being open at both ends, said sections having mutually complementary counterbored collar and reduced neck telescopic portions, the internal dimension of said casing permitting a match book to fit snugly therein with its book cover in closed position and its striking portion accessible through said window, the upper end of said casing being open and the upper edges of the front and back walls having corresponding finger receiving notches permitting the match book therein to be manually grasped for partial withdrawal to a position where the striking position is no longer accessible through said window, and stop means extending internally from the casing side



walls of the open ended section into the path of the bottom end of the match book limiting the withdrawal of the match book to the position where the striking position is no longer accessible through said open window, whereby the match book must be so withdrawn before the match book cover can be opened to remove a match, and must be closed and pushed to the bottom before the match can be struck on the striking portion through the window.

2,946,433
DISPLAY CARTONS
Russell J. Hennessey, St. Paul, Minn., assignor to Waldorf Paper Products Company, Ramsey County, Minn., a corporation of Minnesota
Filed July 11, 1958, Ser. No. 747,965
7 Claims. (Cl. 206—45.19)



1. A display carton including a rectangularly arranged front, rear, and side panels secured in tubular relation, a partition panel connecting said side panels between, and parallel to, said front and rear panels, said partition panel having a generally rectangular aperture therethrough spaced from the edges thereof, a first pair of connected cut lines in said front panel converging downwardly from opposite sides of the front panel to an apex at the center of the front panel, a fold line spaced from, and parallel to, the upper edge of said front panel connecting the outer ends of said cut lines to provide a generally triangular flap, a second pair of connected cut lines converging upwardly from opposite sides of said front panel to an apex at the center of the carton, a fold line parallel to and spaced from the lower edge of said front panel connecting the outer ends of said second cut lines to form a second generally triangular flap, a cut line connecting the apex of the first cut lines to the apex of the second cut lines, and fold lines parallel to the sides of said front panel connecting each outer end of the first cut lines to corresponding ends of the second cut lines to define a pair of trapezoidal flaps, said flaps being foldable into said aperture in said partition panel.

2,946,434
CONTAINER WITH OPENING MEANS
Ernest Brim, Jersey City, N.J., assignor to Scientific Packaging Corporation, Jersey City, N.J., a corporation of New Jersey
Filed May 6, 1957, Ser. No. 657,671
7 Claims. (Cl. 206—56)



1. A filled bag consisting essentially of a front wall and a back wall each comprised of a thickness of tough plastic film with the edges of said front and back walls sealed, and means to facilitate cutting of the bag comprising a strip of material stiffer and more resistant to tear than the said film, said strip attached to and extending completely across the outside face of only one of said walls from one edge to another edge, the said strip having a straight cutting edge along its entire length against which the walls of the bag may be cut.

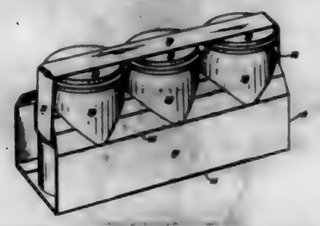
2,946,435
ADHESIVE BANDAGE
Peter Schinderwandt, Bronxville, and William H. Dunerstein, Bethpage, N.Y., and Langdon S. Simons, Jr., Darien, Conn., assignors to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Filed May 2, 1956, Ser. No. 582,259
15 Claims. (Cl. 206—63.2)



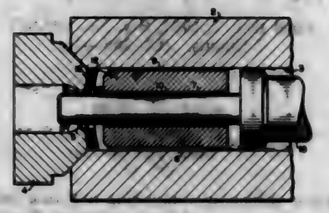
1. An adhesive bandage package unit comprising an adhesive bandage including an adhesive tape having a backing and a layer of adhesive on one surface thereof, said tape being reversely folded to define two contiguous overlapping panels with the backings of the panels on the inside face to face, and with the adhesive layer on the outside of one of said panels, a wrapper for said adhesive bandage having two successive folds therein near one end of the package unit separated by a fold line and serving as tabs respectively by which the wrapper may be ruptured and removed from the adhesive bandage, and a sheet connected to one of said tabs and attached to the outside of the said one panel by the adhesive layer in face contact therewith to serve as a facing member for the adhesive layer on the outside of said one panel, whereby when said one tab is pulled after rupture of the wrapper, the sheet is caused to be peeled off the said one panel, and at the same time the said one panel to be unfolded.

2,946,436
MULTICELLULAR FOLDING BOX STRUCTURES
Marshall L. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed July 19, 1957, Ser. No. 672,973
6 Claims. (Cl. 206—65)

1. A merchandise package unit of cans, jars, and similar receptacles, the package comprising, a plurality of receptacles of a certain height arranged in line; a multicellular box of paperboard of a lesser height than said receptacles engaging end end of said receptacles, the other end of said receptacles protruding from said box, said box comprising, a pair of opposite side walls, a main panel between, and articulated to, said side walls against which main panel said receptacles bear with one end, and a cell panel spaced from said main panel and articulated to said side walls, said cell panel being cut transversely to the side walls by spaced cuts, portions of the cell panel adjacent said cuts being deflected into a position substantially normal with respect to said main panel to form cell walls engaging the sides of said receptacles, thereby preventing separation of the inserted one ends of the receptacles; and a tape extending over, and adhesively secured to, the protruding other ends of said receptacles for securing said receptacles to one another at their other ends, thereby preventing separation and fanning out of the other ends, when the package is handled by gripping one of said protruding receptacles.



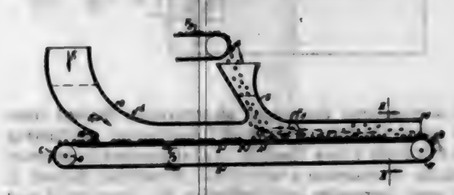
2,946,437
EXTRUSION OF METAL BILLETS
David A. Edgecombe, Beaver Falls, Pa., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 31, 1955, Ser. No. 512,128
1 Claim. (Cl. 207—10)



In a method of extruding a metal billet from an extrusion chamber having a die at one end, the die having a die opening through which the billet is extruded and a ledge surrounding the die opening, the steps comprising placing in the extrusion chamber adjacent the die a preformed rigid disc of agglomerated glass powder held together by a suitable adhesive binder of such character as to render the same rigid and unbendable, placing a heated metal billet in the extrusion chamber and extruding the billet.

2,946,438
PROCESS AND APPARATUS FOR THE SEPARATION OF SOLID PARTICULATE MATERIALS OF DIFFERENT DENSITIES AND/OR DIFFERENT PARTICLE SIZES
Pierre Belugou, Paris, and Elie Condolios, Grenoble, France, assignors to Charbonnages de France, Paris, France, a public institution of France, and Etablissements Neyrpic, Grenoble, France, a corporation of France
Filed Nov. 23, 1956, Ser. No. 623,830
Claims priority, application France Nov. 25, 1955
17 Claims. (Cl. 209—156)

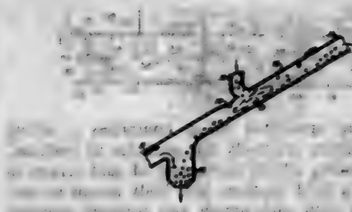
5. Apparatus for separating a mixture of particulate solid materials into a plurality of fractions differing according to their differences of density and/or particle size, comprising a closed conduit, that is stationary as a whole to provide a substantially fixed passageway for a flow of liquid and having a lower side without substantial openings therein throughout the length of such fixed passageway means for establishing in said conduit a fluid flow in one longitudinal direction thereof under a predetermined head, said conduit including means providing a supporting surface at the lower side of and within said conduit for solid particles settling within said fluid, and means supporting said surface means for movement longitudinally of said conduit, means for feeding a mixture of said materials into the fluid flow passing through said conduit at a point intermediate the ends thereof, said feeding means including a hopper connected to said closed conduit so as to form a part thereof enabling the formation therein of a height of fluid corresponding to the pressure on such fluid in said conduit, said conduit being so configured in the region of said poin that with the fluid head established by said flow



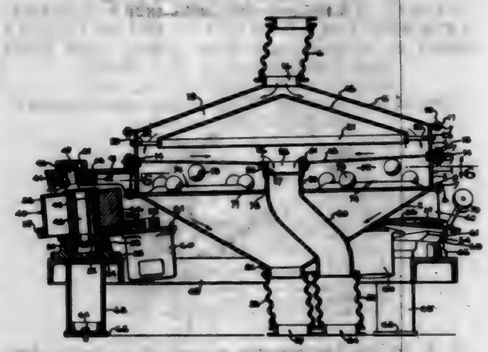
means the fluid flow past said point is given such velocity that part of the constituents of said mixture deposit on said supporting surface, and means for moving said supporting surface longitudinally of and relatively to said conduit and oppositely to the direction of fluid flow, said moving means being constructed and arranged to impart such an upstream movement to said supporting surface that the combined action of such surface movement and the fluid flow established by said flow means and conduit causes the depositing particles to form a sorting dune at a predetermined place relative to said supporting surface, maintains the position of said sorting dune substantially fixed within said conduit at said place of deposit, and agitates and stirs said dune to cause the lighter or smaller particles to be separated therefrom and carried along with the fluid to a downstream point of discharge and the heavier or larger particles to be moved with said supporting surface away from said dune to an upstream point of discharge therefor, and means at said upstream point of discharge to enable withdrawal of the particles arriving thereat from said conduit.

2,946,439
PROCESS AND APPARATUS FOR THE SEPARATION OF SOLID PARTICULATE MATERIALS OF DIFFERENT DENSITIES AND/OR DIFFERENT PARTICLE SIZE
Elie Condolios, Grenoble, and Pierre Belugou, Paris, France, assignors to Etablissements Neyrpic, Grenoble, and Charbonnages de France, Paris, France, a public institution of France
Filed Nov. 23, 1956, Ser. No. 627,533
Claims priority, application France Nov. 25, 1955
23 Claims. (Cl. 209—157)

8. Apparatus for sorting particulate solid materials into a plurality of fractions differing according to their differences of density and/or particular size, comprising an inclined closed conduit having a substantially smooth supporting surface, means for supplying fluid under head to the lower portion of said conduit, so that such fluid flows through said conduit as a continuous stream which is capable of sustaining in suspension at least one of the fractions of the particulate material, means for controlling the velocity of said fluid flow at a predetermined place in said conduit and means spaced upwardly from said supplying means and spaced downwardly a substantial distance from the upper end of said conduit for feeding said materials to the fluid passing through said conduit, the inclination of said conduit and the velocity given the fluid flow by said control means at the predetermined place in said conduit being such that their combined action on such materials brings about the formation on said supporting surface at such place of a substantially stationary dune which is constantly stirred.



2,946,440
GYRATORY SIFTING MACHINE
Lowe E. Simpson, Cincinnati, Ohio, assignor to The Orville Simpson Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 17, 1956, Ser. No. 628,726
5 Claims. (Cl. 209—326)



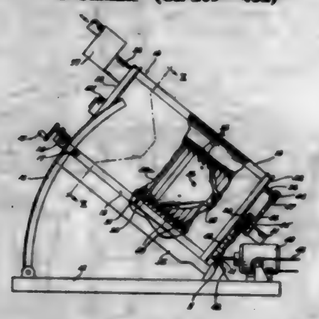
1. A sifting machine comprising, a circumferential housing member disposed in a generally horizontal plane, a screen extending across the said member and having a tailings opening at substantially its center portion, means for delivering material which is to be sifted to upper surface areas of said screen adjacent the circumference thereof, a conduit communicating with the central opening of the screen and extending therebeneath, drive members in spaced circumferential relationship to one another interconnected with said housing member, said drive members comprising eccentrics rotatable about axes which are tilted from vertical direction for imparting a gyratory wobbling motion to said screen whereby material to be sifted is caused to move over the surface of the screen in paths of travel extending from the circumferential areas to which the material initially was delivered generally toward the central area such that particles smaller than the openings of said screen member pass through it during their courses of travel and particles larger than said openings move over the screen surface and escape through the central opening and conduit connected thereto, and means for absorbing differences in the center spacing of said eccentrics.

2,946,441
SIFTER
Everett F. Ford, Des Moines, Iowa, assignor to General Mills, Inc., a corporation of Delaware
Filed Mar. 10, 1959, Ser. No. 798,465
8 Claims. (Cl. 209—344)



8. In a sifting apparatus which comprises a sifting screen for classifying relatively fine particles of material, means for producing sifting movement of said screen in the presence of a fluid medium, and body means enclosing and moving with said screen and forming opposed zones at opposite faces of the sifting screen in which zones the fluid medium may have different degrees of movement in response to said sifting movement, the improvement comprising means for equalizing the resulting fluid pressures at the opposite faces of said sifting screen in said zones, said equalizing means including means guiding the stock along the screen and maintaining a portion of said screen clear of said stock thereby providing an equalizing air passage between said opposed zones through said clear screen portion.

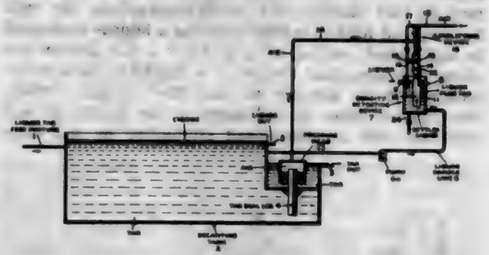
2,946,442
MULTI-CONE ORE CONCENTRATION APPARATUS
Frank W. Hack, 1226–28 Harding Ave., Des Plaines, Ill.
Filed Dec. 28, 1954, Ser. No. 476,276
5 Claims. (Cl. 209—482)



1. A dry ore concentrator comprising a tubular shaft, a plurality of sheet metal elements of increasing diameter secured in nested relation to said shaft at their respective points of least diameter, means rotatably supporting said shaft at an angle to the horizontal for rotating said elements about an inclined axis whereby any given point on the inside surface of the respective elements moves from a position having a slight incline relative to the horizontal in the opposite direction to the incline of said shaft to a generally upright inverted position, means for placing finely divided ore on the inside surface of said element, apertures in said shaft adjacent the junctions of said elements therewith and a baffle plate positioned inside said shaft above each aperture therein for preventing material moving down said shaft from passing laterally out through said apertures.

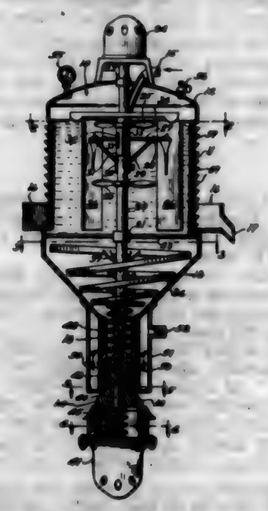
2,946,443
DECANTER CONTROL
Lawrence D. Schmidt, New York, N.Y., assignor to Allied Chemical Corporation, a corporation of New York
Filed May 1, 1958, Ser. No. 732,297
6 Claims. (Cl. 210—83)

1. In the separation of a liquid mixture of relatively light and relatively heavy immiscible and difficultly separable liquid components wherein such a mixture is fed continuously into a settling zone and is retained therein for time sufficient to produce by gravity settling relatively light and relatively heavy fractions composed essentially of said relatively light and relatively heavy components, respectively, which are withdrawn from the zone as products at cumulative rate equal to the rate of feed of said mixture and at individual rates corresponding substantially to the proportionate quantities of said relatively light and relatively heavy components in said mixture, the improved method of controlling the residence time and content of said relatively heavy component in said zone



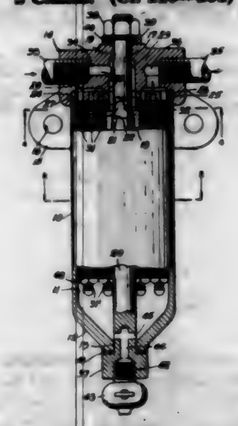
and consequently the extent of separation thereof from said relatively light component, comprising discharging said relatively heavy fraction against pneumatic pressure adequate to maintain a substantial proportion thereof in said zone, increasing and decreasing the quantity of said relatively heavy component retained in said zone by varying said pneumatic pressure, continuously comparing the densities of said relatively light fraction and of a liquid consisting of said relatively light component, and decreasing and increasing said pneumatic pressure, respectively, responsive to increases and decreases in the differences in said densities.

2,946,444
APPARATUS FOR CONTINUOUS FILTERING
James F. Zievers, Skokie, Ill., and Hugh A. Currie, San Jose, Calif.; said Currie assignor to said Zievers
Filed Sept. 16, 1955, Ser. No. 534,779
9 Claims. (Cl. 210—107)



1. Continuous filter apparatus comprising a substantially sealed cylindrical chamber, the cylindrical walls thereof comprising a perforated filter element, an inlet for admitting liquid to be filtered into said chamber under pressure, a rotating scraper adjustable radially in said chamber for scraping accumulated solids from the interior of said filter element, a float arranged to float on the liquid in said chamber, and means interconnecting said float and said scraper and driving said scraper radially outward when said float rises.

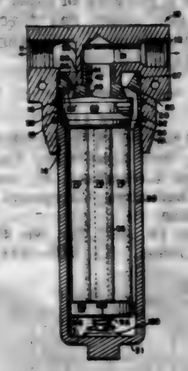
2,946,445
FLUID SEPARATORS
Charles M. Turnty, 542 Broad Ave., Palisades Park, N.J.
Filed July 16, 1958, Ser. No. 748,842
5 Claims. (Cl. 210—232)



1. A separator of the character described, comprising a tubular casing open at the upper end, a head detachable with the upper end of the casing, said head having intake and discharge passages, the head having a bore communicating with the intake passage and an annular recess communicating with the discharge passage, a coil unit comprising a disc having a multiplicity of apertures therein and spiral coils fixed to the disc and registering with said apertures, said disc forming the sole support of the coils freely in said casing, means for sealing said disc within the head and directly upon said cylinder, said spiral coils extending to the lower portion of said casing, means sealing the lower ends of said coils, the upper ends of the coils communicating with the annular recess in said head through the apertures in said disc, and said disc having a bore registering with the bore of said head for directing the intake through the head into the central portion of said casing.

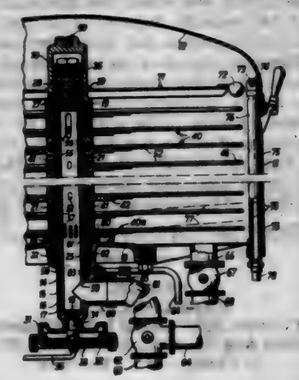
2,946,446
FILTRATION UNITS
Herbert H. Howard, Los Angeles, Calif., assignor to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California
Filed Sept. 17, 1958, Ser. No. 761,490
9 Claims. (Cl. 210—323)

1. A filter of the class described, having an enclosing casing with a removable bottom section as well as an inlet for filtrant under pressure and an outlet for filtrate, a filtration unit removable from the casing when the casing's bottom section is removed having a filtrate delivery end, means for leading the pressure feed of filtrant from the inlet thereof to encircle and submerge the filtration unit, and means for leading filtrate from the filtration unit to the filtrate outlet of the casing; said filtration unit comprising a plurality of open-ended cylinders of filter-media formed of sintered metallic spheres having tangential points of mutual contact, a depression-bearing bottom cover plate enclosing the lower ends of the cylinders, a depression-bearing top cover plate against which the upper ends of the cylinders are held with the cover plate having an aperture in each depression aligned with each cylinder through which filtrate can flow, means for securing the cover plates together with the cylinders



therebetween, and plastic cylinder-seating leak-proof means in each depression in each cover plate for removably frictionally engaging the end of a cylinder in each depression whereby said cylinders may be readily removed from said cover plates.

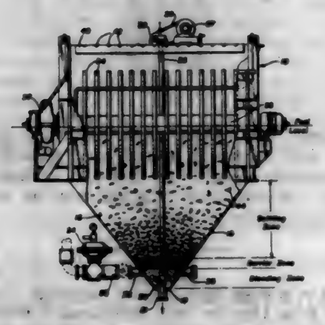
2,946,447
APPARATUS FOR FILTERING LIQUIDS, PARTICULARLY FOR USE IN THE BEVERAGE INDUSTRY
Alfred Welz, Zurich, Switzerland, assignor to Filtrez-Werke A.G., St. Gallen, Switzerland
Filed Oct. 23, 1958, Ser. No. 769,188
Claims priority, application Switzerland Oct. 26, 1957
4 Claims. (Cl. 210—333)



1. A pressure liquid filtering apparatus, comprising in combination a closed casing with a liquid inlet, a vertical discharge tube traversing and sealed against the bottom of said casing, said discharge tube projecting into the casing with a portion having lateral openings, a hollow shaft surrounding said discharge tube and being rotatably supported by the same, a plurality of disk-shaped hollow filter elements mounted on said hollow shaft axially spaced from one another, the inside of said filter elements communicating with the inside of said hollow shaft, said hollow shaft being closed at its upper end, a flange arranged at the lower end portion of said hollow shaft and cooperating with a sealing means at the bottom of the casing, means for axially displacing said discharge tube for lowering or lifting said hollow shaft to make a liquid-tight seat or a clearance between said flange and said seal-

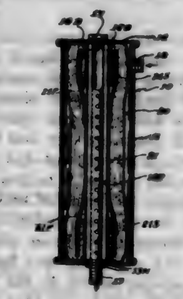
ing means, a turbine blade wheel fixed on said hollow shaft, a first stationary jet-nozzle within said casing and directed towards said turbine blade wheel for rotation thereof, the shaft and the filter elements when said hollow shaft is lifted, and a plurality of other stationary liquid jet-nozzles within said casing and directed towards the surface of said filter elements for clearing them of the filtering residues deposited thereon.

2,946,448
HIGH DENSITY THICKENER
C. Lynn Peterson, Salt Lake City, Utah, and Bloddle Leonard Derringe, Greensburg, Pa., assignors to Peterson Filters & Engineering Company, Salt Lake City, Utah, a corporation
Filed Mar. 18, 1955, Ser. No. 495,286
3 Claims. (Cl. 210—331)



1. In a filter device including a tank for slurry having feed inlet means in its upper portion and a discharge outlet for cake removal in its lower portion with a plurality of disc filter members mounted for rotation about a common horizontal axis above the discharge outlet and adapted to be partially submerged in tank-contained slurry and having means for subjecting each disc to variable differential pressures during each arc of revolution for inducing a flow from the slurry into the disc during the arc of submergence and an opposite flow during at least a portion of the remaining arc of the revolution, characterized by the fact that the feed inlet means includes a feed box extending laterally of the discs and includes points of cascading discharge immediately over at least a portion of the surface of each said disc exposed before its immersion in the slurry.

2,946,449
LIQUID FILTERS
Ernest C. Shaw, 2024 Collett Lane, Flossmoor, Ill.
Filed Aug. 15, 1957, Ser. No. 678,297
15 Claims. (Cl. 210—484)



1. In a filter cartridge, a rigid foraminous tubular core having concentric foraminous double walls at the ends thereof permanently connected to each other intermediate the ends of the core and defining anchoring pockets at the respective ends of the core and open in an axial direction at the respective ends of the core, and a filter sleeve surrounding the core including said double walls and having its ends extending inwardly and then reversely toward each other and inserted into the respective anchoring pockets.

2,946,450
LIQUID FILTERS
Ernest C. Shaw, 2024 Collett Lane, Flossmoor, Ill.
Filed Sept. 4, 1957, Ser. No. 681,924
8 Claims. (Cl. 210—484)



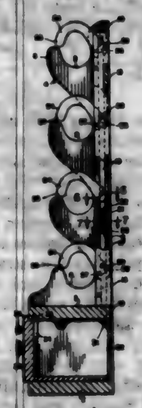
1. In a filter cartridge, a rigid foraminous tubular core, a filter sleeve surrounding the core and having end portions thereof reversely bent inwardly and disposed against the outer surface of the core to provide a double thickness of said sleeve near the ends thereof, and coil spring means between said thickness and engaging said end portions at the bends thereof to urge the reversely bent curved ends of sleeve yieldingly beyond the ends of the core.

2,946,451
APPARATUS FOR SEPARATING ENTRAINED PARTICLES FROM LIQUIDS
John T. Calleton, Hayward, Calif., assignor to Pacific Pumping Company, Oakland, Calif., a corporation of California
Filed Feb. 14, 1957, Ser. No. 640,146
3 Claims. (Cl. 210—512)



2. A unit for separating entrained sand from water, including in combination: a vertical cylindrical tank having a side wall, a top wall, and a bottom wall; a flat annular disc spaced well below said top wall and well above said bottom wall, so as to divide said tank into upper and lower compartments, said tank having a water outlet from said upper compartment and a sand outlet from said lower compartment, the outer periphery of said disc being spaced radially inwardly from said side wall, said disc having a central opening therethrough and being otherwise imperforate and a small-diameter, disc-like, horizontally-disposed, hollow centrifugal separator suspended from said disc below and around its said central opening, the bottom surface of said separator being imperforate except for a small central drain opening, the top of said separator being closed by said disc except at said central opening, the periphery of said separator being perforate and being located radially outside said central opening and radially well inside the periphery of said disc, said separator having tangentially entering inlet means for water carrying entrained sand.

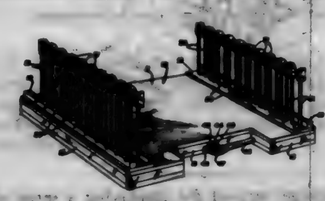
2,946,452
HORIZONTAL GUN RACK WITH LOCKING DEVICE
John Caloiaro, Aldo Michelini, and Raymond P. Rocchi, Chicago, Ill., assignors to Artistic Wood Specialties, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 16, 1958, Ser. No. 729,019
6 Claims. (Cl. 211—6)



6. A gun rack comprising a pair of vertically extending and horizontally spaced side rails, said side rails having cradles formed therein coating to support guns, a pair of horizontally extending and vertically spaced members secured at opposite ends to said side rails and defining therewith a space for a drawer, a drawer slidably arranged in said space for movement between open and closed position, and means for locking guns in position on the cradles including a vertically arranged bar having a longitudinal groove therein secured adjacent one of said rails, a rod slidable in said groove and having its lower end extending through the uppermost member and into the path of the drawer, a plurality of C-shaped members pivotally mounted on said bar, one coacting with each cradle of said one rail for movement between locked and unlocked position therewith, means on said rod engagable with said C-shaped members to pivot same between locked and unlocked position upon movement of said rod, and means responsive to movement of said drawer into closed position for moving said rod to actuate said C-shaped members into locked position.

2,946,453
SUPPORTING RACK FOR AUTOMOBILE WINDSHIELDS
Edward L. Pikye, 1386 Pompton Ave., Cedar Grove, N.J.
Filed Feb. 13, 1959, Ser. No. 793,184
2 Claims. (Cl. 211—41)

1. A rack for holding automobile windshields of the longitudinally curved type so that they may be transported without liability of breakage comprising, a lower base to be mounted upon a truck or the like for transportation, a first pair of rows of substantially vertical rigid spaced stationary posts rigidly mounted upon the base and the rows being arranged a sufficient distance apart to be positioned near the ends of the windshield, clamping heads having substantially flat clamping faces, means to pivotally mount the clamping heads upon the upper ends of the rigid stationary posts so that the clamping heads may turn upon the longitudinal axes of said posts, resilient pads mounted upon the clamping heads and covering the substantially flat faces, a second pair of rows of substantially vertical rigid spaced clamping posts, the rigid clamping posts in the second pair being arranged between the clamping posts of the first pair and spaced therefrom, the clamping posts of the second rows being arranged in alignment with the clamping posts of the first rows in a direction extending longitudinally of the first rows, second



clamping heads having substantially flat faces, means to pivotally mount the second heads upon the upper ends of the posts of said second rows so that the second heads can turn upon the longitudinal axes of such posts, resilient pads mounted upon the second heads and extendings over the substantially flat faces of the second heads, holding means for the vertical posts in the second rows and having the vertical posts rigidly mounted thereon, said holding means being mounted upon the lower base, means to shift the holding means in one direction to draw the posts in the second rows toward the posts in the first rows and to positively hold the posts in the second rows in the shifted position, and resilient pads mounted upon the lower base and arranged adjacent to the first and second rows of posts and having grooves formed therein, said grooves being arranged opposite the spaces between the posts of the first and second rows.

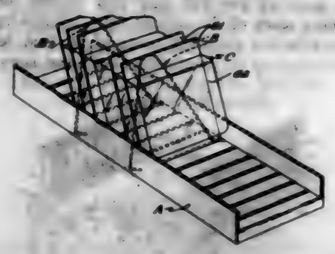
2,946,454
CARPET SAMPLE DISPLAY RACK
Carlton R. Asher, Wayne, Pa., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed Nov. 27, 1959, Ser. No. 855,884
3 Claims. (Cl. 211—45)



3. A display rack assembly comprising a sloping front panel having a series of marginal perforations adjacent each lateral edge thereof, separate flexible chains extending through transversely aligned pairs of perforations, a retaining element on the terminus of each of said chains

is back of the panel, a carpet sample suspended from the opposite terminus of each of said chains, and a clamp secured to each of the chains for supporting the sample.

2,946,455
PACKAGE SUPPORTS
Harold S. Meyers, Minneapolis, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Filed July 24, 1958, Ser. No. 750,741
5 Claims. (Cl. 211—49)



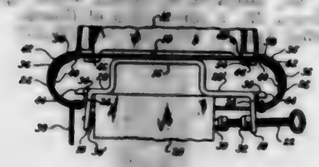
1. A package support for displaying a series of packages including a hollow rectangular tubular member having closely spaced top and bottom members and connecting side walls, said top member having transversely extending spaced parallel slots therein, package backing members extending through said slots and having a pair of spaced legs each adjoining a side wall and generally parallel leg extremities at substantially right angles to said legs, the junctures between said legs and leg extremities resting upon the upper surface of said bottom member and the ends of said leg extremities engaging the under surface of said top member.

2,946,456
MULTIPLE TRAY FOR BABY FOOD
Michael Lignori, 196 Paterson Ave., Lodi, N.J.
Filed Nov. 5, 1958, Ser. No. 771,978
2 Claims. (Cl. 211—77)



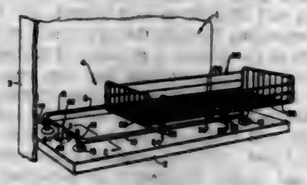
2. A multiple tray holder for containers, comprising a base adapted for mounting on a support, a central post rigidly fixed to and upstanding from said base, a plurality of generally flat trays having scalloped peripheral walls set one above another and rotatable on the post, a plurality of recesses formed in each of the trays for frictionally receiving one of said containers, each of said recesses having an apertured bottom to facilitate removal of a jar from a recess, each of the trays having an apertured depending boss providing a friction-bearing surface for restraining rotation of the tray on the post, said base being provided with a flat hub and radiating legs, a friction foot secured to each of the legs, said hub providing a support for the lowermost of said trays, said post having a plurality of spaced diametral holes therein, a pin extending through one of the holes and extending radially from opposite sides of the post, the uppermost of said trays being supported on said pin, the boss on the uppermost tray being a circular member having a series of circumferentially spaced grooves and ridges at the bottom thereof, said pin being lodged in two diametrally aligned grooves, said grooves, ridges and pin constituting a detent arrangement for positively and selectively positioning said uppermost tray on the post.

2,946,457
DISPLAY RACKS
Melbourne H. Pierce, Belmont, Roger L. Perry, Lynnfield Center, and Frederick W. Adams, Jr., Hanover, Mass., assignors to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Sept. 2, 1955, Ser. No. 532,347
10 Claims. (Cl. 211—86)



6. A merchandise display rack comprising a base portion including a merchandise supporting surface having downwardly and inwardly extending flange-like thrust-receiving portions integral therewith and means for securing thereto a plurality of partition-like members, a mounting bracket disposed between said portions including a pair of legs extending downwardly adjacent respective ones of said portions for straddling a supporting member on which the display rack is to be mounted, at least one of said legs being yieldable with respect to the other leg toward the adjacent thrust-receiving portion, and means for deflecting said yieldable leg toward and into locking engagement with said portion adjacent thereto while forcing said other thrust-receiving portion into engagement with said bracket and simultaneously securing said legs to the supporting member.

2,946,458
RECIPROCATING TRAY UNITS
Philip Du Boff and Harvey Miller, Kearny, N.J., assignors to Shelfmaker Products Corp., Kearny, N.J., a corporation of New Jersey
Filed Jan. 27, 1960, Ser. No. 4,911
8 Claims. (Cl. 211—88)



1. A reciprocating tray unit adapted to be disposed on a shelf in a storage area whereby items can be moved to a convenient position for insertion in, or removal from, the storage area, said unit comprising a base member having rails extending along opposite sides thereof, a first group of attaching means extending from the underside of said base member to secure one end of said base member to the shelf, a second group of attaching means spaced from said first group and extending from the underside of said base member to secure the other end of said base member to said shelf, a tray member overlying said base member, and at least two retaining bars extending between opposite sides of said base member below said rails, and having end portions passing over and around the outside of said rails, one of said retaining bars being secured to the underside of said tray member near one end thereof, the other of said retaining bars being secured to the underside of said tray member in spaced relation to said one retaining bar toward the other end of said tray member whereby said tray member is irremovably coupled to said base member and reciprocal thereon, said one retaining bar secured to said tray member near one end thereof cooperating with one of said groups of attaching means to limit movement of said tray member in one direction, and said other retaining bar secured to said tray member cooperating with the other group of attaching means to limit movement of said tray member in the direction opposite to said one direction.

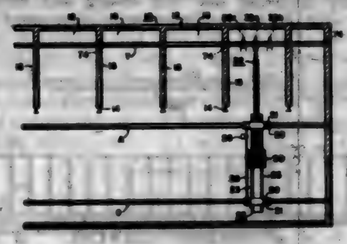
2,946,459
COLLAPSIBLE SHELF STRUCTURE
Angelo A. Rizzuto, Box 325, General Post Office, New York, N.Y.
Filed Feb. 19, 1959, Ser. No. 794,470
3 Claims. (Cl. 211—93)



3. A collapsible shelf structure comprising, in combination, two rectangular frames, hinges pivotally connecting said frames at their edges, at least one shelf pivotally mounted within one of said frames, latching means to secure said frames in extended relation, said latching means consisting of a first M-shaped lug fixed to one frame with the legs of said first lug forming two channels adjacent to said frame, a second T-shaped lug fixed by its leg to the other frame, a U-shaped catch with both legs of said catch extending slidably through the channels in said first lug so that said catch may be moved to extend the legs of said catch on either side of the leg of said second lug, and feet portions extending laterally outward from the ends of the legs of said catch preventing the withdrawal of said catch from said first lug while allowing the engagement of the legs of said catch with said second lug, and means to support said frames in a vertical position when said frames are secured by said latching means in an extended relation.

2,946,460
PACK HANDLING DEVICE
Thomas A. Insolio, Jeannette, Pa., and Reno Carlal and Peter J. Magrini, Sr., Okmulgee, Okla., assignors to American Window Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 28, 1957, Ser. No. 662,148
9 Claims. (Cl. 212—10)

1. A conveying and handling device comprising in combination, a plurality of longitudinal support members with at least one longitudinal member thereof arranged in spaced apart relation between others, first rollers, interfitting elements forming a transversely extended crane unit movably mounted by means of said first rollers at each end upon the outer ones of said longitudinal support members, said elements being telescopically related and having means comprising second rollers movably mounting the inner end of one of the elements to an inner one of the longitudinal members for supporting the unit to move therealong, and means effective both



with said elements extended in the described manner or telescoped together for moving the transverse crane unit with respect to said plurality of longitudinal members and for effecting movement of the elements of said assembly into telescoped relationship.

2,946,461
MISSILE LOADING APPARATUS
Robert W. Siezak, deceased, late of Oxnard, Calif., by Jean Siezak, administratrix, and Earl B. Bjorke, Oxnard, Calif., and Robert B. Caldwell, Honolulu County, Hawaii, assignors to the United States of America as represented by the Secretary of the Navy
Filed May 28, 1957, Ser. No. 662,304
5 Claims. (Cl. 212—135)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Article handling apparatus for aligning an unwieldy elongate article to be secured to a support which comprises a frame having rail means, a carriage movably supported on said rail means, said carriage having spaced guide means lying in a vertical plane, a resilient elongate means having depending portions freely running through and supported by said guide means, said elongate means being movable around said guide means in the same direction alternately to raise and lower the respective depending portions, cradle means attached to said depending portions of the elongate means for suspending the article substantially in said vertical plane at spaced locations, the entire length of said resilient means always being under tension, whereby the suspended article will feel substantially weightless when one end is tilted during alignment of the article to the support.

2,946,462
SHOCK ABSORBING MECHANISMS
Vernon S. Danielson, Chicago Heights, Ill., assignor to W. H. Minet, Inc., Chicago, Ill., a corporation of Delaware
Filed Jan. 13, 1958, Ser. No. 708,637
4 Claims. (Cl. 213—7)

3. A shock absorbing mechanism comprising an open-ended first casing having top, bottom and side walls

integral with a front panel and having diagonal corner walls joining the top and side walls and the bottom and side walls, triangular lugs projecting laterally outwardly from said diagonal walls in proximity to the open end of said first casing; a second open-ended casing telescopically receiving said first casing and having top, bottom and side walls integral with each other to form



corner sections and integral with a rear panel, pairs of juxtaposed slots at said corner sections of said second casing, each slot of a pair of slots being located in a different wall of said second casing; a retaining key extending through each pair of slots into the path of movement of the lugs and embracing the intervening corner section of said second casing, and resilient means housed within said first and second casings.

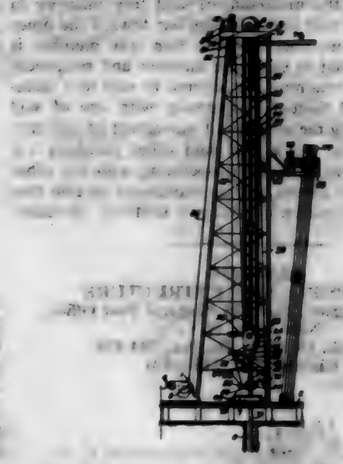
2,946,463
APPARATUS FOR ARRANGING RODS
Oscar Josef Smedjeb, Nydalen, Oslo, Norway, assignor to Christiania Spigerverk, Oslo, Norway
Filed Apr. 21, 1959, Ser. No. 807,877
Claims priority, application Norway Mar. 21, 1953
13 Claims. (Cl. 214—1)



1. A device for arranging a bundle of rods into a layer of parallel rods comprising a plurality of longitudinally extending substantially horizontal support means for supporting a bundle of rods in a direction transverse to the direction of said support means, end supports supporting said horizontally extending support means, a mounting means positioned below said support means, a plurality of right cylindrical bodies freely rotatably mounted on said mounting means about a single axis transverse to the longitudinal direction of said support means, said cylindrical bodies projecting above the upper level of the ends of said horizontal support means, and a driving mechanism connected to one of said means for reciprocally moving one of said means relative to the other in a horizontal direction.

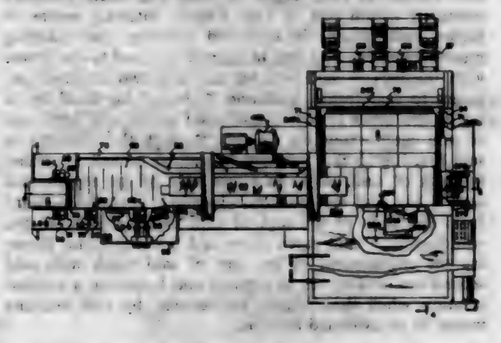
2,946,464
APPARATUS FOR HANDLING STANDS OF PIPE
William C. Guier, P.O. Box 7244, Tulsa, Okla.
Filed July 11, 1956, Ser. No. 597,252
10 Claims. (Cl. 214—2.5)

3. In an apparatus for handling drill pipe including a derrick, a traveling block, means suspending the traveling block from the upper portion of the derrick and for raising and lowering the traveling block in the derrick, an elevator pivotally suspended from the traveling block and having hinged sections adapted to open and close upon a drill pipe, cable means extending from the upper portion of the derrick to a lower portion of the derrick for guiding the traveling block in said raising and lowering movement, arms on the elevator sections and connected with the cable means, and means connected with the cable means for pulling on said arms of the elevator



sections for swinging the elevator sections to open position and for moving the elevator on its pivotal connection with the traveling block and out of vertical alignment with the traveling block.

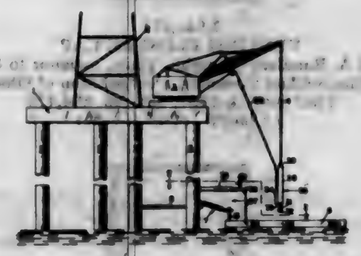
2,946,465
PALLET LOADING MACHINES
Warren S. Raynor, Port Hope, Ontario, Canada, assignor to Mathews Conveyer Company, Elwood City, Pa., a corporation of Pennsylvania
Filed Nov. 16, 1954, Ser. No. 469,274
Claims priority, application Canada Nov. 16, 1953
7 Claims. (Cl. 214—6)



1. A pallet loading machine comprising a frame defining a lift share, a lift for raising and lowering a pallet within said shaft, an apron slideably mounted in said frame at the upper end of said shaft for movement between an extended position overlying a pallet on said lift and a retracted position withdrawn from said shaft, means for feeding articles to a location adjacent one side of said shaft at the upper end thereof, releasable stop means normally operable to accumulate articles on said feeding means at said location in a row extending in a direction normal to the direction of movement of said apron, means responsive to the accumulation of a predetermined number of articles in the row for releasing said stop means and transferring the accumulated row from said feeding means onto said apron, and indexing means responsive to the location of the accumulated row

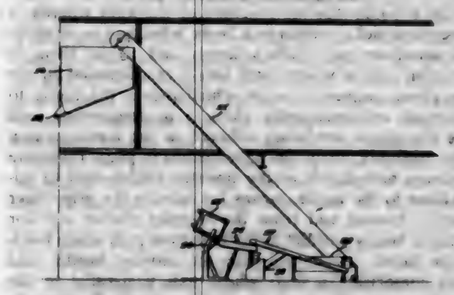
of articles upon said apron for restoring said stop means to its article accumulating condition and indexing said apron toward said extended position to position said apron to receive a subsequent row of articles from said accumulating means.

2,946,466
APPARATUS FOR LOADING AND UNLOADING FLOATING VESSELS
Ted Weiner, Texas Crude Oil Company, 6100 Camp Bowie Blvd., P.O. Box 9846, Fort Worth 7, Tex.
Filed Sept. 26, 1958, Ser. No. 763,539
4 Claims. (Cl. 214—16)



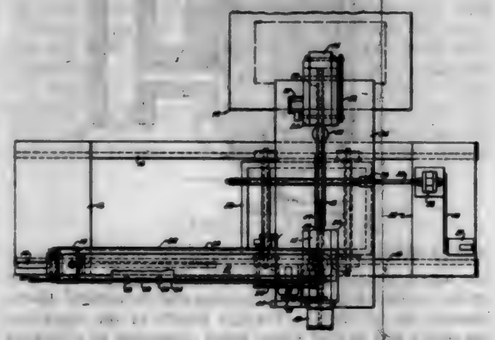
1. A system for loading and unloading articles from a floating vessel, comprising supporting means for supporting said articles to be loaded and unloaded from said vessels; power means operable in response to an electrical signal for controlling movement of said supporting means when said supporting means is in a vessel loading and unloading position; a first electrical signal generator coupled to said vessel and controlled thereby in correspondence with the vertical position thereof; a second electrical signal generator coupled to said supporting means and controlled thereby in correspondence with the vertical position thereof; and means, in circuit connection with said signal generators and operative when said signals are not in a predetermined relationship, to produce an electrical signal to operate said power means and thereby cause said supporting means to move such that said signals return to said predetermined relationship.

2,946,467
TEXTILE BOBBIN DELIVERY MEANS
Charles V. Hinton, Charlotte, N.C., assignor to The Terrell Machine Company, a corporation of North Carolina
Filed June 18, 1958, Ser. No. 742,924
9 Claims. (Cl. 214—17)



2. Apparatus of the character described for maintaining at each of a plurality of operating stations a reserve supply of articles being handled thereat, said apparatus comprising means for containing a common main supply of said articles, conveyor means running from said main supply means to all of said operating stations, means for operating said conveyor means to deliver articles from said main supply to said operating stations, settable means for directing the delivery discharge from said conveyor means selectively to any one of said operating stations, means at each of said operating stations for sensing, and anticipating exhaustion of, the reserve supply of articles thereat, and means responsive to said sensing means for controlling said conveyor operating means and said settable directing means to select an operating station at which an anticipated exhaustion of the article supply thereat has been sensed and to deliver a replenishing supply of articles thereto in a quantity sufficient to satisfy said sensing means.

2,946,468
COMPOUND TRAVERSE CONVEYOR FOR PATTERN FEEDING
Robert E. Hagan, Butler, Pa., and Roger D. Lopez and George H. Sundin, Duluth, Minn., assignors to United States Steel Corporation, a corporation of New Jersey
Filed May 14, 1957, Ser. No. 659,471
12 Claims. (Cl. 214—18)

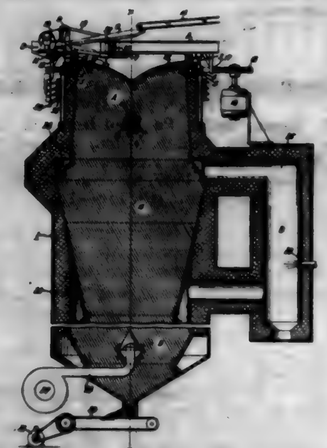


1. In an apparatus for feeding material from a source to an open shaft, which apparatus includes a first conveyor supported to receive material from the source and to swing on a vertical axis beneath the source, and a final conveyor supported to receive material from the first and to swing on a movable vertical axis near the discharge end of the first and having its own discharge end located over the shaft, the combination with said conveyors of a traversing drive for moving the discharge end of said final conveyor over the shaft in a selected feeding pattern comprising a first driven means movable in a straight line, a second driven means supported on said first driven means and movable relative thereto in a straight line at right angles to the direction of movement of the first driven means, and means pivotally connecting said second driven means to said final conveyor.

2,946,469
HEAT-TREATING FLUENT SOLIDS
Fred D. De Vaney, Duluth, Minn., and Donald Beggs, Toledo, Ohio, assignors to Erie Mining Company, Hibbing, Minn., a corporation of Minnesota
Filed May 13, 1957, Ser. No. 658,589
2 Claims. (Cl. 214—18.2)

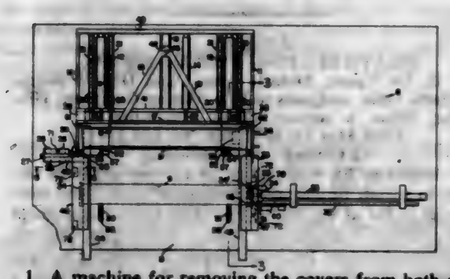
1. Apparatus for maintaining an average stockline elevation in a shaft furnace organization wherein fluent solid material is fed at the top thereof and heat-treated fluent solid material is discharged from a lower part thereof, comprising a loader for continuously distributing a layer of fluent solid material in a path over the stockline, a carriage for transporting the loader over said path, variable speed drive means for propelling the carriage along said path at variable speeds, said varinble speed drive means including a motor control circuit having low speed

circuit means for propelling said carriage along said path at a relatively low speed and high speed circuit means for propelling said carriage along said path at a relatively high speed, auxiliary relay means having a normal first position for operating said low speed circuit means and for disconnecting said high speed circuit means and a second position for disconnecting said low speed circuit means and for operating said high speed circuit means, and means for actuating said auxiliary relay means from said first position to said second position when the stockline level is at least as high as the



desired average height comprising an electrical circuit one leg of which includes a flexible electrically-conductive probe insulated from said loader and suspended therebeneath to the desired average height of the stockline, the upper end of said probe being connected to a voltage source and the lower end of said probe being adapted to slidably engage the upper surface of the fluent solid material, said solid material being electrically connected to ground, said electrical circuit also including electronic relay means operable by said probe member upon the grounding thereof on the solid material for actuating said auxiliary relay.

2,946,470
MACHINE FOR REMOVING COVERS AND CONTENTS FROM CONTAINER
Arthur M. McFarlane, Rochester, N.Y., assignor to Russer's, Inc., Rochester, N.Y., a corporation of New York
Filed Apr. 29, 1959, Ser. No. 809,780
3 Claims. (Cl. 214—304)



1. A machine for removing the covers from both ends of a container, comprising a base, a pusher reciprocally mounted on said base, means for moving the pusher on said base in a forward direction, means supporting the container in position to be engaged and moved by the pusher upon the forward movement of said pusher, a first cover stripping means disposed alongside of the path of the forward movement of the pusher, a second cover stripping means attached to the base opposite the first cover stripping means, one of said cover stripping means being transversely slidable on said base, means urging the slidable cover stripping means towards the other stripping means, and means attached to said slidable cover stripping means for engaging one cover to position said slidable means to align with said one cover of the container, both said cover stripping means holding said covers during forward movement of the container.

2,946,471
VENTING CLOSURE CAP
Edward A. Randlett, Memphis, Tenn., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 4, 1957, Ser. No. 694,425
3 Claims. (Cl. 215—56)

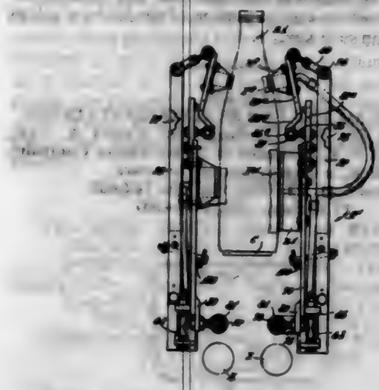


1. In a sealed package comprising a container, a neck defining a filling opening and terminating in an annular top rim or sealing surface, a closure cap telescoped over the neck, and screw threads for holding the cap and container together, a membrane inner seal within the closure cap and an adhesive on all portions of said rim for bonding the inner seal to the latter incident to threading of the closure cap onto said neck; the improvement which comprises coating a selected restricted area of the inner seal with a film of material incapable of bonding with the adhesive whereby to allow flexing of the seal and separation of the latter from the rim in such area upon separation of the closure cap and rim in the presence of pressure conditions wherein the pressure within the sealed package substantially exceeds that of the ambient atmosphere.

2,946,472
GRIP-FINGER ASSEMBLY FOR LABELING MACHINES
Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin
Filed May 26, 1959, Ser. No. 815,878
24 Claims. (Cl. 216—13)

1. In a bottle-labeling machine of the kind wherein a gum-coated picker removes a body label and a shoulder label simultaneously from a supply and carries them to a transfer station where both labels are disposed in the same plane, conveyor means which moves the bottle to be labeled uninterruptedly along a predetermined path while the labels are being adhered to the bottle, a grip finger assembly, including label transfer pads, operative to receive both labels at the transfer station and to adhere them to the bottle, means for moving the grip finger assembly toward and from the transfer station and for moving it bodily parallel to the conveyor path while holding the labels in contact with the moving bottle, said means comprising a shaft whose axis is parallel to the conveyor path and means for rocking the shaft, said grip finger assembly comprising a rock arm mounted on said shaft and a frame fixed to the rock arm, carriers for a body label pad and for a shoulder label pad, respectively, mounted upon said frame, the label-contacting surfaces of both pads normally being in the same plane, characterized in having means responsive to the termination

of motion of the body label pad carrier, by contact of the label carried thereby with the bottle, to move the shoulder label pad carrier from its normal position of



parallelism with the body label pad carrier to a position such that its label-contacting surface slopes at the same angle as the shoulder of the bottle.

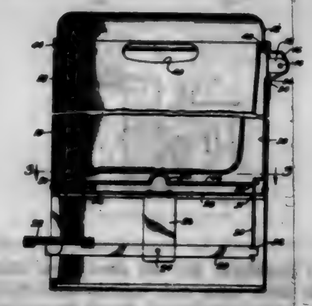
2,946,473
TOBACCO HOGSHEAD
Kemper N. Moseley, 1014 Gloria Ave., Durham, N.C.
Filed Jan. 14, 1957, Ser. No. 633,875
3 Claims. (Cl. 217—44)



3. A knock down hogshead comprising a first and second group of staves, trapezoidal cleats at each end of each stave on one face thereof, a first strap fixed to one group of staves on the other face, said strap having a loop formed at one end thereof, a second loop formed of a strap section within said one loop and having its bight portion spaced from the bight portion of said one loop, a second strap fixed to the other group of staves and having a first loop formed at one end thereof and a second loop formed of a strap section within said first loop, a U-shaped connector for insertion in the first loop of each of said straps, said group of staves being of a construction to be stored in flat condition and be secured around loose material, the other end of such straps extending beyond the other edges of the groups of straps whereby the other ends may be secured in fixed overlapping relation while the said one ends of said straps may be released to permit inspection of the contents.

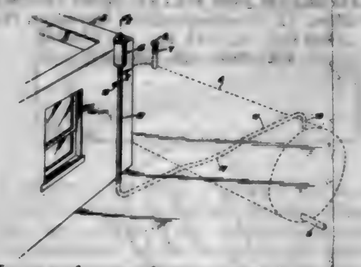
2,946,474
SANITARY GARBAGE RECEIVER
Andrew S. Knapp, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Aug. 4, 1958, Ser. No. 752,716
2 Claims. (Cl. 220—17)

1. In a sanitary garbage receiver, an outer housing, a hinged lid thereon, a foot pedal operated lever pivoted at its center, having a foot pedal on one end and a link operatively connecting its other end to said lid for opening the same, an inner container removably positioned within said outer housing, said inner container having a lip around its upper edge to rest on the upper edge of said outer housing and being supported thereby, said inner container having hand grasp holes immediately below said



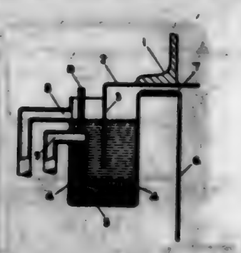
lip and thereby normally inaccessible when said inner container is in said outer housing, and means for elevating said inner container to expose said hand grasp holes comprising a second lever pivoted at one end, contacting the center of the bottom of said inner container intermediate its ends and operatively connected at its other end with said link to elevate said inner container when said foot pedal is depressed and said lid is thereby opened.

2,946,475
GASOLINE TRAP
Harold J. Rockelman, 226 Waverly Ave., Tonawanda, N.Y.
Filed Mar. 26, 1957, Ser. No. 648,712
5 Claims. (Cl. 220—18)



1. In an underground storage tank for gasoline or the like having a vent pipe open to the atmosphere including a subsurface horizontal run buried at such shallow depth as to be susceptible to having a dip formed therein by vehicles travelling on the ground thereover and also having an upright end part projecting above ground and open at its upper end, the combination therewith of means for trapping any liquid gasoline discharged from said open end of said vent pipe, comprising a lower end head secured to said upper end of said vent pipe and through which said upper end of said vent pipe extends, a tubular shell secured to and rising from the rim of said lower end head, means within said tubular shell and arranged over the open upper end of said vent pipe and deflecting laterally any liquid discharged therefrom, said vent pipe being provided above said lower end head with a drain hole for returning such discharged liquid into said vent pipe, said tubular shell being provided with a removable upper end head forming a cap above and enclosing the space above said deflecting means and means venting the chamber formed by said tubular shell and its end heads.

2,946,476
SEALING DEVICE
Herbert John Rose, Runcorn, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Aug. 20, 1956, Ser. No. 604,373
Claims priority, application Great Britain Aug. 29, 1955
4 Claims. (Cl. 220—45)



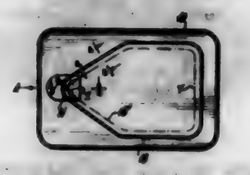
1. In an apparatus for the continuous treatment of materials in sheet form with volatile substantially water-immiscible, organic solvents, means including a cover and independent side wall means defining a chamber within which the materials are subjected to treatments that give rise to evaporation of the solvents, and liquid seal means between said cover and said independent side wall means for preventing escape of the solvent vapors, said seal means comprising an annular channel-shaped vessel carried by said side wall means and having liquid therein, and an annular skirt on said cover extending downwardly into said vessel, said liquid including water and a water-immiscible solvent, first overflow means directly communicating with said water, and second overflow means directly communicating with said solvent.

2,946,477
BEAD SEAMS FOR METAL CONTAINERS
Edvin Wadtne, 23, Drosningsgaagate, Stavanger, Norway
Filed Oct. 16, 1956, Ser. No. 616,255
2 Claims. (Cl. 220—54)



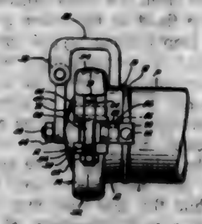
1. In combination with a can having a continuous side wall providing along its top marginal edge with a lip in the form of a roll presenting an upwardly facing toroidal surface disposed just beyond the confines of said side wall, a lid having a depressed central portion of an area substantially equal to the area of the can and in conformity therewith, said central portion of the lid being fitted snugly into the top of said can, said lid also having a peripheral edge portion overlying and snugly engaging said top marginal edge lip of the can, said marginal edge portion of the lid being provided with a score line extending substantially completely thereabout but having spaced end portions defining a portion of the marginal edge of the lid which is devoid of such score line, said score line being in a position in the marginal edge portion of the lid in relation to said can lip so as to lie above the uppermost portion of said upwardly facing toroidal surface, said lid also including a tab integrally formed therewith at that portion thereof which is devoid of the score line, the disposition of the score line relative to the toroidal surface permitting a key to bear directly upon the outermost marginal edge portion of the lid immediately adjacent the score line to permit the removal of the whole central portion of the lid by a rolling up action upon such key.

2,946,478
OPENING MEANS FOR SEALED CONTAINERS
Verne Clair, Jr., New Hartford, and Stanley A. Zyzk, Little Falls, N.Y., assignors to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Sept. 22, 1953, Ser. No. 762,469
17 Claims. (Cl. 220—54)



1. In combination with a sealed container having at least a wall portion consisting of cold pressure weldable metal, means for producing an opening in said container comprising a tearing tag or the like detachable member also of cold pressure weldable material, said member overlying and being secured to said wall portion by a linear indentation cold pressure welding joint providing a first indentation of said wall portion conforming to a fractional outline portion of an opening to be produced in said container, said wall portion being provided at its area exterior of said member with a second linear indentation forming a scoring line of reduced metal thickness conforming to the remaining outline portion of said opening, said first and second indentations gradually merging into one another, whereby to cause severing of the container metal at and to produce an opening conforming to the outline of both said indentations upon tearing said member off said wall portion in a predetermined direction.

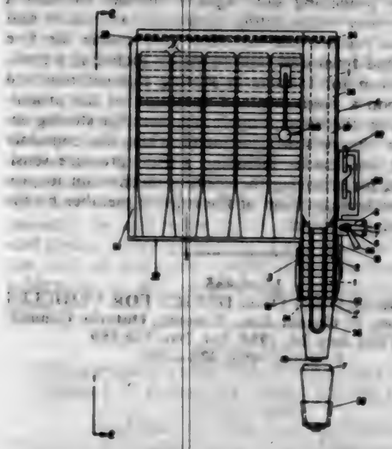
2,946,479
CLOSURE ASSEMBLY
Thomas Wheatley, 3505 W. Dallas St., Houston, Tex.
Filed Feb. 17, 1953, Ser. No. 715,743
1 Claim. (Cl. 220—55)



A closure assembly comprising, a tubular body having an external annular flange forming an annular end face on the body, a closure having an external annular flange forming an annular face positioned to be engaged with with said end face to close the body, means for supporting the closure on the body for movement into and out of a position to close the body, clamp elements having portions of channel-shape in cross section shaped to be positioned about the body and closure, means forming a pivotal connection between the body and each of said elements to

support the elements for swinging movement into and out of a position to clampingly engage the flanges in said portions to hold the closure closed, cam means rotatably mounted on the body and having a portion extending between the ends of the clamp elements and formed with cam surfaces positioned for co-action with the ends of said elements to move the elements out of clamping position upon rotation of the cam means to one position and to permit the elements to be moved into clamping position upon rotation of the cam means to another position, and means for releasably holding the elements in clamped position.

2,946,480
STACKING MECHANISM FOR RECEIVING STACKS OF NESTED CONTAINERS AND INDIVIDUALLY DELIVERING THE SAME
Jurgen Farber, Duesseldorf, Germany, assignor to Jagenberg-Werke Akt.-Ges., Duesseldorf, Germany
Filed Aug. 17, 1956, Ser. No. 604,640
Claims priority, application Germany Sept. 3, 1955
5 Claims. (Cl. 221—166)



3. Stacking mechanism for accommodating and holding stacks of containers at least a major length of which are conical and for delivering individual containers from the stack to a cell conveyor underlying the mechanism and in spaced relation thereto, said mechanism comprising stack supporting means for accommodating and holding a stack of nested containers in vertical position, mechanism for individually delivering the end container of the stack to an underlying cell of the conveyor, adjustable mounting means for said stack supporting means including a slideway extending at an acute angle to the longitudinal axis of the stack and upwardly and laterally outwardly with respect to the path of travel of the underlying conveying mechanism, a slide on said slideway and connected to said stack supporting means, an adjusting means for moving said slide and thus said stack supporting means on said slideway when the cross sectional size of the containers of a supported stack is varied so that the longitudinal median line of a supported stack is simultaneously moved vertically and transversely to be disposed concentrically of the underlying cell of the cell conveyor.

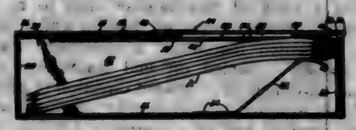
4. Stacking mechanism as claimed in claim 3 in which the stack supporting means further includes a lateral extension and means connected to the extension for supporting a plurality of stacks of nested containers and said extension being movable with the stack supporting means when the latter is adjusted.

2,946,481
CONVERTIBLE CUP DISPENSING MECHANISM
Hermann Carow, Easton, Pa., assignor, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 1, 1955, Ser. No. 532,846
4 Claims. (Cl. 221—232)



1. In dispensing mechanism for temporary containers, frame means having an opening therein through which containers having a rim bead may be successively dispensed from a stack of nested containers, an annular series of rotary dispensing worms carried by said frame means adjacent said opening, the dispensing configuration on each said worm terminating at the bottom in a flat land for final engagement with a container under the rim bead, and each said land having a curvate exposed edge contour substantially the same as the external circumference of the container whereby each land contacts the side wall of the container and the underside of the rim bead.

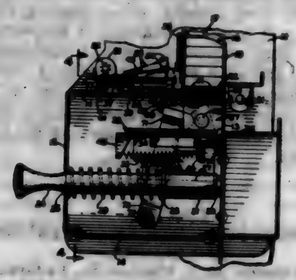
2,946,482
DISPENSER FOR ARTICLE-CONTAINING ENVELOPES
Stanley R. Johnson, 36 N. Madison St., La Grange, Ill.
Filed July 2, 1957, Ser. No. 669,525
9 Claims. (Cl. 221—240)



1. A dispenser for singly dispensing therefrom elongated flattened article-containing envelopes wherein longitudinal edge portions of each said envelope are thinner than the remainder of the envelope and wherein said envelope has ejector-engaging means thereon; said dispenser comprising casing means defining an elongated chamber therein adapted to receive a plurality of said elongated envelopes with their said thinner longitudinal portions aligned, said casing means defining a discharge opening through which single ones of said envelopes may be longitudinally discharged, said chamber being of a dimension to prevent any substantial lateral or longitudinal displacement of the envelopes relative to each other, ejector means carried by said casing and arranged for reciprocating movement toward and away from said discharge opening, said ejector means including spaced ejector elements disposed in said chamber wherein the envelopes are positioned and arranged to be reciprocated along predetermined longitudinal paths which are in alignment with said thinner longitudinal edge portions of said envelopes, at one end of which path a portion of each said ejector element extends outwardly of said casing through said discharge opening and at the other end of which path each said ejector element is retracted within said chamber and is spaced from said discharge opening, said casing defining an abutment wall which is exposed

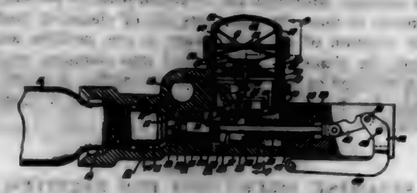
when said ejector element is retracted, bias means within said chamber adapted to bias the thicker article-containing portions of said envelopes in said chamber toward said abutment wall, said ejector element being arranged to pass between said envelopes and said abutment wall during the action of said ejector element in the dispensing of an envelope, said abutment wall being arranged adjacent said discharge opening so that the envelope which abuts said abutment wall is aligned with said discharge opening, and means for insuring only single dispensing of said envelopes from said casing.

2,946,483
VENDING APPARATUS
Harry B. Stoner, Edwin Purre, and Robert L. McGary, Aurora, Ill., assignors, by mesne assignments, to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Original application May 28, 1950, Ser. No. 163,274, now Patent No. 2,707,543, dated May 3, 1955. Divided and this application Nov. 3, 1953, Ser. No. 389,942
4 Claims. (Cl. 221—243)



1. A vending machine comprising container means for containing a stack of merchandise units to be vended and having a discharge opening through which said units may be dispensed therefrom, a stationary frame, an ejector slidably mounted on said frame for alternate reciprocal movement in a forward direction to permit one of said units to move to a position in alignment with said discharge opening and in a rearward direction to eject said one unit from said container means through said discharge opening, a manually operable plunger slidably mounted on said frame for alternate reciprocal movement in said forward and rearward directions and adapted to be manually pulled by a customer in said forward direction toward said customer, an interconnecting member slidably engaging said ejector and slidably mounted on said plunger for reciprocal movement of said member in said forward and rearward directions, a first yieldable spring means urging said member rearwardly, a first pair of coacting means on said plunger and said member and mutually engageable for moving said member forwardly in response to manual pulling of said plunger forwardly and for moving said plunger rearwardly in response to rearward movement of said member by said first yieldable spring means, said first pair of coacting means being disengageable in response to relative rearward movement of said plunger with respect to said member, said plunger and said member being normally maintained in rearward positions by said first spring means when the machine is at rest, a second yieldable spring means urging said ejector forwardly, and a second pair of coacting means on said member and said ejector and mutually engageable for moving said ejector rearwardly in response to rearward movement of said member and mutually disengageable in response to forward movement of said member.

2,946,484
INFLATABLE LIFE SAVING DEVICE
Joseph Warren Stoner, 1714 Eastern Parkway, Schenectady, N.Y.
Filed Feb. 25, 1954, Ser. No. 412,617
20 Claims. (Cl. 222—5)



1. Apparatus for inflating an inflatable member comprising a gas producing component having a fluid filled container removably sealed therein and operative in response to the rupturing of said container, a rupture member, a manual operating lever and an energy storing element each having two-way propulsion means operable thereby for propelling said rupture member through a cycle of two-way reciprocating motion into and out of said container to rupture said container and enable the free escape of fluid from said rupture means including a cocking mechanism for the energy storing element rendered effective upon a predetermined operation of the propulsion means by the manual operating lever for storing energy in the energy storing element while the container is removed, and means including a fluid pressure sensitive element for releasing the cocking mechanism to produce automatic propulsion of the rupture member by the energy storing element.

2,946,485
SAFETY BRAKE SETTING DEVICE FOR VEHICLES
Carl Darner, 37 Garnet Ave., Toronto, Ontario, Canada
Filed July 24, 1958, Ser. No. 750,759
1 Claim. (Cl. 222—30)



In a fluid dispensing motor vehicle, a brake control valve and a meter for metering a substance delivered thereby, said meter having a casing and a delivery slip holding arm which is pivoted for movement between a raised position in which the meter is inoperative and a lowered position in which the meter is operative, a device for actuating said brake control valve in response to operation of said meter comprising a lever connected to said valve for actuating the same, a servo motor having a reciprocating rod directly connected to said lever to actuate said lever, a vacuum line leading to said servo motor to operate said motor, a valve controlling said vacuum line and having a body fixed to said casing, said body having a cylindrical chamber therein and passages communicating with said vacuum line, a spool reciprocally mounted in said chamber and being movable to one position to place said passages in communication with each other and to a second position to arrest communication between said passages and interrupt said vacuum line, a spring urging said valve into said first position, a pin axially fixed to said spool and projecting into said meter casing, a projection fixed to said delivery slip holding arm and engaging the end of said pin, said pin and spool being reciprocal into said second position in response to movement of said delivery slip holding arm.

2,946,486
ANALYTICAL DEVICE
Roger Gilmont, Douglaston, N.Y., assignor to Mancotat Corporation, New York, N.Y., a corporation of New York
Filed May 29, 1957, Ser. No. 662,527
9 Claims. (Cl. 223—38)



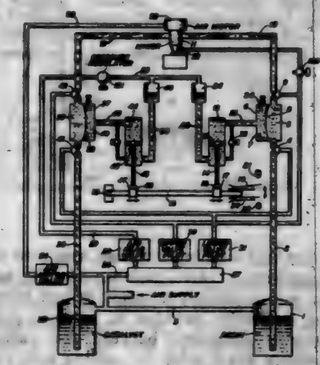
1. A microburet comprising a discharge buret having capillary tubing at one end and an enlarged chamber or titrant reservoir at the other end, a barrel communicating with said buret and having a translatable plunger axially guided therein and a housing, said housing having a longitudinal slot therein, a slidable, hollow mounting rod connected to said plunger at one end and having an opening at the opposite end, said mounting rod having a depending nut slidably received in said slot whereby said rod is restrained from rotation, a screw spindle in threaded engagement with said mounting rod extending through the open end thereof and through said housing, an indicator including a plurality of indicia-bearing counter wheels, a counter shaft on which said wheels are carried and a pinion secured to said counter shaft, a gear mounted on said screw spindle and adapted to engage said pinion, whereby the ratio of said gear and pinion and the pitch of said screw spindle thread predetermines the calibration of said counter for a given total capacity buret.

2,946,487
COLLAPSIBLE TUBE WITH SHUT-OFF DEVICE
Petrus J. C. Seelen, 191 Nieuwe Gracht, Utrecht, Netherlands
Filed Nov. 10, 1958, Ser. No. 772,748
Claims priority, application Netherlands Nov. 15, 1957
4 Claims. (Cl. 222—107)



1. Self-closing dispenser device of the collapsible tube type, comprising a tubular collapsible body portion closed at one end, a rigid spout secured at the other end of said body portion, said spout having a tip portion of relatively small diameter, a base portion of larger diameter joining said body portion, and a transition portion connecting said tip and base portions, said tip portion having a wall defining an axial passage therethrough and having a transverse passage extending through said wall and communicating with said axial passage, and a hollow plunger element closely fitting the inner surface of said wall and slidable inwardly and outwardly relative to said spout and body portion, said element being closed at its outer end and open to the interior of said body portion at its inner end, and having a transverse passage therethrough which registers with said first-mentioned transverse passage when said element is in its inward position, the inner end of said element being formed to provide a transverse flange portion closely fitting inside the base and transition portions of said spout when said element is in its outward position, and closely fitting inside said base portion during sliding movements of said element.

2,946,488
METERING AND DISPENSING SYSTEMS
August L. Kraft, 120 Bender Ave., Roselle Park, N.J.
Filed Dec. 26, 1957, Ser. No. 705,259
13 Claims. (Cl. 222—134)

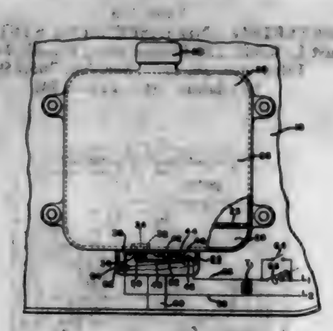


1. In a mixing and metering system, a plurality of sources for materials to be individually metered and then intermixed, a metering device individual to each of said materials, means to operate each of said devices in a two-stage cycle, said cycle consisting of a measuring stage and an ejection stage, a single mechanically movable member, means to adjustably connect each of said metering devices to said member independently of the position of the other of said metering devices, the volume to be measured by each of said devices being a joint function of the movement of said member and of the positional adjustment of said device upon said member, primary power means to propel said member in a metering movement, whereby said metering devices in the first stage of cyclic operation simultaneously measure said materials in a selected volumetric ratio with respect to one another, secondary power means to propel said member during the ejecting stage to expel measured volumes of said materials from said devices, and a utilization chamber to receive said materials.

2,946,489
AUTOMATIC SOAP DISPENSER FOR WASHING MACHINES
Byron L. Bracken, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 6, 1956, Ser. No. 620,740
2 Claims. (Cl. 222—160)

1. A liquid detergent dispensing arrangement for a washing machine of the top loading type having a top access opening in the cabinet of said machine closable by a door that is movable from a horizontally disposed closed position to a substantially vertically disposed open position comprising, a receptacle having a filler opening

and an outlet secured to the inner side of said door, said receptacle being so positioned on said door that said filler opening takes a position above at least a portion of said receptacle when said door is moved to a vertical position, a baffle extending across said receptacle and dividing said receptacle into a storage chamber and into a dispensing chamber, said dispensing chamber being connected with said outlet and being disposed below said storage chamber when said door is in a substantially vertical position, said baffle trapping liquid in said dispensing chamber when said door is moved from its vertical to its horizontal position, and means for controlling the rate of continuous flow through said outlet from said dispensing

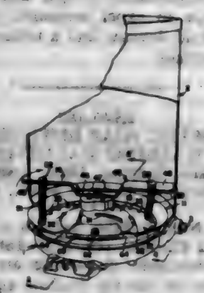


chamber into said washing machine, said flow controlling means comprising a valve member opening and closing said outlet, means directly attached to said valve member for biasing said valve member to an open position and a wire member connected between said valve member and a relatively fixed point for pulling said valve member in a closed position against the force of said biasing means, said wire member elongating upon the passage of an electric current therethrough thereby permitting said biasing means to move said valve member to an open position, and a threaded bolt member selectively movable into engagement with said valve member for limiting the biasing effect of said biasing means on said valve member.

2,946,490
COTTON CELL DROP ATTACHMENT FOR PLANTERS

Harold V. Hansen, Hillsdale, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Filed Dec. 31, 1956, Ser. No. 631,954
10 Claims. (Cl. 222—227)

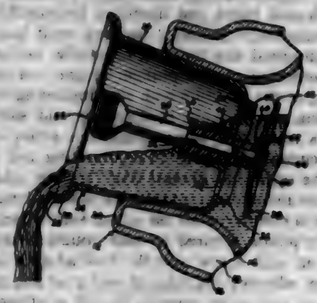


1. In an agricultural implement, a hopper carrying a distributing plate mounted for rotation in the bottom of the hopper and having peripheral cells, a first agitating means disposed in said hopper above said plate and having means spaced substantially directly above said cells and angled upwardly and rearwardly relative to the direction of movement so as to move material generally upwardly, thereby loosening material above the plate, and a second agitating means disposed substantially directly above said cells and angled downwardly and rearwardly relative to the direction of movement so as to direct material downwardly into said cells.

2,946,491
FOUR-THROUGH STOPPER FOR VACUUM BOTTLES

Carl Braunsing, Nashville, Tenn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois

Filed May 29, 1957, Ser. No. 663,583
3 Claims. (Cl. 222—545)



1. In a closure for vacuum bottles or the like, the combination comprising a soft resilient hollow generally cup-shaped stopper having a resiliently flexible generally cylindrical downwardly tapering side wall with a generally disk-shaped bottom wall thereon, said bottom wall having an axial guide sleeve formed thereon and projecting upwardly therefrom into said stopper with an opening extending in said sleeve between the upper and lower sides of said bottom wall, said bottom wall having a plurality of apertures formed therein around said sleeve, a downwardly projecting annular flange-like seat formed on said bottom wall, a soft resilient valve disk disposed below said bottom wall and movable axially of said stopper into and out of sealing engagement with said seat, operating shaft means connected centrally to said disk and extending upwardly through said sleeve to a point accessible for manual operation from the upper side of said stopper, said sleeve and said shaft means having interengaging screw threads thereon for moving said shaft means and said disk upwardly and downwardly in response to rotation of said shaft means, and an outwardly and upwardly flaring pouring lip formed on said side wall at the upper end thereof.

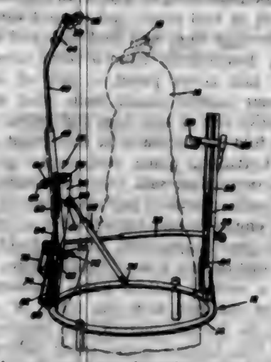
2,946,492
ATTACHMENT FOR SHIRT FINISHING UNIT

Delvin P. Kennedy, P.O. Box 246, Pikeville, Tenn.

Filed Feb. 11, 1959, Ser. No. 792,569
4 Claims. (Cl. 223—68)

1. An attachment for a shirt finishing unit having a collar former for receiving a shirt collar, a pivotal front clamp lever and a ring-like base supporting said front clamp lever, said attachment comprising an upstanding support member rigid with the ring-like base in diametric opposition to the front clamp lever, a rear clamp lever pivotally attached to said upstanding support member, a resilient pad on said rear clamp lever for clamping engagement with a shirt collar placed on the back face of

the collar former, and means interconnecting the front clamp lever and the rear clamp lever for moving the rear



clamp lever in response to pivotal movement of the front clamp lever.

2,946,493
GARMENT HANGER

Nellie V. Bury, 80 Avenue B, New York, N.Y.; Gregory R. Serrao, 1470 E. 4th St., Brooklyn, N.Y.; and Robert M. Koval, 80 Avenue B, New York, N.Y.

Filed Jan. 19, 1956, Ser. No. 560,166
1 Claim. (Cl. 223—92)



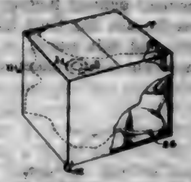
A garment hanger comprising a flat strip of sheet material having its side edges vertically disposed, said strip having an undulating upper surface and having a central portion, said central portion forming an upwardly facing convex surface with respect to the remainder of said strip, said strip having a pair of upwardly facing concave portions, one on each side of said central portion, said central portion smoothly merging into both of said concave portions, a pair of upwardly facing convex portions, one at each end of said strip, the latter portions each smoothly merging into one of said concave portions, the convex end portions extending upwardly to a height substantially the same as said central portion, said hanger having a hook-like suspension means fixed to and extending upwardly substantially centrally of said central convex portion, a bulbous member secured to said central portion and surrounding the lower part of said hook-like suspension means and extending upwardly from said central portion a substantial distance, and a pair of bulbous members, each of the latter members being fixed to one of said convex end portions and projecting upwardly therefrom a substantial distance to form a strap retainer, each of said pair of bulbous members being positioned outwardly of the uppermost portion of its respective one of said convex end portions.

2,946,494
CONTAINER

Ralph L. Knox, Findlay, Ohio, assignor to R. L. Knox & Company, Inc., Findlay, Ohio, a corporation of Ohio

Filed Oct. 3, 1958, Ser. No. 765,100
3 Claims. (Cl. 229—14)

1. A container comprising a carton, a bag having upper corners and an opening in a side wall thereof, means forming a flange around said opening, a top wall supported by said container having spaced means near diagonally opposite corners of said top wall for frictionally engaging and supporting the upper corners of said bag and having means near another corner of said top wall for engaging said flange means and supporting an intermediate portion of said bag with the opening in said bag

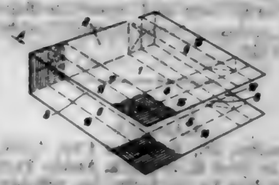


aligned with a hole in said top wall, whereby said bag can be filled with material substantially equal in volume to the space defined by said carton.

2,946,495
CONTAINER DEVICE

Ferdinand Lange, Minden, Westphalia, Germany, assignor to Firma Werner Bahlsen, Hannover, Germany

Filed Mar. 25, 1955, Ser. No. 496,744
Claims priority, application Germany Mar. 38, 1954
1 Claim. (Cl. 229—16)



A vapor-tightly closed, filled container device formed of a single rectangular sheet of cardboard material and the like, comprising a top wall, a bottom wall, and a back wall connecting said top and bottom walls and having a predetermined width, said walls being formed by bending the sheet of material along spaced substantially parallel lines; side and front walls extending between said top and bottom walls formed by folding top and bottom free marginal portions of said sheet having each a width equal to the width of said back wall and located beyond said top and bottom walls toward each other along first fold lines, said side walls and front wall forming with said top, bottom and back walls a closed container, each of the free marginal portions of each pair of opposite top and bottom free marginal portions being folded along an additional fold line midway between the respective first fold line and the free edge of said free marginal portion parallel, and an additional fold line normal, to its respective first-mentioned fold line so as to form a wall-forming portion, a connecting edge portion and connecting corner portions, the thus formed opposite connecting edge portions being superimposed on each other with said connecting corner portions folded inwardly between said superimposed portions and folded therewith against one of said wall-forming portions parallel therewith, so that one of said connecting edge portions is superimposed on the respective wall forming portion coextensive therewith; and adhesive fastening means securing one of said superimposed connecting edge portions to the respective wall forming portion on which it is superimposed.

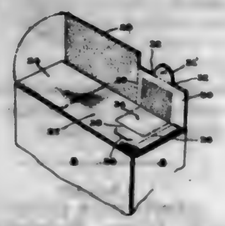
2,946,496
CARTON

Arthur F. Stegmeier, New York, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

Filed Apr. 16, 1957, Ser. No. 653,088
6 Claims. (Cl. 229—17)

1. A carton having side and end wall panels, extensions on said panels forming top closing flaps for said

carton, said top closing flaps including side and end flaps, the inner of said side flaps having a weakened breakaway section and a slit adjacent thereto, the outer side flap provided with a segment defined therein by a weakened line extending across the side flap from its free edge to its folded juncture with said side panel, a pull tab at the outer edge of said segment, said weakened section of said



inner side flap being disposed under and within said segment of said outer side flap when the carton is closed and said segment breaking away from said outer side flap on an upward pull of said pull tab, said weakened section breaking away from said inner side flap with said lifted segment, reclosure being accomplished by inserting said tab in said slit.

2,946,497
CARTON
Arthur E. Randles, Jr., Redwood City, Calif., assignor of one-half to Fred E. Helmick, Menlo Park, Calif.
Filed May 14, 1957, Ser. No. 659,044
1 Claim. (Cl. 229—28)



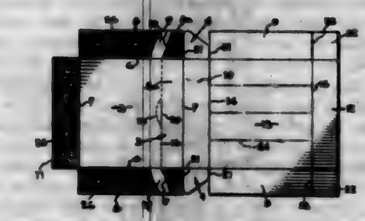
An egg carton comprising a single sheet of fibreboard material when erected and closed having a planar horizontal cover panel connected along a rear edge fold to a substantially vertical rear panel extending to a first bottom edge in a horizontal plane, said cover being disposed along its front edge at the upper edge of a substantially vertical front panel extending to a second bottom edge in said horizontal plane, a securing strip on said rear panel adjacent said rear edge fold, connectors extending from said upper edge of said front panel and from said securing strip, substantially vertical cross partitions depending from said connectors and extending transversely between said front panel and said rear panel, each of said cross partitions having a front edge and a rear edge and having a notch extending upwardly from the bottom thereof and having an opening with a bottom edge located above said notch, the forward edges of said notch and of said opening being in a first straight line and the rearward edges of said notch and of said opening being in a second straight line, said first line and said second line diverging downwardly from a point substantially in the plane of said cover panel, a pair of downwardly diverging planar central panels each lying substantially along a respective one of said lines and extending substantially from a fold substantially at said point to terminations in said horizontal plane, said central panels having cutouts to accommodate said cross partitions, hooks on said central panels extending into said opening and having bottom edges engaging said bottom edge of said opening, a first bottom panel connected to said front panel and merging with one of said central panels above the bottom thereof, and a second bottom panel connected to said rear panel and merging with the other of said central panels above the bottom thereof, the transverse dimension of said first bottom panel being substantially the same as that of the adjacent bottom edge of the cross partition between the front edge thereof and the forward edge of said notch and the transverse dimension of said second bottom panel being substantially the same as that of the adjacent bottom edge of the cross partition between the rear edge thereof and the rearward edge of said notch whereby said central panels are increasingly spaced apart from top to bottom of said carton and are held in diverging locations against the diverging front and rear edges of said opening and of said notch.

2,946,498
MULTICELLULAR FOLDING BOX STRUCTURES
Marshall I. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed July 19, 1957, Ser. No. 673,802
8 Claims. (Cl. 229—28)



1. A folding box structure for the packing of light bulbs, comprising, in combination, a pair of opposite side walls, a cellular top structure between said side walls, said top structure providing a plurality of cellular apertures and comprising pairs of oppositely disposed upwardly slanted panel portions articulated to said side walls along their bases and having an apex opposite the base, the apexes of oppositely slanted panel portions being joined at a ridge lying above said bases, and skirt panel portions depending from said upwardly slanted panel portions and forming substantially tubular walls about said cellular apertures, said tubular walls being adapted to retain light bulbs between them; a lamp base supporting panel extending between said side walls below said top structure, said lamp base supporting panel having apertures therein in line with said cellular apertures, the apertures in the lamp base supporting panel being adapted to receive light bulb bases; and a bottom panel below said supporting panel, said bottom panel being articulated to said side walls and having apertures in it in line with the apertures in the supporting panel, through which bottom panel apertures the bases of light bulbs packaged in said box structure are accessible.

2,946,499
HINGE TYPE CARTON
Edmund W. Creelman, Cincinnati, Ohio, assignor to The C. W. Zumbiel Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 10, 1958, Ser. No. 747,652
5 Claims. (Cl. 229—37)



1. A carton formed from a one-piece blank and having a top cover hingedly connected to an open end of the carton, said carton comprising a carton body having opposed front and rear walls, a pair of side walls, and a bottom wall, said side walls comprising respective inner and outer side flaps overlapped one upon another and having an adhesive surface facially securing said flaps together, each pair of overlapped inner and outer side flaps having a non-adhesive area providing a respective pocket within the opposed side walls, each pocket having an open end adjacent the open end of the carton body, a top cover having a top wall hingedly joined to the rear wall of the carton body, said top cover having a front wall and a pair of side walls corresponding to the front and side walls of the carton body, said top wall having a pair of latching tabs joined thereto and residing parallel with the side walls of the top cover, said latching tabs being adhesively secured to the inner surface of the side walls of the top cover and having respective outer end portions projecting downwardly beyond the lower edges of said side walls, said outer end portions of the tabs depending downwardly into said pockets through the open ends thereof, said top cover being free to pivot relative to said rear wall to an open position withdrawing said latching tabs from said pockets, said outer end portion of each of said latching tabs having a forward edge which moves through an arc intercepting and forcibly camming against the upper edge of the respective pockets as the top cover is pivoted to said open position, the forward edges of the tabs latching the top cover relative to the carton body when the top cover is pivoted to a closed position relative to the carton body.

2,946,500
MERCHANDISE RACK AND METHOD OF FORMING
William W. Hooper, 2431 Pasco Road, Colorado Springs, Colo., and George W. Traver, 1242 N. Lake Shore Drive, Chicago, Ill.
Substituted for abandoned application Ser. No. 385,129, Oct. 9, 1953. This application Oct. 29, 1958, Ser. No. 770,425
2 Claims. (Cl. 229—42)



1. A merchandise rack comprising a transverse bottom panel having longitudinally extending side portions and transversely extending end portions defining a continuous peripheral framework, said bottom panel also having a plurality of transversely extending intermediate portions equally spaced from each other and from the end portions and having their ends integral with said side portions, transverse vertical panels upstanding from one side of all said intermediate portions and one of said end portions, vertical legs integral with said end portions, vertically arranged longitudinal beam panels spaced above said bottom panel, said longitudinal beam panels being connected to the bottom panel only by said vertical legs, downwardly extending notches along the top edges of said transverse vertical panels, said downwardly extending notches including a vertical edge and an arcuate edge merging to define a sharp pointed bottom, upwardly extending notches along the bottom edges of said longitudinal beam panels aligning with the notches of said transverse vertical panels, and slits in said longitudinal beam panels extending upwardly from the notches in said longitudinal beam panels and engaging the transverse vertical panels, the upper edges of said transverse vertical panels and said longitudinal beam panels being coplanar.

2,946,501
HANDLE FOR MULTICELLULAR FOLDING BOXES
Marshall I. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed July 19, 1957, Ser. No. 672,991
9 Claims. (Cl. 229—52)

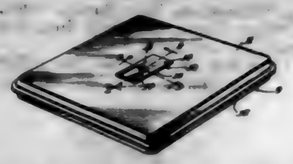


1. A self engaging strap type handle of foldable sheet material, particularly for use with multicellular folding box structures, the handle comprising, a pair of substantially vertical handle panels folded in substantially the shape of an inverted U, the upper portion constituting a grip portion; a box engaging flap articulated to the end of each of the handle panels along a substantially horizontal flap fold line, said flap being folded back upon the panel to which it is articulated, at least the lower portions of the handle panels together with the folded-back flaps being bowed to form oppositely facing vertical channels, whereby the curved flap fold lines of both panels form a biconcave figure in plan view, the flaps are drawn tight against the handle panels, and are prevented from unfolding.

2,946,502
VALVE-EQUIPPED CONTAINERS
Melvin R. Metzger, 3359 Madison Road, Cincinnati 9, Ohio
Filed Nov. 10, 1954, Ser. No. 467,977
3 Claims. (Cl. 229—62.5)

1. As a new article of manufacture, a container consisting of a hollow body formed of fluid impervious mate-

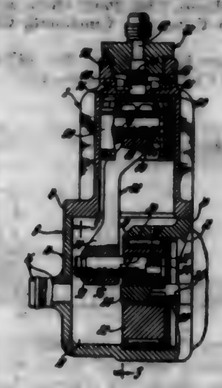
rial and closed throughout except for a small-sized opening in one portion thereof, and a normally flat, tube-like check valve positioned flatly against said one portion of the body, comprising two rectangular, superposed, separately formed, coextensive members of comparatively thin, flexible, fluid impervious, film-type material, arranged so that one of the members is directly adjacent to said one portion of the body and the other member is separated from the container body by the one member, provided in the one member at a location midway between the side margins of the one member and inwards of the two end edges of said one member with an opening in registry with the opening in said one portion of the body, having on the inner surface of said other member a truly coextensive coating of permanently tacky, pressure sensitive adhesive, and having the side margins of said coating pressed against, and in adhesively connected relation with, the side margins of the outer surface of said one member; said coating of permanently tacky, pressure sensitive adhesive on the inner surface of said other member having a continuous portion thereof that extends between the side margins of the coating and also extends between the opening in said one member and



one end edge of said other member treated with inert, non-adhesive material so as to render it non-adhesive and thus permit spreading apart of the portions of the two members that are in direct opposite relation with the continuous treated portion of the aforesaid coating; said normally flat, tube-like check valve having on the surface of said one member that is directly adjacent to the body a truly coextensive coating of permanently tacky, pressure sensitive adhesive, having the portion of the last mentioned coating that extends around the opening in the one member in adhesively but releasably connected relation with the opening defining portion of the body, and being adapted when the portions of the two members that are in direct opposite relation with the continuous treated portion of the first mentioned coating are spread apart to assume an open position wherein communication is established between the interior of the body and the ambient air and when said portions of its members are pressed together to assume a closed position wherein communication of the body interior and said ambient air is cut off; each of the two aforesaid members of the check valve with its own coating of permanently tacky, pressure sensitive adhesive being formed originally of a strip of conventional "Scotch" type tape.

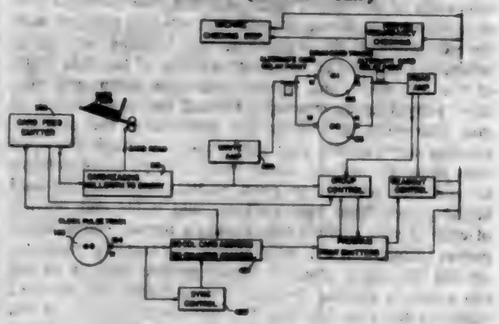
2,946,503
AIR COMPRESSOR
William R. Thompson, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 22, 1957, Ser. No. 660,800
1 Claim. (Cl. 230—190)

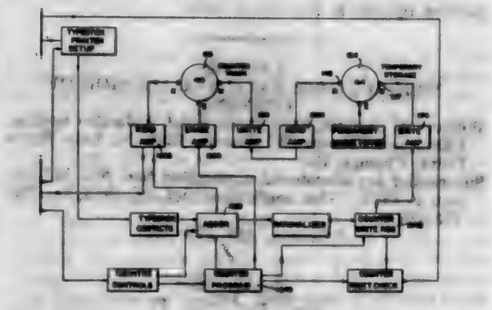
In a fluid compressor having a piston movable by a connecting rod, an anti-friction bearing assembly mounted in said compressor in substantial vertical alignment with said piston, a statically unbalanced circular rotor carried by said bearing assembly, said rotor having a splined aperture extending axially through the center thereof for engagement with a splined driving shaft, means forming an axially extending aperture in the body of said rotor radially offset from said splined aperture, and means carried by said connecting rod operatively engaging said last mentioned aperture, the lower portion of said con-



necting rod being offset axially from the upper portion thereof.

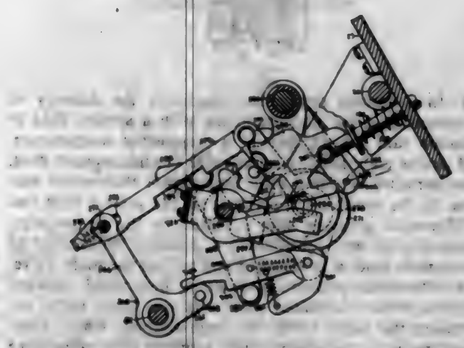
2,946,504
ACCOUNTING MACHINE
Horace S. Beattie and Theodore L. Buley, Poughkeepsie, and Bernard M. Mausner, Hyde Park, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 13, 1955, Ser. No. 555,826
93 Claims. (Cl. 235—61.9)





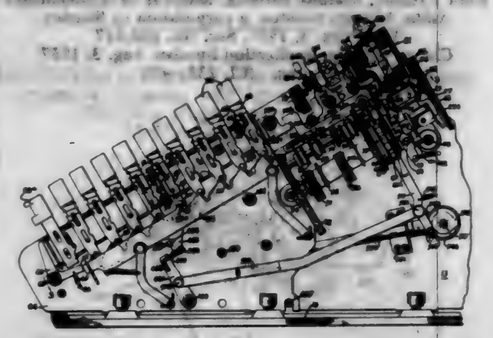
48. Multiplying apparatus comprising, a rotatable drum storage device having a plurality of data storage channels thereon, one of said channels storing magnetic representations of multipliers and multiplicands, means for selecting a desired one of said stored multiplicand representations, means for reading out said selected multiplicand representation, digit by digit, and generating signals representative of each digit as read out, settable circuit means responsive to said generated signals and set representative of each multiplicand digit read out, serial printing means controlled by each setting of said circuit means for effecting a listing of the read out multiplicand digit, means also controlled by each multiplicand digit setting of said circuit means, to record a corresponding magnetic digit representation in a related storage order of each of 10 multiplicand storage registers arranged on another one of said channels, the entire multiplicand being accordingly recorded ten times on said channel after the reading out of the last order of the selected multiplicand, an accumulator including an adder, means for selecting a desired one of said stored multiplier representations subsequent to the recording of said multiplicand 10 times on the related channel, means for read-out said selected multiplier representation, digit by digit, and setting said circuit means representative of each multiplier digit read out, said circuit means controlling said serial printing means for effecting a listing of each multiplier digit read out, means also controlled by each multiplier digit setting of said circuit means for reading out the multiplicand a corresponding number of times from said 10 times channel, means responsive to said last mentioned read out means to enter the read out multiplicand representations into said accumulator to generate therein a partial product for the related multiplier digit, for storing a product representation, means to transfer the contents of said product storage, if any, to said accumulator to generate therein a partial product summation, means for transferring said partial product summation from said accumulator back to said product storage, means to column shift the partial product summation in said product storage one order prior to the subsequent product summation, and means for reading the final product out of said product storage, digit by digit, and setting said circuit means representative of each final product digit read out, said circuit means controlling said serial printing means for effecting a listing of each final product digit read out.

2,946,505
CALCULATING MACHINE
Elwood A. Davis, Castro Valley, Calif., assignor to Friden, Inc., a corporation of California
Filed Mar. 13, 1956, Ser. No. 571,289
6 Claims. (Cl. 235—63)



1. In a calculating machine having a plural order actuating mechanism, normally disabled cyclically operating power means for driving said actuating mechanism, a carriage shiftable transversely of the orders of said actuating mechanism, normally disabled shifting mechanism driven by said actuating mechanism for selectively shifting said carriage relative to said actuating mechanism, a plural order register carried by said carriage and selectively driven by said actuating mechanism, register zeroizing mechanism carried by said carriage, normally disabled power clearing mechanism selectively driven by said actuating mechanism for operating said zeroizing mechanism, and means driven by said power means for disabling said zeroizing mechanism at the end of a single cycle of operation, a control means comprising a single key, means operated by the operation of said key for enabling said power means and said power clearing mechanism to drive said register zeroizing mechanism during the first cycle of operation following actuation of said control means and thereby zeroize said register in the coincidental position of said carriage relative to said actuating mechanism, and means operated by the continued operation of said key after said first cycle of operation for enabling said shifting mechanism to selectively shift said carriage in a predetermined direction and to a selected extent so long as said key is maintained in operated position beyond said first operating cycle.

2,946,506
MULTIPLYING MECHANISM
Arthur J. Malavazos, Hayward, Calif., assignor to Friden, Inc., a corporation of California
Filed May 21, 1957, Ser. No. 660,626
13 Claims. (Cl. 235—63)



1. In a calculating machine having a product register, a selection mechanism settable to represent a multiplicand, a cyclically operable actuating means normally controlled by said selection means and operable to control a single registration of the multiplicand in said product register, means for shifting said register in either direction relative to said selection mechanism, a zero resetting mechanism selectively operable to zeroize said register, and a multiplying mechanism comprising: a first control key for initiating operation of said resetting mechanism, a second control key, means controlled by either of said keys upon operation thereof to enable the operation of said shifting means to shift said register in one direction to an end position, a multiplier carriage having ordinal differentially settable elements for controlling a plural order operation of said cyclically operable actuating means, means for differentially setting said elements, normally inoperative means for ordinally shifting said carriage, means for restoring the one of said differentially settable elements in a predetermined ordinal position a single step from a differentially set position of "1" and biunially step-by-step from a differentially set position greater than "1," normally inactive multiplier control means operable by the predetermined one of said differentially settable elements upon its restoration to its "0" position to control the operation of said shifting means to shift said register ordinally in the other direction and to enable the operation of said carriage shifting means, means adjustable to effect a multiple registration of the multiplicand in said product register upon

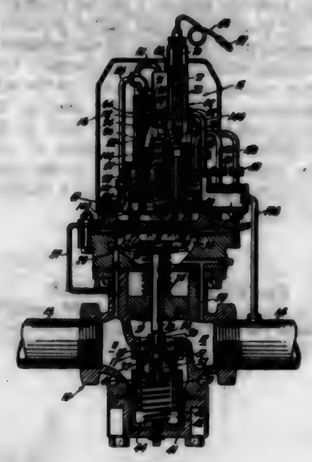
each cycle of operation of said actuating means, clutch controlled means for adjusting said adjustable means, means engageable with the predetermined one of said settable elements for actuation thereby to effect operation of said clutch controlled means whenever such settable element is set for a value greater than "1," resilient means for effecting engagement of said engageable means, means operated by said shifting means in the end position of said register for enabling operation of said resilient means and said restoring means upon operation of either of said keys, means for latching said engageable means in the actuated position upon operation of said multiplier control means, positionable means associated with each of said elements normally operable by each of said elements in the differentially set position of "1" to prevent engagement of said engageable means with said predetermined settable element, and sensing means for sequential cooperation with said positionable means operable upon return of each of said elements to the set position of "1" to release said latching means and to disengage said engageable means.

2,946,507
MECHANISMS FOR SHORT CUT MULTIPLICATION IN CALCULATING MACHINES
John Lydfors, Malmo, Sweden, assignor to Aktiebolaget Addo, Malmo, Sweden, a corporation of Sweden
Filed Oct. 3, 1957, Ser. No. 688,017
Claims priority, application Sweden Aug. 3, 1957
3 Claims. (Cl. 235—63)



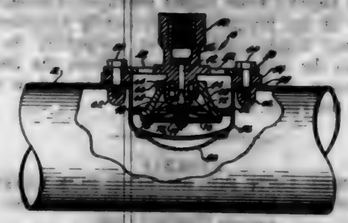
1. In an adding machine having a starting means movable to an actuated position to initiate cyclic operation of the machine, a sign control means adjustable between two positions controlling additive and subtractive operation of the machine, respectively, and a cycling means operable through a single cycle for each operation cycle of the machine, a mechanism for controlling the number of operation cycles of the adding machine during short cut multiplication, comprising a multiplication control means, multiplier digit setting means for entering one multiplier digit at a time into the mechanism, said setting means handling the multiplier digits 0 to 9, inclusively, as a lower group comprising the consecutive lowest digits and a higher group comprising the consecutive highest digits and entering the multiplier digits by moving said multiplication control means differentially from a normal position a number of steps which, for the lower group of digits, directly corresponds to the value of the digit, i.e. no step for digit 0, one step for digit 1 etc., and which, for the higher group of digits, corresponds to the formula 9—S where S is the value of the digit in question, i.e. no step for digit 9, one step for digit 8, two steps for digit 7 etc., means controlled by said setting means for actuating the starting means of the machine, sign determining means operably associated with the sign control means and actuated by said setting means to control the adjustment of said sign control means to its additive position for a lower group digit and its subtractive position for a higher group digit entered by said setting means, step feeding means operated by said cycling means of the machine and feeding said multiplication control means, when moved by said setting means, towards its normal position one step for each operation cycle of the machine, sign storing means controlled by said setting means and disabling said step feeding means for one operation cycle of the machine during each multiplication effected with a digit from one group following immediately upon a multiplication with a digit from the other group, and means actuated by said multiplication control means upon movement from normal position to retain said starting means in actuated position and upon restoration to normal position to release said starting means to interrupt the multiplication going on at the end of the current operation cycle of the machine at the end of which said multiplication control means is in its normal position.

2,946,508
CONTROL DEVICE FOR REGULATING FLOW OF FLUIDS IN HEAT EXCHANGING RELATION
Henry W. Angsley, 19 Gwynne Court, Northvale, N.J.
Original application May 28, 1953, Ser. No. 357,982, now Patent No. 2,805,039, dated Sept. 3, 1957. Divided and this application July 9, 1957, Ser. No. 670,735
5 Claims. (Cl. 236—99)



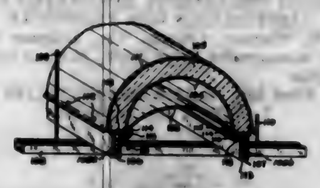
1. In a control device for regulating the delivery of a regnant fluid for heat exchange with a subject fluid to maintain said subject fluid at a preselected temperature, said device comprising a main valve for the regnant fluid, a temperature actuated pilot including a thermostat sensitive to the sensible temperature of the subject fluid and a differential pressure pilot actuated by the temperature actuated pilot and sensitive to a pressure differential of the regnant fluid in advance of and behind the main valve, said differential pressure pilot being interposed between the temperature actuated pilot and the main valve for actuating the main valve, the improvement which comprises means in the temperature actuated pilot responsive to the thermostat for actuating the differential pressure pilot when the sensible temperature of the subject fluid departs from said preselected temperature, the degree to which the thermostat responsive means actuates the pressure pilot being a variable function of the degree of departure of the sensible temperature from said preselected temperature and the degree to which the differential pressure pilot opens the main valve being a pressure compensated variable function of said degree of departure.

2,946,509
TEMPERATURE RESPONSIVE TRANSDUCER
Edward W. Radtke, Manchester, and Thomas P. Farkas, Bloomfield, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed July 30, 1957, Ser. No. 675,091
2 Claims. (Cl. 236—87)



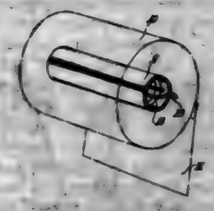
1. A transducer for controlling pressure in a fluid pressure device responsive to temperature in a conduit or the like containing a fluid under pressure, the said transducer comprising a housing connectible with the pressure device and defining a passage having a vent orifice in communication therewith, a frame adjustably supported on said housing, a temperature sensitive bimetallic element supported on said frame, a valve adjustably supported by said bimetallic element in operative association with said orifice and movable relative to said orifice with said bimetallic element to control its effective opening and thereby to control pressure in the fluid pressure device, a container provided with a bleed aperture adapted to be disposed in said conduit or the like and adapted to receive said transducer housing, vent orifice, frame, temperature sensitive bimetallic element, and valve therewithin, and means defining an atmospheric vent for said container substantially larger than said bleed aperture so that changes in pressure of the fluid in the conduit or the like are not felt within said container.

2,946,510
HIGH TEMPERATURE CONDUIT RADIANT OVERHEAD HEATING
Ralph Bree Galvin, Seattle, Wash., assignor to Hi-Ro Heating Corporation, Arlington Heights, Ill., a corporation of Washington
Filed Aug. 4, 1954, Ser. No. 447,872
13 Claims. (Cl. 237—70)



12. An infrared radiant heating mechanism comprising a closed circuit conduit having a lower surface with lateral edges disposed relatively downwardly, said lower surface and lateral edges forming a trapped air space under said conduit lower surface, said conduit being disposed in the form of a continuous closed circuit loop in the upper portion of a space to be heated with at least a substantial portion of its length horizontal; a gaseous circulating medium in said conduit; heat source means enclosed in said conduit for heating said gaseous circulating medium; and a circulator for circulating said medium around said conduit, said heat source means maintaining the temperature level of the said medium sufficiently high to cause heat emission of predominantly infrared character from the surfaces of said conduit throughout its length.

2,946,511
COMBINATION TOILET TISSUE ROLL AND DEODORANT CONTAINER
Frank G. Bartus, 2586 N. Kedzie Blvd., Chicago, Ill.
Filed May 26, 1958, Ser. No. 737,249
3 Claims. (Cl. 239—52)



1. An article of manufacture comprising a toilet tissue roll; a rotatable tube upon which said roll is mounted; a normally impervious tearable closed container mounted within said tube; container tearing means in the walls of said container, and a deodorant in particle form within said container, said container being formed with a dispensing slot when torn by said tearing means, the deodorant falling from the container through said slot and held within said tube as said roll is rotated.

2,946,512
MEANS FOR AUTOMATIC IRRIGATION CONTROL
Lorenzo A. Richards, 4455 5th Ave., Riverside, Calif.
Filed May 17, 1954, Ser. No. 430,377
11 Claims. (Cl. 239—63)

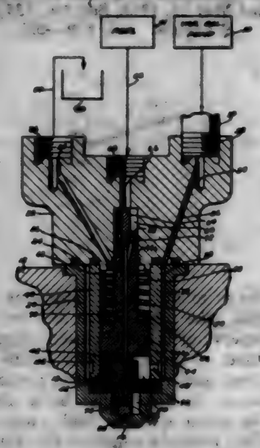


3. An apparatus for controlling irrigation, comprising: a sealed hollow porous cell tending to produce a vacuum pressure within said cell on evaporation of moisture from its exterior surface; means connected to said cell and supporting said cell in a fixed position above ground and exposed to air as well as exposed to those factors responsible for evopration of water from the air-exposed parts of plants to be irrigated; pressure-actuated means in communication with the interior of said cell and operable to initiate an on-cycle of plant irrigation when a predetermined vacuum pressure develops in said cell; and shield means secured on the exterior of said cell and adjustable thereon to vary the effective exposed area thereof.

2,946,513
FUEL INJECTOR
Achilles C. Sampietro, Birmingham, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Original application Sept. 27, 1956, Ser. No. 612,391. Divided and this application Apr. 14, 1958, Ser. No. 728,457
7 Claims. (Cl. 239—91)

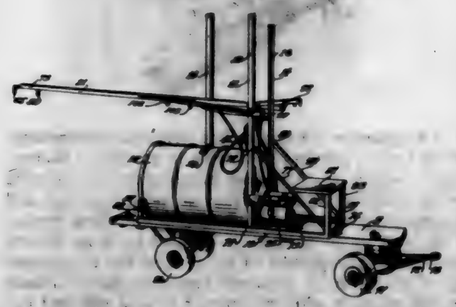
1. A device for fuel injection comprising a fuel injection plunger, a fuel injection housing having a chamber therein in which said plunger is movably mounted for movement in an intake stroke and a discharge stroke, said chamber terminating in a discharge port at one end and in an intake port at the other end, means defining a chamber in said housing for the receipt of plunger actuation fluid, means having an actuation surface movable in

said chamber and operatively connected to the plunger to move it in a discharge stroke when pressurized actuating fluid is admitted to said chamber, and a variable



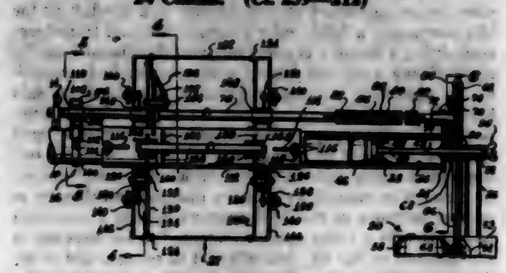
delivery actuation fluid pump connected to be in communication with said actuation chamber to deliver the fluid thereto to cause the plunger to move in a discharge stroke.

2,946,514
MOBILE SPRAY APPARATUS
Marvin Bernard Johnson, Pendleton, N.C.
Filed Apr. 26, 1957, Ser. No. 655,295
1 Claim. (Cl. 239—127)



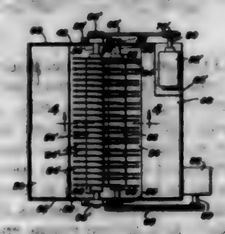
In a sprayer, the combination which comprises an elongated platform, supporting wheels rotatably mounted on the platform, a tank providing a storage chamber for spray liquid positioned on one end of the platform, said tank having an open nipple extended upwardly from the upper surface, a motor driven pump mounted on the platform, said pump having a suction connection and a discharge connection, a supply tube extended from the suction connection of the pump downwardly through said open nipple and to a point in the lower part of the tank, a spray tube extended from the discharge connection of the pump to spray nozzle supply tubes and said spray tube having a return connection extended therefrom through said open nipple and into said tank, a pair of posts extended upwardly from opposite sides of the platform and positioned at the forward end of the tank for supporting spray headers, a post mounted on the tank and extended upwardly therefrom, the post on the tank being spaced rearwardly from the posts at the forward end of the tank and positioned on the longitudinal center of the platform, a cross bar extended between the posts extended upwardly from the platform, a semi-circular band mounted on the posts with the ends secured to the posts extended upwardly from the platform and with the intermediate part supported by the post extended upwardly from the tank, spray headers pivotally mounted on the cross bar and positioned to slide on said band, springs secured to and extended from ends of the band to intermediate parts of the spray headers for returning the spray headers from folded positions extended longitudinally of the platform to outwardly extended positions, spray nozzle supply tubes connecting the spray headers to the spray tube extended from the discharge of the pump, and spray nozzles positioned at spaced points in the spray headers.

2,946,515
POWER UNIT FOR MOVING PIPE LINES
Arthur R. Jensen, 11372 SW. Skyline Drive, Lemon Heights, Calif.
Filed July 1, 1957, Ser. No. 669,322
24 Claims. (Cl. 239—212)



24. Apparatus for moving a string of pipe that has a plurality of wheels rigidly concentrically mounted thereon comprising: a member rigidly affixed to said string; an annular element coaxially rotatably mounted on said string; a drive means on said member that is operatively associated with both said member and said element and adapted to cause relative movement of said element and said member in response to actuation of said drive means; and a means on said element adapted to hold said element against rotation when said drive means is actuated to cause said member and said string to be moved in response to actuation of said drive means.

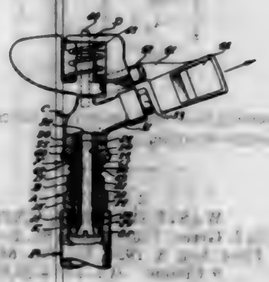
2,946,516
LIQUID TREATMENT APPARATUS FOR CONTINUOUS WEB PRODUCTS
Edward E. Wagner, Chester, Va., assignor to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed July 17, 1958, Ser. No. 749,142
7 Claims. (Cl. 239—220)



1. Liquid treatment apparatus comprising a supply tank for a liquid additive, a liquid pick-up rotor assembly having axially spaced disks arranged to contact the liquid, a liquid distributing rotor assembly having spaced disks interdigitated with the disks of said pick-up rotor assembly and in laterally liquid film contacting relation

therewith, and drive means for rotating said rotors, said distributing rotor being rotated at a speed to cast liquid centrifugally radially from the disks.

2,946,517
SPRINKLER BEARING CONSTRUCTION
Harry D. Jacoby, Palos Verdes Estates, Calif., assignor to Walter V. Storm, Rolling Hills, Calif.
Filed Feb. 3, 1958, Ser. No. 713,951
2 Claims. (Cl. 239—264)



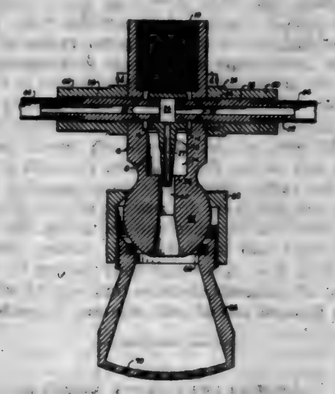
1. In a sprinkler bearing construction involving an elongate vertically disposed bearing housing, an elongate tubular spindle freely engaged through and rotatably carried by the housing and a water distributing head fixed to the spindle having a nozzle inclined relative to the longitudinal axis of the spindle and adapted to direct a stream of water laterally relative to the longitudinal axis of the housing and the spindle including, longitudinally spaced oppositely disposed conical bearing surfaces on the spindle and adapted to establish flat bearing engagement in the housing when the spindle is urged out of axial alignment with the housing, by the reaction of the jet of water issuing from the nozzle in the distributing head and resilient sealing means between the spindle and the lower end of the housing.

2,946,518
PIPE SIDE SPRAY NOZZLE AND CLAMP
Fred W. Wahlin, Kane County, Ill., assignor to Spraying Systems Co., Bellwood, Ill., a corporation of Illinois
Filed Oct. 29, 1957, Ser. No. 693,061
4 Claims. (Cl. 239—266)



1. A pipe clamp and spray nozzle assembly wherein the pipe clamp has an outwardly projecting portion of general U-shape with outwardly extending laterally spaced opposite side walls thereof providing the legs of the U and an apertured cross wall which extends between and interconnects the side walls at their outer ends and provides the closed end of the U and has separably attached thereto a nozzle provided at its outer end with removable closure means provided with a spray orifice leading from the interior of the nozzle, the clamp having seats at the opposite sides respectively of the open end of the U between which said seats a pipe with an opening in the side wall thereof is interposable in clamping engagement thereagainst with the pipe side wall opening facing toward said cross wall, the nozzle having a hollow generally cylindrical body which extends through the aperture of the cross wall and projects outwardly therefrom and has an enlargement at each end located respectively at the inner and outer sides of the cross wall and too large to pass through the aperture of the cross wall and serving conjointly to lock the nozzle in said aperture against removal therefrom, the enlargement at the outer end of said body being a part of said closure means and detachably secured on the body and applicable thereon and removable therefrom by turning movement thereof about the longitudinal axis of the body while the body is restrained against turning movement therewith, and the enlargement at the inner end of the body being formed at the periphery with outwardly projecting portions which are slidable along the aforesaid legs of the U in an abutting relation thereagainst which restrains turning movement of the body in the aperture of the cross wall, the said body having at its inner end a tubular stem which projects therefrom in a direction leading between the seats at the opposite sides of the open end of the U and has a sealing gasket thereabout which is adapted to be compressed between the enlargement at the inner end of the body and a pipe when the latter is clamped against said seats and provide a sealed path of communication from the interior of the pipe through the tubular stem to the interior of the nozzle.

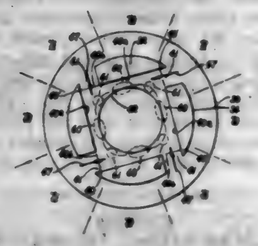
2,946,519
LIQUID MIXING APPARATUS
Randall Y. Bellman, P.O. Box 66, Billings, Okla.
Filed Sept. 15, 1958, Ser. No. 761,128
6 Claims. (Cl. 239—318)



1. Apparatus for mixing a treatment liquid in a liquid stream, comprising a body having a first end and a second end and a bore extending therethrough from the first end to the second end, means for directing the stream into said bore at the first end of the body for passage of the stream through the body and out of the second end, said bore being reduced in diameter in the medial portion thereof to form a circumferential shoulder therein facing the first end of the body, said bore being further reduced in diameter between said circumferential shoulder and the second end of the body and then increased in diameter adjacent the second end of the body to provide a restricted portion between said circumferential shoulder

and the second end of the body, an elongated head extending transversely in the bore into engagement with said circumferential shoulder at the opposite sides of said bore, the width of said head being less than the diameter of said bore to provide clearance around the head, a tubular nozzle extending from said head along the center line of said bore into the restricted portion of said bore, said nozzle having an outer diameter less than the diameter of the adjacent portions of the bore to provide clearance for flow of the stream around the nozzle, a treatment liquid supply, and means providing communication between said supply and the end of the nozzle closest to the first end of the body.

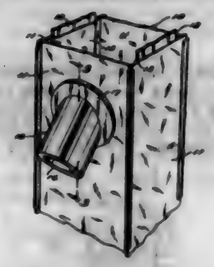
2,946,520
FLUID DISTRIBUTING DEVICE
Gordon R. Meador, Fresno, Calif., assignor, by direct and mesne assignments, of one-fourth to Myron C. Miller, Dinuba, Calif., and of three-fourths to said Meador
Filed Apr. 15, 1958, Ser. No. 728,684
10 Claims. (Cl. 239—498)



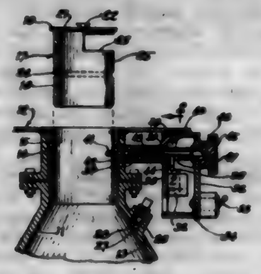
5. In a fluid sprinkler adapted to distribute fluid over a substantially polygonal area to be sprinkled, a body providing a chamber therein adapted to contain fluid under pressure, the body providing an upwardly opening substantially circular fluid ejection bore, the body also providing an internal polygonal cavity of substantially the same shape as the area to be sprinkled, the cavity being substantially concentric to and in fluid communication with the bore, the body providing substantially straight side walls and corners defining the cavity, said walls being in circumferentially spaced relation to the bore and having fluid injection channels at the corners of the cavity individually interconnecting the fluid chamber and said cavity for passage of fluid in individual streams from the chamber into the cavity, the channels being directed into the cavity and having substantially straight fluid flow axes tangentially related to the bore, the axes of adjacent channels intersecting within the cavity in front of one of such adjacent channels.

2,946,521
ADJUSTABLE BOOT NOZZLE
Loyd R. McEachern, Greenville, S.C., assignor to The American Mono Rail Co., Cleveland, Ohio, a corporation of Ohio
Filed Jan. 23, 1959, Ser. No. 788,672
5 Claims. (Cl. 239—547)

1. In apparatus for removing lint from textile machines, an elongated tube having a side wall provided with a nozzle hole and adapted to be moved along and in proximity to a side of the machines, said tube being composed of flexible material and adapted to direct downwardly an air stream traveling therethrough, a nozzle extending through said hole in said wall of the tube and having an annular rib disposed at an acute angle to the longitudinal axis of the nozzle and bearing against the inner surface of the tube, and means for retaining the nozzle in assembled position with said wall, said retaining means including resilient means surrounding the nozzle and pressing said wall against the outer surface of said rib with nozzle-retaining contact.



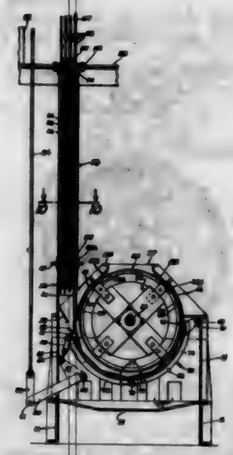
2,946,522
WASTE DISPOSAL UNIT
Martin J. Green, 730 Milburn St., Evanston, Ill.
Filed Aug. 8, 1956, Ser. No. 602,778
9 Claims. (Cl. 241—32.5)



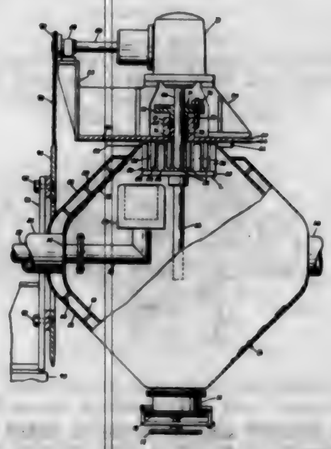
1. In a waste disposal unit having an electric motor and a waste receiving inlet, a switch for controlling operation of said motor, manually operable control means for closing said switch, closure means insertable into said inlet for cooperation with said control means to enable subsequent manual switch closing operation of said control means, and means automatically operable in response to removal of said closure means from said inlet to prevent effective manual switch closing operation of said control means.

2,946,523
INTERCHANGEABLE SCREEN CONSTRUCTION FOR MILL
Charles E. Phillips, Dowagville, Wis., assignor to The Strong-Scott Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota
Filed July 18, 1955, Ser. No. 522,749
10 Claims. (Cl. 241—89)

9. In a mill having a housing and a rotary member within said housing, edge portions of said rotary member committing a circular path of rotation during rotation of said rotary member, a screen positioned in substantially arcuate position about a portion of said circular path of rotation and spaced slightly therefrom, said screen comprising a plurality of sections, each section of substantially linear extension, means articulately connecting said sections, extending operator control means secured to one end of said screen, a first substantially tangentially extending guide means for guiding said extending screen into extended position in which one end thereof is positioned substantially adjacent the periphery of said rotary member and the other end is remote therefrom, and means for maintaining said screen in said arcuate position, said last named means comprising a second guide means cooperating with said first guide means whereby said screen will be guided from said extended position to said arcuate position.



2,946,524
LUMP BREAKER FOR VACUUM DRYER
Charles G. Keirnan, East Liverpool, Ohio, assignor, by mesne assignments, to Patterson Foundry & Machine Company, a corporation of Ohio
Filed Aug. 11, 1958, Ser. No. 754,219
6 Claims. (Cl. 241—98)



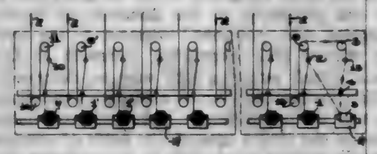
3. A material handling apparatus comprising a hollow blending chamber having frusto-conical end portions, a support, means for mounting the chamber on the support for rotation on an axis transverse to the conical axis of said end portions, lump breaking means including a fixed member and a movable member operably disposed in one of said end portions and coacting therein to break agglomerate formations of material, means for rotating said movable member on an axis of rotation substantially transverse to the axis of rotation of said chamber, and means for rotating said chamber to tumble said material.

2,946,525
QUICK CONNECT SINK MOUNTING FOR GARBAGE GRINDERS
Charles Thiesse, Belleville, N.J., assignor to National Rubber Machinery Company, Akron, Ohio, a corporation of Ohio
Filed July 10, 1957, Ser. No. 671,685
4 Claims. (Cl. 241—100.5)



1. Garbage grinder suspension means comprising a sink flange adapted to be inserted through a sink drain opening with its top flange overlying the margin of such opening; said sink flange adjacent its lower end having a grinder mounting ring engaged with a shoulder of said sink flange; a sealing ring disposed to underlie the margin of such opening; screw means bearing on said mounting ring to press said sealing ring up against the margin of such opening and to draw the top flange down against the margin of such opening; said mounting ring being formed with a series of circumferentially extending keyhole slots for supporting a garbage grinder; and a corresponding series of headed screw members extending upwardly from the grinder to pass upwardly through the wide portions of such slots and to overlie the narrow portions of such slots when the grinder is lifted and the screw heads circumferentially so positioned.

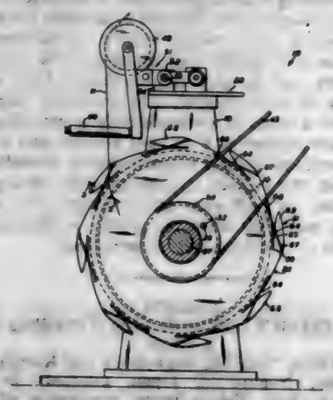
2,946,526
CONTINUOUS METHOD FOR WINDING UP YARNS
Kimio Kuroiwa, Nishi-ku, Nagoya-shi, and Kosuke Sone, Minato-ku, Nagoya-shi, Japan, assignors to Toyo Rayon Co., Ltd., Tokyo, Japan, a company of Japan
Filed Oct. 17, 1956, Ser. No. 616,498
Claims priority, application Japan Oct. 21, 1955
1 Claim. (Cl. 242—18)



A method for continuously winding yarns on a succession of winding devices comprising winding the yarn on one of said devices by feeding the yarn thereto via a reserve device and cutting the yarn between said one and said reserve devices, with said one device having a determinable amount of yarn on it, whereupon the yarn is wound, without interruption, on said reserve device, said method further comprising providing a godet roller and a winding bobbin holder in reserve and, when it is desired to replace a full bobbin with an empty bobbin one by one from right to left successively, passing the yarn from the roller associated with the full bobbin to be replaced to the roller associated with the empty bobbin on the right to pass the yarn around the empty bobbin forming at least one loop before passing through the guide associated with said full bobbin, cutting the yarn between the empty bobbin and the guide associated with said full bobbin thereby shifting the winding operation from the full bobbin to the empty bobbin on the right, replacing the full bobbin with a new empty bobbin, and repeating the operation successively until the leftmost end

full bobbin is replaced with an empty bobbin, and, when it is desired to replace a full bobbin with an empty bobbin one by one from left to right, removing the yarn from the roller associated with the full bobbin to be replaced and passing the yarn around an empty bobbin on the left forming at least one loop around said empty bobbin, cutting the yarn between the guide associated with the full bobbin and the empty bobbin thereby shifting the winding operation from the full bobbin on the right to the empty bobbin on the left, replacing the full bobbin with an empty bobbin, and repeating the operation successively until the utmost right full bobbin is replaced with a new empty bobbin, while continuing the winding operation.

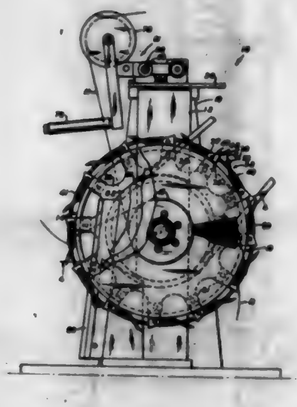
2,946,527
SNAGGING DEVICE
Benjamin C. Ellis, Jr., Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 2, 1958, Ser. No. 725,943
5 Claims. (Cl. 242—25)



4. An improved snagging device, which comprises a rotatable snagging disc, at least one snagging tooth secured to the outer periphery of the snagging disc having a free end projecting in the direction of rotation of the snagging disc, positioned adjacent to the outer periphery thereof and cooperating therewith to form an elongated strand receiving slot, and an elongated piece of resilient material positioned adjacent to and diagonally of the slot and crossing the slot at approximately the midpoint of the length thereof, the piece of resilient material being secured at one end to the snagging disc and being connected at the other end to the associated snagging tooth approximately radially outwardly from the inner end of the slot, whereby when the strand is caught by the snagging tooth and forced toward the inner end of the slot the portion of the strand projecting from the slot on the side on which the piece of resilient material is positioned rides between the piece of resilient material and the snagging tooth and is bent in an angular configuration with respect to the adjacent portion of the strand positioned in the slot for clamping the strand to the snagging device.

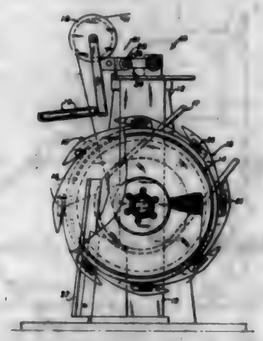
2,946,528
STRAND SNAGGING DEVICE
Tillman T. Bunch, near Ashland, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 8, 1958, Ser. No. 733,908
10 Claims. (Cl. 242—25)

1. An improved snagging device for strands, which comprises a rotatable snagging hoop, and at least one spirally shaped snagging finger secured adjacent to the periphery of the snagging hoop, said snagging finger having a free end projecting beyond the hoop in the direction



of rotation of the snagging hoop, partially encompassing an adjacent portion thereof and cooperating therewith to form a strand-receiving, tortuous path into which a portion of a strand is caught and held.

2,946,529
SNAGGERS FOR CONTINUOUS TAKE-UP APPARATUS
Eugene C. Stem, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 26, 1958, Ser. No. 763,642
5 Claims. (Cl. 242—25)



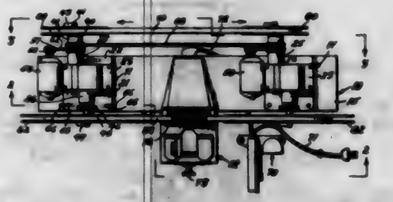
1. An improved snagging device for strand material, which comprises a rotatable snagging disc, and a plurality of slotted plates secured to the snagging disc, each of said plates having an outer projecting portion extending in the direction of rotation of the disc to form a snagging tooth and an inner resilient projecting portion extending in the direction of rotation of the associated snagging disc and cooperating with the outer projecting portion of the plate to form a resilient clamp for the strand material, the resilient projecting portion being capable of being forced resiliently inwardly toward the axis of rotation of the disc when the strand material is caught by the portion of the associated plate to clamp the strand material in the resilient clamp.

2,946,530
RECORD TAPE TAKE-UP MEANS
Cebern B. Trimble, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application Sept. 30, 1954, Ser. No. 459,476. Divided and this application Aug. 1, 1957, Ser. No. 676,782
6 Claims. (Cl. 242—55.11)



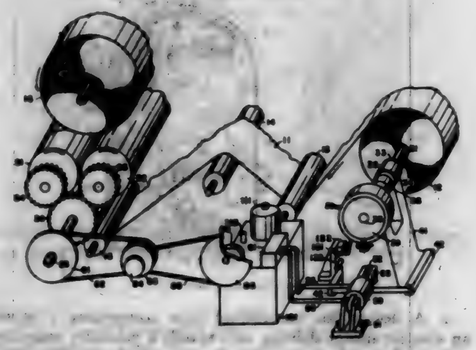
1. A device for receiving and storing tape in the form of a roll comprising a spool core, a flange extending beyond the core boundary for the tape to abut in forming a roll, means arranged to coact with the periphery of the flange for driving said flange, yieldable engaging means for engaging the core and the flange so that the driving means may drive the core in a tape-taking-up direction, and an elongated flexible strip having a length approximating that of the circumference of the core and having a tab which extends beyond the side of the roll, said strip being wound about the core, together with the end of the tape as the tape is started about the core, the first few turns of the tape holding the strip in place, said tab on the strip enabling the strip to be withdrawn from the roll in a direction away from the flange to cause the effective core diameter to be reduced, thereby permitting removal of the roll.

2,946,531
MOTION-PICTURE FILM WINDER AND EDITOR
Alva K. Hutchison, 2 Rugby Road, Bryn Mawr, Pa.
Filed Aug. 27, 1957, Ser. No. 680,482
7 Claims. (Cl. 242—55.12)



1. In a motion-picture film winder and editor, a base, a pair of spaced speed-reduction gear trains on said base each having a high-speed shaft projecting on one side and a low-speed shaft projecting on the other side, independently actuable drive means operatively connected to each of said high-speed shafts for driving the respective gear train, means for mounting a film reel on each of said low-speed shafts for rotation therewith, whereby a film is adapted to be wound from a reel on a selected one of said low-speed shafts to a reel on the other of said low-speed shafts by actuation of the drive means associated with said other low-speed shaft, and transmission means yieldably connected between said high-speed shafts for allowing variation in speed between said low-speed shafts required by the changing relative sizes of film coils on said reels.

2,946,532
OSCILLATOR FOR WEB WINDING DEVICES
Thomas N. Carter, Hamilton, Ohio, assignor to The Champion Paper and Fibre Company, Hamilton, Ohio, a corporation of Ohio
Filed Apr. 4, 1956, Ser. No. 576,895
10 Claims. (Cl. 242—57.1)



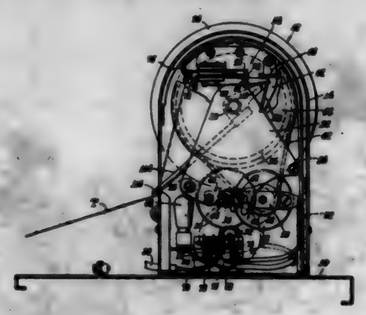
1. In a web-winding device comprising a source from which a web to be wound is supplied, a reel on which the web is wound, means for oscillating the reel and the source relative to each other in a direction transverse to the web, and means for driving said reel to wind the web at variable speed; the improvement which comprises means for maintaining a predetermined ratio between the speed of the oscillatory movement and the speed of movement of the web.

2,946,533
ANCHORING AND IDENTIFYING TRIPOD FOR TAPE RECORDERS
George E. Johnston, Rte. 1, Box 103, Bulger, Pa.
Filed Feb. 24, 1958, Ser. No. 717,015
1 Claim. (Cl. 242—74.1)



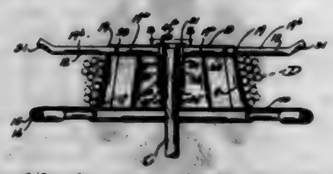
A tape reel comprising a central hub having an axial bore extending therethrough, a pair of circular flanges mounted on said hub in spaced apart parallel relation, said hub having a plurality of spaced apart bores formed therein spaced outwardly from said axial bore with at least one of said bores having a slot opening through the periphery of said hub, a plate, a leg secured to said plate releasably engaging in said one bore and a pair of legs secured to said plate for releasable engagement in a pair of said plurality of bores different from said one bore, said last named legs having a substantially shorter length than said first named leg, said first named leg being provided with a tape receiving slot for securing tape to said reel.

2,946,534
TAPE CONTROL WINDER
Adam Allendorf, Forest Hills, N.Y., assignor to Allendorf Industries Inc., Forest Hills, N.Y., a corporation of New York
Filed Feb. 24, 1956, Ser. No. 566,888
6 Claims. (Cl. 242—75.51)



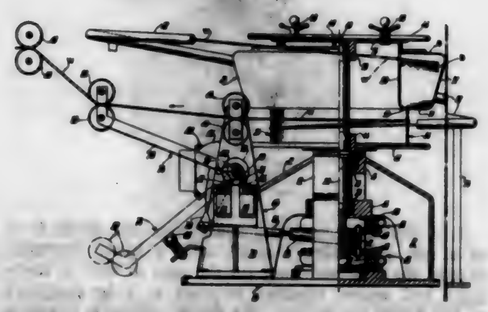
1. A device for controlling tape comprising a spool; an electric motor driving said spool; a pivotally mounted slack feeler for sensing the amount of slack in the tape adjacent said spool and movable between a determinate taut tape position and a determinate slack tape position spaced therefrom; means operated by said feeler for effecting one predetermined condition in the motor circuit when said feeler reaches said slack tape position and additional means for maintaining said one condition until the tape carries the feeler to said taut tape position; said additional means being operated by said feeler for effecting another predetermined condition in the motor circuit when said feeler reaches said taut tape position and for maintaining said other condition until the tape allows the feeler to return to said slack tape position.

2,946,535
APPARATUS FOR WINDING AND COILING WIRE, CABLE AND THE LIKE
Kenneth O. Marlen, 19797 Whitcomb Ave., Detroit 35, Mich.
Filed June 20, 1956, Ser. No. 592,638
3 Claims. (Cl. 242—84)



3. A reel for the support of coils of flexible wire comprising a side wall, a drum secured transversely upon said side wall, a hollow hub disposed axially of said drum and secured to said side wall, arms pivotally mounted intermediate their ends upon said drum spaced from the side wall including inner end portions and outer coil retaining portions, a flexible spring detent mounted upon said hub for each of said arms biased so that the inner end portions of said arms will contact with the detents at the opposite side of the arm pivots from said coil retaining portions whereby said outer retaining portions of said arms will be held substantially parallel to said side wall in projecting relation beyond the drum periphery, a movable member mounted upon said spring detents, and means connected to said member for moving it away from said side wall and compressing said detents out of locking relation with respect to the inner end portions of said arms whereby said arms can be pivoted from positions substantially parallel to said side wall into positions substantially normal to said side wall to enable release of a coil of wire from the drum.

2,946,536
PAY OFF REEL FOR WIRE OR THE LIKE
Gustave H. Froelich, Torrington, Conn., assignor to The Torrington Manufacturing Company, Torrington, Conn., a corporation of Connecticut
Filed Dec. 6, 1956, Ser. No. 626,773
8 Claims. (Cl. 242—128)



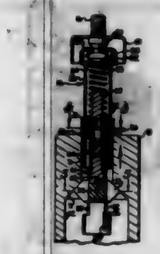
1. In a pay off reel for wire or the like, the combination of a frame, a drum rotatably supported on the frame, an annular basket connected with the drum for rotation therewith and adapted to support a coiled bundle of wire, guide means for receiving and guiding wire from the basket to the periphery of the drum for passage thereabout, and means for retarding rotation of the drum and the basket when wire is pulled from the drum.

2,946,537
BOBBIN HOLDER
Agnew H. Bahnson, Jr., Winston-Salem, N.C., assignor to Wachovia Bank and Trust Company, trustee, Winston-Salem, N.C., a corporation of North Carolina
Filed June 28, 1956, Ser. No. 594,458
4 Claims. (Cl. 242—130.3)



1. A holder for substantially cylindrical textile machine bobbins comprising means for removably securing a bobbin to said holder, said bobbin securing means including a plurality of jaw members adapted to be inserted within the bore of said bobbin, said jaw members being constituted by depending portions of an inverted U-shaped member formed from a metallic blank, and an inverted U-shaped spring formed from flat material, said spring being removably positioned between and having the arms thereof contacting the inner surfaces of said jaw members thereby to urge said jaw members apart to firmly contact the walls of the bobbin bore.

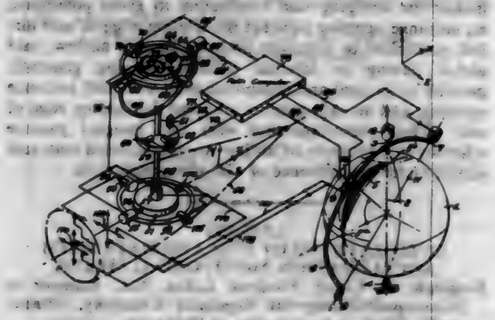
2,946,538
BOBBIN HOLDER
Woodrow W. Hewitt, Charlotte, N.C., assignor, by mesne assignments, to Parks-Cramer Company, Fitchburg, Mass., and Charlotte, N.C., a corporation of Massachusetts
Filed Feb. 25, 1958, Ser. No. 717,478
5 Claims. (Cl. 242—130.3)



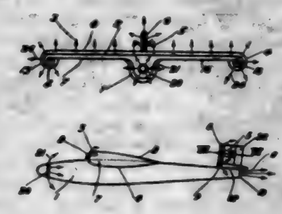
4. A pendulous support for bobbins and the like comprising a vertically disposed hollow cylindrical housing supported at its upper end, a latch member pivotally mounted within and adjacent the lower end of said housing, a sleeve surrounding and axially movable along said housing, a guide mounted for axial movement inside said housing, a pin fixed in said sleeve and penetrating said guide to connect said guide to said sleeve, first spring means mounted inside of said housing and above said guide to normally urge said guide and sleeve downwardly, a pawl connected at its upper end to said guide and at its lower end engageable with said latch to rotate the same with upward movement of said sleeve, a locking member disposed within said housing and penetrating said guide, said locking member being mounted for axial movement within said guide, said locking member having an elongated slot through which said pin loosely passes to limit the axial movement of said locking member relative to said guide, and second spring means positioned below said guide and surrounding said locking member to normally urge said locking member to its lowermost limit of travel relative to said guide.

2,946,539
GUIDANCE SYSTEM FOR LONG RANGE BALLISTIC MISSILE
Edward M. Fischel, Huntsville, Ala., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 17, 1952, Ser. No. 277,856
36 Claims. (Cl. 244—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A course computer for a guided missile comprising X-, Y-, and Z-components for the double integration of accelerations vectors (1) along the path of travel of the missile, (2) along a direction horizontally transverse of said path, and (3) along the instantaneous vertical of said path, respectively, each said component comprising first and second amplifiers, first and second motors each driven from the output of a respective amplifier, first and second generators each driven by a respective one of said first and second motors, first potentiometers each adjusted by and proportionately to the rotations of the respective first motors, and connections applying the output of each said first potentiometer to the input of each said second amplifier, respectively, a second potentiometer adjusted by and proportionately to the rotations of the second motor of said Y-component, connections energizing the field coils of the second generators of said X- and Z-components from the output of said second potentiometer of said Y-component, and a feed-back connection from each generator to its amplifier.



2,946,540
JET PROPELLED AIRCRAFT
Henri Coanda, Paris, France, assignor to Sebac Nouvelle S.A., Lausanne, Switzerland, a corporation of Switzerland
Filed July 21, 1954, Ser. No. 444,869
Claims priority, application France Sept. 13, 1948
3 Claims. (Cl. 244—15)



1. In an aircraft comprising a fuselage, wing elements fixedly secured to said fuselage, an empennage including fixed tail fins, a fluid compressor unit, continuous narrow slits of the COANDA type extending around said fuselage forward of said wing elements and along the leading edge of the said fixed tail fins, said slits being adapted to direct emerging fluid rearwardly, continuous narrow slits of the COANDA type extending along the leading edge of said wing elements, said last-mentioned slits being adapted to direct emerging fluid rearwardly along the extrados of said wing elements, and conduit means for delivering through all of said slits, at a pressure of at least 40 gms./sq. cm., fluid compressed in said compressor unit.

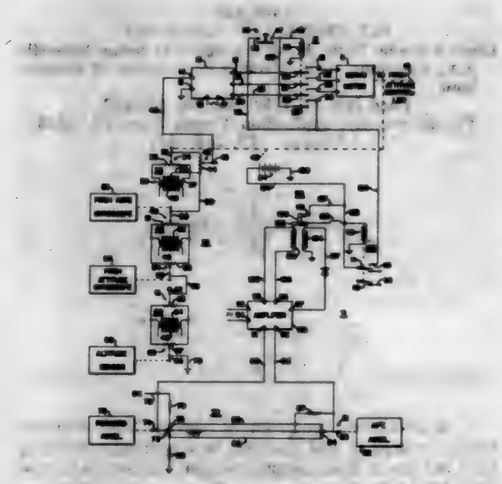
2,946,541
AIRFOIL FLUID FLOW CONTROL SYSTEM
John R. Boyd, 2421 W. Washington Blvd., Venice, Calif.
Filed Apr. 11, 1955, Ser. No. 500,564
1 Claim. (Cl. 244—42)



An apparatus for controlling the boundary layer on an airfoil to control the aerodynamic friction offered to air-

flow thereover by said airfoil, comprising: electric field generating means including a series of conductors imbedded in said airfoil transverse to the cord thereof; means for charging said conductors to given potentials; an entrance opening adjacent the trailing edge of said airfoil positioned to intercept portions of said airflow, said airfoil having an internal passage running generally parallel to its cord and communicating with said entrance opening; and an exit opening adjacent the leading edge of said airfoil communicating with said internal passage whereby said portions of airflow are recirculated over said airfoil under the influence of said given potentials.

2,946,542
AUTOMATIC PILOT FOR AIRCRAFT WITH ACCELERATION MONITORING MEANS
Benjamin H. Ciscel, Medford Lakes, N.J., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 2, 1956, Ser. No. 563,851
26 Claims. (Cl. 244—77)

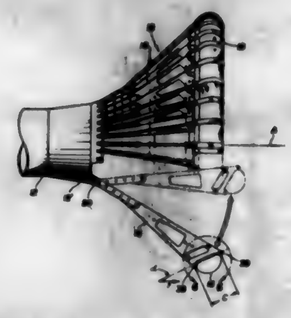


1. Control apparatus for an aircraft having an attitude control device and servomotor means to which the device may be operatively connected and disconnected, said apparatus comprising: a pair of accelerometers longitudinally spaced on opposite sides of the center of gravity of the craft, two variable magnitude voltage signal generators, one responsive to one accelerometer and the second responsive to the other accelerometer; means connected to said generators and combining said voltage signals to provide an output voltage having craft normal and craft angular acceleration components; further means responsive to the output voltage for operatively disconnecting said motor means and attitude control device; and control means for operating said motor means.

2,946,543
AERODYNAMIC DRAG DEVICE
Carroll G. Gordon, Menlo Park, and Lysle B. Robbins, Mountain View, Calif., assignors to Textron Inc., Belmont, Calif., a corporation of Rhode Island
Filed Jan. 25, 1957, Ser. No. 636,371
16 Claims. (Cl. 244—135)

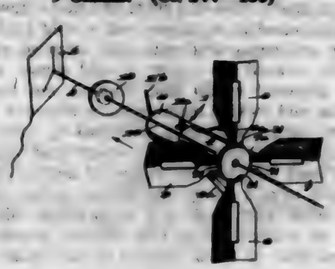
1. A foldable drogue comprising an annular support, a plurality of struts pivotally connected to said support at arcuately spaced points, an annular flexible canopy having a first annular forward edge and a second annular aft edge, a rigid bracket for each strut connected to said





canopy edges, and means for connecting said brackets to the respective struts.

2,946,544
KITE ACCESSORY
Frank N. Kinney, R.D. 1, Beaver Falls, Pa.
Filed Feb. 9, 1959, Ser. No. 792,111
9 Claims. (Cl. 244—155)



1. A kite accessory adapted for longitudinal movement along a kite string comprising a pair of coaxial arranged relatively slidably movable cylindrical members, a plurality of radial wings collapsibly connected to one of said cylindrical members, means connecting said wings to the other of said cylindrical members to cause radial expansion of said wings as said members are axially displaced in one direction relative to each other and radial collapsing of said wings as said members are axially displaced in the opposite direction relative to each other, resilient means biasing said cylindrical members axially with respect to each other in the direction causing collapsing of the wings, and trippable latch means maintaining said cylindrical members in a fixed axial position with respect to each other to position said wings in an expanded condition.

2,946,545
CALENDAR MOUNT OR THE LIKE
George H. Sampson, Middleboro, Mass., assignor to Windhrop-Atkins Co., Inc., Middleboro, Mass., a corporation of Massachusetts
Filed May 21, 1958, Ser. No. 736,876
1 Claim. (Cl. 248—35)

In an easel-type mount having two parts connected along their adjacent edges for angular disposition relative to each other to spread their opposite edges apart for supporting the mount upright on said edges, braces interengageable to hold the parts angularly disposed, comprising a first brace connected to one part and extending inwardly therefrom toward the other part for abutting engagement with the inner side of said other part, said first brace increasing in transverse width toward its distal end and a second brace connected to said other part swingable inwardly therefrom toward said one part, said second brace containing at its distal end an opening increasing in transverse width toward its connected end, the narrow end



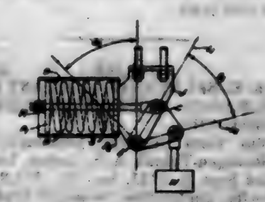
of said opening being narrower than the distal end of the first brace, said distal end of said first brace being engageable with said opening by disposing a part thereof, corresponding in width to the narrow end of said opening in said opening, said parts being held interengaged by a force exerted by said second brace to return the plane of the second part, which wedges the sides of said opening in said second brace against the diverging edges at the distal end of the first brace, and a force exerted by the first brace to return to the plane of the one part which holds the first brace against the wider end of said opening.

2,946,546
FISHING ROD SUPPORT
Louis Pokorny, Cedar Ave., Ronkonkoma, N.Y., and Anthony F. Leis, Shore Road, Oakdale, N.Y.
Filed Dec. 31, 1959, Ser. No. 863,233
7 Claims. (Cl. 248—40)



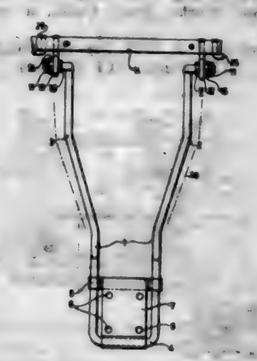
7. A fishing rod holder comprising upper and lower parallel supporting walls having aligned front edges substantially semi-circular in contour, each wall having a hole whose center coincides with the center of curvature of the semi-circle, a pair of cooperating clamping portions integral with the rear part of each of said supporting walls respectively, said clamping portions adapted for engagement with a stationary rod-like support, fastening means maintaining said supporting walls in superposed relation so that the holes in said walls are concentrically arranged, a bearing sandwiched between said walls and conforming to the shape of said walls, said bearing being concentric with the holes in said supporting walls and having an internal diameter larger than said holes, a ring split along one of its diameters located in said bearing concentrically therewith and capable of rotation in the plane of said bearing, trunnions integral with said ring and projecting inwardly along a diameter transverse to the line of split, and a tubular rod-accommodating member arranged inside said ring and having a pair of diametrically opposed holes in its side wall for accommodating said trunnions.

2,946,547
CONSTANT SUPPORT HANGER
Clarence G. Grabe, Royal Oaks, Md., assignor to National Valve & Manufacturing Company, Pittsburgh, Pa., a corporation of Delaware
Filed Mar. 3, 1959, Ser. No. 799,400
11 Claims. (Cl. 248—54)



1. In a hanger of the type which comprises:
a support;
a spring seat mounted on said support;
a bell crank mounted on the support by a horizontal pivot spaced from said spring seat;
the bell crank having angularly-related load and balance arms;
a hanger rod pivoted to the outer end of the load arm, said hanger rod being adapted for connection to the load, and providing a vertical load axis;
a longitudinally extending spring having one end seated on said spring seat;
and a spring rod extending longitudinally of said spring, the outer end of the spring rod being connected to the outer end of the spring, and the inner end of the spring rod being pivotally attached to the balance arm of the bell crank to form a balance pivot;
said spring being initially compressed a predetermined amount measured partly by the angle between the load and balance arms of the bell crank;
the improvement which comprises having said spring seat attached rigidly to said support;
whereby as the parts move the changing leverage of the bell crank compensates for the changing resistance of the spring to produce a substantially constant support for the load as it moves.

2,946,548
SUPPORTING CLAMP
Lars G. V. Largelius, Nordvalla, Vedum, Sweden
Filed Sept. 10, 1956, Ser. No. 609,640
5 Claims. (Cl. 248—316)



1. A supporting clamp for sign boards and the like, comprising a pair of spaced resilient legs, a pair of parallel jaw units, said units being rod shaped and disposed in the same plane as the resilient legs, a pair of links pivotally connected at their opposite ends to the jaw units, said

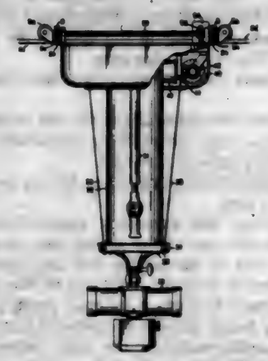
links having the same length and being disposed in spaced parallel relation, a pivot pin formed integrally with the terminal end of each of the resilient legs, a circular eye provided on each of the jaw units, the pins and the eyes forming a pivotal connection between the legs and the jaw units, and said legs exerting a resilient pressure upon said jaws in opposite longitudinal directions thereof in an effort to close said jaws.

2,946,549

DEVICE FOR SUSPENDING AT LEAST ONE BODY IN CORDS, BANDS, OR SIMILAR FLEXIBLE CARRYING MEMBERS

Johan Benedikt Kühl, Abyhoj, Denmark, assignor to Dansk Rontgen-Teknik A/S, Arhus, Denmark

Filed Sept. 8, 1953, Ser. No. 378,939
Claims priority, application Denmark Sept. 13, 1952
8 Claims. (Cl. 248—328)



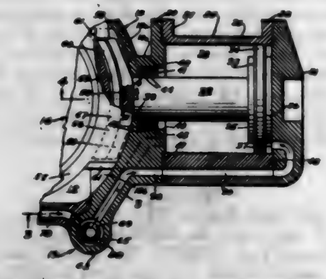
8. In a device for suspending a medical unit such as X-ray tubes and operation lamps, a plurality of suspending bands attached to the unit along lines forming a polygon, winding means to which said bands are attached at the upper end the axes of which are parallel to said lines and form a polygon of an area greater than that of the first mentioned polygon, bevel gears coupling the axles of said winding means and a driving motor driving one of the winding means.

2,946,550

HYDRAULIC CONTROL GATE

Arthur E. Wilde, Big Bear Lake, Calif., assignor to Shaffer Tool Works, Brea, Calif., a corporation of California

Filed Sept. 9, 1957, Ser. No. 682,821
13 Claims. (Cl. 251—1)



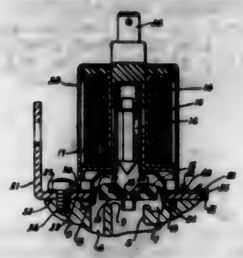
1. A ram gate assembly, including: a body having a flow hole from top to bottom and a gate chamber extending laterally from said hole and opening outwardly at the ends; a cap provided with an interior, semicircular pocket in the outer wall thereof; horizontal rails on the inner side of said cap and carried thereby; a hinge pivotally mounting said cap to the adjacent end of said body; a cylinder secured to the outer side of said cap; a piston slidably mounted in said cylinder and movable to retracted and extended positions; a ram shaft having one end connected to said piston and the opposite end extending into said pocket, oppositely extending arcuate arms on the end of said shaft extending into said pocket, said arms forming an arcuate member having an arcuate upstanding wall along the free edge, there being a central groove between said wall and the adjacent end of said ram shaft; a ram assembly supported on said rails when adjacent said cap, said assembly including a ram block holder having an arcuate, downwardly opening groove into which said wall is removably received, the groove of said ram block being defined at the outer end thereof by a downwardly extending arcuate tongue removably received on said arms and in the groove of said arms; end walls closing the ends of the groove in the ram block holder; and manifolds for pressure fluid formed on said body and having fluid passages therein, there being respective passages through said hinge connected with said manifold passages respectively and also connected to opposite ends of said cylinder so that said cylinder may be provided with pressure fluid for actuating said piston regardless of the pivotal position of said cap.

2,946,551

DETACHABLE MOUNTING FOR SOLENOID COIL

Julius William Kovach, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

Filed June 3, 1957, Ser. No. 663,064
4 Claims. (Cl. 251—30)



1. A solenoid valve comprising a valve housing having a flat exterior face; a first passage extending inwardly of said face; an annular passage concentric with said first passage and extending inwardly from said face to define an annular sealing surface; a diaphragm extending across said passages and having a central opening therein in registry with the first passage and another opening therein in registry with the annular passage; a tubular guide in axial registry with the central opening and having an annular flange overlying the peripheral edge of the diaphragm; an armature slidably positioned in said tubular guide for movements toward and away from the central opening to control flexing movement of the diaphragm into and out of sealing engagement with the annular sealing surface; a coil encircling the tubular guide for operating the armature; a flat annular wall element carried on said housing exterior face and having two parallel flat faces; said wall element having one of said flat faces positioned on the aforementioned flat valve housing face with the inner edge area thereof overlying the aforementioned annular flange; a flat annular plate carried on the other flat face of the annular wall element; portions of said plate being cut away and deflected out of the plate plane to form a series of circumferentially spaced spring fingers; a cup-shaped

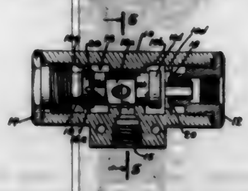
housing overlying the coil and having a plurality of circumferentially spaced ears releasably retained between the spring fingers and annular plate.

2,946,552

SEALING ELEMENTS

Joseph J. Mascuch, Jr., Rochester, N.Y., assignor to Altair Inc., Terryville, Conn., a corporation of New York

Filed Oct. 5, 1955, Ser. No. 538,560
5 Claims. (Cl. 251—175)



1. In a valve, an outlet port, an apertured and flexible and thin and slightly dished element mounted about said port, and a solid element movable into engagement with said dished element to restrict the flow in said outlet port, said dished element being effective upon the relative increase of pressure in the upstream side of said outlet to collapse upon and increasingly engage said solid element over a substantial area internally from the dished element's edge.

2,946,553

BUTTERFLY VALVES

Helmut Adam, Stuttgart-Uhlbach, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany

Filed Feb. 14, 1957, Ser. No. 640,114
6 Claims. (Cl. 251—188)



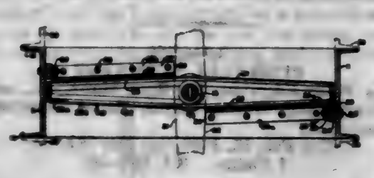
1. A butterfly valve unit comprising, in combination, a longitudinally extending substantially cylindrical valve housing, a rotatable actuating shaft extending crosswise of said housing, a valve closure disc carried by said shaft and rotatable thereby for valve closing and opening with a pair of bearing blocks provided on said disk to allow for rotation therein of said shaft relative to said disc, a pressure plate movably anchored upon said disc and constituting therewith a peripheral groove with a sealing ring of resiliently deformable material lodging in said groove and confinable and deformable by actuation of said pressure plate, a pair of guide bolts rigidly extending from said pressure plate through said disc to afford guided movement of said pressure plate relative to said disc, said guide bolts straddling said shaft and having a yoke member rigidly connecting their free ends with one another across said shaft and intermediate said bearing blocks, and a cam member fixedly carried by said shaft between said bearing blocks for actuating said pressure plate incident to rotation of said shaft, whereby said shaft and cam engaging upon said yoke member are operable to deform said ring to effect valve-sealing and wall-engaging deformation thereof when the disc is in valve closing position, and conversely operable to relieve ring pressure to allow the ring to reassume substantially unbiased wall-clearing normal shape and contour preparatory to valve opening.

2,946,554

BUTTERFLY VALVE

Gunnar C. F. Asker and Gert K. A. Siggelin, Falls Church, Va., assignors to Desomatic Products, Inc., Falls Church, Va., a corporation of Delaware

Filed June 13, 1956, Ser. No. 591,069
2 Claims. (Cl. 251—306)



2. A large volume gas control butterfly valve for control of gas flowing through rectangular ducts subject to substantial variation in temperature, comprising a rectangular casing having a rotary vane symmetrically mounted for rotation within said casing, said vane comprising rectangular upper and lower sheathing elements each vertically disposed from the other and fastened to an opposite tangential point of a central rotor shaft, said sheathing elements being perimetrically fastened at their edges to a rectangular stiffening frame, thus cubically enclosing a heat insulating air space therebetween, one of said sheathing elements including venting means, the assembled vane being symmetrically balanced about said rotor shaft, silicone rubber sealing means mounted perimetrically about said casing in separated portions, each portion supported by an angle iron housing terminating near the rotary vane axis of rotation at points defined by the upper and lower surfaces of said rotor vane in gas flow control rotation from horizontal to vertical positions, one portion of said sealing element being mounted above with its silicone rubber sealing member extending deformably from said angle iron housing a substantial distance downward for sealing contact with the upper surface portion of said rotor vane on one side of the axis of rotation thereof, and another portion of the sealing element mounted below with its silicone rubber sealing member extending deformably from said angle iron housing a substantial distance upward for simultaneous sealing contact with the lower surface portion of said rotor vane on the opposite side of the axis of rotation thereof in the valve closed position, said rotor shaft and the central rotor vane portion being sealed against the inner wall of said casing defining said flow path by annular resilient gaskets.

2,946,555

VALVE

Jacob J. Cantor, 1905 Beverly Blvd., Los Angeles, Calif.

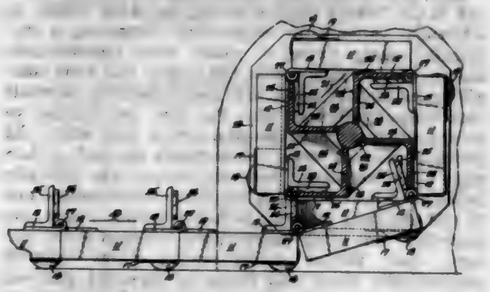
Filed Sept. 16, 1957, Ser. No. 684,259
2 Claims. (Cl. 251—342)



1. A valve comprising a tubular resilient body having an inlet and an outlet, a conduit extending into the inlet, a portion of the body having normal annular contact with the conduit, there being one or more outlets from the conduit into the body upstream of said annular contact, one or more ears on the exterior of the body in the vicinity of said annular contact by which a portion of the body may be pulled laterally so as to break at least a portion

of said annular contact and allow flow from the outlets in the conduit to the outlet from the body, fulcrum means on the conduit and lever means secured to the ears engaging with the fulcrum means by which the ears may be pulled laterally to break portions of the annular contact with the conduit and allow flow from the outlets in the conduit to the outlet from the body.

2,946,556
PUSH-PULL ACTUATOR
Charles Willis Edgerton, Jr., Bryn Mawr, Pa., assignor to Wayne Iron Works, Wayne, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1959, Ser. No. 792,913
7 Claims. (Cl. 254—1)



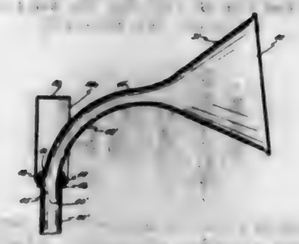
1. A push-pull actuator for operating grandstands and like structures between an open and a nested position on a floor, comprising a rotor having an axis of rotation parallel to the floor, an actuating arm operable to be wound in a helix on said rotor, said arm comprising a plurality of rigid links, and hinge means interconnecting adjacent links for pivotal movement between an open limit position in which said links are in longitudinal alignment parallel to the floor, and a closed position in which said links are at an angle to one another on said rotor, the axis of said hinge means being disposed parallel to said rotor axis and at an angle to the longitudinal center line of said links corresponding to the winding pitch of said helix on said rotor whereby said links lie side-by-side on said rotor without overlapping when wound thereon, said links having means limiting pivotal movement of said links when in said open position parallel to the floor to provide a rigid push arm for extending said structure to open position.

2,946,557
JACKING MECHANISM
George E. Suderow, New York, N.Y., assignor to De Long Corporation, New York, N.Y., a corporation of Delaware
Filed May 8, 1958, Ser. No. 733,969
16 Claims. (Cl. 254—93)

1. A jacking mechanism for selectively effecting or restraining substantially vertical relative movement selectively in either direction between a platform-like body and at least one substantially upright body-supporting leg mounted on the body for substantially vertical movement relative thereto comprising a first section having a generally upright column portion, a second section mounted in surrounding relation on the column portion of said first section for substantially vertical sliding movement thereon, said column portion having a vertically elongated opening extending therethrough, a first horizontal pin carried by said first section for horizontal reciprocating movement relative thereto between extended and retracted positions, a second horizontal pin carried by said second section for horizontal reciprocating movement relative thereto between extended and retracted positions, said second pin extending through said opening, power means for selectively effecting the horizontal reciprocating movement of said pins, and power means for selectively effecting a vertical sliding movement in either direction of said second section on said first section portion.



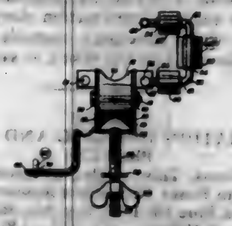
2,946,558
APPARATUS FOR FEEDING WIRES INTO CONDUITS
Olaf G. Ferm, 2708 W. Boone, Spokane, Wash.
Filed Aug. 30, 1956, Ser. No. 607,149
3 Claims. (Cl. 254—134.3)



1. A wire feeding tube for guiding wires into conduit sections connected to electrical connection boxes comprising a tubular member having a small end of suitable size for insertion into a conduit section and a larger outwardly flared outer end, the tubular member being curved intermediate the ends whereby to position the axis of one end at an angle to the axis of the other end, the small end being bias cut from the tip to a point on the outside of the curved surface spaced endwise from the tip to provide a reduced tip for insertion into the conduit while the small end is angularly disposed with respect to the conduit, said bias cut also providing an enlarged end opening in said small end.

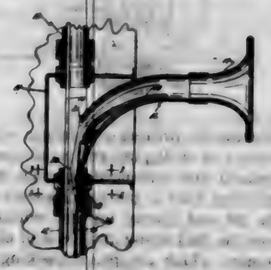
2,946,559
CABLE STRINGING BLOCK
Neales L. Pickett, 338 Mohawk Blvd., Tulsa, Okla.
Filed Aug. 12, 1957, Ser. No. 677,684
1 Claim. (Cl. 254—134.3)

A stringing block for cable and comprising a pair of spaced side plate members, a pulley journalled between the side plate members for receiving the cable, a substantially U-shaped arm member pivotally secured to one of the side plate members for alternate positions of open and closed with respect to the pulley, locking means for retaining the arm member in a closed position thereof, said locking means comprising an L-shaped arm member flexibly secured to the second of said side plate members, a pivotal lug member provided at the free end of the L-shaped arm member for retaining thereof in engagement with the U-shaped arm member in a closed position thereof, a pair of spaced roller members journalled on the U-shaped arm member and parallel with



respect to each other, a third roller member journalled on the U-shaped arm member in a perpendicular disposition with respect to the first roller members, said roller members cooperating with said pulley in a closed position for the U-shaped arm member to provide a four way guard for protection of the outer periphery of the cable, said open position for the U-shaped arm member providing for insertion and removal of the cable adjacent the pulley member.

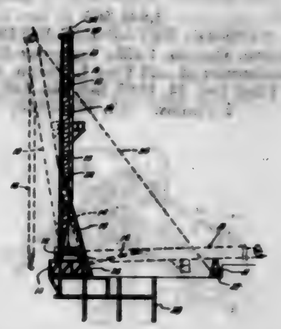
2,946,560
TOOL FOR GUIDING WIRES INTO CONDUITS
Olaf G. Ferm, 2708 W. Boone, Spokane, Wash.
Filed May 19, 1958, Ser. No. 736,163
6 Claims. (Cl. 254—134.3)



1. A guide for guiding wires as they are pulled into a conduit through a connection box comprising a curved tube having part of the material cut away along the outside of the curve from one end thereof to provide an open channel comprising a tip portion at said end insertible into the conduit, gripping means on said tube spaced from the tip portion, insertible in the conduit with said tip portion for yieldably engaging the inner surface of the conduit at a distance from said tip portion whereby to hold the tip portion in the conduit, the open channel extending beyond said gripping means along the tube to admit wires extending from the conduit across the box, and the tube being closed from the open channel to its other end to provide a closed channel for confining new wires that are being fed into the conduit.

2,946,561
HOISTING APPARATUS
Warren K. Thorson and Archie R. McLerran, Dallas, Tex., assignors to Ideco Inc., a corporation of Ohio
Filed Mar. 28, 1956, Ser. No. 574,439
6 Claims. (Cl. 254—145)

1. In combination with a mast, means mounting the mast on a platform for swinging movement through a substantial arc and in a vertical plane, a crown block at the upper end of the mast, a traveling block suspended by a line from the crown block, the crown and traveling blocks having sheaves receiving said line and rotatable about axes perpendicular to the plane of swinging movement of the mast, drawworks having a rotatable drum on the platform to one side of said plane, the dead end of said line being secured to a point fixed with respect to the platform and the fast end being attached to the drawworks drum for raising and lowering the



traveling block, another sheave fixedly mounted on the crown block for directing the fast end of the line from said crown block toward said drawworks without misalignment with said first-mentioned sheaves, and means engageable with said fast end of the line adjacent the drawworks and movable longitudinally along the drum of the drawworks to guide said line onto and from the drum of the drawworks substantially uniformly of the length thereof and at a substantially uniform angle with respect to the drum while the mast is in different swinging positions in said arc.

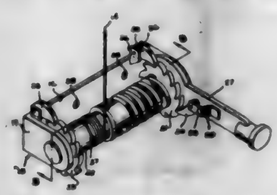
2,946,562
MOORING REEL
Harold E. Handley, Jackson, Mich., assignor to Handley Brown Heater Company, Jackson, Mich., a corporation of Michigan
Filed Feb. 14, 1956, Ser. No. 565,386
3 Claims. (Cl. 254—161)



1. In a mooring reel of the type described, a casing having a cable discharge opening therein, cable reel structure disposed in said casing and having an annular portion upon which the cable is wound, a hand wheel attached to said reel for winding the cable thereon to effect a preliminary take up on the cable, a cable having its inner end anchored within the interior of said reel, an opening defined in said annular portion of said reel through which said cable end, to be wound upon said annular portion and discharged through said opening in said casing, is passed, said reel being in the form of two parts one of which is piloted and rigidly fixed against relative rotation upon the other, anchoring and guide structure for said cable inner end defined by said parts interiorly of said annular portion of said reel, said hand wheel abutting one of said parts, means extending between said hand wheel and the other of said

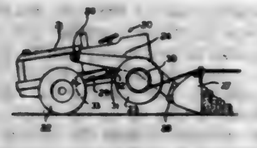
parts for attaching said hand wheel and said reel parts together into a unit, said reel having spaced radial flanges having circular peripheries upon opposite sides of said annular portion, said casing being defined in part by axial flange portions enclosing said annular portion of said reel, said axial flange portions defining a cylindrical bearing surface complementary to the periphery of said radial flanges for giving relative rotational support to said reel through said radial flanges.

2,946,563
TENSION RETAINING BINDER
Fred L. Eaton, Decoto, Calif.; Lawrence Edward Eaton, administrator of said Fred L. Eaton, deceased
Filed Oct. 14, 1955, Ser. No. 540,438
2 Claims. (Cl. 254—164)



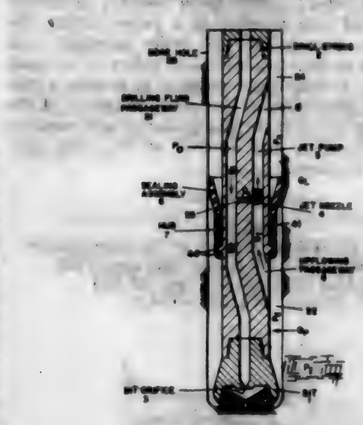
1. In a load vehicle, a side portion, a supporting bracket secured longitudinally to said side portion, a shaft journaled longitudinally in said bracket, a lever rotatably mounted on said shaft, cooperating ratchet means on one end of said shaft and on the adjacent portion of the bracket limiting rotation of said shaft relative to said bracket, a ratchet wheel rotatably mounted on the other end of said shaft, pawl means on said bracket engaging said ratchet wheel and limiting rotation of said ratchet wheel relative to said shaft, means drivingly coupling said shaft to said ratchet wheel comprising; a coil spring surrounding said shaft between said ratchet means and said ratchet wheel, one end of said spring being connected to said shaft and the other end of said spring being connected to said ratchet wheel, said spring being constructed and arranged to transmit torque from said ratchet wheel to said shaft, and a load binding cable anchored to said shaft, whereby a desired amount of spring tension may be placed on said load binding cable when said cable is wound on said shaft.

2,946,564
BUCKET LOADER
Ernest R. Cunningham, Jr., P.O. Box 566, Libertyville, Ill.
Filed Apr. 11, 1957, Ser. No. 652,228
7 Claims. (Cl. 254—166)



1. An excavating machine comprising a frame having powered wheels thereon, a boom pivotally mounted to said frame and having a bucket mounted at the free end thereof, power means for moving said boom relative to said frame to a position where said bucket is in contact with the ground at a point remote from said frame and said wheels with a pair of wheels adjacent said bucket out of contact with the ground, a differential mechanism between said pair of wheels, a winch drum mounted on each of said wheels, a cable wound on each of said winch drums, and anchored to a movable object remote from said bucket, means on said bucket for guiding said cable, said means being disposed above the center of rotation of said winch so that the portion of the cable between said winch and said means and the portion of the cable between said movable object and said means define an angle in a vertical plane of less than one hundred eighty degrees to provide a downward component of force on said bucket to augment the reaction thereagainst, and a brake at each wheel selectively operable to control the operation of the cable on the winch at said wheel.

2,946,565
COMBINATION DRILLING AND TESTING PROCESS
Philip S. Williams, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Filed June 16, 1953, Ser. No. 362,026
7 Claims. (Cl. 255—1.8)

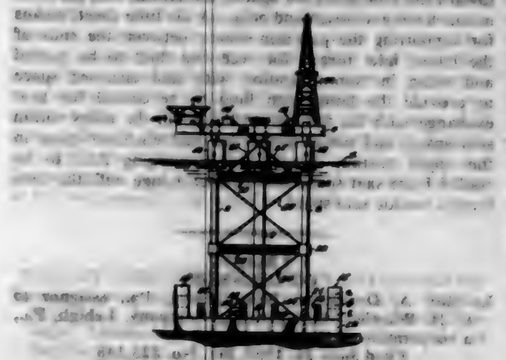


3. In a process for drilling a borehole within the earth wherein a string of drill pipe and a bit supported therefrom are rotated and advanced through the earth, and wherein a drilling fluid is passed down through the drill string to the bit and thence upward within the annular space between the drill string and the wall of the borehole, the improvement which comprises packing off a portion of the annular space between the bit and the surface of the earth, educing fluid from the packed-off portion at a rate sufficient to lower the pressure within said portion to a value below the pressure within the earth surrounding said portion, discharging the educed fluid into the annular space above said portion, by-passing upflowing drilling fluid around each packing-off point, and advancing the packed-off portion down the borehole as the borehole is drilled.

2,946,566
SUBAQUEOUS DRILLING APPARATUS
Charles T. Samuelson, 105 N. Burnett Drive, Baytown, Tex.
Filed Aug. 31, 1956, Ser. No. 607,485
4 Claims. (Cl. 255—2.5)

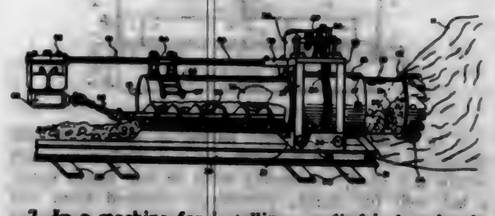
1. In a floating unit for subaqueous drilling, the combination with a submersible ground anchor barge, of a rigid column secured thereto and extending upwardly therefrom, and a platform barge slidably mounted on said column, means for raising said platform barge on said column, means for securing said platform barge to said column at the desired height, and a sleeve surrounding and slidable on said column, bracing cables connected at one end to said sleeve and at the other end

to said ground anchor barge, other cables extending from said ground anchor barge and from said sleeve to



a point above said platform barge, and means on said platform barge for tensioning all of said cables.

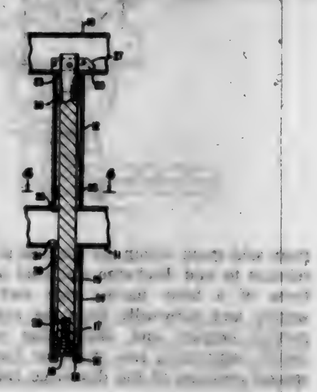
2,946,567
CASING INSTALLING MACHINE
Robert K. Pepper, 216 E. Florence Ave., Syracuse, N.Y.
Filed Aug. 11, 1958, Ser. No. 754,941
7 Claims. (Cl. 255—36)



7. In a machine for installing a cylindrical casing in an embankment, an unobstructed cylindrical cutting head adapted to be removably attached to the peripheral edge of the forward, embankment entering end of the casing whereby said forward end is completely unobstructed, a track extending towards the embankment in the direction that the casing is intended to pass therethrough, a support for the casing including a frame mounted for reciprocable movement on said track and a cylindrical sleeve rotatably mounted in said frame, said sleeve being adapted to encircle said casing intermediate the ends thereof and having means to releasably secure the casing thereto, power operated means mounted on said frame to rotate said sleeve and the casing therewith, means to advance said support on said track towards the embankment, a free floating worm positioned adjacent to the bottom of the casing, the over-all diameter of said worm being substantially less than the inner diameter of the casing, the forward end of said worm terminating rearwardly of the forward end of the casing, and independent power operated means to drive said worm.

2,946,988
GUARD RAIL ASSEMBLY
Paul Ogden, Toledo, Ohio, assignor to Axt Iron and Wire Works, Inc., Toledo, Ohio, a corporation of Ohio
Filed Dec. 11, 1958, Ser. No. 779,999
2 Claims. (Cl. 256—65)

1. A fastener for holding one end of a hollow post assembly in mating engagement against one side of a tubular rail having an opening through said one side thereof, said fastener comprising an elongate rod adapted to extend lengthwise through said post assembly, said rod being bifurcated at one end to provide a slot and having a threaded socket at the other end, the bifurcated end closely engaging through the opening in the rail, a latch, a pivot pin pivotally supporting said latch in said slot, said latch being of a length greater than the width of said opening and of a width less than the width of the opening and being pivotally supported on said pivot pin intermediate the ends thereof for swinging between two positions, said latch in the first of said positions being disposed lengthwise of said shank whereby said latch and the bifurcated end of said shank may pass through said opening into the interior of said rail, said latch, in the second of said positions, being disposed with the length thereof generally transverse of said opening with one longitudinal edge thereof engaging the inner surface of



said one side of said rail, a cam surface on one end of said latch for engaging the inner side of said rail opposite said opening whereby to swing said latch about said pivot pin from said first position to the second position, a nut having a body engaging within the other end of said post assembly, a flange on said nut body, said flange engaging against said other end of said post assembly, and a threaded bolt engaging through said nut and into said threaded socket on said other end of said rod whereby, said fastener, with said latch in said first position, may be inserted into said post assembly through said other end until the cam surface engages the inner side of the rail opposite said opening and, when the latch has been cammed to said second position, the same may be drawn across said opening and against the inner surface of said rail on opposite sides of said opening.

2,946,569
APPARATUS FOR CLEANING THE SURFACES OF HEAT EXCHANGE MEANS
Albert Harry Kirkby, Boreham Wood, England, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed June 17, 1954, Ser. No. 437,455
Claims priority, application Great Britain June 18, 1953
2 Claims. (Cl. 257—4)

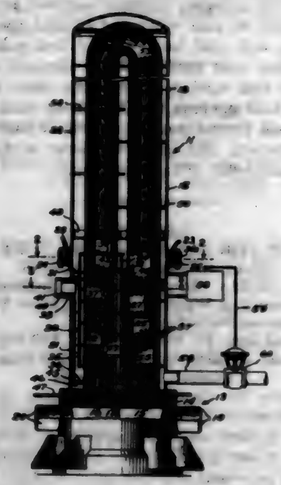
1. Apparatus for cleaning the surfaces of heat exchange means in an upright gas pass, having a roof, side walls, and a bottom wall, said apparatus comprising, in combination, means for collecting solid cleaning particles from the gas pass and disposed at a location below the gas pass, means for removing oversize and undersize particles from said solid cleaning particles including spaced coarse and fine screens positioned between said gas pass and said collecting means whereby a selected size of solid cleaning particle is gravitationally delivered to said collecting means, a separator at a location above

the gas pass, pneumatic conveying means connecting the collecting means to said separator to return the particles to the latter, a gravity flow particle discharge spout extending from said separator through the roof of the gas pass and having a discharge end above the heat exchange means in the gas pass, a stationary deflector supported



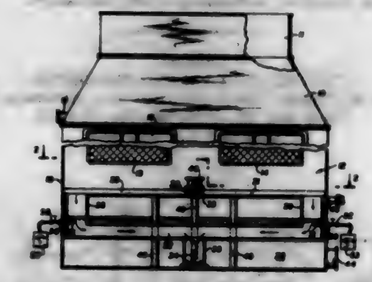
from said spout within the gas pass in downwardly spaced relation to said discharge end, said deflector being in the form of a body having side surfaces sloping downwardly and outwardly from the top thereof to form a particle impact and distributing surface, and means rigidly supporting said deflector from circumferentially spaced portions of the discharge end of said spout.

2,946,570
VERTICAL FEEDWATER HEATER
John M. West, Pelham, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Filed Mar. 28, 1957, Ser. No. 647,331
7 Claims. (Cl. 257—32)



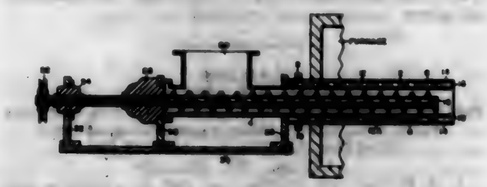
1. In apparatus of the class described, a vertically disposed shell, a vertical tube bundle in said shell, means for directing a fluid to be heated through the tube bundle and including a tube sheet disposed at the lower end of said shell, partition means enclosing a space within the shell containing a portion of said tube bundle and including vertical partitions spaced from the shell and extending toward the tube sheet but spaced therefrom, said partition means having a closed end adjacent the tube sheet, means for supporting the partition means between the ends of the latter, inlet means for receiving fluid to be cooled and being in communication with said enclosed space to provide the latter with fluid to be cooled for heat exchange with the fluid to be heated in the tubes within said space, and outlet means for said enclosed space in the upper portion thereof for discharging fluid to be cooled from said space into heat exchange with the tube bundle outside said space.

2,946,571
CONDENSERS
Le Roy A. Dressler, Bala-Cynwyd, Pa., assignor to C. H. Wheeler Manufacturing Company, Lehigh, Pa., a corporation of Pennsylvania
Filed June 24, 1959, Ser. No. 823,148
7 Claims. (Cl. 257—43)



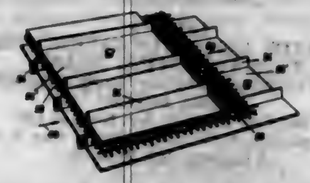
1. In a condenser, a shell having an opening for the admission of exhaust steam to a steam-condensing space within said shell, condensing tubes in said steam space, a hot well for storing condensate received from said steam space, said hot well having a roof wall separating said hot well from said steam space, means normally communicating between said steam space and said hot well, said communicating means comprising a vent to allow non-condensable gases and steam to escape from said hot well to said steam space, and a drain terminating short of the bottom of said hot well for conducting condensate from said steam space into said hot well, and valve means for closing said vent and drain whereby the condensate contained in said storage hot well is isolated from said steam space when said valve means are closed.

2,946,573
CHEMICAL APPARATUS
Roger L. Annis, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 22, 1955, Ser. No. 554,789
2 Claims. (Cl. 257—86)



1. In combination with a furnace, a screw conveyor adapted for use in said furnace having a screw flight located within a tubular conduit, feed means and drive means located at one end of said conveyor outside of the furnace with the main portion of the conveyor extending into said furnace, an outer shell surrounding said tubular conduit and cooperating therewith to provide an annular heat exchange chamber therebetween having closure members at opposite ends and containing helically wrapped bars separating the chamber into separate compartments which intercommunicate in an annulus section at the end opposite the feed means, said heat exchange chamber extending a substantial distance into the furnace beyond the end of the screw flight and having ingress and egress means outside of said furnace at the end opposite the annulus section.

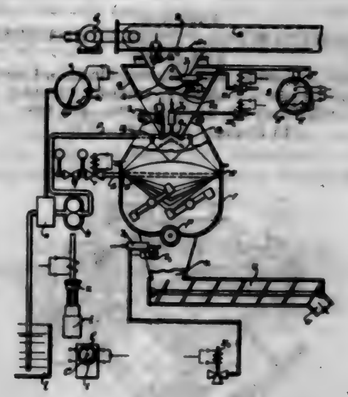
2,946,573
ROTARY REGENERATIVE HEAT EXCHANGERS
Teodor Immanuel Lindhagen and Tor Axel Odman, Stockholm, Sweden, assignors to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed June 18, 1956, Ser. No. 591,884
9 Claims. (Cl. 257—270)



1. A heat exchanger comprising a casing structure having inlet and outlet ports for conducting to and from the casing different streams of gaseous fluid at different temperature between which heat is to be exchanged, a rotor mounted to rotate within said casing, said rotor having regenerative mass located therein to traverse said streams in alternation to absorb heat from the stream of higher temperature and to reject the absorbed heat to the stream of lower temperature, said mass comprising one or more packs each composed of a plurality of juxtaposed heat exchange elements, at least every second one of said elements comprising wire mesh, said elements being substantially parallel with the direction of flow of the streams of gaseous fluid through the rotor, means parallel with the direction of flow of said streams of gaseous fluid for laterally spacing away from each other substantially the entire surface areas of adjacent elements to provide between each two adjacent elements a series of relatively wide and shallow open channels extending axially of the rotor and substantially parallel with the direction of flow of the gaseous fluid therethrough, at least every second of said regenerative mass elements constituting one of the wider side walls of said channels constituting wire mesh.

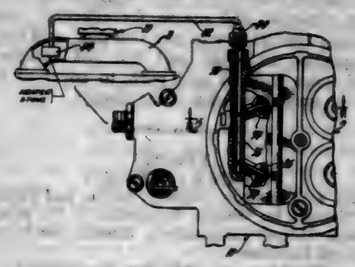
2,946,574
INSTALLATION FOR MAKING BRIQUETTES
Paul Munderich, Rothenbergen, near Gelsenkirchen, Germany, assignor to Wilma Westdeutsche Industrie- und Strangpress-Maschinen-Gesellschaft m.b.H., Rothenberg, near Gelsenkirchen, Germany, a German company
Filed Aug. 28, 1958, Ser. No. 757,862
Claims priority, application Germany Aug. 30, 1957
5 Claims. (Cl. 259—6)

1. Apparatus for combining the elements of a briquetting material comprising a mixing vat, an input hopper having a discharge orifice opening into said vat, a displaceable shutter covering said orifice, weighing means coupled to said input hopper for weighing the content thereof, a conveyor for conveying selected of said elements toward said hopper, a collector operatively disposed with respect to said conveyor for receiving the selected elements therefrom and having a discharge aperture opening into said hopper, a flap closing said discharge aperture, first control means for opening said shutter and thereby said discharge orifice, second control means for opening said flap and thereby said discharge aperture, said weighing means including a first device settable to respond to a determinable weight in said hopper to actuate said second control means to close said flap and a second device responsive to zero weight in said hopper to actuate said



first control means to close said shutter, a control responsive to the position of said flap to control movement of said conveyor, a switch correlating the position of said flap to the position of said shutter so that when said shutter is open the flap is closed, supply means for supplying a binder controllably into said vat, feed means for feeding steam controllably into said vat, and discharge means operatively associated with said vat for the discharge of briquetting material therefrom, said discharge means being coupled to said first control means to control the opening of said shutter.

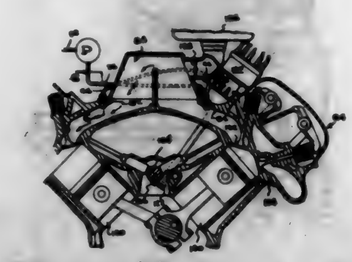
2,946,575
CARBURETOR AIR HEATING DEVICE
Milton C. Rohr, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,826
3 Claims. (Cl. 261—16)



1. A charge forming device for an internal combustion engine comprising an intake passage, a throttle valve disposed in said intake passage, primary venturi means in said intake passage anteriorly of the throttle valve, a booster venturi in said induction passage terminating at one end at the throat of the primary venturi, a source of fuel, passage means communicating said fuel source with said booster venturi, a source of heated air, conduit means communicating at one end with said heated air

source, the other end of said conduit means terminating at the induction passage anteriorly of the booster venturi, a tube member communicating with the said other end of said conduit means, said tube member extending within the induction passage and terminating proximate the inlet side of the booster venturi whereby air flow through said induction passage will draw heated air through said tube means causing the same to mix with the fuel issuing from said booster venturi.

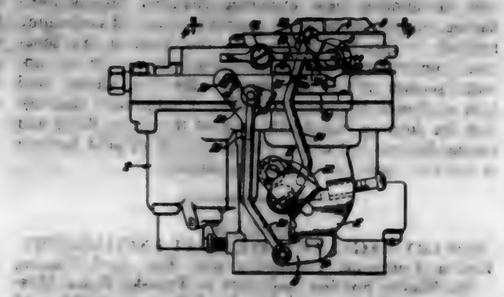
2,946,576
FUEL INJECTOR FOR INTERNAL COMBUSTION ENGINES
Claude B. Coulter, Belcraygeoz, Ontario, Canada (23 Queen St., Lindsay, Ontario, Canada)
Filed July 12, 1957, Ser. No. 671,548
13 Claims. (Cl. 261—23)



1. A fluid metering and control device comprising a substantially hollow casing having a pair of opposed closed ends, one of said ends having a plurality of radially spaced fluid discharge ports extending transversely therethrough, a disk having a plurality of radially spaced slots extending transversely therethrough with the spacing between said slots corresponding to the spacing between said ports, said disk being disposed within said casing with a side thereof slidably engaging the inner side of said one closed end with said slots normally aligned with said ports, means connected with said disk to effect rotation thereof relative to said one end of said casing, a second disk disposed within said casing and having a side thereof engaging against the other side of said first disk, said second disk having a slot formed therein, said second disk being rotatable relative to said first disk to effect alignment of said last named slot, successively, with said slots formed in said first disk, means for connecting said casing with a source of fluid under constant pressure, and means for effecting rotation of said second disk relative to said first disk, said first means being operable to adjust said first disk relative to the adjacent inner ends of said ports to cover or uncover, selectively, greater or lesser areas thereof.

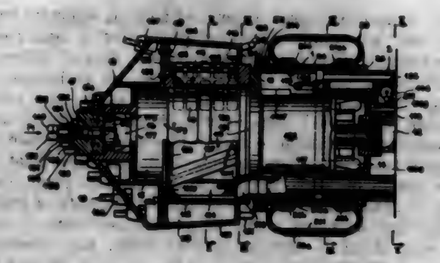
2,946,577
CHOKE LOCK-OUT
Frederick R. Dennison, Berkley, Mich., and Elmer Olson and George W. Westis, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 28, 1957, Ser. No. 668,715
15 Claims. (Cl. 261—39)

1. A carburetor comprising an air passage, an automatic choke mechanism controlling the flow of air through said passage; said mechanism comprising a choke valve rotatably mounted within said passage, temperature responsive means operatively connected to said valve to automatically rotatably position the latter within said passage; latch means for locking said valve in an open position within said passage, said latch means comprising a first latch member operatively connected to said valve for rotation with the latter between an open and closed position, a second latch member engageable with said first latch member to lock said valve in an open position,



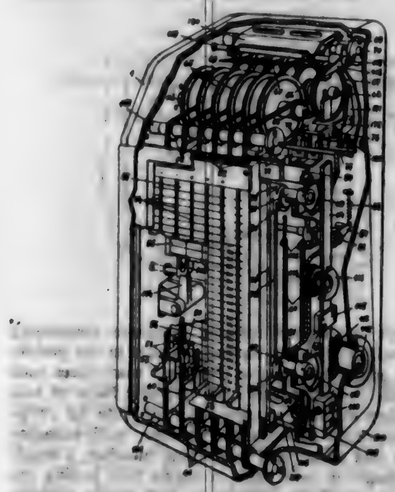
and temperature responsive means operatively connected to one of said members for releasing said latch in response to a change in ambient temperature.

2,946,578
EXCAVATOR APPARATUS HAVING STEPPER TYPE ADVANCING MEANS
Albert De Sumois, 17 Place George Brugmann, Ixelles, Belgium
Filed Feb. 25, 1957, Ser. No. 642,135
Claims priority, application Belgium Aug. 4, 1952
8 Claims. (Cl. 262—7)



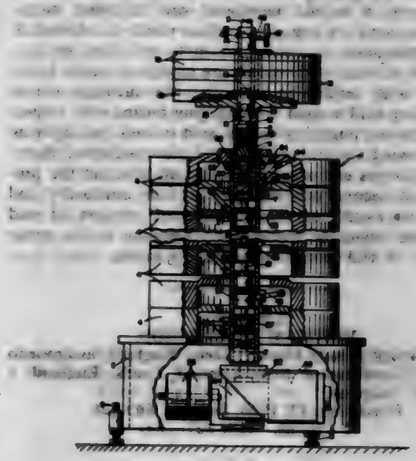
1. Excavator apparatus for making a borehole in rocks, soil, coal seams, minerals and solid masses and the like, comprising a telescoping device having an external element and an internal element, a peripheral fitting mounted upon said external element, means cooperating with said fitting for establishing an uninterrupted peripheral frictional and tight engagement of said fitting with the walls of the borehole and thereby substantially fixing in position said external element with respect to said walls, means for releasing said engagement, means for selectively controlling said means for engaging and releasing said fitting, a second peripheral fitting mounted upon said internal element, means cooperating with said second fitting for establishing an uninterrupted peripheral frictional and tight engagement of said second fitting with the walls of said borehole, and thereby substantially fixing in position said internal element with respect to said walls, means for releasing said engagement of said second fitting, a second controlling means for selectively controlling said means for engaging and releasing said second fitting, means for stretching said telescoping device, means for shortening said telescoping device, a third controlling means for selectively controlling said stretching means and said shortening means, a hollow head mounted at one end of said internal element, the interior of said head being in communication with the interior of said internal element, said head having at least one aperture emerging into the space around said head between the free end of said head and said peripheral fitting closest to said head, a rotative excavating device mounted on the free end of said head and having at least one plate constituting a rotor, cutting tools mounted on said rotor, a motor having a shaft located in said internal element to drive said rotor with respect to said internal element, a first tube connected to said interior with the interior of said internal element, the other end of said tube being connected to an external source of a fluid under pressure, a second tube connected to said internal element having an opening at one end in communication with the external space around said head and another opening at the other end at a selected remote position to take over the excavated materials and transport them to said remote position by means of said fluid under pressure delivered from said first tube, and means located at a remote position for controlling the operation of said means associated with the excavator apparatus.

2,946,579
APPARATUS FOR PICKING UP SAMPLES OF CIGARETTES, WEIGHING SAME AND RECORDING THEIR WEIGHT
Scipione Innocenti, Bologna, Italy, assignor to S.A.I.L.-S.p.A. Scipione Innocenti-Bologna, Bologna, Italy, an Italian joint-stock company
Filed Mar. 6, 1956, Ser. No. 569,848
Claims priority, application Italy Mar. 11, 1955
24 Claims. (Cl. 265—5)



1. An apparatus of the kind described, comprising a rotating drum mounted to rotate on a horizontal axis adjacent the rod line of a cigarette making machine having longitudinal cells in the form of open channels in its periphery with a series of openings in the periphery of the drum forming perforated bottom walls for said channels, said channels when in their top position being adapted to receive a cigarette from the rod line of said cigarette-making machine, suction means connected to said drum interior for effecting a suction through the perforations of said drum to hold cigarettes in certain of said channels, fixed valve means within said drum at the lower portion thereof for closing a part of the perforation corresponding to the lower and adjacent cells, up to a predetermined angular position before the channels in said drum reach the limit of their arcuate travel at the top of the drum, lever means presented to said drum for abstracting samples of cigarettes from said drum, and for ejecting same in a position out of the drum cells; a weigher scale having a pan for receiving batches of said cigarette samples from said rotating drum removed by said lever means, a pivotally balanced counterweighted beam on said scale from which said pan is suspended for weighing said cigarettes, a control pointer attached to said beam by means of a hinge at right angles to the pivotal means of said beam whereby said pointer is permitted to be rocked in a direction at right angles to the oscillation of said weigher scale beam; weight means for urging said control pointer in an inoperative position, spaced from all adjacent parts, so as to permit its free oscillation; actuating bar means for engaging and rocking said pointer in said last named direction when the said beam is stopped after a weighing operation, lever means operated by said pointer during its rocking movement for indicating and recording the approximate or sectional angular position in which the said control pointer has been oscillated, means for releasing said control pointer-rocking means and permitting the same to return to said inoperative position, and means engageable with said weigh pan periodically after each weighing cycle to hold said pan against movement.

2,946,580
AUTOMATIC WEIGHT LOADER
Raymond Hensley, Los Angeles, Calif., assignor to North American Aviation, Inc.
Filed Dec. 1, 1958, Ser. No. 777,395
8 Claims. (Cl. 265—48)



1. A weight-loading device adapted for use with the loading beam of a force measuring system comprising a vertical shaft carried by said beam; means for rotating said shaft, said shaft having axially spaced threaded portions; a nut on said shaft adjacent each of said threaded portions; means operatively associated with each of said nuts for contacting the next adjacent nut and individually and sequentially advancing each of said nuts beginning from one end of the shaft onto its adjacent threaded shaft portion for coaction therewith upon rotation of said shaft and consequent movement of said nuts along said shaft; a plurality of weights adapted to be contacted and suspended by a weight raising means; and a weight raising means adapted to contact said weights and to be contacted by said nuts, said weight raising means being operable by the sequential movement of each of said nuts upon movement thereof in one direction along the shaft for sequentially and individually raising the weights and thereby applying the same to said loading beam and for sequentially and individually lowering said weights out of suspension upon reverse rotation of said shaft and movement of said nuts in an opposite direction along the shaft.

2,946,581
FURNACE FOR REDUCING METALLIC ORES
Allen K. Crabill, Lynchburg, Va., assignor to E. J. Lavino and Company, Philadelphia, Pa., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 717,063
14 Claims. (Cl. 266—9)



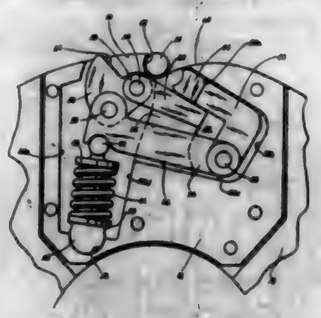
4. A furnace for reducing metallic ores which comprises a first ore engaging means having a first ore engaging surface, electrically operated heating means for heating said first ore engaging surface and maintaining said first ore engaging surface at a substantially constant temperature, a second elongated ore engaging means having a second ore engaging surface which is substantially complementary in configuration to said first surface, means for moving said second ore engaging means longitudinally with respect to said first ore engaging means and rotating said second ore engaging means with respect to said first ore engaging means, said second ore engaging surface having a plurality of curved grooves formed therein, said grooves extending from a point adjacent the center of said second ore engaging surface outwardly and curving rearwardly of the direction of rotation of said second ore engaging means and extending to the other periphery of said second ore engaging means.

2,946,582
VEHICLE SUSPENSION
Gavin Patrick Blandy Martin, Leeds, England, assignor to Jonas Woodhead & Sons Limited, Leeds, England, a British company
Filed Aug. 13, 1956, Ser. No. 603,626
7 Claims. (Cl. 267—64)



4. A telescopic suspension unit for interposition between sprung and unsprung parts of a vehicle comprising means defining a working chamber, means actuatable by relative movement between the sprung and unsprung path of the vehicle for pumping an incompressible fluid into said chamber, means for extending said unit in response to an increase of incompressible fluid in said chamber, said pumping means including a cylinder mounted on a first member of said unit, a piston slidably fitted within said cylinder, said piston being connected to a second member of said unit and reciprocatable thereby relative to said cylinder in response to alternate compression and extension of said unit, means for closing both ends of said cylinder, and one-way valves disposed respectively at each end of said cylinder and in said piston and arranged to permit fluid flow through said cylinder and said piston only in a predetermined direction.

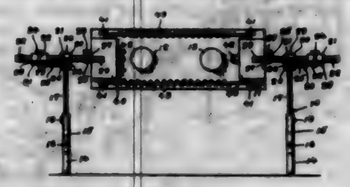
2,946,583
WORK AND TOOL HOLDERS FOR METAL WORKING MACHINES
Guy O. Conner, Cleveland, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Original application Mar. 12, 1951, Ser. No. 215,131, now Patent No. 2,828,692, dated Apr. 1, 1958. Divided and this application Mar. 25, 1958, Ser. No. 723,698
5 Claims. (Cl. 269—155)



1. A work holder for forming machines comprising a disk-shaped rotary plate having a socket in the periphery thereof adapted to receive elongated workpieces such that the ends thereof extend from opposite faces of said plate, a clamp member mounted in said plate for reciprocating movement at a tangent thereto, work-engaging surfaces on said socket and said clamp member, a toggle member pivoted in said plate, a toggle link having opposite ends pivoted respectively to said toggle member and said clamp member, and spring means for rotating said toggle member on its pivot whereby said toggle link reciprocates said clamp member into work clamping position in respect to said work-engaging surfaces of said toggle.

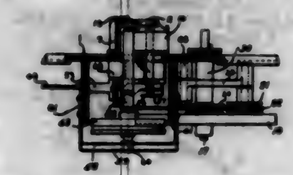
2,946,584
RADIO AND TELEVISION CHASSIS STAND
John Kenneth Edwards, New Baltimore, Mich.
(9 Sentinel Lane, Elkart, Miss.)
Filed Feb. 26, 1958, Ser. No. 717,637
4 Claims. (Cl. 269—156)

1. In a stand, a pair of support members adapted to be spaced apart when a chassis is supported therebetween, a vertically disposed standard extending upwardly from each support member and connected thereto, a vertically disposed post adjustably connected to each standard and extending upwardly therefrom, a horizontally disposed strap secured to the upper end of each post, a pair of body members each including a cylindrical collar, an arm extending from an end of each collar and including first and second offset portions, a crosspiece secured to the second portion of each arm and said crosspiece being arranged above a corresponding strap, a top member arranged above each crosspiece and said strap including an intermediate bearing portion, said top member being secured to said crosspiece and strap, a pair of spaced apart horizontally disposed rods rotatably supported in said bearing portions and collars, a screw member extending through each collar and engaging a corresponding rod, a



bar arranged at right angles with respect to each rod and connected thereto, a pair of spaced apart sleeves mounted on each bar, set screws extending through each sleeve and engaging said bars, an L-shaped bracket secured to each sleeve, a plate secured to each bracket with said plate positioned in opposed relation to each other, hook members extending from each plate, and spring members connected to certain of said hook members of said opposing plates.

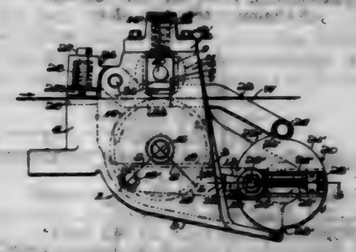
2,946,585
TAPE TRANSPORT MECHANISM
Edgar N. Rosenberg, 6914 Mission Gorge Road, San Diego, Calif.
Filed Dec. 14, 1956, Ser. No. 628,292
7 Claims. (Cl. 271—2.3)



1. A tape transporting mechanism comprising a tape deck, a tape, a capstan shaft having conical shaped bearing surfaces at each of its ends, means to rotate said capstan shaft, said tape passing around and being driven by said capstan shaft, a pair of conical bearings, one of said conical bearings rigidly supported by said deck structure and rotatably supporting and mating with one end of said capstan shaft, and the other of said conical bearings yieldably supported from said supporting deck structure and adapted to move along the center line of said capstan shaft with no side to side clearances and urged into a preloaded mating working contact with the conical bearing surface at the other end of said capstan shaft thereby effecting essentially zero clearances between said conical bearings and the conical ends of said capstan shaft.

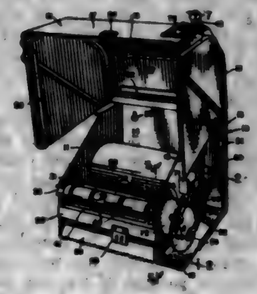
2,946,586
WEB FEEDING MECHANISM
Albert F. Pityo, Paterson, N.J.
(1384 Pompton Ave., Cedar Grove, N.J.)
Filed Sept. 17, 1953, Ser. No. 380,685
3 Claims. (Cl. 271—2.4)

1. Web feeding mechanism comprising a support, a feed roll journaled upon the support to oscillate with relation thereto, a rotary element mounted upon the support and having high and low cam faces which are oppositely arranged circumferentially of the rotary element and shoulders connecting the high and low cam faces on opposite sides of the axis of rotation of the rotary element and spaced substantially equidistantly from such axis of rotation, means to continuously rotate said element during the operation of the mechanism, a link, a pivot element mounted upon the rotary element and connected with the link and arranged substantially midway between said shoulders and spaced from the axis of rotation of the rotary element, a pivot element mounted upon the feed roll and pivotally connected with the link, the arrangement being such that the link produces a dwell of the feed roll when the pivot element



of the rotary element is substantially at dead center with respect to the link and the axis of rotation of the rotary element, a presser roll arranged near and opposite said feed roll, movable means for shifting the presser roll toward and from the feed roll including an arm having a part arranged to contact the high and low cam faces and to engage the shoulders when the first-named pivot element is substantially at dead center, and a web clamping device connected with the movable means and operated by the same, the arrangement being such that the movable means operates to shift the presser roll from or toward the feed roll during the dwell of the feed roll and when said part engages said shoulders.

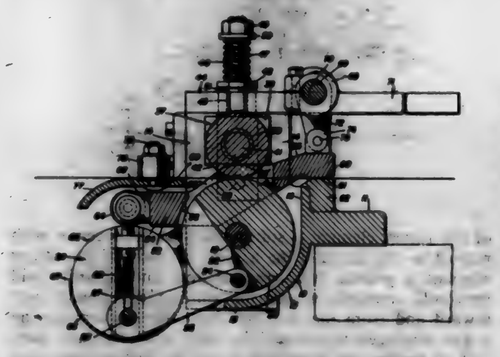
2,946,587
TOWEL DISPENSER
Judson B. Ryno, Fort Wayne, Ind., assignor to Reliable Engineering Co., Chicago, Ill., a corporation of Illinois
Filed June 24, 1957, Ser. No. 667,547
3 Claims. (Cl. 271—2.4)



2. In a towel dispenser including a cabinet adapted to contain toweling, means operating automatically to arrest the issuance of toweling from the cabinet when a predetermined length of toweling has been issued, said means comprising a roller against which the toweling is frictionally biased, a rotatable member connected to said roller, detent means mounted on said member, means for continually urging said member into a first position in the direction of rotation of said roller causing discharge

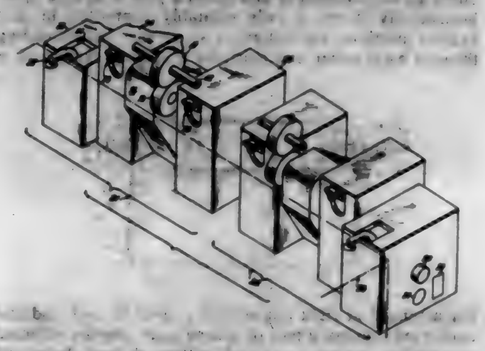
of toweling from the cabinet, movable latch means arranged to engage said detent means at a second position beyond said first position, and manual means controllable from the outside of said cabinet for actuating said latch means, whereby operation of said latch means releases said member whereupon it is urged to said first position thereby issuing toweling from the cabinet and whereby a predetermined amount of toweling may be issued before the detent means again engages the latch means.

2,946,585
WEB FEEDING MECHANISM
Albert F. Pityo, 1384 Pompton Ave., Cedar Grove, N.J.
Filed Jan. 3, 1958, Ser. No. 706,942
3 Claims. (Cl. 271—34)



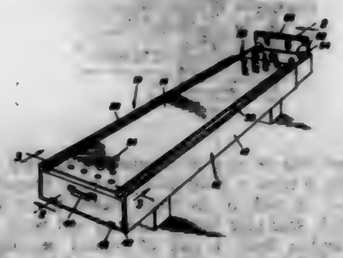
1. Web feeding mechanism comprising a support having a stationary web clamping part, a feed roll journaled upon the support on one side of the stationary web clamping part, a presser roll arranged opposite the feed roll to engage the web with the feed roll as the web passes between the feed and presser rolls and across the stationary web clamping part, reciprocatory means slidable upon the support and carrying the presser roll and shiftable therewith toward and away from the feed roll, resilient means connected with the reciprocatory means to urge the same toward the feed roll, a rockable member pivoted intermediate its ends to the reciprocatory means and extending on opposite sides of the feed and presser rolls and provided near one end with a movable web clamping part disposed opposite the stationary web clamping part, said rockable member provided near its other end with a cam follower, a rotary cam journaled upon the support near the feed roll and having circumferentially extending opposed radially offset high and low cam faces and inclined shoulders connecting the high and low cam faces near opposite sides of the cam, and driving connecting means between the rotary cam and feed roll to oscillate the feed roll during rotation of the cam, whereby initial engagement of one of said inclined shoulders with the cam follower turns the rockable member upon its pivot to first shift the movable clamp part into clamping engagement with the web and stationary clamp part, complete passage of the cam follower over said one shoulder and onto said high cam face causing the rockable member to pivot upon said movable clamp part for separating the presser roll from the feed roll, passage of the cam follower from the high cam face over the other shoulder and onto the low cam face causing the rockable member to pivot in the reverse direction upon said movable clamp part to return the presser roll into active engagement with the feed roll and to then turn the rockable member upon its pivot in the reverse direction for separating the movable clamp part from the stationary clamp part and web.

2,946,589
SHEET FEEDING MECHANISM
Murray Spiro, 163—28 17th Ave., Whitestone, N.Y., and George Nelmath, 67—11 161st St., Flushing, N.Y.
Filed Mar. 19, 1958, Ser. No. 722,424
14 Claims. (Cl. 271—26)



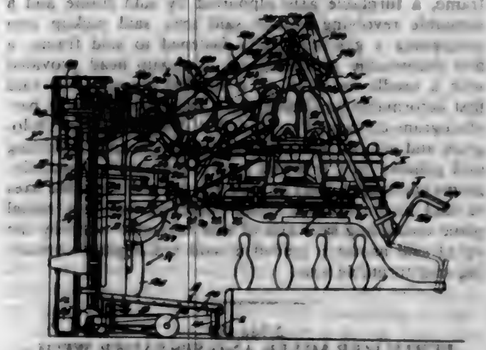
1. In a device for stream-feeding sheets from a stack, the combination comprising sheet-lifting means engaging the upper frontward portion of the top sheet of the stack, whereby the said top sheet may be displaced in a vertical path from the stack, and sheet forwarding means engaging the lower frontward portion of the top sheet when it is displaced by the said sheet lifting means, the said sheet forwarding means initially engaging the top sheet when it is entirely disposed within said vertical path.

2,946,590
BOWLING GAME DEVICE
Charles O. Brunet, 520 W. La Habra Ave., La Habra, Calif.
Filed June 11, 1958, Ser. No. 741,266
2 Claims. (Cl. 273—37)



1. A bowling game device comprising an elongated planar playing surface having pin spots at each end and trough members along each side edge thereof, a bottom member disposed in spaced parallel relation to the playing surface, said bottom being substantially equal in length to the playing surface and underlying said playing surface, a pair of side members interconnecting the side edges of the bottom member and playing surface thereby forming a hollow elongated housing, a drawer slidably received in each end of said housing, each drawer including a bottom provided with longitudinal grooves in the under surface thereof, said bottom member of the housing having longitudinal ribs thereon slidably received in the grooves for guiding the drawers, each drawer also including a pair of side walls, an inner end wall and an outer end wall rigid with the bottom and slidably received in the hollow housing, the external dimensions of the outer end wall being substantially equal to the interior dimensions of the housing for forming a closure for the end of the housing when aligned with the end edges of the housing, a handle on the outer surface of said outer end wall for moving the drawer in a horizontal plane longitudinally from a concealed position substantially completely underlying the playing surface to an extended position with the drawer forming a longitudinal extension of the housing, said drawer having a bottom substantially below the playing surface thereby forming a receptacle for receiving the pins and balls, stop means mounted on the underside of said playing surface in depending relation to limit the longitudinal sliding movement of the drawer, an extension plate pivotally mounted on the upper edge of the outer end wall of the drawer for swinging movement from a retracted position alongside the inner surface of said outer end wall to an extended position in vertical alignment with the outer end wall, said extension plate having vertical and horizontal dimensions generally equal to the inner surface of the outer end wall thereby extending substantially vertically above the playing surface when in extended position and forming a bumper for receiving impacts from the pins and balls.

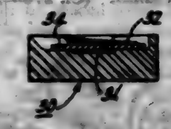
2,946,591
AUTOMATIC PINSETTER FOUL CONTROL MECHANISM
William F. Heck, Forest Hills, N.Y., and Alexander J. Albrecht, Teaneck, and David P. Sanford, Union, N.J., assignors, by mesne assignments, to The Brunswick Automatic Pinsetter Corporation, Paramus, N.J., a corporation of Delaware
Original application Nov. 25, 1955, Ser. No. 549,875. Divided and this application Apr. 12, 1957, Ser. No. 652,421
5 Claims. (Cl. 273—43)



1. An automatic pinsetting machine for at least a two-ball frame game having a mechanical control operable after the rolling of a first ball comprising, a new set lever for causing the machine to place a set of pins on an alley upon the occurrence of a "strike," a plural ball frame lever for causing the machine to set up for the rolling of a second ball in a frame if a "strike" does not occur, means responsive to a foul incurred in the rolling of a first ball to shift both of said levers whereby a new set of pins is placed on the alley with the machine set up awaiting the rolling of a second ball in a frame.

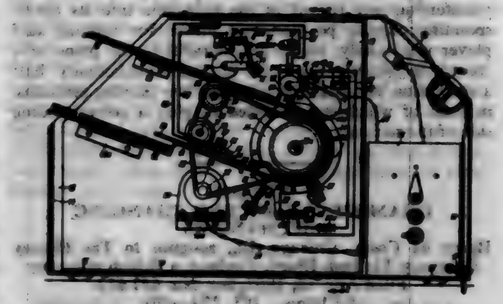
2,946,592
GAME PIECES
Arthur Post, 235 W. 102nd St., New York, N.Y.
Filed Dec. 24, 1956, Ser. No. 630,347
4 Claims. (Cl. 273—137)

2. For use with a checkers game board, a set of round checkers of the same general outline, said set including a group of playing pieces and at least one special playing piece different from the playing pieces of said group, said special piece comprising a round checker, having one relatively flat surface and on the side opposite said flat surface a permanently uncovered and accessible indent of sufficient size and design to enable the insertion and removal of coins or tokens of various sizes, a flexible pressure exerting means attached only to a relatively small arcuate area of said special checker at a location



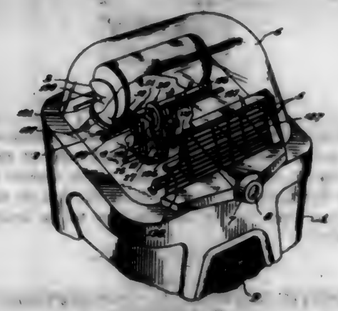
below that edge of the checker which is adapted to rest on the game board for holding said coin or said token in said indent, said special checker when viewed from the said one flat surface being indistinguishable in shape and appearance from the other checkers to be used in said game board.

2,946,593
MAGNETIC RECORDING AND REPRODUCING EQUIPMENT
Eugen Beyer, Ekenscheider, 107, Hoffnungsthal (Neuhaus), Germany
Filed July 21, 1953, Ser. No. 369,304
Claims priority, application Germany July 21, 1952
10 Claims. (Cl. 274—4)



1. In an apparatus of the type described, in combination, rotary transporting means for transporting a flexible resilient record sheet tending to assume a straight position; drive means for rotating said transporting means in one direction of rotation; guide means including an arcuate guide face surrounding at least an axial section of said transporting means, said arcuate guide face being spaced in radial direction from said rotary transporting means a predetermined distance so that the leading and trailing edges of a transported record sheet engage said guide face during rotation of said transporting means while being slightly spaced apart whereby said record sheet is bent into a curved position, said guide means having an inlet for record sheets, and an outlet for record sheets; and closure means located at said outlet and having a guide portion, said closure means and said guide portion having a closed position in which said guide portion is spaced in radial direction said predetermined distance from said transporting means and is flush with said guide face and continues the same in said outlet closing the same so that in said closed position of said closure means a record sheet fed through said inlet is repeatedly moved by said transporting means along said annular guide face and said guide portion, said closure means and said guide portion being movable to a discharge position in which said guide portion is located substantially in a tangential plane with respect to said guide face whereby a transported record sheet guided along said guide portion is discharged through said outlet; and operating means for operating said closure means.

2,946,594
PHONOGRAPHS
Marcel Jules Helene Sinez, Ixelles, Belgium, assignor, by mesne assignments, to Seeburg Corporation, a corporation of Pennsylvania
Filed Feb. 9, 1954, Ser. No. 409,286
Claims priority, application Belgium Feb. 12, 1953
24 Claims. (Cl. 274—10)



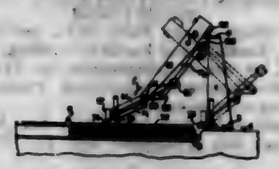
1. In an automatic phonograph, in combination, a magazine for records, a player unit including a turntable and a player arm, said magazine and player unit being relatively movable to bring any record in the magazine into cooperative relation with the player unit, means for transferring any record in the magazine into its corresponding playing position and means for rotating said player unit bodily, on an axis parallel to the plane of a record in playing position, through substantially half a revolution to bring said unit into two playing positions, in each of which it is adapted to play a corresponding side of the record.

2,946,595
GRAMOPHONE RECORD CHANGING MECHANISMS
Harry da Costa, Chicago, Ill., assignor to The Plessey Company Limited, Ilford, England, a British company
Filed Apr. 12, 1957, Ser. No. 652,632
6 Claims. (Cl. 274—10)



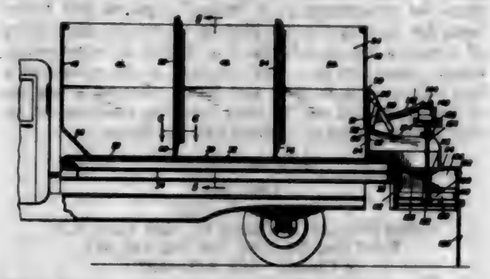
1. A centre spindle assembly for a record-changing phonograph, comprising a rod-like straight spindle which is notched to provide a shoulder facing towards one end of the spindle and which is provided with a parallel-walled longitudinal groove extending from the other end of the spindle at least to a point substantially diametrically opposite to the shoulder, a record-release member movably mounted in said groove adjacent to the shoulder for co-operation with a record resting on said shoulder, an actuating rod mounted in said groove for movement longitudinally of the spindle to operate said record-release member, and a cross-pin-and-slot guide interconnecting said actuating rod and spindle in a zone between the shoulder and said other end of the spindle to prevent movement of the rod towards and away from the bottom of the groove while permitting movement longitudinally of the spindle, the actuating rod consisting of a flat strip of metal folded to a U-like profile facing the bottom of the groove, the back of the profile being substantially flush with the cross-sectional profile of the spindle, and the depth of the groove being, in a zone adjacent to said other end of the spindle, substantially equal to the height of the U-profile and less than half the diameter of the spindle.

2,946,596
PICK-UP ARM FOR SPEAKING MACHINE
Hugo Bajulaz, Renens, Switzerland, assignor to Thorens S.A., Sainte-Croix, Switzerland, a corporation of Switzerland
Claims priority, application Switzerland Sept. 23, 1957
Filed Sept. 16, 1958, Ser. No. 761,337
12 Claims. (Cl. 274—23)



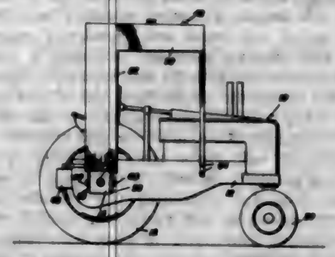
1. A pickup arm for a talking machine having a frame, a turntable axis supported by said frame and a turntable revolving around said axis, said pickup arm comprising a gallows rigidly fastened to said frame, a first deformable parallelogram, a pickup head provided with a needle mounted on a support connected to said first deformable parallelogram, a second deformable parallelogram connected to said first deformable parallelogram and also to said gallows, hinging means connecting said gallows, said first and second deformable parallelograms and said support in their relative positions, the axes of said hinging means being perpendicular to a radial plane containing said axis of said turntable whereby the tip of said needle is guided in said radial plane containing said turntable axis.

2,946,597
FERTILIZER MIXER AND SPREADER WITH PARTITIONED CONTAINER
Marie W. Stevenson, Quimby, Iowa
Filed Sept. 18, 1957, Ser. No. 684,807
8 Claims. (Cl. 275—5)



1. A combined fertilizer mixer and spreader comprising a tank which has at least one vertically extending partition extending transversely of said tank and that separates said tank into a plurality of longitudinally spaced compartments, said partition having an upwardly extending opening at its bottom, an endless conveyor constituting the bottom of the compartments and located beneath said opening, a gate slidably mounted and guided upon said partition to control the effective area of said opening, means for adjusting said gate and retaining said gate in the selected adjusted position, said tank having an opening at its discharge end through which said conveyor extends, means carried by the tank for controlling said opening in said discharge end of said tank, a hopper at said discharge end of said tank and in registry with the discharge end of said conveyor, a hood that has side walls constituting an opened bottom casing, an impeller which includes a paddle wheel mounted in said casing and disposed in registry with the hopper so that the material that is extracted from said compartment by said conveyor is delivered from the discharge end of said conveyor into said hopper and onto said paddle wheel for distribution through the open bottom of said casing, means connected to said conveyor for driving the same at a speed proportionate to the speed of said tank over the ground.

2,946,598
TRACTOR WITH FENDER AND CAB DEFINING TANKS
Charlie E. Foster, Dilley, Tex.
(Rte. 2, Box 1238, Mission, Tex.)
Filed Oct. 1, 1958, Ser. No. 764,636
5 Claims. (Cl. 280—5)



1. An accessory for a tractor, said accessory being in the form of a pair of body parts for a tractor, said parts of hollow construction and being liquid tanks, a filler opening in an upper part of said body parts for filling the latter, said body parts including a pair of side tanks each being mounted on a tractor inwardly of and adjacent a rear driving wheel thereof, each tank comprising at least a partial shield or fender to protect a driver from the rear wheels, a delivery line connected to and in communication with the lower portions of each of said tanks, and a supply line having one end in communication with said delivery line and the other end adapted to be operatively connected to a fluid pump on a tractor, a roof tank secured between the upper limits of said side tanks, said filler opening being formed in the upper wall of said roof tank whereby both side tanks may be conveniently filled through one opening.

2,946,599
SHOE ATTACHMENT FOR WINTER SPORTS
Theodore Hunsbedt, Briarcliff Manor, N.Y., assignor to Bilwin Co., Inc., Briarcliff Manor, N.Y., a corporation of New York
Filed Nov. 24, 1958, Ser. No. 775,804
2 Claims. (Cl. 280—11.13)

1. In an article for use as an ice skate, snow shoe and ski, an elongated sheet member, an elongated plate member secured atop the sheet member, to be positioned lengthwise against the underside of a shoe; said sheet member being wider than such shoe and having at least one longitudinal rib extending downwardly therefrom intermediate its longitudinal edges and the forward part of said sheet member being bent upwardly; said plate member being wider than the shoe and spaced from the edges of the sheet member, a pair of spaced loops formed from the material of said plate member and extending upwardly therefrom at such positions respectively that they receive the rearward portion of the shoe between them, a second pair of spaced loops similarly formed at such positions on the plate member respectively that they receive the forward portion of the shoe between them; the openings of the loops of each said pair, being opposite each other respectively, a saddle having straps extending, one from each side thereof; said saddle being adapted to straddle the back portion of the shoe and



serve as a heel stop; each of said straps being laced through one of the loops which are at the rearward portion of the shoe, means on said straps to releasably secure them together to tightly hold the shoe on the plate member and a belt laced through the loops which are at the forward part of the plate member, having means to releasably secure spaced portions of said belt together to tightly hold the forward part of the shoe on the plate member; said plate having cut-out portions, one at each loop; each cut-out portion being laterally of a loop and extending in the direction of the oppositely associated loop; each of said cut-outs commencing from an edge of the plate member and ending beyond the loop it is at; each cut-out being under a loop and wider than the strap through such loop.

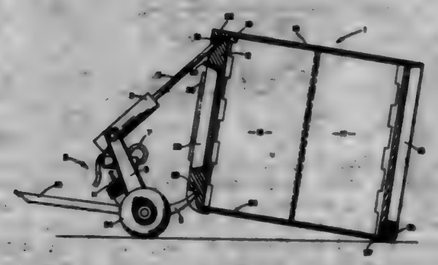
2,946,600
SAFETY SKI POLE HAVING RELEASABLE HAND GRIP
Mitchell H. Cubberley, 121 Bell St., Belleville, N.J.
Filed May 15, 1958, Ser. No. 735,483
6 Claims. (Cl. 280—11.37)



4. A ski pole comprising a tubular shaft, a hand grip member having an axial bore to receive the shaft, a wrist loop member secured to the hand grip member for external extension therefrom, a cross-pin extending across the hand grip member and its bore, means to releasably couple the hand grip member to the staff comprising a suspension bar depending from said cross-pin within the

bore of the hand grip member and adapted to enter the tubular shaft when the hand grip member is mounted on the latter, and said suspension bar and staff having cooperative means to releasably couple the same together, said means being automatically yieldable to pulling strain applied to the hand grip member relative to the staff, whereby to separate the former from the latter.

2,946,601
MOVING VAN
George G. Brenning, 337 16th St., San Pedro, Calif., and Richard A. Espinosa, 2214 Delaware, Santa Monica, Calif.
Filed Apr. 25, 1958, Ser. No. 730,162
4 Claims. (Cl. 280—46)



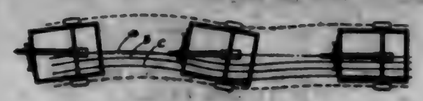
1. In combination, a plurality of collapsed containers, means for securely binding said collapsed containers together, at least one of said containers having rolling means, said rolling means being effective only upon tilting of said container, carting means cooperatively associated with said collapsed containers, said carting means comprising a lift, a lifting lever, wheel and axle means providing a fulcrum for said lifting lever, said lift operable between one end of said lifting lever and one of said collapsible containers, the other end of said lifting lever engaging said latter one of said collapsible containers in lifting position, whereby said collapsible containers are tilted onto said rolling means.

2,946,602
WHEEL CHAIRS WITH HAND PROPULSION MEANS
Robert E. Lee, Alexandria, Va., assignor to Anthony G. Allison, Chicago, Ill.
Original application Sept. 10, 1953, Ser. No. 379,361, now Patent No. 2,847,058, dated Aug. 12, 1958. Divided and this application Apr. 23, 1958, Ser. No. 736,430
6 Claims. (Cl. 280—250)



1. A wheel chair comprising a pair of spaced parallel side frames, a seat disposed between said side frames, each of said side frames including a pair of fork portions, one opening to the front and top thereof and the other opening to the bottom thereof, a ground engaging traction wheel rotatably mounted on each of said side frames in said other of said fork portions, a hand wheel rotatably mounted on each of said side frames in said one of said fork portions, the wheels on each of said side frames lying in a substantially vertical plane common to the wheels and the respective side frame, and operating means extending between and operatively associated with each of the wheels on each of said side frames within the confines of the respective fork portions.

2,946,603
STEERING DEVICE FOR SURFACE MARKING APPARATUS
John P. Weld, Jr., Moorestown, and Rufus W. Wilson, Huntingdon, Pa., assignors to Weld Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Filed Mar. 6, 1958, Ser. No. 715,679
11 Claims. (Cl. 280—463)



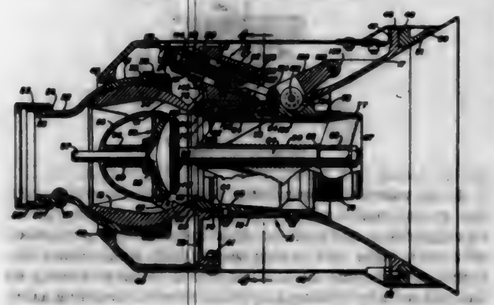
1. In apparatus for marking a surface, a longitudinally extending tongue adapted to be secured to the rear end of a towing vehicle, a frame mounted for pivotal movement on said tongue, a steering assembly mounted on the forward end of said frame and operatively engaging said tongue, said steering assembly including a cylinder, a piston located in said cylinder and fixed with respect thereto and said frame, the longitudinal axis of said piston and cylinder being normally perpendicular to the axis of said tongue, a pivot block mounted on said cylinder and slidable therewith, said pivot block receiving said tongue therein and pivotally mounted with respect to said cylinder, and means for translating said cylinder and pivot block with respect to said piston, the movement of said cylinder causing said frame to pivot with respect to the relatively fixed tongue, to vary the position of said frame with respect to said surface.

2,946,604
FOLDER COVER
James C. Hanger, 8008 Michigan, Oakland, Calif., and George R. Reed, 1115 Lovell Court, Concord, Calif.
Filed July 15, 1957, Ser. No. 671,966
3 Claims. (Cl. 281—34)



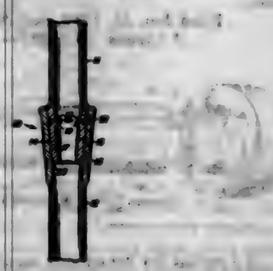
1. A folder cover of the character described comprising front and rear flaps connected together at their inner edges and with an outer edge of the front flap foreshortened relative to the corresponding outer edge of the rear flap so as to thereby leave a portion of the inner side of the rear flap exposed along its said outer edge when said flaps are brought into contiguous folding relation, a transparent sheet portion covering said exposed area of the rear flap and attached to said flap along the outer edge and adjacent end edges thereof to define a folder portion receiving pocket with the outer open side facing an edge of said front flap, said pocket extending from said rear flap outer edge a distance greater than said exposed rear flap portion, and means on the inner side of and attached to said front flap along the outer and end edges thereof defining a pocket opposed to said first mentioned pocket.

2,946,605
IN-FLIGHT AIRCRAFT REFUELING APPARATUS
James K. Mosher, Pasadena, Calif., assignor to Schultz Tool and Manufacturing Co., San Gabriel, Calif., a corporation of California
Filed Mar. 12, 1956, Ser. No. 571,346
11 Claims. (Cl. 284—18)



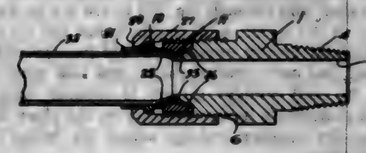
1. In an inflight refueling system for transfer of fluid between aircraft in flight of the type having a drogue and a probe adapted to be coupled to the drogue, the drogue and probe having valve means formed therein adapted to open upon the parts being brought into coupling relationship to provide for sealed flow of fluid through the coupling formed; the improvement comprising cooperating yieldable latching means carried by the probe and drogue adapted to latch them together when brought into coupling relationship, said latching means comprising a fluid operated piston and means providing communication of operating fluid to the piston when the parts are brought into coupling relationship, said communicating means providing for communication with the interior of the coupling whereby the force required to uncouple depends upon the pressure of the fluid transmitted to the latching means.

2,946,606
SEALING CONSTRUCTION
Arthur F. Smith, 1516 Lake Road, Webster, N.Y.
Filed Apr. 19, 1957, Ser. No. 653,816
1 Claim. (Cl. 285—332.3)



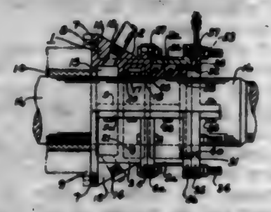
A convertible high vacuum-low vacuum sealing construction for a ground glass joint between two cylindrical, coaxial glass conduits, that have respectively relatively movable male and female members that are formed with complementary-shaped, mating, ground generally conical surfaces that are engageable substantially throughout their entire lengths to form a substantially fluid-tight seal between the engaged mating portions thereof, said ground mating portions engaging frictionally to resist displacement relative to each other in all directions, said male member having intermediate the lengthwise ends of its said ground, conical surface an endless groove that has a generally circular section in a plane at a right angle to the axis of said surface and that is coaxial with said conduits, and an endless fluid seal element formed of resilient rubber-like material and generally round in cross-section disposed in said groove to engage the surface of said groove and to project from said groove so that when said mating surfaces are engaged, said element is subject to compressive stresses which make it conform with and resiliently engage said ground, conical surface of the female member and the surface of said groove, thereby to form a more perfect fluid-tight seal between the engaged mating portions of said surfaces, and frictionally to resist displacement of said two parts relative to each other in all directions, said construction being useable in the absence of said seal element as a ground glass joint.

2,946,607
SELF-FLARING TUBE COUPLING
Matthew F. Ramer, 16911 St. Clair Ave., Cleveland, Ohio
Filed Dec. 6, 1956, Ser. No. 626,619
3 Claims. (Cl. 285—334.5)



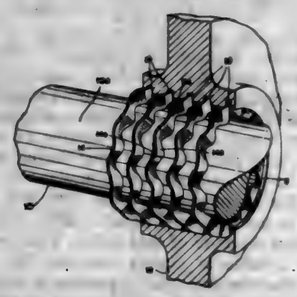
1. A tube coupling comprising an elongated body having a bore extending axially therethrough, said body further having a tube flaring end portion provided by an annular peripheral portion tapering longitudinally outwardly and radially inwardly from one end of said body, said body having a lateral outwardly extending peripheral wall contiguous with said tube flaring end portion and a threaded peripheral portion extending longitudinally of said body from the outer end of said wall, an annular collar having an end detachably positioned against said body lateral wall and an inner annular frusto-conical wall decreasing in diameter from said collar end and being radially outward of said body tube end flaring portion and diverging therefrom forming an annular chamber of a wedge shaped cross-sectional configuration therebetween the mouth of which is capable of receiving an end of the tube receiving said tube flaring end portion, said collar having a second inner annular wall contiguous with and flaring outwardly from said first mentioned inner wall to the other end of said collar with said inner walls defining the bore of said collar, a sleeve having an axial bore capable of closely receiving the tube to be connected therethrough and a peripheral outwardly extending shoulder, said sleeve having a compressible inwardly slanting peripheral end portion, a tubular member having a threaded bore capable of being in threaded engagement with said body threaded portion for drawing said member to said body and said member having a shoulder for engaging said sleeve shoulder and pushing said sleeve compressible end portion upon the drawing of said member, into and against said collar second inner wall being compressed thereby into said tube forming an annular seal therewith and inserting said body tube flaring end portion into said tube flaring the same within said annular chamber compressing the end of said tube forming annular seals between said tube and said tube flaring end portion and also said collar.

2,946,608
CONTINUOUSLY WASHED SHAFT SEAL
Walter J. Gilbert, Sr., Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Filed Oct. 27, 1955, Ser. No. 543,231
8 Claims. (Cl. 286—8)



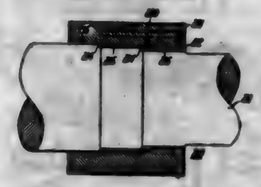
1. A ship's propeller shaft seal comprising a propeller shaft, a housing surrounding said propeller shaft and sealed with the hull of the ship, radial walls defining the ends of an annular chamber in said housing, a seal including a body mounted in annular sealed relation on said shaft, a yieldable annular flange on said body having a radial sealing face continuously engaging the face of one of said radial walls defining the ends of said annular chamber, a passage in said one wall opening through said radial sealing face intermediate the extent of the radial contact of said flange to supply clean liquid under pressure to flow in both directions along said shaft and wash down said shaft and through the hull to the sea to prevent the ingress of sea water, said sealing flange has an intermediate annular groove opposite to said passage and defining inner and outer sealing lands, and said inner land produced by said annular groove is broader than the outer land requiring a higher pressure on the clean liquid to increase the washing leakage across the broad inner land to the bilge.

2,946,609
LABYRINTH SEAL
Peter Dennis Comery, Cookeville, Ontario, Canada, assignor to Orenda Engines Limited, Malton, Ontario, Canada, a corporation of Canada
Filed Apr. 8, 1958, Ser. No. 727,088
1 Claim. (Cl. 286—10)



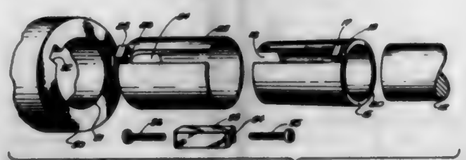
A labyrinth seal comprising two relatively rotating parts having spaced parallel surfaces of revolution, a series of annular grooves in one surface, each groove being axially spaced from the adjacent grooves, an annular seal element secured in each groove in the one surface and extending towards the other surface, each seal element comprising a strip of sheet metal of annular form with its ends in overlapping, unconnected relationship, of a thickness less than the width of each groove, each seal element having crimps extending from one edge of the strip to the other to provide laterally displaced crests and troughs in the strip of greater depth adjacent the radially inner edge of the seal element than adjacent its radially outer edge, the width of each groove being such that the crests of the crimps contact the edges of the grooves when the seal elements are seated in the grooves thereby providing, in association with the side wall of each groove, areas of capillary attraction for molten brazing material to secure the seal elements in the grooves.

2,946,610
ASSEMBLY HAVING FLUID PRESSURE MEANS FOR THE REMOVAL OF TIGHTLY FITTED PARTS
Raymond C. Jonsson, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Aug. 30, 1957, Ser. No. 681,327
4 Claims. (Cl. 287—52)



4. An assembly comprising: a cylindrical member having an external surface provided with a plurality of integral portions and annular steps consecutively juxtaposed with each other and having sequentially diminishing dimetric dimensions; an annular sleeve member having an internal surface defining a cylindrical bore extending axially therethrough and having a plurality of integral portions and annular steps complementary in position and diametric dimension to said portions of said cylindrical member, said cylindrical member being tightly secured in said sleeve member with said portions thereof partially engaged with said complementary portions of said bore, said portions and steps of said cylindrical member and said complementary portions and steps of said bore adjacent said steps of said cylindrical member defining therebetween a plurality of identical annular totally enclosed axially expansible chambers; and fluid passage means axially disposed in one of said members and connected with said chambers for introducing fluid pressure into said chambers to axially expand said chambers to move said members axially relative to each other while simultaneously maintaining the totally enclosed annular characteristic of said chambers until said members become disengaged from each other.

2,946,611
MEANS FOR DETACHABLY SECURING HUBS TO SHAFTS
Robert F. Moyer, Warwick, R.I., assignor to Harsco Corporation, Harrisburg, Pa., a corporation of Delaware
Filed Jan. 31, 1958, Ser. No. 712,395
3 Claims. (Cl. 287—52.06)



1. In a means for detachably securing a hub to a shaft, the combination therewith of a hub having a bore, a keyway provided in said hub at the periphery of said bore, a shaft, a first tapered collar provided with a longitudinal slot, a second tapered collar provided with a second longitudinal slot, said first tapered collar selectively positioned on said shaft, said second tapered collar

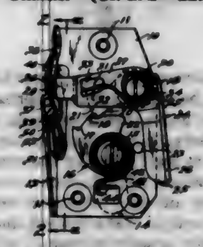
positioned over said first tapered collar in wedging relationship, a key provided with means to pull said first tapered collar into wedging relationship with said second tapered collar to force said first mentioned tapered collar into predetermined gripping relationship with said shaft, said key engaging said first and second tapered collars and said keyway to unite said shaft with said hub.

2,946,612
SELF-ALINING CATCH
Axel W. Ahlgren, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Feb. 24, 1958, Ser. No. 717,138
2 Claims. (Cl. 292—17)



2. A catch adapted to be mounted in a panel having a hole of predetermined width, said catch being made of a resilient material and comprising a body having two walls laterally spaced apart a distance less than the width of said hole and adapted to be received in the hole, latching means supported by said body, a flange projecting laterally outwardly from one end of each wall and overlapping said panel, a first finger disposed behind said flange and projecting laterally outwardly from one of said walls, said finger being substantially narrower than and disposed to one side of the center of said one wall, and a second and similar finger projecting outwardly from the other wall and disposed on the opposite side of the center of said other wall whereby the two fingers are offset from each other, said fingers being spaced behind said flange a distance correlated to the thickness of said panel whereby the fingers and the flange frictionally grip the panel and hold the catch in a selected position in said hole.

2,946,613
DOOR LOCK
John H. Roethel, Coral Gables, Fla.
(20200 Mansfield, Detroit 35, Mich.)
Filed May 31, 1956, Ser. No. 588,481
7 Claims. (Cl. 292—329)



1. In a latch mechanism for a swinging door, a support having a main plate portion for disposition at the free edge wall of the door and having a flange extending from the inner edge of said main plate portion, latch device means pivotally mounted on said main plate portion, detent means pivotally mounted on said main plate portion for engagement with said latch device means, a swingable detent means release lever pivotally mounted on said plate portion and adapted to be operated from the outside of the door, said release lever having an extension extending toward said flange, a blocking lever pivotally mounted on said flange, said blocking lever having a hook portion adapted to engage said extension thereby to block swinging movement of said release lever, yieldable means normally urging said blocking lever into non-blocking position, and inner manually operable means operative in one direction to engage said extension to swing said release lever to disengage the detent means from said latch device and operative in the opposite direction to swing said blocking lever into blocking position, said inner manually operable means being effective to hold said blocking lever in blocking position against the resistance of said yieldable means.

2,946,614
LOW FRICTION STRIKE PLATE
Fred J. Russell, 2800 Don Felipe Drive, Los Angeles, Calif.
Filed Dec. 9, 1958, Ser. No. 779,133
4 Claims. (Cl. 292—341.11)



1. A composite strike plate comprising a metal element including a fastening section having a bolt aperture therethrough, a lip on one edge of the fastening section having a sloping portion extending in a direction oblique relative to the plane of the fastening section and having an inner edge and an outer edge, the sloping portion of said lip having an opening therein located between said inner and outer edge, and a secondary element of synthetic plastic material having a low coefficient of friction, said secondary element being secured to the metal element at a location over said opening.

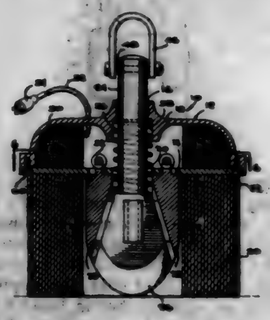
2,946,615
DEVICE FOR REMOVING AND REPLACING FLUORESCENT LAMPS
Charles F. Yawman, Jr., 921 E. G St., Ontario, Calif., and Robert L. Stangenberg, 1650 Vejar St., Pomona, Calif.
Filed Dec. 26, 1957, Ser. No. 705,308
5 Claims. (Cl. 294—28)



5. A device for applying and removing fluorescent lamps mounted in a fixture of the spring loaded type com-

prising a handle, fixed and movable jaws mounted crosswise on one end of said handle, a generally T-shaped member pivotally mounted centrally of said fixed jaw with a cross arm substantially perpendicular thereto, push rods connected to each end of said cross arm and extending lengthwise of said fixed jaw, guide means mounted on said fixed jaw and adapted to receive said push rods, and means accessible from a remote position along said handle for moving said movable jaw toward said fixed jaw and subsequently for operating said T-shaped member to extend said push rods and move said lamp axially to insert or remove the lamp from said fixture.

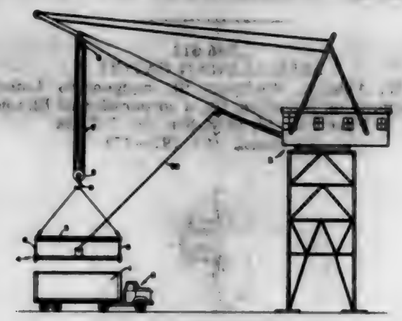
2,946,616
LIFTING DEVICE
Cecil J. Carter, E. Cleveland Terrace, Hobart, Ind.
Filed Sept. 26, 1958, Ser. No. 763,641
3 Claims. (Cl. 294—65.5)



1. A lifting device for hoisting an upstanding coil of magnetically attractive metal strip, comprising a horizontally disposed support having a flat underface, magnet means extending about and fixedly carried by said support and adapted to hold the underface of said support against the top end of said coil when mounted on said coil, a vertically disposed plunger extending through said support and having a portion adjacent the lower end below said support and having a portion adjacent the upper end above said support, means mounting said plunger in said support for vertical upward and downward movement, a spreading member on the lower end of said plunger, a plurality of fingers arranged about the lower end portion of said plunger and normally nesting against said spreading member, the upper ends of said fingers being connected to said support for movement of the fingers from the nested position to positions away from each other and from said plunger lower end portion, and means on the upper end of said plunger for application thereto of an upwardly directed lifting force, said plunger upon application of an upwardly directed lifting force to said plunger upper end means executing its upward movement and shifting said spreading member into wedging engagement between said fingers and cause said fingers to execute their movement away from each other.

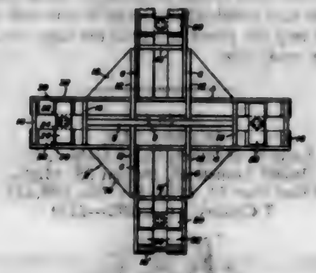
2,946,617
SPREADER BAR
Keith W. Tantlinger, Mobile, Ala., assignor to Pan-Atlantic Steamship Corporation, Mobile, Ala., a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,817
5 Claims. (Cl. 294—67)

1. A spreader bar comprising a rigid framework, a load-engaging element rotatably mounted at each of four points on said framework comprising the corners of a shape that is rectangular in plan, a driving gear coupled to each of said elements, power means for operating said elements comprising a motor mounted on the framework, a shaft driven by the motor extending along the framework and having gears at its end portions, chains trained over said gears and over each of said load-engaging element driving gears, and a yieldable take-up device interposed in each of said chains including a resilient element



operative normally to keep the chains tensioned about said gears and stretchable under load, whereby said load-engaging elements may be rotated beyond load-engaging terminal positions with stretching of the take-up devices and may thereafter, upon lifting of the spreader bar and a supported load, rotate reversely with contraction of the take-up devices without rotation of the shaft.

2,946,618
GRAPPLE
William R. Kluba, Crown Point, and Raymond W. Nemert, East Gary, Ind., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Aug. 7, 1958, Ser. No. 753,767
2 Claims. (Cl. 294—67)



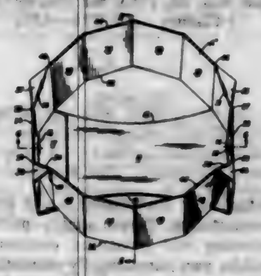
1. A grapple comprising a cruciform frame having four arms adapted to be supported in a horizontal plane, each of said arms having a center opening extending longitudinally therealong, a load hanger bar carried by and depending from at least three of the arms of said frame through the openings thereof, means mounting each of said hanger bars on its respective arm for swinging movement in a vertical plane toward and away from the vertical axis of the cruciform frame, said means including an elongated bearing on each of said hanger bars extending radially in opposite directions from the hanger bar adjacent the top thereof, the bottom of each of said bearings being rounded and having an arc extending transversely of the longitudinal axis of the bearing, each of said hanger bars being adjustably positionable lengthwise of said arms, and means operatively supporting each of said hanger bars in each of its positions, said last named means comprising a pair of bearing saddles on each arm for supporting said bearing in each of said positions, the saddles in said pair being disposed adjacent opposite sides of said opening.

2,946,619
DOUBLE SOCKET AND SLING STRUCTURE
Harold F. Wahl, Portland, Oreg., assignor to Electric Steel Foundry Company, Portland, Oreg., a corporation of Oregon
Filed Sept. 29, 1955, Ser. No. 536,413
2 Claims. (Cl. 294—74)



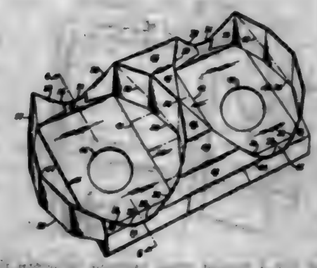
1. A sling device, comprising a cable and a socket block receiving the end portions of the cable, said socket block having an integral eye-strap at the upper side thereof and having thereabelow and on either side thereof wedge pockets tapering downwardly and inwardly, said wedge pockets being spaced apart with their broad faces in side-by-side relation, wedge plates in said pockets, the end portions of said cable being looped about said wedge plates within said pockets and the depending portions of said cable forming the sling each leaving a different wedge plate and in a different plane.

2,946,620
SINGLE CAN CARRIER
Marshall I. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed July 19, 1957, Ser. No. 672,905
7 Claims. (Cl. 294—87.2)



1. A carrier for a single chime-end can or similarly shaped receptacle, the carrier consisting of a single blank of paper board and comprising, a pair of opposite side walls; a top panel between, and articulated to, said side walls along parallel top fold lines spaced a distance substantially equal to the diameter of the chime-end of the can; a main panel between, and articulated to, said side walls along two parallel main fold lines spaced a distance substantially equal to the diameter of the chime-end of the can, each side wall having an intermediate folding score in it parallel to, and between, said top and main fold lines, said main panel having a central cut through it extending at right angles to, across, and beyond said main fold lines into the body of the side walls at least as far as said intermediate folding scores, said central cut dividing said main panel into two straps of substantially equal width, said side walls having side cuts in them extending from, and substantially transverse to, the end of said central cut, the ends of the side cuts lying on said intermediate folding score and marking apex points, the said side walls further including diagonal scores extending in a direction of 45 degrees with respect to said intermediate score towards said main fold line in a direction away from said central cut, said diagonal scores and said intermediate score including a hinge panel between them, the straps being foldable about said diagonal fold lines into a position upright with respect to said top panel in which position the straps form a circumferential enclosure for the can body, the straps having two bordering cut edges, one edge being a can-chime engaging edge formed by said central cut, the other edge being the side edge of the blank and forming a cell mouth into which a chime-end can may be inserted, the mouth being expansible for easy insertion of the can in the position in which said hinge panels are slanted with respect to said side walls and in which position the distance between said side cuts is larger than the can diameter, the slant being automatically reduced by insertion of the can forcing the straps into upright position, thereby reducing the circumference of the mouth and locking the can, the slant being further reduced by a lifting force applied to the top panel.

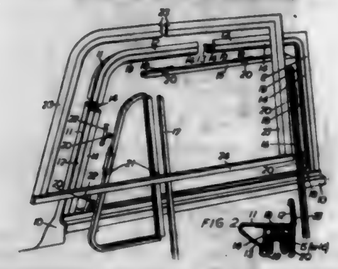
2,946,621
TWO CAN CARRIER
Marshall I. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Filed July 19, 1957, Ser. No. 672,953
5 Claims. (Cl. 294—87.2)



1. A carrier for two chime-end cans, the carrier consisting of a single blank of paperboard and comprising, a pair of opposite side walls; a top panel between, and articulated to, said side walls along parallel top fold lines spaced a distance substantially equal to the can diameter; a main panel between, and articulated to, said side walls along two parallel main fold lines spaced a distance substantially equal to the can diameter, each side wall having an intermediate folding score in it parallel to, and between, said top and main fold line, said main panel having two spaced parallel cell cuts through it producing cut edges extending at right angles to, across, and beyond said main fold lines into the body of the side walls at least as far as said intermediate folding scores, said spaced parallel cuts dividing said main panel into two marginal portions adjacent the lateral edges of the blank and a central portion, said side walls having side cuts in them extending from, and substantially transverse to, the ends of said two spaced parallel cuts, the ends of the side cuts lying on the intermediate folding score and marking apex points, the said side walls further including diagonal scores extending from said apex points in a direction of 45 degrees with respect to said intermediate score towards said main fold line and in a direction away from the respective cell cut, the intersection of the diagonal scores with the main fold lines within the central portion marking base points, said main panel further including cell scores defining substantially triangular main panel areas having the respective portion of the main fold line between said base points as a base,

the main panel also including a plurality of spaced parallel main scores extending parallel to, and between, the main fold lines, the stock of the main panel to either side of the said cell cuts being folded into a position substantially upright with respect to said top panel in which position they form polygonal cell walls adapted to grasp the circumference of the can, said side walls comprising substantially triangular hinge panels defined by said intermediate fold line, the lateral edge of the blank and certain of said diagonal scores, said hinge panels being tiltable relatively to the side walls in which they are formed, and also tiltable relatively to the endmost cell walls which are articulated to the side walls by said hinge panels, the top panel having two spaced handle cuts in it substantially at right angles to said top fold lines, said handle cuts extending across and beyond the top fold lines substantially to the intermediate folding scores in the side walls, the stock of the top panel between said handle cuts constituting a central handle by which the carrier may be lifted.

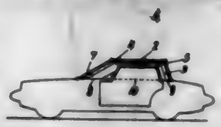
2,946,622
DOORS FOR MOTOR ROAD VEHICLES
Edward G. Abbott, Rednal, Birmingham, England, assignor to The Austin Motor Company Limited, Birmingham, England
Filed May 5, 1959, Ser. No. 811,861
Claims priority, application Great Britain May 14, 1958
4 Claims. (Cl. 296—44)



1. A door for a motor road vehicle wherein the upper part of the door has a fixed window frame for a vertically adjustable window which is slidable in vertical guide channels within said fixed frame, said frame having an outwardly directed boundary flange on its exterior side and an inwardly directed boundary flange on its interior side, and also having a reinforcing channel section member secured thereto, a top edge receiving guide channel and at least one vertical guide channel mounted for sliding movement within said channel section member, a plurality of spring members within said channel section member and interposed between the latter and said guide channels and acting to resiliently urge said guide channels inwardly, limiting abutment means to limit the inward movement of said guide channels, said spring members being provided with inwardly directed catch portions, and a separate closed figure trim frame having an outer marginal portion for slidably embracing the edge of said outwardly directed boundary flange and having an inner marginal portion for slidably engaging said catch portions.

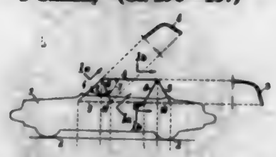
2,946,623
AUTOMOBILE ROOF STRUCTURE
Béla Barényi, Stuttgart-Hohenheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Feb. 21, 1955, Ser. No. 489,678
Claims priority, application Germany Feb. 22, 1954
7 Claims. (Cl. 296—137)

1. In an automobile of the sedan type having a passenger space, a top which is adapted to be readily manufactured by simple means and which is adapted to enclose the upper part of said passenger space, said top being formed of three separately made parts, said parts including a front window, a central roof portion, and a rear window, said front window, said central roof portion and said rear window respectively forming portions of generated surfaces of cones each having an axis of symmetry, the axes of symmetry of said cones lying within the central vertical plane extending in the longitudinal direction of said top, said central roof portion and said front window being connected along first lines of juncture, said central roof portion and said rear window being connected along second lines of juncture, all of said lines of



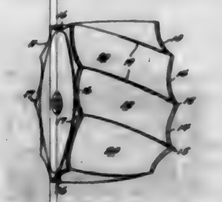
juncture being curved, said first lines of juncture lying in a first single, flat plane, said second lines of juncture lying in a second, single, flat plane, said planes intersecting said central vertical plane at right angles thereto, the intersections of said single, flat planes with said central vertical plane forming unequal angles with the lines respectively constituting the intersections of said central vertical plane with said windows and with said central roof portion, the angles formed by said intersections of said single flat planes with said central vertical plane and by the said intersections of said central vertical plane with said central roof portion being the smaller of said unequal angles.

2,946,624
TRANSPARENT PLASTIC CAR TOP
Béla Barényi, Stuttgart-Hohenheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Mar. 28, 1955, Ser. No. 497,255
3 Claims. (Cl. 296—137)



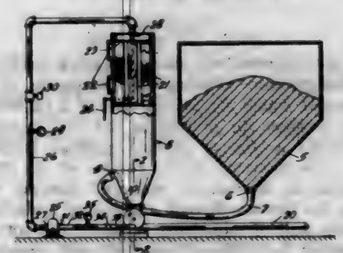
1. A passenger car comprising a car body having a passenger compartment therein and a middle part substantially enclosing said passenger compartment like a hood, said middle part substantially consisting of a transparent plastic material, and composed of a roof part, a front window part and a rear window part, each said part having a shape conforming to cyclindrical curvatures, the axes of said cylindrical curvatures being parallel, the cylindrical curvatures of said roof part being equal in degree to the cylindrical curvatures of said front window part and of said rear window part, each of said parts having an outer contour as viewed from the side of said car, said contour being constituted by one of said cylindrical curvatures, the said outer contours of said front window part and said rear window part forming angles respectively with the outer contour of said roof part, a first joint between said roof part and said front window part, said joint being disposed along a curved line lying in a first plane transverse to said car body, one of said angles being bisected by a line lying in said plane, a second joint between said roof part and said rear window part, said second joint being disposed along a curved line lying in a second plane transverse to said car body, and the other of said angles being bisected by a line lying in said second plane.

2,946,625
WHEEL FOR MARSH VEHICLE
John P. Crain and Albert H. Crain, both of Grand Chenier, La.
Filed Feb. 13, 1959, Ser. No. 793,012
1 Claim. (Cl. 301—41)



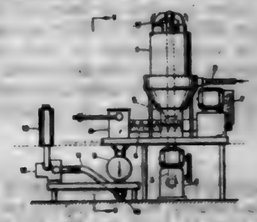
In a wheel construction for marsh vehicles, a pair of spaced annular side plates, a tubular hub, said hub extending through the center of each of said plates and fixedly secured thereto, said side plates each having a plurality of regular equi-spaced semicircular recesses extending inwardly from the outer peripheral edge thereof and delineating a plurality of equi-spaced peripheral points projecting radially outwardly from the outer edge portion of said side plates, said points on one of said plates being staggered with respect to said points on the other of said plates, said recesses on said one plate being staggered with respect to said recesses on said other plate, and a circumferential wall extending between and secured to said peripheral edges of said plates, said wall comprising a series of spirally arranged ground engaging peak members extending between said plates in circumferentially spaced relation, with each of said members having an edge extending from one of said points on said one of said side plates to one of said points on said other of said side plates, said series of peak members delineating a series of circumferentially spaced spiral flutes, each of said flutes extending between one of said recesses on said one plate to a respective one of said recesses on said other plate, said side plates and said members forming a closed watertight buoyant body for movement over semi-fluid terrain.

2,946,626
SUCTION-PRESSURE UNLOADING SYSTEM
Frederick M. Atkinson, Wayzata, and Albert Leigh Paulsen and David F. Mattson, Minneapolis, Minn., assignors to Atkinson Belt Transport Company, Minneapolis, Minn., a corporation of Minnesota
Filed May 31, 1957, Ser. No. 662,759
8 Claims. (Cl. 302—23)



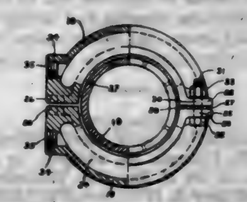
1. In a conveying line from a source of material to a separator having a bladed rotor at the bottom thereof for withdrawing material from the separator and introducing the same into a compressed air line, a conduit having one end portion connected to the source of material and having a discharge terminal terminating at the bottom of said separator and directed into the path of the blades of the rotor whereby the formation of large quantities of dust in the conveyance of pulverulent material will be avoided.

2,946,627
CONVEYING APPARATUS FOR POWDERED CEMENT
Emilio Polzinetti, Florence, Italy, assignor of one-half to Cementi Elba Societa per Azioni (C.E.S.A.), Florence, Italy, a corporation of Italy
Filed Mar. 24, 1958, Ser. No. 723,481
Claims priority, application Italy Mar. 25, 1957
1 Claim. (Cl. 302—23)



A powdered material conveyor system comprising: a filter chamber for separating powdered material from an air stream; a vacuum pump connected to said filter chamber to maintain a suction therein; a flexible intake pipe having one end connected to said filter chamber and the other end thereof free for insertion into a mass of said powdered material for drawing said material in an air stream by suction into said chamber; a hopper receiving said powdered material from said filter chamber; a closed chamber for collecting said powdered material; a worm conveyor interconnecting said hopper and said closed chamber for moving said powdered material from the hopper to said closed chamber; an air compressor having a filtered air intake; a discharge pipe connected to said compressor, said pipe having a lateral opening; a dosing device connected between said closed chamber and said lateral opening for cyclically discharging quantities of said powdered material into said pipe; said compressor maintaining high air pressure in said pipe to move powdered material discharged into the pipe along to an outlet; said worm conveyor including a multiple turn helical rotor effective to hermetically separate said hopper from said closed chamber, so that the high air pressure in said pipe is isolated from the suction in said filter chamber.

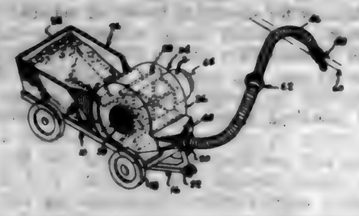
2,946,628
SAND BOOSTER
Frank A. Bauregger, 2221 W. 32nd St., Erie, Pa.
Filed Jan. 9, 1958, Ser. No. 708,046
1 Claim. (Cl. 302—24)



A sand booster for use in a sand conveying system comprising a pipe conveyor for sand, said pipe conveyor adapted to have means to feed sand connected thereto and means to supply compressed air to said pipe conveyor connected thereto to carry said sand therethrough, spaced booster stations, said stations each comprising peripherally spaced holes bored through said pipe conveyor and communicating with the inside thereof, said holes being inclined at an angle of approximately ten degrees to the radius of said pipe conveyor and inclined toward the direction of flow of said sand at an angle of approximately twenty-two degrees to said pipe conveyor,

a collar member comprising two crescent shaped half members, each said crescent shaped member having spaced flanges connected by a web, the inside surfaces of said flanges being shaped in the shape of the outside of said pipe conveyor and one said flange being disposed on each side of said spaced holes, means to form a seal between said flanges and the outside surface of said pipe conveyor, said web being spaced from said pipe conveyor forming a flow passage bounded by said flanges and said web, means to admit air into said flow passage, each said crescent shaped half member having an air passage therein, the engaging ends of each said crescent shaped half member having means thereon closing the ends of said air passages, and separate means connecting said supply of compressed air to said passages.

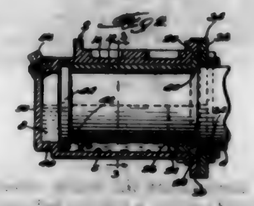
2,946,629
GRAIN BLOWER ASSEMBLY
John Headley, R.R. 4, Angola, Ind.
Filed Mar. 21, 1958, Ser. No. 722,897
2 Claims. (Cl. 302—37)



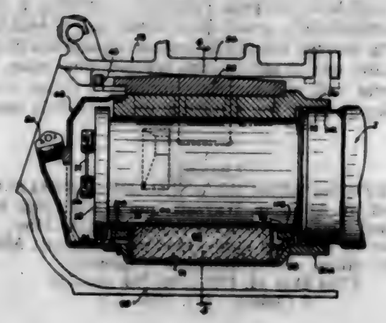
1. A grain blower assembly comprising a horizontally disposed wheel-supported frame having a forward end and a rearward end, an open top receptacle having one end closed and the other end open arranged in superimposed relation with respect to said frame so that the closed end is contiguous to the rearward end of said frame and the open end is inwardly of and spaced from the forward end of said frame, the bottom of said receptacle sloping downwardly from said closed end to said open end, a blower including a horizontally disposed drum and a rotatable vane assembly disposed within said drum positioned so that said drum is transversely of said frame exteriorly of and in bridging relation with respect to the open end of said receptacle, there being a first opening in the portion of said drum adjacent the lower end of said receptacle bottom and a second opening in the portion of said drum contiguous to the forward end of said frame, an air intake opening in one end of said drum, conduit means having one end in communication with said second drum opening and having the other end remote from said drum, and motor means carried by said frame and drivably connected to said vane assembly.

2,946,630
JOURNAL BOX MOUNTING
James T. Smith, Chicago, Ill., assignor, by mesne assignments, to Jay R. Smeaton, Winnetka, Ill.
Filed May 2, 1958, Ser. No. 732,711
7 Claims. (Cl. 308—79)

1. A journal mounting comprising a journal box having an opening in its inboard end, an axle having a portion extending into said inboard opening, a parti-cylindrical bearing on top of said axle supporting said box, another parti-cylindrical bearing beneath said axle, said bearings mating with each other to completely encircle the axle, said other bearing being substantially shorter than the first-mentioned bearing to expose a major portion of said axle end at the bottom thereof, the inboard ends of said bearings projecting from said openings and having flanges bearing against inboardly facing surfaces of the box, a gasket encircling the axle in snug engagement therewith at a portion of said axle disposed externally of the box, and a clamp ring having an opening within which said gasket is snugly received, said gasket having a flange between the ring and bearing flanges, readily releaseable means connected to the box and ring for adjustably clamping said gasket flange between the ring and bearing flanges to seal said opening around said axle, a bath of oil in the bottom of said box contacting said exposed portion of said axle end to continuously lubricate the latter during rotation thereof, and a thrust shoulder on said axle engageable with said bearing flanges.

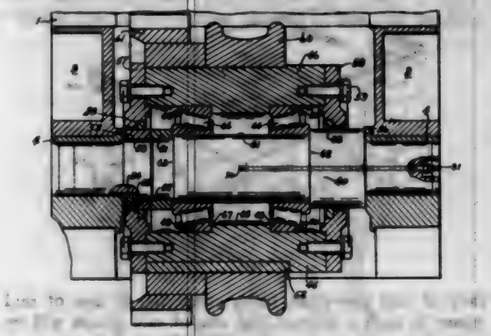


2,946,631
RAILWAY JOURNAL BEARINGS
Isaac Eugene Cox, Kirkwood, Mo., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed July 27, 1955, Ser. No. 524,640
17 Claims. (Cl. 308—83)



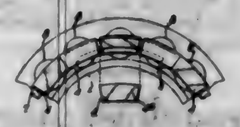
1. A one-piece railway journal bearing having an exterior configuration adapting the bearing to be removably disposed within the journal box of a railway car to rotatably support the journal of the car, comprising a sleeve having a bore of bearing material enabling the bearing to be mounted on the portion of the journal to be disposed in the box, a wall cast integral with the sleeve at the bottom thereof and spaced radially below the bottom wall of said sleeve to afford the bottom wall of a reservoir for lubricant isolatable with respect to the journal box, said reservoir additionally including end and side walls that are cast integral with and extend between said bottom wall of the sleeve and the said wall that is spaced radially therebelow, said reservoir occupying but a part of the arc of said sleeve, a portion of the bottom wall of said sleeve along said arc being discontinuous to expose the journal to lubricant in said reservoir, and said sleeve being formed at one end thereof with and integral annular end collar having an inside diameter larger than the diameter of said bore.

2,946,632
CRANE WHEELS
John B. Kreeling, Glenshaw, Pa., assignor to Dravo Corporation, Cockranton, Pa., a corporation of Pennsylvania
Filed Dec. 13, 1955, Ser. No. 552,891
16 Claims. (Cl. 308—196)



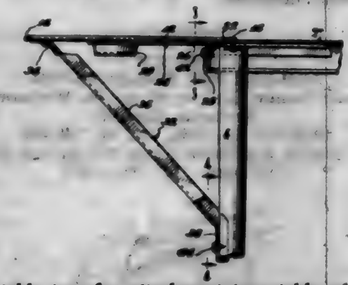
1. A crane wheel support consisting of a tubular housing member having a carriage, a nonrotary said housing member, from each end of said shaft member, a plurality of pairs of thrust transmitting means with a first pair on said housing member and a second pair on said shaft member, the first pair of said thrust transmitting means having thrust abutment surfaces faced outwardly from each other and carried by one of said members and the second pair of thrust transmitting means having abutment surfaces facing each other and carried by the other of said members to cooperate with the abutment surfaces of said first thrust transmitting means, antifriction bearing assemblies having inner and outer races held between the abutment surfaces of said first and second pairs of thrust transmitting mean, at least one of said thrust transmitting means including a demountable means, a fastening means securing said demountable means to its corresponding member, said demountable means carrying one abutment surface of its thrust transmitting means, and a third pair of thrust transmitting means embodying abutment surfaces on one of said members including said demountable means having direct contact with said carriage to bypass the lateral thrust forces from said fastening means.

2,946,633
ROLLER BEARING
Karl Evald Andreas Göthberg, Backaens, Lerum, Sweden, assignor to Aktiebolaget Svenska Kullagerfabriken, Gothenburg, Sweden, a corporation of Sweden
Filed Jan. 19, 1959, Ser. No. 787,578
Claims priority, application Sweden Jan. 22, 1958
8 Claims. (Cl. 308—217)



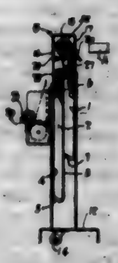
1. For a roller bearing having rollers disposed intermediate a pair of opposed race rings, an annular cage comprising a plurality of cage sections of plastic material and guide rings engaging said sections and interconnecting the same to form the cage, each section consisting of a pair of arcuate portions and at least two circumferentially spaced cross bars mounting said arcuate portions in axially spaced parallel relation to define at least one roller-receiving pocket therein, said arcuate portions having means engaging said guide rings to limit radially outward displacement of said sections whereby said guide rings counteract the centrifugal forces on said cage section, said means being constructed to afford slidable displacement of said sections in a circumferential direction on the guide rings.

2,946,634
DETACHABLE TABLE TRAY
John E. Gilbert, 1411 Old Orchard Road, Vincennes, Ind.
Filed July 21, 1958, Ser. No. 749,736
4 Claims. (Cl. 311—103)



1. A table tray for attachment to a table whose top has a rounded vertical edge comprising; an article supporting surface, a leg depending from said surface adjacent one end thereof, said leg being rounded vertically to conform to the rounded vertical table top edge, a support bar secured to the underside of said surface adjacent the opposite end thereof, an arm depending from said support bar, and means for removably attaching said leg and arm to the top and a leg respectively of said table so that said attached tray covers no portion of the flat surface of said table top.

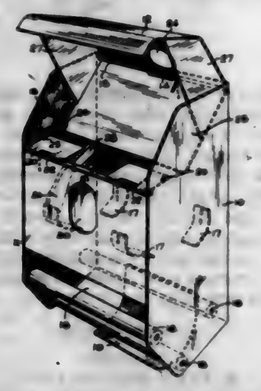
2,946,635
PAPER STORAGE UNIT
Thomas Lowther, 1331 E. 289th St., Wickliffe, Ohio
Filed Oct. 25, 1957, Ser. No. 692,396
3 Claims. (Cl. 312—39)



1. In a paper storage unit of the class described, in combination, a first sheet paper holder formed to support sheets of paper with edge portions uppermost and in a manner to be grasped singly thereby, a second paper holder like that described adjacent the first mentioned, paper therein being generally parallel to paper in the first holder, means to support the holders as a unit and assist in retaining paper therein, and a single cover for said unit comprising a member arranged to completely cover and screen light from such exposed paper edges referred to, said paper holders comprising narrow, elongated pocket-like members, the bottoms of which are

angularly connected to the spaced sides, such bottoms constituting support means for sheet paper in the holders, the cover is hingedly connected adjacent the upper edge of one of said sides, the cover thereby being swingable over the upper portions of the pocket-like members into a position to close such members and thereby enclose the contents thereof, said cover further being a relatively wide, elongated pocket-like member, said cover likewise providing a support for rolled paper therein and the closing of said cover effecting a screening of light from such rolled paper, in conjunction with the paper holders aforesaid, the hinge arrangement being such as to facilitate movement of the cover into open position and withdrawal of paper from a roll therein in a continuous manner if desired, to the same general area as may be effected in withdrawal of sheets of paper in the narrow pocket-like members described.

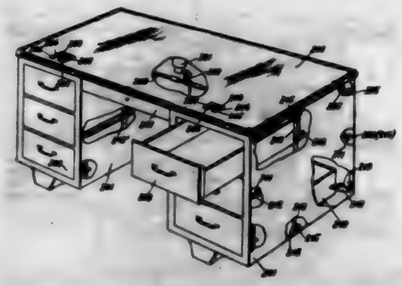
2,946,636
HOLDER FOR TOILET PAPER
Ernest Penney, Canister Market St., Whitworth, Rochdale, England
Filed July 18, 1958, Ser. No. 749,486
Claims priority, application Great Britain July 24, 1957
13 Claims. (Cl. 312—39)



1. In a toilet paper holder comprising a reserve compartment and a main compartment located in a housing having means for supporting bundles of paper in the respective compartments, releasable means for displacing a bundle from the reserve compartment into the main compartment and prevent the displacement of a bundle from the main compartment into the reserve compartment, said housing having an insertion opening communicating with the reserve compartment, and a lid closing said insertion opening, catch means located in said reserve compartment, said catch means being positioned to engage with said lid to retain said lid in the closed position and means operably associated with said catch means located in a position such as to be obstructed by a bundle of paper in the reserve compartment to maintain the catch means in the retaining position until the bundle has been displaced from the reserve compartment into the main compartment.

2,946,637
SELECTIVELY POWER-OPERATED DRAWER STRUCTURE
Otto Alfred Becker, Mainzer Strasse 201-209, Saarbrucken 3, Germany
Filed Mar. 7, 1957, Ser. No. 644,572
Claims priority, application Germany Mar. 16, 1956
8 Claims. (Cl. 312—223)

1. In a desk, card file cabinet or the like, comprising automatically extendable and retractable drawers two means which extend transversely to the direction of movement of the drawers and are movable in the direction of movement, one of said means being arranged on one common side of several drawers and the other being arranged on the other common side of said several drawers, conveyors extending in the direction of movement of said drawers and arranged to be driven by an electric motor,



each of said conveyors being connected to one of said means in such a manner that one of said means will be in its front end position when the other is in its rear end position and the means perform mutually opposite movements when being driven, and a coupling device for selectively coupling individual ones of the drawers to one of the means.

2,946,638
SLIDABLE SHELF ARRANGEMENT
Peter M. Celo, Charlottesville, Va., assignor to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware
Filed Mar. 31, 1959, Ser. No. 803,237
7 Claims. (Cl. 312—255)

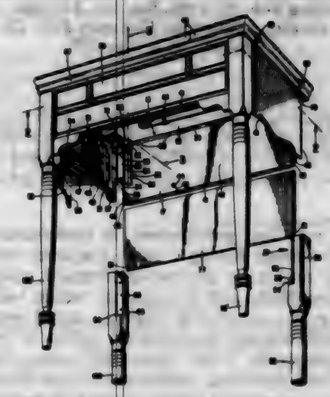


4. A rectangular supporting stand including a pair of opposed parallel track means for support and interengagement with slide means on a slidable shelf, a slidable tray on said track formed of sheet metal edgewise return bent to form U-shaped flanges, Z-shaped brackets having one flat end secured to the underface of said tray at the side and forward edges thereof and the other in spaced plane parallel relationship to the return-bent edge of the tray and terminating thereat downwardly and normally in slide means for slidable reception in said track, and a molding overlying the forward and side edges of the tray and slide means on the Z-bracket, including a longitudinally extending medial arm disposed and secured between the free face of the Z-bracket and the return-bent terminus of the tray.

2,946,639
SEWING MACHINE CABINETS
Edward W. Stanton, Cranford, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Mar. 13, 1957, Ser. No. 645,783
8 Claims. (Cl. 312—257)

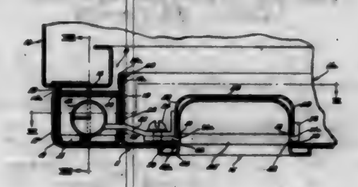
5. A metallic frame adapted to be used as part of a sewing machine cabinet having a plurality of decorative

panel covers, said metallic frame comprising a rear panel having chases formed on opposite ends thereof, a front panel having chases formed on opposite ends thereof, an end panel having chases formed on opposite ends thereof, said chases formed on opposite ends of said panels being adapted to receive opposite ends of said decorative panel covers, a door supporting panel, hinges formed on said door supporting panel and adapted to support a door, a corner bracket connecting one end of said rear panel to



one end of said end panel, a corner bracket connecting one end of said front panel to the other end of said end panel, a corner bracket connecting the other end of said rear panel to said door supporting panel, a corner bracket connecting the other end of said front panel to the other end of said door supporting panel, means carried by said four corner brackets for attaching a table-top thereto, and means for attaching a leg member to each of said corner brackets.

2,946,640
LOCKER HANDLE CONSTRUCTION
Richard W. Sitler, Aurora, Ill., assignor to Aurora Equipment Company, Aurora, Ill., a corporation of Illinois
Filed July 20, 1954, Ser. No. 446,968
9 Claims. (Cl. 312—328)



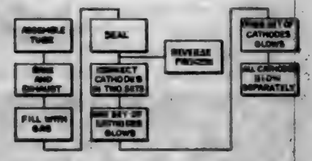
1. In a door construction including a door panel having latching mechanism along one vertical margin of the door panel, and handle structure for actuating said latch mechanism comprising a flanged cup-shaped member telescoped through a hole in said door with the flanged area of the cup-shaped member bearing against the outer side of the door panel concealing the opening, means connecting the flanged cup-shaped member to the door panel, slot means on the cup shaped member on the inner side of the panel, and a handle member retainingly disposed in said slot means in said cup-shaped member on the inner side of the door but with the handle member accessible from the outer side of the door and movable vertically in said slot means.

2,946,641
LAMP MANUFACTURE
William R. Wilmer, Painted Post, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York
Filed Aug. 18, 1957, Ser. No. 678,752
1 Claim. (Cl. 316—19)



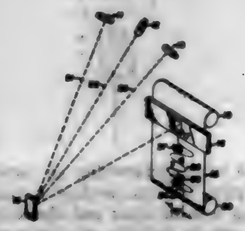
The method of manufacturing an incandescent lamp comprising a glass bulbous envelope having an adjoining tubular portion with its outer end closed by a glass filament mount, which includes perforating two opposite side wall areas of the neck below the region of its junction with its bulb portion, projecting a filament mount with trailing lead-in wires into the bulb portion of the envelope, retracting the mount somewhat while guiding the free ends of the lead-in wires laterally through such perforations, sealing the lead-in wires in the neck wall, directing heat into the surrounding glass of the tubular portion to shrink its outward end region into sealing relation with the periphery of the mount, evacuating the bulb via its mount, sealing off the mount while separating the excess glass of the bulb neck and mount from the bulb, and further heating and marvering the tubular portion of the bulb in the seal region thereof to a desired final configuration.

2,946,642
METHOD OF MAKING GASEOUS GLOW TUBES
Saul Kuchinsky, Somerville, and Thomas D. Peterson, New Market, N.J., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 13, 1959, Ser. No. 793,189
11 Claims. (Cl. 316—26)



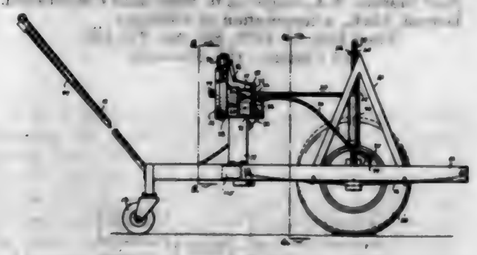
1. The method of making a gaseous glow tube of the type comprising an envelope containing a gas, a plurality of cathode indicator electrodes adapted to glow and an anode electrode, said method comprising the steps of mounting said cathode and anode electrodes in said envelope, filling said envelope with a gas for promoting cathode glow, electrically connecting said cathode electrodes in two separate groups, first causing one group of cathodes to glow and then causing the other group of cathodes to glow, and then cyclically causing said cathodes to glow separately and consecutively.

2,946,643
CLIPPED TRACE RECORDING OF ELECTRICAL SIGNALS
John S. Hutchison and Alexander S. Hildebrandt, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Filed Feb. 15, 1956, Ser. No. 565,621
8 Claims. (Cl. 346—1)



1. The method of recording an electrical signal in the form of a variable amplitude trace which comprises recording the central portion of the trace on either side of a zero base line position within an area on the recording medium of constant limited width as an oscillograph type trace and recording the more extreme amplitude portions of the trace as variable area traces within the same area on the recording medium of limited width.

2,946,644
MEANS FOR SENSING AND TABULATING THE ACCUMULATED ROUGHNESS OF A ROADWAY SURFACE
Lyell D. Henry, 2234 Knapp St., Ames, Iowa
Filed June 18, 1959, Ser. No. 821,276
11 Claims. (Cl. 346—13)



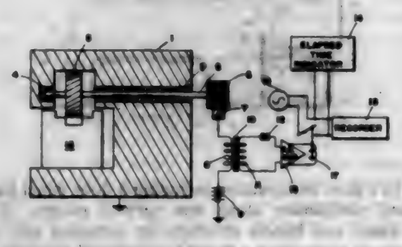
1. In a device for recording the roughness of a surface, a frame, a means for supporting one end of said frame, a wheel axle, spring means on said frame rotatably supporting said axle, a wheel on said axle, a support means on said frame located closer to the supported end of said frame than to said axle, a paper ribbon, a means operatively secured to said wheel for moving said paper ribbon, a shaft operatively rotatably mounted to said frame, a cam operatively secured to said shaft, a movable member in engagement with said cam, a writing instrument secured to said last mentioned member and in engagement with said paper ribbon, two shafts operatively secured to said axle and positioned at each side, respectively, of said wheel, a spring means associated with each of said shafts for yieldingly holding them in a lowered position, a crossbar operatively engaging said two shafts, a drum on said rotatably mounted shaft, a cable secured to said drum and said crossbar, and a spring means for yieldingly holding said rotatably mounted shaft in one direction of its rotation; said paper ribbon, said means for moving said paper ribbon, said cam, said movable member engaging said cam, and said writing instrument being supported by said support means.

2,946,645
METHOD FOR REGISTERING SIGNAL VOLTAGES, PARTICULARLY OF PHYSIOLOGICAL ORIGIN, BY MEANS OF MECHANICALLY RECORDING OSCILLOGRAPHS
Hans Hermann Gustav Friedrich Schwarze, 58 Paul-Gerhardt-Allee, Munich-Pasing, Germany
Filed Feb. 17, 1953, Ser. No. 337,344
Claims priority, application Germany Feb. 22, 1952
4 Claims. (Cl. 346—33)



1. In a recording arrangement, in combination, a recording instrument having a given frequency range and adapted to record an alternating electrical wave which varies in amplitude and in frequency within said range; rectifying means adapted to receive a signal wave varying in amplitude and in frequency within a frequency range substantially larger than said given frequency range of said recording instrument, for rectifying said signal wave; integrating means coupled to the output of said rectifying means for deriving therefrom an integrated wave which corresponds to the envelope of said signal wave after rectification thereof; oscillator means for producing a monofrequency oscillation within the frequency range of said recording instrument; modulating means in circuit with said oscillator and said integrating means for modulating said monofrequency oscillation with said integrated wave; and means in circuit with said oscillator adapted to supply the modulated oscillation to said recording instrument having said given frequency range so that a wave form corresponding to said wave envelope is recorded instead of said signal wave.

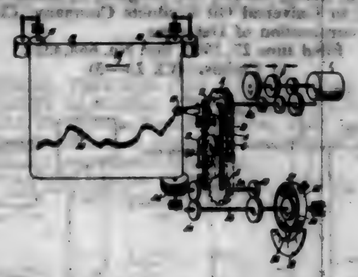
2,946,646
MACHINE TOOL CUTTING TIME INDICATOR
John L. Bower and Thomas E. Castle, Downey, Calif., assignors to North American Aviation, Inc.
Filed May 28, 1954, Ser. No. 431,238
7 Claims. (Cl. 346—33)



1. Means for measuring the useful running time of a machine having a rotating metal-removing tool comprising commutating means rotatable with said tool; a circuit including said tool, said commutating means, a source of direct current, and the work piece machined by said machine; said circuit being conductively completed when said tool is in contact with said workpiece; an elapsed time meter; and means responsive to commutated current in said circuit for operating said elapsed time meter.

2,946,647
INSTRUMENTS FOR RECORDING SHORT INTERVALS OF TIME
Friedrich Richter, Preetz, Holstein, Schleswig-Holstein, Germany, assignor to Electroacustic Gesellschaft mit beschraenkter Haftung, Kiel, Germany, a corporation of Germany
Filed Sept. 16, 1958, Ser. No. 761,391
9 Claims. (Cl. 346—74)

1. A recording instrument, comprising record carrier means for advancing a surface member, a stylus for producing a record on the surface member, an elongated carrier structure on which said stylus is rigidly mounted, said carrier structure being displaceable in a travel direction transverse to the advance of the surface member, rotatable gear means peripherally in driving engagement with said carrier structure for displacing said structure, a stationary race member extending parallel to said carrier structure in spaced relation thereto, said gear means being peripherally in engagement with said race member to roll along said race member when driving said carrier structure, drive means having a continuously rotating shaft, and means operably connected between said shaft



and said gear means at the axis of rotation of said gear means for periodically moving said gear means in a reciprocating path along said race member.

CHEMICAL

2,946,648
SODIUM XYLENE SULFONATE DIAZONIUM SALT COMPOSITIONS
Clemens Strock, Lansdowne, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 28, 1955, Ser. No. 554,128
12 Claims. (Cl. 8—44)

1. A composition comprising a stable aromatic diazonium salt and about 1 to 120% by weight thereof of sodium xylene sulfonate.

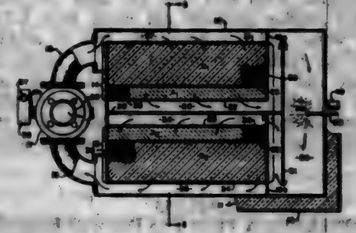
2,946,649
TANNING AGENT
Rudi Heyden, Duesseldorf, Germany, and Friedrich Schmitt, deceased, late of Duesseldorf, Germany, by Alice Schmitt, nee Neukirchner, Duesseldorf, Germany, heir, assignors to Deutsche Fettchemie G.m.b.H., Duesseldorf, Germany
No Drawing. Filed July 20, 1956, Ser. No. 599,831
Claims priority, application Germany Feb. 24, 1951
4 Claims. (Cl. 8—94.33)

1. A process for tanning skins, hides and furs into leather, which comprises milling into these materials from 1 to 8 percent of the polyalkyl ether condensation product obtained by the condensation of from 6 to 18 mols ethylene oxide with one mol of an alkylated sulfamide selected from the group consisting of alkylated benzene sulfamides and alkylated naphthalene sulfamides, the alkyl radical being selected from the group consisting of butyl, hexyl, octyl, dodecyl and octadecyl radicals, adjusting the pH range during milling to 2 to 9, until tanning occurs, and washing the excess tanning agent from the leather after tanning is complete.

2,946,650
PROCESS FOR THE MANUFACTURE OF VISCOSE RAYON STAPLE
Shozo Tachikawa, Higashiyama-ku, Kyoto, Japan, by mutual agreement of all the heirs of said Shozo Tachikawa, deceased, to Tatsuji Tachikawa, heir
No Drawing. Filed Feb. 17, 1953, Ser. No. 715,517
7 Claims. (Cl. 18—54)

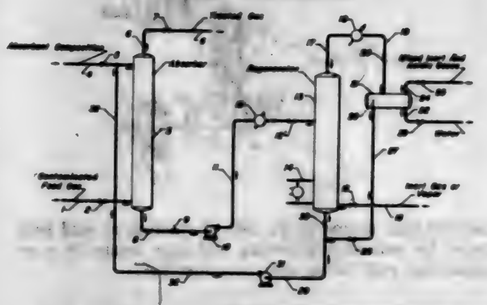
1. A process for producing a regenerated cellulose rayon staple or filament having a high degree of polymerization, comprising the steps of introducing alkali cellulose into a mixture of carbon disulfide, Turkey red oil and triethylamine, extruding the resulting viscose into a spinning bath containing a solution of oxalic acid and sodium ions which accumulate unavoidably during spinning and thereafter immersing the thread in a secondary bath containing a weak solution of sulfuric acid.

2,946,651
CATALYTIC TREATMENT OF GAS STREAMS
Eugene J. Houdry, Ardmore, Pa., assignor to Oxy-Catalyst, Inc., a corporation of Pennsylvania
Filed Aug. 9, 1956, Ser. No. 603,629
4 Claims. (Cl. 23—2)



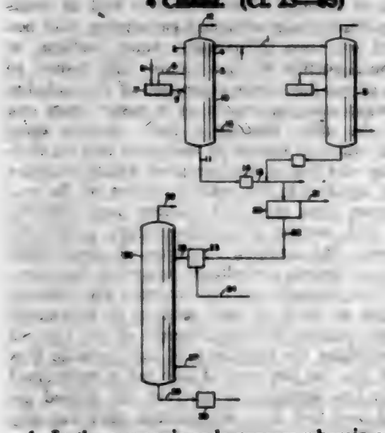
1. A method for the catalytic treatment of a relatively low temperature gas stream containing small amounts of combustible material comprising the steps of flowing said gas stream through a gas-permeable bed of solids adapted to exchange heat with said gas stream, said bed being divided into two substantially equal sections, at least the central portion of each section with respect to the direction of gas flow being comprised of an oxidation catalyst, flowing said gas stream as it passes from one section into the other through a fuel injection zone, injecting fuel into said stream in said zone and catalytically oxidizing said fuel as the fuel-laden stream traverses the oxidation catalyst in the central portion of the section downstream from said fuel injection zone, thereby maintaining said portion at a temperature sufficiently high to promote the catalytic oxidation of combustible material in said stream, periodically reversing the direction of gas flow through said bed whereby the catalytic central portion of each of said sections is alternately heated by the catalytic oxidation therein of the injected fuel, and controlling the frequency of said periodic flow reversals such that the hot zone of said bed is maintained at a relatively low temperature whereby the treated gas stream leaves said bed at a temperature approximately that of said relatively cool outer portions.

2,946,632
GAS PURIFICATION PROCESS
Herman S. Bloch, Skokie, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Chicago, Ill., a corporation of Delaware
Filed June 27, 1957, Ser. No. 668,435
11 Claims. (Cl. 23—3)



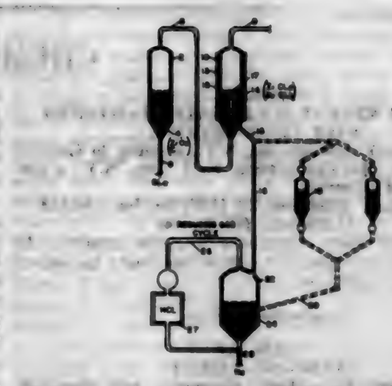
1. A combined absorption-absorbent regeneration process for treating a contaminated feed gas containing an acidic gaseous component which comprises contacting said feed gas with a liquid absorbent composition comprising an organic amine, a substantially anhydrous, hydrophilic glycol compound and a minor amount, based upon the glycol compound, of a hydrocarbon at least partially soluble in said glycol compound and vaporizable in the absorbent regeneration step, to thereby form a rich absorbent composition and a treated gas stream substantially free of moisture and said acidic gas component, separating said treated gas stream from said rich composition, separately distilling said rich composition and vaporizing said hydrocarbon and amine together with the acidic gaseous component and any water absorbed by the composition from said feed gas until the resulting composition residue contains not more than 0.5% by weight of water and is substantially free of acidic gas, separating the resulting overhead into an acidic gas, a water phase and a separate hydrocarbon phase containing amine and glycol compound, and thereafter combining said hydrocarbon phase with said composition residue and recycling the resulting mixture to contact with said feed gas.

2,946,653
AMMONIA-SODA PROCESS IMPROVEMENTS
Clyde B. Myers, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
Filed Sept. 5, 1956, Ser. No. 608,033
4 Claims. (Cl. 23—65)



1. In the ammonia-soda process wherein a liquor from the stripper section of an ammonia still is treated with lime, the improved process which comprises withdrawing a slurry containing lime from said ammonia still to a settling zone, withdrawing the underflow of said slurry from said settling zone, said underflow comprising lime and calcium carbonate, and treating said underflow with an ammonium salt-containing liquor, the ammonium salt in said liquor being in a quantity substantially stoichiometrically equivalent to the quantity of lime in said underflow so as to react with substantially all the lime in said underflow.

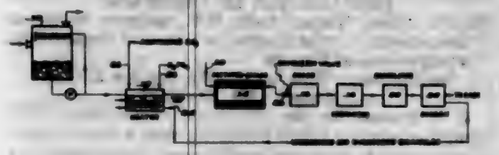
2,946,654
PRODUCTION OF IRON-FREE ZIRCONIUM TETRACHLORIDE
Milo P. Halliday, Jr., Concord, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Dec. 27, 1955, Ser. No. 630,969
2 Claims. (Cl. 23—87)



1. A process for the production and purification of zirconium tetrachloride from iron-containing zirconium oxide which comprises reacting the zirconium oxide with chlorine in a fluidized bed reactor, condensing the gaseous zirconium tetrachloride and ferric chloride produced in a fluid bed condenser, transferring said hot fluidized zirconium tetrachloride and ferric chloride without substantial cooling to a third fluidized zone, wherein the hot ferric chloride-containing zirconium tetrachloride is treated with hydrogen thereby reducing said contained ferric chloride to ferrous chloride but leaving said zirconium tetrachloride substantially unaffected, said zirconium tetrachloride being maintained during treatment with hydrogen at a temperature below the sublimation temperature thereof and thereafter separating the low boiling zirconium tetrachloride from the higher boiling ferrous chloride.

2,946,655
PRODUCTION OF DIAMMONIUM PHOSPHATE
Edward J. Hoke and Elwood V. Schultz, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,701
4 Claims. (Cl. 23—107)

1. A process for the recovery of ammonia from coke oven gas as diammonium phosphate crystals in the absence of formations of monoammonium phosphate crystals comprising the steps of contacting said gas with an aqueous solution of ammonium phosphate at a temperature of between about 30 and 60° C. and having an ammonia to phosphoric acid molecular ratio between about 1.45 to 1.55 so as to absorb the ammonia from said gas, heating said ammonia enriched solution to its boiling point to evaporate water therefrom so that said ammonia enriched solution becomes saturated with respect to ammonium phosphate, cooling and agitating said saturated and enriched ammonia solution while adding ammonia



to provide an ammonia to phosphoric acid molecular ratio about 2 to 1 so as to form a slurry of diammonium phosphate, partially drying said slurry, compacting said slurry to form a sheet, and granulating said sheet to desired sized granules of diammonium phosphate.

2,946,656
DIBASIC ALKALINE EARTH METAL PHOSPHATE AND LUMINESCENT POWDERS CONTAINING SUCH PHOSPHATE
Willy Schwarz, Brussels, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium, a Belgian company
Filed Feb. 21, 1956, Ser. No. 566,971
Claims priority, application France Feb. 22, 1955
4 Claims. (Cl. 23—109)

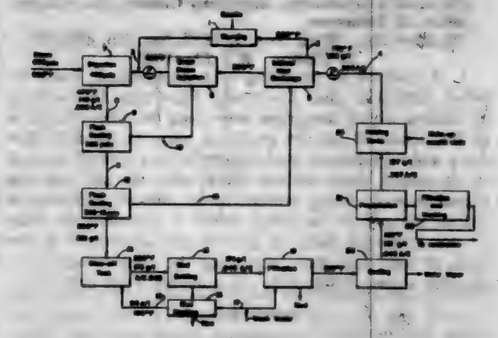


1. The process for the manufacture of dicalcium phosphate by precipitation from an aqueousu medium which compriaes slowly introducing an aqueous solution of a pure calcium chloride into an aqueous solution of pure ammonium phosphate and, simultaneously with the introduction of said aqueous solution of said calcium chloride, continuously adding gaseous ammonia to the aqueous medium in a quantity to maintain the pH of the aqueous medium at 5.0 to 5.1 until the completion of the precipitation of said dicalcium phosphate.

2,946,657
SEPARATING ILLITE FOR GEOCHEMICAL ANALYSES
Robert C. Reynolds, Jr., Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
No Drawing. Filed Mar. 5, 1958, Ser. No. 719,198
2 Claims. (Cl. 23—110)

1. A method of separating clay-mineral illite from an earth sample in which it occurs with other minerals, said sample having been disaggregated into its constituent mineral grains without substantial alteration of the natural grain sizes, and the less than 2 micron particle-size fraction of said disaggregated sample having been separated from the remainder thereof by suspending said fraction in a quantity of liquid from which said remainder settles out, which method comprises boiling said less than 2 micron particle-size fraction for about four hours in about 6 N sodium hydroxide solution to dissolve a major portion of the clay minerals other than illite, contacting the insoluble residue of the sodium hydroxide treatment with hydrochloric acid for a period of time sufficient to convert into water-soluble salts the clay minerals attacked by said alkali, washing the insoluble residues of said acid-contacting step in water to dissolve substantially all water-soluble constituents, and recovering from said water a final insoluble residue comprising essentially illite suitable for geochemical analysis.

2,946,658
CHEMICAL PROCESS FOR EXTRACTING MONOHYDRATE ALUMINA CONTAINING MATERIALS
Donald J. Donaldson, Berkeley Woods, Calif., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Filed June 26, 1957, Ser. No. 668,232
15 Claims. (Cl. 23—143)



1. In the wet alkali aluminate process for the production of alumina from aluminous materials containing caustic soluble monohydrate alumina, wherein the alumina is extracted by pressure digestion of the aluminous material in recycled spent caustic aluminate liquor leaving an insoluble residue, the pregnant liquor is depressurized and flash cooled and water is removed therefrom by flash steam generation, the spent liquor is diluted by injection steam in heating to digestion temperature, the pregnant liquor is diluted by addition of wash water used in washing of said insoluble residues, and an amount of water equivalent to the net dilution is removed therefrom by evaporation in each cycle, the improved process for total extraction of the caustic soluble alumina with substantially reduced heat input, which comprises pressure digesting the aluminous material in the diluted spent liquor from which not more than a minor fraction of the net dilution water is removed, limiting digestion dilution by increasing the spent liquor temperature by an amount in excess of 200° F. and at least to within 100° F. of the digestion temperature by indirect heat exchange with the flash steam generated by flash cooling the pregnant liquor, the digestion being conducted at a temperature sufficiently above the atmospheric boiling point of said diluted liquor such that on depressurizing and flash cooling thereof at least the major portion of the net dilution water is removed by flash steam generation, and depressurizing the pregnant liquor to substantially the atmospheric boiling point thereof.

2,946,659
PRODUCTION OF NEW SULFURIC ACID FROM WASTE PICKLE LIQUOR
Charles B. Francis, Pittsburgh, Pa., assignor to Purex and Chemicals, Inc., a corporation of Pennsylvania
No Drawing. Filed May 15, 1958, Ser. No. 736,393
4 Claims. (Cl. 23—172)

1. The method of producing sulfuric acid which comprises heating particulate ferrous sulfate mixed with free sulfuric acid in such proportions that the acid equals at least 17% of the weight of the ferrous sulfate on the dry basis and at such concentration that said sulfate in the resulting mixture is insoluble in the acid at 212° F., subjecting the mixture to a current of an oxygen-containing

gas to a temperature above 212° F. and below that at which the acid is volatilized, thereby evaporating substantially only water and producing dry basic ferric sulfate, thereafter heating the dry basic ferric sulfate to above its decomposition temperature to produce ferric oxide and sulfur trioxide, and then reacting the released sulfur trioxide with water to produce sulfuric acid.

2,946,660

METHOD OF PREPARING SILICEOUS PIGMENTS

Edward L. Priebe, Milton, Fla., and Joseph A. McCarthy, Mahtomedi, Minn., assignors to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware

No Drawing. Filed Nov. 1, 1957, Ser. No. 693,823

13 Claims. (Cl. 23—182)

1. A method of purifying acid precipitated, finely divided, filterable silica containing impurities in the form of cations which comprises subjecting the filterable silica to the action of an ion exchange resin in the hydrogen form and an aqueous medium containing a small amount of an added water soluble metal salt, the salt and ion exchange resin being present in an amount sufficient to reduce the pH of the silica below 6, allowing the resin in the hydrogen form to absorb the impurities in the form of ions, and then separating the resin to obtain an aqueous slurry of filterable silica having a pH below 6.

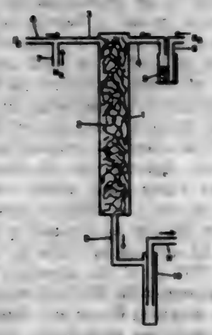
2,946,661

PENTAFLUOROSULFUR HYPOFLUORITE AND METHOD FOR ITS PRODUCTION

Francis B. Dudley, 169 Mann St., Armidale, New South Wales, Australia, and George H. Cady, 2532 Royal Court, Seattle, Wash.

Filed July 14, 1956, Ser. No. 597,951

8 Claims. (Cl. 23—203)



1. As a new chemical compound, pentafluorosulfur hypofluorite (SOF_4).

2. A process of producing pentafluorosulfur hypofluorite which comprises contacting gaseous thionyl fluoride with fluorine, within the temperature range 100° C. to 400° C., in the presence of a porous mass of copper coated with silver fluoride, the amount of fluorine as measured in moles being greater than the amount of thionyl fluoride.

2,946,662

PREPARATION OF ALKALI METAL HYDRIDES

Neal J. Mosely, Mars, Pa., assignor, by mesne assignments, to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed June 3, 1955, Ser. No. 513,153

8 Claims. (Cl. 23—204)

1. In a method of preparing alkali metal hydrides in which an alkali metal mixed with a finely divided inert solid is reacted with hydrogen at a temperature above the melting point of said alkali metal, the improvement comprising carrying out said reaction in the presence of phenol in a small amount effective to catalyze said reaction.

2,946,663

PREPARATION OF DIBORANE

Carl D. Good, Niagara Falls, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Jan. 6, 1956, Ser. No. 557,633

2 Claims. (Cl. 23—204)

1. A process for the production of diborane which comprises reacting boron trichloride with a slurry of aluminum hydride at approximately room temperature in a reaction medium selected from the group consisting of benzene and alkyl benzenes having a total of not more than six carbon atoms in the alkyl radical, and recovering diborane from the reaction mixture.

2,946,664

PREPARATION OF DIBORANE

Ralph Klein, Hamden, Herbert G. Nadeau, North Haven, and Louis J. Schoen and Arthur D. Bliss, New Haven, Conn., assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Oct. 5, 1956, Ser. No. 614,768

9 Claims. (Cl. 23—204)

1. A method for the production of diborane which comprises maintaining a reactant consisting essentially of at least one compound of the class $B(R)_3$ wherein R is an alkyl radical containing from one to five carbon atoms in admixture with hydrogen and in contact with a catalyst selected from the group consisting of metals of periods 5 and 6 of group VIII of the periodic table at a temperature within the range from 125° C. to 350° C. and a pressure of from about 400 to 4000 p.s.i.g., and recovering diborane from the reaction mixture.

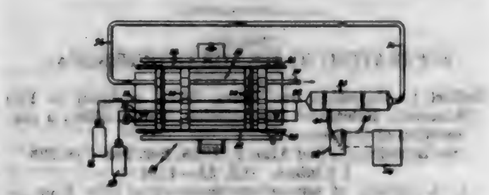
2,946,665

METHOD AND MEANS FOR THE DETERMINATION OF CARBON DIOXIDE IN BIOLOGICAL FLUIDS

Leonard T. Skeggs, Cleveland, Ohio, assignor, by mesne assignments, to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

Filed Sept. 26, 1956, Ser. No. 613,299

11 Claims. (Cl. 23—230)



1. Apparatus for analyzing a liquid for determining the presence therein of a substance which is capable of being liberated in gaseous form by the addition of a reagent to said liquid, comprising a conduit, pump means for effecting a flow of the liquid and the reagent in predetermined proportions to a junction point at which reaction of said reagent with said substance occurs and which is in fluid-flow communication with said conduit and a flow of the resulting fluid through said conduit occurs, pump means connected to said conduit at said reaction point for providing sub-atmospheric pressure at said reaction point, said conduit having an enlarged part through which the fluids are transmitted by said first and last mentioned pump means, and pressure responsive means connected to said enlarged part of said conduit for indicating pressure changes therein during the flow of said fluid through said conduit and thereby indicating the quantity of the liberated gaseous substance.

4. A method of quantitatively analyzing a liquid for the presence therein of substance capable of being liberated therefrom in gaseous form, comprising forming a stream of said liquid in a conduit, adding a reagent thereto in a part of said conduit and providing sub-atmospheric pressure in said part of the conduit for causing said substance to be evolved from the liquid in gaseous form, and measuring the fluid pressure in said part of the conduit during the flow of said fluid therein.

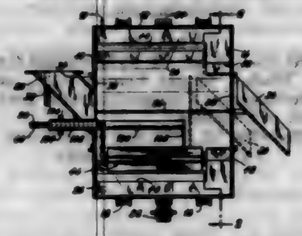
2,946,666

APPARATUS FOR AMMONIATION OF PHOSPHATE MATERIALS

Lewis C. Eymann, 648 N. Clark St., Forest City, Iowa

Filed Oct. 29, 1957, Ser. No. 693,284

2 Claims. (Cl. 23—299.1)



1. Apparatus for ammoniating particulate phosphate material comprising an axially rotatable cylindrical mixing drum, a plurality of radially inwardly projecting flights extending lengthwise of the inner periphery of said drum, means for rotating said drum, means for supplying to said drum a charge of particulate phosphate material in such predetermined quantity as to form in said rotating drum a dense body rolling about a horizontal axis and having a maximum depth at least about twice as great as the amount of radially inward projection of said flights, and said body being substantialy uniform in depth and density throughout the major portion of the length of said flights and of said drum, and a sparger having a head provided with orifice means for discharging in one direction an ammoniating liquid at a volumetric rate which at any given instant is substantially identical throughout the length of said sparger, said sparger having a second head provided with orifice means for discharging in an opposite direction an acid in liquid form at a volumetric rate which at any given instant is substantially identical throughout the length of said sparger, means for mounting said sparger in a fixed position within said drum with the discharging means thereof at least about four inches below the surface of said body of phosphate material and so directed as to discharge ammoniating liquid and acid in opposite directions generally parallel with the upper surface of said body, said sparger having a length substantially equal to and being disposed within that portion of said body which is substantially uniform in depth and density.

2,946,667

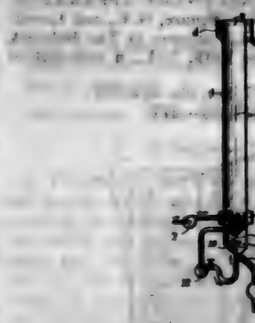
APPARATUS FOR CONTROLLING THE RATE OF DISCHARGE OF MATERIALS THROUGH AN OUTLET

Georges Cohen de Lara, Grenoble, Pierre Chagnon, Villeneuve Saint Georges, Michel Delachanal, Grenoble, Jacques Huré, Fontenay aux Roses, and Roger Platzer, Chatillon sous Bagneux, France, assignors to Etablissement Public: Commissariat a l'Energie Atomique, Paris, France

Filed June 3, 1958, Ser. No. 739,486

5 Claims. (Cl. 23—270)

1. Apparatus for controlling the rate of flow of solid materials continuously circulated in a liquid-solid countercurrent treating column, wherein the solid materials are introduced at the top of the treating zone portion of said column and withdrawn at the bottom thereof, with a liquid circulating in said column portion in counterflow relation, said apparatus comprising: an enclosure positioned below said column portion, said enclosure and said treating zone being in communication through at least one orifice at the bottom end of said column portion for the flow of solids into said enclosure, said enclosure being provided with an outlet for the removal of said solids; a



horizontal wall positioned in said enclosure in spaced relation below said orifice and in the path of said flow of solids, said wall being positioned to accumulate solids thereon to the extent of blocking said orifice and being provided with at least one aperture therethrough; and means for delivering a controlled flow of liquid through said aperture in the direction of said orifice to thereby oppose the flow of solids, whereby the amount of liquid flow determines the extent of accumulation of solids above said wall.

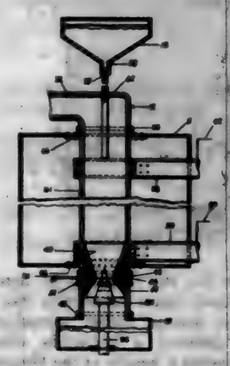
2,946,668

CONTINUOUS HIGH-TEMPERATURE REACTION APPARATUS

Mark Richelsen, Olcott, N.Y., assignor to Metal Chlorides Corporation, Middleport, N.Y.

Filed May 28, 1954, Ser. No. 433,209

4 Claims. (Cl. 23—277)



3. Apparatus adapted for high-temperature halogenation which comprises an elongated reactor tube, said tube being formed of carbon and being impregnated with carbon to render it impervious to fluids at elevated temperatures, longitudinally spaced internally-cooled means directly engaging said tube and adapted to serve as electrical contacts for passing electrical current through said tube, to heat said tube an outlet member for the reaction products and feed means for feed material into said tube at one end of the tube, an outlet for residual feed mate-

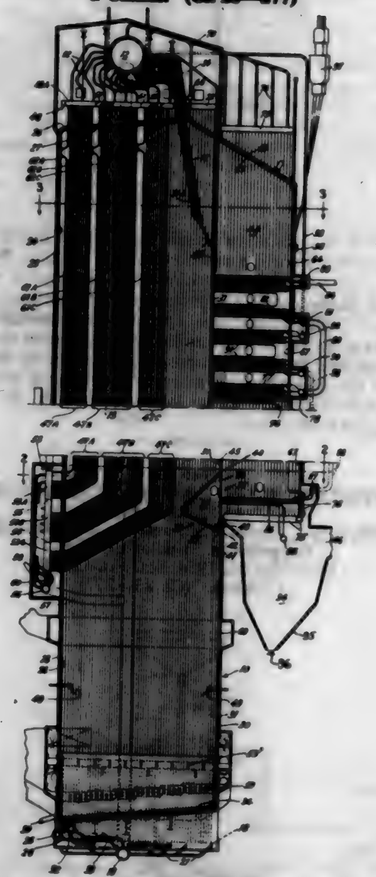
rial at the other end of said tube, said outlet including a venturi-shaped carbon throat and a vertically movable member co-acting with said throat, means for introducing a halogenating agent into said tube, a jacket surrounding said tube and extending for substantially the full length thereof, and insulating material within said jacket and around said tube.

2,946,669

CHEMICAL AND HEAT RECOVERY APPARATUS

James H. Coulter, Jr., Franklin Square, N.Y., and Lowell E. Johnson, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Filed June 10, 1957, Ser. No. 664,780
2 Claims. (Cl. 23—277)



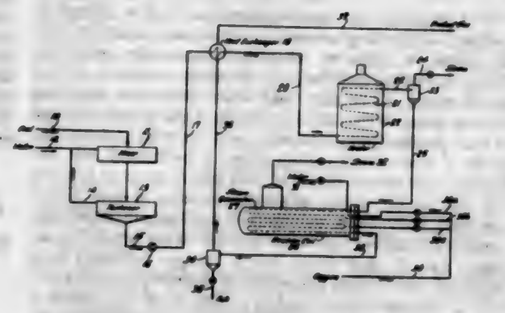
1. Apparatus for the recovery of chemicals and heat from pulp residual liquor containing inorganic chemicals and combustible organic matter comprising upright fluid cooled walls defining a vertically elongated furnace chamber and having a hearth at the bottom and a heating gas outlet in the upper rear portion thereof, a vapor-liquid drum positioned above said furnace and connected in the fluid circulatory system of said fluid cooled walls, means for incinerating said residual liquor in the lower portion of said furnace chamber for the recovery of inorganic chemicals and the production of hot combustion products, a plurality of laterally spaced rows of fluid cooled tubes forming platens lying in upright planes in the upper forward portion of said furnace, means connecting said platens into the fluid circulatory system with said drum, some of the fluid cooled tubes of said rear wall inclined forwardly and upwardly in spaced relationship across said heating gas outlet to a position adjacent the rear of said platens to form a screen across said outlet, and an inwardly tapering nose baffle positioned above said hearth substantially at the level of the lower portion of said platens and extending forwardly adjacent the rear of said platens for directing gas flow into heat exchange contact with said platens, said baffle having an upper surface extending upwardly and rearwardly to the plane of the rear wall of the furnace to form a substantially unobstructed space in the rear upper portion of said furnace extending downwardly from said screen to the upper surface of said baffle and rearwardly bounded by the rear wall of said furnace and forwardly by the rearward edge of said platens for the gravitational movement of solids dislodged from said screen onto said baffle and thence into the lower portion of said furnace.

2,946,670

MANUFACTURE OF SYNTHESIS GAS

Thomas H. Whaley, Mount Vernon, N.Y., assignor to Texaco Development Corporation, New York, N.Y., a corporation of Delaware

Filed Mar. 11, 1957, Ser. No. 645,844
5 Claims. (Cl. 48—206)



1. A process for the gasification of a solid carbonaceous fuel which comprises forming a slurry of particles of said carbonaceous fuel in water, passing said slurry as a confined stream through an externally heated elongated heating zone to vaporize substantially all of the water in said slurry and to form a dispersion of particles of said carbonaceous fuel in steam, withdrawing said dispersion from the heating zone at a velocity of at least 30 feet per second, introducing the particles of solid carbonaceous fuel dispersed in steam into an elongated reaction zone, introducing gas comprising uncombined oxygen into the reaction zone with the dispersion, imparting a velocity in excess of about 50 feet per second and at least as great as the velocity at which the dispersion is removed from the heating zone to the resulting stream of particles dispersed in steam and said gas in the elongated reaction zone to effect highly turbulent flow in the reaction zone, passing the stream of solid particles dispersed in steam and said gas through said elongated reaction zone at a pressure within the range of about atmospheric to about 600 p.s.i.g. and at an autogenous temperature within the range of from about 1500° F. to about 2000° F. thereby effecting a reaction between said uncombined oxygen and substantially all of said solid particles of said dispersion to yield a product gas comprising hydrogen and carbon monoxide, said velocity in excess of about 50 feet per second being maintained in the reaction zone until said reaction is substantially complete and discharging product gas comprising carbon monoxide and hydrogen from said reaction zone.

2,946,671

GAS GENERATING COMPOSITION CONTAINING SURFACTANT

Paul O. Marti, Jr., Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 26, 1955, Ser. No. 504,116
8 Claims. (Cl. 23—5)

1. A thermoplastic composition consisting at least 70% by weight of ammonium nitrate; from 18% to about 30% by weight of a plasticizable binder consisting essentially of about 20% to about 40% by weight of a cellulose acetate-containing ester plasticized with about 60% to about 80% by weight of an oxygen-containing organic plasticizer consisting essentially of a mixture of 2,4-dinitrodiphenyl ether and ethylene glycol diglycolate, from about 1% to about 5% by weight of an inorganic combustion catalyst selected from the class consisting of Prussian blue and ammonium dichromate, and from about 0.05% to about 1.0% by weight of a non-ionic surfactant material selected from the class consisting of polyethylene oxide homopolymers, copolymers of ethylene oxide and propylene oxide, and block polymers of propylene oxide and ethylene oxide, said homopolymers, copolymers and block polymers having molecular weights of about 1000 ot 3000; monoethers of 12 to 20 carbon atom fatty alcohols and said homopolymers, copolymers and block polymers said ethers having molecular weights of about 2000 to about 3000; monoesters of 12 to 20 carbon atom fatty acids and said homopolymers, copolymers and block polymers said monoesters having molecular weights within the range of about 1000 to about 3300; esters of 12 to 20 carbon atom fatty acids and the condensation product of ethylene oxide with sorbitol said esters having molecular weights of about 1000 to about 3300; and sorbitan oleates containing from 1 to 3 oleyl radicals.

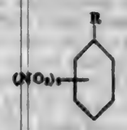
2,946,672

GAS GENERATING COMPOSITIONS

Paul O. Marti, Jr., Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Apr. 26, 1955, Ser. No. 504,117
10 Claims. (Cl. 52—9)

1. A gas-forming composition comprising about 73% to about 88% by weight of ammonium nitrate, from about 1% to about 5% by weight of a combustion catalyst selected from the class consisting of Prussian blue and ammonium dichromate and from about 10% to about 25% by weight of a plastic binder said binder consisting essentially of about 15% to about 35% by weight of polyvinyl chloride and from about 65% to about 85% by weight of a plasticizer, said plasticizer comprising from about 60% to about 100% of at least one dinitro-substituted phenyl nucleus-containing aromatic compound corresponding to the general formula



where "R" is selected from the class consisting of hydrogen, methyl, phenyl, nitrophenyl, phenoxy, mononitrophenoxy, 2-propeneoxy and alkoxy containing from 1 to 3 carbon atoms, and from about 40% to 0% of an ester selected from the class consisting of dialkyl phthalate, dipropyl diglycolate and polypropylene glycol dibenzoate.

2,946,673

MANUFACTURE OF DOUBLE-BASE PROPELLANT GRAINS

Vernon R. Grande, Kennett Square, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 29, 1955, Ser. No. 556,058
7 Claims. (Cl. 52—9)

1. The process for preparing cast double-base propellant grains which comprises agitating fibrous nitrocellulose in an aqueous bath containing organic liquid solvent which has active solvent power for said nitrocellulose and which has an appreciable vapor pressure at 100° C., said solvent being selected from the group consisting of solvents soluble in water in all proportions and solvents having limited solubility in water, said solvent being present in amount to soften and destroy the fibrous structure of the nitrocelluloses without dissolution thereof, continuing agitation with removal of substantially all the solvent until smooth, hardened, densified and irregular particles of the nitrocellulose having a bulk density on a dry basis of at least about 25 pounds per cubic foot are obtained, removing substantially all water from the resulting densified nitrocellulose particles, charging the resulting dry densified nitrocellulose into a propellant grain casting mold, evacuating air therefrom, introducing a nitroglycerin casting liquid into the mold to completely fill all voids and just cover the nitrocellulose particles, and curing the mixture of nitrocellulose and casting liquid in the mold until the particles of nitrocellulose absorb all of the casting liquid and become swollen and fully colloidized and the whole mass in the mold, due to the solvent action of the casting liquid on the nitrocellulose, consolidates and welds together into a solid, unitary, homogeneously colloided double-base propellant grain conforming to the shape of the casting mold.

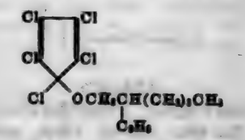
2,946,674

PENTACHLOROCYCLOPENTADIENE-MONO-2-ETHYLHEXYL ETHER

Henry Rakoff, College Station, Tex., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Oct. 1, 1956, Ser. No. 612,918
3 Claims. (Cl. 71—2.3)

1.



having a refractive index at 20° C. of approximately 1.5137 and a boiling point of 132–133.5° C. at 0.24–0.4 mm. Hg pressure.

3. A method for the protection against undesired plant growth which comprises the application of a phytotoxic amount of the composition of claim 1 to said plants and their environment.

2,946,675

SAWDUST COMPOSTS AND METHOD OF PREPARING THE SAME

Charles B. Davey and Siegel A. White, Madison, Wis., assignors to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

No Drawing. Filed Apr. 21, 1954, Ser. No. 424,775
3 Claims. (Cl. 71—8)

1. The process of preparing a sawdust compost which comprises reacting sawdust with anhydrous ammonia in a ratio of about 12–18 pounds of ammonia per cubic yard of sawdust, mixing the resulting alkaline sawdust product with about 1 to 6 pounds of potassium sulfate per cubic yard of sawdust, neutralizing the sawdust mixture with phosphoric acid to provide a sawdust product with a pH of about 6.1 to 6.9, inoculating the neutralized sawdust product with *Coprinus ephemerus* and allowing the resulting mixture to ferment while maintaining the sawdust moist.

2,946,676

FERROCHROMIUM-ALUMINUM ALLOY

Joseph H. Brennan, Niagara Falls, and Earle R. Saunders, Grand Island, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Continuation of application Ser. No. 421,182, Apr. 5, 1954. This application Apr. 29, 1957, Ser. No. 658,500
7 Claims. (Cl. 75—37)

1. In the manufacture of an alloy steel employing an exothermic reaction mixture as an additive material the improvement which comprises incorporating in said mixture an alloy having aluminum as an exothermic reducing agent therein, the alloy comprising from 5% to 85% aluminum, 5% to 70% chromium, silicon in an amount up to 30%, carbon in an amount up to 5% and the remainder iron, the ratio of said chromium to said iron being at least 1.5 to 1 and not more than 4 to 1.

2,946,677

TREATMENT OF ALLOYS CONTAINING IRON GROUP METALS

Stephen M. Shelton, Albany, Oreg., assignor to Oregon Metallurgical Corporation, Albany, Oreg., a corporation of Oregon

No Drawing. Filed Nov. 24, 1958, Ser. No. 775,701
9 Claims. (Cl. 75—97)

1. In the recovery of iron-group metals from a starting alloy containing the same, the process of producing salts of the iron-group metals in the starting alloy by alloying the starting alloy with aluminum to produce a friable aluminum alloy product, and dissolving the aluminum alloy product in an oxidizing acid which is reactive with the product to produce salts of the acid and iron-group metals.

2,946,678

METALLIC COMPOSITION

Lawrence V. La Rue, Detroit, Mich., assignor to Wall Colmonoy Corporation, Detroit, Mich., a corporation of New York

No Drawing. Filed Sept. 23, 1956, Ser. No. 613,391
6 Claims. (Cl. 75—134)

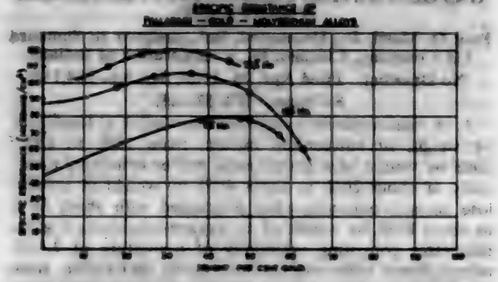
1. An alloy having substantially the composition 5 to 20% boron, 25 to 79% of one metal selected from the group consisting of chromium and nickel, and the remainder copper.

2,946,679

DUCTILE ELECTRICAL RESISTANCE ALLOY

Alan Sydney Darling, Needlewood, England, assignor to Johnson, Matthey & Company Limited, London, England, a British company

Filed July 29, 1959, Ser. No. 830,384
Claims priority, application Great Britain Aug. 6, 1958
7 Claims. (Cl. 75—134)



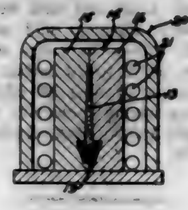
1. A ductile stable high resistance alloy composed of 16–90% palladium, 5–64% gold and 2.5–20% molybdenum apart from impurities.

2,946,680

POWDER METALLURGY

William Roger Rayment, University Heights, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio

Filed Aug. 10, 1955, Ser. No. 527,578
5 Claims. (Cl. 75—200)



1. The method of making corrosion resistant shapes from refractory compositions which comprises forming a refractory powder into a self-sustaining shaped preform, supporting said preform in a porous ceramic mold which has a thermal shrinkage rate substantially the same as that of said preform, infiltrating said preform while in said mold with a molten corrosion resistant composition under non-oxidizing conditions, and heat treating the infiltrated preform while the same is still confined in said mold.

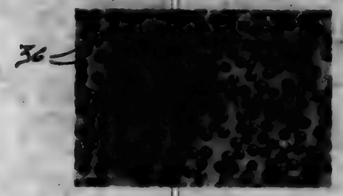
2,946,681

METHOD OF PROVIDING A BODY WITH A POROUS METAL SHELL

Robert L. Probst, Gordon J. Le Brasse, and Philip I. Kemp, Ann Arbor, Mich., assignors to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan

Filed Jan. 31, 1957, Ser. No. 637,677
3 Claims. (Cl. 75—200)

1. The method of providing a longitudinally extending body with a porous metal shell comprised of substantially spherical particles and which can be supplied internally with cooling fluid that flows outwardly through the shell, said method comprising forming the outer surface of the body with longitudinally extending lands separated by gaps, filling said gaps with refractory material, metal-coating the outer surfaces of said lands between said gaps, confining the body in a mold cavity of a size to provide a space surrounding said body, filling said space with a metal powder the individual particles of which are substantially spherical in shape, vibrating the powder to pack it within said space, initially sintering said powder



to bond it to the metal coating on said lands, removing said body with the sintered shell thereon from said mold cavity, finally sintering said powder, and removing the refractory material from said gaps by mechanically vibrating said body and said shell.

2,946,682

ELECTROSTATIC PRINTING

John P. Laurello, Westmont, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 12, 1958, Ser. No. 780,115
6 Claims. (Cl. 96—1)



1. A method of electrostatic printing utilizing a substrate having a volume resistivity greater than 10^{10} ohm-cm. at about room temperature and a volume resistivity less than 10^{10} ohm-cm. at a temperature substantially within a range of about 100° C. to 300° C. and having on one surface thereof an insulating photoconductive coating, said method comprising heating said substrate to at least said temperature at which said volume resistivity is less than 10^{10} ohm-cm., substantially immediately thereafter simultaneously contacting an electrode to the uncoated side of said substrate and applying an electric field through said coating and said substrate to produce a substantially uniform electrostatic charge on said coating, discharging the charge on said coating in selected areas to produce thereon a latent electrostatic image, and developing said electrostatic image with an electroscopic developer substance to produce a visible image on said coating.

2,946,683

PRESENSITIZED PRINTING PLATE AND METHOD FOR PREPARING SAME

Ibert Mellan, Bayside, and Robert Gumbinner, Tarrytown, N.Y., assignors to Polychrome Corporation, Yonkers, N.Y., a corporation of New York

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,155
17 Claims. (Cl. 96—75)

1. A presensitized planographic printing plate comprising a metallic base and a hydrophilic coating thereon in the form of a continuous film, said coating being provided by treatment of the metal base with an aqueous solution of a zirconium hexahalide, and a light sensitive diazo coating overlying said hydrophilic coating.

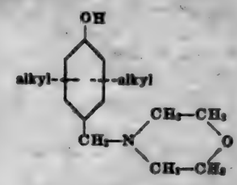
2,946,684

DIAZOTYPE COPYING PROCESSES

Oskar Süs, Wiesbaden-Biebrich, and Heinz Schlesinger, Wiesbaden, Germany, assignors, by mesne assignments, to Kalle & Esser Co., Hoboken, N.J., a corporation of New Jersey

No Drawing. Filed June 10, 1959, Ser. No. 819,245
Claims priority, application Germany June 14, 1958
5 Claims. (Cl. 96—91)

1. A diazotype light sensitive material for the preparation of intermediate copies comprising a light transmitting base material coated with a light sensitive composition which will form after exposure and development a yellow to greenish yellow image including a light sensitive diazo compound and an azo dye coupling component of the general formula:



2,946,685

COMPOSITION AND METHOD FOR TREATMENT OF CAGED PET BIRDS

Edward J. Ross, 4213 Prather Ave., St. Louis 9, Mo., and Charles H. Ellerdor, 14 Lynbrook Drive, St. Louis 24, Mo.

No Drawing. Filed Dec. 2, 1957, Ser. No. 699,936
6 Claims. (Cl. 99—4)

1. A process for treating caged pet birds to improve their health and well-being and to combat commonly occurring caged bird diseases such as the respiratory diseases, bacterial enteritis and infectious arthritis comprising administering to the bird a chemical composition including penicillin, streptomycin and vitamin B_{12} in about the relative proportions of 2,000 to 6,000 units of penicillin, 5 to 15 milligrams of streptomycin and 0.1 microgram of vitamin B_{12}.

2,946,686

PROCESS OF CONDITIONING AND DRYING GLUTAMIC ACID END LIQUOR

Kenneth M. Gaver, Preville, Quebec, and Allan Alfred Eisenbraun, Montreal, Quebec, Canada, assignors to The Ogilvie Flour Mills Co., Ltd., Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Filed Apr. 17, 1958, Ser. No. 729,066
9 Claims. (Cl. 99—14)

1. A process of conditioning and drying the end liquor remaining after the separation of glutamic acid in the process of manufacture of glutamic acid from wheat gluten by hydrolysis which comprises rehydrolyzing said end liquor by alkali; neutralizing the rehydrolyzed end liquor; and spray drying the neutralized end liquor.

2,946,687

METHOD OF MAKING VODKA

Frederick L. Jacobs, Wethersfield, Conn., assignor to Heublein, Inc., Hartford, Conn., a corporation of Connecticut

No Drawing. Filed Dec. 27, 1957, Ser. No. 705,500
8 Claims. (Cl. 99—48)

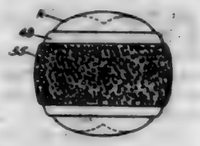
1. A method of treating a mixture of ethanol and water, which consists in flowing said mixture through a

bed of pieces of charcoal which have adsorbed carbon dioxide and which also have calcium oxide; reacting said calcium oxide with said water within said bed to form calcium hydroxide which is dissolved in said water within said bed; also dissolving some of said adsorbed carbon dioxide in said water within said bed to form carbonic acid within said bed; and reacting said dissolved calcium hydroxide with said carbonic acid within said bed to form calcium carbonate within said bed.

2,946,688
METHOD OF STABILIZING THE FLAVOR OF FOODS AND THE RESULTING PRODUCT
Waldemar A. Rosenthal and Hamilton A. Pinkalla, Milwaukee, Wis., assignors to Chr. Hansen's Laboratory, Inc., Milwaukee, Wis., a corporation of New York
No Drawing. Filed July 28, 1958, Ser. No. 751,190
8 Claims. (Cl. 99—97)

1. The method of fixing and stabilizing the flavor of foods which includes preparing an autolysate of *Torulopsis utilis* with 16% sodium chloride solution in the ratio by weight of 1.0 part of yeast dried to no more than 5% moisture content to 2.3 parts of the solution, and mixing 1–5% by weight of the autolysate with the food until a homogeneous composition results.

2,946,689
CARAMEL-COATED APPLE
Harry Fiksl, Bangor, Mich.
Original application Nov. 16, 1955, Ser. No. 547,057, now Patent No. 2,889,801, dated June 9, 1959. Divided and this application Aug. 11, 1958, Ser. No. 754,481
2 Claims. (Cl. 99—138)



1. As an edible confection article, a fresh apple with its full natural skin imperforate and having an annular band of caramel confection adhered to its surface completely around the apple with the core of the apple as the axis of the band and with an overcoated layer of a comminuted confection embedded in the layer of caramel.

2,946,690
METHOD OF PREPARING BARREL PACK PICKLES
Murray M. Scharf, 7542 N. Rockwell St., Chicago 45, Ill.
No Drawing. Filed Feb. 14, 1958, Ser. No. 715,189
9 Claims. (Cl. 99—154)

1. In a process of preparing barrel pack pickles to inhibit the discoloration thereof over prolonged periods of time, the steps which comprise packing cucumbers with a salt brine containing conventional flavoring constituents and an added innocuous alkali in amount sufficient to produce a pH in the brine, after the addition thereof to said cucumbers, between 6 and 10, and then subjecting said packed cucumbers to a temperature of about 140 to 200 degrees F. for a time of at least several minutes at the higher temperatures recited and proportionally longer at the lower temperatures recited but insufficient adversely to affect the desired characteristics of said pickles whereby to effect the aforesaid inhibition of discoloration.

2,946,691
MANUFACTURING METHOD OF SUCCADES WITH THE NATURAL FORM OF RAW FRUITS OR VEGETABLES
Hisaki Sagitani, 482 Minatokata, Okayama City, Prefecture of Okayama, Japan
No Drawing. Filed Oct. 21, 1957, Ser. No. 691,120
Claims priority, application Japan Oct. 29, 1956
3 Claims. (Cl. 99—169)

1. A method of manufacturing succades with natural form which comprises picking fruit which is almost ripe, immersing immediately and for at least a month said almost ripe fruit in a sulphurous acid solution which contains calcium carbonate, removing the fruit from said solution, washing and then rapidly freezing said fruit for at least two hours at a temperature of about 20° C. below zero, thawing the frozen fruit in water, cleansing and blanching the fruit by washing in hot and cold water alternately, thereby completely eliminating any sulphurous acid which might have remained in the flesh of the fruit, immersing the cleansed and blanched fruit in a dextrin-rich syrup until the flesh of said fruit gets over Brix 65°, said syrup being produced by saccharizing starch, drying the resulting fruit, immersing the dried fruit in a pectin solution and then in a calcium chloride solution so as to coat the surface of said fruit with a film of calcium pectinate and drying the coated fruit to eliminate the moisture in the film.

2,946,692
PROCESS OF CURING MEAT AND COMPOSITION THEREFOR
Louis E. Kahn and Johannes A. Dolve, Cincinnati, Ohio, assignors, by mesne assignments, to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 22, 1957, Ser. No. 679,769
10 Claims. (Cl. 99—322)

1. In a method of preparing a pickle-preserved fryable meat product the step comprising introducing into a meat product a pickling solution consisting essentially of water, sodium chloride, and a sweetening agent selected from the group consisting of cyclamic acid, saccharin, cyclamates and saccharin salts of non-toxic foodstuff cations which form hydroxides having a pK value less than 10, sorbitol, dulcin, glycine methyl and ethyl esters of cyclohexylsulfamic acid, N-(3-methylcyclopentyl)-sulfamic acid, the sodium, calcium, and potassium N-(3-methylcyclopentyl)-sulfamates, and mixtures thereof.

2,946,693
METHOD OF MAKING A FOAMED AND EXPANDED PRODUCT FROM VOLCANIC GLASS
Alfred E. Booth, East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 25, 1959, Ser. No. 795,328
11 Claims. (Cl. 106—40)

1. In a method of making a foamed and expanded product from volcanic glass, the steps comprising mixing together to form a batch, finely divided volcanic glass and, as a fluxing and gassing agent, a mixture of sodium nitrate and sodium hydroxide in the proportion of about a 5% to about a 35% addition of said fluxing and gassing agent to said volcanic glass, based on the Na_2O yield of the fluxing and gassing agent, said sodium nitrate being present in said mixture to the extent of between about 2 mol percent and 98 mol percent; firing said batch within a temperature range of about 1300° F. to about 2000° F. to react said mixture of sodium hydroxide and sodium nitrate with said volcanic glass and flux and soften the same and simultaneously to release gas into said fluxed and softened glass for substantial foaming and expanding thereof; continuing the firing until the gas released into said softened glass produces a foamed and substantially expanded product; and thereafter annealing the product.

2,946,694
GLASS COMPOSITION
Dominick Labino, Maumee, Ohio, assignor to L.O.F. Glass Fibers Company, Toledo, Ohio, a corporation of Ohio
No Drawing. Filed June 2, 1958, Ser. No. 738,987
5 Claims. (Cl. 106—47)

3. A glass having substantially the following composition by weight:

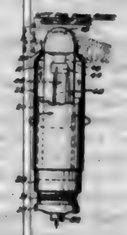
	Percent
Li_2O	0–4.5
Al_2O_3	16.0–28.0
B_2O_3	10.5–14.0
Na_2O	31–42
P_2O_5	18–25
F_2	8–10.5

2,946,695
SELF-HARDENING ALKALI- AND ACID-PROOF WATER GLASS CEMENTS CAPABLE OF SWELLING
Karl Dietz, Kronberg, Taunus, and Guido Max Rudolf Lorentz, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Apr. 2, 1957, Ser. No. 650,088
Claims priority, application Germany Sept. 11, 1956
9 Claims. (Cl. 106—84)

1. Self-hardening alkali-proof and acid-proof water glass cement powder composition capable of swelling consisting essentially of alkali-water glass, 0.1 to 10% of a cyanamide of a bivalent metal selected from the group consisting of lead and alkaline earth metals, an inert inorganic filling material and 5 to 50% of a sintered and finely triturated calcium-aluminum-iron-silicate, wherein the above percentage figures are calculated upon the weight of the cement powder and said calcium-aluminum-iron-silicate consists of

5 to 15% by weight of SiO_2,
30 to 50% by weight of Al_2O_3,
5 to 15% by weight of Fe_2O_3, and
35 to 45% by weight of CaO.

2,946,696
MASKING METHOD AND APPARATUS
Stanley A. Lopenski, Pompton Plains, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 31, 1957, Ser. No. 706,435
8 Claims. (Cl. 117—38)



1. The method of masking a selected body portion of an article from a processing medium sprayed from a movable source which scans the exposed end portion of said article, and effecting a desired final line of cut-off which method comprises, inserting said article into a shielding member adapted to loosely receive the selected body portion to be protected and define therewith a chamber open to the atmosphere and normally accessible to said processing medium through a constricted opening which, in turn, defines the line of cut-off on said article, positioning said article so that a predetermined part thereof in excess of the said selected body portion to be protected is recessed below the edge of said shielding member while said medium source scans the exposed end portion of said article, placing said medium source abreast of and preferentially below the defining edge of said shielding member and constricted opening thereat after the aforesaid end portion has been processed, and then raising said article an additional distance out of said shielding member to expose the recessed predetermined part of said article which is in excess of the said selected body portion and thereby effect said desired final line of cut-off.

2,946,697
MASKING METHOD AND APPARATUS
James Petro, Little Falls, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 31, 1957, Ser. No. 706,436
8 Claims. (Cl. 117—38)

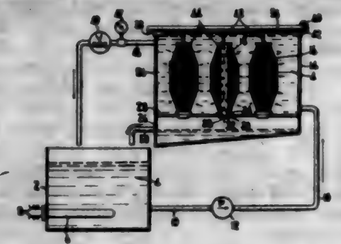


2. The method of masking a selected part of an article from a processing medium which method consists of inserting said article into a shielding member adapted to loosely receive the selected part to be masked, positioning said article within and in wholly spaced relationship with said shielding member to define with the encircled part of said article an opening which coincides with a predetermined line of cut-off on said article, rotating said article and shielding member while so positioned, and then passing a fluid medium through said opening to prevent the influx of said processing medium into said opening and thereby restrict said processing medium to the exposed part of said article above the aforesaid line of cut-off.

2,946,698
METHOD OF APPLYING WAX TO STRANDS OF GLASS FIBERS
Wayne A. Brunswick, Shelby, N.C., and Clarence H. Helbing, Shelbyville, Ind., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Filed Oct. 20, 1958, Ser. No. 768,361
3 Claims. (Cl. 117—54)

1. A method of applying wax to layers of strands of glass fibers supported on a hollow, tubular support hav-

ing openings therein which comprises continuously passing molten wax through the layers of strands from the outside layer to the support and through the openings in the support until the strands are saturated with a maximum



amount of wax and thereafter continuing the passage of wax through the strands until the amount of wax on the strands is reduced and the difference between the high and low amounts of wax on the strands at different layers on the support is reduced.

2,946,699

PROCESS OF IMPREGNATING GRAPHITE WITH A URANIUM COMPOUND

Manuel C. Sanz, Los Angeles, Robert R. Randolph, Bellflower, and Chauncey Starr, Pacific Palisades, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Mar. 24, 1947, Ser. No. 736,626
4 Claims. (Cl. 117—65)

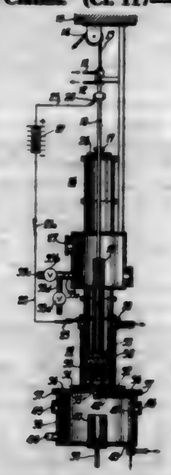
1. A process of forming reactor material comprising the steps of placing in a container uranyl nitrate hexahydrate, and graphite; heating the uranyl nitrate hexahydrate and graphite to a temperature greater than about 60° C. to melt the uranyl nitrate hexahydrate in its own water of crystallization so that it will then be absorbed by the graphite; and thereupon heating the graphite with the salt absorbed therein to a temperature greater than about 235° C. until the salt is converted into an oxide.

2,946,700

PRODUCTION OF INFILTRATED COMPOSITES

Maurice J. Day, Pittsburgh, Pa., assignor to Crucible Steel Company of America, Pittsburgh, Pa., a corporation of New Jersey

Filed Dec. 24, 1957, Ser. No. 705,000
5 Claims. (Cl. 117—66)



1. The method of producing infiltrated composites comprising an initially porous matrix of higher melting material infiltrated with a lower melting metal, which comprises: arc melting a consumable electrode composed of said infiltrant metal to form a molten pool thereof in which said matrix is immersed and while maintaining a substantially subatmospheric pressure surrounding said arc and matrix during at least the initial portion of said melting, thereupon increasing said pressure sufficiently to force the molten infiltrant metal into the pores of said matrix to the maximum extent, and thereupon removing the excess molten infiltrant metal.

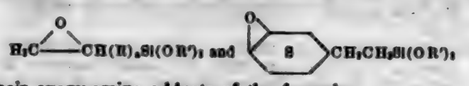
2,946,701

METHOD OF TREATING GLASS WITH EPOXY-SILANES AND THEIR EPOXY-AMINE ADDUCTS, AND THE ARTICLES MADE THEREBY

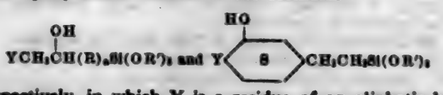
Edwin P. Plueddemann, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Nov. 12, 1957, Ser. No. 695,542
6 Claims. (Cl. 117—72)

6. A method comprising applying to glass an aqueous solution of a compound selected from the group consisting of epoxy compounds of the formulas



their epoxy-amine adducts of the formulas



respectively, in which Y is a residue of an aliphatic hydrocarbon radical substituted water-miscible amine which residue is attached to the carbon through a carbon-nitrogen linkage, and water soluble hydrolyzates of said epoxy compounds and said epoxy-amine adducts, in all of which compounds R is a radical attached to silicon by a carbon-to-silicon bond and selected from the group consisting of divalent hydrocarbon radicals of less than 10 carbon atoms and divalent radicals of less than 10 carbon atoms which are composed of carbon, hydrogen, and oxygen atoms, the latter being in the form of ether linkages, *a* has a value selected from the group consisting of 0 and 1 and R′ is selected from the group consisting of aliphatic hydrocarbon radicals of less than 5 carbon atoms, carboxyacyl radicals of less than 5 carbon atoms and radicals of the formula $(—CH_2CH_2O)_nZ$ in which *n* is an integer of at least 1 and Z is selected from the group consisting of hydrogen atoms and aliphatic hydrocarbon radicals of less than 5 carbon atoms, allowing the resulting coating to dry and bonding said coated glass with an organic resin.

2,946,702

HIGH SOLIDS VINYL DISPERSIONS

Henry J. Bach, Mount Lebanon Township, Allegheny County, Pa., assignor, by mesne assignments, to American-Marietta Company, Stoner-Mudge Co. Division, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Aug. 31, 1956, Ser. No. 607,260
10 Claims. (Cl. 117—75)

9. A fluid resin dispersion, capable of being spread on a surface and thereafter fused by heating into a hard, stable, continuous, tough and abrasion-resistant coating, comprising resin, plasticizer, and volatile liquid dispersant components, said components consisting of (1) solid thermoplastic polyvinyl resin having an average molecular weight in excess of 20,000 and made from vinyl chloride in major amount, (2) plasticizer for said resin, and (3) volatile liquid dispersant material consisting essentially of mixed aromatic alkyl substituted polynuclear hydrocarbons having a composite specific gravity of about one, a mixed aniline point of about 26° to about 30° C., and a distillation range of about 150° C. to about 450° C., the plasticizer component (2) constituting about 5% to about 25% of the combined weight of the resin and plasticizer components (1) and (2), and the volatile liquid dispersant component (3) constituting about 35% to about 55% of the total weight of components (1), (2), and (3), said composition having a viscosity in the range of about 30 seconds to about 300 seconds in No. 4 Ford cup at 80° F., being capable, when baked at 425° F. for 5 minutes, of releasing most of the said material (3) to atmosphere.

2,946,703

METHOD AND COMPOSITION FOR COMBATING SLAG FORMATION ON REFRACTORY SURFACES

Harris Thompson, Downers Grove, Ill., assignor to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed Apr. 16, 1956, Ser. No. 578,194
15 Claims. (Cl. 117—123)

1. In a regenerative gas preheating method wherein hot effluent gases containing slag-forming materials are conducted over regenerative refractory surfaces to transfer heat thereto, and fresh gases are conducted over the thus heated refractories to transfer heat from the refractories to the fresh gases, the improvement for combating slag formation on said refractory surfaces which comprises providing a coat of magnesium oxide on said surfaces.

2,946,704

OPAQUE GLASS

Burnham W. King, Columbus, and Allison K. Smalley, Worthington, Ohio, assignors, by mesne assignments, to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 18, 1956, Ser. No. 616,588
8 Claims. (Cl. 117—129)

8. A method of producing a white, opaque enamel coating on a cast iron surface comprising pulverizing a frit consisting essentially of from 35 to 65 percent by weight PbO, from 15 to 40 percent by weight SiO_2, from 1 to 15 percent B_2O_3, from 1 to 15 percent by weight V_2O_5, up to 14 percent by weight of at least one alkali selected from the group consisting of ZrO_2, TiO_2, and Al_2O_3, applying said frit on the cast iron surface to be coated, and firing it at a temperature between about 1050° F. and about 1350° F. to obtain an enamel coating.

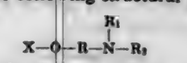
2,946,705

WARP SIZING PROCESS

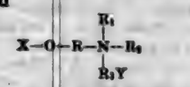
Herbert C. Olsen, Berkeley Heights, N.J., assignor to National Starch and Chemical Corporation, a corporation of Delaware

No Drawing. Filed Aug. 26, 1958, Ser. No. 757,191
6 Claims. (Cl. 117—139.5)

1. In a method for the warp sizing of textile yarns, the step which comprises the passage of the yarns through a sizing solution containing a starch-amine reaction product selected from the class consisting of starch-amine reaction products having the following structural formulae:



wherein X is starch, R is a radical selected from the group consisting of substituted alkyl, hydroxyalkyl, acyl, and aroyl radicals, and each of R_1 and R_2 is a radical selected from the group consisting of hydrogen, alkyl, and aralkyl radicals, and



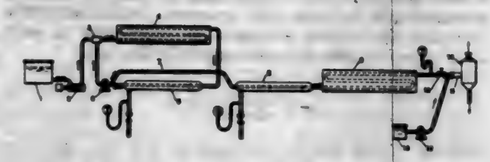
wherein X is starch, R is a radical selected from the group consisting of substituted alkyl, hydroxyalkyl, acyl, and aroyl radicals, and each of R_1 and R_2 is a radical selected from the group consisting of hydrogen, alkyl, and aralkyl radicals, and where R_3 is a radical selected from the group consisting of hydrogen and alkyl radicals, and Y is a radical selected from the group consisting of chloride, bromide, and iodide radicals.

2,946,706

PROCESS FOR THE HYDROLYZATION OF STARCH AND OTHER POLYSACCHARIDES

Edmund F. Boon and Laszlo Vahl, Delft, and Wouter G. Klagma, Amsterdam, Netherlands, assignors to Werkspoor N.V., Amsterdam, Netherlands, a company of the Netherlands

Filed Aug. 14, 1956, Ser. No. 604,032
Claims priority, application Netherlands Aug. 29, 1955
4 Claims. (Cl. 127—38)



1. A process for the hydrolyzation of starch and other polysaccharides involving the use of a heater and reactor comprising passing an acidified suspension of a polysaccharide sequentially through the heater and reactor for successive heating operations, repeatedly recycling the fluid from the reactor to the heater and back through the reactor, adding fresh suspension between the reactor and heater, and heating the fresh suspension to pass the same through the gelatinization stage by the heat of the recycled fluid.

2,946,707

STORAGE BATTERIES AND FLUIDS THEREFOR

Harold H. Sperber, 5627 Hickam Drive, Dayton, Ohio

No Drawing. Filed Sept. 30, 1954, Ser. No. 459,558
17 Claims. (Cl. 136—154)
(Granted under Title 35, U.S. Code (1952), sec. 266)

10. A lead-type storage battery comprising a case, separators, plates, sulphuric acid, and between 0.1 and 50% by volume based on the entire battery fluid of a stable liquid organo-siloxane.

2,946,708

NITRIDING WITH ELECTRIC GLOW DISCHARGE

Bernhard Berghaus and Hans Bucek, Zurich, Switzerland, assignors to Elektrophysikalische Anstalt Bernhard Berghaus, Vaduz, Liechtenstein

No Drawing. Filed Sept. 14, 1955, Ser. No. 534,376
11 Claims. (Cl. 148—16.6)

1. Process for hardening the interior surface of steel gun-barrels which comprises subjecting the portion of the interior surface of a gun-barrel which is contacted by the projectile to an electrical glow-discharge in a nitrogenous atmosphere to effect heating of the interior surface of the gun-barrel, substantially entirely by such glow-discharge, to a nitriding temperature and heavy bombardment of such surface, with nitrogen ions to enrich the treated surface with nitrogen through the glow-discharge until there is obtained a hardened interior surface zone characterized by increased resistance to wear, and by ductility and resistance to splintering.

2,946,709
POWER TRANSISTOR WITH MONOCRYSTALLINE SEMICONDUCTOR BODY
Adolf Herlet, Pretzfeld, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Filed July 21, 1958, Ser. No. 749,706
Claims priority, application Germany July 23, 1957
10 Claims. (Cl. 148—33)



1. A power transistor comprising a monocrystalline semiconductor body having at least two highly doped areas of a given conductance type and a less highly doped basis area of the opposite conductance type intermediate said other two areas and forming respective p-n junctions together therewith the two highly doped areas providing a collector and an emitter respectively, said semiconductor body in said basis area having a specific resistance (ρ) and a thickness (W) correlated to each other approximately in accordance with the ratio

$$\rho/W = \frac{1}{\epsilon_0 \mu E_k} \text{ohm}$$

wherein ρ is the specific resistance in ohm cm., W is the thickness in cm., ϵ_0 is the influence coefficient equal to $8.86 \cdot 10^{-14}$ amp. second/volt cm., ϵ is the dielectric constant of the semiconductor material (dimensionless), μ in cm.²/volt second is the mobility of the charge carriers in the basis area, and E_k in volt/cm. is the critical electric field strength of the semiconductor material.

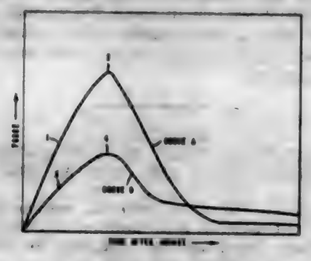
2,946,710
POLYTETRAFLUOROETHYLENE ADHESIVE TAPE
Reuben Thomas Fields, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 8, 1956, Ser. No. 570,262
1 Claim. (Cl. 154—2.26)



The method of insulating an electrical conductor which comprises the steps of contacting a tape of polytetrafluoroethylene with a solution of an alkali metal in a non-metallic, inert solvent treating the tape with nitric acid, coating the tape with an uncured resin of the class consisting of silicone resins, epoxy resins and polyester resins, winding the tape onto an electrical conductor and thereafter heating the tape and conductor sufficiently to cause curing of the said resin.

2,946,711
SAFETY-GLASS LAMINATE
Chester Griswold Bragaw, Jr., West Chester, Pa., and William Goodrich Sineral, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 11, 1957, Ser. No. 702,047
6 Claims. (Cl. 154—2.77)

1. An improved safety-glass laminate having a total thickness of 0.180 to 0.370 inch comprising two outer layers of glass bonded to a central layer of plasticized polyvinyl butyral, the total thickness of the two layers of glass being from 0.100 to 0.250 inch and the thickness of said central layer being from 0.030 to 0.120 inch in thickness, said polyvinyl butyral having a composition of 15–30% by weight of vinyl alcohol, 0–2% by weight of vinyl ester and the remainder vinyl butyral, said plasticized polyvinyl butyral containing 25–40% by weight of a compatible ester plasticizer, the exact amount of said plasticizer being that amount which will cause the break heights at 0° F. and at 120° F. of said laminate to be



substantially equal when measured by the test described in American Standard Safety Code Z 26.1–1950 and modified by employing as the missile of the said test a ball 6.5 inches in diameter and weighing 9.2 pounds, and further modified by mounting the said laminate in a rigid rubber mounting substantially identical to that employed in mounting windshields in automobiles.

2,946,712
LAMINATED TRIM SHEET
James W. Greig, Grosse Pointe Park, Mich., assignor to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan
Filed May 22, 1956, Ser. No. 586,531
4 Claims. (Cl. 154—45.9)



1. A laminated trim sheet comprising, in combination, a cast flexible plastic finish layer of a shallow pan shape in cross section and having a marginal rim provided with an inwardly extending flange overhanging the bottom of the pan shape and spaced therefrom, said rim and flange of the plastic layer being self supporting as to shape and spacing of the flange from the bottom of the pan-shaped plastic layer, a cushionlike core layer disposed within the pan-shaped plastic layer with the marginal portion of the core layer received underneath the flange of the plastic layer, said plastic layer being cast in situ upon and into securement with the front face of the core layer and about the margin thereof and the flange of the plastic layer being cast in situ upon and into securement with the back face of the core layer, said plastic flange being provided with a series of fastener-receiving apertures extending therethrough underneath the core layer, said apertures adapted to receive fasteners therethrough to be engaged through and underneath the flange to secure the trim sheet to a support, said core layer being held to size and shape by the plastic layer.

2,946,713
PROCESS FOR EMBOSSING DECORATIVE ARTICLES
Peter P. Dusina, Jr., St. Clair Shores, and Ralph M. Stallard, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 6, 1955, Ser. No. 538,914
14 Claims. (Cl. 154—106)

1. A process for dielectrically embossing a sponge rubber trim assembly comprising a sheet of trim material

positioned on a layer of sponge rubber wherein heat and pressure are applied to form depressed areas in the assembly, the invention comprising the step of providing the rubber with a conditioning material consisting of at least one of the materials selected from the group



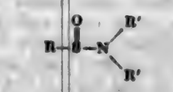
consisting of water, methyl alcohol and the higher alcohols to enable the rubber to be selectively heated and fused in the depressed areas, the fused rubber acting as an adhesive to retain the embossed design in the trim material.

2,946,714
FUNGICIDAL COMPOSITIONS COMPRISING REACTION PRODUCTS OF ETHYLENE AND SULFUR
Irving D. Webb and John W. Yale, Jr., Yerba Linda, Calif., assignors, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California
No Drawing. Filed Mar. 18, 1957, Ser. No. 646,529
12 Claims. (Cl. 167—22)

1. A fungicidal composition comprising an inert fungicidal carrier material and, as the essential fungitoxic ingredient, a normally liquid product obtained by heating ethylene with elemental sulfur at a reaction temperature between about 75° C. and about 250° C. and at a pressure between about 200 and about 5000 p.s.i.g., and thereafter separating from the product so obtained the components thereof which boil below about 140° C. under about 0.4 mm. pressure, the proportions of ethylene and sulfur and the time of said heating being such that the said product contains between 1 and about 6 atoms of sulfur per molecule of ethylene.

2,946,715
INSECTICIDAL COMPOSITION CONTAINING A SULFINAMIDE AND ALLETHRIN OR PYRETHRUM
Roy E. Stansbery and Rector P. Loudian, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed June 23, 1958, Ser. No. 743,973
15 Claims. (Cl. 167—22)

11. A method of paralyzing and killing insects which comprises exposing such insects to the action of an insecticidal composition containing a sulfinamide and a pyrethrum-like compound in a ratio in the range from 2.5:1 to 150:1 on a weight basis, wherein said sulfinamide has the formula



wherein R and R′ are hydrocarbon radicals selected from the group consisting of aryl, saturated acyclic and saturated alicyclic radicals and combinations of such radicals, each R contains from 1 to 16 carbon atoms, each R′ contains from 1 to 10 carbon atoms, and the total carbon atoms in R plus the R's does not exceed 25, and wherein the said pyrethrum-like compound is selected from the group consisting of pyrethrum and allethrin.

2,946,716
METHOD OF CONTROLLING AND ERADICATING MITES AND TICKS
Frederick A. Hessel, Montclair, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 27, 1958, Ser. No. 744,927
3 Claims. (Cl. 167—22)

1. A process of controlling mites and ticks attacking chlorophyllaceous plants which comprises applying to said plants an aqueous solution comprising 0.05 to 0.5% by weight of an acetylenic diol having the following general formula:

$$HOCH_2(-C{\equiv}C-)_nCH_2OH$$

wherein n represents a positive integer of from 1 to 2.

2,946,717
INSECT REPELLENT COMPOSITION AND METHOD FOR REPELLING INSECTS
Kenneth E. Cantrell, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 21, 1958, Ser. No. 756,423
25 Claims. (Cl. 167—22)

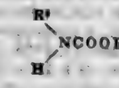
1. An improved insect repellent having enhanced repellency comprising 3-chloropropyl-n-octyl sulfoxide incorporated with a N-alkyl imide of bicyclo-[2.2.1]-5-heptene-2,3-dicarboxylic acid wherein the alkyl substituent of said imide has 1 to 12 carbon atoms.

2,946,718
SYNERGISTIC INSECTICIDAL COMPOSITIONS
Howard A. Jones and John A. Garman, Baltimore, Md., and Berton C. Dickinson, Lyndonville, N.Y., assignors to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Original application Mar. 24, 1955, Ser. No. 496,596. Divided and this application Oct. 17, 1958, Ser. No. 767,782
2 Claims. (Cl. 167—22)

2. The method of killing insects which comprises applying to the insects and their habitat a synergistic insecticidal composition comprising O,O-dimethyl S-(1,2-dicarbethoxyethyl)dithiophosphate and phenyl carbamate, wherein said components are present in the ratio of about two parts of said carbamate per part of said dithiophosphate.

2,946,719
SYNERGISTIC INSECTICIDAL COMPOSITIONS
Howard A. Jones and John A. Garman, Baltimore, Md., and Berton C. Dickinson, Lyndonville, N.Y., assignors to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Original application Mar. 24, 1955, Ser. No. 496,596. Divided and this application Oct. 23, 1958, Ser. No. 769,070
6 Claims. (Cl. 167—22)

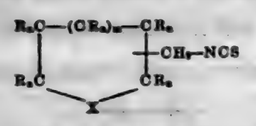
1. Synergistic insecticidal compositions comprising O,O-dimethyl S-(1,2-dicarbethoxyethyl)dithiophosphate and an organic carbamate ester having the following general formula



wherein R^4 is ethyl and R^5 is selected from the group consisting of 2-naphthyl, furfuryl, 1-naphthyl and 2-ethylhexyl radicals, wherein said components are present in the ratio of about 2 parts of said carbamate per part of said dithiophosphate.

2,946,720
METHOD OF TREATING NEMATODES BY TREATING WITH A HETEROCYCLIC METHYL ISOTHIOCYANATE
Norman J. Lewis, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 13, 1957, Ser. No. 658,584
13 Claims. (Cl. 167—33)

1. A method of inhibiting the destructive activity of parasitic nematodes in soil which comprises dispersing in the infected soil a toxic amount of a compound having the structure



wherein R is a radical selected from the group consisting of hydrogen, alkyl radicals having up to three carbon atoms, and halogen atoms; wherein *n* is an integer from one (1) to two (2), and *m* is an integer from zero (0) to one (1) provided that when *m* is zero (0) the sum of all of integers *n* is an uneven integer from three (3) to seven (7) and when *m* is one (1) the sum of all the *n* integers is an uneven integer from five (5) to nine (9); and wherein X is a chalcogen having an atom weight between ten (10) and forty (40).

2,946,721
EMULSIFICATION OF WATER-INSOLUBLE ORGANIC SOLVENTS
Robert C. Hyatt, Cranford, and Raymond L. Mayhew, Phillipsburg, N.J., and Leslie G. Nunn, Brooklyn, Ohio, assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 17, 1954, Ser. No. 476,082
15 Claims. (Cl. 167—42)

1. An emulsifier mixture comprising about 50 to 90 parts by weight of a water soluble synthetic nonionic surface active polyoxyethylene ether of an alkylated phenol containing from about 8 to 18 carbon atoms in said alkylated portion and from about 7 to 30 oxyethylene groups in said polyoxyethylene portion, and about 10 to 50 parts by weight of the cyclohexylammonium salt of an alkylbenzene sulfonic acid containing at least one alkyl group of at least 3 carbon atoms.

2,946,722
COMPOSITION AND METHOD FOR TREATING POULTRY
Walter H. Hoffman, 24 Crestview Drive, and Waltman P. Scott, 2353 S. Maryland, both of Springfield, Mo.
No Drawing. Filed July 21, 1959, Ser. No. 828,444
8 Claims. (Cl. 167—53.1)

1. A composition for poultry treatment consisting essentially of a nontoxic water-soluble salt of propionic acid and lesser but complementary quantities of methyl rosaniline, ferric choline citrate, menadione sodium bisulfite, and trace-element compounds.

2,946,723
COMPOSITION CONTAINING PARA-AMINOSALICYCLIC ACID AND ITS SODIUM SALT
Frank L. Root, St. Louis, Mo., assignor to Dumas-Wilson & Co., St. Louis, Mo., a corporation of Missouri
No Drawing. Filed Jan. 21, 1958, Ser. No. 710,188
9 Claims. (Cl. 167—65)

4. A therapeutic composition consisting essentially of para-aminosalicylic acid and a salt selected from a group consisting of sodium para-aminosalicylate, potassium para-aminosalicylate and a mixture of sodium and potassium para-aminosalicylate, the composition having a pH of about 3.3 to 4.8.

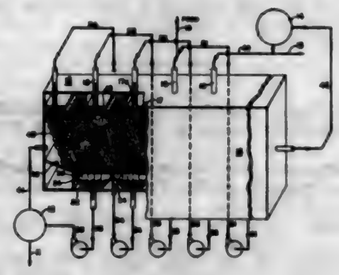
2,946,724
STABLE POLIOMYELITIS LIVE VIRUS VACCINE
William Valentine, Nanuet, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed May 29, 1957, Ser. No. 662,333
4 Claims. (Cl. 167—78)

1. An orally administrable poliomyelitis virus vaccine comprising an aqueous attenuated non-pathogenic poliomyelitis virus suspension adsorbed by substantially nonhydrated gelatin particles from 10 to 140 mesh as water of hydration, the amount of gelatin being sufficient so that after hydration with the virus suspension, the particles are substantially dry, said virus vaccine being free-flowing, particulate, granular, and storage-stable with respect to its activity.

2,946,725
DENTIFRICE COMPOSITIONS
Paul E. Norris, Springfield Township, Hamilton County, and Henry C. Schweitzer, Sycamore Township, Hamilton County, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 25, 1957, Ser. No. 647,956
12 Claims. (Cl. 167—93)

1. A dentifrice containing a stannous compound, said stannous compound being difficultly soluable but capable of dissolving to supply at least 10 but not more than 1000 parts per million of stannous ions when in association with water, and being present in said dentifrice in an amount sufficient to provide said stannous compound in undissolved and undissociated form, said dentifrice having a pH of from 3.5 to 6.0.

2,946,726
HORIZONTAL DISTILLATION APPARATUS
Michael Markels, Jr., 1017 Woodside Drive, Alexandria, Va.
Filed Dec. 4, 1958, Ser. No. 778,269
4 Claims. (Cl. 202—158)



1. A distillation apparatus for separating a mixture of compounds of low and of high boiling points comprising a horizontal longitudinal tube; an apertured vapor inlet closure secured in air tight manner to one end of said tube; an apertured vapor outlet closure secured in in air tight manner to the other end of said tube; packing material substantially completely filling said tube; a plurality of spaced-apart weir tanks disposed transversely within the top of said tube; a like number plurality of spaced-apart sump tanks disposed transversely within the bottom of said tube in off-set relationship to said weir tanks to collect the overflow of each respective weir tank; a pump disposed between each respective weir tank and the co-acting sump tank for conveying liquid toward said inlet closure from the bottom of one sump tank to the top of the adjacent weir tank and a liquid mixture feed inlet disposed intermediate said closure ends whereby the continuous packing material disposed in said horizontally disposed fully packed tube is divided into a like number plurality of contiguous distillation zones.

2,946,727
METHOD FOR MAKING ELECTROLYTIC CONDENSERS
Cary L. Wellington, Stamford, Conn., assignor to The Condenser Machinery Corp., Englewood, N.J., a corporation of New York
Filed Oct. 28, 1955, Ser. No. 541,626
2 Claims. (Cl. 204—38)



1. In the electrolytic condenser art, the method of attaching metal tabs at intervals to a metal ribbon, perforating the metal ribbon at intervals generally transverse to the ribbon and no more than once between any adjacent pair of metal tabs, and before severing into individual electrodes passing the ribbon through an oxide-forming bath and placing a voltage between the foil and an electrode in the bath to cause current to flow in the ribbon, whereby an oxide coating is formed on all exposed surfaces of said tabs and of said ribbon.

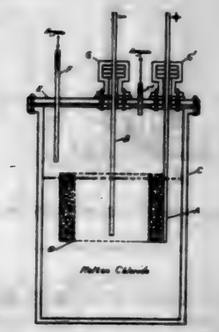
2,946,728
ADHERENT ELECTROPLATING ON TITANIUM
William J. Foisel, Cleveland, and Charles R. Ellmers, Chagrin Falls, Ohio, assignors to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
No Drawing. Filed June 23, 1955, Ser. No. 517,654
9 Claims. (Cl. 204—37)

2. A method of providing a composite coating on an article of a metal selected from the group consisting of titanium and titanium-base alloys which comprises the steps of contacting a cleaned surface of said article with an electrolyte consisting essentially of an aqueous solution containing at least 0.02 gram per liter of trivalent chromium ions and at least 2.8 grams per liter of fluoride ions at a temperature between about 20° C. and about 80° C. and depositing chromium by chemical displacement from said solution onto said surface, removing said article from contact with said acid solution when said chemical displacement deposit has been established on the article and contacting the article as a cathode with a Watts-type nickel plating solution at a cathode density between about 10 to about 65 amperes per square foot and forming a nickel plate on said deposit.

2,946,729
PRODUCTION OF ELECTROLYTIC ZIRCONIUM
Reginald S. Dean, Hyattsville, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
No Drawing. Filed June 9, 1958, Ser. No. 740,568
1 Claim. (Cl. 204—64)

The method of producing coarsely crystalline zirconium free from ZrCl as a deposit adherent to the cathode which consists in making comminuted zirconium in an annular steel basket an anode in a cell having an inert cathode centrally located with respect to said anode and a molten electrolyte at about 850° C. consisting of sodium chloride in which is dissolved 2–6% zirconium as chloride, average valence 2.0–2.4 and sodium as determined by hydrogen evolution in acidified ferric salt solution .1–2.0%, passing a direct current through the cell at a cathode current density of about 500 amperes per sq. ft. and an anode current density of less than 1 ampere per sq. ft. and maintaining during the electrolysis a partial pressure of $ZrCl_4$ of about 75 mm. of mercury.

2,946,730
REFINING TITANIUM ALLOYS
Reginald S. Dean, Hyattsville, and William W. Gullett, College Park, Md., assignors to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Filed Feb. 9, 1959, Ser. No. 792,230
3 Claims. (Cl. 204—64)

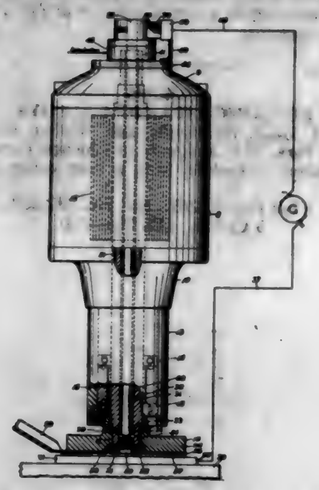


1. In a process for electrorefining titanium containing oxygen and at least one element selected from the group consisting of Fe, Cr and Mn in solid solution, in a single phase electrolyte consisting of at least one fused alkalinous chloride and, dissolved therein, lower chlorides of titanium and at least one alkalinous metal, the improvement which consists in maintaining an electrolyte composition of $SrCl_2$ 50–75%, balance NaCl, and dissolved therein about 9% soluble titanium as chloride, average valence about 2.2, and alkalinous metal corresponding to 10–20 ml. of hydrogen per gram of electrolyte evolved in acidified ferric chloride, at a temperature of 1000° F.–1600° F. and passing direct current through the electrolyte from a comminuted anode of the alloy to be refined at an anode current density dependent on temperature from below .005 amp./sq. cm. at 1600° F. to below .0001 amp./sq. cm. at 1000° F. to an inert cathode at a cathode current density of from 0.05 to 2.0 amps./sq. cm. whereby to form large crystals of pure titanium, adherent to the cathode.

2,946,731
METHOD AND APPARATUS FOR ELECTROLYTIC SHAPING
John J. Falls, Cincinnati, Ohio, assignor to The Standard Electrical Tool Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 13, 1956, Ser. No. 621,918
17 Claims. (Cl. 204—143)

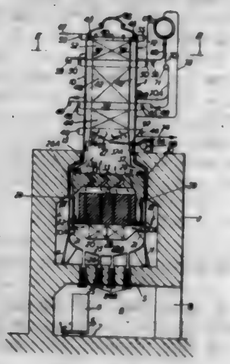
1. An electrolytic grinder for shaping an electrically charged metallic workpiece, comprising in combination, an elongate driving spindle having a working end and a tail end, a casing including bearing means rotatably supporting the spindle near the ends thereof, means at the working end of the spindle for supporting a current conductive grinding wheel in close proximity to the charged workpiece, and electric current conductive means electrically insulated from the spindle, for directing an electric

current from a terminal upon the tail end of the spindle directly to a portion of the grinding wheel, to impose



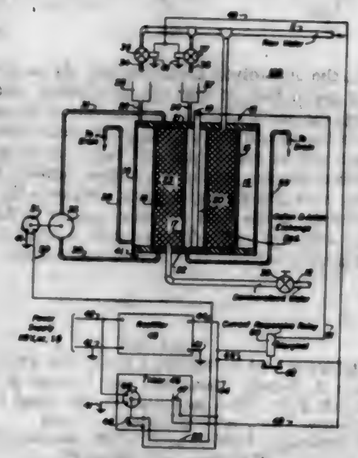
thereon a charge opposite in polarity to the charge upon the workpiece.

2,946,732
NUCLEAR POWER PLANT
William R. Wootton, London, England, assignor to Babcock & Wilcox Limited, London, England, a British company
Filed Nov. 6, 1956, Ser. No. 620,714
Claims priority, application Great Britain Nov. 11, 1955
11 Claims. (Cl. 204—193.2)



1. Nuclear power plant comprising a single pressure vessel, a biological shield, a section of which is disposed inside the pressure vessel separating the interior of the pressure vessel into two chambers, a heterogeneous nuclear reactor of the natural uranium, graphite-moderated, gas coolant type which operates with a recycled gaseous coolant under super-atmospheric pressure arranged in one of said chambers of the pressure vessel, a steam generator including a heat exchanger arranged in the other of said chambers of the pressure vessel, the section of the biological shield in the pressure chamber being so formed as to permit the flow therethrough of gaseous coolant and to prevent direct radiation from the nuclear reactor to the heat exchanger, baffle means disposed wholly within the pressure vessel and arranged to direct heated coolant gas from the reactor to the heat exchanger and cooled coolant gas from the heat exchanger to the reactor, and fan means within the pressure vessel arranged to promote the flow of heated coolant gas from the reactor to the heat exchanger and cooled coolant gas from the heat exchanger to the reactor, the pressure vessel being subjected internally under normal operation of the plant to the full pressure of the gaseous coolant, whereby the baffle means are subjected only to the small pressure differences required to insure flow of gaseous coolant.

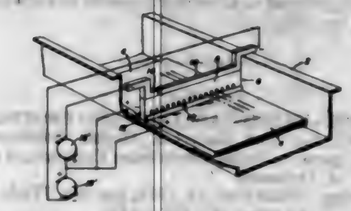
2,946,733
WATER DEMINERALIZING SYSTEMS
Joseph J. Gayoswki, Chicago, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 18, 1957, Ser. No. 703,690
22 Claims. (Cl. 204—229)



1. In a water demineralizing system: a demineralizing unit including structure defining a treatment chamber and an anolyte chamber and a catholyte chamber with a first diaphragm as a common wall between said treatment chamber and said anolyte chamber and with a second diaphragm as a common wall between said treatment chamber and said catholyte chamber, an anode in said anolyte chamber, a cathode in said catholyte chamber, and a porous ion exchange bed arranged in said treatment chamber and characterized by both cation exchange and anion exchange; an inlet pipe adapted to contain raw water under pressure and connected to said treatment chamber; an outlet pipe adapted to contain demineralized water under pressure and connected to said treatment chamber; valve mechanism for controlling the flow of water from said inlet pipe through said treatment chamber and into contact with said ion exchange bed and thence through said outlet pipe with the result that the raw water passing through said treatment chamber is demineralized and said ion exchange bed is correspondingly degenerated; first conduit means for supplying fresh anolyte into said anolyte chamber; second conduit means for supplying fresh catholyte into said catholyte chamber; a power circuit for conducting a direct current from said anode to said cathode, whereby said ion exchange bed is regenerated with the migration of the sorbed anions and cations of the mineral salts respectively into said anolyte and into said catholyte with the result that the ion concentrations therein are increased; valve apparatus for controlling the supply of fresh anolyte from said first conduit means into said anolyte chamber and the supply of fresh catholyte from said second conduit means into said catholyte chamber; and automatic means governed by the ion concentrations in said anolyte and in said catholyte for selectively

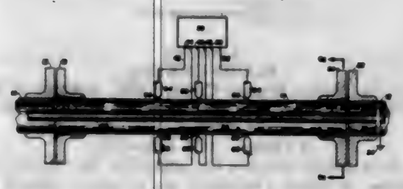
controlling said valve apparatus, so that said valve apparatus is opened in response to relatively high concentrations of ions in said anolyte and in said catholyte and is closed in response to relatively low concentrations of ions in said anolyte and in said catholyte.

2,946,734
CONTACT ELEMENT FOR ELECTROLYTIC PROCESSING OF WIRE AND THE LIKE
Frank P. Roy, Burton, and Richard L. Sallo, Shaker Heights, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey
Filed Apr. 17, 1958, Ser. No. 729,087
2 Claims. (Cl. 204—279)



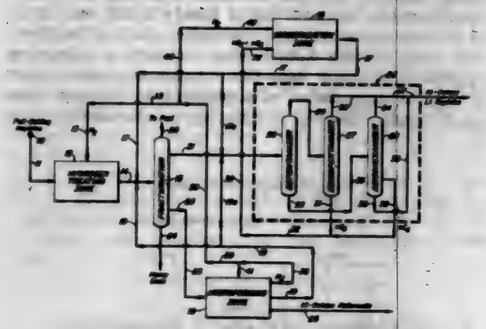
1. A contact element assembly for the electrolytic processing of wire or strip which comprises a slab of insulating material standing on edge in an electrolyte tank and extending transversely thereof, said slab having a first set of transverse holes therethrough spaced along the length thereof adjacent the lower edge, and a second set of holes extending downwardly from the upper edge, intersecting the holes of the first set and extending therebelow, a conducting bar secured to the upper edge of said slab having holes therethrough alined with the holes of the second set, respectively, and contact pins fixedly inserted in each hole in said bar and the alined hole of said second set, said pins being in electrical contact with said bar and extending downwardly and intersecting the holes of said first set, said contact pins having holes through their lower ends registering with the holes of said first set, respectively.

2,946,735
OIL TREATING APPARATUS
Le Roi E. Hutchings, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Aug. 15, 1956, Ser. No. 604,209
3 Claims. (Cl. 204—302)



1. An apparatus for dissociating oil emulsions comprising in combination a hollow tubular dielectric envelope, a grounded electrode within and spaced from the sides of said envelope to form an unobstructed annular space therebetween, means for supporting said envelope as a section between the open ends of a conduit, said conduit supplying emulsion to one end of said annular space and removing treated emulsion from the other end thereof, at least two bayonet supports extending from the inner side of said conduit and attaching to said grounded electrode, means for grounding said conduit, means for supplying high-frequency alternating current to said grounded electrode, means for applying said alternating current to said concentric envelope, electrode and annular space including a plurality of conductive rods, said rods being radially positioned and spaced from the outside of said envelope by a gap of about ¼ to 1 inch, and leads connecting each of said rods to said source of alternating current.

2,946,736
COMBINATION PROCESS FOR HIGH-OCTANE NAPHTHA PRODUCTION
Donald L. Maffat, Lansing, and William J. Birmingham, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed Mar. 29, 1957, Ser. No. 649,558
8 Claims. (Cl. 208—65)

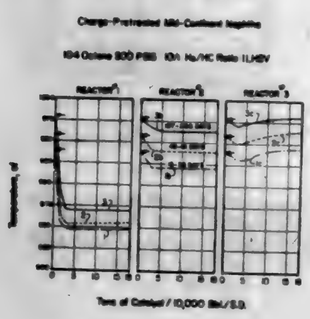


1. A combination process for producing high octane gasoline blending stocks from lower octane naphtha, which process comprises charging said naphtha to a fractionation zone, separating said naphtha in said zone into at least a first naphtha fraction rich in hydrocarbons boiling below about 170–180° F. and a second naphtha fraction rich in hydrocarbons boiling above about 170–180° F., hydroforming said second naphtha fraction in a hydroforming zone in the presence of platinum-alumina hydroforming catalyst, whereby there is produced a net amount of hydrogen and a hydroformate having a higher octane than said second naphtha fraction, recycling a first portion of said hydrogen to said hydroforming zone, separating said hydroformate into a first hydroformate fraction rich in hydrocarbons boiling below about 170–180° F. and a second hydroformate fraction rich in hydrocarbons boiling above about 170–180° F. having a higher octane than said second naphtha fraction and suitable for use as a gasoline blending stock, charging said first naphtha fraction and said first hydroformate fraction to a separation zone, separating from the charge to said separation zone at least a substantial portion of the normal pentane and normal hexane in the charge to said separation zone, withdrawing from said separation zone as a gasoline blending stock the remaining hydrocarbons from the charge to said separation zone, charging said normal pentane and normal hexane and a second portion of said hydrogen to an isomerization zone maintained under isomerizing conditions adapted to convert at least a substantial proportion of said normal pentane and normal hexane to higher octane isomers thereof, and charging the hydrocarbon effluent from said isomerization zone to said separation zone.

2,946,737
REACTOR TEMPERATURE EFFECT IN REFORMING
Anthony E. Potas, Wenonah, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Sept. 6, 1957, Ser. No. 682,361
6 Claims. (Cl. 208—65)

1. In the method of reforming naphtha which comprises passing a charge naphtha and hydrogen in series

flow through a plurality of reforming reaction zones each of which contains platinum-containing reforming catalyst at reforming temperature and pressure and at an overall liquid hourly space velocity dependent upon the total volume of the aforesaid reforming catalyst with which the aforesaid charge naphtha is contacted in all of the aforesaid plurality of reforming reaction zones, reheating the effluent of each of the aforesaid plurality of reforming reaction zones to reforming temperature prior to introducing said effluent into the next reforming reaction zone in the series, and recovering a reformate, the improvement which comprises contacting the aforesaid charge naphtha with the aforesaid reforming catalyst at a substantially constant liquid hourly space velocity in the first reforming reaction zone independent of the aforesaid overall liquid hourly space velocity at reforming temperatures higher than the autogenous quench point of the dehydrogenation of naphthenes to produce a reaction mixture having a temperature substantially that



of the autogenous quench point, separating said reaction mixture from the aforesaid reforming catalyst substantially when the temperature of said reaction mixture first reaches substantially the temperature of the aforesaid autogenous quench point, contacting the aforesaid separated reaction mixture in the subsequent reforming zones with the aforesaid reforming catalyst at reforming conditions of temperature, pressure, and liquid hourly space velocity to produce leaded gasoline having a research octane number of at least 100, and maintaining the temperature of the aforesaid reaction mixture in contact with the aforesaid reforming catalyst above that of the autogenous quench point whilst said reaction mixture contains more than about 20 percent of the naphthenes originally present in the aforesaid charge naphtha to ensure minimum time of contact of said reaction mixture containing more than 20 percent of the naphthenes originally present in the charge naphtha with the aforesaid reforming catalyst at temperatures below the temperature of the aforesaid autogenous quench point.

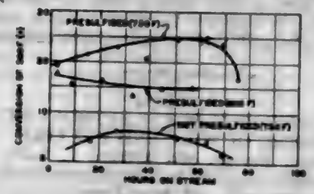
2,946,738

HYDROCRACKING A GAS OIL WITH A PRESULFIDED CATALYST CONSISTING OF OXIDES OF VANADIUM, COBALT AND MOLYBDENUM ON GAMMA ALUMINA

Lloyd E. Gardner and Robert J. Hogan, Bartlesville, Okla, assignors to Phillips Petroleum Company, a corporation of Delaware

Filed July 1, 1957, Ser. No. 669,350
18 Claims. (Cl. 208—112)

16. A process for hydrocracking a gas oil boiling in the range of about 350 to 1100° F. which comprises contacting said gas oil admixed with hydrogen under hydrocracking conditions including a temperature in the range of 700 to 800° F. with a catalyst consisting es-



sentially of porous active alumina having deposited thereon a reduced, sulfided mixture of the oxides of vanadium, cobalt, and molybdenum.

2,946,739

HYDROCRACKING CATALYST AND PROCESS

Lloyd E. Gardner and Robert J. Hogan, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Nov. 13, 1958, Ser. No. 773,561
5 Claims. (Cl. 208—112)

5. A process for the hydrocracking of Wafra 400° F. plus crude which comprises hydrocracking said crude at a temperature in the range 750–850° F., a pressure in the range 500–3000 p.s.i.g. and a liquid hourly space velocity of 0.1–1, using 500–5000 cubic feet of hydrogen per barrel of oil with a catalyst containing 0.1–1 weight percent rhodium, 1–5 weight percent cobalt, 3–10 weight percent molybdenum and the balance an alumina catalyst support.

2,946,740

DEACTIVATION OF POISONS ON CONTAMINATED CRACKING CATALYSTS

Albert N. De Vault, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Apr. 22, 1958, Ser. No. 730,046
5 Claims. (Cl. 208—120)

5. A process of detactivating contaminants on a contaminated silica-alumina hydrocarbon cracking catalyst which comprises contacting said catalyst with chromyl chloride at a temperature and for a time effective to cause deactivation of said contaminants with respect to further use of said catalyst for cracking of hydrocarbon.

2,946,741

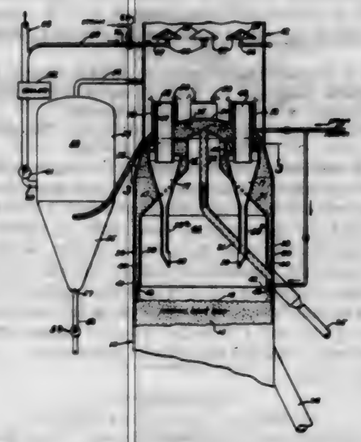
FLUID COKING

Walter M. Miller, Walnut Creek, Calif., assignor to Tidewater Oil Company, a corporation of Delaware

Filed June 21, 1956, Ser. No. 592,924
4 Claims. (Cl. 208—127)

1. In a coking process for upgrading heavy petroleum fractions, in which a fluidized bed of heated coke is continuously sprayed with a fresh feed of said fractions to produce thermal cracking thereof into a vaporous effluent and additional coke, said vaporous effluent being separated from coke particles and transferred upwardly to a quenching zone while the coke is cycled through a heating zone for reuse; the novel steps of conveying freshly heated coke in a downwardly and outwardly flowing stream around and separated from the upwardly flowing effluent so as to heat it without direct contract therebetween and so that the temperature imparted to said effluent is highest at the top and rises gradually and consistently during the upward passage of said effluent; maintaining said separation to a point just above the bed level; and there adding said downwardly flowing stream of coke to said coke bed, while spraying jets of

steam downwardly at the point where the separation of said effluent from said downwardly flowing stream of



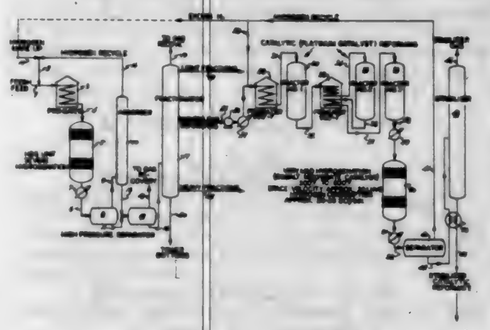
coke terminates, to direct said effluent away from said stream.

2,946,742

MILD HYDROGENATION OF CATALYTIC REFORMATE

Louis D. Rampino and Milton J. Gorham, Concord, Calif., assignors to Tidewater Oil Company, a corporation of Delaware

Filed Jan. 2, 1958, Ser. No. 706,682
11 Claims. (Cl. 208—143)



1. A method for improving the storage stability and induction-system cleanliness of a substantially non-olefinic naphtha reformate that has been severely reformed in the presence of platinum catalyst and hydrogen at temperatures above 900° F., with the production of additional hydrogen and under conditions sufficient to maintain the bromine number of the reformate below about 4.5, said method comprising mildly hydrogenating said reformate in the absence of added olefins and in the presence of a hydrogenation catalyst at a temperature between 450° and 600° F., at substantially the same pressure as the catalytic reforming and at a liquid hourly space velocity of approximately 30; said hydrogenation being insufficient to cause a significant reduction in the research octane rating of the reformate.

2,946,743

STABILIZATION OF LUBRICATING OILS IN THE PRESENCE OF A NICKEL-ALUMINA CATALYST AND HYDROGEN

John Arthur Edgar Moy and Alan Arthur Yeo, both of Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Filed May 27, 1957, Ser. No. 661,688
4 Claims. (Cl. 208—264)

1. A method of treating a lubricating oil to improve its color and oxidation stability comprising contacting the oil in the presence of hydrogen at a temperature of 150 to 430° C. and a pressure of 50 to 800 p.s.i.g. with a catalyst, said catalyst being a nickel-alumina base impregnated with nickel, said catalyst having been prepared by impregnating aluminum oxide with a solution of a nickel compound, said nickel compound being decomposable under heat to the nickel oxide thereof, roasting the impregnated aluminum oxide at a temperature above 650° C. to form said nickel-alumina base, impregnating said nickel-alumina base with a solution of a nickel compound, said nickel compound being decomposable under heat to the oxide thereof, and roasting the impregnated nickel-alumina base at a temperature of 350 to 650° C. to obtain said nickel-alumina base impregnated with nickel.

2,946,744

METHOD OF PREPARING ODOR FREE NAPHTHAS

George W. Ayers, Chicago, and William A. Krewer, Arlington Heights, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Aug. 26, 1959, Ser. No. 836,854
12 Claims. (Cl. 208—289)

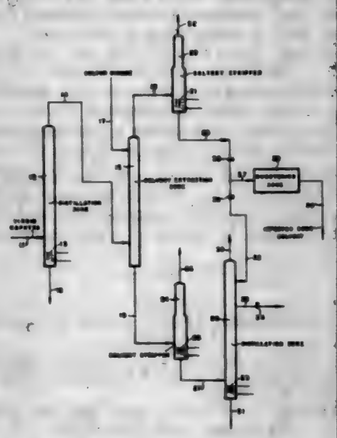
1. A method of preparing odor-free naphthas which comprises treating said naphthas with an aqueous solution containing an hydroxylamine and alkali metal hydroxide.

2,946,745

PRODUCTION OF SOLVENTS

Harry E. Bloomsburg, Westfield, N.J., and Oral C. Behymer and William K. Robbins, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 15, 1958, Ser. No. 767,488
6 Claims. (Cl. 208—312)



1. A method for improving the odor of solvents which comprises solvent extracting a hydrocarbon fraction boiling in the gasoline and kerosene range containing aro-

matic and saturated hydrocarbons and odoriferous compounds to form a raffinate phase and an extract phase, separately removing and recovering solvent from said phases, distilling the solvent-free extract phase to separate and recover a heart cut fraction including aromatic hydrocarbons distilling between about 40% and about 90% of said extract phase and to separate and reject odoriferous compounds, and then combining said heart cut fraction with said raffinate phase whereby a solvent of improved odor and solvency value is obtained, said heart cut fraction and said raffinate phase being sweetened after separation and recovery of said heart cut fraction from said solvent-free extract phase by distillation.

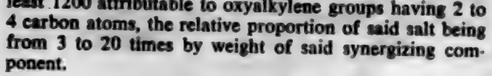
2,946,746

OIL-EXTERNAL EMULSION DRILLING FLUIDS

Howard F. Keller, Jr., Fullerton, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Filed Oct. 1, 1956. Ser. No. 612,963
7 Claims. (Cl. 252—8.5)

1. A drilling fluid composition comprising (1) an emulsified liquid suspending medium comprising between about 20 and about 90 percent by volume of a hydrocarbon oil as the continuous phase, between about 80 and about 10 percent by volume of water as the dispersed phase, and sufficient of a polyamide compound of the general formula:



wherein R is selected from the class consisting of alkyl and alkenyl radicals containing from 11 to 21 carbon atoms and "x" represents an integer from 2 to 5, to maintain said water stably and uniformly dispersed in said oil, (2) a suspended normally oleophobic finely-divided inorganic solid weighting agent, and (3) sufficient of a fluid-loss agent to reduce the loss of said liquid suspending medium due to filtration but insufficient to increase the viscosity of the composition to such an extent that it cannot readily be pumped.

2,946,747

COMPOSITION FOR CONDITIONING SURFACES CONTAINING CONTAMINATING WATER AND METHOD OF USING THE SAME

Willard H. Kirkpatrick, Sugar Land, and Virgil L. Seale, Houston, Tex., assignors to Visco Products Company, Houston, Tex., a corporation of Delaware

No Drawing. Filed Apr. 5, 1955, Ser. No. 499,492
43 Claims. (Cl. 252—8.55)

1. A surface active modifying reagent comprising an oil soluble amine salt of an alkylated aromatic sulfonic acid and a polyether synergizing component capable of reducing surface tension of water at least 25 dynes per square centimeter and having a molecular weight of at least 1200 attributable to oxyalkylene groups having 2 to 4 carbon atoms, the relative proportion of said salt being from 3 to 20 times by weight of said synergizing component.

2,946,748

LIQUID HYDROCARBON GELS AND USES THEREOF

Charles S. Steiner, Homewood, and Paul Gibson, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed May 8, 1956, Ser. No. 583,352
14 Claims. (Cl. 252—8.55)

1. A gelled liquid hydrocarbon comprising a liquid hydrocarbon and about 0.5–3.0% by weight of a gelling agent consisting essentially of a member from the group consisting of alkali metal and ammonium soaps of aliphatic, monocarboxylic acids of at least 14 carbons, at least 10% of said aliphatic acids having at least 20 carbons.

2,946,749

OPEN GEAR LUBRICANTS CONTAINING SILICONES

Lorne W. Sproule and Thomas M. Rogers, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Mar. 28, 1955, Ser. No. 497,436
9 Claims. (Cl. 252—28)

1. A gear lubricant composition having a grease consistency consisting essentially of a major proportion of a viscous mineral lubricating base having an S.U.S. viscosity at 210° F. in the range of about 1,000 to 6,000, and in the range of about 0.05 to 1.5% by weight, based on the total lubricant composition, of a silicone composition consisting essentially of (1) dimethyl silicone polymer having an S.U.S. viscosity at 210° F. in the range of about 300 to 3,000, and (2) in the range of about 4.0 to 20.0 wt. percent, based on the silicone composition, of finely-divided silica.

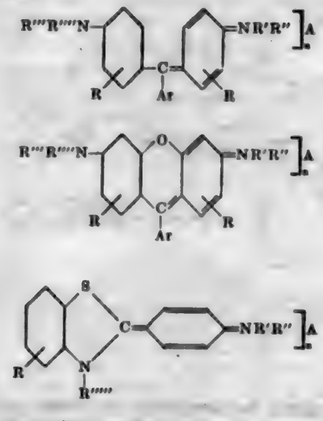
2,946,750

LUBRICATING GREASES THICKENED WITH REACTION PRODUCTS OF ARYLAMINE DYES WITH PHOSPHOMOLYBDIC, PHOSPHOTUNGSTIC AND PHOSPHOTUNGSTOMOLYBDIC ACIDS

Norman R. Odell, Fishkill, and Joseph F. Lyons, Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Filed Aug. 13, 1957, Ser. No. 677,821
10 Claims. (Cl. 252—33)

1. A lubricating grease consisting essentially of a lubricating oil thickened to a grease consistency with a compound selected from the class represented by the following formulas:



wherein Ar is chosen from the group consisting of phenyl, naphthyl and substituted phenyl and naphthyl groups, R and R"" are chosen from the group consisting of hydrogen and lower alkyl groups, R', R", and R"' and R"" are chosen from the group consisting of hydrogen, hydrocarbon groups and substituted hydrocarbon groups, at least one group represented by R' and R" being chosen from the group consisting of hydrocarbon and substituted hydrocarbon groups, A is the anion of a heteropoly acid chosen from the group consisting of phosphomolybdic, phosphotungstic and phosphotungstomolybdic acids, and *n* is a number from 1 to 7, inclusive, said compound being employed in the form of particles below about 5 microns in diameter.

2,946,751

CONTINUOUS GREASE MANUFACTURE USING COATED FREE-FLOWING ALKALI METAL SAPONIFYING AGENT

Alan Beerbower and William H. Meyer, Baltimore, Md., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 26, 1956, Ser. No. 573,677
5 Claims. (Cl. 252—40)

1. In a process for preparing a lubricating grease composition comprising feeding an alkali metal base to a mixing zone, simultaneously feeding a lubricating oil dispersant to said mixing zone to obtain an alkali metal base oil slurry, mixing said slurry with additional lubricating oil dispersant and a grease-thickening proportion of a saponifiable material, heating the resulting mixture to a grease-forming temperature, dehydrating and then cooling to obtain said lubricating grease composition, the improvement which comprises maintaining said alkali metal base free-flowing by thoroughly mixing it with a dry, alkaline earth metal base powder sufficient in amount to coat said alkali metal base.

2,946,752

FERROMAGNETIC MATERIAL

Gerard Heinrich Jonker, Henricus Petrus Johannes Wijn, and Poul Bernard Braun, all of Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 9, 1956, Ser. No. 603,135
Claims priority, application Netherlands Aug. 10, 1955
6 Claims. (Cl. 252—62.5)

1. A ferromagnetic material consisting essentially of crystals of a composition having the formula

$$Ba_{3-a}M_aCo_2Fe_{24}O_{41}$$

in which M is a metal selected from the group consisting of strontium, calcium, and lead, and *a* has a value less than 1, said compound containing as the equivalent a total of 17.6 mol. percent of barium, strontium, calcium and lead oxides, 11.8 mol. percent of CoO and 70.6 mol. percent of Fe_2O_3, said crystals having a structure, the unit cell of which in the hexagonal crystal system has a *c*-axis of about 52.3 A and an *a*-axis of about 5.9 A.

2,946,753

FERROMAGNETIC MATERIAL

Gerard Heinrich Jonker, Henricus Petrus Johannes Wijn, and Poul Bernard Braun, all of Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Aug. 9, 1956, Ser. No. 603,136
Claims priority, application Netherlands Aug. 10, 1955
8 Claims. (Cl. 252—62.5)

1. A ferromagnetic material consisting essentially of crystals of a composition having the formula:

$$Ba_{1-a-(b+c)}Sr_aPb_bCa_cM^{II}Fe^{III}_{6-(e+f)}Al_eCr_fO_{11}$$

in which

M^{II} is at least one divalent metal selected from the group consisting of Mn, Fe, Co, Ni, Cu, Zn, and Mg, and

a has a value less than 0.5
$(b+c)$ has a value less than 0.25
$(e+f)$ has a value less than 0.6

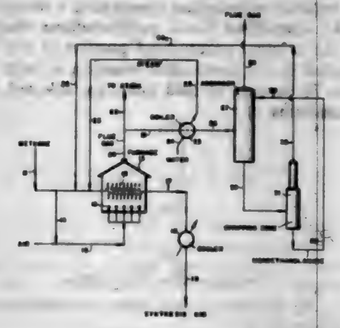
said crystals having a rhombohedric structure, of which the unit cell in the hexagonal crystal system can be described with a *c*-axis of about 43.5 A. and an *a*-axis of about 5.9 A.

2,946,754

PRODUCTION OF SYNTHESIS GAS

Nick P. Peet, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N. J., a corporation of Delaware

Filed Nov. 21, 1957, Ser. No. 697,982
4 Claims. (Cl. 252—373)



1. A method for producing synthesis gas which comprises the steps of dividing a natural gas feed stream into a first portion and a second portion, contacting the first portion in admixture with steam and carbon dioxide obtained in a later step at an elevated temperature within the range between about 1100° and 1850° F. and at pressures from about 0 to 300 pounds per square inch gauge in a conversion zone arranged in a combustion zone with a synthesis gas catalyst to produce synthesis gas, burning the second portion in said combustion zone to provide said elevated temperature and to form a combustion gas containing substantial amounts of carbon dioxide, cooling the combustion gas with water to generate steam and reduce the temperature of the combustion gas, recovering carbon dioxide by absorption from the cooled combustion gas, admixing the steam and recovered carbon dioxide with the first portion, and recovering said synthesis gas comprising carbon monoxide and hydrogen from the contacted admixture, said first and second portions being proportioned such that the heat released from burning said second portion is in balance with that required for conversion of said first portion.

2,946,755

RECOVERY OF DIATOMACEOUS EARTH

Charles A. Frankenhoff, 6 Hathaway Road, Scarsdale, N.Y.

No Drawing. Filed Oct. 3, 1956, Ser. No. 613,618
3 Claims. (Cl. 252—416)

1. A process for the recovery of diatomaceous earth in condition for use as a filter aid from an intimate mixture of the diatomaceous earth and heat-carbonizable organic matter including a carbohydrate disposed between the particles of diatomaceous earth and in the proportion of at least 20% of the weight of the diatomaceous earth on the dry basis, which comprises heating the diatomaceous earth at a temperature within the range from about 700° to about 1100° F. while limiting available air, thereby effecting carbonization of the organic material without burning, then heating the diatomaceous earth at a temperature within the range from about 1200° to about 1800° F. below the sintering temperature of minerals contained therein in the presence of sufficient air to effect substantially complete oxidation of carbonized matter, and only then breaking up any lumps present.

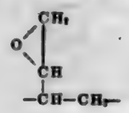
2,946,756

RESINS FROM EPOXIDIZED LIQUID POLYBUTADIENE AND NEUTRAL ESTERS OF POLYBASIC ACIDS

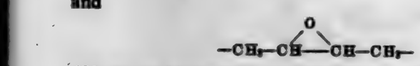
Charles E. Wheelock and John E. Wicklatz, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Filed Dec. 13, 1957, Ser. No. 702,514
19 Claims. (Cl. 260—2)

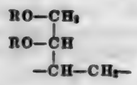
1. A curable composition comprising a mixture of 100 parts (A) epoxidized liquid polybutadiene characterized in that the original unsaturated portion of the molecule is converted by the epoxidation reaction to units of which (1) 8 to 70 percent of said units are selected from the group consisting of



and



(2) up to 82 percent of said units are selected from the group consisting of



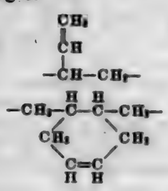
and



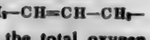
where R is selected from the group consisting of H and



where R_1 is selected from the group consisting of alkyl, aryl, alkaryl, and aralkyl groups of 1 to 20 carbon atoms and (3) 10 to 35 percent of said units are selected from the group consisting of



and



at least 1 percent of the total oxygen being present as hydroxyl oxygen, and (B) 0.1 to 50 parts of a neutral ester of an acid selected from the group consisting of ortho titanic acid, ortho boric acid, sulfurous acid, and ortho silicic acid and a monohydric aliphatic alcohol boiling below 200° C.

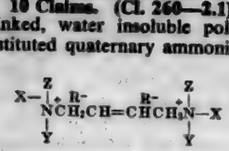
2,946,757

QUATERNARY AMMONIUM ION EXCHANGE RESINS OF IMPROVED PROPERTIES

George B. Butler, 1722 NW. 11th Road, Gainesville, Fla., and Robert L. Goette, M-3 King Haigler Apts., Camden, S.C.

No Drawing. Filed May 2, 1955, Ser. No. 505,530
10 Claims. (Cl. 260—2.1)

10. Cross-linked, water insoluble polymers of symmetrically-substituted quaternary ammonium salts of the structure:



wherein X is an allyl radical, Y and Z are selected from the group consisting of lower alkyl and allyl radicals, and R^- is selected from the group consisting of chloride and bromide ion, said polymers being suitable for use as ion exchange resins capable of rapid regeneration rates and being characterized by polymerization and cross-linking through the ethylenic double bonds of the allyl groups, the butene double bonds remaining intact, the said polymers being selected from the group consisting of the homopolymers of said salts, and the copolymers of said salts with different ethylenically unsaturated aliphatic quaternary ammonium compounds.

2,946,758

ANION EXCHANGE RESINS FROM ESTERS OF ACRYLIC ACIDS WITH POLYHYDROXY SUBSTITUTED QUATERNARY AMMONIUM SALTS

Henryk Zenftman, West Kilbride, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Sept. 7, 1956, Ser. No. 608,429
Claims priority, application Great Britain Oct. 7, 1955
4 Claims. (Cl. 260—2.1)

1. A water-insoluble anion exchange resin which is a polymer of a monomer selected from the group consisting of the salts of esters, with at least two moles of a monomeric acid selected from the class consisting of acrylic acid and methacrylic acid, of a member of the class of alcoholic quaternary amine cations consisting of (1) N-alkyl, N-methyl-N,N-bis (β-hydroxy ethyl) ammonium, (2) N,N'-dialkyl-N,N'-bis (hydroxymethyl) piperazinium, (3) N,N'-dialkyl-N,N'-bis (β-hydroxyethyl) piperazinium, (4) N-alkyl-N-ethyl-N,N-bis (β-hydroxyethyl) ammonium, (5) N-alkyl-N-methyl-N,N-bis (γ-hydroxypropyl) ammonium, (6) N-alkyl-N,N,N tris (β-hydroxyethyl) ammonium and (7) N,N'-dialkyl,N,N,N',N' tetrakis (β-hydroxyethyl) ethylene diammonium, the salts being salts with anions selected from the group consisting of monomethyl sulfate, monoethyl sulfate, chloride, bromide and iodide, said polymers being manufactured by polymerization in the presence of a solvent for said monomer and a polymerization catalyst, and said alkyl groups having from one to three carbon atoms.

2,946,759

HEAT-REACTIVE COMPOSITIONS COMPRISING A POLYAMIDE AND TRIMETHYLPHENOL

Melvin M. Gallant, Metuchen, and Norris R. Legue, South Orange, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed June 23, 1958, Ser. No. 743,979
11 Claims. (Cl. 260—19)

1. A heat-reactive composition comprising at least 2 parts by weight of a polyaminoamide per 98 parts by weight of trimethylolphenol.

2,946,760

STABILIZED ACRYLONITRILE POLYMER COMPOSITION AND METHOD OF MAKING SAME

Hobson D. De Witt and Patrick H. Hobson, Decatur, Ala., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed May 23, 1956, Ser. No. 586,685
16 Claims. (Cl. 260—29.6)

1. A new composition of matter comprising a polymer selected from the group consisting of (1) polyacrylonitrile, (2) a copolymer of at least 80 percent acrylonitrile and up to 20 percent of another mono-olefinic monomer copolymerizable therewith, and (3) a polymer blend of 80 to 99 percent of (A) a copolymer of 90 to 98 percent acrylonitrile and 2 to 10 percent vinyl acetate, and 1 to 20 percent of (B) a copolymer of 10 to 70 percent acrylonitrile and 30 to 90 percent of a tertiary heterocyclic amine containing a vinyl group attached directly to the heterocyclic nucleus, said blend having an overall tertiary heterocyclic amine content of from 2 to 10 percent based on the total weight of the blend, dissolved in a solvent therefor, and 0.01 to 2.0 percent, based on the total weight of the polymer solution, of an inhibiting agent containing an inorganic acid having an ionization constant greater than 1.86×10^{-5}, and an aldehyde selected from the group consisting of formaldehyde, acetaldehyde, acrolein, propionaldehyde, and benzaldehyde, said acid being employed in a range of about 50 to about 89 percent and said aldehyde being employed in a range of about 11 to about 50 percent, based on the total weight of said inhibiting agent.

2,946,761

AQUEOUS SOLUTION CONTAINING ACYRLONITRILE POLYMER AND A BISULFITE

Walter H. Schuller, Stamford, Conn., assignor to American Cyanamid Company, New York, N. Y., a corporation of Maine

No Drawing. Filed Nov. 1, 1956, Ser. No. 619,685
8 Claims. (Cl. 260—29.6)

1. A fiber-formable, fluid composition comprising an aqueous solution having dissolved therein an acrylonitrile polymer selected from the class consisting of homopolymers of acrylonitrile and copolymers of acrylonitrile having combined in the polymer molecule a preponderant proportion by weight of acrylonitrile and a minor proportion by weight of a monoethylenically unsaturated monomer that is copolymerizable with acrylonitrile and is incapable of forming a salt with an acid, said polymer constituting from about 5% to about 20% by weight of the said composition; and, to improve the color stability on aging of the said aqueous solution, from 0.1% to 5%, by weight of the said polymer on a net-dry basis, of a water-soluble inorganic bisulfite.

2,946,762

AQUEOUS SOLUTION CONTAINING A BISULFITE AND ACRYLONITRILE POLYMER HAVING BASIC AMINO GROUPS

Witold R. Kocay, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Nov. 1, 1956, Ser. No. 619,686
14 Claims. (Cl. 260—29.6)

1. A fiber-formable, fluid composition comprising an aqueous solution having dissolved therein an acrylonitrile polymer that has, combined in the polymer molecule, a preponderant proportion by weight of acrylonitrile and a minor proportion by weight of at least one different monoethylenically unsaturated monomer which is copolymerizable with acrylonitrile and which includes a monoethylenically unsaturated monomer having basic amino groups, said polymer constituting from about 5% to about 20% by weight of the said composition; and, to improve the color stability on aging of the said aqueous solution, from 0.1% to 5%, by weight of the said polymer on a net-dry basis, of a water-soluble inorganic bisulfite.

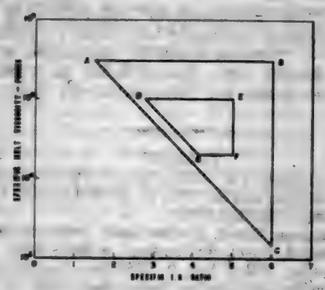
2,946,763

NOVEL PERFLUOROCARBON POLYMERS

Manville Isager Bro and Bernd Wilhelm Sandt, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 29, 1957, Ser. No. 649,451
13 Claims. (Cl. 260—45.5)

1. As a new perfluorocarbon product, resinous interpolymeric hexafluoropropylene and tetrafluoroethylene, having a specific melt viscosity, as measured at 380° C. under a shear stress of 6.5 pounds per square inch, of 1.5×10^8 to 3×10^8 poises, a specific I.R. ratio, as measured on film of about 2 mil thickness water-quenched from the molten product, by net absorbance at 10.18 microns wave length divided by net absorbance at 4.25 microns wave length, in the range of 1.5 to 6, which ratio is at least equal to the difference between 12.26



and the product of 1.96 and the common logarithm of the said specific melt viscosity, and a specific volatile content, as measured by weight loss during 30 minutes at 380° C. under a pressure of 10 mm./Hg absolute, of less than 0.3 percent.

2,946,764

HEAT STABILIZED VINYL CHLORIDE RESIN PLASTISOLS

Arthur Dock Fon Toy, Park Forest, Kenneth H. Rattenbury, South Chicago Heights, and Thomas M. Hinkes, Park Forest, Ill., assignors to Victor Chemical Works, a corporation of Illinois

No Drawing. Filed May 24, 1957, Ser. No. 661,297
17 Claims. (Cl. 260—45.7)

1. A plastisol composition comprising a vinyl chloride resin, a vinyl chloride plasticizer, and a heating stabilizing amount of dibutyl benzenephosphonite.

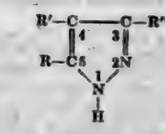
2,946,765

HALOGEN CONTAINING POLYMERS STABILIZED WITH A PYRAZOLE

Ernst Roos, Leverkusen, Friedrich Lober, Leverkusen-Bayerwerk, and Jürgen Koerner, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Mar. 25, 1958, Ser. No. 723,666
Claims priority, application Germany Mar. 27, 1957
6 Claims. (Cl. 260—45.8)

1. A novel composition comprising polyvinylchloride containing as a stabilizer 0.1–5% by weight of a pyrazole of the formula



in which R, R' and R'' represent substituents selected from the group consisting of hydrogen, cyclohexyl, cyclopentyl, an alkyl group of 1 to 18 carbon atoms, phenyl, halogen-substituted phenyl, hydroxyl-substituted phenyl, alkyl-substituted phenyl, and alkoxy-substituted phenyl.

2,946,766

PROCESS FOR PRODUCING POLYCARBONATES

Hermann Schnell, Krefeld-Uerdingen, and Gerhard Fritz, Krefeld-Bockum, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed July 9, 1956, Ser. No. 596,398
Claims priority, application Germany Dec. 21, 1955
9 Claims. (Cl. 260—47)

1. A process for producing high molecular weight film and fiber-forming resinous linear polycarbonates, which

consists essentially of heating at a temperature between 120 and 280° C., and at a reduced pressure a composition that consists essentially of (I) a compound selected from the class consisting of aryl, alkyl and cycloalkyl diesters of the bis-monocarbonates of aromatic dihydroxy hydrocarbons, and (II) no more than an equimolar amount of an unesterified aromatic dihydroxy compound, and continuing the heating for a time sufficient to cause linear interesterification and the formation of the desired polycarbonate.

2,946,767

MANUFACTURE OF REACTION PRODUCTS OF POLYISOCYANATES WITH ETHYLENE OXIDE ADDITION PRODUCTS

Hans Gassmann, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed Aug. 9, 1956, Ser. No. 603,164
Claims priority, application Switzerland Aug. 12, 1955
10 Claims. (Cl. 260—47)

1. A process for the manufacture of a high molecular surface-active polyurethane from an organic polyisocyanate and an alkylene oxide addition product as the sole reactants, wherein an organic polyisocyanate containing only isocyanate groups as reactive functional groups is reacted with a polyglycol ether containing an aliphatic hydrocarbon radical of at least 8 carbon atoms and only one free hydroxyl group and having a molecular weight of at least 1000, and which polyglycol ether derivative is obtained by reacting an alkylene oxide having at most 3 carbon atoms with a member of the class consisting of monoalcohols containing an aliphatic hydrocarbon radical of at least 8 carbon atoms, alkylated monophenols containing an aliphatic hydrocarbon radical of at least 8 carbon atoms, monomercaptans containing an aliphatic hydrocarbon radical of at least 8 carbon atoms, monocarboxylic acids containing an aliphatic hydrocarbon radical of at least 8 carbon atoms and secondary monoamines containing an aliphatic hydrocarbon radical of at least 8 carbon atoms, said polyisocyanate containing at least 1 isocyanate equivalent per mol of alkylene oxide addition product.

2,946,768

CONDENSATION PRODUCTS OF CARBAMIC ACID ESTERS

Erich Klauke and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Aug. 12, 1957, Ser. No. 677,771
2 Claims. (Cl. 260—65)

1. The method of heating the condensation product of an N-aromatic substituted carbamic acid lower alkyl ester and a member selected from the group consisting of formaldehyde and cyclohexanone in an acid medium, said condensation product containing urethane groups, to split off alcohol at a temperature within the range of from about 180° C. to about 250° C. to form residual polymeric isocyanates.

2,946,769

LINEAR POLYMERS CONTAINING REGULARLY RECURRING ESTER AND AMIDE LINKAGES

Julian K. Ross, South Charleston, and Helmut W. Schulz, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 23, 1954, Ser. No. 431,264
5 Claims. (Cl. 260—75)

1. A fiber-forming, resinous polyester having a reduced viscosity of at least 0.4 in m-cresol, of (1) an organic dicarboxylic acid represented by the structural formula: HOOCRCOOH wherein R is a member selected from the group consisting of divalent hydrocarbon radicals free from olefinic and acetylenic unsaturation and containing from 2 to 12 carbon atoms, divalent hydrocarbon ether radicals free from olefinic and acetylenic unsaturation and containing from 2 to 12 carbon atoms, and divalent hydrocarbon thioether radicals free from olefinic and acetylenic unsaturation and containing from 2 to 12 carbon atoms and (2) an N, N' di(omega hydroxy alkyl) diamido-substituted hydrocarbon compound wherein the omega hydroxy alkyl amido radicals of said compound contain from 4 to 6 carbon atoms and the nitrogen atoms of said amido radicals are linked to each other through a divalent hydrocarbon radical free from olefinic and acetylenic unsaturation and containing from 2 to 10 chain carbon atoms.

2,946,770

POLYMERIZATION OF VINYLIDENE COMPOUNDS USING ORGANIC PEROXIDE, ORGANIC SULFUR AND QUATERNARY AMMONIUM COMPOUNDS AS CATALYSTS

Erich Bäder, Hanau am Main, Otto Schweitzer, Kronstein, Taunus, and Wilhelm Querfurth, Oberursel, Taunus, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Filed July 25, 1955, Ser. No. 524,272
Claims priority, application Germany July 30, 1954
5 Claims. (Cl. 260—77.5)

1. A process for the mass polymerisation of a $CH_2=C<$ compound which comprises polymerising a polymerizable organic compound containing terminal $>C=CH_2$ group in the presence of catalytic amount of an organic peroxide, an organic sulphur compound selected from the group consisting of sulphinic acids and salts thereof, alpha-hydrosulphones, sulphoxylates, alpha-amino-sulphones and mercaptans, and an organic quaternary ammonium compound the organic groups of which are selected from the group consisting of alkyl and aralkyl radicals.

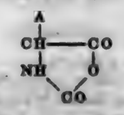
2,946,771

PRODUCTION OF POLYAMIDES

Denis George Harold Ballard, Holyport, near Maidenhead, Clement Henry Bamford, Beaconsfield, William Edward Hanby, Oakes Grove, Maidenhead, and Frederick John Weymouth, Styvechale, Coventry, England, assignors to Courtaulds Limited, London, England, a British company

No Drawing. Filed Jan. 22, 1958, Ser. No. 710,425
Claims priority, application Great Britain Feb. 22, 1955
5 Claims. (Cl. 260—77.5)

1. A process for the production of polyamides comprising dissolving in a solvent chosen from the group consisting of benzene, nitrobenzene, chlorobenzene, acetophenone, dioxane, methylene chloride, chloroform, dimethyl formamide, and mixtures of these compounds, at least one anhydrocarboxyamino acid having the general formula:



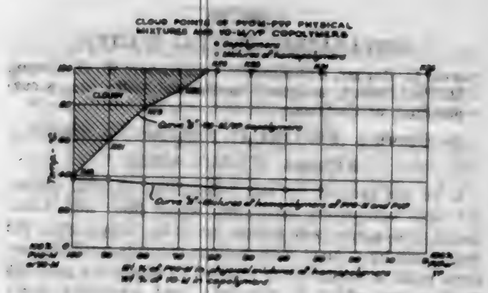
where A is a radical chosen from the group consisting of alkyl, aralkyl, and alkyl and aryl groups substituted by an ester group, and, as polymerisation initiator, a monocarboxylic acid salt having the general formula $(R.COO^-)_nX^{n+}$ in which $R.COO^-$ is the anion of a monocarboxylic acid having a dissociation constant of less than 2×10^{-5}, R is a radical chosen from the group consisting of alkyl, aryl and aralkyl groups, X^{n+} is the cation of a radical chosen from the group consisting of the alkali metals, alkaline earth metals and alkyl tertiary bases and n is a number equal to the valency of the cation, and maintaining the temperature of the resultant solution at 0° C. to 100° C. whereby carbon dioxide is evolved and polymerisation of the anhydrocarboxyamino acid is effected.

2,946,772

WATER-SOLUBLE COPOLYMERS OF RING-SUBSTITUTED N-VINYL-2-OXAZOLIDINONE

Wilhelm E. Walles and William F. Tousignant, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Feb. 27, 1958, Ser. No. 718,052
6 Claims. (Cl. 260—77.5)



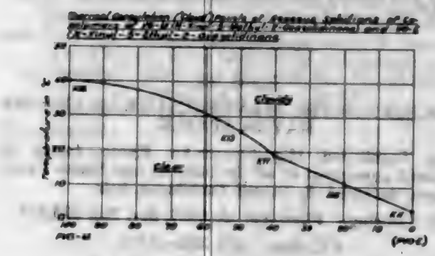
1. A normally solid copolymer consisting essentially of between about 1 and 99 weight percent, based on the weight of the copolymer, of copolymerized N-vinyl-5-methyl-2-oxazolidinone with from about 99 and 1 weight percent, based on the weight of the copolymer, of a copolymerized monomer selected from the group consisting of N-vinyl-2-pyrrolidone, N-vinyl-2-piperidone, N-vinyl-2-caprolactam, N-vinyl-succinimide, N-vinyl-3-morpholinone, and their mixtures.

2,946,773

WATER-SOLUBLE COPOLYMERS OF RING-SUBSTITUTED N-VINYL-2-OXAZOLIDINONE

Wilhelm E. Walles and William F. Tousignant, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed May 7, 1958, Ser. No. 733,742
3 Claims. (Cl. 260—77.5)



1. A normally solid copolymer consisting essentially of between about 1 and 99 weight percent, based on the weight of the copolymer, of copolymerized N-vinyl-5-ethyl-2-oxazolidinone with between about 99 and 1 weight percent, based on the weight of the copolymer, of copolymerized N-invyl-5-methyl-2-oxazolidinone.

2,946,774

INTERPOLYMERS OF ETHYLENIC MONOMERS AND ETHYLENIC ESTERS OF ALCOHOLS FROM REDUCTION OF FATTY ACIDS OF GLYCERIDE OIL ACIDS

Roger M. Christenson, Whitefish Bay, Wis., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Filed July 13, 1954, Ser. No. 443,135
4 Claims. (Cl. 260—78.5)

1. An interpolymer soluble in aromatic hydrocarbon solvents and being essentially of approximately equal parts by weight of vinyl chloride and vinyl acetate and 20 percent by weight based upon the total mixture of an ester of methacrylic acid and an alcohol derived by selectively reducing the carboxyl of a drying oil acid, said interpolymer, when spread as a film, being adapted to dry by oxidative cross-linking to a hard, durable, alkali resistant state.

2,946,775

IMPROVING THE COLOR OF PETROLEUM RESINS

Arthur Deuwe de Vries and Fred J. Buchmann, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Apr. 17, 1956, Ser. No. 578,591
2 Claims. (Cl. 260—82)

1. A process for preparing resins of improved color which comprises isolating a steam-cracked petroleum fraction boiling between about 20 and 175° C., heating the steam-cracked fraction to a temperature sufficient to dimerize substantially all of the cyclodienes in said fraction, stripping the resulting mixture to separate an overhead product from the dimerized cyclodienes, fractionating the overhead product to separate at least 50% of the product boiling up to 38° C., including isoprene, recovering a product stream boiling between about 20 and 170° C. and having the following composition:

Composition:	Weight percent
Olefins	68–30
Diolefins	8–20
Paraffins and naphthenes	5– 1
Aromatics	19–49

drying said product stream to reduce its water content to less than 130 p.p.m., polymerizing said dried product stream by contacting it with 0.2 to 0.4 wt. percent aluminum chloride catalyst at a temperature between —40 and 70° C., and recovering a light colored resin.

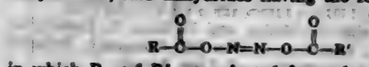
2,946,776

POLYMERISATION OF ETHYLENICALLY UNSATURATED COMPOUNDS

Gerald Scott, Blackley, and Leslie Seed, Northwich, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Dec. 23, 1957, Ser. No. 704,258
Claims priority, application Great Britain Jan. 8, 1957
9 Claims. (Cl. 260—88.7)

1. Process for the polymerization and interpolymerization of an ethylenically unsaturated monomer that undergoes addition polymerization, which comprises polymerizing said monomer in the presence of a catalytic amount of a mixed anhydride selected from the group consisting of (1) mixed anhydrides containing the residue of hyponitrous acid and the residue of an organic monocarboxylic acid, said anhydrides having the formula:



in which R and R' are selected from the group consisting of alkyl, chloro-lower alkyl, phenyl, lower-alkoxy phenyl, chlorophenyl, lower alkyl phenyl, β-phenyl vinyl, tetrahydrofuryl and 2,3-dihydrofuryl-5 radicals and (2)

mixed anhydrides containing the residue of hyponitrous acid and the residue of a polycarboxylic organic acid selected from the group consisting of alkylene dicarboxylic acids, phenylene dicarboxylic acids and trimesic acid.

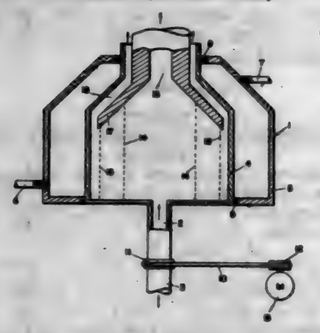
3. Process as claimed in claim 1 in which the ethylenically unsaturated compound is vinyl acetate.

2,946,777

SEPARATION OF POLYOLEFINS FROM LIQUID MEDIA

Thomas S. Mertes, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Filed June 21, 1957, Ser. No. 667,249
3 Claims. (Cl. 260—93.7)



1. Process for separating solid polyolefins from liquid media which comprises continuously introducing to the interior of a rotating centrifuge bowl a slurry of particulate solid polyolefin in a liquid which is substantially insoluble in melted polyolefin, which has a boiling point lower than the melting point of the polyolefin at the pressures generated within the centrifuge, and which has a density lower than the solid polyolefin, maintaining the wall of the centrifuge bowl at a temperature higher than the melting point of the polyolefin whereby to maintain a layer of melted polyolefin adjacent the wall of the centrifuge bowl, continuously removing liquid from a point adjacent the hub of the centrifuge bowl, and continuously recovering melted polyolefin essentially free from normally liquid contaminants from a point adjacent the wall of the centrifuge bowl.

2,946,778

POLYMERIZATION PROCESS AND CATALYSTS

Bacon Ke, Hammond, Ind., and Herbert N. Friedlander, Homewood, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed July 14, 1958, Ser. No. 748,171
20 Claims. (Cl. 260—93.7)

1. A process for the polymerization of a 1-alkene, which process comprises exposing said 1-alkene under polymerization conditions to a catalyst consisting essentially of a composition formed from a hydrocarbon aluminum compound and a pentavalent oxide of vanadium containing a minor proportion, between about 1 and about 20 mole percent based on said oxide of vanadium, of at least one oxide of an element selected from the group consisting of lithium, silver, strontium, boron, thorium, tin and manganese.

2,946,779

FRACTIONATION OF POLYOLEFINS

Herbert L. Johnson, Media, and William A. Henderson, Aldan, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Oct. 24, 1958, Ser. No. 769,286
4 Claims. (Cl. 260—93.7)

1. A process for the fractionation of polyolefins which comprises mixing a solid polymerization reaction product consisting of a mass of crystalline olefin polymer of varying molecular weights with from about five to fifty times its weight of a monocyclic aromatic hydrocarbon, maintaining the mixture at a temperature of from about 90° C. to about 145° C. for a period of time sufficient to cause the polymer to form a gel, adding to the mixture from about one quarter to twice the weight of the aromatic hydrocarbon of a liquid saturated aliphatic hydrocarbon having at least six carbon atoms, maintaining the temperature at from about 90° C. to about 145° C. for a time sufficient to break down the gel structure of the polymer, separating undissolved polymer from liquid containing dissolved polymer at a temperature in excess of 90° C., and recovering from the liquid a solid polymer having a lower average molecular weight than the undissolved polymer.

2,946,780

PREPARATION OF VITAL GLUTEN

Norval G. Barker, Robbinsdale, and Robert W. H. Chang, St. Paul, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Filed Oct. 16, 1957, Ser. No. 690,425
2 Claims. (Cl. 260—123.5)

1. In the process for the preparation of vital gluten, the steps comprising separating wheat flour into wheat starch and native wet gluten, partially dehydrating the wet gluten by contact with sodium chloride until the isotonic point is substantially reached to produce a partially dried gluten which is non-tacky, and air-drying solely the partially dried non-tacky gluten to obtain vital gluten which may be reconstituted with water to form wet gluten having substantially the same physical characteristics as the native wet gluten.

2,946,781

PROCESS FOR THE PREPARATION OF ADENOSYL HOMOCYSTEINE

Clifford H. Shunk, Westfield, N.J., and John W. Richter, Wilmington, Del., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Feb. 6, 1957, Ser. No. 638,432
7 Claims. (Cl. 260—211.5)

1. The process for making adenosyl homocysteine, which comprises hydrolyzing the reaction product of 2',3'-isopropylidene-5'-p-toluenesulfonyl adenosine and homocysteine, and removing adenosyl homocysteine from the products of hydrolysis by treatment of the latter with an anion exchange substance having a strong basic functional group and eluting adenosyl homocysteine from said substance with a weak acid.

2,946,782

PROCESS FOR THE MANUFACTURE OF VISCOSE RAYON STAPLE

Shozo Tachikawa, Higashiyama-ku, Kyoto, Japan, by mutual agreement of all the heirs of said Shozo Tachikawa, deceased, to Tatsuji Tachikawa, heir

No Drawing. Filed Apr. 5, 1957, Ser. No. 650,818
4 Claims. (Cl. 260—217)

1. In the production of viscose, a process for xanthating alkali cellulose comprising the step of introducing shredded alkali cellulose into a xanthating medium containing carbon disulphide, Turkey red oil as a surface active agent and a monoamine having a formula $R_1R_2R_3N$ in which at least one R is an alkyl radical and the remaining R's are H atoms.

2,946,783

PREPARATION OF COSTUS ROOT OIL AND THE PRODUCTS THEREOF

Govind Ramchandra Kelkar and Sasanka Chandra Bhattacharyya, Poona-6, India, assignors to Council of Scientific and Industrial Research, New Delhi, India

No Drawing. Filed Aug. 19, 1958, Ser. No. 755,887
1 Claim. (Cl. 260—236.6)

A process for the extraction of an unaltered, heat sensitive lactone of costus root oil and the products thereof, said lactone being characterized by a melting point of 108° C. in pure form, comprising the critical steps of (1) treating the powdered costus roots at room temperature with a fraction of petroleum ether having a boiling point of from 40–60° C., (2) separating the petroleum ether extract from the plant pulp by filtration, and (3) removing the solvent from the said extract under vacuum at a bath temperature of about 40° C.

2,946,784

CYCLOPENTANOPHENANTHRENE DERIVATIVES AND PROCESS

George Rosenkranz, Jesus Romo, and Carl Djerassi, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Original application Oct. 24, 1958, Ser. No. 191,942, now Patent No. 2,858,307, dated Oct. 28, 1958. Divided and this application Mar. 7, 1958, Ser. No. 724,492
4 Claims. (Cl. 260—239.55)

2. An ester of Δ^5-22-isoallospirosten-3β-ol selected from the group consisting of lower fatty acid esters and the benzoate esters.

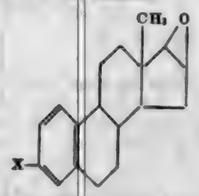
2,946,785

16β,17β-EPOXY-1,3,5(10)-ESTRATRIENES

William F. Johns, Morton Grove, and George P. Mueller, Park Ridge, Ill., assignors to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Oct. 20, 1958, Ser. No. 768,083
4 Claims. (Cl. 260—239.55)

1. A compound of the formula



wherein X is a lower alkoxy radical.

2. 16β,17β-epoxy-1,3,5(10)-estratriene.

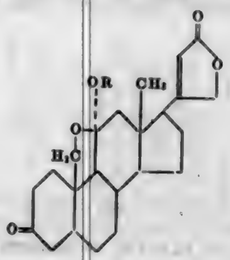
2,946,786

3-OXO-11α-HYDROXY-11,19-EPOXYCARD-20(22)-ENOLIDES AND DERIVATIVES THEREOF

John S. Baran, Chicago, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 16, 1959, Ser. No. 827,457
19 Claims. (Cl. 260—239.57)

1. A member of the class consisting of the compounds of the formula



and their Δ^{14}, and $\Delta^{4,14}$ derivatives, wherein R is a member of the class consisting of hydrogen and lower alkyl radicals.

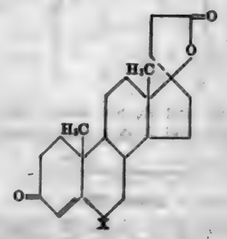
2,946,787

17α - CARBOXYETHYL-6-HALO-17β-HYDROXYANDROST-4-EN-3-ONE LACTONES AND INTERMEDIATES

Roy H. Bible, Jr., Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Aug. 7, 1959, Ser. No. 832,176
10 Claims. (Cl. 260—239.57)

1. A compound of the formula



wherein X denotes replacement of one of the hydrogens on carbon atom 6 with halogen.

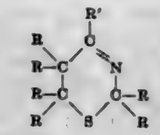
2,946,788

DIHYDRO-M-THIAZINE-Δ-3,4 COMPOUNDS AND PROCESS FOR THEIR PREPARATION

Friedrich Asinger and Max Thiel, Leuna, and Walter Höringklee, Halle, Germany, assignors to VEB Leuna-Werke "Walter Ulbricht," Leuna, Germany

No Drawing. Filed Aug. 22, 1957, Ser. No. 679,773
Claims priority, application Germany Oct. 6, 1956
27 Claims. (Cl. 260—243)

26. As a composition of matter, a compound of formula



wherein R' is a monovalent radical selected from the class consisting of alkyl, cycloalkyl, monocarbocyclic aryl and monocarbocyclic aralkyl, and R is a radical selected from the group consisting of hydrogen, alkyl, cycloalkyl, monovalent monocarbocyclic aryl and monovalent monocarbocyclic aralkyl, said alkyl radicals having from 1 to 20 carbon atoms in the alkyl chain, and said cycloalkyl radicals having from 4 to 12 carbon atoms in the cycloalkyl ring.

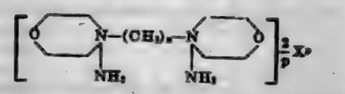
2,946,789

BIS MORPHOLINIUM SALTS

Aristotle G. Prapas, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Nov. 12, 1958, Ser. No. 773,141
5 Claims. (Cl. 260—247.5)

1. Compounds having the general formula:



wherein n is an integer having the values 6 to 12 inclusive and X is a pharmaceutically acceptable anion bearing the charge p.

2,946,790

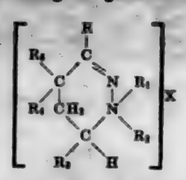
TETRAHYDROPYRIDAZINIUM COMPOUNDS

Bernard Rudner, Pittsburgh, Pa., and Mary Jo Woods, Catonsville, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Mar. 20, 1959, Ser. No. 800,624

6 Claims. (Cl. 260—250)

4. Compounds having the general formula:



wherein R, R_1, R_2 and R_3 are lower alkyl radicals; R_4 and R_5 are phenyl; and X is a pharmaceutically acceptable anion.

2,946,791

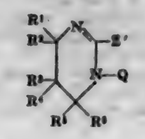
2-DIARYLALKYL-3,4,5,6-TETRAHYDROPYRIMIDINES AND PROCESSES

Clinton A. Dornfeld, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed May 2, 1957, Ser. No. 656,495

12 Claims. (Cl. 260—251)

1. A compound of the formula



wherein R^1, R^2, R^3, R^4, R^5, and R^6 are selected from the group consisting of hydrogen and lower alkyl radicals; Q is selected from the group consisting of hydrogen and lower alkyl, benzoyl, and lower alkanoyl radicals; and Z' is a lower alkyl radical in which each of two hydrogens is replaced by a member of the group consisting of phenyl, (lower alkyl)phenyl, and halophenyl radicals.

2,946,792

NEW PHENAZINE DERIVATIVES

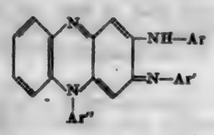
Vincent C. Barry, Rathgar, Dublin, James G. Belton, Terenure, Dublin, Michael L. Conalty, Dublin, Dermot Twomey, Terenure, Dublin, and John F. O'Sullivan, Rancleigh, Dublin, Ireland, and Ernst Hodel, Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,823

Claims priority, application Switzerland Oct. 4, 1956

6 Claims. (Cl. 260—267)

1. Phenazine derivatives of the general formula:



wherein two of the symbols Ar, Ar' and Ar'' represent the same aryl radicals selected from the group consisting of phenyl and lower alkoxyphenyl, and the third symbol represents lower alkoxyphenyl.

2,946,793

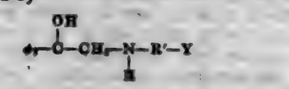
CARBINOL AMINES

Raymond J. Michaels, Jr., Mundelein, and Harold E. Zaugg, Lake Forest, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Sept. 25, 1957, Ser. No. 686,014

7 Claims. (Cl. 260—268)

7. A compound selected from the group consisting of bases represented by



where R is selected from the group consisting of hydrogen and lower alkyl; R' is an alkylene group consisting of 1 to 4 carbon atoms and Y is a substituent containing an N atom through which a linkage is made to R' and is selected from the group consisting of monoalkylamino, diloweralkylamino, piperidino, morpholino, pyrrolidino and dialkylmorpholino and the non-toxic, acid addition salts thereof.

2,946,794

VAT DYESTUFFS

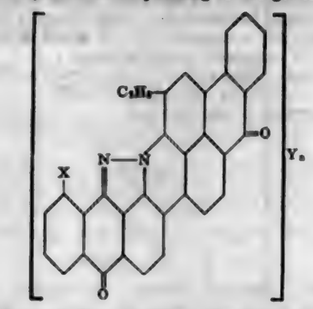
Hans Schlichenmaier, Bad Soden (Taunus), and Heinrich Pohlmann, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius und Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Original application Jan. 26, 1955, Ser. No. 484,296, now Patent No. 2,882,272, dated Apr. 14, 1959. Divided and this application Aug. 14, 1958, Ser. No. 758,642

Claims priority, application Germany Feb. 4, 1954

3 Claims. (Cl. 260—275)

1. A vat dyestuff corresponding to the general formula



wherein X stands for a member selected from the group consisting of hydrogen and chlorine, Y stands for a member selected from the group consisting of hydrogen, chlorine and bromine, and *n* means a numeral ranging from 0.5–2.

2,946,795

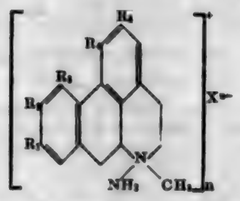
APOMORPHINIUM SALTS

Bernard Rudner, Pittsburgh, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Aug. 18, 1958, Ser. No. 755,421

5 Claims. (Cl. 260—285)

1. New chemical compounds having the general formula:



wherein R_1, R_2, R_3, R_4 and R_5 are members independently

selected from the group consisting of hydrogen, hydroxyl and lower alkoxy; R_1 and R_2 considered together form the divalent —OCH_2O— group; X is a pharmaceutically acceptable anion; and *n* is an integer less than four.

2,946,796

SALTS OF ERGOT ALKALOIDS

Bernard Rudner, Pittsburgh, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 15, 1958, Ser. No. 767,269

3 Claims. (Cl. 260—285.5)

3. Compounds having the formula R^+X^- wherein the cation R^+ is selected from the group consisting of N-aminoergotaminium, N-aminoergotamininium, N-aminoergotoxinium, N-aminoergotininium, N-aminoergonovinium, N-aminoergometrininium, N-aminomethylergonovinium, N-aminoergosinium, N-aminoergosininium, N-aminoergocristinium, N-aminoergocristininium, N-aminoergocorminininium, N-aminoergoranium, N-aminoergocryptinium, N-aminoergocryptininium and X^- is a pharmaceutically acceptable anion.

2,946,797

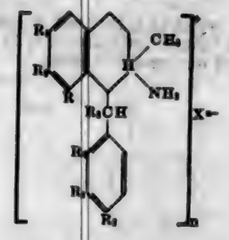
N-AMINOTETRAHYDROISOQUINOLINIUM SALTS

Bernard Rudner, Pittsburgh, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Aug. 18, 1958, Ser. No. 755,485

7 Claims. (Cl. 260—286)

7. New chemical compounds having the general formula:



wherein R is selected from the group consisting of hydrogen and lower alkoxy; R_1 and R_2 taken individually are selected from the group consisting of hydroxy and methoxy; R_1 and R_2 taken collectively are methylenedioxy; R_3 is selected from the group consisting of hydrogen and hydroxyl; R_4 is selected from the group consisting of hydrogen and carboxyl; R_5 and R_6 taken collectively are carbonyloxy; X is a pharmaceutically acceptable anion; and *n* is an integer less than four.

2,946,798

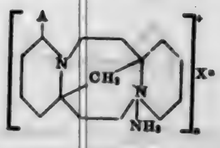
LUPINE HYDRAZINIUM COMPOUNDS

Bernard Rudner, Pittsburgh, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 30, 1958, Ser. No. 770,587

5 Claims. (Cl. 260—293)

1. New chemical compounds having the general formula:



wherein A is selected from the group consisting of O and H_2; X is a pharmaceutically acceptable anion and *n* is an integer less than four.

2,946,799

ESTER-LIKE 4-HYDROXY-PIPERIDINE DERIVATIVES

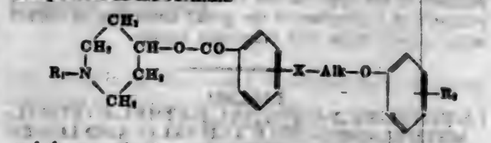
Jany Renz and Jean-Pierre Bourquin, Basel, Switzerland, assignors to Sandoz Ltd., Basel, Switzerland

No Drawing. Filed Apr. 24, 1959, Ser. No. 808,557

Claims priority, application Switzerland May 6, 1958

13 Claims. (Cl. 260—294.3)

1. A member selected from the group consisting of compounds of the formula



and therapeutically-useful salts thereof with acids, wherein R_1 stands for a lower alkyl group, X is a member selected from the group consisting of O and NH, Alk is an alkylene chain containing up to three carbon atoms in a straight chain, and R_2 is a member selected from the group consisting of H, halogen and lower alkoxy groups.

2,946,800

PROCESS FOR THE PREPARATION OF ISONICOTINIC ACID

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed June 5, 1957, Ser. No. 663,599

7 Claims. (Cl. 260—295)

1. A process of preparing isonicotinic acid from a methylolated derivative of gamma picoline having at least one methylol group attached to the carbon atom of the gamma methyl group which comprises oxidizing said methylolated derivative in the liquid phase with molecular oxygen in the presence of a solvent comprising a monocarboxylic acid having from 2 to 8 carbon atoms in the molecule and in the presence of from about 0.001% to about 5% by weight of a metallic oxidation catalyst comprising essentially as the sole effective catalytic ingredient thereof a heavy metal salt of a carboxylic acid at a temperature of from about 350° F. to about 425° F. and at a pressure at least sufficient to maintain liquid phase reaction conditions.

2,946,801

PRODUCTION OF PYRIDINE CARBOXYLIC ACIDS

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed June 5, 1957, Ser. No. 663,603

9 Claims. (Cl. 260—295)

1. The process for the production of isonicotinic acid which comprises oxidizing a 4-alkyl pyridine compound wherein the alkyl substituent comprises an oxidizable hydrocarbon group of from 1 to 8 carbon atoms in the liquid phase with molecular oxygen in the presence of a solvent comprising a mono-carboxylic acid having from 2 to 8 carbon atoms in the molecule and in the presence of from about 0.001% to about 5% by weight of a metallic oxidation catalyst comprising essentially as the sole effective catalytic ingredient thereof a heavy metal salt of a carboxylic acid at a temperature of from about 450° F. to about 550° F. and at a pressure at least sufficient to maintain liquid phase reaction conditions.

2,946,802
METHOD OF PREPARING β-ANILINOPYRIDINE
Otto Zima, Darmstadt-Eberstadt, and Ernst Jacobi, Darmstadt, Germany, assignors to E. Merck, Aktiengesellschaft, Darmstadt, Darmstadt, Germany, a corporation of Germany
No Drawing. Filed Oct. 11, 1957, Ser. No. 689,478
4 Claims. (Cl. 260—296)

1. Method of preparing β-anilinopyridine which comprises heating N-(3-pyridyl)-anthranilic acid to a temperature in the approximate range of 200°–300° C.

3. Method of preparing β-anilino-pyridine which comprises heating N-(3-pyridyl)-anthranilic acid to a temperature in the approximate range of 200–300° C. in the presence of a member of the group consisting of copper salts, copper oxide and elemental copper.

2,946,803
1-METHYL-5(2',2'-DIPHENYL-3'-ETHYL-4' - FURYLMETHYL)-IMIDAZOLE AND SALTS AND LOWER ALKYL QUATERNARIES
Harold E. Zaugg, Lake Forest, and Robert W. De Net, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 29, 1958, Ser. No. 783,087
5 Claims. (Cl. 260—309)

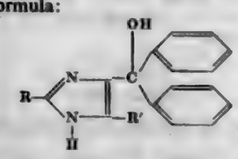
4. A compound selected from the group consisting of bases of the formula:



the non-toxic acid addition salts thereof and the non-toxic lower alkyl quaternary ammonium salt thereof.

2,946,804
(5-METHYL-4-IMIDAZOLYL)-DIPHENYL CARBINOL SALTS AND LOWER ALKYL QUATERNARIES
Harold E. Zaugg, Lake Forest, and Robert W. De Net, Waukegan, Ill., assignors to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Filed Dec. 29, 1958, Ser. No. 783,121
7 Claims. (Cl. 260—309)

6. A compound selected from the class consisting of bases of the formula:



where R and R' are selected from the class consisting of hydrogen and methyl; the non-toxic acid addition salts thereof; and the non-toxic lower alkyl quaternary ammonium salts thereof.

2,946,805
SYNTHESIS OF 2-PYRROLIDONE
Roger F. Kleinschmidt, Bartlesville, Okla., and Joseph M. Wilkinson, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 20, 1957, Ser. No. 660,081
4 Claims. (Cl. 260—326.5)

1. A process for the preparation of 2-pyrrolidone which comprises reacting gamma-hydroxybutyramide with anhydrous ammonia at elevated temperatures and pressures, and recovering the thus produced 2-pyrrolidone.

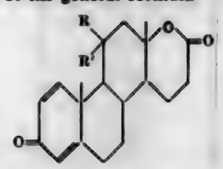
2,946,806
PROCESS FOR THE PRODUCTION OF PENTACHLOROPHENYL ETHERS OF POLYHYDRIC ALCOHOLS
Joachim Neutwig, Krefeld, and Hermann Schnell, Krefeld-Uerdingen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed May 22, 1957, Ser. No. 660,766
Claims priority, application Germany May 26, 1956
7 Claims. (Cl. 260—340.7)

1. 2,2 - dimethyl-5-ethyl-5-pentachlorophenoxymethyl-1,3-dioxane.

7. Monopentachlorophenylethers formed by reacting at temperatures from about 80° C. to about 250 C. (1) a member selected from the group consisting of acetals and ketals derived from the reaction of a trihydric alcohol selected from the group consisting of glycerol, trimethylol ethane, trimethyloipropane and trimethyloibutane with a hydrocarbon mono-oxo compound selected from the group consisting of formaldehyde, acetaldehyde, benzaldehyde, acetone, methylethylketone and cyclohexanone, with (2) hexachlorobenzene and (3) an acid binding agent selected from the group consisting of alkali metal and alkaline earth metal oxides, hydroxides and carbonates.

2,946,807
11-OXYGENATED-1-DEHYDROTESTOLOLACTONES
Josef Fried, New Brunswick, and Richard W. Thoma, Somerville, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Oct. 27, 1955, Ser. No. 543,243
3 Claims. (Cl. 260—343.2)

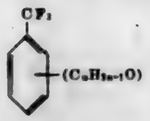
1. A steroid of the general formula



wherein R is hydrogen, R' is selected from the group consisting of α-hydroxy and α-acyloxy, wherein the acyl radical is of an organic hydrocarbon carboxylic acid of less than ten carbon atoms selected from the group consisting of lower alkanoic acids, monocyclic aromatic carboxylic acids and monocyclic aralkanoic acids, and together R and R' is keto.

2,946,808
EPOXYALKYLTRIFLUOROMETHYLBENZENES
Samuel W. Tinsley, South Charleston, Paul S. Starcher, Charleston, and Joseph P. Henry, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Sept. 30, 1958, Ser. No. 764,227
3 Claims. (Cl. 260—348)

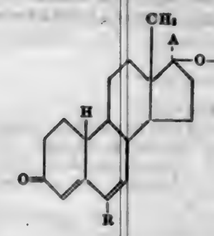
1. As new epoxides, epoxyalkylbenzenes characterized by the formula



wherein the group $(C_nH_{2n-1}O)$ represents an epoxyalkyl group composed of n carbon atoms, $2n-1$ hydrogen atoms and one oxygen atom attached to vicinal carbon atoms and where n represents a whole positive integer in the range of 2 to 4.

2,946,809
17α-ALKYNYL-17β-ALKANOYLOXY-4,6-ESTRADIEN-3-ONES
Frank Benjamin Colton, Chicago, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Feb. 13, 1959, Ser. No. 792,984
6 Claims. (Cl. 260—397.4)

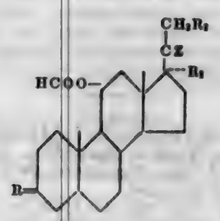
1. A compound of the structural formula



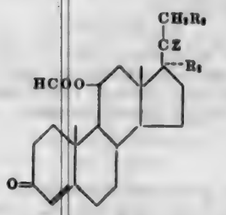
wherein A is an alkynyl radical of less than six carbon atoms and R is a member of the class consisting of hydrogen and methyl.

2,946,810
11β-FORMYLOXY STEROIDS AND PROCESS FOR MANUFACTURING SAME
Eugene P. Oliveto, Bloomfield, and Emanuel B. Hershberg, West Orange, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 8, 1954, Ser. No. 421,948
10 Claims. (Cl. 260—397.45)

10. Compounds of the group consisting of saturated and Δ^4 unsaturated pregnanes having the following respective formulae:



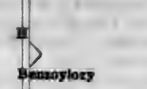
and



wherein R is a member of the class consisting of =O;



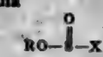
and



and R_3 is a member of the class consisting of H, OH, and low alkanoyloxy and benzoyloxy groups; and Z is a member of the class consisting of =O and (H, OH).

2,946,811
PREPARATION OF $\Delta^{9(11)}$-ANHYDRO STEROIDS
Earl M. Chamberlin, Westfield, and Torleif Utne, Warrenville, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Mar. 29, 1957, Ser. No. 649,301
10 Claims. (Cl. 260—397.45)

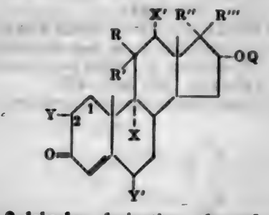
1. The process for preparing a $\Delta^{9(11)}$-3,20-bisoxygenated steroid of the pregnane series that comprises reacting a steriod selected from the group consisting of 11β-hydroxy - 3,20-bisoxygenated-Δ^4-pregnenes and 11β-hydroxy-3,20-bisoxygenated-Δ^5-pregnenes having a hydrogen atom attached to the C-9 position with an alkyl halosulfinate of the formula



where R is lower alkyl and X is selected from the group consisting of chlorine and bromine.

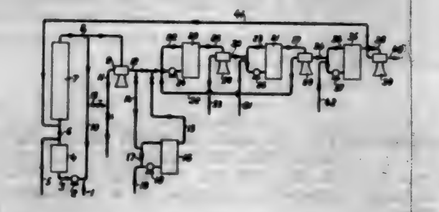
2,946,812
SYNTHESIS OF STEROIDS
Josef Fried, Princeton, N.J., and Gordon H. Thomas, Birmingham, England, assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Aug. 1, 1958, Ser. No. 752,443
16 Claims. (Cl. 260—397.45)

1. A compound selected from the group consisting of steroids of the general formula



and the 1,2-dehydro derivatives thereof, wherein R is hydrogen, R' is β-hydroxy and together R and R' is keto; R'' is selected from the group consisting of hydrogen and lower alkyl, R''' is hydroxy, and together R'' and R''' is keto; X and X' are selected from the group consisting of hydrogen, halogen, hydroxy and lower alkoxy, at least one X being hydrogen; Y is selected from the group consisting of hydrogen and methyl; Y' is selected from the group consisting of hydrogen, fluoro and methyl; and Q is selected from the group consisting of lower alkyl and aralkyl of less than ten carbon atoms.

2,946,813
CONTINUOUS MANUFACTURE OF SOAP
Fredrik Teodor Emanuel Palmqvist, Stockholm, Sweden, assignor to Aktiebolaget Separator, Stockholm, Sweden, a corporation of Sweden
Filed Apr. 27, 1954, Ser. No. 425,880
10 Claims. (Cl. 260—417)



1. In the continuous manufacture of soap from a saponifiable material, the improvement which comprises passing said material to a saponification stage and there saponifying said material while adjusting the electrolyte content of the saponification mass in relation to the soap

concentration of the mass to maintain the mass within the fitting zone of a McBain diagram and thereby form a mixture of neat soap and nigre, discharging the mixture from said stage, and separating said mixture into neat soap and nigre.

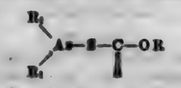
2,946,814

PROCESS FOR THE PREPARATION OF ARSENIC XANTHATES AND PARASITICIDAL COMPOSITIONS PRODUCED THEREBY

Cesare Augusto Perl, Milan, Italy, assignor to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Filed July 10, 1956, Ser. No. 596,826
Claims priority, application Italy July 13, 1955
7 Claims. (Cl. 260—440)

1. In the art of control of insect and fungus pests, the improvement comprising applying to the locality of the said pests a xanthate of the formula



in which R is selected from the group consisting of saturated and unsaturated linear and branched alkyl hydrocarbon, and cycloparaffin hydrocarbon radicals, and R_1 is a hydrocarbon radical taken from the group consisting of alkyl and phenyl.

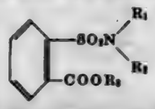
2,946,815

2-SULFAMOYLBENZOIC ACID ESTERS

Glenn H. Hamor, University Park, Los Angeles 7, Calif.

No Drawing. Filed Mar. 11, 1959, Ser. No. 798,582
7 Claims. (Cl. 260—470)

1. A chemical compound having the structural formula:



in which R_1 and R_2 are members selected from the group consisting of hydrogen and lower alkyl and R_3 is a member selected from the group consisting of a branched alkyl group having from 3 to 6 carbon atoms, a cycloalkyl group having from 4 to 6 carbon atoms and an unsaturated acyclic hydrocarbon group having from 3 to 6 carbon atoms.

2,946,816

METHOD OF SYNTHESIS OF DIALKYL ALPHA-KETOGLUTARATE FROM ALKYL 2-FUROATE

Masuo Murakami, 1-39, 3-Cho, Sekimori-cho, Suma-ku, and Saburo Senoh, 274 Mori, Motoyama-cho, Nada-ku, both of Kobe-shi, Hyogo-ken, Japan

No Drawing. Filed May 22, 1956, Ser. No. 586,373
Claims priority, application Japan Oct. 13, 1955
1 Claim. (Cl. 260—483)

A method for the production of a lower dialkyl alpha-ketoglutarate consisting essentially of reacting a lower alkyl-2-furoate with a lower alkanol and chlorine at a temperature not exceeding room temperature, and then forming said alpha-ketoglutarate by heating the resulting reaction mixture under reflux conditions.

2,946,817

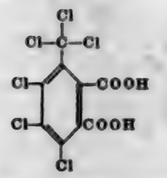
RING-SUBSTITUTED DERIVATIVES OF α,α,α-2,3,4-HEXACHLOROTOLUENE

Hyman M. Molotsky, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Jan. 8, 1957, Ser. No. 632,986
6 Claims. (Cl. 260—515)

1. A new composition of matter selected from the group consisting of hydroxy methyl-α,α,α,2,3,4-hexachlorotoluene, chloromethyl-α,α,α,2,3,4-hexachlorotoluene, bromomethyl-α,α,α,2,3,4-hexachlorotoluene, 5,6-di-(hydroxymethyl)-α,α,α,2,3,4-hexachlorotoluene, 5,6-di-(methylamine)-α,α,α,2,3,4-hexachlorotoluene, methyl-α,α,α,2,3,4-hexachlorotoluene, 5,6-dicarboxy-α,α,α,2,3,4-hexachlorotoluene, phenyl-α,α,α,2,3,4-hexachlorotoluene, 5,6-dichloromethyl-α,α,α,2,3,4-hexachlorotoluene, diaminophenyl-α,α,α,2,3,4-hexachlorotoluene, cyclopentyl-α,α,α,2,3,4-hexachlorotoluene, carboxyethyl-α,α,α,2,3,4-hexachlorotoluene and methyleneacetoxy-α,α,α,2,3,4-hexachlorotoluene.

4.



2,946,818

PREPARATION OF HYDROXY MERCAPTO BUTYRIC ACIDS AND DERIVATIVES THEREOF

Constantine E. Anagnostopoulos, Waltham, and Robert J. Wineman, Concord, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Oct. 1, 1953, Ser. No. 383,694
1 Claim. (Cl. 260—535)

The method of preparing calcium alpha-hydroxy-gamma-mercapto butyrate which comprises reacting hydrocyanic acid with beta-acetylthiopropionaldehyde in the presence of a basic amine catalyst, hydrolyzing the resulting cyanohydrin with sulfuric acid, heating the reaction mixture at a temperature between 80° and 110° C., neutralizing it with an excess of calcium hydroxide, filtering off the precipitated calcium sulfate, evaporating the filtrate to a volume not more than one-quarter its original volume, and allowing the solution to cool, whereby a precipitate is formed.

2,946,819

PROCESS OF PRODUCING CARBODIIMIDES

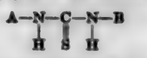
Robert F. Coles, North St. Paul, Minn., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 14, 1958, Ser. No. 728,087
4 Claims. (Cl. 260—551)

1. A process of producing a carbodiimide of the following general formula:

A—N=C=N—B

wherein A and B are selected from the class consisting of lower alkyl, lower cycloalkyl and phenyl which comprises reacting about 1 mole of a N,N'-disubstituted thiourea of the following general formula:



wherein A and B are selected from the class consisting of lower alkyl, lower cycloalkyl and phenyl with about 1 mole of mercuric potassium iodide and about 2 moles of an alkali metal hydroxide in an aqueous medium and separating the carbodiimide formed from said aqueous medium.

2,946,820

HIGH BULK DENSITY NITROGUANIDINE

Ronald A. Henry and Joseph Cohen, both of Room 1609, Michelson Laboratory, Naval Ordnance Test Station, Inyokern, China Lake, Calif.

Filed Feb. 16, 1958, Ser. No. 144,554
5 Claims. (Cl. 260—564)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The method of producing high bulk-density nitroguanidine which comprises the step of crystallizing the same from a 1 to 8% aqueous solution of nitroguanidine having a pH of from 2 to 8 in the presence of an additive chosen from the group consisting of nitroguanyl hydrazone of benzaldehyde, nitroguanyl hydrazone of vanillin, nitroguanyl hydrazone of acetophenone, nitroguanyl hydrazone of salicylaldehyde, 1-phenyl-3-nitroguanidine, 1-(2-methylphenyl)-3-nitroguanidine, 1-(3-methylphenyl)-3-nitroguanidine, 1-(4-methylphenyl)-3-nitroguanidine, 1-(2-ethoxyphenyl)-3-nitroguanidine, 1-(2-methoxyphenyl)-3-nitroguanidine, and 1-(4-methoxyphenyl)-3-nitroguanidine.

2,946,821

PURIFICATION OF M-PHENYLENEDIAMINE

Leslie M. Schenck, Westfield, and Dennis L. Deutsch, Cranford, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 5, 1956, Ser. No. 614,046
4 Claims. (Cl. 260—582)

1. A process of recovering m-phenylenediamine from a mixture of the same with its o- and p-isomers which comprises adding to an aqueous solution of a mixture of said isomeric diamines at a temperature below about 100° C., a water-soluble heavy metal salt selected from the group consisting of the chlorides, sulfates, acetates and nitrates of vanadium, manganese, iron, cobalt, nickel, copper and zinc to thereby form an addition product of said salt and the ortho and para-phenylenediamines instantaneously and which precipitates as formed, and separating said precipitated addition product from the m-phenylenediamine before any appreciable amount of addition product of said heavy metal salt with m-phenylenediamine is formed.

2,946,822

PURIFICATION OF M-PHENYLENEDIAMINE

Leslie M. Schenck, Westfield, and Dennis L. Deutsch, Cranford, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 5, 1956, Ser. No. 614,047
6 Claims. (Cl. 260—582)

1. The process of recovering meta-phenylenediamines from mixtures of the same with the ortho- and para-isomers, which comprises adding to an aqueous solution of a mixture of said isomeric diamines, at a temperature below about 100° C., a water soluble compound having a chromium containing anion and selected from the group consisting of chromic acid and the chromate and bichromate salts thereof to thereby form an addition product with o- and p-phenylenediamines instantaneously and which precipitates as formed, and separating said precipitated addition product from the m-phenylenediamines before any appreciable amount of addition product of said compound having a chromium containing anion with said m-phenylenediamine is formed.

2,946,823

PROCESS FOR MAKING METHYL-(4-ISOPROPYL-1-CYCLOPENTYL)-KETONE AND INTERMEDIATE OBTAINED THEREBY

Habib-Emile Eschinazi, Montclair, N.J., assignor to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 28, 1958, Ser. No. 731,145
4 Claims. (Cl. 260—593)

1. The process, which comprises subjecting 1-paramenthene to ozone at a temperature within the range from about −70° C. to about 50° C., heating the resulting ozonide under reducing conditions at a temperature within the range from about 0° C. to about 100° C. to form 3-isopropyl-6-oxoheptanal, and heating the latter in the presence of a member selected from the group consisting of aqueous alkali and aqueous acid at a temperature within the range from about 0° C. to about 100° C. to form methyl-(4-isopropyl-1-cyclopentenyl)-ketone.

4. L-3-isopropyl-6-oxoheptanal, having a boiling point of about 98°–100° C. under a pressure of 3 mm. of Hg, n_D^{20}=1.4515, α_D is −6°, and infrared absorption bands at 5.85 (double), 6.85, 7.1, 7.25, 7.35 and 8.6 microns.

2,946,824

ALKYLBENZYLTRIPHENYLPHOSPHONIUM CHLORIDES

Max E. Chiddix, Easton, and Earl P. Williams, Pen Argyl, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 15, 1958, Ser. No. 767,294
6 Claims. (Cl. 260—606.5)

1. Alkylbenzyltriphenylphosphonium chlorides having the following general formula:



wherein R represents an alkyl group containing from 8 to 18 carbon atoms.

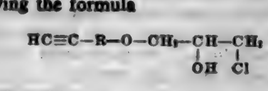
2,946,825

2-HYDROXY-3-CHLOROALKYL ETHERS OF ACETYLENIC ALCOHOLS

Roger F. Monroe and Arthur W. Anderson, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,473
5 Claims. (Cl. 260—611)

1. A 2-hydroxy-3-chloropropyl ether of an acetylenic alcohol having the formula



wherein R is a bivalent saturated hydrocarbon radical having from 1 to 8 carbon atoms, inclusive six of which may be joined together to form a ring.

2,946,826

STABILIZATION OF HALOHYDROCARBONS

George Whitlock Graham, Beloeil Station, Quebec, and George Russell Lusby, St. Hilaire Station, Quebec, Canada, assignors to Canadian Industries Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Filed May 13, 1959, Ser. No. 812,889
Claims priority, application Canada May 16, 1958
4 Claims. (Cl. 260—652.5)

1. A method of stabilizing trichloroethylene against the formation of acidic products therein which comprises incorporating therewith 0.0001–0.1% by weight of triethylamine and 0.01–1.0% by weight of metal salt of a weak organic acid selected from the group consisting of calcium stearate, magnesium stearate, zinc stearate, sodium stearate, potassium oleate and basic lead stearate.

2,946,827

PRODUCTION OF FLUOROFORM

Leon Jerzy Belf, Bristol, England, assignor to The National Smelting Company Limited, London, England

No Drawing. Filed Dec. 18, 1957, Ser. No. 703,507
Claims priority, application Great Britain Jan. 14, 1957
2 Claims. (Cl. 260—653.7)

1. The method of preparing fluoroform in high yield, which comprises passing a gaseous mixture of chloroform and hydrogen fluoride at a temperature between about 200° C. and 400° C. over a catalyst consisting essentially of active charcoal impregnated with from about 10.7% to 12.7% iron chloride, and thereafter separating the fluoroform from the remaining products.

2,946,828
PROCESS FOR PREPARING ALIPHATIC FLUORINE COMPOUNDS

Otto Scherer, Heinrich Kühn, and Eberhard Forche, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Original application Dec. 2, 1957, Ser. No. 699,890. Divided and this application May 4, 1959, Ser. No. 810,586
Claims priority, application Germany Apr. 4, 1952
12 Claims. (Cl. 260—653.7)

1. A process for the manufacture of saturated aliphatic fluorine compounds by replacing halogen by fluorine, which process comprises reacting hydrogen fluoride, at a temperature within the range of about 200° C. to 700° C. and in the presence of aluminum fluoride containing in addition magnesium fluoride as a catalyst, with saturated halogenated aliphatic hydrocarbons containing at least one halogen atom other than fluorine.

2,946,829
SELECTIVE HYDROGENATION AND PALLADIUM CATALYST THEREFOR

Merle Likins and John F. Strotman, Louisville, Ky., and Donald O. McCarthy, Tuscola, Ill., assignors to Chemetron Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Filed July 15, 1958, Ser. No. 748,686
9 Claims. (Cl. 260—677)

1. A catalyst, suitable for selective hydrogenation of highly unsaturated hydrocarbons in a concentrated olefin stream, which comprises from 0.01 to 0.09% by weight of palladium metal on an alumina carrier, said catalyst characterized by a pore volume of surface pores having a threshold diameter not greater than 800 A. in the range of from 0.0 to 0.4 cc./gm. and further characterized in that the palladium is predominantly concentrated in the external portions of the carrier.

2. A method of selectively hydrogenating highly unsaturated hydrocarbons in a concentrated olefin stream which comprises passing said concentrated olefin stream over a palladium on alumina catalyst as defined by claim 1 at a temperature in the range of 100° to 400° F. and an hourly space velocity of 425 to 1600.

8. A method of making catalyst, suitable for the selective hydrogenation of highly unsaturated hydrocarbons in a concentrated olefin stream, which comprises the step of spraying a solution of a palladium salt onto an alumina carrier possessing an initial pore volume of from 0.00 to 0.40 cc./gm. of pores having a threshold diameter of less than 800 A., characterized in that the volume of the salt solution in relation to the volume of the solid carrier is in the range of from 1:12 to 1:5 and further characterized in that the concentration of the salt solution is regulated so as to produce a finished catalyst with a palladium concentration of from 0.01 to 0.09% by weight.

2,946,830
PREVENTION OF EMULSIONS DURING EXTRACTION WITH ACIDIC CUPROUS SALT SOLUTIONS

Frederick L. Stoller, Barcelona, Venezuela, assignor to Phillips Petroleum Company, a corporation of Delaware

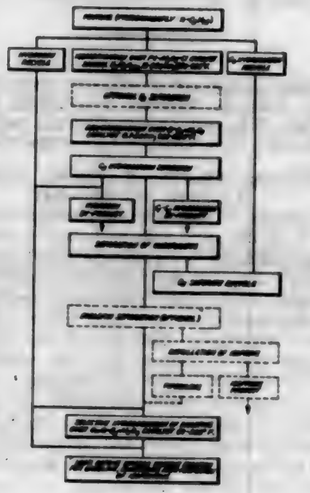
No Drawing. Filed Sept. 2, 1958, Ser. No. 758,550
7 Claims. (Cl. 260—677)

1. In the separation of olefins from fluid mixtures containing them with an acidic aqueous cuprous salt solution as the absorption medium, and wherein difficultly separable emulsions are formed, the improvement comprising having present in said aqueous cuprous salt solution 0.1 to 5 weight percent of a salt of an alkyl aryl sulfonate.

2,946,831
PENTANE DEHYDROGENATION

John B. Meerker, Secane, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

Filed July 16, 1958, Ser. No. 749,014
5 Claims. (Cl. 260—680)

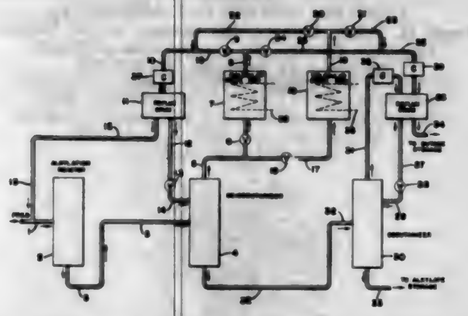


1. The method of preparing both isoprene and a C_5 fraction of high octane number from a feedstock stream consisting predominantly of normal pentane which includes the steps of: mixing a feedstock stream consisting predominantly of normal pentane with a recycle stream consisting predominantly of C_5 acyclic saturated hydrocarbons; passing said mixture, together with several mols of hydrogen per mol of hydrocarbon, over a platinum on halided alumina catalyst at isomerization conditions including a space rate from 1 to 6 volumes of liquid hydrocarbon per volume of catalyst per hour, a pressure of from 15 to 50 atmospheres and a temperature of 600° to 950° F.; subjecting all of the C_5 hydrocarbon effluent from the isomerization catalyst to dehydrogenation over a chromia on alumina catalyst at a liquid space rate of from 0.5 to 3 volumes of liquid C_5 hydrocarbon per volume of catalyst per hour, a pressure from 0.1 to 2 atmospheres, and a temperature from 900° F. to 1200° F.; separating from the effluent from the chromia on alumina dehydrogenation catalyst unconverted C_5 acyclic saturated hydrocarbons for inclusion in said recycle stream; separating from the effluent from the dehydrogenation catalyst a stream consisting essentially of pentenes, isoprene and, miscellaneous pentadienes; separating and withdrawing isoprene from the effluent from the dehydrogenation catalyst; subjecting the raffinate remaining after isoprene withdrawal to selective hydrogenation over a catalyst containing copper chromite at a temperature from 60° F. to 320° F. at a liquid space rate from 0.5 to 6 volumes of liquid raffinate per volume of catalyst per hour at a hydrogen to hydrocarbon ratio of from 0.01 to 1 to selectively hydrogenate the miscellaneous pentadienes to pentenes and to prepare a pentene stream substantially free from diolefins; and withdrawing said stream of pentenes containing a high proportion of isopentenes as a fraction for imparting both a high octane number and controlled volatility to a fuel for high compression internal combustion motors.

2,946,832
ALKYLATION PROCESS

Willis L. Vermilion, Jr., Lakewood, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

Filed May 14, 1958, Ser. No. 735,285
2 Claims. (Cl. 260—683.43)

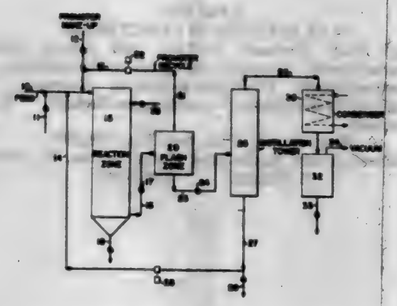


1. An alkylation process comprising the steps of contacting a normally gaseous hydrocarbon mixture comprising iso-alkanes, olefins and n-alkanes with a catalyst in a reaction zone under alkylation conditions, withdrawing a mixture of product and unreacted feed material from said reaction zone, introducing said mixture of product and unreacted feed material into a distillation zone and adjusting the temperature and pressure in said distillation zone so as to separate a mixture comprising substantially all of the iso-alkanes and a part of the n-alkanes from said mixture, passing said mixture of iso-alkanes and n-alkanes to an adsorption zone containing a bed of molecular sieves having an average pore size of about 5 angstroms and recovering therefrom a stream consisting essentially of iso-alkanes, and finally returning at least part of said iso-alkane stream to said distillation zone as reflux and recycling the remainder of said iso-alkane stream to said reaction zone.

2,946,833
PARAFFIN HYDROCARBON REACTIONS WITH ALUMINUM BROMIDE

Charles Newton Kimberlin, Jr., and Howard Emerson Merrill, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Aug. 27, 1956, Ser. No. 757,538
6 Claims. (Cl. 260—683.74)



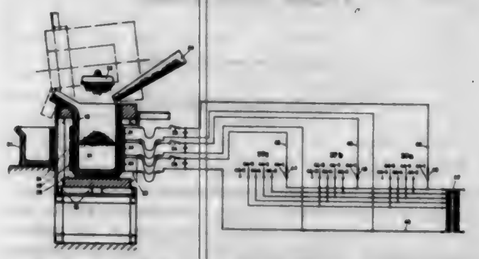
1. In the catalytic treatment of paraffinic hydrocarbons in the presence of aluminum bromide catalyst and a promoter at temperatures of up to about 120° F. in a reaction zone, wherein the products of the reaction comprise principally branched chain paraffinic hydrocarbons of from 4 to 7 carbon atoms, and including the step of removing from the reaction zone hydrocarbon products containing dissolved aluminum bromide, the improvement which comprises the steps of separating the products of the reaction from at least the major portion of the promoter and thereafter subjecting the products to vacuum distillation in a distillation zone at temperatures no higher than 120° F. and recycling to the reaction zone a bottoms product containing dissolved $AlBr_3$, whereby recovery and re-use of catalyst may be effected without catalyst deactivation and without product degradation.

ELECTRICAL

2,946,834
METHOD AND APPARATUS FOR ELECTRIC INDUCTION FURNACE MELTING

Otto Junker, Lammersdorf, Germany, assignor, by mesne assignments, to Otto Junker (Offene Handelsgesellschaft), Lammersdorf, Germany, a partnership of Germany

Filed Nov. 25, 1955, Ser. No. 549,143
6 Claims. (Cl. 13—27)

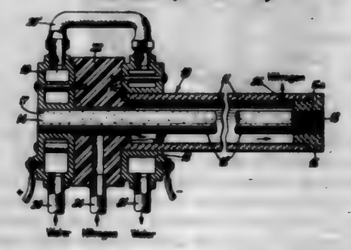


1. In a method for melting solid metal parts having a large surface, in a melting bath in an electric induction furnace having a heating primary coil divided axially of the furnace into a plurality of at least three portions, the steps comprising, first delivering electric energy only to the lower portion of the coil surrounding a molten metal sump, thereafter delivering the main portion of the electric energy stepwise into succeeding higher portions of the coil in accordance with the rise of the level of the sump due to the delivery of fresh metal into the molten metal sump.

2,946,835
CARBON-CARBON BORON THERMOCOUPLE

Russell D. Westbrook and Robert L. Shepard, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Filed Aug. 12, 1957, Ser. No. 677,743
3 Claims. (Cl. 136—5)



1. A thermocouple for measuring temperatures above 2000° C. wherein one of the elements thereof consists of

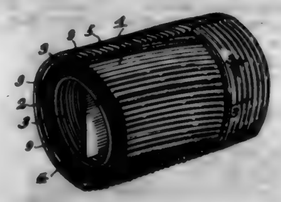
a crystalline carbon article thermoelectrically modified by the inclusion as an essential constituent therein of atoms of boron as impurities in said carbon, said boron being present in an amount between 0.1 percent and 5.0 percent by weight of said article, said boron being so disposed therein as to alter the thermoelectromotive force of said carbon article.

2,946,836
GAS DIFFUSION ELECTRODE
Eduard Justi, Gerhard Reichert, and August Winsel, Braunschweig, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, and Steinkohlen-Elektrizität Aktiengesellschaft, Essen, Germany
Filed Jan. 9, 1956, Ser. No. 558,894
Claims priority, application Germany Jan. 12, 1955
6 Claims. (Cl. 136—86)



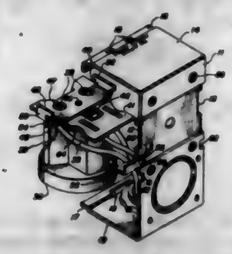
1. In a gas diffusion electrode for a fuel cell having a hollow porous electrode body and a current tap, the improvement which comprises electrically conductive granules positioned in the hollow interior of said hollow electrode body and in conductive connection with said current tap said electrically conductive granules establishing electrical connection between said electrode body and said current tap, conduit means for passing a gas to the hollow interior of said hollow electrode body, an exhaust conduit from said hollow interior, a valve sealing said exhaust conduit and means for opening said valve controlled by the electricity from said current tap.

2,946,837
FLUID-COOLED ELECTRIC CABLE
William R. Beamish, Pointe Claire, Quebec, Canada, assignor to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed May 26, 1958, Ser. No. 737,599
9 Claims. (Cl. 174—15)



1. An electric cable capable of carrying heavy currents and adaptable to be cooled comprising in combination: a central core, including a plurality of layers of bare conductors; a flexible liquid-tight outer sheath encompassing the core; a plurality of covered conductors, spaced apart and stranded with and partially contained within the conductors of the outer layer of the core, the cross section of the covered conductors being of larger diameter than that of the bare conductors among which they are stranded so as to provide a predetermined passageway between the inner surface of the flexible sheath and the surface of the outer layer of the core; means for applying a coolant to the passageway.

2,946,838
ELECTRIC UTILITY BOX ASSEMBLY
Frank G. Bollak, Chicago, Ill., assignor to Bell Electric Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 21, 1959, Ser. No. 841,218
11 Claims. (Cl. 174—53)



10. An electric utility box comprising: a box base member including a rear wall with opposed recesses in the vertical margins thereof; a wiring element device having wire clamping means exposedly mounted in the rear end thereof; an insulating member, having openings alignable with said clamping means, slidably mounted on said rear end over said clamping means and slidable between first and second positions respectively exposing and covering said clamping means with said member having a recess; a bracket plate affixed on said device and having a pair of spaced ears rearwardly depending and seatable respectively in said opposed recesses with one of said ears having an enlarged end portion lockingly engaged behind said rear wall and the other of said ears having a notch disposed beyond said rear wall from said plate; a lug projecting forwardly from said rear wall in a position accommodating said recess in said insulating member only when the latter is in said second position; a latch lever pivotally mounted on said rear wall with its free end movable into said notch; and a box cover member including a side wall and enclosingly mateable with said base member with a portion of said side wall latchingly adjacent said lever in said notch.

2,946,839
SLEEVE TYPE JOINT PROTECTOR
William A. Horning, 902 Friedel Ave., Vancouver, Wash.
Filed Feb. 24, 1959, Ser. No. 795,266
1 Claim. (Cl. 174—93)

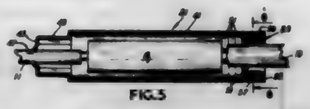


FIG. 5

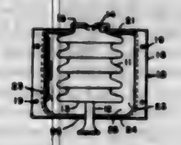
A sleeve protector comprising an elongated tubular sleeve member to fit over a compression member which joins the bare portions of a pair of cables, one end of the sleeve member having a snug fit with one of the cables, an end closure having a cylindrical portion frictionally fitting within the other end of the sleeve member, said cylindrical portion having an inwardly extending flexible flange defining an opening, said flange snugly fitting on the second cable, said end closure having an outwardly extending radial portion for disposition next to the end face of said other end of said sleeve member, said cylindrical portion of said end closure having axially extending ribs thereon for engaging the sleeve member and defining a plurality of axially extending channels, the outwardly extending radial portion of said enclosure having radial ribs aligned with the axial ribs and forming radial channels which form continuations of the axial channels whereby water in the interior of the sleeve member may drain through said channels and be discharged from said sleeve member.

2,946,840
PROTECTIVE WIRE WRAPPING AND METHOD FOR PROTECTING ELECTRICAL WIRES
Alvin D. Palmer, 626 S. Austin Blvd., Oak Park, Ill.
Filed Aug. 4, 1955, Ser. No. 526,380
2 Claims. (Cl. 174—136)



2. In combination, an overhead electrical transmission line having a plurality of insulated conductors, sheathing means anchored to and protectively encasing a longitudinal portion of said transmission line to be protected from interfering vegetation, and abrasive means on the exterior of said sheathing means for wearing away vegetation interferingly engaged therewith and moved relative thereto.

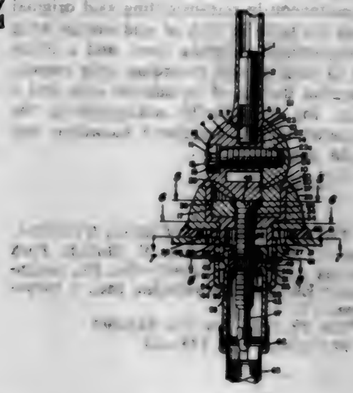
2,946,841
ELECTRICAL INSULATOR CONTAMINATION SHIELD
Charlie M. Wagner, 645 Hoffman St., Corpus Christi, Tex.
Filed May 7, 1957, Ser. No. 657,654
2 Claims. (Cl. 174—139)



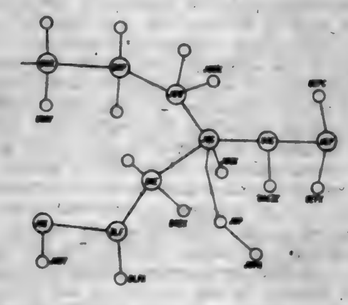
1. A contamination shield for an electrical insulator equipped with normally downwardly extending supporting hardware in its base comprising a plurality of longitudinal segments and releasable means snapping said segments together, said segments being formed of smooth insulative material and shaped to jointly provide a skirt having an inturned annular top portion for engagement with the upper end portion of the insulator, a generally cylindrical side portion encircling the insulator in spaced relation and an inturned annular bottom portion spaced from the insulator and defining a gap relative to the insulator hardware, said gap having a clearance selected as necessary for lightning gaps at the applied voltage.

2,946,842
AUTOMOBILE ANTENNA
Joseph P. Chadowski, Cleveland, Ohio, assignor, by mesne assignments, to New-Tronics Corp., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 24, 1959, Ser. No. 795,134
8 Claims. (Cl. 174—153)

1. In combination with an automobile body having a circular opening therein, an antenna mounting comprising a soft pad disposed about said opening, a metal collar seated on said pad and having a non-circular opening therein, a base member of insulating material seated in said collar and having a non-circular extension passing entirely through said non-circular opening and through the opening in said body, a metallic spherical segment having a base portion seated on said base member, and a spherical segment complementary to said first segment and removably secured to the latter.



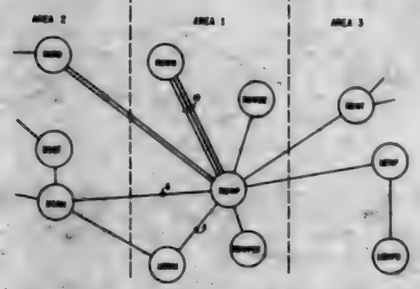
2,946,843
AUTOMATIC TELEGRAPH SWITCHING SYSTEM WITH MULTIPLE CALL PROCESSING
Richard C. Stiles, La Grange, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Oct. 21, 1953, Ser. No. 387,354
35 Claims. (Cl. 178—2)



1. In an automatic telegraph switching system, a switching center, a plurality of stations, each of said stations identified by different address codes, outgoing lines extending from said switching center, means in said switching center recording an original telegraph message, said original message including a list of address codes identifying different ones of said stations that are to receive said original message, processing apparatus in said switching center, a plurality of message storage units, each common to said outgoing lines and to said processing apparatus, means in said processing apparatus controlled by said address codes for determining the outgoing lines over which said original message must be retransmitted to reach each of the stations identified by the address codes in said original message and for associ-

sting one of said message storage units with each one of said determined outgoing lines, means in said processing equipment for registering in each message storage unit associated with a determined outgoing line the address code or codes that determined the corresponding outgoing line, means associated with said original message recording means for simultaneously retransmitting said original message to register the same in each of said storage units associated with determined outgoing lines, and a transmitter individual to each of said recording units responsive to the registration therein of an address code and a telegraph message for individually retransmitting the information registered by the associated recording unit over the associated outgoing line.

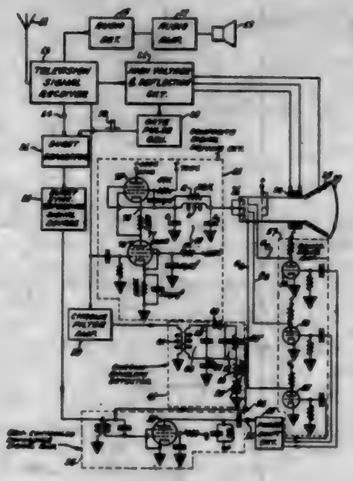
2,946,844
AUTOMATIC TELEGRAPH SWITCHING SYSTEM
Richard C. Stiles, La Grange, Robert E. Steffels, Park Ridge, and Robert A. Kolpek, Libertyville, Ill., assignors to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Nov. 29, 1956, Ser. No. 625,904
49 Claims. (Cl. 178—2)



1. In a telegraph switching center having an incoming line over which a message with one or more address codes each representing an individually corresponding destination may be received and a plurality of storage units, the improvement comprising a translator effective in response to the receipt of said message for interpreting said plurality of address codes to select only one route in case said destinations corresponding to said plurality of address codes may be reached over said one route and to select a plurality of routes in case said destinations corresponding to said plurality of address codes requires a plurality of routes to reach said corresponding destinations, and an arrangement controlled in one manner in response to said selection of only said one route for transmitting said message to only one of said storage units, and said arrangement controlled in another manner in response to said selection of said plurality of routes for transmitting said message to a corresponding plurality of said storage units.

2,946,845
GAIN CONTROL OF DEMODULATION WAVES
Raymond L. Pickholtz, New York, and Albert Macovski, Massapequa, N.Y., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 20, 1956, Ser. No. 629,651
8 Claims. (Cl. 178—5.4)

2. In combination, a color kinescope capable of reproducing different component colors and having a plurality of electron guns, each having a cathode and a control grid and adapted to control the color light emission of one of said component colors, means to apply a color television signal including a luminance signal and a chrominance signal to each of said cathodes, said color television signal being indicative of both the component colors and the saturation of a televised image, said chrominance signal comprising a modulated subcarrier having an envelope giving an indication of saturation and having a subcarrier frequency, said color television signal capable of being converted into each of a plurality of component color signals corresponding to said component colors reproducible by said color kinescope in said color kinescope by mixing in each electron gun said color television signal and a demodulating signal having said subcarrier frequency and having a prescribed phase of said chrominance signal corresponding to color information relating to the component color light emission

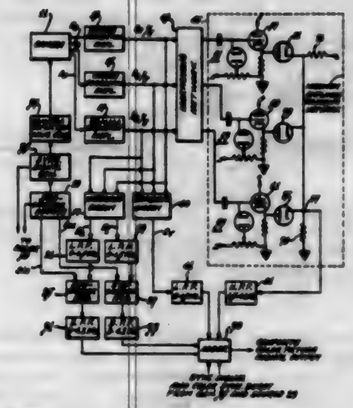


controlled by that electron gun, means to measure the saturation of said televised image and to develop a control voltage which varies in accordance with said saturation, means to develop a plurality of demodulating signals, each having a phase of said chrominance signal corresponding to color information in said chrominance signal related to the color light emission controllable by one of said plurality of electron guns, means coupled to said control signal developing means and to said developing demodulating signal means to control the amplitude of each of said demodulating signals in accordance with said control voltage, and means to apply each of said amplitude controlled demodulating signals to the corresponding one of said plurality of electron guns.

2,946,846
COLOR TELEVISION
Alfred C. Schroeder, Southampton, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Original application Nov. 2, 1953, Ser. No. 389,566. Divided and this application Dec. 4, 1957, Ser. No. 700,702
6 Claims. (Cl. 178—5.4)

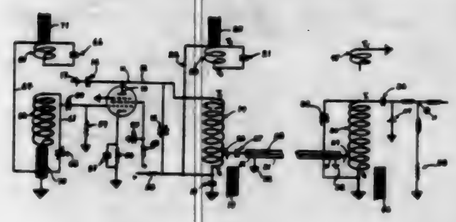
1. In a color television system including a source of a plurality of simultaneous component color signals, apparatus comprising the combination of means coupled to said source for combining all of said component color signals in relative proportions substantially corresponding to the relative luminosities of said component colors, a low pass filter coupled to said component color signal combining means, additional means coupled to said source and having an output terminal for continually selecting

and passing to said output terminal the component color signal of greatest magnitude, a high pass filter coupled



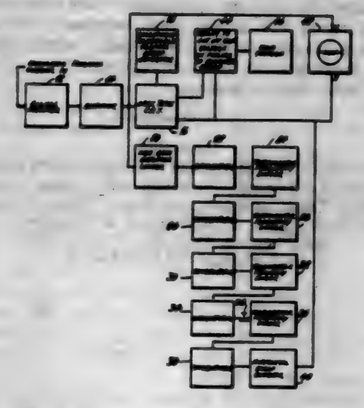
to said output terminal, and signal adding means coupled to said low pass and high pass filters.

2,946,847
STRUCTURE FOR CONTROLLING BAND WIDTH
Russell J. Callender, 417 University Ave., St. Paul, 3, Minn.
Filed Apr. 30, 1956, Ser. No. 581,595
13 Claims. (Cl. 178—5.8)



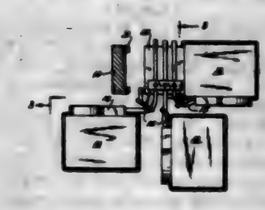
7. In a television receiver system of the intercarrier type having an intermediate frequency amplifier channel including a plurality of cascade connecting amplifier stages, means for impressing a television signal on the input of said channel, a picture carrier and a sound carrier, means for detecting the beat frequency of the difference in frequency between said picture carrier and said sound carrier, said intermediate frequency channel having an output stage including an output plate circuit and input grid circuit for said stage, the said plate circuit including two electrostatically and magnetically shielded tapped turn inductors each with high impedance ends and low impedance ends and each connected across their ends respectively with resonance controlling shunt condensers, a low impedance transmission line connecting and coupling the two tapped turn inductors at tapped turn points at the said low impedance ends of each inductor, with said resonance shunt condensers controlling the degree of coupling of said tapped turn coils, and the said grid circuit of the said output stage including a grid connected to a resistor to ground and through a capacitor to a grid coil resonant circuit shunted inductor coil and an inductively coupled condenser shunted inductor coil inductively coupled to said grid coil resonant circuit.

2,946,848
FACSIMILE RECORDER SYSTEM
Edgar W. Van Winkle, Rutherford, N.J., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 8, 1954, Ser. No. 414,917
3 Claims. (Cl. 178—6.8)



1. A facsimile recorder for use in monitoring comprising; a cathode ray visual recording storage tube; intensity modulating means coupled to said tube and adapted for varying beam intensity in said tube in accordance with intelligence signal voltage received from a facsimile transmitter whose message is being recorded by said recorder, said intensity modulating means including an amplifier for intelligence signal modulated carrier and detector means coupled between the output end of said amplifier and said tube; first deflection means coupled to said tube and adapted for applying deflection energy to the electron beam of said tube for deflecting the beam in one direction synchronously with page scanning at the facsimile transmitter, said first deflection means including manually operable means for initiating a deflection cycle in said first deflection means; second deflection means coupled to said tube and adapted for applying deflection energy to the electron beam of said tube for deflecting the beam in a direction transverse to the aforementioned direction synchronously with the line-by-line scanning rate at the facsimile transmitter; and synchronizing means coupled between said amplifier and said second deflection means for synchronizing the frequency of the deflection energy of said second deflection means with a submultiple of the frequency of the carrier.

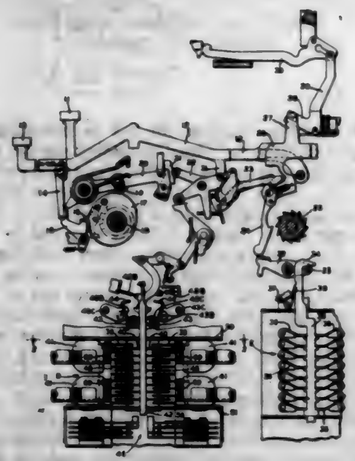
2,946,849
DATA REPRODUCING APPARATUS
Nicholas Curtis, Denville, N.J., assignor to Trans-Lux Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 8, 1958, Ser. No. 778,972
12 Claims. (Cl. 178—7.1)



1. In an apparatus of the character described, a pair of tape-printing and feeding mechanisms each having a zone from which imprinted tape is discharged, tape-sup-

porting means providing a display station therefor, said mechanisms being disposed in positions at which the tapes discharged thereby move toward each other, a television camera, means for mounting such camera to encompass within its field tapes displayed at such station, means interposed between said tape-supporting means and the discharge zones of the said mechanisms for guiding the tapes in movements converging upon the display station and causing them to traverse the surface of said supporting means in parallel relationship and means individual to each tape for drawing the same across such display station.

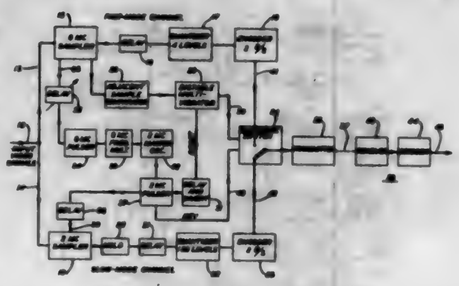
2,946,850
DECODING MECHANISM FOR MULTIPLE CODES
Ellsworth L. Reitsma, Norwalk, and Costas Avgerinos, Wilton, Conn., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 4, 1957, Ser. No. 681,942
17 Claims. (Cl. 178—33)



3. In a decoding device in which settable code plates are employed, the invention which comprises a plurality of interposed sets of code plates respectively settable in response to the receipt of information in different codes, each of said sets of plates having an operative and an inoperative position, one set being in one position while the other set is in the other position, a pivoted scissor plate connected to one set of plates on one side of the pivot point and to the other sets of plates on the other side of the pivot point, and means connected to said scissor plate to oscillate it around its pivot point to move the sets of plates in opposite directions at right angles to their length.

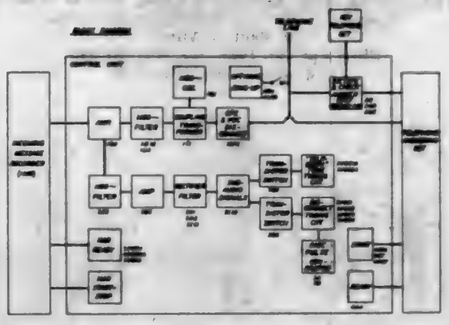
2,946,851
TELEVISION SYSTEM HAVING REDUCED TRANSMISSION BANDWIDTH
Ernest R. Kretzmer, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 21, 1956, Ser. No. 573,022
19 Claims. (Cl. 178—43.5)

18. Transmission apparatus which comprises, in combination with a signal source and an output terminal, a fine grain encoder and a coarse grain encoder, said fine grain encoder and said coarse grain encoder being connected in parallel between said source and said output terminal and being alternatively actuatable, means for determining the momentary character of the signals of said signal source, and means responsive to the results of



said determinations for selectively actuating one of said encoders.

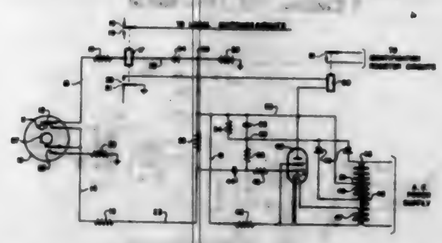
2,946,852
AUTOMATIC TELEPHONE ANSWERING AND MESSAGE-RECORDING SYSTEM
William J. Brown, Madison, Robert A. Miller, Plainfield, and Charles M. Tarls, Cranford, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 2, 1958, Ser. No. 725,941
28 Claims. (Cl. 179—6)



1. In a signal system comprising a line, a voice recorder and means for connecting said line to said recorder and starting the operation thereof to record speech transmitted over said line, a frequency filter coupled to said line, said filter including means for passing subaudio frequencies corresponding to the syllabic modulation of said speech and suppressing all audio frequencies, means responsive to said syllabic frequencies when the level thereof is below a predetermined amplitude for a predetermined time interval for stopping the operation of said recorder.

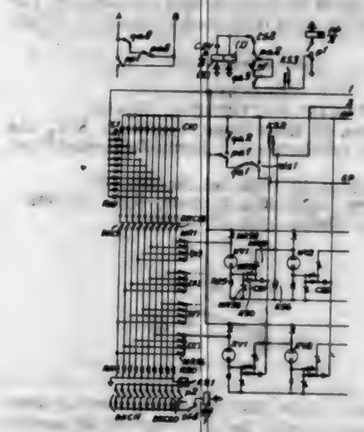
2,946,853
IMPULSING GENERATING CIRCUITS
Edward S. Peterson, Elmwood Park, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Jan. 3, 1955, Ser. No. 479,503
8 Claims. (Cl. 179—17)

1. In a telephone system, a substation identification arrangement comprising a telephone line, a substation connected to one end of said line and having a dial with a digital impulse contact and an identification contact, there being provided at the other end of said line a digital impulse responsive relay periodically operated and released under the control of said impulse contact, an electronic detecting device periodically rendered conductive under the control of said identification contact, the state of conductivity of said detecting device each time being maintained independently of said identification contact, and contact means controlled by said digital impulse responsive relay for preventing said detecting de-



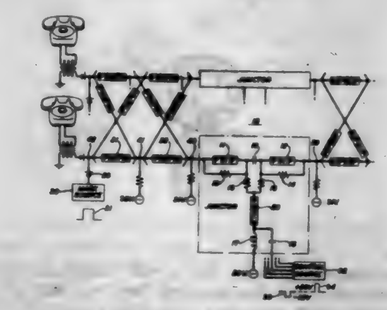
vice from being thus rendered conductive, and for subsequently transmitting said state of conductivity, with said digital impulse responsive relay in unoperated condition, the termination of said state of conductivity upon release of the digital impulse responsive relay causing said identification relay to release preparatory for the next cycle of operation.

2,946,854
KEY SENDERS OF THE KIND USED IN AUTOMATIC TELEPHONE AND LIKE SIGNALLING SYSTEMS
Bloomfield James Warman, Charlton, London, England, assignor, by mesne assignments, to Siemens Edison Swan Limited, London, England, a British company
Filed Nov. 5, 1956, Ser. No. 620,501
Claims priority, application Great Britain Nov. 4, 1955
3 Claims. (Cl. 179—18)



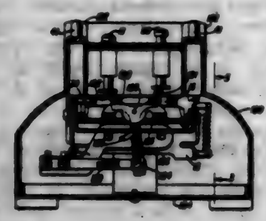
1. A multi-digit register sender of the kind used in telephone systems, comprising a plurality of signalling wires on which digits keyed by an operator for registration in the register sender appear as signals in multi-element code form there being one such wire for each element of the multi-element code employed, a plurality of storage chains one for each element of the multi-element code and each consisting of a plurality of storage devices connected in chain formation there being the same number of storage devices in each storage chain and the plurality of storage chains as a whole constituting a plurality of digit storage registers all connected in chain formation and each comprising one storage device in each storage chain, the register at one end of the chain of digit storage registers being an incoming register connected to said signalling wires and adapted to register digits it receives as signals in multi-element code form over these wires and in which each digit keyed for registration in the register sender is initially registered and the register at the other end of the chain being an outgoing register and there being a plurality of intermediate registers between said incoming register and said outgoing register, means operative on the keying of a digit for registration in the register sender to transfer the registration of each digit already stored in the chain of digit storage registers from the register in which the registration resides to the next succeeding register in order along the chain, means operative on the termination of the keying of a digit for registration in the register sender to transfer the registration of each digit then stored in the chain of digit storage registers from the register in which the registration resides to the next succeeding register in order along the chain, a utilisation circuit, impulse sending and counting means for sending a number of impulses over said utilisation circuit in accordance with a registration in said outgoing register in respect of a keyed digit, means for restoring said outgoing register upon the utilisation of a registration therein, and means for causing the registrations of the digits stored in the chain of digit storage registers to be advanced along the chain as the sending of digits in the form of trains of impulses over said utilisation circuit takes place, to bring the registrations of the stored digits to said outgoing register in turn to enable the sending operation to be performed in respect of each of these digits in turn.

2,946,855
ELECTRICAL CIRCUIT FOR COMMUNICATION NETWORKS
Luther W. Hussey, Sparta, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 30, 1958, Ser. No. 731,923
13 Claims. (Cl. 179—18)



1. An electronic junctor circuit for a telephone switching network comprising a pair of terminals, a pair of voltage breakdown devices in series connection between said terminals for controlling a voice communication channel, another voltage breakdown device having a first electrode connected to a point betwen said series-connected voltage breakdown devices, means including a voltage source for applying marking potentials to said terminals, and control means including current limiting means in shunt with said pair of series-connected devices, said control means being connected to said other voltage breakdown device to breakdown said last-mentioned device only upon the simultaneous occurrence of said marking potentials at said terminals.

2,946,856
TELEPHONE EXCLUSION KEY
Fredric E. Wood, McHenry, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed May 28, 1958, Ser. No. 738,476
6 Claims. (Cl. 179—99)



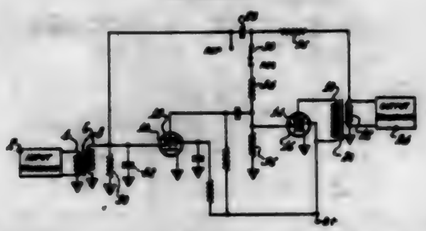
1. In a telephone substation unit comprising a base having a plurality of tines protruding from said base, each two of said tines forming a set, a cradle defined in the upper portion of said base by said tines, an exclusion plunger in said cradle, a release plunger mutually reciprocable with said exclusion plunger, a Y-shaped member mounted internally in said base and having a first arm subjacent said exclusion plunger, a second arm subjacent said release plunger and a leg extending downwardly, a spring pileup adjacent said leg, said leg responsive to rotation of said first arm by the depression of said exclusion plunger to operate said spring pileup, and said second arm responsive to said rotation to prepare said release plunger for subsequent operations.

2,946,857
COMPACT WALL TELEPHONE MOUNTING
E. Burton Benjamin, Chicago, Ill., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,586
5 Claims. (Cl. 179—100)



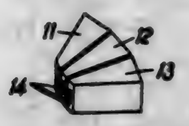
1. A compact housing for a wall telephone having a dial mount, a dial face exposed from one side of said mount and a ball extending from said mount, a socket on said housing for nesting said ball in any one of an infinite number of positions in an arc of 360°, a hookswitch arm extending from said housing, means for positioning said hookswitch arm in any one of a finite number of planar positions, said positioning means including a stationary rib, a rotary plate having a number of peripheral notches, each of said notches individually capable of nesting therein said rib, said hookswitch having a follower for operating a spring pileup, a cutout in said rotary plate for engaging said follower to thereby fix the position of said hookswitch arm relative to said rotary plate, said notch to rib engagement determining the position of the plate relative to the housing, a slot in said socket for holding said hookswitch arm and for positioning said socket relative to said hookswitch arm.

2,946,858
CONVERTIBLE SELF-BIASING OR AMPLIFYING CIRCUIT FOR MAGNETIC RECORDING OR REPRODUCING
Marshall C. Kidd, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Dec. 30, 1954, Ser. No. 478,657
5 Claims. (Cl. 179—100.2)



1. A magnetic record translating system comprising, in combination, an amplifier having an input circuit and an output circuit, means for applying intelligence signals to said input circuit, means operable to condition said system for recording of said intelligence signals, said conditioning means including a reactive element, means for coupling said reactive element in positive feedback relation with said amplifier between said input circuit and said output circuit thereof for rendering said amplifier oscillatory at a predetermined frequency higher than the frequency of said intelligence signals to provide recording bias signals superimposed upon said intelligence signals in said amplifier, said conditioning means also including a resistive element, means for simultaneously coupling said resistive element between said input circuit and said output circuit in negative feedback relation with said amplifier for stabilizing said amplifier, and means connected to said output circuit for applying said superimposed bias and intelligence signals to the magnetic record for recording thereon.

2,946,859
MAGNETIC RECORDING HEADS
Siegmund Loewe, 68 Ridge Road, Yonkers 5, N.Y., and Werner Zorn, Schillerstrasse 5, Berlin-Zehlendorf-West, Germany
Filed Sept. 10, 1956, Ser. No. 609,842
Claims priority, application Germany Sept. 14, 1955
2 Claims. (Cl. 179—100.2)



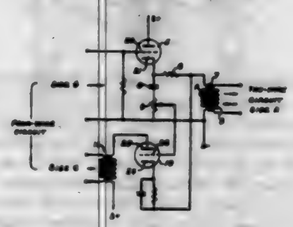
1. In a magnetic tape recording arrangement an electromagnetic head assembly having a substantially smaller surface at its gap side than its opposite side comprising a recording-reproducing head and two erasing heads, an axis mounting the head assembly to turn within its horizontal plane, said recording-reproducing head being arranged between said two erasing heads, each of said heads being trapezio-shaped in its horizontal cross-section and substantially smaller at its gap side than the opposite side, each of said heads further forming a separate magnetic circuit embedded in non-magnetic material and being arranged closely adjacent one another in horizontal direction thus forming a mechanical unit which is adapted to turn round said axis into the running direction of the tape and to touch the tape with the gap side only of said recording-reproducing head and one of said erasing heads.

2,946,860
HEADSET
Richard E. Jansen, Runnemede, and Robert E. Ulrich, Riverton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Jan. 3, 1957, Ser. No. 632,363
7 Claims. (Cl. 179—156)



1. A headset comprising a pair of earpieces, each of said earpieces having a pair of cavities therein, said cavities being spaced from each other, a pair of elements smaller than said cavities and individually disposed therein, each of said elements being universally movable with respect to said earpieces, each of said elements having a hole extending therethrough, and a headrest having pairs of laterally spaced members at opposite ends thereof, said members being slidably inserted through said holes in different ones of said elements so as to frictionally engage said elements whereby said earpieces are attached to said headrest so as to be pivotally and slidably adjustable with respect thereto.

2,946,861
VACUUM TUBE HYBRID
Li-Yen Chen, Canton, Kwang Tung, China, assignor to Directorate General of Telecommunications, Ministry of Communications, Taipei, Taiwan
Filed Apr. 29, 1955, Ser. No. 504,997
8 Claims. (Cl. 179—170)



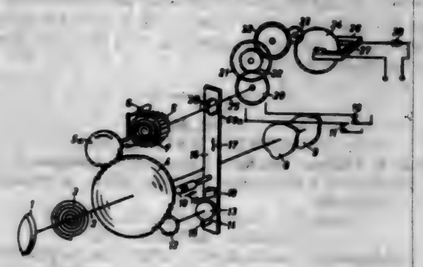
1. A two-way repeater for coupling a two-wire to a four-wire line comprising a first electron discharge device have anode, cathode and control electrodes, a pair of parallel connected circuits in the cathode circuit of the first electron discharge device, each circuit including a pair of serially connected impedances, means coupling the outgoing signals from one side of the four-wire line between the control electrode and the pair of circuits at a point remote from the cathode electrode of the first electron discharge device, the values of the impedances being such that substantially no output signals appear across the junction points formed between the serially connected impedances of the parallel circuits upon energization of the first electron discharge device by the outgoing signals, means coupling the two-wire line to an impedance in one of said parallel circuits to transmit the outgoing signals, a second electron discharge device having anode, cathode and control electrodes, the control and cathode electrodes of the second electron discharge device being coupled respectively to said junction points, and means coupling the anode electrode of said second electron discharge device to the other side of the four-wire line for transmitting incoming signals from said two-wire line.

2,946,863
EAR PROTECTOR AND COMMUNICATION EQUIPMENT
William B. Wadsworth, Concord, and Forrest R. Poole, Worcester, Mass., assignors to David Clark Company Incorporated, Worcester, Mass., a corporation of Massachusetts
Filed Mar. 21, 1955, Ser. No. 495,394
12 Claims. (Cl. 179—182)



1. The combination of an ear protector comprising a shell to be applied to the head of the user and surrounding the ear, with a transducer for the communication of sound within the shell to an exterior point with the shell applied to the head of the user.

2,946,863
DEVICE FOR OPERATING A PRESET SWITCH
Walter Holzer, 43 Schaetzeerain, Meersburg-on-the-Bodensee, Germany
Filed Apr. 29, 1957, Ser. No. 655,869
Claims priority, application Germany Apr. 27, 1956
7 Claims. (Cl. 200—35)

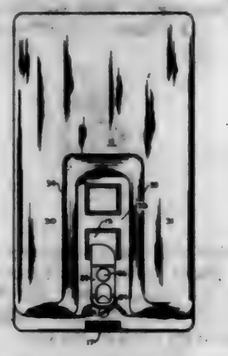


1. A spring actuated pre-set switch comprising in combination: preselector means of a sequence of operations including a cam shaft control driven by a main spring means; an escapement having an auxiliary spring means; a multiple speed reduction train gear means driven by said auxiliary spring means; an eddy current brake disc driven by said multiple speed gear train means; means to dampen the movements of said eddy current brake disc; and common tensioning means for said main and said auxiliary spring means.

2,946,864
LOCKING APPARATUS
Kenneth J. Marien, Milwaukee, Wis., assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 26, 1959, Ser. No. 802,115
6 Claims. (Cl. 200—42)

1. In combination with a switch box and cover enclosing a switch having a switch operating pushbutton extending through the cover, the provision of a hasp re-

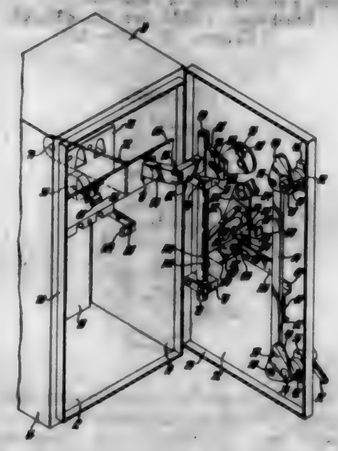
ceiving member secured to and carried by a wall of said box, said hasp receiving member having a free end portion extending outwardly beyond said cover and provided with a hasp receiving opening and also having another portion extending parallel with said cover in a general direction from said free end portion towards said pushbutton and provided with a threaded opening, a threaded element carried by said cover between said pushbutton and said hasp receiving member and threaded in said opening and thereby releasably fastening said cover to said hasp receiving element to releasably hold



said cover on said box, a latch member carried by and pivoted to said cover at a location between said pushbutton and said threaded element and rotatable relative to the cover to a first position and to a second position, said member having one end overlaying said pushbutton and an opposite end overlaying said threaded element when the member is in said first position, said ends being free of and removed from said pushbutton and said element when the latch member is in said second position whereby said pushbutton and said threaded element are rendered usable.

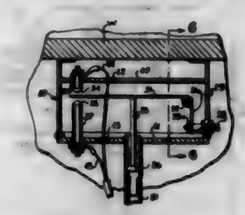
2,946,865
ELECTRIC CONTROL BOX
Leslie S. Thomas, Orchard Lake, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 24, 1958, Ser. No. 769,384
3 Claims. (Cl. 200—50)

1. An electric control box comprising a plurality of panels defining an open sided box, a switch secured in said box, a door hingedly secured at one edge to one of said panels, a latch handle rotatably secured to the outside of said door and having a shaft extending through said door, a first latch cam secured to said shaft and rotatable with said handle, a second latch cam rotatably secured to said door and spaced from said first latch cam, a connecting rod pivotally secured to said first and second latch cams to rotate said second cam in conjunction with said first cam when said first cam is rotated by said handle and secure said door to said box in a closed position, switch actuating means secured to said door and vertically movable with respect thereto, means pivotally secured to said switch and within said box and engaged by said switch actuating means to open and close said switch when rotated by said switch actuating means, connecting means operable between said switch actuating means and said connecting rod to actuate said switch actuating means and open said switch when said connecting rod and said latch cams are disengaged from said box to open said door, and independently operated defeater means to disengage said connecting means and actuate said connecting rod and said latch cams to open said door without actuating said switch actuating means



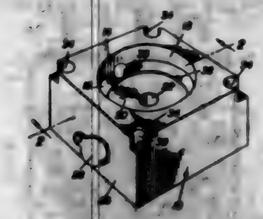
and to allow access to said switch and said box when said switch is in a closed position.

2,946,866
TIRE PRESSURE INDICATING DEVICE
Lewis J. Pope, 1901 Kenilworth Ave., Charlotte, N.C.
Filed Jan. 25, 1957, Ser. No. 636,423
2 Claims. (Cl. 200—61.25)



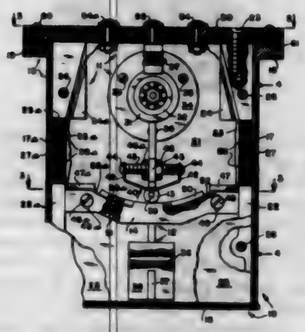
1. A pressure responsive switch for actuating a device indicating improper pressure in a tire of a vehicle, said switch comprising a housing, a tubular passageway attached to said housing for providing communication with the interior of the tire so as to be subject to the pressure therein, means in said tubular passageway movable in response to pressure variations in said tubular passageway, said means comprising a piston slidably received in said tubular passageway, said piston extending into said housing, a pair of spaced fixed contacts extending from oppositely disposed walls of said housing, a leaf spring contact adjustably mounted for pivotable movement in said housing, means for adjusting the position of said leaf spring contact in said housing between said pair of fixed contacts in engagement with the one of the fixed contacts closest to said piston, said piston normally contacting a surface of said leaf spring contact and urging said leaf spring contact to a position in spaced relationship with respect to said pair of fixed contacts, said piston moving said leaf spring contact into engagement with the other of said fixed contacts upon an increase in pressure in the tubular passageway above a predetermined amount, and said leaf spring contact engaging said one of said fixed contacts upon a decrease in pressure in the tubular passageway below a predetermined amount which relieves the urging force of said piston against said leaf spring contact.

2,946,867
BURGLAR ALARM
Otto C. Wehrig, 442 Burgess St., Seguin, Tex.
Filed Aug. 14, 1958, Ser. No. 754,971
7 Claims. (Cl. 200—61.45)



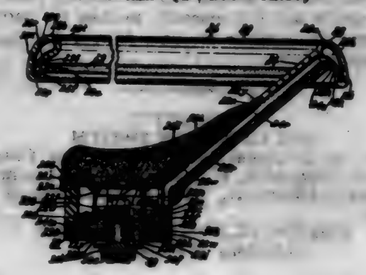
1. A circuit closing device for motor vehicles or other movable objects, said device comprising a non-conductive base having an upwardly opening recess therein, said recess having a bottom wall within which there is at least one well, said bottom wall having a downwardly sloping part, a conductive ball adapted to seat in said well and to be separated therefrom in response to movement of said base so that said ball is movable down the sloping part of the bottom of said recess, said base having a passage in registry with the bottom of said recess and into which said ball is adapted to pass, and a pair of conductors in said passage and onto which said ball is adapted to fall to complete an external electric circuit.

2,946,868
DEVICE FOR LIMITING CLIMB AND DIVE ANGLES IN A TORPEDO
Stephen Kowalyshyn, Jr., Oliver Eikel, Jr., and Ronald G. Warren, Sharon, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 9, 1953, Ser. No. 397,286
4 Claims. (Cl. 200—61.48)



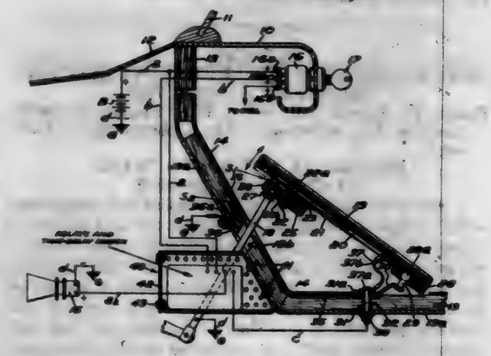
1. A dive and climb angle limit switch for torpedoes, comprising; a closed casing, a pendulum disposed within the casing having a downwardly extending arm, the upper end of which is pivoted to the casing by an anti-friction bearing, the lower end having a weight affixed thereto, fluid filling the casing for damping relative movement between the casing and pendulum, a lateral projecting portion on the arm intermediate its ends, a pair of spaced resilient contact carrying members carried by said projecting portion, a rotatable roller carried by each member, a commutator-like member of electrical insulating material having arcuate upper surfaces along which the rollers are adapted to roll, a pair of electrical contacts carried by the commutator member, on which the rollers are also adapted to roll, one being disposed in spaced angular relationship to the vertical position of the pendulum at one side thereof, and the other similarly disposed at the opposite side thereof, and an electrical circuit including said arm, lateral projection and contact carrying members, and one or the other of said electrical contacts.

2,946,869
SAFETY STEERING WHEEL AND HORN BLOWING MEANS
Robert R. Parks, Madison Heights, and Wayne A. Weaver, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 6, 1958, Ser. No. 740,475
6 Claims. (Cl. 200—61.57)



1. A safety steering wheel, comprising, a hub portion, a rim portion including metal imbedded therein and shaped to provide a thicker and larger top section and a narrower bottom section interconnected by an inner concave surface, a pair of radially extending spoke portions interconnecting said hub portion and said rim portion, one of said spoke portions having a groove extending longitudinally thereof, tubular means adapted to be placed and attached relative to the inner concave surface and the groove of said one spoke portion, a horn blowing means including contact portions provided relative to said hub portion, said tubular means being compressible to effect horn blowing through closure of said contact portions, and a crash pad covering of relatively soft material for said hub portion, said crash pad covering and said tubular means for said steering wheel being non-metallic to avoid production of glare and being resilient and fitted to said steering wheel for safety to avoid obstruction to vision and to permit resilient movement of said rim portion in the event of impact of an operator against said steering wheel.

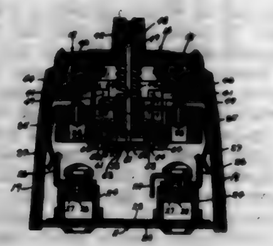
2,946,870
THEFT ALARM SYSTEM
Sam S. Brown, 144 N. Dithridge St., Pittsburgh, Pa.
Filed June 10, 1958, Ser. No. 741,059
5 Claims. (Cl. 200—61.39)



2. In a theft alarm system for an automobile wherein a normally-open circuit is connected to a source of elec-

tromotive force and is closed by an unauthorized person attempting to operate the automobile, and a time delay switch is then activated to energize an audio signal, an improved non-detectable pressure responsive switch for closing the normally-open circuit comprising, a bolt and nut assembly secured to a floor board of the automobile, said assembly being connected to one side of the electromotive source, a flexible metal contact plate positioned adjacent to and normally spaced-apart from a head of said assembly, resilient dielectric means covering a side of said contact plate opposite the head of said assembly, said contact plate being connected to the opposite side of said electromotive source, and said contact plate being flexible against said bolt assembly to close the normally-open circuit and activate the time delay switch to energize the audio signal.

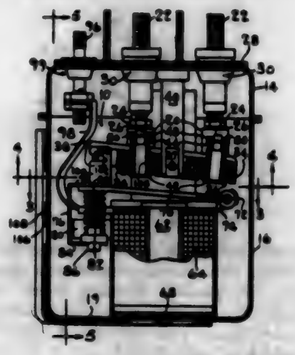
2,946,871
MULTIPOSITION SWITCH
Woodrow A. De Smidt, Whitefish Bay, and Cedric E. Zarwell, Shorewood, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 12, 1957, Ser. No. 702,478
4 Claims. (Cl. 200—65)



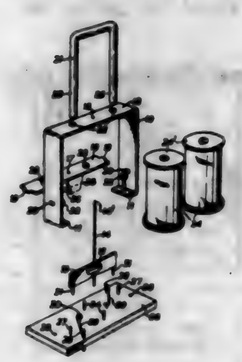
1. In a selector switch, the combination of: a support; and a switching mechanism supported thereby comprising: a turn-button; fixed stop means, and cooperating stop means rotatable with the turn-button to limit the turning of the turn-button in each direction; switch contact means, actuable by the turning of the turn-button, to selectively assume a plurality of closed and open switching positions; indexing cam means, rotatable by the turn-button, and cooperating therewith fixed indexing cam means, exposed for ready adjustment, and adjustable by rotating the fixed indexing cam means as a whole from one fixed position to another fixed position to cause the turning of the turn-button to selectively perform different indexing switching cycles.

2,946,872
SHOCK AND VIBRATION RESISTANT ELECTROMAGNETIC CONTACTOR
Robert W. Siebers, Milwaukee, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Dec. 19, 1957, Ser. No. 703,837
14 Claims. (Cl. 200—87)

1. An electromagnetically operated switch compriaing, a shell member having an opening at one end thereof, a support member mounted in said opening, a pair of terminal posts mounted in said support member and extending into said shell, a pair of stationary contacts mounted on the ends of said terminals facing into said shell, a lever pivotally mounted in said shell and supported from said support member, said lever positioned substantially parallel to said support member, a bridging contactor mounted on said lever having a pair of movable contacts mounted thereon opposite said stationary contacts for movement in and out of contact with said stationary contacts as said lever is pivoted, and an electromagnetic actuator supported from said support member and operatively connected to said lever to actuate said lever.



2,946,873
ELECTROMAGNETIC RELAYS
Lionel S. Distin, Beeston, England, assignor to Ericsson Telephones Limited, London, England, a British company
Filed Apr. 28, 1958, Ser. No. 731,381
Claims priority, application Great Britain May 3, 1957
10 Claims. (Cl. 200—87)



1. An electromagnetic relay comprising a frame, an armature, an elongated torsion bar fixed to said armature intermediate the ends of said torsion bar and having one end fixed to said frame, the other end of said bar being free to move together with said armature in rocking movement about the axis of said bar, the armature being supported against movement axially of said bar solely by said bar, an apertured guide member fixed to said frame, said torsion bar passing freely through the aperture in said guide member but being guided for rotation about its longitudinal axis by edge portions of said guide member defining said aperture, an electromagnet having poles adjacent to and co-operating with said armature and contact means positioned to be actuated by said armature upon rocking movement thereof about the longitudinal axis of said torsion bar.

2,946,874
ELECTRICAL VIBRATOR AND METHOD OF MAKING SAME
Tullio Tognola, Sidney, N.Y., assignor to Bendix Aviation Corporation, Sidney, N.Y., a corporation of Delaware
Filed Nov. 26, 1956, Ser. No. 624,396
12 Claims. (Cl. 200—90)



1. An electrically energized vibrator comprising a vibrator coil, a stator for said coil, said stator having a recess in a face thereof, an armature supported in alignment with the recess and projecting partially within the recess when the coil is deenergized, a first contact mounted on the armature and movable therewith and a second cooperating contact fixedly supported relative to said first contact, and means resiliently supporting the armature for movement in directions into and out of the recess when the coil is energized and deenergized, respectively.

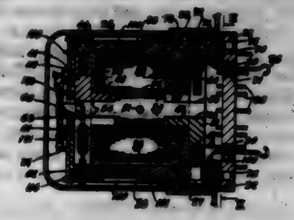
2,946,875
ELECTROMAGNETIC RELAY
Charles H. Waldhauer, Jr., Pacific Palisades, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,938
17 Claims. (Cl. 200—103)



1. An electromagnetic relay mechanism comprising: a coil-form, a relay coil wound on said form, a plurality of magnetically movable members arranged in the magnetic path of said coil so as to form a part thereof, bias means connected to said members and effective to hold said members in spaced-apart relation, said members being caused to move toward each other under the influence of the magnetic field created by energizing said coil, and switching means operated responsive to the combined movements of said members and bias means.

2,946,876
RELAY STRUCTURE
Edwin H. Lockwood, Frederick, and Rexford W. Brenneman, Woodsboro, Md., assignors to Consolidated Electronics Industries Corp., New York, N.Y., a corporation of Delaware
Filed Nov. 22, 1954, Ser. No. 470,369
27 Claims. (Cl. 200—104)

1. An electromagnet having a coil with a hollow center and a pivoted armature movable transversely of the axis of said coil in the hollow center of said coil, the improvement comprising: a pair of magnetic end plates for said coil, at least one of said end plates having an attached pole piece, magnetic means for magnetically connecting said end plates together outside of said coil, said pole piece extending part way across the open end of said hollow center and having an integral extension extending



part way into said coil, whereby said armature has a surface of magnetic attraction adjacent said pole piece and its said extension.

2,946,877
PRINTED CIRCUIT ARTICLE
Thomas A. Nalette, East Pepperell, Mass., and Harold W. Lalmond, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,273
8 Claims. (Cl. 200—166)



1. A printed circuit article, comprising: a flat, flexible, plastic, printed circuit cable having embedded therein a plurality of conductors in an upper and a lower plane, said conductors having an adherent coating of black cupric oxide produced by oxidation in a chemical bath; a connector having a row of terminals in each of two planes, said connector terminals being adapted for engagement with said cable conductors of both of said planes at one end of said cable; and a rotary wafer switch having a high terminal density, said cable conductors in said upper conductor plane having terminals adapted to engage simultaneously some of said switch terminals when superimposed thereon and said cable conductors in said lower conductor plane having terminals divided longitudinally to form two terminal groups, each of said terminal groups adapted to being folded around and over the conductors of said upper conductor plane and onto the remaining terminals of said switch.

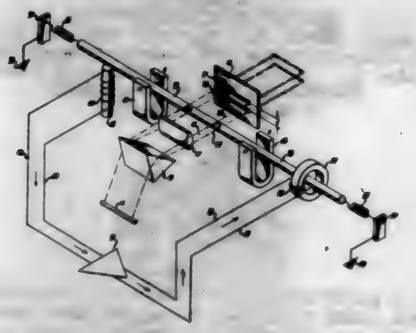
2,946,878
LIGHT WEIGHT HEAVY DUTY WELDING ROD HOLDER
Martin Wells, 5886 Compton Ave., Los Angeles, Calif.
Filed Feb. 11, 1958, Ser. No. 714,632
2 Claims. (Cl. 219—138)



1. In a welding rod holder: first and second levers hingedly connected intermediate the ends thereof, said

levers having jaw elements at the front ends thereof to grip a welding rod, said first lever comprising aluminum and the jaw element of which comprises a body of copper soldered onto the first lever, and said second lever being of molded insulating material and having a reinforcing strip therein, said reinforcing strip being isolated from said first lever so that no electric current will flow in said reinforcing strip of said second lever; hinge means connecting the intermediate portions of said levers together; a cable connector at the rear end of said first lever; and means for swinging said levers so as to cause said jaw elements to swing toward each other and grip a welding rod.

2,946,879
ILLUMINATING DEVICE
John B. Powers, Los Angeles, Calif., assignor to The Regents of the University of California, Berkeley, Calif., a corporation of California
Filed July 26, 1957, Ser. No. 674,525
12 Claims. (Cl. 240—1)



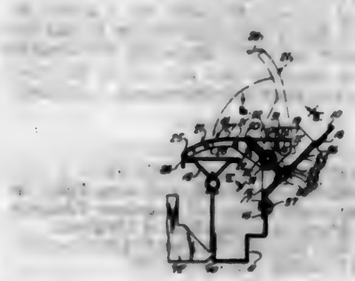
1. An illuminating device comprising a masking element having a pair of transversely spaced like size elongated fixed size substantially parallel apertures, means to project a light spectrum on the element so that light of different substantially monochromatic spectral composition passes through the individual apertures, an opaque light-eclipsing element of a width corresponding to the center-to-center spacing of the apertures and of a length at least equal to that of the elongated apertures positioned substantially adjacent to the masking element, and means for continuously moving the eclipsing element relative to the apertures in a direction parallel to the spectrum dispersion to reveal light alternately through the pair of apertures in two different spectral compositions.

2,946,880
LUMINAIRE
George J. Picha and Frederic C. Winkler, Cleveland, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 31, 1954, Ser. No. 453,184
10 Claims. (Cl. 240—51.11)



1. An elongated luminaire comprising a main supporting longitudinally extending channel having downwardly extending side walls, a plate at each end of said channel extending transversely to and outwardly beyond each of said side walls, each of said plates having a lateral boss therein which extends outwardly beyond each of said side walls, each of said side walls being formed with a recess for receiving said boss therein so that the ends of said side walls are approximately flush with the inner surface of said plate at the base of said boss, each of said side walls being provided in said recess with extending projections insertable through openings in said boss for securing said plates to each side wall by bending said projection to engage the outer surface of said boss, and lamp supporting means secured to each of said bosses adjacent each of said side walls for receiving a lamp therebetween.

2,946,881
LEVELING DEVICE FOR LIGHTING FIXTURES
Ernest Pascucci, Meriden, Conn., assignor to The Miller Company, Meriden, Conn., a corporation of Connecticut
Filed May 6, 1957, Ser. No. 657,142
1 Claim. (Cl. 240—78)

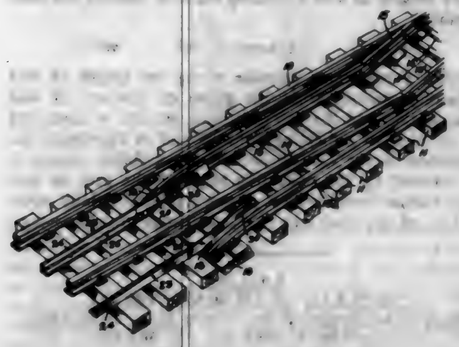


The combination with a lighting fixture having a casing including a side wall having an opening, of a leveler secured to said side wall and overlying said opening, said leveler comprising a base member including means for attaching it to said fixture, a pair of spaced outwardly extending parallel side walls carried by said base, an arm, a pair of parallel wall members carried by said arm and spaced one from the other a distance less than the distance between the first said side walls, means pivotally attaching the wall members of said arm to said parallel side walls, said wall members each having an opening therein spaced from the pivotal means and at least partially overlapped by said parallel side walls throughout arcuate movement of the arm, a traverse member spanning said wall members and engaging said openings, said traverse member being retained in position in said openings by said parallel side walls and having a threaded opening therein, said base having an opening aligned with the last said threaded opening and the first said fixture opening and a screw extending through the fixture and base openings and threadably engaging said transverse member for moving said arm relative to said base.

2,946,882
DERAIL WITH BUILT-IN REPLACERS
Eino Jacob O. Salmi, 227 E. Brock St., Fort William, Ontario, Canada
Filed May 8, 1957, Ser. No. 657,818
8 Claims. (Cl. 246—163)

1. In a railway having a first pair of parallel rails supported on ties, a derailing and rerailing device comprising a second pair of parallel rails used for derailing and rerailing railway cars, each of said second pair of rails having one end switchably connected to one rail of said first pair whereby in one position wheels of a railway

vehicle will switch from the first pair to the second pair of rails, each of the ends of the rails of the second pair being connected to different rails of the first pair, each rail of the second pair also having a downwardly turned portion on its opposite end extending below the level of said first pair of rails and down to substantially the same level as that of the ties, a pair of substantially parallel replacers located between the pair of second rails, each replacer located adjacent a different corresponding rail of the second pair and rigidly connected in a position generally parallel thereto, said replacer located so that at least a part of the replacer is adjacent the downwardly



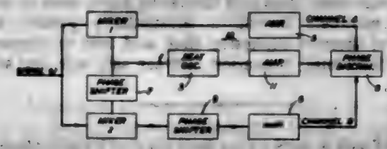
turned portion of its corresponding rail of the second pair, said replacer having a vertical web that tapers downwardly in the same direction as the downwardly turned end portion of the second pair of rails, each of said replacers having a portion thereof spaced apart from its corresponding rail of said second pair and so constructed and arranged as to define a guide way therewith for slidably receiving the flange of a rail wheel therebetween, a pair of parallel guide rails generally parallel to said replacers and located at the ends of the replacers opposite the second pair of rails, each of said guide rails having a vertical flange for guiding a rail wheel.

2,946,883
TUNABLE DEVICE FOR EXTRACTING RADIO FREQUENCY ENERGY FROM A POWER LINE
Jack Beever, Philadelphia, and Walter Goodman, Plymouth Meeting, Pa., assignors to Jerrold Electronics Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 842,246
7 Claims. (Cl. 250—16)



1. A tunable device for extracting radio frequency energy from power wiring feeding a receiver comprising an elongated housing of insulating material, a longitudinal conductive channel carried by said housing, means to slidably and frictionally clamp the power wiring in said housing along the length of said channel in proximity thereto and a conductor electrically connected at one of its ends to said channel and adapted to be connected at its other end to the antenna input of the receiver, said means including a member substantially coextensive with said channel hinged to said housing, and spring means normally urging said member towards said channel and against the power wiring in said housing.

2,946,884
AUTOMATIC FREQUENCY CONTROL FOR RADIO RECEIVER
William L. Mraz, Morris Plains, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 8, 1954, Ser. No. 461,994
1 Claim. (Cl. 250—20)



In a superheterodyne radio receiver, an automatic frequency control system for permitting indiscriminate choice of either image frequency comprising a source of signal oscillations, an oscillator for supplying beating oscillations differing from the frequency of said signal oscillations by an intermediate frequency, a first mixer having supplied thereto oscillations from each of said sources, a second mixer having supplied thereto oscillations from each of said sources, means for producing a phase shift in the oscillations from one of said sources supplied to said second mixer so that said oscillations from said one of said sources are in phase quadrature with the oscillations from said one source supplied to said first mixer, means for selecting from the output of each mixer modulation products at said intermediate frequency to the exclusion of other modulation products, means for producing a constant phase difference of ninety degrees between the selected intermediate frequency products from the two mixers, a frequency discriminator, means for supplying to said discriminator the selected and phase modified intermediate frequency modulation products from said mixers, and means responsive to the output of said discriminator for regulating the frequency of said oscillator for supplying beating oscillations to maintain said intermediate frequency constant.

2,946,885
ROTARY TUNER WITH TEMPERATURE COMPENSATING MEANS IN OPERATING ARM
Harold T. Lyman, Milford, Conn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois
Filed Oct. 29, 1958, Ser. No. 770,473
4 Claims. (Cl. 250—40)

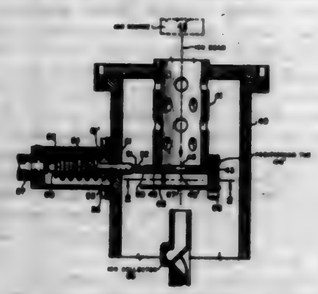
1. In a radio frequency tuner, the combination comprising a toroidal coil including a flat ribbon-like conductor coiled around a ring-shaped insulating form, said coil being generally rectangular in cross section, inner and outer segmental electrodes movable along said coil in closely adjacent energy exchange relation thereto on the inside and outside of said ring-shaped form, a dielectric film around said coil to provide for capacitive energy exchange between said coil and said electrodes, a conductive rotatable operating shaft extending along the axis of said ring-shaped form, a conductive metallic arm forming a rigid connection between said inner electrode and said shaft, a first metallic member forming a rigid con-

nection between said second electrode and said arm, a second metallic member connected between said electrodes at the ends thereof opposite from said arm, and a conductive ring received around said shaft with dielectric material therebetween, said ring being capacitively coupled to said shaft and constituting one terminal of said



tuner, one end of said coil constituting the other terminal of said tuner, said arm having a greater co-efficient of thermal expansion than said insulating form, each of said metallic members having a substantially greater co-efficient of thermal expansion than said arm to compensate for differential expansion between said arm and said form.

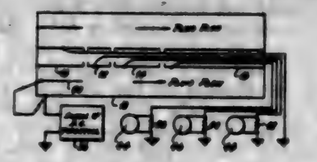
2,946,886
ADJUSTABLE ION COLLECTOR SLIT FOR MASS SPECTROMETER
Beldon A. Peters, Houston, and James A. Rickard, Bellaire, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Oct. 19, 1956, Ser. No. 617,019
7 Claims. (Cl. 250—41.9)



1. A device for forming an adjustable ion collector slit in a mass spectrometer comprising a housing, a support mounted in said housing, a first plate member secured to said support, a second plate member slidably arranged on said first plate, said first and second plate members cooperating to form a slit opening, the width of said slit opening being varied upon movement of said second plate member, resilient means positioned between said first and second plate members adapted to urge said second plate member in one direction, movable means extending sealingly through said housing and engaging said second plate member adapted to urge said second plate member against the bias of said spring and means engaging with said movable means adapted to indicate the width of said slit opening.

2,946,887
OPTIMIZING SENSITIVITY AND RESOLUTION OF ION CHAMBER
John G. Castle, Jr., Murrysville, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 30, 1957, Ser. No. 637,341
7 Claims. (Cl. 250—41.9)

1. A multiple-section ion chamber formed with a passage through which ion-bearing fluid may flow comprising a filter section at the entrance to said passage and a plurality of arranged serially collecting sections, the cumu-

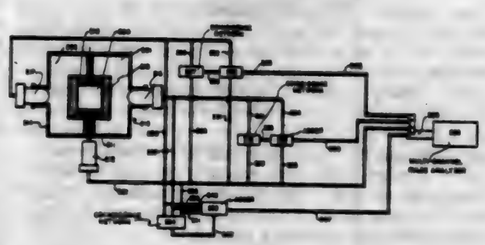


lative lengths of said collecting sections bearing the relationship

$$x_1:x_2:x_3 \ldots x_n = m^0:m^1:m^2 \ldots m^{n-1}$$

wherein x represents distance along the length of said collecting sections from the plane of juncture of said filter section and the first collecting section, n represents the number of collecting sections and m represents the resolution factor for the desired ion mobility ranges to be detected by the collecting sections, the area of said filter section comprising a proportion substantially equal to $1/m$ of the total area of the entrance to said passage.

2,946,888
NUCLEAR MEASURING SYSTEM
Serge A. Scherbatskoy, 804 Wright Bldg., Tulsa, Okla.
Filed May 2, 1955, Ser. No. 505,686
10 Claims. (Cl. 250—71.5)

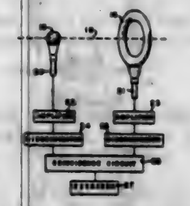


1. Radiation-detecting apparatus comprising two scintillating elements adapted to interact with incident gamma rays and to produce light flashes responsively to such interactions, the intensity of said respective flashes representing the amounts of energy absorbed in said element from said gamma rays in the course of said respective interactions, a photomultiplier for each of said scintillating elements, each of said photomultipliers being individually optically coupled to one of said scintillating elements and being adapted to produce current impulses having magnitudes respectively representing the intensity of the light flashes occurring in the scintillating element to which it is coupled, and means fed by the impulses from said photomultipliers operative selectively to add the impulses from said respective photomultipliers that occur in time coincidence and to produce therefrom new impulses having magnitudes proportional to the sums of the magnitudes of said selectively added impulses.

2,946,889
FOCUSING SYSTEM FOR USE IN RADIOACTIVITY WELL LOGGING
Nils L. Muench, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Filed Apr. 15, 1957, Ser. No. 653,882
4 Claims. (Cl. 250—71.5)

1. A system for focusing radiation emanating from subsurface formations surrounding a well bore comprising first and second scintillation detectors adapted to translate

incoming gamma radiation into light, said detectors being spaced selected horizontal and vertical distances from each other, said distances selected being dependent upon the proportion of energy of incoming gamma rays absorbed in said first detector, the remainder of the energy of said gamma rays being absorbed in said second scintillation detector, said first scintillation detector being a spherically configured phosphor positioned adjacent the wall of the well bore, said second scintillation detector being a solid of revolution configured phosphor positioned relative to said first scintillation detector such that the



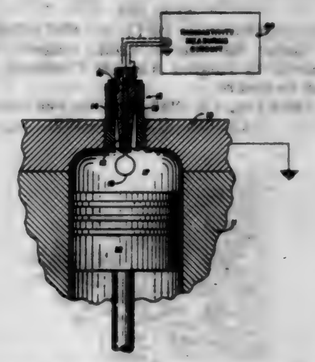
axis of said solid of revolution extends in a substantially horizontal direction and coincides with an axis of said first detector, means connected to each of said detectors for generating electrical signals in response to said light, means connected to each of said electrical signal generating means adapted to transmit electrical signals proportional to selected gamma ray energies absorbed in said first and second scintillation detectors, respectively, and means for recording said transmitted signals only when the energies of said gamma rays absorbed in said first and second detectors equals said selected gamma ray energies.

2,946,890
FILM HOLDER FOR MONITORING RADIATION
Arthur M. Samples, 2904 Tazewell Pike, Knoxville, Tenn.
Filed Sept. 17, 1957, Ser. No. 684,453
2 Claims. (Cl. 250—83)



1. A holder for radiation monitoring film comprising a generally rectangular hollow one-piece casing having a pair of openings in one face thereof for permitting passage of radiation, one end edge of said casing having a slot-like opening for receiving radiation sensitive film for positioning behind the openings, each side edge of said casing having an inwardly extending lug between the pair of openings, the free ends of said lugs receiving the film therebetween, a pair of radiation shields resting on said lugs and extending to the slotted end edge of the casing with a portion of the film received between the shields, said shields having openings defining indicia with the openings in alignment with one of said openings in the face of the casing whereby radiation passing through the openings in the shield will form the indicia on the film, a U-shaped wire member movably mounted in said casing with the bight portion forming a closure for the slot in the end edge of the casing, the legs of said wire member extending into the casing alongside the side edges of the film, the end of the casing remote from the slot having a pair of horizontal ledges with the free ends of the leg members projecting laterally for releasable engagement under the ledges thereby releasably holding the wire member in the casing with the bight portion closing the slot in the end edge thereof.

2,946,891
TEST APPARATUS AND METHOD
Edmund Wesolowski, Cary, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed July 30, 1956, Ser. No. 601,071
8 Claims. (Cl. 250—83.6)



1. A method for measuring the extent of accumulation of foreign deposits within an enclosed space contacted by fluids having deposit-forming tendencies which comprises forming within said space an accumulation of a foreign deposit having incorporated therein a radioactive material, capable of emitting detectable radioactivity, disposing within said space a first electrode in non-electrical contact with the walls of said space, the walls of said space comprising a second electrode, filling said space with a counter gas, applying a high voltage, direct current, potential difference between the walls of said enclosed space and said first electrode to positively charge said electrode and effect the accumulation of electrified particles thereon and measuring the level of the radioactive radiation emanating from said deposits.

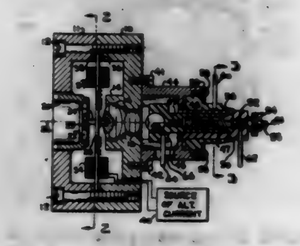
2,946,892
ARRANGEMENT FOR CONTROLLING AND CORRECTING THE LOCATION OF THE FOCAL SPOT PRODUCED BY A CATHODE-RAY ON THE TARGET OF A ROENTGEN-TUBE
Enis Bas-Taymaz, Zurich, Switzerland, assignor to Gesellschaft Zur Forderung der Forschung an der Eidg. Techn. Hochschule, Zurich, Switzerland
Filed Oct. 2, 1958, Ser. No. 764,889
Claims priority, application Switzerland Jan. 22, 1958
1 Claim. (Cl. 250—99)



An X-ray generating arrangement comprising, in combination, an X-ray tube having in an evacuated envelope a cathode, a focussing electrode, an anode and a target, said target being provided with a protruding impingement portion facing said cathode and upon which it is desired to direct the focal spot of a cathode-ray beam emitted by said cathode for producing X-ray radiations within an angular space exceeding 180 degrees, measuring electrodes arranged about said target within said envelope and connected to the positive pole of a high-voltage source feeding said X-ray tube, and electromagnetic deflection coils for deflecting said cathode-ray beam and connected in the output circuit of a grid-controlled tube, the grid voltage on said tube being controlled in accordance with the magnitude of secondary electron currents impinging on said measuring electrodes and emitted by the impact of

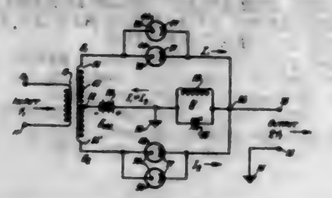
the cathode-ray beam on said target wherein deflection of said cathode-ray beam is such that the focal spot of said cathode-ray beam is automatically centered upon said protruding impingement portion of said target.

2,946,893
SCANNER FOR OPTICAL SYSTEMS
Custer C. Beam, Hawthorne, Calif., assignor, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware
Filed Dec. 13, 1950, Ser. No. 200,613
7 Claims. (Cl. 250—203)



1. An electro-optical system including a telescope having a photo-electric cell, a condenser lens system, an optical collector for focusing light, and a scanning element between said collector and said lens system, said collector focusing the light entering said telescope in the plane of said scanning element and said lens system focusing the light passing through said scanning element on said cell, and means for producing a rotating magnetic field for rotating said scanning element.

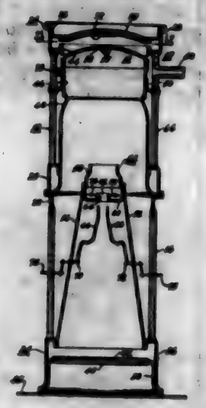
2,946,894
LIGHT CONTROL SIGNAL GENERATOR
John B. Powers, Los Angeles, Calif., assignor to The Regents of The University of California, Berkeley, Calif., a corporation of California
Filed Oct. 29, 1957, Ser. No. 693,137
11 Claims. (Cl. 250—210)



1. A light-controlled signal generator comprising a bridge circuit including a pair of photoemissive cells adapted for illumination by a single light source and connected in series opposition to form two adjacent bridge arms and a pair of substantially equal impedance elements connected in series therewith to form a closed circuit, means to apply an oscillating voltage of frequency f across the bridge diagonal spanning the connected impedance elements, and means to derive at the other bridge diagonal a signal of frequency $2f$ controlled in amplitude by light impinging on the photosensitive surfaces.

2,946,895
IMAGE TUBE
Richard G. Stoudenheimer, Lancaster, and Joseph C. Moor, Manheim, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed Apr. 1, 1957, Ser. No. 649,777
7 Claims. (Cl. 250—213)

1. An image device comprising an electron-emissive photocathode adapted to release an electron image in response to the impression of a light image thereon, a phosphor screen adapted to emit a light image in response to the impression of said electron image thereon in its movement along a path between said photocathode and



said phosphor screen, grid means surrounding said path and including an apertured portion having a plurality of apertures, for gating said electron image, said path extending through said apertures, and means for focusing said electron image, on said phosphor screen.

2,946,896
MAGNETOSTATIC RELAYS
Etienne Alizon, Le Chesnay, and Claude Monin, Villennes-sur-Seine, France, assignors to Compagnie Industrielle des Telephones, a corporation of France
Filed Oct. 29, 1957, Ser. No. 693,180
Claims priority, application France Nov. 9, 1956
6 Claims. (Cl. 307—88)



1. A magnetostatic relay, comprising a magnetic amplifier including a saturable magnetic core with at least one winding supported thereby, and a rectifier connected in series with said winding, wherein there are connected in parallel across the output terminals of the magnetic amplifier two circuit branches, one of which comprises a chopping device which varies the potential difference between the said output terminals and which can reverse this potential difference, while the other branch comprises a transistor connected between the emitter and the base, a load impedance of the utilization circuit of the relay being connected in the circuit of the collector of the transistor.

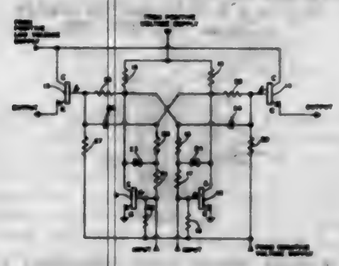
2,946,897
DIRECT COUPLED TRANSISTOR LOGIC CIRCUITS
John S. Mayo, Newark, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 29, 1956, Ser. No. 574,819
12 Claims. (Cl. 307—88.5)

4. In combination, two transistors having their base and emitter circuits directly cross connected, said transistors being of the direct coupled transistor logic type, individual circuits for applying control voltages to each of



the cross connections, and a common load resistance connected to the collectors of both of said transistors.

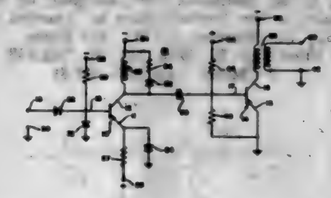
2,946,898
BISTABLE TRANSISTOR CIRCUIT
Alan K. Jensen, Kearny, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed June 13, 1956, Ser. No. 591,226
2 Claims. (Cl. 307—88.5)



1. A bistable transistor circuit which comprises, a first and a second transistor, each of said transistors having a base, a collector and an emitter electrode, a source of electric potential providing different potentials at three points, a pair of load resistors respectively connecting said collector electrodes to a first point on said potential source, two pairs of serially connected coupling resistors, said pairs respectively connecting the collector electrode of one of said transistors to the base electrode of the other one of said transistors, a pair of bias resistors, each resistor of said last named pair being respectively connected between said base electrodes and a second potential point of said source, means for connecting said emitter electrodes to a third potential point on said source, said third point having a potential intermediate the potentials of said first and second potential points, a pair of unilaterally conducting devices, the devices of said last named pair being respectively connected between the collector electrode of one of said transistors and a terminal common to the resistors of the coupling resistor pair having one terminal connected to the base electrode of said last mentioned transistor, an output amplifier, a resistor connecting one of said collector electrodes to the input of said amplifier and a capacitor connecting the other of said collector electrodes to the input of said amplifier.

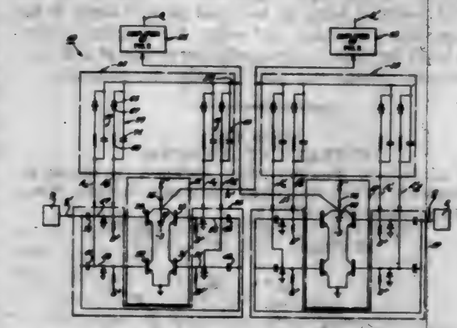
2,946,899
PULSE WIDTH SHAPING CIRCUIT
Richard A. Day, North Redondo Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 28, 1956, Ser. No. 625,574
5 Claims. (Cl. 307—88.5)

1. A pulse shaping circuit for developing output pulses comprising a first transistor including a first emitter, a first collector and a first base in contact therewith, input signal means coupled between said first base and said first emitter for applying an input signal thereto, bias means coupled between said first base and said first emitter for rendering said first transistor conducting in the absence of said input signal, an inductive element connected in series with said first collector and said first emitter for storing electromagnetic energy in response to said first transistor being conducting, a second transistor including a second emitter, a second collector and a second base in contact therewith, capacitive means connected between said inductive element and said second base and resonant with said inductive element with a period



of oscillation corresponding to a resonant frequency thereof, said inductive element, said capacitive element and the base-emitter circuit of said second transistor forming a series resonant circuit, bias means coupled to the base-emitter circuit of said second transistor for rendering said second transistor nonconducting in the absence of current flow through said resonant circuit after a time of conduction equal to one quarter of said period, and means coupled to the collector and emitter electrodes of said second transistor for deriving the output pulse therefrom having a width equal to the time of one quarter of said period.

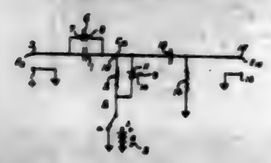
2,946,900
REDUNDANT TRANSISTOR FLIP-FLOPS
Leon H. Steinman, Los Angeles, and Merritt L. MacKnight, Manhattan Beach, Calif., assignors to Litton Industries of California, Beverly Hills, Calif.
Filed Nov. 28, 1957, Ser. No. 697,723
16 Claims. (Cl. 307—88.5)



1. In a flip-flop including redundant tramistors and having first and second states of operation, the flip-flop being responsive to a triggering pulse of an input signal having a predetermined level for changing its states of operation, the combination comprising: a load resistor having a first and a second terminal; a first source of potential coupled to said first terminal of said load resistor; a second source of potential; a flip-flop component quadruple transistor amplifier unit having four transistors interconnected in a symmetrical series-parallel circuit comprising two legs each leg including two serially connected transistors and said two legs being interconnected in parallel with each other, said flip-flop com-

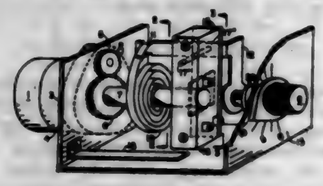
ponent quadruple transistor amplifier unit intercoupling said second source of potential and said second terminal of said load resistor and being operable for forming a conductive path and a non-conductive path between said second potential source and said second terminal of said load resistor when the flip-flop operates in the first and second states of operation, respectively; and input balancing means for applying the input signal to each of said transistors.

2,946,901
SWITCHING CIRCUIT FOR DIFFERENTIATOR
Robert J. Kyler, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Filed Sept. 22, 1958, Ser. No. 762,669
3 Claims. (Cl. 307—88.5)



1. A differentiating circuit for unipolar signals that can be changed from an ineffective state to an effective state by the application of a control potential, said circuit comprising: a condenser, a resistor, means connecting one terminal of said condenser to one terminal of said resistor, a switching device connected to the other terminal of said resistor and operating to selectively connect this terminal to either of two points one of which is a point of reference potential and the other of which has a direct control potential of predetermined magnitude relative to said point of reference potential, means for applying a unipolar input signal between the other terminal of said condenser and said point of reference potential, a unidirectional diode connected across said condenser and poled so that said input signal acts thereon in the conductive direction, the said predetermined magnitude of said control potential being greater than the maximum magnitude of said input signal and the polarity of said control potential being so as to act on said diode in the nonconductive direction, and means for coupling an output circuit between the connected terminals of said condenser and resistor said point of reference potential.

2,946,902
REPEAT CYCLE TIMERS
Paul A. Hagen, Baraboo, Wis., assignor, by mesne assignments, to The Gamewell Company, Newton, Mass., a corporation of Delaware
Filed Jan. 14, 1959, Ser. No. 786,747
12 Claims. (Cl. 307—141.4)



3. A repetitive cycle timer having, in combination, a snap switch, said switch having an actuator projecting from two opposite sides of said switch, a shaft supporting said switch and adapted to rotate said switch through an arc, an adjustable abutment engaged by said switch actuator limiting rotation of said switch in one direction, a stop engaged by said switch actuator limiting rotation of said switch in the opposite direction, an electric circuit closed when said switch actuator engages said adjustable abutment, a synchronous motor energized through said circuit, a speed reducer and a unidirectional clutch between said motor and said shaft adapted to drive said shaft at a uniform rate of speed in one direction, a reset spring having one end affixed to said shaft and another end affixed to said adjustable abutment and adapted to rotate said shaft in the reverse direction after said switch actuator engages said stop and opens said circuit, said switch alternately rotated by said motor and then by said reset spring into contact alternately with said stop and then with said adjustable abutment, this cycling repeated until power is removed, the duration of the reset time remaining substantially constant for various settings of said adjustable abutment, and a load circuit connected through said switch and controlled thereby.

2,946,903
VARIABLE VOLTAGE TRANSFORMER DEVICE
Gerald L. Osborne and Elbern A. Lawson, both of 712 SE. Hawthorne Blvd., Portland, Oreg.; said Lawson assignor to said Osborne
Filed Sept. 9, 1957, Ser. No. 682,919
4 Claims. (Cl. 307—156)



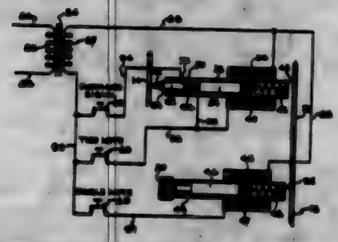
1. A variable voltage device comprising a unitary switch and transformer assembly including a support member, a switch operating shaft extending through said support member and journaled in said support member, a switch plate spaced axially of said shaft from said support member and having circumferentially spaced contacts, a rotary switch member rotated by said shaft and having contacts engaging said spaced contacts, a transformer supporting plate spaced axially of said shaft from said switch plate, a transformer clamping plate spaced axially of said shaft from said transformer supporting plate, a transformer positioned between said supporting plate and said clamping plate and having a closed iron core and a tapped winding connected to said spaced contacts, means for securing said support member to a supporting structure, and means for supporting all of said plates from said support member and for clamping said transformer between said supporting plate and said clamping plate.

2,946,904
ULTRASONIC TRANSDUCER ARRANGEMENT FOR SENDING AND RECEIVING
Paul Renaut, Saint-Maur, France, assignor to Réalisations Ultrasoniques, Saint-Maur, France, a corporation
Filed Mar. 11, 1957, Ser. No. 645,218
Claims priority, application France Mar. 14, 1956
2 Claims. (Cl. 310—8.2)



1. A transducer unit comprising a plurality of juxtaposed alternating transmitting and receiving elements separated from each other by at least one groove, the transducer unit essentially consisting of a first and a second block, respectively made of a piezo-electrical material and of a material having damping properties with respect to elastic vibrations, and having two sides in contact with each other, each of said grooves extending through said first block and penetrating into said second block along a portion thereof across said contact sides.

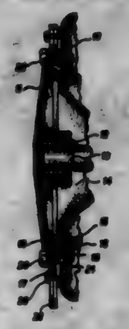
2,946,905
SINGLE COIL REPEATER SOLENOID
John G. Jolly, Cincinnati, Ohio, assignor to Numona, Inc., Cincinnati, Ohio, a corporation of New York
Filed Feb. 13, 1958, Ser. No. 715,027
6 Claims. (Cl. 310—34)



1. A repeater solenoid comprising, a solenoid tube, a solenoid coil mounted on a forward portion of said tube, a solenoid plunger slidably sustained for longitudinal motion within said tube, a plunger spring connected to the plunger and normally urging said plunger toward a retracted position relative to said coil, a pair of stationary contact plates extending in parallelism with said tube, spring means yieldably mounting said plates in transversely spaced relationship relative to the tube, a switch pole mounted for longitudinal motion relative to the tube, said pole projecting generally at right angles to the longitudinal axis of the tube and in a radial direction transversely thereof, said contact plates having opposed relatively inclined contact surfaces which intercept the outer end of said pole, said pole residing in a first position between said contact surfaces when the solenoid plunger is in said retracted position, the outer end of said relatively inclined contact surfaces engaging the outer end of said pole when the pole is in said first position and providing line contacts with said contact surfaces which complete an electrical circuit across the plates to the coil, whereby the coil propels the plunger forwardly in a power stroke, and a lost motion coupling element in driving connection between said plunger and pole, said coupling element shifting the pole longitudinally to a second position spaced from said contact surfaces as the plunger approaches the end of said power stroke, said pole in said second position opening the circuit across said contact plates and deenergizing said coil, said plunger spring thereupon propelling the plunger toward said retracted position, said coupling means shifting said pole back to said first position as the plunger approaches said retracted position and thereby providing sustained reciprocation of the plunger.

2,946,906
ELECTRIC MOTOR FOR HOISTS, CRANES, CONVEYORS OR THE LIKE
Fredrik Munck, Bergen, Norway, assignor to Sverre Munck, trading as Sverre Munck Elektro-Mekanisk Industri, Bergen, Norway
Filed Dec. 16, 1958, Ser. No. 780,834
1 Claim. (Cl. 310—77)

In an electric motor for hoists, cranes, and the like, in combination with a housing, a cover, a rotor rotatably and axially displaceably mounted within said housing and in said cover, and a number of fixing bolts carried by a portion of said cover and secured to said housing for adjusting said cover axially relatively to said rotor, said cover comprising brake drum means located within said housing, said rotor comprising brake shoe means adapted to engage said brake drum means for braking said rotor; a number of headed studs carried by said housing, the number of said headed studs being equal to that of said fixing bolts, each headed stud being located adjacent a separate fixing bolt, and a plurality of spac-



ing members mounted for pivotal swinging movement upon said headed studs, each headed stud carrying at least one spacing member, each spacing member comprising a hook-shaped portion adapted to embrace the adjacent fixing bolt and to be interposed between said portion of the cover and the housing in an operative position of the spacing member, and to be withdrawn from the space between said portion of the cover and the housing into an inoperative position to allow for said axial adjustment of the cover.

2,946,907
INSTANT FILMING BRUSH
Albert C. Titus, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 2, 1957, Ser. No. 700,669
8 Claims. (Cl. 310—228)

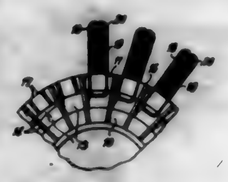


1. A current carrying brush comprising the combination of a body portion consisting essentially of graphitic carbon and having one or more auxiliary members positioned therein for depositing a film on a contacting surface under low humidity conditions; said auxiliary members comprising an admixture of a major component of a compound having chemical affinity for carbon and minor components of a solid metal dispersed therein and a base compound capable of neutralizing an acid and preventing the formation of an oxide of said metal.

2,946,908
COMMUTATOR ARRANGEMENTS
Gerhard Ullrich, Stuttgart, Germany, assignor to Robert Bosch, G.m.b.H., Stuttgart, Germany
Filed Sept. 4, 1956, Ser. No. 607,707
Claims priority, application Germany Sept. 8, 1955
5 Claims. (Cl. 310—234)

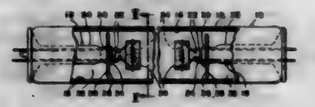
1. In an electric motor, in combination, a commutator ring having a plurality of electrically conductive com-

mutator bars parallel to and distributed about the axis of an armature which carries said ring and spaced and insulated from each other, each of said bars having an end face directed toward said armature and formed with a pair of slots substantially parallel to each other and extending spaced from each other and the side faces of said bar substantially radially from the axis of the armature and substantially normal to said end face into each bar, said slots defining between themselves a central end



portion in each bar; a pair of armature wires located over each bar at its end adjacent the armature with one of said wires directly engaging the outer face of said bar and located between the latter and the other of said wires and engaging the latter; and an electrically conductive loop-shaped connector having a pair of legs respectively extending through said slots and embracing said central end portion and said wires for holding the latter together and in operative relationship with each bar.

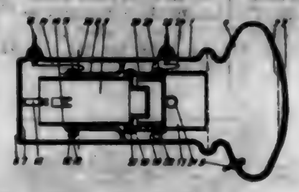
2,946,909
DISCHARGE DEVICE
Chalmers Morehead, Montclair, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 30, 1959, Ser. No. 802,952
5 Claims. (Cl. 313—43)



1. A fluorescent lamp adapted when normally operated to have a loading in excess of 16 watts per foot comprising, an envelope having a small charge of mercury sealed therein, a phosphor coating on the inner surface of said envelope comprising a halophosphate phosphor, a gaseous filling within said envelope initially comprising a mixture of at least one inert ionizable gas and nitrogen wherein the nitrogen is within the range of .3% to 3% by volume, lead-in conductors sealed through and extending inwardly into said envelope, a mount structure at each end of said envelope including electrodes carried by said lead-in conductors, means comprising an integral part of said lamp for controlling the mercury-vapor pressure when said lamp is normally operated, and a black chromium-vanadium plating on the non-emissive portions of each of said mount structures.

2,946,910
INFRARED IMAGE CONVERTER TUBES
Wilhelm Spinnler, Bonstetten Schachen, and Joseph Bruhin, Anton Schirli, Ernst Huber, and Walter Linder, Zurich, Switzerland, assignors to Albiswerk Zurich A.G., Zurich, Switzerland, a Swiss company
Filed Nov. 9, 1954, Ser. No. 467,841
Claims priority, application Switzerland Nov. 9, 1953
6 Claims. (Cl. 313—65)

1. An image converter tube for converting infrared radiation into visible radiation, comprising a hermetically sealed elongated vitreous envelope having at one end a first wall portion transparent to infrared radiation and having at the other end a second wall portion transparent to visible radiation, an infrared-responsive photocathode covering said first wall portion to emit electrons substantially proportional to the intensity of said infrared radiation at the respective points of impingement; a fluorescent screen on said second wall portion within said tube in axially spaced relation to said cathode, said screen being responsive to impinging electrons to emit visible rays proportional thereto; a plurality of electron-optical electrodes of hollow-cylindrical shape



coaxially aligned in said envelope between said cathode and said screen for focusing and accelerating the electrons emitted by said cathode onto said screen, said electrodes being rigidly joined with each other and forming together a single rigid mechanical structure; and an annular supporting member of metal substantially surrounding said electrode structure within said envelope and peripherally contacting said envelope, said member being radially elastic and engaging said electrode structure to maintain it in a given position relative to said envelope.

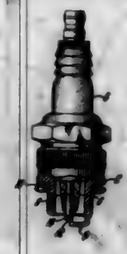
2,946,911
COATED ELECTRIC LAMP
Richard P. Maliszewski, Cleveland, and Vincent Vodicka, South Euclid, Ohio, assignors to General Electric Company, a corporation of New York
Filed Nov. 1, 1957, Ser. No. 694,041
9 Claims. (Cl. 313—116)



1. An electric lamp comprising a transparent glass bulb containing a light source and having a light refracting and light-transmitting coating on at least a portion of the exterior surface thereof comprising a thin layer of a transparent organic plastic having a multiplicity of integral faceted protuberances of a transparent organic plastic projecting in random oriented manner therefrom, substantially all of said protuberances having a minimum width dimension of at least several hundredths of an inch.

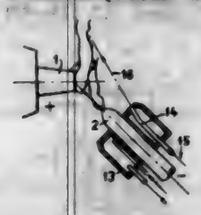
2,946,912
SPARK PLUGS
Owen A. Christenson, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 18, 1959, Ser. No. 821,303
2 Claims. (Cl. 313—141)

1. A spark plug comprising a metal shell, a ceramic insulator secured in said shell having a centerbore extending therethrough, a metal center electrode wire secured in the centerbore, said wire having a lower portion with a flat lower end surface exterior of said insulator, and a metal ground electrode wire welded to the lower end of said shell and having a flat elongated straight end portion extending radially inwardly and terminating in spaced parallel relationship with the flat lower end surface of said center electrode wire, the lower portion



of said center electrode wire being generally cylindrical and of substantially uniform diameter along its axis and having a plurality of circumferentially arranged serrations each of V-shaped cross section such that the flat end of said center electrode wire presents a plurality of circumferentially arranged outwardly extending points to the flat end portion of said ground electrode.

2,946,913
CARBON ARRANGEMENTS FOR HIGH-INTENSITY ELECTRIC ARCS
Jean Adrien Perrin, Pagny-sur-Moselle, France, assignor to Societe le Carbone-Lorraine, Paris, France
Filed May 17, 1956, Ser. No. 585,421
4 Claims. (Cl. 313—231)



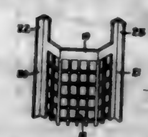
1. A carbon arrangement for high-intensity electric arcs comprising a positive carbon, a negative carbon, said carbons being non-coaxially arranged but with their axes meeting at the positive carbon, and a blowing tube located adjacent said negative carbon and running parallel to said negative carbon for part of its length, said blowing tube being bent away from said negative carbon and having an outlet for blowing gas in front of and above said positive carbon.

2,946,914
APPARATUS FOR PRODUCING AND MANIPULATING PLASMAS
Stirling A. Colgate, Livermore, John P. Ferguson, Los Altos, Harold P. Furth, Berkeley, and Robert E. Wright, Hayward, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 16, 1958, Ser. No. 742,445
17 Claims. (Cl. 313—231)

1. Apparatus for the production and manipulation of a plasma comprising electrical gaseous pinch discharge tube means provided with evacuation and gas supply means for introducing a gaseous atmosphere therein, means for supplying an initial axially symmetric stabilizing H_s field in said discharge tube, electrical power supply means for initiating and establishing the gaseous pinch discharge in said tube thereby providing a plasma in which said initial stabilizing H_s field is trapped and the plasma is compressed leaving a residual portion of the H_s field in the plasma external to the main plasma column, and axially symmetric magnetic field generating means coupled to said tube and programmed as a function of said compression for supplying magnetic field to said tube to modify the boundary value of said external H_s field.



2,946,915
GRID CONSTRUCTION
Allen P. Haase, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed July 21, 1954, Ser. No. 444,750
4 Claims. (Cl. 313—348)

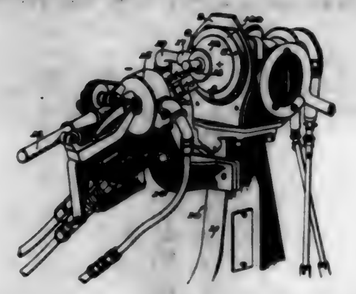


1. A self-supporting grid structure for use in an electron discharge device consisting of a single sheet of metal having an arcuate cross-section and including an integral perforate area constituting an electron permeable portion of said structure and an imperforate area limited to only the marginal portion of said sheet and constituting a support portion of said structure, said imperforate area including a portion that is channel-like in cross-section whereby said structure is rendered more rigid, said perforate area of said sheet being of substantially lesser thickness than said imperforate area throughout the whole of said perforate area, whereby said perforate area is adapted for maximizing electron transmission therethrough.

2,946,916
HIGH CURRENT CARBON ARC LAMPS OR DEVICES
Walter Zagieboylo, Norfolk, and Bernard McQue, Framingham, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Sept. 10, 1958, Ser. No. 760,280
9 Claims. (Cl. 314—29)
(Granted under Title 35, U.S. Code (1952), sec. 266)

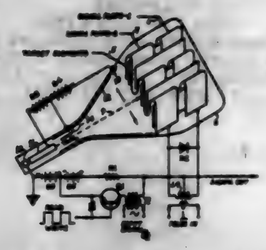
1. A high current carbon arc device, comprising a water-cooled head for the negative carbon electrode, a negative carbon electrode in said head, a water-cooled second head for the positive carbon electrode, a positive carbon electrode in said second head, each of said heads having a central passage therein for the reception and feeding of the carbon electrodes, and a tubular sleeve formed of ceramic material having a coating of copper on its exterior surface, said sleeve being disposed in the

central passage of the positive head between the passage wall and the positive carbon electrode, said tubular sleeve being fixed in the passage by metallic cement in the joint



between the sleeve and the adjacent wall of the passage at both ends of the sleeve to provide a water-tight seal for the head.

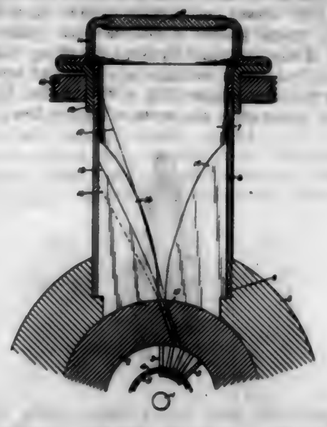
2,946,917
STORAGE TUBE
Megner V. Kalfaian, 962 Hyperion Ave., Los Angeles, 29, Calif.
Filed Feb. 12, 1959, Ser. No. 792,887
11 Claims. (Cl. 315—12)



1. In a cathode beam storage device having a target of a plurality of beam responsive capacitive elements for storing plurality of independent electrical quantities upon impingement at different elements by said beam, a target comprising a plurality of mutually insulated beam responsive target elements in the path of said cathode beam; first and second electrodes remote from said beam, physically so arranged as each of said first and second electrodes to have mutually separated capacitances with respect to said plurality of beam responsive target elements, for causing simultaneous but independent storage charge of like-poled electrical quantities between the first and second electrodes upon impingement by said beam at any one of said beam responsive elements; and first and second output terminal means from said electrodes, respectively, for modifying and discharging said last stored electrical quantities externally of said device.

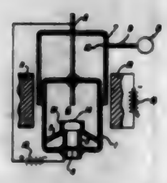
2,946,918
MAGNETRON OUTPUT COUPLING CIRCUIT
Paul W. Crapuchettes, Palo Alto, Calif., assignor to Litton Industries, Inc.
Filed Dec. 18, 1958, Ser. No. 201,472
3 Claims. (Cl. 315—39)

3. An output coupling circuit for a multi-cavity resonator magnetron, wherein the magnetron resonators are composed of relatively thin radially disposed vanes connected to a relatively thick outer cylindrical wall, comprising a wave guide having longitudinal conductive walls sealed at one end to said outer wall, an insulating window sealed to the other end to said conductive walls, said outer cylindrical wall having a communicating open slit between one of said resonators and the interior of



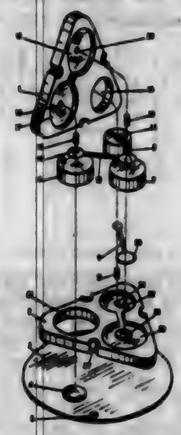
said wave guide positioned at an angle to a radius of said cylinder and to said conductive wall, whereby free electrons passing through said slit will be directed toward one of said conductive walls.

2,946,919
ION SOURCES USING A HIGH-FREQUENCY FIELD
Alfred Lorbe, Frankfurt am Main, Germany, assignor to Compagnie Generale de Telegraphie Sans Fil, Paris, France
Filed Sept. 18, 1957, Ser. No. 684,729
Claims priority, application France Oct. 3, 1956
17 Claims. (Cl. 315—39)



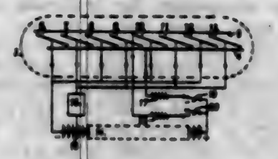
1. An ion source including an ionization space formed by a vacuum-tight envelope, a source of ultra-high frequency energy, a coaxial line portion having a hollow inner conductor and having one of its ends terminated at said ionization space while the other end thereof is closed by a metallic cover traversed by said hollow conductor, means for coupling said coaxial line portion to said ultra-high frequency source thereby to induce in said ionization space an ultra-high frequency wave, means for establishing in said ionization space an electrostatic field so that the lines of force thereof and the lines of force of the electric ultra-high frequency field have a common axis of symmetry, said hollow conductor being disposed along said axis of symmetry, means for establishing in said ionization space a constant intensity magnetic field having lines of force substantially perpendicular to those of the ultra-high frequency electric field, and means for introducing gas to be ionized into said ionization space through said hollow conductor, said ionization space comprising a cylinder closed at the extremity remote from said coaxial line by a cover made of insulating material, a metal tube traversing said cover and provided with a diaphragm having an aperture for extracting ionized gas, and means for raising said hollow inner conductor to a positive potential with respect to said metal tube.

2,946,920
LIGHTNING ARRESTERS FOR VERY HIGH VOLTAGE
Fernand Martin, Rouen, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium, a corporation of Belgium
Filed June 26, 1959, Ser. No. 824,640
Claims priority, application France July 7, 1958
6 Claims. (Cl. 315—58)



1. A lightning arrester for a high voltage line, comprising a plurality of axially spaced elements stacked to form a column, each of said elements comprising a metallic plate, an insulating casing superposed on said metallic plate, a discharger block enclosed in said casing, a plurality of resistance blocks enclosed in said casing, said resistance blocks being disposed radially relative to each other and said discharger block and being made of a material having a resistivity varying with applied voltage, and means connecting said elements including means electrically connecting their respective blocks in series.

2,946,921
GLOW DISCHARGE TUBES AND CIRCUITS THEREFOR
Hans Lux von Gugelberg, Schloss Salenegg, Maienfeld, Switzerland
Filed June 26, 1958, Ser. No. 744,751
Claims priority, application Switzerland Oct. 19, 1957
3 Claims. (Cl. 315—84.6)



1. A glow discharge tube comprising a gas filled envelope, a pair of parallel spaced linear anodes in said envelope, a plurality of equally-spaced cold cathodes intermediate and spaced from said pair of anodes and coplanar therewith, each of said cathodes consisting solely of a linear wire section, said cathodes extending between said anodes and being angularly arranged at equal angles of inclination to one of said anodes, said cathodes being spaced relative to each other to cause each cathode intermediate two other cathodes to extend at one end intermediate the space between one anode and the adjacent cathode on one side thereof and at the other end intermediate the space between the other anode and the adjacent cathode on the other side thereof, first circuit means connecting alternate cathodes together as one group, second circuit means connecting the remaining cathodes together as a second group, means for operatively energizing either one of said anodes, and means for applying impulses to one of said groups of cathodes whereby the glow discharge on a given cathode will jump to the adjacent cathode in one direction longitudinally of the anodes when one of said anodes is operatively energized and the glow discharge will jump to the adjacent cathode in the other direction longitudinally of the anodes when the other of said anodes is energized.

2,946,922
BALLAST APPARATUS
Charles R. Dougherty, Danville, Ill., assignor to General Electric Company, a corporation of New York
Filed Aug. 31, 1959, Ser. No. 837,231
13 Claims. (Cl. 315—100)

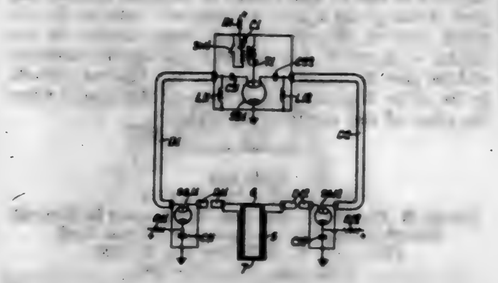


1. Ballast apparatus for starting and operating three fluorescent lamps comprising a high reactance transformer having a magnetic core with an elongated winding leg and an outer yoke member, a plurality of windings disposed on said winding leg in side by side relationship, said windings including a primary winding for connection to an alternating current source, a lead circuit secondary winding and a pair of lag circuit secondary windings, a capacitive reactor, said lead circuit secondary winding being connected to said capacitive reactor in series circuit relation and to said primary winding in autotransformer relation to form a lead circuit for operating two of said lamps with leading current, said lag circuit secondary windings being electrically isolated from said primary winding and being serially interconnected to form a lag circuit for operating the other of said lamps with lagging current, one of said lag circuit secondaries being located on said winding leg between said primary winding and said lead circuit secondary winding and the other of said lag circuit secondary windings being located on the opposite side of said primary winding, and said winding leg having a bridged gap beneath said other lag secondary winding, whereby said windings are effective to operate said lamps in said lead and lag circuits with a good current balance therebetween.

2,946,923
SPARK-GAP CIRCUITS
Richard Anthony Fitch, Mortimer, England, assignor to United Kingdom Atomic Energy Authority, London, England
Filed June 20, 1958, Ser. No. 743,283
Claims priority, application Great Britain June 24, 1957
5 Claims. (Cl. 315—163)

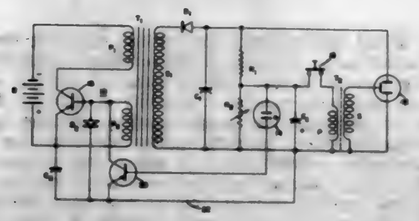
1. A spark-gap circuit comprising a plurality of storage condensers, a load, a spark-gap associated with each stor-

age condenser, each spark-gap having a triggering electrode and two main electrodes, a connection between one main electrode of each spark-gap and one side of its associated storage condenser, a distributed connection between the other main electrode of each spark-gap and the



load, and means for triggering the spark-gaps substantially simultaneously, the distributed connections being of equal length sufficient to delay the arrival of the voltage fronts from said storage condensers at the load for a time greater than half the maximum difference in the breakdown times of the associated spark-gaps when triggered.

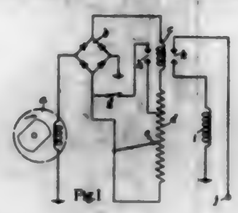
2,946,924
CAPACITOR DISCHARGE CIRCUIT
Karl Albrecht Gerlach, Duesseldorf, and Kurt Wittig, Lubeck-Kuckaltz, Germany, assignors to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 13, 1959, Ser. No. 806,151
6 Claims. (Cl. 315—241)



1. An electrical circuit comprising, in combination: a storage capacitor; a transistor vibrator for charging said capacitor from a source of D.-C. potential; a control transistor connected to render said vibrator inoperative when said control transistor is biased to conduction; and a circuit element, conductive upon the application thereto of a predetermined potential, connected to render said control transistor conductive in response to the existence of a predetermined voltage on said capacitor.

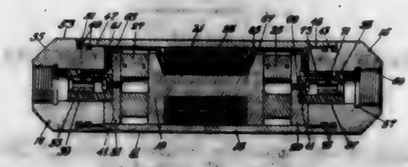
2,946,925
SYSTEM FOR EFFECTING AUTOMATIC CONTROL OF A VEHICLE POWER TRANSMISSION SYSTEM
Clifford Frank May, Moseley, Birmingham, England, assignor to Joseph Lucas (Industries) Limited, Birmingham, England
Filed Nov. 22, 1955, Ser. No. 548,459
Claims priority, application Great Britain Nov. 27, 1954
5 Claims. (Cl. 317—5)

1. A system for effecting automatic control of a vehicle variable-speed power transmission mechanism, comprising in combination an electric current generator of the kind adapted to produce a voltage which varies with the speed of said generator, a first electric circuit containing said generator, electromagnetic means consisting in part of a relay having a winding in said electric circuit so that current from said generator can flow through said winding, a resistance connected in series with said winding, manually-responsive contact means electrically connected to said resistance for co-operating therewith to vary current flow through said winding from said generator, a normally-open first switch connected in parallel with said resistance and contact means and closable by a part of said electromagnetic means to short-circuit at least a part of said resistance in response to a predetermined current flow through the winding of said relay, a manually-responsive and normally-closed second



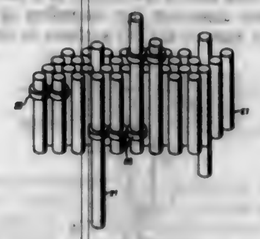
switch connected in series with said normally-open switch so that the latter is rendered ineffective when said normally-closed second switch is opened, a gear-changing electromagnet formed by a part of said electromagnetic means, a second electric circuit containing said gear-changing electromagnet, said second electric circuit being separate from said first electric circuit and serving, when closed, to energise said gear-changing electromagnet, and a third switch for controlling said gear-changing electromagnet and operable by said relay in response to a predetermined current flow through the winding of said relay.

2,946,926
BORE HOLE DETECTOR AND FIRING APPARATUS
Millo Marion Hawthorne, Fort Worth, Tex., assignor to Go Oil Well Services, Inc., Fort Worth, Tex.
Filed Mar. 6, 1958, Ser. No. 719,543
8 Claims. (Cl. 317—80)



3. In an arrangement for performing operations in cased bore holes wherein there is provided a collar locating device and a detonating assembly suspended in a hole by a cable; and a control station aboveground, with a cable constituting a two-conductor transmission channel, one conductor of which is common, with the control station including an indicator device adapted for receiving signals from said collar locator device, a source of detonator signals, and means for selectively connecting either said indicator device or said source to said cable transmission channel; with said detonator assembly including an electrically actuable detonator device; that improvement wherein said collar locating device includes a transformer having a relatively high inductance primary winding in which signals are induced responsive to casing anomalies, and a relatively low inductance secondary winding, conductor means connecting said primary winding between the common conductor of said cable transmission line and its other conductor, and conductor means connecting one side of said secondary winding to common and the other side of said secondary winding in series with said detonator device and then to common.

2,946,927
ELECTRICAL COMPONENTS AND CIRCUITS AND METHODS OF FABRICATING THE SAME
Roland Silver, Boston, Mass. (432 Broadway, Cambridge, Mass.), and Thomas L. Etter, 305 W. 103rd St., New York 25, N.Y.
Filed Nov. 22, 1955, Ser. No. 548,396
21 Claims. (Cl. 317—101)



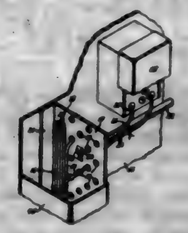
1. An electrical circuit comprising a continuous coiled filament having turns thereof in contiguous relation to one another, said filament being formed to have electric circuit components formed at spaced points along the length thereof, certain of said circuit components on different turns of said filament being in electrical contact to form an electrical circuit, each of said components being formed of equal length sections and with a pair of conductive bands surrounding said filament at the respective ends of each said section, said bands being in contact with similar bands of components on adjacent filaments to form said circuit.

2,946,928
CIRCUIT BREAKER PANELBOARD
Eugene E. Slade, Bristol, Conn., assignor to General Electric Company, a corporation of New York
Filed Sept. 30, 1957, Ser. No. 686,930
7 Claims. (Cl. 317—119)



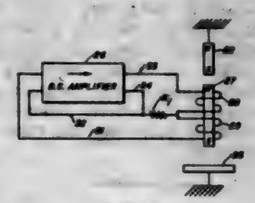
1. An electric panelboard comprising a generally planar main supporting member, two rows of electrical control devices mounted on said main supporting member in parallel spaced apart relation, a group of at least two main bus bars having one end thereof mounted on said main supporting member and extending in generally parallel relation to said rows of control devices in the space therebetween, a plurality of branch connecting straps, each extending transversely of and connected to one of said main bus bars and having each of its opposite ends connected to a corresponding one of said control devices, a pair of elongated insulating members mounted on said main supporting member generally parallel to and on either side of said group of main bus bars, said transverse branch connecting straps having their opposite ends supported by said insulating members respectively, the intermediate portions of said main bus bars being suspended from said branch connecting straps and spaced away from the main planar surface of said main supporting member.

2,946,929
PANELBOARD WIRING SUPPORT ARRANGEMENT
Kurt R. Walch, Philadelphia, and John J. Whitmore, Havertown, Pa., assignors to General Electric Company, a corporation of New York
Filed May 24, 1957, Ser. No. 661,530
7 Claims. (Cl. 317—122)



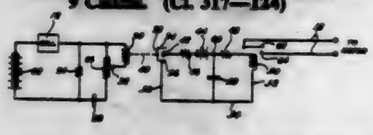
3. In a panelboard comprising a panel having a mounting surface, at least one electrical device mounted on the panel and projecting from said surface, a pair of horizontally spaced-apart wiring strips each extending along said surface and having a body portion disposed generally perpendicular to said surface, each of said body portions containing a plurality of apertures, at least some of which are aligned with some of the apertures of the other body portion, a rod-like structure extending horizontally between said two strips inwardly of the outer edges of the two strips and having end portions anchored within a set of aligned apertures in the body portions of the two strips, a plurality of circuit wires extending alongside one of said strips at a side thereof opposite to the location of said electrical device, at least one of said wires extending through an aperture in said strip and alongside said rod-like structure, means located at points spaced along the length of said rod-like structure for anchoring said one wire to the outer periphery of said rod-like structure, and means for electrically connecting a terminal of said wire to said electrical device.

2,946,930
MAGNETIC SUSPENSION
Roswell W. Gilbert, Montclair, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed June 20, 1955, Ser. No. 516,517
4 Claims. (Cl. 317—123)



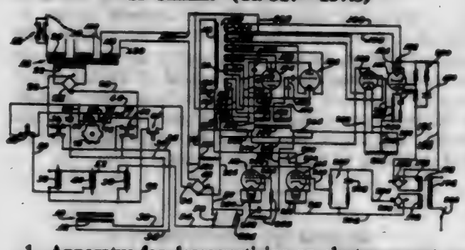
1. Apparatus for suspending a body of magnetizable material in free space solely by magnetic forces, comprising primary static magnetic supporting means proximate to the body, coil means surrounding the body, and a feedback system connected to said coil means to apply incremental stabilizing electromagnetic forces to the body in response to changes in the flux linkage between the body and the static magnetic supporting means.

2,946,931
PHOTOELECTRIC CONTROL SYSTEM FOR DOOR OPERATION AND THE LIKE
Vernon Durbin, Wabun, Mass., assignor to National Pneumatic Co., Inc., Boston, Mass., a corporation of Delaware
Filed Mar. 12, 1956, Ser. No. 570,902
9 Claims. (Cl. 317—124)



1. A control system comprising a photoelectric cell, a control device adapted to be actuated in a given sense in response to a change in energization thereof whether that change in energization is in an increasing or decreasing direction, said control device being operatively connected to a power element to actuate the latter, and an operative connection between said photoelectric cell and said control device, said operative connection being sensitive to a change in the illumination of said cell and effective to cause energization of said control device only when a change occurs in the illumination of said cell, and means for permitting effective energization of said control device only when the rate of change of illumination of said photoelectric cell exceeds a given value.

2,946,932
DEMAGNETIZING APPARATUS
Arthur K. Litwin, Lincolnwood, Ill., assignor, by mesne assignments, to Robert L. Litwin, Arthur K. Litwin, and Louis W. Bier, Chicago, Ill., as trustees
Filed Aug. 30, 1957, Ser. No. 681,412
13 Claims. (Cl. 317—157.5)



1. Apparatus for demagnetizing an electromagnet comprising a source of alternating current, rectifying means for converting the alternating current to direct current and delivering it to the electromagnet, switch means for reversing the polarity of the direct current, electromagnets for operating said switch means, second circuit means for controlling the operating electromagnets, first electronic tube means in the second circuit means, second electronic tube means for controlling the conductivity of the first electronic tube means, and means for pulsing the second tube means and thereby rendering the first tube means pulsatingly conductive for actuating the reversing means in a series of successively diminishing time intervals and successively decreasing the residual magnetism on the electromagnet.

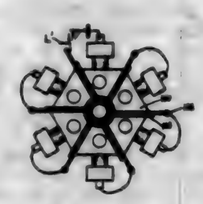
2,946,933
RELAY
James J. Cummings, Monmouth Beach, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 5, 1958, Ser. No. 719,456
5 Claims. (Cl. 317—171)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A relay including first and second symmetrical, semi-cylindrical bodies having discrete top and bottom ends and opposing flat surfaces, each of said flat surfaces having spaced N and S pole pieces intermediate the respective top and bottom ends, means for maintaining the flattened faces of said bodies in substantially intimate contact and for permitting said flattened surfaces to be longitudinally positioned relative to each other, said bodies being normally positioned such that the S pole piece of one body is contiguous to the N pole piece of the other body whereby said bodies are locked in a first prescribed position, discrete angulated lips extending upwardly and outwardly from each of the flat surfaces at the respective



top ends of said bodies, a cavity in each of said bodies intermediate one of said pole pieces and the diametric lip of each body adapted to receive the diametric lip of the other magnetic body and be disengaged therefrom when one of said bodies is moved relative to the other, a hole in each of the top ends of said bodies substantially at the junction of the angulated lip and its associated top end, and means operably engageable with the lip and hole of either of said bodies for reversing the prescribed position of said bodies such that the N pole piece of said one body is contiguous to the S pole of said other body to lock said bodies in said reverse position.

2,946,934
RECTIFIER
James V. Caputo, Youngstown, Ohio; Alice E. Caputo, 1409 S. Meridian Road, executrix of said James V. Caputo, deceased
Filed July 24, 1958, Ser. No. 750,803
21 Claims. (Cl. 317—234)



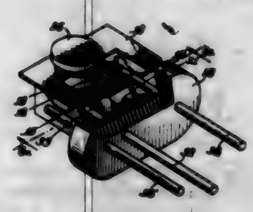
1. A rectifier comprising a hollow vessel of conducting material, spaced tubes projecting perpendicularly from a wall of the vessel and opening into the interior of the vessel, a mounting block of conducting material at the outer end of each tube, and a diode mounted on each block and having one terminal connected to the block.

2,946,935
DIODE
George B. Finn, Jr., Bloomington, Ind., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Filed Oct. 27, 1958, Ser. No. 769,636
10 Claims. (Cl. 317—234)



1. A diode comprising a semiconductor wafer having a PN junction therein, a terminal member on which said wafer is supported, a resilient member enclosing the surface of said wafer which is intersected by said junction, and a rigid plastic enclosing said resilient member and the remaining exposed portions of said wafer thereby to compress said resilient member against said wafer to provide a fluid tight seal for said junction and to exert a compressive stress on said wafer.

2,946,936
SEMICONDUCTOR DEVICE
Donovan V. Geppert and James W. Corn, Phoenix, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Mar. 5, 1954, Ser. No. 414,385
13 Claims. (Cl. 317—235)



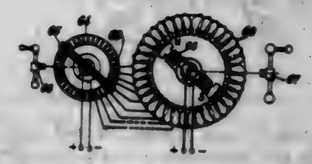
1. A transistor unit including in combination, a metallic block having an aperture therein, a crystal of semi-conductive material having a surface affixed to a surface of said block in electrical contact therewith, a supporting post disposed in said aperture of said metallic block and extending outwardly from said surface of said block, and a pair of resilient metallic strips mounted on said supporting post in adjacent mutually spaced insulated relation, said strips extending from said post in a plane spaced from said surface of said block and substantially parallel therewith, and said strips having respective bent-over tips remote from said post in point contact with said crystal.

2,946,937
CERAMIC MATERIAL AND METHOD OF PRODUCING THE SAME
John M. Herbert, Horton, England, assignor to The Plessey Company Limited, Ilford, England, a British company
No Drawing. Filed May 7, 1956, Ser. No. 582,945
5 Claims. (Cl. 317—258)

1. A method of producing a dielectric sintered body, which comprises shaping the body of a material which, at least after sintering consists essentially of barium titanate and a smaller molecular quantity of manganous oxide, the amount of manganous oxide being at least approximately 14 mol percent of the composition as a whole, and sintering said body in a reducing atmosphere to give a body which comprises barium titanate and manganous oxide in a proportion corresponding to a formula selected from the group consisting of

$MnO.(BaTiO_3)_2$, $MnO.(BaTiO_3)_4$ and $MnO.(BaTiO_3)_6$

2,946,938
AUTOMATIC CONTROL OF INDUSTRIAL MACHINE SERVOSYSTEM WITH DIFFERENTIAL TRANSMITTER
Vladimir Gavreau and Albert Caboara, Marseille, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a French society
Filed Jan. 28, 1957, Ser. No. 636,397
Claims priority, application France Jan. 28, 1956
5 Claims. (Cl. 318—37)

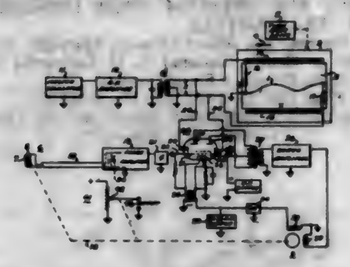


1. High-accuracy electric servo-motor, for driving with torque amplification a driven shaft in a machine tool synchronously to the rotation of a driving shaft, the rotation of said driving shaft being controlled by a magnetic record, comprising: a transmitter unit consisting of a stationary collector with a ring surface constituted by a plurality of electricity conducting zones separated by insulating zones, at least one pair of rotating diametrically opposed brushes carried by said driving shaft, means for resiliently pressing said brushes against said ring surface with a pressure substantially independent of the rotation speed of said brushes, and means for feeding a D.C. voltage difference between the two brushes of said pair, said feeding means comprising a sleeve in an insulating material secured around said driving shaft, a pair of electricity conducting slip rings secured around said sleeve, said slip rings being therefore driven in rotation by said driving shaft synchronously with said brushes, a pair of electricity conducting pathes insulated one from the other for connecting separately one of said slip rings with one of said brushes, and two stationary feeding brushes, each one of said feeding brushes being applied against one of said slip rings; a receiver unit consisting of a stationary armature winding with a plurality of stationary spaced taps, the number of said taps being equal to the number of said conducting zones, and a rotating field magnet driving said driven shaft; and a number of leads equal to the number of said conducting zones and said taps, each lead connecting one of said conducting zones to one of said taps with a connection arrangement providing that successive zones of said ring surface are connected to successive taps.

2,946,939
CURVE FOLLOWER
Arden L. Lind, New Brighton, Minn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed June 2, 1958, Ser. No. 739,445
5 Claims. (Cl. 318—31)

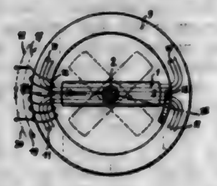
1. Apparatus for following an electrically conductive curve located on a rectangular surface with respect to x and y rectangular coordinate axes, said apparatus comprising: a probe having a coil positioned close to said surface with its axis normal to said surface; means for producing relative motion between said curve and said probe in the direction of said x-axis; a servo system for producing relative motion between said curve and said probe in the direction of said y-axis; a pair of narrow

repelling electrodes on opposite sides of said curve, situated near the boundary of said surface and parallel to said x-axis; means for applying alternating voltages of equal amplitude and opposite phase between said repelling electrodes and a point of reference potential; means for connecting a point on said curve to said point of reference potential; means for sending an alternating current through said curve of the same frequency as said



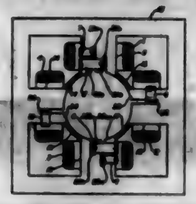
alternating voltages and passing through zero at the same time as said alternating voltages, the direction of said current at any instant being such that the voltage induced in said coil when it is on either side of said curve by the fields produced by said current and the voltage of the repelling electrode on the same side are additive; and means for applying the total voltage induced in said coil to said servo system as an error signal.

2,946,940
TIMEPIECE COMPRISING AN ELECTROMAGNETICALLY MAINTAINED OSCILLATING REGULATOR
André Beyner, Igor Scherrer, and Henri Morier, Neuchatel, Switzerland, assignors to Ebauches S.A., Neuchatel, Switzerland, a firm of Switzerland
Filed Apr. 4, 1958, Ser. No. 726,575
8 Claims. (Cl. 318—128)



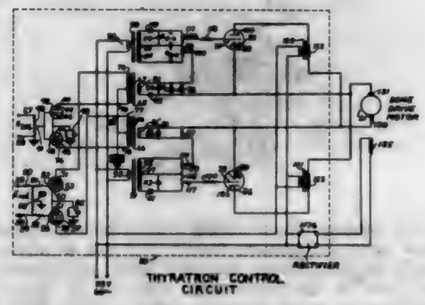
1. In a timepiece having an electromagnetically maintained oscillating regulator, an oscillating field magnet, a torus of high magnetic permeability surrounding the said magnet and canalising its magnetic flux so as to divide it into partial fluxes situated in a plane perpendicular to the axis of oscillation of the said magnet, the number of which is equal to the number of poles of the magnet, a pick-up winding wound around a portion of the said torus, in such a place along the said torus that this pick-up winding is situated opposite a pole of the magnet when the latter occupies its position of equilibrium, and a driving winding situated in an air gap separating the magnet from the said torus, the whole arrangement being such that the said pick-up winding is exposed to a constant magnetic flux as long as it is not situated opposite one of the poles of the magnet, the value of the said magnetic flux being equal to that of a partial flux, the said flux changing sign while passing through 0 when a pole of the magnet travels past the said pick-up winding, whereby there is induced in the latter an impulse signal of one sense only at each passage of a pole of the magnet in front of the pick-up winding.

2,946,941
ELECTRIC MOTORS
Korda K. D. Jin, Elyria, Ohio, assignor to The General Industries Company, Elyria, Ohio, an Ohio company
Filed May 7, 1959, Ser. No. 811,632
11 Claims. (Cl. 318—223)



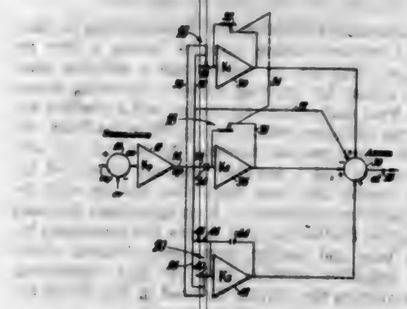
1. An electric motor having a four-pole stator, each pole having an energizing coil and a shading coil, said poles being energized circumferentially with alternate polarities, two of said shading coils being interconnected in series whereby their magnetomotive forces effectively cancel each other when the polarity of the energizing coil associated with one of said shading coils is reversed, and switch means for reversing the polarity of two of said energizing coils including said energizing coil associated with said one of said shading coils.

2,946,942
THYRATRON CONTROL SYSTEM
Walter R. Peck, Asheville, N.C., assignor to Ancel Propulsion, Inc.
Filed July 1, 1955, Ser. No. 519,390
12 Claims. (Cl. 318—293)



8. An apparatus for causing the motor of one motor-driven device to track with the motor of another motor-driven device which comprises means for deriving an A.-C. signal voltage of phase and amplitude indicative of the difference in relative positions of said two devices, means for supplying an A.-C. reference voltage of the same frequency as the A.-C. signal voltage and of substantially constant amplitude and phase, means for comparing said A.-C. signal voltage with said A.-C. reference voltage of one phase to obtain one comparison voltage, means for comparing said A.-C. signal voltage with said A.-C. reference voltage of the opposite phase to obtain another comparison voltage, means for rectifying and filtering said one comparison voltage to obtain one D.-C. signal voltage, means for rectifying said other comparison voltage to obtain another D.-C. signal voltage, a source of A.-C. voltage of substantially constant phase and frequency, means for deriving from said source an A.-C. bias voltage, means for combining algebraically said A.-C. bias voltage of one phase and said one D.-C. signal voltage to obtain one control voltage, means for combining algebraically said A.-C. bias voltage of the opposite phase and said other D.-C. signal voltage to obtain another control voltage, a pair of thyratrons, means for supplying said one control voltage between grid and cathode of one of said thyratrons, means for supplying said other control voltage between grid and cathode of the other of said thyratrons, the grid-cathode circuits of the thyratrons being isolated from each other for D.-C. voltages, means for deriving from said source of A.-C. voltage a first A.-C. plate voltage of leading phase with respect to said one control voltage and for supplying said first plate voltage between plate and cathode of said one thyratron, means for deriving from said source of A.-C. voltage a second A.-C. plate voltage of opposite phase to said first A.-C. plate voltage and for supplying said second plate voltage between plate and cathode of said other thyratron, and means for supplying the difference of the plate currents of said pair of thyratrons to the motor of said one motor-driven device.

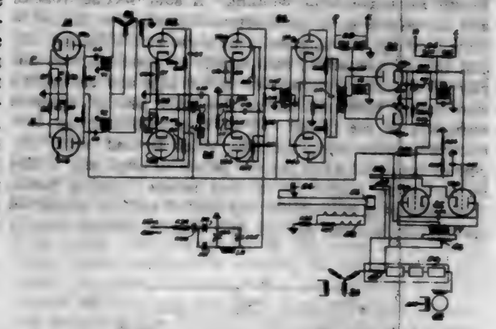
2,946,943
PARALLEL COMPONENT CONTROLLER SERVOSYSTEM
Dudley D. Nye, Jenkintown, Pa., and Ronald Y. Paradise, Passaic, N.J., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Feb. 20, 1956, Ser. No. 566,692
14 Claims. (Cl. 318—448)



1. In a device for controlling a process having a controller input adapted to receive a signal indicative of a variable to be controlled and a controller output adapted to be applied to a process, the combination comprising a system including a plurality of parallel components having common inputs, means for impressing said signal upon said inputs, said system including a first component for altering said signal in proportion to changes in the value thereof, a second component for altering the signal in proportion to the integral of the same, and means for impressing the output of each of said components upon said controller output.

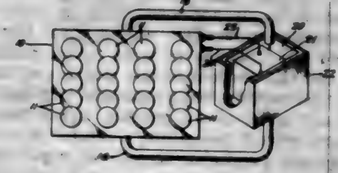
2,946,944
AIRCRAFT FLIGHT CONTROL
Gordon S. Hartloff, Hamburg, N.Y., assignor to Bell Aircraft Corporation, Wheatfield, N.Y.
Filed Mar. 19, 1949, Ser. No. 82,353
1 Claim. (Cl. 318—489)

An automatic azimuth turn control for aircraft of the type provided with a directional reference system, an automatic pilot and servomotor mechanism for initiating coordinated turns of said aircraft, comprising means for deriving from said directional reference system an alternating voltage corresponding to the heading of such aircraft, a vacuum tube amplifier resonant to the frequency of said alternating voltage for comparing said voltage with an intelligence signal characteristic of a desired heading of such aircraft, means controlled jointly by said means and said amplifier for applying to said servomotor mechanism signal energy adapted to cause said mechanism to alter the heading of said aircraft in such a manner as to eliminate the difference in the heading of said aircraft and the heading called for by said signal, said amplifier providing an output signal which is proportional to the



difference in heading for values of the latter not exceeding a predetermined maximum, and means for limiting said output signal to a predetermined level for differences in heading exceeding said predetermined maximum.

2,946,945
SOLAR ENERGY CONVERTING APPARATUS OR THE LIKE
Norman J. Regnier, Lawrence W. Schmidt, and Dona E. Kefes, Los Angeles, Calif., assignors to Hoffman Electronics Corporation, a corporation of California
Filed Mar. 11, 1958, Ser. No. 720,688
10 Claims. (Cl. 320—2)

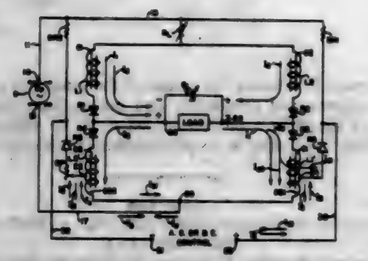


1. In combination, a tray containing a fluid, a plurality of photovoltaic cells supported in said tray and having a pair of electrical terminals, a cover transparent to light but substantially opaque to long wavelength infrared energy extending over the surface of said tray and sealed to the edges thereof, said tray having inlet and outlet ports, heat transfer means, and tube means interconnecting said tray and said heat transfer means to provide a continuous path for enabling said fluid to circulate from said outlet port to said heat transfer means, to said inlet port, to said tray, and back to said outlet port.

2,946,946
TRANSIENT-CONTROLLED MAGNETIC AMPLIFIER
George Scholnan, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 12, 1957, Ser. No. 671,676
14 Claims. (Cl. 323—89)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A half-wave bridge magnetic amplifier comprising a pair of supply terminals for connection to an alternating current source, a pair of output terminals connectable to a load, first and second saturable core reactors, a first inductive load winding on said first reactor and connected to a unidirectional conductive device to form one leg of the bridge, a second inductive load winding on said first reactor and connected to a unidirectional

conductive device to form the bridge leg diagonally opposite said one leg, a third inductive load winding on said second reactor and connected to a unidirectional conductive device to form a third leg of the bridge, a fourth inductive load winding on said second reactor and connected to a unidirectional conductive device to form a bridge leg diagonally opposite said third leg, circuit means connecting said supply terminals across one pair of opposite terminals of said bridge and connecting said output terminals across the other pair of opposite terminals of the bridge, all of said unidirectional conductive devices being similarly poled in said bridge circuit to pass half-wave current pulses through said bridge on the same half-cycle of said source, biasing means consisting of a pair of parallel branch circuits connected across said source, one of said branch circuits serially

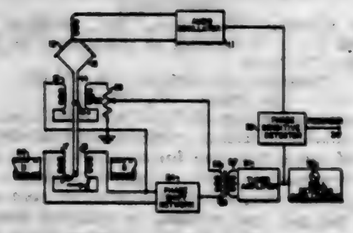


including a rectifier and a portion of said second load winding, the other of said branch circuits serially including a rectifier and a portion of said third load winding, said rectifiers being poled to pass current from said source on the same half-cycle but during the half-cycle which said bridge is non-conductive, an input control circuit connected to receive a control signal from a control source and including in series circuit relation said rectifiers and said portions of said second and third load windings, said rectifiers being connected in polarity opposition in said series circuit relation, and a firing angle determining network comprising a resistor in series with said bridge and a capacitor across said output terminals, the parameters of said resistor and said capacitor being selected so that firing initiation of one of said reactors occurs upon current dissipation of said other reactor.

2,946,947

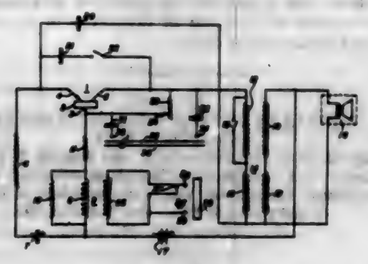
WITHDRAWN

2,946,948
MAGNETIC TEST APPARATUS
Simon Foner, Cambridge, Mass.
(31 Payson Terrace, Belmont 78, Mass.)
Filed June 29, 1957, Ser. No. 666,933
33 Claims. (Cl. 324—34)



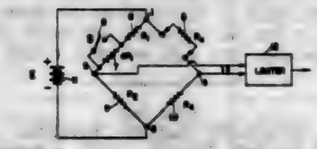
1. Apparatus for determining the magnetic properties of a specimen of matter in a substantially uniform saturating magnetic field applied in a predetermined direction comprising, induction pickup means disposed within said field adjacent said specimen, and means for oscillating said specimen relative to said pickup means along an axis substantially perpendicular to said field direction.

2,946,949
DEVICE FOR TESTING CONTINUITY AND CAPACITANCE OF CIRCUIT ELEMENTS
Otto Walter Dopheide, Longueuil, Quebec, Canada, assignor to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada
Filed Feb. 4, 1957, Ser. No. 637,954
6 Claims. (Cl. 324—51)



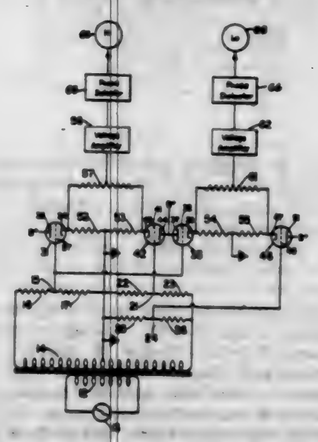
4. An adjustable oscillating device comprising in combination: a semiconducting material having a low resistance base electrode, an emitter and a collector electrode with means for applying negative operating potential to the base and emitter electrodes and a positive potential to the collector electrode; a positive feedback circuit means interconnected between the emitter and collector electrodes and a negative feedback connected between the emitter and base electrodes and between the base and collector electrodes; a high impedance included in the negative feedback circuit means and connected between the base and emitter electrodes, a closed circuit means in inductive relation with the high impedance, means for varying the current induced in the closed circuit means.

2,946,950
AUTOMATIC LIMIT BRIDGE
Gerard L. Zomber, Wychoff, N.J., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 28, 1956, Ser. No. 587,753
2 Claims. (Cl. 324—57)



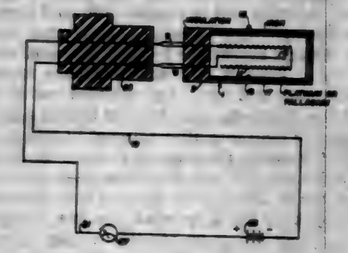
1. An apparatus for testing circuit elements having a fixed impedance, said apparatus comprising a Wheatstone bridge circuit including a first branch having means for connecting therein a circuit impedance element to be tested to determine whether its impedance is within a range of values between a minimum and a maximum value, a second branch including an impedance equal to a desired value between said minimum and maximum impedance values, a third branch including an impedance equal to a value between said minimum and maximum impedance values, and a fourth branch of said Wheatstone bridge having a plurality of impedances connected in series the sum of the impedance values thereof being equal to said maximum impedance value, one of said plurality of impedances in said fourth branch being equal to said minimum impedance value, a direct voltage source having one terminal connected to said Wheatstone bridge between said second and third branches and the other terminal of said direct voltage source connected between said first and fourth branches, an output circuit connected across the other two terminals of said Wheatstone bridge, said fourth branch including a shunt circuit including a switch connected across all said plurality of impedances in said fourth branch except said one impedance, means to open and close said switch at a fixed frequency to provide a positive current in said output circuit having a minimum value when said circuit impedance element to be tested has an impedance on one side of said impedance range and a negative current having a minimum value when the impedance of said circuit impedance element is on the other side of said impedance range, said output circuit including a limiter circuit having an operating range between said minimum values of said positive and negative currents for producing an alternating current output.

2,946,951
TESTING DEVICES
Carl N. Boode, Riverside, Calif., assignor to Bourns, Inc., a corporation of California
Filed May 27, 1957, Ser. No. 661,719
1 Claim. (Cl. 324—62)



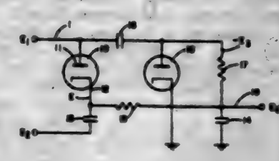
A testing device for checking a test resistor to determine whether the resistance thereof falls within predetermined upper and lower limits, said device comprising a voltage supply transformer having primary windings connected to a source of alternating current, and a secondary winding having a grounded center tap, said center tap and one end of said secondary winding providing a first output component, and said center tap and the other end of said secondary winding providing a second output component, said first and second output components having a phase difference of 180°, a first voltage divider connected across said center tap and said one end of said secondary, said first voltage divider comprising said test resistor and a first resistor of known value connected together in series, the junction between said test resistor and said first resistor being connected to the grid of each of a first and second triode vacuum tube, an upper limit voltage divider and a lower limit voltage divider connected in parallel between said center tap and said other end of said secondary, said upper limit voltage divider and said lower limit voltage divider each comprising a pair of resistors of known value connected together in series, the junction of said resistors in said upper limit voltage divider being connected to the grid of a third triode vacuum tube, and the junction of said resistors in said lower limit voltage divider being connected to the grid of a fourth triode vacuum tube, said triode vacuum tubes each having an anode connected to a source of D.C. bias voltage and a cathode, the cathodes of said first and third vacuum tubes being connected to ground through cathode resistors, said cathodes of said first and third vacuum tubes being also connected to the ends of a center tapped comparator resistor, the center tap of said comparator resistor being connected to a voltage amplifier and thence to a phase detector, said phase detector being operable to actuate a high-limit indicator, the cathodes of said second and fourth vacuum tubes being connected to ground through other cathode resistors, said cathodes of said second and fourth vacuum tubes being also connected to the ends of a second center tapped comparator resistor, the center tap of said second comparator resistor being connected to a second voltage amplifier and thence to a second phase detector, said second phase detector being operable to actuate a low-limit indicator, said phase detectors being connected to a reference voltage that is in phase with the voltage of their respective secondary output components.

2,946,952
ELECTRON TUBE APPARATUS FOR DETECTION OF ATOMIC HYDROGEN
Glenn A. Marsh and Edward Schaschl, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Sept. 30, 1957, Ser. No. 687,969
7 Claims. (Cl. 324—71)



1. An electron discharge tube consisting of a pair of cold electrodes and electrical connectors therefor, supported on an insulated base and enclosed by a shell evacuated to a high vacuum, in which said shell comprises a hollow, closed-end tube of a material highly permeable to hydrogen and having a thin external coating of a corrodible metal, less noble than hydrogen, thereon.

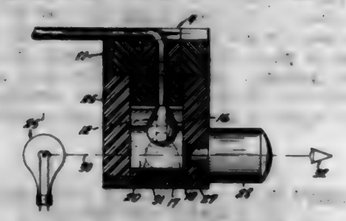
2,946,953
PHASE DETECTORS
Archie F. Boccia, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Jan. 23, 1957, Ser. No. 635,980
5 Claims. (Cl. 324—87)



1. In a system for comparing the phase of an alternating wave with a repetitive pulse signal of the same period,

two parallel circuits of substantially equal impedances joined at the input terminal and at the output terminal of the system; a source of said repetitive pulse signals connected to said input terminal, means in one circuit only for reversing the polarity of the pulse, means exclusively in the other path responsive to said alternating wave for modifying the amplitude of pulse voltage, and means coupled to said output terminal for indicating the amplitude and polarity of the resultant voltage at said output terminal.

2,946,954
INDICATOR
Clyde J. Fitch, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 28, 1957, Ser. No. 636,616
2 Claims. (Cl. 324—97)



1. A voltage indicating electrolytic cell comprising an enclosing casing of non-conducting material enclosing a cell chamber filled with liquid capable of conducting an electric current, a first electrode formed of conducting material extending through said non-conducting casing and having its inner end in contact with said liquid, said inner end having a drop of mercury suspended therefrom and held thereon by surface tension, a second electrode also extending through said non-conducting casing and into contact with said liquid but mounted out of contact with said first electrode, said chamber having a floor portion adapted to hold said drop adjacent to said inner end of said first electrode, the distance between the bottom of the first electrode and said floor being less than the vertical diameter of the drop so that the first electrode will touch and pick up the drop when the drop is resting on said floor, a light source on one side of said cell adapted to pass light through the cell in a predetermined path so disposed that movement of said drop will change the amount of light from said source passing through said cell in said path, and means for applying a potential across the electrodes thereby to cause the drop to change its position with respect to the first electrode caused by changing the surface tension of said drop and thereby to change the amount of light from said source passing through said cell and said path, the drop being adapted to resume its original position on said first electrode when said applied potential is removed.

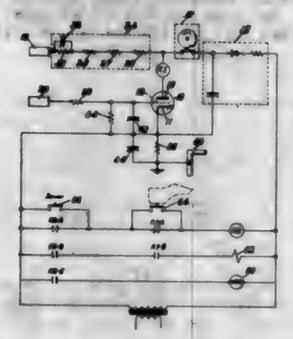
2,946,955
MEASURING APPARATUS COMPRISING A MAGNETIC FIELD-RESPONSIVE RESISTOR AS A CONDITION-RESPONSIVE ELEMENT
Friedrich Kuhrt, Nurnberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a German corporation
Filed Aug. 25, 1954, Ser. No. 452,023
Claims priority, application Germany Aug. 31, 1953
17 Claims. (Cl. 324—101)

1. Apparatus for measuring electrical current, comprising a conductor traversed by the current to be measured, an electric circuit member consisting of a semiconductor compound having a minimum carrier mobility of about 6000 cm^2/volt second, said member being insulated from said conductor and disposed in close parallel relation thereto and at a fixed distance therefrom, a current source connected with said member to pass another current through said member independently of current



to be measured, and electric measuring means connected to said member and responsive to an electrical property of said member dependent upon the field of said conductor.

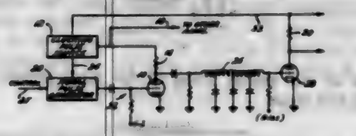
2,946,956
BODY CONDUCTIVITY OPERATED CONTROLS FOR ELECTRIC DEVICES
Robert W. Bradley, Marblehead, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed Aug. 28, 1958, Ser. No. 757,795
1 Claim. (Cl. 328—1)



A control operable by body conductivity comprising, in combination, a source of D.C. voltage, a cold-cathode glow-discharge thyratron having an anode, a cathode and a control grid adapted normally to hold the tube nonconductive at zero bias, resistance means connected between said grid and said cathode, means for connecting said thyratron by its anode and cathode in series with an electrically operated device to be controlled across said source, a pair of touch electrodes adapted to be simultaneously engaged by an operator, means including series resistance means having a portion of its resistance shunted by a capacitor connecting one electrode to the positive side of said source, and means connecting the other electrode to said control grid.

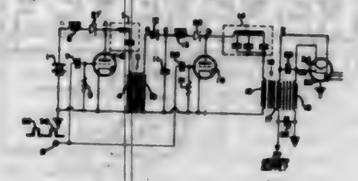
2,946,957
SIGNAL AMPLIFIER SYSTEM
Ralph H. Beter, Philadelphia, and Morris Rubinoff, Sharon Hill, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 18, 1955, Ser. No. 493,366
6 Claims. (Cl. 328—53)

4. A system for processing pulses comprising first and second normally inactive signal processing stages, means for rendering said first signal processing stage active during time intervals of limited duration, said active intervals recurring periodically at a given repetition rate, means for rendering said second signal processing stage active during time intervals of limited duration, said last-mentioned time intervals recurring at the same repetition rate as said first-mentioned time intervals, delay means coupling the output of said first signal processing stage to the input of said second signal processing stage, said delay means having a delay time substantially equal to the time spacing between a selected active time interval of



said first stage and a non-coincident active time interval of said second stage, means for supplying a signal to be processed to the input of said first signal processing stage and means for deriving an output signal from the output of said second signal processing stage.

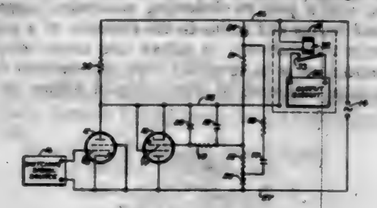
2,946,958
MODULATORS
Walter J. Bonin, Concord, and John E. Olbrych, Salem, Mass., assignors to Raytheon Company, a corporation of Delaware
Filed Sept. 2, 1958, Ser. No. 758,253
6 Claims. (Cl. 328—65)



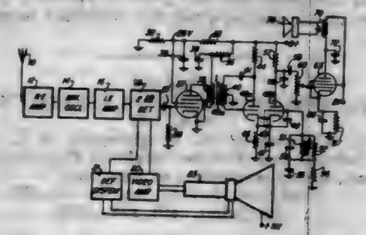
1. A modulator for pulsing a magnetron comprising a pulse forming first network connected in series with the primary winding of a pulse transformer, a first choke inductor, means for resonantly charging said first network through said first choke, a normally open first electronic switch connected to said first network, means for causing said first switch to close in response to a triggering signal whereby said first network discharges through said primary winding, a storage capacitor connected across the secondary winding of said pulse transformer, a pulse forming second network connected in series through a normally open second electronic switch to the primary winding of an output transformer, a second choke inductor interconnecting said storage capacitor and said second network, means for causing said second switch to close in response to said triggering signal to cause said second network to discharge through the primary winding of said output transformer, and means for deriving an output pulse from the secondary winding of said output transformer.

2,946,959
ALTERNATING CURRENT SWITCHING CIRCUITS
Robert C. Mierendorf and Clarence W. Porter, Wauwatosa, Wis., assignors to Square D Company, Detroit, Mich., a corporation of Michigan
Filed Mar. 18, 1957, Ser. No. 646,768
6 Claims. (Cl. 328—39)

1. In an alternating current switching circuit, the combination comprising; a pair of gaseous discharge devices consisting of a lead device and a trail device connected in inverse parallel in series circuit with a load and an alternating current source, each of said devices having a control means for controlling the conduction of said devices, means connected to the control means for controlling the conduction of the lead device and means including a capacitor connected to the control means of the trail device and the series circuit to have a charge of one polarity impressed thereon for continuously biasing the trail device against conduction whenever the lead device is non conductive and having a charge of reversed polarity impressed thereon for continuously biasing the trail device to conduction over the entire half cycle following the preceding half cycle conduction of the lead device.



2,946,960
ELECTRONIC CIRCUIT
Kurt Schlesinger, La Grange, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed May 16, 1956, Ser. No. 585,340
8 Claims. (Cl. 328—133)

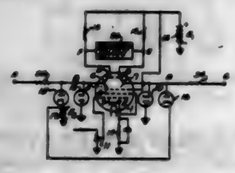


1. A detector for angular modulation signals including in combination, oscillator circuit means including first electron valve means adapted to generate a signal phase locked to said angular modulation signals, second electron valve means adapted to conduct on portions of signals applied thereto, said first and second electron valve means having common emission electrode means and respective first and second electrodes, an input circuit coupled to said first electrode and said emission electrode means and including impedance means coupled from said emission electrode means to a reference point and having an impedance at the frequency of the signals to provide angular modulation signals at said emission electrode means, said second electrode and said emission electrode means having a given capacitance therebetween, a tuned circuit coupled between said second electrode and the reference point and energized by signals applied at least in part through said given capacitance to provide an injection signal at said second electrode so that said second electron valve means is conductive according to phase shifts in said injection voltage caused by modulation of said angular modulation signals, and output circuit means coupled to said second electron valve means for deriving an output from said detector.

2,946,961
PULSE COMPARATOR
Arden L. Lind, New Brighton, Minn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed May 28, 1957, Ser. No. 660,432
6 Claims. (Cl. 328—146)

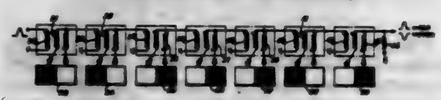
1. Apparatus for comparing the electrical pulses of one pulse train with the electrical pulses of another syn-

chronized pulse train of the same repetition rate, comprising: an electron tube having a pair of anodes, means including a cathode for producing a constant current beam of electrons normally impinging equally on the two anodes, and a pair of deflecting electrodes cooperating with said beams and acting in the presence of a potential difference therebetween to deflect said beam relative to said anodes so as to inversely vary the electron flow to said anodes; a source of direct current having its nega-



tive terminal connected to said cathode and its positive terminal connected to each of said anodes through separate anode impedances; means for applying one of said pulse trains between one of said deflecting electrodes and a point of reference potential; means for applying the other of said pulse trains between the other of said deflecting electrodes and said point of reference potential; and means for sensing a potential difference between said anodes.

2,946,962
TRANSFORMER REDUNDANCY CHECKING CIRCUIT
Carl L. Christensen, Jr., Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 13, 1957, Ser. No. 696,132
19 Claims. (Cl. 328—195)



1. A circuit for determining the on or off status of a bistable device, said device having a first side thereof conducting and a second side thereof non-conducting comprising; a first circuit means and a second circuit means, input means for feeding an input signal to both of said circuit means, means to connect said first circuit means and said second circuit means to opposite sides of said bistable device, whereby only one of said circuit means is operatively connected to said input means, one of said circuit means being adapted to produce an output signal therefrom out-of-phase with said input signal and the other of said circuit means being adapted to produce an output signal therefrom in-phase with said input signal and means to determine the phase of an output signal from said operatively connected circuit means with relation to said input signal as an indication of the status of said bistable device.

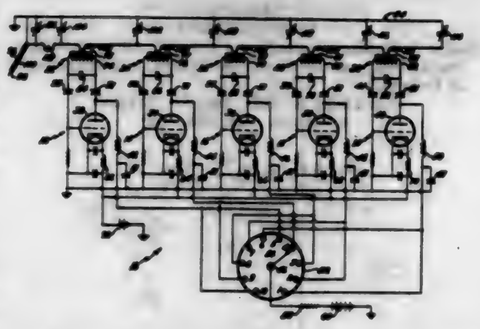
2,946,963
FREQUENCY MULTIPLIER
Willis L. Lee, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Apr. 5, 1957, Ser. No. 650,979
4 Claims. (Cl. 331—36)

2. A frequency multiplier circuit for producing odd multiples of the input frequency comprising a resonant tank adapted to oscillate at a predetermined odd multiple, a pulse generating circuit for energizing said tank circuit with pulses twice per input cycle, said pulses occurring at the peaks of cycles of said input frequency, the first pulse being of the same polarity as the first half cycle, the



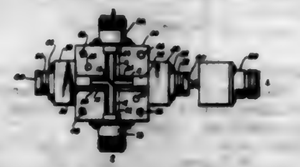
second of said pulses being of the same polarity as the second half cycle.

2,946,964
SELECTIVE FREQUENCY SYSTEM
Earle H. Byerly, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 29, 1957, Ser. No. 649,569
9 Claims. (Cl. 331—49)



1. The combination with a plurality of electric signal generating means, said plurality being greater than two, of an electrically conductive means for carrying said signals to a load, means inductively coupled to each of said signal generating means for carrying said signals to said conductive means, capacitive means in said inductively coupled means for balancing impedance of said inductively coupled means a source of energy for said signal generating means, and switch means for disconnecting said energy source from all except a selected one of said signal generating means.

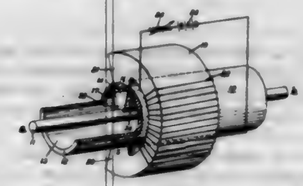
2,946,965
COAXIAL T HYBRID
Victor J. Albanese, Valley Stream, N.Y., assignor to Bogart Manufacturing Corporation, Brooklyn, N.Y., a corporation of New York
Filed Jan. 7, 1958, Ser. No. 707,515
20 Claims. (Cl. 333—11)



19. A coaxial hybrid of the series shunt type for frequencies in the microwave band, said hybrid comprising a first T made up of arms 1, 2 and 3, and a second T made up of arms 2, 3 and 4, with arm 4 disposed transversely of arm 1, so that the second T is in a plane transverse to that of the first T, arms 1, 2, 3 and 4 each having an inner conductor and an outer conductor, said conductors of arms 2, 3 and 4 being coaxial the adjacent

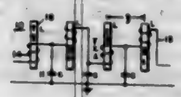
ends of the inner conductors of arms 2 and 3 being separated by a gap, the inner conductor of arm 1 being longitudinally bifurcated at its inner end to form a parallel plate transformer having approximately one-quarter wave length, the furcations of said inner conductor of arm 1 being disposed astride the gap, with one furcation connected to the inner conductor of arm 2 and the other furcation connected to the inner conductor of arm 3.

2,946,966
NONRECIPROCAL WAVE TRANSMISSION
William J. Crowe, Hanover Township, Morris County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 30, 1957, Ser. No. 705,981
3 Claims. (Cl. 333—24)



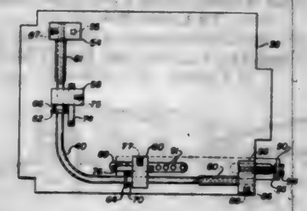
1. A coaxial transmission line for electromagnetic wave energy adapted to propagate said waves within a given frequency range of interest and having a longitudinal axis, means for exciting said line in a wave mode having magnetic field components extending solely circumferentially around the inner conductor of said coaxial line, means disposed within said line for producing an electric field intensity differential in at least one portion of said coaxial line for wave energy being transmitted in opposite directions of propagation therealong, said means consisting solely of a single element of magnetic material exhibiting the gyromagnetic effect at frequencies within said given range, said element being magnetically polarized in a direction transverse to said direction of propagation and occupying a part only of the transverse cross section of said line, means including a loss producing coating of material of electrical characteristic different from that of said magnetically polarized material located in said one portion for converting said field intensity differential into a nonreciprocal attenuation, and a homogeneous nonmagnetic dielectric material filling the remainder of said cross section.

2,946,967
DELAY LINES
Daniel S. Elders, Englewood, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 7, 1958, Ser. No. 707,653
6 Claims. (Cl. 333—29)
(Granted under Title 35, U.S. Code (1952), sec. 266)



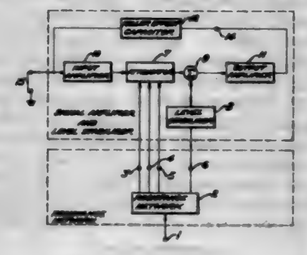
1. A recurrent, multisection, ladder-type delay line comprising two linear arrays of coils electrically connected in series with alternate coils of the series in the same array and adjacent coils in opposite arrays, the axes of each coil in one array of coils lying in a first plane and the axes of each coil in the other array lying in a second plane, said arrays of coils being offset from one another so that the coils are connected in zigzag fashion along the line, said coils being wound to provide positive mutual coupling between adjacent coils and negative mutual coupling between alternate coils, an input circuit for feeding a signal to one end of said line and an output circuit for passage of the signal from the other end of said line.

2,946,968
MECHANICAL DELAY LINE
Alfred H. Faulkner, Redondo Beach, Calif., assignor to Automatic Electric Laboratories, Inc., a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 717,983
6 Claims. (Cl. 333—30)



1. A pulse delay system, comprising an elongated tubular element of magnetostrictive material, input means including a coil coupled to the tubular element for generating a signal pulse in said element, output means including another coil coupled to the tubular element for picking up a delayed signal pulse, at least one end of said tubular element being terminated by being slit longitudinally to provide two portions, one portion having a part extending beyond the other portion, a support block having a cylindrical opening, a cylindrical rod and said extended part being inserted in said opening, with means rigidly clamping said extended part of one portion between the rod and the body of the support block and leaving the end of the other portion free so that from the point of division to the respective reflection points the said two portions are of the same length, said arrangement causing the respective echoes produced by reflections of signal pulses from the ends of said portions to coincide in opposite phase after passing beyond said slit.

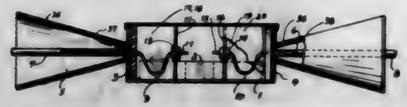
2,946,969
SYSTEM FOR VARYING CAPACITANCE
George Rosen, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 25, 1958, Ser. No. 757,168
5 Claims. (Cl. 333—80)



3. A system for varying the value of capacitance in accordance with a control signal comprising a pair of amplifying means, the first of said amplifying means having an input circuit characterized by a regulable degree of capacitance effective thereacross, a fixed capacitor connected between the output terminal of the second of said amplifying means and the input terminal of said first of said amplifying means, attenuating means following said first amplifying means and preceding said second am-

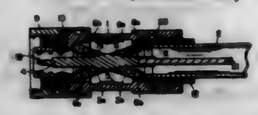
plifying means interconnecting said pair of amplifying means, said attenuating means operating as a resistance ladder to vary the output voltage of said first amplifying means in accordance with the magnitude of said control voltage and thereby regulate the value of said input circuit capacitance, and stabilizing means to inject a signal of the proper polarity and magnitude at the output terminal of said attenuating means to control the variations in the direct current output level of said attenuating means also in accordance with said control signal.

2,946,970
REPEATER AMPLIFIERS FOR SURFACE WAVE TRANSMISSION
Theodore Hafner, 265 Riverside Drive, New York, N.Y.
Filed Apr. 11, 1956, Ser. No. 577,571
11 Claims. (Cl. 333—95)



1. In a surface wave transmission system, a housing having a pair of opposite side walls and electromagnetic horns fixedly attached thereto at their small ends and extending in opposite directions, and a pair of surface wave conductors extending through said horns also in opposite directions, and each of said surface wave conductors being adjustably attached through a coiled loop to at least part of said housing in the space formed between said side walls and substantially insulated therefrom, means being provided for tensioning each of said surface wave conductors by changing the length of each of said coiled loops.

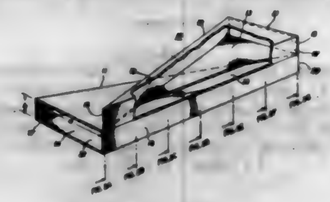
2,946,971
HIGH TEMPERATURE PRESSURIZED COAXIAL RADIO FREQUENCY CONNECTOR
Claude H. Child and Stanley A. Fryga, Paramount, Calif., assignors to North American Aviation, Inc.
Filed Dec. 21, 1956, Ser. No. 629,863
9 Claims. (Cl. 333—97)



1. In a coaxial electrical connector for use with gas dielectric coaxial lines, a center electrical conductor, an electrically conductive shell concentric with and surrounding said center conductor, a gas dielectric interposed between said center conductor and said shell, and a pair of hollow conical ceramic separator beads, said beads being identical as to dielectric constant, base angle, face angle formed with said center conductor, and face angle formed with said shell, said separator beads being concentric to said center conductor, the vertex ends of said beads facing each other and being bonded to adjacent sections of said center conductor, and the base ends of said beads being bonded to the inner wall of said concentric shell.

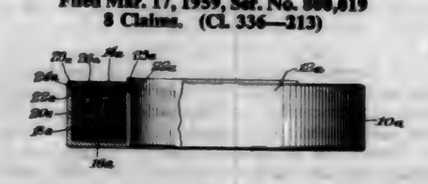
2,946,972
WAVE GUIDE PHASE INVERTER
Loyd E. Hunt, Oakhurst, and John C. Schelleng, Asbury Park, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,507
8 Claims. (Cl. 333—98)

1. In combination, first and second wave transmission paths each having one dimension inversely proportional to the cut-off frequency associated therewith, and means located in a coextensive portion of said paths for transferring electromagnetic wave energy therebetween, said dimension of said first path along the region of said coextensive portion in which said transferring means are located varying between a finite value at a first end of said region and a value less than cut-off at the other end



of said region, and said dimension of said second path along the region of said coextensive portion in which said transferring means are located varying between a value less than cut-off at said first end and said finite value at said other end whereby energy entering one end of said wave paths is constrained by the diminishing dimension thereof to pass via said transferring means into said other wave path with a resultant phase inversion.

2,946,973
MAGNETIC CORE BOX
Carroll W. Lafey, Silver Spring, Md., assignor to Dynacor Inc., Kensington, Md., a corporation of Maryland
Filed Mar. 17, 1959, Ser. No. 800,019
8 Claims. (Cl. 336—213)



1. An enclosed magnetic tape-wound core comprising a toroidal wound core of magnetic tape, a thin-walled hollow [illegible]al container made of an anodizable metal having an open side, said core being inserted within said container, an annular lid also made of an anodizable metal, said lid being substantially rigid in its planar direction and including recessed circumferential edges upon its outer surface, the inner and outer edges of said circumferential container being internally recessed to provide shoulders constructed and arranged to support said lid in a position to have its outer surface form a substantially smooth continuation of the outside wall of said container when said edges of said container are deformed to lie within and to interlock with said recessed edges of said lid, said lid being disposed against said shoulders and having its recessed edges interlocked within said deformed circumferential edges of said container to provide a joint of substantial length therebetween, a cushioning material disposed within said container separating said core from the adjacent surfaces of said container and lid, the dimensions of said container and lid and the thickness of said cushioning material disposed between said adjacent surfaces being constructed and arranged to provide a substantially uniform perpendicular dimension from the outer surfaces of said core to respective closest outer surfaces of said container and lid, the surface of said container and lid being anodized to provide insulation between said lid and said container, and a thin sheet of insulating material having a slick non-wetting surface being interposed between said lid and said container and interlocked within said joint between said deformed circumferential edges of said container and said recessed

edges of said lid to provide an effective liquid-tight seal and insulation between said lid and container when only enough force is applied to deform said circumferential edges sufficiently to provide a visually smooth joint.

2,946,974
RESISTANCE TEMPERATURE DETECTOR
Frederick R. Sias, Lynchburg, Va., assignor to General Electric Company, a corporation of New York
Filed Mar. 5, 1958, Ser. No. 719,350
10 Claims. (Cl. 336—28)



1. The method of manufacturing a resistance temperature detector assembly comprising: winding a flattened spiral of temperature sensitive resistance wire onto a flat flexible insulating support; applying electrical insulation to said resistance wire; inserting said wire and support into a hollow metallic protective tube; bending said tube and contents into a flattened arcuate shape to compress the contents of said tube between the flattened sides thereof, said bending being sufficient to exceed the elastic limit of a portion of the tube to retain the bent shape thereof but not exceeding the breaking stress of said tube; and sealing the ends of said tube to a suitable base with electrical connections from said resistance wire passing through said base.

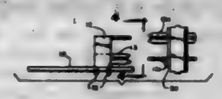
2,946,975
VARIABLE RESISTOR
Richard E. Caddock, Ames, Iowa, assignor to Bourns, Inc., a corporation of California
Filed Jan. 23, 1959, Ser. No. 788,539
4 Claims. (Cl. 338—183)



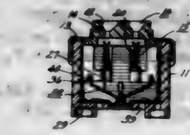
1. In a variable resistor having a housing, a leadscrew rotatably mounted on said housing, and a resistance element extending parallel to said leadscrew, the improvement comprising a follower having an open-sided channel in one side thereof to receive said leadscrew, a generally rectangular-shaped wire spring having end portions that extend over and yieldingly engage the thread of said leadscrew adjacent the ends of said follower, said wire spring having side portions extending substantially parallel to said leadscrew and secured at their midpoints to the sides of said follower, means preventing said follower from turning with said leadscrew, and a contact attached to the other side of said follower and wiping on said resistance element.

2,946,976
PRINTED CIRCUIT BOARD WITH BIFURCATED TERMINALS
Albert Blain, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 22, 1955, Ser. No. 529,786
7 Claims. (Cl. 339—17)

6. A terminal for printed circuits comprising a base having printed circuits thereon, first and second conductive elements attached to a common side of said base in contact with said printed circuits respectively, said first conductive element extending further from said base than said second conductive element and having a first planar contact portion extending in a plane substantially parallel to said base, said second conductive element having a second contact portion disposed between said base and said first contact portion extending in a plane substantially perpendicular to said base, each of said first and second contact portions being bifurcated in configuration.



2,946,977
INTERCHANGEABLE WIRING DEVICE WITH PRESSURE LOCK TERMINALS
Luther M. Sheldon, Oak Lawn, R.I., assignor to General Electric Company, a corporation of New York
Filed Apr. 28, 1958, Ser. No. 731,545
3 Claims. (Cl. 339—95)

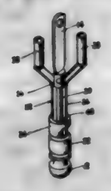


1. A convenience outlet comprising a hollow housing, a pair of contact members in the upper portion of the housing, each contact having a spring portion and a terminal end, the spring portion being of generally U-shape with one leg of the U supported at one end on a ledge on a side wall of the housing, while the base of the U is supported on another ledge on the opposite side wall, at least one upright blade extending from a leg of the U for making electrical engagement with a prong of an attachment plug, and a pair of prong-receiving openings in the top of the housing centered over the said blades, the second leg of the U having an extension that is directed toward an end wall of the housing with the terminal end positioned against the end wall and supported by the bottom wall, and spring locking tongues seated on the bottom wall of the housing, each tongue member having a wire-gripping portion and an end that is doubled back at a re-entrant angle and terminates as a movable offset arm with an upright anchoring portion, the said extension of the U-shaped spring portion having an oversized slot on its lower edge to serve as a fulcrum for the anchoring portion of a locking tongue, and at least one wire-receiving opening through the bottom wall of the housing associated with the terminal end of each contact, one side edge of each opening being substantially in alignment with the terminal end of the related contact, so that a wire may be brought into the housing through said opening and electrically connected to the contact terminal by the wedging action of a spring locking tongue.

2,946,978
TELEPHONE PLUG
Owen L. Cook, Wakefield, Mass., assignor to The Waltham Horological Corp., Lynn, Mass., a corporation of Massachusetts
Filed May 3, 1956, Ser. No. 582,498
8 Claims. (Cl. 339—103)

3. In a plug, a stem, a ball contact formed from a single piece of conducting material with the stem and

disposed at one end of the stem, a first unperforated annular contact surrounding the stem adjacent the ball contact, a second unperforated annular contact surrounding the stem and disposed adjacent the first annular contact, an additional stem formed from a single piece of conducting material with the first annular contact and extend-



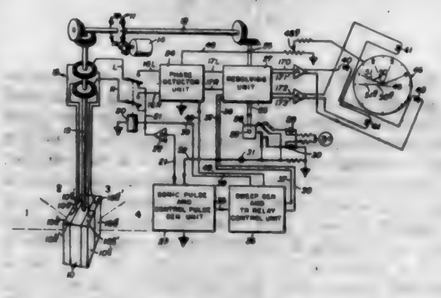
ing through the center of the second annular contact toward the other end of the first-named stem, a terminal post formed as one piece with the additional stem and the first annular contact and disposed adjacent the other end of the first-named stem, and means electrically insulating the contacts and their respective stems and terminal post from one another.

2,946,979
BINDING POST UNIT
Howard N. Saxton, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 28, 1957, Ser. No. 649,090
1 Claim. (Cl. 339—253)



The combination comprising: a tubular housing having a transversely positioned wire receiving slot through the wall thereof; a cap positioned on the end of said housing, said cap having an eccentrically positioned hole therethrough; means for forcing a wire to the end of said slot, said means comprising a unitary disk-and-plunger assembly positioned in said housing, said disk having a periphery slightly smaller than the inner periphery of said housing and being coaxial therewith—whereby it may slide freely therein; and resilient means positioned in said housing for urging said disk toward said cap and forcing the wire to the end of said slot; and means for preventing rotation of said disk-and-plunger assembly, said means comprising said plunger projecting through said eccentric hole in said cap and being eccentrically positioned with respect to said disk-and-housing and being positioned so that one surface thereof is in slidable contact with the inner surface of said housing—whereby movement of said disk-and-plunger assembly against the force of said resilient means away from said slot permits the wire to be inserted into said slot, and movement of said disk-and-plunger assembly due to said resilient means holds the wire at the end of said slot.

2,946,980
SOUND RANGING SYSTEM
Robert M. Bridges, North Hollywood, Erland W. Rudy, Reseda, and James A. Rummell, Glendale, Calif., assignors to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware
Filed May 2, 1955, Ser. No. 505,142
10 Claims. (Cl. 340—6)

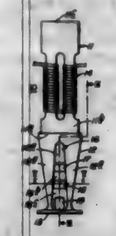


1. Apparatus for determining the direction of a source of wave energy comprising: a directional transducer responsive to wave energy impinging thereon for producing an electrical output potential; means for successively rotating said transducer in steps between a plurality of predetermined discrete directional positions and dwelling it in each position, for selective reception of wave energy approaching from a plurality of discrete directions; a cathode ray oscilloscope having a beam-deflection means energizable in a plurality of different discrete modes for deflecting the beam in any one of a plurality of discrete directions corresponding to said discrete directional positions of said transducer; a source of potential; resolving means including a switch mechanism having a plurality of discrete positions corresponding to said discrete directions for selectively deriving deflecting potentials from said source and applying them to said beam-deflection means in said different modes; means for actuating said switch mechanism in phase with said transducer rotation; beam-control means responsive to said transducer output potential for varying the intensity of said beam in response to received wave energy; said transducer comprising a plurality of independent directive transducer elements pointed in different directions symmetrically angularly spaced about a common axis by a displacement angle inversely proportional to the number of elements, said angle of displacement being a multiple of the angle of each of said discrete steps of rotation of said transducer; switch means coupled to said transducer-rotating means for selectively connecting successive transducer elements to said beam-control means in response to successive rotations of said transducer through said displacement angle whereby successive transducer elements are successively effective to receive wave energy from the same discrete directions.

2,946,981
SONIC TRANSDUCERS FOR FLUID MEDIUMS
James P. O'Neill, Sunland, Calif., assignor to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware
Filed Jan. 3, 1956, Ser. No. 556,991
15 Claims. (Cl. 340—8)

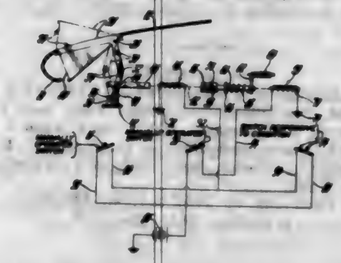
8. A transducer for high-frequency compressional waves in fluids comprising: a longitudinally expansible

and contractible electromechanically-responsive body having a front end face of substantial area; a diaphragm longitudinally spaced from said end face and having a front working face of substantial area; a motion-transforming member interposed between and interconnecting



said body and diaphragm and comprising a continuous peripheral wall joined to and extending between said front face and said diaphragm and defining a closed cavity back of said diaphragm, said cavity containing a gas of small coustic impedance relative to that of a liquid contacting said working face of the diaphragm.

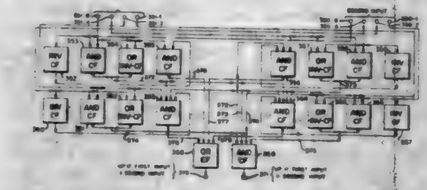
2,946,982
POP-UP SIGNAL DEVICES IN INSTRUMENT PANELS
Henry M. Convermano, El Paso, Tex., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 16, 1957, Ser. No. 702,875
3 Claims. (Cl. 340—52)



1. A signal device comprising an indicating instrument in combination with an instrument panel and pivotally mounted within the latter, a first side of said instrument being in substantial conformity with the contour of said panel, a second side of said instrument being concealed by said panel and presenting indicating means representing the instrument reading, and actuating means connected to said instrument and influenced by an external condition whereby said indicating instrument may be pivoted to reveal said second side to an observer.

2,946,983
COMPARISON CIRCUITS
Charles R. Borders, Alpine, N.J., and James W. Toner, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 14, 1955, Ser. No. 546,402
1 Claim. (Cl. 340—149)

A decimal digit comparator circuit for simultaneously accepting a first electrical manifestation representative of a first decimal digit input expressed in binary-coded decimal notation, and a second electrical manifestation representative of a second decimal digit input expressed in binary-coded decimal notation and rendering one of three discrete electrical manifestations which respectively indicate whether said first decimal digit input is equal in magnitude to said second decimal digit input, said first decimal digit input is greater in magnitude than said second decimal digit input, or said second decimal digit input is greater in magnitude than said first decimal digit input, said decimal digit comparator circuit consisting in combination of: a first group of input terminals consisting of a 1-bit input terminal, 2-bit input terminal, a 4-bit input terminal, and an 8-bit input terminal; a second group of input terminals consisting of a 1-bit input terminal, a 2-bit input terminal, a 4-bit input terminal, and an 8-bit input terminal; a first output terminal; a second output terminal; a first AND circuit having first and second inputs and an output; a second AND circuit having first and second inputs and an output; a third AND circuit having first, second and third inputs and an output; a fourth AND circuit having first and second inputs, and an output; a fifth AND circuit having first and second inputs and an output; a sixth AND circuit having first, second, third and fourth inputs and an output; a seventh AND circuit having first, second, third, fourth and fifth inputs and an output; an eighth AND circuit having first and second inputs and an output; a ninth AND circuit having first, second, third and fourth inputs and an output directly connected to said first output terminal of said decimal digit comparator; a first Inverter circuit having an input and an output; a second Inverter circuit having an input and an output; a third Inverter circuit having an input and an output; a fourth



Inverter circuit having an input and an output; a first OR-Inverter circuit having first and second inputs and an output; a second OR-Inverter circuit having first and second inputs and an output; a third OR-Inverter circuit having first and second inputs and an output; a fourth OR-Inverter circuit having first and second inputs and an output; a first OR circuit having first, second, third and fourth inputs and an output directly connected to said second output terminal of decimal digit comparator; a direct connection between said 1-bit input terminal of said first group of input terminals, said first input of said eighth AND circuit, said first input of said fourth OR-Inverter circuit and said fifth input of said seventh AND circuit; a direct connection between said 1-bit input terminal of said second group of input terminals, said input of said fourth Inverter circuit, said second input of said eighth AND circuit, and said second input of said fourth OR-Inverter circuit; a direct connection between said 2-bit input terminal of said first group of input terminals, said second input of said fifth AND circuit, said second input of said third OR-Inverter circuit, and said first input of said sixth AND circuit; a direct connection between said 2-bit input terminal of said second group of input terminals, said input of said third Inverter circuit, said first input of said fifth AND circuit, and said first input of said third OR-Inverter circuit; a direct connection between said 4-bit input terminal of said first group of input terminals, said third input of

said third AND circuit, said first input of said second OR-Inverter circuit, and said first input of said fourth AND circuit; a direct connection between said 4-bit input terminal of said second group of input terminals, said second input of said second OR-Inverter circuit, said second input of said fourth AND circuit, and said input of said second Inverter circuit; a direct connection between said 8-bit input terminal of said first group of input terminals, said second input of said first AND circuit, said second input of said first OR-Inverter circuit, and said first input of said second AND circuit; a direct connection between said 8-bit input terminal of said second group of input terminals, said first input of said first OR-Inverter circuit, said first input of said first AND circuit, and said input of said first Inverter circuit; a direct connection between said output of said first Inverter circuit and said second input of said second AND circuit; a direct connection between said output of said second Inverter circuit and said first input of said third AND circuit; a direct connection between said output of said first AND circuit, said output of said first OR-Inverter circuit, said second input of said sixth AND circuit; said second input of said third AND circuit, said third input of said seventh AND circuit, and said first input of said ninth AND circuit; a direct connection between said output of said second AND circuit and said second input of said first OR circuit, a direct connection between said output of said third AND circuit and said third input of said first OR circuit; a direct connection between said output of said second OR-Inverter circuit, said output of said fourth AND circuit, said fourth input of said seventh AND circuit, said second input of said ninth AND circuit, and said third input of said sixth AND circuit; a direct connection between said output of said third Inverter circuit and said fourth input of said sixth AND circuit; a direct connection between said output of said fourth Inverter circuit and said first input of said seventh AND circuit; a direct connection between said output of said fifth AND circuit, said output of said third OR-Inverter circuit, said third input of said ninth AND circuit, and said second input of said seventh AND circuit; a direct connection between said output of said eighth AND circuit, said output of said fourth OR-Inverter circuit, and said fourth input of said ninth AND circuit; a direct connection between the output of said sixth AND circuit and said first input of said first OR circuit; a direct connection between said output of said seventh AND circuit and said fourth input of said first OR circuit; whereby a first discrete electrical manifestation will appear at said first and second output terminals when said first decimal digit input is greater in magnitude than said second decimal digit input, a second discrete electrical manifestation will appear at said first and second output terminals when said second decimal digit is greater in magnitude than said first decimal digit, and a third discrete electrical manifestation will appear at said first and second output terminals when said first and second decimal digits are equal in magnitude.

2,946,984

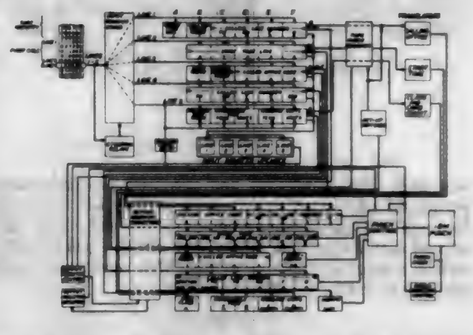
TAPE-TO-CARD CONVERTER CIRCUIT

Rolland N. Breed, West Caldwell, N.J., Willard B. Groth, Tuckahoe, N.Y., Gordon C. Irwin, Fair Haven, and Lindley A. Kile, Morristown, N.J., and George Rigge, Port Washington, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Original application Jan. 29, 1952, Ser. No. 268,742, now Patent No. 2,780,416, dated Feb. 5, 1957. Divided and this application May 31, 1956, Ser. No. 588,338

4 Claims. (Cl. 340—168)

2. In a switching system, a counting circuit for counting pulses, said circuit comprising means for impressing an electrical condition in sequence on each of a plurality of conductors, said means comprising a relay individual to each of said conductors, each said relay having a total of one winding and one armature thereon, said armature lockable in either of two opposed positions responsive to its actuation thereto, a capacitor and a resistor circuit individual to each of said relays, each said capacitor connected directly in series with said winding on its



respective relay, each of said armatures actuable successively to a first of said positions responsive to an individual current surge produced in its respective capacitor and resistor circuit in response to an individual pulse, and all of said armatures actuable simultaneously to the second of said positions responsive to a current surge impressed on all of said resistor-capacitor circuits simultaneously in response to a single pulse from a common source.

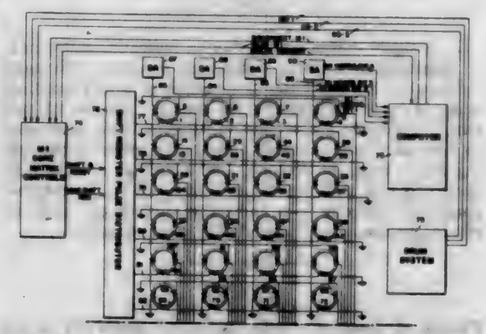
2,946,985

MAGNETIC CORE BUFFER STORAGE

Wilmer M. McMillan, Wappingers Falls, and Richard W. Lowrie, Poughkeepsie, N.Y., and Edward J. Rasor, Concord, Mass., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Aug. 12, 1955, Ser. No. 527,911

6 Claims. (Cl. 340—174)



1. A magnetic core storage system comprising; a plurality of magnetic core registers wherein each core has substantially a rectangular hysteresis loop characteristic, each order of each of said registers being independently biassed so as to store information by either of its magnetic saturation states, and such states are independent of each other an individual magnetic core for each of said magnetic core registers, each of said individual magnetic cores being capable of storing information by its remanence magnetic state; and means to simultaneously deliver the information signals stored in said individual magnetic cores and said plurality of magnetic core registers to a common utilization device, whereby such simultaneous delivery results in a destructive read-out of an individual core in its remanent state, but a non-destructive read-out of the biassed cores.

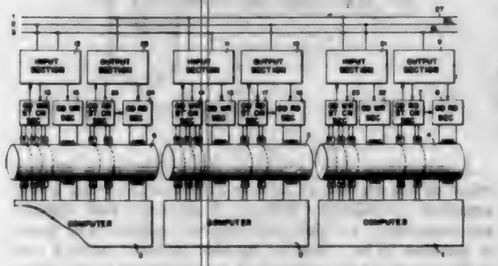
2,946,986

COMMUNICATIONS SYSTEM

Donald A. Harrison, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Apr. 17, 1956, Ser. No. 578,689

11 Claims. (Cl. 340—174)



1. A digital data communications system comprising a transmission channel means for applying digital signals to said transmission channel, a plurality of signal receivers connected to said transmission channel, certain of said digital signals representing a code identifying which of said signal receivers should accept the digital signals, each of said signal receivers including means responsive to said digital signals representing a code for causing the digital signals to be rejected by said receiver if the digital signals representing a code indicate that said receiver should not accept the digital signals.

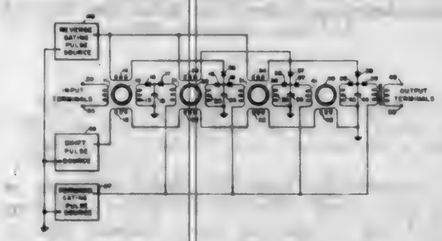
2,946,987

REVERSIBLE MAGNETIC SHIFT REGISTER

Stephen E. Townsend, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Filed June 16, 1953, Ser. No. 742,128

3 Claims. (Cl. 340—174)



1. A reversible shift register comprising a plurality of magnetic members each capable of being magnetically saturated in either one of two stable conditions of saturation in response to applied energizing current pulses of a first polarity sense or of another polarity sense, forward and reverse unidirectional information transfer circuit means intecoupling adjacent ones of said members for applying signal energizing current pulses of a selected one polarity from any member to either adjacent member, means for applying a shift energizing current pulse to all of said members simultaneously in a polarity sense opposite that of said signal energizing current pulses, a non-magnetic storage element included in said information transfer circuit means for intercepting and storing said signal energizing current pulses, said transfer circuit means having forward and reverse gating means to be activated for preventing the application of said signal energizing current pulse from said storage element to either adjacent member until after the termination of said shift energizing current pulse, and means for deactivating a selected one only of said forward and reverse gating means after termination of said shift energizing current pulse to thereby transfer the signal energizing current pulse stored in the respective storage element to a selected one of said adjacent members to thus provide forward or reverse shift registration.

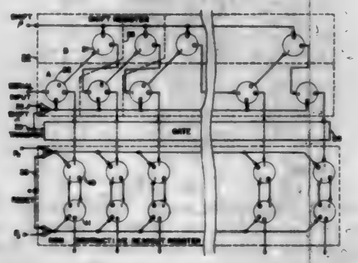
2,946,988

NON-DESTRUCTIVE MAGNETIC STORAGE

William Miehle, Havertown, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Continuation of application Ser. No. 407,120, Jan. 29, 1954. This application Jan. 30, 1959, Ser. No. 791,902

12 Claims. (Cl. 340—174)



3. A serial input-parallel output magnetic register system comprising in combination; a shift register having a plurality of storage banks each with two static magnetic elements for storing a binary bit; circuit means connecting said banks in said shift register in cascade to thereby establish a pair of storage sub-registers for each bank, each sub-register including one of the elements of each bank, the pair of sub-registers of each bank being connected for alternately holding the stored information; means for serially entering information into one bank of the shift register and progressively stepping each bit of information from one element to another; means for selectively transferring information out of at least one of said pair or storage sub-registers in parallel; and a non-destructive read-out register coupled to receive the transferred information including a pair of auxiliary static magnetic elements per storage bank, a plurality of circuit means each interconnecting the two auxiliary static magnetic elements of one of said pairs for circulating transferred binary information of only one polarity back and forth between the auxiliary storage elements of each of said pairs, means for reading information out of the non-destructive register during circulation, and means for selectively clearing said non-destructive read-out register in a time sequence before information is transferred into it from the sub-register.

2,946,989

TEMPERATURE INDICATOR AND FIRE ALARM SYSTEM

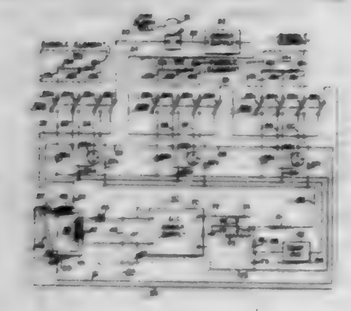
John A. Loeber, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Filed Oct. 18, 1954, Ser. No. 462,992

4 Claims. (Cl. 340—181)

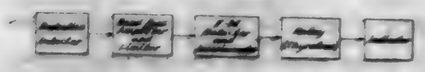
1. In a combined temperature indicating and fire alarm system, a plurality of remotely located temperature responsive units each including a temperature sensitive resistance indicative of temperature and a temperature

responsive switch element actuated when the temperature of said switch element exceeds a predetermined temperature, a selectively operable switching means for each of said temperature responsive units and having a first normal position and a second position, a central electrical energy responsive temperature indicating means, a central alarm means, a plurality of first conductors each connected to one terminal of a different one of said switch elements and to the associated switching means, a similar plurality of second conductors each connected to the opposite terminal of a different one of said switch elements and to the associated switching means, a control circuit for said alarm means including said plurality of switching means and effective when said switching means are all in their first normal position to connect said plurality of first and second conductors and the temperature responsive switching elements to said alarm means, said control circuit being operative to render said alarm ef-



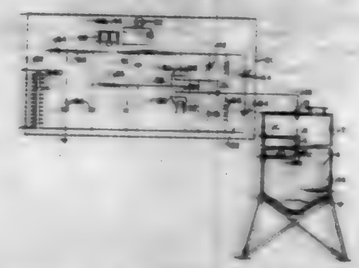
fective upon any of said temperature sensitive switch elements being actuated upon its temperature exceeding said predetermined value, a plurality of third conductors each connected to one terminal of a different one of said resistances and to the associated switching means, each of said second conductors being connected to the other terminal of a different one of said resistances, and circuit means controlled by said switching means operable upon any one of said switching means being moved to its second position to connect the second and third conductors connected to the associated resistance to said temperature indicating means to cause the latter to indicate the temperature at the area in which said resistance unit is located and to cause said third conductor of the associated temperature responsive switch element to be connected to said temperature indicating means in such a manner as to oppose the effect of the resistance of said first conductor.

2,946,990
APPARATUS FOR DETECTING FLAME
Clifford John Klein, Riverdale, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Sept. 14, 1954, Ser. No. 455,927
6 Claims. (Cl. 340—227)



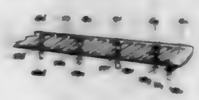
1. In a flame detecting apparatus, the combination of means having an output responsive to flame flicker frequencies, means for detecting variations in the frequency of the output, and means controlled by said last mentioned means for giving an indication that a variation in frequency is being detected.

2,946,991
MATERIAL LEVEL INDICATING APPARATUS
Waldemar Hochstrasser, Braunschweig-Timmerlah, Germany, assignor to Fuller Company, Catasauqua, Pa., a corporation of Delaware
Filed Nov. 14, 1955, Ser. No. 546,890
4 Claims. (Cl. 340—244)



1. Apparatus for indicating the height in a storage space of the surface of a body of material having a low electrical conductivity different from zero, said apparatus comprising an electrode disposed within said space in position to be contacted by said material upon a rise in the height of the surface of said material to the location of said electrode, an electron discharge tube including a cathode, an anode, and control and screen grids, a first oscillatory circuit coupled between said anode and a point of fixed potential, a second oscillatory circuit coupled between said control grid and a point of fixed potential, a condenser of adjustable capacity coupling said oscillatory circuits together to form therewith and with said tube an electron tube oscillator, means to couple in parallel with the second of said circuits the resistance between said electrode and a location in said storage space below said electrode, and a differential relay having one coil in series with the anode and one coil in series with the screen grid of said tube.

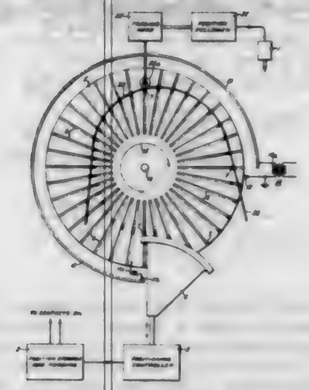
2,946,992
SHEET FEED DETECTING DEVICES
Daniel Brodin, Cookfoston, near Hawnt, England, assignor to International Computers and Tabulators Limited, London, England, a British company
Filed July 31, 1956, Ser. No. 601,190
Claims priority, application Great Britain Oct. 11, 1955
12 Claims. (Cl. 340—259)



1. Apparatus for detecting incorrect positioning of sheets moved along a feed path and spaced apart along the feed path at nominally regular intervals, said apparatus comprising detecting means including photo-electric means, means for directing a plurality of light beams on to the photo-electric means through paths intersecting said feed path, said light beams intersecting said feed path at a plurality of points spaced along its length by intervals each of which is an integral multiple of the correct spacing of successive sheets and each beam being interrupted when any part of a sheet coincides with the corresponding one of said spaced points, means for deriving an output signal from the photo-electric means indicative at any instant of the interruption of any of said light beams, error indicating means controlled by said output signal to initiate a control action in response to said output signal being indicative of the interruption of any one of said light beams, and

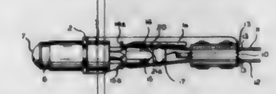
timing means synchronised with the motion of said sheets for rendering the error indicating means effective only during those periods when, if the spacing of the sheets is correct, spaces between the sheets traverse said spaced points on said feed path.

2,946,993
AUTOMATIC PROGRAMMING CONTROL SYSTEM
Orrin W. Livingston, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Sept. 21, 1956, Ser. No. 611,329
15 Claims. (Cl. 340—347)



1. In a programming control system, a carriage member movable along a predetermined path and having a plurality of equally spaced apart coordinates disposed at equal angles to said path, a plurality of positioning heads each mounted on said carriage for movement along a corresponding one of said coordinates, means for positioning and securing said heads on said carriage at points on their associated coordinates corresponding to the magnitude of successive discrete data points during the progress of said heads past a point on said path, and a flexible member mounted to be engaged and positioned by the succession of said heads within a predetermined zone to provide a continuous interpolation between the discrete data points represented by the positions of said heads on their corresponding coordinates.

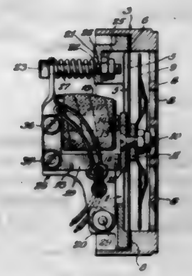
2,946,994
SIGNAL LAMP AND HOLDER THEREFOR
William E. Dumke and James R. Bailey, Chicago, Ill., assignors to Switchcraft, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 26, 1959, Ser. No. 795,662
3 Claims. (Cl. 340—381)



1. A signal lamp and holder assembly including an elongated supporting body having terminals at one end thereof, said body having a laterally offset portion at the other end thereof, said portion having an aperture therein, an insulating bushing positioned in said aperture with the axis thereof extending generally parallel to the axis of said body, a light element removably inserted in said bushing, said terminals having resilient arms extending toward said aperture and biased toward one another, the inner end of said light element having terminal portions in contact with said arms, and a spacing

element positioned between said arms, said element having an enlarged medial portion and reduced end portions, said end portions being received in apertures in said arms, whereby the medial portion limits movement of said arms toward one another while said end portions allow movement of said arms away from one another.

2,946,995
SOUND SIGNAL DEVICE
Earl W. Gosswiller, Chicago, Ill., assignor to Federal Sign and Signal Corporation, Chicago, Ill., a corporation of New York
Filed July 8, 1959, Ser. No. 825,766
6 Claims. (Cl. 340—388)

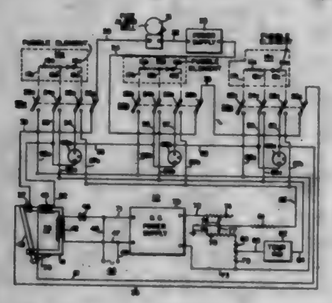


1. A sound signal device comprising, a frame, a resilient diaphragm carried on said frame for vibrating movement, said diaphragm including an armature, a bridge support carried by said frame and extending across said diaphragm in spaced relationship thereto, an electromagnetic assembly carried by said bridge support, said assembly comprising a ferromagnetic core carrying an actuating coil, said core comprising a pole face at one end which is supported by said bridge support adjacent said armature, said core comprising a plurality of ferromagnetic lamina, said bridge support being provided with an aperture, said lamina being provided with apertures, a bolt extending through the apertures in said lamina and through the aperture in said bridge support frictionally to hold the lamina in face-to-face relationship with each other and with the bridge support, the diameter of the aperture in said bridge support being sufficiently greater than the diameter of said bolt to permit relative face-to-face movement of some of said lamina with respect to said bridge support.

2,946,996
RADAR SYSTEMS
Harold Joseph Hughes Wassell, Danbury, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Original application Feb. 28, 1955, Ser. No. 491,135. Divided and this application Feb. 27, 1956, Ser. No. 568,062
Claims priority, application Great Britain Mar. 1, 1954
6 Claims. (Cl. 343—5)

1. A height displaying radar system comprising an aerial subject to scanning deflection in the zenithal plane, a first cathode ray tube, the cathode ray beam of the tube being subjected to linear deflection in dependence upon range, a mask marked with lines of constant height, the mask being subjected to scanning by the light spot of said first tube, said mask being maintained in fixed relationship with respect to the first cathode ray tube, means for subjecting the cathode ray beam of said first tube to a circular deflection in accordance with the angle of elevation of the aerial with respect to the horizontal and to the radial deflection coincident with a scanning deflection, a second cathode ray tube acting as a display tube, means

responsive switch element actuated when the temperature of said switch element exceeds a predetermined temperature, a selectively operable switching means for each of said temperature responsive units and having a first normal position and a second position, a central electrical energy responsive temperature indicating means, a central alarm means, a plurality of first conductors each connected to one terminal of a different one of said switch elements and to the associated switching means, a similar plurality of second conductors each connected to the opposite terminal of a different one of said switch elements and to the associated switching means, a control circuit for said alarm means including said plurality of switching means and effective when said switching means are all in their first normal position to connect said plurality of first and second conductors and the temperature responsive switching elements to said alarm means, said control circuit being operative to render said alarm ef-



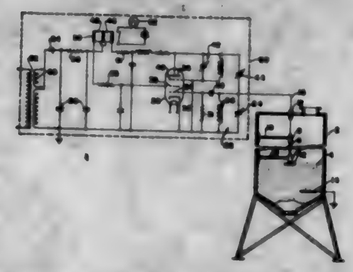
fective upon any of said temperature sensitive switch elements being actuated upon its temperature exceeding said predetermined value, a plurality of third conductors each connected to one terminal of a different one of said resistances and to the associated switching means, each of said second conductors being connected to the other terminal of a different one of said resistances, and circuit means controlled by said switching means operable upon any one of said switching means being moved to its second position to connect the second and third conductors connected to the associated resistance to said temperature indicating means to cause the latter to indicate the temperature at the area in which said resistance unit is located and to cause said third conductor of the associated temperature responsive switch element to be connected to said temperature indicating means in such a manner as to oppose the effect of the resistance of said first conductor.

2,946,990
APPARATUS FOR DETECTING FLAME
Clifford John Klein, Riverdale, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Sept. 14, 1954, Ser. No. 455,927
6 Claims. (Cl. 340—227)



1. In a flame detecting apparatus, the combination of means having an output responsive to flame flicker frequencies, means for detecting variations in the frequency of the output, and means controlled by said last mentioned means for giving an indication that a variation in frequency is being detected.

2,946,991
MATERIAL LEVEL INDICATING APPARATUS
Waldemar Lindenberg, Hamburg-Hausbruch, Germany, assignor to Fuller Company, Catasauqua, Pa., a corporation of Delaware
Filed Nov. 14, 1955, Ser. No. 546,690
4 Claims. (Cl. 340—244)



1. Apparatus for indicating the height in a storage space of the surface of a body of material having a low electrical conductivity different from zero, said apparatus comprising an electrode disposed within said space in position to be contacted by said material upon a rise in the height of the surface of said material to the location of said electrode, an electron discharge tube including a cathode, an anode, and control and screen grids, a first oscillatory circuit coupled between said anode and a point of fixed potential, a second oscillatory circuit coupled between said control grid and a point of fixed potential, a condenser of adjustable capacity coupling said oscillatory circuits together to form therewith and with said tube an electron tube oscillator, means to couple in parallel with the second of said circuits the resistance between said electrode and a location in said storage space below said electrode, and a differential relay having one coil in series with the anode and one coil in series with the screen grid of said tube.

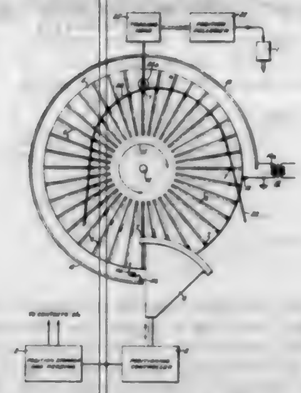
2,946,992
SHEET FEED DETECTING DEVICES
Daniel Broido, Cockfosters, near Barnet, England, assignor to International Computers and Tabulators Limited, London, England, a British company
Filed July 31, 1956, Ser. No. 601,190
Claims priority, application Great Britain Oct. 11, 1955
12 Claims. (Cl. 340—259)



1. Apparatus for detecting incorrect positioning of sheets moved along a feed path and spaced apart along the feed path at nominally regular intervals, said apparatus comprising detecting means including photo-electric means, means for directing a plurality of light beams on to the photo-electric means through paths intersecting said feed path, said light beams intersecting said feed path at a plurality of points spaced along its length by intervals each of which is an integral multiple of the correct spacing of successive sheets and each beam being interrupted when any part of a sheet coincides with the corresponding one of said spaced points, means for deriving an output signal from the photo-electric means indicative at any instant of the interruption of any of said light beams, error indicating means controlled by said output signal to initiate a control action in response to said output signal being indicative of the interruption of any one of said light beams, and

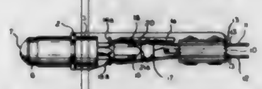
timing means synchronised with the motion of said sheets for rendering the error indicating means effective only during those periods when, if the spacing of the sheets is correct, spaces between the sheets traverse said spaced points on said feed path.

2,946,993
AUTOMATIC PROGRAMMING CONTROL SYSTEM
Orris W. Livingston, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Sept. 21, 1956, Ser. No. 611,329
15 Claims. (Cl. 340—347)



1. In a programming control system, a carriage member movable along a predetermined path and having a plurality of equally spaced apart coordinates disposed at equal angles to said path, a plurality of positioning heads each mounted on said carriage for movement along a corresponding one of said coordinates, means for positioning and securing said heads on said carriage at points on their associated coordinates corresponding to the magnitude of successive discrete data points during the progress of said heads past a point on said path, and a flexible member mounted to be engaged and positioned by the succession of said heads within a predetermined zone to provide a continuous interpolation between the discrete data points represented by the positions of said heads on their corresponding coordinates.

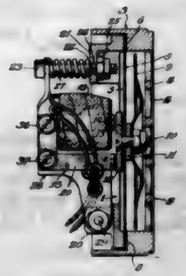
2,946,994
SIGNAL LAMP AND HOLDER THEREFOR
William E. Dumke and James R. Bailey, Chicago, Ill., assignors to Switchcraft, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 26, 1959, Ser. No. 795,662
3 Claims. (Cl. 340—381)



1. A signal lamp and holder assembly including an elongated supporting body having terminals at one end thereof, said body having a laterally offset portion at the other end thereof, said portion having an aperture therein, an insulating bushing positioned in said aperture with the axis thereof extending generally parallel to the axis of said body, a light element removably inserted in said bushing, said terminals having resilient arms extending toward said aperture and biased toward one another, the inner end of said light element having terminal portions in contact with said arms, and a spacing

element positioned between said arms, said element having an enlarged medial portion and reduced end portions, said end portions being received in apertures in said arms, whereby the medial portion limits movement of said arms toward one another while said end portions allow movement of said arms away from one another.

2,946,995
SOUND SIGNAL DEVICE
Earl W. Gosswiller, Chicago, Ill., assignor to Federal Sign and Signal Corporation, Chicago, Ill., a corporation of New York
Filed July 8, 1959, Ser. No. 825,766
6 Claims. (Cl. 340—388)

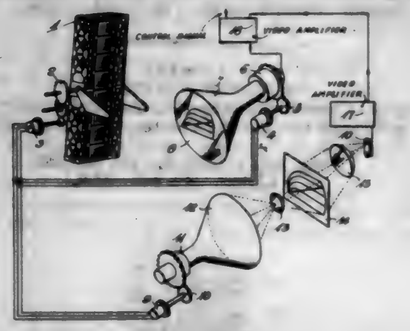


1. A sound signal device comprising, a frame, a resilient diaphragm carried on said frame for vibrating movement, said diaphragm including an armature, a bridge support carried by said frame and extending across said diaphragm in spaced relationship thereto, an electromagnetic assembly carried by said bridge support, said assembly comprising a ferromagnetic core carrying an actuating coil, said core comprising a pole face at one end which is supported by said bridge support adjacent said armature, said core comprising a plurality of ferromagnetic lamina, said bridge support being provided with an aperture, said lamina being provided with apertures, a bolt extending through the apertures in said lamina and through the aperture in said bridge support frictionally to hold the lamina in face-to-face relationship with each other and with the bridge support, the diameter of the aperture in said bridge support being sufficiently greater than the diameter of said bolt to permit relative face-to-face movement of some of said lamina with respect to said bridge support.

2,946,996
RADAR SYSTEMS
Harold Joseph Hughes Wassell, Danbury, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Original application Feb. 28, 1955, Ser. No. 491,135. Divided and this application Feb. 27, 1956, Ser. No. 568,062
Claims priority, application Great Britain Mar. 1, 1954
6 Claims. (Cl. 343—5)

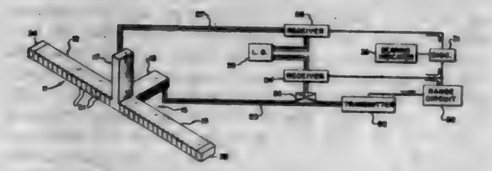
1. A height displaying radar system comprising an aerial subject to scanning deflection in the zenithal plane, a first cathode ray tube, the cathode ray beam of the tube being subjected to linear deflection in dependence upon range, a mask marked with lines of constant height, the mask being subjected to scanning by the light spot of said first tube, said mask being maintained in fixed relationship with respect to the first cathode ray tube, means for subjecting the cathode ray beam of said first tube to a circular deflection in accordance with the angle of elevation of the aerial with respect to the horizontal and to the radial deflection coincident with a scanning deflection, a second cathode ray tube acting as a display tube, means

for subjecting the cathode ray beam of the latter tube to simultaneous radial and circular deflection respectively in accordance with range and angle of elevation of the target echoes, and means for applying a control signal to



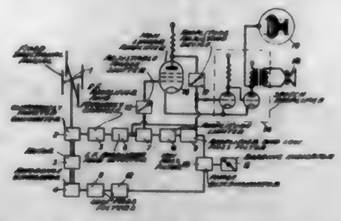
said second tube, said means for subjecting the cathode ray beam of the latter tube including means for producing a display of the mask on said latter tube, said means for applying a control signal including means for expanding or off-setting the display of said latter tube.

2,946,997
SLOTTED WAVEGUIDE LOBING IN RADAR SYSTEM
Robert E. Honer, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Dec. 27, 1956, Ser. No. 630,947
2 Claims. (Cl. 343—11)



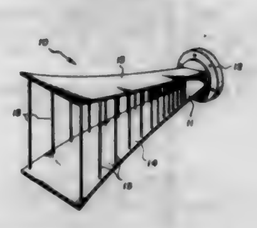
2. A directive antenna including first and second symmetrical radiating sections, each of said radiating sections comprising a rectangular waveguide having a plurality of lateral radiating slots distributed along a narrow side thereof and extending across said narrow side, the width of said slots being small with respect to the length thereof, first and second symmetrical matching terminations at the ends of said first and second symmetrical radiating sections, a magic-T waveguide junction having a first waveguide arm connected to said first radiating section, a second waveguide arm in line with said first waveguide arm connected to said second radiating section, a third waveguide arm at right angles to said first and second waveguide arms reciprocally connecting said first and second waveguide arms in phase through said waveguide junction to a first radio frequency transmission line, a fourth waveguide arm at right angles to said first, second and third waveguide arms reciprocally connecting said first and second waveguide arms out of phase through said waveguide junction to a second radio frequency transmission line, a radar transmitter connected to said first radio frequency transmission line, a series transmit-receive switch connected in said first radio frequency transmission line between said third waveguide arm and said transmitter, a first receiver connected to said transmit-receive switch, a second receiver connected to said second radio frequency transmission line, a local oscillator connected to said first and second receivers, a phase discriminator connected to said first and second receivers, and a range circuit connected to said first receiver and to said transmitter.

2,946,998
DIRECTION FINDER
Sidney Arthur Walter Jolliffe, Maldon, and David William Watson, Great Baddow, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a company of Great Britain
Filed Mar. 21, 1958, Ser. No. 722,941
Claims priority, application Great Britain Apr. 26, 1957
3 Claims. (Cl. 343—118)



1. A radio direction finder of continuously rotated directivity and including a channel for recovering intelligence signals modulating incoming waves whose direction is to be ascertained said direction finder including means for deriving a low frequency wave of the frequency of rotation of directivity, a non-linear amplifier connected to amplify said wave and having gain which is a function of and increases with increase of input amplitude, means to adjust the phase and amplitude of said amplifier and means for superimposing the output of said amplifier upon the signals in said channel in phase opposition to the component of directivity-rotation frequency which will be present in said signals so as to annul or substantially reduce said component.

2,946,999
CONSTANT BEAMWIDTH HORN ANTENNA
Kenneth S. Kelleher, Alexandria, and Clair F. Parker, Jr., Falls Church, Va., assignors to Melpar, Inc., Falls Church, Va., a corporation of New York
Filed Dec. 16, 1957, Ser. No. 702,944
3 Claims. (Cl. 343—786)



1. A horn antenna for providing a pattern of constant beamwidth comprising, a waveguide transmission line having a rectangular cross section; upper and lower plate members forming extensions of the respective walls of said transmission line, said plate members producing an E plane pattern; a plurality of conductive pin members joining said plate members on their longitudinal outer edges and being spaced at progressively increasing distances traversing from the throat to the mouth of said horn antenna, said conductive pin members producing an H plane pattern; said plate and pin members defining a tubular structure flared from the throat to the mouth

of said horn antenna; said conductive pin members allowing the higher transmitted frequencies to radiate outwardly therefrom while constraining the lower frequencies.

2,947,000
BEACON ANTENNA USING SPIRAL
Arthur E. Marston, Alexandria, Va., and Julius A. Kaiser, Jr., Kensington, Md.; said Kaiser assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 28, 1958, Ser. No. 777,157
6 Claims. (Cl. 343—895)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A radio frequency system comprising, a radio frequency device, a spiral antenna element having two interspaced conductors with an outer periphery of approximately two wavelengths at the desired frequency of operation, means for shielding the conductors out to a periphery of approximately one wavelength at the desired frequency of operation, and means for coupling

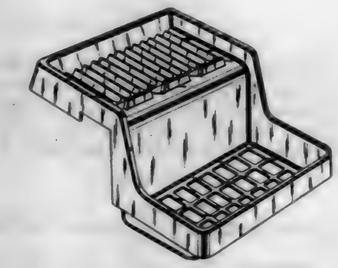


said element at said device for transfer of radio frequency energy therebetween.

DESIGNS

JULY 26, 1960

188,453
COMBINED SOAP DISH AND TRAY
William Marcus, Cleveland, Ohio, assignor to The Standfast Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 5, 1959, Ser. No. 58,212
Term of patent 14 years
(Cl. D4—3)



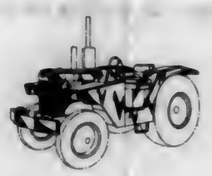
188,454
INFANT'S TOILET SEAT
Bronislaw Zapolski, Hastings on Hudson, N.Y., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 50,410
Term of patent 14 years
(Cl. D4—5)



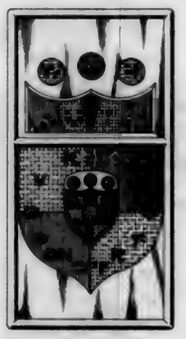
188,455
BUILDING
Ernest Kump, 26184 Arastradero Road, Los Altos, Calif.
Filed July 19, 1957, Ser. No. 47,006
Term of patent 14 years
(Cl. D13—1)



188,456
TRACTOR
Henry Dreyfuss, South Pasadena, and William F. H. Purcell, Pasadena, Calif., assignors to Deere & Company, Moline, Ill., a corporation of Delaware
Filed July 16, 1959, Ser. No. 56,797
Term of patent 14 years
(Cl. D14—3)



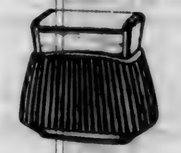
188,457
FACE PLATE FOR AN ELECTRICAL SWITCHING MECHANISM
Carroll Brooks Fry, 436 N. Roxbury Drive, Beverly Hills, Calif.
Filed June 16, 1958, Ser. No. 51,381
Term of patent 14 years
(Cl. D14—6)



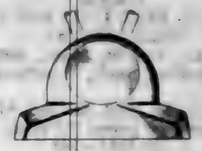
188,458
BURIAL CASKET
Joseph D. Flynn, 422 Lee St., Apt. 2, Oakland, Calif.
Filed Sept. 1, 1959, Ser. No. 57,403
Term of patent 14 years
(Cl. D19—1)



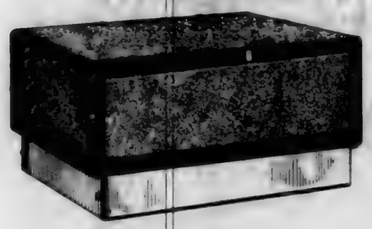
188,459
ELECTRIC SHAVER
Ivar Jepsen and Robert O. Ernest, Oak Park, Ill., assignors to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Aug. 24, 1959, Ser. No. 57,269
Term of patent 14 years
(Cl. D22—3)



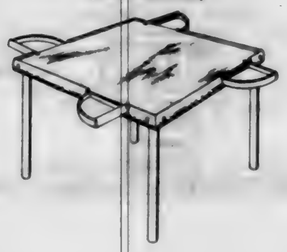
188,460
ONE PIECE SHELL FOR AN INDOOR ANTENNA
Robert D. Raynor, Reseda, Calif., assignor to Clear Beam Antenna Corporation, Canoga Park, Calif., a corporation of California
Filed Sept. 16, 1959, Ser. No. 57,574
Term of patent 14 years
(Cl. D26—14)



188,461
AMPLIFIER CABINET OR SIMILAR ARTICLE
Victor Pomper, 45 Linnaean St., Cambridge, Mass.
Filed July 16, 1959, Ser. No. 56,810
Term of patent 14 years
(Cl. D26—14)



188,462
CARD TABLE
Thomas S. Haye, P.O. Box 3663, Rincon Annex, San Francisco, Calif.
Filed Sept. 29, 1958, Ser. No. 52,802
Term of patent 14 years
(Cl. D33—14)



188,463
TOY ANIMAL FIGURINE
Fred I. Grothe, Minneapolis, Minn. (2233 University Ave., St. Paul, Minn.), and Willys L. Schwan, 2233 University Ave., St. Paul, Minn.
Filed Feb. 9, 1960, Ser. No. 59,316
Term of patent 3½ years
(Cl. D34—2)



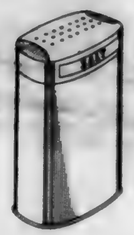
188,464
TRICYCLE
Guy F. Campbell, Hammond, Ind., assignor, by mesne assignments, to American Machine & Foundry Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 24, 1954, Ser. No. 32,426
Term of patent 14 years
(Cl. D34—15)



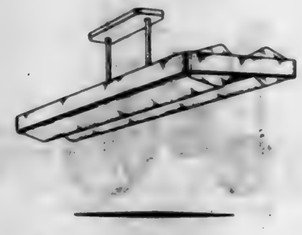
188,465
SCREW LIFT ELEVATOR FOR GRAIN OR THE LIKE
James R. Nolan, Fort Worth, Tex., assignor to Fort Worth Steel and Machinery Company, Fort Worth, Tex., a corporation of Texas
Filed July 15, 1958, Ser. No. 51,802
Term of patent 14 years
(Cl. D41—1)



188,466
CONDIMENT DISPENSER
Abraham I. Silverman and Sidney Silverstein, New York, N.Y., assignors to Lincoln Metal Products Corp., New York, N.Y., a corporation of New York
Filed Mar. 5, 1959, Ser. No. 54,868
Term of patent 14 years
(Cl. D44—22)



188,467
LIGHTING FIXTURE
Bruce Patten Dunckel, Oakland, N.J., assignor to Litecraft Manufacturing Corp., Passaic, N.J., a corporation of New York
Filed Dec. 31, 1959, Ser. No. 58,875
Term of patent 14 years
(Cl. D48—23)



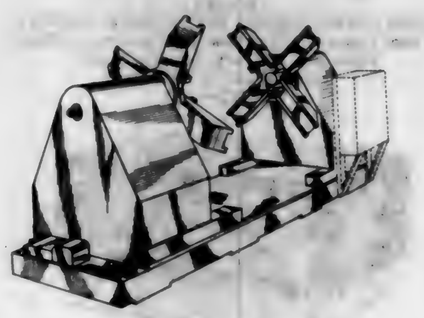
188,468
LIGHT SUPPORTING POLE
Jerry D. Sorrentino, Scotch Plains, N.J., assignor to Pfaff & Kendall, Newark, N.J., a corporation of New Jersey
Filed Aug. 29, 1958, Ser. No. 52,447
Term of patent 14 years
(Cl. D48—31)



188,469
LUGGAGE LATCH
John B. Humphries, Stamford, Conn., assignor to The Excelsior Hardware Company, Stamford, Conn.
Continuation of design applications Ser. No. 54,799 and Ser. No. 54,801, Mar. 2, 1959. This application Apr. 27, 1960, Ser. No. 60,513
Term of patent 14 years
(Cl. D50—7)



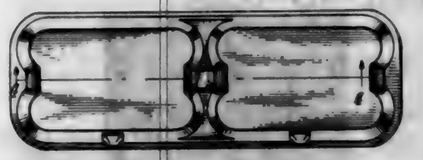
188,470
CENTERING REEL UNIT FOR COILED SHEET METAL
Albert F. Lehmann, Detroit, Mich., assignor to Sesco Incorporated, Detroit, Mich., a corporation of Michigan
Filed Jan. 20, 1958, Ser. No. 49,298
Term of patent 14 years
(Cl. D54—14)



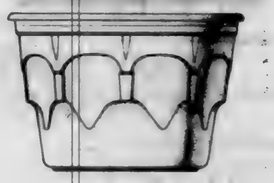
188,471
CHAMPAGNE BOTTLE CORK
Floyd A. Terwilliger, 1264 Culver Road, Rochester, N.Y.
Filed Dec. 18, 1957, Ser. No. 48,951
Term of patent 14 years
(Cl. D58—10)



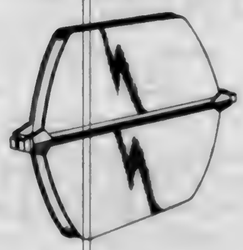
188,472
EGG CARTON
Harry E. Lambert, Gary, Ind., assignor to Packaging Corporation of America, a corporation of Delaware
Filed Feb. 9, 1959, Ser. No. 54,516
Term of patent 14 years
(Cl. D58—13)



188,473
CUP
William L. Nicians, Parsippany-Troy Hills, N.J. (170 Knoll Road, R.D. 1, Boonton, N.J.)
Filed Jan. 6, 1960, Ser. No. 58,945
Term of patent 14 years
(Cl. D58—17)



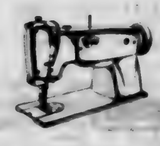
188,474
CASE FOR TAPE REELS OR SIMILAR ARTICLES
Giorgio I. Spadaro, 602 N. Woodland Lane, Northfield, Ill.
Filed Nov. 23, 1959, Ser. No. 58,425
Term of patent 14 years
(Cl. D26—14)



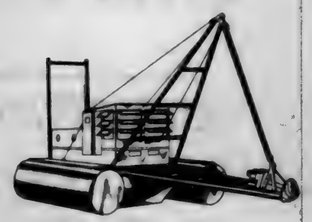
188,475
MONORAIL TRAIN
Robert H. Gurr, North Hollywood, Calif., assignor to Wed Enterprises, Inc., Burbank, Calif., a corporation of California
Filed Mar. 15, 1960, Ser. No. 59,740
Term of patent 14 years
(Cl. D66—1)



188,476
SEWING MACHINE OR SIMILAR ARTICLE
Robert E. Redmann, Milford, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Apr. 7, 1960, Ser. No. 60,079
Term of patent 14 years
(Cl. D70—1)



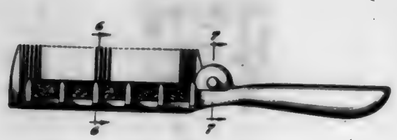
188,477
DREDGE
John H. Milne, 1445 NE. 129th St., North Miami, Fla.
Filed Dec. 3, 1958, Ser. No. 53,642
Term of patent 14 years
(Cl. D71—1)



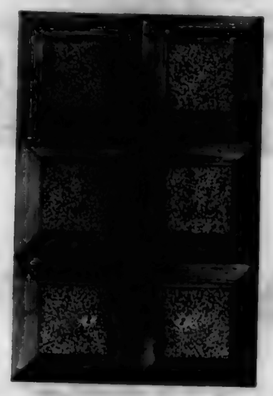
188,478
ILLUMINABLE MERCHANDISING DISPLAY STAND
Lawrence W. Patterson, Santa Ana, Calif., assignor to Spring-A-Way Displays of California, Inc., a corporation of California
Filed June 19, 1959, Ser. No. 56,425
Term of patent 14 years
(Cl. D80—9)



188,479
APPLICATOR COMB
Joseph Lloyd Chiariello, 430 Orange St., Oakland, Calif.
Filed Feb. 10, 1960, Ser. No. 59,329
Term of patent 14 years
(Cl. D86—8)



188,480
PLASTIC COATED FABRIC OR SIMILAR ARTICLE
Jakob H. Vogel, West Orange, N.J., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Filed Nov. 26, 1957, Ser. No. 48,673
Term of patent 14 years
(Cl. D87—3)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 26TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Devaud, Albert J., to Minneapolis-Honeywell Regulator Co. Electrostatic tape and methods of construction. Re. 24,850, 7–26–60, Cl. 154—121.
Dow Chemical Co., The: *See*—
Kaeding, Warren W., Lindblom, and Temple. Re. 24,848.
Kaeding, Warren W., R. O. Lindblom, and R. G. Temple, to The Dow Chemical Co. Catalytic oxidation of aromatic carboxylic acids to phenols. Re. 24,848, 7–26–60, Cl. 260—621.
Lindblom, Robert O.: *See*—
Kaeding, Warren W., Lindblom, and Temple. Re. 24,848.
Lorenz, Anton: *See*—
Luckhardt, Johannes. Re. 24,849.
Luckhardt, Johannes, deceased, by W. Luckhardt, administrator, to A. Lorenz. Article of repose for supporting the body of a person. Re. 24,849, 7–26–60, Cl. 155—106.
Luckhardt, Wasili: *See*—
Luckhardt, Johannes. Re. 24,849.
McCloud, George R., to McGraw-Edison Co. Load interrupter fuse cutout. Re. 24,847, 7–26–60, Cl. 200—114.
McGraw-Edison Co.: *See*—
McCloud, George R. Re. 24,847.
Minneapolis-Honeywell Regulator Co.: *See*—
Devaud, Albert J. Re. 24,850.
Temple, Robert G.: *See*—
Kaeding, Warren W., Lindblom, and Temple. Re. 24,848.

LIST OF PLANT PATENTEES

Jackson & Perkins Co.: *See*—
Morey, Dennison H., Jr. 1,962.
Verschuren, Hendrikus A. M. 1,961.
Morey, Dennison H., Jr., to Jackson & Perkins Co. Rose plant. 1,962, 7–26–60, Cl. 47—61.
Verschuren, Hendrikus A. M., to Jackson & Perkins Co. Rose plant. 1,961, 7–26–60, Cl. 47—61.

LIST OF DESIGN PATENTEES

American Machine & Foundry Co.: *See*—
Campbell, Guy F. 188,464.
American Radiator & Standard Sanitary Corp.: *See*—
Zapolski, Bronislaw. 188,454.
Campbell, Guy F., to American Machine Machine & Foundry Co. Tricycle. 188,464, 7–26–60, Cl. D34—15.
Chiariello, Joseph L. Applicator comb. 188,479, 7–26–60, Cl. D86—8.
Clear Beam Antenna Corp.: *See*—
Raynor, Robert D. 188,460.
Deere & Co.: *See*—
Dreyfuss, Henry, and Purcell. 188,456.
Dreyfuss, Henry, and W. F. H. Purcell, to Deere & Co. Tractor. 188,456, 7–26–60, Cl. D14—3.
Dunckel, Bruce P., to Litecraft Mfg. Corp. Lighting fixture. 188,467, 7–26–60, Cl. D48—23.
Ernest, Robert O.: *See*—
Jepson, Ivar, and Ernest. 188,459.
Excelsior Hardware Co., The: *See*—
Humphries, John B. 188,469.
Flynn, Joseph D. Burial casket. 188,458, 7–26–60, Cl. D19—1.
Fort Worth Steel and Machinery Co.: *See*—
Nolan, James R. 188,465.
Fry, Carroll B. Face plate for an electrical switching mechanism. 188,457, 7–26–60, Cl. D14—6.
Grothe, Fred L., and W. L. Schwan. Toy animal figurine. 188,463, 7–26–60, Cl. D34—2.
Gurr, Robert H., to Wed Enterprises, Inc. Monorail train. 188,475, 7–26–60, Cl. D66—1.
Haye, Thomas S. Card table. 188,462, 7–26–60, Cl. D33—14.
Humphries, John B., to The Excelsior Hardware Co. Luggage latch. 188,469, 7–26–60, Cl. D50—7.
Interchemical Corp.: *See*—
Vogel, Jakob H. 188,480.
Jepson, Ivar, and R. O. Ernest, to Sunbeam Corp. Electric shaver. 188,459, 7–26–60, Cl. D22—3.
Kump, Ernest J. Building. 188,455, 7–26–60, Cl. D13—1.
Lambert, Harry E., to Packaging Corp. of America. Egg carton. 188,472, 7–26–60, Cl. D58—13.
Lehmann, Albert F., to Sesco Inc. Centering reel unit for coiled sheet metal. 188,470, 7–26–60, Cl. D54—14.
Lincoln Metal Products Corp.: *See*—
Silverman, Abraham I., and Silverstein. 188,466.
Litecraft Mfg. Corp.: *See*—
Dunckel, Bruce P. 188,467.
Marcus, William, to The Standfast Products Co. Combined soap dish and tray. 188,453, 7–26–60, Cl. D4—3.
Milne, John H. Dredge. 188,477, 7–26–60, Cl. D71—1.
Niclaus, William L. Cup. 188,473, 7–26–60, Cl. D58—17.
Nolan, James R., to Fort Worth Steel and Machinery Co. Screw lift elevator for grain or the like. 188,465, 7–26–60, Cl. D41—1.
Packaging Corp. of America: *See*—
Lambert, Harry E. 188,472.
Patterson, Lawrence W., to Spring-A-Way Displays of California, Inc. Illuminable merchandising display stand. 188,478, 7–26–60, Cl. D80—9.
Pfaff & Kendall: *See*—
Sorrentino, Jerry D. 188,468.
Pomper, Victor. Amplifier cabinet or similar article. 188,461, 7–26–60, Cl. D26—14.
Purcell, William F. H.: *See*—
Dreyfuss, Henry, and Purcell. 188,456.
Rayner, Robert D., to Clear Beam Antenna Corp. One piece shell for an indoor antenna. 188,460, 7–26–60, Cl. D26—14.
Redmann, Robert E., to The Singer Mfg. Co. Sewing machine or similar article. 188,476, 7–26–60, Cl. D70—1.
Schwan, Willys L.: *See*—
Grothe, Fred L., and Schwan. 188,463.
Sesco Inc.: *See*—
Lehmann, Albert F. 188,470.
Silverman, Abraham I., and S. Silverstein, to Lincoln Metal Products Corp. Condiment dispenser. 188,466, 7–26–60, Cl. D44—22.
Silverstein, Sidney: *See*—
Silverman, Abraham I., and Silverstein. 188,466.
Singer Mfg. Co., The: *See*—
Redmann, Robert E. 188,476.
Sorrentino, Jerry D., to Pfaff & Kendall. Light supporting pole. 188,468, 7–26–60, Cl. D48—31.
Spadaro, Giorgio I. Case for tape reels or similar articles. 188,474, 7–26–60, Cl. D26—14.
Spring-A-Way Displays of California, Inc.: *See*—
Patterson, Lawrence W. 188,478.
Standfast Products Co., The: *See*—
Marcus, William. 188,453.
Sunbeam Corp.: *See*—
Jepson, Ivar, and Ernest. 188,459.
Terwilliger, Floyd A. Champagne bottle cork. 188,471, 7–26–60, Cl. D58—10.
Vogel, Jakob H., to Interchemical Corp. Plastic coated fabric or similar article. 188,480, 7–26–60, Cl. D87—3.
Wed Enterprises, Inc.: *See*—
Gurr, Robert H. 188,475.
Zapolski, Bronislaw, to American Radiator & Standard Sanitary Corp. Infant's toilet seat. 188,454, 7–26–60, Cl. D4—5.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 26TH DAY OF JULY, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Svenska Flaktfabriken: *See*—
Gustafsson, Stig. 2,946,400.

ACF Industries, Inc.: *See*—
Zomber, Gerard L. 2,946,950.

A/S Brodrene Hartmann: *See*—
Hartmann, Louis M., and Hansen. 2,946,426.

Abbott, Edward G., to The Austin Motor Co. Ltd. Doors for motor road vehicles. 2,946,622, 7–26–60, Cl. 296—44.

Abbott Laboratories: *See*—
Michaels, Raymond J., Jr., and Zaugg. 2,946,793.
Zaugg, Harold E., and De Net. 2,946,803.
Zaugg, Harold E., and De Net. 2,946,804.

Aberer, Frank E., and H. J. Talge; said Aberer assor. to said Talge. Food slicer blade engagement. 2,946,362, 7–26–60, Cl. 146—102.

Acme Visible Records, Inc.: *See*—
Colo, Peter M. 2,946,638.

Adam, Helmut, to Robert Bosch G.m.b.H. Butterfly valves. 2,946,553, 7–26–60, Cl. 251—188.

Adami, Frederick W., Jr.: *See*—
Pierce, Melbourne H., Perry, and Adami. 2,946,457.

Adams, John N.: *See*—
Barnhill, George B. 2,946,155.

Aeroprojects, Inc.: *See*—
Jones, James B., Elmore, and De Prisco. 2,946,119.

Aeroprojects Incorporated: *See*—
Jones, James B., Elmore, and De Prisco. 2,946,120.

Ahlgren, Axel W., to Amerock Corp. Self-alining catch. 2,946,612, 7–26–60, Cl. 292—17.

Air Products Inc.: *See*—
Lauer, Albert W., Jr. 2,946,223.
Schilling, Clarence J. 2,946,200.

Aktiebolaget Addo: *See*—
Lydfors, John. 2,946,507.

Aktiebolaget Bolinder-Munktell: *See*—
Evrell, Kaleb E. 2,946,228.

Aktiebolaget Elektrolux: *See*—
Hellstrom, Axel G. 2,946,200.
Nilsson, Bengt E. 2,946,071.

Aktiebolaget Separator: *See*—
Palmqvist, Fredrik T. E. 2,946,813.

Aktiebolaget Svenska Kullagerfabriken: *See*—
Gothberg, Karl E. A. 2,946,633.
Lilljekvist, Bengt L. F., and Uhrus. 2,946,101.

Aladdin Industries, Inc.: *See*—
Bramming, Carl. 2,946,491.
Lyman, Harold T. 2,946,885.

Albanese Victor J., to Bogart Mfg. Corp. Coaxial T hybrid. 2,946,965, 7–26–60, Cl. 333—11.

Albiswerk Zurich, A.G.: *See*—
Bolay, Errol. 2,946,255.
Spinnler, Wilhelm, Bruhin, Scharli, Huber, and Linder. 2,946,910.

Albrecht, Alexander J.: *See*—
Huck, William F., Albrecht, and Sanford. 2,946,591.

Alison, Etienne, and C. Monin, to Compagnie Industrielle des Telephones. Magnetostatic relays. 2,946,896, 7–26–60, Cl. 307—88.

Allan, Robert E., to General Motors Corp. Drill fixture. 2,946,246, 7–26–60, Cl. 77—62.

Allegheny Ludlum Steel Corp.: *See*—
Ely, James K. 2,946,163.

Allen-Bradley Co.: *See*—
De Smidt, Woodrow A., and Zarwell. 2,946,871.

Allendorf, Adam, to Allendorf Industries Inc. Tape control winder. 2,946,534, 7–26–60, Cl. 242—75.51.

Allendorf Industries Inc.: *See*—
Allendorf, Adam. 2,946,534.

Allied Chemical Corp.: *See*—
Schmidt, Lawrence D. 2,946,443.

Allis-Chalmers Mfg. Co.: *See*—
Anderson, Reynold M. 2,946,144.
Elliott, William E., and Reinhard. 2,946,216.
Jenness, Raymond C. 2,946,610.
Weltmer, Wilton W. 2,946,845.

Allison, Anthony G.: *See*—
Lee, Robert E. 2,946,602.

Altair Inc.: *See*—
Mancusi, Joseph J., Jr. 2,946,552.

Amcel Propulsion Inc.: *See*—
Peck, Walter R. 2,946,942.

American Brake Shoe Co.: *See*—
Cox, Isaac E. 2,946,631.
Fraula, William S., and King. 2,946,001.

American Can Co.: *See*—
Carew, Herman. 2,946,481.

American Cyanamid Co.: *See*—
Kocay, Witold R. 2,946,762.
Schuller, Walter H. 2,946,761.
Valentine, William. 2,946,724.

American-Lincoln Corp.: *See*—
Bruck, John P. 2,946,358.

American-Marietta Co., Stoner-Mudge Co. Division: *See*—
Bach, Henry J. 2,946,702.

American Mono Rail Co., The: *See*—
McEachern, Loyd E. 2,946,521.

American Photocopy Equipment Co.: *See*—
Eisner, Burton D., and Katerman. 2,946,272.

American Radiator & Standard Sanitary Corp.: *See*—
Kovach, Julius W. 2,946,551.

American Smelting and Refining Co.: *See*—
Baier, Richard, Smart, and Phillips. 2,946,100.

American Window Glass Co.: *See*—
Insolio, Thomas A., Carini, and Magrini. 2,946,460.

Amerock Corp.: *See*—
Ahlgren, Axel W. 2,946,612.

Anagnostopoulos, Constantine R., and R. J. Wineman, to Monsanto Chemical Co. Preparation of hydroxy mercapto butyric acids and derivatives thereof. 2,946,816, 7–26–60, Cl. 260—535.

Anderson, Arthur W.: *See*—
Monroe, Roger F., and Anderson. 2,946,825.

Anderson, Orofino B.: *See*—
Mettetal, Donald, Jr. 2,946,328.

Anderson, Reynold M., to Allis-Chalmers Mfg. Co. Hydraulic control system. 2,946,144, 7–26–60, Cl. 37—129.

Anderson, Sidney M., to Deere & Co. Conveyor means for corn harvester. 2,946,170, 7–26–60, Cl. 56—18.

Angelery, Henry W. Control device for regulating flow of fluids in heat exchanging relation. 2,946,508, 7–26–60, Cl. 236—80.

Angeles Metal Trim Co.: *See*—
Lawlor, Reed C. 2,946,099.

Annear, John D., H. White, and S. L. Holt, to Power Jets (Research and Development) Ltd. Stator blade mounting of condition sensing elements in fluid flow machines. 2,946,221, 7–26–60, Cl. 73—212.

Annis, Roger L., to Diamond Alkali Co. Chemical apparatus. 2,946,572, 7–26–60, Cl. 257—86.

Appleton, Bernard S.: *See*—
Greer, Edward M., Appleton, and Barth. 2,946,304.

Archer, Louis F., to Maya Mfg. Co., Inc. Safety device for press. 2,946,277, 7–26–60, Cl. 100—53.

Armstrong Cork Co.: *See*—
Booth, Alfred E. 2,946,693.

Armstrong, George W., to O. B. Armstrong and Sons Co. Grain drier and valve therefor. 2,946,132, 7–26–60, Cl. 34—170.

Armstrong, O. B., and Sons Co.: *See*—
Armstrong, George W. 2,946,132.

Art Iron and Wire Works, Inc.: *See*—
Ogden, Paul. 2,946,568.

Artistic Wood Specialties, Inc.: *See*—
Caiolero, John, Michelini, and Rocchi. 2,946,452.

Asher, Carlton R., to James Lees and Sons Co. Carpet sample display rack. 2,946,454, 7–26–60, Cl. 211—45.

Asinger, Friedrich, M. Thiel, and W. Horingklee, to VEB Leuna-Werke "Walter Ulbricht." Dihydro-m-thiazine-Δ-3,4 compounds and process for their preparation. 2,946,788, 7–26–60, Cl. 260—243.

Asker, Gunnar C. F., and G. K. A. Siggelin, to Desomatic Products, Inc. Butterfly valve. 2,946,554, 7–26–60, Cl. 251—306.

Ateliers de Constructions Electriques de Charleroi: *See*—
Martin, Fernand. 2,946,920.
Schreurs, Willy. 2,946,656.

Atkins, S. Lawrence: *See*—
Spooner, Bernard P., and Atkins. 2,946,062.

Atkinson Bulk Transport Co.: *See*—
Atkinson, Frederick M., Paulsen, and Mattson. 2,946,826.

Atkinson, Frederick M., A. L. Paulsen, and D. F. Mattson, to Atkinson Bulk Transport Co. Suction-pressure unloading system. 2,946,626, 7–26–60, Cl. 302—23.

Aurora Equipment Co.: *See*—
Sitler, Richard W. 2,946,640.

Austin Motor Co. Ltd., The: *See*—
Abbott, Edward G. 2,946,622.

Automatic Electric Laboratories, Inc.: *See*—
Benjamin, E Burton. 2,946,857.
Berg, Einar. 2,946,114.
Faulkner, Alfred H. 2,946,068.
Peterson, Edward S. 2,946,853.
Stiles, Richard C. 2,946,845.
Stiles, Richard C., Stoffels, and Kolpek. 2,946,844.
Wood, Fredric E. 2,946,856.

Avgerinos, Costas: *See*—
Reitsma, Ellsworth L., and Avgerinos. 2,946,850.

Axelrod, Dr. Stanley: *See*—
Wolshin, Louis. 2,946,067.
Wolshin, Louis. 2,946,337.

Ayers, George W., and W. A. Krewer, to The Pure Oil Co. Method of preparing odor free naphthas. 2,946,744, 7–26–60, Cl. 208—288.

Babcock & Wilcox Co., The: *See*—
Coulter, James H., Jr., and Johnson. 2,946,669.
Edgecombe, David A. 2,946,437.
Kirkby, Albert H. 2,946,569.

Babcock & Wilcox Ltd.: *See*—
Wootten, William R. 2,946,732.

Bach, Henry J., to American-Marietta Co., Stoner-Mudge Co. Division. High solids vinyl dispersions and primers therefor. 2,946,702, 7–26–60, Cl. 117—75.

Bader, Erich, O. Schweitzer, and W. Querfurth, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Polymerisation of vinylidene compounds using organic peroxide, organic sulfur and quaternary ammonium compounds as catalysts. 2,946,770, 7–26–60, Cl. 260—77.5.

Bahnson, Agnew H., Jr., to Wachovia Bank and Trust Co. Textile processing machine. 2,946,173, 7–26–60, Cl. 57—56.

Bahnson, Agnew H., Jr., to Wachovia Bank and Trust Co. Apparatus for doffing lint collection chambers. 2,946,174, 7–26–60, Cl. 57—56.

Bahnson, Agnew H., Jr., to Wachovia Bank and Trust Co. Bobbin holder. 2,946,537, 7–26–60, Cl. 242—130.2.

Baker, Morris W. G. Apparatus for cutting reinforced tubing. 2,946,750, 7–26–60, Cl. 83—176.

Baier, Richard, J. S. Smart, Jr., and A. J. Phillips, to American Smelting and Refining Co. Block graphite mold for continuous casting. 2,946,100, 7–26–60, Cl. 22—57.3.

Bailey, James R.: *See*—
Dumke, William E., and Bailey. 2,946,994.

Bailey, William D., to Corning Glass Works. Manufacture of a windowed article. 2,946,156, 7–26–60, Cl. 49—81.

Bajulaz, Roger, to Thorens S.A. Pick-up arm for speaking machine. 2,946,596, 7–26–60, Cl. 274—23.

Baker, David S. Belt. 2,946,428, 7–26–60, Cl. 198—193.

Baker, Lester A. Weedless fishing spoon. 2,946,149, 7–26–60, Cl. 43—42.16.

Baldwin, Herman J.: *See*—
Fuldner, Herbert M., Morgan, Rave, and Baldwin. 2,946,265.

Ballard, Denis G. H., C. H. Bamford, W. E. Hanby, and F. J. Weymouth, to Courtaulds Ltd. Production of polyamides. 2,946,771, 7–26–60, Cl. 260—77.5.

Bamford, Clement H.: *See*—
Ballard, Denis G. H., Bamford, Hanby, and Weymouth. 2,946,771.

Banke, Joseph J.: *See*—
Mathews, Abe W., and Banke. 2,946,086.

Baran, John S., to G. D. Searle & Co. 3-oxo-11α-hydroxy-11, 19-epoxycard-20(22)-enolides and derivatives thereof. 2,946,786, 7–26–60, Cl. 260—239.57.

Barényi, Béla, to Daimler-Benz Aktiengesellschaft. Automobile roof structure. 2,946,622, 7–26–60, Cl. 296—137.

Barényi, Béla, to Daimler-Benz Aktiengesellschaft. Transparent plastic car top. 2,946,624, 7–26–60, Cl. 296—137.

Barker, Norval G., and R. W. H. Chang, to General Mills, Inc. Preparation of vital gluten. 2,946,780, 7–26–60, Cl. 260—123.5.

Barnes, Charles H., to Specialties Development Corp. Fire extinguisher. 2,946,380, 7–26–60, Cl. 169—31.

Barnhill, George B., deceased: L. S. Barnhill, administratrix, 25% to J. N. Adams, and 37½% to M. C. Friel. Method for improving soil texture. 2,946,155, 7–26–60, Cl. 47—58.

Barnhill, Louise S.: *See*—
Barnhill, George B. 2,946,155.

Barr Rubber Products Co., The: *See*—
Yoder, Alfred F. 2,946,092.

Barr and Stroud Ltd.: *See*—
Strang, John M., and Foster. 2,946,257.

Barry, Vincent C., J. G. Belton, M. L. Conalty, D. Twomey, J. P. O'Sullivan, and E. Hodel, to Geigy Chemical Corp. New phenasine derivatives. 2,946,792, 7–26–60, Cl. 260—267.

Barth, Kurt: *See*—
Greer, Edward M., Appleton, and Barth. 2,946,304.

Bartley, Vernon L. Portable swimming pool digger. 2,946,146, 7–26–60, Cl. 37—192.

Bartus, Frank G. Combination toilet tissue roll and deodorant container. 2,946,511, 7–26–60, Cl. 239—52.

Basford, Kenneth A., to Rolls-Royce Ltd. Fuel systems of gas-turbine engines. 2,946,189, 7–26–60, Cl. 60—39.28.

Basbover, Albert, to Conmar Products Corp. Slide fasteners. 2,946,109, 7–26–60, Cl. 24—205.15.

Baso Inc.: *See*—
Thornbery, John H., and Matthews. 2,946,376.

Bas-Taymas, Enis, to Gesellschaft Zur Forderung der Forschung an der Eidg. Techn. Hochschule. Arrangement for controlling and correcting the location of the focal spot produced by a cathode-ray on the target of a roentgen-tube. 2,946,892, 7–26–60, Cl. 250—99.

Bates, Charles E., and J. Z. De Lorean, to General Motors Corp. Power drive apparatus. 2,946,326, 7–26–60, Cl. 123—179.

Bauer, Horace P.: *See*—
Dean, Walter B., and Bauer. 2,946,297.

Bauer, Matthew F. Self-flaring tube coupling. 2,946,607, 7–26–60, Cl. 285—334.5.

Baum, Custer C., to Hughes Aircraft Co. Scanner for optical systems. 2,946,893, 7–26–60, Cl. 250—203.

Bauregger, Frank A. Sand booster. 2,946,628, 7–26–60, Cl. 302—24.

Baxter, Thomas R., to Continental Can Co., Inc. Poultry packaging machine and method. 2,946,166, 7–26–60, Cl. 53—124.

Bayer, Frank C., to Thompson Ramo Wooldridge Inc. Fuel-air manifold for an afterburner. 2,946,185, 7–26–60, Cl. 60—35.6.

Bayer, Otto: *See*—
Klauke, Erich, and Bayer. 2,946,768.

Beachy, Alvin S.: *See*—
Beachy, Sam A., A. S., and M. S. 2,946,143.

Beachy, Menno S.: *See*—
Beachy, Sam A., A. S., and M. S. 2,946,143.

Beachy, Sam A., A. S., and M. S. to Sam Beachy & Sons. Ditching machine. 2,946,142, 7–26–60, Cl. 37—92.

Beachy, Sam, & Sons: *See*—
Beachy, Sam A., A. S., and M. S. 2,946,143.

Beamish, William R., to Northern Electric Co., Ltd. Fluid-cooled electric cable. 2,946,837, 7–26–60, Cl. 174—15.

Bearden, William G., R. P. Murphy, Jr., and P. P. Scott, Jr., to Pan American Petroleum Corp. Shutting off water in wells. 2,946,383, 7–26–60, Cl. 166—33.

Beattie, Horace S., T. L. Buley, and B. M. Muenner, to International Business Machines Corp. Accounting machine. 2,946,504, 7–26–60, Cl. 235—61.9.

Becker, Otto A. Selectively power-operated drawer structure. 2,946,637, 7–26–60, Cl. 312—223.

Becker-Boost, Erich H., and H. Kronacher, to Dr. C. Otto & Comp. G.m.b.H. Process for recovering hydrocyanic acid from gas mixtures containing the same. 2,946,402, 7–26–60, Cl. 183—114.2.

Beer, Ludwig A., to Monsanto Chemical Co. Process for preparing porous films of vinyl chloride polymers. 2,946,095, 7–26–60, Cl. 18—57.

Beerbower, Alan, and W. H. Meyer, to Esso Research and Engineering Co. Continuous grease manufacture using coated free-flowing alkali metal saponifying agent. 2,946,751, 7–26–60, Cl. 252—40.

Beever, Jack, and W. Goodman, to Jerrold Electronics Corp. Tunable device for extracting radio frequency energy from a power line. 2,946,883, 7–26–60, Cl. 250—16.

Beggs, Donald: *See*—
De Vaney, Fred D., and Beggs. 2,946,460.

Behymer, Oral C.: *See*—
Bloomsburg, Harry E., Behymer, and Robbins. 2,946,745.

Belf, Leon J., to The National Smelting Co. Ltd. Production of fluoroform. 2,946,827, 7–26–60, Cl. 260—653.7.

Bell Aircraft Corp.: *See*—
Hartloff, Gordon G. 2,946,944.

Bell Electric Co.: *See*—
Bellek, Frank G. 2,946,838.

Bell Telephone Laboratories, Inc.: *See*—
Breed, Rolland N., Groth, Irwin, Kille, and Riggs. 2,946,984.
Brown, William J., Miller, and Taris. 2,946,852.
Crowe, William J. 2,946,986.
Hunt, Loyd E., and Schelleng. 2,946,972.
Hussey, Luther W. 2,946,855.
Kretzmer, Ernest R. 2,946,851.
Mayo, John S. 2,946,897.
Mraz, William L. 2,946,884.

Bellek, Frank G., to Bell Electric Co. Electric utility box assembly. 2,946,838, 7–26–60, Cl. 174—53.

Bellman, Randall Y. Liquid mixing apparatus. 2,946,519, 7–26–60, Cl. 259—318.

Beloit Iron Works: *See*—
Hornbostel, Lloyd. 2,946,231.

Belton, James G.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,946,792.

Belugou, Pierre: *See*—
Condolios, Elie, and Belugou. 2,946,439.

Belugou, Pierre, and E. Condolios, to Charbonnages de France and Etablissements Neyrpic. Process and apparatus for the separation of solid particulate materials of different densities and/or different particles sizes. 2,946,438, 7–26–60, Cl. 209—156.

Bendix Aviation Corp.: *See*—
Bridges, Robert M., Rudy, and Rummell. 2,946,980.
Eastman, James M. 2,946,188.
O'Neill, James P. 2,946,961.
Tognola, Tullio. 2,946,874.

Benjamin, E Burton, to Automatic Electric Laboratories, Inc. Compact wall telephone mounting. 2,946,857, 7–26–60, Cl. 189—100.

Berberich, Wilfred A. Ladder mount for vehicles. 2,946,397, 7–26–60, Cl. 182—39.

Berg, Einar, to Automatic Electric Laboratories, Inc. Method of assembling junction transistor. 2,946,114, 7–26–60, Cl. 29—25.3.

Berghaus, Bernhard, and H. Bucek, to Elektrophysikalische Anstalt Bernhard Berghaus. Nitriding with electric glow discharge. 2,946,708, 7–26–60, Cl. 148—10.

Bertuzzi, Andrew F.: *See*—
Tek, Mehmet R., and Bertuzzi. 2,946,392.

Bessiere, Pierre E. Self-regulating piston pumps, in particular fuel injection pumps for internal combustion engines. 2,946,287, 7–26–60, Cl. 103—41.

Beter, Ralph H., and M. Rubinoff, to Philco Corp. Signal amplifier system. 2,946,957, 7–26–60, Cl. 328—53.

Bethea, Malcolm. Cable clamp. 2,946,108, 7–26–60, Cl. 24—135.

Beyer, Eugen. Magnetic recording and reproducing equipment. 2,946,593, 7–26–60, Cl. 274—4.

Beyerstedt, Ralph L., to The Frank G. Hough Co. Motor vehicle transmissions. 2,946,238, 7–26–60, Cl. 74—665.

Beyner, Andre, I. Scherrer, and H. Morier, to Ebauches S.A. Timepiece comprising an electromagnetically maintained oscillating regulator. 2,946,940, 7–26–60, Cl. 318—128.

Bhattacharyya, Sasanka C.: *See*—
Kelkar, Govind R., and Bhattacharyya. 2,946,783.

Bianco, Buthe F. Brasseiere. 2,946,334, 7–26–60, Cl. 128—484.

Bible, Roy H., Jr., to G. D. Searle & Co. 17α-carboxyethyl-6-halo-17β-hydroxyandrost-4-en-3-one lactones and intermediates. 2,946,787, 7–26–60, Cl. 260—239.57.

Bier, Louis W.: *See*—
Littwin, Arthur K. 2,946,932.

Biggs, Robert W., to The S. K. Wellman Co. Method of bonding sintered material. 2,946,369, 7–26–60, Cl. 153—48.

Bilwin Co., Inc.: *See*—
Hunsbedt, Theodore. 2,946,599.

Birmingham, William J.: *See*—
Muffat, Donald L., and Birmingham. 2,946,750.
Bjerke, Earl B.: *See*—
Slezak, Robert W., Bjerke, and Caldwell. 2,946,461.
Blais, Albert, to Sperry Rand Corp. Printed circuit board with bifurcated terminals. 2,946,976, 7-26-60, Cl. 339—17.
Blair, Lyman C. Respirator apparatus. 2,946,330, 7-26-60, Cl. 128—29.
Bliss, Arthur D.: *See*—
Klein, Ralph, Nadeau, Schoen, and Bliss. 2,946,664.
Blizard, John, to Foster Wheeler Corp. Control of the temperature of superheated vapor. 2,946,323, 7-26-60, Cl. 122—479.
Bloch, Herman S., to Universal Oil Products Co. Gas purification process. 2,946,652, 7-26-60, Cl. 23—3.
Bloomsburg, Harry E., O. C. Behymer, and W. K. Robbins, to Esso Research and Engineering Co. Production of solvents. 2,946,745, 7-26-60, Cl. 208—312.
Boehme Feintechnik G.m.b.H.: *See*—
Heydeck, Rudi, and Schmitt. 2,946,649.
Boeing Airplane Co.: *See*—
Lemont, Harold E., Jr. 2,946,391.
Boeing, Walton F., to General Electric Co. Automatic ice cube making machines. 2,946,202, 7-26-60, Cl. 62—135.
Bogart Mfg. Corp.: *See*—
Albanese, Victor J. 2,946,965.
Bolay, Errol, to Albiswerk Zurich, A.G. Combined day and night viewing device. 2,946,258, 7-26-60, Cl. 88—1.
Bolkow-Entwicklungen KG: *See*—
Nauschütz, Peter, Wessel, Kuhlo, Dreyer, and Bölkow. 2,946,285.
Bölkow, Lugdig: *See*—
Nauschutz, Peter, Wessel, Kuhlo, Dreyer, and Bölkow. 2,946,285.
Bonis, Walter J., and J. E. Olbrych, to Raytheon Co. Modulators. 2,946,958, 7-26-60, Cl. 328—65.
Boode, Carl N., to Bourns, Inc. Testing devices. 2,946,951, 7-26-60, Cl. 324—62.
Boon, Edmund F. L. Vahl, and W. G. Kingma, to Werkspoor N.V. Process for the hydrolisation of starch and other polysaccharides. 2,946,706, 7-26-60, Cl. 127—38.
Booth, Alfred E., to Armstrong Cork Co. Method of making a foamed and expanded product from volcanic glass. 2,946,693, 7-26-60, Cl. 106—40.
Borden Co., The: *See*—
Krueger, Bruno O., Butler, and Hine. 2,946,403.
Borders, Charles R., and J. W. Toner, to International Business Machines Corp. Comparison circuits. 2,946,983, 7-26-60, Cl. 340—149.
Borg-Warner Corp.: *See*—
Snoy, Joseph B. 2,946,416.
Udry, John J. 2,946,283.
Bornemann, William C., to Fleming Sales Co., Inc. Liquid dispenser with metering means and porous applying means. 2,946,154, 7-26-60, Cl. 47—1.
Borsch, Robert, G.m.b.H.: *See*—
Adam, Helmut. 2,946,553.
Ulbrich, Gerhard. 2,946,908.
Boscia, Archie F., to General Dynamics Corp. Phase detectors. 2,946,983, 7-26-60, Cl. 324—87.
Bouzormenyi, Andre G. T.: *See*—
Jendrassik, George. 2,946,184.
Bourns, Inc.: *See*—
Boode, Carl N. 2,946,951.
Caddock, Richard E. 2,946,976.
Bourquin, Jean-Pierre: *See*—
Rens, Jany, and Bourquin. 2,946,799.
Boutillette, Raymond P. Skinning devices. 2,946,084, 7-26-60, Cl. 17—7.
Bower, John L., and T. E. Curtis, to North American Aviation, Inc. Machine tool cutting time indicator. 2,946,646, 7-26-60, Cl. 346—33.
Boyd, John R. Airfoil fluid flow control system. 2,946,541, 7-26-60, Cl. 244—42.
Boyer, Charles J., to The Electric Storage Battery Co. Molded suspension for safety hat. 2,946,063, 7-26-60, Cl. 2—3.
Boyles, Robert L., and W. C. Wingler, to General Electric Co. Alarm clock control mechanism. 2,946,182, 7-26-60, Cl. 58—21.12.
Bozza, Joseph D., to The Jo-An Shoe Mfg. Co., Inc. Method of manufacturing moccasins. 2,946,069, 7-26-60, Cl. 12—142.
Brack, Alma. Supplemental article for a foundation garment. 2,946,335, 7-26-60, Cl. 128—522.
Bradley, Robert W., to United Shoe Machinery Corp. Body conductivity operated controls for electric devices. 2,946,956, 7-26-60, Cl. 328—1.
Brady, Bernard P.: *See*—
Fairchild, Merl K., Maxfield, and Brady. 2,946,339.
Brady, W. H., Co.: *See*—
Muttera, William H., Jr. 2,946,370.
Bragaw, Chester G., Jr., and W. G. Simeral, to E. I. du Pont de Nemours and Co. Safety-glass laminate. 2,946,711, 7-26-60, Cl. 154—2.77.
Bramley, Robert K. Lawn mower service device. 2,946,159, 7-26-60, Cl. 51—48.
Bramming, Carl, to Aladdin Industries, Inc. Pour-through stopper for vacuum bottles. 2,946,491, 7-26-60, Cl. 222—545.
Branning, George G., and R. A. Espinosa. Moving van. 2,946,601, 7-26-60, Cl. 280—46.
Braun, Poul B.: *See*—
Jonker, Gerard H., Wijn, and Braun. 2,946,752.
Jonker, Gerard H., Wijn, and Braun. 2,946,753.
Bray, Murel B. Combination hair clipper. 2,946,123, 7-26-60, Cl. 30—219.
Breed, Rolland N., W. B. Groth, G. C. Irwin, L. A. Kille, and G. Riggs, to Bell Telephone Laboratories, Inc. Tape-to-card converter circuit. 2,946,984, 7-26-60, Cl. 340—168.
Brennan, Joseph H., and E. R. Saunders, to Union Carbide Corp. Ferrochromium-aluminum alloy. 2,946,676, 7-26-60, Cl. 75—27.
Brenneman, Rexford W.: *See*—
Lockwood, Edwin H., and Brenneman. 2,946,876.
Bridges, Robert M., E. W. Rudy, and J. A. Rummell, to Bendix Aviation Corp. Sound ranging system. 2,946,980, 7-26-60, Cl. 340—6.
Brina, Ernest, to Scientific Packaging Corp. Container with opening means. 2,946,434, 7-26-60, Cl. 206—56.
British Petroleum Co. Ltd., The: *See*—
Moy, John A. E., and Yeo. 2,946,743.
Bro, Manville I., and B. W. Sandt, to E. I. du Pont de Nemours and Co. Novel perfluorocarbon polymers. 2,946,763, 7-26-60, Cl. 260—45.5.
Broido, Daniel, to International Computers and Tabulators Ltd. Sheet feed detecting devices. 2,946,992, 7-26-60, Cl. 340—259.
Brown, Cicero C. Well completion and well packer apparatus and method. 2,946,384, 7-26-60, Cl. 166—46.
Brown, Marshall T.: *See*—
Zoll, Maurice B., Brown, and Smith. 2,946,377.
Brown, Sam S. Theft alarm system. 2,946,870, 7-26-60, Cl. 200—61.59.
Brown, William J., R. A. Miller, and C. M. Taris, to Bell Telephone Laboratories, Inc. Automatic telephone answering and message-recording system. 2,946,852, 7-26-60, Cl. 179—6.
Bruck, John P., to American-Lincoln Corp. Saber saw. 2,946,358, 7-26-60, Cl. 143—68.
Brucken, Byron L., to General Motors Corp. Automatic soap dispenser for washing machines. 2,946,489, 7-26-60, Cl. 222—160.
Bruehl, Lawrence, to International Business Machines Corp. Combined gun equilibrator and elevation cylinder. 2,946,262, 7-26-60, Cl. 89—37.
Bruehl, Lawrence, to International Business Machines Corp. Gun equilibrator. 2,946,263, 7-26-60, Cl. 89—37.
Bruehl, Lawrence, to International Business Machines Corp. Hydraulic cylinder and piston. 2,946,316, 7-26-60, Cl. 121—38.
Bruhin, Joseph: *See*—
Spinnler, Wilhelm, Bruhin, Scharli, Huber, and Linder. 2,946,910.
Bruner, Charles O. Bowling game device. 2,946,590, 7-26-60, Cl. 273—37.
Brunnick, Wayne A., and C. H. Helbing, to Pittsburgh Plate Glass Co. Method of applying wax to strands of glass fibers. 2,946,698, 7-26-60, Cl. 117—54.
Brunswick Automatic Pinsetter Corp., The: *See*—
Huck, William F., Albrecht, and Sanford. 2,946,591.
Bucek, Hans: *See*—
Berghaus, Bernhard, and Bucek. 2,946,705.
Buchmann, Fred J.: *See*—
De Vries, Arthur D., and Buchmann. 2,946,775.
Budd Co., The: *See*—
Dean, Albert G. 2,946,295.
Dean, Walter B., and Bauer. 2,946,297.
Murphy, Goodrich E. 2,946,294.
Buley, Theodore L.: *See*—
Beattie, Horace S., Buley, and Muenzer. 2,946,504.
Bunch, Tillman T., to Western Electric Co., Inc. Strand snagging device. 2,946,528, 7-26-60, Cl. 242—25.
Burch, Willie D. Suction operated floor and rug conditioning and cleaning tool. 2,946,080, 7-26-60, Cl. 15—375.
Burroughs Corp.: *See*—
Kuchinsky, Saul, and Peterson. 2,946,642.
Miehle, William. 2,946,988.
Bury, Nellie V., G. R. Serrao, and R. M. Koval. Garment hanger. 2,946,493, 7-26-60, Cl. 223—92.
Butler, Benjamin B.: *See*—
Krueger, Bruno O., Butler, and Hine. 2,946,403.
Butler, George B., and R. L. Goette. Quaternary ammonium ion exchange resins of improved properties. 2,946,757, 7-26-60, Cl. 260—2.1.
Byerly, Earle H., to United States of America, Air Force. Selective frequency system. 2,946,964, 7-26-60, Cl. 331—49.
C.A.V. Ltd.: *See*—
Chmielecki, Jersy. 2,946,292.
Caddock, Richard E., to Bourns, Inc. Variable resistor. 2,946,975, 7-26-60, Cl. 338—183.
Cadwell, Charles W. Bathing accessory. 2,946,074, 7-26-60, Cl. 15—122.
Cady, George H.: *See*—
Dudley, Francis B., and Cady. 2,946,661.
Calaora, Albert: *See*—
Gavreau, Vladimir, and Calaora. 2,946,938.
Caldwell, Robert B.: *See*—
Slezak, Robert W., Bjerke, and Caldwell. 2,946,461.
Caldwell, Samuel P., to The Greist Mfg. Co. Gage mechanism. 2,946,128, 7-26-60, Cl. 33—147.
Callender, Russell J. Structure for controlling band width. 2,946,847, 7-26-60, Cl. 178—5.8.
Callery Chemical Co.: *See*—
Mosley, Neal J. 2,946,662.
Calotero, John, A. Michelini, and R. P. Rocchi, to Artistic Wood Specialties, Inc. Horizontal gun rack with locking device. 2,946,452, 7-26-60, Cl. 211—4.
Canadian Industries Ltd.: *See*—
Graham, George W., and Lusby. 2,946,826.
Canning Equipment Co.: *See*—
Skog, Henry A., and Fox. 2,946,361.
Cantor, Jacob J. Valve. 2,946,555, 7-26-60, Cl. 251—342.
Cantrel, Kenneth E., to Phillips Petroleum Co. Insect repellent composition and method for repelling insects. 2,946,717, 7-26-60, Cl. 167—22.
Caputo, Alice E.: *See*—
Caputo, James V. 2,946,934.

Caputo, James V., deceased; A. E. Caputo, executrix. Rectifier. 2,946,934, 7-26-60, Cl. 317—234.
Carew, Herman, to American Can Co. Convertible cup dispensing mechanism. 2,946,481, 7-26-60, Cl. 221—222.
Carini, Reno: *See*—
Insolio, Thomas A., Carini, and Magrini. 2,946,460.
Carrier, Robert M., Jr., to Chain Belt Co. Helical conveyor. 2,946,429, 7-26-60, Cl. 198—220.
Carter, Cecil J. Lifting device. 2,946,616, 7-26-60, Cl. 294—65.5.
Carter, Sidney T., to Geo. J. Meyer Mfg. Co. Grip-finger assembly for labeling machines. 2,946,472, 7-26-60, Cl. 216—13.
Carter, Thomas A., Jr., and A. V. Hooper, to Thompson Ramo Wooldridge Inc. Pump. 2,946,288, 7-26-60, Cl. 103—97.
Carter, Thomas N., to The Champion Paper and Fibre Co. Oscillator for web winding devices. 2,946,532, 7-26-60, Cl. 242—57.1.
Carver, Robert G., to General Electric Co. Refrigerant compressor having thermal overload protector. 2,946,203, 7-26-60, Cl. 62—230.
Case, J. I., Co.: *See*—
Yeske, Laurel E. 2,946,171.
Castini, Vittorio, to Piaggio & C. Societa per Azioni. Internal combustion engine. 2,946,324, 7-26-60, Cl. 123—73.
Castle, John G., Jr., to United States of America, Navy. Optimising sensitivity and resolution of ion chamber. 2,946,887, 7-26-60, Cl. 250—41.9.
Cedeno, Arturo O. Traffic intersection. 2,946,267, 7-26-60, Cl. 94—1.
Cementi Elba Societa per Azioni (C.E.S.A.): *See*—
Polsinetti, Emilio. 2,946,627.
Centre National de la Recherche Scientifique: *See*—
Gavreau, Vladimir, and Calaora. 2,946,938.
Chadowski, Joseph P., to New-Tronics Corp. Automobile antenna. 2,946,842, 7-26-60, Cl. 174—153.
Chagnon, Pierre: *See*—
Cohen de Lara, Georges, Chagnon, Delachanal, Hure, and Platzer. 2,946,667.
Chagnot, Albert C.: *See*—
Collingwood, Merle J., and Chagnot. 2,946,266.
Chain Belt Co.: *See*—
Carrier, Robert M., Jr. 2,946,429.
Chamberlin, Earl M., and T. Utne, to Merck & Co., Inc. Preparation of Δ9(11)-anhydro steroids. 2,946,811, 7-26-60, Cl. 260—397.45.
Champion Paper and Fibre Co., The: *See*—
Carter, Thomas N. 2,946,532.
Warner, Edgar. 2,946,307.
Chang, Robert W. H.: *See*—
Barker, Norval G., and Chang. 2,946,780.
Charbonnages de France: *See*—
Belugou, Pierre, and Condolios. 2,946,438.
Condolios, Elie, and Belugou. 2,946,439.
Chemetron Corp.: *See*—
Likins, Merle, Strotman, and McCarthy. 2,946,629.
Chemstrand Corp., The: *See*—
De Witt, Hobson D., and Hobson. 2,946,760.
Chen, Li-Yen, to Directorate General of Telecommunications, Ministry of Communications. Vacuum tube hybrid. 2,946,861, 7-26-60, Cl. 179—170.
Chicago Development Corp.: *See*—
Dean, Reginald S. 2,946,729.
Dean, Reginald S., and Gullett. 2,946,730.
Chicago Railway Equipment Co.: *See*—
Lewis, Frank W. 2,946,411.
Spaeth, Irvin J. 2,946,410.
Chiddix, Max E., and E. P. Williams, to General Aniline & Film Corp. Alkylbenzyltriphenylphosphonium chlorides. 2,946,824, 7-26-60, Cl. 260—606.5.
Chikuan Co.: *See*—
Hamer, Leland S. 2,946,349.
Child, Claude H., and S. A. Pryga, to North American Aviation, Inc. High temperature pressurized coaxial radio frequency connector. 2,946,971, 7-26-60, Cl. 333—97.
Childs, Henry B., to Underwood Corp. Ribbon spool cover arrangement in typewriter. 2,946,423, 7-26-60, Cl. 197—166.
Chittenden, George E., to The Keelavite Co. Ltd. Hydraulic motor systems. 2,946,193, 7-26-60, Cl. 60—53.
Chmielecki, Jersy, to C.A.V. Ltd. Liquid fuel pumps for internal combustion engines. 2,946,292, 7-26-60, Cl. 103—160.
Christenson, Owen A., to General Motors Corp. Spark plugs. 2,946,912, 7-26-60, Cl. 313—141.
Christenson, Roger M., to Pittsburgh Plate Glass Co. Interpolymers of ethylenic monomers and ethylenic esters of alcohols from reduction of fatty acids of glyceride oil acids. 2,946,774, 7-26-60, Cl. 260—78.5.
Christiani & Nielsen: *See*—
Lassen-Nielsen, Morten. 2,946,197.
Christiania, Sprgerverk: *See*—
Smejda, Oscar J. 2,946,463.
Christianson, Carl L., Jr., to International Business Machines Corp. Transformer redundancy checking circuit. 2,946,962, 7-26-60, Cl. 328—195.
Ciba Ltd.: *See*—
Gasamann, Hans. 2,946,767.
Ciccone, Thomas Q.: *See*—
Triscoli, Louis R., Muller, and Ciccone. 2,946,284.
Cincinnati Milling Machine Co., The: *See*—
Fuldner, Herbert M., Morgan, Rave, and Baldwin. 2,946,265.
Cincinnati Shaper Co., The: *See*—
Jahnke, Robert H. 2,946,234.
Ciscel, Benjamin H., to Minneapolis-Honeywell Regulator Co. Automatic pilot for aircraft with acceleration monitoring means. 2,946,542, 7-26-60, Cl. 244—77.
Clair, Verne, Jr., and S. A. Zysk, to Kelsey-Hayes Co. Opening means for sealed containers. 2,946,478, 7-26-60, Cl. 220—54.
Clark, David, Co. Inc.: *See*—
Wadsworth, William B., and Poole. 2,946,862.
Clark, George M. Removable handle construction for burial caskets. 2,946,113, 7-26-60, Cl. 27—27.
Clark, Melville, Jr. Progressively keyed electrical musical instrument. 2,946,252, 7-26-60, Cl. 84—1.1.
Clark, Melville, Jr. Photoelectric apparatus for generating musical tones. 2,946,253, 7-26-60, Cl. 84—1.18.
Clemens, Ludwig. Machine for the manufacture of packages for cut materials. 2,946,167, 7-26-60, Cl. 83—137.
Cleveland Pneumatic Industries, Inc.: *See*—
Foisel, William J., and Elmers. 2,946,728.
Clevite Corp.: *See*—
Gerlach, Albrecht, and Wittig. 2,946,924.
Clifford, Cecil F., to Horstmann Clifford Magnetics Ltd. Self-starting magnetic escapement mechanisms. 2,946,183, 7-26-60, Cl. 58—116.
Clifford, Horstmann, Magnetics Ltd.: *See*—
Clifford, Cecil F. 2,946,183.
Clifford, Ivy B. Dough mixer and kneader. 2,946,299, 7-26-60, Cl. 107—38.
Cloutier, Frederick J.: *See*—
Yogus, William, and Cloutier. 2,946,245.
Coanda, Henri, to Sebac Nouvelle S.A. Jet propelled aircraft. 2,946,540, 7-26-60, Cl. 244—15.
Coast Metals, Inc.: *See*—
White, Harry G., and Zampieri. 2,946,430.
Coble, Lucian G. Swallowing coordinator. 2,946,124, 7-26-60, Cl. 32—32.
Cognint, Marcel, M. De Fromont, and P. Jacquemier, to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine. Differential flowmeter. 2,946,220, 7-26-60, Cl. 73—196.
Cohen, Joseph: *See*—
Henry, Ronald A., and Cohen. 2,946,820.
Cohen de Lara, Georges, P. Chagnon, M. Delachanal, J. Hure, and R. Platzer, to Etablissement Public: Commissariat A L'Energie Atomique. Apparatus for controlling the rate of discharge of materials through an outlet. 2,946,667, 7-26-60, Cl. 23—270.
Coles, Robert F., to General Aniline & Film Corp. Process of producing carbodiimides. 2,946,819, 7-26-60, Cl. 260—551.
Colgate, Stirling A., J. P. Ferguson, H. P. Furth, and R. E. Wright, to United States of America, Atomic Energy Commission. Apparatus for producing and manipulating plasmas. 2,946,914, 7-26-60, Cl. 313—231.
Collier Carbon and Chemical Corp.: *See*—
Webb, Irving D., and Yale. 2,946,714.
Collingwood, Merle J., and A. C. Chagnot. Counting and displacing apparatus for printing press delivery mechanisms. 2,946,266, 7-26-60, Cl. 93—93.
Collins, Samuel C., to Arthur D. Little, Inc. Liquid oxygen. 2,946,199, 7-26-60, Cl. 62—13.
Colo, Peter M., to Acme Visible Records, Inc. Slidable shelf arrangement. 2,946,638, 7-26-60, Cl. 312—255.
Colson, Glenn L. Reversing friction drive. 2,946,242, 7-26-60, Cl. 74—792.
Colton, Arthur, Co.: *See*—
Doepel, Wallace A., Edgar, Gajda, and Palen. 2,946,298.
Colton, Frank B., to G. D. Searle & Co. 17a-alkynyl-17β-alkanoyloxy-4,6-estradien-3-ones. 2,946,800, 7-26-60, Cl. 260—397.4.
Columbia-Southern Chemical Corp.: *See*—
Priebe, Edward L., and McCarthy. 2,946,660.
Combustion Engineering, Inc.: *See*—
Norris, William C., Rupinski, and Svendsen. 2,946,116.
Comery, Peter D., to Orenda Engines Ltd. Labyrinth seal. 2,946,609, 7-26-60, Cl. 286—10.
Compagnie Generale de Telegraphie Sans Fil: *See*—
Lerbs, Alfred. 2,946,919.
Compagnie Industrielle des Telephones: *See*—
Allson, Etienne, and Monin. 2,946,896.
Compton, Charles E. Cooking apparatus. 2,946,275, 7-26-60, Cl. 99—390.
Conalty, Michael L.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,946,792.
Conant Ball Co.: *See*—
Fryar, Ken, and Diamond. 2,946,083.
Condenser Machinery Corp., The: *See*—
Wellington, Cary L. 2,946,727.
Condolios, Elie: *See*—
Belugou, Pierre, and Condolios. 2,946,438.
Condolios, Elie, and P. Belugou, to Etablissements Neyrpic, and Charbonnages de France. Process and apparatus for the separation of solid particulate materials of different densities and/or different particle size. 2,946,439, 7-26-60, Cl. 209—157.
Conmar Products Corp.: *See*—
Bashover, Albert. 2,946,109.
Conner, Guy O., to Republic Steel Corp. Work and tool holders for metal working machines. 2,946,583, 7-26-60, Cl. 269—156.
Consolidated Electronics Industries Corp.: *See*—
Lockwood, Edwin H., and Brenneman. 2,946,876.
Continental Can Co., Inc.: *See*—
Baxter, Thomas R. 2,946,166.
Continental-Diamond Fibre Corp.: *See*—
Haroldson, Arthur H., Mulrooney, and Hogan. 2,946,087.
Conversano, Henry M., to General Motors Corp. Pop-up signal devices in instrument panels. 2,946,082, 7-26-60, Cl. 340—52.
Convery, Rita: *See*—
Convery, Sue J. and R. 2,946,138.
Convery, Sue J. and R. Educational test folder for teaching arithmetic. 2,946,138, 7-26-60, Cl. 35—48.

Cook, Owen L., to The Waltham Horological Corp. Telephone plug. 2,946,978, 7-26-60, Cl. 339—103.

Corbett, Marshall J., to Thompson Ramo Wooldridge Inc. Gas turbine engine fuel system and method. 2,946,190, 7-26-60, Cl. 60—39.28.

Corn, James W.: *See*—
Geppert, Donovan V., and Corn. 2,946,936.

Corning Glass Works: *See*—
Bailey, William D. 2,946,156.
Wismer, William R. 2,946,641.

Cota, Raymond E.: *See*—
Manwaring, Joshut G. D., and Cota. 2,946,168.

Cote, Omer E., to United States Automatic Box Machinery Co., Inc. Method of and machine for forming packages. 2,946,165, 7-26-60, Cl. 53—26.

Coulter, Claude B. Fuel injector for internal combustion engines. 2,946,576, 7-26-60, Cl. 261—23.

Coulter, James H., Jr., and L. E. Johnson, to The Babcock & Wilcox Co. Chemical and heat recovery apparatus. 2,946,609, 7-26-60, Cl. 23—277.

Council of Scientific and Industrial Research: *See*—
Kelkar, Govind R., and Bhattacharyya. 2,946,783.

Courtaulds Ltd.: *See*—
Ballard, Denis G. H., Bamford, Hanby, and Weymouth. 2,946,771.

Cox, Isaac E., to American Brake Shoe Co. Railway journal bearings. 2,946,631, 7-26-60, Cl. 308—83.

Crabill, Allen K., to E. J. Lavino and Co. Furnace for reducing metallic ores. 2,946,581, 7-26-60, Cl. 266—9.

Craddock-Terry Shoe Corp.: *See*—
Lockridge, Robert S. 2,946,140.

Craig, Burnie J. Writing instrument. 2,946,311, 7-26-60, Cl. 120—42.03.

Craig, Burnie J. Ball point pen. 2,946,312, 7-26-60, Cl. 120—42.16.

Craig, Carroll C. Film holder. 2,946,271, 7-26-60, Cl. 95—66.

Crain, Albert H.: *See*—
Crain, John P. and A. H. 2,946,625.

Crain, John P. and A. H. Wheel for marsh vehicle. 2,946,625, 7-26-60, Cl. 301—41.

Crapuchettes, Paul W., to Litton Industries Inc. Magnetron output coupling circuit. 2,946,918, 7-26-60, Cl. 315—39.

Creamery Package Mfg. Co., The: *See*—
Wakeman, Alden H. 2,946,205.

Creelman, Edmund W., to The C. W. Zumbiel Co. Hinge type carton. 2,946,499, 7-26-60, Cl. 229—37.

Crockett, Sydney R., to United States of America, Navy. Peripheral nozzle spinner rocket. 2,946,261, 7-26-60, Cl. 89—1.7.

Crowe, William J., to Bell Telephone Laboratories, Inc. Nonreciprocal wave transmission. 2,946,966, 7-26-60, Cl. 333—24.

Crucible Steel Co. of America: *See*—
Day, Maurice J. 2,946,700.

Cubberley, Mitchell H. Safety ski pole having releasable hand grip. 2,946,600, 7-26-60, Cl. 280—11.37.

Culleton, John T., to Pacific Pumping Co. Apparatus for separating entrained particles from liquids. 2,946,451, 7-26-60, Cl. 210—512.

Cummings, Howard B., to Shenango China, Inc. Dishware decorating machine. 2,946,278, 7-26-60, Cl. 101—44.

Cummings, James J., to United States of America, Army. Relay. 2,946,933, 7-26-60, Cl. 317—171.

Cunningham, Ernest R., Jr. Bucket loader. 2,946,564, 7-26-60, Cl. 254—106.

Currie, Hugh A.: *See*—
Zievers, James F., and Currie. 2,946,444.

Curtis, Nicholas, to Trans-Lux Corp. Data reproducing apparatus. 2,946,840, 7-26-60, Cl. 178—7.1.

Curtis, Thomas E.: *See*—
Bower, John L., and Curtis. 2,946,646.

Curtiss-Wright Corp.: *See*—
Dickey, John W. 2,946,374.
Hungerford, Philip C., Jr. 2,946,417.

Cutler-Hammer, Inc.: *See*—
Siebers, Robert W. 2,946,972.

Daane, Willem: *See*—
Klaassen, Hendrik, and Daane. 2,946,317.

Dacam Corp.: *See*—
Potts, William M., Hartis, and Darholt. 2,946,164.

Da Costa, Harry, to The Plessey Co. Ltd. Gramophone record changing mechanisms. 2,946,595, 7-26-60, Cl. 274—10.

Daimler-Benz Aktiengesellschaft: *See*—
Barényi, Béla. 2,946,623.
Barényi, Béla. 2,946,624.

Dalve, Johannes A.: *See*—
Kahn, Louis E., and Dalve. 2,946,692.

Danielson, Vernon S., to W. H. Miner, Inc. Shock absorbing mechanisms. 2,946,462, 7-26-60, Cl. 213—7.

Dansk Rontgen-Teknik A/S.: *See*—
Kühl, Johan B. 2,946,549.

Darholt, Jerome O.: *See*—
Potts, William M., Hartis, and Darholt. 2,946,164.

Darling, Alan S., to Johnson, Matthey & Co. Ltd. Ductile electrical resistance alloy. 2,946,679, 7-26-60, Cl. 75—134.

Davey, Charles B., and S. A. Wilde, to Wisconsin Alumni Research Foundation. Sawdust composts and method of preparing the same. 2,946,675, 7-26-60, Cl. 71—8.

Davis, Elwood A., to Friden, Inc. Calculating machine. 2,946,505, 7-26-60, Cl. 235—63.

Day, Maurice J., to Crucible Steel Co. of America. Production of infiltrated composites. 2,946,700, 7-26-60, Cl. 117—66.

Day, Richard A., to Hughes Aircraft Co. Pulse width shaping circuit. 2,946,899, 7-26-60, Cl. 307—88.5.

Daystrom, Inc.: *See*—
Gilbert, Roswell W. 2,946,930.

Dean, Albert G., to The Budd Co. Double-deck railway car structure. 2,946,295, 7-26-60, Cl. 105—340.

Dean, Reginald S., to Chicago Development Corp. Production of electrolytic zirconium. 2,946,729, 7-26-60, Cl. 204—64.

Dean, Reginald S., and W. W. Gullett, to Chicago Development Corp. Refining titanium alloys. 2,946,730, 7-26-60, Cl. 204—64.

Dean, Walter B., and H. P. Bauer, to The Budd Co. Underframe structure for railway cars. 2,946,297, 7-26-60, Cl. 105—397.

De Bourdeau, Paul. Blades of saws. 2,946,359, 7-26-60, Cl. 143—133.

Deere & Co.: *See*—
Anderson, Sidney E. 2,946,170.
Hansen, Harold V. 2,946,490.
McCanse, James E., and Van Auweleer. 2,946,373.
Nelson, Roger J. 2,946,392.
Soteropulos, Gust. 2,946,169.

Deering Milliken Research Corp.: *See*—
Wright, Edward J. 2,946,175.

De Fromont, Michel: *See*—
Cogniat, Marcel, De Fromont, and Jacquemier. 2,946,220.

Deibel, Raymond A., and A. C. Scinta, to Trico Products Corp. Windshield wiper. 2,946,078, 7-26-60, Cl. 15—250.

Delachanal, Michel: *See*—
Cohen de Lara, Georges, Chagnon, Delachanal, Hure, and Platzer. 2,946,667.

De Long Corp.: *See*—
Suderow, George E. 2,946,557.

De Lorean, John Z.: *See*—
Bates, Charles E., and De Lorean. 2,946,326.

De Net, Robert W.: *See*—
Zaugg, Harold E., and De Net. 2,946,803.
Zaugg, Harold E., and De Net. 2,946,804.

Dennerlein, William H.: *See*—
Schladermundt, Peter, Dennerlein, and Simons. 2,946,435.

Dennison, Frederick R., E. Olson, and G. W. Wentis, to General Motors Corp. Choke lock-out. 2,946,577, 7-26-60, Cl. 261—39.

Denton, Robert F., and J. R. White, to Jamieson Laboratories, Inc. Escapement mechanism. 2,946,227, 7-26-60, Cl. 74—1.5.

De Prisco, Carmine F.: *See*—
Jones, James B., Elmore, and De Prisco. 2,946,119.
Jones, James B., Elmore, and De Prisco. 2,946,120.

Derringe, Bloddie L.: *See*—
Peterson, C. Lynn, and Derringe. 2,946,448.

De Smaele, Albert. Excavator apparatus having stepper type advancing means. 2,946,578, 7-26-60, Cl. 262—7.

De Smidt, Woodrow A., and C. E. Zarwell, to Allen-Bradley Co. Multiposition switch. 2,946,871, 7-26-60, Cl. 200—65.

Desomatic Products, Inc.: *See*—
Asker, Gunnar C. F., and Siggelin. 2,946,554.

Deutsch, Dennis L.: *See*—
Schenck, Leslie M., and Deutsch. 2,946,821.
Schenck, Leslie M., and Deutsch. 2,946,822.

Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Bader, Erich, Schweitzer, and Querfurth. 2,946,770.
Manteufel, Rolf. 2,946,399.

De Vaney, Fred D., and D. Beggs, to Erie Mining Co. Heat-treating fluent solids. 2,946,489, 7-26-60, Cl. 214—18.2.

De Vault, Albert N., to Phillips Petroleum Co. Deactivation of poisons on contaminated cracking catalysts. 2,946,740, 7-26-60, Cl. 208—120.

De Vries, Arthur D., and F. J. Buchmann, to Esso Research and Engineering Co. Improving the color of petroleum resins. 2,946,775, 7-26-60, Cl. 260—82.

De Witt, Hobson D., and P. H. Hobson, to The Chemstrand Corp. Stabilized acrylonitrile polymer composition and method of making same. 2,946,760, 7-26-60, Cl. 260—29.6.

Dexter, Richard D., to United Shoe Machinery Corp. Eyeleting machines for wire terminal forming. 2,946,368, 7-26-60, Cl. 153—1.

Diamond Alkali Co.: *See*—
Annis, Roger L. 2,946,572.
Myers, Clyde B. 2,946,653.

Diamond, Leslie: *See*—
Fryar, Ken, and Diamond. 2,946,083.

Dicken, Robert W. Well system. 2,946,385, 7-26-60, Cl. 166—88.

Dickey, John W., to Curtiss-Wright Corp. Seat construction and the like. 2,946,374, 7-26-60, Cl. 155—179.

Dickinson, Berton C.: *See*—
Jones, Howard A., Garman, and Dickinson. 2,946,718.
Jones, Howard A., Garman, and Dickinson. 2,946,719.

Dieterle, Charles. Belt. 2,946,004, 7-26-60, Cl. 2—312.

Dietz, Karl, and G. M. R. Lorentz, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Self-hardening alkali- and acid proof water glass cements capable of swelling. 2,946,695, 7-26-60, Cl. 106—84.

Directorate General of Telecommunications, Ministry of Communications: *See*—
Chen, Li-Yen. 2,946,861.

Disch, Ellis V., to Plainfield Patents Corp. Knit goods printing machine. 2,946,280, 7-26-60, Cl. 101—178.

Distin, Lionel S., to Ericsson Telephones Ltd. Electromagnetic relays. 2,946,873, 7-26-60, Cl. 200—87.

Djerassi, Carl: *See*—
Rosenkranz, George, Romo, and Djerassi. 2,946,784.

Dobbs, Russell S., to Philadelphia Gear Works, Inc. Valve operating mechanism. 2,946,338, 7-26-60, Cl. 137—22.

Dobson, Austin: *See*—
Scragg, Ernest P. R., and Dobson. 2,946,177.

Doeden, Roland E., to Doeden Tool Corp. Angle drive attachment for air operated hand tool. 2,946,315, 7-26-60, Cl. 121—34.

Doeden Tool Corp.: *See*—
Doeden, Roland E. 2,946,315.

Doepel, Wallace A., H. C. Edgar, L. P. Gajda, and W. E. Palen, to Arthur Colton Co. Compression coating tablet press. 2,946,298, 7-26-60, Cl. 107—1.

Donaldson, Donald J., to Kaiser Aluminum & Chemical Corp. Chemical process for extracting monohydrate alumina containing materials. 2,946,658, 7-26-60, Cl. 23—143.

Dopheide, Otto W., to Northern Electric Co., Ltd. Device for testing continuity and capacitance of circuit elements. 2,946,949, 7-26-60, Cl. 324—51.

Doppelmaier, George. Drain valve. 2,946,842, 7-26-60, Cl. 137—217.

Dornfeld, Clinton A., to G. D. Searle & Co. 2-diarylalkyl-3,4,5,6-tetrahydropyrimidines and processes. 2,946,791, 7-26-60, Cl. 260—251.

Dougherty, Charles R., to General Electric Co. Ballast apparatus. 2,946,922, 7-26-60, Cl. 315—100.

Dow Chemical Co., The: *See*—
Houvener, Irving S. 2,946,090.
Monroe, Roger F., and Anderson. 2,946,825.
Walles, Wilhelm E., and Tousignant. 2,946,772.
Walles, Wilhelm E., and Tousignant. 2,946,773.

Dow-Corning Corp.: *See*—
Plueddemann, Edwin P. 2,946,701.

Drafto Corp.: *See*—
Kraeling, John B. 2,946,632.

Drager, Otto H.: *See*—
Hollman, Franz, and Warnecke. 2,946,340.

Dreyer, Kuno: *See*—
Nauschutz, Peter, Wessel, Kuhlo, Dreyer, and Bolkow. 2,946,285.

Droescher, Le Roy A., to C. H. Wheeler Mfg. Co. Condensers. 2,946,571, 7-26-60, Cl. 257—43.

Du Boff, Philip, and H. Miller, to Shelfmaker Products Corp. Reciprocating tray units. 2,946,458, 7-26-60, Cl. 211—88.

Ducki, Chester J.: *See*—
Sylvander, Charles E., and Ducki. 2,946,290.

Dudley, Francis B., and G. H. Cady. Pentafluorosulfur hypofluorite and method for its production. 2,946,661, 7-26-60, Cl. 23—203.

Dumas-Wilson & Co.: *See*—
Root, Frank L. 2,946,723.

Dumke, William E., and J. R. Bailey, to Switchcraft, Inc. Signal lamp and holder therefor. 2,946,994, 7-26-60, Cl. 340—381.

Dunham, George W. Pilots for filling threads. 2,946,353, 7-26-60, Cl. 139—125.

Du Pont de Nemours, E. I., and Co.: *See*—
Bragaw, Chester G., Jr., and Simeral. 2,946,711.
Bro, Manville L., and Sandt. 2,946,763.
Fields, Reuben T. 2,946,710.
Kahn, Louis E., and Dalve. 2,946,692.

Durbin, Vernon, to National Pneumatic Co., Inc. Photoelectric control system for door operation and the like. 2,946,931, 7-26-60, Cl. 317—124.

Durner, Carl. Safety brake setting device for vehicles. 2,946,485, 7-26-60, Cl. 222—30.

Dusina, Peter P., Jr., and R. M. Stallard, to General Motors Corp. Process for embossing decorative articles. 2,946,713, 7-26-60, Cl. 154—106.

Dyer, Arthur M. Shoe cleaning apparatus. 2,946,077, 7-26-60, Cl. 15—238.

Dynacor Inc.: *See*—
Lufcy, Carroll W. 2,946,973.

Dynex, Inc.: *See*—
Hare, Richard C. 2,946,195.

Eastman, James M., to Bendix Aviation Corp. Acceleration scheduling and isochronous governing fuel feed and power control device for gas turbine engines. 2,946,188, 7-26-60, Cl. 60—39.28.

Eaton, Fred L., deceased; L. E. Eaton, administrator. Tension retaining binder. 2,946,563, 7-26-60, Cl. 254—164.

Eaton, Lawrence E.: *See*—
Eaton, Fred L. 2,946,563.

Ebauches S.A.: *See*—
Beyner, Andre, Scherrer, and Morier. 2,946,940.

Edgar, Hugh C.: *See*—
Doepel, Wallace A., Edgar, Gajda, and Palen. 2,946,298.

Edgecombe, David A., to The Babcock & Wilcox Co. Extrusion of metal billets. 2,946,487, 7-26-60, Cl. 207—10.

Edgerton, Charles W., Jr., to Wayne Iron Works. Push-pull actuator. 2,946,556, 7-26-60, Cl. 254—1.

Edwards, John K. Radio and television chassis stand. 2,946,584, 7-26-60, Cl. 269—156.

Eickmeyer, Otto R., and C. J. Pitt. Educational device. 2,946,135, 7-26-60, Cl. 35—31.

Eikel, Oliver, Jr.: *See*—
Kowalyshyn, Stephen, Jr., Eikel, and Warren. 2,946,868.

Eisenbraun, Allan A.: *See*—
Gaver, Kenneth M., and Eisenbraun. 2,946,686.

Eisner, Burton D., and D. E. Raterman, to American Photocopy Equipment Co. Combination photo-copy and printing apparatus. 2,946,272, 7-26-60, Cl. 95—77.5.

Elbreder, Charles H.: *See*—
Ross, Edward J., and Elbreder. 2,946,685.

Elders, Daniel S., to United States of America, Army. Delay lines. 2,946,967, 7-26-60, Cl. 333—29.

Electric Steel Foundry Co.: *See*—
Wahl, Harold P. 2,946,619.

Electric Storage Battery Co., The: *See*—
Boyer, Charles J. 2,946,063.

Electroacustic Gesellschaft mit beschrankter Haftung: *See*—
Richter, Friedrich. 2,946,647.

Elektrophysikalische Anstalt Bernhard Berghaus: *See*—
Berghaus, Bernhard, and Bucek. 2,946,708.

Elliott, William E., and R. E. Reinhard, to Allis-Chalmers Mfg. Co. Method for estimating interfacial tension of a mineral oil. 2,946,216, 7-26-60, Cl. 73—53.

Ellis, Benjamin C., Jr., to Western Electric Co., Inc. Snagging device. 2,946,527, 7-26-60, Cl. 242—25.

Elmers, Charles E.: *See*—
Foisel, William J., and Elmers. 2,946,728.

Elmore, William C.: *See*—
Jones, James B., Elmore, and De Prisco. 2,946,119.
Jones, James B., Elmore, and De Prisco. 2,946,120.

Eloranta, Valto K., to Polaroid Corp. Photographic apparatus. 2,946,270, 7-26-60, Cl. 95—13.

Ely, James E., to Allegheny Ludlum Steel Corp. Grinders. 2,946,163, 7-26-60, Cl. 51—188.

Engel, Charles P. Sheet metal shear having dual tractive cutters. 2,946,251, 7-26-60, Cl. 83—488.

Engineering Research and Application Ltd.: *See*—
Hodkin, David. 2,946,322.

Ericsson Telephones Ltd.: *See*—
Distin, Lionel S. 2,946,873.

Erie Mining Co.: *See*—
De Vaney, Fred D., and Beggs. 2,946,489.

Ernst, Heinrich. Self-steered toy vehicle. 2,946,153, 7-26-60, Cl. 46—202.

Eschinazi, Habib-Emile, to The Givaudan Corp. Process for making methyl-(4-isopropyl-1-cyclopentyl)-ketone and intermediate obtained thereby. 2,946,823, 7-26-60, Cl. 260—593.

Eshbaugh, Jesse E., D. G. Keil, and A. H. Schmidt, to General Motors Corp. Press-on closure for filler pipes. 2,946,215, 7-26-60, Cl. 70—169.

Espinoza, Richard A.: *See*—
Branning, George G., and Espinoza. 2,946,601.

Esso Research and Engineering Co.: *See*—
Beerbower, Alan, and Meyer. 2,946,751.
Bloomsburg, Harry E., Behymer, and Robbins. 2,946,745.
De Vries, Arthur D., and Buchmann. 2,946,775.
Kimberlin, Charles N., Jr., and Merrill. 2,946,833.
Peet, Nick P. 2,946,754.
Sproule, Lorne W., and Rogers. 2,946,749.

Etablissement Public: Commissariat A L'Energie Atomique: *See*—
Cohen de Lara, Georges, Chagnon, Delachanal, Hure, and Platzer. 2,946,667.

Etablissements Neyrpic: *See*—
Belugou, Pierre, and Condollos. 2,946,438.
Condollos, Elie, and Belugou. 2,946,439.

Etter, Thomas L.: *See*—
Silver, Roland, and Etter. 2,946,927.

Evans, L. B., Son Co.: *See*—
Spaulding, Earl H. 2,946,070.

Evans, Robert T., to Halliburton Oil Well Cementing Co. Well apparatus. 2,946,388, 7-26-60, Cl. 166—120.

Everett, O. Ellis: *See*—
Stone, Wallace E. 2,946,278.

Everett, S., & R. J., & Co. Ltd.: *See*—
Everett, Samuel J. 2,946,093.

Everett, Samuel J., to S. & R. J. Everett & Co. Ltd. Hypodermic needles. 2,946,093, 7-26-60, Cl. 18—36.

Evrell, Kaleb E., to Aktiebolaget Bolinder-Munktell. Device for conversion of a periodically irregular rotary motion to a regular motion or vice versa. 2,946,228, 7-26-60, Cl. 74—68.

Eymann, Lewis C. Apparatus for ammoniation of phosphate materials. 2,946,666, 7-26-60, Cl. 23—259.1.

Fabula, Andrew: *See*—
Paulson, Arthur W., and Fabula. 2,946,919.

Fairchild, Meri K., C. W. Maxfield, and H. P. Brady, to North Corp. Inertia valve. 2,946,339, 7-26-60, Cl. 137—38.

Falk Corp., The: *See*—
Schmitter, Walter P. 2,946,233.

Falls, John J., to The Standard Electrical Tool Co. Method and apparatus for electrolytic shaping. 2,946,731, 7-26-60, Cl. 204—143.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Klauke, Erich, and Bayer. 2,946,768.
Nentwig, Joachim, and Schnell. 2,946,808.
Roos, Ernst, Lober, and Koerner. 2,946,765.
Schnell, Hermann, and Fritz. 2,946,766.

Farber, Jurgen, to Jagenberg-Werke Akt.-Ges. Stacking mechanism for receiving stacks of nested containers and individually delivering the same. 2,946,480, 7-26-60, Cl. 221—106.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Dietz, Karl, and Lorentz. 2,946,695.
Jüngst, Hans, and Kätsch. 2,946,331.
Scherer, Otto, Kuhn, and Forche. 2,946,828.
Schlichenmaier, Hans, and Pohlmann. 2,946,794.

Parchmin, Roy H. Scraper for hog dehairing machine. 2,946,085, 7-26-60, Cl. 17—18.

Farkas, Thomas P.: *See*—
Radtke, Edward W., and Farkas. 2,946,509.

Fastener Corp.: *See*—
Wandel, Oscar A. 2,946,059.

Faulkner, Alfred H., to Automatic Electric Laboratories, Inc. Mechanical delay line. 2,946,968, 7-26-60, Cl. 333—30.

Federal-Mogul-Bower Bearings, Inc.: *See*—
Probst, Robert L., Le Brasse, and Karp. 2,946,681.

Federal Paper Board Co., Inc.: *See*—
Williamson, Marshall I. 2,946,436.
Williamson, Marshall I. 2,946,498.
Williamson, Marshall I. 2,946,501.
Williamson, Marshall I. 2,946,620.
Williamson, Marshall I. 2,946,621.

Federal Sign and Signal Corp.: *See*—
Gosswiller, Earl W. 2,946,995.

Ferguson, John P.: *See*—
Colgate, Stirling A., Ferguson, Furth, and Wright. 2,946,914.

Ferguson, William C.: *See*—
Gordon, Kerwin E., and Ferguson. 2,946,414.
Ferm, Olaf G. Apparatus for feeding wires into conduits. 2,946,558, 7–26–60, Cl. 254—134.3.
Ferm, Olaf G. Tool for guiding wires into conduits. 2,946,560, 7–26–60, Cl. 254—134.3.
Fidelity Machine Co., Inc.: *See*—
Haas, Paul. 2,946,209.
Fields, Ellis K., to Standard Oil Co. Process for the preparation of isonicotinic acid. 2,946,800, 7–26–60, Cl. 260—295.
Fields, Ellis K., to Standard Oil Co. Production of pyridine carboxylic acids. 2,946,801, 7–26–60, Cl. 260—296.
Fields, Reuben T., to E. I. du Pont de Nemours and Co. Polytetrafluoroethylene adhesive tape. 2,946,710, 7–26–60, Cl. 154—2.26.
Filler, Edward Z., and J. J. Kelter. Massage and brush type single-use toothbrush. 2,946,072, 7–26–60, Cl. 15—110.
Filtrox-Werke AG.: *See*—
Weis, Alfred. 2,946,447.
Finn, George B., Jr., to Sarkes Tarzian, Inc. Diode. 2,946,935, 7–26–60, Cl. 317—234.
Firm, Walter G., to Minneapolis-Honeywell Regulator Co. Method of producing round metal pellets. 2,946,116, 7–26–60, Cl. 29—148.4.
Firma Werner Bahlsen: *See*—
Lange, Ferdinand. 2,946,495.
Fischel, Eduard M., to United States of America, Army. Guidance system for long range ballistic missile. 2,946,539, 7–26–60, Cl. 244—14.
Fischer, Jean. Arrangement in wall and ceiling panellings consisting of elongated trough-shaped thin-walled elements. 2,946,415, 7–26–60, Cl. 189—86.
Fitch, Clyde J., to International Business Machines Corp. Indicator. 2,946,954, 7–26–60, Cl. 324—97.
Fitch, Richard A., to United Kingdom Atomic Energy Authority. Spark-gap circuits. 2,946,923, 7–26–60, Cl. 315—163.
Flambeau Plastics Corp.: *See*—
Hulterstrum, Harold D. 2,946,207.
Fleming Sales Co., Inc.: *See*—
Bornemann, William C. 2,946,154.
Foisel, William J., and C. R. Ellmers, to Cleveland Pneumatic Industries, Inc. Adherent electroplating on titanium. 2,946,728, 7–26–60, Cl. 204—37.
Foner, Simon. Magnetic test apparatus. 2,946,948, 7–26–60, Cl. 324—34.
Food Machinery and Chemical Corp.: *See*—
Halt, James M. 2,946,239.
Jones, Howard A., Garman, and Dickinson. 2,946,718.
Jones, Howard A., Garman, and Dickinson. 2,946,719.
Forche, Eberhard: *See*—
Scherer, Otto, Kuhn, and Forche. 2,946,828.
Ford, Everett F., to General Mills, Inc. Sifter. 2,946,441, 7–26–60, Cl. 209—344.
Foster, Charlie E. Tractor with fender and cab defining tanks. 2,946,598, 7–26–60, Cl. 280—5.
Foster, Claud: *See*—
Strang, John M., and Foster. 2,946,257.
Foster Wheeler Corp.: *See*—
Blizard, John. 2,946,323.
West, John M. 2,946,570.
Zoschak, Robert J., and Ray. 2,946,187.
Fox, Richard D.: *See*—
Skog, Henry A., and Fox. 2,946,361.
Francis, Charles B., to Puriron and Chemicals, Inc. Production of new sulfuric acid from waste pickle liquor. 2,946,659, 7–26–60, Cl. 23—172.
Francis, John G., Jr., to Thomas Steel Forms, Inc. Collapsible core form. 2,946,111, 7–26–60, Cl. 25—128.
Frankenhoff, Charles A. Recovery of diatomaceous earth. 2,946,755, 7–26–60, Cl. 252—416.
Franz, Earl E., and E. E. Franz, Jr. Clip for bathroom fixtures. 2,946,157, 7–26–60, Cl. 50—22.
Franz, Earl E., Jr.: *See*—
Franz, Earl E., and E. E. Franz, Jr. 2,946,157.
Fraula, William S., and H. M. King, to American Brake Shoe Co. Presses for thermosetting compositions. 2,946,091, 7–26–60, Cl. 18—17.
Friden, Inc.: *See*—
Davis, Elwood A. 2,946,505.
Malavazos, Arthur J. 2,946,506.
Fried, Josef, and R. W. Thoma, to Olin Mathieson Chemical Corp. 11-oxygenated-1-dehydrotestololactones. 2,946,807, 7–26–60, Cl. 260—343.2.
Fried, Josef, and G. H. Thomas, to Olin Mathieson Chemical Corp. Synthesis of steroids. 2,946,812, 7–26–60, Cl. 260—397.45.
Friedlander, Herbert N.: *See*—
Ke, Bacon, and Friedlander. 2,946,778.
Friedman, Merrill P., to Identification, Inc. Garment sorting apparatus. 2,946,427, 7–26–60, Cl. 198—38.
Friel, M. Craig: *See*—
Barnhill, George B. 2,946,155.
Fritz, Gerhard: *See*—
Schnell, Hermann, and Fritz. 2,946,766.
Froelich, Gustave H., to The Torrington Mfg. Co. Pay off reel for wire or the like. 2,946,536, 7–26–60, Cl. 242—128.
Fruengel, Frank. System for probing materials by shock wave signals. 2,946,217, 7–26–60, Cl. 73—67.5.
Fryar, Ken, and L. Diamond, to Conant Ball Co. Drop-leaf hinges. 2,946,083, 7–26–60, Cl. 160—135.
Fuldner, Herbert M., J. M. Morgan, Jr., J. A. Rave, Jr., and H. J. Baldwin, to The Cincinnati Milling Machine Co. Pattern controlled milling machine. 2,946,265, 7–26–60, Cl. 90—13.5.
Fuller Co.: *See*—
Lindenberg, Waldemar. 2,946,991.
Furth, Harold P.: *See*—
Colgate, Stirling A., Ferguson, Furth, and Wright. 2,946,914.
G. M. E. Corp.: *See*—
Greer, Edward M., Appleton, and Barth. 2,946,304.
G-M Laboratories Inc.: *See*—
Malershofer, Karl M. 2,946,269.
Gajda, Leo P.: *See*—
Doepel, Wallace A., Edgar, Gajda, and Palen. 2,946,298.
Gallant, Melvin M. and N. R. Legue, to Union Carbide Corp. Heat-reactive compositions comprising a polyamide and trimethylphenol. 2,946,759, 7–26–60, Cl. 260—19.
Galvin, Ralph B., to Hi-Ro Heating Corp. High temperature conduit radiant overhead heating. 2,946,510, 7–26–60, Cl. 237—70.
Gamewell Co., The: *See*—
Hagen, Paul A. 2,946,902.
Gardner, Lloyd E., and R. J. Hogan, to Phillips Petroleum Co. Hydrocracking a gas oil with a presulfided catalyst consisting of oxides of vanadium, cobalt and molybdenum on gamma alumina. 2,946,738, 7–26–60, Cl. 208—112.
Gardner, Lloyd E., and R. J. Hogan, to Phillips Petroleum Co. Hydrocracking catalyst and process. 2,946,739, 7–26–60, Cl. 208—112.
Garman, John A.: *See*—
Jones, Howard A., Garman, and Dickinson. 2,946,718.
Jones, Howard A., Garman, and Dickinson. 2,946,719.
Gaskins, Lemuel W. Attachment for barber's shears. 2,946,122, 7–26–60, Cl. 30—133.
Gassmann, Hans, to Ciba Ltd. Manufacture of reaction products of polyisocyanates with ethylene oxide addition products. 2,946,767, 7–26–60, Cl. 260—47.
Gaver, Kenneth M., and A. A. Eisenbraun, to The Ogilvie Flour Mills Co., Ltd. Process of conditioning and drying glutamic acid end liquor. 2,946,686, 7–26–60, Cl. 99—14.
Gavreau, Vladimir, and A. Caiaora, to Centre National de la Recherche Scientifique. Automatic control of industrial machine servosystem with differential transmitter. 2,946,938, 7–26–60, Cl. 318—27.
Gaysowski, Joseph J., to General Electric Co. Water demineralising systems. 2,946,733, 7–26–60, Cl. 204—229.
Geigy Chemical Corp.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,946,792.
General Aniline & Film Corp.: *See*—
Chiddix, Max E., and Williams. 2,946,824.
Coles, Robert F. 2,946,819.
Hessel, Frederick A. 2,946,716.
Hyatt, Robert C., Mayhew, and Nunn. 2,946,721.
Kleinschmidt, Roger F., and Wilkinson. 2,946,805.
Schenck, Leslie M., and Deutsch. 2,946,821.
Schenck, Leslie M., and Deutsch. 2,946,822.
Streck, Clemens. 2,946,648.
General Dynamics Corp.: *See*—
Boscia, Archie F. 2,946,953.
Honer, Robert E. 2,946,907.
Lee, Willis L. 2,946,963.
Saxton, Howard N. 2,946,979.
Townsend, Stephen E. 2,946,987.
General Electric Co.: *See*—
Boeing, Walton P. 2,946,202.
Boyles, Robert L., and Wingler. 2,946,182.
Carver, Robert G. 2,946,203.
Dougherty, Charles R. 2,946,922.
Gaysowski, Joseph J. 2,946,733.
Grimes, Emory H., Jr. 2,946,274.
Haase, Allen P. 2,946,915.
Houser, Philip H. 2,946,212.
Jennings, Gresham N. 2,946,409.
Livingston, Orrin W. 2,946,993.
Malinowski, Richard F., and Vodicka. 2,946,911.
Sheldon, Luther M. 2,946,977.
Sholtes, George T., and Maney. 2,946,286.
Sias, Frederick R. 2,946,974.
Slade, Eugene E. 2,946,928.
Titus, Albert C. 2,946,907.
Walch, Kurt R., and Winsness. 2,946,929.
Wendt, Harry C., and Haskell. 2,946,226.
General Foods Corp.: *See*—
Stagmeier, Arthur F. 2,946,496.
General Industries Co., The: *See*—
Jin, Korda K. D. 2,946,941.
General Mills, Inc.: *See*—
Barker, Norval G., and Chang. 2,946,780.
Ford, Everett F. 2,946,441.
General Motors Corp.: *See*—
Allan, Robert M. 2,946,246.
Bates, Charles E., and De Lorean. 2,946,326.
Brucken, Byron L. 2,946,469.
Christenson, Owen A. 2,946,912.
Conversano, Henry M. 2,946,982.
Dennison, Frederick R., Olson, and Wentis. 2,946,577.
Dusina, Peter P., Jr., and Stallard. 2,946,713.
Eshbaugh, Jesse E., Kell, and Schmidt. 2,946,215.
Hay, Charles N. 2,946,160.
Horvath, William J. 2,946,117.
Kop, Carl F. 2,946,240.
Parks, Robert R., and Weaver. 2,946,869.
Rohr, Milton C. 2,946,575.
Snyder, Kenneth E. 2,946,241.
Thomas, Leslie S. 2,946,865.
Thompson, William B. 2,946,503.
Gentile, Frank. Muffler for use with catalysts in internal combustion engines. 2,946,325, 7–26–60, Cl. 123—119.
Geppert, Donovan V., and J. W. Corn, to Motorola, Inc. Semiconductor device. 2,946,936, 7–26–60, Cl. 317—235.
Gerlach, Albrecht, and K. Wittig, to Clevite Corp. Capacitor discharge circuit. 2,946,924, 7–26–60, Cl. 315—241.
Gesellschaft Zur Forderung der Forschung an der Eidg. Techn. Hochschule: *See*—
Bas-Taymas, Enis. 2,946,892.

Gibson, Paul: *See*—
Steiner, Charles S., and Gibson. 2,946,748.
Gibbings & Lewis Machine Tool Co.: *See*—
Jones, Gordon H. 2,946,232.
Gilbert, John E. Detachable table tray. 2,946,634, 7–26–60, Cl. 311—103.
Gilbert, Roswell W., to Daystrom, Inc. Magnetic suspension. 2,946,930, 7–26–60, Cl. 317—123.
Gilbert, Walter J., Sr., to Syntron Co. Continuously washed shaft seal. 2,946,608, 7–26–60, Cl. 286—8.
Gillette Co., The: *See*—
Nissen, Warren I. 2,946,431.
Pierce, Melbourne H., Perry, and Adami. 2,946,457.
Gilmont, Roger, to Manostat Corp. Analytical device. 2,946,486, 7–26–60, Cl. 222—38.
Gittelson, Bernard, to Triumph-Universa G.m.b.H. Bust measuring device. 2,946,125, 7–26–60, Cl. 33—2.
Givaudan Corp., The: *See*—
Eschinazi, Habib-Emile. 2,946,823.
Go Oil Well Services, Inc.: *See*—
Hawthorne, Millo M. 2,946,926.
Goette, Robert L.: *See*—
Butler, George B., and Goette. 2,946,757.
Good, Carl D., to Olin Mathieson Chemical Corp. Preparation of diborane. 2,946,663, 7–26–60, Cl. 23—204.
Goodman, Walter: *See*—
Beever, Jack, and Goodman. 2,946,883.
Gordon, Carroll G., and L. B. Robbins, to Textron Inc. Aerodynamic drag device. 2,946,543, 7–26–60, Cl. 244—135.
Gordon, Kerwin E., and W. C. Ferguson, to Southern Extrusions, Inc. Framework for a suspended ceiling. 2,946,414, 7–26–60, Cl. 189—36.
Gorham, Milton J.: *See*—
Rampino, Louis D., and Gorham. 2,946,742.
Gosswiller, Karl W., to Federal Sign and Signal Corp. Sound signal device. 2,946,995, 7–26–60, Cl. 340—388.
Gotay, Erasmo. Double bolt lock means. 2,946,214, 7–26–60, Cl. 70—118.
Gothberg, Karl E. A., to Aktiebolaget Svenska Kullagerfabriken. Roller bearing. 2,946,633, 7–26–60, Cl. 308—217.
Gothe, Ernst. Tool feed for multi-spindle automatics. 2,946,243, 7–26–60, Cl. 77—22.
Grabe, Clarence G., to National Valve & Mfg. Co. Constant support hanger. 2,946,547, 7–26–60, Cl. 248—54.
Grace, W. R., & Co.: *See*—
Prapas, Aristotle G. 2,946,789.
Rudner, Bernard. 2,946,795.
Rudner, Bernard. 2,946,796.
Rudner, Bernard. 2,946,797.
Rudner, Bernard. 2,946,798.
Rudner, Bernard, and Woods. 2,946,790.
Graham, George W., and G. B. Lusby, to Canadian Industries Ltd. Stabilisation of halohydrocarbons. 2,946,826, 7–26–60, Cl. 260—652.5.
Graphic Arts Research Foundation, Inc.: *See*—
Moyroud, Louis M. 2,946,268.
Grassie, Vernon R., to Hercules Powder Co. Manufacture of double-base propellant grains. 2,946,673, 7–26–60, Cl. 52—5.
Gray, John W., to United States of America, Navy. Bomb range computer. 2,946,260, 7–26–60, Cl. 89—1.5.
Green, Martin J. Waste disposal unit. 2,946,522, 7–26–60, Cl. 241—32.5.
Greer, Edward M., B. S. Appleton, and K. Barth, to G.M.E. Corp. Hatch cover assembly. 2,946,304, 7–26–60, Cl. 114—202.
Greig, James W., to Woodall Industries, Inc. Laminated trim sheet. 2,946,712, 7–26–60, Cl. 154—45.9.
Greist Mfg. Co., The: *See*—
Caldwell, Samuel P. 2,946,128.
Grimes, Emory H., Jr., to General Electric Co. Window closure for room air conditioner. 2,946,274, 7–26–60, Cl. 98—94.
Groner, Edward L., and L. J. Herndon, Jr., to Welex, Inc. Well bore caliper. 2,946,130, 7–26–60, Cl. 33—178.
Groth, Willard R.: *See*—
Breed, Holland N., Groth, Irwin, Kille, and Riggs. 2,946,984.
Guier, William C. Apparatus for handling stands of pipe. 2,946,464, 7–26–60, Cl. 214—2.5.
Gullett, William W.: *See*—
Dean, Reginald S., and Gullett. 2,946,730.
Gumbinner, Robert: *See*—
Mellan, Ibert, adn Gumbinner. 2,946,683.
Gustafsson, Stig, to AB Svenska Flaktfabriken. Collecting electrode for electrofilter. 2,946,400, 7–26–60, Cl. 183—7.
Gustin-Bacon Mfg. Co.: *See*—
Stephens, Joseph F., and Kerr. 2,946,371.
Haas, Paul, to Fidelity Machine Co., Inc. Auxiliary gap closing mechanism. 2,946,209, 7–26–60, Cl. 66—112.
Haase, Allen P., to General Electric Co. Grid construction. 2,946,915, 7–26–60, Cl. 313—348.
Hack, Frank W. Multi-cone ore concentration apparatus. 2,946,442, 7–26–60, Cl. 209—482.
Hacklander, Hans, to The Singer Mfg. Co. Looper throw out for sewing machines. 2,946,301, 7–26–60, Cl. 112—200.
Hafner, Theodore. Repeater amplifiers for surface wave transmission. 2,946,970, 7–26–60, Cl. 333—95.
Hagen, Paul A., to The Gamewell Co. Repeat cycle timers. 2,946,902, 7–26–60, Cl. 307—141.4.
Hagen, Robert H., R. D. Lopes, and G. H. Sundin, to United States Steel Corp. Compound traverse conveyor for pattern feeding. 2,946,468, 7–26–60, Cl. 214—16.
Halt, James M., to Food Machinery and Chemical Corp. Combined power transmission and steering mechanism for tracklaying vehicles. 2,946,239, 7–26–60, Cl. 74—710.5.
Hale, Theodore A., and W. F. Morgan. Lawn edge trimmer. 2,946,172, 7–26–60, Cl. 56—25.4.
Halliburton Oil Well Cementing Co.: *See*—
Evans, Robert T. 2,946,388.
Hambling, Stewart K., to The Standard Motor Co. Ltd. Gas turbine power plant. 2,946,192, 7–26–60, Cl. 60—39.51.
Hamel, Edmund. Reversible spindle drive for textile machine. 2,946,178, 7–26–60, Cl. 57—100.
Hamer, Leland S., to Chikaan Co. Fast operating plate valve. 2,946,349, 7–26–60, Cl. 138—94.3.
Hamor, Glenn H. 2-sulfamoylbenzoic acid esters. 2,946,815, 7–26–60, Cl. 260—470.
Hanby, William E.: *See*—
Ballard, Denis G. H., Bamford, Hanby, and Weymouth. 2,946,771.
Handley Brown Heater Co.: *See*—
Handley, Harold E. 2,946,562.
Handley, Harold E., to Handley Brown Heater Co. Mooring reel. 2,946,562, 7–26–60, Cl. 254—161.
Hansen, Albert B. A.: *See*—
Hartmann, Louis M., and Hansen. 2,946,426.
Hansen's, Chr., Laboratory, Inc.: *See*—
Rosenthal, Waldemar A., and Finkalla. 2,946,688.
Hansen, Harold V., to Deere & Co. Cotton cell drop attachment for planters. 2,946,490, 7–26–60, Cl. 222—227.
Hare, Richard C., to Dynex, Inc. Power operated master cylinder. 2,946,195, 7–26–60, Cl. 60—54.5.
Harless, Charles A., and A. R. Hegeman, to R. Hoe & Co., Inc. Reversing gear drives for printing machines. 2,946,230, 7–26–60, Cl. 74—361.
Harless, Charles A., to R. Hoe & Co., Inc. Printing machine plate lock-up. 2,946,282, 7–26–60, Cl. 101—415.1.
Haroldson, Arthur H., E. A. Mulrooney, Jr., and W. P. Hogan, to Continental-Diamond Fibre Corp. Apparatus and method for calendering plastic sheet material. 2,946,087, 7–26–60, Cl. 18—2.
Harris, Jess W. Device for providing water and liquid food to animals. 2,946,306, 7–26–60, Cl. 119—78.
Harrison, Donald A., to International Business Machines Corp. Communications system. 2,946,986, 7–26–60, Cl. 340—174.
Harsco Corp.: *See*—
Moyer, Robert F. 2,946,611.
Hartis, William E.: *See*—
Potts, William M., Hartis, and Darholt. 2,946,164.
Hartioff, Gordon S., to Bell Aircraft Corp. Aircraft flight control. 2,946,944, 7–26–60, Cl. 318—489.
Hartmann, Louis M., and A. B. A. Hansen, to A/S Brodrene Hartmann. Apparatus for conveying articles. 2,946,426, 7–26–60, Cl. 198—32.
Haskell, Clarence A.: *See*—
Wendt, Harry C., and Haskell. 2,946,226.
Hauser, Robert F. Blackboard for instruction in music. 2,946,254, 7–26–60, Cl. 84—471.
Hawkins, James E., to Seismograph Service Corp. Method of seismic prospecting. 2,946,393, 7–26–60, Cl. 181—.5.
Hawthorne, Millo M., to Go Oil Well Services, Inc. Bore hole detector and firing apparatus. 2,946,926, 7–26–60, Cl. 317—80.
Hay, Charles N., to General Motors Corp. Method and apparatus for finishing annular grooves. 2,946,160, 7–26–60, Cl. 51—58.
Headley, John. Grain blower assembly. 2,946,629, 7–26–60, Cl. 302—37.
Hebert, Domid G., to Royal McBee Corp. Latching devices. 2,946,237, 7–26–60, Cl. 74—527.
Hegeman, Andrew R.: *See*—
Harless, Charles A., and Hegeman. 2,946,230.
Helbing, Clarence H.: *See*—
Brunnick, Wayne A., and Helbing. 2,946,698.
Hellstrom, Axel G., to Aktiebolaget Elektrolux. Refrigerator employing secondary refrigeration system. 2,946,206, 7–26–60, Cl. 62—334.
Helm, Edward J. and E. V. Schulte, to Koppers Co., Inc. Production of diammonium phosphate. 2,946,655, 7–26–60, Cl. 23—107.
Helmick, Fred E.: *See*—
Randles, Arthur E., Jr. 2,946,497.
Henderson, William A.: *See*—
Johnson, Herbert L., and Henderson. 2,946,779.
Hennessey, Russell J., to Waldorf Paper Products Co. Display cartons. 2,946,433, 7–26–60, Cl. 206—45.19.
Henning, Robert W.: *See*—
Kopf, Rowland J., Henning, and Marsh. 2,946,061.
Henry, Albert R., to Henry Mfg. Co., Inc. Variable load limiting system for extensible masts and booms. 2,946,406, 7–26–60, Cl. 187—9.
Henry, Lyell D. Means for sensing and tabulating the accumulated roughness of a roadway surface. 2,946,644, 7–26–60, Cl. 346—13.
Henry Mfg. Co., Inc.: *See*—
Henry, Albert R. 2,946,406.
Henry, Ronald A., and J. Coben. High bulk density nitroguanidine. 2,946,820, 7–26–60, Cl. 260—564.
Henshaw, Thomas A., to The Fyrene Co. Ltd. Inductors. 2,946,293, 7–26–60, Cl. 103—273.
Hensley, Raymond, to North American Aviation, Inc. Automatic weight loader. 2,946,580, 7–26–60, Cl. 265—48.
Herbert, John M., to The Plessey Co. Ltd. Ceramic material and method of producing the same. 2,946,937, 7–26–60, Cl. 317—258.
Hercules Powder Co.: *See*—
Grassie, Vernon R. 2,946,673.
Herlet, Adolf, to Siemens-Schuckertwerke Aktiengesellschaft. Power transistor with monocrystalline semiconductor body. 2,946,709, 7–26–60, Cl. 148—33.
Herlihy, William F., to Lowell Counter Co. Flexible molded flanged counter stiffener having a ventilating opening. 2,946,141, 7–26–60, Cl. 36—68.
Herndon, Luther J., Jr.: *See*—
Groner, Edward L., and Herndon. 2,946,180.
Hershberg, Emanuel B.: *See*—
Oliveto, Eugene P., and Hershberg. 2,946,810.
Hershey Mfg. Co.: *See*—
Mihalek, Emery. 2,946,148.

Hessel, Frederick A., to General Aniline & Film Corp. Method of controlling and eradicating mites and ticks. 2,946,716, 7-26-60, Cl. 167—22.

Heston, Eugene E., to National Rubber Machinery Co. Extruder with jolated feed screw. 2,946,089, 7-26-60, Cl. 18—12.

Heublein, Inc.: *See*—
Jacobs, Frederick L. 2,946,687.

Hewitt, Woodrow W., to Parks-Cramer Co. Bobbin holder. 2,946,538, 7-26-60, Cl. 242—130.2.

Heyden, Rudi, and F. Schmitt, deceased (by A. Schmitt, nee Neukirchner, heir), to Boehme Fettchemie G.m.b.H. Tanning agent. 2,946,649, 7-26-60, Cl. 8—94.33.

Higgins, Fred, to James Lees and Sons Co. Yarn control device for uptwisters. 2,946,176, 7-26-60, Cl. 57—62.

Hildebrandt, Alexander B.: *See*—
Hutchison, John S., and Hildebrandt. 2,946,643.

Hill, Thomas G. Water ski towing device. 2,946,305, 7-26-60, Cl. 114—235.

Hinchman, Alva K. Motion-picture film winder and editor. 2,946,531, 7-26-60, Cl. 242—55.12.

Hine, John M.: *See*—
Krueger, Bruno O., Butler, and Hine. 2,946,403.

Hinkes, Thomas M.: *See*—
Toy, Arthur D. F., Rattenbury, and Hinkes. 2,946,764.

Hinton, Charles V., to The Terrell Machine Co. Textile bobbin delivery means. 2,946,467, 7-26-60, Cl. 214—17.

Hi-Ro Heating Corp.: *See*—
Galvin, Ralph B. 2,946,510.

Hi-Shear Rivet Tool Co.: *See*—
Schuster, Michael M. 2,946,208.

Hitzl, Harry. Roll film developing machine. 2,946,273, 7-26-60, Cl. 95—99.

Hnilicka, Milo P., Jr., to National Research Corp. Production of iron-free zirconium tetrachloride. 2,946,634, 7-26-60, Cl. 23—87.

Hobbie, Albert C., and J. W. Holdcraft, to Pittsburgh Plate Glass Co. Apparatus and method for packing pulverulent material. 2,946,357, 7-26-60, Cl. 141—5.

Hobson, H. M., Ltd.: *See*—
Westbury, Roy. 2,946,194.

Hobson, Patrick H.: *See*—
De Witt, Hobson D., and Hobson. 2,946,760.

Hodel, Ernst: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,946,792.

Hodkin, David, to Engineering Research and Application Ltd. Internal combustion engines. 2,946,322, 7-26-60, Cl. 121—194.

Hoe, R., & Co., Inc.: *See*—
Harless, Charles A. 2,946,282.
Harless, Charles A., and Hegeman. 2,946,280.

Hoffman Electronics Corp.: *See*—
Regnier, Norman J., Schmidt, and Kefes. 2,946,945.

Hoffman, Walter H., and W. P. Scott. Composition and method for treating poultry. 2,946,722, 7-26-60, Cl. 167—53.1.

Hogan, Robert J.: *See*—
Gardner, Lloyd E., and Hogan. 2,946,738.
Gardner, Lloyd E., and Hogan. 2,946,739.

Hogan, William P.: *See*—
Haroldson, Arthur H., Mulrooney, and Hogan. 2,946,087.

Holdcraft, Joseph W.: *See*—
Hobbie, Albert C., and Holdcraft. 2,946,357.

Hollman, Franz, and E. Warncke, to O. H. Drager. Lung-controlled breathing valve. 2,946,340, 7-26-60, Cl. 137—68.

Holt, Samuel L.: *See*—
Annear, John D., White, and Holt. 2,946,221.

Holser, Walter. Device for operating a preset switch. 2,946,863, 7-26-60, Cl. 200—35.

Honer, Robert E., to General Dynamics Corp. Slotted waveguide lobing in radar system. 2,946,997, 7-26-60, Cl. 343—11.

Hooker, Charles L., Jr. Oil and water separating pump for oil wells. 2,946,387, 7-26-60, Cl. 166—105.

Hooper, Alton V.: *See*—
Carter, Thomas A., Jr., and Hooper. 2,946,288.

Hooper, William W., and G. W. Traver. Merchandise rack and method of forming. 2,946,500, 7-26-60, Cl. 229—42.

Hopkins, Ruth R. Bed with tilting headboard. 2,946,066, 7-26-60, Cl. 5—327.

Hopkins, Shirley R., to United Shoe Machinery Corp. Fastener inserting devices. 2,946,420, 7-26-60, Cl. 193—43.

Hoppner, Martin, A. Schussler, and E. Schafer, to VEB Spinnereimaschinenbau Karl-Marx-Stadt. Gill box. 2,946,097, 7-26-60, Cl. 19—127.

Horingklee, Walter: *See*—
Asinger, Friedrich, Thiel, and Horingklee. 2,946,788.

Hornbostel, Lloyd, to Beloit Iron Works. Paper machine drive mechanism. 2,946,231, 7-26-60, Cl. 74—396.

Horning, William A. Sleeve type joint protector. 2,946,839, 7-26-60, Cl. 174—93.

Horvath, William J., to General Motors Corp. Assembly machine. 2,946,117, 7-26-60, Cl. 29—201.

Houdry, Eugene J., to Oxy-Catalyst, Inc. Catalytic treatment of gas streams. 2,946,651, 7-26-60, Cl. 23—2.

Houdry Process Corp.: *See*—
Maerker, John B. 2,946,831.

Hough, Frank G., Co., The: *See*—
Beyerstedt, Ralph L. 2,946,238.

Houk, Robin H. Toy log cabin. 2,946,150, 7-26-60, Cl. 46—28.

Houser, Philip H., to General Electric Co. Control system for wash water storage and re-use system. 2,946,212, 7-26-60, Cl. 68—12.

Houvener, Irving S., to The Dow Chemical Co. Die assembly. 2,946,090, 7-26-60, Cl. 18—12.

Howard, Herbert H., to Permanent Filter Corp. Filtration units. 2,946,446, 7-26-60, Cl. 210—323.

Huber, Ernst: *See*—
Spinnler, Wilhelm, Bruhin, Scharli, Huber, and Linder. 2,946,910.

Huck, William F., A. J. Albrecht, and D. P. Sanford, to The Brunswick Automatic Pinsetter Corp. Automatic pinsetter foul control mechanism. 2,946,591, 7-26-60, Cl. 273—43.

Hughes Aircraft Co.: *See*—
Baum, Custer C. 2,946,893.
Day, Richard A. 2,946,899.

Hujsak, Edward J. Fluid pressure sensitive resistance bridge circuit. 2,946,222, 7-26-60, Cl. 73—398.

Hulterstrum, Harold D., to Flambeau Plastics Corp. Mold for frozen confections. 2,946,207, 7-26-60, Cl. 62—355.

Hunger, James C., and G. R. Reed. Folder cover. 2,946,604, 7-26-60, Cl. 281—34.

Hungerford, Philip C., Jr., to Curtiss-Wright Corp. Bidirectional no-back couplings. 2,946,417, 7-26-60, Cl. 192—8.

Hunsbedt, Theodore, to Bilwin Co., Inc. Shoe attachment for winter sports. 2,946,599, 7-26-60, Cl. 280—11.13.

Hunt, Loyd E., and J. C. Schelleng, to Bell Telephone Laboratories, Inc. Wave guide phase inverter. 2,946,972, 7-26-60, Cl. 333—98.

Huppert, Charles B. Hand stamps. 2,946,279, 7-26-60, Cl. 101—103.

Hure, Jacques: *See*—
Cohen de Lara, Georges, Chagnon, Delachanal, Hure, and Platzer. 2,946,667.

Hussey, Luther W., to Bell Telephone Laboratories, Inc. Electrical circuit for communication networks. 2,946,855, 7-26-60, Cl. 179—18.

Hutchings, Le Roi E., to The Pure Oil Co. Oil treating apparatus. 2,946,735, 7-26-60, Cl. 204—302.

Hutchison, John S., and A. B. Hildebrandt, to Jersey Production Research Co. Clipped trace recording of electrical signals. 2,946,643, 7-26-60, Cl. 346—1.

Hyatt, Robert C., R. L. Mayhew, and L. G. Nunn, to General Aniline & Film Corp. Emulsification of water-insoluble organic solvents. 2,946,721, 7-26-60, Cl. 167—42.

Ideco Inc.: *See*—
Thorson, Warren K., and McLerran. 2,946,561.

Identification, Inc.: *See*—
Friedman, Merrill P. 2,946,427.

Illinois Tool Works: *See*—
Poupitch, Ougiljesa J. 2,946,082.

Imperial Chemical Industries Ltd.: *See*—
Ross, Herbert J. 2,946,476.
Scott, Gerald, and Seed. 2,946,776.
Westwood, Albert R. C. 2,946,105.
Zenftman, Henryk. 2,946,758.

Innocenti, Scipione, to S.A.S.I.B.-S.p.A. Scipione Innocenti-Bologna. Apparatus for picking up samples of cigarettes, weighing same and recording their weight. 2,946,579, 7-26-60, Cl. 265—3.

Insolio, Thomas A., R. Carini, and P. J. Magrini, Sr., to American Window Glass Co. Pack handling device. 2,946,460, 7-26-60, Cl. 212—10.

Intagliata, Salvatore J., and R. W. Yerks, to Underwood Corp. Case shift and related features. 2,946,421, 7-26-60, Cl. 197—5.

International Business Machines Corp.: *See*—
Beattie, Horace S., Buley, and Muenzer. 2,946,504.
Borders, Charles R., and Toner. 2,946,983.
Bruehl, Lawrence. 2,946,262.
Bruehl, Lawrence. 2,946,263.
Bruehl, Lawrence. 2,946,316.
Christiansen, Carl L., Jr. 2,946,962.
Fitch, Clyde J. 2,946,954.
Harrison, Donald A. 2,946,986.
Lisinski, Joseph E. 2,946,381.
McMillan, Wilmur M., Lowrie, and Raser. 2,946,985.

International Computers and Tabulators Ltd.: *See*—
Broido, Daniel. 2,946,982.

Irwin, Gordon C.: *See*—
Breed, Rolland N., Groth, Irwin, Kille, and Riggs. 2,946,984.

Jacobi, Ernst: *See*—
Zima, Otto, and Jacobi. 2,946,802.

Jacobs, Frederick L., to Heublein, Inc. Method of making vodka. 2,946,687, 7-26-60, Cl. 99—48.

Jacoby, Harry D., to W. V. Storm. Sprinkler bearing construction. 2,946,517, 7-26-60, Cl. 239—264.

Jacquemier, Paul: *See*—
Cogniat, Marcel, De Fromont, and Jacquemier. 2,946,220.

Jaeckel, Otto: *See*—
Schultze, Kurt H., and Jaeckel. 2,946,161.

Jagenberg-Werke Akt.-Ges.: *See*—
Farber, Jurgen. 2,946,480.

Jahnke, Robert H., to The Cincinnati Shaper Co. Press brake. 2,946,234, 7-26-60, Cl. 74—421.

Jamieson Laboratories, Inc.: *See*—
Denton, Robert F., and White. 2,946,227.

Jansen, Richard E., and R. E. Ulrich, to Radio Corp. of America. Headset. 2,946,860, 7-26-60, Cl. 179—156.

Jasper, Harry. Float for personal use. 2,946,068, 7-26-60, Cl. 9—347.

Jendrassik, Clara: *See*—
Jendrassik, George. 2,946,184.

Jendrassik Developments Ltd.: *See*—
Jendrassik, George. 2,946,184.

Jendrassik, George, deceased: A. G. T. Bossormenyi and C. Jendrassik, executors, to Jendrassik Developments Ltd. Pressure exchangers and applications thereof. 2,946,184, 7-26-60, Cl. 60—35.6.

Jenness, Raymond C., to Allis-Chalmers Mfg. Co. Assembly having fluid pressure means for the removal of tightly fitted parts. 2,946,610, 7-26-60, Cl. 287—52.

Jennings, Gresham N., to General Electric Co. Brake mechanism for clothes washing machines. 2,946,409, 7-26-60, Cl. 188—134.

Jensen, Alan K., to Monroe Calculating Machine Co. Bistable transistor circuit. 2,946,896, 7-26-60, Cl. 307—88.5.

Jensen, Arthur R. Power unit for moving pipe lines. 2,946,515, 7-26-60, Cl. 239—212.

Jensen, Warren R., to Raybestos-Manhattan, Inc. Liquid cooled hydraulically actuated brake. 2,946,412, 7-26-60, Cl. 188—264.

Jerrold Electronics Corp.: *See*—
Beever, Jack, and Goodman. 2,946,883.

Jersey Production Research Co.: *See*—
Hutchison, John S., and Hildebrandt. 2,946,643.
Jones, Marvin R. 2,946,386.
Knapp, Richard P. 2,946,196.
Muench, Nils L. 2,946,889.
Peters, Beldon A., and Rickard. 2,946,886.
Williams, Philip B. 2,946,565.

Jin, Korda K. D., to The General Industries Co. Electric motors. 2,946,941, 7-26-60, Cl. 318—223.

Jo-An Shoe Mfg. Co., Inc., The: *See*—
Bozza, Joseph D. 2,946,069.

Johns, William F., and G. P. Mueller, to G. D. Searle & Co. 16β,17β-epoxy-1,3,5(10)-estratrienes. 2,946,788, 7-26-60, Cl. 260—239.55.

Johnson, Herbert L., and W. A. Henderson, to Sun Oil Co. Fractionation of polyolefins. 2,946,779, 7-26-60, Cl. 260—93.7.

Johnson, John W.: *See*—
Mader, Stewart S., and Johnson. 2,946,162.

Johnson & Johnson: *See*—
Schladermundt, Peter, Dennerlein, and Simons. 2,946,435.

Johnson, Lowell E.: *See*—
Coulter, James H., Jr. and Johnson. 2,946,669.

Johnson, Marvin B. Mobile spray apparatus. 2,946,614, 7-26-60, Cl. 239—127.

Johnson, Matthey & Co. Ltd.: *See*—
Darling, Alan S. 2,946,679.

Johnson, Stanley R. Dispenser for article-containing envelopes. 2,946,482, 7-26-60, Cl. 221—240.

Johnston, George E. Anchoring and identifying tripod for tape recorders. 2,946,533, 7-26-60, Cl. 242—74.1.

Jolliffe, Sidney A. W., and D. W. Watson, to Marconi's Wireless Telegraph Co. Ltd. Direction finder. 2,946,998, 7-26-60, Cl. 343—118.

Jolly, John G., to Nutone, Inc. Single coil repeater solenoid. 2,946,905, 7-26-60, Cl. 310—34.

Jones, Gordon H., to Giddings & Lewis Machine Tool Co. Gear drive. 2,946,232, 7-26-60, Cl. 74—409.

Jones, Howard A., J. A. Garman, and B. C. Dickinson, to Food Machinery and Chemical Corp. Synergistic insecticidal compositions. 2,946,718, 7-26-60, Cl. 167—22.

Jones, Howard A., J. A. Garman, and B. C. Dickinson, to Food Machinery and Chemical Corp. Synergistic insecticidal compositions. 2,946,719, 7-26-60, Cl. 167—22.

Jones, James B., W. C. Elmore, and C. F. De Prisco, to Aeroprojects, Inc. Method and apparatus employing vibratory energy for bonding metals. 2,946,119, 7-26-60, Cl. 29—470.

Jones, James B., W. C. Elmore, and C. F. de Prisco, to Aeroprojects Inc. Seam vibratory welding apparatus and method. 2,946,120, 7-26-60, Cl. 29—470.

Jones, Marvin R., to Jersey Production Research Co. Latching overshot well blowout closure device. 2,946,386, 7-26-60, Cl. 166—96.

Jones, Robert E., to Sanford-Day Iron Works, Inc. Drop bottom cars. 2,946,296, 7-26-60, Cl. 105—364.

Jonker, Gerard H., H. P. J. Wijn, and P. B. Braun, to North American Philips Co., Inc. Ferromagnetic material. 2,946,752, 7-26-60, Cl. 252—62.5.

Jonker, Gerard H., H. P. J. Wijn, and P. B. Braun, to North American Philips Co., Inc. Ferromagnetic material. 2,946,753, 7-26-60, Cl. 252—62.5.

Joseph, Alphonse, to James Whitson and Co. Ltd. Apparatus for positioning a first movable member in dependence upon the position of a second movable member. 2,946,236, 7-26-60, Cl. 74—480.

Juergens, Fred W. Door closing device. 2,946,081, 7-26-60, Cl. 16—80.

Jüngst, Hans, and P. Kitsch, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Injection casing for injection syringes. 2,946,331, 7-26-60, Cl. 128—218.

Junker, Otto, to Otto Junker (Offene Handelsgesellschaft). Method and apparatus for electric induction furnaces melting. 2,946,834, 7-26-60, Cl. 13—27.

Junker, Otto (Offene Handelsgesellschaft): *See*—
Junker, Otto. 2,946,834.

Justi, Eduard, G. Reckert, and A. Winsel, to Ruhrchemie Aktiengesellschaft, and Steinkohlen-Elektrizitat Aktiengesellschaft. Gas diffusion electrode. 2,946,836, 7-26-60, Cl. 136—86.

Justice Co., The: *See*—
Justice, Donald S. 2,946,204.

Justice, Donald S., to The Justice Co. Combined salt water still and fresh water chiller. 2,946,204, 7-26-60, Cl. 62—238.

Kahn, Louis E., and J. A. Dalve, to E. I. du Pont de Nemours and Co. Process of curing meat and composition therefor. 2,946,692, 7-26-60, Cl. 99—222.

Kaiser Aluminum & Chemical Corp.: *See*—
Donaldson, Donald J. 2,946,658.

Kaiser, Julius A., Jr.: *See*—
Maraton, Arthur E., and Kaiser. 2,947,000.

Kalfaian, Meguer V. Storage tube. 2,946,917, 7-26-60, Cl. 315—12.

Kalter, Harold E., to Troxel Mfg. Co. Bicycle saddle clamp. 2,946,372, 7-26-60, Cl. 155—5.24.

Kantor, Andrew J.: *See*—
Tucker, Linwood G., Jr., and Kantor. 2,946,112.

Karp, Philip I.: *See*—
Probst, Robert L., Le Brasse, and Karp. 2,946,681.

Karpchuk, Sylvester, to Tinius Olsen Testing Machine Co. Tumable pick-up. 2,946,218, 7-26-60, Cl. 73—70.2.

Kitsch, Paul: *See*—
Jüngst, Hans, and Kitsch. 2,946,331.

Kawasaki, Sozo. Process of making oil-impregnated machine parts from synthetic resin and the articles manufactured by said process. 2,946,094, 7-26-60, Cl. 18—47.5.

Ke, Bacon, and H. N. Friedlander, to Standard Oil Co. Polymerization process and catalysts. 2,946,778, 7-26-60, Cl. 260—93.7.

Keasbey & Mattison Co.: *See*—
Belpt, Willard R. 2,946,158.

Keelavite Co. Ltd., The: *See*—
Chittenden, George E. 2,946,103.

Kefes, Donn E.: *See*—
Regnier, Norman J., Schmidt, and Kefes. 2,946,945.

Keil, David G.: *See*—
Eshbaugh, Jesse E., Keil, and Schmidt. 2,946,215.

Keirnan, Charles G., to Patterson Foundry & Machine Co. Lump breaker for vacuum dryer. 2,946,624, 7-26-60, Cl. 241—98.

Kelkar, Govind R., and S. C. Bhattacharyya, to Council of Scientific and Industrial Research. Preparation of costus root oil and the products thereof. 2,946,783, 7-26-60, Cl. 260—236.6.

Kelleher, Kenneth S., and C. F. Parker, Jr., to Melpar, Inc. Constant beamwidth horn antenna. 2,946,999, 7-26-60, Cl. 343—786.

Keller, Howard F., Jr., to Union Oil Co. of California. Oil-external emulsion drilling fluids. 2,946,746, 7-26-60, Cl. 252—8.5.

Kelly, George M., to Kingston Products Corp. Suction tool for vacuum cleaners. 2,946,079, 7-26-60, Cl. 15—371.

Kelsey-Hayes Co.: *See*—
Clair, Varne, Jr., and Zysk. 2,946,478.

Kelter, Joseph J.: *See*—
Filler, Edward E., and Kelter. 2,946,072.

Kemper, David A. Continuously indicating torque and horsepower device. 2,946,219, 7-26-60, Cl. 73—136.

Kennedy, Delvin P. Attachment for shirt finishing unit. 2,946,492, 7-26-60, Cl. 223—68.

Kerr, Glenn W.: *See*—
Stephens, Joseph F., and Kerr. 2,946,371.

Keuffel & Esser Co.: *See*—
Sas, Oskar, and Schlesinger. 2,946,684.

Kidd, Marshall C., to Radio Corp. of America. Convertible self-biasing or amplifying circuit for magnetic recording or reproducing. 2,946,858, 7-26-60, Cl. 179—100.2.

Kille, Lindley A.: *See*—
Breed, Rolland N., Groth, Irwin, Kille, and Riggs. 2,946,984.

Kimberlin, Charles N., Jr., and H. E. Merrill, to Esso Research and Engineering Co. Paraffin hydrocarbon reactions with aluminum bromide. 2,946,833, 7-26-60, Cl. 260—683.74.

King, Bertell W. Device for measuring inclinations. 2,946,131, 7-26-60, Cl. 33—214.

King, Burnham W., and A. K. Smalley, to Union Carbide Corp. Opaque glass. 2,946,704, 7-26-60, Cl. 117—129.

King, Harry M.: *See*—
Fraula, William S., and King. 2,946,091.

Kingma, Wouter G.: *See*—
Boon, Edmund F., Vahl, and Kingma. 2,946,706.

Kingston Products Corp.: *See*—
Kelly, George M. 2,946,079.

Kinney, Frank N. Kite accessory. 2,946,544, 7-26-60, Cl. 244—153.

Kirkby, Albert H., to The Babcock & Wilcox Co. Apparatus for cleaning the surfaces of heat exchange means. 2,946,369, 7-26-60, Cl. 257—1.

Kirkpatrick, Willard H., and V. L. Seale, to Visco Products Co. Composition for conditioning surfaces containing contaminating water and method of using the same. 2,946,747, 7-26-60, Cl. 252—8.55.

Kjellstrom, John M.: *See*—
Swanson, Fred R., Kjellstrom, and Penrose. 2,946,249.

Klaassen, Hendrik, and W. Duane, to Lips N.V. Adjusting mechanism for adjusting the pitch of the blades of a marine propeller. 2,946,317, 7-26-60, Cl. 121—38.

Klahn, William R., and R. W. Neupert, to United States Steel Corp. Grapple. 2,946,618, 7-26-60, Cl. 294—67.

Klauke, Erich, and O. Bayer, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Condensation products of carbamic acid esters. 2,946,768, 7-26-60, Cl. 260—65.

Klein, Clifford J., to Specialties Development Corp. Apparatus for detecting flame. 2,946,990, 7-26-60, Cl. 340—227.

Klein, Ralph, H. G. Nadeau, L. J. Schoen, and A. D. Bliss, to Olin Mathieson Chemical Corp. Preparation of diborane. 2,946,664, 7-26-60, Cl. 23—204.

Kleinschmidt, Roger F., and J. M. Wilkinson, to General Aniline & Film Corp. Synthesis of 2-pyrrolidone. 2,946,805, 7-26-60, Cl. 260—326.5.

Knapp, Andrew S., to Knapp-Monarch Co. Sanitary garbage receiver. 2,946,474, 7-26-60, Cl. 220—17.

Knapp-Monarch Co.: *See*—
Knapp, Andrew S. 2,946,474.

Knapp, Richard P., to Jersey Production Research Co. Method of compacting soil for conducting offshore operations. 2,946,198, 7-26-60, Cl. 61—46.5.

Kocay, Witold R., to American Cyanamid Co. Aqueous solution containing a bisulfite and acrylonitrile polymer having basic amino groups. 2,946,762 7-26-60, Cl. 260—29.6.

Kodama, Yoshio, to Nihon Spindle Seizo Kabushiki Kaisha. Oil cushion brake ring insert for spinning and like machines. 2,946,179, 7-26-60, Cl. 57—134.

Koenigsdorfer, Hans: *See*—
Reiner, Theodor. 2,946,213.

Koerner, Jurgen: *See*—
Roos, Ernst, Lober, and Koerner. 2,946,765.
Kolpek, Robert A.: *See*—
Stiles, Richard C., Staffels, and Kolpek. 2,946,844.
Kop, Carl F., to General Motors Corp. Overdrive unit and control therefor. 2,946,240, 7–26–60, Cl. 74—752.
Kopf, Rowland J., R. W. Henning, and R. Marsh, to Olin Mathieson Chemical Corp. Explosively actuated tools. 2,946,061, 7–26–60, Cl. 1—106.
Koppers Co., Inc.: *See*—
Heim, Edward J., and Schulte. 2,946,655.
Tucker, Linwood G., Jr., and Kantor. 2,946,112.
Kortum, Herbert, and K. Papello, to VEB Carl Zeiss Jena. Measuring devices. 2,946,129, 7–26–60, Cl. 33—172.
Kovach, Julius W., to American Radiator & Standard Sanitary Corp. Detachable mounting for solenoid coil. 2,946,-551, 7–26–60, Cl. 251—30.
Koval, Robert M.: *See*—
Bury, Nellie V., Serrao, and Koval. 2,946,493.
Kowalyshyn, Stephen, Jr., O. Eikel, Jr., and R. G. Warren, to United States of America, Navy. Device for limiting climb and dive angles in a torpedo. 2,946,868, 7–26–60, Cl. 200—61.48.
Kraeling, John B., to Drafto Corp. Crane wheels. 2,946,-632, 7–26–60, Cl. 308—190.
Kraft, August L. Metering and dispensing systems. 2,946,-488, 7–26–60, Cl. 222—134.
Krasnits, Jacob. Artistic cover for sewing machines. 2,946,302, 7–26–60, Cl. 112—258.
Kretzmer, Ernest R., to Bell Telephone Laboratories, Inc. Television system having reduced transmission bandwidth. 2,946,851, 7–26–60, Cl. 178—435.
Krewer, William A.: *See*—
Ayers, George W., and Krewer. 2,946,744.
Kronacher, Hermann: *See*—
Becker-Boost, Erich H., and Kronacher. 2,946,402.
Krueger, Bruno O., B. B. Butler, and J. M. Hine, to The Borden Co. Concentrated formaldehyde solution. 2,946,-403, 7–26–60, Cl. 183—115.
Kuchinsky, Saul, and T. D. Peterson, to Burroughs Corp. Method of making gaseous glow tubes. 2,946,642, 7–26–60, Cl. 316—26.
Kühl, Johan B., to Dansk Rontgen-Teknik A/S. Device for suspending at least one body in cords, bands, or similar flexible carrying members. 2,946,349, 7–26–60, Cl. 248—328.
Kuhlo, Gunther: *See*—
Nauschutz, Peter, Wessel, Kuhlo, Dreyer, and Bolkow. 2,946,285.
Kuhn, Heinrich: *See*—
Scherer, Otto, Kuhn, and Forche. 2,946,828.
Kuhrt, Friedrich, to Siemens-Schuckertwerke Aktiengesellschaft. Measuring apparatus comprising a magnetic field-responsive resistor as a condition-responsive element. 2,946,955, 7–26–60, Cl. 324—101.
Kuroiwa, Kimio, and K. Sone, to Toyo Rayon Co., Ltd. Continuous method for winding up yarns. 2,946,526, 7–26–60, Cl. 242—18.
Kuss, R. L., & Co., Inc.: *See*—
Kuss, Ralph L. 2,946,494.
Kuss, Ralph L., to R. L. Kuss & Co., Inc. Container. 2,946,-494, 7–26–60, Cl. 229—14.
Kyler, Robert J., to United States of America, Air Force. Switching circuit for differentiator. 2,946,901, 7–26–60, Cl. 307—88.5.
L.O.F. Glass Fibers Co.: *See*—
Labino, Dominick. 2,946,694.
Labino, Dominick, to L.O.F. Glass Fibers Co. Glass composition. 2,946,694, 7–26–60, Cl. 106—47.
Lalmond, Harold W.: *See*—
Nalette, Thomas A., and Lalmond. 2,946,877.
Lambert, Harry L., to Royal McBee Corp. Tab-stop setting device for business machines. 2,946,422, 7–26–60, Cl. 197—179.
Lang, Gus W. Device for trowelling coatings upon moving tiles. 2,946,110, 7–26–60, Cl. 25—1.
Lange, Ferdinand, to Firma Werner Bahlsen. Container device. 2,946,495, 7–26–60, Cl. 229—16.
Largelius, Lars G. V. Supporting clamp. 2,946,548, 7–26–60, Cl. 248—316.
La Rou, Lawrence V., to Wall Colmonoy Corp. Metallic composition. 2,946,678, 7–26–60, Cl. 75—134.
Lassen-Nielsen, Morten, to Christiani & Nielsen. Apparatus for joining of submerged structures. 2,946,197, 7–26–60, Cl. 61—43.
Lassy, Carl O. Slide fixture with two-way motion. 2,946,-247, 7–26–60, Cl. 77—64.
Lauer, Albert W., Jr., to Air Products Inc. Gauge guard. 2,946,223, 7–26–60, Cl. 73—431.
Lauriello, John P., to Radio Corp. of America. Electrostatic printing. 2,946,682, 7–26–60, Cl. 96—1.
Lavino, E. J., and Co.: *See*—
Crabill, Allen K. 2,946,581.
Lawlor, Reed C., to Angeles Metal Trim Co. Trim member. 2,946,099, 7–26–60, Cl. 20—74.
Lawson, Lilbern A.: *See*—
Osborne, Gerald L., and Lawson. 2,946,903.
Lawson Products, Inc.: *See*—
Morancy, William F. 2,946,210.
Morancy, William F. 2,946,211.
Le Brasse, Gordon J.: *See*—
Probst, Robert L., Le Brasse, and Karp. 2,946,681.
Lee, Robert E., to A. G. Allison. Wheel chairs with hand propulsion means. 2,946,602, 7–26–60, Cl. 280—250.
Lee, Willis L., to General Dynamics Corp. Frequency multiplier. 2,946,963, 7–26–60, Cl. 331—38.
Lees, James, and Sons Co.: *See*—
Asher, Carlton R. 2,946,454.
Higgins, Fred. 2,946,176.
Worth, Maurice W. 2,946,350.
Worth, Maurice W. 2,946,355.
Leeson, James L., Jr., to Warner Electric Brake & Clutch Co. Electrical control of torque transmitting mechanism. 2,946,418, 7–26–60, Cl. 192—12.
Legue, Norris R.: *See*—
Gallant, Melvin M., and Legue. 2,946,759.
Leipert, Edward. Tiltable and steerable marine propeller unit. 2,946,308, 7–26–60, Cl. 115—35.
Leis, Anthony F.: *See*—
Pokorny, Louis, and Leis. 2,946,546.
Lemont, Harold E., Jr., to Boeing Airplane Co. Rotor blade flapping control mechanism. 2,946,391, 7–26–60, Cl. 170—160.55.
Lennartz, Walter. Plastic folders and like containers for flat articles. 2,946,363, 7–26–60, Cl. 150—1.
Lerbs, Alfred, to Compagnie Generale de Telegraphie Sans Fil. Ion sources using a high-frequency field. 2,946,910, 7–26–60, Cl. 315—39.
Lewis, Frank W., to Chicago Railway Equipment Co. Keyed head brake beam. 2,946,411, 7–26–60, Cl. 188—228.6.
Lewis, Norman J., to Monsanto Chemical Co. Method of treating nematodes by treating with a heterocyclic methyl isothiocyanate. 2,946,720, 7–26–60, Cl. 167—33.
Lieser, Mathias J., to Mead Specialties Co., Inc. Control system for fluid pressure-actuated reciprocating device. 2,946,321, 7–26–60, Cl. 121—156.
Liguori, Michael. Multiple tray for baby food. 2,946,456, 7–26–60, Cl. 211—77.
Likins, Merle, J. F. Strotman, and D. O. McCarthy, to Chemetron Corp. Selective hydrogenation and palladium catalyst therefor. 2,946,829, 7–26–60, Cl. 260—677.
Lilljekvist, Bengt I. F., and L. O. Uhrus, to Aktiebolaget Svenska Kullagerfabriken. Procedure for vacuum casting and arrangement intended therefor. 2,946,101, 7–26–60, Cl. 22—84.
Lind, Arden L., to United States of America, Air Force. Curve follower. 2,946,939, 7–26–60, Cl. 318—31.
Lind, Arden L., to United States of America, Air Force. Pulse comparator. 2,946,961, 7–26–60, Cl. 328—146.
Lindblom, Frank W., to Welsh Mfg. Co. Spectacle frame. 2,946,258, 7–26–60, Cl. 88—41.
Lindenberg, Waldemar, to Fuller Co. Material level indicating apparatus. 2,946,901, 7–26–60, Cl. 340—244.
Linder, Walter: *See*—
Spinnler, Wilhelm, Bruhin, Scharli, Huber, and Linder 2,946,910.
Lindhagen, Teodor I., and T. A. Odman, to Svenska Rotor Maskiner Aktiebolag. Rotary regenerative heat exchangers. 2,946,573, 7–26–60, Cl. 257—270.
Lindner, Herbert, G.m.b.H.: *See*—
Schultze, Kurt H., and Jaeckel. 2,946,161.
Lips N.V.: *See*—
Klaassen, Hendrik, and Daane. 2,946,317.
Lisinski, Joseph E., to International Business Machines Corp. High speed tape punch. 2,946,381, 7–26–60, Cl. 164—115.
Little, Arthur D., Inc.: *See*—
Collins, Samuel C. 2,946,199.
Litton Industries Inc.: *See*—
Crapuchettes, Paul W. 2,946,918.
Litton Industries of California: *See*—
Steinman, Leon H., and MacKnight. 2,946,900.
Littwin, Arthur K., to R. L. and A. K. Littwin and L. W. Bier, trustees. Demagnetizing apparatus. 2,946,932, 7–26–60, Cl. 317—157.5.
Littwin, Robert L.: *See*—
Littwin, Arthur K. 2,946,932.
Livingston, Orrin W., to General Electric Co. Automatic programming control system. 2,946,993, 7–26–60, Cl. 340—347.
Lober, Friedrich: *See*—
Roos, Ernst, Lober, and Koerner. 2,946,765.
Lockridge, Robert S., to Craddock-Terry Shoe Corp. Shoe. 2,946,140, 7–26–60, Cl. 36—19.5.
Lockwood, Edwin H., and R. W. Bronneman, to Consolidated Electronics Industries Corp. Relay structure. 2,946,876, 7–26–60, Cl. 200—104.
Loeber, John A., to Minneapolis-Honeywell Regulator Co. Temperature indicator and fire alarm system. 2,946,959, 7–26–60, Cl. 340—181.
Loewe, Siegmund. Magnetic tape indexing. 2,946,127, 7–26–60, Cl. 33—128.
Loewe, Siegmund, and W. Zorn. Magnetic recording heads. 2,946,859, 7–26–60, Cl. 179—100.2.
Lopenski, Stanley A., to Westinghouse Electric Corp. Masking method and apparatus. 2,946,696, 7–26–60, Cl. 117—33.
Lopez, Roger D.: *See*—
Hagen, Robert E., Lopez, and Sundin. 2,946,468.
Lorentz, Guido M. R.: *See*—
Dietz, Karl, and Lorentz. 2,946,695.
Louthan, Rector P.: *See*—
Stansbury, Roy E., and Louthan. 2,946,715.
Love, Porter G. Centrifugal pump. 2,946,289, 7–26–60, Cl. 103—100.
Lowell Counter Co.: *See*—
Herlihy, William F. 2,946,141.
Lowrie, Richard W.: *See*—
McMillan, Wilmur M., Lowrie, and Raser. 2,946,985.
Lowther, Thomas. Paper storage unit. 2,946,635, 7–26–60, Cl. 312—39.
Lucas, Joseph, (Industries) Ltd.: *See*—
May, Clifford F. 2,946,925.
Lufcy, Carroll W., to Dynacor Inc. Magnetic core box. 2,946,973, 7–26–60, Cl. 336—213.
Lusby, George R.: *See*—
Graham, George W., and Lusby. 2,946,826.

Lydfors, John, to Aktiebolaget Addo. Mechanisms for short cut multiplication in calculating machines. 2,946,507, 7–26–60, Cl. 235—63.
Lyman, Harold T., to Aladdin Industries, Inc. Rotary tuner with temperature compensating means in operating arm. 2,946,885, 7–26–60, Cl. 250—40.
Lynch, Helen: *See*—
Reiner, Theodor. 2,946,213.
Lyons, Joseph P.: *See*—
Odell, Norman R., and Lyons. 2,946,750.
MacKnight, Merritt L.: *See*—
Steinman, Leon H., and MacKnight. 2,946,900.
Macovski, Albert: *See*—
Pickholtz, Raymond L., and Macovski. 2,946,845.
Mader, Stewart S., and J. W. Johnson, to Norton Co. Multiple wheel grinding machine. 2,946,162, 7–26–60, Cl. 51—165.
Maerker, John B., to Houdry Process Corp. Pentane dehydrogenation. 2,946,831, 7–26–60, Cl. 260—680.
Magrini, Peter J., Sr.: *See*—
Insolio, Thomas A., Carini, and Magrini. 2,948,460.
Maierhofer, Karl M., to G-M Laboratories Inc. Camera latch. 2,946,260, 7–26–60, Cl. 95—11.
Malavasos, Arthur J., to Triden, Inc. Multiplying mechanism. 2,946,506, 7–26–60, Cl. 235—63.
Malinowski, Richard F., and V. Vodicka, to General Electric Co. Coated electric lamp. 2,946,911, 7–26–60, Cl. 313—116.
Mancusi, Joseph J., Jr., to Altair Inc. Sealing elements. 2,946,552, 7–26–60, Cl. 251—175.
Maney, Charles T.: *See*—
Sholtes, George T., and Maney. 2,946,286.
Manostat Corp.: *See*—
Gilmont, Roger. 2,946,486.
Mantenfel, Rolf, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Apparatus for the separation of mixtures in the gaseous or vapor phase state. 2,946,399, 7–26–60, Cl. 183—2.
Manwaring, Joshua G. D., and R. H. Cota, ¼ to Radio Frequency Co., Inc. Method and apparatus for sealing metal foil. 2,946,168, 7–26–60, Cl. 53—230.
Marach, Paul. Electric shaver. 2,946,121, 7–26–60, Cl. 30—29.5.
Marconi's Wireless Telegraph Co. Ltd.: *See*—
Jolliffe, Sidney A. W., and Watson. 2,946,998.
Wassell, Harold J. H. 2,946,996.
Marien, Kenneth J., to Square D Co. Locking apparatus. 2,946,864, 7–26–60, Cl. 200—42.
Marion, Kenneth O. Apparatus for winding and coiling wire, cable and the like. 2,946,535, 7–26–60, Cl. 242—84.
Markels, Michael, Jr. Horizontal distillation apparatus. 2,946,726, 7–26–60, Cl. 202—158.
Marsh, Glenn A., and E. Schaschl, to The Pure Oil Co. Electron tube apparatus for detection of atomic hydrogen. 2,946,952, 7–26–60, Cl. 324—71.
Marsh, Roger: *See*—
Kopf, Rowland J., Henning, and Marsh. 2,946,061.
Marston, Arthur E., and J. A. Kaiser, Jr.; said Kaiser assor. to United States of America, Navy. Beacon antenna using spiral. 2,947,000, 7–26–60, Cl. 343—895.
Marti, Paul O., Jr., to Standard Oil Co. Gas generating composition containing surfactant. 2,946,671, 7–26–60, Cl. 52—5.
Marti, Paul O., Jr., to Standard Oil Co. Gas generating compositions. 2,946,672, 7–26–60, Cl. 52—5.
Martin, Fernand, to Ateliers de Constructions Electriques de Charleroi. Lightning arresters for very high voltage. 2,946,920, 7–26–60, Cl. 315—58.
Martin, Gavin P. B., to Jonas Woodhead & Sons Ltd. Vehicle suspension. 2,946,582, 7–26–60, Cl. 267—64.
Martin, Thomas B. Method of making cores for casting bladed members. 2,946,104, 7–26–60, Cl. 22—194.
Mathews, Abe W., and J. J. Banke. Apparatus for forming pellets from pulverulent material. 2,946,086, 7–26–60, Cl. 18—1.
Mathews Conveyer Co.: *See*—
Raynor, Warren S. 2,946,465.
Matthews, Russel B.: *See*—
Thornbery, John H., and Matthews. 2,946,376.
Mattson, David F.: *See*—
Atkinson, Frederick M., Paulsen, and Mattson. 2,946,-826.
Maxfield, Charles W.: *See*—
Fairchild, Meri K., Maxfield, and Brady. 2,946,339.
May, Clifford F., to Joseph Lucas (Industries) Ltd. System for effecting automatic control of a vehicle power transmission system. 2,946,925, 7–26–60, Cl. 317—5.
Mayhew, Raymond L.: *See*—
Hyatt, Robert C., Mayhew, and Nunn. 2,946,721.
Maynard, Harlan J. Method and apparatus for mist cooling cutting tools. 2,946,244, 7–26–60, Cl. 77—55.
Mayo, John S., to Bell Telephone Laboratories, Inc. Direct coupled transistor logic circuits. 2,946,897, 7–26–60, Cl. 307—88.5.
Mays Mfg. Co., Inc.: *See*—
Archer, Louis F. 2,946,277.
McCanse, James E., and A. J. Van Auweleer, to Deere & Co. Bi-positionable seat. 2,946,373, 7–26–60, Cl. 155—80.
McCarthy, Donald O.: *See*—
Likins, Merle, Strotman, and McCarthy. 2,946,829.
McCarthy, Joseph A.: *See*—
Priebe, Erward L., and McCarthy. 2,946,660.
McDougal, Emeline L. Fireman's ladder. 2,946,396, 7–26–60, Cl. 182—3.
McEachern, Loyd R., to The American Mono Rail Co. Adjustable boot nozzle. 2,946,521, 7–26–60, Cl. 239—547.
McFarlane, Arthur M., to Russer's, Inc. Machine for removing covers and contents from container. 2,946,470, 7–26–60, Cl. 214—304.
McGary, Robert L.: *See*—
Stoner, Harry B., Parre, and McGary. 2,946,483.
McKeown, Irma B. Loom let-off mechanism. 2,946,382, 7–26–60, Cl. 139—110.
McLerran, Archie R.: *See*—
Thorson, Warren K., and McLerran. 2,946,561.
McMillan, Wilmur M., R. W. Lowrie, and E. J. Raser, to International Business Machines Corp. Magnetic core buffer storage. 2,946,985, 7–26–60, Cl. 340—174.
McNeil Machine & Engineering Co., The: *See*—
Soderquist, Leslie E. 2,946,068.
McNulty, Patrick J. Collapsible metal ladder. 2,946,398, 7–26–60, Cl. 182—95.
McQue, Bernard: *See*—
Zagieboylo, Walter, and McQue. 2,946,916.
McRookey, John W., to Wen-Mac Corp. Toy engine starting device. 2,946,327, 7–26–60, Cl. 123—185.
Mead Specialties Co., Inc.: *See*—
Lieser, Mathias J. 2,946,321.
Mead, Theodore E. 2,946,348.
Mead, Theodore E., to Mead Specialties Co., Inc. Cam-equipped control device and drive therefor. 2,946,346, 7–26–60, Cl. 137—622.
Meador, Gordon R., ¼ to M. C. Miller and ¾ to said Meador. Fluid distributing device. 2,946,520, 7–26–60, Cl. 239—600.
Meijer Drees, Jan, to Nederlands Instituut voor Vliegtuigontwikkeling. Ramjet for a rotating member such as a rotor or propeller of an aircraft. 2,946,191, 7–26–60, Cl. 60—39.35.
Meilan, Ibert, and R. Gumbinner, to Polychrome Corp. Presensitised printing plate and method for preparing same. 2,946,683, 7–26–60, Cl. 96—75.
Meipar, Inc.: *See*—
Kelleher, Kenneth S., and Parker. 2,946,999.
Merck & Co., Inc. *See*—
Chamberlin, Earl M., and Utne. 2,946,811.
Shunk, Clifford E., and Richter. 2,946,781.
Merck, E., Aktiengesellschaft, Darmstadt: *See*—
Zima, Otto, and Jacobi. 2,946,802.
Merrill, Howard E.: *See*—
Kimberlin, Charles N., Jr., and Merrill. 2,946,833.
Mertes, Thomas S., to Sun Oil Co. Separation of polyolefins from liquid media. 2,946,777, 7–26–60, Cl. 260—93.7.
Metal Chlorides Corp.: *See*—
Richelsen, Mark. 2,946,668.
Metcalf, Carol R.: *See*—
Metcalf, Herbert E. 2,946,229.
Metcalf, Herbert E., deceased; C. R. Metcalf, administratrix. Rotary actuator. 2,946,229, 7–26–60, Cl. 74—89.
Metcalfe, Paul V. Escutcheon for a sprinkler head. 2,946,329, 7–26–60, Cl. 126—317.
Mettetal, Donald, Jr., to O. B. Anderson. Lubricating apparatus. 2,946,328, 7–26–60, Cl. 123—196.
Metzger, Melvin R. Valve-equipped containers. 2,946,502, 7–26–60, Cl. 229—62.5.
Meyer, Geo. J., Mfg. Co.: *See*—
Carter, Sidney T. 2,946,472.
Meyer, William H.: *See*—
Beerbower, Alan, and Meyer. 2,946,751.
Meyers, Harold S., to Waldorf Paper Products Co. Package supports. 2,946,455, 7–26–60, Cl. 211—49.
Michaels, Raymond J., Jr., and H. E. Zaugg, to Abbott Laboratories. Carbinol amines. 2,946,793, 7–26–60, Cl. 260—268.
Michelini, Aldo: *See*—
Calolero, John, Michelini, and Rocchi. 2,946,452.
Michigan Tool Co.: *See*—
Moncrieff, Alexander D. F. 2,946,264.
Michie, William, to Burroughs Corp. Non-destructive magnetic storage. 2,946,988, 7–26–60, Cl. 340—174.
Mierendorf, Robert C., and C. W. Porter, to Square D Co. Alternating current switching circuits. 2,946,959, 7–26–60, Cl. 328—89.
Migneault, Fernand W.: *See*—
Migneault, Romuald and F. W. 2,946,098.
Migneault, Romuald and F. W. Panel protective device for cashless windows. 2,946,098, 7–26–60, Cl. 20—52.
Mihalek, Emery, to Hershey Mfg. Co. Variable display device. 2,946,148, 7–26–60, Cl. 40—34.
Miller Co., The: *See*—
Pascucci, Ernest. 2,946,861.
Miller, Harvey: *See*—
Du Boff, Philip, and Miller. 2,946,458.
Miller, Myron C.: *See*—
Meador, Gordon R. 2,946,520.
Miller, Robert A.: *See*—
Brown, William J., Miller, and Taria. 2,946,852.
Miller, Walter M., to Tidewater Oil Co. Fluid coking. 2,946,741, 7–26–60, Cl. 208—127.
Mills, Aubrey R. Die casting machines. 2,946,102, 7–26–60, Cl. 22—94.
Miner, W. H., Inc.: *See*—
Danielson, Vernon S. 2,946,462.
Minneapolis-Honeywell Regulator Co.: *See*—
Ciscel, Benjamin H. 2,946,542.
Firm, Walter G. 2,946,115.
Loeber, John A. 2,946,989.
Mott, Richard C. 2,946,344.
Waldhauer, Charles H., Jr. 2,946,875.
Mobay Chemical Co.: *See*—
Klauke, Erich, and Bayer. 2,946,768.
Mobile Aerial Towers, Inc.: *See*—
Myers, Lester L. 2,946,196.
Moeller & Neumann G.m.b.H.: *See*—
Neumann, Karl. 2,946,248.
Mohr, William F.: *See*—
Wiebelhaus, Ralph F., and Mohr. 2,946,424.
Molotsky, Hyman M., to Velsicol Chemical Corp. Ring-substituted derivatives of a.c.a.-2,3,4-hexachlorotoluene. 2,946,817, 7–26–60, Cl. 260—515.
Moncrieff, Alexander D. F., to Michigan Tool Co. Loading mechanism. 2,946,264, 7–26–60, Cl. 90—1.6.

Monin, Claude: *See*—
Alison, Etienne, and Monin. 2,946,896.
Monroe Calculating Machine Co.: *See*—
Jensen, Alan K. 2,946,896.
Monroe, Roger F., and A. W. Anderson, to The Dow Chemical Co. 2-hydroxy-3-chloroalkyl ethers of acetylenic alcohols. 2,946,825, 7–26–60, Cl. 260—611.
Monsanto Chemical Co.: *See*—
Anagnostopoulos, Constantine E., and Wineman. 2,946,818.
Beer, Ludwig A. 2,946,095.
Lewis, Norman J. 2,946,720.
Montecatini, Societa Generale per l'Industria Mineraria e Chimica: *See*—
Perl, Cesare A. 2,946,814.
Moor, Joseph C.: *See*—
Stoudenheimer, Richard G., and Moor. 2,946,895.
Moran, Arnold J., Jr., 20% to M. Stella. Necktie holder. 2,946,106, 7–26–60, Cl. 24—40.
Morancy, William F., to Lawson Products, Inc. Knitted fabric. 2,946,210, 7–26–60, Cl. 66—200.
Morancy, William F., to Lawson Products, Inc. Knitted fabrics. 2,946,211, 7–26–60, Cl. 66—200.
Morehead, Chalmers, to Westinghouse Electric Corp. Discharge device. 2,946,900, 7–26–60, Cl. 313—43.
Morgan, John M., Jr.: *See*—
Fuldner, Herbert M., Morgan, Rave, and Baldwin. 2,946,265.
Morgan, Sidney C. Ice-scraping tool. 2,946,076, 7–26–60, Cl. 15—236.
Morgan, Wayne F.: *See*—
Hale, Theodore A., and Morgan. 2,946,172.
Morich, Gloria M. Combination foundation garment and brassiere. 2,946,333, 7–26–60, Cl. 128—482.
Morier, Henri: *See*—
Beyner, Andre, Scherrer, and Morier. 2,946,940.
Moseley, Kemper N. Tobacco hogshead. 2,946,473, 7–26–60, Cl. 217—44.
Mosher, James K., to Schuls Tool and Mfg. Co. In-flight aircraft refueling apparatus. 2,946,605, 7–26–60, Cl. 284—18.
Mosley, Neal J., to Callery Chemical Co. Preparation of alkali metal hydrides. 2,946,662, 7–26–60, Cl. 23—204.
Motorola, Inc.: *See*—
Geppert, Donovan V., and Corn. 2,946,936.
Schlesinger, Kurt. 2,946,960.
Mott, Richard C. to Minneapolis-Honeywell Regulator Co. Pressure regulating valve. 2,946,344, 7–26–60, Cl. 137—484.8.
Moy, John A. E., and A. A. Yeo, to The British Petroleum Co. Ltd. Stabilization of lubricating oils in the presence of a nickel-alumina catalyst and hydrogen. 2,946,743, 7–26–60, Cl. 208—264.
Moyer, Robert F., to Harsco Corp. Means for detachably securing hubs to shafts. 2,946,611, 7–26–60, Cl. 287—52.6.
Moyroud, Louis M., to Graphic Arts Research Foundation, Inc. Photocomposing machines. 2,946,268, 7–26–60, Cl. 95—4.5.
Mraz, William L., to Bell Telephone Laboratories, Inc. Automatic frequency control for radio receiver. 2,946,884, 7–26–60, Cl. 250—20.
Mucho, Musa. Combination cigarette holder and smoke guard. 2,946,336, 7–26–60, Cl. 131—175.
Mueller, George P.: *See*—
Johns, William F., and Mueller. 2,946,785.
Muench, Nils L., to Jersey Production Research Co. Focusing system for use in radioactivity well logging. 2,946,889, 7–26–60, Cl. 250—71.5.
Muenzer, Bernard M.: *See*—
Beattie, Horace S., Buley, and Muenzer. 2,946,504.
Muffat, Donald L., and W. J. Birmingham, to Standard Oil Co. Combination process for high-octane naphtha production. 2,946,736, 7–26–60, Cl. 208—65.
Muller, Hollis L., Jr.: *See*—
Triscoli, Louis R., Muller, and Ciccone. 2,946,284.
Mulrooney, Edward A., Jr.: *See*—
Haroldson, Arthur H., Mulrooney, and Hogan. 2,946,087.
Munck, Fredrik, to Sverre Munck trading as Sverre Munck, Elektro-Mekanisk Industri. Electric motor for hoists, cranes, conveyors or the like. 2,946,906, 7–26–60, Cl. 310—77.
Munck, Sverre: *See*—
Munck, Fredrik. 2,946,906.
Munck, Sverre, Elektro-Mekanisk Industrie: *See*—
Munck, Fredrik. 2,946,906.
Munderich, Paul, to Wibau Westdeutsche Industrie- und Strassenbau-Maschinen-Gesellschaft m.b.H. Installation for making briquettes. 2,946,574, 7–26–60, Cl. 259—6.
Munters, Carl G. Method for avoiding frost deposits on cooling members. 2,946,201, 7–26–60, Cl. 62—94.
Murakami, Masuo, and S. Senoh. Method of synthesis of dialkyl alpha-ketoglutarate from alkyl 2-furoate. 2,946,816, 7–26–60, Cl. 260—483.
Murphy, Goodrich K., to The Budd Co. High-capacity private compartment passenger vehicle. 2,946,294, 7–26–60, Cl. 105—315.
Murphy, Robert P., Jr.: *See*—
Bearden, William G., Murphy, and Scott. 2,946,383.
Musser, C Walton, to United Shoe Machinery Corp. Thruster. 2,946,235, 7–26–60, Cl. 74—424.8.
Muttera, William H., Jr., to W. H. Brady Co. Transferring pressure sensitive mass. 2,946,370, 7–26–60, Cl. 154—1.6.
Myers, Clyde B., to Diamond Alkali Co. Ammonia soda process improvements. 2,946,653, 7–26–60, Cl. 23—66.
Myers, Lester L., to Mobile Aerial Towers, Inc. Valve mechanism for crane controls. 2,946,196, 7–26–60, Cl. 60—54.5.
Nadeau, Herbert G.: *See*—
Klein, Ralph, Nadeau, Scheen, and Bliss. 2,946,664.
Naico Chemical Co.: *See*—
Thompson, Harris. 2,946,703.
Naletta, Thomas A., and H. W. Lalmond, to Sanders Associates, Inc. Printed circuit article. 2,946,877, 7–26–60, Cl. 200—166.
Nast, Paul H. Rock drills. 2,946,814, 7–26–60, Cl. 121—16.
National Cash Register Co., The: *See*—
Trimble, Cebern B. 2,946,530.
National Electronics Distributors: *See*—
Nations, Carl T. 2,946,136.
National Pneumatic Co., Inc.: *See*—
Durbin, Vernon. 2,946,931.
National Research Corp.: *See*—
Hallicka, Milo P., Jr. 2,946,654.
National Rubber Machinery Co.: *See*—
Hestea, Eugene E. 2,946,089.
Thierer, Charles. 2,946,525.
National Smelting Co. Ltd., The: *See*—
Belf, Leon J. 2,946,827.
National Starch and Chemical Corp.: *See*—
Olsen, Herbert C. 2,946,705.
National Valve & Mfg. Co.: *See*—
Grabe, Clarence G. 2,946,547.
Nations, Carl T., to National Electronics Distributors. Strip feeding and measuring mechanism. 2,946,136, 7–26–60, Cl. 33—152.
Nauschütz, Peter, W. Wessel, G. Kuhlo, K. Dreyer, and L. Bölkow, to Bolkow-Entwicklungen KG. Rocket projectiles. 2,946,285, 7–26–60, Cl. 102—49.
Nederlands Instituut voor Vliegtuigontwikkeling: *See*—
Meijer Drees, Jan. 2,946,191.
Nellson, Roger D. Game instruction apparatus. 2,946,134, 7–26–60, Cl. 35—29.
Nelmeth, George: *See*—
Spiro, Murray, and Nelmeth. 2,946,589.
Nelson, Roger J., to Deere & Co. Draft load control for tractors. 2,946,392, 7–26–60, Cl. 172—7.
Nentwig, Joachim, and H. Schnell, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of pentachlorophenyl ethers of polyhydric alcohols. 2,946,806, 7–26–60, Cl. 260—340.7.
Neukirchner, Alice: *See*—
Heyden, Rudi, and Schmitt. 2,946,649.
Neumann, Karl, to Moeller & Neumann G.m.b.H. Cooling and transfer table. 2,946,248, 7–26–60, Cl. 80—42.
Neupert, Raymond W.: *See*—
Klahn, William R., and Neupert. 2,946,618.
Neu-Tronics Corp.: *See*—
Chadowski, Joseph P. 2,946,642.
New York Air Brake Co., The: *See*—
Buhl, Charles A. L. 2,946,347.
New York Wire Cloth Co.: *See*—
Webber, Clarence E., and Smith. 2,946,354.
Nihon Spindle Seizo Kabushiki Kaisha: *See*—
Kodama, Yoshio. 2,946,179.
Nilsson, Bengt E., to Aktiebolaget Elektrolux. Lifting and carrying handle for domestic appliance. 2,946,071, 7–26–60, Cl. 15—49.
Nissen, Warren I., to The Gillette Co. Blade dispenser. 2,946,431, 7–26–60, Cl. 206—16.
Nordell, Carl H. Curtain support. 2,946,378, 7–26–60, Cl. 160—348.
Norris, Paul E., and H. C. Schweiner, to The Procter & Gamble Co. Dentifrice compositions. 2,946,725, 7–26–60, Cl. 167—93.
Norris, William C., W. Rupinski, and K. S. Svendsen, to Combustion Engineering, Inc. Tubular wall construction. 2,946,116, 7–26–60, Cl. 29—157.4.
North American Aviation, Inc.: *See*—
Bower, John L., and Curtis. 2,946,646.
Child, Claude H., and Pryga. 2,946,971.
Hemsley, Raymond. 2,946,580.
North American Philips Co., Inc.: *See*—
Jonker, Gerard H., Wijn, and Braun. 2,946,752.
Jonker, Gerard H., Wijn, and Braun. 2,946,753.
North Corp.: *See*—
Fairchild, Merl K., Maxfield, and Brady. 2,946,839.
North, John D. Balanced rotary hydraulic valves. 2,946,348, 7–26–60, Cl. 137—624.
Northern Electric Co., Ltd.: *See*—
Beamish, William R. 2,946,837.
Dopheide, Otto W. 2,946,949.
Northrop Corp.: *See*—
Vogel, Alvin R. 2,946,320.
Norton Co.: *See*—
Mader, Stewart S., and Johnson. 2,946,162.
Nunn, Leslie G.: *See*—
Hyatt, Robert C., Mayhew, and Nunn. 2,946,721.
Nutone, Inc.: *See*—
Jolly, John G. 2,946,905.
Nye, Dudley D., and R. Y. Paradise, to Robertshaw-Fulton Controls Co. Parallel component controller servosystem. 2,946,943, 7–26–60, Cl. 318—448.
Nysco Laboratories, Inc.: *See*—
Sacks, Milton. 2,946,332.
Odell, Norman R., and J. F. Lyons, to Texaco Inc. Lubricating greases thickened with reaction products of arylamine dyes with phosphomolybdic, phosphotungstic and phosphotungstomolybdic acids. 2,946,750, 7–26–60, Cl. 252—33.
Odman, Tor A.: *See*—
Lindhagen, Teodor I., and Odman. 2,946,573.
Ogden, Paul, to Art Iron and Wire Works, Inc. Guard rail assembly. 2,946,568, 7–26–60, Cl. 256—65.
Ogilvie Flour Mills Co., Ltd., The: *See*—
Gaver, Kenneth M., and Eisenbraun. 2,946,686.
Olbrych, John E.: *See*—
Bonis, Walter J., and Olbrych. 2,946,958.

Olin Mathieson Chemical Corp.: *See*—
Fried, Josef, and Thoma. 2,946,807.
Fried, Josef, and Thomas. 2,946,812.
Good, Carl D. 2,946,665.
Klein, Ralph, Nadeau, Scheen, and Bliss. 2,946,664.
Kopf, Rowland J., Henning, and Marsh. 2,946,661.
Oliveto, Eugene P., and E. B. Hershberg, to Schering Corp. 11β-formyloxy steroids and process for manufacturing same. 2,946,810, 7–26–60, Cl. 260—397.45.
Olsen, Herbert C., to National Starch and Chemical Corp. Warp sizing process. 2,946,705, 7–26–60, Cl. 117—139.5.
Olson, Elmer: *See*—
Dennison, Frederick R., Olson, and Westin. 2,946,577.
O'Neal, Joseph L., to Wagner Machinery Corp. Flange lubricator. 2,946,404, 7–26–60, Cl. 184—3.
O'Neill, James P., to Bendix Aviation Corp. Sonic transducers for fluid mediums. 2,946,961, 7–26–60, Cl. 340—8.
Oregon Metallurgical Corp.: *See*—
Shelton, Stephen M. 2,946,677.
Orenda Engines Ltd.: *See*—
Comery, Peter D. 2,946,609.
Orville Simpson Co., The: *See*—
Simpson, Lowe E. 2,946,440.
Osborne, Gerald L., and L. A. Lawson; said Lawson assor. to said Osborne. Variable voltage transformer device. 2,946,903, 7–26–60, Cl. 307—156.
O'Sullivan, John F.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,946,792.
Otis Elevator Co.: *See*—
Paulson, Arthur W., and Fabula. 2,946,319.
Otto, Dr. C., & Comp. G.m.b.H.: *See*—
Becker-Boost, Erich H., and Kronacher. 2,946,402.
Overland, Bernard O. Muffler repair kit. 2,946,895, 7–26–60, Cl. 181—72.
Owens-Illinois Glass Co.: *See*—
Randlett, Edward A. 2,946,471.
Oxy-Catalyst, Inc.: *See*—
Houdry, Eugene J. 2,946,651.
Pacific Pumping Co.: *See*—
Culleton, John T. 2,946,451.
Page, Clarence, to Page and Cox. Supporting means for cage series in chicken houses. 2,946,309, 7–26–60, Cl. 119—22.
Page and Cox: *See*—
Page, Clarence. 2,946,309.
Palen, William E.: *See*—
Doepel, Wallace A., Edgar, Gajda, and Palen. 2,946,298.
Palmer, Alvin D. Protective wire wrapping and method for protecting electrical wires. 2,946,840, 7–26–60, Cl. 174—136.
Palmqvist, Fredrik T. E., to Aktiebolaget Separator. Continuous manufacture of soap. 2,946,813, 7–26–60, Cl. 260—417.
Pan American Petroleum Corp.: *See*—
Bearden, William G., Murphy, and Scott. 2,946,383.
Reynolds, Robert C., Jr. 2,946,657.
Pan-Atlantic Steamship Corp.: *See*—
Tantlinger, Keith W. 2,946,617.
Papello, Karl: *See*—
Kortum, Herbert, and Papello. 2,946,129.
Paradise, Ronald Y.: *See*—
Nye, Dudley D., and Paradise. 2,946,943.
Parker, Clair F., Jr.: *See*—
Kelleher, Kenneth S., and Parker. 2,946,999.
Parks-Cramer Co.: *See*—
Hewitt, Woodrow W. 2,946,538.
Parks, Robert R., and W. A. Weaver, to General Motors Corp. Safety steering wheel and horn blowing means. 2,946,869, 7–26–60, Cl. 200—61.57.
Parre, Edwin: *See*—
Stoner, Harry B., Parre, and McGary. 2,946,485.
Pascucci, Ernest, to The Miller Co. Leveling device for lighting fixtures. 2,946,881, 7–26–60, Cl. 240—78.
Patterson Foundry & Machine Co.: *See*—
Keirnan, Charles G. 2,946,524.
Paulsen, Albert L.: *See*—
Atkinson, Frederick M., Paulsen, and Mattson. 2,946,626.
Paulson, Arthur W., and A. Fabula, to Otis Elevator Co. Hydraulic control system for elevators. 2,946,319, 7–26–60, Cl. 121—41.
Pock, Walter R., to Amcel Propulsion Inc. Thyratron control system. 2,946,942, 7–26–60, Cl. 318—293.
Poet, Nick P., to Esso Research and Engineering Co. Production of synthesis gas. 2,946,784, 7–26–60, Cl. 252—373.
Penney, Ernest. Holder for toilet paper. 2,946,636, 7–26–60, Cl. 312—39.
Penrose, Chester F.: *See*—
Swanson, Fred R., Kjellstrom, and Penrose. 2,946,249.
Pepper, Robert K. Casing installing machine. 2,946,567, 7–26–60, Cl. 255—20.
Peras, Lucien, to Regie Nationale des Usines Renault. Disc brake. 2,946,408, 7–26–60, Cl. 188—73.
Peri, Cesare A., to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Process for the preparation of arsenic xanthates and parasiticidal compositions produced thereby. 2,946,814, 7–26–60, Cl. 260—440.
Permanent Filter Corp.: *See*—
Howard, Herbert H. 2,946,446.
Perrin, Jean A., to Societe Le Carbone-Lorraine. Carbon arrangements for high-intensity electric arcs. 2,946,913, 7–26–60, Cl. 313—231.
Perry, Roger L.: *See*—
Pierce, Melbourne H., Perry, and Adami. 2,946,457.
Peters, Beldon A., and J. A. Rickard, to Jersey Production Research Co. Adjustable ion collector slit for mass spectrometer. 2,946,886, 7–26–60, Cl. 250—41.9.
Peters, William H.: *See*—
Sterrett, Vance C., and Peters. 2,946,343.
Petersen, C. Lynn, and B. L. Derringe, to Peterson Filters & Engineering Co. High density thickener. 2,946,448, 7–26–60, Cl. 210—231.
Peterson, Edward S., to Automatic Electric Laboratories, Inc. Impulsing generating circuits. 2,946,853, 7–26–60, Cl. 178—17.
Peterson Filters & Engineering Co.: *See*—
Peterson, C. Lynn, and Derringe. 2,946,448.
Peterson, Thomas D.: *See*—
Kuchinsky, Saul, and Peterson. 2,946,642.
Petro, James, to Westinghouse Electric Corp. Masking method and apparatus. 2,946,697, 7–26–60, Cl. 117—36.
Philadelphia Gear Works, Inc.: *See*—
Dobbs, Russell S. 2,946,238.
Philco Corp.: *See*—
Beter, Ralph H., and Rubinoff. 2,946,857.
Philip Morris Inc.: *See*—
Wagner, Edward E. 2,946,516.
Phillips, Albert J.: *See*—
Baier, Richard, Smart, and Phillips. 2,946,100.
Phillips, Charles E., to The Strong-Scott Mfg. Co. Interchangeable screen construction for mill. 2,946,522, 7–26–60, Cl. 241—89.
Phillips Petroleum Co.: *See*—
Cantrel, Kenneth E. 2,946,717.
De Vault, Albert N. 2,946,740.
Gardner, Lloyd E., and Hogan. 2,946,738.
Gardner, Lloyd E., and Hogan. 2,946,739.
Stansbury, Roy E., and Louthan. 2,946,715.
Stoller, Frederick L. 2,946,830.
Tek, Mehmet R., and Bertucci. 2,946,282.
Wheelock, Charles E., and Wicklatz. 2,946,756.
Piaggio & C. Societa per Azioni: *See*—
Casini, Vittorio. 2,946,324.
Picha, George J., and F. C. Winkler, to Westinghouse Electric Corp. Luminaire. 2,946,880, 7–26–60, Cl. 240—51.11.
Pickett, Neales L. Cable stringing block. 2,946,559, 7–26–60, Cl. 254—134.3.
Pickholtz, Raymond L., and A. Macovski, to Radio Corp. of America. Gain control of demodulation pulses. 2,946,845, 7–26–60, Cl. 178—504.
Pierce, Melbourne H., R. L. Perry, and F. W. Adami, Jr., to The Gillette Co. Display racks. 2,946,457, 7–26–60, Cl. 211—86.
Pikal, Harry. Caramel-coated apple. 2,946,660, 7–26–60, Cl. 99—138.
Pinkalla, Hamilton A.: *See*—
Rosenthal, Waldemar A., and Pinkalla. 2,946,683.
Pitt, Catherine J.: *See*—
Bleikmeyer, Otto E., and Pitt. 2,946,135.
Pittsburgh Plate Glass Co.: *See*—
Brannick, Wayne A., and Heibing. 2,946,698.
Christenson, Roger M. 2,946,774.
Hobbie, Albert C., and Holderaft. 2,946,357.
Pityo, Albert F. Web feeding mechanism. 2,946,586, 7–26–60, Cl. 271—2.4.
Pityo, Albert F. Web feeding mechanism. 2,946,588, 7–26–60, Cl. 271—2.4.
Pityo, Edward L. Supporting rack for automobile windshields. 2,946,453, 7–26–60, Cl. 211—41.
Plainfield Patents Corp.: *See*—
Disch, Ellis V. 2,946,280.
Platzer, Roger: *See*—
Cohen de Lara, Georges, Chagnon, Delachanal, Hure, and Platzer. 2,946,667.
Plessey Co. Ltd., The: *See*—
Da Costa, Harry. 2,946,595.
Herbert, John M. 2,946,937.
Plueddemann, Edwin P., to Dow Corning Corp. Method of treating glass with epoxy-silanes and their epoxy-amine adducts, and the articles made thereby. 2,946,701, 7–26–60, Cl. 117—72.
Pohlmann, Heinrich: *See*—
Schlichenmaier, Hans, and Pohlmann. 2,946,794.
Pokorny, Louis, and A. F. Leis. Fishing rod support. 2,946,546, 7–26–60, Cl. 248—40.
Polaroid Corp.: *See*—
Eloranta, Vaito K. 2,946,270.
Polychrome Corp.: *See*—
Mellan, Ibert, and Gumbinner. 2,946,683.
Polsinetti, Emilio, ½ to Cementi Elba Societa per Azioni (C.E.S.A.). Conveying apparatus for powdered cement. 2,946,627, 7–26–60, Cl. 302—23.
Poole, Forrest R.: *See*—
Wadsworth, William B., and Poole. 2,946,862.
Pope, Lewis J. Tire pressure indicating device. 2,946,866, 7–26–60, Cl. 200—61.25.
Porter, Clarence W.: *See*—
Mierendorf, Robert C., and Porter. 2,946,959.
Poschman, William McA., II. Safety match book holder. 2,946,432, 7–26–60, Cl. 206—33.
Post, Arthur. Game pieces. 2,946,592, 7–26–60, Cl. 273—137.
Potas, Anthony E., to Socony Mobil Oil Co., Inc. Reactor temperature effect in reforming. 2,946,737, 7–26–60, Cl. 208—65.
Potts, William M., W. E. Hartis, and J. O. Darbolt, to Dacam Corp. Method of placing cartons into packing cases. 2,946,164, 7–26–60, Cl. 53—26.
Poupitch, Ougliess J., to Illinois Tool Works. Box spring handle. 2,946,082, 7–26–60, Cl. 16—125.
Power Jets (Research and Development) Ltd.: *See*—
Anneer, John D., White, and Holt. 2,946,221.
Powers, John B., to The Regents of the University of California. Illuminating device. 2,946,879, 7–26–60, Cl. 240—1.
Powers, John B., to The Regents of the University of California. Light control signal generator. 2,946,894, 7–26–60, Cl. 250—210.

Powers, Richard E., to Powers Wire Products Co., Inc. Clip positioning head for fastener driving tool. 2,946,060, 7-26-60, Cl. 1—49.

Powers, Richard E., and C. W. Weis, to Powers Wire Products Co., Inc. Fastener driving tool and release therefor. 2,946,313, 7-26-60, Cl. 121—13.

Powers Wire Products Co., Inc.: *See*—
Powers, Richard E. 2,946,060.
Powers, Richard E., and Weis. 2,946,313.

Poggay, Carl J. Helicopter blade control device. 2,946,390, 7-26-60, Cl. 170—160.13.

Prapas, Aristotle G., to W. R. Grace & Co. Bis morpholinium salts. 2,946,789, 7-26-60, Cl. 260—247.5.

Priebe, Edward L., and J. A. McCarthy, to Columbia-Southern Chemical Corp. Method of preparing siliceous pigments. 2,946,660, 7-26-60, Cl. 23—182.

Probst, Robert L., G. J. Le Brasse, and P. I. Karp, to Federal-Mogul-Bower Bearings, Inc. Method of providing a body with a porous metal shell. 2,946,681, 7-26-60, Cl. 75—208.

Procter & Gamble Co., The: *See*—
Norris, Paul E., and Schweizer. 2,946,725.

Pryga, Stanley A.: *See*—
Child, Claude H., and Pryga. 2,946,971.

Pure Oil Co., The: *See*—
Ayers, George W., and Krewer. 2,946,744.
Hutchings, Le Roi E. 2,946,735.
Marsh, Glenn A., and Schaschl. 2,946,952.
Wesolowski, Edmund. 2,946,891.

Puriron and Chemicals, Inc.: *See*—
Francis, Charles H. 2,946,659.

Pyrene Co. Ltd., The: *See*—
Henshaw, Thomas A. 2,946,293.

Querfurth, Wilhelm: *See*—
Bader, Erich, Schweitzer, and Querfurth. 2,946,770.

Quinn, Edward, and W. W. Witt, to United Shoe Machinery Corp. Machines for fastening strips to other work. 2,946,300, 7-26-60, Cl. 112—47.

Radio Corp. of America: *See*—
Jansen, Richard E., and Ulrich. 2,946,860.
Kidd, Marshall C. 2,946,858.
Lauriello, John P. 2,946,682.
Pickholtz, Raymond L., and Macovski. 2,946,845.
Schroeder, Alfred C. 2,946,846.
Stoudenheimer, Richard G., and Moor. 2,946,895.

Radio Frequency Co., Inc.: *See*—
Manwaring, Joshua G. D., and Cota. 2,946,168.

Radtke, Edward W., and T. P. Farkas, to United Aircraft Corp. Temperature responsive transducer. 2,946,509, 7-26-60, Cl. 236—87.

Rakoff, Henry, to Velsicol Chemical Corp. Pentachlorocyclopentadiene-mono-2-ethylhexyl ether. 2,946,674, 7-26-60, Cl. 71—2.3.

Rampino, Louis D., and M. J. Gorham, to Tidewater Oil Co. Mild hydrogenation of catalytic reformate. 2,946,742, 7-26-60, Cl. 208—143.

Randles, Arthur E., Jr., ½ to F. E. Helmick. Carton. 2,946,497, 7-26-60, Cl. 229—28.

Randlett, Edward A., to Owens-Illinois Glass Co. Venting closure cap. 2,946,471, 7-26-60, Cl. 215—56.

Randolph, Robert R.: *See*—
Sanz, Manuel C., Randolph, and Starr. 2,946,699.

Raser, Edward J.: *See*—
McMillan, Wilmur M., Lowrie, and Raser. 2,946,985.

Raterman, Donald E.: *See*—
Eisner, Burton D., and Raterman. 2,946,272.

Rattenbury, Kenneth H.: *See*—
Toy, Arthur D. F., Rattenbury, and Hinkes. 2,946,764.

Rave, Joseph A., Jr.: *See*—
Fuldner, Herbert M., Morgan, Rave, and Baldwin. 2,946,265.

Ray, Kelvin J.: *See*—
Zoschak, Robert J., and Ray. 2,946,187.

Raybestos-Manhattan, Inc.: *See*—
Jensen, Warren R. 2,946,412.

Raymont, William R., to Thompson Ramo Wooldridge Inc. Powder metallurgy. 2,946,680, 7-26-60, Cl. 75—200.

Raynor, Warren S., to Mathews Conveyer Co. Pallet loading machines. 2,946,465, 7-26-60, Cl. 214—6.

Raytheon Co.: *See*—
Bonia, Walter J., and Olbryeh. 2,946,958.

Realisations Ultrasoniques: *See*—
Renault, Paul. 2,946,904.

Rebling, Robert C.: *See*—
Worth, Sidney V., and Rebling. 2,946,137.

Reckert, Gerhard: *See*—
Justi, Eduard, Reckert, and Winsel. 2,946,836.

Reed, George R.: *See*—
Hunger, James C., and Reed. 2,946,604.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 2,946,408.

Regnier, Norman J., L. W. Schmidt, and D. E. Kefes, to Hoffman Electronics Corp. Solar energy converting apparatus or the like. 2,946,945, 7-26-60, Cl. 320—2.

Reich, A., & Sons, Inc.: *See*—
Reich, Walter A. 2,946,407.

Reich, Walter A., to A. Reich & Sons, Inc. Hand truck having power actuated article receiving body. 2,946,407, 7-26-60, Cl. 187—10.

Reiner, Theodor, to H. Koenigsdorfer, and H. Lynch. Safety door lock. 2,946,213, 7-26-60, Cl. 70—93.

Reinhard, Richard E.: *See*—
Elliott, William E., and Reinhard. 2,946,216.

Reitsma, Ellsworth L., and C. Avgerinos, to Sperry Rand Corp. Decoding mechanism for multiple codes. 2,946,850, 7-26-60, Cl. 178—33.

Reliable Engineering Co.: *See*—
Ryno, Juddson B. 2,946,587.

Renault, Paul, to Realisations Ultrasoniques. Ultrasonic transducer arrangement for sending and receiving. 2,946,904, 7-26-60, Cl. 310—8.2.

Rens, Jany, and J. Bourquin, to Sandoz Ltd. Ester-like 4-hydroxy-piperidine derivatives. 2,946,790, 7-26-60, Cl. 260—294.3.

Republic Steel Corp.: *See*—
Conner, Guy O. 2,946,583.

Reynolds, Robert C., Jr., to Pan American Petroleum Corp. Separating illite for geochemical analyses. 2,946,657, 7-26-60, Cl. 23—110.

Richards, Lorenzo A. Means for automatic irrigation control. 2,946,512, 7-26-60, Cl. 239—63.

Richelsen, Mark, to Metal Chlorides Corp. Continuous high temperature reaction apparatus. 2,946,968, 7-26-60, Cl. 23—277.

Richter, Friedrich, to Electroacustic Gesellschaft mit beschrankter Haftung. Instruments for recording short intervals of time. 2,946,647, 7-26-60, Cl. 346—74.

Richter, John W.: *See*—
Shunk, Clifford H., and Richter. 2,946,781.

Rickard, James A.: *See*—
Peters, Beldon A., and Rickard. 2,946,886.

Riggs, George: *See*—
Breed, Rolland N., Groth, Irwin, Kille, and Riggs. 2,946,984.

Rizzuto, Angelo A. Collapsible shelf structure. 2,946,459, 7-26-60, Cl. 211—93.

Robbins, Lysle B.: *See*—
Gordon, Carroll G., and Robbins. 2,946,543.

Robbins, William K.: *See*—
Bloomsburg, Harry E., Behymer, and Robbins. 2,946,745.

Robertshaw-Fulton Controls Co.: *See*—
Nye, Dudley D., and Paradise. 2,946,943.

Robertson, H. H., Co.: *See*—
Wiesmann, Joseph W. 2,946,413.

Rocchi, Raymond P.: *See*—
Caloiero, John, Michelini, and Rocchi. 2,946,452.

Rockelman, Harold J. Gasoline trap. 2,946,475, 7-26-60, Cl. 220—18.

Roebig, Adolf, to Roebig-Christ & Co., Inc. Suction and pressure pump. 2,946,291, 7-26-60, Cl. 103—149.

Roebig-Christ & Co., Inc.: *See*—
Roebig, Adolf. 2,946,291.

Roethel, John H. Door lock. 2,946,613, 7-26-60, Cl. 292—229.

Rogers, Raymond E. Insecticide applicator for animals. 2,946,310, 7-26-60, Cl. 119—157.

Rogers, Thomas M.: *See*—
Sproule, Lorne W., and Rogers. 2,946,749.

Rohr, Milton C., to General Motors Corp. Carburetor air heating device. 2,946,575, 7-26-60, Cl. 261—14.

Rolls-Royce Ltd.: *See*—
Basford, Kenneth A. 2,946,189.

Romo, Jesus: *See*—
Rosenkranz, George, Romo, and Djerassi. 2,946,784.

Roos, Ernst, F. Lober, and J. Koerner, to Farbenfabriken Bayer Aktiengesellschaft. Halogen containing polymers stabilized with a pyrazole. 2,946,765, 7-26-60, Cl. 260—45.8.

Root, Frank L., to Dumas-Wilson & Co. Composition containing para-aminosalicyclic acid and its sodium salt. 2,946,723, 7-26-60, Cl. 167—65.

Rose, Julian K., and H. W. Schulz, to Union Carbide Corp. Linear polymers containing regularly recurring ester and amide linkages. 2,946,769, 7-26-60, Cl. 260—75.

Rosen, George, to United States of America, Air Force. System for varying capacitance. 2,946,969, 7-26-60, Cl. 333—80.

Rosenberg, Edgar N. Tape transport mechanism. 2,946,585, 7-26-60, Cl. 271—23.

Rosenkranz, George, J. Romo, and C. Djerassi, to Syntex S.A. Cyclopentanophenanthrene derivatives and process. 2,946,784, 7-26-60, Cl. 260—239.55.

Rosenthal, Waldemar A., and H. A. Pinkalla, to Chr. Hansen's Laboratory, Inc. Method of stabilizing the flavor of foods and the resulting product. 2,946,688, 7-26-60, Cl. 99—97.

Ross, Edward J., and C. H. Elbreder. Composition and method for treatment of caged pet birds. 2,946,685, 7-26-60, Cl. 99—4.

Ross, Herbert J., to Imperial Chemical Industries Ltd. Sealing device. 2,946,476, 7-26-60, Cl. 220—45.

Rothenberger, Jakob. Ironing apparatus. 2,946,147, 7-26-60, Cl. 38—2.

Roy, Frank P., and R. L. Sailo, to United States Steel Corp. Contact element for electrolytic processing of wire and the like. 2,946,734, 7-26-60, Cl. 204—279.

Royal McBee Corp.: *See*—
Hebert, Donald G. 2,946,237.
Lambert, Harry L. 2,946,422.
Scribner, Albert W. 2,946,380.

Rubin, Harry, & Sons, Inc.: *See*—
Rubin, Leonard R. 2,946,152.

Rubin, Leonard R., to Harry Rubin & Sons, Inc. Musical toy hoop. 2,946,152, 7-26-60, Cl. 46—175.

Rubinoff, Morris: *See*—
Beter, Ralph H., and Rubinoff. 2,946,957.

Rudner, Bernard, and M. J. Woods, to W. R. Grace & Co. Tetrahydropyridazinium compounds. 2,946,790, 7-26-60, Cl. 260—250.

Rudner, Bernard, to W. R. Grace & Co. Apomorphinium salts. 2,946,795, 7-26-60, Cl. 260—285.

Rudner, Bernard, to W. R. Grace & Co. Salts of ergot alkaloids. 2,946,796, 7-26-60, Cl. 260—285.5.

Rudner, Bernard, to W. R. Grace & Co. N-aminotetrahydroisoquinolinium salts. 2,946,797, 7-26-60, Cl. 260—286.

Rudner, Bernard, to W. R. Grace & Co. Lupine hydrazinium compounds. 2,946,798, 7-26-60, Cl. 260—293.

Rudy, Erland W.: *See*—
Bridges, Robert M., Rudy, and Rummell. 2,946,980.

Ruettiger, Justin. Solid oculars. 2,946,259, 7-26-60, Cl. 88—57.

Ruhl, Charles A. L., to The New York Air Brake Co. Control valve having a movable member containing combination check and relief valve unit. 2,946,347, 7-26-60, Cl. 137—622.

Ruhrchemie Aktiengesellschaft: *See*—
Justi, Eduard, Reckert, and Winsel. 2,946,836.

Rummell, James A.: *See*—
Bridges, Robert M., Rudy, and Rummell. 2,946,980.

Rupinski, Waldemar: *See*—
Norris, William C., Rupinski, and Svendsen. 2,946,116.

Russell, Fred J. Low friction strike plate. 2,946,614, 7-26-60, Cl. 292—341.11.

Russer's, Inc.: *See*—
McFarlane, Arthur M. 2,946,470.

Rutherford, George W., to The W. L. Bonner Co., Inc. Automatic clutch engager. 2,946,318, 7-26-60, Cl. 121—38.

Ryba, Anton, to Zahnradfabrik Friedrichshafen. Electromagnetic friction clutch. 2,946,419, 7-26-60, Cl. 192—84.

Ryno, Juddson B., to Reliable Engineering Co. Towel dispenser. 2,946,587, 7-26-60, Cl. 271—2.4.

S.A.S.I.B.-S.p.A. Scipione Innocenti-Bologna: *See*—
Innocenti, Scipione. 2,946,579.

Sacks, Milton, to Nyaco Laboratories, Inc. Insufflator. 2,946,332, 7-26-60, Cl. 128—206.

Sallo, Richard L.: *See*—
Roy, Frank P., and Sallo. 2,946,734.

Salmi, Eino J. O. Derail with built-in replacers. 2,946,882, 7-26-60, Cl. 246—163.

Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Fuel injector. 2,946,513, 7-26-60, Cl. 239—91.

Samples, Arthur M. Film holder for monitoring radiation. 2,946,890, 7-26-60, Cl. 250—83.

Sampson, George H., to Winthrop-Atkins Co., Inc. Calendar mount or the like. 2,946,545, 7-26-60, Cl. 248—35.

Samuelson, Charles T. Subaqueous drilling apparatus. 2,946,566, 7-26-60, Cl. 255—2.5.

Sanders Associates, Inc.: *See*—
Nalette, Thomas A., and Lalmond. 2,946,877.

Sandoz Ltd.: *See*—
Rens, Jany, and Bourquin. 2,946,790.

Sandt, Bernd W.: *See*—
Bro, Manville I., and Sandt. 2,946,763.

Sanford, David P.: *See*—
Huck, William F., Albrecht, and Sanford. 2,946,591.

Sanford-Day Iron Works, Inc.: *See*—
Jones, Robert E. 2,946,296.

Sanz, Manuel C., R. R. Randolph, and C. Starr, to United States of America, Atomic Energy Commission. Process of impregnating graphite with a uranium compound. 2,946,699, 7-26-60, Cl. 117—65.

Saperstein, Joel. Tire traction attachment. 2,946,366, 7-26-60, Cl. 152—218.

Sarkes Tarzian, Inc.: *See*—
Finn, George B., Jr. 2,946,935.

Saunders, Earle R.: *See*—
Brennan, Joseph H., and Saunders. 2,946,676.

Saxton, Howard N., to General Dynamics Corp. Binding post unit. 2,946,979, 7-26-60, Cl. 339—253.

Schafer, Erwin: *See*—
Hoppner, Martin, Schussler, and Schafer. 2,946,097.

Scharf, Murray M. Method of preparing barrel pack pickles. 2,946,690, 7-26-60, Cl. 99—154.

Scharli, Anton: *See*—
Spinnler, Wilhelm, Bruhin, Scharli, Huber, and Linder. 2,946,910.

Schaschl, Edward: *See*—
Marsh, Glenn A., and Schaschl. 2,946,952.

Schelleng, John C.: *See*—
Hunt, Loyd E., and Schelleng. 2,946,972.

Schenck, Leslie M., and D. L. Deutsch, to General Aniline & Film Corp. Purification of M-phenylenediamine. 2,946,821, 7-26-60, Cl. 260—582.

Schenck, Leslie M., and D. L. Deutsch, to General Aniline & Film Corp. Purification of M-phenylenediamine. 2,946,822, 7-26-60, Cl. 260—582.

Scherbatskoy, Serge A. Nuclear measuring system. 2,946,888, 7-26-60, Cl. 250—71.5.

Scherer, Otto, H. Kuhn, and E. Forche, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for preparing aliphatic fluorine compounds. 2,946,826, 7-26-60, Cl. 260—653.7.

Schering Corp.: *See*—
Oliveto, Eugene P., and Hershberg. 2,946,810.

Scherrer, Igor: *See*—
Beyner, Andre, Scherrer, and Morier. 2,946,940.

Schilling, Clarence J., to Air Products Inc. Method of separating gaseous mixtures. 2,946,200, 7-26-60, Cl. 62—22.

Schlabermundt, Peter, W. H. Dennerlein, and L. S. Simons, Jr., to Johnson & Johnson. Adhesive bandage. 2,946,430, 7-26-60, Cl. 206—63.3.

Schlesinger, Heinz: *See*—
Sda, Oskar, and Schlesinger. 2,946,654.

Schlesinger, Kurt, to Motorola, Inc. Electronic circuit. 2,946,960, 7-26-60, Cl. 328—168.

Schlichenmaier, Hans, and H. Pohlmann, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius und Bruning. Vat dyestuffs. 2,946,704, 7-26-60, Cl. 260—275.

Schmid, Mathias, to G. Stempelkamp and Co. Hydraulically operated presses. 2,946,303, 7-26-60, Cl. 113—45.

Schmidt, Alvin H.: *See*—
Eshbaugh, Jesse E., Keil, and Schmidt. 2,946,215.

Schmidt, Lawrence D., to Allied Chemical Corp. Decanter control. 2,946,443, 7-26-60, Cl. 210—83.

Schmidt, Lawrence W.: *See*—
Regnier, Norman J., Schmidt, and Kefes. 2,946,945.

Schmitt, Alice: *See*—
Heyden, Rudi, and Schmitt. 2,946,649.

Schmitt, Friedrich: *See*—
Heyden, Rudi, and Schmitt. 2,946,649.

Schmitter, Walter P., to The Falk Corp. Cooling tower fan drive. 2,946,233, 7-26-60, Cl. 74—421.

Schnell, Hermann: *See*—
Neatwig, Joachim, and Schnell. 2,946,806.

Schnell, Hermann, and G. Fritz, to Farbenfabriken Bayer Aktiengesellschaft. Process for producing polycarbonates. 2,946,766, 7-26-60, Cl. 260—47.

Schoen, Louis J.: *See*—
Klein, Ralph, Nadeau, Schoen, and Bliss. 2,946,664.

Schohan, George, to United States of America, Navy. Transient-controlled magnetic amplifier. 2,946,946, 7-26-60, Cl. 323—89.

Schreurs, Willy, to Ateliers de Constructions Electriques de Charleroi. Dibasic alkaline earth metal phosphate and luminescent powders containing such phosphate. 2,946,656, 7-26-60, Cl. 23—109.

Schroeder, Alfred C., to Radio Corp. of America. Color television. 2,946,846, 7-26-60, Cl. 178—5.4.

Schuller, Walter H., to American Cyanamid Co. Aqueous solution containing acrylonitrile polymer and a bisulfite. 2,946,751, 7-26-60, Cl. 260—29.6.

Schulte, Elwood V.: *See*—
Helm, Edward J., and Schulte. 2,946,655.

Schultze, Kurt H., and O. Jaeckel, to Herbert Lindner G.m.b.H. Feed device for thread grinding machines. 2,946,161, 7-26-60, Cl. 51—165.

Schulz, Helmut W.: *See*—
Rose, Julian K., and Schulz. 2,946,769.

Schulz Tool and Mfg. Co.: *See*—
Mosher, James K. 2,946,605.

Schussler, Alfred: *See*—
Hoppner, Martin, Schussler, and Schafer. 2,946,097.

Schuster, Michael M., to Hi-Shear Rivet Tool Co. Hydraulic power source provided with cooling means. 2,946,208, 7-26-60, Cl. 62—396.

Schwarzer, Hans H. G. F. Method for registering signal voltages, particularly of physiological origin, by means of mechanically recording oscillographs. 2,946,645, 7-26-60, Cl. 346—33.

Schweitzer, Otto: *See*—
Bader, Erich, Schweitzer, and Querfurth. 2,946,770.

Schweizer, Henry C.: *See*—
Norris, Paul E., and Schweizer. 2,946,725.

Scientific Packaging Corp.: *See*—
Brina, Ernest. 2,946,434.

Scinta, Anthony C.: *See*—
Deibel, Raymond A., and Scinta. 2,946,078.

Scott, Gerald, and L. Seed, to Imperial Chemical Industries Ltd. Polymerisation of ethylenically unsaturated compounds. 2,946,776, 7-26-60, Cl. 260—88.7.

Scott, Platho P., Jr.: *See*—
Bearden, William G., Murphy, and Scott. 2,946,383.

Scott, Waitman P.: *See*—
Hoffman, Walter H., and Scott. 2,946,722.

Scragg, Ernest P. R., and A. Dobson, to Ernest Scragg & Sons Ltd. False twisting machines. 2,946,177, 7-26-60, Cl. 57—77.3.

Scragg, Ernest, & Sons Ltd.: *See*—
Scragg, Ernest P. R., and Dobson. 2,946,177.

Scribner, Albert W., to Royal McBee Corp. High speed punch. 2,946,380, 7-26-60, Cl. 164—111.

Seale, Virgil L.: *See*—
Kirkpatrick, Willard H., and Seale. 2,946,747.

Searle, G. D., & Co.: *See*—
Baran, John S. 2,946,786.
Bible, Roy H., Jr. 2,946,787.
Colton, Frank B. 2,946,809.
Dornfeld, Clinton A. 2,946,791.
Johns, William F., and Mueller. 2,946,765.

Sebac Nouvelle S.A.: *See*—
Coanda, Henri. 2,946,540.

Seeburg Corp.: *See*—
Staar, Marcel J. H. 2,946,594.

Seed, Leslie: *See*—
Scott, Gerald, and Seed. 2,946,776.

Seelen, Petrus J. C. Collapsible tube with shut-off device. 2,946,487, 7-26-60, Cl. 222—107.

Seipt, Willard R., to Keasbey & Mattison Co. Composite building unit. 2,946,158, 7-26-60, Cl. 50—413.

Seismograph Service Corp.: *See*—
Hawkins, James E. 2,946,303.

Senoh, Saburo: *See*—
Murakami, Masuo, and Senoh. 2,946,816.

Seragnoli, Ariosto. Mechanism for distributing and feeding articles into a machine. 2,946,425, 7-26-60, Cl. 198—30.

Serner, Herbert E. Entrainment separator. 2,946,401, 7-26-60, Cl. 183—110.

Serrao, Gregory R.: *See*—
Bury, Nellie V., Serrao, and Koval. 2,946,493.

Shaffer Tool Works: *See*—
Wilde, Arthur R. 2,946,550.

Shaw, Ernest C. Liquid filters. 2,946,449, 7-26-60, Cl. 210—484.

Shaw, Ernest C. Liquid filters. 2,946,450, 7-26-60, Cl. 210—484.

Sheesley, Jay R.: *See*—
Smith, James T. 2,946,630.

Sheldon, Luther M., to General Electric Co. Interchangeable wiring device with pressure lock terminals. 2,946,977, 7-26-60, Cl. 339—95.

Shelfmaker Products Corp.: *See*—
Du Boff, Philip, and Miller. 2,946,458.

Shelton, Stephen M., to Oregon Metallurgical Corp. Treatment of alloys containing iron group metals. 2,946,077, 7-26-60, Cl. 75—97.

Shenango China, Inc.: *See*—
Cummings, Howard B. 2,946,278.

Shepard, Robert L.: *See*—
Westbrook, Russell D., and Shepard. 2,946,835.

Sholtes, George T., and C. T. Maney, to General Electric Co. Valveless two way pump. 2,946,286, 7-26-60, Cl. 103—2.

Shunk, Clifford H., and J. W. Richter, to Merck & Co., Inc. Process for the preparation of adenosyl homocysteine. 2,946,781, 7-26-60, Cl. 260—211.5.

Sias, Frederick R., to General Electric Co. Resistance temperature detector. 2,946,974, 7-26-60, Cl. 338—28.

Siebers, Robert W., to Cutler-Hammer, Inc. Shock and vibration resistant electromagnetic contactor. 2,946,872, 7-26-60, Cl. 200—87.

Siemens Edison Swan Ltd.: *See*—
Warman, Bloomfield J. 2,946,854.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Herlet, Adolf. 2,946,709.
Kuhrt, Friedrich. 2,946,955.

Siempelkamp, G., and Co.: *See*—
Schmid, Mathias. 2,946,303.

Siggelin, Gert K. A.: *See*—
Asker, Gunnar C. P., and Siggelin. 2,946,554.

Silver, Roland, and T. L. Etter. Electrical components and circuits and methods of fabricating the same. 2,946,927, 7-26-60, Cl. 317—101.

Simeral, William G.: *See*—
Bragaw, Chester G., Jr., and Simeral. 2,946,711.

Simmons, Archie L., and W. H. Womack; said Simmons assor. to said Womack. Dual range front sight. 2,946,126, 7-26-60, Cl. 33—58.

Simons, Langdon S., Jr.: *See*—
Schladermundt, Peter, Dennerlein, and Simons. 2,946,435.

Simonsen, Merle W. Fertilizer mixer and spreader with partitioned container. 2,946,597, 7-26-60, Cl. 275—5.

Simpson, Lowe E., to The Orville Simpson Co. Gyratory sifting machine. 2,946,440, 7-26-60, Cl. 209—326.

Singer Mfg. Co., The: *See*—
Hacklander, Hans. 2,946,301.
Stanton, Edward W. 2,946,639.

Sitler, Richard W., to Aurora Equipment Co. Locker handle construction. 2,946,640, 7-26-60, Cl. 312—320.

Skeggs, Leonard T., to Technicon Instruments Corp. Method and means for the determination of carbon dioxide in biological fluids. 2,946,665, 7-26-60, Cl. 23—230.

Skog, Henry A., and R. D. Fox, to Canning Equipment Co. Fruit orienting, transferring, splitting, and pitting machine. 2,946,361, 7-26-60, Cl. 146—28.

Slade, Duncan E., to United States Rubber Co. Molded plastic heel cup with retaining wall feature. 2,946,139, 7-26-60, Cl. 36—7.3.

Slade, Eugene E., to General Electric Co. Circuit breaker panelboard. 2,946,928, 7-26-60, Cl. 317—119.

Slaughter, Walter H., Jr. Clothes brush. 2,946,075, 7-26-60, Cl. 15—184.

Slezak, Jean: *See*—
Slezak, Robert W., Bjerke, and Caldwell. 2,946,461.

Slezak, Robert W., deceased (by J. Slezak, administratrix), E. B. Bjerke, and R. B. Caldwell, to United States of America, Navy. Missile loading apparatus. 2,946,461, 7-26-60, Cl. 212—135.

Smalley, Allison K.: *See*—
King, Burnham W., and Smalley. 2,946,704.

Smart, John S., Jr.: *See*—
Baier, Richard, Smart, and Phillips. 2,946,100.

Smejda, Oscar J., to C. Sprgerverk. Apparatus for arranging rods. 2,946,463, 7-26-60, Cl. 214—1.

Smith, Alonzo L. Air-conduction hearing aid clamps. 2,946,394, 7-26-60, Cl. 181—23.

Smith, Arthur F. Sealing construction. 2,946,606, 7-26-60, Cl. 285—332.3.

Smith, Daniel L., to D. L. Smith, trustee. Toilet unit. 2,946,065, 7-26-60, Cl. 4—115.

Smith, James T., to J. R. Sheesley. Journal box mounting. 2,946,630, 7-26-60, Cl. 308—79.

Smith, Jesse C.: *See*—
Webber, Clarence E., and Smith. 2,946,354.

Smith, Robert M., Jr.: *See*—
Zoll, Maurice B., Brown, and Smith. 2,946,377.

Snoy, Joseph B., to Borg-Warner Corp. Hydraulic retarder control. 2,946,416, 7-26-60, Cl. 192—4.

Snyder, Kenneth E., to General Motors Corp. Transmission. 2,946,241, 7-26-60, Cl. 74—754.

Societe de Constructions Mecaniques de Stains: *See*—
Tissot, Germain, and E. Teissier. 2,946,180.
Tissot, Germain, and E. Teissier. 2,946,181.

Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine: *See*—
Cognlat, Marcel, De Fromont, and Jacquemier. 2,946,220.

Societe Le Carbone-Lorraine: *See*—
Perrin, Jean A. 2,946,913.

Socony Mobil Oil Co., Inc.: *See*—
Potas, Anthony E. 2,946,737.

Soderquist, Leslie E., to The McNeil Machine & Engineering Co. Accessory for tire shaping and curing presses. 2,946,088, 7-26-60, Cl. 18—2.

Sohn, Allen O. Apparatus for feeding, printing and cutting a strip into discrete printed portions. 2,946,281, 7-26-60, Cl. 101—227.

Sold, Einar R. Concrete form clamp. 2,946,360, 7-26-60, Cl. 144—291.

Somner, W. L., Co., Inc., The: *See*—
Rutherford, George W. 2,946,318.

Sone, Kosuke: *See*—
Kurolwa, Kimio, and Sone. 2,946,526.

Soteropulos, Gust, to Deere & Co. Field forage harvester. 2,946,169, 7-26-60, Cl. 56—16.

Southam, Donald L., to Thompson Ramo Wooldridge Inc. Balanced regulator valve. 2,946,186, 7-26-60, Cl. 60—59.09.

Southern Extrusions, Inc.: *See*—
Gordon, Kerwin E., and Ferguson. 2,946,414.

Spaeth, Irvin J., to Chicago Railway Equipment Co. Brake beam structure. 2,946,410, 7-26-60, Cl. 188—219.6.

Spaulding, Earl H., to L. B. Evans, Son Co. Method of making turned slippers. 2,946,070, 7-26-60, Cl. 12—142.

Specialties Development Corp.: *See*—
Barnes, Charles H. 2,946,388.
Klein, Clifford J. 2,946,990.

Sperber, Harold H. Storage batteries and fluids therefor. 2,946,707, 7-26-60, Cl. 136—154.

Sperry Rand Corp.: *See*—
Blain, Albert. 2,946,976.
Reitsma, Ellsworth L., and Avgerinos. 2,946,850.
Young, Robert G. 2,946,956.

Spinnler, Wilhelm, J. Bruhin, A. Scharli, E. Huber, and W. Linder, to Albiswerk Zurich A.G. Infrared image converter tubes. 2,946,910, 7-26-60, Cl. 313—65.

Spiro, Murray, and G. Neimeth. Sheet feeding mechanism. 2,946,589, 7-26-60, Cl. 271—26.

Spooner, Bernard, deceased, by P. Spooner and S. L. Atkins, executors, to P. Spooner. Protective hood. 2,946,062, 7-26-60, Cl. 2—3.

Spooner, Pearl: *See*—
Spooner, Bernard. 2,946,062.

Spraying Systems Co.: *See*—
Wahlin, Fred W. 2,946,518.

Sproule, Lorne W., and T. M. Rogers, to Esso Research and Engineering Co. Open gear lubricants containing silicones. 2,946,749, 7-26-60, Cl. 252—28.

Square D Co.: *See*—
Marien, Kenneth J. 2,946,864.
Mierendorf, Robert C., and Porter. 2,946,959.

Staar, Marcel J. H., to Seeburg Corp. Phonographs. 2,946,594, 7-26-60, Cl. 274—10.

Stagmeier, Arthur F., to General Foods Corp. Carton. 2,946,496, 7-26-60, Cl. 229—17.

Stahl, William F. Method of making a coil form. 2,946,096, 7-26-60, Cl. 18—59.

Stallard, Ralph M.: *See*—
Dusina, Peter P., Jr., and Stallard. 2,946,713.

Standard Electrical Tool Co., The: *See*—
Falls, John J. 2,946,731.
Hambling, Stewart K. 2,946,102.

Standard Oil Co. (Indiana): *See*—
Fields, Ellis K. 2,946,800.
Fields, Ellis K. 2,946,801.
Ke, Bacon, and H. N. Friedlander. 2,946,778.
Marti, Paul O., Jr. 2,946,671.
Marti, Paul O., Jr. 2,946,672.
Muffat, Donald L., and Birmingham. 2,946,736.

Standard Oil Co., (Ohio) The: *See*—
Vermilion, Willas L., Jr. 2,946,832.

Stangenberg, Robert L.: *See*—
Yawman, Charles F., Jr., and Stangenberg. 2,946,615.

Stansbury, Roy E., and R. P. Louthan, to Phillips Petroleum Co. Insecticidal composition containing a sulfinamide and allethrin or pyrethrum. 2,946,715, 7-26-60, Cl. 167—22.

Stanton, Edward W., to The Singer Mfg. Co. Sewing machine cabinets. 2,946,639, 7-26-60, Cl. 312—257.

Starcher, Paul S.: *See*—
Tinsley, Samuel W., Starcher, and Henry. 2,946,808.

Starr, Chauncey: *See*—
Sans, Manuel C., Randolph, and Starr. 2,946,699.

Statham Instruments, Inc.: *See*—
Stedman, Cecil K. 2,946,223.

Steck, George L. Method of repairing dents. 2,946,118, 7-26-60, Cl. 29—401.

Stedman, Cecil K., to Statham Instruments, Inc. Angular accelerometer. 2,946,225, 7-26-60, Cl. 73—516.

Steiner Charles S., and P. Gibson, to Swift & Co. Liquid hydrocarbon gels and uses thereof. 2,946,748, 7-26-60, Cl. 252—8.55.

Steinkohlen-Elektrizitat Aktiengesellschaft: *See*—
Justi, Eduard, Beckert, and Winsel. 2,946,836.

Steinman, Leon H., and M. L. MacKnight, to Litton Industries of California. Redundant transistor flip-flops. 2,946,900, 7-26-60, Cl. 307—88.5.

Stella, Michael: *See*—
Moran, Arnold J., Jr. 2,946,106.

Stem, Eugene C., to Western Electric Co., Inc. Snaggers for continuous take-up apparatus. 2,946,529, 7-26-60, Cl. 242—25.

Stephens, Joseph F., and G. W. Kerr, to Gustin-Bacon Mfg. Co. Method of making thermal pipe insulation. 2,946,371, 7-26-60, Cl. 154—28.

Sterrett, Vance C., and W. H. Peters. Valve construction. 2,946,343, 7-26-60, Cl. 137—390.

Stiles, Richard C., to Automatic Electric Laboratories, Inc. Automatic telegraph switching system with multiple call processing. 2,946,843, 7-26-60, Cl. 178—2.

Stiles, Richard C., R. E. Stoffels, and R. A. Kolpek, to Automatic Electric Laboratories, Inc. Automatic telegraph switching system. 2,946,844, 7-26-60, Cl. 178—2.

Stoffels, Robert E.: *See*—
Stiles, Richard C., Stoffels, and Kolpek. 2,946,844.

Stoller, Frederick L., to Phillips Petroleum Co. Prevention of emulsions during extraction with acidic cuprous salt solutions. 2,946,830, 7-26-60, Cl. 260—677.

Stone, Wallace E., ¼ to O. R. Everett. Food holder for cooking food over an open fire. 2,946,276, 7-26-60, Cl. 99—419.

Stoner, Harry B., E. Parre, and R. L. McGary, to The Vendo Co. Vending apparatus. 2,946,483, 7-26-60, Cl. 221—243.

Stoner, Joseph W. Inflatable life saving device. 2,946,484, 7-26-60, Cl. 223—5.

Storm, Walter V.: *See*—
Jacoby, Harry D. 2,946,517.

Stoudenheimer, Richard G., and J. C. Moor, to Radio Corp. of America. Image tube. 2,946,606, 7-26-60, Cl. 250—215.

Strang, John M., and C. Foster, to Barr and Stroud Ltd. High speed camera. 2,946,257, 7-26-60, Cl. 88—16.

Streck, Clemens, to General Aniline & Film Corp. Sodium xylene sulfonate diazonium salt compositions. 2,946,648, 7-26-60, Cl. 8—44.

Strong-Scott Mfg. Co., The: *See*—
Phillips, Charles E. 2,946,523.

Strotman, John F.: *See*—
Likins, Merle, Strotman, and McCarthy. 2,946,829.

Suderow, George R., to De Long Corp. Jacking mechanism. 2,946,557, 7-26-60, Cl. 254—93.

Sugitani, Hitoshi. Manufacturing method of succades with the natural form of raw fruits or vegetables. 2,946,691, 7-26-60, Cl. 99—168.

Sullivan, Timothy J., to Sullivan Valve and Engineering Co. Unidirectional check valve. 2,946,341, 7-26-60, Cl. 137—116.5.

Sullivan Valve and Engineering Co.: *See*—
Sullivan, Timothy J. 2,946,341.

Sun Oil Co.: *See*—
Johnson, Herbert L., and Henderson. 2,946,779.
Mertes, Thomas S. 2,946,777.

Sundin, George H.: *See*—
Hagen, Robert E., Lopez, and Sundin. 2,946,468.

Sundstrand Corp.: *See*—
Swanson, Fred R., Kjellstrom, and Penrose. 2,946,249.

Sus, Oskar, and H. Schlestinger, to Keuffel & Esser Co. Diazotype copying processes. 2,946,684, 7-26-60, Cl. 96—91.

Svendsen, Konrad H.: *See*—
Norris, William C., Rupinski, and Svendsen. 2,946,116.

Svenska Rotor Maskiner Aktieboiag: *See*—
Lindhagen, Teodor L., and Odman. 2,946,573.

Swanson, Fred R., J. M. Kjellstrom, and C. F. Penrose, to Sundstrand Corp. Step turning lathes. 2,946,249, 7-26-60, Cl. 82—11.

Swanson, Russel, to Wind-King Electric Mfg. Co. Trenching machine cutter. 2,946,142, 7-26-60, Cl. 37—60.

Swift & Co.: *See*—
Steiner, Charles S., and Gibson. 2,946,748.

Switchcraft, Inc.: *See*—
Dumke, William E., and Bailey. 2,946,994.

Sylvander, Charles E., and C. J. Duckl. Fluid distribution device. 2,946,290, 7-26-60, Cl. 103—142.

Syntex S.A.: *See*—
Rosenkrans, George, Romo, and Djerassi. 2,946,784.

Syntron Co.: *See*—
Gilbert, Walter J., Sr. 2,946,606.

Tachikawa, Shoso, deceased, by mutual agreement of all the heirs of said S. Tachikawa, to Tatsuji Tachikawa, heir. Process for the manufacture of viscose rayon staple. 2,946,650, 7-26-60, Cl. 18—54.

Tachikawa, Shoso, deceased, by mutual agreement of all the heirs of said S. Tachikawa, to Tatsuji Tachikawa, heir. Process for the manufacture of viscose rayon staple. 2,946,782, 7-26-60, Cl. 260—217.

Tachikawa, Tatsuji: *See*—
Tachikawa, Shoso. 2,946,650.
Tachikawa, Shoso. 2,946,782.

Talge, Henry J.: *See*—
Aberer, Frank E., and Talge. 2,946,362.

Tantlinger, Keith W., to Pan-Atlantic Steamship Corp. Spreader bar. 2,946,617, 7-26-60, Cl. 294—67.

Taris, Charles M.: *See*—
Brown, William J., Miller, and Taris. 2,946,852.

Technicon Instruments Corp.: *See*—
Skeggs, Leonard T. 2,946,665.

Teissier, Emmanuel: *See*—
Tissot, Germain, and Teissier. 2,946,180.
Tissot, Germain, and Teissier. 2,946,181.

Tek, Mehmet R., and A. F. Bertuzzi, to Phillips Petroleum Co. Process for recovering hydrocarbons from underground formations. 2,946,382, 7-26-60, Cl. 166—11.

Terrell Machine Co., The: *See*—
Hinton, Charles V. 2,946,467.

Texaco Development Corp.: *See*—
Whaley, Thomas H. 2,946,670.

Texaco Inc.: *See*—
Odell, Norman R., and Lyons. 2,946,750.

Textron Inc.: *See*—
Gordon, Carroll G., and Robbins. 2,946,543.

Thiel, Max: *See*—
Asinger, Friedrich, Thiel, and Höringklee. 2,946,789.

Thierer, Charles, to National Rubber Machinery Co. Quick connect sink mounting for garbage grinders. 2,946,525, 7-26-60, Cl. 241—100.5.

Thoma, Richard W.: *See*—
Fried, Josef, and Thoma. 2,946,807.

Thomas, Gordon H.: *See*—
Fried, Josef, and Thomas. 2,946,812.

Thomas, Leslie S., to General Motors Corp. Electric control box. 2,946,865, 7-26-60, Cl. 200—50.

Thomas Steel Forms, Inc.: *See*—
Francis, John G., Jr. 2,946,111.

Thompson, Harris, to Nalco Chemical Co. Method and composition for combating slag formation on refractory surfaces. 2,946,703, 7-26-60, Cl. 117—123.

Thompson Ramo Wooldridge Inc.: *See*—
Bayer, Frank C. 2,946,185.
Carter, Thomas A., Jr., and Hooper. 2,946,288.
Corbett, Marshall J. 2,946,190.
Raymont, William R. 2,946,680.
Sampietro, Achilles C. 2,946,513.
Southam, Donald L. 2,946,186.

Thompson, William B., to General Motors Corp. Air compressor. 2,946,503, 7-26-60, Cl. 230—190.

Thorens S.A.: *See*—
Bajulas, Roger. 2,946,596.

Thornbery, John H., and R. B. Matthews, to Baso Inc. Multiple burner control system or the like. 2,946,376, 7-26-60, Cl. 158—131.

Thorson, Warren K., and A. R. McLerran, to Ideco Inc. Hoisting apparatus. 2,946,561, 7-26-60, Cl. 254—145.

Tidewater Oil Co.: *See*—
Miller, Walter M. 2,946,741.
Rampino, Louis D., and Gorham. 2,946,742.

Tiffany, Carter, to Weems System of Navigation, Inc. Angular bearing instrument and mechanism for angular adjustment. 2,946,256, 7-26-60, Cl. 88—2.4.

Timson, William J. Tire chain fastener. 2,946,365, 7-26-60, Cl. 152—213.

Tinius Olsen Testing Machine Co.: *See*—
Karpchuk, Sylvester. 2,946,218.

Tinsley, Samuel W., P. S. Starcher, and J. P. Henry, to Union Carbide Corp. Epoxyalkyltrifluoromethylbenzenes. 2,946,-906, 7-26-60, Cl. 260—348.

Tissot, Germain, and E. Teissier, to Societe de Constructions Mecaniques de Stains. Production of twistless staple fiber yarns by sizing untwisted bundles, false twisting and winding. 2,946,180, 7-26-60, Cl. 57—156.

Tissot, Germain, and E. Teissier, to Societe de Constructions Mecaniques de Stains. Production of twistless yarns by direct spinning to tow, sizing the tow, false twisting and winding. 2,946,181, 7-26-60, Cl. 57—157.

Titus, Albert C., to General Electric Co. Instant filming brush. 2,946,907, 7-26-60, Cl. 310—228.

Tognola, Tullio, to Bendix Aviation Corp. Electrical vibrator and method of making same. 2,946,874, 7-26-60, Cl. 200—90.

Toner, James W.: *See*—
Borders, Charles R., and Toner. 2,946,968.

Torrington Mfg. Co., The: *See*—
Froelich, Gustave H. 2,946,536.

Tousignant, William F.: *See*—
Walles, Wilhelm E., and Tousignant. 2,946,772.
Walles, Wilhelm E., and Tousignant. 2,946,773.

Townsend, Stephen E., to General Dynamics Corp. Reversible magnetic shift register. 2,946,987, 7-26-60, Cl. 340—174.

Toy, Arthur D. F., K. H. Ratteabury, and T. M. Hinkes, to Victor Chemical Works. Heat stabilized vinyl chloride resin plastisols. 2,946,764, 7-26-60, Cl. 260—45.7.

Toyo Rayon Co., Ltd.: *See*—
Kurolwa, Kimio, and Sone. 2,946,526.

Trans-Lux Corp.: *See*—
Curtis, Nicholas. 2,946,849.

Traver, George W.: *See*—
Hooper, William W., and Traver. 2,946,500.

Traylor, Charles H., Jr. Rocket and satellite toy apparatus. 2,946,151, 7-26-60, Cl. 46—74.

Trico Products Corp.: *See*—
Deibel, Raymond A., and Scinta. 2,946,078.

Trimble, Cebern B., to The National Cash Register Co. Record tape take-up means. 2,946,530, 7-26-60, Cl. 242—55.11.

Triscoli, Louis R., H. L. Muller, Jr., and T. Q. Ciccone, to United States of America, Army. Explosive cartridge. 2,946,284, 7-26-60, Cl. 102—39.

Triumph-Universa G.m.b.H.: *See*—
Gittelson, Bernard. 2,946,125.

Troxel Mfg. Co.: *See*—
Kalter, Harold E. 2,946,372.

Tucker, Linwood G., Jr., and A. J. Kantor, to Koppers Co., Inc. Process of producing light weight aggregate. 2,946,-112, 7-26-60, Cl. 25—157.

Tursky, Charles M. Fluid separators. 2,946,445, 7-26-60, Cl. 210—232.

Twomey, Dermot: *See*—
Barry, Vincent C., Beiton, Conalty, Twomey, O'Sullivan, and Hodel. 2,946,792.

Udry, John J., to Borg-Warner Corp. Method and apparatus for perforating wellbores and casings. 2,946,283, 7-26-60, Cl. 102—20.

Uhrus, Lars O.: *See*—
Liljekvist, Bengt L. F., and Uhrus. 2,946,101.

Ulbrich, Gerhard, to Robert Bosch G.m.b.H. Commutator arrangements. 2,946,908, 7-26-60, Cl. 310—234.

Ulrich, Robert E.: *See*—
Jansen, Richard E., and Ulrich. 2,946,660.

Underwood Corp.: *See*—
Childs, Henry B. 2,946,423.
Intaglata, Salvatore J., and Yerks. 2,946,421.

Union Carbide Corp.: *See*—
Brennan, Joseph H., and Saunders. 2,946,676.
Gallant, Melvin M., and Legue. 2,946,759.
King, Burnham W., and Smalley. 2,946,704.
Rose, Julian K., and Schuls. 2,946,769.
Tinsley, Samuel W., Starcher, and Henry. 2,946,808.
Westbrook, Russell D., and Shepard. 2,946,835.

Union Oil Co. of California: *See*—
Keller, Howard F., Jr. 2,946,746.

United Aircraft Corp.: *See*—
Radtke, Edward W., and Farkas. 2,946,509.

United Kingdom Atomic Energy Authority: *See*—
Fitch, Richard A. 2,946,923.

United Shoe Machinery Corp.: *See*—
Bradley, Robert W. 2,946,956.
Dexter, Richard D. 2,946,368.
Hopkins, Shirley R. 2,946,420.
Musser, C Walton. 2,946,235.
Quinn, Edward, and Witt. 2,946,800.

United States Automatic Box Machinery Co., Inc.: *See*—
Cote, Omer E. 2,946,165.

United States of America

Air Force: *See*—
Byerly, Earle H. 2,946,964.
Kyler, Robert J. 2,946,901.
Lind, Arden L. 2,946,920.
Lind, Arden L. 2,946,921.
Rosen, George. 2,946,969.

Army: *See*—
Cummings, James J. 2,946,933.
Elders, Daniel S. 2,946,967.
Fischel, Eduard M. 2,946,539.
Triscoli, Louis R., Muller, and Ciccone. 2,946,284.
Zagieboylo, Walter, and McQue. 2,946,916.

Atomic Energy Commission: *See*—
Colgate, Stirling A., Ferguson, Furth, and Wright. 2,946,914.
Sass, Manuel C., Randolph, and Starr. 2,946,699.

Navy: *See*—
Castle, John G., Jr. 2,946,887.
Crockett, Sydney R. 2,946,261.
Gray, John W. 2,946,260.
Kowalyshyn, Stephen, Jr., Eikel, and Warren. 2,946,868.
Marston, Arthur E., and Kaiser. 2,947,000.
Schoban, George. 2,946,946.
Slezak, Robert W., Bjerke, and Caldwell. 2,946,461.
Van Winkle, Edgar W. 2,946,848.

United States Rubber Co.: *See*—
Slade, Duncan E. 2,946,139.

United States Steel Corp.: *See*—
Hagen, Robert E., Lopez, and Sundin. 2,946,468.
Klahn, William E., and Neupert. 2,946,618.
Roy, Frank P., and Salio. 2,946,734.

Universal Oil Products Co.: *See*—
Bloch, Herman S. 2,946,652.

University of California, The Regents of the: *See*—
Powers, John B. 2,946,879.
Powers, John B. 2,946,894.

Utne, Torleif: *See*—
Chamberlin, Karl M., and Utne. 2,946,811.

VEB Leuna-Werke "Walter Ulbricht": *See*—
Aslinger, Friedrich, Thiel, and Höringklee. 2,946,789.

VEB Carl Zeiss Jena: *See*—
Kortum, Herbert, and Papello. 2,946,129.

VEB Spinnereimaschinenbau Karl-Marx-Stadt: *See*—
Hoppner, Martin, Schmeiler, and Schafer. 2,946,097.

Vahl, Laszlo: *See*—
Boon, Edmund F., Vahl, and Kingma. 2,946,706.

Valentine, William, to American Cyanamid Co. Stable poliomyelitis live virus vaccine. 2,946,724, 7-26-60, Cl. 167—78.

Valeron Corp., The: *See*—
Yogus, William, and Cloutier. 2,946,245.

Vallak, Enn. Hot tops. 2,946,103, 7-26-60, Cl. 22—147.

Van Auweleer, Albert J.: *See*—
McCanse, James E., and Van Auweleer. 2,946,373.

Van Winkle, Edgar W., to United States of America, Navy. Facsimile recorder system. 2,946,848, 7-26-60, Cl. 178—6.8.

Velsicol Chemical Corp.: *See*—
Molotsky, Hyman M. 2,946,617.
Rakoff, Henry. 2,946,074.

Vendo Co., The: *See*—
Stoner, Harry B., Parre, and McGary. 2,946,483.

Vermilion, Willas L., Jr., to The Standard Oil Co. Alkylation process. 2,946,832, 7-26-60, Cl. 260—683.43.

Victor Chemical Works: *See*—
Toy, Arthur D. F., Rattenbury, and Hinkes. 2,946,764.

Visco Products Co.: *See*—
Kirkpatrick, Willard H., and Seale. 2,946,747.

Vodicka, Vincent: *See*—
Malinowski, Richard F., and Vodicka. 2,946,911.

Vogel, Alvin R., to Northrop Corp. Rotary hydraulic servo actuator. 2,946,320, 7-26-60, Cl. 121—120.

Von Gugelberg, Hans L. Glow discharge tubes and circuits therefor. 2,946,921, 7-26-60, Cl. 315—84.6.

Vosbikian, Peter S. and T. S. Brush having a main brush and a flexibly mounted roll in advance of said main brush. 2,946,073, 7-26-60, Cl. 16—118.

Vosbikian, Thomas S.: *See*—
Vosbikian, Peter S. and T. S. 2,946,073.

Wachovia Bank and Trust Co.: *See*—
Bahnson, Agnew H., Jr. 2,946,173.
Bahnson, Agnew H., Jr. 2,946,174.
Bahnson, Agnew H., Jr. 2,946,537.

Wadsworth, William B., and F. R. Poole, to David Clark Co. Inc. Ear protector and communication equipment. 2,946,802, 7-26-60, Cl. 179—182.

Wagner, Charlie M. Electrical insulator contamination shield. 2,946,841, 7-26-60, Cl. 174—139.

Wagner, Edward E., to Philip Morris Inc. Liquid treatment apparatus for continuous web products. 2,946,516, 7-26-60, Cl. 239—220.

Wahl, Harold F., to Electric Steel Foundry Co. Double socket and sling structure. 2,946,619, 7-26-60, Cl. 294—74.

Wahlin, Fred W., to Spraying Systems Co. Pipe side spray nozzle and clamps. 2,946,518, 7-26-60, Cl. 239—206.

Wakeman, Alden H., to The Creamery Package Mfg. Co. Aerating and refrigerating apparatus. 2,946,208, 7-26-60, Cl. 62—304.

Walch, Kurt R., and J. J. Winsness, to General Electric Co. Panelboard wiring support arrangement. 2,946,929, 7-26-60, Cl. 317—122.

Wald Industries, Inc.: *See*—
Wald, John R., Jr., and Wilson. 2,946,603.

Wald, John R., Jr., and R. W. Wilson, to Wald Industries, Inc. Steering device for surface marking apparatus. 2,946,603, 7-26-60, Cl. 280—463.

Waldhauer, Charles H., Jr., to Minneapolis-Honeywell Regulator Co. Electromagnetic relay. 2,946,875, 7-26-60, Cl. 200—103.

Waldorf Paper Products Co.: *See*—
Hennessey, Russel J. 2,946,433.
Meyers, Harold E. 2,946,485.

Wall Colmonoy Corp.: *See*—
La Rou, Lawrence V. 2,946,678.

Wallen, Wilhelm E., and W. P. Tousignant, to The Dow Chemical Co. Water-soluble copolymers of ring-substituted N-vinyl-2-oxazolidinone. 2,946,772, 7-26-60, Cl. 260—77.5.

Wallen, Wilhelm E., and W. P. Tousignant, to The Dow Chemical Co. Water-soluble copolymers of ring-substituted N-vinyl-2-oxazolidinone. 2,946,773, 7-26-60, Cl. 260—77.5.

Waltham Horological Corp., The: *See*—
Cook, Owen L. 2,946,978.

Wandel, Oscar A., to Fastener Corp. Stapling apparatus. 2,946,009, 7-26-60, Cl. 1—48.

Warman, Bloomfield J., to Siemens Edison Swan Ltd. Key senders of the kind used in automatic telephone and like signalling systems. 2,946,854, 7-26-60, Cl. 179—18.

Warnecke, Ernst: *See*—
Hollman, Franz, and Warnecke. 2,946,340.

Warner, Edgar, to The Champion Paper and Fibre Co. Apparatus for coating paper. 2,946,307, 7-26-60, Cl. 118—119.

Warner Electric Brake & Clutch Co.: *See*—
Leeson, James L., Jr. 2,946,418.

Warren, Ronald G.: *See*—
Kowalyshyn, Stephen, Jr., Eikel, and Warren. 2,946,868.

Wartiainen, Henrik V. A. Cover for the suction box of paper making machines. 2,946,379, 7-26-60, Cl. 162—374.

Wassell, Harold J. H., to Marconi's Wireless Telegraph Co. Ltd. Radar systems. 2,946,996, 7-26-60, Cl. 343—5.

Wathne, Edvin. Bead seams for metal containers. 2,946,477, 7-26-60, Cl. 220—54.

Watson, David D.: *See*—
Jolliffe, Sidney A. W., and Watson. 2,946,998.

Wayne Iron Works: *See*—
Edgerton, Charles W., Jr. 2,946,556.

Weaver, Wayne A.: *See*—
Parks, Robert E., and Weaver. 2,946,866.

Webb, Irving D., and J. W. Yale, Jr., to Collier Carbon and Chemical Corp. Fungicidal compositions comprising reaction products of ethylene and sulfur. 2,946,714, 7-26-60, Cl. 167—22.

Webber, Clarence E., and J. C. Smith, to New York Wire Cloth Co. Wire cloth mirage forming mechanism. 2,946,354, 7-26-60, Cl. 139—130.

Weems System of Navigation, Inc.: *See*—
Tiffany, Carter. 2,946,256.

Wegner Machinery Corp.: *See*—
O'Neal, Joseph I. 2,946,404.

Wehrig, Otto C. Burglar alarm. 2,946,867, 7-26-60, Cl. 200—61.45.

Weiner, Ted. Apparatus for loading and unloading floating vessels. 2,946,466, 7-26-60, Cl. 214—14.

Weis, Charles W.: *See*—
Powers, Richard E., and Weis. 2,946,312.

Welex, Inc.: *See*—
Groner, Edward L., and Herndon. 2,946,130.

Wellington, Cary L., to The Condenser Machinery Corp. Method for making electrolytic condensers. 2,946,787, 7-26-60, Cl. 204—28.

Wellman, S. K., Co., The: *See*—
Biggs, Robert W. 2,946,369.

Wells, Martin. Light weight heavy duty welding rod holder. 2,946,878, 7-26-60, Cl. 219—138.

Welsh Mfg. Co.: *See*—
Lindblom, Frank W. 2,946,258.

Weltmer, Wilton W., to Allis-Chalmers Mfg. Co. Baffle structure for tanks. 2,946,345, 7-26-60, Cl. 137—590.

Weiz, Alfred, to Filtrox-Werke AG. Apparatus for filtering liquids, particularly for use in the beverage industry. 2,946,447, 7-26-60, Cl. 210—333.

Wendt, Harry C., and C. A. Haskell, to General Electric Co. Accelerometers. 2,946,226, 7-26-60, Cl. 73—517.

Wen-Mac Corp.: *See*—
McRoskey, John W. 2,946,227.

Wentis, George W.: *See*—
Dennison, Frederick R., Olson, and Wentis. 2,946,577.

Werkspoor N.V.: *See*—
Boon, Edmund F., Vahl, and Kingma. 2,946,706.

Wesolowski, Edmund, to The Pure Oil Co. Test apparatus and method. 2,946,891, 7-26-60, Cl. 250—83.6.

Wessel, Wilhelm: *See*—
Nauschütz, Peter, Wessel, Kuhlo, Dreyer, and Bölkow. 2,946,235.

West, John M., to Foster Wheeler Corp. Vertical feedwater heater. 2,946,570, 7-26-60, Cl. 257—32.

Westbrook, Russell D., and R. L. Shepard, to Union Carbide Corp. Carbon-carbon boron thermocouple. 2,946,835, 7-26-60, Cl. 136—5.

Westbury, Roy, to H. M. Hobson Ltd. Constant speed units. 2,946,194, 7-26-60, Cl. 60—53.

Western Electric Co., Inc.: *See*—
Bunch, Tillman T. 2,946,528.
Ellis, Benjamin C., Jr. 2,946,527.
Stem, Eugene C. 2,946,529.

Westinghouse Electric Corp.: *See*—
Lopenski, Stanley A. 2,946,096.
Morehead, Chalmers. 2,946,909.
Petre, James. 2,946,607.
Picha, George J., and Winkler. 2,946,880.

Westwood, Albert R. C., to Imperial Chemical Industries Ltd. Casting metals. 2,946,106, 7-26-60, Cl. 22—200.

Wetherill, William C. Manually operated loom. 2,946,361, 7-26-60, Cl. 139—33.

Weymouth, Frederick J.: *See*—
Ballard, Denis G. H., Bamford, Hanby, and Weymouth. 2,946,771.

Whaley, Thomas H., to Texaco Development Corp. Manufacture of synthesis gas. 2,946,670, 7-26-60, Cl. 48—206.

Wheatley, Thomas. Closure assembly. 2,946,479, 7-26-60, Cl. 220—55.

Wheeler, C. H., Mfg. Co.: *See*—
Drosscher, Le Roy A. 2,946,571.

Wheelock Charles E., and J. E. Wicklatz, to Phillips Petroleum Co. Resins from epoxidized liquid polybutadiene and neutral esters of polybasic acids. 2,946,756, 7-26-60, Cl. 260—2.

White, Harry: *See*—
Annear, John D., White, and Holt. 2,946,221.

White, Harry G., and H. M. Zampieri, to Coast Metals, Inc. Means for feeding weld rod. 2,946,430, 7-26-60, Cl. 203—210.

White, James R.: *See*—
Denton, Robert F., and White. 2,946,227.

White, Morris. Handbags. 2,946,364, 7-26-60, Cl. 150—28.

Whitson, James, and Co. Ltd.: *See*—
Joseph, Alphonse. 2,946,236.

Wibau Westdeutsche Industrie-und Strassenbau-Maschinen-Gesellschaft m.b.H.: *See*—
Munderich, Paul. 2,946,574.

Wicklatz, John R.: *See*—
Wheelock, Charles E., and Wicklatz. 2,946,756.

Wiebelhaus, Ralph F., and W. F. Mohr. Crop gathering device. 2,946,424, 7-26-60, Cl. 198—7.

Wiesmann, Joseph W., to H. H. Robertson Co. Building and combination air and wire distributing structure. 2,946,418, 7-26-60, Cl. 189—34.

Wijn, Henricus P. J.: *See*—
Jonker, Gerard H., Wijn, and Braun. 2,946,752.
Jonker, Gerard H., Wijn, and Braun. 2,946,753.

Wilde, Arthur E., to Shaffer Tool Works. Hydraulic control gate. 2,946,550, 7-26-60, Cl. 251—1.

Wilde, Sergei A.: *See*—
Davey, Charles B., and Wilde. 2,946,675.

Wilkie, Stanley A. Drapery hooks. 2,946,107, 7-26-60, Cl. 24—86.

Wilkinson, Joseph M.: *See*—
Kleinschmidt, Roger F., and Wilkinson. 2,946,805.

Williams, Earl P.: *See*—
Chiddix, Max E., and Williams. 2,946,824.

Williams, Fred A. Meditation device. 2,946,133, 7-26-60, Cl. 35—25.

Williams, Philip S., to Jersey Production Research Co. Combination drilling and testing process. 2,946,565, 7-26-60, Cl. 255—1.5.

Williamson, Marshall L., to Federal Paper Board Co., Inc. Multicellular folding box structures. 2,946,436, 7-26-60, Cl. 206—65.

Williamson, Marshall L., to Federal Paper Board Co., Inc. Multicellular folding box structures. 2,946,498, 7-26-60, Cl. 229—28.

Williamson, Marshall L., to Federal Paper Board Co., Inc. Handle for multicellular folding boxes. 2,946,501, 7-26-60, Cl. 229—52.

Williamson, Marshall L., to Federal Paper Board Co., Inc. Single can carrier. 2,946,620, 7-26-60, Cl. 294—87.2.

Williamson, Marshall L., to Federal Paper Board Co., Inc. Two can carrier. 2,946,621, 7-26-60, Cl. 294—87.2.

Wilson, J. G., Corp., The: *See*—
Zoll, Maurice B., Brown, and Smith. 2,946,877.

Wilson, Rufus W.: *See*—
Wald, John R., Jr., and Wilson. 2,946,603.

Wind-King Electric Mfg. Co.: *See*—
Swanson, Russel. 2,946,142.

Wineman, Robert J.: *See*—
Anagnostopoulos, Constantine E., and Wineman. 2,946,815.

Wingler, William C.: *See*—
Boyles, Robert L., and Wingler. 2,946,182.

Winkel, Paul L. Rotary disc shoulder cutter. 2,946,145, 7-26-60, Cl. 37—143.

Winkler, Frederic C.: *See*—
Picha, George J., and Winkler. 2,946,880.

Winsel, August: *See*—
Justi, Eduard, Beckert, and Winsel. 2,946,836.

Winsness, John J.: *See*—
Walch, Kurt R., and Winsness. 2,946,929.

Winthrop-Atkins Co., Inc.: *See*—
Sampson, George H. 2,946,545.

Wisconsin Alumni Research Foundation: *See*—
Davey, Charles B., and Wilde. 2,946,675.

Wisner, William R., to Corning Glass Works. Lamp manufacture. 2,946,641, 7-26-60, Cl. 316—19.

Witt, Wilbur W.: *See*—
Quinn, Edward, and Witt. 2,946,800.

Wittig, Kurt: *See*—
Gerlach, Albrecht, and Wittig. 2,946,924.

Wolshin, Louis, 50% to Dr. S. Axelrod. Inflatable beach mat and a supporting frame therefor. 2,946,067, 7-26-60, Cl. 5—344.

Wolshin, Louis, 50% to S. Axelrod. Inflatable shelter device. 2,946,337, 7-26-60, Cl. 135—1.

Womack, Walter H.: *See*—
Simmons, Archie L., and Womack. 2,946,126.

Wood, Fredric E., to Automatic Electric Laboratories, Inc. Telephone exclusion key. 2,946,856, 7-26-60, Cl. 179—99.

Woodall Industries, Inc.: *See*—
Greig, James W. 2,946,712.

Woodhead, Jonas, & Sons Ltd.: *See*—
Martin, Gavin P. B. 2,946,582.

Woods, Mary J.: *See*—
Rudner, Bernard, and Woods. 2,946,790.

Wootton, William R., to Babcock & Wilcox Ltd. Nuclear power plant. 2,946,732, 7-26-60, Cl. 204—193.2.

Worth, Maurice W., to James Lees and Sons Co. Cut and loop Axminster loom and method. 2,946,850, 7-26-60, Cl. 139—7.

Worth, Maurice W., to James Lees and Sons Co. Axminster pile fabric. 2,946,355, 7-26-60, Cl. 139—401.

Worth, Sidney V., and R. C. Rebling. Child's story book with shiftable pictures. 2,946,137, 7-26-60, Cl. 35—35.

Wright, Edward J., to Deering Milliken Research Corp. Twisting arrangement. 2,946,175, 7-26-60, Cl. 57—58.3.

Wright, Robert E.: *See*—
Colgate, Stirling A., Ferguson, Furth, and Wright. 2,946,914.

Yale, John W., Jr.: *See*—
Webb, Irving D., and Yale. 2,946,714.

Yamaguchi, Takao. Dynamic balancing apparatus. 2,946,224, 7-26-60, Cl. 73—461.

Yawman, Charles F., Jr., and R. L. Stangenberg. Device for removing and replacing fluorescent lamps. 2,946,615, 7-26-60, Cl. 294—20.

Yeo, Alan A.: *See*—
Moy, John A. E., and Yeo. 2,946,743.

Yerke, Richard W.: *See*—
Intagliata, Salvatore J., and Yerke. 2,946,421.

Yenke, Laurel R., to J. I. Case Co. Adjustable mounting means for a reciprocating mower. 2,946,171, 7-26-60, Cl. 56—25.

Yoder, Alfred F., to The Barr Rubber Products Co. Apparatus for rotationally distributing a liquid charge within a mold. 2,946,092, 7-26-60, Cl. 18—26.

Yogus, William, and F. J. Cloutier, to The Valeron Corp. Boring tools with individually adjustable tool cartridges. 2,946,245, 7-26-60, Cl. 77—58.

Young, Robert G., to Sperry Rand Corp. Twister-hook. 2,946,356, 7-26-60, Cl. 140—119.

Zachrisson, Karl T. Apparatus for controlling the oil level in the crankcase of a motor vehicle. 2,946,405, 7-26-60, Cl. 184—103.

Zagieboylo, Walter, and B. McQue, to United States of America, Army. High current carbon arc lamps or devices. 2,946,916, 7-26-60, Cl. 314—29.

Zahnradfabrik Friedrichshafen: *See*—
Ryba, Anton. 2,946,419.

Zampieri, Enrico M.: *See*—
White, Harry G., and Zampieri. 2,946,430.

Zingl, Karl. Process of and machine for treating used tires. 2,946,375, 7-26-60, Cl. 157—13.

Zarwell, Cedric E.: *See*—
De Smidt, Woodrow A., and Zarwell. 2,946,871.

Zaugg, Harold E.: *See*—
Michaels, Raymond J., Jr., and Zaugg. 2,946,793.

Zaugg, Harold E., and R. W. De Net, to Abbott Laboratories. 1-methyl-5(2',2'-diphenyl-3'-ethyl-4'-furylmethyl)-amidasole and salts and lower alkyl quaternaries. 2,946,808, 7-26-60, Cl. 260—309.

Zaugg, Harold E., and R. W. De Net, to Abbott Laboratories. (5-methyl-4-imidazolyl)-diphenyl carbinol salts and lower alkyl quaternaries. 2,946,804, 7-26-60, Cl. 260—309.

Zeitlin, Edward J. Automobile tire with means for attachment of chains, tire boot, etc. 2,946,367, 7-26-60, Cl. 152—222.

Zenftman, Henryk, to Imperial Chemical Industries Ltd. Anion exchange resins from esters of acrylic acids with polyhydroxy substituted quaternary ammonium salts. 2,946,758, 7-26-60, Cl. 260—2.1.

Zievers, James F., and H. A. Currie; said Currie assor. to said Zievers. Apparatus for continuous filtering. 2,946,444, 7-26-60, Cl. 210—107.

Zima, Otto, and E. Jacobi, to E. Merck Aktiengesellschaft, Darmstadt. Method of preparing β-anilinopyridine. 2,946,802, 7-26-60, Cl. 260—296.

Zoll, Maurice B., M. T. Brown, and R. M. Smith, Jr., to The J. G. Wilson Corp. Temperature-operated rolling steel doors. 2,946,877, 7-26-60, Cl. 160—8.

Zomber, Gerard L., to ACF Industries, Inc. Automatic limit bridge. 2,946,950, 7-26-60, Cl. 324—57.

Zorn, Werner: *See*—
Loewe, Siegmund, and Zorn. 2,946,859.

Zoschak, Robert J., and K. J. Ray, to Foster Wheeler Corp. Gas and steam cycle power plant having twin supercharged vapor generators. 2,946,187, 7-26-60, Cl. 60—39.16.

Zumbiel, C. W., Co., The: *See*—
Creelman, Edmund W. 2,946,499.

Zysk, Stanley A.: *See*—
Clair, Verne, Jr., and Zysk. 2,946,478.

CLASSIFICATION OF PATENTS

ISSUED JULY 26, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 49: 2,946,059
2,946,060
106: 2,946,061
2— 3: 2,946,062
2,946,063
312: 2,946,064
4— 115: 2,946,065
5— 227: 2,946,066
344: 2,946,067
8— 44: 2,946,648
94.33: 2,946,649
9— 347: 2,946,068
12— 142: 2,946,069
2,946,070
13— 37: 2,946,834
15— 49: 2,946,071
110: 2,946,072
118: 2,946,073
122: 2,946,074
184: 2,946,075
236: 2,946,076
238: 2,946,077
250.32: 2,946,078
371: 2,946,079
373: 2,946,080
16— 80: 2,946,081
125: 2,946,082
135: 2,946,083
17— 7: 2,946,084
18: 2,946,085
19— 1: 2,946,086
2: 2,946,087
2,946,088
12: 2,946,089
2,946,090
17: 2,946,091
26: 2,946,092
36: 2,946,093
47.5: 2,946,094
84: 2,946,650
87: 2,946,095
89: 2,946,096
19— 127: 2,946,097
20— 92: 2,946,098
74: 2,946,099
22— 57.3: 2,946,100
84: 2,946,101
94: 2,946,102
147: 2,946,103
194: 2,946,104
209: 2,946,105
23— 2: 2,946,651
3: 2,946,652
65: 2,946,653
67: 2,946,654
107: 2,946,655
109: 2,946,656
110: 2,946,657
143: 2,946,658
172: 2,946,659
182: 2,946,660
202: 2,946,661
204: 2,946,662
2,946,663
2,946,664
230: 2,946,665
259.1: 2,946,666
270: 2,946,667
277: 2,946,668
2,946,669
24— 49: 2,946,106
88: 2,946,107
135: 2,946,108
205.15: 2,946,109
25— 1: 2,946,110
128: 2,946,111
157: 2,946,112
27— 27: 2,946,113
29— 25.3: 2,946,114
148.4: 2,946,115
157.4: 2,946,116
201: 2,946,117
401: 2,946,118
470: 2,946,119
2,946,120
30— 29.5: 2,946,121
133: 2,946,122
219: 2,946,123
32— 32: 2,946,124
33— 2: 2,946,125
58: 2,946,126
33— 126: 2,946,127
132: 2,946,135
147: 2,946,136
172: 2,946,129
176: 2,946,130
214: 2,946,131
34— 170: 2,946,132
35— 23: 2,946,133
29: 2,946,134
31: 2,946,155
35: 2,946,137
48: 2,946,138
36— 7.3: 2,946,139
19.5: 2,946,140
68: 2,946,141
37— 30: 2,946,142
92: 2,946,143
129: 2,946,144
143: 2,946,145
192: 2,946,146
38— 2: 2,946,147
40— 34: 2,946,148
43—42.18: 2,946,149
46— 28: 2,946,150
74: 2,946,151
175: 2,946,152
202: 2,946,153
47— 1: 2,946,154
58: 2,946,155
61: P.P.1,951
P.P.1,962
49— 200: 2,946,670
49— 81: 2,946,156
50— 22: 2,946,157
413: 2,946,158
51— 48: 2,946,159
58: 2,946,160
165: 2,946,161
2,946,162
188: 2,946,163
52— 5: 2,946,671
2,946,672
2,946,673
53— 26: 2,946,164
2,946,165
124: 2,946,166
137: 2,946,167
53— 176: 2,946,250
488: 2,946,251
54— 1.01: 2,946,252
1.12: 2,946,253
471: 2,946,254
55— 1: 2,946,255
2.4: 2,946,256
16: 2,946,257
41: 2,946,258
57: 2,946,259
58— 1.5: 2,946,260
1.7: 2,946,261
37: 2,946,262
2,946,263
2,946,264
59— 1.6: 2,946,264
12.5: 2,946,265
98— 93: 2,946,266
94— 1: 2,946,267
95— 4.5: 2,946,268
11: 2,946,269
13: 2,946,270
66: 2,946,271
77.5: 2,946,272
99: 2,946,273
96— 1: 2,946,683
78: 2,946,683
91: 2,946,684
98— 94: 2,946,274
99— 4: 2,946,685
14: 2,946,686
48: 2,946,687
97: 2,946,688
138: 2,946,689
154: 2,946,690
168: 2,946,691
222: 2,946,692
260: 2,946,275
419: 2,946,276
100— 53: 2,946,277
101— 44: 2,946,278
103: 2,946,279
178: 2,946,280
227: 2,946,281
413.1: 2,946,282
102— 20: 2,946,283
102— 39: 2,946,284
49: 2,946,285
103— 3: 2,946,286
41: 2,946,287
97: 2,946,288
100: 2,946,289
142: 2,946,290
149: 2,946,291
160: 2,946,292
272: 2,946,293
105— 315: 2,946,294
340: 2,946,295
354: 2,946,296
397: 2,946,297
106— 40: 2,946,693
47: 2,946,694
64: 2,946,695
107— 1: 2,946,298
38: 2,946,299
112— 47: 2,946,300
300: 2,946,301
258: 2,946,302
113— 45: 2,946,303
114— 202: 2,946,304
235: 2,946,305
115— 35: 2,946,306
117— 38: 2,946,696
2,946,697
54: 2,946,698
65: 2,946,699
66: 2,946,700
72: 2,946,701
75: 2,946,702
123: 2,946,703
129: 2,946,704
139.5: 2,946,705
118— 119: 2,946,307
119— 18: 2,946,308
22: 2,946,309
157: 2,946,310
120—42.03: 2,946,311
62.16: 2,946,312
121— 13: 2,946,313
15: 2,946,314
34: 2,946,315
38: 2,946,316
2,946,317
122— 479: 2,946,323
123— 73: 2,946,324
119: 2,946,325
179: 2,946,326
185: 2,946,327
196: 2,946,328
126— 317: 2,946,329
127— 29: 2,946,706
128— 29: 2,946,330
218: 2,946,331
268: 2,946,332
482: 2,946,333
484: 2,946,334
522: 2,946,335
131— 175: 2,946,336
135— 1: 2,946,337
136— 5: 2,946,835
86: 2,946,836
184: 2,946,707
137— 22: 2,946,338
38: 2,946,339
63: 2,946,340
116.5: 2,946,341
217: 2,946,342
390: 2,946,343
484.6: 2,946,344
560: 2,946,345
622: 2,946,346
2,946,347
624: 2,946,348
138— 94.3: 2,946,349
139— 7: 2,946,350
33: 2,946,351
110: 2,946,352
125: 2,946,353
130: 2,946,354
401: 2,946,355
140— 119: 2,946,356
141— 5: 2,946,357
143— 66: 2,946,358
133: 2,946,359
144— 201: 2,946,360
146— 28: 2,946,361
102: 2,946,362
148—16.6: 2,946,708
33: 2,946,709
150— 1: 2,946,363
28: 2,946,364
152— 213: 2,946,365
216: 2,946,366
222: 2,946,367
153— 1: 2,946,368
48: 2,946,369
154— 1.6: 2,946,370
2.26: 2,946,710
2.77: 2,946,711
28: 2,946,371
45.9: 2,946,712
106: 2,946,713
171: Re.24,850
155— 5.24: 2,946,372
80: 2,946,373
106: Re.24,849
179: 2,946,374
157— 13: 2,946,375
158— 131: 2,946,376
160— 8: 2,946,377
348: 2,946,378
162— 374: 2,946,379
164— 111: 2,946,380
115: 2,946,381
166— 11: 2,946,382
23: 2,946,383
46: 2,946,384
88: 2,946,385
95: 2,946,386
105: 2,946,387
120: 2,946,388
167— 22: 2,946,714
2,946,715
2,946,716
2,946,717
2,946,718
2,946,719
33: 2,946,720
42: 2,946,721
53.1: 2,946,722
65: 2,946,723
78: 2,946,724
93: 2,946,725
169— 31: 2,946,389
170—160.13: 2,946,390
160.55: 2,946,391
172— 7: 2,946,392
174— 15: 2,946,837
53: 2,946,838
93: 2,946,839
136: 2,946,840
139: 2,946,841
153: 2,946,842
178— 2: 2,946,843
2,946,844
178— 5.4: 2,946,845
2,946,846
5.8: 2,946,847
6.8: 2,946,848
7.1: 2,946,849
33: 2,946,850
43.5: 2,946,851
179— 6: 2,946,852
17: 2,946,853
18: 2,946,854
2,946,855
99: 2,946,856
100: 2,946,857
100.2: 2,946,858
2,946,859
156: 2,946,860
170: 2,946,861
182: 2,946,862
181— .5: 2,946,393
23: 2,946,394
72: 2,946,395
182— 3: 2,946,396
39: 2,946,397
95: 2,946,398
183— 2: 2,946,399
7: 2,946,400
110: 2,946,401
183—114.2: 2,946,402
115: 2,946,403
184— 3: 2,946,404
103: 2,946,405
187— 9: 2,946,406
10: 2,946,407
188— 73: 2,946,408
194: 2,946,409
219.6: 2,946,410
228.6: 2,946,411
264: 2,946,412
189— 34: 2,946,413
36: 2,946,414
89: 2,946,415
192— 4: 2,946,416
8: 2,946,417
12: 2,946,418
84: 2,946,419
193— 43: 2,946,420
197— 5: 2,946,421
179: 2,946,422
195: 2,946,423
198— 7: 2,946,424
30: 2,946,425
32: 2,946,426
38: 2,946,427
193: 2,946,428
230: 2,946,429
200— 35: 2,946,863
42: 2,946,864
50: 2,946,865
51.25: 2,946,866
51.45: 2,946,867
51.48: 2,946,868
51.57: 2,946,869
51.60: 2,946,870
65: 2,946,871
87: 2,946,872
2,946,873
90: 2,946,874
103: 2,946,875
104: 2,946,876
114: Re.24,847
166: 2,946,877
203— 158: 2,946,726
206— 210: 2,946,430
204— 28: 2,946,727
37: 2,946,728
64: 2,946,729
2,946,730
143: 2,946,731
193.2: 2,946,732
229: 2,946,733
279: 2,946,734
302: 2,946,735
206— 16: 2,946,431
33: 2,946,432
45.19: 2,946,433
56: 2,946,434
63.2: 2,946,435
66: 2,946,436
207— 10: 2,946,437
208— 65: 2,946,736
2,946,737
112: 2,946,738
2,946,739
120: 2,946,740
127: 2,946,741
143: 2,946,742
204: 2,946,743
205: 2,946,744
212: 2,946,745
209— 156: 2,946,438
157: 2,946,439
326: 2,946,440
344: 2,946,441
482: 2,946,442
210— 83: 2,946,443
107: 2,946,444
232: 2,946,445
323: 2,946,446
331: 2,946,448
333: 2,946,447
464: 2,946,449
2,946,450
512: 2,946,451
211— 4: 2,946,452
41: 2,946,453
45: 2,946,454
49: 2,946,455
77: 2,946,456

211— 86: 2,946,457
88: 2,946,458
93: 2,946,459
212— 10: 2,946,460
126: 2,946,461
213— 7: 2,946,462
214— 1: 2,946,463
2.5: 2,946,464
6: 2,946,465
14: 2,946,466
17: 2,946,467
18: 2,946,468
18.2: 2,946,469
304: 2,946,470
215— 55: 2,946,471
216— 13: 2,946,472
217— 44: 2,946,473
219— 138: 2,946,478
220— 17: 2,946,474
18: 2,946,475
45: 2,946,476
54: 2,946,477
2,946,478
55: 2,946,479
221— 106: 2,946,480
222: 2,946,481
240: 2,946,482
243: 2,946,483
229— 5: 2,946,484
30: 2,946,485
38: 2,946,486
107: 2,946,487
134: 2,946,488
160: 2,946,489
227: 2,946,490
545: 2,946,491
229— 68: 2,946,492
92: 2,946,493
229— 14: 2,946,494
16: 2,946,495
17: 2,946,496
28: 2,946,497
2,946,498
37: 2,946,499
42: 2,946,500
82: 2,946,501
62.5: 2,946,502
230— 190: 2,946,503
235— 61.9: 2,946,504
63: 2,946,505
2,946,506
2,946,507
236— 30: 2,946,508
87: 2,946,509
237— 70: 2,946,510
239— 62: 2,946,511
63: 2,946,512
91: 2,946,513
127: 2,946,514
312: 2,946,515
220: 2,946,516
264: 2,946,517
266: 2,946,518
318: 2,946,519
480: 2,946,520
547: 2,946,521
240— 1: 2,946,879
51.11: 2,946,880
240— 78: 2,946,881
241— 32.5: 2,946,522
89: 2,946,523
98: 2,946,524
100.5: 2,946,525
242— 18: 2,946,526
25: 2,946,527
2,946,528
2,946,529
55.11: 2,946,530
55.12: 2,946,531
57.1: 2,946,532
74.1: 2,946,533
75.51: 2,946,534
84: 2,946,535
128: 2,946,536
130.2: 2,946,537
2,946,538
244— 14: 2,946,539
15: 2,946,540
42: 2,946,541
77: 2,946,542
135: 2,946,543
155: 2,946,544
246— 163: 2,946,892
248— 35: 2,946,545
40: 2,946,546
54: 2,946,547
316: 2,946,548
328: 2,946,549
250— 16: 2,946,893
20: 2,946,894
40: 2,946,895
41.9: 2,946,896
2,946,897
71.5: 2,946,898
2,946,899
83: 2,946,900
83.6: 2,946,901
99: 2,946,902
203: 2,946,903
210: 2,946,904
213: 2,946,905
251— 1: 2,946,550
30: 2,946,551
175: 2,946,552
188: 2,946,553
206: 2,946,554
342: 2,946,555
252— 8.5: 2,946,746
8.55: 2,946,747
2,946,748
28: 2,946,749
33: 2,946,750
40: 2,946,751
62.5: 2,946,752
2,946,753
373: 2,946,754
416: 2,946,755
254— 1: 2,946,556
93: 2,946,557
134.3: 2,946,558
2,946,559
2,946,560
145: 2,946,561
161: 2,946,562
164: 2,946,563
254— 166: 2,946,564
255— 1.8: 2,946,565
2.5: 2,946,566
20: 2,946,567
65: 2,946,568
256— 1: 2,946,569
257— 1: 2,946,570
32: 2,946,571
43: 2,946,572
86: 2,946,573
270: 2,946,574
259— 6: 2,946,575
260— 2: 2,946,756
2.1: 2,946,757
2,946,758
19: 2,946,759
29.6: 2,946,760
2,946,761
2,946,762
45.5: 2,946,763
45.7: 2,946,764
45.8: 2,946,765
47: 2,946,766
2,946,767
65: 2,946,768
75: 2,946,769
77.5: 2,946,770
2,946,771
2,946,772
2,946,773
78.5: 2,946,774
82: 2,946,775
85.7: 2,946,776
93.7: 2,946,777
2,946,778
2,946,779
123.5: 2,946,780
211.5: 2,946,781
217: 2,946,782
226.6: 2,946,783
230.55: 2,946,784
2,946,785
230.57: 2,946,786
2,946,787
243: 2,946,788
247.5: 2,946,789
250: 2,946,790
251: 2,946,791
257: 2,946,792
268: 2,946,793
276: 2,946,794
285: 2,946,795
285.5: 2,946,796
286: 2,946,797
293: 2,946,798
294.3: 2,946,799
295: 2,946,800
2,946,801
296: 2,946,802
300: 2,946,803
2,946,804
226.5: 2,946,805
240.7: 2,946,806
243.2: 2,946,807
248: 2,946,808
297.4: 2,946,809
297.45: 2,946,810
2,946,811
250-297.45: 2,946,812
417: 2,946,812
440: 2,946,814
470: 2,946,815
482: 2,946,816
515: 2,946,817
536: 2,946,818
551: 2,946,819
564: 2,946,820
582: 2,946,821
2,946,822
588: 2,946,823
606.5: 2,946,824
611: 2,946,825
621: Re.24,948
652.5: 2,946,826
653.7: 2,946,827
2,946,828
677: 2,946,829
2,946,830
680: 2,946,831
683.43: 2,946,832
683.74: 2,946,833
261— 16: 2,946,575
23: 2,946,576
39: 2,946,577
262— 7: 2,946,578
265— 8: 2,946,579
45: 2,946,580
266— 9: 2,946,581
267— 84: 2,946,582
269— 135: 2,946,583
136: 2,946,584
271— 2.3: 2,946,585
2.4: 2,946,586
2,946,587
2,946,588
26: 2,946,589
273— 37: 2,946,590
43: 2,946,591
137: 2,946,592
274— 4: 2,946,593
10: 2,946,594
2,946,595
23: 2,946,596
2,946,597
275— 8: 2,946,598
280— 5: 2,946,599
11.13: 2,946,600
11.37: 2,946,601
280: 2,946,602
452: 2,946,603
281— 34: 2,946,604
284— 18: 2,946,605
285—332.3: 2,946,606
334.5: 2,946,607
286— 8: 2,946,608
10: 2,946,609
287— 52: 2,946,610
52.06: 2,946,611
288— 17: 2,946,612
229: 2,946,613
341.11: 2,946,614
294— 20: 2,946,615
65.5: 2,946,616
67: 2,946,617
2,946,618
294— 74: 2,946,619
87.2: 2,946,620
2,946,621
296— 44: 2,946,622
137: 2,946,623
2,946,624
301— 41: 2,946,625
302— 23: 2,946,626
2,946,627
24: 2,946,628
37: 2,946,629
307— 88: 2,946,896
89.5: 2,946,897
2,946,898
2,946,899
2,946,900
2,946,901
141.4: 2,946,902
156: 2,946,903
309— 79: 2,946,630
83: 2,946,631
190: 2,946,632
317: 2,946,633
310— 8.2: 2,946,904
34: 2,946,905
77: 2,946,906
228: 2,946,907
234: 2,946,908
311— 103: 2,946,634
312— 36: 2,946,635
2,946,636
222: 2,946,637
255: 2,946,638
257: 2,946,639
320: 2,946,640
313— 43: 2,946,909
55: 2,946,910
116: 2,946,911
141: 2,946,912
231: 2,946,913
2,946,914
346: 2,946,915
314— 29: 2,946,916
315— 12: 2,946,917
39: 2,946,918
2,946,919
58: 2,946,920
84.6: 2,946,921
100: 2,946,922
163: 2,946,923
241: 2,946,924
316— 19: 2,946,641
26: 2,946,642
317— 5: 2,946,925
80: 2,946,926
101: 2,946,927
119: 2,946,928
122: 2,946,929
123: 2,946,930
124: 2,946,931
157.5: 2,946,932
171: 2,946,933
234: 2,946,934
2,946,935
235: 2,946,936
258: 2,946,937
318— 27: 2,946,938
318— 81: 2,946,939
128: 2,946,940
223: 2,946,941
293: 2,946,942
443: 2,946,943
489: 2,946,944
320— 2: 2,946,945
323— 89: 2,946,946
324— 34: 2,946,948
51: 2,946,949
57: 2,946,950
62: 2,946,951
71: 2,946,952
87: 2,946,953
97: 2,946,954
101: 2,946,955
326— 1: 2,946,956
53: 2,946,957
65: 2,946,958
89: 2,946,959
133: 2,946,960
146: 2,946,961
195: 2,946,962
331— 36: 2,946,963
49: 2,946,964
333— 11: 2,946,965
24: 2,946,966
29: 2,946,967
30: 2,946,968
80: 2,946,969
95: 2,946,970
97: 2,946,971
98: 2,946,972
336— 212: 2,946,973
338— 28: 2,946,974
163: 2,946,975
339— 17: 2,946,976
95: 2,946,977
103: 2,946,978
253: 2,946,979
340— 6: 2,946,980
8: 2,946,981
52: 2,946,982
149: 2,946,983
168: 2,946,984
174: 2,946,985
2,946,986
2,946,987
2,946,988
181: 2,946,989
227: 2,946,990
244: 2,946,991
259: 2,946,992
347: 2,946,993
351: 2,946,994
398: 2,946,995
343— 5: 2,946,996
11: 2,946,997
118: 2,946,998
795: 2,946,999
995: 2,947,000
346— 1: 2,946,643
13: 2,946,644
33: 2,946,645
2,946,646
74: 2,946,647

Classification of Designs

D 4— 3: 188,453
5: 188,454
D13— 1: 188,455
D14— 3: 188,456
6: 188,457
D19— 1: 188,458
D22— 3: 188,459
D26— 14: 188,460
188,461
188,474
D33— 14: 188,462
D34— 2: 188,463
15: 188,464
D41— 1: 188,465
D44— 22: 188,466
D48— 23: 188,467
31: 188,468
D50— 7: 188,469
D54— 14: 188,470
D56— 10: 188,471
D58— 13: 188,472
17: 188,473
D66— 1: 188,475
D70— 1: 188,476
D71— 1: 188,477
D80— 9: 188,478
D86— 8: 188,479
D87— 3: 188,480

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 26, 1960 Volume 756 Number 4

TRADEMARKS

NOTICES

Decisions of the Commissioner of Patents

The 1959 edition of the Decisions of the Commissioner of Patents has been released from the printer and is available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price $2.75.

Assignment Information to be Added to Trademark Application and Registration Files

On July 11, 1960, the Patent Office will begin the practice of entering assignment information in trademark application and registration files. The information to be added to the files will supplement the records maintained in the Assignment Branch which consist of a microfilm copy of each assignment document and separate indexes maintained by Registration and Application Serial Numbers, Assignor, and Assignee.

The addition of assignment information to trademark application and registration files will be accomplished by preparing an extra copy of the assignment index card used in the Assignment Branch and inserting this copy in each file at the time each new assignment is recorded. When the first Title Report is ordered or the first index card is made for a file after July 11, 1960, a Title Record form will also be prepared and placed in the file. This form will identify and briefly describe all assignments of prior record. By reviewing the information on the Title Record form and on the index cards in the files, a person desiring title information will be able to trace recorded transfers of title.

A number of years may elapse before this useful information will be found in all of the appropriate registration files, since these entries will not be made unless and until an assignment is received for recording or a Title Report is ordered for a Registration.

C. A. KALK,
Director of Administration.

June 22, 1960.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 265,391 (VARSITY GIRL), J. E. Melker, Hosiery, filed Feb. 19, 1959, D.C., S.D.N.Y., Doc. 143/149, *Joseph E. Melker v. Brown Durrell.* Stipulation and order dismissing complaint and counterclaim with prejudice May 9, 1960.

Reg. No. 295,238 (AIR-WAY), Air-way Electric Appliance Corporation, Protective polish for varnished, shellacked, lacquered or painted floors, etc.; **Reg. No. 626,120** (AIR-WAY SANITIZOR), Air-Way Industries, Inc., Electrical suction cleaners and parts and accessories thereof, filed June 8, 1960, D.C., N.D. Ala. (Birmingham), Doc. 9670, *Air-Way, Inc. v. A. D. Edwards and Air-Way of Alabama, Inc.*

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,472
Date of oldest new application	Jan. 5, 1960
Date of oldest amended application	Dec. 1, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50		
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	1-5-60	12-1-59
Renewals (All Classes)	1-8-60	12-9-59
Sec. 12 (c) Publications (All Classes)	5-3-60	------
	5-3-60	------

Applications filed during the month of May 1960—2,017

Registrations Issued	486—No. 701,552 to No. 702,037
Renewals Issued	93

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PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 322,709 (ESQUIRE), Esquire Publishing Company, Monthly publication, filed June 1, 1960, D.C., E.D. Mich. (Detroit), Doc. 30198, *Esquire, Inc. v. Sylvia Paford et al., doing business as Esquire Bar.* Same, filed June 13, 1960, D.C., N.D. Fla. (Pensacola), Doc. 1089, *Esquire, Inc. v. "Esquire House" and Esquire House, Inc.*

Reg. No. 344,988 (ROTO ROOTER), Roto-Rooter Corporation, Sewer and drain cleaning machines; **Reg. No. 397,721**, same, A municipal, industrial and domestic sewer, drain and pipe cleaning service, filed June 3, 1960, D.C., N.D. Tex. (Fort Worth), Doc. 4283, *Roto-Rooter Corporation v. Harry S. Biddle, doing business as Rotary-Rooter Sewer Service.*

Reg. No. 351,719 (ROYAL CROWN), Nonalcoholic maltless beverages sold as soft drinks, and syrups and extracts used for making the same, filed June 14, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–567, *Royal Crown Cola Company v. Crown Beverage Corporation.*

Reg. No. 356,781 (E-Z-CUT), John Morrell & Co., Hams, filed Nov. 6, 1959, D.C., N.D. Ill. (Chicago), Doc. 58c1965, *John Morrell & Co. v. Reliable Packing Company.* Trademark held infringed; defendant enjoined; defendant's Illinois registration for trademark to be canceled June 1, 1960.

Reg. No. 361,023 (RIPLEY), Fashion-Plate Clothes, Inc., Men's and younger men's clothing—namely, suits, coats, etc.; **Reg. No. 397,397** (RIPLEY MADE CLOTHES AND DESIGN), Ripley Manufacturing Company, Men's, women's and younger men's clothing—namely, suits, coats, pants, slacks, etc., filed June 13, 1960, D.C., W.D. Pa. (Pittsburgh), Doc. 60/406, *Ripley Manufacturing Corporation v. Malgreen Clothing, Inc.*

Reg. No. 515,822 (ALLIED), Allied Van Lines, Inc., Transportation of household goods by motor vehicle; **Reg. No. 525,512**, same, filed July 22, 1958, D.C., S.D. Calif. (Los Angeles), Doc. 1893–ND, *Allied Van Lines, Inc. v. J. Horsfield, doing business as American Allied Moving & Storage Company et al. etc.* Defendant enjoined June 8, 1960.

Reg. No. 515,823. (See Reg. No. 515,822.)

Reg. No. 672,238 (GIGI YOUNG), Lombardy Dresses, Inc., Ladies' and misses' dresses, filed Dec. 8, 1955, D.C., S.D.N.Y., Doc. 105/280, *Lombardy Dresses, Inc. v. Gigi Fashions, Inc.* Stipulation and order of discontinuance June 3, 1960.

Reg. No. 327,227. (See Reg. No. 361,023.)

Reg. No. 327,721. (See Reg. No. 344,988.)

Reg. No. 686,129. (See Reg. No. 295,228.)

Reg. No. 640,559 (HILLBILLY BITS), Coal Bit Company, Coal cutting machine bits; **2,967,137**, Cutting tools and method of making same, filed Oct. 12, 1959, D.C., E.D. Ky. (Lexington), Doc. 586, *Wilbur R. Joy and Coal Bit Company v. Logan Bit Company.* Consent order of dismissal May 12, 1960.

Reg. No. 667,741 (MERCURY), Mercury Record Corporation, Grooved phonograph records, filed Mar. 31, 1960, D.C., S.D. Tex. (Houston), Doc. 13/094, *Mercury Record Corporation v. B. W. Leisy, doing business as L & Q Music Company et al.* Order enjoining defendants June 10, 1960.

Reg. No. 664,557 (WHITE EAGLE), National Cordial Co., Inc., Vodka, filed June 10, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c920, *National Cordial Company v. Royal Distilled Products, Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 59,333. The Polymer Corporation, Reading, Pa. Filed Sept. 22, 1958.

FLUOROSINT

For Filled Polytetrafluoroethylene Resin in the Form of Semi-Finished Shapes Such as Rods, Tubular Bars, Slugs, Sheet, and Tape.
First use May 15, 1958.

SN 80,099. H. M. Johnson, Inc., Elizabeth, N.J. Filed Aug. 24, 1959.

KAOPOLITE

For Treated Clay.
First use May 27, 1957.

SN 81,184. General Foam Plastics Corp., Portsmouth, Va. Filed Sept. 11, 1959.

Genafoam

For Foam Polystyrene Materials, Which Are Used for Packaging Purposes.
First use Oct. 15, 1957.

SN 85,112. De Kalb Agricultural Association, Inc., De Kalb, Ill. Filed Nov. 12, 1959.

DEKALB

CHIX

Owner of Reg. Nos. 508,117 and 509,810.
For Baby Chicks.
First use Nov. 8, 1946.

SN 85,113. De Kalb Agricultural Association, Inc., De Kalb, Ill. Filed Nov. 12, 1959.



Owner of Reg. Nos. 508,117 and 509,810.
For Baby Chicks.
First use Nov. 8, 1946.

SN 90,403. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

MEMORY LANE

For Roses.
First use in December 1956.

SN 90,404. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

IDEAL

For Roses.
First use December 1953.

SN 90,407. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

MAYFLOWER

For Roses.
First use in December 1953.

SN 91,952. Loewengart & Company, New York, N.Y. Filed Mar. 1, 1960.

GAHNA MIRANO

Owner of Reg. No. 389,256.
For Leather in the Piece.
First use Dec. 20, 1959.

Class 2—Receptacles

SN 78,477. The Dow Chemical Company, Midland, Mich. Filed May 12, 1959.

SOUND SELLERS

For Bags for Packaging Merchandise and Comprised at Least in Part of Flexible Film.
First use Apr. 1, 1959.

SN 88,502. Tucker Products Corporation, Leominster, Mass. Filed Jan. 5, 1960.

PIK PAK

For Plastic Tableware.
First use January 1957.

SN 89,165. Hutchinson Bag Corporation, Hutchinson, Kans. Filed Jan. 18, 1960.

HUSCO "GOLDEN MAGIC-MARK" TAG

The term "Tag" is hereby disclaimed. Owner of Reg. No. 683,395.
For Partially-Printed Tags Sold as Components of Oil Well Sand Sample Bags.
First use Oct. 15, 1959.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 89,067. Charles S. Kahn, Inc., Miami, Fla. Filed Jan. 15, 1960.

KAHN-CEPT

For Handbags.
First use Aug. 1, 1959.

Class 4 — Abrasives and Polishing Materials

SN 80,315. Diamond Tool Research Co. Inc., New York, N.Y. Filed Aug. 27, 1959.

OVALIZED-DIAMONDS

For Industrial Diamonds for Use on Earth, Thin-Wall or Masonry Bits.
First use Jan. 5, 1959.

Class 5 — Adhesives

SN 78,801. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 31, 1959.

THERMO-FAX

Owner of Reg. Nos. 560,098, 577,845, and 601,804.
For Chemical Compositions Comprising Thread Sealing Compounds, Useful for Sealing Fasteners in Place—e.g., Screws.
First use May 1959.

Class 6 — Chemicals and Chemical Compositions

SN 17,790. FX Lab Co., Livingston, N.J. Filed Oct. 19, 1956.

FX

For Compounds and Mixtures Containing Micro-Organisms Used for Cesspool and Septic Tank Liquefaction and Cesspool Drainage Fields.
First use Jan. 1, 1955.

SN 68,920. Lutex Chemical Corporation, Tyner, Tenn. Filed Mar. 4, 1959.

LUTEX

For Non-Resinous Chemical Products—Namely, Water Solutions of Dyes, Polyethylene Glycol Esters and Similar Softeners and/or Surface Active Agents Used To Lubricate Fibers and Yarns by Spinning Mills in the Textile Industry.
First use Jan. 1, 1959.

SN 81,394. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Sept. 15, 1959.

OFNALAN

Owner of German Reg. No. 613,114, dated Oct. 24, 1951; and U.S. Reg. Nos. 565,556, 654,620, and others.
For Dyestuffs, Chemical Products for Industrial, Scientific, and Photographic Purposes—viz., Intermediates for Dyestuffs, Auxiliaries for the Dyeing and Textile Industry as Well as Dyed and Undyed Plastics.

SN 87,119. American Home Products Corporation, New York, N.Y., assignee of Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. Filed Dec. 11, 1959.

QUAN-SEPT

For Disinfectant and Germicide for Veterinary Use.
First use Nov. 27, 1946.

SN 88,953. American Cyanamid Company, New York, N.Y. Filed Jan. 14, 1960.

AEROTEX

For Textile Finishing Agents, i.e., Purifying Agents, Water Repellents, Softeners, Fire Retardants and Antistatic Preparations, and Accelerators for Use Therewith.
First use Apr. 26, 1940.

SN 90,625. Diamond Alkali Company, Cleveland, Ohio. Filed Feb. 9, 1960.

DACTHAL

For Herbicide.
First use Oct. 8, 1959.

SN 90,692. Mona Industries, Inc., Paterson, N.J. Filed Feb. 10, 1960.

MONAWET

Owner of Reg. Nos. 572,875 and 589,361.
For Surface Active Agents.
First use January 1953.

SN 90,693. Mona Industries, Inc., Paterson, N.J. Filed Feb. 10, 1960.

MONAMID

Owner of Reg. Nos. 572,875 and 589,361.
For Surface Active Agents.
First use March 1956.

SN 91,504. Aquadyne Corporation, Clark, N.J. Filed Feb. 24, 1960.

HYDRODYNE

For Multiphase Concentrate for Industrial Welting, Product Blending, and Fire Fighting.
First use Nov. 16, 1949.

Class 7 — Cordage

SN 51,766. American Greetings Corporation, Cleveland, Ohio. Filed May 16, 1958.

TWINKLE-TYE

For Gift Wrapping Ribbon.
First use July 15, 1956.
Subj. to Intf. with Reg. No. 647,679.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 83,322. Smo-King Products, Inc., Brooklyn, N.Y. Filed Oct. 15, 1959.

SPIN-TOP

Owner of Reg. No. 587,737.
For Ash Trays.
First use Nov. 25, 1952.

SN 90,860. L. G. Rogers Tobacco Co., Inc., New York, N.Y. Filed Feb. 12, 1960.

CAPRI

For Pipes.
First use Jan. 11, 1960.

SN 92,039. L. Orlik, Ltd., London, England. Filed Mar. 2, 1960.

CAPTAIN BLACK

Owner of British Reg. No. B622,118, dated Apr. 21, 1931.
For Tobacco Pipes.

SN 94,505. Edgar C. Muehr, d.b.a. Safety Floor Products, Chicago, Ill. Filed Apr. 6, 1960.

BUTT SNUFFER · SAFETY FLOOR PRODUCTS · CHICAGO 52

No claim is made to the wording "Safety Floor Products Chicago 52."
For Industrial Ash Trays.
First use Nov. 10, 1953.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 65,416. The Ensign-Bickford Company, Simsbury, Conn. Filed Jan. 7, 1959.

MISSILECORD

For Low Energy Detonating Cord Particularly Suitable for Small Explosive Charges.
First use Dec. 10, 1958.

SN 86,581. The Ensign-Bickford Co., Simsbury, Conn. Filed May 6, 1960.

MINICORD

Owner of Reg. Nos. 345,773 and 385,372.
For Detonating Fuses.
First use Apr. 28, 1960.

SN 90,740. Anselmo Ortiz Rodrigues, Merida, Badajoz, Spain. Filed May 9, 1960.

A.O.

Owner of Spanish Reg. No. 332,221, dated Oct. 28, 1958.
For Shot Cartridge Wads.

SN 96,803. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed May 10, 1960.

RANGER

Owner of Reg. No. 191,722.
For Sporting and Small Arms Ammunition and Components Therefor.
First use on or about Apr. 13, 1960.

SN 96,804. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed May 10, 1960.

XPERT

Owner of Reg. Nos. 159,784 and 500,221.
For Sporting and Small Arms Ammunition and Components Thereof.
First use on or about May 2, 1960.

Class 10 — Fertilizers

SN 76,585. Millburn Peat Company, Inc., Chicago, Ill. Filed June 26, 1959.

GARDENERS PRIDE

For Peat for Use as a Soil Conditioner.
First use May 12, 1960.

SN 96,830. Clover Chemical Company, Pittsburgh, Pa. Filed May 11, 1960.

FERT-ORGANIC

For Fertilizer in Dehydrated, Concentrated Water Soluble Powder Form, and in Liquid Form.
First use Oct. 15, 1959.

SN 96,831. Clover Chemical Company, Pittsburgh, Pa. Filed May 11, 1960.

FERTI-LAWN

For Fertilizer in Dehydrated, Concentrated Water Soluble Powder Form, and in Liquid Form.
First use Oct. 15, 1959.

SN 96,878. Re-Mark Chemical Co., Inc., Miami, Fla. Filed May 11, 1960.

HURRI-GREEN

For Fertilizer.
First use Mar. 26, 1957.

Class 11 — Inks and Inking Materials

SN 79,759. Carbon Web Mfg. Corporation, Covington, Ky. Filed Aug. 18, 1959.

BLUE GRASS

For Carbon Paper.
First use May 19, 1959.

SN 88,665. Grady & Neary Ink Co., Chicago, Ill. Filed Jan. 8, 1960.

ATOM-MIST

For Ink Antioxidants.
First use Jan. 31, 1959.

Class 12 — Construction Materials

SN 44,923. The F. C. Russell Company, Columbiana, Ohio. Filed Jan. 29, 1958.

RUSCO PREMIER

Owner of Reg. Nos. 396,078, 594,427, and 608,551.
For Combination Screen and Storm Windows and Doors.
First use Jan. 23, 1957.

SN 56,908. American Felt Company, Glenville, Conn. Filed Aug. 11, 1958.



The drawing is lined for red.
For Vibration Absorbing Felt.
First use July 7, 1958.

SN 70,390. Plains Aluminum Industries, Panhandle, Tex. Filed Mar. 27, 1959.



No claim is made to the representation of the door constituting the goods, or to the words "Dust Stopper" apart from the mark. Owner of Reg. No. 659,947.
For Aluminum Combination Storm Doors.
First use Nov. 19, 1958.

SN 70,959. Swedlow Inc., Los Angeles, Calif. Filed Apr. 6, 1959.

SWEDLOW

For Glass and Plastic Glazing Material and Parts, Reinforced and Decorative Plastics, Metallized Heat Reflective Laminates, and Stainless Steel Honeycomb Core.
First use Sept. 4, 1952.

SN 71,774. F. Allan Christensen, d.b.a. Allan Christensen & Co., Copenhagen, Denmark. Filed Apr. 14, 1960.



"Viktoria Vippe Vinduet" means "Viktoria tilt-type window" and the words "Vippe Vinduet" are disclaimed apart from the mark. Owner of Danish Reg. No. 1541–1951, dated Nov. 3, 1951.
For Windows and Parts Therefor.

SN 72,276. Basic Incorporated, Cleveland, Ohio. Filed Apr. 27, 1959.

GUNMIX

Owner of Reg. No. 396,927.
For Refractory Preparations Suitable for Furnace Lining and Repairing.
First use on or about Feb. 2, 1941.

SN 73,867. Industrial Plant Service Inc., Watertown, Mass. Filed May 11, 1959.



The word "Cedar" and the representation of the goods are disclaimed apart from the mark as shown.
For Picket Fencing; Open Picket Fencing; Post and Rail Fencing; Basket Weave Fencing; Gates for Such Fences Made of Pine or Cedar or Combinations Thereof.
First use Nov. 17, 1958.

SN 77,280. Golden Key Homes, Inc., Annapolis Junction, Md. Filed July 8, 1959.

Golden Key Homes

No claim is made to the word "Homes" apart from the mark as shown. Owner of Reg. Nos. 521,571, 532,737, and 532,738.
For Precision-Fitting Sections of Wall, Door and Window Panels, and Floors and Roofs, Trusses and Other Members and Parts Sold as a Unit, for Use in Assembling and Constructing Prefabricated Houses and Cottages and Other Buildings.
First use Mar. 2, 1959.

SN 82,536. Richard Kühn Rohstoffverwertung G.m.b.H., Worms (Rhine), Germany. Filed Oct. 1, 1959.

FRIGOLIT

Owner of German Reg. No. 657,317, dated May 6, 1954.
For Insulating Means—Namely, Synthetic Foam Substances for Insulating Purposes in Plates, Shaped Articles, and Bodies.

SN 83,371. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Oct. 16, 1959.

FLINTGRAIN

For Refractory Material Comprising Calcined Flint Fireclay With or Without Binder for Making Metallurgical Molds and Cores.
First use Oct. 5, 1959.

SN 83,465. Chain Belt Company, Milwaukee, Wis. Filed Oct. 19, 1959.

REX

For Girders and Beams.
First use July 30, 1959.

SN 83,819. New Castle Products, Inc., New Castle, Ind. Filed Oct. 22, 1959.

SPANMASTER

Owner of Reg. No. 596,211.
For Foldable and Slidable Doors and Partitions.
First use Sept. 9, 1959.

SN 84,353. Kenneth T. Snyder, d.b.a. K. T. Snyder Company, Houston, Tex. Filed Oct. 29, 1959.

RAM-NEK

For Cold-Applied, Ready-to-Use Plastic Joint Sealing Compound Sold in Bulk and the Same Product in Preformed Rope-Like Form for Easy Application.
First use June 5, 1958.

SN 84,622. Rockwell-Standard Corporation, Coraopolis, Pa. Filed Nov. 4, 1959.

ROCKWELL-STANDARD

Owner of Reg. Nos. 667,225, 666,010, and others.
For Metal Gratings and Metal Treads for Use on Floors, Stairs, Bridges, Sidewalks, Streets, and the Like.
First use about April 1958.

SN 87,542. H. D. Campbell Company, Rochelle, Ill. Filed Dec. 18, 1959.

DOWN Spout-O-Matic

For Retractable Unit for Attaching to End of Down Spout.
First use Nov. 22, 1958.

SN 88,715. The Alumiline Corporation, Pawtucket, R.I. Filed Jan. 11, 1960.

CUSTOM G

For Aluminum Architectural Products—Namely, Store Front Moldings, Doors and Door Frames, Curtain Wall Products, and Sliding Doors.
First use on or about June 20, 1958.

SN 90,176. N.V. Technische Handelsonderneming J.V. Meijer, Soest, Netherlands. Filed Feb. 2, 1960.

GEWI

Owner of Dutch Reg. No. 114,474, dated Feb. 5, 1953.
For Adhesive Grease Tapes, Particularly Adhesive Grease Tapes To Be Used for the Protection of Gas Pipes, Water Pipes, and Conduits; Asphalt Emulsions.

SN 90,486. Berry Asphalt Company, d.b.a. Berry Asphalt Co., Magnolia, Ark. Filed Feb. 8, 1960.

PERMA MIX

The word "Mix" is disclaimed apart from the mark as shown.
For Fine Aggregate Coated With Chemically Treated Asphalt for Resurfacing and Patching Any Dry or Moist Surface, Concrete, Tile, Wood, or Asphalt.
First use Dec. 31, 1948.

SN 90,683. Theodore Efron Mfg. Co., d.b.a. Theodore Efron Manufacturing Company, Chicago, Ill. Filed Feb. 10, 1960.

BENELITE

For Shower and Bathtub Enclosures.
First use Jan. 5, 1960.

SN 90,795. Universal Fabricators, Incorporated, New York, N.Y. Filed Feb. 11, 1960.

TOUCH-O-MATIC

For Window Units Including Actuating Hardware Therefor.
First use Aug. 10, 1959.

SN 92,103. Modern Partitions, Inc., Holland, Mich. Filed Mar. 3, 1960.

PRESTIGE

For Movable Partitions.
First use Feb. 16, 1960.
Subj. to Intf. with SN 95,892.

SN 92,218. Casings, Inc., Milwaukee, Wis. Filed Mar. 7, 1960.



Applicant disclaims any right in and to the words "Corner Guard."
For Metal Corner and Edge Guards for Exterior Wall Board Corners.
First use Sept. 1, 1952.

SN 95,892. General Plywood Corporation, Louisville, Ky. Filed Apr. 27, 1960.

PRESTIGE

For Office Partitions.
First use Jan. 21, 1960.
Subj. to Intf. with SN 92,103.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 58,408. Hiawatha Metalcraft, Inc., Minneapolis, Minn. Filed June 12, 1958.



Applicant hereby disclaims the word "Bar" apart from the mark as illustrated.
For Door Latch Mechanisms.
First use May 13, 1958.

SN 64,066. Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. Filed Dec. 11, 1958.

MicroLoc

For Locking Device Comprising an Arrangement of Valve Parts for Locking a Pneumatic Valve for Removal and Reinsertion of Adjustable Parts Without Disturbing the Setting.
First use June 18, 1956.

SN 79,116. Penn-Akron Corporation, Woodside, N.Y. Filed Aug. 6, 1959.

SATINA

For Hardware for Kitchen Furniture and Kitchen Cabinets—Namely, Handles.
First use June 1, 1959.

SN 90,897. Howard Sylvester Bowser, Santa Barbara, Calif. Filed Feb. 15, 1960.

GROOMER

For Prefabricated Bathrooms Including Basin, Toilet, Shower, Etc.
First use Aug. 20, 1957.

SN 91,386. C. M. Beyer and Company, Incorporated, Los Angeles, Calif. Filed Feb. 25, 1960.

MULOX

For Industrial Slings and Brackets Therefor.
First use Feb. 2, 1960.

SN 91,650. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG C W RESTORATION

Owner of Reg. Nos. 392,455, 682,904, and others.
For Pewter Flatware and Hollow Ware, Generally for Table and Desk Use.
First use Oct. 6, 1949.

SN 91,772. Ekco Products Company, Chicago, Ill. Filed Feb. 29, 1960.

SPACE-AIDES

For Garment Racks and Hangers, Closet Rods, Towel Racks, Clothes Valet, Clothes Tree, Garment Drying Frames and Hangers, Shoe Trees, Thread Holders, Utility Racks, Shoe Storage Racks, Shelves, Hat Racks, Belt Racks, Tie Racks, Belt and Purse Bar, Hang-Up Hook.
First use Feb. 1, 1960.

SN 91,874. Stewarts and Lloyds Limited, Glasgow, Scotland. Filed Feb. 29, 1960.

S&L

For Pipes and Tubes and Fittings Therefor in the Nature of Pipe Couplings, Joints and Connections, Tubular Fittings, T's, Knees, Crosses, Flanges, Clamps, Butt Welding Fittings, Elbow Caps, and Reducers.
First use Jan. 22, 1931.

SN 91,888. The Vollrath Co., Sheboygan, Wis. Filed Feb. 29, 1960.

CATHEDRAL

For Stainless Steel Cooking Ware—Namely, Sauce Pans, Pots, Covers, Skillets, Casserole Inserts, Egg Cups, and Dutch Ovens.
First use Jan. 30, 1960.

SN 92,008. General Kinetics Corp., Englewood, N.J. Filed Mar. 2, 1960.

FLUID-TROL

For Hand-Operated Valves for Hose Lines and the Like.
First use Jan. 21, 1960.

SN 92,027. Leslie Co., Lyndhurst, N.J. Filed Mar. 2, 1960.

LESLIE-SPIROFLEX

Owner of Reg. Nos. 580,044, 580,899, and 583,267.
For Diaphragms Used on Valves, Pumps and the Like.
First use Jan. 7, 1960.

SN 92,186. Sloan Valve Company, Chicago, Ill. Filed Mar. 4, 1960.

SLOAN-CACO

For Valves, Including Railroad Brake Valves.
First use June 11, 1959.

SN 92,187. Sloan Valve Company, Chicago, Ill. Filed Mar. 4, 1960.

CACO

For Valves, Including Railroad Brake Valves.
First use Apr. 15, 1955.

Class 14—Metals and Metal Castings and Forgings

SN 83,967. The Glidden Company, Cleveland, Ohio. Filed Oct. 26, 1959.

Glidden

The words "Quality Products" are disclaimed apart from the mark as shown.
For Metal Powders, Metal Oxides, and Alloys.
First use Apr. 16, 1952.

SN 87,214. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Dec. 14, 1959.

EUTECTIC

Owner of Reg. No. 502,459.
For Alloys in Various Forms Suitable for Welding, Brazing, Soldering, and Hard Surfacing Operations.
First use Dec. 1, 1959; November 1940 as to "Eutectic."

Class 15—Oils and Greases

SN 71,168. Chemon Corporation, Stamford, Conn. Filed Apr. 1, 1959.

OCTAGEN

For Motor Fuel Additive To Raise Octane Number.
First use Aug. 10, 1957.

SN 92,362. Clare Candles, Incorporated, Dallas, Tex. Filed Mar. 8, 1960.

ZARAPE

For Candles.
First use Aug. 7, 1959.

SN 92,424. Arkansas Louisiana Chemical Corporation, Dover, Del. Filed Mar. 9, 1960.

MULTI-RANGE

For Motor Oils.
First use Nov. 10, 1959.

SN 92,425. Arkansas Louisiana Chemical Corp., Dover, Del. Filed Mar. 9, 1960.

ARKLA

For Gasoline and Motor Oils.
First use Nov. 10, 1959.

SN 92,426. Arkansas Louisiana Chemical Corporation, Dover, Del. Filed Mar. 9, 1960.

ARKTANE

For Gasoline.
First use Nov. 10, 1959.

SN 92,428. Arkansas Louisiana Chemical Corporation, Dover, Del. Filed Mar. 9, 1960.

EXPRESS

For Motor Oils.
First use Nov. 10, 1959.

SN 92,429. Arkansas Louisiana Chemical Corporation, Dover, Del. Filed Mar. 9, 1960.

ARKLA BLUE

For Gasoline.
First use Nov. 10, 1959.

SN 92,431. Arkansas Louisiana Chemical Corporation, Dover, Del. Filed Mar. 9, 1960.

BLUE CHIP

For Motor Oils.
First use Nov. 10, 1959.

Class 16—Protective and Decorative Coatings

SN 82,661. The Glidden Company, Cleveland, Ohio. Filed Oct. 5, 1959.

NU-FLEX

Owner of Reg. No. 284,176.
For Paper Coating Compositions.
First use Sept. 9, 1949.

SN 87,144. Dr. Heinrich Schowitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESOPON

Owner of German Reg. No. 672,058, dated Feb. 25, 1955; and U.S. Reg. No. 688,595.
For Painting Colours, Lacquer Colours, Lacquers, Varnish Primers, Coloured Enamel Lacquers, Light-Coloured Lacquers, Varnish Thinners, Polishing Lacquers.

SN 87,145. Dr. Heinrich Schowitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESODON

Owner of German Reg. No. 532,841, dated May 16, 1941; and U.S. Reg. No. 688,595.
For Painting Preparations, Lacquer Colours, Lacquers, Varnish Primers, Coloured Enamel Lacquers, Light-Coloured Lacquers, Varnish Thinners, Polishing Lacquers.

SN 87,146. Dr. Heinrich Schowitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESONIT

Owner of German Reg. No. 501,955, dated May 3, 1938; and U.S. Reg. No. 688,595.
For Painting Preparations, Lacquer Colours, Lacquers, Varnish Primers, Coloured Enamel Lacquers, Light-Coloured Lacquers, Varnish Thinners, Polishing Lacquers.

SN 87,150. Dr. Heinrich Schowitz, d.b.a. Chr. Lechler & Sohn Nachf., Stuttgart-Feuerbach, Germany. Filed Dec. 11, 1959.

LESOCOTE

Owner of German Reg. No. 695,507, dated Oct. 3, 1956; and U.S. Reg. No. 688,595.
For Dyestuffs, Colours, Lacquer Colours, Varnish, Lacquers, Varnish Primers, Light-Coloured Lacquers, Mordants, Resins, Adhesive Substances, Shoe Polish, Floor Waxes.

SN 89,836. De Mert & Dougherty, Inc., Chicago, Ill. Filed Jan. 20, 1960.

PENTA-LINE

For Combination Primer and Sealer, Pigmented Water Repellent Finish, Non-Pigmented Water Repellent Wood Preservative, Stain Containing Wood Preservative, Exterior Finish for Open Grain Woods, Concentrated Non-Pigmented Wood Preservative.
First use on or about Jan. 5, 1960.

SN 90,283. Tropical Paint Company, Cleveland, Ohio. Filed Feb. 3, 1960.

RHINAMEL

For Enamel Reinforced With Synthetic Resin.
First use Feb. 21, 1929.

SN 90,368. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Feb. 4, 1960.

TOPTONE

For Leather Finishes.
First use at least as early as 1940.

SN 92,871. The Parbolt Company, Baltimore, Md. Filed Mar. 8, 1960.

EPOTHANE

Owner of Reg. Nos. 272,856, 272,857, and 554,243.
For Plastic Coating Composition.
First use in December 1958; June 1, 1939, as to the fanciful representation of a man holding a bucket; and in April 1919 as to "Parbolt."

SN 92,704. California Products Corporation, Cambridge, Mass. Filed Mar. 14, 1960.

RAYOGLOS

For Acrylic Latex Paints.
First use Dec. 17, 1956.

SN 93,649. Acme Chemical Company, Milwaukee, Wis. Filed Mar. 25, 1960.

SUPER FLORGARD

Owner of Reg. No. 406,311.
For Liquid Floor Finish for Wood, Linoleum, Asphalt Tile, Rubber Tile, Vinyl Plastic, Terrazzo, and Cement Floors.
First use Apr. 11, 1947.

SN 95,091. International Paint Company, Inc., New York, N.Y. Filed Apr. 14, 1960.

INTER-POLY

Owner of Reg. Nos. 316,965, 669,006, and others.
For Paint.
First use Feb. 4, 1960.

Class 17—Tobacco Products

SN 81,943. Steuben Cigarette Co., Inc., New York, N.Y. Filed Sept. 23, 1959.

HUDSON

For Cigarettes.
First use Sept. 16, 1959.

SN 85,536. United States Tobacco Company, New York, N.Y. Filed Nov. 17, 1959.

ANTIQUE MIXTURE

No. 38

Applicant disclaims the word "Mixture." Owner of Reg. No. 547,578.
For Smoking Tobacco.
First use Aug. 27, 1959.

Class 18—Medicines and Pharmaceutical Preparations

SN 73,704. Lambert-Kay, Inc., Los Angeles, Calif. Filed May 14, 1959.

TRANQUAPET

For Mild Sedative and Calming Agent for Pet Animals, Which May Also Be Used for Preventing Motion Sickness to Said Animals.
First use Apr. 10, 1959.

SN 92,562. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 10, 1960.

ADEFLOR

For Vitamin Preparation.
First use Nov. 19, 1959.

SN 92,564. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 10, 1960.

MAGENTACIN

For Antibiotic Preparation.
First use Dec. 16, 1959.

SN 92,565. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 10, 1960.

TOGAMYCIN

For Antibiotic Preparation.
First use Dec. 15, 1959.

SN 92,568. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 10, 1960.

OMNATAB

For Nutritional Supplement for Veterinary Use.
First use Dec. 15, 1959.

SN 92,570. The Upjohn Company, Kalamazoo, Mich. Filed Mar. 10, 1960.

TEKONE

For Relaxant and Sedative.
First use Oct. 10, 1959.

SN 92,711. The Chattanooga Medicine Company, d.b.a. Chattem Laboratories, Chattanooga, Tenn. Filed Mar. 14, 1960.

PAMPRIN

For Pharmaceutical Preparation for the Relief of Premenstrual Tension.
First use Feb. 19, 1960.

SN 92,856. Beecham Research Laboratories Limited, Brentford, England. Filed Mar. 15, 1960.

TRESCILLIN

Owner of British Reg. No. 792,965, dated July 6, 1959.
For Antibiotic Preparations and Substances.

SN 92,857. Beecham Research Laboratories Limited, Brentford, England. Filed Mar. 15, 1960.

ENTOCILLIN

Owner of British Reg. No. 792,945, dated July 6, 1959.
For Antibiotic Preparations and Substances.

SN 92,858. Beecham Research Laboratories Limited, Brentford, England. Filed Mar. 15, 1960.

HECTOCILLIN

Owner of British Reg. No. 792,948, dated July 6, 1959.
For Antibiotic Preparations.

SN 92,859. Beecham Research Laboratories Limited, Brentford, England. Filed Mar. 15, 1960.

PENBRITIN

Owner of British Reg. No. 792,964, dated July 6, 1959.
For Antibiotic Preparations and Substances.

SN 92,902. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Mar. 15, 1960.

PARSTELIN

For Anti-Depressant-Tranquilizer Preparation.
First use Mar. 8, 1960.

Class 19—Vehicles

SN 65,135. Whitehouse Reinforced Plastic Co., Fort Worth, Tex. Filed Dec. 30, 1958.

Whitehouse

For Molded Plastic Boats.
First use Jan. 1, 1956.

SN 77,573. Mealpack Corporation, Evanston, Ill. Filed July 13, 1959.

REDI-SERV

For Food and Tray Carts Used in a System for the Delivery of Prepared Meals.
First use Mar. 1, 1956.

SN 77,745. Hamilton Cosco, Inc., Columbus, Ind. Filed July 15, 1959.

COSCO

Owner of Reg. Nos. 518,072, 623,481, and others.
For Baby Strollers.
First use July 21, 1958.

SN 89,861. Metals Engineering Corporation, Greeneville, Tenn. Filed Jan. 28, 1960.

MECO MAID

For Boat Trailers.
First use Nov. 16, 1959.

SN 92,659. Superior Industries, Inc., North Hollywood, Calif. Filed Mar. 11, 1960.

JET STREAM

For Air Deflectors Affixed to the Rear End of an Automotive Vehicle so as To Obviate the Vacuum Normally Formed at the Rear of the Automotive Vehicle During Forward Motion.
First use June 26, 1959.

SN 93,783. Liberty Coach Company, Inc., Syracuse, Ind. Filed Mar. 14, 1960.

SOUTHERNAIRE

For Mobile Homes.
First use Jan. 14, 1960.

SN 93,328. Yvonne D. Malbon, d.b.a. Silver Tern Small Boat Center, Westbrook, Conn. Filed Mar. 21, 1960.

Silver Tern

For Sailboats.
First use Feb. 2, 1959.

Class 20—Linoleum and Oiled Cloth

SN 87,237. La Manufacture de Feutres de Mouzon (Anciens Etablissements Roger Sommer et Ses Fils), Paris (Seine), France. Filed Dec. 14, 1959.

TAPIFLEX

Owner of French Reg. No. 422,900, dated Oct. 17, 1952 (Paris); Natl. Inst. No. 331.
For Floor Covering Constituted by a Textile Felt Coated With Vinyl.

SN 89,632. American Biltrite Rubber Co., Inc., d.b.a. American Biltrite Rubber Company, Trenton, N.J. Filed Jan. 26, 1960.

Amtico

METALLIC MIST

Owner of Reg. No. 599,268.
For Vinyl-Tile Flooring.
First use Dec. 14, 1959.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 77,114. Knapp Monarch Company, St. Louis, Mo. Filed July 6, 1959.

REDI-OVEN

Owner of Reg. Nos. 611,716, 684,369, and others.
For Portable Electric Ovens.
First use Apr. 15, 1959.

SN 79,208. The H. J. Ashe Company, Inc., Glenbrook, Conn. Filed Aug. 10, 1959.

"A.B.C."

For Lanterns and Flashlights.
First use June 1, 1957.

SN 81,576. Luke H. Lipka, d.b.a. William H. Simpkins Studio, Philadelphia, Pa. Filed Sept. 17, 1959.

SIMKIMATIC

For Programming Control Unit for Apparatus Performing a Series of Operations in a Predetermined Sequence.
First use Jan. 7, 1959.

SN 84,521. Dialight Corporation, Brooklyn, N.Y. Filed Nov. 3, 1959.

DATA MATRIX

Owner of Reg. No. 684,370.
For Electric Indicator Lights for Pilot and Signal Light Purposes.
First use Aug. 12, 1959.

SN 86,818. National Presto Industries, Inc., Eau Claire, Wis. Filed Dec. 7, 1959.

FLEETWOOD

Owner of Reg. Nos. 662,172 and 659,218.
For Domestic Electrical Cooking Appliances for the Preparation of Food.
First use Jan. 3, 1957.

SN 88,650. Cutler-Hammer, Inc., Milwaukee, Wis. Filed Jan. 8, 1960.

mPAC

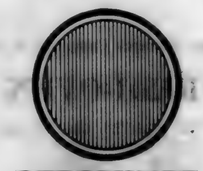
For Packaged Electric Circuit Modular Units for Dynamo-Electric Machine Control Systems and the Like, Including Accessories Used Therewith and Parts Thereof.
First use Dec. 24, 1959.

SN 88,993. Jetronic Industries, Inc., Philadelphia, Pa. Filed Jan. 14, 1960.

AQUAVOX

For Electrical and Electronic Equipment for Local Underwater Communication, Such as Between Divers, Between Surface Craft, and Between Divers and Surface Craft.
First use Mar. 24, 1958.

SN 89,889. Robert J. Arthur, San Francisco, Calif. Filed Feb. 1, 1960.



CERAMILITE

The drawing is lined for red and applicant is claiming the color red as an integral portion of his mark.
For Lighting Fixtures.
First use Oct. 25, 1959.

SN 90,240. Elise Mercantile of New York, Inc., New York, N.Y. Filed Feb. 3, 1960.

Startone

For Radios and Clock-Radios.
First use Oct. 1, 1959.

SN 90,711. Space Instrumentation Corp., Santa Monica, Calif. Filed Feb. 10, 1960.

SPACO

For Ratio Controllers, and for Series Frequency to D.C. Converters and Series Frequency Limiting Switches.
First use Apr. 23, 1959.

SN 90,747. Gerts, Lumbard & Co., Chicago, Ill. Filed Feb. 11, 1960.

MARINE

For Paint Brushes.
First use Nov. 6, 1959.

SN 90,891. Bissell Inc., Grand Rapids, Mich. Filed Feb. 15, 1960.

BISSELLECTRIC

Owner of Reg. No. 87,595.
For Electric Motor Driven Floor Scrubbers and Vacuum Cleaners.
First use Jan. 29, 1960.

SN 91,474. U.S. Electrical Motors, Inc., Los Angeles, Calif. Filed Feb. 23, 1960.

EVERSEAL

For Insulation for Stator Windings of Electrical Motors.
First use Jan. 29, 1960.

SN 91,477. Ultrasonic Industries, Inc., Albertson, N.Y. Filed Feb. 23, 1960.



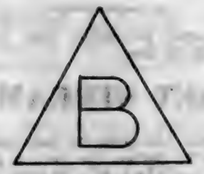
For Ultrasonic Cleaning Devices—Namely, Generators, Cleaning Tanks, Junction Boxes, Submersible Transducers, Apparatus Containing the Above Components and Parts Thereof.
First use Jan. 20, 1960.

SN 91,521. Ceco Incorporated, Dallas, Tex. Filed Feb. 24, 1960.

TELE-MOTE

For Remote Control Unit Used to Remotely Control Two-Way Radio Stations Over Interconnected Wire Lines.
First use Jan. 15, 1960.

SN 91,587. The Belton Company, Belton, S.C. Filed Feb. 25, 1960.



For Electric Blankets and Electric Sheets.
First use Feb. 15, 1960.

SN 91,823. Minneapolis Sound Laboratories, Inc., Minneapolis, Minn. Filed Feb. 29, 1960.

Serenata

For Stereophonic Sound Apparatus—Namely, Stereophonic Sound Reproducing Systems.
First use Mar. 10, 1958.

SN 91,879. Theta Electronics, Inc., Greensburg, Pa. Filed Feb. 29, 1960.

THETA

For New and Rebuilt Television Picture Tubes.
First use June 1, 1952.

SN 92,286. The Nortronics Company, Inc., Minneapolis, Minn. Filed Mar. 7, 1960.



For Magnetic Recording Heads, Magnetic Reproducing Heads, and Magnetic Erase Heads, Electronic Recording and Reproducing Amplifiers, and Electronic Testing Equipment for Magnetic Heads, Magnetic Tape, and Magnetic Recording and Reproducing Systems.
First use on or about Jan. 6, 1960.

SN 92,615. International Resistance Company, Philadelphia, Pa. Filed Mar. 11, 1960.

MICROSTAK

For Selenium Rectifiers.
First use March 1952.

SN 93,076. Jefferson Electric Company, Bellwood, Ill. Filed Mar. 17, 1960.

MILESTONE

For Luminous Tube Transformers.
First use Feb. 19, 1960.

SN 93,104. Swivelier Company, Inc., Nanuet, N.Y. Filed Mar. 17, 1960.

VOYAGER

For Adjustable Electrical Lighting Fixtures.
First use Feb. 16, 1960.

SN 93,449. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 22, 1960.

MINCOM

Owner of Reg. No. 689,512.
For Magnetic Recording Heads.
First use Jan. 16, 1958.

SN 94,263. Cutler-Hammer, Inc., Milwaukee, Wis. Filed Apr. 6, 1960.



No claim is made to the word "Control" apart from the mark as shown. Owner of Reg. Nos. 287,074, 546,574, and others.
For Electric Motor Controls Including Starting, Stopping, Speed Regulating, Reversing, and Protective Apparatus; Electric Entrance and Branch Service Equipment Including Circuit Breakers, Panels, and Enclosures Therefor, Parts Thereof and Accessories Used Therewith.
First use Mar. 17, 1960.

SN 94,469. Ebert Electronics Corporation, Queens Village, N.Y. Filed Apr. 6, 1960.

FLASHMASTER

For Flasher Relays for Use at Intersections for Signs.
First use Jan. 3, 1960.

SN 94,470. Ebert Electronics Corporation, Queens Village, N.Y. Filed Apr. 6, 1960.

LITE-A-LITE

For Photocell Street-Lighting Control Units.
First use Jan. 3, 1960.

SN 94,602. Moloney Electric Company, St. Louis, Mo. Filed Apr. 7, 1960.

MOLONEY MOBILE

Owner of Reg. Nos. 651,680 and 658,999.
For Transformers.
First use Nov. 11, 1959; 1897 as to "Moloney."

SN 94,916. Rheem Manufacturing Company, Richmond, Calif. Filed Apr. 12, 1960.

Rheem

For Diodes and Transistors.
First use Oct. 23, 1959.

SN 95,097. Kraloy Plastic Pipe Co., Inc., Los Angeles, Calif. Filed Apr. 14, 1960.

KRALET

For Electrical Conduit Fittings in the Form of Junction Boxes of Various Designs.
First use Mar. 8, 1960.

SN 96,551. Naxon Utilities Corporation, Chicago, Ill. Filed Apr. 21, 1960.

FRYMASTER

Owner of Reg. No. 584,762.
For Electric Griddles, Electric Frying Pans, Electric Deep Fat Fryers.
First use April 1938.

Class 22—Games, Toys, and Sporting Goods

SN 74,272. Tippett & Wood, Phillipsburg, N.J. Filed May 21, 1959.

HORN HEAD

For Toy Comprising a Flexible Band and One or More Similated Tusks in Removably Assembled Relation With the Band.
First use Mar. 9, 1959.

SN 75,880. Milton B. Reach, Springfield, Mass. Filed June 16, 1959.



Colored (red) recessed markings equally spaced about the equator of a (white) golf ball, with additional spaced markings of similar kind spaced diagonally therefrom toward the natural poles of the ball, so that four or more of said colored spaced markings are visible when the ball is viewed from any side.
For Golf Balls.
First use Mar. 25, 1959.

SN 78,578. Rempel Manufacturing, Inc., Akron, Ohio. Filed July 28, 1959.

STOMPIN' ROCKET

No claim of exclusive right is made to "Rocket" as used on toy missiles game equipment.
For Toy Missiles and a Launching Ball and Tube for Playing a Ballistic Missile or Rocket Game.
First use July 3, 1959.

SN 89,550. John L. Burnside III, Woodside, Calif. Filed Jan. 25, 1960.

Teleidoscope

For Kaleidoscopic Toy.
First use Nov. 13, 1959.

SN 90,235. Dadan, Inc., Watertown, N.Y. Filed Feb. 4, 1960.

THE BIG BOARD

For Equipment Sold as a Unit for Playing a Stock Market Type Board Game.
First use about Mar. 16, 1959.

SN 92,700. The Bowman Products Company, Cleveland, Ohio. Filed Mar. 14, 1960.

BOMARINE

For Water Skis and Related Accessories.
First use on or about Dec. 1, 1959.

SN 93,078. Lee Hardware Company, Ltd., Shreveport, La. Filed Mar. 17, 1960.

ORBIT

For Sporting Goods—Namely, Fishing Tackle and Water Skis.
First use Jan. 20, 1960.

SN 97,601. Cameo Doll Products Co., Inc., Port Allegany, Pa. Filed May 24, 1960.

PEANUT

For Toy Dolls.
First use Feb. 1, 1952.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 66,010. Barnard & Leas Manufacturing Company, Inc., Cedar Rapids, Iowa. Filed Jan. 19, 1959.

B&L

The mark is lined for gray.
For Process Equipment Including Feed, Grain, and Fertilizer Processing Equipment.
First use May 26, 1955.

SN 75,011. Homestead Valve Manufacturing Company, Coraopolis, Pa. Filed June 3, 1959.

JENOLIZING

For Vapor Spray Machines, Vapor Spray Guns and Nozzles, and Parts Therefor.
First use Apr. 24, 1959.

SN 75,632. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed June 12, 1959.

BAK-PAK

For Power-Operated Dusters and Sprayers, and Parts and Attachments Therefor.
First use Feb. 28, 1957.

SN 83,309. Photon, Inc., Cambridge, Mass. Filed Oct. 15, 1959.

CLEANTAPE

For Keyboard-Operated Tape Perforating Machine.
First use on or about Sept. 4, 1959.

SN 89,156. Irving A. Grand, d.b.a. Grand Sales Company, Detroit, Mich. Filed Jan. 18, 1960.

HERCULES

For Automotive Mufflers, Muffler Parts, Tailpipes, Exhaust Pipes, Muffler Clamps, and Muffler and Tailpipe Hangers.
First use on or about Mar. 1, 1953.

SN 90,518. Imperial Knife Associated Companies, Inc., Providence, R.I. Filed Feb. 8, 1960.

IMPERIAL—NEVER A DULL MOMENT

Owner of Reg. No. 676,838.
For Scissors, Shears, Stainless Steel Flatware, Including Knives, Forks, and Spoons, Kitchen Knives, Pocket Knives, Hunting Knives, Bread Knives, Butcher Knives, Carving Forks and Knives, Chef's Knives and Forks, French Cook's Knives and Forks, Paring Knives, Pot Forks, Steak Knives, Utility Knives, Kitchen Tools, Including Ladles, Spatulas, Pancake Turnovers, Potato Mashers, Egg Beaters, Slicers, Barbecue Sets, Razors, Razor Blades, Platters, and Stainless Steel Cookware.
First use Dec. 16, 1959.

SN 91,651. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG RESTORATION C W

Owner of Reg. Nos. 392,455, 662,904, and others.
For Table Utensils.
First use Oct. 20, 1949.

SN 91,766. A. B. Dick Company, Niles, Ill. Filed Feb. 29, 1960.



For Photocopy Machine and Parts Thereof.
First use Mar. 22, 1957.

SN 91,771. Exco Products Company, Chicago, Ill. Filed Feb. 29, 1960.

POCKET BOY

For Kitchen and Household Tools and Utensils—To Wit, Can Openers and Cap Lifters.
First use Feb. 1, 1960.

SN 92,056. Usines Métallurgiques de Vallorbe, Vallorbe, Switzerland. Filed Mar. 2, 1960.

GLARDON VALLORBE

Priority claimed under Sec. 44(d) on Swiss Reg. No. 178,396, dated Dec. 7, 1959.
For Files, Rifflers, Chisels, Gravers, and Scrapers.

SN 92,078. H. Boker & Co., Inc., New York, N.Y. Filed Mar. 3, 1960.

MANHATTAN

For Shears.
First use Feb. 11, 1960.

SN 92,162. King-Kan Opener, Inc., New York, N.Y. Filed Mar. 4, 1960.



For Can Openers.
First use Feb. 18, 1960.

SN 92,190. Vogel Tool & Die Corporation, Melrose Park, Ill. Filed Mar. 4, 1960.

ARC-SNUG

For Punch and Die Apparatus for Notching the Ends of Tubing and Pipe.
First use Jan. 2, 1958.

SN 92,249. Gardner-Denver Company, Quincy, Ill. Filed Mar. 7, 1960.

HI-LEED

For Sectional Drill Rods, Shanks, Couplings, and Extractors.
First use Feb. 11, 1960.

SN 92,276. Maguire Grove Service, Incorporated, Ocoee, Fla. Filed Mar. 7, 1960.

Maguire

For Power Hoe, Power Banker, and Power Mower.
First use June 1, 1958.

SN 92,698. Bissel Inc., Grand Rapids, Mich. Filed Mar. 14, 1960.

BISSELL

Owner of Reg. No. 87,595.
For Vacuum Cleaners, Floor Scrubbers, Rug Cleaner Applicators, and Combination Vacuum Cleaners and Floor Scrubbers.
First use Sept. 30, 1957, on rug cleaner applicators.

SN 92,813. Sears, Roebuck and Co., Chicago, Ill. Filed Mar. 14, 1960.

HANDIMAN

For Garden Tractors and Attachments, Including Cultivators, Roto Tillers, Lawn Mowers, Snowplows, Power Saws, Dump-Barrows, Lawn Rollers.
First use on or about Feb. 1, 1931.

SN 93,511. Ekco Products Company, Chicago, Ill. Filed Mar. 23, 1960.

Lil' Darling

For Kitchen Tools—Namely, Vegetable Mashers, Ladles, Spoons, Turners, Forks, Pie and Cake Servers, Basting Brushes, and Strainers.
First use Oct. 15, 1958.

SN 93,602. Fabricated Metal Products Company, St. Louis, Mo. Filed Mar. 24, 1960.

FABCO

For Shear Blades for Cutting Hot and Cold Steel.
First use June 1958.

Class 24 — Laundry Appliances and Machines

SN 90,906. John B. Delander, d.b.a. Torette Manufacturing Company, St. Paul, Minn. Filed Feb. 15, 1960.

IRON-MATE

For Ironing Board Covers.
First use Jan. 21, 1959.

Class 26 — Measuring and Scientific Appliances

SN 56,102. Eastman Kodak Company, Rochester, N.Y. Filed July 28, 1958.

REGENT

For Photographic Office Copiers.
First use July 18, 1958.

SN 66,502. Squangle Corporation, Lynnwood, Wash. Filed Jan. 26, 1959.

SQUANGLE

For Combination Bevel, Square and Level.
First use on or about June 1, 1958.

SN 70,884. Black, Sivalls & Bryson, Inc., Kansas City, Mo. Filed Apr. 6, 1959.

PHANTO-MATIC

For Automatic Systems for Testing, Controlling, and Determining Production Data for Individual Oil Wells.
First use Oct. 1, 1958.

SN 84,689. Photronic Corporation of America, Takoma Park, Md. Filed Nov. 5, 1959.

PRISMAT

For Cameras, Lenses, and Camera Accessories.
First use on or about Oct. 26, 1959.

SN 85,156. Photronic Corporation of America, Takoma Park, Md. Filed Nov. 12, 1959.

PCA

For Cameras, Camera Cases, and Camera Lenses; and Photocopying and Duplicating Equipment.
First use on or about Oct. 26, 1959.

SN 89,655. Dial-A-Style, Inc., Evansville, Ind. Filed Jan. 26, 1960.

Dial-A-Style

For Photographic Equipment and Accessories Used in Beauty Salon Operations—Namely, Photographic Booths Having Cameras Installed Therein, Viewing Apparatus Including a Viewer for Pictures Taken With the Camera, and a Transparent Strip for Use With the Viewer, the Strip Containing Reproductions of Various Hair Styles Adapted To Be Positioned Over the Picture in the Viewer.
First use Nov. 12, 1959.

SN 91,416. The Microcard Corporation, West Salem, Wis. Filed Feb. 23, 1960.

microcard

Owner of Reg. Nos. 534,191 and 686,828.
For Readers of Microphotographical Publications.
First use March 1958.

SN 91,461. The Univis Lens Company, Dayton, Ohio. Filed Feb. 23, 1960.

FL

For Ophthalmic Lenses and Lens Blanks.
First use Feb. 8, 1960.

SN 92,132. Warshawsky and Company, Inc., Chicago, Ill. Filed Mar. 3, 1960.

KAR-LIFE

Owner of Reg. No. 633,960.
For Ammeters, Speedometers, and Gauges for Measuring Automotive Operating Conditions—Namely, Fuel, Oil Ignition, Temperature, Exhaust, and the Like.
First use Feb. 24, 1960.

SN 94,216. Zenith Radio Corporation, Chicago, Ill. Filed Apr. 1, 1960.

ZENITH

For Audiometers.
First use on or about Aug. 31, 1959.

SN 94,278. Eastman Kodak Company, Rochester, N.Y. Filed Apr. 4, 1960.

AERECON

For Sensitized Photographic Film.
First use Aug. 19, 1957.

SN 94,280. Eastman Kodak Company, Rochester, N.Y. Filed Apr. 4, 1960.

CINEFLURE

For Sensitized Photographic Film.
First use Jan. 30, 1958.

SN 94,282. Edcliff Instruments, Monrovia, Calif. Filed Apr. 4, 1960.

EDCLIFF

For Measuring and Scientific Appliances, Including Potentiometers, Accelerometers, and Pressure Gauges.
First use Dec. 31, 1950.

SN 94,542. The Brunswick-Balke-Collender Company, Chicago, Ill. Filed Mar. 23, 1960.

CUSTOM-MATIC

For Bowling Ball Grip Measuring Devices.
First use Feb. 10, 1958.

Class 27 — Horological Instruments

SN 86,426. Victor Huff, d.b.a. Henri Gireaux Watches, New York, N.Y. Filed Dec. 1, 1959.

Henri Gireaux

For Watches.
First use at least as early as July 1956.

SN 86,443. The Pan American Barter Co., Inc., New York, N.Y. Filed Dec. 1, 1959.

LEVERETTE

Applicant claims no exclusive rights of the representation of the watch part, apart from the mark as shown.
For Watches.
First use Apr. 6, 1959.

SN 89,352. General Time Corporation, New York, N.Y. Filed Jan. 20, 1960.

HAYDON

Owner of Reg. No. 442,210.
For Clocks and Clock Movements, Control Clocks.
First use 1937.

SN 91,652. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG C W RESTORATION

Owner of Reg. Nos. 392,455, 682,904, and others.
For Sundials and Clocks.
First use Nov. 22, 1949, on sundials.

Class 28 — Jewelry and Precious-Metal Ware

SN 84,162. Paul O. Onsrud, d.b.a. Flex-O-Matic Products, La Crosse, Wis. Filed Oct. 28, 1959.

FLEX-O-MATIC

For Watch Bands, Sometimes Called Watch Bracelets.
First use June 11, 1959.

SN 88,934. Mrs. America, Inc., New York, N.Y. Filed Jan. 13, 1960.

Mrs. America

Owner of Reg. No. 575,274.
For Sterling Silver Pitchers.
First use July 30, 1959.

Class 29 — Brooms, Brushes, and Dusters

SN 90,743. Gerts, Lumbard & Co., Chicago, Ill. Filed Feb. 11, 1960.

GOLDEN-OX

For Paint Brushes.
First use Feb. 17, 1958.

SN 90,953. I. Sekine Company, Inc., New York, N.Y. Filed Feb. 15, 1960.

ORIOLE

For Tooth Brushes.
First use 1935.

SN 91,195. Devoe & Raynolds Company, Inc., Louisville, Ky. Filed Feb. 18, 1960.



For Brushes for Paints, Enamels, Varnishes, and Shellacs.
First use January 1960.

Class 30—Crockery, Earthenware, and Porcelain

SN 91,654. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.



Owner of Reg. Nos. 392,455, 682,904, and others.
For China and Pottery Tableware, and Decorative and Miscellaneous Pieces of China and Pottery Including Vases, Jardinieres, Jugs, Trays, and Candlesticks.
First use Dec. 21, 1946, for china decorative pieces.

Class 31—Filters and Refrigerators

SN 80,892. Liberty Distributors, Philadelphia, Pa. Filed Sept. 4, 1959. COLLECTIVE MARK.

TRUSTWORTHY

For Electric Refrigerators and Parts Thereof; Ice Cube Cups and Freezing Trays; Ice Machines; Refrigerator Display Cabinets; Oil Filters; Coffee Filters; Air Filters; Liquid Filters; Aerating Devices; Water, Milk, and Beverage Coolers; Ice Boxes; Portable Insulated Receptacles; Filter Cloths and Bags; and Water Softening Apparatus.
First use July 15, 1958.

SN 90,399. The Coca-Cola Company, Atlanta, Ga. Filed Feb. 5, 1960.



For Pre-Mix Dispenser Units.
First use Aug. 31, 1959.

Class 32—Furniture and Upholstery

SN 75,015. Percy Jones (Twinlock) Limited, Beckenham, England. Filed June 3, 1959.



For Machine Bookkeeping Equipment—Namely, Holders, Trays, and Cabinets for Ledger Cards and Stands for Ledger Card Holders and Trays.
First use June 3, 1952; in commerce 1952.
Subj. to Intf. with SN 54,446.

SN 89,245. Broyhill Furniture Factories, Lenoir, N.C. Filed Jan. 19, 1960.

INVITATION CLASSIC

For Bedroom, Dining Room, and Upholstery Furniture.
First use Sept. 14, 1959.

SN 94,290. Illinois Shade Cloth Corporation, Chicago Heights, Ill. Filed Apr. 4, 1960.

ZEROLITE

For Window Shades.
First use Aug. 6, 1959.

SN 94,300. Illinois Shade Cloth Corporation, Chicago Heights, Ill. Filed Apr. 4, 1960.

BOULEVARD

For Window Shades.
First use May 7, 1959.

SN 94,460. The Brunswick-Balke-Collender Company, Chicago, Ill. Filed Apr. 6, 1960.

PAGEANT

For Settees.
First use June 30, 1958.

Class 33—Glassware

SN 87,038. Corning Glass Works, Corning, N.Y. Filed Dec. 10, 1959.

CORNING ✳ WARE

The word "Ware" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 545,056 and 618,649.
For Culinary Vessels and Utensils Formed of Crystalline Material Produced From Glass by Heat Treatment Thereof.
First use about Mar. 1, 1959.

SN 91,655. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.



Owner of Reg. Nos. 392,455, 682,904, and others.
For Glassware for Table and Bar Use; and Miscellaneous Glassware Including Pitchers, Jugs, Decanters, Bottles, Rummers, Beakers, Muddlers, Vases, and Hurricane Candle Chimneys or Shades.
First use 1946.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 71,945. Gustav F. Gerdts K.G., Bremen, Germany. Filed Apr. 21, 1959.



Owner of German Reg. No. 631,027, dated Dec. 3, 1952.
For Heating Apparatus and Devices, Cooking Apparatus and Devices, Drying Apparatus and Devices, Heating Preserving Means, Apparatus To Prepare, Preheat, and Return Boiler Water Steam, Condensate Cleaners, Apparatus and Devices To Circulate Steam in Heating and Cooking Utensils, Apparatus and Devices To Utilize Heat Content in Steam, Steam Condensate Separators and Devices To Withdraw and Collect Steam Condensate.

SN 72,723. Gustav F. Gerdts K.G., Bremen, Germany. Filed May 1, 1959.

GESTRA

Owner of German Reg. No. 631,025, dated Dec. 3, 1952.
For Heating Apparatus and Devices, Cooking Apparatus and Devices, Drying Apparatus and Devices, Heating Preserving Means, Apparatus To Prepare, Preheat, and Return Boiler Water Steam, Condensate Cleaners, Apparatus and Devices To Circulate Steam in Heating and Cooking Utensils, Apparatus and Devices To Utilize Heat Content in Steam, Steam Condensate Separators and Devices To Withdraw and Collect Steam Condensate.

SN 78,737. Thermotank, Inc., Detroit, Mich. Filed July 30, 1959.

PUNKAH LOUVRE

The word "Louvre" is disclaimed apart from the mark as shown.
For Rotatable Air Outlet Fittings for Heating, Ventilating, and Air Conditioning Systems.
First use Jan. 1, 1922.

SN 88,775. M & W Gear Co., Inc., Anchor, Ill. Filed Jan. 11, 1960.

SUPER-SNOOT

For Radiator Cover and Protector.
First use June 15, 1959.

SN 92,634. Nutone, Inc., Cincinnati, Ohio. Filed Mar. 11, 1960.

JET-POWER

For Electric Outlet Fans.
First use Jan. 15, 1960.

SN 92,652. Sexton Can Company, Inc., Everett, Mass. Filed Mar. 11, 1960.

Diner-mite

For Outdoor Grills.
First use Feb. 18, 1960.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 93,568. Victor Manufacturing & Gasket Company, Chicago, Ill. Filed Mar. 23, 1960.

VICDUALL

For Oil Seals.
First use Feb. 17, 1960.

SN 93,585. Automotive Foundry Products Corp., Brooklyn, N.Y. Filed Mar. 24, 1960.

STURDI-FLEX

For Hoses for Conducting Fluids—Namely, Radiator Hose for Heat Exchangers.
First use during November 1958.

SN 94,092. The Pep Boys, Manny, Moe & Jack, d.b.a. Cornell Tire & Rubber Co., Philadelphia, Pa. Filed Mar. 31, 1960.

CORNELL SNOWMAN

Owner of Reg. No. 503,440.
For Automobile Tires.
First use Mar. 8, 1960.

Class 37—Paper and Stationery

SN 65,271. Souvenir Lead Pencil Company, Cedar Rapids, Iowa. Filed Jan. 2, 1959.

GIFT RITER

For Ball Point Pens and Mechanical Pencils.
First use Aug. 22, 1958.

SN 68,377. Economy Label Sales Company, Holly Hill, Fla. Filed Feb. 25, 1959.

SLIP-ON

For Labels for Use in the Designation of Plants and Horticultural Products.
First use in April 1954.

SN 69,409. Kimberly-Clark Corporation, Neenah, Wis. Filed Mar. 12, 1959.

TINTPRINT

For Printing Paper.
First use Feb. 25, 1959.

SN 72,191. Alvah Bushnell Company, Philadelphia, Pa. Filed Apr. 24, 1959.

VERTEX

For Expanding File Pockets and Folders.
First use May 1, 1918.

SN 75,902. Robert R. Citron, Stockton, Calif. Filed June 17, 1959.

VUE ALL

For Fountain Pens.
First use on or about Jan. 27, 1959.

SN 76,598. Rochester Paper Company, Rochester, Mich. Filed June 26, 1959.



For Blotter Paper, Filter Paper, Craft Paper Bags, Craft Paper (With or Without Indented Chip Paperboard Layers), Pad Wrapping, Separation Pieces Made of Craft Paper (With or Without Indented Chip Paperboard Layers), and Photo-Mount Board.
First use May 21, 1959.

SN 77,452. Malanco, Inc., Blue Island, Ill. Filed July 10, 1959.

PAR-SEL-FLEX

For Single Face, Readily Foldable Corrugated Paper Material.
First use June 26, 1959.

SN 82,336. A. W. Faber-Castell Pencil Co., Inc., Newark, N.J. Filed Sept. 29, 1959.

MultiEdge

For Rubber Erasers and Erasers Made of Plastic Materials.
First use Apr. 13, 1959.

SN 85,560. Chicago's Top Ten, Inc., Chicago, Ill. Filed Nov. 18, 1959.

Scribe

For Stationery—Namely, Writing Paper, Writing Tablets, Notebooks, Notebook Fillers, Typing Paper, and Envelopes.
First use Oct. 7, 1959.

SN 89,415. Fox River Paper Corporation, Appleton, Wis., assignee of Customark Corporation, Appleton, Wis. Filed Jan. 21, 1960.

SPECTATOR

For Writing Papers.
First use Jan. 14, 1959.

SN 89,416. Fox River Paper Corporation, Appleton, Wis., assignee of Customark Corporation, Appleton, Wis. Filed Jan. 21, 1960.

COCKADE

For Writing Papers.
First use Jan. 14, 1960.

SN 89,417. Fox River Paper Corporation, Appleton, Wis., assignee of Customark Corporation, Appleton, Wis. Filed Jan. 21, 1960.

HANNIBAL

For Writing Papers.
First use Jan. 14, 1960.

SN 89,418. Fox River Paper Corporation, Appleton, Wis., assignee of Customark Corporation, Appleton, Wis. Filed Jan. 21, 1960.

PLANTAGENET

For Writing Papers.
First use Jan. 14, 1960.

SN 90,845. Kimberly-Clark Corporation, Neenah, Wis. Filed Feb. 12, 1960.



For Cleansing Tissues Suitable for Hygienic, Cosmetic or Cleaning Purposes.
First use Jan. 22, 1960.

Class 38—Prints and Publications

SN 59,761. Jerome H. Peacock, Moorestown, N.J. Filed Sept. 29, 1958.

HOBBY BIRTHDAY

Owner of Reg. No. 666,372.
For Greeting Cards.
First use June 25, 1958.

SN 60,631. Reynolds Metals Company, Richmond, Va. Filed Oct. 14, 1958.



Owner of Reg. No. 654,671.
For Trade Publications.
First use on or about December 1943.

SN 72,580. Bertil I. Carlson, d.b.a. Bertil I. Carlson Photo-products Co., Fort Lee, N.J. Filed Apr. 30, 1959.



No exclusive right is claimed in the words "World Films" apart from the mark.
For Films and Film Strips.
First use Mar. 5, 1959.

SN 77,208. Paul J. Herman, Chattanooga, Tenn. Filed July 7, 1959.

PLA-NOW

For Printed Charts and Strips To Be Placed Above Keyboards for Chord Selection and Sheet Music To Be Used in Association Therewith.
First use June 15, 1959.

SN 77,209. Paul J. Herman, Chattanooga, Tenn. Filed July 7, 1959.

PAULE SYSTEM

For Printed Charts and Strips To Be Placed Above Keyboards for Chord Selection and Sheet Music To Be Used in Association Therewith.
First use June 15, 1959.

SN 89,633. American Horizon, Inc., New York, N.Y. Filed Jan. 26, 1960.

HORIZON

For Periodical Publication.
First use during September 1958.

SN 90,898. Brown Daily Herald, Providence, R.I. Filed Feb. 15, 1960.

BROWN DAILY HERALD

For College Publications—Namely, Newspapers and Magazines.
First use in or about 1891.

SN 91,415. The Microcard Corporation, West Salem, Wis. Filed Feb. 23, 1960.

microcard

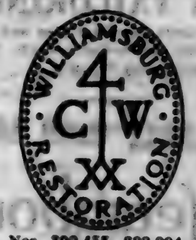
Owner of Reg. Nos. 634,101 and 636,566.
For Microphotographical Publications.
First use March 1958.

SN 91,427. Florence Pritchett Smith, New York, N.Y. Filed Feb. 25, 1960.

THE MOOD AND THE FOOD

For Newspaper Articles Devoted to the Love of Food and Its Sensual Appreciation.
First use Feb. 14, 1960.

SN 91,656. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.



Owner of Reg. Nos. 392,455, 682,904, and others.
For Maps and Pictorial Prints.
First use Aug. 30, 1949, for pictorial prints.

SN 91,685. Harris Trust and Savings Bank, Chicago, Ill. Filed Feb. 26, 1960.

WOMAN'S BUSINESS

For Periodical Relating to Business News of Interest to Women.
First use Feb. 16, 1960.

SN 91,730. Affiliated Government Employees' Distributing Company, Oakland, Calif. Filed Feb. 28, 1960.

A·G·E REPORTER

For Monthly Publication.
First use January 1955.

SN 91,769. The Dynamics Letter, Inc., New York, N.Y. Filed Feb. 29, 1960.



For Market Letter Published Periodically.
First use June 26, 1959.

Class 39—Clothing

SN 23,249. Lester Pincus Shoe Corporation, New York, N.Y. Filed Jan. 25, 1957.

Nature Trail
BACK TO BAREFOOT WALKING

Applicant disclaims the words "Back to Barefoot Walking" apart from the mark.
For Shoes.
First use Sept. 5, 1956.

SN 27,386. Adams-Millis Corporation, High Point, N.C. Filed Apr. 2, 1957.

SILIKIZED

For Hosiery.
First use Mar. 20, 1957.

SN 44,702. The Globe Tailoring Company, d.b.a. Kahn Tailoring Co., Cincinnati, Ohio. Filed Jan. 27, 1958.

KAHN TAILORING CO.

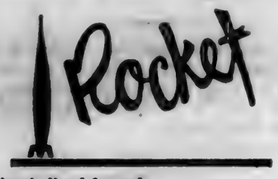
For Clothing Manufactured for Men and Young Men, Consisting of Overcoats, Men's Suits, Coats, Pants, and Vests.
First use on or about July 30, 1914.

SN 45,212. The H. A. Seinsheimer Company, Cincinnati, Ohio. Filed Feb. 3, 1958.

Yearabout

For Men's and Young Men's Overcoats and Topcoats.
First use October 1936.

SN 57,814. Industria Mexicana de Ropa, S.A., Mexico City, Mexico. Filed Aug. 25, 1958.



The drawing is lined for red.
For Men's Pajamas and Undershorts.
First use July 22, 1958; in commerce July 22, 1958.

SN 68,056. Hat Corporation of America, Norwalk, Conn. Filed Feb. 19, 1959.

VAPOR WEIGHT

For Hats for Men.
First use about Nov. 1, 1958.

SN 73,378. The Josephine Co. (Minnesota corporation), St. Paul, Minn., assignee of The Josephine Company (partnership), St. Paul, Minn. Filed May 11, 1959.



For Children's and Infants' Clothing and Accessories of All Types and Descriptions.
First use Apr. 27, 1959.

SN 76,191. Douglas Fraser & Sons Limited, Arbroath, Scotland. Filed June 22, 1959.

"Balleez"

For Rope Soled Canvas Shoes.
First use in December 1948; in commerce in February 1957.

SN 79,054. Fred Engelman Co., Inc., New York, N.Y. Filed Aug. 5, 1959.

For "TOPS" it's Engelwear

For Play Bras and Summer Blouse Tops.
First use in the spring of 1953.

SN 79,569. L. Greif & Bro., Inc., Baltimore, Md. Filed Aug. 14, 1959.

60 minute

For Slacks for Men, Boys, and Youths.
First use June 24, 1959.

SN 80,277. Sondra Manufacturing Co. Inc., New York, N.Y. Filed Aug. 26, 1959.

SOCK-EEZ

Owner of Reg. No. 411,468.
For Knitted Foot Socks.
First use Sept. 1, 1942.

SN 80,495. True Form Foundations, Inc., Darby, Pa., assignee of Caryl Leslie Creations, Philadelphia, Pa. Filed Aug. 31, 1959.

SPRY TYTES

No claim is made to the word "Tytes" apart from the mark as shown.
For Panty Girdles and Leotard Tights.
First use Feb. 11, 1955.

SN 80,510. Eagle Clothes, Inc., Brooklyn, N.Y. Filed Aug. 31, 1959.

JON YORK

For Men's Overcoats, Topcoats, and Suits.
First use in December 1958.

SN 85,397. Regal Knitting Co., Inc., New York, N.Y. Filed Nov. 16, 1959.

IGLOO

For Garments—Namely, Snow Suits for Children From 1 to 16 Years of Age.
First use July 23, 1931.
Subj. to Intf. with Reg. No. 690,301.

SN 85,811. A. S. Beck Shoe Corporation, New York, N.Y. Filed Nov. 23, 1959.

BEATNIK

For Women's Shoes and Boots.
First use Apr. 13, 1959.
Subj. to Intf. with SN 87,607.

SN 86,038. The Kramer Company, Baltimore, Md. Filed Nov. 25, 1959.

THE Pilot BLOUSE

Without restriction of applicant's common law rights, the word "Blouse" is disclaimed apart from the mark as shown.
Owner of Reg. No. 155,739.
For Ladies' Blouses.
First use in or about December 1944.

SN 86,924. L. S. Brown Company, Atlanta, Ga. Filed Dec. 9, 1959.

DIXIE PRIDE

For Work Shirts, Work Pants, Coveralls, and Overalls.
First use on or about July 15, 1935.

SN 87,645. Derby Sportswear, Inc., New York, N.Y. Filed Dec. 21, 1959.

pantasia

For Women's Outerwear—Namely, Slacks, Shorts, and Pants.
First use Sept. 22, 1959.
Subj. to Intf. with SN 84,464.

SN 87,607. Hank Mann, Inc., Temple, Tex. Filed Dec. 21, 1959.

BEACHNIKS

For Trousers of Cotton Duck and Bedford Cord, With Three Quarter Length Legs, for Males.
First use Sept. 1, 1959.
Subj. to Intf. with SN 85,811.

SN 87,739. Tam O'Shanter, Inc., Manchester, N.H. Filed Dec. 21, 1959.

Tam O'Sht

Owner of Reg. Nos. 442,940, 567,099, and 570,940.
For Cotton Knit Fabrics Specially Treated To Render Them Shrink Resistant and To Render the Garments Made Therefrom Shape-Retaining, Which Fabrics Are Manufactured Into Wearing Apparel—Namely, Infants', Boys', Girls', and Men's Knit Outer and Under Shirts, Outer and Under Knit Pants and Shorts.
First use Aug. 4, 1959.

SN 88,280. The H. D. Lee Company, Incorporated, Kansas City, Mo. Filed Dec. 30, 1959.

Lee TROPICS

Owner of Reg. No. 130,792.
For Trousers.
First use Dec. 17, 1959.

SN 88,814. Service Heel Company, Inc., Lawrence, Mass. Filed Jan. 11, 1960.

"LIFETIME GOLD STAR TOPS"

Owner of Reg. No. 424,900.
For Shoe Toplifts.
First use Oct. 14, 1959.

SN 89,066. Hartfield Stores Incorporated, New York, N.Y. Filed Jan. 15, 1960.

SLIM magic

The word "Slim" is disclaimed apart from the mark as shown.
For Foundation Garments Comprising Girdles.
First use Nov. 12, 1959.

SN 90,218. Boys'Tone Shirt Co., Inc., New York, N.Y. Filed Feb. 3, 1960.

BOYFORD

For Men's and Boys' Dress and Sport Shirts.
First use June 23, 1957.

SN 90,220. Boys'Tone Shirt Co., Inc., New York, N.Y. Filed Feb. 3, 1960.

Sport Club

For Men's and Boys' Dress and Sport Shirts.
First use June 21, 1958.

SN 90,248. Garey Bros., Inc., Los Angeles, Calif. Filed Feb. 3, 1960.

BEACH-NIKS

For Men's, Women's, and/or Children's Coats, Suits, Trousers, Shorts, Brassieres, Skirts, Dresses, Pedal Pushers, and Headwear.
First use Oct. 3, 1959.
Subj. to Intf. with SN 85,811.

SN 90,469. Allyson Frocks, Inc., New York, N.Y. Filed Feb. 8, 1960.

"SWEET PETITE"

For Dresses for Young Women and Girls.
First use Feb. 1, 1960.

SN 91,018. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Feb. 16, 1960.

STRATEGY

For Foundation Garments—Namely, Brassieres.
First use Feb. 5, 1960.

SN 92,064. Wonderknit Corporation, New York, N.Y. Filed Mar. 2, 1960.

BAYFIELD

For Infants' and Young Boys' and Young Girls' Under and Outer Shirts, Sleeping Shirts and Pants, T-Shirts, Basque Shirts, Polo Shirts, Shirt and Pants Combinations, and Sweaters, of Cotton, Cotton Substitutes, Rayon, and Combinations of Such Fibers.
First use September 1954.

SN 92,402. S.D.S. Inc., d.b.a. Renée of Hollywood, Los Angeles, Calif. Filed Mar. 8, 1960.

MY SIN

For Brassieres.
First use Feb. 22, 1960.

SN 94,464. Albert Confino, d.b.a. J.C. Sportswear, New York, N.Y. Filed Apr. 6, 1960.

PANTASTIC

For Ladies' Slacks.
First use Dec. 18, 1959.
Subj. to Intf. with SN 87,645.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 66,669. Trim-Knit, Inc., New York, N.Y. Filed Jan. 28, 1959.

Trim-Knit

The lines form a part of the mark and do not represent color.
For Cotton, Wool, and Synthetic Fiber Trimmings for Textile Materials.
First use Oct. 1, 1940.

SN 81,561. H. & W. Shoe Supplies Co., Dumont, N.J. Filed Sept. 17, 1959.

DURA-LACE

For Plastic Lacings or Strippings for Trimming and Decorating Purposes in Handicraft Work.
First use Jan. 2, 1959.

SN 92,382. Koh-I-Noor Bilovec, Narodni Podnik, Bilovec, Czechoslovakia. Filed Mar. 8, 1960.

MASSAG

Owner of Czechoslovakian Reg. No. 153,067.
For Closures and Fasteners for Garments and Shoes Made From Non-Precious Metals and/or From Plastics—Namely, Buckles; Clasps; Clamps; Hooks; Hook and Eye Fasteners; Buttons; Rings.

Class 41 — Canes, Parasols, and Umbrellas

SN 91,082. Embee Sunshade Company, Brooklyn, N.Y. Filed Feb. 11, 1960.

EM-BRELLA-CABANA

For Combination Beach Parasol and Shield.
First use Jan. 20, 1960.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 85,249. Robert R. Scott Corp., New York, N.Y. Filed Nov. 13, 1959.

TOP DECK

For Textile Fabrics for Production of Dresses, Blouses, and Undergarments Composed of Cotton, Silk, Rayon, Nylon, and Synthetic Fibers.
First use Sept. 22, 1959.

SN 86,427. Intermarco, Inc., Brighton, Mass. Filed Dec. 1, 1959.

LEBEL OF FRANCE

For Wilton-Type Weave Rugs.
First use Sept. 2, 1959.

SN 92,234. Theresa F. Eyrich, d.b.a. Lavette Company, St. Paul, Minn. Filed Mar. 7, 1960.

LAVETTE

For Fiber Washcloths.
First use Mar. 21, 1959.

SN 92,814. Security Mills, Inc., New York, N.Y. Filed Mar. 14, 1960.

SECURATEX

For Knitted Fabrics in the Piece of Cotton, Rayon, Synthetic Fibres, and Mixtures Thereof.
First use Jan. 5, 1959.

SN 92,917. Pepperell Manufacturing Company, Boston, Mass. Filed Mar. 15, 1960.

NORPOLE

For Coated Piece Goods for Making Into Weather-Resistant Outer Garments.
First use Feb. 16, 1960.

Class 44 — Dental, Medical, and Surgical Appliances

SN 55,271. Rocky Mountain Metal Products Co., Denver, Colo. Filed July 14, 1958.

R

Owner of Reg. No. 669,435.
For Dental Supplies and Equipment, Particularly Those Usable for Children's Dentistry and Orthodontia—Namely, Bands and Banding Materials, Attachments, Appliances, Fastenings, Brackets, Band and Attachment Prewelded Assemblies, Crowns, Wires, Clasps, and Instruments.
First use on or about June 1, 1958.

SN 82,887. Ernest W. Ekstrand, Washington, D.C. Filed Oct. 8, 1959.

ROCKAWAY

For Exercising Platform Manipulated by Rocking Back and Forth.
First use June 1957.

SN 87,306. W. F. Young, Inc., Springfield, Mass. Filed Dec. 14, 1959.

PRES-O-MATIC

For Applicator Comprising a Liquid Container and a Dispenser Therefor.
First use Oct. 21, 1959.

SN 90,068. Kimberly-Clark Corporation, Neenah, Wis. Filed Feb. 1, 1960.

FEMS

Owner of Reg. Nos. 154,296, 689,578, and others.
For Sanitary Panties.
First use Jan. 22, 1960.

SN 90,497. Davol Rubber Company, Providence, R.I. Filed Feb. 8, 1960.

PLIVOL

For Surgical Equipment—Namely, Bulbs, Syringes, and Aspirators.
First use in or about February 1959.

SN 90,545. Merit Enterprises, Inc., Brooklyn, N.Y. Filed Feb. 8, 1960.

LADY VANITY

For Electric Hair Dryers.
First use Jan. 29, 1960.

Class 46 — Foods and Ingredients of Foods

SN 56,010. The Haserot Company, Cleveland, Ohio. Filed July 25, 1958.

MT. PLEASANT

For Canned Cherries.
First use July 25, 1942.

SN 64,437. The Sharaf Company, Inc., d.b.a. R. M. Haan and as Royal Confectionery Co., East Boston, Mass. Filed Dec. 16, 1958.

R. M. HAAN

For Candy.
First use Nov. 1, 1922.

SN 71,759. Sunshine Biscuits, Inc., d.b.a. Gordon Foods, Long Island City, N.Y. Filed Apr. 17, 1959.

SNAPS

For Extruded Cheese Corn Chips.
First use Sept. 29, 1958.

SN 71,763. Sunshine Biscuits, Inc., d.b.a. Gordon Foods, Long Island City, N.Y. Filed Apr. 17, 1959.

ALMONETTE

For Enrobed or Coated Cream Filled Cake.
First use Oct. 19, 1953.

SN 71,768. Sunshine Biscuits, Inc., d.b.a. Gordon Foods, Long Island City, N.Y. Filed Apr. 17, 1959.

PECANOE

For Cake.
First use Oct. 5, 1953.

SN 74,894. Roman Meal Company, Tacoma, Wash. Filed June 1, 1959.

ROMAN MEAL

Applicant disclaims the word "Meal" apart from the mark as shown. Owner of Reg. Nos. 142,896, 575,522, and others.
For Biscuits, Bread, Buns, Cereal, Cookies, Flour, Muffin Mix, Pancake Mix, and Rolls.
First use July 23, 1957.

SN 77,059. Baier Pit Enterprises, Inc., San Fernando, Calif. Filed July 6, 1959.

The BAIER-PIT

For Barbecue Sauce.
First use July 10, 1957.

SN 78,300. National Tea Co., d.b.a. National Food Stores, Chicago, Ill. Filed July 23, 1959.

NATIONAL'S TOP TASTE

Owner of Reg. Nos. 444,626, 652,143, and 662,492.
For Prepared Quick Frozen Composite Dinners Including Vegetables and Meat or Vegetables and Fowl, and Quick Frozen Fruit Pies.
First use Apr. 1, 1959, on quick frozen composite dinners.

SN 79,090. Armour and Company, Chicago, Ill. Filed Aug. 6, 1959.

TOP-PELT

For Mink Feed.
First use May 14, 1959.

SN 82,300. Leon C. Thomas, d.b.a. Boar & Castle, Greensboro, N.C. Filed Sept. 28, 1959.

BOAR AND CASTLE

For Meatless Sauce.
First use Aug. 31, 1959.

SN 82,901. Kellogg Company, Battle Creek, Mich. Filed Oct. 8, 1959.

CHOICE PACK

The word "Pack" is disclaimed apart from the mark as shown.
For Cereal Breakfast Foods.
First use Oct. 2, 1959.

SN 86,297. Joseph V. Lunardini, d.b.a. Lunardini's Own, Pittsburgh, Pa. Filed Nov. 30, 1959.

CAVAGNOCCHI

For Frozen Macaroni Product Comprising Wheat Flour, Water, Fresh Ricotta Cheese, Eggs, Potato Flour, Corn Gluten Oil, and Salt.
First use Sept. 7, 1959.

SN 86,920. Berg's Bretzels, Inc., Leetonia, Ohio. Filed Dec. 9, 1959.

TAMI

For Potato Chips.
First use on or about Mar. 20, 1958.

SN 87,627. Besco Products Company, Inc., Zebulon, Ga. Filed Dec. 21, 1959.

MISS GEORGIA

For Canned Fruits and Vegetables.
First use June 1940.

SN 88,404. T. Marsetti Company, Columbus, Ohio. Filed Jan. 4, 1960.

FLORENTINE

For Salad Dressing.
First use Nov. 2, 1959.

SN 89,191. National Dairy Products Corporation, Chicago, Ill. Filed Jan. 18, 1960.

ROKA

For Salad Dressing.
First use Oct. 30, 1959.

SN 89,292. Pacific Mercantile Company, San Francisco, Calif. Filed Jan. 19, 1960.

Shur Lac

No claim of exclusive right is made to the word "Lac."
For Non-Fat Dry Milk.
First use Dec. 18, 1959.

SN 89,439. Lance, Inc., Charlotte, N.C. Filed Jan. 21, 1960.

WHEAT-O-LUNCH

For Peanut Butter Sandwiches.
First use Jan. 8, 1960.

SN 89,968. Underwood's of Texas, Inc., Lubbock, Tex. Filed Jan. 29, 1960.



No claim is made to the words "Of Texas" or to the map of Texas except as shown. Owner of Reg. No. 241,383.
For Frozen Packaged Barbecued Foods—Namely, Meat, Poultry, and Sandwiches.
First use Aug. 1, 1959.

SN 91,545. Lane Products Co. Inc., Eugene, Oreg. Filed Feb. 24, 1960.



Owner of Reg. No. 677,418.
For Bakery Products—Namely, Pie Shells.
First use June 1, 1958.

SN 92,864. Caroline Kitchen Foods, Incorporated, Forest, Va. Filed Mar. 15, 1960.

CAROLINA KITCHEN

For Frozen Hushpuppies.
First use July 11, 1958.

SN 92,873. Earl B. Dail, d.b.a. Enterprise Feed Mill, Mount Olive, N.C. Filed Mar. 15, 1960.

YELLOW ROSE

For Dog Food, Poultry Feed, and Hog Feed.
First use Oct. 15, 1956.

Class 48—Malt Beverages and Liquors

SN 76,967. Naamloose Vennootschap Zuid-Hollandsche Bierbrouwerij, d.b.a. South Holland Brewery, The Hague, Netherlands. Filed July 2, 1959.



Owner of U.S. Reg. No. 380,521.
For Beer.
First use Dec. 6, 1938; in commerce Dec. 6, 1938.

SN 77,406. Fa. Flensburger Brauereien Emil Petersen & Co. Kommanditgesellschaft, Flensburg, Germany. Filed June 22, 1959.



Owner of Reg. No. 627,526, dated Sept. 30, 1952.
For Beer.

Class 49—Distilled Alcoholic Liquors

SN 78,921. James Robertson Company, Los Angeles, Calif. Filed Aug. 3, 1959.



The word "Superior" is disclaimed apart from the mark as a whole.
For Vodka.
First use Oct. 2, 1958.

SN 79,148. Coates & Co. (Plymouth) Limited, Plymouth, England. Filed Aug. 7, 1959.

BLACK FRIAR

Owner of British Reg. No. 767,566, dated July 18, 1957; and U.S. Reg. Nos. 358,958 and 87,427.
For Gin.

SN 90,738. Barton Distilling Company, Chicago, Ill. Filed Feb. 11, 1960.

OLD OKLAHOMA

For Whiskey.
First use Feb. 8, 1960.

Class 50—Merchandise Not Otherwise Classified

SN 81,183. The General Tire & Rubber Company, Akron, Ohio. Filed Sept. 10, 1959.

RESPOC

Owner of Reg. Nos. 202,923, 398,585, and others.
For Plastic-Coated Inner Lining Material for the Shoe Trade.
First use July 14, 1959.

SN 85,884. Link Research Corporation, Beverly Hills, Calif. Filed Nov. 23, 1959.

MOON ROCKS

For Kit Containing a Chemical Solution, Container, and Rocks Which Produce Simulated Colored Stalagmites.
First use Oct. 23, 1959.

SN 88,929. Homer T. McGill, d.b.a. H. T. McGill, Houston, Tex. Filed Jan. 13, 1960.

BUG-ROPE

For Device for Inserting Caged Test Insects in Material To Be Fumigated.
First use Dec. 29, 1959.

SN 89,180. Margio, Inc., New Britain, Conn. Filed Jan. 18, 1960.

Namestix

For Name Tapes Made of Metallised Plastic With Adhesive Backing.
First use Oct. 29, 1959.

Class 51—Cosmetics and Toilet Preparations

SN 64,829. Les Parfums Chypres S.A., Bois-Colombes, Seine, France. Filed Dec. 23, 1958.

CHYPRÊME

Owner of U.S. Reg. Nos. 336,296 and 339,093.
For Eau de Cologne, Perfumes, Toilet Waters, Hair Tonics, Cosmetic Skin Astringents, Hair and After-Shaving Lotions, Depilatories, Brilliantine, Hair Oil, Mouth Wash, Tooth Paste, Cosmetic Skin Creams, Shaving Stick, Shaving Soap, Bath Salts, Suntan Cream and Oil, Eyebrow and Eyelash Mascara, Balm for the Growth of the Eyelashes, Eyelid Shadow, Eyebrow Pencil, Lipsticks, Rouge, Face Powder, Body Skin Powder, Nail Polish, Nail Polish Remover, Nail Oil, and Nail White Pencil.
First use Jan. 27, 1936; in commerce Nov. 14, 1958.

SN 80,436. Jay S. McConkey, d.b.a. McConkey Products, Hollywood, Calif. Filed Aug. 28, 1959.

SKINLIFT

For Skin Lotion.
First use during March 1958.

Class 52—Detergents and Soaps

SN 64,830. Les Parfums Chypres S.A., Bois-Colombes, Seine, France. Filed Dec. 23, 1958.

CHYPRÊME

Owner of U.S. Reg. Nos. 336,296 and 339,093.
For Toilet Soap, Glycerine Soap, Bath Soap, Cream Soap, Liquid Glycerine Soap, and Shampoo.
First use Jan. 27, 1936; in commerce Nov. 14, 1958.

SN 80,208. National Institutional Food Distributors Association, Inc., d.b.a. National Institutional Food Distributor Associates, Inc., Atlanta, Ga. Filed Sept. 4, 1959.



For Liquid Detergent Compound.
First use in March 1959.

SERVICE MARKS

Class 100 — Miscellaneous

SN 54,865. Jensen Engineering Co., Inc., Kansas City, Mo. Filed July 7, 1958.

Jensen

For Engineering Services in the Fields of Product, Machine, and Tool Design.
First use during 1954; during 1951 as to "Jensen."

SN 83,556. Redel Incorporated, Anaheim, Calif. Filed Oct. 19, 1959.

REDEL

For Scientific and Economic Research and Development, Particularly in the Fields of Chemistry, Mechanics, Electronics, Industrial Economics, and Marketing.
First use September 1951.

SN 85,786. Sav-On Drugs, Inc., Los Angeles, Calif. Filed Nov. 20, 1959.

Sav-on

For Filling of Medical Prescriptions.
First use 1945.

Class 101 — Advertising and Business

SN 46,964. McCormick & Company, Incorporated, Baltimore, Md. Filed Mar. 3, 1958.

MARY COLLINS

For Services Consisting of the Dissemination of Information and Advice of Interest to and Used by Housewives and Other Homemakers, Including Recipes, and Other Information Relating to the Preparation and Serving of Food and Including Advertising Material Submitted to Publishers for Reproduction in Women's Sections and the Like.
First use May 1957.

SN 50,874. Cahners Publishing Company, Inc., Boston, Mass., by change of name from Materials Handling Laboratories, Inc., d.b.a. Modern Materials Handling, Boston, Mass. Filed Apr. 25, 1958.

CIRCLE SERVICE

Applicant disclaims exclusive right to the use of the word "Service" apart from the mark as shown.
For Supplying Technical Equipment and Operation Maintenance Information to Industry.
First use Apr. 1, 1958.

SN 58,074. Architectural Woodwork Institute, Chicago, Ill. Filed Aug. 29, 1958.

SCHOOLMATE

For Promoting and Developing the Use of Architectural Woodwork, Originating and Distributing Technical and Otherwise General Information on Matters of Interest to Architects, Owners, Builders, Members of the Architectural Woodwork Industry, and the Public.
First use July 16, 1958.

SN 65,232. Gold Bond Stamp Company, Minneapolis, Minn. Filed Jan. 2, 1959.

STAMP-O-RAMA

For Promoting the Sale of the Goods and Services of Others by Means of an Audience-Participation Type Radio Program.
First use Dec. 12, 1958.

SN 72,469. Harry D. Squires, d.b.a. Harry D. Squires Enterprises, New York, N.Y. Filed Apr. 8, 1959.

Harry D. Squires
THE MAN BEHIND THE MAN

For Representing and Furnishing Performers for Places of Entertainment.
First use Oct. 21, 1956.

SN 79,187. Ben-Hur Manufacturing Co., Milwaukee, Wis. Filed Aug. 7, 1959.

Gold Shield

For Food Service Programs for Home Freezers.
First use Dec. 11, 1958.

SN 84,556. Charles M. O'Shea, Chicago, Ill. Filed Nov. 2, 1959.

BUSINESS MEN'S CLEARING HOUSE

For Employment Agency Services.
First use in 1902.

Class 102 — Insurance and Financial

SN 80,807. Agricultural Insurance Company, Watertown, N.Y. Filed Feb. 12, 1960.

Autoconomy

For Underwriting of Automobile Insurance.
First use Oct. 7, 1959.

Class 103 — Construction and Repair

SN 38,931. Magikist Service Corporation, Chicago, Ill. Filed Oct. 15, 1957.

KISS OF BEAUTY

The drawing is lined for red. Owner of Reg. Nos. 581,697 and 652,505.
For Dry Cleaning Services, Including the Cleaning of Rugs, Carpets, and Drapes.
First use Jan. 1, 1953.

SN 73,042. Harry E. Rentz, Jr., d.b.a. Rentz Auto Body Company, Wilmington, Del. Filed May 6, 1959.

RENTZ
HAND OF QUALITY

For Vehicle Repair Service.
First use Sept. 15, 1957.

SN 87,939. Carl M. Freeman, Inc., Bethesda, Md. Filed Dec. 24, 1959.

AMERICANA HOMES

The word "Homes" is disclaimed.
For Construction of Houses.
First use Sept. 10, 1951.

Class 105 — Transportation and Storage

SN 78,194. The Flying Tiger Line Inc., Burbank, Calif. Filed July 22, 1959.

SKY-HIGHWAY

For Coordinated Transportation of Freight, via Airplane and Truck.
First use in the early part of February 1959.

SN 83,702. Dean Van Lines, Inc., d.b.a. Dean Van Lines, Long Beach, Calif. Filed Oct. 21, 1959.



The Dean of American Movers

For Packing and Storing of Goods and Transportation of Goods by Motor Van.
First use Oct. 18, 1956.

SN 83,703. Dean Van Lines, Inc., d.b.a. Dean Van Lines, Long Beach, Calif. Filed Oct. 21, 1959.

SEA-PAK

For Packing and Storing of Goods and Transportation of Goods by Motor Van and Water Craft.
First use Mar. 1, 1955.

Class 106 — Material Treatment

SN 49,417. City Products Corporation, Chicago, Ill. Filed Apr. 10, 1958.

CHILL-VAC

For Cooling of Fresh Fruits and Vegetables of Others.
First use on or before Dec. 16, 1952.

Class 107 — Education and Entertainment

SN 85,010. The Hall Syndicate, Inc., New York, N.Y. Filed Nov. 10, 1959.

DENNIS THE MENACE

Owner of Reg. No. 566,112.

For Title of a Television Program in the Nature of a Children's Program.

First use Oct. 4, 1959.

SN 86,192. Philip J. Piacitelli and Louis Fiore (joint owners), d.b.a. The High Hopes, Norristown, Pa. Filed Nov. 27, 1959.

THE HIGH HOPES

For Musical and Acting Presentations, Presented Through the Mediums of Radio and Television.

First use Nov. 3, 1959.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

701,552. CABRITE. Godfrey L. Cabot, Inc. SN 28,147. Pub. 5–10–60. Filed 4–15–57.

701,553. SAICCOR AND DESIGN. The South African Industrial Cellulose Corporation (Proprietary) Limited. SN 48,801. Pub. 5–10–60. Filed 3–31–58.

701,554. THERMALSAN. Whitehead Brothers Company. SN 58,890. Pub. 5–10–60. Filed 9–12–58.

701,555. SHAMVA. Laclede-Christy Company. SN 59,901. Pub. 5–10–60. Filed 10–1–58.

701,556. WEBRIL. The Kendall Company. SN 60,293. Pub. 5–10–60. Filed 10–8–58.

701,557. SILIFORM. Luxmasse G.m.b.H. SN 64,724. Pub. 5–10–60. Filed 12–22–58.

701,558. REBELS' ROOST ETC. AND DESIGN. Robert T. Regester. SN 71,607. Pub. 5–10–60. Filed 4–15–59.

701,559. HETROFOAM. Hooker Chemical Corporation. SN 72,315. Pub. 5–10–60. Filed 4–27–59.

701,560. BARE FACTS AND DESIGN. George E. Loomis and Sons, d.b.a. George Loomis & Sons. SN 73,394. Pub. 5–10–60. Filed 5–11–59.

701,561. NAKED TRUTH AND DESIGN. George E. Loomis and Sons, d.b.a. George Loomis & Sons. SN 73,395. Pub. 5–10–60. Filed 5–11–59.

701,562. PELRON. Pelron Corporation. SN 73,432. Pub. 5–10–60. Filed 5–11–59.

701,563. GREEN BAND. Milwhite Mud Sales Company. SN 74,439. Pub. 5–10–60. Filed 5–25–59.

701,564. BLOSSOM TIME. Mas Yoshida. SN 74,806. Pub. 5–10–60. Filed 5–29–59.

701,565. ARMOUR'S POLISKIN LEATHERS AND DESIGN. Armour and Company. SN 78,412. Pub. 5–10–60. Filed 7–27–59.

701,566. SURE-FIRE. Kingsford Company. SN 79,246. Pub. 5–10–60. Filed 8–10–59.

701,567. WONDER-WEIGHT. O.K. Service Co. SN 80,113. Pub. 5–10–60. Filed 8–26–59.

701,568. ORCHAWAII. Orchids of Hawaii, Inc. SN 81,084. Pub. 5–10–60. Filed 9–9–59.

701,569. TWI. Texas-West Indies Company. SN 83,227. Pub. 5–10–60. Filed 10–15–59.

701,570. POLY-CAP. Capital Plastics, Inc. SN 84,591. Pub. 5–10–60. Filed 11–4–59.

701,571. FLUFFSIL. Kidde Process Corporation. SN 84,774. Pub. 5–10–60. Filed 11–6–59.

701,572. GLENDALE PARK. Pedigreed Seed Company, d.b.a. Flower Lane Farm. SN 85,901. Pub. 5–10–60. Filed 11–23–59.

701,573. FAWNTRA. Henry Pollak, Inc. SN 86,195. Pub. 5–10–60. Filed 11–27–59.

701,574. STEROLITE. Albert Trostel & Sons Company. SN 86,219. Pub. 5–10–60. Filed 11–27–59.

701,575. RESITAN. Albert Trostel & Sons Company. SN 86,222. Pub. 5–10–60. Filed 11–27–59.

701,576. WAPITI SIDES. Albert Trostel & Sons Company. SN 86,224. Pub. 5–10–60. Filed 11–27–59.

701,577. PACO-FOAM. Plastic Age Manufacturing Company. SN 86,323. Pub. 5–10–60. Filed 11–30–59.

701,578. ONDELETTE. E. I. du Pont de Nemours and Company. SN 86,550. Pub. 5–10–60. Filed 12–3–59.

701,579. PHENO SEAL. Montello, Inc. SN 87,508. Pub. 5–10–60. Filed 12–17–59.

701,580. SORB-X. Canfield Oil Company. SN 87,543. Pub. 5–10–60. Filed 12–18–59.

701,581. HARTEX. The Firestone Tire & Rubber Company. SN 87,933. Pub. 5–10–60. Filed 12–24–59.

701,582. MONFUR. Navan Products, Inc. SN 88,176. Pub. 5–10–60. Filed 12–29–59.

701,583. VORAFOAM. The Dow Chemical Company. SN 90,029. Pub. 5–10–60. Filed 2–1–60.

701,584. VORACEL. The Dow Chemical Company. SN 90,031. Pub. 5–10–60. Filed 2–1–60.

701,585. VORAFIL. The Dow Chemical Company. SN 90,033. Pub. 5–10–60. Filed 2–1–60.

701,586. SPORTAN. Hoffmann-Stafford Tanning Co. SN 90,428. Pub. 5–10–60. Filed 2–5–60.

701,587. POLOSKIN. Armour and Company. SN 90,472. Pub. 5–10–60. Filed 2–8–60.

701,588. TECHNICALF. Hermann Loewenstein, Inc. SN 90,929. Pub. 5–10–60. Filed 2–15–60.

701,589. METHOCEL. The Dow Chemical Company. SN 91,355. Pub. 5–10–60. Filed 2–23–60.

701,590. ETHOSPAN. The Dow Chemical Company. SN 91,356. Pub. 5–10–60. Filed 2–23–60.

Class 2 — Receptacles

701,591. QUICK DRAW. The Dow Chemical Company. SN 74,301. Pub. 5–10–60. Filed 5–22–59.

701,592. SPICE ISLANDS. Spice Islands Company. SN 84,952. Pub. 5–10–60. Filed 11–9–59.

701,593. KUDL-PAK AND DESIGN. Navan Products, Inc. SN 86,515. Pub. 5–10–60. Filed 12–2–59.

701,594. PAK-APEAL. National Packaging Corporation. SN 87,976. Pub. 5–10–60. Filed 12–24–59.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

701,595. GOLD PFEIL AND DESIGN. Gold-Pfeil Ludwig Krumm Aktiengesellschaft, by change of name from Ludwig Krumm, A.G. SN 32,831. Pub. 5–10–60. Filed 8–25–57.

701,596. READI-PAK AND DESIGN. Herz Specialty Products, Inc. SN 83,518. Pub. 5–10–60. Filed 10–19–59.

701,597. VAL'S DOG TOGS OF MIAMI. Charles P. Schumacher and Ruth Valborg Schumacher, d.b.a. Tropical Pet and Garden Supply. SN 85,918. Pub. 5–10–60. Filed 11–23–59.

Class 5 — Adhesives

701,598. EXEC. Distributors East, Inc. SN 82,642. Pub. 5–10–60. Filed 10–5–59.

701,599. NEVAMAR. The National Plastic Products Company. SN 83,762. Pub. 5–10–60. Filed 10–21–59.

701,600. LOCTITE. The American Sealants Company. SN 87,843. Pub. 5–10–60. Filed 12–23–59.

Class 6—Chemicals and Chemical Compositions

701,601. DENSICON 76. Maintenance Inc. SN 48,296. Pub. 5–10–60. Filed 8–26–58.

701,602. ENDIT–76. Lawn Products Corporation of America. SN 66,906. Pub. 3–1–60. Filed 2–2–59.

701,603. DOOM. Howard A. Chittick, d.b.a. Fairfax Biological Laboratory. SN 69,314. Pub. 5–10–60. Filed 3–11–59.

701,604. SELECTACEL. Brown Company. SN 73,652. Pub. 5–10–60. Filed 5–14–59.

701,605. MORNING STAR PAISLEY ETC. AND DESIGN. Morningstar-Paisley, Inc. SN 75,197. Pub. 5–10–60. Filed 6–5–59.

701,606. DOUBLE "A." Automotive Associates, Inc. SN 77,796. Pub. 1–19–60. Filed 7–16–59.

701,607. DOUBLE A AND DESIGN. Automotive Associates, Inc. SN 78,754. Pub. 1–19–60. Filed 7–31–59.

701,608. MP. J. I. Holcomb Manufacturing Company, Inc. SN 80,425. Pub. 5–10–60. Filed 8–28–59.

701,609. LINCO. Linco Products Corporation. SN 83,378. Pub. 5–10–60. Filed 10–16–59.

701,610. LINCO AND DESIGN. Linco Products Corporation. SN 83,380. Pub. 5–10–60. Filed 10–16–59.

701,611. ALFENE. Continental Oil Company. SN 85,308. Pub. 5–10–60. Filed 11–16–59.

Class 7—Cordage

701,612. MOARK. H. P. Smith Company, Inc. SN 77,330. Pub. 5–10–60. Filed 7–8–59.

701,613. ARROW. Nylon Net Company. SN 87,710. Pub. 5–10–60. Filed 12–21–59.

Class 8—Smokers' Articles, Not Including Tobacco Products

701,614. AIRLIT. Ernesto Markus-Markush. SN 51,441. Pub. 5–10–60. Filed 5–12–58.

701,615. QUERCIA. Marcel Quercia Orfevre, assignee of Marcel Quercia. SN 70,942. Pub. 5–10–60. Filed 4–6–59.

Class 9—Explosives, Firearms, Equipments, and Projectiles

701,616. THE "FLAMING ARROW" AND DESIGN. Kenneth H. Delfeld, d.b.a. F & S Company. SN 74,842. Pub. 5–10–60. Filed 6–1–59.

Class 10—Fertilizers

701,617. VITA-PEAT. Vita-Peat, Inc. SN 58,604. Pub. 5–10–60. Filed 9–8–58.

Class 11—Inks and Inking Materials

701,618. RACER SET. Kohl & Madden Printing Ink Corp. SN 81,491. Pub. 5–10–60. Filed 9–16–59.

701,619. ROCKET SET. Kohl & Madden Printing Ink Corp. SN 81,492. Pub. 5–10–60. Filed 9–16–59.

701,620. GIRL FRIDAY. Girl Friday Office Supplies. SN 85,734. Pub. 5–10–60. Filed 11–20–59.

701,621. UNISET. Universal Printing Ink Corporation. SN 87,749. Pub. 5–10–60. Filed 12–21–59.

701,622. POLY-ALCOL. Claremont Pigment Dispersion Corporation. SN 87,785. Pub. 5–10–60. Filed 12–22–59.

Class 12—Construction Materials

701,623. ALUMERAMIC. Sidetex Co., Inc. SN 73,889. Pub. 5–10–60. Filed 5–15–59.

701,624. TAPE-SEAL. Friesland Plastics Company. SN 73,908. Pub. 5–10–60. Filed 5–18–59.

701,625. GYP-SEAL. A. C. Hamilton, Jr. SN 76,692. Pub. 5–10–60. Filed 6–29–59.

701,626. SOUNDSHEAR. Bien Corporation. SN 77,642. Pub. 5–10–60. Filed 7–14–59.

701,627. SHEARFLEX. Bien Corporation. SN 77,643. Pub. 5–10–60. Filed 7–14–59.

701,628. SOUNDFLEX. Bien Corporation. SN 77,644. Pub. 5–10–60. Filed 7–14–59.

701,629. SHEARCORE. Bien Corporation. SN 77,645. Pub. 5–10–60. Filed 7–14–59.

701,630. FOAM CLAVED. Owens-Illinois Glass Company. SN 81,085. Pub. 5–10–60. Filed 9–9–59.

701,631. SCANTEX. Irving R. Boody & Co., Inc. SN 81,616. Pub. 5–10–60. Filed 9–18–59.

701,632. GUM-BESTOS. Grant Wilson, Incorporated. SN 81,898. Pub. 5–10–60. Filed 9–23–59.

701,633. LIFECOAT. Simpson Redwood Company. SN 82,158. Pub. 5–10–60. Filed 9–25–59.

701,634. SEMTEC. Stebbins Engineering and Manufacturing Company. SN 84,347. Pub. 5–10–60. Filed 10–30–59.

701,635. H–W ALKAMORTAR. Harbison-Walker Refractories Company. SN 84,760. Pub. 5–10–60. Filed 11–6–59.

701,636. DESIGN OF ARABIC SYMBOLS FOR STONE AND WATER. Lake Ontario Portland Cement Company, Limited. SN 84,778. Pub. 5–10–60. Filed 11–6–59.

701,637. FASHIONAIRE. Sears, Roebuck and Co. SN 86,334. Pub. 5–10–60. Filed 11–30–59.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

701,638. MAJESTIC. Cory Corporation. SN 62,673. Pub. 5–10–60. Filed 11–18–58.

701,639. SQUIRES VALVATROL. The C. E. Squires Company. SN 64,502. Pub. 5–10–60. Filed 12–17–58.

701,640. SAFE-T-CHEK. Modern Engineering Company, Inc. SN 71,404. Pub. 5–10–60. Filed 4–13–59.

701,641. WEL-SITE. Duplex Manufacturing Company. SN 71,824. Pub. 5–10–60. Filed 4–20–59.

701,642. SILENCIA. Joannes Gaumond. SN 72,494. Pub. 5–10–60. Filed 4–29–59.

701,643. HYDROTROL. Hydrotherm, Inc. SN 76,213. Pub. 5–10–60. Filed 6–22–59.

701,644. COUNTRY CLUB. Crane Co. SN 84,128. Pub. 5–10–60. Filed 10–23–59.

701,645. STRINGER. Alabama Pipe Company. SN 84,276. Pub. 5–10–60. Filed 10–30–59.

701,646. DEMI-ZIP. Talon, Inc. SN 85,530. Pub. 5–10–60. Filed 11–17–59.

701,647. VAC-LOC. Lee Rubber & Tire Corporation, d.b.a. Republic Rubber Division. SN 85,757. Pub. 5–10–60. Filed 11–20–59.

701,648. CHAMPAGNE. Geo. F. Smith Company, Inc., d.b.a. GFS Co. SN 86,842. Pub. 5–10–60. Filed 12–7–59.

701,649. THERMAC. Thermac Company. SN 87,988. Pub. 5–10–60. Filed 12–24–59.

701,650. TRUTH. Truth Tool Company. SN 87,989. Pub. 5–10–60. Filed 12–24–59.

701,651. SAVAIR. Westinghouse Air Brake Company. SN 83,118. Pub. 5–10–60. Filed 12–28–59.

701,652. DEC-O-MOLDS. Marie C. Wagner, d.b.a. Wagner's Dec-O-Mold Company. SN 88,274. Pub. 5–10–60. Filed 12–30–59.

701,653. VODIUM. George Vodian, d.b.a. Roulynn Products. SN 88,353. Pub. 5–10–60. Filed 12–31–59.

Class 14—Metals and Metal Castings and Forgings

701,654. COLORROLL. Washington Steel Corporation. SN 62,640. Pub. 5–10–60. Filed 11–17–58.

701,655. STANNOL AND DESIGN. Hans Eckstaedt, d.b.a. Fa. Wilhelm Paff. SN 78,344. Pub. 5–10–60. Filed 5–11–59.

701,656. AIRCOMATIC WIREPAK. Air Reduction Company, Incorporated. SN 74,498. Pub. 5–10–60. Filed 5–26–59.

701,657. VISCOTHERM. Kelsey-Hayes Company. SN 78,568. Pub. 5–10–60. Filed 7–28–59.

701,658. WEHRBEST. Wehr Steel Company. SN 78,606. Pub. 5–10–60. Filed 7–29–59.

701,659. JNVAC. Allegheny Ludlum Steel Corporation. SN 82,949. Pub. 5–3–60. Filed 10–9–59.

701,660. S AND DESIGN. Sandusky Foundry & Machine Co. SN 83,003. Pub. 5–10–60. Filed 10–9–59.

Class 15—Oils and Greases

701,661. PETROFLUID. Pennsylvania Refining Company. SN 62,872. Pub. 5–10–60. Filed 11–20–58.

701,662. PLUS 10. Frederick J. Geisinger, d.b.a. Nutmeg Chemical Co. SN 81,554. Pub. 5–10–60. Filed 9–17–59.

701,663. SILENT MECHANIC. Fargo Oil & Grease Co. SN 86,125. Pub. 5–10–60. Filed 11–27–59.

Class 16—Protective and Decorative Coatings

701,664. PENTA-COAT. De Mert & Dougherty, Inc. SN 70,192. Pub. 1–26–60. Filed 3–25–59.

701,665. PENTAPRIME. De Mert & Dougherty, Inc. SN 71,099. Pub. 2–9–60. Filed 4–6–59.

701,666. RIGID ECONOMY, MON. Rust-Oleum Corporation. SN 71,423. Pub. 5–10–60. Filed 4–13–59.

701,667. FLEX-CURE SEAL. Enterprise Paint Manufacturing Company. SN 74,636. Pub. 5–10–60. Filed 5–28–59.

701,668. QUI-ETT. Kerr Chemicals, Inc., d.b.a. The Dur-E-Con Company. SN 76,225. Pub. 5–10–60. Filed 6–22–59.

701,669. PANDA FASHION FLOW. St. Louis Paint Manufacturing Company. SN 81,347. Pub. 5–10–60. Filed 9–14–59.

Class 17—Tobacco Products

701,670. OLD HOLBORN AND DESIGN. Cope & Lloyd (Overseas) Limited. SN 83,951. Pub. 5–10–60. Filed 10–26–59.

Class 18—Medicines and Pharmaceutical Preparations

701,671. 20/20. B.S.B. Laboratories, Inc. SN 58,153. Pub. 5–10–60. Filed 9–2–58.

701,672. PYRICTAL. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 60,208. Pub. 5–10–60. Filed 10–8–58.

701,673. C–B VONE. U.S. Vitamin & Pharmaceutical Corporation. SN 70,121. Pub. 5–10–60. Filed 3–23–59.

701,674. NATURE-TONE N-T AND DESIGN. Continental Drug Company, assignee of Norman Sober, d.b.a. Eanis Drug Co. SN 71,516. Pub. 10–20–59. Filed 4–14–59.

701,675. BECOPLUS-C. Foods Plus, Inc. SN 73,230. Pub. 10–27–59. Filed 5–8–59.

701,676. GOLACOL AND DESIGN. Arcum Pharmaceutical Corporation. SN 82,872. Pub. 5–10–60. Filed 10–8–59.

701,677. PERGRAVA AND DESIGN. Arcum Pharmaceutical Corporation. SN 82,874. Pub. 5–10–60. Filed 10–8–59.

701,678. NEODONTAL PAK. Horton & Converse. SN 83,973. Pub. 5–10–60. Filed 10–26–59.

701,679. DYMENZYME. Travenol Laboratories, Inc. SN 85,181. Pub. 5–10–60. Filed 11–12–59.

701,680. KREBIOZEN. Stevan Durovic, M.D. SN 87,481. Pub. 5–10–60. Filed 12–17–59.

701,681. ARISTODROPS. American Cyanamid Company. SN 88,509. Pub. 5–10–60. Filed 1–6–60.

701,682. CYAMAL. Lloyd Brothers, Inc. SN 88,546. Pub. 5–10–60. Filed 1–6–60.

701,683. THIOGUAN. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 89,736. Pub. 5–10–60. Filed 1–27–60.

701,684. GLUTAFORTIS. The Purdue Frederick Company. SN 89,796. Pub. 5–10–60. Filed 1–27–60.

701,685. NEOACTASAL. The Purdue Frederick Company. SN 89,797. Pub. 5–10–60. Filed 1–27–60.

701,686. TINDAL. Schering Corporation. SN 89,946. Pub. 5–10–60. Filed 1–29–60.

Class 19—Vehicles

701,687. PORTA-FOLD. Dainippon Bicycle Manufacturing Company, Ltd. SN 53,593. Pub. 5–10–60. Filed 6–16–58.

701,688. RADIOPLANE AND DESIGN. Northrop Corporation. SN 74,880. Pub. 5–10–60. Filed 6–1–59.

701,689. PAR AIR WITHIN CONCENTRIC CIRCLE. Peters & Russell, Inc. SN 75,496. Pub. 5–10–60. Filed 6–10–59.

701,690. TOTEM-ALL. Birmingham Manufacturing Co., Inc. SN 81,966. Pub. 5–10–60. Filed 9–24–59.

701,691. CONESTOGA. Sperry Rand Corporation. SN 83,665. Pub. 5–10–60. Filed 10–20–59.

701,692. CATA-CRUISER AND DESIGN. Jordan Builders, Inc., d.b.a. Jordan, Inc. SN 85,874. Pub. 5–10–60. Filed 11–23–59.

701,693. COASTLINE. Coastline Trailers, Inc. SN 85,959. Pub. 5–10–60. Filed 11–24–59.

701,694. REPRESENTATION OF BIRD IN FLIGHT. Ford Motor Company. SN 86,650. Pub. 5–10–60. Filed 12–4–59.

Class 20—Linoleum and Oiled Cloth

701,695. MODERNTONES. Mirapiaa Tile Company. SN 72,870. Pub. 5–10–60. Filed 5–4–59.

701,696. AIRLOOM. Congoleum-Nairn Inc. SN 75,171. Pub. 5–10–60. Filed 6–5–59.

701,697. GALA. Congoleum-Nairn Inc. SN 75,172. Pub. 5–10–60. Filed 6–5–59.

701,698. AMTICO GALAXY AND DESIGN. American Biltrite Rubber Co., Inc., d.b.a. American Biltrite Rubber Company. SN 78,406. Pub. 5–10–60. Filed 7–27–59.

701,699. AMTICO FLOOR-MATE ORIGINALS. American Biltrite Rubber Co., Inc., d.b.a. American Biltrite Rubber Company. SN 78,407. Pub. 5–10–60. Filed 7–27–59.

Class 21—Electrical Apparatus, Machines, and Supplies

701,700. GLORITONE. Kay Jewelry Stores, Inc. SN 24,510. Pub. 5–10–60. Filed 2–15–57.

701,701. MUSIC MASTER. Sonic Industries, Inc. SN 87,484. Pub. 5–10–60. Filed 2–10–59.

701,702. THERMAL-RAYE. Thermal-Aire, Inc. SN 71,452. Pub. 5–10–60. Filed 4–13–59.

701,703. MINNESOTA RUBBER ETC. AND DESIGN. Minnesota Rubber Company. SN 72,864. Pub. 5–10–60. Filed 5–4–59.

701,704. MR AND DESIGN. Minnesota Rubber Company. SN 72,865. Pub. 5–10–60. Filed 5–4–59.

701,705. WILLIAMSGRIP. The Garrett Corporation. SN 74,860. Pub. 5–10–60. Filed 6–1–59.

701,706. DKW-JUNIOR. Auto Union G.m.b.H. SN 79,210. Pub. 5–10–60. Filed 8–10–59.

701,707. PHOTOMATION AND DESIGN. Photomation Inc. SN 79,510. Pub. 5–10–60. Filed 8–13–59.

701,708. SNOWFLAKE AND DESIGN. Silvray Lighting, Inc. SN 83,404. Pub. 5–10–60. Filed 10–16–59.

701,709. INTERELECTRONICS. Interelectronics Corporation. SN 84,300. Pub. 5–10–60. Filed 10–30–59.

701,710. SPEAKEASY. Chance Vought Aircraft, Incorporated. SN 84,846. Pub. 5–10–60. Filed 11–9–59.

701,711. THE SCAN-A-GRAPH 500 AND DESIGN. Television Utilities Corporation. SN 85,451. Pub. 5–10–60. Filed 11–16–59.

701,712. GUIDE-MATIC. General Motors Corporation. SN 85,732. Pub. 5–10–60. Filed 11–20–59.

701,713. RED SPOT. The Wakefield Company. SN 87,926. Pub. 5–10–60. Filed 12–23–59.

701,714. CHALLENGER. Northern Electric Company. SN 87,977. Pub. 5–10–60. Filed 12–24–59.

701,715. BELFUSE. Bel Fuse Inc. SN 88,589. Pub. 5–10–60. Filed 1–7–60.

701,716. BEL. Bel Fuse Inc. SN 88,591. Pub. 5–10–60. Filed 1–7–60.

701,717. KEARNALEX. James R. Kearney Corporation. SN 88,769. Pub. 5–10–60. Filed 1–11–60.

701,718. PARICODE. North Electric Company. SN 90,096. Pub. 5–10–60. Filed 2–1–60.

701,719. "NASSAU." Munston Manufacturing and Service, Inc. SN 90,647. Pub. 5–10–60. Filed 2–9–60.

701,720. "BAY SHORE." Munston Manufacturing and Service, Inc. SN 90,648. Pub. 5–10–60. Filed 2–9–60.

701,721. LOUVRE-LITE. Nu-Lite Corporation. SN 91,703. Pub. 5–10–60. Filed 2–26–60.

Class 22—Games, Toys, and Sporting Goods

701,722. SPORTSMAN. Sportsman's Golf Corporation. SN 46,667. Pub. 2–10–59. Filed 2–26–58.

701,723. SPUNKY. Fun in the Sun of Florida, Inc. SN 64,627. Pub. 5–10–60. Filed 12–19–58.

701,724. TIP-TOP. Tip-Top Products Company. SN 84,186. Pub. 5–10–60. Filed 10–28–59.

701,725. LITTLE MISS HOUSEKEEPER. Tico-Toys, Inc. SN 87,088. Pub. 5–10–60. Filed 12–10–59.

701,726. PRO-TOW. Dale R. Risney. SN 87,280. Pub. 5–10–60. Filed 12–14–59.

701,727. STRATO-FLITE. Audiger, Inc. SN 87,535. Pub. 5–10–60. Filed 12–18–59.

701,728. TENS-O-MATIC. Jauco Industries, Inc. SN 87,564. Pub. 5–10–60. Filed 12–18–59.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

701,729. DESIGN OF A PIPE. F. D. Rasspe Sohne. SN 33,570. Pub. 5–10–60. Filed 7–11–57.

701,730. TANTONE. Ideal Roller & Manufacturing Company. SN 66,447. Pub. 5–10–60. Filed 1–26–59.

701,731. CARLE MONTANARI ETC. AND DESIGN. Carle & Montanari, Inc. SN 69,720. Pub. 5–10–60. Filed 3–17–59.

701,732. TURBO-MITE. Curtiss-Wright Corporation. SN 70,873. Pub. 5–10–60. Filed 4–6–59.

701,733. STATESMAN. Southern States Cooperative, Incorporated. SN 71,315. Pub. 5–10–60. Filed 4–10–59.

701,734. TASTOLUT AND DESIGN. Robert Biohm. SN 72,111. Pub. 5–10–60. Filed 4–23–59.

701,735. JECO. Sidney B. Jeffreys, d.b.a. Jeffreys Engineering & Equipment Company. SN 72,213. Pub. 5–10–60. Filed 4–24–59.

701,736. VANASIL. Gillett & Eaton, Inc. SN 72,306. Pub. 5–10–60. Filed 4–27–59.

701,737. MR AND DESIGN. Minnesota Rubber Company. SN 72,862. Pub. 5–10–60. Filed 5–4–59.

701,738. MR MINNESOTA RUBBER AND DESIGN. Minnesota Rubber Company. SN 72,867. Pub. 5–10–60. Filed 5–4–59.

701,739. BRUSH-BULL. Wood Brothers Manufacturing Company. SN 72,920. Pub. 5–10–60. Filed 5–4–59.

701,740. SNO-BERRY. Dennis H. Fletcher, d.b.a. Sno-Berry Products & Equipment Co. SN 73,546. Pub. 5–10–60. Filed 5–13–59.

701,741. SCHMETZ NEEDLES AND DESIGN. Ferdinand Schmetz G.m.b.H. SN 74,158. Pub. 5–10–60. Filed 5–20–59.

701,742. VAC-A-BULB. Charles E. Foster, d.b.a. Rite-O-Lite of California. SN 75,293. Pub. 5–10–60. Filed 6–8–59.

701,743. RITE-O-LITE. Charles E. Foster, d.b.a. Rite-O-Lite of California. SN 75,294. Pub. 5–10–60. Filed 6–8–59.

701,744. SPLIT ROLL. G. T. Schjeldahl Company. SN 75,586. Pub. 5–10–60. Filed 6–11–59.

701,745. GOLDEN GLORY. United Nations Trading Co., Inc. SN 76,353. Pub. 5–10–60. Filed 6–22–59.

701,746. POWER PULLER AND DESIGN. Food Machinery and Chemical Corporation. SN 76,560. Pub. 5–10–60. Filed 6–26–59.

701,747. BLUE BOND. Clipper Manufacturing Company. SN 77,999. Pub. 5–10–60. Filed 7–20–59.

701,748. CROWN AND REPRESENTATION OF A CROWN. Crown Controls Company, Inc. SN 78,260. Pub. 5–10–60. Filed 7–25–59.

701,749. VISCO-DRIVE. Eaton Manufacturing Company. SN 78,620. Pub. 5–10–60. Filed 7–29–59.

701,750. ARTOUSTE. Turbomeca. SN 78,739. Pub. 5–10–60. Filed 7–30–59.

701,751. ASTAZOU. Turbomeca. SN 78,740. Pub. 5–10–60. Filed 7–30–59.

701,752. BASTAN. Turbomeca. SN 78,741. Pub. 5–10–60. Filed 7–30–59.

701,753. DIG-N-PICK. Harry A. Behrens, d.b.a. Behrens Manufacturing. SN 79,043. Pub. 5–10–60. Filed 8–5–59.

701,754. OLYMPIA-SPLENDID. Olympia Werke Aktiengesellschaft. SN 79,205. Pub. 5–10–60. Filed 7–21–59.

701,755. H AND DESIGN. R. M. Hannum, d.b.a. R. M. Hannum & Co. SN 79,648. Pub. 5–10–60. Filed 8–17–59.

701,756. RUBBA-FLEX. The Joslyn Manufacturing Company, Inc. SN 79,660. Pub. 5–10–60. Filed 8–17–59.

701,757. SIDEWINDER. Henry Pratt Company. SN 80,266. Pub. 5–10–60. Filed 8–26–59.

701,758. PORT-AIR ETC. AND DESIGN. Charles J. Pittenger, d.b.a. Port-Air Conveyor Company. SN 80,354. Pub. 5–10–60. Filed 8–27–59.

701,759. PITMAN. Pitman Manufacturing Company. SN 80,586. Pub. 5–10–60. Filed 8–31–59.

701,760. PRONG. Utica Cutlery Company. SN 82,958. Pub. 5–10–60. Filed 10–8–59.

701,761. CTL-CHECK. Allesair Corp. SN 84,967. Pub. 5–10–60. Filed 11–10–59.

701,762. KOOLS. Kools Brothers, Inc. SN 85,015. Pub. 5–10–60. Filed 11–10–59.

701,763. STOWAWAY. The Bates Manufacturing Company. SN 85,278. Pub. 5–10–60. Filed 11–16–59.

701,764. K. S. H. Kress and Company. SN 85,382. Pub. 5–10–60. Filed 11–16–59.

701,765. OCTAGONAL DESIGN. Burgess Vibrocrafters, Inc. SN 86,107. Pub. 5–10–60. Filed 11–27–59.

701,766. LITTLE SHAVER. John J. Milo, d.b.a. Jersey Manufacturing Company. SN 86,511. Pub. 5–10–60. Filed 12–2–59.

701,767. MANHATTAN MFR AND DESIGN. Arthur O. Wirsing, d.b.a. Manhattan Floor Supplies. SN 86,619. Pub. 5–10–60. Filed 12–3–59.

701,768. ACE CADET AND DESIGN. Ace Fastener Corporation. SN 86,623. Pub. 5–10–60. Filed 12–4–59.

701,769. TILLSMITH. Yuba Power Products, Inc. SN 86,705. Pub. 5–10–60. Filed 12–4–59.

701,770. STAR TIME. Imperial Knife Associated Companies, Inc. SN 87,052. Pub. 5–10–60. Filed 12–24–59.

701,771. CANTEEN. Automatic Canteen Company of America. SN 88,003. Pub. 5–10–60. Filed 12–28–59.

701,772. LOYALTY. Root-Lowell Manufacturing Co. SN 88,097. Pub. 5–10–60. Filed 12–28–59.

701,773. IDEAL AND DESIGN. The Gustav Wiedeke Company. SN 88,120. Pub. 5–10–60. Filed 12–28–59.

701,774. TAP-TREE. American Saw and Tool Company. SN 88,128. Pub. 5–10–60. Filed 12–29–59.

701,775. GLARDON AND DESIGN. Usines Métallurgiques de Vallorbe (Société Anonyme). SN 88,187. Pub. 5–10–60. Filed 12–29–59.

701,776. REPRESENTATION OF TROUT. Usines Métallurgiques de Vallorbe (Société Anonyme). SN 88,188. Pub. 5–10–60. Filed 12–29–59.

701,777. HELLER ETC. AND DESIGN. Heller Tool Co. SN 88,232. Pub. 5–10–60. Filed 12–30–59.

Class 26—Measuring and Scientific Appliances

701,778. ARLOT. William W. Barr, d.b.a. Associated Research Laboratories of Texas and Electronic Research Laboratories of Texas. SN 27,769. Pub. 5–10–60. Filed 4–9–57.

701,779. TRIPPENSEE. Trippensee Planetarium Co. SN 46,526. Pub. 5–10–60. Filed 2–17–58.

701,780. MODULAIRE. The Sheffield Corporation. SN 49,029. Pub. 5–10–60. Filed 4–3–58.

701,781. STROBEMETER. Frederick A. Thomas, d.b.a. Thomas Instrument Company. SN 59,574. Pub. 5–10–60. Filed 9–25–58.

701,782. SOILMOISTURE AND DESIGN. Percy E. Skaling, d.b.a. Soilmoisture Equipment Co. SN 59,855. Pub. 5–3–60. Filed 9–30–58.

701,783. HELITEST. Techniques Nucleaires. SN 64,358. Pub. 5–10–60. Filed 12–15–58.

701,784. POWER-CHEK. Heyer Industries Incorporated. SN 64,979. Pub. 5–10–60. Filed 12–29–58.

701,785. HYTROL. Crane Co. SN 67,590. Pub. 5–10–60. Filed 2–12–59.

701,786. NATIONAL COMPU-TRONIC. The National Cash Register Company. SN 69,834. Pub. 3–1–60. Filed 3–18–59.

701,787. COMPU-TRONIC. The National Cash Register Company. SN 69,835. Pub. 3–1–60. Filed 3–18–59.

701,788. MULTIFORM. Precision Thermometer & Instrument Co. SN 69,910. Pub. 5–10–60. Filed 3–19–59.

701,789. AEROJET-GENERAL. Aerojet-General Corporation. SN 70,023. Pub. 5–10–60. Filed 3–23–59.

701,790. SAF EVAC. Fisher Governor Company. SN 73,351. Pub. 5–10–60. Filed 5–11–59.

701,791. CURV-O-MARK AND DESIGN. Contour Marker Corp. of California. SN 73,895. Pub. 5–10–60. Filed 5–18–59.

701,792. PHAZOR AND DESIGN. The Industrial Test Equipment Company. SN 75,419. Pub. 5–10–60. Filed 6–9–59.

701,793. SELECTRASTAT. Maxitrol Company. SN 75,929. Pub. 5–10–60. Filed 6–17–59.

701,794. LUBRIPORT. U.S. Electrical Motors, Inc. SN 79,309. Pub. 5–10–60. Filed 8–10–59.

701,795. F AND DESIGN. Fisher Scientific Company. SN 82,414. Pub. 5–10–60. Filed 9–30–59.

701,796. RED END AND DESIGN. The Lufkin Rule Co. SN 84,149. Pub. 5–10–60. Filed 10–28–59.

701,797. COMFORTRON. General Motors Corporation. SN 84,533. Pub. 5–10–60. Filed 11–3–59.

701,798. POCOSLIDE. Ernst Leitz, G.m.b.H. SN 84,542. Pub. 5–10–60. Filed 11–3–59.

701,799. OSCILLOTRON. Beattie-Coleman, Inc. SN 85,281. Pub. 5–10–60. Filed 11–16–59.

701,800. VARITRON. Beattie-Coleman, Inc. SN 85,282. Pub. 5–10–60. Filed 11–16–59.

701,801. PORTRONIC. Beattie-Coleman, Inc. SN 85,284. Pub. 5–10–60. Filed 11–16–59.

701,802. FLUOROTRON. Beattie-Coleman, Inc. SN 85,285. Pub. 5–10–60. Filed 11–16–59.

701,803. DU PONT AND DESIGN. E. I. du Pont de Nemours and Company. SN 87,559. Pub. 5–10–60. Filed 12–23–59.

Class 29—Brooms, Brushes, and Dusters

701,804. SLIP-O-MATIC. Elder & Jenks, Inc. SN 60,492. Pub. 5–10–60. Filed 10–13–58.

701,805. SELF-MOISTENING SPEED SWEEP. Milwaukee Dustless Brush Co. SN 66,799. Pub. 5–10–60. Filed 1–30–59.

701,806. DENTAGARD. Colgate-Palmolive Company. SN 84,291. Pub. 5–10–60. Filed 10–30–59.

Class 31—Filters and Refrigerators

701,807. CHEM FLOW. Chem Flow Corp. SN 72,703. Pub. 5–10–60. Filed 5–1–59.

Class 32—Furniture and Upholstery

701,808. PEG-LEG AND DESIGN. Donald G. C. Perry, d.b.a. Perry Furniture Company. SN 668,685. Pub. 5–10–60. Filed 5–2–55.

701,809. AERLON. The Englander Company, Inc. SN 76,377. Pub. 2–16–60. Filed 6–24–59.

701,810. FOAMATIC. The Holiday Line, Inc. SN 78,203. Pub. 12–29–59. Filed 7–22–59.

701,811. CHESTNUT HILL COLLECTION AND DESIGN. Veit Furniture Corp., Inc. SN 78,392. Pub. 5–10–60. Filed 7–24–59.

701,812. FOMAT. Rose-Derry Company. SN 79,881. Pub. 12–29–59. Filed 8–19–59.

701,813. KLING MEANS SOLID MAHOGANY-MAPLE-CHERRY AND DESIGN. Chautauqua Cabinet Company, d.b.a. Kling Factories. SN 84,288. Pub. 5–10–60. Filed 10–30–59.

701,814. REPRESENTATION OF A LION. Straus-Duparquet Inc. SN 87,920. Pub. 5-10-60. Filed 12-23-59.

701,815. FLORENCE AND DESIGN. Florence Wood Working Co. SN 90,504. Pub. 5-10-60. Filed 2-8-60.

Class 33 — Glassware

701,816. FILTRE RAY. Glass Containers Corporation. SN 82,218. Pub. 5-10-60. Filed 9-28-59.

Class 34 — Heating, Lighting, and Ventilating Apparatus

701,817. HELICRAFT. Air Reduction Company, Incorporated. SN 76,048. Pub. 5-10-60. Filed 6-19-59.

701,818. HYDROTANK. Hydrotherm, Inc. SN 76,211. Pub. 5-10-60. Filed 6-22-59.

701,819. KEE LITE. Thatcher Glass Manufacturing Company, Inc. SN 81,647. Pub. 5-10-60. Filed 9-18-59.

701,820. TURBOPLATE. Louis De Markus Corporation. SN 86,023. Pub. 5-10-60. Filed 11-25-59.

701,821. MITCHELL. Cory Corporation. SN 86,186. Pub. 5-10-60. Filed 11-27-59.

701,822. VACU-MASTER. C. I. Hayes, Inc. SN 88,040. Pub. 5-10-60. Filed 12-28-59.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

701,823. PAR AIR WITHIN CONCENTRIC CIRCLE. Peters & Russell, Inc. SN 75,497. Pub. 5-10-60. Filed 6-10-59.

701,824. CONTENDER. The Goodyear Tire & Rubber Company. SN 85,973. Pub. 5-10-60. Filed 11-24-59.

701,825. VOL-PAC. E. F. Houghton & Co. SN 86,285. Pub. 5-10-60. Filed 11-30-59.

701,826. BRD AND DESIGN. Bellofram Corporation. SN 86,393. Pub. 5-10-60. Filed 12-1-59.

701,827. BRD. Bellofram Corporation. SN 86,394. Pub. 5-10-60. Filed 12-1-59.

Class 36 — Musical Instruments and Supplies

701,828. WEBCOR B.F.D. Webcor, Inc. SN 71,430. Pub. 5-10-60. Filed 4-13-59.

701,829. PHONO TRIX. Matthew Stuart & Co., Inc. SN 76,525. Pub. 5-10-60. Filed 6-25-59.

701,830. MADISON FIELDING. Crosby Electronics, Incorporated. SN 82,398. Pub. 5-10-60. Filed 9-30-59.

701,831. KAHALA. Raymond M. Frink, d.b.a. Frink Sales Company. SN 82,967. Pub. 5-10-60. Filed 10-9-59.

701,832. MF DESIGN. Crosby Electronics, Incorporated. SN 83,470. Pub. 5-10-60. Filed 10-19-59.

701,833. RHYTHA-CORD. G. Douglas Rice, d.b.a. Douglas Recordings Co. SN 84,094. Pub. 5-10-60. Filed 10-27-59.

Class 37 — Paper and Stationery

701,834. PEEK-O-LOPE. American Mail Advertising Incorporated. SN 23,595. Pub. 5-10-60. Filed 2-1-57.

701,835. FEATHER SOFT AND DESIGN. Romar Tissue Mills, Incorporated. SN 72,150. Pub. 5-20-60. Filed 4-23-59.

701,836. FAMILY FUN PAC. Crown Zellerbach Corporation. SN 81,385. Pub. 5-10-60. Filed 9-15-59.

701,837. PS. The Standard Register Company. CONSOLIDATED CERTIFICATE. SN 82,546, pub. 3-1-60, filed 10-1-59, Cl. 37; SN 82,547, pub. 5-3-60, filed 10-1-59, Cl. 38.

701,838. BALLARINA. Morton Paper Company. SN 87,446. Pub. 5-10-60. Filed 12-16-59.

701,839. DRI-TONES. Scott Paper Company. SN 87,513. Pub. 5-10-60. Filed 12-17-59.

701,840. PEN MORE. Puritan Stationery Company, Inc. SN 88,087. Pub. 5-10-60. Filed 12-28-59.

701,841. PHOTO VAULT ALBUM AND DESIGN. Schachter Enterprises, Inc. SN 88,940. Pub. 5-10-60. Filed 1-13-60.

Class 38 — Prints and Publications

701,837. CONSOLIDATED CERTIFICATE. See Class 37.

701,842. HALLMARK SYSTEM-MATIC AND DESIGN. Hallmark Cards Incorporated. SN 69,141. Pub. 5-10-60. Filed 3-9-59.

701,843. THE McCLEARY-THORNTON MINOR NEWS. McCleary-Thornton Minor Hospital, Inc. SN 72,854. Pub. 5-10-60. Filed 5-4-59.

701,844. MODERN RAILROADS. Watson Publications, Inc. SN 81,782. Pub. 5-10-60. Filed 9-21-59.

701,845. WILLIE LUMPKIN. Publishers Syndicate. SN 85,392. Pub. 5-10-60. Filed 11-16-59.

701,846. BROTHER JUNIPER. Publishers Syndicate. SN 85,393. Pub. 5-10-60. Filed 11-16-59.

701,847. SCHOOL MANAGEMENT. School Management Magazines, Inc. SN 85,520. Pub. 5-10-60. Filed 11-17-59.

701,848. A BADGER BOOK AND DESIGN. Whitman Publishing Company. SN 85,641. Pub. 5-10-60. Filed 11-18-59.

701,849. DAYSTROM DATA. Daystrom, Incorporated. SN 85,661. Pub. 5-10-60. Filed 11-19-59.

701,850. YOUNG AND BEAUTIFUL. Drum Major Publishing Company. SN 85,724. Pub. 5-10-60. Filed 11-20-59.

701,851. DIAMOND NATIONAL DIGEST AND DESIGN. Diamond National Corporation. SN 85,852. Pub. 5-10-60. Filed 11-23-59.

Class 39 — Clothing

701,852. SATELLITE. The La Resista Corset Company. SN 39,535. Pub. 5-10-60. Filed 10-25-57.

701,853. FAERIE SHILURE. Fairy Mills, Inc., by change of name from Fairy Silk Mills, Inc. SN 42,695. Pub. 5-10-60. Filed 12-19-57.

701,854. RAVISSANT. Vanity Fair Mills, Inc. SN 55,098. Pub. 5-10-60. Filed 7-10-58.

701,855. RAINGARD. Plasticsmith, Inc. SN 60,960. Pub. 5-10-60. Filed 10-20-58.

701,856. SQUASH HEELS. A. Sandler Co. SN 62,125. Pub. 5-10-60. Filed 11-7-58.

701,857. FOR THE "THREE WHEELERS." Quality Mills, Incorporated. SN 63,599. Pub. 5-10-60. Filed 12-3-58.

701,858. LADY LONG LEGS. Olga Company. SN 64,934. Pub. 5-10-60. Filed 12-26-58.

701,859. BEN FRANKLIN ETC. AND DESIGN. City Products Corporation, assignee of Butler Brothers. SN 66,843. Pub. 4-5-60. Filed 2-2-59.

701,860. BILLIE OF CALIFORNIA. A. J. Edlin Manufacturing Co., Inc. SN 68,241. Pub. 5-10-60. Filed 2-24-59.

701,861. MR. SIMON. Forest City Manufacturing Company. SN 69,518. Pub. 5-10-60. Filed 3-13-59.

701,862. KALI-PED-IKS. The Gilbert Shoe Co. SN 70,708. Pub. 5-10-60. Filed 4-2-59.

701,863. ESCORTS. Kaysam Corporation of America. SN 72,131. Pub. 5-3-60. Filed 4-23-59.

701,864. SALE KNIT AND DESIGN. Sale Knitting Company, Inc. SN 72,151. Pub. 5-10-60. Filed 4-23-59.

701,865. JODI. B & N Importers, Inc. SN 72,271. Pub. 5-10-60. Filed 4-27-59.

701,866. FRENCH HUG. Olga Company. SN 73,424. Pub. 5-10-60. Filed 5-11-59.

701,867. MARVELIFT. Sears, Roebuck and Co. SN 73,829. Pub. 5-10-60. Filed 5-15-59.

701,868. LUSTRE STITCH. Sears, Roebuck and Co. SN 73,832. Pub. 5-10-60. Filed 5-15-59.

701,869. CARRICK. Smith Brothers Manufacturing Co. SN 75,794. Pub. 5-10-60. Filed 6-15-59.

701,870. THE DUFLEX. Goodstein Bros. & Co., Inc. SN 76,563. Pub. 5-10-60. Filed 7-1-59.

701,871. PALA. C & M Garment Inc. SN 78,975. Pub. 5-10-60. Filed 8-4-59.

701,872. WALK-ABOUT. Jolly Kids Togs, Inc., assignee of Jolly Kids Togs. SN 79,004. Pub. 5-10-60. Filed 8-4-59.

701,873. ADJUSTOMATIC. H & M Sportswear, Inc. SN 79,061. Pub. 5-10-60. Filed 8-5-59.

701,874. POPOLINO. The Richman Brothers Company. SN 79,712. Pub. 5-10-60. Filed 8-17-59.

701,875. RICHCREST. The Richman Brothers Company. SN 80,195. Pub. 5-10-60. Filed 8-25-59.

701,876. ALLSAFE. American Allsafe Company, Inc. SN 81,861. Pub. 5-10-60. Filed 9-23-59.

701,877. COURIER CLOTH. Michaels Stern & Company Incorporated. SN 82,036. Pub. 5-10-60. Filed 9-24-59.

701,878. SUN-TANNER. Tanner of North Carolina, Inc. SN 82,368. Pub. 5-10-60. Filed 9-29-59.

701,879. BRIEFCOAT. Winer Manufacturing Co., Inc. SN 83,760. Pub. 5-10-60. Filed 10-21-59.

701,880. AJUSTO-FIT. Joseph Kanner Hat Co., Inc. SN 84,069. Pub. 5-10-60. Filed 10-27-59.

701,881. WILMAR. Wilmar Undergarment Corp. SN 84,366. Pub. 5-10-60. Filed 10-30-59.

701,882. BUDDY CARROLL. Plymouth Wholesale Dry Goods Corporation. SN 84,617. Pub. 5-10-60. Filed 11-4-59.

701,883. FIGURE GLAMOR. Morris L. Goldstein, d.b.a. Grasbia. SN 84,888. Pub. 5-10-60. Filed 11-9-59.

701,884. BERCKTOWNE. Bercktowne of Hollywood. SN 84,974. Pub. 5-10-60. Filed 11-10-59.

701,885. BANDWAGON. Shoecraft Inc. SN 85,999. Pub. 5-10-60. Filed 11-24-59.

701,886. LADY PILOT. The Kramer Company. SN 86,037. Pub. 5-10-60. Filed 11-25-59.

701,887. LUCKY GIRL. Charles Greenberg & Sons, Inc. SN 86,143. Pub. 5-10-60. Filed 11-27-59.

701,888. HOLLYWOOD PREMIERE. Adrian Tobin Corporation. SN 86,209. Pub. 5-10-60. Filed 11-27-59.

701,889. STELLAR. Maiden Form Brassiere Company, Inc. SN 86,432. Pub. 5-10-60. Filed 12-1-59.

701,890. STARGAZER. Maiden Form Brassiere Company, Inc. SN 86,433. Pub. 5-10-60. Filed 12-1-59.

701,891. STAR BILLING. Maiden Form Brassiere Company, Inc. SN 86,434. Pub. 5-10-60. Filed 12-1-59.

701,892. MOOD MUSIC. Maiden Form Brassiere Company, Inc. SN 86,435. Pub. 5-10-60. Filed 12-1-59.

701,893. STALLION BRAND AND DESIGN. Atlantic Sportswear Inc. SN 86,474. Pub. 5-10-60. Filed 12-2-59.

701,894. BACHELOR HALL. Eagle Bros., Inc. SN 86,486. Pub. 5-10-60. Filed 12-2-59.

701,895. MAGIC LADY. Exquisite Form Brassiere, Inc. SN 86,744. Pub. 5-10-60. Filed 12-7-59.

701,896. ISLANDSTATE ETC. AND DESIGN. Pacific Exporting Co. SN 86,821. Pub. 5-10-60. Filed 12-7-59.

701,897. ROI-SPUN. Le Roi Hosiery Co. Inc. SN 86,980. Pub. 5-10-60. Filed 12-9-59.

701,898. MR. BILL. The Billy Boy Co. SN 87,024. Pub. 5-10-60. Filed 12-10-59.

701,899. MAGICOOL. A. Stein & Company. SN 87,064. Pub. 5-10-60. Filed 12-10-59.

701,900. PRAPPE. Maiden Form Brassiere Company, Inc. SN 87,243. Pub. 5-10-60. Filed 12-14-59.

701,901. MINIFORM. Maiden Form Brassiere Company, Inc. SN 87,245. Pub. 5-10-60. Filed 12-14-59.

701,902. TOP BILLING. Maiden Form Brassiere Company, Inc. SN 87,247. Pub. 5-10-60. Filed 12-14-59.

701,903. ASTEN. Hudson Hosiery Company. SN 87,492. Pub. 5-10-60. Filed 12-17-59.

701,904. PENNY&AVERS. Dutchess Underwear Corporation. SN 87,849. Pub. 5-10-60. Filed 12-21-59.

701,905. MEMENTOES. Lown Shoes, Inc. SN 87,896. Pub. 5-10-60. Filed 12-21-59.

701,906. RAPIER. A-1 Manufacturing Co. SN 87,957. Pub. 5-10-60. Filed 12-24-59.

701,907. RESERVE NEATNESS. The Manhattan Shirt Company. SN 88,241. Pub. 5-10-60. Filed 12-30-59.

701,908. OSPREY. Osprey Corporation. SN 88,283. Pub. 5-10-60. Filed 12-31-59.

701,909. PANTSVILLE. Mister Pants, Inc. SN 88,690. Pub. 5-10-60. Filed 1-8-60.

701,910. MIRTH. The Formfit Company. SN 88,905. Pub. 5-10-60. Filed 1-13-60.

Class 40 — Fancy Goods, Furnishings, and Notions

701,911. CHIC. Gaylord Products, Incorporated. SN 80,726. Pub. 5-10-60. Filed 9-2-59.

701,912. VASSAR. W. J. Caley Co. SN 82,394. Pub. 5-10-60. Filed 9-30-59.

Class 41 — Canes, Parasols, and Umbrellas

701,913. FUM CO AND DESIGN. Frankford Umbrella Manufacturing Company. SN 86,492. Pub. 5-10-60. Filed 12-2-59.

701,914. F. Frankford Umbrella Manufacturing Company. SN 86,493. Pub. 5-10-60. Filed 12-3-59.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

701,915. SARANSPUN AND DESIGN. The National Plastic Products Company, assignee of The Saran Yarns Company. SN 55,523. Pub. 5-10-60. Filed 7-17-58.

701,916. PRIDE OF VIRGINIA. Bates Manufacturing Company. SN 62,725. Pub. 5-10-60. Filed 11-19-58.

701,917. PRIDE OF NEW HAMPSHIRE. Bates Manufacturing Company. SN 68,101. Pub. 5-10-60. Filed 2-20-59.

701,918. CECONITE. Daniel A. Cooper, d.b.a. Cooper Engineering Co. SN 72,676. Pub. 5-10-60. Filed 4-27-59.

701,919. MARGHAB. Emile Marghab, Incorporated. SN 73,306. Pub. 5-10-60. Filed 4-20-59.

701,920. CHARM PRINTS. Columbus Coated Fabrics Corporation. SN 85,102. Pub. 5-10-60. Filed 11-12-59.

701,921. RUGGY-BEAR AND DESIGN. Mitchell Accessories, Inc. SN 85,237. Pub. 5-10-60. Filed 11-13-59.

Class 43 — Thread and Yarn

701,922. ASAHI KASEI. Asahi Kasei Kogyo Kabushiki Kaisha. SN 67,432. Pub. 5-10-60. Filed 2-10-59.

701,923. NATURA. National Spinning Co., Inc. SN 67,703. Pub. 5-10-60. Filed 2-13-59.

Class 44—Dental, Medical, and Surgical Appliances

701,924. INSTEMP. Craig Instrument Corporation. SN 87,845. Pub. 5-10-60. Filed 5-16-56.

701,925. VITA-SEAGE. American Vita-Seage Products, Inc. SN 67,182. Pub. 3-8-60. Filed 2-6-59.

701,926. GEYSIR. Emma Lefmann, d.b.a. Le-Co-Therm. SN 73,835. Pub. 5-10-60. Filed 4-27-59.

701,927. PLATIL. Dr. Plate, G.m.b.H. SN 80,077. Pub. 5-10-60. Filed 8-24-59.

Class 45—Soft Drinks and Carbonated Waters

701,928. ESQUIRE. Monarch Food Packers, Inc., d.b.a. Monarch Manufacturing Co. SN 66,296. Pub. 3-22-60. Filed 2-24-59.

Class 46—Foods and Ingredients of Foods

701,929. RIPE'N-RAGGED. Independent Grocers' Alliance Distributing Company. SN 42,142. Pub. 7-8-58. Filed 12-10-57.

701,930. CP AND DESIGN. The Creamery Package Mfg. Company. SN 56,534. Pub. 5-10-60. Filed 5-4-56.

701,931. LIVE BETTER FOR LESS. The Kroger Co. SN 68,406. Pub. 5-10-60. Filed 2-25-59.

701,932. RALLY. General Foods Corporation. SN 68,989. Pub. 11-17-59. Filed 3-5-59.

701,933. CARAMAC. John Mackintosh & Sons Limited. SN 69,248. Pub. 5-10-60. Filed 3-11-59.

701,934. BOSCO. J. G. Boswell Company. SN 72,575. Pub. 3-29-60. Filed 4-30-59.

701,935. FROSTO. Wilson & Co., Inc. SN 72,673. Pub. 5-10-60. Filed 4-30-59.

701,936. TIP-TOP AND DESIGN. Ward Baking Company. SN 74,482. Pub. 5-10-60. Filed 5-25-59.

701,937. RONI-DINNER. American Beauty Macaroni Co., d.b.a. The American Beauty Macaroni Co. SN 77,712. Pub. 5-10-60. Filed 7-15-59.

701,938. DO-GO. Baxter Laboratories, Inc., d.b.a. Wallerstein Company, Div. of Baxter Laboratories, Inc. SN 78,111. Pub. 5-10-60. Filed 7-21-59.

701,939. OLD SOUTH BRAND. Martin Gillet & Co., Inc. SN 78,130. Pub. 3-22-60. Filed 7-21-59.

701,940. OPEN PIT. Max Dinisman. SN 81,469. Pub. 5-10-60. Filed 9-16-59.

701,941. CHEF'S TREASURE. Samuel Kaltman, d.b.a. Mutual Spice Company. SN 81,571. Pub. 5-10-60. Filed 9-17-59.

701,942. PARKWOOD. Kobacker Stores, Inc., d.b.a. Tiedtke's. SN 81,712. Pub. 5-10-60. Filed 9-21-59.

701,943. CLINSWEET. Standard Brands Incorporated. SN 81,942. Pub. 5-10-60. Filed 9-23-59.

701,944. OPEN HOUSE. Norris Inc. SN 82,280. Pub. 5-10-60. Filed 9-28-59.

701,945. CHEF MARCO AND REPRESENTATION OF A CHEF. Buitoni Foods Corporation. SN 83,202. Pub. 5-10-60. Filed 10-14-59.

701,946. FASWEET. Lucian L. Spellings, d.b.a. The Fasweet Co. SN 83,250. Pub. 3-29-60. Filed 10-14-59.

701,947. TORUMEL. The Emenel Company. SN 83,784. Pub. 5-10-60. Filed 10-22-59.

701,948. SMOOTHTEX. Meat Industry Suppliers, Inc. SN 85,364. Pub. 5-10-60. Filed 11-16-59.

701,949. McLAREN'S. L. M. McLaren Produce, Inc. SN 85,507. Pub. 5-10-60. Filed 11-17-59.

701,950. FINE BAKE AND DESIGN. Food Fair Stores, Inc. SN 86,027. Pub. 5-10-60. Filed 11-25-59.

701,951. GRAND. The Grand Union Company. SN 86,282. Pub. 5-10-60. Filed 11-30-59.

701,952. STUDENT PRINCE AND DESIGN. The Hauser Company. SN 87,226. Pub. 5-10-60. Filed 12-14-59.

701,953. DREAM-DIP. Penn Maid Foods, Inc. SN 87,274. Pub. 5-10-60. Filed 12-14-59.

701,954. THE HICKORY BOWL. Hickory Bowl Foods, Inc. SN 87,563. Pub. 5-10-60. Filed 12-18-59.

701,955. POPULAR. J. S. Danenberg, d.b.a. Danny Danenberg. SN 87,642. Pub. 5-10-60. Filed 12-21-59.

701,956. SOVEREIGN. National Fishcuring Company Limited. SN 87,705. Pub. 5-10-60. Filed 12-21-59.

Class 47—Wines

701,957. MADDISON SQUARE. Leslie Arthur Maddison. SN 74,758. Pub. 5-10-60. Filed 5-29-59.

701,958. MARIE ANTOINETTE. Schenley Industries, Inc., d.b.a. Marie Antoinette Champagne Cellars. SN 87,724. Pub. 5-10-60. Filed 12-21-59.

Class 50—Merchandise Not Otherwise Classified

701,959. CARIOLIER. Tupper Corporation. SN 52,166. Pub. 5-10-60. Filed 5-22-58.

701,960. POLENE. Anchor Industries, Inc. SN 74,978. Pub. 5-10-60. Filed 6-3-59.

701,961. FABCEL. Fabreeka Products Company. SN 75,074. Pub. 2-23-60. Filed 6-4-59.

701,962. POSY RING AND DESIGN. Saxe Brothers, Inc., d.b.a. Posy Ring. SN 78,926. Pub. 5-10-60. Filed 8-3-59.

701,963. SPEEDKOTE. Polychrome Corporation. SN 84,244. Pub. 5-10-60. Filed 10-29-59.

Class 51—Cosmetics and Toilet Preparations

701,964. COME ALIVE BLONDE. Clairol Incorporated (Delaware corporation), assignee of Clairol Incorporated (Connecticut corporation). SN 54,379. Pub. 5-10-60. Filed 6-27-55.

701,965. MANI-DERM. Anthony C. De Filippis, d.b.a. Mani-Derm Co. SN 66,776. Pub. 5-10-60. Filed 1-30-59.

701,966. HOLLINGSWORTH'S. A. M. Hollingsworth, d.b.a. Hollingsworth Products Co. SN 68,401. Pub. 5-10-60. Filed 2-25-59.

701,967. LIQUA-LINER. Diedre Products Inc. SN 69,489. Pub. 5-10-60. Filed 3-13-59.

701,968. B-FIT. Silhouette Products Ltd. SN 70,651. Pub. 5-10-60. Filed 4-1-59.

701,969. REPRESENTATION OF GIRL IN TUB. Mary Sherman, Inc. SN 71,617. Pub. 5-10-60. Filed 4-15-59.

701,970. BON VOYAGE. Les Parfums de Dana, Inc., d.b.a. Dana. SN 81,193. Pub. 5-10-60. Filed 9-11-59.

701,971. C'EST LA VIE. Charles Stutzer, d.b.a. Celavie Perfumes. SN 82,452. Pub. 5-10-60. Filed 9-30-59.

701,972. RECITAL. Societe Technique de Parfumerie, F. Millot, Société Anonyme. SN 82,543. Pub. 5-10-60. Filed 10-1-59.

701,973. ANSWER. The Gillette Company, d.b.a. The Toni Company. SN 83,789. Pub. 5-10-60. Filed 10-22-59.

701,974. PENCI-LINER. The Kurlash Company, Inc. SN 83,960. Pub. 5-10-60. Filed 10-26-59.

701,975. DEMOISELLE. Tom Fields, Ltd. SN 84,042. Pub. 5-10-60. Filed 10-27-59.

701,976. CHALLENGE. Colgate-Palmolive Company. SN 84,121. Pub. 5-10-60. Filed 10-28-59.

701,977. FOUNT. Nopcoma Chemical Co. SN 84,141. Pub. 5-10-60. Filed 10-28-59.

701,978. CHANEL NO. 5. Chanel Industries Inc. SN 84,287. Pub. 5-10-60. Filed 10-30-59.

701,979. LSM. Aids, Inc. SN 85,551. Pub. 5-10-60. Filed 11-18-59.

701,980. BEAUTY POWER. Chesebrough-Pond's Inc. SN 85,556. Pub. 5-10-60. Filed 11-18-59.

701,981. UNDER-WONDER. Richard Hudnut. SN 85,565. Pub. 5-10-60. Filed 11-18-59.

701,982. REDI-GROOM. The Meanen Company. SN 86,173. Pub. 5-10-60. Filed 11-27-59.

701,983. SOF STROKE. The Meanen Company. SN 86,174. Pub. 5-10-60. Filed 11-27-59.

701,984. SPEED MATIC. The Meanen Company. SN 86,176. Pub. 5-10-60. Filed 11-27-59.

701,985. SIGMA. The Meanen Company. SN 86,177. Pub. 5-10-60. Filed 11-27-59.

Class 52—Detergents and Soaps

701,986. SUPER SPEEDY. Columbia Soap Company. SN 75,613. Pub. 5-10-60. Filed 6-12-59.

701,987. "WEE MODERNS." Saks & Company. SN 85,785. Pub. 5-10-60. Filed 11-20-59.

701,988. TIFIT. Murray F. Woodward. SN 87,389. Pub. 5-10-60. Filed 12-15-59.

701,989. BRIEF. Lan-O-Sheen, Inc. SN 87,437. Pub. 5-10-60. Filed 12-16-59.

Service Marks

Class 100—Miscellaneous

701,990. CHUBBY CHUCK "THEY'RE GOODER" AND DESIGN. Wayne R. Herrington. SN 7,004. Pub. 5-10-60. Filed 4-24-56.

701,991. ERIEZ S.A. AND DESIGN. Eriez Manufacturing Co. SN 26,133. Pub. 5-10-60. Filed 4-15-57.

701,992. DEMOCRATIC MIDWEST CONFERENCE. Democratic Midwest Conference. SN 84,295. Pub. 5-10-60. Filed 11-2-59.

Class 101—Advertising and Business

701,993. DRI-BILT WITH PLYWOOD AND DESIGN. Douglas Fir Plywood Association. SN 84,574. Pub. 5-10-60. Filed 9-3-57.

701,994. GOLD BOND STAMP-O-RAMA. Gold Bond Stamp Company. SN 85,293. Pub. 5-10-60. Filed 1-2-59.

701,995. KG AND DESIGN. Kelly Girl Service, Inc. SN 84,773. Pub. 5-10-60. Filed 11-6-59.

Class 102—Insurance and Financial

701,996. GUARDIAN OF AMERICA. The Guardian Life Insurance Company of America. SN 82,975. Pub. 5-10-60. Filed 10-9-59.

701,997. ULTRAMAR WW AND DESIGN. Ultramar Western World Corporation. SN 86,388. Pub. 5-10-60. Filed 11-30-59.

Class 105—Transportation and Storage

701,998. NE AND REPRESENTATION OF THE SUN. Northeast Airlines, Inc. SN 85,698. Pub. 5-10-60. Filed 11-23-59.

701,999. NE. Northeast Airlines, Inc. SN 85,699. Pub. 5-10-60. Filed 11-23-59.

Collective Membership Mark

Class 200

702,000. REPRESENTATION OF GREEK LETTERS ALPHA GAMMA DELTA. Alpha Gamma Delta Fraternity. SN 76,538. Pub. 5-10-60. Filed 6-26-59.

Certification Mark

Class A—Goods

702,001. PGA AND DESIGN. The Professional Golfers' Association of America, assignee of Professional Golfers' Association of America. SN 52,042. Pub. 5-10-60. Filed 5-27-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

702,002. B-W Manufacturers, Inc., Kokomo, Ind. SN 55,897. Filed P.R. 7-24-58; Am. S.R. 5-16-60.

Kit-Kat

For Absorbent Granular Material Used as Litter for Small Animals, Such as Cats, and on Toilets Containing Such Material.

First use Dec. 27, 1955.

Class 2—Receptacles

702,003. The Foley-Irish Corporation, Brooklyn, N.Y. SN 72,123. Filed P.R. 4-22-59; Am. S.R. 5-19-60.

WASH-AID

For Container for Silverware—To Be Used in Sink, Washing Machine—or as a Carrier or Dispenser.

First use Oct. 6, 1958.

Class 4—Abrasives and Polishing Materials

702,004. Universal Spray Can Corp., New York, N.Y. SN 78,388. Filed P.R. 7-24-59; Am. S.R. 5-26-60.

UNIVERSAL 10 SECOND SPEED SHINE

For Shoe Shine Compositions.
First use Jan. 1, 1957.

702,005. Universal Spray Can Corp., New York, N.Y. SN 78,391. Filed P.R. 7-24-59; Am. S.R. 5-26-60.

10 SECOND SKUFF-A-WAY

For Shoe Shine Compositions.
First use Jan. 1, 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

702,006. Donald B. Bolinger, Normal, Ill. SN 41,832. Filed P.R. 12-6-57; Am. S.R. 10-6-58.

LOCK-N-ROLL

For Automatic Locking Floor Casters Used on Bed Frames and Other Furniture.
First use Aug. 21, 1957.

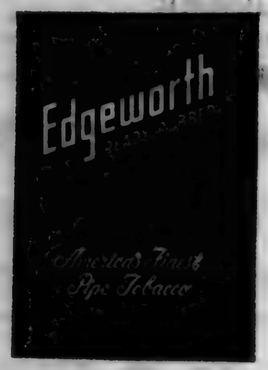
702,007. Western Newell Mfg. Co., Freeport, Ill. SN 73,063. Filed P.R. 5-6-59; Am. S.R. 5-26-60.

Decorator

For Drapery Hardware—Namely, Curtain Rods, Traverse Rods, Cranes, Sash Rods, Cafe Curtain Rods, Drapery Hooks, and Curtain Hardware Accessories.
First use in March 1959.

Class 17—Tobacco Products

702,008. Larus & Brother Company, Richmond, Va. SN 65,778. Filed P.R. 1-13-59; Am. S.R. 5-23-60.



For Tobacco and Tobacco Products—Namely, Smoking Tobacco.
First use Jan. 2, 1959; in 1895 as to "Edgeworth," and in March 1939 as to "America's Finest Pipe Tobacco."

Class 21—Electrical Apparatus, Machines, and Supplies

702,009. The Black and Decker Manufacturing Company, Towson, Md. SN 73,074. Filed P.R. 5-7-59; Am. S.R. 5-25-60.

SCRU-DRILL

For Electrical Apparatus and Machines and Accessories Consisting of Portable Electric Tools, for Use in Such Craft as Drilling, Boring, Screwdriving, Nut Running and the Like.
First use Feb. 16, 1949

Class 36—Musical Instruments and Supplies

702,010. Buegeleisen & Jacobson, Inc., New York, N.Y. SN 74,195. Filed P.R. 5-21-59; Am. S.R. 5-6-60.

KENT

For Organs.
First use Apr. 2, 1959.

Class 38—Prints and Publications

702,011. S. S. Kresge Company, Detroit, Mich. SN 89,858. Filed 1-28-60.

CARDS YOU WILL BE PROUD TO SEND

For Greeting Cards.
First use Sept. 8, 1958.

702,012. L. A. Jones, d.b.a. Hap Jones, San Francisco, Calif. SN 90,520. Filed 2-8-60.

MOTORCYCLE & SCOOTER BLUE BOOK

For Motorcycle and Scooter Price Book Published Annually.
First use Jan. 8, 1959.

Class 39—Clothing

702,013. P. H. Hanes Knitting Company, Winston-Salem, N.C. SN 44,619. Filed P.R. 1-24-58; Am. S.R. 5-5-60.

CUSTOM QUALITY

HANES

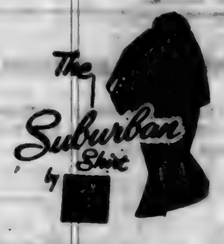
For Underwear.
First use May 21, 1951.

702,014. Selecta, Inc., New York, N.Y. SN 66,570. Filed P.R. 1-27-59; Am. S.R. 5-26-60.



For Gloves and Slippers.
First use Nov. 28, 1958.

702,015. M. Serman & Co., Inc., New York, N.Y. SN 76,346. Filed P.R. 6-23-59; Am. S.R. 5-19-60.



For Ladies' and Girls' Blouses.
First use Mar. 20, 1959.

702,016. Style Vogues, Inc., New York, N.Y. SN 78,827. Filed P.R. 7-31-59; Am. S.R. 4-29-60.

FROM THE TREASURE CHEST OF FASHION

For Misses' and Ladies' Dresses.
First use July 8, 1958.

702,017. Diplomat Tie Company, Baltimore, Md. SN 61,684. Filed 9-21-59.

FASHION-GUIDE

For Neckties.
First use on or about Sept. 11, 1956.

Class 40—Fancy Goods, Furnishings, and Notions

702,018. Mac, Kayn Bros. & Band, Inc., New York, N.Y. SN 65,160. Filed P.R. 12-31-58; Am. S.R. 5-24-60.

Hollywood
RAPID DRY

For Non-Electrical Curlers, Hair Rollers, and Coiffure Clips.
First use Feb. 25, 1932, as to curlers.

Class 46—Foods and Ingredients of Foods

702,019. McCormick & Company, Incorporated, Baltimore, Md. SN 56,028. Filed P.R. 7-25-58; Am. S.R. 5-27-60.

SPEEDI-MASH

For Dehydrated Potatoes—Namely, Instant Mashed Potatoes.
First use July 15, 1958.

702,020. Eskimo Pie Corporation, Richmond, Va. SN 90,041. Filed 2-1-60.

SERV-A-SLICE

For Ice Cream.
First use Jan. 12, 1959.

Class 51—Cosmetics and Toilet Preparations

702,021. Revlon, Inc., New York, N.Y. SN 66,741. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

VIOLET ICING

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,022. Revlon, Inc., New York, N.Y. SN 66,742. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

TANGERINE SHERBET

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,023. Revlon, Inc., New York, N.Y. SN 66,743. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

TOFFEE SHERBET

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,024. Revlon, Inc., New York, N.Y. SN 66,744. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

RASPBERRY ICING

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,025. Revlon, Inc., New York, N.Y. SN 66,745. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

GRAPE ICING

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,026. Revlon, Inc., New York, N.Y. SN 66,746. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

ORANGE FLOAT

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,027. Revlon, Inc., New York, N.Y. SN 68,747. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

STRAWBERRY VANILLA

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,028. Revlon, Inc., New York, N.Y. SN 68,748. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

WHITE A LA CARTE

For Lipstick.
First use Jan. 13, 1959.

702,029. Revlon, Inc., New York, N.Y. SN 68,749. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

AURORA

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,030. Revlon, Inc., New York, N.Y. SN 68,750. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

NOUGAT

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,031. Revlon, Inc., New York, N.Y. SN 68,752. Filed P.R. 1-29-59; Am. S.R. 1-15-60.

MANGO SHERBET

For Lipstick and Nail Enamel.
First use Jan. 13, 1959.

702,032. Revlon, Inc., New York, N.Y. SN 74,962. Filed P.R. 6-2-59; Am. S.R. 5-13-60.

BUTTER PECAN

For Nail Enamel.
First use May 1, 1959.

702,033. Ruth Cole, Inc., Arlington, Vt. SN 80,499. Filed P.R. 8-31-59; Am. S.R. 5-20-60.

NATURAL TAN BY RUTH COLE

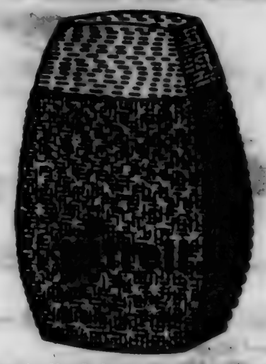
For Cosmetic, Specifically, a Brown Cream Which Produces a Sun Tan Appearance.
First use June 8, 1954.

702,034. The Glaso Company, Inc., Stamford, Conn. SN 88,315. Filed P.R. 12-31-59; Am. S.R. 5-13-60.

RED-O-RED

For Nail Polish and Nail Enamel.
First use Aug. 21, 1959.

702,035. Lingner-Werke G.m.b.H., Duesseldorf, Germany. SN 90,077. Filed 2-1-60.

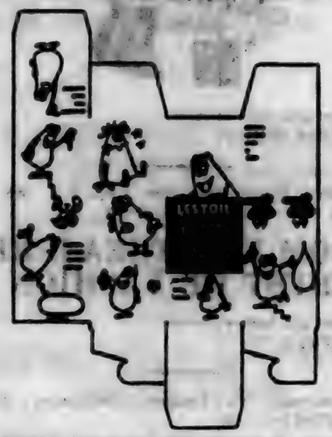


The drawing is lined for yellow and gray. The design portion of the mark is a representation of the container for the goods. Owner of German Reg. No. 719,397, dated Nov. 10, 1958; and U.S. Reg. No. 684,458.

For Cosmetics and Toilet Preparations—Namely, Shaving Lotions for Electric Razors.

Class 52—Detergents and Soaps

702,036. Adell Chemical Company, Holyoke, Mass. SN 74,285. Filed P.R. 5-22-59; Am. S.R. 5-12-60.



For Liquid Detergent for Household Cleaning and Laundering.
First use May 4, 1959.

Service Mark

Class 100—Miscellaneous

702,037. Exprinter Travel Service, Inc., New York, N.Y. SN 59,101. Filed P.R. 9-16-58; Am. S.R. 5-23-60.

EXPRINTER
ECONOMY
INDEPENDENT

For Conducting Travel Tours.
First use Apr. 8, 1958.

TRADEMARK REGISTRATIONS RENEWED

16,185. DUCK BRAND. Cl. 39. 7-15-1890.
130,209. MAC-IT. Cl. 23. 4-13-20.
130,326. LAURETTE. Cl. 39. 4-20-20.
131,105. SILVER-DALE. Cl. 46. 5-4-20.
131,670. BEACON. Cl. 4. 5-18-20.
131,676. FARADON. Cl. 21. 5-18-20.
131,789. TRU-VALUE. Cl. 29. 5-25-20.
131,915. LONG-BELL. Cl. 12. 5-25-20.
131,963. KARAAY. Cl. 46. 6-8-20.
132,005. O.K. Cl. 12. 6-8-20.
132,040. INSULBRIK. Cl. 12. 6-8-20.
132,364. AERO. Cl. 26. 6-22-20.
133,094. EMERALD. Cl. 1. 7-6-20.
133,304. CARBOSAND. Cl. 12. 7-20-20.
133,323. SOUTH BEND TWINS AND DESIGN. Cl. 23. 7-20-20.
133,457. PRUDENCE, PENNY. Cl. 38. 7-27-20.
133,729. LUXITE. Cl. 39. 8-3-20.
133,802. SUN-SHI. Cl. 39. 8-3-20.
133,803. TUROLE. Cl. 39. 8-3-20.
134,046. SYROCK. Cl. 46. 8-10-20.
134,894. DRESSUP AND DESIGN. Cl. 39. 9-14-20.
134,892. FENASPIRINA. Cl. 18. 9-21-20.
135,477. MISSING LINK. Cl. 13. 10-12-20.
135,920. BOSTITCH. Cl. 23. 10-26-20.
136,128. SYROCK. Cl. 45. 10-26-20.
136,403. PINNACLE. Cl. 37. 11-2-20.
136,457. HARDTEM. Cl. 14. 11-2-20.
136,534. SQUARE CHECKBOARD BORDER. Cl. 2. 11-2-20.
136,758. A AND DESIGN. Cl. 44. 11-9-20.
370,481. EEZ. Cl. 6. 5-29-39.
374,850. GOBLIN. Cl. 21. 1-23-40.
376,163. HIGH DUKE AND DESIGN. Cl. 51. 3-12-40.
376,729. EYE-EXY. Cl. 40. 4-2-40.
376,812. DESOXYCHOLATE AGAR. Cl. 6. 4-9-40.
376,951. CREEL N'REEL. Cl. 39. 4-9-40.
377,212. CALNITEO. Cl. 10. 4-23-40.
377,459. DESOXYCHOLATECITRATE AGAR. Cl. 6. 5-7-40.
377,460. SELENITE-F ENRICHMENT. Cl. 6. 5-7-40.
377,555. LAZY SUSAN. Cl. 32. 5-7-40.
377,557. THI-AMINO. Cl. 18. 5-7-40.
377,904. UNICO QUALITY PRODUCTS AND DESIGN. Cl. 15. 5-21-40.
378,379. MELLO JOY. Cl. 46. 6-4-40.
378,382. BODYGUARD AND DESIGN. Cl. 39. 6-4-40.
378,409. GLOBE. Cl. 6. 6-11-40.
378,531. INSURADEX. Cl. 37. 6-11-40.
378,593. ANSCO. Cl. 6. 6-11-40.
378,655. ADOBE. Cl. 51. 6-11-40.
378,656. HACIENDA. Cl. 51. 6-11-40.
378,657. PAPRIKA. Cl. 51. 6-11-40.
378,658. TAMALE. Cl. 51. 6-11-40.
378,788. JUNETTE JUNIOR AND DESIGN. Cl. 39. 6-18-40.
378,792. CERLOX. Cl. 37. 6-18-40.
378,940. THE TREND OF BUSINESS. Cl. 38. 6-25-40.
378,945. THE WINNING HORSE AND DESIGN. Cl. 38. 6-25-40.
378,951. ANSCO. Cl. 26. 6-25-40.
378,985. LARCOLOID. Cl. 16. 6-25-40.
379,006. VIBRANT STEP. Cl. 39. 6-25-40.
379,419. ROCKET. Cl. 22. 7-9-40.
379,833. SUPREME STANDARDIZED PRODUCTS AND DESIGN. Cl. 21. 7-30-40.
380,033. CARMOTE IT'S THE FINISH THAT COUNTS. Cl. 16. 8-6-40.
380,164. FORD. Cl. 4. 8-13-40.
380,312. PETROGEL. Cl. 9. 8-20-40.
380,329. CYRENE. Cl. 1. 8-20-40.
380,397. PLENAMINS. Cl. 18. 8-20-40.
380,498. M. Cl. 13. 8-20-40.
380,963. VAN X. Cl. 23. 9-10-40.
381,226. KLEK. Cl. 52. 9-17-40.
381,393. VENUS AND DESIGN. Cl. 4. 9-24-40.
381,466. BEAMOGRAPH. Cl. 34. 9-24-40.
381,606. BRASHY TWEED BY THE HOUSE OF WORSTED-TEX AND DESIGN. Cl. 39. 10-1-40.
381,641. WOOLSOLINE. Cl. 39. 10-1-40.
381,719. TRIMMAX. Cl. 14. 10-1-40.
381,837. WILLIAMS. Cl. 22. 10-8-40.
382,004. CITIZENS. Cl. 15. 10-15-40.
382,038. HYTAKEROL. Cl. 18. 10-15-40.
382,046. U.S.I. CHEMICAL NEWS. Cl. 38. 10-15-40.
382,047. U.S.I. ALCOHOL NEWS. Cl. 38. 10-15-40.
382,186. ALP. Cl. 13. 10-22-40.
382,376. VAPOR VACUUM. Cl. 50. 10-29-40.
382,448. SWAN AND DESIGN. Cl. 50. 10-29-40.
382,514. BECAPLETS. Cl. 18. 10-29-40.
382,539. MILD-EX AND DESIGN. Cl. 6. 10-29-40.
382,661. HUMATIC. Cl. 6. 11-5-40.
382,662. CUT-COST. Cl. 46. 11-5-40.
382,683. VIG-O-RAY. Cl. 46. 11-5-40.
382,770. BAT MAN AND DESIGN. Cl. 28. 11-12-40.
382,829. NEOPAKE. Cl. 1. 11-12-40.
382,837. EBONOL. Cl. 6. 11-12-40.
382,852. PREST-O-FLEX. Cl. 23. 11-12-40.
382,865. KNICKERBOCKER. Cl. 46. 11-12-40.
382,869. DAYLUME. Cl. 21. 11-12-40.
382,933. PILLSBURY'S BEST XXXX AND DESIGN. Cl. 46. 11-19-40.
383,025. BEMBERG AND DESIGN. Cl. 42. 11-19-40.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

The following registrations issued June 8, 1954

519,023. ANDAL. Cl. 42. 12-20-49.
561,450. "ANDAL." Cl. 50. 7-15-52.
571,903. FOAM FAB AND DESIGN. Cl. 50. 3-17-53.
591,497. FULL-O-WEAR. Cl. 39. 6-15-54.
605,209. ANDALFOAM. Cl. 42. 4-26-55.
611,135. FABRICUSHON. Cl. 42. 8-23-55.
645,587. SENSI-DISCS. Cl. 6. 5-21-57.
653,491. HO-MO. Cl. 44. 10-22-57.
656,196. MYCINGUN. Cl. 18. 10-6-59.
695,493. DIAMOND TAN. Cl. 6. 4-5-60.

Section 8

308,882. TABACOLINE. Cl. 6. 12-26-33.
344,741. PACIFIC ETC. AND DESIGN. Cl. 19. 4-6-37.
554,567. "WONDER-BAR." Cl. 32. 2-5-52.
590,555. BLUE MIST. Cl. 1.
590,559. VAMETCO. Cl. 1.
590,569. BUR-GON. Cl. 1.
590,577. I YEAR. Cl. 4.
590,580. EVER GLASTING. Cl. 5.
590,581. X-97. Cl. 5.
590,586. HYDREL PRINT DEVELOPER AND DESIGN. Cl. 6.
590,587. ULTRA PURE. Cl. 6.
590,588. FADE-X. Cl. 6.
590,589. GROTESQUE FIGURE OF A MAN. Cl. 6.
590,590. ADRIAN AID-SOL AND DESIGN. Cl. 6.
590,591. KINGTEX. Cl. 6.
590,596. LACROS. Cl. 6.
590,702. JET SPRAY AND DESIGN. Cl. 6.

590,718. ECON-O-KRAFT. Cl. 12.
590,724. STEELCRAFT. Cl. 13.
590,729. TEMPRESS. Cl. 13.
590,732. GEC AND DESIGN. Cl. 14.
590,736. CUIRON. Cl. 14.
590,739. CROMSIL. Cl. 14.
590,740. SUPREROM. Cl. 14.
590,747. ISOLYN. Cl. 18.
590,749. LIPOTHYN. Cl. 18.
590,750. ERYTHROTRACIN. Cl. 18.
590,754. VICOMPO. Cl. 18.
590,755. SEPTICILLIN. Cl. 18.
590,762. STREPTOSONE. Cl. 18.
590,764. HUMP AND LUMP AND DESIGN. Cl. 18.
590,775. TERRIER. Cl. 19.
590,776. JIFFY-BOND. Cl. 20.
590,777. JIFFY-GRIP. Cl. 20.
590,778. BIG TEN. Cl. 21.
590,783. ANGEL-BELL AND DESIGN. Cl. 21.
590,790. TRU-MITE. Cl. 21.
590,795. GW AND DESIGN. Cl. 22.
590,797. GEM. Cl. 23.
590,800. PANTHER. Cl. 23.
590,810. MAGNALUX. Cl. 26.
590,813. TWIST O'WRIST. Cl. 28.
590,815. DELMAR. Cl. 30.
590,816. BEECHWOOD. Cl. 30.
590,817. MARMONT. Cl. 30.
590,818. NORTHRIDGE. Cl. 30.
590,821. HARTER AND DESIGN. Cl. 32.
590,826. HEART-SAVER. Cl. 32.
590,829. SHAFTEX. Cl. 33.
590,831. SPODI. Cl. 35.
590,841. SPHINX AND DESIGN. Cl. 39.
590,849. WENDY SUSAN. Cl. 39.
590,851. MOOLAH. Cl. 39.
590,853. YUM YUM AND DESIGN. Cl. 39.
590,855. "MAGIC-GLO." Cl. 40.
590,856. DORRIE BAG. Cl. 40.
590,858. MIRACLINED. Cl. 42.
590,861. VYCASHMA. Cl. 42.
590,862. MENUETT. Cl. 43.
590,866. MYOFASCIATRON. Cl. 44.
590,869. KEWAUNEE. Cl. 46.
590,870. GROTESQUE OF A MAN. Cl. 46.
590,871. REPRESENTATION OF DWARF. Cl. 46.
590,872. REPRESENTATION OF DWARF'S HEAD AND DESIGN. Cl. 46.
590,873. PURITY FRESH CRISP TASTY AND DESIGN. Cl. 46.
590,879. BIG-HEARTED. Cl. 46.
590,884. HECO. Cl. 50.
590,887. CHEZ LINDELLE. Cl. 51.
590,888. WHITE BLOSSOMS. Cl. 51.
590,891. CRU-GROOM. Cl. 51.
590,892. WHIMSICAL. Cl. 51.
590,896. FANCY PANTS. Cl. 51.
590,897. TINKLE TOP. Cl. 51.
590,900. CILAG AND DESIGN. Cl. 16.
590,902. VIZO. Cl. 52.
590,903. SUPER-SOLV. Cl. 52.
590,910. STAPPERIZED AND ENTIRE LABEL DESIGN. Cl. 103.
590,916. COP-R-NU COPPER CLEANER AND DESIGN. Cl. 4.
590,924. NEOPECTIN. Cl. 15.
590,925. AMERICAN WHITIN, ETC. AND DESIGN. Cl. 28.
590,929. SUPER COMPACTOR. Cl. 23.
590,931. SPRED-ALL. Cl. 23.
590,934. KURLY-TIP. Cl. 29.
590,941. NOW YOU CAN EAT YOUR CAKE, ETC. Cl. 46.
590,942. THE STALEY CUSTOMER NEVER GUESSES, ETC. Cl. 46.
590,944. STURDEE BUILT AND REPRESENTATION OF LADDER. Cl. 50.
590,949. LATH-A-RICH. Cl. 51.
590,950. HANZ. Cl. 51.
590,955. STEVENS CARPACK. Cl. 105.

Section 18

679,991. TRUE LOVE. Cl. 28.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

376,828. CAMPANA ITALIAN BALM. Cl. 51. 4-9-40. Campana Corporation, Batavia, Ill. Amended: In the certificate, line 4, after "Delaware,", line 16, after "Corporation", in the heading and signature, after "Corporation", and in the statement, column 1, line 4, after "Illinois,", *Campana Corporation (by change of name from Campana Sales Company), a Delaware corporation into which the registrant corporation was merged, of Batavia, Illinois* is inserted, and the drawing is amended to appear:

CAMPANA ITALIAN BALM

521,076. OLIVAROME. Cl. 46. 2-21-50. Florasynth Laboratories Incorporated, New York, N.Y. Corrected:

OLIVAROME

693,080. PARAVITA. Cl. 18. 2-16-60. Imperial Drug Exchange, Inc., doing business as Century Drug Co., New York, N.Y. Corrected: In the heading, *Ser. No. 77,671, filed July 14, 1959* should be inserted.

695,237. UNI-STRAND. Cl. 21. 3-29-60. Belden Manufacturing Company, Chicago, Ill. Corrected: In the statement, column 1, line 1, "Belgen" should be deleted and *Belden* should be inserted.

695,455. LENZ SPRAY. Cl. 52. 3-29-60. B. T. Babbitt, Inc., assignee of Bostwick Laboratories, Inc., New York, N.Y. Corrected: In the statement, column 1, line 1, before "Bostwick", *B. T. Babbitt, Inc. (New York corporation), New York 22, N.Y., assignee of* should be inserted.

695,796. MAZEL TOV. Cl. 47. 4-5-60. Alhambra Wine Company, Selah, Wash. Corrected: In the statement, column 1, line 2, "Salem" should be deleted and *Selah* should be inserted.

696,078. MICRORGAN. Cl. 36. 4-12-60. Societa Farlisa S.p.A., Camerano, Ancona, Italy. Corrected: In the statement, column 1, line 1, "Farisa" should be deleted and *Farfisa* should be inserted.

INDEX OF REGISTRANTS

JULY 26, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Abbott Laboratories, North Chicago, Ill. 590,747, canc. Cl. 18.
Ace Fastener Corp., Chicago, Ill. 701,768, pub. 5-10-60. Cl. 22.
Adell Chemical Co., Holyoke, Mass. 702,036. Cl. 52.
Adrian Research and Chemical Corp., North Wales, Pa. 590,-690, canc. Cl. 6.
Adrian Tabin Corp., Chicago, Ill. 701,888, pub. 5-10-60. Cl. 39.
Aerojet-General Corp., Azusa, Calif. 701,789, pub. 5-10-60. Cl. 26.
Aids, Inc., Palm Beach, Fla. 701,979, pub. 5-10-60. Cl. 51.
Air Reduction Co., Inc.: *See*—
Air Reduction Sales Co.
Air Reduction Co., Inc., New York, N.Y. 701,656, pub. 5-10-60. Cl. 14.
Air Reduction Co., Inc., New York, N.Y. 701,817, pub. 5-10-60. Cl. 34.
Air Reduction Sales Co., to Air Reduction Co., Inc., New York, N.Y. 581,466, ren. 7-26-60. Cl. 34.
Alabama Pipe Co., Chicago, Ill. 701,645, pub. 5-10-60. Cl. 13.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa. 701,659, pub. 5-3-60. Cl. 14.
Allenair Corp., Mineola, N.Y. 701,761, pub. 5-10-60. Cl. 23.
Alpha Gamma Delta Fraternity, Chatham, N.J. 702,000, pub. 5-10-60. Cl. 200.
Amerace Corp.: *See*—
American Hard Rubber Co.
American Allisafe Co., Inc., Buffalo, N.Y. 701,676, pub. 5-10-60. Cl. 39.
American Baler Co., The, to Spred-All, Inc., Bellevue, Ohio. 590,931, canc. Cl. 23.
American Beauty Macaroni Co., The: *See*—
American Beauty Macaroni Co.
American Beauty Macaroni Co., d.b.a. The American Beauty Macaroni Co., Kansas City, Kans. 701,937, pub. 5-10-60. Cl. 46.
American Bemberg Corp., to Beaunit Mills, Inc., New York, N.Y. 383,025, ren. 7-26-60. Cl. 43.
American Biltrite Rubber Co.: *See*—
American Biltrite Rubber Co., Inc.
American Biltrite Rubber Co., Inc., d.b.a. American Biltrite Rubber Co., Trenton, N.J. 701,698-9, pub. 5-10-60. Cl. 20.
American Cyanamid Co., New York, N.Y. 701,681, pub. 5-10-60. Cl. 18.
American Hard Rubber Co., to Amerace Corp., New York, N.Y. 136,738, ren. 7-26-60. Cl. 44.
American Hoist & Derrick Co.: *See*—
Laughlin, Thomas Co., The.
American Mail Advertising Inc., Boston, Mass. 701,834, pub. 5-10-60. Cl. 37.
American Molasses Co.: *See*—
Nulomoline Co., The.
American Saw and Tool Co., Louisville, Ky. 701,774, pub. 5-10-60. Cl. 23.
American Scientific Laboratories, Inc., Madison, Wis. 590,-755, canc. Cl. 18.
American Sealants Co., The, Hartford, Conn. 701,600, pub. 5-10-60. Cl. 5.
American Vita-Seage Products, Inc., Media, Pa. 701,925, pub. 5-3-60. Cl. 44.
Anchor Industries, Inc., Cleveland, Ohio. 701,960, pub. 5-10-60. Cl. 50.
Andrews-Alderfer Co.: *See*—
Andrews-Alderfer Processing Co., Inc.
Andrews-Alderfer Co., Akron, Ohio. 605,209, canc. Cl. 42.
Andrews-Alderfer Co., Akron, Ohio. 611,135, canc. Cl. 42.
Andrews-Alderfer Processing Co., Inc., Akron, Ohio. 519,028, canc. Cl. 43.
Andrews-Alderfer Processing Co., Inc., Akron, Ohio. 561,480, canc. Cl. 50.
Andrews-Alderfer Processing Co., Inc., to Andrews-Alderfer Co., Akron, Ohio. 571,903, canc. Cl. 50.
Antoinette, Marie, Champagne Cellars: *See*—
Schenley Industries, Inc.
A-1 Mfg. Co., Los Angeles, Calif. 701,906, pub. 5-10-60. Cl. 39.
Arcum Pharmaceutical Corp., Washington, D.C. 701,676-7, pub. 5-10-60. Cl. 18.
Arena, A., & Co., Ltd.: *See*—
Fruit Growers Service Co.
Armour and Co., Chicago, Ill. 701,565, pub. 5-10-60. Cl. 1.
Armour and Co., Chicago, Ill. 701,567, pub. 5-10-60. Cl. 1.
Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. 701,922, pub. 5-10-60. Cl. 43.
Associated Research Laboratories of Texas: *See*—
Barr, William W.
Atlas Powder Co., Wilmington, Del. 380,312, ren. 7-26-60. Cl. 9.
Audiger, Inc., Paterson, N.J. 701,727, pub. 5-10-60. Cl. 22.
Auto Union G.m.b.H., Ingolstadt (Danube), Germany. 701,-706, pub. 5-10-60. Cl. 21.
Automatic Canteen Co. of America, Chicago, Ill. 701,771, pub. 5-10-60. Cl. 23.
Automotive Associates, Inc., New York, N.Y. 701,606-7, pub. 1-19-60. Cl. 6.
Automotive Solvents & Specialties, Inc., St. Clair Shores, Mich. 590,902, canc. Cl. 52.
B & N Importers, Inc., New York, N.Y. 701,665, pub. 5-10-60. Cl. 39.
B.S.B. Laboratories, Inc., Tulsa, Okla. 701,671, pub. 5-10-60. Cl. 18.
B-W Manufacturers, Inc., Kokomo, Ind. 702,002. Cl. 1.
Baker Clothes Inc., to Baker Clothes, Inc., Philadelphia, Pa. 381,641, ren. 7-26-60. Cl. 39.
Baltimore Biological Laboratory, to Baltimore Biological Laboratory, Inc., Baltimore, Md. 376,812, ren. 7-26-60. Cl. 6.
Baltimore Biological Laboratory, to Baltimore Biological Laboratory, Inc., Baltimore, Md. 377,459, ren. 7-26-60. Cl. 6.
Baltimore Biological Laboratory, to Baltimore Biological Laboratory, Inc., Baltimore, Md. 377,460, ren. 7-26-60. Cl. 6.
Baltimore Biological Laboratory, Inc.: *See*—
Baltimore Biological Laboratory.
Baltimore Biological Laboratory, Inc., Baltimore, Md. 645,587, canc. Cl. 6.
Barber, S. Morgan, Jr., Greens Farms, Conn., to A. Terry III, d.b.a. The Townsend Co., South Bend, Ind. 378,531, ren. 7-26-60. Cl. 37.
Barr, William W., d.b.a. Associated Research Laboratories of Texas and Electronic Research Laboratories of Texas, Dallas, Tex. 701,778, pub. 5-10-60. Cl. 26.
Bates, C. J., & Son: *See*—
Bates, Hamilton C.
Bates, Hamilton C., to C. J. Bates & Son, Chester, Conn. 376,729, ren. 7-26-60. Cl. 40.
Bates Mfg. Co., The, Orange, N.J. 701,768, pub. 5-10-60. Cl. 23.
Bates Mfg. Co., Lewiston, Maine. 701,916-17, pub. 5-10-60. Cl. 42.
Baxter Laboratories, Inc., d.b.a. Wallerstein Co., Div. of Baxter Laboratories, Inc., Morton Grove, Ill. 701,938, pub. 5-10-60. Cl. 46.
Bayer Co., Inc., The, to Sterling Drug Inc., New York, N.Y. 134,592, ren. 7-26-60. Cl. 18.
Beattie-Coleman, Inc., Anaheim, Calif. 701,799-802, pub. 5-10-60. Cl. 26.
Beaunit Mills, Inc.: *See*—
American Bemberg Corp.
Beaunit Mills, Inc., New York, N.Y. 590,863, canc. Cl. 43.
Begnaud, Louis R., d.b.a. Mello-Joy Coffee Co., Lafayette, La. 378,279, ren. 7-26-60. Cl. 46.
Behrens, Harry A., d.b.a. Behrens Mfg., Minot, N. Dak. 701,753, pub. 5-10-60. Cl. 23.
Behrens Mfg.: *See*—
Behrens, Harry A.
Bel Fuse Inc., Jersey City, N.J. 701,715-16, pub. 5-10-60. Cl. 21.
Bellofram Corp., Burlington, Mass. 701,826-7, pub. 5-10-60. Cl. 35.
Benton Hosiery Co., Paterson, N.J. 590,849, canc. Cl. 39.
Bercktowne of Hollywood, Los Angeles, Calif. 701,834, pub. 5-10-60. Cl. 39.
Big Ten, The, Philadelphia, Pa. 590,778, canc. Cl. 21.
Billy Boy Co., The, New York, N.Y. 701,893, pub. 5-10-60. Cl. 39.
Birmingham Mfg. Co., Inc., Birmingham, Ala. 701,690, pub. 5-10-60. Cl. 19.
Black and Decker Mfg. Co., The, Towson, Md. 702,009. Cl. 21.
Blen Corp., Cambridge, Mass. 701,626-9, pub. 5-10-60. Cl. 12.
Blohm, Robert, Hamburg-Bergedorf, Germany. 701,734, pub. 5-10-60. Cl. 23.
Boehringer, C. H., Sohn, Ingelheim am Rhein, Germany. 686,196, canc. Cl. 18.
Bolinger, Donald B., Normal, Ill. 702,006. Cl. 13.
Bonande Mills, Inc., Winthrop, Maine, and New York, N.Y. 590,776-7, canc. Cl. 20.
Boody, Irving B., & Co., Inc., New York, N.Y. 701,631, pub. 5-10-60. Cl. 12.
Bostitch, Inc.: *See*—
Boston Wire Stitcher Co.
Boston Wire Stitcher Co., to Bostitch, Inc., East Greenwich, R.I. 135,920, ren. 7-26-60. Cl. 23.
Boswell, J. G., Co., Los Angeles, Calif. 701,934, pub. 5-29-60. Cl. 46.
Branscombe, J. C., d.b.a. J. C. Branscombe Products, Chicago, Ill. 590,677, canc. Cl. 4.
Branscombe, J. C., Products: *See*—
Branscombe, J. C.
Breon, George A., & Co.: *See*—
Breon, George A., & Co., Inc.
Breon, George A., & Co., Inc., Kansas City, Mo., to George A. Breon & Co., New York, N.Y. 382,514, ren. 7-26-60. Cl. 18.
British Vacuum Cleaner & Engineering Co. Ltd., The, to Goblin (B.V.C.) Ltd., London, England. 374,830, ren. 7-26-60. Cl. 21.

Brown Co., Boston, Mass. 701,804, pub. 5–10–60. Cl. 6.
Buckman, Jacob F., d.b.a. Enthone Co., to Enthone, Inc., New Haven, Conn. 282,837, ren. 7–26–60. Cl. 6.
Buegeleisen & Jacobson, Inc., New York, N.Y. 702,010. Cl. 36.
Buitoni Foods Corp., Hackensack, N.J. 701,945, pub. 5–10–60. Cl. 46.
Burgess Vibrocrafters, Inc., Grayslake, Ill. 701,765, pub. 5–10–60. Cl. 23.
Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 701,672, pub. 5–10–60. Cl. 18.
Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. 701,683, pub. 5–10–60. Cl. 18.
C & M Garment Inc., Kenosha, Wis. 701,871, pub. 5–10–60. Cl. 39.
Cabot, Godfrey L., Inc., Boston, Mass. 701,553, pub. 5–10–60. Cl. 1.
Caby, W. J., Co., New York, N.Y. 701,912, pub. 5–10–60. Cl. 40.
Canfield Oil Co., Cleveland, Ohio. 701,580, pub. 5–10–60. Cl. 1.
Capital Plastics, Inc., Rochester, N.Y. 701,570, pub. 5–10–60. Cl. 1.
Carle, Fred A.: *See*—
Hannan, Willett W.
Carle & Montanari, Inc., Hackensack, N.J. 701,781, pub. 5–10–60. Cl. 23.
Carpenter-Morton Co., Everett, Mass. 378,985, ren. 7–26–60. Cl. 16.
Carpenter-Morton Co., Everett, Mass. 380,033, ren. 7–26–60. Cl. 16.
Carpenter Paper Co., Omaha, Nebr. 382,448, ren. 7–26–60. Cl. 50.
Carter, Macy Co., Inc.: *See*—
Carter, Macy & Co., Inc.
Carter, Macy & Co., Inc., to Carter, Macy Co., Inc., New York, N.Y. 131,968, ren. 7–26–60. Cl. 46.
Catavie Perfumes: *See*—
Stutzer, Charles.
Centraal Stikstof Verkoopkantoor, N.V.: *See*—
Synthetic Nitrogen Products Corp.
Cercia, Inc., Chicago, Ill., to General Binding Corp., Northbrook, Ill. 378,792, ren. 7–26–60. Cl. 37.
Champ Hats, Inc.: *See*—
Hat Corp. of America.
Chance Vought Aircraft, Inc., Dallas, Tex. 701,710, pub. 5–10–60. Cl. 21.
Chanel Industries Inc., New York, N.Y. 701,978, pub. 5–10–60. Cl. 51.
Chautauqua Cabinet Co., d.b.a. Kling Factories, Mayville, N.Y. 701,813, pub. 5–10–60. Cl. 32.
Chem Plow Corp., Lodi, N.J. 701,807, pub. 5–10–60. Cl. 31.
Chesebrough-Pond's Inc., New York, N.Y. 701,960, pub. 5–10–60. Cl. 51.
Chittick, Howard A., d.b.a. Fairfax Biological Laboratory, Clinton, Corners, N.Y. 701,603, pub. 5–10–60. Cl. 6.
Cilag Aktiengesellschaft, Schaffhausen, Switzerland. 590,900, canc. Cl. 16.
Citizens Oil Co., Inc., Tallahassee, Fla., to Tennessee Gas Transmission Co., Houston, Tex. 382,004, ren. 7–26–60. Cl. 15.
City Products Corp., from Butler Brothers, Chicago, Ill. 701,859, pub. 4–5–60. Cl. 39.
Clairol Inc., New York, N.Y., from Clairol Inc., Stamford, Conn. 701,964, pub. 5–10–60. Cl. 51.
Claremont Pigment Dispersion Corp., Roslyn Height, N.Y. 701,622, pub. 5–10–60. Cl. 11.
Clipper Mfg. Co., Kansas City, Mo. 701,747, pub. 5–10–60. Cl. 23.
Coastline Trailers Inc., El Monte, Calif. 701,693, pub. 5–10–60. Cl. 19.
Cohen, Goldman & Co., Inc., New York, N.Y., to House of Worsted-Tex, Inc., Baltimore, Md. 351,606, ren. 7–26–60. Cl. 39.
Cole, Ruth, Inc., Arlington, Vt. 702,033. Cl. 51.
Colgate-Palmolive Co.: *See*—
Colgate-Palmolive-Peet Co.
Colgate-Palmolive Co., New York, N.Y. 701,806, pub. 5–10–60. Cl. 29.
Colgate-Palmolive Co., New York, N.Y. 701,976, pub. 5–10–60. Cl. 51.
Colgate-Palmolive-Peet Co., Jersey City, N.J., to Colgate-Palmolive Co., New York, N.Y. 381,224, ren. 7–26–60. Cl. 52.
Columbia Soap Co., Paterson, N.J. 701,986, pub. 5–10–60. Cl. 52.
Columbus Coated Fabrics Corp., Columbus, Ohio. 701,920, pub. 5–10–60. Cl. 42.
Combined Industries: *See*—
Gould, Sidney S.
Congoleum-Nairn Inc., Kearny, N.J. 701,696–7, pub. 5–10–60. Cl. 20.
Continental Can Co., Inc.: *See*—
White Cap Co.
Continental Oil Co., Ponca City, Okla. 701,611, pub. 5–10–60. Cl. 6.
Continental Drug Co., from Norman Sober, d.b.a. Kanis Drug Co., Baltimore, Md. 701,674, pub. 10–20–59. Cl. 18.
Contour Marker Corp. of California, Compton, Calif. 701,791, pub. 5–10–60. Cl. 26.
Cooper, Daniel A., d.b.a. Cooper Engineering Co., Glendale, Calif. 701,918, pub. 5–10–60. Cl. 42.
Cooper Engineering Co.: *See*—
Cooper, Daniel A.
Cope & Lloyd (Overseas) Ltd., London, England. 701,670, pub. 5–10–60. Cl. 17.
Copperweld Steel Co., Glassport, Pa. 590,736, canc. Cl. 14.
Cop-R-Nu, Inc., Chicago, Ill. 590,916, canc. Cl. 4.
Cornell-Dubilier Electric Corp.: *See*—
Wirelam Specialty Apparatus Co.
Cory Corp., Chicago, Ill. 701,638, pub. 5–10–60. Cl. 12.
Cory Corp., Chicago, Ill. 701,821, pub. 5–10–60. Cl. 34.
Coty, Inc., New York, N.Y. 377,555, ren. 7–26–60. Cl. 32.
Coty, Inc., New York, N.Y. 378,555–6, ren. 7–26–60. Cl. 51.
Craig Instrument Corp., Long Branch, N.J. 701,824, pub. 5–10–60. Cl. 44.
Crane Co., Chicago, Ill. 701,644, pub. 5–10–60. Cl. 13.
Crane Co., Burbank, Calif. 701,785, pub. 5–10–60. Cl. 26.
Creamery Package Mfg. Co., The, Chicago, Ill. 701,930, pub. 5–10–60. Cl. 46.
Crosby Chemicals, Inc., De Ridder, La. 590,699, canc. Cl. 6.
Crosby Electronics, Inc., Syosset, N.Y. 701,830, pub. 5–10–60. Cl. 36.
Crosby Electronics, Inc., Syosset, N.Y. 701,832, pub. 5–10–60. Cl. 36.
Crown Controls Co., Inc., New Bremen, Ohio. 701,748, pub. 5–10–60. Cl. 23.
Crown Zellerbach Corp., San Francisco, Calif. 701,836, pub. 5–10–60. Cl. 37.
Cru-Groom Mfg. Co.: *See*—
Liuzzi, Pasquale.
Curtiss-Wright Corp., Santa Barbara, Calif. 701,782, pub. 5–10–60. Cl. 23.
Dainippon Bicycle Mfg. Co., Ltd., Taito-ku, Tokyo, Japan. 701,687, pub. 5–10–60. Cl. 19.
Dana: *See*—
Les Parfums de Dana, Inc.
Danenberg, Danny: *See*—
Danenberg, J. S.
Danenberg, J. S., d.b.a. Danny Danenberg, El Centro, Calif. 701,955, pub. 5–10–60. Cl. 46.
Day-Brite Lighting, Inc., St. Louis, Mo. 382,869, ren. 7–26–60. Cl. 21.
Daystrom, Inc., Murray Hill, N.J. 701,849, pub. 5–10–60. Cl. 38.
Deckelmann, Louis L., Marrero, La. 590,764, canc. Cl. 18.
DeFilippis, Anthony C., d.b.a. Maxi-Derm Co., Stamford, Conn. 701,965, pub. 5–10–60. Cl. 51.
Delfeld, Kenneth H., d.b.a. F & S Co., Azle, Tex. 701,616, pub. 5–10–60. Cl. 9.
De Markus, Louis, Corp., Buffalo, N.Y. 701,830, pub. 5–10–60. Cl. 24.
DeMert & Dougherty, Inc., Chicago, Ill. 701,664–5, pub. 1–26–60. Cl. 16.
Democratic Midwest Conference, Des Moines, Iowa. 701,902, pub. 5–10–60. Cl. 100.
Detective Comics, Inc., to National Comics Publications, Inc., New York, N.Y. 382,770, ren. 7–26–60. Cl. 38.
Devices Mfg. Corp., Chicago, Ill. 590,800, canc. Cl. 23.
Diamond National Corp., New York, N.Y. 701,851, pub. 5–10–60. Cl. 38.
Diedre Products Inc., Forest Hills, N.Y. 701,967, pub. 5–10–60. Cl. 51.
Dinisman, Max, Chicago, Ill. 701,940, pub. 5–10–60. Cl. 46.
Diplomat Tie Co., Baltimore, Md. 702,017. Cl. 39.
Distributors East, Inc., New York, N.Y. 701,598, pub. 5–10–60. Cl. 5.
Distributors Trucking Corp., New York, N.Y. 590,869, canc. Cl. 46.
Div. of Baxter Laboratories, Inc.: *See*—
Baxter Laboratories, Inc.
Dixon, Joseph, Crucible Co., Jersey City, N.J. 134,402, ren. 7–26–60. Cl. 37.
Douglas Fir Plywood Association, Tacoma, Wash. 701,992, pub. 5–10–60. Cl. 101.
Douglas Recordings Co.: *See*—
Rice, G. Douglas.
Dow Chemical Co., The, Midland, Mich. 701,583–5, pub. 5–10–60. Cl. 1.
Dow Chemical Co., The, Midland, Mich. 701,589–91, pub. 5–10–60. Cl. 1.
Drum Major Publishing Co., Janesville, Wis. 701,850, pub. 5–10–60. Cl. 38.
Dunlap, Lawton & Hall, Chicago, Ill., to United States Rubber Co., New York, N.Y. 18,185, ren. 7–26–60. Cl. 39.
Duplex Mfg. Co., Superior, Wis. 701,841, pub. 5–10–60. Cl. 13.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 701,578, pub. 5–10–60. Cl. 1.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 701,803, pub. 5–10–60. Cl. 26.
Dur-E-Con Co.: *See*—
Kerr Chemicals, Inc.
Durovic, Stevan, M.D., Chicago, Ill. 701,650, pub. 5–10–60. Cl. 18.
Dutchess Underwear Corp., New York, N.Y. 701,904, pub. 5–10–60. Cl. 39.
Eagle Bros., Inc., New York, N.Y. 701,894, pub. 5–10–60. Cl. 39.
Eastman Kodak Co., to Eastman Kodak Co., Rochester, N.Y. 132,364, ren. 7–26–60. Cl. 26.
Eaton Mfg. Co., Cleveland, Ohio. 701,748, pub. 5–10–60. Cl. 23.
Eckstaedt, Hans, d.b.a. Fa. Wilhelm Paff, Wuppertal-Barmen, Germany. 701,655, pub. 5–10–60. Cl. 14.
Edlis, A. J., Mfg. Co., Inc., St. Louis, Mo. 701,860, pub. 5–10–60. Cl. 39.
Eez Co., The: *See*—
Hannan, Willett W.
Egan, Dorothy C., Tampa, Fla. 590,856, canc. Cl. 40.
Elder & Jenks, Inc., Philadelphia, Pa. 701,804, pub. 5–10–60. Cl. 39.
Electronic Research Laboratories of Texas: *See*—
Barr, William W.
Elmcourt Pharmacal Co.: *See*—
Elmen, Jules.

Elmen, Jules, d.b.a. Elmcourt Pharmacal Co., Farmingdale, N.Y. 590,924, canc. Cl. 18.
Emerald Co., The, Loma Linda, Calif. 701,947, pub. 5–10–60. Cl. 46.
Emery Food Co., to Emery Food Co., Chicago, Ill. 131,103, ren. 7–26–60. Cl. 46.
Englander Co., Inc., The, Baltimore, Md. 701,809, pub. 2–16–60. Cl. 32.
Ennis Drug Co.: *See*—
Continental Drug Co.
Enterprise Mfg. Co., The, Akron, Ohio. 378,419, ren. 7–26–60. Cl. 22.
Enterprise Paint Mfg. Co., Chicago, Ill. 701,667, pub. 5–10–60. Cl. 16.
Enthone, Inc.: *See*—
Buckman, Jacob F.
Erie Mfg. Co., Erie, Pa. 701,991, pub. 5–10–60. Cl. 100.
Eskimo Pie Corp., Richmond, Va. 702,020. Cl. 46.
Exprinter Travel Service, Inc., New York, N.Y. 702,037. Cl. 100.
Exquisite Form Brassiere, Inc., New York, N.Y. 701,895, pub. 5–10–60. Cl. 39.
F & S Co.: *See*—
Delfeld, Kenneth H.
Fa. Wilhelm Paff: *See*—
Eckstaedt, Hans.
Fabreeka Products Co., Boston, Mass. 701,961, pub. 2–23–60. Cl. 50.
Fade-Proof Corp. of America, Chicago, Ill. 590,686, canc. Cl. 6.
Fairfax Biological Laboratory: *See*—
Chittick, Howard A.
Fairy Mills, Inc., by change of name from Fairy Silk Mills, Inc., Shillington, Pa. 701,853, pub. 5–10–60. Cl. 39.
Fairy Silk Mills, Inc.: *See*—
Fairy Mills, Inc.
Fargo Oil & Grease Co., Fort Worth, Tex. 701,668, pub. 5–10–60. Cl. 15.
Fashion Park, Inc.: *See*—
Rosenberg Bros. & Co.
Fasweet Co., The: *See*—
Spellings, Lucian L.
Fields, Tom, Ltd., Englewood, N.J. 701,975, pub. 5–10–60. Cl. 51.
Firestone Tire & Rubber Co., The, Akron, Ohio. 701,581, pub. 5–10–60. Cl. 1.
Fisher Governor Co., Marshalltown, Iowa. 701,790, pub. 5–10–60. Cl. 26.
Fisher Scientific Co., Pittsburgh, Pa. 701,795, pub. 5–10–60. Cl. 26.
Flagg-Utica Corp.: *See*—
Utica Knitting Co.
Fletcher, Dennis H., d.b.a. Sno-Berry Products & Equipment Co., Sacramento, Calif. 701,740, pub. 5–10–60. Cl. 23.
Flint, Eaton and Co., Decatur, Ill. 590,749, canc. Cl. 19.
Florence Wood Working Co., Chicago, Ill. 701,815, pub. 5–10–60. Cl. 32.
Flower Lane Farms: *See*—
Pedigreed Seed Co.
Foley-Irish Corp., The, Brooklyn, N.Y. 702,003. Cl. 2.
Food Fair Stores, Inc., Philadelphia, Pa. 701,950, pub. 5–10–60. Cl. 46.
Food Machinery and Chemical Corp., San Jose, Calif. 701,746, pub. 5–10–60. Cl. 23.
Food Fixx, Inc., New York, N.Y. 701,675, pub. 10–27–59. Cl. 18.
Ford Motor Co., Dearborn, Mich. 380,164, ren. 7–26–60. Cl. 4.
Ford Motor Co., Dearborn, Mich. 701,694, pub. 5–10–60. Cl. 19.
Forest City Mfg. Co., St. Louis, Mo. 701,861, pub. 5–10–60. Cl. 39.
Formfit Co., The, Chicago, Ill. 701,910, pub. 5–10–60. Cl. 39.
Foster, Charles E., d.b.a. Rite-O-Lite of California, Los Angeles, Calif. 701,742–3, pub. 5–10–60. Cl. 23.
Frankford Umbrella Mfg. Co., Philadelphia, Pa. 701,918–14, pub. 5–10–60. Cl. 41.
Friesland Plastics Co., Friesland, Wis. 701,624, pub. 5–10–60. Cl. 12.
Frink, Raymond M., d.b.a. Frink Sales Co., Honolulu, Hawaii. 701,831, pub. 5–10–60. Cl. 36.
Frink Sales Co.: *See*—
Frink, Raymond M.
Fruit Growers Service Co., Fresno, to A. Arena & Co., Ltd., Los Angeles, Calif. 382,865, ren. 7–26–60. Cl. 46.
Fun in the Sun of Florida, Inc., Coral Gables, Fla. 701,722, pub. 5–10–60. Cl. 22.
GFW Co.: *See*—
Smith, Geo. F., Co., Inc.
Gardiner Shoe Co., Inc.: *See*—
Gardiner Shoe Co., The.
Gardiner Shoe Co., The, to Gardiner Shoe Co., Inc., Gardiner, Maine. 379,006 ren. 7–26–60. Cl. 39.
Garrett Corp., The, Los Angeles, Calif. 701,705, pub. 5–10–60. Cl. 21.
Gaumond, Jeannes, Paris, France. 701,842, pub. 5–10–60. Cl. 13.
Gaylord Products, Inc., Chicago, Ill. 701,911, pub. 5–10–60. Cl. 40.
Geisinger, Frederick J., d.b.a. Nutmeg Chemical Co., New Haven, Conn. 701,662, pub. 5–10–60. Cl. 15.
General Aniline & Film Corp., New York, N.Y. 378,593, ren. 7–26–60. Cl. 6.
General Aniline & Film Corp., New York, N.Y. 378,951, ren. 7–26–60. Cl. 26.
General Binding Corp.: *See*—
Cercia, Inc.
General Foods Corp., White Plains, N.Y. 701,932, pub. 11–17–59. Cl. 46.
General Motors Corp., Detroit, Mich. 701,712, pub. 5–10–60. Cl. 21.
General Motors Corp., Detroit, Mich. 701,797, pub. 5–10–60. Cl. 26.
Gilbert Shoe Co., The, Thiensville, Wis. 701,862, pub. 5–10–60. Cl. 39.
Gillet, Martin, & Co., Inc., Baltimore, Md. 701,939, pub. 3–22–60. Cl. 46.
Gillett & Bates, Inc., Lake City, Minn. 701,736, pub. 5–10–60. Cl. 23.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 701,973, pub. 5–10–60. Cl. 51.
Girl Friday Office Supplies, Newark, N.J. 701,620, pub. 5–10–60. Cl. 11.
Glasband, Isadore, d.b.a. Secur-O-Lock Safety Pin Co., Hartford, Conn. 590,855, canc. Cl. 40.
Glass Containers Corp., Fullerton, Calif. 701,616, pub. 5–10–60. Cl. 33.
Glaso Co., Inc., The, Stamford, Conn. 702,034. Cl. 51.
Globe Chemical Co., Inc., The, St. Bernard, Ohio. 378,409, ren. 7–26–60. Cl. 6.
Goblin (B.V.C.) Ltd.: *See*—
British Vacuum Cleaner & Engineering Co. Ltd., The.
Gold Bond Stamp Co., Minneapolis, Minn. 701,894, pub. 5–10–60. Cl. 101.
Gold-Pfeil Ludwig Krumm Aktiengesellschaft, by change of name from Ludwig Krumm A.G., Offenbach on the Main, Germany. 701,586, pub. 5–10–60. Cl. 3.
Goldstein, Morris L., d.b.a. Grosbin, Los Angeles, Calif. 701,888, pub. 5–10–60. Cl. 39.
Goodstein Bros. & Co., Inc., New York, N.Y. 701,870, pub. 5–10–60. Cl. 39.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 701,824, pub. 5–10–60. Cl. 35.
Gorman Mfg. Corp., Los Angeles, Calif. 590,790, canc. Cl. 21.
Gould, Barbara, Inc., New York, N.Y. 590,892, canc. Cl. 51.
Gould, Sidney S., d.b.a. Combined Industries, Brooklyn, N.Y. 564,367, canc. Cl. 32.
Grand Union Co., The, East Paterson, N.J. 701,951, pub. 5–10–60. Cl. 46.
Green Giant Co., Le Sueur, Minn. 590,870, canc. Cl. 46.
Greenberg, Charles, & Sons, Inc., New York, N.Y. 701,887, pub. 5–10–60. Cl. 39.
Grieg Reproducer Corp., New York, N.Y. 590,732, canc. Cl. 14.
Griesman, Franklin J., d.b.a. The Winning Horse, Chicago, Ill. 378,945, ren. 7–26–60. Cl. 38.
Grosbin: *See*—
Goldstein, Morris L.
Guardian Life Insurance Co. of America, The, New York, N.Y. 701,996, pub. 5–10–60. Cl. 102.
H & M Sportswear, Inc., New Bedford, Mass. 701,873, pub. 5–10–60. Cl. 39.
Hallmark Cards Inc., Kansas City, Mo. 701,842, pub. 5–10–60. Cl. 38.
Hamblet and Hayes Co., Peabody, Mass. 695,493, canc. Cl. 6.
Hamerslag Equipment Co.: *See*—
Hamerslag, Jay P., Jr.
Hamerslag, Jay P., Jr., d.b.a. Hamerslag Equipment Co., San Francisco, Calif. 590,884, canc. Cl. 50.
Hamilton, A. C., Jr., Dallas, Tex. 701,625, pub. 5–10–60. Cl. 12.
Hanes, P. H., Knitting Co., Winston-Salem, N.C. 702,013. Cl. 39.
Hannan, Willett W., d.b.a. The Eez Co., to F. A. Carle d.b.a. The Eez Co., Jamaica, N.Y. 370,481, ren. 7–26–60. Cl. 6.
Hannum, R. M., & Co.: *See*—
Hannum, R. M.
Hannum, R. M., d.b.a. Hannum & Co., Cleveland, Ohio. 701,755, pub. 5–10–60. Cl. 23.
Hans of Hollywood: *See*—
White, Ruth M.
Harbison-Walker Refractories Co., Pittsburgh, Pa. 701,635, pub. 5–10–60. Cl. 12.
Hart Furniture Co., Inc., Brooklyn, N.Y. 590,621, canc. Cl. 32.
Hasenrot Co., The, Cleveland, Ohio. 701,952, pub. 5–10–60. Cl. 46.
Hat Corp. of America, Norwalk, Conn., to Champ Hats, Inc., Philadelphia, Pa. 378,951, ren. 7–26–60. Cl. 39.
Hayes, C. I., Inc., Cranston, R.I. 701,822, pub. 5–10–60. Cl. 34.
Hearst Publishing Co., Inc.: *See*—
Los Angeles Examiner.
Heller Tool Co., Newcomerstown, Ohio. 701,777, pub. 5–10–60. Cl. 23.
Heppenstall Co.: *See*—
Heppenstall Forge & Knife Co.
Heppenstall Co., Pittsburgh, Pa. 281,719, ren. 7–26–60. Cl. 14.
Heppenstall Forge & Knife Co., to Heppenstall Co., Pittsburgh, Pa. 136,457, ren. 7–26–60. Cl. 14.
Herrick, Howard E., Waterford, N.Y. 590,724, canc. Cl. 13.
Herrington, Wayne R., Wichita, Kans. 701,990, pub. 5–10–60. Cl. 100.
Hers Specialty Products, Inc., Long Island City, N.Y. 701,586, pub. 5–10–60. Cl. 2.
Herzer Industries Inc., Belleville, N.J. 701,784, pub. 5–10–60. Cl. 26.
Hickory Bowl Foods, Inc., Chicago, Ill. 701,954, pub. 5–10–60. Cl. 46.
Hoffmann-Stafford Tanning Co., Chicago, Ill. 701,586, pub. 5–10–60. Cl. 1.
Holcomb, J. I., Mfg. Co., Inc., Indianapolis, Ind. 701,608, pub. 5–10–60. Cl. 6.
Holiday Line, Inc., The, New York, N.Y. 701,810, pub. 12–29–59. Cl. 32.

Hollingshead, R. M., Corp., Camden, N.J. 381,303, ren. 7–26–60. Cl. 1.
Hollingsworth, A. M., d.b.a. Hollingsworth Products Co., Fayetteville, N.C. 701,968, pub. 5–10–60. Cl. 51.
Hollingsworth Products Co.: *See*— Hollingsworth, A. M.
Hooker Chemical Corp., Niagara Falls, N.Y. 701,559, pub. 5–10–60. Cl. 1.
Horton & Converse, Los Angeles, Calif. 701,678, pub. 5–10–60. Cl. 18.
Houghton, E. F., & Co., Philadelphia, Pa. 701,825, pub. 5–10–60. Cl. 35.
Hesse of Worsted-Tex, Inc.: *See*— Cohen, Goldman & Co., Inc.
Hou-Tex Ladders, Inc., Houston, Tex. 590,944, canc. Cl. 50.
Hudnut, Richard, New York, N.Y. 590,895, canc. Cl. 51.
Hudnut, Richard, New York, N.Y. 590,897, canc. Cl. 51.
Hudnut, Richard, Morris Plains, N.J. 701,981, pub. 5–10–60. Cl. 51.
Hudson Hosiery Co., Charlotte, N.C. 701,903, pub. 5–10–60. Cl. 39.
Hydrotherm, Inc., Northvale, N.J. 701,643, pub. 5–10–60. Cl. 13.
Hydrotherm, Inc., Northvale, N.J. 701,818, pub. 5–10–60. Cl. 34.
Ideal Roller & Mfg. Co., Chicago, Ill. 701,730, pub. 5–10–60. Cl. 23.
Imperial Knife Associated Companies, Inc., Providence, R.I. 701,770, pub. 5–10–60. Cl. 23.
Independent Grocers Alliance Distributing Co., Chicago, Ill. 701,929, pub. 7–5–58. Cl. 46.
Industrial Test Equipment Co., The, New York, N.Y. 701,792, pub. 5–10–60. Cl. 26.
Interelectronics Corp., New York, N.Y. 701,709, pub. 5–10–60. Cl. 21.
International Latex Corp., Dover, Del. 590,826, canc. Cl. 32.
International Paper Co.: *See*— Long-Bell Lumber Co., The.
Jacoby-Bender, Inc., Woodside, N.Y. 382,852, ren. 7–26–60. Cl. 28.
Jauco Industries, Inc., Clayton, Mo. 701,728, pub. 5–10–60. Cl. 22.
Jeffreys Engineering & Equipment Co.: *See*— Jeffreys, Sidney B.
Jeffreys, Sidney B., d.b.a. Jeffreys Engineering & Equipment Co., Greensboro, N.C. 701,735, pub. 5–10–60. Cl. 23.
Jersey Mfg. Co.: *See*— Milo, John J.
Johnson City Mills, Johnson City, to Lea-Wayne Knitting Mills, Inc., Morristown, Tenn. 134,694, ren. 7–26–60. Cl. 39.
Johnson Publishing Co., Inc.: *See*— Schneiderman, Joseph.
Jolly Kids Togs: *See*— Jolly Kids Togs, Inc.
Jolly Kids Togs, Inc., from Jolly Kids Togs, Chicago, Ill. 701,872, pub. 5–10–60. Cl. 39.
Jones, Hap: *See*— Jones, L. A.
Jones, L. A., d.b.a. Hap Jones, San Francisco, Calif. 702,012. Cl. 38.
Jordan Builders, Inc., d.b.a. Jordan, Inc., Austin, Minn. 701,692, pub. 5–10–60. Cl. 19.
Jordan, Inc.: *See*— Jordan Builders, Inc.
Joslyn Mfg. Co., Inc., The, Macedonia, Ohio. 701,756, pub. 5–10–60. Cl. 23.
Kaltman, Samuel, d.b.a. Mutual Spice Co., North Bergen, N.J. 701,941, pub. 5–10–60. Cl. 46.
Kanner, Joseph, Hat Co., Inc., South Norwalk, Conn. 701,880, pub. 5–10–60. Cl. 39.
Kay Jewelry Stores, Inc., Washington, D.C. 701,700, pub. 5–10–60. Cl. 21.
Kaysam Corp. of America, Paterson, N.J. 701,863, pub. 5–3–60. Cl. 39.
Kayser-Roth Corp.: *See*— Luxite Silk Products Co.
Kearney, James R., Corp., St. Louis, Mo. 701,717, pub. 5–10–60. Cl. 21.
Kelly Girl Service, Inc., Detroit, Mich. 701,995, pub. 5–10–60. Cl. 101.
Kelsey-Hayes Co., Detroit, Mich. 701,657, pub. 5–10–60. Cl. 14.
Kendall Co., The, Walpole, Mass. 701,556, pub. 5–10–60. Cl. 1.
Kerr Chemicals, Inc., d.b.a. The Dur-E-Con Co., Des Plaines, Ill. 701,668, pub. 5–10–60. Cl. 16.
Kidde Process Corp., South Pasadena, Calif. 701,571, pub. 5–10–60. Cl. 1.
King, Oliver, to Oliver King Sand & Lime Co., Inc., Knoxville, Tenn. 132,005, ren. 7–26–60. Cl. 12.
King, Oliver, Sand & Lime Co., Inc.: *See*— King, Oliver.
King, Robert C., & Co., to Julian J. Leavitt, d.b.a. Robert C. King & Co., New York, N.Y. 130,326, ren. 7–26–60. Cl. 39.
Kingsford Co., Iron Mountain, Mich. 701,566, pub. 5–10–60. Cl. 1.
Kipnis, Louis, & Sons, Inc., New York, N.Y. 590,887, canc. Cl. 51.
Kirchner & Renich Co., Minneapolis, Minn. 679,991, canc. Cl. 28.
Kling Factories: *See*— Chautauqua Cabinet Co.
Knipe Bros., Inc., Haverhill, Mass., to Knipe Bros.-Ward Hill Shoes, Inc., Gardiner, Maine. 131,789, ren. 7–26–60. Cl. 39.
Knipe Bros.-Ward Hill Shoes, Inc.: *See*— Knipe Bros., Inc.
Kobacker Stores, Inc., d.b.a. Tiedtke's, Toledo, Ohio. 701,942, pub. 5–10–60. Cl. 46.
Kohl & Madden Printing Ink Corp., Chicago, Ill. 701,818–19, pub. 5–10–60. Cl. 11.
Kools Brothers, Inc., Appleton, Wis. 701,762, pub. 5–10–60. Cl. 23.
Korach Bros. Co.: *See*— Korach Brothers.
Korach Brothers, to Korach Bros. Co., Chicago, Ill. 378,788, ren. 7–26–60. Cl. 39.
Kramer Co., The, Baltimore, Md. 701,886, pub. 5–10–60. Cl. 39.
Kresge, S. S., Co., Detroit, Mich. 702,011. Cl. 38.
Kress, S. H., and Co., New York, N.Y. 701,764, pub. 5–10–60. Cl. 23.
Kroger Co., The, Cincinnati, Ohio. 701,931, pub. 5–10–60. Cl. 46.
Krumm, Ludwig, A.G.: *See*— Gold-Pfeil Ludwig Krumm Aktiengesellschaft.
Kubec, Erwin E., New York, N.Y. 590,829, canc. Cl. 33.
Kurlash Co., Inc., The, Rochester, N.Y. 701,974, pub. 5–10–60. Cl. 51.
Laciede-Christy Co., Pittsburgh, Pa. 701,555, pub. 5–10–60. Cl. 1.
Lake Ontario Portland Cement Co., Ltd., Toronto, Ontario, Canada. 701,636, pub. 5–10–60. Cl. 12.
Landorf, Sam, & Co., Inc., New York, N.Y. 590,853, canc. Cl. 39.
Lan-O-Sheen, Inc., St. Paul, Minn. 701,989, pub. 5–10–60. Cl. 52.
La Resista Corset Co., The, Bridgeport, Conn. 701,852, pub. 5–10–60. Cl. 39.
Larus & Brother Co., Richmond, Va. 702,008. Cl. 17.
Laughlin, Thomas, Co., The, Portland, Maine, to American Hoist & Derrick Co., St. Paul, Minn. 135,477, ren. 7–26–60. Cl. 13.
Lawn Products Corp. of America, Chicago, Ill. 701,602, pub. 3–1–60. Cl. 6.
Leavitt, Julian J.: *See*— King, Robert C., & Co.
Lea-Wayne Knitting Mills, Inc.: *See*— Johnson City Mills.
Le-Co-Therm: *See*— Lefmann, Emma.
Lee Rubber & Tire Corp., d.b.a. Republic Rubber Division, Youngstown, Ohio. 701,647, pub. 5–10–60. Cl. 13.
Lefmann, Emma, d.b.a. Le-Co-Therm, Erlangen, Germany. 701,926, pub. 5–10–60. Cl. 44.
Leitz, Ernst, G.m.b.H., Wetzlar/Lahn, Germany. 701,798, pub. 5–10–60. Cl. 26.
Le Roi Hosiery Co. Inc., New York, N.Y. 701,897, pub. 5–10–60. Cl. 39.
Les Parfums de Dana, Inc., d.b.a. Dana, New York, N.Y. 701,970, pub. 5–10–60. Cl. 51.
Linco Products Corp., Chicago, Ill. 701,609–10, pub. 5–10–60. Cl. 6.
Lingner-Werke G.m.b.H., Dusseldorf, Germany. 702,035. Cl. 51.
Liquidvision Gauge & Control Corp., Oceanside, Long Island, N.Y. 590,810, canc. Cl. 26.
Liuzzi, Pasquale, d.b.a. Cru-Groom Mfg. Co., Tacoma, Wash. 590,891, canc. Cl. 51.
Lloyd Brothers, Inc., Cincinnati, Ohio. 701,682, pub. 5–10–60. Cl. 18.
Loewenstein, Hermann, Inc., New York, N.Y. 701,588, pub. 5–10–60. Cl. 1.
Long-Bell Lumber Co., The, Kansas City, Mo., to International Paper Co., New York, N.Y. 131,913, ren. 7–26–60. Cl. 12.
Loomis, George E., and Sons, d.b.a. George Loomis & Sons, Hemet, Calif. 701,560–1, pub. 5–10–60. Cl. 1.
Los Angeles Examiner, Los Angeles, to Hearst Publishing Co., Inc., San Francisco, Calif. 136,457, ren. 7–26–60. Cl. 38.
Lown Shoes, Inc., Auburn, Maine. 701,905, pub. 5–10–60. Cl. 39.
Lufkin Rule Co., The, Saginaw, Mich. 701,786, pub. 5–10–60. Cl. 26.
Luxite Silk Products Co., Milwaukee, Wis., to Kayser-Roth Corp., New York, N.Y. 133,729, ren. 7–26–60. Cl. 39.
Luxmasse G.m.b.H., Ludwigshafen am Rhein, Germany. 701,557, pub. 5–10–60. Cl. 1.
Mac Kayn Bros. & Band, Inc., New York, N.Y. 702,018. Cl. 40.
MacGregor, May, New York, N.Y. 590,941, canc. Cl. 46.
Mac-It Parts Co., Lancaster, Pa. 130,209, ren. 7–26–60. Cl. 23.
Mackintosh, John, & Sons Ltd., Yorkshire, England. 701,933, pub. 5–10–60. Cl. 46.
Maddison, Leslie A., Ruislip, Middlesex, England. 701,957, pub. 5–10–60. Cl. 47.
Malden Form Brassiere Co., Inc., New York, N.Y. 701,889–93, pub. 5–10–60. Cl. 39.
Malden Form Brassiere Co., Inc., New York, N.Y. 701,900–2, pub. 5–10–60. Cl. 39.
Maintenance Inc., Wooster, Ohio. 701,601, pub. 5–10–60. Cl. 6.
Malden Knitting Mills, Inc., Malden, Mass. 590,861, canc. Cl. 42.
Mallinckrodt Chemical Works, St. Louis, Mo. 590,687, canc. Cl. 6.
Manhattan Floor Supplies: *See*— Wirsing, Arthur O.
Manhattan Shirt Co., The, New York, N.Y. 701,907, pub. 5–10–60. Cl. 39.
Mani-Derm Co.: *See*— DeFilippis, Anthony C.
Marghab, Emile, Inc., New York, N.Y. 701,919, pub. 5–10–60. Cl. 42.

Markus-Markush, Ernesto, Zurich, Switzerland. 701,814, pub. 5–10–60. Cl. 3.
Maxitrol Co., Detroit, Mich. 701,793, pub. 5–10–60. Cl. 26.
McCleary-Thornton Minor Hospital, Inc., Excelsior Springs, Mo. 701,842, pub. 5–10–60. Cl. 35.
McCormick & Co., Inc., Baltimore, Md. 702,019. Cl. 46.
McLaren, L. M., Produce, Inc., Yuma, Ariz. 701,948, pub. 5–10–60. Cl. 46.
Meat Industry Suppliers, Inc., Northfield, Ill. 701,948, pub. 5–10–60. Cl. 46.
Medicated Products Co., Chicago, Ill. 590,949, canc. Cl. 51.
Mello-Joy Coffee Co.: *See*— Begnaud, Louis R.
Mengel Box Co., to The Mengel Co., Louisville, Ky. 136,534, ren. 7–26–60. Cl. 2.
Mengel Co., The: *See*— Mengel Box Co.
Mennen Co., The, Morris Township, N.J. 701,982–5, pub. 5–10–60. Cl. 51.
Milo, John J., d.b.a. Jersey Mfg. Co., Elizabeth, N.J. 701,766, pub. 5–10–60. Cl. 23.
Milwaukee Dustless Brush Co., Milwaukee, Wis. 701,505, pub. 5–10–60. Cl. 29.
Milwhite Mud Sales Co., Houston, Tex. 701,563, pub. 5–10–60. Cl. 1.
Minnesota Rubber Co., Minneapolis, Minn. 701,703–4, pub. 5–10–60. Cl. 21.
Minnesota Rubber Co., Minneapolis, Minn. 701,737–8, pub. 5–10–60. Cl. 23.
Miracle Lining Fabrics Corp., New York, N.Y. 590,555, canc. Cl. 42.
Miraplas Tile Co., Columbus, Ohio. 701,695, pub. 5–10–60. Cl. 20.
Mister Pants, Inc., New York, N.Y. 701,909, pub. 5–10–60. Cl. 39.
Mitchell Accessories, Inc., New York, N.Y. 701,921, pub. 5–10–60. Cl. 42.
Modern Engineering Co., Inc., St. Louis, Mo. 701,640, pub. 5–10–60. Cl. 13.
Moline Malleable Iron Co., St. Charles, Ill. 380,496, ren. 7–26–60. Cl. 13.
Monarch Food Packers, Inc., d.b.a. Monarch Mfg. Co., Atlanta, Ga. 701,928, pub. 5–12–60. Cl. 46.
Monarch Mfg. Co.: *See*— Monarch Food Packers, Inc.
Montello, Inc., Tulsa, Okla. 701,579, pub. 5–10–60. Cl. 1.
Morningstar-Paisley, Inc., New York, N.Y. 701,605, pub. 5–10–60. Cl. 6.
Morton Paper Co., Brooklyn, N.Y. 701,833, pub. 5–10–60. Cl. 37.
Munston Mfg. and Service, Inc., Islip, N.Y. 701,719–20, pub. 5–10–60. Cl. 21.
Murphy Products Co., Burlington, Wis. 382,682–3, ren. 7–26–60. Cl. 46.
Mutual Spice Co.: *See*— Kaltman, Samuel.
Natcon Chemical Co., Inc.: *See*— Od Peacock Sultan Co.
National Cash Register Co., The, Dayton, Ohio. 701,786–7, pub. 3–1–60. Cl. 26.
National Comics Publications, Inc.: *See*— Detective Comics, Inc.
National Distillers and Chemical Corp.: *See*— U.S. Industrial Chemicals, Inc.
National Fishcuring Co. Ltd., Aberdeen, Scotland. 701,956, pub. 5–10–60. Cl. 46.
National Packaging Corp., Fort Wayne, Ind. 701,594, pub. 5–10–60. Cl. 2.
National Plastic Products Co., The, Odenton, Md. 701,509, pub. 5–10–60. Cl. 5.
National Plastic Products Co., The, from The Saran Yarns Co., Odenton, Md. 701,915, pub. 5–10–60. Cl. 42.
National Silver Co., New York, N.Y. 590,816–18, canc. Cl. 30.
National Sound Equipment Co.: *See*— Pangle, George W.
National Spinning Co., Inc., New York, N.Y. 701,923, pub. 5–10–60. Cl. 43.
Navan Products, Inc., El Segundo, Calif. 701,593, pub. 5–10–60. Cl. 2.
Neville Chemical Co.: *See*— Neville Co., The.
Neville Co., The, to Neville Chemical Co., Neville Island, Pittsburgh, Pa. 380,829, ren. 7–26–60. Cl. 1.
Norris Inc., Atlanta, Ga. 701,944, pub. 5–10–60. Cl. 46.
North Electric Co., Galion, Ohio. 701,718, pub. 5–10–60. Cl. 21.
Northeast Airlines, Inc., Boston, Mass. 701,998–9, pub. 5–10–60. Cl. 105.
Northern Electric Co., Chicago, Ill. 701,714, pub. 5–10–60. Cl. 21.
Northrop Corp., Beverly Hills, Calif. 701,688, pub. 5–10–60. Cl. 19.
Northwood Fur Farms, Cary, Ill. 590,655, canc. Cl. 1.
Noxzema Chemical Co., Baltimore, Md. 701,977, pub. 5–10–60. Cl. 51.
Nu-Lite Corp., Newark, N.J. 701,721, pub. 5–10–60. Cl. 21.
Nulomoline Co., The, to American Molasses Co., New York, N.Y. 134,046, ren. 7–26–60. Cl. 46.
Nulomoline Co., The, to American Molasses Co., New York, N.Y. 136,128, ren. 7–26–60. Cl. 45.
Nulomoline Co., The, New York, N.Y. 303,532, canc. Cl. 6.
Nutmeg Chemical Co.: *See*— Geisinger, Frederick J.
Nylon Net Co., Memphis, Tenn. 701,613, pub. 5–10–60. Cl. 7.
O.K. Service Co., Littleton, Colo. 701,567, pub. 5–10–60. Cl. 1.
Od Peacock Sultan Co., St. Louis, Mo., to Natcon Chemical Co., Inc., Bethpage, N.Y. 377,557, ren. 7–26–60. Cl. 18.
Olga Co., Van Nuys, Calif. 701,858, pub. 5–10–60. Cl. 39.
Olga Co., Van Nuys, Calif. 701,964, pub. 5–10–60. Cl. 39.
Olympia Werke Aktiengesellschaft, Wilhelmshaven, Germany. 701,734, pub. 5–10–60. Cl. 23.
Orchids of Hawaii, Inc., New York, N.Y. 701,568, pub. 5–10–60. Cl. 1.
Orfevre, Marcel Q., from Marcel Quercia, Paris, France. 701,615, pub. 5–10–60. Cl. 8.
Osprey Corp., New York, N.Y. 701,908, pub. 5–10–60. Cl. 39.
Owens-Illinois Glass Co., Toledo, Ohio. 701,630, pub. 5–10–60. Cl. 12.
Pacific Car and Foundry Co., Seattle and Renton, Wash. 344,741, canc. Cl. 19.
Pacific Exporting Co., New York, N.Y. 701,896, pub. 5–10–60. Cl. 39.
Pangle, George W., d.b.a. National Sound Equipment Co., Omaha, Nebr. 590,783, canc. Cl. 21.
Parker, Arthur L., to Parker-Hannifin Corp., Cleveland, Ohio. 382,186, ren. 7–26–60. Cl. 13.
Parker-Hannifin Corp.: *See*— Parker, Arthur L.
Parkinson, C. V., Associates, Inc., Manhasset, N.Y. 590,686, canc. Cl. 6.
Pedigreed Seed Co., d.b.a. Flower Lane Farm, Jersey City, N.J. 701,572, pub. 5–10–60. Cl. 1.
Pelron Corp., Lyons, Ill. 701,562, pub. 5–10–60. Cl. 1.
Pemco Corp.: *See*— Porcelain Enamel and Mfg. Co. of Baltimore, The.
Penn Maid Foods, Inc., Philadelphia, Pa. 701,953, pub. 5–10–60. Cl. 46.
Pennsylvania Refining Co., Butler, Pa. 701,661, pub. 5–10–60. Cl. 15.
Perfex Co., The, Tacoma, Wash., to Purex Corp., Ltd., South Gate, Calif. 382,539, ren. 7–26–60. Cl. 6.
Perry, Donald G. C., d.b.a. Perry Furniture Co., Grand Rapids, Mich. 701,808, pub. 5–10–60. Cl. 32.
Perry Furniture Co.: *See*— Perry, Donald G. C.
Peters & Russell, Inc., Springfield, Ohio. 701,689, pub. 5–10–60. Cl. 19.
Peters & Russell, Inc., Springfield, Ohio. 701,823, pub. 5–10–60. Cl. 35.
Pevely Dairy Co., St. Louis, Mo. 653,491, canc. Cl. 46.
Phalen, W. H., to Wells Mfg. Corp., Fond du Lac, Wis. 379,833, ren. 7–26–60. Cl. 21.
Photomation Inc., Bergenfield, N.J. 701,707, pub. 5–10–60. Cl. 21.
Pillsbury Co.: *See*— Pillsbury Flour Mills Co.
Pillsbury Flour Mills Co., to The Pillsbury Co., Minneapolis, Minn. 382,933, ren. 7–26–60. Cl. 46.
Pitegoff Brothers Inc., Brooklyn, N.Y. 590,934, canc. Cl. 29.
Pitman Mfg. Co., Grandview, Mo. 701,759, pub. 5–10–60. Cl. 23.
Pittenger, Charles J., d.b.a. Port-Air Conveyor Co., York, Pa. 701,756, pub. 5–10–60. Cl. 23.
Plastic Age Mfg. Co., Mint Canyon, Calif. 701,577, pub. 5–10–60. Cl. 1.
Plasticsmith, Inc., Pittsburg, Calif. 701,855, pub. 5–10–60. Cl. 39.
Plate, Dr., G.m.b.H., Bonn, Germany. 701,927, pub. 5–10–60. Cl. 44.
Plymouth Wholesale Dry Goods Corp., New York, N.Y. 701,882, pub. 5–10–60. Cl. 39.
Pollak, Henry, Inc., New York, N.Y. 701,573, pub. 5–10–60. Cl. 1.
Polo, D. Sotero, Madrid, Spain. 590,831, canc. Cl. 35.
Polychrome Corp., Yonkers, N.Y. 701,963, pub. 5–10–60. Cl. 50.
Porcelain Enamel and Mfg. Co., The: *See*— Porcelain Enamel and Mfg. Co. of Baltimore, The.
Porcelain Enamel and Mfg. Co. of Baltimore, The, d.b.a. The Porcelain Enamel and Mfg. Co., to Pemco Corp., Baltimore, Md. 382,829, ren. 7–26–60. Cl. 1.
Port-Air Conveyor Co.: *See*— Pittenger, Charles J.
Posy Ring: *See*— Saxe Brothers, Inc.
Pratt, Henry, Co., Chicago, Ill. 701,757, pub. 5–10–60. Cl. 23.
Precision Thermometer & Instrument Co., Philadelphia, Pa. 701,788, pub. 5–10–60. Cl. 26.
Professional Golfers' Association of America: *See*— Professional Golfers' Association of America, The.
Professional Golfers' Association of America, The, from Professional Golfers' Association of America, Dunedin, Fla. 702,001, pub. 5–10–60. Cl. A.
Progressive Leather Products, Inc.: *See*— Seco Leather Products Co.
Publishers Syndicate, Chicago, Ill. 701,845–6, pub. 5–10–60. Cl. 38.
Purdue Frederick Co., The, New York, N.Y. 701,684–5, pub. 5–10–60. Cl. 18.
Purex Corp., Ltd.: *See*— Perfex Co., The.
Puritan Stationery Co., Inc., Philadelphia, Pa. 701,840, pub. 5–10–60. Cl. 37.
Purity Pretzel Co., Harrisburg, Pa. 590,871–3, canc. Cl. 46.
Quality Mills, Inc., Mount Airy, N.C. 701,857, pub. 5–10–60. Cl. 39.
Quercia, Marcel: *See*— Orfevre, Marcel Q.
Quigley Co., Inc.: *See*— Quigley Furnace Specialties Co. Quigley Furnace Specialties Co., Inc.
Quigley Furnace Specialties Co., Inc., to Quigley Co., Inc., New York, N.Y. 132,040, ren. 7–26–60. Cl. 12.
Quigley Furnace Specialties Co., Inc., to Quigley Co., Inc., New York, N.Y. 133,304, ren. 7–26–60. Cl. 12.
Rassme, P. D., Sohne, Solingen-Stocken, Germany. 701,729, pub. 5–10–60. Cl. 23.

Ravan Products, Inc., Edgewater, N.J. 701,843, pub. 5–10–60. Cl. 1.
Register, Robert T., Gettysburg, Pa. 701,558, pub. 5–10–60. Cl. 1.
Republic Rubber Division: *See*—
Lee Rubber & Tire Corp.
Revlon, Inc., New York, N.Y. 702,021–32. Cl. 51.
Rexall Drug and Chemical Co.: *See*—
United Drug Co.
Rice, G. Douglas, d.b.a. Douglas Recordings Co., Springfield, Mass. 701,883, pub. 5–10–60. Cl. 36.
Richman Brothers Co., The, Cleveland, Ohio. 701,874–5, pub. 5–10–60. Cl. 39.
Rimsey, Dale E., Utica, N.Y. 701,726, pub. 5–10–60. Cl. 22.
Rite-O-Lite of California: *See*—
Foster, Charles E.
Roemar Tissue Mills, Inc., Hardwick, Mass. 701,825, pub. 5–20–60. Cl. 37.
Roslyn Products: *See*—
Vodian, George.
Root-Lowell Mfg. Co., Lowell, Mich. 701,772, pub. 5–10–60. Cl. 23.
Rose-Derry Co., Newton, Mass. 701,812, pub. 12–29–59. Cl. 39.
Rosenberg Bros. & Co., to Fashion Park, Inc., Rochester, N.Y. 133,802, ren. 7–26–60. Cl. 39.
Rosenberg Bros. & Co., to Fashion Park, Inc., Rochester, N.Y. 133,803, ren. 7–26–60. Cl. 39.
Rotary Hose Ltd., East Horndon, England. 590,797, canc. Cl. 23.
Rowe Exterminating Co.: *See*—
Rowe, Willis.
Rowe, Willis, d.b.a. Rowe Exterminating Co., Kingsville, Tex. 590,691, canc. Cl. 6.
Russell, F. J., d.b.a. Russell Packing Co., Salinas, Calif. 590,579, canc. Cl. 46.
Russell Packing Co.: *See*—
Russell, F. J.
Rust-Oleum Corp., Evanston, Ill. 701,666, pub. 5–10–60. Cl. 16.
Ryder, Herold E., Chicago, Ill. 590,866, canc. Cl. 44.
St. Louis Paint Mfg. Co., St. Louis, Mo. 701,669, pub. 5–10–60. Cl. 16.
Saks & Co., New York, N.Y. 701,987, pub. 5–10–60. Cl. 52.
Sale Knitting Co., Inc., Martinsville, Va. 701,664, pub. 5–10–60. Cl. 39.
Sandler, A., Co., Needham Heights, Mass. 701,856, pub. 5–10–60. Cl. 39.
Sandusky Foundry & Machine Co., Sandusky, Ohio. 701,660, pub. 5–10–60. Cl. 14.
Santa Anita Potteries, Los Angeles, Calif. 590,615, canc. Cl. 30.
Saran Yarns Co., The: *See*—
National Plastic Products Co., The.
Saxe Brothers, Inc., d.b.a. Posy Ring, Menands, N.Y. 701,962, pub. 5–10–60. Cl. 50.
Schachter Enterprises, Inc., Brooklyn, N.Y. 701,841, pub. 5–10–60. Cl. 37.
Schenley Industries, Inc., d.b.a. Marie Antoinette Champagne Cellars, New York, N.Y. 701,958, pub. 5–10–60. Cl. 47.
Schering Corp., Bloomfield, N.J. 701,686, pub. 5–10–60. Cl. 18.
Schjeldahl, G. T., Co., Northfield, Minn. 701,744, pub. 5–10–60. Cl. 23.
Schmetz, Ferdinand, G.m.b.H., Herzogenrath, Germany. 701,741, pub. 5–10–60. Cl. 23.
Schneiderman, Joseph, to Johnson Publishing Co., Inc., Chicago, Ill. 376,163, ren. 7–26–60. Cl. 51.
Schoeneman, J., Inc., Baltimore, Md. 590,851, canc. Cl. 39.
School Management Magazines, Inc., Greenwich, Conn. 701,847, pub. 5–10–60. Cl. 38.
Schumacher, Charles P., and Ruth Valborg Schumacher, d.b.a. Tropical Pet and Garden Supply, Miami, Fla. 701,597, pub. 5–10–60. Cl. 3.
Schumacher, Ruth Valborg: *See*—
Schumacher, Charles P. and Ruth Valborg Schumacher.
Scott Paper Co., Chester, Pa. 701,839, pub. 5–10–60. Cl. 37.
Sears, Roebuck and Co., Chicago, Ill. 701,637, pub. 5–10–60. Cl. 12.
Sears, Roebuck and Co., Chicago, Ill. 701,667–8, pub. 5–10–60. Cl. 39.
Seco Leather Products Co., West New York, to Progressive Leather Products, Inc., Newark, N.J. 382,661, ren. 7–26–60. Cl. 3.
Selecta, Inc., New York, N.Y. 702,014. Cl. 39.
Serman, M., & Co., Inc., New York, N.Y. 702,015. Cl. 39.
Sheffield Corp., The, Dayton, Ohio. 701,780, pub. 5–10–60. Cl. 26.
Sherman, Mary, Inc., St. Louis, Mo. 701,969, pub. 5–10–60. Cl. 51.
Shoecraft Inc., New York, N.Y. 701,895, pub. 5–10–60. Cl. 39.
Sidstex Co., Inc., Rockville Centre, N.Y. 701,623, pub. 5–10–60. Cl. 12.
Silhouette Products Ltd., Toronto, Ontario, Canada. 701,968, pub. 5–10–60. Cl. 51.
Silvray Lighting, Inc., New York, N.Y. 701,708, pub. 5–10–60. Cl. 21.
Simms, T. S., & Co. Ltd., Fairville, New Brunswick, Canada. 590,813, canc. Cl. 29.
Simpson Redwood Co., Seattle, Wash. 701,633, pub. 5–10–60. Cl. 12.
Skaling, Percy E., d.b.a. Soilmoisture Equipment Co., Santa Barbara, Calif. 701,782, pub. 5–3–60. Cl. 26.
Smith Brothers Mfg. Co., Carthage, Mo. 701,869, pub. 5–10–60. Cl. 39.
Smith, H. P., Co., Inc., Rogers, Ark. 701,612, pub. 5–10–60. Cl. 7.
Smith, Geo. F., Co., Inc., d.b.a. GFS Co., St. Louis, Mo. 701,648, pub. 5–10–60. Cl. 13.
Sno-Berry Products & Equipment Co.: *See*—
Fletcher, Dennis H.
Synthetic Nitrogen Products Corp., New York, N.Y., to Centraal Stikstof Verkoopkantoor, N.V. The Hague, Netherlands. 577,212, ren. 7–26–60. Cl. 10.
Societe Technique de Parfumerie, F. Millet, Societe Anonyme, Paris, France. 701,972, pub. 5–10–60. Cl. 51.
Soilmoisture Equipment Co.: *See*—
Skaling, Percy E.
Sonic Industries, Inc., Lynbrook, N.Y. 701,701, pub. 5–10–60. Cl. 21.
South African Industrial Cellulose Corp. (Proprietary) Ltd., The, Umkomaasi Drift, near Umkomaas, Natal, Union of South Africa. 701,553, pub. 5–10–60. Cl. 1.
South Bend Lathe, Inc.: *See*—
South Bend Lathe Works.
South Bend Lathe Works, to South Bend Lathe, Inc., South Bend, Ind. 133,333, ren. 7–26–60. Cl. 23.
Southern States Cooperative, Inc., Richmond, Va. 701,733, pub. 5–10–60. Cl. 23.
Spellings, Lucian L., d.b.a. The Farmers Co., Jonesboro, Ark. 701,946, pub. 3–29–60. Cl. 46.
Sperry Rand Corp., New Holland, Pa. 701,691, pub. 5–10–60. Cl. 19.
Spice Islands Co., South San Francisco, Calif. 701,592, pub. 5–10–60. Cl. 2.
Sportsman's Golf Corp., Melrose Park, Ill. 701,722, pub. 2–10–59. Cl. 22.
Spred-All, Inc.: *See*—
American Baler Co., The.
Squires, C. E., Co., The, Cleveland, Ohio. 701,639, pub. 5–10–60. Cl. 12.
Staley, A. E., Mfg. Co., Decatur, Ill. 590,942, canc. Cl. 46.
Standard Brands Inc., New York, N.Y. 701,943, pub. 5–10–60. Cl. 46.
Standard Register Co., The, Dayton, Ohio. 701,837. Pub. 3–1–60, Cl. 57; pub. 5–3–60, Cl. 38. (Consolidated certificate, Classes 37 and 38.)
Stappers Equipment Co., Inc., New York, N.Y. 590,910, canc. Cl. 103.
Stark, W. P., Lumber Co., Inc., Kansas City, Kans. 590,718, canc. Cl. 12.
Stebbins Engineering and Mfg. Co., Watertown, N.Y. 701,634, pub. 5–10–60. Cl. 12.
Stedman Mfg. Co., Asheboro, N.C. 591,497, canc. Cl. 39.
Stein, A., & Co., Chicago, Ill. 701,890, pub. 5–10–60. Cl. 39.
Sterling Drug Inc.: *See*—
Bayer Co., Inc., The.
Winthrop Chemical Co., Inc.
Stern, Michaels, & Co. Inc., Rochester, N.Y. 701,877, pub. 5–10–60. Cl. 39.
Stevens Brothers Moving and Storage: *See*—
Stevens Brothers.
Stevens Brothers, also d.b.a. Stevens Brothers Moving and Storage, Saginaw, Mich. 590,955, canc. Cl. 105.
Stockhausen, Frederick, d.b.a. U-Mak-It-Products, New York, N.Y. 590,680–1, canc. Cl. 5.
Straus-Duparquet Inc., New York, N.Y. 701,814, pub. 5–10–60. Cl. 32.
Stuart, Matthew, & Co., Inc., New York, N.Y. 702,029, pub. 5–10–60. Cl. 36.
Stutzer, Charles, d.b.a. Celavie Perfumes, New York, N.Y. 701,971, pub. 5–10–60. Cl. 51.
Style Vogues, Inc., New York, N.Y. 702,016. Cl. 39.
Super-Compactors, Inc., Sacramento, Calif. 590,929, canc. Cl. 23.
Super-Solv Products, Bakersfield, Calif. 590,903, canc. Cl. 52.
Talon, Inc., Meadville, Pa. 701,646, pub. 5–10–60. Cl. 13.
Tanner of North Carolina, Inc., Rutherfordton, N.C. 701,875, pub. 5–10–60. Cl. 39.
Techniques Nucleaires, Seine, France. 701,783, pub. 5–10–60. Cl. 26.
Television Utilities Corp., Corona, N.Y. 701,711, pub. 5–10–60. Cl. 21.
Temperature-Pressure Products Corp., Cleveland, Ohio. 590,720, canc. Cl. 13.
Tennessee Gas Transmission Co.: *See*—
Citizens Oil Co., Inc.
Terry, Arthur, III: *See*—
Barber, S. Morgan, Jr.
Texas-West Indies Co., El Campo, Tex. 701,565, pub. 5–10–60. Cl. 1.
Textiloses & Textiles S.A., Milan, Italy. 590,841, canc. Cl. 39.
Thatcher Glass Mfg. Co., Inc., New York, N.Y. 701,619, pub. 5–10–60. Cl. 24.
Thermac Co., Corona, Calif. 701,649, pub. 5–10–60. Cl. 13.
Thermal-Aire, Inc., Allston, Mass. 701,702, pub. 5–10–60. Cl. 21.
Thomas, Frederick A., d.b.a. Thomas Instrument Co., New York, N.Y. 701,781, pub. 5–10–60. Cl. 26.
Thomas Instrument Co.: *See*—
Thomas, Frederick A.
Tico-Toys, Inc., Pawtucket, R.I. 701,725, pub. 5–10–60. Cl. 22.
Tiedtke's: *See*—
Kobacker Stores, Inc.
Tip-Top Products Co., Omaha, Nebr. 701,724, pub. 5–10–60. Cl. 22.
Toni Co., The: *See*—
Gillette Co., The.
Townsend Co., The: *See*—
Barber, S. Morgan, Jr.
Travenol Laboratories, Inc., Morton Grove, Ill. 701,679, pub. 5–10–60. Cl. 18.

Trippensee Planetarium Co., Saginaw, Mich. 701,778, pub. 5–10–60. Cl. 26.
Triumph Engineering Co. Ltd., Coventry, England. 590,778, canc. Cl. 19.
Tropical Pet and Garden Supply: *See*—
Schumacher, Charles P., and Ruth Valborg Schumacher.
Trostel, Albert, & Sons Co., Milwaukee, Wis. 701,574–6, pub. 5–10–60. Cl. 1.
Truth Tool Co., Owatonna, Minn. 701,660, pub. 5–10–60. Cl. 13.
Tupper Corp., North Smithfield, R.I. 701,968, pub. 5–10–60. Cl. 50.
Turbomeca, Bordes, Basses-Pyrenees, France. 701,780–3, pub. 5–10–60. Cl. 28.
Ultramar Western World Corp., New York, N.Y. 701,997, pub. 5–10–60. Cl. 102.
U-Mak-It Products: *See*—
Stockhausen, Frederick.
United Co-Operatives, Inc., Alliance, Ohio. 577,904, ren. 7–26–60. Cl. 15.
United Drug Co., Boston, Mass., to Rexall Drug and Chemical Co., Los Angeles, Calif. 590,397, ren. 7–26–60. Cl. 18.
United Engineering and Foundry Co., Pittsburgh, Pa. 590,943, ren. 7–26–60. Cl. 23.
United-Greenfield Corp.: *See*—
Williams, J. H., & Co.
United National Trading Co., Inc., New York, N.Y. 701,745, pub. 5–10–60. Cl. 23.
U.S. Electrical Motors, Inc., Los Angeles, Calif. 701,794, pub. 5–10–60. Cl. 26.
U.S. Industrial Chemicals, Inc., to National Distillers and Chemical Corp., New York, N.Y. 382,046–7, ren. 7–26–60. Cl. 23.
United States News Publishing Corp., Washington, D.C. 378,940, ren. 7–26–60. Cl. 38.
United States Rubber Co.: *See*—
Dunlap, Lawton & Hall.
U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 701,673, pub. 5–10–60. Cl. 18.
Universal Printing Ink Corp., Houston, Tex. 701,621, pub. 5–10–60. Cl. 11.
Universal Spray Can Corp., New York, N.Y. 702,004–5. Cl. 4.
Upjohn Co., The, Kalamazoo, Mich. 590,750, canc. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 590,762, canc. Cl. 18.
Usines Metallurgiques de Vallorbe (Societe Anonyme), Vallorbe, Vaud, Switzerland. 701,775–6, pub. 5–10–60. Cl. 23.
Utica Cutlery Co., Utica, N.Y. 701,760, pub. 5–10–60. Cl. 23.
Utica Knitting Co., Utica, to Flagg-Utica Corp., New York, N.Y. 378,282, ren. 7–26–60. Cl. 39.
Vanadium Corp. of America, New York, N.Y. 590,739–40, canc. Cl. 14.
Vanity Fair Mills, Inc., Reading, Pa. 701,854, pub. 5–10–60. Cl. 39.
Vaporized Metal Coatings, Inc., New York, N.Y. 590,659, canc. Cl. 1.
Veit Furniture Corp., Inc., Hanover, Pa. 701,811, pub. 5–10–60. Cl. 32.
Vicompe Corp., Akron, Ohio. 590,754, canc. Cl. 18.
Vita-Cell Corp., Saginaw, Mich. 590,589, canc. Cl. 6.
Vita-Peat, Inc., Bethel Island, Calif. 701,617, pub. 5–10–60. Cl. 10.
Vodian, George, d.b.a. Roslyn Products, Pueblo, Colo. 701,663, pub. 5–10–60. Cl. 13.
Wagner, George O., San Francisco, Calif. 590,795, canc. Cl. 23.
Wagner, Marie C., d.b.a. Wagner's Dec-O-Mold Co., St. Paul, Minn. 701,652, pub. 5–10–60. Cl. 13.
Wagner's Dec-O-Mold Co.: *See*—
Wagner, Marie C.
Wakefield Co., The, Vermilion, Ohio. 701,715, pub. 5–10–60. Cl. 21.
Wallerstein Co.: *See*—
Baxter Laboratories, Inc.
Ward Baking Co., New York, N.Y. 701,986, pub. 5–10–60. Cl. 46.
Warren Belting Co., Inc., Worcester, Mass. 590,702, canc. Cl. 6.
Washington Steel Corp., Washington, Pa. 701,654, pub. 5–10–60. Cl. 14.
Watkins, J. R., Co., The, Winona, Minn. 590,588, canc. Cl. 51.
Watson Publications, Inc., Chicago, Ill. 701,944, pub. 5–10–60. Cl. 38.
Webcor, Inc., Chicago, Ill. 701,628, pub. 5–10–60. Cl. 36.
Wehr Steel Co., Milwaukee, Wis. 701,656, pub. 5–10–60. Cl. 14.
Wells Mfg. Corp.: *See*—
Flaks, W. H.
Western Newell Mfg. Co., Freeport, Ill. 702,007. Cl. 13.
Westinghouse Air Brake Co., Wilmerding, Pa. 701,651, pub. 5–10–60. Cl. 13.
Whitaker, Fred, Co., Philadelphia, Pa. 590,669, canc. Cl. 1.
White Cap Co., Chicago, Ill., to Continental Can Co., Inc., New York, N.Y. 382,276, ren. 7–26–60. Cl. 50.
White, Ruth M., d.b.a. Hans of Hollywood, North Hollywood, Calif. 590,950, canc. Cl. 51.
Whitehead Brothers Co., New York, N.Y. 701,554, pub. 5–10–60. Cl. 1.
Whitin Machine Works, Whitinsville, Mass. 590,925, canc. Cl. 26.
Whitman Publishing Co., Racine, Wis. 701,848, pub. 5–10–60. Cl. 38.
Whittemore Bros. Corp.: *See*—
Whittemore Brothers, Corp.
Whittemore Brothers, Corp., Cambridge, Mass., to Whittemore Bros. Corp., Baltimore, Md. 131,670, ren. 7–26–60. Cl. 4.
Windeke, Gustav, Co., The, Dayton, Ohio. 701,773, pub. 5–10–60. Cl. 23.
Will, Oscar H., & Co., Bismarck, N. Dak. 133,094, ren. 7–26–60. Cl. 1.
Williams, J. H., & Co., Buffalo, N.Y., to United-Greenfield Corp., Chicago, Ill. 381,837, ren. 7–26–60. Cl. 23.
Wilmar Undergarment Corp., New York, N.Y. 701,881, pub. 5–10–60. Cl. 39.
Wilson & Co., Inc., Chicago, Ill. 701,935, pub. 5–10–60. Cl. 46.
Wilson, Grant, Inc., Chicago, Ill. 701,632, pub. 5–10–60. Cl. 12.
Wiser Mfg. Co., Inc., Hammond, Ind. 701,879, pub. 5–10–60. Cl. 39.
Winning Horse, The: *See*—
Grissman, Franklin J.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N.Y. 382,038, ren. 7–26–60. Cl. 18.
Wireless Specialty Apparatus Co., New York, N.Y. and Boston, Mass., to Cornell-Dubilier Electric Corp., New Bedford, Mass. 131,676, ren. 7–26–60. Cl. 21.
Wirding, Arthur O., d.b.a. Manhattan Floor Supplies, New York, N.Y. 701,767, pub. 5–10–60. Cl. 23.
Wood Brothers Mfg. Co., Oregon, Ill. 701,789, pub. 5–10–60. Cl. 23.
Woodward, Murray F., Greenville, S.C. 701,993, pub. 5–10–60. Cl. 52.
Yoshida, Mas, Los Angeles, Calif. 701,564, pub. 5–10–60. Cl. 1.
Yuba Power Products, Inc., Cincinnati, Ohio. 701,769, pub. 5–10–60. Cl. 23.

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
August 2, 1960 Volume 757 Number 1

PATENTS

NOTICES

Foreign Patents Received in the Scientific Library as of June 30, 1960

Country	Date received	Highest number
Australia:		
(*Abstracts*)	June 2, 1960	53,692
(*Patents*)	June 6, 1960	225,491
Austria	June 20, 1960	209,350
Belgium	June 17, 1960	562,900
Canada	June 8, 1960	599,216
Denmark	June 8, 1960	88,290
Egypt	May 31, 1960	1,739
Finland	May 23, 1960	30,550
France:		
(*Patents*)	June 1, 1960	1,215,900
(*Additions*)	June 1, 1960	72,600
Germany:		
(*Auslegeschriften*)	June 14, 1960	1,080,940
(*Patents*)	Mar. 15, 1960	1,060,808
Great Britain	May 31, 1960	834,958
India	May 5, 1960	64,638
Ireland	May 31, 1960	22,300
Italy	May 23, 1960	566,100
Japan	June 16, 1960	5,200/60
Netherlands	June 10, 1960	94,401
Norway	May 25, 1960	93,951
Pakistan	Apr. 17, 1959	107,296
Poland	June 10, 1960	42,981
Rumania	May 19, 1960	41,215
Sweden	June 8, 1960	171,218
Switzerland	June 14, 1960	345,853
U.S.S.R.	May 19, 1960	129,308

Australia: First 2,000 incomplete
Belgium: First printed 496,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Latest 81,300/1952
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Philippine Republic: Latest 217/1956
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

Board of Appeals Decisions Rendered in the Month of June 1960

Examiner affirmed	178
Examiner affirmed in part	31
Examiner reversed	59
Total	268

New Applications Received During June 1960

Patents	7,040
Designs	370
Plant Patents	12
Reissues	12
Total	7,434

Decisions of the Commissioner of Patents

The 1959 edition of the Decisions of the Commissioner of Patents has been released from the printer and is available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price $2.75.

Disclaimers

2,792,562.—*Buford M. Baker*, Houston, Tex. HORIZONTAL SEISMOMETER. Patent dated May 14, 1957. Disclaimer filed June 16, 1960, by the assignee, *Texas Instruments Incorporated*.

Hereby enters this disclaimer to claims 1, 2, 4, 5, and 6 of said patent.

2,818,684.—*Albert G. Lauck*, Toledo, Ohio. GLASSWARE FORMING APPARATUS. Patent dated Jan. 7, 1958. Disclaimer filed June 28, 1960, by the assignee, *Owens-Illinois Glass Company*.

Hereby enters this disclaimer to claims 1, 2, and 3 of said patent.

2,828,598.—*Arthur C. Anderson* and *Tengel Andersen*, Wildwood, N.J. RECIPROCATING CUTTING ASSEMBLY WITH HYDRAULIC CONTROL MEANS. Patent dated Apr. 1, 1958. Disclaimer filed June 23, 1960, by the assignee, *A. C. Anderson, Inc.*

Hereby enters this disclaimer to claims 1, 2, 3, 4, and 5 of said patent.

Patents Available for Licensing or Sale

2,551,682. Morpholine Salicylates and Their Preparation. (For licensing.) EGEMA, 32, Rue Eugene Flachat, Paris 17°, France. Correspondence to: Mrs. Erna Engle, Droit et Pharmacie, 305 Broadway, New York 7, N.Y.

2,732,582. Flush Hinge. The Hartwell Corporation, 9035 Venice Blvd., Los Angeles 34, Calif.

2,886,230. Container (Dispensing Container for Packaging Granular Materials). Virgil E. Langley, P.O. Box 1006, Apopka, Fla.

2,933,911. Cigarette Lighter. Laurence F. Ritchie, 1007 Wilmington Blvd., Wilmington, Calif.

2,934,144. Punched Card Reproducer (With Correcting Mechanism for Reproduction From Original Card). ARITMA, narodni podnik, Prague, Czechoslovakia. Correspondence to: Richard Low, 1060 Broad St., Newark 2, N.J.

2,936,465. Combined Gunwale Step Plate and Boat Ladder Adapter. J. W. Mayfield, 617 Main Ave., Del Paso Heights, Calif.

2,939,629. Automatic Mailbox Signal. (For licensing.) Howard W. Barkdoll, 1940 Atlantic St., St. Paul 9, Minn.

Issue

Patents	989	No. 2,947,001 to No. 2,947,989, incl.
Designs	46	No. 188,481 to No. 188,526, incl.
Total	1,035	

2,940,529. Beet Harvesting Machine. Oscar R. Krell, 2026 T St., Sacramento 14, Calif.

2,940,632. Embroidery Thread Holder or Rack. I. H. Tauber and Ida P. Tauber, 4503 Roosevelt Ave., Sacramento 20, Calif.

General Electric Company is prepared to grant non-exclusive licenses under the following 11 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 7 patents may be addressed to: Patent Counsel, Turbine Division, General Electric Company, 1 River Road, Building 53, Schenectady 5, N.Y.

2,485,374. Turbine-Generator Load Control System.

2,916,878. Air-Directing Vane Structure for Fluid Fuel Combustor.

2,921,647. Moisture Separator.

2,923,319. Fluid Pressure Reducing Apparatus.

2,924,680. Emergency Governing System for a Steam Turbine.

2,929,388. Governing Mechanism.

2,935,869. Torque Applying and Measuring Device.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,842,439. High Strength Alloy for Use at Elevated Temperatures.

2,928,801. Polyethylene Composition Containing Di-a-Cumyl Peroxide, Silica, and a Stabilizer, and Process of Making Same.

Applications for license under the following 2 patents may be addressed to: Patent Counsel, General Engineering Laboratory, General Electric Company, 1 River Road, Schenectady 5, N.Y.

2,901,297. Bearings.

2,927,556. Device for Producing Step by Step Motion in Different Directions.

Patent Withdrawn From Register

The General Electric Company hereby withdraws the following patent from the Register of Patents Available for Licensing or Sale. This patent was listed in the OFFICIAL GAZETTE of Jan. 2, 1951 (642 O.G. 13).

2,515,945. Electroplating Apparatus.

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1960

Total number of pending applications (excluding Designs)	195, 885
Total number of pending Design applications	5, 937
Total number of applications awaiting action (excluding Designs)	87, 039
Total number of Design applications awaiting action	1, 511
Date of oldest new application	Feb. 24, 1959
Date of oldest amended application	Feb. 14, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 32, 42, 48, 59, 60, 69, 62, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 20, 37, 41, 42, 44, 48, 51, 54, 55.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 38, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 30, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 28, 29, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 26, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 99, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	1-5-60	1-6-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-14-60	1-4-60
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	12-10-60	12-3-60
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-2-60	11-2-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-3-59	8-5-59
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	12-1-59	12-2-59
7. (IV) ANDERSON, E. G., Optics	10-9-59	10-5-59
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-6-60	1-6-60
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-16-59	10-14-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-31-59	12-16-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-24-59	11-5-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-22-59	1-6-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	11-9-59	11-4-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-30-59	8-27-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-12-60	1-6-60
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	8-3-59	7-8-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-11-60	11-12-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-4-60	1-4-60
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-28-60	12-18-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-4-60	1-4-60
21. (III) MADER, R. C., Textiles	1-10-60	11-30-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-30-59	10-15-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	3-24-59	3-14-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	10-1-59	10-1-59
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	10-1-59	9-23-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	10-1-59	9-1-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-60	2-1-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	1-4-60	1-4-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-24-59	11-24-59
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	1-5-60	1-4-60

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
21. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	1-11-60	1-11-60
22. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	12-9-59	12-9-59
23. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	10-15-59	10-1-59
24. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	4-20-59
25. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	12-9-59	12-9-59
26. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	10-19-59	10-19-59
27. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	10-1-59	10-5-59
28. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Antheones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-21-59	8-24-59
29. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-8-59	12-1-59
45. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-4-60	1-4-60
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television; Telegraphy (part)	12-4-59	12-1-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-26-59	10-26-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	10-9-59	10-12-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	7-3-59	7-3-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-23-59	12-14-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-7-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-9-59	12-14-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-3-59	11-2-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	9-4-59	9-4-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-59	9-18-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	11-2-59	11-2-59
52. (V) LE ROY, C. A., Supports and Racks	3-16-60	3-3-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	1-4-60	1-5-60
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-4-60	12-29-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-59	10-23-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-14-59	12-4-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	10-1-59	10-6-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	11-2-59	11-2-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-8-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-7-60	1-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-4-60	1-5-60
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-4-60	1-4-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	10-16-59	10-19-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-4-59	8-20-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-26-59	12-26-59
66. (V) LIBANN, L., Geometric Instruments; Measuring and Testing (part)	8-31-59	8-6-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	9-29-59	9-4-59
81. (III) MONCURE, J. A., Industrial Arts	4-4-60	4-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	4-13-60	4-20-60
91. BAILEY, J. S., Ornamentation	3-7-60	3-24-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	3-12-60	3-1-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	1-6-60	1-4-60
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	1-4-60	1-11-60
96. ANGEL, C. D., Metallic Building Structures; Packed Rod Joints; Joint Packings	11-2-59	10-16-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	1-4-60	12-4-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1959*.

Patents ..... Numbers 2,935,570 to 2,938,434, inclusive
Plant Patents ..... Numbers 997 to 999, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

CLEVELAND-DETROIT CORPORATION v. CAMCO (MACHINERY) LIMITED

No. 6541. Decided May 3, 1960

[47 CCPA —; 277 F.2d 958; 125 USPQ 586]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—RECORD—TRADEMARK—OPPOSITION—TRADEMARK RULE 2.122

"Appellant has moved to correct the record by striking those pages which comprise a copy of appellee's application. The basis of the motion is Patent Office Rule 2.126 which provides that the allegation of dates of use in an application for registration cannot be used as evidence in behalf of the applicant. That rule is not in point here since the applicant (appellee) does not seek to rely on such allegations. The pertinent Patent Office Rule here is Rule 2.122 which provides that the file of an application against which a notice of opposition is filed forms 'part of the record of the proceeding without any action by the parties, and may be referred to for any relevant and competent purpose.' In view of that provision, appellee's application is a proper part of the record here. Indeed, since the opposition proceeding was directed against appellee's application, it is difficult to see how that proceeding could be reviewed here if the application were stricken from the record. Appellant's motion to correct the record is denied."

2. WORDS AND PHRASES—"PAPER WRAPPERING MACHINERY."

"Appellee's application covers 'paper wrappering machinery.' Funk and Wagnall's Dictionary defines the verb 'wrapper' as meaning 'To furnish with a wrapper,' while the definition given by Webster is 'To provide with a wrapper.' On the basis of those definitions it would appear that 'paper wrappering machinery' includes machinery for providing articles with paper wrappers, or in other words, packaging them in paper. That the application contemplates such a meaning is confirmed by appellee's admission in its answer to the notice of opposition that 'it is using its mark "Camco" for wrappering and packaging machinery.'"

3. TRADEMARK—CONFUSING SIMILARITY.

In an opposition by appellant-opposer, based on its ownership, prior use and registration of "Clamco" as a trademark for "packaging equipment, fixtures, and supplies—namely, heat sealers and parts and cleaners therefor; packaging tables, counters and hot plates; package closure and marking supplies and fixtures therefor; package filling equipment," to appellee's application for registration of "Camco" as a trademark for "Printing machinery, paper folding machinery, baling machinery, letter-press machinery, paper cutting and perforating machinery, paper wrappering machinery and book-binding machinery," *Held* that "on the basis of the statements in appellant's registration and appellee's application it appears that the two cover closely related goods which might well be expected to emanate from the same source."

4. SAME—OPPOSITION—GOODS—GOODS COVERED BY APPLICATION.

"The Board [Trademark Trial and Appeal Board] found that the record contains no explanation as to the meaning of 'paper wrappering machinery,' and apparently placed the burden of showing what was meant by that term on appellant. However, since the term was first used by appellee, who has advanced no evidence as to its meaning, it would seem proper to give it the dictionary interpretation which, * * *, includes packaging machinery. We are unable to agree with the Board that because appellee's application includes several types of machinery in the field of printing and binding, its 'paper wrappering material' should be construed as limited to those fields. This is especially true in view of appellee's admission, * * *, that it is using its mark on packaging machinery."

5. SAME—SAME—SAME—SAME.

"The Board [Trademark Trial and Appeal Board] * * * seems to have given weight to the fact that much of the equipment sold by appellant is of a relatively small hand-operated type. However, that is not controlling since neither the application nor the registration is in any way limited to the size or manner of operation of the machinery."

APPEAL from the Patent Office. Opposition No. 37,320.

REVERSED.

Ely, Pearne & Gordon (*Albert L. Ely, Jr.*, of counsel) for Cleveland-Detroit Corporation.

Wenderoth, Lind & Ponack (*E. F. Wenderoth* of counsel) for Camco (Machinery) Limited.

Before WORLEY, *Chief Judge*, and RICH, and MARTIN, *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board of the United States Patent Office dismissing appellant's opposition to appellee's application for registration of "Camco" as a trademark for "Printing machinery, paper folding machinery, baling machinery, letter-press machinery, paper cutting and perforating machinery, paper wrappering machinery and book-binding machinery." The opposition is based on opposer's ownership, prior use and registration of "Clamco" as a trademark for "packaging equipment, fixtures, and supplies—namely, heat sealers and parts and cleaners therefor; packaging tables, counters and hot plates; package closure and marking supplies and fixtures therefor; package filling equipment," Registration No. 689,004, Dec. 25, 1956.

[1] Appellant has moved to correct the record by striking those pages which comprise a copy of appellee's application. The basis of the motion is Patent Office Rule 2.126 which provides that the allegation of dates of use in an application for registration cannot be used as evidence in behalf of the applicant. That rule is not in point here since the applicant (appellee) does not seek to rely on such allegations. The pertinent Patent Office Rule here is Rule 2,122 which provides that the file of an application against which a notice of opposition is filed forms "part of the record of the proceeding without any action by the parties, and may be referred to for any relevant and competent purpose." In view of that provision, appellee's application is a proper part of the record here. Indeed, since the opposition proceeding was directed against appellee's application, it is difficult to see how that proceeding could be reviewed here if the application were stricken from the record. Appellant's motion to correct the record is denied.

Appellant's priority is not disputed. The marks "Clamco" and "Camco" are obviously quite similar. The Board held, however, that the differences between the goods of the parties were such that concurrent use of their respective marks thereon would not be likely to result in confusion of purchasers within the meaning of section 2(d) of the Lanham Act.

Appellant's registration covers packaging equipment

including "heat sealers" and, therefore, is evidently directed to packaging with heat-sealable material; the record shows that appellant manufactures equipment of that type.

[2] Appellee's application covers "paper wrappering machinery." Funk and Wagnall's Dictionary defines the verb "wrapper" as meaning "To furnish with a wrapper," while the definition given by Webster is "To provide with a wrapper." On the basis of those definitions it would appear that "paper wrappering machinery" includes machinery for providing articles with paper wrappers, or in other words, packaging them in paper. That the application contemplates such a meaning is confirmed by appellee's admission in its answer to the notice of opposition that "it is using its mark Camco for wrappering and packaging machinery. [3] Therefore, on the basis of the statements in appellant's registration and appellee's application it appears that the two cover closely related goods which might well be expected to emanate from the same source.

[4] The Board found that the record contains no explanation as to the meaning of "paper wrappering machinery," and apparently placed the burden of showing what was meant by that term on appellant. However, since the term was first used by appellee, who has advanced no evidence as to its meaning, it would seem proper to give it the dictionary interpretation which, as above noted, includes packaging machinery. We are unable to agree with the Board that because appellee's application includes several types of machinery in the field of printing and binding, its "paper wrappering material" should be construed as limited to those fields. This is especially true in view of appellee's admission, above referred to, that it is using its mark on packaging machinery.

[5] The Board also seems to have given weight to the fact that much of the equipment sold by appellant is of a relatively small hand-operated type. However, that is not controlling since neither the application nor the registration is in any way limited to the size or manner of operation of the machinery. See *Intercontinental Mfg. Co., Inc.* v. *Continental Motors Corp.*, 43 CCPA 841, 230 F.2d 621, 109 USPQ 105, and *General Shoe Corp.* v. *Lerner Bros. Mfg. Co., Inc.*, 45 CCPA 872, 254 F.2d 154, 117 USPQ 281.

In our opinion at least some of the goods of the parties are so similar that concurrent use by the parties of their respective marks would be likely to result in confusion within the meaning of section 2(d) of the Lanham Act.

The decision is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

SCHNICK *v.* FENN

No. 6479. Decided April 12, 1960

[47 CCPA —; 277 F.2d 567; 125 USPQ 567]

1. INTERFERENCE—COUNT—CONSTRUCTION OF COUNT.

In construing an interference count reciting a heating element comprising a spirally wound annulus of resistence ribbon, and stating that the successive courses of the spiral should be substantially in contact and that they should be insulated at their points of contact solely by an oxide coating, *Held* that "It appears to us that the unambiguous meaning of the words does not necessitate the conclusion that a continuous contact of the faces of the ribbon each with the next is required to satisfy the count."

2. SAME—REDUCTION TO PRACTICE—TESTS.

Where several of appellee's automobile cigar lighters were given the usual laboratory tests accepted by the industry as basic for cigar lighters, the fact that a number of the test results did not meet the requirements of appellee's licensee which would have warranted production of the lighter, *Held* "* * * not fatal since we do not believe that an actual reduction to practice necessarily requires the making of a commercially acceptable embodiment, * * *, if the testing of it shows that it will perform its intended function"; and *Held* that "The amount of testing necessary depends upon the facts of the particular case, * * *."

3. SAME—SAME—SAME.

"It must be remembered that Fenn [appellee] and his associates were extremely experienced in this field and once they found the basic concept of the invention to be sound by testing it their principal concern was dissipated because they knew that the refinements necessary to perfect a commercially acceptable device could be made in the usual course of preparing it for mass production. Although a number of manufacturing techniquer were tried and abandoned as not being practical, we know of no precedent which requires that proven methods of mass producing a device must exist before a reduction to practice is established. On the contrary, we believe the law to be that reduction to practice is proved when there is corroborated testimony that the device actually performed the function for which it was designed, * * *, which we find to be the situation here."

4. SAME—SAME.

"Appellant [Schnick] has argued that if Fenn [appellee] possessed a workable 12-volt 'formed' self-insulating wire lighter at the time he was discussing the Schnick-Cuno lighter with the Chrysler representative in the fall of 1952, he would have mentioned it. It is alleged that appellee's silence in that respect indicates that he did not consider his invention workable at that time. We do not agree with appellant."

5. SAME—SAME—*Beals* v. *Finkenbiner* DISTINGUISHED.

In connection with appellant Schnick's reliance on *Beals* v. *Finkenbiner*, 12 App. D.C. 23, to support the contention that appellee Fenn's failure to mention that he was the inventor of the formed ribbon lighter when he was discussing the 12-volt lighters with the Chrysler representative was a most significant factor in appellant's favor, *Held* that, while it was a factor to be considered, the circumstances which rendered it important in the cited case were not present in the case at bar; that in the case at bar appellee's licensee and firm "had an operable and satisfactory device which was acceptable to the automobile industry"; and that there "was no need in the industry which his firm was not capable of satisfying, clearly a situation different from that in the *Beals* v. *Finkenbinder* case" (where an industry wide demand for a device to perform a certain function had arisen).

6. SAME—SAME—SAME—ABANDONED EXPERIMENT.

"Since actual reductions to practice have already been established as of April and December 1951 by the activity of Fenn [appellee] and his subordinates, the later tests conducted throughout 1951 and the early part of 1952 directed to the problems of devising a method for mass producing and in further perfecting the device are not significant in a determination of a reduction to practice. With respect to the issue of the device being an abandoned experiment, once reduction to practice has been found that question no longer exists. * * *. Therefore evidence of subsequent experimenting and testing is without probative value."

7. SAME—CONCEALMENT OF INVENTION—DELAY IN FILING APPLICATION.

"We come now to appellant's contention that Fenn [appellee] concealed or suppressed his invention. In support of this position Schnick cites the fact that Fenn did not file his application until November 12, 1952, 19 months after Fenn conceived the invention and then only because he was stimulated by having procured one of appellant's lighters in September 1952. On innumerable occasions the courts have held that the length of time between reduction to practice and filing is not significant in and of itself, but that each case must be determined on its own set of facts."

8. SAME—SAME—INTENTIONAL CONCEALMENT ESSENTIAL TO ESTOPPEL.

"* * *, the type of concealment which would estop an inventor from asserting his rights to an invention presupposes that the concealment was intentional. * * *. The testimony here is devoid of any evidence which shows that characteristic to be present. Quite to the contrary, there are mitigating circumstances which convince us that Fenn [appellee] cannot be chargeable with concealment or suppression."

9. SAME—SAME—EVIDENCE OF WILFUL CONCEALMENT ABSENT.

"We do not find sufficient evidence in this record to justify a conclusion that appellee concealed or suppressed his invention. Appellee might have been stimulated into action by the Cuno lighter which came into his possession, but it is more likely that he was motivated by the knowledge which he obtained in September 1952, i.e., that the entire automobile industry had definitely decided to convert to a 12-volt system. Whether it was either or both factors is not significant because evidence of wilful concealment or suppression is not present."

10. SAME—PRIORITY.

"* * *, since we are of the opinion that appellee did conceive and reduce to practice a device upon which the counts read prior to the invention thereof by Schnick, and since we find neither concealment nor suppression of the invention by Fenn, appellee must prevail in this interference proceeding. Therefore, we affirm the decision of the Board of Patent Interferences."

APPEAL from the Patent Office, Interference No. 87,714.

AFFIRMED.

Irvin H. Rimel, Cushman, Darby & Cushman, (*John W. Malley* of counsel) for Schnick.

Johnson & Kline, Ernest M. Junkins, Jr., (*Stephen H. Phillbin* of counsel) for Fenn.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior District Judge for the Eastern District of Pennsylvania*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Patent Office Board of Patent Interferences in Interference No. 87,714 awarding priority to the junior party Fenn.

The appellant, senior party Schnick, on September 16, 1952 filed application Serial No. 309,865 entitled "Electrical Heating Unit." Schnick was an employee of Cuno Engineering Corporation (to be referred to hereinafter as Cuno), to which the application is assigned, and was engaged in cigar lighter development work in March 1952, the time at which he concededly conceived the invention embodied in the counts at bar.

The junior party Fenn, appellee here, filed application Serial No. 320,071 entitled "Heating Element for Cigar Lighters" on November 12, 1952. At the time he alleges he conceived and reduced to practice the invention here in issue, Fenn was executive vice president of Casco Products Corporation (hereinafter called Casco), and at the time testimony was taken, was president of Casco, licensee of the Fenn application.

The counts in controversy are:

1. A cordless electric cigar lighter plug of the type adapted to be housed and heated in a socket and to be separated therefrom for use, a heating element comprising a spirally wound annulus of resistance ribbon of segmental tubular cross-section along at least a portion of its length, successive courses of said spiral being substantially in contact each with the next whereby said annulus resists deformation in an axial direction, said courses being insulated from each other at their points of contact solely by an insulating oxide formed on the surface of said ribbon, terminals for said heating element, one of said terminals comprising a metallic carrier on said plug connected to the outer end of said heating element.
2. The invention as defined in count 1, wherein said carrier is a cup enclosing said heating element.
3. The invention as defined in count 1, wherein said ribbon is substantially V-shaped in cross-section.
4. The invention as described in count 1, wherein said ribbon is substantially arcuate in cross-section.

The invention resides in heating elements intended primarily for, and utilized as, automobile cigar lighters. In 1951, both Cuno and Casco, apparently the two largest cigar lighter manufacturers in the country, learned that automobile manufacturers were contemplating a change-over to 12-volt electrical systems from the then standard 6-volt systems for passenger vehicles. A 12-volt electrical system necessitated 12-volt cigarette lighters. Ohm's law would suggest the use of a resistance wire half the thickness and twice the length of the flat ribbon then used in the 6-volt lighters. However the decreased cross-section posed two serious problems from practical and mass production standpoints. First, thin metal (0.01 inch) tended to distort and creep in an axial direction upon repeated heating to elevated temperatures, which meant that a heating element soon lost its desirable flat igniting surface. Secondly, the greater length of the ribbon required closer spacing of the successive courses to enable the wound coil to fit the cup into which it was eventually welded. That presented a need for some means for insulating the turns of the coil to prevent short circuiting.

In March 1952, Schnick allegedly formed an aluminum containing alloy ribbon having a V-shaped cross section, wound it tightly into a coil, and welded it into a cup in that tightly wound condition. Fenn claims that in April 1951 he and his associates formed a V-shaped ribbon of an aluminum alloy, wound it into a coil, and welded the coil into a cup, the turns of the coil being close enough together so that they restrained movement in an axial direction. The aluminum alloy "Kanthal" was used by both so that when wound into coils and upon heating, an aluminum oxide coating, an insulator, would be formed on the surfaces of the ribbon to provide self-insulated coils, thus obviating the need for an additional insulating means such as ceramic.

Appellant has assailed virtually every holding made by the Board of Patent Interferences and appellee's arguments are substantially a reaffirmation of the Board's position.

The basic issues confronting us in this case are:

1. Was the Board's interpretation of the counts proper?

2. Did Fenn conceive a device upon which the counts can be read?

3. Were Fenn's reductions to practice proven by the proper type and quantum of evidence?

4. Was there abandonment, concealment or suppression of the Fenn invention prior to the filing of an application thereon in November 1952?

Appellant contends that all of the counts require the ribbon to be tightly wound so that all of the faces of adjacent courses are in contact with each other, those faces being insulated from each other solely by the aluminum oxide layer on their surfaces.

The Board was of the opinion that the counts were not so limited, that they merely required the successive courses to be so interlocked that axial distortion was prevented, and that the oxide insulation was required only where the faces of the interlocking turns actually

contacted each other. That, the Board felt was a reasonable construction of the count and since its terms were found to be unambiguous, resort to the Schnick application for interpretation was considered to be unnecessary. Even had that been necessary appellant's construction was held to be required neither by the specification nor by the original claims.

In connection with the issue of priority, the junior party has not attempted to prove diligence. Fenn's proofs are directed solely to establishing reduction to practice prior to late March 1952, the uncontested dates of conception and reduction to practice by Schnick.

The Board stated that the parties should be held to the same standard of proof with respect to the question of reduction to practice. Both parties were felt to have been satisfied that their elements were suitable for the intended purpose after only preliminary tests. It was held that testing to the point where a fully satisfactory commercial model was obtained was not necessary in the cigar lighter art, especial reliance being placed upon *Sinko Tool & Mfg. Co.* v. *Automatic Devices Corp.*, 157 F.2d 974 (CCA 2), 71 USPQ 100. The testing required to prove a reduction to practice was held to be no more than that which showed "clearance or lack of shorts, lack of severe distortion along with self-retention of the coils and some promise of durability." The Board also found that Schnick's own proofs of March 1952 did not establish that tightness was the gist of the invention (as is now argued), nor that the basic industrial[1] tests were run on his models.

The Board also held that Fenn's tests were not abandoned experiments (again relying heavily on the *Sinko* case) and that he had neither concealed nor suppressed his invention. The Board concluded that Fenn conceived all of the counts on April 9, 1951, that counts 1, 2 and 3 were reduced to practice by him in April 1951, and that counts 1, 2 and 4 were reduced to practice in December 1951. The reductions to practice were found to be sufficiently demonstrated and properly corroborated.

The three features of count 1 which are in issue here are the shape of the ribbon, the closeness of its convolutions and its self-insulating property. Although appellant contests the conception by appellee of all of these features, he argues most vigorously that in order to meet the count the ribbon must be so tightly wound that all of its successive courses are in contact, that appellee's device does not qualify in this respect, nor was it ever intended to do so.

[1] The question immediately arises whether the count requires that interpretation. We think it does not. It states that the successive courses of the spiral shall be *substantially in contact* and that they should be insulated at *their points of contact* solely by an oxide coating. It appears to us that the unambiguous meaning of the words does not necessitate the conclusion that a continuous contact of the faces of the ribbon each with the next is required to satisfy the count. Therefore, appellant's interpretation of the testimony which might show appellee's unawareness of that feature is not significant. It might be noted in this connection that appellant has been allowed a claim, in the appealed application wherein a tightly wound coil having the sides of the ribbon in "substantially face-to-face engagement" is a critical element.[2]

We now turn to the device that appellee conceived and its relation to the counts as a whole. Exhibit A dated April 9, 1951, which Fenn stated he sketched in pencil on that date, is a sheet of lined tablet paper showing various configurations of the formed ribbon including the V-shaped and arcuate forms and bearing notations of ".010 Kanthal"[3] and "lock coils by form to strengthen and stabilize [:] to compensate for thinner wire oxidize first by H.F. or furnace then apply voltage." It is initialed by Fenn and Youhouse, the development engineer in charge of Casco's Research and Development Electrical Engineering Laboratory. Fenn explained that a conference with Youhouse was initiated on that day to tell him of his idea to meet the cigar lighter requirements of the automobile industry's projected 12-volt systems, and that he sketched Exhibit A so that Youhouse would have a visual image of the invention. Fenn kept this exhibit in his desk from then until this controversy arose.

Pursuant to Fenn's orders, Youhouse had several lighters (12 to 15) made incorporating Fenn's features in them. Within a few days after the conference with Youhouse, Fenn went to the laboratory and tested one of these lighters in several ways, including lighting a cigarette with it. Fenn stated:

> * * * I had been in the laboratory, even tested this [the heating element] myself, personally, and lighted cigarettes from it, to see if the tobacco would pull, and did many other things with it. * * *

Later, one of these lighters, according to Youhouse, was taken to Fenn's office. Fenn testified that upon receiving it he placed it in his desk drawer where it remained until shortly before it was introduced in evidence as Exhibit B. Although Exhibit B may not be the lighter that Fenn tested himself, according to Youhouse it was, and there is no reason to believe it is not one made according to Fenn's specification. Youhouse's testimony in that respect is as follows:

> Q33. What, if anything was done with the sample after it was made? A. Well, we made up more than one sample, as I said. And I showed it to Mr. Fenn. And he came down to the lab and tried it out. He thought it was pretty good. He advised me to put one on the life test machine, and I did. However, within two days I got a phone call that he wanted to see that sample. That is the only one we had at the time.
>
> Q34. And what did you do then? A. I took it off the machine and brought it up to the office.
>
> Q35. What office? A. Mr. Fenn's office.
>
> Q36. What did you do with it then? A. I left it there. I never seen it after. In fact I thought it was lost, until I saw it afterwards, a little while ago. It never went back to the testing machine. I think it had a short cycling period of two days on the machine.
>
> Q37. I notice a white tag on Fenn's Exhibit B. Please examine that and indicate what it signifies to you. A. Well I had a girl type up this tag, to put it on, to make sure that it is the right one, and initialled it, typed my initials on, to know what it is about, that that was the unit that I sent over. I didn't want to have it mixed with other heating units, so that we wouldn't be able to separate it afterwards.
>
> Q38. When did you have that tag typed? A. Before I took it up to the office.
>
> Q39. What date? A. I presume on that date. It must be on that date when I took it off. April 16, 1951.

A physical examination of that lighter shows that it meets the requirements of counts 1, 2 and 3, namely, the "ribbon is substantially V-shaped in cross section," and the "successive courses of said spiral * * * [are] substantially in contact each with the next whereby said annulus resists deformation in an axial direction." Youhouse's testimony convinces us that the wire used for the lighter was an aluminum alloy which was oxidized to form an aluminum oxide insulating coating. This satisfies the limitation, "said courses being insulated from each other at their points of contact solely by an insulating oxide."

The next question to be considered is whether the work done by Fenn and his subordinates amounted to an actual reduction to practice. As has been stated, Fenn had the lighters tested in various ways. He testified as follows:

> Q79. I would like to know what was done with this particular lighter, this particular sample that you mentioned. I would like to know what was done. A. Well, the questions that I was primarily interested in had to be tested to see what the results were. I would say the most important requirement was to see whether or not the coil would creep or distort under heat. The second major requirement was, since we were using a thinner cross-section wire, the cherry-red factor was a vital point. By that I mean the requirement of a lighter is that it retain what we term cherry-red color, which is a heat, for a minimum of eight to ten seconds, since if it does not, it is not a satisfactory lighter, or would be known as a "cold light," and would pull tobacco from the end of a cigarette.
>
> Now naturally, when you use a heavy cross-section, the mass is greater, and the heat is retained more easily. With a lighter, thinner gauge wire, it normally would cool much faster. To overcome this, the idea was to put more wire into the same diameter element retainer, wind the turns closely and retain the heat, in theory. And I was anxious to determine whether this would work out in practice.
>
> Q80. Did you determine it? A. Yes, I did.
>
> Q81. When did you determine it? A. I would say within a few weeks of the time I first put the sketch on paper and instructed him to proceed with this development. I visited the laboratory many times while the lighter was on test, and cycling. * * *

[2] Throughout the year 1951 several of them were given the usual laboratory tests which were accepted by the industry as basic for cigar lighters. Although a number of the test results did not meet the requirements of the Casco Company which would have warranted production of the lighter at that time, that was not fatal since we do not believe that an actual reduction to practice necessarily requires the making of a commercially acceptable embodiment, *Van Cleef* v. *Tierney*, 28 CCPA 1039, 118 F.2d 911, 49 USPQ 274; *Radio Corporation of America et al.* v. *International Standard Electric Corp.*, 282 F.2d 726 (CCA 3), 100 USPQ 228; see also *Hildreth* v. *Mastoras*, 257 U.S. 27, 42 S. Ct. 20, 66 L. Ed. 112; *Tansel* v. *Higonnet et al.*, 42 CCPA 732, 215 F.2d 457, 103 USPQ 58; *Field* v. *Knowles*, 37 CCPA 1211, 188 F.2d 598, 86 USPQ 373, if the testing of it shows that it will perform its intended function. The amount of testing necessary depends upon the facts of the particular case, *Lustig* v. *Legat*, 38 CCPA 991, 154 F.2d 680, 69 USPQ 345; *Sinko Tool & Mfg. Co.* v. *Automatic Devices Corp.*, supra.

In this instance, since the 12-volt system required the use of longer and thinner wire, the main problems to be overcome were axial distortion and shorting. The self-insulated interlocked formed ribbon solved those problems, and there is sufficient evidence to convince us that the device made according to the specifications which Fenn prescribed satisfied Fenn that he had accomplished his purpose and that the device was satisfactory.

[3] It must be remembered that Fenn and his associates were extremely experienced in this field and once they found the basic concept of the invention to be sound by testing it their principal concern was dissipated because they knew that the refinements necessary to perfect a commercially acceptable device could be made in the usual course of preparing it for mass production. Although a number of manufacturing techniques were tried and abandoned as not being practical, we know of no precedent which requires that proven methods of mass producing a device must exist before a reduction to practice is established. On the contrary, we believe the law to be that reduction to practice is proved when there is corroborated testimony that the device actually performed the function for which it was designed, *Applegarth* v. *Wilson*, 33 CCPA 1208, 156 F.2d 373, 70 USPQ 449; *Sinko Tool & Mfg. Co.* v. *Automatic Devices Corp.*, supra, which we find to be the situation here.

Counts 1, 2 and 3 read upon Exhibit B and counts 1, 2 and 4 read on Exhibit C, this latter exhibit showing a ribbon having a substantially arcuate cross-section.

Youhouse in endeavoring to devise a low-cost method of manufacturing the formed wire coil, in late 1951 instructed one Beardsley, the model maker at Casco, to use the regular coil winding machinery and wind the coil into a conical spiral using a mandrel. Beardsley made about 25 coils by this method. An arcuate shape resulted because of the shape of the mandrel. In December 1951, Exhibit C was given the "life test," and thereafter was tagged and deposited in the archives of the Casco plant where it remained "until somebody wanted to see it work." Although the method of manufacture used to make it was found to be impractical, we are of the opinion that the exhibit represents one of the configurations sketched by Fenn on Exhibit A, that it was adequately identified and there was sufficient testing of it on the life test machine to establish a reduction to practice.

[4] Appellant has argued that if Fenn possessed a workable 12-volt "formed" self-insulating wire lighter at the time he was discussing the Schnick-Cuno lighter with the Chrysler representative in the fall of 1952, he would have mentioned it. It is alleged that appellee's silence in that respect indicates that he did not consider his invention workable at that time. We do not agree with appellant.

Appellee visited the Chrysler Company to sell them the 12-volt flat wire lighter which Casco was then producing in competition with the Schnick-Cuno formed self-insulating wire lighter. It would have been extremely poor salesmanship if Fenn had admitted at that time that he felt the Cuno type lighter to be preferable, and that he had invented one which he was having difficulty convincing his company to produce. As we understand the evidence, Fenn visited Chrysler to sell the product which Casco could deliver, not to justify his position as an inventor at the expense of his company.

[5] Appellant relies on *Beals* v. *Finkenbiner*, 12 App. D.C. 23, and cases such as *Atlantic Works* v. *Brady*, 107 U.S. 192, 208, 2 S. Ct. 225, 27 L. Ed. 438, to support the contention that Fenn's failure to mention that he was the inventor of the formed ribbon lighter when he was discussing 12-volt lighters with the Chrysler representative is a most significant factor in his favor. While it is a factor to be considered, the circumstances which rendered it important in the cited cases are not present here. In *Beals* v. *Finken-*

[1] The following appear to be the basic tests:
1. Timing—the rate of heating of the element.
2. Cherry-red factor—the length of time the element retains a red heat after removal from the energizing source.
3. One minute burnout—whether the element remains operative after continuous heating for one minute.
4. Life cycle test—whether the element survives 10,000 operating cycles.

[2] In an interference involving that count, Fenn filed an abandonment of contest, and priority was awarded to Schnick.

[3] A thinner wire than Casco had been using for the 6-volt lighter. "Kanthal" is wire containing aluminum which oxidizes when heated to produce an aluminum oxide coating which serves as an insulator.

biner an industry wide demand for a device to perform a certain function had arisen. Finkenbiner, the junior party to the interference, was a general manager of a company which supplied similar devices, and which in answer to the demand offered several which were unsatisfactory for the purpose during the period in which manufacturers were seeking a solution to their problem. During that same period he claims he conceived and reduced to practice a device which was acceptable, and which was not submitted by him either to the officers of his company or to the industry until after he saw that device in operation in one of the plants he supplied, at which time he asserted no claim to it.

In the case at bar Casco had an operable and satisfactory device which was acceptable to the automobile industry; there was no need in the industry which his firm was not capable of satisfying, clearly a situation different from that in the *Beals* v. *Finkenbiner* case.

In the *Atlantic Works* v. *Brady* case, the "silent" inventor was shown to have long spoken of another's plan "as *the best possible plan that could be devised*, and that although deeply interested in the success of the operations [with which the device was to be used], he never alluded to or hinted at any plan of his own devising different from it" [emphasis ours], at a time when there was no device available which performed as satisfactorily as the invention he later laid claim to. This case is so obviously different from that at bar that it requires no further comment.

Appellant contends that even assuming Fenn conceived the invention in April 1951, the several unsatisfactory tests are convincing evidence that a reduction to practice was never accomplished and that those tests, together with the lack of further activity on Fenn's part, prove that he had but an abandoned experiment.

[6] Since actual reductions to practice have already been established as of April and December 1951 by the activity of Fenn and his subordinates, the later tests conducted throughout 1951 and the early part of 1952 directed to the problems of devising a method for mass producing and in further perfecting the device are not significant in a determination of a reduction to practice. With respect to the issue of the device being an abandoned experiment, once reduction to practice has been found that question no longer exists. *Brown* v. *Childs*, 28 CCPA 1229, 120 F.2d 350, 49 USPQ 713. Therefore evidence of subsequent experimenting and testing is without probative value.

[7] We come now to appellant's contention that Fenn concealed or suppressed his invention. In support of this position Schnick cites the fact that Fenn did not file his application until November 12, 1952, 19 months after Fenn conceived the invention and then only because he was stimulated by having procured one of appellant's lighters in September 1952. On innumerable occasions the courts have held that the length of time between reduction to practice and filing is not significant in and of itself, but that each case must be determined on its own set of facts. *Brown* v. *Childs*, supra; *Wheeler* v. *Linton*, 38 CCPA 799, 186 F.2d 738, 88 USPQ 382; *Rhinevault* v. *Pfiester*, 20 CCPA 1112, 65 F.2d 161, 17 USPQ 510.

[8] Furthermore, the type of concealment which would estop an inventor from asserting his rights to an invention presupposes that the concealment was intentional. *Rhinevault* v. *Pfiester*, supra. The testimony here is devoid of any evidence which shows that characteristic to be present. Quite to the contrary, there are mitigating circumstances which convince us that Fenn cannot be chargeable with concealment or suppression.

Although in late 1951 and early 1952 large scale mass production of a 12-volt lighter for automobiles was not necessary since only a few were needed to satisfy the demand, it soon became apparent as more and more automobile companies decided to convert to 12-volt systems, that the mass production of 12-volt lighters was required. When it became obvious that the automobile industry was in earnest about converting, it became imperative for Casco to mass produce a 12-volt lighter quickly in order to secure as much of this business as possible. Casco had already perfected 12-volt lighters having flat .014" resistance ribbons, some having ceramic cement between the convolutions and others not. The company decided to proceed with the production of those so that they would not be in a handicapped position, hence it produced 2 or 3 million of this type of lighter.

Fenn, the executive vice president of Casco, went to Detroit to endeavor to sell those lighters to the automobile companies and was successful in that endeavor. His company could not wait for the perfection of a technique to mass produce his invention in view of the highly competitive nature of the automobile accessory business.

Furthermore, even though Fenn was executive vice president of Casco and son-in-law of the president, he could not order the production of a new type of lighter which would require retooling operation in the plant especially when, during the period from December 1951 to September 1952, they were continuing "the development of the best design" and spending "a great deal of time discussing the feasibility of manufacturing an element of * * * [Fenn's] design for production." There is ample evidence that he endeavored to convince the various people in the hierarchy of his company to adopt his lighter. Ultimately though, it was Fenn's responsibility to manage the company so that its operation would run smoothly and profitably. Inventing was an extra-curricular activity of his.

This is not to say that Fenn was not concerned about filing an application for his invention during that period. In December 1951 he called his patent attorney and described to a patent agent in that office the fundamentals of his invention. That fact was corroborated by testimony and documentary evidence. At that time a preliminary search was made and Casco was billed for it. Undoubtedly there was a period between December 1951 and November 1952 when appellee could have filed his application, but Fenn could have been discouraged about the mass production of his lighter by the Engineering Department of Casco and the fact that the company was proceeding with the production of the 12-volt flat wire lighter.

[9] We do not find sufficient evidence in this record to justify a conclusion that appellee concealed or suppressed his invention. Appellee might have been stimulated into action by the Cuno lighter which came into his possession, but it is more likely that he was motivated by the knowledge which he obtained in September 1952, i.e., that the entire automobile industry had definitely decided to convert to a 12-volt system. Whether it was either or both factors is not significant because evidence of wilful concealment or suppression is not present.

[10] The record in this case is voluminous and we believe counsel for appellant in their brief have developed with great care every conceivable proposition which might support a judgment in appellant's favor. However, since we are of the opinion that appellee did conceive and reduce to practice a device upon which the counts read prior to the invention thereof by Schnick, and since we find neither concealment nor suppression of the invention by Fenn, appellee must prevail in this interference proceeding. Therefore, we affirm the decision of the Board of Patent Interferences.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

MICHIGAN MUSHROOM COMPANY *v.* NASH-FINCH COMPANY

No. 6337. Decided April 18, 1960. Petition for rehearing denied June 29, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. TRADEMARK—CONFUSING SIMILARITY—"DAWN FRESH" AND "DEWY-FRESH."

Upon review of the dismissal of an opposition to the registration of appellee's composite mark, for fresh vegetables, having as its background a leaf shaped pattern upon which, in large letters at the center thereof, were the words "DEWY-FRESH" and, at the lower left and extending, in part, off the leaf a little elf-like figure, by the registrant and prior user of "DAWN FRESH" on a line of canned and fresh frozen fruits and vegetables, various canned mushroom products, fresh mushrooms and fresh asparagus, *Held* that "DEWY-FRESH" and "DAWN FRESH" have the same general appearance, both having in common the word "FRESH," the same number of letters in each word, and the same first and third letters of the first word; that "Considered in their entireties they sound quite similar"; and that "Their meanings stimulate the same mental associations, i.e., as fresh as the dawn with dew on the grass."

2. SAME—SAME—EFFECT OF BACKGROUND CONFIGURATION AND PICTURE.

"Appellee contends, inter alia, that confusion as to source is unlikely because of the background configuration and picture included in its mark. We do not believe that this factor is determinative of the issues in this instance."

3. SAME—SAME—SUGGESTIVENESS AS TO QUALITY OF GOODS.

Held that in appellant's mark, "DAWN FRESH," suggestiveness as to quality is apparent, but the mark has some fanciful characteristics; that "DAWN FRESH" is neither suggestive nor descriptive of appellant's canned and fresh frozen fruits and vegetables, canned mushroom products, fresh mushrooms and fresh asparagus; and that whatever trademark significance "DAWN FRESH" possesses in identifying the source of appellant's goods could be jeopardized by the use of appellee's mark including "DEWY-FRESH" because of their similarity.

APPEAL from the Patent Office. Opposition No. 36,501.

REVERSED.

Robert I. Dennison, Brezina and Buckingham (*John Charles Brezina* of counsel) for Michigan Mushroom Company.

Herbert M. Birch for Nash-Finch Company.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*

MARTIN, J., delivered the opinion of the court.

This appeal is from the decision of the Assistant Commissioner of Patents dismissing an opposition to the registration of a composite mark bearing the words "DEWY-FRESH" for use on fresh vegetables, by the registrant and prior user of "DAWN FRESH."

Appellee's mark is a composite having as its background a leaf shaped pattern upon which, in large letters at the center thereof, are the words "DEWY-FRESH" and, at the lower left and extending, in part, off the leaf a little elf-like figure. Use in commerce of that mark since February 10, 1955 has been alleged. Opposer, appellant here, is the owner of several registrations[1] for use on a line of canned and fresh frozen fruits and vegetables, various canned mushroom products, fresh mushroom and fresh asparagus.

The stipulated facts show that both the gross sales and the advertising expenditures in connection with the sale of products under the "DAWN FRESH" mark have been considerable during the years 1945–1956, 1956 being the year in which the verified notice of opposition to the registration of "DEWY-FRESH" was filed. In addition the stipulation indicates that at the time it was entered into "DAWN FRESH" was used on fresh asparagus and fresh mushrooms sold in packages weighing one pound or less. Also the mark was used on canned mushrooms, mushroom products, and canned asparagus.

Since the goods of the parties are the same, the class of purchasers alike, and appellant is the prior user, the sole question remaining for our determination is whether the composite "DEWY-FRESH" mark when applied to the goods of appellee would be likely to cause confusion or mistake or deception of purchasers.

The Assistant Commissioner, with whom the appellee agrees, found that the differences in sound, appearance and general impressions created by the marks were sufficient to avoid any likelihood of confusion. The appellee additionally contends that both of the word marks are suggestive of the qualities of the goods to which they are applied and consequently are not entitled to very broad protection.

It is the appellant's position that the word marks dominate and that the issue of likelihood of confusion should be decided on the basis of a comparison of those words. It also maintains that the marks sound alike, look alike and stimulate the same mental associations. It is contended that the purchasers of the respective parties' goods are not discriminating and that this is a factor which must be considered in resolving the issue of likelihood of confusion. Finally, appellant reminds us that if a doubt arises as to whether the marks are likely to cause confusion, that doubt must be resolved against appellee, the newcomer.

[1] "DEWY-FRESH" and "DAWN FRESH" have the same general appearance, both having in common the word "FRESH," the number of letters in each word, and the first and third letters of the first word. Considered in their entireties they sound quite similar.

[1] Reg. No. 319,998 issued December 18, 1934, renewed December 18, 1954; Reg. No. 382,228 issued October 22, 1940; Reg. No. 531,730 issued October 10, 1950; Reg. No. 610,007, filed June 21, 1954, issued August 2, 1955.

Their meanings stimulate the same mental associations, i.e., as fresh as the dawn with dew on the grass.

[2] Appellee contends, interalia, that confusion as to source is unlikely because of the background configuration and picture included in its mark. We do not believe that this factor is determinative of the issues in this instance. See *W. B. Roddenbery Co.* v. *Kolich*, 34 CCPA 745, 158 F.2d 289, 72 USPQ 188; *Rice-Stix Dry Goods Company* v. *Industrial Undergarment Corporation*, 33 CCPA 813, 152 F.2d 1011, 68 USPQ 180; *Lekas & Drivas, Inc.* v. *Tenth Avenue Trading Corp.*, 42 CCPA 1010, 223 F.2d 294, 106 USPQ 190.

[3] The remaining question to be resolved in this case is whether appellant is entitled to prevail in spite of the fact that its mark is suggestive of the quality of its goods. Suggestiveness as to quality is apparent, and yet, the mark has some fanciful characteristics. "DAWN FRESH" is neither suggestive nor descriptive of the goods themselves.

We believe whatever trademark significance the mark possesses in identifying the source of appellant's goods could be jeopardized by the use of appellee's mark because of their similarity. Sufficient doubt is raised in our minds as to the likelihood of confusion to cause us to decide in favor of appellant.

For those reasons the decision of the Assistant Commissioner is reversed.

REVERSED

PATENT SUITS

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2,940,500. (See 2,918,113.)

2,940,510. (See 2,918,113.)

Re. 24,169, A. R. Solomon et al., Mobile staging, filed Apr. 27, 1960, D.C., W.D. Mo. (Kansas City), Doc. 12801, *Arthur R. Solomon et al.* v. *Sterling Roofing & Sheet Metal Company.*

Re. 24,599, D. Biermann, Full feathering propeller, filed June 17, 1960, D.C., S.D. Ohio (Dayton), Doc. 2486, *Hartzell Industries, Inc.* v. *McCauley Industrial Corporation.*

Des. 174,419, D. L. Fenlason, Slipper, filed Aug. 19, 1959, D.C., S.D.N.Y., Doc. 149/343, *Donna L. Fenlason* v. *Mercury, Ltd.* Stipulation and order of discontinuance June 20, 1960.

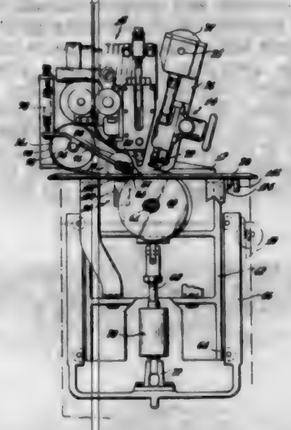
Des. 182,227, P. Schuss, Sheet plastic fabric, filed Feb. 26, 1959, D.C. Mass. (Boston), Doc. 59/166-MC-F, *Columbus Coated Fabrics Corporation* v. *Southbridge Finishing Co., Inc.* Stipulation and order holding patent valid and infringed; defendant enjoined June 20, 1960.

PATENTS

GRANTED AUGUST 2, 1960

GENERAL AND MECHANICAL

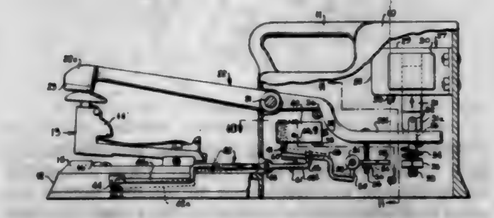
2,947,081
UPHOLSTERY MACHINE
Jacob S. Kamberian, West Newton, Mass. (% International Shoe Machine Corp., 292 Main St., Cambridge 42, Mass.)
Filed Nov. 18, 1957, Ser. No. 697,220
10 Claims. (Cl. 1—2)



1. Apparatus for pulling the marginal edge of flexible material applied to one side of a rigid panel over the edge of the panel and attaching it to the opposite side, comprising instrumentalities for constantly operating on the marginal edge progressively to pull successive small areas of the margin heightwise with respect thereto, and to advance the same lengthwise while taking up new areas, a folding device next to the instrumentalities for contact with the edge of the panel to turn the margin down as it leaves the instrumentalities, a support situated below the instrumentalities mounting a work table for yieldably holding the panel engaged with the instrumentalities, panel feeding means on the table operable to assist in moving the panel in unison with the feed imparted to the margin by the instrumentalities, and means mounting the panel feeding means for angular disposition on the table so as to impart a component of feeding force to the panel in a direction to hold its edge against the folding device.

2,947,082
ELECTRICALLY OPERABLE STAPLER
Harry O. Moore, Charlotte, N.C., assignor to Silabert Corporation, Mecklenburg, N.C., a corporation of North Carolina
Filed Feb. 11, 1957, Ser. No. 639,538
2 Claims. (Cl. 1—3)

1. A stapling device comprising a housing, a base extending forwardly from said housing, at least one stapling machine mounted on said base, a stapling machine actuating lever, means pivotally mounting said stapling machine actuating lever on said housing, said stapling machine actuating lever extending forwardly from said pivot means and overlying said stapling machine to actuate the same, a vertically disposed solenoid positioned in said housing and having a solenoid plunger normally depending downwardly therefrom, said stapling machine actuating lever extending rearwardly from said pivot means inside the housing and underneath said solenoid, means for connecting the rear end portion of said stapling machine actuating lever to the solenoid plunger, and means for energizing said solenoid to retract the solenoid plunger to pivot the outer end of the actuating lever downwardly against the stapling machine to perform a stapling operation, said means for energizing the solenoid comprising a normally open switch, a switch button for closing the switch, a substantially horizontally disposed and pivotally mounted switch actuating lever positioned alongside said base adjacent said stapling machine and extending inside said housing, resilient means for normally urging the outermost end of said switch actuating lever upwardly, a substantially horizontally disposed rod pivotally secured to

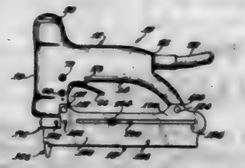


the inner end portion of said switch actuating lever, said rod being pivotally mounted at a medial portion thereof in overbalancing relation so that the end portion thereof extending rearwardly from the pivot point overbalances the end portion extending forwardly from the pivot point, the forward end of said rod being in engagement with said switch button to actuate the same and close the switch, a normally substantially vertically disposed and pivotally mounted arm lockingly engaging the rear end portion of said rod to prevent upward movement thereof, a normally horizontally disposed arm connected to said vertically disposed arm, and means for connecting the horizontally disposed arm to the rear end portion of the stapler machine actuating lever whereby upon said switch actuating lever being depressed, the forward end portion of said rod will be pivoted upwardly to close the switch and energize the solenoid to perform a stapling operation.

2,947,083
PNEUMATIC STAPLING TOOL
Arvid I. Ericsson, Chicago, Ill., assignor to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Filed Nov. 8, 1956, Ser. No. 621,096
11 Claims. (Cl. 1—44.4)

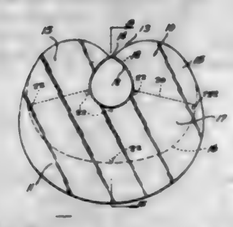
1. A stapling tool comprising, in combination, a handle, a staple magazine fixed relative to said handle and having an outlet at one of its ends, means forming a staple guideway at said outlet end of said magazine, means slidably carried by said magazine and holding said guideway in staple guiding position, resilient means connected to said guideway holding means for retaining the latter in holding position, a staple driver slidable in said guide-

way past said outlet end of said magazine, means for operating said staple driver, a staple follower slidable in said magazine for moving staples to said magazine out-



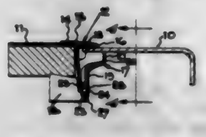
let, and means connecting said resilient means to said follower to urge the latter toward said magazine outlet while said resilient means holds said guideway holding means in said holding position.

2,947,804
GARMENT PROTECTOR
Grace V. Pile, 704 Franklin, Sedgwick, Kans.
Filed May 2, 1958, Ser. No. 732,705
1 Claim. (Cl. 2—50)



A protective covering for garments for use particularly in beauty salons, said protector being a cape-like article designed to extend about the wearer's neck in position both underlying and overlying the wearer's garment at the sides and back of the neck, said protector comprising: an outer panel formed of thin, liquid-proof, transparent, flexible plastic material, said outer panel being shaped from a single piece of said material to provide, in said single piece, a generally semicircular rear part intended to overlie the back portion of the wearer's garment and a roughly-semicircular front part formed medially between its opposite sides with a neck opening of approximately oval shape communicating with a shallowly V-shaped, forwardly-opening recess through the provision of a narrow throat, thus to define in said front part a pair of oppositely but identically formed wings located at opposite sides of the neck opening and adapted to overlie the wearer's shoulders in positions extending downwardly forwardly from the shoulders, said wings merging at their rear portions into the opposite side portions of said rear part of the outer panel, whereby liquids dropping from the hair and from the vicinity immediately to the sides and back of the head will drop onto said outer panel; an inner panel formed of the same material as the outer panel, said inner panel being smaller in area than the outer panel and having a rear part the back edge of which is moved rearwardly and is offset forwardly from the back edge of the rear part of the outer panel, said inner panel having side and forward edges constituting continuations of the curved back edge of the rear part thereof, the side and forward edges of the inner panel being disposed in full registration with the corresponding edges of the outer panel; a neck-encircling connecting portion integral with the outer and inner panels, said connecting portion extending over the full length of the edge of the neck opening, whereby said outer and inner panels may be disposed in overlying and underlying relation, respectively, to the shoulder and back areas of the wearer's garment, in positions protectively embracing the neck of said garment; an absorption panel formed of a liquid-absorbent material, said absorption panel being intended for a single use while the outer and inner panels are adapted for repeated usages thereof, the absorption panel being segmentally shaped and having a forwardly-opening recess registering with the rear part of the edge of the neck opening, the absorption panel extending laterally rearwardly from the neck opening with its back edge in registration with the back edge of the rear part of the inner panel; and a plurality of gripper fasteners removably connecting the absorption panel to the inner panel, said absorption panel being connected by said gripper fasteners solely to the inner panel, in a position overlying that surface of the inner panel that faces away from the outer panel, thus to dispose the absorption panel between the inner panel and the wearer's body when the inner panel is in underlying relation to the wearer's garment, said gripper fasteners being spaced about the periphery of the absorption panel with two of said fasteners being disposed at opposite ends of the recess of the absorption panel, a third gripper fastener being disposed medially between the first two gripper fasteners along the edge of the recess, fourth and fifth gripper fasteners being disposed at opposite ends of the back edge of the absorption panel, and a sixth fastener being disposed along said back edge of the absorption panel medially between the fourth and fifth fasteners.

2,947,805
MEANS AND METHOD OF SECURING SINK STRIP
Harold Kenneth Switzer, Trapp Court, Alexandria, Ky.
Filed July 30, 1956, Ser. No. 600,742
13 Claims. (Cl. 4—187)

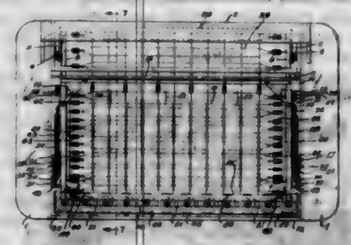


1. Means for mounting a flat-flange type sink in an opening in a drainboard, comprising; a frame of generally T-shaped cross section which is adapted to be positioned with its vertical leg between the edge of the drainboard and the edge of the sink and with a horizontal portion overlying the adjacent edges of the drainboard and the sink, the vertical leg of the frame terminating in a lower edge disposed below the plane of the under side of the drainboard, a plurality of one-piece metal lugs which are substantially U-shaped as viewed from above, each lug positioned beneath the frame with the arms of the U in contact with the under side of the drainboard at one side of the opening and with the opposite end thereof in contact with the under side of the sink flange, each lug being configurated to present an arcuate shoulder which is disposed adjacent to the lower edge of the vertical leg of the frame, and a portion of the lower edge of the vertical leg being swaged over to underlie the arcuate shoulder on the lug.

2,947,806
SOFA BED
Rudolph Coopersmith, Clayton, Mo., assignor, by mesne assignments, to Gerald W. Frotzake and Julius Greenblatt, as trustees
Filed Dec. 24, 1948, Ser. No. 67,183
17 Claims. (Cl. 5—13)

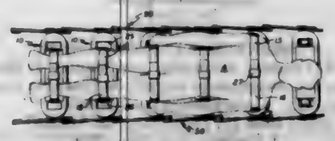
1. A folding sofa bed, comprising, a series of articulated frame sections including a front section and an adjacent section hinged thereto, a flexible fabric secured to and foldable with said sections from extended to folded

positions to form a support for a bed and a seat respectively and in which when folded with said sections the flexible fabric secured to said front section forms the support for the seat, and a resilient device connected to one of said sections and movable with said one section into a position extending along and forwardly of the front section at the junction of said sections and in the



plane of said fabric to flex downwardly with respect thereto when said front section is folded to form the seat, said device comprising a support fixed to said adjacent section, springs mounted on said support, and a frame carried by said springs and connected to said front section, said frame forming the leading edge of said resilient device and being adapted to flex with said springs.

2,947,807
PORTABLE COLLAPSIBLE STRETCHER
Jack L. Ondes, Mexican Hat, Utah, assignor to Clifford L. Shinn, Santa Ana, Calif.
Filed June 9, 1958, Ser. No. 740,655
5 Claims. (Cl. 5—82)



5. In a stretcher adapted to hold, inflexible, the bodies of injured persons and conform to the shape of the body longitudinally, a transverse member attachment to the body of the injured person consisting of a substantially rectangular flat body having a pivot pin at each end, each having a resilient holding latch at their outer end, said rectangular body having a rectangular cavity in its center portion closed by a plate providing slots at each end of the cavity, straps contained within said cavity each secured to cross pins within the cavity and extending over cross rollers slidably mounted on longitudinally extending slide rods, springs operating on said longitudinally extending slide rods to hold said cross rollers in position to retract said straps; said straps extending over said cross rollers to form flat loops and thence out through the slots at each end of said plate to provide means for attaching the transverse member to the body of an injured person.

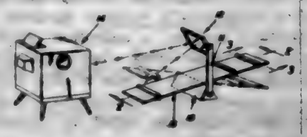
2,947,808
APPARATUS FOR THE DAILY MAKING OF BEDS
Ernst Wild, Im Gehren, Stafa, Zurich, Switzerland
Filed Oct. 22, 1958, Ser. No. 768,905
Claims priority, application Switzerland Feb. 20, 1958
6 Claims. (Cl. 5—321)

1. In combination with a bed including a mattress and a frame supporting said mattress, a covering device comprising a frame having an open side and a shape conforming to that of said mattress, means hingeably supporting said frame on said bed for hinged movement about said open side and clamping means adapted for clamping sheets and covers onto said frame whereby



the sheets and covers are pivotal as a unit with the frame onto said mattress, the open side providing for the engagement and disengagement of the sheets and covers beneath said mattress.

2,947,809
RELAXER
Louis Philip McKenzie, Houston, Tex., assignor to Apartment Furniture Co., a corporation of Texas
Filed Apr. 4, 1958, Ser. No. 726,543
6 Claims. (Cl. 5—327)



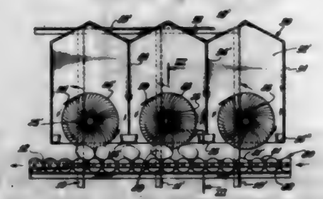
1. A device for relaxation comprising a stand having a base portion providing a fulcrum, supported by said stand, a mirror above said fulcrum, an elongated board balanced on said fulcrum and having a head end facing said mirror for observation of objects behind said head end of the board reflected in the mirror, and pivotally adjustable means mounting said mirror on said stand.

2,947,810
ARM FINS FOR UNDERWATER SWIMMING
Charles Rabito, 2720 Fagot St., Metairie, La.
Filed Sept. 30, 1958, Ser. No. 764,318
6 Claims. (Cl. 9—307)



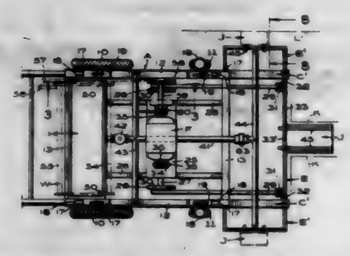
4. For use in underwater swimming, a flexible sleeve for attachment to an arm of a swimmer at the elbow joint region for folding at the region of its transverse center into elbow form from a straight condition in response to bending of the elbow of the arm, radial ribs on said sleeve at opposite sides of the transverse center of the sleeve for operation of one rib into diverging relation to another in response to folding of the sleeve on an arm into elbow form, and a web connecting said ribs and pulled taut in response to operation of said one rib into diverging relation to another rib.

2,947,011
MECHANICAL WATER-REMOVING DEVICE
Stanley A. McClusky, 3001 Baylor Ave., Bakersfield, Calif.
Filed Sept. 30, 1958, Ser. No. 764,389
5 Claims. (Cl. 15—3.17)



1. A device for mechanically and effectively removing free water from the surfaces of fruit and vegetables comprising, in combination with a non-absorbent roller conveyor adapted to roll and convey a bed of fruit and vegetables longitudinally: a plurality of cylindrical brushes extending transversely above and out of contact with said conveyor, each of said brushes being composed of thin, long, flexible, resilient and non-absorptive fibers, said cylindrical brushes being in spaced relation and mounted for rotation; means for driving said cylindrical brushes; and a substantially vertical partition between adjacent cylindrical brushes, a collection gutter carried by the partition in a plane below a horizontal plane passing through axes of rotation of said brushes but above a bed of fruit and vegetables on said conveyor and a longitudinally extending discharge gutter in communication with said collection gutters.

2,947,012
AUTOMATIC WASHING MOP AND FLOOR DRYER
Kosmas Skinas, 171 Noe St., San Francisco, Calif.
Filed Mar. 10, 1959, Ser. No. 798,439
4 Claims. (Cl. 15—98)



1. In an automatic washing mop and floor dryer: a main frame supported on wheels so as to be rolled about over a floor to be cleaned; the main frame being disposed at an elevation above the floor; a cradle frame carried by the main frame and being arranged between the main frame and the floor; the cradle frame having a portion projecting in front of the main frame and adjacent to the floor at a low elevation so as to be movable underneath a piece of furniture or the like; the cradle frame defining a pair of spaced parallel and longitudinally extending beams; a T-shaped horizontal screen supported by the beams of the cradle frame for longitudinal reciprocation; a horizontally disposed T-shaped main floor-cleaning member removably attached to the underneath surface of the screen for engaging with the floor; the screen and the main floor-cleaning member being identical in size and shape and both defining main body portions that extend longitudinally of the cradle frame; both the screen and the main floor-cleaning member being provided with wing portions at their forward ends which project laterally in both directions beyond the wheels, whereby these wing portions may be used for cleaning a floor adjacent to a wall; means operable for reciprocating the screen and the main floor-cleaning member rectilinearly back and forth over the floor in directions extending lengthwise of the cradle frame; and means for delivering a cleaning fluid to the screen for downward flow into the main floor-cleaning member.

2,947,013
AUDIBLE TOOTH BRUSH
Milton B. Silverman, 3204 Garrison Ave., Baltimore 16, Md.
Filed Feb. 17, 1956, Ser. No. 566,369
2 Claims. (Cl. 15—105)



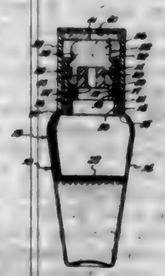
1. A toothbrush assembly, comprising, a housing having an opening on one side thereof and including an oscillatable brush head mounted therein having bristles extending therefrom through said opening and limited to a predetermined arcuate movement with respect to said housing, said housing including a musical box spaced from said brush head and enclosing a prong and reed mechanism for creating predetermined musical tones, a shaft connecting said prong and reed mechanism to said oscillatable brush head, said shaft being actuated when said brush head is rubbed against the tooth of a user in a vertical direction for operating said prong and reed mechanism to create musical tones.

2,947,014
COMPRESSION SPONGE MOP
Philip K. O'Connor, Riverside, and Stanley J. Stomiany, Chicago, Ill., assignors to American-Marietta Company, Chicago, Ill., a corporation of Illinois
Filed June 29, 1955, Ser. No. 518,867
3 Claims. (Cl. 15—119)



1. In a compression sponge mop structure, an elongated sponge body, a head plate member positioned above said body centrally thereof, compression plates on either side of said head plate member for folding and compressing said sponge body between them during wringing, a handle secured to said head plate member, an actuating handle associated with said first-mentioned handle, toggle link members extending between said actuating handle and said compression plates, and hinge connections comprising cooperating slots and pins connecting the head plate and the compression plates, each of said compression plates being rotatable about its respective hinge connection, said hinge connections permitting lateral shifting of the inner ends of said plates away from one another when said actuating handle is moved to compress said compression plates about said sponge to fold it upon itself, said lateral shifting of the inner ends of the compression plates being in addition to any lateral component of movement of said ends caused by rotation of said plates about their respective hinge connections, each of said hinge connections serving at least during the latter part of the wringing operation as a fulcrum against which its associated compression plate bears to apply wringing pressure to the sponge compressed between said plates.

2,947,015
LIQUID SHOE POLISH DISPENSER
Hugh M. Burt, 14723 Yukon Ave., Hawthorne, Calif.
Filed Oct. 16, 1958, Ser. No. 767,694
7 Claims. (Cl. 15—134)

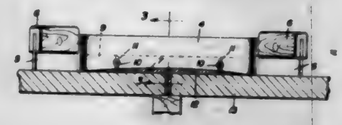


1. An improved liquid dispenser, comprising a deformable squeeze bottle having a reduced neck of greater wall thickness than the wall thickness of the deformable bottle, a tubular inner cap mounted on said bottle and extending around said neck and the terminal end thereof in spaced relation thereto, a porous applicator retained in the space between said inner cap and neck, said applicator having an enlarged annular portion extending about and compressed against the neck shank and a reduced end portion completely covering and compressed by the cap against the open terminal end of the neck and protruding through the cap endwise opposite the neck for dispensing liquid contained within the bottle, and an enlarged outer cap detachably mounted on the bottle and enclosing the inner cap and the applicator protrusion to prevent inadvertent spilling of liquid from said dispenser.

2,947,016
CLEANING AND POLISHING CLOTH
Dewey T. Thompson, La Grange, Ga., assignor to Callaway Mills Company, La Grange, Ga., a corporation of Georgia
No Drawing. Filed Apr. 8, 1957, Ser. No. 651,175
6 Claims. (Cl. 15—209)

1. A highly moisture absorbent cloth for cleaning surfaces which comprises a fabric of cellulosic material having a ratio of filling to warp of between 77 to 23 and 50 to 50, woven from yarn characterized by a range of twist multiplier of from about 2.25 to about 5.00, and impregnated with colloidal silica.

2,947,017
WALLBOARD JOINT FINISHING TOOL
Frank Dybdahl, R.F.D., Scottsbluff, Nebr.
Filed Aug. 18, 1958, Ser. No. 755,592
1 Claim. (Cl. 15—235.8)



A wallboard joint finishing tool comprising: a blade engageable transversely with the joint and including a concave arcuate, bottom scraping edge, said blade further including angularly extending, forwardly divergent end portions providing operating handles and operable on the wall on opposite sides of the joint for stabilizing said blade, an arcuate smoothing shoe for the joint mounted on the rear of the blade in laterally extending position and having a bottom face curved permanently in conformity with said edge of said blade, said smoothing shoe including a mounting flange engaged with the blade, said flange having slots therein, and securing elements on the blade engaged in the slots for adjustably fastening the shoe on said blade.

2,947,018
GUIDE STICK AND SUPPORT FOR PAINT BRUSHES
Lloyd F. Kurschner, 523 8th Ave., Minneapolis, Minn.
Filed Feb. 18, 1958, Ser. No. 715,971
1 Claim. (Cl. 15—246)



A guide stick and supporting member for hand paint brushes comprising a substantially elongated holder adapted to be detachably applied to the body of said paint brush, a pair of longitudinally spaced, upstanding guide channels in the body of said holder affording guide and retaining means for the guide stick mounted therein, spring means in the form of a pre-stressed spring clip acting on the guide stick to hold the same frictionally in pre-set engagement with the said guide channels, an aperture in said holder between the channel members wherein said stick is exposed for finger engagement to endwise adjust the same said guide stick at one outer end portion being upwardly inclined at an oblique angle and terminating in a working surface, said guide stick through its central longitudinal section being transversely notched to afford stops having frictional engagement with the said pre-stressed spring clip to limit the endwise movement of said guide stick relative to the paint brush.

2,947,019
DEVICE FOR REGULATING THE PRESSURE OR INSURING A CONSTANT PRESSURE ON WINDSHIELD WIPER BLADES
Maurice Liezze, 67 Ave. Paul Vaillant, Couturier, Cachan (Seine), France
Filed July 21, 1958, Ser. No. 749,973
3 Claims. (Cl. 15—250.2)

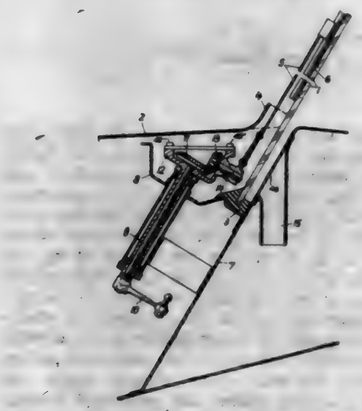
1. A mounting for a windshield wiper arm and blade assembly comprising a hub, pivot means on said hub, said wiper arm being mounted on said pivot means for pivotal movement toward and away from said windshield, a spring connected to said hub and to said wiper arm at

points spaced from said pivot means to bias said blade against said windshield, and a cam fixed to said hub, said spring being connected to bend about said cam as said wiper arm turns about said pivot means, said cam being



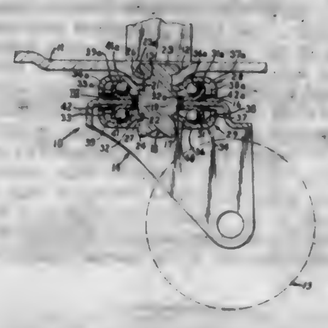
contoured to vary the distance between said spring and pivot means and thereby regulate the pressure of said blade against said windshield as said arm turns about said pivot means.

2,947,820
WINDSHIELD WIPER ARRANGEMENT FOR MOTOR VEHICLES
Karl Wilfert, Stuttgart-Degerloch, and Bela Barenyi, Stuttgart-Rohr, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed Dec. 21, 1953, Ser. No. 399,358
Claims priority, application Germany Dec. 22, 1952
9 Claims. (Cl. 15—250.16)



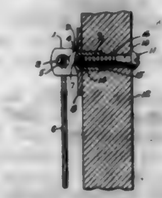
1. A wiper arrangement for motor vehicles having a cowl forming part of the front section of the vehicle said cowl having a transversely extending substantially horizontal upper wall portion, and a transversely extending window pane having a lower edge disposed beneath said upper wall portion, said cowl also having a terminal portion in front of said window pane and spaced therefrom to provide a gap, said wiper arrangement comprising wiper means adapted for oscillatory movement in said gap along said window pane, said wiper means having a horizontal rest position beneath said upper wall portion, an oscillatory shaft, said wiper means being mounted upon said oscillatory shaft for oscillatory movement along a path spaced from said terminal portion, drive means for oscillating said shaft and for pivoting said wiper means to said rest position, and said shaft being disposed beneath said upper wall portion.

2,947,821
SWIVEL CASTER STRUCTURE
John W. Black, Kalamazoo Township, Kalamazoo County, Mich., assignor to Pemco Wheel Company, Kalamazoo, Mich., a corporation of Michigan
Filed Jan. 18, 1957, Ser. No. 635,001
5 Claims. (Cl. 16—21)



1. In a swivel caster structure, the combination comprising: a top plate having a hole therethrough; a pivot pin extending through said hole and means rigidly securing said pin to said top plate; a frame having a wheel mounted thereon, said frame including a substantially planar plate having an opening therethrough, said pin extending loosely through said opening and said plate being positioned between the ends of said pin; a pair of substantially identical bearing units positioned, respectively, above and below said planar plate; said bearing units each consisting of an annular race, an annular retaining cone and a set of bearing balls therebetween; said races being of identical size and substantially identical configuration and being rigidly secured, respectively, to the upper and lower surfaces of said planar plate, said races each including an annular flange at its periphery extending away from such surface; said retaining cones also being of identical size and substantially identical configuration, each cone having an annular groove facing the race associated therewith and into which said annular flanges extend, each cone also having an annular, radially outer portion extending substantially beyond and spaced from the annular flange on the race associated therewith; said retaining cones being rigidly secured to said pin, respectively, above and below said planar plate; the respective sets of bearing balls being positioned within the respective races against and between the annular flange thereof and the opposing surface of the annular groove of the cone associated therewith.

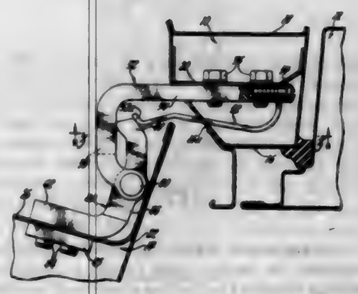
2,947,822
DECORATIVE HARDWARE FOR DRAWERS, DOORS, FURNITURE AND THE LIKE
Thomas S. Chack, 406-410 Grant Ave., San Francisco, Calif.
Filed June 24, 1957, Ser. No. 667,648
1 Claim. (Cl. 16—123)



In a decorative handle for furniture, doors and the like, a handle head, a hub extended from said head and being

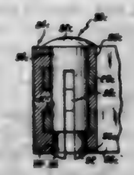
insertable into a suitable bore in a wall of said furniture, a screw adapted to be screwed axially into said hub, a screw head on the screw for drawing said hub and said handle head toward said bore, a shoulder formed on said handle head projecting beyond the periphery of said hub and forming a corner on said handle head, said handle head having a generally central hole therethrough transversely with respect to the axis of the hub and a slit extended diagonally from said shoulder corner to said central hole, said slit being pryable apart at said corner, a decorative handle, a loop on the handle insertable into said hole through said slit when the slit is spread apart, and a washer having a hole therethrough conforming to the outer periphery of said hub at said shoulder extending beyond said corner and beyond the outer periphery of said shoulder to form an enlarged bearing surface and for exerting slit closing pressure on said corner of said shoulder whereby said corner slit is held tightly closed by the force on said hub exerted by the drawing of said screwhead.

2,947,823
DOOR HINGE, CHECK, AND HOLD-OPEN
Arthur W. Hollar, Jr., Grosse Pointe, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,919
3 Claims. (Cl. 16—145)



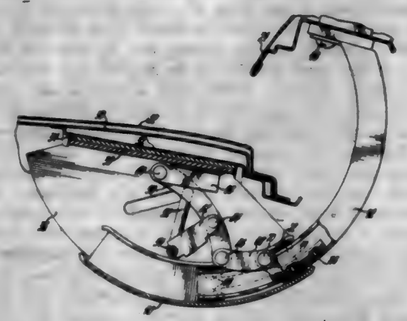
1. A door hinge, check and hold-open for mounting a closure member on a vehicle body member for swinging movement between open and closed positions, comprising, a first L-shaped hinge strap having a stem portion fixedly mounted on said body member and a leg portion extending at an angle from said stem portion to form a bight; a second hinge strap having a stem portion fixedly mounted on said closure member and a leg portion extending at an angle from said stem portion; a hinge pin pivotally connecting the free end of the leg portion of the first hinge strap to the second hinge strap intermediate the ends of the leg portion of the second hinge strap, the free end portion of the leg of the second hinge strap extending into the bight of the L-shaped first hinge strap, one side of said free end being adapted to abut the leg portion of the first hinge strap when the closure is in open position to provide a positive check; and a leaf spring mounted on the stem portion of said first hinge strap at a location adjacent the mounting of said first hinge strap on said body member, said spring extending into the bight of the L-shaped first hinge strap and said spring having a free end lying in the bight of said first hinge strap and in the path of movement of the free end of the leg portion of said second hinge strap and abutting the opposite side of the leg portion of said second hinge strap when the closure is in open position to provide a yieldable hold-open.

2,947,824
SPECTACLE HINGE AND PIVOT STUD THEREFOR
Frank Czadak, Jr., % Acme Precision Screw Products, Inc., 623 Glide St., Rochester, N.Y.
Filed Nov. 6, 1956, Ser. No. 620,683
10 Claims. (Cl. 16—168)



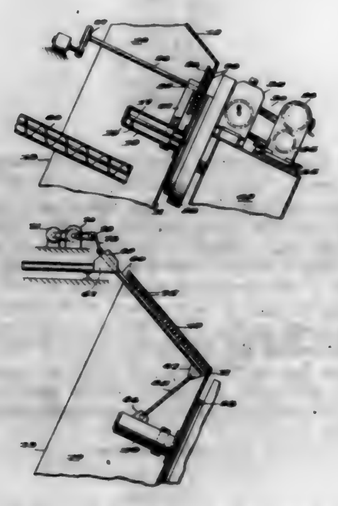
1. A spectacle hinge pivot stud comprising a main shank portion having a substantially cylindrical plain surface; an enlarged head at one end of said main shank portion; a smaller shank portion having a substantially cylindrical plain surface at the other end of said main shank portion; at least one enlarged protrusion adjacent the end of said smaller shank portion; at least one slot extending through at least a part of the length of said smaller shank portion from the protrusion end toward the head end of the stud so that the stud shank has at least two leg portions that are resiliently compressible towards each other to thereby reduce the distance between the outermost portion of said protrusion and the stud axis.

2,947,825
HINGE
David D. Campbell, Detroit, and Claud S. Sensar, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 26, 1958, Ser. No. 737,823
4 Claims. (Cl. 16—178)



1. A hinge for mounting a closure on a body, comprising, a first arcuate track member fixedly mounted on the body; a second arcuate track member movably carried on said first track member and connected to the closure, said second track member being arcuate about the same center as the first track member, and one track member being carried within the other; anti-friction means mounted between said track members to facilitate movement therebetween; and means providing a counterbalance force for said closure, including a torsion spring having one end anchored on said body and a crank portion near its other end, a first link pivoted at one end on the body, a second link having one end connected to the crank and the other end articulated to said first link intermediate the ends thereof, and a third link connected between the other end of said first link and said second member.

2,947,826
TREATING ORE CONCENTRATES
Fred D. De Vaney, Hibbing, Minn., assignor to Erie Mining Company, Hibbing, Minn., a corporation of Minnesota
Filed Mar. 23, 1956, Ser. No. 573,419
2 Claims. (Cl. 18—1)



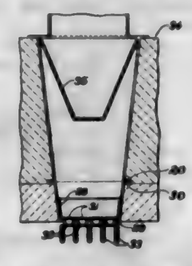
2. Apparatus for forming moist finely divided loose mineral solid particles such as ore fines into balls, said apparatus comprising an inclined hollow conically shaped vessel in the form of a right frustrum of a cone the smaller end of which is closed by a generally plane bottom member having, during use, at least the greater part of the inner surface of its conical side wall and of its bottom member lined with a compacted layer of moist particles constituting a rolling surface for the loose moist particles, means for feeding loose moist particles to the interior of the vessel, means for rotating the vessel about its inclined axis, first doctoring means for continuously limiting the thickness of the compacted layer on the bottom wall of said vessel comprising a rotatable disc disposed with one face substantially parallel to said bottom member and provided over said face with a plurality of spaced relatively narrow scraping elements the free ends of which are equally spaced from said bottom member, means for rotating said disc, and second doctoring means for continuously limiting the thickness of the compacted layer on the side wall of said vessel comprising an elongated member extending within said vessel for a distance substantially equal to the height of said side wall and parallel thereto, said elongated member being coplanar with the axis of rotation of said vessel, fixed bearing means exteriorly of said vessel for slidably supporting said elongated member, said elongated member having a plurality of spaced scraping members extending radially in a row therefrom, the free ends of said scraping members being equally spaced from said side wall and presenting relatively narrow scraping edges, and means exteriorly of said vessel for reciprocating said elongated member in said bearings independently of the rotation of said first doctoring means, the stroke of reciprocation of said elongated member being at least equal to the space between adjacent scraping members.

2,947,827
MANUFACTURE OF GLASS FIBERS
Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Jan. 16, 1952, Ser. No. 266,748
2 Claims. (Cl. 18—8)



1. Apparatus for forming glass fibers comprising a feeder for molten glass having a plurality of feeding orifices therein, means in said orifices for subdividing the glass flowing therethrough into a multiplicity of smaller streams, said means including a corrugated sheet of metal rolled on itself into a cylindrical body.

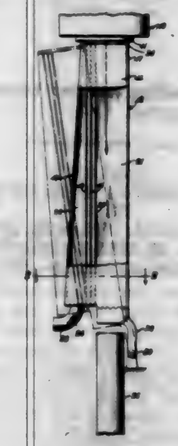
2,947,828
APPARATUS FOR MANUFACTURE OF FIBROUS GLASS
Games Slayter, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Nov. 19, 1954, Ser. No. 469,922
3 Claims. (Cl. 18—8)



1. Apparatus for producing fibrous glass comprising a receptacle for molten glass having a plurality of feeding orifices therein for feeding streams of molten glass to be attenuated into fibers and gathered together in the form of a strand, including a plurality of closely spaced, side by side nipples projecting from a surface of the receptacle, each of said nipples having a feeding passage therethrough, and disposed immediately above and in contact with the nipples a plate having a plurality of small openings arranged in patches, which patches are aligned with said feeding passages in said nipples.

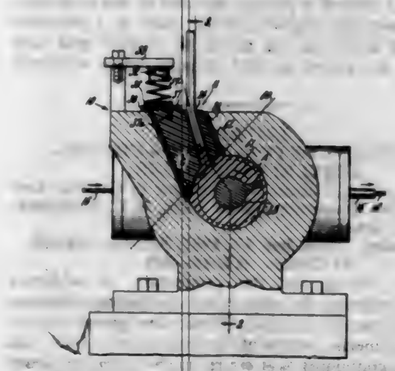
2,947,829
TILTING BLOW BOX
Willem Bakker, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Feb. 7, 1956, Ser. No. 564,659
Claims priority, application Netherlands Feb. 15, 1955
2 Claims. (Cl. 18—8)

1. A melt spinning apparatus comprising an extrusion assembly having a spinning plate for extruding a plurality of threads in adjacent parallel paths, a pair of side walls and an integral back wall defining an elongated chamber, at least one perforated plate hermetically sealed at the edges thereof to said side walls and through which a gaseous medium is supplied to cool said threads, the elongated chamber being disposed coaxially beneath said spinning plate and movable both axially and radially with respect thereto from an operative position wherein the upper edge of said chamber is urged in sealed relationship against said extrusion assembly and said walls surround the thread path to an inoperative unsealed position wherein the upper edge of said chamber is spaced axially and radially from said extrusion assembly and said walls are displaced laterally with respect to said thread path, a leg attached to and depending from the lower edge of each side wall of said elongated chamber, said legs being disposed on the forward side of said thread path opposite from said back wall and said perforated plate, brackets engaging said legs and pivotally supporting said elongated chamber for movement between said



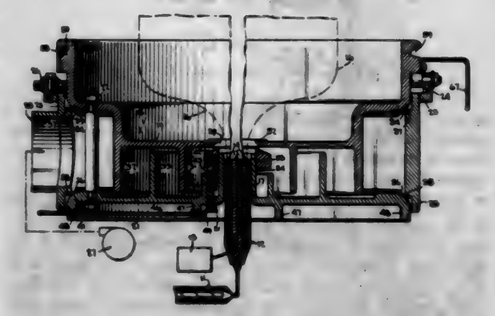
operative and inoperative positions, the pivotal axis being sufficiently forward of the elongated chamber to provide the aforesaid radial and axial movement, and means to seal the upper edge of said elongated chamber to said extrusion assembly in the operative position thereof to prevent escape of the gaseous cooling medium while permitting pivotal movement of the chamber to inoperative position to afford easy access to the spinning plate and to prevent excessive heat conduction from the extrusion assembly to the elongated chamber.

2,947,830
FEEDING MECHANISM FOR EXTRUDERS
Charles F. Varn, West New Brighton, N.Y., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed Aug. 29, 1956, Ser. No. 606,871
3 Claims. (Cl. 18—12)



1. The combination of an extruder and an improved mechanism for feeding plastic material thereto, said extruder comprising a screw, a barrel for enclosing a forward portion of said screw, the rear end of said screw extending beyond said barrel to receive plastic material to be conveyed through said barrel, a housing for said rear end of said screw, said housing having a cavity therein for receiving the plastic material at a point removed from the entrance to said barrel and for receiving accumulated excess material at said barrel entrance, said improved mechanism for feeding plastic material to said extruder comprising a slidable plunger and a mounting therefor in said housing at said barrel entrance, and resilient means for forcing said plunger towards the axis of said screw, said plunger having a curved continuous bottom surface having one edge adjacent to and conforming substantially to the contour of said barrel entrance and against which the accumulated excess material exerts pressure to move said plunger in opposition to said resilient means, the periphery of said surface being sealed along said plunger mounting against the passage of the accumulated excess material in contact therewith, said bottom surface extending axially from said entrance to enclose a portion of said housing cavity and provide sufficient space for the accumulated excess material to expand into and for the plastic material to pass to said rear end of said screw and underneath said plunger, said plunger having a slot therein for the passage of the plastic material in strip form to said rear end of said screw, said slot having an elongated cross section extending in the axial direction of said screw.

2,947,831
METHOD AND APPARATUS FOR COOLING EXTRUDED TUBING
Ho Chow, New York, N.Y., and Charles E. Leyes, Union, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Feb. 20, 1956, Ser. No. 566,494
15 Claims. (Cl. 18—14)

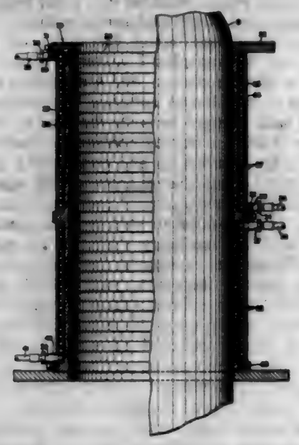


2. Apparatus for the production of blown tubing comprising a die for continuously extruding a heated material in the form of tubing, means for continuously inflating said tubing, a distributor for continuously directing an annular stream of cooling fluid against the outer surface of the tubing being extruded, and means for oscillating said distributor around said tubing.

2,947,832
APPARATUS FOR PROCESSING EXTRUDED PLASTIC TUBE
Charles W. Taylor, Jr., Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed May 21, 1958, Ser. No. 736,906
6 Claims. (Cl. 18—14)

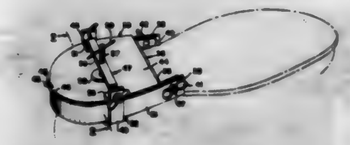
1. Apparatus for sizing and quenching a tube of plastic material after exiting from an extrusion die comprising an elongated annular rigid member having the opening therethrough of a size substantially that of the sized tube, said member being spaced from and in substan-

tial alignment with the die opening, a series of circumferentially continuous, axially spaced lands forming the interior surface of said member with the spaces between said lands being recessed radially outwardly, and tem-



perature control means to maintain the temperature of said member at a predetermined temperature to cool said tube below the blocking temperature of the plastic material as it passes therethrough.

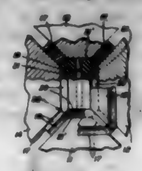
2,947,833
SHOE REPAIR MOLDS
David E. Ryan, 35 W. 75th St., New York, N.Y.
Filed Apr. 12, 1957, Ser. No. 652,383
9 Claims. (Cl. 18—34)



1. In a shoe repair mold, a bendable band strip adapted to be wrapped about the edge of a shoe sole and to confine the shape of moldable material to the contour of the shoe sole, means for securing the ends of the band strip to the shoe sole, a top mold plate extended over the shoe sole to shape the top of the moldable material and means for securing said top mold plate between the sides of the strip and over the shoe sole, said top mold plate hingedly connected to the band mold strip intermediate its length thereof and adapted to overlie the upper edges of the band strip.

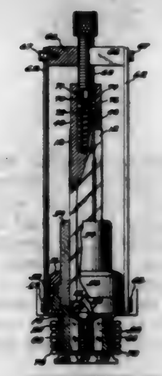
2,947,834
HIGH PRESSURE HIGH TEMPERATURE APPARATUS
Robert H. Wentorf, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 27, 1959, Ser. No. 855,866
8 Claims. (Cl. 18—34)

1. In a high pressure apparatus having a plurality of pressure resisting members, said pressure resisting members defining a reaction chamber in which a specimen material is placed to be subjected to high pressure, said pressure resisting members defining a gap therebetween, and a gasket in said gap next adjacent said reaction chamber and between said pressure resisting members, said gasket providing relative motion between said pressure resisting members through compression thereof, the improvement comprising, a floating dam member, bridging the gap from one said pressure resisting member to



another pressure resisting member between said gasket and said reaction chamber.

2,947,835
MOLDING AND JOINING HEAD ON COLLAPSIBLE TUBE
Alanson J. Baker, 307 S. William St., Johnstown, N.N.Y.
Filed Mar. 28, 1955, Ser. No. 497,016
6 Claims. (Cl. 18—36)

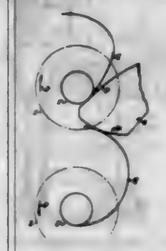


4. Apparatus for forming and joining a threaded head on a collapsible tubular barrel of thermoplastic material by pressure molding, comprising a mold block containing an open ended cavity forming well, an internally threaded hollow core die peripherally fitting said well in a manner to be slidably removable from said well through the open end thereof, a plunger mandrel of less girth than said well insertable endwise in the latter in a direction to approach said core die means to support said core die against the thrust by said mandrel when subjected thereto.

2,947,836
TREATMENT OF POLYMERIC α-CHLORO-ACRYLIC ACID ESTERS
Harry D. Anspon, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 17, 1957, Ser. No. 634,629
13 Claims. (Cl. 18—48)

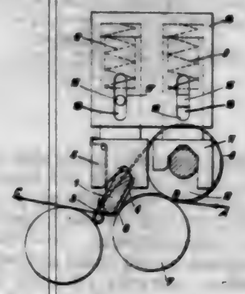
1. In a process for the production of whitened polymeric material, the step which comprises subjecting a polymeric material, selected from the group consisting of polymeric esters of α-chloroacrylic acid and copolymers containing said esters, to the action of steam at superatmospheric pressure and at a temperature of 250 to 260° F. whereby small bubbles are formed in said polymeric material.

2,947,837
FALLER GUIDE FOR GILL BOXES
Robert Girtner, Ingolstadt, Germany, assignor to Deutscher Spinnereimaschinenbau Ingolstadt Niederlassung der Schubert & Salzer Maschinenfabrik Aktiengesellschaft, a corporation of Germany
Filed Nov. 25, 1955, Ser. No. 549,866
Claims priority, application Germany Dec. 2, 1954
7 Claims. (Cl. 19—129)



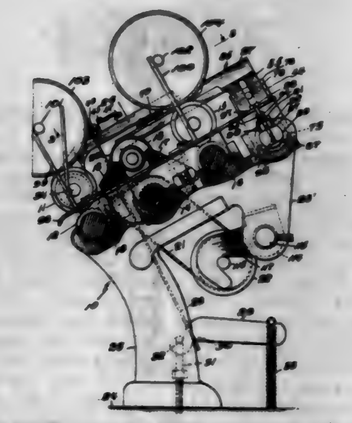
1. In a gill box having horizontal advance and return screws and a faller movable horizontally along said screws upon rotation thereof and vertically between the screw ends from the advance screw to the return screw at one end and from the return screw to the advance screw at the other end, the improvement which comprises a separate acceleration cam positioned at said first mentioned end of said advance screw and said second mentioned end of said return screw and a separate braking cam positioned at said second mentioned end of said advance screw and said first mentioned end of said return screw, said acceleration cams and braking cams being shaped and dimensioned to hold and guide the faller therebetween over its path of vertical motion, the acceleration cams being shaped to accelerate the faller over a first portion of its vertical motion, and said braking cams being dimensioned to decelerate the faller of the remaining portion of its vertical motion to about zero velocity at the screw spindles.

2,947,838
DRAWING DEVICES OPERATING WITH AN UPPER BELT
Josef Pfenningsberg, Munich-Gladbach, Germany, assignor to Josef Pfenningsberg & Co., Munich-Gladbach, Germany
Filed Nov. 8, 1954, Ser. No. 467,526
Claims priority, application Germany Nov. 12, 1953
6 Claims. (Cl. 19—131)



1. A single belt drawing device for spinning machinery comprising a lower drafting roller, an upper drafting roller and a belt surrounding said upper roller, belt tensioning means mounted above said lower roller and lying within said belt, independent parallel guides positioned above said lower roller, first and second supporting heads having recesses and mounted on said parallel guides to hold said upper roller and said belt tensioning means respectively in parallelism with said lower roller, resilient means biasing each of said supporting heads downwardly, said belt tensioning means comprising a rail, the upper edge of which seats in a recess in said second supporting head and the lower edge extends angularly downwardly, and a downwardly extending spring mounted on said second supporting head to bear on the lower edge of said rail to bias said lower edge substantially radially toward said lower drafting roller to exert radial pressure on said belt against said lower drafting roller.

2,947,839
ROLLER MOUNTING FOR SPINNING MACHINES
Robert Raine-Miller and Warner H. Tabor, Bristol, R.I., assignors to Dixon Corporation, a corporation of Rhode Island
Filed Aug. 28, 1957, Ser. No. 679,271
4 Claims. (Cl. 19—134)



1. In a drawing mechanism for spinning and roving machines, a roll stand having a bearing with an opening thereto of a dimension less than the diameter of said bearing, a member having a portion to fit said bearing, said portion being slabbed off to provide a dimension in one direction to pass through said opening into said bearing, a back bar, means to rotatably mount said back bar on said member, a plurality of spaced saddles extending in generally parallel arrangement at right angles to said back bar, spaced arms one for each of said saddles fixed to said bar, and means rockably connecting a saddle to its corresponding arm so that upon rotating said bar a plurality of saddles will be simultaneously adjusted in the direction of their extent.

2,947,840
WALL CONSTRUCTION
David Schultz, Seattle, Wash., assignor to Package Home Mfg., Inc., Seattle, Wash.
Filed June 18, 1956, Ser. No. 592,107
8 Claims. (Cl. 20—4)



1. A wall structure comprising a plurality of like elongated structural units disposed in parallel, adjoining relationship to define a wall, each of said units having a groove extending along one edge and a tongue extending along its opposite edge and fitted snugly within

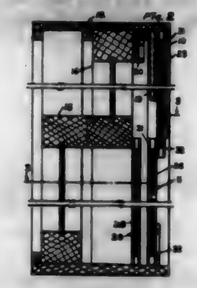
the groove of the adjoining unit, each tongue having a channel extending inwardly from its edge with the opposite sides of such channel disposed generally parallel to the side faces of the tongue, and a strip of elastomer material substantially uniformly compressible throughout its length and of a thickness in relaxed condition exceeding the spacing between the opposite sides of the tongue channel in relaxed condition, said strip being fitted into the channel of a tongue having its edge portion received within and confined by the groove of an adjacent structural unit which groove limits the extent to which the channel can be spread by the resilience of said elastomer strip squeezed by such channel.

2,947,041
MOVABLE PARTITION
Arthur G. Imbrecht, 9348 Nichols St., Bellflower, Calif.
Filed June 23, 1958, Ser. No. 743,571
1 Claim. (Cl. 20—4)



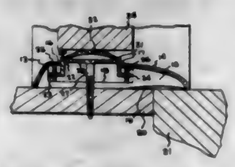
A movable partition defined by a plurality of rectangular members sequentially disposed in abutting contact between the floor surface and the ceiling surface of a building to provide a continuous flat vertical surface, with each of said members including: a rectangular panel member having first and second vertical edges, and horizontal top and bottom edges, said panel member having a trough formed therein that extends downwardly from said top edge; means on said bottom edge for frictionally engaging said floor surface, interlocking means on said first and second edges respectively of said panel members in abutting contact with said panel member on which said interlocking means is disposed; an elongate inflatable tube disposed in said trough; an elongate movable beam of T-shaped transverse cross section, the vertically disposed portion of which beam is slidably disposed for vertical movement in said trough, the sides of said vertical portion being in abutting, slidable contact with the sides of said trough to prevent inadvertent displacement of said beam with respect to said rectangular panel member, with the upper surface of the horizontal portion of said beam being adapted to pressure-contact said ceiling surface when said tube is inflated and said means on said bottom edge frictionally engage said floor surface, with the combined height of said panel and said beam being less than the height between said floor and ceiling surfaces when said elongate tube is deflated; means for inflating said tube when said panel is vertically disposed to move said beam upwardly relative thereto to pressure-contact said ceiling surface, said inflatable means being substantially concealed in said panel; and parallel molding strips attached to said beam that slidably engage the upper portion of opposite walls of said panel member.

2,947,042
SASH ASSEMBLY FOR MOUNTING GLASS OR OTHER TRANSPARENCIES
Elmer Tveter, 6758 W. 21st St., Berwyn, Ill.
Filed Apr. 22, 1953, Ser. No. 350,367
4 Claims. (Cl. 20—55)



1. In a window construction, an auxiliary storm sash frame consisting of separate horizontal top and bottom rails and vertical side rails each formed of an extruded metal section of H-shape having straight sides and a transverse connecting portion, an outwardly opening relatively deep channel and an inwardly opening relatively shallow channel of substantially less depth than the outwardly opening channel and adapted to receive and retain the peripheral edges of a pane of glass, and a substantially T-shaped connector mounted in adjacent channels in the adjoining corners of said rails for ready assembly or disassembly of one or more rails and the ready insertion, removal or replacement of the pane of glass, the leg of a connector at each corner received in an outwardly opening channel of a horizontal rail and the head of said connector received in the inwardly opening channel at an end of a vertical rail whereby said connectors are arranged in spaced relation and out of contact with the edges of the retained glass, and means for anchoring the leg of each connector to the transverse connecting portion of a horizontal rail and the head to the transverse connecting portion of a vertical side rail.

2,947,043
ADJUSTABLE THRESHOLD
Aale Klemma, Rte. 1, Box 104A, Roselle, Ill.
Filed Apr. 10, 1959, Ser. No. 805,613
3 Claims. (Cl. 20—64)



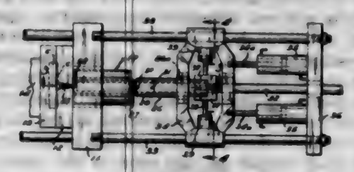
1. A threshold assembly comprising an elongated riser strip having spaced upwardly and inwardly inclined side marginal approach walls defining an elongated recess therebetween extending parallel to said approach walls, a generally channel-shaped, downwardly facing bar member disposed in said recess and being vertically adjustable therein, outwardly extending horizontal flanges on the bottom edges of said bar member underlying the inner marginal portions of said approach walls, and a plurality of vertical headed adjusting screws having exposed heads and extending through said inner marginal portions of the approach walls and supportingly engaging said inner marginal portions at their heads and threadedly engaging said flanges at their shanks, whereby to adjustably support said bar member.

2,947,044
CONTINUOUS FEED PRINTING STRIP MATERIAL CASTER
Andrew J. Sitton, Daytona Beach, Fla., assignor to Sitton Industries, Inc., Lakeland, Fla., a corporation of Florida
Filed May 20, 1952, Ser. No. 288,932
4 Claims. (Cl. 22—57.2)



1. An improved continuous feed printing strip material caster comprising a mold for receiving a molten metal mixture and forming it into a strip material, a tray for receiving the strip material from the mold, cutting means for cutting the strip material into slugs, a solenoid for operating said cutting means and being normally de-energized, means for energizing said solenoid and having a member disposed in the path of the strip material entering the tray and adapted to be moved by the strip material for energizing the solenoid without deformation of the strip material, whereby the cutting means is operated to sever the strip material to form a slug, means for moving the strip material from the mold past the cutting means and into said tray, and pusher means for moving the severed slugs out of the path of the strip material and comprising a pusher member slidably supported by said tray and having an upstanding lug, an abutment on said tray, a bell crank lever operatively connected with said pusher member for moving said pusher member inwardly against a severed slug, means carried by said cutting means for actuating said lever at the end of a cutting operation, means for de-energizing said solenoid, resilient means confined between said abutment and lug for withdrawing said pusher member from engagement with the severed slug after the solenoid is de-energized and resilient means for returning said cutting means and said lever actuating means to their inoperative positions after the solenoid is de-energized.

2,947,045
DIE CASTING BAR INJECTION MACHINE
Walter M. Goldhamer, 2915 Huntington Road, Shaker Heights, Ohio
Filed Sept. 6, 1957, Ser. No. 682,331
5 Claims. (Cl. 22—68)



1. In a die casting machine embodying a fixed and a movable die block, each having a die cavity therein, the combination of a heating unit for melting the end of a bar of die casting metal and a contiguous chill to preserve the solidified form of the bar, said heating unit comprising a core having a bore therein for the support of the bar, a helical electric resistance element circumambient the perimeter thereof to melt the portion of the bar therein, said chill comprising a tube affixed to said core in coaxial alignment therewith, said tube having a helical groove in the perimeter thereof, a sleeve circumambient said groove constituting a waterjacket to maintain the solidification of the portion of the bar therein, and mechanism rearward and coaxial said chill to progressively feed the bar into said chill and the molten metal in the heating unit into the die cavities.

2,947,046
METHOD OF MAKING PLASTIC LAMINATED CORE BOXES AND PATTERNS
Richard Wiedmann, Cincinnati, Ohio, assignor to The Lunkenheimer Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 1, 1957, Ser. No. 669,342
3 Claims. (Cl. 22—195)



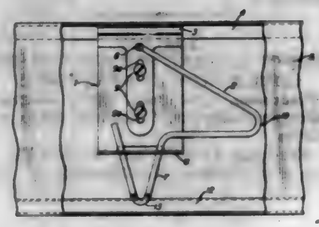
1. A method of producing a core box for use in forming a sand core of predetermined configuration, said method comprising the steps of preparing a master core having a surface configuration corresponding to at least one-half of the sand core to be formed, coating said master core with a substantial uniform thickness of removable spacing material, said thickness being not less than 1/32 inch and not more than 1/8 inch, preparing a mold from said coated master core, using said mold to produce a metal base member which is identical to said mold, removing said spacing material from said master core, coating said master core with a parting compound, mounting said metal base member relative to said master core such that said base member and said master core are spaced apart a distance equal to the thickness of said removable spacing material, filling said space with liquid epoxy-resin while vibrating said base member and said master core as an unit to free said resin of air bubbles, maintaining said base member and said master core in said spaced relationship until said resin cures, and after the resin is cured, removing said master core to leave the resin as a permanent laminate adhering to the surface of said base member as a part thereof.

2,947,047
PAPER CLIP
Walter A. Guzell, 2453 W. Hirsch, Chicago, Ill.
Filed July 2, 1956, Ser. No. 595,468
1 Claim. (Cl. 24—66)



A U-shaped paper clip formed of a single resilient wire, comprising a pair of U-shaped coplanar juxtaposed members forming an inner bight and an outer bight, an eye formed at one end of the outer bight, a second eye common to the other end of the outer bight and one end of the inner bight, the other end of the inner bight terminating in an end angularly disposed to the plane of the coplanar bights.

2,947,848
METAL TRIM CLIP
Donald A. Ellis, Waukesha, Wis., assignor to Inland Steel Products Company, Milwaukee, Wis., a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,671
4 Claims. (Cl. 24—73)



1. A clip assembly for attaching metal trim to walls and the like comprising in combination a substantially planar bracket having an offset portion along one of its edges for engaging an edge of said metal trim; a spring member having one end fixed relative to said bracket and having a V-shaped nose portion including an apex adapted to engage an opposite edge of said metal trim at the other end and a resilient portion comprising two legs joined at an angle intermediate said fixed end and said nose portion, said resilient portion serving to bias said nose portion in a direction away from the offset portion of said bracket; guide means on said bracket opposite said offset portion slidably engaging said nose portion and restraining the same from movement in a direction perpendicular to the plane of said bracket; and means for securing said clip assembly to said walls and the like.

2,947,849
COVERED BUTTON
Sidney Mishkin, New York, N.Y., assignor to Bac-A-Brand Products, Inc., New York, N.Y., a corporation of New York
Filed Feb. 24, 1958, Ser. No. 716,956
4 Claims. (Cl. 24—104)



1. A come-apart button adapted to be covered with fabric or the like, said button comprising an outer part directly around which the fabric may be wrapped, and an inner part adapted to be received and held within the outer part in order to hold the fabric covering in position, said outer part having a convex circular top and a slit rim which is turned inward at its bottom edge, said inner part being dimensioned to pass through the bottom edge when the rim is expanded, and to be held within the bottom edge when the rim is contracted, said rim being expanded by depression of the convex top, and said button having fastening means to fasten the assembled button on a garment, the convex circular top of the outer part being a flat spring disc which moves abruptly to either side of a flat position, whereby the slit rim remains expanded when the top is pushed from convex to concave condition, and the top is returned from concave to convex condition when the slit rim is pressed inward to contract it after assembly with the cloth and inner part.

2,947,850
SEPARABLE BUTTON
Francis E. Grasseu, 5270 North Bend Road, Cincinnati, Ohio
Original application Mar. 10, 1949, Ser. No. 80,715, now Patent No. 2,683,909, dated July 20, 1954. Divided and this application Mar. 11, 1954, Ser. No. 415,483
2 Claims. (Cl. 24—109)



1. In a device of the class described the combination of a holding member comprising an underlying and an overlying disc in superimposed relation secured to one another and provided with means for securing it in position on the surface of the material with which it is to be used, said underlying disc having a depression therein including a base and an upwardly, outwardly, inclined wall, said overlying disc having an aperture therein of a length equal to the greatest length of the depression but of a width less than the greatest length of the depression with portions of said overlying disc, immediately adjacent opposed sides of the aperture, depressed into said underlying disc depression to form with the depression inclined wall passageways each of said portions having a yieldably displaceable spring lip; and a detachable button having a shank projecting therefrom with diametrically disposed arms adapted to pass through the aperture in the overlying plate to have the arms disposed within the said passageways, and said shank being of such length as to be exposed between the overlying disc and button to space the button from said overlying disc.

2,947,851
LINE TIGHTENER
Warren C. Johnson, Willway Road, Wayne, Ill.
Filed Dec. 30, 1957, Ser. No. 705,955
14 Claims. (Cl. 24—129)



1. In a device of the character described for securing against slippage the free end of a rope loop, the combination with a rope of substantially uniform thickness having a loop formed in one end portion thereof from which extends a free end portion, a disc body having a pair of diametrically opposed elongated rope-receiving openings extending therethrough in substantially parallel relation and perpendicular to the plane of the body, the openings being tapered toward one another and both being of a width in relation to the thickness of said rope for close confinement and wedging engagement in the narrower inner ends of both of said openings of side by side abutting live and dead lengths of the rope in the inner ends thereof, said rope being extended through said openings and formed in a loop and its dead end portion being extended back through the openings alongside its live end portion to define the abutting lengths, both lengths of said rope between the openings being disposed in a plane parallel to and abutting the surface of the body of said disc, and the live end being placed under tension while the loop is suitably anchored.

2,947,852
CLOTHES HOLDER
Peter Michalsky, 197 Cambridge Ave., Garfield, N.J.
Filed Mar. 15, 1957, Ser. No. 646,354
1 Claim. (Cl. 24—139)



A clothes holder for resilient material comprised of a single resilient rod, said holder comprising a substantially U-shaped body, forming first and second arms connected by an integral resilient coil extending more than 360° and biasing the arms toward each other, the end of said first arm having a portion extending back on itself forming a first loop facing said second arm, the end of said second arm including a portion extending back on itself forming a second loop facing the first loop, said second arm end portion further extending across and about the second arm, and extending toward the free end of the second arm to define a third loop alongside of and spaced from the second loop whereby the material may be clamped between said loops.

2,947,853
PLASTIC BEADS
William Troutbeck Sanderson, Marlow, England, assignor to Chelton (Poppits) Limited, Marlow, England, a British company
Filed Aug. 28, 1957, Ser. No. 680,704
Claims priority, application Great Britain Sept. 20, 1956
3 Claims. (Cl. 24—217)



1. In a multiple bead assembly formed by identical beads, a bead of resilient plastic material of the type which may be snapped one into the other comprising a body portion of which a part thereof has an integral neck with a head thereon wider than said neck, an opposite part of the body portion having a cavity extending thereinto with a mouth portion which is triangular in cross section, said mouth being formed by spaced segmental lips which define shoulders inside the cavity, said lips being inwardly inclined, the shoulders of said mouth portion being adapted to engage the head portion of an adjacent bead to hold the beads together, and said head portion being frusto-conical in longitudinal cross section so that when two adjacent beads are interengaged, the frusto-conical head is received in the cavity and is held by the shoulders defined by the segmental lips inside the cavity, and the insertion of the head in the cavity taking place with distortion of the lips with no substantial distortion of the body portion beyond the lips.

2,947,854
EARRING CLAMP
Wallace C. Adams, Riverside, R.I., assignor to Apex Jewelry Co., Providence, R.I., a corporation of Rhode Island
Filed May 7, 1958, Ser. No. 733,704
2 Claims. (Cl. 24—248)

1. An earring clamp comprising a flat annular disc member, a clamping arm extending integrally from the edge of said disc member, a second flat annular disc member, a clamping arm extending integrally from the edge of said second disc member, said disc members being axially aligned in face to face relation, said disc members having radially extending teeth on their opposed faces to provide a ratchet action, said disc members each having a central depressed portion forming a protuberance on the opposite face, the protuberant portion



of one disc nesting within the depressed portion of the other disc, and means for pivotally locking said disc members in face to face relation whereby relative rotation of said disc members will cause said clamping arms to move toward or away from each other, said locking means comprising a plurality of spaced integral lugs extending from the edge of one disc member and bent over to engage the depressed portion of the other disc member.

2,947,855
FENCE POST CLAMP
Warren B. McHenry, 6212 Rhode Island Ave., Riverdale, Md.
Filed June 14, 1957, Ser. No. 665,855
1 Claim. (Cl. 24—259)



A one-piece clamp for securing fencing to a post, said clamp being formed of a single strip of spring metal and comprising an elongated band shaped to provide a generally centrally disposed circular yoke portion for encircling a fence post, with leg portions extending therefrom in spaced and slightly flaring relation to each other, one of said leg portions having an included T-shaped slot and the other leg portion having an end portion inturned toward the first leg portion and terminating in a T-shaped tongue directed generally normally to and removably engageable in said slot, the tongue-bearing leg portion extending generally tangentially from the yoke portion and the slotted leg portion extending substantially radially and normally from the yoke portion, said tongue and slot being adapted for releasable interlocking of each other about said fencing and assuring support of the same substantially free of turning about said post.

2,947,856
SINTERED ALUMINA ARTICLES AND A PROCESS FOR THE PRODUCTION THEREOF
István Csordás and Béla Lányi, Budapest, Zoltán Veress, Karcag-Berekfurdo, and László Visy, Budapest, Hungary, assignors to Kabel-es Muanyaggyar, Budapest, Hungary
No Drawing. Filed Oct. 8, 1957, Ser. No. 688,827
2 Claims. (Cl. 25—157)

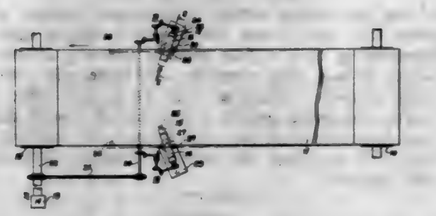
1. Process for the manufacture of sintered alumina body adapted to be used for cutting and drawing tools,

comprising molding α-alumina powder, having at least 99.99% Al_2O_3 content, the α-alumina particles being less than 3 microns in diameter and at least 90% of same being less than 1 micron, into a shaped body, then sintering at a temperature between 1450° and 1500° C., and keeping said body at the maximum sintering temperature for such a short time that at least 90% of the grain size of the sintered body should not exceed 10 microns.

2,947,657
FLEXIBLE WEB REELING AND GUIDING MECHANISMS

James L. Meagher, Jr., Rogers, and Edward A. Baril, Plainfield, Conn., assignors, by mesne assignments, to Plainfield Patents Corporation, Plainfield, Conn., a corporation of Delaware

Filed Feb. 3, 1956, Ser. No. 563,304
1 Claim. (Cl. 26—66)



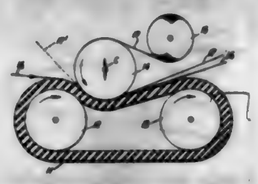
A web reeling control mechanism for a web which is extensible under tension and comprising; means to feed the web between two spaced points while maintaining the web under minimum tension which is insufficient to cause substantial width distortion of the web, a first set of correction rollers mounted at an angle to and adjacent one margin of the web, a second set of correction rollers mounted at an angle to and adjacent the opposite margin of the web, the web passing between the rollers of each set, one roller of each set being positively power driven independently of the web motion and the other roller of each set being an idler roller, a support for each idler roller, means to operate each support to move its idler roller into and out of traction contact with the web only when the web width becomes distorted or while the web is moving in a path offset from a predetermined linear path, a pair of light-sensitive devices located respectively adjacent the said margins of the web and selectively masked or unmasked in accordance with the width and path of movement of the web, electric circuit connections between said cells and the said operating means for automatically controlling the movement of said idler rollers to correct width distortion of the web and to restore the movement of the web to said desired linear path, said support operating means including a pneumatic controlled member, and a valve for controlling said pneumatic member, said connections comprising circuit connections between each light-sensitive device and a corresponding one of said valve for selectively controlling the movement of the associated idler roller.

2,947,658
ORNAMENTATION OF SHEET MATERIAL

George Landells, Leeds, and William Bragg, West Ardsley, near Wakefield, England, assignors to The Bradford Dyers' Association Limited, Bradford, and Bleachers' Association Limited, Manchester, England

Filed Feb. 7, 1956, Ser. No. 564,681
Claims priority, application Great Britain Feb. 10, 1955
9 Claims. (Cl. 26—69)

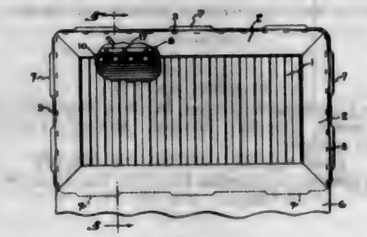
3. A process for ornamenting compressively shrinkable sheet material which normally shrinks but does not buckle when subjected to the action of a compressive shrinking machine, which process comprises producing ornamental buckles in the shrinkable sheet material by subjecting said material to the action of a compressive shrinking machine while in surface contact with compressively buckliable sheet material which normally buckles when subjected to the action of a compressive shrinking machine.



2,947,659
DECORATIVE PANELS

George C. Hillenbrand, Batesville, Ind., assignor to The Batesville Casket Co., Inc., Batesville, Ind., a corporation of Indiana

Filed Feb. 11, 1957, Ser. No. 639,369
5 Claims. (Cl. 27—19)



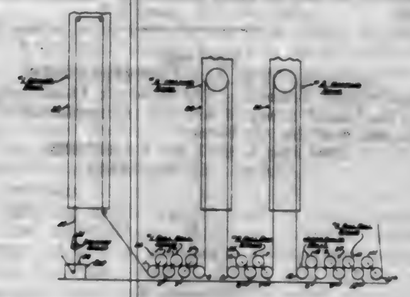
1. A decorative panel comprising a backing sheet, at least two profiling strips, each profiling strip having a base portion secured to the backing sheet, a plurality of profiling tabs extending outwardly from the base portion to present a profile in a plane at right angles to the base portion, the respective strips being disposed at the opposite side edges of the backing sheet with the profiling tabs thereof aligned crosswise thereof, and a facing material drawn tightly over the profiling tabs of the two strips and secured to the backing sheet between the individual profiling tabs along the opposite side edges of said backing sheet, whereby the configurations of the profiling strips are imparted to the decorative facing material.

2,947,660
APPARATUS FOR CONTROLLING TENSION IN SHEET MATERIAL

Harold F. Umstott, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Sept. 21, 1955, Ser. No. 535,718
3 Claims. (Cl. 28—1)

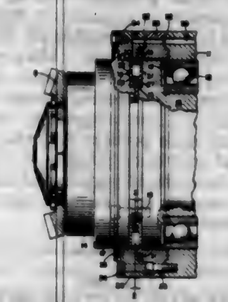
1. Apparatus for alternately stretching and relaxing tension in continuously moving tire cord fabric material, to remove residual stretch therein and to impart non-shrinkability therein, comprising at least three spaced groups of paired fabric-transporting and snubbing rolls and fabric heat-treating zones interposed between said groups, the rolls of any said pair of rolls having substantially equal diameters and being driven at the same speed, any roll pair within the first of said groups being driven at a speed greater than that of a preceding pair of rolls of said first group, any roll pair within the second and third said groups, respectively, being driven at a speed less than that of the preceding pair of rolls in said group, respectively, the speed of the initial roll pair in each of the said last-mentioned groups being greater than that of the last roll pair in the preceding group, whereby the tire cord material passing through the apparatus will be successively hot-stretched, relaxed, again hot-stretched, and finally relaxed to set the cord, remove residual stretch, and eliminate heat-shrinkability in the tire cords.



2,947,661
SPINDLE CLAMP

Leonard O. Carlsen, Rochester, and Herman A. Male, Brighton, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York

Original application Dec. 30, 1955, Ser. No. 556,725, now Patent No. 2,812,186, dated Nov. 5, 1957. Divided and this application Jan. 18, 1957, Ser. No. 634,960
6 Claims. (Cl. 29—1)



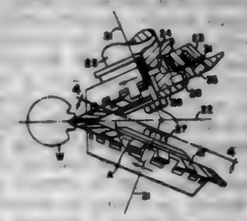
1. A gear cutting machine or the like comprising a spindle housing, a work spindle journaled for rotation in bearings in the housing and having a workpiece-supporting end portion projecting beyond said bearings, said end portion of the spindle having an annular peripheral groove, and the housing having a fluid-expansible tubular annulus fitting in said groove, the opposite side walls of the annulus being adapted for relative displacement, axially of the spindle, to clamp against the opposite walls of the groove upon expansion of the annulus by fluid under pressure.

2,947,662
ROTARY CUTTER FOR GEARS AND THE LIKE

Gilmore M. Spear, Rochester, N.Y., assignor to The Gleason Works, Rochester, N.Y., a corporation of New York

Filed Aug. 18, 1953, Ser. No. 374,965
9 Claims. (Cl. 29—105)

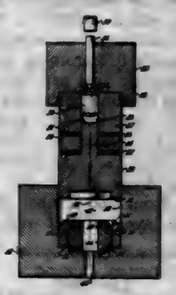
1. A rotary cutter for gears and the like which is one of a symmetrical pair of cutters adapted to rotate on intersecting axes that are equally and oppositely inclined to the plane of symmetry, the cutter having at least one blade projecting radially from the cutter body, said blade having a cutting side face and a front face which intersect along a side cutting edge, and a tip face which intersects the front face along a tip cutting edge, the cutting side face and the tip face being relieved back of their respective cutting edges, and the cutting side face being plane and intersecting the tip face along a curved line which as the cutter rotates intersects the plane common to the cutter rotation axes at a substantially constant distance from the plane of symmetry.



2,947,663
APPARATUS AND METHOD FOR FORMING SELF-ALIGNING BEARINGS

Gifford H. Teeple, Jr., Manhattan Beach, Calif., assignor to T.N.T. Corporation, Los Angeles, Calif., a corporation of California

Filed Nov. 12, 1957, Ser. No. 695,649
12 Claims. (Cl. 29—149.5)



1. Apparatus for impact swaging a metallic substantially annular bearing housing about ball surface, comprising a cylindrical punch movable forwardly along an endwise extending axis and having a forwardly projecting annular shoulder centered about said axis, said punch including a rearwardly extending reduced cross section plunger, a die forward of the punch for confining the periphery of said housing and holding the housing centered about said axis with the side of the housing to be impact swaged spaced from and in the path of punch shoulder movement, and a chamber at the rearward side of the punch having an axial bore receiving said plunger for application of explosive gaseous pressure thereagainst accelerating the punch relatively away from said chamber and toward the die so that the punch impacts against the housing side swaging and elastically compressing the housing about the ball, said chamber having a vent covered by said punch and adapted to be uncovered thereby during punch free travel toward the bearing housing to effect release of explosive gases whereby the punch may rebound from the housing permitting the swaged and elastically compressed housing metal to rebound sufficiently from the ball for development of ball turning clearance in the housing.

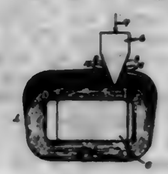
9. In the process of swaging a metallic substantially annular bearing housing about a ball wherein said housing and ball are placed in a die with the ball in said

housing and said housing and ball are centered about an endwise extending axis with the side of the housing to be swaged extending transversely thereof, and wherein means including a punch is guided for axial movement forwardly toward and rearwardly away from said housing with a punch annular shoulder centered about said axis facing said housing side in oppositely spaced relation thereto, the steps that include detonating an explosive charge against the rearward side of said means thereby explosively accelerating the punch forwardly and axially toward the bearing housing so that the punch annular shoulder impacts against said housing side swaging and elastically compressing the housing metal about the ball, and allowing the punch to rebound rearwardly from the housing thereby permitting the swaged and elastically compressed housing metal to rebound sufficiently from the ball for development of ball turning clearance in the housing.

2,947,864
METHOD OF INTERCONNECTING PATHWAY PATTERNS OF PRINTED CIRCUIT PRODUCTS BY CHEMICAL DEPOSITION
John B. Langton, Tarrytown, N.Y., assignor to Technograph Printed Electronics Inc., Tarrytown, N.Y.
No Drawing. Filed Mar. 6, 1956, Ser. No. 569,674
6 Claims. (Cl. 29—155.5)

1. In a method of metallically joining the metal layers of two-sidedly metal-clad insulation material of the type used as stock material in the manufacture of printed circuit products, wherein holes are formed through the metal-clad insulation, the step of coating the wall surface defining said holes, which comprises, exposing the said wall surface to the action of an aqueous solution composed of approximately 0.2 gram of palladium chloride and 3 cc. of hydrochloric acid per liter, and then to the action of an aqueous solution composed of 2.65 grams to 15.9 grams of copper tartrate, 4.85 grams to 21.9 grams of Rochelle salt, and 9 grams of sodium hydroxide per liter in the presence of a reducing agent at a temperature in the approximate range of 70°–90° F., whereby the copper is reduced from the soluble state and deposits out as a conductive layer on said wall surface.

2,947,865
METHOD OF MAKING A JOINT IN A WOUND MAGNETIC CORE
Charles W. Moody, Natick, John R. Neff and Willard F. M. Gray, Pittsfield, and Clarence J. Kettler, Stockbridge, Mass., assignors to General Electric Company, a corporation of New York
Filed Feb. 17, 1953, Ser. No. 337,322
11 Claims. (Cl. 29—155.57)



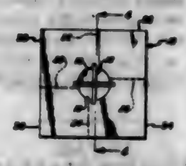
1. A method of making a joint in a magnetic core for induction apparatus comprising the steps of spirally winding a metallic strip into an assembly comprising turn laminations of said strip which are radially nested and superposed with respect to each other in spaced relationship, impregnating the assembly with a lubricating material so that a film of lubricant is formed between juxtaposed surfaces of said laminations, and then pinch-cutting the laminations by forcing a wedge-shaped blade through the assembled laminations thereby forcing each of the laminations as it is penetrated by said blade to expansively yield along its lubricated surface in a direction transverse to the line upon which force is applied to the blade.

2,947,866
METHOD OF BLADE CONSTRUCTION
Julius William Tumavicus, Old Saybrook, Conn., assignor to the United States of America as represented by the Secretary of the Air Force
Filed May 8, 1957, Ser. No. 657,983
3 Claims. (Cl. 29—156.8)



3. A method of forming rotor blades for turbines, compressors, blowers and the like which comprises the steps of blanking a piece of sheet stock to form a pair of blade portions, a central portion narrower than said blade portions, and tapering sections joining said central portions to said blade portions, blanking ears tapering from the blade portion to a maximum dimensioned portion adjacent the said central portion on the lateral edges of each of said tapering sections, folding said blade portions and tapering sections toward each other, inserting a pin hold member in the opening formed by said tapering sections and said central portion, continuing said folding until said blade portions and said ears adjacent opposed edges of said blade portions are in contact and said maximum dimensioned portion and said central portion encompass said pin hold member, and subjecting the parts so assembled to finish brazing.

2,947,867
METHOD OF MANUFACTURE OF FLEXURE MEMBER
Charles L. Vice, San Marino, and Peter V. H. Serrell, Pasadena, Calif., assignors to Sanborn-Serrell Corporation, Pasadena, Calif., a corporation of California
Filed Dec. 9, 1957, Ser. No. 701,540
6 Claims. (Cl. 29—173)

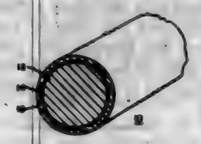


1. The method of making flexures comprising the steps of forming a grooved aperture within an appropriately shaped piece of material, securing flexible means to the grooved portion of said aperture, heat treating the entire assembly to achieve the desired strength of the flexible means, dividing said piece of material into two parts by cutting inwardly to the aperture so that the remaining opposing parts are secured to the flexible means.

2,947,868
ALUMINUM BASE POWDER PRODUCTS
John S. Nachtman, 2901 Quebec St., Washington, D.C.
No Drawing. Filed Apr. 18, 1958, Ser. No. 730,752
7 Claims. (Cl. 29—182.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A structural material formed by mechanically working a metallurgical composition consisting of a finely divided mixture of substantially unoxidized particles of a metallic base and 2 to 25 parts by weight of particles of an oxygen bearing compound of aluminum said metallic base selected from the group consisting of aluminum, alloys of aluminum, and mixtures of aluminum and alloys of aluminum with each other and with aluminum alloy strengthening metals selected from the group consisting of iron, molybdenum, vanadium, titanium, tantalum, niobium, chromium, manganese, nickel, cobalt, tungsten, boron, beryllium, thorium, iridium, and the rare earth elements wherein said strengthening metals comprise less than 50 percent of said metallic base, said oxygen bearing compound being selected from the group consisting of aluminum oxide, the aluminates of barium, beryllium, calcium, cobalt, iron, lithium, manganese, magnesium, and nickel, aluminum borate and mixtures thereof, said composition having been presintered under non-oxidizing conditions at a temperature between about 700° F. to about the melting point of aluminum.

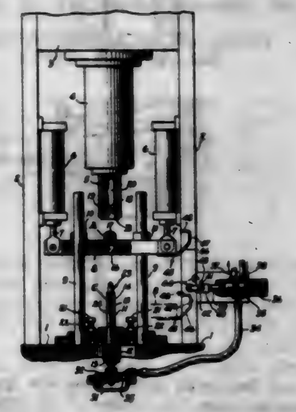
2,947,869
ALUMINUM CLAD COPPER WIRE AND PROCESS FOR MAKING THE SAME
Charles L. Carlson, Irwin, and Stanley A. Rosecrans, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 12, 1956, Ser. No. 558,699
4 Claims. (Cl. 29—197)



1. An elongated, highly worked wrought wire member comprising an elongated core of copper, a continuous barrier layer of silver of an average thickness of at least 0.0001 inch applied to and bonded to the surface of the copper core, and a relatively thin sheath of aluminum covering and bonded to the layer of silver, said aluminum comprising from 5% to 20% of the cross-sectional area of the wire, the composite structure of copper core, layer of silver and the sheath of aluminum having been subjected to a high reduction in area to metallurgically bond them together.

2,947,870
MACHINE FOR ASSEMBLING RESILIENT BUSHINGS OF THE RUBBER INSERT TYPE
Howard N. Peppercorn, Logansport, Ind., assignor to The General Tire and Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 15, 1954, Ser. No. 410,186
1 Claim. (Cl. 29—235)

A machine for assembling resilient bushings that have a tubular rubber insert under radial compression between a rigid outer sleeve and a rigid tubular core comprising a plunger having a portion inwardly of one end of a size to fit within the tubular core a shoulder for positioning the core with its outer end adjacent said end of the plunger, a rod coaxial with said plunger, slidable therein and projecting past said end, a tapered pilot carried by said rod and having a radially expansible body portion inwardly of its tip in the form of a circumferentially continuous annular body of elastic rubber surrounding said rod and attached thereto, said rubber body portion being normally of a diameter no greater than the internal diameter of the core and being radially expansible to a diameter corresponding to the external diameter of said core, said body portion having a reentrant inner end providing an annular end portion for engagement with the end of the plunger that is spaced radially from said rod, means for holding a sleeve with an insert therein in axial alinement with said plunger,

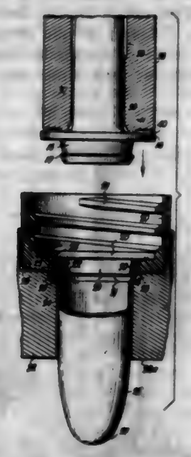


means for moving said holding means and plunger relatively axially of said plunger to pass said pilot through the insert, place the core within the insert and retract the pilot through the core of the assembled bushing, and means controlled by axial movement of said plunger relative to the sleeve and insert-holding means for applying an end thrust to said rod to press the inner end of said rubber body portion against the plunger to expand said body portion radially prior to entry of the pilot into the insert and for releasing said rod to permit said body portion to contract to normal diameter prior to return of the pilot through said core.

2,947,871
METHOD AND APPARATUS FOR MATING ENGAGING FITTINGS
Paul A. Marchant, Kansas City, Mo., assignor to Injection Molding Company, Kansas City, Mo., a corporation of Missouri
Filed Nov. 2, 1956, Ser. No. 620,000
2 Claims. (Cl. 29—235)

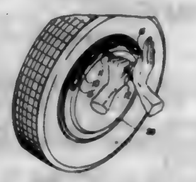
1. In an apparatus for assembling a three piece dropper assembly made up of, first, a cap with a perforated top, second, a bulb having a flange adjacent its open lower engaging edge adapted to abut the top surface of the cap top, the lower engaging edge of the bulb sized to resiliently fit within the cap top perforation and, third, a pipette having a flange fixed adjacent its upper open engaging end adapted to abut the inside surface of the cap top, the engaging end of the pipette sized to resiliently fit within the open end of the bulb when the latter is received in the cap top perforation, the construction in combination which comprises a die, a first recess formed in said die communicating with at least one surface thereof sized to closely receive at least the perforated portion of the cap, a second recess formed within said die and first said recess sized to closely receive the bulb flange, a third recess formed within said die and first and second recesses sized to closely and frictionally receive the bulb, and a punch having an opening extending into at least portion

thereof and communicating with one surface thereof sized to closely and frictionally receive at least a portion of the discharge end of the pipette, said punch movable relative to the die and having an outer diameter slightly less than the inner diameter of the first recess in the die and cap top when the latter is positioned within the die whereby to be insertable in both said recess and top, said outer



diameter of the punch greater than the inner diameter of the second recess the portion of the punch engaging the underside of the pipette flange comprising only a limited ring circumferential to the punch opening, the outer diameter of said ring being less than the inner diameter of the dropper assembly cap top hole whereby the punch may force the pipette readily and deeply into the bulb.

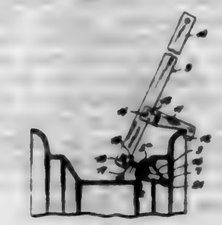
2,947,872
HUB CAP TOOL
Robert J. Irwin, 8653 Wabash, Seattle, Wash.
Filed Feb. 7, 1955, Ser. No. 486,374
1 Claim. (Cl. 29—245)



A hub cap tool of the character described comprising an arcuate bar adapted to be seated against the outer face of and along the peripheral portion of a hub cap for its application to a wheel, said bar extending through an arc of substantial extent, and a post fixed rigidly to said bar midway of its ends, to extend outwardly from the hub cap to which said bar may be applied and to lean toward the axial line of the wheel and an impact head at the outer end of the post.

2,947,873
TIRE VALVE TOOL
Ralph K. Boyer, Cleveland, Ohio, assignor to The Dill Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 14, 1955, Ser. No. 487,861
2 Claims. (Cl. 29—267)

1. A tool for mounting a rubber valve stem in an opening therefor in a metal wheel rim adapted to have a tubeless tire mounted thereon, and the rubber valve stem being of the type having a metal insert extending longitudinally thereof with an inner end of the metal insert adapted to communicate with the inside of the tubeless tire, comprising an elongated bar one end of which provides a handle portion, a structure including a pin portion located closely adjacent to the other end of said bar and adapted to axially engage the inner end of the metal insert extending longitudinally of the rubber valve stem for enabling the application of axial thrust thereto, means permanently pivotally connecting said structure to said bar so the pin portion thereof projects laterally from one side of said bar, said structure being provided with means limiting the pivotal movement of the structure relative to said bar, and a hook member



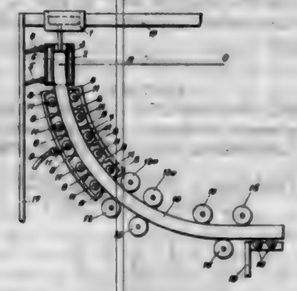
pivotally connected to said bar intermediate said one end thereof and said structure and in substantial spaced relationship longitudinally of the bar to said structure and projecting laterally from said one side of the bar in the same direction as said pin portion of said structure and a substantial distance greater than said pin portion, said structure further including a portion engaging said bar and through which extends the means for permanently pivotally connecting said structure to said bar, said structure also including a flange portion located outwardly of the said one side of said bar and constituting the means for limiting the pivotal movement of said structure relative to said bar, while said pin portion of said structure is located outwardly of said flange portion thereof.

2,947,874
NOZZLE PULLER
Clarence M. Newman, Houston, Tex., assignor to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Feb. 11, 1957, Ser. No. 639,525
3 Claims. (Cl. 29—280)



3. A tool for removing a bushing from within its mounting comprising, a stem consisting of a pair of elongated members mounted to move slidably and nonrotatively longitudinally relative to each other, a pair of handle members attached, respectively, to one end of said stem members, one of said stem members passing slidably through one of the handle members whereby the handle members are in opposed relation, means normally urging the handle members to a predetermined spaced relation, and sidewardly extending projections on the other end of said stem members in opposed relation when the handle members are moved to juxtaposed position to form a composite handle.

2,947,875
METHOD FOR THE CONTINUOUS CASTING OF METAL STRIP, AND STRIP CASTING PLANT FOR CARRYING OUT THE METHOD
Emil Schneckenburger and Carl Kung, Emmenbrucke, Switzerland, assignors to Aktiengesellschaft der von Moos'schen Eisenwerke, Luzerne, Switzerland, a corporation of Switzerland
Filed Sept. 18, 1957, Ser. No. 684,724
Claims priority, application Switzerland Sept. 21, 1956
5 Claims. (Cl. 29—417)

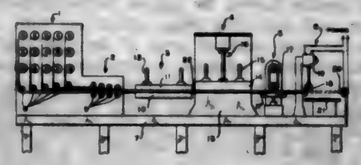


2. A casting apparatus for continuous casting of elongated metal bodies of relatively heavy cross-section comprising, in combination, a water cooled flow-through mould including a casting chamber in the shape of a segment of a circular annulus, the walls forming said casting chamber being stationary with respect to the remainder of the mould; means for pouring metal into said casting chamber; curved track means located below said mould and including a plurality of guide rollers spaced from each other and arranged in two groups along two concentric circles, with the innermost portion of said guide rollers in the two groups of guide rollers in direct contact with opposite sides of the cast metal body emanating from said mould, respectively, and respectively located on two concentric circles having a median radius of curvature corresponding to the median radius of curvature of said casting chamber; cooling means arranged in the vicinity of said curved track means; additional track means mounting said mould for oscillating movement along a curved path having a median radius of curvature corresponding to the median radius of curvature of said casting chamber; drive means for imparting an oscillating movement to said mould along said additional track means; at least one pair of take-off rollers arranged in a position in which the cast metal body is deflected; and straightening means for converting the cast curved body into a substantially straight elongated body.

2,947,876
MANUFACTURE OF TURBINE BLADES
George O. Eccles, Barrowford, and Nelson Hector Kent, Allestree, England, assignors to Rolls-Royce Limited, Derby, England, a British company
No Drawing. Filed Dec. 13, 1957, Ser. No. 702,519
Claims priority, application Great Britain Dec. 21, 1956
1 Claim. (Cl. 29—424)

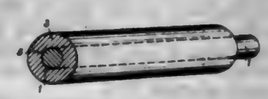
The method of extruding through a die a metal resistant to high temperatures which includes a substantial percentage of nickel and chromium comprising nickel-plating a billet of the metal to produce an adherent coating to at least a depth of the order of 0.004 inch which is extensible with the billet, coating the active surface of the die with a colloidal suspension of graphite in a lubricating liquid, extruding the billet through the die by pressure applied thereto in the axis of the major direction of extrusion and then removing said nickel coating.

2,947,877
METHOD OF MANUFACTURING LAMINATED SHEET METAL FOR SHIM STOCK
Jerome B. Lazarus, New York, N.Y., assignor, by mesne assignments, to The Staver Company Inc., Bay Shore, N.Y.
Filed July 28, 1955, Ser. No. 525,031
2 Claims. (Cl. 29—430)



1. A method of manufacturing a continuous length of laminated metal shim stock, comprising the steps of providing several equally thick strips of shim stock metal in juxtaposition and several continuous strips of heat fusible solder material, superimposing said shim strips and said solder strips composed of multiple alternating layers of several juxtaposed shim strips and one solder strip respectively, the width of the solder strip in each respective layer of the stack being substantially equal to the combined width of the juxtaposed shim strips in each layer, then heating successive lengths of the stack while at rest sufficiently to melt the interleaved solder strips for fusing together the superimposed shim strips, then submitting successive fused lengths of the stack by means of plane pressure plates to a uniform pressure upon the entire top and bottom surface area thereof, and compressing the respective fused lengths into the desired final thickness, removing from successive compressed and fused lengths of the stack squeezed out solder and foreign matter adhering to said length thereby finishing the shim stock, and cutting the finished stock to units of desired length.

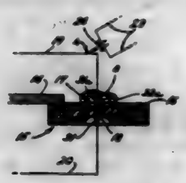
2,947,878
SOLID-PHASE BONDING OF METALS
Heinz R. Pfaumm, North Attleboro, and Freeman P. Rogers, Plainville, Mass., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 30, 1957, Ser. No. 693,283
5 Claims. (Cl. 29—474.3)



1. The method of solid-phase bonding core-forming and sleeve-forming elements composed of malleable metal materials, which elements are cleaned throughout their surfaces to be interfacially bonded and which have at least one of said surfaces work-hardened; comprising coaxially surrounding said core-forming element with sleeve-forming material composed of inner and outer portions, at least the outer portion having a lower coefficient of thermal expansion than that of the core-forming element and establishing substantially coextensive interfacial contact between the outside of said core-forming element and

the inside of said sleeve-forming element, heating the assembly at a temperature lying within the range which extends from and includes the recrystallization temperature of the one of the metals to be bonded which has been work-hardened, or if there be more than one work-hardened metal to be bonded, then from and including the recrystallization temperature of the one which has the highest recrystallization temperature, and in either case up to but not including the temperature at which a liquid-phase or brittle intermetallic compound would appear in the interfacial bonding area, in order to create a first partial bond between the core-forming and sleeve-forming elements, squeezing at least the inner portion of the sleeve-forming element with the partially bonded core-forming element therein at a temperature below the recrystallization temperature of that one of the partially bonded metals having the highest recrystallization temperature, said squeezing being carried out with a reduction of the cross-sectional areas of the core- and sleeve-forming materials adapted to produce a concomitant substantial increase in the bonding area, and heating the metals at a temperature which will recrystallize at least one of the partially bonded metals, but below one of those temperatures, whichever is the lower, as the case may be, at which a liquid-phase material or brittle intermetallic compound would form in appreciable amount, said heating being continued for such a time as to effect substantial growth of the partial bond, thereby substantially to increase the over-all bond strength.

2,947,879
METHOD OF SOLDER BONDING
George L. Schnable, Lansdale, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 3, 1955, Ser. No. 544,665
3 Claims. (Cl. 29—495)



1. In solder bonding a whisker wire to an electrode disposed upon a body of semiconductive material, said wire having a melting temperature above that of the electrode, the method comprising: disposing said wire adjacent said electrode with a body of solder contacting each thereof, said solder having a melting temperature below the melting temperature of said electrode; immersing the juncture of said solder, wire, and electrode in a fluxing solution having a vaporization temperature intermediate the melting temperature of the solder and electrode; applying heat to said wire to melt the solder and to vaporize a portion of the fluxing solution; and halting the application of heat prior to complete vaporization of the fluxing solution and while said juncture remains immersed in said solution.

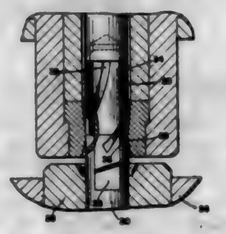
2,947,880
METHOD FOR MAKING FUEL ELEMENTS
Leonard W. Kates, Hempstead, and Robert W. Campbell, Malverne, N.Y., and Raymond H. W. Heartel, Cranford, N.J., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 29, 1953, Ser. No. 334,102
1 Claim. (Cl. 29—528)

The method of manufacturing a nuclear fuel element in the form of a wire having a core containing fissionable material in close contact with a cladding metal that comprises the steps of plugging one end of a hollow tube of zirconium with a plug made of zirconium, chilling a slug of uranium in Dry Ice, introducing the chilled uranium slug into the zirconium tube to rest against the plug, introducing a second zirconium plug into the tube and in contact with the chilled uranium slug, inserting additional chilled uranium slugs and zirconium plugs alternately



into the zirconium tube until the entire length of the tube is filled, permitting the chilled uranium plugs to attain room temperature, whereby the uranium will expand into close contact with the zirconium tube, inserting the filled tube in an iron sheath, working the sheathed tubing at a temperature in the range of 600° to 900° C. to form a wire of predetermined diameter, and thereafter removing the sheath.

2,947,881
METHOD OF FORMING A SPLINED SLEEVE
Carl L. Cleveager, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 1, 1955, Ser. No. 532,876
2 Claims. (Cl. 29—447)



1. In a method for forming an internally splined sleeve, the steps comprising; loosely positioning a tubular metal part concentrically upon an arbor having a diameter smaller than the diameter of the tube and including a longitudinally extending groove along at least a portion of its surface, inwardly kinking a portion of the tube into the groove on said arbor and then uniformly compressing the remainder of the tube while the tube remains concentric with said arbor for conforming the remainder of the surface of the tube to the surface of the arbor whereby a tubular sleeve is formed having an inwardly facing spline therealong and finally removing the tube from the arbor.

2,947,882
CRYSTAL DRIVEN DENTAL TOOL
Herman Epstein, Philadelphia, Pa.
(27 Latham Park, Melrose Park, Pa.)
Filed May 15, 1953, Ser. No. 355,305
8 Claims. (Cl. 32—46)



1. A dental drilling system comprising, a supersonic vibrator, electronic means for driving said vibrator, a drilling bit having a shank and a chipping point coupled to said vibrator, a transparent shield member housing the shank of said bit so that the chipping point protrudes, and means for adjustably positioning the shield member along the shank relative to the chipping point whereby the depth of drilling may be accurately gauged.

2,947,883
SURFACE PLATE CALIBRATION
Rudolph J. Rahn, Dayton, Ohio, assignor to Rahn Granite Surface Plate Company, Dayton, Ohio, a partnership
Filed Sept. 14, 1956, Ser. No. 609,951
4 Claims. (Cl. 33—1)



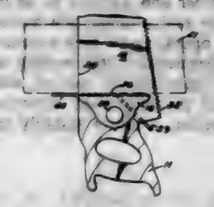
3. A method of calibrating a surface plate including supporting a straight edge over a surface plate in a plurality of relatively crossing diagonals having a common crossing point, establishing the crossing point of the straight edge as a common zero reference point, determining the elevation of the ends of the straight edge from the plate relative to the reference point in each of the crossing positions so as to determine a reference plane over the surface plate, including the same zero reference point, taking a point on each of said diagonals where a reading has been established and orienting the straight edge over said points so the indicator will record the previous readings at those points and with the indicator so set taking further readings at selected points between the straight edge and the surface plate thus establishing vertical distances of points on the surface plate from the straight edge so referenced to the vertical distance of said common point from the surface plate to thereby provide for direct calibration of the surface plate.

2,947,884
LINE MARKING TOOL
Roy O. Billings, Box 2611, Milwaukee 14, Wis.
Filed Aug. 8, 1957, Ser. No. 677,080
2 Claims. (Cl. 33—32)



1. A decorating tool comprising a handle having a projecting bearing portion with an open end recess, said bearing portion being forked and comprising spaced arms, an axle having a wheel rigidly connected to each end thereof, with the axle projecting beyond the wheel on at least one side of the tool, said axle and projecting end being removably and rotatably positioned in the bearing portion with the adjacent wheel within the fork whereby said handle is located over one wheel and is at one side of the tool and is offset a predetermined substantial distance from the other wheel on the other side of the tool so as not to obstruct vision and to permit the latter wheel to be used as a tracing wheel on a previous line while the wheel beneath the handle is forming a new line, the spacing of said fork arms being such as to accommodate said wheel while permitting rotation of the wheels and axle as a unit.

2,947,885
HAND SAW CONSTRUCTION
Nicholas Schmidt, P.O. Box 264, Wolverine, Mich.
Filed Dec. 2, 1957, Ser. No. 699,975
2 Claims. (Cl. 33—79)

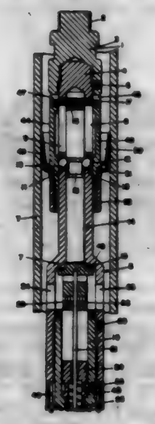


1. The combination comprising a handle, a blade mounted on said handle in the medial plane thereof, said blade having a straight edge, a member mounted on said handle adjacent the plane of said blade having a planar surface extending substantially from and in a plane at a right angle to the plane of said blade and at a right angle to the straight edge of said blade, said member having a first section fixed to an end face of said handle on one side of the plane of the blade and a second section coplanar with the first section and mounted adjacent one end of the first section for pivotal movement with respect to said first section about an axis parallel to the straight edge of said blade from a position wherein said sections are coplanar, contiguous and superposed edgewise to a plurality of positions wherein said sections are coplanar and angularly related, the width of said first section in a direction perpendicular to the plane of said blade being at least equal to substantially the thickness of the handle on the side of the plane of said blade on which said first section is mounted thereby substantially covering said end face of said handle, said member having an extension at the other end of said first section, said extension having a portion coplanar with the first section, the width of said extension in a direction perpendicular to the plane of said blade being substantially greater than the width of said first section at the other end of said first section, the width of said first section in a direction perpendicular to the plane of said blade at said one end of said first section adjacent said pivotal axis being substantially equal to the width of said extension, thereby providing a bearing surface enabling relatively stable positioning of said handle and blade on the end of a board with said bearing surface in coplanar engagement with the end face of the board and the adjacent portion of the blade in coplanar engagement with an adjacent surface of the board perpendicular to the end face of the board and with the second section of said member angularly related to the first section so that an angle may be scribed on said end face of the board.

2,947,886
RELEASE ASSEMBLY FOR TUBING CALIPER
William G. Boyle, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 770,039
16 Claims. (Cl. 33—178)

16. In an internal tube wall calipering and recording device adapted to be passed through an extended length of tubing containing fluid, said device including a plurality of feelers mounted for movement from a feeler-retracted position out of contact with the tubing wall to a feeler-extended position for contact with the tubing wall: a mechanism for releasing said feelers for move-

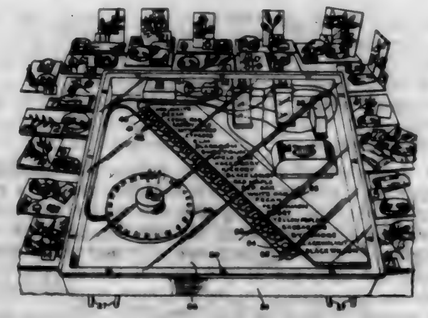
ment from the feeler-retracted position to the feeler-extended position comprising a bored body member adapted to be secured to the feeler head assembly, a plunger mounted for sliding movement within said body member, a feeler controlling member secured to said plunger, said controlling member permitting movement of said feelers to a feeler-extended position in response to movement in a predetermined direction of said plunger with respect to said body member, a rigid ball mounted in said body member and adapted to be moved into and out of a groove in said plunger, the moving of said ball into said groove operating to lock together said plunger and said body member and the moving of said ball out of said groove operating to release said plunger for movement in said predetermined direction with respect to said body member, a sleeve slidably mounted on the



outside of said body member, said sleeve having an internal groove extending over a portion only of its length, said sleeve originally being in a position wherein the ungrooved portion thereof engages said ball to maintain the latter within the plunger groove but being slidable to a position wherein the grooved portion thereof is adjacent said ball so that the latter is free to move out of the plunger groove and into the sleeve groove, and an impervious cup-shaped member fixedly secured to the outside of said sleeve, the open end of said cup-shaped member facing upwardly in the original position of said mechanism, wherein said feelers are in the feeler-retracted position, said cup-shaped member having sufficient flexibility to roll over on itself, so that its open end faces downwardly, in response to an upward pull on said mechanism through the fluid in said tubing.

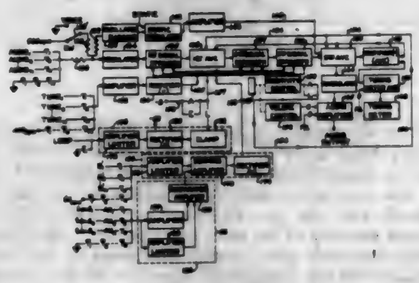
2,947,087
EDUCATIONAL, RECREATIONAL, AND TESTING APPARATUS
Harold A. Arnold and John B. Sharp, Knoxville, Tenn.; Icey Hayes Arnold, as administratrix of the estate of Harold A. Arnold, deceased, assignors to The University of Tennessee Research Corporation, Knoxville, Tenn., a corporation of Tennessee
Filed Mar. 18, 1957, Ser. No. 646,586
6 Claims. (Cl. 35—9)

1. In apparatus as described, a selector switch, a manually actuable switch member for said selector switch, a plurality of contacts one of which is engaged for each position of said switch member, a plurality of manually actuable switches, a circuit for each of said second named switches connecting each switch to one of said contacts, error indicating means, a circuit connecting said error indicating means to said second named switches, electrically actuated switch means in said error indicating circuit, a source of electrical energy in said error indicating circuit and connected to said second named switches, means indicating correct answers, a normally open circuit connecting said last named means to said electrically actuated switch means and to said source of electrical energy, circuit means from said switch member to said electrically actuated switch means including said source of electrical energy, said electrically actuated switch means including a contact and a movable switch element connected in series in said circuit connecting said error indicating means to said second named switches and normally engaging said contact, a second contact engageable by said movable switch element in said cir-



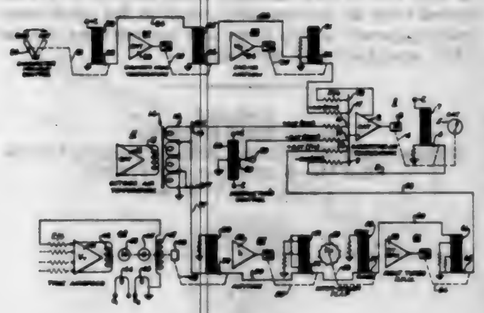
cuit for said means indicating correct answers, a coil connected in series in said circuit from said manually actuable switch member to actuate said switch element, electrically actuated scoring means, a second selector switch actuable with said first selector switch and having a second plurality of contacts corresponding to said contacts of said first selector switch, a circuit from each of said switches to one of said second contacts, a circuit for said scoring means including said source of electrical energy and said second selector switch whereby said scoring means is actuated only when one of said switches is actuated for one of said units correctly identifying the specimen set by number on said selector switch.

2,947,088
SIMULATED RADIO NAVIGATIONAL AIDS RECEIVER
Charles F. Zahner, Clifton, and Ralph L. Samson, Wyckoff, N.J., assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 770,288
15 Claims. (Cl. 35—10.2)



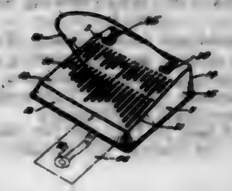
2. In a grounded aircraft trainer having computing means for producing a plurality of control signals determinative of the signal strength of a simulated radio navigational aids transmitter: an improved simulated radio receiving system comprising a source of audio signals representing a message from said transmitter, a carrier generator for producing a carrier signal at a fixed supersonic frequency, means for modulating said carrier signal with said audio signals, a cascade of amplifier stages for amplifying the modulated signal, a plurality of electronic function generators for applying direct current type gain control signals as functions of the aforesaid control signals to at least one of said stages, means for demodulating the amplified signal and providing a demodulated audio signal, said demodulating means including a long time constant network providing a demodulated direct current type signal in accordance with the carrier strength, and means for applying the latter demodulated signal as an electronic automatic volume control signal to at least one of said stages.

2,947,089
SIMULATED CARBURETOR AIR TEMPERATURE SYSTEM FOR AIRCRAFT TRAINING APPARATUS
William H. Dawson, Jr., Waldwick, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Nov. 24, 1954, Ser. No. 470,917
6 Claims. (Cl. 35—12)



1. In an aircraft trainer having flight aerodynamic condition and engine dynamic condition computers, the latter being responsive to a plurality of simulated manual controls including two manual controls for varying simulated carburetor air temperature, function generating means responsive to each of said controls for deriving an electrical signal in accordance with the position of that control, said computers including a plurality of electrical servo and summing systems some of which produce output signals representing ambient and dynamic flight factors respectively determinative of the simulated flight, one of said systems being a computer of simulated outside air temperature, a second of said systems being adapted to compute and indicate simulated carburetor air temperature in response to an input signal supplied thereto by said outside air temperature computer and additional input signals derived from function generators responsive to said two manual controls, at least two further systems adapted to compute dynamic factors representing engine supercharger r.p.m. and engine air flow respectively, means for modifying the function generator signals in accordance with the operation of said engine factor computing systems, respectively and means to apply said modified signals as said additional input signals to the carburetor air temperature computing system for operating an indicating instrument representing carburetor air temperature.

2,947,090
CODE-TEACHING APPARATUS
John Keith Levin, New Bedford, Mass., and Willis G. Stewart, Portsmouth, R.I., assignors to Aerovox Corporation, a corporation of Massachusetts
Filed Nov. 10, 1958, Ser. No. 772,908
5 Claims. (Cl. 35—14)



1. Apparatus for teaching a code utilizing dots and dashes, comprising a hollow casing of insulating material having a top wall, a plate of insulating material secured to the undersurface of said top wall, said plate having a predetermined continuous relatively thin layer of conducting material on the top surface thereof exposing portions of the insulating plate, said top wall having a plurality of parallel slots therethrough, each of said slots exposing a region of conducting and insulating areas of predetermined pattern, said conducting areas in each of said exposed regions corresponding to a code symbol, a movable electrical contact adapted to fit into any of said slots and to engage successive strips of conducting and insulating material when moved the length of said slots, said top wall being of thickness such that the slots act as a guide for the movable electrical contact to retain the latter in each of the slots as it is moved the length of the latter, means for supplying electric current to said contact and means electrically connected to said contact through said conductive pattern for producing a signal as said contact engages the successive conducting strips exposed by said slots, said hollow casing having front, rear and side walls depending therefrom and a plate covering the base of said casing, said base plate having a cut out portion adjacent the front wall of said casing, a plate hinged to the front edge of said cut out and movable to extend beyond said front wall in substantially the same plane as said base plate, and a key mounted on said hinged plate and electrically connected to said signal producing means.

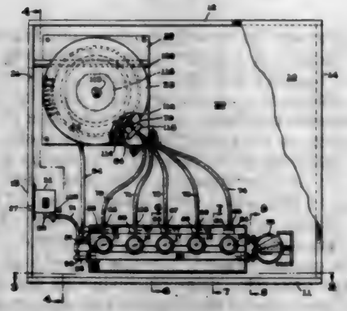
2,947,091
LIQUID DRIBBLER FOR TOILET TRAINING
Lola Ivers McCrary, 206 NW. 17th, Grand Prairie, Tex.
Filed Aug. 6, 1959, Ser. No. 832,087
7 Claims. (Cl. 35—17)



1. A liquid dribbler for stimulating normal urinary action including, a closed container adapted to receive a quantity of liquid and having a base portion for supporting the container in an upright position, and an open top compartment in the upper portion of the container with means for conducting liquid from the lower portion of the container into the compartment, the compartment

having its lower portion communicating with the lower portion of the container through a restricted aperture, at least the medial portion of the opposed walls of the container being transparent.

2,947,092
EDUCATIONAL, RECREATIONAL, AND TESTING APPARATUS
Harold A. Arnold and John R. Sharp, Knoxville, Tenn.; Icesy Hayes Arnold, as administratrix of the estate of Harold A. Arnold, deceased, assignors to The University of Tennessee Research Corporation, Knoxville, Tenn., a corporation of Tennessee
Filed June 28, 1957, Ser. No. 666,907
10 Claims. (Cl. 35—48)



4. In apparatus as described, a correlating drum, a reset gear, a ratchet gear and a plurality of spaced correlating discs in stacked arrangement in said drum, a spring-loaded follower for each of said correlating discs, contact means for each of said followers shiftable by the corresponding follower from an extreme position to another extreme position, manually actuated selector means for each of said contact means, a counter, a signal device, means for rotating said ratchet gear and said drum in step-by-step rotation including a dog engaging said ratchet gear, means responsive to said contact means in one extreme position upon actuation of the corresponding selector means for actuating said counter and said signal device, second means responsive to said contact means in the other extreme position upon actuation of the corresponding selector means for moving said dog and rotating said ratchet gear and said drum one step and for actuating said signal device and manually actuated means for rotating said reset gear to bring said drum to an initial position.

2,947,093
MOUNTING CONSTRUCTION AND THE COMBINATION THEREOF WITH A BOARD
Albert M. Masters, P.O. Box 155, Pen Argyl, Pa.
Filed Aug. 21, 1957, Ser. No. 679,487
14 Claims. (Cl. 35—65)

1. A mounting construction for chalk boards, cork boards and the like having an outer surface and thickness comprising at least one base member having means adapted to be secured to a wall, a clamping and trim member of a substantial length; cooperating interengaging means located and concealed within the trim member including a flange carried by one member having a predetermined thickness and the other member having a channel flange rigidly fixed thereto and spaced therefrom forming a cooperating channel, the channel having a width slightly greater than the thickness of the flange to freely receive the flange upon pressing the clamping and trim member laterally with respect to the base member to interengage with the flange, and the flange and cooperating channel extending parallel or approximately parallel with respect to the outer surface of the board to be clamped; the clamping and trim member having at least one clamping surface spaced inwardly from the outer surface of the board to be clamped when assembled with the base member and spaced from the cooperating



interengaging means to engage and clamp the board; and at least one of said members being resilient at a point spaced from the interengaging means to flex upon lateral interengagement of the flange and interengaging channel when assembled with the board.

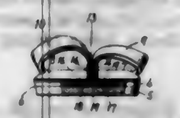
2,947,094
SNOW SHOE HARNESS
William Gabry, Birch Island, British Columbia, Canada
Filed May 4, 1959, Ser. No. 810,682
1 Claim. (Cl. 36—4.5)



A sole plate and heel clip component combination for fastening snow shoes to the associated boots of the wearer, said sole plate being detachably securable via the front thereof to said snow shoe, straps associated with said sole plate adapted to engage around said boot, said heel clip component including means to detachably secure same to the heel of said boot, hook means on said sole plate, and means on said heel clip component adapted to be selectively engageable by said hook means, said sole plate including a strip secured to and extending rearwardly from said sole plate, said hook means including a resilient down-turned hook portion formed on the distal end of said strip, said heel clip component including a clamp secured around the wall of the heel of the associated boot, said clip extending forwardly therefrom, and a plurality of barbs projecting at right angles from the inner surface of said component and adapted to engage in said wall of said heel.

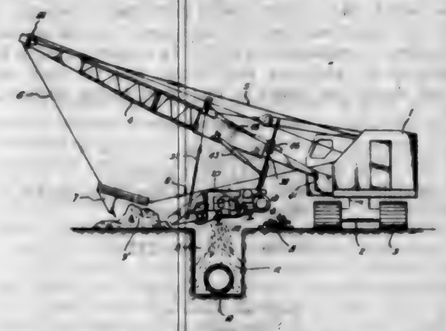
2,947,095
SANDAL
Kiyoichi Miyachi, 488–1 Mikado-machi, Fukuyama, Hiroshima, Japan
Filed Oct. 21, 1957, Ser. No. 691,444
Claims priority, application Japan Sept. 9, 1957
1 Claim. (Cl. 36—11.5)

A sandal comprising, in combination: an insole having an opening; and outsole below said insole; a sock liner covering said insole and having a slit above said opening; a pair of strips integral with and each extending from one outer side of said sock liner adjacent to the latter's rear end, said strips being twisted and turned over to form a pair of side straps of the sandal



and being connected to each other to form a front strap having a lower end portion received in said slit, and each of said strips having a free end bent into the plane of said insole and received in the opening therein; and means for connecting the free ends of said strips to the outsole and for connecting the sock liner to said insole.

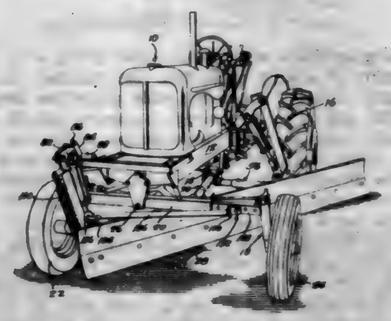
2,947,096
DRAGLINE DITCH PADDER ATTACHMENT
James D. Cummings and Ernest E. Cummings, San Marcos, Tex. (Both of Crutcher-Rolfs-Cummings, Inc., P.O. Box 2073, Houston 1, Tex.)
Filed Oct. 18, 1957, Ser. No. 691,020
8 Claims. (Cl. 37—144)



1. In combination with a dragline having a dirt bucket and a guide boom therefor, of a dirt separator unit for operating on dirt transferred thereto from the bucket and means suspending the separator unit from the boom including a flexible cable connected to one end of the separator unit and a pair of transversely spaced apart struts, each having vertically spaced apart pivotal connections with the boom and the other end of the separator unit, a power actuator connected with the cable to vary its effective length between the boom and the separator unit and power actuators for connection one with each strut to swing the struts relative to one another.

2,947,097
SCRAPER BLADE ATTACHMENT FOR A TRACTOR
Harvey Robert Toews, R.F.D. 2, McPherson, Kans.
Filed Feb. 14, 1958, Ser. No. 715,238
2 Claims. (Cl. 37—155)

2. The combination with a tractor bed frame having a forward end and a rearward end, a front wheel assembly including an axle and a pair of wheels carried by opposite ends of said axle positioned transversely of said bed frame adjacent the forward end and having the axle connected intermediate its ends to the forward end of said frame for rocking movement about a horizontal axis, and an implement hitch dependingly carried by the midportion of said bed frame, of an upstanding scraper blade positioned beneath said frame intermediate the ends so that it extends in a direction diagonally of said frame with one of the ends forwardly of said axle and on one side of said axis and adjacent one of the front wheels and the other of its ends on the other side of said axis and outwardly of the adjacent side of said frame and forwardly of and near the rearward end of said frame, a first telescoping member having one end connected to the portion of said blade inwardly of and spaced from said one end thereof and having the other end connected to said hitch for limited up and down movement of said blade portion and for lateral swinging movement of said blade about said hitch as a vertical axis, a second telescoping member extending diagonally between the portion of said blade inwardly of and spaced from said blade other end and said first telescop-



ing member inwardly of and adjacent said first telescoping member other end, and having one end pivotally secured to the last-named blade portion and having the other end pivotally connected to said first member for pivotal movement about another vertical axis, means operatively connected to said blade adjacent said one end thereof for effecting the limited up and down movement of the portion of said blade adjacent said one end thereof, means operatively connected to said blade adjacent the other end thereof for effecting the limited up and down movements of the portion of said blade adjacent the other end thereof, and a brace member arranged forwardly of said axle and having one end pivotally connected to said axle inwardly of and adjacent the other of said wheels and having the other end pivotally connected to said first-named means.

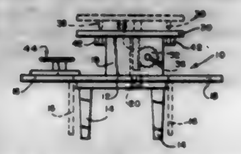
2,947,098
PADDING FOR LAUNDRY ROLLS
Joseph R. Crockford, New York, N.Y., assignor of one-fourth to Harry Radzinsky, Hollywood, Fla.
Filed May 19, 1958, Ser. No. 736,013
1 Claim. (Cl. 38—66)



A padding for laundry rolls comprising, a sheet composed of inner and outer layers of a padding material with a layer of metallic foil disposed between them, the inner layer of padding material being that arranged adjacent to the surface of the roll and being of greater thickness than the outer layer and having greater cushioning effect than the outer layer, the layer of metallic foil having a plurality of rows of apertures located adjacent to its marginal edges and spaced from each other, the metallic

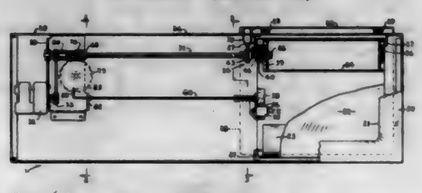
layer being imperforate between the rows of apertures, the layers of padding having fibres entering into the apertures to thereby restrain movement of the metallic layer relatively to the layers of padding.

2,947,099
COMBINATION TABLE AND IRONING BOARD
Nobye Lancaster, 2733 Bond Ave., East St. Louis, Ill.
Filed Oct. 27, 1958, Ser. No. 769,821
1 Claim. (Cl. 38—105)



Ironing apparatus comprising a table having a top and a plurality of relative supporting legs therefor, an upright post having a depending male projection integral therewith, said table top having an opening slidably and adjustably receiving the male projection so that the post can be either turned to extend in one direction or in an opposite direction, an ironing board having depending guide pins, said upright post having receptacles for removably and slidably receiving said guide pins, said ironing board having a depending rack gear extending into said upright post, and said upright post having a pinion meshing with said rack gear and a crank for operating said pinion whereby said ironing board may be angled by the connection of the upright post with the table top and vertically adjusted from the upright post.

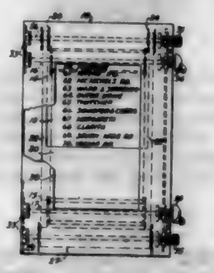
2,947,100
DISPLAY DEVICE
Lawrence R. Loskill, 6241 Hohman Ave., Hammond, Ind., and Jack E. Martens, 7100 E. 1st Ave., Gary, Ind.
Filed Aug. 21, 1959, Ser. No. 835,236
15 Claims. (Cl. 40—32)



1. In a changeable exhibitor, a housing having a window therein, a series of panels arranged within said housing to be positioned one after another for viewing through said window, a movable shutter associated with said window for concealing said panels during the panel-changing cycle, and means for cyclically changing said panels and withdrawing said shutter between the panel-changing operations, said means including a helically threaded screw shaft, a freewheeling nut structure reciprocably driven along said shaft, said shutter being connected with said nut structure for movement therewith, and means engageable with said nut structure at one end of its stroke for positioning a fresh panel within view of said window.

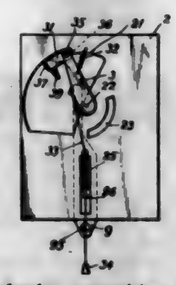
2,947,101
ADJUSTABLE SIGN
Leonard D. Barry, 19300 Pennington Drive, Detroit 21, Mich.
Filed Jan. 26, 1955, Ser. No. 484,283
13 Claims. (Cl. 40—53)

1. A ratchet wheel arranged to revolve in either direction having a ratchet pawl engaged with said wheel and actuating to turn said wheel in a given direction, said ratchet having resilient means permitting the pawl of said ratchet to extend in the opposite direction from ratcheting to skip teeth when said wheel is forced in the opposite direction from ratcheting and retractable and pivoted tongue holding said wheel so that said ratchet pawl can return to engage successive teeth during ratcheting and comprising a pin, a guide piece having a hole in which said pin rides, a spring forcing said pin outward



of said hole and radially against a tooth of said wheel, supporting means pivotally holding said guide piece so as to swing said pin in the direction of movement of the tooth with which said pin is engaged, stop means preventing movement of said pin in the direction of ratcheting said wheel, and resilient means permitting movement of said pin about said pivot on said support in the opposite direction to enable said wheel to be revolved against the direction of ratcheting said ratchet and yet hold said wheel during the return of said pawl during ratcheting.

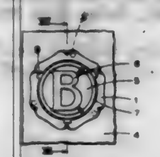
2,947,102
PERPETUAL CALENDAR
Magdalin Christian Gleerup-Moller, Bülowsvej 9, Copenhagen, Denmark
Filed Aug. 18, 1958, Ser. No. 755,536
5 Claims. (Cl. 40—115)



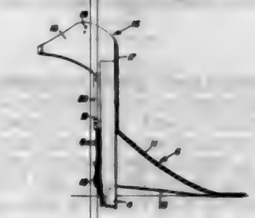
1. Perpetual calendar comprising in combination a frame with a window, a day disc, date discs and a month disc bearing legends part of which is visible through the window, a first handle for the simultaneous setting of the day and date discs and another handle with tips for the simultaneous setting of the month disc, the date discs and the day disc.

2,947,103
DECORATIVE MOUNTS
George Kluthek, 9, W. Heath Ave., London NW. 11, England
Filed Mar. 11, 1959, Ser. No. 798,739
Claims priority, application Great Britain Apr. 15, 1958
3 Claims. (Cl. 40—140)

1. A removable decorative mount comprising a ring member adapted to be secured to a supporting surface, such ring member having an undercut channel on its inner periphery; an insert having a plurality of lugs upon its outer periphery, such lugs being adapted to pass through apertures adjacent the inner periphery of the ring member to enter said channel; and resilient means adapted to be interposed between the insert and the supporting surface.



2,947,104
WATER FOWL DECOY
Wallace A. Johnson and Arvid T. Johnson, both of Milbank, S. Dak.
Filed Sept. 10, 1957, Ser. No. 683,144
2 Claims. (Cl. 43—3)



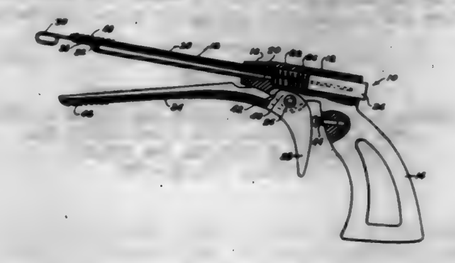
1. A water fowl decoy comprising: a post, an upwardly opening, resilient clip mounted on said post at an intermediate point, a generally hollow, elongated body removably mounted horizontally on the post and including a vertical front end wall portion slidable on the post and frictionally engaged in the clip for positively supporting the body on the post, said body having a horizontal opening therein immediately adjacent the top of said vertical front end wall portion receiving the post, said post extending upwardly beyond the body, and a head unit removably mounted on the upper portion of the post and engaged with the body for retaining same in the clip.

2,947,105
FISH SIGNAL DEVICE
Thomas L. Legios, Box 519, Rte. 1, Antioch, Ill.
Filed Sept. 8, 1958, Ser. No. 759,537
3 Claims. (Cl. 43—17)



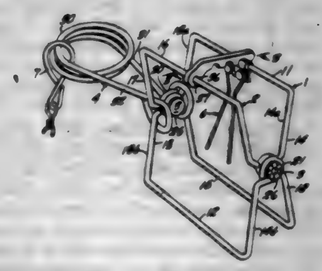
1. In a fish signal device, a hollow transparent housing including a pair of sections each of said sections being of truncated conical formation having a solid circular portion at the apex thereof with one of said sections having a reduced externally threaded portion and the other of said sections being internally threaded whereby said sections are detachably connected together, a hollow transparent case mounted in said housing and including a pair of interfitting alined hollow members that are integral with and extend inwardly of the solid circular portion on each section, a spring member on the circular portion at one end of said case, a battery positioned in said case, a coil spring engaging an end of said battery, a light bulb movably mounted in said case and engaging said coil spring, and a weighted body member arranged in said case and mounted for movement into and out of engagement with said light bulb so as to selectively move the light bulb into engagement with the battery when the fish signalling device tilts or moves from a horizontal position.

2,947,106
FISH HOOK REMOVERS
William Lewan, 2464 S. 92nd St., West Allis, Wis.
Filed Nov. 18, 1957, Ser. No. 697,170
4 Claims. (Cl. 43—53.5)



1. A substantially pistol shaped fish hook remover including a hollow barrel having a muzzle end and a butt portion used in conjunction with a hook having a line connected thereto, a first serrated element formed on the upper side of the barrel adjacent the muzzle end thereof, a lever member of substantially the same length as the barrel including a trigger shaped actuator pivotally connected to the butt portion adjacent the barrel, a second serrated element formed on the lower side of said lever member adjacent the muzzle end of the barrel, said serrated elements being movable apart to grip the interior of the fish's mouth by pressure on the trigger, a loop element slidably mounted within said barrel to receive the fish line which guides the loop into contact with the fish hook which it engages, and resilient means at the butt end of the pistol shaped member to propel the hook engaging end of the loop element in a direction towards the serrated elements and remove the hook from the mouth of the fish when said means is moved from a cocked position to released position.

2,947,107
ANIMAL TRAPS
John U. Leiss, Lititz, Pa., assignor to Animal Trap Company of America, Lititz, Pa., a corporation of Pennsylvania
Filed Sept. 18, 1958, Ser. No. 761,747
5 Claims. (Cl. 43—92)



1. A trap comprising two similar frames, each having opposite side portions and connecting end portions, pivot

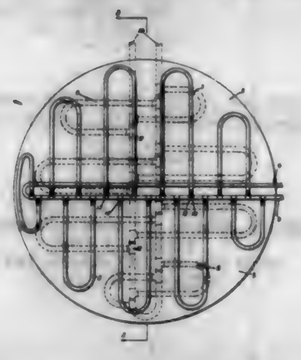
means pivotally connecting the end portions of said frames together intermediate said side portions, spring means for swinging said frames relative to one another about their pivots from a set position in which a first side portion of one frame is adjacent a first side portion of the other frame to a closed position in which said first side portion of each frame is adjacent a second side portion of the other frame, a latch member pivotally carried on one of said frames and comprising an arm having a plurality of notches spaced along said arm and adapted to receive said other frame in a selected one of said notches to hold said frames in set position, and a trigger member pivotally carried on the other frame and having a portion engaging said latch to release said other frame from said selected notch and thereby release said frames.

2,947,108
CENTRIFUGAL FLYING TOY
William O. Dodd, Jr., 2025 Lindell, and Clinton A. Hicks, 3906 N. Chadbourne, both of San Angelo, Tex.
Filed Feb. 5, 1958, Ser. No. 713,454
2 Claims. (Cl. 46—77)



1. An amusement device comprising a tethered object, a flexible control line, a swivel connector attaching said object to the outer end of said control line, a ring adapted to be held by one hand of a user of the device, a swivel directly connected to said ring and to the inner end of said control line thereby isolating the part of said control line between said tethered object and said ring from the hand of the user and from said tethered object whereby to enable turning of said control line about its longitudinal axis independently of said ring and object, a straight control handle adapted to be held in the other hand of the user and having a straight, uninterrupted longitudinal passageway extending therethrough in a straight line from end to end thereof, said control line extending in a straight line through said passageway and being freely slidably disposed and rotatable therein, said handle consisting of a plurality of straight sections each having an end to end bore therethrough constituting part of said passageway, adjacent ends of parts of adjacent sections having a telescoping engagement with each other and with the end of one section of a pair being of reduced external and internal diameter and being telescopingly received in the adjacent end of the other section of said pair, said sections being separably connected by said telescoping engagements whereby to alter the length of said handle while maintaining said continuous passageway therethrough by varying the number of connected sections, said control ring and the rotatable and slidable disposition of said isolated part of said control line in said handle enabling control force to be applied to the control line at one end thereof by one hand of the user while the handle is independently manipulated by the other hand of the user whereby to effect sensitive control of said tethered object.

2,947,109
MEANS FOR KEEPING GRASS GREEN ON A GOLF PUTTING GREEN
Melvin B. Davis, Sr., 948 Hillcrest Ave., Birmingham 8, Ala., and Paul L. Davis, 2320 3rd Place NW., Birmingham, Ala.
Filed Feb. 19, 1959, Ser. No. 794,325
2 Claims. (Cl. 47—1)



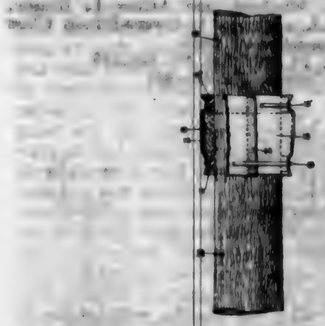
1. A golf putting green, means for keeping grass green on said golf putting green comprising, a layer of soil, grass growing on the soil, a coil of plastic tube, said coil having a plurality of perforations therein, said coil being located in the bottom portion of the soil, a layer of sand, said soil resting on said sand, a coil made of metal pipe, this coil being located in said sand, a layer of sawdust, said sand resting on said sawdust, a layer of gravel, said sawdust resting on said gravel, said gravel resting on the surface of the earth; all of said layers being of the same area and extending to the edge of the putting green; a regulated source of cold water connected to said plastic coil; a regulated source of hot water connected to said metal pipe coil.

2,947,110
METHOD AND COMPOSITION FOR DESTROYING TREE STUMPS
Charles S. Walters and Kenneth R. Peterson, Urbana, Ill., assignors to The University of Illinois Foundation, Urbana, Ill., a corporation of Illinois
No Drawing. Filed May 15, 1958, Ser. No. 735,351
15 Claims. (Cl. 47—58)

1. A method for substantially destroying the subterranean portion of a tree stump which comprises dispersing at least one compound selected from the group consisting of the water-soluble compounds of copper and chromium within said stump in an amount sufficient to promote the glow combustion thereof, and igniting said stump whereby a substantial subterranean portion of said stump is destroyed.

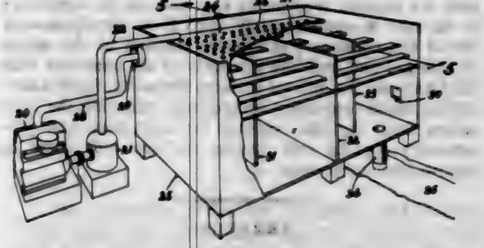
2,947,111
SYSTEMIC FUNGICIDAL SOLUTION AND METHOD OF APPLICATION
Leo Zobrist, Dielsdorf-Zurich, Switzerland, assignor to Dr. R. Maag, Limited, a corporation of Switzerland
Filed Oct. 3, 1958, Ser. No. 765,055
6 Claims. (Cl. 47—58)

1. A systemic fungicidal solution which comprises the equilibrium reaction product obtained by reacting in aqueous solution (*a*) one mole of at least one ethylenepolyamine selected from the group consisting of ethylenediamine, diethylenetriamine, triethylenetetramine, tetraethylenepentamine, and the polyethylenepolyamine mixture formed by the interaction of ethylene dichloride and ammonia, (*b*) two moles carbon disulfide, (*c*) two equivalents of a hydroxide selected from the group consisting of lithium, sodium, potassium, ammonium, calcium, and magnesium, and (*d*) two moles of $R_2NH.HX$ in which R



is selected from the group consisting of methyl and ethyl, and X is an equivalent of an anion selected from the group consisting of chloride, bromide, sulfate, phosphate and nitrate.

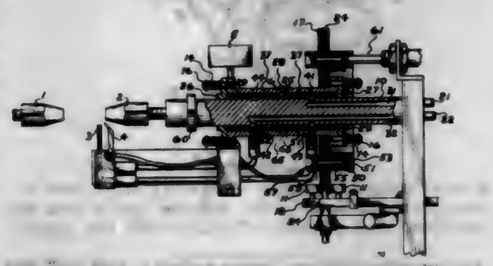
2,947,112
PRODUCTION, FIXATION AND USE OF NITROGENOUS COMPOUNDS
Willard L. Morrison, Lake Forest, Ill., assignor to The Union Stock Yard and Transit Company of Chicago, Chicago, Ill., a corporation of Illinois
Filed Oct. 29, 1958, Ser. No. 770,512
10 Claims. (Cl. 47—58)



1. The method of promoting vegetable growth which includes burning fuel in the presence of heated air in an internal combustion engine, using said engine to pump irrigation water, mixing the engine exhaust gas with an additional supply of air in the presence of a stream of irrigation water in finely divided condition whereby there is an intimate contact between the gases and the water, discharging the gas to the atmosphere and supplying the water as irrigation water for the land.

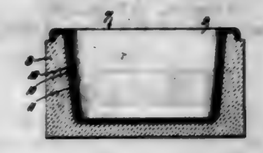
2,947,113
GLASS SEALING APPARATUS
Mathew Nazzewski, Adams, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Jan. 13, 1955, Ser. No. 481,621
1 Claim. (Cl. 49—1)

A sealing apparatus for fusing miniature glass structures together, said apparatus having a gripping device for holding the miniature glass structure to be fused, burner mechanism including a burner nozzle mounted for rotation completely around the gripping device to heat and fuse the structure completely around its periphery, driving elements connected to so rotate the burner mechanism, an electrically fired burner ignition assembly including said burner nozzle as one electrode member mounted for rotation with the burner mechanism to ignite the burner while it is rotating, means for axially shifting the position of said rotatable burner nozzle and said rotatable igniting member with respect to said gripping device, a control device comprising a flow control means controlling the rate of supply of combustible material to the burner, a first electric circuit including a first electric switch for controlling the passage of power through said first circuit to the igniting member, a second electric circuit including a second electric switch for permitting the passage of power through said second



circuit to the burner driving elements, and an operating member having movement between two extremes; the structural relationship between the components of the control device being such that movement of said operating member from one extreme to the other extreme actuates the second electric switch means to complete said second circuit to said driving elements, the flow control means to supply combustible material to said burner, and the first electric switch means to complete said first circuit to said igniting member.

2,947,114
COMPOSITE MATERIAL
James S. Hill, Cranford, N.J., assignor to Engelhard Industries, Inc., a corporation of New Jersey
Filed May 9, 1957, Ser. No. 658,167
3 Claims. (Cl. 49—53)

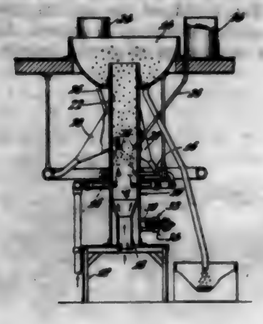


3. Glass handling apparatus comprising a plurality of metal members nested one within the other, one of the members being shaped to contain the other, one of the members being a platinum member, the other member being a base metal member, a coating of a fused refractory oxide selected from the group consisting of alumina and zirconia on at least one of the members and positioned therebetween, the members being nested together with a snug fit.

2,947,115
APPARATUS FOR MANUFACTURING GLASS BEADS
Thomas K. Wood, Devon Road, Essex Fells, N.J.
Filed Dec. 1, 1955, Ser. No. 550,249
3 Claims. (Cl. 49—58)

1. In apparatus for the manufacture of glass beads and the like the combination of a vertically disposed draft tube having an open lower end, means for supplying heat to the interior of said draft tube to cause an upward flow therein of hot gas at a temperature such as to soften small particles of glass, a coating of refractory material on at least the portion of the inner surface of said draft tube that is exposed to said glass-softening temperature,

means for dispersing into said hot gas a continuous supply of finely divided glass particles a portion of which will flow upwardly with said hot gas to become spherical beads and a portion of which will come into contact with and tend to adhere to said refractory coating or glass particles previously adhered to said coating, and means



for imparting vibratory driving motion to said draft tube and the refractory coating thereon at a constant frequency of at least several hundred cycles per minute, and, at a constant amplitude and in directions generally transverse to the longitudinal axis of said draft tube to minimize accumulation of adhered particles in a layer upon said refractory coating.

2,947,116
METHOD OF PRODUCING TISSUE CULTURE FLASKS

Wilton R. Earle, Bartonsville, and Frederick Highhouse, Germantown, Md., assignors to the United States of America as represented by the Secretary of Health, Education, and Welfare

Original application Feb. 26, 1954, Ser. No. 412,967, now Patent No. 2,858,036, dated Oct. 28, 1958. Divided and this application Apr. 22, 1958, Ser. No. 736,429
4 Claims. (Cl. 49—79)
(Granted under Title 35, U.S. Code (1952), sec. 266)

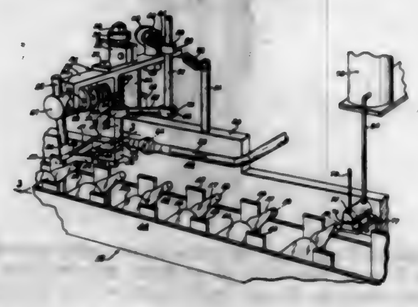


1. In a method of forming a tissue culture flask, the combination of steps comprising heating a length of cylindrical tube somewhat longer than the length of flask body to be made until it is somewhat plastic and while continuing such heating rapidly and consecutively passing into it, and then withdrawing, each of a series of several flat faced and progressively broader mandrels to form a blank of rectangular internal cross section; passing into the so formed blank a mandrel of rectangular cross section that has a laterally tapered nose end, the top and bottom faces of which are coplanar with the main faces of the mandrel, and heating and flowing the glass of the tube over the laterally tapered nose end of said mandrel to form a closed end on the blank; inserting in the so closed blank a polished cast iron vacuum mandrel having the exact configuration of the interior of the flask to be made, and having its broad faces parallel for internally shaping the roof and floor of the flask body and, while further heating the flask, vacuum shrinking the closed end and flask-body thereon to precisely dimension and highly polish the inner surfaces of the roof, sides and floor of the flask; and removing the vacuum mandrel and cooling the so formed flask body.

2,947,117
APPARATUS AND METHOD FOR TREATING INTERIOR SURFACES OF GLASS CONTAINERS

Joseph F. Greene, Vineland, and Arthur L. Hinson, Mauricetown, N.J., assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Oct. 13, 1955, Ser. No. 540,289
8 Claims. (Cl. 49—89)



8. In a method of treating the interior surfaces of hollow glass containers having open ends therein during continuous travel of the containers to and through an annealing lehr to reduce the alkalinity on said interior surfaces, the steps of conveying the containers in a substantially linear path, during said conveying and at spaced points along said path, separately injecting several cubic centimeters of sulfur dioxide gas and a lesser amount of a gaseous dispersion of moisture into the open ends of said containers, introducing said containers into the lehr with the injected reagents in situ, heating the containers in the lehr to approximately 750° F. to simultaneously anneal the containers and cause reaction of the sulfur dioxide gas and moisture interiorly of the container with the alkalis on the interior surfaces thereof to form water-soluble alkali-containing compounds, removing the containers from the lehr, cooling the containers, and subsequently washing said interior surfaces with water to remove said compounds.

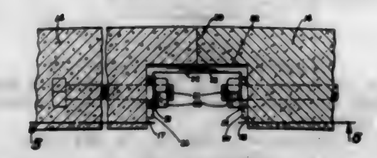
ERRATUM

For Class 50—43 see:
Patent No. 2,947,267

2,947,118
GRAIN STORAGE STRUCTURES

Harvard S. Rockwell, 1635 W. 26th St., Minneapolis, Minn.

Filed Sept. 6, 1956, Ser. No. 608,245
2 Claims. (Cl. 50—102)

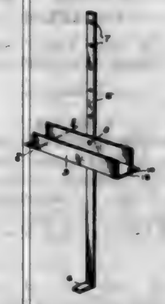


1. In a concrete grain storage structure comprising a plurality of superimposed courses of independent segmental wall sections, the vertical end edges of each wall section being abuttingly engaged with the vertical end edges of adjacent wall sections in each course of wall sections, the vertical end edges of each wall section having its inner corners recessed the height of the wall section whereby a longitudinally extending inwardly facing channel is provided between the vertical edges of contiguous wall sections, each of said channels being defined by a circumferentially disposed wall portion and laterally spaced vertical wall portions, horizontally disposed tie studs embedded in the laterally spaced vertical wall portions of each longitudinally extending channel, each of said studs having a threaded end portion projecting into its respective channel, U-shaped coupling members received in said channels and each comprising an elongated wall and spaced parallel end walls, the elongated walls of said coupling members being seated against the circumferential wall portions of said channels, the end walls of said coupling members each having a downwardly facing open ended slot therein adapted to receive the projecting threaded end portions of said studs, and securing elements received in threaded engagement with the projecting end portions of said studs and with the end walls of said coupling members, whereby manipulation of said securing elements will draw the abutting vertical edges of said segmental wall sections firmly into engagement with one another.

2,947,119
ANCHORED TIE-DOWN DEVICE FOR RAFTERS

Lawrence P. Puckett, Jr., 150 NW. 121st St., Miami, Fla.

Filed Sept. 18, 1956, Ser. No. 610,589
4 Claims. (Cl. 50—466)



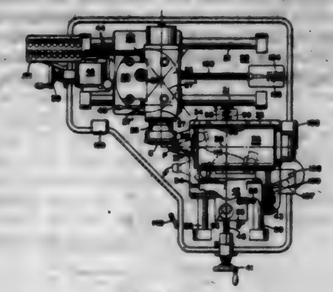
3. An anchoring device for anchoring roof elements to the continuous top beam of concrete structures; said anchoring device comprising an elongated upright strap having a lower bent portion adapted to be positioned in the poured concrete and having an upper end portion of a length sufficient to permit its attachment to a rafter or beam, a saddle in the form of an upwardly facing channel like member of moisture proof material comprising a bottom and upstanding side walls, connecting means between one of said side walls and the said strap holding the saddle and strap against separation while permitting movement of the saddle to a position substantially transverse to the said strap whereby to permit the saddle to extend across and to bear upon the top of the poured beam, extended end portions on said saddle, the distance between the said walls of the saddle being such as to receive the lower edge portion of a roof beam to position said roof beam and to hold it against movement away from the said strap.

2,947,120
MACHINE AND METHOD FOR RUNNING GEARS TOGETHER FOR TESTING AND FINISHING

Oliver F. Baner and Edward Stark, Rochester, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York

Filed Aug. 18, 1958, Ser. No. 755,773
43 Claims. (Cl. 51—26)

5. A machine for running a pair of gears together comprising a frame, spindles for the gears supported by the frame, means for effecting relative adjustment of the spindles on the frame to bring the gears into mesh, the spindles being mounted on the frame for oscillation relative to each other about an axis that passes through

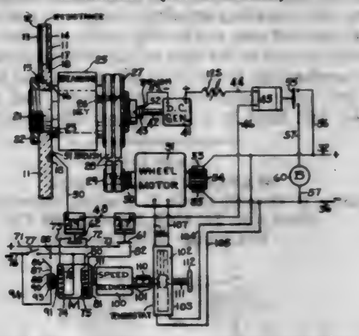


the mesh zone of the gears and that is perpendicular to the axes of both spindles, drive means for rotating one spindle, and drive means for effecting such oscillation.

2,947,121
GRINDING WHEEL AND WHEEL DIAMETER MEASURING APPARATUS

Loring Coes, Jr., Brookfield, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Filed Mar. 25, 1959, Ser. No. 801,930
22 Claims. (Cl. 51—134.5)



11. A grinding machine comprising a grinding wheel consisting of abrasive grains bonded by organic bond and containing embedded therein an electrical resistance device, and containing at least partially embedded therein and each extending to a surface thereof a pair of commutators connected to the resistance device, the resistance device being so connected to the commutators and so arranged in the wheel that as the wheel is worn away during grinding the electrical geometry of the resistance device is changed and therefore the electrical resistance between the commutators is also changed, an electric motor having at least one coil connected to rotate said grinding wheel, a generator connected to said motor to be driven by it, and electrical means connected to said generator and to said coil constructed to change the current through the coil responsive to changes in the value of the resistance of the resistance device.

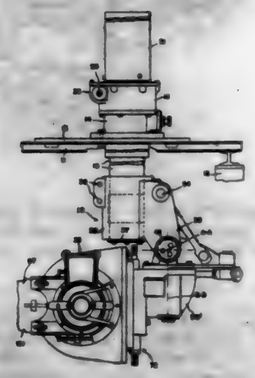
2,947,122
ADJUSTABLE SPINDLE FOR BUFFING WHEELS AND THE LIKE

Otto Thiel, Detroit, Mich., assignor to Midwest Supply and Manufacturing Company, Ferndale, Mich., a corporation of Michigan

Filed Aug. 18, 1958, Ser. No. 755,620
10 Claims. (Cl. 51—166)

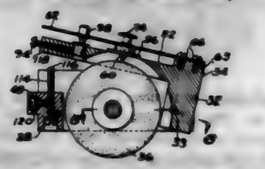
1. Structure for the mounting of a buffing or like head for universal adjustment, comprising a support, a

first mounting member having means to engage the same with said support for adjustment thereon, a second mounting member having means pivotally engaging said first mounting member for rotatively adjusting it about a first axis, a third mounting member having means pivotally engaging said second mounting member for rotatively adjusting the third mounting member about a second axis in 90° angular relation to said first axis, means to secure



said second mounting member in rotatively adjusted position on said first member and said third member in rotatively adjusted position on said second member, comprising rods extending angularly relative to said respective first and second axes and having means to secure the same pivotally at ends of the rods to said respective second and third members on pivotal axes offset from and paralleling said first and second axes, respectively, and means to connect said head to said third mounting member.

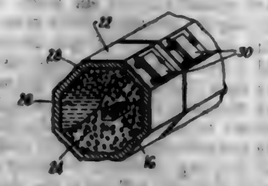
2,947,123
WATCHMAKER'S TOOL
George E. Dygert, 16956 E. Warren, Detroit, Mich.
Filed Apr. 24, 1959, Ser. No. 808,779
10 Claims. (Cl. 51—259)



1. A watchmaker's tool for removing the staffs from balance wheels or the like comprising, a support with a grinding wheel journaled thereon, a holder adapted to hold a balance wheel with a portion of its staff disposed toward said grinding wheel, said holder being mounted for movement on said support toward said grinding wheel for advancing the staff into grinding engagement against said grinding wheel, means forming a balance wheel supporting anvil on said tool, said tool having an opening adjacent said anvil to receive another portion of a balance wheel staff supported on said anvil, and means forming a punch mounted on said holder for aligned movement toward said opening for driving a portion of the staff loose from the balance wheel into said opening.

2,947,124
PROCESS FOR TUMBLE FINISHING
Gerald C. Madigan and Walter W. Middleton, South Bend, Ind., assignors to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Sept. 8, 1959, Ser. No. 838,801
8 Claims. (Cl. 51—282)

1. In a process for surface finishing generally foraminous articles of manufacture which are made from a predetermined material or materials, the steps of: selecting a liquid bath treatment which will readily dissolve some materials but which does not appreciably dissolve the articles to be finished, selecting a substance which will be dissolved by said liquid bath treatment, selecting abrasive granules which will not be appreciably dissolved by said liquid bath treatment, forming tumble

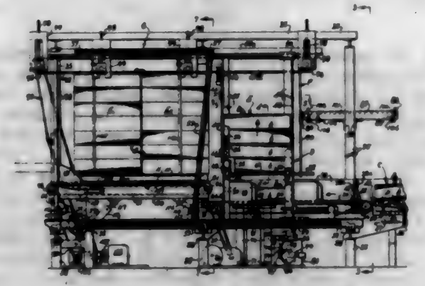


finishing pellets wherein said abrasive granules are dispersed throughout a coherent matrix of said selected substance, tumbling said articles with said pellets, and thereafter subjecting the articles in which pellets become lodged during the tumbling operation to said liquid bath treatment to dissolve away the substance in the surface of said pellets to reduce their size and thereby facilitate their removal from said articles.

ERRATUM

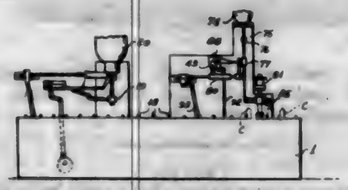
For Class 53—37 see:
Patent No. 2,947,904

2,947,125
MACHINE FOR PACKAGING CARTONS
Harry W. Wilson, Millbrae, and Clinton L. Dornbush, Palo Alto, Calif., assignors to Royal Container Co., San Francisco, Calif., a corporation of California
Filed Apr. 29, 1957, Ser. No. 655,774
40 Claims. (Cl. 53—61)



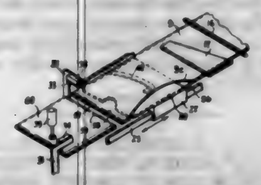
1. A device for making a self-palletized bale of k.d.f. corrugated paper cartons, comprising: means for forming at least one stack of k.d.f. cartons over a bottom oversize locking sheet; means for folding the portions of said locking sheet that extend beyond said stack against the sides of the stack; means for compressing the stack; means for positioning overlength reinforcing and protective members on predetermined portions of said compressed stack on portions of which boards may be located against one side of the stack; means for locating metal straps around said compressed stack, with each said strap overlying a said board and overlying some of said reinforcing and protective members; means for securing the ends of said strap together tightly to form a bale; means for relieving the pressure of said compressing means against said stack after the bale is formed; and means for turning said bale 90° to rest it on said boards, which are then used as pallet boards.

2,947,126
MACHINE FOR FILLING AND CHARGING AN AEROSOL CONTAINER AND FOR SEALING THE LATTER
John Richard Focht, Yonkers, N.Y., assignor to Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed Sept. 21, 1956, Ser. No. 611,313
8 Claims. (Cl. 53—38)



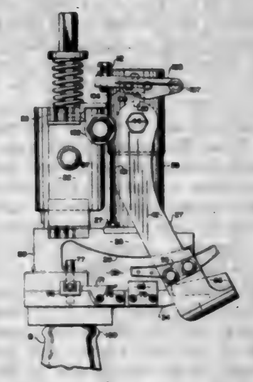
1. An aerosol charging and sealing machine comprising: means for supporting a container having a top opening with a valved cap loosely engaged therewith, a charging and sealing head provided therein with a chamber, means for imparting relative movement between such a container and the head to engage the container with the head with the container opening registering with the head chamber, means to engage and lift the valved cap free from the container and thereafter return it into engagement therewith, means for injecting a predetermined measured charge of propellant into the head chamber and through said chamber and container top opening into the container while the valved cap is lifted free from the container to permit unrestricted passage of propellant into the container, means for sealing the valved cap to the container after it has been returned to engagement therewith, said means for injecting the propellant comprising a propellant source, a conduit leading from said source to the head chamber, a cylinder connected to said conduit, a piston within said cylinder, and means, synchronized with the other parts of the machine, for operating said piston to draw into the cylinder a predetermined quantity of propellant from said source and then pressure feed said propellant to said head chamber.

2,947,127
PACKAGE WRAPPING MACHINE
Philip Herman, Montreal, Quebec, Canada, assignor to Herman & Leal Ltd., Montreal, Quebec, Canada
Filed Mar. 26, 1959, Ser. No. 802,227
13 Claims. (Cl. 53—182)



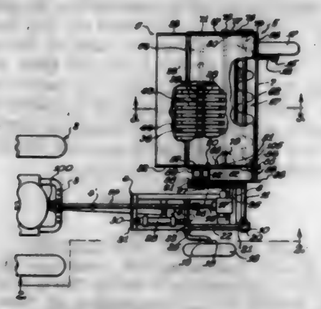
13. A package wrapping machine in which the package wrapping material is in the form of a continuous sheet folded upon itself lengthwise of the machine and mounted at one end of the machine for feeding the material lengthwise therethrough, the said machine comprising a table, an article carrying plate reciprocatingly mounted for longitudinal movement over the said table and projected transversely between the lower and upper layers of the folded wrapping material, a pair of heat sealing members located one above the other, means to bring the sealing members into sealing engagement with the said wrapping material firstly to seal the wrapping material transversely to form a transverse closed end, the said article carrying plate in its forward longitudinal movement contacting the transverse sealed end of the material to feed the wrapping material along the machine, means to bring the sealing members into sealing engagement with the wrapping material to secondly seal the material transversely remote from the first transverse seal and longitudinally along the edges of the material between the first and second transverse seals after the carrier plate has been withdrawn, and means to sever the second transverse seal midway of its width to separate the sealed package from the wrapping material and leave the end of the wrapping material sealed for a second operation.

2,947,128
CAP APPLYING APPARATUS
Henry H. Franz, Baltimore, Md., and Lee D. Pierce, Fulton, N.Y., assignors to Sealright-Oswego Falls Corporation, Fulton, N.Y., a corporation of New York
Filed July 24, 1958, Ser. No. 750,627
6 Claims. (Cl. 53—310)



1. Apparatus for applying caps to bottle tops including a base, a cap magazine vertically mounted on said base for receiving a stack of nested caps having radial flanges vertically spaced from each other, said base having a vertical capping throat spaced laterally from said magazine, a platform extending forwardly from said throat below said magazine and being formed with an open bottomed slot extending inwardly from its forward edge toward said throat, a vertically disposed yoke member pivotally connected at its ends to said magazine with the center part of said yoke positioned below said platform for swinging movement toward and from said throat, a cap separating means secured to said yoke and being operable upon movement of said yoke forwardly from said throat to separate the lowermost cap from the stack in said magazine for descent to said platform, a cap pusher attached to and carried by the center part of said yoke and being positioned in the slot in said platform, said pusher being operable upon rearward movement of said yoke towards said throat to move a separated cap on said platform into said throat, and means operable upon upward movement of a bottle having its top positioned in said throat to apply the cap in said throat to the bottle top and swing said yoke about its pivotal mounting forwardly away from said throat and upon downward movement of the bottle to move said yoke towards said throat.

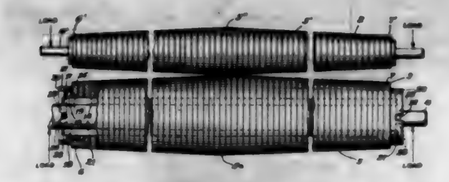
2,947,129
UTILITY FORAGE HARVESTER
John J. Kowalik, Glenview, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Oct. 23, 1957, Ser. No. 691,955
6 Claims. (Cl. 56—1)



1. A harvester adapted to advance over a field of crop, comprising: supporting structure including first and second sides spaced apart transversely of the line of advance; crop-receiving means carried by the supporting structure adjacent to the first side and including a blower housing, a blower in the housing and a blower shaft supporting the blower and rotatable about a transverse horizontal axis, said shaft having an end portion projecting externally of the blower housing at the first side of the supporting structure; an elongated auger transverse to the line of advance and having its axis parallel to but offset radially from the blower shaft axis, said auger having a first end feeding into the blower housing and a second end including a shaft portion adjacent to the second side of the supporting structure; a transverse auger trough embracing the auger; a crop-collecting rotor having an axially elongated central shaft positioned ahead of and parallel to the auger and operative to collect field-borne crops and deliver such crops to the auger for feeding into the blower housing, said rotor shaft having a first end portion at the first side of the supporting structure and ahead of the blower shaft end portion and a second end portion at the second side of the supporting structure, first drive means at the first side of said supporting structure and interconnecting the blower shaft end portion and the first end portion of the rotor shaft, a rotatable structure generally parallel to the rotor shaft and disposed behind the rotor and having a first end portion at said first side proximate to said blower shaft and connected thereto and having a second end portion at the second side of the structure, and second drive means at the second side of the supporting structure and interconnecting the second end portion of the rotatable structure and the auger shaft.

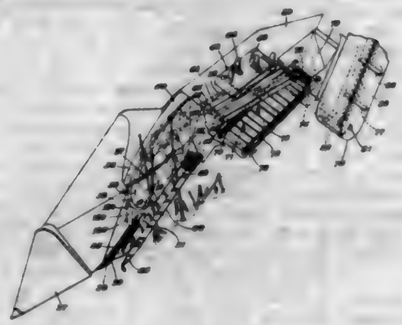
2,947,130
HAY CRUSHING ROLL CONSTRUCTION
Charles V. Everett, Warrenville, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Nov. 12, 1958, Ser. No. 773,338
4 Claims. (Cl. 56—1)

1. In a transversely deflectable roller, the combination of a center shaft having load sustaining ends, a roller body of elastomer material supported on the shaft intermediate its ends, and keying means extending through a complementary aperture in said body only and generally parallel to the shaft and said keying means having end portions projecting outwardly of the ends of the body, and securing means on the ends of the shaft embracing said body therebetween and connected to the shaft for rotation therewith and having openings receiving the ends of said keying means therein thereby securing the keying



means to rotate with the shaft, said keying means in assembled position with said securing means being movable axially with respect thereto.

2,947,131
EAR CORN CONVEYOR FOR CORN PICKERS
Elof K. Karlsson, Moline, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed July 22, 1958, Ser. No. 750,133
6 Claims. (Cl. 56—18)

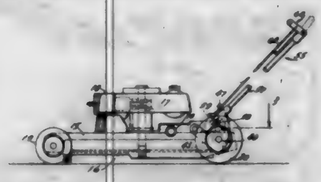


1. In a corn picker of the type having downwardly and forwardly inclined snapping rolls and an elevator arranged and constructed to receive ears of corn from and snapped by the snapping rolls and convey them rearwardly in the corn picker, said elevator comprising a wheel mounted on a transverse axis and disposed laterally adjacent said snapping rolls, said wheel having at least one generally transversely disposed paddle thereon arranged to receive ears of corn from said snapping rolls as the ears of corn fall by gravity forwardly and laterally into said paddle to thereupon clear said snapping rolls of corn, and means rotating said wheel forwardly and thence upwardly to throw ears of corn from a position adjacent the lower forward ends of the snapping rolls upwardly and rearwardly in the corn picker to a position over the snapping rolls.

2,947,132
WHEEL ADJUSTMENT AND DRIVING IN A POWER MOWER OR THE LIKE
Gerald J. Shaw, Lamar, Mo., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Feb. 4, 1957, Ser. No. 638,051
10 Claims. (Cl. 56—25.4)

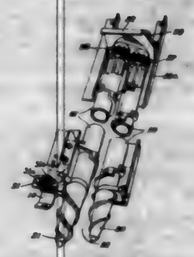
2. In a device of the character described, the combination with a chassis having front and rear wheels and a mowing device intermediate said wheels, of means for varying the cut of the mowing device including a mounting upon which all the wheels at one end of the chassis are carried for concurrent movement vertically respecting the chassis, a drive shaft having wheel-driving rollers,

the said mounting having lever portions pivoted substantially coaxially with said shaft, and a single detent member connected with the wheel mounting between the



wheels and having a portion guided for movement respecting the chassis and selectively engageable with the chassis in a plurality of positions of adjustment of the said mounting and wheels.

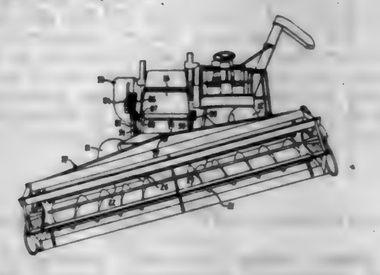
2,947,133
ADJUSTABLE SKEWING OF CORN SNAPPING ROLLS
Benjamin M. Hyman, East Moline, and Elof K. Karlsson, Moline, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 23, 1957, Serial No. 704,717
4 Claims. (Cl. 56—110)



1. In a corn machine comprising a frame supporting structure, cooperative first and second snapping rolls carried by said frame supporting structure, both of said first and second snapping rolls mounted in journals at their one ends, said first snapping roll mounted in a relatively fixed journal at its other end, an arm member pivotally mounted on and adjacent the relatively fixed journal of the other end of the first snapping roll for arcuate swinging about the first snapping roll as an axis, the second of said snapping rolls having its other end journally mounted in said arm member spaced from its pivotal mounting, and means operatively associated with said rolls for arcuately adjustably positioning said arm member to thereby skew the rolls to any desired relationship.

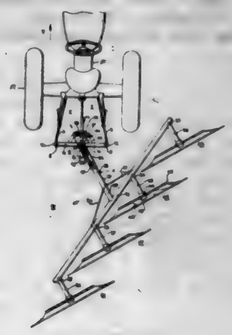
2,947,134
ADJUSTABLE HEADER DEVICE FOR HILLSIDE COMBINE
Herbert Benjamin Clifford, Sanger, and Donald Hector McNeil, Fresno, Calif., assignors to Massey-Ferguson Inc., Racine, Wis., a corporation of Maryland
Filed May 29, 1958, Ser. No. 750,278
7 Claims. (Cl. 56—209)

1. In a hillside harvester, the combination comprising a feeder house having a forward face with an intake opening formed therein, a header assembly having a back wall overlying said forward face, said header assembly being pivoted on said feeder house along an axis spaced from said intake opening, and said back wall having a segmentally shaped discharge opening formed therein alined with said intake opening so as to form a passage from said header assembly to said feeder house whose open cross section remains substantially equal to said



intake opening as the header assembly swings about said pivot.

2,947,135
IMPLEMENT FOR LATERALLY DISPLACING MATERIAL LYING ON THE GROUND
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch limited-liability company
Filed Apr. 4, 1956, Ser. No. 576,114
Claims priority, application Netherlands Apr. 28, 1955
4 Claims. (Cl. 56—377)

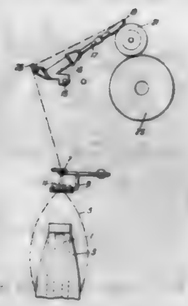


1. Apparatus for displacing material lying on the ground and having a determinable direction of travel comprising freely rotatable rake wheels arranged in a row and operatively associated for displacing said material, a frame supporting said rake wheels, and means coupled to and supporting said frame and thereby said rake wheels for movement about a substantially horizontal axis parallel to said wheels in order to accommodate irregularities in the ground traversed.

2,947,136
TWISTING OF CONTINUOUS FILAMENT YARNS
Robert G. C. Arridge and George A. Clough, Pontypool, England, and Morris William Pell, Melbourne, Australia, assignors to British Nylon Spinners Limited, Pontypool, England
Filed Mar. 25, 1958, Ser. No. 723,766
Claims priority, application Great Britain Mar. 30, 1957
8 Claims. (Cl. 57—157)

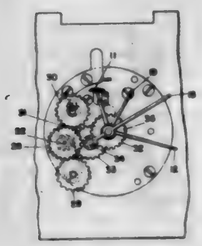
1. A process for uptwisting continuous filament yarn to about 2–10 turns per inch, comprising: withdrawing yarn upwardly from a rapidly rotating supply package to form a thread balloon; imparting a false twist of at

least five turns per inch to the succeeding lengths of yarn in the ballooning phase, such that the total twist of



the yarn in the ballooning phase is at least fifteen turns per inch; and collecting the yarn.

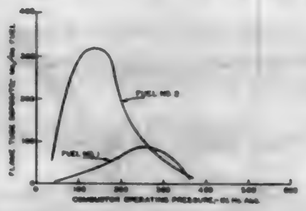
2,947,137
TIME SETTING MECHANISM FOR DUAL PURPOSE CLOCK
Henry E. Berry, Philadelphia, Alfred C. Hirschle, Wayne, and Theodore Zarrabara, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed Apr. 7, 1959, Ser. No. 804,850
4 Claims. (Cl. 58—80)
(Granted under Title 35, U.S. Code (1952), sec. 266)



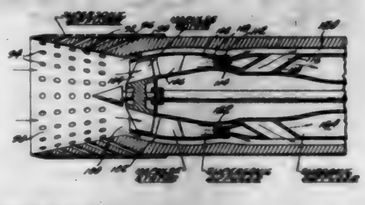
1. In a timepiece completely sealed within an enclosure and having prevailing local time and Greenwich mean time hour hands, the combination of a hand selector and a hand set member external to said enclosure, and means responsive to said selector for coupling said hand set member to either of said hour hands, said means including a rod interconnecting a pair of levers one of which is fixed to the shaft of said selector and the other of which is geared to said hand set member.

2,947,138
METHOD OF OPERATING CONTINUOUS COMBUSTION TYPE POWER PLANTS
George D. Kittredge, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 29, 1956, Ser. No. 574,696
8 Claims. (Cl. 60—35.4)

1. A method of operating a continuous combustion type gas turbine power plant without excessive deposition of carbonaceous material in the combustor of said power plant, which method comprises: continuously supplying a normally liquid hydrocarbon fuel containing at least 50 percent by volume of aromatic hydrocarbons to said combustor; burning said fuel in said combustor; and operating said combustor at a pressure within the range of about 250 to about 500 inches of mercury.

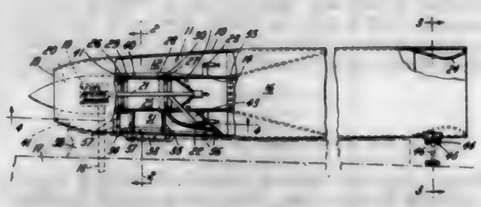


2,947,139
BY-PASS TURBOJET
George F. Hausmann, Glastonbury, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Aug. 29, 1957, Ser. No. 681,105
13 Claims. (Cl. 60—35.6)



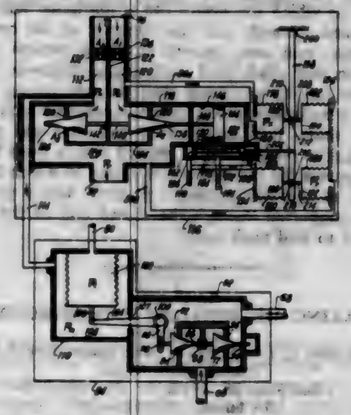
1. An air breathing turbine type power plant including a supersonic convergent inlet, said inlet having a throat in which air flows at supersonic velocity, an impulse rotor located in the throat of said inlet whereby the air is accelerated and discharged at supersonic velocity, a supersonic convergent diffuser downstream of said rotor and having a throat, a subsonic divergent diffuser downstream of said supersonic diffuser, and means for bleeding off the low energy boundary layer at each of said throats.

2,947,140
RAM-JET MOUNTING STRUCTURE
James Lansdowne Norton, Bristol, England, assignor to Bristol Aero-Engines Limited, Bristol, England
Filed Oct. 23, 1957, Ser. No. 692,002
10 Claims. (Cl. 60—35.6)



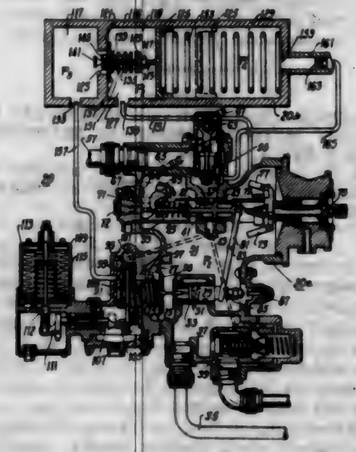
1. A ram-jet engine comprising an outer air casing of light distortable construction, an inner inland constructed at least in part as a shape-maintaining rigid body and forming with said outer air casing an annular air duct, mounting means externally of the air casing, a main spar extending from the rigid body across the annular air duct to said mounting means and a plurality of struts extending from the rigid body across the annular air duct to the air casing whereby the latter is braced to the rigid body.

2,947,141
FUEL FEED AND POWER CONTROL SYSTEM FOR GAS TURBINE ENGINES
Daniel G. Ross, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Jan. 4, 1954, Ser. No. 401,989
23 Claims. (Cl. 60—39.28)



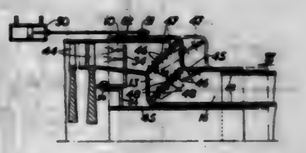
1. In a fuel control system for gas turbine engines having a burner and a compressor, means for controlling the flow of fuel to the burner comprising fuel flow regulating valve means, means responsive to first and second fluid pressures for controlling said valve means, means for continuously modulating said first fluid pressure during operation of the engine in such a way that said pressure effectively measures a predetermined function of compressor pressure ratio, and means including the compressor for generating said second fluid pressure to also vary as a predetermined function of compressor pressure ratio.

2,947,142
FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES
Robert F. Nugent, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Sept. 8, 1955, Ser. No. 533,112
16 Claims. (Cl. 60—39.28)



1. In a fuel system for a gas turbine engine having a burner, the combination of a conduit for supplying fuel under pressure to the burner, means operatively connected with said conduit for metering fuel to said burner according to a predetermined fuel flow schedule in accordance with an engine acceleration from a stabilized operating condition and control means operably connected with said first named means for automatically causing a variation in said predetermined fuel flow schedule to said burner during subsequent reaccelerations from a non-stabilized engine speed said control means including mechanism for rendering said control means inoperative at a predetermined engine speed during said reaccelerations from a non-stabilized engine speed.

2,947,143
BAFFLE ARRANGEMENT FOR COMBUSTION EQUIPMENT
Dudley B. Spalding, Cambridge, England, assignor to National Research Development Corporation, London, England, a British corporation
Filed Oct. 12, 1953, Ser. No. 385,662
Claims priority, application Great Britain Oct. 15, 1952
6 Claims. (Cl. 60—39.72)

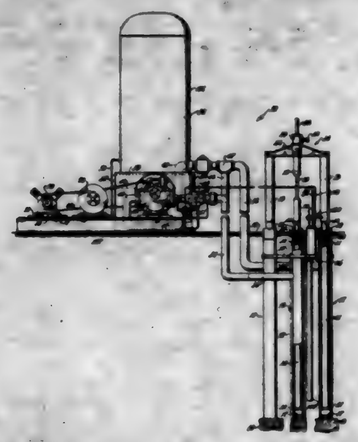


1. Equipment for burning vaporific fuel in a stream of combustion-supporting gas which comprises a duct defining a path for the said stream, said duct being in the shape of a crank or double L-form with a center portion of cross-sectional area substantially transversely disposed with respect to portions of said duct immediately upstream and downstream therefrom, said center portion thus defining a sudden and substantial enlargement in said duct, a first cascade of blades of aerofoil section positioned in the crank bend of the duct immediately upstream of the said center portion, a second cascade of aerofoil section blades positioned in the crank bend of said duct immediately downstream of the said center portion, said first cascade section causing recirculation of said gas stream through a substantial angle, means for introducing fuel into said duct, and ignition means positioned in said enlargement.

2,947,144
PNEUMATIC HYDRAULIC PUMPING APPARATUS
Samuel V. Smith, Long Beach, Calif., assignor to Paen-Hy Co., Long Beach, Calif., a corporation of California
Filed Aug. 19, 1957, Ser. No. 678,887
10 Claims. (Cl. 60—52)

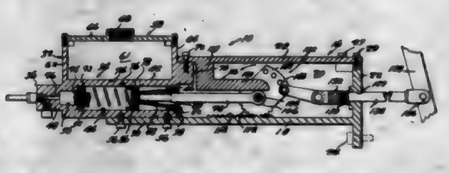
1. An apparatus for vertically reciprocating a loaded rod at a constant uniform rate on the downstroke thereof irrespective of variation of the magnitude of said load on said rod which includes: a plurality of substantially vertically extending and laterally spaced cylinders adjacently disposed to said rod; piston means reciprocal up and down in said cylinders; a reservoir partially filled with hydraulic fluid and having a quantity of gas at at least a predetermined minimum second pressure situated thereabove; a source of gas at a pressure substantially higher than said second pressure; a positive displacement pump; a prime mover which when operating continuously drives said pump; first valve means which include a movable valve member capable of occupying first and second positions; first conduit means which when said valve member is in said first position have said fluid flowing therethrough from said reservoir to the

suction of said pump to be discharged to a first portion of said cylinders at a first pressure higher than said second pressure to cause said pistons therein to rise and raise said loaded rod; second conduit means which when said valve member is in said second position and said loaded rod moves downwardly from the top of its stroke have said hydraulic fluid flowing therethrough from said first cylinders to the suction of said pump, and the discharge of said pump being conducted by said second means to said reservoir, with the rate at which said fluid is pumped through said pump solely determining the rate at which said loaded rod moves downwardly on the downstroke thereof; means responsive to the movement of said loaded rod that move said valve member to said first position at substantially the termination of the



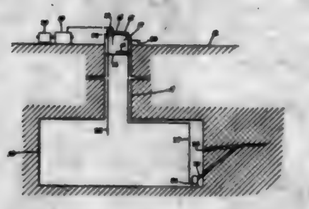
downstroke of said rod and to said second position at substantially the completion of the upstroke by said rod; third conduit means extending between said reservoir and said second portions of said cylinders to force said pistons therein by fluid at said second pressure to support a predetermined fraction of said load on said rod on both the upstroke and downstroke thereof; and means sensitive to the pressure of said gas in said reservoir and said fluid at said first pressure that bleeds gas from said reservoir, or admits gas from said source to said reservoir to automatically maintain a predetermined differential in pressure that is substantially constant between said first and second pressures to force said pistons in said second portions of cylinders to support said predetermined fraction of said load on said rod on both the upstroke and downstroke thereof, even if the magnitude of said load over a period of time varies.

2,947,145
MULTIPLE MASTER CYLINDER
William E. Choate, P.O. Box 321, Galveston, Tex., and Joseph A. Morgan, Chalmette, La.
Filed June 6, 1958, Ser. No. 740,431
6 Claims. (Cl. 60—54.6)



1. In a brake master cylinder assembly, a casing having a bottom wall, side walls, a closed end, and an open end, a brake cylinder mounted on the casing at said opening to said open end, a piston working in said cylinder, a piston rod engaged at one end with said piston and having another end extending into said casing toward said closed end, a rack on said casing bottom wall, a cam element having a sector on its lower end in mesh with said rack, a floating shaft extending across the interior of the casing and extending through said cam element on which the piston rod is journaled and which is journaled through said cam element at the center of said sector, said cam element having a portion extending above said shaft, said shaft being otherwise unconnected to the casing, a top wall on said casing having thereon a horizontal guide means engageable with means on said shaft, link means having a first end pivoted to said upper portion and a second end, a push bar extending across the interior of the casing to which the second end of the link means is pivoted, and a push rod slidably supported through the closed end of the casing and fixed to said push bar.

2,947,146
SEALING METHOD FOR UNDERGROUND CAVITIES
Robert L. Loofbourow, 4032 Queen Ave. S., Minneapolis, Minn.
Filed Mar. 28, 1955, Ser. No. 497,070
5 Claims. (Cl. 61—5)

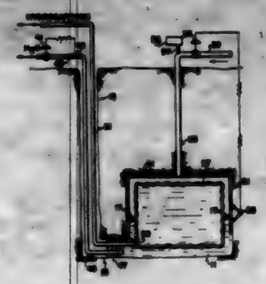


1. The method of sealing an underground storage cavity which comprises subjecting the cavity to increased pressure within safe human working limits of about 2 to 40 pounds gauge, applying a settable film forming material impervious to the material to be stored over permeable areas in the cavity while maintaining the cavity under pressure to force the settable material into the depths of the leakages in the cavity walls and permitting the material to set while under said pressure and thereafter increasing said pressure to maximum anticipated storage pressure between about 20 and 5000 pounds gauge.

2,947,147
UNDERGROUND STORAGE RESERVOIR FOR LIGHT HYDROCARBONS IN SEMIPERMEABLE ROCK
Kenneth O. Johnson, Chatham, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 20, 1955, Ser. No. 554,267
7 Claims. (Cl. 61—5)

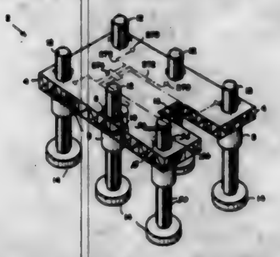
1. A process of storing fluids, including liquefied normally gaseous materials, in a subterranean storage chamber inherently capable of resisting pressures at least equal to the vapor pressure of said fluids at the natural temperature of said chamber, comprising at least partially flooding said chamber with water to produce a pressure in said chamber at least equal to the vapor pressure of said fluids at said chamber temperature, introducing said fluids in liquid form into a hallow, flexible and collapsible membrane contained in said chamber thereby expanding said membrane within said chamber and displacing water from said chamber against said flooding water pressure

and thereby buoying said membrane in said flooding water, introducing into said chamber externally of said membrane a gaseous material initially at a pressure sufficient to displace water from said chamber against said flooding pressure thereby establishing a depressed water surface level therein and exposing a portion of said membrane to the pressure of said gaseous material and at this pressure limiting expansion of said fluids whereby to maintain said membrane out of contact with the boundary surfaces of said chamber, and maintaining said water



surface level in said chamber within predetermined upper and lower limits by discharging water from said chamber at least in part by increasing the pressure of said gaseous material therein externally of said membrane and admitting water into said chamber at least in part by decreasing the pressure of said gaseous material therein externally of said membrane, said gaseous material pressure in said chamber externally of said membrane being increased and decreased in automatic response to variation of said water surface level from said predetermined upper and lower limits.

2,947,148
JACKING MECHANISM FOR SEADROME
Einar T. Young, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed June 28, 1954, Ser. No. 439,589
15 Claims. (Cl. 61—46.5)



10. A seadrome comprising a plurality of laterally spaced upright column members, a floatable platform structure having said column members extending freely therethrough, said platform structure and column members being movable vertically relative to one another, and means operable for moving said columns selectively upwardly or downwardly relative to said platform structure including rack means fixedly mounted respectively upon said column members and extending longitudinally thereof, two groups of principal extensible fluid motors mounted directly upon said platform structure for swinging movement respectively about horizontal axes and detachably engageable with said rack means for transmitting column loads to said platform structure when said column members are not engaged with the ocean bottom and for transmitting platform loads to said column members when said column members are engaged with the ocean bottom, and means for controlling the extension and contraction and positioning of said principal motor groups in predetermined sequence and effecting operation thereof in repeated cycles to controllably shift said column members selectively upwardly or downwardly relative to said platform structure including two groups of auxiliary extensible fluid motors mounted directly upon said platform structure for swinging movement about horizontal axes and operable for swinging said groups of principal motors respectively about their pivotal axes thereby to position each principal motor group in detachable load supporting engagement with said rack means while the other principal motor group is free of said rack means.

2,947,149
PILE WITH SELF-SPREADING ANCHORS
Lowell J. Barkley, Jr., Box 127, Matador, Tex.
Filed Feb. 11, 1958, Ser. No. 714,528
3 Claims. (Cl. 61—53)

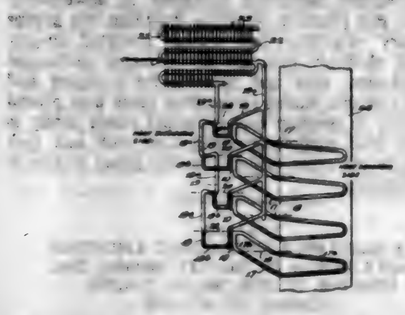


1. A pile comprising an elongated tubular member adapted to be driven into the ground, a conical ground penetrating point removably plugged into the leading end of said member and adapted to be forcibly driven into the ground with the aid of a conventional pile driver, at least one pair of broad-surfaced stabilizing and anchoring arms arranged on diametrically opposite sides of said member and having upper ends hingedly joined to said member, and lower ends normally depending and projecting below the lower end of the tubular member but terminating in a plane just short of the apex of said point so that pressurized earth crowding and wedging itself between the tapering surfaces of the point and said depending lower ends will force and spread the arms radially, outwardly, and upwardly to assume an expanded stabilizing and anchoring position relative to said member, said member being provided just above the lower end thereof with a plurality of openings, each arm having a lug fixed thereon at right angles thereto and projecting into the bore of the tubular member by way of one of said openings, the inner projecting end of each lug having a vertical keeper hole, the adjacent ends of said lugs overlapping one another and the keeper holes being vertically alined with each other, a keeper pin passing downwardly and releasably through said keeper holes, and a remote controlled pull cable connected at a lower end thereof to said pin so that the pin may be withdrawn from the keeper holes at the proper time, said penetrating point being removable to allow access to be had to said lugs and pin.

2,947,150
REFRIGERATING APPARATUS HAVING IMPROVED HEAT TRANSFERRING MEANS
John Roeder, Jr., Benton Harbor, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Feb. 21, 1958, Ser. No. 716,795
12 Claims. (Cl. 62—3)

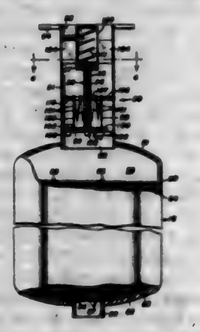
10. A thermocouple device, comprising: a substantially fluid impervious block of thermal and electrical insulating

material having a pair of opposite side surfaces; at least one pair of dissimilar thermo electric elements in said block having their opposite ends oriented toward said side surfaces; electrical conducting metal members at said opposite side surfaces connecting said elements in electrical series to provide a cold junction at one of said side



surfaces and a hot junction at the other when said series is subjected to a direct current; and enclosure means defining chambers confronting each of said opposite side surfaces in electrically insulated association with the metal members for exposing the metal members at each of said opposite side surfaces to have direct contact with a refrigerant for efficient heat transfer to and from said junctions.

2,947,151
METHOD AND APPARATUS FOR OPERATING REGENERATORS
Clarence J. Schilling, Allentown, Pa., assignor to Air Products Incorporated, a corporation of Michigan
Filed Feb. 3, 1956, Ser. No. 563,340
21 Claims. (Cl. 62—13)



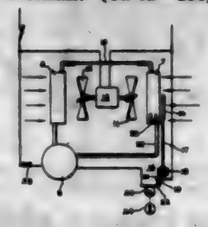
1. Method of operating a regenerator including a bed of particles of regenerative material and adapted to be switched between first and second operating phases, in which relatively high pressure fluid flows through the regenerator during the first operating phase and relatively low pressure fluid flows through the regenerator during the second operating phase, the method of controlling the flow of relatively high pressure fluid in the bed upon switching the regenerator from one operating phase to the other operating phase which comprises the steps of restricting the flow of relatively high pressure fluid in the bed upon the regenerator being switched from one operating phase to the other operating phase to maintain the pressure drop across the bed less than a predetermined value to produce an upward force on the bed less than the density of the regenerative material, and establishing normal unrestricted flow of fluid in the bed upon the pressure of fluid in the bed decreasing to a predetermined low value, the predetermined low value being such that normal unrestricted flow of fluid in the bed at a pressure corresponding to the predetermined low value establishes a pressure drop across the bed which produces an upward force on the bed less than the density of the regenerative material.

2,947,152
HEAT EXCHANGER FOR SEPARATING OUT CONSTITUENTS FROM A GAS BY COOLING
Albert Teunis Bloem, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 618,794
Claims priority, application Netherlands Nov. 6, 1955
4 Claims. (Cl. 62—46)



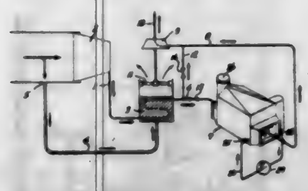
1. A heat exchanger for separating out constituents of a gas by cooling comprising a hollow tube provided with an inlet and outlet for said gas, a strip-like supporting member in said tube, a plurality of projections in said supporting member arranged in the path of said gas and secured to only one interior wall of said hollow tube, each of said projections taken from the hot side of the tube to the cold side thereof being at the most 20° warmer than the next succeeding projection, at least a number of said projections having a thermal resistance such that during operation the ends more remote from the support are at a temperature at least 5° C. higher than the temperature at the points of attachment of the respective projections to said one interior wall, a thermal sink, said supporting member being directly connected to said thermal sink.

2,947,153
COMBINED THERMOSTAT AND DEFROST CONTROL FOR AIR CONDITIONING APPARATUS
Leonard W. Atchison, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 24, 1958, Ser. No. 750,651
4 Claims. (Cl. 62—156)



1. An air conditioning apparatus for cooling the air within an enclosure comprising a refrigeration system including an evaporator, a compressor and a condenser connected in refrigerant flow relationship, means for continuously circulating a stream of air from within said enclosure through said evaporator and back into said enclosure, means for operating said system to cool said evaporator below the freezing point of water whereby frost tends to collect on the surface of said evaporator, a temperature control means for energizing said refrigeration system when the air stream entering said evaporator from said enclosure is above a predetermined temperature and de-energizing said refrigeration system when the air stream entering said evaporator from said enclosure is below said predetermined temperature, said temperature control means also de-energizing said system to defrost said evaporator when frost accumulates on said evaporator, said temperature control means including a single temperature sensing element disposed adjacent said evaporator on the upstream side thereof and directly in the air stream being circulated through said evaporator, said temperature sensing element being so disposed with relation to said evaporator that said element senses the temperature of said air stream entering said evaporator during normal air flow through said evaporator and senses temperature conditions below said predetermined temperature for de-energizing said refrigeration system during restricted air flow through said evaporator due to frost accumulation thereon.

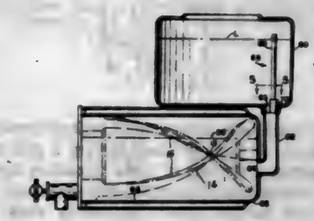
2,947,154
METHOD AND APPARATUS FOR COOLING VARIOUS FLUIDS AND MORE PARTICULARLY THE AIR IN AIRCRAFT FLYING AT HIGH SPEED
André Chausson, Asnieres, France, assignor to Societe Anonyme des Usines Chausson, Asnieres, France, a French company
Filed July 19, 1956, Ser. No. 598,847
Claims priority, application France July 28, 1955
5 Claims. (Cl. 62—169)



1. An evaporator type heat exchanger comprising a first compartment, a second compartment, vaporizable coolant liquid completely filling said first compartment and partly filling said second compartment, means extending through said first compartment only, defining a flow path for a fluid to be cooled therein by said coolant liquid, and means for pressurizing said first compartment sufficiently above the pressure in said second compartment to prevent appreciable boiling of said coolant liquid in said first compartment at the temperature to which it is heated by cooling such fluid, but the pressure in said second compartment being sufficiently low to promote boiling of the coolant liquid thus heated for cooling such coolant liquid by the evaporation of such boiling, and means providing escape of coolant vapor from said second compartment, said pressurizing means including restricted passage means from said first compartment to said second compartment for flow of said coolant liquid therethrough effected by the differential of pressure in said first compartment over that in said second compartment and pressure-producing means operable to produce such pressure differential and force coolant liquid from said second compartment into said first compartment, then through said first compartment and finally from said first compartment back into said second compartment through said restricted passage means.

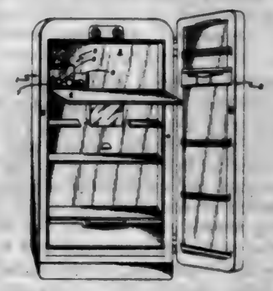
2,947,155
AUTOMATIC FEED FOR ICE CREAM AND THE LIKE FREEZERS
Louis A. M. Phelan, Rockton, Ill.
Filed Mar. 6, 1956, Ser. No. 569,769
3 Claims. (Cl. 62—342)

1. A continuous, automatic gravity feed freezer for ice cream and the like, including a horizontally disposed, refrigerated cylinder having an outer front cover with a serving valve adjacent the bottom thereof and also having a rear end wall, a conveyor unit journaled for rotation within said cylinder for moving the contents of said cylinder toward said front cover and into a mass inclined generally downwardly from front to rear, a fresh mix container supported above said cylinder, automatic gravity feed means for mix including a feed conduit extending from said fresh mix container to said cylinder and entering said cylinder through an opening adjacent said rear end wall thereof at a predetermined point spaced downwardly from the top of said



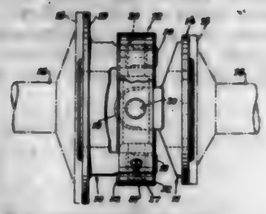
cylinder, said opening being at least partially below the center height of the freezer chamber, said feed conduit and opening being unrefrigerated whereby freezing of the fresh mix therein will be prevented, means for supplying replacement air to said cylinder, and means for supporting a higher air pressure in said cylinder than in said fresh mix container, said feed means maintaining an air pocket in said cylinder above said inclined mass and automatically admitting additional mix in replacement amounts at such time as the pressure in the cylinder at said opening is not balanced with the pressure exerted by the head of the mix in the feed conduit above the fresh mix opening when frozen mix is drawn off at the serving valve.

2,947,156
AUTOMATIC ICE MAKER
Henry Edward Roedter, Hamilton, Ohio
(538 Clinton Springs Ave., Cincinnati 17, Ohio)
Filed May 2, 1957, Ser. No. 656,548
10 Claims. (Cl. 62—353)



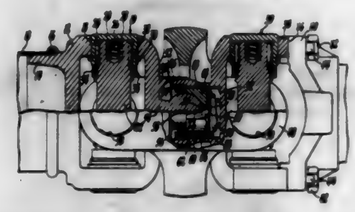
6. In combination, a mold defining a mold cavity in its upper portion, a piston assembly directly beneath said mold cavity the upper face of which defines at least in part the bottom wall of the mold cavity, said piston assembly comprising an outer piston and an inner piston, means for supplying fluid under pressure beneath said pistons to extend them into the mold cavity, means for differentially limiting movement of said pistons upwardly into the mold cavity, and means for retracting the pistons out of the mold cavity.

2,947,157
UNIVERSAL JOINTS
Stanley Edward Harris, Ewell, England, assignor to The Mollart Engineering Company Limited, Surbiton, England
Filed Mar. 26, 1958, Ser. No. 724,899
Claims priority, application Great Britain Aug. 19, 1957
2 Claims. (Cl. 64—18)



1. A universal joint comprising a pair of terminal members with each of said members having a pair of axially extending arms, said pairs of arms extending toward each other, an intermediate member between said terminal members and having axially extending slots receiving said arms, and radially extending pins passing through each of said arms to pivotally connect said arms to said intermediate member, said intermediate member having centrally located compartment forming a lubricant reservoir, there being passageways in each of said pins and communicating with said reservoir so that the bearing surfaces of said pins can be lubricated during operation of the universal joint.

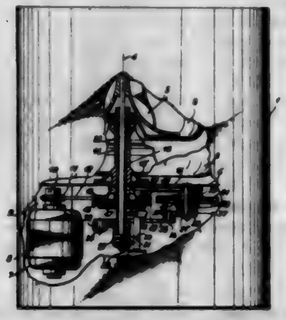
2,947,158
UNIVERSAL JOINT CENTERING DEVICE
Kenneth K. King, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 21, 1959, Ser. No. 835,216
5 Claims. (Cl. 64—21)



1. Centering means for a double Cardan constant velocity universal joint having first and second yoke members, said centering means comprising a stud extending from said first yoke member toward said second yoke member, a spherical ball formed on the end of said stud and having a center midway between said yoke members, a tubular extension formed from said second yoke member and extending toward and enclosing said ball, a pair of shoes disposed within said extension and having mating spherical cavities formed therein and engaging said ball, said shoes being adapted for wedging contact between said ball and said extension for eliminating clearances therebetween.

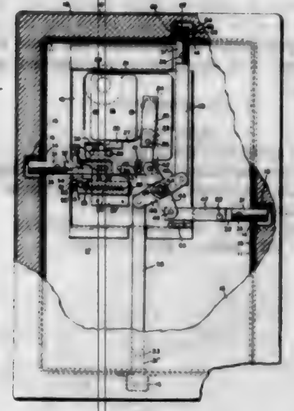
2,947,159
CLUTCHING MECHANISMS FOR WASHING MACHINES INCLUDING AN AGITATOR
Enrique Fernandez, 1680 Coronel Molinedo, Province of Buenos Aires, Avellaneda, Argentina
Filed Nov. 18, 1958, Ser. No. 774,707
2 Claims. (Cl. 68—23)

1. In a washing machine, a stationary drain tub, an upstanding spin tub rotatably housed in said stationary drain tub, an upstanding agitator housed in said spin tub, a controllable reversible driving source including a driving shaft, a driving pulley mounted on said driving shaft, a clutching mechanism comprising a hollow shaft integral with said spin tub, a shaft passing through said hollow shaft and rigidly connected to said agitator, a double pulley mounted on said hollow shaft, said double pulley comprising a first pulley and a second pulley, a first belt connecting said driving pulley with said first pulley, an intermediary shaft, a third pulley and a fourth pulley mounted on said intermediary shaft, a second belt connecting said second pulley to said third pulley, a transmission shaft, a fifth pulley having a coaxial cylindrical projection and mounted on said transmission shaft, a third belt connecting said fourth pulley to said fifth pulley, a commanding disc loosely mounted on said cylindrical projection, a cam portion and a projecting arm intgeral with said commanding disc, a crank member rigidly mounted on said cylindrical projection, resilient means urging said commanding disc into frictional engagement with said crank member, a crank loosely mounted on said shaft of said agitator, a lever pivotally linking said crank member with said crank for transforming a rotary movement into an oscillatory movement, clutching means consisting of a collar member slidably mounted on said shaft of said agitator, a fork member for upward and downward sliding said collar



member, a lever linkage connecting said fork member with said projecting arm, an upstanding clutching teeth ring integral with said collar member, a clutching teeth ring integral with said crank and facing said upstanding clutching teeth ring, said upstanding clutching teeth ring being adapted to clutch said clutching teeth ring by upward sliding movement of said fork member, said lever linkage being capable of raising said collar member when said fifth pulley is rotated in one direction by frictionally swinging said commanding disc in a direction to correspondingly operate said lever linkage, whilst when rotating in opposite direction to carry out the declutching by downward movement of said upstanding clutching teeth ring, a free wheel clutching disc loosely mounted on said hollow shaft below said double pulley, a friction disc rigidly mounted on said hollow shaft and in frictional engagement with said free wheel clutching disc, pin means housed in said double pulley for clutching said free wheel clutching disc when said double pulley rotates in opposite direction to said one direction, said free wheel clutching disc being provided with at least one recess on its periphery, a pivot, a blocking lever pivotally supported by said pivot and including a cam operated end portion at one side of said pivot and a projecting block tooth at the other side of said pivot, resilient means urging said cam operated end portion into frictional contact with said commanding disc and said projecting blocking tooth into engagement with said recess, said cam portion of said commanding disc being adapted to withdraw said projecting block tooth from said recess when said fifth pulley rotates in the direction opposite to said one direction.

2,947,160
BOLT RELOCKING DEVICE FOR SAFES
Carl F. Wolters, New Canaan, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 7, 1955, Ser. No. 545,263
2 Claims. (Cl. 70—1.5)



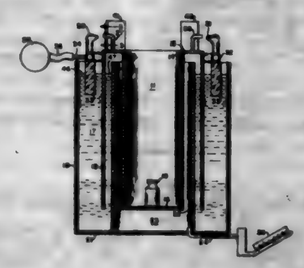
1. In a safe having a bolt, said safe having a recess into which said bolt extends when advanced to locking position, locking plugs disposed within the bolt and adapted for lateral movement therefrom into said recess, and means on the bolt and moved when force is applied to said means through the walls of the safe to contact and advance said plugs from the bolt into said recess and prevent the retraction of the bolt from the recess.

2,947,161
LOCK FOR BRIEFCASES AND THE LIKE
Fritz Höffgen, Iserlohn, Westphalia, Germany, assignor to Heinrich Sudhaus Sohne, Iserlohn, Germany, a corporation of Germany
Filed July 7, 1958, Ser. No. 747,086
1 Claim. (Cl. 70—67)



A lock for securing the flap of a briefcase or the like to keeper means on the body thereof, comprising, a lock casing including inner and outer plates whose upper portions embrace the upper face of the flap, said inner plate provided in its upper portion with a pair of laterally spaced closed depressions whose bottom walls form guideways facing the back of the flap, and said outer plate having a pair of spaced slots communicating with said depressions, said outer plate also having an opening, a spring latch in said opening and a staple including an intermediate transversely arched portion and having flat triangular end prongs whose apices register with said slots and are pressed through said slots into said guideways to shieldingly clinch the inner and outer plates together, and the inner portion of said prongs lying in and concealed by said guideways between the inner plate and the inner face of the flap, the intermediate transversely arched portion of said staple constituting an exposed outward projection to provide a substantial finger engaging manipulating portion for the locking member to withdraw it from the said keeper means.

2,947,162
INSTRUMENT FOR CALIBRATING MANOMETERS
Manfred Daviz, Bronxville, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Mar. 16, 1959, Ser. No. 799,640
6 Claims. (Cl. 73—4)

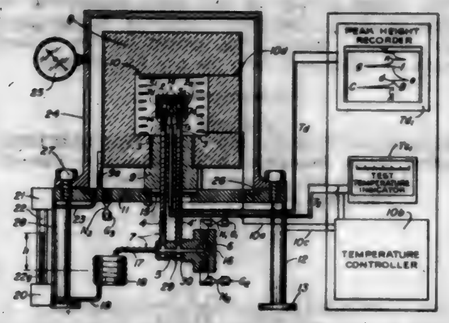


1. An instrument for calibrating a manometer comprising, a double walled cylindrical container having inner and outer walls and an open top and closed bottom forming a central cylindrical chamber and an outer concentric chamber, a reentrant cylinder having a closed bottom central reentrant portion positioned internally of said cylindrical chamber and a dependent outer wall concentrically positioned between the inner and outer walls of said double walled cylindrical container, a liquid filling said outer concentric chamber to a selected level below the top of said double walls whereby an air chamber is formed which encompasses the space between the inner wall of said cylindrical container and the central reentrant portion of said reentrant cylinder, means connecting a manometer to said air chamber whereby the air pressure developed in the air chamber is applied to said manometer, a pipe member connected to the upper end of said reentrant cylinder communicating with said air chamber, said pipe member having one end disposed in a radial direction as respects said reentrant cylinder, an air pump, a conduit connected thereto having a nozzle positioned adjacent to but vertically offset in overlapping relation as respects said pipe end whereby relative vertical movement betwen said pipe end and said nozzle varies the air pressure in said air chamber, said nozzle being maintained at a fixed height as respects the liquid level in said outer concentric chamber, and means for varying the weight of said reentrant cylinder.

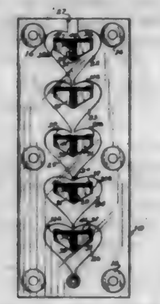
2,947,163
MATERIAL TESTING APPARATUS AND METHOD
Robert L. Stone, 2607 Hillview Road, Austin 3, Tex.
Filed Mar. 20, 1956, Ser. No. 572,697
17 Claims. (Cl. 73—15)

9. Apparatus for testing material comprising, a furnace, a pair of generally cylindrical material holding chambers in said furnace, gas distributing means disposed at each end of each of the chambers for confining the material therein and distributing the gas therethrough, a pair of tubes, one each connected to an end of one each of said chambers for flowing gas through said chambers, means for selectively supplying a first and second gas to said tubes, restrictions in said tubes for providing a substantially constant rate of flow of said gas to said cham-

bers, means for heating said furnace at a substantially constant temperature, and means responsive to the temperature differential within said chambers for indicating the temperature differential within said chambers.



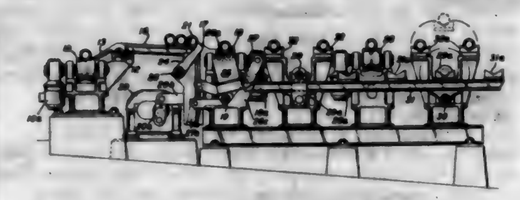
2,947,164
CASCADE IMPACTOR FOR SAMPLING SMOKES, DUSTS, AND FUMES
Clyde Orr, Jr., Atlanta, Ga., assignor to Georgia Tech Research Institute, Atlanta, Ga., a corporation of Georgia
Filed Jan. 23, 1957, Ser. No. 635,699
5 Claims. (Cl. 73—28)



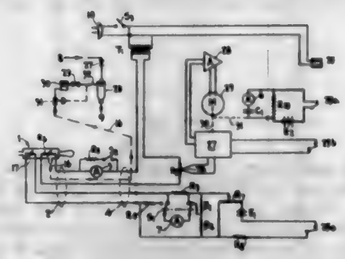
1. In a device of the character described, a casing defining an interconnected series of chambers of generally cardioidal configuration and generally uniform size in which the apex of each of said chambers forms a port leading from the bottom of one chamber into the re-entrant curve at the top of the next adjacent chamber, and an adhesive member in each chamber for retaining thereon particulate material borne by a fluid passing from chamber to chamber of said device by way of said ports, the ports connecting said chambers being of successively diminishing cross-section in the direction of fluid flow through the device.

2,947,165
METHOD AND APPARATUS FOR TESTING PIPE
George J. Kirchner, Whitehall Borough, Pa., and Andrew F. Kritscher, Lafayette, Calif., assignors to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 18, 1957, Ser. No. 684,769
9 Claims. (Cl. 73—37)

1. A method of testing a pipe length which consists in advancing the length sidewise along a generally horizontal plane and, while so advancing it, applying a valved cap to one end thereof and a coupling having a projecting pin screwed therein to the other end, tilting the length from the horizontal position so that said pin is lower than said cap, filling said length with liquid under pressure through said pin, then draining the fluid from the length, returning it to horizontal position and removing the cap and pin.

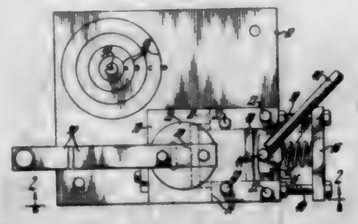


2,947,166
VAPOUR LEAK DETECTOR
James F. Palmer and Russell B. Turner, Deep River, Ontario, Canada, assignors to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada
Filed Nov. 5, 1956, Ser. No. 620,404
12 Claims. (Cl. 73—407)



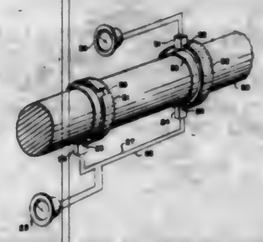
1. A leak rate measuring system comprising an element whose electrical properties depend on the moisture content of air about the element, means for conducting air from a predetermined vicinity past said element at a predetermined rate, a source of electrical potential, means connecting said element and said source of potential in an electrical circuit the current in which is dependent upon the electrical properties of said element, and means sensitive to the current in said circuit to generate a signal proportional to the maximum rate of change of the square of the current.

2,947,167
TEST FIXTURE
Robert J. Heussi, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 20, 1957, Ser. No. 660,161
1 Claim. (Cl. 73—100)



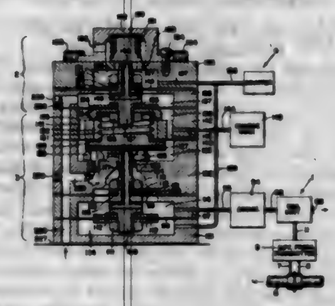
A test fixture for measuring the spring-back character of sheet material comprising a base, a supporting structure secured to said base, a rotatable arbor journaled in said supporting structure and in said base and having a slot formed therein for receiving one end of a sample strip of said sheet material, a wiping block slidable in said supporting structure and adjacent one side of said arbor, spring means biasing said wiper block toward said arbor, means for rotating said arbor with said strip of material engaged therewith for forming said material in a spiral about said arbor, said material being wound in successive layers about said arbor and between said arbor and said wiping block, a post secured in said base adjacent said supporting structure, and a plurality of circular calibrations scribed in said base and about said post, said calibrations being adapted to measure the displacement of the outer end of said strip of material with respect to said post when said material is placed on said post and allowed to expand to the natural position thereof.

2,947,168
POWER INDICATOR
Denis C. Yang, 509 18th Ave., Prospect Park, Pa.
Filed June 23, 1954, Ser. No. 438,809
5 Claims. (Cl. 73—136)



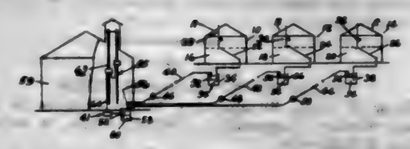
1. An instrument providing a direct and continuous reading of the power transmitted by a rotating shaft, comprising a pair of identical magnetic tapes fixedly encircling the shaft parallel to and in spaced relationship with each other and having impressed therein identical magnetic flux densities sinusoidally varying in intensity longitudinally thereof, a magnetic pickup head stationarily associated with each of said tapes containing an air gap through which at least a portion of its associated tape passes with rotation of the shaft, an indicator, and a circuit interconnecting said pickup heads and said indicator.

2,947,169
FLUID FLOWMETER
Charles P. Rohmann, Hatboro, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 5, 1957, Ser. No. 700,820
18 Claims. (Cl. 73—206)



1. A flow integrating apparatus comprising a counter, a pressure regulator operably connected to supply a regulated fluid pressure, a tripping relay, passageways operably connected to transmit said supply fluid by way of said tripping relay to said counter, a switching relay, a charge tank, other passageways operably connected to transmit said supply fluid by way of said switching relay to said charge tank to thereby provide a way of charging said tank to a fixed pressure level during a predetermined period of time, a one-to-one pressure regulator unit, a pressure actuated valve means in said switching relay operably connected to cut off said supply fluid from being transmitted by way of said second mentioned passageways to said charge tank when said fixed pressure level of said fluid has been reached, an additional passageway operably connected at one end to said fluid pressure that is being applied to said charge tank by way of said switching relay and connected at its other end to a bleed valve opening into a flexible atmospheric exhaust chamber of said one-to-one pressure regulator unit, a pressure actuated means operably connected to partially seal off said one end of said additional passageway when said pressure of said fluid in said tank is below said fixed pressure limit and to open said last mentioned end of said passageway when said fixed pressure level of said fluid has been reached, a differential pressure transmitter operably connected at its input end to the fluid pressure on either side of an orifice in a flow line containing a flow of fluid to be integrated, said transmitter being operably connected to apply an output pressure signal at its output end to said bleed valve in said one-to-one pressure regulator unit to increase or decrease the opening of said last mentioned bleed valve and to thereby simultaneously decrease or increase the time required to reduce the pressure in said charge tank to a predetermined lower fluid pressure level in accordance with increases or decreases occurring in the differential pressure on opposite sides of said orifice and valve means operably connected to said tripping relay to effect an immediate lowering of said fluid pressure in said counter to zero when said lower fluid pressure level is reached.

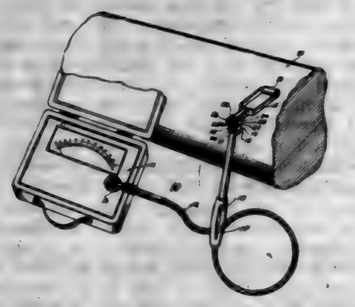
2,947,170
PRESSURE OPERATED LIQUID LEVEL MEASURING DEVICE
Harold A. Quist, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed May 20, 1955, Ser. No. 509,380
20 Claims. (Cl. 73—311)



1. In a pressure responsive liquid level measuring system, a float in contact with the liquid to be measured, a flexible tube mechanically connected at one end to the float and containing a liquid of high specific gravity, the pressure exerted by the liquid within said tube varying with changes in the level of the liquid to be measured, a first cell containing a high specific gravity liquid and connected to receive the pressure exerted by the liquid within said tube, said cell being vertically movable to initially balance said last-mentioned pressure, a second cell cooperatively movable with said first cell, a conduit connecting the upper part of the first cell to the lower part of the second cell, and a liquid of low specific gravity supported in the upper part of the first cell and above the high specific gravity liquid therein, said low specific gravity liquid rising into the second cell by way of said

conduit to represent pressure differences in the first cell over a vertical distance proportional to the relative specific gravities of the two liquids therein.

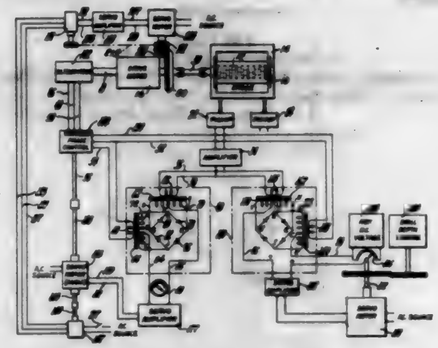
2,947,171
SURFACE CONTACT PYROMETERS
Veikko K. Peltola, Chicago, Ill., assignor to Illinois Testing Laboratories, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 29, 1958, Ser. No. 711,920
16 Claims. (Cl. 73—351)



1. A surface contact pyrometer assembly comprising an elongated supporting member, a bifurcated mounting on the end of said member, a pyrometer unit mounted between the arms of said bifurcated mounting, and comprising an insulating block, a pair of metal trunnion supporting arms carried by said block and insulated from each other by said block, a temperature responsive electrical element extending from the end of one arm to the end of the other arm and fixedly mounted on and electrically connected to said arms, a hollow cylindrical tubular trunnion carried by each arm, the said trunnions extending toward each other and being in axial alignment with each other, said trunnions surrounding and protecting said element, an insulating bearing member mounted for rotation on each trunnion, and a hollow metal roller body having its ends mounted on said bearing members and supported thereby for free rotation on said trunnions, said roller being insulated from said element and spaced from said element on all sides, and being mounted for rolling contact with the surface of the subject, the surface temperature of which is to be indicated, said element receiving heat from the interior of said roller by radiation and convection.

2,947,172
BALANCING ORGANIZATION
William F. King, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 17, 1954, Ser. No. 469,365
9 Claims. (Cl. 73—462)

1. Apparatus for determining the location and magnitude of unbalance of a rotatable body comprising in combination; vibratile means supporting the body for rotation about its rotational axis; drive means including a shaft coupled to said body for rotating it about its rotational axis; vibration pickup means responsive to vibrations induced in said vibratile supporting means by unbalance in said body and developing a periodically varying electrical signal having characteristics related to the magnitude and the location of unbalance in said body; means for determining the location of unbalance in said body including a two phase alternator driven by said rotating drive means in synchronism with said body and having a pair of quadrature related phase windings generating a pair of quadrature related alternating current reference signals, adjustable phase shifting means for shifting the phase of the reference signals from said alternator relative to said rotatable body, a phase sensitive rectifier bridge having two pairs of input terminals and one pair of output terminals, one of the said pairs of input terminals of said phase sensitive rectifier bridge being connected to said vibration pickup means and the other input pair being operatively interconnected with said alternator to receive one of said reference signals, and null indicating means connected to said output terminals of said bridge; means for determining the magnitude of unbalance in said body including a second phase sensitive rectifier bridge having one pair of input terminals connected to said vibration pickup means and another pair of input terminals operatively connected to said alterna-

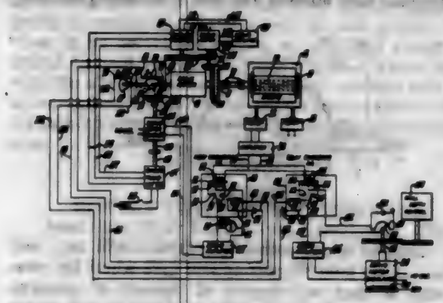


tor to receive the other of said reference signals, and amplitude measuring means connected to the output terminals of said second phase sensitive rectifier bridge; a continuous proportional servo positioning system including a servo motor having a control winding energized from the output of said first phase sensitive rectifier bridge, said system including a rotor coupled to said adjustable phase shifting means for adjusting said phase shifting means until the output of said phase sensitive bridge is null; and an electrical follow-up means positioned by said servo motor and coupled to the shaft of said drive means for positioning said shaft and said body in accordance with the location of unbalance therein, and switch means adapted to be closed to energize said follow-up means upon completion of the unbalance determining cycle and cessation of operation of said drive means.

2,947,173
AUTOMATIC BALANCING INSTALLATION
Joseph F. Lash, Ferndale, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 19, 1954, Ser. No. 469,893
12 Claims. (Cl. 73—464)

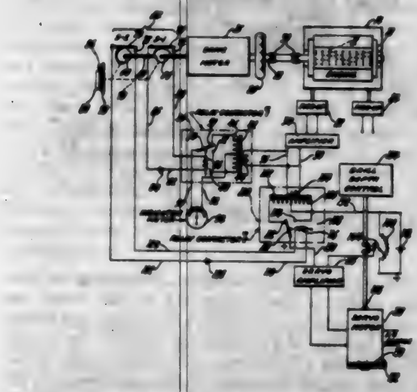
1. Apparatus for automatically determining the location of unbalance of a dynamically unbalanced rotating body comprising in combination vibration pickup means responsive to vibrations induced by unbalance in said body and developing a periodically varying signal having characteristics related to the location of unbalance in said body; a chopper device having an input circuit connected to said vibration pickup means and an output circuit with a commutator therein; a variable contact mechanism controlling the output from said chopper device and including a cam driven in synchronism with said body, a pair of switch contacts adapted to be actuated by said cam and adjustable means for changing the position in space of said switch contacts relative to said cam, said switch contacts being connected in circuit controlling re-

lation with said commutator; and servo positioning means connected to said commutator to be responsive to the output of said chopper device for automatically adjusting



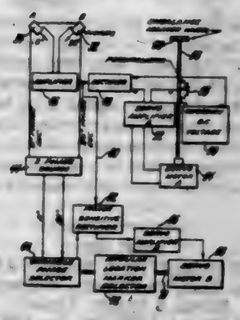
said adjustable means of said variable contact mechanism so that the output from said chopper device will be some predetermined amount.

2,947,174
BALANCING ORGANIZATION
Joseph F. Lash, Ferndale, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Continuation of application Ser. No. 468,172, Sept. 24, 1954. This application Sept. 16, 1957, Ser. No. 684,248
10 Claims. (Cl. 73—464)



1. Apparatus for determining the magnitude and angular location of unbalance of a dynamically unbalanced body comprising in combination, means supporting the body for rotation about its axis; drive means rotating the body on its axis; vibration pickup means responsive to vibrations induced by unbalance in said body and developing a periodically varying signal having characteristics related to the magnitude and the location of unbalance in said body; a pair of commutating chopper devices each having a transformer with a primary winding connected to said vibration pickup means and a center-tapped secondary winding, a relay having a pair of stationary contacts connected to the opposite ends of said secondary winding and an armature movable between said contacts by an operating coil of the relay, a variable contact mechanism including a pair of cams displaced 90 degrees apart and driven by said drive means in synchronism with said body, a pair of switches each having a pair of switch contacts and adapted to be actuated by a different one of said cams, and adjustable means for changing the position in space of said switches relative to said cams, the said switch contacts of each of said cam operated switches being connected in separate energizing circuits for the relay operating coil of a different one of said chopper devices; a null indicating device connected to the output of one of said chopper devices constituted by the relay armature and center tap of the transformer secondary winding associated with said one chopper device; and a self-balancing type of amplitude comparison circuit connected to the output of the other of said chopper devices.

2,947,175
BALANCING DEVICE
William F. King, Birmingham, and Kanno E. Sihvonen, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 23, 1954, Ser. No. 457,895
3 Claims. (Cl. 73—483)

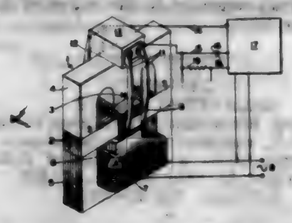


1. Unbalanced detection apparatus comprising a support for having a workpiece mounted thereon in a substantially horizontal plane, said support including pivot means to allow said workpiece to come to rest in an inclined position, the amount and direction of which are functions of any unbalance present therein, a pair of electromechanical transducers operatively interconnected with said support at a pair of orthogonal locations and responsive to said inclining movement of said workpiece, each of said transducers being excited by sources 90 degrees out of phase with each other, each of said transducers being effective to produce a signal having an amplitude representing the amount of displacement of said workpiece in a direction parallel to the axis of the transducer and a phase representing the direction of said displacement, means operatively interconnected with said transducers and responsive to said signals for vectorially combining said signals to produce an indication of the unbalance in said workpiece.

2,947,176
ACCELEROMETERS
John R. Perry, Peabody, Mass., assignor to General Electric Company, a corporation of New York
Filed Oct. 4, 1957, Ser. No. 688,214
5 Claims. (Cl. 73—517)

1. An acceleration-sensitive instrument comprising: a core structure having a first section defining an elongated flux conducting path, a second section permanently magnetized and arranged to apply a unidirectional magnetic flux to an intermediate portion of said first section across an air gap, and a third section arranged to apply fluxes to an intermediate portion of said first section across another air gap separate and spaced from the first mentioned air gap; means for circulating alternating magnetic flux in said third section and said other air gap; inductive means including electrical conductors encircling said first section of said core structure and extending

through both of said air gaps; means mounting said electrical conductors for deflection longitudinally of said first section by acceleration forces from a position of zero mutual inductance relative to said alternating flux to positions of varying mutual inductance depending upon said acceleration forces, whereby acceleration induced deflections of said conductors cause periodically varying potentials to be induced in said inductive means; means



connected to receive said periodically varying potentials and governed thereby for producing a direct current signal varying in magnitude with the amplitude of said periodically varying potentials; and means connected to circulate said direct current signal in at least a portion of said electrical conductors to create a magnetic field reacting with said unidirectional flux for urging said electrical conductors toward said normal position, whereby said direct current signal is a measure of said acceleration forces.

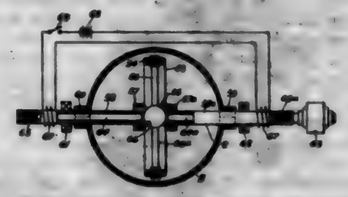
2,947,177
GYROSCOPES EMBODYING MERCURY SWITCHES
Robert Stanley Read, Barkingside, England, assignor to Kelvin & Hughes Limited
Filed Oct. 14, 1957, Ser. No. 689,790
Claims priority, application Great Britain Oct. 15, 1956
3 Claims. (Cl. 74—5.6)



1. A gyroscope comprising a flywheel, an inner gimbal rotatably supporting said flywheel for rotation about a spin axis, an outer gimbal, a frame, said inner gimbal being mounted in said outer gimbal for rotary movement about a second axis, said outer gimbal being mounted in said frame for rotary movement about a third axis, said axes being mutually perpendicular, and a mercury switch mounted upon said inner gimbal, said switch comprising an envelope having a floor, a quantity of mercury in said envelope and movable over said floor, said floor being convex upwards to provide a short abrupt movement of said quantity of mercury between two contact making positions to minimize any precession caused by any shift in the center of gravity of said inner gimbal, at least three contact members positioned in said envelope to be engaged selectively in pairs by said mercury in extreme positions of said mercury within said envelope upon movement of said inner gimbal about said second axis, a means controlled by said mercury switch in respectively different directions according to whether said quantity of mercury is in one or the other of its extreme positions respectively to thereby cause said outer gimbal to oscillate.

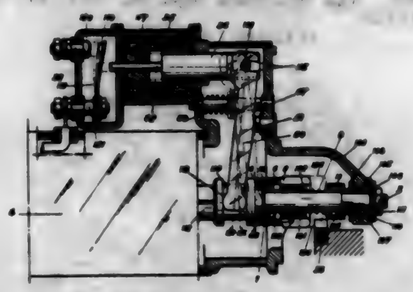
2,947,178
GYROSCOPE
Robert T. Adams, Short Hills, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Mar. 5, 1957, Ser. No. 644,831
2 Claims. (Cl. 74—5.7)

1. A gyroscope comprising a housing, means for mounting said housing for rotation about a spin axis, a gyro-wheel, means for mounting said gyro-wheel for spinning within said housing and completely enveloped by said housing, said last-named means including a ball and socket joint between said housing and said gyro-wheel, the kine-



matic center of which coincides with said spin axis, said ball and socket joint supporting said gyro-wheel for rotation with at least two degrees of freedom of rotation, and clutching means securing the said ball to said socket to restrain rotation of said gyro-wheel about said spin axis with predetermined limits of rotation of said enclosure.

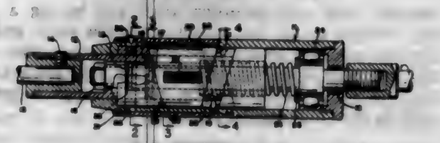
2,947,179
POSITIVELY ACTUATED STARTING DEVICE FOR ENGINE
Théodore Lafitte, 3 Ville Nial, Paris, France
Filed Jan. 29, 1959, Ser. No. 789,919
Claims priority, application France Feb. 4, 1958
5 Claims. (Cl. 74—6)



1. A device for starting an engine, comprising an electric starter motor, a shaft connected to said motor for being driven thereby and provided with at least one helical guideway, a driving sleeve rotating coaxially with said shaft and provided with at least one inner helical guideway engaging the corresponding helical guideway on the said shaft, a washer carrying said sleeve and sliding therewith over said shaft for guiding said sleeve, a ring rotatably and slidingly mounted on said shaft, a driving pinion concentrically carried by said ring, cooperating clutch teeth formed on the surfaces facing each other of said driving sleeve and said driving pinion, a further series of teeth at the end of said driving pinion facing away from said driving sleeve, a gear wheel operatively connected with the engine to be started and adapted to mesh with the last-mentioned teeth on said driving pinion, a spring arranged coaxially with reference to said shaft of said starter motor and urging said cooperating teeth on said driving pinion and on said driving sleeve into engagement, a second spring arranged coaxially with reference to said shaft acting in opposition to said first-mentioned spring and fitted between said ring and said washer guiding said driving sleeve, a resilient stop for said driving pinion adapted to engage the surface of said driving pinion facing away from said driving sleeve when said pinion is engaging said gear wheel, a forked rocking lever having one end engaging said driving sleeve for moving the latter over said shaft co-axially with the shaft axis from an inoperative

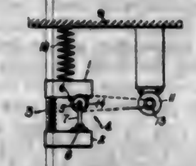
position towards an operative position engaging said driving pinion, a return spring acting on said rocking lever urging the same back into its inoperative position, means for moving the other end of said lever against said return spring, a switch for being closed by said rocking lever when in its operative position, an electrical circuit controlled by said switch for energizing said starter motor, with the starting torque of said motor causing said shaft to exert a longitudinal thrust on said driving sleeve, clamping said driving pinion between said driving sleeve and said stop.

2,947,180
ROTARY PERCUSSIVE POWER TOOL
John Oros, 9420 Yonkel Ave., Cleveland 4, Ohio
Filed Nov. 4, 1958, Ser. No. 771,856
12 Claims. (Cl. 74—22)



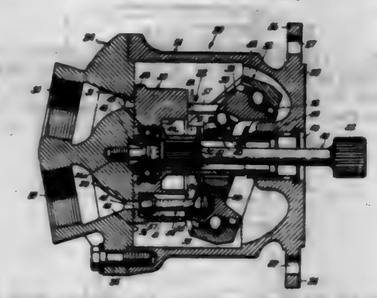
1. A device for applying axial percussive effects to a rotating tool comprising in combination: a member fixed against rotation, a drive shaft rotatable and axially immovable relative to said fixed member, a tool holder rotatable with said shaft and receiving said tool, said holder having an anvil surface facing in the direction opposite to the working end of said tool, a hammer member axially slidable relative to said shaft and rotatable therewith, said hammer member having a hammer surface cooperating with the anvil surface of the tool holder, and means for imparting an intermittent reciprocation to said hammer member, said last-named means including a fixed cam having an axial rise and an abrupt drop-off, a follower on said hammer member and cooperating with said cam, spring means biasing said follower toward said cam and said hammer surface toward and into pressure engagement with the anvil surface, said cam and follower members having a clearance at the point of abrupt drop-off when the hammer and anvil surfaces are in engagement.

2,947,181
RESONANT VIBRATION EXCITER
Robert M. Carrier, Jr., and John M. Morris, Louisville, Ky., assignors, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Jan. 16, 1953, Ser. No. 331,714
3 Claims. (Cl. 74—36)



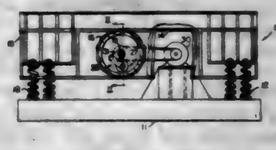
1. In a machine for doing work by vibration, in combination, an exciter mass, a work performing mass several times greater in magnitude than said exciter mass, spring means connecting said masses and forming with said masses a two mass resonant system having a natural frequency, cushioning means for supporting said masses in space, and constant amplitude cyclical force producing means including a yieldable member connected between said masses and operated at a speed generally equal to said natural frequency.

2,947,182
PISTON BALL END
Gunnar A. Wahlmark, 211 S. Rockford Ave., Rockford, Ill.
Filed May 7, 1958, Ser. No. 733,716
8 Claims. (Cl. 74—60)



1. In a piston having a head portion, a segmental spherical surface formed on the end of said piston opposite the head portion with a spherical diameter larger than the diameter of the head portion and with a maximum diameter at least equal to the diameter of said head portion, and a second segmental spherical surface formed on said piston adjacent said first mentioned segmental spherical surface but diametrically opposed thereto, said second segmental spherical surface having a spherical diameter smaller than the diameter of said head portion.

2,947,183
VIBRATION IMPARTING MECHANISM
Robert M. Carrier, Jr., and John M. Morris, Louisville, Ky., assignors, by mesne assignments, to Chain Belt Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 30, 1957, Ser. No. 687,879
15 Claims. (Cl. 74—61)

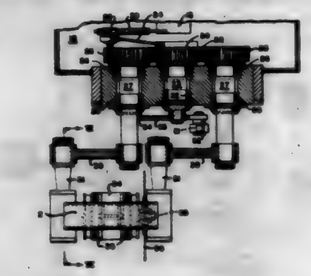


1. Vibratory mechanism comprising, in combination, a mass to be vibrated, an annular track rigidly fixed to and constituting a part of said mass, a weight and roller unit including a roller adapted to roll around the inside of said annular track, a drive shaft, a bearing concentric with the annular track for journaling said drive shaft upon said mass, means for reducing peak intensities of forces nonconstantly transmitted to said bearing, impeller means revolved by said drive shaft for rolling said roller around the inside of said annular track and a torsionally resilient coupling drivingly connecting said impeller means and said drive shaft.

2,947,184
VARIABLE SPEED TRANSMISSION
Merton E. Olson, Dyer, Ind., assignor to The Youngstown Sheet and Tube Company, Youngstown, Ohio, a corporation of Ohio
Filed Oct. 19, 1956, Ser. No. 617,137
1 Claim. (Cl. 74—69)

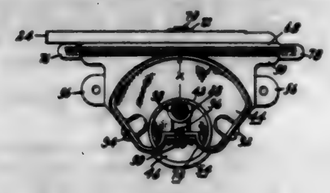
A variable speed transmission comprising two parallel shafts, a third shaft geared to said two parallel shafts for driving the same, an operating arm carried by the third shaft, a driving shaft parallel to the third shaft but having its axis offset from the axis of the third shaft, a driv-

ing arm carried by the driving shaft, a driving connection between the operating arm carried by the third shaft and the driving arm carried by the driving shaft, said connection having means on one of said arms engaging the other arm and moving in and out radially therealong during



rotation of the shafts whereby the driving shaft drives the third shaft and hence said two parallel shafts at variable speed, arms fixed to said two parallel shafts and a head pivotally carried by the arms so that the head while maintaining constant orientation moves in a circular path at variable speed.

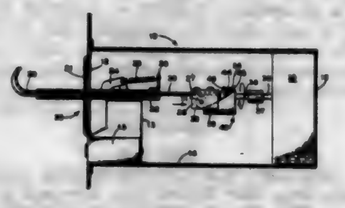
2,947,185
WINDSHIELD WIPER DRIVE MECHANISM
Eugene R. Ziegler, Spencerport, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,931
12 Claims. (Cl. 74—95)



1. A windshield wiper drive including in combination, a rotary driving crank, a link having one end movably connected with said crank and movable to and fro upon rotation thereof, a stationary housing, an oscillatable shaft journalled in said housing, an eccentric attached to said wiper shaft for oscillation therewith about the axis of said wiper shaft, the axis of said wiper shaft being disposed between the periphery of said eccentric and the center thereof, a cage supported by said eccentric, a member supported for reciprocable movement in said cage and operatively connected to the other end of said link, and means interconnecting said member and said eccentric whereby to and fro movement of said link reciprocates said member to oscillate said eccentric and said shaft.

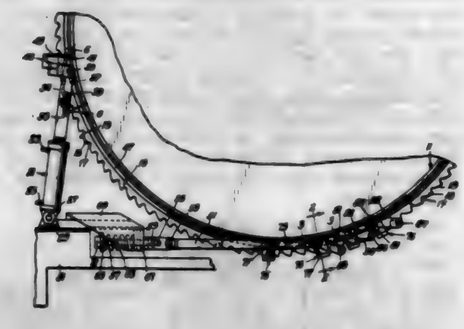
2,947,186
COIN SLIDE ACTUATED TIMER
Harry Greenwald, Brooklyn, N.Y., assignor to H. Greenwald Co. Inc., Brooklyn, N.Y., a corporation
Filed June 3, 1958, Ser. No. 739,506
9 Claims. (Cl. 74—107)

5. Coin control mechanism for rotating the control shaft of a cycle timer comprising, in combination, an extension shaft; a coupling securing said extension shaft coaxially and non-rotatably to the timer shaft; a coin slide assembly including a coin slide mounted for reciprocation toward and away from said extension shaft in substantially longitudinal alignment with the latter; a bracket rotatable on said extension shaft; interengageable stop means on said bracket and said extension shaft for rotating the latter when said bracket is moved in one angular direction; a cylindrical section cam secured to said bracket



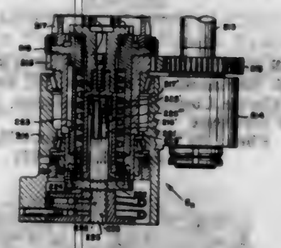
coaxially with said extension shaft and having a cam edge oblique to the axis of the extension shaft; and an operator mounted on said coin slide and engageable with said cam edge, upon movement of said slide toward said shaft, to rotate said extension shaft through a pre-set angle in such one angular direction.

2,947,187
APPARATUS FOR THE ROTATION OF DRUMS
Alan R. Graff, Flossmoor, Ill., and Gordon O. Gerk, Golden Valley, and Robert L. Butts, Brooklyn Park, Minn., and Edwin C. Juergens, Chicago, Ill., assignors to The Columbia Malting Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 15, 1957, Ser. No. 646,486
5 Claims. (Cl. 74—142)



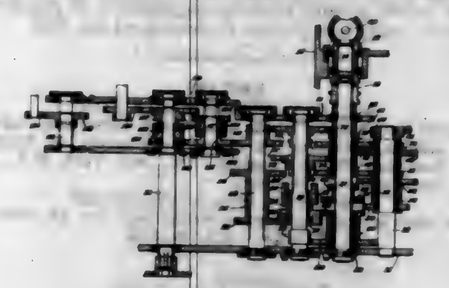
1. Apparatus for the rotation of drums comprising a rack secured to the drum and extending circumferentially around the drum, said rack having teeth formed thereon and each tooth being uniformly spaced from adjacent teeth and having a steep face and an inclined face, power means for rotating the drum including a yoke adapted to reciprocate for producing a power stroke and a return stroke, a pivot pin provided by the yoke, a thrust bar suspended from the yoke by levers which are pivotally connected to the yoke by said pivot pin, said thrust bar having operation to engage the steep face of a tooth during a power stroke whereby to effect rotation of the drum and to ride over the inclined faces of the teeth when the reciprocating yoke is retracted, said rack having a circumferential groove formed in a latheral face thereof, said pivot pin extending into the groove whereby to maintain the yoke permanently connected to the rack throughout the rotation of the rack and drum, and hold back means in operative association with the rack and adapted to engage the teeth thereof to limit reverse movement of the drum during the return stroke of the yoke.

2,947,188
SYNCHRONIZING DEVICE
Edward C. Bullard, Southport, and Arthur A. Tomaszcook and James E. Ettore, Bridgeport, Conn., assignors to The Bullard Company, a corporation of Connecticut
Filed Jan. 31, 1955, Ser. No. 484,998
14 Claims. (Cl. 74—333)



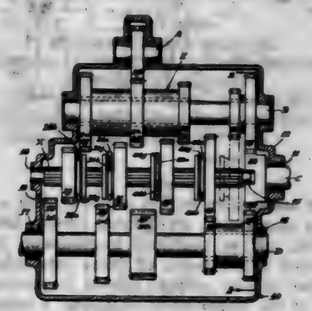
1. In a synchronizing mechanism for a multiple spindle machine tool, a bracket stationarily mounted within the base of said machine tool; a first hollow cylindrical member journaled within said bracket and having a gear fixed thereto; a second hollow cylindrical member telescopically received within said first member and provided with a friction clutch engaging surface; a third hollow cylindrical member telescopically received within said second member and provided with a positive enmeshing clutch engaging element; a piston fixed to said stationary bracket and extending into said third hollow cylindrical member; a compression spring located between said second and third members; means for selectively admitting liquid under pressure to opposite sides of the piston within said third member; and means for rotating the gear fixed to said first member.

2,947,189
FEED BOX TRANSMISSION
Theodore Foster, Montgomery, and Walter T. Hake, White Oak, Ohio, assignors to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed Aug. 23, 1957, Ser. No. 679,282
10 Claims. (Cl. 74—342)



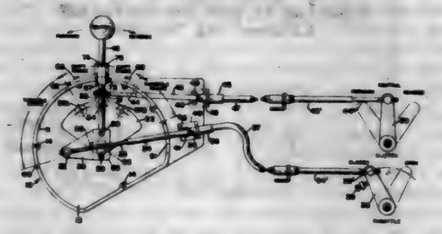
1. A transmission comprising: an input shaft, an output shaft, and at least one intermediate shaft; a plurality of gears on each of said shafts, certain of said gears being shiftable axially of said shafts for selective engagement with other of said gears; and shifter means for each shiftable gear, each of said means comprising a yoke operatively engageable with the related shiftable gear, a rack secured to said yoke for movement therewith, a pinion engageable with said rack, a timing gear movable in unison with said pinion, individual motor means for driving said timing gear, and means associated with said timing gear for stopping the motor when the timing gear and shiftable gear reach a predetermined position, said last-mentioned means comprising cam means on the timing gear, and a plurality of limit switches arranged to be opened and closed by said cam means in response to movement of said timing gear.

2,947,190
POWER TRANSMISSION GEARING WITH SPEED CHANGE IN FORWARD AND REVERSE DRIVE
Robert W. Johnson, Elmhurst, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed July 14, 1958, Ser. No. 748,231
5 Claims. (Cl. 74—342)



1. A change-speed transmission comprising a drive shaft, an intermediate shaft, means for driving the intermediate shaft from the drive shaft, a driven shaft, gear means constrained for rotation with the driven shaft, a countershaft, gear means constrained for rotation with the countershaft, an idler gear constituting a driving connection between the countershaft gear means and the driven shaft gear means, and gear means constrained for rotation with the intermediate shaft and selectively meshable with the gear means on the driven shaft for driving the same at one speed and alternatively meshable with the gear means on the countershaft for selectively establishing a driving connection between the intermediate shaft through the countershaft gear means and the idler gear for driving the output shaft at a different speed.

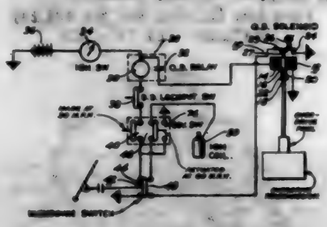
2,947,191
SINGLE LEVER MARINE ENGINE CONTROL
Donald W. Waner, Munroe Falls, Ohio, assignor to The Morse Instrument Co., Hudson, Ohio, a corporation of Ohio
Filed Feb. 5, 1959, Ser. No. 791,300
15 Claims. (Cl. 74—471)



1. A single lever control unit for the clutch and throttle lever of an engine and the like, comprising a stationary mounting plate, a pivot shaft journaled on said plate, a control lever rockably secured to said shaft, a throttle operating arm connected to said shaft, a clutch operating plate journaled on said shaft, pick-up means secured on said lever to selectively engage said clutch operating plate for rotating said plate with said lever, and means on

said mounting plate to retain said clutch operating plate in neutral position, said retaining means releasable by said pick-up means.

2,947,192
OVERDRIVE CONTROL MECHANISM
Edwin E. Prather, Centerville, Mich., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Oct. 23, 1957, Ser. No. 691,970
5 Claims. (Cl. 74—472)



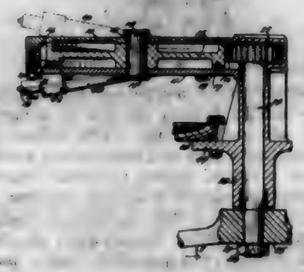
1. In an automotive vehicle provided with a grounded battery, an accelerator, an ignition system including an ignition coil, and an overdrive transmission including a pawl member and capable of being established in one or the other of two settings; means for controlling the operation of the transmission including a solenoid comprising a grounded coil and an armature, a normally closed grounded switch actuated by the armature, means interconnecting the grounded switch and armature, means interconnecting the armature and pawl of the transmission, means electrically interconnecting the ignition coil and switch to provide a means for temporarily disabling the ignition system to facilitate one of the operations of the transmission said connecting means including a normally closed governor operated switch, means electrically interconnecting the battery and coil of the solenoid including a normally open relay switch, and electrical means for controlling the operation of the relay switch including a relay coil and further including means for controlling the flow of electricity through said coil including an accelerator operated kickdown switch, a plurality of governor operated switches one of which is closed when the vehicle is traveling at a relatively high speed, and a two-stage governor for operating the governor operated switches.

2,947,193
THROTTLE CONTROL FOR OUTBOARD MOTORS
Ray R. Guernsey, 4616 Westmoreland Terrace, Portsmouth, Va.
Filed Aug. 25, 1959, Ser. No. 836,828
2 Claims. (Cl. 74—479)



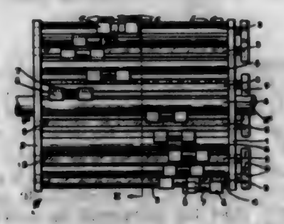
1. In a boat outboard motor combination a throttle control assembly for said motor comprising a pair of spaced apart swivel pulleys mounted on said boat forwardly of said motor on opposite sides of said motor, a pulley secured to one side of said motor rearwardly of and longitudinally aligned with the throttle of said motor, a cable loop having one end thereof anchored to the side of said motor opposite said last named pulley, said cable loop being trained over said pair of pulleys and said last named pulley with the opposite end thereof connected to said throttle, a control cable extending longitudinally of said boat, a pulley trained over said cable loop connected to said control cable for moving said control cable to actuate said throttle, and resilient means normally biasing said throttle forwardly of said motor away from said pulley mounted on said motor.

2,947,194
ROTOR FOR ACTUATING A CONTROL CABLE
William J. Shimanckas, Waukegan, Ill., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed July 15, 1957, Ser. No. 672,065
4 Claims. (Cl. 74—501)



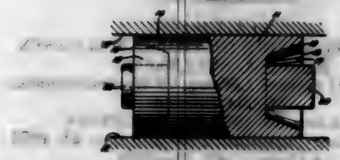
1. In combination, a first housing having spaced wall members, a gear rotatable in the housing and having a face in contact with one of the housing wall members and having a peripheral channel in said face, a guide duct on one of said wall members extending tangentially from said channel and at an angle to the channeled face of the gear, a Bowden cable anchored at one end in said channel and extending through the duct for axial movement therein upon rotation of the gear, a second housing in substantially fixed position, means for reversibly supporting the first housing from the second housing, a shaft extending into the second housing, and a pinion meshing with the gear in both of the positions of the first housing and mounted on the shaft for rotation thereby, reversal of the first housing and its said gear relative to the second housing changing the direction of extension of the guide tube relative to the axis of the shaft.

2,947,195
AXIALLY DISPLACEABLE STOP
Jacob Verhoeff and Henny van Booyen, Hilversum, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Sept. 11, 1956, Ser. No. 609,235
Claims priority, application Netherlands Oct. 24, 1955
5 Claims. (Cl. 74—526)



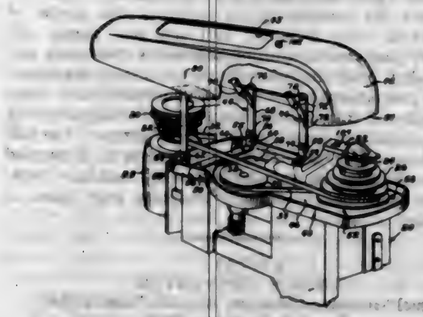
1. An axially adjustable stop arrangement comprising at least two substantially parallel, spaced supports, and a slidable stop therebetween, a resilient member surrounding a portion of said stop and engaging said spaced supports on either side of said stop, one of said supports being provided with a longitudinal flattened portion and being rotatable whereby in a selected position of said one support said slidable stop is free for axial movement and in other positions thereof said stop is fixed and prevented from movement.

2,947,196
CAM-FOLLOWER CONSTRUCTION
Horace Bishop Van Dorn and Ronald Wesson Morse, New Britain, Conn., assignors to The Fafnir Bearing Company, New Britain, Conn., a corporation of Connecticut
Filed Nov. 17, 1955, Ser. No. 547,488
5 Claims. (Cl. 74—569)



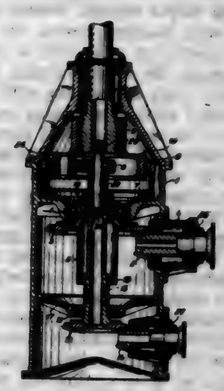
1. In combination, a rotary cam means having a peripherally continuous cam surface, said rotary cam being adapted for rotation, and an antifriction roller means to follow the surface of said cam means as said cam means rotates, said roller means comprising a substantially cylindrical outer surface between opposite ends of the roller means so that contact between said cam surface and the outer surface of said roller means extends along a line between the opposite ends of the roller means, each of said opposite ends having face portions in a plane substantially perpendicular to said line of contact between the cam means and the roller means, each face portion of said roller means having an annular recess extending into said roller means a predetermined distance to provide a cantilevered, flexible support for the portion of said cylindrical outer surface adjacent the ends of said roller means.

2,947,197
GUARDS FOR MACHINE TOOLS
David D. Pettigrew and Donald E. Bell, Pittsburgh, Pa., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 19, 1957, Ser. No. 678,975
3 Claims. (Cl. 74—611)



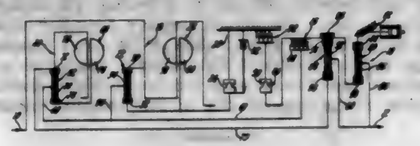
1. A guard assembly for a drive unit of a drill press or other machine tool having drive components projecting upwardly from a body member comprising a shell-like guard member shiftable between a lowered position to substantially enclose said drive components and a raised position to permit free access to said drive components, a pair of substantially coplanar links each pivotally connected at one end to said body member and at the other end to said shell-like member at one side thereof, said pivotal connections being aligned when said shell-like guard member is in said lowered position, arms rigid with the respective links and projecting laterally therefrom, a link member pivotally connected to the free ends of said arms, said body member, said links and said shell-like member forming a first parallelogram system, and said body member, said arms and said link member forming a secondary parallelogram system to assure the smooth, positive operation of said first parallelogram system through its entire operating range, and an additional link pivotally connected at its respective ends to said body member and said shell-like member at the opposite side of said shell-like member.

2,947,198
HELICOPTER GEARING
Wilhelm G. Stoeckicht, 4 Regerstrasse, Munich-Solln, Germany
Filed Feb. 27, 1958, Ser. No. 718,021
Claims priority, application Germany Mar. 7, 1957
7 Claims. (Cl. 74—665)



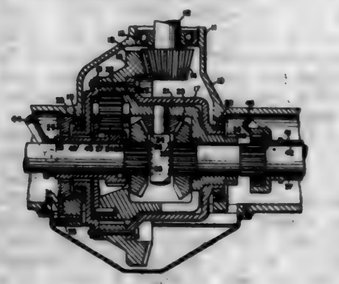
1. In a helicopter gearing, a housing, a driving shaft rotatably mounted in said housing, an intermediate hollow shaft rotatably mounted in said housing, the axes of said driving shaft and said intermediate hollow shaft intersecting one another, a first pair of intermeshing bevel gears, the first gear of which is secured to said driving shaft and the second gear of which is secured to said intermediate hollow shaft, first bearing means adjacent said second gear of said first pair of bevel gears for rotatably mounting said intermediate hollow shaft in said housing, a driven shaft coaxially arranged within said intermediate hollow shaft, spaced second and third bearing means for rotatably mounting said driven shaft within said intermediate hollow shaft, a planetary gear set mounted in said housing, a sun gear of said planetary gear set being secured to said intermediate hollow shaft, a reaction ring gear of said planetary gear set being fastened to said housing, and a planet carrier with planet gears engaging said sun gear and said ring gear being secured to said driven shaft, a first rotor shaft rotatably mounted in said housing and coaxially aligned with respect to and driven by said intermediate shaft through a one-way coupling, a second rotor shaft rotatably mounted in said housing so as to intersect with its axis the axes of said first rotor shaft, said intermediate shaft, and said driven shaft, a second pair of intermeshing bevel gears, the first gear of which is secured to said second rotor shaft and the second gear of which is secured to said driven shaft, and fourth bearing means adjacent said second bevel gear of the second pair of bevel gears for rotatably mounting said driven shaft within said housing.

2,947,199
TRANSMISSION
Jack R. Doidge, Ann Arbor, and Victor C. Moore, Plymouth, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 26, 1957, Ser. No. 698,997
9 Claims. (Cl. 74—688)



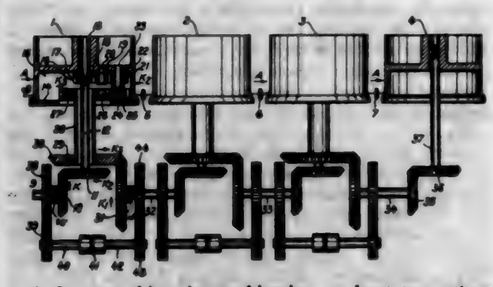
5. In a transmission driven by a torque producing engine, the combination of driving and driven shafts, planetary gearing comprising first and second planetary gear units each including input, output, and reaction elements, the first gear unit having the input element thereof rotatable by the driving shaft, the second gear unit having the output element thereof connected to the driven shaft, ratio changing devices for so conditioning the planetary gearing as to provide a plurality of speed ratios therethrough, the ratio changing devices including a forward drive brake cooperating with one of the gear units, the forward drive brake being engageable in forward drive so as to establish plural forward speed ratios through said one of the gear units and releasable in neutral so as to establish a neutral condition for the transmission, a torque transmitting mechanism drive related to the first and second gear units for transferring drive therebetween, the torque transmitting mechanism comprising a torque control gear unit having an input element rotatable by the first gear unit output element and an output element rotatable with the second gear unit input element, and a hydrodynamic torque transmitting device for automatically varying the relative speeds between the torque control gear unit input and output elements so as to control the torque transferred therethrough, the difference in speeds between the torque control gear unit input and output elements being greatest at engine idle so that insufficient torque is transferred by the mechanism to rotate the driven shaft.

2,947,200
AXLE GEAR FOR MOTOR VEHICLES
Eugen Stump, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Dec. 17, 1956, Ser. No. 628,639
Claims priority, application Germany Dec. 16, 1955
4 Claims. (Cl. 74—695)



1. An axle drive arrangement for motor vehicles comprising an axle gear housing, input means, output means formed by two axle shafts, differential gear means within said housing including a planet carrier and at least one planetary gear thereon operatively connected with both said axle shafts, a sleeve axially slidable on one axle shaft for coupling said planet carrier to said one axle shaft and selectively movable on the latter to lock or unlock said differential gear meant, change speed gear means interconnecting said input means and said planet carrier for rotatably driving the latter at various speeds, said change-speed gear means including at least one planetary gear rotatably mounted on said planet carrier, and a sleeve axially slidable on the other of said axle shafts for selectively locking or unlocking said last-mentioned planetary gear relative said carrier to select different ones of said speeds, said axle drive arrangement including means for actuating both said sleeves in unison.

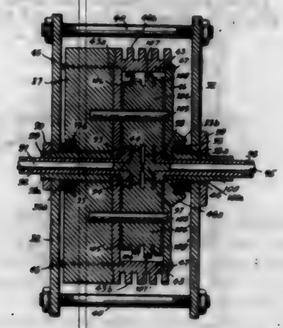
2,947,201
DEVICE FOR WIRE DRAWING MACHINES, ROLLING MILLS, ETC.
Birger David Sigvard Lidberg, 29 Hantverksgatan, Motala, Sweden
Filed Dec. 23, 1953, Ser. No. 399,954
Claims priority, application Sweden Dec. 23, 1952
5 Claims. (Cl. 74—795)



1. In a machine, in combination, at least two rotary drums; a rotatably-mounted input shaft associated with one of said drums and adapted to be rotated; an output shaft associated with said one drum; input sun gear means fixedly connected to said input to rotate therewith, planetary gear means turnably mounted on said one drum, and being driven from said input sun gear means; output sun gear means operatively connecting said plentary gear means with said output shaft so that said one drum and said output shaft are driven from said input shaft, said one drum being turnable relative to said input and output shafts and constituting the planetary gear carrier of an epicyclic train including said sun gear means and planetary gear means; transmission means connecting said output shaft with the other drum for driving the latter; and by-pass transmission means connecting said input shaft with said transmission means and including coupling means so that said input shaft is directly connected to said other drum when said coupling means is in a coupled position whereby the unit constituted by said one drum, said sun gear means and said planetary gear means is inactivated.

2,947,202
TORQUE CONVERTER
Miguel Montalva-Calderon, Avenida Miguel Claro No. 638, Santiago, Chile
Filed Mar. 13, 1956, Ser. No. 571,274
5 Claims. (Cl. 74—751)

1. A torque converter comprising at least one input shaft, at least one output shaft axially aligned with said input shaft, a sun gear on said input shaft, a sun gear on said output shaft of a different size than said sun gear on said input shaft, a gear casing, a flywheel on said gear casing, said gear casing and flywheel being rotatably mounted on said input and said output shafts with the sun gears on said input and said output shafts projecting into said gear casing, at least two planet gears in said gear casing, at least one shaft mounted on and exteeding through said gear casing on which said planet gears are rotatably mounted, one of said planet gears meshed only with said sun gear on said input shaft and the other of said planet gears meshed only with said sun gear on said



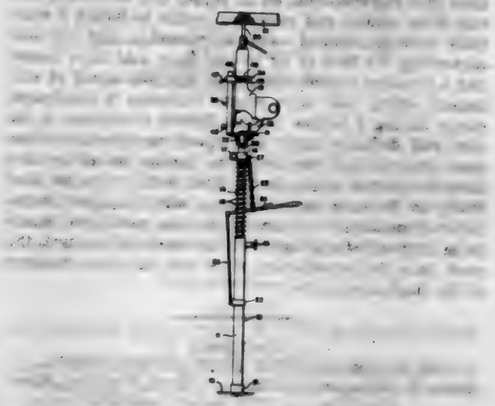
output shaft, said planet gears rigidly joined directly to each other, a frame mounted on said input and output shafts and surrounding said flywheel and gear casing for holding said shafts, said gear casing and said flywheel in position with respect to each other, and braking means in said gear casing responsive to the speed of said torque converter and acting on said planet gears for applying a load thereto.

2,947,203
FABRICATION SYSTEM
Carlo Ausenda and Roberto Demalles, Milan, Italy, assignors to Compagnia Italiana Forme Acciaio S.p.A., Milan, Italy, a corporation of Italy
Filed July 7, 1954, Ser. No. 441,856
19 Claims. (Cl. 77—5)



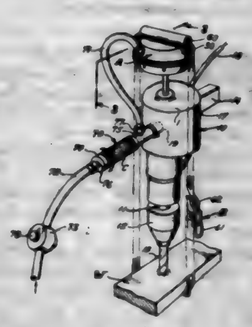
1. In a fabrication system, in combination, a frame, a carriage movable on said frame, a perforated tape connected to said carriage for movement therewith, a control head through which said tape passes in the course of its movement, a plurality of apertures in said head spaced from each other in the direction of movement of said tape, a light source in said head on one side of said tape and apertures, a respective photo-tube for each aperture on the other side of said tape and apertures, means for driving said carriage, at respectively different rates of speed, the lowest rate of speed being sufficiently slow to permit of substantially instant stopping of said carriage at index position, means for slowing said carriage down to said lowest rate of speed when a perforation reaches any aperture except the last while said carriage is being driven at a higher rate of speed, means for preventing said carriage from being driven at a higher rate of speed when a perforation passes over any aperture other than the last of said apertures while said carriage is being driven at said lowest rate of speed, and means for substantially instantly stopping said carriage as each group of at least one perforation registers with the last of said apertures.

2,947,204
UNIVERSAL POWER TOOL HOLDER FOR USE WITH EXPANSIBLE SELF-FEEDING STRUTS
Arthur J. Fine, Lake Hiawatha, N.J. (138 Lexington Ave., New York 16, N.Y.), and James F. Wagner, 276 Beechwood Road, Oradell, N.J.
Filed Oct. 25, 1957, Ser. No. 692,393
1 Claim. (Cl. 77—7)



A universal power tool holder adapted for use with an expansible self-feeding strut comprising a pair of members one telescoping in the other with a compression spring to urge the members for relative movement one within the other, a clamp collar on one of the members against which the spring abuts, a base on one of the members and having a strut attaching portion thereon, an upstanding support arm extending upwardly from one side of the base, said base being adapted to support the handle end of the tool, means on the base for releasably securing the handle to its upper surface thereof, a clamp device adjustable upon the upstanding support and adapted to be releasably secured to the shank of the tool, and said adjustable vertical clamp device formed of clamp parts with V-shaped openings and a clamp insert adapted to be located within the openings of either of the clamp parts, each of said clamp parts having a threaded screw hole, and a screw extended through the clamp insert and into the threaded opening of the clamp part for securing the clamp insert to the clamp part.

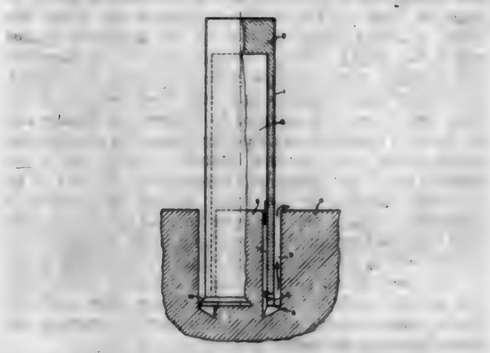
2,947,205
PNEUMATIC FEED FOR ELECTRIC HAND DRILL
Ralph A. Wilson, 4856 Long Beach Blvd., Apt. 7, North Long Beach, Calif.
Filed Mar. 13, 1957, Ser. No. 645,857
3 Claims. (Cl. 77—14)



1. An apparatus applicable to an elongated vertically disposed electric hand drill of the character described

and having a central longitudinally disposed drive shaft with a bit engaging chuck including, pneumatically operated drive means operatively related to the hand drill to occur in axial alignment therewith, mechanical supporting means carried by the drive means and engageable with a piece of work and adapted to maintain said drive means in fixed position relative to said work with the hand drill therebetween, an air supply line connected with said drive means, and operating means including a manually operable control valve interposed in said line and controlling the flow of air to and from said drive means and a pressure regulator valve in said line ahead of said control valve, said drive means including a diaphragm motor having a hollow case, a flexible membrane in the case and defining upper and lower chambers, a drive stem fixed to said membrane to depend therefrom and through the case to engage the hand drill, and an air inlet fitting on the case communicating with the upper chamber and connected with the supply line, said drive means being adapted to urge and feed the hand drill towards the work upon the introduction of air into the upper chamber of the diaphragm motor.

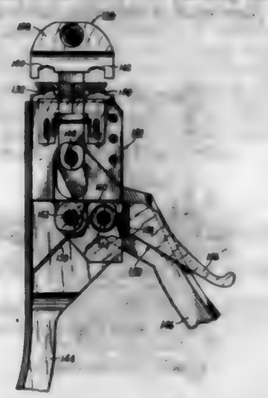
2,947,206
SELF-LUBRICATING TREPANNING DRILL
James H. Flanagan, 14 Pinebrook Road, Wayland, Mass.
Filed Oct. 13, 1959, Ser. No. 846,217
8 Claims. (Cl. 77—55)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A machine tool for use in preparing free-standing cylindrical columns in solid materials comprising a trepanning drill, said drill having a hollow shank portion, said shank portion being solid at one end, a cutting head integrally formed in the other end and a high viscosity lubricant packed within the hollow portion of said shank.

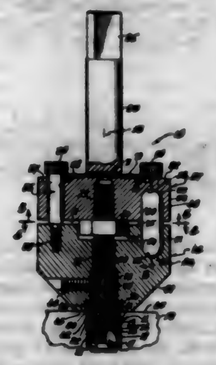
2,947,207
HAND CRIMPING TOOL
Henry W. Dessler, Lebanon, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Filed Nov. 23, 1956, Ser. No. 624,151
6 Claims. (Cl. 81—15)

1. In a hand tool for crimping electrical connectors in combination, a crimping head having a first crimping die therein, a plunger mounted for reciprocating motion in said head and having a second crimping die positioned to cooperate with said first die to crimp a connector placed in the path of said plunger, a pair of handles connected to said head and plunger to reciprocate said plunger, one of said handles being fixed to said head and the other handle having a first pivot near one end thereof, and a link connected to said other handle by a second pivot spaced from said first pivot, said link having a third pivot near one end thereof, one of said first and third pivots being connected to said head and the other of said first and third pivots being connected to said plunger, whereby relative movement of said handles reciprocates said plunger, said link, when said handles are open, being substantially perpendicular to the path of



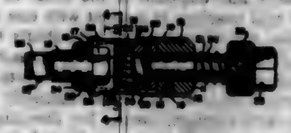
movement of said plunger and having a manually operable extension by which it can be rotated about said second pivot, whereby said handles are locked in open position and can be closed only after said link has been manually rotated to move said plunger toward its crimping position.

2,947,208
INSERT AFFLYING TOOL
Robert Neuschotz, 1162 Angelo Drive, Beverly Hills, Calif.
Filed Mar. 2, 1959, Ser. No. 796,546
16 Claims. (Cl. 81—53)



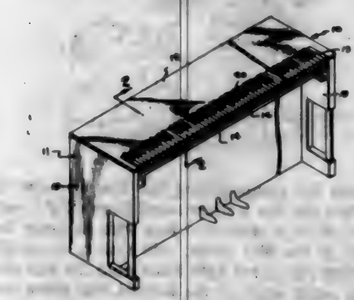
1. A tool for screwing an insert into an opening comprising a first section adapted to be turned about a predetermined axis, a shank projecting from and turning with said first section and having external threads to be screwed into the insert, a second section adapted to be turned by said first section about said axis and free for limited relative rotary movement about said axis, means at the inner side of said second section positioned to abut axially inwardly against said insert, and an element for transmitting axially inward forces from the first section to the second section and movable relative to both sections between first and second positions in response to predetermined limited rotary movement of the first section relative to the second section in an unscrewing direction, said element in said first position being constructed to hold the second section in an axially advanced position relative to the first section, and said element in said second position being of reduced effective axial length to free the second section for axial retracting movement relative to the first section.

2,947,209
SOCKET WRENCH
Charles Kastlin, Bronx, N.Y.
(4 Dodi St., Mount Vernon, N.Y.)
Filed Apr. 16, 1958, Ser. No. 727,572
4 Claims. (Cl. 81—63.3)



1. A socket wrench having an axially shiftable clutch mechanism comprising an outer sleeve, said sleeve having journal openings in the opposite ends thereof, coupling parts journalled in the opposite ends of the sleeve and adapted to be engaged with one another by axial adjustment of one of said parts relative to the other, said sleeve having a removable plug connected thereto and having a journal opening at that end of the sleeve, one of said coupling parts being journalled in the plug and having a knurled turning knob thereon by which hand turning can be effected and a spring on said coupling part reacting between the plug and the knurled knob.

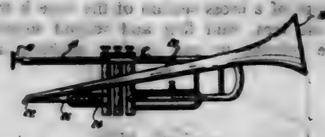
2,947,210
PIANO
Stanley R. Facey, 1803 Arctic Ave., and Percy W. P. Hancock, 500½ Ohio Ave., both of Atlantic City, N.J.
Filed Jan. 6, 1958, Ser. No. 707,278
1 Claim. (Cl. 84—177)



A piano comprising a frame having a case operatively associated therewith, said case having a pair of end members and a uniplanar top connected to the tops of said end members, said top having a recess along one side thereof, a keyboard base below said recess and operatively connected at its ends to said end members, and a keyboard on said base, said keyboard having a top surface which is substantially coplanar with that of said top.

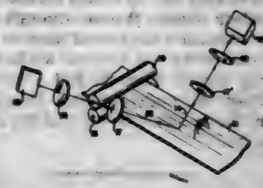
2,947,211
VALVE TRUMPET
Davis Shuman, 741 Bradford St., Brooklyn 7, N.Y.
Continuation of application Ser. No. 520,605, July 7, 1955. This application Sept. 17, 1958, Ser. No. 762,197
1 Claim. (Cl. 84—388)

In a valve trumpet having a valve casing and a lead pipe connected thereto, valves in said valve casing, a ferrule attached to said valve casing, an integral bell assembly comprising a bell and bell section, said bell and bell section having a common longitudinal axis generally normal to the axes of said valves, said bell and bell section being of a total length substantially equal to the total length of said trumpet, a bell bow connected at one



end to said bell section, and a branch section attached to the other end of said bell bow, said bell bow having a bend out of a plane containing the axis of said bell and bell section, said branch section being rotatably attached to said ferrule so as to be rotatable beneath said valve casing about its own axis through the greater part of a circle.

2,947,212
METHOD OF DETECTING SURFACE CONDITIONS OF SHEET METAL
Robert C. Woods, Old Lyme, Conn., assignor to The American Brass Company, Waterbury, Conn., a corporation of Connecticut
Filed Apr. 30, 1956, Ser. No. 581,435
4 Claims. (Cl. 88—14)

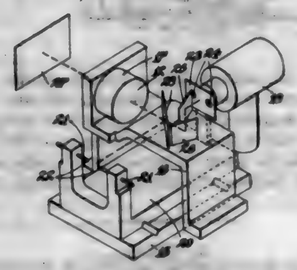


1. A process for examining the surface of rolled sheet metal having parallel linear striations impressed thereon during rolling for the purpose of detecting defects in said surface which comprises directing an incident light beam of substantially constant intensity obliquely toward the surface to be examined in a direction generally perpendicular to said striations, moving the metal relative to the incident light beam substantially in the direction of said striations, and measuring the intensity of the reflection of said incident light beam from the walls of said striations, said measured reflection being the specular reflection of the incident light beam at a substantially constant angle from the side walls of said linear striations in a direction generally perpendicular to the linear striations between the incident light beam and its specular reflection relative to the plane of the sheet metal, whereby interruptions in the uniformity of the pattern of striations in the surface of the metal are revealed by variations in the intensity of said measured reflection.

2,947,213
OPTICAL APPARATUS FOR CHECKING BORE-CROSS-SECTIONS
Fredrick Brian Oddie, Skipton, England, assignor to Rolls-Royce Limited, Skipton, England, a British company
Filed Dec. 23, 1957, Ser. No. 704,702
Claims priority, application Great Britain Dec. 21, 1956
8 Claims. (Cl. 88—14)

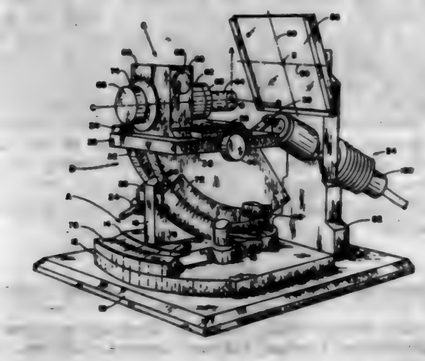
1. Optical measuring or checking apparatus for use in the inspection of the cross section of a bore in an article, which apparatus comprises a light source insertable in the bore to be illuminated, a graticule means, a

stylus, an optical system including a lens of small depth of focus and mirror means by which images of the bore of the article, the graticule means and the stylus are reflected through the lens, a first support carrying the optical system, a second support wherein the article to be checked is mounted with the bore of the article optically substantially aligned with the optical axis, whereby an image of a cross section of the bore is transmitted through the lens, said first and second supports being adjustable relative to one aonther enabling images of



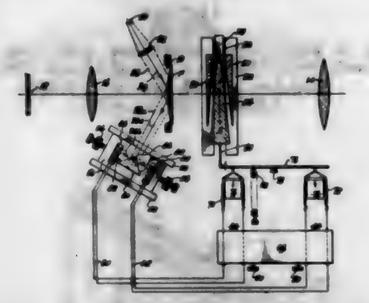
the cross section of successive portions of the bore to be transmitted through the lens, said graticule means enabling the image of the bore to be checked or measured, a third support carrying said graticule means and said stylus in fixed relation to one another and in positions relative to said mirror means permitting said mirror means to reflect images thereof through the lens, said stylus being adjacent said second support and having a portion for contacting the external surface of an article carried in the second support, and a screen positioned to receive from the optical system images of the bore cross section, the graticule means and the stylus in superimposed relation.

2,947,214
CRYSTAL ORIENTATION DEVICE
Gunter H. Schwuttke, Flushing, Edgar D. Haffner, Willston Park, and Ralph Michael Adler, Kew Gardens, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed June 2, 1958, Ser. No. 739,140
2 Claims. (Cl. 88—14)



2. Apparatus for determining the orientation of a given crystallographic plane in a specimen of crystalline substance with respect to a planar surface of said specimen comprising, an assembly for defining first, second and third mutually orthogonal fixed axes, said assembly comprising first, second and third subassemblies rotatable respectively about said first, second and third axes, said third assembly supporting said specimen with said planar surface thereof passing through the intersection of said three mutually orthogonal axes, said second subassembly supporting said third subassembly, said first subassembly supporting said second subassembly, said support for said second subassembly including a portion of said first subassembly in the form of a vertical plate with a pair of apertures in the form of arcuate slots each having a different radius about the axis of the second subassembly as a center, a shaft-supported roller bearing disposed in one of said slots and being in contact with one surface of said slot, a plurality of shaft-supported roller bearings spaced from each other and disposed in the other of said slots with each of said bearings in contact with one surface of said other slot, the axes of all of said shafts being substantially parallel, each bearing being rotatable on its shaft, and each shaft being secured at its ends to vertically disposed portions of said second subassembly on either side of said vertical plate, means for directing a beam of light on said planar surface, said light being reflected from said planar surface in the form of a light pattern, and a screen positioned to intercept said light pattern, whereby said specimen is displaced about one or more of said axes to line up said light pattern with a reference point on said screen.

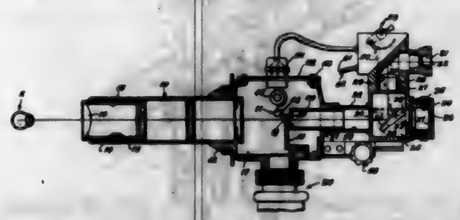
2,947,215
COMPENSATING FILM WARPAGE IN PROJECTORS
George A. Mitchell, 687 Prospect Crescent, Pasadena 3, Calif.
Filed Mar. 4, 1957, Ser. No. 643,657
5 Claims. (Cl. 88—17)



1. A system for compensating for film warpage in a projector where the film is illuminated from a light source and is projected by a projection lens with its inner focal plane located at the film plane; said system comprising, means directing a constant light beam onto the film along an axis at an acute angle to the normal film plane to be constantly reflected from the film along an axis whose position changes with changes of film position, constantly operating electro-motive means receiving and constantly responding to changes in position of the reflected beam, and constantly acting means controlled by the electro-motive means and acting to shift the position of the inner focal plane of the projection lens with relation to that lens, whereby the position of the inner focal plane of the lens is shifted with relation to the lens to correspond to changes in film position without accompanying shift of the outer focal plane of the lens.

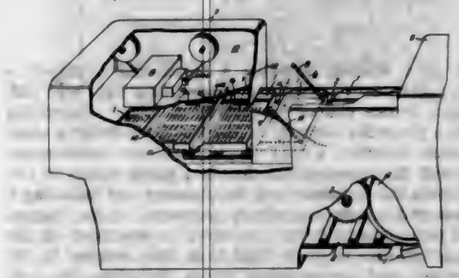
2,947,216
RETINAL CAMERA
Robert C. Drews, 4510 McKinley Ave., St. Louis 10, Mo.
Filed Sept. 15, 1955, Ser. No. 534,494
5 Claims. (Cl. 88—20)

1. A camera for photographing an interior region of an eye through the lens of the eye comprising a housing having an ophthalmoscope lens mounted in an opening in one end thereof, said ophthalmoscope lens having an optical axis that extends to the eye being photographed, a camera lens mounted in said housing and having an optical axis aligned with the optical axis of the ophthalmoscope lens, a film chamber positioned in the housing opposite said ophthalmoscope lens, said ophthalmoscope lens and said camera lens defining an optical path that extends between the eye being photographed and the film chamber, an electronic flash light



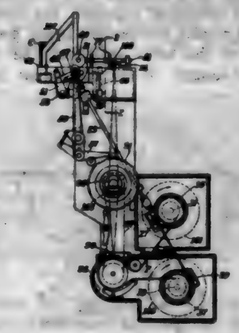
source mounted inside the camera in the optical path between the ophthalmoscope lens and the film chamber, said light source being in direct optical communication with the lens of the eye being photographed, masking means associated with the light source and positioned on the side thereof closest to the film chamber to prevent light from the light source from entering the film chamber directly, and electronic means connected to the light source including means for exciting said source to produce a flash of light of sufficient intensity for taking pictures of the interior region of the eye.

2,947,217
PHOTOGRAPHIC CONTROL APPARATUS
Eric Malcolm Swift McWhirter, Rye, N.Y., assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed May 12, 1955, Ser. No. 507,834
8 Claims. (Cl. 88—24)



1. Control apparatus for photographing data recorded on a document, comprising a camera, adjustable image framing means for said camera to select a desired portion of the document for photographing, index means applied to said document and coextensive in length with said desired portion of the document for indicating the said portion to be photographed, means producing relative movement between said camera and said document, photoelectric means mounted in a position to scan said index means and effective during said relative movement to produce a control signal for controlling said framing means, said index means controlling the amount of light impinging on said photoelectric means, and means responding to said control signal to vary a dimension of said image framing means as determined by said index means to cause said camera to photograph only that portion of the document determined by the said length of said index means.

2,947,318
DOCUMENT HANDLING APPARATUS
James F. Hayden and Glen W. Ohmsund, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Dec. 16, 1955, Ser. No. 553,314
2 Claims. (Cl. 88—24)

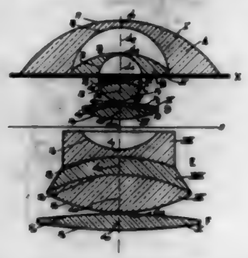


1. Document handling and illumination intensifying apparatus for a device having a work surface provided with an aperture, means for moving documents successively on said work surface and over said aperture, and means for illuminating said aperture, said apparatus comprising a member having a document supporting surface and a light reflecting surface and rotatably mounted about an axis which is parallel to and spaced below the plane of said work surface and is normal to the direction of movement of said documents over said aperture, said member being rotatable about said axis for movement to a first position at which said document supporting surface is in said aperture in supporting relation to the underside of each of said documents moving over said aperture and to a second position in which said reflecting surface reflects light from said illuminating means to said aperture to intensify the illumination of each of said documents positioned over said aperture, said positions of said member being angularly spaced about said axis whereby said document supporting surface is out of said aperture and in noninterfering relation to light reflected to said aperture by said reflecting surface in said second position, and means for rotating said member about said axis through said first position in the direction of and in synchronism with the movement of the leading edge of said documents over said aperture and through said second position while said documents are over said aperture.

2,947,319
WIDE-ANGLE OBJECTIVE LENS
Abraham C. S. van Heel, Delft, Gerardus J. Boersink, The Hague, and Hendrik J. Ruterink, Rijswijk Z.H., Netherlands, assignors to Nederlandse Organisatie voor Toegepast - Natuurwetenschappelijk Onderzoek Ten Behoeve van de Rijksverdediging (The National Defence Research Council-T.N.O.), The Hague, Netherlands, a corporation of the Netherlands
Filed July 24, 1958, Ser. No. 750,739
Claims priority, application Netherlands Aug. 7, 1957
3 Claims. (Cl. 88—57)

1. In photographic wide-angle objective comprising a field compressor component composed of at least two negative meniscus lenses having substantially semi-spherical back surfaces the centers of which are positioned approximately in the center of a stop located close behind said field compressor component, and a positive lens component containing a foremost positive doublet

component positioned close behind the said stop, and a backmost biconvex positive component having a focal length many times greater than the focal length of the total lens system, the improvement comprising, that between the said two positive components there are situated a positive biconvex component and a triplet component consisting of a biconcave, a concave-convex end a biconvex part cemented together, the total axial thickness of the said triplet component being greater than the focal distance of the total objective; the range for the individual focal lengths of the individual components in



order from front to rear wherein f represents the focal length of the objective are

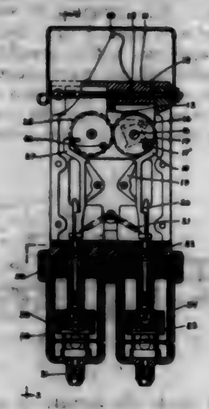
$$2.6\ f<-f'A<3.5\ f$$
$$0.9\ f<-f'B<1.3\ f$$
$$1.2\ f<f'C<1.6\ f$$
$$1.8\ f<f'D<2.5\ f$$
$$4.5\ f<-f'E<6.3\ f$$
$$9.4\ f<f'F<12.8\ f$$

the Abbe number of the concave-convex part of the said triplet component being about twice as high as that of the biconcave part of said triplet component, both of said parts having a moderately high refraction index, the third (biconvex) part of said triplet component having a high refraction index as compared with that of the other parts and an Abbe number lying between those of the first two parts of the said component, the axial distance between said positive biconvex component and said triplet component being between 0.35 and 0.75 times the focal length of the total objective.

2,947,220
SINGLE TRIGGER SEQUENTIAL FIRING MECHANISM
Creston F. Langer, Beverly, N.J., assignor to the United States of America as represented by the Secretary of the Army**
Filed Jan. 23, 1958, Ser. No. 710,825
1 Claim. (Cl. 89—1)

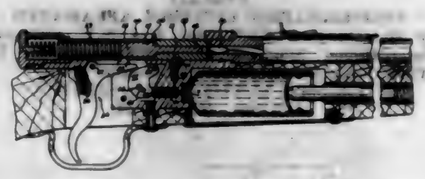
(Granted under Title 35, U.S. Code (1952), sec. 266)

In an apparatus for generating a gas pressure and for applying said gas pressure to a device to be operated, the combination of a support, a pair of initiators fixed to one end of said support with their longitudinal axes parallel to one another, each of said initiators having a firing pin, a spring biasing said firing pin to its uncocked position, a gear, a sear extending between and releasably coupled to said gear and said firing pin, said sear having a surface which is flat adjacent said gear and is offset adjacent said firing pin, a rocker arm pivoted to said support and having relatively long and short arms and a spring tensioned to maintain said arms in engagement with said surface and to disengage said sear from said gear and from said firing pin when said relatively short arm engages the offset part of said surface, the gears of said initiators being in mesh with one another, actuating means including a pawl biased into engagement with one of said gears, said actuating means being mounted at the other end of said support and being movable transversely of said longitudinal axes for alternately firing



said initiators, and means for returning said actuating means to its original position after each of its movements.

2,947,221
COMPRESSION IGNITION GUN
Donald N. Griffin, Niagara Falls, N.N.Y., and John W. Orr, Duarte, Calif., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed Dec. 10, 1956, Ser. No. 627,724
2 Claims. (Cl. 89—7)



1. In a firearm including a barrel and a trigger, a bolt operative to engage and make a fluid tight seal with respect to one end of the barrel, said bolt cooperating with a projectile disposed in the barrel to define a compression chamber, a fluid supply container communicating with the compression chamber, pump means in circuit with the container and the chamber and including a piston and a cam operatively connected to the trigger, said pump means being responsive to operation of the trigger effective to meter fluid from the container to the chamber, and compression means including the bolt responsive to operation of the trigger for changing the volume of the chamber whereby fluid introduced therein is pressurized.

2,947,222
AMMUNITION LINK
Andrew G. Blok and Elvyn G. Rasor, Okaloosa County, Fla., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Aug. 5, 1957, Ser. No. 676,448
3 Claims. (Cl. 89—35)

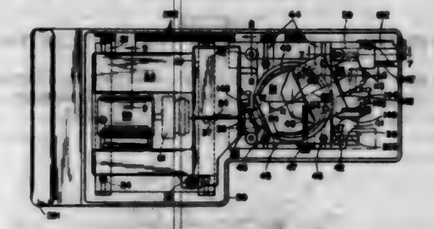
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An ammunition carrying link arranged to be combined with other similar links to form a self-disintegrating type ammunition belt, each of said ammunition carrying links comprising a semi-cylindrical body portion adapted to substantially envelop and retain a generally cylindrical round of ammunition therein, said body portion formed of material adapted to resiliently grip said ammunition, means for combining said links, said means including a self-locking hook-shaped member, a pin member passing through said hook-shaped member and said body portion for pivotally attaching said hook-shaped member to one wall of said body portion, an engageable loop member outwardly projecting from the opposite wall of said body portion, said hook-shaped member



engaging the loop member of an adjacent link and dimensioned such that the contact of inserted ammunition with the lower portion of said hook-shaped member urges said hook-shaped member to pivot inwardly, thereby locking said engaged loop within said hook-shaped member and preventing release of said loop member and attached adjacent link until said inserted ammunition has been stripped therefrom.

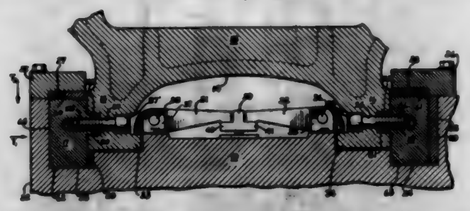
2,947,223
GEAR MACHINE OR THE LIKE
Leonard O. Carlson, Rochester, Adolph H. Krastel, Irondequoit, and Herman A. Maiz, Brighton, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Filed July 2, 1956, Ser. No. 595,281
16 Claims. (Cl. 90—5)



1. A gear machine or the like comprising a frame, a cutter head having a cutter spindle journaled for rotation therein about a horizontal axis, a work head having a work spindle journaled for rotation therein about a horizontal axis, a first cross-slide for the cutter head adjustable horizontally with respect to the frame in a direction perpendicular to the cutter spindle axis, a second cross-slide for the work head adjustable horizontally with respect to the frame in said direction, and the cutter head being adjustable on its cross-slide in a direction perpendicular to the cutter spindle axis and inclined to the horizontal at an acute angle.

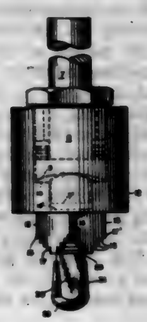
2,947,224
ATTACHABLE WAYS FOR MACHINE COLUMNS
Raymond M. Woytych, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin
Filed Aug. 6, 1956, Ser. No. 602,728
5 Claims. (Cl. 90—11)

1. A machine tool having a vertical column presenting spaced vertical standards having aligned front faces and parallel outer surfaces extending substantially at right angles to the front faces of the standards, a headstock carried for vertical movement on said standards with the spindle extending across the front of the column, a pair of substantially rectangular cross section ways keyed on the sides of said column standards on the said outer surfaces thereof and means defining cooperating keys and keyways in the abutting surfaces of said ways and column standards, each of said ways presenting a major rear load bearing surface substantially parallel with the aligned front faces of the standards, a transverse outer load bearing surface, and a front surface adjacent to



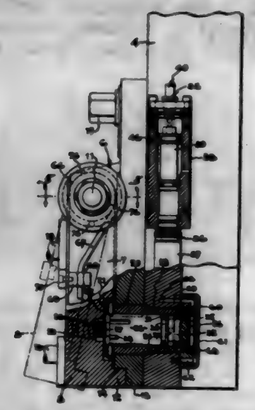
and spaced from the front of the column; said headstock including bearing surfaces slidable on the surfaces presented by said ways; forces developed in machining operations with the headstock spindle and applied transversely of the spindle to said rear load bearing surfaces being transmitted to the column standards through the keys and cooperating keyways, and forces developed in machining operations and applied axially of the spindle to said outer load bearing surfaces being transmitted directly to the column standards through the outer surfaces on which the ways are supported.

2,947,225
POLYGONAL HOLE FORMING TOOL
Leander J. Heppner, 4930 W. Jackson Blvd., Chicago 44, Ill.
Filed Dec. 19, 1958, Ser. No. 782,358
8 Claims. (Cl. 90—24)



1. A tool for forming polygonal holes in a work piece comprising, a pair of axially aligned elements one of which is axially shiftable relative to the other, one of said elements being adapted for rotation about the axis of a bore in the work piece and the other of said elements having a forwardly projecting axially aligned member of polygonal cross section and formed with axially successive cutting edge corner parts each conforming to an annular segment of a right circular conical surface and of progressively reduced radial dimension adapted to shear out radially successive peripheral portions of the work piece bore at angularly spaced locations about the circumference of the bore as said other element progresses through the bore, and cam means driven by said one element and coacting with said other element to effect relative reciprocation of said elements and drive said other element other element axially into the work piece bore.

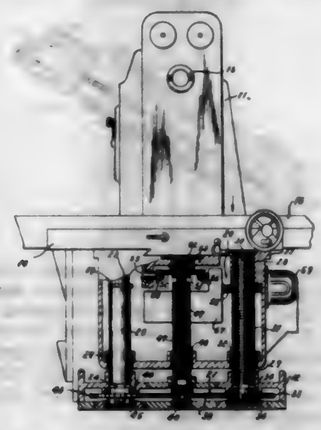
2,947,226
TOOL LIFT MECHANISM
John M. Walter, Cincinnati, Ohio, assignor to The G. A. Gray Company, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 27, 1953, Ser. No. 718,648
6 Claims. (Cl. 90—55)



I. In a machine tool of the planer type having a tool block pivotally mounted in a clapper box for swinging movement between cutting and lift positions and engageable with an abutment in its cutting position, an air-operated power cylinder mounted in said clapper box behind said tool block, a power piston slidable in said cylinder, said piston having a forward end engaging the tool block for swinging the same from the cutting position to the lift position, a spring interconnecting the tool block and clapper box and normally biasing the tool block toward cutting position and into engagement with said abutment, means for applying and exhausting air pressure relative to said cylinder for reciprocating said piston and tool block between its cutting and lift positions, whereby said spring decelerates the motion of the tool block during motion to the lift position and drives the tool block from the lift position back to the cutting position into engagement with said abutment, a floating piston slidably mounted within said power cylinder adjacent the rearward end thereof, a hydraulic snubber apparatus in communication with the rearward end of said power cylinder and acting upon the said floating piston, said power piston engaging said floating piston as said tool block approaches the cutting position, said floating piston thereupon exhausting hydraulic fluid from the power cylinder to the snubber apparatus at a metered rate and decelerating the power piston and tool block as the block approaches said abutment.

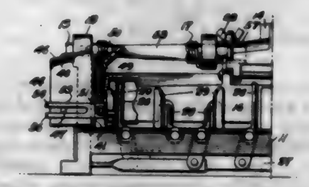
2,947,227
TWIN SCREW ELEVATING MECHANISM
Charles A. Parske and Kurt A. Riedel, Milwaukee, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin
Filed Nov. 12, 1957, Ser. No. 695,883
9 Claims. (Cl. 90—58)

1. In a milling machine, a vertically upstanding column provided with a forwardly projecting base, a hollow knee slidably mounted on said column for vertical movement above said base, a pair of elevating mechanisms operatively interconnected between said base and said knee, a pair of slide bearings mounted in suitable openings in the bottom wall of said knee, a pair of protective sleeves, one end of each of said sleeves being secured to the forwardly projecting base of the column and extending upwardly therefrom into said knee with its periphery in sliding engagement with one of said slide bearings and its interior surface in sliding engagement with one of said elevating mechanisms to impart stability to said knee as well as to protect said elevating mechanisms, a source of driving power contained within said knee, a telescoping power transmitting shaft jour-



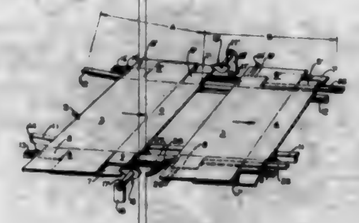
nalled at its upper end in said knee and at its lower end in said column base, said telescoping shaft being connected to be driven by said power source, and a plurality of operatively intermeshing synchronizing gears journalled within said base connected to be driven by said telescoping shaft, said synchronizing gears being connected to transmit power for effecting simultaneous synchronized actuation of said elevating mechanisms.

2,947,228
PRINTING ATTACHMENT FOR EGG CARTON HAND SET-UP MACHINE
Le Roy F. Carkhuff, Morris, Ill., assignor to Diamond National Corporation, a corporation of Delaware
Filed Aug. 8, 1958, Ser. No. 753,944
7 Claims. (Cl. 93—37)



1. In combination; a machine having a frame, a longitudinally extending operating shaft journalled therein, and means to rotate said shaft including a hand manipulable operating handle; and a printing attachment for said machine comprising a frame secured to the frame of the machine, a tube carried by said frame and extending transversely of said operating shaft, a shaft in said tube having the back end thereof angled to form a lever, an operating lever attached at one end to the operating shaft and extending outwardly from said operating shaft and then parallel thereto, a spring connected to the free end of said operating lever and to the angled end of said tubed shaft, whereby upon movement of said handle said tubed shaft will be rotated, the front end of said tubed shaft being offset, a type carrier rotatably mounted on the offset portion of said tubed shaft and having a furcated trip lever integral therewith, a pin carried by said attachment frame and extending between the furcations of said lever, and an ink pad carried by said attachment frame, said type carrier being carried by said offset portion of said tubed shaft and rotated by said pin upon rotation of said tubed shaft from a rest position in which the type is against the ink pad to a printing position in said machine.

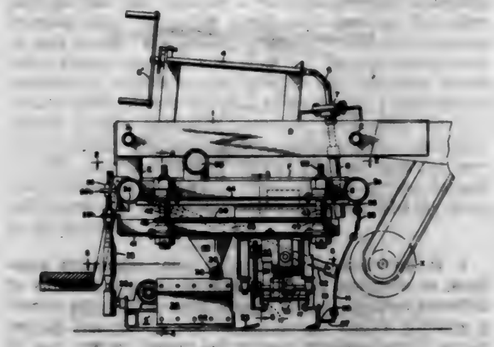
2,947,229
CARTON FLAP DEFLECTING AND SEPARATING MEANS
Dominic J. Carosio, Alhambra, Calif., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed July 30, 1958, Ser. No. 751,986
3 Claims. (Cl. 93—53)



1. Apparatus for transforming a collapsed carton having pairs of major and minor flaps at an end thereof with one major flap and one minor flap positioned on each side of said collapsed carton from the collapsed state to the erected state, said apparatus comprising means for moving said carton along a carton supporting surface, a pivotable member mounted adjacent said surface and laterally spaced therefrom including a cam portion positioned in the path of movement of said major flaps but spaced from the path of movement of said minor flaps whereby a leading one of said major flaps is deflectable by said member and said member is pivotable by said one major flap as said carton is moved into engagement with said member whereby said one major flap may be separated from the other major flap, and a separating band having a leading end positioned substantially in alignment with said pivotable member and a thin curved section extending from said leading end toward said surface, said curved section being positioned in the path of movement of said minor flaps whereby said curved section may enter clearance spaces provided between said one major flap and said minor flaps when said one major flap is deflected by said pivotable member thereby to separate said one major flap from said minor flaps and said other major flap as said carton is moved relative to said separating band.

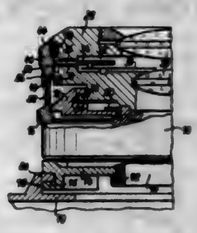
2,947,230
BITUMINOUS PAVER
Ralph W. Heer and Lloyd W. Mundy, Minneapolis, Minn., assignors to Poor & Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 21, 1957, Ser. No. 641,533
3 Claims. (Cl. 94—46)

1. A paver for laying bituminous mats, comprising, in combination, a tow frame disposed in a substantially horizontal position, a sub-frame pivoted about a transverse axis on the tow frame and having its front portion adjustable relative to said tow frame, screed sections having abutting inner edges and the inner and outer ends suspended from said sub-frame, crown adjusting means for controlling the raising and lowering of the abutting inner edges of the screed sections, said crown adjusting means including an upper channel fixed to the tow frame and an adjustable lower channel disposed beneath said upper channel each having web portions and disposed in substantially horizontal planes longitudinally of the paver, means depending from the lower channel and connected with the inner ends of the screed sections to hold them in selected angular relation, a pair of spaced vertical screw shafts rotatably connected at their bot-



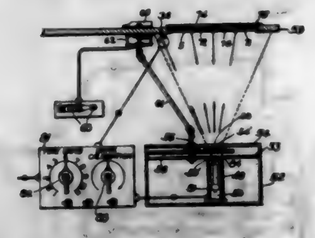
tom ends to the web of said lower channel, and nut means for each shaft secured to the web of said upper channel and threadedly receiving said screw shafts, and means connecting said screw shafts and responsive to selective turning of one of them to actuate both shafts to raise and lower the adjustable channel.

2,947,231
PHOTOGRAPHIC CAMERA PROVIDED WITH INTERCHANGEABLE SHUTTER HAVING INTERCHANGEABLE LENS
Kurt Gebele, Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a German firm
Filed Sept. 26, 1955, Ser. No. 536,584
Claims priority, application Germany Oct. 8, 1954
1 Claim. (Cl. 95—11)



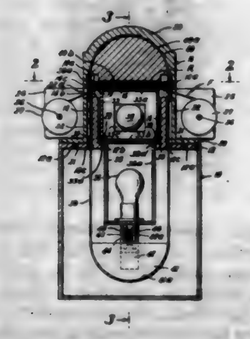
A photographic camera construction including a camera body, a shutter unit, and a lens unit separate from said shutter unit, said camera body, shutter unit, and lens unit each having an optical axis alined with the optical axes of the others, characterized by the provision of interengaging bayonet connection parts on said shutter unit and said lens unit for detachably connecting said two units to each other by relative rotary movement of less than one complete revolution about the optical axes of said units as a center, and other interengaging bayonet connection parts on one of said units and on said camera body for detachably connecting said one of said units to said body by relative rotary movement of less than one complete revolution about the optical axes as a center, whereby the camera body may be used with any selected one of a plurality of interchangeable shutter units in combination with any selected one of a plurality of interchangeable lens units.

2,947,232
COLOR PRINTING
James Leslie Armentrout and Ronald L. Gibson, both of 725 N. Western Ave., Los Angeles 29, Calif.
Filed Sept. 30, 1954, Ser. No. 459,398
2 Claims. (Cl. 95—73)



1. In apparatus for producing color separation negatives, an electrical circuit, a printing lamp, a plurality of different colored electric lamps connected in the circuit, a selector switch connected in the circuit and having means for selectively closing the circuit to any one of the lamps at a time, a film support positioned in light receiving relation to the light source, a rotatively adjustable filter wheel carrying a plurality of different colored light filters, the said filters corresponding in color to the lamps, the said filters being arranged to be selectively positioned in the path of the light rays proceeding from the printing lamp to the film support, and a hand control connected to both the selector switch and the filter wheel for simultaneously operating the selector switch and rotating the filter wheel, whereby a certain colored light filter may be positioned to intercept light rays proceeding from the printing lamp to the film support at the same time the circuit to an associated lamp is closed.

2,947,233
APPARATUS FOR PHOTOGRAPHIC PRINTING
Nathaniel C. Hickey, Jr., 1402 W. 6th St., and George C. Mick, 1523 W. 5th St., both of Freeport, Tex.
Filed July 7, 1958, Ser. No. 746,828
9 Claims. (Cl. 95—75)



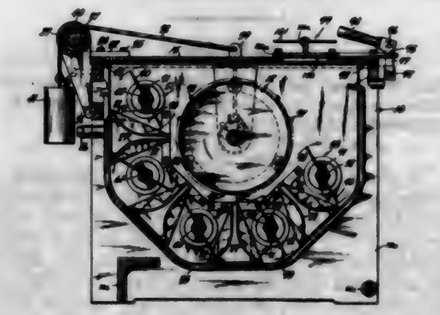
1. An apparatus for forming microcards comprising, a support housing, a card holder mounted on said housing for vertical movement relative thereto, a film carrier positioned on the support housing for lateral movement relative to the card holder, and a pressure means for applying pressure to the card holder to bring the card into contact with the film on the carrier, said pressure means including a pressure platen disposed over the card holder and having an upper substantially hemicylindrical surface, a band extending over and in conformance with said hemicylindrical surface of the platen, and an actuating member connected to said band so that upon vertical movement of the actuating member the band effects a vertical movement of the pressure platen to move the card holder vertically so as to bring the card into contact with the film with the application of uniform pressure thereto.

2,947,234
PHOTOGRAPHIC EXPOSING APPARATUS
Harry W. Fasbender, Larchmont, N.Y., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed May 22, 1957, Ser. No. 662,983
11 Claims. (Cl. 95—76)



1. In photographic printing apparatus, the combination comprising a base, a source of light, a mounting means rotatably disposed on said base, power means to rotate said mounting means, a removable negative and sensitized surface holder mounted on said mounting means to revolve before said light source thereby exposing a sensitized surface through a negative, a vacuum means, and means to communicate said vacuum means to said holder to cause close contact between said negative and said sensitized surface when said holder is mounted on said mounting means, said last-mentioned means being adapted to seal said vacuum means when said holder is removed from said mounting means.

2,947,235
PHOTOGRAPHIC DEVELOPING APPARATUS
Harry W. Fasbender, Larchmont, N.Y., assignor to Time, Incorporated, New York, N.Y., a corporation of New York
Filed June 27, 1957, Ser. No. 668,436
10 Claims. (Cl. 95—93)



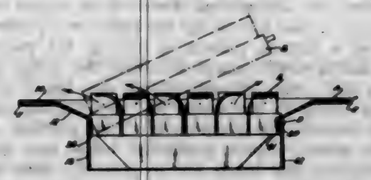
5. A photographic processing apparatus comprising a tank for enclosing photographic processing fluid, two bearings mounted within the tank in spaced apart relation, a rotatable drum supported between the bearings within the tank, means on the rotatable drum to mount material to be processed, a first plurality of agitators within the tank to establish motion in the fluid, a second plurality of agitators within the tank and spaced apart from the first plurality of agitators to establish additional motion in the fluid, a first power means connected to the rotatable drum to induce rotation thereof, a second power means, means interconnecting the first plurality of agitators to be driven by the second power means, a third power means, means interconnecting the second plurality of agitators so that the third power means rotates these agitators in the opposite direction, and a plurality of baffles in proximity to the first and second agitators for maintaining processing fluid adjacent the first and second pluralities of agitators.

2,947,236
PROCESS AND APPARATUS FOR THE PHOTOGRAPHIC LIQUID PROCESSING OF COATINGS ON FLEXIBLE SUPPORTS
Hans Siegel, Wallachgasse 10, Ulm (Danube), Germany
Filed July 31, 1957, Ser. No. 675,461
Claims priority, application Germany Aug. 6, 1956
3 Claims. (Cl. 95—93)



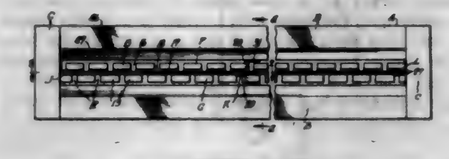
1. A process of photographic processing of a flexible sheet having lateral edges and having a light sensitive coating on one face of said sheet the process comprising, in combination, the steps of bending the sheet into an at least partly tubular shape with said light sensitive coating facing inwardly and said opposite lateral edges facing each other; inserting said bent sheet into a tubular container having an internal circumference equal to at least the distance between said opposite edges of said sheet so that said inserted sheet extends superimposed on and along the inner surface of said container over an arc not exceeding 360° and with said lateral edges of said sheet facing each other without overlapping; rotating said tubular container with its axis extending in a horizontal direction and simultaneously introducing into a lower part of said container a quantity of processing liquid sufficient to cover the lower part of said inwardly facing light sensitive coating, so that rotation of said container with said sheet therein will result in equal distribution of the introduced liquid over the entire surface of said inwardly facing light sensitive coating.

2,947,237
AIR DIFFUSERS
Cortland N. O'Day, Port Washington, N.Y.
(% Air Devices, Inc., 185 Madison Ave., New York, N.Y.)
Filed Mar. 4, 1957, Ser. No. 643,591
5 Claims. (Cl. 98—40)



1. An air diffuser comprising a flush rectangular frame to be positioned against the periphery of an opening in a wall or ceiling having a flange positioned flush with said wall or ceiling to which opening an air conduit leads, a transverse rectangular cross section neck portion connected within the wall or ceiling to said air conduit extending into the wall or ceiling from the frame, obliquely positioned side walls connecting said frame and said neck portion and forming a well, transversely extending crossing strips extending across said opening, the edges of said straight crossing strips being slotted and crossing strips fitting into said slots and thus having slotted connections in respect to one another and mounted inside of said neck portion and said strips having a plurality of spaced parallel separated outwardly projecting tab portions turning into quarter cylindrical portions and then into flat portions parallel to one another, said flat portions being positioned in a plane parallel to and beyond said frame and means for supporting the ends of the strips in the frame.

2,947,238
AIR DISTRIBUTING OUTLET
Cortland N. O'Day, Port Washington, N.Y.
(% Air Devices, Inc., 185 Madison Ave, New York, N.Y.)
Filed Mar. 4, 1957, Ser. No. 643,592
3 Claims. (Cl. 98—40)



1. An air distributor for mounting on a wall or the like, comprising a rectangular frame having a rectangular opening therein and peripheral flanges, a gasket carried within said flanges for sealing said frame against said wall, means forming a throat for the entrance of air to the frame opening, a bevel connecting said throat to said frame opening, parallel vanes mounted in said frame within said throat, each of said vanes being bent to form a curved outer portion and a straight inner portion substantially at right angles to said outer portion, said outer portion having slots whereby fins are formed blocking egress of air from said throat, the fins of one of said vanes being staggered with respect to the fins of the other vane, and means within said throat for holding the vanes therein with the ends of the curved portions of the fins being in the plane of the peripheral flanges of the frame.

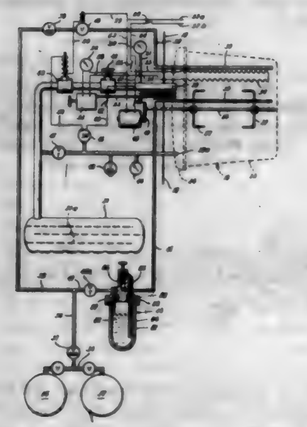
2,947,239
VENTILATION CONTROL SYSTEM
James Vincent Burgess, P.O. Box 535, Clothier, W. Va.
Filed Aug. 5, 1957, Ser. No. 676,065
3 Claims. (Cl. 98—50)



1. In a ventilation control system for a mine comprising a flexible fire resistant substantially gas impervious

plastic material sheet means suspended transversely of the mine for sealing a section of the mine, said means having at least two side panels and a flexible center panel, said side panels being in intimate contact with the floor of the mine, means for securing each of said side panels to the wall of the mine, and means for securing the upper marginal edge of said center panel to the roof of the mine.

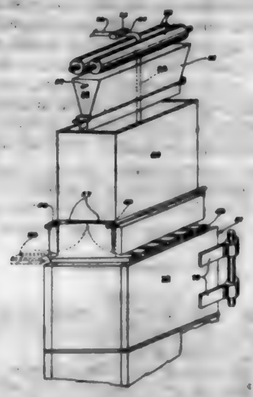
2,947,240
COOKING MEANS
Allan P. Blouzoon, 4402 Travis, Houston, Tex.
Filed May 17, 1955, Ser. No. 508,245
7 Claims. (Cl. 99—333)



1. Cooking apparatus comprising a pressure tight oven, a heating element in the oven, a rotatable spit in the oven, means for rotating the spit, inlet means for introducing gas under pressure into the oven, outlet means for discharging the gas from the oven, an inlet valve and an outlet valve in the inlet means and outlet means, respectively, for controlling inflow and outflow of the gas to and from the oven, one of said valves being open while the other is closed, pressure control means in pressure communication with the oven controlling opening and closing of said valves in response to predetermined maximum and minimum pressures in the oven, temperature control means for controlling the temperature of the heating element, and a timer connected to the heating element for preselecting the time interval of heating by the heating element.

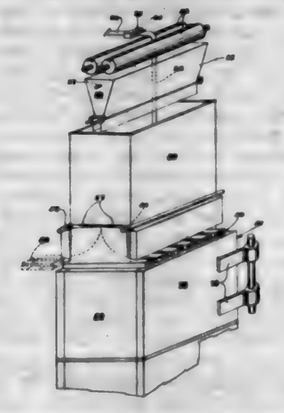
2,947,241
TOW BALING METHOD
Edgar G. Guenther and John W. Smith, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Original application July 20, 1955, Ser. No. 523,270. Divided and this application Jan. 4, 1957, Ser. No. 632,479
4 Claims. (Cl. 100—39)

1. The method of baling tow comprising, feeding a strand of tow continuously, collecting the tow in superimposed loose layers of uniform pattern at one position until a portion only of a bale of loose layers has accumulated at said one position, transferring the accumulated portion of loose layers as a unit to a compressing point, laying additional loose layers on said portion at said point until a predetermined amount of tow has been accumulated at said point, then compressing the predetermined amount into a bale at said point while simultaneously collecting succeeding lengths of said tow in loose



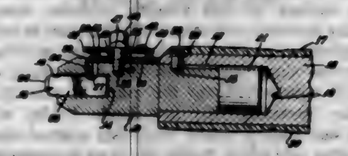
layers at said one position to form a succeeding bale portion.

2,947,242
TOW BALING APPARATUS
Edgar G. Guenther and John W. Smith, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 20, 1955, Ser. No. 523,270
3 Claims. (Cl. 100—39)



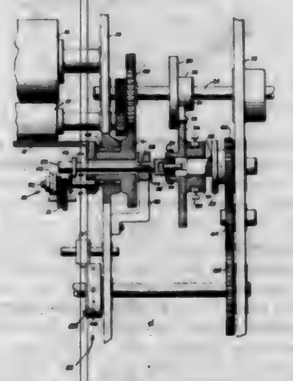
1. A mechanism for forming a high density tow bale comprising, in combination, means to feed a tow continuously, a tow guide positioned ahead of said feed means, means to reciprocate said guide in one direction to traverse said tow along said feed means, a spreader means positioned below said feed means to receive the tow delivered therefrom, means to rock said spreader means angularly in a direction normal to the reciprocating means and cooperating therewith to impart a dual movement to said tow to lay the latter in superimposed layers of a definite pattern, a hold-up bin positioned below said spreader means to receive the layers, means to hold said layers in said hold-up bin, means on said spreader means to direct said tow in a definite relation to said hold-up bin irrespective of the position of the spreader means, a press positioned below said hold-up bin to receive said layers and to press the latter into a compact bale, and means to release said holding means to allow the layers to fall from said hold-up bin to said press.

2,947,243
TYPE HOLDER
John McKnight Ballou, Long Beach, Calif., assignor to William Chadsoff, Los Angeles, Calif.
Filed July 28, 1959, Ser. No. 828,162
10 Claims. (Cl. 101—28)



1. A type holder comprising a body portion having a type receiving cavity at one end for receiving a plurality of interchangeable type members, each of said typing members having a notch, a leaf member mounted on said body portion having a finger for engaging said notches in said type members to hold said type members in locked position, a cap member rotatably mounted on said leaf member, tension means serving to urge said finger of said leaf member to a position out of engagement with the notches in said type members, cooperating stop means on said cap member and said leaf member permitting limited rotational movement of said cap member in both clockwise and counter-clockwise direction and cooperating means on said leaf member and said cap member whereby when said cap member is manually rotated in one direction said finger of said leaf member is depressed against the tension of said tension means to engage said notches in said type members to hold said type members in locked position and when said cap member is manually rotated in an opposite direction said finger of said leaf member, under urging of said tension means, is withdrawn from said notches in said type members to unlock said type members.

2,947,244
INDICATION APPARATUS
William J. Long, Framingham, Mass., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Filed Dec. 4, 1956, Ser. No. 626,250
12 Claims. (Cl. 101—77)



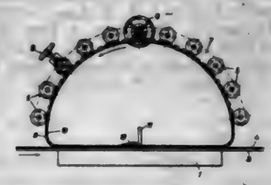
1. Apparatus for printing on a moving medium comprising a frame, a driving means, an eccentrically mounted printing mechanism mounted on said frame and adapted to be rotatably driven and brought into engagement with said medium at a peripheral speed equal to the speed of said medium, first gear means connected to said printing mechanism to index said mechanism as it is rotated, a second gear means positively connected to said driving means, an indicating mechanism fixedly mounted on said frame and coupled to said second gear means, said indicating mechanism being positively locked into mechanical agreement with said printing mechanism and adapted to be indexed and to remain indexed with said printing mechanism, and means coupled to said first and second gear means to stop the indexing of said printing means and said indicating means while said printing mechanism is rotated.

2,947,245
CARD PRINTING DEVICE
Herbert W. Brazeal, 1300 Lucile Ave., Los Angeles 26, Calif.
Filed July 15, 1957, Ser. No. 671,794
10 Claims. (Cl. 101—114)



1. A card printing device including a housing, a printing table in said housing, a belt movable about a pair of spaced rollers adjacent to said table, means for driving said belt, a source of supply cards to be printed, injector means operable to inject a card onto said table from said card supply source, a lug projecting from said belt and operatively engageable with said injector means during a portion of the travel of said belt to actuate said injector means to deliver a card to said table, and means for printing said card while said card is disposed on said table.

2,947,246
SCREEN PRINTING MACHINE COMPRISING ENDLESS TEMPLATES
Rupert Kraft, 4 Dr. Prunnstrasse, Kufstein, Austria
Filed Sept. 29, 1958, Ser. No. 763,857
Claims priority, application Austria Oct. 1, 1957
11 Claims. (Cl. 101—122)

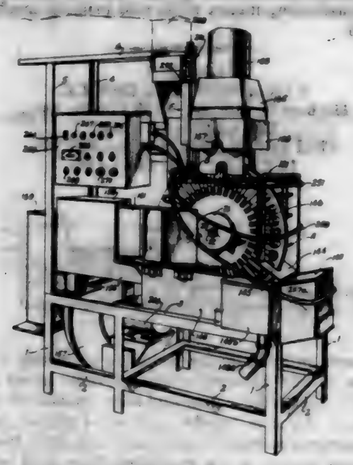


1. A screen printing machine which comprises a magnetizable printing table, at least one endless template of material responsive to magnetic forces, magnetic rollers engaging the outside of said template for guiding said template past said table adjacent thereto to cause it to be attracted by magnetic forces produced by said table, and means for moving material to be printed between said template and said printing table to cause said template to be moved in the same direction and at the same speed as said material.

2,947,247
PATTERN PRINTER
Charles C. Rayburn, Alexandria, Va., Herman A. Schmidt, Washington, D.C., and Wallace N. Knutson, Alexandria, Va., assignors, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed June 27, 1956, Ser. No. 594,184
17 Claims. (Cl. 101—126)

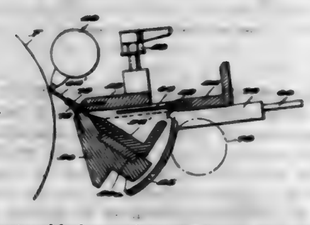
1. In an apparatus for spray printing patterns on ceramic wafers, a supporting frame, a traveling carrier

for said wafers mounted on said frame, said carrier being provided with a plurality of recesses for supporting said wafers, means for feeding wafers to said carrier, pattern holding means supported by said carrier at opposite sides of the recesses, patterns supported in said holding means, means for alternately moving the ceramic wafers in said



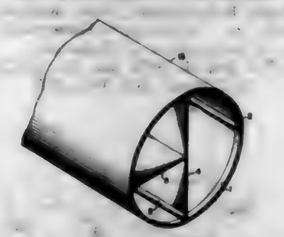
recesses laterally to opposite sides for abutting association with oppositely disposed ones of said patterns, spray guns positioned at opposite sides of said patterns, means synchronized with said ceramic wafer moving means to operate said spray guns for projecting spray through said patterns onto the opposite faces of the ceramic wafers as said wafers are alternately moved into engagement with said patterns.

2,947,148
DOCTOR BLADE MECHANISM
Friedrich Fuchs, Ende uber Dortmund, Germany, assignor to Westfalendruck G.m.b.H. & Co., Kommandit-Gesellschaft, Dortmund, Germany, a firm of Germany
Filed June 24, 1958, Ser. No. 744,112
Claims priority, application Germany June 26, 1957
12 Claims. (Cl. 101—157)



1. A doctor blade mechanism for rotary printing machines comprising supporting means, said means comprising a pair of supporting rails disposed at an acute angle to each other and rigidly secured to each other near their ends so as to form a single unit, and having a narrow slot separating their front edges forming the apex of said angle, one of said rails being adapted to support a blade holder with a doctor blade thereon in the normal operative position in which said blade extends through said slot and its front edge engages with the surface of the printing cylinder of said machine, means for removably securing said blade holder to said first rail in said normal operative position, sliding means adapted to receive a second blade holder in a reserve position outside of the angular area between said rails and substantially within the plane of said second rail, and for sliding said second blade holder from said reserve position substantially along said plane into said angular area and into a temporary operative position in which the doctor blade on said second blade holder likewise extends through said slot and its front edge engages with the surface of said printing cylinder, means for temporarily securing said second blade holder in said temporary operative position, means for then pivoting said sliding means alone substantially from the plane of said second rail substantially to the plane of said first rail, means for retracting said first blade holder with its blade on said sliding means from said normal operative position after said blade holder has been disengaged from said securing means thereof and for then permitting said first blade holder with its blade to be removed, said pivoting means then being adapted to pivot said sliding means in said retracted position to said reserve position, said sliding means then being adapted to be moved into engagement with said second blade holder, whereupon said temporary securing means are disconnected from said second blade holder and said sliding means with said second blade holder is pivoted into engagement with said first rail, and secured thereto by said securing means thereof, while the front edge of the doctor blade on said second blade holder remains in engagement with said printing cylinder, whereupon said sliding means may again alone be pivoted to said loading position to receive another blade holder with a doctor blade thereon for the next blade exchanging operation.

2,947,249
MINE CASE AND INSTRUMENT MOUNTING SYSTEM
Charles C. Vogt, Bethesda, and Howard W. Semon, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed Feb. 6, 1953, Ser. No. 335,614
2 Claims. (Cl. 102—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with the cylindrical casing of a mine, an instrument rack positioned within said casing, said rack comprising, a ring shaped member for close fitting slidable engagement with the inner cylindrical surface of said casing, four rods equally spaced and having one end thereof secured to said ring shaped member and extending normal to the plane of said member, a circular end plate secured to the other end of said rods, said member and plate being configured for close fitting slidable movement within the casing, a first plate secured to a diametrically disposed pair of said rods and dividing the volume between the end plate and ring shaped member into equal portions, a plurality of batteries, a plurality of electrical components of smaller size than said batteries, each of said components being of the same outside dimensions, and a second plate secured to another one of said rods and said first plate whereby a rack is formed which is adapted to retain said batteries on one side of said first plate and said smaller electrical components on the other side thereof, said batteries being secured to said first plate and said electrical components being secured to both of said plates.

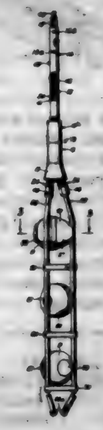
2,947,259
SHAPED CHARGE ASSEMBLY AND GUN
Henry H. Mohaupt, Swampscott, Mass., assignor, by mesne assignments, to Welex, Inc., Fort Worth, Tex., a corporation of Delaware
Filed Sept. 24, 1951, Ser. No. 247,984
2 Claims. (Cl. 102—20)



1. A shaped charge gun assembly for perforating well pipe comprising an elongated cylindrical gun body providing a coaxial cylindrical chamber therein, the side wall of said gun body providing therein longitudinally spaced groups of pairs of diametrically opposed cylindrical ports of the same diameter; plugs inserted in said ports; a plurality of shaped charge assemblies each positioned in said chamber at one of said port groups, each said shaped charge assembly comprising an open-ended cylindrical housing having an outside diameter smaller than the diameter of said ports and a length greater than the diameter of said chamber and less than the outside diameter of said gun body with its extremities extending into and seated in the ports of its associated port group, explosive within said housing, said explosive having a pair of lined cavities each facing outwardly of an end of said housing and through one of said ports, and means providing a transverse passage through said housing medially thereof and communicating with said explosive, said shaped charge assemblies being positioned to dispose said transverse passages in alignment axially of said chamber; and a detonation fuse threaded through said passages in detonating relation to the explosive in said shaped charge assemblies; whereby the extension into and seating of the extremities of each said housing in the ports of its associated port group interposes the extremities of said housing between said explosive and said ports to protect said ports to a substantial extent from the deleterious effect of direct exposure to the explosive blast of the charge assembly.

2,947,251
SHAPED-CHARGE WELL PERFORATOR
Louis Frank Jilly, Inglewood, Calif., assignor, by mesne assignments, to Borg-Warner Corporation, Vernon, Calif., a corporation of Illinois
Filed Oct. 9, 1952, Ser. No. 313,895
1 Claim. (Cl. 102—20)

A destructible perforating apparatus for use in boreholes comprising a vertically elongated head member; means for attaching a cable to said head member at the upper end thereof, said head member providing a sealed chamber therein; detonator means in said chamber; three thin-walled flexible tubes disposed in substantially parallel, spaced-apart relation about the extended vertical axis of said head member and arranged to form a triangular shaped framework of substantially uniform lateral dimensions throughout a major portion of the length thereof, the ends of said tubes at the upper end of said framework being curved inwardly toward each other and being sealingly and rigidly attached to the lower end of said head member with the bores of the tubes in communication with the chamber in said head member, and the ends of said tubes at the bottom end of said framework being curved inwardly; means sealingly closing the bores of said tubes at the bottom end of said framework; a plurality of shaped-charge units having fluid-tight frangible housings vertically spaced apart along said framework, the housing of each unit providing three transverse grooves, each groove slidably receiving a side portion of one of the tubes of said framework, each of said units containing a lined shaped-charge and a priming charge therefor positioned opposite one of said grooves and adapted to be detonated by a fuse in the bore of the tube that is received in said one of said grooves; a plurality of endless bands of triangular shape encircling said three

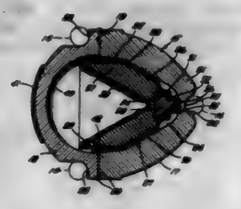


tubes and being tensioned thereabout, one of said bands being positioned below the lowermost of said units and the others of said bands being positioned one substantially midway between each pair of adjacent units, the dimensions of said bands being such as to deflect said tubes inwardly toward one another between adjacent units to securely grip and hold said shaped-charge units in compression between said tubes; said bands and said shaped-charge units being vertically spaced from one another and being supported solely by said tubes, whereby to form a substantially rigid assembly projecting from said head member and being composed essentially of said tubes, said shaped-charge units, and said bands; lengths of fuse running through the bores of said tubes and arranged to be detonated simultaneously by said detonator means and to detonate said priming charges; and means for initiating said detonator means.

2,947,252
SHAPED CHARGE UNIT FOR WELL PERFORATORS
Will H. Lindsay, Jr., Lawndale, Calif., assignor, by mesne assignments, to Borg-Warner Corporation, Vernon, Calif., a corporation of Illinois
Filed Dec. 16, 1952, Ser. No. 326,291
2 Claims. (Cl. 102—20)

1. A shaped charge unit adapted for use while submerged in a borehole comprising: a container including forward and rearward cup-shaped container portions made of porcelain or a similar material having high strength in compression and being relatively brittle or fragile, the rims of said container portions abutting one

another and being sealed together to provide a fluid-tight enclosure, said rearward container portion having a thin section centrally located in the rearward wall thereof through which detonating forces originating outside of the container are readily conducted; a shaped charge explosive sub-unit disposed in said container including a cup-like shell having a rearward portion conforming substantially to the inner wall of said rearward container portion, and a booster cup projecting rearwardly from said shell and terminating in a transverse end portion in contact with the thin section of said rearward container portion, said



shell having a forward portion extending forwardly of the rim of said rearward container portion; and a locking ring of rubber-like material wedged between said shell and the forward portion of the inner wall of said rearward container portion effective to center said sub-unit in said container with said end portion of said booster cup firmly seated in contact with said thin section, said sub-unit being spaced from the inner walls of said container portions at all points other than at the transverse end portion of said booster cup.

2,947,253

PERFORATOR

Manuel Cirilo, Puente, Calif., assignor, by mesne assignments, to Borg-Warner Corporation, Vernon, Calif., a corporation of Illinois

Filed Sept. 1, 1954, Ser. No. 453,455
4 Claims. (Cl. 102—20)



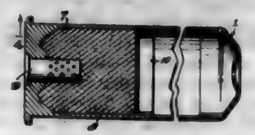
1. Apparatus for perforating casing in oil wells below tubing suspended in said casing comprising in combination: an elongated frame adapted to be lowered in said well through and out the lower end of said tubing; a plurality of longitudinally coaxially aligned shaped charges pivotally mounted on said frame for rotation to laterally directed firing positions; arcuately shiftable means to rotate said charges from said coaxially aligned positions to laterally extending firing positions; means controlled by contact with the inside bore of said tubing to restrain said first means from actuation while said frame is in said tubing; and means to detonate said charges when in said laterally extended firing positions, said second means comprising a collapsible quadrilateral linkage having an upper pair of laterally extending links and a lower pair of laterally extending links, said upper pair having inner adjacent ends pivotally connected centrally of and to said frame by pivotal connection means; direction-reversing means associated with said pivotal connection means; said lower pair of links having adjacent ends pivotally connected together at an anchor point; the outer ends of said upper pair of links being pivotally connected to the outer ends of said lower pair of links; a cable connected to said anchor point and passing upwardly therefrom over said direction-reversing means and returning downwardly for connection to means associated with the mounting means for said shaped charges at the ends opposite the pivotal connections thereof to said body, said upper pair of links when said frame is being raised in said casing and into said lower end of said tubing, being engageable with said lower end of said tubing and actuatable thereby to tension said cable and shift said arcuately shiftable means to rotate said charges to their originally aligned coaxial positions.

2,947,254

CLOSING PLUG FOR SEMI-FIXED AMMUNITION

Alexander C. H. Weiss, Fort Lauderdale, Fla., assignor to the United States of America as represented by the Secretary of the Army

Filed May 19, 1955, Ser. No. 509,703
2 Claims. (Cl. 102—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A closure plug for a casing of a semi-fixed round of ammunition including a shell comprising a unitary cap-shaped member having a side wall, a beveled wall and an end wall, said side wall having an upper portion and a lower portion, said side wall defining a smooth skirt along its lower portion of less thickness than the upper portion thereof, said skirt portion having an outside diameter substantially equal to the inside diameter of said shell of said semi fixed ammunition, said member being weakened on the outer surface only of said end wall, said beveled wall and the upper portion of said side wall along two sets of mutually normal intersecting closed-wall channels, said sets of channels being parallelly spaced, whereby said member will shatter in a predetermined pattern on detonation of a propelling charge confined therein.

2,947,255

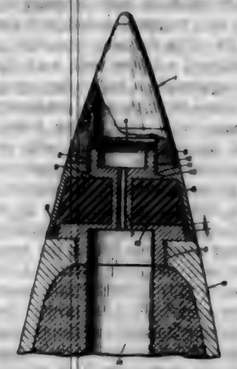
PROJECTILE CHOKE

John H. Knck, Silver Spring, Md., and Jules H. Sreb, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

Filed Dec. 6, 1949, Ser. No. 131,268
8 Claims. (Cl. 102—70.2)

1. In a missile having a proximity fuze, means electrically isolating the fuze from the missile comprising a tuned choke interposed between the fuze and the missile, said choke including a central column, a pair of spaced-

apart flanges on said column, a shield connected to one of said flanges and extending in spaced insulated rela-



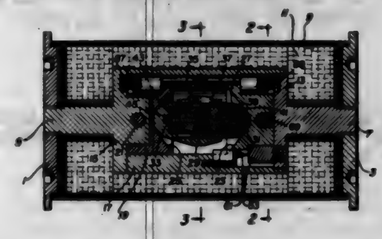
tion to the other of said flanges to define an annular cavity.

2,947,256

FUZE

Frank B. Hale, Bel Air, Md., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Mar. 17, 1958, Ser. No. 722,106
4 Claims. (Cl. 102—79)
(Granted under Title 35, U.S. Code (1952), sec. 266)



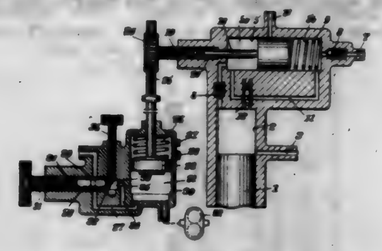
2. A centrifugally armed, impact sensitive fuze adapted to operate under all directions of impact, comprising a fuze body forming a cavity having two spaced coaxial, concave and conical end surfaces, a generally cylindrical primer-striker mechanism positioned between said conical end surfaces, said primer-striker mechanism comprising a tubular primer sleeve having a primer adjacent said conical end, a tubular striker sleeve in slideable, telescoping relation with said primer sleeve and a firing pin positioned within said striker sleeve in alignment with said primer of said primer sleeve, a transverse positioned and radially slideable locking pin mounted on said firing pin, said locking pin in its unarmed condition being spring biased out of engagement with said primer sleeve thereby to permit the telescoping of said striker and primer sleeves and therefore the movement of said firing pin toward said primer, a pair of longitudinally sliding, centrifugally actuated, detent weights mounted axially on said firing pin, one on each side of said radial locking pin, a detent spring positioned between a sliding detent weight and the end of the primer sleeve, a second detent spring positioned between the second sliding detent weight and the end of the striker sleeve, said detent springs serving to bias said detents into engagement with said locking pin, to hold said locking pin in unarmed position in engagement with said primer sleeve, said detents functioning as centrifugal weights and moving away from said locking pin under the influence of centrifugal force to thereby permit the locking pin to fall into armed position out of contact with the primer sleeve.

2,947,257

RECIPROCATING PISTON PUMPS, IN PARTICULAR FOR THE INJECTION OF FUEL

Pierre Etienne Bessière, 55 Blvd. du Commandant Charcot, Neuilly-sur-Seine, France

Filed June 9, 1958, Ser. No. 740,843
Claims priority, application France June 12, 1957
10 Claims. (Cl. 103—41)



8. A reciprocating piston pump which comprises, in combination, a main cylinder, a main piston mechanically actuated to reciprocate in said cylinder, an auxiliary cylinder fixed with respect to said main cylinder, an auxiliary piston freely movable in said auxiliary cylinder, said auxiliary piston dividing said auxiliary cylinder in two chambers, located respectively on opposite sides of said auxiliary piston, a delivery pipe starting from the end of one of said chambers, resilient means for urging said auxiliary piston in the direction which reduces the volume of the other of said chambers, said second mentioned chamber being in communication with said main cylinder, mechanical abutment means adjustably carried by said auxiliary cylinder for limiting the displacements of said auxiliary piston in the direction which reduces the volume of said second mentioned chamber, a discharge conduit leading out from said auxiliary cylinder and starting from a point of the wall thereof intermediate between the ends thereof, an external source of liquid under pressure having no communication with said second mentioned chamber and the portion of said main cylinder that communicates therewith, a conduit leading from said source to said first mentioned chamber for the feed of liquid thereto, and valve means in said conduit operative by said main piston for connecting said conduit with said source at least at the end of the outward stroke of said main piston whereby liquid is then fed to said first mentioned chamber and for cutting off said conduit during every inward stroke of said main piston, when liquid is then expelled by said auxiliary piston from said first mentioned chamber into said delivery pipe.

2,947,258

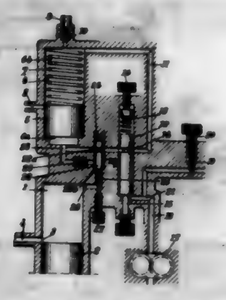
SELF-REGULATING RECIPROCATING PISTON PUMPS, IN PARTICULAR FOR THE INJECTION OF FUEL INTO INTERNAL COMBUSTION ENGINES

Pierre Etienne Bessière, 55 Blvd. Charcot, Neuilly-sur-Seine, France

Filed July 7, 1958, Ser. No. 746,939
Claims priority, application France July 8, 1957
16 Claims. (Cl. 103—41)

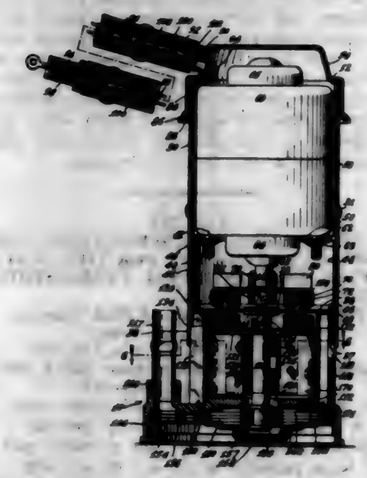
1. A reciprocating action liquid pump which comprises, in combination, a main pump cylinder, a main pump piston reciprocable in said cylinder, said main cylinder being provided at one end thereof with an outlet passage, the strokes of said main piston toward said end of said main cylinder being called delivery strokes, an auxiliary cylinder fixed with respect to said main cylinder and connected at one end with said outlet passage, valve means in said outlet passage to permit liquid circulation therethrough from said main cylinder to said auxiliary cylinder but to prevent circulation therethrough in

the opposed direction, a shuttle piston reciprocable in said auxiliary cylinder so as to be given a displacement in one direction in response to every delivery stroke of said main piston, resilient means for opposing such a displacement in said direction of said shuttle and for urging said shuttle piston in the opposed direction on its return stroke during every return stroke of said main piston, a conduit connected with said auxiliary cylinder, said conduit being arranged for the flow therethrough of the



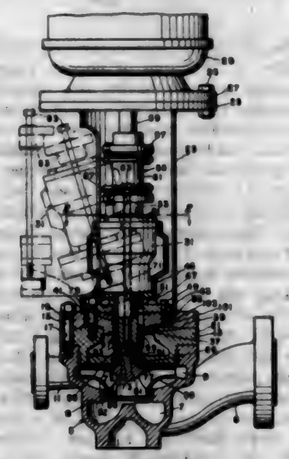
liquid delivered from said auxiliary cylinder during every return stroke of said shuttle piston, valve means in said conduit operative by said main piston for closing said conduit during every delivery stroke of said main piston and for opening said conduit during every stroke of said main piston in the opposed direction, an adjustable throttled passage in said conduit, and automatic means responsive to variations of a regulation factor for varying the cross section of said throttled passage in accordance with the value of said factor.

2,947,259
MOTOR-PUMP UNIT FOR AUTOMOTIVE FUEL
George W. Wright, Yoder, and Joseph D. Clymer, Fort Wayne, Ind., assignors to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed Dec. 6, 1957, Ser. No. 701,947
11 Claims. (Cl. 103—87)



1. A submersible motor-pump unit having a drive assembly including a motor and a magnetic-coupling driving member operatively connected to the motor shaft thereof, and having a driven assembly including a magnetic-coupling driven member and a pump connected thereto, said coupling members being magnetically coupled through an imperforate diaphragm wall, said unit comprising a housing tube, a cup-shaped member sealingly fixed in said tube with its web forming the imperforate diaphragm wall as a transverse end wall for said housing tube and with its sides forming shoulder means in predetermined positional relation with said diaphragm wall, a motor mount centered in said tube engaging and positioned by said shoulder means in predetermined relation to said diaphragm wall, said motor being mounted on said mount and thereby positioned with its axis normal to said diaphragm wall and said magnetic-coupling member being thereby positioned by the motor shaft for rotation on an axis normal to said wall in magnetic field-transmitting relation therewith, a hold-down spacer engaging said motor mount to retain the same in mounted position against said shoulder means, a closure for the end of said housing tube in which said motor is mounted, said closure engaging said hold-down spacer to retain the same against said mount and being sealingly fixed to said housing tube to close the same whereby the drive assembly is sealingly enclosed by and fixed in said housing means, said tube extending beyond said diaphragm wall and forming a projecting skirt, a bearing support for said driven assembly received and guided in said projecting skirt and coacting with said diaphragm as a stop, said support supporting shaft-bearing means with a shaft rotatable therein and supporting the magnetic-coupling driven member for rotation on an axis normal to said wall and substantially co-axial with the axis of rotation of said magnetic-coupling driving member, a pump rotor carried by said shaft, a pump body positioned from said bearing support and forming a pump chamber about said pump rotor, and inlet and outlet means for the pump.

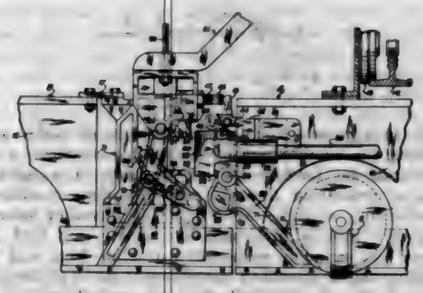
2,947,260
CENTRIFUGAL PUMPS
Hanns Hornschuch, Easton, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 17, 1958, Ser. No. 774,294
7 Claims. (Cl. 103—87)



1. In a centrifugal pump unit having a pump casing, an impeller disposed within said casing for rotation on its axis, a motor coaxial with said impeller, a bearing cradle disposed between said casing and said motor and supported on said casing and extending about said axis, a shaft extending through said cradle coaxially with said impeller and said motor and in bearing relation in said cradle, the combination with said unit of coupling means

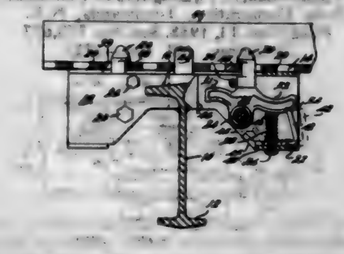
connected to said motor and to said shaft for effecting rotation of said shaft by said motor, said coupling means being disposed in a space between said motor and the adjacent end of said shaft, said shaft at its opposite end extending into said casing and engaging said impeller for effecting rotation of said impeller upon rotation of said shaft, and a fastening element extending through said shaft generally coaxially therewith and at one end thereof engaging said shaft adjacent said coupling end of said shaft and at its other end engaging said impeller to hold said impeller in said engagement with said shaft, said coupling space upon removal of said coupling being sufficient to provide for axial movement of said shaft out of engagement with said impeller upon releasing said fastening element from engaging said impeller.

2,947,261
OVERHEAD MONORAIL SYSTEM
Alphonse F. Anjakay, Cleveland, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Aug. 22, 1958, Ser. No. 756,671
2 Claims. (Cl. 104—96)



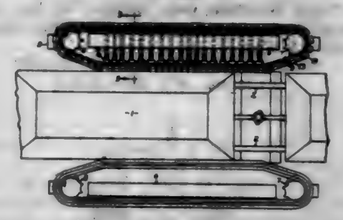
1. In an overhead carrier system a supporting structure, a first carrier rail connected to said supporting structure, a transfer bridge structure, a second carrier rail connected to said transfer bridge structure, said bridge structure transporting said second carrier rail connected thereto transversely of and into end-to-end alignment with said first rail, locking means for securing said rails in end-to-end alignment comprising a bolt-like member slidably mounted upon one of said structures for movement into and out of engagement with the other of said structures, a first stop member pivotally connected to the other of said supporting structures for movement into and out of the path of the wheels of a carrier on said rails, said bolt-like member engaging said first stop member and moving it about its pivot and out of the path of the carrier wheels when said bolt-like member is engaged with said other structure, said first stop member and said bolt-like member having cooperating means engageable with one another upon said movement of said first stop member for preventing movement of said bolt-like member in a direction to disengage said other structure, a second stop member pivotally connected to said bolt-like member and having a portion thereof engageable with said other structure upon movement of said bolt-like member into engagement with said other structure for camming said second stop member about its pivot and out of the path of the carrier wheels, said second stop member in its raised position having a surface thereof engageable with the said structure upon which said bolt-like member is mounted for preventing movement of said bolt-like member in a direction to disengage said other structure, and a lever operatively connected to said first stop member and to said supporting structure to which it is pivoted for spanning the space between said stop members when said bolt-like member is engaged with said other structure and preventing lowering of said first stop with a wheel intermediate said stops.

2,947,262
PORTABLE TROLLEY TRACK AND TROLLEY ASSEMBLY
Harvey W. Chapman, Detroit, and Henry L. Dunlap, Dearborn, Mich., assignors to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Filed Nov. 3, 1954, Ser. No. 466,612
8 Claims. (Cl. 104—111)



1. A portable trolley track for removable attachment to a support structure having a pair of holes therein, said portable trolley track comprising an elongated structural member having a tracklike trolley supporting surface and a plurality of transverse mounting fittings located along its length, each said fitting including at least one fixed pin and at least one pivotally mounted locking pin, said pins being adapted for insertion into said holes in said support structure, means on at least one of said pins for engaging said support structure for preventing withdrawal of said pins from said holes in said support structure and including a shoulder on said locking pin adapted to be moved through a hole in which said locking pin is inserted, and means mounted on said member and yieldably urging said locking pin to a position in which it holds said shoulder in position for engagement with said support structure at an edge of said hole.

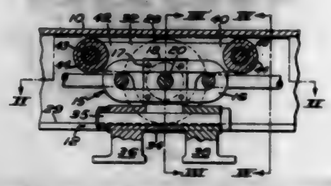
2,947,263
RAILROAD CAR SPOTTER
John P. Vidmar, Hibbing, Minn., assignor to The M. A. Hanna Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 16, 1957, Ser. No. 678,489
8 Claims. (Cl. 104—168)



1. Apparatus for moving railway cars which comprises a frame member mounted along the side of a railway track, a pair of sprockets mounted on said frame member for rotation in substantially a horizontal plane and at a height above said tracks opposite the sides of railway cars on said tracks, an endless chain connected around said sprockets, a plurality of metal plates mounted on the outside of said chain, resilient pads on the outside of said plates, a support member mounted inside the endless path of said chain, a rod mounted in said support member for lateral movement toward and

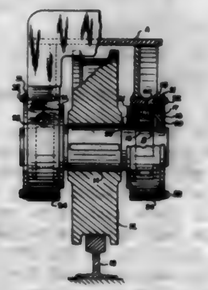
away from the metal plates on the portion of said chain adjacent to the track, a bracket member carried on the free end of said rod, a roller mounted on said bracket for rotation about a vertical axis, said roller positioned to contact said plates, a downwardly projecting portion from said plates, a second roller carried by said bracket and positioned to contact said projecting portion, and means for rotating said sprockets.

2,947,264
CHAIN POWERED CONVEYORS
Humphrey F. Parker, Buffalo, and Erford E. Robins, North Tonawanda, N.Y., assignors to Columbus McKinnon Chain Corporation, Tonawanda, N.Y.
Filed Nov. 13, 1958, Ser. No. 773,677
4 Claims. (Cl. 104—172)



1. A load pick-up unit for mounting in articulated connection relation in a conveyor power chain adapted to run in a guideway having a top wall portion, said unit comprising a conventional loop type chain link, a pair of bearing plates fixedly attached to opposite sides of said chain link and centrally apertured in mutual alignment, an axle journalled through the apertures of said bearing plates, a pair of wheels mounted upon opposite ends of said axle, a load engaging and stabilizing bracket device comprising a bent metal member of U-shaped form centrally apertured in alignment with the apertures of said bearing plates and engaging upon said axle, said bracket having a bottom eye portion depending below said axle and supporting a load pick-up device, said bracket having opposed side wall portions extending upwardly above the elevation of said axle and in fore and aft directions relative thereto, the fore and aft end portions of said bracket carrying roller devices therebetween, said roller devices being thereby disposed and arranged to bear against the top wall of a power chain guideway upon rocking of said unit therein about the center of said axle incidental to engagement with a stationary load or the like.

2,947,265
CRANE
Roy F. Dohn, Wickliffe, Ohio, assignor to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Feb. 27, 1959, Ser. No. 795,983
3 Claims. (Cl. 105—224.1)



1. In a heavy duty crane, an end truck frame member, an axle member having a rail wheel fixed thereto intermediate its ends, bearing supporting members at opposite sides of said wheel, annular anti-friction bearings at opposite sides of said wheel and interposed between said axle and said annular bearing supporting members, electrical non-conductor resilient material interposed between each of said bearing supporting members and said truck frame member, and flanges at opposite ends of said resilient material, one of said flanges at either side of said wheel being on one of said members and projecting over only a part of the end of said resilient material adjacent thereto and the other being on the other of said members.

2,947,266
APPARATUS FOR MAKING WAFER SANDWICHES
Kenneth Farrer, Peterborough, Northants, England, assignor to Baker Perkins Limited, Peterborough, England, a company of Great Britain
Filed Mar. 27, 1956, Ser. No. 574,158
Claims priority, application Great Britain Mar. 29, 1955
6 Claims. (Cl. 107—1)

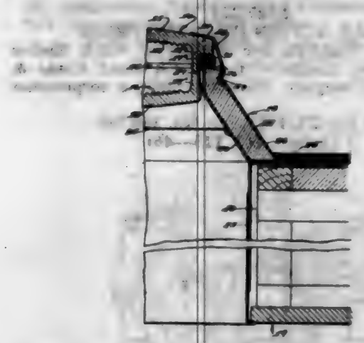


1. In apparatus for the manufacture of wafer sandwiches, the combination of a spreading machine, a feed conveyor for feeding dry wafer sheets in a regularly spaced procession towards said spreading machine, a sandwiching machine, a continuously travelling selecting conveyor moving in a path intersecting said feed conveyor and including means for extracting from said procession before arrival of the sheets at the spreading machine every *n*th sheet (*n* being a small whole number exceeding unity), said selecting conveyor feeding said extracted sheets in succession to said sandwiching machine, means for marshalling the sheets remaining on the feed conveyor and passing them in close abutment through said spreading machine, whereby said remaining sheets receive a layer of cream, and a further conveyor for transferring the creamed remaining sheets in succession from the spreading machine to the sandwiching machine, said sandwiching machine comprising means operating in timed relationship with said selecting conveyor and including means for accepting in succession $n-1$ creamed sheets from said further conveyor and forming said accepted sheets into a pile with their creamed surfaces uppermost and means for placing on top of the pile a single dry sheet supplied to the sandwiching machine by the selecting conveyor.

2,947,267
SKYLIGHT MOUNTING
Charles H. Stark, Waterville, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Nov. 15, 1956, Ser. No. 622,448
1 Claim. (Cl. 50—43)

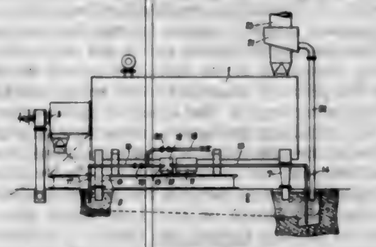
A skylight construction for a roof opening comprising a hollow sealed glass dome having oppositely disposed and integrally united twin concavo-convex viewing panels and a depending radial flange, said flange projecting radially from an upper region of said dome providing a substantially horizontal annular sealing surface, a frusto-conical shaped hollow annular curb having essentially the same contour at its upper smaller end as the sealing surface of said annular flange of said dome for support thereof and essentially the same contour at its lower larger end as said roof opening for mounting

therearound, the interior of said hollow curb containing thermal insulating material, said curb having a horizonal upper supporting surface arranged in underlying relationship beneath the sealing surface of said annular flange, an upwardly directed annular ledge portion on the interior of said supporting surface, an outwardly and downwardly directed flashing portion below said sup-



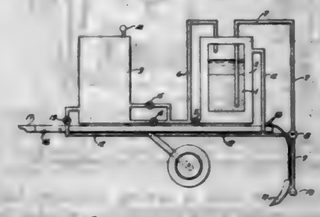
porting surface and an annular recess disposed at an upper region of said curb, an annular resilient gasket interposed between the said flange sealing surface and said curb supporting surface coextensive and in contact with said vertical ledge portion compressed in weather-tight relation by the weight of said dome, and an annular retention band peripherally engaging the upper surface of the said annular flange of said dome and the said recessed upper exterior region of said annular curb.

2,947,268
BOILERS
John Arthur Tatem and Reginald Dennis Northcote, Penn, Wolverhampton, England, assignors to Orr & Sembower Incorporated, Reading, Pa.
Filed Feb. 18, 1958, Ser. No. 714,314
Claims priority, application Great Britain Feb. 22, 1957
2 Claims. (Cl. 110—165)



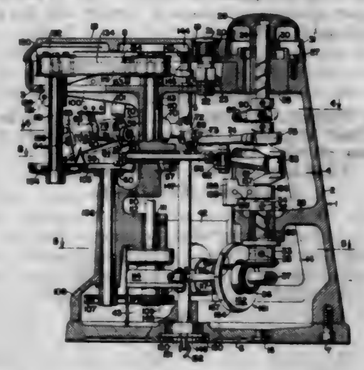
1. In a packaged pulverized fuel-fired horizontal fire tube boiler, dust collecting means at each end of said boiler, means defining a water trough extending beneath said boiler substantially the full length thereof between said dust collecting means, the bottom of said trough being inclined and having a sump at its lower end, chutes leading from each of said dust collecting means to the adjacent end of said trough, a pump, first conduit means connecting the inlet of said pump directly to said sump, second conduit means connecting the outlet of said pump directly to the end of said trough remote from said sump to provide a closed recirculating circuit, first valve means in said second conduit means for controlling the flow therethrough, third conduit means connected to said second conduit means intermediate the outlet of the pump and said first valve means and leading to a disposal point remote from said boiler, and second valve means in said third conduit means to control the flow therethrough, said first and second valve means cooperating to control the proportion of the output of said pump delivered to said disposal point and recirculated through said trough, respectively.

2,947,269
METHOD OF FERTILIZING, USING YELLOW PHOSPHORUS
Edgar M. Queeny, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Filed July 22, 1957, Ser. No. 673,166
10 Claims. (Cl. 111—80)



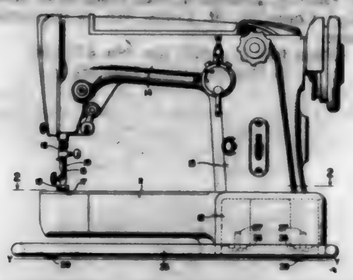
1. The method of fertilizing an agricultural soil which comprises depositing liquid elemental yellow phosphorus in the soil beneath the surface level thereof and covering the deposited phosphorus with at least one-quarter of an inch of the soil.

2,947,270
SEWING MACHINES
Hans Hacklander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Dec. 19, 1955, Ser. No. 553,806
8 Claims. (Cl. 112—258)



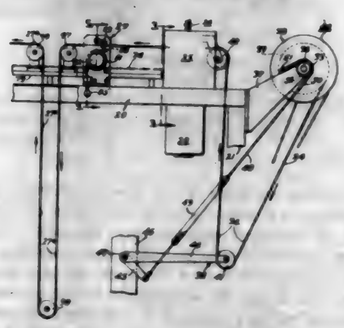
1. In a sewing machine of the hosiery seamer type, a frame including a standard having four sides comprising two pairs of adjacent substantially identical sides, a bracket-arm carried by said standard and extending from adjacent the intersection of a first pair of said pairs of sides outwardly, across the intersection of the second pair of said pairs of sides, a main shaft journaled for rotation in said frame longitudinally of said standard, a drive shaft journaled for rotation in said frame and operatively connected to said main shaft for imparting rotation thereto, stitching and feeding mechanisms carried by said frame, operative connections for actuating said stitching and feeding mechanisms from said main shaft and drive shaft, said first pair of sides having apertures therein for providing access to the interior of said frame, said apertures extending opposite the portions of said main shaft and drive shaft including said operative connections, and cover plates for closing said apertures.

2,947,271
SUPPORTING BASES FOR CYLINDER BED MACHINES
Martin R. Perin, Bridgeport, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Feb. 13, 1956, Ser. No. 565,122
7 Claims. (Cl. 112—260)



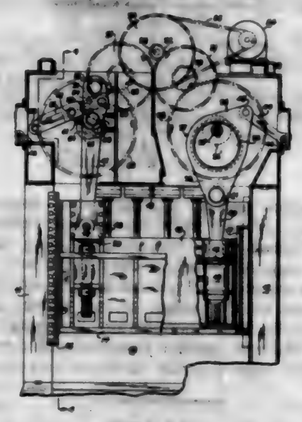
1. In combination with a sewing machine having a standard, a free ended work-supporting cylinder bed extending from said standard and adapted to accommodate tubular articles, said cylinder bed having an upper work-supporting surface and an under surface, and stitch forming instrumentalities carried by said standard and said cylinder bed defining a stitching point on said cylinder bed, a supporting base comprising a loop-shaped member secured to said standard and defining a plane of support for said sewing machine beneath the under surface of said cylinder bed, said member extending from said standard and disposed wholly outside the projected area of said work-supporting cylinder bed normal to said plane of support, and said member outwardly of the stitching point toward the free end of said cylinder bed extending from the plane of support only a portion of the distance between said plane of support and the under surface of said cylinder bed.

2,947,272
TABBING MACHINE
Cary L. Wellington, Englewood, N.J., assignor to The Condenser Machinery Corp., Englewood, N.J., a corporation of New York
Filed July 10, 1957, Ser. No. 670,936
24 Claims. (Cl. 113—1)



1. A machine for affixing tabs of sheet material to a continuous tape of foil material, comprising supply means for supplying the continuous tape, collection means including a driven rotatable member adapted to be driven by a power supply, said collection means being adapted to draw the tape from the supply along a tape path, tabbing means along the tape path adapted to fix tabs to the tape periodically, a tab supply feeding tabs to the tabbing means along a tab path intersecting the tape path at the tabbing means, a slack storage means positioned between the tabbing means and the collection means along the tape path adapted to maintain tension on the tape at all times and to collect and store slack tape while the tape is passing freely through the tabbing means and adapted to release to the collection means some of the stored slack tape during the tabbing.

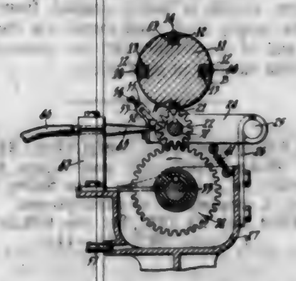
2,947,273
DOUBLE ACTION DRAWING PRESS
Roy F. Dehn, Wickliffe, and William E. Ward, Shaker Heights, Ohio, assignors to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed July 23, 1953, Ser. No. 369,753
3 Claims. (Cl. 113—46)



1. In a double action press, a frame, a die slide reciprocable in said frame, a blank holder reciprocable relative to said die slide, a shaft rotatably supported by said frame for rotation about a fixed axis, means to reciprocate said die slide along a line comprising an eccentric member connected to and rotated by said shaft and an eccentric strap cooperating with said eccentric member and having two connecting points offset from the center of the eccentric member, means for rotating said shaft, a first link pivotally connected at one end to one of said connecting points and at the other end to said die slide, a second link pivotally connected at one end to said frame and at the other end to the other of said connecting points for constraining the latter to move through a circular arc about the connection of said second link to said frame and the said one connecting point to move through a closed elongated loop upon the rotation of said eccentric member, the length of said loop being generally transverse to the line through the center of rotation of said eccentric member and the connection of said slide to said first link whereby the die slide is moved in a direction away from said loop for substantially more than 180° of each revolution of said eccentric member, means for reciprocating said blank holder comprising a rocker pivotally connected to said frame, a link pivotally connected at one end to a first point on said rocker and at the other end to said blank holder, a toggle linkage comprising two members pivotally connected at adjacent ends, one of said members being pivotally connected at its other end to said rocker at a second point offset from the said first point and the other of said members being pivotally connected at its other end to said frame, and means for moving said toggle linkage from one side to the other of dead center in timed relation to the rotation of said eccentric member so that said toggle linkage is at substantially dead center when said slide moves through its working stroke comprising a crank member rotatable about a fixed axis and operatively connected to said

shaft for rotation thereby and a rod connecting said crank member and one of said members of said toggle linkage.

2,947,274
CAN BODY FLUXING MECHANISM
Delbert E. Wobbe, Cary, and Frank F. Faller, Chicago, Ill., assignors to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Sept. 18, 1956, Ser. No. 610,583
2 Claims. (Cl. 113—95)



1. In a mechanism for solder fluxing the side seams of container bodies, said mechanism including a horn for supporting a can body at a fluxing station, a rotatable flux applying roll of substantially the length of the can body disposed adjacent the horn at said station for fluxing said side seam in a single operation simultaneously throughout the longitudinal extent of the seam, and means for pivotally mounting said roll for vertical tilting movement towards and away from said can body on said horn: the improvement comprising an axially fixed drive shaft having a gear thereon provided with elongated teeth meshing with elongated teeth of a gear on said flux applying roll for continuously rotating the latter, a flat elongated nozzle disposed parallel to the roll axis and spaced from the periphery of said roll, said nozzle having a long narrow and restricted discharge orifice extending longitudinally of the roll for projecting a film of liquid flux under pressure against the roll periphery throughout its longitudinal extent, cooperating cam means on said roll and drive shaft for bodily tilting said roll on its pivotal axis relative to said drive shaft into peripheral engagement with said side seam to apply liquid flux thereto and maintaining said elongated gear teeth in meshing engagement in all positions of the roll, and a doctor blade mounted for bodily movement with said roll for controlling the thickness of the projected film of liquid flux on said roll prior to its application to the can body side seam.

2,947,275
CLAMP
Kinzy M. Edmonds, 8313 Eastern Ave., Bell Gardens, Calif.
Filed July 15, 1957, Ser. No. 672,078
1 Claim. (Cl. 113—99)

A clamp comprising an elongate slide bar; a pair of bracket members slidably mounted in spaced relation on said bar; a clamp arm depending from and pivotally connected to one of said bracket members and adapted to be maintained in an adjusted fixed position along said slide bar; said pivoted clamp arm being mounted in one of said bracket members to position one end of said arm so that it will jam with the bar when the free end of the arm is engaged with an object to be clamped; another clamp arm depending from the other of said bracket members; fluid pressure operating means mounted on one end of said bar, and comprising a fluid cylinder connected to one end of said slide bar, a piston within said cylinder, a piston rod extending from said piston to, and connected to the other of said bracket members; valve means associated with said operating means whereby fluid under pressure is connected to operate said piston rod and force the clamp arms toward each other under a continuously ap-



plied pressure; the free ends of said arms having tapered pointed ends; and a cross arm secured adjacent the tapered pointed free ends of said arms to prevent tilting of the clamp arms when in engagement with an article to be clamped.

2,947,276
METHOD OF PRODUCING CAN BODY BLANKS WITH SPACING PROJECTIONS
John J. Loughney, New Rochelle, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Apr. 15, 1955, Ser. No. 501,463
1 Claim. (Cl. 113—120)

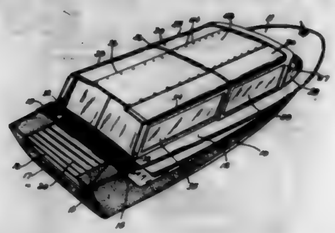


The method of producing stacks of sheet metal can body blanks to prevent sticking thereof during successive feeding of individual blanks from the stacks, comprising longitudinally slitting a flat rectangular metal sheet into a plurality of elongated rectangular strips of equal length while simultaneously progressively indenting the strips to form shallow embossments in the opposite longitudinal marginal portions of said strips at spaced intervals therealong with the initial embossments of each strip spaced randomly from the leading end of each strip and the embossments of each strip disposed in out of phase relationship with the corresponding embossments of an immediately adjacent strip, slitting said indented strips transversely at uniformly spaced intervals to form a plurality of individual flat rectangular body blanks of equal size with said embossments disposed along two opposite marginal portions of each blank, said embossments in the blanks formed from each strip being respectively disposed in out of phase relationship to the embossments in the corresponding blanks of said adjacent strip, and stacking the individual blanks of each of said strips on the corresponding blanks of said adjacent strip to form a plurality of stacks wherein the embossments on adjacent blanks are disposed in out of phase relationship to permit the blanks to be individually and successively fed from the stacks without sticking.

2,947,277
SEDAN-TYPE BOAT
Clifford Brooks Stevens, Milwaukee, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Jan. 16, 1958, Ser. No. 709,377
5 Claims. (Cl. 114—71)

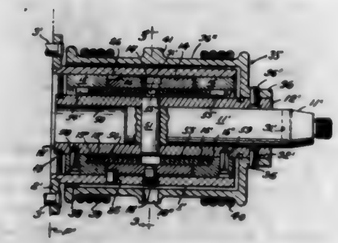
1. In a boat, the combination with a hull portion having spaced guides along its sides, of laterally spaced sepa-

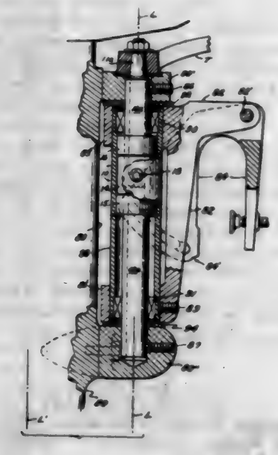
rate cabin roof portions having spaced means engaging respective guides, whereby the roof portions are movable along the side portions of the hull without dependance



upon each other, and canopy means for bridging the space between said cabin roof portions transversely of the hull.

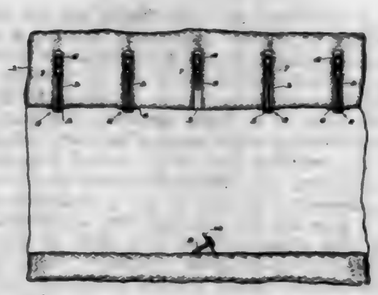
2,947,278
STEERING MECHANISMS FOR BOATS, TRACTORS AND THE LIKE
John J. Magill, Willowick, and Philip C. Hungerford, Jr., Cleveland Heights, Ohio, assignors to Curtiss-Wright Corporation, a corporation of Delaware
Filed Apr. 28, 1958, Ser. No. 731,271
17 Claims. (Cl. 115—18)





3. In a steering mechanism for a dirigible element of a vehicle, a tubular housing adapted for attachment to a fixed part of the vehicle at one end of the housing, an input shaft within the housing coaxially thereof for connection to a steering wheel or the like and extending from the opposite end of the housing, a bidirectional no-back coupling mechanism supported within the housing and having an output shaft in the form of a sleeve supported by respective axially spaced apart internal peripheral surface portions of the housing and extending out of said opposite end of the housing, self-energizing friction braking means between the output shaft and the housing and capable of locking the output shaft to the housing except when torque is being applied from the input shaft to the output shaft, and means on the outwardly projecting end of the output shaft for connection thereof to the dirigible element of the vehicle.

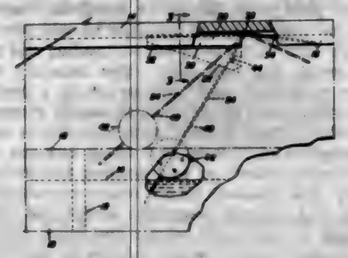
2,947,279
MINE ROOF BOLT AND BOLTING SYSTEM
Edward J. Hobas, Pittsburgh, and James A. Richard, Monroeville, Pa., assignors to Mine Safety Appliances Company, a corporation of Pennsylvania
Filed Nov. 22, 1957, Ser. No. 698,280
1 Claim. (Cl. 116—114)



In a mine roof the combination with a plurality of standard roof support bolts including an indicating bolt, a plurality of openings formed in said mine roof, said roof support bolts and said indicating bolt having means securing the inner end of each of said bolts in respective roof openings, said indicating bolt having a shank portion of smaller diameter than said roof opening, said shank having a weakened portion intermediate its ends and an enlarged portion at its outer end, a plate of larger dimensions than the transverse dimensions of said roof openings intermediate said outer end portions and said roof, whereby sagging of the roof will break the indicating bolt before the other bolts and the lower end of the broken bolt will fall and thereby warn of the roof sagging.

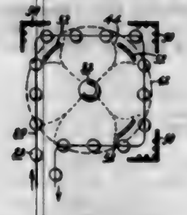
2,947,286
FLUSH TANK WATER LEVEL INDICATOR
Marten Fanders, Box 551, Beatrice, Nebr.
Filed Jan. 29, 1958, Ser. No. 712,014
6 Claims. (Cl. 116—118)

1. In an appliance to show a high liquid level condition in a flush tank that has an overflow tube, walls and a cover provided with a depending flange and which has a proper liquid level, the combination of a support disposed on the upper edge of one of the flush tank walls, a float arm, a spindle fixed to said float arm, a bearing at one edge of said support within which said spindle is mounted for oscillation, an indicator fixed to said spindle and located in a concealed position and flush between the outer surface of said wall of the flush tank and a part of the flange of the cover so that as said float arm is moved in an upward direction in accordance with the elevating of the liquid level in the tank beyond said proper level said indicator is moved from between said



part of said flush tank wall and the cover flange to signal a water level condition at which water will be lost into said overflow tube.

2,947,281
MANUFACTURING APPARATUS AND METHOD OF OPERATING THE SAME
Harold J. Reindl, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,490
1 Claim. (Cl. 118—632)



Electrostatic spraying apparatus comprising in combination; a rotating centrifugal spraying device adapted to dissipate paint particles in a generally circular pattern, a conveyor means capable of transporting a plurality of articles to be coated, said conveyor means having an entrance to and an adjacent exit from said circular pattern and otherwise substantially surrounding said spraying device, said spraying device being located at the geometrical center of said surrounding conveyor means, said conveyor having at least two portions which extend beyond and return to said circular spray pattern in addition to the original entrance and the final exit, heating means positioned adjacent said extended portions of said conveyor to dry the coatings, plate-type electrostatic deflectors positioned adjacent said conveyor and between said conveyor and said spraying device at said extended portions to prevent paint from depositing on the articles adjacent the heater, and means for placing an electrical charge of one polarity on said deflector and said spraying device and a charge of the opposite polarity on said articles whereby a heavy coating of electrodeposited paint particles may be obtained on said conveyed articles.

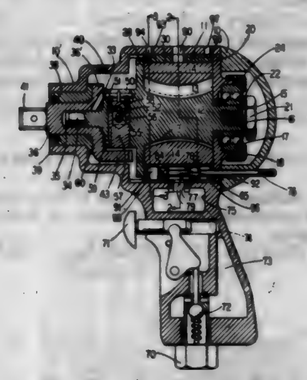
2,947,282
MICROBICIDAL ELASTOMER ARTICLES
Delmont D. Brown, North Baltimore, Ohio, assignor to The D. S. Brown Company, North Baltimore, Ohio, a corporation of Ohio
Filed Aug. 6, 1958, Ser. No. 753,585
11 Claims. (Cl. 119—14.47)

1. A cured microbicidal elastomer article employed in contact with milk and having dispersed therethrough at a microbicidally active level a microbicidal agent which



is safe for human consumption of the milk at said level.

2,947,283
IMPACT TOOL
Earl G. Roggenburk, 4120 Behrwald Ave., Cleveland, Ohio
Filed Feb. 4, 1955, Ser. No. 486,198
4 Claims. (Cl. 121—33)

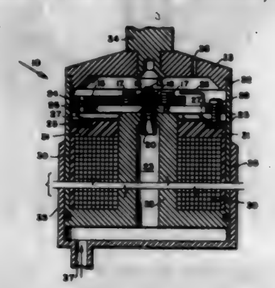


1. An impact tool comprising a housing, a stationary liner within said housing, a rotor eccentrically mounted within said stationary liner, said liner comprising a cylinder having in its wall a bore extending in a direction parallel to the axis of said cylinder and having a first port extending from said bore to the inside of said liner and having an air inlet port, a non-rotatable reversing valve slidably mounted within said bore, and manually operable means connected to said valve and extending outside of said bore for moving the valve axially within said bore to cover and uncover said first port.

2,947,284
CONE VALVE
John F. Nicholson, China Lake, Calif., assignor to United States of America as represented by the Secretary of the Navy
Filed July 8, 1958, Ser. No. 747,317
2 Claims. (Cl. 121—38)
(Granted under Title 35, U.S. Code (1952), sec. 266)

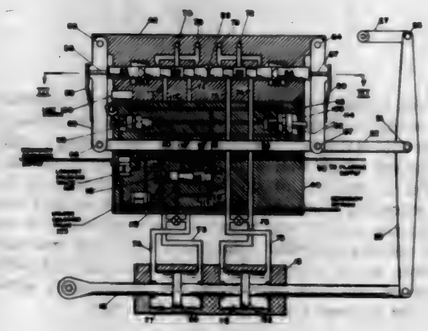
1. A control device including a piston cylinder having an inlet, a piston casing slidably disposed in said piston cylinder, said piston casing including a cavity, a hollow

piston rod interconnecting said inlet and said cavity, said piston rod having an upper plane surface forming part of the cavity surface, a convergent-divergent nozzle disposed in the hollow section of said hollow piston rod and the divergent section extending through and above said upper plane surface, a valve plate pivotally mounted in said cavity and spaced above and parallel to said upper plane surface, said valve plate entirely covering said plane surface and having a hole axially aligned with said divergent



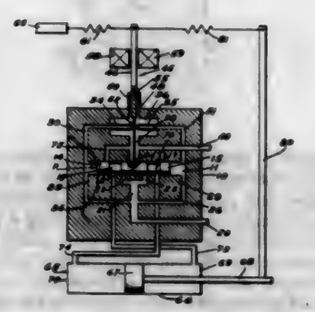
nozzle section, a valve having a cone and a stem, the angle of the apex of said valve cone being greater than the angle of the apex of the cone forming the divergent nozzle section, said stem being of lesser diameter than said hole and mounted in said hole with the cone extending towards said divergent nozzle section thereby providing self-alignment, means for exerting a force on said valve cone for controlling the flow through said nozzle whereby gas flow past said nozzle and between said valve plate and said plane surface is laminar and buildup of dirt from gas at the end of said divergent section is prevented.

2,947,285
MANUAL AND AUTOMATIC HYDRAULIC SERVOMECHANISM
George T. Baltus, Tonawanda, and William Beauchemin, North Tonawanda, N.Y., assignors to Bell Aerospace Corporation
Filed Mar. 20, 1957, Ser. No. 647,255
6 Claims. (Cl. 121—41)



1. In an aircraft control system, a movable flight control device, a member for moving said control device, manual control means adjustable to cause movement of said member, a fluid-pressure actuator connected to said member to motivate the latter, a valve mechanism controlling said actuator comprising a housing enclosing valve means displaceable relative to said housing to control flow of fluid through a primary fluid system to said actuator, said manual control means including a member fulcrumed differentially upon said housing and connected to bias said valve means when said member is unrestrained, said valve mechanism including fluid-pressure responsive means, a pilot valve selectively controlling primary fluid-pressure applications to said valve mechanism, said pilot valve having an armature, electromagnetic means controlling the armature of said pilot valve, mechanical feed back means interconnecting said manual control means and said pilot valve armature to null said pilot valve when said actuator attains a position of response to a control command, a secondary pressure system including a fluid pressure responsive device operable when energized to restrain fulcruming motions of said manual control means on said housing and including a secondary fluid pressure supply source operatively connected to said pressure responsive device and manually controllable to alternately release and block fulcruming of said manual control means relative to said housing, whereby to permit manual control movements to be translated into manually powered movements of said control member, and whereby upon deenergization of said pressure responsive means said manual control will be permitted to displace said valve means to selectively control motivations of said actuator through means of said primary fluid system, and whereby application of differential pressures against said valve mechanism as controlled by said pilot valve will cause displacement of said valve means.

2,947,286
INTEGRATED ACTUATOR
George T. Baltus and Martin P. Welsh, Tonawanda, N.Y., assignors to Bell Aerospace Corporation
Filed Jan. 29, 1958, Ser. No. 711,865
26 Claims. (Cl. 121—41)



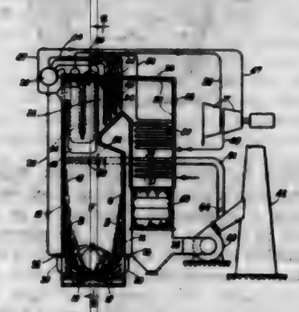
1. In a control mechanism for a hydraulic control system: a fluid-pressure actuator mechanism adapted to be connected to a device to be actuated, said actuator having a part movable in opposite directions; a fluid pressure conduit system connected with said actuator mechanism for applying fluid pressure to selectively operate said part in opposite directions; a power valve mechanism in said fluid pressure conduit system for controlling same, said power valve mechanism normally shutting off fluid flow relative to said actuator, but operable to respective positions for supplying pressure fluid to said actuator to actuate said part in one or the other directions of movement; pilot valve means having a neutral position, said pilot valve means being operably connected by means of a feedback spring with said power valve and selectively responsive to control signals to effect operative movements of said power valve toward said respective positions; and second feedback means, including yielding means, connecting the actuator mechanism with said pilot valve means and operable by the actuator mechanism for returning the pilot valve means to the neutral position.

2,947,287
PRESSURE BALANCE CONTROL VALVE
Everett E. Johnston, Fort Worth, Tex., assignor to Sta-Rite, Inc., Fort Worth, Tex., a corporation of Texas
Filed Aug. 29, 1957, Ser. No. 681,041
6 Claims. (Cl. 121—45)



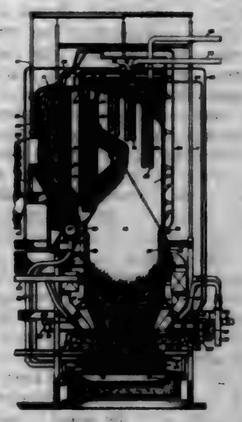
1. In a control circuit for automatically cycling and operating a reciprocating fluid jack from a fluid control valve; a fluid jack having a piston, said piston including valve depressing means thereon, a master fluid control valve connected in operating relation with said jack, a starting valve and a reversing valve in operating relation with said master valve and also in operating alignment with said valve depressing means, a fluid passage means within said master control valve to supply fluid pressure to extend said jack upon actuation of said starting valve, means to retract said jack upon actuation of said reversing valve, said fluid passage means comprising a housing, a spring loaded sleeve moving in said housing in response to pressure, a spring loaded piston in said housing adapted to move against its spring pressure and to move said sleeve against its spring pressure in response to fluid pressure behind said piston, said starting valve when actuated supplying fluid pressure behind said piston.

2,947,288
RADIANT TUBULAR HEAT EXCHANGER
Eberhard Nickel, Stuttgart-Wangen, Germany, assignor to Kohlenscheidungs-Gesellschaft, m.b.H., a corporation of Germany
Filed Aug. 20, 1957, Ser. No. 679,219
1 Claim. (Cl. 122—478)



In a radiant tubular heat exchanger organized for the generation and heating of steam; an elongated upright furnace chamber having two opposing side walls and a roof lined with heat-absorbing steam generating water wall tubes and having a combustion gas outlet at the upper end of said furnace chamber; burner means for discharging fuel and air for burning into said chamber through the walls thereof at points remote from said gas outlet to produce a stream of hot combustion gases flowing from said burner means through said chamber in heat exchange relation with said wall tubes for the generation of steam and out through said gas outlet; superheating tubes for superheating said steam; said superheating tubes forming elongated upright panels extending downwardly into said furnace chamber from said roof a predetermined distance, said superheater panels being spacedly arranged within a central zone of said chamber and forming a horizontally extending tube bank consisting solely of superheater tubes and maintaining a predetermined space between the sides of said bank and each of said two opposing side walls; reheater tubes for reheating said superheated steam, said reheater tubes forming elongated upright panels extending downwardly into said furnace chamber from said roof a substantially shorter distance than said predetermined distance, said reheater panels being spacedly arranged for occupying said space provided between each side of said superheater tube bank and said opposing side walls, said reheater panels forming a tube bank consisting solely of reheater tubes and forming a vacant pocket immediately therebelow which extends from each side of said superheater tube bank to each opposing side wall; means for conducting recirculated cooled combustion gases from a point downstream of said superheater tube bank in the gas flow sense to the furnace chamber at a location directly below said reheater tube bank; and means for introducing said recirculated gases into said vacant pocket provided between said superheater tube bank and each opposing side wall, and immediately below said reheater tube bank, whereby said reheater tubes are exposed to a gas stream portion the temperature of which having been reduced by the cooling action of said water wall tubes, said extended superheater tubes and said recirculated gases to a greater extent than the temperature of the gas stream portion to which said centrally located superheater tubes are exposed.

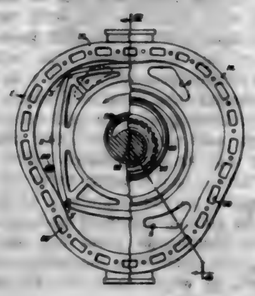
2,947,289
STEAM TEMPERATURE CONTROL
Earle C. Miller, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 11, 1958, Ser. No. 728,085
12 Claims. (Cl. 122—479)



1. Apparatus for the control of superheat comprising an elongated furnace, a nose extending from the rear wall of the furnace partly across the furnace adjacent one end, a pass leaving the said one end of the furnace, a convection superheater located in the said pass, a radiant superheater residing in a wall of the furnace, a pair of opposed burners located at the other end of the furnace in the front and rear wall, each burner having means for projecting fuel therethrough in a fixed direction, means for controlling the total air flow through the burners, and means operative when the temperature of superheat changes from a predetermined value to cause a change in air flow through the burners, so that the position of the

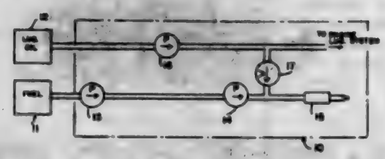
line of greatest mass flow is moved toward one burner and closer to the radiant superheater and the temperature of superheat is returned to the said predetermined value.

2,947,290
HEAT GENERATING ROTARY INTERNAL COMBUSTION ENGINE
Walter G. Froede, Neckarsulm, Germany, assignor to NSU Werke Aktiengesellschaft, Neckarsulm, Germany, and Wankel G.m.b.H., Lindau, Bodensee, Germany
Filed Nov. 18, 1958, Ser. No. 774,721
Claims priority, application Germany Nov. 18, 1957
12 Claims. (Cl. 123—8)



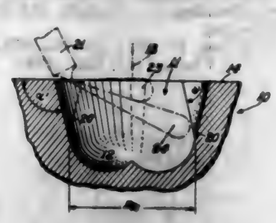
2. In a rotary mechanism, an outer body having axially spaced end walls and a peripheral wall interconnecting the end walls, an inner body within the outer body and having axially spaced end faces and a peripheral outer surface, means supporting said inner body for turning movement relative to the outer body about an axis that is eccentrically disposed with respect to the geometrical center of the inner surface of the peripheral wall of the outer body, the inner surface of said peripheral wall and said peripheral outer surface being co-operatively shaped so as to define upon relative turning movement of the inner body with respect to the outer body at least four variable volume working chambers, and including a plurality of symmetrically arranged circumferentially spaced lobe-defining portions on the inner surface of the peripheral wall and a plurality of symmetrically arranged circumferentially spaced apex portions on the peripheral outer surface of the inner body, there being at least four apex portions, means mechanically interconnecting the bodies so that the inner body turns relative to the outer body in a manner determined by the number of apex portions relative to the number of lobe-defining portions, at least one fuel admission channel means associated with the outer body and having a fuel delivery opening communicating with the space between the bodies, means for feeding fuel to said channel means, at least one exhaust gas delivery means communicating with the space between the bodies at a location circumferentially spaced from said delivery opening, and at least one residual exhaust gas delivery means communicating with the space between the bodies at a location circumferentially spaced from said first gas delivery means and between said first gas delivery means and said fuel delivery opening such that upon relative turning movement of the inner body with respect to the outer body each working chamber undergoes a cycle of operation determined solely by the phase positions of the inner body relative to the outer body and consisting of a fuel admission phase, a compression phase, an expansion and working phase, an exhaust gas delivery phase for delivery of hot pressurized gases, a re-expansion phase during which residual gases remaining within the working chamber are expanded and have their temperature reduced and finally an exhaust phase for discharging such residual gases from the space between the bodies.

2,947,291
COMPRESSION IGNITION ENGINE
Earl R. Klings, Detroit, Mich., assignor to Continental Motors Corporation, Detroit and Muskegon, Mich., a corporation of Virginia
Filed Feb. 27, 1958, Ser. No. 718,629
11 Claims. (Cl. 123—30)



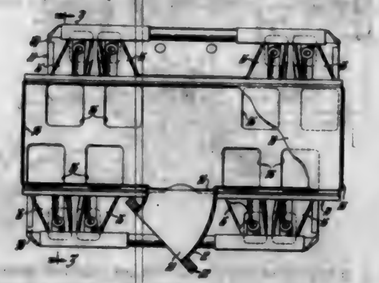
1. In a fuel supply system for a compression ignition engine, means delivering said engine fuel under pressure variable relative to engine speed and load, a source of ignition accelerator supply, and a pressure responsive valve connected intermediate said delivery means and said ignition accelerator supply and actuated upon a decrease of fuel pressure to open and admit ignition accelerator into said fuel, said source of ignition accelerator supply comprising a lubricating oil system connected with said engine.

2,947,292
PISTON FOR INTERNAL COMBUSTION ENGINES, PARTICULARLY FOR SELF-IGNITION ENGINES HAVING COMBUSTION CHAMBERS ADAPTED FOR DIRECT FUEL INJECTION
Josef Böttger, 5 V Mezihorí, Prague, Czechoslovakia
Filed Apr. 21, 1958, Ser. No. 729,674
Claims priority, application Czechoslovakia May 7, 1957
5 Claims. (Cl. 123—32)



1. A piston for internal combustion engines of the kind having auto-ignition and direct fuel injection; said piston having a combustion chamber in its top portion and opening at the top surface of the piston, said combustion chamber including a bottom portion in the shape of a surface of revolution concentric with the central axis of the piston, the opening of said combustion chamber at said top surface having equal halves at opposite sides of a plane passing through said central axis and defined by first and second inwardly concave arcuate edge portions, respectively, and connecting edge portions extending between the adjacent ends of said arcuate edge portions, said first arcuate edge portion increasing progressively in its distance from said central axis in the direction from one end to the other end of said first arcuate edge portion and said second arcuate edge portion also increasing progressively in its distance from said central axis in the direction from the end of said second arcuate edge portion which is adjacent said other end of the first arcuate edge portion to the opposite end of said second arcuate edge portion, said arcuate edge portions constituting the major part of the circumferential distance around said opening, said combustion chamber further having a side wall extending from said arcuate edge portions to the periphery of said bottom portion and forming angles with respect to the plane of said top surface of the piston which are obtuse angles, at the ends of said arcuate edge portions farthest from said central axis, and decrease progressively to acute angles, at the ends of the arcuate edge portions closest to said central axis.

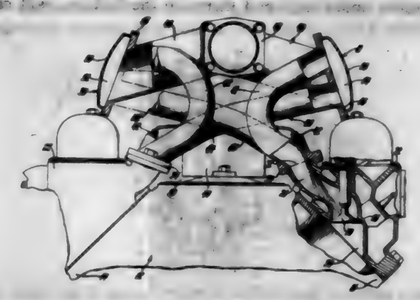
2,947,293
MANIFOLD
Zora Arkus-Duntov, 830 Lake Shore Road, Grosse Pointe Shores, Mich.
Continuation of application Ser. No. 610,265, Sept. 17, 1956. This application Dec. 17, 1958, Ser. No. 781,826
5 Claims. (Cl. 123—52)



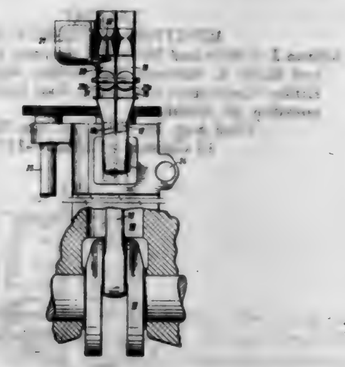
4. An intake manifold for an internal combustion engine having parallel rows of cylinders on opposite sides of said engine and being formed to provide an elongated plenum chamber adapted to be disposed lengthwise between said rows of cylinders and having groups of substantially identical ram pipes connected in side by side relation at opposite ends of said plenum chamber, each group of said ram pipes providing pairs of ram pipes with one of said pairs being connected to each side of said plenum chamber and extending toward the cylinders at each end of each of said rows of cylinders, said ram pipes in said pairs being closely spaced and extending substantially normally to said plenum chamber with the outlet ends of said pairs being at least as closely spaced as the inlet ends of said pairs, said plenum chamber at said inlet ends of said pairs being formed to provide combustion fluid distribution zones substantially as long and as wide as the width of said pairs and substantially as deep as said inlet ends of said pairs, said plenum chamber leading to said zones being at least as wide and as deep as said zones, said plenum chamber between said zones being of a length at least as great as the length of said zones.

2,947,294
INDUCTION SYSTEM
Ralph C. Bird, Lansing, Christiaan H. Bouvy, Bloomfield Hills, and John Dolza, Fenton, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 16, 1957, Ser. No. 664,728
2 Claims. (Cl. 123—55)

1. An intake manifold for an internal combustion engine having a pair of angularly disposed banks of cylinders with an upwardly opening space therebetween, said manifold comprising a pair of spaced plenum chambers disposed on the opposite sides of said manifold to be positioned over said banks, a transversely extending duct interconnecting said chambers with each other and having an inlet in the middle thereof for supplying induction air thereto, a separate set of ram pipes for each of said plenum chambers, each of said sets including substantially straight ram pipes for interconnecting its associated plenum chamber with a group of cylinders in the bank most remote therefrom and arcuate ram pipes for interconnecting said chamber with a group of cylinders in the bank closest thereto.



2,947,295
INTERNAL COMBUSTION ENGINES
Frank Metcalf Aspin, Alderley Edge, England, assignor of one-half to F. M. Aspin Engines Limited, Manchester, England
Filed June 18, 1957, Ser. No. 666,378
Claims priority, application Great Britain June 23, 1956
6 Claims. (Cl. 123—75)

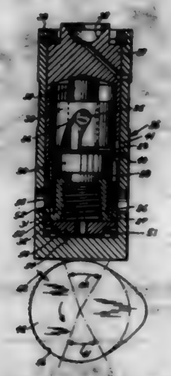


1. An internal combustion engine comprising a cylinder, a piston reciprocable in said cylinder, a head at the open end of said cylinder, a conical valve in said head rotatable about the axis of said cylinder, a curved combustion chamber in said valve in communication with said cylinder and having a lateral opening, an exhaust port in said head adapted to communicate with said opening, at least one inlet port in said head adapted to communicate with said opening, said valve adapted to sweep said exhaust and inlet ports successively, a plurality of inlet passages for combustion supporting air and rich fuel mixture respectively in communication with said inlet port, said air passage being in communication with said inlet port while said exhaust port is open.

2,947,296
VALVE LINKAGE ADJUSTING MECHANISM
Bronson C. Skinner, Dunedin, Fla., assignor to Brunhilde W. Skinner, Dunedin, Fla.
Filed Aug. 3, 1959, Ser. No. 831,130
10 Claims. (Cl. 123—90)

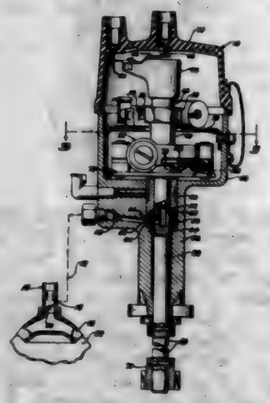
1. In a length compensating mechanism adapted for longitudinal reciprocation in an end thrust transmitting linkage and having complemental members longitudinally

adjustable automatically relative to each other in the operation of the linkage to take up the slack and said mechanism embodying an elastic clearance device collapsible under high end thrust in the linkage, said clear-



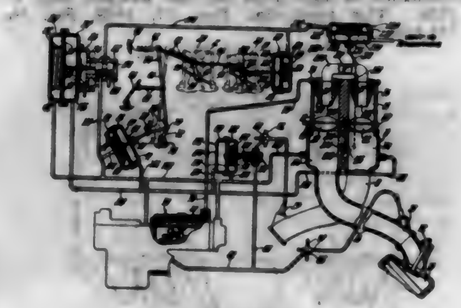
ance device comprising an elastic means expansible in the longitudinal direction of the linkage arranged to press against one of said complemental members, and an adjustable stop means arranged to limit the movement of said one complemental member under the pressure of said elastic means.

2,947,297
IGNITION DISTRIBUTOR
Milton J. Kittler and Melvin F. Sterner, Bloomfield Hills, and Kalin S. Johnson, Northville, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Aug. 29, 1958, Ser. No. 757,945
14 Claims. (Cl. 123—117)



1. In an ignition distributor for an internal combustion engine having an induction passage, a drive shaft adapted to be driven in accordance with engine speed, a cam member coaxial with said shaft and adapted to be angularly adjustable relative thereto, means responsive to changes of engine operating conditions for adjusting said cam member relative to said shaft, said means combining speed responsive elements and pressure responsive elements, said speed responsive elements being capable of independently adjusting said cam in response to variations in induction passage vacuum regardless of engine speed and without moving said speed responsive elements or influencing said calibration plate in any way.

2,947,298
DUAL BALANCED AIR METER FOR SPLIT ENGINE
John Dolan, Fenton, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 7, 1958, Ser. No. 811,691
5 Claims. (Cl. 123—127)

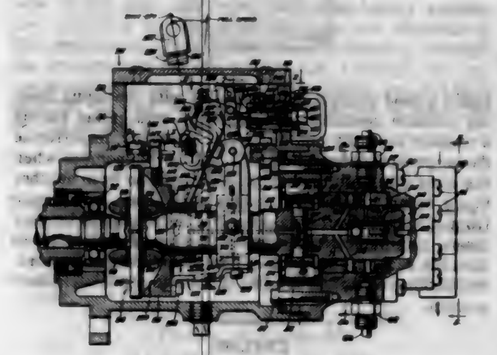


1. A charge forming device for an internal combustion engine comprising a first air induction system for supplying air to certain cylinders of the engine, a second air induction system for supplying air to the remaining engine cylinders, first and second throttle valves for respectively controlling the flow of air through said first and second systems, means for supplying fuel to each of said air induction systems in accordance with engine demand, means for synchronizing the actuation of said throttles, means responsive to the engine vacuum differential in said air induction systems posteriorly of said throttles for fully opening one of said throttles when said differential exceeds a predetermined value, additional means responsive to said predetermined vacuum differential for moving the other throttle to a more open position when said one throttle is fully opened, means operable in response to said predetermined vacuum differential to cut off the flow of fuel to the air induction system associated with the fully opened throttle, and means for equalizing air flow through said induction systems when all engine cylinders are operative to supply power.

2,947,299
CONTROL MECHANISM FOR FUEL INJECTION PUMPS
Robert L. Shallenberg, Wheaton, and Walter A. Parrish, Jr., Mount Prospect, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed July 1, 1957, Ser. No. 669,172
26 Claims. (Cl. 123—140)

1. In a fuel injection pump drivable at variable speed by an internal combustion engine whose speed and torque are influenced by the quantity of fuel metered thereto by such pump, a compoundably movable fuel delivery control structure adapted for one character of reversible movement attendant to which such structure is advanceable or retractable to respectively increase or decrease the fuel delivery quantity of the pump, means in force transmitting relation with said structure and yieldably biasing such structure in the direction of such advance thereof and operable to exert a force to advance the same when unopposed by an equal or superior force, speed responsive means sensitive to pump speed to exert a force of a magnitude constituting a direct function of pump

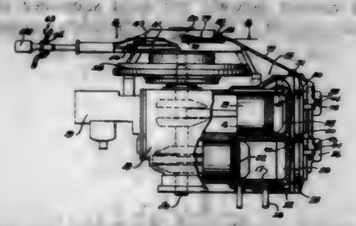
speed, the speed responsive means being disposed to exert at least a portion of such force upon the fuel delivery control structure to urge the same retractively and being operable in opposition to the biasing means to retract the fuel delivery control structure to a retractive limit attendant to an increase in pump speed to an upper limit of an upper speed range portion of the pump, the speed responsive means and the biasing means being cooperable in response to speeds in said upper speed range portion to attain an amount of advancement of the control structure from said retractive limit according to an inverse function of pump speed, the pump having a torque control speed range contiguously below a lower limit of said upper speed range portion, yieldable torque control means disposed for transmitting force to the control structure in opposition to the biasing means force coter-



minously with the pump operating within the torque control speed range and being thus cooperable with the speed responsive means to yieldably oppose advancement of the control structure within said torque control speed range, the biasing means being operable pursuant to pump deceleration in said torque speed range to prevail over the speed responsive means and the yieldable torque control means to cause further advancement of the control structure at a rate influenced by resistance characteristics of such torque control means, the fuel delivery control structure also being adapted for selective opposite movement of another character to impose respectively an increase or decrease in the fuel delivery quantity influenced by the position of such structure attained through the one character of movement, and means operably connected with the fuel delivery control structure and operable at will for imparting the other character of movement to the fuel delivery control structure.

2,947,300
STARTER-CONTROLLED ENGINE COMPRESSION RELIEF
Robert L. Trapp, Milwaukee, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,671
14 Claims. (Cl. 123—182)

2. The combination with an internal combustion engine including a cylinder having a combustion chamber portion and a piston reciprocable therein for the compression of a charge in said portion, of a starter for effecting piston reciprocation, means automatically effective during starter operation for relieving compression in said portion during a part of the period of starter operation, said means having starter controlled connections for terminating such compression relief automatically while the piston continues in movement consequent upon starter operation, said engine including a crankshaft having the crank connected with the piston and having a flywheel, the starter comprising a pulley in driving connection with the flywheel and provided with a starter rope and a rewind spring, means for relieving pressure comprising a valve movable to and from a seat about a



port with which said cylinder is provided, a valve opening member in operative connection with the valve, and means whereby said member is actuated in a valve opening direction during initial movement of the pulley by the starter rope and in a direction permitting the valve to close in the initial movement of the pulley by the rewind spring.

2,947,301
BOW STRING HOLDER
Elvro L. Haulk, 339 Michigan Ave., Mansfield, Ohio
Filed Jan. 14, 1959, Ser. No. 786,748
8 Claims. (Cl. 124—36)

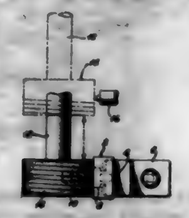


1. A bow string holder for retaining a bow string in position along a bow when the bow is unstrung, comprising; a member adapted to extend transversely across a bow and having projections at its ends extending laterally of said member for engaging opposite edges of the bow to hold said member against transverse displacement relative to said bow, an elastic loop secured to said member for removably engaging the end notch of a bow, and hook means secured to said member for removably receiving the end loop of the bow string.

2,947,302
ART OF DRESSING GRINDING WHEELS
Henry B. Patterson, Springfield, Vt., assignor to Bryant Chucking Grinder Company
Filed Jan. 10, 1958, Ser. No. 708,246
3 Claims. (Cl. 125—11)

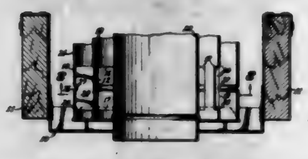
1. A method of dressing a grinding wheel having refractory grits in order to condition the grinding surface thereof so that when it is presented to the work it will remove material at a rapid rate and at the same time produce a good surface finish, the method comprising; first dressing the wheel by conventional dressing means such as a diamond dressing tool down to a desired surface level, the conventional dressing inherently leaving residual projecting refractory grits above this surface level, subsequently frictionally contacting the same por-

tions of the so-dressed wheel with a solid substance, the solid substance being a metal which thermochemically reacts with the refractory grits of the grinding wheel at temperatures approaching the melting point of the solid substance, creating an extremely high temperature at the point of contact between the solid substance and the wheel, the creation of the high temperature accomplished



by allowing the solid substance and the wheel relative tangential motion while applying a light force and moving the solid substance against the projecting grits down to the proximity of the desired surface level, such that the thermochemical reaction between the solid substance and the refractory grits at the high temperatures occurs at the contact between the solid substance and grinding wheel to dub off the residual projecting grits on the wheel to the proximity of the desired surface level.

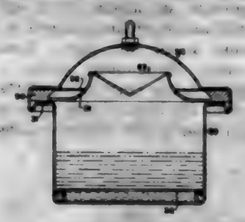
2,947,303
CONSTRUCTION FOR INTERMEDIATE WALL VENT PIPE
Saul Epstein, 2332 Nottingham Ave., Los Angeles 27, Calif.
Filed Mar. 10, 1958, Ser. No. 720,239
4 Claims. (Cl. 126—307)



1. An intermediate wall construction for a triple wall vent pipe comprising a series of annularly spaced slot means positioned adjacent the lower end of the intermediate wall of the vent pipe, vertical members on the intermediate wall for spacing the slot means and supporting the intermediate wall adjacent the slot means, radial members extending from the vertical members and spacing the outer wall of the triple wall vent pipe from the intermediate wall, the outer ends of said radial members and said outer wall having interlocking portions for locking said intermediate and outer walls against relative longitudinal movement.

2,947,304
APPARATUS FOR PROCESSING FOOD PRODUCTS
Carlyle Martin Ashley, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Nov. 14, 1951, Ser. No. 256,315, now Patent No. 2,870,020, dated Jan. 20, 1959. Divided and this application June 2, 1958, Ser. No. 739,413
3 Claims. (Cl. 126—381)

1. In an apparatus for processing food products, the combination of a vessel having a circumferentially extending, radially outwardly disposed flange, a cover member having a concave inner surface and a radially outwardly disposed flange cooperable with said flange on said vessel for closing said vessel and adapted to securely retain said cover on said vessel when said vessel is subjected to internal and external pressures, a gasket positionable between and in contact with said radially disposed flanges of said vessel and said cover member and thereby adapted to seal said cover to said vessel in a fluid tight manner, said vessel having a bottom forming a sump for a liquid heating medium, a perforated support disposed within said vessel and spaced from the bottom thereof to



retain a food product out of contact with the liquid heating medium contained in said sump, said gasket having a radially inwardly and upwardly, extending, imperforate flange portion cooperating with said cover member when the same is in position to close said vessel to form another liquid sump adapted to receive and retain condensate from the food processing operation, and vacuum breaker means communicating with the interior of said vessel to limit the vacuum therein and thereby to limit the evaporative cooling of a food product therein to a predetermined amount.

2,947,305
SURGEON'S MOUTH GAG
Eric A. Storz, St. Louis, Mo., assignor to Storz Instrument Company, St. Louis, Mo., a corporation of Missouri
Filed July 10, 1958, Ser. No. 747,758
11 Claims. (Cl. 128—12)



1. In a mouth gag having a two-legged loop member on one leg of which is a guided slide for a manually adjustable tongue blade; the improvement comprising a pair of bite members having independent upright swivel mounts on the other leg of said loop member, said members being movable on their respective mounts into various horizontal angular relations in the same general horizontal plane.

2,947,306
SURGICAL SPLINTS
Myron L. Cullen, E. 1518 Ostrander, Spokane, Wash.
Filed Jan. 26, 1959, Ser. No. 789,946
4 Claims. (Cl. 128—87)

1. A multiple use surgical splint comprising two flat elongated splint strips overlapped with each other, one

of said strips having a slot extending along the length thereof and terminating just short of the ends thereof, the other strip having an aperture therethrough near one end thereof and a semi-circular slot concentric with the aperture therein, the semi-circular slot extending cross-



wise of the strip, said other strip also having another slot extending lengthwise of the strip and intersecting said semi-circular slot, a headed bolt extending through the aperture and the first named slot, a headed bolt extending through the first and second named slots and nuts threaded on said bolts securing the strips between the bolt heads and the nuts.

2,947,307
PLASTIC FOAM SPLINT
Peter Hoppe, Troisdorf, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed May 20, 1955, Ser. No. 509,983
2 Claims. (Cl. 128—90)



1. As a new article of manufacture, a polyurethane foam splint prepared by placing a mixture of partially reacted liquid ingredients adapted to form a substantially rigid polyurethane foam about a limb and maintaining said mixture about the limb until a solid substantially rigid polyurethane foam is obtained.

2,947,308
HIP JOINT PROSTHESIS
Harry A. Gorman, San Antonio, Tex. (26 Outer Octagon, Randolph AFB, Tex.)
Filed Nov. 2, 1956, Ser. No. 620,139
3 Claims. (Cl. 128—92)



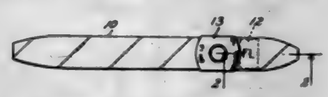
1. A hip-joint prosthesis comprising a shaft, a ball member on one end of said shaft, a cup member capping said ball member, a ring member having an inner substantially spherical surface, said ring member abutting the rim of said cup member, said ball member being articulate within said cup and ring members, a collar on said shaft spaced from said ball member, the shaft having a slanted hole passing through the axis thereof, and a coaxial bore through one end of said shaft communicating with said hole.

2,947,309
LOOSE LEAF BINDERS
Phillip Bennett, Port Mills, Brimscombe, Stroud, England
Filed Dec. 17, 1957, Ser. No. 703,388
1 Claim. (Cl. 129—24)



A loose leaf binder comprising a cover having spaced apart parallel flaps adapted to swing about a crease joint connecting the flaps to the cover of the binder and the cover between the flaps being formed of an inner layer and an outer layer of material, ring carrying plates mounted on the flaps and adapted to be brought into position with the flaps in the same plane when the flaps are folded inwardly towards one another to close the binder, tongues on the ends of the ring carrying plates, a fastener for engaging said tongues on adjacent ends of the ring carrying plates having a flat plate slidably mounted on the binder and a head on the plate having sockets therein for engaging said tongues to mount the fastener on the ring carrying plates and to hold the ring carrying plates against movement in relation to one another when the binder is closed, and means for slidably anchoring the plate of the fastener between said two layers of the binder cover so that it is located preparatory to being slidably engaged with said tongues for fastening the binder in the closed position, comprising a stem on the fastener connecting said plate and said head, and a slot in the inner of said two layers of the binder cover through which said stem passes which slot limits the sliding movement of the fastener.

2,947,310
DUAL FLAVOR CIGAR OR CIGARETTE
Alexander Konrad, 7431 Ridgewood Drive, Parma, Ohio
Filed Mar. 12, 1959, Ser. No. 798,884
1 Claim. (Cl. 131—9)

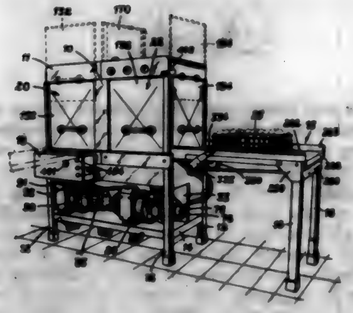


A cigar or cigarette comprising a wrapper, a tobacco filler encased in said wrapper, a smoke flavoring medium in the form of a band encircling the tobacco filler between the filler and said wrapper adjacent to one end of the cigar or cigarette, said flavoring band being reactable to the heat of the burning cigar or cigarette, thereby producing a flavoring medium flavoring the smoke drawn through the cigarette when the end of said cigarette containing the filtering band is lit, and means disposed on the wrapper indicating the end of the cigar or cigarette in which said flavoring band is retained.

2,947,311
DISHWASHER
Gerald B. Fox, Troy, Ohio, and Charles F. Stoddard, New York, N.Y., assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed July 19, 1956, Ser. No. 598,773
7 Claims. (Cl. 134—58)

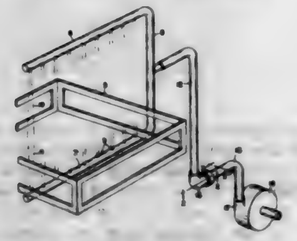
1. In a dishwashing machine of the character described, a closed housing divided into two compartments of sub-

stantially equal dimensions, each said compartment having a tank at its bottom and spray heads in the upper portion thereof for spraying fluid over the dishes to be cleansed, a pump for each said compartment connected to supply fluid from the associated said tank to the associated said spray heads, a supply source of rinsing fluid, rinsing spray heads for mounting in one of said compartments adapted for connection to said supply source, means for mounting said rinsing spray heads in either of said compartments to provide for use of that compart-



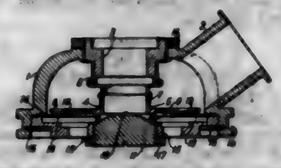
ment in which said rinsing spray heads are mounted as a rinsing compartment, control means for operating the pump in that one compartment in which said rinsing spray heads are mounted for a timed interval and for subsequently connecting said rinsing spray heads to the source of rinsing fluid for a second timed interval, additional control means providing for operation of the pump in the other said compartment during the combined said time intervals, means for establishing an operating cycle of both said control means, and interlock means maintaining operation of both said control means during said cycle.

2,947,312
WASHING AND STERILIZING MACHINE FOR GLASSWARE
Kurt J. Heinicke, Hollywood, Fla., assignor to Heinicke Instruments Company, Hollywood, Fla.
Filed Feb. 26, 1958, Ser. No. 717,722
3 Claims. (Cl. 134—191)



1. A surface treating apparatus of the character described comprising an article holder for supporting articles to be cleaned in an upright manner, a substantially U-shaped spraying device including an upper horizontal portion overlying said holder and having downwardly facing orifices, such spraying device also including a lower horizontal portion underlying said holder and having upwardly facing orifices and whereby to spray a cleaning medium from above and below in opposed relation, the said spraying device and the article holder being relatively movable in a horizontal plane, a fluid line for conducting fluid jointly to the upper and lower horizontal portions of the spraying device, a pump connected to the fluid line, a coupling disposed within the fluid line, a flat vibratory element disposed within the coupling centrally thereof to substantially span the diameter of the fluid line, the vibratory element being anchored at one end to one member of the coupling and with its major length extending into the fluid line, the extended end of the vibratory element being slotted intermediate its width to form a pair of tongues that are disposed in the line of flow of the cleaning medium, the said tongues imparting a pulsating action to the fluid passing thereby and with the pulsating action being maintained throughout the fluid line and throughout the opposed sprays being directed to the articles within the article holder, the said sprays imparting a push-pull action upon the articles in the article holder for removing recalcitrant deposits.

2,947,313
TWO-WAY VALVE
Eric H. Taylor, Woodside, Poynton, Cheshire, England
Filed Apr. 17, 1956, Ser. No. 578,810
13 Claims. (Cl. 137—63)

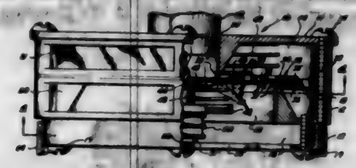


1. A two-way valve comprising a housing member having an inlet port, an outlet, and a third port, valve means between said third port and said outlet comprising a tubular valve member, a seating surface engageable by one end of said tubular valve member and a flexible resilient tubular element connecting the other end of said tubular valve member to said outlet, said resilient tubular element yieldably urging said tubular valve member against said surface to close said outlet, a flexible diaphragm mounted on one of said members between said inlet port and said third port so that one face thereof is exposed to pressure at said third port and the other to pressure at said inlet port, said diaphragm having a movable portion engageable with the other of said members for effecting a seal between said housing member and said tubular valve member to close said inlet port when the pressure acting on said one face exceeds that on said other face, at least a portion of said diaphragm coacting with said tubular valve member and being movable therewith so that pressure at said third port acting on said one face tends to simultaneously close said inlet port and displace said tubular valve member to move the said one end thereof away from said seating surface to open a flow path from said third port through said tubular valve member to said outlet.

2,947,314
INLINE DILUTER VALVE
Aaron Bloom, Pasadena, Calif., assignor to Sierra Engineering Co., Sierra Madre, Calif., a corporation of California
Filed July 13, 1959, Ser. No. 826,813
5 Claims. (Cl. 137—64)

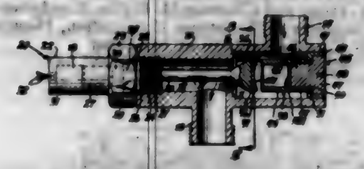
1. A diluter valve device for mixing and admitting oxygen and ambient air to a breathing system comprising a valve body having an ambient air port and a breather chamber, means forming an oxygen supply passage to said breather chamber, an exhaust port from said breather chamber, a first valve seat separating said oxygen supply passage from said ambient air port and a second valve seat separating said exhaust port from said breather chamber, a flexible composite valve member mounted in

the valve body having a first valve element seating in one direction upon said first valve seat and a second valve element seating in an opposite direction against said second valve seat, a passage through said composite valve and an outflow check valve therefor, a pressure sensitive element in said body subject to ambient air pressure and connecting means between said pressure sensitive ele-



ment and said first valve element, said pressure sensitive element when subjected to higher ambient air pressure having movement effective of a restriction of the opening of said first valve element without affecting said second valve element and when subjected to lower ambient air pressure effective of an increase of the opening effect of said first valve element whereby to control the mixture of ambient air and oxygen passing to the breather chamber in response to changes in ambient air pressure.

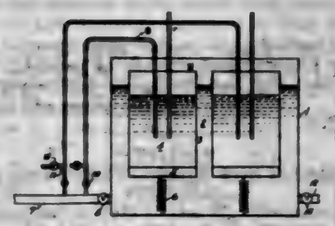
2,947,315
SINGLE OPERATION NORMALLY CLOSED VALVE
Maurice W. Connell, Clarence Center, N.Y., assignor to Conax Corporation, Buffalo, N.Y., a corporation of New York
Filed Sept. 4, 1959, Ser. No. 838,226
5 Claims. (Cl. 137—68)



1. In a single operation normally closed valve including a valve body having an inlet compartment adapted to be filled with and to confine incompressible fluid therein, an outlet compartment, a first diaphragm separating said compartments and ram means arranged on the outlet compartment side of said first diaphragm and including an enlarged head, the combination therewith comprising means providing an auxiliary compartment adapted to be filled with and to confine compressible fluid therein and having a second diaphragm closing one end thereof and exposed to the interior of said inlet compartment, said ram means when actuated driving said head through said first diaphragm to strike out a one-piece portion thereof and said head moving into said inlet compartment sufficient to permit fluid flow therepast and thereby establish communication between said compartments, and said second diaphragm being rupturable upon said first diaphragm being struck out, whereby communication is established with the interior of said auxiliary compartment to permit displacement of said incompressible fluid into said auxiliary compartment.

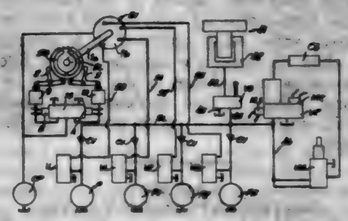
2,947,316
MEANS FOR THE CONTINUOUS PROPORTIONING OF TWO OR MORE LIQUIDS
William John Walker, 26 2nd Ave., Parktown N., Johannesburg, Union of South Africa
Filed Dec. 23, 1957, Ser. No. 704,790
5 Claims. (Cl. 137—101.25)

1. Liquid proportioning apparatus for the mixing of liquids continuously and in accurate proportions, comprising a main vessel having a discharge pipe, containing one of the liquids, and flotation vessels floating in the liquid contained in the main vessel, each flotation vessel containing one of the other liquids to be mixed with the liquid from the main vessel, and each said flotation vessel being provided with a discharge pipe, all vessels being subjected to the same air or gas pressure above the surface of their respective liquids, provision being made therefor by the provision of suitable openings, as required, in the covers of the main and flotation vessels, the vertical movements of each of the flotation vessels



being controlled by the spring action of a separate spring assembly in each case, incorporated between the main and the corresponding flotation vessel, the strength of each spring being correlated with the ratio of the head in its associated flotation vessel and the head in the main vessel, so that on deviation of such ratio for any flotation vessel the spring of the associated vessel will be stressed in a direction tending to vary the flow from each flotation vessel in a manner to restore its ratio, the separate discharge of each of the liquids being arranged to pass through their respective discharge pipes which are arranged to meet at a common junction or junctions where mixing takes place.

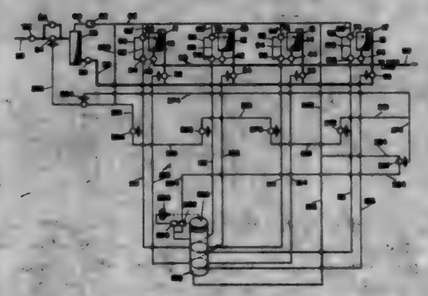
2,947,317
UNLOADING VALVES FOR HYDRAULIC PUMPS
Frank Hathorn Towler, Dob Park, Otley, England, and John Maurice Towler, deceased, late of Mayfair, London, England, by Frank Hathorn Towler, executor, Dob Park, Otley, England, assignors to Electraulic Presses Limited, Rodley, near Leeds, Yorkshire, England, a limited-liability company of Great Britain
Filed Oct. 31, 1956, Ser. No. 619,640
Claims priority, application Great Britain June 12, 1953
14 Claims. (Cl. 137—108)



1. In a hydraulic system supplied with pressure fluid from a plurality of sources, in combination, an unloading valve individual to each fluid source effective when operated to divert the fluid from the source to exhaust, a multi-position selector valve operatively connected with each of the unloading valves, said selector valve being settable in selected positions each of which represents a particular number of effective fluid sources, power operated means for moving said selector valve from one position to another, a relief valve in the hydraulic system operative to divert fluid to exhaust when the pressure in the system rises to a predetermined value, and control means operable in response to the flow through the relief valve exceeding a predetermined

volume for initiating operation of said power operated means to move said selector valve in a direction to operate an additional unloading valve or valves and reduce the number of effective fluid sources.

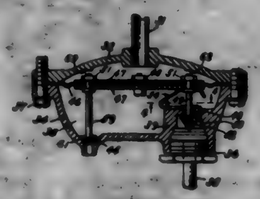
2,947,318
AUTOMATIC TANK SWITCHING SYSTEM
Prentice Odom, Winnie, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Aug. 26, 1957, Ser. No. 680,333
2 Claims. (Cl. 137—122)



1. An automatic pneumatically-operated system for storing crude petroleum for subsequent controlled delivery comprising means for receiving the crude petroleum and for separating the same into liquids and gases, a plurality of storage tanks, a feed line carrying the liquids from said separating means through valved connections to each of the tanks, a conduit system conducting gas at operating pressure from said separating means to the valve means controlling the feed line connections, a single valve connected in said conduit system for selectively directing gas pressure in operating force to the feed line connection valve means on the separate tanks, the operating position of said single valve, and thereby also of the various feed line connection valve means, being controllable in response to gas pressure supplied to said single valve; a float-controlled valve on each tank connected to control a separate valve-positioning supply of pressured gas fed from said separating means to said single valve, a plurality of control valves equal in number to the number of storage tanks, each control valve being responsive to the pressure conditions existing in the connection from a respective float-controlled valve to said single valve and each control valve being operated to a predetermined position when its respective storage tank is filled; and means operating in response to the reaching by all of said control valves of said predetermined position, to disable said single valve so as to prevent needless rotation thereof.

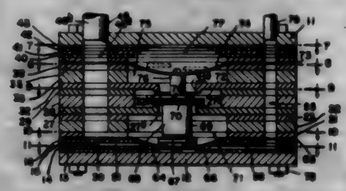
2,947,319
WATER EXPULSION VALVE
Phoebus R. Kaldobsky, Farmington Township, Oakland County, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Dec. 6, 1956, Ser. No. 626,734
8 Claims. (Cl. 137—204)

1. A water expulsion valve unit for an air suspension system having a compressor, a reserve tank and a check valve between the compressor and the reserve tank to prevent the return of reserve tank air to the compressor, said valve unit comprising in combination a valve body, a diaphragm separating said body into an upper and lower section respectively, said upper section adapted to be connected to a source of compressed air, said lower section having a port open to atmosphere and an air-water entrance port, closure means for said ports including an exhaust valve and an intake valve spaced apart in substantial parallel relationship secured to the diaphragm whereby a generally vertical movement of the diaphragm will actuate said valves to open and close the ports in the lower section, said exhaust valve being located interiorly of said body and closed in the direction of flow of pressurized air-water, said intake valve being located exteriorly of the body and the air-water entrance port and biased to close in the direction of the



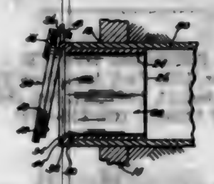
flow of pressurized air-water whereupon the initial introduction of compressed air from the source of compressed air forces the diaphragm downward closing the port open to atmosphere and opening the air-water entrance port permitting pressurized air-water to enter the lower section and a subsequent drop in the pressure of the compressed air from the source of compressed air permits an upward movement of the diaphragm closing the air-water entrance port and opening the port open to atmosphere and expelling entrapped air-water.

2,947,336
CONVERTIBLE VALVE STRUCTURE
Le Roy V. Oxley and Clarence M. Blythe, Hendersonville, N.C., assignors to Robotyper Corporation, Hendersonville, N.C., a corporation of Michigan
Filed Nov. 8, 1954, Ser. No. 467,354
8 Claims. (Cl. 137—371)



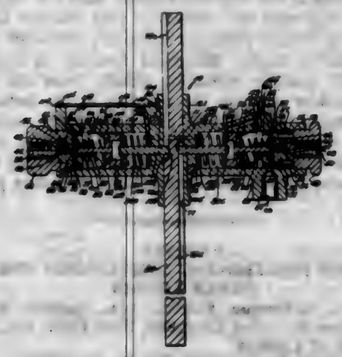
1. A valve structure comprising a plurality of laminae stacked one upon the other, said plurality of laminae comprising a bottom imperforate lamina, a series of laminae having concentric central openings of graduated size from the bottom up forming a pocket, a diaphragm overlying said pocket and having a pouch depressed into the pocket, a plurality of spacer laminae over said diaphragm and having concentric central openings forming a chamber over the pocket, a top valve seat lamina having a central opening defined by an upturned seat flange and opening into said chamber, a free moving valve member having a shank extending through the opening of said valve seat lamina with its lower end in closely spaced proximity to the depressed pouch and a valve disc overlying and engaging said seat flange, a series of spacer lamina on said seat lamina and having concentric center openings forming a top chamber, a top lamina on said last series and having a central opening adapted to be closed by said disc upon the elevation of the valve from its seat, a vacuum passage opening through the top lamina and extending down through the laminae to the diaphragm and communicating with the first chamber above the diaphragm, a bleed port leading from said passage into said pocket below the diaphragm, and a pair of passages opening through the top lamina and extending down through certain of the underlying laminae, one of said passages communicating with said pocket beneath the pouch and the other passage communicating with the chamber above the valve seat lamina.

2,947,321
TRAP FOR CATCH BASINS
Frank Kovalcik, 5235 S. Seeley Ave., Chicago, Ill.
Filed Apr. 16, 1956, Ser. No. 578,332
1 Claim. (Cl. 137—516.25)



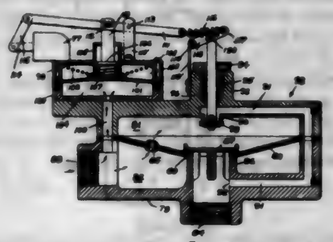
A trap for a catch basin comprising a tubular valve body having a smooth outer surface of uniform dimension throughout the length of said outer surface, said valve body being open at its opposite ends, said valve body having an outer circumferential shoulder adjacent one end, said tubular valve body having an inner circumferential shoulder forwardly of said outer circumferential shoulder, an upwardly extending body extension on the top of said valve body between the outer circumferential shoulder and said adjacent one end of the valve body, a trap door having a slotted member which receives said upwardly extending extension so as to provide a pivot means for said trap door, said trap door having an outer and an inner disc and when in closed position having the inner disc positioned within said tubular body and in abutting relation with said inner circumferential shoulder and with the outer disc in abutting relation with the front of said tubular body.

2,947,322
CONTROL DEVICE FOR VEHICLE PNEUMATIC SUSPENSION
Norman B. Christensen, North Olmsted, Ohio, assignor of one-half to Republic Manufacturing Co., Cleveland, Ohio, and of one-half to The Firestone Tire & Rubber Company, Akron, Ohio, both corporations of Ohio
Filed May 4, 1956, Ser. No. 582,745
5 Claims. (Cl. 137—596.2)



1. Control means adapted for regulation of the supply and exhaust of air to and from an expansible bellows for a vehicle suspension system to maintain a predetermined height between the road gear and frame of a vehicle, comprising, an elongated housing having a medial transverse bore, two opposed longitudinal bores communicating at their inner ends with said transverse bore, and interior conduits in said housing for the passage of air to and from a bellows, valve means adjacent the outer end of each longitudinal bore for regulating air flow through said conduits, a piston means in each longitudinal bore between a valve means and said transverse bore, a piston rod extending from said piston means to said valve means in each longitudinal bore, a piston actuating means in each longitudinal bore extending into said transverse bore, a rod slidable in said transverse bore and having opposed surfaces for selective displacement away from said rod of one of said actuating means at a time when said housing is moved along said rod by an external force, and a damping means in said housing opposing movement of said pistons for a predetermined time following displacement of a piston actuating means.

2,947,323
FLUSH VALVE CONTROL FOR PLUMBING FIXTURES
Lyman Becker, 1012 S. 33rd St., Milwaukee, Wis.
Filed May 6, 1955, Ser. No. 506,629
3 Claims. (Cl. 137—624.14)

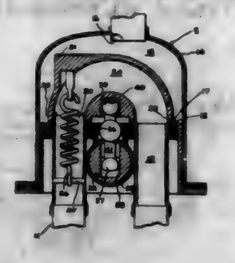


1. An automatic periodically operated valve including a valve body having an inlet, an outlet, and a valve seat between said inlet and outlet, a valve member movably supported within said body and adapted to close upon said seat, a pivotal link interconnected with said valve member for opening and closing said valve member in response to movement of said link, a pressure chamber and a pressure responsive member therein, said chamber being in communication with said inlet whereby the pressure in said inlet biases said pressure responsive member in one direction, a spring interconnected with said link and pressure responsive member, said spring being positioned, with relation to the direction of pressure biased movement of said responsive member and the pivot point of said link to apply a valve closing force to said link during a predetermined initial range of movement of said responsive member under the influence of the pressure in said chamber and to apply a valve opening force to said link during further movement whereby said valve is positively closed during said initial range of movement and positively opened thereafter, and means biasing said pressure responsive member in the other direction to thereby slow the valve opening action thereof and for returning said pressure responsive member and thereby said valve member, to valve closed position upon a pressure drop in said inlet attendant to opening of said valve.

2,947,324
REVERSING VALVE FOR REVERSIBLE REFRIGERATING SYSTEM
Kenneth E. Cooper, North Caldwell, N.J., and Donald W. Lynch, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Filed Apr. 17, 1958, Ser. No. 729,108
3 Claims. (Cl. 137—625.29)

1. A reversing valve comprising a valve plate and a casing defining a gas tight housing, said valve plate in-

cluding a surface within said housing forming a valve seat, said casing having a high pressure inlet port, said valve seat having a plurality of ports opening into said housing and including a low pressure outlet port and two additional ports spaced equidistant from said low pressure port, a valve member having a valve passage communicating at one end with said low pressure outlet port, the other end of said valve member being slidably supported on said valve seat, said valve member being pivotally mounted adjacent said one end of said passage for pivotal movement about said low pressure outlet port for movement of the other end of said valve passage between two limiting positions communicating with said respective additional ports, and means for actuating said valve member from either of said limiting positions to the other comprising a cylinder generally disposed outside said housing between said low pressure outlet port and said additional ports and extending in a direction substantially parallel to the direction of movement of said other end of said valve passage between said additional ports, a piston slidably disposed in said cylinder and dividing said cylinder into a control chamber and a second cham-



ber, a lever pivotally supported by said valve plate and having one end in engagement with said valve member and the other end engaged by said piston whereby movement of said piston effects pivotal movement of said valve member to either of said positions, means for creating a pressure differential across said piston to effect movement thereof within said cylinder comprising means for connecting said control chamber with either said inlet port or said low pressure outlet port and means for equalizing the pressures across said piston upon completion of a piston stroke comprising a first passage extending through said valve plate and having one end communicating with said second chamber and the other end opening into said housing, a low pressure passage extending from said low pressure outlet port through said valve plate and terminating in said housing on the face of said valve plate adjacent said first passage, a slide valve slidably arranged on said valve seat in operative relationship with the housing ends of said passages, and means carried by said valve member for engaging said slide valve when said valve member approaches either of its limiting positions to move said slide valve to a position in which the pressure in said second chamber becomes the same as that existing in said control chamber.

2,947,325
VALVE DIAPHRAGM AND METHOD OF MAKING THE SAME
Rolland McFarland, Jr., Crystal Lake, Ill., assignor to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 6, 1956, Ser. No. 563,554
6 Claims. (Cl. 137—793)

1. A diaphragm structure comprising a flexible elastic body member, an imperforate polytetrafluoroethylene liner member having a chemically active surface portion, and means chemically bonding said surface portion to said body member with relatively weak adhesion for per-



mitting separation of said surface portion from said body member upon flexing of the diaphragm structure.

2,947,326
PRESSURE DEVICE
Jean Mercier, 1185 Park Ave., New York, N.Y.
Filed Mar. 14, 1955, Ser. No. 494,139
5 Claims. (Cl. 138—30)

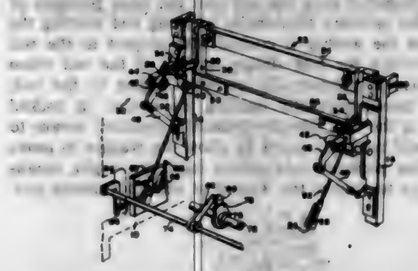


1. A pressure device comprising a container having a deformable bladder therein, the area of said bladder wall substantially conforming to the area of the inner wall surface of the container when the bladder is in extended condition, said bladder having a mouth at one end, means securely clamping said mouth with respect to said container, means to charge said bladder with fluid, said container having an opening axially aligned with said bladder for flow of a second fluid into and out of said container, valve means in said container controlling said opening and adapted to seat against the portion of the container around the periphery of the opening therein, resilient means in said container, operatively connected to said valve means, normally to retain said valve means in open position, said bladder having an axial opening in the free end thereof, said free end being reversely bent with the portion of said bladder adjacent the opening therein normally extending inwardly of said bladder and a central elongated member in said container, said member extending axially from the mouth of said bladder through the opening in the latter, said member being retained in axial alignment with said container and restrained from axial movement therein, the portion of said bladder adjacent said opening therein being secured to said valve means and extending parallel thereto.

2,947,327
REED POSITIONING MECHANISM FOR TERRY LOOMS
William L. McHargue, Fairfax, Ala., assignor to West Point Manufacturing Company, West Point, Ga., a corporation of Georgia
Filed Jan. 13, 1959, Ser. No. 786,636
4 Claims. (Cl. 139—37)

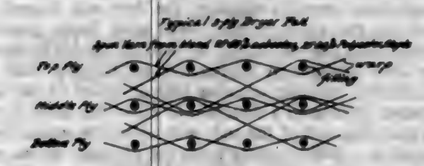
1. In a terry loom having a lay, a reed pivotally mounted on said lay, and a toggle mechanism connected to said reed; improved means for positioning the reed about

its pivot comprising a rod pivotally connected to and extending from said toggle mechanism, a head engaged to said rod at a point spaced from its pivotal connection to said toggle mechanism, a mounting plate rigidly affixed to the loom, a guide stud secured to said plate and restricting said head to a generally reciprocatory path ad-



jacent said plate, a slot disposed in said plate parallel to the path of said head, a second stud adjustably positioned in said slot, a latch pivotally mounted on said second stud and positioned and adapted for selective engagement with said head, and means including a cam-actuated rocker shaft for pivoting the latch into and out of head engaging position.

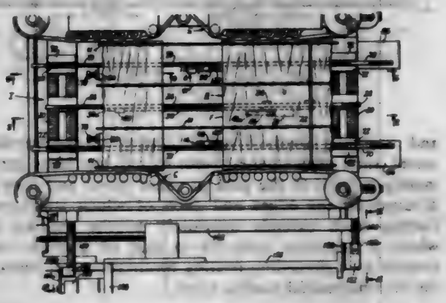
2,947,328
ASBESTOS DRYER FELT
Dietrich V. Aston and John G. Schoepf, Philadelphia, Pa., assignors to Aston-Hill Mfg. Co., Philadelphia, Pa., a corporation of Delaware
Filed May 18, 1955, Ser. No. 507,498
3 Claims. (Cl. 139—412)



1. A dryer felt adapted to withstand high temperatures, flexion, abrasion, and prolonged exposure to high concentrations of chemicals employed in paper manufacture, said felt being constructed of a plurality of interconnected plies, each of which is woven from warp and filling yarns, the surface ply being composed predominantly of asbestos fibers, said felt being characterized in that at least the warp of said surface ply comprises essentially yarn spun from a homogeneous blend of polyester staple fibers and asbestos fibers and containing about 75–80% asbestos fibers and about 20–25% polyester fibers.

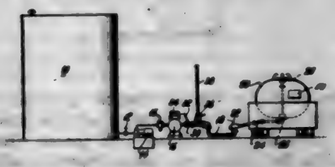
2,947,329
LOOP FASTENER MACHINE CONTROL APPARATUS
David G. Kingsley, Mountain Lakes, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Filed Sept. 26, 1957, Ser. No. 686,407
5 Claims. (Cl. 140—93)

1. In a machine for forming loop fasteners from binding wires interconnecting a spaced series of wirebound box parts, apparatus for adapting said machine to form loop fasteners of different lengths in successive cycles comprising, a stop assembly mounted in said machine for longitudinal movement, said stop assembly including a movable stop element positioned for engagement with a predetermined portion of each box part moving into said machine, a stop switch actuated by said stop element, said stop switch being connected to control the work feeding and loop forming mechanisms of said machine, whereby actuation of said stop switch by said box parts renders said feeding mechanism ineffective to feed the box parts and causes said loop forming mechanism to be driven through a loop forming cycle, power means for moving said stop assembly longitudinally between two positions, at which said stop element will respective-



ly actuate said stop switch to stop said wirebound box blanks with the loop forming mechanism at opposite sides of the center of a space between adjacent box parts, and control means for controlling said power means, said control means being mounted on said machine in such position as to be engaged and actuated by a relatively movable part therein during each loop forming cycle of said machine to cause said power means to shift said stop assembly to alternate ones of said two positions on successive cycles.

2,947,330
BOTTOM LOADING FOR TRUCK TANKS
John A. Savage, 66 Prospect St., Summit, N.J.
Filed Nov. 8, 1957, Ser. No. 695,390
3 Claims. (Cl. 141—1)

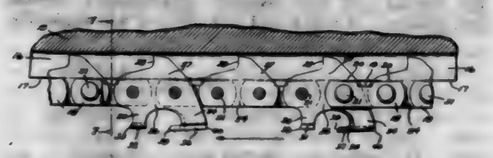


3. Method of filling truck tanks with liquid at the bottom thereof, which comprises storing the liquid in a storage tank from which the liquid may be passed, pumping said liquid from said storage tank through a low level meter on through a bottom filling delivery conduit, maintaining said conduit normally full of liquid, returning residual liquid from a truck tank to be filled back into said delivery conduit and establishing a free level at a point between said conduit and said meter to determine a linear measure of the depth of residual liquid in said truck tank to be filled, setting said meter for the capacity desired with reference to said linear reading, metering said pumped fluid, and cutting off the flow of said liquid through said meter when said desired capacity has been metered into said truck tank.

2,947,331
SAW CHAIN AND TOOTH-CARRYING LINK
Flinn T. Irgens, Wauwatosa, Wis., assignor to Outboard Marine Corporation, Waukegan, Ill., a corporation of Delaware
Filed Nov. 5, 1956, Ser. No. 620,385
2 Claims. (Cl. 143—135)

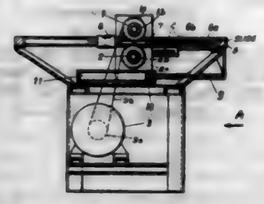
1. A saw chain comprising a plurality of links and pivotal connections and provided at intervals with allo-

chiral routing teeth comprising central mounting shanks and oppositely directed flanges provided with forwardly directed cutting edges, the said chain being provided in advance of respective routing teeth with means for limiting the cutting penetration of said teeth, said means constituting supplemental cutting teeth effective in boring



and normally ineffective for cutting during rectilinear travel, such supplemental teeth having top faces approximately parallel to the path of chain travel and forwardly directed cutting edges and each of which supplemental cutting teeth extends oppositely to the routing tooth which it precedes, whereby to ride on a work surface formed by a preceding routing tooth allochiral respecting the first mentioned routing tooth.

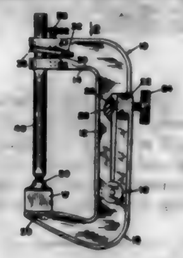
2,947,332
DOUBLE-SURFACE PLANER FOR WOOD STRIP MATERIAL
Manfred Baumann, St. Margrethen, Switzerland, assignor to Bauwerk A.G., St. Margrethen, Switzerland, a company of Switzerland
Filed Aug. 19, 1958, Ser. No. 755,965
6 Claims. (Cl. 144—116)



1. A machine for the production of small parquet battens comprising the combination of two planer knife cylinders arranged parallel to and spaced from each other, a slide for sliding movement between said planer knife cylinders, said slide including a board holder having clamping members engaging respectively the forward and rear edge of the workpiece and being thinner than the space between said cylinders, actuating means carried by said slide for movement of said clamping members between an operative and an inoperative position, drive means connected to said slide for moving of said slide, and control means connected to said actuating means and said drive means for controlling the sequence of actuation of said actuating means and said drive means by first causing operation of said actuating means and subsequently causing operation of said drive means.

2,947,333
C-CLAMP
Alvin L. Johnson, Worcester, Mass., assignor to Edgar G. Vaudreuil, Auburn, Mass.
Filed July 23, 1958, Ser. No. 750,375
2 Claims. (Cl. 144—305)

1. A C-clamp comprising a main frame including a free-ended longitudinal member and a lateral end member therefor, a cross slot in said end member, said slot forming a pair of divided arms, said slot extending inwardly from the extreme end thereof toward the longitudinal member and terminating short thereof in an abutment, an elongated cockable washer in the slot between said divided arms, a yoke at one end of the washer, the legs of the yoke embracing said abutment, aligned apertures in the divided arms and cockable washer, a rod extending through said apertures, said rod having an inner, clamping end, the aperture in the washer having a slightly greater diameter than the rod and the edge portions of the washer aperture frictionally gripping and holding the rod when the washer is cocked with respect to the rod and providing for free sliding motion of the rod when the washer is substantially at right angles to the rod, resilient means normally holding the washer in cocked relation to the rod, selective manually operated means to retract said resilient means to allow the washer to move to rod-free position, said means including a pin, means on the pin to engage the washer at one end, means slid-

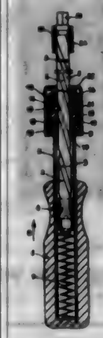


ably mounting the pin, the other end of the pin being exposed for actuation by a finger of the operator to retract the washer from rod holding position against the action of the spring, said main frame also including an anvil member, means pivotally connecting the latter to the longitudinal member adjacent the free end thereof, an anvil on the anvil member, said anvil being generally aligned with the rod axially thereof, adjustable means on the anvil member in cooperative relationship with the longitudinal member to cause pivotal action of the anvil member thereon in a direction to move the anvil toward the clamping end of the rod, said adjustable means being located at a point remote from the pivoting means, said rod being releasable from the cockable washer and freely slidable to lightly clamp a workpiece on the anvil, and the adjustable means being operative to more tightly clamp the workpiece against the clamping end of the rod while the cockable washer holds the rod against retraction.

2,947,334
HAND BRACE
René Antoine Marie Isnardet, 62 Rue du Onze Novembre, Saint-Etienne, France
Filed Dec. 27, 1957, Ser. No. 705,554
Claims priority, application France Jan. 5, 1957
3 Claims. (Cl. 145—54)

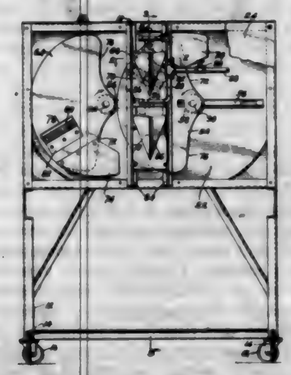
1. In a hand brace comprising a tool-carrying rod provided with at least one pair of respectively left-pitched and right-pitched threads, a socket-shaped handle slidingly fitted over the rear end of said rod and a main spring compressed between the handle and said rod, the provision of a clutch system comprising a collar rigid with the front end of the handle and surrounding coaxially the rod, and provided with axially directed recesses in its front surface, a first ring fitted slidingly over the rod and provided with radial bores facing alternatingly locations of right-pitched and left-pitched threads and opening into the opposite surfaces of the ring, studs carried by the rear transverse surface of the ring and adapted to operatively engage the corresponding recesses in the collar on the handle, balls carried revolubly by the corresponding radial bores of said ring and engageable with the corresponding helical thread of the rod, a second

outer ring coaxially and outwardly fitted over the first ring and engaging the outer surfaces of the balls in the radial bores to urge them into engagement with the rod threads, the inner surface of said ring being provided with recesses registering selectively with the locations of the threads of either direction of pitch along the periphery of the rod to face the balls cooperating with the threads of the same direction of pitch selectively to allow the



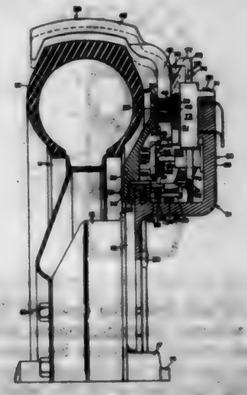
release of said balls with reference to the said threads, a flange rigid with the handle and the rear surface of which extends transversely of the rod axis and faces the front surface of the rings, and a second spring fitted between said flange and ring and urging the ring into operative engagement with the collar, the expansion of the main spring overcoming the action of the second spring to separate the ring and collar forming the clutch upon holding of the rod against rotation with reference to the handle.

2,947,335
CORRUGATED POTATO CHIP MACHINE
Hyman Schachet, 1020 Larimer St., Denver, Colo.
Filed Dec. 16, 1957, Ser. No. 703,091
2 Claims. (Cl. 146—78)



1. In a vegetable slicing machine of the type having a housing with a vegetable receiving aperture therein and a disk carrying a cutter mounted for rotation behind the aperture, the feed mechanism that comprises an open-topped chute attached to the housing in position to direct a vegetable placed therein through the aperture and against the cutter, said chute having two generally-triangular shaped sidewalls diverging from a common edge inclined at an angle between approximately 30° and 40° to the plane of the disk carrying the cutter, and water-jet means located above the chute positioned and adapted to direct a stream of water against a vegetable in the chute thereby forcing said vegetable against the cutter.

2,947,336
TRACTION DEVICE
Donald D. Gutierrez, 444 Railroad Ave., Melios, Ill.
Filed Feb. 26, 1959, Ser. No. 795,646
14 Claims. (Cl. 152—216)

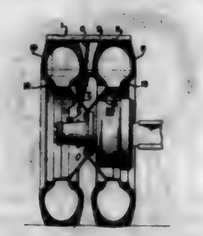


1. An attachment for use with a wheel structure on a vehicle having an electrical power source, the wheel structure including an outer torus member formed about an axis and rotatably mounted relative to a non-rotatable frame, a radial structure fixedly attachable to the frame and having an annular guide radially inwardly of the outer periphery of the torus member; an annular track rotatably mounted relative to the guide; a shoe member having an axially extending shoe portion overlying the torus member and a radial portion extending inwardly alongside the torus member; means mounting the radial portion on the annular track for radial movement whereby the shoe portion may move between a first position engaging the torus member and a second position spacedly outward of the torus member; shoe locking means supported by the annular track automatically engageable with the radial portion for restricting radial movement from said first position; means biasing said shoe member to said second position; primary solenoid means mounted on the radial structure effectively associated with said shoe member for effecting movement of said shoe member from said first to said second position; primary circuit means including a manually operated switch extending from the electrical power source to the primary solenoid for energizing the latter; a locking element movably mounted on the radial structure and biased to a locking position to effect a locking connection between the radial structure and annular track for preventing rotation of the latter; means connecting said locking element to the primary solenoid to automatically effect movement of the element from said locking position upon the primary solenoid moving the shoe member into engagement with the torus member; a secondary solenoid effective to release the locking means on the shoe member; secondary circuit means including a secondary switch extending from the electrical power source to the secondary solenoid for energizing the latter; a tertiary solenoid effective to move the locking element into said locking position and to close said secondary switch to energize the secondary solenoid; and a switch means in the second circuit for energizing the tertiary solenoid.

2,947,337
TRACTION DEVICE
Hugh L. Ambeau, 600 Berard St., Breaux Bridge, La.
Filed Apr. 23, 1957, Ser. No. 654,491
7 Claims. (Cl. 152—220)

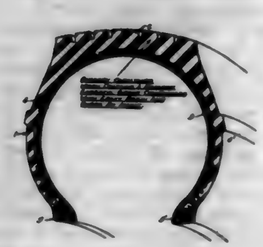
1. In a dual wheel assembly comprising spaced wheel rims and tires, load supporting portions and openings in

the outer of said portions, a traction device therefor comprising a polygonal frame member having longitudinal and transverse base elements providing tire-tread engaging surfaces, said transverse elements adapted to span the lateral dimension of said dual wheel, traction



flanges carried by and extending upwardly from said base elements, and separate fastening means positioned intermediate the ends of said transverse base elements adapted to pass between said dual wheels and through said openings for securing said device to the outer of said dual wheels.

2,947,338
EPOXIDE CURE OF RUBBERY COPOLYMER WHICH CONTAINS A REACTIVE CARBOXYL GROUP
Robert J. Reid, Canal Fulton, and Byron H. Werner, Akron, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Apr. 19, 1957, Ser. No. 653,247
17 Claims. (Cl. 152—330)



1. The method of curing an elastomer which contains from 0.03 to 0.4 chemical equivalent by weight of free and anhydride carboxyl groups (all calculated as —COOH) per 100 parts by weight of elastomer, in which the elastomer is a copolymer of a conjugated diene and an olefinically unsaturated monomer from the class consisting of carboxylic acids and carboxylic acid anhydrides, which method comprises heating the elastomer admixed with a polyepoxide in which the epoxy oxygen group is united to two carbon atoms which are adjacent to one another, the temperature and time of heating being equivalent to 90 to 20 minutes at 250 to 350° F.

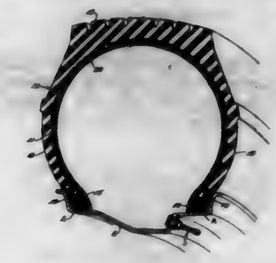
2,947,339
TIRE CONSTRUCTION
William F. Billingsley, Silver Lake, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Mar. 7, 1958, Ser. No. 719,887
12 Claims. (Cl. 152—361)

1. An inflatable vehicle tire comprising a carcass surmounted by a tread with an overhead between the carcass and tread, the said overhead comprising inextensible cord extending angularly back and forth across the circumferential center line of the tire with the cord cross-



ing itself in a closed loop at the location of each change of direction of the cord.

2,947,340
TUBELESS TIRE AND CHAFER THEREFOR
Robert W. French, Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed June 21, 1957, Ser. No. 667,160
5 Claims. (Cl. 152—362)

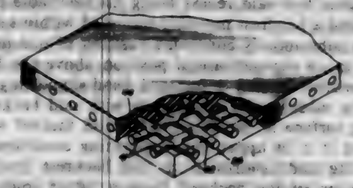


4. A pneumatic tubeless tire comprising a body formed of a plurality of plies of suitable material, a pair of beads at the radially inner edges of said body, and a chafer extending about the radially inner and laternally outer portions of each said bead, said chafer comprising a knitted fabric having courses of multifilament yarn and at least one course of an air-impervious monofilamentary material, said course of monofilamentary material extending longitudinally of said bead and confined to the area intermediate the inner and outer margins of said bead and separating courses of said multifilament yarn, whereby inflationary air is barred from passing to the atmosphere from within said tire.

2,947,341
TUBELESS TIRE
Melvin P. Hershey, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Aug. 15, 1957, Ser. No. 678,289
8 Claims. (Cl. 152—361)

1. In a pneumatic tubeless tire, a chafer strip of woven fabric having monofilament warp and filling elements of abrasion-resistant, air-impervious material, the intersect-

ing portions of said elements being flattened on the outwardly facing side of said fabric and having a thickness



greater than either element to provide abrasion-resistant exterior bearing surfaces of substantial area.

2,947,342
TIRE CHAFER
Harold S. Holloway, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 12, 1957, Ser. No. 683,694
6 Claims. (Cl. 152—362)



1. A tubeless tire comprised of an open-bellied vulcanized rubberized fabric body portion terminating at its edges in two inextensible hoop-shaped beads, said body portion having superimposed thereon a vulcanized rubbery tread portion, a substantially air impervious vulcanized rubbery liner adhered to the belly of said tire, a rubbery sandwich of at least three layers of rubbery material covering said inextensible bead portions over at least part of the radially inner and axially outer portions thereof, the innermost and outermost layers of said sandwich comprised of vulcanizable rubbery polymers stiffened to a substantially non-flowable state by a first vulcanization before the tire is vulcanized, the center layer of said sandwich being in a substantially unvulcanized state until said tire is molded and vulcanized whereby the innermost and outermost layers have a greater state of vulcanization than the state of vulcanization of the center layer.

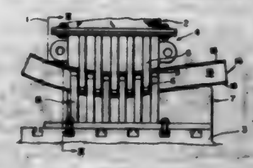
2,947,343
CHAFER FOR TUBELESS TIRES
Irvin J. Sjothun, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 18, 1957, Ser. No. 684,761
8 Claims. (Cl. 152—362)

1. A tubeless tire comprised of an open-bellied vulcanized rubberized fabric body portion terminating at its edges in two inextensible hoop-shaped beads, said body portion having superimposed thereon a vulcanized rubbery tread portion, a substantially air impervious vulcanized rubbery liner adhered to the belly of said tire from bead to bead, said inextensible bead portions covered over at least part of the radially inner and axially outer portions thereof by a layer of rubberized monofilament material and a layer of a vulcanized rubbery material interposed between said monofilament sheet and the other portions of said bead, the rubbery portions of said layers comprised of vulcanized rubbery polymers stiffened to a substantially non-flowable state by a first vulcaniza-



tion before application to the bead of the unvulcanized tire and vulcanized a second time as said tire is molded and vulcanized.

2,947,344
BEAM BENDING MACHINE
Don M. Springer, 261 Parque Drive, San Francisco, Calif.
Filed Mar. 25, 1958, Ser. No. 723,931
2 Claims. (Cl. 153—48)
(Granted under Title 35, U.S. Code (1952), sec. 266)

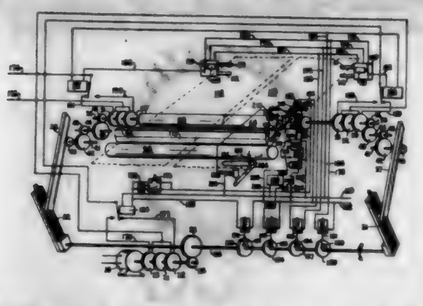


1. An apparatus for arcuately shaping a flange beam member comprising the combination of opposed dies that may be relatively reciprocated and that have curved surfaces for engaging the confronting surfaces of a beam member being shaped and means for self-aligning said beam member while it is being shaped comprising a plurality of bars that are attached to said dies and arranged in a parallel but staggered relationship whereby the bars of one die will partially overlap and be positioned between the bars attached to the other die during the shaping operation, said bars having inturned fingers that extend laterally to the main body of the bars whereby each bar has a surface that contacts a confronting surface of a flange of said beam being shaped, said confronting surfaces being on opposite sides of flanges of said beam, whereby said dies and bars confine spaced portions of said flanges during shaping to prevent unwanted distortion.

2,947,345
MACHINE FOR MAKING ARTICLES FROM MULTIPLE THERMOPLASTIC WEBS
Gilmore T. Schjeldahl, Farmington, Minn., assignor to G. T. Schjeldahl Company, Northfield, Minn., a corporation of Minnesota
Filed Oct. 8, 1958, Ser. No. 766,982
10 Claims. (Cl. 154—42)

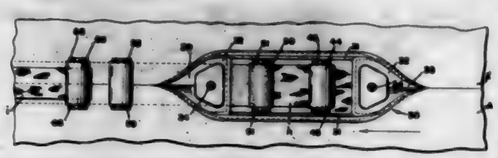
1. A side-weld machine for a plurality of thermoplastic webs comprising in combination, a plurality of independently movable web-advancing means, a single drive adapted intermittently to impart simultaneous movement and simultaneous quiesence to said web-advancing means, the movement of each being at a predetermined independent rate of speed, said web-advancing means each causing a web to move into side-by-side alignment, a single knife element positioned beyond the web-advancing

means in the direction of travel of each web, and means adapted to bring said single knife element into simulta-



neous cutting engagement with all of the webs when in a quiescent state.

2,947,346
METHOD AND APPARATUS FOR MAKING FOAM-BACKED MATERIALS IN BROAD WIDTHS AND PRODUCT THEREOF
Robert D. Thompson, 1115 Jefferson Ave., Akron, Ohio
Continuation of application Ser. No. 486,560, Jan. 27, 1954. This application Oct. 25, 1956, Ser. No. 620,785
14 Claims. (Cl. 154—42.3)



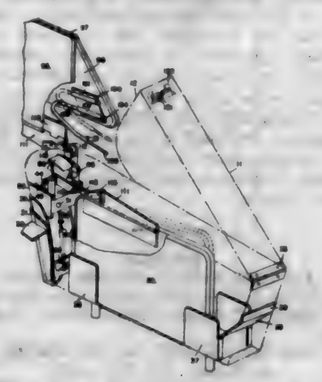
1. An apparatus for the manufacture of multiple strips of carpet having layers of vulcanized sponge rubber attached to the undersides thereof, comprising means for conveying two strips of carpet in edge-to-edge relation, means for separating the adjacent edges of the sponge rubber layers from the undersides of the strips, means to apply a splicing element having an adhesive coated side with said coated side in contact with the exposed undersides of the strips while the sponge rubber layers are separated from the strips, and means to adhesively unite the edges of the sponge rubber layers to the other side of said splicing element.

2,947,347
AUTOMATIC PROJECTING HEADREST FOR RECLINING CHAIRS
Albert M. Speamd, Los Angeles, Calif.
(% Charlton Company, Fitchburg, Mass.)
Filed Sept. 5, 1957, Ser. No. 682,142
2 Claims. (Cl. 155—107)



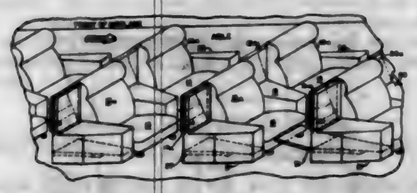
1. A reclining chair comprising a stationary frame and a backrest swingably mounted thereon for disposition between sitting and reclining positions thereof, said backrest having a recess therein at the rear portion only thereof, the front surface of said backrest being smooth and continuous and said recess being unobservable from the front, and a headrest movably mounted within said recess from a substantially concealed position of non-use therewithin to an exposed useful position above the backrest, said headrest having a forward head-supporting surface which is substantially continuous with said backrest supporting surface at the forward portion thereof when the headrest is in its upper head-supporting condition, means projecting said headrest from said backrest upon swinging motion of the backrest from a sitting toward a reclining position, and means for moving said headrest forwardly so that it moves from its cavity at the rearward portion of said backrest upwardly and forwardly into useful position as above stated, said means comprising a link pivotally mounted with relation to said stationary frame and connected to and supporting said headrest, said link being slidably mounted upon said backrest and bodily movable relative to the stationary frame, said link being movable in a generally longitudinal direction relative to the backrest upon said swinging motion of the backrest, and inter-engaging cam means on said backrest and said link, said cam means including a wedge having a surface inclined relative to the direction of motion of the link, and a follower to engage the wedge surface, the inclination of the wedge surface being arranged to move said link and headrest bodily forwardly with relation to said backrest at a predetermined point in the motion of the link as it is projected in a longitudinal direction during said swinging motion from a sitting toward a reclining position, said interengaging cam means being spaced apart in the direction of the motion of the link when the headrest is in said substantially concealed position.

2,947,348
ARM REST AND CONCEALED TABLE UNIT
Wesley L. Peckham, Coral Gables, Fla., assignor to L. B. Smith Aircraft Corporation, Miami, Fla., a corporation of Ohio
Filed Aug. 1, 1958, Ser. No. 752,460
8 Claims. (Cl. 155—128)



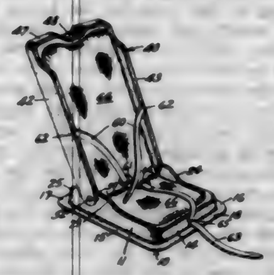
1. An arm rest and concealed table unit, comprising a hollow body means having means for securing the unit between a pair of adjacent seats, said body means having a movable portion providing access to the interior thereof, a foldable table pivotally mounted within said body means, said table including first and second portions hingedly connected to one another and adapted to be folded into substantially parallel relationship with one another, said foldable table being pivotable out of said hollow body means into operative position extending laterally of an adjacent seat, said foldable table being supported by a pivotal support structure, said support structure including a pivot link, said body means having an opening formed therein for receiving a portion of said pivot link, and said pivot link including a portion adapted to be disposed adjacent said opening for providing a closure for the opening and preventing the entrance of foreign matter through the opening.

2,947,349
SEAT AND SEATING ARRANGEMENT
Karl D. Kryter, 154 Hampshire Road, Wellesley Hills, Mass.
Filed Apr. 10, 1958, Ser. No. 727,745
5 Claims. (Cl. 155—130)
(Granted under Title 35, U.S. Code (1952), sec. 266)



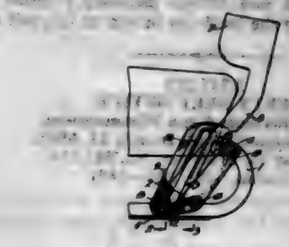
1. A seating arrangement for use in passenger-carrying vehicles comprising sets of spaced seats arranged at an acute angle to the side wall of the vehicle, partially enclosed foot rests spaced forwardly of said seats and aligned therewith for supporting the feet of the occupants thereof, said foot rests having top portions positioned to serve as arm rests for the occupants of the next forward set of seats.

2,947,350
INFANT CHAIR HAVING A RECLINABLE BACK
Shirley A. Davis, 1567 Euclid Ave., St. Paul, Minn.
Filed Nov. 19, 1957, Ser. No. 697,362
4 Claims. (Cl. 155—152)



2. A chair having a reclinable back for infants, comprising a base having means for supporting said base in at least four point suspension, a seat having a low center of gravity defined in said base within the polygon defined by said points of suspension, a lateral groove defined in said base within said polygon immediately adjacent and below the rearward end of said seat, said groove extending continuously and substantially entirely along the full width of said seat, a back member pivotally associated with said base with its lower end resting in said groove, means for retaining said back member in said groove while allowing said back member to pivot about the point of abutment between the lower edge thereof and the surface of said groove, and means for retaining said back member at various angles of reclination with respect to said base.

2,947,351
FITTINGS FOR AUTOMOBILE SEATS
Gerard C. Maclaine, 26 Lansell Crescent, Camberwell, Victoria, Australia
Filed July 18, 1958, Ser. No. 749,406
4 Claims. (Cl. 155—160)



4. In combination with a seat having a pair of rigid frame members on each side thereof, each frame member having an upwardly extending rear portion, a pivot pin on a lower rear portion thereof, and a fixed projection on the upwardly extending portion, said seat having a back rest provided with a pair of depending arms apertured at their lower ends to releasably engage said pivot pins, and adapted to be supported by said projections, a fitting for each of said frame members comprising a plate having an aperture formed in a lower end thereof for removably receiving one of said pins, and being recessed at an upper rear portion to removably receive one of said projections, an upwardly extending slot defined in said plate having its upper portion terminating above said projection when the plate is thus mounted on a frame member, and a pivot member extending through each of the apertures in said arms into the slot in one of the fittings whereby the back rest may be disposed in a substantially upright position with the pivot members at the lower portions of said slots and said arms bearing against said projections, or in a substantially level position with the pivot members disposed at the uppermost portions of said slots and resting on said projections, selectively, said arms being engageable on the outside of said plates and said pivot members comprising inwardly extending pivot studs dimensioned to be guided along said slots in close-fitting relationship.

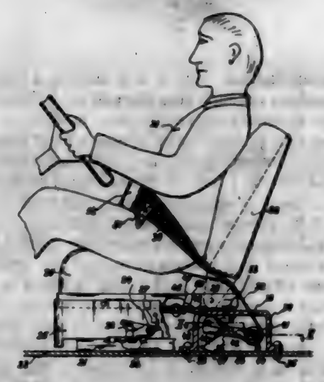
2,947,352
ADJUSTABLE HEAD RESTS FOR SEATING UNITS
Fridtjof F. Schliephacke, Berlin-Dahlem, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed June 8, 1956, Ser. No. 590,283
1 Claim. (Cl. 155—177)



In a reclining article of furniture, a stationary frame, seating elements movably mounted on said frame for movement into more or less reclining positions, said seating elements including a seat and a back rest both of which are tiltable with respect to the frame, said seat being pivoted to the frame, a head rest pivotally mounted on top of the back rest for forward tilting movement about an axis fixed with respect to the back rest, a head rest drive lever having a fulcrum point on the stationary frame and pivoted at a point spaced from said fulcrum point to the seat at a point eccentric to the point at which the

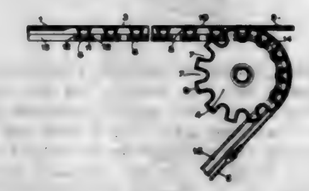
seat is pivoted to the frame, for turning said lever about its fulcrum point when the seating elements are tilted, and linkage connected to the head rest and to a part of the drive lever eccentric to the fulcrum point of the lever on the frame for tilting the head rest when the seating elements are tilted, said linkage including a thrust link pivoted to a part of the head rest in rear of its pivot axis.

2,947,353
SAFETY BELT DEVICE
Heinrich Ferdinand von Wissmersperg, 15721 Rosemont Road, Detroit 23, Mich.
Filed May 24, 1956, Ser. No. 587,074
23 Claims. (Cl. 155—189)



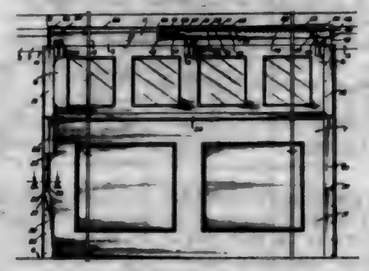
1. In combination, a vehicle structure, a seat mounted on the vehicle structure, a clamping device, means rigidly and immovably mounting said clamping device on the vehicle structure adjacent but free of the seat, a seat belt having one end fixedly anchored to the seat at a point spaced from the clamping device, said belt extending from said anchoring point on said seat at said one end through said clamping device and from said clamping device in a direction forwardly and upwardly of the seat, the other end of said belt being arranged for securing a passenger in the seat, said clamping device being engageable with an intermediate portion of the belt with substantially non-yielding clamping pressure to resist movement of the belt relative to the clamping device whereby to anchor both the seat and the passenger on the seat to said vehicle structure.

2,947,354
MOVABLE PANEL
Henri Nectoux, Saint-Germain-en-Laye, France, assignor to Societe des Forges et Ateliers du Creusot, Paris, France, a company of France
Filed Feb. 5, 1957, Ser. No. 638,311
Claims priority, application France Feb. 17, 1956
2 Claims. (Cl. 160—91)



1. A movable panel providing a continuous connection between a fixed element and a movable element of a wall having a drum adjacent said fixed element and a flexible metallic strip winding around said drum and secured to said movable element whereby said strip is deflected out of alignment with the plane of the fixed wall element, comprising a plurality of separate equally spaced transverse girders, a strip of elastic material for and adhesively secured to each of said girders and to said flexible metallic strip, carriages at each end of each of said girders, a track on each side of said metallic strip for said carriages, and teeth in said drum receiving said girders, said metallic strip bearing on and passing partially around said drum.

2,947,355
DOOR AND OPERATING STRUCTURE THEREFOR
Tandy B. Thornton, Kansas City, Mo., assignor to Ellis Saunders and Robert W. Saunders, both of Kansas City, Mo.
Filed Nov. 6, 1956, Ser. No. 620,651
5 Claims. (Cl. 160—191)



1. An overhead door structure comprising, a frame having spaced door posts, a sill and a header defining a doorway opening, a door in the doorway opening and movable to open and close same, guide tracks on the door posts for defining the path of movement of the door as said door is moved to open and closed positions, guide means carried by the door and movable in the guide tracks for guiding the door during opening and closing movement of said door, a lever, means pivotally mounting one end of said lever on the header for swinging movement toward and away from said header, spring means having one end anchored relative to the door header and the other end connected to the lever in spaced relation to the pivotal mounting thereof whereby the moment of force applied by the spring to the lever increases as the spring force decreases, flexible members having ends secured to opposite sides of the door, means anchoring the other ends of the flexible members relative the header, and means on the other end portion of the lever and having movable engagement with the flexible members between the anchoring means for said other ends and the ends secured to the door whereby the force applied to the lever by the spring is opposite that applied by the flexible members and the raising pull on the door increases as the door is moved to opened position.

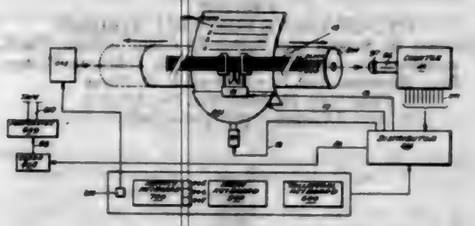
2,947,356
PAPER MACHINE DANDY ROLL CONSTRUCTION
Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed Mar. 11, 1957, Ser. No. 645,254
3 Claims. (Cl. 162—314)

1. In combination with a hollow dandy roll provided with a foraminous surface and having plate members secured at opposite ends thereof, the improvement which comprises an annular flange on one plate member defining with said plate member an opening therethrough of substantial diameter at the operating side of the roll to permit ready visual and manual access to the interior thereof, and a hollow journal on the other plate member of substantially greater length than the annular flange and defining with said other plate member an opening therethrough at the driving side of the roll of lesser diameter than the opening at the operating side, the journal being of a length sufficient that driving means located



on the end of said journal remote from the roll are essentially free of contact with stock deposited on the roll to avoid damage to the driving means therefrom, and said annular flange, plate members, dandy roll and journal providing a stepped passage extending entirely therethrough.

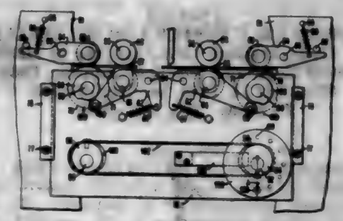
2,947,357
KEYBOARDS FOR AUTOMATIC COMPOSING MACHINES
Georges Pierre Bafour, 27 Rue de la Convention, and André René Blanchard, 57 Rue Vercingetorix, both of Paris 15, France, and François Henri Raymond, Saint-Germain en Laye, France. (138 Blvd. de Verdun, Courbevoie, France)
Filed June 12, 1957, Ser. No. 666,265
Claims priority, application France June 20, 1956
22 Claims. (Cl. 164—112)



1. In a message-recording system, in combination, a set of first keys, a set of second keys, a plurality of symbol-bearing members each actuatable by one of said first keys and by one of said second keys for producing a mark on a blank, characterization means selectively controlled by said keys for distinctively varying the appearance of said mark depending on whether said members are actuated by operation of a first or a second key, and mechanism for registering on a recording medium a coded entry individually identifying the operated key.

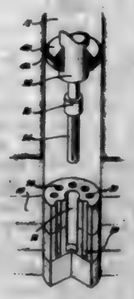
2,947,358
ROLL SPACING FOR A CARD PUNCH MECHANISM
John E. Hawxhurst, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 27, 1959, Ser. No. 816,279
5 Claims. (Cl. 164—115)

1. In a high speed card punch comprising a punch mechanism, sensing means for reading the cards and sending an impulse to the punch mechanism to actuate the punch to punch the card, feed rolls, an adjustable support frame for supporting the feed rolls, roll spacing means on the adjustable support for opening the rolls and maintaining the same distance that the rolls must travel to engage the card regardless of the thickness of the card



to maintain the same timing relationship of card movement with respect to the punch and sensing means.

2,947,359
METHOD AND APPARATUS FOR DETERMINING DIRECTION OF FLUID FLOW IN BOREHOLES
Virgil A. Jossendal, Pomona, and Richard J. Stegemeier, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Apr. 8, 1957, Ser. No. 651,396
8 Claims. (Cl. 166—4)



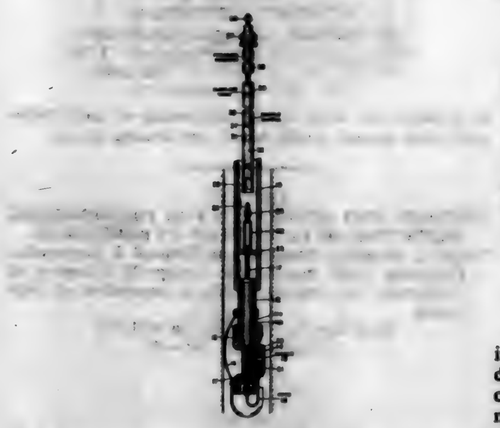
1. The method for determining the direction of flow in the horizontal plane of a fluid moving through an underground fluid-permeable stratum penetrated by a borehole, which method comprises coaxially positioning a radiation detector within said borehole opposite said stratum, said detector being capable of scanning around the azimuth, establishing within said borehole and around said radiation detector an annular fluid-permeable solid body containing a radioactive material which is soluble in said fluid, isolating said solid body from the remainder of the borehole, and, after a period of time sufficient for said radioactive material to be displaced radially from said solid body into said stratum substantially only by the hydrodynamic force of said fluid, measuring with said radiation detector the radiation intensity in a plurality of directions around the azimuth.

2,947,360
TREATMENT OF CLAYEY MATERIALS
George G. Bernard, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed Jan. 14, 1958, Ser. No. 708,743
12 Claims. (Cl. 166—9)

1. The method of preventing swelling of clay-containing material upon contact with non-saline water comprising contacting said material with at least one metal coordination compound of an alkyl polyamine in which the metal component is selected from the group consisting

of copper, cobalt, nickel, platinum, and palladium, and thereafter first contacting said material with non-saline water.

2,947,361
RETRIEVABLE TESTER FOR OIL WELLS
Walter E. Hyde, Duncan, Okla., assignor to Halliburton Oil Well Cementing Company, Duncan, Okla.
Filed July 25, 1958, Ser. No. 751,842
2 Claims. (Cl. 166—100)



1. A side wall packer assembly for use in testing oil wells or the like comprising a section of drill pipe or the like, a mandrel vertically and telescopically movable in said section of pipe, a J-slot connector coupling said mandrel to said section of pipe and adapted to hold the mandrel in fixed position in the section of pipe while the assembly is being lowered into the wells, drag means on said mandrel for preventing rotation of the mandrel in the well so that the J-slot connector can be uncoupled upon rotation of the section of drill pipe, a spreader block mounted to swivel on the section of pipe, a plurality of slips mounted on the spreader block and adapted to engage the wall of the well upon relative telescopic movement of said mandrel in said section of drill pipe, one of said slips being a special slip and provided with a chamber, a pad for sealing against the wall of the well bore to prevent well fluid from flowing into said chamber, a tube extending up through the mandrel, a flexible hose connecting the lower end of the tube to the chamber in said special slip, a cylinder fixed in said lower section of pipe, the upper end of said tube and lower end of said cylinder providing a slip joint coupling, the arrangement thus providing for the flow of fluid from the chamber into the cylinder.

2,947,362
FISHING TOOL
Thomas C. Smith, Houston, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Filed Sept. 6, 1956, Ser. No. 608,387
8 Claims. (Cl. 166—103)

1. A combination washover and grappling tool comprising, a washover pipe adapted to be lowered into a well bore and having an internal diameter sufficient to fit about a fish in the well bore, a grappling assembly in the washover pipe including a generally elongate body, slips carried by the body arranged to grip an inner wall of the washover pipe, a mandrel slidably extending through the body, a slip expander on the mandrel engaging and expanding the slips on downward movement of the mandrel relative to the body, drag members carried by the body yieldingly engaging the inner wall of the washover pipe, shear pins initially securing the grappling assembly to the washover pipe, a grapple carried by the mandrel for engaging and grappling the fish, said washover pipe having an annular undercut portion adjacent



its lower end adapted to receive said drag elements on downward movement of the body relative to the washover pipe thereby preventing such continued downward movement, said body and mandrel one of which is provided with a J-slot and the other with a pin movable in the J-slot for releasably locking the mandrel and body relative to one another.

2,947,363
FILL-UP VALVE FOR WELL STRINGS
Thomas H. Sackett and Parker F. Glass, Avenal, Calif., assignors, by mesne assignments, to Johnston Testers, Inc., Houston, Tex., a corporation of Texas
Filed Nov. 21, 1955, Ser. No. 548,061
5 Claims. (Cl. 166—224)



1. A fill-up valve assembly for use with well strings comprising a tubular housing adapted to be inserted in a well string, a sleeve valve slidably mounted within said housing for limited longitudinal movement relative thereto, radial ports in said housing, radial ports in said sleeve valve in fluid communication with the radial ports in said housing when said sleeve valve is in its uppermost position relative to said housing, inwardly extending resilient latch fingers connected to said housing and normally retaining said sleeve valve in its uppermost position relative to said housing, and a member sized to drop through a well string to seat in and close the upper end of said

sleeve valve for moving said sleeve valve downwardly relative to said housing to move said radial ports out of fluid communication.

2,947,364
PROPELLER-DRIVING COMPOUND GAS-TURBINE ENGINE FOR AIRCRAFT
Lionel Haworth, Littleover, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Filed Jan. 20, 1956, Ser. No. 560,366
Claims priority, application Great Britain Jan. 25, 1955
3 Claims. (Cl. 170—135.71)



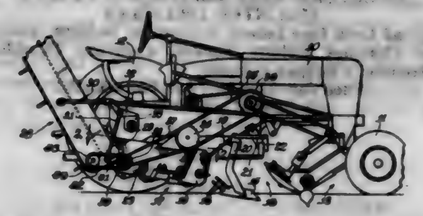
1. A compound propeller gas-turbine engine comprising in flow series a low-pressure compressor, a high-pressure compressor, a high-pressure turbine, the high-pressure compressor and high-pressure turbine being in permanent driving connection, and a low-pressure turbine; a propeller, the propeller and low-pressure turbine being in permanent driving connection; a one-way clutch connection between the low-pressure turbine and the low-pressure compressor permitting the low-pressure turbine to drive the low-pressure compressor and permitting the low-pressure compressor to over-run the low-pressure turbine; and a driving connection interconnecting the high-pressure compressor and the low-pressure compressor, said driving connection including clutching means permitting the driving connection to be rendered operative and inoperative.

2,947,365
MEANS FOR DYNAMICALLY BALANCING ROTOR BLADES
Ralph R. Lightfoot, Stratford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Continuation of application Ser. No. 219,723, Apr. 6, 1951, which is a division of application Ser. No. 613,190, Aug. 28, 1945, now Patent No. 2,552,727, dated May 15, 1951. This application Feb. 23, 1956, Ser. No. 567,390
15 Claims. (Cl. 170—159)



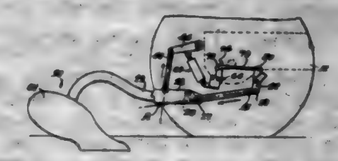
1. In rotary wing aircraft, a rotor drive shaft, a plurality of variable pitch rotor blades pivotally mounted on said shaft for flapping movements and rotatable substantially in a plane, a horn carried by each blade for moving it about its pitch varying axis, pilot controlled means for holding each blade in a predetermined pitch varying regime as the blades rotate including a tiltable swashplate mechanism and link means connecting each of said blade horns with said swashplate mechanism, means for dynamically balancing the pitch changing moments of the several blades comprising weight supporting means secured to each blade at a substantial angle to the chordline of said blade and extending on opposite sides of said pitch changing axis, weights carried by said supporting means on opposite sides of said axis to produce a cyclically varying pitch changing couple in response to centrifugal force resulting from rotation of said blades, and means for adjusting each of said weights with respect to its blade to change the pitch changing moments of the several blades until said blades are dynamically balanced.

2,947,366
BEET HARVESTER CLOD CRUSHER
John R. Orelind, Wilmette, and Everett M. Clark, Naperville, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed May 14, 1958, Ser. No. 735,293
1 Claim. (Cl. 171—116)



For use in connection with a digger for beets and the like, a cleaning device arranged to receive the beets and clods of earth and debris from the digger, comprising a supporting frame, a horizontal shaft rotatably mounted in said frame, spaced wheels on said shaft, each said wheel including a plurality of radially projecting arms arranged to engage and advance generally horizontally the beets and clods delivered to the cleaning device, and each said arm having a convex beet-engaging edge, a relatively stationary arm mounted in said frame on the side of said shaft opposite the direction from which the beets are received by the cleaning device and extending generally vertically in the path of angular movement of the arms on said wheel, each said wheel arm and its associated stationary arm having a scissoring action with respect to beets and clods caught therebetween, and the angle formed, by the beet-engaging edge of said relatively stationary arm with a line tangent to the convex edge of the other arm at the point of contact thereof with the beets and clods being such that clods are frictionally held between said arms and crushed thereby, while beets are expressed radially outwardly therebetween.

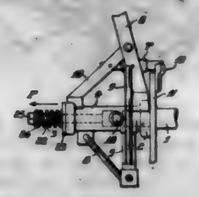
2,947,367
DRAFT CONTROL FOR IMPLEMENTS
John R. Orelind, Wilmette, and Otto E. Johnson, Canton, Ill., assignors to International Harvester Company, a corporation of New Jersey
Filed Oct. 5, 1956, Ser. No. 614,110
10 Claims. (Cl. 172—239)



1. Implement attaching apparatus for a tractor, comprising a longitudinally extending articulated draft structure carrying an implement at its rear end and pivotally connected at its forward end to the tractor in draft-receiving relation, said latter connection including means accommodating horizontal movement of said draft struc-

ture relative to the tractor in response to excessive draft forces acting on the implement, said draft structure including pivotally connected front and rear sections accommodating vertical floating of the rear section relative to the front section, a lift arm mounted on the tractor, a generally vertical lift link pivotally connecting said lift arm to said rear section, whereby a virtual hitch point is provided at the intersection of lines drawn through said lift link and said forward section, and a force transmitting member on the tractor connected to said draft structure and to said arm and operative to transmit directly the horizontal movement of said draft structure to said lift arm to rock the latter.

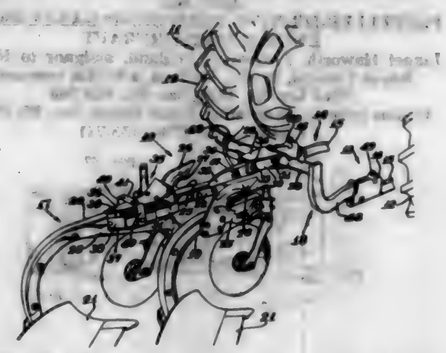
2,947,368
OVERLOAD RELEASE FOR ROTATABLY MOUNTED DRAWBAR
Edmond Leon Jean Jadoul, Sauveniere, Belgium, assignor to Charrues Meloche, Société Anonyme, Gembloux, Belgium, a Belgian company
Filed Jan. 22, 1957, Ser. No. 635,582
13 Claims. (Cl. 172—264)



1. A draft attachment for a tractor-agricultural implement combination comprising a bushing mounted on the tractor, a drawbar for the agricultural implement extending through and beyond said bushing, said drawbar being slidable and rotatable in said bushing, coacting locking means on said bushing and drawbar to prevent rotation of said drawbar in said bushing, coacting latching means on said bushing and drawbar to keep said bushing and drawbar engaged under normal operating conditions, tensioning means carried by the drawbar and acting yieldingly on the bushing to keep said locking means engaged, said tensioning means being overcome under the pull of an obstruction engaged by the agricultural implement, causing relative sliding movement between said bushing and drawbar and disengagement of said coacting latching and locking means, whereby the implement may be rotated out of the path of the obstruction, said tensioning means thereupon pulling said drawbar back to its original position in the bushing and causing reengagement of said latching and locking means.

2,947,369
SELF-COUPLING HITCH WITH OVERLOAD RELEASE
Hiram P. Smith, Chicago, and Otto E. Johnson, Canton, Ill., assignors to International Harvester Company, a corporation of New Jersey
Filed Mar. 13, 1956, Ser. No. 571,254
3 Claims. (Cl. 172—269)

1. The combination with a tractor having an implement attaching structure forming a part thereof including laterally spaced socket members, of a two-part plow comprising a tool-carrying frame portion and a hitch portion, said hitch portion including a transverse bar member, a pair of laterally spaced rigid shaft members affixed to and projecting forwardly from said bar member adapted to be slidably received in said tractor socket members, and a third rigid shaft member affixed to and projecting rearwardly from said bar member between said forward shaft members, said tool-carrying frame portion having a socket member thereon to slidably receive and form an integral connection, releasable under overload, with said rearwardly projecting shaft member, and a pair of laterally spaced hook members mounted



on said tool-carrying frame portion on opposite sides of said socket member adapted to partly encircle said transverse hitch bar to form therewith a rigid implement frame.

2,947,370
GARDEN TOOL
Milton A. Nelson, Rockford, Ill., assignor to Thomas A. Nelson, Rockford, Ill.
Filed July 26, 1955, Ser. No. 524,464
5 Claims. (Cl. 172—375)

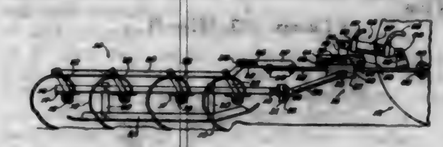


1. A hand garden tool comprising a sheet metal body having a straight longitudinal centerline, an end section of the body having its side portions curved upwardly about the longitudinal centerline of the body and terminating with the side edges thereof in abutting relation above the longitudinal center line of the body to define a tubular handle for the tool, the other end section of the body having its side portions curved upwardly from the longitudinal centerline of the body in a wide arc, the edges of said other section tapering inwardly toward its free end to form a scoop-like blade, and a plurality of cultivator tines attached to the handle adjacent its free end, said tines projecting downwardly below the longitudinal centerline of the body and having lower end portions slanting downwardly from the free end of said handle in a direction toward the free end of said other section.

2,947,371
IMPLEMENT CONTROL APPARATUS
Russell E. Rice, Stockton, Calif., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Dec. 9, 1957, Ser. No. 701,419
6 Claims. (Cl. 172—605)

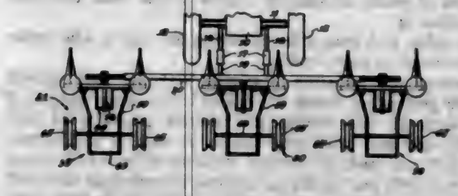
1. In an implement having a frame and an earth-working tool relatively movable between operating and transport positions of the tool, a hitch structure including a relatively stationary part and a member longitudinally slidable relative thereto, means operatively connecting said tool to said relatively stationary part, means

operatively connecting said slidable member to said implement frame for moving the latter relative to said first mentioned means to raise and lower the earth-working tool, locking means releasably connecting said slidable member to said stationary part, whereby draft is trans-



mitted therethrough to said implement frame, a hydraulic ram mounted on said hitch structure, and means operatively connecting said ram to said slidable member for moving the latter relative to said stationary part to raise and lower the earth-working tools including means actuated by said ram for releasing said locking means.

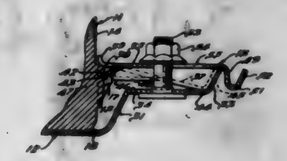
2,947,372
MULTI-ROW PLANTER
William N. Olson, Canton, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Mar. 25, 1958, Ser. No. 724,129
7 Claims. (Cl. 172—624)



1. The combination with a tractor having a vertically movable draft structure adapted for lateral tilting about a longitudinal axis, of an implement comprising a transverse tool bar carried by said draft structure for lateral tilting therewith, a longitudinally extending pivot member secured to each end of said tool bar, an earth-working unit including laterally spaced furrow openers mounted on each said pivot member for lateral tilting as a unit about the axis thereof, a central longitudinally extending pivot member, another earth-working unit including laterally spaced furrow openers mounted on said central pivot member for lateral tilting about the axis thereof, means mounting said central pivot member on said tool bar for vertical movement thereof and of said earth-working unit relative to said tool bar, including vertically spaced generally parallel links pivotally connected at one end to said tool bar and at their other ends to said central pivot member.

2,947,373
BATTERY MOUNTING APPARATUS
Harland D. Wilson, Lathrup Village, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Aug. 11, 1958, Ser. No. 754,297
2 Claims. (Cl. 180—68.5)

1. A battery hold-down device comprising, in combination, a battery case having integral laterally extending ribs at each end thereof, said ribs being located adjacent and parallel to the bottom of said battery case, a support tray having at one end thereof an end wall provided with overhanging flange means beneath which the rib at one end of said battery case projects to hold down said one end of the battery case, a selectively positionable clamp member to hold down the other end of said battery case, said clamp member being fulcrumed on the other end of said support tray on a raised extension thereof and being



provided with a clamping portion, abutment means on said clamping member coacting with an end wall of said raised extension and defining the extent of said clamping portion, and pressure means acting through said raised extension on said clamp device causing the clamping portion thereon to apply hold-down pressure on the rib at said other end of the battery case.

2,947,374
BATTERY HOLD-DOWN ADAPTER
Edwin L. Moore, Muncie, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 6, 1959, Ser. No. 797,413
2 Claims. (Cl. 180—68.5)

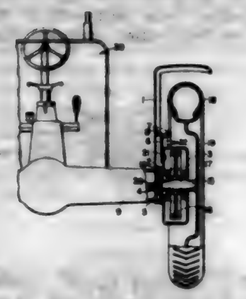


1. A battery hold-down adapter, comprising, a frame for use in mounting batteries of differing length on one side of a supporting shelf and including a pair of end portions having a pair of transversely extending tabs as well as two spaced longitudinally extending side frame portions attached adjacent opposite ends to said tabs, and a pair of separable, longitudinally slidable transverse frame members having hook shaped ends adapted to be positioned and placed under said longitudinally extending side frame portions.

2,947,375
ADJUSTABLE MUDGUARD
Heinz Lehmann, Schoenebeck (Elbe), Germany, assignor to VEB Traktorenwerk Schoenebeck, Schoenebeck (Elbe), Germany, a corporation of Germany
Filed May 11, 1959, Ser. No. 812,457
Claims priority, application Germany May 13, 1958
6 Claims. (Cl. 180—75)

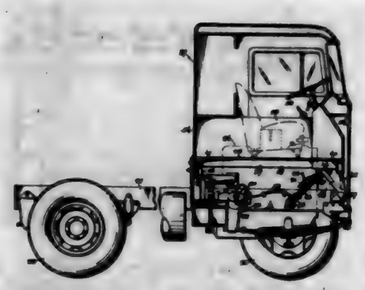
1. In a prime mover having a pinion-driven wheel, in combination, an axle housing, a pinion-gear housing swingable about said axle housing and provided with a screw-threaded neck, a driven gear within said pinion-gear housing, said driven gear being provided with an axle for said wheel projecting from said pinion-gear housing, a mudguard for said wheel mounted on said pinion-gear housing with freedom of angular adjustment

about said axle, locator means on one of said housings eccentrically engaging said mudguard, and a lock nut



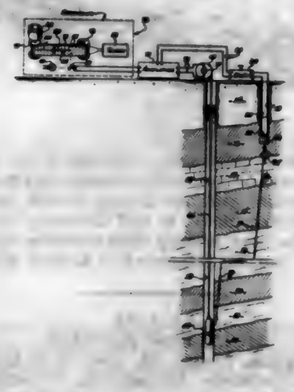
threadedly engaging said neck, said lock nut releasably clamping said mudguard between itself and said pinion-gear housing.

2,947,376
AUTOMOTIVE VEHICLE WITH TILTING OVER-ENGINE CAB
Robert C. Norris, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington
Filed Feb. 26, 1958, Ser. No. 717,589
17 Claims. (Cl. 180—89)



1. In a tilting-cab vehicle, in combination: a vehicle main frame presenting a cross-member lying to the rear of a vehicle engine and elevated above the level occupied by transversely spaced longitudinal principals of said main frame, a cab having a frame resting by its rear end upon said cross-member and having transversely spaced apart standards, one for each side of the cab, depending as fixed adjuncts from the front end thereof, trunnions on the forward end of the main frame engaging the lower ends of the standards to support the cab for forward tilting movement about a transverse horizontal axis, latch structure releasably securing said rear end of the cab to the cross-member and power means extending between the main frame and the cab for tilting the cab, said cab presenting a tunnel upon its under side arranged to overlie said vehicle engine, the standards each comprising an invertedly mounted tripodal-like structure of which two of the legs have their upper ends secured to the underside of the cab at widely spaced point on an imagined line extending longitudinally of the cab adjacent the related side of the tunnel and the other of which three legs has its upper end secured to the underside of the cab at a point spaced laterally to the same side of said tunnel a material distance beyond said imagined line.

2,947,377
WELL-SHOOTING SYSTEM
Raymond A. Peterson, Altadena, Calif., assignor to United Geophysical Corporation, Pasadena, Calif., a corporation of California
Continuation of application Ser. No. 313,020, Oct. 3, 1952. This application Nov. 29, 1956, Ser. No. 625,190
6 Claims. (Cl. 181—.5)



1. In a well shooting apparatus in which seismic waves are generated at a seismic wave generating station located at a point spaced laterally from a well containing liquid, and in which seismic waves are received at a series of points at different depths in said well, the combination of:

a cable and means for lowering an end of said cable in said well to such depths;

means for initiating a seismic wave at said seismic wave generating station while said cable end is supported at each of said depths, the relative positions of said cable end and generating station at each of said depths in said well and the relative velocity of travel of waves in the cable and in the formations surrounding said well being such that waves travel from said seismic wave generating station to said cable and along the cable in less time than seismic waves travel thereto through formations surrounding the well;

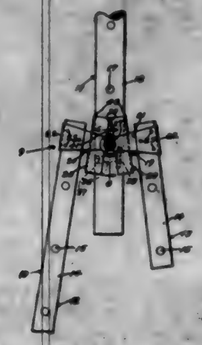
a pressure-responsive transducer connected to said cable end, said transducer being selectively responsive to changes in pressure in the well liquid compared with vibrations transmitted to said transducer along the length of the cable, said transducer comprising a case adapted to be lowered in said well, said case having a relatively thick wall portion having a opening therein and a resilient external wall member closing said opening, and also comprising means located within said case for detecting movement of said resilient wall member in response to a change in pressure of the liquid in the well; and

means for measuring the time elapsed between the initiation of each of said seismic waves and the detection of the inception of pressure changes produced in the well by seismic waves traveling through such formations to each of said depths, whereby the velocity of transmission of seismic waves from said seismic wave generating station through formations of the earth to said depths may be determined.

2,947,378
EXTENSIBLE TRESTLE
Bergur L. Brynjolfsson, 4520 N. Clifton Ave., Chicago, Ill.
Filed June 29, 1959, Ser. No. 823,609
4 Claims. (Cl. 182—105)

1. An extensible trestle comprising, in combination with a pair of ladders disposed in downwardly diverging

relation to one another and forming a trestle base and a ladder extending upwardly from the base and forming an extensible upper section of the trestle; connecting and clamping units hingedly connecting the upper ends of the base ladders to one another and adjustably supporting the extensible section ladder therebetween, each of said units including a pair of bracket arms rigidly secured to and extending inwardly from complementary rails of the two base ladders and having overlapping inner ends disposed between said rails, a fastening extending loosely through said overlapping inner ends and pivotally connecting said rails of the two ladders to one another between the ladders, each of said units including a pair of elongated clamping elements of channel shaped cross section having complementary longitudinal edges provided with overlapping extensions through which said fastening loosely extends for pivotally mounting said clamping elements on inner sides of the bracket arms,



said fastenings being spaced from upper and lower ends of said clamping elements, the clamping elements of said two units being disposed between the bracket arms thereof, the rails of the ladder of the extensible upper section fitting slidably in said pairs of clamping elements, the other inner longitudinal edges of the clamping elements of each pair being spaced apart a distance sufficient to permit the rungs of said upper extensible ladder to slide freely therebetween for extending or retracting said upper section vertically relative to the trestle base, and means for closing the gap between said inner edges of said clamping elements, beneath the fastening thereof, to provide a support for one of the rungs of the extensible upper ladder and for camming the lower portions of said clamping elements away from one another to swing the upper ends of said clamping elements into clamping engagement with the ladder rail of the extensible ladder for rigidly supporting said extensible ladder relative to the trestle base.

2,947,379
PETROLEUM VAPOR RECOVERY SYSTEM
Herman S. Aubrey, Tulsa, Okla., assignor, by mesne assignments, to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Apr. 21, 1958, Ser. No. 730,812
7 Claims. (Cl. 183—2)

2. A process for recovering hydrocarbon vapors evolved from liquid hydrocarbons, which includes,

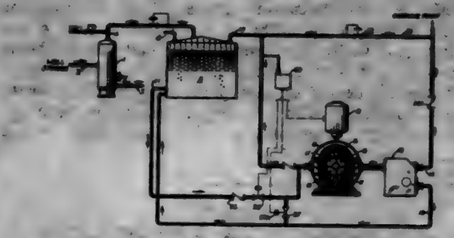
collecting vapors from the liquid hydrocarbons,

withdrawing a portion of the liquid hydrocarbons which are cooler than the vapors,

utilizing the portion of the cooler liquid hydrocarbons to simultaneously condense a first portion of the vapor and absorb a second portion of the vapor and compress a third portion of the vapor,

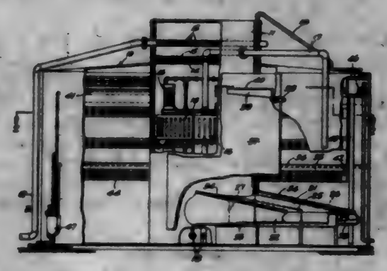
returning the compressed third portion of the vapor to the collected vapors from the liquid hydrocarbons when the pressure of the collected vapors falls below a predetermined minimum value,

separating the liquid hydrocarbon and absorbed vapor from the compressed vapor,



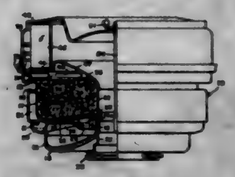
and returning the liquid hydrocarbon and absorbed vapor to the liquid hydrocarbons from which the vapors evolved.

2,947,380
WASH TANK, AND OIL, WATER AND GAS SEPARATOR
Richard M. Fullaway, Los Angeles, Calif., assignor to Superior Tank & Construction Company, Los Angeles, Calif., a corporation of California
Filed May 29, 1958, Ser. No. 738,682
8 Claims. (Cl. 183—2.7)



4. In a device of the class described, an upright conduit through which an influent is caused to descend, a spreader at the bottom of the conduit into which the influent is discharged, said spreader having sides, top and an open bottom, the sides being outwardly convex and having serrations at the top edges thereof.

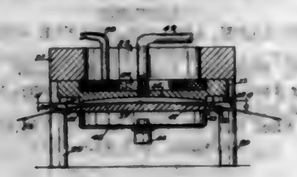
2,947,381
AIR CLEANER ASSEMBLY
Donald J. Cook, Livonia, and Patrick J. Schoessow, Wayne, Mich., assignors to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Filed Oct. 14, 1958, Ser. No. 767,286
6 Claims. (Cl. 183—15)



1. An air cleaner assembly comprising a lower cylindrical casing having a circular opening in the top thereof and a liquid sump therein, an annular filter shell extending through said opening and seated in said casing containing a filter medium therein, said shell having an

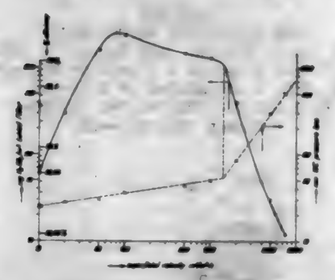
outer rim portion therearound, an annular air inlet passage provided between said casing and shell, an upper casing comprising upper and lower cylindrical portions, the bottom of said lower cylindrical portion having an annular platform formed thereon and spaced openings therein in communication with both said casings, the inner end of said bottom being flared downwardly to seat against said shell, the outer end of said bottom being seated on said rim portion, an annular pleated paper filter element seated on said platform, air outlet means in communication with said upper casing for clean air, and means for removably attaching said upper casing to said lower casing.

2,947,382
CONTINUOUS THERMAL PRECIPITATOR
Clyde Orr, Jr., Atlanta, Ga., assignor to The Georgia Tech Research Institute, Atlanta, Ga., a corporation of Georgia
Filed Feb. 15, 1957, Ser. No. 640,549
20 Claims. (Cl. 183—32)



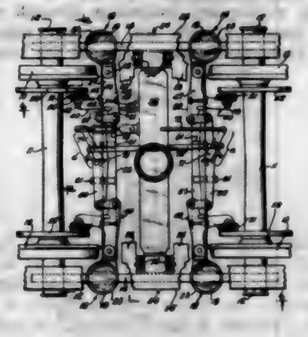
1. A thermal precipitation chamber including an upper plate defining an upper curved surface, a lower plate defining a lower curved surface uniformly spaced from said upper curved surface, means for maintaining said plates at different temperatures, means for passing fluid from which material is to be separated toward the center of the plates between said surfaces and discharge means for conducting said fluid from said center in a direction substantially normal to said surfaces after subjection to thermal precipitation.

2,947,383
PROCESS FOR COLLECTING THE LIQUID CONTAINED IN A MIST
Franz Schyll and Hubert Krollmann, Frankfurt am Main, Germany, assignors to Metallgesellschaft, A.G., Frankfurt am Main, Germany
Filed June 7, 1956, Ser. No. 590,869
Claims priority, application Germany Sept. 13, 1950
3 Claims. (Cl. 183—121)



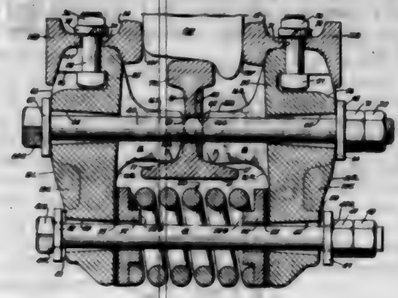
1. In a process for collecting the sulfuric acid contained in a sulfuric acid mist containing a substantial quantity of mist particles of a size between 0.01μ and 3μ, the steps which comprise passing the mist through a wettable porous ceramic filter of bonded granules and having a pore diameter larger than the smallest particles of the mist to be collected at a velocity which is sufficient to cause a pressure drop of between 100 and 500 mm. water column and to cause the liquid to be collected from the mist to pass through the porous filter and which is greater than that corresponding to the break point in the logarithmically plotted pressure-drop-velocity diagram for such porous filter, and collecting the liquid which has passed through the porous filter.

2,947,384
RAILWAY CAR BRAKE MECHANISM
Charles R. Busch, Orange, N.J., assignor to Buffalo Brake Beam Company, a corporation of New York
Filed Jan. 23, 1957, Ser. No. 635,828
7 Claims. (Cl. 188—59)



1. In a railway car truck of the type comprising two spaced wheel and axle assemblies, each having two coaxial wheels and respective journals for said wheels mounting respective journal boxes, a substantially U-shaped longitudinal equalizer bar on each side of the truck extending between journal boxes on the same side of the truck and having a depressed middle section, springs supported on said depressed middle section of said equalizer bar, side frames supported on said springs for resilient movements up and down relative to the wheel journals, and a truck bolster extending between and supported on said frames, the combination comprising brake discs on the inboard sides of the wheels respectively and rigid with the wheels respectively for rotation therewith, said brake discs being provided with respective inboard brake faces, four L-shaped brake head levers arranged in two sets, one set consisting of a pair of levers in opposed relationship on opposite sides of the truck bolster pivotally supported from the depressed middle section of the longitudinal equalizer bar on one side of the truck on respective supports rigid with the latter middle section and on respective axes close to and fixed in relation to the latter middle section, the other set of levers consisting of a pair of levers in opposed relationship on the opposite sides of the bolster pivotally supported from the depressed middle section of the longitudinal equalizer bar on the other side of the truck on respective supports rigid with the latter middle section and on respective axes close to and fixed in relation to the latter middle section, each of said levers having one leg which extends along the bolster between the bolster and the corresponding brake disc with which it is adapted to coact and which is pivotally supported at one end of the lever to the corresponding longitudinal equalizer bar for substantially horizontal angular movement about the corresponding fixed axis, and having its other leg extending transversely away from the bolster towards the corresponding brake disc and carrying at its free end a brake head for cooperation with the latter brake disc, said levers in braking positions exerting forces mainly in inboard directions transverse to the equalizer bars on which said levers are supported, a pair of parallel transverse equalizer bars on opposite sides of the truck bolster extending along said bolster between the longitudinal equalizer bars and pivotally connected at their ends to supports rigid with said longitudinal equalizer bars and connected to the middle sections of the longitudinal equalizer bars for resisting said forces, all of said equalizer bars and said pivot supports being arranged in the form of a parallel motion device, each of said levers having a shoe on its underside spaced from its pivot support and resting on the transverse equalizer bar on the same side of the truck bolster to support said lever, and power means for operating said levers substantially simultaneously into brake applying positions.

2,947,385
CAR RETARDER
John L. Devaney, Downey, Calif., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed July 10, 1958, Ser. No. 747,786
5 Claims. (Cl. 188—62)



1. In a rail mounted car retarder of the kind described, a pair of left and right-hand retarder arms disposed respectively in generally parallel vertical planes on opposite sides of the rail, each of said arms having an upper extension with a retarder element supported thereby above the head of the rail in position to engage the respective sides of a car wheel travelling on the head of the rail, each of said arms being provided intermediate the ends thereof with an inwardly directed stop member having a portion in substantial point engagement with the upper surface of the rail base inward of the related outer edge of the rail base, said stop members each having inner ends substantially abutting the related surface of the web of the rail, each of said arms being pivotal on the portions of the stop members so engaged with the rail base, a tie member joining said arms intermediate the upper and lower ends thereof and maintaining said arms in engaged, pivotal relation with the rail base enabling the arms to rock toward and away from one another respectively moving the retarder elements closer together and farther apart, said arms having bottom extensions depending below the related ones of said stop members, a coil spring disposed beneath the rail in a manner so as to be free of the rail and rail support structure and arranged between said bottom extensions to apply outwardly directed forces thereto, and bolt means extending between the lower ends of said bottom extensions and affording stop elements disposed immediately outwardly of said bottom extensions for limiting outward movement of said bottom extensions, whereby the car retarder is suspended from the rail and vertically positioned with respect to the rail by the portions of the stop members engaged with the rail base.

2,947,386
BAND PASS SHOCK ABSORBERS WITH SNUBBERS
Emanuel Schaltzer, 822 19th Place, Newport News, Va.
Filed Sept. 27, 1957, Ser. No. 686,800
6 Claims. (Cl. 188—88)
(Granted under Title 35, U.S. Code (1952), sec. 266)

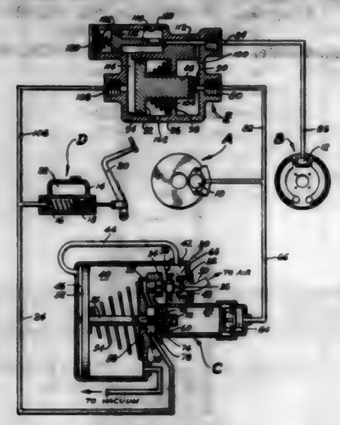


1. A snubber for shock absorbers comprising a piston cylinder having a head, a receiver cylinder in which said piston head has sliding movement, a flange projecting outwardly from the piston head into sliding engagement with the receiver cylinder, a flange projecting inwardly from the receiver cylinder edge to said piston cylinder to form a chamber with movable end walls, a series of larger orifices formed annularly through the outer section of said piston flange, a series of smaller orifices formed annularly through the inner section of said piston flange, an annular groove formed in the piston flange top above said smaller flange orifices, a ring surrounding said piston cylinder within said chamber and slidable into said groove, a stop on said piston cylinder for limiting upward movement of said ring at a point of clearance between the ring and groove wall, a radial rim projecting from the upper section of said ring to a point short of the receiver cylinder to form an edge passageway about the rim, and an annular series of bleed ducts around the outer section of said rim, said bleed ducts being coaxial with said larger orifices.

2,947,387
POWER OPERATED BRAKING SYSTEM
Earl R. Price, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,348
8 Claims. (Cl. 188—152)

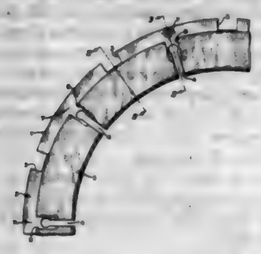
1. In a hydraulic braking system for an automotive vehicle and the like: a disc brake for a front wheel of the vehicle, a first hydraulic fluid pressure motor for actuating said disc brake; a shoe brake for a rear wheel of the vehicle; a second hydraulic fluid pressure motor for actuating said shoe brake; a fluid pressure servomotor driven fluid pressure intensifying unit of the type constructed and arranged to intensify a hydraulic input signal; means communicating the intensified output pressure from said servomotor to said first hydraulic fluid pressure motor; a manually actuatable fluid pressure modulating device the pressure discharge of which is communicated to said servomotor to control its operation; a first normally open valve structure for communicating the hydraulic output from said fluid pressure intensifying unit to said second fluid pressure motor; a second normally closed valve structure for communicating the output from said pressure modulating device to said second fluid pressure motor; and means for closing

said first valve structure and for opening said second valve structure when the pressure supplied to said second



fluid pressure motor rises above a generally predetermined level.

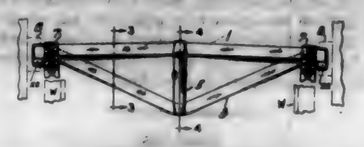
2,947,388
METALLURGICAL CONTROL DURING SINTERING
James A. Culbertson, Barberton, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 19, 1957, Ser. No. 641,130
2 Claims. (Cl. 188—218)



1. A brake disc of ferrous metal including an annular, flat, one-piece body of sheet metal of uniform thickness, said body having a plurality of strain-relieving slots extending radially therein from the inner periphery at points spaced equally circumferentially, the slots extending a majority of the distance through the body and terminating in enlarged circular ends of greater diameter than the circumferential width of the slots, a plurality of ferrous powdered metal sintered facings fused to both sides of the body, each facing extending near the inner periphery of the body from substantially the edge of one slot to the edge of the next but being spaced from substantially the radially outer half of each slot to prevent carbonization of the body adjacent the radially outer end of the slots from migration of the facing material during the sintering and fusing heat applied to the facings.

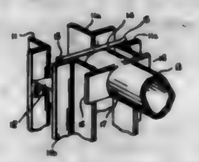
2,947,389
RAILWAY BRAKE BEAM
Irvin J. Spaeth, Chicago, Ill., assignor to Chicago Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 16, 1956, Ser. No. 622,635
2 Claims. (Cl. 188—229.1)

1. A railway truss type brake beam comprising a tension member of flat bar form with its greater width disposed generally horizontally, a compression member of channel section with a generally upright web and relatively wide legs receiving the ends of said tension member between them and secured thereto, a strut spacing the intermediate portions of said compression and tension members apart and having a slot between its ends for a brake lever and including a looped end receiving the compression member, a brake head mounted on each end of the tension and compression member with its transverse



axis intersecting its shoe mounting face inclined to the plane of the longitudinal axis of the strut, the upper and lower faces of the tension member and the flanges of the compression member at the middle of the beam being parallel to the plane of said strut axis, and said faces and legs at the ends of the beam being parallel to said brake head axis and the compression member being twisted gradually about its longitudinal axis between the strut and the brake heads and slidable lengthwise through the strut looped end.

2,947,390
STORAGE RACKS
Harry A. Stollenwerk, 2465 S. Howell Ave., Milwaukee, Wis.
Filed Apr. 2, 1958, Ser. No. 725,908
5 Claims. (Cl. 189—36)

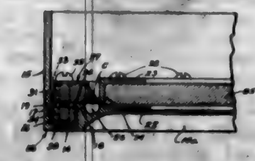


5. A standard and brace assembly for use with demountable storage racks including two spaced pairs of vertically extending angle irons, the legs of each pair of angle irons being spaced apart generally parallel to one another, each leg of each angle iron being generally parallel to one leg of each of the other angle irons, the pairs of angle irons being spaced apart so as to define elongated and vertically extending openings between opposed legs of angle irons, a plurality of spacer members fixed to each of the angle irons and vertically spaced from one another, said angle irons and spacer members defining a supporting standard, and cross-braces engaged with said standard, each such cross-brace being elongated and having pairs of flanges on the ends thereof for embracing the leg portions of a pair of angle irons, one pair of flanges of each cross brace being supported on a spacer member, the cross braces extending outwardly from at least a pair of said openings with the flanges of said cross braces engaged with different pairs of angle irons.

2,947,391
CORNER CONNECTION FOR FRAMES
Michael Wayne, Chicago, Ill., assignor to The Tablet & Ticket Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 19, 1958, Ser. No. 722,610
2 Claims. (Cl. 189—76)

1. A frame for display devices and the like comprising end and side frame strips each having a flat front marginal wall and an inwardly beveled wall extending from

the inner end of the marginal wall to define a frame opening, said strips also having a side wall extending rearwardly from the periphery of the front marginal wall for a considerable distance, the beveled front wall portion of each strip having an inwardly opening channel adapted to receive the marginal edge of a panel, each strip also having a rearwardly opening channel between the panel receiving channel and the rearwardly extending side wall, said rearwardly opening channel being spaced outwardly from the panel channel immediately behind the flat marginal front wall portion, the space between the two channels having a rearwardly opening groove, the rearwardly opening channel of each strip having overlying top ribs



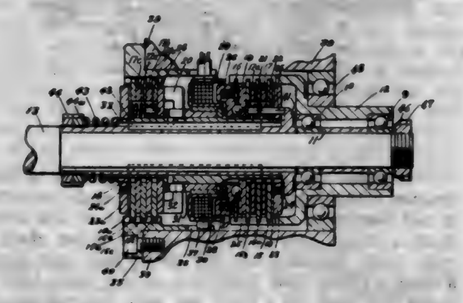
providing opposed flat abutment faces, clamping connectors uniting the side and end strips, each of said connectors including an angle bar seated in a channel of adjacent strips and an overlying massive angle clamping bar seated on the top ribs of the rearwardly opening channel of adjacent strips, said massive angle clamping bar being larger and more rigid than the underlying angle bar seated in the channels, screw means connecting the clamping bar and angle bar to draw the bars against opposed faces of the ribs and to hold the strips in aligned secured together relation, and said side wall of the strips extending rearwardly beyond the clamping bars for a considerable distance and adapted to confine material mounted behind said front wall and in said rearwardly opening groove.

2,947,392
CONTROL SYSTEM FOR EXHAUST BRAKE
Lawrence Joseph Heise, Bethlehem, Pa., assignor to Mack Trucks, Inc., New York, N.Y., a corporation of New York
Filed Oct. 3, 1956, Ser. No. 613,647
7 Claims. (Cl. 192—3)



1. A brake system for a vehicle having a compression ignition engine, an exhaust pipe extending from said engine, a movable foot brake member for the wheel brakes of the vehicle, means for supplying fuel to said engine and a movable accelerator pedal for controlling the supply of fuel to said engine and substantially shutting off the supply when released, comprising a valve in said exhaust pipe movable to substantially close said pipe and obstruct flow of exhaust gases from said engine and create a back pressure in said exhaust pipe, a motor connected to said valve for moving it to close said pipe, means normally urging said valve to open said pipe, first control means connected to said foot brake member and movable in response to actuation of said foot brake member, second control means responsive to movement of said accelerator pedal to a position substantially shutting off the supply of fuel, means connected to said first and second control means and responsive to release of said accelerator pedal and movement of said brake pedal when said accelerator pedal is released at any engine speed for actuating said motor to move said valve in and close said exhaust pipe, and manually operable means for selectively rendering said first control means ineffective and said second control means effective, said manually operable means being adjustable to render both of said first and second control means ineffective to actuate said motor.

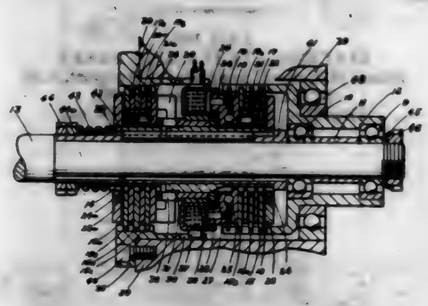
2,947,393
ELECTRIC CLUTCH AND BRAKE
Robert R. Grover, Swanzey, V. Westport, N.H. (R.F.D. 1, Winchester, N.H.)
Filed Dec. 26, 1956, Ser. No. 630,611
3 Claims. (Cl. 192—18)



1. A clutch and brake apparatus, comprising in combination, a stationary housing, a stationary braking cup, driving means including a driving cup, driven means including a driven shaft, a thrust body, a clutch body, a clutch disc pack and a brake body, a brake disc pack mounted on said brake body, brake control means including a brake control sleeve operatively connected to said brake disc pack effecting engagement and disengagement of said brake disc pack, a compression spring operatively connected to said brake disc pack effecting engagement of said brake disc pack, clutch control means including said clutch body and a plurality of control pins, said plurality of control pins being mounted on said thrust body and slidably connected to said clutch body for rotation therewith and operatively connected to said thrust body effecting engagement and disengagement of said clutch disc pack, power operated means including an actuator cam mounted on said clutch body for limited rotation and coaxial with said clutch disc pack, a disc cam mounted in said driving cup for rotation and coaxial with said clutch disc pack, said actuator cam and said disc cam each having a face portion and said face portions confronting each other and each having a plurality of wedge shaped recesses to form pairs of oppositely located recesses, a plurality of balls respectively mounted in the spaces between said pairs of recesses and being supported by said actuator cam and said disc cam, electromagnetic means including an annular electromagnet mounted in coaxial relation with and mounted on said brake control sleeve for free rotation therewith, and an armature disc mounted in said driving cup in coaxial relation with and loosely mounted between said confronting face portions of said actuator cam and said disc cam, and being slidably connected to said driving cup for rotation therewith, said electromagnetic means being operatively engaged with said plurality of balls for moving said actuator cam and said armature disc axially with a greater force than said compression spring effecting axial movement of said brake control

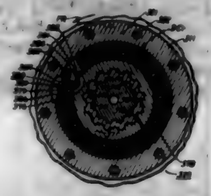
sleeve disengaging said brake disc pack and with initial movement of said clutch body to engage said clutch disc pack.

2,947,394
ELECTRIC CLUTCH AND BRAKE
Robert R. Grover, Swanzey, N.H. (R.F.D. 1, Winchester, N.H.)
Filed June 3, 1957, Ser. No. 663,241
3 Claims. (Cl. 192—18)



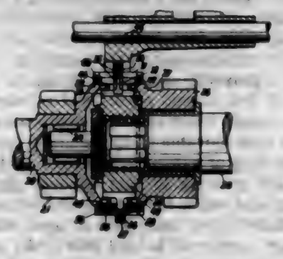
1. A clutch and brake apparatus comprising in combination a stationary housing, a driven shaft journalled in said housing, a driving cup journalled on said driven shaft, a thrust body mounted on said driven shaft, a brake body mounted on said thrust body and keyed thereto, a clutch body journalled on said brake body, a clutch disc pack and a brake disc pack mounted on said clutch body and said brake body, respectively, within said driving cup, a stationary braking cup mounted in said stationary housing in fixed relation thereto and in circumjacent relation to said brake body, a brake control means including a brake control sleeve mounted on said brake body and operatively connected to said brake disc pack for effecting engagement and disengagement of said brake disc pack, a compression spring mounted on said brake body and operatively connected to said brake disc pack for effecting engagement of said brake disc pack, power operating means including an actuator cam mounted on said brake body within said driving cup, said actuator cam being coaxial with said clutch disc pack and mounted for limited rotation therewith, a disc cam mounted on said brake body within said driving cup, said disc cam being adjacent to said actuator cam, coaxial with said clutch disc pack and mounted for rotation therewith, said actuator cam and said disc cam each having a face portion and said face portions being in confronting relation to each other, each of said face portions having a plurality of semi-circular shaped recesses therein, that are alined with each other and have spaces there between to provide pairs of oppositely positioned recesses, a plurality of balls mounted in the spaces between said pairs of recesses and being supported by said actuator cam and said disc cam, electromagnetic means including an annular electromagnet mounted on said brake control sleeve coaxial therewith and for rotation therewith and an armature disc mounted in said driving cup coaxial with and loosely positioned between the confronting face portions of said actuator cam and said disc cam and being slidably connected to said driving cup for rotation therewith, said electromagnetic means being operatively associated with said plurality of balls for axially moving said actuator cam and said armature disc to effect axial movement of said brake control sleeve for disengaging said brake disc pack from said driving cup and for engaging said clutch disc body with said clutch disc pack and said driving cup.

2,947,395
ONE-WAY CLUTCH
Fred E. Ullery, 8231 Marygrove Drive, Detroit, Mich.
Original application Apr. 18, 1952, Ser. No. 283,090, now Patent No. 2,762,198, dated Sept. 11, 1956. Divided and this application June 21, 1956, Ser. No. 593,131
3 Claims. (Cl. 192—45.3)



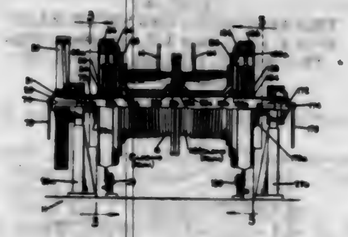
1. A one-way clutch adaptable for rendering two coaxial components of a machine one-way rotatory, one to the other, and comprising: a drum having a smooth cylindrical outer surface; a support ring having a smooth cylindrical inner surface disposed around said drum outer surface to bound an annular space therebetween; a plurality of one-way jamming sprags arranged around said annular space, each of said sprags being disposed with an axial line contact with said drum outer surface and an axial line contact with said support ring inner surface and with the plane of said contacts oblique from radial disposition to effect one-way jamming operative to render said drum and said support ring one-way rotatory one to the other, and each of said sprags having a pair of spring seats which, one to the other, are situated on circumferentially-opposite sprag sides and are radially offset; and jam-urging means for said sprags including a plurality of compression type springs of coil form having end coils situated in said spring seats and disposed so that a spring thrust is transmitted to each seat of each said pair of spring seats, each of said springs being disposed with its coil axis oblique from tangency with an imaginary circle which intersects its coil axis midway between its opposite end coils and is concentric with said drum outer surface, and each of said spring seats being disposed for normal squareness with the coil axis of the particular spring which is situated thereat, said urging means thus being operative to induce said one-way jamming action simultaneously for each of said sprags.

2,947,396
SYNCHRONIZED CLUTCH
Werner E. Altmann, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Apr. 25, 1958, Ser. No. 583,562
Claims priority, application Germany Apr. 27, 1954
23 Claims. (Cl. 192—53)



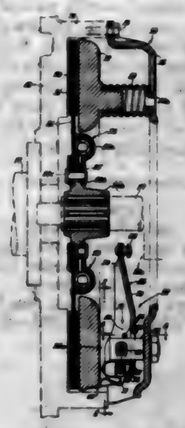
1. A clutch comprising, in combination, a first clutch member, a second clutch member, said two clutch members being relatively axially movable to engage one another, a synchronizing member, means connecting said second clutch member with said synchronizing member so as to allow a limited relative rotary movement between said last-named two members in a peripheral direction thereof, means for frictionally engaging said first clutch member with said synchronizing member, means on said synchronizing member for permitting said two clutch members to engage in one relative rotary position of said synchronizing member relative to said second clutch member, but preventing the same from engaging in another relative position when said two clutch members have a different peripheral speed, said first clutch member having axial projections and axial recesses therebetween, said second clutch member comprising a ring member with stud-like radial projections extending inwardly therefrom, an intermediate clutch member having radially open axial slots, said second clutch member engaging said intermediate clutch member by means of said radial projections engaging said slots so as to allow an axial movement of said second clutch member relative to said intermediate clutch member, but preventing a relative peripheral movement between said two last-named clutch members, said intermediate clutch member being provided with radially extending projecting portions having a substantially I-shaped cross section, said axial slots being located intermediate said projecting portions, said synchronizing member having a series of teeth adapted to prevent said first and second clutch members from engaging when not rotating at the same speed, the teeth of said synchronizing member and the axial projections of said first clutch member, which is adapted to be frictionally engaged therewith, being radially disposed one above the other, said radial projections being adapted to slide axially into the gaps between the axial projections of said first clutch member and the teeth of synchronizing member.

2,947,397
FLUID CLUTCH CONTROL FOR CLAMSHELL EXCAVATORS
William C. Pietsch, West Allis, Wis., assignor to Bucyrus-Erie Company, South Milwaukee, Wis., a corporation of Delaware
Filed July 23, 1958, Ser. No. 750,355
12 Claims. (Cl. 192—87)



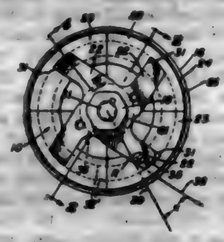
1. In a winch and associated controls for the operation of a clamshell excavator, the combination of: a constantly rotating element; a closing drum; a closing drum clutch, to impart the rotation of the rotating element to the closing drum; pressure-fluid closing-clutch actuating means to actuate the closing drum clutch; a holding drum; a holding drum clutch, to impart the rotation of the rotating member to the holding drum; pressure-fluid holding-clutch actuating means to actuate the holding drum clutch; a pressure fluid source; a sump; a first fluid conduit connecting the source to the pressure fluid closing clutch actuating means; a second fluid conduit connecting the source to the pressure fluid holding clutch actuating means; closing clutch valve means interposed in the first fluid conduit; holding clutch valve means interposed in the second fluid conduit; third fluid conduit means connecting each said valve means with the sump; each said valve means being shiftable alternatively to connect its associated pressure-fluid actuating means to the source or to the sump; a pressure fluid responsive selector valve interposed in said second fluid conduit intermediate the holding clutch valve means and the holding clutch actuating means; a fourth fluid conduit interconnecting said selector valve and said first fluid conduit intermediate the closing clutch valve means and the closing clutch actuating means; and fluid-pressure control means interposed in said fourth fluid conduit; said fluid-pressure control means being adjustable to proportion the flow of fluid from said first fluid conduit to said second fluid conduit and being responsive to fluid pressure in said fourth fluid conduit to maintain said pressure at a predetermined level; and said selector valve being shiftable alternatively (1) to block flow of pressure fluid between said fluid-pressure control means and said second fluid conduit and to admit pressure fluid from the holding clutch valve means to the holding clutch actuating means responsive to pressure in the second fluid conduit, and (2) to block flow of pressure fluid between the holding clutch valve means and said fourth fluid conduit and to admit fluid under pressure predetermined by said fluid pressure control means from said fourth conduit to the holding clutch actuating means responsive to pressure in the fourth fluid conduit.

2,947,398
CLUTCH RELEASE LEVER
Joseph M. Willese, Rockford, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed July 3, 1957, Ser. No. 669,743
3 Claims. (Cl. 192—99)



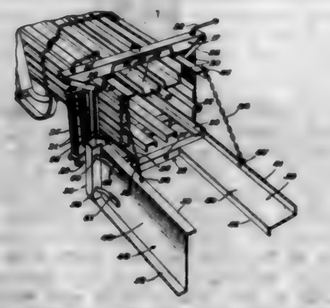
1. In a clutch having an axially fixed rotatable plate, an axially movable rotatable pressure plate, a plurality of circumferentially spaced release assemblies selectively actuatable by an axially slidable release bearing, each of said release assemblies including a pivotally mounted lever capable of limited movement radially outwardly, the improvement comprising means for controlling the direction of movement of said levers while under the influence of centrifugal force so that movement of the inner ends of said levers towards said release bearing is precluded, said means including a stop in each assembly for limiting the radial movement of the lever thereof.

2,947,399
CENTRIFUGALLY ACTUATED FRICTION CLUTCH
Harold E. Moore, Torrance, and Harry I. Hazzard, Los Angeles, Calif., assignors to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Filed July 29, 1957, Ser. No. 674,847
4 Claims. (Cl. 192—105)



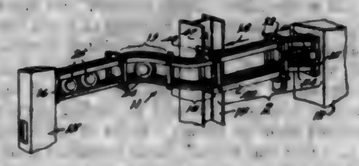
1. In a centrifugally actuated clutch: a driving member adapted to be connected to a driving shaft comprising a hub, a spider fixed on said hub, said spider comprising outwardly extending guide arms which lie in a plane normal to the axis of said hub and are disposed tangentially to a circle described around said axis so as to recede rearwardly relative to the direction of driving rotation, sectorial clutch shoes arranged around said spider, said shoes having guide slots intermediate the ends of said shoes and corresponding to said arms to receive said arms of said spider in guiding relationship so that the leading faces of said arms drivingly engage adjacent walls of said slots, the angle at which each of said arms recedes rearwardly being approximately 30° between a line coinciding with the leading face of said arm and a radial line from the axis of said hub intersecting said leading face at a point substantially in the center of the area of engagement between said leading face and the adjacent wall of the guide slot in which it is received; yielding means urging said shoes inwardly on said guide arms; and a driven member comprising a cylindrical drum surrounding said shoes in position to be frictionally engaged thereby as said shoes are moved outwardly on said guide arms by centrifugal force upon driving rotation of said spider, the leading faces of said guide arms then acting upon said shoes to urge them outwardly into greater pressural engagement with said drum.

2,947,400
BALE TURNER
Donald A. Murray and John H. Whitby, Stockton, Calif., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 26, 1958, Ser. No. 763,721
7 Claims. (Cl. 193—5)



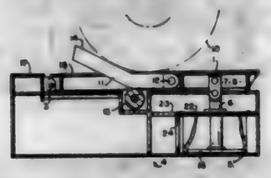
1. A bale delivery mechanism for balers having bale forming chambers comprising a supporting structure affixed to the baler, a narrow chute part carried on said supporting structure and in alignment with one side edge of the bale forming chamber, a wider chute part removably engaging said supporting structure in a horizontal position to complement said narrow chute part to form a flat unbroken chute and rearwardly engaging said supporting structure in a vertical position spaced from said narrow chute part and outside the other side edge of the bale forming chamber and in said position forming a spaced apart side wall to cause turning of the discharging bales from the baler and guiding them to the ground.

2,947,401
FLEXIBLE CHUTE
Henry A. Schwiebt, Pontiac, and Lawrence H. Smith, Birmingham, Mich., assignors to Leading Engineering and Manufacturing Company, Pontiac, Mich., a corporation of Michigan
Filed June 10, 1957, Ser. No. 664,536
6 Claims. (Cl. 193—35)



1. In a flexible chute, a pair of central bands of spring steel in spaced parallel relation and having uninterrupted exposed surfaces and facing edges, two pairs of spring steel side bands parallel to said central bands spaced laterally therefrom, said side bands having uninterrupted exposed surfaces, said central and side bands together forming a channel through which a series of workpieces may pass, a plurality of interchangeable clamp assemblies in spaced relation along said bands, each of said clamp assemblies having members for frictionally gripping the band surfaces at any point therealong, and means for drawing together said gripping members into a rigid assembly and simultaneously gripping said band surfaces in firm frictional contact, whereby the bands may be held in a predetermined configuration.

2,947,402
TILTABLE ROLL TRANSFER RAMP
Alvin F. Groll, Box 347, Napoleon, Ohio
Filed July 22, 1957, Ser. No. 673,288
5 Claims. (Cl. 193—46)



1. In a ramp for storing coils of sheet material in position to be gravity fed to a processing station, in combination, a base, a ramp table hinged to the base along a side of the table, said table serving as the sole support for a stored coil, said table having a slot in its surface extending perpendicular to the hinged side, means for arresting the stored coil at a particular position, said means comprising an arm having a bend intermediate its ends and having an end pivoted to the table remote from said hinged side and extending toward the hinged side in position to swing through the slot, means for tilting the table to discharge rolls of material therefrom, and a roller mounted in said base generally below said particular position to engage said arm near the bend therein to drive the arm through the slot as the table approaches a level condition.

2,947,403
PARKING METERS
Robert D. Murphy, North Canton, and Paul C. Janson, Richville, Ohio, assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1957, Ser. No. 639,771
6 Claims. (Cl. 194—20)



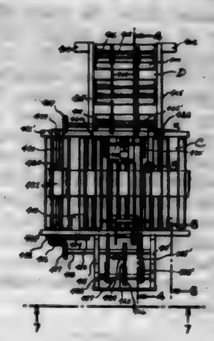
1. In a parking meter having an indicator hand driven in one direction over a time scale by a clock mechanism: means for moving said indicator in the opposite direction to set time on said scale in response to the insertion of coins of different diameter in said meter comprising, a peripherally toothed ratchet plate movable with said indicator, a pawl carried by a plate around at least a portion of the toothed periphery of said ratchet plate when a coin is inserted into the meter, a relatively fixed cam slide having surfaces opposite certain portions of said ratchet plate and interposed in the path of said pawl and operative to control the engagement of said pawl with said ratchet, a second relatively movable cam slide having cam surfaces adapted to be interposed in the path of said pawl or removed from the path of said pawl depending upon the position of said second cam slide to thereby also control the engagement of said pawl and said ratchet, and means on said second cam slide projecting into the path of coins of predetermined diameter as said coins pass through said meter for controlling the position of said second cam slide.

2,947,404
KEY BUTTON FOR KEYBOARD OFFICE MACHINES
Ernst Stobels and Arthur Beyer, Wilhelmshaven, Germany, assignors to Olympia Werke AG., Wilhelmshaven, Germany
Filed July 8, 1958, Ser. No. 747,297
Claims priority, application Germany July 12, 1957
5 Claims. (Cl. 197—102)



1. A key button for keyboard office machines comprising a button body member having a wall with front and rear faces, said front face being adapted to have formed therein any one of a plurality of differently configured depressions, the particular configuration of each such depression corresponding to that of a desired character and adapted to be filled with a colored material different from that of said body member, and said rear face having an array of holes extending into said wall and which are distributed over an area in alignment with at least a part of the area of each possibly differently configured depression that may be formed in the front face of said button, the depth of said holes being at least equal to the wall thickness as measured from the bottom of said character depression so as to establish as to those holes which are at any part thereof in line with any part of said character depression corresponding communication channels for the introduction of said colored material into said character depression.

2,947,405
PATTERN-DETERMINING APPARATUS FOR PALLET LOADER
Frank W. Fenton, Lemay, Mo., assignor to Beacon Production Equipment Corporation, St. Louis, Mo., a corporation of Illinois
Filed Dec. 31, 1956, Ser. No. 631,831
9 Claims. (Cl. 198—33)



1. For use with a pallet loading machine, a pattern-determining system for non-cubic units to be stacked thereby comprising a first powered conveyor, a second powered conveyor communicating with said first conveyor and having its direction of travel axially perpendicular thereto whereby units moving directly onto said second conveyor from said first conveyor will, through simultaneous subjection to the movement of the first and second conveyors, be turned axially through a ninety degree arc, unit-receiving, vertically movable means provided with said second conveyor and being adapted for movement between inoperative position below, and operative position above, said second conveyor, said unit-receiving means being adapted for traveling movement in a path axially aligned with said first conveyor for receiving selected units from said first conveyor when in operative position and delivering same, upon movement into inoperative position, to said second conveyor for maintaining said unit against axial turning.

2,947,406
LETTER INVERTER
Henry S. Haselton, Jr., White Plains, N.Y., assignor to Pitney-Bowes, Inc., Stamford, Conn., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,255
7 Claims. (Cl. 198—33)

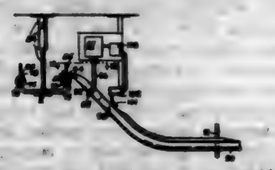
1. In a stamp cancelling machine, a first stamp cancelling mechanism; a second stamp cancelling mechanism in line with and spaced from said first cancelling mechanism and adapted to receive letters from the latter on which no cancelling operations have been performed; a letter transferring device located between said first

and second cancelling mechanism and comprising a feed table on said first cancelling mechanism for receiving letters from said first cancelling mechanism and supporting and guiding the letters on their longitudinal edges, a receiving table connected with said second stamp cancelling mechanism on which the letters are deposited on their longitudinal edges, a letter advancing means between said feed table and said receiving table, said advancing means comprising means for receiving letters one at a time from the feed table, advancing each letter toward said receiving table and simultaneously inverting each letter on a longitudinal axis as it advances, the receiving end of said advancing means being spaced a



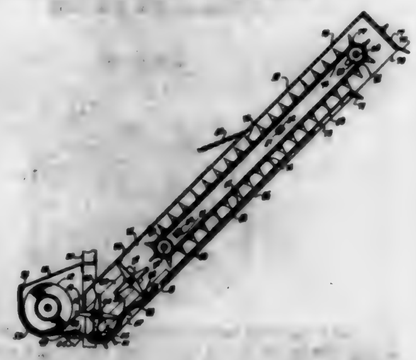
determinate distance above the plane of the feed table whereby a letter of common height will be engaged on or closely adjacent its longitudinal median line while letters of greater than common height will be engaged below their longitudinal median lines, the delivery end of said advancing means being spaced a distance above said receiving table substantially greater than said determinate distance whereby the lower edges of inverted letters of all heights for which said device is designed arrive at the delivery end of the advancing means at or substantially above the plane of the receiving table; and means at the delivery end of the advancing means for urging letters there delivered one at a time forwardly and downwardly onto the receiving table of the second cancelling mechanism.

2,947,407
CONVEYOR MECHANISM FOR GARMENTS ON HANGERS
Byron A. Wood, 4101 W. Barton St., Seattle 6, Wash.
Filed May 15, 1957, Ser. No. 659,399
4 Claims. (Cl. 198—66)



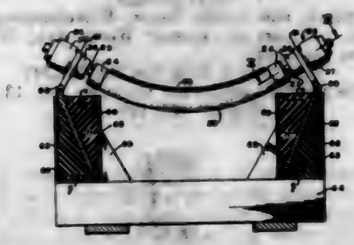
1. In conveyor and storage means for handling garments on garment hangers that are provided with hooks, a generally horizontal track pipe supported in an elevated position and arranged to have the hooks of garment hangers engaged thereover, said pipe having an upwardly directed longitudinal slot; a link belt type conveyor member movable in said track pipe; drive pins on said conveyor member extending upwardly through the slot in said track pipe; a plurality of substantially horizontal bars forming storage racks positioned adjacent to said track pipe and at a lower elevation than said track pipe; a movable switch arm interposed between each storage rack and said track pipe, each switch arm having a tip portion capable of being positioned close to said track pipe alongside of the slot therein and clear of the path of movement of the drive pins and each switch arm sloping downwardly from the track pipe to the storage rack providing gravity movement of hangers thereover between the track pipe and the storage rack; and switch arm moving means connected with each switch arm capable of selectively moving the end portion of the switch arm adjacent to the track pipe between a position clear of the path of the hangers on the track pipe and a hanger engaging and deflecting position relative to the hangers on the track pipe.

2,947,408
COTTON HARVESTER ELEVATOR
Lambeth G. Fowler, 3511 46th St., Lubbock, Tex.
Filed Apr. 11, 1958, Ser. No. 727,822
5 Claims. (Cl. 198—123)



3. An elevator for a cotton harvester having a discharge opening including a housing having its lower end communicating with the discharge opening, means for pivotally attaching the housing to the harvester whereby said housing may undergo relative movement, a flexible connector underlying the discharge opening and connecting the lower end of said housing to the harvester to accommodate pivotal movement of said housing, the flexible connector including a plurality of bars extending transversely of said housing and hinged to one another, and resilient means connecting the frontmost hinged bar to the harvester.

2,947,409
RESILIENT IDLER AND SUPPORT
Nathaniel S. Dodge, Jr., Orinda, Leonard L. Hohl, Berkeley, and John R. Jones and Marvin E. Negley, Oakland, Calif., assignors to The American Rubber Manufacturing Co., Oakland, Calif., a corporation of California
Filed Oct. 7, 1957, Ser. No. 688,691
7 Claims. (Cl. 198—192)



1. A support for traveling troughing belts, comprising in combination an idler assembly having a resilient transverse idler member, nonresilient collars adjacent each end of said resilient member, roller shafts, a portion of each of said shafts being expandably secured within the opposite ends of said resilient member which is held against external distortion by said collars, bearings for rotatably mounting the exposed ends of said shafts, a

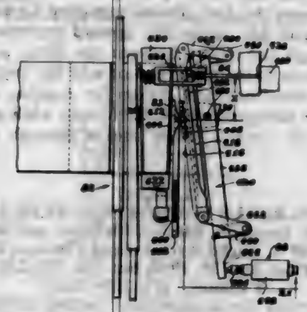
bearing housing for said bearings having an inward portion of smaller diameter than the outer portion with a shoulder there connecting, supporting members one at each side having yokes for receiving the smaller diameter of said bearing housings and having stems angled transversely inwardly, substantially square tubular rigid members secured to the frames for the traveling belt transversely oppositely disposed for receiving the stems of each of said supporting members and solid triangular shaped resilient packing means for said stems in said rigid members, so that the maximum force is applied against the maximum mass.

2,947,410
DRIVE MEANS FOR VIBRATORY APPARATUS
Robert M. Carrier, Jr., Louisville, Ky., assignor, by mesne assignments, to Chain Belt Company, Milwaukee, Wis.
Filed Sept. 30, 1957, Ser. No. 686,909
3 Claims. (Cl. 198—220)



1. In a device for doing work by vibration, in combination, a work member to be vibrated; resilient means for supporting the member and forming with the member a vibratory system having a natural frequency; a positive amplitude vibration exciter that is operable at said natural frequency; coupling means connecting the exciter to the work member; said coupling means including a lever having a first pivot point connected to the work member, a second pivot point connected to the exciter, and a third pivot point; an armature connected to said third pivot point; and an electromagnetic clutch cooperating with said armature and adapted when energized to restrict movement of said armature whereby said third pivot point becomes a fulcrum as the lever transmits force to the work member.

2,947,411
TYPE CASTING AND COMPOSING MACHINES
Wade H. Patton, Wade H. Patton, Jr., and Artur Roth, Philadelphia, Pa., assignors to Lanston Monotype Machine Company, Philadelphia, Pa., a corporation of Virginia
Original application Dec. 1, 1954, Ser. No. 472,481, now Patent No. 2,883,838, dated Apr. 21, 1959. Divided and this application Oct. 1, 1958, Ser. No. 770,243
5 Claims. (Cl. 199—91)



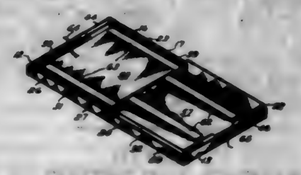
4. In a composing machine of the character described, a mold having a mold cavity therein, a mold blade reciprocably mounted in the cavity in said mold to determine the width of said mold cavity, and adjustable means for arresting the movement of said mold blade in the direction enlarging said mold cavity, said means comprising: a bar including an abutment surface in the path of opening movement of the mold blade; a second bar adapted to be pivoted to the machine base; links respectively pivotally connecting the opposite ends of said bars in parallelogram arrangement; wedge means to determine the position of said abutment surface with respect to the opening movement of the mold blade; and means for varying the position of said second bar in relation to the mold blade travel to provide for the casting of type bodies of a different set size.

2,947,412
BRUSH HOLDER AND SHAPER
Earl S. Tupper, Lamond, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Filed Dec. 18, 1956, Ser. No. 629,154
3 Claims. (Cl. 206—15.1)



1. A bristle brush holder and shaper of resilient, flexible and deformable plastic having a narrow bottom and opposing diverging side walls with opposing parallel channel portions on their upper ends adapted to accommodate the side edges of the brush head, the diverging side walls at one end having an end closure wall, said channel portions being elevated above the bottom wall a distance greater than the length of the brush bristles to maintain the bristles suspended from its head above the bottom wall of the holder, a rigidifying element on the outer side of the bottom wall and intermediate the length thereof and having side extensions proceeding over the respective side walls to provide further rigidity to the side walls intermediate their length thereof and limiting the flexibility of the side walls at the opening end of the holder yet not sufficient to prevent the flexing of the side walls beyond the said band when it is desired to forcibly clean the interior of the holder.

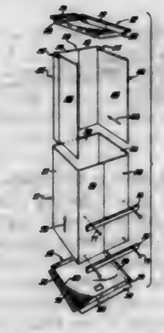
2,947,413
DISPOSABLE CIGARETTE CASE
Leon A. Tsonakis, 2530 Fruitvale Ave., Oakland, Calif., and Lawrence J. Berbe, 332 Broad Ave., San Leandro, Calif.
Filed Nov. 12, 1957, Ser. No. 695,593
4 Claims. (Cl. 206—41.1)



1. An improved disposable crush proof cigarette case comprising a first generally rectangular sheet of material having central transverse fold lines and flaps extending laterally from the corners and center thereof with edge flaps therebetween, said first sheet being folded with the edge flaps and transverse flaps secured together to form two like shallow top and bottom boxes pivotable together along a connecting central fold line, a second generally

rectangular sheet having edge flaps about one end thereof and central fold lines and an end flap extending laterally across the other end, said second sheet disposed within the top and bottom portions of said folded first sheet to form a liner therefor, the width of said second sheet end flap exceeding the width of the edge flaps of said first sheet and the width of said second sheet edge flaps lesser than the width of the edge flaps of said first sheet and the combined width of said second sheet edge flaps and end flap equalling the width of two edge flaps of said first sheet whereby said case is frictionally retained in pivotally closed position.

2,947,414
SHIPPING CONTAINER WITH SIDE CLOSURE
Richard H. Johnson, Arlington Heights, Ill., assignor to Container Corporation of America, Chicago, Ill., a corporation of Illinois
Filed Apr. 25, 1958, Ser. No. 730,880
12 Claims. (Cl. 206—46)



1. In a heavy duty container an article packed therein, a hollow body member having a plurality of vertical sides, one of said vertical sides comprising panel portions extending from one end of the body member to the other end thereof, displaceable outwardly therefrom to provide access to the container interior, a reinforcing liner member disposed vertically interiorly of and adjacent the other sides of the body member, extending from one end of the body member to the other end thereof, a closure member for each end of the body member, each of said closure members comprising an outer and an inner sheet interconnected with one another, each closure member sheet including a main panel, each edge of said main panel having an integrally connected flap extending therefrom into overlapping relation with a marginal portion of the end of the body member, including a marginal portion of the end of the liner, the flaps being secured in said overlapping relation at the back and side walls, and removable locking means disposed in part over the flaps overlapping the front wall panel portions securing said flaps in said overlapping relation, said locking means including means disposed through the panel portion attached to the article in the container.

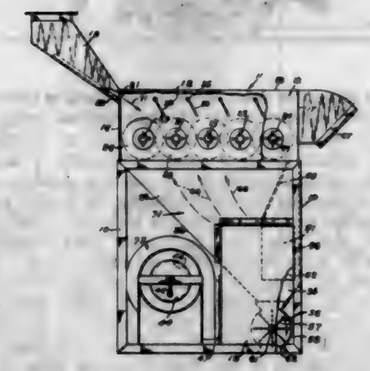
2,947,415
STERILE PACKAGE AND METHOD OF MAKING SAME
Ernest D. G. Garth, Summit, N.J., assignor to C. R. Bard, Inc., Summit, N.J., a corporation of New Jersey
Filed Oct. 3, 1957, Ser. No. 688,048
5 Claims. (Cl. 206—63.2)

1. A package for the protection of articles requiring sterilization and the maintenance of sterility comprising, a backing sheet, a cover sheet fixed to said backing sheet along at least one continuous line adjacent to the periphery of the cover sheet, at least the cover sheet being made of laminated plastic sheet material the inner layer of which is effectively gas permeable and an outer layer of which is gas impervious, at least the edge of said inner



layer being exposed on the outside of the package, and a narrow strip of microporous material lying between said sheets and extending from the interior of the package to an outer edge thereof.

2,947,416
GRAIN SEPARATOR
Edward Owen Ross, 1903 N. Lexington Blvd., Corpus Christi, Tex.
Filed May 27, 1958, Ser. No. 738,158
3 Claims. (Cl. 209—23)

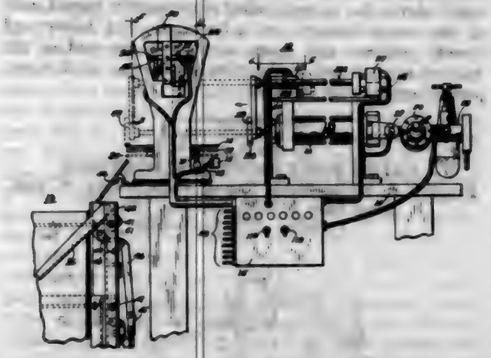


1. Apparatus for separating grain comprising, a plurality of horizontally disposed substantially parallel shafts, each shaft having a number of discs secured thereon in spaced relationship with peripheral portions of the discs carried by one shaft extending between peripheral portions of the discs carried by the next adjacent shaft, a housing encasing said discs having a discharge opening therein, means for driving said shafts in the same direction of rotation with upper arcs thereof moving towards said opening, means for guiding grain to be cleaned onto the upper peripheries of said discs, bin means below the discs for receiving grain passing downwardly through spaces between the discs, means supplying air under pressure into said bin means for upward movement therefrom through the spaces between the discs, a rotatable door structure at the lower end of said bin means receiving grain therefrom, and means for rotating said door structure to discharge grain therethrough while preventing escape of air from said bin means through said door structure.

2,947,417
APPARATUS FOR SORTING ARTICLES
Richard W. Reynolds, 640 E. 89th Place, and Sam Sotos, 8609 S. Euclid Ave., both of Chicago, Ill.
Filed Apr. 30, 1952, Ser. No. 285,232
2 Claims. (Cl. 209—121)

2. Apparatus for automatically sorting articles according to weight comprising a weighing device having an indicator which assumes a plurality of indicating positions intermediate the extremes of indicator travel, each indicating position corresponding to a predetermined weight, an electric circuit associated with each of said

positions having a contact at the associated position which completes said electric circuit when the indicator assumes said position, article receiving means defining an open article path through which said articles may freely fall when received from said weighing device, a plurality of

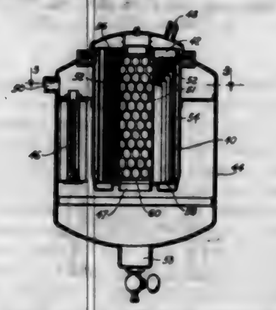


pivotally mounted trays normally in a collapsed position and assuming an angular position in said article path when actuated to deflect said articles, receptacle means corresponding to each tray positioned to receive such an article when deflected, and a means responsive to each of said electric circuits to move the corresponding tray to said angular position and rigidly support said tray in said angular position.

2,947,418
PHOSPHATE PROCESS
William R. Gooch, Lake Wales, and Elliott E. Dobson, Tampa, Fla., assignors to Florida Lightweight Products Company, Pembroke, Fla., a corporation of Florida
No Drawing. Filed Dec. 23, 1957, Ser. No. 704,306
10 Claims. (Cl. 210—68)

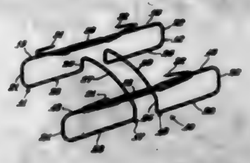
1. A process for forming dried phosphate slimes which comprises forming sequentially a series of layers of dried slimes by delivering separate portions of a slurry containing such slimes to a drying bed, allowing the solids content of said slurry to settle, draining off the clarified surface water from the settled slimes layer thereby formed and allowing each settled layer to dry by natural evaporation prior to forming a second settled slimes layer in like manner on top of said dried settled layer.

2,947,419
FILTER AND METHOD OF MAKING
Walter Kasten, Royal Oak, Mich., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed May 26, 1955, Ser. No. 511,387
12 Claims. (Cl. 210—435)



1. In a filter, the combination of an inner element formed of layers of nylon resin fibrous material having one side which is relatively loosely packed and another side which is more tightly packed, said material being arranged in said layers so that the loosely packed side of each layer contacts the more tightly packed side of the adjacent layer, and resin impregnated paper filter material surrounding said inner element.

2,947,420
HAT RACK
John G. Behrendt, % A. J. Peterson, 3413 W. North Ave., Chicago 47, Ill.
Filed Oct. 14, 1957, Ser. No. 689,872
2 Claims. (Cl. 211—31)



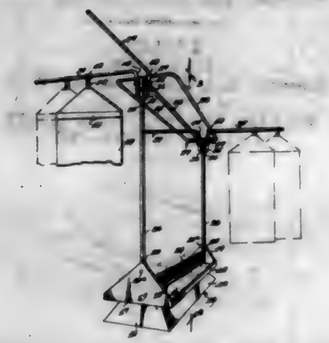
1. A hat rack for securement to the fabric lining of an automobile comprising two like, wire frames, each frame comprising a wire having a central hat brim supporting portion lying in a plane, a bend at each end of said portion away from the plane, a second bend extending each end in a plane substantially parallel to the first, a third bend extending each end of the wire back parallel to the plane of the central portion, a fourth bend directing the ends of the wire back toward the central portion thereof, a 180° bend in each end of the wire forming a bight, a second 180° bend directing the end back toward the central portion and slightly upwardly, the end having a sharp point to penetrate fabric, and contraction springs having their ends respectively hooked to opposed bights in the wire frames.

2,947,421
DISPLAY HANGER
Edward E. Schaefer, 1534 Park Ave., River Forest, Ill.
Filed Feb. 17, 1959, Ser. No. 793,914
1 Claim. (Cl. 211—45)



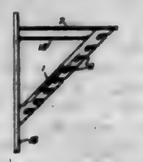
A display hanger comprising a crossbar with end openings, and a one-piece support formed from an elongated resilient wire element, said wire element being folded upon itself centrally to provide an upright double hook having a pair of integrally connected, side-by-side, resiliently spreadable hook portions, said wire element extending laterally at opposite sides of said double hook and having its opposite ends bent toward said crossbar and thence turned axially inwardly into said openings, one of said inturned ends being fixedly connected to the crossbar and the other of said inturned ends being removable from its crossbar end opening by resilient flexing of said support relative to said crossbar, the laterally extending portions of said wire element being spaced from said crossbar by a slight distance such that both said laterally extending portions and the crossbar can be grasped in one hand of a user, and said laterally extending portions being disposed at a slight angle relative to the crossbar so that the support is spaced from the crossbar at the central hook portion thereof a slightly greater distance than at the opposite ends thereof whereby to facilitate rapid detachment of said other inturned end from the crossbar upon squeezing of the central portion of the support toward the crossbar.

2,947,422
DISPLAY RACK
Carl H. Sudbury, 212 W. 1st Ave., Mitchell, S. Dak.
Filed Mar. 19, 1958, Ser. No. 722,431
1 Claim. (Cl. 211—47)



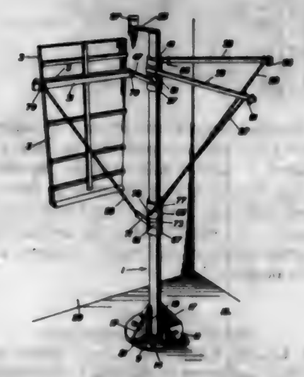
A wallpaper display rack comprising a base, a pair of upright members secured to said base and arranged in spaced parallel relation, a support frame detachably secured to the upper ends of said uprights in parallel relation to said base, a U-shaped support rod secured to each of said uprights at each end of said support frame adjacent to but spaced below said support frame, a plurality of generally horizontal tubular support poles, a perpendicularly depending integral extension formed on one end of each of said support poles and telescopically mounted on each end of each of said U-shaped support rods with its associated support pole positioned above said frame and journalled on said support rod for rotary movement on a vertical axis, and means on each of said depending extensions engaging under said frame for releasably holding a support pole in its associated support rod, said means comprising a washer rigidly secured to each depending extension for engaging under said frame, with each said washer having a flat side to permit the washer to move upwardly past said frame in one position of rotation of its associated pole on its support rod.

2,947,423
HOLDER FOR COAT HANGERS
Nils Bengt Artur Ekström, Brahegatan 58, Jonkoping, Sweden
Filed Nov. 21, 1958, Ser. No. 775,449
Claims priority, application Sweden Nov. 26, 1957
1 Claim. (Cl. 211—90)



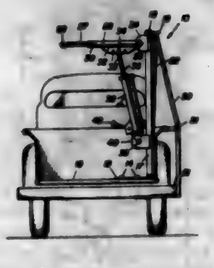
In a combined shelf bracket and holder for coat hangers, a triangular assembly including a horizontal beam of sufficient width to constitute a shelf for supporting clothing articles, a rail having straight, upper and lower edges extending downwardly from said beam adjacent one end thereof at an angle of approximately 45° relative to a vertical plane with the lower end of said rail terminating in the same vertical plane as the end of said beam, and a vertical support to which the lower end of the rail and the end of the beam are secured, said rail being of materially less width than the beam whereby the side edges of the beam project beyond the side edges of the rail, the lower edge of the rail having a plurality of recesses therein spaced along the length of said rail in such positions relative to each other that when coat hangers are located adjacent recesses, the downwardly turned ends of the upper hanger are positioned above a horizontal plane through the upwardly turned parts located above the corresponding downwardly turned ends of the lower hanger, and a horizontal rod below and closely adjacent said beam secured at one end of the vertical support and at the other end to the rail for supporting empty coat hangers.

2,947,424
RACKS FOR LINOTYPE MAGAZINES
Franklin E. White, Steele County Press, Finley, N. Dak.
Filed June 4, 1958, Ser. No. 739,861
1 Claim. (Cl. 211—168)



A rack for storing a matrix magazine of a type casting machine comprising a vertical standard for seating on a floor, a horizontal arm adapted for suspending a matrix magazine therefrom, a collar rotatably mounted on said standard for swingably supporting said arm, a right angled terminal flat extension on said arm fixed flatly against one side of said collar to offset said arm to one side of the standard for swinging close to a wall adjacent to which the standard is seated, a brace rod inclining downwardly from said arm toward said standard, a collar rotatable on said standard below the first-named collar, and a terminal flat angular extension on said brace rod fixed flatly to one side of the second-named collar to offset said rod from said standard in correspondence with said arm.

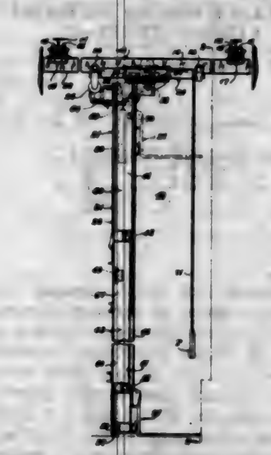
2,947,425
HYDRAULIC HOIST
Frank D. Nichols, 18 E. 41st St., San Angelo, Tex.
Filed Aug. 22, 1958, Ser. No. 756,714
1 Claim. (Cl. 212—35)



A fluid operated hoist for pickup trucks with a body having a floor, a side extending upwardly and flared outwardly at the top and a transverse bar member under

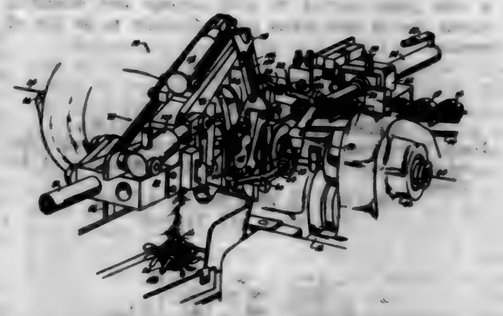
the bottom and extending laterally outwardly from thereunder to lie beneath the flanged upper end of the side, a base mounting plate, means for securing said base mounting plate adjacent the side wall and to the bottom of the body, an upright support post fixed at its lower end to the mounting plate, a plate fixed to the upper end of the support plate, and extending in a direction outwardly over the flanged upper end of the vehicle body, a side post secured to the upper plate and extending downwardly and outwardly of the side wall and anchored thereto and fixed at its lower end to the extended outer end of the transverse bar, an upright post secured at its upper end to said upper plate and extending forwardly and downwardly and secured to the inner side of the side wall, whereby said vertical upright support anchored in the bottom plate is held against lateral, fore and aft displacement, a tubular sleeve disposed on the upright support for turning movement, vertically spaced pairs of vertically extending spaced apart parallel plates, an extensible arm structure pivoted to the upper pair of spaced apart plates, a fluid cylinder pivotally connected to the lower pair of spaced apart plates, and means for adjustably securing the upper end of the fluid cylinder device to the arm structure whereby said arm structure can be elevated to adjustable different distances and the arm structure and fluid cylinder device may be swung horizontally by the sleeve upon support posts, and fluid pressure supply means for said fluid cylinder device.

2,947,426
CRANE
Harry A. Cotesworth, Cleveland Heights, and Franklin W. Dunning, Painesville, Ohio, assignors to The Cleveland Crane & Engineering Company, Wickliffe, Ohio, a corporation of Ohio
Filed Feb. 5, 1957, Ser. No. 638,240
6 Claims. (Cl. 212—128)



1. In a material handling apparatus a movable overhead support, a vertical mast assembly comprising a plurality of relatively movable mast sections, means connecting the upper end of one of said mast sections to said overhead support for rotation about a vertical axis, means operatively connecting another of said mast sections to said one of said mast sections for movement relative thereto between a position in which its lower end is below the lower end of said one of said mast sections and a position in which its upper end is adjacent to said overhead support, a load carriage, a load engaging member connected to said load carriage, means for connecting said load carriage to said another of said mast sections for movement thereof and said load engaging member thereatong between positions adjacent to the upper and lower ends of said another of said mast sections, and means for raising said load carriage and said load engaging member above said position adjacent to the lower end of said another of said mast sections and said another of said mast sections above said position in which its lower end is below the lower end of said one of said mast sections.

2,947,427
ARMATURE WINDING AND TRANSFER MACHINE
Harry W. Moore, 420 Davis Ave., Dayton 3, Ohio
Filed Sept. 27, 1954, Ser. No. 458,696
7 Claims. (Cl. 214—1)

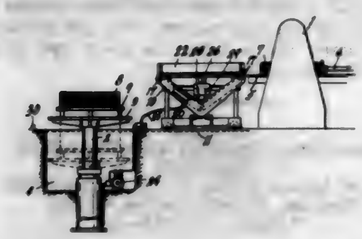


1. An armature handling machine for armatures of the type provided with a shaft, the combination comprising support structure, an elongate inclined receiving track rigidly attached to the support structure for supporting a plurality of armatures, a positioning arm member pivotally mounted adjacent the receiving track and engageable with one of the armatures to retain the position thereof, a reciprocally operable horizontally movable loading member supported adjacent the positioning arm and engageable with one end portion of the shaft of an armature for axial movement of the armature, a clamping member for retaining an armature, the loading member being operable to engage the shaft of an armature retained by the positioning arm and to transfer the armature in axial movement from the receiving track to the clamping member, an unloader member movably carried by the support structure, the unloader member being provided with means abuttingly engageable with opposite ends of the armature shaft for movement thereof from the clamping member, the unloader member moving the armature from the clamping member in the same direction as the movement of the armature to the clamping member by the loading member, the armature thus moving axially in a substantially straight line from the receiving track to the clamping member entering the clamping member at one portion thereof and leaving the clamping member from an opposite portion thereof.

2,947,428
MACHINE FOR STACKING PAPER INCLUDING OPPOSITELY WITHDRAWABLE ADJACENT STACK SUPPORTS
Frederick B. Curtenius, Kalamazoo, Mich., assignor, by mesne assignments, to Rice Barton Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 29, 1954, Ser. No. 426,496
12 Claims. (Cl. 214—6)

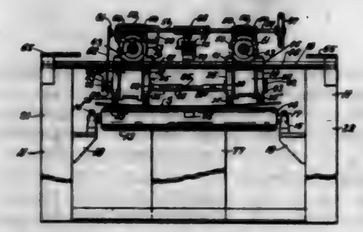
7. Paper stacking apparatus in combination with a paper trimmer and a hoist spaced therefrom comprising, a carriage movable from said trimmer to over said hoist, a pair of table plates slidably mounted on said carriage

and movable from spaced positions into side by side relation, reversely threaded screws on said carriage connected to said plates to oppositely actuate the same, and



a side guide carried by said carriage and extending across one of said plates perpendicularly to its line of motion.

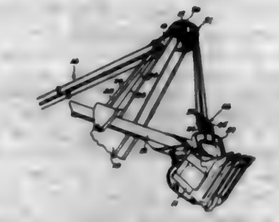
2,947,429
SHEET HANDLING APPARATUS
Dario Bucciconi, Gary, Ind., assignor to Bucciconi Engineering Co., Inc., Gary, Ind., a corporation of Indiana
Filed May 25, 1959, Ser. No. 815,552
17 Claims. (Cl. 214—6)



16. An apparatus for piling relatively wide and thin metal sheets comprising a supporting frame, relatively narrow elongate rail-like electromagnetic conveyor units disposed in longitudinally extending, laterally spaced, parallel relation above said frame, longitudinally aligned pivots connecting opposite ends of each conveyor unit to said supporting frame, a cross shaft rotatably mounted on said frame, worm and gear connections between said cross shaft and each of said conveyor units which are operative to rotate each of said conveyor units about a longitudinal axis so as to position the bottom surface of each unit at an angle to a common cross plane, means for advancing successive sheets in a longitudinal direction to the bottom surfaces of said conveyor units, means for actuating the magnets of said conveyor units to hold the sheets on the bottom surfaces thereof whereby the sheets are bowed about a longitudinal axis, and means to drive at least one of said conveyor units so as to advance the sheets beneath the conveyor units while held thereby.

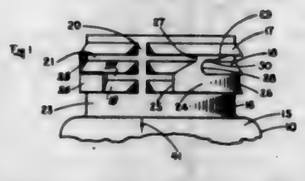
2,947,430
HOIST CABLE EQUALIZER ASSEMBLY
Karl Schneider, Milwaukee, Wis., assignor to Harnischfeger Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed Aug. 30, 1955, Ser. No. 531,525
9 Claims. (Cl. 214—135)

1. In an excavator having hoist drum means, a boom with four substantially coaxial boom point sheaves arranged in axially spaced closely adjacent sheave pairs, and a dipper movable with respect to said boom and boom point sheaves, the combination of two sets of cable pairs having two lines each, the respective lines of each cable pair being beat over respective sheaves of each pair of boom point sheaves and connected to said hoist drum for simultaneous winding thereon, a hoist equalizer block and means mounting said block on the dipper for pivotal movement about one axis, said block having dual sheaves mounted thereon for oscillation on axes transverse to the axis of pivotal movement of the block and transverse to



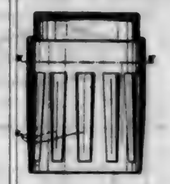
the axis of the boom point sheaves, one cable pair being reeved about one block sheave in non-running relation thereto and the other cable pair being reeved about the other block sheave, the axes of both block sheaves being within the bight of both cable pairs, the oscillation of said block sheaves about their axes equalizing tension as between cable lines in each cable pair and the oscillation of the entire block about its pivotal mounting on the dipper equalizing tension as between the respective cable pairs.

2,947,431
LOCK FOR CONTAINER COVERS
Don A. Haynes, Okemos, Mich., assignor to Calmar, Incorporated, Los Angeles, Calif., a corporation of California
Filed Apr. 6, 1959, Ser. No. 804,162
5 Claims. (Cl. 215—9)



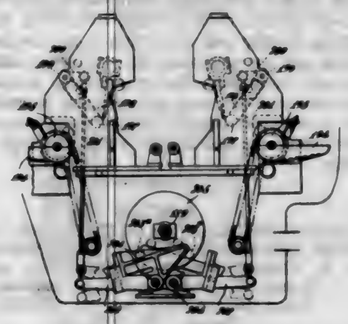
1. A combination lock for a container cover comprising a container having an opening surrounded by an annular wall, a cover for said opening having an annular wall arranged in coaxial telescoping relationship with said first named wall, one of said walls having a plurality of axially spaced apart parallel grooves therein extending in a circumferential direction at least partially around said wall and opening toward the other wall, the side walls of said grooves having axially registering gaps therein, a ring rotatably mounted on the other wall, said ring having a detent thereon located in one of said grooves and adapted to pass through said gaps when in registry therewith, a fixed lug on the wall on which the ring is mounted extending into another of said grooves, said lug being adapted to pass through said gaps when in registry therewith, stop means on said one wall for limiting the rotary movement of said ring relative to said one wall, one of said walls of the groove in which the detent is located having a helically extending portion engageable by the detent on the ring in that groove, said detent and lug being selectively positionable in registry with said gaps by rotation of the cover in opposite directions to predetermined positions.

2,947,432
CAP SEALS AND THE LIKE FOR THE SEALING AND FOR THE PUTTING OF A CAPSULE ON CONTAINERS PARTICULARLY ON BOTTLES
Henri Marcel, 44 Quai Jayr, Lyons (Rhone), France
Filed Apr. 15, 1957, Ser. No. 652,888
Claims priority, application France May 4, 1956
5 Claims. (Cl. 215—41)



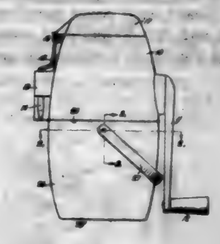
1. In a plastic cap seal for the sealing of containers having a neck and an annular flange on said neck, said plastic cap seal comprising an upper part having a recess for the annular flange of the neck of the container, a skirt, an annular shoulder in the inner surface of the skirt defining the lower margin of said recess for the annular flange of the neck, the thickness of said skirt decreasing progressively from said shoulder to its lower extremity, and means on the inner surface of said skirt enabling the air enclosed in said cap seal to escape when driven in, said skirt ending in a flexible and elastically deformable circular edge the diameter of which is slightly less than the diameter of said neck to effect a snug fit, the elasticity of said skirt causing the engagement of said shoulder under said flange of said container neck to prevent any removal of said cap seal when once set in place.

2,947,433
GUM-APPLYING APPARATUS FOR LABELING MACHINES
Sidney T. Carter, Shrewsbury, Mass., assignor to Geo. J. Meyer Manufacturing Co., Cudahy, Wis., a corporation of Wisconsin
Original application Dec. 5, 1955, Ser. No. 551,012. Divided and this application Oct. 23, 1958, Ser. No. 769,229
11 Claims. (Cl. 216—12)



1. In a labeling machine of the kind having a conveyor for moving articles along a predetermined path, label-applying elements including a picker, a gum box, a gum-elevating roll in the gum box, and means for starting and stopping the conveyor and label-applying means, in combination, means for turning the gum elevating roll at a relatively high speed while the conveyor and labeling means are operative, and means for turning the gum roll at a predetermined, relatively lower speed while the conveyor and label-applying elements are stationary.

2,947,434
CONTAINER ENGAGING MECHANISM
Frank E. Aberer, Kansas City, Kans., assignor to John C. Hockery, trustee, Kansas City, Mo.
Filed June 3, 1955, Ser. No. 513,149
2 Claims. (Cl. 220—4)

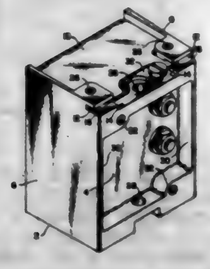


1. Engaging mechanism for open ended container sections for detachably securing said sections together comprising, in combination, first and second container sections each having wall portions and continuous rims engageable with each other, a pair of flanges connected to the wall portion of the first section having portions extending beyond the rim thereof, said flanges being positioned on the wall portion so as to be substantially opposed to each other, each flange having a slot therethrough with an enlarged slot portion in the body of said flange, said slots extending from the free end of said flange to said enlarged slot portion, said second section having a pair of openings therethrough positioned in the wall portions adjacent said rim portion and aligned with said enlarged portions of said flange slots when the rims of the sections are properly engaged, a resilient handle, and a pair of shafts each attached at one end to the end portion of said handle and extending inwardly of and normal thereto, each of said shafts having a reduced portion and an enlarged head on its inner end, said shafts being positioned through said openings with their enlarged heads positioned interiorly of the wall portion of said second section, said reduced portions of said shafts being freely slidable in said openings and flange slots, said enlarged shaft heads being of a size to pass into said enlarged slot portions and being larger than said flange slots and openings, said resilient handle having each end portion normally spaced from the outer wall portions of said second section a distance at least as great as the thickness of one of said shaft heads for normally holding said enlarged heads in their respective enlarged slot portions for locking said sections together, the length of the reduced portion of said shafts being greater than of combined thickness of the wall portion and flange through which they extend to permit the end portions of said handle to be pressed inwardly and thus move said shafts inwardly a distance sufficient to disengage said enlarged heads from said enlarged slot portions and permit disengagement of said sections.

2,947,435
HOUSING MEANS
Martin R. Vocht, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 24, 1957, Ser. No. 685,957
1 Claim. (Cl. 220—4)

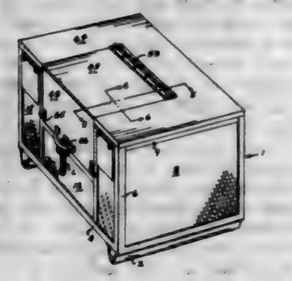
A housing means for electronic apparatus comprising a unitary metal main housing member defining a rectangular structure having a bottom, an end and two side members, said structure having one open end and an open top, said side member each having adjacent the open end a groove open toward said bottom, said bottom terminating adjacent said open end at a plane at least as far removed from the end of the side members as said

grooves, a unitary cover member of sheet material formed to cover said open end and said top, said cover member having a pair of laterally extending tongues, said tongues being arranged to be hooked into said grooves to secure said cover member to said main housing member at one end, screw fastening means positioned on the top of said main housing means, said cover member being contoured at its opposite end for cooperative association with said screw fastening means as a means for securing said oppo-



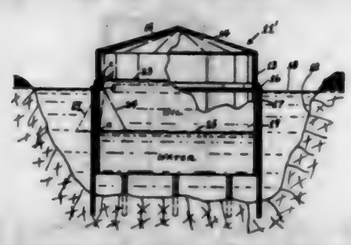
site end to said housing member, and said housing means being provided with means for mounting said housing means on a supporting structure in any of several positions, said last mentioned means comprising a pair of receiving means opening on said open end for receiving a pair of mounting screws, a similar pair of receiving means opening on said bottom for receiving a pair of mounting screws, said bottom having a downwardly extending skirt as an extension of said side members and ends, said skirt having a pair of aligned openings through the opposite end portions for the reception of a unitary mounting bolt.

2,947,436
INSULATED CONTAINER
John W. Kappas, 243 Kenwood Ave., Dayton, Ohio
Filed July 19, 1956, Ser. No. 598,678
5 Claims. (Cl. 220—10)



1. An insulated container comprising, a receptacle having an inner lining of metal foil, a secondary lining of Fiberglas uniformly applied to said inner lining, a second receptacle of expanded metal contained by said secondary lining, said secondary lining and foil affording a complete air and moisture impervious packing about said second receptacle, a non-conductive cover frame seated to and about said second receptacle affording access thereto and connected to said first receptacle in sealing relation thereto, and an insulator closure panel removably mounted to said cover frame to normally seal the access to said second receptacle whereby a container obtains which may be employed to ship frozen foods in ordinary vehicles and maintain their freezing temperatures for as much as thirty hours.

2,947,437
STORAGE TANKS FOR LIQUIDS
David M. Gruer, 98 Greenwood Ave., Montclair, N.J.
Original application Apr. 23, 1957, Ser. No. 654,541, now Patent No. 2,914,358, dated Feb. 9, 1960. Divided and this application Feb. 24, 1958, Ser. No. 717,257
5 Claims. (Cl. 220—13)



1. A storage tank comprising a relatively thin vertical shell member open at its bottom end and immersed in a body of water so that water is free to enter the bottom portion of said shell member and can exert upward force therein, a quantity of liquid of lesser density than water contained in said shell member and supported by the water in the bottom portion thereof so that the level of the top surface of said liquid is substantially higher than the level of the outside water, whereby the liquid exerts a maximum outward bursting force on the shell member at the level of the outside water, an annular continuous reinforcing band secured externally to said shell member at the level of the outside water and opposing said outward bursting force on the shell member, a plurality of vertical piles supportingly engaging beneath said band to support said shell member at a substantially constant depth of immersion, and an impervious flexible member substantially in the form of a cylinder with a closed flat bottom, said cylinder having an outside diameter slightly less than the inside diameter of the vertical shell member, the upper rim of said cylinder being impermeably attached to the inside surface of the shell member at a level located substantially midway between said reinforcing band and the flat bottom when the flexible member is in a completely downwardly distended condition, said flexible member being sufficiently thin so that by flexing, folding and crumpling it can dispose itself to constitute an approximately flat and level surface separating said liquid from the water in the bottom portion of the shell member, said shell member extending downwardly a sufficient distance to completely surround said flexible member in said completely downwardly distended condition.

2,947,438
INTERNAL INSULATION STRUCTURE FOR USE WITH LIQUEFIED PETROLEUM PRODUCTS
Frank A. Clausen, Roslyn Heights, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 19, 1957, Ser. No. 703,916
2 Claims. (Cl. 220—15)

1. In combination with the side wall of a light weight container for holding at low temperature and at low pressure a liquefied product normally gaseous at ambient temperature, an internal insulation structure comprising a plurality of panel members each having top and bottom edges and being fastened hermetically along each of their top edges to the internal surface of said side wall in a substantially horizontal plane, each of said panel members having a continuous top edge portion extending from said top edge inwardly and downwardly with respect to said side wall and ending at a vertical portion thereof extending downwardly parallel to and spaced

from said side wall, said panel members being positioned in vertical overlapping relationship to each other with the bottom edge of one course of said panel members being fastened at spaced intervals to the subjacent course of said panel members along the juncture of the inwardly extending continuous top edge portion with the vertical portion thereby to define a series of vertically aligned peripheral chambers to serve as individual vapor traps for vaporized gas from said liquefied product entering said chambers along the bottom edges thereof, the cross section of each of said chambers being a parallelogram



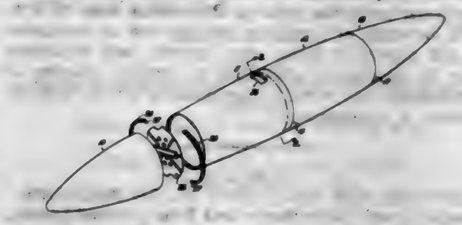
having acute and obtuse angles, the angle at the juncture of the top edge of each panel member with said side wall being of such magnitude that the vaporization of said liquefied product in each of said chambers provides a vapor barrier between said liquefied product and said side wall and a vapor seal to prevent further ingress of said liquefied product thereinto, said bottom edges of said panel members having a series of notches therein, the top edge of said notches in each panel member defining a substantially horizontal plane which is substantially below the plane of the top fastened edges of the subjacent course of said panel members.

2,947,439
FLAT BOTTOM PRESSURE CONTAINER
Raymund V. McGrath, Merrionette Park, Ill., assignor to Chicago Bridge & Iron Company, a corporation of Illinois
Continuation of application Ser. No. 356,723, May 22, 1953. This application Dec. 13, 1957, Ser. No. 702,711
1 Claim. (Cl. 220—18)



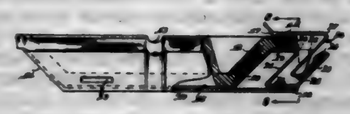
A pressure container for storing fluids in large volume, comprising a substantially flat bottomed vessel resting directly on grade material, a cylindrical side wall secured to said bottom, a rigid top secured to said side wall, a circular anchor wall positioned below said bottom and beneath said grade, said anchor wall having a diameter substantially equal to that of the side wall and anchored thereto, a second anchor wall of appreciably smaller diameter than said first anchor wall positioned beneath grade and lying appreciably within the periphery of said bottom and concentric with the side wall, and tension members inside the vessel converging downwardly from the top and connecting the top thereof to said second anchor wall, said anchor walls having substantial rigidity and weight to resist the tendency of the internal pressure within the container to lift portions of the container and deform the bottom.

2,947,440
SECTIONAL CONTAINERS AND THE LIKE
William P. Slein, Reseda, Calif., assignor to Reseda Manufacturing Company, a corporation of Missouri
Filed Oct. 2, 1957, Ser. No. 687,689
3 Claims. (Cl. 220—22)



3. In a tank comprising a hollow cylindrical shell, the combination of a circular baffle member disposed inside of and partitioning the shell, an expandable ring circumscribing the baffle and having spaced parallel baffle member engaging elements disposed on opposite sides of the baffle member and confining same against axial separation from the ring, structure on the inside of the shell positioned to be engaged by and to index the ring in the shell when the ring is expanded, the diameter of the baffle member being sufficiently less than that of the ring when the ring is expanded as to permit the ring and baffle member to be initially positioned with a portion of the ring adjacent but spaced inwardly of said structure, and means operable to expand the ring to engage it with said structure.

2,947,441
LAMINATED DISPOSABLE ASH TRAY
Lawrence P. Brannan, 5431 North Indiana, Kansas City 16, Mo.
Filed June 22, 1956, Ser. No. 593,284
2 Claims. (Cl. 220—63)



2. In an ash tray, the combination which comprises a tray having a base with upwardly inclined side walls, laminated layers of fire resistant material positioned in the tray and providing a lining for the base and side walls, said base having an extension at one point, and a deformable spring clip positioned on said extension, supported by a tongue extended below the layers of laminated material, and having a section with a rough under surface extended over the uppermost of said layers of material and formed to free a portion of the uppermost layer of material from the layer of material below.

2,947,442
SANITARY CAN COATING
Gerald P. Roeser, Lahaska, Pa., assignor to American-Marietta Company, Stoner-Mudge Co. Division, Chicago, Ill., a corporation of Illinois
No Drawing. Filed June 5, 1959, Ser. No. 818,258
13 Claims. (Cl. 220—64)

1. In the process of lining an interior metal surface of a container for foods and beverages and the like by coat-

ing on said metal surface a copolymer of vinyl chloride and vinylidene chloride dissolved in a solvent medium comprising a major proportion of mononuclear aromatic hydrocarbon solvent and then baking the coating to remove said solvent medium, the improvement which comprises improving the blush resistance and other sanitary can characteristics of the baked coating which is produced by employing in the said process in place of the said copolymer of vinyl chloride and vinylidene chloride a copolymer of vinyl chloride and vinylidene chloride which has been chlorinated to numerically increase the chlorine content from 3% to 8% on a weight basis, said copolymer containing prior to chlorination from 15% to 45% by weight of vinylidene chloride with the remainder of said copolymer being vinyl chloride, said copolymer prior to chlorination possessing an intrinsic viscosity of substantially 0.15 to 0.30 determined at 20° C. in 0.4% solution in nitrobenzene.

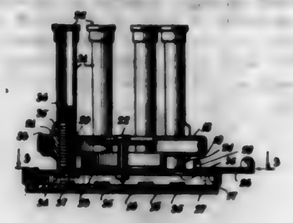
2,947,443
DEVICES FOR RELEASING FLUID PRESSURE
Charles Henry Victor Sawyer and Peter Edmund Landeg, Hayes, England, assignors to C. D. Patents Limited, London, England, a British company
Filed June 16, 1958, Ser. No. 742,425
Claims priority, application Great Britain July 1, 1957
2 Claims. (Cl. 220—89)



1. A device for releasing fluid pressure comprising a first mating part which has an axial fluid passage therein and is recessed to provide first and second internal support shoulders; a carbon bursting disc having flat faces to the marginal portion of each of which is secured an annular gasket, one of said gaskets being seated on said first support shoulder whereby said bursting disc closes said axial passage; a support member for said disc which member is supported by said second support shoulder and is spaced from said disc when said disc is in its normal, unflexed condition by an amount which permits said disc to flex towards said support member by an amount which is insufficient to cause said disc to rupture; and a second mating part seated on the other of said gaskets and having an axial fluid passage which communicates with the axial passage in said first mating part when said bursting disc is ruptured, one of said mating parts being provided with two angularly asymmetrically disposed locating slots of different configuration, and one of said gaskets having two locating tabs projecting edgewise therefrom engaged in said slots.

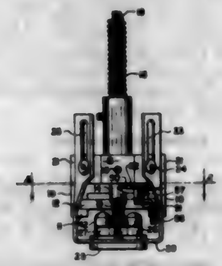
2,947,444
DISC DISPENSER
Harry E. Taylor, Baltimore, Md., and James R. Buck, Jersey City, N.J., assignors to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Filed Jan. 18, 1956, Ser. No. 559,929
7 Claims. (Cl. 221—93)

3. A disc-containing apparatus comprising in combination a supporting structure embracing a pair of vertically spaced plates, each formed with a series of openings, the individual openings in one plate being non-aligned with openings in the other plate, a dispensing structure including a plate also formed with a series of openings substantially aligned with the openings of said one plate of said pair, means for supporting the plate of said dispensing structure at a point intermediate the plates of said pair, means connected to one of said structures for shifting the plate of said dispensing structure with respect to said pair of plates to substantially align the openings of the plate of said dispensing structure with the openings of said other plate of said pair, a series of



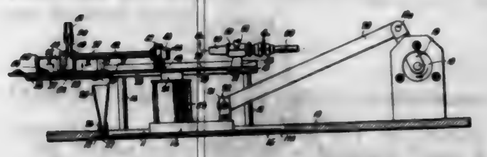
disc-containing cartridges removably receiving within the openings of said one plate of said pair with portions of each of said cartridges resting upon the other plate of said pair and means forming a part of said cartridges and supporting structure cooperating to maintain the position of the former in a predetermined relationship with respect to the latter.

2,947,445
WORK PIECE TRANSFER MECHANISM
Linn E. Potter, Fayetteville, N.Y., assignor to Syracuse Special Machine Co., Inc., a corporation of New York
Filed May 26, 1958, Ser. No. 737,482
3 Claims. (Cl. 221—210)



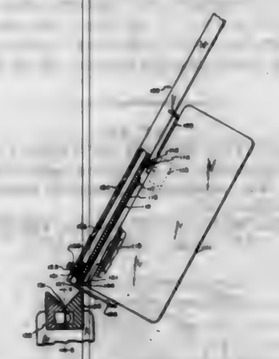
1. A work piece transfer apparatus for transferring a work piece from a feeding station to a tool spaced therefrom comprising a frame, a vertically disposed tubular magazine mounted on the frame for containing a supply of work pieces, a work piece stop positioned below the lower end of said magazine for supporting a stack of work pieces in the magazine, a carriage mounted in the frame for reciprocation forwardly and rearwardly thereof, a pair of jaws pivotally mounted at like ends on said carriage, means normally urging the free ends of said jaws together for gripping a work piece, means operable to spread said jaws apart and latch means for maintaining said jaws in spaced apart relation, means at said work feeding station for releasing said latch to permit closing of said jaws upon the lowermost work piece positioned on said stop, a work piece retaining member, means yieldably retaining said retaining member in engagement with the work piece next above said lowermost work piece to prevent descent thereof to said stop, said latched jaws being operable upon rearward movement of the carriage to move said work piece retaining member out of engagement with the work piece to permit descent thereof downwardly against said stop prior to the movement of said jaws to said feeding station.

2,947,446
CORE DROPPING DEVICE
Joseph T. Warkoczewski, Kansas City, Mo., assignor to Gustin-Bacon Manufacturing Company, a corporation of Missouri
Filed Dec. 8, 1958, Ser. No. 778,897
9 Claims. (Cl. 221—211)



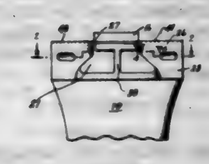
1. A frame comprising a lower shelf and an upper shelf mounted thereover in substantially parallel relationship, a core reservoir box on said upper shelf open on one side thereof, said box disposed with its length substantially parallel to the lengths of the shelves and adapted to receive cores in a pile positioned transversely of said upper shelf and box, a transverse slot in said shelf adjacent the open side of said box, means below said slot for receiving cores dropped therethrough, a core pick-up slide on said upper shelf adapted to move to and fro longitudinally thereof in a direction substantially normal to the lay of the cores in the reservoir box, a core pick-up head on the front of said slide adapted to contact cores in said core box with its front side, at least one vacuum orifice in the lower front edge of said pick-up head, a vacuum cavity and at least one passage in said pick-up head connected to said orifice whereby to pull a vacuum at the lower front of said head, a vacuum connection to said cavity operable to alternately pull and release a vacuum, and means for translating said slide to and fro on said upper shelf to move said head from said core pile in said box to said slot and return.

2,947,447
COMPONENT FEED AND INSERTION
Herbert K. Hazel, Arlington, Va., assignor to Melpar, Inc., Alexandria, Va., a corporation of New York
Filed Apr. 10, 1956, Ser. No. 577,329
2 Claims. (Cl. 221—299)



1. A gravity feed hopper for a plurality of stacked electrical components, said hopper having a channel, said channel having a vertical component of extension and arranged to store said components in superposition of one another, each of said components including a relatively thick body and relatively thin leads extending in opposite directions from said body, said hopper having a gate, said gate including two pairs of fingers, said pairs of fingers extending in opposite directions with respect to said channel, one of said pairs of fingers positioned and arranged to support the lowest component, and the other of said pair of fingers arranged to support the second lowest component in said hopper, and means for actuating said fingers one into and the other out of said channel simultaneously, wherein is provided a solenoid and an armature for said solenoid, said solenoid and armature included in said means for actuating said fingers, wherein said hopper is fabricated of non-magnetic material, wherein said armature is a magnetic resilient strip secured at one end directly to said hopper, and wherein said fingers are integral with said armature adjacent the other end thereof.

2,947,448
COLLAPSIBLE TUBE CLOSURE AND SEALING MEANS
Duane C. Madden, 3016 W. Verdugo Ave., Burbank, Calif.
Filed July 23, 1957, Ser. No. 673,674
2 Claims. (Cl. 222—92)



1. A collapsible container comprising a flexible tubular member of thermoplastic material for containing a soft, extrudible material, closure means secured to one end of said container to form the member in a generally flat ellipsoidal shape with opposing walls, to form a slit-like passage between said walls for extruding material from said container, said closure means having a pair of opposite jaws with means for pressing said jaws against said walls to close said slit-like passage and permit the opening of said passage on pressing the soft extrudible material in the container, said closure means having a pair of panels on opposite sides of said passage pressing said walls together to seal a portion of the end of the tube and forming the discharge passage therethrough, said panels having inwardly turned edges extending along the side of said panels longitudinally to said passage to retain between the panels the flexible thermoplastic material pressed on clamping of the panels, said walls between said inwardly turned edges being taut to form smooth, even inner facing sealing surfaces forming a sealing area at the discharge end of the passage and the jaws pressing against the taut wall portions to form a continuous uninterrupted seal along said inner surfaces to prevent the entrance of air or other contaminants within said container, thereby protecting the contents of the container.

2,947,449
LIQUID DISPENSING APPARATUS AND VALVE
Manuel Emil Hernandez, New York, N.Y., assignor to Colgate-Palmolive Company, Jersey City, N.J., a corporation of Delaware
Filed Oct. 31, 1956, Ser. No. 543,787
8 Claims. (Cl. 222—94)

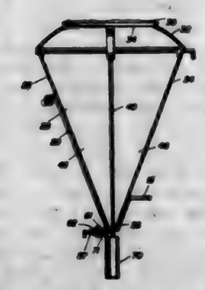
1. A dispensing container adapted to dispense a plurality of distinct liquid charges under the influence of a single, self-contained compressed pneumatic propellant which comprises an outer casing having a discharge outlet in the upper part thereof, a valve closing said outlet, a siphon tube communicating said valve with the bottom of said outer casing, an inner casing deformable under pressure positioned within said outer casing and having a

separate discharge outlet, a valve closing said separate discharge outlet, a first of said distinct liquid charges in said outer casing, and a second of said distinct liquid charges of different composition in said inner casing, one of said casings including, in admixture with the liquid



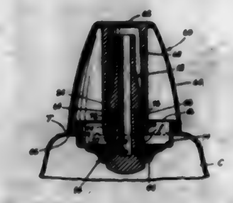
charge therein, said compressed, liquefied pneumatic propellant for directly forcing a mixture of said pneumatic propellant and the liquid charge in admixture therewith through the outlet thereof when the valve therein is operated and for indirectly forcing the liquid charge from the other casing through the outlet therein when the valve therein is operated.

2,947,450
COMBINATION SPREADER BOX AND GRAIN DRILL
Albert L. Wilson, Palo Pinto, Tex., assignor of fifty per cent to Ben H. Martin, Mineral Wells, Tex.
Filed May 14, 1958, Ser. No. 735,254
4 Claims. (Cl. 222—136)



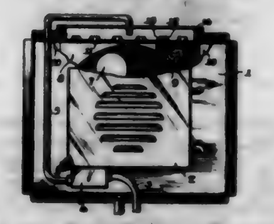
4. A combination implement adapted to distribute grain and/or fertilizer, said combination implement comprising a spreader box that has an elongated narrow discharge port at the lower end, a flat plate forming a plunger mounted for reciprocation in said box and operable in alignment with said port, the lower edge portion of said plunger always occupying said port with clearance between the surface of said plunger and the elongated edges of said port, at least one control plate in registry with said port, means adjustably securing said control plate to said box, a cam shaft, means for rotating said cam shaft, said cam shaft having at least one cam thereon, a lever, means mounting said lever for oscillation with a portion thereof in engagement with said cam of said cam shaft, resilient means opposing the movement of said lever and attached to said lever, means connected to said plunger plate and to said lever for transmitting motion from said lever to reciprocatory motion of said plunger plate, said plunger plate divides said box into separate compartments so that different materials can be maintained separate from each other in said box.

2,947,451
PROTECTIVE COVER FOR A DISPENSING VALVE ASSEMBLY
Fred F. Stollenwerp, Mehlville, Mo. (276 Lemay Ferry Road, St. Louis 25, Mo.)
Filed May 23, 1958, Ser. No. 736,179
1 Claim. (Cl. 222—183)



A protective cover for a dispensing valve assembly of the character disclosed, said assembly being mounted centrally in the closure member incorporated in the top wall of a pressurized container and consisting of a resilient grommet having a therewith cooperating tiltable generally tubular valve stem extending therethrough, said grommet including a sleeve segment and an integral therewith neck segment that has a downwardly outwardly tapered external periphery, said sleeve and neck segments projecting upwardly above the bottom wall of the closure member and said stem projecting upwardly above the top of the sleeve segment, the protective cover aforesaid comprising integrally in combination: a top wall merging into an outwardly flared cylindrical side wall that terminates at the bottom in a circular rim portion; a tubular section depending centrally from said top wall and having an internal diameter slightly exceeding the largest external diameter of said stem; and an internal thread formation in the lower end portion of the tubular section; said thread formation being continuous and helically generated from a point coincident with the bottom edge of said section and having its thread crests slightly rounded, in consequence whereof when said cover member is manually pressed downwardly from above about the projecting portion of the valve stem until the bottom rim of the cylindrical side wall contacts the top wall of the container, the internal thread formation aforesaid of the tubular section will deform the external peripheries of said grommet sleeve and neck segments into frictional threaded engagement therewith whereby to provide a hermetic seal about the valve stem, to obviate fortuitous displacement of said cover, and to simultaneously preclude tilting of said valve stem.

2,947,452
GRAVITY WATER DISTRIBUTOR
Stanley H. Frohmader, Carl B. Rowe and John A. Salvaag, Madison, Wis., assignors to Research Products Corporation, Madison, Wis.
Filed Sept. 10, 1957, Ser. No. 683,183
14 Claims. (Cl. 222—187)



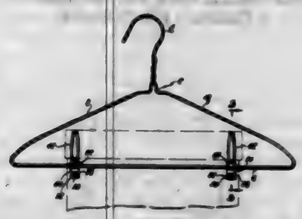
1. A distributor for the uniform supply of water by gravity flow to an extended area comprising a trough-like container having a plurality of spaced discharge openings in a vertical liquid-retaining wall of said container, the lowermost portions of said openings being at approximately the same level, and a water insoluble hydrophilic composition adherently coating at least the surfaces of said container at and immediately adjacent each said discharge opening at said lowermost portions thereof whereby to promote the steady and uniform flow of water from said trough-like container through all of said discharge openings.

2,947,453
CLOSURE AND REVERSIBLE SPOUT ASSEMBLIES FOR CONTAINERS
Richard L. Parish, Jr., North Salem, N.Y., and Carl R. Bee, Warren, Ohio, assignors to American Flange & Manufacturing Co., Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 19, 1956, Ser. No. 579,180
8 Claims. (Cl. 222—539)



1. A reversible pouring spout for containers, which comprises an elongated hollow sheet metal spout body formed with a pouring end and a mounting end, said mounting end including an outwardly offset portion adjacent the end of said body, said end continuing from said offset portion into a downwardly extending annular bead, and said end continuing from said downwardly extending bead into an upwardly extending annular bead, said end terminating in a downwardly extending cylindrical portion terminating in a free end face.

2,947,454
HANGER FOR TROUSERS
Claire N. Brewer, 737 W. 44th St., Indianapolis, Ind.
Filed June 3, 1958, Ser. No. 739,592
2 Claims. (Cl. 223—88)



1. In combination with a conventional triangular wire coat hanger having a horizontal wire member, means for supporting a pair of cuffed trousers on said horizontal member, comprising two substantially identical devices each having a body part having a recess therein receiving said horizontal wire member of the coat hanger whereby the two devices may be supported in spaced positions on said member, means for rigidly but releasably attaching said devices to said horizontal wire member whereby said devices may be moved along the horizontal member of the coat hanger relatively to each other and rigidly fastened in adjusted position to stretch the cuffed trousers hung on said device, each of said two devices having two members extending upwardly therefrom which are spaced apart laterally of the general plane of the coat hanger and which are adapted to be received within the cuffs of the two legs of a pair of trousers.

2,947,455
GRIP BRACELET
Otto Straub, Wangen, Kreis Goppingen, Germany, assignor to Lowa G.m.b.H., Uhingen, Wurttemberg, Germany, a firm
Filed Apr. 23, 1957, Ser. No. 654,569
Claims priority, application Germany Apr. 25, 1956
4 Claims. (Cl. 224—4)



1. In a grip bracelet for a wrist watch and the like, the combination of a slip-like spring band, the central portion of which is adapted to extend under a wrist watch with the ends thereof lying in overlapped relation, a flexible center sleeve mounted on and inclosing the intermediate portion of the spring band and anchored thereto, flexible terminal end sleeve members on the overlapping ends of the spring band extending a distance thereon to receive the adjacent ends of the center sleeve and the terminal ends of the end sleeve members being of increased size, a box-like watch attaching member disposed in the enlarged terminal end of each end sleeve in surrounding relation to the spring band and hook means on each box-like member extending toward and adapted to engage a watch, said box-like attaching members also serving as a shape retainer for the enlarged terminal ends of the end sleeves and being freely slidable with respect to the portions of the spring band associated therewith.

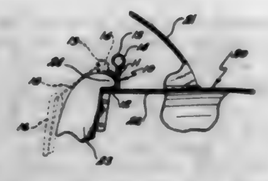
2,947,456
LANYARD
Soren M. Seron, % Seron Mfg. Company, 432 Barber Bldg., Joliet, Ill.
Filed Jan. 23, 1958, Ser. No. 710,822
1 Claim. (Cl. 224—5)



A neckpiece lanyard comprising: a length of neoprene tubing with sealed, joined ends formed into a large loop element, the tubing enclosing a trapped body of fluid; a keeper slidably engaging opposed portions of the looped tubing to juxtapose said portions and form the large loop into two smaller loops, adjustable in size, the tubing of one of the small loops being generally in a single plane to lie flat against the chest of a wearer, the keeper encircling the loop portions and having an internal diameter slightly smaller than the dimensions of the element whereby the element is received in the keeper under slight restriction and the keeper is retained longitudinally of the element to maintain a desired adjustment of the relative sizes of the loops; and fastening means comprising a post member secured to said one small loop and lying in said plane and extending generally at right angles to the longer dimension of said small loop, an element de-

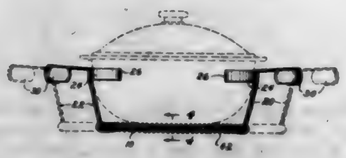
tachably connected with said post and a hook member carried by said element for swivel movement about said post member in a plane at right angles to the plane of said one small loop, said hook member having a generally U-shaped portion lying in the plane of swivel movement and opening upwardly and outwardly to form an instrument support for carrying an instrument generally in the plane of said one small loop.

2,947,457
VEHICLE SPRING-AWAY GARMENT HANGER HOOK
Arthur Lentz, 2048 Cold Spring Road, Indianapolis 2, Ind.
Filed May 15, 1959, Ser. No. 813,389
1 Claim. (Cl. 224—29)



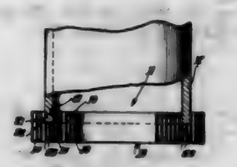
For supporting a garment hanger carrying a garment thereon hanging downwardly over a vehicle seat back, the combination with a deck member and a seat back having an upper end portion overlapping and bearing in part over said deck, of a garment hanger carrying means comprising a plate serving as a foot resting on said deck and entered between the deck and said seat back portion; a leg of resilient material extending upwardly from said foot and said back portion and terminating in a ring member spaced above said back portion; said leg resiliently bending over said back portion under the weight of said hanger and garment thereon and flexing up and down under shaking and vibration of the vehicle under driving conditions.

2,947,458
HOLDER FOR CONTAINERS SUCH AS CASSEROLES AND THE LIKE
Ray E. Troendly, Elkton, Oreg., assignor to Troendly Illinois Corporation, Melrose Park, Ill., a corporation of Delaware
Filed Jan. 18, 1957, Ser. No. 635,846
2 Claims. (Cl. 224—45)



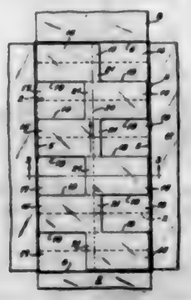
1. A device for supporting and handling containers such as casseroles and the like, comprising a base part formed of two parallel spaced pairs of side bars which are straight throughout their length, the bars of each pair being parallel to each other and closely adjacent each other, a first member integrally connecting one end of a bar of one of the pairs to the corresponding end of a bar of the other pair and a second member integrally connecting the opposite end of the second bar of the first pair to the corresponding end of the second bar of the second pair, thereby to form a two-part base the parts of which are movable relatively to each other, a coil spring closely surrounding and engaging the parallel and closely adjacent bars of each pair and extending throughout substantially the entire length thereof and connected at its ends to said members to constantly urge the two parts of the base toward each other and hold the bars of each pair in close, free-sliding relationship to each other, said springs spacing the said base part from the supporting structure on which the holder rests, and means extending upwardly from each member of said two-part base for engaging spaced parts of the side wall of a container.

2,947,459
CUSHIONING PAD FOR PACKAGED ARTICLES
Thomas W. Pregent, Chicago, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Filed Sept. 26, 1958, Ser. No. 763,536
2 Claims. (Cl. 229—14)



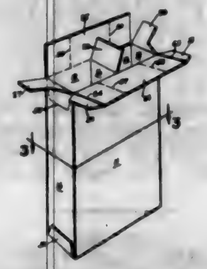
1. A cushioning and supporting device for supporting packaged articles comprising a cylindrical pad of corrugated paper board construction, said pad including a strip of corrugated paper positioned to form a compact spiral having adjacent walls bonded together and having a centrally disposed axially extending opening, axially extending corrugations on said pad and axially spaced substantially parallel transversely extending surfaces on said pad, a first of said surfaces including an annular receiving recess spaced inwardly from the outer peripheral surface of said pad, said recess having a lower supporting wall beneath the first surface, said lower wall comprising vertically compacted corrugations.

2,947,460
CARTON INSERT
Marie C. Baumann, St. Louis, Mo., assignor to Pet Milk Company, St. Louis, Mo., a corporation of Delaware
Filed Jan. 22, 1959, Ser. No. 788,311
5 Claims. (Cl. 229—14)



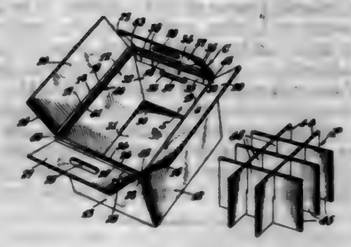
1. A relatively flat one-piece insert for a substantially rectangularly shaped carton having two rows of aligned boxes therein, one row being on either side of a longitudinal center line, said insert being formed from a portion of a substantially rectangular blank of corrugated paperboard material and having a longitudinal central rib adapted to be positioned directly above said longitudinal center line between said boxes so that a portion thereof is disposed directly above each and every box therein, said insert having alternately positioned oppositely extending spaced segments adapted to extend substantially to the side walls of said carton, said segments being approximately twice the width of said boxes in said carton, the transverse edges of said oppositely extending segments being in conterminous relation with each other thereby allowing similar inserts to be struck from a blank without there being any waste material.

2,947,461
COMPARTMENTED CARTON
Charles H. Turpin, Minneapolis, Minn., assignor to The Pillsbury Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 1, 1959, Ser. No. 843,836
1 Claim. (Cl. 229—17)



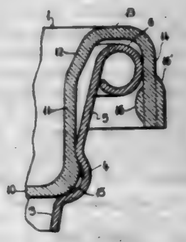
A sift-proof compartmented container resistant to passage of moisture and gases, which container comprises opposite front and back walls and intermediate end walls joining said opposite walls, each of said walls being generally rectangular; a partition the same size and shape as, and parallel to said end walls secured in place between said opposite front and back walls at approximately right angles thereto and spaced between said end walls to divide said container into two compartments; inner flaps extending from the ends of said end walls; flaps extending from the ends of said partition disposable over one of said compartments; first and second outer flaps extending from the ends of said opposite front and back walls respectively, the first outer flap adapted to be superimposed immediately over and entirely cover the inner end flaps and partition flap, the second outer flaps adapted to be superimposed over said first outer flap; longitudinally extending tabs at the opposite ends of said second outer flap, said tabs being adapted to be folded down against the outer surfaces of said end walls, the inside surface of the fold line along which said longitudinally extending tabs are attached to said first outer flap being provided with a thickened bead of flexible microcrystalline wax adhesive whereby, when the conatiner is closed with the tabs folded down against the outer surfaces of said end walls, the adhesive is compressed and spread to form a sift-proof closure; said walls, partition, flaps and tabs being integral, being formed from a single blank of paper board sheet material, said sheet material being provided with a barrier layer resistant to the passage of moisture and gases, said barrier layer being composed of two glassine films bonded together with a layer of microcrystalline wax and bonded to said blank sheet material with microcrystalline wax, said barrier layer being bonded to the paper board sheet material from which the container is formed so as to be disposed on the inner surfaces of said container; perforations in said intermediate end walls adjacent the area of said overlying longitudinally extending tabs, the area defined by said perforations conforming generally in shape to said tabs and in size just slightly larger than said tabs, said perforations extending through less than the total thickness of the sheet material from which said container is formed so as not to penetrate said barrier layer.

2,947,462
CARRIER FOR BOTTLES AND THE LIKE
Raymond N. Bostock, Upper Montclair, N.J., assignor to P. Ballantine & Sons, Newark, N.J., a corporation of New Jersey
Filed Feb. 24, 1954, Ser. No. 412,197
9 Claims. (Cl. 229—23)



1. A carrier for bottles and the like, comprising a hollow first unit made from a sheet of paperboard and comprising a bottom wall, a pair of spaced parallel side walls and a pair of spaced parallel end walls, each side and end wall of the first unit having an extension comprising a flap which is folded inwardly and downwardly and a second unit removably disposed within the first unit and including a bottom wall and a pair of spaced end walls, the bottom and end walls of said second unit being made from a sheet of paperboard substantially stronger, more durable and more water resistant than the paperboard from which the first unit is made, the bottom wall of said second unit being adjacent and generally parallel to the bottom wall of said first unit and the end walls of said second unit being disposed between an end wall and flap of said first unit whereby said units fit snugly together, said second unit also including a frame comprising a rod defining an opening corresponding generally in size and configuration to the bottom wall of the second unit and including a pair of spaced parallel side portions and a pair of spaced parallel end portions, each end portion forming a hinge connection with the upper portion of an end wall of the second unit.

2,947,463
CLOSURE LIDS FOR PAPER CONTAINERS
Charles S. Conklin, Haworth, N.J., assignor to Lily-Tulip Cup Corporation, New York, N.Y., a corporation of Delaware
Filed June 27, 1957, Ser. No. 668,373
7 Claims. (Cl. 229—43)



2. A one-piece closure lid composed of relatively stiff thermoplastic material such as polystyrene comprising an integrally formed rigid closure end portion and a rigid peripheral rim portion for cooperative closure engagement with a paper container having an outwardly flaring lip extending upwardly from an internal groove and terminating in an external bead, said rim portion extending generally normal to said end portion for the major portion of its height thence inclined outwardly provid-

ing an inner wall having a substantially cylindrical lower zone and an outwardly flaring upper zone thence abruptly outwardly and then downwardly providing an outer wall substantially parallel to and in spaced relationship to the inner wall cylindrical zone, said inner wall being provided with an external bead disposed at the juncture of said end and inner wall and adapted for engagement within the internal groove of said container to be closed and said outer wall being provided on its interior with a plurality of circumferentially spaced rounded buttons disposed adjacent its lower end and extending radially inwardly from said outer wall a distance of .015"–.030" opposite the cylindrical inner wall zone for engagement below the hollow bead of said paper container, the outer wall above said buttons being spaced outwardly from the outwardly flaring inner wall zone a distance greater than the thickness of the container lip at its bead.

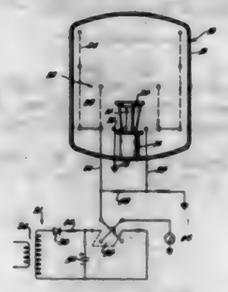
2,947,464
HANDLE BAGS
Donald O. Newton, Cantonment, Fla., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Filed Oct. 22, 1957, Ser. No. 691,585
2 Claims. (Cl. 229—54)



2. A bag formed of flexible sheet material having upstanding end portions brought together and secured in closed condition by stitching means or the like extending along in spaced relation to the edges of such end portions, a closure tape folded over astride the end edges of the bag and secured by said stitching means, and handle means for the bag comprising a generally flat area of relatively rigid material secured in place by such stitching means, a lower portion of such area normally extending in exposed position below such stitching means and said closure tape and an upper portion of such area normally extending above such stitching means and being covered by such closure tape, said area being of sufficient strength and stiffness that such lower portion, when it is grasped to lift the bag, will tilt upwardly about the line of the stitching means to a horizontal position while remaining flat as aforesaid although subjected to the normal load of the bag when filled, and thereby causing twisting of the adjacent closure portions and said upper portion of said area downwardly to horizontal position while remaining flat as aforesaid although subjected to the normal load of the bag when filled, thus providing portions extending rigidly in opposite directions from the stitching means for secure grasping on both sides of the bag closure.

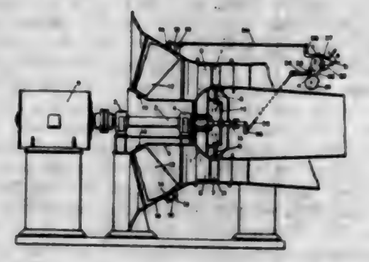
2,947,465
MEANS AND METHOD FOR PRODUCING A VACUUM
Michael A. Otavka, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 20, 1958, Ser. No. 736,650
6 Claims. (Cl. 230—69)

4. Apparatus for producing a vacuum comprising, means forming a partially evacuated chamber, an element having material capable of combining with the common gases centrally located within said chamber and supported at one end, an electron-emitting, heater filament surrounding said element in close proximity to the unsupported end of said element, a wire grid surrounding



said filament within said chamber, a reversible direct current power supply connected to said grid whereby the potential on said grid may be alternated between negative and positive with respect to said element and said chamber.

2,947,466
AXIAL FLOW FANS
Jan C. Basquet, Hengelo, Netherlands, assignor to Koninklijke Machinefabriek Gebr. Stork & Co. N.V., Hengelo, Netherlands.
Filed July 22, 1957, Ser. No. 673,379
Claims priority, application Netherlands Aug. 31, 1956
3 Claims. (Cl. 230—114)

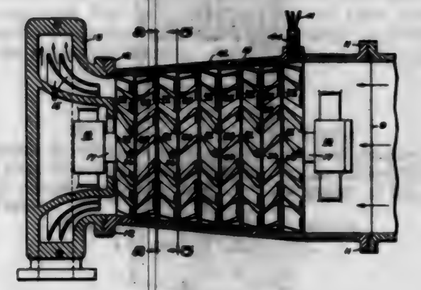


1. An axial flow fan, comprising a casing, an impeller journalled in said casing including a hub with blades rigidly secured thereon and additional blades adjustably mounted on said hub behind said fixed blades, guide vanes adjustably mounted in the inflow side of said casing, means connected to said adjustable blades for adjusting said blades, means connected to said guide vanes for adjusting said vanes, and control means connected with both said adjusting means and operative to actuate only one of said adjusting means at a time to adjust the impeller blades while the guide vanes remain stationary and to adjust the guide vanes while the impeller blades remain stationary.

2,947,467
COMBINED AXIAL AIR GAP MOTOR AND GAS COMPRESSOR
Robert T. Palmer, Sharon, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 1, 1958, Ser. No. 752,581
3 Claims. (Cl. 230—117)

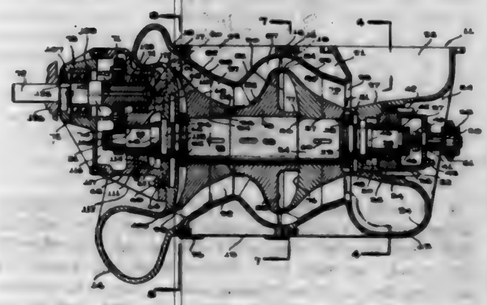
1. A gas compressor comprising a casing having a gas inlet at one end and a gas outlet at the opposite end, and having an inner surface between said inlet and outlet

circular in cross-section, a rotary shaft, means comprising bearings at the ends of said shaft for supporting said shaft for rotation with its axis at the longitudinal axis of said casing, a plurality of spaced-apart, axial air gap, motor rotors around and attached to said shaft between said bearings, said rotors having outer surfaces, circular in cross-section, spaced inwardly of said inner surface of said casing, spaced-apart compressor blades on said



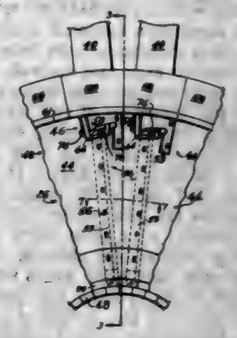
outer surfaces of said rotors and closely approaching but spaced from said inner surface of said casing, a plurality of axial air gap, motor stators in the spaces between said rotors, said stators having outer surfaces, circular in cross-section, spaced inwardly of said inner surface of said casing, spaced-apart counter-spin vanes on said outer surfaces of said stators, said stators having central openings through which said shaft passes, stator windings on said stators, and means for supplying A.C. to said windings.

2,947,468
MULTI-STAGE CENTRIFUGAL COMPRESSOR
David H. Tryon, Sheridan, Wyo., assignor of nine and one-half percent to E. E. Lonabaugh, nine percent to Loyal Kirkland, five percent to G. S. Gwinn, seven percent to Robert Jurosek, and seven percent to Michael G. Jurosek, all of Sheridan, Wyo., five percent to Beverlee Nelson, Los Angeles, Calif., and six percent to Mary E. Krohn and Bud Edgar Krohn, both of Sheridan, Wyo.
Filed Feb. 21, 1957, Ser. No. 641,689
2 Claims. (Cl. 230—119)



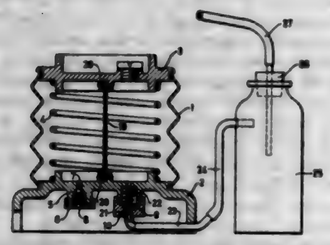
1. A multi-stage centrifugal fluid compressor comprising a housing having a substantially annular intake chamber, an annular flaring outlet portion communicating with said intake chamber at its smaller end, an annular intermediate chamber connected to the larger end of said outlet portion coaxially with said intake chamber, said intermediate chamber being reduced in diameter at its mid portion and defining an annular flaring outlet chamber, a spiral casing communicating with the larger end of said outlet chamber and increasing in cross sectional area circumferentially therearound, and an outlet conduit connected to the larger end of said spiral casing, a shaft journaled axially in said housing, a first impeller mounted on said shaft in said outlet portion of the intake chamber, said impeller having an annular external surface converging toward the wall of the larger end of said outlet portion, arcuately curved vane on said first impeller extending substantially tangentially at the smaller end of said outlet portion and extending substantially in an axial direction at the larger end of said outlet portion, fixed baffle plates secured in said intermediate chamber and extending in a substantially axial direction, a rotor on said shaft in said intermediate portion and having its periphery extending adjacent the inner edges of said baffle plates, said baffle plates being arcuately curved in a transverse vertical plane and being shaped so that their inner edges diverge toward the outlet chamber at relatively small angles with respect to radial longitudinal planes containing their innermost corners and in the direction of rotation of said rotor, said baffle plates being inclined inwardly in the direction of rotation of said rotor, a second impeller on said shaft in said outlet chamber, and radially extending vanes on said second impeller extending adjacent the wall surface of said outlet chamber.

2,947,469
LIGHT WEIGHT AXIAL FLOW COMPRESSOR WHEELS
Edward A. Stalker, Bay City, Mich., assignor to The Stalker Corporation, a corporation of Michigan
Filed Apr. 23, 1954, Ser. No. 425,205
11 Claims. (Cl. 230—134)



1. In combination in an axial flow wheel for interchanging force with a fluid, a wheel hub structure, a plurality of axial flow blades carried on said hub structure in peripherally spaced relation thereabout, said blades and said hub structure being adapted for rotation about an axis at high tip speeds to develop a substantial variation in pressure and density of said fluid flowing between said blades and developing centrifugal forces at the root ends thereof during said rotation, said hub structure comprising a sheet metal hub plate, thin metal walls defining a plurality of peripherally spaced sockets fixed to said plate, a rim means extending in the general axial direction between the leading and trailing edges of said blades and from blade to blade to sustain said variation in pressure, said rim means comprising formed segments of relatively light material fixed in said hub structure, each said blade having a root end portion secured in a said socket for transferring said centrifugal forces to said plate while keeping said rim means substantially free of said forces.

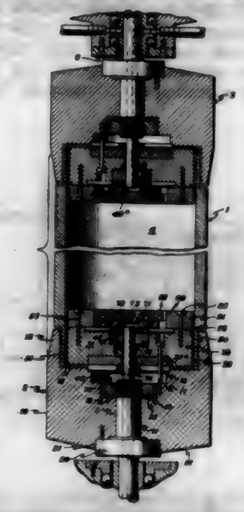
2,947,470
ASPIRATING APPARATUS
Henning M. Ruben, Vinkelvej 7, Vedbaek, and Holger Hesse, Skovtoftebakken 19, Copenhagen-Lyngby, Denmark
Filed Feb. 25, 1957, Ser. No. 642,033
Claims priority, application Sweden Mar. 2, 1956
10 Claims. (Cl. 230—160)



8. An aspirating apparatus for evacuating mixed fluids and for simultaneously separating non-gaseous substances therefrom comprising in combination a gravity operated fluid-pressure-tight vertical separator-container and suction means, said container comprising a tight top-colsure, an evacuating line connecting the source of said fluid to be evacuated with the interior of said container through said closure, said suction means comprising a suction port, a suction line connecting said suction port with the interior of said container through said closure and a suction valve mounted in said suction line, said suction means further comprising a foot-operated fluid-pressure-tight compressible and expansible bellows-type vertical chamber provided with a pair of vertically spaced endwalls, a helical compression spring mounted within said bellows-type chamber vertically with its ends fixed one to each said endwall, a flexible connection mounted axially within said bellows-type vertical chamber and the helix of said spring with one end fixed to each said endwall, the length of said connection being less than the distance between said endwalls under full expansion of said spring to bias the force of said spring thereby limiting the expansion of said bellows-type vertical chamber, the latter being further provided with a discharge port having an exhaust valve mounted therein, and rigid guide means interposed between said container and said bellows-type chamber, said guide means extending to a point above the maximum expansion of said bellows-type chamber and above the top of said container, said guide means serving not only to direct the foot of the operator into contact with said bellows-type chamber but also serving as a guard to prevent accidental displacement of said container.

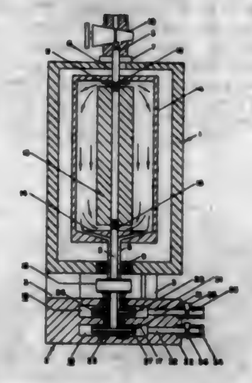
2,947,471
CENTRIFUGE END CAP
Jesse W. Beams and Leland B. Snoddy, Charlottesville, Va., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 13, 1944, Ser. No. 540,154
19 Claims. (Cl. 233—13)

1. An end cap for the rotor of a centrifuge, comprising a body member having an annular end surface portion, a first baffle secured in abutting relation with said body surface and including a member constructed and arranged to provide in cooperation therewith a plurality of circumferentially arranged passages extending radially to the periphery of said baffle, said first baffle having in the opposite face thereof from said body a plurality of circumferentially spaced radially extending grooves, the outer ends of the grooves being positioned inwardly from the periphery thereof, and a second baffle secured in abutting relation with said opposite face of the first baffle and cooperating with said grooves therein to form a second group of radially extending gas passages, said second baffle having a plurality of axially extending openings therethrough



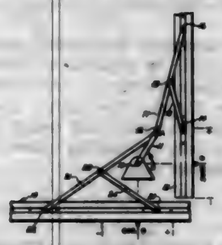
disposed circumferentially of the second baffle at a predetermined position radially thereof and communicating at one end with said second group of radial passages.

2,947,472
CENTRIFUGE APPARATUS
Charles Skarstrom, Pearl River, and Karl Cohen, New York, N.Y., and Harold C. Urey, Leonia, N.J., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 20, 1944, Ser. No. 554,980
2 Claims. (Cl. 233—19)



1. A centrifuge device for separating fluid mixtures comprising a rotatable separating chamber, a first tubular shaft providing an inlet and outlet to said chamber at respectively opposite ends thereof extending axially of said chamber, a second tubular shaft arranged in concentric spaced relation with respect to the first shaft outlet portion and providing a second outlet from the chamber, means for rotationally driving said shafts and chamber, a cylindrical core surrounding and arranged to rotate with the first tubular shaft, said core being positioned intermediate the inlet and outlet portions of said first shaft, a baffle in said chamber arranged to separate the outlet portion of said first shaft from the outlet portion of said second shaft and operable to cause the heavier separation fraction in said chamber to flow outwardly from the chamber through the second shaft and the lighter separation fraction to flow outwardly through the first shaft outlet portion, and a centrifugal pump secured on each of said shafts for rotation therewith, said pumps each having its intake communicating with the interior of its shaft and operating during rotation of the device to induce flow of the respective separation fractions through the chamber and deliver the said fractions under pressure at a point exteriorly of said device, valve means operable to control the amount of fluid admitted to said chamber through said first shaft inlet portion, and valve means operable to control the amount and relative proportions of the separation fractions discharged from each pump.

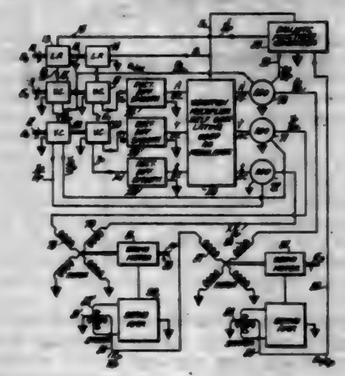
2,947,473
SINE AND COSINE RESOLVER
Thomas R. Silverberg, West Concord, and Sumner D. Lewis, Westwood, Mass., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Jan. 3, 1956, Ser. No. 557,216
1 Claim. (Cl. 235—61)



A sine and cosine resolver comprising a crank pivotally connected at one end to a fixed support and adapted to be rotated to a predetermined angle from a reference line through said pivotal connection, a pair of linkages, each of said pair of linkages comprising a first link having one end pivotally connected at a common point with the other end of said crank, and a second link having one end pivotally connected to the midpoint of said first link, a pair of fixed guides in a perpendicular relationship to each other, the other end of said first link and the other end of said second link of each of said pair of linkages being pivotally and slidably connected with a guide such that the vertical distance of the pivotal connection of said linkages on said other end of said crank from said reference line is transferred to the pivotal and slidable connection of the second link of one of said pair of linkages on one of said guides, and the horizontal distance of the pivotal connection of said linkages on said other end of said crank to said first-mentioned pivotal connection is transferred to the pivotal and slidable connection of the second link of the other of said pair of linkages on the other of said guides, said linkages being arranged such that a line through the pivotal and slidable connection of each of said second links and said linkage connecting point with said crank always forms a perpendicular with the guide containing said last-mentioned pivotal and slidable connection.

2,947,474
COMPUTING SYSTEMS
Arthur W. Vance, Cranbury, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Dec. 30, 1944, Ser. No. 570,524
9 Claims. (Cl. 235—61.5)

6. A system for directing a projectile from a gun to intercept a moving target comprising, in combination, means to generate potentials proportional to ballistic functions defined as the reciprocal of the time of travel of said projectile, and the product of said reciprocal and the height above the target said projectile must be directed to establish contact therewith, means to generate potentials proportional to the ground and elevation linear coordinates of the present position of said target, means to derive a differential potential from each of said ground and elevation linear coordinate potentials, means upon which said potential proportional to the reciprocal of time of travel is impressed to generate potentials proportional to the products of said ground and elevation potentials and said reciprocal potential, separate means to add each of said latter named product potentials to its associated differential potential to derive sum potentials, said means to add for said elevation coordinate product potential also including means to add said ballistic function product potential, first vario-coupler resolver means

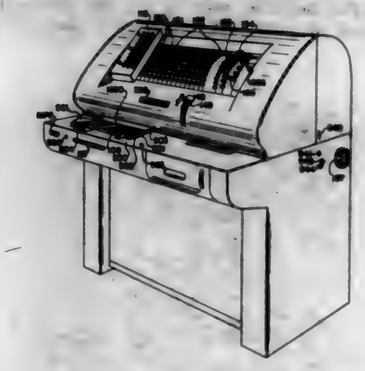


to which said linear coordinate ground sum potentials are applied to provide a mechanical displacement proportional to the azimuth angle to which said gun should be turned, said first vario-coupler resolver means having a separate winding means on its stator to derive a potential from said applied potentials proportional to the product of the ground range of said target at the time of interception by said projectile and said reciprocal, second vario-coupler resolver means to which said latter named derived potential and said elevation coordinate sum potential are applied to provide a mechanical displacement proportional to the elevation to which said gun should be pointed, said second vario-coupler resolver means having a separate winding means on its stator to derive a potential from said potentials applied to said second vario-coupler which is proportional to the product of the slant range of the target at the time of interception and said reciprocal, and means to impress said latter derived potential on said means to generate ballistic function potentials to control the potentials generated thereby.

2,947,475
ACCOUNTING MACHINES
Konrad Rauch and Chester N. Jorgensen, Dayton, Gilbert A. Neubauer, Centerville, Kenneth S. Ferris, Miamisburg, Russell E. Knisley and Edward S. Stork, Dayton, all of Ohio, and William E. Harsch, Trumbull, Conn., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Sept. 19, 1956, Ser. No. 610,754
32 Claims. (Cl. 235—61.6)

12. In an apparatus for keeping ledger accounts on ledger cards on which balance, check-count, and other

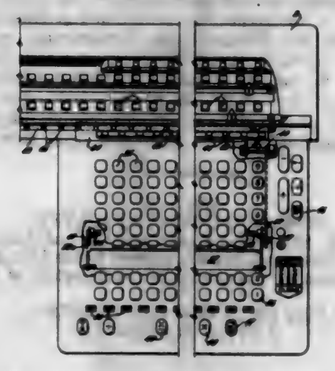
related data are printed and on which cards the last balance, check-count, and account number are also recorded magnetically so as to be readable and erasable, the combination of an accounting machine having totalizers and means to operate the totalizers to enter amounts therein and withdraw amounts therefrom; a presettable means on which the account number is set up; a first reading means to read the balance and check-count magnetically recorded on the ledger card; means controlled by the first reading means to temporarily store the balance and check-count which are read from the card; means in the temporary storage means for controlling the entering means of the accounting machine to enable the balance and check-count to be entered into the totalizers; other reading means for reading the account number from the



card; account number storage means controlled by the other reading means and settable according to the account number read from the card; account number comparing means controlled by the presettable means, on which the account number is set, and by the account number storage means and operable to provide a signal when the account number read from the card agrees with the account number set on the presettable means; and means controlled by both reading means as an incident to their control of their respective storage means and by the account number comparing means, to initiate an operation of the accounting machine to enable it to be controlled by the storage means to enter the balance and check-count therein if the account numbers agree and if all the data has been read from the card, whereby to prevent incorrect entries if either the account numbers do not agree or if all the data is not read from the card.

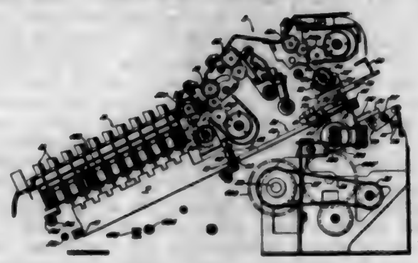
2,947,476
SELECTIVELY OPERABLE STOPPING MEANS FOR CALCULATING MACHINES IN MULTIPLICATION
Herman Gang, Morris Plains, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Aug. 21, 1957, Ser. No. 679,430
4 Claims. (Cl. 235—63)

2. In a calculating machine having a register, differentially settable actuators for said register, selection means for setting said actuators including ordinal rows of settable digital value keys, an ordinal series of multiplier storage devices each differentially settable from a home position, multiplier entering means operable to enter a value set in said key rows into respective orders of said storage devices, clearing means operable upon termination of operation of said multiplier entering means to restore said keys from set position, means for initiating operation of said actuators, means operable to restore a series of set storage devices successively to home position during operation of said actuators, and primary terminating means operable in response to movement of the last set device of said series to home position to terminate operation of said actuators; settable locking means for each key row for holding any set key of said row against retraction upon operation of said clearing means, nor-



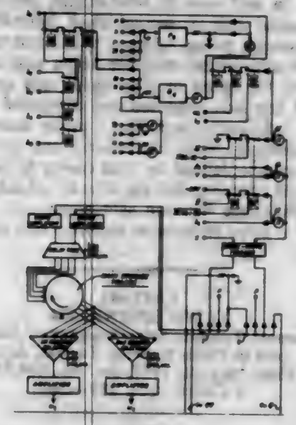
mally disabled secondary terminating means selectively settable and operable in response to movement of any given device to home position to terminate operation of of said actuators thereby superseding operation of said primary terminating means, and means operable upon setting of one of said key locking means to enable said secondary terminating means.

2,947,477
VALUE SELECTION CONTROL FOR CALCULATING MACHINES
Herman Gang, Morris Plains, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Mar. 26, 1957, Ser. No. 648,660
14 Claims. (Cl. 235—79)



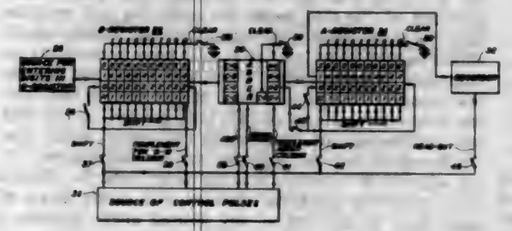
1. In a calculating machine having two registers disposed one behind the other, differentially adjustable value entry means for each of said registers, common digital value selection mechanism for controlling differential operation of both said value entry means, mechanism operable to lock one of said value entry means in digitally adjusted position and then divorce said one value entry means from the control of said common selection mechanism, means for operating said locking and divorcing mechanism, means for restoring said locking and divorcing mechanism to unoperated condition after operation thereof thereby restoring said one value entry means to control by said common selection mechanism, means for selectively initiating operation of said restoring means, and means automatically operable in response to operation of said initiating means to cause said one value entry means to assume the same differential adjustment as said other value entry means.

2,947,478
ELECTRONIC CALCULATOR
John J. Lentz, Chappaqua, and John H. Palmer, Scarsdale, N.Y., and Daniel Robbins, Pasadena, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 16, 1955, Ser. No. 508,382
22 Claims. (Cl. 235—160)



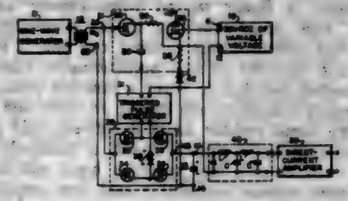
19. In combination a digital register for recording a mathematical quantity including means for erasably recording digit representations at predetermined order locations, means for erasably recording a radix point representation among said digit representations at a chosen order location for establishing the significance of said digit representations, means for shifting said radix point recordation and said digital recordations, means for selectively recognizing said radix point representation and said digit representations and means effective upon the recognition of said radix point representation at a preselected order position for halting said shifting.

2,947,479
ELECTRONIC ADDER
Ernst S. Selmer, Oslo, Norway, assignor, by mesne assignments, to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Sept. 25, 1953, Ser. No. 382,491
13 Claims. (Cl. 235—169)



2. An electronic adder comprising a first set of toggles for registering a group of binary bits corresponding to one of successive digits of an addend, a second set of toggles for registering a group of binary bits corresponding to one of successive digits of another addend, carry toggles for registering signals corresponding to carry digits, gates interconnecting the first set of toggles and the carry toggles, and means including said gates for simultaneously altering the binary condition of the second set and one of the carry toggles in response to a single pulse to represent the binary sum of each of the successive digits represented by said signals.

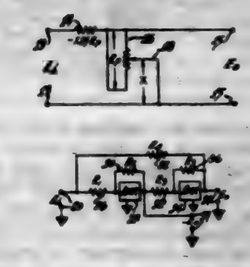
2,947,480
ELECTRICAL DIFFERENTIATOR
Charles J. Hirsch, Locust Valley, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 15, 1956, Ser. No. 616,857
17 Claims. (Cl. 235—183)



1. An electrical differentiator comprising: circuit means for supplying a first voltage representing a function to be differentiated; a storage device; a circuit for substantially periodically and instantaneously applying said voltage to the storage device; a circuit for determining the difference between the instantaneous value of the first voltage and the voltage of the storage device; and means for utilizing said difference as a representation of the derivative of said function.

17. An electrical differentiator comprising: means for supplying a periodic voltage; circuit means for supplying a first voltage representing a function to be differentiated; a storage device; comparison means for instantaneously comparing the periodic voltage with the first voltage; a circuit actuated by the comparison means for instantaneously applying said voltage to the storage device when said periodic and first voltages become equal during the cycle of the periodic voltage; a circuit for developing a saw-tooth voltage constituting the difference between the instantaneous value of the first voltage and the voltage of the storage device; a passive circuit for developing a voltage proportional to the peak amplitude of the saw-tooth voltage; and means for utilizing said proportional voltage as a representation of the derivative of said function.

2,947,481
TRIGONOMETRIC FUNCTION RESOLVER
Arthur W. Vance, Union Valley, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 23, 1950, Ser. No. 151,443
6 Claims. (Cl. 235—186)

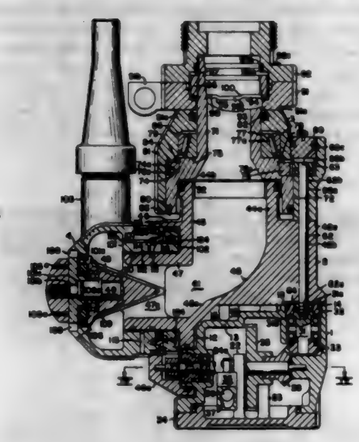


1. A trigonometric function resolver comprising an effective negative resistance, a potentiometer having a movable arm, short-circuiting means connecting both ends of said potentiometer winding, one of said potentiometer winding ends being connected to said effective negative resistance, means to apply an input to said

negative resistance and said potentiometer movable arm, and means to derive an output from said potentiometer winding one end and said movable arm which is a function of the resistance of said potentiometer winding between said movable arm position and said potentiometer winding other end.

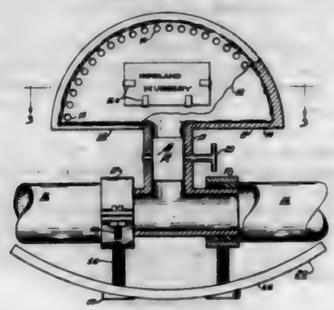
5. A trigonometric function resolver comprising a first resistor, a linear wound potentiometer having a movable arm, short-circuiting means connecting both ends of said potentiometer winding, one end of said first resistor and one end of said potentiometer winding being connected together to form a junction point, a first and a second amplifier each having an input and an output, a first input resistor coupled between said junction point and said first amplifier input, a feedback resistor coupled between said first amplifier input and output, a second input resistor connecting said first amplifier output and said second amplifier input, a second feedback resistor coupled between said second amplifier output and input, a third resistor coupled between said junction point and said second amplifier output, means to impress an input upon said first resistor and said potentiometer movable arm, and means to derive an output of one polarity from said first amplifier output and an output of an opposite polarity from said second amplifier output, both said outputs being functions of the position of said movable arm.

2,947,482
TANK WASHING APPARATUS
Leonard V. Liona, Fanwood, N.J., assignor to Butterworth System, Inc., a corporation of Delaware
Filed Aug. 1, 1958, Ser. No. 752,510
7 Claims. (Cl. 239—227)



1. In an apparatus for applying liquid streams against the interior surfaces of a walled enclosure, wherein said apparatus includes a liquid supply and support tube, adapted for flow connection to a liquid supply conduit; a liquid delivery head, defining an internal passageway, mounted on said tube for rotation about the axis thereof, with said internal passageway in communication at one end with said tube; and a hollow nozzle structure, adapted to be mounted on said head for rotation about a second axis perpendicular to said tube axis, and in communication with said head defined passageway at the other end thereof; means for rotating said nozzle structure and said head about said respective axes, comprising at least two jet reaction, discharge nozzle elements in said nozzle structure disposed in substantially coplanar, radially offset, and angularly opposed discharge relation; a first ring gear engageable in fixed coaxial relation with said nozzle structure; a second ring gear mounted on said support tube for fixed coaxial relation thereto; a gear case mounted in separably dependent relation to said delivery head, said case adapted to contain a body of a liquid lubricant; a drive connection between said first and second ring gears, including a first shaft journalled in said case in substantially parallel relation to said second axis; a second shaft journalled in said case; a governor pump, adapted to control the speed of rotation of said nozzle structure about said second axis, and thereby the speed of rotation of said delivery head about said first axis, disposed and supported within said gear case, said pump including a pump casing, a pump chamber defined within said casing, and inlet and outlet orifice means defined by said casing to communicate between said chamber and the interior of said gear case; a drive connection between said pump and said second shaft; and a drive connection between said first and second shafts.

2,947,483
LAWN SPRINKLER
Roland Larson, Tucson, Ariz., assignor of forty-nine percent to Willis R. Dees, Tucson, Ariz.
Filed May 21, 1957, Ser. No. 660,713
1 Claim. (Cl. 239—286)

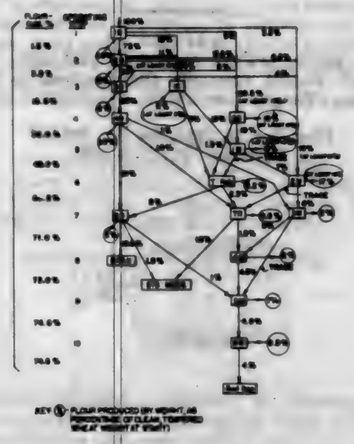


A lawn sprinkler for sprinkling a lawn with a gentle spray of water comprising a glider, a sprinkler head including a hollow, perforated shell and a T-shaped base portion having two free arms, a hose, said hose encompassing said free arms of said base portion, and means for mounting said sprinkler head on said glider, characterized in that said means for mounting said sprinkler head on said glider comprises clamping means rigidly affixed to said glider encircling said hose in clamping relationship where it encompasses said free arms, in that the cross-sectional area of said hollow shell is less than the cross-sectional area of said base portion, and in that said perforations are small enough to restrict water issuing therefrom to a gentle spray, said clamping means being adapted to maintain said sprinkler head in selected lawn sprinkling positions whereby said gentle spray of water may be directed at any desired angle between a horizontal direction and a vertical direction.

2,947,484
METHOD AND APPARATUS FOR MILLING FLOUR
Nandor Szasz, deceased, late of Minneapolis, Minn., by Katherine Szasz, special administratrix, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed May 22, 1958, Ser. No. 737,131
35 Claims. (Cl. 241—10)

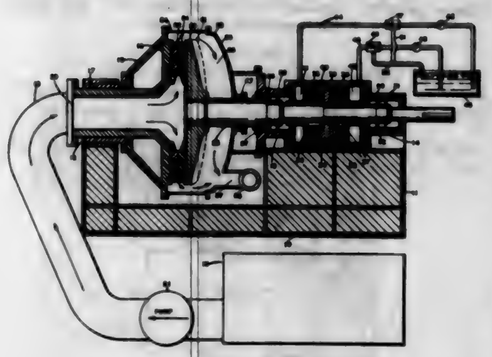
1. The method of milling flour from wheat on a commercial scale of at least 750 cwt. of flour per 24 hours

of operation which comprises feeding cleaned, tempered wheat through a series of breaking steps including, classifying the stock at each break and thereby segregating the different size ranges of middlings and sizings stock produced, subjecting said different size ranges to appro-



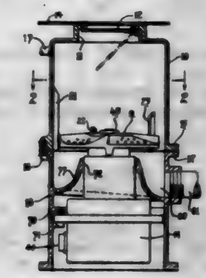
priate sizings reduction and middlings reduction steps including appropriate further classification, and controlling the breaking and reduction steps to extract an amount of flour equal to at least substantially half of the clean, tempered wheat weight in the first six operating steps of the process.

2,947,485
DISC REFINER
Maurice D. Woodruff and Clinton K. Textor, Springfield, Ohio, assignors to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio
Filed Feb. 5, 1954, Ser. No. 408,420
17 Claims. (Cl. 241—32)



1. A pressure refiner for pulp material, including a rotatable shaft, a disc on said shaft, having front and back sides, relatively stationary means in opposing facing relation to the front of said disc, means mounting said shaft providing a continuous floating bias of said disc to said stationary means a substantially liquid tight casing in surrounding spaced apart relation to the periphery and back of said disc forming a pressure chamber, a liquid suspension of pulp material under pressure being supplied to a space between said disc and said stationary means centrally thereof and flowing radially in said space for peripheral discharge into said chamber, and a relatively restricted outlet from said chamber maintaining said chamber filled with the liquid pulp suspension, rotation of said disc therein producing a pressure on the back of said disc within said pressure chamber exerted in opposition to thrust pressures on the front of said disc the sum of the bias and the back pressure produced on the back of said disc by the rotation of said disc being constantly in balance with the pressure produced on the front of said disc to establish a predetermined clearance between said disc and said stationary means at all times.

2,947,486
CUTTING AND DISINTEGRATING MACHINE
Harry Higer, 1823 Farnum St., Royal Oak, Mich.
Filed June 11, 1956, Ser. No. 590,643
3 Claims. (Cl. 241—36)

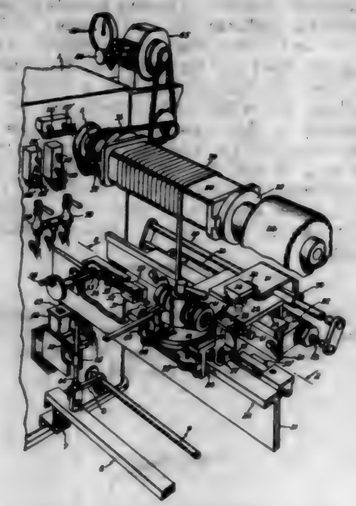


1. In a garbage disposal apparatus, a casing having a cylindrical passage forming in its upper portion a matter-loading space, a plurality of blades provided on said casing in the lower portion thereof and extending radially into said passage for an equal distance, a rotor operatively mounted in said passage within the space defined by said casing blades, said rotor comprising a cylindrical body having a conical top and closing said passage except for the peripheral space forming an annular discharge grading slot interrupted by said casing blades, and an even plurality of radial ridges on the conical top of the rotor, said ridges being inclined alternately in a clockwise direction and in a counter-clockwise direction and having formed thereon radial cutting edges as well as cutting edges at the periphery of said ridges where said peripbery forms with the periphery of the rotor body a continuous smooth surface bounded by said edges.

2,947,487
MACHINE WITH HYDRAULICALLY ACTUATED CARRIAGE
Theodore L. Winestock, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed Apr. 29, 1955, Ser. No. 504,951
11 Claims. (Cl. 242—9)

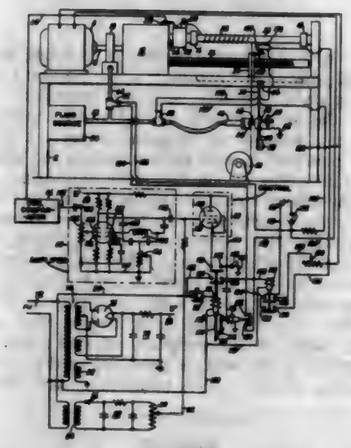
10. In a winding machine, a rotary spindle, a guide carriage mounted for straight line motion parallel to the axis of said spindle, and a positive displacement hydraulic system interconnecting said spindle and said carriage so as to at all times maintain direct proportionality between angular motion of said spindle and translatory motion of said carriage, and said machine having means for moving said carriage independent of rotation of said

spindle comprising hydraulic valve means and hydraulic pressure pump means hydraulically connected to said



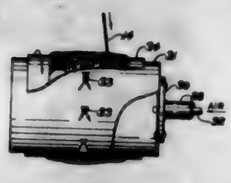
hydraulic system, and means for driving said pressure pump means independent of rotation of said spindle.

2,947,488
AUTOMATIC COIL WINDING MACHINE
Francis D. Trotta, Utica, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 16, 1956, Ser. No. 578,452
4 Claims. (Cl. 242—9)



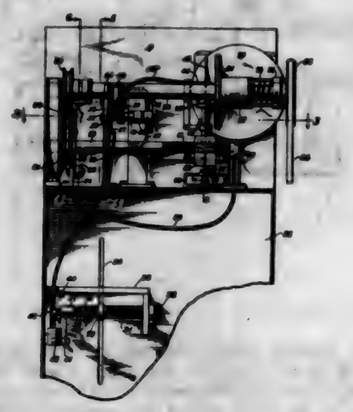
1. An automatic coil winding machine for winding insulated wire on a core comprising drive means for said core, a level winder disposed adjacent said core during winding and driven by said drive means, a circular electrical conductor secured to said core and rotatable therewith, an electrical terminal on said circular electrical conductor adapted to hold a first terminal of the coil being wound, a stationary electrical conductor in contact with said circular electrical conductor, a movable terminal connection for said insulated wire, means to automatically and fixedly clamp said movable terminal connection to said insulated wire at a point on the unwound wire which is spaced from the coil after a predetermined portion of said coil has been wound, an electrical circuit including said stationary electrical conductor and said movable terminal connection with said coil being wound, said electrical circuit developing a signal when the coil is wound to a predetermined value of inductance, and means responsive to said signal to stop said drive means.

2,947,489
HIGH SPEED WINDING COLLET
Robert G. Russell, Granville, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 29, 1953, Ser. No. 400,967
9 Claims. (Cl. 242—18)



1. Apparatus for packaging a continuously available continuous strand comprising a hollow cylindrical sleeve having a thin wall and fully open ends, a chamber having a cylindrical outer surface of diameter smaller than the inside diameter of said sleeve and at least one circumferentially extending series of air jets opening outwardly from the interior of said chamber and impinging against the interior of said sleeve when mounted circumjacently to said chamber, said air jets being directed at an angle to a tangent to the surface of said sleeve at the point of impingement thereon less than normal, and means for introducing air under pressure into the interior of said chamber.

2,947,490
SPEED CONTROL SYSTEM FOR WINDING MACHINES
Conrad Joseph Gonsalves, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Nov. 23, 1954, Ser. No. 470,679
Claims priority, application Netherlands Nov. 28, 1953
8 Claims. (Cl. 242—45)



1. An automatic speed control system for a yarn winding machine comprising a package support for collecting into package form yarn delivered thereto at an approxi-

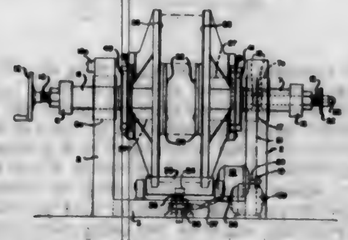
mately constant speed, a constant speed drive source, a variable speed transmission interconnecting said package support and said drive source, first means operative in response to variations in speed of yarn delivered to said package support for varying the input-output speed ratio of said transmission, additional means operative in response to increase in diameter of said package also for varying the input-output speed ratio of said transmission, and means operative in response to variations in the input-output speed ratio of said transmission for maintaining the sensitivity of said first means irrespective of the diameter of the wound package.

2,947,491
CAKE STRIPPING MECHANISM
Glen H. Clem, Parkersburg, W. Va., and William M. Ickes, Marietta, Ohio, assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Jan. 17, 1958, Ser. No. 709,648
5 Claims. (Cl. 242—53)



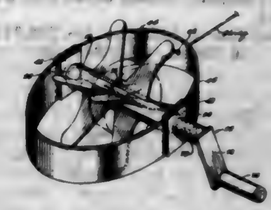
1. Cake stripping apparatus comprising a swift for withdrawing yarn from a cake, drive means for rotating said swift, a clutch for connecting said drive means to said swift, means for engaging and disengaging said clutch, a rotatable cam member, means operatively connecting said cam member to said last-mentioned means whereby one complete revolution of said cam member is effective to disengage said clutch and interrupt the drive to said swift, a reduction gear train for driving said cam member from from said swift, an overrunning clutch between said gear train and said cam member whereby said cam member may be manually rotated without affecting said gear train, and manually operable means for rotating said cam member to its starting position.

2,947,492
COIL HANDLING MECHANISM
Albert J. Sarka, Maple Heights, Ohio, assignor to Wean Equipment Corporation, Euclid, Ohio, a corporation of Ohio
Continuation of abandoned application Ser. No. 578,368, filed Apr. 16, 1956. This application Sept. 10, 1959, Ser. No. 839,090
15 Claims. (Cl. 242—78.7)



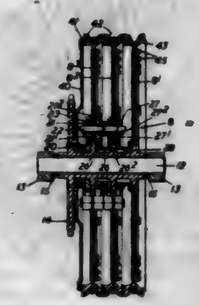
1. Coil handling mechanism comprising spaced apart generally upright coaxial generally circular members, anti-friction supporting means for said members directly engaging peripheral portions of said members and supporting them for turning movement about their common axis and means carried by said members and projecting from the opposed faces thereof for entering the central opening of a coil from the respective axial ends of such opening for supporting the coil.

2,947,493
SPOOL ARRANGEMENT
Mark P. Schneider, 4445 Yellowstone St., Los Angeles, and Fred W. Klayer, 500 South Fifth St., Alhambra, Calif.
Filed May 5, 1958, Ser. No. 732,931
6 Claims. (Cl. 242—96)



6. A spool arrangement for winding and unwinding a string including a pair of shaft segments each provided with a plurality of slots extending longitudinally along the shaft segments and disposed at spaced intervals around the periphery of the shaft segments, a plurality of blades each disposed in a particular one of the slots in the shaft segments and each extending longitudinally beyond the slots in the particular shaft segment to slide into one of the slots in the other shaft segment when the segments are combined to form an interlocking relationship, the blades being formed to hold the string in wound relationship, and means for rotatably supporting the combined shaft segments so as to provide for readily winding and unwinding the string.

2,947,494
APPARATUS FOR PAYING OUT AND WINDING IN CABLES, WIRES, ROPES AND THE LIKE
Henry Edward Merritt, Cleverdon, England, assignor to Wharton Engineers (Elstree) Limited, Elstree, England
Filed June 26, 1958, Ser. No. 744,880
2 Claims. (Cl. 242—156)



1. Apparatus for use in paying out and winding in a cable under tension, which apparatus is in use arranged between a drum capable of supplying and receiving cable and the source of tension exerted on the cable and is adapted to control the tension in the cable between the apparatus and the source of tension, said apparatus comprising a pair of pulley units respectively mounted on spaced approximately parallel main shafts and around

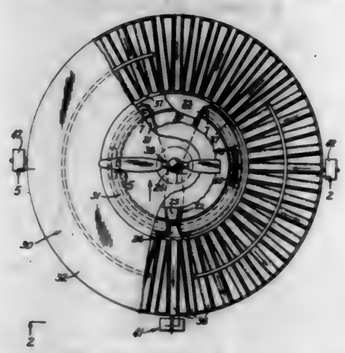
and between which units the cable is wrapped in helical fashion, each pulley unit having a plurality of pulley wheels capable of rotation with respect to the shaft thereof and also having gear means carried by and operatively interposed between the respective pulley wheels for imparting controlled rotary movement from one to the other, and means for applying a braking force to each pulley unit, the said gear means being adapted to divide said force between the pulley wheels in a desired ratio, to give the required tension in the cable.

2,947,495
AIR VEHICLE
Wardlaw M. Hammond, Jr., Baltimore, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland
Filed June 1, 1956, Ser. No. 588,715
10 Claims. (Cl. 244—3)



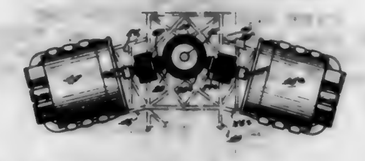
3. An air-towed vehicle for carrying detection instrumentation or the like a substantial distance behind a towing aircraft comprising a substantially spherical vehicle body for carrying the instrumentation, and a pair of stabilizing fins rotatably mounted on said body so as to contribute no lift, said fins being mounted on diametrically opposite portions of the body at approximately the center of gravity of the body, said fins being articulated for damped movements about the pitch axis of the body, whereby the vehicle can take on a new pitch attitude with changes in angle of the towing cable.

2,947,496
JET PROPELLED AIRCRAFT
Archie L. Leggett, 1141 S. Elden Ave., Los Angeles 6, Calif.
Filed Sept. 28, 1955, Ser. No. 537,127
5 Claims. (Cl. 244—12)



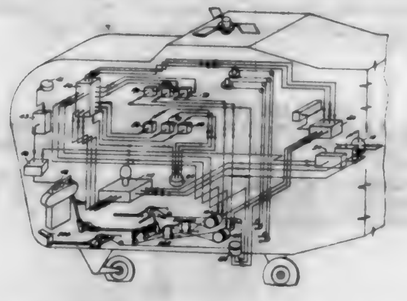
1. A space craft including a central compartment having a resonant jet engine mounted centrally thereacross, a horizontal annular disc having radial passages therein mounted for rotation about said central compartment, to provide a lifting surface for air travel and gyroscopic stabilization, a circular peripheral channel formed around said compartment and a matching concentric channel formed on the internal edge of said annular disc, said two channels forming a continuous connection between said radial passages and the jet engine to provide cyclic inlet and outlet passages therefor, and a power plant in said compartment for rotating said disc.

2,947,497
DUAL ENGINE DRIVE MEANS FOR HELICOPTERS
Bernard W. Sawyer, New York, N.Y., assignor to Omega Aircraft Corporation, New York, N.Y., a corporation of New York
Filed May 6, 1957, Ser. No. 657,336
4 Claims. (Cl. 244—17.11)



1. In a helicopter, a fuselage frame, a single rotor shaft mounted thereon carrying rotor blades, a main rotor gear carried by said rotor shaft, a pair of air-cooled engines carried by said fuselage frame substantially equidistantly at either side of said fuselage frame and closely adjacent said main rotor gear, said engines each having fan means to draw an air stream from the direction of said main rotor gear, and across said engines, transmission means connecting each engine with said rotor gear, said means each being located substantially in the path of the aforesaid air stream flowing to each engine, pulley means connected by a belt drive being included in each said transmission means.

2,947,498
AUTOMATIC PILOT FOR ROTARY WING AIRCRAFT
Louis S. Guarino, 1128 Duncan Ave., Yeadon, Pa.
Filed June 12, 1953, Ser. No. 361,446
13 Claims. (Cl. 244—17.13)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An automatic pilot for rotary wing aircraft having a fuselage suspended from at least one lifting rotor, said automatic pilot comprising gyroscope means for producing electrical signals corresponding to fuselage displacement in roll and pitch with respect to a predetermined reference attitude, directional gyroscope means for producing a selsyn signal corresponding to fuselage displacement in yaw with respect to said predetermined reference attitude, means for converting said selsyn signal to a synchro signal, further means for separately amplifying said pitch, roll and yaw displacement signals to control separate servo-mechanisms, and a manually operable controller means including a unitary element independently movable simultaneously about three mutually perpendicular axes, and means responsive to such movement of said unitary element about the respective axes to produce corresponding electrical signals, superimposed on the electrical signals produced by said gyroscope means, to manœuver the aircraft by means of the automatic pilot.

2,947,499
JET PROPULSION FOR AIRCRAFT AND CONTROL MEANS THEREFOR
Aubrey Douglas, Saltford Farm, Saltford, Somerset, England
Filed Sept. 27, 1955, Ser. No. 536,883
Claims priority, application Great Britain Oct. 2, 1954
8 Claims. (Cl. 244—23)



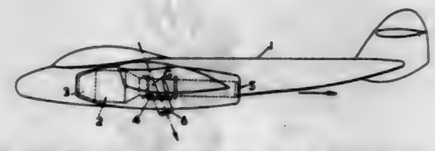
1. An aircraft having means for propulsion or control by the reaction of a gas stream emitting from an exhaust tube, comprising a first exhaust tube for guiding the gas stream into a first direction, a second exhaust tube extending at an angle to said first direction, means for diverting at least a part of the gases from the first tube into the second tube, and means for moving the second tube in a direction parallel to said first tube to thereby define a means for varying the position of the gas stream emitted from the second tube in a direction parallel to said first direction.

2,947,500
ROCKET POWER PLANTS FOR AIRCRAFT AND THE LIKE
Kuno Dreyer, Echterdingen, Wilhelm Wessel, Stuttgart-Hohenheim, and Ludwig Bölkow, Stuttgart-Degerloch, Germany, assignors to Bölkow-Entwicklungen KG., Stuttgart-Flughafen, Germany
Filed Apr. 5, 1957, Ser. No. 651,061
Claims priority, application Germany Apr. 6, 1956
2 Claims. (Cl. 244—23)



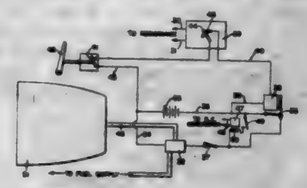
1. An aircraft comprising a fuselage having a solid fuel rocket power acceleration plant and a solid fuel rocket power continuous drive plant for starting and continuously driving said aircraft in flight, said acceleration plant extending in tandem relation to and forwardly of said continuous drive plant, said acceleration plant including at least one thrust nozzle communicating with said acceleration plant and extending downwardly and rearwardly through said fuselage and at an acute angle to said continuous drive plant, said acceleration plant and said continuous drive plant being provided with a wall common to both said plants.

2,947,501
JET DEFLECTORS FOR AIRCRAFT
John Avery Flint, Cove, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Oct. 12, 1953, Ser. No. 385,628
Claims priority, application Great Britain Oct. 21, 1952
4 Claims. (Cl. 244—51)



1. A jet-propelled aircraft having a jet nozzle unit with a jet deflector device comprising a pipe junction in the form of a T-piece, a first nozzle projecting rearwardly therefrom, a second nozzle projecting downwardly therefrom along an axis which is a continuation of a straight line passing through the neighborhood of a horizontal line through the center of gravity of the aircraft, a first butterfly valve mounted in said T-piece for movement from a first position in which it is lying along the first said nozzle to a second position in which it is located to block the entrance to the said first nozzle, a second butterfly valve mounted in said T-piece for movement from a first position in which it is located to block the entrance to the said second nozzle to a second position in which it is located to deflect the jet into said second nozzle and downward along said continuation line and wherein the said second butterfly valve in its said second position lies partly along the axis of the downward nozzle, and is curved in a sense to guide the deflected jet smoothly into the downward direction, and a link tying the said butterfly valves to move together from their respective first positions to their respective second positions.

2,947,502
ACCELERATION INDICATOR FOR AIRCRAFT
Frank H. Highley, Canton, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Sept. 10, 1958, Ser. No. 760,202
5 Claims. (Cl. 244—76)



1. Aircraft take-off control mechanism including an electric power source, means, when electrically energized, for providing an essential service to the aircraft engine to keep it operating, electric leads connecting the power source to the means, a time delay relay having a normally closed contact in series with one of the electric leads, a circuit connecting the operating coil of the time delay relay to the power source, a normally open switch in said circuit and adapted to be closed when the engine throttle is opened a selected amount, means for indicating aircraft acceleration and having a normally closed switch in said circuit which opens when an acceleration exceeding that required for take-off has been reached, and latching-in relay means responsive to aircraft speed for shunting out the normally closed contact of the time delay relay.

2,947,583
EJECTION SEAT FOR AIRCRAFT AND THE LIKE
Galen A. Holcomb, Columbus, Ohio, assignor to North American Aviation, Inc.
Filed May 9, 1958, Ser. No. 734,242
7 Claims. (Cl. 244—122)



1. Emergency escape apparatus for aircraft and the like which includes a seat, lift plate means attached to said seat at the underside thereof and movable from a retracted position to an extended position for providing said seat with an empennage clearance capability, and rocket means attached to said seat to provide a primary seat-lifting force, said lift plate means providing a secondary seat-lifting force when said seat is moved in an air stream.

2,947,594
CABLE SUSPENSION AND ANCHORING MEANS AND METHOD
Jon R. Ruhlman, Cleveland, Ohio, assignor to Preformed Line Products Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 3, 1955, Ser. No. 485,883
16 Claims. (Cl. 248—63)



1. A strand suspensory comprising, in combination with a strand to be suspended, a first helically-preformed, relatively elastic strand-conforming element of open pitch so as to be applied to said strand, said element being doubled back upon itself to constitute two leg portions terminating in a bight portion intermediate its ends, the leg portions of said element being wrapped around said strand in coaxial relation to each other, said bight portion lying to one side of said strand; and a second preformed element similar to said first element having a bight portion overlapping the bight portion of said first element, and having its leg portions wrapped around said strand similarly to said first element but extending in the opposite direction along said strand from said bight portions to that in which the leg portions of said first element extend.

2,947,595
DOWNSPOUT HANGER
Oren E. Sheets, 112 E. Jackson St., Columbia City, Ind.
Filed July 30, 1958, Ser. No. 752,626
3 Claims. (Cl. 248—74)



1. A downspout hanger comprising a single length of wire formed to provide two spaced-apart eyelets and two oppositely extending arms which extend at right angles to a straight line intersecting said eyelets, said eyelets being helical coils of approximately one and one-half turns each, said coils lying in substantially the same plane and having the axes thereof substantially parallel, one end of one coil being joined by a straight length portion of said wire to one end of the other coil, the other ends of said coils being joined to two straight lengths of wire, respectively, which extend toward a point midway between said coils, said two straight lengths being connected together at said point by a twist which extends outwardly at substantially right angles to said straight line and to the plane of said coils, the outer ends of the twist terminating in said two oppositely extending arms which are adapted to be wrapped around an object to be supported.

2,947,506
ADJUSTABLE SUPPORT
Naum Julius Slutzky, 92 Newlands Park, London, England
Filed June 14, 1954, Ser. No. 436,654
Claims priority, application Great Britain June 12, 1953
6 Claims. (Cl. 248—122)

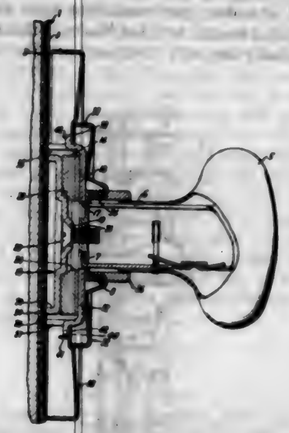


5. An adjustable support device comprising a boss, a ring member having a small portion cut out from its circumference resiliently clamped to said boss at a part substantially diametrically opposite said cut out portion for sliding in relation to said boss, a hollow tubular support member having a transverse opening adjacent one end thereof, the ends of said cut out portion of said ring being located in said transverse opening, notches at the ends of said cut out portion, a tubular plug located within said hollow tubular support, stop means at the other end of said support, and a spring between said stop means and one end of said tubular plug, said spring being mounted to push said tubular plug and apply its other end against said notches whereby said ring member is swingable about said transverse opening but is frictionally held in said opening by the pressure of said spring.

6. A device as claimed in claim 5 and further comprising a stand having a base member and means securing said hollow tubular support member to said stand.

2,947,587
MAGNETIC DISPLAY MOUNT
Ernest L. Schlage, Burlingame, and Armin H. Green, San Mateo, Calif., assignors to Schlage Lock Company, a corporation
Filed Dec. 5, 1958, Ser. No. 778,376
13 Claims. (Cl. 248—206)

1. A door knob display comprising: an elongated spindle adapted to receive a knob thereon at one end thereof, a circular pole piece centrally secured to the opposite end of said spindle and disposed at right angles to the axis of said spindle, said pole piece including a circumferential flange extending axially outwardly relative to said spindle and terminating in a circular edge adapted to be applied against a display board, a magnet positioned radially inwardly of said flange and in engagement at one of its opposite sides with said pole piece on the side of the latter opposite said spindle, said magnet being magnetized in a direction at right angles to said opposite sides whereby said edge has a magnetic polarity opposite to the polarity of the other of said opposite sides of said magnet, a second pole piece engaging said magnet on said other side and being positioned within the radially projected confines of said flange for establishing a magnetic pole opposite to the polarity of said flange.

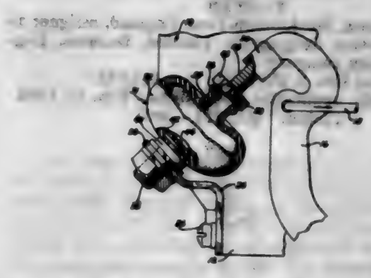


2,947,588
BLOWOUT PREVENTER AND RAM THEREFOR
Herbert Allen, Houston, Tex., assignor to Cameron Iron Works, Inc., Houston, Tex., a corporation of Texas
Filed Apr. 6, 1956, Ser. No. 576,696
7 Claims. (Cl. 251—2)



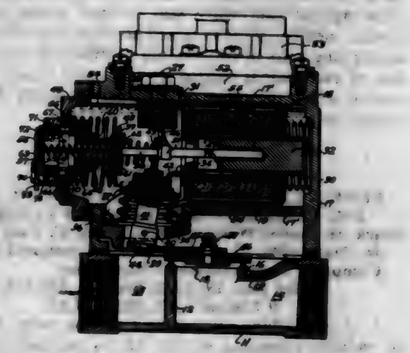
1. A blowout preventer comprising; a housing; a central bore through the housing to be closed; a plurality of transverse ram bores radiating from the central bore; a ram in each ram bore including a plurality of ram segments arranged side-by-side across the ram and individually reciprocal toward and away from the central bore; said ram segments forming a pair of flexible walls, means sealing between the ram segments, and between the ram and ram bore, and between the ram segments and an object in the central bore when the segments are forced against said object to seal off the central bore, and sealing ram to ram when the central bore is empty and the rams are forced together; and means for reciprocating each ram segment including a force applying means, and a plurality of smooth wall solid members having a circular wall in at least the plane perpendicular to the axis of the central bore filling spaces formed between the force applying means and each of the flexible walls; said members in one of said spaces transmitting a closing force to the ram segments while permitting them to move relative ot each other and the ram fronts to abut when the central bore is empty or to assume the contour of an object in the central bore; and said members in the other of said spaces transmitting an opening force to the ram segments while permitting them to assume the contour of the blowout preventer bore.

2,947,589
MOLDED RUBBER DASHPOT
Marion L. Smitley, Huntington Woods, and Melvin F. Sterner, Bloomfield Hills, Mich., assignors to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Filed Sept. 17, 1956, Ser. No. 610,141
4 Claims. (Cl. 251—48)



4. A dashpot for a movable control member comprising a generally globular hollow resilient member having a tubular extension of reduced diameter, a fixed support secured to that end of said resilient member opposite said extension, the free end of said extension being open to atmosphere, said control member having a portion adapted to engage said extension to close said opening and compress said body axially, and vent means associated with one of said members to restrict the escape of air during compression of the resilient member whereby said dashpot, because of its configuration, provides one rate of movement of said control member during initial compression of the resilient member and a slower rate of movement of said control member during final compression of the resilient member.

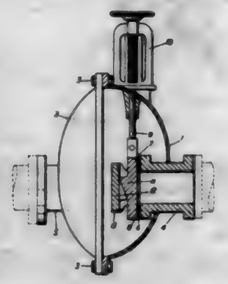
2,947,510
SOLENOID OPERATED GAS VALVE WITH SOLENOID RETARDING MEANS
William A. Ray, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California
Filed Sept. 9, 1957, Ser. No. 682,711
15 Claims. (Cl. 251—54)



1. In a solenoid operated valve, said valve having closure means movable between closed and fully open positions; solenoid means directly connected to said closure means for movement of the same between said closed and open positions, said solenoid means including: a movable part; retarding means operated by said part for retarding said movement of said closure means to fully open position when said solenoid means is energized; a one-way connection between said part and said

retarding means, there being a lost motion space provided between said part and said retarding means when said solenoid means is unenergized; and means for adjusting said space between said part and said retarding means.

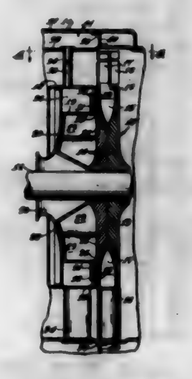
2,947,511
VALVES
William McInnes, Stockton-on-Tees, England, assignor to The Power-Gas Corporation Limited, Durham, England, a British company
Filed Feb. 8, 1957, Ser. No. 639,095
Claims priority, application Great Britain Feb. 10, 1956
5 Claims. (Cl. 251—203)



1. In a valve, the combination comprising first and second complementary bowl-shaped members of fabricated metal plate, fastening means for detachably fastening said first and second bowl-shaped members to one another to form an entire valve casing, tubular inlet and outlet connection members in substantial axial alignment with one another and communicating with the inside of said valve casing, each of said bowl-shaped members having one of said connection members secured thereto and one end of at least the one of said connection members secured to said first bowl-shaped member protruding into said valve casing, a valve seat carried on said protruding connection member end, a valve closure member, means carried by said first bowl-shaped member for moving said valve closure member relatively to said valve seat to cover the valve seat to a variable extent, and thrust means for causing said valve closure member to thust against said valve seat at least when said valve closure member is in the closed position, said thrust means comprising pairs of cooperating instrumentalities of which one of each pair is carried by said valve closure member and of which the other of each pair is rigidly fixed with respect to said first bowl-shaped member.

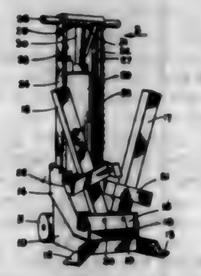
2,947,512
TURBINE BLADE AND NOZZLE BLADE COOLING CONSTRUCTION FOR GAS TURBINES
Mack M. Jones, Western Springs, and C. Paul Kolthoff, Jr., Naperville, Ill., assignors to International Harvester Company, a corporation of New Jersey
Filed Dec. 19, 1956, Ser. No. 629,315
9 Claims. (Cl. 253—39.15)

1. A gas turbine comprising a turbine rotor, a plurality of radially extending turbine blades on said rotor, each of said blades including a hollow portion, an annular first chamber disposed about the outer peripheral edge of said rotor, said first chamber communicating with the hollow portion of the turbine blades, a cylindrical housing encircling said rotor, said housing including an annular second chamber, a cylindrical fan housing disposed within said cylindrical housing, said fan housing having an air inlet, a plurality of hollow nozzle blades connected to said fan housing and to said cylindrical housing and communicating with said second chamber, a third annular chamber 23 within said fan housing communicating with said hollow nozzle blades, a fan disposed within said housing and connected to said turbine rotor for rotation therewith, a plurality of radially extending and relatively circumferentially spaced hollow fan blades on said fan, said third chamber communicating with the spaces between said fan blades, said fan blades including outer ends spaced radially inwardly from said annular first chamber,



said rotor having ports adjacent said outer ends of said fan blades and communicating with the fan blades and the first chamber, and a liquid within the hollow portions of said turbine blades, said liquid being vaporized by heated gases directed against the turbine blades, the vapor traveling to said hollow fan blades being condensed during rotation of the fan, the resultant liquid being centrifugally returned to said turbine blades, the air being moved by said fan being discharged to said third chamber and through said nozzle blades for cooling the same.

2,947,513
HYDRAULIC BUMPER JACK
John L. Nolden, 630 Resolano Drive, Pacific Palisades, Calif., and Ira J. Swartz, 11848 W. Jefferson Blvd., Culver City, Calif.; said Swartz assignor to said Nolden
Filed June 12, 1957, Ser. No. 665,153
5 Claims. (Cl. 254—2)



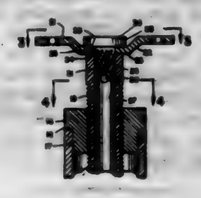
1. A jack comprising, in combination: a base having two parallel supporting members rigidly secured thereto and extending upwardly; a vertical cylinder secured between said members and to said base, said cylinder having a piston rod extending from the upper end thereof; a carriage structure comprising a lifting portion adapted to seat on said base when said carriage is in a first position; said carriage including two parallel racks rigidly secured to either side thereof in horizontally spaced relationship and extending upwardly adjacent said supporting members on opposite sides of said cylinder, respectively, said racks having teeth in their front edges facing in the same direction; a plate member rigidly connecting the upper ends of said rack and rigidly connected at its central portion to the upper end of said piston rod whereby application of fluid pressure to said cylinder urges said piston rod upwardly to lift said carriage and racks relative to said base and supporting members from said first position to a second elevated position; stop members in the form of projections secured to the upper ends of said supporting members cooperating with said carriage to limit the upward movement of said carriage; a transverse rod extending at its opposite ends into said projections to be supported thereby; dogs secured to the opposite ends of said transverse rod outside said projections in horizontally spaced relationship to engage said racks simultaneously to block the same from downward movement whereby loads horizontally off center are accommodated by said horizontally spaced relationship of said racks and dogs; and a handle rigidly secured to said transverse rod and extending in a rearward direction to exert a rotational bias on said transverse rod, thereby urging said dogs against the teeth of said racks.

2,947,514
LOG BINDER
Herbert A. Goss, 1750 N.E. Stephens, Roseburg, Oreg.
Filed Apr. 4, 1958, Ser. No. 726,491
4 Claims. (Cl. 254—78)



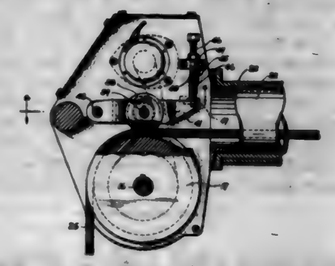
1. A binder for tightening a flexible retainer about a load of logs or the like comprising a lever including a substantially straight, elongated handle portion and a foot portion including a heel and a toe, said toe being substantially in alignment with the handle portion and said heel being offset from the toe-handle portion line, said foot portion having a central longitudinal slot therethrough from the toe rearwardly through the heel, a clevis pivotally fixed to said toe along a pivotal axis at right angles to said slot, the side walls of said slot having a pair of opposed parallel grooves therein, said grooves having open ends at the top of said foot portion, extending diagonally forward into said heel toward the toe and having closed ends within said heel, said lever and said clevis being relatively movable from a load binding position in which said foot is embraced by said clevis to a releasing position in which said foot portion and said clevis extend in opposite directions, and an elongated bar link having a head slidably retained in said grooves, the closed ends of said grooves being over-center with respect to the clevis and said bar link lying within said slot when said lever and said clevis are in binding position, said bar link separating from said lever when said lever swings toward releasing position.

2,947,515
SCREW-ADJUSTED LIFTING JACK
Paul Shaffer, 498 Vaughn Road, Akron 19, Ohio
Filed Dec. 3, 1957, Ser. No. 700,464
4 Claims. (Cl. 254—100)



1. An adjustable post for supporting a building structure comprising an elongated supporting member having an internally threaded portion at an end thereof, an externally threaded post extension screwed in said threaded portion for longitudinal screw adjustment with respect to said supporting member, means for turning said extension in said threaded portion, said extension having an axially inwardly extending opening in the outer end thereof, a plate having a central concavo-convex dished portion providing a seat on the convex side thereof for complementally seating against said outer end of said extension and the outer face of the plate being in a plane to fit flatwise against a surface of the building structure to be supported, said plate having an aperture in said dished portion centrally of said seat thereof and adapted to be aligned with the said opening in the outer end of said extension, a pin receivable through said aperture for securement in said opening of the extension and having an enlarged head engaging the concave side of said dished portion to retain the plate seated on the extension, the outer end portion of said head being substantially flush with said outer face of said plate and thereby adapted to engage said surface of the building whereby the dished portion of the plate is solidly supported against buckling of said dished portion thereof by said head under compressive load on said member when supporting the building structure.

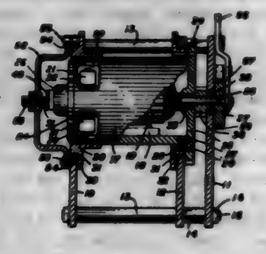
2,947,516
SLACK PULLER
Rodney Jackson, Seattle, Wash., assignor to Young Iron Works, Seattle, Wash., a corporation of Washington
Filed Oct. 22, 1956, Ser. No. 617,548
4 Claims. (Cl. 254—175.7)



1. An integral fairleader and slack puller assembly comprising a frame, mounting means fixed to one side of said frame whereby the assembly is adapted to be mounted upon the end of a boom and through which mounting means a cable is adapted to be passed into the assembly, a load sheave rotatably journalled within said frame and adapted to pass a cable thereover with the cable issuing generally downwardly from the fairleader assembly whereby the cable is wrapped about a substantial portion of the periphery of the load sheave, said load

sheave constituting the main load support for the cable, a motor mounted on said frame and having a drive connection with said load sheave for selectively imparting rotary motion thereto, and means mounted within said frame for pressing the cable tightly against said load sheave when said motor is imparting rotary motion to said load sheave so that cable will be payed out from said load sheave, the disposition of the mounting means for the assembly being so related to the load sheave that the cable is wrapped around at least approximately 45° of the circumference of the load sheave so that wear is minimized on the cable when the same is being payed out from the load sheave.

2,947,517
MOTOR WINCH
Charles W. Simonsen, P.O. Box 419, Longmont, Colo.
Filed June 23, 1958, Ser. No. 743,745
2 Claims. (Cl. 254—186)



1. An electrically operated cable reel comprising: a cylindrical motor housing; motor-field coils mounted in said housing; two spaced-apart frame plates, there being one frame plate positioned adjacent each extremity of said housing and rotatably supporting the latter; an electric armature in said housing; an armature shaft driven by said armature and projecting from said housing; a gear concentrically fixed to said housing so as to rotate therewith; a motor pinion fixed to said armature shaft so as to rotate therewith; a countershaft adjacent said armature shaft; a countershaft pinion on said countershaft meshing with the gear fixed to said housing; a countershaft gear on said countershaft affixed to said countershaft pinion and meshing with said motor pinion; eccentric means for moving said countershaft to move its associated gears into and out of operative relation; means for conducting electric current to said motor-field coils and to said armature, each of the spaced-apart frame plates being provided with a relatively large opening provided interiorly with annular bronze ring bearings; and said motor housing being provided at its ends with flanged bearing rings rotatable in said bearings, said flanged bearing rings comprising cable reel side flanges to form with said motor housing in flanged spool-like cable reel, the outer sides of said flanges bearing against said side plates to prevent lateral endwise movement of said housing.

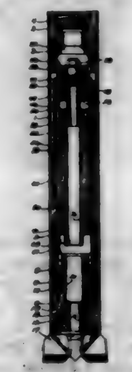
2,947,518
SIDE WALL CORE TAKING APPARATUS
Henry U. Garrett and Norman F. Brown, Longview, Tex., assignors, by mesne assignments, to Henry U. Garrett, Longview, Tex.
Filed May 1, 1957, Ser. No. 656,383
12 Claims. (Cl. 255—1.4)

1. A side wall coring tool comprising, a body having a passageway therein adapted to be run on a drill string, a piston in said body, retractor means carried by the piston for retracting a side wall core drill from the wall of a well into the passageway, a chamber in said body, said piston exposed on one side to the passageway and on the other side to the chamber, port means for fluidly connecting the chamber with the passageway and with the exterior of the body, valve means operable to control flow through the port means so that said chamber



is alternately connected with the passageway and the exterior of the body, and means for operating the valve means in response to predetermined pressure conditions in the passageway.

2,947,519
PERCUSSION DRILL
Jacob E. Feucht, Garfield Heights, Ohio, assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Sept. 11, 1957, Ser. No. 683,408
9 Claims. (Cl. 255—4.4)



1. A fluid actuated impact tool comprising, in combination, a cylinder having a closed end and a pressure fluid inlet port adjacent to said end, an anvil slidably and sealingly mounted in the other end of said cylinder and adapted to carry a tool bit, a hammer reciprocatingly mounted within said cylinder, said hammer and anvil each having a bore extending axially therethrough, a valve stem fixedly mounted within said cylinder adjacent said closed end and adapted to receive said hammer bore in fluid sealing relationship so as to define a power stroke pressure chamber at said closed end, said hammer having a valve element adapted to enter into and form a sliding sealing fit with said anvil here to thereby close said cylinder other end and define a return pressure chamber, a porting sleeve mounted between said hammer and said cylinder, said cylinder and said sleeve defining a fluid inlet passage therebetween which is in fluid communication with said inlet port, said sleeve and said hammer defining fluid distributing passages therebetween which are adapted to be in communication with said chambers, said sleeve having ports which place said inlet passage in communication with said distributing passage intermediate the length of the latter, and valve means between said hammer and sleeve whereby fluid is directed alternatively to each chamber to cause reciprocation of said hammer.

2,947,520
WELL CASING BACK-OFF TOOL
Ronald A. Tappmeyer, Corpus Christi, Tex., assignor to Shell Oil Company, a corporation of Delaware
Filed Dec. 28, 1953, Ser. No. 400,416
2 Claims. (Cl. 255—35)



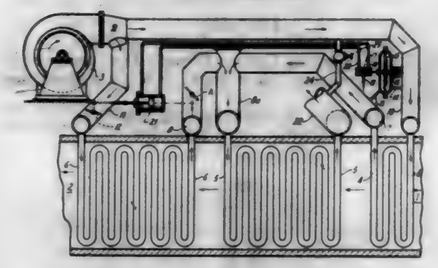
1. An apparatus adapted to be secured to the lower end of a pipe string and lowered into a cased well borehole for unscrewing a predetermined upper portion of a well casing at a selected threaded joint, said apparatus comprising inner and outer elongated tubular body members concentrically mounted for limited axial movement with regard to each other, the inner tubular body member being attached to said pipe string, closure means at the lower end of said inner body member normally closing the lower end thereof at least during operation of said apparatus for retaining a pressure fluid therein, upper and lower hydraulically-actuated slip assemblies carried in spaced relationship on said outer body member, passage means through the wall of the inner tubular body member, said slip assemblies including axially-spaced annular seal means surrounding said inner tubular body member at points above and below the fluid passage means at all times and radially-extendible slips actuatable by pressure fluid from the inner tubular body member through said passage means and being adapted to engage continuously said well casing above and below the selected casing joint to be unscrewed upon application of hydraulic pressure to said inner body member against said normally closed closure means, an axially extendible joint in said outer body member intermediate the upper and lower slip assemblies, a swivel joint in said outer body member intermediate the upper and lower slip assembly, the inner wall of said outer body member having a helically-grooved section above said swivel joint and a vertically-grooved section below said swivel joint, upper and lower spline means fixedly secured to said inner body member and positioned within the helical and vertical grooves in said upper and lower sections, respectively, of said outer body member, and a ratcheting tubular pipe coupling forming means for permitting transmission of left-hand rotation of said helically-grooved section to said upper slip assembly and for preventing transmission of right-hand rotation of said helically-grooved section to the upper slip assembly and being connected in said outer body member intermediate the upper slip assembly and the helically-grooved section of said outer body member.

2,947,521
WELL CASING BACK-OFF TOOL
Ronald A. Tappmeyer, Corpus Christi, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware
Filed May 26, 1958, Ser. No. 740,510
2 Claims. (Cl. 255—35)



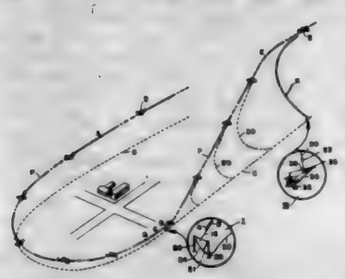
1. An apparatus adapted to be secured to the lower end of a pipe string and lowered into a cased well borehole for unscrewing a predetermined upper portion of the well casing at a selected threaded joint, said apparatus comprising inner and outer elongated tubular body members concentrically mounted in spaced relationship for limited axial movement with regard to each other, said outer member being attached to said pipe string, valve means carried at the lower end of said outer body member normally closing the lower end thereof during operation of said apparatus for retaining a pressure fluid therein, upper and lower hydraulically-actuated slip assemblies carried in spaced relationship on said outer body member and in fluid communication with a source of pressure fluid, said slip assemblies being adapted to engage said well casing above and below the selected casing joint to be unscrewed, means carried by said outer body member between said slip assemblies for permitting longitudinal movement between said slip assemblies while a casing string is being unscrewed, a swivel joint in said outer body member intermediate the upper and lower slip assemblies, the inner wall of said outer body member having a helically-grooved section above said swivel joint and a vertically-grooved section below said swivel joint, upper and lower spline means fixedly secured to said inner body member for sliding movement in engagement with the helically- and vertically-grooved sections, respectively, of said outer body member, a piston formed on at least one end of said inner body member closing the annular space therearound, annular closure means closing the upper end of said outer body member, a small diameter conduit positioned coaxially within said outer member and extending through said closure means into said inner body member, port means through the wall of said inner body member at a point adjacent said upper slip assembly, spring means between said inner and outer body members for returning said inner body member to its lowermost position.

2,947,522
RECUPERATORS
John Donald Keller, 1019 Farmer's Bank Bldg., Pittsburgh, Pa.
Filed May 12, 1955, Ser. No. 507,790
6 Claims. (Cl. 257—309)



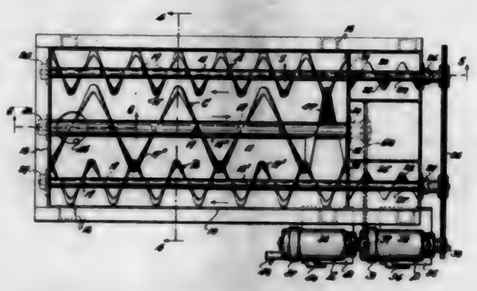
1. In a recuperator for an industrial heating furnace, a hot gas chamber for receiving the products of combustion of said furnace having heat exchange conduits for heating air disposed in the path of travel of the hot gases passing through said chamber, said conduits being divided into a plurality of air passes each having air inlets and outlets, the conduits of one of said passes being disposed in the region of the hottest gases passing through said chamber, the conduits of another of said passes being disposed in the region of the coolest gases in said chamber, and the conduits of the other of said air passes being disposed intermediate the first and second-named passes, a source of air connected to the inlets of the conduits of said first and second-named passes, which air varies in volume with the heat demands of the furnace, means connecting the air outlets of the first and second-named passes to the air inlet of the other pass and means for maintaining air flow substantially constant in the first-named pass by varying the air flow through the second-named pass when the total air flow through the recuperator is reduced.

2,947,523
AERIAL TARGET LAUNCHING TECHNIQUE
Leonard W. Seeley and William S. Rosey, China Lake, and Lewis A. Stevens, Ridgecrest, Calif., and Reginald R. Vancil, Oceana, Va., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 10, 1955, Ser. No. 546,289
2 Claims. (Cl. 258—1.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method of effecting aerial pickup of a grounded tow target without ground-dragging thereof, comprising the steps of: pointing said tow target down-range relative to the direction in which it is to be picked up and towed by a pickup aircraft; providing a tow line of sufficient length to impose thereon, when the tow line is entirely raised out of ground contact during pickup operation, airload and inertia forces of magnitude effective to lift said tow target without dragging effect; securing said tow line to said tow target at substantially the center of gravity thereof; extending said tow line uprange from said tow target; securing the up-range end of said tow line to a tow line loop; supporting a length of said tow line loop in position to be engaged by a pickup aircraft; restraining said tow target against the up-range displacement which tends to occur during the pickup operation; causing a pickup aircraft to fly down range toward said tow line loop; causing said aircraft to effect engagement of said loop; and causing said aircraft to climb up and over said tow target to raise the entire tow line out of ground contact and to effect lifting of said tow target.

2,947,524
BLENDER APPARATUS
Charles P. Bridges, P.O. Box 233, Morristown, N.J.
Filed May 1, 1958, Ser. No. 732,343
4 Claims. (Cl. 259—6)



1. Blender apparatus comprising an elongated horizontal mixing trough having a rounded bottom and receiving and discharge ends, a blended material discharge means at the discharge end, a pair of laterally spaced apart rotatable top agitating members extending longitudinally within the upper region of the mixing trough between its ends and respectively adjacent to side walls of the latter, said agitating members, when rotated, being adapted to move the material operated upon endwise from the receiving end of the mixing trough toward the discharge end thereof, a rotatable bottom agitating member extending longitudinally within the lower region of the mixing trough between its ends contiguous to the rounded bottom thereof and below and intermediate said top agitating members, said bottom agitating member, when rotated, being adapted to normally move the material operated upon endwise through the mixing trough in a direction opposite to the movement of said material by said top agitating members, whereby said material is circulated longitudinally within the mixing trough between the receiving and discharge ends thereof, means disposed in the plane of the top agitating members for introducing materials to be operated upon into the receiving end of the mixing trough, power actuated changeable speed transmission means to drive the top agitating members at variable speed, and separate power actuated changeable speed transmission means to drive the bottom agitating member at a variable selected different speed relative to the driven speed of the top agitating members.

2,947,525
DIFFUSER TUBE
Joseph J. Klein, Glencoe, Ill., assignor, by mesne assignments, to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Filed Sept. 15, 1951, Ser. No. 246,854
4 Claims. (Cl. 261—122)

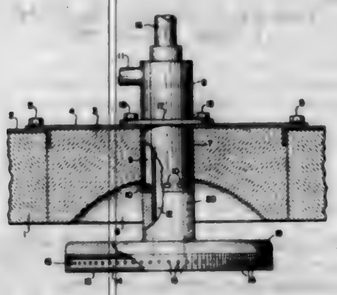
4. In apparatus for transmitting fluid through a porous medium, the combination comprising: a receptacle for

connection through a quick-acting valve alternately to a source of fluid under pressure and to the atmosphere, said receptacle having rigid impervious wall means and an opening to the exterior, and a fluid transmitting element of flexible porous material secured to said receptacle over said opening, whereby it will be flexed in one direction to an extended position outside the receptacle when



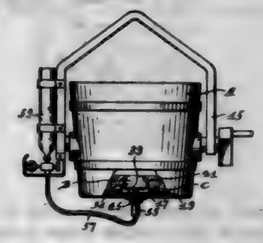
the fluid pressure in the receptacle exceeds the external fluid pressure, and, when the external fluid pressure exceeds the fluid pressure in the receptacle, will be suddenly flexed in the opposite direction and inverted into the receptacle, said receptacle and said element being so conformed with respect to size and shape that, upon such inversion said element will come into engagement with the inner surface of said wall means and be supported thereby.

2,947,526
INDUSTRIAL GAS BURNER
Robert E. Buckholdt, Willow Grove, Pa., assignor to Selas Corporation of America, Dresher, Pa., a corporation of Pennsylvania
Filed Apr. 8, 1957, Ser. No. 651,461
4 Claims. (Cl. 263—19)



1. In a burner, the combination of a burner block having one surface thereof adapted to act as a portion of a furnace wall, a tubular member extending through said block and extending in front of said surface, a hollow disc attached to the projecting end of said member substantially parallel to said surface said surface being provided with a substantially conical depression coaxial with said member and smaller in diameter than said disc, the space between said disc and surface forming a combustion chamber, means forming a passage in said member terminating in a plurality of outlets adjacent to the base of said depression in said combustion chamber between said surface and disc through which fuel and air are supplied to be burned, and means forming a passage in said member through which gas is supplied to said disc, said disc being provided on its periphery with a plurality of orifices through which said gas is discharged radially to mix with the products of combustion.

2,947,527
DEVICE FOR INSUFFLATING GAS INTO A MASS OF MOLTEN METAL
Etienne Spire, Montreal, Quebec, Canada, assignor to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude, Paris, France
Filed Sept. 9, 1957, Ser. No. 682,850
5 Claims. (Cl. 266—34)

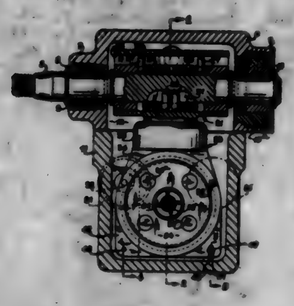


1. A self-contained unit for removable attachment to the inside of the bottom wall of a metallurgical vessel for blowing gas into the vessel's molten contents, said bottom wall being provided with a connecting opening, comprising a frustro-conical diffusing plug of porous refractory material including a tapering side wall and opposed large and small end walls for receiving gas and for contacting the molten metal respectively, a metal housing including a side wall encasing in gas-tight relationship to the tapering side wall of the plug and projecting beyond said large end thereof to provide an integral skirt, and an end assembly including a flat metal base wall welded gas tightly to the skirt and forming with the skirt and said large end of the plug and enclosure constituting a gas chamber, an outwardly projecting connecting stem connected to said base wall, said base wall being adapted to seat on the inside of said vessel bottom wall with said connecting stem extending through the opening in the wall of the metallurgical vessel for connecting the unit to the vessel, said connecting stem including a gas passage therethrough for conveying gas from outside the vessel into said gas chamber, and adjustable retaining means acting between said base wall and the large end of the plug to retain the plug in wedging-nested relationship against said tapered wall, said retaining means extending through the base wall whereby it is accessible for adjustment from outside the unit.

2,947,528
DAMPED AIR VALVE
Robert J. Broadwell, Cleveland, Ohio, assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 2, 1957, Ser. No. 632,155
3 Claims. (Cl. 267—1)

3. In a retarded valve actuator, a housing having a cavity, a shaft journalled in said housing for oscillation relative to the housing, actuating means carried by the shaft within said cavity for oscillating movement in opposite directions, said actuating means including a hollow tubular portion surrounding the shaft, and a pendant portion connected to the tubular portion and extending outwardly therefrom, a torque coupling including resilient means surrounding by said tubular portion and operatively connected to said shaft and to said tubular portion, said pendant portion being provided with a fluid reservoir, damping means carried by said pendant portion and including a pair of flexible diaphragms mounted

within the pendant portion in spaced relation to define therebetween a single pressure fluid containing chamber communicating with said reservoir, said diaphragms being spaced in a direction which is generally perpendicular to a plane which includes the axis of said shaft, a separate plunger associated with each of the diaphragms for



engagement with opposite interior walls of the housing upon movement of the actuating means in opposite directions to move the diaphragms relative to each other to vary the pressure fluid chamber, and means carried by the pendant portion intermediate said reservoir and said chamber to control the flow of fluid between the chamber and reservoir.

2,947,529

DISC-TYPE SUSPENSION SPRING

Herbert Schwartz and Julian B. Plato, West Covina, Calif., assignors to Bell & Howell Company, Chicago, Ill., a corporation of Illinois

Filed Dec. 3, 1957, Ser. No. 700,495
1 Claim. (Cl. 267—1)

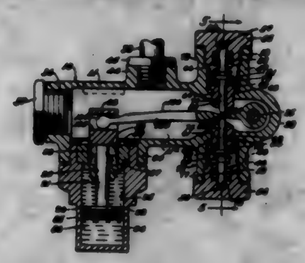
A suspension spring integrally formed from a disc of thin, resilient material and having a substantially circular central member; a plurality of radially spaced apart concentric rings disposed around the central member; the width, thickness and spacing between rings being progressively greater as the outer of said rings is approached; and a set of at least three relatively narrow spaced apart connecting members for respectively joining the central member with the adjacent ring and adjacent rings with each other, each set of three connecting members being symmetrically arranged between the central member and the said outer ring, with adjacent sets of connectors being staggered to define at least six series of radially aligned connecting members, each series of radially aligned connecting members comprising a connector from every second set of connectors whereby a bending movement of the portions of each ring intermediate the pairs of adjacent connectors is allowed and provides rectilinear motion of a mass attached to the spring.

2,947,530

CONTROL DEVICE FOR VEHICLE SUSPENSION SYSTEM

Ralph Charles Davis, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Feb. 13, 1956, Ser. No. 565,198
4 Claims. (Cl. 267—65)



1. A device for controlling the passage of fluid under pressure, comprising, a housing having an open port, a fluid supply port, a fluid exhaust port and an elongated interior bore permitting passage of fluid between said ports, said supply and exhaust ports being in an opposed relation transversely of said bore, valves within said housing blocking passage of fluid through said supply and exhaust ports, a journaled shaft extending transversely of said bore adjacent one end of said housing, an arcuately movable valve actuating bar extending longitudinally within said bore and affixed at one end to said shaft and extending between said valves, and hydraulic means at the other end of said actuating bar to dampen movement thereof toward said valves when said shaft is rotated.

2,947,531

CONTROL DEVICE FOR VEHICLE SUSPENSION SYSTEM

Herbert H. Deist, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed Apr. 4, 1956, Ser. No. 576,047
1 Claim. (Cl. 267—65)



Control means for regulation of the supply and exhaust of air to and from the expansible bellows for a vehicle suspension system to maintain a predetermined height between the road gear and frame of the vehicle, comprising, a member adapted to be journaled on said frame and adapted for rotation by relative movement between the road gear and frame of the vehicle, an oscillative lever carried by and extending generally upwardly from said member, two housings adapted to be coaxially secured to said frame with one each on opposite sides of said lever, each housing having walls defining a longitudinal bore with closed ends and two aligned conduits extending radially of said bore through a housing wall, an air-tight plunger slidable in each housing bore having a circumferential groove for simultaneous registration with said conduits, said conduits adapted to communicate with said bellows when in registry with said groove, an actuating rod secured to adjacent ends of each of said plungers and projecting through a bore end of each housing toward said lever and a locking rod secured to the

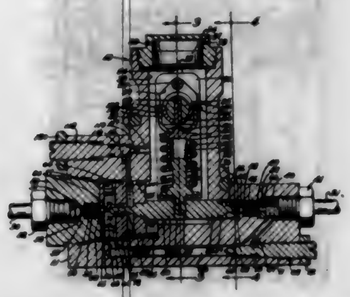
opposite ends of each plunger and projecting through the opposite bore end of each housing, and an inflatable ring surrounding each rod longitudinally of the housing for maintaining said plunger groove in unregistered relation with said conduits.

2,947,532

ACTUATING MECHANISM

Norman B. Christensen, North Olmsted, Ohio, assignor of one-half to Republic Manufacturing Co., Cleveland, Ohio, and one-half to The Firestone Tire & Rubber Company, Akron, Ohio, both corporations of Ohio

Filed July 5, 1956, Ser. No. 596,110
5 Claims. (Cl. 267—65)



1. Control means adapted for regulation of the supply and exhaust of air to and from an expansible bellows for a vehicle suspension system to maintain a predetermined height between the road gear and frame of the vehicle, comprising: a housing having a normally vertical bore, a first horizontal bore communicating with said vertical bore, and a second smaller diameter bore axially aligned with said first bore; a plug in said first bore; an air supply port opening exteriorly of said housing through said plug; a sealing member inwardly of said plug defining an air chamber within said first bore; a valve within said plug blocking passage of air between said supply port and air chamber; a two-way port adapted for communication with a bellows opening exteriorly of said second bore; a valve within said housing blocking passage of air between said two-way port and second bore; an exhaust port opening exteriorly of said second bore; a passageway through said housing connecting said air chamber with said two-way port; a plunger fitted in said second bore in sealed engagement therewith and slidably extending transversely of said vertical bore through said first bore and sealing member to selectively actuate said valves; a shaft extending transversely of said vertical bore adapted for rotation by relative movement between the road gear and frame of the vehicle; a motion transmitting means within said vertical bore operatively connecting said shaft with said plunger; and, damping means associated with said plunger opposing movement thereof for a predetermined time.

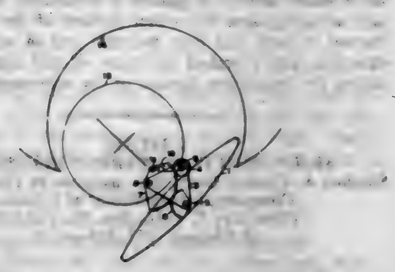
2,947,533

DOORS OR CLOSURE MEMBERS FOR BOMB BAYS OR LIKE SPACES IN THE FUSELAGES OR WINGS OF AIRCRAFT

Harold Brumby, Elloughton, Brough, and Kenneth Alfred Whitworth, Hull, England, assignors to The Blackburn Group Limited, Brough, England, a British company

Filed Apr. 13, 1955, Ser. No. 501,680
Claims priority, application Great Britain Dec. 13, 1954
7 Claims. (Cl. 268—30)

1. In combination, an enclosure wall provided with a door opening, a reversible door therefor operable between a first position in which it closes the door opening and a second position identical with the first in which it also closes the door opening but has its inner and outer faces reversed, and operating means for effecting and controlling movement of the door between the first and second positions in such fashion that the door when half within and half without the enclosure is positioned well toward one side of the door opening from the middle thereof for making available a wide exit way, said operating means comprising door carriers supported respectively by the upper and lower portions of an enclosure wall from above and below the door opening for rotation about a fixed axis which extends between the middle of the door opening and one side thereof in the plane of the door opening and is well spaced both



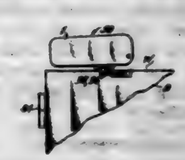
from the middle of the door opening and from the adjacent side of the door opening, means pivotally supporting the door on the carriers for rotation relative to the carriers about a movable axis that extends along a central portion of the door, actuating means for rotating the carrier through substantially a full revolution to carry the said movable door axis from the middle of the door opening over close to one side of the door opening and then on around to the middle of the door opening again, and means responsive to said actuating means for causing the door to be turned about its own axis in the direction opposite to that in which it is turned by the carriers at an angular velocity such that the door will be carried and turned by a compound movement from its first to its second position or vice versa by the total operation of said actuating means.

2,947,534

AUTOMATIC OPERATING DEVICE FOR DOORS, GATES AND LIKE SWINGABLE ELEMENTS

Albert Leimer, Beimlerstr. 15, and Kurt Ausmüller, Burgfriedenstr. 20, both of Augsburg, Germany

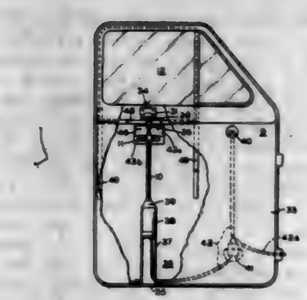
Filed Dec. 18, 1957, Ser. No. 703,689
Claims priority, application Germany Apr. 27, 1957
5 Claims. (Cl. 268—65)



1. A mechanism for operating a door, gate and like swingable element; comprising a housing, a brake cylinder fixed to said housing, an actuating arm extending out through said housing and operable in a first direction to open said door and in an opposite direction to close said door, an electric motor, drive means including a shaft in driving connection with said motor to move in one direction for operating said arm in said first direction, spring means in said housing arranged to be tensioned in response to said drive means when moved in said one direction, locking means for holding said spring means under

tension until said drive means is driven in a second direction opposite to said first direction, said spring means upon release by said locking means moving said actuating arm in said opposite direction, friction coupling means operatively connectable with said actuating arm, one-way coupling means operatively interposed between said drive means and said friction coupling means and operatively connecting said drive means to said actuating arm to open said door, said shaft extending into said cylinder, a crank arm fixed to said shaft, a connecting rod pivoted to said crank arm, said cylinder being filled with fluid, a braking piston in said cylinder pivoted to said connecting rod, first valve means in said piston, and second valve means connected to said cylinder, said first and second valve means serving to provide a brake-free operation of said actuating arm for a first portion of the movement thereof in both said first direction and in said opposite direction, and a braked operation of said actuating arm during the remaining portion of the movements thereof.

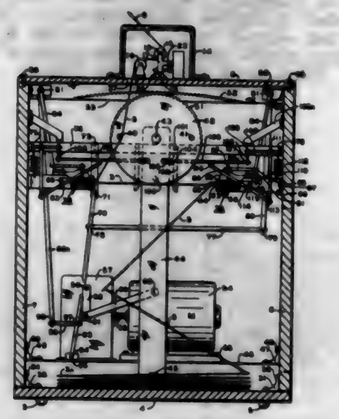
2,947,535
MOUNTING FOR BEARING ELEMENTS
Stephen A. Crosby, Gary, Ind., assignor to The Anderson Company, a corporation of Indiana
Filed May 7, 1956, Ser. No. 583,137
11 Claims. (Cl. 268—124)



1. A nut assembly for a helically threaded shaft including a pair of mounting plates generally paralleling the longitudinal axis of the shaft, each plate having an arcuate portion complementing a corresponding portion in the other plate to define a circular opening exceeding the diameter of the shaft to pass the shaft therethrough, means securing the plates together, said arcuate portions being formed with elongate recesses extending parallel with the axis of the shaft, elongate bearing elements for engaging the threads of said shaft, each element being positioned for rotation in one of said recesses, the bearing elements having axle portions at either end, and the ends of each of said recesses including bearing portions for said axle portions receiving the axial and the radially outward thrusts of said bearing elements and accurately mounting the bearing elements axially of the threaded shaft and to each other.

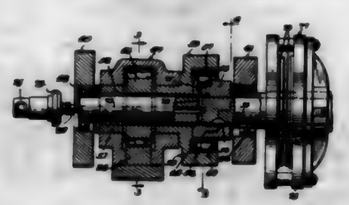
2,947,536
PAPER FOLDING DEVICE
Iliff H. Martin, 1214 Cameron Court NE., Atlanta, Ga.
Filed June 3, 1957, Ser. No. 663,242
6 Claims. (Cl. 270—79)

1. A device for imparting a folding and creasing operation to a continuous strip of paper, said device comprising a first pair of biased closed separable creasing elements, a second pair of biased closed separable creasing elements arranged in spaced relation to said first pair of elements, oscillatable injecting means disposed between said pairs of elements rotatably, a pair of injecting elements mounted on said oscillatable injecting means, each of said injecting elements being arranged to engage the paper roll and to move a part thereof between the creasing elements comprising one of said pairs upon separation thereof, motive means for imparting operating movement to each of said injecting elements in coordination with separation of its associated pair of creasing elements, means responsive to excess tension in the paper being supplied to said machine for deenergizing said motive



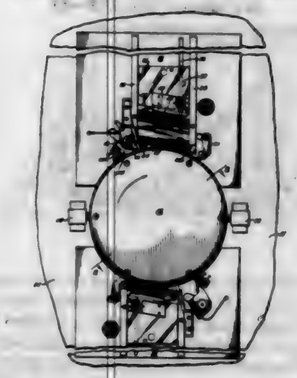
means, and an ejector element disposed adjacent each of said pairs of creasing elements and responsive to movement of said oscillatable injecting means for respectively removing the parts of said roll from between its associated creasing elements, each ejector element being arranged to perform an ejecting operation in connection with its associated creasing elements immediately before a succeeding injecting operation of the associated injector element and while the paper is securely gripped by the other pair of creasing elements.

2,947,537
LOCK-UP MEANS FOR OVERRIDING DRIVES
Frederick M. Littell and Simeon Rudlong, Chicago, Ill., assignors to F. J. Littell Machine Company, Chicago, Ill., a corporation of Illinois
Filed May 2, 1958, Ser. No. 732,624
3 Claims. (Cl. 271—2.4)



2. In a machine of the class described, the combination with feeding rolls for feeding strip material, of a feed roll drive shaft, intermittently operating driving means for rotating the feed roll drive shaft to cause feeding of measured lengths of said strip material, said driving means including an overrunning clutch having an annular outer casing comprising the driving member and an interior hub keyed to the feed roll drive shaft and comprising the driven member of the clutch, lock-up means for frictionally and releasably locking the casing to the interior hub, said lock-up means comprising a plurality of pistons mounted by the hub for reciprocation and friction elements carried by the casing and hub respectively, and means for actuating the pistons to cause the friction elements to engage whereby to render the lock-up means operative.

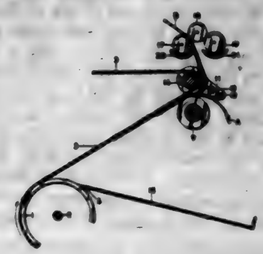
2,947,538
CARD FEEDING APPARATUS
Eric Azari, Pacific Palisades, Alfred E. Gray, Culver City, Herman J. Malin, Los Angeles, and Harold B. Thompson, Playa Del Rey, Calif., assignors to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Filed Feb. 24, 1958, Ser. No. 717,270
18 Claims. (Cl. 271—11)



1. In apparatus for processing data on a plurality of information storage cards, the combination of: transport means for the cards, card holding means disposed adjacent said transport means and including a card supporting surface and at least one guide rail, a tongue member extending from one end of the guide rail towards the transport means to define a throat for the cards fed from the card holding means to the transporting means, said tongue member being disposed intermediate the upper and lower edges of the guide rail to engage the leading edge of each card so fed to the transport means at a point intermediate the top and bottom thereof, and a stack head having a width corresponding to the width of each card for controlling the transfer of cards from the transport means to the card holding means, said stack head being movable between a standby position and an operative position and having a groove formed therein for receiving the tongue head in the operative position of the stack head to obtain a positioning of the cards in the card holding means for a sequential transfer of the cards from the card holding means to the transport means.

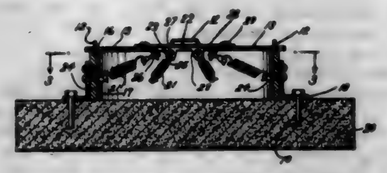
2,947,539
DEVICE FOR SEPARATING ORIGINAL AND COPY SHEETS
Theo Pierre Chrétien Breuers and Henricus Meyer, Venlo, Netherlands, assignors to Chemische Fabriek L. van der Grinten N.V., Venlo, Netherlands, a corporation of the Netherlands
Filed Feb. 4, 1958, Ser. No. 713,224
Claims priority, application Netherlands Feb. 6, 1957
8 Claims. (Cl. 271—64)

1. An apparatus for separating superimposed original and copy sheets passing in face to face relation from a place of exposure, comprising means for conveying said sheets endwise into a separation station with at least the leading edge of one sheet disposed on and behind the leading edge of another sheet, a two-legged tumbling element mounted rockably at said station, the end of one leg of said element normally lying across the path of the forward one of said leading edges, said element having between the ends of said legs a surface normally in a position to be engaged by said forward edge and movable thereby to rock said element and



thus move said one leg out of said path and move the end of the other leg of said element across the path of approach of the backward one of said edges, whereby said edges and the sheets are diverted into separate paths.

2,947,540
BASE SACK ANCHORING MEANS
Herbert W. Henry, 881 Stebbins Ave., New York, N.Y.
Filed Mar. 9, 1959, Ser. No. 798,127
6 Claims. (Cl. 273—25)

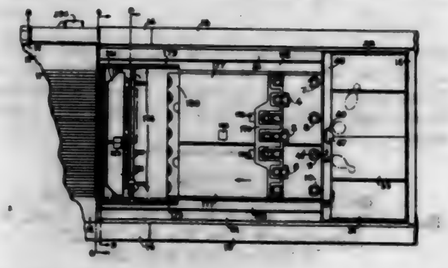


1. In a base sack anchoring means, a plate arranged substantially flush with the playing area and having a plurality of spaced loops adapted for receiving means for connecting a base sack thereto adjacent the periphery thereof, a frame located centrally below said plate and on which the same is slidably supported, a supporting base embedded in the ground below said frame, means securing said frame in fixed relation on said supporting base, and a plurality of spaced radially arranged springs affixed at their outer ends to the inner face of said frame and connected at their inner ends with said plate for securing the plate on said frame and normally retaining the plate and the base sack centrally thereof and permitting of limited movement of the sack and plate throughout the plane of the top of the frame.

2,947,541
AUTOMATIC BOWLING PIN SETTER
Donald M. Came, Brookline, Mass., David E. O'Connor, Houston, Tex., and Donald Richardson, Winchester, Mass., assignors to Came Associates, Inc., Boston, Mass., a corporation of Massachusetts
Original application Dec. 5, 1955, Ser. No. 550,973. Divided and this application June 23, 1958, Ser. No. 743,810
23 Claims. (Cl. 273—43)

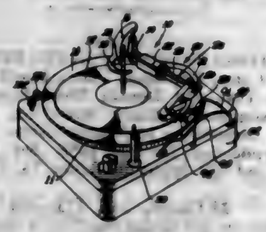
7. In a bowling pin setting machine, a bowling pins carrying and sweeping mechanism comprising, in combination: a bowling pins carrying and sweeping structure, adapted to be received into a chamber located below the playing surface of a bowling alley and there to receive bowling pins thereinto; and adapted to hold releasably, in translation in forwardly directed motion over the bowling pins spots positions of the playing surface of the bowling

alley, bowling pins maintained uprightly therein; means for venting the playing surface of the bowling alley above the chamber located below the playing surface of the bowling alley to provide an entrance and exit for the bowling pins carrying and sweeping structure; bowling pin arresting devices, embedded in the playing surface of the bowling alley at the bowling pins spots positions and capable of cooperating with bowling pins to effect arrests of bowling pins upon bowling pins spots positions; means for elevating and erecting the bowling pins carrying and sweeping structure out of the chamber located below the playing surface of the bowling alley and for supporting and carrying the bowling pins carrying and sweeping structure, in translation in rearwardly directed motion over the playing surface comprising the bowling pins spots positions of the bowling alley, sweeping bowling



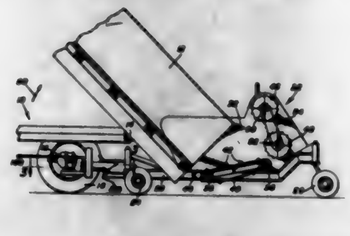
pins and bowling balls therefrom, and for supporting and carrying, in translation in forwardly directed motion over the bowling pins spots positions of the playing surface of the bowling alley, the bowling pins carrying and sweeping structure, releasing bowling pins upon bowling pins spots positions; control means for activating the bowling pin arresting devices, distributed between the bowling alley and the bowling pins carrying and sweeping structure and actuatable by the bowling pins carrying and sweeping structure in its translation in forwardly directed motion over the bowling pins spots positions of the playing surface of the bowling alley; means for deerecting and lowering the bowling pins carrying and sweeping structure into the chamber located below the playing surface of the bowling alley; and means for restoring the playing surface of the bowling alley above the chamber located below the playing surface of the bowling alley.

2,947,543
AUTOMATIC RECORD CHANGER AND PLAYER
Arnold P. Grunwald, Chicago, Ill., assignor to Capital Engineering & Manufacturing Corporation
Filed June 28, 1956, Ser. No. 594,509
11 Claims. (Cl. 274—10)



1. A record changer comprising, in combination, a turntable, a frame, a tone arm, a swing arm support for the tone arm, means pivotally securing the swing arm support to the frame to rotate rearwardly and downwardly thereby retracting the pickup arm, means coupled with the pivotal support permitting the swing arm to flop when the center of gravity shifts as the stylus enters the runout groove of the record, a cycling switch engageable by the swing arm when the swing arm support flops, the tone arm being mounted for movement transversely with respect to the swing arm, the tone arm being so balanced on the swing arm that when a record has been played the swing arm flops in its support and trips the cycling switch thereby beginning the cycling action.

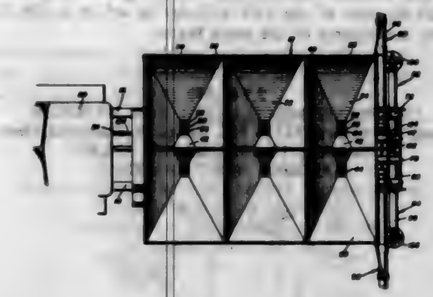
2,947,543
MANURE SPREADER FOR DUMP TRUCK
Delmar H. Raybould, 273 E. Main, Rexburg, Idaho
Filed Nov. 2, 1956, Ser. No. 620,096
18 Claims. (Cl. 275—5)



1. In combination with a drawing vehicle mounted for longitudinal earth traversing movement, and a mobile caster wheel supported trailing vehicle adapted for alignment with the drawing vehicle by adjustment in transverse direction with respect thereto, an automatic coupling apparatus comprising a drawbar assembly rearwardly extended from the drawing vehicle, means borne by the drawing vehicle mounting the drawbar assembly on the drawing vehicle for free floating elevational movement in fixed position with respect to the transverse dimension of said vehicle, a tongue assembly rigidly mounted on the trailing vehicle in forwardly disposed position telescopically engageable with the drawbar assembly for reciprocal rectilinear movement relative thereto longitudinally of the drawing vehicle between coupled position interconnecting the vehicles in fixed alignment while accommodating relative elevational movement of the vehicles and disengaged relation, and one of said assemblies having oppositely transversely and oppositely elevationally disposed camming surfaces divergently extended toward and engageable with the opposite assembly, releasable means mounted on one of the assemblies and engageable with the other automatically actuated by movement of the assemblies to coupled position to retain said assemblies in such position.

2,947,544
FERTILIZER MIXING AND SPREADING MACHINE
Arthur A. Hurt, 215 E. 14th St., Spencer, Iowa
Filed Nov. 8, 1956, Ser. No. 621,042
2 Claims. (Cl. 275—5)

1. A fertilizer mixing and spreading machine comprising a mobile body divided into a plurality of independent transverse compartments arranged longitudinally of the body, each of said compartments having a discharge opening therein, a cylindrical housing extending laterally of the discharge opening in each housing and communicating therewith, a screw auger disposed in each housing and having the periphery disposed adjacent the inner surface of the cylindrical housing thereby providing a positive displacement metering conveyor, said housing having a discharge area disposed laterally of the opening in the compartment thereby necessitating passage of all the material through the metering conveyor, an elongated longitudinal tubular housing underlying the transversely extending metering conveyors and communicating with each of the discharge areas for receiving the material, an elongated screw auger mounted in said tubular housing with the periphery thereof disposed adjacent the inner surface of the tubular housing for conveying the material longitudinally and intermingling the materials received from the independent compartments while conveying the same, a laterally extending tubular housing connected with the rear of the body and communicated with the longitudinal tubular housing, an elon-



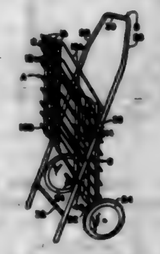
gated screw auger in said laterally extending housing for conveying the mixed material laterally of the body, rotary scattering means mounted on the laterally extending tubular housing for broadcasting the mixed material from a point located laterally of the body, a power source for driving all of said screw augers and the rotary scattering means and independently adjustable power transmission means interconnecting the power source and each of the metering conveyors for independently varying the speed of each metering conveyor and varying the quantity of material discharged by each of the metering conveyors into the longitudinal tubular housing.

2,947,545
SKI BINDER CABLE SAFETY TIGHTENER
Henry de Place, 25 rue du Montparnasse, Paris, France
Filed Dec. 4, 1957, Ser. No. 701,076
Claims priority, application France Dec. 7, 1956
2 Claims. (Cl. 280—11.35)



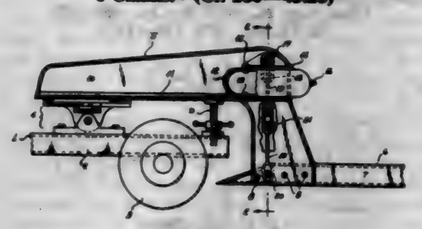
1. A ski binder cable safety tightener comprising a stationary support of substantially U-shaped cross-section with lateral upstanding flanges each provided with a slot, a pivot pin having its end portions engaged in said slots and formed with flat faces forming a large bearing surface against the upper edges of said slots, a resilient system constantly urging said pivot pin forwards against the traction exerted by the binder cable, a tilting support having its front end pivotally mounted on said pivot pin, a second pivot pin on the rear upper portion of said tilting support, a cable tensioning lever pivoted at its rear end on said second pivot pin, a transverse member rigid with said stationary support and extending between said upstanding flanges, said tilting support having a hook-shaped lower portion formed by a flat portion normally resting upon said transverse member and preventing said tilting support from tilting and a notch between said flat portion and the pivot pin on which said support is pivotally mounted, said hook-shaped lower portion being positioned entirely between said upstanding flanges and said flat portion and said notch extending the full width of the hook-shaped lower portion, said tilting support being adapted, in case of abnormal tension exerted on said cable, to recede to an extent sufficient to cause its flat portion to escape from said transverse member, whereby said notch registers with said transverse member and said tilting support rotates about its fulcrum as said transverse member engages said notch and said tilting support is retained by said transverse member, said tilting movement causing the pivot pin on which said lever is pivoted to be lowered to a position beneath the line along which the cable traction is exerted on said lever so as to automatically open said lever.

2,947,546
COLLAPSIBLE SHOPPING CART
Daniel Berlin, 4424 Paul St., Philadelphia 24, Pa.
Filed Oct. 17, 1957, Ser. No. 690,696
2 Claims. (Cl. 280—36)



1. A collapsible cart comprising a foldable basket and a U-shaped tubular frame, said basket comprising a plurality of vertically spaced wire ribs of rectangular configuration, and a plurality of flat vertical stringers pivotally secured to the front and back portions of each of said ribs, said stringers having a plurality of spaced uncinated tabs curled about said wire ribs in vertically spaced relationship therewith, one of said ribs having pins extending outwardly from the sides thereof, said pins being in pivotal engagement with said frame to pivotally secure said basket to said frame, one of said ribs having secured thereto at the sides thereof brackets adapted for sliding engagement with said frame, and the lowermost of said ribs having a plurality of spaced struts secured thereto to form a bottom.

2,947,547
TRACTOR-TRAILER ASSEMBLY INCLUDING A PNEUMATIC SUSPENSION FOR THE TRAILER
Rene Gouirand, 210 W. 88th St., New York, N.Y.
Filed June 8, 1955, Ser. No. 513,961
6 Claims. (Cl. 280—43.23)



1. A trailer comprising: a body provided at its forward end with a bracket rigidly and detachably secured to the body, a vertically expandable and contractable pneumatic chamber mounted on the bracket independently of and above the body with the bottom of said pneumatic chamber supported on the bracket and the top of said pneumatic chamber free to raise and lower, links secured

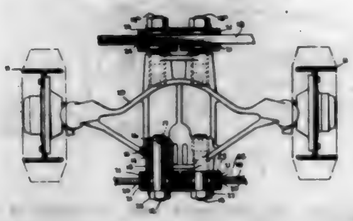
at their upper ends to the top of said pneumatic chamber and at their lower ends to the body, and means for admitting compressed air into the pneumatic chamber and for venting said chamber for the purpose of raising the forward end of the body from ground level to engagement with the bracket or for lowering the forward end of the body from engagement with the bracket to ground level, when the bracket is detached from the body.

2,947,548
BUMPER ASSEMBLY FOR BUCKETS
Elmer H. Bard, Muskegon, Mich., assignor to Geerpres Wringer, Inc., a corporation of Michigan
Filed June 28, 1958, Ser. No. 743,270
3 Claims. (Cl. 280—79.2)



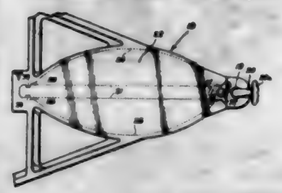
1. In combination with a bucket having a tubular side wall and a bottom wall secured to said side wall at a bead, a frame secured to the lower end of said bucket, a plurality of projections on said frame disposed outwardly of said bead for mounting wheels on said frame, a plurality of bumper supporting brackets, each of said brackets being arranged in a straddling relation with one of said projections and having a bead receiving groove on the inner side thereof, each of said brackets having an inner surface conforming to the curvature of said bucket side wall and an outer surface which is of a reduced radius of curvature relative to said inner surface, first flange means on each bracket extending inwardly of said bucket at the lower side of said bead, second flange means on each bracket extending outwardly adjacent the top side thereof, and a resilient bumper member extending horizontally about said brackets and said bucket at a position engaging the underside of said second flange means.

2,947,549
RUBBER SUSPENDED ARTICULATING AXLE FOR INDUSTRIAL TRUCK
George F. Quayle, Philadelphia, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Aug. 26, 1957, Ser. No. 680,252
10 Claims. (Cl. 280—112)



1. In a truck of the class described, a main frame, an axle having a wheel mounted to rotate on each end thereof, shafts arranged in two parallel longitudinal axes and through which said axle is mounted to rotate relatively to said main frame, rubber members arranged at the front and rear sides of said axle with each member encircling a shaft, means securing one end of each rubber member to said main frame and the opposed end of the member to said axle whereby each rubber member acts in shear to resist movement of said axle relatively to said main frame, each rubber member that encircles a shaft in one axis yielding in shear to permit some rotation of the axle about that shaft while a part of the stresses incidental to said rotation is accepted through yielding of each rubber member that encircles a shaft in the other axis, and said rubber members by so accepting the stresses offering increasingly greater resistance to the rotation of the axle whereby to act as a stop for tilting movements of the main frame.

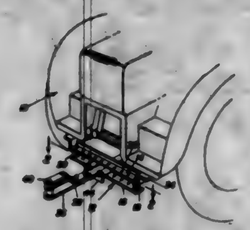
2,947,550
COUPLING MECHANISM FOR VEHICLE
Elmer H. Oddson, 13324 NE. Glisan St., Portland, Oreg.
Filed Aug. 19, 1957, Ser. No. 678,875
1 Claim. (Cl. 280—477)



Draft mechanism for coupling a drawing and drawn vehicle comprising a mounting portion secured to one of said vehicles, an elongated tongue member slidably carried in said mounting portion, one end of said tongue member being connectable with the other of said vehicles to establish a draft connection between the vehicles, said mounting portion having a pair of elongated guide portions cooperating with each other and operable to move said tongue member into a predetermined angular position relative to said mounting portion when said tongue member is advanced into said mounting portion, and locking means detachably locking said tongue member in said mounting portion in said angular position, said locking means having a pair of locking members spaced to either side of said tongue member and adapted to move inwardly and engage said tongue member thereby to hold the member from longitudinal movement, a cam member interposed between said locking members and revolvable from a nonspreading to a spreading position wherein said locking members are out of engagement with said tongue member, catch means adjustable to hold said locking members in engagement with said tongue member when said cam member occupies a nonspreading position, release means connected to said catch means for releasing the latter from holding said locking members, and clutch means interposed between said release means and said cam member operable to connect said cam member and said release means.

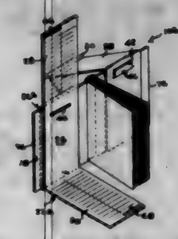
2,947,551
DRAWBAR ROLLER
William G. Reimers, Wimbledon, N. Dak. (Star Route, Jamestown, N. Dak.)
Filed Apr. 22, 1959, Ser. No. 808,205
5 Claims. (Cl. 280—499)

1. A drawbar assembly comprising the combination of an upper plate, a lower plate, a pair of stops between said plates adjacent to the ends thereof, a drawbar tongue extending through the space between said upper and lower plates, a carriage carried by said tongue and having a pair of rollers in said space, said rollers contacting at least one of said plates to establish a rolling support for the tongue as it moves in said space between said upper and lower plates, said carriage including a forward carriage plate and a rearward carriage plate, said



rollers extending between said carriage plates, said carriage plates having notches therein, and said drawbar occupying said notches.

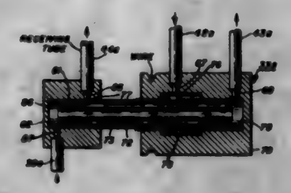
2,947,552
EASEL BOOK STRUCTURE
Francis Warren Dereuski, 1807½ Tamarend Ave., North Hollywood 28, Calif.
Filed Aug. 8, 1958, Ser. No. 753,918
2 Claims. (Cl. 281—33)



1. A book structure comprising a cover back, and an easel means including a flat mounting piece having a front face and a back face, a flat base piece arranged so that it overlies the front face of said mounting piece with one end adjacent one end of said mounting piece, means connecting said one end of said mounting and base pieces together for movement of said base piece from the overlying position to an extended position at an angle to the back face of said mounting piece, and a prop piece arranged so that it overlies the front face of said mounting piece with one end adjacent the other end of said mounting piece, means connecting said one end of said prop piece and said other end of said mounting piece together for movement of said prop piece from the overlying position to an extended position at another angle to the back face of said mounting piece, mounting means embodying an open ended flat sleeve carried by the back face of said mounting piece, said cover back being inserted into said sleeve through one end thereof and slidably moved to a position such that the sleeve embraces the cover to thereby secure said easel means to said cover back, and cooperating means on said prop and base pieces adjacent the other ends thereof and releasably interengaging with each other when said prop and base pieces have been moved to their angular positions.

2,947,553
PIPE COUPLING FOR A PNEUMATIC FOLLOW-UP SYSTEM
Paul F. K. Erbguth, Great Neck, N.Y., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed Nov. 7, 1955, Ser. No. 545,409
2 Claims. (Cl. 285—133)

1. A rotatable coupling member for a pneumatic system comprising a first supporting member with a bore, a pair of coaxially-disposed tubes telescoped with respect to and sealed against each other at both ends, one end portion of the outer of said tubes being non-rotatably supported in said bore and the other end portion thereof having external threads, a barrel with a cavity internally threaded and fitted on said external threads, a pair of nozzle tubes extending radially from said barrel and axially spaced therealong, an enlargement in said cavity intermediate the ends of said threads, one of said nozzle tubes communicating with said enlargement and the other nozzle tube communicating with the end portion of said



cavity beyond the ends of said coaxially-disposed tubes, an air supply connection with the bore of said supporting member beyond the supported end of said coaxially-disposed tubes, and an air receiving connection with said bore short of said supported end, an aperture in said outer tube communicating with said receiving connection and another aperture in said outer tube communicating with said enlargement, whereby air can flow from the supply connection of the supporting member through the inner tube to the barrel, from there through one nozzle tube and through the other nozzle tube back to the barrel, and from there through the outer tube to the receiving connection of the supporting member.

2,947,554
RACK CONSTRUCTION
David Koch, Chicago, Ill., assignor to Morris Kurtzon, Incorporated, Chicago, Ill., a corporation of Illinois
Filed Feb. 21, 1957, Ser. No. 641,511
10 Claims. (Cl. 287—54)



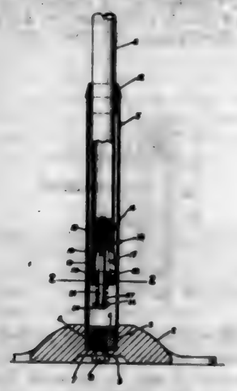
2. A frame structure comprising a square tubular leg member, a square tubular brace, said brace having a tongue on one end of one of its walls lying in face to face abutment with one wall of the leg member, aligned holes in said tongue and said leg wall, a rod within the leg having a tapped opening in register with said holes, a connector plug having an axial externally threaded end of reduced diameter providing a shoulder thereon, said end extending through the holes and being threaded into the tapped opening so as to carry the shoulder into tight abutment with the tongue to secure the brace to the leg member, a square tubular stretcher telescoped over the connector plug in end abutment with the tongue, one wall of said stretcher abutting the end of the brace, a tongue on the end of the opposite stretcher wall overlying the end of the tongue and having end abutment with the leg member, and means securing the stretcher to the connector.

2,947,455
SCAFFOLD LADDER CLAMP
Charles Olson, Sulphur, La.
Filed Mar. 15, 1954, Ser. No. 416,212
2 Claims. (Cl. 287—54)



1. A scaffold ladder clamp comprising a first clamp portion adjustably securable to a scaffold member, and an L-shaped second clamp portion, said second clamp portion being carried by said first clamp portion and being engageable around a side and edge of a ladder standard, said first clamp portion including arcuate halves hingedly connected together, fastening means adjustably securing said halves together remote from said said hinge, said second clamp portion including a first leg disposed normal to a plane passing between said halves, a second leg remote from said halves and in spaced parallel relation thereto, a support arm, a pivot pin pivotally connecting said support arm to one of said halves, said pivot pin having an axis normal to the axis of said first clamp portion, said first leg being connected to said support arm remote from said pivot pin, clamp means carried by said support arm cooperating with said second leg for retaining a ladder against movement.

2,947,556
VERTICALLY ADJUSTABLE STANDARD FOR MUSIC RACKS
Harry J. Wenger, Owatonna, Minn.
Filed Mar. 16, 1959, Ser. No. 799,556
2 Claims. (Cl. 287—58)



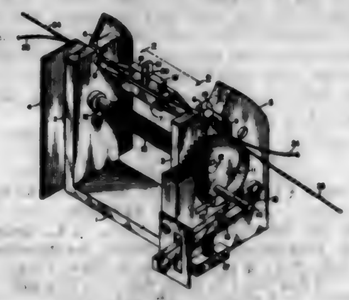
1. A music stand comprising inner and outer telescopic members, a plug secured to the lower end of said inner member and having a split skirt extending below said inner member into the bore of said outer telescopic member, said split skirt having an axial tapered bore therein, a skirt-expanding element in said tapered bore, said element having an axial bore therein, a screw traversing the bore in said element and having its upper end received in threaded engagement with said plug, said screw having a seat at its lower end, and resilient means interposed between said element and said seat for exerting a yielding pressure against said element to expand said skirt into frictional engagement with the bore of said outer telescopic member, when said screw is rotated, thereby to frictionally secure said inner telescopic member against relative axial movement in said outer telescopic member, under normal operating condition.

2,947,557
LOCKING DEVICE
Fredric W. Schwab, 82 Lenox Ave., Maywood, and Gordon B. McKay, 75 Snyder Rd., Ramsey, N.J.
Filed Apr. 24, 1959, Ser. No. 808,495
5 Claims. (Cl. 287—53)



1. A telescopic pole comprising an outer, hollow cylindrical member, a cylindrical sleeve connected to said outer member and positioned therein said sleeve having a ledge formed on one end adjacent the end of said outer member, an intermediate sleeve member positioned in said outer member, an intermediate sleeve member positioned in said outer member in alignment with said sleeve, an inner member positioned within said outer member and said sleeve, each of said outer, inner and intermediate members being axially relatively movable, said inner member having at least one annular protuberance, a resilient ring carried by said inner member, said inner member being retractable to position said protuberance above said sleeve ledge, said resilient member being movable down along the walls of said inner member to position the latter between the ledge and said protuberance whereby to lock said inner member in an extended position.

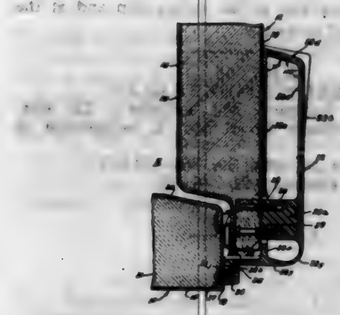
2,947,558
KNOT-TYING APPARATUS
George R. Bethune, Jr., Carterville, Ga., assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 12, 1957, Ser. No. 639,713
19 Claims. (Cl. 289—2)



1. An apparatus for tying two cord ends into a knot comprising a base, spaced-apart upstanding members

secured to said base, a cord-twisting means extending between said upstanding members and rotatably journaled at each end thereof to one of said members, means to rotate said cord-twisting means a plurality of turns, and cord-holding means mounted on said twisting means to releasably hold said cords in the course of tying the knot.

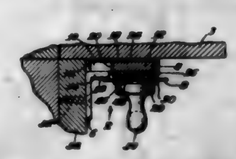
2,947,559
COMBINED DOOR HANDLE AND LATCH
Erik Olsson, Bromma, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 19, 1958, Ser. No. 774,862
Claims priority, application Sweden Nov. 21, 1957
5 Claims. (Cl. 292—128)



1. For use with a cabinet having a door, the cabinet having a latch keeper mounted thereon, a latch element cooperating with the keeper to hold the door in its closed position, said latch element being disposed transverse to and having at least a portion thereof projecting forward from the front of the door, a handle including an arm extending across the front of the door and spaced therefrom, one end of said arm being nearer to the forwardly extending portion of said latch element than the opposite end thereof, a part having a bend connecting the one end of said arm and the forwardly extending portion of said latch element, means including an attachment part for mounting said arm and said connecting bend part and said latch element on the door, said attachment part being fixed to and projecting forward from the front of the door to the one end of said handle arm, said latch element and handle arm and connecting bend part and attachment part being formed of a single body of material and integrally joined to one another, said attachment part and latch element being substantially rigid, said connecting bend part being flexible, said handle arm, including the one end thereof integrally joined and anchored to said rigid attachment part, being resilient, said handle arm being movable from a first position to a second position about the one end thereof anchored to said attachment part, said rigid latch element and flexible connecting bend part and resilient handle arm being formed and arranged to move said latch element from its latched to its unlatched position responsive to movement of said handle arm from its first to its second position and to move said latch element from its unlatched to its latched position responsive to movement of said resilient arm from its second to its first position when the latter is released.

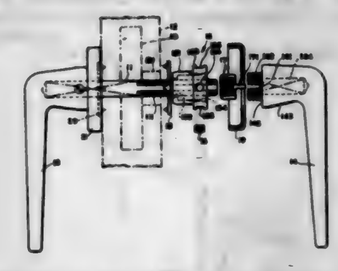
2,947,560
DOOR LOCK
Lester A. Klee, 216 Ferawood St., Hammond, Ind.
Filed Oct. 26, 1955, Ser. No. 542,958
12 Claims. (Cl. 292—241)

11. A door lock for a door hinged to a frame defining a doorway, said lock comprising an armature having a part anchored to a surface of the frame and having another part extending approximately perpendicularly from the first mentioned part into the doorway, said other armature part comprising oppositely facing inner and outer sides, a casing anchored to the door, a U-shaped permanent magnet in the casing having spaced



legs arranged with their free ends facing the frame surface and spaced therefrom, said legs having corresponding sides thereof engaging one side of said other armature part, a lock bar carried by the casing and clamped against the opposite side of said other armature part, and means connected to the lock bar for clamping the latter against said other armature part and for disengaging the lock bar therefrom.

2,947,561
DOOR FURNITURE
Ernest John Holden, 35 Hampton St., Birmingham 19, England
Filed July 16, 1958, Ser. No. 748,923
5 Claims. (Cl. 292—347)

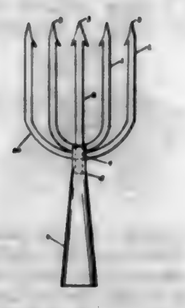


1. Door furniture including in combination a handle having a threaded spindle arranged to pass through the door and emerge in a concentric recess therein, a cup fitted within the recess and having a flanged bottom perforated to receive the spindle and an internally threaded head at its outer end, a nut threaded for engagement with the spindle and of diameter to pass freely into the cup, a handle member having a threaded stem engaging the internal threads of the cup whereby rotation of the cup is effective to draw the handle member inwardly while outward displacement of the cup is prevented by said nut, and means for locking the cup against rotation after the fitment of the free handle.

2,947,562
FISH SPEAR
Frederick S. Doolittle, Richfield Springs, N.Y., assignor to The Shurkatch Fishing Tackle Co., Inc., Richfield Springs, N.Y., a corporation of New York
Filed Mar. 16, 1956, Ser. No. 571,904
2 Claims. (Cl. 294—61)

1. A spear head comprising at least one U-shaped tine having a bight portion, a straight tine disposed transversely of the bight portion of said U-shaped tine and fixedly secured in coplanar relation thereat, a socket element having a tubular open end portion having a cross section conforming to that of said straight tine, a transverse slotted portion extending across the tubular open end portion, said bight portion of said U-shaped

tine being disposed in said transverse slotted portion and the terminal end of said straight tine being disposed in the open ended socket portion with portions of said



slotted socket portion being disposed longitudinally on opposite intermediate side portions of said straight tine, and means fixedly securing said tines and socket element in assembled relation.

2,947,563
MAGNETIC DEVICE FOR REMOVING LITTER
Edward W. Stitt, Mercer County, N.J. (2771 Brunswick Pike, Trenton, N.J.)
Filed Dec. 23, 1957, Ser. No. 704,570
2 Claims. (Cl. 294—65.5)



1. A device for collecting articles attracted by a magnetic field, comprising a three-dimensional sintered ceramic permanent magnetic element having at least one substantially planar surface, a protective housing of ferrous metal enclosing substantially all of said magnetic element except said planar surface and protruding a short distance beyond said planar surface whereby said planar surface is recessed within said housing, a shock absorbing device between said protective housing and said magnetic element, a handle means secured to and protruding from said magnetic element protective housing in a direction away from said planar surface of said magnetic element, a removable flexible non-magnetic cover over at least the said planar surface of said magnetic element, and resilient means for removably retaining said cover over said surface.

2,947,564
TOOL
Simon P. Winther, 644 Diversey Parkway, Chicago 14, Ill.
Filed Aug. 26, 1957, Ser. No. 680,235
2 Claims. (Cl. 294—100)

1. A pickup and inspection tool comprising an elongated sleeve, a smooth shank at one end of the sleeve adapted to receive any one of a number of tool accessories, each of said tool accessories including an end portion having a plurality of yieldable fingers forming a spring clip receivable by the smooth shank, a universal



joint secured at one end to the spring clip and at the other end to the tool accessory.

2,947,565
GENERAL PURPOSE TRAILER
John Allen Wood, Baltimore, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland
Filed Dec. 21, 1956, Ser. No. 629,868
7 Claims. (Cl. 296—3)



1. A universal trailer having structural side members, a plurality of flooring members spaced apart and extending between the side members to constitute the platform of the trailer, and upstanding header supporting means adapted to be individually mounted on each of said side members in fore and aft locations to receive load-carrying headers, said header supporting means having attachment fittings thereon adapted to be removably secured to said side members at locations intermediate said flooring members, said header supporting means being in the form of side pieces utilized in pairs and mounted in aligned relation on said side members, each of said side pieces having a slot therein to receive a header, the slot in each side piece being so arranged with respect to the attachment fittings of the side pieces that when a side piece is installed on a structural side member of the trailer, said slot will be in alignment with the space between two flooring members, whereby a header installed in a pair of side pieces can extend downwardly between the flooring members and thereby be stabilized in the vertical position.

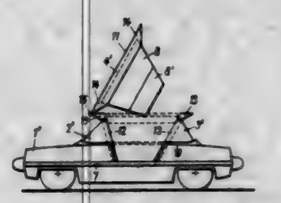
2,947,566
UNIVERSAL PICK-UP TRUCK RACK
Pierce Tower, Dearborn, Mich., assignor to Pierce Metal Products, Inc., Dearborn, Mich., a corporation of Michigan
Filed Aug. 5, 1958, Ser. No. 753,307
7 Claims. (Cl. 296—10)

1. A utility rack for attachment to the carrying box of a pick-up truck to form substantially vertical extensions of the side walls thereof; said rack comprising four generally rectangular corner uprights; each upright having one side longer than the other; said uprights being interconnected by detachable telescopic horizontally-extending side and end slats to form a generally rectangular rack adjustable as to length and as to width; each of said uprights having openings in at least one long side and at least one short side to receive fastening means securing



the slats thereto; said slats being secured to the uprights by means of the long side openings or the short side openings to permit the uprights to be oriented in positions with the long sides of the uprights at substantially right angles to the long sides of a truck-carrying box or with the long sides of the uprights substantially parallel to the long sides of a truck carrying-box whereby the lower end of the uprights may be inserted into similarly oriented rectangular recesses provided in a truck carrying-box.

2,947,567
AUTOMOBILE TOP STRUCTURE
Béla Barényi, Stuttgart-Valhingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed June 18, 1956, Ser. No. 591,873
9 Claims. (Cl. 296—28)

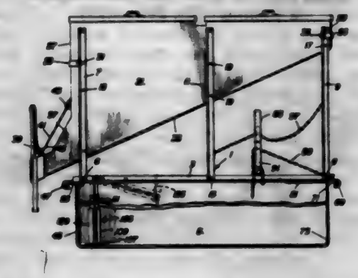


1. In combination with a motor vehicle having a lower body, front and rear walls having windows therein and secured to and projecting upwardly from said lower body, an upper body forming a roof normally disposed substantially intermediate said front and rear walls and connecting the same, said upper body having at least one extension projecting forwardly of said front wall, a bracket near the upper end of said front wall and projecting forwardly thereof, means near the forward ends of said extension and said bracket for pivotally connecting the same about a substantially horizontal transverse axis so as to permit said roof to be tilted upwardly from its closed position to an open position, and means for locking said upper body in the closed position.

2,947,568
MEANS FOR SUPPORTING STOCK FEED HOPPERS AND THE LIKE ON PICKUP TRUCK BEDS
Lloyd L. Johnson, Rte. 3, Elmore City, Okla.
Filed Nov. 6, 1958, Ser. No. 772,371
5 Claims. (Cl. 296—35)

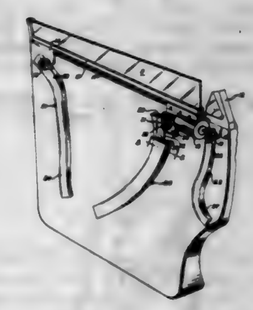
1. In combination, a hopper having sides, a supporting frame for said hopper comprising a pair of parallel laterally spaced base bars opposite each other and adapted to extend across a body of a pickup truck to support said hopper on said body with ends of the base bars adjacent opposite sides of the body, and means for fastening the

base bars to the sides of a pickup truck body comprising fasteners on said bars for securing to one side of said body a frame having fasteners thereon for securing to the other side of said body and being slidably mounted on and between said base bars for movement to tightly secure all



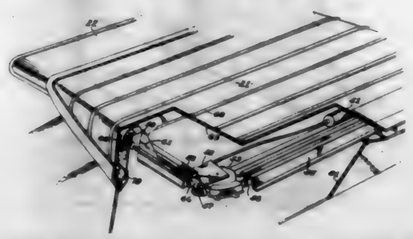
of said fasteners, a transverse shaft journaled on said bars for rotation thereon, operating connectors between said shaft and slidably mounted frame for sliding the slidably mounted frame in response to rotation of said shaft in one direction, a hand lever on said shaft swingable to rotate the shaft, and detent means for releasably holding the hand lever in swung position.

2,947,569
POWER WINDOW REGULATOR
John A. McDougall, Garden City, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 7, 1958, Ser. No. 719,878
6 Claims. (Cl. 296—44)



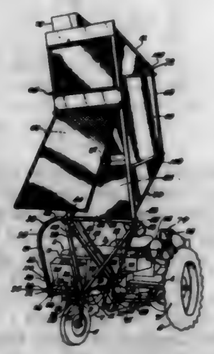
1. In an automobile body structure having a window opening, a window well therebelow, and a transparent panel movable into and out of housed position within said well; a support structure attached to said panel within said well, guide means mounted within said well, means coupling said support structure to said guide means, said guide means comprising curved track members adapted to control the movement of said panel so as to provide predetermined deviation from straight line movement to thereby permit said panel to circumvent body structure parts preventing straight line movement to and from said well, at least one of said curved track members being provided with drive engageable means, motor means, and means slidably supporting said motor means on said support structure for movement longitudinally of said panel, said motor means having drive means coupled thereto and in engagement with said drive engageable means, the curvature of said one curved track member permitting said drive means to remain in operative engagement with said drive engageable means as said panel is moved into and out of said opening and as said motor means travels longitudinally therebeneath.

2,947,570
MOTOR VEHICLE BODY TELESCOPIC ROOF CONSTRUCTION
Richard T. Noe, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Mar. 14, 1957, Ser. No. 646,034
4 Claims. (Cl. 296—117)



1. In a motor vehicle roof assembly, a base roof portion having internal longitudinally extending channel members at each side thereof, each of said channel members having at least a pair of longitudinally extending parallel guide elements, a movable panel section slidably guided by at least one of said guide elements in each channel member for internal longitudinal retraction within said base roof portion, a strip member guided within another of said guide elements, said strip member being attached to said movable panel section, and power means for moving said strip member and thereby said movable panel section relative to said base roof portion into protracted or retracted positions relative to said base roof portion.

2,947,571
DUMP-BODY ASSEMBLY AND ATTACHING MEANS FOR COMPLEMENTARY TRACTOR
Clarence R. Hagen, Memphis, Tenn., assignor to International Harvester Company, a corporation of New Jersey
Filed Sept. 30, 1954, Ser. No. 459,475
11 Claims. (Cl. 298—10)



1. The combination of a tractor having a chassis with front, rear and lateral sides, spaced mounting means on the front of the tractor, additional mounting means on one of lateral sides of the tractor spaced longitudinally of the tractor with respect to said spaced mounting means, a dump-body-attaching means comprising a first frame adjacent the front of the chassis and a second frame adjacent said one side of the chassis and rigidly connected to said first frame, means connecting said first and second frames to said spaced mounting means and additional mounting means respectively, and a dump body pivoted at one end to said first frame adjacent to said front and on an axis transversely of the tractor.

2,947,572
WHEEL COVER
George Albert Lyon, 13881 W. Chicago, Blvd., Detroit 28, Mich.
Filed Mar. 12, 1957, Ser. No. 645,507
4 Claims. (Cl. 301—37)



1. In a wheel structure including a wheel body supported by a tire rim having a generally axially outwardly extending intermediate flange joining a generally radially outwardly and then axially outwardly extending terminal flange, a plurality of rigid cover supporting members secured to the tire rim adjacent to juncture of the intermediate and terminal flanges and disposed in circumferentially spaced relation, each of said members including a base flange portion projecting radially inwardly beyond said juncture in generally overlying relation to the intermediate flange and having a cover receiving surface spaced substantially axially outwardly relative to the radially extending portion of the terminal flange, the surfaces being disposed coplanar, said surfaces having cover engaging and retaining means projecting generally axially outwardly therefrom, and a cover of a diameter to substantially overlie the terminal flange with the radially outer extremity located adjacent to the tip of the axially extending portion of the terminal flange and with an annular portion of the cover spaced radially and axially inwardly from the cover extremity retainingly engageable by said cover retaining means for thereby holding the cover concentric with the wheel and with said annular cover portion firmly drawn toward said surface, the cover being entirely supported by said members and by virtue of the relationship of said members to the tire rim and the spaced relation of said surfaces from the tire rim supporting the cover in entirely spaced relation to the tire rim inclusive of said extremity and the tip of the terminal flange and thereby affording a gap relation between the cover and the tire rim through which water and dirt can escape from behind the cover.

2,947,573
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Apr. 15, 1957, Ser. No. 652,755
9 Claims. (Cl. 301—37)



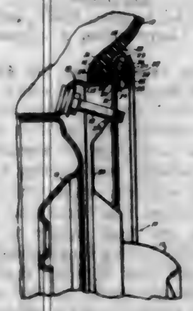
9. In a wheel structure including a portion having circumferentially spaced cover retaining shoulder members providing retaining shoulders that face generally axially inwardly, a cover member over the outer side of the wheel having portions thereof retainingly aligned with said shoulder members and having socket apertures therein into which said shoulder members project, said socket apertures being defined on the axially inner sides thereof with turned back and flattened portions of the material struck from the apertures reinforcing said axially inner sides and providing reinforced shoulder edges retainingly thrusting against the shoulders of said members.

2,947,574
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Apr. 15, 1957, Ser. No. 652,915
5 Claims. (Cl. 301—37)



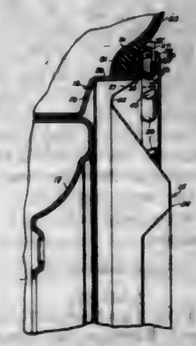
1. In a wheel structure including a terminal flange having a generally radially extending and axially outwardly facing portion joining a generally axially outwardly extending and radially inwardly facing lip portion, a circumferentially spaced plurality of cover retaining members welded to the radially extending terminal flange portion and providing cover retaining shoulders spaced radially inwardly from said lip portion, a cover for disposition at the outer side of the wheel including a circumferentially spaced series of underturned marginal cover retaining fingers of substantial width and provided with circumferentially arcuate terminal bead structure engageable in press-on pry-off relation with said retaining member shoulders and also engageable in bottoming relation against the radially extending terminal flange portion radially and axially inwardly from said shoulders for holding the cover in spaced relation to the wheel.

2,947,575
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Apr. 15, 1957, Ser. No. 653,031
5 Claims. (Cl. 301—37)



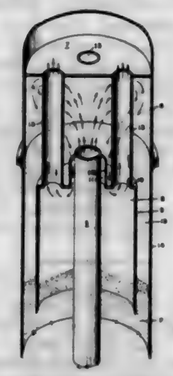
1. In a wheel structure a multi-flange tire rim adapted to receive a pneumatic tire and having an intermediate generally radially inwardly facing flange merging with a terminal flange including a generally radially outwardly extending portion provided at the radially outer end thereof with a generally axially outwardly extending portion, a rigid metallic cover retaining lug member having a body with a flange extension of limited thickness bearing against and secured to one of said flanges, said body overlying said radially extending terminal flange portion and projecting substantially axially outwardly beyond said flange extension, said body having thereon a generally axially inwardly and radially facing undercut-like shoulder, and a wheel cover member having resiliently flexible cover retaining terminal structure thereon engageable in press-on-off relation with said shoulder and having generally radially projecting portions disposed in the assembly in proximate opposing relation to circumferentially opposite sides of the lug body to hold the cover member against turning on the wheel, said lug flange extension projecting circumferentially under and in axial clearance relation to said projecting portions.

2,947,576
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed June 14, 1957, Ser. No. 665,805
6 Claims. (Cl. 301—37)



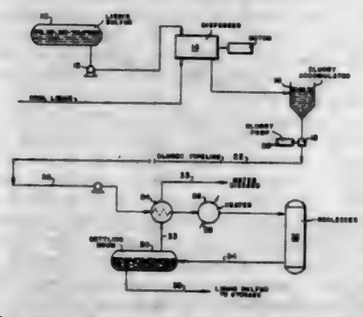
1. In a wheel structure including a wheel body and a tire rim supported thereby and provided with an intermediate flange facing generally radially inwardly and a terminal flange having a portion thereof extending generally radially outwardly from the axially outer end of the intermediate flange an facing generally axially outwardly, a cover retaining lug structure carried by said terminal flange portion and projecting generally axially outwardly therefrom adjacent to juncture of the intermediate and terminal flanges, said lug structure providing in axially outwardly spaced relation to the terminal flange portion a shoulder structure including a generally radially and axially inwardly facing shoulder and a generally axially outwardly facing shoulder spaced axially outwardly therefrom, and a cover for disposition over the outer side of the wheel having axially spaced retaining shoulders engageable in press-on, pry-off relation with said lug structure shoulders comprising a retaining shoulder engageable with said radially and axially inwardly facing shoulder of the lug structure and a seating shoulder for engaging with said generally axially outwardly facing shoulder of the lug structure and thereby supporting the wheel cover in spaced relation to the wheel body and the tire rim and retained against unintentional axial displacement from the wheel.

2,947,577
DISENGAGING SOLIDS FROM A LIFT GAS
Joannes A. W. J. van Dommelen, Delft, Netherlands, assignor to Shell Oil Company, a corporation of Delaware
Filed Jan. 13, 1958, Ser. No. 708,566
Claims priority, application Netherlands Jan. 15, 1957
12 Claims. (Cl. 302—59)



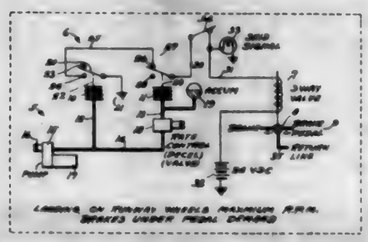
1. A gas-solids disengager for separating conveyed solid particles from an upwardly directed stream of lift gas discharging from the upper end of a lift pipe comprising a hood situated at least in part above said end and including a vertically elongated confining side wall joined at the top to a top closure which is spaced above said end in alignment with the stream for impingement thereby, said hood having a central bottom opening for the upward admission of said stream and separate downwardly extending gas-discharge and solids-discharge passageways for discharging gas and solids, respectively, from the hood after reversal of flow direction within the hood interiorly of said side wall, including a wall which separates said passageways only below a level substantially below said top closure.

2,947,578
PROCEDURE FOR TRANSPORTING SULPHUR
Hampton G. Cornell, Baytown, and Henry H. Meredith, Jr., Tyler, Tex., assignors to Humble Oil & Refining Company
Filed Sept. 20, 1957, Ser. No. 685,123
7 Claims. (Cl. 302—66)



7. A process for transporting sulphur to a distant location from the point of its production in melted form comprising the steps of feeding the melted sulphur at a temperature of about 275° F. and water at a temperature in the range of 50° to 100° F. to a disperser to provide a slurry of finely divided sulphur particles having a maximum diameter of 0.015 inch suspended in water, pumping the slurry to the distant location through a pipeline at a velocity sufficient to prevent settling of the sulphur particles in the pipeline, heating the slurry at the distant location to about 275° F. and at a pressure sufficient to melt the sulphur without vaporizing the water, passing the melted sulphur and the water to a coalescer to coagulate the liquid droplets of sulphur, feeding the resulting liquid sulphur and water to a settling drum pressurized to prevent vaporization of the water, discarding the water from the settling drum, and feeding the 275° F. liquid sulphur to a place of storage.

2,947,579
ANTISKID DEVICE
Richard E. Woodworth, Wheaton, Ill., assignor, by mesne assignments, to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed Apr. 17, 1957, Ser. No. 655,939
6 Claims. (Cl. 303—24)

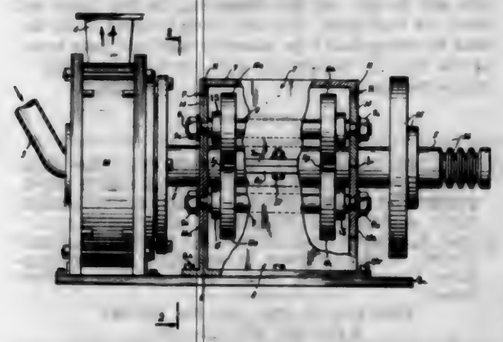


1. In a braking system for wheeled vehicles, in combination with a rotatable wheel and brake mechanism for retarding said wheel, means for releasing and applying said brake mechanism, and mechanism for actuating said releasing and applying means upon excessive deceleration of said wheel and deactuating said releasing and applying means upon subsequent acceleration of said wheel including a closed hydraulic circuit having therein a rotary pump driven by said rotatable wheel, opposed pressure sensitive units, means coupled to said rotary pump to control the rate of output pressure change, means connecting one of said pressure sensitive units to respond directly to the pressure developed by said rotary pump, means connecting the other of said pressure sensitive units to said rate of output pressure change control means to cause said other pressure sensitive unit to respond to a reduced rate of change of pressure, and a control member operable by the differential movement of said opposed pressure sensitive units for operating said brake releasing and applying means.

2,947,580
BEARING
Robert P. Fisher, Los Angeles, Calif., assignor to Microson Equipment Corporation, a corporation of Delaware
Filed Sept. 18, 1957, Ser. No. 684,678
1 Claim. (Cl. 308—203)

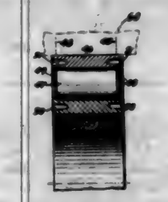
A bearing for a rotatable shaft which has a longitudinal axis of rotation, comprising a housing which has parts which are fixed to each other in assembled relation to form a complete housing, said housing having longitudinally spaced front and rear walls which are transverse to said axis of rotation, said front and rear walls having inserts therein and fixed rigidly to said front and rear walls, said inserts having longitudinally alined shaft-bores through which said rotating shaft extends with clearance, supplemental shafts having ends which are fixed rigidly to said inserts, said supplemental shafts having shaft-axes which are parallel to said axis of rotation, said rotatable shaft having a plurality of transverse

and circumferential bearing grooves between said inserts, each said bearing groove having a set of turnable bearing wheels associated therewith, each said bearing wheel having a central bore through which a respective and non-rotatable supplemental shaft extends, each said bore having a cylindrical bore-face which is coaxial with the respective shaft-axis, each said bearing wheel being rotatable relative to its respective supplemental shaft, each said supplemental shaft having two transverse and circumferential grooves located within said bore-face, one of said grooves being a roller-bearing groove and having a set of anti-friction rollers located therein, said anti-friction rollers extending beyond the respective sup-



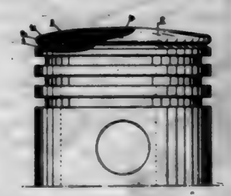
plemental shaft to turnably abut said bore-face, the front and rear ends of said roller-bearing groove and the front and rear ends of said rollers being shaped to have only point contact, the other groove of each said supplemental shaft being cup-shaped and being a ball-bearing race in which parts of a set of anti-friction balls are located, said bore-face having a cup-shaped grooved ball-bearing race in which parts of said anti-friction balls are located, said ball-bearing races being shaped to contact with said anti-friction balls substantially only at diameters of said anti-friction balls which are parallel to said axis of rotation, said bearing wheels having peripheries which interfit turnably with said bearing grooves of said rotatable shaft, there being enough bearing wheels around said rotatable shaft to maintain said rotatable shaft in fixed relation to said supplemental shafts.

2,947,581
RELATIVELY ROLLING ELEMENTS
Horace Bishop Van Dorn and Ronald Wesson Moran, New Britain, Conn., assignors to The Fafnir Bearing Company, New Britain, Conn., a corporation of Connecticut
Filed Nov. 17, 1955, Ser. No. 547,581
1 Claim. (Cl. 308—216)



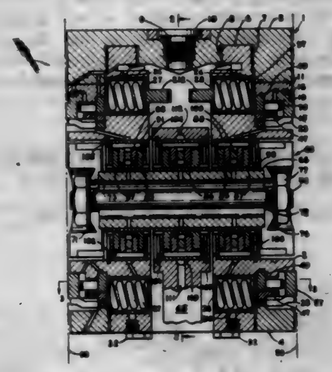
In combination, two radially spaced annular race members formed with roller raceways on opposed adjacent surfaces, antifriction rollers between said raceways, said rollers and raceways being in continuous lines of contact, the end points of said lines of contact defining two spaced terminal planes, said terminal planes being substantially perpendicular to said lines of contact between said rollers and said raceways, said race members each having an annular recess extending from each end thereof into said race members a depth measured from said respective terminal planes at least equal to the average radial thickness of the cantilevered portion adjacent said rollers formed by said recesses in said race members, whereby the ends of said raceways yieldably support the ends of said rollers at said terminal planes.

2,947,582
LIGHT METAL PISTON WITH PLATED HEAD
Paul Leonel Langewaard, 1a Raamstraat, The Hague, Netherlands
Filed Oct. 23, 1958, Ser. No. 769,179
2 Claims. (Cl. 309—9)



1. A piston made of light metal and designed for a combustion engine comprising a resilient protective plate secured to the piston head and extending over the entire surface thereof, said resilient protective plate and the piston head being of slightly convex shape having approximately the same radius of curvature and with their convex sides facing away from the piston pin, said protective plate being secured in position by means of a flanged edge which in mounted condition grips around the edge of the piston head with a slight air layer between said piston head and plate.

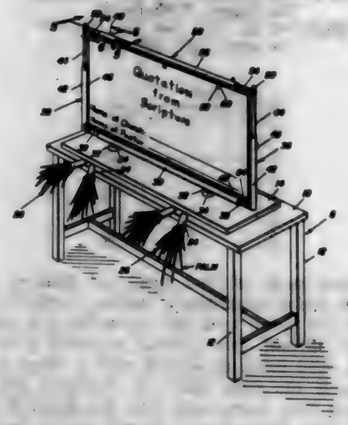
2,947,583
PISTON ASSEMBLY
Sergei D. Alexandroff, San Francisco, Calif.
Filed Sept. 2, 1958, Ser. No. 758,222
12 Claims. (Cl. 309—10)



1. A piston assembly arranged for reciprocation in a cylinder of an internal combustion engine including a piston and a pin connecting said piston with a connecting rod, said piston having an upper and a lower guide ring, means arranged in said piston for yieldably forcing said rings radially outwardly against the cylinder wall, said means and rings keeping said piston in longitudinal alignment with the cylinder, bearing means connecting said pin with the piston, said last mentioned means permitting said pin to move transversely in relation to said piston a distance equal at least to the clearance between

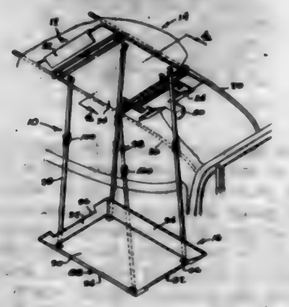
said piston and the cylinder, a slide secured to said pin for contacting said cylinder when a transverse force applied by the connecting rod to said pin moves the latter and the slide laterally and for transferring said force directly to said cylinder wall.

2,947,584
DEVOTIONAL SERVICE ASSISTANCE TABLE FOR CHURCH USE
William L. Harris, 700 W. Green St., Tallulah, La.
Filed Sept. 26, 1958, Ser. No. 763,556
3 Claims. (Cl. 311—2)



2. A religious service and assistance table for use in a church or elsewhere, a portable supporting table, a base panel removably mounted atop said table, a flexible foldable curtain containing a quotation or message from scripture, and a frame, said frame being removably mounted on said base panel, said curtain being removably suspended within the confining and supporting limits of said frame, said panel being provided with ornamental vases adapted to contain palms, flowers, or the like, said frame being provided with suction cups whereby it may be removably attached to said panel, said frame being of knockdown form so that the complemental components thereof may be collapsed and compactly arranged for convenience of storage and handling.

2,947,585
ELEVATING TRAY FOR AUTOMOBILES
Patsy J. Fazio, 3929 Vista Grande Drive, San Diego, Calif.
Filed Apr. 29, 1958, Ser. No. 731,750
3 Claims. (Cl. 311—21)



1. In combination, an automobile roof having a top plate, laterally spaced longitudinal ribs spaced beneath said top plate, and a flexible lining extending across and between and supportably engaging said ribs, a base assembly comprising a base plate extending between adjacent ribs and bearing against the underside of said lining, spaced elongated mounting bars extending crosswise of the under side of said base plate between the opposite ends of said base plate and secured to said base plate, spaced mounting hooks on each of said mounting bars, each hook including a shank fixed to the adjacent mounting bar and a resilient hook portion clampably embracing an adjacent roof rib, releasable jaws on the opposite ends of said base plate, a tray assembly comprising a pan-shaped tray, and flexible means secured to the base plate and to said tray for suspending the tray from and below the base plate, said tray being adapted to be elevated to engage said base assembly with said jaws securing the tray in engagement with the base assembly in storage position.

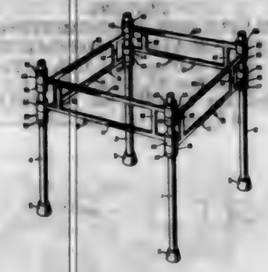
2,947,586
TABLE OR THE LIKE HAVING ITS TOP SUPPORTED BY SPACED PEDESTALS EACH COMPRISING A HORIZONTALLY ELONGATED BASE AND A PAIR OF VERTICAL COLUMNS
Alfred C. Hoven and Walter E. Nordmark, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Filed May 18, 1955, Ser. No. 509,183
8 Claims. (Cl. 311—39)



1. In a table structure: spaced, horizontally elongated pedestal bases disposed in parallelism, each base comprising complementary elongated halves providing spaced, vertically disposed side walls having mutually inwardly extending peripheral flanges, said side walls having in their middle regions oppositely outwardly embossed concavities forming therebetween a pair of vertical, upwardly opening cylindrical sockets; a pair of columns having their lower ends seated in the sockets of each pedestal base and extending upwardly therefrom; and a table top structure mounted on the upper ends of said pairs of columns.

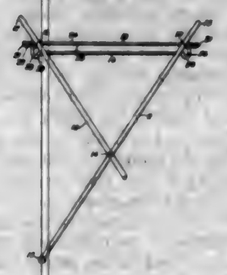
2,947,587
COLLAPSIBLE TABLE
Louis E. Navellier, 1337 Navellier St., El Cerrito, Calif.
Filed Aug. 24, 1959, Ser. No. 835,624
3 Claims. (Cl. 311—79)

1. In a round table, a support for the top of such table comprising: four spaced legs positioned at points defining the corners of a square, frame members of equal length pivotally connected at their ends to said legs and aligned with the two pairs of opposite sides of such square, one pair of said frame members that are aligned with one pair of parallel sides of said square being correspondingly offset vertically relative to the other pair of said frame members, each of said frame members being formed with vertically spaced axially aligned cylindrical sleeves for rotatably securing one of said legs thereto to provide the pivotal connection between each leg and the adjacent pairs of said frame members, the sleeves on one of each adjacent pair of frame members being alternately disposed relative to



the sleeves on the other frame member of each adjacent pair, and the longitudinal axes of said frame member being offset outwardly of the vertical axes of said legs relative to the square area enclosed by said frame members to facilitate collapsing said support to a position in which the corresponding sleeves of two of said legs are in engagement with each other.

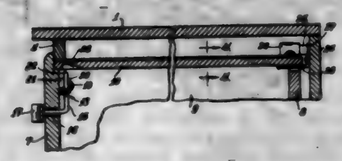
2,947,588
REVERSIBLE TOP COLLAPSIBLE TABLE
Stanley M. Friedenreich, 1300 Park Ave., New Hyde Park, N.Y.
Filed Dec. 18, 1958, Ser. No. 781,232
5 Claims. (Cl. 311—33)



1. A collapsible table, comprising two U-shaped leg frame members, each defined by a pair of legs spaced and joined by a crosshead, means pivoting the legs of said frame members together, upper portions of the frame members inwardly of said crossheads having transverse rails fixed thereto in horizontal alinement, a table top, a pair of rails fixed to and spaced from one surface of the table top adjacent side edge portions thereof, the rails of each pair being arranged parallel to each other and the pairs being arranged at right angles to each other, and the second named rails forming channels, in which the first named rails are slidably mounted in exposing the first named rail surface of the table top or the opposed plain surface thereof upwardly when the table is in setup condition.

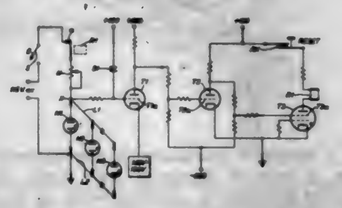
2,947,589
COMBINATION DRAWER AND TABLE TOP
Howard H. Darbo, 1110 N. Wheaton Ave., Wheaton, Ill.
Filed Jan. 3, 1955, Ser. No. 479,613
10 Claims. (Cl. 312—301)

10. In combination with a drawer having sides and a front, a thin panel spanning the width of said drawer and slidably supported at its side edges by the sides of said drawer, catch means fastened to said panel and adapted to be anchored to fixed structure at the rear of said drawer to retain said panel normally in fixed retracted position without regard to the position of said drawer, and latch means mounted upon the front of said drawer, said latch means being arranged to lock said panel and



said drawer against relative movement in one position of said latch means, and to permit independent movement thereof in another position of said latch means, the arrangement of said drawer, panel, catch and latch means being such that said latch means is always in position to lock said panel and drawer against relative movement by manipulation of said operating element when said drawer is closed.

2,947,590
PROCESS FOR CONVERTING GLOW DISCHARGE TUBES TO PHOTOELECTRIC TUBES
James P. Hammer, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Feb. 28, 1958, Ser. No. 718,267
6 Claims. (Cl. 316—9)

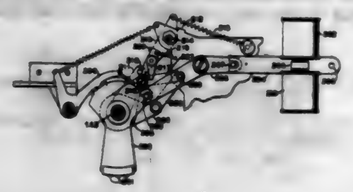


1. A process for converting a glow discharge device; of the type having photo-emissive material bearing electrodes and having an envelope through which energy, capable of the photoelectric effect, is transmitted; to a photoelectric device comprising impressing upon said electrodes an alternating current and voltage of sufficient power to cause the depositing of said photo-emissive material to the inner surface of said envelope for a period of time ranging up to approximately 72 hours, depending upon the photoelectric characteristics desired, and conducting the depositing of said material in the absence of light.

2,947,591
TOLL HIGHWAY RECORDER
William F. Henry, Endicott, and Joseph J. Purcell, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 15, 1953, Ser. No. 398,358
1 Claim. (Cl. 346—50)

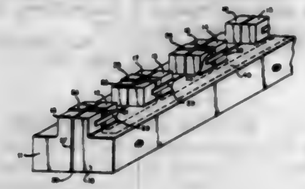
In a toll highway recorder station past which vehicles are required to drive for recordation of toll information related to the individual vehicles, electrically operated recording means including recording elements for recording the toll information and a recording element for recording an electrical power failure symbol, means normally holding said power failure symbol recording element in noneffective position, means responsive to the restoration of power to said recording means after a power

failure for positioning said power failure symbol recording element in power failure recording position, means to actuate said recording means to record concurrently the toll information and the power failure symbol after



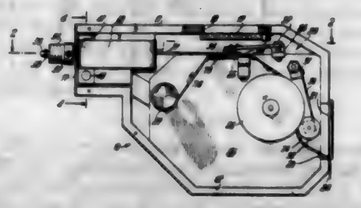
said power failure symbol recording element has been moved to power failure recording position, and means controlled by said concurrent operation of said recording means for restoring said power failure symbol recording element to said noneffective position.

2,947,592
HIGH FREQUENCY MAGNETIC TRANSDUCERS
Mark Naimen, Philadelphia, Pa., and Howard Schwartz, Brooklyn, N.Y., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 25, 1955, Ser. No. 530,532
12 Claims. (Cl. 346—74)



1. In a magnetic transducer, a non-magnetic support structure, a pair of elongated pole pieces carried by said support structure in spaced relation to one another, each of said pole pieces comprising an elongated thin lamination of magnetic material, the directions of elongation of said pole pieces being substantially parallel to one another, a first extremity of at least one of said pole pieces being bent to extend toward a corresponding first extremity of the other of said pole pieces whereby said first extremities of said pole pieces are closely adjacent to and spaced from one another thereby to define an operative gap therebetween, a further elongated bridging lamination of magnetic material carried by said support structure in a direction transverse to the directions of elongation of said pole pieces, spaced points on said bridging laminations being respectively contiguous with each of said pair of pole pieces adjacent the other extremities of said elongated pole pieces, and a control coil carried by said further bridging lamination.

2,947,593
APPARATUS FOR TRANSMITTING AND TRANSLATING MOVEMENT
Peter Davey, Lake Hill, N.Y.
(P.O. Box 97, Glenford, N.Y.)
Filed Apr. 21, 1958, Ser. No. 729,660
4 Claims. (Cl. 346—117)



1. In apparatus for producing a record of frequencies of a vibratory body, a casing having an elongated slot in a wall thereof, a flexible resilient member positioned adjacent and coextensive with at least the portion of the casing wall which defines said slot, a chart strip at least partly within the casing, drive means for moving successive increments of the chart strip at a predetermined speed past a selected location in the casing, guide means carried in the casing and disposed to the side of the resilient member remote from the slot, a unit slidable along the guide means, detent means releasably maintaining the unit at any one of a plurality of spaced locations along the guide means, a plunger carried by and reciprocable in the unit, said plunger extending through the slot and the resilient member and having an inner end positioned in the casing and an outer end exterior the casing and adapted to bear against the vibratory body, and a linkage normally and yieldingly urging the plunger in one axial direction, said linkage comprising a first lever mounted in the casing for movement about a first pivotal axis and a second lever mounted in the casing for movement about a second pivotal axis in response to corresponding movement of the first lever, the inner end of the plunger engaging the first lever intermediate the first pivotal axis and the end of the first lever, said second lever including a pair of angularly disposed arms which intersect at said second pivotal axis, one of the arms being connected to the first lever, the other arm carrying a device which contacts and is adapted to mark the chart strip at said selected location.

CHEMICAL

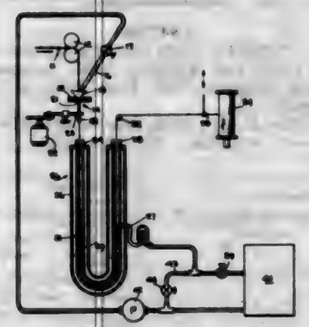
2,947,594
ANIMALIZATION OF CELLULOSE
Edward L. Kropa, Greensboro, N.C., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Dec. 9, 1957, Ser. No. 701,321
12 Claims. (Cl. 8—117)

1. A process for animalizing cellulose base materials which comprises effecting reaction between cellulose and a monomeric quaternary ammonium compound having a vinyl group of the formula $CH_2{=}C<$ in the presence of an alkaline catalyst, pre-treating the cellulose material by impregnating it with an alkaline medium having a pH of at least 8 and reacting said alkaline-impregnated material with a monomeric quaternary compound having a vinyl group of the formula $CH_2{=}C<$.

2,947,595
TREATMENT OF FILAMENTARY MATERIALS
Gregory M. Moeller, Bernardsville, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
Filed Jan. 24, 1955, Ser. No. 483,601
16 Claims. (Cl. 8—151.2)

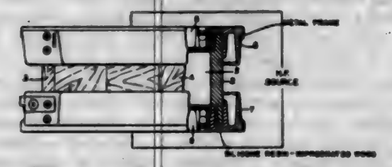
2. In the process for the liquid treatment of filamentary material, the individual filaments of which all extend substantially in the direction of the length of said filamentary material, the improvement which comprises introducing said filamentary material into a liquid treating bath continuously in the form of a series of crunodal loops of said filamentary material arranged in a spiral having a diameter greater than the diameter of said loops, the density of said liquid bath being less than the density of said filamentary material whereby said spiral of yarn loops sinks in said bath, supporting said spiral in said bath with successive convolutions of said spiral resting on one another, and continuously withdrawing said filamentary material from the bottom of said spiral.

5. Process for the liquid treatment of filamentary material the individual filaments of which all extend substantially in the direction of the length of said filamentary material, which comprises continuously feeding said filamentary material, feeding a liquid for treating the same into contact with said filamentary material to form a



continuous stream containing said liquid and filamentary material, passing said stream downward in free condition from a point while rotating said point about a horizontal axis, introducing said stream into a bath of said liquid, said liquid being of lower density than said filamentary material, said filamentary material introduced into said bath forming a series of crunodal loops arranged in a spiral having a diameter greater than the diameter of said loops, supporting and maintaining said spiral with successive convolutions of said spiral resting on one another, and continuously withdrawing said yarn from the bottom of said spiral in unlooped condition.

2,947,596
DIELECTRIC HEATING MOLD AND METHOD OF FORMING A WOODEN MOLD MEMBER
Imre J. Barry, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed Jan. 25, 1957, Ser. No. 636,289
12 Claims. (Cl. 18—47)

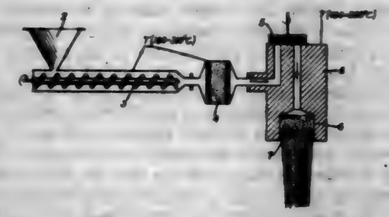


2. In a mold for confining a charge of dielectric material during processing by dielectric heating in which the charge of material and the mold are both dielectrically heated simultaneously, the combination of a mold side wall formed of hard wood from which essentially all moisture has been removed and has been replaced directly within the cellular body thereof by a body of resin which consists essentially of the hard, glasslike heat reaction product of a potentially reactive silicone resin-forming composition comprising a mixture of a partially hydrolyzed methyl substituted polysiloxane containing 20–50% by weight of alkoxy and the reaction product of a silica hydrosol and chlorinated methyl silane, having a minimum resin solids content of 75%, and a maximum time-temperature reaction factor the equivalent of 120 minutes at 320° F. cured directly within the cellular body at a minimum final curing temperature of about 200° F.

2,947,597
MANUFACTURE OF VISCOSE RAYON
August Brötz, Kurt Richter, Wilhelm Wachtendorf, and Kurt Heser, all of Erlenbach (Main), Germany, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
No Drawing. Filed Feb. 18, 1957, Ser. No. 640,617
Claims priority, application Germany Feb. 20, 1956
4 Claims. (Cl. 18—54)

1. A process for the production of regenerated cellulose articles having substantially all skin from viscose comprising spinning a solution consisting essentially of viscose containing sodium hydroxide in the amount of less 6% by weight into a coagulating spinbath consisting essentially of 17–19% sodium sulphate, 4.5–6.0% sulphuric acid, and zinc sulphate, directing the spun article out of said spinbath into a second bath containing dilute sulphuric acid, and stretching the spun article in the second bath to an extent of at least 85%, the concentration of zinc sulphate being adjusted so that the ratio of sulphuric acid in said spinbath to zinc sulphate is 1.2–0.8 to 1.

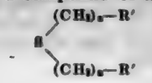
2,947,598
PRODUCING SHAPED ARTICLES COMPRISING ISOTACTIC POLYPROPYLENE
Domenico Maragliano and Franco Dentl, both of Villaggio Polymer, Terni, Italy
Filed Aug. 30, 1957, Ser. No. 681,155
Claims priority, application Italy Sept. 5, 1956
10 Claims. (Cl. 18—54)



1. A process for producing, by melt-extrusion methods, shaped articles of propylene polymers consisting prevailingly of isotactic polypropylene and in which the propylene polymer is melt-extruded at an intrinsic viscosity between 0.3 and 2.0, which process comprises heating isotactic polypropylene having mixed therewith up to 15% of atactic polypropylene at a temperature from 20° C. to 150° C. above the melting point of the isotactic polypropylene to obtain a homogenized molten mass of the polymer having an intrinsic viscosity between 0.3 and 2.0, filtering the molten mass at said temperature above the melting point of the isotactic polypropylene, then cooling the mass to a temperature between the melting point of the isotactic polymer and about 60° C. above the melting point thereof, filtering the cooled mass at the temperature of cooling and immediately extruding the mass, at the temperature of cooling, under pressure through a shaping device.

2,947,599
CORROSION INHIBITORS
John L. Eanis, Lexington, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
No Drawing. Filed July 5, 1955, Ser. No. 520,167
4 Claims. (Cl. 21—2.5)

2. An anti-corrosion wrapping paper suitable for protecting metallic objects, said wrapping paper being impregnated with a corrosion inhibitor, said corrosion inhibitor comprising a compound of the formula



where n is an integer selected from one and two and R' is a radical selected from the group consisting of



and



wherein R is an alkyl radical having from one to eight carbon atoms.

2,947,600
METHOD AND APPARATUS FOR TREATING EXHAUST GASES WITH AN EXHAUST GAS BURNER WITH CATALYTICALLY INDUCED FLAME
William Clayton, Pasadena, Calif., assignor to Berkelew Manufacturing Company, Alhambra, Calif., a corporation of California
Filed Jan. 20, 1958, Ser. No. 709,895
8 Claims. (Cl. 23—2)



1. The method of effecting oxidation of the oxidizable constituents of a gaseous exhaust mixture, comprising in combination the steps of passing a first minor portion only of the gaseous mixture together with air into contact with a catalyst and thereby inducing exothermic oxidation of the oxidizable constituents of that first portion, heating a second minor portion only of the gaseous mixture with heat derived from said catalyst induced exothermic oxidation, initiating and maintaining combustion of the oxidizable constituents of said heated second minor portion of the gaseous mixture together with air to produce a pilot flame, and introducing the remainder of said gaseous mixture together with air into proximity of the pilot flame to initiate and maintain oxidation of the oxidizable constituents of said remaining portion by the heat of the pilot flame, and thus finally producing an exhaust mixture substantially devoid of constituents which are combustible in air.

2,947,601
COMPLEX FLUORIDES OF PLUTONIUM AND AN ALKALI METAL
Glenn T. Seaborg, Albany, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed May 23, 1947, Ser. No. 750,175
7 Claims. (Cl. 23—14.5)

1. A composition of matter consisting of a complex fluoride of plutonium and at least one alkali metal and being selected from the group consisting of a compound of the formula $MPuF_5$ wherein M designates an alkali metal and KPu_2F_9.

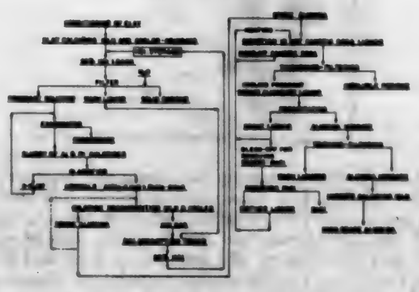
2,947,602
PRODUCTION OF SODIUM PERBORATE IN STABLE FORM
Edward A. Youngman, Lafayette, and Richard M. Roberts, Berkeley, Calif., assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Aug. 29, 1955, Ser. No. 531,272
7 Claims. (Cl. 23—60)

1. A process for producing a sodium perborate of improved properties which comprises intimately contacting sodium metaborate and hydrogen peroxide as essentially the sole reactants in an aqueous medium while maintaining the mixture at a temperature within the range of 40° to 60° C. until crystallization of sodium perborate trihydrate therefrom takes place and separating the crystals so produced.

2,947,603
NONCAKING ROCK SALT COMPOSITION
Howard C. Miller, Grand Saline, Tex., assignor to Morton Salt Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Feb. 21, 1957, Ser. No. 641,440
8 Claims. (Cl. 23—89)

1. A noncaking crushed rock salt adapted for outdoor storage comprising a crude crushed rock salt interspersed with pelletized mixtures of sodium chloride and a water dispersible alkali metal ferrocyanide.

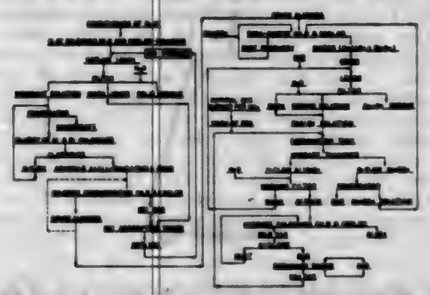
2,947,604
PRODUCTION OF ALUMINA
Frederick Laist, Los Angeles, Calif., assignor to The Anaconda Company, New York, N.Y., a corporation of Montana
Filed Dec. 7, 1956, Ser. No. 626,916
4 Claims. (Cl. 23—143)



1. The method of producing substantially silica- and iron-free alumina from an iron-containing clay which comprises calcining the clay, dissolving aluminum and iron in the calcined clay by treatment with hydrochloric acid to form aluminum and iron chlorides, converting the aluminum and iron chlorides to aluminum and iron oxides by heat-treatment at a temperature within the range of 1000 and 1300° F., whereby an oxide product which is readily digestible in caustic soda solution is produced, digesting the resulting mixture of aluminum and iron oxides containing a minor amount not exceeding about 1% of residual chlorine in an aqueous caustic soda liquor under pressure and at a high temperature and thereby producing sodium aluminate with some sodium chloride in solution and an insoluble residue consisting principally of iron oxide, separating said insoluble residue from the solution of sodium aluminate and sodium chloride, treating said solution to precipitate aluminum hydroxide and thereby producing a spent caustic soda liquor containing some sodium chloride and suitable for digestion of additional aluminum and iron oxides as aforesaid, maintaining the concentration of sodium chloride in said spent caustic soda liquor below a predetermined maximum by removing any excess sodium chloride therefrom, and calcining said aluminum hydroxide precipitate to produce substantially silica- and iron-free alumina.

2,947,605
PRODUCTION OF ALUMINA
Frederick Laist, Los Angeles, Calif., assignor to The Anaconda Company, New York, N.Y., a corporation of Montana
Filed Oct. 22, 1956, Ser. No. 617,614
5 Claims. (Cl. 23—143)

1. In the method of producing substantially silica-free and iron-free alumina from an iron-containing clay in which an iron-containing crude alumina substantially free of silica is first produced by calcining the clay, leaching the calcine with hydrochloric acid, separating the siliceous residue from the leach solution, and crystallizing aluminum and iron chlorides from the leach solution, the improvement which comprises subjecting said chloride crystals to calcination at a temperature within the range of 1500 and 1900° F. and thereby producing an iron-containing crude alumina substantially free of both silica and residual chloride, sintering said crude alumina in the presence of sodium carbonate at a temperature in excess of 1500° F. and thereby converting the alumina



to sodium aluminate while retaining the iron as oxide in the resulting sinter product, separating the sodium aluminate from the iron oxide residue associated therewith by leaching with an aqueous medium, recovering substantially silica-free and iron-free alumina from the aqueous solution of sodium aluminate, recovering substantially chloride-free sodium carbonate from the residual aqueous leach solution, and recycling the recovered sodium carbonate for sintering with a further quantity of iron-containing crude alumina.

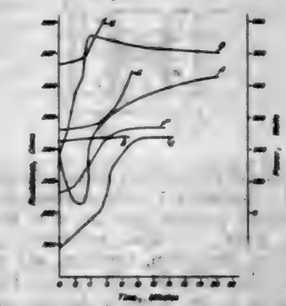
2,947,606
PRODUCTION OF SILICA-FREE ALUMINA
Francis L. Holderreed, Anaconda, and Robert E. Sullivan, Butte, Mont., assignors to The Anaconda Company, New York, N.Y., a corporation of Montana
No Drawing. Filed May 21, 1957, Ser. No. 660,441
5 Claims. (Cl. 23—143)

1. The process of producing silica-free alumina from an aluminiferous raw material containing iron and only a very small amount of silica relative to the amount of alumina which comprises preparing a mixture of the aluminiferous material and sufficient sodium carbonate to form sodium aluminate with the alumina therein, incorporating in said mixture an amount of lime greatly in excess of the amount required to form dicalcium silicate with the silica therein, sintering the mixture at a temperature above about 1700° F., thereby converting all the silica and an equivalent portion of the alumina to a calcium aluminum silicate which is substantially completely insoluble in an alkaline aqueous leach solution and converting essentially all the remainder of the alumina to sodium aluminate, leaching the sintered mixture with an aqueous alkaline medium to form a sodium aluminate solution free from silica and iron, and recovering alumina from the resulting leach solution.

2,947,607
METHOD OF PURIFYING SILICON BROMIDES CONTAMINATED WITH BORON BROMIDE AND SILICON IODIDES CONTAMINATED WITH BORON IODIDE
Franz Arthur Pohl, Bolecke, Moehne, Germany, assignor to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
No Drawing. Filed Feb. 26, 1958, Ser. No. 717,544
Claims priority, application Germany Feb. 26, 1957
9 Claims. (Cl. 23—205)

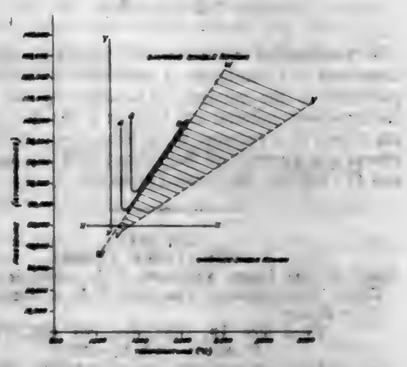
1. A method of producing a boron-free silicon halide of the type described, comprising the steps of admixing to a boron containing silicon halide selected from the group consisting of silicon bromides containing boron bromide as an impurity and silicon iodides containing boron iodide as an impurity, at least one at least partly chlorinated hydrocarbon as a purifying agent having a boiling point lower than that of the silicon halide, reacting the same with the boron impurity in the silicon halide to form gaseous boron trichloride escaping from the reaction mixture and recovering the silicon halide, purified from accompanying boron, by fractional distillation of the reaction mixture.

2,947,608
DIAMOND SYNTHESIS
Howard Tracy Hall, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 29, 1955, Ser. No. 530,935
10 Claims. (Cl. 23—209.1)



10. The method of making diamond which comprises positioning a nickel rod in a graphite cylinder to form an assembly, subjecting said assembly to a pressure of about 95,000 atmospheres, measuring continuously the electrical resistance of said assembly, applying sufficient heat to said assembly for sufficient time to cause an inflection in the electrical resistance of said assembly, thereafter reducing the pressure and terminating the application of heat in response to said inflection, and recovering the diamond so formed.

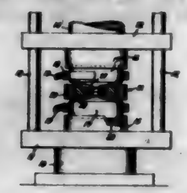
2,947,609
DIAMOND SYNTHESIS
Herbert M. Strong, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1958, Ser. No. 707,433
12 Claims. (Cl. 23—209.1)



1. In the process for making diamonds by heating a carbonaceous material at elevated temperatures and pressures, the improvement which comprises effecting the

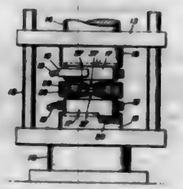
conversion of the carbonaceous material to diamond at a pressure of at least about 50,000 atmospheres in the presence of an alloy of a metal which is a catalyst for the aforesaid conversion reaction, the said metal being selected from the class consisting of iron, cobalt, nickel, ruthenium, rhodium, palladium, osmium, iridium, platinum, chromium, tantalum and manganese.

2,947,610
METHOD OF MAKING DIAMONDS
Howard Tracy Hall, Provo, Utah, and Herbert M. Strong and Robert H. Wentorf, Jr., Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Jan. 6, 1958, Ser. No. 707,435
18 Claims. (Cl. 23—209.1)



1. The method of synthetically making diamonds which comprises (1) combining a carbonaceous material with a catalyst material selected from the class consisting of iron, cobalt, nickel, rhodium, ruthenium, palladium, osmium, iridium, chromium, tantalum, and manganese, (2) subjecting the aforesaid carbonaceous material and catalyst material in the diamond forming region to a pressure of at least about 75,000 atmospheres at a temperature of from about 1200° to about 2000° C., and (3) recovering the diamond formed.

2,947,611
DIAMOND SYNTHESIS
Francis P. Bundy, Alpinus, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1958, Ser. No. 707,436
4 Claims. (Cl. 23—209.1)



1. The method of synthetically making diamonds which comprises (1) combining a carbonaceous material with platinum as the catalyst, (2) subjecting the aforesaid carbonaceous material and catalyst in the diamond forming region to a pressure of at least about 90,000 atmospheres at a temperature from about 2050° C. to 2500° C., and (3) isolating the formed diamond.

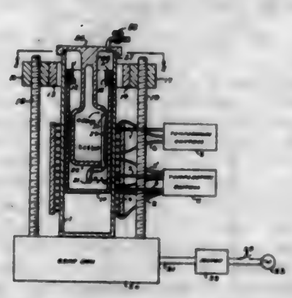
2,947,612
LABORATORY VESSEL
Allen R. De Long, Vineland, N.J., assignor to Bellco Glass, Incorporated, Vineland, N.J., a corporation of New Jersey
Filed Oct. 10, 1957, Ser. No. 689,393
3 Claims. (Cl. 23—292)

1. An Erlenmeyer flask formed integrally of glass and including a flat base, a generally conical body portion, a generally tubular neck portion having a diameter less than the body portion for the entire height of said neck portion, a mouth from which the contents of the vessel are discharged at the top of said neck portion, said neck portion having a uniform internal diameter for its entire height, the lip of said mouth being continuous and uninterrupted and tapering outwardly from bottom to top to a point below the uppermost surface of said mouth,



the included angle intermediate the inside wall of the lip and the outside wall of the tapered portion of the lip being between about seven degrees to about thirteen degrees, and being arcuate from said point to the top surface of said mouth, with the top surface of said mouth lying within a plane parallel to the base.

2,947,613
GROWTH OF CRYSTALS
Donald C. Reynolds, Springfield, Ohio, and Stanley J. Czyzak, Royal Oaks, Mich., assignors to the United States of America as represented by the Secretary of the Air Force
Filed Mar. 16, 1956, Ser. No. 572,170
3 Claims. (Cl. 23—294)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A method of growing a single crystal of uniform lattice structure throughout and of a prescribed composition selected from the group of cadmium sulfide and zinc sulfide by following the steps of imparting one zone of heat to the composition to convert it to the gaseous state, conducting the gaseous composition to an orifice, discharging the gaseous composition toward a surface in a hydrogen sulfide atmosphere at a second zone of heat at a temperature slightly below the composition sublimation of the atoms of the composition temperature of 1000° C. for cadmium sulfide and controlling the orientation of the atoms of the composition in a single crystal of uniform lattice structure throughout, moving the surface away from the orifice as the crystal increases in thickness without change in the uniformity of the crystal lattice structure being formed, and maintaining the crystal growth conditions continuously for a prescribed period of time and size of crystal growth.

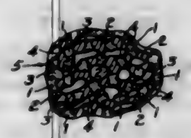
2,947,614
METHOD OF MAKING INSOLUBLE SULPHUR
Ernst Julius Manthey, Essen, Germany, assignor to Ruhrgas Aktiengesellschaft, Essen, Germany
No Drawing. Filed Apr. 11, 1957, Ser. No. 652,111
Claims priority, application Germany Mar. 13, 1954
7 Claims. (Cl. 23—312)

1. A method of making stabilized insoluble sulphur, which includes the steps of: heating sulphur to a temperature above its melting temperature and below its volatilization temperature without the addition of a catalyst while carrying out the thus effected melting operation in a first vessel of corrosion-resistant material, transferring the thus obtained sulphur melt into a second vessel of corrosion-resistant material, adding an inhibitor to the sulphur melt in said second vessel for preventing a reversion of the insoluble sulphur to soluble sulphur while allowing the sulphur melt and inhibitor to remain in said second vessel for a short time only of the order of from 20 seconds to 10 minutes, after said short time chilling the melt to a temperature below the melting temperature of the sulphur, storing the chilled resultant plastic sulphur until its plastic mass has crystallized, thereafter by means of a solvent extracting the soluble sulphur from the crystallized mass, and separating from said solvent the insoluble sulphur forming the residue.

2,947,615
METHOD OF TREATING THE SURFACES OF GLASS CONTAINERS
Joseph F. Greene and Neill H. McCallum, Jr., Vineland, N.J., assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed May 31, 1956, Ser. No. 588,279
4 Claims. (Cl. 41—42)

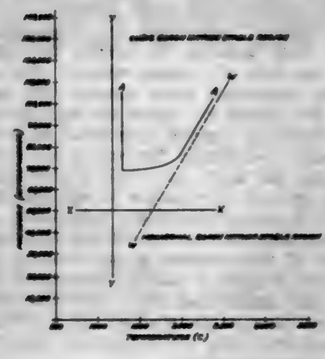
1. The method of reducing the alkalinity of the interior surfaces of a glass container having a restricted neck opening comprising the steps of introducing gaseous sulfur dioxide through said neck opening, separately introducing through said neck opening an oxidizing reagent selected from the group consisting of moisture with hydrogen peroxide and moisture with substantially pure oxygen, and subjecting said container interior surfaces, sulfur dioxide and oxidizing reagent to an elevated temperature.

2,947,616
GRINDING WHEEL STRUCTURE
Loring Coes, Jr., Brookfield, and Marion S. Champagne, Princeton, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 12, 1957, Ser. No. 695,614
8 Claims. (Cl. 51—296)



1. A grinding wheel consisting of abrasive grains bonded together by electrically non-conductive vitrified ceramic bond leaving interconnecting pore spaces in the wheel, and a continuous lining of vitreous carbon on the walls of the interconnecting pore spaces said vitreous carbon being electrically conductive and said lining forming a continuous electrical path through the wheel, said wheel having surfaces and said path extending from one surface to another surface and said continuous lining being also on the walls of the surface pores of said surfaces.

2,947,617
ABRASIVE MATERIAL AND PREPARATION THEREOF
Robert H. Wentorf, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 6, 1958, Ser. No. 707,434
13 Claims. (Cl. 51—307)



7. The method of converting hexagonal boron nitride to cubic crystal structure boron nitride which comprises subjecting hexagonal boron nitride to a pressure of from about 50,000 to 110,000 atmospheres and a temperature of about 1200° C. to 2000° C. in the presence of at least one catalyst selected from the class consisting of alkali metals, alkaline earth metals, lead, antimony, tin, and nitrides of the foregoing metals, said pressure and temperature being selected to be in the range in which the particular catalyst is operative to catalyze the conversion of hexagonal boron nitride to the above cubic boron nitride, and thereafter recovering boron nitride having a cubic crystal structure.

8. An abrasive article comprising a base member having a surface abrasive layer of cubic crystal structure boron nitride having a zincblende cubic structure in which the cubic boron nitride has a hardness substantially equal to the hardness of diamond.

2,947,618
LIQUID FUELS FOR REACTION MOTORS
Leonard A. Stengel and Emory E. Toops, Jr., Terre Haute, Ind., assignors to Commercial Solvents Corporation, New York, N.Y., a corporation of Maryland
No Drawing. Filed Jan. 14, 1959, Ser. No. 786,678
2 Claims. (Cl. 52—.5)

1. A liquid fuel for combustion engines consisting essentially of from about 55 to about 95% by weight methanol and from about 5 to about 45% by weight monomethylamine nitrate.

2,947,619
RAPID COMPOSTING
Harry B. Gorby, Oklahoma City, Okla., assignor to American Dross Disposal Corporation
No Drawing. Filed Mar. 22, 1957, Ser. No. 647,745
3 Claims. (Cl. 71—9)

1. In a process for manufacturing compost composed of fermented organic waste material by rapidly aerobically fermenting municipal organic waste material, the steps consisting of elevating said waste material an appreciable distance above the ground; shredding said waste material while elevated to form coarse particles thereof; allowing said coarse, shredded particles to fall, by gravity, and deposit on the ground in the form of a porous windrow pile; spraying moisture on said coarse shredded particles during their fall to the ground, said moisture being sprayed on said falling particles to adjust the mois-

ture content thereof to within the range of from about 40 to 60 percent by weight; allowing said moist, porous windrow pile to ferment aerobically while maintaining said pile at a temperature of from about 50° C. to 70° C. and a pH of from about 6.5 to 7.5, until primary fermentation is substantially complete and the moisture content of said porous windrow pile is reduced to about 35 percent; then reprocessing said coarse, shredded waste material by re-elevating, reshredding and redepositing said reshredded waste material, by gravity fall onto the ground, in the form of a porous windrow pile, and re-spraying said reshredded waste material with moisture during the fall thereof to readjust the moisture content thereof to within the range of from about 40 to 60 percent by weight; aerobically fermenting said reformed moist windrow pile again under said fermentation conditions until primary fermentation is substantially complete, said re-elevating, reshredding, redepositing and re-spraying steps being each carried out each time the moisture content of the reformed porous windrow pile of shredded waste material is reduced to about 35 percent by weight, said reprocessing being continued until said aerobic fermentation of said windrow pile is substantially complete; and recovering said completely fermented organic waste material compost.

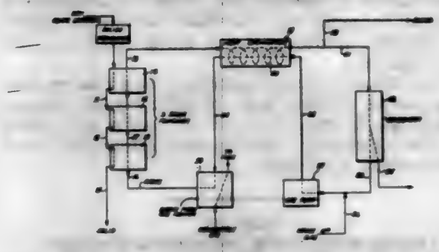
2,947,620

PROCESS OF PREPARING IRON POWDER CAPABLE OF BEING ROLLED DIRECTLY TO SHEET FORM

Irving P. Whitehouse, South Euclid, and William A. Reed, West Richfield, Ohio, assignors to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey

Filed Aug. 6, 1957, Ser. No. 676,579

3 Claims. (Cl. 75—.5)



1. The process of preparing powdered metallic iron capable of being rolled directly to sheet form and having a hydrogen loss of not over about 1½% and a content of acid-insolubles of not over about 1%, and in which the acid-insolubles exist in a particle size of not over about 200 mesh, said process starting with an iron oxide material having not over about 1% acid-insolubles; said process comprising the steps of comminuting all said starting material to a particle size of not over about 200 mesh; reducing said starting material in at least two reducing stages by contacting it in each stage and as hereinafter stated with a gaseous reducing agent, the active reducing constituent of which consists essentially of hydrogen and which contains not less than about 2.7 parts by volume of water vapor for each 100 parts by volume of hydrogen, maintaining the solid material in each of said stages in a fluidized condition by moving said gaseous reducing agent upwardly therethrough, maintaining the velocity of gas travel through the fluidized bed of each of said stages from about ½ to about 1½ feet per second, maintaining the gaseous pressure in the last of said stages at not over about 7½ pounds per square inch gauge and in the first of said stages at not over about 2½ pounds per square inch gauge, maintaining the temperature in the first and all but the last stage (from the point of view of the solid material) in the range of about 900° F. to about 1200° F. and in the last stage, from about 1000° F. to about 1100° F.; and retaining the solid materials in the last of said stages until these materials are substantially completely reduced, so that the hydrogen loss thereof is not over about 1½%.

2,947,631

TERNARY ALLOYS OF URANIUM, COLUMBIUM, AND ZIRCONIUM

Frank G. Foote, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 13, 1946, Ser. No. 49,128

12 Claims. (Cl. 75—122.7)

1. An alloy consisting substantially of uranium, zirconium, and columbium wherein the amount of uranium metal is greater than the total zirconium and columbium content and is the major constituent of the alloy.

8. A process for preparing an alloy of uranium comprising casting at a high temperature uranium alloy consisting substantially of uranium as the predominant metal and a total of at least two percent of minor alloying elements, namely, columbium and zirconium, heat treating said alloy at an elevated temperature to obtain a homogeneous composition and subsequently quenching said homogeneous alloy composition.

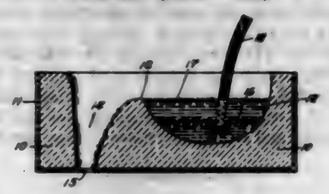
2,947,632

METHOD OF MAKING LEAD-CONTAINING STEELS

Michael Tenenbaum, Flossmoor, Ill., and James W. Halley, Chesterton, and Frank W. Learman, Munster, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware

Filed June 23, 1953, Ser. No. 743,708

3 Claims. (Cl. 75—129)



1. The method of dispersing small amounts of lead in steel to increase the machineability of the steel which comprises feeding a stream of molten steel to a pool of molten lead, separating the molten steel and molten lead into two layers by gravity settling, removing the upper layer comprising steel having a small amount of lead dispersed therein, and solidifying the leaded steel so produced.

2,947,633

PRECIOUS METAL RUPTURE DISC

Arnold J. Lincoln, Florham Park, N.J., assignor to Engelhard Industries, Inc., Newark, N.J., a corporation of New Jersey

No Drawing. Filed May 7, 1958, Ser. No. 733,470

3 Claims. (Cl. 75—165)

1. A method of protecting fluid containers from rupture comprising utilization of a rupture disc in said container composed of an alloy from the group consisting of gold and silver in amounts of from 99.0 to 99.9 weight percent, the balance composed of at least two metals taken from the group consisting of platinum, iridium, palladium, rhodium, ruthenium, copper, iron, nickel, calcium, manganese, lead, tin, zinc and antimony, one metal of said group being present in an amount of from 0.1 to less than 1 weight percent of the alloy, the amount of said one metal being greater than the combined amount of all other metals of said group.

2,947,634

HIGH TEMPERATURE ALLOY

Marion Semchyshen, Dearborn, Mich., assignor to American Metal Climax, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 19, 1958, Ser. No. 760,845

3 Claims. (Cl. 75—176)

1. A cast molybdenum-base alloy capable of being worked at elevated temperatures and containing from .30% to .75% carbon, from 1.00% to 8.00% titanium, not more than .005% oxygen, and the balance consisting essentially of molybdenum.

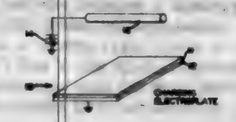
2,947,625

METHOD OF MANUFACTURING PRINTED CIRCUITS

Bruce I. Bertelsen, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 21, 1955, Ser. No. 554,510

4 Claims. (Cl. 96—1)



1. In the method of manufacturing printed circuits which comprises exposing an electrostatically charged photoconductive insulating surface to a light image of the desired circuit pattern to form a latent electrostatic image of said pattern, developing the latent electrostatic image with an acid resistant powder and transferring said acid resistant powder image thereby developed to an acid etchable metallic surface, and etching the uncovered portions of the metallic surface, the improvement which comprises transferring said developed powder image from said photoconductive insulating surface to a flaccid transfer sheet by pressing the surface of said sheet against the developed powder image on said photoconductive insulating surface, said surface of said transfer sheet having the property of adhering to the developed image with a tenacity greater than that of the image to the photoconductive insulating surface, the surface of said transfer sheet being sufficiently pliable to allow contact with the entire powder image which has one portion embedded in the surface of the transfer sheet and another portion projecting therefrom when said pressure is applied; exposing said another portion to a vapor of a solvent therefor to make said another portion tacky without dissolving the same, said one portion embedded in the surface of said transfer sheet remains unaffected by said vapor of said solvent; retransferring said powder image by bringing said tacky another portion into contact with said metallic surface and pressing upon said transfer sheet so that said tacky another portion contacts the metallic surface and dislodges said embedded one portion from the transfer sheet during the removal thereof; and fusing said one and another portions to the metallic surface before etching.

2,947,626

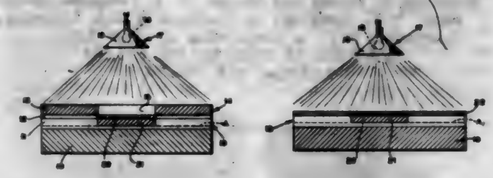
REPRODUCTION OF PHOTOGRAPHS ON CERAMICS

Max Fassely, Linden, N.J., and George F. Leyenmark, Huntington, N.Y., assignors, by mesne assignments, to Photo Ceramics Corporation, Long Island City, N.Y., a corporation of New York

Filed Nov. 8, 1954, Ser. No. 467,465

4 Claims. (Cl. 96—34)

1. The process of producing a photographic image on the surface of a ceramic piece comprising forming a first sensitized emulsion of a gelatine base containing ceramic pigment which has no hardening effect on said gelatin base and applying same to a temporary support, forming a second non-pigmented sensitized emulsion over said first emulsion, both emulsions being sensitized with potassium bichromate, exposing said emulsions to actinic radiations at varying degrees of intensity per unit area over the surface of the emulsions for a first exposure for a period of time sufficient to obtain a desired density of the resultant image in the first emulsion, exposing said emulsions to actinic radiations of the same degree of intensity per



unit area over the surface of the emulsions for a second exposure for a period of time much smaller than the first exposure, to harden said second unpigmented emulsion and form a highlight blocking film, transferring said emulsions from said temporary support onto a porous surface of the ceramic piece with the second emulsion in contact with said surface, washing away the still soluble portions of said first emulsion, to leave a hardened unpigmented film over said surface of said second emulsion and hardened pigmented parts of said first emulsion forming an image bonded to said surface, and drying the image.

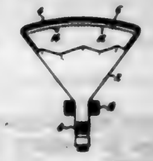
2,947,627

FORMING PATTERNED PHOSPHOR SCREENS IN POST ACCELERATION CATHODE RAY TUBES

Hayo Ahlburg and Hans Heil, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York

Filed Jan. 27, 1956, Ser. No. 561,806

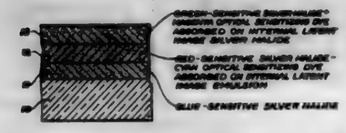
1 Claim. (Cl. 96—45)



In the art of forming a screen phosphor pattern for a post-acceleration cathode ray tube having an electron beam permeable grid between which and a spaced parallel screen support member the post-acceleration field is adapted to be formed and in which the screen support member has undesired random irregularities of surface configuration causing deviations from the locus of a surface free from such irregularities, the method of locating the phosphor pattern on the irregular screen support member in registry with the pattern of impingement of the tube electron beam on the irregular screen support member comprising coating the screen support member with a light sensitive resist, and projecting an image of the phosphor pattern on the resist with light rays, the

light rays falling on any one point on the irregular screen support member passing in a straight line through a first point and a second point relative to the support member, said first point corresponding to a point of intersection of the electron beam with the grid, and said second point corresponding to the point at which the post-accelerated electron beam passing through the first point intersects the locus of the irregularity-free surface, the intersection of extensions of such straight lines defining a location for a source of light rays.

2,947,628
MULTILAYER PRINT FILM HAVING INCORPORATED COLORING MATERIAL
Schouring S. Florin and Homer W. J. Crossman, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 12, 1956, Ser. No. 615,546
7 Claims. (Cl. 96—74)



1. A multilayer photographic element comprising a support having on one side thereof three silver halide emulsion layers separately sensitive to the blue, green and red spectral regions, and each containing non-diffusing color-forming compounds capable of coupling with the oxidation product of a primary aromatic amino silver halide developing agent to form dyes, and in at least one layer on said side of the support an internal latent image silver halide emulsion, the silver halide grains of which are such as to cause a test portion of said latter emulsion upon exposure to a light intensity scale for a fixed time between $\frac{1}{100}$ and 1 second and development for 3 minutes at 20° C. in the following internal type developer:

	Grams
Hydroquinone	15
Monomethyl-p-aminophenol sulfate	15
Anhydrous sodium sulfite	50
Potassium bromide	10
Sodium hydroxide	25
Sodium thiosulfate	20

Water to 1 liter

to give a maximum density at least 5 times the maximum density obtained when the equally exposed silver halide emulsion is developed for 4 minutes at 20° C. in the following surface developer:

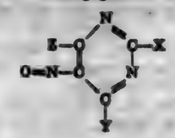
	Grams
p-Hydroxyphenylglycine	10
Sodium carbonate	100

Water to 1 liter.

to which emulsion layer is adsorbed a dye absorbing a major amount up to 100% of the light to which any emulsion above the colored layer is sensitive and substantially no light to which an emulsion layer below the dyed emulsion layer is sensitive, and when present in an emulsion layer, the dye adsorbing a major amount up to 75% of the light to which said last-mentioned emulsion layer is sensitive, said blue, green and red-sensitive emulsions being of the ordinary type developable in a surface developer and incapable of development to said density difference under said test conditions.

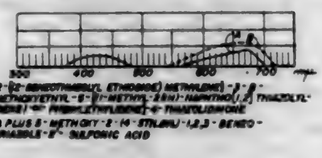
2,947,629
NITROSOPYRIMIDINE DESENSITIZING COMPOUNDS AND PHOTOGRAPHIC EMULSIONS CONTAINING THEM
Paul H. Stewart and Richard W. Karlson, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Sept. 17, 1958, Ser. No. 761,458
7 Claims. (Cl. 96—101)

1. A direct positive photographic silver halide emulsion containing at least 95 mole percent, based on the silver halide content of said emulsion, of substantially uniformly, strongly fogged silver chloride grains and a desensitizing amount of a compound selected from the class represented by the following general formula:

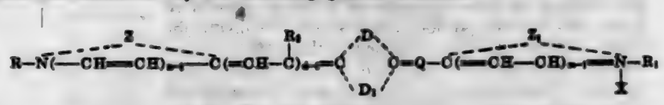


wherein X represents a member selected from the class consisting of amino, methylamino, ethylamino, a hydroxyl group, a lower alkyl group, a mercapto group and an alkylmercapto group, and Y and Z each represents a member selected from the class consisting of a hydroxyl group, amino, methylamino and ethylamino.

2,947,630
SUPERSENSITIZATION OF COMPLEX CYANINE DYES
Jean E. Jones, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 29, 1957, Ser. No. 674,689
16 Claims. (Cl. 96—104)



1. A photographic silver halide emulsion sensitized with a supersensitizing combination of (*a*) at least one complex cyanine dye selected from the class represented by the following general formula:



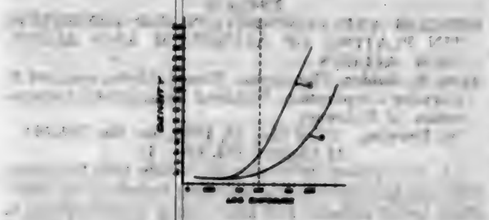
wherein R and R_1 each represents an alkyl group, R_2 represents a member selected from the group consisting of a hydrogen atom, an alkyl group, and an aryl group, Q represents a member selected from the group consisting of a methine group and a nitrogen atom, X represents an acid radical, *n*, *m* and *d* each represents a positive integer of from 1 to 2, D and D_1 together represent the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the 4-thiazolidinone series, those of the 5-thiazolidinone series, and those of the 4-imidazolidinone series, and Z and Z_1 each represents the non-metallic atoms necessary to complete a heterocyclic nucleus containing from 5 to 6 atoms in the heterocyclic ring selected from the group consisting of those of the thiazole series, those of the benzothiazole series, those of the naphthothiazole series, those of the thianaphtheno-7',6',4,5-thiazole series, those of the oxazole series, those of the benzoxazole series, those of the naphthoxazole series, those of the

selenazole series, those of the benzoselenazole series, those of the naphthoselenazole series, those of the thiazoline series, those of the 2-quinoline series, those of the 4-quinoline series, those of the benzimidazole series, those of the 3,3-dialkylindolenine series, those of the 2-pyridine series, and those of the 4-pyridine series, and (*b*) at least one water-soluble compound selected from the class represented by the following general formula:

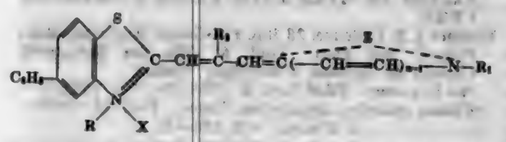
$$R_3—SO_3M$$

wherein R_3 represents a polynuclear aromatic group and M represents a cation.

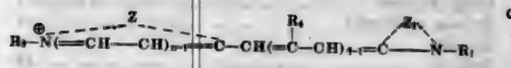
2,947,631
MULTICONTRAST PHOTOGRAPHIC EMULSIONS CONTAINING CYANINE DYES
Burt H. Carroll, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Original application Jan. 18, 1957, Serial No. 634,944. Divided and this application Mar. 2, 1959, Ser. No. 718,726
8 Claims. (Cl. 96—106)



4. A photographic silver halide emulsion sensitized with from about 5 to 300 mg./mole, based on the amount of silver halide, of a spectral sensitizing dye selected from the group consisting of (1) a neutral cyanine dye selected from those represented by the following general formula:



and (2) an acid cyanine dye selected from those represented by the following general formula:



wherein R and R_1 each represents a member selected from the group consisting of methyl, ethyl, and β-hydroxyethyl, R_2 represents a member selected from the group consisting of a hydrogen atom, an alkyl group containing from 1 to 2 carbon atoms and a mononuclear aryl group of the benzene series containing from 6 to 7 carbon atoms, R_3 represents a member selected from the group consisting of a carboxyalkyl group containing from 2 to 3 carbon atoms and a sulfoalkyl group containing from 1 to 2 carbon atoms, R_4 represents a member selected from the group consisting of a hydrogen atom and an alkyl group containing from 1 to 2 carbon atoms, X represents an acid radical, *d* and *n* each represents a positive integer of from 1 to 2, and Z and Z_1 each represents the non-metallic atoms necessary to complete a heterocyclic nucleus selected from the group consisting of those of the benzothiazole series, those of the benzoxazole series, those of the benzoselenazole series, those of the naphthothiazole series and those of the quinoline series, said sensitized photographic silver halide emulsion containing from about 4 to 25 g./mole, based on the amount of silver halide, of a light-absorbing oxonol dye selected from the class consisting of a trimethine oxonol dye and a pentamethine oxonol dye, said oxonol dye having a 3-methyl-1-(sulfophenyl)-5-pyrazolinone nucleus attached to one end of the methine chain through the 4-position of said 3-methyl-1-(sulfophenyl)-5-pyrazolinone nucleus, and attached to the other end of said methine chain a second nucleus selected from the class consisting of a 5-pyrazolinone nucleus and a 2,4,6-triketohexahydropyrimidine nucleus, said light-absorbing oxonol dye having its maximum absorption in substantially the same region of the spectrum as said sensitizing dye, the amounts of said sensitizing dye and said light-absorbing dye being such that said emulsion has a contrast for the unsensitized region of the spectrum at least twice that for the sensitized region, said sensitizing dye having its maximum absorption beyond about 480 mμ.

2,947,632
PREPARATION OF A MOLASSES FEED
Norman F. Kruse, Decatur, Ind., assignor to Central Soya Company, Inc., Fort Wayne, Ind., a corporation of Indiana
No Drawing. Filed Jan. 12, 1956, Ser. No. 558,621
7 Claims. (Cl. 99—6)

1. In a process for forming a molasses-containing pelleted feed, the steps of mixing liquid molasses with a feed meal, drying the mixture to a moisture content at which the meal is free flowing, introducing live steam into the material to wet the exposed surfaces of the material, and pressing the material to form pellets.

2,947,633
TREATMENT OF VEGETABLE BEVERAGES
William M. Perry, Bethlehem, and George G. Stoner, Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 29, 1957, Ser. No. 680,931
6 Claims. (Cl. 99—48)

1. The process for removing tannins, tannic acid and protein-tannin complexes from vegetable beverages, which comprises flowing a beverage containing at least one of the aforesaid compounds through a bed of solid water-insoluble copolymer, in particulate form, said copolymer substantially consisting of N-vinyl-α-pyrrolidone copolymerized with a second copolymerizable vinyl compound, whereby the aforesaid compounds combine with said solid water-insoluble copolymer and withdrawing from said bed said beverage freed of the aforesaid compounds.

2,947,634
PROCESS FOR PREPARING SOLUBLE COFFEE
Jacob R. Feldman, Maplewood, Harold S. Levenson, Morristown, and William V. White, Metuchen, N.J., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Filed July 28, 1956, Ser. No. 598,993
18 Claims. (Cl. 99—71)

1. A process for preparing a fortified oil to be incorporated with the extract of roasted coffee which comprises expressing coffee oil from roasted coffee by subjecting said roasted coffee to pressures of at least 5,000 p.s.i., causing the aromatic constituents of said coffee oil to be distilled therefrom under mild temperatures while the oil is subjected to substantially reduced subatmospheric pressure, condensing the aromatics thus distilled from said coffee oil, and admixing said condensate with an oleaginous material to balance and stabilize said constituents therein.

2,947,635
METHOD OF PREPARING PUFFED SKIN PRODUCTS

William D. Paynter and Elwood W. Klebmaster, Madison, Wis., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Filed May 15, 1958, Ser. No. 735,376
5 Claims. (Cl. 99—107)

1. A method of preparing a puffed edible skin product which comprises heat treating edible skin pieces having a moisture content of about 4 to 10% to expand the same to an extent that the same is provided with a thin walled cellular structure, and cooling said expanded skin under vacuum immediately following final expansion thereof to at least substantially set and retain the extent of expansion obtained.

2,947,636
PRODUCTION OF PROTEINACEOUS DRY SYRUP COMPOSITION AND THE RESULTING PRODUCT

Louis Sair, Evergreen Park, Ill., assignor to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois

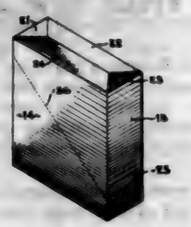
No Drawing. Filed Oct. 29, 1958, Ser. No. 770,270
6 Claims. (Cl. 99—142)

1. A dry solid composition useful in the preparation of food products comprising residue of drying water from an homogeneous aqueous composition comprising 100 parts by weight of solids consisting of from 5 to 95 parts by weight of dissolved hydrolysate of starch having a dextrose equivalent in the range from 24 to 55, and the remainder proteinaceous material dispersed in the solution of hydrolysate, said proteinaceous material being selected from the group consisting of water-soluble and water-dispersible proteins and alkali proteinates.

2,947,637
SANDWICH PACKAGE

Frank E. Fobiano, Cincinnati, Ohio, assignor to Premier Carton Company, Cincinnati, Ohio, a corporation of Ohio

Filed Apr. 7, 1958, Ser. No. 726,764
4 Claims. (Cl. 99—171)



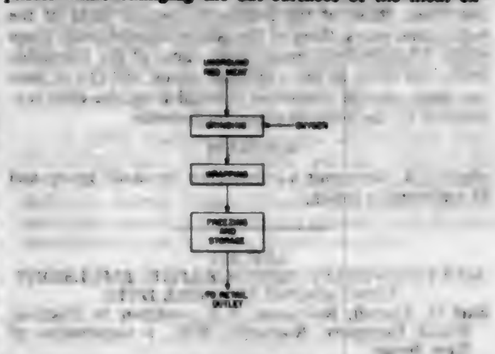
1. A combination handling and display carton containing two individually wrapped sandwiches, said sandwiches being packed within said carton with their cut edges in abutment, said carton having a continuous perforated line around the periphery of said carton, said perforated line lying generally in the same plane as that defined by the said abutting sandwich edges, whereby the carton is separable into two display portions, each containing one of said sandwiches, when pressure is exerted along said perforated line.

2,947,638
PRESERVING THE COLOR OF GROUND RED MEAT

James E. Snyder and Ruby Jean Swartz, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Filed June 30, 1958, Ser. No. 745,394
2 Claims. (Cl. 99—194)

1. The method of preserving the red color of a mass of ground beef which comprises exposing the freshly ground meat to oxygen under pressure greater than atmospheric while changing the cut surfaces of the meat exposed to the oxygen, packaging the resulting oxygenated ground beef in transparent film, and then freezing and storing the package at freezing temperature.



2,947,639
PROCESS AND COMPOSITION FOR IMMERSION TIN PLATING OF ALUMINUM AND ALUMINUM ALLOYS

Alvin R. Baldes, Huntington Woods, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

No Drawing. Filed May 19, 1958, Ser. No. 736,404
21 Claims. (Cl. 106—1)

12. An aqueous immersion tin coating bath for aluminum and aluminum alloys consisting essentially of water, alkali metal stannate and alkali metal polyphosphate in amount between ¼ to 3 oz. by weight thereof for each 6 ounces of stannate.

2,947,640
PROCESS FOR THE TREATMENT OF TRACING PAPERS TO MAKE THEM READILY ERASABLE UPON

Maurice J. B. Ledoute, 28 Rue Pre-Gentil, Rosny-sur-Bois, France, and Pierre Toni, 6 Villa des Buissonets, Chemin du Buisson, Champigny, France

No Drawing. Filed Sept. 2, 1958, Ser. No. 758,567
Claims priority, application France Feb. 21, 1958
2 Claims. (Cl. 106—2)

1. A preparation for treating tracing paper, so as to fill the pores thereof and reduce ink penetration, including the following constituents:

	Parts by weight
Ethyl alcohol	43
Sodium carbonate	4
Stearine	4
Benzene	26
Ethylamine	9
Ethanolamine	9
Oleic acid	5

2,947,641
SHELL MOLDING MATERIAL AND PROCESS

Julius M. Bleuenstein, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,236
9 Claims. (Cl. 106—38.3)

1. A dry, pulverulent, readily flowable shell molding material consisting essentially of a granular refractory material admixed with a small but effective amount of a hydrated silicate of an alkali metal, said alkali metal hydrated silicate exhibiting a melting point not substantially above that of $K_2O.2SiO_2.H_2O$.

2,947,642
CERAMIC COMPOSITIONS

George Vincent Glowacki, Bloomfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 19, 1957, Ser. No. 703,806
7 Claims. (Cl. 106—62)

1. A ceramic composed essentially of 85 to 92 percent aluminum oxide; 4 to 7 percent magnesium oxide; 4 to 7 percent calcium silicate; 0 to 3 percent beryllium oxide; and 1 to 3 percent pentacalcium trialuminate.

2,947,643
HYDRAULIC CEMENTS

Jonas Kamlet, % The Kamlet Laboratories, 300 4th Ave., New York 10, N.Y.

No Drawing. Filed Dec. 19, 1955, Ser. No. 553,687
3 Claims. (Cl. 106—97)

1. Hydraulic cements containing:
(*a*) from 75.0% to 92.5% of water-granulated blast-furnace slag assaying from 4.3% to 12.5% of magnesium oxide content,
(*b*) from 0.1% to 4.0% of an alkaline activator chosen from the group consisting of calcium oxide, calcium hydroxide and Portland cement,
(*c*) the remainder containing at least one member of the group consisting of anhydrite, gypsum and calcium sulfate,
the cement being ground to a fineness of from 4000 to 10,000 square centimeters per gram by the Blaine air permeability method.

2,947,644
ARTIFICIAL FIBRES

Claude Giddey, Carouge, Geneva, Switzerland, assignor to F.P. Research Limited, Mowbray, England, a company of Great Britain

No Drawing. Filed Mar. 4, 1958, Ser. No. 718,961
Claims priority, application Great Britain Mar. 14, 1957
7 Claims. (Cl. 106—157)

1. An artificial fibre comprising about 95 to 65% protein and 5 to 35% carrageenin, said percentages being by weight of the dry fiber.

3. A process for producing artificial fibres consisting predominantly of protein which comprises forming an aqueous, viscous solution containing from 30 to 300 g. per litre of protein and at least one polysaccharide having ionizable sulphate side groups, the ratio of protein to polysaccharide in the solution being at least 2 to 1 and the concentration of the polysaccharide being between 0.1 to 50 g. per litre, maintaining the solution at a temperature between 20° and 100° C. for a time sufficient to permit the solution to develop the desired viscosity for extrusion and then extruding the resulting viscous solution into a coagulating bath having a pH between about 1 and 3 to form fibres.

2,947,645
STABLE CELLULOSE ETHER COMPOSITIONS AND METHOD FOR PRODUCING THE SAME

David T. Milne, Deventer, Netherlands, assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Oct. 29, 1957, Ser. No. 693,012
10 Claims. (Cl. 106—170)

1. A composition of matter comprising a stable, colloidal dispersion of a water-insoluble hydroxyethyl cellulose ether in an aqueous medium having a pH between 5 and 9, the cellulose ether having on an average the equivalent of 0.3 to 1.3 hydroxyethyl groups per glucose residue and being soluble in an aqueous solution containing from 0.5% to 4% of an alkali metal hydroxide, the aqueous medium consisting essentially of water and an alkali metal salt selected from the group consisting of formates, acetates, propionates, butyrates, maleates, xylates and fluosilicates.

2,947,646
COLLOIDAL DISPERSION OF METALS IN PLASTICS

Richard G. Devaney and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

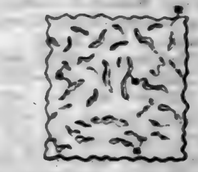
No Drawing. Filed Jan. 7, 1958, Ser. No. 707,454
8 Claims. (Cl. 106—193)

1. A process for preparing a dispersion of metal selected from the class consisting of gold, aluminum, copper, germanium, silver, iron, cadmium, tin, lead and gallium in an organic thermoplastic material wherein substantially all of the metal particles are less than 0.1 micron in diameter comprising depositing the metal as a thin coating having a thickness of less than 0.1 micron on powdered organic thermoplastic components fine enough to pass a 20 mesh screen, and working the coated powder into a plastic state to fragment the metal coating into metallic particles of less than 0.1 micron in diameter.

2,947,647
FISSURED COATED FIBERBOARD AND METHOD OF MANUFACTURE

John C. Hart and Edgar A. Lauring, International Falls, Minn., assignors to Minnesota and Ontario Paper Company, Minneapolis, Minn.

Filed Sept. 24, 1958, Ser. No. 762,919
7 Claims. (Cl. 117—41)

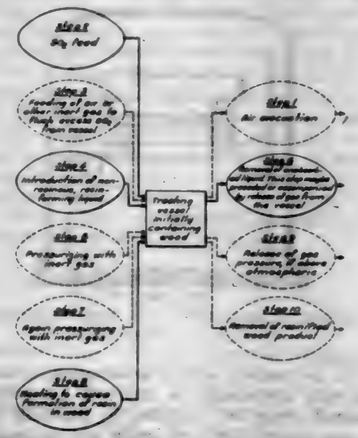


5. An acoustical tile comprising a baseboard having a layer of foamed and fissure composition thereon, the said fissures extending inwardly from a surface and having sloping walls with fibers extending across the fissures, said composition containing about 5 to about 15 parts of a bentonite, a non-oil binder and a filler pigment.

2,947,648
RESINIFICATION OF WOOD

Lawrence F. Sonnabend and Charles R. Williams, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Filed Dec. 21, 1955, Ser. No. 554,404
14 Claims. (Cl. 117—59)



1. A method of resinifying wood which comprises contacting the wood with sulfur dioxide to cause permeation

of the latter into the wood, impregnating the wood, having sulfur dioxide absorbed therein, with a non-resinous liquid capable of undergoing a condensation reaction in the presence of condensing agents to form a water-eliminating solid resin, and maintaining the impregnated wood at a reaction temperature until a resin is formed therein.

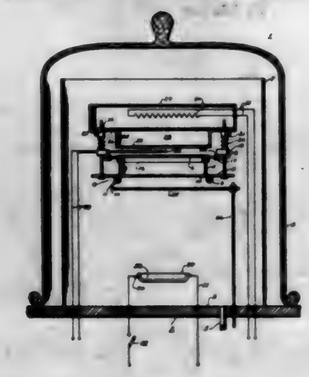
2,947,649
CHEMICALLY BONDED BASIC REFRACTORY
Ben Davies, Pittsburgh, Pa., assignor to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed July 18, 1956, Ser. No. 598,515
10 Claims. (Cl. 117—118)

1. That method of preparing an unburned basic refractory shape that is resistant to slaking by water, comprising forming to the desired shape a mixture of a chemical bonding agent and refractory material that includes at least 5 percent by weight of uncombined magnesia refractory, contacting only the surface of the resultant shape with a water solution of a water-soluble phosphate, then drying the phosphate treated shape and recovering the resulting dried, surface treated, unburned refractory shape produced.

2,947,650
ADHESIVE
James S. Gerhardt and William F. Fowler, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed June 13, 1958, Ser. No. 741,754
2 Claims. (Cl. 117—122)

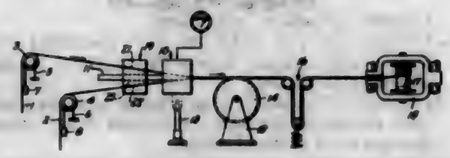
1. A pressure sensitive adhesive tape comprising a flexible support having thereon an adhesive containing 20–50 percent tetrahydroabietyl alcohol, 20–35 percent inert pigments and fillers and 30–50 percent of a copolymer prepared from a monomeric mixture having 70–50 mole percent styrene and 30–50 mole percent 2-ethylhexyl acrylate.

2,947,651
METHOD OF MAKING STORAGE ELECTRODE FOR CHARGE STORAGE TUBE
Michael F. Toohig, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed Sept. 23, 1958, Ser. No. 762,867
10 Claims. (Cl. 117—222)



1. The method of making a storage electrode for a storage tube comprising the steps of: mounting a fine mesh metal screen in a container by thermally insulated means and maintaining said screen taut; evacuating said container; heating said screen to an elevated temperature; rapidly evaporating a thin layer of magnesium fluoride onto said screen; cooling said screen with said magnesium fluoride layer thereon and with said container still evacuated so that said screen cools at substantially the same rate as said magnesium fluoride layer; and admitting air to said container and removing said screen therefrom.

2,947,652
ELECTRIC CABLES
Harvey Burr, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Original application Dec. 18, 1950, Ser. No. 201,348, now Patent No. 2,810,011, dated Oct. 15, 1957. Divided and this application Mar. 8, 1957, Ser. No. 646,188
Claims priority, application Great Britain Dec. 23, 1949
3 Claims. (Cl. 154—2.24)



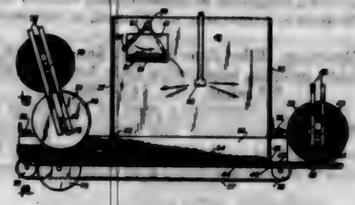
1. Apparatus for insulating two conductors one from the other, comprising an elongated die having an input end and an output end, said die having first and second channels of substantially circular cross section extending longitudinally through the die, said first and second channels being parallel to a plane extending through said die, said first channel having its center displaced from one side of said plane, said second channel having its center displaced from the other side of said plane, a third channel of rectangular cross section having its central plane lying on said first mentioned plane and having its sides tangential to the lower portion of said first channel and to the upper portion of said second channel at said input end, said first and second channels converging from said input end so that continuous portions of said first and second channels tangential with said third channel at its input end overlap at said output end of said die, said third channel having the cross section of its longitudinal sides decreasing until said third channel disappears at the point of overlap of said first and second channels, means for traversing a strip of insulating material and said two separated conductors through respective channels, and means for heating the die during said traversing.

2,947,653
METHOD OF PRODUCING CONTAINERS FROM THERMOPLASTIC MATERIAL
Matthias Föhr, Glattbrugg, Switzerland, assignor to Werkzeugmaschinenfabrik Oerlikon Bührle & Co., Abt.: Elektrodenfabrik, Zurich-Oerlikon, Switzerland, a company of Switzerland
Filed June 26, 1956, Ser. No. 593,922
Claims priority, application Switzerland May 28, 1956
4 Claims. (Cl. 154—33)



1. A method of producing a container from thermoplastic material comprising the steps of permanently deforming a plastic web by means of a mandrel to form a hollow substantially cylindrical extension in the middle of said web, inserting a length of tube also formed of plastic material in said extension, welding said length of tube to the end face of said extension in order to form a reinforced tube neck and a closure seal, and then bringing together and welding the two overlapping wall portions formed by folding the web in the vicinity of the extension to form seams closing said container.

2,947,654
METHOD OF MANUFACTURING A COMPOSITE BOARD PRODUCT
Ralph Chapman, Corvallis, Oreg., assignor to Wood Processes (Oregon) Ltd., Corvallis, Oreg., a limited partnership
Filed Mar. 26, 1956, Ser. No. 573,897
5 Claims. (Cl. 154—100)



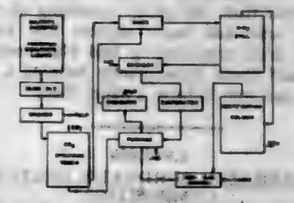
1. The method of manufacturing a composite board product which comprises forming straight grained veneer flakes ranging up to several inches in length and ranging up to several inches in width, said veneer flakes having a moisture content of forty to fifty percent, coating said veneer flakes with an adhesive, forming a pair of continuous loosely felted blankets from a thin slurry of cellulosic fibers in water, said blankets having a thickness of about one-sixteenth to one-eighth inch, forming a sandwich of a layer several inches in thickness of the coated veneer flakes interleaved in random orientation between two of said blankets while they are still wet and spongy from the water of said slurry, severing said sandwich into sections and compacting said sandwich sections into a product of boardlike density and uniform thickness under heat and pressure.

2,947,655
METHOD OF PRODUCING WOOD PULP
Lee E. Eberhardt, Springfield, Ohio, assignor to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio
Filed Apr. 21, 1955, Ser. No. 502,980
13 Claims. (Cl. 162—26)



1. The method of producing groundwood pulp consisting of the steps of chipping pulp wood, waste wood and the like, wetting and soaking said chips, subjecting said soaked chips to alternate continuous application and release of mechanically applied pressure for a predetermined period to effect a high degree of fiberization of said chips and extract substantially all the moisture and natural wood fluids therefrom in a single pass, introducing water to said chips upon final release of pressure, subjecting said pressed chips with water added thereto to a further fiberizing action in a disc mill, discharging said fiberized chips into a centrifugal cleaner for the removal of impurities, dirt specks and the like, the rejects from said cleaner being discharged to waste, subjecting the accepted portion of said stock to the action of a rotary screen for removal of long shives and undefibered chips, the stock removed therefrom being returned to the pressure stage of the process for further processing, the finally accepted material being acceptable groundwood pulp.

2,947,656
PROCESSING OF SPENT COOKING LIQUORS
Berry W. Bailey, Mukilteo, Wash., assignor to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania
Filed Apr. 15, 1957, Ser. No. 652,763
14 Claims. (Cl. 162—32)



1. A cyclical method for chemical recovery from a pulping process wherein an ammonia-base sulphite cooking liquor is employed which comprises combining spent cooking liquor with an aqueous solution containing sodium carbonate and sodium sulphide derived from processed spent cooking liquor in amounts sufficient for the substantially complete liberation by distillation of the available ammonia content of said spent cooking liquor and to provide such liquor with a pH of at least about 7 after removal of ammonia therefrom, stripping the available ammonia from said alkalized spent liquor and converting volatile sulphur compounds in said liquor to nonvolatile sulphur compounds in a heated stripping zone by means of an oxygen-containing stripping gas, recovering said ammonia, concentrating by evaporation said alkalized spent liquor after stripping to increase the solids content thereof to at least about 40 percent by weight, subsequently burning said concentrated liquor under self-sustaining and reducing conditions for reduction of the sodium sulphur compounds present therein with the generation of volatile sulphides and the formation of a smelt containing sodium carbonate and sodium sulphide, oxidizing the volatilized sulphides to sulphur dioxide by means of an oxygen containing gas, recovering said sulphur dioxide, forming an aqueous solution of the smelt, combining the smelt solution with spent cooking liquor and forming a fresh cooking liquor containing an ammonium sulphite from said recovered ammonia and sulphur dioxide for use in a succeeding cycle.

2,947,657
EXTRACTION OF CELLULOSE FROM VEGETABLE MATTER
Robert Peteri, Paris, France, assignor to Compagnie de Saint-Gobain, Paris, France
No Drawing. Filed Feb. 15, 1957, Ser. No. 640,304
Claims priority, application France Feb. 18, 1956
7 Claims. (Cl. 162—76)

5. In the extraction of cellulose from vegetable matter containing ligno-cellulose by mineral salts in neutral and

acid media, the improvement which comprises digesting the vegetable matter in a liquor containing at least one of the sulfites and bisulfites of alkali and alkali earth metals, a metal hydrosulfite, and a stabilizer for the hydrosulfite.

2,947,658

METHOD OF MANUFACTURING UNIFIED PAPER CONTAINING TITANIA

Joseph R. Weechler and Edward William Engel, New Brunswick, N.J., and Paul Lagally, Pleasant Gap, Pa., assignors, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

Filed July 18, 1956, Ser. No. 596,960
4 Claims. (Cl. 162—169)

1. The method of forming a unified paper sheet having improved characteristics of wet tensile strength, tear strength and delamination resistance and adequate flexibility and elongation comprising the steps of mixing with a slurry of paper pulp including cellulose fibers, a latex of an elastomeric impregnant and a solution of reactive titania selected from the group consisting of monomeric orthotitanic acid and water soluble low polymers of orthotitanic acid, precipitating said elastomeric impregnant onto said fibers, subsequently forming a paper web and drying said web to form a paper sheet.

2,947,659

STABILIZED BORDEAUX MIXTURE COMPOSITION

Charles H. Rogers, Norwalk, Conn., assignor to R. T. Vanderbilt Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 5, 1956, Ser. No. 569,302
7 Claims. (Cl. 167—16)

1. Bordeaux mixture containing, in an amount from 1 to 3% by weight of the solids content of the Bordeaux mixture, a lignosulfonate and the product formed by the reaction of 1 to 6 moles of an aliphatic hydrocarbon monocarboxylic acid containing from 8 to 18 carbon atoms, and 1 mole of a polyhydric alcohol containing 3 to 9 carbon atoms and 3 to 6 hydroxyl groups, the amount of unesterified acid being zero to about 75 mol percent of the total equivalent acid, and the amount of unesterified alcohol being zero to about 75 mol percent of the total equivalent alcohol, the relative proportions of lignosulfonate being within the range from 15 to 25 parts by weight of lignosulfonate to 0.75 to 1.5 parts by weight of the equivalent amount of product obtainable from said acid and alcohol at complete esterification.

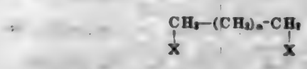
2,947,660

PROCESS AND COMPOSITIONS FOR TREATING NEMATODES

Otto L. Hoffmann, Pittsburg, Kans., assignor to Spencer Chemical Company, a corporation of Missouri

No Drawing. Filed Dec. 7, 1956, Ser. No. 626,833
10 Claims. (Cl. 167—22)

1. A parasitic nematode control composition which comprises an alpha, omega-dihaloalkane of the group consisting of 1,5-dibromopentane and compounds of the formula



wherein X is a member of the group consisting of chlorine and bromine and *n* is an integer from 4 through 6, a surface active agent, and an inert pesticide carrier as an adjuvant therefor.

2,947,661

ADDUCT OF 1,2-DIBROMO-3-CHLOROPROPANE AND THIOUREA

Thomas Robert Hopkins and Paul Donovan Strickler, Johnson County, Kans., assignors to Spencer Chemical Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Filed Oct. 16, 1958, Ser. No. 767,519
5 Claims. (Cl. 167—22)

5. The method of controlling plant nematodes which comprises applying the adduct of thiourea and 1,2-dibromo-3-chloropropane to soil infested with nematodes.

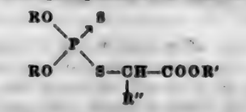
2,947,662

ALPHA-SUBSTITUTED DIETHOXY - DITHIOPHOSPHORYLACETIC ESTERS

Raffaello Fusco, Giuseppe Losco, and Mario Perini, Milan, Italy, assignors to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Filed June 6, 1956, Ser. No. 589,587
Claims priority, application Italy June 14, 1955
5 Claims. (Cl. 167—30)

1. In the art of controlling pests of the group consisting of flies, aphides, mites, and fungi, the improvement comprising applying to the locality frequented by the pest an 0,0-dialkyl-dithiophosphoric acid ester of the formula



wherein R, and R' represent members of the group consisting of straight and branched-chain lower alkyls having up to three carbon atoms, and R'' represents a member of the group consisting of phenyl, para-nitrophenyl, para-chlorophenyl, and 1-naphthyl.

5. The pesticidal compound, the ethyl ester of alpha-(0,0 - diethyldithiophosphoryl)-p-chlorophenylacetic acid.

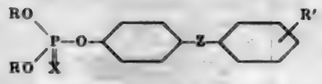
2,947,663

PHOSPHORIC AND THIOPHOSPHORIC PHENOL ESTERS CONTAINING AN AZO GROUP AND METHODS OF PREPARING SAME

Giuseppe Losco and Cesare Augusto Perl, Milan, Italy, assignors to Montecatini-Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Filed Oct. 30, 1957, Ser. No. 693,241
Claims priority, application Italy Nov. 7, 1956
10 Claims. (Cl. 167—30)

10. In the art of control of flies at a locality, the improvement comprising applying to the locality a compound of the formula



in which R is a lower alkyl, X is a member of the group consisting of oxygen and sulphur, the R' radical is taken from the group consisting of hydrogen, methoxy, para-ethoxy, para-chloro, ortho-chloro, ortho-nitro, meta-nitro, and para-nitro, and Z is a radical taken from the group consisting of the linkage —N=N— and azoxy.

2,947,664

SALTS OF 7-CHLORO-4-(4-DIETHYLAMINO-1-METHYLBUTYLAMINO) QUINOLINE

Charles F. Geschickter, Kensington, and Leonard M. Rice, Baltimore, Md., assignors to The Geschickter Fund for Medical Research, Inc., Washington, D.C., a corporation of New York

No Drawing. Filed July 11, 1955, Ser. No. 521,372
6 Claims. (Cl. 167—58)

2. A novel therapeutic agent for parenteral administration in the treatment of allergenic disorders comprising

at least one of the salts defined in claim 3 dissolved in a vehicle suitable for injection selected from the group consisting of water, oils and benzyl alcohol and dioctyl solution.

3. As a novel composition of matter, a compound selected from the group consisting of 7-chloro-4-(4-diethylamino-1-methylbutylamino) quinoline salts of an acid selected from the group consisting of ascorbic acid, quininic acid and nicotinic acid.

2,947,665

MICROBIOLOGICAL PREPARATION OF MESO-TARTARIC ACID

Jackson W. Foster, 2112 Highgrove Terrace, Austin, Tex.

No Drawing. Filed May 7, 1956, Ser. No. 582,954
4 Claims. (Cl. 195—36)

3. The process for enzymatically converting trans-epoxysuccinic acid to meso-tartaric acid that comprises treating an aqueous medium containing trans-epoxysuccinic acid with a cell-free extract of the enzyme trans-succinicepoxide hydrolase obtained from the cells of an organism selected from the group consisting of *Aspergillus fumigatus, Paecilomyces variotl* and *Penicillium vermiculatum*.

2,947,666

AMINO ACIDS AND PROCESS

Heing T. Huang, Fresh Meadows, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,880
2 Claims. (Cl. 195—47)

1. A process for the preparation of a mixture of diaminopimelic acid and glutamic acid which comprises fermenting under submerged, aerobic conditions, *E. coli*, ATCC 12,932 in a nutrient medium initially containing from about 0.1 to about 0.5 gram of L-lysine per liter.

2,947,667

MALT OF IMPROVED PROPERTIES, FERMENTED MALT BEVERAGES, AND PROCESS OF MAKING SAME

Ernst Komm, Bergstrasse 13, Munich 9, Germany

No Drawing. Filed May 21, 1957, Ser. No. 660,447
Claims priority, application Germany May 29, 1956
12 Claims. (Cl. 195—70)

1. In a process of producing malt rich in substances increasing the viscosity of fermented beverages made therefrom, the steps comprising rapidly heating green malt to a temperature of at least about 60° C. within a period of time not exceeding about 15 minutes, said temperature being sufficiently high to destroy the cytolytic ferment activity of said green malt, and reducing the water content of the malt at least to about 15%.

12. A dried malt product rich in substances increasing the viscosity of fermented beverages made therefrom, said dried malt product being obtained by rapidly heating green malt to a temperature of at least about 60° C. for a period of time not exceeding about 15 minutes, said temperature being sufficiently high to destroy the cytolytic ferment activity of said green malt, and by reducing the water content of the malt at least to about 15%.

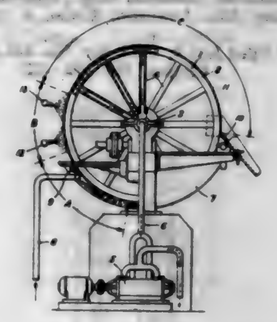
2,947,668

PROCESS OF PRODUCING YEAST OF INCREASED DRY SOLID CONTENT AND REDUCED PLASTICITY

Ernst Kuestler, Mauer, Vienna, and Karl Rokitansky, Vienna, Austria, assignors to Vereinigte Mautner Markhof'sche Press-Hefe Fabriken, Vienna, Austria, a corporation of Austria

Filed Jan. 16, 1959, Ser. No. 787,242
Claims priority, application Austria Feb. 3, 1954
13 Claims. (Cl. 195—98)

9. In a process of producing yeast cell material with an increased dry solid content by means of suction filtration of suspensions of said cell material in continuous operation, the steps comprising adding to an aqueous suspension of said cell material a water soluble, osmotically active compound in an amount sufficient to cause exudation of intracellular water from and cytorrhysis of the cells of said material, subjecting the resulting cytorrhyzed cell suspension in a continuously moving layer to suction filtration, displacing, after formation of said layer, the aqueous extracellular liquid present in said layer in an amount dependent upon the difference in pressure prevailing during said suction filtration, said liquid



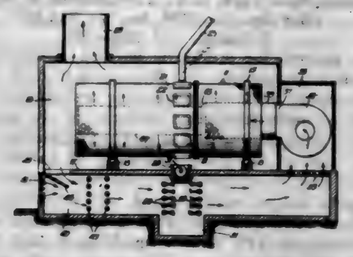
containing the osmotically active compound, by an aqueous liquid of lower osmotic pressure in such a manner that said displacement reaction is completed before the total amount of water corresponding to the exuded amount of intracellular water is reabsorbed from said displacing liquid by said cytorrhyzed cell material, and continuing exposing the thus treated and washed layer of cell material to the action of the difference in pressure prevailing during said suction filtration, thereby causing said cell material to reabsorb extracellular water present outside of the cells of said cell material layer so as to decrease the extracellular water content thereof below the value corresponding to and attainable by said difference in pressure.

2,947,669

ROTARY MALTING EQUIPMENT

Alan R. Graff, Flossmoor, and Edwin C. Juergens and Samuel E. Berkenblit, Chicago, Ill., assignor to The Columbia Malting Company, Chicago, Ill., a corporation of Illinois

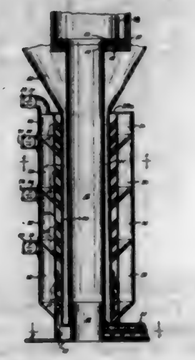
Filed Sept. 24, 1956, Ser. No. 611,571
8 Claims. (Cl. 195—127)



1. A horizontal rotary malting drum, said drum being generally cylindrical in shape, the outer walls of the cylinder being perforate, a tubular perforate member supported

centrally of the drum, means for supplying air to the tubular member, means for introducing grain between the drum walls and tubular member, imperforate end wall members in the drum and means for varying the effective length and capacity of the space between the end wall members and simultaneously similarly varying the effective length of the perforate surface of the tubular member.

2,947,670
FRACTIONAL DISTILLATION OF VOLATILES FROM SOLIDS
Frank E. Hobson, Missoula, Mont., assignor to P.D. & P. Processing Inc., Lewiston, Idaho, a corporation of Idaho
Filed July 9, 1954, Ser. No. 442,379
3 Claims. (Cl. 202—22)



1. A method of extracting the volatile constituents of aggregates of solid particles which comprises flowing the solid particles downward by gravity in a continuous stream between an inner confining wall and an outer confining wall, keeping said particles in engagement with other particles in said stream and maintaining engagement between the walls and particles, flowing continuous streams of hot gaseous fluid upwardly in contact with and covering said confining walls thereby supplying heat through said walls to the solid particles and gradually increasing the temperature of said particles as they move down between the walls, and withdrawing the volatilized constituents from the stream of particles through one of the walls and through the gaseous fluid stream covering it.

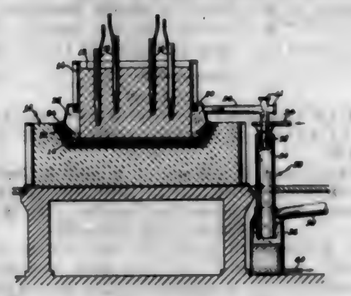
2,947,671
PURIFICATION OF DICHLOROACETALDEHYDE
Benjamin Veldhuis, Morristown, and Robert J. De Bois, Morris Plains, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Filed June 23, 1958, Ser. No. 743,887
7 Claims. (Cl. 202—57)

1. A process for producing purified dichloroacetaldehyde which comprises: (A) forming a mixture comprising (1) crude dichloroacetaldehyde comprising a minor amount of underchlorinated material of the group consisting of acetaldehyde and monochloroacetaldehyde, and (2) an acid of the group consisting of sulfuric acid of from 65 to 85% concentration and para toluene sulfonic acid, meta toluene sulfonic acid, and ortho toluene sulfonic acid of from 75 to 90% concentration, with the weight ratio of (2) to (1) equalling at least 0.1; (B) heating said mixture in a temperature range not above 94° C. to cause the formation of non-volatile products from said underchlorinated material; (C) distilling said mixture at atmospheric pressure; and (D) recovering purified dichloroacetaldehyde as distillate.

2,947,672
PROCESS FOR THE EXTRACTION OF RELATIVELY PURE VANADIUM, NIOBIUM AND TANTALUM
Guy Ervin, Jr., Encino, Calif., and Herbert F. G. Ueltz, Shrewsbury, Mass., assignors to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Aug. 4, 1959, Ser. No. 831,556
32 Claims. (Cl. 204—64)

1. Process for the preparation of metal selected from the fifth group consisting of vanadium, niobium and tantalum and mixtures thereof which comprises passing a direct electric current through a cell having a solid anode and a solid cathode in a direct current electric circuit, the electrolyte in said cell consisting, apart from any fifth group metal halide content, essentially of fused halide of metal selected from the group consisting of alkali metals and alkaline earth metals including magnesium and mixtures of such halides, said cell containing fifth group metal carbide in said halide electrically connected to the positive side of the electric circuit and collecting the fifth group metal electrolytically liberated at the cell cathode.

2,947,673
COLLECTION OF GAS FROM FURNACE FOR ELECTROLYTIC SMELTING PRODUCTION OF ALUMINIUM
Mathias Ovrum Sem, Smestad, Oslo, and Fredrik Christen Collin, Ljan, Oslo, Norway, assignors to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway
Filed Mar. 26, 1958, Ser. No. 724,183
Claims priority, application Norway Mar. 30, 1957
3 Claims. (Cl. 204—67)



1. In the manufacture of aluminium by melt electrolysis of a solution of aluminium oxides in molten fluorides wherein a furnace gas including carbon monoxide, carbon dioxide, dust and tar fumes is generated the method comprising the steps of collecting the gas in the furnace, withdrawing the collected gas from the furnace, then at a point immediately adjacent such furnace and while the gas temperature is not less than 200° C. subjecting the gas to sudden cooling and agitation by injecting a spray of liquid into the gas stream to condense tar fumes and to create turbulence whereby tar fumes and dust particles are caused to agglomerate and separating the agglomerates from the gas and conducting the gas away from the furnace pot.

2,947,674
METHOD OF PREPARING POROUS CHROMIUM WEARING SURFACES
John A. Andrisek, Westlake, Ohio, and Thomas R. Gill, Pompano Beach, Fla., assignors to Metal Finishers, Inc., Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 19, 1957, Ser. No. 703,769
6 Claims. (Cl. 204—141)

4. A method of producing a porous layer of electrolytically deposited chromium, which comprises the steps of placing a wearing member having a relatively non-

porous layer of electrolytically deposited chromium in a bath consisting essentially of water, and a material selected from the group consisting of alkali metal and ammonium hydroxides and salts thereof, chromic acid, and phosphoric, sulfuric and hydrochloric acids passing an alternating current between said layer and another electrode substantially equally spaced therefrom at a density of 5 to 120 amperes per square decimeter for a sufficient time to pass 50 to 500 ampere minutes of electricity from each square decimeter of the surface of said chromium layer to provide pores in said surface, and thereafter honing said surface, whereby a wearing surface having porosity for retaining lubricating oil while having excellent hardness and wear resistance is obtained, the total concentration of material in said bath being at least .05 normal.

2,947,675
STYRENE POLYMERIZATION PROCESS
Daniel S. Maisel, Union, and Donald A. Guthrie, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Feb. 8, 1956, Ser. No. 564,125
7 Claims. (Cl. 204—154)

1. A polymerization process which comprises dehydrogenating ethyl benzene in a predominantly aromatic hydrocarbon refinery feed stock to obtain a product stream containing in the range of about 2 to 50 volume percent of styrene, subjecting said styrene-containing stream in aqueous emulsion to a total dosage of high energy ionizing radiation corresponding to in the range of 10^4 to 5×10^6 roentgens, separating from said emulsion a polymer having a molecular weight in the range of 2,000 to 300,000 Staudinger in a yield in the range of 20 to 100 percent based on the weight of said styrene, and recycling unreacted ethyl benzene and styrene for further processing.

2,947,676
METHOD OF MAKING WIRE FUEL ELEMENTS
John L. Zambrow, Bayside, N.Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 29, 1952, Ser. No. 268,824
1 Claim. (Cl. 204—154.2)

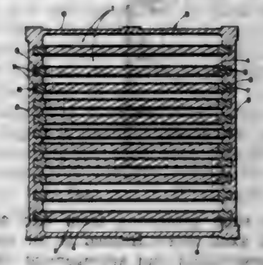


In the method of making a wire fuel element for nuclear reactors, the steps comprising enclosing a uranium bar in a zirconium sheath, coating said sheath with an oxide of the group consisting of magnesium oxide, zirconium oxide, and beryllium oxide, enclosing the composite in a steel tube, swaging the assembled parts at a temperature between 800° to 900° C. to materially reduce the diameter, continuing the working of the composite at a temperature between 800° to 900° C. to reduce its diameter to the desired size and removing the steel tube and the oxide.

2,947,677
ELECTROPHORETIC COATING MATERIAL
Theodore W. Blickwedel, Emporium, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 11, 1958, Ser. No. 747,840
3 Claims. (Cl. 204—181)

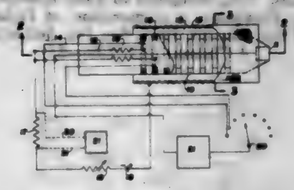
1. A suspension for electrophoretically coating a metal base consisting essentially of alkaline earth metal carbonates and from at least .5% to but not greater than 10% by weight of an alkaline earth metal nitrate suspended in a solution of from 6% to 60% by weight of a polymethacrylate dissolved in from 4 cc. per gram to 12 cc. per gram of a hydrocarbon ester of an organic acid, all of said weights being based upon the weight of said carbonates.

2,947,678
VARIABLE-SPACED NUCLEAR REACTOR FUEL ASSEMBLY
Ralph J. Gimera, Edward F. Weimer, and Joseph R. Welch, Woodland Hills, Calif., assignors to North American Aviation, Inc.
Filed Dec. 18, 1956, Ser. No. 629,149
7 Claims. (Cl. 204—193.2)



1. A nuclear reactor fuel element comprising a plurality of spaced fuel plates, supporting means for said plates, the spaces between said fuel plates increasing with the flux level in said plates.

2,947,679
CORROSION RATE SENSING ASSEMBLY
Edward Schaschl and Glenn A. Marsh, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 24, 1956, Ser. No. 630,369
8 Claims. (Cl. 204—195)

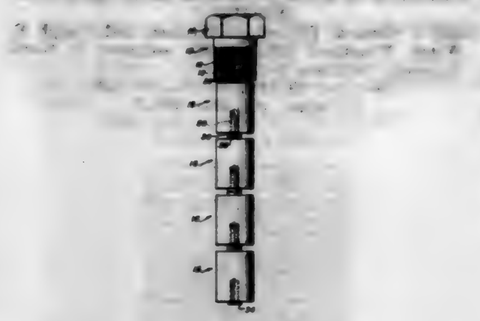


1. A sensing assembly for use in determining the corrosion rate of iron which comprises an electrically non-conductive base element, an iron cathode member of known area mounted on said base, a corrosion-resistant anode member mounted on said base in spaced relation from said cathode, a reference electrode incorporated in said base element, means for electrically connecting said cathode and anode members in a direct current power circuit, means for electrically connecting said reference electrode and said cathode member to an electric potential-measuring means, and a threaded element on said base to mount said apparatus in a threaded opening.

2,947,680
MULTIPLE DISC ANODE
Herman S. Preiser, 6904 Leesville Blvd., Springfield, Va.
Filed Dec. 2, 1957, Ser. No. 700,239
14 Claims. (Cl. 204—197)
(Granted under Title 35, U.S. Code (1952), sec. 266)

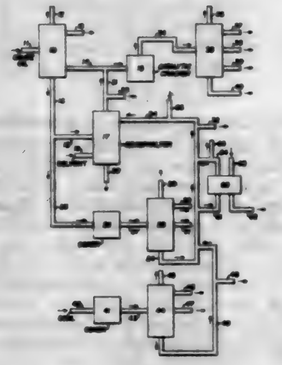
1. A cathodic protection device for protecting the interior surface of a vessel having an aperture in a wall

thereof, said device comprising a plug adapted for closing the aperture in the vessel, said plug having a threaded axial recess formed in the inner end thereof, an elongated multiple disc assembly fixed to the inner end of said plug and adapted to extend within the vessel, said multiple disc assembly comprising a plurality of discs each having a cathodic core and a sacrificial anodic sleeve firmly bonded to the core, the core being longer than the sleeve and each of the cathodic cores having a



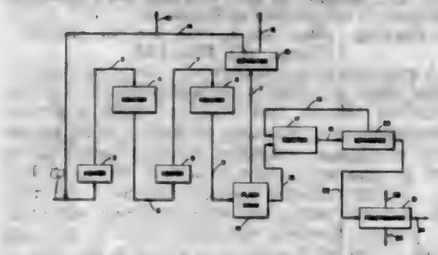
threaded axial stem projecting from one end thereof and a threaded axial recess formed in the opposite end thereof, the construction and arrangement of the cores being such that the threaded stem of a first disc is screw-threaded into the threaded recess of the plug, the threaded stem of a second disc is screw-threaded into the threaded recess of the first disc and so on, so that the desired number of discs are assembled on the plug, said plug and multiple disc assembly carried thereby forming a mechanically rigid, electrical conducting assembly.

2,947,681
PROCESS FOR PRODUCING HIGH QUALITY FUELS FROM CRUDE RESIDUA
Chester L. Read, Westfield, and William O. Heilman, Short Hills, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 23, 1956, Ser. No. 560,666
4 Claims. (Cl. 208—55)



1. An improved process for the production of a petroleum fuel which comprises distilling a crude oil under conditions yielding a relatively high boiling residual fraction, separating said residual fraction into a first portion and a second portion, subjecting said first portion to a coking operation at pressures of from 2 to 100 p.s.i.g. and at temperatures of from about 900 to 1050° F. to form coking products, including a heavy aromatic fraction, segregating said heavy aromatic fraction from the coking products, introducing said heavy aromatic fraction as a wash oil into the top of a deasphalting zone, introducing said second portion into an intermediate point of said deasphalting zone, introducing a deasphalting solvent into the lower area of said deasphalting zone, segregating a deasphalted oil and subjecting said deasphalted oil to a catalytic cracking operation and thereafter recovering a high quality fuel from the cracked products.

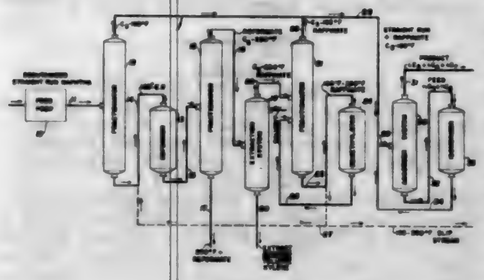
2,947,682
METHOD OF PRODUCING A HIGH OCTANE GASOLINE BY REFORMING A NAPHTHA IN TWO STAGES
Bernard S. Friedman, Chicago, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
Filed Dec. 3, 1956, Ser. No. 625,999
2 Claims. (Cl. 208—65)



2. In a method for the conversion of a straight run hydrocarbon fraction boiling in the motor fuel range, the steps comprising contacting said hydrocarbon fraction with a platinum-alumina catalyst in the presence of free hydrogen at a temperature of about 825 to 975° F. and a pressure of about 150 to 500 p.s.i.g. to provide a product boiling in the motor fuel range of increased octane value, separating a resulting hydrocarbon liquid product boiling over a range of at least about 200° F. and containing about 30 to 60 weight percent of aromatics, contacting said separated liquid product with a catalyst consisting essentially of hydrogen fluoride and boron trifluoride at a temperature of about 150 to 300° F. and a pressure of about 400 to 1500 p.s.i.g. and sufficient to maintain the liquid phase to provide a further increase in the octane quality of the product boiling in the motor fuel range, the contacted hydrogen fluoride, boron trifluoride and hydrocarbon including about 1 to 2 moles of boron trifluoride and about 1 to 10 moles of hydrogen fluoride per mole of aromatic in the hydrocarbon and separating a motor fuel boiling range hydrocarbon of high octane quality.

2,947,683
PROCESS FOR IMPROVING THE OCTANE NUMBER OF NAPHTHAS
Harvey Hennig, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Filed Dec. 12, 1957, Ser. No. 702,442
3 Claims. (Cl. 208—65)

1. A process for preparing high-octane number fuel from low-octane number naphtha comprising desulfurizing and fractionating said low-octane naphtha into a higher-boiling fraction and a lower boiling fraction, containing normal pentane and hexane and having an end point of about 193° F., catalytically reforming said higher boiling fraction in the presence of hydrogen at temperatures of 900–930° F. and pressures of 250–350 lb./sq. in., separating from the reformed product a lower boiling fraction containing benzene, toluene and xylenes admixed with paraffin hydrocarbons, and a higher boiling fraction, withdrawing the higher boiling fraction from the system, solvent extracting the lower boiling reformed fraction to separate a raffinate of low aromatic content and an extract of high aromatic content, fractionating said raffinate into fractions, one of which contains predominantly C_6 and lighter hydrocarbons, and the other of which contains C_7 and heavier hydrocarbons, subjecting the fraction containing C_7 and heavier hydrocarbons to demethylation in the presence of hydrogen and a catalyst composed of silica-alumina cracking catalyst promoted with nickel molybdate, which is selective for the demethylation



reaction at a temperature of 620–680° F. and pressure of 300–750 lb./sq. in., fractionating the demethylated product together with said raffinate, combining said first-mentioned lower boiling fraction with said raffinate fraction containing predominantly C_6 and lighter hydrocarbons, separating said combined fractions into predominantly isoparaffin and normal paraffin fractions and isomerizing said normal paraffin fractions in the presence of a selective noble metal isomerization catalyst at temperatures of 650–800° F. and pressures of 150–1000 lb./sq. in. in the presence of hydrogen to produce an isomerized product of high iso-paraffin content.

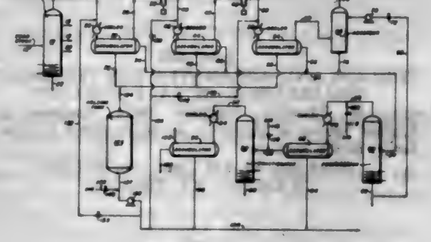
2,947,684
CONTROLLING THE SURFACE AREA OF SILICEOUS CRACKING CATALYSTS
Paul H. Johnson and Charles R. Eberline, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Jan. 2, 1958, Ser. No. 706,566
8 Claims. (Cl. 208—118)

1. A process for improving cracking selectivity which comprises maintaining a zone of fluidized siliceous cracking catalyst under suitable conditions to effect conversion of a hydrocarbon feed, introducing to said zone a hydrocarbon oil containing above 10 p.p.m. heavy metals, withdrawing metal contaminated catalyst from said zone, introducing uncontaminated catalyst having a surface area of between about 25 and about 90 square meters per gram to said zone in an amount sufficient to balance the withdrawal of contaminated catalyst, controlling the catalyst flow rate to provide an average catalyst surface area in said zone of between about 25 and about 50 square meters per gram and withdrawing a conversion product from said zone.

2,947,685
CATALYTIC HYDROGENATION OF SULFUR-BEARING HYDROCARBON OILS
Jacob Koome and Gerardus J. F. Stijntjes, Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware
No Drawing. Filed Feb. 11, 1958, Ser. No. 714,497
5 Claims. (Cl. 208—216)

1. An improved process for the continuous nondestructive hydrogenation of sulfur-bearing lubricating oil boiling at least 90% by volume above 300° C. but not more than about 20% by volume above 500° C., without conversion of more than about 10% by volume of said lubricating oil to lower boiling products, which comprises the steps of (1) admixing the lubricating oil to be hydrogenated with an auxiliary oil at least 90% by volume of which boils below the initial boiling point of the lubricating oil, the amount of the auxiliary oil being from about 0.10 to about 1.25 parts by weight per part of the lubricating oil, (2) mixing the admixture of lubricating oil and auxiliary oil with a hydrogen-containing gas, (3) passing the mixture of lubricating oil, auxiliary oil and hydrogen-containing gas downwardly through a foraminous bed of a hydrogenation catalyst in a reaction zone, the catalyst comprising as active hydrogenation promoters sulfides of a metal of group VI and metal of group VIII, at a rate insufficient to flood the catalyst so that the oil flows as a film over the catalyst particles, while maintaining the temperature in the reaction zone above about 325° C. but below about 400° C. and the pressure above about 10 atm. but below about 100 atm., said temperature and pressure being correlated to maintain the oil largely in the liquid phase, and the amount of hydrogen-containing gas being such that the effluent gas from the reaction zone contains between 50 and 600 liters (measured as H_2S free gas at 0° C. and 1 atm.) per kilogram of lubricating oil charged.

2,947,686
PROCESS FOR THE PREVENTION OF CORROSION OF PETROLEUM REFINING EQUIPMENT
Cecil Phillips, Jr., Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed May 18, 1955, Ser. No. 509,306
8 Claims. (Cl. 208—346)

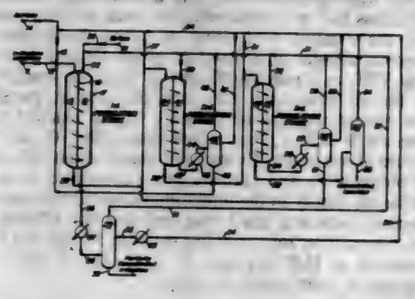


1. In a process wherein metallic surfaces are brought into contact with a chemical product containing water having a pH of at least about 7.5 and contaminated with sulfides, cyanides and ammonia, the improved method for protecting said metal surfaces against corrosion in the continued presence of said cyanides which comprises injecting air into the said chemical product and simultaneously maintaining a circulating body of water having an air contact age of at least about one hour in contact with said metallic surfaces.

2,947,687
SEPARATION OF HYDROCARBONS BY PERMEATION MEMBRANE
Robert J. Lee, La Marque, Tex., assignor to The American Oil Company, a corporation of Texas
Filed Oct. 29, 1954, Ser. No. 465,497
11 Claims. (Cl. 210—23)

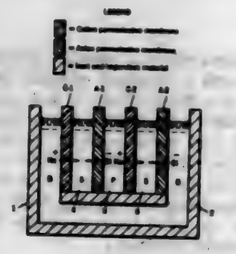
1. In the process of separating a mixture of at least two hydrocarbons by introducing said mixture into the

feed zone of a permeation apparatus comprised of a feed zone which is sealed from a permeate zone by a thin plastic membrane in which one of the hydrocarbons contained in said hydrocarbon mixture is more soluble than others, in which process a portion of the mixture of hydrocarbons is permeated through said membrane into the permeate zone and the permeated portion is withdrawn from said permeate zone and a non-permeated portion is withdrawn from the feed zone, said permeated portion being enriched in the hydrocarbon which is more soluble in the membrane, the improvement which



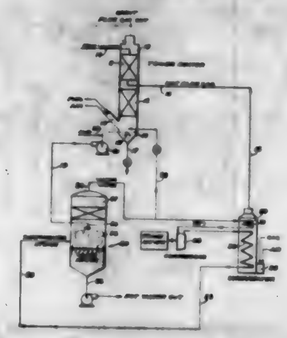
comprises increasing the rate of permeation of hydrocarbons through the membrane by introducing into the feed zone a substituted hydrocarbon solvent for said membrane, the introduced solvent being in addition to that normally occurring with the feed hydrocarbons, and carrying out the permeation in the presence of said substituted hydrocarbon solvent in an amount of the latter sufficient to substantially increase the rate of permeation of hydrocarbons through said permeation membrane, and thereafter separating said substituted hydrocarbon solvent from the permeated hydrocarbons.

2,947,688
PROCESS AND APPARATUS FOR THE DEMINERALIZATION OF SALINE WATER
George W. Murphy, Norman, Okla., assignor to the United States of America as represented by the Secretary of the Interior
Filed Jan. 10, 1957, Ser. No. 634,138
8 Claims. (Cl. 210—23)



6. In a method for demineralizing relatively dilute saline waters including sea waters, the steps comprising: introducing relatively dilute saline water into each of three adjacent zones, the end zones called herein S zones, and the middle zone called herein a P zone, said zones being separated from each other and closed off by alternate anion and cation permselective membranes, the S zones being separated by ion-permeable membranes from a B zone, introducing concentrated salt solution into said B zone, so that cations and anions migrate out of the B and P zones into the S zones, and recovering relatively desalted water from zone P.

2,947,689
SALINE WATER HEATING PROCESSES AND SYSTEMS
Gordon A. Cain, New York, N.Y., assignor to Freeport Sulphur Company, New York, N.Y., a corporation of Delaware
Filed Dec. 2, 1953, Ser. No. 395,949
15 Claims. (Cl. 210—56)



1. A process for providing large quantities of hot process water from water having scale-forming salts therein at temperatures above 220° F. in a continuous operation which comprises, flowing under pressure the water to be heated when at a temperature below about 195° F. into a heating vessel, raising the temperature of the water to a level above 220° F. by means of substantially only the sensible heat of superheated steam directly contacted with said water in said vessel under pressure, thereby also providing water vapor in said vessel, withdrawing the water vapor thus produced from said vessel, heating said water vapor to provide superheated steam, introducing said superheated steam into said heating vessel thereby to accomplish the hereinbefore specified heating step and flowing the hot process water from said heating vessel containing the scale-forming salts therein.

2,947,690
HEATING OF SEA WATER FOR SULFUR MINING
Bernard A. Axelrad, Freeport, Tex., assignor to Freeport Sulphur Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 19, 1956, Ser. No. 598,749
6 Claims. (Cl. 210—67)

1. A process for superheating sea water and other waters of high salinity to sulfur mining high temperatures in tubes of indirect heat exchangers without causing substantial scale deposition on the heating surfaces of the tubes which comprises, pumping sea water down into and out of a salt dome thereby producing a concentrated brine, removing at least 20% of the calcium sulfate content by reacting the same with sodium carbonate and separating the calcium carbonate precipitate formed, mixing the resulting brine in a proportion of 0.1 to 10% with sea water, increasing the hydrogen ion concentration of the resulting water-brine mixture to a pH value of about 6.5–7.5, forcing the mixed waters under superatmospheric pressure into and through the tubes of the heat exchanger, heating the same in said tubes to a temperature at which scale deposition would occur if it were the raw saline water initially used, and maintaining the temperature of the heating surfaces of the tubes in contact with the altered saline water below that which causes precipitation of the calcium sulfate present in said water.

2,947,691
PROCESS FOR THE CONTROL OF BACTERIA IN SECONDARY OIL RECOVERY
Edward O. Bennett, 3623 Alberta Ave., Houston, Tex., and Edward B. Hodge, 2906 Oak, Terre Haute, Ind.
No Drawing. Filed Apr. 2, 1959, Ser. No. 803,560
2 Claims. (Cl. 252—8.55)

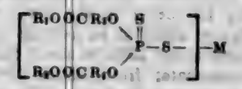
1. In the process of secondary oil recovery characterized by the step of injecting flooding water into oil-bearing subterranean formations to displace portions of the residual oil therein, the improvement comprising having present in said injected flooding water in excess of 2–5 p.p.m. of 4-ethyl-3,5-heptanedione dioxime to inhibit the growth of sulfate reducing bacteria within said formations.

2,947,692
METAL DRAWING LUBRICANT
Everett C. Hughes, Shaker Heights, and Harrison M. Stine, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Nov. 9, 1956, Ser. No. 621,214
1 Claim. (Cl. 252—28)

An emulsifiable lubricating composition comprising 60 to 75% by weight of a suspended phase consisting essentially of about 85 to 97% by weight of an inert solid material selected from the group consisting of calcium carbonate, zinc sulfide, lithopone, and talc having a hardness of 1 to 3.5 on Mohs' scale and a particle size at least fine enough to pass a 150 mesh screen and about 3 to 15% by weight of hydrophilic bentonite, and from about 40 to 25% by weight of a suspending phase consisting essentially of about 50 to 88% by weight of a mineral lubricating oil having a viscosity within the range of about 50 to about 500 SUS at 100° F. and about 12 to 50% by weight of an emulsifying agent of the oil-in-water type.

2,947,693
OIL COMPOSITIONS CONTAINING METAL SALTS OF RICINOLEATE DITHIOPHOSPHORIC ACIDS
James M. Boyle, Bayonne, and Charles S. Lynch, Plainfield, N.J., and Harold R. Ready, Decatur, Ill., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Original application Feb. 9, 1955, Ser. No. 487,212, now Patent No. 2,895,973, dated July 21, 1959. Divided and this application Apr. 17, 1959, Ser. No. 807,026
8 Claims. (Cl. 252—32.7)

1. A lubricating oil composition comprising a major proportion of lubricating oil and about 0.01 to 10% by weight of a compound of the formula



where R_1 and R_2 are alkyl radicals containing 1 to 20 carbon atoms, $-OCR_3O-$ and $-OCR_4O-$ are residues of aliphatic monohydroxy monocarboxylic acids selected from the group consisting of ricinoleic acid and condensation polymers thereof having in the range of 2 to 6 ricinoleic groups per molecule, and M is a metal selected from the group consisting of alkaline earth metals and zinc.

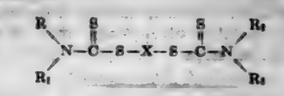
2,947,694
PREPARATION OF METAL PETROLEUM SULFONATES
James T. Gragson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Oct. 6, 1955, Ser. No. 539,023
9 Claims. (Cl. 252—33)

1. In a method for producing a material having detergent and dispersant properties which comprises sulfonating a hydrocarbon fraction having a viscosity between about 120 and 700 SUS at 210° F., neutralizing the resulting sulfonic acids with ammonia, extracting the resultant neutralized sulfonation mixture with a liquid organic solvent, and converting the resultant ammonium petroleum sulfonates to metal petroleum sulfonates, the improvement comprising adding to said metal petroleum sulfonates a selective solvent to cause the formation of two immiscible layers including a bottom layer containing oil-insoluble metal petroleum sulfonates, said selective solvent consisting of an aliphatic liquid ketone having at least four carbon atoms per molecule, isolating said bottom layer and treating the same with an acid having an ionization constant greater than 1×10^{-6} in an amount sufficient to render oil-soluble said oil-insoluble metal petroleum sulfonate.

9. In a method for producing a material having detergent and dispersant properties which comprises sulfonating a propane-fractionated, solvent-extracted and dewaxed Mid-Continent crude distillate having a viscosity in the range of 200–230 SUS at 210° F., neutralizing the resulting sulfonic acids with anhydrous ammonia, extracting the resulting ammonium petroleum sulfonates with isopropyl alcohol, and converting said ammonium petroleum sulfonates to alkaline earth metal petroleum sulfonates by reaction with a metal compound selected from the group consisting of the salts, oxides, and hydroxides of alkali metals and alkaline earth metals, the improvement comprising dissolving the resulting metal petroleum sulfonates in methyl isobutyl ketone, cooling the resulting admixture to a temperature in the range of 50–70° F. to cause the same to stratify into two immiscible layers including a top layer comprising preferentially oil-insoluble metal petroleum sulfonates, isolating said top layer and cooling the same to a temperature in the range of 10–30° F. to cause the same to stratify to two immiscible layers including the bottom layer comprising said preferentially oil-insoluble metal petroleum sulfonates, isolating said bottom layer and treating the same with one gram of dry hydrogen chloride gas per 200–800 grams of said oil-insoluble metal petroleum sulfonates, and recovering the resulting oil-soluble metal petroleum sulfonates.

2,947,695
LUBRICATING OIL ADDITIVES COMPRISING MIXTURES OF POLYVALENT METAL DITHIOCARBAMATES
Richard Leshin, Akron, and Joy G. Lichty, Stow, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed May 9, 1956, Ser. No. 583,644
2 Claims. (Cl. 252—33.6)

1. A lubricating oil additive composition consisting of a petroleum hydrocarbon lubricating oil solution of a mixture of at least two different dithiocarbamates of the general formula:



wherein X is a polyvalent metal selected from the group consisting of zinc, ferric iron, barium, magnesium, calcium, strontium and radium and R, R_1, R_2 and R_3 are aliphatic radicals having from 1 to 5 carbon atoms, and wherein the average number of carbon atoms in

$$R+R_1+R_2+R_3$$

for all the different dithiocarbamates in said mixture is less than 15, the concentration of divalent metal dithiocarbamates in solution in the petroleum hydrocarbon lubricating oil being between 15 and 50% by weight of said oil additive composition.

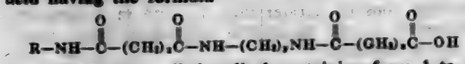
2,947,696

CALCIUM BASE GREASE CONTAINING A CALCIUM SALT OF AN AMIDIC ACID

John Walter Nelson, Lansing, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 22, 1957, Ser. No. 654,884
2 Claims. (Cl. 252—33.6)

1. An anhydrous lubricating grease consisting essentially of a lubricating base oil and a grease-forming soap in an amount sufficient to thicken the base oil to grease consistency, the grease-forming soap consisting essentially of the calcium soaps of 12-hydroxy stearic acid and the acid having the formula



in which R is an alkyl radical containing from 1 to 22 carbon atoms, x is a number from 0 to 8, and y is a number from 2 to 10, the latter acid soap constituting about 0.2 to 5 percent by weight on the finished grease.

2,947,697

LUBRICANT COMPOSITION

Ernest R. Vierk, Lansing, Ill., and Theodore J. Karr, East Chicago, Ind., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Oct. 18, 1955, Ser. No. 541,295
3 Claims. (Cl. 252—55)

1. A protective lubricant consisting essentially of about 2 to 10 percent by weight of a normally solid polyethylene having a molecular weight of about 1000 to 23,000, about 55 to 75 percent by weight of blown asphalt, said blown asphalt having a softening point of about 200 to 225° F. and having a penetration at 77° F. (100 gram needle) of less than about 15, and a mineral lubricating oil fraction sufficient to characterize the lubricant with a viscosity of about 150 to 300 furol seconds at 250° F.

2,947,698

SILVER NIOBATE FERROELECTRIC MATERIALS

Frederic Holtzberg, Rockville Centre, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 29, 1958, Ser. No. 763,788
3 Claims. (Cl. 252—62.9)

2. A method of making a ferroelectric body comprising a ceramic of finely divided silver niobate which comprises forming a mixture of niobium pentoxide and silver sulfate in essentially an equimolar ratio, presintering the thus formed mixture at about 700° in air, adding an additional quantity of silver sulfate to the thus presintered product to bring the Nb_2O_5:Ag_2SO_4 ratio up to about 50 mole percent Nb_2O_5 to 75 mole percent Ag_2SO_4, increasing the temperature of said mixture slowly to 1000–1100°, heating at this temperature for bout 2 hours, cooling the thus sintered material slowly to room temperature, and washing the product obtained thereby with dilute HNO_3 to remove any metallic silver which may have formed during the sintering steps.

2,947,699

NON-INFLAMMABLE HYDRAULIC FLUID

Jones I. Wasson, Union, and Arnold J. Morway, Clark, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Sept. 14, 1955, Ser. No. 534,386
5 Claims. (Cl. 252—76)

1. A composition consisting essentially of about 40 to 65% by weight of water, about 9 to 34% by weight of ethylene glycol, about 20 to 30% by weight of a polyalkylene glycol having a viscosity at 100° F. of between 400 and 200,000 S.U.S. and 0.5 to 2.0% by weight of an alkali metal soap of a branched chain acid containing from 9 to 13 carbon atoms, said acid being prepared by the carbonylation of an olefinic hydrocarbon having from 8 to 12 carbon atoms with carbon monoxide and hydrogen in the presence of a cobalt carbonylation catalyst at a temperature of about 200 to about 400° F. and at a pressure of about 100 to about 300 atmospheres and the subsequent oxidation of the carbonylated olefins thus obtained.

2,947,700

INHIBITED CHLORITE BATHS AND METHOD

Wilhelm Waibel, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main Hochst, Germany, a company of Germany

No Drawing. Filed Oct. 2, 1956, Ser. No. 613,364
Claims priority, application Germany Dec. 15, 1953
6 Claims. (Cl. 252—102)

1. A method of diminishing the formation of chlorine dioxide in acid sodium chlorite baths used for bleaching textile materials and having a pH of about 2.5 to 4.5, comprising adding to said baths an ammonium salt selected from the group consisting of ammonium chloride, ammonium sulphate, ammonium chlorate and ammonium acetate in a concentration of about 0.3 to 5 grams per liter and further adding a compound selected from the group consisting of sulfonic acids and carboxylic acids containing an aliphatic radical having eight to eighteen carbon atoms which is interrupted by a carboxylic amide group and of sulphonic acids and carboxylic acids containing an aliphatic radical having eight to eighteen carbon atoms which is interrupted by a carboxylic ester group and the salts thereof.

2,947,701

SPRAY DRIED DETERGENT COMPOSITION

Edgar E. Ruff, Bergenfield, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 9, 1955, Ser. No. 507,133
8 Claims. (Cl. 252—109)

1. A spray dried detergent composition comprising from about 5% to about 15% of (1) a compound having the empirical formula

$$HO—(C_2H_4O)_a(C_3H_6O)_b(C_2H_4O)_cH$$

prepared by condensing ethylene oxide with a hydrophobic base formed by the condensation of propylene oxide with propylene glycol where b is an integer selected from the group consisting of 26 to 30 and a plus c is an integer such that the molecule contains from 40% to 50% ethylene oxide, and (2) a polypropylene alkyl phenol averaging tetradecyl in the alkyl radical condensed with ethylene oxide to an average of 9 ethylene oxide groups; from about 20% to about 50% of pentasodium tripolyphosphate; from about 10% to about 20% of sodium carbonate; from about 5% to about 15% of sodium silicate; from about 0.2% to about 2.0% by weight of a water-soluble alkali metal salt of a fatty acid having an acyl group of from about 8 to about 22 carbon atoms; an amount up to about 10% water; and the balance essentially sodium sulfate, the above amounts being expressed as percentages by weight on a dry basis with the exception of water.

2,947,702

LIQUID DETERGENT COMPOSITIONS

Ronald Cockle, Whitley Bay, Northumberland, England, assignor to The Procter & Gamble Company, Ivorydale, Ohio, a corporation of Ohio

No Drawing. Filed Jan. 21, 1958, Ser. No. 710,283
Claims priority, application Great Britain Jan. 23, 1957
2 Claims. (Cl. 252—137)

1. A clear liquid detergent composition which remains clear over the temperature range 40° F. to 80° F. and consisting essentially of, by weight, from 10% to 25% sodium dodecylbenzene sulphonate, from 1% to 5% fatty acid monoethanolamide in which the fatty acid moiety contains from 10 to 14 carbon atoms, from 2% to 10% potassium pyrophosphate, from 10% to 12% urea, from 5% to 10% ethyl alcohol, and a proportion of an organic acid selected from the class consisting of citric acid in a proportion of 1.5% to 4%, tartaric acid in a proportion of 1.5% to 3% and salicylic acid in a proportion of 2% to 4%, and from 34% to 70.5% water, the pH being adjusted to 5 to 7.

2,947,703

PROCESS OF INHIBITING CORROSION OF FERROUS METALS IN CONTACT WITH AQUEOUS SOLUTIONS OF ACIDS

Louis C. Larsenneur, Chicago, Ill., assignor to Nalco Chemical Company, a corporation of Delaware

No Drawing. Filed July 16, 1958, Ser. No. 748,818
4 Claims. (Cl. 252—149)

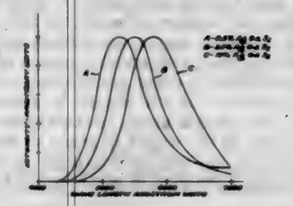
1. A process of inhibiting corrosion of ferrous metals in contact with aqueous solutions of acids, said acids being from the group consisting of sulfamic acid and hydroxy substituted carboxylic acids which contain no more than 6 carbon atoms in chain length and mixtures of said acids, which comprises adding to such solutions corrosion inhibiting amounts of a corrosion inhibiting composition which comprises (A) a higher alkyl substituted organic nitrogen base from the group consisting of higher alkyl substituted monoamines, higher alkyl substituted acyclic quaternary ammonium compounds, higher alkyl substituted imidazolines and higher alkyl substituted imidazolinium salts, said higher alkyl substituted organic nitrogen base containing at least one aliphatic group of from 6 to 22 carbon atoms in chain length and (B) a thiourea from the group consisting of thiourea, N-lower alkyl substituted thioureas, and N,N'-lower alkyl substituted thioureas, and alkyl substituted thioureas having no substituent greater than 4 carbon atoms in chain length with the weight ratio of A to B being within the range of 1:9 to 22:1.

2,947,704

LUMINESCENT ZINC SULFIDE PHOSPHORS AND THE PREPARATION THEREOF

Eugene F. Apple, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 10, 1957, Ser. No. 651,871
8 Claims. (Cl. 252—301.6)



2. The method of preparing a luminescent phosphor which method comprises preparing a mixture containing 0.01 to 10 mole percent of silver-gallium sulfide, the remainder being cubic zinc sulfide, and firing said mixture in an atmosphere of hydrogen sulfide at a temperature of 800° C. to 1000° C.

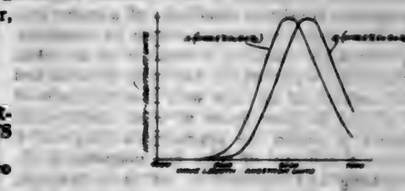
7. A green-yellow emitting luminescent phosphor consisting essentially of cubic zinc sulfide activated with 0.6 to 10 gram-atomic percent of silver and gallium, said silver and gallium being present in equal proportions.

2,947,705

LUMINESCENT ZINC SULFIDE PHOSPHORS AND THE PREPARATION THEREOF

Eugene F. Apple, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Apr. 10, 1957, Ser. No. 651,906
8 Claims. (Cl. 252—301.6)



2. The method of preparing a luminescent phosphor which method comprises preparing a mixture containing 0.01 to 20 mole percent copper-gallium sulfide, the remainder being cubic zinc sulfide, and firing said mixture in an atmosphere of hydrogen sulfide at a temperature of 800° C. to 1000° C.

7. An orange-red emitting luminescent phosphor consisting essentially of cubic zinc sulfide activated with 1.0 to 20 gram-atomic percent of copper and gallium, said copper and gallium being present in equal proportions.

2,947,706

PROCESS FOR REGENERATING CATALYSTS USED IN THE SYNTHESIS OF ACRYLONITRILE

Wilhelm Müller and Johannes Casper, Leverkusen, and Rudolf Haupt and Josef Heinen, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Oct. 31, 1957, Ser. No. 693,521
Claims priority, application Germany Nov. 5, 1956
1 Claim. (Cl. 252—416)

A process for the regeneration of aqueous cuprous chloride catalysts inactivated by use in the synthesis of acrylonitrile from acetylene and hydrocyanic acid which comprises heating the aqueous cuprous chloride solution containing the inactivated catalyst at a temperature of up to about 200° C. to dehydrate the solution and removing the resins separating out on the surface of the melt thereby formed by heating the same with an oxidizing flame at a temperature of up to about 500° C. to burn off said resins.

2,947,707

CATALYST REGENERATION

Preston A. Wells, Jr., 345 Locust Road, Winnetka, Ill.

No Drawing. Filed Jan. 3, 1956, Ser. No. 556,795
5 Claims. (Cl. 252—419)

1. A process of regenerating a mass of catalyst pellets comprising copper and sodium silicate promoter having a carbonaceous residue deposited thereon which comprises passing a hot gas having less than about 1½ volume percent of molecular oxygen through said catalyst at a temperature in excess of about 220° F. but below the sintering temperature of copper until the copper has been substantially completely oxidized to copper oxide and thereafter increasing said temperature in said mass to above said sintering temperature but below about 800° F. while continuing to pass an oxygen-containing gas therethrough whereby to completely oxidize said carbonaceous residue and subsequently reducing the copper oxide to copper.

2,947,708
METHOD FOR MANUFACTURING A CATALYST COMPRISING A COGELLED COMPOSITE OF SILICA AND MAGNESIA
Robert C. Wilson, Jr., Woodbury, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed Apr. 8, 1957, Ser. No. 651,178
3 Claims. (Cl. 252—452)

1. A process for preparing a homogeneous cogelled catalytic composite consisting essentially of a major proportion of silica and a minor proportion of magnesia, comprising intimately admixing a solution of an alkali metal silicate with a water-soluble salt of magnesium and a controlled amount of an acid such that the ratio of gram ions of acid to gram moles of alkali metal oxide in the mixture is within the approximate range of 6 to 30, whereby a hydrosol of silica and magnesia is obtained, permitting said hydrosol to set to a hydrogel, treating said hydrogel with ammonium hydroxide solution to substantially neutralize the same, water-washing the hydrogel so treated free of water-soluble matter, drying and calcining the resulting cogel.

2,947,709
STABILIZED SORPTIVE ALUMINO-SILICATE PARTICLES AND PROCESS THEREFOR
Watson A. Ray, Rock Tavern, N.Y., assignor to Texaco Inc., a corporation of Delaware
Filed July 20, 1956, Ser. No. 599,231
14 Claims. (Cl. 252—455)

1. A process for stabilizing a sorptive crystalline alumino-silicate zeolite particle, said zeolite having substantially uniform effective pore diameter between about 3 and about 13 Angstrom units, which comprises contacting said particle for a period of time between about 2 and about 200 seconds with a molten metal heating medium having a melting point lower than said zeolite particle and maintained in the range of about 1000° to about 1700° F., the relationship between said time and said temperature being substantially inverse, and thereafter recovering from the molten metal said particle having increased durability and no substantial impairment of sorptive activity.

2,947,710
PRESSURE SENSITIVE ADHESIVE COMPOSITION AND TAPE COATED THEREWITH
Verne L. Frantz, Deans, N.J., assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 15, 1955, Ser. No. 547,040
2 Claims. (Cl. 260—5)

1. A normally tacky and pressure-sensitive adhesive having improved flame resistant and flame proof characteristics comprising elastomeric polymers comprising per 100 parts by weight of polymer, 15 to 75 parts by weight of at least one chlorine containing elastomeric polymer selected from the group consisting of polychloroprene rubbers and reclaimed polychloroprene rubbers, and 85 to 25 parts by weight of one other elastomeric polymer selected from the group consisting of natural rubber, reclaimed rubber, butadiene-styrene copolymers containing at least 40% butadiene and at least 10% styrene and polyvinyl ether polymers, tackifying resins compatible with said elastomeric polymers and adapted to, and present in the adheaive in an amount of from 2:3 to 3:2 parts by weight of said adhesive, sufficient to render the composition tacky and pressure-sensitive at normal household temperatures, the latter comprising per 100 parts by weight of tackifying resin, 25 to 90 parts by weight of at least one chlorinated biphenyl tackifying resin and 75 to 10 parts by weight of one other tackifying resin, and antimony trioxide, said antimony trioxide being present in an amount of from about 5–30 parts by weight and said mixture of elastomeric polymers and tackifying resins being present in an amount from about 95–70 parts by weight.

2,947,711
EPOXIDE COMPOSITIONS CONTAINING MALEIC ANHYDRIDE-UNSATURATED ORGANIC ACID ADDUCTS AND METHOD OF FORMING INFUSIBLE PRODUCTS THEREFROM
Harold G. Cooke, Jr., and John E. Masters, Louisville, Ky., assignors to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York
No Drawing. Filed Aug. 1, 1955, Ser. No. 525,823
4 Claims. (Cl. 260—18)

1. The method of converting an epoxide compound having a plurality of epoxide groups selected from the group consisting of (1) glycidyl ethers of polyhydric phenols, (2) glycidyl ethers of polyhydric alcohols, and (3) epoxidized esters of an unsubstituted polyhydric alcohol which is free of non-benzenoid unsaturation and at least one of the acids from the group consisting of oleic and linoleic acids into cross-linked infusible, insoluble reaction products which comprises heating said epoxide compound with a maleic-anhydride-rosin acid adduct having an acid anhydride group and a free carboxyl group in proportions of from about 0.2 to about 2.0 epoxide equivalents of the epoxide compound to one carboxyl equivalent of the adduct, said adduct being produced by the reaction of maleic anhydride with rosin acid, and said heating being carried out at a sufficient temperature for a sufficient length of time to convert the reaction mixture into an infusible, insoluble reaction product.

2,947,712
EPOXIDE RESIN COMPOSITIONS
William J. Belanger, John E. Masters, and Darrell D. Hicks, Louisville, Ky., assignors to Devoe & Raynolds Company, Inc., a corporation of New York
No Drawing. Filed June 11, 1956, Ser. No. 590,787
9 Claims. (Cl. 260—18)

1. In the process for heat curing glycidyl polyethers of polyhydric compounds selected from the group consisting of polyhydric alcohols and phenols having at least two phenolic hydroxyl groups, said glycidyl polyether containing more than one epoxide group per molecule, and having an epoxide equivalent below 1000, with polycarboxylic acid anhydrides wherein a ratio of two anhydride equivalents to two epoxide equivalents is employed, the improvement which comprises incorporating 0.01 to 0.8 equivalents of a monohydric alcohol in the glycidyl polyether-anhydride mixture prior to effecting the cure, and heating the mixture wherein the anhydride groups react with hydroxyl groups resulting in carboxyl groups which in turn react with epoxide groups of the glycidyl polyether to form a cured composition, considering an epoxide equivalent as the weight in grams of glycidyl polyether per epoxide group, an equivalent of a monohydric alcohol as the weight in grams of one mol of the monohydric alcohol and an anhydride equivalent as the weight of acid anhydride in grams per anhydride group.

2,947,713
PROTECTIVE COATING COMPOSITIONS COMPRISING PYROGENIC SILICA
Merrill E. Jordan, Walpole, and William G. Barbine, Whitman, Mass., assignors to Godfrey L. Cabot, Inc., Boston, Mass., a corporation of Massachusetts
No Drawing. Filed Oct. 7, 1954, Ser. No. 461,032
3 Claims. (Cl. 260—19)

1. A novel substantially transparent, protective film forming, coating composition characterized by exceptionally high gloss and hold-out properties which comprises varnish and as the sole pigment contained in said composition pyrogenic colloidal silica, said varnish being a mixture of tung-oil type oil and organic resin in a ratio of from about 8–40 gallons of said oil per 100 pounds of said resin and said silica being the product of flame hydrolysis of a silicon tetrahalide at elevated temperatures, having an average discrete particle size of below about 50 millimicrons, and being present in pigment volume concentration of from about 1.67–7, the finished film from said composition having a 60° gloss value as determined by the Photovolt reflection meter of at least 90%.

2,947,714
PREPARATION OF RESINS FROM DIISOCYANATES
René Leclercq, Woluwe-Saint-Pierre, and René Paquet, Braine-le-Comte, Belgium, assignors to Union Chimique Belge, S.A., Brussels, Belgium, a corporation of Belgium
No Drawing. Filed June 4, 1957, Ser. No. 663,363
Claims priority, application Belgium June 22, 1956
2 Claims. (Cl. 260—24)

1. A process for the preparation of diisocyanate resins which comprises reacting at a temperature between 100 and 300° C. and in the presence of an inert gas, materials consisting essentially of at least one diisocyanate of the general formula OCN—R—NCO wherein R is selected from the group consisting of aliphatic and aromatic bivalent radicals with a mixture of at least two monohydroxylated compounds selected from the group consisting of allyl, benzyl, furfuryl and abietyl alcohols, phenol and nonylphenol, the molecular ratio of the diisocyanate to the monohydroxylated compounds used being about 1:1.

2,947,715
TWO-STEP CREAMING PROCESS FOR THE PREPARATION OF EMULSION LATICES FROM HYDROCARBON POLYMER
Elphege Maxime Charlet and Augustus Bailey Small, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed July 13, 1955, Ser. No. 521,872
21 Claims. (Cl. 260—29.6)

1. Process for preparing hydrocarbon polymer latices which comprises dissolving said polymer in a hydrocarbon solvent, emulsifying the dissolved polymer with water in the presence of about 10 to 20 wt. percent based on polymer of emulsifier, adding a creaming agent to the resulting emulsion whereby an upper latex layer containing the polymer, solvent and some water and a lower aqueous layer are formed, separating the latex layer from the aqueous layer, stripping the solvent from the latex layer, creaming the solvent-free latex layer whereby an upper latex layer and a lower aqueous layer are formed, separating the latex layer from the aqueous layer and recovering a latex containing about 40 to 50 wt. percent solids.

2,947,716
MIXTURES OF LOWER ALKYL ACRYLATE POLYMERS AND METHACRYLATE POLYMERS FOR DOUGH COMPOSITION
John A. Cornell, Conshohocken, and John L. Tucker, Upper Darby, Pa., assignors to H. D. Justi and Son, Inc., a corporation of Pennsylvania
Filed July 16, 1957, Ser. No. 672,133
9 Claims. (Cl. 260—41)

1. A resinous molding composition which is prepared by mixing (1) a methacrylate monomer selected from the group consisting of methyl methacrylate, propyl methacrylate, butyl methacrylate, tetrahydrofurfuryl methacrylate, ethylene dimethacrylate and mixtures thereof, and (2) metacrylate polymer composition in a weight ratio of from 30:70 to 40:60, said polymer composition (2) being in finely divided solid form of spheres having an average diameter in the range of from about 0.07 millimeter to about 0.59 millimeter and being solvatable by said methyl methacrylate when admixed therewith to form a soft spreadable thickened dough, said polymer composition (2) consisting of a mixture of from about 8% to about 48% (*a*) an all methacrylate polymer selected from the group consisting of polymethyl methacrylate, methyl methacrylate-butyl methacrylate copolymer, methyl methacrylate-isobutyl methacrylate copolymer and methyl methacrylate-ethyl methacrylate copolymer and the remainder being (*b*) a copolymer of an acrylate selected from the group consisting of methoxyethyl acrylate, butoxyethyl acrylate and ethyl acrylate with methyl methacrylate, said acrylate component of the acrylate copolymer being present in an amount of from at least about 7.5% and up to 20% by weight of said acrylate copolymer, said copolymer being present in said mixture of finely divided resin solids, whereby said composition has a reduced solvation time.

2,947,717
EPOXIDE RESIN COMPOSITIONS
William J. Belanger and John E. Masters, Louisville, Ky., assignors to Devoe & Raynolds Co., Inc., a corporation of New York
No Drawing. Filed June 11, 1956, Ser. No. 590,419
6 Claims. (Cl. 260—45.4)

1. A process for preparing a resinous composition of matter which comprises (*a*) forming a mixture of (1) a glycidyl polyether of a polyhydric organic compound selected from the group consisting of polyhydric alcohols and phenols containing at least two hydroxyl groups, the glycidyl polyether containing more than one epoxide group per molecule and having an epoxide equivalent below 1,000, (2) a polycarboxylic acid anhydride, and (3) a dihydric alcohol having a molecular weight of less than 600, wherein the ratio of glycidyl polyether to alcohol is 2 epoxide equivalents glycidyl polyether to 0.02 to 1.4 equivalents dihydric alcohol, and wherein the ratio of anhydride to alcohol is such that there is one anhydride equivalent for each hydroxyl equivalent of the alcohol and .5 to 1.9 additional anhydride equivalents for reaction with hydroxyl group of the glycidyl polyether and those formed by reaction of carboxyl groups with epoxy groups, considering an epoxide equivalent as the weight in grams of glycidyl polyether per epoxide group, an anhydride equivalent as the weight of acid anhydride in grams per anhydride group, and an equivalent dihydric alcohol as the weight in grams of alcohol per hydroxyl group, and (*b*) heating the mixture to 80° to 200° C. to bring about a reaction of anhydride groups with hydroxyl groups forming carboxyl groups, and a reaction of carboxyl groups with epoxy groups forming hydroxyl groups.

2,947,718
POLYMERIZATION OF VINYL ESTER IN THE PRESENCE OF POLYETHYLENE AND PRODUCT THEREFROM
Frank M. Rugg, West Caldwell, and James E. Potts, Roseland, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Aug. 30, 1954, Ser. No. 452,808
7 Claims. (Cl. 260—45.5)

1. The process which consists in reacting in the presence of a catalyst selected from the group consisting of benzoyl peroxide, hydroxyheptyl peroxide, methylethyl ketone peroxide, cyclohexanone peroxide, cumene hydroperoxide, tetrt-butyl hydroperoxide, p-chlorobenzoyl peroxide, di-tert-butyl peroxide, peracetic acid, di-tert-butyl diperphthalate, a preformed normally solid polyethylene and a vinyl ester of a carboxylic acid, said polyethylene being dissolved in an aromatic solvent therefor,

to form a homogeneous mixture comprising ethylene homopolymer, a homopolymer of the vinyl ester, and a graft copolymer of polyethylene and the vinyl ester, and thereafter removing said aromatic solvent.

2,947,719

METHOD OF POLYMERIZING VINYL CHLORIDE IN THE PRESENCE OF POLYETHYLENE AND PRODUCT PRODUCED THEREBY

Frank M. Rugg, West Caldwell, and James E. Potts, Roseland, N.J., assignors to Union Carbide Corporation, a corporation of New York

Filed Sept. 9, 1954, Ser. No. 454,922
7 Claims. (Cl. 260—45.5)

1. The process which consists in reacting, in the presence of benzoyl peroxide, vinyl chloride with a preformed normally solid polyethylene, said polyethylene being dissolved in an aromatic solvent therefor.

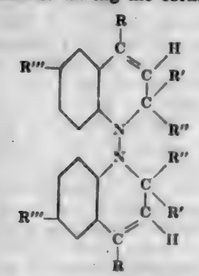
2,947,720

OXIDATION PRODUCTS OF 6-SUBSTITUTED-2,2,4-TRIALKYL DIHYDRO QUINOLINES AS ANTIOXIDANTS

Frederick J. Webb, Cuyahoga Falls, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Original application July 29, 1955, Ser. No. 525,361. Divided and this application Feb. 20, 1958, Ser. No. 716,286
10 Claims. (Cl. 260—45.8)

1. Vulcanized rubber which contains a stabilizing amount of a stabilizer having the formula



in which R, R′ and R″ are alkyl substituents of the class consisting of methyl and ethyl and R‴ is from the group consisting of alkyl, aryl, alkoxy and aryloxy; the alkyl groups of the foregoing alkyl and alkoxy substituents each containing 1 to 18 carbon atoms, and the aryl groups of the foregoing substituents being from the class consisting of phenyl and phenyl substituted with at least one substituent of 1 to 12 carbon atoms; the rubber being of the class consisting of sulfur-vulcanizable natural and synthetic rubbers which are from the class consisting of homopolymers of conjugated dienes and copolymers of conjugated dienes and an ethylenically unsaturated comonomer.

2,947,721

POLY-α-OLEFIN COMPOSITIONS CONTAINING 4-ALKOXY-2-HYDROXYBENZO-PHENONES AND N,N′-DIPHENYL-p-PHENYLENEDIAMINE

Gordon C. Newland and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 28, 1958, Ser. No. 776,698
7 Claims. (Cl. 260—45.9)

1. A solid poly-α-olefin composition selected from the group consisting of polyethylene and polypropylene compositions containing .001% to 10% by weight of a stabilizer combination comprising N,N′-diphenyl-p-phenylenediamine and a 4-alkoxy-2-hydroxybenzophenone wherein the alkoxy moiety has 12 to 14 carbon atoms, the weight ratio of said N,N′-diphenyl-p-phenylenediamine to said 4-alkoxy-2-hydroxybenzophenone being in the range of 1/30 to 30/1.

2,947,722

STABILIZED POLYMERIC OXETANE MOLDING COMPOSITIONS

Harold Boardman, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Aug. 17, 1954, Ser. No. 450,533
8 Claims. (Cl. 260—45.85)

1. As a new article of manufacture, a pelleted plastic molding composition essentially consisting of a mixture of a polymer of the group consisting of homopolymers of 3,3-bis(chloromethyl)oxetane and copolymers of 3,3-bis(chloromethyl)oxetane with at least one member of the group consisting of 3,3-disubstituted oxetanes other than 3,3-bis(chloromethyl)oxetane and oxetane, and a phenolic compound of the group consisting of phenols, esters of said phenols, and ethers of said phenols in an amount from about 0.1% to about 10% by weight of said polymer as a heat and light stabilizer therefor, said phenols having at least one substituent radical of the group consisting of alkyl radicals having at least 4 carbon atoms, aryl radicals, and aralkyl radicals, said polymer having a specific viscosity of at least about 0.3 when measured as a 1% solution in cyclohexanone at 50° C.

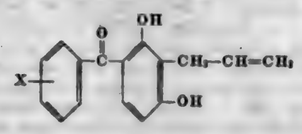
2,947,723

CHLOROETHYLENE POLYMERS STABILIZED WITH 2,4-DIHYDROXY-3-ALLYL BENZOPHENONE AND SUBSTITUTED DERIVATIVES THEREOF

Gerald A. Clark, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Nov. 7, 1956, Ser. No. 620,883
3 Claims. (Cl. 260—45.95)

1. A light stable thermoplastic composition comprising a chloro-ethylene polymer composed of at least 50 percent by weight of vinylidene chloride with any remainder being of at least one monoethylenically unsaturated comonomer and from 0.5 to 6 percent of the weight of said polymer of a 2,4-dihydroxybenzophenone derivative having the general formula:



wherein X is selected from the group consisting of hydrogen, alkyl having from 1 to about 8 carbon atoms, and chlorine.

2,947,724

NON-BLOOMING, NON-STAINING RUBBER ANTIOXIDANTS

Joseph C. Ambelang, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 20, 1957, Ser. No. 703,994
17 Claims. (Cl. 260—45.95)

1. A vulcanizable rubbery diolefin hydrocarbon polymer composition containing as an anti-oxidant 0.1 to 10 percent by weight of the rubber of a 1,1-bis(3-polyalkylcarbinyl-6-isopropyl-hydroxyphenyl)alkane of the group consisting of compounds of Formula A, Formula B and Formula C, in which R_1 and R_2 are methyl radicals, R_3 is of the group consisting of methyl and neopentyl radicals and R_4 is of the group consisting of hydrogen and alkyl radicals containing one to eight, inclusive, carbon atoms.

2,947,725

POLYEPOXIDES, ETC.

Harold G. Cooke, Jr., Louisville, Ky., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York

No Drawing. Filed May 2, 1957, Ser. No. 656,488
2 Claims. (Cl. 260—47)

1. The method of producing high molecular weight, soluble, fusible polyepoxides which comprises reacting with heat, in admixture with an organic base as a catalyst, a diepoxide selected from the group consisting of diglycidyl ethers of polyhydric phenols and diglycidyl ethers of polyhydric alcohols and cyanuric acid in such proportions that there are from about 1.5 to 2 epoxide groups of the diepoxide for each of the hydroxyl groups of the cyanuric acid, the amount of heat supplied to the reaction mass being insufficient to render the reaction product insoluble and infusible.

2,947,726

EPOXIDE RESINS

William J. Belanger, Louisville, Ky., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York

No Drawing. Filed May 2, 1957, Ser. No. 656,490
12 Claims. (Cl. 260—47)

1. The method of producing high molecular weight, soluble, fusible epoxide resins which comprises heating to a reaction temperature cyanuric acid with a sufficient excess of a diepoxide selected from a member of the group consisting of diglycidyl ethers of dihydric phenols and diglycidyl ethers of dihydric alcohols to react with all of the acid groups of the cyanuric acid to give a polyepoxide reaction product containing at least three epoxide groups, adding to the reaction mixture a monofunctional reactant selected from a member of the group consisting of a monohydric phenol, a monocarboxylic acid and a monohydric alcohol in limited amount and reacting the polyepoxide with the monofunctional reactant to give a soluble, fusible epoxide resin of lower epoxide content, said reaction being carried out in admixture with an organic base as a catalyst.

2,947,727

CATALYTIC POLYMERIZATION PROCESS

Kenneth W. Bartz, Austin, Tex., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 21, 1957, Ser. No. 691,140
4 Claims. (Cl. 260—67)

1. A process for preparing a tough, high molecular weight material which comprises polymerizing trioxane under substantially anhydrous conditions at a temperature between 0° C. and the boiling point of trioxane in admixture with catalyst comprising an alkane sulfonic acid having up to 5 carbon atoms.

2,947,728

CATALYTIC POLYMERIZATION OF TRIOXANE

Kenneth W. Bartz, Summit, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Filed Oct. 21, 1957, Ser. No. 691,141
8 Claims. (Cl. 260—67)

1. A process for preparing a tough, high molecular weight material which comprises polymerizing trioxane under substantially anhydrous conditions in contact with not more than about 1%, based on the weight of trioxane, of a catalyst selected from the group consisting of thionyl chloride, phosphorus trichloride, stannic chloride, titanium tetrachloride, and zirconium tetrachloride.

2,947,729

SYNTHESIS OF POLYESTERS USING LEAD ACETATE AS CATALYST

John K. Sullivan, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Mar. 30, 1954, Ser. No. 419,925
12 Claims. (Cl. 260—75)

1. In a process for preparing a polyester by the self-condensation, with the removal of glycol, of a bis glycol ester of at least one acid selected from the group consisting of terephthalic acid and isophthalic acid, the improvement which comprises carrying out said condensation in the presence of a catalytic amount of lead acetate.

2,947,730

POLYMERS OF VINYLPENTACHLOROPHENYL SULFIDE AND METHOD OF MAKING THE SAME

Earl D. Holly and William R. Nummy, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 3, 1957, Ser. No. 632,265
10 Claims. (Cl. 260—79.7)

1. A solid polymeric composition of matter consisting essentially of from 20 to 50 percent on a molar basis of vinylpentachlorophenyl sulfide copolymerized with from 80 to 50 mole percent of at least one other monoethylenically copolymerizable vinyl compound selected from the group consisting of (*a*) monovinyl aromatic hydrocarbons of the benzene series, (*b*) alkyl esters of acrylic acid, and (*c*) acrylonitrile.

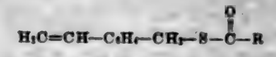
2,947,731

VINYLBENZYL THIOLESTERS OF CARBOXYLIC ACIDS AND POLYMERS THEREOF

William R. Nummy, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Apr. 4, 1957, Ser. No. 650,569
12 Claims. (Cl. 260—79.7)

4. A vinylbenzyl thiolester having the general formula:



wherein R is a member of the group consisting of the phenyl radical and alkyl radicals containing from 1 to 17 carbon atoms.

11. A polymer comprising vinylbenzyl thiol chemically combined in the polymer molecule.

2,947,732

TERNARY POLYMERS OF TRIFLUOROETHYL ACRYLATE, ACRYLONITRILE, AND AN ESTER OF ACRYLIC ACID

Benjamin D. Halpern, Jenkintown, and Wolf Karo, Elkins Park, Pa., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 8, 1958, Ser. No. 727,037
4 Claims. (Cl. 260—80.5)

1. Ternary copolymers of a mixture of the monomers trifluoroethyl acrylate of the formula

$$CH_2=CH—COO—CH_2CF_3$$

acrylonitrile, and a polymerizable ester selected from the group consisting of methyl, ethyl, butyl, octyl, methoxyethyl and phenyl esters of acrylic acid, the proportions by weight of the three monomers being about 85–95 parts, 0.5–10 parts, and 0.5–10 parts, respectively, for 86–115 parts total weight of the said mixture.

2,947,733
PROCESS OF CURING A RUBBERY COPOLYMER OF A CONJUGATED DIENE AND A CARBOXYLIC ACID OR ANHYDRIDE WITH DICYANDIAMIDE, AND CURED PRODUCT OBTAINED THEREBY

Byron H. Werner, Akron, and Robert J. Reid, Canal Fulton, Ohio, assignors to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Apr. 19, 1957, Ser. No. 653,753
5 Claims. (Cl. 260—82.1)

1. The process of curing an elastomer which is an elastomeric copolymer of monomers comprising a conjugated diene and an olefinically unsaturated monomer from the class consisting of carboxylic acids and carboxylic acid anhydrides which contains from 0.03 to 0.4 chemical equivalent by weight of carboxyl groups of the class consisting of free and anhydride carboxyl groups per 100 parts of the combined weight of said diene and olefinically unsaturated monomer (calculated as COOH), which process comprises mixing the same with a small amount of dicyandiamide in finely divided form and then curing by heating to a temperature of 140 to 185° C.

2,947,734
COPOLYMER OF 2,2,2-TRIFLUOROETHYL ACRYLATE AND VINYLIDENE CHLORIDE

Benjamin D. Halpern, Jenkintown, and Wolf Karo, Elkins Park, Pa., assignors to The Borden Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Apr. 9, 1958, Ser. No. 727,235
1 Claim. (Cl. 260—86.3)

The copolymer of 75 to 98 parts by weight of the 2,2,2-trifluoroethyl ester of acrylic acid and 2 to 25 parts by weight of vinylidene chloride.

2,947,735
PROCESS FOR THE PRODUCTION OF COPOLYMERS OF ETHYLENE

Herbert Barti, Koln-Stammheim, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Filed Dec. 19, 1957, Ser. No. 703,763
6 Claims. (Cl. 260—87.3)

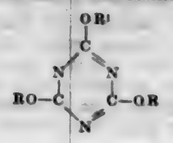
1. A process for the production of a novel copolymer which comprises copolymerizing ethylene and at least one vinyl ester selected from the group consisting of vinyl acetate and vinyl propionate, in a homogeneous liquid phase consisting essentially of tertiary butyl alcohol and said vinyl ester, at temperatures between 10° and 200° C. and at a pressure of at least 10 atm. in the presence of an organic free radical-forming polymerization catalyst and in the absence of an emulsifying agent, said tertiary butyl alcohol being present in an amount by weight of 3 to 10 times to that of vinyl ester, the ethylene and said vinyl ester being used in a proportion by weight varying between 2:1 and 20:1, to produce copolymers in which the vinyl ester is present in an amount not surpassing 35 percent by weight.

2,947,736
RESIN COMPOSITIONS

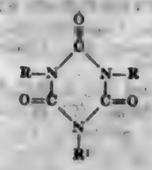
Lennart A. Lundberg, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 31, 1956, Ser. No. 631,417
16 Claims. (Cl. 260—88.3)

1. A composition of matter comprising a polymerized product obtained by reacting a triester of an acid selected from the group consisting of cyanuric and isocyanuric and corresponding to one of the formulas



and



in which R^1 is a member of the group consisting of alkyl, allyl and methallyl and R is a member of the group consisting of allyl and methallyl with a halogen until the amount of combined halogen is from about 0.5 to 2.25 mols per mol of the ester, said halogenation product containing residual ethylenic unsaturation, and then polymerizing the resulting halogenated material by heating it in the presence of a polymerization catalyst.

2,947,737
POLYMERIZATION OF CONJUGATED DIOLEFINES WITH A CATALYST COMPRISING METALLIC LITHIUM DISPERSED IN A CRYSTALLINE SALT

Richard S. Stearns, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Filed Feb. 8, 1956, Ser. No. 564,109
6 Claims. (Cl. 260—94.2)

1. Process which comprises contacting a substance, selected from the group consisting of conjugated diolefines and mixtures thereof with styrene and with alpha-methyl styrene, with a catalyst comprising a crystalline salt having reduced metallic lithium dispersed in the crystal lattice thereof so as to exhibit a blue coloration.

2,947,738
ETHYLENE POLYMERIZATION

Norman L. Hardwicke, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Feb. 24, 1959, Ser. No. 794,822
2 Claims. (Cl. 260—94.9)

1. The process of polymerizing ethylene which comprises heating ethylene at a temperature within the range from about 100° C. to about 400° C. and a pressure in the range from about 2500 to about 50,000 p.s.i.g. in the presence of perchloryl fluoride, the amount of perchloryl fluoride present being in the range from about 0.001% to about 5.0% by weight of the ethylene to be polymerized.

2,947,739
PROCESS FOR THE HYDROGENATION OF LIGNIN AND LIGNOCELLULOSIC MATERIALS

Franco Gaslini, Via Venlero 14, Milan, Italy

No Drawing. Filed June 9, 1958, Ser. No. 740,523
Claims priority, application Italy Mar. 7, 1958
6 Claims. (Cl. 260—134)

1. A process for the selective, liquid-phase, catalytic hydrogenation of the noncellulosic components of lignocellulosic materials which comprises suspending a material selected from the group consisting of lignocellulosic materials and lignin in a solvent selected from the group consisting of inert hydrocarbons, ethers, alcoholics, esters, having a metal carbonyl dissolved therein as catalyst, and reacting the resulting suspension with mixtures of carbon monoxide and hydrogen, both in substantial amounts at temperatures up to 200° C. and at a pressure above 50 atmospheres.

2,947,740
CATALYSIS OF PHOSPHOSULFURIZATION REACTIONS

John A. Brown, Metuchen, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 13, 1958, Ser. No. 734,821
5 Claims. (Cl. 260—139)

1. In a process wherein phosphorus pentasulfide is reacted with a hydrocarbon material selected from the group consisting of C_2–C_{10} monoolefin polymers having a molecular weight in the range of 500–100,000 and petroleum bright stocks having viscosities above 100 SUS at 210° F., viscosity indices above 80 and initial boiling points above 700 F. abs. at a temperature in the range of 350° to 600° F. to obtain a product useful as a lubricant additive containing above 2 weight percent of combined phosphorus and above 4 weight percent of combined sulfur; the improvement which comprises catalyzing the reaction between said phosphorus pentasulfide and hydrocarbon material by adding to the reaction mixture elemental sulfur in an amount in the range of 0.01 to 1.5 weight percent and in the range of 0.01 to 0.1 weight percent of an oxygen acid of phosphorus, consisting of hydrogen phosphorus and oxygen, whereby the quality of the product is enhanced.

2,947,741
ISOBEBEERINE NICOTINATE

Edgar A. Ferguson, Jr., 150 Woodruff Ave., Brooklyn, N.Y.

No Drawing. Filed Dec. 17, 1958, Ser. No. 780,952
3 Claims. (Cl. 260—236)

1. The salt of isobebeerine and an acid selected from the group consisting of pyridine-2-carboxylic acid and pyridine-3-carboxylic acid.

2,947,742
4-AMINO-6-TRIFLUOROMETHYL-N,N'-DI-2-PYRIDYL-m-BENZENEDISULFONAMIDE

Lee C. Cheney, Fayetteville, and Charles T. Holdrege, Camillus, N.Y., assignors, by mesne assignments, to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 15, 1959, Ser. No. 820,125
4 Claims. (Cl. 260—239.65)

1. A compound selected from the group consisting of 4 - amino - 6 - trifluoromethyl - N,N' - di - 2 - pyridyl-m-benzenedisulfonamide and nontoxic metal salts thereof.

2,947,743
N^4-AMINOACETYL-, N^4-LOWER ALKYLAMINOACETYL- AND N^4-DI-LOWER ALKYLAMINOACETYL-6-SULFANILAMIDO - 2,4 - DIMETHOXYPYRIMIDINES

Max Hoffer, Nutley, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed May 12, 1959, Ser. No. 812,588
7 Claims. (Cl. 260—239.75)

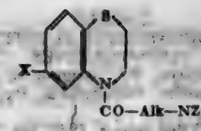
1. A compound of the group consisting of N^4-[(R^1,R^2-amino)-acetyl]-6-sulfanilamido-2,4-dimethoxypyrimidine, wherein R^1 and R^2 each represents a member of the group consisting of hydrogen and lower alkyl, and medicinally acceptable acid addition salts thereof.

2,947,744
4-AMINOALKANOYL-2,3-DIHYDRO-1,4-BENZOTHIAZINES AND PROCESS

Harman S. Lowrie, Northbrook, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Oct. 27, 1958, Ser. No. 769,574
10 Claims. (Cl. 260—243)

1. A compound of the formula



wherein X is selected from the group consisting of hydrogen and chlorine; Alk is a lower alkylene radical containing more than 1 carbon atom; and NZ is selected from the group consisting of di(lower alkyl)amino, piperidino, hydroxy(lower alkyl)piperidino, piperazino, methylpiperazino, and hydroxy(lower alkyl)piperazino radicals.

2,947,745
SUBSTITUTED PHENOXAZINE SEDATIVE AGENTS

Paul N. Craig, Roslyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Aug. 11, 1958, Ser. No. 754,131
14 Claims. (Cl. 260—244)

13. 2-chloro-10-(3' - dimethylaminopropyl) - phenoxazine.

2,947,746
NEW PREPARATION OF SUBSTITUTED PHENOXAZINES AND INTERMEDIATES THEREFOR

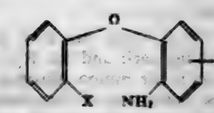
Michael P. Olmsted, Gladwyne, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 14, 1959, Ser. No. 813,682
8 Claims. (Cl. 260—244)

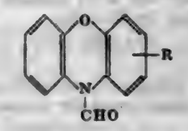
1. The method of forming compounds having the following basic structural formula:



in which R represents a member selected from the group consisting of trifluoromethyl, fluorine, chlorine, bromine, lower alkoxy and lower alkyl, which comprises reacting with a 50 to 98% aqueous formic acid solution at from about 140–180° C. a compound having the following basic structural formula:



in which R is as defined here above and X represents a member selected from the group consisting of chlorine, bromine and iodine, to form the N-formyl derivative: reacting said N-formyl derivative by heating at from about 80–250° C. in the presence of an alkali metal carbonate in a solvent selected from the group consisting of N,N-dimethylformamide, N,N-dimethylacetamide, benzene, xylene and toluene to form a N-formyl compound having the following basic structural formula:



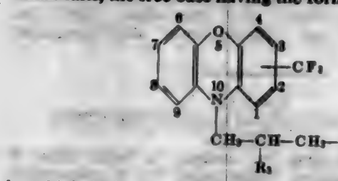
in which R is as defined here above; and reacting said N-formyl compound with an aqueous solution of a member selected from the group consisting of sodium hydroxide and potassium hydroxide.

2,947,747
TRIFLUOROMETHYL SUBSTITUTED PHENOXAZINES

Paul N. Craig, Roslyn, Pa., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed June 8, 1959, Ser. No. 818,509
13 Claims. (Cl. 260—244)

1. Chemical compounds of the class consisting of a free base and its nontoxic organic and inorganic acid addition salts, the free base having the formula:



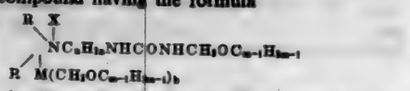
in which Z is a member selected from the group consisting of dimethylamino, diethylamino, N-hydrogen piperazinyl, N-alkylpiperazinyl, the alkyl moiety having from 1 to 4 carbon atoms, N-(ω-hydroxyalkylene)-piperazinyl, N - (ω - alkanoyloxyalkylene) - piperazinyl, the alkanoyl moiety having from 2 to 4 carbon atoms, N - (ω - benzoyloxyalkylene) - piperazinyl, N - (ω - hydroxyalkyleneoxyalkylene) - piperazinyl, N - (ω - hydroxyethoxyethoxyethyl) - piperazinyl, N - (ω - carbamyloxyalkylene) - piperazinyl, N - (ω - dimethylcarbamyloxyalkylene) - piperazinyl and N - (ω-diethylcarbamyloxylakylene)-piperazinyl; and R_3 is a member selected from the group consisting of hydrogen and methyl; each of the aforesaid alkylene moieties having from 2 to 4 carbon atoms.

2,947,748
QUATERNARY AMMONIUM COMPOUNDS OF THE UREIDOALKYLAMMONIUM TYPE

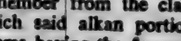
Ruth H. Zeitschel, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed June 30, 1955, Ser. No. 519,271
14 Claims. (Cl. 260—247.2)

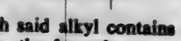
3. As a composition of matter, a quaternary ammonium compound having the formula



in which the R's, taken singly, are alkyl groups of not over two carbon atoms each and the R's, taken collectively and jointly with the amino nitrogen, form members from the class consisting of morpholino, thiamorpholino, pyrrolidinyl, methylpiperazinyl and piperidino, *n* is an integer of two to three, *m* is an integer of one to five, X is an anion having a group weight of about 35.5 to 127, *b* is an integer of one to three, and M has at least one and no more than three methylolatable groups and is a member from the class consisting of alkanamido in which said alkan portion contains two eighteen carbon atoms having the formula,



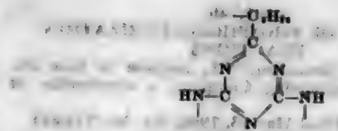
alkylureido in which said alkyl contains two to eighteen carbon atoms having the formula,



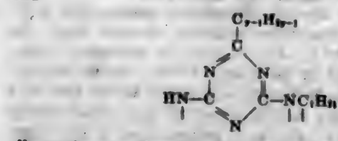
alkanoylureido in which said alkanoyl contains two to eighteen carbon atoms having the formula,



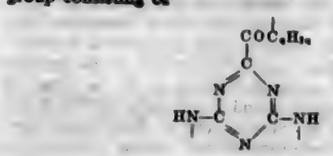
alkylguanamino in which said alkyl contains from one to eighteen carbon atoms having a formula from the group consisting of



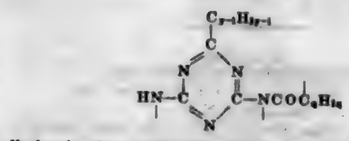
and



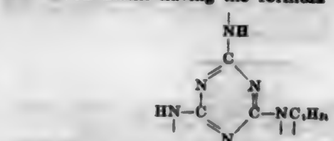
alkanoylguanamino in which said alkanoyl contains two to eighteen carbon atoms having a formula from the group consisting of



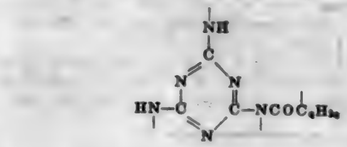
and



alkylmelamino in which said alkyl contains two to eighteen carbon atoms having the formula

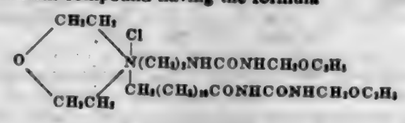


and alkanoylmelamino in which said alkanoyl contains two to eighteen carbon atoms having the formula



in which *q* is an integer of one to seventeen, *t* is an integer of two to eighteen, *y* is an integer of one to three, and *z* is an integer of one to eighteen, the carbon atom in M containing the free valence is attached to the amino nitrogen atom of the remainder of the molecule.

11. As a new composition of matter, the quaternary ammonium compound having the formula



2,947,749
α-(3-MORPHOLYL)-BENZHYDROL AND ITS SALTS

Stanley O. Winthrop, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed June 19, 1959, Ser. No. 821,369
3 Claims. (Cl. 260—247.7)

1. A compound selected from the group which consists of α-(3-morpholyl)-benzhydrol and its hydrochloride salt.

2,947,750
FORMALDEHYDE ABSORPTION

William P. Gerg, Bainbridge, N.Y., assignor to The Borden Company, a corporation of New Jersey

No Drawing. Filed Feb. 8, 1957, Ser. No. 638,937
3 Claims. (Cl. 260—249.6)

1. The method of absorbing and concentrating formaldehyde, which comprises oxidizing methanol in a furnace to form a gaseous mixture containing formaldehyde in predominantly monomeric form, introducing said gaseous mixture at a temperature of about 150°–380° C. into an aqueous dispersion of an acceptor selected from the group consisting of urea and melamine, said dispersion being maintained at a temperature of about 50°–90° C. and a pH approximately within the range 3.5–5.5, and continuing the introduction of the gaseous formaldehyde into said acceptor dispersion to form a clear stable solution containing at least 2–7 moles of formaldehyde to 1 mole of the acceptor.

3. The process of claim 1 in which the acceptor dispersion is a suspension of melamine in water.

2,947,751
DERIVATIVES OF DIHYDROERGOTAMINE

Georg Seitz, Darmstadt, and Karl Kritzer, Darmstadt-Arheilgen, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Darmstadt, Germany, a corporation of Germany

No Drawing. Filed Mar. 27, 1958, Ser. No. 724,238
Claims priority, application Germany June 7, 1957
1 Claim. (Cl. 260—285.5)

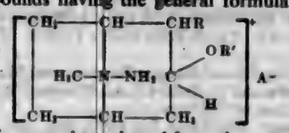
Dihydroergotamine diacetate.

2,947,752
5-AMINOCOCAINIUM COMPOUNDS

Bernard Rudner, Pittsburgh, Pa., and Aristotle G. Prapas, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Feb. 4, 1959, Ser. No. 791,012
6 Claims. (Cl. 260—292)

1. Compounds having the general formula:



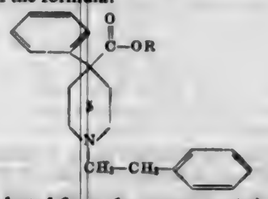
wherein R is a member selected from the group consisting of carboxy and carboloweralkoxy; R′ is a member selected from the group consisting of hydrogen and monocarbocyclic aroyl; and A^- is a pharmaceutically acceptable anion.

2,947,753
N-(β-PHENYLETHYL) -4- PHENYL - 4 - CARBOALKOXYPIPERIDINES AND PROCESSES OF PREPARING THEM

Karl Pfister III, Westfield, and Arsenio A. Pessolano, Linden, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed May 26, 1955, Ser. No. 511,413
5 Claims. (Cl. 260—294.3)

5. A compound selected from the group consisting of compounds of the formula:



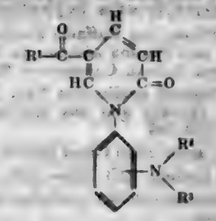
where R is selected from the group consisting of methyl and ethyl, and acid addition salts.

2,947,754
SUBSTITUTED PYRIDONES

John V. Scudi, Springfield, David B. Reisner, Cedar Grove, and Scott J. Childress, Newark, N.J., assignors to Wallace & Tiernan Incorporated, Belleville, N.J., a corporation of Delaware

No Drawing. Filed Nov. 12, 1958, Ser. No. 773,192
5 Claims. (Cl. 260—295.5)

1. A compound of the group consisting of pyridone compounds having the formula:



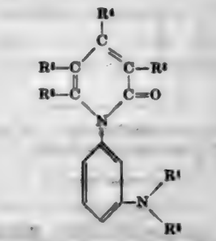
in which R^1 is selected from the group consisting of hydroxy, lower alkoxy, NH_2, and lower alkamine; R^2 is selected from the group consisting of hydrogen, lower alkyl, and lower alkanoic acid acyl; and R^3 is selected from the group consisting of hydrogen and lower alkyl; and the non-toxic acid salts of these pyridone compounds.

2,947,755
SUBSTITUTED 1-m-AMINOPHENYL-2-PYRIDONES

John V. Scudi, Springfield, and David B. Reisner, Cedar Grove, N.J., Scott J. Childress, Broomall, Pa., and Lewis A. Walter, Madison, N.J., assignors to Wallace & Tiernan Incorporated, Belleville, N.J., a corporation of Delaware

No Drawing. Filed Feb. 5, 1959, Ser. No. 791,249
3 Claims. (Cl. 260—296)

1. A m-amino compound of the group consisting of those having the formula:



said compound being selected from the group consisting of: (*a*) the compounds in which R^2, R^4, R^5 and R^6 are substituents selected from the group consisting of hydrogen and lower alkyl groups, and (*b*) the compound in which R^4 is phenyl and in which the substituents R^2, R^5 and R^6 are each hydrogen; and wherein, in all said compounds of said groups (*a*) and (*b*) above, R^1 and R^3 are substituents selected from the group which consists of lower alkyl groups, lower alkanoic acid acyl and hydrogen; and the non-toxic mineral acid addition salts of the aforesaid amino compounds.

2,947,756
PROCESS FOR PREPARATION OF 2(N,N-DI-LOWERALKYL - AMINO - LOWERALKYL)-3[(2-PYRIDYL)-(R_1)METHYL]-INDENES

Charles Ferdinand Huebner, Chatham, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey

No Drawing. Filed May 5, 1959, Ser. No. 810,998
3 Claims. (Cl. 260—296)

1. Process for the preparation of 2-(N,N-di-lower alkyl-amino-lower alkyl)-3-[(2-pyridyl)-(R_1)methyl]-in-

denes, in which R_1 represents a member of the group consisting of hydrogen and lower alkyl, which comprises reacting a 2-(N,N-di-lower alkyl-amino-lower alkyl)-indan-1-one with a (2-pyridyl)-lower alkyl lithium compound and dehydrating a resulting indan-1-ol with mineral acids.

2,947,757

PROCESS FOR PREPARING 5-HYDROXY-TRYPTAMINE THROUGH NEW INTERMEDIATES

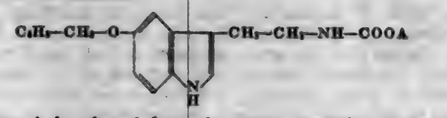
Romeo Justoni, Milan, and Raffaele Pentina, Cantenovo Brianza, Italy; said Pentina assignor to Francesco Vismara Societa per Azioni, Cantenovo Brianza, Italy

No Drawing. Original application Feb. 21, 1956, Ser. No. 566,776. Divided and this application Feb. 18, 1957, Ser. No. 644,706

Claims priority, application Great Britain Apr. 1, 1955

7 Claims. (Cl. 260—319)

7. β-[3-(5-benzyloxy)-indolyl]-ethylcarbamic acid esters of the formula



where A is selected from the group consisting of lower alkyl radicals containing up to 5 carbon atoms and benzyl.

2,947,758

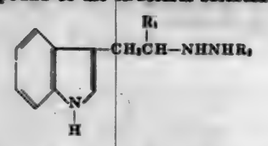
3-(ω-HYDRAZINO)ALKYLINDOLES

Richard A. Robinson, Evanston, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Apr. 28, 1959, Ser. No. 809,351

4 Claims. (Cl. 260—319)

1. A compound of the structural formula



wherein R_1 and R_2 are selected from the group consisting of hydrogen and lower alkyl radicals.

2,947,759

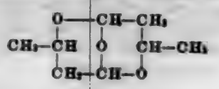
ACETALDOL CONDENSATION PRODUCT AND PROCESS FOR PREPARATION

Herbert S. Johnson, Shawinigan Falls, Quebec, Canada, assignor to Shawinigan Chemicals Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Filed Feb. 3, 1958, Ser. No. 712,621

6 Claims. (Cl. 260—340.7)

1. The compound having the structural formula:



2,947,760

CHROMAN DERIVATIVES

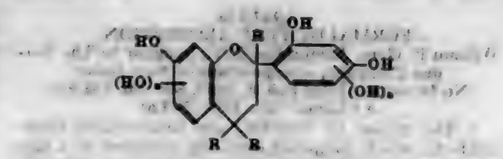
Pieter Brain and Arie Klootwijk, Amsterdam, Netherlands, assignors to Shell Oil Company, a corporation of Delaware

No Drawing. Filed May 16, 1957, Ser. No. 659,462

Claims priority, application Netherlands May 17, 1956

4 Claims. (Cl. 260—345.2)

3. As a new composition of matter, a compound of the formula



wherein R is a lower alkyl radical and n is 0 to 1.

2,947,761

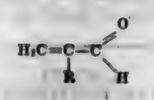
EPOXIDATION OF ALDEHYDES

George B. Payne, Kensington, Calif., assignor to Shell Oil Company, a corporation of Delaware

No Drawing. Filed June 2, 1958, Ser. No. 738,943

13 Claims. (Cl. 260—348.5)

1. A process which comprises reacting an alpha-methylidene alkanal of 3 to 9 carbon atoms per molecule of the formula



wherein R represents a member of the group consisting of hydrogen and alkyl with hydrogen peroxide in the liquid phase at about 0° to about 100° C. in the proportions of about 0.5 to about 1.5 moles of hydrogen peroxide per mol of alpha-methylidene alkanal while maintaining the pH of the mixture at least 4 but no higher than 12 throughout the reaction using a time not substantially greater than about 24 hours which is shorter the higher the temperature whereby an alpha,beta-epoxypropionaldehyde corresponding to said alpha-methylidene alkanal is produced, said alpha-methylidene alkanal and hydrogen peroxide being essentially the sole reactants in said reaction.

2,947,762

2-ARALKYL DERIVATIVES OF Δ^4-PREGNENE-3,20-DIONE AND PROCESS FOR THEIR PRODUCTION

Howard J. Ringold and George Rosenkranz, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Filed Jan. 29, 1957, Ser. No. 636,858

Claims priority, application Mexico Jan. 31, 1956

4 Claims. (Cl. 260—397.3)

1. 2α-benzyl-Δ^4-pregnene-3,20-dione.

2,947,763

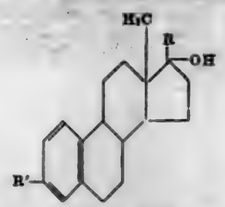
17α-(1-ALKYNYL)- AND 17α-(1-ALKENYL)-1,3,5(10)-ESTRATRIEN-17β-OLS AND INTERMEDIATES

Arthur H. Goldkamp, Deerfield, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Dec. 17, 1958, Ser. No. 780,920

9 Claims. (Cl. 260—397.3)

1. A compound of the structural formula



wherein R is selected from the group consisting of lower 1-alkynyl and lower 1-alkenyl radicals and R′ is selected from the group consisting of hydrogen and lower alkyl radicals.

9. 3-methyl-1,3,5(10)-estratrien-17-one.

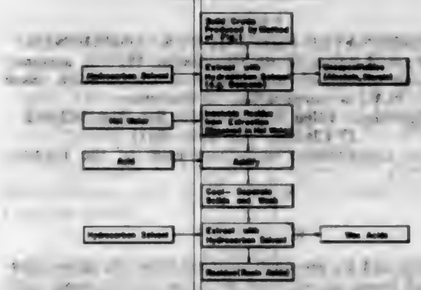
2,947,764

METHOD OF PRODUCING, SEPARATING AND RECOVERING REACTION PRODUCTS FROM BARK

Piotr Zaczzak, Coos Bay, Oreg., assignor to Grenco, Inc., Portland, Oreg., a corporation of Washington

Filed Nov. 18, 1955, Ser. No. 546,250

2 Claims. (Cl. 260—397.25)



1. The process of removing unsaponifiables from a crude mass obtained from bark by treating the bark in alcoholic solution of alkali metal hydroxide and separating the liquor from the solid residue and then removing the alcohol to obtain the crude mass, the process comprising extracting the crude mass with a hydrocarbon solvent selected from the group consisting of hexane and benzene, concentrating the hydrocarbon solvent solution, dissolving the concentrate in acetone wherein white crystals are formed, filtering to separate the crystals from the acetone solution, concentrating the acetone solution by distillation, dissolving the concentrate in ethyl alcohol wherein light yellow crystals are formed and removing the light yellow crystals from the solution.

2,947,765

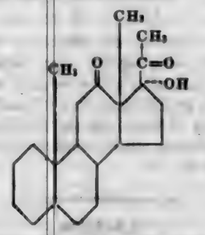
PREPARATION OF THE 12-KETO ISOMER OF CORTISONE

Percy L. Julian, Oak Park, Arthur Magnani, Wilmette, and Chappelle C. Cochrane, Maywood, Ill., assignors, by mesne assignments, to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 7, 1955, Ser. No. 551,510

2 Claims. (Cl. 260—397.45)

1. The process which comprises brominating a pregnane compound of the general formula



which also possesses in the 3-position an acyloxy group of a lower hydrocarbon carboxylic acid and in which the valences not shown are satisfied by hydrogen to form the 21-bromo derivative, hydrolyzing to form a 3-hydroxy group, treating the resulting 3-hydroxy-21-bromo compound with an alkali metal salt of a lower fatty acid to replace the 21-bromo group with the acyloxy group of the alkali metal salt and oxidizing the 3-OH group to a keto group to form a 17α,21-dihydroxy-3,12,20-trione-21-mono-acylate compound, and thereafter brominating to introduce a 4-bromo group and then removing the elements of HBr from the resulting brominated compound to produce a Δ^4-pregnene compound.

2,947,766

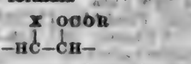
ACYLOXY-HALO DERIVATIVES OF ALIPHATIC ACIDS AND THEIR ESTERS

Edward F. Riener, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Apr. 16, 1954, Ser. No. 423,846

8 Claims. (Cl. 260—485)

1. As composition of matter a compound selected from the class consisting of 1) saturated fatty acids containing 16 to 22 carbon atoms and having at least one acyloxyhalo group of the formula



wherein X is a halogen atom from the class consisting of chlorine and bromine, and R is a member of the class consisting of a hydrogen atom and a methyl group, and 2) acyloxyhalo substituted esters of the said saturated fatty acids, the alcohol moiety of said esters being selected from the group consisting of monohydric unsubstituted alkanols containing from 1 to 18 carbon atoms, benzyl alcohol and cyclohexyl alcohol, unsubstituted alkane diols containing from 2 to 12 carbon atoms, polyalkylene glycol, glycerol, and pentaerythritol.

2,947,767

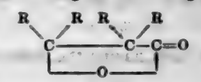
PROCESS FOR THE MANUFACTURE OF UNSATURATED ACIDS AND SALTS FROM β-LACTONES

Gaylord K. Fisch and Charles D. Stringer, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 3, 1958, Ser. No. 771,289

4 Claims. (Cl. 260—414)

1. A method of obtaining salts of unsaturated acids from β-lactones comprising reacting a β-lactone having 3–12 carbon atoms having the following general formula:



in which R is selected from the class consisting of hydrogen and alkyl groups with aqueous alkali at a temperature of 50–100° C.

2,947,768

NEW CONDENSATION PRODUCTS, THEIR METAL SALTS AND THEIR METAL COMPOUNDS, AND PROCESS FOR THEIR PRODUCTION

Ernst Bayer, Gellweilerhof, Siebeldingen, Uber Landau, Germany

No Drawing. Filed Dec. 10, 1956, Ser. No. 627,133

Claims priority, application Germany Dec. 15, 1955

5 Claims. (Cl. 260—429.1)

1. A compound of a Schiff's base condensation product of an amino compound selected from the group consisting of o-amino phenol, o-amino thiophenol 2,6-diamino-p-cresol and 2,4,6-triamino phenol, and a dicarbonyl compound selected from the group consisting of glyoxal, succindialydehyde and methyl glyoxal with a metal selected from the group consisting of copper, nickel, uranium, cobalt and barium.

2,947,769

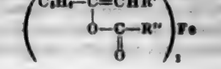
BIS(ACYLCYCLOPENTADIENYL)IRON ENOL ESTERS

Roy L. Pruett, Tonawanda, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Jan. 24, 1958, Ser. No. 710,855

4 Claims. (Cl. 260—439)

1. As compositions of matter the organometallic compounds having the formula



wherein R′ is a group selected from the class consisting of hydrogen and lower alkyl, and R″ is a group selected from the class consisting of lower alkyl, halogen-substituted lower alkyl, phenyl, lower alkylphenyl and naphthyl.

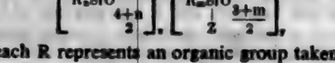
2,947,770

DIFORMYLBUTYL AND DIFORMYLCYCLOPENTYL CONTAINING SILOXANES

Donald L. Bailey, Snyder, and William T. Black, Buffalo, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed May 13, 1955, Ser. No. 508,313
8 Claims. (Cl. 260—448.2)

1. An organopolysiloxane having the formula:



where each R represents an organic group taken from the class consisting of alkyl and alkoxy groups, Z represents an organic group taken from the class consisting of 1,4-diformyl-2-butyl and 2,4-diformylcyclopentyl groups, *m* has a value of from 0 to 2, *n* has a value of from 1 to 3, *x* and *y* have values of from 1 to 50 and the sum of *x*+*y* having a value of from 2 to 60.

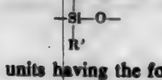
2,947,771

AMINOALKYLPOLYSILOXANES AND PROCESS FOR THEIR PRODUCTION

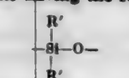
Donald L. Bailey, Snyder, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 12, 1956, Ser. No. 615,587
9 Claims. (Cl. 260—448.2)

1. End-blocked polysiloxanes composed of 1 to 30 siloxane units having the formula:



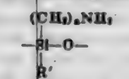
5 to 400 siloxane units having the formula:



wherein "*a*" is an integer of at least 3 and R′ is a group selected from the class consisting of methyl and phenyl, and 1 to 2 terminal siloxane units of the formula:

≡Si—O—

wherein one of the unfilled valences of silicon is satisfied by a member selected from the class consisting of the $H_2N(CH_2)_a$-grouping, wherein *a* is a number having a value of at least 3, and alkoxy groups and wherein the remaining unfilled valences of said silicon are satisfied by a member selected from the class consisting of methyl and alkoxy groups, said siloxane units of the formula:



can be present in said end-blocked polysiloxanes as a part of said terminal siloxane units.

2,947,772

ALKOXYSILANES AND THEIR USE AS LUBRICANTS

Benjamin A. Eynon and Harry M. Schiefer, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Filed Nov. 10, 1958, Ser. No. 772,731
7 Claims. (Cl. 260—448.8)

1. An organosilicon compound selected from the group consisting of silanes of the formula $RSi(OR')_3$ and disiloxanes of the formula $[R(R'O)_2Si]_2O$ in which R is an alkyl group of from 8 to 20 carbon atoms inclusive and R′ is a branched alkyl group of from 4 to 20 carbon atoms inclusive in which the branching occurs at the carbon atom beta to the oxygen, in said silanes there being a total of from 30 to 50 inclusive carbon atoms per molecule and in said siloxanes there being a total of from 32 to 70 inclusive carbon atoms per molecule.

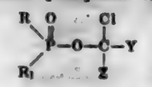
2,947,773

HALOGENATED PHOSPHORUS COMPOUNDS

James Forrest Allen, South Charleston, W. Va., assignor to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware

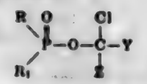
No Drawing. Filed Feb. 1, 1956, Ser. No. 562,642
17 Claims. (Cl. 260—461)

3. The alpha-chloro phosphate ester of the formula

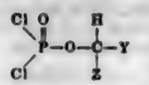


wherein R and R_1 are each selected from the group consisting of lower alkoxy and di(lower alkyl)amino radicals; Y is selected from the group consisting of hydrogen, halogen, alkyl radicals of 1 to 8 carbon atoms and haloalkyl radicals of 1 to 7 carbon atoms; and Z is selected from the group consisting of alkyl radicals of 1 to 8 carbon atoms and haloalkyl radicals of 1 to 7 carbon atoms; and wherein said alpha-chloro phosphate ester has at least as many halogen atoms on the alpha carbon as on any carbon atom adjacent to said alpha carbon.

14. The process of preparing an alpha-chloro phosphate ester of the formula:



wherein Y is selected from the group consisting of hydrogen, halogen, alkyl radicals of 1 to 8 carbon atoms and haloalkyl radicals of 1 to 7 carbon atoms; Z is selected from the group consisting of alkyl radicals of 1 to 8 carbon atoms and haloalkyl radicals of 1 to 7 carbon atoms; and R and R_1 are each selected from the group consisting of lower alkoxy and di(lower alkyl)amino radicals; comprising: first reacting chlorine with a phosphorodichloridate of the formula



wherein Y and Z are as described, in the presence of a free-radical producing agent; then reacting the alpha-chloro phosphorodichloridate produced with a compound selected from the group consisting of alcohols and amines; thereby replacing at least one of the chlorine atoms attached to phosphorus with a radical of the group represented by R and R_1.

2,947,774

PREPARATION OF ALKYL PYROPHOSPHATE EXTRACTANTS

Charles A. Levine, Concord, Calif., William E. Skiens, Seattle, Wash., and George R. Moore, Oakland, Calif., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Filed Apr. 25, 1956, Ser. No. 580,670
4 Claims. (Cl. 260—461)

1. A process comprising mixing P_2O_5 with a first organic solvent-diluent to produce a slurry therewith, adding to said slurry an alcohol having a chain length in the range of 4 to 17 carbons atoms and at a mole ratio of 2:1 with respect to said P_2O_5 to react with said alcohol

to produce a solution of said extractant compound having a final concentration below about 30% in said solvent, separating the alkyl pyrophosphate extractant compound from said first solvent, and then diluting said separated extractant compound with a second solvent to provide an extractant phase used in the extraction of metal values from an aqueous phase.

2,947,775

O,O-DIALKYL S-(2-ACETOXY-2-CYANOETHYL) PHOSPHOROTHIOLOTHIONATES

Harry W. Coover, Jr., and Richard L. McConnell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Nov. 25, 1957, Ser. No. 698,355
6 Claims. (Cl. 260—461)

1. O,O-dialkyl S-(2-acetoxy-2-cyanoethyl) phosphorothiolothionates, said alkyl radicals containing from 1 to 4 carbon atoms.

2,947,776

PROCESS OF PREPARING TRIMETHYL BORATE

Stanley J. Chiras, Niagara Falls, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed May 8, 1953, Ser. No. 353,903
1 Claim. (Cl. 260—462)

A continuous process for the production of trimethyl borate by reaction of boric acid with excess methanol wherein water is formed in the reaction liquor and the trimethyl borate is removed by distillation which comprises continuously charging boric acid and methanol to a heated reaction zone, continuously removing a portion of the reaction liquor from the reaction zone, removing water from the reaction liquor removed from the reaction zone by contacting the liquor with an ion exchange sulfonated cationic resin, and recycling dehydrated reaction liquor to the reaction zone.

2,947,777

PURIFICATION OF ACRYLONITRILE

Gordon H. Lovett, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Filed Nov. 26, 1957, Ser. No. 699,083
3 Claims. (Cl. 260—465.9)

1. In the process of refining a crude acrylonitrile, produced by the reaction of acetylene and HCN, wherein said crude acrylonitrile is subjected to fractional distillation in a series of separate distillation zones to separate the various impurities therefrom and wherein substantially pure acrylonitrile is withdrawn overhead while a stream consisting essentially of acrylonitrile, lactonitrile, and cyanobutadiene is withdrawn from the bottom of one of said distillation zones, the improvement which comprises contacting said bottoms stream with water to extract acrylonitrile and lactonitrile therefrom, recovering a stream of cyanobutadiene as the organic phase from said extraction, withdrawing the aqueous solution of acrylonitrile and lactonitrile, subjecting said aqueous solution to fractionation in a distillation zone to obtain acrylonitrile as the overhead product and an aqueous solution of lactonitrile as the bottoms from said distillation zone.

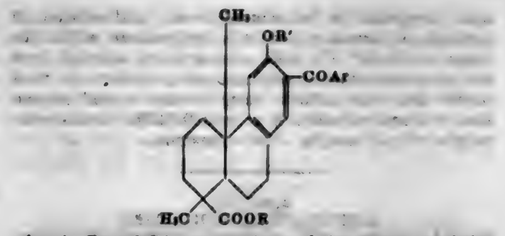
2,947,778

1,12-DIMETHYL-6-HYDROXY-7-AROYL-1,2,3,4,9,10,11,12-OCTAHYDROPHENANTHRENE-1-CARBOXYLIC ACIDS, ETHERS AND ESTERS THEREOF

Roy H. Bible, Jr., Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Sept. 23, 1958, Ser. No. 762,683
10 Claims. (Cl. 260—468.5)

1. A compound of the structural formula



wherein R and R′ are members of the group consisting of hydrogen and lower alkyl radicals; and wherein Ar is a monocyclic aromatic hydrocarbon radical containing fewer than 9 carbon atoms, monocyclic aromatic halohydrocarbon radical containing fewer than 9 carbon atoms, and monocyclic aromatic alkoxyhydrocarbon radical containing fewer than 9 carbon atoms.

2,947,779

PROCESS FOR THE ESTERIFICATION OF UNSATURATED ACIDS

James D. Idol, Jr., Shaker Heights, Robert W. Foreman, Cleveland, and Franklin Veatch, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Dec. 31, 1957, Ser. No. 706,253
7 Claims. (Cl. 260—486)

1. A process for the production of unsaturated esters which comprises the step of contacting a gaseous mixture comprising an alkyl alcohol containing from 1 to 8 carbon atoms and an α,β-unsaturated carboxylic acid selected from the group consisting of acrylic and methacrylic acids with silica gel at a temperature in the range between 212° F. and 750° F. in the presence of added water in an amount sufficient to provide a water-acid ratio in said mixture in the range of 1:1 to 8:1, said gaseous mixture having a molal ratio of alcohol to acid of at least 1.

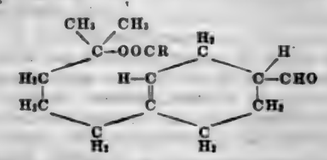
2,947,780

CYCLOHEXENE AND HEXADIENE CARBOXALDEHYDES AND DERIVATIVES THEREOF

Robert W. Teegarden, Fair Haven, and Leonard Steinbach, New Shrewsbury, N.J., assignors to International Flavors & Fragrances, Inc., New York, N.Y., a corporation of New York

No Drawing. Filed Jan. 15, 1960, Ser. No. 2,602
6 Claims. (Cl. 260—488)

5. The lower alkanoic acid ester of 4-(4-methyl, 4-hydroxy amyl) Δ 3-cyclohexene carboxaldehyde having the formula:



where OOCR is a lower alkanoic acid radical.

2,947,781

REDUCTION PROCESS FOR PREPARING AROMATIC P-AMINO COMPOUNDS

Louis Spiegler, Woodbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed June 10, 1953, Ser. No. 360,815
9 Claims. (Cl. 260—518)

1. The process of preparing an amino compound taken from the group consisting of p-aminophenol and p-aminobenzoic acid by catalytic hydrogenation of the corresponding starting nitro compound which comprises adding hydrogen gas to a suspension consisting of the

nitro compound to be reduced, water, and catalyst, at atmospheric pressure and at a temperature within the range of 50–95° C., said catalyst being selected from the group consisting of platinum and palladium and their oxides, and, said catalyst being present in said suspension at a concentration of at least 0.025% based on the weight of said starting nitro compound.

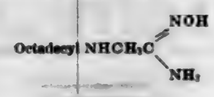
2,947,781
AMINOACETAMIDOXIMES
Peter L. de Benneville and Charles S. Hollander, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Dec. 23, 1957, Ser. No. 704,331
11 Claims. (Cl. 260—551)

1. A composition of matter, the compound having the formula



in which R^1 considered singularly is a member of the class consisting of a hydrogen atom and an alkyl group of 1 to 2 carbon atoms, R^2 considered singularly is a member of the class consisting of an alkyl group of 1 to 18 carbon atoms and a phenyl group such that when R^1 is alkyl, said R^1 and R^2 contain 1 to 2 carbon atoms each, R^1 and R^2 considered collectively represent a divalent saturated chain that forms with the amino nitrogen atom a 5 to 6 membered heteromonocyclicamine selected from the group consisting of pyrrolidinyl, piperidino, morpholino, and thiomorpholino, and m is an integer of 1 to 2.

7. A composition of matter having the formula



2,947,783
PROCESS FOR THE PRODUCTION OF ALICYCLIC KETOXIMES
Kurt Kaber, Ems, and Alfred Flaun, Cham, Switzerland, assignors to Inventa A.-G., für Forschung und Patentverwertung Luzern, Lucerne, Switzerland
No Drawing. Filed May 8, 1958, Ser. No. 733,850
Claims priority, application Switzerland Apr. 9, 1954
1 Claim. (Cl. 260—566)

A process of producing a material of the class consisting of cyclopentanonoxime and cyclohexanonoxime by homogenously catalytically oxidizing the corresponding hydroxylamine at temperature between 20° C. and 80° C. by means of oxygen-containing gas under a pressure of from 5 to 30 atmospheres in a solvent of the class consisting of methanol, ethanol, propanol, cyclohexane, and benzene, the catalyst being selected from the class consisting of copper-naphthanate, copper-cobalt-oleate, cobalt-lead-manganese-naphthanate, copper-manganese-vanadium-oleate, and cobalt-naphthanate.

2,947,784
PREPARATION OF N,N-DIBUTYL ANILINE
James C. Martin and Robert H. Hasek, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 31, 1957, Ser. No. 675,243
4 Claims. (Cl. 260—577)

1. In the preparation of N,N-di-n-butylaniline by hydrogenating n-butyraldehyde and aniline in a reaction zone in the presence of palladium and acetic acid at a pressure of 500–4,000 p.s.i. and at a temperature of 10°–50° C., the improvement which comprises introducing the n-butyraldehyde into said reaction zone during the said hydrogenation at a controlled rate substantially equal to the rate of reaction of the n-butyraldehyde with the aniline in said reaction zone.

2,947,785
CYCLIC PROCESS FOR THE PRODUCTION OF LOWER NITROSODIALKYLAMINES
John B. Tindall, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland
No Drawing. Filed Dec. 4, 1957, Ser. No. 700,563
4 Claims. (Cl. 260—583)

1. A process for the production of lower nitrosodialkylamines which comprises interacting a lower alkyl nitrite with a lower dialkylamine under substantially anhydrous conditions at atmospheric pressure and at temperatures of 0–100° C.

2,947,786
SUBSTITUTED UNSATURATED ALDEHYDES
Kent C. Brannock, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Apr. 14, 1958, Ser. No. 728,084
8 Claims. (Cl. 260—598)

1. A substituted unsaturated aldehyde selected from the group consisting of 2,2-dimethyl-4-pentenal; 2-ethyl-2-methyl-4-pentenal; 2,2,4-trimethyl-4-pentenal; 2,2-dimethyl-4-heptenal; 1-allyl-cyclohexane carboxaldehyde; 1-allyl-cyclopentanecarboxaldehyde; and 2-allyl-norcamphane-2-carboxaldehyde.

2,947,787
PREPARATION OF DIALKYL SULFOXIDES
Pat W. K. Flanagan, Ponca City, Okla., assignor to Continental Oil Company, Ponca City, Okla., a corporation of Delaware
No Drawing. Filed Aug. 20, 1959, Ser. No. 834,959
13 Claims. (Cl. 260—607)

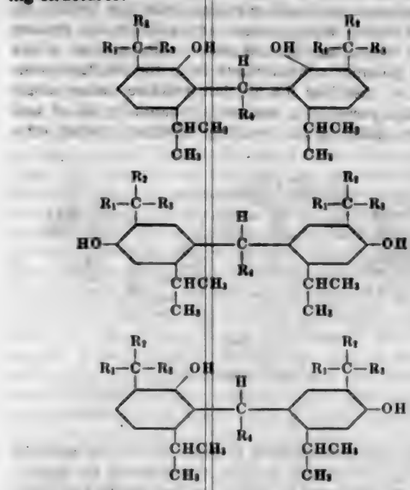
1. A method of preparing a dialkyl sulfoxide which comprises dissolving an alkylaluminum compound in an inert organic solvent maintaining the resulting solution at a temperature varying from —25 to 100° C. under an atmosphere of an inert gas, adding to said solution thionyl chloride dissolved in an inert organic solvent, heating the resulting mixture to a temperature varying from 0 to 100° C., cooling said mixture and then recovering the dialkyl sulfoxide.

2,947,788
MANUFACTURE OF AROMATIC THIOPHENOLS
Harold Pitt, Lafayette, Calif., assignor to Stauffer Chemical Company, a corporation of Delaware
No Drawing. Filed Apr. 22, 1959, Ser. No. 808,087
9 Claims. (Cl. 260—608)

1. The process of making disulfides and thiophenols from aromatic sulfonic acids comprising heating together an aromatic sulfonic acid, iodine catalyst and elemental phosphorus, allowing said mixture to react, and recovering a member selected from the group of thiophenols and disulfides from said reaction mixture.

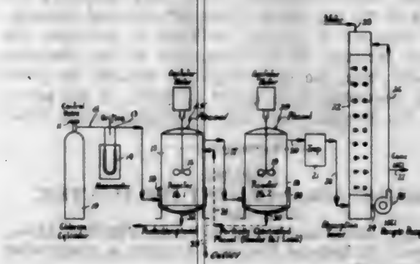
2,947,789
1,1-BIS(HYDROXY-3-ALKYL-6-ISOPROPYL-PHENYL) ALKANES
Joseph C. Ambelang, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 28, 1957, Ser. No. 704,000
8 Claims. (Cl. 260—619)

1. A 1,1-bis(3-polyalkylcarbinyl-6-isopropyl-hydroxyphenyl)alkane of the group of compounds of the following structures:



in which R_1 and R_3 are methyl radicals, R_2 is of the group consisting of methyl and neopentyl radicals and R_4 is of the group consisting of hydrogen and alkyl radicals containing one to five, inclusive, carbon atoms.

2,947,790
PROCESS FOR PRODUCTION OF CHLORINATED PHENOLS WITH RECOVERY OF HYDROCHLORIC ACID
Frederic J. Shelton, Seattle, Wash., Theodore S. Hodgins, White Plains, N.Y., and Charles L. Allyn, Seattle, Wash., assignors to Reichhold Chemicals, Inc., Detroit, Mich.
Filed Jan. 14, 1958, Ser. No. 708,839
4 Claims. (Cl. 260—623)



1. A process for the production of technical grade pentachlorophenol containing less than 1% of matter insoluble in 1 N sodium hydroxide solution, and having a melting point of at least 174° C., which process comprises first chlorinating phenol at an elevated temperature to produce an intermediate chlorinated product having a melting point not exceeding 120° C., the temperature in the first stage being sufficient to maintain the reaction mass in a molten state but below 130° C., then chlorinating the intermediate product at an elevated temperature sufficient to maintain the reaction mass liquid, the differential between the reaction mass temperature and its melting point being controlled so that the mathematical product of said temperature differential expressed in degrees centigrade and the hours of time required in the further chlorination to reach a chlorophenol product freezing point of 174° C. does not exceed about 60, the chlorination being carried out in the presence of between 0.004 and 0.0085 mole of anhydrous aluminum chloride catalyst per mole of phenol at least from the time where two atoms of chlorine have been combined with one mole of phenol.

2,947,791
TWO-ZONE MONONITRATION OF TOLUENE
Rowland K. Adams, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Jan. 24, 1957, Ser. No. 635,987
4 Claims. (Cl. 260—645)

1. In a continuous process for the nitration of toluene, the improvement which comprises continuously contacting, under conditions of agitation, substantially equimolar quantities of mixed nitration acid nitric acid component and toluene in a two-reactor system at a temperature within the range of 50 to 100° C., said mixed nitration acid containing, by weight, 50 to 60% sulfuric acid, 20 to 40% nitric acid and 10 to 20% water, reacting, by mixing in a continuous manner in the first reactor, a composition within the range of 0.4 to 0.7 mole of toluene per mole of said nitric acid component until an amount of nitric acid substantially in molar equivalence to said toluene is consumed, said effluent containing cruide mononitrotoluene, sulfuric acid, water and nitric acid followed by contacting said effluent in a second reactor with toluene in an amount substantially in molar equivalence to the nitric acid in the effluent, until said nitric acid is consumed to produce a crude mononitrotoluene layer, which layer is convertible into a dinitrotoluene isomeric mixture having an increased ratio of 2,4-dinitrotoluene to 2,6-dinitrotoluene by further nitration.

2,947,792
STABILIZATION OF TETRACHLOROETHYLENE WITH A MIXTURE OF A HYDROXY ALKYNE AND ISOEUGENOL
Maxwell James Skeeters, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Feb. 16, 1954, Ser. No. 410,735
3 Claims. (Cl. 260—652.5)

1. A composition of matter comprising tetrachloroethylene and, as a general-purpose stabilizer, from about 0.1 to about 1% by weight of a hydroxy alkyne, and, as a light stabilizer, from about 0.001% to about 0.1% by weight isoeugenol.

2,947,793
PREPARATION OF ALKYLENE DILITHIUM COMPOUNDS
Kenneth C. Eberly, Akron, Ohio, assignor to The Firestone Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 5, 1958, Ser. No. 719,189
12 Claims. (Cl. 260—665)

1. Process which comprises grinding granular lithium metal, in the presence of an exclusively hydrocarbon solvent, with an alkylene dihalide containing 3–8 carbon atoms.

2,947,794
2,2-DI(p-TOLYL) PROPANE PREPARATION
John C. Petropoulos, Norwalk, and Anthony T. Cocchi, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 1, 1957, Ser. No. 668,920
11 Claims. (Cl. 260—668)

1. In preparing 2,2-di(p-tolyl) propane by reacting a solution of 2-(p-tolyl)-2-chloropropane with toluene in

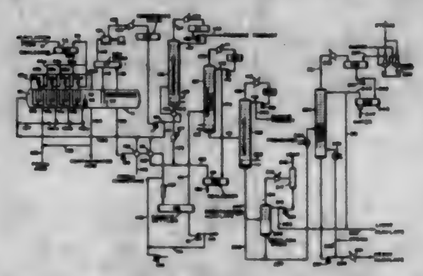
the presence of anhydrous aluminum chloride catalyst and a sufficient quantity of added hydrogen chloride to saturate said solution, the improvement therein which comprises: carrying out the reaction in the presence of a catalyst complex comprising aluminum chloride, hydrogen chloride, toluene and an organonitro compound selected from the group consisting of a nitroalkane and a nitroaromatic hydrocarbon.

2,947,795
PROCESS FOR STABILIZING MONOVINYLACETYLENE CONTAINING IMPURITIES
Robert W. Keown, Montague, Mich., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 5, 1958, Ser. No. 778,312
3 Claims. (Cl. 260—678)

1. A process for retarding the formation of solid polymer in monovinylacetylene containing impurities, said monovinylacetylene being prepared from acetylene and a cuprous chloride catalyst, said process comprising the contacting of said monovinylacetylene with from 1 to 1,000 parts per million by weight of an organic oxime of a carbonyl compound selected from the group consisting of aldehydes and ketones of the aliphatic, cycloaliphatic, and aromatic series.

2,947,796
ALKYLATION OF HYDROCARBONS
James Warburton, Alamo, Calif., and Samuel R. Stiles, Crenshill, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Filed Aug. 22, 1958, Ser. No. 757,177
11 Claims. (Cl. 260—683.62)

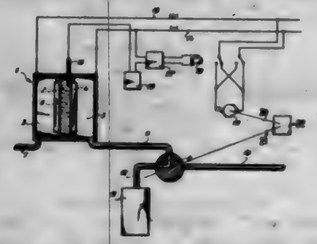
1. In a process for recovering an alkylate product from the alkylation of a mixture comprising isoparaffins, normal paraffins and olefins in the presence of sulfuric acid in which the alkylate product contains a small portion of polymers and sulfate esters which are readily decomposed during fractionation, and wherein the process comprises separating the acid and a major portion of the ester and polymer contaminants from the alkylate product mixture, distilling the alkylate mixture under superatmospheric pressure to remove substantially all of said isoparaffin, distilling the resulting alkylate product mix-



ture under superatmospheric pressure to remove substantially all of said normal paraffin, not required for volatility in the product, and fractionating the resulting alkylate product into light and heavy alkylate fractions; the method for preventing fouling during said fractionation which comprises reducing the pressure on the alkylate after removal of said normal paraffin and prior to said fractionation to between about 1 and about 14 p.s.i.a. and fractionating said alkylate under subatmospheric pressure to provide a low boiling alkylate fraction and a high boiling alkylate fraction.

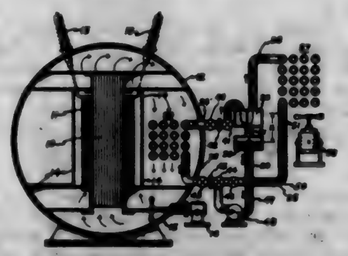
ELECTRICAL

2,947,797
DIRECT PRODUCTION OF ELECTRICAL ENERGY FROM COMBUSTIBLE FUEL GASES
Eduard Justi and August Winsel, Braunschweig, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, and Steinkohlen-Elektrizität Aktiengesellschaft, Essen, Germany, a German corporation
Filed May 14, 1957, Ser. No. 659,894
Claims priority, application Germany May 18, 1956
9 Claims. (Cl. 136—86)



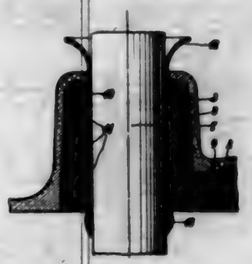
1. In the method for generating electric current in which a pair of gas-diffusion electrodes are maintained spaced apart in an electrolyte with a surface of each electrode in contact with the electrolyte, and in which a combustible gas is passed in contact with the surface of one of said electrodes opposite the electrolyte at a pressure sufficient to maintain a gas-electrolyte interphase in the electrode pores, and in which an oxidizing gas is passed in contact with the surface of the other of said electrode opposite the electrolyte at a pressure sufficient to maintain a gas-electrolyte interphase in the pores of the electrode, the average pore cross-sectional size of at least one of said electrodes increasing from the electrode surface opposite the electrolyte to the electrode surface in contact with the electrolyte, the improvement which comprises periodically increasing the pressure of the gas passed in contact with said last-mentioned electrode to a value sufficient to overcome the capillary pressure of the electrolyte in the electrode pores and force the gas completely through the pores into the electrolyte flushing out the pores, as the potential of this electrode falls below a predetermined value.

2,947,798
COOLING ARRANGEMENT FOR ELECTRIC APPARATUS
Guglielmo Camilli and David R. Pryde, Pittsfield, Mass., assignors to General Electric Company, a corporation of New York
Filed Aug. 20, 1957, Ser. No. 679,293
10 Claims. (Cl. 174—15)



1. A cooling arrangement for electric apparatus immersed in a dielectric gas filled enclosure comprising a sealed fluid circulation system having first heat transfer means within said enclosure, second heat transfer means external of said enclosure, first conduit means and return conduit means joining said heat transfer means, a volatile liquid partially filling said system, and means inhibiting the passage of liquid through said first conduit means to said second heat transfer means said first and second heat transfer means each having a high temperature end and a low temperature end, and the inhibiting means comprising an upper receptacle and a lower receptacle, said upper receptacle being connected at one area thereof to the high temperature end of said first heat transfer means and connected at another area thereof to said second heat transfer means at the high temperature end thereof, and a portion of said receptacle between the connections being free of said sealed fluid that has condensed to the liquid state, said lower receptacle being connected to the low temperature end of said first heat transfer means and to the low temperature end of said second heat transfer means, a condensed fluid returning conduit connecting said upper and lower receptacles, and said second heat transfer means being located above said first heat transfer means, whereby liquid entrained in said sealed fluid as it is passing from said first heat transfer means to said second heat transfer means will be condensed in said upper receptacle in the liquid-free portion thereof, and the condensed liquid will then pass through said liquid returning conduit and through said lower receptacle to the low temperature end of said first heat transfer means without entering said second heat transfer means.

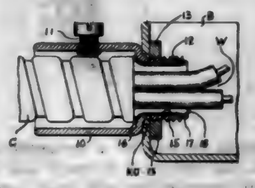
2,947,799
WATER-TIGHT CASE FOR ELECTRICAL APPARATUS
Johan Christiaan Jacobus Flack, Hilversum, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 9, 1956, Ser. No. 583,753
6 Claims. (Cl. 174—50.62)



1. A loading coil case comprising a receptacle and a cover for said receptacle, each formed of a glass filled polyester resin, said cover containing at least one outwardly projecting portion through which a substantially flexible lead covered cable is passed, said projecting portion containing a rigid metal sleeve closely surrounding and soldered to said lead covered cable and separated from the inner wall of said projection by a solid insulating medium that firmly adheres both to the inner surface of the projection and to the metal sleeve, said sleeve extending out of said cover and having a flared outer end.

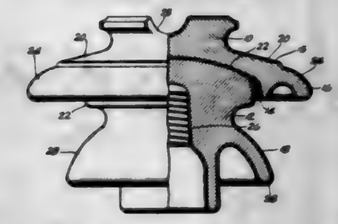
2,947,800
INSULATED ELECTRICAL RACEWAY FITTING
Carroll A. Badeau, Westfield, and Walter H. Weber, Metuchen, N.J., assignors to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Filed Oct. 10, 1955, Ser. No. 539,567
3 Claims. (Cl. 174—83)

1. An electrical-raceway throated fitting, through which conductor wiring having insulation-covering is adapted to loosely extend, consisting of an annular body, having a metallic throat; an insulating tubular liner having a pressure fit within said metallic throat, and being formed of semi-hard tough and resilient plastic, of larger inside diameter than said conductor wiring, with a thin-wall formation, of continuous, seamless, cylindrical form, and having an outside diameter making said pressure fit within said metallic throat; and an annular external flange, integral with and at one extremity of the insulating liner, abutting one end of said metallic throat;



also an annular external bead, of smaller diameter than the flange, integral with the insulating liner at its other extremity; the insulating liner being annularly and internally chamfered adjacent the bead, said internal chamfer constituting a flexing perimeter which, by contraction, permits the bead and insulating liner to be pressed into said metallic throat and which, by expansion, when the bead is pressed through said metallic throat, locks the tubular liner in the fittings, to permanently integrate said liner therein, and through which the conductor wiring is adapted to loosely extend.

2,947,801
CONTAMINATION AND MOISTURE RESISTANT INSULATOR
Fred B. Doolittle, 1022 Cortez Drive, Glendale, Calif.
Filed May 2, 1957, Ser. No. 656,526
6 Claims. (Cl. 174—141)



1. The combination with an insulator for high-potential transmission lines which is subject to arc-over due to contamination and moisture condensing on the surfaces thereof from the atmosphere, of a conductive coating on a portion of a surface of said insulator on both sides of one of said surfaces to form a condenser therewith, said condenser being exposed to contamination and moisture condensation from the atmosphere, and resistive coating means over remaining surfaces of said insulator in contact with said conductive coating on both sides of said one surface and in series with said condenser to enable a flow of current under operating conditions sufficient to evaporate moisture from the remaining surfaces of said insulator upon condensation of moisture on said one of said surfaces.

2,947,802
INSULATOR WITH CAP IN SOCKET
Adolf Wortmann, 29 Rheinische Strasse, Wuppertal-Nachstebreck, Germany
Filed Nov. 25, 1957, Ser. No. 698,619
Claims priority, application Germany Nov. 29, 1956
12 Claims. (Cl. 174—200)

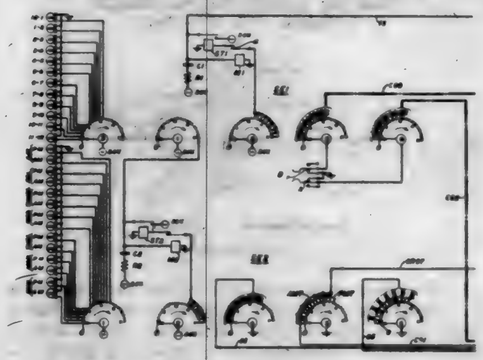
1. An insulator arrangement for supporting electrical lines, comprising, a metallic supporting means having an

outer free end portion; an inner cap of slightly elastically deformable tough non-conducting composition material comprising a substantially endless cylindrical jacket portion tightly surrounding said free end portion of said supporting means and an end portion closing one end of said jacket portion and having a curved non-planar configuration so that stresses imposed upon said end portion are



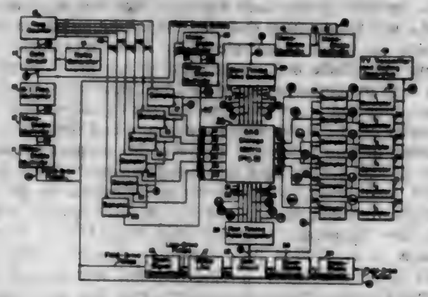
absorbed therein by way of a corresponding elastic deformation of the curvature thereof; and an outer rigid insulator body surrounding said inner cap and having a closed end portion, with the outer terminal face of said free end portion of said supporting means spaced from the inner terminal face of said end portion of the insulator body so as to allow for said elastic deformation of said curvature between said terminal faces.

2,947,883
CLOCK CONTROLLED AUTOMATIC RECYCLING SWITCHING CIRCUIT
Frank H. Hanley, Butler, and Clarence J. Votaw, Bergenfield, N.J., assignors to American Telephone and Telegraph Company, a corporation of New York
Filed Apr. 24, 1957, Ser. No. 654,923
7 Claims. (Cl. 178—3)



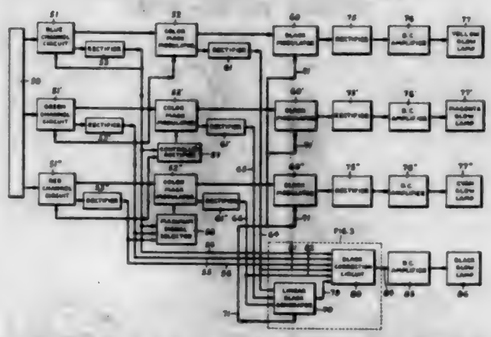
1. A public utility central service station having a timed selecting system for effectively connecting a line from a patron's premises to the service station for service at fixed intervals at times designated by the patron, said selecting system comprising a time control, cycling means responsive to said control, a selecting circuit responsive to said cycling means, a first and a second selectable element responsive to said selecting circuit, a first means in said circuit, responsive to said cycling means, for selecting said first element once per cycle of said cycling means, a second means in said circuit responsive to said cycling means for selecting said second element once per *n* cycles of said cycling means, where *n* is any integer greater than one, said first element being a winding on a relay, said second element being a contact on said relay, a second relay, a circuit path extending through said contact and a winding on said second relay, to actuate said second relay, to connect said line to said central station for service responsive to said selection of said second element.

2,947,884
SECRECY COMMUNICATION
Carl G. Ellers, Fairbury, and Erwin M. Roschke, Des Plaines, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Filed Oct. 21, 1954, Ser. No. 463,702
25 Claims. (Cl. 178—5.1)



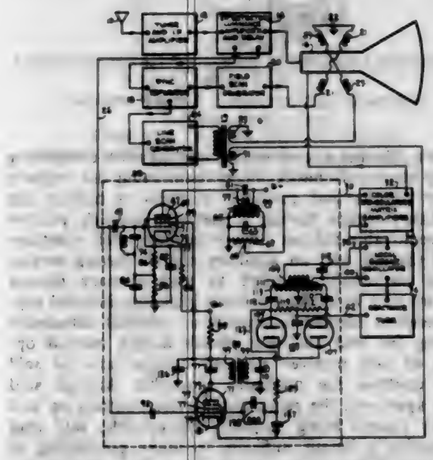
15. A secrecy communication system for translating an intelligence signal comprising: means for developing signal components; means for utilizing certain ones of said signal components for effectively removing certain other ones of said components; and means for utilizing said signal components, with the exception of those that have been removed, to encode said intelligence signal.

2,947,885
FOUR COLOR REPRODUCING METHOD AND APPARATUS
William West Moe, Stratford, and Joseph Grant Jordan, Stamford, Conn., assignors to Time, Incorporated, New York, N.Y., a corporation of New York
Filed June 15, 1953, Ser. No. 515,664
13 Claims. (Cl. 178—5.2)



8. Black signal apparatus for a four color reproducing system wherein the intensities of three color analyzing light beams derived from colors in scanned elemental areas of the subject are represented by the respective amplitudes of three color signals which are color corrected after being developed from said light beams, and wherein signal selector means is adapted to receive inputs of said three color corrected signals to provide an output of a linear black signal as a function of that one of the color corrected signals which represents the maximum intensity light beam, said apparatus comprising a plurality of signal transfer means having their outputs connected to a common electrical junction and their inputs respectively adapted to receive respective ones of said three color signals before color correction, said signal transfer means being respectively characterized by input/output amplitude ratios of preselected values of which the ratio value for each transfer means is adapted to weight the signal passing therethrough in accordance with the relative sensitivity of the eye to the color associated with such signal, said plurality of signal transfer means being thereby adapted to provide an ortholuminous signal at said junction, distortion amplifier means connected by its input to said junction to produce at its output an amplified ortholuminous signal of unreversed polarity, said amplifier means having a distortion characteristic providing different degrees of amplification when the input ortholuminous signal is derived from scanned shadow areas and other intensity areas, and a mixing network having a plurality of inputs which are, respectively, adapted to be connected to the output of said signal selector means, connected to said junction, and connected to the output of said amplifier means, said network being adapted to mix said linear black signal, ortholuminous signal and amplified ortholuminous signal to produce an output black signal with an amplitude-intensity characteristic whose slope is greater in magnitude in the highlight and shadow regions than in the median intensity region.

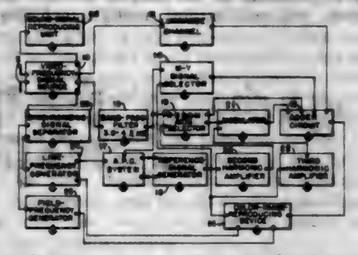
2,947,886
BURST SEPARATOR CONTROLLED, CHROMA KILLER
Joseph E. Davis, Buffalo, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Dec. 16, 1954, Ser. No. 475,736
6 Claims. (Cl. 178—5.4)



1. In a color television receiver, the combination of, a chroma amplifier adapted to be supplied with at least the chroma signal, a burst amplifier adapted to be supplied with at least the burst signal, means rendering said chroma amplifier ineffective in response to a voltage of less than a predetermined magnitude appearing in the output circuit of said burst amplifier, means responsive to said burst signal biasing said burst amplifier beyond cutoff, means responsive to a received signal for producing a scanning voltage wave, and means responsive to said scanning voltage wave for decreasing said bias to render said burst amplifier conductive during occurrence of said burst signal.

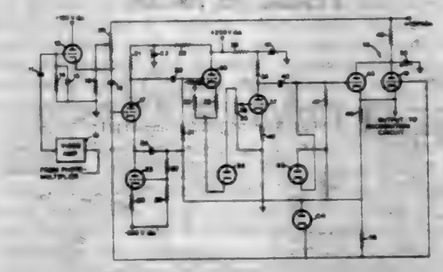
2,947,887
CHROMINANCE-SIGNAL SELECTION SYSTEM
Joseph R. McPhee, Jr., Garden City, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Apr. 20, 1955, Ser. No. 502,643
11 Claims. (Cl. 178—5.4)

1. A chrominance-signal selection system for a color-television receiver for selecting desired chrominance components along nonquadrature axes of a chrominance subcarrier wave signal comprising: means for supplying such a chrominance subcarrier wave signal; means including a quadrature axis selector responsive to said subcarrier wave signal and having a pair of output circuits for developing therein components along different ones of a pair of quadrature axes of said wave signal; and means



including a phase-shift circuit responsive to said developed components having substantially a quadrature phase shift at the frequency of said wave signal and having an asymmetrical signal-transfer impedance coupling said output circuits for combining in at least one of said output circuits specific proportions of said components along said quadrature-phase axes with substantially the same phase to develop said desired chrominance components in said output circuits.

2,947,888
SIGNAL TRANSLATING APPARATUS
James D. Allen, Jr., Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 21, 1955, Ser. No. 516,973
5 Claims. (Cl. 178—6.6)

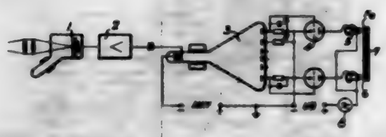


1. Apparatus for improving the video signals obtained in scanning graphic data comprising a differentiating circuit arranged to receive said video signals for supplying derivative signals, means coupled to said differentiating circuit for eliminating predetermined portions of said derivative signals, and mixer means for receiving said video signals and the remaining derivative signals for supplying output signals which follow the instantaneously higher in amplitude of the signals fed to said mixer circuit.

2,947,889
MAGNETIC PICTURE RECORDING
August Karolus, Hohenstrasse 52, Zollikon-Zurich, Switzerland
Filed Feb. 24, 1953, Ser. No. 338,544
Claims priority, application Germany Feb. 29, 1952
6 Claims. (Cl. 178—6.6)

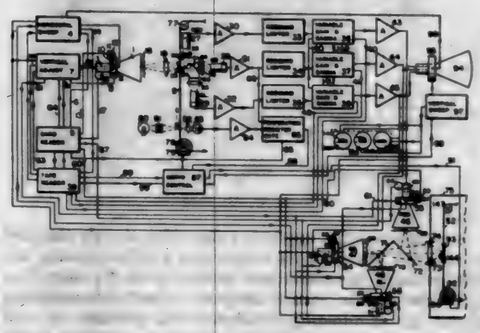
1. In an apparatus for the magnetic recording and reproduction of pictures, television camera means of predetermined line scanning frequency for translating

each line of the picture into a number of electric signals representing the intensities of a number of line elements, each element forming a fraction of a line and occupying a corresponding fraction of the frequency range of a line; a number of separate means including a source of carrier wave for separately modulating at least some of said line signals upon said carrier wave, said carrier wave having a frequency of an integral multiple of the line frequency, and said integral multiple including the line



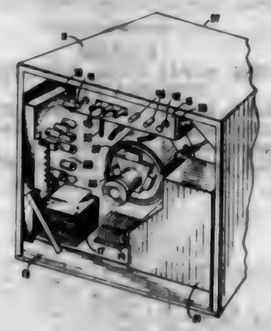
frequency itself; an electronic switch including an input coupled to said television camera means and a number of outputs coupled to said modulating means, means for producing a cathode ray, and means including means for deflecting said cathode ray at said predetermined line scanning frequency, for distributing the intensity representing signals of said line elements to said modulating means on a time sharing basis; a number of separate magnetic recording means and means for applying the modulated carrier waves to said recording means.

2,947,810
FILM SCRATCH MINIMIZER
David S. Hornley, 3929 Kentucky Drive, Hollywood, Calif.
Original application Apr. 17, 1958, Ser. No. 729,121, now Patent No. 2,912,487, dated Nov. 10, 1959. Divided and this application Jan. 12, 1959, Ser. No. 790,317
5 Claims. (Cl. 178—6.7)



2. In combination in an electronic printer for picture strip film having electronic means for converting variations of opacity upon an original film to corresponding electrical impulses, electronic means to handle said electrical impulses and further electronic means for exposing an unexposed film according to said opacities from said electrical impulses; means for reducing the visibility of scratches on said original film upon the completely processed said unexposed film which include a bistable electronic circuit connected to and coactive with said electronic means to handle said electrical impulses, said electronic circuit actuated by the abnormally high amplitude of each electrical impulse representing the low opacity of a scratch at the start of said abnormally high amplitude and de-actuated at the end thereof, said bistable electronic circuit constituted to limit the abnormally high amplitude of each said electrical impulse corresponding to said scratch to an average amplitude which makes the reproduction of said scratch less visible in the completely processed said unexposed film, said abnormally high amplitude being greater than any amplitude of electrical impulse corresponding to opacities of pictures upon said film.

2,947,811
TELEVISION APPARATUS
Garland W. Archer, Snyder, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Mar. 12, 1956, Ser. No. 571,043
2 Claims. (Cl. 178—7.5)



1. In a television receiver, the combination comprising primary electrical chassis means containing the primary receiver circuits and customer controls, a cabinet for said chassis means having a television viewing portion and a removable cabinet closure member with apertures formed therein, and an auxiliary chassis having service controls electrically coupled to said primary chassis means by lead wires, said cabinet including internal support members formed to provide an internal detachable mounting for said auxiliary chassis during normal operation of said receiver whereby certain ones of said service controls are normally accessible through said closure apertures, the remaining service controls on said auxiliary chassis being normally inaccessible, said lead wires having a length sufficient to allow positioning of said auxiliary chassis for access from said viewing position upon detachment of said auxiliary chassis from said support members and after removal of said closure member to provide accessibility for manipulation of said service controls from the viewing position.

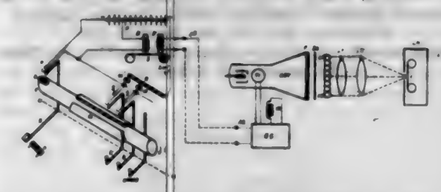
2,947,812
REMOTE CONTROL SYSTEM
Bernard S. Parmet, Elmwood Park, and James J. Krakora, Jr., Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 7, 1956, Ser. No. 620,875
14 Claims. (Cl. 178—7.5)

1. In a television receiving system having tunable signal translating means, remote control apparatus responsive to a radiated control signal of particular frequency including in combination, an electric motor for operating the signal translating means, an energization circuit for said motor, a high gain tuned amplifier for the control signal, a signal interceptor for receiving the radiated control signal and applying the same to said amplifier, detector means coupled to said amplifier and comprising first and second diode means with resistor-capacitor means connected thereto to provide outputs of opposite polarities from said detector means, one diode means providing an output signal in response to the signal translated by said amplifier, relay means having contacts connected to said energization circuit of said motor for selectively completing said circuit, an operating circuit for said relay means, including an electron valve



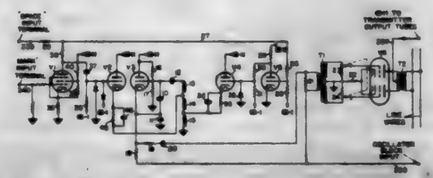
and a resistor-capacitor network forming an integrating circuit and coupled between said one diode means and said electron valve for applying said output signal to said electron valve with a polarity to cause conduction thereof in response to the output signal, said operating circuit causing operation of said relay to energize said motor in response to conduction of said valve, said integrating circuit having a bandwidth of the order of seven cycles per second.

2,947,813
IMPROVEMENT IN HIGH SPEED TELEGRAPHIC SYSTEMS
Georges Valensi, 3 Rue des Chaudronniers, Geneva, Switzerland
Filed Feb. 13, 1958, Ser. No. 715,037
Claims priority, application France June 27, 1957
10 Claims. (Cl. 178—15)



1. High speed system for telegraphy or for remote measuring over a telephone channel, comprising at the transmitting station: an encoding device generating without inertia, for each element of information to be transmitted, a preliminary alternating pulse of great amplitude and of small duration, followed by a combination of alternating coded pulses of smaller amplitude and of longer total duration, said combination characterizing said element of information, said pulses having a distorted shape (as compared with a regular sinusoid) with gradual increase at the beginning of the positive half wave and also at the end of the negative half wave, and an idle interval (without any pulses) separating two sequences of elements of information, a local oscillator, a timing device fed by said local oscillator for accurately timing the encoding operations, a delay line bringing said coded pulses immediately after said preliminary alternating pulse, an electronic mixer energized by the groups of pulses and feeding the telephone channel towards the distant receiving station; and at the receiving station: an electronic amplitude filter separating the received preliminary alternating pulse of greater amplitude, an electronic gate controlled by said separated pulse for separating the following combination of coded pulses, a rectifier suppressing the negative parts of said pulses, an electronic slicer acting on the positive parts of said pulser, a pulse code demodulating device transforming each combination of said sliced pulses into an analog signal corresponding to a particular received element of information, a frequency recovering device energized by the train of received coded pulses, a timing device controlled by said frequency recovering device for accurately timing the decoding operations, a cathode ray tube having a luminescent screen, horizontally deflecting plates and vertically deflecting plates, said horizontally deflecting plates being energized by said preliminary pulses and said vertically deflecting plates being energized by said analog signals produced by said pulse demodulator, a decoding screen bearing the clear representations of the various elements of information and located close to the luminescent screen of the cathode ray tube, an optical system comprising lens elements for positioning the luminous images of the clear representations of the received elements of information, and an electronic reproducer for producing, with said luminous images, a legible picture of all the received information.

2,947,814
CARRIER TRANSMITTER
Robert B. Haner, Jr., Scottsville, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Dec. 27, 1957, Ser. No. 705,593
8 Claims. (Cl. 178—66)

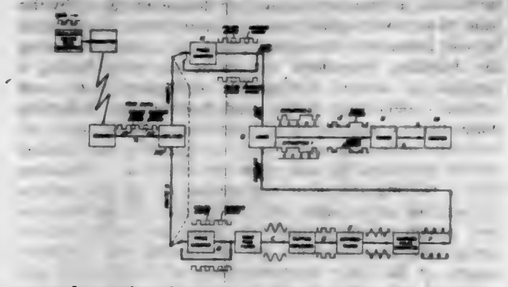


1. In a carrier frequency transmitter organization having preselected different frequencies of operation, an oscillator having a frequency-determining resonant circuit comprising a plurality of series-connected inductors, first and second input terminals having gating voltages selectively applied thereto, first electron tube circuit means being normally effective to shunt a respective one of said inductors but acting in response to a gating voltage applied to one of said input terminals to remove said shunt, a second electron tube circuit means being rendered effective only in response to a gating voltage applied to said one input terminal to shunt a second of said inductors and also said one inductor normally shunted by said first electron tube circuit means, and means governed by the application of a gating voltage applied to the other of said input terminals to render said second electron tube circuit means nonresponsive to said gating voltage applied to said one input terminal, whereby the selective application of said gating voltages to said one input terminal and to both said input terminals respectively increases and decreases the frequency of operation of said oscillator as compared to its normal frequency of operation when gating voltages are applied to neither of said input terminals.

2,947,815
TELEGRAPH SIGNAL ERROR COUNTING CIRCUIT
George H. Baker, Chatham, and Doren Mitchell, Martinsville, N.J., and John V. Reiling, Jr., Pittsburgh, Pa., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 18, 1956, Ser. No. 629,436
8 Claims. (Cl. 178—69)

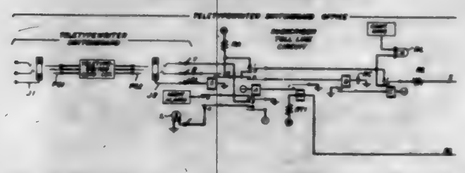
1. An error indicator circuit for indicating errors in received standard square wave telegraph test signals,

said circuit comprising means responsive to received signals for generating standard sampling signals and



means for testing the received signals with said sampling signals.

2,947,816
TELEGRAPH REPEATER
John L. Hyslo, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 22, 1956, Ser. No. 605,622
5 Claims. (Cl. 178—71)



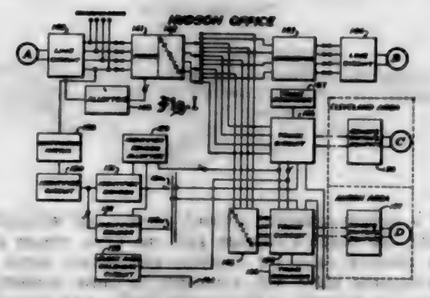
1. A telegraph system having a first, second, third and fourth carrier-current-direct-current terminating circuit, each of said circuits having means for receiving direct-current telegraph signals and translating them into alternating-current signals and vice versa, a first and a second direct-current telegraph circuit, a two-way operative telegraph channel interconnecting said first direct-current circuit, in tandem, through said first, second, third and fourth terminating circuit to said second direct-current circuit, a first potentiometer circuit in said channel interconnecting an output of said second terminating circuit to an input of said third terminating circuit, a second potentiometer circuit in said channel interconnecting an output of said third terminating circuit to an input of said second terminating circuit and means connected to each of said potentiometer circuits for translating incoming current-no-current signals into outgoing potential signals.

2,947,817
CLOCK-CALENDAR CIRCUIT
Ben A. Harris, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Filed Sept. 26, 1955, Ser. No. 536,577
33 Claims. (Cl. 179—7.1)

6. In a telephone system, means for establishing a telephonic connection, register means for storing items of information pertaining to a call completed over said connection and including the time of the call, time signaling means providing signals representative of time, means for connecting said register means to said time signaling means to cause time representing signals to be stored in said register means in conjunction with each call, and means for modifying the time representing signals normally provided by said time signaling means on selected days of the year.

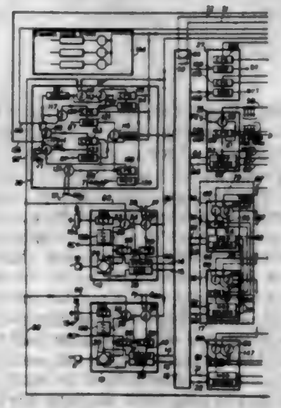
9. A date and time register comprising a standard timing means, first circuit means controlled by said timing means for providing manifestations representing the digits of instant date and time, second circuit means for modifying said manifestations, and third circuit means controlled by said first circuit means and operable to conditions representing the various days of a week for controlling the operation of said second circuit means.

12. In an automatic toll ticketing system, a register for storing data pertaining to the date and time of a toll



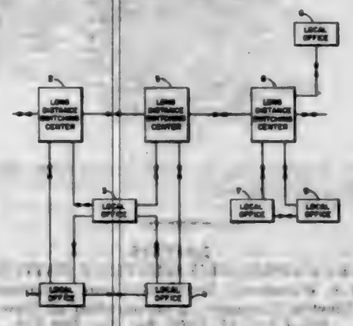
call, circuit means providing a continuous manifestation of instant date and time and operative to supply signals representative thereof to said register, means for associating said circuit means with said register to operate said register in accordance with said signals, display means controlled by said circuit means for providing a visual display of said manifestation, and means controlled by said display means for preventing the association of said register with said circuit means.

2,947,818
AUTOMATIC TELEPHONE AND LIKE SYSTEMS
Peter William Ward, Wembley, England, assignor to The General Electric Company Limited, London, England
Filed Oct. 18, 1955, Ser. No. 541,141
Claims priority, application Great Britain Oct. 19, 1954
5 Claims. (Cl. 179—18)



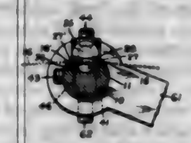
1. In an automatic telephone system of the character including a plurality of subscribers' lines each terminating at an individual one of a plurality of subscribers' line terminating units, a lesser plurality of trunk terminating units, a multiplex signal transmission link, a plurality of communication channels for the multiplex transmission of signals through said link between said line terminating units and said trunk terminating units, and a plurality of registers: means for transmitting calling signals from a calling subscriber's line terminating unit over said link in any free channel of said channels for reception by a free register, and means controlled by said free register for establishing a speech signal path between the calling and called subscribers, said speech signal path extending between the calling subscriber's line terminating unit and one of a pair of trunk terminating units which are not otherwise engaged through said link in the same channel as that used to transmit said calling signals, and between the called subscriber's line terminating unit and the other of said pair of trunk terminating units through said link in another free channel of said channels.

2,947,819
ELECTRONIC SWITCHING TELEPHONE SYSTEM
Barrie Brightman and James Gordon Pearce, Rochester, and Matthew P. Tubinis, Penfield, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Mar. 13, 1958, Ser. No. 721,241
46 Claims. (Cl. 179—18)



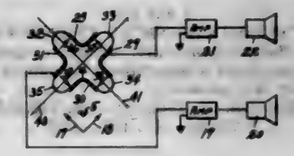
1. In a telephone system, a given number of line terminating units, a register, a multichannel transmission highway network interconnecting said units and said register, said network providing a number of channels less than said given number, a channel allotter, means in said allotter for marking an idle one of said channels to said units and to said register, a calling unit finder, means in said finder for transmitting an enabling signal to each of said units in turn, means in each unit operative only when the line terminated by that unit is in a calling condition and responsive to the receipt of an enabling signal from said finder for causing that unit and said register to seize the marked channel.

2,947,820
SIGNAL TRANSFER AND GUIDE FIXTURE FOR MAGNETIC INFORMATION MEDIUM
Harold Gallina, 40 Park View Ave., Belleville 9, N.J.
Filed Nov. 8, 1954, Ser. No. 467,272
11 Claims. (Cl. 179—100.2)



1. A signal transfer and guide fixture for a magnetic information strip comprising, a post characterized in structure by an outer surface of convex contour in planes normal to the post axis, a recessed guideway for said strip cutting through said surface crosswise to said axis, said guideway being characterized by a pair of crosswise running side walls spaced apart by slightly more than the width of said strip and adapted to preclude substantial lateral movement of said strip, a pair of lengthwise running edges located where opposite margins of the guideway bottom meet with said surface, said edges lying in a plane chordal to the convex contour of said surface, a concave recess formed in the guideway between the marginal edges, and bracket means adapted to support a signal transfer head having a convex signal transfer face so that said convex signal transfer face projects beyond said chordal plane into said concave recess, said bracket means being mechanically coupled with said post to be operably maintained in predetermined position in relation thereto, and said fixture upon receiving said strip in said guidway in stretched relation over said edges being adapted to bow said strip over said convex signal transfer face.

2,947,821
CERAMIC BINAURAL PHONOGRAPH PICKUP
Jerome D. Heibel, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Filed Apr. 21, 1958, Ser. No. 730,006
9 Claims. (Cl. 179—100.41)

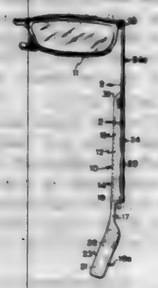


2. A phonograph pickup for binaural records having two channels cut in a single record groove in two directions at right angles to each other comprising a bar supported at one end and having a needle coupled to the other end for bending the bar about axes substantially at right angles to said two directions, said bar being of polarizable ceramic having two pairs of longitudinally extending electrodes, with the electrode of each pair on opposite sides of a different one of one of said axes, said bar being polarized from one electrode of one of the pairs in divergent directions to an adjacent electrode of the other pair, one of the directions of polarization extending directly from said one electrode to said adjacent electrode, the other direction of polarization extending serially from said one electrode through the remaining electrodes to said adjacent electrode, one of the pairs of electrodes grounded, and the output for bending about one and the other of said axes appearing respectively between ground and one and the other of the remaining two electrodes.

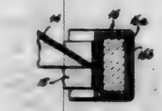
2,947,822
SNAP COUPLING BETWEEN EYEGLASS TEMPLE PLATE AND HEARING AID HOUSING
Harumi H. Matsuura, Minneapolis, Minn., assignor to Maico Electronics, Inc., Minneapolis, Minn., a corporation of Minnesota
Filed Aug. 3, 1959, Ser. No. 831,223
9 Claims. (Cl. 179—107)

1. Temple construction including electrical circuitry for use with a spectacle frame, comprising an elongated housing member having a forward compartment and having an outer side and a closed inner side adapted to lie against the side of a person's head, the compartment having access opening through the outer side thereof, electrical circuitry within the compartment and exposed to the exterior through said opening, an elongate plate member overlying the outer side of the compartment and closing said opening, said plate member having a forward end portion extending beyond the end of the housing member and being adapted for attachment to the spec-

tacle frame, a snap coupling releasably securing said members together and including a pair of interlocking elements on the housing and plate members respectively and arranged to be unlocked from each other upon relative movement of said members.



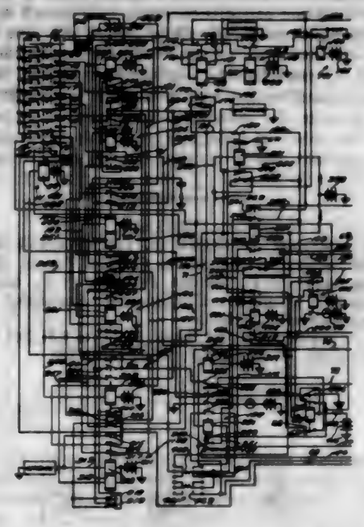
2,947,823
ELECTROMECHANICAL TRANSDUCER
Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut
Filed Jan. 31, 1958, Ser. No. 712,433
1 Claim. (Cl. 179—110)



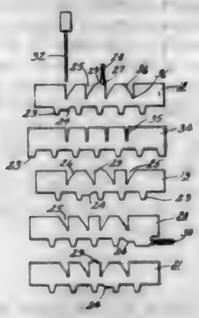
A microphone comprising a conical surface member of a stiff material, a ring of magnetostrictive material having a cylindrical radially inner surface, a winding disposed about said ring for coupling to an electrical circuit, cylindrical shoe means concentric with said ring and located radially inside the part of said winding adjacent said radially inner surface, the periphery of said conical surface member abutting the inner surface of said shoe means at a location intermediate the axial ends of said shoe means, bonding means securing said shoe means to said ring, and said ring having a mass substantially exceeding that of said conical surface member, whereby varying acoustical pressures exerted on said conical surface member may be transformed to a varying electrical output of said winding.

2,947,824
APPARATUS FOR TESTING AUTOMATIC TELEPHONE EXCHANGE EQUIPMENT
Harvey A. Holappa, Elmwood Park, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 21, 1956, Ser. No. 586,132
4 Claims. (Cl. 179—175.2)

1. In an apparatus for testing a telephone sending unit, a pulse source for producing pulses at a predetermined frequency, a counting circuit including a group of relays, key switch means having selectively actuatable contacts for setting the counting circuit, means operable by the key switch for starting the pulse source, relay means operable by the counting circuit for connecting the pulse source to a telephone sending unit after the creation of a predetermined number of pulses forming a predigital delay period, and means operable by the counting circuit after the predigital delay period for alternately connecting the pulse source to the unit for digital pulsing of the unit and disconnecting the pulse source from the unit for interdigital delay periods.

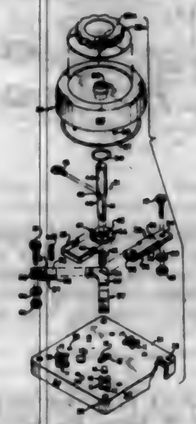


2,947,825
KEY OPERATED MULTIPLE SWITCH
Stewart A. Woodward, Stratford, Conn., assignor to General Electric Company, a corporation of New York
Filed Jan. 27, 1959, Ser. No. 789,315
4 Claims. (Cl. 200—5)



1. A multiple electrical switch comprising a housing, a plurality of fixed contacts and movable contact blades supported in the housing, each blade being engageable with at least one of the fixed contacts for closing a circuit therethrough, a plurality of movable sliders arranged in the housing transversely of the contact blades, one edge of the sliders having cam surfaces that cooperate with the contact blades so that movement of the sliders will control the opening and closing of the circuits through the switch, the sliders also having inclined portions which are engaged by a switch actuator for shifting the sliders in a predetermined manner; the invention comprising a fixed guide plate within the housing, the plate having a series of narrow slots in one edge, one wall of the housing having a matching series of narrow openings in alignment with the slots, the switch actuator being represented by a removable key that may be inserted into any one of the openings for engaging the inclined portions of the sliders, the slots of the guide plate serving to receive only the proper key and to seal the switch from unauthorized operation.

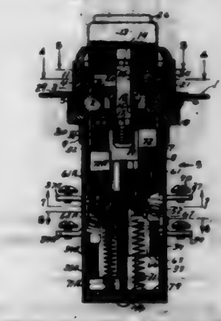
2,947,826
ELECTRICAL SWITCH
Roger Pelletier, 2560 Ocean Ave., Seaford, N.Y.
Filed Sept. 11, 1959, Ser. No. 839,374
5 Claims. (Cl. 200—15)



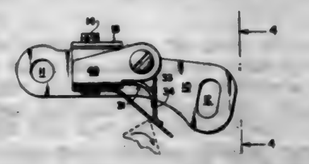
1. A vapor tight electrical switch comprising an electrically insulating flat plastic base, a plurality of three cradle means integral in said base each adapted for holding a pair of metal contact plates, an integral center platform of predetermined height in the center of said base having a cavity therein, a circular plastic cap having a depending skirt around its periphery, said skirt having a suitable groove in its edge, said cap having a central round aperture having a circular groove in the aperture wall, a suitable plastic O-ring disposed in said aperture groove, a suitable O-ring disposed in the groove of said skirt, a plurality of threaded inserts molded into the edge of said skirt, said inserts being passed through co-acting apertures in said base to secure said cap to said base in a vapor tight manner, a rotatable spindle disposed through said cap aperture in a vapor tight manner and extending into the cavity of said center platform of said base, knob means secured fixedly to said spindle protruding above said cap, a pair of metal outlet relatively long contact plates having suitably spaced-apart front portions each having a round aperture therein disposed fixedly in one of said cradles, a rotatable flat dual arm switch plate having a suitable rectangular key slot therein disposed between said spaced-apart outlet contact plates, a pair of relatively short inlet contact plates having suitable spaced-apart front portions disposed in the remaining two cradles, a spindle having a round top portion and a rectangular bottom portion extending through said round apertures of said outlet contact plates and in said key slot of said rotatable blade whereby rotation of said knob selectively rotates said switch blade between said spaced-apart inlet contact plates to effect a large contact area on each side of the arms of said rotatable plate.

2,947,827
CAM-OPERABLE TWIN-SWITCHES
Oswald M. Bundy, Cleveland Heights, and Joseph P. Finley, Cleveland, Ohio, assignors to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 29, 1957, Ser. No. 699,686
4 Claims. (Cl. 200—16)

1. An electric switch comprising, a housing of insulating material having a chamber formed therein; an elongated reciprocator disposed for reciprocable movement in the chamber; a first and second pair of stationary contacts mounted in spaced apart relationship on the housing at one side of the reciprocator axis; a bridging contact on the reciprocator to be moved therewith between the first and second pairs of stationary contacts; a spring reacting between the housing and the bridging contact to retain the bridging contact on the reciprocator, and the spring yieldably biases the reciprocator in one direction causing the bridging contact to engage the first pair of stationary contacts under pressure, and the spring also permits the bridging contact to be rocked relative to the reciprocator when the contacts engage causing the bridging contact to wipe on the engaged stationary contacts.



2,947,828
IGNITION BREAKER
Lloyd F. Neely, Indianapolis, Ind., assignor to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Filed Oct. 4, 1957, Ser. No. 688,326
9 Claims. (Cl. 200—39)

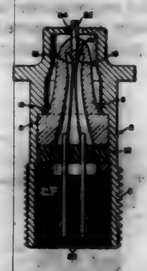


1. In a cam actuated circuit breaker for ignition systems for internal combustion engines comprising an adjustable bracket adapted to be mounted to a support plate, said bracket having an integrally mounted flange horizontally disposed thereto, a plurality of contact spring arms, one of said arms being larger than the other, an insulative block separating said spring arms, an individual end of each said respective arms being fixedly retained thereagainst to said flange, the opposite ends of said arms being free and adapted to meet with each other, a terminal bracket also fixedly carried by said flange, and a flat insulative strip placed therebeneath to extend horizontally therefrom, said strip being placed above a cam actuator, said cam adapted to move thereagainst, the movement of said cam pushing said strip against one of said springs to move it away from the other spring so as to break the electrical circuit.

2,947,829
SAFETY FUSE
Donald H. Fish, Livingston, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,863
7 Claims. (Cl. 200—61.08)

1. A safety fuse comprising a housing, a hollow ceramic body in the housing, a plurality of cooperating contact

blades in the ceramic body, the free ends of the contact blades bearing resiliently and from opposite directions



against an inside projection of the hollow ceramic body, and means adapted when struck to fracture the ceramic body.

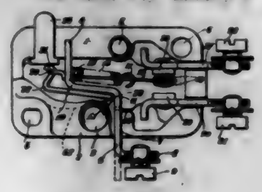
2,947,830
VEHICLE ALARM SWITCH
Herbert A. Goss, 1750 NE. Stephens, Roseburg, Oreg.
Filed Sept. 2, 1958, Ser. No. 758,214
1 Claim. (Cl. 200—61.51)



A switch for setting off an alarm device in a vehicle if the vehicle should be disturbed, said switch comprising a support adapted to be mounted in the vehicle, a pair of electrically conductive pivot members positioned adjacent each other and insulated from each other, a pair of conductors pivotally suspended from said pivot members respectively in electrically conductive relation thereto, one said conductor being mounted on one said pivot member for pivotal movement about one substantially horizontal axis only, said one conductor including an elongated narrow loop below said one pivot member, said loop having a major axis several times the length of its minor axis, said major axis being parallel to said horizontal axis and said minor axis being tangent to an arc about said horizontal axis, the other said conductor passing through said loop and being mounted on the other said pivot member for pivotal movement in any direction, and a weight attached to the lower portions of said other conductor to cause said conductors to oscillate with different periods of oscillation to thereby make electrical contact with each other when said vehicle is disturbed.

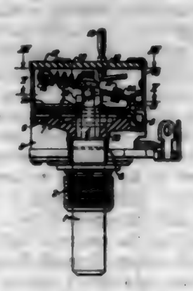
2,947,831
SNAP ACTION MECHANISM
William Riddell, Whitley Bay, England, assignor to Burgess Products Company Limited, Hinckley, England, a company of Great Britain
Filed Mar. 5, 1958, Ser. No. 719,228
Claims priority, application Great Britain July 23, 1957
3 Claims. (Cl. 200—67)

1. A snap-action mechanism which includes a housing having an integral inwardly-extending projection; a mounting member carried by said housing adjacent to said projection and bent, inwardly of said projection, so that the limbs of the member on either side of the bend form a crotch with said projection; an actuator member insertable into said crotch and capable of pivotal movement therein, the actuator member bearing against the un-notched surface of the limb carried by the housing



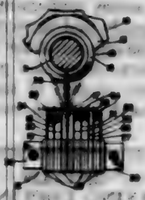
and being restrained from lateral displacement by the other limb and by said projection, the actuator member also having a first anchorage at an extremity remote from said pivot; a movable arm having a second anchorage; and a tension spring extending between the two said anchorages.

2,947,832
PUSH-PULL ELECTRIC SWITCH
Henry M. Dressel, St. Marys, Pa., assignor to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania
Filed Apr. 27, 1959, Ser. No. 809,289
13 Claims. (Cl. 200—67)



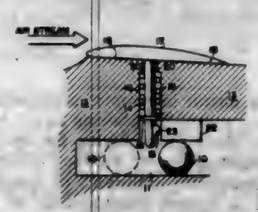
1. A push-pull electric switch comprising a housing having front and back walls connected by a side wall, the front wall having a central opening through it, a bushing rigidly mounted in front of the front wall in line with said opening, a control shaft rotatably and slidably mounted in the bushing and extending back into the housing, a switch arm inside the housing inclined to the shaft and provided with an opening loosely receiving the shaft extending therethrough, means oscillatably mounting the arm on an axis extending across the shaft, a coil spring tensioned between the rear end of the shaft and one end of the arm, the point of connection of the shaft to the spring being movable by the shaft forward from a location in back of said axis to a location in front of said axis to cause the spring to snap said end of the arm forward and thereby swing its opposite free end backward toward said back wall, an electric contact carried by the free end of the arm, a fixed electric contact mounted in the housing in position to be engaged by the other contact when it is swung toward the fixed contact, and a spring in the housing in front of the coil spring and compressed between the housing side wall and the side of the shaft to substantially counteract the lateral tension exerted on the shaft by the coil spring.

2,947,833
REVERSING MOTOR SWITCH
Joseph Greenbut, 2564 Saybrook Road, University Heights, Ohio
Filed Mar. 5, 1957, Ser. No. 643,990
7 Claims. (Cl. 200—80)



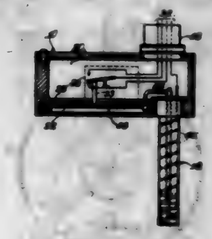
1. In a switching device for an electric motor, the combination of a reversing switch operatively associated with the motor circuit, a body mounted on the motor shaft for rotation therewith and reciprocably movable thereon in response to predetermined motor speed changes, a switch-actuating element disposed in the path of movement of said body, means on said body for deflecting said element out of the path of movement of said body when said rotating body advances into engagement with said element, and means responsive to the direction of deflection of said element for closing said switch to provide a circuit for counter-rotation of said motor.

2,947,834
CONTROL APPARATUS
Sol Scope, Los Angeles, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 695,046
7 Claims. (Cl. 200—81.9)



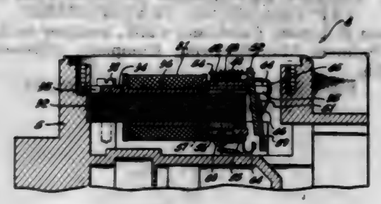
1. Apparatus for detecting a predetermined velocity of a vehicle comprising: a housing forming an outer body of said vehicle; a mass capable of being displaced from a first to a second position by a change in velocity of said vehicle; a chamber located in said housing for supporting said mass; a bore in said housing located normal to said chamber and opening into said chamber; an airfoil for creating a lifting force proportional to said vehicle velocity when displaced into an airstream surrounding said vehicle; a rod coaxially aligned with said bore and guided by said bore, said rod being connected to said airfoil and projecting into said chamber for operative engagement by said mass so that said mass in moving from said first to said second position displaces said rod and said airfoil into said airstream; a ring circumferentially attached to said rod; an actuating device situated adjacent to said rod in said chamber for engaging said rod; and a compression spring for creating a compression force representative of a predetermined velocity, said spring encompassing said rod and supported by said ring on one end and by said housing on the other end so that said spring is compressed as long as said lift created by said airfoil overcomes said compression force and upon said spring compression force overcoming said lift said rod operatively engages said actuating device.

2,947,835
AIRCRAFT ICE DETECTION SYSTEM
Charles H. Fluhocher, Barrington, and Vernon E. Adrig, Rolling Meadows, Ill., assignors to Cook Electric Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 24, 1959, Ser. No. 795,218
9 Claims. (Cl. 200—83)



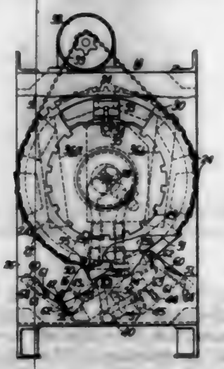
1. In an ice detecting device having first and second pressure chambers and switch means operable by a given pressure differential in the chambers to operate an electric circuit, an ice detecting probe adapted to be positioned in an air stream, said probe including an elongated body portion having first and second air passages therein adapted to be coupled respectively to the first and second chambers of the device, said body portion including reference aperture means extending through said body portion and intersecting the surface thereof on opposite sides of said body portion, with the openings in said sides being of substantially the same total area to present a reference aperture structure symmetrical with respect to air flow in opposite directions across said probe said reference aperture means communicating with said first air passage, said body portion further having detector aperture means communicating with said second air passage, so that icing of said aperture means will cause blocking thereof and pressure differential change in the pressure chambers and operation of the switch means.

2,947,836
COMBINED RELAY AND HIGH INDUCTANCE COIL
William A. Ray, North Hollywood, Calif., assignor to General Controls Co., a corporation of California
Filed Apr. 22, 1957, Ser. No. 654,298
5 Claims. (Cl. 200—87)



1. In a combination relay and high inductance coil: a magnetic core structure including at least two legs defining polar projections; an inductance coil mounted on one of the legs; magnetic means supported adjacent the end of one of the legs for forming another polar extension; an armature pivotally supported on said one of the legs, overlying only said other polar extension; and a circuit controller operated by movement of the armature toward and from said other polar extension; said armature being operated by the flux extending between said other extension and said one of the legs.

2,947,837
REVERSING SWITCH FOR LOAD TAP CHANGING TRANSFORMER
Alfred H. Bagnino, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Sept. 7, 1956, Ser. No. 608,576
4 Claims. (Cl. 200—92)



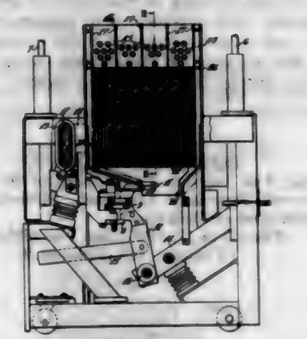
1. A reversing switch assembly for a quick break load tap changer comprising a two position reversing switch mounted on a shaft, a rocker assembly pivotally mounted on a frame of a tap changer, said rocker assembly being engageable at a point removed from its pivot by a pin carried in an arc by a relatively slow moving motor driven element of said tap changer to pivot said rocker assembly between positions corresponding to the positions of said reversing switch preparatory to the quick break operation of the tap changing switch, said switch shaft engaged with said rocker assembly for transmitting the pivotal movement of said rocker assembly to said switch, and toggle means cooperating with opposite sides of said rocker assembly and urging said rocker assembly toward one of said positions after a predetermined pivotal movement of said rocker assembly and urging said rocker assembly toward the other of said positions to positively position said reversing switch independently of the tap changer motor in the event that said motor is deenergized before said rocker assembly reaches said predetermined position.

2,947,838
SNAP ACTION REVERSING SWITCH FOR LOAD TAP CHANGING TRANSFORMER
Benon F. Uroda, Calabasas, Calif., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Sept. 18, 1956, Ser. No. 610,539
2 Claims. (Cl. 200—92)



1. A reversing switch assembly for a load tap changing transformer comprising a reversing switch mounted on a shaft and having two fixed contact positions, a rocker assembly pivotally mounted on a frame of a tap changer and engageable at a point removed from its pivot by a relatively slow moving motor driven element of said tap changer to pivot said rocker assembly between three stable positions, two of which correspond to the fixed contact positions of said reversing switch and the third position corresponding to a position intermediate said fixed contact positions, said switch shaft engaged with said rocker assembly for transmitting the pivotal movement of said rocker assembly to said reversing switch, and toggle means cooperating with opposite sides of said rocker assembly and supported on said frame at two points located on opposite sides of said pivotal mount and on a line removed from said pivotal mount to urge said rocker assembly to one of said three positions to positively position said reversing switch independently of said motor.

2,947,839
ARC CHUTE HAVING COOLING AND DEIONIZING ELEMENTS ARRANGED AT THE EXHAUST END
Victor A. Morinaeau, Schenectady, Donald E. Weston, Brookline, and Martin J. Reilly, South Weymouth, Mass., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Feb. 28, 1957, Ser. No. 643,038
2 Claims. (Cl. 200—147)



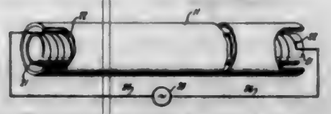
1. An electric circuit interrupter comprising relatively movable contacts, means for drawing an arc between said contacts, an arc chute for receiving the arc at one end thereof and exhausting the arc products at the other end, said arc chute comprising a plurality of spaced insulating plates arranged to extend longitudinally of the axis of said chute at the arc receiving end thereof, and a plurality of groups of spaced tubular cooling elements arranged in staggered relationship in compartments downstream from said insulating plates, each of said compartments being formed of insulating material and detachably mounted at the exhaust end of said chute, said compartments isolating said groups from each other, said groups in some of said compartments comprising a greater number of said elements than said groups in the remainder of said compartments.

2,947,840
ELECTRIC SWITCH
Rodney F. Park, Elm Grove, and Robert D. Thomas, Fox Point, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Apr. 25, 1958, Ser. No. 730,833
17 Claims. (Cl. 200—160)

1. In an electric switch, in combination, a depressible trigger member, means for normally maintaining the switch in its normal position when said trigger member is in its normal undepressed position, means comprising a switch actuator responsive to depressive movement of said trigger member to an intermediate stopping position for actuating the switch to its operating position, and separable latch means comprising cooperating portions on said switch actuator and said trigger member responsive to further depressive movement of said trigger member beyond said stopping position for permitting return of the switch from said operating position to said normal position.

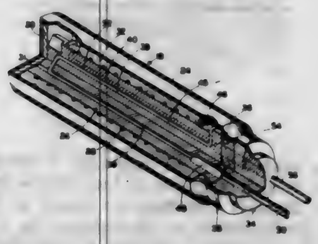


2,947,841
ANTENNA DEICING
Sidney Pickles, P.O. Box 1126, Tonopah, Nev., and Reuben S. Tice, Monterey, Calif.; said Tice assignor to said Pickles
Filed Apr. 6, 1959, Ser. No. 804,367
4 Claims. (Cl. 219—10.79)



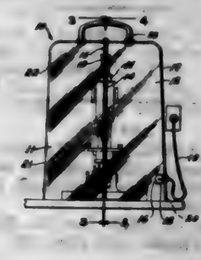
1. An improved heated antenna comprising at least one hollow radiating element, an elongated ferrous coil form, an insulated winding adapted for insertion within a hollow antenna radiator in substantial coextension therewith and wound about said form in inductive relation thereto, and means extending from said coil for energizing same with an alternating current whereby a low reluctance magnetic path links said winding and antenna and heating currents are effectively induced in said antenna.

2,947,842
INTERNALLY FUSED ELECTRIC HEATER
Lawrence E. Rook, Shelbyville, Ind., assignor to General Electric Company, a corporation of New York
Filed June 9, 1958, Ser. No. 740,940
5 Claims. (Cl. 219—19)



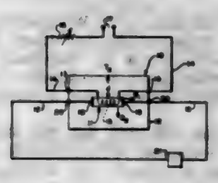
3. A sheathed electric heater comprising a tubular metal sheath, a resistance wire heating element disposed within the sheath in electrically insulated relation thereto, a pair of conductors of low electrical resistance forming terminals disposed within the sheath, radially impervious solid insulation for electrically isolating both of said terminals from said heating element and said sheath in a radial direction, and a pair of fusible elements respectively connecting said terminals to said heating element, said fusible elements being electrically isolated from said sheath by solid insulation means for a substantial distance from the ends of said terminals respectively to form a long arc path between each of said terminals and said sheath in the event of an arc therebetween.

2,947,843
DEHUMIDIFYING COVERS
Henry Hal Berman, 1200 NE. 177th Terrace, North Miami Beach, and Harry H. Wayner, 2240 Lincoln Ave., Miami, Fla.
Filed Sept. 3, 1958, Ser. No. 758,836
1 Claim. (Cl. 219—19)



A dehumidifying protective cover for scientific and other delicate instruments comprising, in combination, a box-like enclosure structure open at its lower end and adapted to be placed over an instrument to be protected, an aperture means at the lower end of said structure at one side thereof for the inflow of air, heating means within said structure and directly above said air inflow aperture means, and a second aperture means at the upper end of the opposite side of said structure for discharging air entering said air inflow aperture means and heated by said heating means, said box-like structure comprising a pair of similar shell members having peripheral flanges permanently secured together as by cementing to provide a stiffening rib of increased thickness, said air inflow aperture means and said air discharge aperture means each comprising a plurality of openings, said heating means comprising an elongated electrical heating unit.

2,947,844
POSITIVE TEMPERATURE COEFFICIENT SEMICONDUCTOR DEVICE
Dennis H. Howling, West Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,255
1 Claim. (Cl. 219—20)



In combination, a hermetically sealed container, a body of a semiconductive material having a negative temperature coefficient of resistance mounted in said container in spaced relation to the walls thereof, a gaseous medium in said container of a pressure where at the mean free length of path of the gas molecules is at least of the order of the minimum distance of spacing of said semiconductor body from said container, and means for supplying heat to said body at a substantially constant rate sufficient to raise the temperature of the body substantially above that of the outside ambient and cause said body

to have a positive temperature coefficient of resistance relative to variations in said outside ambient temperature, wherein said body has end terminals, including lead wires connected to said terminals and leading through the walls of said container in sealed relation thereto, a circuit to be controlled connected across said semiconductor body through said lead wires, a source of current connected to said lead wires for heating said body to a temperature substantially above that of the outside ambient, an impedance means in the heating circuit for isolating electrically said current source from said control circuit.

2,947,845

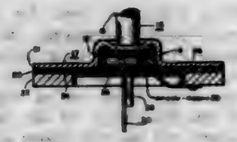
WITHDRAWN

2,947,846

HEATING APPARATUS

John J. Fox, Lexington, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed June 30, 1959, Ser. No. 823,913
3 Claims. (Cl. 219—38)



1. An electric heating element assembly for application to a container for heating the contents thereof, said assembly comprising: a heater including a heating element having a metallic sheath, a mounting plate supporting said heater and electrically connected with the sheath thereof and having a peripheral flange, a clamping plate overlying said flange and having a central opening therethrough, an insulator of electrically non-conductive material interposed between said flange and said clamping plate and having a central opening therethrough, said mounting plate, said clamping plate and said insulator defining a cavity in said assembly, an electrical resistor disposed in said cavity and having a pair of leads electrically connected one to the mounting plate and the other to the clamping plate, and a body of thermal setting insulating material in said cavity, said body of insulating material covering said resistor and uniting the mounting plate, the insulator, the clamping plate and the resistor in assembled relation.

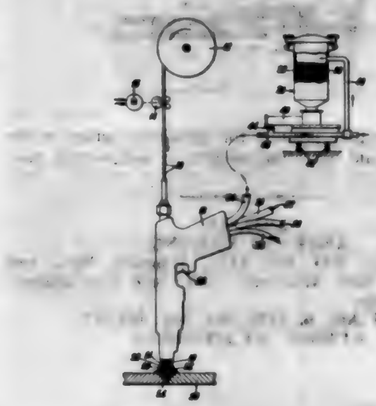
2,947,847

SHIELDED METAL ARC WELDING PROCESS

James R. Craig, Pleasantville, and Harry E. Rockefeller, Bronxville, N.Y., Frank T. Stanchus, West Orange, N.J., and Norman Davis, Los Angeles, Calif., assignors to Union Carbide Corporation, a corporation of New York

Filed Jan. 14, 1955, Ser. No. 481,798
4 Claims. (Cl. 219—74)

1. The process of electric arc welding steel wherein a metal electrode and a metal workpiece are connected to a source of welding current comprising, feeding said electrode toward said workpiece to establish and maintain an arc and welding zone between said electrode and said workpiece; suspending in at least a part of a stream of shielding gas, at a point remote from said arc about 10 to about 150 grams per minute of solid non-magnetic granulated welding composition composed of a fused and crushed silicate selected from the class consisting of manganese, magnesium, calcium and aluminum and having a slag-producing component capable of fusion in the arc to produce a slag, and a metal halide electrical conductivity-imparting component; feeding said gas and solid stream independently of the electrode around said arc and welding zone at a rate between about 10 and about 50 cubic feet per hour to shield said arc and said welding zone, to stabilize said arc, and to flux and



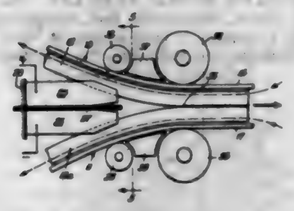
refine said welding zone; and coordinating the rate of suspending said welding composition in said gas stream with the rate of fusion of said electrode between about 0.2 pound of composition per pound of rod to about 1.5 pounds of composition per pound of rod to form a slag blanket on the weld produced by said arc.

2,947,848

METHOD AND APPARATUS FOR TRUSS CORE SANDWICH WELDING

David Sciaky, Chicago, Ill., assignor to Welding Research, Inc., Chicago, Ill., a corporation of Illinois

Filed Aug. 11, 1958, Ser. No. 754,388
9 Claims. (Cl. 219—83)



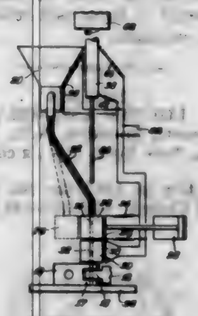
1. In a method for the resistance welding of two workpieces to each other, the said workpieces incorporating closed channels extending the length of the same, the steps which consist in maintaining the workpieces separated at a location in advance of their welding contact point, applying pressure to the workpieces at their welding contact point to cause them to contact each other, supplying a welding current to one workpiece at the location of separation in a manner to cause the current to flow in said one workpiece to the point where they contact each other and then return by flowing in the other workpiece to said location of separation, moving the workpieces at a desired rate to progressively weld the workpieces together at the welding contact point, and flowing a cooling fluid through the closed channels during the welding operation in a direction opposite to the movement of the workpieces.

2,947,849

APPARATUS AND METHOD FOR CONSTRUCTING PIVOTAL CONNECTIONS

Orville T. Wood, Essex, Conn., assignor to Pratt, Read and Co., Incorporated, Ivoryton, Conn., a corporation of Connecticut

Filed Mar. 5, 1957, Ser. No. 644,153
9 Claims. (Cl. 219—159)



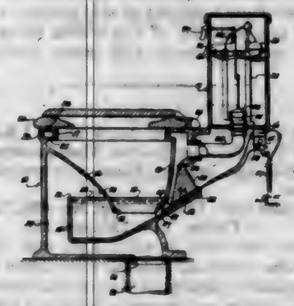
1. Apparatus for assembling the parts forming a pivotal joint which includes a first plastic member, a second member, and a metal pin positioned in apertures in the members, including in combination, guide means having an aperture therein for receiving a metal pin, means to support the first and second members with the apertures aligned with said aperture of said guide means, means to feed metal pivot pins to said guide means, ram means to drive a metal pivot pin in said guide means into the aligned apertures of the first and second members positioned in said support means, and electrical means to heat the metal pivot pin to cause the plastic of the first member to fuse thereabout and form a smooth plastic bearing therewith.

2,947,850

LIGHTED TOILET

James T. Reilly, 2880 Catalina St., Laguna Beach, Calif.

Filed June 28, 1957, Ser. No. 666,996
8 Claims. (Cl. 240—2)



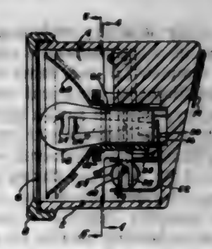
4. The combination comprising a toilet bowl having opaque walls which extend upwardly at the sides, front and back of the bowl and which form an upper edge of the bowl defining a top opening thereof, said toilet bowl having a lower portion which normally contains a body of water up to a predetermined level therein, and an electric light unit carried by said toilet bowl at a location to illuminate the interior thereof and to illuminate said water therein, said light unit being so positioned that it is not directly visible when a person looks downwardly into the toilet bowl through said top opening, and so that the illumination of the interior of the bowl is therefore indirect and pleasing to the eye, said bowl containing a passage through which a stream of flushing water enters the bowl when the toilet is flushed, said light unit being positioned at a location to be contacted and cleaned by said stream of flushing water as it flows through said passage, said bowl having an opening in one of said upwardly extending walls at a location spaced beneath said upper edge and through which the light is connectible into the bowl from its exterior, said opening being located above said predetermined normal water level in the bowl.

2,947,851

FOCUSSING HEADPIECE FOR MINER'S ELECTRIC CAP LAMP

Homer A. Lozeau, Worcester, Mass., assignor to Koehler Manufacturing Company, Marlboro, Mass., a corporation of Massachusetts

Filed Dec. 12, 1957, Ser. No. 702,355
13 Claims. (Cl. 240—41.25)



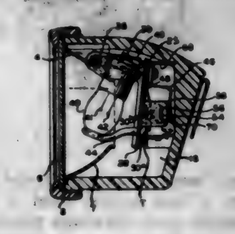
1. Miner's lamp structure including a lamp enclosure body, a lamp unit detachably supported in the enclosure body, said lamp unit having independently operated filaments, electrical means for energizing said filaments and an electrical rotary switch device for selectively closing an electrical circuit through either of said filaments, and axially movable reflector apparatus responsive to rotative movement of the electrical switch device for focussing a reflected beam of light from either of said filaments in said lamp.

2,947,852

ELECTRIC LAMP STRUCTURE WITH BULB ADJUSTMENT

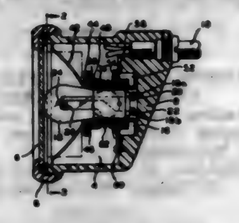
Homer A. Lozeau, Worcester, Mass., assignor to Koehler Manufacturing Company, Marlboro, Mass., a corporation of Massachusetts

Filed Feb. 3, 1958, Ser. No. 712,889
8 Claims. (Cl. 240—41.25)



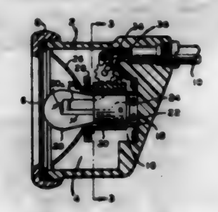
8. Miners lamp construction comprising a source of illumination, manually operated rotary switch means for controlling operation of the source of illumination, means responsive to the rotary switch means for focussing a beam of light from said source of illumination when the switch means is actuated, said rotary switch means consisting of a rotor element, and said focussing means including a swivel bracket having a bulb supported therein, and mechanism for pivotally moving the bracket and bulb when the rotor element is rotated.

2,947,853
MINER'S LAMP STRUCTURE WITH PINION AND GEAR ADJUSTMENT MECHANISM
Homer A. Lozeau, Worcester, and Albert E. Mignone, Wellesley, Mass., assignors, by direct and mesne assignments, to Koehler Manufacturing Company, Marlboro, Mass., a corporation of Massachusetts
Filed July 1, 1958, Ser. No. 745,963
4 Claims. (Cl. 240—41.25)



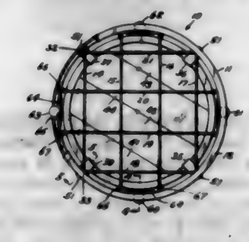
1. Miner's lamp structure including a lamp enclosure body fixed therein, a lamp socket, a lamp detachably supported in the lamp socket, said lamp including independently energized filaments, electrical means for energizing said filaments, an electrical switch device including a rotatable spindle for selectively closing an electrical circuit through either of said filaments, a reflector member mounted around the lamp and having a tubular extension slidably supported externally of the lamp socket, a ring gear element rotatably disposed around the tubular extension, means for holding the ring gear in seated relationship on the lamp enclosure body, said ring gear having a cone portion formed around the side thereof, pinion gear means fixed to said rotatable spindle for engaging with and rotating said ring gear, cam follower portion arranged to engage with the cam surfaces of the ring gear and produce axial displacement of the reflector and its tubular extension and spring means for maintaining the cam follower against the cam surface.

2,947,854
MINER'S LAMP STRUCTURE INCLUDING RACK AND PINION TYPE ADJUSTMENT MECHANISM
Homer A. Lozeau, Worcester, Mass., assignor to Koehler Manufacturing Company, Marlboro, Mass., a corporation of Massachusetts
Filed Sept. 2, 1958, Ser. No. 758,258
2 Claims. (Cl. 240—41.25)



1. In a miner's lamp, a lamp enclosure body, a lamp socket including a base portion fixed to the enclosure body and a tubular lamp receiving portion, a reflector positioned in said enclosure body including a cylindrical hub portion slidably mounted on the tubular portion of said socket, a rack extending longitudinally of said hub portion, a rotatable switch member mounted in the enclosure body having a gear engaging said rack for sliding said hub and reflector along the tubular portion of said socket, said lamp socket having a pair of electrical contact elements, a bulb member resiliently held in the socket and presenting a pair of filaments occurring in electrically connected relationship to the said electrical contact elements to constitute two independent sources through which said current may flow, a source of electrical current and electrical conductor means leading therefrom to said contact elements, said rotary switch device being adapted to close the circuit through said conductors to one of said filaments and simultaneously opening a circuit through the remaining filament, whereby said gear and rack mechanism actuates said reflector to position the latter in accordance with the filament illuminated to focus said reflector with respect to the filament energized.

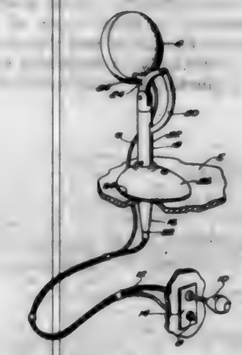
2,947,855
LOUVER ASSEMBLY
Nathan R. Schwartz, Brooklyn, N.Y., assignor to Nara-Research Inc., New York, N.Y., a corporation of New York
Filed July 16, 1957, Ser. No. 672,154
6 Claims. (Cl. 240—46.39)



1. A louver assembly for the elimination of glare emanating from a light source, comprising a ring like housing and disposed within said ring like housing a lattice work comprising at least two groups of planar spaced apart intersecting louver strips each substantially parallel to the axis of the ring like housing, the louver strips of each group being positioned substantially parallel to each other, said ring like housing having inwardly turned edges engaging each of said louver strips at both ends thereof thereby providing a mechanically stable unit; a plurality of clip means adapted to retain a lens; a first end of each of said plurality of clip means being entered into individual recesses formed by said ring like housing and the ends of two louver strips, one from a first of said groups and the other from a second of said groups; a second end of each of said plurality of clip means being adapted to removably secure a lens to said louver assembly.

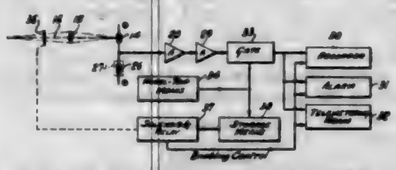
2,947,856
REMOTE CONTROLLED MOVABLE LIGHT UNIT
William P. Fox, Newton Center, Mass., assignor to Merriman Bros., Inc., Boston, Mass., a corporation of Massachusetts
Filed Nov. 15, 1957, Ser. No. 696,713
1 Claim. (Cl. 240—61.13)

A remote controlled movable light unit comprising a mounting tube, a slotted pedestal tube closed at its upper end and rotatably positioned within said mounting tube, means for securing said pedestal tube and said mounting tube against relative longitudinal movement, means for substantially preventing the entry of water between said mounting tube and pedestal tube, a plunger tube shorter than and wholly within said pedestal tube, said plunger tube being slidably mounted within said pedestal tube and having its upper end closed by a plunger cap, a light housing pivoted to said pedestal tube, a linkage extending from said plunger cap through the slot of said pedestal tube to said light housing for tilting said housing when said plunger tube is moved axially with respect to said pedestal tube and for rotating said pedestal tube and light housing when said plunger tube is rotated about its longitudinal axis, the lower ends of said mounting tube and plunger tube being tapered with the lower ends of the pedestal tube and plunger tube being within and protected by the lower end of the mounting tube, a flexible shaft and flexible housing extending through the tapered end of said mounting tube, the said flexible housing terminating below the downward position of said plunger tube, the flexible shaft extending beyond said flexible housing



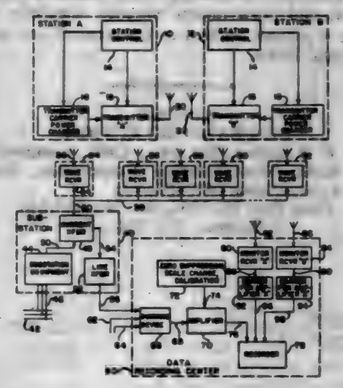
and into the tapered end of said plunger tube, said mounting tube tapered end secured to said flexible housing and said plunger tube tapered end secured to said flexible shaft whereby axial movement of said flexible shaft with respect to said flexible housing will move said plunger tube axially with respect to said pedestal tube and rotation of said flexible shaft will cause rotation of said plunger tube, linkage and pedestal tube.

2,947,857
HOT-BOX DETECTOR
Cornelius A. Gallagher, Hicksville, and William M. Pelino, Garden City, N.Y., assignors to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
Original application June 30, 1958, Ser. No. 747,553, now Patent No. 2,880,309, dated Mar. 31, 1959. Divided and this application Mar. 26, 1959, Ser. No. 804,061
4 Claims. (Cl. 246—169)



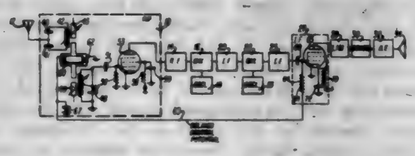
2. A railroad hot-box detecting device, comprising a housing mounted alongside a length of railroad track, said housing containing an infrared-radiation detector producing an electrical signal in response to incident radiant energy, said housing having a viewing opening therein, optical means within said housing and imaging said detector externally of said housing and along an axis passing through said opening and in a direction to view passing journal boxes or axles, shutter means carried by said housing externally of said optical means and having an open position externally exposing said detector on said axis, said shutter means having a closed position closing said opening and protecting both said optical means and said detector, whereby said detector is necessarily exposed to an internal part of said shutter means when in closed position, and actuating means for said shutter means comprising a device responsive to the presence of a train on said track and actuating said shutter means to open position only substantially as long as the train is one the track and near said housing.

2,947,858
APPARATUS FOR DETERMINING THE LISTENING HABITS OF WAVE SIGNAL RECEIVER USERS
Robert C. Abbott, 1032 Wadsworth St., Syracuse 8, N.Y.
Filed July 28, 1958, Ser. No. 751,367
2 Claims. (Cl. 250—2)



1. A system for determining the total number of wave signal receivers tuned to a transmitted wave signal comprising a wave signal transmitter, means for momentarily varying the strength of the wave signal transmitted by said transmitter, said strength variation being of sufficient magnitude to induce a uniform change in power consumption of the wave signal receivers tuned to said signal, means for measuring the total change in power consumption in each of a plurality of power distribution systems common to said receivers tuned to said signal, the total change in power consumption of said systems being proportional to the total number of wave signal receivers tuned to said transmitted signal.

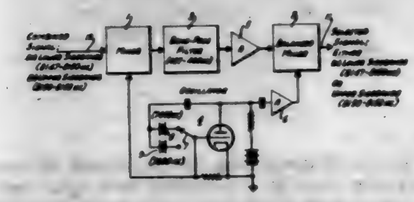
2,947,859
AUTOMATIC CONTROL OF COUPLING BETWEEN INPUT TUNED CIRCUITS TO VARY ATTENUATION AND SELECTIVITY
Angus A. Macdonald, Hinsdale, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 11, 1955, Ser. No. 527,785
7 Claims. (Cl. 250—20)



4. In a radio receiver, a system for reducing intermodulation by automatically regulating the input attenuation and selectivity thereof including in combination, passive input means adapted to be coupled directly to an antenna, a first signal developing impedance coupled to said input means, a second signal developing impedance coupled to the receiver to apply signals thereto, both of said first and second signal developing impedances comprising a tuned circuit tunable to the frequency of a desired signal, voltage sensitive means providing critical cou-

pling between said first and second signal developing impedances, said voltage sensitive means being subject to application of a control potential thereto to reduce the amount of coupling between said first and second impedances and the selectivity of said tuned circuit in accordance with the control potential applied, said voltage sensitive means providing signal coupling between said first and second impedances which is reduced as the control potential increases to increase the selectivity of said tuned circuit and attenuation of signals, and means connected to said voltage sensitive means for producing a control potential increasing with increase of signal strength at said input means whereby selectivity and attenuation of signals applied to the receiver are increased at high signal levels.

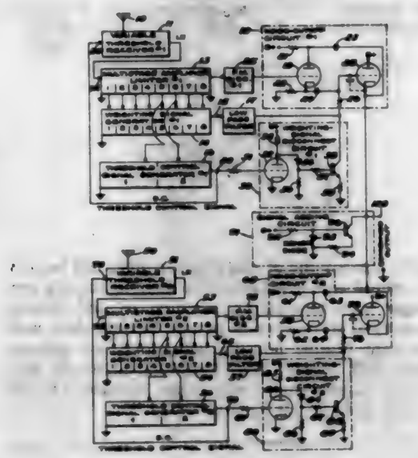
2,947,860
SIDEBAND SELECTION
Emanuel P. Alvernaz, San Jose, Calif., assignor to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California
Filed Dec. 18, 1956, Ser. No. 627,230
5 Claims. (Cl. 250—20)



1. A side band selection circuit comprising a first mixer, a bandpass filter having a restricted frequency pass band, a second mixer, an adjustable fixed frequency oscillator connected to supply two signals of the same frequency to said first mixer and said second mixer respectively, said frequency being outside the passband of said filter, means for supplying to said first mixer two input electric signals simultaneously, said two input signals being the upper modulation sidebands and the lower modulation sidebands respectively of the same carrier frequency, said first mixer heterodyning said input signal with the signal supplied thereto by said oscillator for producing a first set of difference-frequency signals having frequencies equal to the frequency differences between the upper-sideband input signal and the signal supplied by said oscillator and a second set of difference-frequency signals having frequencies equal to the frequency differences between the lower-sideband input signal and the signal supplied by said oscillator, means for conveying said difference-frequency signals from said first mixer to said filter, only one of said sets of difference frequencies lying within the pass band of said filter and passing through said filter, means for conveying the signals that pass through said filter to said second mixer, said second mixer heterodyning the last-mentioned signals with the signals supplied thereto by said oscillator for producing sum-frequency signals having frequencies identical to the frequencies of only one of said input signals.

2,947,861
DIVERSITY COMBINER CONTROL SYSTEM
Meredith S. Ulstad and Howard D. Hern, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Sept. 29, 1958, Ser. No. 763,928
8 Claims. (Cl. 250—20)

1. An angular-modulation diversity combiner system including at least a pair of variable-threshold receivers, a plurality of amplifier-limiters respectively connected in series with said receivers, each amplifier-limiter comprising a plurality of tandem-connected stages, a plurality of frequency-modulation discriminators respectively connected to the outputs of said amplifier-limiters, a plurality of logarithmic weighting-signal generators, each connected to stages of a respective amplifier-limiter, a plurality of threshold-control signal generators also respectively connected to some stages of said amplifier-limiters, an output of each of said threshold-control generators being connected to a respective receiver to vary its threshold, a plurality of noise-cutoff circuits, each in-

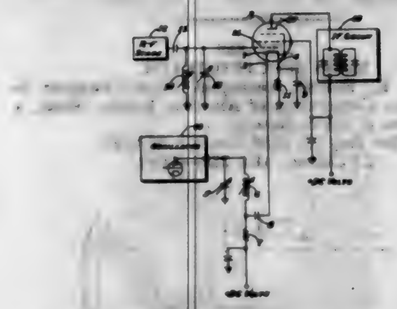


cluding a phase-splitter connected to an output of a respective discriminator and providing opposite phased outputs, a plurality of cathode-followers each including a cathode and grid, with the cathode and grid of each respectively connected to the opposite-phased outputs of a respective phase splitter; a weighting-signal disconnect circuit including a direct-current amplifier and having an input connected to an output of said threshold-control signal generator, an output of each disconnect circuit being connected to the grid of a respective cathode-follower; a signal-adding circuit connected between ground and the cathode of each cathode-follower, and means connecting the output of each weighting-signal generator to the grid of a respective cathode-follower.

2,947,862
HIGH FREQUENCY CONVERTER HAVING A SERIES CATHODE SIGNAL INJECTION CIRCUIT
Ray L. Stimson, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed June 3, 1959, Ser. No. 817,833
3 Claims. (Cl. 250—20)

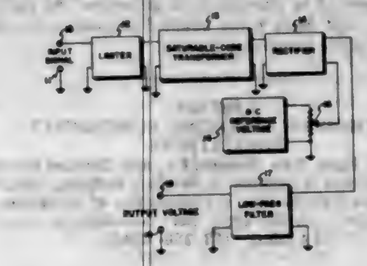
1. A converter system comprising a mixer tube having at least a cathode, a control grid, and an anode, first and second cathode terminals, a substantial portion of said cathode being connected between said first and second cathode terminals, a source of input signal connected to said control grid, an intermediate-frequency output circuit connected to said anode, means including a resonant circuit for applying injection signal to said cathode, said resonant circuit including said first and second cathode terminals for connecting said cathode in series in said resonant circuit, and one of said cathode terminals being bypassed to provide a low impedance return circuit for

said injection signal and said input signal, whereby the main current flow of said resonant circuit flows through



said cathode for coupling said injection signal to said mixer tube for mixing with said input signal.

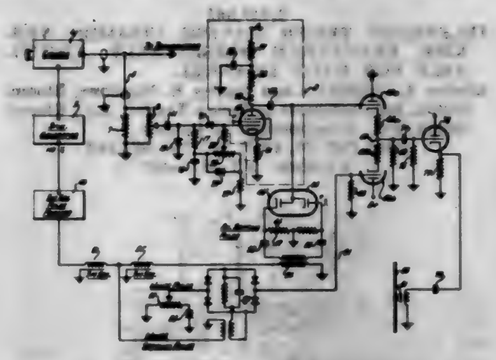
2,947,863
LINEAR DISCRIMINATORS OR THE LIKE
James L. Buie, Sun Valley, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Filed Mar. 17, 1954, Ser. No. 416,912
1 Claim. (Cl. 250—27)



A wide band discriminator selectively responsive to a signal reference frequency and deviations therefrom, including means for amplitude limiting an input signal, saturable transformer means having a core material exhibiting a rectangular hysteresis loop, said transformer means being responsive to the output signal from said limiting means for producing a time integrated signal the average half-cycle voltage of which is dependent in magnitude solely upon the frequency of the input signal, means responsive to the output signal from said integrating means for commutating said signal to produce a pulsating D.C. signal, means coupled to said commutating means for providing a controllable bucking voltage which may be adjusted to balance out, at the signal reference frequency, the average voltage of said commutated signal, and low-pass filter means for filtering said output signal to provide an averaged direct-current output voltage dependent in magnitude and polarity substantially only upon the frequency of the discriminator input signal.

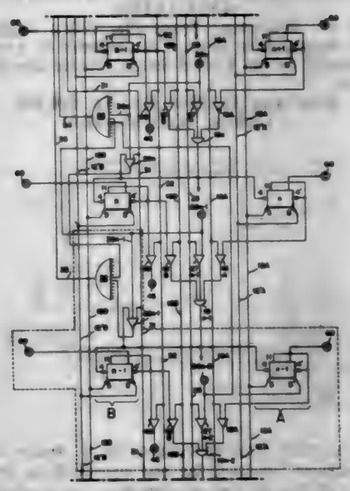
2,947,864
APPARATUS FOR RECORDING TELEVISION SIGNALS
Wayne R. Johnson, Los Angeles, Calif., assignor, by mesne assignments, to Minnesota Mining & Manufacturing Co., St. Paul, Minn., a corporation of Delaware
Filed Dec. 5, 1955, Ser. No. 550,871
9 Claims. (Cl. 250—27)

1. A circuit arrangement for preemphasizing a band of lower frequency components of broadband signals cyclically interspersed with pulses representative of a reference amplitude level, which comprises, a first amplifier the output current whereof varies substantially in proportion to variations in its input voltage, an output circuit for said first amplifier consisting essentially of a resistor and a condenser of equal impedance to said resistor at the upper cutoff frequency of said band in series with said device, a second amplifier, connecting means coupled between said second amplifier and said output circuit for applying alternating components only



of the voltage drop across said condenser to said second amplifier, means for supplying actuating pulses timed to coincide with the reference level pulses in the signals to be amplified, and a clamp circuit coupled to said actuating pulse supplying means and to said output circuit and responsive to each of the actuating pulses from said actuating pulse supplying means to apply to said output circuit a predetermined potential whereby the amplitude level of the signals to said second amplifier is successively returned to a predetermined level.

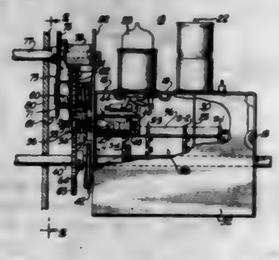
2,947,865
IMPULSE DISTRIBUTOR
Raoul Estrems, Saint Mande, and Maurice Pape, Paris, France, assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 1, 1957, Ser. No. 643,369
Claims priority, application France Mar. 20, 1956
4 Claims. (Cl. 250—27)



1. An impulse producing system, comprising a plurality of chains of cascade connected dual stability trig-

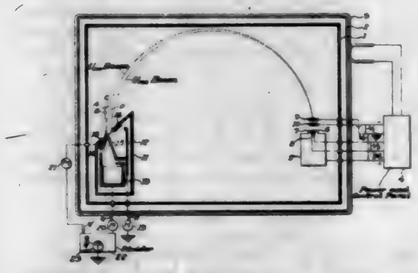
gers, a source of phase displaced impulses for operating each chain of triggers, means interconnecting a trigger in one chain with a trigger in another chain, a source of control impulses, and means responsive to a simultaneous occurrence of a control impulse and a phase displaced impulse for rendering said chains of triggers alternately responsive to successively occurring ones of said phase displaced impulses.

2,947,866
TELEVISION TUNER HAVING COMMON VERNIER REACTANCE PRESETTABLY ADJUSTABLE FOR EACH CHANNEL
Alarico A. Valdettaro and Stanley R. Meadows, Bloomington, Ind., assignors to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Filed Oct. 24, 1957, Ser. No. 692,185
9 Claims. (Cl. 250—40)



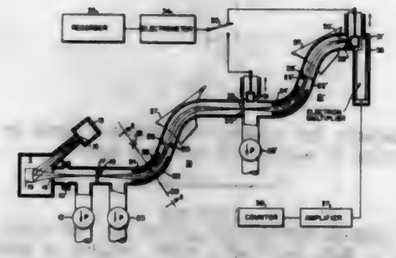
2. A television tuner comprising an oscillator circuit, incrementally rotatable channel selecting switch means for controlling the frequency of oscillation of said circuit, a vernier tuning reactance connected in said circuit for accurately adjusting the frequency of oscillation thereof, and means driven by said switch means for adjusting the value of said reactance to a particular predetermined value for each channel selecting position of said switch means, said adjusting means including a plurality of separately adjustable members for respectively controlling said predetermined value of said reactance for each channel selecting position of said switch means.

2,947,867
CONTROL FOR ISOTOPE SEPARATING APPARATUS
Howard W. Brackney, Bronxville, N.Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 15, 1946, Ser. No. 690,808
4 Claims. (Cl. 250—41.9)



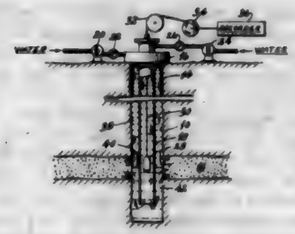
1. A calutron receiver comprising a pocket disposed in said receiver for receiving and collecting an ion beam composed of ions of a particular mass, an insulated electrode disposed adjacent to said pocket for receiving a fringe of said ion beam, and divider means connected to said pocket and said electrode for indicating the ratio of the deionizing current to said pocket to the deionizing current to said electrode.

2,947,868
MASS SPECTROMETER
Richard F. K. Herzog, Lexington, Mass., assignor to Geophysics Corporation of America, Boston, Mass., a corporation of Massachusetts
Filed July 27, 1959, Ser. No. 829,683
23 Claims. (Cl. 250—41.9)



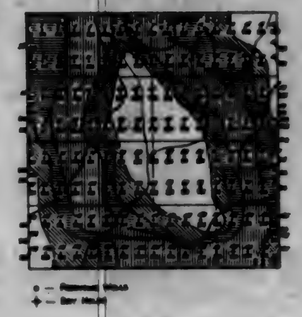
5. A mass spectrometer for operating on an ion beam, comprising a plurality of magnetic and electric deflecting fields spaced in alternation to determine the path of said beam, said fields being adapted to concentrate said beam in a plane transverse thereto.

2,947,869
METHOD OF STUDYING SUBSURFACE FORMATIONS
Edmond F. Egan, New Orleans, La., and Gerhard Herzog, Houston, and Alexander S. McKay, Bellaire, Tex., assignors to Texaco Inc., a corporation of Delaware
Filed Oct. 22, 1954, Ser. No. 463,998
14 Claims. (Cl. 250—43.5)



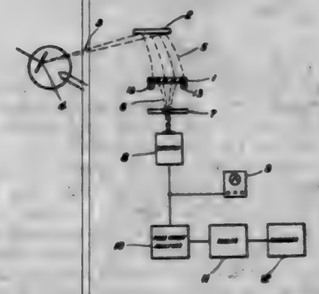
1. The method of making a permeability log of a subsurface formation traversed by a borehole which comprises pumping a fluid into said borehole above said formation, simultaneously pumping a similar fluid into said borehole below said formation, one of said fluids containing a neutron-reactive substance, thereby establishing an interface between said fluids, determining the depth in the hole of said interface by determining the response of the fluids in the hole to neutron bombardment, varying the ratio of the pumping rates of the two fluids being pumped into the hole while maintaining constant the sum of the two fluids so as to cause said interface to move along the walls of said formation to a new position, determining the depth of the interface at said new position in a similar manner, and repeating these operations while noting the ratios of the two fluids being pumped for each measured depth of the interface in the hole.

2,947,870
RADIATION SURVEY METHOD
John W. Merritt, 208–209 Midco Bldg., Tulsa, Okla.
Filed Apr. 12, 1955, Ser. No. 500,889
4 Claims. (Cl. 250—83)



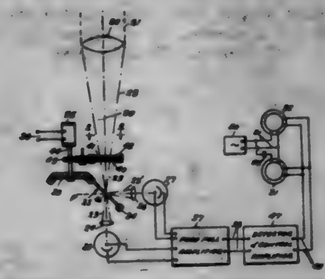
1. A method of exploring for and locating sub-surface hydrocarbon deposits comprising the steps of measuring and recording the surface radiation intensity of the radioactive constituents of the earth at a plurality of stations in a selected area to obtain for each of said stations a radiation value, sampling the soil for its retentivity characteristics at each station, correlating the retentivity characteristics and radiation values and establishing a corrected radiation value for each station, and charting the corrected values to reveal the corrected pattern.

2,947,871
APPARATUS FOR DETERMINING THE COMPOSITION AND THICKNESS OF THIN LAYERS
Herbert Friedman, 2643 N. Upshur St., Arlington, Va.
Filed Aug. 1, 1955, Ser. No. 525,607
9 Claims. (Cl. 250—83.6)



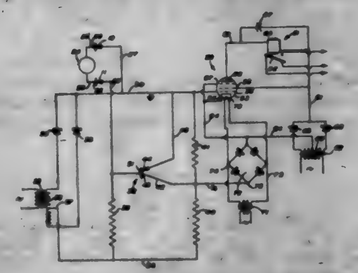
1. Apparatus for determining the composition and thickness of a thin layer comprising a dual source of X-radiation having X-ray spectra one of which includes a characteristic wave-length adjacent to and longer than the absorption edge of an element in said layer and the other of which includes a characteristic wave-length adjacent to and shorter than said absorption edge, means to position a portion of said layer in the path of said X-radiation, means to detect the emergent beam of X-radiation from said layer, and means to measure the intensity of each of said wave-lengths in the emergent beam to thereby determine the amount of said element in and the thickness of said layer.

2,947,872
STAR TRACKING SYSTEM
Victor E. Carbonara and Howard J. Schwalley, Manhasset, James R. O'Maley, Sanford Harbor, and Paul D. Hassell, Jamaica, N.Y., assignors to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Filed Jan. 23, 1956, Ser. No. 560,744
4 Claims. (Cl. 250—203)



1. In a system for tracking a source of light located in a field of non-uniform background illumination, optical means for producing an image of the source and its field of background illumination, means for nutating the image at a periodic rate, a rotatable shutter interposed in the path of the source image and its field of background illumination with means for directing the light flux thereof into two diverse paths, electrical means responsive to the light flux in each path to provide a control signal in accordance with the source position, a detector having quadrature windings in individual circuit relation with the said electrical means, and means including circuit connections controlled by said detector for maintaining the system in tracking operative condition during the source presence in the field at a light flux value above a predetermined minimum.

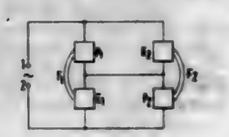
2,947,873
AMPLIFIER FOR SAFE-RAY
Joseph H. Borden, Toledo, Ohio, assignor to Toledo Scale Corporation, a corporation of Ohio
Filed Sept. 23, 1955, Ser. No. 536,099
4 Claims. (Cl. 250—206)



4. In a photoelectric relay circuit, in combination, a low impedance current generating photoelectric cell, a three terminal semi-conductor current amplifier having an input current path and an output current path therethrough, said photocell being connected across two terminals of said current amplifier to pass current through the input current path in response to light, a source of direct current, a high resistance circuit connecting said source to said amplifier to pass current through the input current path in opposition to the photocell current, a resistance voltage divider circuit connected across said source and having a portion of the divider circuit connected in par-

allel with the output current path of the amplifier, and a utilization circuit connected in parallel with the output current path of the amplifier.

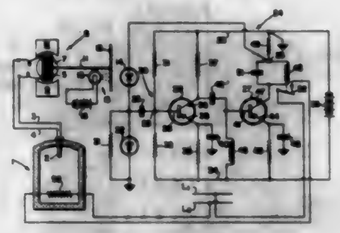
2,947,874
ELECTRICAL SWITCHING ARRANGEMENTS
Terence Bernard Tomlinson, Harrow, England, assignor to The General Electric Company Limited, London, England
Filed May 6, 1957, Ser. No. 657,334
Claims priority, application Great Britain May 14, 1956
11 Claims. (Cl. 250—208)



1. An electrical switching circuit arrangement comprising two input terminals arranged to be connected for operation of the arrangement to the terminals of an electrical supply, and two branch circuits each comprising a photoconductive element in series with an electroluminescent element, wherein the two branch circuits are connected to the input terminals in reverse parallel with each other as regards the order of said elements, and the junctions of the photoconductive and electroluminescent elements of the two branches are connected together by a low impedance path so that in operation of the arrangement a reduction in the impedance of the photoconductive element of either one branch results in a reduction in the voltage applied across the electroluminescent element of the other branch and an increase in the voltage applied across the electroluminescent element in the same branch, and wherein each photoconductive element is sensitive to, and is located so as to receive at least part of, the radiations emitted by its series-connected electroluminescent element when the latter is excited to luminescence, the circuit taking up in operation one of two stable conditions with one of the photoconductive elements in a highly conducting state owing to the radiations incident upon it from the corresponding series-connected electroluminescent element, which is excited to relatively high brightness, the second electroluminescent element being at relatively low brightness or extinguished, and such that when the second photoconductive element receives radiations to which it is sensitive, at intensities above a critical level, the circuit takes up the second stable condition with the second photoconductive element in a highly conducting state, the second electroluminescent element excited to relatively high brightness, and the first electroluminescent element at relatively low brightness or extinguished.

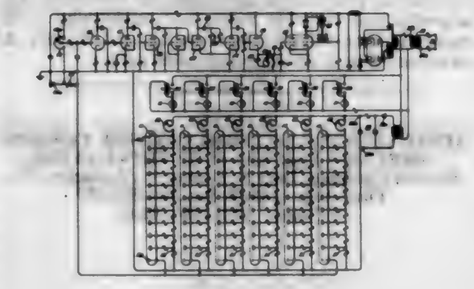
2,947,875
ELECTRICAL CONTROL APPARATUS
Kenneth H. Beck, Newtown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 23, 1954, Ser. No. 445,327
19 Claims. (Cl. 250—214)

1. An electrical controller comprising in combination circuit control means including a photosensitive semiconductor diode, a light source positioned to transmit light to said photodiode, and a movable vane, positioned by means responsive to the condition to be controlled, for regulating the light transmitted from said light source to said photodiode, a transistor amplifier having an input and an output, means connecting the output of said control means to said amplifier input, means electrically connecting said amplifier output to said circuit control means in regenerative feedback controlling relationship to produce an oscillating signal in said amplifier output



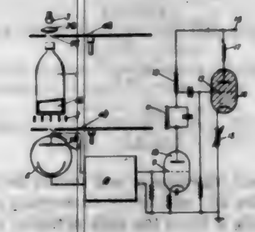
for predetermined positions of said vane, and signal utilization means connected to said amplifier output and responsive to the presence of said oscillating signal.

2,947,876
PINHOLE DETECTING UNIT
John J. Larew, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Dec. 30, 1955, Ser. No. 556,652
9 Claims. (Cl. 250—219)



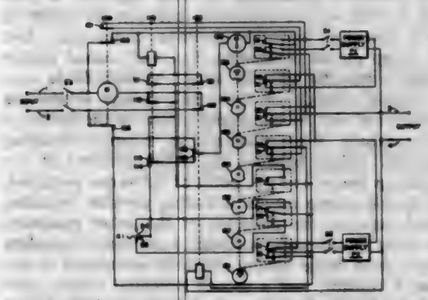
9. A photoelectric detection unit comprising an elongated tubular housing member having a longitudinal slot disposed generally parallel to the longitudinal axis of said housing member for admitting light to the interior thereof and having its inner surface coated with a highly reflective material to provide a light integrating chamber, a plurality of light-sensitive devices disposed within said chamber and mounted on said housing member in longitudinal spaced apart relationship, a supporting member mounted at one end of said housing member, an electrical control device, an amplifier mounted on said supporting member and having an input circuit connected to be supplied from all said light-sensitive devices and having an output circuit connected to supply said control device, a plurality of auxiliary light sources each mounted within said chamber in position to transmit light to a corresponding one of said light-sensitive devices, a pair of voltage supply terminals, a plurality of switching devices mounted on said supporting member, one for each of said auxiliary light sources for separately connecting each of said auxiliary sources to said supply terminals for individual energization, a plurality of individual gain control potentiometers, one for each of said light-sensitive devices and each mounted on said mounting member in positional proximity to the switching device for the auxiliary light source corresponding to its associated light-sensitive device.

2,947,877
APPARATUS FOR DETECTING FOREIGN BODIES IN TRANSPARENT VESSELS
Norman Parker Steele, London, England, assignor to U.D. Engineering Co. Limited, London, England, a British company
Filed Dec. 3, 1956, Ser. No. 626,031
Claims priority, application Great Britain Dec. 9, 1955
13 Claims. (Cl. 250—219)



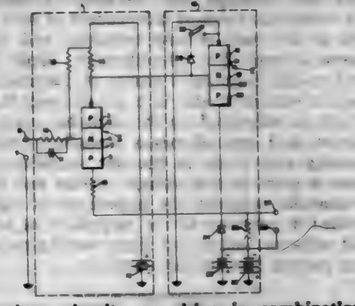
4. An apparatus for detecting the presence of foreign transparent bodies in transparent vessels having mouths and bottoms, comprising a device for casting a light beam through the transparent bottom of the vessel, means for causing uniform pulsations in the light beam, a photo-electric cell disposed to intercept the light beam after it has passed through the vessel bottom, a control circuit including an accurately tuned rejector circuit connected to said photo-electric cell, and means for causing the pulsating light beam to scan the whole area of the vessel bottom within the walls thereof whereby when the beam strikes a transparent object in the vessel, the light beam pulsations will be distorted and such distortion will engender a disturbance of the electric impulses produced by said photo-electric cell from a regular wave form that is rejected or not passed by said rejector circuit so that the control circuit remains inactive, to a non-regular wave form which will pass the rejector circuit and energize the control circuit.

2,947,878
SWITCHING CIRCUIT
George W. Killian, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Apr. 15, 1959, Ser. No. 806,609
5 Claims. (Cl. 307—64)



5. In a power supply system of the type having first and second power supplies with respective output terminals to be selectively connected to a load singly or in parallel, the switching system comprising first switch means operative to selectively connect the output terminals of said first power supply to the load, second switch means operative to selectively connect the output terminals of said second power supply to the load, sequence control means to sequentially operate said first and second switch means in various combinations to selectively connect the output terminals of said first and second power supplies to the load singly or in parallel including a first combination of connections of said first and second switch means for connecting the output terminals of one of said power supplies to the load while the output terminals of said other power supply is not connected to the load, a second combination of connections of said first and second switch means for connecting the output terminals of said other power supply to the load while the output terminals of said one power supply is not connected to the load, and a third combination of connections of said first and second switch means for connecting the output terminals of said first and second power supplies to the load in parallel, means for operating said sequence control means, voltage responsive means, means to selectively connect said voltage responsive means to the respective output terminals of said first and second power supplies, means operated by said voltage responsive means to control the operation of said sequence control operating means to switch the connections from said first combination directly to said second combination when the voltage responsive means is connected to the output terminals of the power supply which is singly connected to the load and the voltage at the output terminals of said power supply is below a predetermined amplitude, means operated by said voltage responsive means to control the operation of said sequence control operating means to switch the connections from said first combination to said third combination and then to said second combination when the voltage responsive means is connected to the output terminals of the power supply which is not connected to the load and the voltage at said output terminals is above a predetermined amplitude, and means controlled by said voltage responsive means to control the sequence control operating means to prevent further operation of said first and second switch means when the output terminals to which said voltage responsive means is connected remains below a predetermined amplitude for a predetermined period of time.

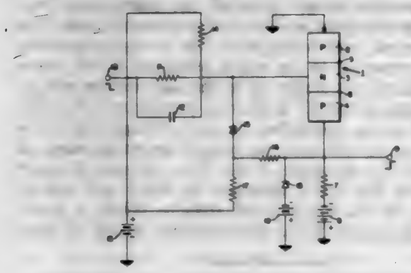
2,947,879
TRANSISTOR POWER INVERTER CIRCUIT
Robert A. Heale, Hyde Park, and James B. Mackay, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Oct. 30, 1956, Ser. No. 619,146
4 Claims. (Cl. 307—88.5)



1. A transistor circuit comprising in combination a common power source having one polarity terminal thereof connected to reference potential, a common load impedance having one terminal connected to the remaining terminal of said common power source, a first transistor having emitter, base and collector connections and being of a polarity type compatible with the polarity of said common power source having the collector connection thereof connected to the remaining terminal of said load impedance and having the emitter connection thereof connected to reference potential, a second transistor of

a conductivity type the same as said first transistor having emitter, base and collector connections having the emitter thereof connected to said base of said first transistor, an auxiliary power source having one terminal of a polarity opposite to said common power source connected to reference potential, an emitter impedance having a first terminal connected to the remaining terminal of said auxiliary power source and having the remaining terminal thereof connected to said emitter of said second transistor, a biasing impedance having one terminal connected to said base of said second transistor and having the remaining terminal thereof connected to said first terminal of said emitter resistor, a collector impedance having one terminal connected to the collector of said second transistor and having the remaining terminal thereof connected to said collector of said first transistor and signal introduction means operable to apply input signals to said base of said second transistor.

2,947,880
TRANSISTOR SATURATION CONTROL
John L. Anderson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 5, 1956, Ser. No. 620,526
4 Claims. (Cl. 307—88.5)



4. A transistor saturation control circuit comprising a transistor having at least emitter base and collector connection thereto, means establishing current flow in the emitter to collector current path of said transistor, a source of potential having a proper polarity when applied to the base connection of said transistor to oppose current flow through said transistor, a control diode, signal introduction means independent of said diode connected to the base of said transistor and operable to influence current flow therethrough, diode impedance control means including a source of potential connected through a voltage divider to a circuit point the potential of which is influenced by the collector current of said transistor, said control means including further means connecting said diode in the low impedance direction between a point in said voltage divider and the base of said transistor whereby the impedance of said diode is controlled in response to the magnitude of said current at said collector, and output signal sensing means responsive to current flow in said transistor.

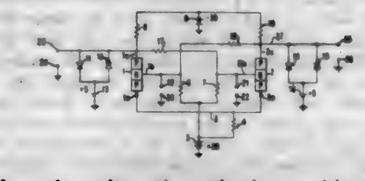
2,947,881
TIME DELAY SYSTEMS UTILIZING TRANSISTORS
William H. Elliot, Whitefish Bay, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Mar. 7, 1957, Ser. No. 644,586
8 Claims. (Cl. 307—88.5)

1. In a timing system, a source of unidirectional potential, a transistor having an emitter, a collector and a base, an impedance connected in series with the emitter-collector circuit of said transistor across said source, a voltage divider connected across said source and having an intermediate potential terminal, a capacitor connected between said terminal and a point common between said



collector and said impedance, and means including manual switch means for selectively connecting said base to and disconnecting it from the high potential plate of said capacitor.

2,947,882
TRANSISTOR TRIGGER CIRCUITS
Wayne W. Chou, Stamford, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 30, 1957, Ser. No. 705,842
1 Claim. (Cl. 307—88.5)



A clamped transistor trigger circuit comprising first and second transistors, each having base, emitter and collector electrodes, first and second constant current source means connected between a point of reference potential and the respective collectors, third and fourth constant current source means connected between the point of reference potential and the respective bases, a pair of direct current conductive impedance means connecting each base electrode with the collector electrode of the other transistor, a common connection to both emitters, a fifth constant current source connected between the point of reference potential and the common connection; first double clamp means comprising first and second diodes connected in parallel with the anode of each diode connected to the cathode of the other, means connecting one terminal of the double clamp means to the collector of one transistor, a potential source, means connecting the potential source between the other terminal of the double clamp means and the point of reference potential; second double clamp means including parallel branches connected between the collector of the other transistor and the point of reference potential, one branch including in series a third diode having its anode connected to the collector, a resistor, and a second potential source, said second branch including in series fourth and fifth diodes poled oppositely to said third diode and a third potential source; an amplifier stage including a third transistor having base, emitter and collector electrodes, the base electrode of the third transistor being connected directly to the collector of said other transistor, the emitter of the third transistor being connected to the common junction of the fourth and fifth diodes, a sixth constant current source connected between the common junction and the point of reference potential, a load resistor and a fourth potential source connected between the collector

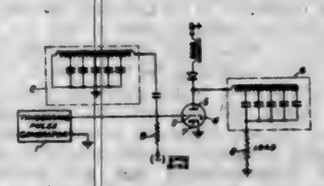
electrode of the third transistor and the point of reference potential; and third double clamp means including parallel branches connected between the third collector electrode and the point of reference potential, one branch consisting of a sixth diode and the other branch including a seventh diode poled oppositely to the sixth diode and a fifth potential source in series with the seventh diode.

2,947,883
SQUARE WAVE GENERATOR AND DIODE MODULATOR
Jack D. Welch, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 14, 1958, Ser. No. 735,153
1 Claim. (Cl. 307—88.5)



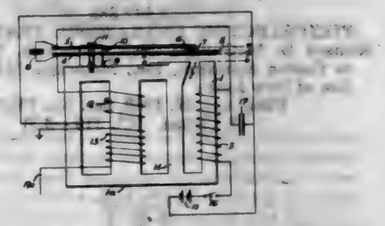
A square wave generator for converting a direct current signal into a square wave with an amplitude proportional to the amplitude of the direct current, comprising a transformer with a primary and two secondaries, a pair of zenar diodes connected in series back to back across the primary of said transformer, an alternating current voltage supply connected to the primary of said transformer, a second pair of diodes connected in series across the first secondary of said transformer, a third pair of diodes connected in series and the combination connected in parallel with said second pair of diodes, a fourth pair of diodes connected in series across the second secondary of said transformer, a fifth pair of diodes connected in series and the combination connected in parallel with the fourth pair of diodes, an input signal of direct current connected to the junction points between the second and fourth pairs of diodes, a first output terminal connected to the junction point between said third pair of diodes, a second output terminal connected to the junction point between the fifth pair of diodes, and a pair of resistors connected between the output terminals and their junction point connected to a ground plane.

2,947,884
HIGH VOLTAGE PULSE GENERATOR
Joseph B. Horodyski, Rutherford, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 3, 1959, Ser. No. 803,947
4 Claims. (Cl. 307—106)



3. A gas tube pulse generator, comprising a gas tube having an anode, cathode, and at least one control element, a source of positive triggering pulses coupled to said control element, a source of negative bias coupled to said control element, a shorted delay line coupled to said control electrode whereby each triggering pulse applied to ionize said tube is also applied to said shorted delay line which inverts a portion of the energy of said triggering pulse and applies a negative pulse after a delay interval to said control element to aid in deionization of said tube, an open circuited artificial transmission line coupled to said anode to apply an electrical discharge to said anode upon ionization of said tube, and means coupled to said anode and said transmission line to recharge said transmission line during deionization of said tube.

2,947,885
ELECTRICAL FENCING EQUIPMENT
Heinz Müller, Langemarckweg 21, Korbach-Waldeck, Germany
Filed Dec. 18, 1958, Ser. No. 781,382
Claims priority, application Germany Sept. 6, 1955
12 Claims. (Cl. 307—132)



3. Electrical fencing equipment of the kind in which electrical impulses of a predetermined voltage are applied to a fence at regular time intervals in the order of one second, said equipment comprising a condenser, a source of direct current connected with said condenser for charging said condenser, a high voltage transformer comprising a primary winding having one end connected with said source and another end connected with said condenser, and a secondary winding having one end connected to the fence, and a control relay having a core of magnetic material and comprising two normally closed cooperating contacts, one of said contacts being connected with the primary winding of said transformer and the other contact being connected with said condenser, an armature, a spring assembly comprising means carrying and operating said contacts and a leaf spring carrying said armature, said spring being located in a normal intermediate position when the relay is deenergized; said armature being located in the magnetic field of said core, at least one relay winding cooperating with said core and having one end connected with said source and another end connected with said condenser and said contacts, whereby said armature is attracted by said core to move said spring carrying said armature away from said normal intermediate position when the relay winding is energized by the charging current of said condenser, and whereby said spring is kept away from said normal position and said contacts are kept separated during said regular time interval as long as said charging current continues, and whereby said spring and its armature are then released from said core; said spring assembly being swingable in its entirety away from said core and from said normal position to a point of reversion and back without stop to said normal position and so as to close said contacts during said one forward and backward swing and during a predetermined relatively short contact closing time interval, each of which short time intervals beginning at a time when the assembly is substantially in said normal position and ending at another time when the assembly is again close to said normal position, whereby said primary winding of the transformer is energized for said short time interval through said contacts by the discharging of said condenser and whereby simultaneously a charging current of said condenser flowing from said source through said relay winding is generated which

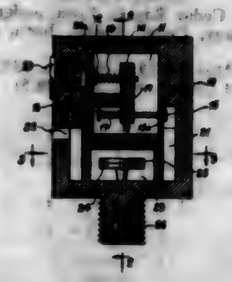
again produces a field re-attracting said armature and separating said contacts when said primary winding has been energized by said discharging current to a substantial degree, thus producing one of said electrical impulses in said secondary winding; said spring assembly together with said armature having resilient, natural frequency and mass characteristics so predetermined as to give said backward swinging until the second-mentioned time and past said normal position only the same phase and direction as those of the magnetic force of said last-mentioned field re-attracting said armature, whereby said backward swinging accelerates said contact separating effect of said magnetic force, the induction field produced by said discharging current of said condenser producing said electrical impulse when disappearing after the separation of the contacts.

2,947,886
PIEZOELECTRIC ULTRASONIC TRANSDUCER
Richard D. McGunigle, New Brunswick, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Apr. 29, 1958, Ser. No. 731,744
8 Claims. (Cl. 310—8.3)



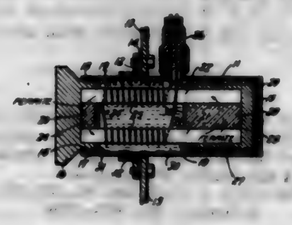
1. An ultrasonic device comprising a tapered mechanical tramformer substantially conical in shape, a plurality of electromechanically sensitive bodies affixed to the larger base of said mechanical transformer, a rigid plate carrying grooves therein, said mechanical transformer comprising first, second and third tapered sections, said first tapered section being adjacent the base with the largest area, said second tapered section having its larger base adjacent the smaller base of said first tapered section, said third tapered section having its larger base adjacent the smaller base of said second tapered section, the line generating the surface of said first tapered section having the smallest slope, the line generating the surface of said second tapered section having a greater slope than that generating the surface of said first tapered section, the line generating the surface of said third tapered section having a greater slope than that generating the surface of said second tapered section, the transitions from one said tapered section to the next adjacent tapered section being at a velocity node of said mechanical transformer, said rigid plate being at the ends of said electromechanically sensitive bodies opposite the ends affixed to said mechanical transformer, each of said grooves being of approximately the same dimension as the perimeter of the surface of the electromechanically sensitive body to be clamped and whose area is less than approximately 1/20 the area of said surface, a resilient member within said groove and in contact with said electromechanically sensitive body, acoustic transmission means in contact with each said electromechanically sensitive body and the larger base of said mechanical transformer, means for applying compression between said rigid plate and said mechanical transformer, and means for insulating said rigid plate from said mechanical transformer.

2,947,887
COOLED PIEZOELECTRIC ACCELEROMETER
Leslie K. Gulton, % Gulton Industries, Inc., 212 Durham Ave., Metuchen, N.J.
Filed Nov. 20, 1956, Ser. No. 623,340
4 Claims. (Cl. 310—8.4)



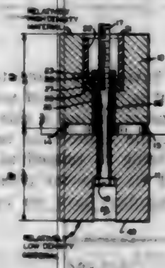
1. An accelerometer comprising a housing; a first chamber in said housing; an electro-mechanically sensitive body mounted in said first chamber; a mass loading said electro-mechanically sensitive body; a second chamber in said housing; a gas contained in said second chamber under pressure; means for confining said gas in said second chamber; a third chamber surrounding said first chamber; means for permitting said gas to escape from said second chamber to said third chamber upon reaching a pressure above a predetermined value; and means for exhausting said gas from said third chamber.

2,947,888
TRANSDUCER CONSTRUCTION
Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut
Filed May 11, 1956, Ser. No. 584,384
6 Claims. (Cl. 310—26)



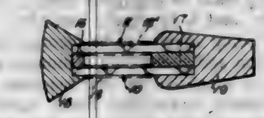
1. In a transducer of the character indicated, an elongated cylindrical housing closed at one end and open at the other, a head-weight having a cylindrical portion longitudinally overlapping the open end of said housing with relatively close radial clearance, a yieldable seal member closing said clearance, said head-weight being recessed at the end facing the interior of said housing, an elongated transducer element comprising two spaced elongated magnetostrictive legs and magnetic flux-conducting means bonded to and joining the respective ends of opposite side walls of said legs to each other, one end of said legs and of one of magnetic flux-conducting means being received in said recess, a tail-weight recessed to accommodate the other ends of said legs and of the magnetic flux-conducting means associated therewith, the interior exposed face of said head-weight and of the magnetic flux-conducting means at the head end being in substantially the same radial plane, a layer of pressure-release material applied to said face and to the magnetic flux-conducting means at said head end, and a liquid flooding the interior of said housing.

2,947,889
ELECTROMECHANICAL TRANSDUCER SYSTEM
Stanley R. Rich, West Hartford, Conn., assignor to The General Ultrasonics Company, a corporation of Connecticut
Filed Aug. 27, 1956, Ser. No. 606,478
16 Claims. (Cl. 310—26)



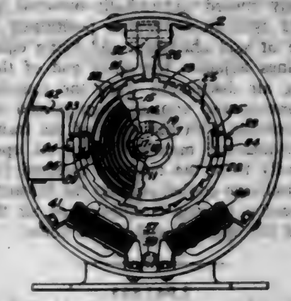
1. An electromechanical transducer system comprising electromechanical transducer means sandwiched between two pieces of solid materials which have relatively dissimilar densities and constituting with said pieces a mechanical vibrator, said system being dimensioned to vibrate as a half-wave vibrator in the direction of a line through said pieces and said transducer means.

2,947,890
TRANSDUCER
Wilbur T. Harris, Southbury, Conn., and Philip B. Edwards, Berryville, Va., assignors to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut
Filed Mar. 25, 1957, Ser. No. 648,103
15 Claims. (Cl. 310—26)



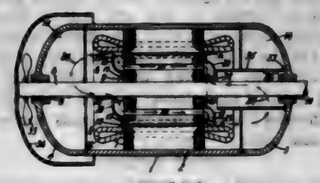
1. In an electromechanical transducer, a substantially continuous and closed magnetic flux-path core comprising a pair of individual laterally spaced elongated legs of magnetostrictive material, said legs having a width measured in the direction of the spacing between said legs and a height measured in a direction substantially at right angles to said width, said legs defining substantially continuous flux-transmitting paths therethrough over a plurality of planes extending widthwise of said legs from opposing edges of said legs outwardly for appreciable distances, a pair of separate magnetic connecting elements each formed of magnetic flux conducting material and connected between said legs respectively at longitudinally spaced portions thereof, each of said magnetic connecting elements extending along the height of said legs for a substantial distance in close flux-conducting adjacency with a plurality of said flux-transmitting planar paths at said opposed edges of said legs, means for magnetically polarizing said core, winding means linked to said legs, and end counterweights bonded to the opposite ends of said core.

2,947,891
CHARGED SPRING STARTERS
Chauncey Guy Suits, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 13, 1957, Ser. No. 658,690
6 Claims. (Cl. 310—41)



6. In a charged spring starter for electric motors having a rotating shaft mounted armature supported between a pair of spaced apart bearings, the combination comprising, a drum assembly slidably and rotatably mounted on said shaft between the rotor and one of said bearings, said drum assembly including first and second friction clutches having a spiral strip spring concentric with said shaft between said first and second friction clutches, said spring being attached at one end to said first clutch and at the other end to said second clutch, a third friction clutch adapted to be engaged by said first friction clutch, a fourth friction clutch adapted to be engaged by said second friction clutch, first solenoid means to move said drum along said shaft for engagement of said first and third friction clutches for winding of said spring through deceleration of said motor, second solenoid means to move said drum along said shaft for engagement of said second and fourth friction clutches to rotate said shaft through the action of said spring, and biasing means to maintain said drum assembly in a position where the said first and third, and second and fourth clutches are disengaged.

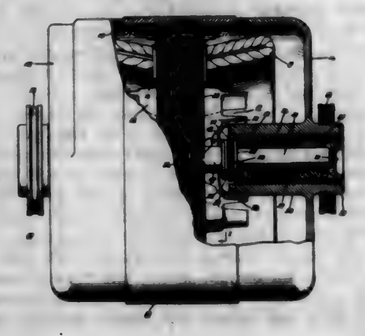
2,947,892
VENTILATION OF TOTALLY ENCLOSED MOTORS
Ion I. Inculet, Quebec, Quebec, and Vaughn A. Taylor, Peterborough, Ontario, Canada, assignors to Canadian General Electric Company, Limited, Toronto, Ontario, Canada, a company incorporated in Canada
Filed Feb. 12, 1958, Ser. No. 714,824
1 Claim. (Cl. 310—57)



A totally enclosed dynamoelectric machine comprising a frame enclosing a stator and a rotor arranged for electrodynamic cooperation therewith, a shaft in said rotor supported in opposite ends of the frame, first and second closed chambers formed by those areas existing between the inner portions of the frame and the exposed stator and rotor surfaces on opposite sides of the machine, a plurality of axially disposed air ducts in said rotor having cup-shaped elements fixed to opposite ends

thereof, the arrangement of said elements attached to the rotor in said first chamber being such that beginning with a selected duct the elements on one end alternate between facing radially outward and radially inward, and the arrangement of the elements attached to the rotor in the second chamber being such that beginning with said selected duct the elements alternate between facing radially inward and radially outward, and an axially disposed cylindrical member positioned around the shaft in one of said chambers and being equipped with intake openings adjacent the outer end of the chamber for receiving air discharged from the radially outward directed elements and cooled when passed in heat exchange relationship with the walls of the frame, an outlet in said cylindrical member having its opening positioned inwardly from the outward directed element and located to discharge cooled air into the inwardly directed elements, thereby causing circulation of air through the ducts toward the opposite end of the rotor.

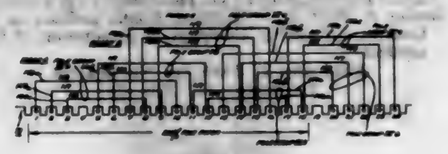
2,947,893
THRUST BEARING SUPPORT AND SPACER ARRANGEMENT FOR ELECTRIC MOTORS
Joseph V. Bumsoms, Sycamore, Ill., assignor to General Electric Company, a corporation of New York
Filed Aug. 20, 1958, Ser. No. 756,237
4 Claims. (Cl. 310—90)



4. In an electric motor having a stator and frame assembly, a shaft, a rotor secured on said shaft and having at least two internal grooves extending the length of said rotor adjacent said shaft, bearing assembly means rotatably supporting said shaft disposed on each side of said rotor, thrust bearing means arranged on said shaft adjacent each bearing assembly means, and a thrust bearing spacer sleeve loosely carried on said shaft between each rotor end face and the adjacent thrust bearing means, each of said sleeves formed at one end with a thrust transmitting surface disposed toward said thrust bearing means and formed at the other end with a plurality of axially extending projections received within said rotor grooves for locking each of said sleeves to said rotor for rotation therewith thereby transmitting thrust loads applied thereto directly to said rotor.

2,947,894
WINDING FOR POLYPHASE ALTERNATING CURRENT DYNAMOELECTRIC MACHINE
Donald P. Strang and William A. Garvey, Fort Wayne, Ind., assignors to General Electric Company, a corporation of New York
Filed Sept. 15, 1958, Ser. No. 761,228
13 Claims. (Cl. 310—202)

1. In a polyphase alternating current dynamoelectric machine: a magnetic core member having a plurality of winding slots formed in an air gap defining surface thereof; and a concentric winding positioned in said slots and having a plurality of phases, each of said winding phases having an even number of groups of coils disposed to form a corresponding even number of poles in said core member, the span of each pole group of each winding phase being different than the span of its adjacent pole group, each adjacent pair of pole groups of



each winding phase having the same total span as all other adjacent pairs of pole groups of said winding; each slot of said core member having a side of at least one coil disposed therein, the number of turns in the coils of each pole group being so related to the number of turns in the coils of its adjacent pole group that all slots of said core member have an equal number of turns therein.

2,947,895
BRUSHGEAR ASSEMBLY
Edward John Wray, Barrie, Ontario, Canada, assignor to Canadian General Electric Company, Limited, Toronto, Ontario, Canada, a corporation of Canada
Filed Nov. 23, 1956, Ser. No. 623,938
5 Claims. (Cl. 310—239)



1. A dynamoelectric machine with field windings, said windings having leads of negligible length, said leads extending axially, and a brushgear assembly, said brushgear assembly being adapted to be incorporated into said machine as a unit and comprising, a mounting cradle that is adapted to be supported by said machine, said cradle supporting terminal straps and brush holders thereon, said terminal straps being effective to form axially facing armature terminals and field terminals, said armature terminals and field terminals being located closely adjacent to said leads when said cradle is supported on said machine, whereby said terminals may be directly connected to said leads.

2,947,896
ELECTROSTATIC DEFLECTION AND FOCUSING SYSTEM
George A. Samm and Rowland W. Redington, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Feb. 9, 1959, Ser. No. 792,459
7 Claims. (Cl. 313—78)

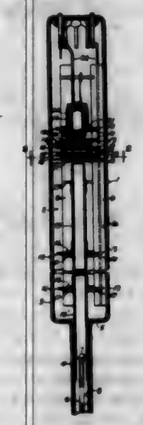
1. An electrostatic deflection and focusing system comprising four pairs of hemispherically-shaped conducting electrodes, the electrodes of each of said pairs of electrodes being of different size and mounted concentrically with the small electrode of each of said pairs mounted within the larger electrode, the centers of all of said pairs of electrodes being arranged along a line, each pair of

said pairs of electrodes being alternately arranged with the spaces between the electrodes of adjacent pairs adjoining



to provide four continuous electron beam paths, each of which extends through an angle of 180°.

2,947,897
ELECTRON GUN STRUCTURE
Conrad F. Rodriguez, Pompton Lakes, and Milner W. Wallace, Westwood, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Jan. 8, 1958, Ser. No. 707,818
6 Claims. (Cl. 313—82)



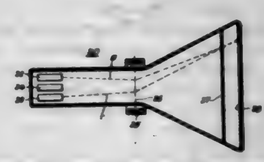
1. In an electron gun, an electrode support arrangement comprising a cylindrical envelope, a plurality of notched insulating rods each having a given diameter disposed lengthwise of said envelope and having a flush contact along their full length against the inner surface of said envelope at circumferentially spaced points thereabout, an electrode element having a portion thereof disposed transversely with respect to said envelope and bearing against said insulating rods the transverse dimension of said electrode element plus two rod diameters being substantially equal to the diameter of said envelope, a rod retaining element disposed transversely of said envelope and in coupled relationship with said portion of said electrode element and said insulating rods, and an electrode supporting member disposed transversely of said envelope and mounted on said insulating rods in coupled relationship with said rod retaining element, the inner surface of said envelope, said insulating rods, said electrode supporting member, and said rod retaining element cooperating to position said electrode element longitudinally along and coaxially of the longitudinal axis of said envelope.

2,947,898
COLOR PICTURE TUBE SCREEN
Hans Heil, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 16, 1956, Ser. No. 572,005
6 Claims. (Cl. 313—92)



1. In a cathode ray tube, a screen having two coordinates, a plurality of electron guns arranged to illuminate the screen with electrons, an electron permeable mask between the guns and screen adapted to have a potential difference with respect to the screen such as to form an accelerating field in the path of said electrons, and a plurality of groups of phosphors on said screen, each phosphor group consisting of respective phosphor areas adapted to be illuminated by electrons from the respective guns, the phosphor areas in each group having a dimension and a center to center spacing decreasing with increasing deflection from the center of the screen in at least said one screen coordinate so as to correspond to the spacing in said one screen coordinate of the landing points of electrons thereon.

2,947,899
COLOR IMAGE REPRODUCERS
Sam H. Kaplan, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Jan. 23, 1958, Ser. No. 710,639
6 Claims. (Cl. 313—92)

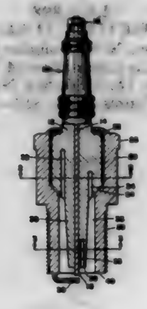


1. For a color-reproducing cathode-ray tube, a compensated aperture mask structure having a plurality of apertures of predetermined shape at the axial aperture and distorted into an elliptical configuration by radial foreshortening as a function of the distance of the apertures from said axial aperture.

2,947,900
SPARK PLUG
John J. Heigl, Short Hills, and Albert J. Blackwood, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed June 28, 1957, Ser. No. 668,657
7 Claims. (Cl. 313—132)

1. A spark plug including a central vertical electrode and bottom electrode means spaced from said vertical electrode to form a spark gap, said vertical electrode being formed as a hollow cylinder, a solid cylinder movably mounted in said hollow cylinder and means for adjusting the position of said solid cylinder in said

hollow cylinder to adjust the length of the well formed between the bottom of said solid cylinder and the bottom



portion of said hollow cylinder, said well being open at its end adjacent said spark gap.

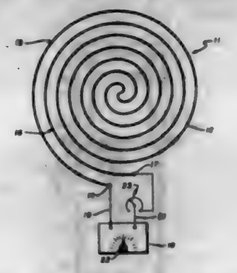
2,947,901
MAGNETRON TUBE SHIELD
Theodore A. Haddad, Swarthmore, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 23, 1956, Ser. No. 573,390
4 Claims. (Cl. 313—157)



1. A magnetron beam switching tube including a plurality of electron beam holding positions disposed about the longitudinal axis of the tube, each position including an electron beam holding electrode, a beam switching electrode and a target electrode, a cylindrical magnet open at its ends and enclosing said tube and providing an axially aligned flow of magnetic flux through said tube, and magnetic shield means positioned at each end of said magnet and substantially closing the ends thereof.

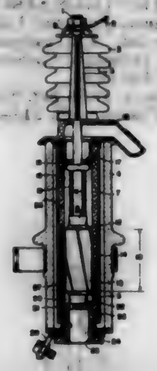
2,947,902
MAGNETIC GRID
Richard F. Post, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 20, 1959, Ser. No. 835,158
5 Claims. (Cl. 313—167)

1. A magnetic grid for controlling charged particle discharge comprising at least one low resistance grid wire having more than two sections spaced apart and extending in substantially opposite directions in the same plane with said grid wire adapted for electrical energization to pass current therethrough of sufficient magnitude that



magnetic fields established about adjacent sections of said wire deflect charged particles from the grid.

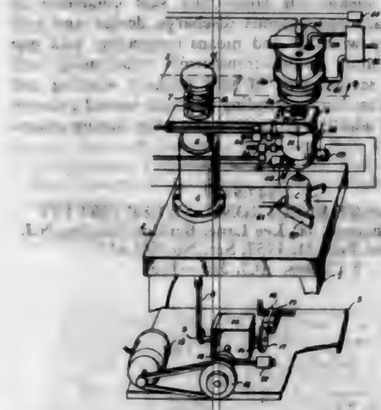
2,947,903
CURRENT INTERRUPTING DEVICES
Arthur C. Westrom, Chicago, Ill., assignor to Hubbard and Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Jan. 17, 1958, Ser. No. 709,610
12 Claims. (Cl. 313—231)



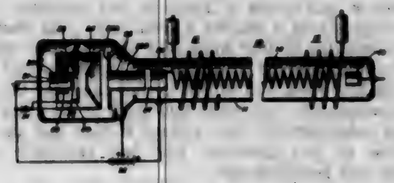
1. In a device for discharging heavy current surges having a housing made from fibers, two electrodes disposed in said housing and spaced apart to form a gap therebetween, one of said electrodes being electrically connected to an air gap connected to the line side of said device and the other electrode being the ground electrode of said device, the combination comprising a sleeve made from ceramic fibers fitting around the outside of said housing, a thin layer of metallic material interposed between the outside of said housing and said sleeve of ceramic fibers, said thin layer of metallic material extending at least substantially the length of said gap in said housing between the two electrodes, said thin layer of metallic material being electrically connected solely to one of said two electrodes.

2,947,904
MACHINE FOR SUPPLYING A CHARGE OF PROPELLANT TO AN AEROSOL CONTAINER AND FOR SEALING THE LATTER
John Richard Focht, Yonkers, N.Y., assignor to Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed May 4, 1955, Ser. No. 505,880
16 Claims. (Cl. 53—37)

16. The method of charging and sealing an aerosol container having a top opening and a valved cap, which comprises: positioning the valved cap loosely on the container in cooperative relation with the top opening of said container, thereafter bodily lifting the valved cap free of said container to completely free the top opening from obstruction thereby, thereafter injecting a predetermined measured quantity of a propellant into the container substantially tangentially of and through the thus unobstructed top opening thereof, and thereafter returning the valved cap into cooperative engagement with the container and sealing said valved cap thereto.



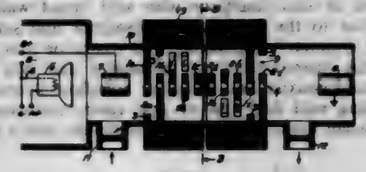
2,947,905
LOW NOISE VELOCITY MODULATION APPARATUS
John R. Pierce, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 29, 1954, Ser. No. 471,673
3 Claims. (Cl. 315—3)



1. In velocity modulation apparatus, an electron emissive cathode surface, a control element located between the cathode surface and means for modulation of electron flow therefrom and spaced closed to said surface for space-charge-limiting the flow therefrom, means for providing a high R-F impedance across said space-charge-limiting region, said means including the cathode and control element forming opposite surfaces of a cavity which is resonant at the midfrequency of the operating band of the apparatus, and means positioned along the path of flow beyond said control element for imparting a velocity jump to the electrons at a point of noise velocity maximum.

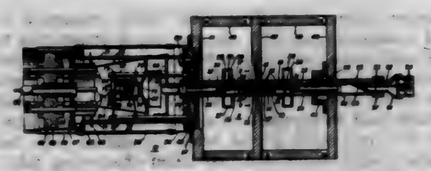
2,947,906
DELAY LINE
Charles Vincent Litton, Grass Valley, Calif., assignor to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed July 29, 1955, Ser. No. 525,128
6 Claims. (Cl. 315—3.5)

1. In a traveling wave tube, a delay line capable of cancelling the reflected wave with substantially no attenuation of the forward wave, characterized by means having non-reciprocal rotational properties positioned to rotate the electric vector of the wave, means for generating an electron beam, said delay line being in coupled relationship with said electron beam, delay-producing means positioned along said delay line and relative to said non-reciprocal means in alignment with the rotation



of the electric vector as the wave traveling in a forward direction is rotated, said delay-producing means having reciprocal electric vector rotating properties, whereby a reflected wave is rotated in opposite directions by said reciprocal and non-reciprocal means respectively, said reciprocal and non-reciprocal means being of sufficient axial length to rotate the electric vector of the reflected wave by at least 180° whereby further propagation of the reflected wave fails.

2,947,907
TRAVELING WAVE TUBE
Max G. Bodmer, Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 31, 1958, Ser. No. 784,314
16 Claims. (Cl. 315—3.5)

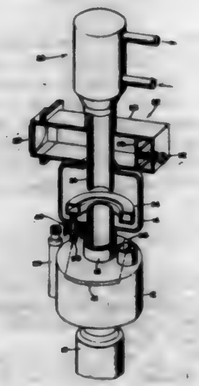


1. A traveling wave tube comprising an evacuated envelope, means including an electron gun for forming and projecting an electron beam along an extended path, a slow wave propagation circuit positioned along said path, means for supporting said slow wave circuit, said supporting means including an insulative support rod divided into a plurality of discrete segments in axial alignment with and glazed to said slow wave circuit along a line parallel to the axis thereof, and a conductive block having means for aligning said support rod sections, said aligning means comprising a groove extending longitudinally of said conductive block and in which said sections are mounted.

2,947,908
OUTPUT STRUCTURE FOR ELECTRON DISCHARGE DEVICES EMPLOYING CAVITY RESONATORS
Paul W. Crapochettes, Atherton, Calif., assignor to Litton Industries of California, Beverly Hills, Calif.
Continuation of application Ser. No. 506,650, May 6, 1955. This application Apr. 15, 1958, Ser. No. 728,748
11 Claims. (Cl. 315—5.46)

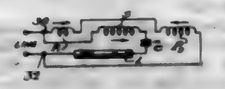
1. In a tunable velocity modulated vacuum tube wherein high frequency electrical energy is generated by bunching the electrons in an electron stream, the combination comprising: a cavity resonator of substantially constant volume having a first and second apertured ends, said resonator having an axis extending through the center

of the apertures in said first and second ends; a first electron beam channeling tube extending into said second end of said cavity resonator, said first tube being concentrically positioned with respect to said resonator and being connected thereto at said second end thereof: a rectangular waveguide having a pair of broad walls and a pair of narrow walls and an axis of symmetry, said rectangular waveguide being positioned adjacent said first end of said resonator with said broad walls perpendicular to the axis of said resonator and said axis of said symmetry intersecting said resonator axis: a coaxial link intercoupling said resonator and said waveguide, said coaxial link including a hollow sleeve interconnecting said first end of said cavity resonator and the adjacent broad wall of said waveguide, and a second



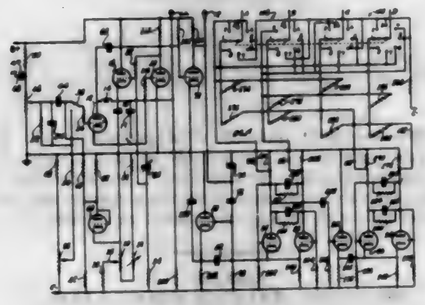
electron beam channeling tube being concentric with said resonator, said first electron beam channeling tube and said sleeve, said second beam channeling tube being rigidly affixed through an electrically conductive connection to the remote wall of said waveguide and extending through said waveguide and sleeve into said resonator at said first end, said second beam channeling tube being spaced axially from said first beam channeling tube by a gap having a relatively fixed dimension; an electron gun for projecting an electron beam through one of said electron beam channeling tubes, across said gap and into the other of said beam channeling tubes; electron collector means connected to said other beam channeling tube; and means for tuning said cavity resonator while maintaining fixed the internal volume of said cavity resonator and the relative position of said first and second beam channeling tubes.

2,947,909
APPARATUS FOR IGNITING AND OPERATING GASEOUS DISCHARGE DEVICES
Paul Berger, Chicago, Ill., assignor to Advance Transformer Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1957, Ser. No. 693,440
29 Claims. (Cl. 315—100)



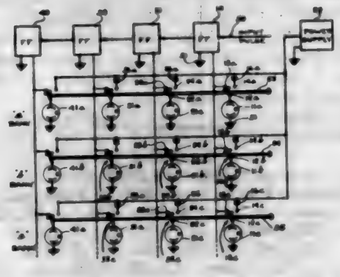
1. Apparatus for igniting and thereafter providing operating voltage for at least one gaseous discharge device from a source of A.C. voltage which comprises, an elongate iron core having a primary winding mounted thereon adapted to be connected across said source and being formed of first and second primary parts, said primary parts being series connected in voltage opposition to one another and physically separated along the length of said core, at least one secondary winding disposed on said core closer coupled with said second primary part than with said first primary part, a condenser, lead means for connecting said condenser in series with said one gaseous discharge device and said one secondary winding, and means connecting said one secondary winding in auto-transformer relationship with at least said second part of said primary winding and with said one secondary winding and said second primary part being in additive voltage relationship during operation.

2,947,910
WIDE RANGE ELECTRONIC SWEEP CIRCUIT
Francis H. Shepard, Jr., Lee Lane, Berkley Heights, N.J.
Filed Feb. 21, 1957, Ser. No. 641,653
8 Claims. (Cl. 315—163)



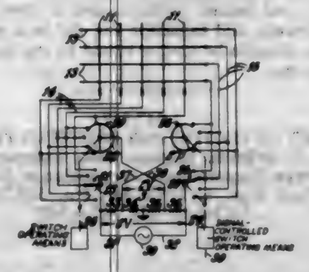
1. A wide range sweep circuit comprising a capacitor charging and discharging circuit having a source of direct voltage, a capacitor and a potentiometer connected in series in a conductive path, a resistor connected between the movable tap on said potentiometer and said source, one point in said path being connected to return current to said source, and means to discharge said capacitor when the voltage across it reaches a given level, said elements being connected so that when said tap is at one end of said potentiometer the voltage at said tap is low and current can flow from said source to said capacitor through said potentiometer, and when said tap is at the other end of said potentiometer, said voltage is high and current can flow to said capacitor with less resistance than through said potentiometer.

2,947,911
READOUT DEVICE
Albert E. Linden, Plainview, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York
Filed Sept. 26, 1958, Ser. No. 763,575
3 Claims. (Cl. 315—166)



1. In a device of the character described, a circuit having an output, said output having two discrete voltage levels, a glow discharge tube, a power supply, the voltage of said power supply being less than the ignition voltage but more than the sustaining voltage of said glow tube, and switching means for connecting said glow tube selectively to said output of said circuit or said power supply, said switching means being momentarily connected to both outputs simultaneously during the switching operation.

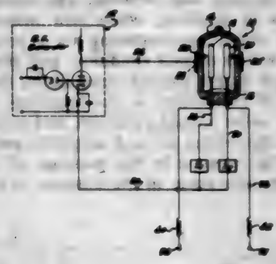
2,947,912
ELECTRO-LUMINESCENT DISPLAY DEVICES
George Richard Hoffman, Sale, and Roy Ernest Hayes, Cheltenham, England, assignors to National Research Development Corporation, London, England, a British corporation
Filed Apr. 7, 1958, Ser. No. 726,832
Claims priority, application Great Britain Apr. 9, 1957
11 Claims. (Cl. 315—169)



1. An electro-luminescent display device comprising a phosphor layer, a first set of electric conductors disposed on one side of said layer, a second set of electric conductors disposed on the opposite side of said layer in non-parallel relationship to said first set conductors whereby each second set conductor crosses a plurality of said first set conductors, a source of varying electric operating potential, a source of varying electric biasing potential having at all times a predetermined and constant fractional value which is between one half and one quarter of that of said source of operating potential, said sources of potential each having first and second terminals, said first terminals being of like polarity at any instant and said second terminals being also of like polarity at any instant but of opposite polarity to said first terminals and selector switching means including equally conductive bi-directional connections for connecting the first terminal of said operating potential source to one of said first set conductors and the second terminal of said operating potential source to one of said second set conductors and simultaneously connecting the second terminal of said biasing potential source to each of said first set conductors which is not connected to said operating potential source and for connecting said first terminal of said biasing potential source to each of said second set conductors which is not connected to said operating potential source.

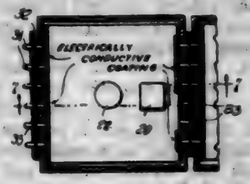
2,947,913
GAS TUBE SWITCH
Richard M. Trostler, Pomona, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Dec. 27, 1956, Ser. No. 630,917
4 Claims. (Cl. 315—238)

1. Switching apparatus comprising a sealed envelope having an ionizable gas therein, a pair of signal electrodes in spaced relation within said envelope, excitation electrode means carried by said envelope for capacitive coupling to said signal electrodes, a single source of radio-frequency excitation power connecting said excitation electrode means to said signal electrodes for ionizing said gas to complete a signal circuit between said signal electrodes, said radio-frequency excitation power being supplied independently of the signal circuit, and a separate impedance connected between each of said signal electrodes



and said excitation source, said impedances having respective magnitudes capable of equalizing the excitation currents through said signal electrodes to minimize the generation of extraneous voltages therebetween, whereby very low signals and signals approaching the ionization potential are switched.

2,947,914
ELECTRONIC APPARATUS
Gerald F. Simons, Joplin, Mo., assignor to Pacific Mercury Television Mfg. Corp., Joplin, Mo., a corporation of California
Filed Sept. 8, 1958, Ser. No. 759,647
4 Claims. (Cl. 317—101)

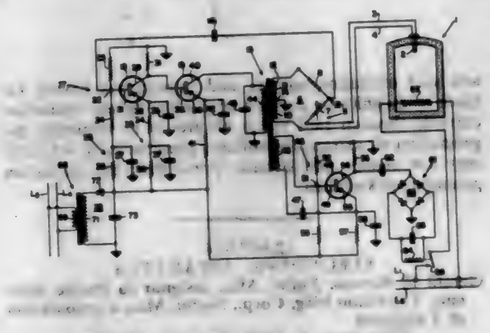


1. An electrical apparatus comprising two adjacent housings having parallel confronting adjacent end walls, electrical circuit components in said housing, a printed circuit board in each housing on which said components are mounted, one end portion of each circuit board being adjacent to one of said end walls, a plurality of jack terminals on each of said end portions disposed in confronting relationship, and a plug comprising a plurality of double-ended prong members disposed intermediate said housings, each prong extending between and interconnecting two confronting ones of said jack terminals.

2,947,915
ELECTRICAL CONTROL APPARATUS
Thomas A. Patchell, Wayne, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 3, 1954, Ser. No. 472,825
7 Claims. (Cl. 317—146)

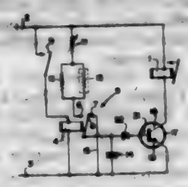
1. In apparatus for controlling the value of a condition, the combination comprising an electrical bridge network having an input and an output and operative to produce in said output an output signal of a phase, with respect to an energizing signal applied to said input, which is controlled by the value of said condition, an amplifier having an input and an output, first circuit means connecting the output of said amplifier in an energizing relationship to the input of said network, second circuit means connecting the output of said network in

an energizing relationship to the input of said amplifier, said circuit means connecting said network in a feedback path between said output and said input of said amplifier to cause an output signal produced in said amplifier output to be fed back regeneratively to said amplifier input through said network, and hence to cause the apparatus to oscillate, when said network output signal has a phase corresponding to a predetermined range of the values of said condition, said phase of said network output signal thereby determining the presence and absence of oscillations in the apparatus in accordance with the value of said condition, and control means connected to the output of said amplifier and operative in one sense in response to the presence of oscillations and in the opposite sense in the absence of oscillations,



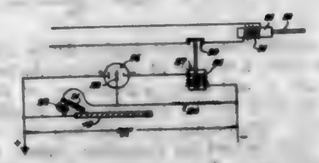
said control means comprising a relay having contacts arranged to control the value of said condition and having an operating winding arranged to close said contacts solely when said winding is operatively energized, rectifier means having an input and an output, a connection including a D.C. blocking device connected between said rectifier input and said amplifier output to apply said oscillations to said rectifier input, said rectifier operating to rectify said oscillations and to produce solely therefrom a D.C. output signal in its said output, and a connection between said rectifier output and said winding over which said winding is operatively energized solely by said D.C. output signal and hence solely by said rectified oscillations, the latter constituting the sole energization for said winding, whereby said contacts are caused to be closed solely in the presence of said oscillations and to be open in the absence of said oscillations.

2,947,916
CONTROL APPARATUS
Kenneth H. Beck, Newtown, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 11, 1956, Ser. No. 597,273
5 Claims. (Cl. 317—148.5)



1. A time delay relay control circuit comprising, in combination, a first terminal adapted to be connected to the positive terminal of a source of voltage, a second terminal adapted to be connected to the negative terminal of said source of voltage, a circuit control relay and a pair of switching contacts for controlling the energization of said relay connected across said first and second terminals, said relay having associated therewith a first stationary contact, a second stationary contact, and a movable contact, said movable contact engaging said first stationary contact when said relay is energized and engaging said second stationary contact when said relay is deenergized, a timing circuit connected across said terminals and comprising a first resistor, a thermistor and a second resistor connected in parallel, said first stationary contact, said movable contact, and a capacitor, the temperature characteristics of said thermistor as shunted by said second resistor being such as to substantially compensate for changes in said capacitor due to temperature, said second stationary contact and said capacitor being connected to said second terminal, a load relay, a transistor having an emitter, a collector, and a base, the collector of said transistor being connected through said load relay to said first terminal, the emitter of said transistor being connected to said second terminal, and a Zener diode connected between said capacitor and the base of said transistor and poled to be reverse biased by the voltage across said capacitor.

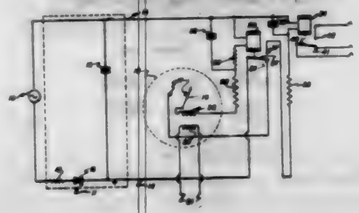
2,947,917
SHEET DETECTOR FOR PRINTING PRESSES
Richard C. O'Brien, Dayton, Ohio, assignor to Harris-Intertype Corporation, a corporation of Delaware
Filed Mar. 1, 1956, Ser. No. 568,754
5 Claims. (Cl. 317—149)



2. In a printing press or similar machine for performing an operation on a material and including means for delivering the material to a predetermined position and sensing means for determining whether the material has been delivered to said position; the combination comprising two conductive members having a first relative position in engagement with each other and a second relative position spaced from each other, said members obtaining said second relative position when the material is properly delivered and the said first relative position when improperly delivered, a control circuit including electronic amplifying means having an input circuit and an output circuit, said output circuit including a relay coil for effecting a control operation when energized by a current of a predetermined magnitude and said input circuit including a resistance connected in series circuit with said members, a potential source connected across said series circuit and providing a potential when said members are separated sufficiently to assure the overcoming of contact resistance to current flow upon engagement of said members and an input signal to said amplifying means upon engagement of said members to effect energization of said relay coil by a current of said magnitude, said resistance limiting the current flow in said series circuit to a magnitude incapable of producing a substantially noticeable shock in the human body, and means biasing said amplifying means to provide a quiescent trickle output current in said output circuit below said predetermined magnitude when said members are separated comprising circuit means connected to derive a feedback voltage from a portion of said output circuit which feedback voltage varies with the current in the output circuit, said circuit means including connections degeneratively applying the derived feedback

voltage to the input of the amplifying means to bias said amplifying means to tend to maintain a substantially constant quiescent output current of a magnitude insufficient to actuate said control means.

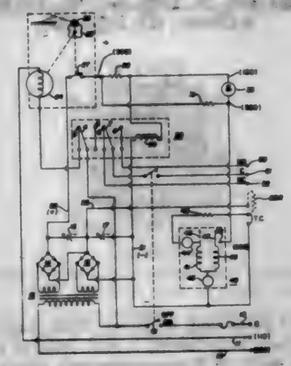
2,947,918
AUTOMATIC INTERRUPTER CIRCUIT
Allen R. Hamilton, Rochester, N.Y., assignor, by mesne assignments, to Consolidated Vacuum Corporation, Rochester, N.Y., a corporation of New York
Filed Aug. 6, 1956, Ser. No. 602,318
7 Claims. (Cl. 317—152)



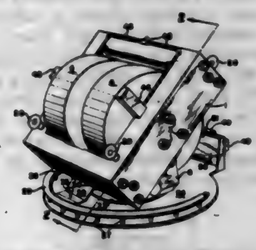
1. In an automatic interrupter circuit of the class described, the combination which comprises a source of power having first and second terminals, an interrupter relay having an energizing coil, an armature and first and second stationary contacts, means for connecting the armature to the first terminal of the power source, the armature being closed against the first contact when the interrupter relay is not energized and being arranged to be closed against the second contact when the interrupter relay is energized, an electric signal indicator having a stationary contact, a movable contact, a holding coil, a pair of input terminals and means coupled to the movable contact and responsive to a predetermined input signal applied across the input terminal for moving the movable contact into engagement with the stationary contact of the indicator, means for connecting the first contact of the interrupter relay to the stationary contact of the indicator, means for connecting the movable contact and the holding coil of the indicator and the energizing coil of the interrupter relay in series relationship to the second terminal of the power source, the holding coil of the indicator being arranged to hold the movable and stationary contacts of the indicator closed after the contacts of the indicator have been closed by the input signal until the armature of the interrupter relay is disengaged from the first contact thereof, a load relay having an energizing coil and being adapted to control the power supplied to a load, and means for connecting the energizing coil of the load relay between the second terminal of the power source and the second contact of the interrupter relay, whereby the load relay is energized only after the armature of the interrupter relay is closed against the second contact thereof.

2,947,919
CIRCUITS FOR CONTACT METERS
John D. Saint-Amour, Chagrin Falls, and George J. Crowdes, Jr., Chesterland, Ohio, assignors to Assembly Products, Inc., Chesterland, Ohio, a corporation of Ohio
Filed Feb. 24, 1959, Ser. No. 795,293
8 Claims. (Cl. 317—152)

1. In an electrical control system, a direct current source of a predetermined first voltage, a load relay having a coil rated at less than said first voltage D.C., connections from the source to the relay coil and including a first resistance for dropping the voltage as applied to the coil, a galvanometer type meter having contacts operable from open to closed positions, additional connections including a second resistance having one end connected adjacent the source side of the first resistance so that the second resistance will be substantially unaffected by IR drop in the first resistance and with said additional connections extending from the source through said second resistance to the meter contacts to apply thereto the full voltage of the source when the contacts are open.

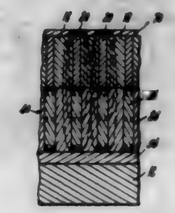


2,947,920
MAGNET APPARATUS
Hugh J. Hall, Los Altos, Calif., assignor to Varian Associates, Palo Alto, Calif., a corporation of California
Filed Jan. 30, 1958, Ser. No. 712,204
5 Claims. (Cl. 317—158)



1. A magnet apparatus including a rectangular magnetic yoke having mutually opposing spaced apart reentrant portions defining a magnetic gap therebetween, a substantially U-shaped yoke supporting member fixedly secured to said rectangular magnetic yoke and holding said yoke in a plane defined by said rectangular yoke substantially at 45° to the vertical, said U-shaped yoke supporting member having a bore extending substantially along the axis of symmetry thereof, a substantially stationary base member, a vertically disposed axle member coaxially disposed within the bore of said U-shaped yoke supporting member, a bearing captured between said vertical axle and said U-shaped yoke supporting member to allow free rotation of said magnetic yoke about said vertical axle, an azimuth scale fixedly coupled to said base member, and an index bracket fixedly coupled to said rectangular magnetic yoke for cooperation with said azimuth scale to give a precise measurement of the orientation of the magnetic field with respect to said stationary base member, as desired.

2,947,921
FINE GRID PERMANENT MAGNETIC CHUCK
Ernest L. Wetzlet, Warwick, R.I., assignor to Brown & Sharpe Mfg. Co., Providence, R.I., a corporation of Rhode Island
Filed Feb. 25, 1957, Ser. No. 642,111
1 Claim. (Cl. 317—199)



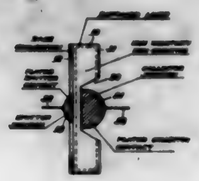
A fine grid permanent magnetic chuck having in combination a chuck body having a work holding plate which comprises a series of flux carrying pole pieces extending through and transversely of said plate, and non-magnetic areas interposed between said pole pieces, said pole pieces and intervening non-magnetic areas being narrowly spaced to form a fine grid holding plate, and a magnet pack housed within said chuck body arranged for engagement with said work holding plate and shiftable longitudinally thereof between work holding and work release position, said magnet pack comprising a series of ceramic permanent magnets characterized by a high coercivity and short magnetic length, said magnets being of substantially rectangular cross section extending transversely of the magnet pack, each of said magnets approximating 3/32" in thickness, 11/16" in depth, and with a lengthwise dimension approximating the width of the chuck table, said magnets being magnetized across said narrow dimension, and alternate magnets being magnetized in opposite directions providing adjacent magnetic faces of like polarity, and magnetic inserts of high flux carrying permeability of a width approximating 3/16" and greater than the width of said intervening non-magnetic areas and with depth and lengthwise dimensions corresponding to the depthwise and widthwise dimensions of the magnet pack, whereby said flux carrying pole pieces will bridge adjacent magnetic inserts for the work release position of said magnet pack.

2,947,922
SEMICONDUCTOR DEVICE
Donald W. Junker, Bloomington, Ind., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana
Filed Oct. 27, 1958, Ser. No. 769,656
2 Claims. (Cl. 317—234)



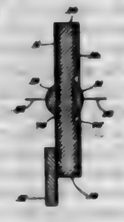
1. A diode comprising a unidirectional impedance element, a first terminal to which one side of said element is connected, a second terminal, a resilient conductive member connected to said second terminal, means responsive to relative rotation of said first and second terminals for moving said resilient member into engagement with the side of said element opposite to said one side, and said resilient conductive member being a cantilever type spring provided with an integral, substantially spherical surface which contacts said unidirectional impedance element.

2,947,923
TRANSISTOR PROCESS AND PRODUCT
Turner E. Pardue, Tempe, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Nov. 3, 1955, Ser. No. 544,699
17 Claims. (Cl. 317—235)



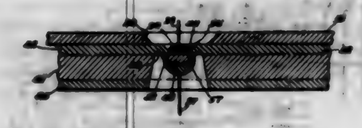
16. A transistor comprising a semiconductor crystal body having a substrate layer of relatively high resistivity and surface layers on opposite sides thereof, each of said surface layers blending with said substrate layer and having a resistivity gradient therein with the resistivity in said surface layers decreasing toward the exterior of said body, a connection on one of said surface layers, means forming a cavity extending through the other surface layer, and a connection to said substrate layer at the bottom of the cavity.

2,947,924
SEMICONDUCTOR DEVICES AND METHODS OF MAKING THE SAME
Turner E. Pardue, Tempe, Ariz., assignor to Motorola, Inc., a corporation of Illinois
Filed Oct. 8, 1956, Ser. No. 614,417
20 Claims. (Cl. 317—235)



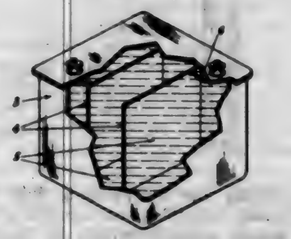
11. A p-n-n'-p transistor which comprises a germanium die having an n'-type substrate and first and second diffused base layers of low resistivity n-type conductivity forming opposite faces of the die, said first base layer having an impurity concentration gradient decreasing approximately exponentially from the outer surface thereof to the substrate, said die also having an emitter pit of a predetermined depth formed in the outer portion of the first diffused base layer and a collector pit of a predetermined depth extending from the outer surface of the second base layer entirely through the second base layer to the substrate, an emitter electrode formed on the bottom of the emitter pit in rectifying contact with the first base layer, a collector electrode formed on the bottom of the collector pit in rectifying contact with the substrate, and a base electrode connected to the die.

2,947,925
TRANSISTOR AND METHOD OF MAKING THE SAME
Fred B. Maynard and Earl L. Steele, Phoenix, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Feb. 21, 1958, Ser. No. 716,666
20 Claims. (Cl. 317—235)

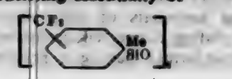


1. In a transistor, a semiconductor body including in combination, a layer of semiconductor material of a first conductivity type and a layer of semiconductor material of the opposite conductivity type formed by diffusion of a conductivity modifying impurity into the first conductivity type material, a first region of material of the first conductivity type in said body electrically isolated from the rest of the material of the same conductivity type in said layer thereof, a diffused rectifying junction formed between the isolated first region of said first conductivity type and said material of said opposite conductivity type and a second region of material of said first conductivity type formed by alloying a conductivity modifying impurity into said layer of semiconductor material of said opposite conductivity type to form an alloyed rectifying junction.

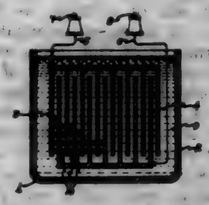
2,947,926
ELECTRICAL APPARATUS EMPLOYING DIELECTRIC FLUIDS
Robert M. March, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
Filed Nov. 23, 1956, Ser. No. 623,987
1 Claim. (Cl. 317—258)



An electrical apparatus comprising elements in spaced relationship having between them a difference in electrical potential, there being between said elements a dielectric fluid consisting essentially of

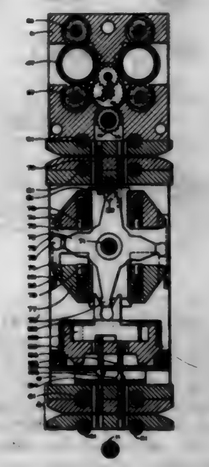


2,947,927
ELECTRIC CAPACITOR AND DIELECTRIC MATERIAL THEREFOR
James F. Tracy, Fort Edward, N.Y., assignor to General Electric Company, a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,146
3 Claims. (Cl. 317—258)



1. An electric capacitor comprising a container, spaced armatures in said container, and a liquid dielectric material in said container between said armatures consisting essentially of adipic acid ester material.

2,947,928
AUTOMATIC MACHINIST
Cletus H. Killian, Brooklyn, N.Y., assignor of one-fourth to R. K. Le Blond Machine Tool Co., Cincinnati, Ohio, a corporation of Delaware
Substituted for abandoned application Ser. No. 487,443, May 18, 1943. This application Oct. 7, 1952, Ser. No. 313,536
9 Claims. (Cl. 318—23)

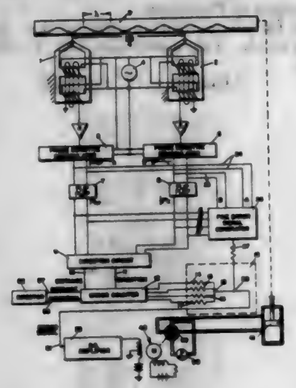


1. In a device of the class described a perforated tape having a plurality of series of feeding perforations and means for progressively feeding said tape comprising a pair of plates between which the tape is adapted to pass, a plurality of sprockets for each series of feeding perforations so arranged and located that the teeth of said sprockets engage with said feeding perforations to positively feed the tape in a predetermined direction between the said plates, a roll for each sprocket arranged for sprocket tooth clearance, the construction and arrangement being such that the line of centers of each sprocket and cooperating roll is substantially perpendicular to the tape between said plates, resilient means for causing each sprocket and cooperating roll to grip the tape, doctor blades associated with each sprocket and roll for guarding against adherence of the tape to either the sprocket or roll on the egress side and for guiding the tape to a position corresponding to substantially the common tan-

gent of sprocket and cooperating roll on the ingress side and means for simultaneously, positively driving all of said sprockets substantially as described.

3. An electromechanical evaluator comprising a power source; a plurality of tapped transformers; a selsyn; a plurality of sets of switches; and suitable electrical connections joining said power source, said transformer, said selsyn, and said sets of switches so that 2^n different classes of circuits to the selsyn terminals may be established to the terminals of said selsyn where n is a predetermined digit and also the number of sets of said sets of switches; the construction and arrangement being such that each class of circuits causes the relatively movable elements of said selsyn to assume predetermined relative positions so that there are a total of 2^n of said predetermined relative positions of said relatively movable elements of said selsyn, and further said 2^n relative positions may be arranged as sequence of 2^n substantially integral multiples of a predetermined angle.

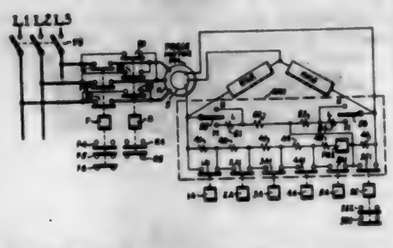
2,947,929
DIGITAL-ANALOG SERVO CIRCUIT
John L. Bower, Downey, Calif., assignor to North American Aviation, Inc.
Filed Dec. 23, 1955, Ser. No. 555,176
18 Claims. (Cl. 318—28)



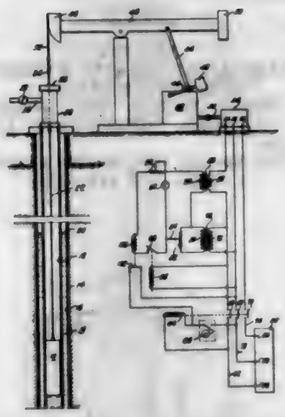
1. In an electronic circuit, converter means adapted to receive a first input electrical signal and transform said signal into a signal of discrete values, means connected to receive said signal of discrete values and adapted to receive a second signal of discrete values and provide an output indicating the difference between said signals, means for summing the difference signal in predetermined weighted relationship with said first input electrical signal.

2,947,930
ELECTRIC MOTOR CONTROLLERS
Cyril P. Feldhausen, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed June 25, 1956, Ser. No. 593,657
8 Claims. (Cl. 318—210)

1. In an electrical controller for a motor having a secondary resistance network, speed control means comprising said secondary resistance network and a plurality of electroresponsive devices for commutating portions of said secondary resistance network to adjust the speed of the motor, a speed selector device operable to select predetermined combinations of said commutating devices for operation to preselect a desired one of a multiplicity of motor operating speeds, and control means for initiating energization of the motor, the improvement comprising selector means having a plurality of operating positions and operable to select desired ones of said commutating devices for operation thereby to preselect a desired value of motor starting torque, torque control means responsive to operation of said control means for causing said selected device to commutate said secondary resistance network to establish said preselected value of motor starting torque, means responsive to said operation of said control means after elapse of a predetermined time interval for causing said torque control means to restore said selected commutating device thereby to change the motor torque, and means comprising said commutating devices including said restored device operable in response to said restoring means for thereafter commutating said secondary resistance network to accelerate the motor in a plurality of steps to a speed determined by the setting of said speed selector device.

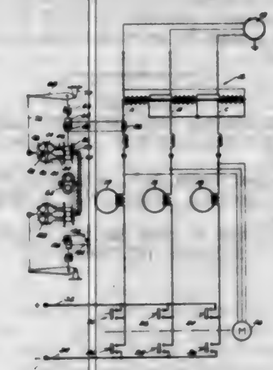


2,947,931
MOTOR CONTROL SYSTEMS
Laurence M. Hubby, Bellaire, Tex., assignor to Texaco Inc., a corporation of Delaware
Filed Dec. 24, 1956, Ser. No. 630,384
1 Claim. (Cl. 318—447)



In a pumping unit for pumping fluid from a well, an electric motor control system comprising means having first and second output terminals for supplying electric energy, an electric motor having first and second input terminals, first and second conductors each including a main switch interconnecting said first terminals and said second terminals respectively, a main relay having a main coil for actuating said main switches, a periodically actuated control switch connected serially with said main coil between said first and second output terminals, a potentiometer having a variable tap, a first transformer having a primary winding connected between the first and second input terminals of said electric motor and a secondary winding connected across said potentiometer, a second transformer having a primary winding interposed in said first conductor between the main switch of said conductor and said first input terminal and a secondary winding connected serially with and in phase opposition to the secondary winding of said first transformer, a voltmeter connected between the variable tap of said potentiometer and the terminal of the secondary winding of said transformer remote from the secondary winding of the first transformer, a first time delay relay having a switch and a coil connected between said first and second input terminals, a variable resistor, and a second time delay relay having a coil connected serially with said variable resistor and the switch of said first time delay relay across said voltmeter, and a switch connected across said periodically actuated control switch through one of said main switches.

2,947,932
OVERLAP REGULATOR
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 11, 1958, Ser. No. 714,522
12 Claims. (Cl. 321—48)

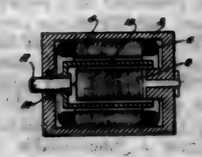


1. In a system for transmitting energy between an A.-C. system and a D.-C. system, said system including a pair of contacts connected between said A.-C. system and said D.-C. system, said pair of contacts being movable between an engaged position for connecting said A.-C. system to said D.-C. system and a disengaged position for disconnecting said A.-C. system and said D.-C. system, and operating means associated with said pair of cooperating contacts for moving said pair of contacts between said engaged and disengaged position in synchronism with the frequency to said A.-C. system; an overlap regulator system, said overlap regulator system being connected to said operating means to control the point at which said pair of contacts are disengaged; said overlap regulator system being energized from electrical signals proportional to a plurality of selected circuit parameters; said overlap regulator system operating independently of signal voltages associated with said pair of contacts.

2,947,933
INDUCTION GENERATOR TACHOMETER
Sidney A. Davis, East Norwich, N.Y., assignor, by mesne assignments, to Eastern Air Devices, Inc., Dover, N.H., a corporation of Delaware
Filed June 6, 1958, Ser. No. 740,291
19 Claims. (Cl. 322—47)

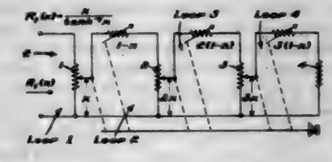
18. An induction tachometer system comprising a primary winding, a secondary winding, and a rotor operatively connected to said windings, in which α represents the ratio between the rotor resistance and the shunting impedance of the primary winding, and in which an impedance is connected with said primary winding, said impedance having a value such, with relation to the values of the resistance and reactance of the primary winding, as to cause the following relationship to exist:

$$\alpha=1 \text{ and } T_x=0$$



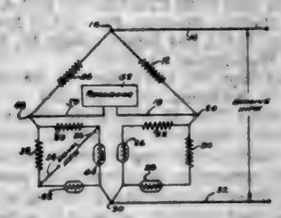
said primary winding being connected to a driving source, said source providing a driving current to said primary winding proportional to the voltage input to said driving source.

2,947,934
LOGARITHMIC FUNCTION GENERATOR
Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Aug. 22, 1955, Ser. No. 529,731
7 Claims. (Cl. 323—74)



1. A ladder network having an impedance variable as a non-linear electrical function of a linear mechanical change, and comprising repeating loops of impedances, each loop comprising at least three impedances, at least two of the corresponding impedances in each loop being variable, and mechanical coupling means constructed to vary concurrently said variable impedances.

2,947,935
MEANS FOR MEASURING THE ROOT MEAN SQUARE VALUE OF A COMPLEX ELECTRICAL WAVE
Ludwig W. Sepmeyer, 1862 Comstock Ave., Los Angeles, Calif.
Continuation of application Ser. No. 305,717, Aug. 21, 1952. This application Sept. 5, 1956, Ser. No. 608,654
1 Claim. (Cl. 323—75)
(Granted under Title 35, U.S. Code (1952), sec. 266)



An electrical apparatus for deriving the time-variable root-mean-square values of a complex input voltage, comprising: an electrical network having four bridge-connected arms, two adjoining arms of said network having thermally-responsive elements each having an electrical resistance which is dependent upon the temperature of said elements in response to current therethrough, and said elements each having a thermal time constant which

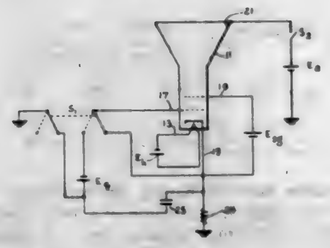
is short relative to the periods in which variations in said root-mean-square values occur, the other two adjoining arms having like resistance, means for applying a bridge-energizing voltage between the junction of said two adjoining arms having thermally-responsive elements and the junction of said other two adjoining arms, first resistive means connected between said junctions and having an output terminal connected to a variable intermediate point thereof, second resistive means connected between the remaining two junctions of said bridge-connected arms and having an output terminal connected to a variable intermediate point thereof, and means for applying said complex input voltage between said remaining two junctions, whereby said electrical apparatus provides at said output terminals a time-variable output voltage corresponding to and serving as a measure of the time-variable root-mean-square values of said complex input voltage.

2,947,936

ELECTRON DISCHARGE TUBE TESTING CIRCUIT

Elmer O. Stone, Seneca Falls, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Filed May 15, 1957, Ser. No. 659,269
4 Claims. (Cl. 324—25)



2. A test circuit for an electron discharge tube having a cathode, control grid and anode comprising a resistance coupled to the cathode, a capacitance normally shunting said resistance, means for energizing said tube to charge said capacitance in accordance with the cathode current in the tube, a voltage supply, and switching means for serially connecting said charged capacitance and voltage supply in boosting relationship with the control grid whereby the cathode current cut-off characteristic of the tube may be determined.

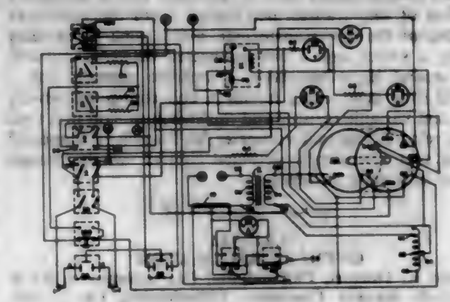
2,947,937

TEST SET FOR CHECKING RELAYS

Orlando W. Richter, Steelton, Pa. (2727 Jasper St. SE., Washington, D.C.), and John C. Sugg, Jr., 2604 Branch Ave. SE., Washington 20, D.C.

Filed Sept. 30, 1957, Ser. No. 687,309
8 Claims. (Cl. 324—28)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A portable apparatus for testing circuit breaker overcurrent relays comprising a circuit including a plug receptacle for connection to a source of power, a cycle counter and timer in said circuit having a clutch coil for operating said counter, a variable autotransformer having primary connections to said source receptacle and having secondary connections with terminals adapted for connection to energize a circuit breaker relay operating coil, a line between said secondary connections and one of said terminals, said clutch coil having terminals adapted in parallel with the contacts on said circuit breaker relay so that closure of said contacts will short out said clutch coil and stop the counter, a resistance in series with said clutch coil, an operating switch serially interposed between said source receptacle and said primary connections, said switch also being interposed between said source receptacle and the series combination of said



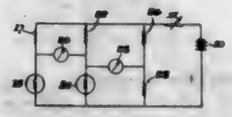
clutch coil and resistance, a current transformer coupled to said line, and an ammeter energized from said current transformer, whereby the time in cycles for an overcurrent relay to operate for selected values of current may be determined.

2,947,938

ELECTROTHERMAL MEASURING APPARATUS AND METHOD FOR THE CALIBRATION THEREOF

Frank K. Bennett, Iselin, N.J., assignor to Victory Engineering Corporation, Union, N.J., a corporation of New Jersey

Filed Apr. 9, 1954, Ser. No. 422,223
5 Claims. (Cl. 324—62)



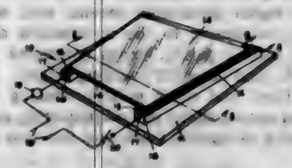
1. In electro thermal measuring apparatus of the class described, in combination: first and second thermally sensitive circuit elements, each of which has an individual accurately measured resistance value at the same fixed elevated reference temperature, each of said resistance values varying in accordance with changes in the thermal conditions to which such element is subjected; means for maintaining said first element under reference thermal conditions and applying an equal adjustment to the second element; means for varying the temperature of said second element by exposure to the thermal condition to be measured; precalibrated circuit means for simultaneously energizing both of said elements to heat the same and bring both of said resistance values simultaneously to said accurately measured values when said elements are both simultaneously maintained under said reference thermal conditions; a first resistance measuring means connected with said first element for determining when its resistance has attained said accurately measured value while energized by said circuit means; and a second resistance measuring means connected with said second element during energization thereof by said circuit means for determining the magnitude of any deviation in its resistance from said accurately measured value, the magnitude of said deviation being determinative of the thermal effect of said thermal condition to be measured.

2,947,939

TESTING ELECTRICALLY CONDUCTIVE ARTICLES

Stephen H. Harwig, Pittsburgh, Pa., assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Filed Sept. 24, 1956, Ser. No. 611,512
6 Claims. (Cl. 324—65)



1. In equipment for applying electrical power to an electrically conductive film carried by a support body to which permanent electrodes are to be subsequently applied, a plurality of spaced containers containing an electrically conductive liquid, means mounting said containers for movement relative to one another to place said electrically conductive liquid in position such that when the support body is supported on said containers said electrically conductive liquid will contact the electrically conductive film along those areas where said electrodes will be placed, and means connected to said electrically conductive liquid to bring electrical power thereto.

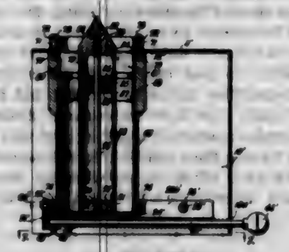
6. Apparatus for determining the electrical resistance of an electrically conducting film on the surface of a support body to which bus bars are to be permanently attached, comprising spaced members having elongated channels therein supporting said support body, said channels having upwardly facing edges in contact with said support body, means mounting said spaced members for movement relative to one another, a pliable bath of an electrically conductive medium contained in each of said channels having an exposed upper surface extending above said upwardly facing edges and in contact with said electrically conducting film along the areas where said bus bars are to be attached, and an electrical circuit including a resistance measuring instrument connecting said baths.

2,947,940

TEST CELL

Frederick W. Stein, Atchison, Kans., assignor to Fred Stein Laboratories, Inc., Atchison, Kans., a corporation of Kansas

Filed Sept. 3, 1957, Ser. No. 681,676
3 Claims. (Cl. 324—65)



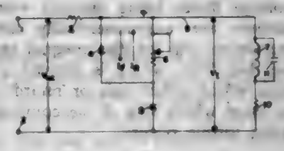
1. In a test cell for fluent materials, a pair of spaced apart electrodes, one comprising an upright post and the other comprising a tube coaxial with said post, a portion of the post at one of its extremities insulated from the remainder thereof, rib means for rigidly supporting said post within said tube communicating between the insulated portion of the post and the tube, an electrical connection to the noninsulated portion of the post within said supporting means, the bottom of said post level with the bottom of said tube, a door operable to slide relative to the bottoms of the tube and post to open and close off the lower end of the annular space therebetween, means resiliently biasing said door to the closed position and means receiving said door for sliding motion relative said tube and post.

2,947,941

SUPPRESSED ZERO VOLTMETER

Almon J. Corson, Marblehead, and Edwin C. Guptill, Peabody, Mass., assignors to General Electric Company, a corporation of New York

Filed June 9, 1958, Ser. No. 740,939
5 Claims. (Cl. 324—131)



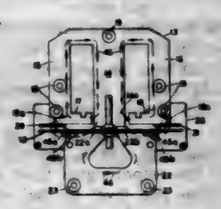
1. A suppressed zero A.-C. voltmeter comprising a first and a second diode in series with their outer ends adapted to be connected to an alternating signal through a first impedance, the first of said diodes having a reverse conduction characteristic in said series circuit which includes a region of substantially constant voltage across said first diode for reverse voltages which exceed a critical voltage, said diodes connected such that like elements are tied together at a common junction, a second impedance in shunt with said second diode, and a D.-C. indicating instrument connected across the ends of the diodes such that voltages outside a predetermined range tend to cause an off-scale deflection.

2,947,942

LIGHT LOAD DEVICE FOR INDUCTION WATTHOUR METER

William H. Morong, Jr., South Berwick, Maine, assignor to General Electric Company, a corporation of New York

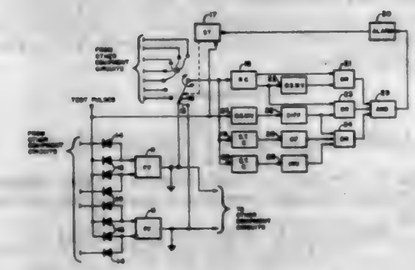
Filed June 27, 1958, Ser. No. 745,213
6 Claims. (Cl. 324—137)



1. In an induction watthour meter, in combination: a rotary disc of conducting material; a voltage electromagnet arranged on one side of said disc, said voltage electromagnet including a substantially E-shaped core member which has its center leg in the form of a main voltage flux pole and its outer legs in the form of auxiliary voltage flux poles, all of said voltage flux poles facing said disc; a current electromagnet arranged on the other side of said disc having a core member providing a pair of spaced current flux poles which face said disc and said voltage flux poles; said voltage and current electromagnets being arranged symmetrically relative to a common axis which extends at right angles to said disc; a light load torque correcting device comprising a pair of spaced magnetic members mounted relative to said voltage electromagnet such that said magnetic members are on opposite sides of said common axis and underly said auxiliary voltage flux poles with each located in the

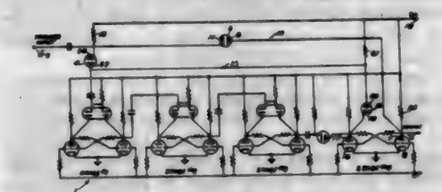
primary flux path between a corresponding auxiliary voltage flux pole and said current flux core member, said magnetic members when in a neutral position being symmetrically arranged relative to said common axis and providing paths of substantially equal magnetic reluctance for the voltage fluxes passing between said current flux core and said auxiliary voltage flux poles, said voltage fluxes being substantially equal when the magnetic members are in their neutral position to produce by interaction with the disc equal and opposite torques on the disc; and means for moving said magnetic members together across the face of said auxiliary voltage flux poles in either direction relative to said common axis to establish an unsymmetrical arrangement of said magnetic members whereby said paths of magnetic reluctance become unequal, said voltage fluxes being unequal whenever the magnetic members are unsymmetrically arranged to produce by interaction with the disc unequal and opposite torques on the disc from which is derived a net compensating torque which either aids or retards disc rotation depending upon which side of the common axis the net compensating torque occurs.

2,947,943
TROUBLE DETECTOR
Robert F. Casey, Pompton Plains, and John Gibbon, Morris Plains, N.J., assignors to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,666
2 Claims. (Cl. 324—158)



1. In apparatus for detecting deterioration in a binary circuit having two levels of output signals corresponding to the two states of said circuit, respectively, the combination comprising a signal source connected for changing the state of said binary circuit, means connected to an output of said binary circuit and to an output of said source of state changing signals for determining if the time required for the output signal from said binary circuit to change from one level to the other lies within preassigned limits, means for determining if the level of said binary circuit output signal corresponds to one of said levels, indicating means connected to receive signals from both said determining means and being rendered operative by negative response from one of said determinations, wherein said first named determining means comprises means responsive to substantially linearly varying input signals for generating an output signal of fixed amplitude and of duration corresponding to the duration of an input signal, said last named responsive means being connected to receive as input signals the output signals from said binary circuit, and wherein said first named determining means further comprises signal generating means for generating a signal having a duration corresponding to the minimum allowable duration of the shift of said binary circuit between said levels, and a second generating means for generating a signal having a duration in excess of a maximum allowable transition time for the aforementioned binary output signals, gating means connected to receive signals from said linearly varying signal responsive means and signals from said first named signal generating means, said gating means being responsive to the presence of a signal from said first signal generating means and to the absence of a signal from said linearly varying signal responsive means for generating a first gating signal, sense pulse producing means connected to receive signals from said second signal generating means, said sense pulse means being responsive to the termination of received signals, and second gating means connected to receive signals from said linearly varying signal responsive means and from said sense pulse producing means for generating an output signal in said indicating means upon the coincidence of signals from said last two mentioned means.

2,947,944
GATED TRIGGER PREDETERMINED BINARY COUNTER
Frank P. Turvey, Jr., Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 11, 1956, Ser. No. 584,243
2 Claims. (Cl. 328—42)

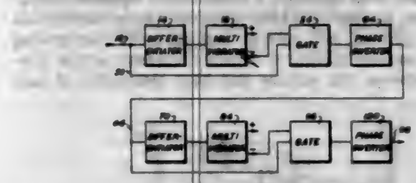


1. A scaler-type counter arranged to produce an arbitrary count and comprising a plurality of cascaded bistable multivibrator stages, each stage having a pair of current-controlling devices one conducting and the other non-conducting and reversing their conduction in respose to input pulses, a pulse source, a first diode coupled to receive pulses from said pulse source and apply them to a first of said stages to initiate a count, a second diode coupled directly between said pulse source and a first current-controlling device of another of said stages, the said first current-controlling device being conductive at the beginning of the count to block said second diode, and a third diode connected to a second current-controlling device of said other multivibrator stage and the said first diode, said third diode being connected to said first diode and becoming conductive in response to current changes in said second current-controlling device to thereby cause said first diode to become blocked and the said second diode to become unblocked, the next input pulse being transmitted to said other stage to cause the said first current-controlling device to conduct and commence the sequence again, the first and second diodes having their like electrodes connected together, and said third and second diodes having their unlike electrodes connected to the devices of said other stage, whereby feedback of pulses from said other stage will switch the first diode.

2,947,945
TIME DOMAIN FILTER
Matthew J. Relis, Bayside, and William Yuni, East Meadow, N.Y., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 5, 1954, Ser. No. 467,874
17 Claims. (Cl. 328—112)

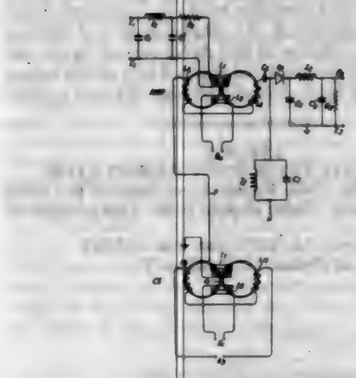
1. A time domain pulse filter for eliminating from a pulse wave all pulses shorter than a desired duration comprising first means to eliminate all pulses having a duration less than the desired duration by shortening the

duration of each of the pulses in said pulse wave by an amount equal to said desired duration, and second means fed by said first means to lengthen the duration



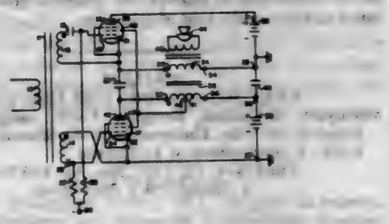
of each remaining pulse by an amount substantially equal to said desired duration to substantially restore each shortened pulse to its original duration.

2,947,946
MAGNETIC SWITCH-AMPLIFIERS
Harry Grayson, Rowland Arthur George Dunkley, and Thomas Harold Walker, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Feb. 15, 1954, Ser. No. 410,387
Claims priority, application Great Britain Feb. 17, 1953
1 Claim. (Cl. 336—3)



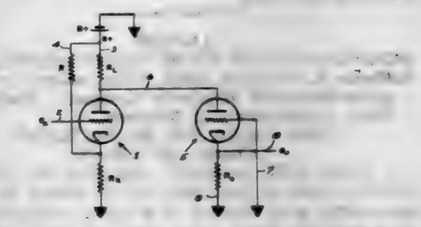
In combination, a magnetic switch comprising a second-harmonic transformer having a primary, a secondary and a control winding, a magnetic amplifier comprising a second-harmonic transformer having a primary, a secondary and a control winding, means for applying a continuous alternating-current potential to the primary winding of the switch transformer, means for applying a direct-current potential to the control winding of the switch transformer during selected intervals of time to cause alternating current to be induced in the secondary winding of the switch transformer during corresponding intervals of time, means for connecting the secondary winding of the amplifier transformer to the primary winding of the amplifier transformer and for transferring the said induced alternating current to the primary winding of the amplifier transformer, means for applying a continuous direct-current potential to the control winding of the amplifier transformer to cause alternating current from the primary winding thereof to be induced in the secondary winding thereof during the said intervals of time, means for applying a continuous information-bearing signal to the secondary winding of the amplifier transformer to modulate the last-said alternating current, and demodulating means connected to the primary winding of the amplifier transformer for demodulating the said modulated alternating current to obtain the information-bearing signals applied to the secondary winding of the amplifier transformer during said interval of time.

2,947,947
AUDIO AMPLIFIER
Sergio Bernstein-Bervery, Tarrytown, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Apr. 7, 1959, Ser. No. 804,814
4 Claims. (Cl. 330—117)



1. An amplifier comprising, a pair of similar electronic tubes each having at least anode, cathode, control grid and screen grid electrodes, means for driving said pair of tubes in opposite phases, an output transformer having at least first and second primary windings and a secondary winding, each primary winding having first and second end terminals, the relative polarizations of said first end terminals being the same, the cathode of one of said tubes being connected to the first end terminal of said first primary winding, the second end terminal thereof being connected to a reference direct current potential terminal, the anode of said tube being connected to a direct current potential terminal which is positive with respect to said reference potential terminal, the anode of the other of said tubes being connected to the first terminal of said second primary winding, the second terminal thereof being connected to a positive terminal with the cathode of said other tube being connected to a relatively negative potential terminal, a conductive connection between said reference potential terminal and said relatively negative potential terminal, alternating current circuit means connecting said primary windings in parallel direct-current circuits connecting the screen grid of each of said tubes to said second primary winding of the output transformer, and a load connected to said secondary winding.

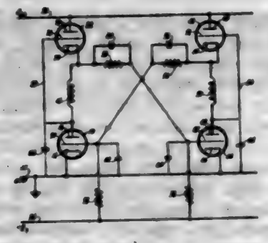
2,947,948
DIRECT COUPLED POLARITY INVERTER D.C. LEVEL ADJUSTER
Alan Greenlan, Brooklyn, N.Y., assignor to The Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Apr. 15, 1957, Ser. No. 652,750
3 Claims. (Cl. 330—193)



1. A polarity inverter comprising a cathode, grid and plate vacuum tube having plate and cathode resistors connected to the corresponding elements thereof, a positive voltage supply connected to said plate resistor, the grid of said tube being adapted to receive an input voltage reference to ground, a triode, said triode having cathode, grid and plate electrodes, means for establishing the same potential levels on the plate electrodes of said

first-mentioned vacuum tube and said triode, said means including a direct plate to plate connection, and the cathode of said triode having a cathode resistor, an output conductor connected between the cathode and cathode resistor of said triode, the voltage across the cathode resistor being referenced to ground and phased oppositely to the input voltage on the grid of said tube.

2,947,949
FAST MULTIVIBRATOR CIRCUIT
Michiyuki Nakamura, Berkeley, Calif., assignor to The Regents of The University of California, Berkeley, Calif., a corporation of California
Filed Nov. 12, 1957, Ser. No. 695,943
3 Claims. (Cl. 331—144)



1. In a multivibrator, the combination of four electron tubes each having an anode, a cathode and a control electrode, said four tubes being here designated for convenience the first switching tube, the first load tube, the second switching tube, and the second load tube, an inductor connected between the cathode of the first load tube and the anode of the first switching tube, forming a first circuit branch including two tubes in series with an inductor therebetween, another inductor connected between the cathode of the second load tube and the anode of the second switching tube, forming a second circuit branch including two tubes in series with an inductor therebetween, connections for applying voltage between the anode of the load tube and the cathode of the switching tube of each circuit branch, means coupling the control electrode of the switching tube in each branch to the anode of the other switching tube via the inductor cathode junction in the other branch for varying the current in each branch in inverse relation to the current in the other branch, and means coupling the control electrode of the load tube in each branch to the anode of the switching tube in the same branch so that each load tube has a high impedance when the current in its circuit branch is increasing and a low impedance when the same current is decreasing.

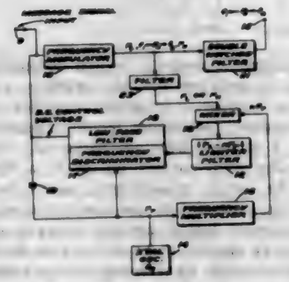
2,947,950
SEMICONDUCTOR PULSE WIDTH MODULATOR
Balthaser H. Fleckaers, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 25, 1958, Ser. No. 723,768
8 Claims. (Cl. 332—9)

1. Pulse width modulator apparatus for providing variable power to load apparatus by varying the power pulse-width as a function of a signal comprising: full wave rectifying means having input and output terminals, said input terminals being connected to a source of alternating current, said rectifying means providing at said output terminals a full wave rectified potential; capacitor means; first circuit means connecting said capacitor means to said rectifier means output terminals whereby said capacitor means is charged to a potential approaching the peak value of said rectified potential, said charging current flowing whenever the magnitude of said rectified potential exceeds the potential charge on said capacitor means; current limiting means forming a portion of said circuit means, said current limiting means being effective to maintain a substantially constant charging current flowing into said capacitor means during said charging periods, said current limiting means comprising a first transistor having a constant current source connected between the emitter and base electrodes of said



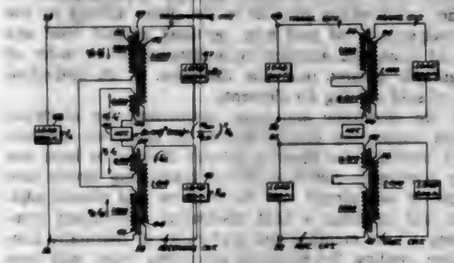
transistor to thereby limit the magnitude of the collector current flowing in said transistor to a relatively constant value; direct current signal producing means; further circuit means controlled by said signal producing means for discharging said capacitor means at a constant magnitude current of discharge, the magnitude of said constant current being a function of said direct current signal; and resistive load means connected into said first circuit means, said load means being actuated by said charging current.

2,947,951
STABILIZED FREQUENCY MODULATOR
Howard D. Hern, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed May 26, 1958, Ser. No. 737,741
10 Claims. (Cl. 332—19)



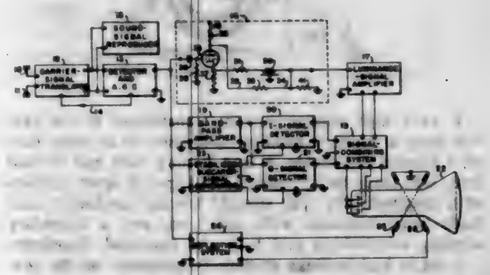
1. A frequency-stabilized angular-modulation generator, comprising a reactance-shift modulator, input means for providing a message signal to said modulator, reference-frequency means also connected to the input of said modulator to generate upper and lower stabilizing frequencies, said stabilizing frequencies being outside the spectrum band generated by the message signal, a frequency mixer having a pair of inputs, means for multiplying the frequency of said reference-frequency means and having an output connected to one input of said mixer, a filter tuned to either the upper or the lower stabilizing frequency and receiving an input from the modulator, the output of said filter connected to the other input of said mixer, a stable frequency discriminator, means connecting said discriminator between the output of said mixer and the input of said modulator.

2,947,952
HYBRID CIRCUITS
Robert W. Hughes, Mountain Lakes, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 8, 1957, Ser. No. 651,339
6 Claims. (Cl. 333—11)



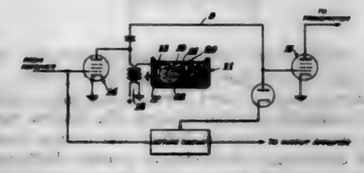
1. A hybrid circuit for associating interchangeably a four-wire transmission line or a two-wire transmission line with a pair of two-wire receiving and transmitting circuits comprising a first and second transformer each having a first and second primary winding in series aiding relationship and each having a secondary winding, each of said secondary windings adapted to be respectively coupled to said receiving and transmitting circuits, means for serially coupling each of said first primary windings to each other, and simultaneously coupling said second primary windings serially with each other to form a balancing network loop for use with said two-wire transmission line arrangement, and means for alternatively serially coupling each of said first primary windings to its associated second primary winding for use with said four-wire transmission line arrangement, the relative turns ratio of the first and second primary winding of each transformer being substantially 1 to 0.414, and said secondary winding of said transformer having a turns ratio to one of its primary windings of 1.414, all of said windings being of like polarity respectively.

2,947,953
SIGNAL-MODIFYING APPARATUS
Walter C. Eppenlaub, Syosset, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed June 29, 1955, Ser. No. 516,349
4 Claims. (Cl. 333—28)



1. Color-television signal translating apparatus for boosting the amplitude of high-frequency components of a luminance signal translated thereby, the apparatus comprising: a first signal-translating path for translating all the frequency components of the luminance signal with a predetermined time delay; a second signal-translating path for independently translating all the frequency components of the luminance signal with a time delay less than that of said first path by an amount substantially one-half the period of the frequency component which is to receive the largest boost; circuit means for inverting the polarity of the signal translated by one of said paths relative to the polarity of the signal translated by the other of said paths; and circuit means for adding together only these two signals after the mentioned translation and relative polarity inversion to produce a resultant output signal corresponding to the luminance signal but with boosted high-frequency components.

2,947,954
DELAY DEVICE
Sven H. M. Dodington, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Original application Aug. 28, 1944, Ser. No. 551,470. Divided and this application Oct. 20, 1945, Ser. No. 623,467
2 Claims. (Cl. 333—30)



1. A device, comprising means defining a chamber, a piezo-electric crystal having a given resonant frequency located in said chamber, means forming a plurality of supersonic pulse reflecting surfaces in said chamber, means for applying and taking off electrical impulse energy with respect to said crystal, a fluid medium in said chamber providing a path of propagation for supersonic pulses between said crystal and said reflecting surfaces, an element for heating said fluid medium whereby the propagating characteristics of said fluid medium may be varied, and means to apply an electric heating current to said element.

2,947,955
MULTI-CHANNEL ROTARY JOINT
Jack L. Bellamy, Mountain View, and Glenn A. Walters, Atherton, Calif., assignors to Textron Inc., Belmont, Calif., a corporation of Rhode Island
Filed June 13, 1957, Ser. No. 665,437
6 Claims. (Cl. 333—98)



1. A microwave rotary joint comprising a plurality of axially aligned wave guide members rotative relative to one another about their common axis, each of said members having at least two apertures radially spaced from said axis and arcuately spaced from each other, each aperture in one member being arranged to at least partially overlie a corresponding opening in the adjacent member, and means interlinking said members for suc-

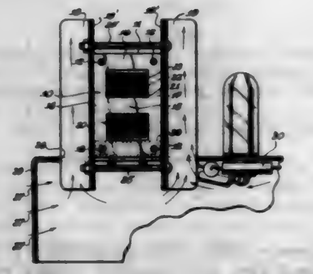
cessively rotating the members and for locating the apertures in said members at progressively different angles of rotation to produce the effect of at least two separate and bent wave guides.

2,947,956
FLUID COOLED ENERGY TRANSMISSION CONTROL DEVICE
Herbert C. Alexander, Peabody, and Harold Heins, Marblehead, Mass., assignors to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts
Filed July 3, 1957, Ser. No. 669,729
3 Claims. (Cl. 333—98)



1. In combination with a balanced duplexer electromagnetic microwave energy transmission system, a fluid cooled transmission control device comprising a plurality of joined mutually parallel sections of a hollow pipe rectangular waveguide having broad and narrow walls, an array of cylindrical electrodeless gaseous discharge elements positioned in each section in a substantially V-shaped configuration, said cylinders extending parallel to the electric field of the propagated energy, dielectric window members enclosing the ends of each waveguide section, metallic cover members spaced from the opposite broad walls of said joined waveguide sections to define hollow chambers, a fluid coolant having a low dielectric constant filling each waveguide section and hollow chambers and external means for circulating said fluid coupled to the outer narrow walls of said joined waveguide sections to thereby dissipate the heat generated within said discharge elements when ionized by high power electromagnetic energy propagated in the system.

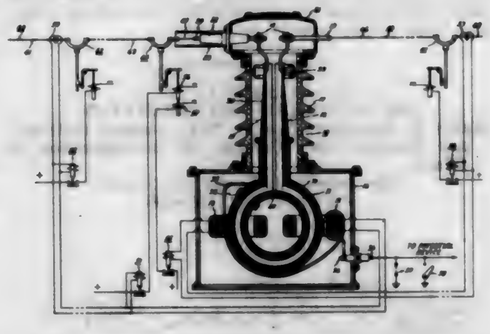
2,947,957
TRANSFORMERS
Joseph C. Spindler, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Filed Apr. 22, 1957, Ser. No. 654,142
12 Claims. (Cl. 336—61)



1. A power transformer for use in domestic appliances such as television receivers and the like comprising: a closed ferromagnetic core having at least two generally parallel legs and a pair of connecting base portions extending in a direction generally perpendicular to said legs; a primary winding and at least one secondary winding each encompassing one of said legs of said core; a thermally conductive heat collector member in thermal contact with the peripheral surface of at least one of said base portions of said core along substantially its entire length; and a plurality of thermally conductive outwardly extending cooling fin elements in thermal edge contact with said collector member and disposed in planes substantially parallel to the plane defined by the geometric axes of said base portions of said core and spaced from one another by a distance of an order of magnitude greater than the thickness of an individual one of said cooling fin elements.

9. An electronic apparatus comprising: an electrical circuit supporting chassis having at least one substantially unobstructed opening formed therein; at least one heat generating electrical energy translating device connected in said circuit and mounted on said chassis adjacent said opening; a heat dissipating attachment comprising a base member and a plurality of thermally conductive cooling fin elements projecting from said base member and in intimate thermal contact therewith, said fin elements being disposed in substantially parallel planes and spaced from one another by a distance of an order of magnitude greater than the thickness of an individual one of said fin elements and extending partially through said opening to establish convection air current flow through said opening and through the channels defined by said fin elements; and means for securing said base member in intimate thermal contact with a peripheral surface of said heat generating device and with said fin elements oriented to extend outwardly from said device.

2,947,958
HIGH VOLTAGE CURRENT TRANSFORMER
Louis W. Marks, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
Filed July 18, 1955, Ser. No. 522,416
3 Claims. (Cl. 336—84)



1. In a high voltage current transformer of the eyebolt type, a primary winding comprised of an open turn of a tubular conductor, a lead joining each end of said turn, said leads being comprised of spaced apart sections of a longitudinally split straight tubular conductor, said leads being coplanar with said turn, and a secondary winding interlinking said turn and insulated therefrom.

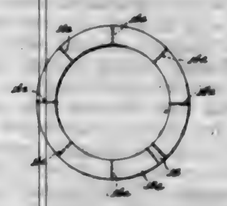
3. In a high voltage current transformer of the eyebolt type, a primary winding assembly comprised of an open turn of a tubular conductor, a lead joining each end of said turn, said leads being comprised of spaced apart sections of a longitudinally split straight tubular conductor, said leads being coplanar with said turn, insulation material surrounding said turn and at least the adjacent portion of said leads, a tubular grounding shield surrounding said insulation material, and a gap in said grounding shield to prevent the flow of circulating currents therein, said gap severing said ground shield radially of said turn.

2,947,959
TRANSFORMER COIL CONSTRUCTION
Louis C. Polzella, Arthur E. Snowdon, and William P. Carpenter, Bristol, Conn., assignors to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut
Filed Nov. 28, 1955, Ser. No. 549,295
1 Claim. (Cl. 336—198)



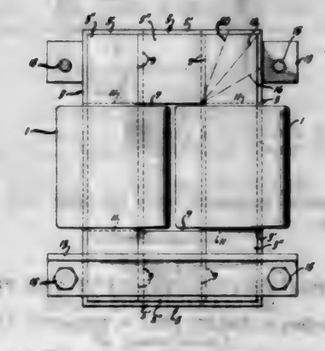
An annular coil for a variable autotransformer comprising an annular core formed of thin sheet iron spirally wound and presenting laminar side surfaces; annular end caps positioned against the laminar side surfaces of the core and a toroidal winding of wire wound about the core and end caps; the improvement which comprises protective means for the core including two annular protective disks, each disk consisting of a thermoset resin film and a layer of paper, positioned between the end caps and the laminar side surfaces of the core, said film coating the laminar side surfaces of the core, and having portions penetrating spaces in the laminar side surfaces of the core to provide a protection for the laminar side surfaces of the core, and said paper adhering to the film and being substantially non-porous and non-perforate and engaging its associated end cap but being unbonded thereto.

2,947,960
WINDING AND CORE THEREFOR
Gustav O. Fredrickson, Southington, Conn., assignor to The Superior Electric Company, Bristol, Conn., a corporation of Connecticut
Filed Sept. 18, 1957, Ser. No. 684,776
2 Claims. (Cl. 336—212)



1. An electrical device comprising an annular core adapted to surround a portion of a ferromagnetic core having magnetic flux therein, said annular core comprising a plurality of rings of ferromagnetic material in adjacently stacked relation, insulating material between said rings, each of said rings having a cut therethrough in angularly spaced relation to the cuts through adjacent rings, a closed winding toroidally wound about the annular core, and in which the insulating material consists of an arcuate length of thin strip that is threaded through the slot of each ring with the strip engaging opposite sides of each ring adjacent the slot.

2,947,961
TRANSFORMER OR REACTOR CORE STRUCTURE
Wallace W. Wahlgren, Oakland, Calif., assignor to Electro Engineering Works, San Leandro, Calif., a corporation of California
Filed Jan. 7, 1959, Ser. No. 785,438
9 Claims. (Cl. 336—216)

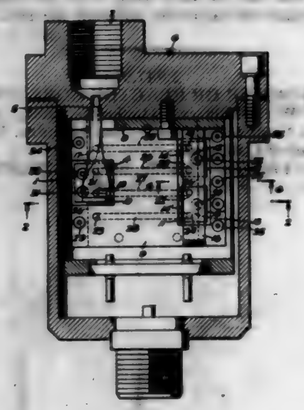


1. A core structure for transformers and like electromagnetic apparatus, comprising at least two legs adapted for carrying the windings of said apparatus, each of said legs comprising a stack of ferromagnetic laminations, yokes interposed between both ends of said legs, each of said yokes comprising a stack of ferromagnetic laminations closely abutting respective laminations of said legs, forming a magnetic circuit with essentially butt joints between said legs and yokes, each lamination of said yokes being wider than the laminations against which it is abutted by a factor of at least 1.1, a plurality of non-ferromagnetic tie plates interspersed at intervals through the stacks of laminations comprised in said yokes, said tie plates extending into slots formed in each end of said legs by including therein a like plurality of ferromagnetic laminations of shorter length than the majority of the laminations in said legs, each of said shorter laminations being abutted against one of the non-magnetic tie plates in each of said yokes, and clamping means for holding the interleaved laminations and the tie plates in frictional engagement, whereby the laminations of said legs and yokes are rigidly secured in closely abutting relationship.

2,947,962
STRAIN WIRE TRANSDUCER
Louis D. Statham, Beverly Hills, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed Feb. 10, 1958, Ser. No. 714,142
9 Claims. (Cl. 338—4)

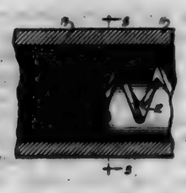
1. An electrical strain wire transducer of the unbonded type which comprises a first wire support, a frame, an armature yieldably mounted on said frame, a pair of pins mounted in said armature in adjacent side by side relation, a second wire support mounted adjacent to the first wire support, strain wires extending in tension between said first wire support and one of said pins in a loop of multiple turns, a second multiple turn loop extending in tension between said second wire support and

the other of said pins, means for moving said first and second wire supports relative to each other whereby one



loop increases in tension while the other loop decreases in tension.

2,947,963
SHEATHED HEATING ELEMENT AND PROCESS OF MAKING THE SAME
Sterling A. Oakley, 6831 N. Kilpatrick Ave., Lincolnwood, Ill.
Filed Apr. 8, 1958, Ser. No. 727,101
7 Claims. (Cl. 338—278)



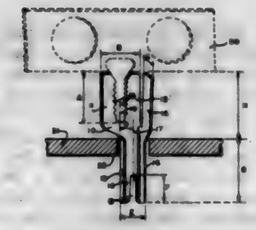
1. A sheathed type electric heating element comprising an outer metal sheath, a helical resistance element within said sheath with the longitudinal axis thereof coincident with the longitudinal axis of said sheath, and a granular material filling all the space within said sheath not occupied by said resistance element, said helical resistance element comprising a wirelike element, said element having a narrow cross section in the direction of said longitudinal axes and a wider cross section in a direction perpendicular to said longitudinal axes.

2,947,964
END CONNECTOR FOR PRINTED CIRCUITS
Bengt J. Johansson, Des Plaines, and William H. McKee, Park Ridge, Ill., assignors, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed July 19, 1955, Ser. No. 522,939
1 Claim. (Cl. 339—17)



In combination with an insulating panel carrying flat conductors extending adjacent an edge thereof, an insulating strip having a row of contact members, each contact member having a pair of opposed legs of greater width than thickness, said legs having broad surfaces in facing relation and narrow side edges, said legs being open at one end of said contact member and said legs of said respective contact members being in lateral alignment to engage therebetween said edge of said panel, each of said contact members having an integral web extending between said legs, said web being joined to said side edges of said legs on one side only of said legs and spaced from said open end thereof, said webs operating to limit movement of said panel between said pairs of legs, one leg of each of said pairs being rigid and having attaching portions extending in angular relation thereto, said attaching portions being in engagement with said strip for securing said contact members thereto.

2,947,965
PUSH-IN TERMINAL LUGS
Ray R. Scoville, 3351 San Fernando Road, Los Angeles 65, Calif.
Filed July 25, 1956, Ser. No. 600,016
7 Claims. (Cl. 339—95)



1. A terminal connector comprising first and second elongated conductive elements spaced from one another to define a first slot therebetween and integrally attached to one another adjacent one end thereof, said first and second conductive elements being disposed in a substantially common plane and the inner spaced facing edges of said first and second elements, defining said first slot, being serrated thereby to firmly grip an external electrical conductor inserted therebetween, a third elongated substantially planar conductive element disposed transverse to the plane of said first and second elements, said third element being spaced from said first and second elements for the major portion of its length to define a second slot for the reception of an external electrical conductor, said third element being integrally attached adjacent one end thereof to the integrally attached portions of said first and second elements thereby to effect an integral connector comprising three spaced connector elements with two only of said three elements being substantially coplanar, means for attaching said integral connector to a terminal board comprising elongated fastening means having a length of the same order of magnitude as the lengths of said first, second, and third conductive elements, said fastening means comprising a conductive member of substantially U-shaped channel form integrally attached adjacent one of its ends to the integrally attached portions of said first, second, and third conductive elements, said elongated substantially U-shaped conductive member being slotted adjacent the other end thereof for the reception of a further external electrical conductor, the major elongated axis of said substantially U-shaped member being non-colinear with each of the elongated extended separating lines between said first, second, and third conductive elements respectively.

2,947,966
RECEPTACLE FOR ELECTRICAL CONNECTOR
Wallace R. Francis, Milford, George C. Mapelsden, Easton, and Cecil W. Feher, Shelton, Conn., assignors to General Electric Company, a corporation of New York
Filed Sept. 3, 1957, Ser. No. 681,551
6 Claims. (Cl. 339—186)



5. An electrical receptacle and connector for a portable tool comprising in combination a cylindrical metal shell for a receptacle, the shell having a base at one end and being open at the other end, a bayonet slot in the shell adjacent the open end, a plunger of insulating material positioned in the shell intermediate the base and open end, a pair of oppositely directed ears on the sides of the plunger, and a pair of inclined slots formed on diametrically opposite sides of the shell for receiving the said ears of the plunger, each ear having inclined surfaces that are parallel to the inclined edges of the mating slot, and spring means seated in the base of the shell and bearing at its opposite end against the plunger to bias the plunger to turn in the shell until the ears are situated in the far ends of the inclined slots, at least two pin contacts mounted on the plunger on the side adjacent the open end of the shell, and lead wires extending through the base of the shell and through the said spring for termination with the said pin contacts on the plunger, the connector comprising a cylindrical plug of insulating material having at least two female contacts provided therein, and a bayonet pin adjacent the end of the connector containing the contacts, so that when the bayonet pin is aligned in the bayonet slot of the receptacle the connector may be forced into the receptacle thereby bringing the several contacts into engagement and depressing the plunger against the spring so that the ears of the plunger will turn as they slide down the edges of the inclined slots, whereby a locking engagement is effected by the bayonet slot when the connector is released as the spring forces the plunger toward the open end of the shell in an attempt to return the plunger to its original position.

2,947,967
DUAL CONDUCTOR TERMINAL
Robert F. Waldrop, Mission Hills, Kans., assignor to Millbank Manufacturing Co., Inc., Kokomo, Ind., a corporation of Indiana
Filed Jan. 14, 1957, Ser. No. 633,876
8 Claims. (Cl. 339—272)

1. In a dual conductor terminal, a U-shaped structure comprising a bottom portion and a pair of flanking upstanding leg portions, a post extending upwardly from the bottom portion and spaced between the two leg portions to permit a pair of conductors to be disposed against said bottom portion, one on each side of the post, a crosspiece rotatably fitted on the post above the conductors, a pair of connector bolts threaded through said crosspiece, one on each side of said post, and having ends for engaging the conductors and compressing them



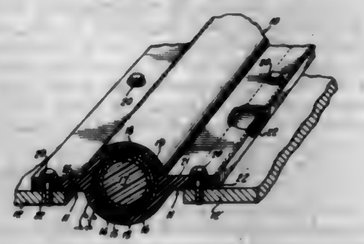
against the bottom portions, said leg portions each on opposite edges a notch adapted to receive therein portions of said crosspiece but from which said portions are disengageable upon rotation of the crosspiece in one direction and reengageable upon rotation in the other direction.

2,947,968
ELECTRICAL TERMINATION
George C. Mapelsden, Easton, and Francis H. Cowe, Devon, Conn., assignors to General Electric Company, a corporation of New York
Filed Apr. 1, 1957, Ser. No. 649,688
3 Claims. (Cl. 339—276)



1. An electrical connector of thin metal strip having a terminal end that is to be crimped over a bare conductor, a lanced tab struck out of one side of the terminal end of said strip to establish an opening in the end that is spaced from the edges of the strip, a bare wire lying across the terminal end and over the opening, the terminal end being rolled over the wire on said side of said strip to hold the wire firmly in place, the tab also being rolled over the crimped portion of the terminal end to restrain the terminal end from releasing its grip on the wire.

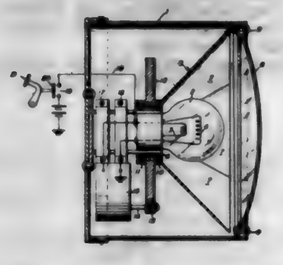
2,947,969
ELONGATED ELECTROACOUSTIC TRANSDUCER WITH INTEGRAL REINFORCED MOUNTING FLANGES
Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Southbury, Conn., a corporation of Connecticut
Filed Sept. 8, 1954, Ser. No. 454,712
3 Claims. (Cl. 340—5)



1. In combination, transducer means and mounting means integral therewith, said transducer means comprising an elongated structure electrically responsive to incident pressure fluctuations and including a peripherally continuous outer boot of pressure-transmitting material

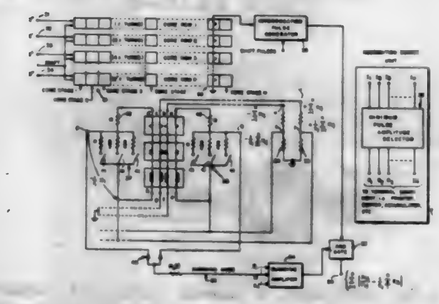
in intimate pressure-transmitting relation with said structure, said mounting means including flange means of yieldable material extending generally radially of the axis of said transducer means, a metal portion bonded within said flange essentially only in the region adjacent the outermost edge, and a frame support having an opening defined by an inner edge overlapping the outer part of said flange means, whereby a substantial part of the radial length of said flange may be unsupported and may therefore yieldably support said transducer, and anchoring bolts passing through the flange means and through said metal portion and engaging said frame support.

2,947,970
STOP LIGHT
Adrianus Wilhelmus van Oosten, Oude Delft 76, Delft, Netherlands
Filed Jan. 28, 1957, Ser. No. 636,775
Claims priority, application Netherlands Feb. 3, 1956
2 Claims. (Cl. 340—50)



1. In a signaling mechanism, the combination comprising a casing, a lamp supported within said casing and having at least one filament, a reflector surrounding said lamp, said reflector flaring outwardly from the longitudinal axis of the lamp and comprising a continuous series of planar segments, each segment adapted to reflect light rays directed thereto from the lamp in a respective separate plane, a bearing embracing a base portion of the lamp and carrying said reflector, and a motor within the casing mechanically connected to said bearing to rotate said reflector.

2,947,971
DATA PROCESSING APPARATUS
Marvin H. Glauberman, Medfield, and Robert C. Kolner, Concord, Mass., assignors to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Filed Dec. 19, 1955, Ser. No. 553,770
16 Claims. (Cl. 340—149)

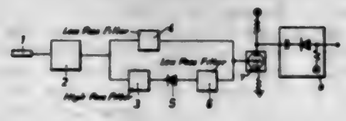


1. Electrical apparatus for determining the degree of match between an unknown signal waveform and a known signal waveform comprising means for sampling said unknown signal in n regions to derive for each region a signal designated x_i which is indicative of a predetermined characteristic of said unknown signal in region i, sampling said known signal in a corresponding plurality of regions to derive for each region a signal designated r_i which is indicative of said predetermined characteristic of said known signal in said region i, means for deriving for each known signal waveform a signal designated m which is related to the average value of said predetermined characteristic of said known signal waveforms, and a combining circuit for relating the aforesaid signals in accordance with the summation

$$\sum_{i=1}^{n}\left|\frac{mx_i}{r_i}-\frac{\sum_{i=1}^{n}x_i}{n}\right|$$

to providing an output matching signal.

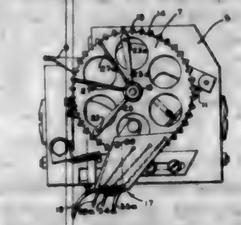
2,947,972
METHOD AND APPARATUS FOR DETERMINING THE POSITION OF A PRINTED OR WRITTEN ITEM WITH RESPECT TO AN IDENTIFICATION MARK APPLIED THERETO
Karl Steinbuch, Feilbach, Wurttemberg, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed June 27, 1957, Ser. No. 668,502
Claims priority, application Germany July 7, 1956
2 Claims. (Cl. 340—149)



1. System for determining the position of a written or printed item with respect to the location thereon of an identification mark applied thereto, comprising photoelectric scanning means, the item being moved relative to said scanning means whereby at least a portion of the surface of said item is scanned, means for deriving a signal current from said scanning means, threshold circuit means including a reference source of current having a predetermined value for comparing said signal current with said reference current, said threshold circuit comprising a parallel branch circuit intermediate said scanning means and said means for deriving a signal current from said scanning means, said branch circuit comprising means for cancelling signals derived from markings on said item not corresponding to said identification mark, whereby the location of said identification mark may be deduced when the current derived from said threshold circuit differs from said reference current by a predetermined amount.

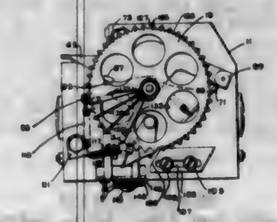
2,947,973
MULTIPLE CONTACT SELECTOR SWITCH
Harold A. Stickel, San Francisco, Calif., assignor to Secode Corporation, a corporation of California
Filed Sept. 23, 1957, Ser. No. 685,723
2 Claims. (Cl. 340—164)

2. An electric, selective code signal receiving device comprising: in combination, a movable control element normally biased in a first direction; propelling means for said control element, said propelling means, when engaged with said control element, being capable of moving said control element in uniformly small increments only; means for engaging said propelling means with said control element for advancing said control element by uniform increments from a normal position to a predetermined first advanced position on receipt of a first electric signal pulse group, and thereafter from said first advanced position to a farther advanced position on receipt of an additional electric signal pulse group, said propelling means having, as a driving unit therefor, a pulsing armature responsive to each cycle of current change within said pulse groups; a member carried by said control element at a point corresponding to said first advanced position; a slow releasing armature responsive once to a plurality of pulses constituting a pulse group and releasing upon the completion of said group; means responsive to said slow releasing armature for engaging said control element whereby to retain said control element at said first advanced position on receipt of said first pulse group and release of the said slow releasing armature; a blocking element carried by the said slow



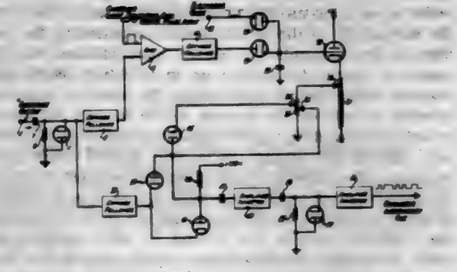
releasing armature, said blocking element obstructing the path of the said member and preventing further advancement of said control element when the said slow releasing armature is actuated and moving out of the path of said member upon a predetermined release movement less than full release of the said slow releasing armature; pawl means releasable by actuation of the slow releasing armature to engage said moveable control element and prevent retrograde movement of the control element except when the slow releasing armature is fully released; an electrical conductor carried by said control element at a point corresponding to said farther advanced position; and a plurality of electrically insulated electrical conductors carried by the said slow releasing armature, each of said plurality of conductors being so positioned that when the said control element is at a farther advanced position and said slow releasing armature is released, said control element conductor and a slow releasing armature conductor will contact one another.

2,947,974
CODE SELECTIVE DEVICE
Harold A. Stickel, 765 Clementina St., San Francisco, Calif.
Filed Sept. 23, 1957, Ser. No. 685,724
7 Claims. (Cl. 340—164)



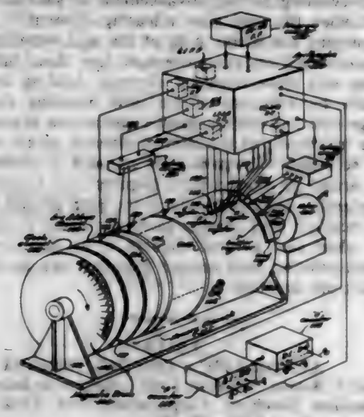
1. A selective code signal receiving device comprising: in combination, a movable control element; propelling means for said control element; means for engaging said propelling means with said control element for advancing said control element from a normal position to a first advanced position on receipt of a first pulse group, and thereafter from said first advanced position to a farther advanced position on receipt of an additional pulse group; a member carried by said control element at a point corresponding to said first advanced position; a slow releasing element responsive once to a pulse group and releasing upon the completion of said group; a blocking element carried by said slow releasing element, said blocking element obstructing the path of the said member and preventing further advancement of said control element when the said slow releasing element is actuated and moving out of the path of the said member upon a predetermined release movement less than full release of the said slow releasing element; holding means releasable by actuation of the slow releasing element to engage said moveable control element and prevent retrograde movement of the control element except when the slow releasing element is fully released; a contact member carried by said control element and a second contact member fixed generally in the path of said first contact member, said contact members being so positioned that when said control element is at said farther advanced position, said contact members can be caused to contact one another.

2,947,975
AUTOMATIC CLIPPING CIRCUIT
Carroll J. Brown, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 21, 1957, Ser. No. 660,556
6 Claims. (Cl. 340—173)



1. Apparatus for recovering binary digital information recorded in accordance with a system whereby successive bits of like value merge into a continuous record and are reproduced by scanning the recorded information with a scanning element larger in dimension than the record of a single bit of information so recorded, resulting in an electrical signal the amplitude whereof differs as between successive bits of different significance and successive bits of like significance, comprising an input circuit for receiving the signals resulting from signals scanning, a first branch circuit derived from said input circuit, a gate in said first branch circuit operative to pass signals only in the presence of a selecting and gating pulse voltage, a peak detector following said gate for storing the maximum voltage developed by the selected portion of the signal output from the gate, and voltage divider means supplied by the voltage so stored and provided with a tap for deriving therefrom a lower voltage proportional thereto, a second branch circuit derived from said input circuit, means in said second branch circuit actuated by the voltage derived from said tap for clipping the signals derived from the input at the A.C. axis thereof, and an overdriven amplifier following said clipping means for converting the clipped signals into substantially rectangular pulses of uniform amplitude.

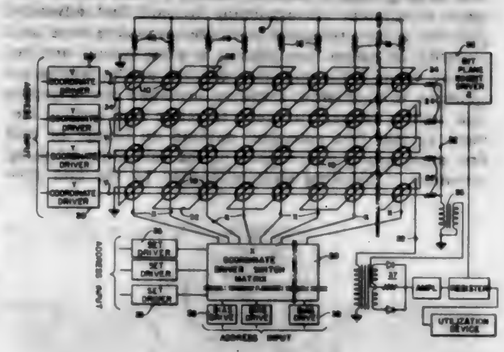
2,947,976
COMPUTER DATA MERGING SYSTEM
Myron J. Mendelson, Los Angeles, and Alfred Doig, Jr., Culver City, Calif., and Richard E. Sprague, New Canaan, Conn., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed May 19, 1955, Ser. No. 509,475
13 Claims. (Cl. 340—174)



2. A system for merging two groups of previously sorted numbers, comprising: a cyclical memory for storage of coded signals representing the two groups of numbers, the numbers in each group being stored in sorted order so as to be successively available in accordance with the magnitude of the coded signals representing the numbers; a first recirculating register synchronized with said memory; means for setting up in said first recirculating register coded signals representing the smallest magnitude number in one of the groups stored in said memory; a second recirculating register synchronized with said memory; means for setting up in said second recirculating register coded signals representing the smallest magnitude number in the other of the groups stored in said memory; means for comparing the coded signals of said recirculating registers; means for storing in said memory as a third group the number whose coded signals are determined by said comparing means to be the smaller; and means to reset one of the recirculating registers with coded signals representing the next smallest magnitude number of the group from which the coded signals stored back in the memory originated.

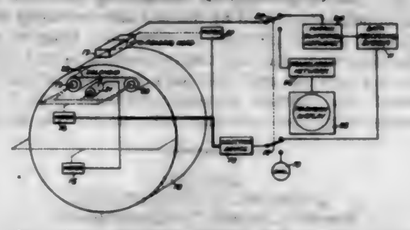
2,947,977
SWITCH CORE MATRIX
Erich Bloch, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 11, 1956, Ser. No. 590,701
8 Claims. (Cl. 340—174)

6. In a magnetic memory system comprising an array of saturable magnetic cores capable of assuming bistable states of magnetic remanence arranged in coordinate rows and columns linked by row and column coordinate selection windings individual thereto, means for providing drive pulses to said coordinate windings including a magnetic matrix switch coupled to the selection windings along one of said coordinates, said switch matrix comprising an array of switch cores likewise arranged in coordinate rows and columns linked by individual set and bias windings respectively, each said switch core having an output winding linked to one terminal of an individual one of said selection windings of the memory array with the remaining terminals of the selection windings commonly connected through individual impedances and electrically floating, first means for energizing said bias windings with a current sufficient to bias the switch cores linked thereby toward saturation in one direction, second means for energizing said bias windings with an additional current sufficient to bias the switch cores linked thereby further toward saturation in said one direction, means for



energizing a selected one of said set windings with a current sufficient to drive an unbiased switch core toward saturation in the other direction, said first means being operative for all but a selected one of said bias windings and said second means being rendered operative for all but said selected one of said bias windings at the time said set winding is energized.

2,947,978
DATA PROCESSING SYSTEM
Michael C. Peyis, New York, N.Y., and Robert L. Whittle, Cedar Grove, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 9, 1956, Ser. No. 621,488
12 Claims. (Cl. 340—174)



1. In a data processing system, a magazine containing a plurality of reels of film for storing information thereon in a plurality of frames, each frame having a separate permanent recording and an erasable recording, an information reading head, means to move said reading head into an information translation relationship with a selected one of said reels, and means to select any of said frames for reading purposes by moving the film contained on a selected reel relative to said reading head and means to rotate the magazine in accordance with a coded signal.

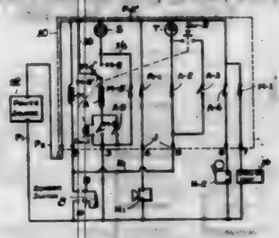
2,947,979
SIGNAL SYSTEM
Leonard Boddy, Ann Arbor, Mich., assignor to King-Seeley Corporation, Ann Arbor, Mich., a corporation of Michigan
Filed Sept. 23, 1955, Ser. No. 536,187
24 Claims. (Cl. 340—213)

23. In a signaling system for automobiles having a selectively actuatable ignition switch which must be actuated before the engine of the vehicle can be started, a source of energy and condition-responsive current modulating means connected in circuit with one another, sensing means for sensing the average energy in said circuit over finite periods of time, an alarm device, separate delay means controlled by said sensing means for operating said



alarm device, and means including said delay means for operating said alarm device for a preselected period following actuation of said switch and for deenergizing said device at the end of said period whether the engine of the vehicle has or has not been started.

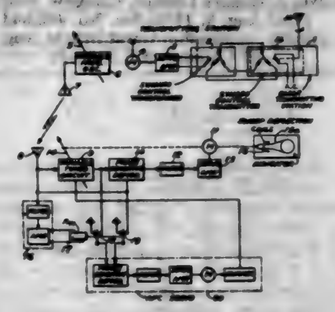
2,947,980
ALARM SYSTEM
Frederick L. Lamm and Richard H. Jewess, Houston, Tex., assignors, by direct and mesne assignments, to Information Systems, Inc., Skokie, Ill., a corporation of Illinois
Continuation of application Ser. No. 538,218, Jan. 16, 1956. This application Jan. 8, 1957, Ser. No. 633,159
13 Claims. (Cl. 340—213)



1. In an alarm unit including at least two normally energized relays and a visual alarm means connected in circuit with a condition-responsive sensor switch means so that operation of said sensor switch to a position indicating an abnormal condition of the point being monitored will de-energize at least one of said relays and will operate the visual alarm means, the improvement comprising a visual trouble-indicating means, an energization circuit for said trouble-indicating means including said sensor switch means, contacts of at least one of said relays, and circuit means connected to said trouble-indicating means, sensor switch means and said contacts of said one relay for preventing energization of said trouble-indicating means by operation of said last-mentioned contacts when said sensor switch means is in its position indicating the abnormality of the point being monitored, and energizing said trouble-indicating means when either of said relays become de-energized and said sensor switch means is in its normal position, and audible alarm means for signalling an alarm condition to an operator when either said visual trouble-indicating means or said visual alarm means is energized.

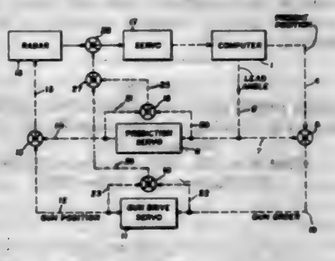
2,947,981
SYNCHRONIZING SYSTEM
Robert J. Heppe, North Caldwell, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed July 3, 1956, Ser. No. 595,615
4 Claims. (Cl. 343—6)

1. A radar system comprising a radar signal transmitting station having a rotating scanning antenna, means responsive to the azimuth position of said antenna for producing a continuous modulated azimuth signal, said azimuth signal being varied linearly in frequency from f_1 to f_2 as said antenna rotates from zero degrees to 360 degrees and being characterized by a flyback operation as said signal goes from f_2 to f_1 during the interval of said antenna movement from 359+ degrees to zero degrees, a radio frequency transmitter for transmitting said azimuth signal, a remotely located radar echo signal



indicating station having a cathode ray tube with rotatable sweep deflection coils for indicating purposes, a radio frequency signal receiver antenna, a variable tuned circuit coupled to said receiver antenna, a phase sensitive demodulator circuit coupled to said receiver antenna and to said variable tuned circuit, motor means for moving the variable arm of said tuned circuit and said rotatable sweep deflection coils of said cathode ray tube arrangement, and circuitry means including a servo loop to couple said motor means to the output of said phase sensitive demodulator.

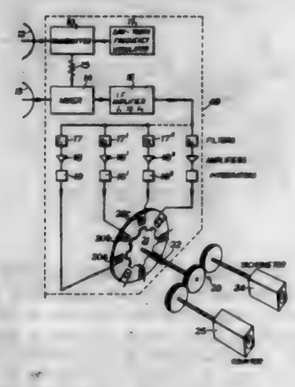
2,947,983
SERVO DRIVE SYSTEM WITH DYNAMIC ERROR ELIMINATION
William H. Newell, Mount Vernon, N.Y., assignor to Sperry-Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of New York
Filed Aug. 16, 1955, Ser. No. 528,616
4 Claims. (Cl. 343—7)



1. An error compensated, closed loop system comprising drive means adapted to be operated by an electrical error signal, means for generating said error signal, means for transmitting the error signal to said drive means, feedback means connecting the output of said drive means to the input side of said error signal generating means whereby quantities in said feedback connection represent the output of said drive means modified by motion errors inhering therein, and means for comparing said transmitted error signal with the output of said drive means and for modifying the output of said error signal generating means in accordance with the out-

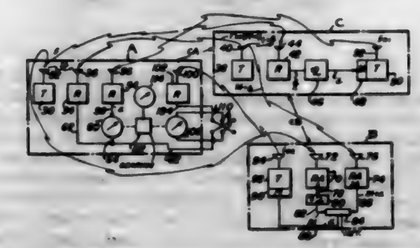
put of said comparing means as determined by the comparison of said transmitted error signal and the output of said drive means, whereby said motion errors may be subtracted from the error signal transmitted to said drive means.

2,947,983
MEASUREMENT OF THE SPEED OF VEHICLES
Harold R. Whitfield, Barkingside, England, assignor to Kelvin & Hughes Limited, Glasgow, Scotland
Filed Aug. 9, 1954, Ser. No. 448,644
Claims priority, application Great Britain Aug. 13, 1953
10 Claims. (Cl. 343—8)



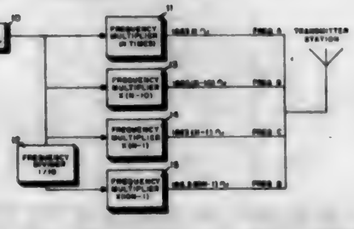
1. A measuring device for use in a moving vehicle comprising radar apparatus carried by said vehicle, said apparatus including transmitting means for radiating radio frequency energy, receiving means for receiving parts of said radio frequency energy reflected by objects and for generating voltages therefrom, at least one of said means having a directional aerial, a range responsive device having a plurality of output terminals, means applying said voltages to said range responsive device to generate at said output terminals respectively further voltages each corresponding to a reflection from an object at a different range, means connected to said output terminals for generating a rotating magnetic field from said further voltages, a rotatable member actuated by rotation of said magnetic field and speed measuring means coupled to said rotatable member to indicate the speed thereof.

2,947,984
RADIO POSITION DETERMINING SYSTEM
Charles E. Hastings, % Hastings-Raydist, Inc., Hampton, Va.
Filed Mar. 22, 1957, Ser. No. 648,484
39 Claims. (Cl. 343—105)



1. In a heterodyne phase comparison radio system for determining position and the like, a first station, a second station, a third station, a first oscillation means at the first station tuned to generate oscillations at a frequency f and to transmit at least a portion thereof, a first receiving means at the first station and heterodyne means associated therewith, a second receiving means at the second station and heterodyne means associated therewith, a second oscillation means at the third station tuned to generate oscillations at a frequency f' which differs substantially from f and to transmit at least a portion thereof, a third receiving means at the third station and heterodyne means associated therewith, each one of said receiving and heterodyning means including means responsive to signals from both oscillation generating means for producing a heterodyne signal, the system further including at least two means for detecting a phase angle between electrical signals, means for conveying the heterodyne signals of one pair of the heterodyne means to the first of the phase angle means as two inputs thereto, and means for conveying the heterodyne signals of a second pair of the heterodyne means to the second of the phase angle means as two inputs thereto, the difference between f and f' being greater than the frequency of said heterodyne signals.

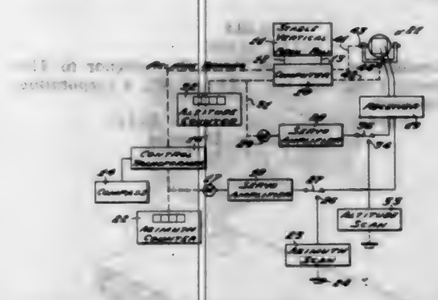
2,947,985
NAVIGATION SYSTEMS
Austin G. Cooley, New York, N.Y., assignor, by mesne assignments, to Digital Control Systems, Inc., Beverly Hills, Calif., a corporation of California
Filed Feb. 6, 1958, Ser. No. 713,633
7 Claims. (Cl. 343—105)



1. In a radio navigation system, the combination of a low-frequency oscillator, means controlled by said oscillator for radiating two constant-frequency continuous wave RF signals from a fixed location, a constant-frequency source at a mobile receiving station, means including said source for generating a third signal having the same frequency as the difference between said radiated continuous wave RF signals, a signal detector at said mobile receiving station and means including said detector to indicate the distance between said fixed location and said mobile receiving station by comparison of the instantaneous phase relation between the difference wave signal as received and said third signal.

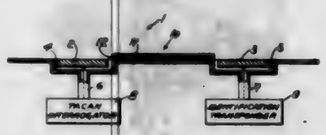
2,947,986
RADIOMETRIC SEXTANT STABILIZATION SYSTEM
Gene R. Marner, Iowa City, and Richard M. Ringoen, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Feb. 5, 1954, Ser. No. 408,386
10 Claims. (Cl. 343—117)

1. A closed loop servo system for stabilizing a tracking mechanism mounted on a moving craft so that pitch, roll and yaw of the craft will not interfere with the accuracy of the tracking mechanism, comprising, a horizontal reference having a pair of output shafts positioned proportional respectively to the pitch and roll attitudes of the craft, said tracking mechanism mounted on train and elevation axes, first and second shafts connected respectively to the train and elevation axes of said tracking mechanism, an electromechanical analogue computer receiving inputs from said horizontal reference output shafts and having output shafts connected to said first and second tracking mechanism shafts, a heading reference device mounted on said craft, first and second



servo motors receiving electrical outputs from said tracking mechanism proportional respectively to the elevation order error and train order error, said first servo motor supplying an output shaft position to said electro-mechanical computer, and a control transformer receiving an output from said second servo motor and an input from said heading reference device and supplying a shaft output to said electromechanical computer.

2,947,987
ANTENNA DECOUPLING ARRANGEMENT
Sven H. M. Dodington, Mountain Lakes, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed May 5, 1958, Ser. No. 733,690
4 Claims. (Cl. 343—180)



3. An arrangement for reducing undesirable coupling between antennas mounted on an airborne body having a conductive surface comprising a pair of spaced antennas mounted on said body with a portion of said conductive surface positioned therebetween, a microstrip line having its ends adjacent said antennas and capacitively coupled thereto, said microstrip line being mounted on said body between said antennas and having a length producing a 180-degree phase reversal of the signal applied from one antenna to the other with respect to the signal otherwise coupled from said one antenna to the other, said capacitive coupling between the ends of said microstrip line and said antennas being of a value such as to couple an amount of energy through said line equal to that otherwise coupled between the two antennas.

2,947,988
TRAVELING WAVE ANTENNA
Robert Wayne Masters, Columbus, Ohio, assignor to The Ohio State University Research Foundation, Columbus, Ohio, a corporation of Ohio
Filed Mar. 29, 1955, Ser. No. 497,693
22 Claims. (Cl. 343—742)



1. A traveling wave antenna comprising a pair of concentric tubular conductors disposed substantially coextensively, means for exciting said conductors to establish a traveling wave internal to said antenna, and a plurality of radiator means spaced other than integral multiples of one-half wavelength apart arranged in a spiral path around the outer one of said conductors, means for coupling said radiators to said traveling wave, said radiators operating under excitation of the traveling wave to maintain the input impedance constant and to preserve the radiation beam substantially invariant in shape and direction with respect to frequency over a discrete range of frequencies.

2,947,989
ROTATING RADAR ANTENNA
John R. Ford, Narberth, Pa., Irving D. Kruger, Haddonfield, N.J., and Harold Perkel, Levittown, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed Nov. 28, 1956, Ser. No. 624,775
6 Claims. (Cl. 343—757)

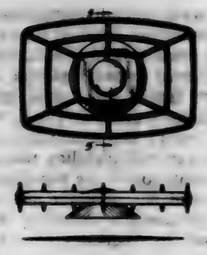


6. In combination, a first aerodynamically asymmetrical structure; drive means coupled to said structure for rotating the same about an axis, whereby, in the presence of wind, the driving force required to rotate said structure is greater in one portion of the driving cycle than in another; and a wind-responsive, second aerodynamically asymmetrical structure fixed to said first structure in a position to counteract the effect of the wind on said first structure during said one portion of said driving cycle, and thereby to reduce said driving force required to rotate said first structure in said one portion of said cycle.

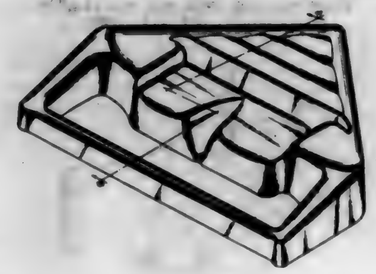
DESIGNS

AUGUST 2, 1960

188,481
SOAP HOLDER
James L. Hvale, Chicago, and William F. Mearé, Oak Park, Ill., assignors to Elco Products Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 8, 1960, Ser. No. 58,976
Term of patent 14 years
(Cl. D4—3)



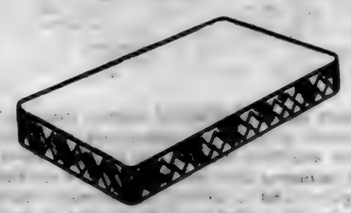
188,482
UTILITY SHELF AND TOWEL BAR COMBINATION
Edgar M. Litzaw, 415 Cherry, Brea, Calif.
Filed May 29, 1959, Ser. No. 56,123
Term of patent 14 years
(Cl. D4—3)



188,483
MATTRESS
Max Koenigsberg, Highland Park, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Oct. 23, 1958, Ser. No. 53,109
Term of patent 14 years
(Cl. D5—2)



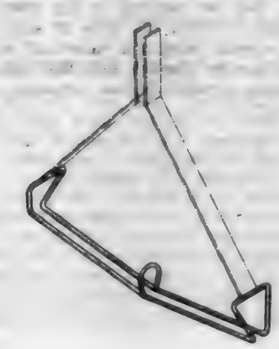
188,484
MATTRESS
Max Koenigsberg, Highland Park, Ill., assignor to The Englander Company, Inc., Chicago, Ill., a corporation of Delaware
Filed Oct. 23, 1958, Ser. No. 53,113
Term of patent 14 years
(Cl. D5—2)



188,485
HINGE
La Verne E. Clayton, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Apr. 4, 1960, Ser. No. 60,892
Term of patent 14 years
(Cl. D10—9)



188,486
POULTRY SUSPENDING FRAME FOR CHILLING SHACKLE
Horace J. De Long, Ridge Road, Gainesville, Ga.
Filed Apr. 25, 1960, Ser. No. 60,309
Term of patent 14 years
(Cl. D11—1)



188,487
FOOD SERVICE CART
Victor D. Molitor, Englewood, Colo.
(1318 10th St., Denver, Colo.)
Filed Feb. 17, 1958, Ser. No. 49,681
Term of patent 14 years
(Cl. D14—3)



188,488
CHAIR
Carl L. Otto, New York, N.Y., assignor to Heywood-Wakefield Company, Gardner, Mass., a corporation of Massachusetts
Filed Aug. 10, 1959, Ser. No. 57,120
Term of patent 7 years
(Cl. D15—1)



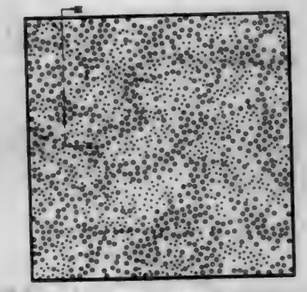
188,489
DAVENPORT
Carl L. Otto, New York, N.Y., assignor to Heywood-Wakefield Company, Gardner, Mass., a corporation of Massachusetts
Filed Aug. 10, 1959, Ser. No. 57,119
Term of patent 7 years
(Cl. D15—11)



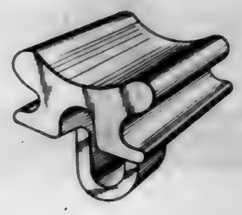
188,490
CHAIR
Mario J. La Vico, 135—92 118th St., South Ozone Park, N.Y.
Filed Nov. 3, 1958, Ser. No. 53,244
Term of patent 7 years
(Cl. D15—11)



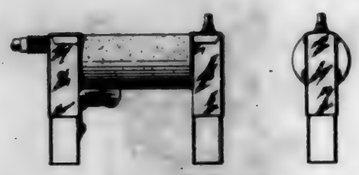
188,491
CEILING TILE OR THE LIKE
Robert F. Green, East Hempfield Township, Lancaster County, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed May 14, 1958, Ser. No. 50,886
Term of patent 14 years
(Cl. D18—2)



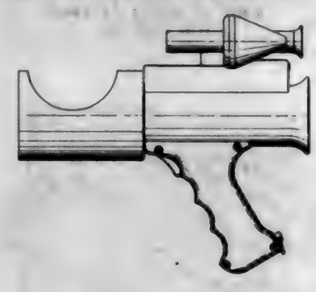
188,492
SLIDE FOR A CURTAIN ROD
Paul Koller, 4 Guggerweg, Zollikon, Switzerland
Filed July 11, 1958, Ser. No. 51,735
Term of patent 14 years
(Cl. D21—1)



188,493
PORTABLE ELECTRO-MAGNETIC CRACK DETECTING TOOL
George H. Olcott, 128 Hubbard St., Allegan, Mich.
Filed Mar. 2, 1959, Ser. No. 54,811
Term of patent 14 years
(Cl. D26—1)



188,494
PHOTOPHONE
Philip J. Udell, Castro Valley, Calif., assignor to Roland E. West, Soquel, Calif.
Filed July 16, 1959, Ser. No. 56,801
Term of patent 7 years
(Cl. D26—14)



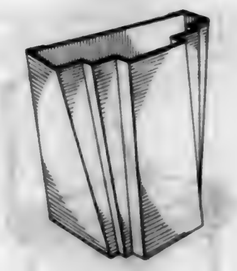
188,495
ANTENNA
Irving Gould, Devon, Pa., assignor to Jerrold Electronics Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Oct. 30, 1959, Ser. No. 58,129
Term of patent 14 years
(Cl. D26—14)



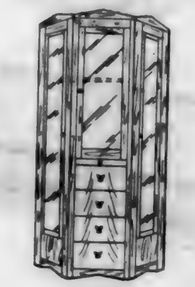
188,496
CHRISTMAS TREE ORNAMENT OR SIMILAR ARTICLE
Jack Barnbaum, 55 Lakeview Ave., Newton, Mass.
Filed Mar. 22, 1960, Ser. No. 59,834
Term of patent 14 years
(Cl. D29—1)



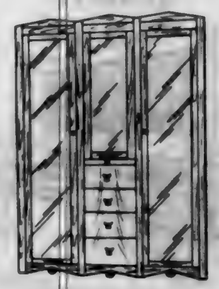
188,497
TROPHY BASE
Ray E. Dodge, Miami Beach, Fla., assignor to Dodge, Inc., Chicago, Ill., a corporation of Illinois
Filed Aug. 16, 1957, Ser. No. 47,387
Term of patent 14 years
(Cl. D29—23)



188,498
CABINET
James V. Shears, 4032 S. Dye Road, Swartz Creek, Mich.
Filed Sept. 25, 1959, Ser. No. 57,676
Term of patent 3½ years
(Cl. D33—19)



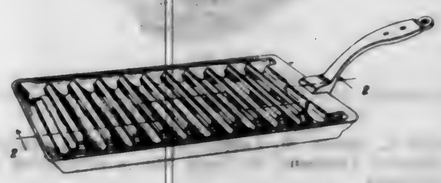
188,499
CABINET
James V. Shears, 4032 S. Dye Road, Swartz Creek, Mich.
Filed Sept. 25, 1959, Ser. No. 57,677
Term of patent 3½ years
(Cl. D33—19)



188,500
LAND PACKER
John Le Roy Swanson, 1714 Morgan Ave., Saskatoon, Saskatchewan, Canada
Filed Mar. 16, 1959, Ser. No. 55,002
Term of patent 14 years
(Cl. D35—2)



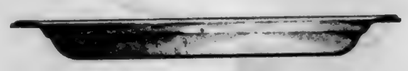
188,501
GRILL
John T. Wood, 312 Wyndhurst Ave., Baltimore, Md.
Filed Mar. 5, 1959, Ser. No. 54,852
Term of patent 14 years
(Cl. D44—1)



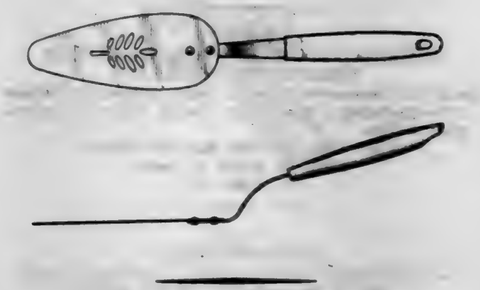
188,502
DIVIDED PLATE
Charles L. Metzler, Palisades Park, N.J., and John D. Wark, Freeport, N.Y., assignors to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Filed July 28, 1958, Ser. No. 51,941
Term of patent 14 years
(Cl. D44—15)



188,503
PLATE
Charles L. Metzler, Palisades Park, N.J., and John D. Wark, Freeport, N.Y., assignors to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Filed July 28, 1958, Ser. No. 51,943
Term of patent 14 years
(Cl. D44—15)



188,504
CULINARY SERVER
Richard S. Latham, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 24, 1960, Ser. No. 59,854
Term of patent 14 years
(Cl. D44—29)



188,505
COMBINED HOSPITAL AND BED LIGHT FIXTURE AND SERVICE OUTLET CONTROL PANEL
Mitchell Bobrick, Pacific Palisades, Calif., assignor to Sunbeam Lighting Company, Los Angeles, Calif., a firm
Filed May 7, 1959, Ser. No. 55,813
Term of patent 14 years
(Cl. D48—20)



188,506
HOSPITAL BED LIGHT UNIT
Mitchell Bobrick, Pacific Palisades, Calif., assignor to Sunbeam Lighting Company, Los Angeles, Calif., a firm
Filed May 7, 1959, Ser. No. 55,815
Term of patent 14 years
(Cl. D48—20)



188,507
CIGAR LIGHTER OR SIMILAR ARTICLE
James Donald Smith, Stroudsburg, Pa., assignor to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Jan. 13, 1959, Ser. No. 54,153
Term of patent 14 years
(Cl. D48—27)



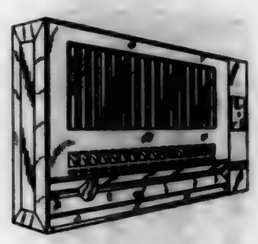
188,508
COMBINED SPOTLIGHT AND REAR VIEW MIRROR FOR VEHICLES
David M. Morgenstern, Euclid, Ohio, assignor to Neimor Manufacturing Corporation, Euclid, Ohio, a corporation of Ohio
Filed Mar. 22, 1960, Ser. No. 59,829
Term of patent 14 years
(Cl. D48—32)



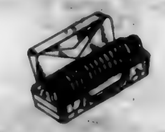
188,509
KNOB
La Verne E. Clayton, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Filed Apr. 4, 1960, Ser. No. 60,152
Term of patent 14 years
(Cl. D50—3)



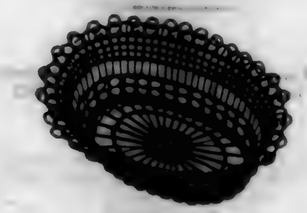
188,510
CIGARETTE DISPENSER
Michel Verdier, Chateau de Saint-Prex, Saint-Prex, Vaud, Switzerland
Filed Sept. 9, 1959, Ser. No. 57,487
Claims priority, application Switzerland Apr. 5, 1959
Term of patent 14 years
(Cl. D52—3)



188,511
COIN HOLDER
Jesse Shanok and Victor Shanok, both of 863 65th St., Brooklyn, N.Y.
Filed Apr. 15, 1959, Ser. No. 55,524
Term of patent 14 years
(Cl. D52—4)



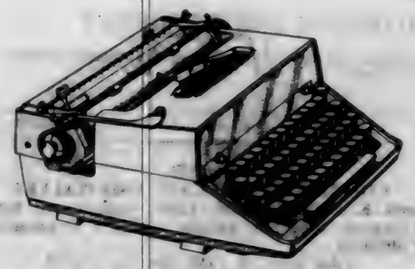
188,512
BASKET
Roger F. Haag, Abingdon, Md.
Filed July 2, 1957, Ser. No. 46,819
Term of patent 14 years
(Cl. D58—4)



188,513
INSULATED JUG
Walter E. Moore, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Dec. 19, 1955, Ser. No. 39,363
Term of patent 14 years
(Cl. D58—17)



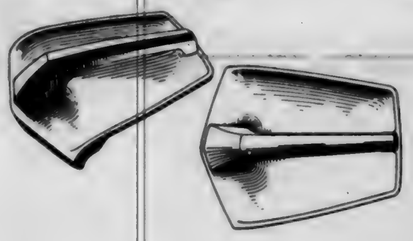
188,514
TYPEWRITER
Carl W. Sundberg, Bloomfield Hills, and Montgomery Ferar, Huntington Woods, Mich., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 25, 1959, Ser. No. 57,570
Term of patent 14 years
(Cl. D64—11)



188,515
REFRIGERATOR CABINET
Le Roy E. Kiefer, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 13, 1959, Ser. No. 58,331
Term of patent 7 years
(Cl. D67—3)



188,516
BOW FITTING
Edward W. Peterson, 445 N. Michigan Ave., Chicago, Ill.
Filed Jan. 4, 1960, Ser. No. 58,912
Term of patent 7 years
(Cl. D71—1)



188,517
COMBINED SIDE DART AND STERN HANDLE
Edward W. Peterson, 445 N. Michigan Ave., Chicago, Ill.
Filed Jan. 4, 1960, Ser. No. 58,913
Term of patent 7 years
(Cl. D71—1)



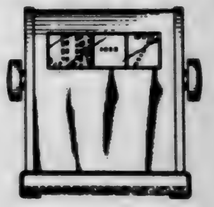
188,518
HAND BLINKER-SIGNAL LIGHT
Charles L. Cleek, P.O. Box 2-4275, Los Angeles, Calif.
Filed Sept. 14, 1959, Ser. No. 57,549
Term of patent 14 years
(Cl. D72—1)



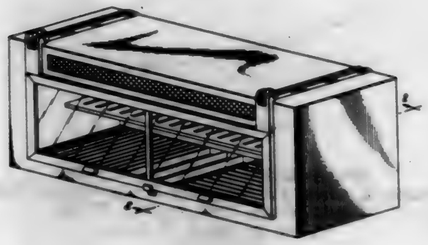
188,519
TAPE DISPENSER
Irvin J. Gershon, 1 Norwood Road, Springfield, N.J.
Filed Oct. 20, 1959, Ser. No. 57,980
Term of patent 14 years
(Cl. D74—1)



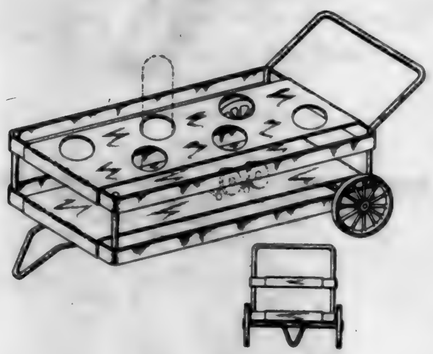
188,520
COMBINED PERPETUAL CALENDAR AND MEMO SHEET HOLDER
Jack Bergman, 1327 Murdock Road, Pittsburgh, Pa.
Filed July 21, 1958, Ser. No. 51,883
Term of patent 14 years
(Cl. D74—5)



188,521
UTENSIL STERILIZER AND DRYER COMBINATION
Mosel A. Adams, Rayne, La., assignor to Trex Corporation, Eunice, La., a corporation of Louisiana
Filed Mar. 24, 1958, Ser. No. 58,153
Term of patent 3½ years
(Cl. D83—1)



188,522
JEWELRY HOLDER OR SIMILAR ARTICLE
Teddy Preda, Pearl River, N.Y., assignor to Linbry Products Co., Inc., New York, N.Y.
Filed June 5, 1959, Ser. No. 56,222
Term of patent 14 years
(Cl. D86—10)



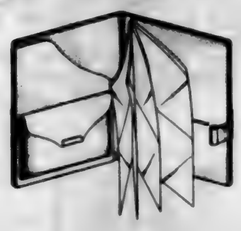
188,523
LUGGAGE HANDLE
Joseph Finkelstein, Glenside, Pa., assignor to Philadelphia Brief Case Company, Philadelphia, Pa., a partnership
Filed Mar. 23, 1959, Ser. No. 55,106
Term of patent 14 years
(Cl. D87—2)



188,524
LUGGAGE HANDLE
Joseph Finkelstein, Glenside, Pa., assignor to Philadelphia Brief Case Company, Philadelphia, Pa., a partnership
Filed Mar. 23, 1959, Ser. No. 55,107
Term of patent 14 years
(Cl. D87—2)



188,525
COMBINED CARD CASE AND WALLET
Joseph K. Seitz, Sunland, Calif., assignor to Bri-Son Company, Inc., Los Angeles, Calif., a corporation of California
Filed Sept. 28, 1959, Ser. No. 57,705
Term of patent 14 years
(Cl. D87—3)



188,526
SLIP FIT COUPLER OR THE LIKE
John H. Hosking, Cincinnati, Ohio, assignor to John H. Hosking Co., Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 6, 1958, Ser. No. 52,886
Term of patent 14 years
(Cl. D91—3)



LIST OF DESIGN PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Adams, Mosel A., to Trex Corp. Utensil sterilizer and dryer combination. 188,521, 8–2–60, Cl. D83—1.
Amerock Corp.: *See*—
Clayton, La Verne E. 188,485.
Clayton, La Verne E. 188,509.
Armstrong Cork Co.: *See*—
Green, Robert F. 188,491.
Bergman, Jack. Combined perpetual calendar and memo sheet holder. 188,520, 8–2–60, Cl. D74—5.
Bobrick, Mitchell, to Sunbeam Lighting Co. Combined hospital and bed light fixture and service outlet control panel. 188,505, 8–2–60, Cl. D48—20.
Bobrick, Mitchell, to Sunbeam Lighting Co. Hospital bed light unit. 188,506, 8–2–60, Cl. D48—30.
Bri-Son Co., Inc.: *See*—
Seitz, Joseph K. 188,525.
Burnbaum, Jack. Christmas tree ornament, or similar article. 188,496, 8–2–60, Cl. D29—1.
Clayton, La Verne E., to Amerock Corp. Hinge. 188,485, 8–2–60, Cl. D10—9.
Clayton, La Verne E., to Amerock Corp. Knob. 188,509, 8–2–60, Cl. D50—3.
Cleek, Charles L. Hand blinker-signal light. 188,516, 8–2–60, Cl. D72—1.
De Long, Horace J. Poultry suspending frame for chilling shackle. 188,486, 8–2–60, Cl. D11—1.
Dodge, Inc.: *See*—
Dodge, Ray E. 188,497.
Dodge, Ray E., to Dodge, Inc. Trophy base. 188,497, 8–2–60, Cl. D29—23.
Ekco Products Co.: *See*—
Hvale, James L., and Meara. 188,481.
Latham, Richard S. 188,504.
Englander Co., Inc., The: *See*—
Koenigsberg, Max. 188,483.
Koenigsberg, Max. 188,484.
Ferar, Montgomery: *See*—
Sundberg, Carl W., and Ferar. 188,514.
Finkelstein, Joseph, to Philadelphia Brief Case Co. Luggage handle. 188,523, 8–2–60, Cl. D87—2.
Finkelstein, Joseph, to Philadelphia Brief Case Co. Luggage handle. 188,524, 8–2–60, Cl. D87—2.
General Motors Corp.: *See*—
Kiefer, Le Roy E. 188,515.
Gershen, Irvin J. Tape dispenser. 188,519, 8–2–60, Cl. D74—1.
Gould, Irving, to Jerrold Electronics Corp. Antenna. 188,498, 8–2–60, Cl. D26—14.
Green, Robert F., to Armstrong Cork Co. Ceiling tile or the like. 188,491, 8–2–60, Cl. D18—2.
Haag, Roger F. Basket. 188,512, 8–2–60, Cl. D58—4.
Heywood-Wakefield Co.: *See*—
Otto, Carl L. 188,488.
Otto, Carl L. 188,489.
Hosking, John H., to John H. Hosking Co. Slip fit coupler or the like. 188,526, 8–2–60, Cl. D91—3.
Hosking, John H., Co.: *See*—
Hosking, John H. 188,526.
Hvale, James L., and W. F. Meara, to Ekco Products Co. Soap holder. 188,481, 8–2–60, Cl. D4—3.
Jerrold Electronics Corp.: *See*—
Gould, Irving. 188,495.
Keyes Fibre Co.: *See*—
Metzler, Charles L., and Wark. 188,502.
Metzler, Charles L., and Wark. 188,503.
Kiefer, Le Roy E., to General Motors Corp. Refrigerator cabinet. 188,515, 8–2–60, Cl. D67—3.
Knapp-Monarch Co.: *See*—
Moore, Walter E. 188,513.
Koenigsberg, Max, to The Englander Co., Inc. Mattress. 188,483, 8–2–60, Cl. D5—2.
Koenigsberg, Max, to The Englander Co., Inc. Mattress. 188,484, 8–2–60, Cl. D5—2.
Koller, Paul. Slide for a curtain rod. 188,492, 8–2–60, Cl. D21—1.
Latham, Richard S., to Ekco Products Co. Culinary server. 188,504, 8–2–60, Cl. D44—29.
Linbry Products Co., Inc.: *See*—
Preda, Teddy. 188,522.
Littaw, Edgar M. Utility shelf and towel bar combination. 188,482, 8–2–60, Cl. D4—9.
Lo Vico, Mario J. Chair. 188,490, 8–2–60, Cl. D15—11.
Meara, William F.: *See*—
Hvale, James L., and Meara. 188,481.
Metzler, Charles L., and J. D. Wark, to Keyes Fibre Co. Divided plate. 188,502, 8–2–60, Cl. D44—15.
Metzler, Charles L., and J. D. Wark, to Keyes Fibre Co. Plate. 188,503, 8–2–60, Cl. D44—15.
Molitor, Victor D. Food service cart. 188,487, 8–2–60, Cl. D14—3.
Moore, Walter E., to Knapp-Monarch Co. Insulated jug. 188,513, 8–2–60, Cl. D58—17.
Morgenstern, David M., to Nelmor Mfg. Corp. Combined spotlight and rear view mirror for vehicles. 188,508, 8–2–60, Cl. D48—32.
Nelmor Mfg. Corp.: *See*—
Morgenstern, David M. 188,508.
Olcott, George H. Portable electro-magnetic crack detecting tool. 188,493, 8–2–60, Cl. D26—1.
Otto, Carl L., to Heywood-Wakefield Co. Chair. 188,488, 8–2–60, Cl. D15—1.
Otto, Carl L., to Heywood-Wakefield Co. Davenport. 188,489, 8–2–60, Cl. D15—11.
Peterson, Edward W. Bow fitting. 188,516, 8–2–60, Cl. D71—1.
Preda, Teddy, to Linbry Products Co., Inc. Jewelry holder or similar article. 188,522, 8–2–60, Cl. D86—10.
Philadelphia Brief Case Co.: *See*—
Finkelstein, Joseph. 188,523.
Finkelstein, Joseph. 188,524.
Peterson, Edward W. Combined side dart and stern handle. 188,517, 8–2–60, Cl. D71—1.
Ronson Corp.: *See*—
Smith, James D. 188,507.
Seitz, Joseph K., to Bri-Son Co., Inc. Combined card case and wallet. 188,525, 8–2–60, Cl. D87—3.
Shanok, Jesse, and V. Coin holder. 188,511, 8–2–60, Cl. D52—4.
Shanok, Victor: *See*—
Shanok, Jesse, and V. 188,511.
Shears, James V. Cabinet. 188,498, 8–2–60, Cl. D33—19.
Shears, James V. Cabinet. 188,499, 8–2–60, Cl. D33—19.
Smith, James D., to Ronson Corp. Cigar lighter or similar article. 188,507, 8–2–60, Cl. D48—27.
Sperry Rand Corp.: *See*—
Sundberg, Carl W., and Ferar. 188,514.
Sunbeam Lighting Co.: *See*—
Bobrick, Mitchell. 188,505.
Bobrick, Mitchell. 188,506.
Sundberg, Carl W., and M. Ferar, to Sperry Rand Corp. Typewriter. 188,514, 8–2–60, Cl. D64—11.
Swanson, John L. Land packer. 188,500, 8–2–60, Cl. D35—2.
Trex Corp.: *See*—
Adams, Mosel A. 188,521.
Udell, Philip J., to R. E. West. Photophone. 188,494, 8–2–60, Cl. D26—14.
Verdier, Michel. Cigarette dispenser. 188,510, 8–2–60, Cl. D52—3.
Wark, John D.: *See*—
Metzler, Charles L., and Wark. 188,502.
Metzler, Charles L., and Wark. 188,503.
West, Roland E.: *See*—
Udell, Philip J. 188,494.
Wood, John T. Grill. 188,501, 8–2–60, Cl. D44—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 2ND DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AMP Inc.: *See*—
Demler, Henry W. 2,947,207.

Abbott, Robert C. Apparatus for determining the listening habits of wave signal receiver users. 2,947,858, 8–2–60, Cl. 250—2.

Aberer, Frank H., to J. C. Hockery, as trustee. Container engaging mechanism. 2,947,434, 8–2–60, Cl. 220—4.

Adams, Robert T., to International Telephone and Telegraph Corp. Gyroscope. 2,947,178, 8–2–60, Cl. 74—5.7.

Adams, Rowland K., to E. I. du Pont de Nemours and Co. Two-zone mononitration of toluene. 2,947,791, 8–2–60, Cl. 260—645.

Adams, Wallace C., to Apex Jewelry Co. Earring clamp. 2,947,054, 8–2–60, Cl. 24—248.

Adler, Ralph M.: *See*—
Schwuttke, Gunter H., Haffner, and Adler. 2,947,214.

Adrig, Vernon E.: *See*—
Flubacker, Charles H., and Adrig. 2,947,838.

Advance Transformer Co.: *See*—
Berger, Paul. 2,947,909.

Aerovox Corp.: *See*—
Levin, John K., and Stewart. 2,947,090.

Ahlburg, Hays, and H. Heil, to General Electric Co. Forming patterned phosphor screens in post acceleration cathode ray tubes. 2,947,627, 8–2–60, Cl. 96—45.

Air Products Inc.: *See*—
Schilling, Clarence J. 2,947,151.

Aktiebolaget Electrolux: *See*—
Olsson, Erik. 2,947,559.

Aktiengesellschaft der von Moos'schen Eisenwerke: *See*—
Schneckenburger, Emil, and Kung. 2,947,075.

Alexander, Herbert C., and H. Heins, to Bomac Laboratories Inc. Fluid cooled energy transmission control device. 2,947,956, 8–2–60, Cl. 333—98.

Alexandroff, Sergei D. Piston assembly. 2,947,563, 8–2–60, Cl. 309—10.

Allen, Herbert, to Cameron Iron Works, Inc. Blowout preventer and ram therefor. 2,947,508, 8–2–60, Cl. 251—2.

Allen, James D., Jr., to International Business Machines Corp. Signal translating apparatus. 2,947,808, 8–2–60, Cl. 178—6.6.

Allen, James F., to Food Machinery and Chemical Corp. Halogenated phosphorus compounds. 2,947,773, 8–2–60, Cl. 260—461.

Allied Chemical Corp.: *See*—
Veldhuis, Benjamin, and Du Bois. 2,947,671.

Allis-Chalmers Mfg. Co.: *See*—
Baguhn, Alfred H. 2,947,837.
Mortenson, Victor A., Weston, and Reilly. 2,947,839.
Ureda, Benon F. 2,947,838.

Allyn, Charles L.: *See*—
Shelton, Frederic J., Hodgins, and Allyn. 2,947,790.

Altmann, Werner E., to Daimler-Benz Aktiengesellschaft. Synchronised clutch. 2,947,396, 8–2–60, Cl. 192—53.

Alverman, Emanuel P., to Jennings Radio Mfg. Corp. Sideband selection. 2,947,860, 8–2–60, Cl. 250—20.

Ambeau, Hugh L. Traction device. 2,947,337, 8–2–60, Cl. 152—220.

Ambelang, Joseph C., to The Firestone Tire & Rubber Co. Non-blooming, non-staining rubber antioxidants. 2,947,724, 8–2–60, Cl. 260—45.95.

Ambelang, Joseph C., to The Firestone Tire & Rubber Co. 1,1 - bis(hydroxy - 3 - alkyl - 6 - isopropylphenyl) alkanes. 2,947,789, 8–2–60, Cl. 260—619.

American Bosch Arma Corp.: *See*—
Linden, Albert H. 2,947,811.

American Brake Shoe Co.: *See*—
Devaney, John L. 2,947,385.

American Brass Co., The: *See*—
Woods, Robert C. 2,947,212.

American Can Co.: *See*—
Loughney, John J. 2,947,276.
Wobbe, Delbert E., and Fallar. 2,947,274.

American Cyanamid Co.: *See*—
Kropa, Edward L. 2,947,594.
Lundberg, Lennart A. 2,947,736.
Petropoulos, John C., and Coscia. 2,947,794.

American Dross Disposal Corp.: *See*—
Gorby, Harry B. 2,947,619.

American Enka Corp.: *See*—
Bakker, Willem. 2,947,029.
Brots, August, Richter, Wachtendorf, and Heuer. 2,947,597.
Gonsalves, Conrad J. 2,947,490.

American Flange & Mfg. Co., Inc.: *See*—
Parish, Richard L., Jr., and Bee. 2,947,453.

American Home Products Corp.: *See*—
Winthrop, Stanley O. 2,947,749.

American-Marietta Co.: *See*—
O'Connor, Philip K., and Stomiany. 2,947,014.

American-Marietta Co., Stoner-Mudge Co. Division: *See*—
Rosser, Gerald P. 2,947,442.

American Metal Climax, Inc.: *See*—
Semchyshen, Marion. 2,947,624.

American Oil Co., The: *See*—
Lee, Robert J. 2,947,687.

American Rubber Mfg. Co., The: *See*—
Dodge, Nathaniel S., Jr., Hohl, Jones, and Negley. 2,947,409.

American Seating Co.: *See*—
Hoven, Alfred C., and Nordmark. 2,947,586.

American Steel Foundries: *See*—
Foster, Theodore, and Hake. 2,947,189.

American Telephone and Telegraph Co.: *See*—
Hanley, Frank H., and Votaw. 2,947,803.

American Viscose Corp.: *See*—
Clem, Glen H., and Ickes. 2,947,491.
Milne, David T. 2,947,645.

Anaconda Co., The: *See*—
Holdsworth, Francis L., and Sullivan. 2,947,906.
Laist, Frederick. 2,947,604.
Laist, Frederick. 2,947,605.

Anderson Co., The: *See*—
Crosby, Stephen A. 2,947,535.
Loskill, Lawrence, and Martens. 2,947,100.

Anderson, John L., to International Business Machines Corp. Transistor saturation control. 2,947,880, 8–2–60, Cl. 307—88.5.

Andrisek, John A., and T. R. Gill, to Metal Finishers, Inc. Method of preparing porous chromium wearing surfaces. 2,947,674, 8–2–60, Cl. 204—141.

Animal Trap Co. of America: *See*—
Lehn, John U. 2,947,107.

Anjeskey, Alphonse F., to The Cleveland Crane & Engineering Co. Overhead monorail system. 2,947,261, 8–2–60, Cl. 104—96.

Anspon, Harry D., to General Aniline & Film Corp. Treatment of polymeric α-chloroacrylic acid esters. 2,947,036, 8–2–60, Cl. 18—48.

Apartment Furniture Co.: *See*—
McKenzie, Louis P. 2,947,009.

Apex Jewelry Co.: *See*—
Adams, Wallace C. 2,947,054.

Apple, Eugene F., to General Electric Co. Luminescent zinc sulfide phosphors and the preparation thereof. 2,947,704, 8–2–60, Cl. 252—301.6.

Apple, Eugene F., to General Electric Co., to Luminescent zinc sulfide phosphors and the preparation thereof. 2,947,705, 8–2–60, Cl. 252—301.6.

Archer, Garland W., to Sylvania Electric Products Inc. Television apparatus. 2,947,811, 8–2–60, Cl. 178—7.5.

Arkus-Duntov, Zora. Manifold. 2,947,293, 8–2–60, Cl. 123—52.

Armentrout, James L., and R. L. Gibson. Color printing. 2,947,232, 8–2–60, Cl. 95—73.

Armstrong Cork Co.: *See*—
Barsy, Imre J. 2,947,596.

Arnold, Harold A., deceased, and J. B. Sharp (I. H. Arnold, administratrix), to The University of Tennessee Research Corp. Educational, recreational, and testing apparatus. 2,947,087, 8–2–60, Cl. 35—9.

Arnold, Harold A., deceased, and J. B. Sharp (I. H. Arnold, administratrix), to The University of Tennessee Research Corp. Educational, recreational, and testing apparatus. 2,947,092, 8–2–60, Cl. 35—48.

Arnold, Iceey H.: *See*—
Arnold, Harold A., and Sharp. 2,947,087.
Arnold, Harold A., and Sharp. 2,947,092.

Arridge, Robert G. C., G. A. Clough, and M. W. Pell, to British Nylon Spinners Ltd. Twisting of continuous filament yarns. 2,947,136, 8–2–60, Cl. 57—157.

Ashley, Carlyle M., to Carrier Corp. Apparatus for processing food products. 2,947,204, 8–2–60, Cl. 126—381.

Aspin, Frank M., ¼ to F. M. Aspin Engines Ltd. Internal combustion engines. 2,947,295, 8–2–60, Cl. 123—75.

Aspin, F. M., Engines Ltd.: *See*—
Aspin, Frank M. 2,947,295.

Assembly Products, Inc.: *See*—
Saint-Amour, John D., and Crowdes. 2,947,910.

Asten, Dietrich V., and J. G. Schoepf, to Asten-Hill Mfg. Co. Asbestos dryer felt. 2,947,228, 8–2–60, Cl. 139—412.

Asten-Hill Mfg. Co.: *See*—
Asten, Dietrich V., and Schoepf. 2,947,228.

Atchison, Leonard W., to General Electric Co. Combined thermostat and defrost control for air conditioning apparatus. 2,947,153, 8–2–60, Cl. 62—156.

Atomic Energy of Canada Ltd.: *See*—
Palmer, James F., and Turner. 2,947,166.

Aubrey, Herman S., to National Tank Co. Petroleum vapor recovery system. 2,947,370, 8–2–60, Cl. 183—2.

Aumuller, Kurt: *See*—
Leimer, Albert, and Aumuller. 2,947,534.

Ausenda, Carol, and R. Deesalles, to Compagnia Italiana Forme Acciaio S.p.A. Fabrication system. 2,947,203, 8–2–60, Cl. 77—5.

Azelrad, Bernard A., to Freeport Sulphur Co. Heating of sea water for sulfur mining. 2,947,690, 8–2–60, Cl. 210—57.

Azari, Eric, A. E. Gray, H. J. Malin, and H. B. Thompson, to The Magnavox Co. Card feeding apparatus. 2,947,538, 8–2–60, Cl. 271—11.

Bac-A-Brand Products, Inc.: *See*—
Mishkin, Sidney. 2,947,049.

Badeau, Carroll A., and W. H. Weber, to The Thomas & Betts Co. Insulated electrical raceway fitting. 2,947,800, 8–2–60, Cl. 174—83.

Bafour, Georges P., A. R. Blanchard, and F. H. Raymond. Keyboards for automatic composing machines. 2,947,357, 8–2–60, Cl. 164—112.

Baguhn, Alfred H., to Allis-Chalmers Mfg. Co. Reversing switch for load tap changing transformer. 2,947,837, 8–2–60, Cl. 200—92.

Bailey, Berry W., to Scott Paper Co. Processing of spent cooking liquors. 2,947,656, 8–2–60, Cl. 162—32.

Bailey, Donald L., to Union Carbide Corp. Aminoalkylpolysiloxanes and process for their production. 2,947,771, 8–2–60, Cl. 260—448.2.

Bailey, Donald L., and W. T. Black, to Union Carbide Corp. Diformylbutyl and diformylcyclopentyl containing siloxanes. 2,947,770, 8–2–60, Cl. 260—448.2.

Baker, Alanson J. Molding and joining head on collapsible tube. 2,947,035, 8–2–60, Cl. 18—36.

Baker, George H., D. Mitchell, and J. V. Reiling, Jr., to Bell Telephone Laboratories, Inc. Telegraph signal error counting circuit. 2,947,815, 8–2–60, Cl. 178—66.

Baker Perkins Ltd.: *See*—
Farrer, Kenneth. 2,947,266.

Bakker, Willem, to American Enka Corp. Tilting blow box. 2,947,029, 8–2–60, Cl. 18—8.

Balden, Alvin R., to Chrysler Corp. Process and composition for immersion tin plating of aluminum and aluminum alloys. 2,947,639, 8–2–60, Cl. 106—1.

Ballantine, P., & Sons: *See*—
Bostock, Raymond N. 2,947,462.

Ballou, John McKnight, to W. Chudnof. Type holder. 2,947,243, 8–2–60, Cl. 101—28.

Baltus, George T., and W. Beauchemin, to Bell Aerospace Corp. Manual and automatic hydraulic servomechanism. 2,947,285, 8–2–60, Cl. 121—41.

Baltus, George T., and M. P. Woipin, to Bell Aerospace Corp. Integrated actuator. 2,947,286, 8–2–60, Cl. 121—41.

Bard, C. R., Inc.: *See*—
Garth, Ernest D. G. 2,947,415.

Bard, Elmer H., to Georgres Wringer, Inc. Bumper assembly for buckets. 2,947,543, 8–2–60, Cl. 280—79.2.

Bardayi, Bela: *See*—
Wilfert, Karl, and Bardayi. 2,947,020.

Bardayi, Edia, to Daimler-Benz Aktiengesellschaft. Automobile top structure. 2,947,567, 8–2–60, Cl. 296—28.

Baril, Edward A.: *See*—
Meagher, James L., Jr., and Baril. 2,947,057.

Barkelew Mfg. Co.: *See*—
Clayton, William. 2,947,600.

Barkley, Lowell J., Jr. Pile with self-spreading anchors. 2,947,149, 8–2–60, Cl. 61—53.

Barry, Leonard D. Adjustable sign. 2,947,101, 8–2–60, Cl. 40—53.

Barsy, Imre J., to Armstrong Cork Co. Dielectric heating mold and method of forming a wooden mold member. 2,947,596, 8–2–60, Cl. 18—47.

Bartl, Herbert. Process for the production of copolymers of ethylene. 2,947,735, 8–2–60, Cl. 260—87.3.

Bartz, Kenneth W., to Celanese Corp. of America. Catalytic polymerization process. 2,947,727, 8–2–60, Cl. 260—67.

Bartz, Kenneth W., to Celanese Corp. of America. Catalytic polymerization of trioxane. 2,947,728, 8–2–60, Cl. 260—67.

Batesville Casket Co., Inc., The: *See*—
Hillenbrand, George C. 2,947,059.

Bauer Bros. Co., The: *See*—
Eberhardt, Lee R. 2,947,655.
Woodruff, Maurice D., and Textor. 2,947,485.

Bauer, Oliver F., and E. Stark, to The Gleason Works. Machine and method for running gears together for testing and finishing. 2,947,120, 8–2–60, Cl. 51—26.

Baumann, Manfred, to Bauwerk A.G. Double-surface planer for wood strip material. 2,947,332, 8–2–60, Cl. 144—116.

Baumann, Marie C., to Pet Milk Co. Carton insert. 2,947,460, 8–2–60, Cl. 229—14.

Bauwerk A.G.: *See*—
Baumann, Manfred. 2,947,332.

Bayer, Ernst. New condensation products, their metal salts and their metal compounds, and process for their production. 2,947,768, 8–2–60, Cl. 260—429.1.

Beacon Production Equipment Corp.: *See*—
Fenton, Frank W. 2,947,405.

Beams, Jesse W., and L. B. Snoddy, to United States of America, Atomic Energy Commission. Centrifuge end cap. 2,947,471, 8–2–60, Cl. 233—16.

Beauchemin, William: *See*—
Baltus, George T., and Beauchemin. 2,947,285.

Beck, Kenneth H., to Minneapolis-Honeywell Regulator Co. Electrical control apparatus. 2,947,875, 8–2–60, Cl. 250—214.

Beck, Kenneth H., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,947,916, 8–2–60, Cl. 317—148.5.

Becker, Lyman. Flush valve control for plumbing fixtures. 2,947,323, 8–2–60, Cl. 137—624.14.

Becton Dickinson and Co.: *See*—
Taylor, Harry E., and Buck. 2,947,444.

Bee, Carl R.: *See*—
Parish, Richard L., Jr., and Bee. 2,947,453.

Beernink, Gerardus J.: *See*—
Van Heel, Abraham C. S., Beernink, and Raterink. 2,947,219.

Behrendt, John G. Hat rack. 2,947,420, 8–2–60, Cl. 211—31.

Belanger, William J. J. E. Masters, and D. D. Hicks, to Devoe & Raynolds Co., Inc. Epoxide resin compositions. 2,947,712, 8–2–60, Cl. 260—18.

Belanger, William J., and J. E. Masters, to Devoe & Raynolds Co., Inc. Epoxide resin compositions. 2,947,717, 8–2–60, Cl. 260—45.4.

Belanger, William J., to Devoe & Raynolds Co., Inc. Epoxide resins. 2,947,728, 8–2–60, Cl. 260—47.

Bell Aerospace Corp.: *See*—
Baltus, George T., and Beauchemin. 2,947,285.
Baltus, George T., and Woipin. 2,947,286.

Bell, Donald E.: *See*—
Pettigrew, David D., and Bell. 2,947,197.

Bell & Howell Co.: *See*—
Schwartz, Herbert, and Pinto. 2,947,829.

Bell Telephone Laboratories, Inc.: *See*—
Baker, George H., Mitchell, and Reiling. 2,947,815.
Bodmer, Max G. 2,947,907.
Hyske, John L. 2,947,816.
Pierce, John R. 2,947,905.

Bellamy, Jack L., and G. A. Walters, to Textron Inc. Multichannel rotary joint. 2,947,956, 8–2–60, Cl. 333—98.

Bellco Glass, Inc.: *See*—
De Long, Allen H. 2,947,612.

Beloit Iron Works: *See*—
Hornbostel, Lloyd. 2,947,356.

Bendix Aviation Corp.: *See*—
Kasten, Walter. 2,947,419.
Madigan, Gerald C., and Middleton. 2,947,124.
Nugent, Robert F. 2,947,142.
Prather, Edwin E. 2,947,192.
Price, Earl R. 2,947,357.
Rose, Daniel G. 2,947,141.

Bennett, Edward O., and E. B. Hodge. Process for the control of bacteria in secondary oil recovery. 2,947,691, 8–2–60, Cl. 252—8.55.

Bennett, Frank K., to Victory Engineering Corp. Electrothermal measuring apparatus and method for the calibration thereof. 2,947,938, 8–2–60, Cl. 324—62.

Bennett, Phillip. Loose leaf binders. 2,947,300, 8–2–60, Cl. 129—24.

Benson Mfg. Co.: *See*—
Slota, William F. 2,947,440.

Berger, Paul, to Advance Transformer Co. Apparatus for igniting and operating gaseous discharge devices. 2,947,909, 8–2–60, Cl. 315—100.

Berkenblit, Samuel E.: *See*—
Graff, Alan R., Jurgens, and Berkenblit. 2,947,669.

Bertin, Daniel. Collapsible shopping cart. 2,947,546, 8–2–60, Cl. 280—36.

Bernard, George G., to The Pure Oil Co. Treatment of clayey materials. 2,947,360, 8–2–60, Cl. 106—6.

Bernstein-Bervery, Sergio, to General Precision, Inc. Audio amplifier. 2,947,947, 8–2–60, Cl. 330—117.

Berry, Henry E., A. C. Hirschle, and T. Zarabara, to United States of America, Army. Time setting mechanism for dual purpose clock. 2,947,137, 8–2–60, Cl. 58—80.

Bertelsen, Bruce I., to International Business Machines Corp. Method of manufacturing printed circuits. 2,947,625, 8–2–60, Cl. 96—1.

Bessiere, Pierre E. Reciprocating piston pumps, in particular for the injection of fuel. 2,947,257, 8–2–60, Cl. 103—41.

Bessiere, Pierre E. Self-regulating reciprocating piston pumps, in particular for the injection of fuel into internal combustion engines. 2,947,258, 8–2–60, Cl. 103—41.

Bethune, George R., Jr., to The Goodyear Tire & Rubber Co. Knot-tying apparatus. 2,947,558, 8–2–60, Cl. 289—2.

Beyer, Arthur: *See*—
Siebels, Ernst, and Beyer. 2,947,404.

Bible, Roy H., Jr., to G. D. Searle & Co. 1,12-dimethyl-6-hydroxy - 7 - aroyl - 1,2,3,4,9,10,11,12 - octahydrophenanthrene-1-carboxylic acids, ethers and esters thereof. 2,947,775, 8–2–60, Cl. 260—468.5.

Blick, Andrew G., and E. G. Roser, to United States of America, Air Force. Ammunition link. 2,947,222, 8–2–60, Cl. 89—33.

Billings, Roy O. Line marking tool. 2,947,084, 8–2–60, Cl. 33—32.

Billingsley, William F., to The B. F. Goodrich Co. Tire construction. 2,947,339, 8–2–60, Cl. 152—361.

Bird, Ralph C., C. H. Bouvy, and J. Dolza, to General Motors Corp. Induction system. 2,947,294, 8–2–60, Cl. 123—85.

Black, John W., to Pemco Wheel Co. Swivel caster structure. 2,947,021, 8–2–60, Cl. 16—21.

Black, William T.: *See*—
Bailey, Donald L., and Black. 2,947,770.

Blackburn Group Ltd., The: *See*—
Brumby, Harold, and Whitworth. 2,947,533.

Blackwood, Albert J.: *See*—
Heigl, John J., and Blackwood. 2,947,900.

Blanchard, Andre R.: *See*—
Bafour, Georges P., Blanchard, and Raymond. 2,947,357.

Bleachers' Association Ltd.: *See*—
Landells, George, and Bragg. 2,947,058.

Bleuenstein, Julius M., to Ford Motor Co. Shell molding material and process. 2,947,641, 8–2–60, Cl. 106—38.3.

Blickwedel, Theodore W., to Sylvania Electric Products Inc. Electrophoretic coating material. 2,947,677, 8–2–60, Cl. 204—181.

Bloch, Erich, to International Business Machines Corp. Switch core matrix. 2,947,977, 8–2–60, Cl. 340—174.

Bloem, Aldert T., to North American Philips Co., Inc. Heat exhanger for separating out constituents from a gas by cooling. 2,947,152, 8–2–60, Cl. 62—40.

Bloom, Aaron, to Sierra Engineering Co. Inline diluter valve. 2,947,314, 8–2–60, Cl. 137—64.

Blomson, Allan P. Cooking means. 2,947,240, 8–2–60, Cl. 99—333.

Blythe, Clarence M.: *See*—
Oxley, Le Roy V., and Blythe. 2,947,320.

Boardman, Harold, to Hercules Powder Co. Stabilized polymeric acetane molding compositions. 2,947,722, 8–2–60, Cl. 260—45.85.

Boddy, Leonard, to King-Seeley Corp. Signal system. 2,947,979, 8–2–60, Cl. 340—212.

Bodmer, Max G., to Bell Telephone Laboratories, Inc. Traveling wave tube. 2,947,907, 8–2–60, Cl. 315—3.5.

Bolie, Victor W., to Collins Radio Co. Logarithmic function generator. 2,947,834, 8–2–60, Cl. 328—74.

Bölkow-Entwicklungen KO.: *See*—
Dreyer, Kuno, Wessel, and Bölkow. 2,947,500.

Bölkow, Ludwig: *See*—
Dreyer, Kuno, Wessel, and Bölkow. 2,947,500.

Bomac Laboratories Inc.: *See*—
Alexander, Herbert C., and Heins. 2,947,866.

Borba, Lawrence J.: *See*—
Tuomala, Leon A., and Borba. 2,947,413.

Borden Co., The: *See*—
Gerg William P. 2,947,750.
Halpern, Benjamin D., and Karo. 2,947,732.
Halpern, Benjamin D., and Karo. 2,947,734.

Borden, Joseph H., to Toledo Scale Corp. Amplifier for safe-ray. 2,947,673, 8–2–60, Cl. 250—206.

Borg-Warner Corp.: *See*—
Cirillo, Manuel. 2,947,253.
Jilly, Louis F. 2,947,251.
Lindsay, Will H., Jr. 2,947,252.
Willens, Joseph M. 2,947,398.

Bostock, Raymond N., to Ballantine, P., & Sons. Carrier for bottles and the like. 2,947,462, 8–2–60, Cl. 229—23.

Böttger, Josef. Piston for internal combustion engines, particularly for self-ignition engines having combustion chambers adapted for direct fuel injection. 2,947,292, 8–2–60, Cl. 123—32.

Bouvy, Christiaan H.: *See*—
Bird, Ralph C., Bouvy, and Dolza. 2,947,294.

Bower, John L., to North American Aviation, Inc. Digital-analog servo circuit. 2,947,920, 8–2–60, Cl. 318—28.

Beyer, Ralph R., to Dill Manufacturing Co., The. Tire valve tool. 2,947,073, 8–2–60, Cl. 29—267.

Boyle, James M., C. S. Lynch, and H. R. Ready, to Esso Research and Engineering Co. Oil Compositions containing metal salts of ricinoleate dithiophosphoric acids. 2,947,698, 8–2–60, Cl. 252—32.7.

Boyle, William G., to Otis Engineering Corp. Release assembly for tubing caliper. 2,947,064, 8–2–60, Cl. 33—178.

Brackney, Howard W., to United States of America, Atomic Energy Commission. Control for isotope separating apparatus. 2,947,887, 8–2–60, Cl. 250—41.9.

Bradford Dyers' Association Ltd., The: *See*—
Landells, George, and Bragg. 2,947,058.

Bragg, William: *See*—
Landells, George, and Bragg. 2,947,058.

Brannan, Lawrence P. Laminated disposable ash tray. 2,947,441, 8–2–60, Cl. 220—63.

Brannock, Kent C., to Eastman Kodak Co. Substituted unsaturated aldehydes. 2,947,786, 8–2–60, Cl. 260—596.

Brassel, Herbert W. Card printing device. 2,947,245, 8–2–60, Cl. 101—114.

Breuers, Theo P. C., and Meyer, to Chemische Fabriek L. van der Grinten N. V. Device for separating original and copy sheets. 2,947,539, 8–2–60, Cl. 271—64.

Brewer, Claire N. Hanger for trousers. 2,947,454, 8–2–60, Cl. 223—88.

Bridges, Charles P. Blender apparatus. 2,947,524, Cl. 259—6.

Brightman, Barrie, J. G. Pearce, and M. F. Tubinis, to General Dynamics Corp. Electronic switching telephone system. 2,947,819, 8–2–60, Cl. 179—18.

Bristol Aero-Engines Ltd.: *See*—
Norton James L. 2,947,140.

Bristol-Myers Co.: *See*—
Cheney, Lee C., and Holdrege. 2,947,742.

British Nylon Spinners Ltd.: *See*—
Arridge, Robert G. C., Clough, and Pell. 2,947,136.

Broadwell, Robert J., to Gabriel Co., The. Damped air valve. 2,947,528, 8–2–60, Cl. 267—1.

Broto, August, K. Richter, W. Wachtendorf, and K. Heuer, to American Enka Corp. Manufacture of viscose rayon. 2,947,597, 8–2–60, Cl. 18—54.

Brown, Carroll J., to International Business Machines Corp. Automatic clipping circuit. 2,947,975, 8–2–60, Cl. 340—173.

Brown, D. S., Co., The: *See*—
Brown, Delmont D. 2,947,282.

Brown, Delmont D., to The D. S. Brown Co. Microbicidal elastomer articles. 2,947,282, 8–2–60, Cl. 119—14.47.

Brown, John A., to Esso Research and Engineering Co. Catalysis of phosphosulfarisation reactions. 2,947,740, 8–2–60, Cl. 260—139.

Brown, Norman F.: *See*—
Garrett, Henry U., and Brown. 2,947,518.

Brown & Sharpe Mfg. Co.: *See*—
Wateiet, Ermand L. 2,947,921.

Bruin, Pieter, and Klootwijk, to Shell Oil Co. Chroman derivatives. 2,947,760, 8–2–60, Cl. 260—345.2.

Brumby, Harold, and K. A. Whitworth, to The Blackburn Group Ltd. Doors or closure members for bomb bays or like spaces in the fuselages or wings of aircraft. 2,947,533, 8–2–60, Cl. 268—30.

Bryant Chucking Grinder Co.: *See*—
Patterson, Henry B. 2,947,302.

Bryajolfsson, Bergur L. Extensible trestle. 2,947,378, 8–2–60, Cl. 182—105.

Buccicone, Dario to Bucciconi Engineering Co., Inc. Sheet handling apparatus. 2,947,429, 8–2–60, Cl. 214,006.

Bucciconi Engineering Co., Inc.: *See*—
Buccicone, Dario. 2,947,429.

Buck, James R.: *See*—
Taylor, Harry R., and Buck. 2,947,444.

Buchholdt, Robert E., to Solas Corp. of America. Industrial gas burner. 2,947,526, 8–2–60, Cl. 263—19.

Bucyrus Erie Co.: *See*—
Pietsch, William C. 2,947,397.

Budlong, Simeon: *See*—
Littell, Frederick M., and Budlong. 2,947,537.

Buffalo Brake Beam Co.: *See*—
Buech, Charles R. 2,947,884.

Buie, James L., to Hoffman Electronics Corp. Linear discriminators or the like. 2,947,863, 8–2–60, Cl. 250—27.

Bullard Co., The: *See*—
Bullard, Edward C., Tomenceak, and Ettorre. 2,947,188.

Bullard, Edward C., A. A. Tomenceak, and J. E. Ettorre, to The Bullard Co. Synchronizing device. 2,947,188, 8–2–60, Cl. 74—333.

Bundy, Francis P., to General Electric Co. Diamond synthesis. 2,947,611, 8–2–60, Cl. 23—209.1.

Bundy, Oswald M., and J. P. Finley, to The Clark Controller Co. Cam-operable twin-switches. 2,947,827, 8–2–60, Cl. 200—16.

Burbine, William G.: *See*—
Jordan, Merrill E., and Burbine. 2,947,713.

Burgess, James V. Ventilation control system. 2,947,239, 8–2–60, Cl. 98—50.

Burgess Products Co. Ltd.: *See*—
Riddell, William. 2,947,831.

Burman, Henry H., and H. H. Wayner. Dehumidifying covers. 2,947,843, 8–2–60, Cl. 219—19.

Burr, Harvey, to International Standard Electric Corp. Electric cables. 2,947,852, 8–2–60, Cl. 154—2.24.

Burroughs Corp.: *See*—
Haddad, Theodore A. 2,947,901.
Rella, Matthew J., and Yuni. 2,947,945.
Selmer, Ernst S. 2,947,479.

Burt, Hugh M. Liquid shoe polish dispenser. 2,947,015, 8–2–60, Cl. 15—134.

Buech, Charles R., to Buffalo Brake Beam Co. Railway car brake mechanism. 2,947,884, 8–2–60, Cl. 188—59.

Busquet, Jan C., to Koninklijke Machinefabriek Gebr. Stork & Co. N.V. Axial flow fans. 2,947,466, 8–2–60, Cl. 230—114.

Bussone, Joseph V., to General Electric Co. Thrust bearing support and spacer arrangement for electric motors. 2,947,893, 8–2–60, Cl. 310—50.

Butterworth System, Inc.: *See*—
Lione, Leonard V. 2,947,482.

Butts, Robert L.: *See*—
Graff, Alan R., Garis, Butts, and Juergens. 2,947,187.

C.D. Patents Ltd.: *See*—
Sawyer, Charles H. V., and Landeg. 2,947,443.

Cabot, Godfrey L., Inc.: *See*—
Jordan, Merrill E., and Burbine. 2,947,713.

Cain, Gordon A., to Freeport Sulphur Co. Saline water heating processes and systems. 2,947,689, 8–2–60, Cl. 210—58.

Callaway Mills Co.: *See*—
Thompson, Dewey T. 2,947,016.

Calmar, Inc.: *See*—
Haynes, Don A. 2,947,431.

Came Associates, Inc.: *See*—
Came, Donald M., O'Connor, and Richardson. 2,947,541.

Came, Donald M., D. E. O'Connor, and D. Richardson, to Came Associates, Inc. Automatic bowling pin setter. 2,947,541, 8–2–60, Cl. 273—43.

Cameron Iron Works, Inc.: *See*—
Allen, Herbert. 2,947,508.

Camilli, Guglielmo, and D. R. Pryde, to General Electric Co. Cooling arrangement for electric apparatus. 2,947,798, 8–2–60, Cl. 174—15.

Campbell, David D., and C. S. Semar, to General Motors Corp. Hinge. 2,947,025, 8–2–60, Cl. 16—178.

Campbell, Robert W.: *See*—
Kates, Leonard W., Campbell, and Heartel. 2,947,080.

Canadian General Electric Co., Ltd.: *See*—
Inculet, Ion I., and Taylor. 2,947,892.
Wray, Edward J. 2,947,895.

Capital Engineering & Mfg. Corp.: *See*—
Grunwald, Arnold P. 2,947,542.

Carbonara, Victor E., H. J. Eckweiler, J. B. O'Maley, and P. D. Hansell, to Kollsman Instrument Corp. Star tracking system. 2,947,872, 8–2–60, Cl. 250—203.

Caresio, Dominic J., to Fibreboard Paper Products Corp. Carton flap deflecting and separating means. 2,947,229, 8–2–60, Cl. 93—58.

Carkhuff, Le Roy F., to Diamond National Corp. Printing attachment for egg carton hand set-up machine. 2,947,228, 8–2–60, Cl. 93—37.

Carlsen, Leonard O., and H. A. Male, to The Gleason Works. Spindle clamp. 2,947,061, 8–2–60, Cl. 29—1.

Carlsen, Leonard O., A. H. Krastel, and H. A. Male, to The Gleason Works. Gear machine or the like. 2,947,223, 8–2–60, Cl. 90—5.

Carlson, Charles L., and S. A. Rosecrans, to Westinghouse Electric Corp. Aluminum clad copper wire and process for making the same. 2,947,069, 8–2–60, Cl. 29—197.

Carpenter, William P.: *See*—
Polzella, Louis C., Snowdon, and Carpenter. 2,947,959.

Carrier Corp.: *See*—
Ashley, Carlyle M. 2,947,304.

Carrier, Robert M., Jr., and J. M. Morris, to Chain Belt Co. Resonant vibration exciter. 2,947,181, 8–2–60, Cl. 74—26.

Carrier, Robert M., Jr., and J. M. Morris, to Chain Belt Co. Vibration imparting mechanism. 2,947,183, 8–2–60, Cl. 74—61.

Carrier, Robert M., Jr., to Chain Belt Co. Drive means for vibratory apparatus. 2,947,410, 8–2–60, Cl. 198—220.

Carroll, Burt H., to Eastman Kodak Co. Multicontrast photographic emulsions containing cyanine dyes. 2,947,631, 8–2–60, Cl. 96—106.

Carter, Sidney T., to Geo. J. Meyer Mfg. Co. Gum-applying apparatus for labeling machines. 2,947,433, 8–2–60, Cl. 216—12.

Casey, Robert F., and J. Gibbon, to Monroe Calculating Machine Co. Trouble detector. 2,947,943, 8–2–60, Cl. 324—158.

Casper, Johannes: *See*—
Müller, Wilhelm, Casper, Haupt, and Heinen. 2,947,706.

Celanese Corp. of America: *See*—
Barts, Kenneth W. 2,947,727.
Barts, Kenneth W. 2,947,728.
Chow, Ho, and Leyes. 2,947,031.
Moelter, Gregory M. 2,947,595.

Central Soya Co., Inc.: *See*—
Kruse, Norman F. 2,947,632.

Chain Belt Co.: *See*—
Carrier, Robert M., Jr. 2,947,410.
Carrier, Robert M., Jr., and Morris. 2,947,181.
Carrier, Robert M., Jr., and Morris. 2,947,183.

Champagne, Marion S.: *See*—
Coes, Loring, Jr., and Champagne. 2,947,616.

Chapman, Harvey W., and H. L. Duniap, to Evans Products Co. Portable trolley track and trolley assembly. 2,947,262, 8–2–60, Cl. 104—111.

Chapman, Ralph, to Wood Processes (Oregon) Ltd. Method of manufacturing a composite board product. 2,947,654, 8–2–60, Cl. 154—100.

Charlet, Elphege M., and A. B. Small, to Esso Research and Engineering Co. Two-step creaming process for the preparation of emulsion latices from hydrocarbon polymer. 2,947,715, 8–2–60, Cl. 260—29.6.

Charrues Melotte, Societe Anonyme: *See*—
Jadoul, Edmond L. J. 2,947,366.

Chausson, André, to Societe Anonyme des Usines Chausson. Method and apparatus for cooling various fluids and more particularly the air in aircraft flying at high speed. 2,947,154, 8–2–60, Cl. 62—169.

Chelton (Poppits) Ltd.: *See*—
Sanderson, William T. 2,947,053.

Chemische Fabriek L. van der Grinten N.V.: *See*—
Breuers, Theo P. C., and Meyer. 2,947,539.

Cheney, Lee C., and C. T. Holdrege, to Bristol-Myers Co. 4-amino - 6 - trifluoromethyl-N,N'-di-2-pyridyl-m-benzenedisulfonamide. 2,947,742, 8–2–60, Cl. 260—239.65.

Chicago Bridge & Iron Co.: *See*—
McGrath, Raymund V. 2,947,430.

Chicago Railway Equipment Co.: *See*—
Spaeth, Irvin J. 2,947,060.

Childress, Scott J.: *See*—
Scudi, John V., Reisner, and Childress. 2,947,764.
Scudi, John V., Reisner, Childress, and Walter. 2,947,765.

Chiras, Stanley J., to Olin Mathieson Chemical Corp. Process of preparing trimethyl borate. 2,947,776, 8–2–60, Cl. 260—462.

Choate, William E., and J. A. Morgan. Multiple master cylinder. 2,947,145, 8–2–60, Cl. 60—54.6.

Chou, Wayne W., to International Business Machines Corp. Transistor trigger circuits. 2,947,882, 8–2–60, Cl. 307—88.5.

Chow, Ho, and C. E. Leyes, to Celanese Corp. of America. Method and apparatus for cooling extruded tubing. 2,947,031, 8–2–60, Cl. 18—14.

Christensen, Norman B., ½ to Republic Mfg. Co. and ½ to The Firestone Tire & Rubber Co. Control device for vehicle pneumatic suspension. 2,947,322, 8–2–60, Cl. 137—596.2.

Christensen, Norman B., ½ to Republic Mfg. Co. and ½ to The Firestone Tire & Rubber Co. Actuating mechanism. 2,947,632, 8–2–60, Cl. 267—65.

Chrysler Corp.: *See*—
Balden, Alvin R. 2,947,639.

Chuck, Thomas S. Decorative hardware for drawers, doors, furniture and the like. 2,947,022, 8–2–60, Cl. 16—123.

Chudnof, William: *See*—
Ballou, John M. 2,947,243.

Ciba Pharmaceutical Products, Inc.: *See*—
Huebner, Charles F. 2,947,756.

Cirillo, Manuel, to Borg-Warner Corp. Perforator. 2,947,253, 8–2–60, Cl. 102—20.

Clark Controller Co., The: *See*—
Bundy, Oswald M., and Finley. 2,947,827.

Clark, Everett M.: *See*—
Orelind, John R., and Clark. 2,947,366.

Clark, Gerald A., to The Dow Chemical Co. Chloroethylene polymers stabilized with 2,4-dihydroxy-3-allyl benzophenone and substituted derivatives thereof. 2,947,723, 8–2–60, Cl. 260—45.95.

Clauson, Frank A., to Texaco Inc. Internal insulation structure for use with liquefied petroleum products. 2,947,438, 8–2–60, Cl. 220—15.

Clayton, William, to Bartelew Mfg. Co. Method and apparatus for treating exhaust gases with an exhaust gas burner with catalytically induced flame. 2,947,600, 8–2–60, Cl. 23—2.

Clem, Glen H., and W. M. Ickes, to American Viscose Corp. Cake stripping mechanism. 2,947,491, 8–2–60, Cl. 242—53.

Cleveland Crane & Engineering Co., The: *See*—
Anjeskey, Alphonse F. 2,947,261.
Cotesworth, Harry A., and Dunning. 2,947,426.
Dehn, Roy F. 2,947,265.
Dehn, Roy F., and Ward. 2,947,275.

Clevenger, Carl L., to General Motors Corp. Method of forming a splined sleeve. 2,947,061, 8–2–60, Cl. 29—547.

Clifford, Herbert B., and D. H. McNeil, to Massey-Ferguson Inc. Adjustable header device for hillside combine. 2,947,134, 8–2–60, Cl. 56—209.

Clough, George A.: *See*—
Arridge, Robert G. C., Clough, and Pell. 2,947,136.

Clymer, Joseph D.: *See*—
Wright, George W., and Clymer. 2,947,269.

Cochrane, Chappelle C.: *See*—
Julian, Percy L., Magnani, and Cochrane. 2,497,765.

Coes, Loring, Jr., to Norton Co. Grinding wheel and wheel diameter measuring apparatus. 2,947,121, 8–2–60, Cl. 51—134.5.

Coes, Loring, Jr., and M. S. Champagne, to Norton Co. Grinding wheel structure. 2,947,616, 8–2–60, Cl. 51—296.

Cohen, Karl: *See*—
Skarstrom, Charles, Cohen, and Urey. 2,947,472.

Colgate-Palmolive Co.: *See*—
Hernandez, Manuel E. 2,947,449.

Collin, Fredrik C.: *See*—
Sem, Mathias O., and Collin. 2,947,673.

Collins Radio Co.: *See*—
Bolie, Victor W. 2,947,934.
Hern, Howard D. 2,947,951.
Marner, Gene R., and Ringoen. 2,947,986.
Stimson, Ray L. 2,947,862.
Ulstad, Meredith S., and Hern. 2,947,861.
Welch, Jack D. 2,947,888.

Columbia Malting Co., The: *See*—
Graff, Alan R., Garis, Butts, and Juergens. 2,947,187.
Graff, Alan R., Juergens, and Berkenblit. 2,947,669.

Columbus McKinnon Chain Corp.: *See*—
Parker, Humphrey F., and Robins. 2,947,264.

Commercial Solvents Corp.: *See*—
Stengel, Leonard A., and Toops. 2,947,618.
Tindall, John B. 2,947,785.

Compagnia Italiana Forme Acciaio S.p.A.: *See*—
Ausenda, Carlo, and Dessalles. 2,947,205.

Compagnie de Saint-Gobain: *See*—
Peteri, Robert. 2,947,657.

Compur-Werk Friedrich Deckel OHG: *See*—
Gebele, Kurt. 2,947,231.

Conax Corp.: *See*—
Connell, Maurice W. 2,947,315.

Condenser Machinery Corp., The: *See*—
Willington, Cary L. 2,947,272.

Conklin, Charles S., to Lily-Tulip Cup Corp. Closure lids for paper containers. 2,947,463, 8–2–60, Cl. 229—43.

Connell, Maurice W., to Conax Corp. Single operation normally closed valve. 2,947,315, 8–2–60, Cl. 137—68.

Consolidated Vacuum Corp.: *See*—
Hamilton, Allen R. 2,947,918.

Container Corp. of America: *See*—
Johnson, Richard H. 2,947,414.

Continental Motors Corp.: *See*—
Klinge, Earl R. 2,947,291.

Continental Oil Co.: *See*—
Flanagan, Pat W. K. 2,947,787.

Cook, Donald J., and P. J. Schoemer, to Purolator Products, Inc. Air cleaner assembly. 2,947,381, 8–2–60, Cl. 183—15.

Cook Electric Co.: *See*—
Flubacker, Charles H., and Adrig. 2,947,835.
Woodworth, Richard E. 2,947,579.

Cooke, Harold G., Jr., and J. E. Masters, to Devoe & Raynolds Co., Inc. Epoxide compositions containing maleic anhydride-unsaturated organic acid adducts and method of forming infusible products therefrom. 2,947,711, 8–2–60, Cl. 260—18.

Cooke, Harold G., Jr., to Devoe & Raynolds Co., Inc. Polyepoxides, etc. 2,947,725, 8–2–60, Cl. 260—47.

Cooley, Austin G., to Digital Control Systems, Inc. Navigation systems. 2,947,985, 8–2–60, Cl. 343—105.

Cooper, Kenneth K., and D. W. Lynch, to General Electric Co. Reversing valve for reversible refrigerating system. 2,947,324, 8–2–60, Cl. 137—625.29.

Coopersmith, Rudolph, to G. W. Froemke and Greenblatt, trustees. Sofa bed. 2,947,006, 8–2–60, Cl. 5—13.

Coover, Harry W., Jr., and R. L. McConnell, to Eastman Kodak Co. O,O-dialkyl S-(2-acetoxy-2-cyanoethyl) phosphorothiolothionates. 2,947,775, 8–2–60, Cl. 260—461.

Cornell, Hampton G., and H. H. Meredith, Jr., to Humble Oil & Refining Co. Procedure for transporting sulphur. 2,947,578, 8–2–60, Cl. 302—66.

Cornell, John A., and J. L. Tucker, to H. D. Justi and Son, Inc. Mixtures of lower alkyl acrylate polymers and methacrylate polymers for dough composition. 2,947,716, 8–2–60, Cl. 260—41.

Corson, Almon J., and E. C. Guptill, to General Electric Co. Suppressed zero voltmeter. 2,947,941, 8–2–60, Cl. 324—131.

Coscia, Anthony T.: *See*—
Petropoulos, John C., and Coscia. 2,947,794.

Coskie, Ronald, to The Procter & Gamble Co. Liquid detergent compositions. 2,947,702, 8–2–60, Cl. 252—137.

Cotesworth, Harry A., and F. W. Dunning, to The Cleveland Crane & Engineering Co. Crane. 2,947,426, 8–2–60, Cl. 212—128.

Cowe, Francis H.: *See*—
Mapelsden, George C., and Cowe. 2,947,968.

Craig, James R., H. E. Rockefeller, F. T. Stanchus, and N. Davis, to Union Carbide Corp. Shielded metal arc welding process. 2,947,847, 8–2–60, Cl. 219—74.

Craig, Paul N., to Smith, Kline & French Laboratories. Substituted phenoxazine sedative agents. 2,947,745, 8–2–60, Cl. 260—244.

Craig, Paul N., to Smith, Kline & French Laboratories. Trifluoromethyl substituted phenoxazines. 2,947,747, 8–2–60, Cl. 260—244.

Crapuchettes, Paul W., to Litton Industries of California. Output structure for electron discharge devices employing cavity resonators. 2,947,908, 8–2–60, Cl. 315—5.46.

Cressman, Homer W. J.: *See*—
Fierke, Schuering S., and Cressman. 2,947,628.

Crockford, Joseph R., ¼ to H. Radzinsky. Padding for laundry rolls. 2,947,008, 8–2–60, Cl. 38—66.

Crosby, Stephen A., to The Anderson Co. Mounting for bearing elements. 2,947,535, 8–2–60, Cl. 268—124.

Crowden, George J., Jr.: *See*—
Saint-Amour, John D., and Crowden. 2,947,919.
Csordás, Istvân, B. Lányi, I. Veress, and L. Vissy, to Kabel-es Muanyagyar. Sintered alumina articles and a process for the production thereof. 2,947,056, 8-2-60, Cl. 25—157.
Culbertson, James A., to The Goodyear Tire & Rubber Co. Metallurgical control during sintering. 2,947,388, 8-2-60, Cl. 188—218.
Culkin, Myron L. Surgical splints. 2,947,306, 8-2-60, Cl. 128—87.
Cummings, Ernest E.: *See*—
Cummings, James D. and E. E. 2,947,096.
Cummings, James D. and E. E. Dragline ditch padder attachment. 2,947,096, 8-2-60, Cl. 37—144.
Curtenius, Frederick H., to Rice Barton Corp. Machine for stacking paper including oppositely withdrawable adjacent stack supports. 2,947,428, 8-2-60, Cl. 214—6.
Curtiss-Wright Corp.: *See*—
Dawson, William H., Jr. 2,947,089.
Magill, John J., and Hungerford. 2,947,278.
Zahner, Charles F., and Samson. 2,947,088.
Cutler-Hammer, Inc.: *See*—
Elliot, William H. 2,947,881.
Feldhausen, Cyril P. 2,947,930.
Park, Rodney F., and Thomas. 2,947,840.
Czudak, Frank, Jr. Spectacle hinge and pivot stud therefor. 2,947,024, 8-2-60, Cl. 16—168.
Czysak, Stanley J.: *See*—
Reynolds, Donald C., and Czysak. 2,947,613.
Daimler-Benz Aktiengesellschaft: *See*—
Altmann, Werner E. 2,947,396.
Barényi, Béla. 2,947,567.
Stump, Eugen. 2,947,200.
Wilfert, Karl, and Barényi. 2,947,020.
Darbo, Howard H. Combination drawer and table top. 2,947,589, 8-2-60, Cl. 312—301.
Davey, Peter. Apparatus for transmitting and translating movement. 2,947,593, 8-2-60, Cl. 346—117.
Davies, Ben, to Harbison-Walker Refractories Co. Chemically bonded basic refractory. 2,947,649, 8-2-60, Cl. 117—118.
Davis, Joseph E., to Sylvania Electric Products Inc. Burst separator controlled, chroma killer. 2,947,806, 8-2-60, Cl. 178—5.4.
Davis, Manfred, to General Precision Inc. Instrument for calibrating manometers. 2,947,102, 8-2-60, Cl. 73—4.
Davis, Melvin B., Sr., and P. L. Davis. Means for keeping grass green on a golf putting green. 2,947,100, 8-2-60, Cl. 47—1.
Davis, Norman: *See*—
Craig, James R., Rockefeller, Stanchus, and Davis. 2,947,847.
Davis, Paul L.: *See*—
Davis, Melvin B., Sr., and P. L. 2,947,109.
Davis, Ralph C., to The Firestone Tire & Rubber Co. Control device for vehicle suspension. 2,947,580, 8-2-60, Cl. 267—65.
Davis, Shirley A. Infant chair having a reclinable back. 2,947,350, 8-2-60, Cl. 155—152.
Davis, Sidney A., to Eastern Air Devices, Inc. Induction generator tachometer. 2,947,933, 8-2-60, Cl. 322—47.
Dawson, William H., Jr., to Curtiss-Wright Corp. Simulated carburetor air temperature system for aircraft training apparatus. 2,947,089, 8-2-60, Cl. 35—12.
Daystrom, Inc.: *See*—
Erbguth, Paul F. K. 2,947,553.
De Benneville, Peter L., and C. S. Hollander, to Rohm & Haas Co. Aminoacetamidoximes. 2,947,782, 8-2-60, Cl. 260—551.
Dees, Willis R.: *See*—
Larson, Roland. 2,947,483.
Dehn, Roy F., to The Cleveland Crane & Engineering Co. Crane. 2,947,265, 8-2-60, Cl. 105—224.1.
Dehn, Roy F., and W. E. Ward, to The Cleveland Crane & Engineering Co. Double action drawing press. 2,947,273, 8-2-60, Cl. 113—46.
Deist, Herbert H., to The Firestone Tire & Rubber Co. Control device for vehicle suspension system. 2,947,531, 8-2-60, Cl. 267—65.
De Long, Allen R., to Bellco Glass, Inc. Laboratory vessel. 2,947,512, 8-2-60, Cl. 23—292.
Demler, Henry W., to AMP Inc. Hand crimping tool. 2,947,207, 8-2-60, Cl. 81—15.
Denti, Franco: *See*—
Maragliano, Domenico, and Denti. 2,947,598.
De Place, Henry. Ski binder cable safety tightener. 2,947,545, 8-2-60, Cl. 280—11.35.
Derenski, Francis W. Easel book structure. 2,947,552, 8-2-60, Cl. 281—33.
Dessalles, Roberto: *See*—
Ausenda, Carlo, and Dessalles. 2,947,203.
Deutscher Spinnereimaschinenbau Ingolstadt Niederlassung der Schubert & Salzer Maschinenfabrik Aktiengesellschaft: *See*—
Gartner, Robert. 2,947,037.
De Vaney, Fred D., to Erie Mining Co. Treating ore concentrates. 2,947,026, 8-2-60, Cl. 18—1.
Devaney, John L., to American Brake Shoe Co. Car retarder. 2,947,385, 8-2-60, Cl. 188—62.
Devaney, Richard G., and J. W. Tamblyn, to Eastman Kodak Co. Colloidal dispersion of metals in plastics. 2,947,646, 8-2-60, Cl. 106—193.
Devoe & Raynolds Co., Inc.: *See*—
Belanger, William J. 2,947,726.
Belanger, William J., and Masters. 2,947,717.
Belanger, William J., Masters, and Hicks. 2,947,712.
Cooke, Harold G., Jr. 2,947,725.
Cooke, Harold G., Jr., and Masters. 2,947,711.
Diamond Alkali Co.: *See*—
Skeeters, Maxwell J. 2,947,792.
Diamond National Corp.: *See*—
Carkhuff, Le Roy F. 2,947,228.
Digital Control Systems, Inc.: *See*—
Cooley, Austin G. 2,947,985.
Dill Mfg. Co., The: *See*—
Boyer, Ralph K. 2,947,073.
Dixon Corp. *See*—
Ruion-Miller, Robert, and Tabor. 2,947,039.
Dobson, Elliott E.: *See*—
Gooch, William R., and Dobson. 2,947,418.
Dodd, William O., Jr., and C. A. Hicks. Centrifugal flying toy. 2,947,108, 8-2-60, Cl. 46—77.
Dodge, Nathaniel B., Jr., L. L. Hohl, J. B. Jones, and M. E. Negley, to The American Rubber Mfg. Co. Resilient idler and support. 2,947,409, 8-2-60, Cl. 198—192.
Dodington, Sven H. M., to International Telephone and Telegraph Corp. Delay device. 2,947,954, 8-2-60, Cl. 333—30.
Dodington, Sven H. M., to International Telephone and Telegraph Corp. Antenna decoupling arrangement. 2,947,987, 8-2-60, Cl. 343—180.
Doidge, Jack E., and V. C. Moore, to General Motors Corp. Transmission. 2,947,199, 8-2-60, Cl. 74—688.
Doig, Alfred, Jr.: *See*—
Mendieson, Myron J., Doig, and Sprague. 2,947,976.
Dolza, John: *See*—
Bird, Ralph C., Bouvy, and Dolza. 2,947,294.
Dolza, John, to General Motors Corp. Dual balanced air meter for split engine. 2,947,298, 8-2-60, Cl. 123—127.
Doolittle, Fred B. Contamination and moisture resistant insulator. 2,947,801, 8-2-60, Cl. 174—141.
Doolittle, Frederick S., to The Shurkatch Fishing Tackle Co., Inc. Fish spear. 2,947,562, 8-2-60, Cl. 294—61.
Dornbush, Clinton L.: *See*—
Wilson, Harry W., and Dornbush. 2,947,125.
Dortort, Isadore K., to I-T-E Circuit Breaker Co. Overlap regulator. 2,947,932, 8-2-60, Cl. 321—48.
Douglas, Aubrey. Jet propulsion for aircraft and control means therefor. 2,947,490, 8-2-60, Cl. 244—23.
Dow Chemical Co., The: *See*—
Clark, Gerald A. 2,947,723.
Holly, Earl D., and Nummy. 2,947,780.
Nummy, William R. 2,947,781.
Sonnabend, Lawrence F., and Williams. 2,947,648.
Dow Corning Corp.: *See*—
Eynon, Benjamin A., and Schiefer. 2,947,772.
Murch, Robert M. 2,947,926.
Dressel, Henry M., to Stackpole Carbon Co. Push-pull electric switch. 2,947,832, 8-2-60, Cl. 200—67.
Drews, Robert C. Retinal camera. 2,947,216, 8-2-60, Cl. 88—20.
Dreyer, Kuno, W. Wessel, and L. Bölkow, to Bolkow-Entwicklungen KG. Rocket power plants for aircraft and the like. 2,947,500, 8-2-60, Cl. 244—23.
Du Bois, Robert J.: *See*—
Veldhuis, Benjamin, and Du Bois. 2,947,671.
Dunkley, Rowland A. G.: *See*—
Grayson, Harry, Dunkley, and Walker. 2,947,946.
Dunlap, Henry L.: *See*—
Chapman, Harvey W., and Dunlap. 2,947,262.
Dunning, Franklin W.: *See*—
Cotesworth, Harry A., and Dunning. 2,947,426.
Du Pont de Nemours, E. I., and Co.: *See*—
Adams, Rowland K. 2,947,791.
Keown, Robert W. 2,947,795.
Spiegler, Louis. 2,947,781.
Dybdahl, Frank. Wallboard joint finishing tool. 2,947,017, 8-2-60, Cl. 15—235.8.
Dygert, George E. Watchmaker's tool. 2,947,123, 8-2-60, Cl. 51—259.
Earle, Wilton R., and F. Highhouse, to United States of America, Health, Education and Welfare. Method of producing tissue culture flasks. 2,947,116, 8-2-60, Cl. 40—79.
Eastern Air Devices, Inc.: *See*—
Davis, Sidney A. 2,947,933.
Eastman Kodak Co.: *See*—
Brannock, Kent C. 2,947,786.
Carroll, Burt H. 2,947,631.
Coover, Harry W., Jr., and McConnell. 2,947,775.
Devaney, Richard G., and Tamblyn. 2,947,646.
Fierke, Scheuring S., and Cressman. 2,947,628.
Finch, Gaylord K., and Stringer. 2,947,767.
Gerhardt, James S., and Fowler. 2,947,650.
Guenther, Edgar G., and Smith. 2,947,241.
Guenther, Edgar G., and Smith. 2,947,242.
Hayden, James F., and Offensend. 2,947,218.
Jones, Jean E. 2,947,630.
Martin, James C., and Hasek. 2,947,784.
Newland, Gordon C., and Tamblyn. 2,947,721.
Stewart, Paul H., and Karlson. 2,947,629.
Eberhardt, Lee E., to The Bauer Bros. Co. Method of producing wood pulp. 2,947,655, 8-2-60, Cl. 162—26.
Eberline, Charles R.: *See*—
Johnson, Paul H., and Eberline. 2,947,684.
Eberly, Kenneth C., to The Firestone Tire & Rubber Co. Preparation of alkylene dilithium compounds. 2,947,793, 8-2-60, Cl. 260—665.
Eccles, George O., and N. H. Kent, to Rolls-Royce Ltd. Manufacture of turbine blades. 2,947,076, 8-2-60, Cl. 29—424.
Eckweiler, Howard J.: *See*—
Carbomara, Victor E., Eckweiler, O'Maley, and Hansell. 2,947,872.
Edmonds, Kinzy M. Clamp. 2,947,275, 8-2-60, Cl. 113—99.
Edwards, Philip B.: *See*—
Harris, Wilbur T., and Edwards. 2,947,890.
Egan, Edmond F., G. Herzog, and A. S. McKay, to Texaco Inc. Method of studying subsurface formations. 2,947,869, 8-2-60, Cl. 250—43.5.
Eilers, Carl G., and E. M. Boschke, to Zenith Radio Corp. Secrecy communication. 2,947,804, 8-2-60, Cl. 178—5.1.
Ekstrom, Nils B. A. Holder for coat hangers. 2,947,423, 8-2-60, Cl. 211—90.

Electraulic Presses Ltd.: *See*—
Towler, Frank H. and J. M. 2,947,217.
Electro Engineering Works: *See*—
Wahlgren, Wallace W. 2,947,961.
Elektrokemisk A/S: *See*—
Sem, Mathias O., and Collin. 2,947,673.
Elliot, William H., to Cutler-Hammer, Inc. Time delay systems utilizing transistors. 2,947,881, 8-2-60, Cl. 307—88.5.
Ellis, Donald A., to Inland Steel Products Co. Metal trim clip. 2,947,049, 8-2-60, Cl. 24—73.
Engel, Edward W.: *See*—
Weechler, Joseph R., Engel, and Lagally. 2,947,658.
Engelhard Industries, Inc.: *See*—
Fish, Donald H. 2,947,829.
Hill, James S. 2,947,114.
Lincoln, Arnold J. 2,947,623.
Ennis, John L., to Arthur D. Little, Inc. Corrosion inhibitors. 2,947,590, 8-2-60, Cl. 21—2.5.
Epstein, Herman. Crystal driven dental tool. 2,947,082, 8-2-60, Cl. 32—46.
Epstein, Saul. Construction for intermediate wall vent pipe. 2,947,303, 8-2-60, Cl. 126—307.
Erbguth, Paul F. K., to Daystrom, Inc. Pipe coupling for a pneumatic follow-up system. 2,947,553, 8-2-60, Cl. 285—133.
Ericsson, Arvid I., to Signode Steel Strapping Co. Pneumatic stapling tool. 2,947,003, 8-2-60, Cl. 1—44.4.
Erie Mining Co.: *See*—
De Vaney, Fred D. 2,947,026.
Erie Resistor Corp.: *See*—
Heibel, Jerome D. 2,947,821.
Ervin, Guy, Jr., and H. F. G. Leitz, to Norton Co. Process for the extraction of relatively pure vanadium, niobium and tantalum. 2,947,572, 8-2-60, Cl. 204—64.
Espenlaub, Walter C., to Haseltine Research, Inc. Signal-modifying apparatus. 2,947,953, 8-2-60, Cl. 333—28.
Esso Research and Engineering Co.: *See*—
Boyle, James M., Lynch, and Ready. 2,947,693.
Brown, John A. 2,947,740.
Charlet, Elphege M., and Small. 2,947,715.
Heigl, John J., and Blackwood. 2,947,900.
Johnson, Kenneth O. 2,947,147.
Maisel, Daniel S., and Guthrie. 2,947,675.
Phillips, Cecil, Jr. 2,947,686.
Read, Chester L., and Heilman. 2,947,681.
Wasson, Jones L., and Morway. 2,947,699.
Estrems, Eugeni, and M. Papo, to International Business Machines Corp. Impulse distributor. 2,947,865, 8-2-60, Cl. 250—27.
Ettorre, James E.: *See*—
Bullard, Edward C., Tomencenk, and Ettorre. 2,947,188.
Evans Products Co.: *See*—
Chapman, Harvey W., and Dunlap. 2,947,262.
Everett, Charles V., to International Harvester Co. Hay crushing roll construction. 2,947,130, 8-2-60, Cl. 56—1.
Eynon, Benjamin A., and H. M. Schiefer, to Dow Corning Corp. Alkoxysilanes and their use as lubricants. 2,947,772, 8-2-60, Cl. 260—448.8.
F.P. Research Ltd.: *See*—
Giddey, Claude. 2,947,644.
Facey, Stanley R., and P. W. P. Hancock. Piano. 2,947,210, 8-2-60, Cl. 84—177.
Faeber, Harry W., to Time, Inc. Photographic exposing apparatus. 2,947,234, 8-2-60, Cl. 95—76.
Faeber, Harry W., to Time, Inc. Photographic developing apparatus. 2,947,235, 8-2-60, Cl. 95—89.
Fafnir Bearing Co., The: *See*—
Van Dorn, Horace B., and Moran. 2,947,198.
Van Dorn, Horace B., and Moran. 2,947,581.
Fallar, Frank P.: *See*—
Wobbe, Delbert E., and Fallar. 2,947,274.
Famely, Max, and G. F. Leyonmark, to Photo Ceramics Corp. Reproduction of photographs on ceramics. 2,947,626, 8-2-60, Cl. 96—34.
Fanders, Marten. Flush tank water level indicator. 2,947,280, 8-2-60, Cl. 116—118.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Hoppe, Peter. 2,947,507.
Müller, Wilhelm, Casper, Haupt, and Heines. 2,947,706.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Waibel, Wilhelm. 2,947,760.
Farrer, Kenneth, to Baker Perkins Ltd. Apparatus for making wafer sandwiches. 2,947,266, 8-2-60, Cl. 107—1.
Fazio, Patsy J. Elevating tray for automobiles. 2,947,595, 8-2-60, Cl. 311—31.
Feher, Cecil W.: *See*—
Francis, Wallace R., Mapelsden, and Feher. 2,947,966.
Feldhausen, Cyril P., to Cutler-Hammer, Inc. Electric motor controllers. 2,947,930, 8-2-60, Cl. 318—310.
Feldman, Jacob R., H. S. Levenson, and W. V. White, to General Foods Corp. Process for preparing soluble coffee. 2,947,634, 8-2-60, Cl. 99—71.
Fenton, Frank W., to Beacon Production Equipment Corp. Pattern-determining apparatus for pallet loader. 2,947,405, 8-2-60, Cl. 198—33.
Ferguson, Edgar A., Jr. Isobebeerine nicotinate. 2,947,741, 8-2-60, Cl. 260—236.
Fernandes, Enrique. Clutching mechanisms for washing machines including an agitator. 2,947,159, 8-2-60, Cl. 68—23.
Ferrin, Kenneth S.: *See*—
Rauch, Konrad, Jorgensen, Neuhauer, Ferrin, Kneisley, Stork, and Harsch. 2,947,475.
Feucht, Jacob E., to Westinghouse Air Brake Co. Percussion drill. 2,947,519, 8-2-60, Cl. 255—4.4.
Fibreboard Paper Products Corp.: *See*—
Carosto, Dominic J. 2,947,229.
Fierke, Scheuring S., and H. W. J. Cressman, to Eastman Kodak Co. Multilayer print film having incorporated coloring material. 2,947,628, 8-2-60, Cl. 96—74.
Finch, Gaylord K., and C. D. Stringer, to Eastman Kodak Co. Process for the manufacture of unsaturated acids and salts from β-lactones. 2,947,767, 8-2-60, Cl. 260—414.
Finck, Johan C. J., to North American Philips Co., Inc. Water-tight case for electrical apparatus. 2,947,799, 8-2-60, Cl. 174—50.62.
Finley, Joseph P.: *See*—
Bandy, Oswald M., and Finley. 2,947,827.
Firestone Tire & Rubber Co., The: *See*—
Ambelang, Joseph C. 2,947,724.
Ambelang, Joseph C. 2,947,789.
Christensen, Norman R. 2,947,522.
Christensen, Norman R. 2,947,532.
Davis, Ralph C. 2,947,530.
Deist, Herbert H. 2,947,531.
Eberly, Kenneth C. 2,947,793.
French, Robert W. 2,947,240.
Hershey, Melvin P. 2,947,341.
Holloway, Harold S. 2,947,342.
Reid, Robert J., and Werner. 2,947,238.
Sjothun, Irvin J. 2,947,343.
Stearns, Richard S. 2,947,737.
Umstott, Harold F. 2,947,060.
Webb, Frederick J. 2,947,720.
Werner, Byron H., and Reid. 2,947,733.
Fish, Donald H., to Engelhard Industries, Inc. Safety fuse. 2,947,829, 8-2-60, Cl. 200—61.06.
Fisher, Robert P., to Microsonic Equipment Corp. Bearing. 2,947,580, 8-2-60, Cl. 308—203.
Flam, Alfred: *See*—
Kahr, Kurt, and Flam. 2,947,783.
Flanagan, James H. Self-lubricating trepanning drill. 2,947,206, 8-2-60, Cl. 77—55.
Flanagan, Pat W. K., to Continental Oil Co. Preparation of dialkyl sulfoxides. 2,947,787, 8-2-60, Cl. 260—607.
Flint, John A., to Power Jets (Research and Development) Ltd. Jet deflectors for aircraft. 2,947,501, 8-2-60, Cl. 244—51.
Florida Lightweight Products Co.: *See*—
Gooch, William R., and Dobson. 2,947,418.
Flubacker, Charles H., and V. E. Adrig, to Cook Electric Co. Aircraft ice detection system. 2,947,835, 8-2-60, Cl. 200—83.
Fobiano, Frank E., to Premier Carton Co. Sandwich package. 2,947,637, 8-2-60, Cl. 99—171.
Focht, John R., to Precision Valve Corp. Machine for filling and charging an aerosol container and for sealing the latter. 2,947,126, 8-2-60, Cl. 53—83.
Focht, John R., to Precision Valve Corp. Machine for supplying a charge of propellant to an aerosol container and for sealing the latter. 2,947,904, 8-2-60, Cl. 53—37.
Fohr, Matthias, to Werkzeugmaschinenfabrik Oerlikon Buhrle & Co., Abt., Elektrodenfabrik. Method of producing containers from thermoplastic material. 2,947,653, 8-2-60, Cl. 154—83.
Food Machinery and Chemical Corp.: *See*—
Allen, James F. 2,947,773.
Klein, Joseph J. 2,947,525.
Foote, Frank G., to United States of America, Atomic Energy Commission. Ternary alloys of uranium, columbium, and zirconium. 2,947,621, 8-2-60, Cl. 75—122.7.
Ford, John R., I. D. Kruger, and H. Perkel, to Radio Corp. of America. Rotating radar antenna. 2,947,969, 8-2-60, Cl. 343—757.
Ford Motor Co.: *See*—
Biewenstein, Julius M. 2,947,641.
Kaldobsky, Phoebus R. 2,947,319.
McDougall, John A. 2,947,569.
Noe, Richard T. 2,947,570.
Wilson, Harland D. 2,947,378.
Foreman, Robert W.: *See*—
Idol, James D., Jr., Foreman, and Veatch. 2,947,779.
Foster, Jackson W. Microbiological preparation of meso-tartaric acid. 2,947,668, 8-2-60, Cl. 195—36.
Foster, Theodore, and W. T. Hake, to American Steel Foundries. Feed box transmission. 2,947,189, 8-2-60, Cl. 74—342.
Fowler, Lambuth G. Cotton harvester elevator. 2,947,408, 8-2-60, Cl. 198—122.
Fowler, William F., Jr.: *See*—
Gerhardt, James S., and Fowler. 2,947,650.
Fox, Gerald B., and C. F. Stoddard, to The Hobart Mfg. Co. Dishwasher. 2,947,311, 8-2-60, Cl. 134—58.
Fox, John J., to Westinghouse Electric Corp. Heating apparatus. 2,947,846, 8-2-60, Cl. 219—38.
Fox, William P., to Merriman Bros., Inc. Remote controlled movable light unit. 2,947,856, 8-2-60, Cl. 240—61.13.
Francesco Vismara Societá per Azioni: *See*—
Justoni, Romeo, and Pessina. 2,947,757.
Francis, Wallace R., G. C. Mapelsden, and C. W. Feher, to General Electric Co. Receptacle for electrical connector. 2,947,966, 8-2-60, Cl. 339—188.
Frantz, Verne L., to Johnson & Johnson. Pressure sensitive adhesive composition and tape coated therewith. 2,947,710, 8-2-60, Cl. 260—5.
Frans, Henry H., and L. D. Pierce, to Sealright-Oswego Falls Corp. Cap applying apparatus. 2,947,128, 8-2-60, Cl. 53—310.
Fredrickson, Gustav O., to The Superior Electric Co. Winding and core therefor. 2,947,960, 8-2-60, Cl. 336—212.
Freeport Sulphur Co.: *See*—
Axelrad, Bernard A. 2,947,600.
Cain, Gordon A. 2,947,689.
French, Robert W., to The Firestone Tire & Rubber Co. Tubeless tire and chafer therefor. 2,947,240, 8-2-60, Cl. 152—362.
Friedenreich, Stanley M. Reversible top collapsible table. 2,947,588, 8-2-60, Cl. 311—83.

Friedman, Bernard S., to Sinclair Refining Co. Method of producing a high octane gasoline by reforming a naphtha in two stages. 2,947,682, 8–2–60, Cl. 208—60.

Friedman, Herbert. Apparatus for determining the composition and thickness of thin layers. 2,947,571, 8–2–60, Cl. 250—83.6.

Froede, Walter G., to NSU Werke Aktiengesellschaft, and Wankel G.m.b.H. Heat generating rotary internal combustion engine. 2,947,290, 8–2–60, Cl. 123—8.

Froemke, Gerald W.: *See*—
Coopersmith, Rudolph. 2,947,006.

Frohmader, Stanley H., C. B. Rowe, and J. A. Selvaag, to Research Products Corp. Gravity water distributor. 2,947,453, 8–2–60, Cl. 222—187.

Fuchs, Friedrich, to Westfalendruck G.m.b.H. & Co. Kommandit-Gesellschaft. Doctor blade mechanism. 2,947,248, 8–2–60, Cl. 101—157.

Fullaway, Richard M., to Superior Tank & Construction Co. Wash tank, and oil, water and gas separator. 2,947,380, 8–2–60, Cl. 183—2.7.

Fusco, Raffaello, G. Losco, and M. Perini, to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Alpha-substituted diethoxy-dithiophosphorylacetic esters. 2,947,662, 8–2–60, Cl. 167—30.

Gabriel Co., The: *See*—
Broadwell, Robert J. 2,947,528.

Gabry, William. Snow shoe harness. 2,947,094, 8–2–60, Cl. 36—4.5.

Gallagher, Cornelius A., and W. M. Pelino, to Servo Corp. of America. Hot-box detector. 2,947,857, 8–2–60, Cl. 246—169.

Gallina, Harold. Signal transfer and guide fixture for magnetic information medium. 2,947,820, 8–2–60, Cl. 179—100.2.

Gang, Herman, to Monroe Calculating Machine Co. Selectively operable stopping means for calculating machines in multiplication. 2,947,476, 8–2–60, Cl. 235—63.

Gang, Herman, to Monroe Calculating Machine Co. Value selection control for calculating machines. 2,947,477, 8–2–60, Cl. 235—79.

Garis, Gordon O.: *See*—
Graff, Alan R., Garis, Butts, and Juergens. 2,947,187.

Garrett, Henry U., and N. F. Brown, to H. U. Garrett. Side wall core taking apparatus. 2,947,518, 8–2–60, Cl. 255—1.4.

Garth, Ernest D. G., to C. R. Bard, Inc. Sterile package and method of making same. 2,947,415, 8–2–60, Cl. 206—63.2.

Gartner, Robert, to Deutscher Spinnereimaschinenbau Ingolstadt Niederlassung der Schubert & Salzer Maschinenfabrik Aktiengesellschaft. Fuller guide for gill boxes. 2,947,037, 8–2–60, Cl. 19—129.

Garvey, William A.: *See*—
Strang, Donald P., and Garvey. 2,947,894.

Gaslini, Franco. Process for the hydrogenation of lignine and lignocelluliosic materials. 2,947,739, 8–2–60, Cl. 260—124.

Gebele, Kurt, to Compur-Werk Friedrich Deckel OHG. Photographic camera provided with interchangeable shutter having interchangeable lens. 2,947,231, 8–2–60, Cl. 95—11.

Geerpres Wringer, Inc.: *See*—
Bard, Elmer H. 2,947,548.

Geophysics Corp. of America: *See*—
Hersog, Richard F. K. 2,947,868.

General Aniline & Film Corp.: *See*—
Anspon, Harry D. 2,947,086.
Perry, William M., and Stoner. 2,947,633.

General Controls Co.: *See*—
Ray, William A. 2,947,510.
Ray, William A. 2,947,836.

General Dynamics Corp.: *See*—
Brightman, Barrie, Pearce, and Tubinis. 2,947,819.
Harris, Ben A. 2,947,817.
Killian, George W. 2,947,878.
Trostler, Richard M. 2,947,913.

General Electric Co.: *See*—
Ahlburg, Hayo, and Heil. 2,947,627.
Apple, Eugene F. 2,947,704.
Apple, Eugene F. 2,947,705.
Atchison, Leonard W. 2,947,153.
Bundy, Francis P. 2,947,611.
Bussone, Joseph V. 2,947,893.
Camilli, Guglielmo, and Pryde. 2,947,798.
Cooper, Kenneth E., and Lynch. 2,947,324.
Corson, Almon J., and Guptill. 2,947,941.
Francis, Wallace R., Mapelsden, and Feher. 2,947,966.
Hall, Howard T. 2,947,608.
Hall, Howard T., Strong, and Wentorf. 2,947,610.
Heil, Hans. 2,947,898.
Larew, John J. 2,947,876.
Mapelsden, George C., and Cowe. 2,947,968.
Marks, Louis W. 2,947,958.
Moody, Charles W., Neff, Gray, and Kettler. 2,947,065.
Morong, William H., Jr. 2,947,942.
Perry, John R. 2,947,176.
Rook, Lawrence E. 2,947,842.
Saum, George A., and Redington. 2,947,896.
Strang, Donald P., and Garvey. 2,947,894.
Strong, Herbert M. 2,947,609.
Suits, Chauncey G. 2,947,891.
Tracy, James F. 2,947,927.
Trotta, Francis D. 2,947,488.
Wentorf, Robert H., Jr. 2,947,034.
Wentorf, Robert H., Jr. 2,947,617.
Winestock, Theodore L. 2,947,487.
Woodward, Stewart A. 2,947,825.

General Electric Co. Ltd., The: *See*—
Tomlinson, Terence B. 2,947,874.
Ward, Peter W. 2,947,518.

General Foods Corp.: *See*—
Feldman, Jacob R., Levenson, and White. 2,947,634.

General Mills, Inc.: *See*—
Szasz, Nandor. 2,947,494.

General Motors Corp.: *See*—
Bird, Ralph C., Bouvy, and Doiza. 2,947,294.
Campbell, David D., and Semar. 2,947,025.
Clevenger, Carl L. 2,947,061.
Doidge, Jack R., and Moore. 2,947,199.
Doiza, John. 2,947,298.
Heusel, Robert J. 2,947,167.
Hollar, Arthur W., Jr. 2,947,023.
King, Kenneth K. 2,947,158.
King, William F. 2,947,172.
King, William F., and Sihvonen. 2,947,175.
Lash, Joseph F. 2,947,173.
Lash, Joseph F. 2,947,174.
Moore, Edwin L. 2,947,374.
Reindl, Harold J. 2,947,281.
Ziegler, Eugene R. 2,947,186.

General Precision, Inc.: *See*—
Bernstein-Bervery, Sergio. 2,947,947.
Davis, Manfred. 2,947,162.

General Railway Signal Co.: *See*—
Haner, Robert B., Jr. 2,947,814.

General Tire and Rubber Co., The: *See*—
Peppercorn, Howard N. 2,947,070.

General Ultrasonics Co., The: *See*—
Rich, Stanley R. 2,947,889.

Georgia Tech Research Institute: *See*—
Orr, Clyde, Jr. 2,947,164.
Orr, Clyde, Jr. 2,947,382.

Gerg, William P., to The Borden Co. Formaldehyde absorption. 2,947,750, 8–2–60, Cl. 260—249.6.

Gerhardt, James S., and W. F. Fowler, Jr., to Eastman Kodak Co. Adhesive. 2,947,650, 8–2–60, Cl. 117—122.

Geschickter, Charles F., and L. M. Rice, to The Geschickter Fund for Medical Research, Inc. Salts of 7-chloro-4-(4-diethylamino-1-methylbutylamino)quinoline. 2,947,664, 8–2–60, Cl. 167—58.

Geschickter Fund for Medical Research, Inc., The: *See*—
Geschickter, Charles F., and Rice. 2,947,664.

Gibbon, John: *See*—
Casey, Robert F., and Gibbon. 2,947,943.

Gibson, Ronald L.: *See*—
Armentrout, James L., and Gibson. 2,947,232.

Giddey, Claude, to F. P. Research Ltd. Artificial fibres. 2,947,644, 8–2–60, Cl. 106—157.

Giddings & Lewis Machine Tool Co.: *See*—
Woytych, Raymond M. 2,947,224.

Gill, Thomas R.: *See*—
Andrisek, John A., and Gill. 2,947,674.

Gimera, Ralph J., E. F. Weisner, and J. R. Wetch, to North American Aviation, Inc. Variable-spaced nuclear reactor fuel assembly. 2,947,678, 8–2–60, Cl. 204—193.2.

Glass, Parker F.: *See*—
Sackett, Thomas H., and Glass. 2,947,363.

Glauberman, Marvin H., and R. C. Keiner, to Laboratory for Electronics, Inc. Data processing apparatus. 2,947,971, 8–2–60, Cl. 340—149.

Gleason Works, The: *See*—
Bauer, Oliver F., and Stark. 2,947,120.
Carlsen, Leonard O., Krastel, and Male. 2,947,223.
Carlsen, Leonard O., and Male. 2,947,061.
Spear, Gilmore M. 2,947,062.

Gleerup-Möller, Magdalin C. Perpetual calendar. 2,947,102, 8–2–60, Cl. 40—115.

Glowacki, George V., to Radio Corp. of America. Ceramic compositions. 2,947,642, 8–2–60, Cl. 106—62.

Goldhamer, Walter M. Die casting bar injection machine. 2,947,045, 8–2–60, Cl. 22—68.

Goldkamp, Arthur H., to G. D. Searle & Co. 17α-(1-alkynyl)- and 17α-(1-alkenyl)-1,3,5(10)-estratrien-17β-ols and intermediates. 2,947,763, 8–2–60, Cl. 260—397.3.

Gonsalves, Conrad J., to American Enka Corp. Speed control system for winding machines. 2,947,490, 8–2–60, Cl. 242—45.

Gooch, William R., and E. E. Dobson, to Florida Lightweight Products Co. Phosphate process. 2,947,418, 8–2–60, Cl. 210—68.

Goodrich, B. F., Co., The: *See*—
Billingsley, William F. 2,947,339.

Goodyear Tire & Rubber Co., The: *See*—
Bethune, George R., Jr. 2,947,558.
Culbertson, James A. 2,947,388.
Highley, Frank H. 2,947,502.
Leshin, Richard, and Lichty. 2,947,695.
Snyder, James E., and Swarts. 2,947,638.
Sullivan, John K. 2,947,729.
Taylor, Charles W., Jr. 2,947,032.

Gorby, Harry B., to American Dross Disposal Corp. Rapid composting. 2,947,619, 8–2–60, Cl. 71—9.

Gorman, Harry A. Hip joint prosthesis. 2,947,808, 8–2–60, Cl. 128—92.

Goss, Herbert A. Log binder. 2,947,514, 8–2–60, Cl. 254—78.

Goss, Herbert A. Vehicle alarm switch. 2,947,820, 8–2–60, Cl. 200—61.51.

Gouirand, Rene. Tractor-trailer assembly including a pneumatic suspension for the trailer. 2,947,547, 8–2–60, Cl. 280—43.23.

Grace, W. R., & Co.: *See*—
Rudner, Bernard, and Prapas. 2,947,752.

Graff, Alan R., G. O. Garis, R. L. Butts, and E. C. Juergens, to The Columbia Malting Co. Apparatus for the rotation of drums. 2,947,187, 8–2–60, Cl. 74—142.

Graff, Alan R., E. C. Juergens, and S. E. Berkenblit, to The Columbia Malting Co. Rotary malting equipment. 2,947,669, 8–2–60, Cl. 195—127.

Gragson, James T., to Phillips Petroleum Co. Preparation of metal petroleum sulfonates. 2,947,694, 8–2–60, Cl. 252—33.

Grannen, Francis M. Separable button. 2,947,050, 8–2–60, Cl. 24—109.

Gray, Alfred E.: *See*—
Amari, Eric, Gray, Malin, and Thompson. 2,947,538.

Gray, G. A., Co., The: *See*—
Walter, John M. 2,947,226.

Gray, Willard F. M.: *See*—
Moody, Charles W., Neff, Gray, and Kettler. 2,947,065.

Grayson, Harry, R. A. G. Dunkley, and T. H. Walker, to International Standard Electric Corp. Magnetic switch-amplifiers. 2,947,946, 8–2–60, Cl. 328—8.

Green, Armin H.: *See*—
Schlage, Ernest L., and Green. 2,947,507.

Greenblatt, Julius: *See*—
Coopersmith, Rudolph. 2,947,006.

Greene, Joseph F., and A. L. Hinson, to Owens-Illinois Glass Co. Apparatus and method for treating interior surfaces of glass containers. 2,947,117, 8–2–60, Cl. 49—89.

Greene, Joseph F., and N. H. McCallum, Jr., to Owens-Illinois Glass Co. Method of treating the surfaces of glass containers. 2,947,615, 8–2–60, Cl. 41—42.

Greenhut, Joseph. Reversing motor switch. 2,947,833, 8–2–60, Cl. 200—80.

Greenwald, H., Co., Inc.: *See*—
Greenwald, Harry. 2,947,186.

Greenwald, Harry, to H. Greenwald Co., Inc. Coin slide actuated timer. 2,947,186, 8–2–60, Cl. 74—107.

Greer, David M. Storage tanks for liquids. 2,947,437, 8–2–60, Cl. 220—18.

Grenco, Inc.: *See*—
Zenczak, Piotr. 2,947,764.

Griffin, Donald N., and J. W. Orr, to Olin Mathieson Chemical Corp. Compression ignition gun. 2,947,221, 8–2–60, Cl. 89—7.

Griffith Laboratories, Inc., The: *See*—
Saitz, Louis. 2,947,636.

Groll, Alvin P. Tiltable roll transfer ramp. 2,947,402, 8–2–60, Cl. 193—40.

Groudan, Alan, to Sperry Rand Corp., The Ford Instrument Co. Division. Direct coupled polarity inverter D.C. level adjuster. 2,947,948, 8–2–60, Cl. 330—193.

Grover, Robert R. Electric clutch and brake. 2,947,393, 8–2–60, Cl. 192—18.

Grover, Robert R. Electric clutch and brake. 2,947,394, 8–2–60, Cl. 192—18.

Grunwald, Arnold P., to Capital Engineering & Mfg. Corp. Automatic record changer and player. 2,947,542, 8–2–60, Cl. 274—10.

Guarino, Louis S. Automatic pilot for rotary wing aircraft. 2,947,498, 8–2–60, Cl. 244—17.13.

Guenther, Edgar G., and J. W. Smith, to Eastman Kodak Co. Tow baling method. 2,947,241, 8–2–60, Cl. 100—39.

Guenther, Edgar G., and J. W. Smith, to Eastman Kodak Co. Tow baling apparatus. 2,947,242, 8–2–60, Cl. 100—60.

Guernsey, Ray R. Throttle control for outboard motors. 2,947,193, 8–2–60, Cl. 74—479.

Gulton Industries, Inc.: *See*—
McGunigle, Richard D. 2,947,886.

Gulton, Leslie K. Cooled piezoelectric accelerometer. 2,947,887, 8–2–60, Cl. 310—8.4.

Guptill, Edwin C.: *See*—
Corson, Almon J., and Guptill. 2,947,941.

Gustin-Bacon Mfg. Co.: *See*—
Warkoczewski, Joseph T. 2,947,446.

Guthrie, Donald A.: *See*—
Maisel, Daniel S., and Guthrie. 2,947,675.

Gutierres, Donald D. Traction device. 2,947,336, 8–2–60, Cl. 152—216.

Guseli, Walter A. Paper clip. 2,947,047, 8–2–60, Cl. 24—66.

Gwinn, G. S.: *See*—
Tryon, David H. 2,947,468.

Hacklander, Hans, to The Singer Mfg. Co. Sewing machines. 2,947,270, 8–2–60, Cl. 112—258.

Haddad, Theodore A., to Burroughs Corp. Magnetron tube shield. 2,947,901, 8–2–60, Cl. 313—157.

Haffner, Edgar D.: *See*—
Schwuttke, Gunter H., Haffner, and Adler. 2,947,214.

Hagen, Clarence R., to International Harvester Co. Dump-body assembly and attaching means for complementary tractor. 2,947,571, 8–2–60, Cl. 298—10.

Hake, Walter T.: *See*—
Foster, Theodore, and Hake. 2,947,189.

Hale, Frank R., to United States of America, Air Force. Fuse. 2,947,256, 8–2–60, Cl. 102—79.

Hall, Howard T., to General Electric Co. Diamond synthesis. 2,947,608, 8–2–60, Cl. 23—209.1.

Hall, Howard T., H. M. Strong, and R. H. Wentorf, Jr., to General Electric Co. Method of making diamonds. 2,947,610, 8–2–60, Cl. 23—209.1.

Hall, Hugh J., to Varian Associates. Magnet apparatus. 2,947,920, 8–2–60, Cl. 317—158.

Halley, James W.: *See*—
Tenenbaum, Michael, Halley, and Luersen. 2,947,622.

Halliburton Oil Well Cementing Co.: *See*—
Hyde, Walter E. 2,947,361.

Halpern, Benjamin D., and W. Karo, to The Borden Co. Ternary polymers of trifluoroethyl acrylate, acrylonitrile, and an ester of acrylic acid. 2,947,732, 8–2–60, Cl. 260—80.5.

Halpern, Benjamin D., and W. Karo, to The Borden Co. Copolymer of 2,2,2-trifluoroethyl acrylate and vinylidene chloride. 2,947,734, 8–2–60, Cl. 260—86.3.

Hamilton, Allen R., to Consolidated Vacuum Corp. Automatic interrupter circuit. 2,947,918, 8–2–60, Cl. 317—152.

Hammer, James P., to International Business Machines Corp. Process for converting glow discharge tubes to photoelectric tubes. 2,947,590, 8–2–60, Cl. 316—9.

Hammond, Wardlaw M., Jr., to The Martin Co. Air vehicle. 2,947,495, 8–2–60, Cl. 244—3.

Hancock, Percy W. P.: *See*—
Facey, Stanley R., and Hancock. 2,947,210.

Haner, Robert B., Jr., to General Railway Signal Co. Carrier transmitter. 2,947,814, 8–2–60, Cl. 178—66.

Hanley, Frank H., and C. J. Votaw, to American Telephone and Telegraph Co. Clock controlled automatic recycling switching circuit. 2,947,903, 8–2–60, Cl. 178—2.

Hanna, M. A., Co., The: *See*—
Vidmar, John P. 2,947,263.

Harbison-Walker Refractories Co.: *See*—
Davies, Ben. 2,947,649.

Hardwicke, Norman L., to Monsanto Chemical Co. Ethylene polymerisation. 2,947,738, 8–2–60, Cl. 260—94.9.

Harnischfeger Corp.: *See*—
Schneider, Karl. 2,947,420.

Harris, Ben A., to General Dynamics Corp. Clock-calendar circuit. 2,947,817, 8–2–60, Cl. 179—7.1.

Harris-Intertype Corp.: *See*—
O'Brien, Richard C. 2,947,917.

Harris, Stanley E., to The Mollart Engineering Co. Ltd. Universal joints. 2,947,157, 8–2–60, Cl. 64—18.

Harris Transducer Corp., The: *See*—
Harris, Wilbur T. 2,947,823.
Harris, Wilbur T. 2,947,888.
Harris, Wilbur T. 2,947,969.
Harris, Wilbur T., and Edwards. 2,947,890.

Harris, Wilbur T., to The Harris Transducer Corp. Electromechanical transducer. 2,947,823, 8–2–60, Cl. 179—110.

Harris, Wilbur T., to The Harris Transducer Corp. Transducer construction. 2,947,888, 8–2–60, Cl. 310—26.

Harris, Wilbur T., and P. B. Edwards, to The Harris Transducer Corp. Transducer. 2,947,890, 8–2–60, Cl. 310—26.

Harris, Wilbur T., to The Harris Transducer Corp. Elongated electroacoustic transducer with integral reinforced mounting flanges. 2,947,969, 8–2–60, Cl. 340—5.

Harris, William L. Devotional service assistance table for church use. 2,947,584, 8–2–60, Cl. 311—2.

Harsch, William E.: *See*—
Rauch, Konrad, Jorgensen, Neubauer, Ferris, Kneisley, Stork, and Harsch. 2,947,475.

Hart, John C., and E. A. Lauring, to Minnesota and Ontario Paper Co. Fissured coated fiberboard and method of manufacture. 2,947,647, 8–2–60, Cl. 117—41.

Harwig, Stephen H., to Libbey-Owens-Ford Glass Co. Testing electrically conductive articles. 2,947,939, 8–2–60, Cl. 324—65.

Hasek, Robert H.: *See*—
Martin, James C., and Hasek. 2,947,784.

Hastings, Charles E. Radio position determining system. 2,947,984, 8–2–60, Cl. 343—105.

Haulk, Elvro L. Bow string holder. 2,947,301, 8–2–60, Cl. 124—80.

Haupt, Rudolf: *See*—
Müller, Wilhelm, Casper, Haupt, and Heinen. 2,947,706.

Hausmann, George F., to United Aircraft Corp. By-pass turbojet. 2,947,139, 8–2–60, Cl. 60—35.6.

Haworth, Lionel, to Rolls-Royce Ltd. Propeller-driving compound gas-turbine engine for aircraft. 2,947,364, 8–2–60, Cl. 170—135.71.

Hawxhurst, John E., to International Business Machines Corp. Roll spacing for a card punch mechanism. 2,947,358, 8–2–60, Cl. 164—115.

Hayden, James F., and G. W. Offensend, to Eastman Kodak Co. Document handling apparatus. 2,947,218, 8–2–60, Cl. 88—24.

Hayes, Roy E.: *See*—
Hoffman, George R., and Hayes. 2,947,912.

Haynes, Don A., to Calmar, Inc. Lock for container covers. 2,947,431, 8–2–60, Cl. 215—9.

Hasel, Herbert K., to Melpar, Inc. Component feed and insertion. 2,947,447, 8–2–60, Cl. 221—299.

Haseltine Research, Inc.: *See*—
Espenlaub, Walter C. 2,947,953.
Hirsch, Charles J. 2,947,480.
McPhee, Joseph R., Jr. 2,947,807.

Haselton, Henry S., Jr., to Pitney-Bowes, Inc. Letter inverter. 2,947,466, 8–2–60, Cl. 198—33.

Hassard, Harry L.: *See*—
Moore, Harold E., and Hassard. 2,947,399.

Heartel, Raymond H. W.: *See*—
Kates, Leonard W., Campbell, and Heartel. 2,947,080.

Heer, Ralph W., and L. W. Mundy, to Poor & Co. Bituminous paver. 2,947,230, 8–2–60, Cl. 94—46.

Heibel, Jerome D., to Erie Resistor Corp. Ceramic binaural phonograph pickup. 2,947,821, 8–2–60, Cl. 179—100.41.

Heigl, John J., and A. J. Blackwood, to Esso Research and Engineering Co. Spark plug. 2,947,900, 8–2–60, Cl. 313—132.

Heil, Hans: *See*—
Ahlburg, Hayo, and Heil. 2,947,627.

Heil, Hans, to General Electric Co. Color picture tube screen. 2,947,896, 8–2–60, Cl. 313—92.

Heilman, William O.: *See*—
Read, Chester L., and Heilman. 2,947,681.

Heine, Lawrence J., to Mack Trucks, Inc. Control system for exhaust brake. 2,947,392, 8–2–60, Cl. 192—3.

Heinen, Josef: *See*—
Müller, Wilhelm, Casper, Haupt, and Heinen. 2,947,706.

Heinicke Instruments Co.: *See*—
Heinicke, Kurt J. 2,947,312.

Heinicke, Kurt J., to Heinicke Instruments Co. Washing and sterilizing machine for glassware. 2,947,312, 8–2–60, Cl. 134—191.

Heins, Harold: *See*—
Alexander, Herbert C., and Heins. 2,947,956.

Henle, Robert A., and J. B. Mackay, to International Business Machines Corp. Transistor power inverter circuit. 2,947,879, 8–2–60, Cl. 307—88.5.

Hennig, Harvey, to The Pure Oil Co. Process for improving the octane number of naphthas. 2,947,683, 8–2–60, Cl. 208—65.

Henry, Herbert W. Base sack anchoring means. 2,947,640, 8-2-60, Cl. 273—26.

Henry, William F., and J. J. Purcell, to International Business Machines Corp. Toll highway recorder. 2,947,601, 8-2-60, Cl. 346—50.

Heppe, Robert J., to International Telephone and Telegraph Corp. Synchronizing system. 2,947,981, 8-2-60, Cl. 343—6.

Heppner, Leander J. Polygonal hole forming tool. 2,947,225, 8-2-60, Cl. 90—24.

Hercules Powder Co.: *See*—
Boardman, Harold. 2,947,722.

Herman & Leal Ltd.: *See*—
Herman, Philip. 2,947,127.

Herman, Philip, to Herman & Leal Ltd. Package wrapping machine. 2,947,127, 8-2-60, Cl. 53—182.

Hern, Howard D.: *See*—
Ulstad, Meredith S., and Hern. 2,947,861.

Hern, Howard D., to Collins Radio Co. Stabilized frequency modulator. 2,947,961, 8-2-60, Cl. 332—19.

Hernandez, Manuel R., to Colgate-Palmolive Co. Liquid dispensing apparatus and valve. 2,947,449, 8-2-60, Cl. 222—94.

Hershey, Melvin P., to The Firestone Tire & Rubber Co. Tubeless tire. 2,947,341, 8-2-60, Cl. 152—362.

Herzog, Gerhard: *See*—
Egan, Edmond P., Herzog, and McKay. 2,947,869.

Herzog, Richard F. K., to Geophysics Corp. of America. Mass spectrometer. 2,947,866, 8-2-60, Cl. 250—41.9.

Hesse, Holger: *See*—
Ruben, Henning M., and Hesse. 2,947,470.

Heuer, Kurt: *See*—
Brotz, August, Richter, Wachtendorf, and Heuer. 2,947,597.

Heusel, Robert J., to General Motors Corp. Test fixture. 2,947,167, 8-2-60, Cl. 73—100.

Hickey, Nathaniel C., Jr., and G. C. Mick. Apparatus for photographic printing. 2,947,263, 8-2-60, Cl. 95—76.

Hicks, Clinton A.: *See*—
Dodd, William O., Jr., and Hicks. 2,947,106.

Hicks, Darrell D.: *See*—
Belanger, William J., Masters, and Hicks. 2,947,712.

Higer, Harry. Cutting and disintegrating machine. 2,947,486, 8-2-60, Cl. 241—36.

Highhouse, Frederick: *See*—
Earle, Wilton R., and Highhouse. 2,947,116.

Highley, Frank H., to The Goodyear Tire & Rubber Co. Acceleration indicator for aircraft. 2,947,502, 8-2-60, Cl. 244—76.

Hill, James S., to Engelhard Industries, Inc. Composite material. 2,947,114, 8-2-60, Cl. 49—53.

Hillenbrand, George C., to The Batesville Casket Co., Inc. Decorative panels. 2,947,059, 8-2-60, Cl. 27—19.

Hills-McCanna Co.: *See*—
McFarland, Rolland, Jr. 2,947,226.

Hinson, Arthur L.: *See*—
Greene, Joseph F., and Hinson. 2,947,117.

Hirsch, Charles J., to Hazeltine Research, Inc. Electrical differentiator. 2,947,460, 8-2-60, Cl. 235—183.

Hirschle, Alfred C.: *See*—
Berry, Henry B., Hirschle, and Zarabara. 2,947,137.

Hobart Mfg. Co., The: *See*—
Fox, Gerald B., and Stoddard. 2,947,311.

Hobson, Frank E., to P. D. & P. Processing Inc. Fractional distillation of volatiles from solids. 2,947,670, 8-2-60, Cl. 202—22.

Hockery, John C.: *See*—
Aberer, Frank H. 2,947,434.

Hodge, Edward B.: *See*—
Bennett, Edward O., and Hodge. 2,947,091.

Hodgins, Theodore S.: *See*—
Shelton, Frederic J., Hodgins, and Allyn. 2,947,790.

Hoffer, Max, to Hoffmann-La Roche Inc. N^4-aminoacetyl-, N^4-lower alkylaminoacetyl- and N^4-di-lower alkylaminoacetyl-6-sulfanilamido - 2,4 - dimethoxypyrimidines. 2,947,743, 8-2-60, Cl. 260—239.75.

Höffgen, Fritz, to Heinrich Sudhaus Sohne. Lock for briefcases and the like. 2,947,161, 8-2-60, Cl. 70—67.

Hoffman Electronics Corp.: *See*—
Buie, James L. 2,947,663.

Hoffman, George R., and R. H. Hayes, to National Research Development Corp. Electro-luminescent display devices. 2,947,912, 8-2-60, Cl. 315—169.

Hoffmann-La Roche Inc.: *See*—
Hoffer, Max. 2,947,743.

Hoffmann, Otto L., to Spencer Chemical Co. Process and compositions for treating nematodes. 2,947,660, 8-2-60, Cl. 167—22.

Hohl, Leonard L.: *See*—
Dodge, Nathaniel S., Jr., Hohl, Jones, and Negley. 2,947,409.

Hohos, Edward J., and J. A. Richard, to Mine Safety Appliances Co. Mine roof bolt and bolting system. 2,947,279, 8-2-60, Cl. 116—114.

Holappa, Harvey A., to Western Electric Co., Inc. Apparatus for testing automatic telephone exchange equipment. 2,947,824, 8-2-60, Cl. 179—175.2.

Holcomb, Galen A., to North American Aviation, Inc. Ejection seat for aircraft and the like. 2,947,508, 8-2-60, Cl. 244—122.

Holden, Ernest J. Door furniture. 2,947,561, 8-2-60, Cl. 292—347.

Holderreed, Francis L., and R. E. Sullivan, to The Anaconda Co. Production of silica-free alumina. 2,947,606, 8-2-60, Cl. 23—146.

Holdrege, Charles T.: *See*—
Cheney, Lee C., and Holdrege. 2,947,742.

Hollander, Charles S.: *See*—
De Benneville, Peter L., and Hollander. 2,947,782.

Holbar, Arthur W., Jr., to General Motors Corp. Door hinge, check and hold-open. 2,947,023, 8-2-60, Cl. 16—145.

Holley Carburetor Co.: *See*—
Kittler, Milton J., Sterner, and Johnson. 2,947,297.
Guiltet, Marion L., and Sterner. 2,947,509.

Holloway, Harold S., to The Firestone Tire & Rubber Co. Tire chafer. 2,947,342, 8-2-60, Cl. 152—362.

Holly, Earl D., and W. H. Nunamy, to The Dow Chemical Co. Polymers of vinylpentachlorophenyl sulfide and method of making the same. 2,947,730, 8-2-60, Cl. 260—79.7.

Holtzberg, Frederic, to International Business Machines Corp. Silver niobate ferroelectric materials. 2,947,696, 8-2-60, Cl. 252—62.9.

Hopkins, Thomas R., and P. D. Strickler, to Spencer Chemical Co. Adduct of 1,2-dibromo-3-chloropropane and thiourea. 2,947,661, 8-2-60, Cl. 167—22.

Hoppe, Peter, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Plastic foam splint. 2,947,307, 8-2-60, Cl. 128—90.

Hornbostel, Lloyd, to Beloit Iron Works. Paper machine dandy roll construction. 2,947,356, 8-2-60, Cl. 162—314.

Hornschuch, Hanns, to Ingersoll-Rand Co. Centrifugal pumps. 2,947,260, 8-2-60, Cl. 103—87.

Horodyski, Joseph H., to International Telephone and Telegraph Corp. High voltage pulse generator. 2,947,884, 8-2-60, Cl. 307—106.

Horsley, David S. Film scratch minimiser. 2,947,810, 8-2-60, Cl. 178—6.7.

Houston Oil Field Material Co., Inc.: *See*—
Smith, Thomas C. 2,947,362.

Hoven, Alfred C., and W. E. Nordmark, to American Seating Co. Table or the like having its top supported by spaced pedestals each comprising a horizontally elongated base and a pair of vertical columns. 2,947,586, 8-2-60, Cl. 311—39.

Howling, Dennis H., to McGraw-Edison Co. Positive temperature coefficient semiconductor device. 2,947,844, 8-2-60, Cl. 219—20.

Huang, Hsing T., to Chas. Pfizer & Co., Inc. Amino acids and process. 2,947,666, 8-2-60, Cl. 195—47.

Hubbard and Co.: *See*—
Westrom, Arthur C. 2,947,903.

Hubby, Laurence M., to Texaco Inc. Motor control systems. 2,947,931, 8-2-60, Cl. 318—447.

Huebner, Charles F., to Ciba Pharmaceutical Products, Inc. Process for preparation of 2(N,N-di-loweralkyl-amino-loweralkyl)-3-[(2-pyridyl)-(R_1) methyl]-indenes. 2,947,756, 8-2-60, Cl. 260—296.

Hughes, Everett C., and H. M. Stine, to The Standard Oil Co. Metal drawing lubricant. 2,947,692, 8-2-60, Cl. 252—29.

Hughes, Robert W., to International Telephone and Telegraph Corp. Hybrid circuits. 2,947,952, 8-2-60, Cl. 333—11.

Hughes Tool Co.: *See*—
Newman, Clarence M. 2,947,074.

Humble Oil & Refining Co.: *See*—
Cornell, Hampton G., and Meredith. 2,947,578.

Hungerford, Philip C., Jr.: *See*—
Magill, John J., and Hungerford. 2,947,278.

Hurt, Arthur A. Fertilizer mixing and spreading machine. 2,947,544, 8-2-60, Cl. 275—8.

Hyde, Walter E., to Halliburton Oil Well Cementing Co. Retrievable tester for oil wells. 2,947,361, 8-2-60, Cl. 166—100.

Hyman, Benjamin M., and E. K. Karlsson, to International Harvester Co. Adjustable skewing of corn snapping rolls. 2,947,133, 8-2-60, Cl. 56—110.

Hyslo, John L., to Bell Telephone Laboratories, Inc. Telegraph repeater. 2,947,816, 8-2-60, Cl. 178—71.

I-T-E Circuit Breaker Co.: *See*—
Dortort, Isadore K. 2,947,932.

Ickes, William M.: *See*—
Clem, Glen H., and Ickes. 2,947,491.

Idol, James D., Jr., R. W. Foreman, and F. Veatch, to The Standard Oil Co. Process for the esterification of unsaturated acids. 2,947,779, 8-2-60, Cl. 260—486.

Illinois Testing Laboratories, Inc.: *See*—
Peltola, Veikko K. 2,947,171.

Illinois Tool Works: *See*—
Rayburn, Charles C., Schmidt, and Knutsen. 2,947,247.

Imbrecht, Arthur G. Movable partition. 2,947,041, 8-2-60, Cl. 20—4.

Inculet, Ion I., and V. A. Taylor, to Canadian General Electric Co., Ltd. Ventilation of totally enclosed motors. 2,947,892, 8-2-60, Cl. 310—57.

Information Systems, Inc.: *See*—
Lemm, Frederick L., and Jewens. 2,947,980.

Ingersoll-Rand Co.: *See*—
Hornschuch, Hanns. 2,947,260.

Injection Molding Co.: *See*—
Marchant, Paul A. 2,947,071.

Inland Steel Co.: *See*—
Tenenbaum, Michael, Halley, and Luerssen. 2,947,622.

Inland Steel Products Co.: *See*—
Ellis, Donald A. 2,947,048.

International Business Machines Corp.: *See*—
Allen, James D., Jr. 2,947,806.
Anderson, John L. 2,947,880.
Bertelsen, Bruce I. 2,947,625.
Bloch, Erich. 2,947,977.
Brown, Caroll J. 2,947,975.
Chou, Wayne W. 2,947,882.
Estrems, Eugeni, and Papo. 2,947,865.
Hammer, James P. 2,947,590.
Hawxhurst, John E. 2,947,358.
Henle, Robert A., and Mackay. 2,947,579.
Henry, William F., and Purcell. 2,947,591.
Holtzberg, Frederic. 2,947,698.
Lents, John J., Palmer, and Robbins. 2,947,478.

International Flavors & Fragrances, Inc.: *See*—
Teegarden, Robert W., and Steinbach. 2,947,780.

International Harvester Co.: *See*—
Everett, Charles V. 2,947,130.
Hagen, Clarence E. 2,947,571.
Hyman, Benjamin M., and Karlsson. 2,947,133.
Johnson, Robert W. 2,947,100.
Jones, Mack M., and Koithoff. 2,947,612.
Karlsson, Elof K. 2,947,131.
Kowalik, John J. 2,947,129.
Murray, Donald A., and Whitby. 2,947,400.
Olson, William N. 2,947,372.
Orelind, John R., and Clark. 2,947,368.
Oreland, John R., and Johnson. 2,947,367.
Pregent, Thomas W. 2,947,459.
Rice, Russell E. 2,947,371.
Shallenberg, Robert L. and Parrish. 2,947,299.
Smith, Hiram P., and Johnson. 2,947,369.

International Standard Electric Corp.: *See*—
Burr, Harvey. 2,947,852.
Grayson, Harry, Dunkley, and Walker. 2,947,946.
McWhirter, Eric M. S. 2,947,217.
Steinbuch, Karl. 2,947,972.

International Telephone and Telegraph Corp.: *See*—
Adams, Robert T. 2,947,178.
Dodington, Sven H. M. 2,947,954.
Dodington, Sven H. M. 2,947,967.
Heppe, Robert J. 2,947,981.
Horodyski, Joseph H. 2,947,884.
Hughes, Robert W. 2,947,952.
Poyle, Michael C., and Whittle. 2,947,978.
Rodrigues, Conrad P., and Wallace. 2,947,897.
Toohig, Michael F. 2,947,651.
Turvey, Frank P., Jr. 2,947,944.

Investa A.-G., für Forschung und Patentverwertung: *See*—
Kahr, Kurt, and Fiam. 2,947,783.

Irgens, Fina T., to Outboard Marine Corp. Saw chain and tooth-carrying link. 2,947,331, 8-2-60, Cl. 143—135.

Irwin, Robert J. Hub cap tool. 2,947,072, 8-2-60, Cl. 29—245.

Issartel, René A. M. Hand brace. 2,947,334, 8-2-60, Cl. 145—54.

Jackson, Rodney, to Young Iron Works. Slack puller. 2,947,516, 8-2-60, Cl. 254—175.7.

Jadoul, Edmond L. J., to Charrues Melotte, Societe Anonyme. Overload release for rotatably mounted drawbar. 2,947,368, 8-2-60, Cl. 172—264.

Janson, Paul C.: *See*—
Murphy, Robert D., and Janson. 2,947,403.

Jennings Radio Manufacturing Corp.: *See*—
Alvernas, Emanuel P. 2,947,860.

Jewens, Richard H.: *See*—
Lemm, Frederick L., and Jewens. 2,947,980.

Jilly, Louis F., to Borg-Warner Corp. Shaped-charge well perforator. 2,947,251, 8-2-60, Cl. 102—20.

Johansson, Bengt J., and W. H. McKee, to United-Carr Fastener Corp. End connector for printed circuits. 2,947,964, 8-2-60, Cl. 339—17.

Johnson, Alvin L., to Edgar G. Vandreuil. C-clamp. 2,947,333, 8-2-60, Cl. 144—305.

Johnson, Arvid T.: *See*—
Johnson, Wallace A., and Johnson. 2,947,104.

Johnson, Herbert S., to Shawinigan Chemicals Ltd. Acetaldol condensation product and process for preparation. 2,947,780, 8-2-60, Cl. 260—340.7.

Johnson & Johnson: *See*—
Frantz, Verne L. 2,947,710.
Weschler, Joseph R., Engel, and Lagally. 2,947,658.

Johnson, Kalin S.: *See*—
Kittler, Milton J., Sterner, and Johnson. 2,947,297.

Johnson, Kenneth O., to Esso Research and Engineering Co. Underground storage reservoir for light hydrocarbons in semipermeable rock. 2,947,147, 8-2-60, Cl. 61—.5.

Johnson, Lloyd L. Means for supporting stock feed hoppers and the like on pickup truck beds. 2,947,568, 8-2-60, Cl. 296—37.

Johnson, Otto E.: *See*—
Orelind, John R., and Johnson. 2,947,367.
Smith, Hiram P., and Johnson. 2,947,369.

Johnson, Paul H., and C. R. Eberline, to Phillips Petroleum Co. Controlling the surface area of siliceous cracking catalysts. 2,947,684, 8-2-60, Cl. 208—118.

Johnson, Richard H., to Container Corp. of America. Shipping container with side closure. 2,947,414, 8-2-60, Cl. 206—46.

Johnson, Robert W., to International Harvester Co. Power transmission gearing with speed change in forward and reverse drive. 2,947,190, 8-2-60, Cl. 74—342.

Johnson, Wallace A., and A. T. Water fowl decoy. 2,947,104, 8-2-60, Cl. 43—3.

Johnson, Warren C. Line tightener. 2,947,051, 8-2-60, Cl. 24—129.

Johnson, Wayne R., to Minnesota Mining & Mfg. Co. Apparatus for recording television signals. 2,947,864, 8-2-60, Cl. 250—27.

Johnston, Everett B., to Sta-Parts, Inc. Pressure balance control valve. 2,947,287, 8-2-60, Cl. 121—45.

Johnston Testers, Inc.: *See*—
Sackett, Thomas H., and Glass. 2,947,363.

Jones, Jean E., to Eastman Kodak Co. Supersensitisation of complex cyanine dyes. 2,947,630, 8-2-60, Cl. 96—104.

Jones, John B.: *See*—
Dodge, Nathaniel S., Jr., Hohl, Jones, and Negley. 2,947,409.

Jones, Mack M., and C. P. Koithoff, Jr., to International Harvester Co. Turbine blade and nozzle blade cooling construction for gas turbines. 2,947,512, 8-2-60, Cl. 253—39.15.

Jordan, Joseph G.: *See*—
Mee, William W., and Jordan. 2,947,805.

Jordan, Merrill E., and W. G. Burbine, to Godfrey L. Cabot, Inc. Protective coating compositions comprising pyrogenic silica. 2,947,713, 8-2-60, Cl. 260—19.

Jorgensen, Chester N.: *See*—
Rauch, Konrad, Jorgensen, Neubauer, Ferrin, Knutsley, Stork, and Harsch. 2,947,475.

Josendal, Virgil A. and E. J. Stegemeier, to Union Oil Co. of California. Method and apparatus for determining direction of fluid flow in boreholes. 2,947,359, 8-2-60, Cl. 166—4.

Juergens, Edwin C.: *See*—
Graf, Alan R., Garis, Butts, and Juergens. 2,947,187.

Juergens, Edwin C.: *See*—
Graf, Alan R., Juergens, and Berkenblit. 2,947,669.

Julian, Percy L., A. Magnani, and C. C. Cochrane, to Chas. Pfizer, & Co., Inc. Preparation of the 12-keto isomer of cortisone. 2,947,766, 8-2-60, Cl. 260—397.45.

Junker, Donald W., to Sarkes Tarzian, Inc. Semiconductor device. 2,947,922, 8-2-60, Cl. 317—234.

Jurosek, Michael G.: *See*—
Tryon, David H. 2,947,468.

Jurosek, Robert: *See*—
Tryon, David H. 2,947,468.

Justi, Eduard and A. Winsel, to Ruhrchemie Aktiengesellschaft, and Steinkohlen-Elektrizitat Aktiengesellschaft. Direct production of electrical energy from combustible fuel gases. 2,947,797, 8-2-60, Cl. 136—86.

Justi, H. D., and Son, Inc.: *See*—
Cornell, John A., and Tucker. 2,947,716.

Justoni, Romeo, and R. Pessina, said Pessina assor. to Francesco Vismara Societá per Azioni. Process for preparing 5 hydroxy-tryptamine through new intermediates. 2,947,757, 8-2-60, Cl. 260—319.

Kabel-es Muanyagygyar: *See*—
Csordás, Istvan, Lányi, Veress, and Vissy. 2,947,056.

Kahr, Kurt, and A. Fiam, to Inventa A.-G., für Forschung und Patentverwertung Lusern. Process for the production of alicyclic ketoximes. 2,947,783, 8-2-60, Cl. 260—566.

Kaldobsky, Phoebus R., to Ford Motor Co. Water expulsion valve. 2,947,319, 8-2-60, Cl. 137—204.

Kamborian, Jacob S. Upholstery machine. 2,947,001, 8-2-60, Cl. 1—2.

Kamiet, Jonas. Hydraulic cements. 2,947,643, 8-2-60, Cl. 106—97.

Kaplan, Sam H., to Zenith Radio Corp. Color image reproducers. 2,947,899, 8-2-60, Cl. 313—92.

Kappen, John W. Insulated container. 2,947,436, 8-2-60, Cl. 220—10.

Karlsson, Richard W.: *See*—
Stewart, Paul H., and Karlsson. 2,947,629.

Karlsson, Elof K.: *See*—
Hyman, Benjamin M., and Karlsson. 2,947,133.

Karlsson, Elof K., to International Harvester Co. Ear corn conveyor for corn pickers. 2,947,131, 8-2-60, Cl. 56—18.

Karo, Wolf: *See*—
Halpern, Benjamin D., and Karo. 2,947,732.
Halpern, Benjamin D., and Karo. 2,947,734.

Karolus, August. Magnetic picture recording. 2,947,809, 8-2-60, Cl. 178—6.6.

Karr, Theodore J.: *See*—
Vierk, Ernest R., and Karr. 2,947,697.

Kasten, Walter, to Bendix Aviation Corp. Filter and method of making. 2,947,419, 8-2-60, Cl. 210—435.

Kates, Leonard W., R. W. Campbell, and R. H. W. Heartel, to United States of America, Atomic Energy Commission. Method for making fuel elements. 2,947,060, 8-2-60, Cl. 29—425.

Kearney & Trecker Corp.: *See*—
Parske, Charles A., and Riedel. 2,947,227.

Keller, John D. Recuperators. 2,947,522, 8-2-60, Cl. 257—309.

Kellogg, M. W., Co., The: *See*—
Warburton, James, and Stiles. 2,947,796.

Kelner, Robert C.: *See*—
Glauberman, Marvin H., and Kelner. 2,947,971.

Kelvin & Hughes Ltd.: *See*—
Read, Robert S. 2,947,177.
Whitfield, Harold R. 2,947,983.

Kent, Nelson H.: *See*—
Eccles, George O., and Kent. 2,947,076.

Keown, Robert W. to E. I. du Pont de Nemours and Co. Process for stabilizing monovinylacetylene containing impurities. 2,947,795, 8-2-60, Cl. 260—678.

Kettler, Clarence J.: *See*—
Moody, Charles W., Neff, Gray, and Kettler. 2,947,065.

Kiasbek, George. Decorative mounts. 2,947,103, 8-2-60, Cl. 40—140.

Kielsmeier, Elwood W.: *See*—
Paynter, William D., and Kielsmeier. 2,947,635.

Killian, Cletus H., ¼ to R. K. Le Blond Machine Tool Co. Automatic machinist. 2,947,926, 8-2-60, Cl. 318—023.

Killian, George W., to General Dynamics Corp. Switching circuit. 2,947,878, 8-2-60, Cl. 307—64.

King, Kenneth K., to General Motors Corp. Universal joint centering device. 2,947,158, 8-2-60, Cl. 64—21.

King-Seeley Corp.: *See*—
Boddy, Leonard. 2,947,979.

King, William F., to General Motors Corp. Balancing organization. 2,947,172, 8-2-60, Cl. 73—462.

King, William F., and K. E. Sihvonen, to General Motors Corp. Balancing device. 2,947,175, 8-2-60, Cl. 73—483.

Kingsley, David G., to Stapling Machines Co. Loop fastener machine control apparatus. 2,947,329, 8-2-60, Cl. 140—93.

Kirchner, George J., and A. F. Kritscher, to United States Steel Corp. Method and apparatus for testing pipe. 2,947,165, 8-2-60, Cl. 73—37.

Kirkland, Loyal: *See*—
Tryon, David H. 2,947,468.

Kittler, Milton J., M. F. Sterner, and K. S. Johnson, to Holley Carburetor Co. Ignition distributor. 2,947,297, 8-2-60, Cl. 123—117.

Kittredge, George D., to Phillips Petroleum Co. Method of operating continuous combustion type power plants. 2,947,135, 8–2–60, Cl. 60—35.4.

Klayer, Fred W.: *See*—
Schneider, Mark P., and Klayer. 2,947,493.

Klee, Lester A. Door lock. 2,947,560, 8–2–60, Cl. 292—241.

Klein, Joseph J., to Food Machinery and Chemical Corp. Diffuser tube. 2,947,525, 8–2–60, Cl. 261—122.

Klemma, Asle. Adjustable threshold. 2,947,043, 8–2–60, Cl. 20—64.

Klinge, Earl R., to Continental Motors Corp. Compression ignition engine. 2,947,291, 8–2–60, Cl. 123—30.

Klootwijk, Arie: *See*—
Bruin, Pieter, and Klootwijk. 2,947,760.

Kneisley, Russel E.: *See*—
Rauch, Konrad, Jorgensen, Neubauer, Ferrin, Kneisley, Stork, and Harsch. 2,947,475.

Knutsen, Wallace N.: *See*—
Rayburn, Charles C., Schmidt, and Knutsen. 2,947,247.

Koch, David, to Morris Kurtzon, Inc. Rack construction. 2,947,554, 8–2–60, Cl. 287—54.

Koehler Mfg. Co.: *See*—
Loseau, Homer A. 2,947,851.
Loseau, Homer A. 2,947,852.
Loseau, Homer A. 2,947,854.
Loseau, Homer A., and Mignone. 2,947,853.

Kohlenscherdungs-Gesellschaft, m.b.H.: *See*—
Nickel, Eberhard. 2,947,288.

Kollsman Instrument Corp.: *See*—
Carbonara, Victor E., Eckweiler, O'Maley, and Hansell. 2,947,872.

Kolthoff, C. Paul, Jr.: *See*—
Jones, Mack M., and Kolthoff. 2,947,512.

Komm, Ernst. Malt of improved properties, fermented malt beverages, and process of making same. 2,947,667, 8–2–60, Cl. 195—70.

Koninklijke Machinefabriek Gebr. Stork & Co. N.V.: *See*—
Busquet, Jan C. 2,947,466.

Konrad, Alexander. Dual flavor cigar or cigarette. 2,947,310, 8–2–60, Cl. 131—9.

Koome, Jacob, and G. J. F. Stijntjes, to Shell Oil Co. Catalytic hydrogenation of sulfur-bearing hydrocarbon oils. 2,947,685, 8–2–60, Cl. 208—216.

Kostka, Charles. Socket wrench. 2,947,209, 8–2–60, Cl. 81—58.3.

Kovalcik, Frank. Trap for catch basins. 2,947,321, 8–2–60, Cl. 187—516.25.

Kowalik, John J., to International Harvester Co. Utility forage harvester. 2,947,129, 8–2–60, Cl. 56—1.

Kraft, Rupert. Screen printing machine comprising endless templates. 2,947,246, 8–2–60, Cl. 101—122.

Krakora, James J., Jr.: *See*—
Parmet, Bernard S., and Krakora. 2,947,812.

Krastel, Adolph H.: *See*—
Carlsen, Leonard O., Krastel, and Male. 2,947,223.

Kritscher, Andrew F.: *See*—
Kirchner, George J., and Kritscher. 2,947,165.

Kritzer, Karl: *See*—
Seitz, Georg, and Kritzer. 2,947,751.

Krohn, Bud E.: *See*—
Tryon, David H. 2,947,468.

Krohn, Mary E.: *See*—
Tryon, David H. 2,947,468.

Krollmann, Hubert: *See*—
Schytil, Franz, and Krollmann. 2,947,383.

Kropa, Edward L., to American Cyanamid Co. Animalisation of cellulose. 2,947,594, 8–2–60, Cl. 8—117.

Kruger, Irving D.: *See*—
Ford, John R., Kruger, and Perkel. 2,947,989.

Kruse, Norman F., to Central Soya Co., Inc. Preparation of a molasses feed. 2,947,632, 8–2–60, Cl. 99—6.

Kryter, Karl D. Seat and seating arrangement. 2,947,349, 8–2–60, Cl. 155—130.

Kuck, John H., and J. H. Sreb, to United States of America, Navy. Projectile choke. 2,947,255, 8–2–60, Cl. 102—70.2.

Kuestler, Ernst, and K. Rokitansky, to Vereinigte Mautner Markhof'sche Presshefe Fabriken. Process of producing yeast of increased dry solid content and reduced plasticity. 2,947,668, 8–2–60, Cl. 195—98.

Kung, Carl: *See*—
Schneckenburger, Emil, and Kung. 2,947,075.

Kurschner, Lloyd F. Guide stick and support for paint brushes. 2,947,018, 8–2–60, Cl. 15—246.

Kurtzon, Morris, Inc.: *See*—
Koch, David. 2,947,554.

Laager, Creston F., to United States of America, Army. Single trigger sequential firing mechanism. 2,947,220, 8–2–60, Cl. 89—1.

Langewaard, Paul L. Light metal piston with plated head. 2,947,582, 8–2–60, Cl. 309—9.

Laboratory for Electronics, Inc.: *See*—
Glauberman, Marvin H., and Keiner. 2,947,971.

Ladeuze, Maurice J. B., and P. Toni. Process for the treatment of tracing papers to make them readily erasible upon. 2,947,640, 8–2–60, Cl. 106—2.

Lafitte, Théodore. Positively actuated starting device for engine. 2,947,179, 8–2–60, Cl. 74—6.

Lagally, Paul: *See*—
Weschler, Joseph R., Engel, and Lagally. 2,947,658.

Lagios, Thomas L. Fish signal device. 2,947,105, 8–2–60, Cl. 43—17.

L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude: *See*—
Spire, Etienne. 2,947,527.

Laist, Frederick, to The Anaconda Co. Production of alumina. 2,947,604, 8–2–60, Cl. 23—143.

Laist, Frederick, to The Anaconda Co. Production of alumina. 2,947,605, 8–2–60, Cl. 23—143.

Lancaster, Nobye. Combination table and ironing board. 2,947,099, 8–2–60, Cl. 38—105.

Landeg, Peter E.: *See*—
Sawyer, Charles H. V., and Landeg. 2,947,443.

Landells, George, and W. Bragg, to The Bradford Dyers' Association Ltd. and Bleachers' Association Ltd. Ornamentation of sheet material. 2,947,058, 8–2–60, Cl. 26—69.

Langton, John B., to Technograph Printed Electronics Inc. Method of interconnecting pathway patterns of printed circuit products by chemical deposition. 2,947,064, 8–2–60, Cl. 29—155.5.

Lanston Monotype Machine Co.: *See*—
Patton, Wade H., and W. H. Patton, Jr., and Roth. 2,947,411.

Lányi, Béla: *See*—
Csordás, István, Lányi, Veress, and Vissy. 2,947,056.

Larew, John J., to General Electric Co. Pinhole detecting unit. 2,947,876, 8–2–60, Cl. 250—219.

Larson, Roland, 49% to W. R. Dees. Lawn sprinkler. 2,947,483, 8–2–60, Cl. 239—286.

Larsonneur, Louis C., to Nalco Chemical Co. Process of inhibiting corrosion of ferrous metals in contact with aqueous solutions of acids. 2,947,703, 8–2–60, Cl. 252—149.

Lash, Joseph F., to General Motors Corp. Automatic balancing installation. 2,947,175, 8–2–60, Cl. 73—464.

Lash, Joseph F., to General Motors Corp. Balancing organisation. 2,947,174, 8–2–60, Cl. 73—464.

Lauring, Edgar A.: *See*—
Hart, John C., and Lauring. 2,947,647.

Lazarus, Jerome B., to The Staver Co. Inc. Method of manufacturing laminated sheet metal for shim stock. 2,947,077, 8–2–60, Cl. 29—430.

Leading Engineering and Mfg. Co.: *See*—
Schuricht, Henry A., and Smith. 2,947,401.

Le Blond, R. K., Machine Tool Co.: *See*—
Killian, Cletus H. 2,947,928.

Leclercq, René, and R. Paquet, to Union Chimique Belge, S.A. Preparation of resins from diisocyanates. 2,947,714, 8–2–60, Cl. 260—24.

Lee, Robert J., to The American Oil Co. Separation of hydrocarbons by permeation membrane. 2,947,687, 8–2–60, Cl. 210—23.

Leggett, Archie L. Jet propelled aircraft. 2,947,496, 8–2–60, Cl. 244—12.

Lehmann, Heinz, to VEB Traktorenwerk Schonebeck. Adjustable mudguard. 2,947,375, 8–2–60, Cl. 180—75.

Lehn, John U., to Animal Trap Co. of America. Animal traps. 2,947,107, 8–2–60, Cl. 43—92.

Leimer, Albert, and K. Aumuller. Automatic operating device for doors, gates and like swingable elements. 2,947,534, 8–2–60, Cl. 268—65.

Lemm, Frederick L., and R. H. Jewens, to Information Systems, Inc. Alarm system. 2,947,980, 8–2–60, Cl. 340—213.

Lentz, Arthur. Vehicle spring-away garment hanger hook. 2,947,457, 8–2–60, Cl. 224—29.

Lentz, John J., J. H. Palmer, and D. Robbins, to International Business Machines Corp. Electronic calculator. 2,947,478, 8–2–60, Cl. 235—160.

Leshin, Richard, and J. G. Lichty, to The Goodyear Tire & Rubber Co. Lubricating oil additives comprising mixtures of polyvalent metal dithiocarbamates. 2,947,695, 8–2–60, Cl. 252—33.6.

Levenson, Harold S.: *See*—
Feldman, Jacob R., Levenson, and White. 2,947,634.

Lever Brothers Co.: *See*—
Ruff, Edgar E. 2,947,701.

Levin, John K., and W. G. Stewart, to Aerovox Corp. Code-teaching apparatus. 2,947,090, 8–2–60, Cl. 35—14.

Levine, Charles A., W. R. Skiens, and G. R. Moore; said Levine and Skiens assors. to United States of America, Atomic Energy Commission. Preparation of alkyl pyrophosphate extractants. 2,947,774, 8–2–60, Cl. 260—461.

Lewa G.m.b.H.: *See*—
Straub, Otto. 2,947,455.

Lewan, William. Fish hook removers. 2,947,106, 8–2–60, Cl. 43—53.5.

Lewis, Sumner D.: *See*—
Silverberg, Thomas R., and Lewis. 2,947,473.

Leyes, Charles E.: *See*—
Chow, Ho, and Leyes. 2,947,031.

Leyonmark, George F.: *See*—
Famely, Max, and Leyonmark. 2,947,626.

Libbey-Owens-Ford Glass Co.: *See*—
Harwig, Stephen H. 2,947,939.

Licentia Patent-Verwaltungs-G.m.b.H.: *See*—
Pohl, Franz A. 2,947,607.

Lichty, Joy G.: *See*—
Leshin, Richard, and Lichty. 2,947,695.

Liesse, Maurice. Device for regulating the pressure or insuring a constant pressure on windshield wiper blades. 2,947,019, 8–2–60, Cl. 15—250.2.

Lightfoot, Ralph B., to United Aircraft Corp. Means for dynamically balancing rotor blades. 2,947,365, 8–2–60, Cl. 170—159.

Lily-Tulip Cup Corp.: *See*—
Conklin, Charles S. 2,947,463.

Lincoln, Arnold J., to Engelhard Industries, Inc. Precious metal rupture disc. 2,947,623, 8–2–60, Cl. 75—165.

Linden, Albert E., to American Bosch Arma Corp. Readout device. 2,947,911, 8–2–60, Cl. 315—166.

Lindsay, Will H., Jr., to Borg-Warner Corp. Shaped charge unit for well perforators. 2,947,252, 8–2–60, Cl. 102—20.

Lione, Leonard V., to Butterworth System, Inc. Tank washing apparatus. 2,947,482, 8–2–60, Cl. 239—227.

Littell, F. J., Machine Co.: *See*—
Littell, Frederick M., and Budlong. 2,947,537.

Littell, Frederick M., and S. Budlong, to F. J. Littell Machine Co. Lock-up means for overriding drives. 2,947,537, 8–2–60, Cl. 271—2.4.

Little, Arthur D., Inc.: *See*—
Ennis, John L. 2,947,599.

Litton, Charles V., to Litton Industries, Inc. Delay line. 2,947,906, 8–2–60, Cl. 315—3.5.

Litton Industries, Inc.: *See*—
Litton, Charles V. 2,947,906.

Litton Industries of California: *See*—
Crapuchettes, Paul W. 2,947,908.

Löberg, Birger D. S. Device for wire drawing machines, rolling mills etc. 2,947,201, 8–2–60, Cl. 74—705.

Lonabaugh, E. E.: *See*—
Tryon, David H. 2,947,468.

Long, William J., to Minneapolis-Honeywell Regulator Co. Indication apparatus. 2,947,244, 8–2–60, Cl. 101—77.

Loofbourow, Robert L. Sealing method for underground cavities. 2,947,148, 8–2–60, Cl. 61—.5.

Lorenz, Anton: *See*—
Schliephacke, Fridtjof F. 2,947,352.

Losco, Giuseppe: *See*—
Fusco, Raffaello, Losco, and Perini. 2,947,662.

Losco, Giuseppe, and C. A. Peri, to Montecatini-Societa Generale per l'Industria Mineraria e Chimica. Phosphoric and thiophosphoric phenol esters containing an azo group and methods of preparing same. 2,947,663, 8–2–60, Cl. 167—30.

Loskill, Lawrence, and J. E. Martens, to The Anderson Co. Display device. 2,947,100, 8–2–60, Cl. 40—32.

Loughney, John J., to American Can Co. Method of producing can body blanks with spacing projections. 2,947,276, 8–2–60, Cl. 113—120.

Lovett, Gordon H., to Monsanto Chemical Co. Purification of acrylonitrile. 2,947,777, 8–2–60, Cl. 260—465.9.

Lowrie, Harman S., to G. D. Searle & Co. 4-aminoalkanoyl-2,3-dihydro-1,4-benzothiazines and process. 2,947,744, 8–2–60, Cl. 260—245.

Loseau, Homer A., to Koehler Mfg. Co. Focussing headpiece for miner's electric cap lamp. 2,947,851, 8–2–60, Cl. 240—41.25.

Loseau, Homer A., to Koehler Mfg. Co. Electric lamp structure with bulb adjustment. 2,947,852, 8–2–60, Cl. 240—41.25.

Loseau, Homer A., to Koehler Mfg. Co. Miner's lamp structure including rack and pinion type adjustment mechanism. 2,947,854, 8–2–60, Cl. 240—41.25.

Loseau, Homer A., and A. E. Mignone, to Koehler Mfg. Co. Miner's lamp structure with pinion and gear adjustment mechanism. 2,947,853, 8–2–60, Cl. 240—41.25.

Luerssen, Frank W.: *See*—
Tenenbaum, Michael, Hailey, and Luerssen. 2,947,622.

Lundberg, Lennart A., to American Cyanamid Co. Resin compositions. 2,947,736, 8–2–60, Cl. 260—88.3.

Lunkenheimer Co., The: *See*—
Wiedmann, Richard. 2,947,046.

Lynch, Charles S.: *See*—
Boyle, James M., Lynch, and Ready. 2,947,693.

Lynch, Donald W.: *See*—
Cooper, Kenneth K., and Lynch. 2,947,224.

Lyon, George A. Wheel cover. 2,947,572, 8–2–60, Cl. 301—37.

Lyon, George A. Wheel cover. 2,947,573, 8–2–60, Cl. 301—37.

Lyon, George A. Wheel cover. 2,947,574, 8–2–60, Cl. 301—37.

Lyon, George A. Wheel cover. 2,947,575, 8–2–60, Cl. 301—37.

Lyon, George A. Wheel cover. 2,947,576, 8–2–60, Cl. 301—37.

Maag Dr. R. Ltd.: *See*—
Zobrist, Leo. 2,947,111.

Macdonald, Angus A., to Motorola, Inc. Automatic control of coupling between input tuned circuits to vary attenuation and selectivity. 2,947,859, 8–2–60, Cl. 250—20.

MacIsaac, Gerard C. Fittings for automobile seats. 2,947,351, 8–2–60, Cl. 155—160.

Mack Trucks, Inc.: *See*—
Heine, Lawrence J. 2,947,392.

Mackay, James B.: *See*—
Henle, Robert A., and Mackay. 2,947,879.

Maddux, Duane C. Collapsible tube closure and sealing means. 2,947,448, 8–2–60, Cl. 222—92.

Madigan, Gerald C., and W. W. Middleton, to Bendix Aviation Corp. Process for tumble finishing. 2,947,124, 8–2–60, Cl. 51—282.

Magill, John J., and P. C. Hungerford, Jr., to Curtiss-Wright Corp. Steering mechanisms for boats, tractors and the like. 2,947,278, 8–2–60, Cl. 115—18.

Magnani, Arthur: *See*—
Julian, Percy L., Magnani, and Cochrane. 2,947,765.

Magnavox Co., The: *See*—
Asari, Eric, Gray, Malin, and Thompson. 2,947,588.

Maico Electronics, Inc.: *See*—
Matsuura, Harumi H. 2,947,822.

Maisel, Daniel S., and D. A. Guthrie, to Esso Research and Engineering Co. Styrene polymerization process. 2,947,676, 8–2–60, Cl. 204—154.

Male, Herman A.: *See*—
Carlsen, Leonard O., Krastel, and Male. 2,947,223.
Carlsen, Leonard O., and Male. 2,947,661.

Malin, Herman J.: *See*—
Asari, Eric, Gray, Malin, and Thompson. 2,947,588.

Mallory, P. R., & Co., Inc.: *See*—
Neely, Lloyd F. 2,947,828.

Manthey, Ernst J., to Ruhrgas Aktiengesellschaft. Method of making insoluble sulphur. 2,947,614, 8–2–60, Cl. 23—312.

Mapelsden, George C.: *See*—
Francis, Wallace R., Mapelsden, and Feher. 2,947,966.

Mapelsden, George C., and F. H. Cowe, to General Electric Co. Electrical termination. 2,947,968, 8–2–60, Cl. 339—176.

Maragliano, Domenico, and F. Denti. Producing shaped articles comprising isotactic polypropylene. 2,947,598, 8–2–60, Cl. 18—54.

Marcel, Henri. Cap seals and the like for the sealing and for the putting of a capsule on containers particularly on bottles. 2,947,432, 8–2–60, Cl. 215—41.

Marchant, Paul A., to Injection Molding Co. Method and apparatus for mating engaging fittings. 2,947,071, 8–2–60, Cl. 29—235.

Marks, Louis W., to General Electric Co. High voltage current transformer. 2,947,958, 8–2–60, Cl. 336—94.

Marner, Gene R., and E. M. Ringoen, to Collins Radio Co. Radiometric sextant stabilization system. 2,947,986, 8–2–60, Cl. 342—117.

Marsh, Glenn A.: *See*—
Schaschl, Edward, and Marsh. 2,947,679.

Martens, Jack E.: *See*—
Loskill, Lawrence, and Martens. 2,947,100.

Martin, Ben H.: *See*—
Wilson, Albert L. 2,947,450.

Martin Co., The: *See*—
Hammond, Wardlaw M., Jr. 2,947,495.
Wood, John A. 2,947,585.

Martin, Ilif H. Paper folding device. 2,947,536, 8–2–60, Cl. 270—79.

Martin, James C., and R. H. Hasek, to Eastman Kodak Co. Preparation of N,N-dibutyl aniline. 2,947,784, 8–2–60, Cl. 260—577.

Massey-Ferguson Inc.: *See*—
Clifford, Herbert B., and McNeil. 2,947,124.

Masters, Albert M. Mounting construction and the combination thereof with a board. 2,947,093, 8–2–60, Cl. 35—66.

Masters, John E.: *See*—
Belanger, William J., and Masters. 2,947,717.
Belanger, William J., Masters, and Hicks. 2,947,712.
Cooke, Harold G., Jr., and Masters. 2,947,711.

Masters, Robert W., to The Ohio State University Research Foundation. Traveling wave antenna. 2,947,988, 8–2–60, Cl. 343—742.

Matsuura, Harumi H., to Maico Electronics, Inc. Snap coupling between eyeglass temple plate and hearing aid housing. 2,947,822, 8–2–60, Cl. 179—107.

Mayer, Oscar, & Co., Inc.: *See*—
Paynter, William D., and Kielsmeier. 2,947,635.

Maynard, Fred B., and E. L. Steele, to Motorola, Inc. Transistor and method of making the same. 2,947,925, 8–2–60, Cl. 317—235.

McCallum, Neill H., Jr.: *See*—
Greene, Joseph F., and McCallum. 2,947,615.

McClusky, Stanley A. Mechanical water-removing device. 2,947,011, 8–2–60, Cl. 15—3.17.

McConnell, Richard L.: *See*—
Coover, Harry W., Jr., and McConnell. 2,947,775.

McCrary, Lola I. Liquid dribbler for toilet training. 2,947,021, 8–2–60, Cl. 35—17.

McCulloch Corp.: *See*—
Moore, Harold E., and Hazzard. 2,947,399.

McDougall, John A., to Ford Motor Co. Power window regulator. 2,947,580, 8–2–60, Cl. 296—44.

McFarland, Rolland, Jr., to Hills-McCanna Co. Valve diaphragm and method of making the same. 2,947,326, 8–2–60, Cl. 137—793.

McGrath, Raymund V., to Chicago Bridge & Iron Co. Flat bottom pressure container. 2,947,439, 8–2–60, Cl. 220—18.

McGraw-Edison Co.: *See*—
Howling, Dennis H. 2,947,844.

McGunigle, Richard D., to Gulton Industries, Inc. Piezoelectric ultrasonic transducer. 2,947,886, 8–2–60, Cl. 310—8.3.

McHargue, William L., to West Point Mfg. Co. Reed positioning mechanism for terry looms. 2,947,327, 8–2–60, Cl. 139—27.

McHenry, Warren B. Fence post clamp. 2,947,065, 8–2–60, Cl. 24—259.

McInnes, William, to The Power-Gas Corp. Ltd. Valves. 2,947,511, 8–2–60, Cl. 251—203.

McKay, Alexander S.: *See*—
Egan, Edmond F., Herzog, and McKay. 2,947,369.

McKay, Gordon B.: *See*—
Schwab, Fredric W., and McKay. 2,947,557.

McKee, William H.: *See*—
Johanson, Bengt J., and McKee. 2,947,864.

McKenzie, Louis P., to Apartment Furniture Co. Relaxer. 2,947,009, 8–2–60, Cl. 5—327.

McNeil, Donald H.: *See*—
Clifford, Herbert B., and McNeil. 2,947,134.

McPhee, Joseph R., Jr., to Haseltine Research, Inc. Chrominance-signal selection system. 2,947,807, 8–2–60, Cl. 178—5.4.

McWhirter, Eric M. S., to International Standard Electric Corp. Photographic control apparatus. 2,947,217, 8–2–60, Cl. 88—24.

Meadows, Stanley R.: *See*—
Valdettaro, Alarico A., and Meadows. 2,947,866.

Meagher, James L., Jr., and E. A. Baril, to Plainfield Patents Corp. Flexible web reeling and guiding mechanisms. 2,947,057, 8–2–60, Cl. 26—66.

Meipar, Inc.: *See*—
Hasel, Herbert K. 2,947,447.

Mendleson, Myron J., A. Doig, Jr., and R. E. Sprague, to The National Cash Register Co. Computer data merging system. 2,947,976, 8–2–60, Cl. 340—174.

Mercier, Jean. Pressure device. 2,947,326, 8–2–60, Cl. 138—30.

Merck & Co., Inc.: *See*—
Pfister, Karl, III, and Pessolano. 2,947,753.

Merck, E., Aktiengesellschaft, Darmstadt: *See*—
Seitz, Georg, and Kritzer. 2,947,751.

Meredith, Henry H., Jr.: *See*—
Cornell, Hampton G., and Meredith. 2,947,576.

Merriman Bros., Inc.: *See*—
Fox, William P. 2,947,856.

Merritt, Henry E., to Wharton Engineers (Elstree) Ltd. Apparatus for paying out and winding in cables, wires, ropes and the like. 2,947,494, 8–2–60, Cl. 242—156.

Merritt, John W. Radiation survey method. 2,947,870, 8–2–60, Cl. 250—83.

Metal Finishers, Inc.: *See*—
Andriesk, John A., and Gill. 2,947,674.

Metallgesellschaft, A.G.: *See*—
Schytil, Franz, and Krollmann. 2,947,353.

Mayer, Geo. J., Mfg. Co.: *See*—
Carter, Sidney T. 2,947,432.

Meyer, Henricus: *See*—
Brewers, Theo P. C., and Meyer. 2,947,539.

Michalsky, Peter. Clothes holder. 2,947,052, 8–2–60, Cl. 24—139.

Mick, George C.: *See*—
Hickey, Nathaniel C., Jr., and Mick. 2,947,233.

Microcon Equipment Corp.: *See*—
Fisher, Robert P. 2,947,580.

Middleton, Walter W.: *See*—
Madigan, Gerald C., and Middleton. 2,947,124.

Midwest Supply and Mfg. Co.: *See*—
Thiel, Otto. 2,947,122.

Mignone, Albert E.: *See*—
Lococo, Homer A., and Mignone. 2,947,853.

Milbank Mfg. Co., Inc.: *See*—
Waldrop, Robert F. 2,947,967.

Miller, Earle C. to Riley Stoker Corp. Steam temperature control. 2,947,289, 8–2–60, Cl. 122—479.

Miller, Howard C. to Morton Salt Co. Noncaking rock salt composition. 2,947,603, 8–2–60, Cl. 23—89.

Milne, David T. to American Viscose Corp. Stable cellulose ether compositions and method for producing the same. 2,947,645, 8–2–60, Cl. 106—170.

Mine Safety Appliances Co.: *See*—
Hobon, Edward J., and Richard. 2,947,279.

Minneapolis-Honeywell Regulator Co.: *See*—
Beck, Kenneth H. 2,947,875.
Beck, Kenneth H. 2,947,916.
Long, William J. 2,947,244.
Patchell, Thomas A. 2,947,915.
Pinckaers, Balthasar H. 2,947,950.
Rohmann, Charles P. 2,947,109.
Scope, Sol. 2,947,834.
Vocht, Martin R. 2,947,435.

Minnesota Mining & Mfg. Co.: *See*—
Johnson, Wayne R. 2,947,864.

Minnesota and Ontario Paper Co.: *See*—
Hart, John C., and Lauring. 2,947,647.

Mishkin, Sidney, to Bac-A-Brand Products, Inc. Covered button. 2,947,049, 8–2–60, Cl. 24—104.

Mitchell, Doren: *See*—
Baker, George H., Mitchell, and Reihing. 2,947,815.

Mitchell, George A. Compensating film warpage in projectors. 2,947,215, 8–2–60, Cl. 88—17.

Miyachi, Kiyoichi. Sandal. 2,947,093, 8–2–60, Cl. 36—11.5.

Mobay Chemical Co.: *See*—
Hoppe, Peter. 2,947,307.

Moe, William West, and J. G. Jordan, to Time, Inc. Four color reproducing method and apparatus. 2,947,805, 8–2–60, Cl. 178—5.2.

Moelter, Gregory M., to Celanese Corp. of America. Treatment of filamentary materials. 2,947,595, 8–2–60, Cl. 8—151.2.

Mohaupt, Henry H., to Welex, Inc. Shaped charge assembly and gun. 2,947,250, 8–2–60, Cl. 102—20.

Mollart Engineering Co. Ltd., The: *See*—
Harris, Stanley E. 2,947,157.

Monroe Calculating Machine Co.: *See*—
Casey, Robert F., and Gibbon. 2,947,943.
Gang, Herman. 2,947,476.
Gang, Herman. 2,947,477.

Monsanto Chemical Co.: *See*—
Hardwicke, Norman L. 2,947,738.
Lovett, Gordon H. 2,947,777.
Queeny, Edgar M. 2,947,269.

Montalvo-Calderon, Miguel. Torque converter. 2,947,202, 8–2–60, Cl. 74—731.

Montecatini, Societa Generale per l'Industria: *See*—
Fusco, Raffaelio, Lococo, and Perini. 2,947,662.
Lococo, Giuseppe, and Peri. 2,947,663.

Moody, Charles W., J. R. Neff, W. F. M. Gray, and C. J. Kettler, to General Electric Co. Method of making a joint in a wound magnetic core. 2,947,065, 8–2–60, Cl. 29—155.57.

Moore, Edwin L., to General Motors Corp. Battery hold-down adapter. 2,947,374, 8–2–60, Cl. 180—68.5.

Moore, George R.: *See*—
Levine, Charles A., Skiens, and Moore. 2,947,774.

Moore, Harold E., and H. I. Hazzard, to McCulloch Corp. Centrifugally actuated friction clutch. 2,947,399, 8–2–60, Cl. 192—105.

Moore, Harry O., to Silabert Corp. Electrically operable stapler. 2,947,002, 8–2–60, Cl. 1—3.

Moore, Harry W. Armature winding and transfer machine. 2,947,427, 8–2–60, Cl. 214—1.

Moore, Victor C.: *See*—
Deidge, Jack R., and Moore. 2,947,199.

Moran, Ronald W.: *See*—
Van Dorn, Horace B., and Moran. 2,947,196.
Van Dorn, Horace B., and Moran. 2,947,581.

Morgan, Joseph A.: *See*—
Choate, William E., and Morgan. 2,947,145.

Morong, William H., Jr., to General Electric Co. Light load device for induction watthour meter. 2,947,942, 8–2–60, Cl. 324—137.

Morris, John M.: *See*—
Carrier, Robert M., Jr., and Morris. 2,947,181.
Carrier, Robert M., Jr., and Morris. 2,947,183.

Morrison, Willard L., to The Union Stock Yard and Transit Co. of Chicago. Production, fixation and use of nitrogenous compounds. 2,947,112, 8–2–60, Cl. 47—58.

Morse Instrument Co., The: *See*—
Waner, Donald W. 2,947,191.

Mortenson, Victor A., D. E. Weston, and M. J. Reilly, to Allis-Chalmers Mfg. Co. Arc chute having cooling and deionizing elements arranged at the exhaust end. 2,947,839, 8–2–60, Cl. 200—147.

Morton Salt Co.: *See*—
Miller, Howard C. 2,947,603.

Morway, Arnold J.: *See*—
Wasson, James I., and Morway. 2,947,699.

Motorola, Inc.: *See*—
Macdonald, Angus A. 2,947,859.
Maynard, Fred E., and Steele. 2,947,925.
Pardue, Turner E. 2,947,923.
Pardue, Turner E. 2,947,924.
Parmet, Bernard S., and Krakora. 2,947,812.

Muller, Heinz. Electrical fencing equipment. 2,947,585, 8–2–60, Cl. 307—132.

Müller, Wilhelm, J. Casper, R. Haupt, and J. Heinen, to Farbenfabriken Bayer Aktiengesellschaft. Process for regenerating catalysts used in the synthesis of acrylonitrile. 2,947,706, 8–2–60, Cl. 252—416.

Mundy, Lloyd W.: *See*—
Heer, Ralph W., and Mundy. 2,947,230.

Murch, Robert M., to Dow Corning Corp. Electrical apparatus employing dielectric fluids. 2,947,926, 8–2–60, Cl. 317—258.

Murphy, George W., to United States of America, Interior. Process and apparatus for the demineralisation of saline water. 2,947,688, 8–2–60, Cl. 210—23.

Murphy, Robert D., and P. C. Jaason, to Rockwell Manufacturing Co. Parking meters. 2,947,403, 8–2–60, Cl. 194—20.

Murray, Donald A., and J. H. Whitby, to International Harvester Co. Bale turner. 2,947,400, 8–2–60, Cl. 193—5.

NSU Werke Aktiengesellschaft: *See*—
Froede, Walter G. 2,947,290.

Nachtman, John S. Aluminum base powder products. 2,947,068, 8–2–60, Cl. 29—182.5.

Naiman, Mark, and H. Schwartz, to Sperry Rand Corp. High frequency magnetic transducers. 2,947,592, 8–2–60, Cl. 346—74.

Nakamura, Michiyuki, to The Regents of the University of California. Fast multivibrator circuit. 2,947,949, 8–2–60, Cl. 331—144.

Nalco Chemical Co.: *See*—
Larsonneur, Louis C. 2,947,708.

Naras Research Inc.: *See*—
Schwartz, Nathan B. 2,947,855.

National Cash Register Co., The: *See*—
Mendleson, Myron J., Doig, and Sprague. 2,947,976.
Rauch, Konrad, Jorgensen, Neubauer, Ferrin, Kneisley, Stork, and Harsch. 2,947,475.

National Research Development Corp.: *See*—
Hoffman, George R. and Hayes. 2,947,912.
Spalding, Dudley B. 2,947,143.

National Tank Co.: *See*—
Aubrey, Herman S. 2,947,379.

Navellier, Louis E. Collapsible table. 2,947,587, 8–2–60, Cl. 311—79.

Nazzewski, Mathew, to Sprague Electric Co. Glass sealing apparatus. 2,947,113, 8–2–60, Cl. 49—1.

Nectoux, Henri, to Societe des Forges et Ateliers du Creusot. Movable panel. 2,947,354, 8–2–60, Cl. 160—91.

Nederlandse Organisatie Voor Toegepast-Natuurwetenschappelijk Onderzoek ten Behoeve Van De Rijksverdediging (The National Defence Research Council-T.N.O.): *See*—
Van Heel, Abraham C. S., Beernink, and Raterink. 2,947,219.

Neely, Lloyd F., to P. R. Mallory & Co. Inc. Ingition breaker. 2,947,828, 8–2–60, Cl. 200—30.

Neff, John R.: *See*—
Moody, Charles W., Neff, Gray, and Kettler. 2,947,065.

Negley, Mervin E.: *See*—
Dodge, Nathaniel S., Jr., Hohl, Jones, and Negley. 2,947,409.

Nelson, Beverlee: *See*—
Tryon, David H. 2,947,468.

Nelson, John W., to Sinclair Refining Co. Calcium base grease containing a calcium salt of an amidic acid. 2,947,696, 8–2–60, Cl. 252—33.6.

Nelson, Milton A., to Thomas A. Nelson. Gardea tool. 2,947,370, 8–2–60, Cl. 172—375.

Nelson, Thomas A.: *See*—
Nelson, Milton A. 2,947,370.

Neubauer, Gilbert A.: *See*—
Rauch, Konrad, Jorgensen, Neubauer, Ferrin, Kneisley, Stork, and Harsch. 2,947,475.

Neuschotz, Robert. Insert applying tool. 2,947,208, 8–2–60, Cl. 81—53.

Newell, William H., to Sperry-Rand Corp., Ford Instrument Co. Division. Servo drive system with dynamic error elimination. 2,947,982, 8–2–60, Cl. 343—7.

Newland, Gordon C., and J. W. Tambtyn, to Eastman Kodak Co. Poly-a-olefin compositions containing 4-alkoxy-2-hydroxybenzo-phenones and N,N'-diphenyl-p-phenylenediamine. 2,947,721, 8–2–60, Cl. 260—45.9.

Newman, Clarence M., to Hughes Tool Co. Nozzle puller. 2,947,074, 8–2–60, Cl. 29—280.

Newton, Donald O., to St. Regis Paper Co. Handle bags. 2,947,464, 8–2–60, Cl. 229—54.

Nichols, Frank D. Hydraulic hoist. 2,947,425, 8–2–60, Cl. 212—35.

Nicholson, John P., to United States of America, Navy. Cone valve. 2,947,284, 8–2–60, Cl. 121—38.

Nickel, Eberhard, to Kohlenscheidungs-Gesellschaft, m.b.H. Radiant tubular heat exchanger. 2,947,353, 8–2–60, Cl. 122—478.

Noe, Richard T., to Ford Motor Co. Motor vehicle body telescopic roof construction. 2,947,570, 8–2–60, Cl. 296—117.

Nolden, John L., and I. J. Swarts, to said Swarts assgnr. to said Nolden. Hydraulic bumper jack. 2,947,518, 8–2–60, Cl. 254—2.

Nordmark, Walter E.: *See*—
Hoven, Alfred C., and Nordmark. 2,947,586.

Norris, Robert C., to Pacific Car and Foundry Co. Automotive vehicle with tilting over-engine cab. 2,947,376, 8–2–60, Cl. 180—89.

North American Aviation, Inc.: *See*—
Bower, John L. 2,947,929.
Gimera, Ralph J., Weimer, and Welch. 2,947,673.
Holcomb, Galen A. 2,947,502.

North American Philips Co., Inc.: *See*—
Bloem, Aldert T. 2,947,153.
Finck, Johan C. J. 2,947,799.
Verhoeff, Jacob, and Van Booyen. 2,947,195.

Northcote, Reginald D.: *See*—
Tatem, John A., and Northcote. 2,947,268.

Norton Co.: *See*—
Coes, Loring, Jr. 2,947,121.
Coes, Loring, Jr., and Champagne. 2,947,616.
Ervin, Gay, Jr., and Ueltz. 2,947,672.

Norton, James L., to Bristol Aero-Engines Ltd. Ram-jet mounting structure. 2,947,140, 8–2–60, Cl. 60—35.6.

Nugent, Robert F., to Bendix Aviation Corp. Fuel control system for gas turbine engines. 2,947,142, 8–2–60, Cl. 60—39.28.

Nummy, William R.: *See*—
Holly, Earl D., and Nummy. 2,947,730.

Nummy, William R., to The Dow Chemical Co. Vinylbenzyl thioesters of carboxylic acids and polymers thereof. 2,947,731, 8–2–60, Cl. 260—79.7.

Oades, Jack L., to C. L. Shinn. Portable collapsible stretcher. 2,947,007, 8–2–60, Cl. 5—82.

Oakley, Sterling A. Sheathed heating element and process of making the same. 2,947,963, 8–2–60, Cl. 338—278.

O'Brien, Richard C., to Harris-Intertype Corp. Sheet detector for printing presses. 2,947,917, 8–2–60, Cl. 317—149.

O'Connor, David E.: *See*—
Cane, Donald M., O'Connor, and Richardson. 2,947,541.

O'Connor, Philip E., and S. J. Stomiany, to American-Marietta Co. Compression sponge mop. 2,947,014, 8–2–60, Cl. 15—119.

O'Day, Cortland N. Air diffusers. 2,947,227, 8–2–60, Cl. 98—40.

O'Day, Cortland N. Air distributing outlet. 2,947,228, 8–2–60, Cl. 98—40.

Oddie, Frederick B., to Rolls-Royce Ltd. Optical apparatus for checking bore-cross-sections. 2,947,213, 8–2–60, Cl. 88—14.

Oddson, Elmer H. Coupling mechanism for vehicle. 2,947,050, 8–2–60, Cl. 280—477.

Odom, Prentice, to Sun Oil Co. Automatic tank switching system. 2,947,316, 8–2–60, Cl. 137—122.

Offensend, Glen W.: *See*—
Hayden, James F., and Offensend. 2,947,216.

Ohio State University Research Foundation, The: *See*—
Masters, Robert W. 2,947,948.

Olin Mathieson Chemical Corp.: *See*—
Chiras, Stanley J. 2,947,776.
Griffin, Donald N., and Orr. 2,947,221.

Olmsted, Michael P., to Smith Kline & French Laboratories. New preparation of substituted penoxazines and intermediates therefor. 2,947,748, 8–2–60, Cl. 260—244.

Olsen, Charles. Scaffold ladder clamp. 2,947,506, 8–2–60, Cl. 287—54.

Olson, Merten E., to The Youngstown Sheet and Tube Co. Variable speed transmission. 2,947,194, 8–2–60, Cl. 74—69.

Olson, William N., to International Harvester Co. Multi-row planter. 2,947,272, 8–2–60, Cl. 172—424.

Olsson, Erik, to Aktiebolaget Electrolux. Combined door handle and latch. 2,947,559, 8–2–60, Cl. 292—128.

Olympia Werke AG: *See*—
Hebels, Ernst, and Beyer. 2,947,404.

O'Maley, James B.: *See*—
Carbonara, Victor E., Schweiler, and O'Maley. 2,947,572.

Omega Aircraft Corp.: *See*—
Sawyer, Bernard W. 2,947,497.

Orelind, John R., and R. M. Clark, to International Harvester Co. Beet harvester clod crusher. 2,947,366, 8–2–60, Cl. 171—116.

Orelind, John R., and O. E. Johnson, to International Harvester Co. Draft control for implements. 2,947,367, 8–2–60, Cl. 172—239.

Oros, John. Rotary percussive power tool. 2,947,188, 8–2–60, Cl. 74—22.

Orr, Clyde, Jr., to Georgia Tech Research Institute. Cascade impactor for sampling smokes, dusts and fumes. 2,947,164, 8–2–60, Cl. 73—28.

Orr, Clyde, Jr., to The Georgia Tech Research Institute. Continuous thermal precipitator. 2,947,382, 8–2–60, Cl. 183—22.

Orr, John W.: *See*—
Griffin, Donald N., and Orr. 2,947,221.

Orr & Sembower Inc.: *See*—
Tatem, John A., and Northcote. 2,947,268.

Otavka, Michael A., to United States of America, Atomic Energy Commission. Means and method for producing a vacuum. 2,947,466, 8–2–60, Cl. 230—69.

Otis Engineering Corp.: *See*—
Boyle, William G. 2,947,066.

Outboard Marine Corp.: *See*—
Irgens, Finn T. 2,947,351.
Shaw, Gerald J. 2,947,192.
Shimanckas, William J. 2,947,194.
Stevens, Clifford B. 2,947,277.
Trapp, Robert L. 2,947,800.

Owens-Corning Fiberglas Corp.: *See*—
Russell, Robert G. 2,947,489.
Slayter, Games. 2,947,027.
Slayter, Games. 2,947,028.

Owens-Illinois Glass Co.: *See*—
Greene, Joseph F., and Hinson. 2,947,117.
Greene, Joseph F., and McCallum. 2,947,916.
Stark, Charles H. 2,947,297.

Oxley, Le Roy V., and C. M. Blythe, to Robotyper Corp. Convertible valve structure. 2,947,320, 8–2–60, Cl. 137—271.

P. D. & P. Processing Inc.: *See*—
Hobson, Frank E. 2,947,670.

Pacific Car and Foundry Co.: *See*—
Norris, Robert C. 2,947,376.

Pactic Mercury Television Mfg. Corp.: *See*—
Simons, Gerald F. 2,947,914.

Package Homes Mfg., Inc.: *See*—
Schulkin, David. 2,947,040.

Palmer, James F., and R. B. Turner, to Atomic Energy of Canada Ltd. Vapour leak detector. 2,947,166, 8–2–60, Cl. 73—40.7.

Palmer, John H.: *See*—
Lantz, John J., Palmer, and Robbins. 2,947,478.

Palmer, Robert T., to Westinghouse Electric Corp. Combined axial air gap motor and gas compressor. 2,947,467, 8–2–60, Cl. 230—117.

Papo, Maurice: *See*—
Batrems, Eugeni, and Papo. 2,947,965.

Paquet, René: *See*—
Leclercq, René, and Paquet. 2,947,714.

Pardue, Turner E., to Motorola, Inc. Transistor process and product. 2,947,923, 8–2–60, Cl. 317—235.

Pardue, Turner E., to Motorola, Inc. Semiconductor devices and methods of making the same. 2,947,924, 8–2–60, Cl. 317—236.

Parish, Richard L., Jr., and C. R. Bee, to American Flange & Mfg. Co., Inc. Closure and reversible spout assemblies for containers. 2,947,450, 8–2–60, Cl. 222—539.

Park, Rodney F., and R. D. Thomas, to Cutler-Hammer, Inc. Electric switch. 2,947,840, 8–2–60, Cl. 200—160.

Parker, Humphrey F., and H. E. Robins, to Columbus McKinnon Chain Corp. Chain powered conveyors. 2,947,264, 8–2–60, Cl. 104—172.

Parmet, Bernard S., and J. J. Krakora, Jr., to Motorola, Inc. Remote control system. 2,947,812, 8–2–60, Cl. 178—7.5.

Parrish, Walter A., Jr.: *See*—
Shallenberg, Robert L., and Parrish. 2,947,290.

Parske, Charles A., and K. A. Riedel, to Kearney & Trecker Corp. Twin screw elevating mechanism. 2,947,227, 8–2–60, Cl. 90—58.

Patchell, Thomas A., to Minneapolis-Honeywell Regulator Co. Electrical control apparatus. 2,947,915, 8–2–60, Cl. 317—146.

Patterson, Henry B., to Bryant Chucking Grinder Co. Art of dressing grinding wheels. 2,947,302, 8–2–60, Cl. 125—11.

Patton, Wade H., W. H. Patton, Jr., and A. Roth, to Lanston Monotype Machine Co. Type casting and composing machines. 2,947,411, 8–2–60, Cl. 199—61.

Patton, Wade H., Jr.: *See*—
Patton, Wade H. and W. H. Patton, Jr., and Roth. 2,947,411.

Payne, George B., to Shell Oil Co. Epoxidation of aldehydes. 2,947,761, 8–2–60, Cl. 260—348.5.

Payster, William D., and E. W. Kielmeier, to Oscar Mayer & Co., Inc. Method of preparing puffed skin products. 2,947,635, 8–2–60, Cl. 99—107.

Pearce, James G.: *See*—
Brightman, Barrie, Pearce, and Tubinis. 2,947,819.

Peckham, Wesley L., to L. B. Smith Aircraft Corp. Arm rest and concealed table unit. 2,947,348, 8–2–60, Cl. 155—128.

Pelino, William M.: *See*—
Gallagher, Cornelius A., and Pelino. 2,947,807.

Pell, Morris W.: *See*—
Arridge, Robert G. C., Clough, and Pell. 2,947,138.

Pelletier, Roger. Electrical switch. 2,947,826, 8–2–60, Cl. 200—15.

Peltola, Veikko K., to Illinois Testing Laboratories, Inc. Surface contact pyrometers. 2,947,171, 8–2–60, Cl. 73—351.

Pemco Wheel Co.: *See*—
Black, John W. 2,947,021.

Peppercorn, Howard N., to The General Tire and Rubber Co. Machine for assembling resilient bushings of the rubber insert type. 2,947,070, 8–2–60, Cl. 29—235.

Peri, Cesare A.: *See*—
Lococo, Giuseppe, and Peri. 2,947,663.

Perini, Mario: *See*—
Fusco, Raffaelio, Lococo, and Perini. 2,947,662.

Perkel, Harold: *See*—
Ford, John R., Kruger, and Perkel. 2,947,889.

Peris, Martin R., to The Singer Mfg. Co. Supporting bases for cylinder bed machines. 2,947,271, 8–2–60, Cl. 112—260.

Perry, John R., to General Electric Co. Accelerometers. 2,947,176, 8–2–60, Cl. 73—517.

Perry, William M., and G. G. Stoner, to General Aniline & Film Corp. Treatment of vegetable beverages. 2,947,633, 8–2–60, Cl. 99—48.

Pessina, Raffaele: *See*—
Justoni, Romeo, and Pessina. 2,947,787.

Pessolano, Arsenio A.: *See*—
Pfister, Karl, III, and Pessolano. 2,947,753.

Pet Milk Co.: *See*—
Baumann, Marie C. 2,947,466.
Peteri, Robert, to Compagnie de Saint-Gobain. Extraction of cellulose from vegetable matter. 2,947,697, 8-2-60, Cl. 162—76.
Peterson, Kenneth R.: *See*—
Walters, Charles S., and Peterson. 2,947,110.
Peterson, Raymond A., to United Geophysical Corp. Well-shooting system. 2,947,377, 8-2-60, Cl. 181—5.
Petropoulos, John C., and A. T. Cocchi, to American Cyanamid Co. 2,2-di (p-tolyl) propane preparation. 2,947,794, 8-2-60, Cl. 260—649.
Pettigrew, David D., and D. E. Bell, to Rockwell Mfg. Co. Guards for machine tools. 2,947,187, 8-2-60, Cl. 74—811.
Pfenningberg, Josef, to Josef Pfenningberg & Co. Drawing devices operating with an upper belt. 2,947,038, 8-2-60, Cl. 19—131.
Pfenningberg, Josef, & Co.: *See*—
Pfenningberg, Josef. 2,947,038.
Pfile, Grace V. Garment protector. 2,947,004, 8-2-60, Cl. 2—50.
Pfister, Karl, III., and A. A. Pesolano, to Merck & Co., Inc. N-(β-phenylethyl)-4-phenyl-4-carboalkoxypiperidines and processes of preparing them. 2,947,753, 8-2-60, Cl. 260—294.3.
Pfizer, Chas., & Co., Inc.: *See*—
Huang, Hsing T. 2,947,666.
Julian, Percy L., Magnani, and Cochrane. 2,947,765.
Pflumm, Heinz R., and F. P. Rogers, to Texas Instruments Inc. Solid-phase bonding of metals. 2,947,078, 8-2-60, Cl. 29—474.1.
Phelan, Louis A. M. Automatic feed for ice cream and the like freezers. 2,947,155, 8-2-60, Cl. 62—342.
Philco Corp.: *See*—
Schnable, George L. 2,947,079.
Phillips, Cecil, Jr., to Esso Research and Engineering Co. Process for the prevention of corrosion of petroleum refining equipment. 2,947,686, 8-2-60, Cl. 208—340.
Phillips Petroleum Co.: *See*—
Grayson, James T. 2,947,694.
Johnson, Paul H., and Eberline. 2,947,684.
Kittredge, George D. 2,947,138.
Photo Ceramics Corp.: *See*—
Famely, Max, and Leyonmark. 2,947,626.
Pickles, Sidney, and E. S. Tice; said Tice assor. to said Pickles. Antenna deicing. 2,947,841, 8-2-60, Cl. 219—10.79.
Pierce, John R., to Bell Telephone Laboratories, Inc. Low noise velocity modulation apparatus. 2,947,906, 8-2-60, Cl. 315—3.
Pierce, Lee D.: *See*—
Frans, Henry H., and Pierce. 2,947,123.
Pierce Metal Products, Inc.: *See*—
Tower, Pierce. 2,947,566.
Pietsch, William C., to Bucyrus Erie Co. Fluid clutch control for clamshell excavators. 2,947,397, 8-2-60, Cl. 192—57.
Pillsbury Co., The: *See*—
Turpin, Charles H. 2,947,461.
Pinckaers, Balthasar H., to Minneapolis-Honeywell Regulator Co. Semiconductor pulse width modulator. 2,947,950, 8-2-60, Cl. 332—9.
Pine, Arthur J., and J. F. Wagner. Universal power tool holder for use with expansible self-feeding struts. 2,947,204, 8-2-60, Cl. 77—7.
Pinto, Julian B.: *See*—
Schwartz, Herbert, and Pinto. 2,947,529.
Pitney-Bowes, Inc.: *See*—
Hazelton, Henry S., Jr. 2,947,406.
Pitt, Harold, to Stauffer Chemical Co. Manufacture of aromatic thiophenols. 2,947,788, 8-2-60, Cl. 260—606.
Plainfield Patents Corp.: *See*—
Meagher, James L., Jr., and Baril. 2,947,057.
Pneu-Hy Co.: *See*—
Smith, Samuel V. 2,947,144.
Pohl, Franz A., to Licentia Patent-Verwaltungs-G.m.b.H. Method of purifying silicon bromides contaminated with boron bromide and silicon iodides contaminated with boron iodide. 2,947,607, 8-2-60, Cl. 23—205.
Polsella, Louis C., A. E. Snowdon, and W. P. Carpenter, to The Superior Electric Co. Transformer coil construction. 2,947,959, 8-2-60, Cl. 336—196.
Poor & Co.: *See*—
Heer, Ralph W., and Mundy. 2,947,230.
Post, Richard F., to United States of America, Atomic Energy Commission. Magnetic grid. 2,947,902, 8-2-60, Cl. 313—167.
Potter, Linn E., to Syracuse Special Machine Co., Inc. Work piece transfer mechanism. 2,947,445, 8-2-60, Cl. 221—210.
Potts, James E.: *See*—
Rugg, Frank M., and Potts. 2,947,718.
Rugg, Frank M., and Potts. 2,947,719.
Power-Gas Corp. Ltd., The: *See*—
McInnis, William. 2,947,511.
Power Jets (Research and Development) Ltd.: *See*—
Flint, John A. 2,947,501.
Poyle, Michael C., and R. L. Whittle, to International Telephone and Telegraph Corp. Data processing system. 2,947,978, 8-2-60, Cl. 340—174.
Prapas, Aristotle G.: *See*—
Rudner, Bernard, and Prapas. 2,947,752.
Prather, Edwin E., to Bendix Aviation Corp. Overdrive control mechanism. 2,947,192, 8-2-60, Cl. 74—472.
Pratt, Read and Co., Inc.: *See*—
Wood, Orville T. 2,947,849.
Precision Valve Corp.: *See*—
Focht, John E. 2,947,126.
Focht, John E. 2,947,904.
Preformed Line Products Co.: *See*—
Ruhlman, Jon R. 2,947,504.
Pregent, Thomas W., to International Harvester Co. Cushioning pad for packaged articles. 2,947,459, 8-2-60, Cl. 229—14.
Preiser, Herman S. Multiple disc anode. 2,947,680, 8-2-60, Cl. 204—197.
Premier Cartes Co.: *See*—
Fobiano, Frank E. 2,947,637.
Price, Earl R., to Bendix Aviation Corp. Power operated braking system. 2,947,287, 8-2-60, Cl. 188—152.
Procter & Gamble Co., The: *See*—
Cookie, Ronald. 2,947,702.
Pruett, Roy L., to Union Carbide Corp. Bis(acylcyclopentadienyl)iron enol esters. 2,947,769, 8-2-60, Cl. 260—439.
Pryde, David R.: *See*—
Camilli, Guglielmo, and Pryde. 2,947,798.
Puckett, Lawrence P., Jr. Anchored tie-down device for rafters. 2,947,119, 8-2-60, Cl. 50—436.
Purcell, Joseph J.: *See*—
Henry, William F., and Purcell. 2,947,591.
Pure Oil Co., The: *See*—
Bernard, George G. 2,947,860.
Hennig, Harvey. 2,947,688.
Schaschl, Edward, and Marsh. 2,947,679.
Purolator Products, Inc.: *See*—
Cook, Donald J., and Schoemer. 2,947,381.
Quayle, George F., to The Yale & Towne Mfg. Co. Rubber suspended articulating axle for industrial truck. 2,947,549, 8-2-60, Cl. 280—112.
Queeny, Edgar M., to Monsanto Chemical Co. Method of fertilizing, using yellow phosphorus. 2,947,269, 8-2-60, Cl. 111—90.
Quist, Harold A., to Sun Oil Co. Pressure operated liquid level measuring device. 2,947,170, 8-2-60, Cl. 73—31.
Rockwell Mfg. Co.: *See*—
Pettigrew, David D., and Bell. 2,947,197.
Rabin, Charles. Arm fins for underwater swimming. 2,947,010, 8-2-60, Cl. 9—307.
Radio Corp. of America: *See*—
Ford, John R., Kruger, and Perkel. 2,947,989.
Glowacki, George V. 2,947,642.
Radzinsky, Harry: *See*—
Crockford, Joseph R. 2,947,098.
Rahn Granite Surface Plate Co.: *See*—
Rahn, Rudolph J. 2,947,083.
Rahn, Rudolph J., to Rahn Granite Surface Plate Co. Surface plate calibration. 2,947,083, 8-2-60, Cl. 33—1.
Raterink, Hendrik J.: *See*—
Van Heel, Abraham C. S., Beernink, and Raterink. 2,947,519.
Rauch, Konrad, C. N. Jorgensen, G. A. Neubauer, K. S. Ferrin, R. E. Kneisley, E. S. Stork, and W. E. Harsch, to The National Cash Register Co. Accounting machines. 2,947,475, 8-2-60, Cl. 235—61.6.
Ray, Watson A., to Texaco Inc. Stabilized sorptive aluminosilicate particles and process therefor. 2,947,709, 8-2-60, Cl. 252—455.
Ray, William A., to General Controls Co. Solenoid operated gas valve with solenoid retarding means. 2,947,510, 8-2-60, Cl. 251—54.
Ray, William A., to General Controls Co. Combined relay and high inductance coil. 2,947,836, 8-2-60, Cl. 200—87.
Raybould, Delmar H. Manure spreader for dump truck. 2,947,543, 8-2-60, Cl. 275—5.
Rayburn, Charles C., H. A. Schmidt, and W. N. Knutsen, to Illinois Tool Works. Pattern printer. 2,947,247, 8-2-60, Cl. 101—126.
Raymond, Francois H.: *See*—
Bafour, Georges P., Blanchard, and Raymond. 2,947,857.
Reed, Chester L., and W. O. Hellman, to Esso Research and Engineering Co. Process for producing high quality fuels from crude residua. 2,947,681, 8-2-60, Cl. 208—58.
Read, Robert S., to Kelvin & Hughes Ltd. Gyroscopes embodying mercury switches. 2,947,177, 8-2-60, Cl. 74—5.6.
Ready, Harold R.: *See*—
Boyle, James M., Lynch, and Ready. 2,947,698.
Redington, Rowland W.: *See*—
Saum, George A., and Redington. 2,947,896.
Reed, William A.: *See*—
Whitehouse, Irving P., and Reed. 2,947,620.
Reichhold Chemicals, Inc.: *See*—
Shelton, Frederic J., Hodgins, and Allyn. 2,947,790.
Reid, Robert J.: *See*—
Werner, Byron H., and Reid. 2,947,783.
Reid, Robert J., and B. H. Werner, to The Firestone Tire & Rubber Co. Epoxide cure of rubbery copolymer which contains a reactive carboxyl group. 2,947,859, 8-2-60, Cl. 152—330.
Reiling, John V.: *See*—
Baker, George H., Mitchell, and Reiling. 2,947,815.
Reilly, James T. Lighted toilet. 2,947,850, 8-2-60, Cl. 240—2.
Reilly, Martin J.: *See*—
Mortenson, Victor A., Weston, and Reilly. 2,947,839.
Reimers, William G. Drawbar roller. 2,947,551, 8-2-60, Cl. 280—499.
Reindl, Harold J., to General Motors Corp. Manufacturing apparatus and method of operating the same. 2,947,281, 8-2-60, Cl. 118—632.
Reisner, David B.: *See*—
Scudi, John V., Reisner, and Childress. 2,947,754.
Scudi, John V., Reisner, Childress, and Walter. 2,947,755.
Relis, Matthew J., and W. Yuni, to Burroughs Corp. Time domain filter. 2,947,945, 8-2-60, Cl. 329—112.
Republic Mfg. Co.: *See*—
Christensen, Norman B. 2,947,822.
Christensen, Norman B. 2,947,552.
Republic Steel Corp.: *See*—
Whitehouse, Irving P., and Reed. 2,947,620.
Research Products Corp.: *See*—
Frohmader, Stanley H., Rowe, and Selvaag. 2,947,452.

Reynolds, Donald C., and S. J. Cyzsak, to United States of America, Air Force. Growth of crystals. 2,947,613, 8-2-60, Cl. 23—294.
Reynolds, Richard W., and S. Sotos. Apparatus for sorting articles. 2,947,417, 8-2-60, Cl. 209—121.
Rice Barton Corp.: *See*—
Curtenius, Frederick B. 2,947,428.
Rice, Leonard M.: *See*—
Geschickter, Charles F., and Rice. 2,947,664.
Rice, Russell E., to International Harvester Co. Implement control apparatus. 2,947,371, 8-2-60, Cl. 172—605.
Rich, Stanley R., to The General Ultrasonics Co. Electromechanical transducer system. 2,947,889, 8-2-60, Cl. 310—26.
Richard, James A.: *See*—
Hohos, Edward J., and Richard. 2,947,279.
Richardson, Donald: *See*—
Came, Donald M., O'Connor, and Richardson. 2,947,541.
Richter, Kurt: *See*—
Brotz, August, Richter, Wachtendorf, and Heuer. 2,947,597.
Richter, Orlando W., and J. C. Sugg, Jr. Test set for checking relays. 2,947,937, 8-2-60, Cl. 324—28.
Riddell, William, to Burgess Products Co. Ltd. Snap action mechanism. 2,947,831, 8-2-60, Cl. 200—67.
Riedel, Kurt A.: *See*—
Parske, Charles A., and Riedel. 2,947,227.
Riener, Edward F., to Rohm & Haas Co. Acyloxy-halo derivatives of aliphatic acids and their esters. 2,947,766, 8-2-60, Cl. 260—405.
Riley Stoker Corp.: *See*—
Miller, Earle C. 2,947,289.
Ringoen, Richard M.: *See*—
Marner, Gene R., and Ringoen. 2,947,986.
Ringold, Howard J., and G. Rosenkrans, to Syntex S.A. 2-aralkyl derivatives of Δ⁴-pregnene-3,20-dione and process for their production. 2,947,762, 8-2-60, Cl. 260—397.3.
Robbins, Daniel: *See*—
Lentz, John J., Palmer, and Robbins. 2,947,478.
Roberts, Richard M.: *See*—
Youngman, Edward A., and Roberts. 2,947,602.
Robins, Erford E.: *See*—
Parker, Humphrey F., and Robins. 2,947,264.
Robinson, Richard A., to G. D. Searle & Co. 3-(ω-hydrazino) alkylindoles. 2,947,758, 8-2-60, Cl. 260—319.
Robotyper Corp.: *See*—
Oxley, Le Roy V., and Blythe. 2,947,320.
Rockefeller, Harry E.: *See*—
Craig, James R., Rockefeller, Stanchus, and Davis. 2,947,847.
Rockwell, Harvard S. Grain storage structures. 2,947,148, 8-2-60, Cl. 50—202.
Rockwell Mfg. Co.: *See*—
Murphy, Robert D., and Janson. 2,947,403.
Rodrigues, Conrad F., and M. W. Wallace, to International Telephone and Telegraph Corp. Electron gun structure. 2,947,897, 8-2-60, Cl. 313—82.
Roeder, John, Jr., to Whirlpool Corp. Refrigerating apparatus having improved heat transferring means. 2,947,150, 8-2-60, Cl. 62—3.
Roedter, Henry E. Automatic ice maker. 2,947,156, 8-2-60, Cl. 62—353.
Roemer, Gerald P., to American-Marietta Co., Stoner-Mudge Co. Division. Sanitary can coating. 2,947,442, 8-2-60, Cl. 220—64.
Rogers, Charles H., to R. T. Vanderbilt Co., Inc. Stabilized bordeaux mixture composition. 2,947,659, 8-2-60, Cl. 167—16.
Rogers, Freeman P.: *See*—
Pflumm, Heinz R., and Rogers. 2,947,078.
Roggenburk, Earl G. Impact tool. 2,947,283, 8-2-60, Cl. 121—33.
Rohm & Haas Co.: *See*—
De Benneville, Peter L., and Hollander. 2,947,782.
Riener, Edward F. 2,947,766.
Zeitschel, Ruth H. 2,947,748.
Rohmann, Charles P., to Minneapolis-Honeywell Regulator Co. Fluid flowmeter. 2,947,109, 8-2-60, Cl. 73—206.
Rokitansky, Karl: *See*—
Kuestler, Ernst, and Rokitansky. 2,947,668.
Rolls-Royce Ltd.: *See*—
Eccles, George O., and Kent. 2,947,076.
Haworth, Lionel. 2,947,364.
Oddie, Fredrick B. 2,947,213.
Roney, William S.: *See*—
Seeley, Leonard W., Roney, Stevens, and Vancil. 2,947,523.
Rook, Lawrence E., to General Electric Co. Internally fused electric heater. 2,947,842, 8-2-60, Cl. 219—19.
Roschke, Erwin M.: *See*—
Ellers, Carl G., and Roschke. 2,947,804.
Rosecrans, Stanley A.: *See*—
Carlson, Charles L., and Rosecrans. 2,947,069.
Rosenkrans, George: *See*—
Ringold, Howard J., and Rosenkrans. 2,947,762.
Roser, Elvyn G.: *See*—
Bilek, Andrew G., and Roser. 2,947,222.
Ross, Edward O. Grain separator. 2,947,416, 8-2-60, Cl. 209—28.
Roth, Artur: *See*—
Patton, Wade H., and Wade H., Jr., and Roth. 2,947,411.
Rowe, Carl B.: *See*—
Frohmader, Stanley H., Rowe, and Selvaag. 2,947,452.
Royal Container Co.: *See*—
Wilson, Harry W., and Dornbush. 2,947,125.
Ruben, Henning M., and H. Hesse. Aspirating apparatus. 2,947,470, 8-2-60, Cl. 230—160.
Rudner, Bernard, and A. G. Prapas, to W. R. Grace & Co. 8-aminococainium compounds. 2,947,752, 8-2-60, Cl. 260—292.
Ruff, Edgar E., to Lever Brothers Co. Spray dried detergent compositions. 2,947,701, 8-2-60, Cl. 252—109.
Rugg, Frank M., and J. E. Potts, to Union Carbide Corp. Polymerization of vinyl ester in the presence of polyethylene and product therefrom. 2,947,718, 8-2-60, Cl. 260—45.5.
Rugg, Frank M., and J. E. Potts, to Union Carbide Corp. Method of polymerizing vinyl chloride in the presence of polyethylene and product produced thereby. 2,947,719, 8-2-60, Cl. 260—45.5.
Ruhlman, Jon R., to Preformed Line Products Co. Cable suspension and anchoring means and method. 2,947,504, 8-2-60, Cl. 248—63.
Ruhrchemie Aktiengesellschaft: *See*—
Justi, Eduard, and Winsel. 2,947,797.
Ruhrgas Aktiengesellschaft: *See*—
Manthey, Ernst J. 2,947,614.
Rulon-Miller, Robert, and W. H. Tabor, to Dixon Corp. Roller mounting for spinning machines. 2,947,039, 8-2-60, Cl. 19—134.
Russ, Daniel G., to Bendix Aviation Corp. Fuel feed and power control system for gas turbine engines. 2,947,141, 8-2-60, Cl. 60—39.28.
Russell, Robert G., to Owens-Corning Fiberglas Corp. High speed winding collet. 2,947,489, 8-2-60, Cl. 242—18.
Ryan, David E. Shoe repair molds. 2,947,033, 8-2-60, Cl. 18—34.
Sackett, Thomas H., and P. F. Glass, to Johnston Testers, Inc. Fill up valve for well strings. 2,947,363, 8-2-60, Cl. 166—224.
Saint-Amour, John D., and G. J. Crowdes, Jr., to Assembly Products, Inc. Circuit for contact meters. 2,947,910, 8-2-60, Cl. 317—152.
St. Regis Paper Co.: *See*—
Newton, Donald O. 2,947,464.
Sair, Louis, to The Griffith Laboratories, Inc. Production of proteinaceous dry syrup composition and the resulting product. 2,947,636, 8-2-60, Cl. 99—142.
Samson, Ralph L.: *See*—
Zahner, Charles F., and Samson. 2,947,088.
Sandberg-Serrell Corp.: *See*—
Vice, Charles L., and Serrell. 2,947,067.
Sanderson, William T., to Chelton (Poppits) Ltd. Plastic beads. 2,947,053, 8-2-60, Cl. 24—217.
Sarka, Albert J., to Wean Equipment Corp. Coil handling mechanism. 2,947,492, 8-2-60, Cl. 242—78.7.
Sarkes Tarzian, Inc.: *See*—
Junker, Donald W. 2,947,922.
Valdettaro, Alarico A., and Meadows. 2,947,866.
Saum, George A., and R. W. Redington, to General Electric Co. Electrostatic deflection and focusing system. 2,947,896, 8-2-60, Cl. 313—78.
Saunders, Ellis: *See*—
Thurman, Tandy B. 2,947,355.
Saunders, Robert W.: *See*—
Thurman, Tandy B. 2,947,355.
Savage, John A. Bottom loading for truck tanks. 2,947,330, 8-2-60, Cl. 141—1.
Sawyer, Charles H. V., and P. E. Landeg, to C. D. Patents Ltd. Devices for releasing fluid pressure. 2,947,443, 8-2-60, Cl. 220—89.
Schachet, Hyman. Corrugated potato chip machine. 2,947,335, 8-2-60, Cl. 146—78.
Schaefer, Edward E. Display hanger. 2,947,421, 8-2-60, Cl. 211—45.
Schaschl, Edward, and G. A. Marsh, to The Pure Oil Co. Corrosion rate sensing assembly. 2,947,679, 8-2-60, Cl. 204—195.
Schiefer, Harry M.: *See*—
Eynon, Benjamin A., and Schiefer. 2,947,772.
Schilling, Clarence J., to Air Products Inc. Method and apparatus for operating regenerators. 2,947,151, 8-2-60, Cl. 62—13.
Schjeldahl, G. T., Co.: *See*—
Schjeldahl, Gilmore T. 2,947,345.
Schjeldahl, Gilmore T., to G. T. Schjeldahl Co. Machine for making articles from multiple thermoplastic webs. 2,947,345, 8-2-60, Cl. 154—42.
Schlage, Ernest L., and A. H. Green, to Schlage Lock Co. Magnetic display mount. 2,947,507, 8-2-60, Cl. 248—206.
Schlage Lock Co.: *See*—
Schlage, Ernest L., and Green. 2,947,507.
Schilephacke, Fridtjof F., to Anton Lorens. Adjustable head rests for seating units. 2,947,352, 8-2-60, Cl. 155—177.
Schmidt, Herman A.: *See*—
Rayburn, Charles C., Schmidt, and Knutsen. 2,947,247.
Schmitt, Nicholas. Hand saw construction. 2,947,085, 8-2-60, Cl. 33—75.
Schnable, George L., to Philco Corp. Method of solder bonding. 2,947,079, 8-2-60, Cl. 29—495.
Schneckenburger, Emil, and C. Kung, to Aktiengesellschaft der von Moos-schen Eisenwerke. Method for the continuous casting of metal strip, and strip casting plant for carrying out the method. 2,947,075, 8-2-60, Cl. 29—417.
Schneider, Karl, to Harnischfeger Corp. Hoist cable equalizer assembly. 2,947,430, 8-2-60, Cl. 214—135.
Schneider, Mark P., and F. W. Khayer. Spool arrangement. 2,947,493, 8-2-60, Cl. 242—96.
Schnitzer, Emanuel. Band saw shock absorbers with snubbers. 2,947,386, 8-2-60, Cl. 188—68.
Schoemer, Patrick J.: *See*—
Cook, Donald J., and Schoemer. 2,947,381.
Schoepf, John G.: *See*—
Asten, Dietrich V., and Schoepf. 2,947,328.
Schultz, David, to Package Homes Mfg., Inc. Wall construction. 2,947,040, 8-2-60, Cl. 20—4.
Schuricht, Henry A., and L. H. Smith, to Leading Engineering and Mfg. Co. Flexible chute. 2,947,401, 8-2-60, Cl. 193—25.
Schwab, Fredric W., and G. B. McKay. Locking device. 2,947,587, 8-2-60, Cl. 287—58.

Schwartz, Herbert, and J. B. Pinto, to Bell & Howell Co. Disc-type suspension spring. 2,947,529, 8-2-60, Cl. 267—1.

Schwartz, Howard: *See*—
Neiman, Mark, and Schwartz. 2,947,592.

Schwartz, Nathan R., to Naras Research Inc. Louver assembly. 2,947,855, 8-2-60, Cl. 240—46.39.

Schwuttke, Gunter H., E. D. Haffner, and R. M. Adler, to Sylvania Electric Products Inc. Crystal orientation device. 2,947,214, 8-2-60, Cl. 88—14.

Schytil, Franz, and H. Krollmann, to Metallgesellschaft, A.G. Process for collecting the liquid contained in a mist. 2,947,383, 8-2-60, Cl. 183—121.

Sciaky, David, to Welding Research, Inc. Method and apparatus for truss core sandwich welding. 2,947,848, 8-2-60, Cl. 219—83.

Scope, Sol, to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,947,834, 8-2-60, Cl. 200—81.9.

Scott Paper Co.: *See*—
Bailey, Berry W. 2,947,656.

Scoville, Ray R. Push-in terminal lugs. 2,947,965, 8-2-60, Cl. 339—95.

Scudi, John V., D. R. Reisner, and S. J. Childress, to Wallace & Tiernan Inc. Substituted pyridones. 2,947,754, 8-2-60, 260—295.5.

Scudi, John V., D. R. Reisner, S. J. Childress, and L. A. Walter, to Wallace & Tiernan Inc. Substituted 1-n-aminophenyl-2-pyridones. 2,947,755, 8-2-60, Cl. 260—295.

Seaborg, Glenn T. to United States of America, Atomic Energy Commission. Complex fluorides of plutonium and an alkali metal. 2,947,603, 8-2-60, Cl. 23—14.5.

Sealright-Oswego Falls Corp.: *See*—
Frans, Henry H., and Pierce. 2,947,128.

Searle, G. D., & Co.: *See*—
Bible, Roy H., Jr. 2,947,778.
Goldkamp, Arthur H. 2,947,763.
Lowrie, Harman S. 2,947,744.
Robinson, Richard A. 2,947,758.

Secode Corp.: *See*—
Stickel, Harold A. 2,947,973.

Seeley, Leonard W., W. S. Roney, L. A. Stevens, and R. R. Vancil, to United States of America, Navy. Aerial target launching technique. 2,947,523, 8-2-60, Cl. 258—1.2.

Seitz, Georg, and K. Kritzer, to E. Merck Aktiengesellschaft, Darmstadt. Derivatives of dihydroergotamine. 2,947,751, 8-2-60, Cl. 260—283.5.

Selas Corp. of America: *See*—
Buckholdt, Robert E. 2,947,526.

Selmer, Ernst S., to Burroughs Corp. Electronic adder. 2,947,479, 8-2-60, Cl. 235—169.

Selvaag, John A.: *See*—
Frohmader, Stanley H., Rowe, and Selvaag. 2,947,452.

Sem, Mathias O., and F. C. Collin, to Elektrokemisk A/S. Collection of gas from furnace for electrolytic smelting production of aluminium. 2,947,673, 8-2-60, Cl. 204—67.

Semar, Claud S.: *See*—
Campbell, David D., and Semar. 2,947,025.

Semchyshen, Marion, to American Metal Climax, Inc. High temperature alloy. 2,947,624, 8-2-60, Cl. 75—176.

Semon, Howard W.: *See*—
Vogt, Charles C., and Semon. 2,947,249.

Sepmeyer, Ludwig W. Means for measuring the root mean square value of a complex electric wave. 2,947,935, 8-2-60, Cl. 323—75.

Seron, Sures M. Lanyard. 2,947,456, 8-2-60, Cl. 224—5.

Serrell, Peter V. H.: *See*—
Vice, Charles L., and Serrell. 2,947,067.

Servo Corporation of America: *See*—
Gallagher, Cornelius A., and Pelino. 2,947,857.

Shafer, Paul. Screw-adjusted lifting jack. 2,947,515, 8-2-60, Cl. 254—100.

Shallenberg, Robert L., and W. A. Parrish, Jr., to International Harvester Co. Control mechanism for fuel injection pumps. 2,947,299, 8-2-60, Cl. 123—140.

Sharp, John B.: *See*—
Arnold, Harold A., and Sharp. 2,947,087.

Sharp, John B.: *See*—
Arnold, Harold A., and Sharp. 2,947,092.

Shaw, Gerald J., to Outboard Marine Corp. Wheel adjustment and driving in a power mower or the like. 2,947,132, 8-2-60, Cl. 56—25.4.

Shawinigan Chemicals Ltd.: *See*—
Johnson, Herbert S. 2,947,759.

Sheets, Oren E. Downspout hanger. 2,947,505, 8-2-60, Cl. 248—74.

Shell Oil Co.: *See*—
Bruin, Pieter, and Klootwijk. 2,947,760.
Koome, Jacob, and Stijntjes. 2,947,685.
Payne, George B. 2,947,761.
Tappmeyer, Ronald A. 2,947,520.
Tappmeyer, Ronald A. 2,947,521.
van Dommelen, Joannes A. W. J. 2,947,577.
Youngman, Edward A., and Roberts. 2,947,602.

Shelton, Frederic J., T. S. Hodgins, and C. L. Allyn, to Reichhold Chemicals, Inc. Process for production of chlorinated phenols with recovery of hydrochloric acid. 2,947,790, 8-2-60, Cl. 260—623.

Shepard, Francis H., Jr. Electronic switch. 2,947,910, 8-2-60, Cl. 315—163.

Shimanckas, William J., to Outboard Marine Corp. Rotor for actuating a control cable. 2,947,194, 8-2-60, Cl. 74—501.

Shinn, Clifford L.: *See*—
Oades, Jack L. 2,947,007.

Shuman, Davis. Valve trumpet. 2,947,211, 8-2-60, Cl. 84—385.

Shurtaich Fishing Tackle Co., Inc., The: *See*—
Doolittle, Frederick S. 2,947,562.

Siebels, Ernst, and A. Beyer, to Olympia Werke AG. Key button for keyboard office machines. 2,947,404, 8-2-60, Cl. 197—102.

Siegel, Haas. Process and apparatus for the photographic liquid processing of coatings on flexible supports. 2,947,236, 8-2-60, Cl. 95—89.

Sierra Engineering Co.: *See*—
Bloom, Aaron. 2,947,314.

Signode Steel Strapping Co.: *See*—
Ericsson, Arvid I. 2,947,003.

Sihvonen, Kauno E.: *See*—
King, William F., and Sihvonen. 2,947,175.

Silabert Corp.: *See*—
Moore, Harry O. 2,947,002.

Silverberg, Thomas R., and S. D. Lewis, to United States of America, Air Force. Sine and cosine resolver. 2,947,473, 8-2-60, Cl. 235—61.

Silverman, Milton B. Audible tooth brush. 2,947,013, 8-2-60, Cl. 15—105.

Simons, Gerald F., to Pacific Mercury Television Mfg. Corp. Electronic apparatus. 2,947,914, 8-2-60, Cl. 317—101.

Simonsen, Charles W. Motor winch. 2,947,517, 8-2-60, Cl. 254—186.

Sinclair Refining Co.: *See*—
Friedman, Bernard S. 2,947,682.
Nelson, John W. 2,947,696.
Vierk, Ernest R., and Karr. 2,947,697.

Singer Manufacturing Co., The: *See*—
Hacklander, Hans. 2,947,270.
Perla, Martin R. 2,947,271.

Sitton, Andrew J., to Sitton Industries, Inc. Continuous feed printing strip material caster. 2,947,044, 8-2-60, Cl. 22—57.2.

Sitton Industries, Inc.: *See*—
Sitton, Andrew J. 2,947,044.

Sjothun, Irvin J., to The Firestone Tire & Rubber Co. Chafer for tubeless tires. 2,947,343, 8-2-60, Cl. 152—362.

Skarstrom, Charles, K. Cohen, and H. C. Urey, to United States of America, Atomic Energy Commission. Centrifuge apparatus. 2,947,472, 8-2-60, Cl. 233—19.

Skeeters, Maxwell J., to Diamond Alkali Co. Stabilization of tetrachloroethylene with a mixture of a hydroxy alkyne and isoeugenol. 2,947,792, 8-2-60, Cl. 260—652.5.

Skiens, William E.: *See*—
Levine, Charles A., Skiens, and Moore. 2,947,774.

Skinas, Kosmas. Automatic washing mop and floor dryer. 2,947,012, 8-2-60, Cl. 15—98.

Skinner, Bronson C., to B. W. Skinner. Valve linkage adjusting mechanism. 2,947,296, 8-2-60, Cl. 123—90.

Skinner, Brunhilde W.: *See*—
Skinner, Bronson C. 2,947,296.

Slayter, Games, to Owens-Corning Fiberglas Corp. Manufacture of glass fibers. 2,947,027, 8-2-60, Cl. 18—8.

Slayter, Games, to Owens-Corning Fiberglass Corp. Apparatus for manufacture of fibrous glass. 2,947,028, 8-2-60, Cl. 18—8.

Slota, William P., to Benson Manufacturing Co. Sectional containers and the like. 2,947,440, 8-2-60, Cl. 220—22.

Slutsky, Naum J. Adjustable support. 2,947,506, 8-2-60, Cl. 248—122.

Small, Augustus B.: *See*—
Charlet, Elphege M., and Small. 2,947,715.

Smith, Hiram P. and O. E. Johnson, to International Harvester Co. Self-coupling hitch with overload release. 2,947,369, 8-2-60, Cl. 172—269.

Smith, John W.: *See*—
Guenther, Edgar G., and Smith. 2,947,241.
Guenther, Edgar G., and Smith. 2,947,242.

Smith Kline & French Laboratories: *See*—
Craig, Paul N. 2,947,745.
Craig, Paul N. 2,947,747.
Olmsted, Michael P. 2,947,746.

Smith, L. B., Aircraft Corp.: *See*—
Peckham, Wesley L. 2,947,348.

Smith, Lawrence H.: *See*—
Schuricht, Henry A. and Smith. 2,947,401.

Smith, Samuel V., to Pneu-Hy Co. Pneumatic hydraulic pumping apparatus. 2,947,144, 8-2-60, Cl. 60—52.

Smith, Thomas C., to Houston Oil Field Material Co., Inc. Fishing tool. 2,947,362, 8-2-60, Cl. 166—103.

Smitley, Marion L., and M. F. Sterner, to Holley Carburetor Co. Molded rubber dashpot. 2,947,509, 8-2-60, Cl. 251—48.

Snoddy, Leland B.: *See*—
Beams, Jesse W., and Snoddy. 2,947,471.

Snowdon, Arthur E.: *See*—
Polzella, Louis C., Snowdon, and Carpenter. 2,947,959.

Snyder, James E., and R. J. Swarts, to The Goodyear Tire & Rubber Co. Preserving the color of ground red meat. 2,947,638, 8-2-60, Cl. 99—194.

Societe Anonyme des Usines Chausson: *See*—
Chausson, André. 2,947,154.

Societe des Forges et Ateliers du Creusot: *See*—
Nectoux, Henri. 2,947,354.

Socony Mobile Oil Co., Inc.: *See*—
Wilson, Robert C., Jr. 2,947,708.

Sonnabend, Lawrence F., and C. R. Williams, to The Dow Chemical Co. Resinification of wood. 2,947,648, 8-2-60, Cl. 117—59.

Sotos, Sam: *See*—
Reynolds, Richard W., and Sotos. 2,947,417.

Spaeth, Irvin J., to Chicago Railway Equipment Co. Railway brake beam. 2,947,389, 8-2-60, Cl. 188—220.1.

Spalding, Dudley B., to National Research Development Corp. Baffle arrangement for combustion equipment. 2,947,143, 8-2-60, Cl. 60—39.72.

Spear, Gilmore M., to The Gleason Works. Rotary cutter for gears and the like. 2,947,062, 8-2-60, Cl. 29—105.

Spencer Chemical Co.: *See*—
Hoffmann, Otto L. 2,947,660.
Hopkins, Thomas R., and Strickler. 2,947,661.

Sperry Rand Corp.: *See*—
Neiman, Mark, and Schwartz. 2,947,592.
Wolters, Carl F. 2,947,160.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Groudan, Alan. 2,947,948.
Newell, William H. 2,947,982.

Spiegler, Louis, to E. I. du Pont de Nemours and Co. Reduction process for preparing aromatic P-amino compounds. 2,947,781, 8-2-60, Cl. 260—518.

Spindler, Joseph C., to Zenith Radio Corp. Transformers. 2,947,957, 8-2-60, Cl. 336—61.

Spire, Etienne, to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude. Device for insufflating gas into a mass of molten metal. 2,947,527, 8-2-60, Cl. 266—34.

Spound, Albert M. Automatic projecting headrest for reclining chairs. 2,947,347, 8-2-60, Cl. 155—107.

Sprague Electric Co.: *See*—
Narszewski, Mathew. 2,947,113.

Sprague, Richard E.: *See*—
Mendleson, Myron J., Doig, and Sprague. 2,947,976.

Springer, Don M. Beam bending machine. 2,947,344, 8-2-60, Cl. 153—48.

Sreb, Jules H.: *See*—
Kuck, John H., and Sreb. 2,947,255.

Stackpole Carbon Co.: *See*—
Dressel, Henry M. 2,947,832.

Stalker Corp., The: *See*—
Stalker, Edward A. 2,947,469.

Stalker, Edward A., to The Stalker Corp. Light weight axial flow compressor wheels. 2,947,469, 8-2-60, Cl. 230—134.

Stanchus, Frank T.: *See*—
Craig, James R., Rockefeller, Stanchus, and Davis. 2,947,847.

Standard Oil Co., (Ohio), The: *See*—
Hughes, Everett C., and Stine. 2,947,692.
Idol, James D., Jr., Foreman, and Veatch. 2,947,779.

Sta-Parts, Inc.: *See*—
Johnston, Everett E. 2,947,287.

Stapling Machines Co.: *See*—
Kingsley, David G. 2,947,329.

Stark, Charles H., to Owens-Illinois Glass Co. Skylight mounting. 2,947,267, 8-2-60, Cl. 108—16.

Stark, Edward: *See*—
Bauer, Oliver F., and Stark. 2,947,120.

Statham Instruments, Inc.: *See*—
Statham, Louis D. 2,947,962.

Statham, Louis D., to Statham Instruments, Inc. Strain wire transducer. 2,947,962, 8-2-60, Cl. 338—4.

Stauffer Chemical Co.: *See*—
Pitt, Harold. 2,947,788.

Staver Co, Inc., The: *See*—
Lazarus, Jerome B. 2,947,077.

Stearns, Richard S., to The Firestone Tire & Rubber Co. Polymerization of conjugated diolefines with a catalyst comprising metallic lithium dispersed in a crystalline salt. 2,947,737, 8-2-60, Cl. 260—94.2.

Steele, Earl L.: *See*—
Maynard, Fred B., and Steele. 2,947,925.

Stegemeier, Richard J.: *See*—
Josendal, Virgil A., and Stegemeier. 2,947,359.

Stein, Fred, Laboratories, Inc.: *See*—
Stein, Frederick W. 2,947,940.

Stein, Frederick W., to Fred Stein Laboratories, Inc. Test cell. 2,947,940, 8-2-60, Cl. 324—65.

Steinbach, Leonard: *See*—
Teegarden, Robert W., and Steinbach. 2,947,780.

Steinbuch, Karl, to International Standard Electric Corp. Method and apparatus for determining the position of a printed or written item with respect to an identification mark applied thereto. 2,947,972, 8-2-60, Cl. 340—149.

Steinkohlen-Elektrizitat Aktiengesellschaft: *See*—
Justi, Eduard, and Winsel. 2,947,797.

Stengel, Leonard A., and E. E. Toops, Jr., to Commercial Solvents Corp. Liquid fuels for reaction motors. 2,947,-618, 8-2-60, Cl. 52—5.

Sterner, Melvin F.: *See*—
Kittler, Milton J., Sterner, and Johnson. 2,947,297.
Smitley, Marion L., and Sterner. 2,947,509.

Stevens, Clifford B., to Outboard Marine Corp. Sedan-type boat. 2,947,277, 8-2-60, Cl. 114—71.

Stevens, Lewis A.: *See*—
Seeley, Leonard W., Roney, Stevens, and Vancil. 2,947,523.

Stewart, Paul H., and R. W. Karlson, to Eastman Kodak Co. Nitrosopyrimidine desensitizing compounds and photographic emulsions containing them. 2,947,629, 8-2-60, Cl. 96—101.

Stewart, Willis G.: *See*—
Levin, John K., and Stewart. 2,947,090.

Stickel, Harold A., to Secode Corp. Multiple contact selector switch. 2,947,973, 8-2-60, Cl. 340—164.

Stickel, Harold A. Code selective device. 2,947,974, 8-2-60, Cl. 340—164.

Stijntjes, Gerardus J. P.: *See*—
Koome, Jacob, and Stijntjes. 2,947,685.

Stiles, Samuel R.: *See*—
Warburton, James, and Stiles. 2,947,796.

Stimson, Ray L., to Collins Radio Co. High frequency converter having a series cathode signal injection circuit. 2,947,862, 8-2-60, Cl. 250—20.

Stine, Harrison M.: *See*—
Hughes, Everett C., and Stine. 2,947,692.

Stitt, Edward W. Magnetic device for removing litter. 2,947,563, 8-2-60, Cl. 294—65.5.

Stoate, Norman P., to U. D. Engineering Co. Ltd. Apparatus for detecting foreign bodies in transparent vessels. 2,947,877, 8-2-60, Cl. 250—219.

Stoddard, Charles F.: *See*—
Fox, Gerald B., and Stoddard. 2,947,311.

Stoeckicht, Wilhelm G. Helicopter gearing. 2,947,196, 8-2-60, Cl. 74—665.

Stollenwerk, Harry A. Storage racks. 2,947,390, 8-2-60, Cl. 189—36.

Stomiany, Stanley J.: *See*—
O'Connor, Philip K., and Stomiany. 2,947,014.

Stone, Elmer O., to Sylvania Electric Products Inc. Electron discharge tube testing circuit. 2,947,930, 8-2-60, Cl. 324—25.

Stone, Robert L. Material testing apparatus and method. 2,947,163, 8-2-60, Cl. 73—16.

Stoner, George G.: *See*—
Perry, William M., and Stoner. 2,947,633.

Stork, Edward S.: *See*—
Rauch, Konrad, Jorgensen, Neubauer, Ferrin, Knoisley, Stork, and Harsch. 2,947,476.

Storz, Eric A., to Storz Instrument Co. Surgeon's mouth gag. 2,947,305, 8-2-60, Cl. 128—12.

Storz Instrument Co.: *See*—
Storz, Eric A. 2,947,305.

Strang, Donald P., and W. A. Garvey, to General Electric Co. Winding for polyphase alternating current dynamoelectric machine. 2,947,894, 8-2-60, Cl. 310—202.

Straub, Otto, to Lewa G.m.b.H. Grip bracelet. 2,947,455, 8-2-60, Cl. 224—4.

Strickler, Paul D.: *See*—
Hopkins, Thomas R., and Strickler. 2,947,661.

Stringer, Charles D.: *See*—
Finch, Gaylord K., and Stringer. 2,947,767.

Strong, Herbert M.: *See*—
Hall, Howard T., Strong, and Wentorf. 2,947,610.

Strong, Herbert M., to General Electric Co. Diamond synthesis. 2,947,609, 8-2-60, Cl. 22—209.1.

Stump, Eugen, to Diamler-Benz Aktiengesellschaft. Axle gear for motor vehicles. 2,947,200, 8-2-60, Cl. 74—695.

Sudbery, Carl H. Display rack. 2,947,422, 8-2-60, Cl. 211—47.

Sudhaus, Heinrich, Sohne: *See*—
Höfgen, Fritz. 2,947,161.

Suelleatrop, Fred F. Protective cover for a dispensing valve assembly. 2,947,451, 8-2-60, Cl. 222—182.

Sugg, John C., Jr.: *See*—
Richter, Orlando W., and Sugg. 2,947,937.

Suits, Chauncey G., to General Electric Co. Charged spring starters. 2,947,891, 8-2-60, Cl. 310—41.

Sullivan, John K., to The Goodyear Tire & Rubber Co. Synthesis of polyesters using lead acetate as catalyst. 2,947,-729, 8-2-60, Cl. 260—75.

Sullivan, Robert E.: *See*—
Holderreed, Francis L., and Sullivan. 2,947,606.

Sun Oil Co.: *See*—
Odom, Prentice. 2,947,318.
Quist, Harold A. 2,947,170.
Young, Elnar T. 2,947,148.

Superior Electric Co., The: *See*—
Fredrickson, Gustav O. 2,947,960.
Polzella, Louis C., Snowdon, and Carpenter. 2,947,959.

Superior Tank & Construction Co.: *See*—
Fullaway, Richard M. 2,947,380.

Swarts, Ira J.: *See*—
Nolden, John L., and Swarts. 2,947,513.

Swarts, Ruby J.: *See*—
Snyder, James E., and Swarts. 2,947,638.

Switzer, Harold K. Means and method of securing sink strip 2,947,005, 8-2-60, Cl. 4—187.

Sylvania Electric Products Inc.: *See*—
Archer, Garland W. 2,947,811.
Blickwedel, Theodore W. 2,947,677.
Davis, Joseph E. 2,947,806.
Schwuttke, Gunter H., Haffner, and Adler. 2,947,214.
Stone, Elmer O. 2,947,936.

Synter S.A.: *See*—
Ringold, Howard J., and Rosenkranz. 2,947,762.

Syracuse Special Machine Co., Inc.: *See*—
Potter, Linn E. 2,947,445.

Szasz, Katherine: *See*—
Szasz, Nandor. 2,947,484.

Szasz, Nandor, deceased, by K. Szasz, special administratrix, to General Mills, Inc. Method and apparatus for milling flour. 2,947,484, 8-2-60, Cl. 241—10.

Sawyer, Bernard W., to Omega Aircraft Corp. Dual engine drive means for helicopters. 2,947,497, 8-2-60, Cl. 244—17.11.

T.N.T. Corp.: *See*—
Teeple, Gifford H., Jr. 2,947,063.

Tablet & Ticket Co., The: *See*—
Wayne, Michael. 2,947,391.

Tabor, Warner H.: *See*—
Bulon-Miller, Robert, and Tabor. 2,947,039.

Tamblyn, John W.: *See*—
Downey, Richard G., and Tamblyn. 2,947,646.
Newland, Gordon C., and Tamblyn. 2,947,721.

Tappmeyer, Ronald A., to Shell Oil Co. Well casing back-off tool. 2,947,520, 8-2-60, Cl. 255—35.

Tappmeyer, Ronald A., to Shell Oil Co. Well casing back-off tool. 2,947,521, 8-2-60, Cl. 255—35.

Tatem, John A., and R. D. Northcote, to Orr & Sembower Inc. Boilers. 2,947,268, 8-2-60, Cl. 110—165.

Taylor, Charles W., Jr., to The Goodyear Tire & Rubber Co. Apparatus for processing extruded plastic tube. 2,947,032, 8-2-60, Cl. 18—14.

Taylor, Eric H. Two-way valve. 2,947,313, 8-2-60, Cl. 137—63.

Taylor, Harry E., and J. R. Buck, to Becton Dickinson and Co. Disc dispenser. 2,947,444, 8-2-60, Cl. 221—93.

Taylor, Vaughn A.: *See*—
Inculet, Ion I., and Taylor. 2,947,892.
Technograph Printed Electronics Inc.: *See*—
Langton, John B. 2,947,064.
Teegarden, Robert W., and L. Steinbach, to International Flavors & Fragrances, Inc. Cyclohexene and hexadiene carboxaldehydes and derivatives thereof. 2,947,780, 8-2-60, Cl. 260—488.
Teeple, Gifford H., Jr., to T.N.T. Corp. Apparatus and method for forming self-aligning bearings. 2,947,063, 8-2-60, Cl. 29—149.5.
Tenenbaum, Michael, J. W. Halley, and F. W. Luerssen, to Inland Steel Co. Method of making lead-containing steels. 2,947,022, 8-2-60, Cl. 75—129.
Texaco Inc.: *See*—
Clauson, Frank A. 2,947,438.
Egan, Edmond F., Hersog, and McKay. 2,947,869.
Hubby, Laurence M. 2,947,931.
Ray, Watson A. 2,947,709.
Texas Instruments Inc.: *See*—
Pfiumm, Heins B., and Rogers. 2,947,078.
Textor, Clinton K.: *See*—
Woodruff, Maurice D., and Textor. 2,947,485.
Textron Inc.: *See*—
Bellamy, Jack L., and Walters. 2,947,955.
Thiel, Otto, to Midwest Supply and Mfg. Co. Adjustable spindle for buffing wheels and the like. 2,947,122, 8-2-60, Cl. 51—166.
Thomas & Betts Co., The: *See*—
Badeau, Carroll A., and Weber. 2,947,800.
Thomas, Robert D.: *See*—
Park, Rodney F., and Thomas. 2,947,840.
Thompson, Dewey T., to Callaway Mills Co. Cleaning and polishing cloth. 2,947,016, 8-2-60, Cl. 15—209.
Thompson, Harold B.: *See*—
Azari, Eric, Gray, Malin, and Thompson. 2,947,538.
Thompson, Robert D. Method and apparatus for making foam-backed materials in broad widths and product thereof. 2,947,346, 8-2-60, Cl. 154—42.3.
Thurman, Tandy B., to E. and R. W. Saunders. Door and operating structure therefor. 2,947,355, 8-2-60, Cl. 160—191.
Tice, Reuben S.: *See*—
Pickles, Sidney, and Tice. 2,947,841.
Time, Inc.: *See*—
Faeber, Harry W. 2,947,234.
Faeber, Harry W. 2,947,235.
Moe, William W., and Jordan. 2,947,805.
Tindall, John B., to Commercial Solvents Corp. Cyclic process for the production of lower nitrosodialkylamines. 2,947,785, 8-2-60, Cl. 260—583.
Toews, Harvey R. Scraper blade attachment for a tractor. 2,947,097, 8-2-60, Cl. 37—155.
Tokheim Corp.: *See*—
Wright, George W., and Clymer. 2,947,259.
Toledo Scale Corp.: *See*—
Borden, Joseph H. 2,947,873.
Tomenceak, Arthur A.: *See*—
Bullard, Edward C., Tomenceak, and Ettorre. 2,947,188.
Tomlinson, Terence R., to The General Electric Co. Ltd. Electrical switching arrangements. 2,947,874, 8-2-60, Cl. 250—208.
Toni, Pierre: *See*—
Ladeuze, Maurice J. B., and Toni. 2,947,640.
Toohig, Michael F., to International Telephone and Telegraph Corp. Method of making storage electrode for change storage tube. 2,947,651, 8-2-60, Cl. 117—222.
Toops, Emory E., Jr.: *See*—
Stengel, Leonard A., and Toops. 2,947,618.
Tower, Pierce, to Pierce Metal Products, Inc. Universal pick-up truck rack. 2,947,566, 8-2-60, Cl. 296—10.
Towler, Frank H., and J. M. Towler, deceased (F. H. Towler, executor), to Electraulic Presses Ltd. Unloading valves for hydraulic pumps. 2,947,317, 8-2-60, Cl. 137—108.
Towler, John M.: *See*—
Towler, Frank H. and J. M. 2,947,317.
Tracy, James F., to General Electric Co. Electric capacitor and dielectric material therefor. 2,947,927, 8-2-60, Cl. 317—258.
Trapp, Robert L., to Outboard Marine Corp. Starter-controlled engine compression relief. 2,947,300, 8-2-60, Cl. 123—182.
Troendly Illinois Corp.: *See*—
Troendly, Ray E. 2,947,458.
Troendly, Ray E., to Troendly Illinois Corp. Holder for containers such as casseroles and the like. 2,947,458, 8-2-60, Cl. 224—45.
Trostler, Richard M., to General Dynamics Corp. Gas tube switch. 2,947,913, 8-2-60, Cl. 315—238.
Trotta, Francis D., to General Electric Co. Automatic coil winding machine. 2,947,488, 8-2-60, Cl. 242—9.
Tryon, David H., 9½% to E. E. Lonabaugh, 9% to L. Kirkland, 5% to G. S. Gwinn, 7% to R. Jurosek, 7% to M. G. Jurosek, 5% to B. Nelson, and 6% to M. E. and H. E. Krohn. Multi-stage centrifugal compressor. 2,947,468, 8-2-60, Cl. 230—119.
Tubinis, Matthew P.: *See*—
Brightman, Barrie, Pearce, and Tubinis. 2,947,819.
Tucker, John L.: *See*—
Cornell, John A., and Tucker. 2,947,716.
Tumavicus, Julius W., to United States of America, Air Force. Method of blade construction. 2,947,066, 8-2-60, Cl. 29—156.8.
Tuomala, Leon A., and L. J. Borba. Disposable cigarette case. 2,947,413, 8-2-60, Cl. 206—41.1.
Tupper Corp.: *See*—
Tupper, Earl S. 2,947,412.
Tupper, Earl S., to Tupper Corp. Brush holder and shaper. 2,947,412, 8-2-60, Cl. 206—16.1.
Turner, Russell B.: *See*—
Palmer, James F., and Turner. 2,947,166.
Turpin, Charles H., to The Pillsbury Co. Compartmented carton. 2,947,461, 8-2-60, Cl. 229—17.
Turvey, Frank P., Jr., to International Telephone and Telegraph Corp. Gated trigger predetermined binary counter. 2,947,944, 8-2-60, Cl. 328—42.
Tvetar, Einar. Sash assembly for mounting glass or other transparencies. 2,947,042, 8-2-60, Cl. 20—55.
U.D. Engineering Co., Ltd.: *See*—
Stoats, Norman P. 2,947,877.
Ueits, Herbert F. G.: *See*—
Bryin, Guy, Jr., and Ueits. 2,947,672.
Ullery, Fred E. One-way clutch. 2,947,395, 8-2-60, Cl. 192—45.1.
Ulstad, Meredith S., and H. D. Hern, to Collins Radio Co. Diversity combiner control system. 2,947,861, 8-2-60, Cl. 250—20.
Umstott, Harold F., to The Firestone Tire & Rubber Co. Apparatus for controlling tension in sheet material. 2,947,060, 8-2-60, Cl. 28—1.
Union Carbide Corp.: *See*—
Bailey, Donald L. 2,947,771.
Bailey, Donald L., and Black. 2,947,770.
Craig, James R., Rockefeller, Stanchus, and Davis. 2,947,847.
Pruett, Roy L. 2,947,760.
Rugg, Frank M., and Potts. 2,947,718.
Rugg, Frank M., and Potts. 2,947,719.
Union Chimique Belge, S.A.: *See*—
Leclercq, René, and Paquet. 2,947,714.
Union Oil Co. of California: *See*—
Josendal, Virgil A., and Stegemeier. 2,947,359.
Union Stock Yard and Transit Co. of Chicago, The: *See*—
Morrison, Willard L. 2,947,112.
United Aircraft Corp.: *See*—
Hausmann, George F. 2,947,139.
Lightfoot, Ralph B. 2,947,365.
United-Carr Fastener Corp.: *See*—
Johanson, Bengt J., and McKee. 2,947,964.
United Geophysical Corp.: *See*—
Peterson, Raymond A. 2,947,377.
United States of America
Air Force: *See*—
Blick, Andrew G., and Roser. 2,947,222.
Hale, Frank B. 2,947,256.
Reynolds, Donald C., and Czymk. 2,947,613.
Silverberg, Thomas R., and Lewis. 2,947,473.
Tumavicus, Julius W. 2,947,066.
Army: *See*—
Berry, Henry E., Hirschle, and Zarabara. 2,947,137.
Laager, Creston F. 2,947,220.
Vance, Arthur W. 2,947,474.
Weiss, Alexander C. H. 2,947,254.
Atomic Energy Commission: *See*—
Beams, Jesse W., and Snoddy. 2,947,471.
Brackney, Howard W. 2,947,807.
Foote, Frank G. 2,947,621.
Kates, Leonard W., Campbell, and Heartel. 2,947,080.
Levine, Charles A., Skiens, and Moore. 2,947,774.
Otavka, Michael A. 2,947,465.
Post, Richard F. 2,947,902.
Seaborg, Glenn T. 2,947,601.
Skarstrom, Charles, Cohen, and Urey. 2,947,472.
Zambrow, John L. 2,947,676.
Health, Education and Welfare: *See*—
Earle, Wilton R., and Highhouse. 2,947,116.
Interior: *See*—
Murphy, George W. 2,947,688.
Navy: *See*—
Kuck, John H., and Sreb. 2,947,255.
Nicholson, John P. 2,947,284.
Seeley, Leonard W., Roney, Stevens, and Vancil. 2,947,523.
Vance, Arthur W. 2,947,481.
Vogt, Charles C., and Semon. 2,947,240.
United States Rubber Co.: *See*—
Varn, Charles F. 2,947,030.
United States Steel Corp.: *See*—
Kirchner, George J., and Kritscher. 2,947,165.
University of California, The Regents of the: *See*—
Nakamura, Michiyuki. 2,947,949.
University of Illinois Foundation, The: *See*—
Walters, Charles S., and Peterson. 2,947,110.
University of Tennessee Research Corp., The: *See*—
Arnold, Harold A., and Sharp. 2,947,087.
Arnold, Harold A., and Sharp. 2,947,092.
Ureda, Benon F., to Allis-Chalmers Mfg. Co. Snap action reversing switch for load tap changing transformer. 2,947,838, 8-2-60, Cl. 200—92.
Urey, Harold C.: *See*—
Skarstrom, Charles, Cohen, and Urey. 2,947,472.
VEB Traktorenwerk Schoneheck: *See*—
Lehmann, Heins. 2,947,375.
Valdettaro, Alarico A., and S. R. Meadows, to Sarkes Tarsian, Inc. Television tuner having common vernier reactance presettably adjustable for each channel. 2,947,866, 8-2-60, Cl. 250—40.
Valensi, Georges. Improvement in high speed telegraphic systems. 2,947,813, 8-2-60, Cl. 178—15.
Van Boeyen: *See*—
Verhoeff, Jacob, and Van Boeyen. 2,947,195.
Vance, Arthur W., to United States of America, Army. Computing systems. 2,947,474, 8-2-60, Cl. 235—61.6.
Vance, Arthur W., to United States of America, Navy. Trigonometric function resolver. 2,947,481, 8-2-60, Cl. 235—186.
Vancil, Reginald R.: *See*—
Seeley, Leonard W., Roney, Stevens, and Vancil. 2,947,523.

Vanderbilt, R. T., Co., Inc.: *See*—
Rogers, Charles H. 2,947,659.
Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. 2,947,135.
Van der Lely, C., N.V.: *See*—
Van der Lely, Cornelis and A. 2,947,135.
Van der Lely, Cornelis and A., to C. van der Lely, N.V. Implement for laterally displacing material lying on the ground. 2,947,135, 8-2-60, Cl. 56—377.
Van Dommelen, Joannes A. W. J., to Shell Oil Co. Disengaging solids from a lift gas. 2,947,577, 8-2-60, Cl. 302—59.
Van Dorn, Horace B., and R. W. Moran, to The Fafnir Bearing Co. Cam-follower construction. 2,947,196, 8-2-60, Cl. 74—569.
Van Dorn, Horace B., and R. W. Moran, to The Fafnir Bearing Co. Relatively rolling elements. 2,947,581, 8-2-60, Cl. 308—216.
Van Heel, Abraham C. S., G. J. Beernink, and H. J. Raterink, to Nederlandse Organisatie Voor Toegepast-Natuurwetenschappelijk Onderzoek ten Behoeve Van De Rijksverdediging (The National Defence Research Council-T.N.O.). Wide-angle objective lens. 2,947,219, 8-2-60, Cl. 88—57.
Van Oosten, Adrianus W. Stoplight. 2,947,970, 8-2-60, Cl. 340—50.
Varian Associates: *See*—
Hall, Hugh J. 2,947,920.
Varn, Charles F., to United States Rubber Co. Feeding mechanism for extruders. 2,947,030, 8-2-60, Cl. 18—12.
Vaudreuil, Edgar G.: *See*—
Johnson, Alvin L. 2,947,333.
Veatch, Franklin: *See*—
Idol, James D., Jr., Foreman, and Veatch. 2,947,779.
Veldhuis, Benjamin, and R. J. Du Bois, to Allied Chemical Corp. Purification of dichloroacetaldehyde. 2,947,671, 8-2-60, Cl. 202—57.
Veress, Zoltán: *See*—
Csordás, Istvân, Lányi, Veress, and Vissy. 2,947,056.
Verhoeff, Jacob, and H. Van Boeyen, to North American Philips Co., Inc. Axially displaceable stop. 2,947,195, 8-2-60, Cl. 74—526.
Vereinigte Mautner Markhof'sche Presshefe Fabriken: *See*—
Kuestler, Ernst, and Rokitansky. 2,947,668.
Vice, Charles L., and P. V. H. Serrell, to Sandberg-Serrell Corp. Method of manufacture of flexure member. 2,947,067, 8-2-60, Cl. 29—173.
Victory Engineering Corp.: *See*—
Bennett, Frank K. 2,947,938.
Vidmar, John P., to The M. A. Hanna Co. Railroad car spotter. 2,947,263, 8-2-60, Cl. 104—168.
Vierk, Ernest R., and T. J. Karr, to Sinclair Refining Co. Lubricant composition. 2,947,697, 8-2-60, Cl. 252—55.
Vissy, László: *See*—
Csordás, Istvân, Lányi, Veress, and Vissy. 2,947,056.
Vocht, Martin R., to Minneapolis-Honeywell Regulator Co. Housing means. 2,947,435, 8-2-60, Cl. 220—4.
Vogt, Charles C., and H. W. Semon, to United States of America, Navy. Mine case and instrument mounting system. 2,947,249, 8-2-60, Cl. 102—10.
Von Wimmersperg, Heinrich F. Safety belt device. 2,947,353, 8-2-60, Cl. 155—189.
Votaw, Clarence J.: *See*—
Hanley, Frank H., and Votaw. 2,947,803.
Wachtendorf, Wilhelm: *See*—
Brotz, August, Richter, Wachtendorf, and Heuer. 2,947,597.
Wagner, James F.: *See*—
Pine, Arthur J., and Wagner. 2,947,204.
Wahlgren, Wallace W., to Electro Engineering Works. Transformer or reactor core structure. 2,947,961, 8-2-60, Cl. 336—216.
Wahlmark, Gunnar A. Piston ball end. 2,947,182, 8-2-60, Cl. 74—60.
Waibel, Wilhelm, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Inhibited chlorite baths and method. 2,947,700, 8-2-60, Cl. 252—102.
Waldrop, Robert F., to Milbank Mfg. Co., Inc. Dual conductor terminal. 2,947,967, 8-2-60, Cl. 339—272.
Walker, Thomas H.: *See*—
Grayson, Harry, Dunkley, and Walker. 2,947,946.
Walker, William J. Means for the continuous proportioning of two or more liquids. 2,947,310, 8-2-60, Cl. 137—101.25.
Wallace, Milner W.: *See*—
Rodrigues, Conrad R., and Wallace. 2,947,897.
Wallace & Tiernan Inc.: *See*—
Scudi, John V., Reisner, and Childress. 2,947,754.
Scudi, John V., Reisner, Childress, and Walter. 2,947,755.
Walter, John M., to The G. A. Gray Co. Tool lift mechanism. 2,947,226, 8-2-60, Cl. 90—55.
Walter, Lewis A.: *See*—
Scudi, John V., Reisner, Childress, and Walter. 2,947,755.
Walters, Charles S., and K. R. Peterson, to The University of Illinois Foundation. Method and composition for destroying tree stumps. 2,947,110, 8-2-60, Cl. 47—58.
Walters, Glenn A.: *See*—
Bellamy, Jack L., and Walters. 2,947,955.
Waner, Donald W., to The Morse Instrument Co. Single lever marine engine control. 2,947,191, 8-2-60, Cl. 74—471.
Wankel G.m.b.H.: *See*—
Froede, Walter G. 2,947,290.
Warburton, James, and S. R. Stiles, to The M. W. Kellogg Co. Alkylation of hydrocarbons. 2,947,796, 8-2-60, Cl. 260—683.62.
Ward, Peter W., to The General Electric Co. Ltd. Automatic telephone and like systems. 2,947,818, 8-2-60, Cl. 179—18.
Ward, William E.: *See*—
Dehn, Roy F., and Ward. 2,947,273.
Wartocsewski, Joseph T., to Gustin-Bacon Mfg. Co. Core dropping device. 2,947,446, 8-2-60, Cl. 221—211.
Wasson, Jones I., and A. J. Morway, to Esso Research and Engineering Co. Non-inflammable hydraulic fluid. 2,947,699, 8-2-60, Cl. 252—76.
Watelet, Ermand L., to Brown & Sharpe Mfg. Co. Fine grid permanent magnetic chuck. 2,947,921, 8-2-60, Cl. 317—159.
Wayne, Michael, to The Tablet & Ticket Co. Corner connection for frames. 2,947,391, 8-2-60, Cl. 189—76.
Wayner, Harry H.: *See*—
Burman, Henry H., and Wayner. 2,947,843.
Wean Equipment Corp.: *See*—
Sarka, Albert J. 2,947,492.
Webb, Frederick J., to The Firestone Tire & Rubber Co. Oxidation products of 6-substituted-2,2,4-trialkyl dihydroquinolines as antioxidants. 2,947,720, 8-2-60, Cl. 260—45.8.
Weber, Walter H.: *See*—
Badeau, Carroll A., and Weber. 2,947,800.
Weisner, Edward F.: *See*—
Gimera, Ralph J., Weisner, and Wetch. 2,947,678.
Weiss, Alexander C. H., to United States of America, Army. Closing plug for semi-fixed ammunition. 2,947,254, 8-2-60, Cl. 102—43.
Welch, Jack D., to Collins Radio Co. Square wave generator and diode modulator. 2,947,883, 8-2-60, Cl. 307—88.5.
Welding Research, Inc.: *See*—
Sciaky, David. 2,947,848.
Welex, Inc.: *See*—
Mohaupt, Henry H. 2,947,250.
Wellington, Cary L., to The Condenser Machinery Corp. Tabbing machine. 2,947,272, 8-2-60, Cl. 113—1.
Wells, Preston A., Jr. Catalyst regeneration. 2,947,707, 8-2-60, Cl. 252—419.
Wenger, Harry J. Vertically adjustable standard for music racks. 2,947,556, 8-2-60, Cl. 287—58.
Wentorf, Robert H., Jr.: *See*—
Hall, Howard T., Strong, and Wentorf. 2,947,610.
Wentorf, Robert H., Jr., to General Electric Co. High pressure high temperature apparatus. 2,947,034, 8-2-60, Cl. 18—34.
Wentorf, Robert H., Jr., to General Electric Co. Abrasive material and preparation thereof. 2,947,617, 8-2-60, Cl. 51—307.
Werkzeugmaschinenfabrik Oerlikon Buhrle & Co., Abt., Elektrodenfabrik: *See*—
Fohr, Matthias. 2,947,653.
Werner, Byron H.: *See*—
Reid, Robert J., and Werner. 2,947,338.
Werner, Byron H., and R. J. Reid, to The Firestone Tire & Rubber Co. Process of curing a rubbery copolymer of a conjugated diene and a carboxylic acid or anhydride with dicyandiamide, and cured product obtained thereby. 2,947,733, 8-2-60, Cl. 260—82.1.
Weschler, Joseph R., E. W. Engel, and P. Lagally, to Johnson & Johnson. Method of manufacturing unified paper containing titania. 2,947,658, 8-2-60, Cl. 162—169.
Wessel, Wilhelm: *See*—
Dreyer, Kuno, Wessel, and Bölkow. 2,947,500.
Western Electric Co., Inc.: *See*—
Holappa, Harvey A. 2,947,824.
Westfalendruck G.m.b.H. & Co. Kommandit-Gesellschaft: *See*—
Fuchs, Friedrich. 2,947,248.
Westinghouse Air Brake Co.: *See*—
Feucht, Jacob E. 2,947,519.
Westinghouse Electric Corp.: *See*—
Carlson, Charles L., and Rosecrans. 2,947,069.
Fox, John J. 2,947,846.
Palmer, Robert T. 2,947,467.
Weston, Donald E.: *See*—
Mortenson, Victor A., Weston, and Reilly. 2,947,839.
West Point Manufacturing Co.: *See*—
McHargue, William L. 2,947,327.
Westrom, Arthur C., to Hubbard and Co. Current interrupting devices. 2,947,903, 8-2-60, Cl. 313—231.
Wetch, Joseph R.: *See*—
Gimera, Ralph J., Weisner, and Wetch. 2,947,678.
Wharton Engineers (Elstree) Ltd.: *See*—
Merritt, Henry E. 2,947,494.
Whirlpool Corp.: *See*—
Roeder, John, Jr. 2,947,150.
Whitby, John H.: *See*—
Murray, Donald A., and Whitby. 2,947,400.
White, Franklin E. Racks for linotype magazines. 2,947,424, 8-2-60, Cl. 211—168:
White, William V.: *See*—
Feldman, Jacob R., Levenson, and White. 2,947,634.
Whitehouse, Irving P., and W. A. Reed, to Republic Steel Corp. Process of preparing iron powder capable of being rolled directly to sheet form. 2,947,620, 8-2-60, Cl. 75—5.
Whitfield, Harold R., to Kelvin & Hughes Ltd. Measurement of the speed of vehicles. 2,947,983, 8-2-60, Cl. 343—8.
Whittle, Robert L.: *See*—
Poylo, Michael C., and Whittle. 2,947,978.
Whitworth, Kenneth A.: *See*—
Brumby, Harold, and Whitworth. 2,947,533.
Wiedmann, Richard, to The Lunkenheimer Co. Method of making plastic laminated core boxes and patterns. 2,947,046, 8-2-60, Cl. 22—195.
Wild, Ernst. Apparatus for the daily making of beds. 2,947,008, 8-2-60, Cl. 5—321.
Wilfert, Karl, and B. Barényi, to Daimler-Benz Aktiengesellschaft. Windshield wiper arrangement for motor vehicles. 2,947,020, 8-2-60, Cl. 15—250.16.
Willene, Joseph M., to Borg-Warner Corp. Clutch release lever. 2,947,398, 8-2-60, Cl. 192—99.
Williams, Charles R.: *See*—
Sonnabend, Lawrence F., and Williams. 2,947,648.

Wilson, Albert L., 50% to B. H. Martin. Combination spreader box and grain drill. 2,947,450, 8–2–60, Cl. 222—136.

Wilson, Harland D., to Ford Motor Co. Battery mounting apparatus. 2,947,373, 8–2–60, Cl. 180—68.5.

Wilson, Harry W., and C. L. Dornbush, to Royal Container Co. Machine for packaging cartons. 2,947,125, 8–2–60, Cl. 53—61.

Wilson, Ralph A. Pneumatic feed for electric hand drill. 2,947,205, 8–2–60, Cl. 77—14.

Wilson, Robert C., Jr., to Socony Mobil Oil Co., Inc. Method for manufacturing a catalyst comprising a cogelled composite of silica and magnesia. 2,947,706, 8–2–60, Cl. 252—452.

Winestock, Theodore L., to General Electric Co. Machine with hydraulically actuated carriage. 2,947,487, 8–2–60, Cl. 242—9.

Winsel, August: *See*—
Justi, Eduard, and Winsel. 2,947,797.

Winther, Simon P. Tool. 2,947,564, 8–2–60, Cl. 294—100.

Winthrop, Stanley O., to American Home Products Corp. α-(13-morpholyl)-benzhydrol and its salts. 2,947,749, 8–2–60, Cl. 260—247.7.

Wobbe, Delbert E., and F. P. Fallar, to American Can Co. Can body fluxing mechanism. 2,947,274, 8–2–60, Cl. 113—95.

Wolpin, Martin P.: *See*—
Baltus, George T., and Wolpin. 2,947,286.

Wolters, Carl F., to Sperry Rand Corp. Bolt relocking device for safes. 2,947,160, 8–2–60, Cl. 70—1.5.

Wood, Byron A. Conveyor mechanism for garments on hangers. 2,947,407, 8–2–60, Cl. 198—66.

Wood, John A., to The Martin Co. General purpose trailer. 2,947,565, 8–2–60, Cl. 296—3.

Wood, Orville T., to Pratt, Read and Co., Inc. Apparatus and method for constructing pivotal connections. 2,947,849, 8–2–60, Cl. 219—150.

Wood Processes (Oregon) Ltd.: *See*—
Chapman, Ralph. 2,947,654.

Wood, Thomas K. Apparatus for manufacturing glass beads. 2,947,115, 8–2–60, Cl. 49—58.

Woodruff, Maurice D., and C. K. Textor, to The Bauer Bros. Co. Disc refiner. 2,947,485, 8–2–60, Cl. 241—82.

Woods, Robert C., to The American Brass Co. Method of detecting surface conditions of sheet metal. 2,947,212, 8–2–60, Cl. 88—14.

Woodward, Stewart A., to General Electric Co. Key operated multiple switch. 2,947,825, 8–2–60, Cl. 200—5.

Woodworth, Richard E., to Cook Electric Co. Antiskid device. 2,947,579, 8–2–60, Cl. 303—24.

Wortmann, Adolf. Insulator with cap in socket. 2,947,802, 8–2–60, Cl. 174—200.

Woytych, Raymond M., to Giddings & Lewis Machine Tool Co. Attachable ways for machine columns. 2,947,224, 8–2–60, Cl. 90—11.

Wray, Edward J., to Canadian General Electric Co., Ltd. Brushgear assembly. 2,947,895, 8–2–60, Cl. 310—239.

Wright, George W., and J. D. Clymer, to Toxheim Corp. Motor-pump unit for automotive fuel. 2,947,259, 8–2–60, Cl. 103—87.

Yale & Towne Manufacturing Co., The: *See*—
Quayle, George F. 2,947,549.

Yang, Denis C. Power indicator. 2,947,168, 8–2–60, Cl. 73—136.

Young, Einar T., to Sun Oil Co. Jacking mechanism for seadrome. 2,947,148, 8–2–60, Cl. 61—46.5.

Young Iron Works: *See*—
Jackson, Rodney. 2,947,516.

Youngman, Edward A., and R. M. Roberts, to Shell Oil Co. Production of sodium perborate in stable form. 2,947,602, 8–2–60, Cl. 23—60.

Youngstown Sheet and Tube Co., The: *See*—
Olson, Merton E. 2,947,184.

Yuni, William: *See*—
Reiis, Matthew J., and Yuni. 2,947,945.

Zahner, Charles F., and R. L. Samson, to Curtiss-Wright Corp. Simulated radio navigational aids receiver. 2,947,088, 8–2–60, Cl. 35—10.2.

Zambrow, John L., to United States of America, Atomic Energy Commission. Method of making wire fuel elements. 2,947,676, 8–2–60, Cl. 204—154.2.

Zarabara, Theodore: *See*—
Berry, Henry E., Hirschle, and Zarabara. 2,947,137.

Zeltschel, Ruth H., to Rohm & Haas Co. Quaternary ammonium compounds of the ureidoalkylammonium type. 2,947,748, 8–2–60, Cl. 260—247.2.

Zenczak, Piotr, to Grenco, Inc. Method of producing, separating and recovering reaction products from bark. 2,947,764, 8–2–60, Cl. 260—397.25.

Zenith Radio Corp.: *See*—
Ellers, Carl G., and Roschke. 2,947,804.
Kaplan, Sam H. 2,947,899.
Spindler, Joseph C. 2,947,957.

Ziegler, Eugene R., to General Motors Corp. Windshield wiper drive mechanism. 2,947,185, 8–2–60, Cl. 74—95.

Zobrist, Leo, to Dr. R. Maag, Ltd. Systemic fungicidal solution and method of application. 2,947,111, 8–2–60, Cl. 47—58.

CLASSIFICATION OF PATENTS

ISSUED AUGUST 2, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 2: 2,947,001
3: 2,947,002
44.4: 2,947,003
2— 30: 2,947,004
4— 187: 2,947,005
5— 13: 2,947,006
82: 2,947,007
321: 2,947,008
327: 2,947,009
8— 117: 2,947,594
151.2: 2,947,595
9— 307: 2,947,010
15— 3.17: 2,947,011
98: 2,947,012
105: 2,947,013
119: 2,947,014
134: 2,947,015
209: 2,947,016
235.8: 2,947,017
246: 2,947,018
250.16: 2,947,020
250.2: 2,947,019
16— 21: 2,947,021
123: 2,947,022
145: 2,947,023
166: 2,947,024
179: 2,947,025
18— 1: 2,947,026
8: 2,947,027
2,947,028
2,947,029
12: 2,947,030
14: 2,947,031
2,947,032
34: 2,947,033
2,947,034
36: 2,947,035
47: 2,947,596
48: 2,947,036
54: 2,947,597
2,947,598
19— 129: 2,947,037
131: 2,947,038
134: 2,947,039
20— 4: 2,947,040
2,947,041
55: 2,947,042
64: 2,947,043
21— 2.5: 2,947,599
22— 87.2: 2,947,044
88: 2,947,045
193: 2,947,046
23— 2: 2,947,600
14.5: 2,947,601
60: 2,947,602
89: 2,947,603
143: 2,947,604
2,947,605
2,947,606
205: 2,947,607
209.1: 2,947,608
2,947,609
2,947,610
2,947,611
292: 2,947,612
294: 2,947,613
312: 2,947,614
24— 66: 2,947,047
73: 2,947,048
104: 2,947,049
109: 2,947,050
129: 2,947,051
130: 2,947,052
217: 2,947,053
248: 2,947,054
259: 2,947,055
25— 157: 2,947,056
26— 66: 2,947,057
69: 2,947,058
27— 19: 2,947,059
28— 1: 2,947,060
29— 1: 2,947,061
103: 2,947,062
149.5: 2,947,063
155.5: 2,947,064
155.57: 2,947,065
166.6: 2,947,066
173: 2,947,067
182.5: 2,947,068
197: 2,947,069
235: 2,947,070
29— 235: 2,947,071
245: 2,947,072
267: 2,947,073
280: 2,947,074
417: 2,947,075
424: 2,947,076
430: 2,947,077
474.3: 2,947,078
495: 2,947,079
526: 2,947,080
547: 2,947,081
32— 40: 2,947,082
33— 1: 2,947,083
32: 2,947,084
75: 2,947,085
178: 2,947,086
35— 9: 2,947,087
10.2: 2,947,088
12: 2,947,089
14: 2,947,090
17: 2,947,091
48: 2,947,092
65: 2,947,093
36— 4.5: 2,947,094
11.5: 2,947,095
37— 144: 2,947,096
185: 2,947,097
38— 66: 2,947,098
100: 2,947,099
40— 32: 2,947,100
53: 2,947,101
115: 2,947,102
140: 2,947,103
41— 42: 2,947,615
43— 3: 2,947,104
17: 2,947,105
53.5: 2,947,106
92: 2,947,107
46— 77: 2,947,108
47— 1: 2,947,109
58: 2,947,110
2,947,111
2,947,112
1: 2,947,113
53: 2,947,114
58: 2,947,115
79: 2,947,116
89: 2,947,117
80— 43: 2,947,267
202: 2,947,118
466: 2,947,119
81— 26: 2,947,120
134.5: 2,947,121
166: 2,947,122
259: 2,947,123
282: 2,947,124
296: 2,947,616
307: 2,947,617
.5: 2,947,618
53— 37: 2,947,204
61: 2,947,125
88: 2,947,126
182: 2,947,127
310: 2,947,128
56— 1: 2,947,129
2,947,130
18: 2,947,131
25.4: 2,947,132
110: 2,947,133
209: 2,947,134
377: 2,947,135
57— 157: 2,947,136
58— 80: 2,947,137
60— 35.4: 2,947,138
35.6: 2,947,139
2,947,140
39.28: 2,947,141
2,947,142
39.72: 2,947,143
52: 2,947,144
54.6: 2,947,145
61— .5: 2,947,146
2,947,147
46.5: 2,947,148
53: 2,947,149
62— 3: 2,947,150
13: 2,947,151
40: 2,947,152
156: 2,947,153
169: 2,947,154
342: 2,947,155
62— 353: 2,947,156
64— 18: 2,947,157
21: 2,947,158
23: 2,947,159
70— 1.5: 2,947,160
67: 2,947,161
71— 9: 2,947,619
73— 4: 2,947,162
15: 2,947,163
28: 2,947,164
37: 2,947,165
40.7: 2,947,166
100: 2,947,167
136: 2,947,168
206: 2,947,169
311: 2,947,170
351: 2,947,171
462: 2,947,172
464: 2,947,173
2,947,174
483: 2,947,175
517: 2,947,176
74— 5.6: 2,947,177
5.7: 2,947,178
6: 2,947,179
22: 2,947,180
26: 2,947,181
60: 2,947,182
61: 2,947,183
69: 2,947,184
95: 2,947,185
107: 2,947,186
142: 2,947,187
323: 2,947,188
342: 2,947,189
2,947,190
471: 2,947,191
472: 2,947,192
479: 2,947,193
501: 2,947,194
526: 2,947,195
599: 2,947,196
611: 2,947,197
665: 2,947,198
688: 2,947,199
695: 2,947,200
705: 2,947,201
751: 2,947,202
75— .5: 2,947,620
122.7: 2,947,621
129: 2,947,622
163: 2,947,623
176: 2,947,624
77— 5: 2,947,203
7: 2,947,204
14: 2,947,205
55: 2,947,206
81— 15: 2,947,207
53: 2,947,208
58.3: 2,947,209
84— 177: 2,947,210
388: 2,947,211
88— 14: 2,947,212
2,947,213
2,947,214
17: 2,947,215
20: 2,947,216
24: 2,947,217
2,947,218
57: 2,947,219
89— 1: 2,947,220
7: 2,947,221
35: 2,947,222
90— 5: 2,947,223
11: 2,947,224
24: 2,947,225
55: 2,947,226
58: 2,947,227
93— 37: 2,947,228
53: 2,947,229
94— 40: 2,947,230
95— 11: 2,947,231
73: 2,947,232
76: 2,947,233
76: 2,947,234
93: 2,947,235
2,947,236
96— 1: 2,947,625
84: 2,947,626
45: 2,947,627
74: 2,947,628
96— 101: 2,947,629
104: 2,947,630
106: 2,947,631
98— 40: 2,947,237
2,947,238
50: 2,947,239
99— 6: 2,947,632
48: 2,947,633
71: 2,947,634
107: 2,947,635
142: 2,947,636
171: 2,947,637
194: 2,947,638
333: 2,947,240
100— 89: 2,947,241
80: 2,947,242
101— 26: 2,947,243
77: 2,947,244
114: 2,947,245
122: 2,947,246
126: 2,947,247
157: 2,947,248
102— 10: 2,947,249
20: 2,947,250
2,947,251
2,947,252
2,947,253
43: 2,947,254
70.2: 2,947,255
79: 2,947,256
103— 41: 2,947,257
2,947,258
87: 2,947,259
2,947,260
104— 98: 2,947,261
111: 2,947,262
168: 2,947,263
172: 2,947,264
103—224.1: 2,947,265
106— 1: 2,947,639
2: 2,947,640
35.3: 2,947,641
62: 2,947,642
97: 2,947,643
157: 2,947,644
170: 2,947,645
193: 2,947,646
107— 1: 2,947,266
110— 165: 2,947,268
111— 80: 2,947,269
112— 258: 2,947,270
260: 2,947,271
113— 1: 2,947,272
46: 2,947,273
95: 2,947,274
99: 2,947,275
120: 2,947,276
114— 71: 2,947,277
115— 18: 2,947,278
116— 114: 2,947,279
118: 2,947,280
117— 41: 2,947,647
59: 2,947,648
118: 2,947,649
122: 2,947,650
222: 2,947,651
118— 632: 2,947,281
119—14.47: 2,947,282
121— 33: 2,947,283
38: 2,947,284
41: 2,947,285
2,947,286
45: 2,947,287
122— 478: 2,947,288
479: 2,947,289
123— 8: 2,947,290
30: 2,947,291
32: 2,947,292
52: 2,947,293
56: 2,947,294
75: 2,947,295
90: 2,947,296
117: 2,947,297
127: 2,947,298
140: 2,947,299
182: 2,947,300
124— 30: 2,947,301
125— 11: 2,947,302
126— 307: 2,947,303
281: 2,947,304
128— 12: 2,947,305
128— 87: 2,947,306
90: 2,947,307
92: 2,947,308
129— 24: 2,947,309
131— 9: 2,947,310
134— 58: 2,947,311
191: 2,947,312
136— 86: 2,947,797
137— 63: 2,947,313
64: 2,947,314
68: 2,947,315
101.25: 2,947,316
108: 2,947,317
122: 2,947,318
204: 2,947,319
271: 2,947,320
516.25: 2,947,321
596.2: 2,947,322
624.14: 2,947,323
625.39: 2,947,324
793: 2,947,325
138— 30: 2,947,326
139— 27: 2,947,327
412: 2,947,328
140— 93: 2,947,329
141— 1: 2,947,330
143— 135: 2,947,331
144— 116: 2,947,332
305: 2,947,333
145— 54: 2,947,334
146— 78: 2,947,335
152— 216: 2,947,336
220: 2,947,337
330: 2,947,338
361: 2,947,339
362: 2,947,340
2,947,341
2,947,342
2,947,343
153— 48: 2,947,344
154—2.24: 2,947,652
42: 2,947,345
42.3: 2,947,346
53: 2,947,653
100: 2,947,654
155— 107: 2,947,347
128: 2,947,348
130: 2,947,349
152: 2,947,350
160: 2,947,351
177: 2,947,352
189: 2,947,353
160— 91: 2,947,354
191: 2,947,355
162— 96: 2,947,655
32: 2,947,656
76: 2,947,657
169: 2,947,658
314: 2,947,356
164— 112: 2,947,357
115: 2,947,358
166— 4: 2,947,359
9: 2,947,360
100: 2,947,361
103: 2,947,362
224: 2,947,363
167— 16: 2,947,659
22: 2,947,660
2,947,661
30: 2,947,662
2,947,663
58: 2,947,664
170—135.71: 2,947,364
159: 2,947,365
171— 116: 2,947,366
172— 239: 2,947,367
264: 2,947,368
269: 2,947,369
375: 2,947,370
605: 2,947,371
624: 2,947,372
174— 15: 2,947,798
50.62: 2,947,799
53: 2,947,800
141: 2,947,801
200: 2,947,802
178— 3: 2,947,803
5.1: 2,947,804
5.2: 2,947,805
5.4: 2,947,806
178— 5.4: 2,947,807
6.6: 2,947,808
2,947,809
6.7: 2,947,810
7.5: 2,947,811
2,947,812
15: 2,947,813
66: 2,947,814
69: 2,947,815
71: 2,947,816
179— 7.1: 2,947,817
18: 2,947,818
2,947,819
100.2: 2,947,820
100.41: 2,947,821
107: 2,947,822
110: 2,947,823
175.2: 2,947,824
180— 68.5: 2,947,373
2,947,374
75: 2,947,375
89: 2,947,376
.5: 2,947,377
181— 105: 2,947,378
182— 2: 2,947,379
2.7: 2,947,380
15: 2,947,381
22: 2,947,382
121: 2,947,383
188— 59: 2,947,384
62: 2,947,385
88: 2,947,386
152: 2,947,387
218: 2,947,388
229.1: 2,947,389
189— 36: 2,947,390
76: 2,947,391
192— 3: 2,947,392
18: 2,947,393
2,947,394
45.2: 2,947,395
53: 2,947,396
87: 2,947,397
99: 2,947,398
105: 2,947,399
103— 5: 2,947,400
25: 2,947,401
40: 2,947,402
194— 30: 2,947,403
195— 38: 2,947,665
47: 2,947,666
70: 2,947,667
98: 2,947,668
127: 2,947,669
197— 102: 2,947,404
198— 33: 2,947,405
2,947,406
66: 2,947,407
122: 2,947,408
192: 2,947,409
220: 2,947,410
199— 91: 2,947,411
200— 5: 2,947,825
15: 2,947,826
16: 2,947,827
20: 2,947,828
61.08: 2,947,829
61.51: 2,947,830
67: 2,947,831
2,947,832
80: 2,947,833
81.9: 2,947,834
83: 2,947,835
87: 2,947,836
92: 2,947,837
2,947,838
147: 2,947,839
160: 2,947,840
202— 22: 2,947,670
57: 2,947,671
204— 64: 2,947,672
67: 2,947,673
141: 2,947,674
154: 2,947,675
154.2: 2,947,676
181: 2,947,677
193.2: 2,947,678
195: 2,947,679
197: 2,947,680
206— 15.1: 2,947,412
41.1: 2,947,413

206— 46: 2,947,414
53.2: 2,947,415
208— 55: 2,947,681
65: 2,947,682
2,947,683
118: 2,947,684
210: 2,947,685
340: 2,947,686
209— 28: 2,947,416
121: 2,947,417
210— 23: 2,947,687
2,947,688
50: 2,947,689
57: 2,947,690
98: 2,947,418
435: 2,947,419
211— 33: 2,947,420
45: 2,947,421
47: 2,947,422
90: 2,947,423
168: 2,947,424
212— 35: 2,947,425
128: 2,947,426
214— 1: 2,947,427
6: 2,947,428
2,947,429
135: 2,947,430
215— 9: 2,947,431
41: 2,947,432
216— 12: 2,947,433
219—10.79: 2,947,841
19: 2,947,842
2,947,843
20: 2,947,844
38: 2,947,846
74: 2,947,847
83: 2,947,848
150: 2,947,849
220— 4: 2,947,434
2,947,435
10: 2,947,436
13: 2,947,437
15: 2,947,438
16: 2,947,439
22: 2,947,440
63: 2,947,441
64: 2,947,442
89: 2,947,443
221— 93: 2,947,444
210: 2,947,445
211: 2,947,446
299: 2,947,447
222— 92: 2,947,448
94: 2,947,449
136: 2,947,450
182: 2,947,451
187: 2,947,452
539: 2,947,453
223— 88: 2,947,454
224— 4: 2,947,455
5: 2,947,456
29: 2,947,457
45: 2,947,458
220— 14: 2,947,459
2,947,460
17: 2,947,461
23: 2,947,462
43: 2,947,463
84: 2,947,464
230— 69: 2,947,465
114: 2,947,466
117: 2,947,467
119: 2,947,468
230— 134: 2,947,469
160: 2,947,470
233— 13: 2,947,471
19: 2,947,472
235— 61: 2,947,473
61.5: 2,947,474
61.6: 2,947,475
63: 2,947,476
79: 2,947,477
160: 2,947,478
169: 2,947,479
183: 2,947,480
186: 2,947,481
239— 227: 2,947,482
295: 2,947,483
240— 2: 2,947,850
41.25: 2,947,851
2,947,852
2,947,853
2,947,854
46.39: 2,947,855
61.13: 2,947,856
241— 10: 2,947,484
32: 2,947,485
36: 2,947,486
242— 9: 2,947,487
2,947,488
18: 2,947,489
45: 2,947,490
53: 2,947,491
78.7: 2,947,492
90: 2,947,493
186: 2,947,494
244— 3: 2,947,495
12: 2,947,496
17.11: 2,947,497
17.13: 2,947,498
23: 2,947,499
2,947,500
51: 2,947,501
76: 2,947,502
122: 2,947,503
246— 169: 2,947,857
248— 63: 2,947,504
74: 2,947,505
122: 2,947,506
206: 2,947,507
250— 2: 2,947,858
20: 2,947,859
2,947,860
2,947,861
2,947,862
27: 2,947,863
2,947,864
2,947,865
40: 2,947,866
41.9: 2,947,867
2,947,868
43.5: 2,947,869
53: 2,947,870
83: 2,947,871
83.6: 2,947,872
206: 2,947,873
208: 2,947,874
214: 2,947,875
219: 2,947,876
2,947,877
251— 2: 2,947,508
48: 2,947,509
54: 2,947,510
203: 2,947,511
252— 8.55: 2,947,691
28: 2,947,692
32.7: 2,947,693
252— 33: 2,947,694
33.6: 2,947,695
2,947,696
55: 2,947,697
62.9: 2,947,698
76: 2,947,699
102: 2,947,700
109: 2,947,701
137: 2,947,702
149: 2,947,708
301.6: 2,947,704
2,947,705
416: 2,947,706
419: 2,947,707
452: 2,947,708
455: 2,947,709
253—39.15: 2,947,512
254— 2: 2,947,513
75: 2,947,514
100: 2,947,515
175.7: 2,947,516
186: 2,947,517
255— 1.4: 2,947,518
4.4: 2,947,519
35: 2,947,520
257— 300: 2,947,522
258— 1.2: 2,947,523
259— 6: 2,947,524
260— 5: 2,947,710
18: 2,947,711
2,947,712
19: 2,947,713
24: 2,947,714
29.6: 2,947,715
41: 2,947,716
45.4: 2,947,717
45.5: 2,947,718
2,947,719
45.8: 2,947,720
45.85: 2,947,722
45.9: 2,947,721
45.95: 2,947,723
2,947,724
47: 2,947,725
2,947,726
67: 2,947,727
2,947,728
75: 2,947,729
79.7: 2,947,730
2,947,731
82.1: 2,947,732
86.3: 2,947,734
87.3: 2,947,735
88.3: 2,947,736
94.2: 2,947,737
94.9: 2,947,738
124: 2,947,739
139: 2,947,740
236: 2,947,741
239.65: 2,947,742
239.75: 2,947,743
243: 2,947,744
244: 2,947,745
2,947,746
2,947,747
247.2: 2,947,748
247.7: 2,947,749
249.6: 2,947,750
295.5: 2,947,751
292: 2,947,752
294.3: 2,947,753
295.5: 2,947,754
260— 298: 2,947,755
2,947,756
319: 2,947,757
2,947,758
340.7: 2,947,759
345.2: 2,947,760
348.5: 2,947,761
397.25: 2,947,764
397.3: 2,947,762
2,947,763
397.45: 2,947,765
405: 2,947,766
414: 2,947,767
429.1: 2,947,768
439: 2,947,769
448.2: 2,947,770
2,947,771
448.8: 2,947,772
461: 2,947,773
2,947,774
2,947,775
462: 2,947,776
465.9: 2,947,777
468.5: 2,947,778
488: 2,947,779
488: 2,947,780
518: 2,947,781
551: 2,947,782
566: 2,947,783
577: 2,947,784
583: 2,947,785
598: 2,947,786
607: 2,947,787
608: 2,947,788
619: 2,947,789
622: 2,947,790
645: 2,947,791
552.5: 2,947,792
694: 2,947,793
666: 2,947,794
678: 2,947,795
683.62: 2,947,796
261— 122: 2,947,525
262— 19: 2,947,526
266— 34: 2,947,527
267— 1: 2,947,528
2,947,529
65: 2,947,530
2,947,531
2,947,532
268— 30: 2,947,533
65: 2,947,534
124: 2,947,535
270— 79: 2,947,536
271— 2.4: 2,947,537
11: 2,947,538
64: 2,947,539
273— 25: 2,947,540
43: 2,947,541
274— 10: 2,947,542
275— 5: 2,947,543
8: 2,947,544
280—11.35: 2,947,545
36: 2,947,546
43.23: 2,947,547
79.2: 2,947,548
112: 2,947,549
477: 2,947,550
499: 2,947,551
281— 33: 2,947,552
283— 133: 2,947,553
287— 54: 2,947,554
2,947,555
58: 2,947,556
287— 58: 2,947,557
289— 2: 2,947,558
292— 128: 2,947,559
241: 2,947,560
347: 2,947,561
294— 61: 2,947,562
65.5: 2,947,563
100: 2,947,564
296— 3: 2,947,565
10: 2,947,566
28: 2,947,567
35: 2,947,568
44: 2,947,569
117: 2,947,570
298— 10: 2,947,571
301— 37: 2,947,572
2,947,573
2,947,574
2,947,575
2,947,576
302— 59: 2,947,577
66: 2,947,578
303— 24: 2,947,579
307— 64: 2,947,578
89.5: 2,947,579
2,947,580
2,947,581
2,947,582
2,947,583
106: 2,947,584
132: 2,947,585
308— 203: 2,947,580
216: 2,947,581
309— 9: 2,947,582
10: 2,947,583
310— 8.3: 2,947,586
8.4: 2,947,587
26: 2,947,588
2,947,589
2,947,590
41: 2,947,591
57: 2,947,592
90: 2,947,593
202: 2,947,594
239: 2,947,595
311— 2: 2,947,584
21: 2,947,585
39: 2,947,586
79: 2,947,587
83: 2,947,588
312— 301: 2,947,589
313— 78: 2,947,596
82: 2,947,597
92: 2,947,598
2,947,599
132: 2,947,600
157: 2,947,601
167: 2,947,602
231: 2,947,603
315— 3: 2,947,605
3.5: 2,947,606
2,947,607
5.46: 2,947,608
100: 2,947,609
163: 2,947,610
166: 2,947,611
169: 2,947,612
238: 2,947,613
316— 9: 2,947,590
317— 101: 2,947,614
148.5: 2,947,616
149: 2,947,617
182: 2,947,618
317— 152: 2,947,919
158: 2,947,920
159: 2,947,921
234: 2,947,922
235: 2,947,923
2,947,924
2,947,925
238: 2,947,926
2,947,927
318— 23: 2,947,928
28: 2,947,929
210: 2,947,930
447: 2,947,931
321— 48: 2,947,932
322— 47: 2,947,933
323— 74: 2,947,934
75: 2,947,935
324— 28: 2,947,936
28: 2,947,937
82: 2,947,938
65: 2,947,939
2,947,940
131: 2,947,941
137: 2,947,942
158: 2,947,943
328— 42: 2,947,944
112: 2,947,945
330— 8: 2,947,946
117: 2,947,947
193: 2,947,948
331— 144: 2,947,949
332— 9: 2,947,950
19: 2,947,951
333— 11: 2,947,952
28: 2,947,953
30: 2,947,954
96: 2,947,955
2,947,956
336— 61: 2,947,957
84: 2,947,958
198: 2,947,959
212: 2,947,960
216: 2,947,961
338— 4: 2,947,962
278: 2,947,963
339— 17: 2,947,964
95: 2,947,965
188: 2,947,966
272: 2,947,967
276: 2,947,968
340— 5: 2,947,969
80: 2,947,970
149: 2,947,971
2,947,972
164: 2,947,973
2,947,974
173: 2,947,975
174: 2,947,976
2,947,977
2,947,978
213: 2,947,979
2,947,980
343— 6: 2,947,981
7: 2,947,982
8: 2,947,983
105: 2,947,984
2,947,985
117: 2,947,986
180: 2,947,987
742: 2,947,988
757: 2,947,989
346— 50: 2,947,591
74: 2,947,592
117: 2,947,593

Classification of Designs

D 4— 3: 188,481
188,482
D 5— 2: 188,483
188,484
D10— 9: 188,485
D11— 1: 188,486
D14— 3: 188,487
D15— 1: 188,488
D15— 11: 188,489
188,490
D18— 2: 188,491
D21— 1: 188,492
D26— 1: 188,493
14: 188,494
188,495
D29— 1: 188,496
D29— 23: 188,497
D33— 19: 188,498
188,499
D35— 2: 188,500
D44— 1: 188,501
15: 188,502
188,503
29: 188,504
D48— 20: 188,505
188,506
27: 188,507
32: 188,508
D50— 3: 188,509
D52— 3: 188,510
4: 188,511
D58— 4: 188,512
D58— 17: 188,513
D64— 11: 188,514
D67— 3: 188,515
D71— 1: 188,516
188,517
D72— 1: 188,518
D74— 1: 188,519
D74— 5: 188,520
D83— 1: 188,521
D86— 10: 188,522
D87— 2: 188,523
188,524
3: 188,525
D91— 3: 188,526

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TRADEMARKS

NOTICES

Decisions of the Commissioner of Patents

The 1959 edition of the Decisions of the Commissioner of Patents has been released from the printer and is available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. Price $2.75.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 22,466 (COCA-COLA), The Coca-Cola Company, Tonic beverages and syrups for the manufacture of such beverages; **Reg. No. 47,139**, same, Non-alcoholic maltless beverages and the syrup for making such beverages; **Reg. No. 238,145**, same, Beverages and syrups for the manufacture of such beverages; **Reg. No. 238,146**, same; **Reg. No. 415,755** (COKE), same, Nonalcoholic maltless beverages and syrups for making such beverages, filed May 16, 1960, D.C., S.D.N.Y., Doc. 60/1976, *Coca-Cola Company* v. *Michael Venevento etc., doing business as Bette Allen's.* Consent judgment; trademarks held valid; defendants enjoined June 15, 1960.

Reg. No. 25,889 (GE AND DESIGN), General Electric Company, Machinery, electrical apparatus and supply parts therefor; **Reg. No. 220,304** (GENERAL ELECTRIC AND DESIGN), filed June 22, 1960, D.C., S.D. Iowa (Des Moines), Doc. 4/1068, *General Electric Company* v. *Office Specialty Company.*

Reg. No. 47,139. (See Reg. No. 22,406.)

Reg. No. 238,145. (See Reg. No. 22,406.)

Reg. No. 238,146. (See Reg. No. 22,406.)

Reg. No. 397,897 (PRO-TEK), The Mountain Varnish & Color Works, Inc., Preparation in the form of a cream for use in protecting the skin from paint, varnish, grease, oils and acid, filed Sept. 17, 1959, D.C.N.J. (Newark), Doc. 783/59, *E. I. du Pont de Nemours and Company* v. *Acrolite Products, Inc.* Complaint dismissed; trademark held not infringed (notice June 17, 1960).

Reg. No. 220,304. (See Reg. No. 35,069.)

Reg. No. 227,696 (EARLY TIMES), Brown-Forman Distillery Co., Inc., Whiskey and/or other potable distilled spirits; **Reg. No. 626,674** (EARLY TIMES AND DESIGN), Brown-Forman Distillers Corporation, Whiskey, filed June 9, 1960, D.C., W.D. Ky. (Louisville), Doc. 3993, *Brown-Forman Distillers Corporation* v. *Winn-Dixie Stores, Inc. et al.*

Reg. No. 269,329 (POLAROID), Polaroid Corporation, Viewing devices such as filters, lenses, eyeglasses, etc., filed June 14, 1960, D.C., S.D.N.Y., Doc. 60/2329, *Polaroid Corporation* v. *Permarite Corporation et al.*

Reg. No. 415,755. (See Reg. No. 22,406.)

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 10,302
Date of oldest new application ..... Feb. 1, 1960
Date of oldest amended application ..... Jan. 14, 1960

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	2-1-60	2-16-60
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	2-6-60	1-14-60
Renewals (All Classes)	6-7-60	6-23-60
Sec. 12 (c) Publications (All Classes)	5-14-60	-------

Applications filed during the month of June 1960—1,895

Registrations Issued ..... 385—No. 702,038 to No. 702,422
Renewals Issued 90

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 627,966 (HONOR YOUR PARTNER AND DESIGN), Square Dance Associates, Phonograph grooved records, **filed** June 21, 1960, D.C., S.D.N.Y., Doc. 60/2433, *Square Dance Associates, Inc.* v. *Folkways Records & Service Corporation.*

Reg. No. 626,884, R. M. Wade & Co., Equipment for irrigation systems—namely, sprinklers, metal pipe, metal pipe couplers, check valves, and lift valves, **filed** June 17, 1960, D.C., S.D.N.Y., Doc. 60/2382, *R. M. Wade & Co.* v. *Solcoor Incorporated.*

Reg. No. 571,798 (ROQUEFORT), The Community of Roquefort, Cheese, **filed** June 10, 1960, D.C., S.D.N.Y., Doc. 60/2290, *Community of Roquefort et al.* v. *William Faehndrich, Inc.*

Reg. No. 623,948 (CEMENT ENAMEL), Cement Enamel of Michigan, Inc., Vitreous wall surfacing, **filed** June 20, 1960, D.C., S.D.N.Y., Doc. 60/2419, *Cement Enamel Development, Inc.* v. *Cement Enamel of New York, Inc. et al.*

Reg. No. 626,674. (See Reg. No. 527,066.)

Reg. No. 628,471 (POLYFOAM), Whitehouse Distributors, Inc., Sheet stock made of polyerethane foam, **filed** Apr. 9, 1958, D.C., S.D. Calif. (Los Angeles), Doc. 314/58–PH, *The General Tire & Rubber Co.* v. *Cecil Greenwold, doing business as Polyfoam Products.* Trademark held valid and infringed; defendant restrained; counterclaim dismissed (notice June 16, 1960).

Reg. No. 622,291 (BADER8'), Baders' Dutch Bakeries, Inc., Cookies, also known as crackers, **filed** July 29, 1959, D.C., W.D. Wash. (Seattle), Doc. 4870, *Baders' Dutch Bakeries, Inc.* v. *Gerald and Catherine Bader, doing business as Baders' Custom Baking et al.* Consent decree; trademark held valid June 21, 1960.

Selected Non-Proprietary Names

The Public Health Service has informed the Patent Office that the names listed below have been selected by WHO as proposed international non-proprietary names for pharmaceutical preparations.

The procedure for selection of these names, by WHO, including earlier publication in accordance with procedures published in the Chronicle of the World Health Organization, June-July 1955 issue, has been completed. WHO requests that these proposed names be recognized as the non-proprietary names for the substances concerned and that the necessary steps be taken to prevent acquisition of proprietary rights in the same.

Proposed International Non-Proprietary Name (*Latin, English*)	Chemical Name or Description
acidum thyropropicum thyropropic acid	3-[4-(4-hydroxy-3-iodophenoxy)-3,5-diodophenyl] propionic acid
allylestrenolum allylestrenol	17α-allylestr-4-en-17-ol
aminoglutethimidum aminoglutethimide	2-(*p*-aminophenyl)-2-ethylglutarimide
amphenidonum amphenidone	1-(*m*-aminophenyl)-2[1*H*]pyridone
amphotericinum B amphotericin B	a polyene antibiotic substance obtained from cultures of *Streptomyces nodosus*, or the same substance produced by any other means
androstanazolum androstanazole	17 *B*-hydroxy-17 α-methylandrostano-[3, 2-*c*]pyrazole
anisindionum anisindione	2-*p*-methoxyphenylindane-1,3-dione
benzthiazidum benzthiazide	3-benzylthiomethyl-6-chloro-7-sulfamoylbenzo-1,2,4 (4*H*)-thiadiazine 1,1-dioxide
biperidenum biperiden	1-(bicyclo[2,2,1] hept-5-en-2-yl)-1-phenyl-3-piperidinopropanol
bretylii tosylas bretylium tosylate	*N*-α-bromobenzyl-*N*-ethyl-*N,N*-dimethylammonium tosylate (tosylic acid is *p*-toluenesulfonic acid)
bunamiodyl bunamiodyl	2-(3-butyramido-2,4,6-triiodophenyl-2-ethylacrylate
butadiazamidum butadiazamide	*N*-(5-butyl-1,3,4-thiadiazol-2-yl)-*p*-chlorobenzenesulfonamide
calcii benzamidosalicylas calcium benzamidosalicylate	calcium 4-benzamido-2-hydroxybenzoate
calcii carbimidum calcium carbimide	calcium cyanamide
carisoprodolum carisoprodol	2-carbamoyloxymethyl-2-isopropylcarbamoyloxymethylpentane
chlorphenoxaminum chlorphenoxamine	2-(1-*p*-chlorophenyl-1-phenylethoxy) ethyldimethylamine
chlorprothixenum chlorprothixene	*trans*-2-chloro-9-(3-dimethylaminopropylidene) thiaxanthen
chlorthenoxazinum chlorthenoxazine	2-(2-chloroethyl)-2,3-dihydro-4-oxobenz-1,3-oxazine
chymotrypsinum chymotrypsin	an enzyme, α-chymotrypsin, obtained in crystalline form from mammalian pancreas by aqueous acid extraction of its proenzyme, chymotrypsinogen, and subsequent conversion with trypsin to chymotrypsin
cinnamaverinum cinnamaverine	2-diethylaminoethyl 2-phenylcinnamate
colistinum colistin	an antibiotic substance obtained from cultures of *Aerobacillus colistinus*, or the same substance produced by any other means
cyclophosphamidum cyclophosphamide	*N,N*-bis(2-chloroethyl)-*N'*-(3-hydroxypropyl) phosphordiamidic acid cyclic ester
cyproheptadinum cyproheptadine	4-(5-dibenzo [*a–e*] cycloheptatrienylidene)-1-methylpiperidine
demecarii bromidum demecarium bromide	*N,N'*-decamethylenebis-(trimethyl(3-*N*-methylcarbamoyloxyphenyl) ammonium bromide)
demethylchlortetracyclinum demethylchlortetracycline	7-chloro-4-dimethylamino-1,4,4a,5,5a,6,11,12a-octahydro-3,6,10,12,12a-pentahydroxy-1,11-dioxo-2-naphthacenecarboxamide
dexbrompheniraminum dexbrompheniramine	(+)-(3-*p*-bromophenyl-3-pyrid-2'-ylpropyl) dimethylamine
dexchlorpheniraminum dexchlorpheniramine	(+)-(3-*p*-chlorophenyl-3-pyrid-2'-ylpropyl) dimethylamino
diampromidum diampromide	*N*-(2-[(methyl)phenethylamino]-propyl)propionanilide
dichlorisonum dichlorisone	9α, 11β-dichloro-17α-hydroxypregna-1,4-diene-3,20-dione
dieldrinum dieldrin	product containing 85 percent of 1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-exo-1,4-endo-5,8-dimethanonaphthalene

Proposed International Non-Proprietary Name (*Latin, English*)	Chemical Name or Description
dimeproxanum dimeproxane	9-(3-dimethylaminopropylidene)-2-methoxyxanthene
dimethisolinum dimethisoline	1-(2-methoxyphenyl)-4-(3-methoxyprepyl)piperazine
diphenoxylatum diphenoxylate	1-(3-cyano-3, 3-diphenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester
dipiproverinum dipiproverine	2-piperidinoethyl α-phenyl-α-piperidinoacetate
ditophalum ditophal	diethyl dithioisophthalate
emylcamatum emylcamate	1-ethyl-1-methylpropyl carbamate
ethenzamidum ethenzamide	o-ethoxybenzamide
ethionamidum ethionamide	2-ethylpyridine-4-carbothionamide
ferrocholinatum ferrocholinate	a chelate prepared by reacting equimolar quantities of freshly precipitated ferric hydroxide with choline dihydrogen citrate
fibrinolysinum (humanum) fibrinolysin (human)	an enzyme obtained from human plasma by conversion of profibrinolysin with streptokinase to fibrinolysin
flumethiazidum flumethiazide	6-trifluoromethyl-7-sulfamoylbenzo-1,2,4(4*H*)-thiadiazine 1,1-dioxide
fluphenazinum fluphenazine	10-(3-[4-(2-hydroxyethyl) piperazin-1-yl]propyl)-2-trifluoromethylphenothiazine
glucagonum glucagon	polypeptide consisting of 29 amino acid residues which would possess a minimum molecular weight of 3482
griseofulvinum griseofulvin	7-chloro-4,6-dimethoxycoumaran-3-one-2-spiro-1'-(2'-methoxy-6'-methylcyclohex-2'-en-4'-one)
halopenii chloridum halopenium chloride	4-bromobenzyl-3-(4-chloro-5-methyl-2-isopropylphenoxy) propyldimethylammonium chloride
haloperidolum haloperidol	4-(*p*-chlorophenyl)-1-[3-(*p*-fluorobenzoyl)propyl] piperidin-4-ol
hexapropymatum hexapropymate	1-prop-2'-ynylcyclohex-1-yl carbamate
hexcarbacholini bromidum hexcarbacholine bromide	*N,N'*-hexamethylenebis[(2-carbamoyloxyethyl) trimethylammonium bromide]
homochlorcyclizinum homochlorcyclizine	1-(*p*-chlorodiphenylmethyl)-4-methyl-1,4-diazacycloheptane
hydrargaphenum hydrargaphen	phenylmercuric methylenebis (2-naphthyl-3-sulfonate)
hydrochlorothiazidum hydrochlorothiazide	6-chloro-3,4-dihydro-7-sulfamoylbenzo-1,2,4-thiadiazine dioxide-1,1
hydroflumethiazidum hydroflumethiazide	3,4-dihydro-6-trifluoromethyl-7-sulfamoylbenzo-1,2,4-thiadiazine 1,1 dioxide
hydroxindasatum hydroxindasate	5-acetoxy-3-(2-aminoethyl)-1-(*p*-methoxybenzyl)-2-methylindole
hydroxystenozolum hydroxystenozole	17 *B*-hydroxy-17α-methylandrost-4 eno-[3,2-*c*]pyrazole
kanamycinum kanamycin	an antibiotic substance obtained from cultures of *Streptomyces kanamyceticus* or the same substance produced by any other means
levisoprenalinum levisoprenaline	1-(3,4-dihydroxyphenyl)-2-isopropylaminoethanol
mebhydrolinum mebhydrolin	5-benzyl-1,2,3,4-tetrahydro-2-methylpyrid[4,3-*b*] indole
medroxyprogesteroni acetas medroxyprogesterone acetate	17 α-acetoxy-6α-methylpregn-4-ene-3,20-dione
mepenzolate bromidum mepenzolate bromide	1-methyl-3-piperidyl benzilate methylbromide
mephenoxalonum mephenoxalone	5-(o-methoxyphenoxymethyl)-2-oxazodidinone
mestanolonum mestanolone	17 *B*-hydroxy-17-methyl-5α-androstan-3-one
metahexamidum metahexamide	*N*-(m-amino-p-methylbenzenesulfonyl)-*N'*-cyclohexylurea
methaqualonum methaqualone	2-methyl-3-o-tolyl-4-quinazolone
methazolamidum methazolamide	5-acetylimino-4-methyl-1,3,4-thiadiazoline-2-sulfonamide
methdilazinum methdilazine	10-(1-methyl-3-pyrrolidinylmethyl) phenothiazine
methotrexatum methotrexate	4-amino-10-methylpteroylglutamic acid
methylchromonum methylchromone	3-methylchromone
natrii carbazochromi sulfonas carbazochrome sodium sulfonate	sodium 2,3,5,6-tetrahydro-1-methyl-6-oxo-5-semicarbazonoindole-3-sulfonate
natrii hexacyclonas sodium hexacyclonate	sodium 1-hydroxymethylcyclohexylacetate
nialamidum nialamide	*N*-isonicotinoyl-*N'*-(*B*-*N*-benzylcarboxamidoethyl) hydrazine
nicothiazonum nicothiazone	nicotinaldehyde thiosemicarbazone
nifurethazonum nifurethazone	5-nitrofuraldehyde 2-(2-dimethylaminoethyl) semicarbazone
nihydrazonum nihydrazone	5-nitro-2-furaldehyde acetylhydrazone
norvinisteronum norvinisterone	17*B*-hydroxy-17α-vinylestr-4-en-3-one

Proposed International Non-Proprietary Name (*Latin, English*)	Chemical Name or Description
octatropini methylbromidum octatropine methylbromide	*N*-methyl-O-(2-propylpentanoyl) tropinium bromide
oxyphencyciminum oxyphencyclimine	(1,4,5,6-tetrahydro-1-methyl-2-pyrimidinyl)methyl α-cyclohexyl-α-phenylglycolate
palmidrolum palmidrol	*N*-(2-hydroxyethyl)palmitamide
paromomycinum paromomycin	an antibiotic substance obtained from cultures of certain *streptomyces* species, one of which is *streptomyces rimosus*, or the same substance produced by any other means
penicillinasum penicillinase	an enzyme obtained by fermentation from cultures of *B. Cereus*
pentapiperidum pentapiperide	1-methylpiperid-4-yl 3-methyl-2-phenylvalerate
phanquinonum phanquinone	4,7-phenanthroline-5,6-quinone
phenampromidum phenampromide	*N*-(2-(1-methylpiperid-2-yl)ethyl) propionanilide
phenelzinum phenelzine	*B*-phenethylhydrazine
phenformin um phenformin	N^1-phenethylbiguanide
phenglutarimidum phenglutarimide	α-2-diethylaminoethyl-α-phenylglutarimide
phenprobamatum phenprobamate	3-phenylpropyl carbamate
phetharbitalum phetharbital	5,5-diethyl-1-phenylbarbituric acid
phytonadioli natrii diphosphas phytonadiol sodium diphosphate	2-methyl-3-phytyl-1,4-naphthalene di(sodium hydrogen phosphate)
pipamazinum pipamazine	10-[3-(4-carbamoylpiperidino)propyl]-2-chlorophenothiazine
pipethanatum pipethanate	2-piperidinoethyl benzilate
polycarbophilum polycarbophil	a synthetic, loosely crosslinked, hydrophilic resin of the polycarboxylic type
pralidoximi methiodidum pralidoxime methiodide	2-pyridine aldoxime methiodide
procainum procaine	*B*-diethylaminoethyl 4-aminobenzoate
promethazini theoclas promethazine theoclate	10-(2-dimethylaminopropyl) phenothiazine salt of 8-chlorotheophylline
propyli docetrizoas propyl docetrizoate	propyl 3-diacetylamino-2,4,6-triiodobenzoate
prothixenum prothixene	9-(3-dimethylaminopropylidene) thiaxanthen
protokylolum protokylol	1-(3,4-dihydroxyphenyl)-2-(α-methyl-3,4-methylenedioxyphenethylamino)ethanol
proxyphyllinum proxyphylline	7-2'-hydroxypropyltheophylline
stryamatum styramate	2-hydroxyphenethyl carbamate
sulfachlorpyridazinum sulfachlorpyridazine	6-chloro-3-sulfanilamido pyridazine
sulfadimethoxinum sulfadimethoxine	2,4-dimethoxy-6-sulfanilamido pyrimidine
sulfaphenazolum sulfaphenazol	1-phenyl-5 sulfanilamido pyrazole
sulfasomizolum sulfasomizol	3-methyl-5-sulfanilamido isothiazole
sulfatolamidum sulfatolamide	1-sulfanilylthiourea salt of p-sulfamoylbenzylamine
syrosingopinum syrosingopine	4-ethoxycarbonyl-3,5-dimethoxybenzoic acid ester of methyl reserpate
thiamphenicolum thiamphenicol	D(+)-*threo*-2-dichloracetamido-1-(*p*-methylsulfonylphenyl) propane-1,3-diol
thihexinoli methylbromidum thihexinol methylbromide	*trans*-α,α-(dithien-2-yl)-(4-dimethylaminocyclohexyl) carbinol methylbromide
thioproperazinum thioproperazine	*N,N*-dimethyl-10-[3-(4-methylpiperazin-1-yl)propyl]-2-phenothiazinesulfonamide
thiotepa thiotepa	*N',N'',N'''*-triethylenethiophosphoramide
toloxychlorinolum toloxychlorinol	1,1'-[(3-o-tolyloxypropylene)dioxy]bis(2,2,2-trichloroethanol)
triclazatum triclazate	1-methyl-3-pyrrolidinylmethyl benzilate
triclobisonii chloridum triclobisonium chloride	hexamethylenebis[dimethyl(1-methyl-3-(2,2,6-trimethylcyclohexyl)propyl)ammonium chloride] hemihydrate
trifluoperazinum trifluoperazine	2-trifluomethyl-10-[3-(1-methyl-4 piperazinyl) propyl]phenothiazine
triflupromazinum triflupromazine	2-trifluoromethyl-10-(3-dimethylaminopropyl) phenothiazine
trimethobenzamidum trimethobenzamide	*N*-(p-2-dimethylaminoethoxybenzyl)-3,4,5-trimethoxybenzamide
trinitratum trinitrate	triethanolamine trinitrate

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 46,793. Amak, Inc., San Antonio, Tex. Filed Feb. 28, 1958. COLLECTIVE MARK.

AMAK R-12

For Hybrid Sorghum Seeds.
First use Dec. 10, 1957.

SN 46,794. Amak, Inc., San Antonio, Tex. Filed Feb. 28, 1958. COLLECTIVE MARK.

AMAK

For Hybrid Sorghum Seeds.
First use Dec. 10, 1957.

SN 46,795. Amak, Inc., San Antonio, Tex. Filed Feb. 28, 1958. COLLECTIVE MARK.

AMAK R-10

For Hybrid Sorghum Seeds.
First use Dec. 10, 1957.

SN 55,987. The Doughten Seed Company, Jersey City, N.J. Filed July 25, 1958.

BETTER GREEN

Owner of Reg. No. 543,171.
For Mixed Grass Seed and Lawn Seed Mixture.
First use Apr. 30, 1947.

SN 55,988. The Doughten Seed Company, Jersey City, N.J. Filed July 25, 1958.

TURF GREEN

Owner of Reg. No. 431,698.
For Mixed Grass Seed and Lawn Seed Mixture.
First use Mar. 6, 1941.

SN 56,726. Maynard Johnson, d.b.a. Black Diamond Fur Farm, Two Harbors, Minn. Filed Aug. 6, 1958.

SAMI

For Mink Pelts and Live Mink.
First use July 7, 1958.

SN 72,724. Charles G. Hardy, Inc., Paramount, Calif. Filed May 1, 1959.

HARDY

For Colored Rock and Pebbles; Natural Rock and Pebbles; and Crushed Rock.
First use Feb. 9, 1955.

SN 73,514. Shaver Poultry Breeding Farm Limited, Galt, Ontario, Canada. Filed May 12, 1959.

SHAVER STARCROSS

Owner of Canadian Reg. No. 112,730, dated Jan. 2, 1959.
For Live Poultry Breeding Stock.
First use October 1957; in commerce Mar. 3, 1958.

SN 73,515. Shaver Poultry Breeding Farm Limited, Galt, Ontario, Canada. Filed May 12, 1959.

The SHAVER STARCROSS

Owner of Canadian Reg. No. 114,971, dated Aug. 14, 1959.
For Live Poultry Breeding Stock.
First use October 1957; in commerce Mar. 3, 1958.

SN 79,378. Avisun Corporation, Philadelphia, Pa. Filed Aug. 12, 1959.

AVISUN

For Synthetic Fibers.
First use Aug. 6, 1959.

SN 80,107. Mobay Chemical Company, Pittsburgh, Pa. Filed Aug. 24, 1959.

MOBAY

Owner of Reg. Nos. 603,802, 605,642, and others.
For Synthetic Resins for Use in Industrial Arts and for Further Processing and/or Manufacture in All Forms.
First use June 7, 1954.

SN 80,492. Bigelow-Sanford, Inc., New York, N.Y., by change of name from Bigelow-Sanford Carpet Company, Inc., New York, N.Y. Filed Aug. 31, 1959.

ZANTREL

For Rayon Fibers for Conversion Into Yarns.
First use Aug. 6, 1959.

SN 80,774. Andrew M. Askew, Hempstead, Tex. Filed Sept. 3, 1959.

AA

For Cattle.
First use in May 1945.

SN 82,488. Harry De Leeuw Company (Pty) Ltd., Maraisburg, The Transvaal, Union of South Africa. Filed Oct. 1, 1959.



For Bulbs and Tubers Including Ranunculis.
First use July 27, 1959; in commerce Aug. 1, 1959.

SN 85,972. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Nov. 24, 1959.

WINGLITE

Owner of Reg. Nos. 127,406 and 166,827.
For Rubber Soling in the Form of Sheets or Slabs.
First use Oct. 16, 1959.

SN 87,278. Pee-Dee Farms, Driver, Va. Filed Dec. 14, 1959.



For Hamsters.
First use Apr. 27, 1954.

SN 89,052. Crown Chemical Corporation, Providence, R.I. Filed Jan. 15, 1960.

C-TRON

For Formaldehyde Resin.
First use May 13, 1959.

SN 90,372. Robert Q. Sutherland, Kansas City, Mo. Filed Feb. 4, 1960.



The mark consists of the letters "RS" in monogram form over a horizontal bar.
For Livestock Such as Registered Quarter Horses, Registered Angus Cattle, and Registered Hereford Cattle.
First use October 1946.

SN 90,402. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

TREASURE HOUSE

For Roses.
First use December 1956.

SN 90,405. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

PLYMOUTH

For Roses.
First use December 1953.

SN 90,409. Co-Operative Rose Growers, Inc., Tyler, Tex. Filed Feb. 5, 1960.

WESTERNER

For Roses.
First use December 1956.

SN 90,888. The Asgrow Seed Company, New Haven, Conn. Filed Feb. 15, 1960.

TURF-MAKER

Owner of Reg. No. 378,207.
For Lawn Seed Mixtures.
First use Sept. 1, 1931.

SN 92,923. Lee Potter, d.b.a. The Lee Potter Company, Glendale, Calif. Filed Mar. 15, 1960.

PERMA WEAR

For Resin Compositions Capable of Being Used as Protective Coatings, Bonding Agents, Casting Compositions, and Potting Compositions.
First use June 30, 1956.

SN 93,577. Bigelow-Sanford, Inc., New York, N.Y., by change of name from Bigelow-Sanford Carpet Company, Inc., New York, N.Y. Filed Mar. 22, 1960.

POLYNOSIC

For Synthetic Textile Fibers for Conversion Into Yarns or for Filament Yarns.
First use July 21, 1959.

SN 94,849. St. Regis Paper Company, New York, N.Y. Filed Apr. 11, 1960.

SUN-CELL

For Wood Pulp.
First use on or about Mar. 22, 1960.

SN 94,971. The Dow Chemical Company, Midland, Mich. Filed Apr. 13, 1960.

PROFOAM

For Expanded Synthetic Resins.
First use Mar. 10, 1960.

SN 95,036. American Cyanamid Company, New York, N.Y. Filed Apr. 14, 1960.

POLYFRAC

For Thermoset-Resin Beads for Use in Oil Well Fracturing Operations.
First use Mar. 21, 1960.

SN 95,060. Collier Carbon and Chemical Corporation, Los Angeles, Calif. Filed Apr. 14, 1960.

C 12

For Charcoal Briquets.
First use Mar. 25, 1960.

SN 95,114. Radcliff Gravel Company, Inc., Mobile, Ala. Filed Apr. 14, 1960.

SHELLITE

For Crushed Oyster Shells.
First use Dec. 1, 1956.

SN 95,226. American Cyanamid Company, New York, N.Y. Filed Apr. 18, 1960.



For Synthetic Fiber.
First use Mar. 24, 1960.

SN 95,227. American Cyanamid Company, New York, N.Y. Filed Apr. 18, 1960.

THE MAGIC MOLECULE

For Synthetic Fiber.
First use Mar. 24, 1960.

SN 95,450. Pennsylvania Industrial Chemical Corporation, Clairton, Pa. Filed Apr. 20, 1960.

PICCOTEX

For Hard, Water White, Transparent Synthetic Resin.
First use Aug. 4, 1958.

SN 95,451. Pennsylvania Industrial Chemical Corporation, Clairton, Pa. Filed Apr. 20, 1960.

PICCOFLEX

For Synthetic Resins Which Are Thermoplastic Styrene Copolymers.
First use Dec. 17, 1956.

SN 95,459. The Trinidad Lake Asphalt Contracting Company of Rhodesia (Private) Limited, Beverley East, Salisbury, Southern Rhodesia. Filed Apr. 20, 1960.

TRINIMASTIC

Owner of Federation of Rhodesia and Nyasaland Reg. No. 1955/59, dated Sept. 22, 1959.
For Waterproof Sheeting Made of Thermoplastic Materials.

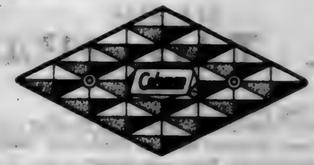
Class 2 — Receptacles

SN 51,613. Bruce L. Bradley, d.b.a. Park-O-Meter Service, Jackson, Mich. Filed May 14, 1958.

PARK-O-FINE

For Receptacles Furnished Municipalities for the Convenient Payment of Overtime Parking Violations, the Receptacles Serving To Receive Payment of Fines and Printed Matter Used in Connection With the Payment of Such Fines.
First use Feb. 26, 1958.

SN 64,616. The Coleman Company, Inc., Wichita, Kans. Filed Dec. 23, 1958.



Owner of Reg. Nos. 140,701, 629,989, and others.
For Cooler Chests and Insulated Jugs.
First use in December 1956.

SN 77,686. The Proper Folding Box Corporation, Whitestone, N.Y. Filed July 14, 1959.

ADJUSTABLE PROPER PACKER

The words "Adjustable" and "Packer" are disclaimed as being descriptive of the goods.
For Folding Heavy Paper or Cardboard Boxes.
First use May 5, 1959.

SN 81,093. The Reddy Company, Inc., Montpelier, Vt. Filed Sept. 9, 1959.

DUO-TOP

For Baby Training Cups.
First use Aug. 7, 1959.

SN 84,271. Van Brode Milling Co., Inc., Clinton, Mass. Filed Oct. 29, 1959.

BERMUDA

For Plastic Dishes.
First use Nov. 5, 1957.

SN 86,612. Toccoa Metal Products and Implement Company, Inc., Toccoa, Ga. Filed Dec. 3, 1959.

Versa File

No claim is made to the use of the term "File" apart from the mark as shown.
For Filing Boxes.
First use Nov. 12, 1959.

SN 87,880. Ivers Lee Company, Newark, N.J. Filed Dec. 23, 1959.

IL THIRST - PAK

Owner of Reg. No. 408,257.
For Envelope-Like Sealed Containers Made of Two Opposed Layers of Sheet Material, at Least One of Which Is Porous, Sealed Together To Form a Compartment Containing an Odor and Moisture Absorbing Substance.
First use March 1959.

SN 87,881. Ivers Lee Company, Newark, N.J. Filed Dec. 23, 1959.

IL TAB -PAK

Owner of Reg. No. 408,257.
For Envelope-Like Sealed Containers Made of Two Opposed Layers of Sheet Material Such as Cellophane, Metal Foil, or Rubber Hydrochloride, Thermoplastically Sealed Together To Form Compartments, One for the Article or Substance To Be Packaged and the Other for Printed Matter, the Envelope-Like Sealed Containers Being Made and Filled by the Applicant for Manufacturers Who Forward the Contents of the Containers to Applicant for Packaging.
First use January 1959.

SN 88,412. Murray Bag & Paper Corp., Vernon, Calif. Filed Jan. 4, 1960.

RUFF-TUFF

For Paper Bags.
First use on or about Jan. 5, 1959.

SN 89,042. Allied Industries Inc., Minneapolis, Minn. Filed Jan. 15, 1960.

SANTAINER

Applicant disclaims the representation of the containers.
For Plastic Food Containers and Covers.
First use Dec. 12, 1959.

SN 90,190. Shield Fabricators, Incorporated, Gardena, Calif. Filed Feb. 2, 1960.

SHIELD

For Shipping Containers.
First use May 15, 1959.

SN 90,685. The General Tire & Rubber Company, Akron, Ohio. Filed Feb. 10, 1960.

BOLTAGLAS

Owner of Reg. Nos. 628,047, 628,049, and 301,800.
For Molded Plastic Trays.
First use Sept. 18, 1959.

SN 90,859. The Richardson Taylor-Globe Corporation, Cincinnati, Ohio. Filed Feb. 12, 1960.

rtg Richglo

For Folding Cartons.
First use Feb. 8, 1960.

SN 91,269. Packaging Corporation of America, Rittman, Ohio. Filed Feb. 19, 1960.

GUARDSMAN

For Cartons Made of Sheet Material.
First use Jan. 29, 1960.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 79,675. Joe Lowe Corporation, New York, N.Y. Filed Aug. 17, 1959.

SICLE

Owner of Reg. No. 536,294.
For Insulated Picnic Bags and Wallets.
First use during January 1957.

SN 86,784. J. Jacobs & Company, San Francisco, Calif. Filed Dec. 7, 1959.

CAIRO
J.JACOBS & CO.

For Suit Bags, Brief Cases, Dispatch Cases, Wallets, Pocket Books, Key Cases, Utility Cases, and Covered Jewelry Cases.
First use February 1898.

Class 4—Abrasives and Polishing Materials

SN 80,569. Milam Supply Co., Inc., d.b.a. Hi-Chemical Company, Houston, Tex. Filed Aug. 31, 1959.

DIATOM

For Liquid Waxing and Polishing Preparation.
First use Jan. 15, 1959.

SN 92,654. Simonds Abrasive Company, Philadelphia, Pa. Filed Mar. 11, 1960.

MONARCH

For Grinding Wheels.
First use Feb. 16, 1960.

Class 5—Adhesives

SN 45,006. Wilhold Glues, Inc., Los Angeles, Calif., by change of name from Acorn Adhesives Co., Inc., Los Angeles, Calif. Filed Feb. 3, 1958.

GLU-BOY

For Package Containing Glue.
First use Sept. 6, 1957.

SN 93,994. Benjamin Foster Company, Philadelphia, Pa. Filed Mar. 30, 1960.

STACKFAS

For Acid and Heat Resistant Adhesive Surface Coatings for Coating and Cementing Masonry, Metal, Wood, and Other Porous Surfaces.
First use Feb. 1, 1960.

SN 94,819. Sears, Roebuck and Co., Chicago, Ill. Filed Apr. 11, 1960.

CRAFTSMAN

For Glue for Wood, Leather, Porcelain, Iron, Plastic, Fiberboard, Paper, and for Affixing Sanding Discs and Sandpaper to Wood, Steel or Aluminum Sanding Plates.
First use on or about Jan. 15, 1950.

SN 94,861. Weyerhaeuser Company, Tacoma, Wash. Filed Apr. 11, 1960.

POLARWELD

For Adhesive Especially Designed for Use in the Sealing of Paperboard Cartons for Packaging Frozen Foods.
First use Apr. 16, 1959.

Class 6—Chemicals and Chemical Compositions

SN 63,023. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Nov. 24, 1958.

TREVIRA

Owner of German Reg. No. 688,837, dated Mar. 21, 1956.
For Textile Auxiliaries, Dyeing Assistants, Dressing Agents, and Tanning Preparations or Compositions.

SN 64,886. Glaxo Laboratories Limited, Greenford, Middlesex, England. Filed Dec. 24, 1958.

GRISOVIN

Priority claimed under Sec. 44(d) on British Reg. No. 784,520, dated Nov. 27, 1958.
For Antibiotic for Treating Fungus and Related Conditions in Forestry, Horticulture, and Agriculture.

SN 71,875. Penola Oil Company, New York, N.Y. Filed Apr. 20, 1959.

Jersey

For Rust and Corrosion Inhibitor.
First use Oct. 3, 1958.

SN 75,218. Solar Nitrogen Chemicals, Inc., Lima, Ohio. Filed June 5, 1959.

SOLAR

For Aqua Ammonia.
First use Apr. 13, 1959.

SN 77,037. L. B. Russell Chemicals, Inc., Long Island City, N.Y. Filed July 3, 1959.

ARGOTONE

For Photographic Developers in Powdered or Liquid Form To Be Dissolved in Water for Sensitized Films and Papers.
First use on or about Jan. 15, 1949.

SN 78,157. The Stamford Chemical Company, Stamford, Conn. Filed July 21, 1959.

SIZEX

For Chemical Preparation for Garment Sizing.
First use May 18, 1955.

SN 78,859. T. M. Duché & Sons, Inc., New York, N.Y. Filed Aug. 3, 1959.

KLARI-FINE

For Settling Agent for Liquids Containing Solid Particles.
First use May 25, 1959.

SN 80,914. Osmose Wood Preserving Co. of America, Inc., Buffalo, N. Y. Filed Sept. 4, 1959.

PFR

Owner of Reg. Nos. 336,697 and 546,873.
For Chemical Composition for Impregnating Wood and Other Cellulosic Materials To Render the Same Fire Resistant.
First use July 25, 1958.

SN 80,917. Osmose Wood Preserving Co. of America, Inc., Buffalo, N. Y. Filed Sept. 4, 1959.

BUTINOX

For Tributyltin Oxide Incorporated in Chemical Compositions for Preserving Wood and Other Materials of Cellulose Origin.
First use July 24, 1959.

SN 87,326. Ansul Chemical Company, Marinette, Wis. Filed Dec. 15, 1959.

ANSUL ETHER 181

Disclaimer is made of the word "Ether" apart from the mark as shown.
For Tetraethylene Glycol Dimethyl Ether.
First use Dec. 3, 1951.

SN 87,327. Ansul Chemical Company, Marinette, Wis. Filed Dec. 15, 1959.

ANSUL ETHER 141

Disclaimer is made of the word "Ether" apart from the mark as shown.
For Diethylene Glycol Dimethyl Ether.
First use Dec. 1, 1952.

SN 87,414. The Dow Chemical Company, Midland, Mich. Filed Dec. 16, 1959.

PURIFLOC

For Synthetic Organic Polymeric Flocculants for Industrial Use.
First use Oct. 19, 1959.

SN 87,613. Allied Chemical Corporation, New York, N.Y. Filed Dec. 21, 1959.

NABOR

For Dyestuffs.
First use June 4, 1958.

SN 88,718. Acqua Lina Manufacturing Co., Inc., Brooklyn, N.Y. Filed Jan. 11, 1960.

Repelzit

For Water Repellent and Stain Resistant Preparation Used on Clothing.
First use 1950.

SN 90,245. J. P. Frank Chemical Corp., Brooklyn, N.Y. Filed Feb. 3, 1960.

PRESTOPLEX

For Plasticizers.
First use Oct. 15, 1958.

SN 90,573. Quaker Chemical Products Corporation, Conshohocken, Pa. Filed Feb. 8, 1960.

QUAPUFF

For Textile Softener and Finish.
First use Jan. 19, 1960.

SN 91,505. B. T. Babbitt, Inc., New York, N.Y. Filed Feb. 24, 1960.

VANO

Owner of Reg. Nos. 392,176, 634,513, and 648,786.
For Fabric Fluffer.
First use Jan. 19, 1960.

SN 92,018. Philip A. Hunt Company, Palisades Park, N.J. Filed Mar. 2, 1960.

HUNT

For Photographic Developers, Photographic Chemicals, Chemicals and Powders Used in the Lithographic Printing Industry and X-Ray Chemicals.
First use in the year 1909.

SN 93,082. Montecatini Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed Mar. 17, 1960.

ROGOR

Owner of Italian Reg. No. 128,343, dated June 15, 1956.
For Chemicals for Use in Agriculture, Preparations for Killing Weeds and Destroying Vermin—Namely, Insecticide, Fungicide, Anticryptogamic Products, Pesticides, and Parasiticides.

SN 93,275. Chipman Chemical Company, Inc., Bound Brook, N.J. Filed Mar. 21, 1960.

CHIP-CAL

Owner of Reg. Nos. 651,903, 652,244, and 678,289.
For Low-Lime Calcium Arsenate Herbicide and Insecticide.
First use June 21, 1957.

SN 93,505. Dow Corning Corporation, Midland, Mich. Filed Mar. 23, 1960.

SYL-MER

Owner of Reg. No. 640,865.
For Compositions Used in the Preparation and Treatment of Leather To Impart Permanent Water Repellence to the Leather.
First use Feb. 2, 1960.

SN 93,532. McLaughlin Gormley King Co., Minneapolis, Minn. Filed Mar. 23, 1960.



For Insect Repellents and Insecticides.
First use on or about Aug. 7, 1958.

Class 7—Cordage

SN 71,966. Alley-Johnson Co., Kansas City, Mo. Filed Apr. 22, 1959.

A-J

For Baler Twine.
First use Mar. 1, 1958.

SN 88,582. American Viscose Corporation, Philadelphia, Pa. Filed Jan. 7, 1960.

AVISTRAP

For Bale and Package Strapping.
First use Dec. 24, 1959.

SN 88,583. American Viscose Corporation, Philadelphia, Pa. Filed Jan. 7, 1960.

CARISTRAP

For Bale and Package Strapping.
First use Dec. 24, 1959.

SN 92,587. Ciba Limited, Basel, Switzerland. Filed Mar. 11, 1960.

ARIGAL

Priority is claimed under Sec. 44(d) on Swiss Reg. No. 178,084, dated Oct. 28, 1959.
For Ropes, Strings, Cords, Twines.

SN 93,441. LeTourneau-Westinghouse Company, Peoria, Ill. Filed Mar. 22, 1960.



Owner of Reg. No. 667,489.
For Wire Rope.
First use May 8, 1958.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 89,395. W.H. Co., Clayton, Mo. Filed Jan. 20, 1960.

HOME PLATE

Owner of Reg. No. 696,871.
For Ashtrays.
First use Jan. 19, 1960.

SN 93,813. Larus & Brother Company, Richmond, Va. Filed Mar. 28, 1960.

HOLIDAY

Owner of Reg. Nos. 400,357, 588,386, and others.
For Smokers' Pipes.
First use Mar. 18, 1960.

SN 93,814. Larus & Brother Company, Richmond, Va. Filed Mar. 28, 1960.

Edgeworth

Owner of Reg. Nos. 128,095, 409,626, 643,489, and others.
For Smokers' Pipes.
First use Mar. 18, 1960.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 97,547. Diamond National Corporation, New York, N.Y. Filed May 20, 1960.

POCKETBOX

Owner of Reg. Nos. 167,347, 421,351, and others.
For Matches.
First use Sept. 8, 1959.

SN 97,876. Remington Arms Company, Inc., Bridgeport, Conn. Filed May 25, 1960.

Automaster

For Firearms—Namely, Sporting Shotguns and Parts Thereof.
First use Feb. 6, 1959.

Class 10—Fertilizers

SN 64,122. John H. Van Mose, Jr., d.b.a. Vanguard, Chicago, Ill. Filed Dec. 11, 1958.

VANGUARD

For Solid Mineral Supplements for Use as a Soil Conditioner or Plant Food.
First use on or about Apr. 1, 1958.

SN 68,265. International Minerals & Chemical Corporation, Skokie, Ill. Filed Feb. 24, 1959.

S-P-M

For Sulphate of Potash Magnesia Used as a Component of Fertilizers.
First use Sept. 13, 1956.

SN 90,603. Western Peat Company, Limited, Lulu Island, British Columbia, Canada. Filed Feb. 8, 1960.

FAIRWAY

Priority claimed under Sec. 44(d) on Canadian application filed Aug. 23, 1959, Reg. No. 117,346, dated Mar. 25, 1960.
For Peat Moss.
First use Oct. 1, 1958; in commerce Oct. 1, 1959.

SN 96,901. Val-U-Gro Corporation, Princeton, N.J. Filed May 11, 1960.



For Fertilizers of All Kinds Including, Without Limitation, Azalea Food, Bone Meal, Tree Food, Tomato Food, Rose Food, Geranium and Iris Food.
First use Mar. 15, 1960.

SN 97,330. The O. M. Scott & Sons Company, Marysville, Ohio. Filed May 17, 1960.

DAWN

For Fertilizer.
First use Apr. 25, 1960.

SN 97,524. St. Louis National Stockyards Company, National Stock Yards, Ill. Filed May 19, 1960.

WIZARD

For Natural and Prepared Fertilizers.
First use May 1, 1906.

SN 97,737. Western Farmers Association, Seattle, Wash. Filed May 23, 1960.



For Fertilizers.
First use on or about Mar. 1, 1960.

SN 87,755. Chik-A-Liser Products Co., Fontana, Calif. Filed May 24, 1960.

CHIK-A-LIZER

For Fertiliser.
First use Nov. 1, 1959.

SN 87,890. Tennessee Corporation, New York, N.Y. Filed May 25, 1960.

DĪ-MŌN

For Fertiliser.
First use Feb. 27, 1959.

Class 11 — Inks and Inking Materials

SN 86,822. Pegasus Prima Products Limited, London, England. Filed Nov. 30, 1959.

PLASTOGRAPH

Priority claimed under Sec. 44(d) on British Reg. No. 793,040, dated July 7, 1959.
For Carbon Paper.

Class 12 — Construction Materials

SN 63,683. American Metaseal Corporation, West New York, N.J. Filed Dec. 5, 1958.

a mc Metacrete

For Ingredients for a Plastic Setting Composition Used for Repairing, Resurfacing, and Protecting Concrete and Wood Surfaces.
First use Oct. 25, 1957.

SN 71,879. Republic Lumber and Building Supply Company, Inc., Richmond, Va. Filed Apr. 20, 1959.



The drawing is lined for red and blue, but no particular coloring is claimed as part of the mark.
For Construction Materials—Namely, Window Units, Disappearing Stairways, and Gypsum Sheathing.
First use May 17, 1949.

SN 80,152. Barry Controls Incorporated, Watertown, Mass. Filed Aug. 25, 1959.

RIGIDAMP

For Shelves, Mounting Bases for Stable Platforms Used in Ground-to-Air Missiles, Supports for Countermeasure Systems in Aircraft and Test Fixtures, and Plates, I-Beams, Channels, Angles and Other Construction Materials Made of Combinations of Metal and Viscoelastic Materials for Use in Making the Aforesaid Articles and Also for Use in Making Boxes, Ducts, Buildings, Rooms, Machinery Foundations, Airplane and Missile Structures and Chassis and Parts for Electrical and Electronic Equipment.
First use May 2, 1959.

SN 85,934. U.S. Awning Corp., Newbury Park, Calif. Filed Nov. 23, 1959.

DESERT

For Awnings for Attachment to Trailers or Homes.
First use Oct. 23, 1958.

SN 86,108. Campbell Foundry Company, Harrison, N.J. Filed Nov. 27, 1959.

CAMPBELL

Owner of Reg. No. 571,590.
For Metal Fence Posts, Gratings, Metal Pipe Bases, Metal Girders and Beams.
First use Mar. 1, 1921.

SN 88,743. The Evans Pipe Company, Uhrichsville, Ohio. Filed Jan. 11, 1960.

EVANS

For Vitrified Clay Products—Namely, Sewer Pipes, Flue Linings, Chimney Pots, Drain Tile, Liner Plates, Fire Brick, Refractories, Septic Tanks, and Conduits.
First use in about the year 1916 on sewer pipes.

SN 92,364. The Connor Lumber and Land Company, Wausau, Wis. Filed Mar. 8, 1960.

GRAND SLAM

For Solid Core Doors.
First use Jan. 11, 1960.

SN 92,779. L & M Tile Products, Inc., Dallas, Tex. Filed Mar. 14, 1960.

ECONO-DRI

For Grouting Compositions.
First use on or about May 20, 1959.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 67,180. Aeroquip Corporation, Jackson, Mich. Filed Feb. 6, 1959.

MARMAN

Owner of Reg. Nos. 587,840 and 603,014.
For Joints, Couplings, Clamps, Connectors and Accessories Therefor—Namely, Tubing and Duct Joints and Couplings, V-Band Couplings and Joints, Instrument Clamps, Universal Joints, Strap and Band Clamps, Flush Latch Couplings, Support Clamps, Universal Clamps, Flexible Couplings, Ventilated Couplings, Gaskets, Seals, Sleeves, Pads, Conduit Sealing and Repair Bands and Clamps, Bands, Hose Clamps, Sheet Metal Duct Joints, Flexible Couplings for Misaligned Conduits, Channel Bands, Exhaust Pipe Couplings, and Fluid Sealing Tube Couplings, as Well as Check Valves.
First use in January 1941.

SN 80,094. Hydraulic Mechanisms, Inc., Brooklyn, N.Y. Filed Aug. 24, 1959.

HYDRAMEX

For Valves for Controlling Hydraulic Fluids.
First use on or about June 11, 1959.

SN 80,095. Hydraulic Mechanisms, Inc., Brooklyn, N.Y. Filed Aug. 24, 1959.

FLEX-TACT

For Valves for Controlling Hydraulic Fluids.
First use on or about June 11, 1959.

SN 81,156. United States Expansion Bolt Company, York, Pa. Filed Sept. 10, 1959.

SETITE

For Expansion Anchors for Masonry.
First use Aug. 13, 1959.

SN 81,158. United States Expansion Bolt Company, York, Pa. Filed Sept. 10, 1959.

DRILSET

For Expansion Anchors for Masonry and Masonry Drills Sold as a Unit.
First use Aug. 13, 1959.

SN 81,843. T. D. Williamson, Inc., Tulsa, Okla. Filed Sept. 22, 1959.

SANDWICH

For Pipeline Valves.
First use on or about June 15, 1959.

SN 84,031. George A. Tinnerman, Cleveland, Ohio. Filed Oct. 26, 1959.

GATNUTS

Owner of Reg. No. 688,571.
For Fasteners of Metal and Plastic Including Fasteners for Retaining Threaded or Unthreaded Studs.
First use June 1956.

SN 87,281. The Oscar C. Rixson Co., Franklin Park, Ill. Filed Dec. 14, 1959.

MULTI CHECK

Owner of Reg. No. 676,578.
For Door Closers and Parts Thereof.
First use Nov. 2, 1959.

SN 88,515. Bell & Gossett Company, Morton Grove, Ill. Filed Jan. 6, 1960.

DRAIN-O-TANK

Owner of Reg. No. 619,217.
For Tank Draining Valves Having Separate Air and Water Passages.
First use Sept. 22, 1954.

SN 89,025. Ross Operating Valve Company, Detroit, Mich. Filed Jan. 14, 1960.

PACER

For Air or Hydraulically Operated Control Valves.
First use May 1960.

SN 91,925. Ekco Products Company, Chicago, Ill. Filed Mar. 1, 1960.

SPACE-AIDES

For Garment Racks and Hangers, Closet Rods, Towel Racks, Clothes Valet, Clothes Tree, Garment Drying Frames and Hangers, Shoe Trees, Thread Holders, Utility Racks, Shoe Storage Racks, Shelves, Hat Racks, Belt Racks, Tie Racks, Belt and Purse Bar, Hang-Up Hook.
First use Feb. 1, 1960.

SN 92,007. General Kinetics Corp., Englewood, N.J. Filed Mar. 2, 1960.

SHEAR-AIR

For Hand-Operated Valves for Hose Lines and the Like.
First use Jan. 26, 1960.

SN 92,293. Parker-Hannifin Corporation, Cleveland, Ohio. Filed Mar. 7, 1960.

HYDRELIEF

For Hydraulic Relief Valves.
First use Feb. 24, 1960.

SN 92,465. Hays Manufacturing Company, Erie, Pa. Filed Mar. 9, 1960.

FLUSH-FLO

For Valves for Water Softeners.
First use Apr. 16, 1956.

SN 92,840. The American Hardware Corporation, New Britain, Conn. Filed Mar. 15, 1960.

SOK-IT

For Door Strikes.
First use Sept. 8, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 29,776. Ekco Products Company, Chicago, Ill., assignee of The Autogyro Company, Chicago, Ill. Filed May 10, 1957.

CHROME-12

For Film Forming Composition Applied to the Surface of Metal Articles To Increase Resistance to Corrosion.
First use Apr. 1, 1957.

SN 67,773. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 16, 1959.



The words "Repair," "Weld," "Save," and "More" are each disclaimed apart from the mark as shown. Owner of Reg. Nos. 502,459 and 421,073.
For Metal Alloys in Various Forms for Welding, Brazing, Soldering, and Like Purposes.
First use Dec. 1, 1958.

SN 68,208. American Casting and Manufacturing Corporation, Brooklyn, N.Y. Filed Feb. 24, 1959.

SAFETY-END

For Seals and Tie Wires.
First use May 6, 1946.

SN 85,981. Magnesium Elektron Limited, Clifton Junction, near Manchester, England. Filed Nov. 24, 1959.

ELEKTRON

Owner of British Reg. No. B529,678, dated Feb. 24, 1932.
For Castings, Extrusions, Rolled Sheet and Forgings of Magnesium Base Alloys Containing Zirconium, Thorium, Zinc, Rare Earth, and/or Other Metals.

SN 87,634. The Carpenter Steel Company, Reading, Pa. Filed Dec. 21, 1959.

tex·star

For Steel, Particularly Tool and Die Steels in the Form of Wire, Strips, Bars, Billets, and Other Shapes.
First use Nov. 30, 1959.

SN 87,879. International Harvester Company, Chicago, Ill. Filed Dec. 23, 1959.

Owner of Reg. No. 420,804.
For Preliminarily Processed Ferrous Metals.
First use Aug. 9, 1944.

SN 88,710. The National Copper & Smelting Company, Cleveland, Ohio. Filed Dec. 31, 1959.

NATIONAL COPPER

Applicant hereby disclaims the word "Copper."
For Copper and Brass Tubing.
First use Apr. 13, 1951.

Class 15—Oils and Greases

SN 70,346. Bemol, Inc., Boston, Mass. Filed Mar. 27, 1959.

MOLI-SPRAY

For Lubricants—Namely, Molybdenum Disulfide Combined With an Aerosol for Spraying Surfaces.
First use Feb. 20, 1959.

SN 73,916. H.R.L. Inc., Los Angeles, Calif. Filed May 18, 1959.

GAF

For Additives for Motor Oil or Fuel for the Purpose of Dissolving Deposits of Varnish, Resins, Gums, and Carbon in Internal Combustion Engines.
First use Aug. 25, 1956.

SN 80,948. The Atlantic Refining Company, Philadelphia, Pa. Filed Sept. 8, 1959.

Keeps your car on the go

Owner of Reg. Nos. 524,224, 548,812, and 552,001.
For Gasoline, Lubricating Oils, Lubricating Greases, Motor Fuels, Motor Oils, and Petroleum Products for Use in Motor Vehicles.
First use on or about September 1950.

SN 87,401. Canfield Oil Company, Cleveland, Ohio. Filed Dec. 16, 1959.

VALVE VIGOR

No claim is made to "Valve" except in the association shown. Owner of Reg. No. 390,133.
For Gasoline Anti-Freeze Additive and Upper Cylinder Lubricant.
First use Dec. 4, 1959.

SN 92,441. Chemical Research Laboratories, Superior, Wis. Filed Mar. 9, 1960.

ALLproof

For Synthetic Motor and Transmission Oil.
First use Feb. 24, 1960.

SN 92,870. Cristy Chemical Corporation, d.b.a. Harvard Chemical Co., Worcester, Mass. Filed Mar. 15, 1960.

PETRO AID

For Chemical Preparation Adapted To Be Added to Gasoline and Fuel Oils as a Water Solvent, Dehydrating Agent, Antifreeze Agent, and Fuel System Conditioner.
First use Feb. 9, 1960.

SN 93,863. Rust Master Chemical Corporation, Worcester, Mass. Filed Mar. 28, 1960.

TRANS MASTER

Owner of Reg. Nos. 379,341, 679,396, and others.
For Chemical Sealer and Conditioner for Automatic Transmissions.
First use Mar. 27, 1958.

Class 16—Protective and Decorative Coatings

SN 91,166. Marshall L. Magee, d.b.a. Magee Chemical Company, Bensenville, Ill. Filed Feb. 18, 1960.

FLEX-O-LITE

Owner of Reg. No. 686,114.
For Sealers and Finishes for Floors.
First use on or about Apr. 24, 1958.

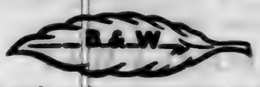
SN 92,899. Maas & Waldstein Co., Newark, N.J. Filed Mar. 15, 1960.

ENAMELACE

For Coating Compositions.
First use on or about Dec. 15, 1959.

Class 17—Tobacco Products

SN 87,473. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Dec. 17, 1959.



No claim is made to the representation of the tobacco leaf apart from the mark as shown. Owner of Reg. Nos. 233,590, 688,507, and others.
For Pipe and Cigarette Smoking Tobacco.
First use at least as early as January 1936.

SN 91,830. Theodorus Niemeijer N.V., Groningen, Netherlands. Filed Feb. 29, 1960.

SAIL

For Smoking Tobacco.
First use 1938; in commerce July 3, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 65,410. Central Soya Company, Inc., Fort Wayne, Ind. Filed Jan. 7, 1959.

HI AB SOY

No claim is made to the word "Soy" apart from the mark as shown. Owner of Reg. No. 415,254.
For Protein Substance for Addition to Livestock and Poultry Feed.
First use Dec. 3, 1958.

SN 75,893. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. Filed June 16, 1959.

ASTRANEST

Owner of Swedish Reg. No. 96,766, dated Mar. 6, 1959.
For Pharmaceutical Preparations—Namely, Local Anesthetics.

SN 82,634. Landstrom Company, d.b.a. Vital Foods, San Francisco, Calif. Filed Oct. 7, 1959.

LECI-PRO

For Food Supplement Consisting of Lecithin and Unsaturated Fatty Acids.
First use July 1, 1957.

SN 82,963. Deutsche Arzneimittel Gesellschaft Steiner & Co., Berlin-Lankwitz, Germany. Filed Oct. 9, 1959.

Aristochol

Owner of German Reg. No. 606,830, dated Apr. 23, 1951.
For Pharmaceutical Extracts of Medicinal Herbs for the Treatment of Liver and Gall Ailments.

SN 83,700. H. R. Cenci Pharmacal Co., d.b.a. H. R. Cenci & Co., Inc., and H. R. Cenci & Company Pharmaceutical Laboratories, Inc., Fresno, Calif. Filed Oct. 21, 1959.

HRC

For Medicinal Preparations.
First use March 1936.

SN 83,766. Armour and Company, Chicago, Ill. Filed Oct. 22, 1959.

CHYMORAL

For Proteolytic Enzyme Preparation for Oral Administration.
First use Aug. 17, 1959.

SN 87,807. International Laboratories Limited, Chessington, England. Filed Dec. 22, 1959.

MŪCRON

Owner of British Reg. No. 789,855, dated Apr. 21, 1959.
For Pharmaceutical Preparations in Tablet Form for Human Use in the Relief of Catarrh, Sinus Infections and the Like Complaints.

SN 89,302. Sandox, Inc., Hanover, N.J. Filed Jan. 19, 1960.
Owner of Reg. No. 624,364.

SPACECAPS

For Medicated Delayed Action Capsules for Use in the Treatment of Spasms, Allergies, Cardiovascular Diseases and Anxiety States.
First use Jan. 5, 1960.

SN 90,141. J. P. Brown, Jr., d.b.a. Dixi-Chem Company, Chattanooga, Tenn. Filed Feb. 2, 1960.

LIX-A-KOF

Owner of Reg. No. 653,678.
For Troches for the Treatment of Coughs and Nasal Congestions Arising From Common Colds.
First use Sept. 10, 1958.

SN 92,943. The William A. Webster Company, Memphis, Tenn. Filed Mar. 15, 1960.

AQUACORT

Owner of Reg. Nos. 586,346 and 663,691.
For Vaginal Suppositories.
First use Feb. 11, 1960.

SN 93,007. Sandoz, Inc., Hanover, N.J. Filed Mar. 16, 1960.

DESERYL

For Medicinal Preparation Recommended for the Treatment of Vascular Headache.
First use Mar. 1, 1960.

SN 93,102. Spirt & Co., Inc., Waterbury, Conn. Filed Mar. 17, 1960.

LIPALONE

For Ointment for Dermatoses.
First use Jan. 25, 1960.

SN 93,142. Carter Products, Inc., New York, N.Y. Filed Mar. 18, 1960.

PATACLAN

For Pharmaceutical Preparations Used as an Aid To Relieve Pain and To Achieve Sleep.
First use Feb. 15, 1960.

SN 93,145. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

AZURENE

Owner of Swiss Reg. No. 141,634, dated Mar. 13, 1952.
For Chemotherapeutic for Tubercular Diseases.

SN 93,146. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

ADYSMENE

Owner of Swiss Reg. No. 135,918, dated Oct. 9, 1950.
For Pharmaceutical Preparations for the Treatment of Dysmenorrhoea.

SN 93,147. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

GUANICIL

Owner of Swiss Reg. No. 123,194, dated Oct. 25, 1947.
For Pharmaceutical Preparations of the Sulfonamide Series.

SN 93,149. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

MEGADROL

Owner of Swiss Reg. No. 137,295, dated Mar. 24, 1951.
For Hemorrhoidal Suppositories.

SN 93,150. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

STRAMINOL

Owner of Swiss Reg. No. 137,301, dated Mar. 24, 1951.
For Pharmaceutical Preparations for Use as Disinfectants.

SN 93,152. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

CARBO-GUANICIL

Owner of Swiss Reg. No. 120,091, dated Feb. 21, 1947.
For Carbon-Containing Pharmaceutical Preparations of the Sulfonamide Series.

SN 93,155. Cilag-Chemie Aktiengesellschaft, Schaffhausen, Switzerland. Filed Mar. 18, 1960.

BENTROFENE

Owner of Swiss Reg. No. 137,288, dated Mar. 24, 1951.
For Pharmaceutical Preparation Consisting of a Ferment System Increasing the Permeability of Connective Tissue (Spreading Factor) for Use in Connection With Subcutaneous Infusions, Subcutaneous or Intramuscular Injections and Local Anesthesia; for Use as an Adjuvant Making Urographies, in Draining Viscous Discharges From Joints and Body Cavities, in Edema Resorption (Quincke); for Increasing the Protective Colloids in Body Fluids; and for Use in Certain Cases of Male Sterility.

Class 19—Vehicles

SN 81,470. Robert W. Dodge, d.b.a. The Industrial Cab Company, Salem, Mass. Filed Sept. 16, 1959.

FOLD-A-WAY

For Tractor Cabs.
First use Nov. 27, 1957.

SN 90,094. New Design & Development Corporation, Lima, Ohio. Filed Feb. 1, 1960.

STAIR CAT

For Self Contained Power Units for Hand Trucks.
First use Dec. 4, 1959.

SN 93,184. International Harvester Company, Chicago, Ill. Filed Mar. 18, 1960.

SCOUT

For Motor Trucks.
First use Feb. 15, 1960.

SN 93,317. Jameo, Inc., Oklahoma City, Okla. Filed Mar. 21, 1960.

MAGIC-POWER

For Automobile Front End Repair Parts—Namely, Idler Arm Kits, Shock Absorbers, and the Like.
First use Jan. 16, 1959.

SN 93,440. LeTourneau-Westinghouse Company, Peoria, Ill. Filed Mar. 22, 1960.

LW

Owner of Reg. No. 687,489.
For Trucks, Tractor-Trailers, and Structural Parts Therefor.
First use June 30, 1959, on trucks.

SN 93,488. S. Bellitto & Sons, Jamaica, N.Y. Filed Mar. 23, 1960.

PIERCE ARROW

For Bicycles.
First use Aug. 5, 1959.

SN 93,496. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Mar. 23, 1960.

BS

Owner of Japanese Reg. No. 440,298, dated Feb. 18, 1954.
For Bicycles and Their Parts.

SN 93,497. Bridgestone Tire Company Limited, Chuo-ku, Tokyo, Japan. Filed Mar. 23, 1960.

BRIDGESTONE

Owner of Japanese Reg. No. 440,297, dated Feb. 18, 1954.
For Bicycles and Their Parts.

SN 93,940. Francis Mortimer Montgomery, Clos de la Ville, Sark, Channel Islands. Filed Mar. 29, 1960.

SKEENA

Owner of British Reg. No. 792,147, dated June 15, 1959.
For Watercraft and Parts Thereof.

SN 94,019. Regie Nationale des Usines Renault, Billancourt, Seine, France. Filed Mar. 30, 1960.

AEROSTABLE

For Automobiles and Parts Thereof, Particularly Suspension Members.
First use Dec. 4, 1959; in commerce Dec. 4, 1959.

SN 94,065. Griffin Wheel Company, Chicago, Ill. Filed Mar. 31, 1960.



For Railway Car Wheels.
First use Apr. 2, 1954.

Class 20—Linoleum and Oiled Cloth

SN 92,600. Congoleum-Nairn Inc., Kearny, N.J. Filed Mar. 11, 1960.

SHOWCASE

For Plastic Coverings of the Smooth Surface, Resilient Type for Surfaces Such as Floors, Walls, Countertops, and the Like in the Form of Rolls, Rugs, and Tiles.
First use Mar. 7, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 64,912. Sunbeam Corporation, Chicago, Ill. Filed Dec. 24, 1958.

SUNBEAM

For Electrical Distribution Centers Including Electrical Outlets With Circuit Breakers and Timing Devices for Controlling Electric Circuits.
First use Oct. 2, 1958.

SN 73,660. Stanley S. Cramer, d.b.a. S.S.C. Laboratory, Okeechobee, Fla. Filed May 14, 1959.

MYSTIC SUNSET MELODY

For Apparatus in Which a Record Player Feeds Signals for Controlling Lamps of Different Colors for Producing Color Effects on a Background Screen With or Without Musical Accompaniment.
First use Apr. 1, 1959.

SN 74,007. United States Electronic Tube Co., East Point, Ga. Filed May 18, 1959.

UNITED STATES ELECTRONIC TUBE CO. US ATLANTA GEORGIA

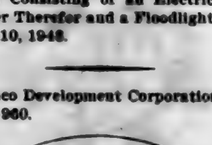
No claim is made to the representation of the television tube.
For Television Tubes.
First use Jan. 28, 1959.

SN 76,552. Dielectric Materials Company, Chicago, Ill. Filed June 26, 1959.

SHRINK TITE △ SHRINK FIT

The drawing is lined to indicate the color red and said color is claimed as part of applicant's mark.
For Electrical Insulating Plastic Tubing.
First use Oct. 24, 1958.

SN 77,445. Leon Hunt, Jr., d.b.a. Hunt & Martin Mfg. Co., Paterson, N.J. Filed July 10, 1959.



No claim is made to the word "Automatic" apart from the mark.
For Electronic Control for Opening Garage Doors.
First use June 22, 1954.

SN 81,207. Thermo-Craft Corp., Montville, N.J. Filed Sept. 11, 1959.

LYMBLAST

For Immersion Heating Elements.
First use Feb. 21, 1959.

SN 81,617. Robert Bosch Corporation, Long Island City, N.Y. Filed Sept. 18, 1959.

WOLFSBURG

For Car Radios.
First use October 1957.

SN 85,957. Burndy Corporation, Norwalk, Conn. Filed Nov. 24, 1959.

PYROLUG

For Electrical Connectors.
First use Oct. 28, 1959.

SN 87,353. Crouse-Hinds Company, Syracuse, N.Y. Filed Dec. 23, 1959.

VAPORMASTER

For Vaportight Electric Lighting Fixtures.
First use Mar. 31, 1957.

SN 88,380. James Frezzolini, d.b.a. General Research Laboratory, New York, N.Y. Filed Jan. 4, 1960.

FREZZO-LITE

For Portable Newsreel Floodlight Assembly Used in Night Photography and Consisting of an Electric Power Pack or Battery, a Charger Therefor and a Floodlight.
First use Sept. 10, 1948.

SN 89,147. Emmco Development Corporation, Brooklyn, N.Y. Filed Jan. 18, 1960.



For Electric Weldments.
First use Aug. 3, 1959.

SN 89,254. Conrac, Inc., Glendora, Calif. Filed Jan. 19, 1960.

CONRAC

For Television and Radio Receivers, Video Monitors, Video Demodulators, and Single Frame Video Storage and Image Readout Devices.
First use on or about June 1, 1950.

SN 90,279. Stewart-Warner Corporation, Chicago, Ill. Filed Feb. 3, 1960.

STEWART SW WARNER

Owner of Reg. Nos. 236,103, 676,953, and others.
For Electrically Controlled Package Sortation System.
First use at least as early as Oct. 15, 1959.

SN 90,604. Wisconsin Electrical Mfg. Co., Inc., Milwaukee, Wis. Filed Feb. 8, 1960.

WISCEL

For Electrical Control Assemblies and Electrical Components for Use in Conjunction With Said Assemblies and Including: Automatic Electrical and Mechanical Weighing and Batching Control Assemblies; Engine Generator Electrical Control Assemblies; Electrical Control Assemblies for Automatic Log Positioning on Saw Mill Setworks; Electrical Switchgear Control Assemblies; Electrical, Hydraulic, and/or Pneumatic Control Assemblies for Machine Automation; Electrical Control Assemblies To Automate Welding Equipment; Odometer-Gear Train Type of Digital Dials for Pre-Setting Desired Weights or Desired Positions for the Ultimate Control of an Automated Machine; Transistorized Sensing Units for Sensing Null Balance in Automatic Weighing or Positioning Control Assemblies; Adjustable Transistorized Recycling Timing Devices To Provide a Time Delay for "On" Time and an Independent Delay for "Off" Time; and Pneumatic and Hydraulic Components in Operating Combination Therewith.
First use Oct. 29, 1959.

SN 91,475. Ultrasonic Industries, Inc., Albertson, N.Y. Filed Feb. 23, 1960.

DI SON TEGRATOR

For Ultrasonic Cleaning Devices—Namely, Generators, Cleaning Tanks, Junction Boxes, Submersible Transducers, Apparatus Containing the Above Components and Parts Thereof.
First use Jan. 20, 1960.

SN 91,738. B & B Electric Co., Inc., Brooklyn, N.Y. Filed Feb. 29, 1960.

BABCO

For Electric Motors, Fans, Starting Controls for Electric Motors, High-Voltage Controls for Regulating the Tension of Traveling Webs, and Switches.
First use at least as early as Jan. 2, 1955.

SN 91,775. Erie Manufacturing Co., Erie, Pa. Filed Feb. 29, 1960.

ERIUM

Owner of Reg. Nos. 540,162, 613,099, and 687,968.
For Permanent Magnetic Power Devices, Including Castings, Pressings, Extrudions, and Moldings Which Include Various Types of Permanent Magnetic Material, Elongated Single Domain Magnets, Ceramics, Magnetic Rubber, and Plastics.
First use Nov. 15, 1959.

SN 93,483. Automatic Electric Company, Northlake, Ill. Filed Mar. 23, 1960.

SPACE-MAKER

For Subscriber Station Telephone Equipment Including a Handset, Dialing Mechanism, Switches, and Housings Therefor, All Adapted for the Initiation or Receipt of Calls Over a Telephone Line.
First use Jan. 18, 1960.

SN 93,610. The Impala Corp., Smithfield, Va. Filed Mar. 24, 1960.



Owner of Reg. No. 694,487.
For Radios.
First use Feb. 16, 1960.

SN 93,668. The Cuffman Co., Inc., Malvern, Ark. Filed Mar. 25, 1960.

OSCI-LITE

For Electric Lamp Support.
First use Jan. 5, 1960.

SN 93,710. Rae-Mar Electronics, Inc., South El Monte, Calif. Filed Mar. 25, 1960.

RAE-MAR

For Radio, Television, and Components Thereof.
First use Mar. 14, 1960.

SN 93,968. Air Reduction Company, Incorporated, New York, N.Y. Filed Mar. 30, 1960.

AIRCOMITE

Owner of Reg. Nos. 119,485, 693,125, and others.
For Arc Welding and Cutting Outfit.
First use on or about Oct. 15, 1958.

SN 94,025. Sony Kabushiki Kaisha, d.b.a. Sony Corporation, Shinagawa-ku, Tokyo-to, Japan. Filed Mar. 30, 1960.

SONY

Owner of Reg. Nos. 692,023 and 691,940.
For Radio, Television, Tape Recorder (Sound Recording and Reproduction Machine) and Accessories and Parts Thereof, Tape for Tape Recorder, Reel for Tape, Recorded Tape, Microphone (Including Wireless Microphone), Announcing Machine, Loudspeaker (Including Stereophonic Loudspeakers), Automatic-Transformer, Eraser of Recorded Tape, Microphones-Mixer, Amplifier, Inverter, Monoprinter, Signal Tracer, Signal Injector, Transistor, Batteries, Electric Vacuum-Tubes, Converters (Rectifier Units for Operation of Battery Radio), Pickups, Electric-Communicating Apparatus, Dictating Machine.
First use May 9, 1955.

SN 94,142. Cerro de Pasco Corporation, New York, N.Y. Filed Apr. 1, 1960.

MICATEMP

For Insulated Electrical Lead Wires.
First use Mar. 17, 1960.

SN 94,163. Haveg Industries, Inc., Wilmington, Del. Filed Apr. 1, 1960.

HAVELEX

For Solid Molded Electrical Insulating Material in the Form of Sheets, Rods, and Components of Electrical Insulators.
First use Feb. 17, 1960.

SN 94,184. Donald E. Pruess, Rye, N.Y. Filed Apr. 1, 1960.

TOOTHMASTER

For Electrically Operated Tooth Brushes.
First use Mar. 15, 1960.

SN 94,185. Harold Radford (Coachbuilders) Limited, London, England. Filed Apr. 1, 1960.

ROTAFLARE

Owner of British Reg. No. 754,651, dated June 12, 1956.
For Electric Lamps for Motor Vehicles.

SN 94,471. Ebert Electronics Corporation, Queens Village, N.Y. Filed Apr. 6, 1960.

MULT-E-LITER

For Photocell Street-Lighting Control Units.
First use Jan. 3, 1960.

SN 94,870. AMP Incorporated, Harrisburg, Pa. Filed Apr. 12, 1960.

AMP-LOK

Owner of Reg. Nos. 405,714, 693,115, and others.
For Electrical Connectors.
First use Mar. 31, 1960.

SN 95,121. Silvray Lighting Inc., New York, N.Y. Filed Apr. 14, 1960.

FLOWER-GLO

For Outdoor Lighting Fixtures.
First use Feb. 24, 1960.

SN 95,317. Rheem Manufacturing Company, Richmond, Calif. Filed Apr. 18, 1960.



For Diodes and Transistors.
First use Oct. 23, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 49,481. Professional Golf Company, Chattanooga, Tenn. Filed Apr. 10, 1956.

STEEL POWER CENTER

For Golf Balls.
First use in December 1956.

SN 55,107. Metropolis Bending Company, Metropolis, Ill., assignee of Babee-Tenda License Corporation, Metropolis, Ill. Filed July 11, 1958.

BABEE-TENDA

Owner of Reg. Nos. 506,986 and 612,540.
For Doll Chairs, Teething Toys, and Chalkboards.
First use on or about Apr. 1, 1949.

SN 76,276. Nestro Manufacturing Company, Baldwin, N.Y. Filed June 22, 1959.

Nestro ORIGINAL

The word "Original" is disclaimed.
For Kiddie Nursery Pictures, Kiddie Pin-Ups, Kiddie Mobiles, Kiddie Puzzles, and I.Q. Puzzles.
First use Jan. 2, 1959.

SN 76,408. Kiddie Gym Products, Inc., Ladysmith, Wis. Filed June 24, 1959.

Kiddie-Gym

For Gymnastic and Playground Apparatus for Children.
First use in 1922.

SN 77,258. Belhop Bait Company, Hamtramck, Mich. Filed July 8, 1959.

BELHOP

For Fishing Lures.
First use Apr. 17, 1959.

SN 77,736. E & L Manufacturing Company, New York, N.Y. Filed July 15, 1959.

WINSTON

For Baseball Gloves, Bats and Balls, and Boxing Gloves, Badminton Sets, Tennis Rackets, Croquet Sets, Football Helmets, Football Shoulder Pads, Footballs.
First use Jan. 15, 1959.

SN 78,576. Rempel Manufacturing, Inc., Akron, Ohio. Filed July 28, 1959.

STOMPIN' MISSILES

No claim of exclusive right is made to "Missiles" as used on toy missiles.
For Toy Missiles.
First use July 10, 1959.

SN 79,368. Ted Williams, Inc., Miami, Fla. Filed Aug. 11, 1959.

SPIN-FLY

For Fishing Lures.
First use May 16, 1959.

SN 80,358. Remco Industries, Inc., Newark, N.J. Filed Aug. 27, 1959.

yankee doodle

For Toy Comprising a Simulation of a Rocket Testing Center.
First use in May 1959.

SN 80,502. Compagnie Francaise des Conduites D'Eau, Paris, France. Filed Aug. 31, 1959.

CARIBE

Priority claimed under Sec. 44(d) on French Reg. No. 478,842, dated Mar. 6, 1959 (Seine); Natl. Inst. No. 122,065.
For Fishing Reels.
First use Mar. 1, 1959.

SN 86,506. Lido Toy Company, New York, N.Y. Filed Dec. 2, 1959.

LIDO

For Educational Toys.
First use Nov. 24, 1959.

SN 91,005. The Gillette Company, Boston, Mass. Filed Feb. 16, 1960.

TONETTE

Owner of Reg. Nos. 567,001 and 584,699.
For Dolls.
First use Oct. 8, 1957.

SN 91,157. Golfcraft, Inc., Escondido, Calif. Filed Feb. 18, 1960.

Golfcraft

Owner of Reg. Nos. 441,999 and 627,701.
For Golf Clubs and Golf Balls.
First use Nov. 2, 1959.

SN 91,517. Cadaco-Ellis, Inc., Chicago, Ill. Filed Feb. 24, 1960.

SEVEN SEAS

For Game Box, Map, Markers, Cards, Dice, and Boats for Use in Playing a Geographical Game.
First use Feb. 17, 1960.

SN 92,283. Momoi Company, Inc., Long Beach, Calif. Filed Mar. 7, 1960.

TRI-LOCK

For Fish Netting.
First use Nov. 30, 1959.

SN 93,557. The Rado-Matic Corporation, Cleveland, Ohio. Filed Mar. 21, 1960.

WHIRL-A-WAND

For Exercise Bar Toy.
First use Feb. 29, 1960.

SN 93,599. William J. Davis, d.b.a. W. J. Davis Mfg., Rock Island, Ill. Filed Mar. 24, 1960.

SNATCHER

For Fish-Hooks, Especially of the Weedless Variety.
First use June 17, 1958.

SN 93,662. Robert A. Budd, d.b.a. Bob Budd's and Bob Budd's Baits, Jeffersonville, Ind. Filed Mar. 25, 1960.

Bob Budd's

For Fishing Equipment—Namely, Artificial Baits, Rods, and Line Control Devices for Spinning Reels.
First use Mar. 1, 1960.

SN 93,678. The Frederick-Willys Company, Inc., St. Paul, Minn. Filed Mar. 25, 1960.

Poly Jester

For Water Toys.
First use February 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 58,586. American-Marietta Company, Chicago, Ill., assignee of Seaman-Andwall Corporation, Milwaukee, Wis. Filed Sept. 8, 1958.

A-M

For Rotary Plows; Rollers and Compactors; Rock Crushing Machines; Cement and Material Spreaders; Road Mixing and Stabilizing Machines and Parts Thereof—Namely, Tractors, Mixing Chambers, Rotors, Tines, Hydraulic Systems, Power Steering Systems, Underbody Scarifiers, Pump and Metering Assemblies, and Spray Bar Attachments.
First use on or about Aug. 19, 1957.

SN 67,369. Marine Construction & Design Co., Seattle, Wash. Filed Feb. 9, 1959.

MARCO

For Machinery and Gear for the Marine and Commercial Fishing Industry—Namely, Winches, Net-Hauling Power Blocks, Snap Purse Rings, Brailers, Gear Reducers, and Steering Gear.
First use in May 1955 on net-hauling power blocks.

SN 69,169. Forrest G. Scott, Auburn, Ind. Filed Mar. 9, 1959.

TURBAFOG

For Fogging Machine for Producing and Dispensing an Insecticidal Fog by Heating a Petroleum Bearing Chemical Insecticide for Use by Professional Pest-Control Operators.
First use Jan. 14, 1959.

SN 72,829. General Metals Corporation, Watertown, Wis. Filed May 4, 1959.

DRAGON

For Replaceable Metal Tooth Points for Use in Excavating, Trenching, and the Like.
First use Apr. 20, 1959.

SN 75,626. Gould Bros. Inc., San Jose, Calif. Filed June 12, 1959.

BEAR HUG CLAW

No claim of exclusive right is made to the word "Claw" apart from the mark as shown.
For Claw Type Gripper for a Boom Tree Shaker Which Is Adapted for Use on Farm Machinery.
First use May 12, 1959.

SN 78,393. Western Alloy Products Company, Grand Junction, Colo. Filed July 24, 1959.

WAPCO

For Drilling Bits With Tungsten Carbide Inserts.
First use June 2, 1958.

SN 79,676. Joe Lowe Corporation, New York, N.Y. Filed Aug. 17, 1959.

SICLE

Owner of Reg. No. 540,733.
For Kitchen Knife Set, Stainless Steel Tableware, and Pocket Knives.
First use during January 1957.

SN 80,613. The Woodman Company, Inc., Decatur, Ga. Filed Aug. 31, 1959.

AIR-WEIGH

For Machines for Weighing and Packaging Food Products Such as Potato Chips and the Like.
First use on or about Sept. 15, 1947.

SN 80,614. The Woodman Company, Inc., Decatur, Ga. Filed Aug. 31, 1959.

KLO-STITCH

For Power Driven Machine for Closing and Stitching Bags.
First use on or about Sept. 2, 1949.

SN 80,871. General Binding Corporation, Northbrook, Ill. Filed Sept. 4, 1959.

GBC

Owner of Reg. Nos. 506,902 and 515,284.
For Electric Duplicating Machines; Electric Laminating Machines for Automatically Coating Paper, Card, Board and Cover Stock With a Transparent Plastic Film; Electric Work Stations for Use in Punching, Binding, and Laminating Operations.
First use in April 1955.

SN 82,160. Société Genevoise d'Instruments de Physique, Geneva, Switzerland. Filed Sept. 25, 1959.

GONIOPTIC

Owner of Swiss Reg. No. 173,199, dated Nov. 14, 1958; and U.S. Reg. Nos. 437,453 and 605,765.
For Machine Tools—Namely, Jig-Boring Machines.

SN 86,459. Toronto Star Limited, Toronto, Ontario, Canada. Filed Dec. 2, 1959.

TORSTAR

For Newspaper Automatic Stacking Equipment, Conveyors, Top and Bottom Wrapper Applicating Equipment, Packaging Machines for Newspapers, Including Equipment for Packaging a Newspaper in Rolled Form and Flat Bundles, Stack Diverting Equipment for Transfer From One Conveyor to Another, Automatic Programming Equipment for Addressing Wrappers, Controlling the Count of Newspapers Being Stacked Into Bundles and the Application of the Addressed Wrapper to the Counted Bundles, Equipment for Automatically Routing and Programming the Flow of Untied Newspapers and Tied Packages of Newspapers Both in the Mailing Room and on the Delivery Dock.
First use at least as early as July 15, 1959.

SN 89,508. Myron M. Fuerst, d.b.a. Fuerst Brothers, Rhinebeck, N.Y. Filed Jan. 22, 1960.



Apart from the mark in its entirety, applicant makes no claim to the right to the exclusive use of the words "Tine" and "Harrow," and of the word "Flexible" in its usual spelling. Owner of Reg. No. 613,870.
For Tine Harrows.
First use about January 1956.

SN 90,251. Great Neck Saw Manufacturers, Inc., Mineola, N.Y. Filed Feb. 3, 1960.



The word "Tools" is disclaimed apart from the mark without waiver of any common law rights. Owner of Reg. No. 696,730.
For Axes, Hammers, Hatchets, Saws, Saw Blades, Saw Frames, Chisels, Screw Drivers, Planes, Scratch Awls, Putty Knives, Utility Knives, Wall Scrapers, Tool Kits, Mitre Boxes, Squares, Pliers, and Garden Tools.
First use during the latter part of 1954.

SN 90,576. Rockwood & Co., Chicago, Ill. Filed Feb. 8, 1960.

BIG JIM

For Silo Loading and Unloading Systems.
First use Mar. 22, 1959.

SN 90,924. Janney, Semple, Hill & Company, Hopkins, Minn. Filed Feb. 15, 1960.



The word "Tool" is disclaimed apart from the mark as shown.
For Tools—Namely, Power Drills, Sanders, Jig and Circular Saws; and Hand Saws, Hammers, Planes, and Screw Drivers.
First use Sept. 16, 1957.

SN 91,317. The American Hardware Corporation, New Britain, Conn. Filed Feb. 23, 1960.

SOK-IT

For Door Strike Staking Tools.
First use Sept. 8, 1959.

SN 91,443. Productive Tool Service, Inc., Cleveland, Ohio. Filed Feb. 25, 1960.

PROTREAT

Owner of Reg. No. 651,104.
For Metal Cutting Tools.
First use May 12, 1959.

SN 91,613. Monroe Calculating Machine Company, Orange, N.J. Filed Feb. 25, 1960.



Owner of Reg. No. 652,291.
For Typewriters.
First use not later than Mar. 25, 1936.

SN 92,349. Exacta-Continental Bureaumaschinenwerk Gesellschaft mit beschraenkter Haftung, Koln-Deutz, Germany. Filed Feb. 17, 1960.

EXACTA-CONTINENTAL

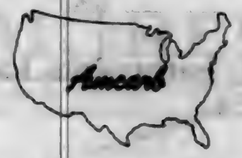
Owner of German Reg. No. 727,488, dated July 30, 1959; and U.S. Reg. Nos. 682,535 and 691,235.
For Typewriters, Typewriters With Symbols, Shorthand Typewriters, Braille Typewriters, Coding and Decoding Typewriters, Photoelectrically Controlled Typewriters, Line Typers, Composing Typewriters, Typewriters for the Automatic Duplication of Typed Matters, Typewriters for Duplication of Punched Tapes and Parts for All the Above Mentioned.

SN 92,513. United-Greenfield Corporation, Chicago, Ill. Filed Mar. 9, 1960.

TRU-LEDE

For Taps.
First use Jan. 22, 1960.

SN 92,089. American Carbide Company, Union City, N.J. Filed Mar. 14, 1960.



For Dies Made of Tungsten Carbide Alloys for Drawing and Forming of Metals and Metal Parts; Inserts Made of Tungsten Carbide Alloys To Be Used in Making Drawing and Forming Dies for Various Metals; Inserts Used in Cutting Tools; Tools Made of Inserts for Cutting Various Metals; and Machine Parts Covered, Coated or Faced With Tungsten Carbide Alloys in Order To Resist Wear and Friction.
First use on or about June 8, 1955.

SN 92,835. Weather-Seal, Inc., Barberton, Ohio. Filed Mar. 14, 1960.



For Hitches for Coupling Implements to Tractors.
First use on or about Mar. 7, 1959.

SN 92,846. Evdel Industries, Inc., New York, N.Y. Filed Mar. 15, 1960.



For Track Links for Crawler Tractors.
First use Oct. 22, 1959.

SN 92,910. Offset Process, Inc., Fort Worth, Tex. Filed Mar. 15, 1960.

VANGUARD

For Rotary Offset Printing Press.
First use Nov. 1, 1959.

SN 92,940. Tubular Textile Machinery Corporation, Woodside, N.Y. Filed Mar. 15, 1960.

PADROL

For Textile Finishing Machinery.
First use Feb. 2, 1960.

SN 93,442. LeTourneau-Westinghouse Company, Peoria, Ill. Filed Mar. 22, 1960.



Owner of Reg. No. 667,489.
For Construction, Grading and Other Machinery and Equipment for the Movement of Snow, Earth, Minerals, Metals, and Other Substances; Hauling Machinery and Equipment; Land Clearing Machinery and Equipment; Materials Handling and Lifting Machinery and Equipment; Logging Machinery and Equipment; Tractors and Other Prime Movers; Machinery and Equipment for Disturbing the Earth's Surface; Compacting Machinery and Equipment; Attachments and Controls for Machinery and Equipment of the Foregoing Types; and Structural Parts for the Foregoing.
First use June 19, 1959, on scrapers.

SN 93,570. Western Machinery Company, San Francisco, Calif. Filed Mar. 23, 1960.

FAG

For Flotation Units.
First use Dec. 1, 1959.

SN 93,639. National Rubber Machinery Company, Akron, Ohio. Filed Mar. 28, 1960.

NRM

For Tire Vulcanizers, Tire Building Machines, Tire Fabric Bias Cutters, Tube Splicers, and Rubber and Plastic Extruders.
First use June 1, 1949.

SN 94,221. Ace Fastener Corporation, Chicago, Ill. Filed Apr. 4, 1960.

CLIPPER

Owner of Reg. Nos. 676,656 and 675,429.
For Stapling Machines of the Plier Type.
First use 1938.

SN 96,185. Cadillac Stamp Company, Inc., Detroit, Mich. Filed May 19, 1960.



For Steel Stamps, Embossing and Marking Dies, Power and Hand Marking Machines.
First use early part of 1922.

Class 24 — Laundry Appliances and Machines

SN 65,970. Metropolitan Dry Cleaning Machinery Co., Inc., Richmond Hill, N. Y. Filed Jan. 16, 1959.

P.O.M.G.

For Coin Operated Washing and Dry Cleaning Machines, Dry Cleaning Lockers, and Soap and Bleach Vending Machines.
First use Jan. 1, 1956.

Class 26—Measuring and Scientific Appliances

SN 57,089. Mueller-mist Irrigation Company, Broadview, Ill. Filed Aug. 12, 1958.

MOISTURE-MASTER

For Electronically Controlled Lawn and Garden Watering Systems Responsive to Time and Sensing Factors.
First use Apr. 10, 1958.

SN 66,094. Reproduction Engineering Corporation, Ivoryton, Conn. Filed Jan. 19, 1959.

BLU-RAY



The drawing is lined for blue.
For Reproduction Equipment—Namely, Diazo Direct Process Whiteprint Machines.
First use Sept. 15, 1957.

SN 66,963. Tokyo Optical Company Limited, Itabashi-ku, Tokyo, Japan. Filed Feb. 2, 1959.



Owner of Japanese Reg. No. 245,259, dated July 31, 1933.
For Cameras, Lenses, Binoculars, Telescopes, Microscopes, Surveying Instruments, Optical Measuring Instruments.

SN 68,180. Tokyo Optical Company Limited, Itabashi-ku, Tokyo, Japan. Filed Feb. 20, 1959.

TOKO

Owner of Japanese Reg. No. 245,822, dated Aug. 2, 1933.
For Cameras, Lenses, Binoculars, Telescopes, Microscopes, Surveying Instruments, Optical Measuring Instruments.

SN 68,244. Filmotype Corporation, Skokie, Ill. Filed Feb. 24, 1959.

ALPHATYPE

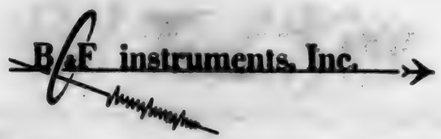
For Photographic Typesetting Machinery.
First use Oct. 17, 1958.

SN 72,860. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed May 4, 1959.

VERSA-TRAN

For Relays Which Are Operated by Changes in Conditions, Such as Temperature, Humidity, Liquid Level, Etc.
First use Aug. 6, 1958.

SN 73,184. B & F Instruments, Inc., Philadelphia, Pa. Filed May 8, 1959.



For Measuring and Testing Equipment—Namely, Torque Meters, Accelerometers, Strain Gage Recording and Plotting Systems, Transducer Input Conditioning Equipment, Transducers and Associated Equipment.
First use Apr. 1, 1958.

SN 74,802. Tasco Sales, Inc., Miami, Fla. Filed May 29, 1959.



For Microscopes, Microscope Kits Including Dissecting Sets, Binoculars, Opera Glasses, Telescopes, Tripods, and Carrying Cases Therefor.
First use July 1, 1952.

SN 79,389. Brandt Automatic Cashier Company, Watertown, Wis., assignee of Coinometer Corp., Chicago, Ill. Filed Aug. 12, 1959.

COINOMETER

For Money Changers and Money Payers of the Key-Operated, Coin-Release Type.
First use Apr. 8, 1927.

SN 80,075. The Driv-A-Lert Corporation, Delphos, Ohio. Filed Aug. 24, 1959.

DRIV-A-LERT

For Electronic Driver Alerting System for Use on Motor Vehicles, Said System Utilizing a Time Delay Mechanism Which Sounds a Signal When the Driver Is Inactive for a Period of Time.
First use Feb. 24, 1959.

SN 84,187. Tip-Top Products Company, Omaha, Nebr. Filed Oct. 28, 1959.



Owner of Reg. Nos. 335,323, 501,099, and 594,280.
For Sun Sets Comprised of Sun Glasses and Barrettes.
First use in January 1958.

SN 84,619. Pierre Morin, Paris, France. Filed Nov. 4, 1959.

MOREX

Priority claimed under Sec. 44(d) on French Reg. No. 481,134, dated June 18, 1959 (Seine); Natl. Inst. No. 127,821.
For Still and Motion-Picture Cameras and Projection Apparatus.

SN 85,388. Photon, Inc., Cambridge, Mass. Filed Nov. 16, 1959.

PHOTON

For Photographic Typographical Composing Equipment.
First use on or about Sept. 5, 1954.

SN 91,913. Charles Bruning Company, Inc., Mt. Prospect, Ill. Filed Mar. 1, 1960.

REVOLUTE

Owner of Reg. Nos. 505,207, 638,759, and others.
For Photographic Materials—Namely, Sensitized Papers, Cloths, and Films.
First use Feb. 15, 1960.

SN 92,202. Amerace Corporation, New York, N.Y. Filed Mar. 7, 1960.

ACE

Owner of Reg. No. 694,872.
For Measuring Device for Bowling Balls, Which Measures Span and Finger Hole and Thumb Size To Be Drilled.
First use Jan. 14, 1960.

SN 92,772. The Jackson Electrical Instrument Company, Dayton, Ohio. Filed Mar. 14, 1960.



Owner of Reg. No. 595,498.
For Tube Testers, Cathode Ray Oscilloscopes, Signal Generators, Vacuum Tube Voltmeters, and Capacitor Checkers.
First use Aug. 12, 1955.

Class 27—Horological Instruments

SN 46,654. Paul Frans Christiaan Sierhuis, d.b.a. Handelsonderneming v/h Gebr. Bertrams, Amsterdam, Netherlands. Filed Feb. 26, 1958.

ECHO

Owner of Dutch Reg. No. 129,340, dated Nov. 8, 1957.
For Alarm Clocks of the Household Type.

Class 28—Jewelry and Precious-Metal Ware

SN 90,266. Paramount Wedding Ring Company, Chicago, Ill. Filed Feb. 3, 1960.

TEENRING

For Finger Rings Including Wedding Rings.
First use on or about Jan. 4, 1960.

SN 90,269. Paramount Wedding Ring Company, Chicago, Ill. Filed Feb. 3, 1960.

RING-A-TEEN

For Finger Rings Including Wedding Rings.
First use on or about Jan. 4, 1960.

SN 91,572. Uncas Manufacturing Company, Providence, R.I. Filed Feb. 24, 1960.

LUCKY ELEPHANT

For Finger Rings.
First use Feb. 8, 1960.

Class 29—Brooms, Brushes, and Dusters

SN 91,907. Bissell Inc., Grand Rapids, Mich. Filed Mar. 1, 1960.

FLEX MASTER

For Floor Mops.
First use Feb. 4, 1960.

Class 30—Crockery, Earthenware, and Porcelain

SN 68,458. Arnart Imports, Inc., New York, N.Y. Filed Feb. 26, 1959.



ROYAL CARLTON

For Ceramic and Porcelain Perfume Sets (Sold Empty), Ceramic and Porcelain Candy Boxes, Ceramic and Porcelain Vases and Ceramic, Porcelain, and China Tableware and Dinnerware.
First use Dec. 30, 1957.

SN 78,573. Porzellanfabrik Schönwald, Schonwald, Oberfranken, Germany. Filed July 28, 1959.

FAIRWOOD

For Dinnerware—Namely, Plates, Cups, Saucers, Bowls, Platters, Tureens, and Serving Pieces Made of Porcelain.
First use Sept. 30, 1957; in commerce Sept. 30, 1957.

Class 31—Filters and Refrigerators

SN 63,749. Podbielniak, Inc., Chicago, Ill. Filed Dec. 5, 1958.

FLO-KOLD

For Refrigerating Apparatus for Use in Conjunction With Laboratory Analytical Equipment.
First use Apr. 8, 1948.

SN 81,400. Philip A. Hopkins, d.b.a. Hopkins Equipment Co., Hatfield, Pa. Filed Sept. 15, 1959.

FILTERMASTER

For Liquid Filters.
First use Aug. 26, 1959.

SN 91,051. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 17, 1960.

POROLOY

Owner of Reg. No. 602,900.
For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Jan. 28, 1953.

SN 93,034. Whirlpool Corporation, St. Joseph, Mich. Filed Mar. 16, 1960.

ICEMAGIC

Owner of Reg. No. 634,586.
For Ice Makers, Freezers, and Parts Thereof.
First use Dec. 20, 1955.

Class 32 — Furniture and Upholstery

SN 70,451. Duo-Bed Corporation, Los Angeles, Calif. Filed Mar. 30, 1959.

DUO-EXECUTIVE

For Sofa Beds and Combined Sofa Bed and Desk Units.
First use Feb. 10, 1958; in 1949 as to "Executive."
Subj. to Intf. with Reg. No. 661,050.

SN 76,808. Honeycomb File Corporation, Valley Stream, N.Y. Filed June 30, 1959.

HONEYCOMB

For Collapsible Filing Units for the Storage of Blue Prints and Other Rolled-Up Flexible Products.
First use Mar. 10, 1939.

SN 77,861. Stainless Metal Products, Inc., Chattanooga, Tenn. Filed July 16, 1959.

STAC-A-TRAY

For Desk Trays.
First use May 29, 1959.

SN 80,001. The United States Bedding Company, St. Paul, Minn. Filed Aug. 31, 1959.

GLIDEOMATIC

For Sofa Beds.
First use July 15, 1959.

SN 80,800. Industrial Enterprises, Inc., New York, N.Y. Filed Sept. 3, 1959.

CASUALAIRE

For Summer Lawn and Patio Furniture.
First use Aug. 24, 1959.

SN 83,922. Supreme Steel Equipment Corp., Brooklyn, N.Y. Filed Oct. 23, 1959.

Conserv-a-matic by SUPREME

Owner of Reg. No. 665,385.
For Office Filing Cabinets.
First use Sept. 16, 1959.

SN 86,946. Foam Pillow Corp., Hicksville, N.Y. Filed Dec. 9, 1959.



"Time out for relaxation"

The word "Pillow" apart from the mark is disclaimed.
For Pillows.
First use Oct. 1, 1959.

SN 88,296. Chemex Corporation, New York, N.Y. Filed Dec. 31, 1959.

CHEMEX

For Shadowbox Mirror.
First use Dec. 29, 1959.

SN 90,471. American Safety Table Company, Inc., Reading, Pa. Filed Feb. 8, 1960.

UNIPAK

For Sewing Machine Stands and Tables.
First use Jan. 22, 1960.

SN 90,639. Alfred Imhof Limited, London, England. Filed Feb. 9, 1960.

IMRAK

Owner of British Reg. No. 787,668, dated Feb. 23, 1959.
For Cabinets, Containers, and Cases All Made of Metal and Sold Empty and Used for Containing Gramophone Records, Electrical and Electronic Instruments and Apparatus; Component Parts of Said Cabinets, Containers and Cases; and Racks.

SN 92,685. Admiral Metal Products, Inc., Chicago, Ill. Filed Mar. 14, 1960.

GOLDCORE KITCHENS

The word "Kitchens" is disclaimed apart from the mark as shown.
For Kitchen Cabinets.
First use Jan. 7, 1960.

SN 93,341. Northern Feather Works, Inc., Newark, N.J. Filed Mar. 22, 1960.

THE BALLOON PILLOW

The words "The" and "Pillow" are disclaimed apart from the mark as shown.
For Pillows Built in Three Layers.
First use Aug. 1, 1959.

Class 33 — Glassware

SN 87,435. Kimble Glass Company, Toledo, Ohio. Filed Dec. 16, 1959.

KIMAX

Owner of Reg. Nos. 640,480, 669,879, and 677,067.
For Tempered Glass Pipe, Fittings, Elbows, Reducers, Traps, Valves, Spacers, and Joints.
First use Feb. 18, 1959.

SN 87,998. American-Saint Gobain Corporation, New York, N.Y. Filed Dec. 28, 1959.

BEADEX

For Rolled Pattern Glass Such as Used for Room Dividers, Paneling, and Doors.
First use Nov. 30, 1959.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 85,926. State Steel Industries, Inc., City of Industry, Calif. Filed Nov. 23, 1959.

FIREBIRD

For Metal Fireplace Units; Fireplace Accessories—Namely, Dampers, Clean Out Doors, Ash Dumps, Screens, Grills, Cranes, Grates; Barbecues; and Barbecue Accessories—Namely, Barbecue Grills, Hoods, Spits, and Doors.
First use about Oct. 10, 1959.

SN 87,454. Specialties, Incorporated, Syosset, N.Y. Filed Dec. 16, 1959.

Specialaire

For Ventilated and Illuminated Cabinets Used as Work Chambers for Assembling Precision Instruments.
First use Apr. 21, 1958.

SN 92,789. ExitAire Co., Pacoima, Calif. Filed Mar. 14, 1960.

ExitAire

Owner of Reg. No. 661,387.
For Power Roof Exhausters.
First use on or about Jan. 4, 1960.

SN 92,764. Hook & Ackerman, Inc., New York, N.Y. Filed Mar. 14, 1960.

H & A

For Gas Fired, Hot Water, Cast Iron Heating Boilers.
First use January 1937.

SN 93,378. H. G. Stocker & Son, Osceola, Wis. Filed Mar. 21, 1960.

TROPICAL MIST

For Humidifiers.
First use Nov. 2, 1959.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 85,941. Western Auto Supply Company, Kansas City, Mo. Filed Nov. 23, 1959.

DAVIS DELUXE

Owner of Reg. No. 309,354.
For Pneumatic Tires and Inner Tubes for Bicycles.
First use Mar. 31, 1936.

SN 93,397. Wisconsin Motor Corporation, Milwaukee, Wis. Filed Mar. 21, 1960.

TRICROME

For Parts of Internal Combustion Engines—Namely, Piston Rings.
First use Dec. 31, 1959.

SN 94,799. O.K. Rubber Welders, Incorporated, Littleton, Colo. Filed Apr. 11, 1960.

X-5R

For Automobile Tires.
First use on or about Jan. 15, 1960.

Class 36 — Musical Instruments and Supplies

SN 66,040. Honey Bucket Cafe, Costa Mesa, Calif. Filed Jan. 19, 1959.

THE honeybucket

For Phonograph Records.
First use Dec. 1, 1958.
Subj. to Intf. with SN 82,353.

SN 71,946. The Fred. Gretsch Manufacturing Co., Brooklyn, N.Y. Filed Apr. 21, 1959.

LAFAYETTE

Owner of Reg. No. 528,377.
For Drums, Cornets, Trumpets, Bugles, Trombones, Alto Horns, Baritone Horns, Bass Horns, Clarinets, Oboes, Flutes, Guitars, Banjos, Ukuleles, Harmonicas, and Accessories for Brass Band and Wood-Wind Instruments.
First use Apr. 22, 1935.

SN 82,102. General Dynamics Corporation, Rochester, N.Y. Filed Sept. 25, 1959.

PERFECTEMPO

For Phonographs, Turntables and Parts Thereof.
First use at least as early as Nov. 24, 1958.

SN 87,534. American Stylus Company, d.b.a. Pageant Needles, Scranton, Pa. Filed Dec. 16, 1959.

*Pageant

For Phonograph Needles and Phonograph Record Accessories.
First use Nov. 25, 1959.

SN 88,168. Nilo Santos Pinto, Rio de Janeiro, Brazil. Filed Dec. 29, 1959.

HI-FI MASTERPIECE

The term "HI-FI" is disclaimed apart from the mark. Owner of Brazilian Reg. No. 327,523, dated Oct. 12, 1956.
For Grooved Phonograph Records.

SN 89,053. James E. Kirchstein, d.b.a. Cuca Record Company, Sauk City, Wis. Filed Jan. 15, 1960.

CUCA

For Phonograph Records.
First use Jan. 10, 1960.

SN 90,627. Droll Yankees, Inc., Providence, R.I. Filed Feb. 9, 1960.

DROLL YANKEES

For Phonograph Records.
First use on or about Feb. 6, 1960.

Class 37 — Paper and Stationery

SN 79,678. Joe Lowe Corporation, New York, N.Y. Filed Aug. 17, 1959.

SICLE

Owner of Reg. No. 560,728.
For Ball Point Pens.
First use during January 1957.

SN 85,561. Chicago's Top Ten, Inc., Chicago, Ill. Filed Nov. 18, 1959.

Word Master

For Stationery—Namely, Writing Paper, Writing Tablets, Notebooks, Notebook Fillers, Typing Paper and Envelopes.
First use Oct. 7, 1959.

SN 89,814. Technical Papers Corporation, Boston, Mass. Filed Jan. 27, 1960.

TECHNISTRENGTH

For Latex Impregnated Paper.
First use Jan. 25, 1960.

SN 89,917. Hercules Powder Company, Wilmington, Del., assignee of Imperial Color Chemical & Paper Corp., Glens Falls, N.Y. Filed Jan. 29, 1960.

GLENWAY

Owner of Reg. Nos. 526,110, 673,532, and others.
For Wallpaper.
First use January 1960.

SN 89,865. The Alling & Cory Company, Rochester, N.Y. Filed Feb. 1, 1960.

ARCTIC

For Adding Machine Paper Rolls.
First use April 1936.

SN 90,056. The Grand Union Company, East Paterson, N.J. Filed Feb. 1, 1960.

GRAND

Owner of Reg. Nos. 638,790 and 665,407.
For Paper Napkins.
First use on or about Dec. 11, 1959.

SN 90,376. Union Bag-Camp Paper Corporation, New York, N.Y. Filed Feb. 4, 1960.

FRANKOTE

For Bleached Kraft Paper and Board.
First use Sept. 10, 1956.

SN 90,499. Durham Printing Company, Muncie, Ind. Filed Feb. 8, 1960.

Durall

For Shipping Labels.
First use Dec. 5, 1959.

SN 90,505. Fort Howard Paper Company, Green Bay, Wis. Filed Feb. 8, 1960.

BELNAP

For Paper Napkins.
First use Jan. 11, 1960.

SN 90,506. Fort Howard Paper Company, Green Bay, Wis. Filed Feb. 8, 1960.

DUO-NAP

For Paper Napkins.
First use Jan. 11, 1960.

SN 90,712. Stedman Paper Company, Holyoke, Mass. Filed Feb. 10, 1960.

Sawedge

Owner of Reg. No. 400,279.
For Roll Edge Protector Made From Solid Fibre Container Board or Other Grade of Paperboard.
First use Dec. 18, 1941.

Class 38 — Prints and Publications

SN 81,569. The Irving-Cloud Publishing Company, Chicago, Ill. Filed Sept. 17, 1959.

HOUSEWARES BUYER

For Periodical Publication.
First use Aug. 19, 1959.

SN 84,942. Fellom Publishing Co., San Francisco, Calif. Filed Nov. 9, 1959.

CALIFORNIA BUILDER

For Magazine.
First use July 1, 1959.

SN 87,331. The Bureau of National Affairs, Inc., Washington, D.C. Filed Dec. 15, 1959.

MODERN MANAGEMENT FILMS

The word "Films" is disclaimed apart from the mark as shown. Owner of Reg. No. 430,669.
For Series of Films.
First use Aug. 5, 1959.

SN 89,603. Prestype, Inc., New York, N.Y. Filed Jan. 25, 1960.

PRESTYPE

For Dry-Ink Transfer Letters.
First use Dec. 1, 1959.

SN 91,018. Consolidated Music Publishers Inc., New York, N.Y. Filed Mar. 1, 1960.

MUSIC FOR MILLIONS SERIES

For Music Books (Folios).
First use Apr. 23, 1947.

SN 91,969. Sawyer's Inc., Portland, Oreg. Filed Mar. 1, 1960.

PANA-VUE

Owner of Reg. No. 672,211.
For Photographic Transparency Slides.
First use Nov. 12, 1959.

SN 92,068. Walker-de Berry, Inc., Cambridge, Mass. Filed Mar. 2, 1960.



For Books.
First use Jan. 29, 1960.

SN 92,677. Marine Corps League and Auxiliary, Department of California, Midway City, Calif. Filed Jan. 12, 1960.

CALIFORNIA LEAGUER

For Magazine.
First use Dec. 1, 1959.

Class 39 — Clothing

SN 88,711. The Quiltex Company, New York, N.Y. Filed Oct. 10, 1957.

Quiltron

Owner of Reg. No. 330,752.
For Quilting Forming Part of Sleeping Bags in the Nature of Garments, Pram Suits, Bathrobes, Snow Suits, and Buntings for Infants.
First use Dec. 20, 1955.

SN 59,891. L. Greif & Bro., Inc., Baltimore, Md. Filed Sept. 23, 1958.

CANBERRA

Owner of Reg. No. 584,450.
For Fabric Made Up Into Men's Suits, Sport Coats, Jackets, Topcoats, Overcoats, and Slacks.
First use Sept. 5, 1952.

SN 66,436. Rubin Grais & Sons, Chicago, Ill. Filed Jan. 26, 1959.

THE PRO

For Men's, Boys', and Women's Leather and Cloth Jackets.
First use on or about Oct. 24, 1958.

SN 66,666. Thomson Co., New York, N.Y. Filed Jan. 28, 1959.



For Men's and Boys' Slacks and Pants.
First use Aug. 22, 1958.

SN 67,456. Southern Department Stores, Inc., Richmond, Va. Filed Feb. 10, 1959.

BIG SOUTHERN

For Men's and Boys' Work Clothing—Namely, Men's and Boys' Denim Dungarees; Men's Cotton Work Shirts and Work Pants.
First use Nov. 1, 1958.

SN 69,698. Waldensian Hosiery Mills, Incorporated, Valdese, N.C. Filed Mar. 16, 1959.

TARTAN

For Ladies' Hosiery.
First use Mar. 5, 1959.

SN 70,842. The Alligator Company, St. Louis, Mo. Filed Apr. 6, 1959.

ALLIGATOR

Owner of Reg. Nos. 75,365, 346,414, and others.
For Raincoats, Water Repellent Coats, Topcoats, Coats With Zip-In Warmers, and Suburban Coats for Men, Women, and Children; Inner Linings for Men's, Women's, and Children's Coats; Sportswear for Men—Namely, Jackets, Golf, Fishing, and Sport Shirts, Parkas, Water Repellent Pants, Waterproof Protectors for Trousers, and Hats.
First use Sept. 1, 1908, on raincoats.

SN 74,251. Premier Textile Co., New York, N.Y. Filed May 21, 1959.

KLEER VUE

For Cotton and Rayon Fabrics Made Up Into Men's, Women's, and Children's Hosiery, Gloves, Underwear, Such as Shorts, Shirts, Women's Briefs and Panties, Men's and Boys' Shirts.
First use Feb. 25, 1959.

SN 74,819. Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. Filed June 1, 1959.

CUPLON

Priority is claimed under Sec. 44(d) on Japanese application filed Apr. 16, 1959; Reg. No. 550,332, dated Mar. 25, 1960.
For Suits, Overcoats, Raincoats, Sweaters, Waistcoats, Blouses, Skirts, Underwear, Pajamas and Negligees, Hats, Gloves, Socks, Stockings, Neckties, Mufflers, Scarves, and Handkerchiefs, All for Men, Women, Children, and Babies.

SN 80,430. The Joseph & Feiss Company, Cleveland, Ohio. Filed Aug. 28, 1959.

HYDRAMAGIC

For Men's Clothing—Namely, Suits, Topcoats, Overcoats, Sport Coats, and Slacks.
First use July 6, 1959.

SN 80,514. Eagle Clothes, Inc., Brooklyn, N.Y. Filed Aug. 31, 1959.

EAGLE University

Owner of Reg. Nos. 66,879, 154,504, and 623,125.
For Men's Overcoats, Topcoats, and Suits.
First use in January 1959; September 1912 as to the word "Eagle"; June 1883 as to picture of eagle.

SN 80,708. Eagle Clothes, Inc., Brooklyn, N.Y. Filed Aug. 27, 1959.

EAGLE 8080

Owner of Reg. Nos. 66,879, 623,125, and others.
For Men's Overcoats, Topcoats, and Suits.
First use Dec. 5, 1951; June 1883 as to the picture of the eagle; September 1912 as to the word "Eagle."

SN 80,709. Eagle Clothes, Inc., Brooklyn, N.Y. Filed Aug. 27, 1959.

EAGLE GALATEEN

Owner of Reg. Nos. 66,879, 623,125, and others.
For Men's Overcoats, Topcoats, and Suits.
First use July 21, 1950; June 1883 as to the picture of the eagle; September 1912 as to the word "Eagle."

SN 80,786. Eagle Clothes, Inc., Brooklyn, N.Y. Filed Sept. 3, 1959.

EAGLE quill weight

Owner of Reg. Nos. 66,879, 154,504, and 623,125.
For Men's Overcoats, Topcoats, and Suits.
First use Aug. 27, 1959; June 1883 as to the picture of an eagle; September 1912 as to the word "Eagle."

SN 81,213. United States Rubber Company, New York, N.Y. Filed Sept. 11, 1959.

PENGUIN

For Outer Rainwear Made of Plastic.
First use Aug. 7, 1959.

SN 82,245. Frank Leonard University Shop, Baltimore, Md. Filed Sept. 28, 1959.



The drawing is lined for red.
For Shirts, Neckwear, Jackets, Belts, Sport Blazers, Trousers and Slacks, Sport Coats, Suits, Overcoats, Suburban Coats, Clicker Coats, Raincoats, Tuxedos, and Other Formal Wearing Apparel, Swim Trunks, and Bermuda Shorts.
First use Dec. 5, 1956.

SN 83,099. Jaymar-Ruby, Inc., d.b.a. Jaymar, Michigan City, Ind. Filed Oct. 12, 1959.

SUMMER STREAM

For Men's Slacks.
First use Sept. 9, 1959.
Subj. to Intf. with SN 83,236.

SN 84,176. Ross-Saturn, Inc., Washington, D.C. Filed Oct. 28, 1959.

William Allen

For Shoes for the Use of Women and Girls.
First use December 1945.

SN 85,897. Nirenberg & Saltman, Inc., New York, N.Y. Filed Nov. 23, 1959.

CLUBMAN

For Men's and Boys' Shirts.
First use Jan. 10, 1926.

SN 86,036. Kelray Knitting Mills, Inc., New York, N.Y. Filed Nov. 25, 1959.

DEE BEE

For Ladies', Misses', and Children's Underwear, Such as Panties, Bloomers, Chemises, Pajamas, Made of Knitted and Woven Fabrics.
First use Nov. 10, 1959.

SN 87,463. Williamson-Dickie Manufacturing Company, Fort Worth, Tex. Filed Dec. 16, 1959.

TRIMTABS

For Men's and Boys' Slacks.
First use at least as early as Nov. 4, 1959.

SN 87,663. Ettore Iorio, Brooklyn, N.Y. Filed Dec. 21, 1959.



No claim is made to the representation of the goods apart from the mark as shown.
For Rubber Soles and Heels for Footwear.
First use Oct. 29, 1959.

SN 87,836. Belk Stores Services, Inc., Charlotte, N.C. Filed Dec. 22, 1959.

Dixie Tots

The word "Tots" is disclaimed apart from the mark as shown. Owner of Reg. No. 624,092.
For Children's Wear—Namely, Knit Shirts, Shorts, Sweaters, and Socks.
First use Aug. 7, 1959.

SN 87,855. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Dec. 23, 1959.

GOLDEN LION

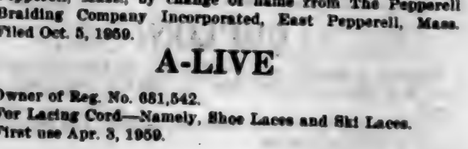
Owner of Reg. Nos. 665,780 and 690,925.
For Shoes for Men and Boys.
First use Nov. 25, 1959.

SN 87,857. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Dec. 23, 1959.

STARS OF TEXAS

For Shoes for Women.
First use Nov. 25, 1959.

SN 88,513. Austin Manufacturing Co., Omaha, Nebr. Filed Jan. 6, 1960.



For Infant's Diaper.
First use Jan. 15, 1954.

SN 88,875. The Salem Co., Inc., Winston-Salem, N.C. Filed Jan. 12, 1960.

ANDY STEELE

Andy Steele is the name of a particular living individual whose consent has been made a part of this application.
Owner of Reg. Nos. 667,778 and 681,536.
For Boys' and Youths' Pants, Jeans, Shorts, Shirts, and Sportswear—Namely, Jackets and Calf Length Pants.
First use Dec. 1, 1959.

SN 91,026. Nestleform Company, Inc., Baltimore, Md. Filed Feb. 16, 1960.

robbinn J

For Ladies' Sportswear—Namely, Pants, Shorts, Blouses, Skirts, Suits, Coats, and Jackets.
First use Jan. 4, 1960.

Class 40—Fancy Goods, Furnishings, and Notions

SN 79,793. Joe Lowe Corporation, New York, N.Y. Filed Aug. 18, 1959.

SICLE

Owner of Reg. No. 534,804.
For Indian Bead Set.
First use during January 1957.

SN 62,706. Pepperell Braiding Company Incorporated, East Pepperell, Mass., by change of name from The Pepperell Braiding Company Incorporated, East Pepperell, Mass. Filed Oct. 5, 1959.

A-LIVE

Owner of Reg. No. 681,542.
For Lacing Cord—Namely, Shoe Laces and Ski Laces.
First use Apr. 3, 1959.

SN 84,185. Tip-Top Products Company, Omaha, Nebr. Filed Oct. 28, 1959.

Tip-Top

Owner of Reg. Nos. 335,323, 501,099, and 594,280.
For Chignon Foundations; Hair Clamps; Pony Tail Holders; Rubber Bands for Pony Tails, Pig Tails, and Braids; Bandeaux; Pony Tail Bows; Decorative Hair Clips; Curler Pins; Combs; Barrettes, Curl Clips, and Hair Rollers.
First use in January 1948.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 92,446. Collins & Aikman Corp., New York, N.Y. Filed Mar. 9, 1960.

SHERPA

For Pile Apparel Fabrics.
First use Jan. 7, 1960.

SN 92,556. Slate Knit, Inc., Slatington, Pa. Filed Mar. 10, 1960.

GRO-KNIT

The word "Knit" is disclaimed when used apart from the mark.
For 100% Stretch Nylon Knitted Fabric.
First use Feb. 3, 1960.

SN 92,586. Ciba Limited, Basel, Switzerland. Filed Mar. 11, 1960.

ARIGAL

Priority is claimed under Sec. 44(d) on Swiss Reg. No. 178,064, dated Oct. 28, 1959.
For Fabrics of Cotton, Linen, Synthetic Fibers, and Mixtures Thereof.

SN 92,825. J. P. Stevens & Co. Inc., New York, N.Y. Filed Mar. 14, 1960.

FARMER'S MARKET

For Cotton Fabrics.
First use Sept. 14, 1959.

SN 92,901. Habib S. Marcus, New York, N.Y. Filed Mar. 15, 1960.

ROSEBUD

For Sheets, Pillow Cases, Towels, Spreads, Pillows, Blankets, Quilts, and Comforters.
First use Apr. 13, 1923.

Class 43—Thread and Yarn

SN 74,822. Asahi Kasei Kogyo Kabushiki Kaisha, Kita-ku, Osaka, Japan. Filed June 1, 1959.

CUPLON

Priority is claimed under Sec. 44(d) on Japanese application filed Apr. 16, 1959; Reg. No. 549,819, dated Mar. 23, 1960.
For Threads and Yarns Made of Artificial Silk and Those Made of Synthetic Fibers.

Class 44—Dental, Medical, and Surgical Appliances

SN 72,697. Bolt, Beranek and Newman, Inc., Cambridge, Mass. Filed May 1, 1959.

AUDIO ANALGESIAC

For Sound-Generating Equipment for Producing Psychological and Physiological Responses.
First use on or about July 1, 1958.

SN 73,492. Heimsauna Gesellschaft m.b.H., Munich, Germany. Filed May 12, 1959.



The word "Heimsauna" is disclaimed apart from the mark as shown. Owner of German Reg. No. 716,070, dated July 24, 1958.
For Electric Apparatus for Medical Purposes, in Particular Infra-Red Heat Appliances.

SN 77,147. Sierra Engineering Co., Sierra Madre, Calif. Filed July 6, 1959.

Sierra

Owner of Reg. Nos. 637,241 and 637,242.
For Valves, Connectors, Oxygen Converters, Oxygen Control Valves, and Oxygen Pressure Reducers of the Type Used for Personal Aviators' Oxygen Equipment and for Oxygen Breathing Equipment of the Type Used in Hospitals and First-Aid Stations.
First use in August 1953.

SN 79,886. Dr. Ing. Hans O. Scheid, Vienna, Austria. Filed Aug. 19, 1959.

AIRMATIC

Priority claimed under Sec. 44(d) on Austrian application filed Apr. 22, 1959; Reg. No. 41,879, dated June 15, 1959.
For Diamond Grinding Instruments for Dental Purposes.

SN 81,568. Institutional Industries, Inc., Cincinnati, Ohio. Filed Sept. 17, 1959.

CARY

For Patient Safety Aids—Namely, Wheel Chairs, Adjustable Leg Rests, Walkers, Crutches, Bathtub Safety Rails and Safety Seats, Toilet Safety Frames, and Non-Folding Commodes.
First use July 10, 1959.

SN 86,111. Leona W. Chalmers, New York, N.Y. Filed Nov. 27, 1959.

Tassette

Owner of Reg. No. 686,010.
For Menstrual Cups.
First use Nov. 1, 1959; in March 1935 as to "Tassette."

SN 89,852. Health-O-Swim Products Co., New York, N.Y. Filed Jan. 28, 1960.

H-EAR

For Plastic Ear Plugs.
First use Jan. 2, 1960.

SN 90,684. Espe Fabrik Pharmaceutischer Präparate G.m.b.H., Seefeld, Oberbayern, Germany. Filed Feb. 10, 1960.

CADURIT

Owner of German Reg. No. 722,364, dated Feb. 20, 1959.
For Tooth Filling Material.

SN 90,759. Hudson Oxygen Therapy Sales Company, Los Angeles, Calif. Filed Feb. 11, 1960.

LIFESAVER

For Mouth to Mouth Rescue Breathing Tubes.
First use Nov. 25, 1959.

SN 91,064. Bird Oxygen Breathing Equipment, Inc., Palm Springs, Calif. Filed Feb. 17, 1960.

BIRD

For Respirators and Devices for Aiding in the Administration of Gaseous Anesthetic Agents and Parts Therefor.
First use on or before Jan. 1, 1958.

SN 91,802. Jectron Company, Toledo, Ohio. Filed Feb. 29, 1960.

ACRIBASE

For Denture Base Made of Acrylic Resin.
First use May 25, 1948.

SN 91,848. Rower Dental Mfg. Corp., Boston, Mass. Filed Feb. 29, 1960.

R

ROWER

Owner of Reg. No. 562,975.
For Dental Instruments, Liquid for Use in Cavity-Lining and Pulp Capping, Dental Impression Trays, Cotton Dispensers, Saliva Ejectors and Dental Powders and Supplies.
First use 1954.

Class 46—Foods and Ingredients of Foods

SN 47,269. Nebraska Consolidated Mills Company, d.b.a. Alabama Flour Mills, Omaha, Nebr. Filed Mar. 7, 1958.



For Animal Feeds—Namely, Poultry Mash, Dairy and Hog Feed, Rabbit Pellets, Pig and Sow Feed, Horse and Mule Feed.
First use Feb. 1, 1951.

SN 49,140. Eastern Topping Corporation, Buffalo, N.Y. Filed Apr. 7, 1958.

DIXIE WHIP

Applicant disclaims the word "Whip" apart from the mark as shown. Owner of Reg. No. 565,814.
For Liquid Vegetable Derived Product in a Pressurized Container Which Dispenses the Product in Whipped Form for Use as a Topping for Desserts, Salads, and the Like.
First use in January 1950.

SN 56,396. Fred Harvey, Chicago, Ill. Filed July 31, 1958.

FRED HARVEY

For Candies, Cookies, Coffee, Salad Dressings, Jelly, Ice Cream, Ice Cream Bars, Sandwiches, and Fluid Milk.
First use in or about 1935.

SN 61,730. North River Meat Co., Inc., New York, N.Y. Filed Oct. 31, 1958.



No claim of exclusive right is made to the word "Brand."
For Frankfurters.
First use May 1957.

SN 62,357. Anderson, Clayton & Co., Dallas, Tex. Filed Nov. 13, 1958.

TESORO

"Tesoro" is a Spanish word meaning anything valuable and precious.
For Salad Oil and Oleomargarine.
First use Oct. 22, 1958.

SN 63,514. Armour and Company, Chicago, Ill. Filed Dec. 2, 1958.

THE HAM WHAT AM

No claim of exclusive right is made to "Ham" as used on the goods claimed.
For Cured Ham.
First use Aug. 13, 1912.

SN 67,351. Harry and David, Medford, Oreg. Filed Feb. 8, 1959.



Owner of Reg. Nos. 386,023, 576,696, and 610,797.
For Fresh, Canned, Candied, and Dried Fruits; Jams, Jellies, Fruit Syrups and Preserves; Salted and Unsalted, Shelled and Unshelled Nuts; Confections—Namely, Petits Fours, Candies, Plum Pudding, Cakes and Cookies; Cheese, Olives, and Onions; Salted and Smoked Fowl; Tea and Honey.
First use in November 1955 on fresh fruit.

SN 69,790. Dairyland Food Laboratories, Inc., Waukesha, Wis. Filed Mar. 18, 1959.

DEL AMERICAN

Owner of Reg. No. 561,366.
For Rennet Enzyme Preparations Used in the Manufacture of Food Products.
First use Jan. 12, 1959.

SN 71,762. Sunshine Biscuits, Inc., d.b.a. Gorden Foods, Long Island City, N.Y. Filed Apr. 17, 1959.

BIG DEVIL

For Cake.
First use 1946.

SN 71,780. Aktiebolaget Felix, Eslov, Sweden. Filed Apr. 13, 1959.

HUSSAR

Priority claimed under Sec. 44(d) on Swedish application filed Oct. 15, 1958; Reg. No. 86,326, dated Jan. 16, 1959.
For Mustard, Vinegar, Pickles, and Food Products—Namely, Vegetables, Salads of Vegetables, Meat and Fruit Either Singly or in Combinations, Fish Sauces, Soups, and Meat Balls in Pickled, Canned, and Quick-Frozen Form; and Jams.

SN 73,852. Wilson & Co., Inc., Chicago, Ill. Filed May 15, 1959.

MAJESTIC

For Frozen Dressed Turkeys.
First use on or about May 1, 1901.

SN 75,270. Chun King Sales, Inc., Duluth, Minn. Filed June 8, 1959.

NAN KING

Owner of Reg. No. 592,055.
For Canned: Bamboo Shoots, Water Chestnuts, Vegetable Chow Mein Without Noodles, Bean Sprouts, Chop Suey Rice Long Grain, Chop Suey Vegetables with Water Chestnuts Added, Beef Chop Suey, Chow Mein Noodles, and Combination Packages of the Above.
First use June 1952.

SN 77,530. Ferry-Morse Seed Co., Detroit, Mich. Filed July 13, 1959.

HI NOTE

For Wild Bird Food.
First use June 23, 1959; on or about Oct. 4, 1956, as to "Hi Note."

SN 77,546. International Packers Limited, Chicago, Ill. Filed July 13, 1959.

KENT

For Canned Corned Beef.
First use Jan. 2, 1959.

SN 78,262. Concentrados Vegetales S.A., Madrid, Spain. Filed July 23, 1959.

SACOVE

Owner of Spanish Reg. No. 333,809, dated Apr. 7, 1959.
For Fresh Fruits and Vegetables.

SN 78,263. Concentrados Vegetales S.A., Madrid, Spain. Filed July 23, 1959.

SACOVE

Owner of Spanish Reg. No. 333,808, dated Apr. 7, 1959.
For Sweet Pastries, Candies, Sugar, Coffee, Chocolate, and Syrups for Food and Culinary Purposes.

SN 79,057. Filler Products, Inc., Atlanta, Ga. Filed Aug. 5, 1959.

KORN-TEES

For Corn Chips.
First use July 22, 1959.

SN 80,114. O'Donnell-Usen Fisheries Corp., Boston, Mass. Filed Aug. 24, 1959.

Deep Sea Doodle

The words "Deep Sea" are disclaimed except in connection with the mark as shown.
For Frozen Prepared Fish.
First use July 27, 1959.

SN 82,306. Western Dairy Products, Inc., San Francisco, Calif. Filed Sept. 28, 1959.

SAVORTONE

For Edible Sodium Caseinate for Use as an Ingredient in Food Products and Also for Use as a Chemical Composition in Lieu of Inedible Sodium Caseinate.
First use Apr. 1, 1956.

SN 82,438. Mitsui & Co., Ltd., New York, N.Y. Filed Sept. 30, 1959.



The characters represent the Japanese term "Mitsui," which when translated into English, means "three wells." Owner of Japanese Reg. No. 451,348, dated Sept. 10, 1954.
For Canned Mandarin Oranges.
First use May 5, 1959.

SN 83,742. Planters Nut & Chocolate Co., Wilkes-Barre, Pa. Filed Oct. 21, 1959.

PLANTERS

Owner of Reg. Nos. 123,641, 528,074, and 315,261.
For Edible Peanut Oil.
First use in 1932.

SN 85,246. Rhodesian Industries Co. (Pvt.) Ltd., Salisbury, Southern Rhodesia. Filed Nov. 13, 1959.

Olivine

Owner of Federation of Rhodesia and Nyasaland Reg. No. 533/1958, dated Mar. 28, 1941.
For Edible Oils and Fats; Preserves and Pickles.

SN 85,322. Fall River Canning Company, Fall River, Wis. Filed Nov. 16, 1959.

PRIDE OF WISCONSIN

For Canned Vegetables.
First use Nov. 4, 1959.

SN 86,083. Wallace & Co., Brooklyn, N.Y. Filed Nov. 25, 1959.

CHOCOLATE 45

No claim of exclusive right is made to the word "Chocolate" as used by applicant on chocolate candy.
For Candy.
First use Oct. 5, 1959.

SN 86,124. Fall River Canning Company, Fall River, Wis. Filed Nov. 27, 1959.

INSTI-PAK

For Canned Vegetables.
First use Oct. 15, 1959.

SN 86,639. Demco Packing Company, Inc., d.b.a. Demco Packing Co., Los Angeles, Calif. Filed Dec. 4, 1959.

ROYAL FED

For Canned Pet Food.
First use Nov. 21, 1959.

SN 86,730. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed Dec. 7, 1959.

PACEMAKER

For Fresh Eggs.
First use Nov. 16, 1959.

SN 87,106. American Breddo Corp., New York, N.Y. Filed Dec. 11, 1959.

STA-KWIK

For Cake Icing Stabilizer.
First use Oct. 28, 1959.

SN 87,111. Casey's English Muffin Co., Chicago, Ill. Filed Dec. 11, 1959.

CASEY'S

For English Muffins.
First use Sept. 25, 1950.

SN 87,123. Holiday Foods, Inc., Waterloo, Iowa. Filed Dec. 11, 1959.



The drawing is lined to indicate shading. The words "Premium Quality" and "Brand" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 658,868 and 664,821.
For Cheese Spreads and Cheese.
First use May 1956; in 1949 as to "Holiday."

SN 87,554. Fruit Growers Co-Operative, Sturgeon Bay, Wis. Filed Dec. 18, 1959.

APPLE BAY

No claim of exclusive right is made to the word "Apple," such word being the name of the goods.
For Apple Sauce, Apple Juice, Diced Apples, Sliced Apples, and Spiced Crabapples, Said Goods Being Canned Goods.
First use September 1958.

SN 87,599. Wallace & Co., Brooklyn, N.Y. Filed Dec. 16, 1959.



No claim of exclusive right is made to the word "Chocolate" as used by applicant on chocolate candy.
For Candy.
First use Oct. 5, 1959

SN 89,460. Emmet J. Purcell, d.b.a. Purcell & Associates, and as Island Sun Company, San Francisco, Calif. Filed Jan. 21, 1960.

ISLAND SUN

For Canned Pineapple.
First use on or about June 1, 1959.

SN 89,874. Seymour Foods, Inc., Topeka, Kans. Filed Jan. 28, 1960.



The word "Egg" is disclaimed apart from the mark as shown.
For Powdered Mix, Containing Mainly Eggs and Non-Fat Milk Solids, for Making Scrambled Eggs Primarily and Also for Use in Making Food Products Requiring Whole Eggs, Such as Custards, Cakes, Muffins, Etc.
First use Dec. 28, 1959.

SN 98,627. Pangburn Company, Inc., Fort Worth, Tex. Filed Mar. 24, 1960.



For Candy.
First use Dec. 29, 1959; Mar. 17, 1947, as to "Ranch Girl."

Class 47—Wines

SN 91,166. Martini & Rossi Corporation, New York, N.Y. Filed Feb. 18, 1960.

M & R

Owner of Reg. No. 575,915.
For Vermouth.
First use on or about Apr. 1, 1948.

Class 50—Merchandise Not Otherwise Classified

SN 61,269. Display Craft, Incorporated, Rockford, Ill. Filed Oct. 24, 1958.

Embostic

For Die-Cut Letters, Designs, Figures, and the Like, Made of Laminated Sheet Plastic Material Covered on the Top and Bottom With Kraft Paper, Each Piece in the Cutting Thereof Being Compressed Around the Edges To Give an Embossed Effect, and Supports and Fastening Clips Therefor.
First use Aug. 15, 1957.

SN 65,976. Rubbermaid Inc., Wooster, Ohio. Filed Jan. 16, 1959.

VENTURA

For Rubber Mats.
First use Aug. 5, 1958.

SN 72,243. The Talic-Tone Co., Minneapolis, Minn. Filed Apr. 24, 1959.

TALIC-TONE

For Leather Coloring Kit Including Materials Adapted for the Coloring of Leather and an Instruction Sheet Describing the Use Thereof, the Coloring Materials Including Finely Divided Colored Solids Together With a Film Forming Resinous Coating Substance.
First use Jan. 12, 1959.

SN 74,145. Miller Dial & Name Plate Co., El Monte, Calif. Filed May 20, 1959.

GLOESCENT

For Electroluminescent Panels, Dials, Markers, Signs, and the Like.
First use August 1958.

SN 79,380. Keith E. Bratton, Indianapolis, Ind. Filed Aug. 12, 1959.

MISSME

For Novelty Figurines.
First use July 25, 1959.

SN 86,329. Safety Aids Company, Coraopolis, Pa. Filed Nov. 30, 1959.



The representation of the traffic cone appearing in the drawing is disclaimed apart from the mark as shown.
For Traffic Cones and Sleeves Therefor.
First use Sept. 16, 1959.

SN 86,781. Hoosier Tarpaulin & Canvas Goods Company, Inc., Indianapolis, Ind. Filed Dec. 7, 1959.

NYLO-LITE

For Tents.
First use Nov. 11, 1959.

SN 87,021. Archer Enterprises, Inc., d.b.a. U.S. Plastic Laminating Co., Los Angeles, Calif. Filed Dec. 10, 1959.



For Plaques, More Particularly Laminated Transparent Plaques for Permanently Mounting Documents and the Like.
First use Nov. 20, 1959.

SN 90,437. Papersticks Corporation, Long Island City, N.Y. Filed Feb. 5, 1960.

LICKETY

For Kit Containing Molds and Sticks for Home Manufacture of Iced Confections.
First use Jan. 21, 1960.

SN 91,197. Garrison Machine Works, Inc., Dayton, Ohio. Filed Feb. 18, 1960.



For Schedule Boards.
First use Dec. 22, 1959.

SN 91,291. Superior Plastics Inc., Chicago, Ill. Filed Feb. 19, 1960.

The Thinking Man

For Plastic Models of the Human Skull.
First use Feb. 12, 1960.

SN 91,295. Tingue, Brown & Co., New York, N.Y. Filed Feb. 19, 1960.

UNIPAK

For Printing Press Blankets.
First use Dec. 17, 1959.

SN 91,433. Perfect Seal Corporation, Chicago, Ill. Filed Feb. 23, 1960.

LITTLE BUB

For Bottle Caps.
First use Oct. 1, 1959.

SN 91,632. Sun Industries, Inc., Cleveland, Ohio. Filed Feb. 25, 1960.

PLASTI-GRIP

For One-Piece Handle of Plasto-Meric Material for Containers.
First use Jan. 17, 1960.

Class 51—Cosmetics and Toilet Preparations

SN 88,027. De Bellco Products Corp., Skokie, Ill. Filed Dec. 28, 1959.

SATIN*SHAV

The word "Shav" is disclaimed except in combination with the word "Satin."
For Cream for Use by Women as a Shaving Cream and as a Skin Moisturiser.
First use Oct. 1, 1959.

Class 52—Detergents and Soaps

SN 56,788. Onyx Oil & Chemical Company, Jersey City, N.J. Filed Aug. 7, 1958.

ONYX

Owner of Reg. Nos. 834,773, 653,961, and 663,927.
For Detergents and Detergents Used in the Manufacture of Other Products.
First use Jan. 2, 1958.

SN 61,778. Cahill Chemical Corporation, Providence, R.I. Filed Nov. 3, 1958.

PEPTIZOID

For Metal Cleaning Compound.
First use Aug. 2, 1934.

SN 80,905. National Institutional Food Distributors Association, Inc., d.b.a. National Institutional Food Distributor Associates, Inc., Atlanta, Ga. Filed Sept. 4, 1959.



Applicant disclaims the representation of the map of the United States, the phrase "Quality Controlled and Packed for Nifda" and the words "Atlanta, Georgia."
For Liquid Detergent Compound.
First use in March 1959.

SN 89,446. Moser Paper Company, Chicago, Ill. Filed Jan. 21, 1960.

Mr. Vau

For Concentrated Cleaning Liquid Used in the Embalmers' Field.
First use Nov. 4, 1959.

SN 91,165. Marshall L. Magee, d.b.a. Magee Chemical Company, Bensenville, Ill. Filed Feb. 18, 1960.

FLEX-O-LITE

Owner of Reg. No. 686,114.
For Cleaning Compounds for Floors.
First use on or about Apr. 24, 1958.

SN 91,476. Ultrasonic Industries, Inc., Albertson, N.Y. Filed Feb. 23, 1960.

For Cleaning Compounds—Namely, Detergents, Solvents, Acids and Alkalies in Liquid or Powder Form, for Use in Ultrasonic Cleaning Devices.
First use Feb. 8, 1960.

SERVICE MARKS

Class 107 — Education and Entertainment

SN 63,422. Comptometer Corporation, Chicago, Ill. Filed Dec. 1, 1958.

COMPTOMETRY

Owner of Reg. Nos. 45,076, 611,745, and others.
For Operating a Special Course of Instruction in the Operation of Adding-Calculating Machines.
First use at least as early as 1925.

SN 80,057. Charm, Incorporated, Revere, Mass. Filed Aug. 24, 1959.

CHARM-O-RAMA

For Instructional Lectures and Displays on Charm, Beauty, Fashion, Style, Poise, Personality, Feminine Grace, and Other Allied Subjects.
First use Aug. 14, 1959.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

702,038. KINDL-BAG. Anthracite Equipment Corporation. SN 58,393. Pub. 5-17-60. Filed 9-6-58.

702,039. PROTHANE. Process Chemicals Company. SN 81,820. Pub. 5-17-60. Filed 9-14-59.

702,040. RAYTEX. Harvard Coated Products Co. Inc. SN 81,702. Pub. 5-17-60. Filed 9-21-59.

702,041. RAYHEET. Harvard Coated Products Co. Inc. SN 81,703. Pub. 5-17-60. Filed 9-21-59.

702,042. THREE KINGS AND DESIGN. René H. M. Schönefeld. SN 82,793. Pub. 5-17-60. Filed 10-6-59.

702,043. STRADIVARIUS. Donovan Industries, Inc. SN 86,544. Pub. 5-17-60. Filed 12-3-59.

702,044. TINTORETTA. Amalgamated Leather Companies, Inc. SN 88,717. Pub. 5-17-60. Filed 1-11-60.

702,045. FORTELON. Fiber Industries, Inc. SN 89,427. Pub. 5-17-60. Filed 1-21-60.

702,046. FORTAL. Fiber Industries, Inc. SN 89,428. Pub. 5-17-60. Filed 1-21-60.

702,047. FORTYL. Fiber Industries, Inc. SN 90,325. Pub. 5-17-60. Filed 2-4-60.

702,048. FORTRIL. Fiber Industries, Inc. SN 90,326. Pub. 5-17-60. Filed 2-4-60.

702,049. FORTIL. Fiber Industries, Inc. SN 90,327. Pub. 5-17-60. Filed 2-4-60.

702,050. FORTRYL. Fiber Industries, Inc. SN 90,328. Pub. 5-17-60. Filed 2-4-60.

Class 2 — Receptacles

702,051. SURE-KOLD AND DESIGN. Whitney Bros., Inc. SN 77,698. Pub. 5-17-60. Filed 7-14-59.

702,052. EYE FUL. Stuart M. Lerner, Inc. SN 86,504. Pub. 5-17-60. Filed 12-2-59.

702,053. LIPSTICK BAR. Oscar F. Igersheim, d.b.a. Plastic Fabricators. SN 88,043. Pub. 5-17-60. Filed 12-28-59.

702,054. LIPSTICK STALL. Oscar F. Igersheim, d.b.a. Plastic Fabricators. SN 88,044. Pub. 5-17-60. Filed 12-28-59.

Class 4 — Abrasives and Polishing Materials

702,055. FELKER. Felker Manufacturing Co. SN 57,066. Pub. 5-17-60. Filed 8-12-58.

702,056. TECEPOL AND DESIGN. Treibacher Chemische Werke Aktiengesellschaft. SN 81,653. Pub. 5-17-60. Filed 9-18-59.

702,057. DAKS ETC. AND DESIGN. Damon Chemical Company, Inc. SN 83,473. Pub. 4-5-60. Filed 10-19-59.

702,058. J.R. AND DESIGN. Jowitt and Rodgers Company. SN 88,159. Pub. 5-17-60. Filed 12-29-59.

Class 6 — Chemicals and Chemical Compositions

702,059. ULTRAFIX. Best Photo Industries, Inc., assignee, by mesne assignment, of Brown-Forman Distillers Corporation. SN 51,855. Pub. 1-5-60. Filed 5-19-58.

702,060. PERMA STOP AND DESIGN. Everpure Laboratories, Inc. SN 57,061. Pub. 5-17-60. Filed 8-12-58.

702,061. REPRESENTATION OF SPUR. Spurrier Paper Company, d.b.a. Spurriers. SN 63,112. Pub. 5-17-60. Filed 11-24-58.

702,062. SPUR-TEX. Spurrier Paper Company, d.b.a. Spurriers. SN 63,113. Pub. 5-17-60. Filed 11-24-58.

702,063. PRESSTREAT. Wood Treating Chemicals Co. SN 67,173. Pub. 5-17-60. Filed 2-5-59.

702,064. TRIZONE. The Dow Chemical Company. SN 69,501. Pub. 5-17-60. Filed 3-13-59.

702,065. ROSAR. Alfran Distributors, Inc. SN 73,867. Pub. 5-17-60. Filed 5-18-59.

702,066. PURE AND DESIGN. The Pure Oil Company. SN 73,974. Pub. 5-17-60. Filed 5-18-59.

702,067. UNIMOLL. Farbenfabriken Bayer Aktiengesellschaft. SN 75,977. Pub. 5-17-60. Filed 6-18-59.

702,068. BARNEBEY CHENEY. The Barnebey-Cheney Company. SN 85,648. Pub. 5-17-60. Filed 11-19-59.

702,069. ALL CLEAR. L.K.R. Chemical Products Corporation. SN 85,670. Pub. 5-17-60. Filed 11-19-59.

702,070. CLINVERT. Standard Brands Incorporated. SN 86,525. Pub. 5-17-60. Filed 12-2-59.

702,071. POWERLITH. Chemco Photoproducts Company, Inc. SN 87,784. Pub. 5-17-60. Filed 12-22-59.

702,072. EVEREADY. Union Carbide Corporation. SN 88,265. Pub. 5-17-60. Filed 12-30-59.

702,073. PRESTONE. Union Carbide Corporation. SN 88,266. Pub. 5-17-60. Filed 12-30-59.

702,074. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 88,269. Pub. 5-17-60. Filed 12-30-59.

702,075. ELOXOL. Elox Corporation of Michigan. SN 88,583. Pub. 5-17-60. Filed 1-6-60.

702,076. GOLD SEAL. Gold Seal Company. SN 89,154. Pub. 5-17-60. Filed 1-18-60.

Class 7 — Cordage

702,077. THREAD-A-BOW. Chicago Printed String Company. SN 78,763. Pub. 5-17-60. Filed 7-31-59.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

702,078. SOLID GEOMETRY ETC. AND DESIGN. California General, Inc. SN 77,421. Pub. 5-17-60. Filed 7-10-59.

702,079. H AND DESIGN. Haveg Industries, Inc. SN 88,389. Pub. 5-17-60. Filed 1-4-60.

Class 10 — Fertilizers

702,080. LAWN-GARD. Ozark-Mahoning Company. SN 88,482. Pub. 5-17-60. Filed 1-5-60.

Class 11 — Inks and Inking Materials

702,081. HI-STACK. Grady & Neary Ink Co. SN 88,666. Pub. 5-17-60. Filed 1-8-60.

Class 12—Construction Materials

702,082. CHEMSEAL AND DESIGN. Chemical Sealing Corporation. SN 58,500. Pub. 5–17–60. Filed 9–8–58.

702,083. PROFILIT. Moosbrunner Glasfabriks-Aktiengesellschaft. SN 59,232. Pub. 5–17–60. Filed 8–21–58.

702,084. MIRROR ETC. AND DESIGN. Mirror Insulation Company. SN 64,226. Pub. 5–17–60. Filed 11–7–58.

702,085. ECONO-LUX. Steelite Buildings, Inc. SN 71,440. Pub. 5–17–60. Filed 4–13–59.

702,086. NEOWOOD. New Castle Products, Inc. SN 73,592. Pub. 5–17–60. Filed 5–13–59.

702,087. SHELROCK. Glasrock Corporation. SN 73,686. Pub. 5–17–60. Filed 5–14–59.

702,088. MASROCK. Glasrock Corporation. SN 73,687. Pub. 5–17–60. Filed 5–14–59.

702,089. FIBERFRAX. The Carborundum Company. SN 74,374. Pub. 5–17–60. Filed 5–25–59.

702,090. RAINBOW. Rimex Corporation. SN 81,094. Pub. 5–17–60. Filed 9–9–59.

702,091. GISMO GUSSET. Truss Pre-Fab, Inc. SN 83,143. Pub. 5–17–60. Filed 10–12–59.

702,092. RESCO. Refractory Specialties Company. SN 84,692. Pub. 5–17–60. Filed 11–5–59.

702,093. PURKEY-WHITE AND DESIGN. R. D. Purkey, d.b.a. "Purkey-White." SN 87,718. Pub. 5–17–60. Filed 12–21–59.

702,094. DECORTONE. U.S. Acoustics Corporation. SN 88,438. Pub. 5–17–60. Filed 1–4–60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

702,095. HANDY ANGLE. Handy Angle Limited. SN 73,235. Pub. 5–17–60. Filed 5–8–59.

702,096. GOLDEN GLO. Chicago Metallic Manufacturing Company. SN 75,063. Pub. 5–17–60. Filed 6–4–59.

702,097. RAMPCO. Eugene Eldridge, d.b.a. Rampco Equipment Co. SN 78,443. Pub. 5–17–60. Filed 7–27–59.

702,098. UNIONDRAWN. Union Steel Corporation. SN 82,041. Pub. 5–17–60. Filed 9–24–59.

702,099. PRESERVO FINISH. S.A. Eteco (European Overseas Trading Company). SN 82,406. Pub. 5–17–60. Filed 9–30–59.

702,100. JUMBO AND DESIGN. Coats & Clark Inc. SN 87,853. Pub. 5–17–60. Filed 12–23–59.

702,101. FLEXAIR. Westinghouse Air Brake Company. SN 88,119. Pub. 5–10–60. Filed 12–28–59.

702,102. AERVOID. Vacuum Can Company. CONSOLIDATED CERTIFICATE. SN 88,350, pub. 5–10–60, filed 12–31–59, Cl. 18; SN 88,347, pub. 5–10–60, filed 12–31–59, Cl. 19; SN 88,349, pub. 5–10–60, filed 12–31–59, Cl. 21; SN 88,348, pub. 5–10–60, filed 12–31–59, Cl. 23.

702,103. AVILOC. American Viscose Corporation. SN 88,584. Pub. 5–17–60. Filed 1–7–60.

702,104. STAB-CLAD. Dresser Industries, Inc. SN 88,599. Pub. 5–17–60. Filed 1–7–60.

Class 14—Metals and Metal Castings and Forgings

702,105. TREK. Letts Industries, Inc. SN 74,226. Pub. 5–17–60. Filed 5–21–59.

702,106. INDUCTALLOY. Eaton Manufacturing Company. SN 78,011. Pub. 5–17–60. Filed 7–20–59.

702,107. PRI-PLATE. Printers Plates Limited. SN 78,065. Pub. 5–17–60. Filed 3–24–60.

702,108. ELECTROSPEC. The Consolidated Mining and Smelting Company of Canada Limited. SN 81,171. Pub. 5–17–60. Filed 9–11–59.

702,109. UC STEEL AND DESIGN. Universal-Cyclops Steel Corporation. SN 83,144. Pub. 5–17–60. Filed 10–12–59.

702,110. AMER-SHELL. American Steel Foundries. SN 85,202. Pub. 5–17–60. Filed 11–13–59.

Class 15—Oils and Greases

702,111. SUNAMATIC. Sun Oil Company. SN 73,843. Pub. 5–17–60. Filed 5–15–59.

702,112. VISCOOL. Anderson Oil and Chemical Company, Inc. SN 87,322. Pub. 5–17–60. Filed 12–15–59.

702,113. ODEX. The Odell Company, Inc. SN 87,820. Pub. 5–17–60. Filed 12–22–59.

702,114. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 88,267. Pub. 5–17–60. Filed 12–30–59.

702,115. PRESTONE. Union Carbide Corporation. SN 88,268. Pub. 5–17–60. Filed 12–30–59.

702,116. EVEREADY. Union Carbide Corporation. SN 88,270. Pub. 5–17–60. Filed 12–30–59.

Class 16—Protective and Decorative Coatings

702,117. AERO-JET. Aero-Jet Products Corp. SN 71,641. Pub. 4–12–60. Filed 4–16–59.

702,118. TRUSTWORTHY. Liberty Distributors, assignee of Supplee-Biddle-Stelts Company. SN 73,157. Pub. 5–17–60. Filed S.R. 5–7–59; Am. P.R. 9–14–59.

702,119. LI AND DESIGN. Laminators Incorporated. SN 84,904. Pub. 5–17–60. Filed 11–9–59.

702,120. FASSKIN. M. J. Fassler & Co., Inc. SN 85,005. Pub. 5–17–60. Filed 11–10–59.

702,121. VERMIGOLD. Zonolite Company. SN 87,307. Pub. 5–17–60. Filed 12–14–59.

Class 17—Tobacco Products

702,122. GOLDEN GATE. Tabakfabrik Landhaus, A. Eichenberger & Co. SN 81,646. Pub. 5–17–60. Filed 9–18–59.

702,123. MARY LONG. Brown & Williamson Tobacco Corporation. SN 81,806. Pub. 5–17–60. Filed 9–22–59.

Class 18—Medicines and Pharmaceutical Preparations

702,124. U.S. HEALTH CLUB. Mimi Horwitt, d.b.a. U.S. Health Club. SN 43,614. Pub. 5–17–60. Filed 1–8–58.

702,125. JUNYER-ALL. Barth Levitt Products. SN 61,896. Pub. 5–17–60. Filed 11–4–58.

702,126. SALENTINE. Arthur Hemstreet. SN 62,137. Pub. 5–17–60. Filed 11–7–58.

702,127. ANEMOCYTE. Allied Biochemical Laboratories, d.b.a. Allied Biochemical. SN 74,016. Pub. 5–17–60. Filed 5–19–59.

702,128. GY DESIGN. Geigy Chemical Corporation. SN 75,083. Pub. 5–17–60. Filed 6–4–59.

702,129. KURLYN. Ortho Pharmaceutical Corporation. SN 76,112. Pub. 2–16–60. Filed 6–19–59.

702,130. LIBRATAR. Union Chimique Belge, Société Anonyme. SN 77,695. Pub. 5–17–60. Filed 7–14–59.

702,131. KEROHYDRIC. Foster-Milburn Company. SN 78,019. Pub. 5–17–60. Filed 7–20–59.

702,132. RETICULOSE. Chemico Laboratories, Inc. SN 79,607. Pub. 5–17–60. Filed 7–14–59.

702,133. OVUTEST. Eli Lilly and Company. SN 79,673. Pub. 5–17–60. Filed 8–17–59.

702,134. MOTILYN. Abbott Laboratories. SN 80,944. Pub. 5–17–60. Filed 9–8–59.

702,135. MICROCOTE. The Upjohn Company. SN 81,103. Pub. 5–17–60. Filed 9–9–59.

702,136. PD ETC. AND DESIGN. Parke, Davis & Company. SN 81,747. Pub. 5–17–60. Filed 9–21–59.

702,137. LITROZYME. Flint, Eaton & Co. SN 83,291. Pub. 5–17–60. Filed 10–15–59.

702,138. DIMORLIN. The G. F. Harvey Company, Inc. SN 84,421. Pub. 5–17–60. Filed 11–2–59.

702,139. VOXIN. The Norwich Pharmacal Company. SN 85,767. Pub. 5–17–60. Filed 11–20–59.

702,140. GUAIALYPTOL. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 85,841. Pub. 5–17–60. Filed 11–23–59.

702,141. MYSTIC. Mystic Products Company. SN 86,089. Pub. 5–17–60. Filed 10–26–59.

702,142. JOAN OF ARC AND DESIGN. P. & F. Co. SN 86,675. Pub. 5–17–60. Filed 12–4–59.

702,143. BENULONE. The Wm. S. Merrell Company. SN 87,254. Pub. 5–17–60. Filed 12–14–59.

702,144. IRON HY-DEX. Chemicals, Incorporated. SN 87,405. Pub. 5–17–60. Filed 12–16–59.

702,145. OTRICORTEN. Ciba Limited. SN 87,408. Pub. 5–17–60. Filed 12–16–59.

702,146. DIMITRONAL. G. D. Searle & Co. SN 87,451. Pub. 5–17–60. Filed 12–16–59.

702,147. OPTO-CON. Optometics, Inc. SN 88,418. Pub. 5–17–60. Filed 1–4–60.

702,148. TJ–60. Craven Pharmacal Co. SN 88,768. Pub. 5–17–60. Filed 1–11–60.

702,149. MEDROCORT. The Upjohn Company. SN 88,826. Pub. 5–17–60. Filed 1–11–60.

702,150. ALKETS. The Upjohn Company. SN 88,828. Pub. 5–17–60. Filed 1–11–60.

702,151. SUCCIPHYLLINE. The G. F. Harvey Company, Inc. SN 88,911. Pub. 5–17–60. Filed 1–13–60.

702,152. STRESEEZ. Dawe's Laboratories, Inc. SN 89,256. Pub. 5–17–60. Filed 1–19–60.

702,153. MER/29. The Wm. S. Merrell Company. SN 89,693. Pub. 5–17–60. Filed 1–26–60.

702,154. TRIURATE. McNeil Laboratories, Incorporated. SN 89,929. Pub. 5–17–60. Filed 1–29–60.

702,155. TWISTON. McNeil Laboratories, Incorporated. SN 89,930. Pub. 5–17–60. Filed 1–29–60.

702,156. RADIPHOS. Abbott Laboratories. SN 89,981. Pub. 5–17–60. Filed 2–1–60.

702,157. ULO. Schenlabs Pharmaceuticals, Inc. SN 90,278. Pub. 5–17–60. Filed 2–3–60.

702,158. TROPHY. Vita-Unit Drug, Inc. SN 90,290. Pub. 5–17–60. Filed 2–3–60.

702,159. ULOMINIC. Schenlabs Pharmaceuticals, Inc. SN 90,363. Pub. 5–17–60. Filed 2–4–60.

702,160. QYLO. Schenlabs Pharmaceuticals, Inc. SN 90,364. Pub. 5–17–60. Filed 2–4–60.

702,161. QYLOMINIC. Schenlabs Pharmaceuticals, Inc. SN 90,365. Pub. 5–17–60. Filed 2–4–60.

702,162. CEROPHYL. Cerophyl Laboratories, Inc. SN 90,394. Pub. 5–17–60. Filed 2–5–60.

702,163. TRIAMEL. Fuller Pharmaceutical Company. SN 90,419. Pub. 5–17–60. Filed 2–5–60.

702,164. TRI-U.R.I. The Purdue Frederick Company. SN 90,441. Pub. 5–17–60. Filed 2–5–60.

702,165. LUVATRENE. Cilag-Chemie A.G. SN 90,465. Pub. 5–17–60. Filed 2–4–60.

702,166. THERABILE. B. F. Ascher & Company, Inc. SN 90,474. Pub. 5–17–60. Filed 2–8–60.

702,167. DROTIC. B. F. Ascher & Company, Inc. SN 90,475. Pub. 5–17–60. Filed 2–8–60.

702,168. PASUMAL. The G. F. Harvey Company, Inc. SN 90,512. Pub. 5–17–60. Filed 2–8–60.

Class 19—Vehicles

702,102. CONSOLIDATED CERTIFICATE. See Class 18.

702,169. MANGUM MR AND DESIGN. Mangum Manufacturing Company, Inc. SN 82,685. Pub. 5–17–60. Filed 10–5–59.

702,170. OCTAVIA. Automobilove Zavody, Narodni Podnik. SN 84,503. Pub. 5–17–60. Filed 11–3–59.

702,171. FELICIA. Automobilove Zavody, Narodni Podnik. SN 84,504. Pub. 5–17–60. Filed 11–3–59.

702,172. SPRITE. Sprite Limited. SN 85,055. Pub. 5–17–60. Filed 11–10–59.

702,173. TELSAN. Parachutes, Incorporated. SN 87,136. Pub. 5–17–60. Filed 12–11–59.

702,174. SPARLANE. Spartan Aircraft Company. SN 87,154. Pub. 5–17–60. Filed 12–11–59.

702,175. BUEHLER TURBOCRAFT. Indiana Gear Works, Inc. SN 87,428. Pub. 5–17–60. Filed 12–16–59.

702,176. FLOTE-AIRE. Markel Manufacturing Co., Inc. SN 87,569. Pub. 5–17–60. Filed 12–18–59.

Class 21—Electrical Apparatus, Machines, and Supplies

702,102. CONSOLIDATED CERTIFICATE. See Class 18.

702,177. PARALLEL ARCUATE FIGURES DESIGN. AMP Incorporated. SN 39,506. Pub. 5–17–60. Filed 10–25–57.

702,178. S.E.C.C. AND DESIGN. Safe Electrical Cord Committee. SN 51,591. COLLECTIVE MARK. Pub. 5–17–60. Filed 5–13–58.

702,179. ATR AND DESIGN. American Television & Radio Co. SN 70,420. Pub. 5–17–60. Filed 3–30–59.

702,180. DESIGNER GROUP AND DESIGN. Curtis-Allbrite Lighting, Inc., assignee, by mesne assignments, of Curtis Lighting, Inc. SN 73,327. Pub. 5–10–60. Filed 5–11–59.

702,181. MICROSET. U.S. Electrical Motors, Inc. SN 74,008. Pub. 5–17–60. Filed 5–18–59.

702,182. PYROTENAX. Societe Alsacienne de Constructions Mecaniques. SN 76,437. Pub. 5–17–60. Filed 6–24–59.

702,183. BANTAM. Bulova Watch Company, Inc. SN 82,760. Pub. 5–17–60. Filed 10–6–59.

702,184. RENS. Rens Manufacturing Company, Inc. SN 83,909. Pub. 5–17–60. Filed 10–23–59.

702,185. PRINCESS. American Telephone and Telegraph Company. SN 87,107. Pub. 5–17–60. Filed 12–11–59.

702,186. WIL-LITE. Cleveland Pneumatic Industries, Inc. SN 87,195. Pub. 5–17–60. Filed 12–14–59.

702,187. ANGLERS. Anglers' Manufacturing Corporation. SN 88,686. Pub. 5–17–60. Filed 1–8–60.

702,188. SR. Slumberest Company. SN 88,879. Pub. 5–17–60. Filed 1–12–60.

702,189. NEOFIL. Bishop Manufacturing Corporation. SN 89,127. Pub. 5–17–60. Filed 1–18–60.

702,190. CON-NEC-TITE. James R. Kearney Corporation. SN 89,172. Pub. 5–17–60. Filed 1–18–60.

702,191. PRESSURITE. James R. Kearney Corporation. SN 89,173. Pub. 5–17–60. Filed 1–18–60.

Class 22—Games, Toys, and Sporting Goods

702,192. STAFTONIA. Minuetta Kessler. SN 59,625. Pub. 5–17–60. Filed 9–26–58.

702,193. STRATO-GLIDE. Sears, Roebuck and Co. SN 86,340. Pub. 5–17–60. Filed 11–30–59.

702,194. CHECKMATE. The American Pad & Textile Co. SN 88,197. Pub. 5–17–60. Filed 12–30–59.

702,195. PLAY-NIKS. Cleveland Cleaner & Paste Company. SN 88,526. Pub. 5-17-60. Filed 1-6-60.

702,196. TWINKIE. S. S. Kresge Company. SN 89,674. Pub. 5-17-60. Filed 1-8-60.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

702,102. CONSOLIDATED CERTIFICATE. See Class 13.

702,197. BRADYTRON POWERED AND DESIGN. James W. Brady, d.b.a. Jas. W. Brady, Research. SN 54,000. Pub. 5-17-60. Filed 6-23-58.

702,198. CARMET. Allegheny Ludlum Steel Corporation. SN 63,290. Pub. 5-17-60. Filed 12-1-58.

702,199. DAIHATSU. Daihatsu Kogyo Kabushiki Kaisha. SN 70,282. Pub. 5-17-60. Filed 8-26-59.

702,200. LENOX. American Saw & Mfg. Company. SN 73,644. Pub. 5-17-60. Filed 5-14-59.

702,201. 3 TEE ETC. AND DESIGN. Keystone Services, Inc. SN 74,139. Pub. 5-17-60. Filed 5-20-59.

702,202. AUTO-LITE. The Electric Auto-Lite Company. SN 74,849. Pub. 5-17-60. Filed 6-1-59.

702,203. LO-TORK. United-Greenfield Corporation. SN 76,033. Pub. 5-17-60. Filed 6-18-59.

702,204. CC INC. Centre Circuits, Inc. SN 77,001. Pub. 5-17-60. Filed 7-3-59.

702,205. HALF/MILL. Cincinnati Manufacturing Corporation. SN 85,210. Pub. 5-17-60. Filed 11-13-59.

702,206. FLYGT AND DESIGN. Stenberg Corporation Aktiebolag. SN 87,000. Pub. 5-17-60. Filed 12-9-59.

702,207. FARMWAY. Sperry Rand Corporation. SN 87,081. Pub. 5-17-60. Filed 12-10-59.

702,208. MISS MISTLETOE. Oneida, Ltd. SN 87,134. Pub. 5-17-60. Filed 12-11-59.

702,209. SELECTEJECT. Koefoed, Hauberg, Marstrand, og Helweg, Aktieselskabet Titan. SN 87,236. Pub. 5-17-60. Filed 12-14-59.

702,210. SPRINTER. Landbouwwerktuigen- en Machinefabriek H. Vissers N.V. SN 87,238. Pub. 5-17-60. Filed 12-14-59.

702,211. TWIST-REZIST. Raymond E. Westlund, Jr., d.b.a. Westlund Industries. SN 87,305. Pub. 5-17-60. Filed 12-14-59.

702,212. ROYALUXE. Royal McBee Corporation. SN 87,377. Pub. 5-17-60. Filed 12-15-59.

702,213. SCOTSMAN. McGraw-Edison Company. SN 88,406. Pub. 5-17-60. Filed 1-4-60.

702,214. TORKOPEN. International Paper Company. SN 88,541. Pub. 5-17-60. Filed 1-6-60.

702,215. EBONAIRE. Imperial Knife Associated Companies, Inc. SN 88,764. Pub. 5-17-60. Filed 1-11-60.

702,216. LANA STEPHANS. Joseph Nachman. SN 89,188. Pub. 5-17-60. Filed 1-18-60.

Class 26 — Measuring and Scientific Appliances

702,217. POWERSCOPE. The Ednalite Optical Company, Inc. SN 85,725. Pub. 5-17-60. Filed 11-20-59.

Class 27 — Horological Instruments

702,218. PLAZA. General Time Corporation. SN 73,551. Pub. 5-17-60. Filed 5-13-59.

702,219. ARCO AND DESIGN. Aristo Import Co., Inc. SN 86,913. Pub. 5-17-60. Filed 12-8-59.

702,220. WESTOVER. General Time Corporation. SN 87,346. Pub. 5-17-60. Filed 12-15-59.

702,221. NAP. General Time Corporation. SN 87,349. Pub. 5-17-60. Filed 12-15-59.

702,222. MARQUISE. Holzer Watch Co. Inc. SN 87,353. Pub. 5-17-60. Filed 12-15-59.

702,223. W WITHIN AN OVAL. Waltham Watch Co. SN 87,467. Pub. 5-17-60. Filed 12-15-59.

702,224. STRADIVARI. Herbert L. Warner, d.b.a. Stradivari Watch Company. SN 87,602. Pub. 5-17-60. Filed 12-18-59.

Class 28 — Jewelry and Precious-Metal Ware

702,225. F AND ARROW DESIGN. Fisher and Company. SN 51,687. Pub. 5-17-60. Filed 5-19-58.

702,226. M AND DESIGN. Towle Manufacturing Company. SN 84,485. Pub. 5-17-60. Filed 11-2-59.

702,227. VIP. Hickok Manufacturing Co. Inc. SN 87,230. Pub. 5-17-60. Filed 12-14-59.

702,228. FLIGHT. Granat Bros. SN 87,489. Pub. 5-17-60. Filed 12-17-59.

702,229. LULLABY. Gorham Manufacturing Company. SN 88,318. Pub. 5-17-60. Filed 12-31-59.

Class 29 — Brooms, Brushes, and Dusters

702,230. "MOP-ALL." Erie Mop and Wringer Company. SN 81,093. Pub. 5-17-60. Filed 9-21-59.

702,231. MISS DUSTEE O-TOOL. Moran Brush Manufacturing Co., Inc. SN 85,147. Pub. 5-17-60. Filed 11-12-59.

Class 30 — Crockery, Earthenware, and Porcelain

702,232. BELLEEK. The Belleek Pottery Limited. SN 20,445. Pub. 5-17-60. Filed 12-5-56.

702,233. F FURSTENBERG AND DESIGN. Furstenberg Ehemalige Herzoglich Braunschweigische Porzellanmanufaktur. SN 75,297. Pub. 5-17-60. Filed 6-8-59.

Class 31 — Filters and Refrigerators

702,234. JET FREEZE. Ranney Refrigerator Company. SN 87,276. Pub. 5-17-60. Filed 12-14-59.

Class 32 — Furniture and Upholstery

702,235. PARLORLOUNGE. Aireloom Bedding Company. SN 73,066. Pub. 5-17-60. Filed 5-7-59.

702,236. QUICK-SEE. Kersting Manufacturing Company. SN 79,244. Pub. 5-17-60. Filed 8-10-59.

702,237. SELECT-A-REST. Dura Corporation. SN 85,934. Pub. 5-17-60. Filed 11-23-59.

702,238. LANA STEPHANS. Joseph Nachman. SN 89,189. Pub. 5-17-60. Filed 1-18-60.

Class 34 — Heating, Lighting, and Ventilating Apparatus

702,239. ACORN AND DESIGN. American Sitina Company. SN 62,901. Pub. 5-17-60. Filed 11-21-58.

702,240. WEATHERTRON. General Electric Company. SN 76,672. Pub. 5-17-60. Filed 6-29-59.

702,241. REPCO. W. H. Bunten & Co., Inc., d.b.a. General Heating Products. SN 79,045. Pub. 5-17-60. Filed 9-14-59.

702,242. DREX-THERM. Detrex Chemical Industries, Inc. SN 79,158. Pub. 5-17-60. Filed 9-7-59.

702,243. ROMLAIR. Romia Co. SN 83,130. Pub. 5-17-60. Filed 10-12-59.

702,244. UNI-MATIC. Dover Corporation. SN 84,088. Pub. 5-17-60. Filed 10-27-59.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

702,245. K-G. Air Products, Inc. SN 43,911. Pub. 5-17-60. Filed 12-31-57.

702,246. K-G AND DESIGN. Air Products, Inc. SN 45,003. Pub. 5-17-60. Filed 1-31-58.

702,247. HRM AND DESIGN. Huntington Rubber Mills. SN 75,314. Pub. 5-17-60. Filed 6-8-59.

702,248. SEAWAY. The General Tire & Rubber Company. SN 80,547. Pub. 5-17-60. Filed 8-31-59.

702,249. HI-POWER. The Gates Rubber Company. SN 82,101. Pub. 5-17-60. Filed 9-23-59.

702,250. BUTYLAIRE. The Firestone Tire & Rubber Company. SN 87,218. Pub. 5-17-60. Filed 12-14-59.

702,251. BUTYLON. The Firestone Tire & Rubber Company. SN 87,219. Pub. 5-17-60. Filed 12-14-59.

702,252. REDICOAT. Federal-Mogul-Bower Bearings, Inc. SN 87,660. Pub. 5-17-60. Filed 12-21-59.

702,253. MICRO-TORC. Federal-Mogul-Bower Bearings, Inc. SN 87,661. Pub. 5-17-60. Filed 12-21-59.

Class 36 — Musical Instruments and Supplies

702,254. SATELLITE. Stanley Hoffman, d.b.a. Satellite Records. SN 28,447. Pub. 5-17-60. Filed 4-18-57.

702,255. SKY RECORDS AND DESIGN. Sky Records. SN 37,690. Pub. 2-17-59. Filed 9-26-57.

702,256. PULL. Transcriber Company, Inc. SN 87,594. Pub. 5-17-60. Filed 12-18-59.

702,257. MULTICHORD. Lawrence M. Cohen. SN 87,639. Pub. 5-17-60. Filed 12-21-59.

702,258. KOHLERT. Wm. R. Gratz Co., Inc. SN 87,797. Pub. 5-17-60. Filed 12-23-59.

702,259. DEE DEE. Dolores Enterprises, Inc. SN 87,936. Pub. 5-17-60. Filed 12-24-59.

702,260. AUDIOLA. Nilo Santos Pinto. SN 88,167. Pub. 5-17-60. Filed 12-28-59.

Class 37 — Paper and Stationery

702,261. QUBIC KONTROL BOARD. J. Chester Berry. SN 88,456. Pub. 5-17-60. Filed 1-5-60.

702,262. BABY SOFT. Topco Associates, Inc. SN 89,391. Pub. 5-17-60. Filed 1-20-60.

Class 38 — Prints and Publications

702,263. SPACE DIGEST. Air Force Association. SN 88,202. Pub. 5-17-60. Filed 2-24-59.

702,264. FLIP-UPS. American Greetings Corporation. SN 71,173. Pub. 5-17-60. Filed 4-9-59.

702,265. TRAFCO. The Television, Radio and Film Commission of the Methodist Church. SN 72,089. Pub. 5-17-60. Filed 4-22-59.

702,266. ROSPATCH. Rose Patch and Label Company. SN 74,895. Pub. 5-17-60. Filed 5-1-59.

702,267. BAHIA INTERNACIONAL. Octavio A. Descalso. SN 78,693. Pub. 5-17-60. Filed 7-30-59.

702,268. THE KEY METHOD ETC. AND DESIGN. Sverre S. Elsmo, d.b.a. Elsmo Bros. Publishers. SN 78,864. Pub. 5-17-60. Filed 8-3-59.

702,269. WILLIE WOO AND DESIGN. Jolly Music, Ltd. SN 79,780. Pub. 5-17-60. Filed 9-18-59.

702,270. TALK BACK. The Television, Radio and Film Commission of the Methodist Church. SN 80,760. Pub. 5-17-60. Filed 9-2-59.

702,271. READ IT NOW. United Newspapers Magazine Corporation. SN 82,042. Pub. 5-17-60. Filed 9-24-59.

702,272. DOLLAR SIGNS. Whaley-Eaton Corporation. SN 83,849. Pub. 5-17-60. Filed 10-22-59.

702,273. SCRIPTCAL. C & H Supply Company. SN 83,945. Pub. 5-17-60. Filed 10-26-59.

702,274. READOUT. Ampex Corporation. SN 84,500. Pub. 5-17-60. Filed 11-2-59.

702,275. CONGRATULATIONS. Congratulations, Inc. SN 84,733. Pub. 5-17-60. Filed 11-6-59.

702,276. TODAY'S MESSAGE. General Features Corporation. SN 84,754. Pub. 5-17-60. Filed 11-6-59.

702,277. MIRRO-CAL. The Meyercord Co. SN 86,180. Pub. 5-17-60. Filed 11-27-59.

702,278. THE AMERICAN ADVENTURE SERIES. Wheeler Publishing Company. SN 86,241. Pub. 5-17-60. Filed 11-27-59.

702,279. THE TOOL AND MANUFACTURING ENGINEER. American Society of Tool Engineers. SN 86,253. Pub. 5-17-60. Filed 11-30-59.

702,280. HORSE WORLD. Ransom Agency, Inc. SN 86,326. Pub. 5-17-60. Filed 11-30-59.

702,281. SANITARY MAINTENANCE. Trade Press Publishing Company. SN 86,527. Pub. 5-17-60. Filed 12-3-59.

702,282. FAR AWAY PLACES. Norcross, Inc. SN 86,568. Pub. 5-17-60. Filed 12-3-59.

702,283. HIGHWAY. Armco Steel Corporation. SN 86,862. Pub. 5-17-60. Filed 12-8-59.

702,284. MOBILE HOMES. Mobile Magazines Inc. SN 86,891. Pub. 5-17-60. Filed 12-8-59.

702,285. THE LABORATORY. Fisher Scientific Company. SN 87,049. Pub. 5-17-60. Filed 12-10-59.

702,286. TICKER TOONS. Jud Hurd, d.b.a. Jud Hurd Cartoons. SN 87,063. Pub. 5-17-60. Filed 12-10-59.

Class 39 — Clothing

702,287. WINDWATE. Rose Brothers Inc. SN 45,917. Pub. 5-17-60. Filed 2-14-58.

702,288. BRAIN-WARMER. Sheldon Diets, d.b.a. The Six-Footer Company. SN 60,405. Pub. 5-17-60. Filed 10-10-58.

702,289. LEGATOS BY JACK ROGERS. Miami Footwear Corporation. SN 62,774. Pub. 5-17-60. Filed 11-19-58.

702,290. POLLY TUCKER. Hoving Corporation. SN 64,888. Pub. 5-17-60. Filed 12-24-58.

702,291. FLORILEGE. Florilege. SN 69,733. Pub. 5-17-60. Filed 3-17-59.

702,292. GLAMOUR COMFYS ETC. AND DESIGN. Henry Z., Inc. SN 71,113. Pub. 5-17-60. Filed 4-8-59.

702,293. JACK FROST. Shoe Corporation of America. SN 71,151. Pub. 5-17-60. Filed 4-8-59.

702,294. SUBURBAN SET. Suburban Set, Inc. SN 71,237. Pub. 5-17-60. Filed 4-9-59.

702,295. REMOTE CONTROL. The Crown Corset Company. SN 71,272. Pub. 5-17-60. Filed 4-10-59.

702,296. KUL-E-TUK. Kiddies' Togs Mfg. Co. Ltd. SN 72,042. Pub. 3-29-60. Filed 4-22-59.

702,297. SOFT-T-MOC BY WELL-BUILT. Well-Built Shoe Company, Inc. SN 72,566. Pub. 5-17-60. Filed 4-29-59.

702,296. RODEO. S. Goldberg & Co. Inc. SN 73,688. Pub. 5-17-60. Filed 5-14-59.

702,299. THE TORSETTE. Lilyette Brassiere Co., Inc., d.b.a. Lilyette. SN 73,706. Pub. 5-17-60. Filed 5-14-59.

702,300. HAPPY CAPPERS AND DESIGN. The Field Company. SN 74,855. Pub. 5-17-60. Filed 6-1-59.

702,301. RODIER AND DESIGN. Tissages Rodier S.A. SN 75,242. Pub. 5-17-60. Filed 4-16-59.

702,302. KAY KENNEDY AND DESIGN. Bayside Manufacturing Company, Inc. SN 75,463. Pub. 5-17-60. Filed 5-10-59.

702,303. DECTOLENE. Cluett, Peabody & Co., Inc. SN 76,370. Pub. 5-17-60. Filed 6-24-59.

702,304. VULCREPE. Cat's Paw Rubber Company, Inc. SN 77,805. Pub. 5-17-60. Filed 7-16-59.

702,305. ARCTIKNIT AND DESIGN. Tip-Top Hosiery Mills, Inc. SN 77,972. Pub. 5-17-60. Filed 7-17-59.

702,306. CLOUD 9. Craddock-Terry Shoe Corporation. SN 80,405. Pub. 5-17-60. Filed 8-26-59.

702,307. MEET MR. MORT. Cole-Mort Inc. SN 80,780. Pub. 5-17-60. Filed 9-3-59.

702,308. IROMATIC. Nino Gesellschaft mit beschraenkter Haftung & Co. SN 81,564. Pub. 5-17-60. Filed 9-17-59.

702,309. SNOW WHITE. Sidney Press. SN 81,752. Pub. 5-17-60. Filed 9-21-59.

702,310. GLENCAL. Glen Raven of California, Inc. SN 82,574. Pub. 5-17-60. Filed 10-2-59.

702,311. FAMOLARE. Joseph P. Famolare, Inc. SN 83,168. Pub. 5-17-60. Filed 10-13-59.

702,312. BALMAIN. Pierre Balmain. SN 83,271. Pub. 5-17-60. Filed 10-15-59.

702,313. GINO DI BALTI. S. Ginsberg Sons. SN 83,517. Pub. 5-17-60. Filed 10-19-59.

702,314. BEAN POLE. Blue Bell, Inc. SN 83,697. Pub. 5-17-60. Filed 10-21-59.

702,315. CHRISTIAN DIOR CREE PAR ROGER VIVIER ETC. AND DESIGN. Société à Responsabilité Limitée Dite: Christian Dior. SN 84,024. Pub. 5-17-60. Filed 10-26-59.

702,316. BRIGHT MUSE. Maiden Form Brassiere Company, Inc. SN 84,232. Pub. 5-17-60. Filed 10-29-59.

702,317. TANNER. Tanner of North Carolina, Inc. SN 84,356. Pub. 5-17-60. Filed 10-30-59.

702,318. SIDE WINDER. The Lyntone Company. SN 84,546. Pub. 5-17-60. Filed 11-3-59.

702,319. CAROBIN. Carol Robins, Inc. SN 84,563. Pub. 4-12-60. Filed 11-3-59.

702,320. MADISON SQUARE. Shoe Corporation of America. SN 84,570. Pub. 5-17-60. Filed 11-3-59.

702,321. COLLEGEVILLE COSTUMES. Collegeville Flag & Mfg. Co. SN 84,991. Pub. 5-17-60. Filed 11-10-59.

702,322. PETITTO. Torch Rubber Company Inc. SN 85,792. Pub. 5-17-60. Filed 11-20-59.

702,323. WORK SHIFT AND DESIGN. Premtex Hosiery Co., Inc. SN 86,826. Pub. 5-17-60. Filed 12-7-59.

702,324. LORD LEX. Lexington Manufacturing Company. SN 86,981. Pub. 5-17-60. Filed 12-9-59.

702,325. CENTENNIAL. Donmoor-Isaacson, Inc. SN 87,042. Pub. 5-17-60. Filed 12-10-59.

702,326. ROBERTO DE SEVILLA. The Strathmore Shoe Co., Inc. SN 87,066. Pub. 5-17-60. Filed 12-10-59.

702,327. RUB-R-WEVE. Maiden Form Brassiere Company, Inc. SN 87,244. Pub. 5-17-60. Filed 12-14-59.

702,328. PADRILLES. E & M Lang Company, Inc. SN 87,362. Pub. 5-17-60. Filed 12-15-59.

702,329. A LA CARTE. Bullock's, Inc. SN 87,474. Pub. 5-17-60. Filed 12-17-59.

702,330. JAMES KENROB. The James Kenrob, Inc. SN 87,497. Pub. 5-17-60. Filed 12-17-59.

702,331. PORO-KNIT. Lord Jeff Knitting Company, Incorporated. SN 87,500. Pub. 5-17-60. Filed 12-17-59.

702,332. COLLEGIAN. Rockford Textile Mills, Inc. SN 87,985. Pub. 5-17-60. Filed 12-24-59.

702,333. PEDI BARES. Pedi-Bares, Inc. SN 88,077. Pub. 5-17-60. Filed 12-28-59.

702,334. LADY, BE GOOD. The Warner Brothers Company. SN 88,194. Pub. 5-17-60. Filed 12-29-59.

Class 40 — Fancy Goods, Furnishings, and Notions

702,335. PAGLINA. Armand Schwab & Co. Inc. SN 87,929. Pub. 5-17-60. Filed 11-30-59.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

702,336. FLOWER DESIGN. J. P. Stevens & Co., Inc. SN 71,899. Pub. 5-17-60. Filed 4-20-59.

702,337. ONDIX. Burberrys Limited. SN 74,113. Pub. 5-17-60. Filed 5-20-59.

702,338. McBRATNEY. Blackstaff Linens, Inc. SN 74,369. Pub. 5-17-60. Filed 5-25-59.

702,339. MAINE PRIDE. Bates Manufacturing Company. SN 81,451. Pub. 5-17-60. Filed 9-16-59.

702,340. IROMATIC. Nino Gesellschaft mit beschraenkter Haftung & Co. SN 81,565. Pub. 5-17-60. Filed 9-17-59.

702,341. RUGBY. Rugby Rug Mills Inc. SN 84,694. Pub. 5-17-60. Filed 11-5-59.

702,342. FASSLOID. M. J. Fassler & Co., Inc. SN 85,004. Pub. 5-17-60. Filed 11-10-59.

702,343. FASSWELD. M. J. Fassler & Co., Inc. SN 85,006. Pub. 5-17-60. Filed 11-10-59.

702,344. ROYAL SATIN. Fieldcrest Mills, Inc. SN 85,728. Pub. 5-17-60. Filed 11-20-59.

702,345. HESGO. Hess, Goldsmith & Co., Inc. SN 87,315. Pub. 5-17-60. Filed 12-14-59.

Class 43 — Thread and Yarn

702,346. MONA. Spinnerin Yarn Co., Inc. SN 56,361. Pub. 5-17-60. Filed 7-30-58.

702,347. VALOR-SPUN. J. P. Stevens & Co., Inc. SN 81,596. Pub. 5-17-60. Filed 9-17-59.

702,348. SILNIK. Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A. SN 83,749. Pub. 5-17-60. Filed 10-21-59.

Class 44 — Dental, Medical, and Surgical Appliances

702,349. MAYKER. Antoine Francois Peyron. SN 66,924. Pub. 5-17-60. Filed 2-2-59.

702,350. CLEANEUR. Antoine Francois Peyron. SN 67,239. Pub. 5-17-60. Filed 2-6-59.

702,351. MAKEUR. Antoine Francois Peyron. SN 67,973. Pub. 5-17-60. Filed 2-18-59.

702,352. PINK ROUND. Antoine Francois Peyron. SN 67,977. Pub. 5-17-60. Filed 2-18-59.

702,353. PINK CIRCLE. Antoine Francois Peyron. SN 67,978. Pub. 5-17-60. Filed 2-18-59.

702,354. KOMFO. Ezo Products Company, d.b.a. Komfo Dental Pad Co. SN 72,939. Pub. 5-17-60. Filed 5-5-59.

702,355. GLYDIN. Shrimpton & Fletcher Limited. SN 84,947. Pub. 5-17-60. Filed 11-9-59.

Class 46 — Foods and Ingredients of Foods

702,356. TRU-GOLD. Food Brands, Inc. SN 70,463. Pub. 5-17-60. Filed 3-30-59.

702,357. WALTER KENDALL FIVES AND DESIGN. Kendall Foods, Inc. SN 72,730. Pub. 5-17-60. Filed 5-1-59.

702,358. ROMAN MEAL AND DESIGN. Roman Meal Company. SN 74,698. Pub. 5-17-60. Filed 6-1-59.

702,359. GOODY GOODY GUM DROPS! AND DESIGN. The P. S. Truesdell Company. SN 77,042. Pub. 5-17-60. Filed 7-3-59.

702,360. SUPER MEAT. The Hervin Company. SN 77,101. Pub. 5-17-60. Filed 7-6-59.

702,361. TOM SAWYER. John Morrell & Company. SN 78,716. Pub. 5-17-60. Filed 7-30-59.

702,362. TOM SAWYER AND DESIGN. John Morrell & Company. SN 80,236. Pub. 5-17-60. Filed 8-27-59.

702,363. BESS' BEST. Bess P. Watt, d.b.a. Bess' Best Farm Kitchen. SN 81,842. Pub. 5-17-60. Filed 9-22-59.

702,364. POINTER. Cardinal Food Products, Inc. SN 82,480. Pub. 5-17-60. Filed 10-1-59.

702,365. THIN TWINS AND DESIGN. Thin Twins Potato Chip Corporation. SN 85,791. Pub. 5-17-60. Filed 11-20-59.

702,366. FIVE STAR AND DESIGN. General Meats. SN 85,847. Pub. 5-17-60. Filed 11-23-59.

702,367. LYNN WILSON'S. Wilson Products Company. SN 86,876. Pub. 5-17-60. Filed 11-30-59.

702,368. CONTINENTAL. Continental Coffee Company. SN 87,640. Pub. 5-17-60. Filed 12-21-59.

702,369. PUDGIES. Andes Candies Inc. SN 87,999. Pub. 5-17-60. Filed 12-28-59.

702,370. CINDY. John Manning, d.b.a. John Manning and Company. SN 88,061. Pub. 5-17-60. Filed 12-28-59.

Class 49 — Distilled Alcoholic Liquors

702,371. SHOPES OF BOULES. Schenley Distillers, Inc. SN 77,688. Pub. 5-17-60. Filed 7-14-59.

Class 50 — Merchandise Not Otherwise Classified

702,372. MOLI-SHIELD. Molitor, Inc. SN 59,744. Pub. 5-17-60. Filed 9-29-58.

702,373. COVER-UP. Foremost Manufacturing Company, assignee of Bill M. Margious, d.b.a. Foremost Cotton & Burlap Products. SN 69,008. Pub. 5-17-60. Filed 3-5-59.

702,374. ROL-A-SHO. William E. Hunn, d.b.a. William Hunn and Associates. SN 75,920. Pub. 5-17-60. Filed 6-17-59.

702,375. IRIDAM. Aldan Rubber Co. SN 78,168. Pub. 5-17-60. Filed 7-22-59.

702,376. PLANTACLIP. S. A. Reider & Co. SN 81,504. Pub. 5-17-60. Filed 9-16-59.

702,377. MAG-CRAFT. Mag-Craft Sales Corporation. SN 84,604. Pub. 5-17-60. Filed 11-4-59.

702,378. PORKORIUM. Chore-Boy Manufacturing Co., Inc. SN 84,848. Pub. 5-17-60. Filed 11-9-59.

702,379. SWAT-RITE. Count-Rite Corporation. SN 85,105. Pub. 5-17-60. Filed 11-12-59.

Class 51 — Cosmetics and Toilet Preparations

702,380. ODO-MATIC. The Odorono Company, Inc. SN 45,321. Pub. 12-30-58. Filed 3-24-58.

702,381. CHOUDA. Mrs. Czerefkow called Gres, born Germaine Krebs. SN 76,794. Pub. 5-17-60. Filed 6-30-59.

702,382. BACCARA. Perfumerie L.T. Piver S.A. SN 77,028. Pub. 5-17-60. Filed 7-3-59.

702,383. BOWLER'S. Julius Elliot Froom, d.b.a. Elliot Pharmacal Co. SN 77,915. Pub. 5-17-60. Filed 7-17-59.

Service Marks

Class 101 — Advertising and Business

702,384. WESTERN GIRL. Western Girl, Inc. SN 86,856. Pub. 5-17-60. Filed 12-7-59.

702,385. REPRESENTATION OF A BOY IN A TOP HAT. James J. Matthews, Incorporated. SN 88,065. Pub. 5-17-60. Filed 12-28-59.

Class 102 — Insurance and Financial

702,386. AUTO-LOBBY. Bank of America National Trust and Savings Association. SN 64,387. Pub. 5-17-60. Filed 12-16-58.

702,387. KATY AND DESIGN. Decatur Federal Savings and Loan Association. SN 82,962. Pub. 5-17-60. Filed 10-9-59.

702,388. MAXIMATIC. Woburn National Bank. SN 89,627. Pub. 5-17-60. Filed 1-25-60.

Class 103 — Construction and Repair

702,389. DOORMAN SYMBOL. Cleveland-Detroit Corporation, assignee of Ray-Dor Sales Corporation. SN 56,348. Pub. 5-17-60. Filed 7-30-58.

Class 104 — Communication

702,390. T AND DESIGN. Telautograph Corporation. SN 78,945. Pub. 5-17-60. Filed 8-3-59.

Class 106 — Material Treatment

702,391. KODACHROME. Eastman Kodak Company. SN 87,417. Pub. 5-17-60. Filed 12-16-59.

Collective Membership Marks

Class 200

702,392. MPA AND DESIGN. Magazine Publishers Association, Inc. SN 77,681. Pub. 5-17-60. Filed 7-14-59.

702,393. HERALDIC SHIELD DESIGN AND GREEK LETTERS. Alpha Gamma Sigma Agricultural Fraternity. SN 87,961. Pub. 5-17-60. Filed 12-24-59.

Certification Mark

Class A — Goods

702,394. WELCONIZED ETC. AND DESIGN. Ro-Search, Inc. SN 83,561. Pub. 5-17-60. Filed 10-19-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

702,395. Whitehead Brothers Company, New York, N.Y. SN 18,009. Filed P.R. 11-1-56; Am. S.R. 6-6-60.

THERMAL SAND

For Corrective Backfill Material Which Is a Specially Compounded, High Density, Mixture of Silica Sands and Clay.
First use Dec. 1, 1955.

702,396. Humble Oil & Refining Company, Houston, Tex., by merger from Esso Standard Oil Company, New York, N.Y. SN 50,783. Filed P.R. 5-1-58; Am. S.R. 6-3-60.

ROADS FOR THE FUTURE

BUILD WITH ASPHALT

For Asphalt.
First use Mar. 11, 1958.

702,397. Stein, Hall & Company, Inc., New York, N.Y. SN 66,174. Filed P.R. 1-20-59; Am. S.R. 5-16-60.

LOLOSS

For Guar Gum Drilling Mud Additive.
First use Mar. 26, 1958.

Class 12—Construction Materials

702,398. Penn Metal Company, Inc., Boston, Mass. SN 89,865. Filed P.R. 1-28-60; Am. S.R. 6-6-60.

STEELDEK

For Sheet Material for Use in Roofing, Floors, and Walls of Buildings.
First use Sept. 11, 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

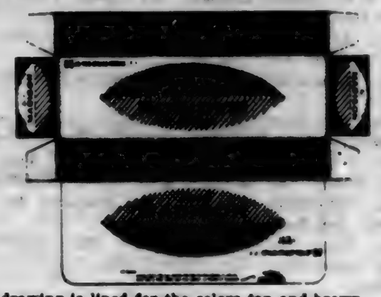
702,399. Detroit Brass & Malleable Co., Cleveland, Ohio. SN 43,670. Filed P.R. 1-9-58; Am. S.R. 6-16-60.

YOUR BEST CONNECTION

For Malleable Fittings, Cast Iron Fittings, Drainage Fittings.
First use on or about Oct. 25, 1957.

Class 17—Tobacco Products

702,400. P. Lorillard Company, New York, N.Y. SN 91,964. Filed 3-1-60.



The drawing is lined for the colors tan and brown.
For Cigars.
First use Jan. 10, 1959.

Class 18—Medicines and Pharmaceutical Preparations

702,401. The Wander Company, d.b.a. Smith-Dorsey, Chicago, Ill. SN 49,226. Filed P.R. 4-7-58; Am. S.R. 6-3-60.

DORSITAL

For Pentobarbital Product Incorporated Into a Sedative and Hypnotic Preparation.
First use Mar. 27, 1958.

Class 22—Games, Toys, and Sporting Goods

702,402. Neiman-Marcus Company, Dallas, Tex. SN 63,785. Filed P.R. 12-5-58; Am. S.R. 11-27-59.

STACK-PAC

For Stuffed Animals, Dolls, Balls, Bats, Darts, Binoculars, Imitation Guns, Sand Pails, Rattles, Blocks, Toy Cars, Trucks and Trains, Construction Sets, Modeling Clay and Similar Toy Items for Children; and Equipment (or Apparatus) for Playing Various Types of Indoor, Board and Card Games.
First use Oct. 20, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

702,403. Thompson Ramo Wooldridge Inc., Cleveland, Ohio, by change of name from Thompson Products, Inc., Cleveland, Ohio. SN 48,370. Filed P.R. 3-24-58; Am. S.R. 8-17-59.

POWERFORGED

For Forged Pistons for Internal Combustion Engines.
First use Feb. 25, 1958.

702,404. Edward C. Houlette, d.b.a. E.C.H. Tool Company, Chicago, Ill. SN 56,995. Filed P.R. 8-11-58; Am. S.R. 6-6-60.

E. C. H. HOLEBREAKER

For Clamping Tool for Use in Breaking a Circle Hole in Ceramic Tile.
First use Nov. 30, 1950.

702,405. A. T. Wright, Fort Worth, Tex. SN 65,040. Filed P.R. 12-29-58; Am. S.R. 6-6-60.



For Chocking Devices for Wheels of Motor Vehicles.
First use Nov. 15, 1957.

702,406. Bro-Dart Industries, Inc., Newark, N.J. SN 77,652. Filed P.R. 7-14-59; Am. S.R. 6-17-60.

Safety Shear

For Paper Cutter Employing a Shielded Rotary Blade Mounted on a Shuttle-Type Operating Handle.
First use in January 1956.

702,407. Phillips & Pain-Vermorel, Société Anonyme, Montrouge, Seine, France. SN 81,823. Filed P.R. 9-14-59; Am. S.R. 6-3-60.



Owner of French Reg. No. 481,951, dated July 23, 1959 (Seine); Natl. Inst. No. 129,582.
For Machines and Apparatus Used in the Cultivation and Treatment of Vineyards, Flowers, Orchards, and Cereals; to wit: Soil Pulverizers, Pumps, Sprayers, Machines and Apparatus for Distributing Insecticides, Harrows, Cultivators, Seeders, Weeding Machinery, and Fruit Dryers.

702,408. Colton Razor Blade Company, Boston, Mass. SN 92,963. Filed 3-16-60.

THE THYNNE BLADE

For Razor Blades.
First use Sept. 24, 1937.

702,409. Colton Razor Blade Company, Boston, Mass. SN 95,251. Filed 4-18-60.

VERITHIN

For Razor Blades.
First use Aug. 30, 1937.

Class 30—Crockery, Earthenware, and Porcelain

702,410. Allied Stores Corporation, New York, N.Y. SN 30,979. Filed P.R. 5-29-57; Am. S.R. 6-7-60.

KYOTO

The term "Kyoto" is the name of a city in Japan.
For China Dinnerware.
First use Sept. 22, 1952.

Class 39—Clothing

702,411. Coat Craft Company, Inc., Philadelphia, Pa., assignee of Coat Craft Company, Philadelphia, Pa. SN 58,700. Filed P.R. 9-10-58; Am. S.R. 2-23-60.

"IT GROWS BY MAGIC"

For Boys' and Girls' Coats, Jackets, Legging Sets, and Hats.
First use March 1952.

702,412. Isod Ltd., New York, N.Y., assignee of David Crystal, Inc., New York, N.Y. SN 71,475. Filed P.R. 4-14-59; Am. S.R. 5-24-60.

THE CHOICE OF CHAMPIONS

For Men's Shirts, Boys' Shirts, Underwear, Sweaters, Sox, Walking Shorts, Swim Trunks, Slacks, Jackets.
First use Mar. 11, 1959.

702,413. Jane Drynan, Austin, Tex. SN 80,415. Filed P.R. 8-28-59; Am. S.R. 6-3-60.

BABY BURP

For Protective Garment in the Nature of Bibs and the Like.
First use Jan. 1, 1959.

Class 44—Dental, Medical, and Surgical Appliances

702,414. Kathleen Tammen, d.b.a. Tammen Table Company, Tucson, Ariz. SN 59,926. Filed P.R. 10-1-58; Am. S.R. 6-9-60.

OSCILLATABLE

For Mechanical Massage Tables.
First use Jan. 15, 1950.

Class 46 — Foods and Ingredients of Foods

702,415. Johnston's Coffee Shop, Inc., Daytona Beach, Fla. SN 53,878. Filed P.R. 6-19-58; Am. S.R. 5-31-60.



The coloring of the design is red with the outline of the continent in black.
For Apple Pie.
First use in 1946.

702,416. Sunshine Biscuits, Inc., d.b.a. Gordon Foods, Long Island City, N.Y. SN 71,760. Filed P.R. 4-17-59; Am. S.R. 4-8-60.

JELYCREM

For Cake.
First use Dec. 13, 1955.

702,417. Golden Grain Macaroni Co., d.b.a. Mission Macaroni Company and as Pacific Coast Macaroni Mfg. Co., San Leandro, Calif. SN 79,408. Filed P.R. 8-12-59; Am. S.R. 5-19-60.



For Alimentary Paste Products.
First use Mar. 1, 1926.

Class 50 — Merchandise Not Otherwise Classified

702,418. Tylart, Inc., Ferndale, Mich. SN 66,511. Filed P.R. 1-26-59; Am. S.R. 6-7-60.

STON-ART

For Kits of Colored Stones of Different Sizes and Shapes for Construction of Ornamental Objects, Including a Numbered Pattern on a Masonite Board, Liquid Cement, Wood Framing Elements, Directions, and a Color Chart.
First use Jan. 15, 1959.

Class 52 — Detergents and Soaps

702,419. Joseph F. Uddo, d.b.a. F. Uddo & Sons Company, New Orleans, La. SN 61,973. Filed P.R. 11-5-58; Am. S.R. 6-2-60.

SURE-KLEAN-ZIT

For Liquid Detergent for Use as a Household Cleaner.
First use Oct. 6, 1958.

702,420. The Bon Ami Company, New York, N.Y. SN 71,802. Filed P.R. 4-20-59; Am. S.R. 6-3-60.



The drawing is lined for blue, yellow, and silver.
For Household Cleanser.
First use Feb. 5, 1959.

Service Marks

Class 100 — Miscellaneous

702,421. Johnston's Coffee Shop, Inc., Daytona Beach, Fla. SN 53,877. Filed P.R. 6-19-58; Am. S.R. 5-31-60.



The color of the design is red with the continent being shown in black.
For Restaurant Services.
First use in 1946.

Class 105 — Transportation and Storage

702,422. Exprinter Travel Service, Inc., New York, N.Y. SN 83,608. Filed P.R. 10-20-59; Am. S.R. 5-16-60.

HOST-ESCORT TOURS

For Operating Guided Tour Travel Services.
First use on or about Oct. 15, 1958.

TRADEMARK REGISTRATIONS RENEWED

130,176. D.M.C. Cl. 40. 4-13-20.
131,707. GEOMETRICAL. Cl. 37. 5-25-20.
131,828. SANOLIN AND DIAMOND DESIGN. Cl. 20. 5-25-20.
132,218. NOMEND. Cl. 39. 6-15-20.
132,796. ADORATION. Cl. 15. 6-29-20.
132,990. HYGIENOL. Cl. 29. 7-6-20.
133,195. W AND DESIGN. Cl. 13. 7-13-20.
133,414. GOLDEN WHEAT. Cl. 46. 7-27-20.
135,986. EUREKA. Cl. 21. 10-26-20.
136,190. SKINNER. Cl. 23. 10-26-20.
136,432. PEDIGREE. Cl. 16. 11-2-20.
136,433. DREADNAUGHT. Cl. 37. 11-2-20.
136,481. ROLL-IN-MIX AND REPRESENTATION OF ROLLING PIN. Cl. 46. 11-2-20.
136,981. RANCH. Cl. 46. 11-9-20.

137,112. BARTLETT'S FLEXIFILL AND DESIGN. Cl. 12. 11-23-20.
137,368. BRER FOX. Cl. 46. 11-23-20.
137,626. NOCORO. Cl. 16. 11-30-20.
375,845. ROYAL. Cl. 23. 3-5-40.
376,290. JOHN CRANE GRANELITE. Cl. 35. 3-19-40.
376,529. AHOY. Cl. 42. 3-26-40.
377,279. DUTCH SCENE DESIGN. Cl. 11. 4-30-40.
377,329. EVERSEAL V PACKING. Cl. 35. 4-30-40.
377,432. KEN-L-LAC. Cl. 46. 5-7-40.
377,457. CLIFFCHAR. Cl. 6. 5-7-40.
378,226. LAND 'N SEA. Cl. 39. 6-4-40.
378,227. AUTO-BUY-MATIC. Cl. 23. 6-4-40.
378,235. PILLSBURY'S HOTEL AND RESTAURANT HR. Cl. 46. 6-4-40.
378,244. ZENITH AND DESIGN. Cl. 24. 6-4-40.
378,306. RED TURK. Cl. 46. 6-4-40.
378,352. MONITOR. Cl. 26. 6-4-40.
378,410. THE GLOBE CHEMICAL CO., INC. ETC. AND DESIGN. Cl. 18. 6-11-40.
378,524. ELMO. Cl. 51. 6-11-40.
378,564. ARITHMATICS. Cl. 38. 6-11-40.
378,578. QUILTRESS. Cl. 32. 6-11-40.
378,629. LUTOCYLOL. Cl. 18. 6-11-40.
378,630. METANDREN. Cl. 18. 6-11-40.
378,909. DUR-O-TEX. Cl. 39. 6-25-40.
379,079. ABC AND DESIGN. Cl. 23. 7-2-40.
379,080. ABC AND EAGLE DESIGN. Cl. 23. 7-2-40.
379,306. ESKIMO. Cl. 34. 7-9-40.
379,437. GOLDEN GLORY AND DESIGN. Cl. 46. 7-9-40.
379,541. ABRAC. Cl. 45. 7-16-40.
379,558. ARMOR-PLATE. Cl. 16. 7-16-40.
379,559. PLASTIC ROCK ETC. AND DESIGN. Cl. 12. 7-16-40.
379,567. HOUSE BEAUTIFUL'S PRACTICAL GARDENER. Cl. 38. 7-16-40.
379,597. PREMIER. Cl. 37. 7-16-40.
379,648. MAGIC. Cl. 32. 7-16-40.
379,687. BASO. Cl. 26. 7-23-40.
380,046. ITALVISCOSA. Cl. 43. 8-6-40.
380,069. AIRLITE. Cl. 39. 8-6-40.
380,202. SILBRAZ. Cl. 13. 8-13-40.
380,301. CF. Cl. 1. 8-20-40.
380,317. ROMANTIC DAYS. Cl. 51. 8-20-40.
380,341. DRAFTEX. Cl. 37. 8-20-40.
380,387. VISAGE DE NUEE. Cl. 51. 8-20-40.
380,402. BLASTUM. Cl. 6. 8-20-40.
380,437. STAR SPANGLED RED. Cl. 51. 8-20-40.
380,471. SEA KING. Cl. 27. 8-20-40.
380,495. FREEZITE. Cl. 6. 8-20-40.
380,777. FLORENCE. Cl. 21. 9-3-40.
380,800. AIRTEMP. Cl. 21. 9-3-40.
380,882. STORMASTER. Cl. 42. 9-3-40.
381,065. LUCKY GO-BO. Cl. 51. 9-10-40.
381,200. MO PAR. Cl. 21. 9-17-40.
381,386. MOPAR. Cl. 34. 9-24-40.
381,392. INTEX. Cl. 13. 9-24-40.
381,436. PHENIX. Cl. 12. 9-24-40.
381,457. MY MASTERPIECE. Cl. 36. 9-24-40.
381,491. TRUAM. Cl. 46. 9-24-40.
381,525. FLIGHT-WEIGHT. Cl. 42. 9-24-40.
381,594. GALE AND DESIGN. Cl. 39. 10-1-40.
381,621. LUSTRA KURL PILE FABRIC COAT. Cl. 39. 10-1-40.
381,673. RED TRIANGLE. Cl. 23. 10-1-40.
381,725. WEATHERSTYE. Cl. 39. 10-1-40.
382,059. SPECTROPHOTELOMETER. Cl. 26. 10-15-40.
382,124. TEN-O-SIX. Cl. 18. 10-15-40.
382,139. NECTOSE. Cl. 46. 10-15-40.
382,249. THE GREAT GO-BO. Cl. 6. 10-22-40.
382,530. SUN HAVEN. Cl. 46. 10-29-40.
382,622. H AND R. Cl. 46. 11-5-40.
382,624. ZIP-A-ROBE. Cl. 42. 11-5-40.
382,629. CARA-KID. Cl. 1. 11-5-40.
382,678. SAFLEX. Cl. 1. 11-5-40.
382,681. SOUPLETS. Cl. 46. 11-5-40.
382,778. TWINPLEX. Cl. 19. 11-12-40.
382,785. M. O. BEALE. Cl. 36. 11-12-40.
383,072. BALTA. Cl. 32. 11-19-40.
383,146. RIBBONETTE. Cl. 46. 11-26-40.
383,155. CEPACOL. Cl. 18. 11-26-40.
383,245. EXPLOSIMETER. Cl. 26. 11-26-40.

TRADEMARK REGISTRATIONS CANCELED

Section 8

86,598. SAMSON. Cl. 23. 5-21-12.
243,407. LEAD & ZINC AND DESIGN. Cl. 16. 6-19-28.
304,379. ALICE IN WONDERLAND. Cl. 39. 7-4-33.
308,663. VIT-AH-DEE. Cl. 46. 12-12-33.
313,049. CONTRACTORS. Cl. 9. 5-15-34.
356,950. PEERLOY. Cl. 14. 5-17-38.
439,740. JAY DEE. Cl. 46. 7-20-48.

The following registrations issued June 15, 1954

590,956. LITE-STONE. Cl. 1.
590,958. KERAFIL. Cl. 1.
590,959. KERON. Cl. 1.
590,965. GULCO. Cl. 1.
590,967. RADIUM. Cl. 1.
590,968. EAGLE DESIGN. Cl. 2.
590,972. JUST FOR YOU. Cl. 3.
590,982. DE-SPARKER. Cl. 6.
590,991. SAMAS PUNCHED CARD ACCOUNTING AND DESIGN. Cl. 11.
590,996. IRILITE. Cl. 12.
591,000. BA-LU. Cl. 12.
591,004. EFFCO AND DESIGN. Cl. 12.
591,006. WELL-LOCKED AND DESIGN. Cl. 12.
591,018. ZINODE. Cl. 14.
591,019. CROSIL. Cl. 14.
591,020. PUREX. Cl. 14.
591,023. UNOWAX. Cl. 15.
591,033. AROUND THE WORLD COLORS AND DESIGN. Cl. 16.
591,035. GREENETTE. Cl. 17.
591,036. GREENOCK. Cl. 17.
591,041. REHIBIN. Cl. 18.
591,042. LONITOL. Cl. 18.
591,044. TEVISAN DEBACAREISA. Cl. 18.
591,045. RSP AND DESIGN. Cl. 18.
591,046. NOVADONNA. Cl. 18.
591,047. HEPASYN. Cl. 18.
591,052. VICOMBIN. Cl. 18.
591,055. PITTLE-TO. Cl. 18.
591,066. SAFE-R-WIPE AND DESIGN. Cl. 21.
591,068. OMEGA AND DESIGN. Cl. 21.
591,078. ROTA-LITE. Cl. 21.
591,083. GLOBEMASTER. Cl. 21.
591,091. ANTROPAHL. Cl. 23.
591,097. CARNES AND DESIGN. Cl. 23.
591,107. PORTO LUBER. Cl. 23.
591,113. KIDDIE. Cl. 25.
591,114. DUAL MASK. Cl. 26.
591,117. SERVOFLEX. Cl. 26.
591,119. PERISPHERE. Cl. 26.
591,123. ESD. Cl. 26.
591,127. TUTONE. Cl. 27.
591,130. LIFE-GUARD. Cl. 27.
591,131. CLAYTON. Cl. 27.
591,132. INTERCO. Cl. 27.
591,134. AUTOCHRON. Cl. 27.
591,135. ROYAL SAXONY. Cl. 28.
591,136. SNOWCRAFT AND DESIGN. Cl. 28.
591,137. ROSE AND LEAF. Cl. 28.
591,139. CINERAMIC AND DESIGN. Cl. 28.
591,141. EXCLUSIVELY YOURS. Cl. 28.
591,142. THE BOUNTY OF THE SEA AND DESIGN. Cl. 28.
591,143. ARNO. Cl. 28.
591,152. RUB-SAN. Cl. 29.
591,153. MONOTOP. Cl. 32.

591,157. SCOTTY CRIBS. Cl. 32.
591,158. FLEXOLUZ. Cl. 32.
591,161. VISCOTE. Cl. 32.
591,164. DUR-O-WALL. Cl. 32.
591,165. PUR-O-SEAL. Cl. 32.
591,166. THRIFTYMATIC HEAT SAVER AND DESIGN. Cl. 34.
591,169. HEATING APPARATUS DESIGN. Cl. 34.
591,170. COMFORT-AMIC. Cl. 34.
591,183. SIGNALIS. Cl. 37.
591,189. BABY SOFT AND DESIGN. Cl. 37.
591,190. REPRESENTATION OF LITTLE GIRL HOLDING CANE. Cl. 37.
591,194. ECONOMY. Cl. 37.
591,200. KING-BOND. Cl. 37.
591,201. KING-POINT. Cl. 37.
591,206. CALSO-MATIC. Cl. 37.
591,208. SANIFREE. Cl. 37.
591,209. METALLITEX. Cl. 37.
591,216. WIRE AND RADIO COMMUNICATIONS. Cl. 38.
591,217. RITO NACIONAL MEXICANO AND DESIGN. Cl. 38.
591,218. THE TOOL BOX. Cl. 38.
591,220. WISHING BELL AND DESIGN. Cl. 38.
591,222. GET IT FROM YOUR JOBBER. Cl. 38.
591,224. ZODI. Cl. 38.
591,225. STAMVULE. Cl. 38.
591,227. BETTY BOW. Cl. 38.
591,228. ARCHIE'S RIVAL REGGIE. Cl. 38.
591,233. W DOUBLE-YOU. Cl. 39.
591,236. SKI-SOLE. Cl. 39.
591,237. LA CROSSE PARATROOPER. Cl. 39.
591,240. WILBUR COON ORTHO TALIPES. Cl. 39.
591,245. REPRESENTATION OF A GLOVE. Cl. 39.
591,247. PANCAKES BY PRIMA AND DESIGN. Cl. 39.
591,250. AIRNAP. Cl. 39.
591,252. TENA DE PRIMA. Cl. 39.
591,254. SANI-TREADS AND DESIGN. Cl. 39.
591,262. WEATHER-EYES. Cl. 39.
591,264. GRENADIER. Cl. 39.
591,269. FURELGA. Cl. 39.
591,270. SKIMMERS BY PRIMA. Cl. 39.
591,271. WAFERS BY PRIMA AND DESIGN. Cl. 39.
591,274. MOM'S PAL. Cl. 40.
591,277. ORGANDEEN. Cl. 42.
591,278. SIAMBA. Cl. 42.
591,279. TWIN-SKIN. Cl. 42.
591,283. E-Z OUT. Cl. 4.
591,284. SYNERGAL. Cl. 44.
591,289. BAR CREST AND DESIGN. Cl. 45.
591,295. REPRESENTATION OF A PURITAN GIRL. Cl. 46.
591,303. REPRESENTATION OF A FOOTBALL PLAYER. Cl. 46.
591,304. HECKERS'. Cl. 46.
591,307. FARMDALE. Cl. 46.
591,309. LE BEL ADOUR. Cl. 46.
591,312. POP ALONG. Cl. 46.
591,313. AL PO TREAT DESIGN. Cl. 46.
591,316. BLUE LABEL BANNER AND PIN. Cl. 46.
591,318. THRIFTY LADY AND DESIGN. Cl. 46.
591,323. LINE MAC. Cl. 46.
591,324. TWIST MAC. Cl. 46.
591,326. ARBOR. Cl. 46.
591,326. IT'S BIRDSEY'S THE BEST AND DESIGN. Cl. 46.
591,331. ESTHERVILLE. Cl. 46.
591,332. TOBIN ESTHERVILLE AND DESIGN. Cl. 46.
591,333. MOUNT HOPE. Cl. 46.
591,348. LOV-IT. Cl. 46.
591,352. OLDE MILLBAKE. Cl. 46.
591,353. SUGARLAND. Cl. 46.
591,359. GEE M-M-M. Cl. 46.
591,362. SWANNY. Cl. 46.
591,363. SAILING AND DESIGN. Cl. 46.
591,364. STONE MOUNTAIN. Cl. 46.
591,371. ARGENTEA. Cl. 46.
591,374. SPECIAL OLD ENGLISH BEER AND DESIGN. Cl. 48.
591,376. DREWRYS BEER ETC. AND DESIGN. Cl. 48.
591,385. FATIGUE. Cl. 50.
591,386. EVR-KLEEN. Cl. 50.
591,393. GREEN ICE. Cl. 51.
591,394. CHLORO-STOP. Cl. 51.
591,396. SUNJOY. Cl. 51.
591,398. LORETTA KAUFMAN'S MIRACLE CREME AND DESIGN. Cl. 51.
591,401. DUALIX. Cl. 51.
591,403. SHOW-OFF. Cl. 51.
591,404. D'ESTREE. Cl. 51.
591,405. 'TILL THEN. Cl. 51.
591,409. MICROGEL. Cl. 51.
591,410. NIGH. Cl. 51.
591,412. MONTEGO. Cl. 51.
591,422. LETS. Cl. 52.
591,423. SUDSETTE. Cl. 52.
591,434. "FUN AND FORTUNE." Cl. 101.
591,437. STRUCTURIGHT AND DESIGN. Cl. 103.
591,439. TOURIST INFORMATION ETC. AND DESIGN. Cl. 105.
591,445. PIRRO. Cl. 107.
591,448. DU-ALL. Cl. 2.
591,449. PFAENDER'S RIGID-LITE. Cl. 2.
591,451. PASS-CLIP. Cl. 3.
591,453. DRI-FLO. Cl. 11.
591,460. TOTE RACK. Cl. 19.
591,462. HITWELL. Cl. 23.
591,465. OCTO-FLO. Cl. 23.
591,466. WIND-A-LINE. Cl. 24.
591,470. RAINIER. Cl. 27.
591,474. CAPE COD. Cl. 29.
591,475. L. M. KELLY ETC. AND DESIGN. Cl. 32.
591,479. SURE FLAME AND DESIGN. Cl. 34.
591,483. PAC-A-GIFT. Cl. 37.
591,485. CORNING GLASSMAKER. Cl. 38.
591,486. THE MUSIC BOOK CLUB. Cl. 38.
591,488. LINDA MARSHALL. Cl. 38.
591,489. MOTORCYCLE BLUE BOOK. Cl. 38.
591,490. EXTRALIFE. Cl. 39.
591,491. REDI-CUT AND DESIGN. Cl. 39.
591,492. JUNIOR BRIEF ETC. AND DESIGN. Cl. 39.
591,493. MOC-A-KIT. Cl. 39.
591,501. SNAP-IT WRAP-IT. Cl. 39.
591,504. TALL TOWNE. Cl. 39.
591,506. CAML RUFF. Cl. 39.
591,507. CARLSON. Cl. 39.
591,509. CLAREMONT ETC. AND DESIGN. Cl. 42.
591,514. MARYLAND AMBER. Cl. 49.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

200,587. CELFECT. Cl. 43. 7-7-25. British Celanese Limited, London, England. Amended: In the statement, column 1, lines 12 through 15, the description of goods is deleted and *yarns and threads composed wholly or in part of acetate* is inserted.

396,182. COURTELLE. Cl. 43. 6-30-42. Courtaulds, Limited, London, England. Amended: In the statement, column 1, line 5, the description of goods, "rayon yarns" is deleted and *yarns composed of man-made filaments or man-made fibres* is inserted.

607,349. GOOD SEASONS. Cl. 46. 6-14-55. 4 Seasons, Inc., now by merger Perkins Products Company. General Foods Corporation, White Plains, N.Y. Amended to appear:

GOOD SEASONS

657,095. COMO-CAST. Cl. 23. 1-14-58. The Petersen Oven Company. Como-Cast Corporation, Milwaukee, Wis. Amended to appear:

COMO-CAST

673,553. STAY THERE! Cl. 39. 2-2-59. Munsingwear, Inc., assignee of Hollywood-Maxwell Co., Minneapolis, Minn. Corrected: In the statement, column 1, line 1, before "Hollywood", *Munsingwear, Inc. (Delaware corporation) 718 Glenwood Ave., Minneapolis, Minn., assignee of* should be inserted.

674,630. RAYNETTE. Cl. 39. 2-24-59. Cambridge Rubber Company, Cambridge, Mass. Amended: In the statement, column 2, lines 1 through 4, the description of goods, "boots made of plastic, rubber, leather, fabric and/or any combinations thereof, for men, women, and children" is deleted and *women's shoes with fabric upper and rubber soles* is inserted.

679,694. ULTRA FILTER. Cl. 44. 6-2-59. Mine Safety Appliances Company, Pittsburgh, Pa. Corrected: In the statement, column 2, line 1, after "respirators" *and parts therefor* should be inserted.

692,264. RAINBOW RINSE. Cl. 6. 2-2-60. Corn Products Company, New York, N.Y. Corrected: In the statement, column 1, line 1, before "Corn", *Corn Products Company (Delaware corporation), now by merger from* should be inserted.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 6—Chemicals and Chemical Compositions

380,949. Sept. 10, 1940. L. Sonneborn Sons, Inc., New York, N.Y. Pub. by registrant.

PETROMIX

For Blend of Emulsifying Agents and Mineral Oil Used as a Base for the Manufacture of Soluble Oils.

437,181. Mar. 9, 1948. Radiant Wash Solution Co., Olean, N.Y. Pub. by registrant.

PRESTO

For Bleaching Preparation Having Incidental Cleaning, Germicidal, and Disinfectant Uses.

Class 12—Construction Materials

182,068. June 8, 1920. Warren Brothers Company, Cambridge, Mass. Pub. by registrant.

WARRENITE-BITULITHIC

For Pavements Containing Bituminous Matter and Containers of Paving Material.

377,436. May 7, 1940. Aktieselskabet Skarrehage Molervaerk, Nykobing Mors, Denmark. Pub. by registrant.



For Insulating Bricks, Partition Blocks, Slabs, Floor Blocks, and Loose Material Produced From Calcined Diatomaceous Earth.

Class 14—Metals and Metal Castings and Forgings

380,990. Sept. 10, 1940. New York Brass & Copper Co., Inc., New York, N.Y. Pub. by registrant.

NEW YORK BRASS NULOY & COPPER CO. INC.

For Metal Alloys, Consisting of Copper, Brass, Nickel, Silver, Aluminum, and Britannia Metals.

381,040. Sept. 10, 1940. Copperweld Steel Company, Glassport, Pa. Pub. by registrant.

ARISTOLOY

For Ferrous Alloy in the Form of Bars, Strips, Rods, Sheets, and Special and Miscellaneous Shapes.

Class 15—Oils and Greases

52,593. May 15, 1906. Gulf Refining Company, Port Arthur, Tex., and Pittsburgh, Pa. Pub. by Gulf Oil Corporation, Pittsburgh, Pa.

ESKIMO

For Petroleum Lubricating Oils.

Class 18—Medicines and Pharmaceutical Preparations

175,422. Nov. 6, 1923. Parke, Davis & Company, Detroit, Mich. Pub. by registrant.

CHLORETONE

For Chlorobutanol.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

380,268. Aug. 20, 1940. Landis Machine Company, Waynesboro, Pa. Pub. by registrant.

LANRAC

For Tangential Chasers.

380,555. Aug. 27, 1940. Landis Machine Company, Waynesboro, Pa. Pub. by registrant.

LANHYDRO

For Machine Tools, Specifically Machines for Threading Steering Knuckles or Other Bodies.

Class 27—Horological Instruments

130,437. Apr. 20, 1920. Waltham Watch Company, Waltham, Mass. Pub. by Waltham Watch Company, Chicago, Ill.

WALTHAM

For Watch Materials—Namely, All Parts of a Watch—Watches, and Watch Cases.

Class 38—Prints and Publications

163,810. Jan. 30, 1923. National Tuberculosis Association, New York, N.Y. Pub. by registrant.



For Stamps or Seals.

Class 39—Clothing

130,580. Apr. 27, 1920. George Spencer & Co., Lutterworth, England. Pub. by George Spencer Ltd., Lutterworth, England.



For Clothing—Namely, Blouses, Aprons, Bodices, Bonnets, Outer Coats, Cloaks, Undercoats, Caps, Pelisses, Bloomers, Knickers, Capes, Jerseys, Singlets, Jackets, Dresses, Dress-Shirts, Negligée Shirts, Work-Shirts, Muffs, Undershirts, Vests, Union-Garments, Mittens, Gloves, Underdrawers, Hosiery, Petticoats, Waistcoats, Dress-Skirts, Underskirts, Cardigan Jackets and Combination Shirt and Pants.

315,256. July 24, 1934. J. Schoeneman, Incorporated, Baltimore, Md. Pub. by registrant.

SEBREEZ

For Coats, Vests, Trousers, Knickerbockers, Top Coats, and Overcoats for Men, Youths, and Boys.

376,605. Apr. 2, 1940. H. C. Cohn & Co., Rochester, N.Y. Pub. by Superba Cravats, Inc., Rochester, N.Y.



For Neckties.

378,815. June 18, 1940. Malone Knitting Company, Springfield, Mass. Pub. by registrant.

"MALCO"

For Infants' Knitted Underwear.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

374,849. Jan. 30, 1940. Sears, Roebuck and Co., Chicago, Ill. Pub. by registrant.



The words "Moth-Off" are disclaimed apart from the mark as shown.

For Blankets and Piece Goods Containing Wool.

Class 43—Thread and Yarn

379,737. July 23, 1940. Patons & Baldwins, Limited, Darlington, England. Pub. by registrant.

P&B

For Yarns of Wool, Worsted, or Hair.

Class 46—Foods and Ingredients of Foods

130,221. Apr. 13, 1920. James Pascall, Ltd., London, England. Pub. by James Pascall, Limited, Mitcham, England.

JP

For Boiled Sugar-Drops, Butter Bonbons, Toffees, Chocolates, Cachous, and Pine-Lozenges.

300,709. Feb. 7, 1933. American Cone & Pretzel Company, Philadelphia, Pa. Pub. by Bold Gold Foods, Inc., St. Louis, Mo.

Golden Maid

For Pretzels.

376,439. Mar. 26, 1940. T. Fukuhara, Arroyo Grande, Calif. Pub. by registrant.



No claim is made to the word "Vegetable," the representation of the vegetables or the outline of the label apart from the mark as shown.

For Fresh Vegetables.

Class 50—Merchandise Not Otherwise Classified

128,818. Jan. 13, 1920. Phoenix-Hermetic Co., Chicago, Ill. Pub. by Phoenix Metal Cap Company, Inc., Chicago, Ill.



For Metal Caps for Jars or Bottles.

Class 51—Cosmetics and Toilet Preparations

231,899. Aug. 30, 1927. Goodrich-Gamble Company, St. Paul, Minn. Pub. by registrant.

Cozette

For Face Powder, Rouge, Rouge and Loose Powder Combination, Lemon and Cucumber Lotion, Benzoin and Almond Cream, Rose Cream, Lemon Cold Cream, Cold Cream, Vanishing Cream for the Complexion, Combing Cream for the Hair, Hair Oil, Shampoo, and Shaving Lotion for Use After Shaving.

375,518. Feb. 20, 1940. Alfred D. McKelvy, d.b.a. Alfred D. McKelvy Company, Minneapolis, Minn. Pub. by Chesebrough-Pond's Inc., New York, N.Y.

Seaforth

For After Shaving Lotion, Deodorant, Talcum Powder, and Toilet Water.

INDEX OF REGISTRANTS

AUGUST 2, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

ABC Vending Corp.: *See*—
Sanitary Automatic Candy Corp.
AMP Inc., Harrisburg, Pa. 702,177, pub. 5–17–60. Cl. 21.
Abbott Laboratories, North Chicago, Ill. 702,134, pub. 5–17–60. Cl. 18.
Abbott Laboratories, North Chicago, Ill. 702,136, pub. 5–17–60. Cl. 18.
Aero-Jet Products Corp., Cleveland, Ohio. 702,117, pub. 4–12–60. Cl. 16.
Air Force Association, Washington, D.C. 702,268, pub. 5–17–60. Cl. 38.
Air Products, Inc., Emmaus, Pa. 702,245–6, pub. 5–17–60. Cl. 35.
Airloom Bedding Co., Alhambra, Calif. 702,235, pub. 5–17–60. Cl. 32.
Aktiebolaget Ferrosan, Malmo, Sweden. 591,041, canc. Cl. 18.
Aktiebolaget Svenska Maskinverken, Bodertalje, Sweden. 591,169, canc. Cl. 34.
Aktieselskabet Skarrehage Molervaerk, Nykobing Mors, Denmark. 377,436, 12(c) pub. 8–2–60. Cl. 12.
Aldan Rubber Co., Philadelphia, Pa. 702,275, pub. 5–17–60. Cl. 50.
Alfran Distributors, Inc., Catskill, N.Y. 702,065, pub. 5–17–60. Cl. 6.
Allegheny Ludlum Steel Corp., Pittsburgh, Pa. 702,198, pub. 5–17–60. Cl. 23.
Allen Products Co.: *See*—
Hunsicker, Robert F.
Allied Biochemical: *See*—
Allied Biochemical Laboratories.
Allied Biochemical Laboratories, d.b.a. Allied Biochemical, San Francisco, Calif. 702,127, pub. 5–17–60. Cl. 18.
Allied Stores Corp., New York, N.Y. 702,410. Cl. 30.
Alsan Mfg. Co.: *See*—
Frackman, Hy.
Alligator Co., The, St. Louis, Mo. 381,594, ren. 8–2–60. Cl. 39.
Alligator Co., The, St. Louis, Mo. 381,735, ren. 8–2–60. Cl. 39.
Alpha Gamma Sigma Agricultural Fraternity, Alexandria, Va. 702,398, pub. 5–17–60. Cl. 200.
Altman, B., & Co., New York, N.Y. 583,072, ren. 8–2–60. Cl. 32.
Amalgamated Leather Companies, Inc., Wilmington, Del. 702,044, pub. 5–17–60. Cl. 1.
American Bildrok Co., Chicago, Ill. 591,283, canc. Cl. 4.
American Cone & Pretzel Co., Philadelphia, Pa., by Reid Gold Foods, Inc., St. Louis, Mo. 300,709, 12(c) pub. 8–2–60. Cl. 46.
American Dietaids Co., Inc.: *See*—
Tam Products, Inc.
American Greetings Corp., Cleveland, Ohio. 702,264, pub. 5–17–60. Cl. 38.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 702,140, pub. 5–17–60. Cl. 18.
American Pad & Textile Co., The, Pittsburgh, Pa. 702,194, pub. 5–17–60. Cl. 22.
American Saw & Mfg. Co., Springfield, Mass. 702,200, pub. 5–17–60. Cl. 23.
American Shredded Paper Co.: *See*—
Kushner, G. Jed.
American Sitina Co., Dedham, Mass. 702,239, pub. 5–17–60. Cl. 34.
American Society of Tool Engineers, Detroit, Mich. 702,279, pub. 5–17–60. Cl. 38.
American Steel Foundries, Chicago, Ill. 702,110, pub. 5–17–60. Cl. 14.
American Stores Co., Philadelphia, Pa. 591,307, canc. Cl. 46.
American Telephone and Telegraph Co., New York, N.Y. 702,185, pub. 5–17–60. Cl. 21.
American Television & Radio Co., St. Paul, Minn. 702,179, pub. 5–17–60. Cl. 21.
American Viscose Corp., Philadelphia, Pa. 702,108, pub. 5–17–60. Cl. 13.
American Woolen Co., New York, N.Y., to Textron Inc., Providence, R.I. 381,525, ren. 8–2–60. Cl. 42.
Ampex Corp., Redwood City, Calif. 702,274, pub. 5–17–60. Cl. 38.
Anderson Oil and Chemical Co., Inc., Portland, Conn. 702,112, pub. 5–17–60. Cl. 15.
Andes Candies Inc., Chicago, Ill. 702,069, pub. 5–17–60. Cl. 46.
Andre, Dr., Laboratory Inc., Milwaukee, Wis. 591,422, canc. Cl. 52.
Anglers' Mfg. Corp., Chicago, Ill. 702,187, pub. 5–17–60. Cl. 21.
Anson Inc., Providence, R.I. 591,139, canc. Cl. 28.
Anthracite Equipment Corp., Wilkes-Barre, Pa. 702,038, pub. 5–17–60. Cl. 1.
Archie Comic Publications, Inc., New York, N.Y. 591,228, canc. Cl. 38.
Aristo Import Co., Inc., New York, N.Y. 702,219, pub. 5–17–60. Cl. 27.
Armco Steel Corp., Middletown, Ohio. 702,288, pub. 5–17–60. Cl. 38.
Ascher, B. F., & Co., Inc., Kansas City, Mo. 702,166–7, pub. 5–17–60. Cl. 18.
Ascher, Eugene, Metz, Moselle, France. 591,284, canc. Cl. 44.
Aurora Lamp Co., Chicago, Ill. 591,078, canc. Cl. 21.
Automobilove Zavody, Narodni Podnik, Mlada Boleslav, Czechoslovakia. 702,170–1, pub. 5–17–60. Cl. 19.
Automotive Advertisers Council, New Castle, Ind. 591,222, canc. Cl. 38.
Avco Mfg. Corp., Cincinnati, Ohio. 591,068, canc. Cl. 21.
Baker Paint & Varnish Co., Jersey City, N.J. 248,407, canc. Cl. 16.
Baldwin, John P., Decatur, Ill. 591,114, canc. Cl. 26.
Balmain, Pierre, Paris, France. 702,312, pub. 5–17–60. Cl. 39.
Balston, W. & R., Ltd., Maidstone, England. 131,707, ren. 8–2–60. Cl. 37.
Ba-Lu Associates, Canfield, Ohio. 591,000, canc. Cl. 12.
Bank of America National Trust and Savings Assn., San Francisco, Calif. 702,386, pub. 5–17–60. Cl. 102.
Barber, W. H., Co., Minneapolis, Minn. 380,402, ren. 8–2–60. Cl. 6.
Barber, W. H., Co., Minneapolis, Minn. 380,495, ren. 8–2–60. Cl. 6.
Barnesbey-Cheney Co., The, Columbus, Ohio. 702,068, pub. 5–17–60. Cl. 6.
Barnes, Bertron O., Oakland, Calif. 591,113, canc. Cl. 25.
Bartlett, F. A., Tree Expert Co.: *See*—
Bartlett, Francis A.
Bartlett, Francis A., d.b.a. The F. A. Bartlett Tree Expert Co., Stamford, Conn. 137,112, ren. 8–2–60. Cl. 12.
Baso Inc.: *See*—
Milwaukee Gas Specialty Co.
Bates Mfg. Co., Lewiston, Me. 702,339, pub. 5–17–60. Cl. 43.
Bayside Mfg. Co., Inc., New York, N.Y. 702,302, pub. 5–17–60. Cl. 39.
Becker Cloak Co., Inc., New York, N.Y. 381,621, ren. 8–2–60. Cl. 39.
Bair, Arthur, & Co., Inc., New York, N.Y. 376,529, ren. 8–2–60. Cl. 42.
Belleek Pottery Ltd., The, Belleek, Northern Ireland. 702,232, pub. 5–17–60. Cl. 30.
Bendix Aviation Corp., The, South Bend, Ind. 382,778, ren. 8–2–60. Cl. 19.
Berger, Harry, d.b.a. California Products of Chicago, Chicago, Ill. 591,289, canc. Cl. 45.
Berkshire Knitting Mills: *See*—
Nomend Hosiery Mills M. B. Laubach Co. Inc.
Berry, J. Chester, Durham, N.C. 702,261, pub. 5–17–60. Cl. 37.
Bersted Mfg. Co., Fostoria, Ohio, to McGraw-Edison Co., Boonville, Mo. 379,306, ren. 8–2–60. Cl. 34.
Bess' Best Farm Kitchen: *See*—
Watt, Bess P.
Best Photo Industries, Inc.: *See*—
Brown-Forman Distillers Corp.
Best Photo Industries, Inc., from Brown-Forman Distillers Corp., Louisville, Ky. 702,059, pub. 1–5–60. Cl. 6.
Birdseye Flour Mills, Macon, Ga. 591,328, canc. Cl. 46.
Bishop Mfg. Corp., Cedar Grove, N.J. 702,189, pub. 5–17–60. Cl. 21.
Bitterman, Bernard K., Kansas City, Mo. 591,225, canc. Cl. 38.
Blackstaff Linens, Inc., New York, N.Y. 702,338, pub. 5–17–60. Cl. 42.
Blanke-Baer Extract & Preserving Co., St. Louis, Mo. 383,146, ren. 8–2–60. Cl. 46.
Blue Bell, Inc., Greensboro, N.C. 702,314, pub. 5–17–60. Cl. 39.
Blum, Milton C., Inc., New York, N.Y. 591,278, canc. Cl. 42.
Boake, A., Roberts and Co. Ltd., London, England. 379,541, ren. 8–2–60. Cl. 45.
Bon Ami Co., The, New York, N.Y. 702,420. Cl. 52.
Bonne Bell, Inc., Lakewood, Ohio. 382,124, ren. 8–2–60. Cl. 18.
Book Club Management, Inc., New York, N.Y. 591,486, canc. Cl. 38.
Brady, James W., d.b.a. Jas. W. Brady, Research, Tampa, Fla. 702,197, pub. 5–17–60. Cl. 23.
Brady, Jas. W., Research: *See*—
Brady, James W.
Breger & Weiner, Inc., New York, N.Y. 304,379, canc. Cl. 39.
British Celanese Ltd., London, England. 200,587. Am. 7(d). Cl. 43.
Bro-Dart Industries, Inc., Newark, N.J. 702,406. Cl. 22.
Brown & Williamson Tobacco Corp., Louisville, Ky. 702,123, pub. 5–17–60. Cl. 17.
Bryant Pharmaceutical Corp., New York, N.Y. 591,052, canc. Cl. 18.
Bullock's, Inc., Los Angeles, Calif. 702,329, pub. 5–17–60. Cl. 39.
Bulova Watch Co., Inc., Flushing, N.Y. 702,163, pub. 5–17–60. Cl. 21.
Bulova Watch Co., Inc., New York, N.Y. 380,471, ren. 8–2–60. Cl. 27.
Bunny Bear, Inc., Everett, Mass. 591,279, canc. Cl. 42.

Bunten, W. H., & Co., Inc., d.b.a. General Heating Products, Philadelphia, Pa. 702,241, pub. 5–17–60. Cl. 34.
Burberrys Ltd., London, England. 702,337, pub. 5–17–60. Cl. 42.
Byer, Irving, Co., The: *See*—
Byer, Irving M.
Byer, Irving M., d.b.a. The Irving Byer Co., New York, N.Y. 591,501, canc. Cl. 39.
C & H Supply Co., Englewood, Calif. 702,273, pub. 5–17–60. Cl. 38.
Cahn, Eric P., Long Island City, N.Y. 591,170, canc. Cl. 34.
California General, Inc., Chula Vista, Calif. 702,078, pub. 5–17–60. Cl. 9.
California Oil Co., The, Wilmington, Del. 591,206, canc. Cl. 37.
California Products of Chicago: *See*—
Berger, Harry.
California Syrup & Extract Co., Oakland, Calif. 591,326, canc. Cl. 46.
Cambridge Rubber Co., Cambridge, Mass. 674,630. Am. 7(d). Cl. 39.
Car-Blair Ltd., d.b.a. Weather-Eyes, New York, N.Y. 591,262, canc. Cl. 39.
Carborundum Co., The, Niagara Falls, N.Y. 702,089, pub. 5–17–60. Cl. 12.
Cardinal Food Products, Inc., St. Louis, Mo. 702,364, pub. 5–17–60. Cl. 46.
Carlson Underwear, Inc., Hazleton, Pa. 591,507, canc. Cl. 39.
Carnes, W. R., Co., Verona, Wis. 591,097, canc. Cl. 23.
Carworth Farms, Inc., New City, N.Y. 380,301, ren. 8–2–60. Cl. 1.
Cat's Paw Rubber Co., Inc., Baltimore, Md. 702,304, pub. 5–17–60. Cl. 39.
Central Scientific Co., Chicago, Ill. 382,059, ren. 8–2–60. Cl. 26.
Centre Circuits, Inc., Pine Grove Mills, Pa. 702,204, pub. 5–17–60. Cl. 23.
Cerophyl Laboratories, Inc., Kansas City, Mo. 702,162, pub. 5–17–60. Cl. 18.
Chappel Bros., Inc., Rockford, Ill., to The Quaker Oats Co., Chicago, Ill. 377,432, ren. 8–2–60. Cl. 46.
Chemco Photoproducts Co., Inc., Glen Cove, N.Y. 702,071, pub. 5–17–60. Cl. 6.
Chemical Sealing Corp., Kansas City, Mo. 702,082, pub. 5–17–60. Cl. 12.
Chemicals, Inc., Luquillo, Puerto Rico. 702,144, pub. 5–17–60. Cl. 18.
Chemico Laboratories, Inc., Miami, Fla. 702,132, pub. 5–17–60. Cl. 18.
Chesebrough-Pond's Inc.: *See*—
McKelvy, Alfred D.
Chicago Metallic Mfg. Co., Chicago, Ill. 702,096, pub. 5–17–60. Cl. 13.
Chicago Printed String Co., Chicago, Ill. 702,077, pub. 5–17–60. Cl. 7.
Chore-Boy Mfg. Co., Inc., Cambridge City, Ind. 702,378, pub. 5–17–60. Cl. 50.
Chrysler Corp., Highland Park, Mich. 380,800, ren. 8–2–60. Cl. 21.
Chrysler Corp., Highland Park, Mich. 381,200, ren. 8–2–60. Cl. 21.
Chrysler Corp., Highland Park, Mich. 381,386, ren. 8–2–60. Cl. 34.
Ciba Ltd., Basel, Switzerland. 702,145, pub. 5–17–60. Cl. 18.
Ciba Pharmaceutical Products Inc.: *See*—
Society of Chemical Industry in Basle.
Cilag-Chemie A.G., Schaffhausen, Switzerland. 702,165, pub. 5–17–60. Cl. 18.
Cincinnati Mfg. Corp., Cincinnati, Ohio. 702,205, pub. 5–17–60. Cl. 23.
Cleveland Cleaner & Paste Co., Cleveland, Ohio. 702,195, pub. 5–17–60. Cl. 22.
Cleveland-Detroit Corp., from Ray-Dor Sales Corp., Cleveland, Ohio. 702,389, pub. 5–17–60. Cl. 103.
Cleveland Pneumatic Industries, Inc., Cleveland, Ohio. 702,186, pub. 5–17–60. Cl. 21.
Cliffs Dow Chemical Co., Marquette, Mich. 377,457, ren. 8–2–60. Cl. 6.
Cluett, Peabody & Co., Inc., New York, N.Y. 702,308, pub. 5–17–60. Cl. 39.
Clyde Associates, Inc., New York, N.Y. 591,491, canc. Cl. 39.
Coats & Clark Inc., New York, N.Y. 702,100, pub. 5–17–60. Cl. 18.
Coat Craft Co.: *See*—
Coat Craft Co., Inc.
Coat Craft Co., Inc., from Coat Craft Co., Philadelphia, Pa. 702,411. Cl. 39.
Cohen, Lawrence M., Greensboro, N.C. 702,257, pub. 5–17–60. Cl. 36.
Cohn, H. C., & Co., by Superba Cravats, Inc., Rochester, N.Y. 376,605, 12(c) pub. 8–2–60. Cl. 39.
Cole-Mort Inc., New York, N.Y. 702,307, pub. 5–17–60. Cl. 39.
Colgate-Palmolive Co.: *See*—
Colgate-Palmolive Peet Co.
Colgate-Palmolive Peet Co., now by change of name Colgate-Palmolive Co., Jersey City, N.J. 591,410, canc. Cl. 51.
Collegeville Flag & Mfg. Co., Collegeville, Pa. 702,321, pub. 5–17–60. Cl. 39.
Colton Razor Blade Co., Boston, Mass. 702,408–9. Cl. 23.
Columbia Mills, Inc., The, Syracuse, N.Y. 591,161, canc. Cl. 32.
Como-Cast Corp.: *See*—
Petersen Oven Co., The.
Congoleum-Nairn Inc.: *See*—
Salem Mfg. Co.
Congratulations, Inc., New York, N.Y. 702,275, pub. 5–17–60. Cl. 38.
Consolidated Cosmetics, Chicago, Ill. 591,408, canc. Cl. 51.
Consolidated Mining and Smelting Co., The, of Canada Ltd., Montreal, Quebec, Canada. 702,108, pub. 5–17–60. Cl. 14.
Continental Coffee Co., Chicago, Ill. 702,368, pub. 5–17–60. Cl. 46.
Coon, W. R., Co., Rochester, N.Y. 591,240, canc. Cl. 39.
Copperweld Steel Co., Glassport, Pa. 381,040, 12(c) pub. 8–2–60. Cl. 14.
Corn Products Co.: *See*—
Corn Products Refining Co.
Corn Products Co., New York, N.Y. 692,264, cor. Cl. 6.
Corn Products Refining Co., to Corn Products Co., New York, N.Y. 379,437, ren. 8–2–60. Cl. 46.
Corning Glass Works, Corning, N.Y. 591,485, canc. Cl. 38.
Count-Rite Corp., Cleveland, Ohio. 702,379, pub. 5–17–60. Cl. 50.
Courtaulds, Ltd., London, England. 396,182. Am. 7(d). Cl. 43.
Craddock-Terry Shoe Corp., Lynchburg, Va. 702,306, pub. 5–17–60. Cl. 39.
Crane Packing Co., Morton Grove, Ill. 376,290, ren. 8–2–60. Cl. 23.
Crane Packing Co., Morton Grove, Ill. 377,329, ren. 8–2–60. Cl. 35.
Craven Pharmacal Co., New Bern, N.C. 702,148, pub. 5–17–60. Cl. 18.
Creamette Co., The: *See*—
Foulds-Briggs Co., The.
Crown Corset Co., The, Bridgeport, Conn. 702,295, pub. 5–17–60. Cl. 39.
Crystal, David, Inc.: *See*—
Izod Ltd.
Curtice Brothers Co., Rochester, N.Y. 591,316, canc. Cl. 46.
Curtis-Allbrite Lighting, Inc., from Curtis Lighting, Inc., Chicago, Ill. 702,180, pub. 5–10–60. Cl. 21.
Curtis Lighting, Inc.: *See*—
Curtis-Allbrite Lighting, Inc.
Cutler Mail Chute Co., Rochester, N.Y. 590,968, canc. Cl. 2.
Czerefkow, Mrs., called Gres, born Germaine Krebs, Paris, France. 702,381, pub. 5–17–60. Cl. 51.
Daihatsu Kogyo Kabushiki Kaisha, Oyodo, Osaka, Japan. 702,199, pub. 5–17–60. Cl. 23.
Damon Chemical Co., Inc., Alliance, Ohio. 702,057, pub. 4–5–60. Cl. 4.
Dartmouth Marketing Co., Inc.: *See*—
Topco Associates, Inc.
Davids Gloves, Inc., Springfield, Ohio. 591,245, canc. Cl. 39.
Dawe's Laboratories, Inc., Chicago, Ill. 702,152, pub. 5–17–60. Cl. 18.
Decatur Federal Savings and Loan Assn. Decatur, Ga. 702,387, pub. 5–17–60. Cl. 102.
De Leon, Andres, d.b.a. Nuclefort Medicine Co., Hato Rey, P.R. 591,044, canc. Cl. 18.
Descalso, Octavio A., Havana, Cuba. 702,267, pub. 5–17–60. Cl. 38.
D'Estree Parfums Cie: *See*—
Young, Gerald.
Detrex Chemical Industries, Inc., Detroit, Mich. 702,242, pub. 5–17–60. Cl. 34.
Detroit Brass & Malleable Co., Cleveland, Ohio. 702,399. Cl. 13.
Dietz, Sheldon, d.b.a. The Six-Footer Co., Norwalk, Conn. 702,288, pub. 5–17–60. Cl. 39.
Dietzgen, Eugene, Co., Chicago, Ill. 379,597, ren. 8–2–60. Cl. 37.
Dietzgen, Eugene, Co., Chicago, Ill. 380,341, ren. 8–2–60. Cl. 37.
Dollfus-Mieg & Cie, Societe Anonyme, Mulhouse, Germany, to Dollfus-Mieg & Cie, Societe Anonyme, Mulhouse (Haut-Rhin), France. 130,176, ren. 8–2–60. Cl. 40.
Dolores Enterprises, Inc., New York, N.Y. 702,259, pub. 5–17–60. Cl. 36.
Donmoor-Isaacson, Inc., New York, N.Y. 702,325, pub. 5–17–60. Cl. 39.
Donovan Enterprises, Saugatuck, Conn. 591,233, canc. Cl. 39.
Donovan Industries, Inc., New York, N.Y. 702,043, pub. 5–17–60. Cl. 1.
Dover Corp., Louisville, Ky. 702,244, pub. 5–17–60. Cl. 34.
Dow Chemical Co., The, Midland, Mich. 702,064, pub. 5–17–60. Cl. 6.
Dresser Industries, Inc., Dallas, Tex. 702,104, pub. 5–17–60. Cl. 13.
Drewrys Ltd., U.S.A., Inc., South Bend, Ind. 591,376, canc. Cl. 48.
Dri-Flo Mfg. Co., Hazel Park, Mich. 591,453, canc. Cl. 11.
Drynan, Jane, Austin, Tex. 702,413. Cl. 39.
Dualix, Ltd.: *See*—
Greben, Jerome.
Du-All Products, Inc., Boston, Mass. 591,448, canc. Cl. 2.
Dura Corp., Oak Park, Mich. 702,237, pub. 5–17–60. Cl. 32.
E.C.H. Tool Co.: *See*—
Houlette, Edward C.
E & M Lang Co., Inc., New York, N.Y. 702,328, pub. 5–17–60. Cl. 39.
Eastern Television Productions: *See*—
Lederach, Franklin L.
Eastman Kodak Co., Rochester, N.Y. 378,352, ren. 8–2–60. Cl. 26.
Eastman Kodak Co., Rochester, N.Y. 702,391, pub. 5–17–60. Cl. 106.
Eaton Mfg. Co., Cleveland, Ohio. 702,106, pub. 5–17–60. Cl. 14.
Eclipse Sleep Products, Inc., Brooklyn, N.Y. 378,578, ren. 8–2–60. Cl. 32.
Eclipse Sleep Products, Inc., Brooklyn, N.Y. 379,648, ren. 8–2–60. Cl. 32.
Ednalite Optical Co., Inc., The, Peekskill, N.Y. 702,217, pub. 5–17–60. Cl. 26.
Edward Valve & Mfg. Co., Inc., The, to Edward Valves, Inc., East Chicago, Ind. 381,302, ren. 8–2–60. Cl. 13.

Edward Valves, Inc.: *See*—
Edward Valve & Mfg. Co., Inc., The.
Eldridge, Eugene, d.b.a. Rampco Equipment Co., Torrance, Calif. 702,097, pub. 5–17–60. Cl. 13.
Electric Auto-Lite Co., The, Toledo, Ohio. 702,202, pub. 5–17–60. Cl. 23.
Elgin National Watch Co., Elgin, Ill. 591,127, canc. Cl. 27.
Elliott Pharmacal Co.: *See*—
Froom, Julius E.
Elmo, Inc., Philadelphia, Pa., to E. A. Tracey Enterprises, Inc., New York, N.Y. 378,524, ren. 8–2–60. Cl. 51.
Elox Corp. of Michigan, Troy, Mich. 702,075, pub. 5–17–60. Cl. 6.
Elsmo Bros. Publishers: *See*—
Elsmo, Sverre S.
Elsmo, Sverre S., d.b.a. Elsmo Bros. Publishers, Racine, Wis. 702,268, pub. 5–17–60. Cl. 38.
Empire Flow Co., The, Cleveland, Ohio. 381,673, ren. 8–2–60. Cl. 23.
Engineered Products Co., Philadelphia, Pa. 591,166, canc. Cl. 34.
Erie Mop and Wringer Co., Girard, Pa. 702,230, pub. 5–17–60. Cl. 29.
Esso Standard Oil Co.: *See*—
Humble Oil & Refining Co.
Eureka Vacuum Cleaner Co., Detroit, Mich., to Eureka Williams Corp., Bloomington, Ill. 135,986, ren. 8–2–60. Cl. 21.
Evans, John R., & Co., Camden, N.J. 382,629, ren. 8–2–60. Cl. 1.
Everpure Laboratories, Inc., Boston, Mass. 702,060, pub. 5–17–60. Cl. 6.
Evr-Klean Nest Co., Elba, Minn. 591,386, canc. Cl. 50.
Excello Hosiery Mills, Hawthorne, N.J. 591,490, canc. Cl. 39.
Exprinter Travel Service, Inc., New York, N.Y. 702,422. Cl. 105.
Eso Products Co., d.b.a. Komfo Dental Pad Co., Philadelphia, Pa. 702,354, pub. 5–17–60. Cl. 44.
Famolare, Joseph P., Inc., Boston, Mass. 702,311, pub. 5–17–60. Cl. 39.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 702,067, pub. 5–17–60. Cl. 6.
Fassler, M. J., & Co., Inc., Brooklyn, N.Y. 702,120, pub. 5–17–60. Cl. 16.
Fassler, M. J., & Co., Inc., Brooklyn, N.Y. 702,342–3, pub. 5–17–60. Cl. 42.
Federal-Mogul-Bower Bearings, Inc., Detroit, Mich. 702,252–3, pub. 5–17–60. Cl. 35.
Felker Mfg. Co., Torrance, Calif. 702,035, pub. 5–17–60. Cl. 4.
Ferguson, E. F., Co., Chicago, Ill. 591,004, canc. Cl. 12.
Fiber Industries, Inc., Charlotte, N.C. 702,045–50, pub. 5–17–60. Cl. 1.
Field Co., The, Los Angeles, Calif. 702,300, pub. 5–17–60. Cl. 39.
Fieldcrest Mills, Inc., Spray, N.C. 702,344, pub. 5–17–60. Cl. 42.
Firestone Tire & Rubber Co., The, Akron, Ohio. 702,250–1, pub. 5–17–60. Cl. 35.
Fisher and Co., Newark, N.J. 702,225, pub. 5–17–60. Cl. 28.
Fisher Scientific Co., Pittsburgh, Pa. 702,285, pub. 5–17–60. Cl. 34.
Flint, Eaton & Co., Decatur, Ill. 702,137, pub. 5–17–60. Cl. 18.
Florence Foods, Inc., Florence Villa, Fla. 591,362, canc. Cl. 46.
Florence Stove Co., Gardner, Mass., to Geo. D. Roper Corp., Kankakee, Ill. 380,777, ren. 8–2–60. Cl. 21.
Florilege, Paris, Seine, France. 702,291, pub. 5–17–60. Cl. 39.
Food Brands, Inc., Concordia, Kans. 702,356, pub. 5–17–60. Cl. 46.
Foremost Cotton & Burlap Products: *See*—
Foremost Mfg. Co.
Foremost Mfg. Co., from B. M. Margious, d.b.a. Foremost Cotton & Burlap Products, St. Louis, Mo. 702,373, pub. 5–17–60. Cl. 50.
Fort Dodge Laboratories, Inc.: *See*—
American Home Products Corp.
Foster-Milburn Co., Buffalo, N.Y. 702,151, pub. 5–17–60. Cl. 18.
Foulds-Briggs Co., The, Cincinnati, Ohio, to The Creamette Co., Minneapolis, Minn. 133,414, ren. 8–2–60. Cl. 46.
4 Seasons, Inc., now by merger Perkins Products Co. General Foods Corp., White Plains, N.Y. 607,349. Am. 7(d). Cl. 46.
Frackman, Hy, d.b.a. Alsan Mfg. Co., New York, N.Y. 591,141, canc. Cl. 28.
Fremont Rubber Co., Fremont, Ohio. 591,385, canc. Cl. 50.
French American Reeds Mfg. Co., Inc.: *See*—
Maccaferri, Mario.
Froom, Julius E., d.b.a. Elliott Pharmacal Co., Omaha, Nebr. 702,383, pub. 5–17–60. Cl. 51.
Fukuhara, T., Arroyo Grande, Calif. 376,439, 12(c) pub. 8–2–60. Cl. 46.
Fuller Pharmaceutical Co., Minneapolis, Minn. 702,163, pub. 5–17–60. Cl. 18.
Furstenberg Ehemalige Herzoglich Braunschweigische Porzellanmanufaktur, Furstenberg Weser, Germany. 702,233, pub. 5–17–60. Cl. 30.
Gates Rubber Co., The, Denver, Colo. 702,249, pub. 5–17–60. Cl. 35.
Geigy Chemical Corp., Ardsley, N.Y. 702,123, pub. 5–17–60. Cl. 18.
General Electric Co., Schenectady, N.Y. 591,153, canc. Cl. 32.
General Electric Co., Schenectady, N.Y. 702,240, pub. 5–17–60. Cl. 34.
General Features Corp., New York, N.Y. 702,276, pub. 5–17–60. Cl. 38.
General Foods Corp.: *See*—
4 Seasons, Inc.
General Heating Products: *See*—
Bunten, W. H., & Co., Inc.
General Meats, Seattle, Wash. 702,366, pub. 5–17–60. Cl. 46.
General Time Corp., New York, N.Y. 702,218, pub. 5–17–60. Cl. 27.
General Time Corp., New York, N.Y. 702,220–1, pub. 5–17–60. Cl. 27.
General Tire & Rubber Co., The, Akron, Ohio. 702,248, pub. 5–17–60. Cl. 35.
Genuine Upholstery Leather Co.: *See*—
Weiss, Jack H.
George, P. D., Co., The, St. Louis, Mo. 136,432, ren. 8–2–60. Cl. 16.
Gilbert Paper Co., Menasha, Wis. 136,433, ren. 8–2–60. Cl. 37.
Ginsberg, S., Sons, Baltimore, Md. 702,313, pub. 5–17–60. Cl. 39.
Glander, John G., Westfield, N.J. 591,220, canc. Cl. 38.
Glasrock Corp., Atlanta, Ga. 702,087–8, pub. 5–17–60. Cl. 12.
Glen Raven of California, Inc., San Fernando, Calif. 702,310, pub. 5–17–60. Cl. 39.
Globe Chemical Co., Inc., The, St. Bernard, Ohio. 378,410, ren. 8–2–60. Cl. 18.
Gold Seal Co., Bismarck, N. Dak. 702,076, pub. 5–17–60. Cl. 6.
Goldberg, S., & Co. Inc., Hackensack, N.J. 702,298, pub. 5–17–60. Cl. 39.
Golden Grain Macaroni Co., d.b.a. Mission Macaroni Co. and Pacific Coast Macaroni Mfg. Co., San Leandro, Calif. 702,417. Cl. 46.
Goodrich-Gamble Co., St. Paul, Minn. 231,899, 12(c) pub. 8–2–60. Cl. 51.
Gordon Foods: *See*—
Sunshine Biscuits, Inc.
Gorham Mfg. Co., Providence, R.I. 702,229, pub. 5–17–60. Cl. 28.
Grady & Neary Ink Co., Chicago, Ill. 702,061, pub. 5–17–60. Cl. 11.
Granat Bros., San Francisco, Calif. 702,228, pub. 5–17–60. Cl. 28.
Gratz, Wm. R., Co., Inc., Lynbrook, N.Y. 702,258, pub. 5–17–60. Cl. 36.
Gray Co., Inc., Minneapolis, Minn. 591,107, canc. Cl. 23.
Greben, Jerome, d.b.a. Dualix, Ltd., Beverly Hills, Calif. 591,401, canc. Cl. 51.
Griffith Laboratories, Inc., The, Chicago, Ill. 308,663, canc. Cl. 46.
Guerlain, Inc.: *See*—
Guerlain Perfumery Corp. of Delaware.
Guerlain Perfumery Corp. of Delaware, Wilmington, Del., and New York, to Guerlain, Inc., New York, N.Y. 380,387, ren. 8–2–60. Cl. 51.
Gulf Oil Corp.: *See*—
Gulf Refining Co.
Gulf Refining Co., Port Arthur, Tex., and Pittsburgh, Pa., to Gulf Oil Corp., Pittsburgh, Pa. 52,593, 12(c) pub. 8–2–60. Cl. 15.
Hamilton, J. D., Fruit Co.: *See*—
Hamilton, John D.
Hamilton, John D., d.b.a. J. D. Hamilton Fruit Co., Wenatchee, Wash. 439,740, canc. Cl. 46.
Handy Angle Ltd., Birmingham, England. 702,095, pub. 5–17–60. Cl. 13.
Hanover Lumber & Drying Corp., Hanover, Pa. 591,157, canc. Cl. 32.
Hansen, Borge, Skive, Denmark. 591,363, canc. Cl. 46.
Harvard Coated Products Co. Inc., Roxbury, Mass. 702,040–1, pub. 5–17–60. Cl. 1.
Harvey, G. F., Co., Inc., The, New York, N.Y. 702,138, pub. 5–17–60. Cl. 18.
Harvey, G. F., Co., Inc., The, New York, N.Y. 702,151, pub. 5–17–60. Cl. 18.
Harvey, G. F., Co., Inc., The, New York, N.Y. 702,168, pub. 5–17–60. Cl. 18.
Havey Industries, Inc., Wilmington, Del. 702,079, pub. 5–17–60. Cl. 9.
Hearst Corp., The: *See*—
Hearst Magazines, Inc.
Hearst Magazines, Inc., to The Hearst Corp., New York, N.Y. 379,567, ren. 8–2–60. Cl. 38.
Heimstreet, Arthur, Little Falls, N.Y. 702,126, pub. 5–17–60. Cl. 18.
Hercules Powder Co., Wilmington, Del. 313,049, canc. Cl. 9.
Hervin Co., The, Tualatin, Oreg. 702,360, pub. 5–17–60. Cl. 46.
Hess, Goldsmith & Co., Inc., New York, N.Y. 702,345, pub. 5–17–60. Cl. 42.
Heublein, G. F., & Bro., Inc., Hartford, Conn. 591,514, canc. Cl. 49.
Hickok Mfg. Co. Inc., Rochester, N.Y. 702,227, 5–17–60. Cl. 28.
Hinkle, Noel C., Denver, Colo. 591,274, canc. Cl. 40.
Hoffman, Stanley, d.b.a. Satellite Records, New York, N.Y. 702,284, pub. 5–17–60. Cl. 36.
Hollywood-Maxwell Co.: *See*—
Munsingwear, Inc.
Holser Watch Co. Inc., New York, N.Y. 702,222, pub. 5–17–60. Cl. 27.
Hope and Anchor Breweries Ltd., Sheffield, England. 591,374, canc. Cl. 46.
Horwitt, Mimi, d.b.a. U.S. Health Club, Bergenfield, N.J. 702,124, pub. 5–17–60. Cl. 18.
Houlette, Edward C., d.b.a. E. C. H. Tool Co., Chicago, Ill. 702,404. Cl. 23.
House of Swansdown, Inc., The, New York, N.Y. 591,506, canc. Cl. 39.
Hoving Corp., New York, N.Y. 702,290, pub. 5–17–60. Cl. 39.

Hubbs & Howe Co., Tonawanda, N.Y. 591,254, canc. Cl. 29.
Humble Oil & Refining Co., Houston, Tex., from Esso Standard Oil Co., New York, N.Y. 702,306. Cl. 1.
Hunn, William, and Associates: *See*—
Hunn, William E.
Hunn, William E., d.b.a. William Hunn and Associates, St. Louis, Mo. 702,274, pub. 5–17–60. Cl. 50.
Hunsicker, Robert F., d.b.a. Allen Products Co., Allentown, Pa. 591,313, canc. Cl. 46.
Huntington Rubber Mills, Portland, Oreg. 702,247, pub. 5–17–60. Cl. 35.
Hurd, Jud, Cartoons: *See*—
Hurd, Jud.
Hurd, Jud, d.b.a. Jud Hurd Cartoons, Cleveland, Ohio. 702,296, pub. 5–17–60. Cl. 38.
Hygienol Co., Inc.: *See*—
Levy, Maurice.
I. & M. Co., New York, N. Y. 591,277, canc. Cl. 42.
Igersheim, Oscar F., d.b.a. Plastic Fabricators, New York, N.Y. 702,053–5, pub. 5–17–60. Cl. 2.
Imperial Knife Associated Companies, Inc., Providence, R.I. 702,218, pub. 5–17–60. Cl. 23.
Indiana Gear Works, Inc., Indianapolis, Ind. 702,175, pub. 5–17–60. Cl. 19.
Industrial Paint Co., Hayesville, Pa. 137,626, ren. 8–2–60. Cl. 16.
International Paper Co., New York, N.Y. 702,214, pub. 5–17–60. Cl. 23.
Irons Memorial Foundation, San Francisco, Calif. 591,047, canc. Cl. 18.
Italviscosa S.A., to Italviscosa S.p.A., Milan, Italy. 380,046, ren. 8–2–60. Cl. 43.
Italviscosa S.p.A.: *See*—
Italviscosa S.A.
Isod Ltd., from David Crystal, Inc., New York, N.Y. 702,412. Cl. 39.
Jelke, John F., Co., Chicago, Ill., to Lever Brothers Co., New York, N.Y. 136,481, ren. 8–2–60. Cl. 46.
Jenrling, Sten A. W., Stockholm, Sweden. 591,091, canc. Cl. 23.
Johnson, C. A., d.b.a. The Johnson School of Arithmatics, to Carl A. Johnson, Cheyenne, Wyo. 378,564, ren. 8–2–60. Cl. 38.
Johnson, Carl A.: *See*—
Johnson, C. A.
Johnson School of Arithmatics, The: *See*—
Johnson, C. A.
Johnston's Coffee Shop, Inc., Daytona Beach, Fla. 702,415. Cl. 46.
Johnston's Coffee Shop, Inc., Daytona Beach, Fla. 702,421. Cl. 100.
Johnson's, Mrs., Tours, New Orleans, La. 591,439, canc. Cl. 105.
Jolly Music, Ltd., New York, N.Y. 702,269, pub. 5–17–60. Cl. 35.
Jones, Hap: *See*—
Jones, L. A.
Jones, L. A., d.b.a. Hap Jones, San Francisco, Calif. 591,469, canc. Cl. 38.
Jowitt and Rodgers Co., Philadelphia, Pa. 702,058, pub. 5–17–60. Cl. 4.
Just For You, Inc., Miami Beach, Fla. 590,972, canc. Cl. 3.
Kastar Inc., New York, N.Y. 591,460, canc. Cl. 19.
Kaufman, Sara, State College, Pa. 591,396, canc. Cl. 51.
Kearney, James R., Corp., St. Louis, Mo. 702,190–1, pub. 5–17–60. Cl. 21.
Kelly, Leo M., Pittsburgh, Pa. 591,475, canc. Cl. 32.
Kendall Foods, Inc., Los Angeles, Calif. 702,357, pub. 5–17–60. Cl. 46.
Kesrob, James, Inc., The, Cleveland, Ohio. 702,380, pub. 5–17–60. Cl. 39.
Kersting Mfg. Co., Alhambra, Calif. 702,236, pub. 5–17–60. Cl. 32.
Kessler, Minuetta, Belmont, Mass. 702,192, pub. 5–17–60. Cl. 22.
Keystone Services, Inc., Denver, Colo. 702,201, pub. 5–17–60. Cl. 23.
Keystone Steel & Wire Co., Peoria, Ill. 86,598, canc. Cl. 23.
Keystone Steel & Wire Co., Peoria, Ill. 356,960, canc. Cl. 14.
Kiddies' Togs Mfg. Co. Ltd., Montreal, Quebec, Canada. 702,296, pub. 5–20–60. Cl. 39.
Kilgore, Charles, Co., Inc.: *See*—
Tam Products, Inc.
Kingston Pencil Corp., Chattanooga, Tenn. 591,200–1, canc. Cl. 37.
Kirsch Co., Sturgis, Mich. 591,158, canc. Cl. 32.
Kleinert, I. B., Rubber Co., New York, N.Y. 380,069, ren. 8–2–60. Cl. 39.
Knopf, Artie W., New York, N.Y. 591,462, canc. Cl. 23.
Koefoed, Hauberg, Marstrand, og Helweg, Aktieselskabet Titan, Copenhagen, Denmark. 702,209, pub. 5–17–60. Cl. 25.
Komfo Dental Pad Co.: *See*—
Eso Products Co.
Kontney Candy Co.: *See*—
Kontney, Fabian E.
Kontney, Fabian E., d.b.a. Kontney Candy Co., Green Bay, Wis. 591,303, canc. Cl. 46.
Kresge, S. S., Co., Detroit, Mich. 702,196, pub. 5–17–60. Cl. 22.
Kushner, G. Jed, d.b.a. American Shredded Paper Co., Somerville, Mass. 591,463, canc. Cl. 37.
L.K.R. Chemical Products Corp., Detroit, Mich. 702,069, pub. 5–17–60. Cl. 6.
La Crosse Rubber Mills Co., La Crosse, Wis. 591,237, canc. Cl. 39.
Laminators Inc., Cleveland, Ohio. 702,119, pub. 5–17–60. Cl. 16.
Landbouwwerktuigen- en Machinefabriek H. Vissers N.V., Nieuw Vennep, Netherlands. 702,210, pub. 5–17–60. Cl. 23.
Land 'N Sea, Inc.: *See*—
Winer-Dickson, Inc.
Lander Co. Inc., to Lander Co., Inc., New York, N.Y. 380,437, ren. 8–2–60. Cl. 51.
Lander Co. Inc., New York, N.Y. 380,317, ren. 8–2–60. Cl. 51.
Lander, David, Huntington Park, Calif. 591,045, canc. Cl. 18.
Landis Machine Co., Waynesboro, Pa. 380,285, 12(c) pub. 8–2–60. Cl. 23.
Landis Machine Co., Waynesboro, Pa. 380,555, 12(c) pub. 8–2–60. Cl. 23.
Lawson, J. W., d.b.a. The Pittle-To Co., Knoxville, Tenn. 591,055, canc. Cl. 18.
Lederach, Franklin L., d.b.a. Eastern Television Productions, Philadelphia, Pa. 591,434, canc. Cl. 101.
Leeds Ltd. Costa, Inc., New York, N.Y. 591,389, canc. Cl. 39.
Lerner, Stuart M., Inc., Brooklyn, N.Y. 702,052, pub. 5–17–60. Cl. 2.
Letts Industries, Inc., Detroit, Mich. 702,105, pub. 5–17–60. Cl. 14.
Lever Brothers Co.: *See*—
Jelke, John F., Co.
Levitt, Barth, Products, Lynbrook, N.Y. 702,125, pub. 5–17–60. Cl. 18.
Levy, Maurice, New York, to Hygienol Co., Inc., New Rochelle, N.Y. 132,990, ren. 8–2–60. Cl. 29.
Lexington Mfg. Co., Lexington, N.C. 702,324, pub. 5–17–60. Cl. 39.
Liberty Distributors, from Supplee-Biddle-Stelts Co., Philadelphia, Pa. 702,118, pub. 5–17–60. Cl. 16.
Lilly, Ell, and Co., Indianapolis, Ind. 702,133, pub. 5–17–60. Cl. 18.
Lilyette: *See*—
Lilyette Brassiere Co., Inc.
Lilyette Brassiere Co., Inc., d.b.a. Lilyette, New York, N.Y. 702,299, pub. 5–17–60. Cl. 39.
Linmark International Corp., New York, N.Y. 591,142, canc. Cl. 28.
Lord Jeff Knitting Co., Inc., Maspeth, N.Y. 702,381, pub. 5–17–60. Cl. 39.
Lorillard, P., Co., New York, N.Y. 702,400. Cl. 17.
Lyntone Co., The, Oklahoma City, Okla. 702,318, pub. 5–17–60. Cl. 39.
Maccaferri, Mario, to French American Reeds Mfg. Co., Inc., New York, N.Y. 381,457, ren. 8–2–60. Cl. 36.
Magazine Publishers Association, Inc., New York, N.Y. 702,392, pub. 5–17–60. Cl. 200.
Mag-Craft Sales Corp., Grand Rapids, Mich. 702,377, pub. 5–17–60. Cl. 50.
Malden Form Brassiere Co., Inc., New York, N.Y. 702,316, pub. 5–17–60. Cl. 39.
Malden Form Brassiere Co., Inc., New York, N.Y. 702,327, pub. 5–17–60. Cl. 39.
Malone Knitting Co., Springfield, Mass. 378,815, 12(c) pub. 8–2–60. Cl. 39.
Mangum Mfg. Co., Inc., Dallas, Tex. 702,109, pub. 5–17–60. Cl. 15.
Manning, John, and Co.: *See*—
Manning, John.
Manning, John, d.b.a. John Manning and Co., Baticoy, Calif. 702,370, pub. 5–17–60. Cl. 46.
Manufacture D'Outils Dumont S.A.: *See*—
Vve. Th. Dumont Fils Et Cie. Succ. De Th. Dumont Fils.
Marcious, Bill M.: *See*—
Foremost Mfg. Co.
Markel Mfg. Co., Inc., Middlebury, Ind. 702,176, pub. 5–17–60. Cl. 19.
Marshall-Wells Co., Duluth, Minn. 378,244, ren. 8–2–60. Cl. 24.
Matthews, J. D., d.b.a. Matthews Thrifty Lady Super Markets, Atlanta, Ga. 591,318, canc. Cl. 46.
Matthews, James J., Inc., Arlington, Va. 702,385, pub. 5–17–60. Cl. 101.
Matthews Thrifty Lady Super Markets: *See*—
Matthews, J. D.
Matthiessen & Hegeler Zinc Co., La Salle, Ill. 591,018, canc. Cl.14.
Mayers, L. & C., Co., Inc., New York, N.Y. 591,131, canc. Cl. 27.
Maytag Co., The, Newton, Iowa. 591,488, canc. Cl. 38.
McAfee Candy Co., Inc., Macon, Ga. 591,394, canc. Cl. 51.
McGraw-Edison Co.: *See*—
Bersted Mfg. Co.
McGraw-Edison Co., Milwaukee, Wis. 702,213, pub. 5–17–60. Cl. 23.
McKelvy, Alfred D., d.b.a. Alfred D. McKelvy Co., Minneapolis, Minn., by Chesebrough-Pond's Inc., New York, N.Y. 375,518, 12(c) pub. 8–2–60. Cl. 51.
McKelvy, Alfred D., Co.: *See*—
McKelvy, Alfred D.
McMullan, W. R., Riverview, Fla. 591,359, canc. Cl. 46.
McNeil Laboratories, Inc., Philadelphia, Pa. 702,154–5, pub. 5–17–60. Cl. 18.
Mead Corp., The, Dayton, Ohio. 591,194, canc. Cl. 37.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 383,155, ren. 8–2–60. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 702,143, pub. 5–17–60. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 702,153, pub. 5–17–60. Cl. 18.
Meyercord Co., The, Chicago, Ill. 702,277, pub. 5–17–60. Cl. 38.
Miami Footwear Corp., Miami, Fla. 702,289, pub. 5–17–60. Cl. 39.
Millbake Co., The, Jacksonville, Fla. 591,352, canc. Cl. 46.
Miller Offset and Letterpress, Chicago, Ill. 591,224, canc. Cl. 38.

Milwaukee Gas Specialty Co., to Base Inc., Milwaukee, Wis. 379,697, ren. 8–2–60. Cl. 26.
Mimi Roget Parfums, Short Hills, N.J. 591,405, canc. Cl. 51.
Mine Safety Appliances Co., Pittsburgh, Pa. 383,245, ren. 8–2–60. Cl. 26.
Mine Safety Appliances Co., Pittsburgh, Pa. 679,094, cor. Cl. 44.
Mirror Insulation Co., Lambertville, N.J. 702,084, pub. 5–17–60. Cl. 12.
Mission Macaroni Co.: *See*—
Golden Grain Macaroni Co.
Mobile Daily Newspapers, Inc., to The Mobile Press Register, Inc., Mobile, Ala. 382,785, ren. 8–2–60. Cl. 38.
Mobile Magazines Inc., Chicago, Ill. 702,284, pub. 5–17–60. Cl. 38.
Mobile Press Register, Inc., The: *See*—
Mobile Daily Newspapers, Inc.
Molitor, Inc., Englewood, Colo. 702,372, pub. 5–17–60. Cl. 50.
Monsanto Chemical Co., St. Louis, Mo. 382,673, ren. 8–2–60. Cl. 1.
Montaquila Bros., Providence, R.I. 591,333, canc. Cl. 46.
Montclair Pharmaceuticals: *See*—
Newton, Frederick G.
Moosbrunner Glasfabriks-Aktiengesellschaft, Vienna, Austria. 702,083, pub. 5–17–60. Cl. 12.
Moran Brush Mfg. Co., Inc., Hamden, Conn. 702,231, pub. 5–17–60. Cl. 20.
Morrell, John, & Co., Ottumwa, Iowa. 702,361–2, pub. 5–17–60. Cl. 46.
Morris Bootmakers, Beverly Hills, Calif. 591,236, canc. Cl. 39.
Munsingwear, Inc., from Hollywood-Maxwell Co., Minneapolis, Minn. 673,553, cor. Cl. 39.
Murray White Co., Inc., Boston, Mass. 591,492, canc. Cl. 39.
Mystic Products Co., Hickory, Miss. 703,141, pub. 5–17–60. Cl. 18.
N.V. Bataafsche Rubber Industrie, Maastricht, Netherlands. 590,967, canc. Cl. 1.
Nachman, Joseph, Philadelphia, Pa. 702,216, pub. 5–17–60. Cl. 23.
Nachman, Joseph, Philadelphia, Pa. 702,238, pub. 5–17–60. Cl. 32.
Namm-Loesser's, Inc., Brooklyn, N.Y. 591,264, canc. Cl. 39.
National Silver Co., New York, N.Y. 591,137, canc. Cl. 28.
National Sure-Fit Quilting Co., Inc., New York, N.Y. 591,509, canc. Cl. 42.
National Tuberculosis Assn., New York, N.Y. 163,810, 12(c) pub. 8–2–60. Cl. 38.
Neiman-Marcus Co., Dallas, Tex. 702,402. Cl. 22.
Nelson, Carl A., New York, N.Y. 591,216, canc. Cl. 38.
Neumann, Morton G., d.b.a. Famous Products Co., to Valmor Products Co., Chicago, Ill. 381,065, ren. 8–2–60. Cl. 51.
Neumann, Morton G., d.b.a. Famous Products Co., to Valmor Products Co., Chicago, Ill. 382,249, ren. 8–2–60. Cl. 6.
New Castle Products, Inc., New Castle, Ind. 702,086, pub. 5–17–60. Cl. 12.
New York Association for the Blind, Inc., The, New York, N.Y. 591,474, canc. Cl. 29.
New York Brass & Copper Co., Inc., New York, N.Y. 380,990, 12(c) pub. 8–2–60. Cl. 14.
Newton, Frederick G., d.b.a. Montclair Pharmaceuticals, Detroit, Mich. 591,046, canc. Cl. 18.
Nino Gesellschaft mit beschraenkter Haftung & Co., Nordhorn, Bentheim, Germany. 702,808, pub. 5–17–60. Cl. 39.
Nino Gesellschaft mit beschraenkter Haftung & Co., Nordhorn, Bentheim, Germany. 702,340, pub. 5–17–60. Cl. 42.
Nomend Hosiery Mills M. B. Laubach Co. Inc., Philadelphia, to Berkshire Knitting Mills, Wyomissing, Pa. 132,218, ren. 8–2–60. Cl. 39.
Norcross, Inc., New York, N.Y. 591,227, canc. Cl. 38.
Norcross, Inc., New York, N.Y. 702,282, pub. 5–17–60. Cl. 38.
Norwich Pharmacal Co., The, Norwich, N.Y. 702,139, pub. 5–17–60. Cl. 18.
Nuclefort Medicine Co.: *See*—
De Leon, Andres.
Odell Co., Inc., The, Newark, N.J. 702,113, pub. 5–17–60. Cl. 15.
Odorono Co., Inc., The, Stamford, Conn. 702,380, pub. 12–30–58. Cl. 51.
Oil Well Chemical Supply & Service Co.: *See*—
Peters, Alexander, Jr.
Oneida Ltd., Oneida, N.Y. 702,208, pub. 5–17–60. Cl. 23.
Optical Gaging Products, Inc., Rochester, N.Y. 591,123, canc. Cl. 26.
Optometics, Inc., Los Angeles, Calif. 702,147, pub. 5–17–60. Cl. 18.
Ortho Pharmaceutical Corp., Raritan, N.J. 702,129, pub. 2–16–60. Cl. 18.
Ozark-Mahoning Co., Tulsa, Okla. 702,080, pub. 5–17–60. Cl. 10.
P. & F. Co., Elizabeth, N.J. 702,142, pub. 5–17–60. Cl. 18.
Pacific Coast Macaroni Mfg. Co.: *See*—
Golden Grain Macaroni Co.
Parachutes, Inc., Bedford, N.Y. 702,173, pub. 5–17–60. Cl. 19.
Parke, Davis & Co., Detroit, Mich. 175,422, 12(c) pub. 8–2–60. Cl. 18.
Parke, Davis & Co., Detroit, Mich. 702,186, pub. 5–17–60. Cl. 18.
Pascall, James, Ltd., Mitcham, England. 130,221, 12(c) pub. 8–2–60. Cl. 46.
Patons & Baldwins, Ltd., Darlington, England. 379,787, 12(c) pub. 8–2–60. Cl. 43.
Patterson, Oscar E., Walnut Creek, Calif. 591,445, canc. Cl. 107.
Pedi-Bares, Inc., San Francisco, Calif. 702,333, pub. 5–17–60. Cl. 39.
Penick & Ford, Ltd., Inc., New Orleans, La., to Penick & Ford, Ltd., Inc., New York, N.Y. 137,863, ren. 8–2–60. Cl. 46.
Penick & Ford, Ltd., Inc., New York, N.Y. 382,139, ren. 8–2–60. Cl. 46.
Penn Metal Co., Inc., Boston, Mass. 702,396. Cl. 12.
Perfumerie L. T. Piver S.A., Paris, France. 702,382, pub. 5–17–60. Cl. 51.
Peridome, Ltd., New York, N.Y. 591,119, canc. Cl. 26.
Perkins Products Co.: *See*—
Seasons, Inc.
Peters, Alexander, Jr., d.b.a. Oil Well Chemical Supply & Service Co., Evansville, Ind. 590,962, canc. Cl. 6.
Petersen Oven Co., The, Como-Cast Corp., Milwaukee, Wis. 657,095, Am. 7(d), Cl. 23.
Perron, Antoine F., Paris, France. 702,349–58, pub. 5–17–60. Cl. 44.
Pfaender, Carl, New Ulm, Minn. 591,449, canc. Cl. 2.
Phenix Mfg. Co., Inc., Milwaukee, Wis. 381,436, ren. 8–2–60. Cl. 12.
Phillips & Pain-Vermorel, Societe Anonyme, Seine, France. 702,407. Cl. 23.
Phoenix-Hermetic Co., by Phoenix Metal Cap Co., Inc., Chicago, Ill. 128,818, 12(c) pub. 8–2–60. Cl. 50.
Phoenix Metal Cap Co., Inc.: *See*—
Phoenix-Hermetic Co.
Pillsbury Co.: *See*—
Pillsbury Flour Mills Co.
Pillsbury Flour Mills Co., to The Pillsbury Co., Minneapolis, Minn. 378,235, ren. 8–2–60. Cl. 46.
Pillsbury Flour Mills Co., to The Pillsbury Co., Minneapolis, Minn. 382,622, ren. 8–2–60. Cl. 46.
Pinto, Nilo S., Rio de Janeiro, Brazil. 702,260, pub. 5–17–60. Cl. 36.
Pittle-To Co., The: *See*—
Lawson, J. W.
Plastic Fabricators: *See*—
Igersheim, Oscar F.
Pomona Products Co., Griffin, Ga. 591,364, canc. Cl. 46.
Powers-Samas Accounting Machines Ltd., Holborn Bars, London, England. 590,991, canc. Cl. 11.
Premtex Hosiery Co., Inc., New York, N.Y. 702,323, pub. 5–17–60. Cl. 39.
Prima Footwear Co., Columbus, Ohio. 591,247, canc. Cl. 39.
Prima Footwear Co., Columbus, Ohio. 591,252, canc. Cl. 39.
Prima Footwear Co., Columbus, Ohio. 591,270–1, canc. Cl. 39.
Printers Plates Ltd., London, England. 702,107, pub. 5–17–60. Cl. 14.
Process Chemicals Co., Santa Fe Springs, Calif. 702,089, pub. 5–17–60. Cl. 1.
Purdue Frederick Co., The, New York, N.Y. 702,164, pub. 5–17–60. Cl. 18.
Pure Oil Co., The, Chicago, Ill. 702,066, pub. 5–17–60. Cl. 6.
Purkey, R. D., d.b.a. "Purkey-White," Miami, Fla. 702,098, pub. 5–17–60. Cl. 12.
"Purkey-White": *See*—
Purkey, R. D.
Quaker Oats Co., The: *See*—
Chappel Bros., Inc.
Radiant Wash Solution Co., Olean, N.Y. 437,181, 12(c) pub. 8–2–60. Cl. 6.
Rampco Equipment Co.: *See*—
Eldridge, Eugene.
Ranco Industrial Products Corp.: *See*—
United Laboratories, Inc.
Ranney Refrigerator Co., Greenville, Mich. 702,234, pub. 5–17–60. Cl. 31.
Ransom Agency, Inc., Lexington, Ky. 702,280, pub. 5–17–60. Cl. 38.
Ray-Dor Sales Corp.: *See*—
Cleveland-Detroit Corp.
Recta Manufacture d'Horlogerie S.A., Bienne, Switzerland. 591,183, canc. Cl. 37.
Redmond Co., Inc., Owosso, Mich. 591,066, canc. Cl. 21.
Refractory Specialties Co., Norristown, Pa. 702,092, pub. 5–17–60. Cl. 12.
Reider, S. A., & Co., New York, N.Y. 702,376, pub. 5–17–60. Cl. 50.
Rens Mfg. Co., Inc., Eugene, Oreg. 702,184, pub. 5–17–60. Cl. 21.
Richlieu Corp., The, New York, N.Y. 590,968, canc. Cl. 12.
Rimex Corp., New York, N.Y. 702,090, pub. 5–17–60. Cl. 12.
Ritz Nacional Mexicano, Mexico City, Mex. 591,217, canc. Cl. 38.
Robbins, Anatole, Inc., Los Angeles, Calif. 591,391, canc. Cl. 51.
Robertson, Kenneth B., Durham, N.C. 591,493, canc. Cl. 39.
Robins, Carol, Inc., New York, N.Y. 702,319, pub. 4–12–60. Cl. 39.
Rockford Textile Mills, Inc., McMinnville, Tenn. 702,332, pub. 5–17–60. Cl. 39.
Rold Gold Foods, Inc.: *See*—
American Cone & Pretzel Co.
Roman Meal Co., Tacoma, Wash. 702,358, pub. 5–17–60. Cl. 46.
Romia Co., Los Angeles, Calif. 702,243, pub. 5–17–60. Cl. 34.
Roper, Geo. D., Corp.: *See*—
Florence Stove Co.
Rose Brothers Inc., New York, N.Y. 702,287, pub. 5–17–60. Cl. 39.
Rose Patch and Label Co., Grand Rapids, Mich. 702,266, pub. 5–17–60. Cl. 38.
Ro-Search, Inc., Waynesville, N.C. 702,394, pub. 5–17–60. Cl. A.
Rosenfeld, Richard L., Cincinnati, Ohio. 591,312, canc. Cl. 46.
Row, John W., Berrien Springs, Mich., to Servo Corp. of America, New Hyde Park, N.Y. 591,117, canc. Cl. 26.

Royal McBee Corp., Port Chester, N.Y. 702,212, pub. 5–17–60. Cl. 23.
Rubberset Co., Newark, N.J. 590,958–9, canc. Cl. 1.
Rugby Rug Mills Inc., New York, N.Y. 702,341, pub. 5–17–60. Cl. 42.
S.A. Etsco (European Overseas Trading Co.), Zwevegem, Belgium. 702,099, pub. 5–17–60. Cl. 13.
S.F. Appliances, Ltd., Ridgefield, N.J. 591,479, canc. Cl. 24.
Safe Electrical Cord Committee, New York, N.Y. 702,178, pub. 5–17–60. Cl. 21.
Safety Night Light Co., Brooklyn, N.Y., to Will & Baumer Candle Co., Inc., Syracuse, N.Y. 132,796, ren. 8–2–60. Cl. 15.
St. Thomas Inc., Gloversville, N.Y. 591,451, canc. Cl. 3.
Salem Mfg. Co., Salem, N.J., and New York, N.Y., to Congoleum-Nairn Inc., Kearny, N.J. 131,828, ren. 8–2–60. Cl. 20.
Sanitary Automatic Candy Corp., New York, to ABC Vending Corp., Long Island City, N.Y. 378,227, ren. 8–2–60. Cl. 23.
Sanitary Automatic Candy Corp., New York, to ABC Vending Corp., Long Island City, N.Y. 379,079–80, ren. 8–2–60. Cl. 23.
Satellite Records: *See*—
Hoffman, Stanley.
Schenlabs Pharmaceuticals, Inc., New York, N.Y. 702,157, pub. 5–17–60. Cl. 18.
Schenlabs Pharmaceuticals, Inc., New York, N.Y. 702,159–61, pub. 5–17–60. Cl. 18.
Schenley Distillers, Inc., New York, N.Y. 702,371, pub. 5–17–60. Cl. 49.
Schmitt, F. R., & Son, Hollis, N.Y. 591,068, canc. Cl. 21.
Schoeneman, J., Inc., Baltimore, Md. 315,256, 12(c) pub. 8–2–60. Cl. 39.
Schonefeld, Rene H. M., The Hague, Netherlands. 702,042, pub. 5–17–60. Cl. 1.
Schratter, Alfred, d.b.a. The Schratter Import Co., New York, N.Y. 591,309, canc. Cl. 46.
Schratter Import Co., The: *See*—
Schratter, Alfred.
Schuckl & Co., Inc.: *See*—
Warrensburg Canning Co.
Schuckl & Co., Inc., Sunnyvale, Calif. 382,530, ren. 8–2–60. Cl. 46.
Schwab, Armand, & Co. Inc., New York, N.Y. 702,335, pub. 5–17–60. Cl. 40.
Scott, Gary, Commodities Corp., New York, N.Y. 591,132, canc. Cl. 27.
Searle, G. D., & Co., Skokie, Ill. 702,146, pub. 5–17–60. Cl. 18.
Sears, Roebuck and Co., Chicago, Ill. 374,849, 12(c) pub. 8–2–60. Cl. 42.
Sears, Roebuck and Co., Chicago, Ill. 702,193, pub. 5–17–60. Cl. 22.
Seidin Coat Co., Inc., Baltimore, Md. 591,250, canc. Cl. 39.
Servo Corp. of America: *See*—
Row, John W.
Seymour of Sycamore, Inc., Sycamore, Ill. 591,033, canc. Cl. 16.
Shoe Corp. of America, Columbus, Ohio. 702,293, pub. 5–17–60. Cl. 39.
Shoe Corp. of America, Columbus, Ohio. 702,320, pub. 5–17–60. Cl. 39.
Shotwell Mfg. Co., The, Chicago, Ill. 591,295, canc. Cl. 46.
Shrimpton & Fletcher Ltd., Birmingham, England. 702,355, pub. 5–17–60. Cl. 44.
Sidney Press, Hummelstown, Pa. 702,309, pub. 5–17–60. Cl. 39.
Simon, I., & Sons: *See*—
Simon, I., & Sons, Inc.
Simon, I., & Sons, Inc., to I. Simon & Sons, Paterson, N.J. 378,909, ren. 8–2–60. Cl. 39.
Six-Footer Co., The: *See*—
Dietz, Sheldon.
Skin Tested Drug Products, Inc., New York, N.Y. 591,412, canc. Cl. 51.
Skinner Chuck Co., The, New Britain, Conn. 436,190, ren. 8–2–60. Cl. 23.
Sky Records, Greenville, Miss. 702,255, pub. 2–17–59. Cl. 36.
Slumberest Co., Georgetown, Ky. 702,188, pub. 5–17–60. Cl. 21.
Sluys Rockford, Inc., Rockford, Mich. 591,409, canc. Cl. 51.
Smith-Dorsey: *See*—
Wander Co., The.
Smith, Elton, Co.: *See*—
Smith, Elton J.
Smith, Elton J., d.b.a. Elton Smith Co., Church Point, La. 591,353, canc. Cl. 46.
Snap-On Tools Corp., Kenosha, Wis. 591,218, canc. Cl. 38.
Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy. 702,348, pub. 5–17–60. Cl. 48.
Sociedad Anonima MacKinnon and Coelho Ltda. Compania Yerbatera, Buenos Aires, Argentina. 591,371, canc. Cl. 46.
Societe a Responsabilite Limitee Dite: Christian Dior, Paris, France. 702,315, pub. 5–17–60. Cl. 39.
Societe Alsacienne de Constructions Mecaniques, Paris, France. 702,182, pub. 5–17–60. Cl. 21.
Society of Chemical Industry in Basle, Basel, Switzerland, to Ciba Pharmaceutical Products Inc., Summit, N.J. 378,629–30, ren. 8–2–60. Cl. 18.
Sonneborn, L., Sons, Inc., New York, N.Y. 880,949, 12(c) pub. 8–2–60. Cl. 6.
Spartan Aircraft Co., Tulsa, Okla. 702,174, pub. 5–17–60. Cl. 19.
Spencer, George, & Co., by George Spencer Ltd., Lutterworth, England. 130,580, 12(c) pub. 8–2–60. Cl. 39.
Spencer, George, Ltd.: *See*—
Spencer, George, & Co.
Sperry Rand Corp., New Holland, Pa. 702,207, pub. 5–17–60. Cl. 23.
Spinnerin Yarn Co., Inc., South Hackensack, N.J. 702,346, pub. 5–17–60. Cl. 45.
Spray Maid Products Co., Fairfield, Conn. 591,396, canc. Cl. 51.
Sprite Ltd., Newmarket, Suffolk, England. 702,172, pub. 5–17–60. Cl. 19.
Spurrier Paper Co., d.b.a. Spurriers, Wichita, Kans. 702,061–2, pub. 5–17–60. Cl. 6.
Spurriers: *See*—
Spurrier Paper Co.
Standard Brands Inc., New York, N.Y. 702,070, pub. 5–17–60. Cl. 6.
Standard Milling Co., New York, N.Y., to Standard Milling Co., Kansas City, Mo. 378,306, ren. 8–2–60. Cl. 46.
Standard Milling Co., Chicago, Ill. 591,304, canc. Cl. 46.
Steelite Buildings, Inc., Pittsburgh, Pa. 702,085, pub. 5–17–60. Cl. 12.
Stein, Hall & Co., Inc., New York, N.Y. 702,397, Cl. 1.
Stenberg Corp. Aktiebolag, Vallingby, Sweden. 702,206, pub. 5–17–60. Cl. 23.
Stevens, J. P., & Co. Inc.: *See*—
Vandam, Albert H., Co., Inc.
Stevens, J. P., & Co., Inc., New York, N.Y. 702,336, pub. 5–17–60. Cl. 42.
Stevens, J. P., & Co., Inc., New York, N.Y. 702,347, pub. 5–17–60. Cl. 43.
Stradivari Watch Co.: *See*—
Warner, Herbert L.
Strathmore Shoe Co., Inc., The, Brockton, Mass. 702,326, pub. 5–17–60. Cl. 39.
Structural Service Co., St. Charles, Ill. 591,437, canc. Cl. 103.
Suburban Set, Inc., Boston, Mass. 702,294, pub. 5–17–60. Cl. 39.
Sudsette, San Francisco, Calif. 591,423, canc. Cl. 52.
Sun Oil Co., Philadelphia, Pa. 702,111, pub. 5–17–60. Cl. 15.
Sunnyhill Aggregates Corp., Pittsburgh, Pa. 590,986, canc. Cl. 1.
Sunshine Biscuits, Inc., d.b.a. Gordon Foods, Long Island City, N.Y. 702,416. Cl. 46.
Superba Cravats, Inc.: *See*—
Cohn, H. C., & Co.
Superior Sleesprite Corp., Chicago, Ill. 591,164–5, canc. Cl. 32.
Supplee-Biddle-Stelts Co.: *See*—
Liberty Distributors.
Tabakfabrik Landhaus, A. Eichenberger & Co., Beinwil am See, Switzerland. 702,122, pub. 5–17–60. Cl. 17.
Taeschner & Co., Kipfenberg, Germany. 591,042, canc. Cl. 18.
Tall Towne Fashions, Inc., Newark, N.J. 591,504, canc. Cl. 39.
Tam Products, Inc., now by change of name to American Dietaids Co., Inc., New York, to Charles Killgore Co., Inc., Yonkers, N.Y. 382,681, ren. 8–2–60. Cl. 46.
Tammen, Kathleen, d.b.a. Tammen Table Co., Tucson, Ariz. 702,414. Cl. 44.
Tammen Table Co.: *See*—
Tammen, Kathleen.
Tanner of North Carolina, Inc., Rutherfordton, N.C. 702,317, pub. 5–17–60. Cl. 39.
Telautograph Corp., Los Angeles, Calif. 702,390, pub. 5–17–60. Cl. 104.
Television, Radio and Film Commission of The Methodist Church, The, Nashville, Tenn. 702,265, pub. 5–17–60. Cl. 38.
Television, Radio and Film Commission of The Methodist Church, The, Nashville, Tenn. 702,270, pub. 5–17–60. Cl. 38.
Textron Inc.: *See*—
American Woolen Co.
Thin Twins Potato Chip Corp., Evansville, Ill. 702,365, pub. 5–17–60. Cl. 46.
Thomas & Co., Inc., Seattle, Wash. 591,470, canc. Cl. 27.
Thompson Products, Inc.: *See*—
Thompson Ramo Wooldridge Inc.
Thompson Ramo Wooldridge Inc., by change of name from Thompson Products, Inc., Cleveland, Ohio. 702,403. Cl. 23.
Thompson, Robert W., Alhambra, Calif. 591,466, canc. Cl. 24.
Tip-Top Hosiery Mills, Inc., Asheboro, N.C. 702,305, pub. 5–17–60. Cl. 39.
Tissages Rodier S.A., Paris, Seine, France. 702,301, pub. 5–17–60. Cl. 39.
Tobin Packing Co., Inc., Rochester, N.Y. 591,331–2, canc. Cl. 46.
Topco Associates, Inc., Chicago, Ill. 591,189, canc. Cl. 37.
Topco Associates, Inc., Chicago, Ill. 702,262, pub. 5–17–60. Cl. 37.
Topco Associates, Inc., to Dartmouth Marketing Co., Inc., Chicago, Ill. 591,190, canc. Cl. 37.
Torch Rubber Co. Inc., New York, N.Y. 702,322, pub. 5–17–60. Cl. 39.
Towle Mfg. Co., Newburyport, Mass. 702,226, pub. 5–17–60. Cl. 28.
Tracey, E. A., Enterprises, Inc.: *See*—
Elmo, Inc.
Trade Builders, Inc.: *See*—
Trade Builders.
Trade Builders, from Trade Builders, Inc., Chicago, Ill. 591,135, canc. Cl. 28.
Trade Press Publishing Co., Milwaukee, Wis. 702,281, pub. 5–17–60. Cl. 38.
Transcriber Co., Inc., Attleboro, Mass. 702,256, pub. 5–17–60. Cl. 36.
Treibacher Chemische Werke Aktiengesellschaft, Treibach, Carinthia, Austria. 702,056, pub. 5–17–60. Cl. 4.
Troy Blanket Mills, Troy, N.H. 382,624, ren. 8–2–60. Cl. 42.
Truesdell, P. S., Co., The, Columbus, Ohio. 702,350, pub. 5–17–60. Cl. 46.

Truss Pre-Fab, Inc., Colorado Springs, Colo. 702,091, pub. 5–17–60. Cl. 12.
Tryco Mfg. Co., Inc., Decatur, Ill. 591,465, canc. Cl. 23.
Tylart, Inc., Ferndale, Mich. 702,418. Cl. 50.
Uddo, F., & Sons Co.: *See*—
Uddo, Joseph F.
Uddo, Joseph F., d.b.a. F. Uddo & Sons, Co., New Orleans, La. 702,419. Cl. 52.
Underwood Corp.: *See*—
Underwood Elliott Fisher Co.
Underwood Elliott Fisher Co. to Underwood Corp., New York, N.Y. 377,279, ren. 8–2–60. Cl. 11.
Union Carbide Corp., New York, N.Y. 702,072–4, pub. 5–17–60. Cl. 6.
Union Carbide Corp., New York, N.Y. 702,114–16, pub. 5–17–60. Cl. 15.
Union Chimique Belge, Societe Anonyme, Brussels, Belgium. 702,130, pub. 5–17–60. Cl. 18.
Union Oil Co. of California, Los Angeles, Calif. 591,023, canc. Cl. 15.
Union Steel Corp., Union, N.J. 702,098, pub. 5–17–60. Cl. 13.
United-Greenfield Corp., Chicago, Ill. 702,203, pub. 5–17–60. Cl. 23.
United Laboratories, Inc., to Ranco Industrial Products Corp., Cleveland, Ohio. 379,558–9, ren. 8–2–60. Cl. 16.
United Newspapers Magazine Corp., New York, N.Y. 702,271, pub. 5–17–60. Cl. 38.
United Wallpaper, Inc., Chicago, Ill. 591,208–9, canc. Cl. 37.
U.S. Acoustics Corp., Chicago, Ill. 702,004, pub. 5–17–60. Cl. 12.
U.S. Electrical Motors, Inc., Los Angeles, Calif. 702,181, pub. 5–17–60. Cl. 21.
U.S. Health Club: *See*—
Horwitt, Mimi.
Universal-Cyclops Steel Corp., Bridgeville, Pa. 702,109, pub. 5–17–60. Cl. 14.
Upjohn Co., The, Kalamazoo, Mich. 702,135, pub. 5–17–60. Cl. 18.
Upjohn Co., The, Kalamazoo, Mich. 702,149–50, pub. 5–17–60. Cl. 18.
Vacuum Can Co., Chicago, Ill. 702,102, pub. 5–10–60. Cl. 13, 19, 21, and 23.
Valmor Products Co.: *See*—
Neumann, Morton G.
Vanadium Corp. of America, New York, N.Y. 591,019–20, canc. Cl. 14.
Vandam, Albert H., Co., Inc., to J. P. Stevens & Co. Inc., New York, N.Y. 380,882, ren. 8–2–60. Cl. 42.
Verdurin Co., from National Agrol Co., Detroit, Mich. 591,035–6, canc. Cl. 17.
Vimco Macaroni Products Co., Carnegie, Pa. 591,323–4, canc. Cl. 46.
Vita-Unit Drug, Inc., New York, N.Y. 702,158, pub. 5–17–60. Cl. 18.
Vve, Th. Dumont Fils Et Cie. Succ. De Th. Dumont Fils, to Manufacture D'Outils Dumont S.A., Montignez, Switzerland. 375,846, ren. 8–2–60. Cl. 23.
Waltham Watch Co., Chicago, Ill. 702,223, pub. 5–17–60. Cl. 27.
Waltham Watch Co., Waltham, Mass. 591,134, canc. Cl. 27.
Waltham Watch Co., Waltham, Mass., by Waltham Watch Co., Chicago, Ill. 130,437, 12(c) pub. 8–2–60. Cl. 27.
Walworth Co.: *See*—
Walworth Mfg. Co.
Walworth Patents Inc.
Walworth Mfg. Co., Boston, Mass., to Walworth Co., New York, N.Y. 133,195, ren. 8–2–60. Cl. 13.
Walworth Patents Inc., Boston, Mass., to Walworth Co., New York, N.Y. 380,202, ren. 8–2–60. Cl. 13.
Wander Co., The, Chicago, Ill. 702,401. Cl. 18.
Warner Brothers Co., The, Bridgeport, Conn. 702,324, pub. 5–17–60. Cl. 39.
Warner, Herbert L., d.b.a. Stradivari Watch Co., New York, N.Y. 702,224, pub. 5–17–60. Cl. 27.
Warren Brothers Co., Cambridge, Mass. 132,068, 12(c) pub. 8–2–60. Cl. 12.
Warrensburg Canning Co., Warrensburg, Ill., to Schuckl & Co., Inc., Sunnyvale, Calif. 136,961, ren. 8–2–60. Cl. 46.
Watt, Bess P., d.b.a. Bess' Best Farm Kitchen, Grand Marsh, Wis. 702,363, pub. 5–17–60. Cl. 46.
Weather-Eyes: *See*—
Car-Blair Ltd.
Weiss, Jack H., d.b.a. Genuine Upholstery Leather Co., New York, N.Y. 590,965, canc. Cl. 1.
Well-Built Shoe Co., Inc., Milford, Mass. 702,297, pub. 5–17–60. Cl. 39.
Western Girl, Inc., San Francisco, Calif. 702,284, pub. 5–17–60. Cl. 101.
Westinghouse Air Brake Co., Wilmerding, Pa. 702,101, pub. 5–10–60. Cl. 13.
Westlund Industries: *See*—
Westlund, Raymond E.
Westlund, Raymond E., Jr., d.b.a. Westlund Industries, East Haven, Conn. 702,211, pub. 5–17–60. Cl. 23.
Wey Equipment (Sales) Ltd., London, England. 591,152, canc. Cl. 29.
Whaley-Eaton Corp., Washington, D.C. 702,272, pub. 5–17–60. Cl. 38.
Wheeler Publishing Co., Chicago, Ill. 702,276, pub. 5–17–60. Cl. 38.
Whitehead Brothers Co., New York, N.Y. 702,395. Cl. 1.
Whitney Bros., Inc., Boston, Mass. 702,051, pub. 5–17–60. Cl. 2.
Will & Baumer Candle Co., Inc.: *See*—
Safety Night Light Co.
Williams, Eureka, Corp.: *See*—
Eureka Vacuum Cleaner Co.
Wilson & Co., Inc., Chicago, Ill. 381,491, ren. 8–2–60. Cl. 46.
Wilson Products Co., Salt Lake City, Utah. 702,367, pub. 5–17–60. Cl. 46.
Windsor Ring Co., Brooklyn, N.Y. 591,136, canc. Cl. 28.
Winer-Dickson, Inc., to Winer-Dickson, Inc., to Land 'N Sea, Inc., New York, N.Y. 378,226, ren. 8–2–60. Cl. 39.
Wisconsin Door Co., Detroit, Mich. 591,006, canc. Cl. 12.
Woburn National Bank, Woburn, Mass. 702,388, pub. 5–17–60. Cl. 102.
Wood Treating Chemicals Co., St. Louis, Mo. 702,068, pub. 5–17–60. Cl. 6.
Wraslowsky, Arno, New York, N.Y. 591,143, canc. Cl. 28.
Wright, A. T., Fort Worth, Tex. 702,405. Cl. 23.
Wyler Watch Agency, Inc., New York, N.Y. 591,130, canc. Cl. 27.
Young, Gerald, d.b.a. D'Estree Parfums Cie, Los Angeles, Calif. 591,404, canc. Cl. 51.
Z., Henry, Inc., New York, N.Y. 702,292, pub. 5–17–60. Cl. 39.
Zion Countryside Bakers: *See*—
Zion Industries, Inc.
Zion Industries, Inc., d.b.a. Zion Countryside Bakers, Zion, Ill. 591,348, canc. Cl. 46.
Zonolite Co., Chicago, Ill. 702,121, pub. 5–17–60. Cl. 16.

U.S. GOVERNMENT PRINTING OFFICE: 0—1960

PATENTS

NOTICES

Patents Available for Licensing or Sale

2,931,584. Ball Mill. Donald H. Fairchild, 4001 Calle de Jardin, Tucson, Ariz.

2,933,519. Method of Manufacturing Pharmacodynamically Effective Basic Esters of Alkoxy Substituted Mono- and Diphenyl Carbamic Acids. SPOFA, Prague, Czechoslovakia. Correspondence to: Michael S. Striker, 360 Lexington Ave., New York 17, N.Y.

2,939,238. Fishing Apparatus. Gutert Quality Products, Inc., of Milwaukee. Correspondence to: Frank S. Andrus, 735 N. Water St., Milwaukee 2, Wis.

2,941,478. Fluid Pressure Converter. John S. Eubanks, 3440 Fulton Ave., Sacramento 21, Calif.

2,941,557. Adjustable Single Joint Miter Clamp. Theodore J. Baprawski, 15032 Mayfield St., Detroit 5, Mich.

2,944,120. Safety Foot Switch. Zorro D. Ruben, 336 N. Central Ave., Chicago 44, Ill.

The following 7 patents are offered by Herbert J. Feldhake, 1012 Pennsylvania Drive, Pensacola, Fla.:

2,857,674. Protractor, Compass and Ruler.

2,872,743. Demonstrator for the Formula for the Surface of a Sphere.

2,885,795. Device for Physically Demonstrating the Pythagorean Theorem.

2,885,796. Device for Physically Demonstrating the Formula for the Area of a Triangle.

2,902,777. Mathematical Formula Demonstrator.

2,902,778. Mathematical Formula Demonstrator.

2,929,159. Mathematical Formula Demonstrator.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 10 patents may be addressed to: General Electric Company, X-Ray Department, 4855 Electric Ave., Milwaukee 1, Wis.

2,405,477. Ray-Generating Apparatus.

2,645,721. Image Intensification Apparatus.

2,660,673. Magnetic Induction Accelerator.

2,736,420. Injection Into Charged Particle Accelerators.

2,738,421. Means for Preventing the Loss of Charged Particles Injected Into Accelerator Apparatus.

2,749,438. Resonator Structure.

2,796,957. Reflection X-Ray Diffraction Apparatus and Method.

2,803,766. Radiation Sources in Charged Particle Accelerators.

2,803,767. Radiation Sources in Charged Particle Accelerators.

2,867,571. Depolymerization of High Molecular Weight Dextran.

Adjudicated Patents

(C.A. Tex.) Bryan Patent No. 2,275,345 (103—32), for removable gas lift apparatus in oil wells. Claims 4 to 7 *Held* valid and infringed. *U.S. Industries, Inc. v. Otis Engineering Corp.*, 277 F.2d 282; 125 USPQ 208.

(D.C.N.Y.) Offner Patent No. 2,517,702 (250—83.3), for locating device. Claim 2 *Held* valid but not infringed. *Technical Development Corp. v. Servo Corp. of America*, 183 F. Supp. 92; 125 USPQ 133.

Classification Order No. 385

The following transfers are hereby ordered to take effect on Friday, July 15, 1960:

From Division 33 to Division 95

Class 189, METALLIC BUILDING STRUCTURES

Subclasses 1–44 and 82–92 for concurrent reclassification and examination of applications pending therein.

From Division 95 to Division 33

Class 50, BUILDING STRUCTURES

The reclassification of this class having been completed, the reclassified art is hereby returned to Division 33.

M. C. ROSA,
Director, Patent Examining Operation.

Disclaimer

2,893,261.—*George E. Flinn*, Muncie, Ind. TRANSMISSION. Patent dated July 7, 1959. Disclaimer filed June 30, 1960, by the inventor; the assignee, *Borg-Warner Corporation*, assenting.

Hereby enters this disclaimer to claim 8 of said patent.

Board of Appeals Decisions Rendered in the Month of June 1960

Examiner affirmed	178
Examiner affirmed in part	31
Examiner reversed	59
Total	268

New Applications Received During June 1960

Patents	7,040
Designs	370
Plant Patents	12
Reissues	12
Total	7,434

Issue

Patents	907	No. 2,947,990 to No.	2,948,896, incl.
Designs	62	No. 188,527 to No.	188,588, incl.
Plant Patents	4	No. 1,963 to No.	1,966, incl.
Reissues	10	No. 24,851 to No.	24,860, incl.
Total	983		

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1960

Total number of pending applications (excluding Designs)	195,385
Total number of pending Design applications	8,037
Total number of applications awaiting action (excluding Designs)	87,039
Total number of Design applications awaiting action	1,511
Date of oldest new application	Feb. 24, 1959
Date of oldest amended application	Feb. 14, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 21, 26, 43, 46, 52, 58, 59, 60, 62, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 20, 37, 41, 42, 44, 45, 51, 54, 55.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 27, 28, 31, 32, 33.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 30, 39, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 30, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 29, 32, 49, 55, 57.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	81, 93, 83, 84, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	1-5-60	1-5-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Tactile Wringers; Buckles, Buttons and Clasps	1-14-60	1-14-60
3. (VII) MARMELSTEIN, N. (WINDHAM, B. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	12-10-59	12-3-60
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-6-59	11-6-59
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminuters; Fences; Gates; Music; Signals and Indicators; Acoustics	8-5-59	8-5-59
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	12-1-59	12-3-59
7. (IV) ANDERSON, E. G., Optics	10-9-59	10-5-59
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-4-60	1-4-60
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-16-59	10-14-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-31-59	12-16-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-26-59	11-3-60
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-25-59	1-6-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	11-9-59	11-4-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-30-59	8-27-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-13-60	1-6-60
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	8-3-59	7-6-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-11-60	11-13-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-4-60	1-4-60
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-25-60	12-18-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-4-60	1-4-60
21. (III) MADER, R. C., Textiles	1-10-60	11-30-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-30-59	10-15-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	9-24-59	9-14-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	10-1-59	10-1-59
25. (VII) NEVIUS, R. D., Casting—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	10-1-59	9-29-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	10-1-59	9-1-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-60	2-1-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	1-4-60	1-4-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-24-59	11-24-59
30. (VII) O'LEARY, R. A., Comminuters; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	1-6-60	1-6-60

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	1-11-60	1-11-60
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	12-9-59	12-3-59
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	10-15-59	10-1-59
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	4-20-59
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	12-9-59	12-9-59
36. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	10-19-59	10-19-59
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	10-1-59	10-5-59
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	9-21-59	8-24-59
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-3-59	12-1-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Package	1-4-60	1-4-60
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television; Telegraphy (part)	12-4-59	12-1-59
42. (II) REYNOLDS, E. B., Electric Signaling; Telegraphy (part)	10-26-59	10-26-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	10-6-59	10-12-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	7-3-59	7-3-59
45. (VI) MANIAN, J. A. (DOUGLAS, E. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-23-59	12-14-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-7-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-9-59	12-16-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-3-59	11-3-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	9-4-59	9-4-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-59	9-18-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	11-2-59	11-3-60
52. (V) LE ROY, C. A., Supports and Racks	3-16-60	3-3-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Feed Apparatus; Closure Operators; Illumination	1-4-60	1-6-60
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-4-60	12-26-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-59	10-23-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-14-59	12-4-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	10-1-59	10-6-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Punching	11-2-59	11-3-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	8-8-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-7-60	1-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-4-60	1-5-60
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-4-60	1-4-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	10-16-59	10-19-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-4-59	8-20-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-28-59	12-28-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	8-21-59	8-6-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	9-29-59	9-4-59
81. (III) MONCURE, J. A., Industrial Arts	4-4-60	4-19-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	4-13-60	4-20-60
91. BAILEY, J. S., Ornamentation	3-7-60	3-24-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	2-12-60	2-1-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	1-6-60	1-6-60
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	1-4-60	1-11-60
95. ANGEL, C. D., Metallic Building Structures; Packed Rod Joints; Joint Packings	11-3-59	10-16-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	1-4-60	12-4-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1960*.

Patents	Numbers 2,825,579 to 2,838,536, inclusive
Plant Patents	Numbers 807 to 880, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

THE MERRITT CORPORATION *v.* STERLING DRUG, INC.

No. 6528. Decided May 3, 1960

[47 CCPA —; — F.2d —; 125 USPQ 584]

TRADEMARK — CONFUSING SIMILARITY — ETHICAL GOODS — CHANNELS OF DRUG DISTRIBUTION.

In an opposition by appellee, based on its registration and prior use of "Suprarenin" as a trademark for a synthetic epinephrine preparation "for the treatment of diseases of the eye, nose, larynx, bladder, urethra, and uterus and, in surgical operations, and to stop the flow of blood," to appellant's application for registration of "Superin" as a trademark for "an aspirin suppository product," where appellant stressed the fact that its goods were sold over the counter whereas appellee's goods were sold on prescription only, but neither appellant's application nor appellee's registration restricted either product to prescription sales or over-the-counter sales and there was testimony on behalf of appellee that aspirin suppositories have been dispensed on prescription, *Held* that "the difference in present manner of sales of the goods is not necessarily controlling as to likelihood of confusion," that "The goods of appellant and appellee are medicinal preparations which are normally sold through drug stores and used by the same general class of purchasers," and that "In view of that fact, and coupled with the close similarity of the marks, we think prospective purchasers would be likely to assume that the goods emanated from the same source."

APPEAL from the Patent Office. Opposition No. 37,519.

AFFIRMED.

Bass & Friend, Ben Cohen for The Merritt Corporation.

James F. Hoge, Lenore B. Stoughton, Mercer L. Stockell, E. F. Wenderoth for Sterling Drug, Inc.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge FRANCIS L. VAN DUSEN, *United States District Judge for the Eastern District of Pennsylvania*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal from the Trademark Trial and Appeal Board of the United States Patent Office involves an opposition by appellee to appellant's application for registration of "Superin" as a trademark for "an aspirin suppository product." The opposition is based on appellee's registration and prior use of "Suprarenin" as a trademark for a synthetic epinephrine preparation "for the treatment of diseases of the eye, nose, larynx, bladder, urethra, and uterus and, in surgical operations, and to stop the flow of blood." The Board sustained the opposition. The parties submit here on the record and briefs.

Since appellee's registration for "Suprarenin" was first issued in 1904, and appellant's first alleged use was in 1957, there is no question of priority. The sole issue is whether one mark so resembles the other as, when applied to the goods of the respective parties, to cause confusion or mistake or to deceive purchasers within the meaning of section 2(d) of the Lanham Act.

In holding confusion would be likely, the Board said:

> The products of the parties, while differing in chemical composition and medicinal uses, are pharmaceutical preparations intended for internal use which would ordinarily be sold through the same channels of drug distribution. It appears moreover in view of the nature of the ailments for which opposer's product is used that it is likely to be administered in many instances under emergency circumstances; and that the use of applicant's product in particular situations where opposer's product is prescribed could have dangerous effects. The consequence of confusion between these products may therefore be serious; and as stated in *Campbell Products, Inc. v. John Wyeth & Bros., Inc.*, 62 USPQ 302 (CCPA, 1944) ". . . where ethical goods are sold and careless use is dangerous, greater care should be taken in the use and registration of trademarks to assure that no harmful confusion results." See also: *Morgenstern Chemical Company, Inc. v. C. D. Searle & Company*, 116 USPQ 490 (CA 3, 1958); *Distone Company v. Distrim Company et al.*, 106 USPQ 344 (CA 8, 1955).
>
> The marks "SUPERIN" and "SUPRARENIN" are coined and arbitrary terms having no apparent significance other than as indications of origin for the respective goods. The resemblances between the marks both in sound and appearance are considered to be such that they frequently would look so nearly alike when written and sound so nearly alike when spoken that confusion in the minds of pharmacists and medical personnel and mistake in the product delivered and administered would be reasonably likely to occur.

Appellant stresses the fact that its goods are presently sold over the counter, whereas appellee's goods are presently sold on prescription only. However, neither appellant's application nor appellee's registration restricts either product to prescription sales or over-the-counter sales. See *Meyer Chemical Co. v. Anahist Co., Inc.*, 46 CCPA 784, 263 F.2d 844, 120 USPQ 488. In point here is a doctor's testimony on behalf of appellee that aspirin suppositories have been dispensed on prescription. Thus the difference in present manner of sale of the goods is not necessarily controlling as to likelihood of confusion. The goods of appellant and appellee are medicinal preparations which are normally sold through drug stores and used by the same general class of purchasers. In view of that fact, and coupled with the close similarity of the marks, we think prospective purchasers would be likely to assume that the goods emanated from the same source.

Full consideration has been given the arguments advanced in appellant's brief regarding the difference in labels, instructions, dispensing, and use of the respective products, but we find no grounds for reversing the decision appealed from.

The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

WILLIAM C. ELMORE *v.* WILLIAM F. SCHMITT

No. 6536. Decided May 10, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. INTERFERENCE — REDUCTION TO PRACTICE — TESTS — SUFFICIENCY OF LABORATORY TESTS.

   "The question of sufficiency of laboratory tests to establish a reduction to practice has frequently been considered by this and other courts. Undoubtedly the general rule, as stated by the Board [Board of Patent Interferences] in the instant case, is that 'A party seeking to prove actual reduction to practice must show that his invention worked as intended to work in its practical contemplated use.'"

2. SAME — SAME — SAME — SAME.

   "Determination of the sufficiency of laboratory tests to effect a reduction to practice must necessarily depend on the circumstances of the particular case under consideration including, inter alia, the simplicity or complexity of the device involved and the nature and character of the laboratory tests, as well as the conditions to which the device is subjected when in practical use. The issue here is not whether it might be possible to reduce the invention to practice by laboratory testing, but whether the particular tests made by Steagall were sufficient for that purpose."

3. SAME — SAME — SAME — SAME.

   "* * *, the record fails in a number of particulars to show that Steagall's tests accurately reproduced the operating conditions which would be encountered in *any practical use* of the invention. In our opinion, the record does not support appellee's argument that those particulars are of no consequence. No doubt the laboratory tests and their results were of an encouraging nature and may have justified a prediction that the invention would probably be successful if and when it was put to some specific practical use; but reduction to practice requires more than that. What is required is not a mere basis for prediction but an actual demonstration."

4. SAME — SAME — SAME — SAME — DEVICE NOT USED ALONE.

   "It is contended by Schmitt [appellee] that the counter is a device having general utility and that it is sold as a separate unit. It does not follow, however, that tests of the counter alone, apart from any specific practical device, are sufficient to reduce it to practice. Spark plugs and tire chains are commonly sold as separate articles of commerce, but it has been held that they require testing under conditions of actual use to effect a reduction to practice. * * *. The device in issue is not made or sold with the idea of using it *alone*, but as part of some practical apparatus, and until it has been shown by actual tests to meet the conditions normally encountered in at least one such use, it is not, as a matter of law, actually reduced to practice."

5. SAME — SAME — SAME — SAME.

   "It is also argued on behalf of Schmitt, and no doubt it is true, that tests such as those employed by Steagall are commonly used in the counter art. Such tests give much useful information as to the properties of the counter, and would normally determine whether to proceed further with it; but since the tests were not shown to accurately duplicate actual working conditions in practical use, we think they are insufficient to establish reduction to practice with the required degree of certainty."

6. SAME — SAME — SAME — SAME.

   "Schmitt also contends that the Steagall tests involved a practical application of the counter, since the counter operated to produce one output pulse for every two input pulses. It does not appear, however, that such operation had any practical value except to test the counter itself."

7. SAME — SAME — SAME — SAME — REQUIREMENT FOR OBTAINING AN EXCEPTION TO THE GENERAL RULE.

   "* * *, Schmitt [appellee] urges that Elmore [appellant] has not indicated any express requirement of a counter in its ultimate use which was not met by the conditions of Steagall's tests. However it was incumbent on Schmitt, since he was relying on laboratory tests and seeking an exception to the general rule that tests under actual working conditions are necessary, to show affirmatively that the tests duplicated the essential conditions of some practical use. We do not think that has been done."

8. SAME — PRIORITY — TESTS — BINARY COUNTER.

   Decision of the Board of Patent Interferences awarding priority of a binary counter to the junior party, Schmitt, reversed, with the comment that "We * * * are unable to agree that Schmitt's device was sufficiently tested to establish an actual reduction to practice."

APPEAL from the Patent Office. Interference No. 87,611.

REVERSED.

Fidler, Beardsley & Bradley, Charles H. Beardsley (*Raymond E. Fidler* of counsel) for William C. Elmore.

Morton C. Jacobs (*William D. Hall* of counsel) for William F. Schmitt.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of JUDGE O'CONNELL.

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Patent Interferences of the United States Patent Office awarding priority of invention of the subject matter at issue in interference No. 87,611 to William F. Schmitt, the junior party. The invention is defined in two counts, of which Count 1 is representative and reads:

> 1. A binary counter comprising a core of magnetic material exhibiting a substantially rectangular hysteresis loop, a coil wound on the said core, a source of input pulses coupled to one end of said coil, and a capacitor coupled to the other end of said coil, whereby said capacitor is selectively charged through said coil by said input pulses and said capacitor passes a reverse discharge current through said coil between successive ones of said input pulses thereby to change selectively the operating point of said core on said hysteresis loop.

The essential features of the invention pertinent here are accurately described in appellant's brief as follows:

> The subject matter of the interference has to do with a binary counter that comprises a core having a substantially rectangular hysteresis loop, and a winding wound on the core connected at one end to a capacitor and at the other end to a source of input pulses. The arrangement is such that the capacitor is charged, through the winding, when a pulse is applied to the winding at a time when the core is magnetised in such a direction as to impart low impedance to the winding, to cause the core to be switched to its other state of magnetisation by the discharge current from the capacitor flowing through the winding; and such that when the pulse is applied to the winding at the time when the core is magnetised in the opposite direction to impart relatively high impedance to the winding, such input pulse will switch the core in the opposite direction without significantly charging the capacitor. Thus, large and small voltages across the capacitor are produced alternately, depending upon the state of the remanent flux in the core.

The load to be actuated by the counter takes the form of a resistance connected in parallel with the capacitor. The exact nature of that load in practice would necessarily depend on the specific nature of the device to which the counter is applied. Although it appears from the record that counters of the instant kind may be used in various devices such as computers, radar equipment, Geiger counters and television circuits, neither party has disclosed in detail any application of the claimed counter to a specific device.

The senior party, Elmore, filed his application December 3, 1952. His preliminary statement alleges no date of invention earlier than July 1952. The junior party, Schmitt, filed his application June 4, 1954, which matured into Patent No. 2,713,675, containing the claims in issue, on July 19, 1955. Schmitt claims to have reduced the invention to practice in April or May of 1952. His record reflects no evidence of activity in connection with the invention between the latter date and December 3, 1952, when Elmore's application was filed. Accordingly, if Schmitt did not reduce the invention to practice in April or May 1952, he cannot prevail, even if Elmore be restricted to his filing date, since there is no evidence that Schmitt was diligent throughout the critical period. On the other hand, if Schmitt did reduce the invention to practice as early as May 1952 he is entitled to priority, since that date is prior to the earliest date alleged by Elmore. It is thus unnecessary to consider Elmore's proofs and, as stated by the Board, the sole issue to be determined is whether Schmitt's proofs establish an actual and sufficient reduction to practice as of April or May 1952. The Board found Schmitt's proofs sufficient and awarded him priority.

It does not appear to be disputed that a device embodying Schmitt's invention, and so constructed as to satisfy the requirements of the counts, was subjected to certain tests by one William F. Steagall, an associate of Schmitt, in April and May 1952. Those tests were of a "bench" or laboratory nature, and did not involve the use of the invention in a computer or other device having practical application. Impulses were applied by a pulse generator, and the resultant wave form appearing at the junction of the coil and capacitor was examined by means of an oscilloscope.

Steagall testified that he conducted a number of experiments in which pulses were supplied by two different pulse generators, and that a resistance was used to simulate the load. In explaining why he used that particular resistance, Steagall testified:

> A counter is not very useful unless it can supply some output. Now, this resistor connected across the capacitor is a load to which this counter supplies an output pulse. That resistor might be the grid resistor of a vacuum tube amplifier stage following the counter or it might be some other load. In any event, the resistor is there to show that output power being taken from the counter.

Steagall's experiments also involved the use of different capacitors, different resistances, and different pulse rates, including both regularly and irregularly applied pulses. It does not appear to be controverted that, *so far as the tests went*, their results were satisfactory. It also appears to be conceded that oscilloscope tests of the kind performed by Steagall are of recognized value in the art and, in some respects, probably afford a better indication of the properties of the device tested than would be given by normal use in a practical apparatus.

On the other hand, we agree with appellant that the record does not show that any one of the various tests employed by Steagall duplicated the conditions which would normally be encountered in a practical application of the invention in issue with respect to the resistance and character of load, nature of pulses, including voltage, duration and amplitude, and amount of capacitance used. Neither is it shown that the tests accurately reproduced the conditions of temperature, vibration, or sustained operation which would usually be encountered in a specific use.

[1] The question of sufficiency of laboratory tests to establish a reduction to practice has frequently been considered by this and other courts. Undoubtedly the general rule, as stated by the Board in the instant case, is that "A party seeking to prove actual reduction to practice must show that his invention worked as intended to work in its practical contemplated use." *Gaiser* v. *Linder*, 45 CCPA 846, 253 F.2d 433, 117 USPQ 209; *Kruger* v. *Resnick*, 39 CCPA 994, 197 F.2d 348, 94 USPQ 65, and cases there cited.

[2] Determination of the sufficiency of laboratory tests to effect a reduction to practice must necessarily depend on the circumstances of the particular case under consideration including, inter alia, the simplicity or complexity of the device involved and the nature and character of the laboratory tests, as well as the conditions to which the device is subjected when in practical use. The issue here is not whether it might be possible to reduce the invention to practice by laboratory testing, but whether the particular tests made by Steagall were sufficient for that purpose.

[3] As pointed out, the record fails in a number of particulars to show that Steagall's tests accurately reproduced the operating conditions which would be encountered in *any practical use* of the invention. In our opinion, the record does not support appellee's argument that those particulars are of no consequence. No doubt the laboratory tests and their results were of an encouraging nature and may have justified a prediction that the invention would probably be successful if and when it was put to some specific practical use; but reduction to practice requires more than that. What is required is not a mere basis for prediction but an actual demonstration. As stated in Robinson on Patents (1890), section 127:

> Moreover, the law demands, for the completion of the inventive act, that the art shall be so practiced, or the article of manufacture so tested, that its efficacy and utility are fully demonstrated. "Reduction to practice" means "reduction to successful practice." Experiments in the direction of the desired result are not such reduction, no matter how nearly they approximate that end. The work of the inventor must be finished, physically as well as mentally.

Steagall testified that not long prior to the taking of his testimony his company had delivered a computer constructed of circuits which had been tested in the same manner as the device in issue, and that the computer was found to operate without difficulty. He also stated, however, that the computer was tested after it was assembled and that he would recommend no system for production in large volumes without having first constructed the complete system.

[4] It is contended by Schmitt that the counter is a device having general utility and that it is sold as a separate unit. It does not follow, however, that tests of the counter alone, apart from any specific practical device, are sufficient to reduce it to practice. Spark plugs and tire chains are commonly sold as separate articles of commerce, but it has been held that they require testing under conditions of actual use to effect a reduction to practice. *Payne* v. *Hurley*, 21 CCPA 1144, 71 F.2d 208, 21 USPQ 624; *St. Pierre* v. *Harvey*, 43 CCPA 918, 238 F.2d 887, 110 USPQ 47. The device in issue is not made or sold with the idea of using it *alone*, but as part of some practical apparatus, and until it has been shown by actual tests to meet the conditions normally encountered in at least one such use, it is not, as a matter of law, actually reduced to practice.

[5] It is also argued on behalf of Schmitt, and no doubt it is true, that tests such as those employed by Steagall are commonly used in the counter art. Such tests give much useful information as to the properties of the counter, and would normally determine whether to proceed further with it; but since the tests were not shown to accurately duplicate actual working conditions in practical use, we think they are insufficient to establish reduction to practice with the required degree of certainty.

[6] Schmitt also contends that the Steagall tests involved a practical application of the counter, since the counter operated to produce one output pulse for every two input pulses. It does not appear, however, that such operation had any practical value except to test the counter itself.

[7] Finally, Schmitt urges that Elmore has not indicated any express requirement of a counter in its ultimate use which was not met by the conditions of Steagall's tests. However it was incumbent on Schmitt, since he was relying on laboratory tests and seeking an exception to the general rule that tests under actual working conditions are necessary, to show affirmatively that the tests duplicated the essential conditions of some practical use. We do not think that has been done.

[8] We have carefully considered the record in light of the arguments ably advanced on behalf of Schmitt, together with the decision of the Board of Patent Interferences, but are unable to agree that Schmitt's device was sufficiently tested to establish an actual reduction to practice.

The decision is reversed.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE SIMMONS COMPANY

No. 6558. Decided May 24, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. TRADEMARK—FUNCTION OF TRADEMARK.

   Held that "It is not the function of a trademark to 'move' prospective purchasers to buy goods, but to identify and distinguish them from the goods of others," and that "A trademark may or may not 'move' purchasers to buy the goods."

2. SAME—REGISTRABILITY—SUPPLEMENTAL REGISTER.

   In connection with a statement suggesting that a mark cannot be placed on the Supplemental Register unless it can be shown that the "average purchaser" recognizes it as a trademark, *Held* that "that is not the test set forth in the applicable statute (15 U.S.C. 1091), which provides, with certain exceptions * * *, that 'All marks *capable of distinguishing* applicant's goods or services and not registrable on the Principal Register' may be registered on the Supplemental Register," that "The test is not whether the mark, when registration is sought, is actually recognized by the average purchaser, or is distinctive of the applicant's goods in commerce, but whether it is *capable of becoming* so," and that "In fact a mark which has become distinctive of an applicant's goods, if not otherwise barred, is registrable on the Principal Register, hence is expressly barred from the Supplemental Register."

3. SAME—SAME—SAME—STITCHING ON MATTRESSES.

   "* * * the double rows of stitching are quite distinct in appearance from the stitching on the mattresses of others, the attention of the public has been directed to this feature as distinctive of appellant's goods, and affidavits have been presented to the effect that they identify appellant's goods by such stitching. On the basis of such facts we cannot hold that the mark is incapable of distinguishing.

APPEAL from Trademark Trial and Appeal Board. Serial No. 691,584.

REVERSED.

William E. Anderson for Simmons Company.

Clarence W. Moore, Solicitor for the Patent Office, for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board of the United States Patent Office affirming the Examiner's refusal to register appellant's alleged trademark for mattresses on the Supplemental Register.

As shown by the drawing of appellant's application, the mark comprises a series of horizontally spaced pairs of vertical rows of stitches which are applied on an outer vertical face of the mattress. The spacing between the pairs of rows of stitches is approximately six times the spacing between the rows of each pair.

As shown by the record, appellant has attempted, by advertising on a national scale, to cause the public to associate the stitches with its product. Typical advertisements contain the statement, "Look for the border with the vertical double stitch lines—it identifies the Beautyrest Mattress." Also of record are two affidavits, one by a mattress salesman and one by a purchaser, in which they state that they recognize the double stitch lines as identifying Beautyrest mattresses. There are two affidavits by an attorney associated with appellant's counsel, to the effect that five employees interviewed in a Chicago store recognized the double stitched border as identifying one of appellant's mattresses.

Appellant originally sought registration on the Principal Register, but was advised by the Examiner that the proposed mark "at this time does not appear to distinguish the goods of applicant from similar goods of others." The Examiner suggested that the application might be transferred to the Supplemental Register and that "the evidence submitted may support a holding that the mark is 'capable of distinguishing.'" However, when applicant transferred to the Supplemental Register, the same Examiner refused registration on the ground that the mark was not capable of distinguishing appellant's goods in a trademark sense.

The Board agreed with the Examiner stating that

> The record fails to show that average purchasers recognize such stitching as a trademark or that they are in any way moved, by the stitching, to buy applicant's mattresses. It seems clear from the record that purchasers are moved by the trademark "Beautyrest" to buy applicant's mattresses, and having decided on that brand, the stitching presented here for registration enables the salesmen to locate applicant's mattresses on the floor.

[1] That statement appears to involve two misconceptions. In the first place, it is not the function of a trademark to "move" prospective purchasers to buy goods, but to identify and distinguish them from the goods of others. A trademark may or may not "move" purchasers to buy the goods.

[2] Second, and of more importance here, the quoted statement suggests that a mark cannot be placed on the Supplemental Register unless it can be shown that the "average purchaser" recognizes it as a trademark. However, that is not the test set forth in the applicable statute (15 U.S.C. 1091), which provides, with certain exceptions not pertinent here, that "All marks *capable of distinguishing* applicant's goods or services and not registrable on the Principal Register" may be registered on the Supplemental Register. The test is not whether the mark, when registration is sought, is actually recognized by the average purchaser, or is distinctive of the applicant's goods in commerce, but whether it is *capable* of *becoming* so. In fact a mark which has become distinctive of an applicant's goods, if not otherwise barred, is registrable on the Principal Register, hence is expressly barred from the Supplemental Register.

[3] The Board has not held that the mark is inherently functional or advanced any other specific reason why appellant's mark is *not* capable of distinguishing its goods from those of others, and we see none. So far as appears from the record, the double rows of

stitching are quite distinct in appearance from the stitching on the mattresses of others, the attention of the public has been directed to this feature as distinctive of appellant's goods, and affidavits have been presented to the effect that they identify appellant's goods by such stitching. On the basis of such facts we cannot hold that the mark is *incapable* of distinguishing.

On the facts here we conclude that appellant is entitled to registration of its mark on the Supplemental Register. The decision appealed from is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

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2,926,656, W. H. Lannert, Sewage treatment system, filed June 24, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1007, *Food Machinery and Chemical Corporation (known as Chicago Pump, Hydrodynamics Division at Chicago, Illinois)* v. *Walker Process Equipment, Inc.*

2,939,202, J. Jonassen, Machine for forming clips and connecting wire members together, filed July 1, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–625, *Innerspring, Inc. et al.* v. *Joseph Aronauer et al.*

2,931,896, E. M. Brogden et al., Art of merchandise packaging, filed June 27, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39234, *The Mead Corporation* v. *The Shasta Water Company*.

2,907,991, A. R. Mitchell, Snap fastener, filed June 28, 1960, D.C. Mass. (Boston), Doc. 60/451–F, *Brier Manufacturing Company* v. *United-Carr Fastener Corporation*.

2,472,122, W. V. Consolazio, Sodium chloride, filed May 13, 1960, C.C.A., 8th Cir., Doc. 16493, *Parmalee Pharmaceutical Company et al.* v. *Lawrence C. Zink, doing business as Zink Safety Equipment Company*.

2,491,846, H. M. Coleman et al., Process for treating animal materials, filed June 24, 1960, D.C., N.D. Ohio (Cleveland), Doc. 8449, *B. Heller & Company* v. *Basic Food Materials Incorporated*.

2,567,452, H. W. Forrer, Bottle carrier, filed June 27, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39235, *The Mead Corporation* v. *The Shasta Water Company*.

2,542,694, R. L. Blanchard, Explorer's folding tent, filed June 29, 1960, D.C., S.D. Ohio (Columbus), Doc. 4635, *Robert L. Blanchard* v. *Montgomery Ward & Co., Inc. et al.*

2,576,189, W. Horth, Mixer, filed Sept. 28, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 27043, *National Engineering Company et al.* v. *Maslo Marine Manufacturing Corporation*. Consent decree; patent held valid; injunction granted (notice June 29, 1960).

2,670,214, Sulo M. Nampa, Freight loading, filed June 23, 1960, D.C., E.D. Mich. (Detroit), Doc. 20250, *Evans Products Company* v. *Sparton Corporation*.

2,713,668, L. L. Krieger, Brassieres, filed July 5, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–630, *International Latex Corporation* v. *Bolero Bra Company, Inc.*

2,718,268, B. A. Somers, Rotary type relays, filed June 30, 1960, D.C. Conn. (New Haven), Doc. 8401, *Hi-G, Incorporated* v. *Connecticut Valley Enterprises, Inc.*

2,738,688, W. F. Peterson et al., Boat trailer; **Reg. No. 604,414** (GATOR), Peterson Bros., Boat trailers, filed June 24, 1960, D.C., S.D. Fla. (Jacksonville), Doc. 3879–T, *Peterson Bros., Inc.* v. *James J. Murphy et al.*

2,756,204, J. W. Welsh, Snap-action device, filed July 1, 1960, D.C.N.J. (Newark), Doc. 587/60, *Signal-Stat Corporation et al.* v. *Weiflash, Inc. et al.*

2,784,885, K. E. Wagner, Paperboard tray, filed June 28, 1960, D.C., W.D.N.Y. (Buffalo), Doc. 8769, *Victor Wagner & Son, Inc.* v. *Wagner Folding Box Corporation*.

2,812,806, W. W. Schofield, Mud scoop, filed June 27, 1960, D.C., S.D. Ind. (Indianapolis), Doc. 60–C–165, *Walter W. Schofield* v. *F. A. Carl*.

2,856,127, H. Marker, Automatically releasable ski binding, filed June 28, 1960, D.C., W.D. Wash. (Seattle), Doc. 5078, *Georg Von Opel* v. *O-W Sports, Inc.*

2,885,719, J. Brasty, Spring for windshield wiper arms, filed June 28, 1960, D.C., S.D.N.Y., Doc. 60/2569, *Joseph Brasty* v. *M. Diamond & Co. et al.*

Re. 24,627, A. W. Seyfried, Flexible coupling means for separable shafts, filed Oct. 27, 1959, D.C., E.D. Wis. (Milwaukee), Doc. 59–C–239, *Scovill Manufacturing Company* v. *John Oster Manufacturing Company*. Stipulation and order of dismissal with prejudice (notice July 1, 1960).

Des. 178,804, W. Martin, Bubbler drinking fountain or similar article, filed Mar. 27, 1957, D.C. Mass. (Boston), Doc. 57/311–F, *William Martin et al.* v. *Consumer Products, Inc. et al.* Order of dismissal without prejudice June 27, 1960.

Des. 181,157, A. W. Madl, Electric food comminuting machine, filed Jan. 10, 1958, D.C., E.D. Wis. (Milwaukee), Doc. 58–C–6, *John Oster Manufacturing Co.* v. *Hamilton Beach Manufacturing Company*. Stipulation and order of dismissal with prejudice June 29, 1960. Same, filed Oct. 17, 1958, same, Doc. 58–C–308, *John Oster Manufacturing Co.* v. *Scovill Manufacturing Company*. Decree as above June 29, 1960.

REISSUES

AUGUST 9, 1960

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,851
INTERNAL COMBUSTION ENGINES

Alfred Buchi, Hurden, Canton Schwyz, Switzerland; Hermann Walder executor of the will of said Alfred Buchi, deceased

Original No. 2,840,059, dated June 24, 1958, Ser. No. 419,395, Mar. 29, 1954. Application for reissue June 24, 1959, Ser. No. 822,698

Claims priority, application Switzerland July 6, 1949

21 Claims. (Cl. 123—32)



1. In an internal combustion engine the combination comprising a cylinder, a piston for said cylinder, said cylinder having a cylindrical sleeve portion, a cylinder head covering said cylinder and piston, said cylinder head having a valve orifice disposed substantially concentrically with the axis of said cylinder, valve means for opening and closing said orifice, a frustro-conically shaped valve seat in said cylinder head for said valve means, said cylinder head having a frustro-conically shaped depression therein with a conical wall surface commencing at said valve seat and flaring outwardly toward the crown of said piston substantially at the same angle to a plane normal to the cylinder axis as the surface of said valve seat, a contiguous wall surface to said conical wall surface in said cylinder head, said conical wall surface forming a circular intersection line with said contiguous wall surface, said circular intersection line lying in a plane normal to the cylinder axis and forming the largest diameter of the combustion space when said piston is in upper dead center, said piston having a depressed area in the crown thereof forming a cavity, said cylinder head depression and said cavity when brought together substantially registering with one another, said contiguous wall surface of said cylinder head from said circular intersecting line continuing outwardly at a smaller angle to a plane normal to the cylinder axis towards the upper end of said cylindrical sleeve whereby a combustion space of smaller diameter than the diameter of said cylinder is formed.

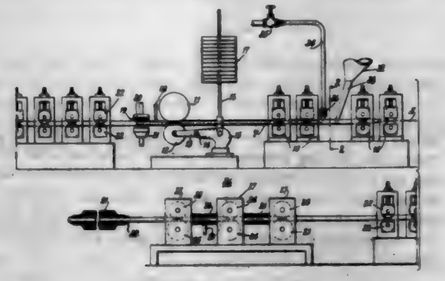
24,852
METHOD OF COATING INTERIOR OF TUBING WITH ZINC

John W. Armstrong, Racine, Wis., and Richard W. Spears, Rochester, and Richard D. Williams, Fairport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original No. 2,771,669, dated Nov. 27, 1956, Ser. No. 297,552, July 7, 1952. Application for reissue Feb. 18, 1958, Ser. No. 715,989

19 Claims. (Cl. 29—429)

1. In the manufacture of steel tubing which is formed continuously from a flat steel strip by bending the strip into tubular form and welding the abutting edges of the tube as it is continuously moved past a welding device; the method of coating the interior surface of the tubing during its continuous formation and while it is being moved continuously with a non-corrosive metal such as zinc which comprises the steps of introducing particles of said metal into the tubing before the tubing is fully formed and while it is below welding temperature, introducing a non-oxidizing gas into the tube after it is fully formed and welded, subsequently heating the tube sufficiently to vaporize the coating metal, and thereafter cooling the tubing to effect condensation of the vaporized metal on the surface of the tubing.



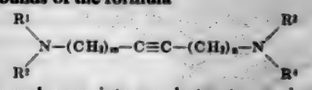
24,853
α,β (DISUBSTITUTED AMINOALKYL) ACETYLENES

John H. Biel, Milwaukee, Wis., assignor to Lakeside Laboratories, Inc., a corporation of Wisconsin

No Drawing. Original No. 2,830,048, dated Apr. 8, 1958, Ser. No. 468,137, Nov. 10, 1954. Application for reissue Dec. 7, 1959, Ser. No. 858,005

20 Claims. (Cl. 260—247.5)

1. A member of the group consisting of a 1,5-(N-di-lower alkyl amino)-2-pentyne, a 1,6-(N-di-lower alkyl amino)-2-hexyne, 1,6-(N-di-lower alkylamino)-3-hexyne, and compounds of the formula



wherein m and n are integers, but not zero, having a sum of at least 3 but not greater than 8; R^1 and R^2 are members of the group consisting of the same and different lower alkyl, phenyl and phenyl-lower alkyl groups and groups wherein R^1 and R^2 are joined so that the nitrogen is part of a monocyclic heterocyclic group of the group consisting of piperidino, pyrrolidino and morpholino groups, and R^3 and R^4 are members of the group consisting of the same and different phenyl and phenyl-lower alkyl groups and groups wherein R^3 and R^4 are joined so that the nitrogen is part of a monocyclic heterocyclic group of the group consisting of piperidino, pyrrolidino and morpholino groups, and acid addition salts and quaternary ammonium salts thereof.

12. 1,6-bis(N-morpholinyl)-2-hexyne.

24,854
RIBBON INKING DEVICE

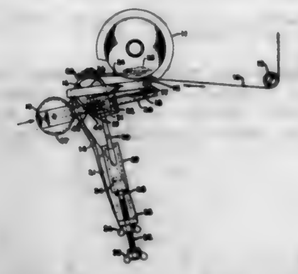
John P. Knight, P.O. Box 364, Detroit, Mich.

Original No. 2,725,849, dated Dec. 6, 1955, Ser. No. 266,056, Jan. 11, 1952. Application for reissue Dec. 5, 1957, Ser. No. 702,219

23 Claims. (Cl. 118—260)

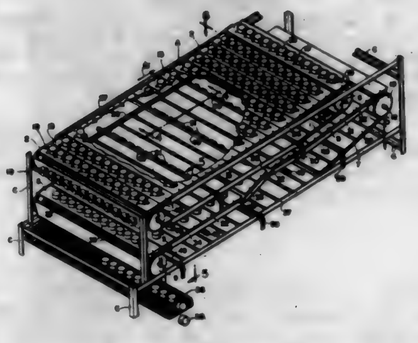
19. Apparatus for supplying ink to a ribbon-inking roller for a printing machine of the type using a transfer

ribbon, comprising, an extensive wick portion of relatively high capillary quality for transfer of ink from a supply of ink with which part of said wick portion is in contact, means enclosing said wick portion but leaving a part exposed and structurally adapted to contact an



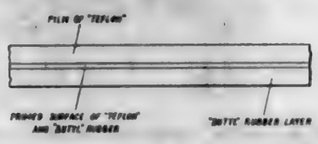
inking roller, said exposed part having ink-feeding properties but having internal structure adjacent and extending up to and terminating at its roller-contacting surface of relatively less capillary quality than the enclosed portion, whereby relatively abundant supply of ink through the wick is restricted by said exposed part to minimize variations in ink delivery.

24,855
CONTINUOUS GRIDDLE
Eugene M. Noel, Cambridge, Mass.
Original No. 2,859,713, dated Nov. 11, 1958, Ser. No. 463,680, Oct. 21, 1954. Application for reissue Jan. 7, 1960, Ser. No. 1,147
14 Claims. (Cl. 107—57)



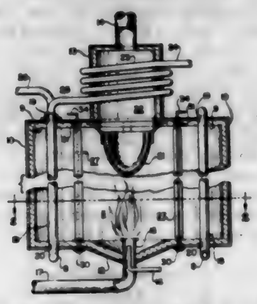
11. A continuous griddle comprising a pair of endless conveyors disposed one above the other in substantially horizontal relation, each of said conveyors having a belt-like web providing top and bottom runs and said webs traveling at the same speed in opposite directions between respective forward and rearward end sprockets carried by respective spaced parallel shafts, the upper conveyor web comprising a succession of relatively narrow transversely extending sheet metal plates disposed in parallel edge-to-edge relation and each having a flat outer surface throughout its length, said plates having identical center-to-center relation along the length of said web, a plurality of individual open ended product retaining rings of uniform height mounted endwise on the outer surface of each of the plates of the upper conveyor web, and a unitary transversely extending transfer guide plate at the rearward end of the upper conveyor mounted adjacent the rearward sprocket shaft thereof and curved toward said conveyor on substantially the same radius as the path of the outer edges of said retaining rings as said conveyor turns around the said rearward sprocket shaft, the lower conveyor being disposed with its top run extending parallel with the bottom run of the upper conveyor for a predetermined distance adjacent the rearward end thereof and with the outer surfaces of the respective conveyors spaced apart vertically a distance substantially equal to the height of said retaining rings to close the adjacent ends thereof, said transfer guide plate terminating immediately above and in overhanging relation with the top run of said lower conveyor at a point inwardly of the respective rearward sprocket shaft.

24,856
LAMINATION OR COATING OF FLUORINE-SUBSTITUTED POLYETHYLENES WITH OR ON OTHER SUBSTANCES
Ahmed Panagrossi, Hamden, Conn., and Ray L. Hauser, Boulder, Colo., assignors to The Connecticut Hard Rubber Company, New Haven, Conn., a corporation of Connecticut
Original No. 2,705,691, dated Apr. 5, 1955, Ser. No. 329,888, Jan. 6, 1953. Application for reissue Mar. 22, 1957, Ser. No. 647,931
16 Claims. (Cl. 154—139)



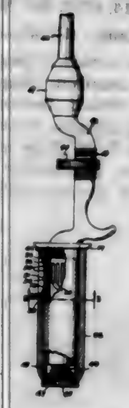
1. A laminate of fluorine-substituted polyethylene plastic and a cured rubber compound containing rubber selected from the group consisting of isobutylene-isoprene and isobutylene-butadiene, both members of the laminate being thin films.

24,857
FLUID HEATERS
Edward J. Wasp, 1079 Lindendale Drive, Pittsburgh, Pa.
Original No. 2,789,521, dated Apr. 23, 1957, Ser. No. 543,907, Oct. 31, 1955. Application for reissue Apr. 21, 1958, Ser. No. 732,410
2 Claims. (Cl. 110—98)



9. In a vertical furnace structure having a radiant chamber and a plurality of generally parallel vertical heating tubes mounted about its periphery, and having a radiant heat source centrally located within said radiant chamber in direct radiant relation with said tubes, the improvement comprising a plurality of thin, flat, heat reflecting surfaces being adjustably positioned within said radiant chamber adjacent said tubes and between said tubes and said radiant heat source, each of said heat reflecting surfaces positioned to cast an umbra from said radiant heat source generated by said heat reflecting surface at the periphery of said radiant chamber, whereby the umbra entirely encompasses at least a portion of the exposed tube surface of at least one and less than the total number of said tubes, and means, external of said radiant chamber, associated with each of said heat reflecting surfaces for increasing and decreasing the length of each of said heat reflecting surfaces which is interposed between said radiant heat source and said tubes.

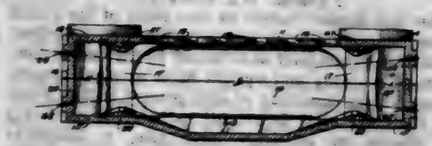
24,858
HEATED FISHING ROD HANDLE
Clarence R. Phipps, 2321 17A St. SW., Calgary, Alberta, Canada
Original No. 2,758,392, dated Aug. 14, 1956, Ser. No. 348,184, Apr. 13, 1953. Application for reissue May 2, 1958, Ser. No. 735,082
4 Claims. (Cl. 126—208)



3. In combination, a fishing rod handle comprising a metal reel seat, a hollow metal cylinder mounted on the rearward end of the reel seat in heat conducting relationship therewith, a heating element capable of being ignited at one end, and means supporting the heating element within the hollow cylinder with the ignitable end positioned adjacent the reel seat, the metal cylinder having an opening in the side wall thereof positioned in proximity to the ignitable end of the heating element for the admittance of air to said ignitable end.

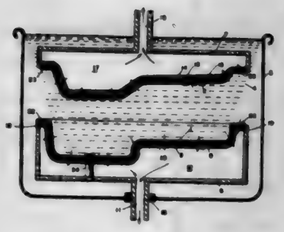
24,859
FURNACE STRUCTURE
Leland B. Luellen, Highland, Ind., assignor to Inland Steel Company, a corporation of Delaware
Original No. 2,679,389, dated May 25, 1954, Ser. No. 343,874, Mar. 23, 1953. Application for reissue Aug. 11, 1959, Ser. No. 833,118
14 Claims. (Cl. 263—15)

9. An open hearth furnace having a hearth section and a fuel supply at each end of the furnace, a single uptake passage at each end of the furnace communicating with the hearth section and an air supply, said uptake passages having a combined length at their narrowest section inside brickwork measured in the direction along the longitudinal axis of the furnace of not more than



.16 times the total length of the furnace inside bindings measured at the foreplate line said uptake passages communicating with said hearth section through a throat, the minimum horizontal dimension of said throat approaching the width of the uptake passage.

24,860
METHOD AND APPARATUS FOR MAKING HOLLOW ACCRETED FIBROUS BODIES
Colin Kyle, Geneva, Ill., assignor to Hawley Products Company, St. Charles, Ill., a corporation of Delaware
Original No. 2,723,600, dated Nov. 15, 1955, Ser. No. 285,831, May 2, 1952. Application for reissue Nov. 15, 1957, Ser. No. 697,302
11 Claims. (Cl. 162—219)



10. A method of making a fibrous article having a cavity which comprises accreting from a fiber-liquid bath fibrous separate component parts each having an extended accreted marginal open edge portion on dies at least one of which is a female die, which parts when brought together at said edge portions form an article having a cavity, bringing said edge portions together without removing said parts from said bath, and thereafter continuing to accrete fibers whereby said parts are securely united.

PLANT PATENTS

GRANTED AUGUST 9, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,963
WALNUT TREE
Charles Edward Sullivan, Garden Highway, Yuba City, Calif.
Filed Mar. 13, 1959, Ser. No. 799,394
1 Claim. (Cl. 47—62)

A new and distinct variety of walnut tree, as shown and described, characterized by vigorous, upright, and strong growth with a tendency to large numbers of side branches; the bearing of few flowers and nuts; lustrous medium green foliage; leaves averaging three to five per shoot and ten to twelve inches in length, with nine to fifteen or more leaflets; elliptical leaflets with pointed tips; leaflets whose petiole is very short, almost non-existent or substantially sessil; relatively greater resistance to oak root fungus, crown rot, root rot, and nematode infestation, together with wide tolerance to soil and moisture conditions; and—as a rootstock—the ability to produce an English walnut tree which is vigorous in growth, large in size, and highly productive.

1,964
ROSE PLANT
Dennison H. Morey, Jr., Pleasanton, Calif., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Oct. 26, 1959, Ser. No. 848,889
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a strong and upright habit of plant growth, abundant foliage consisting of oval pointed leaflets which clothe the plant very thoroughly, a habit of producing many flowers of relatively large size, a distinctive Carmine, lightly overcast with Scarlet-Red, general color tonality of the flowers, and a very strong and rich flower fragrance.

1,965
ROSE PLANT
William C. McDonald, 914 N. Adams St., San Angelo, Tex.
Filed Oct. 26, 1959, Ser. No. 848,881
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the large-flowered polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of general similarities to the characteristics of the parent variety "Ma Perkins" (Plant Patent No. 1,143), but from which it is essentially distinguished by a slightly lighter green color of the foliage, a more profuse blooming habit, greater tolerance to hot weather, a distinctive snow white flower color, and a stronger fragrance of the flowers.

1,966
PEACH TREE
Grant Merrill, P.O. Box 392, Red Bluff, Calif.
Filed Apr. 14, 1959, Ser. No. 806,414
1 Claim. (Cl. 47—63)

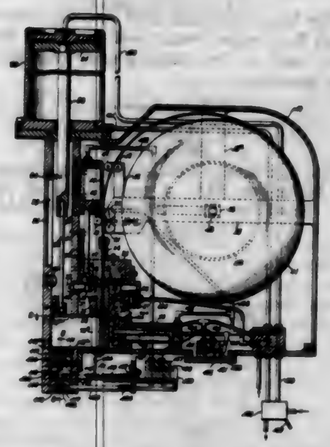
A new and distinct variety of peach tree, substantially as illustrated and described, characterized by highly colored, firm yellow fleshed, freestone peaches, ripening with the unpatented Elberta variety but distinguished therefrom and from fruit of its suspected parent, the unpatented Fortyniner, by distinctly more red coloration of the skin and more symmetrically globular shape.

PATENTS

GRANTED AUGUST 9, 1960

GENERAL AND MECHANICAL

2,947,990
APPARATUS FOR FORMING AND DRIVING JOINT NAILS
O'Dell O'Kelley, Rte. 2, Candler, N.C.
Filed Dec. 5, 1956, Ser. No. 626,466
14 Claims. (Cl. 1—44.4)



1. Apparatus for fastening two work pieces together comprising in combination a source of joint nails, means for positioning one of said joint nails in front of a reciprocatable nail driving shaft, a nail and shaft guide assembly comprising a plurality of vertically disposed pairs of rollers defining a vertical guide for said shaft and a joint nail being driven thereby, jam-preventing means comprising means for resiliently urging one roller of the lowermost pair of said rollers toward the other member of that pair in a plane substantially normal to the axis of said shaft so that said roller is displaced when a joint nail is being driven in said vertical guide between said lowermost pair of rollers, and means responsive to the position of said displaceable roller for controlling the positioning of another joint nail in front of said driving shaft, said guide being aligned with said shaft and means for reciprocating said shaft in said guide.

2,947,991
NAIL-DRIVING DEVICE
Samuel J. Collum, 2922 N. 21st St., Philadelphia 32, Pa., and Theddeus A. Sulkowski, 2518 E. Indiana Ave., Philadelphia 34, Pa.
Filed July 28, 1958, Ser. No. 751,384
3 Claims. (Cl. 1—46)

1. A nail-driving device comprising an upstanding head having its lower end adapted to seat on a surface to be nailed, a pair of hollow elongate generally vertically disposed complementary nail-guide sections disposed in facing relation with each other in a lower region of said head and pivotally connected at their upper ends to said head for resiliently yieldable swinging movement away from each other, said guide sections having their upper ends open and being respectively formed with adjacent vertically extending cutouts combining to define a side opening, a generally vertically disposed plunger mounted in said head over said guide sections for reciprocatory vertical movement downward into said guide sections to swing the latter away from each other and upward to permit return of said guide sections toward each other, said plunger being resiliently biased toward its upward position, a generally horizontally extending track fixed to said head with one end adjacent to and spaced from said side opening and adapted to carry a plurality of nails in side-by-side relation for lateral nail movement along said track toward said one end thereof, a track extension fixed to said head extending between said one track end and said guide sections through the side opening thereof to carry nails from said track into said guide sections, resilient feed means extending removably through said track and having a hooked portion engageable with the head of the rearmost nail to retain said feed means in position extending through said track and



for urging nails in said track toward said one track end, a transfer element mounted on said head for reciprocatory movement transversely of said track across the path of a nail in said track extension and having a surface oblique to said track extension and engageable with a nail in said extension upon movement of said transfer element in one direction to feed a nail from said extension into said guide sections through said side opening, and a cam mounted on said head for movement with said transfer element and in operative driven connection with said plunger for effecting transfer-element movement in the other direction upon the driving stroke of said plunger, and resilient means urging said transfer element in said one direction of its reciprocation and operative upon the nondriving stroke of said plunger, whereby a nail is delivered by said transfer element into said guide sections upon the upward movement of said plunger and adapted to be impaled by the latter upon the downward movement thereof.

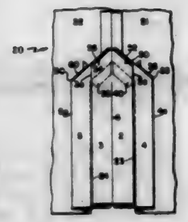
2,947,992
DISPOSABLE TYPE PAPER HEAD DRESS
Edmund J. De Villers and William J. Long, Columbus, Ohio, assignors to Paperlynen Company, Columbus, Ohio, a corporation of Ohio
Filed Oct. 8, 1957, Ser. No. 688,969
1 Claim. (Cl. 2—198)

An article of head wear consisting of an integral, one-piece body of flexible sheet material of generally U-shaped configuration formed to provide a substantially upstanding crown section adapted to be positioned upon the head of a wearer and terminating in opposite side portions adapted to be disposed at the sides of the head of the wearer; each of said side portions terminating in a multiple fold end portion including a transversely extended side flange connected to said side portion by a longitudinally disposed fold line, and an end tab forming a longitudinal

continuation of said side portion and said side flange and joined to said side portion and said side flange along a transversely disposed fold line; said end tab being folded longitudinally inwardly upon said side portion and said side flange, and said side flange being folded transversely and inwardly upon said side portion and said end tab; said side flange when so folded providing a double thickness attachment flange for receiving a bobby pin to secure said body to the hair of a wearer thereof.



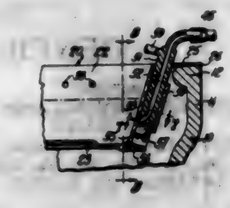
2,947,993
GARMENT HAVING SET-IN INVERTED BOX PLEAT STRUCTURE
Ernest Dounth, 1284 Beacon St., Brookline, Mass.
Filed Oct. 8, 1957, Ser. No. 688,970
2 Claims. (Cl. 2—243)



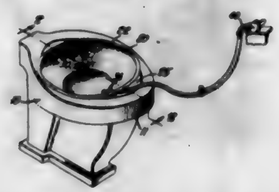
1. A garment having a box pleat, said garment including a panel having a recess formed therein defined by spaced parallel edges which extend to one edge of said garment, said pleat being formed by a pleat section having a plurality of pleated portions, said pleat section including a center seam joining two central portions and two parallel side seams symmetrically disposed with respect to said center seam joining end portions to said central portions, said pleat section being folded along fold lines parallel to said seams to provide at least six expansible portions, three of said expansible portions lying on each side of said center seam, said side seams not lying on any of said fold lines, means attaching said pleat section to said garment along the parallel edges of said recess with said seams and said fold lines parallel to said edges, and with those expansible portions of said pleat section outermost from said center seam lying behind the portion of said garment adjacent the parallel edges of said recess.

2,947,994
SITZ BATH
Saul Saulson, Detroit, Mich., and Stanley H. Saulson, Baltimore, Md., assignors to Harlan M. Buck, Inc., Baltimore, Md., a corporation of Delaware
Filed Apr. 10, 1959, Ser. No. 805,553
11 Claims. (Cl. 4—6)

1. A sitz bath for the purposes set forth, comprising a basin formed at its upper perimeter with an outwardly extending flange for supporting the basin on the rim of a toilet bowl and with the body of the basin suspended within the bowl, said basin having an inlet opening and a drainage opening formed therein adjacent the bottom of the basin, and flow control means mounted on the outer surface of said basin for selectively supplying water at a regulatable rate to the basin through said inlet opening or for by-passing said inlet opening whereby water from said flow control means will discharge directly into the toilet bowl or for draining said basin through said drainage opening.

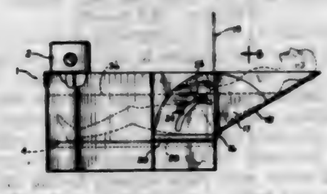


2,947,995
SITZ BATH
Saul Saulson, Detroit, Mich., assignor to Harlan M. Buck, Inc., Baltimore, Md., a corporation of Delaware
Filed Apr. 10, 1959, Ser. No. 805,554
4 Claims. (Cl. 4—6)



1. A sitz bath for the purposes set forth, comprising a basin formed at its upper perimeter with an outwardly extending flange, said basin being dimensioned at its upper margin to permit the flange to support the basin in depending position interiorly of a conventional oval-shaped toilet bowl while leaving the basin spaced from the inner periphery of the rim of such toilet bowl at the forward end of the latter, said basin having in the wall thereof, adjacent said upper margin, an overflow opening and an elongated opening, said last-named opening being disposed at said forward end when the basin is positioned as aforesaid on a toilet bowl, and being larger than the overflow opening whereby one end of a flexible hose in said space between the basin and the inner periphery of the rim of the toilet bowl may be inserted into and withdrawn from the interior of the basin through said elongated opening.

2,947,996
HYDROTHERAPY TANK
Louis B. Newman, 3300 Lake Shore Drive, Chicago, Ill.
Filed May 23, 1957, Ser. No. 661,203
10 Claims. (Cl. 4—178)



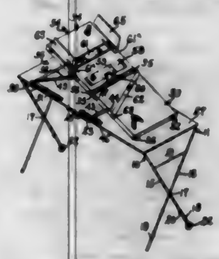
1. A hydrotherapy tank comprising an open top receptacle narrow at one end and wide at the opposite end and having a transversely extending adjustable back at the narrow end for supporting in an inclined position the trunk of a person within the tank, hinge means connecting the back with the rest of the tank, the axis of turning of the hinge means being horizontal and transverse of the tank for varying the angle of inclination of a person in the tank, and means outside of the tank for locking the adjustable back in adjusted position.

2,947,997
FOLDING SOFA BED STRUCTURE
William J. Helton, Affton, Mo., assignor to Foster Brothers Manufacturing Company, St. Louis, Mo., a corporation of Delaware
Filed Mar. 6, 1957, Ser. No. 644,291
5 Claims. (Cl. 5—13)



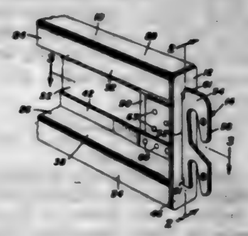
1. A folding sofa bed comprising first, second, third and fourth pinned folding sections, a locking mechanism between said first and third sections including a cam link rotatable about the pin between the second and third sections, a first cam-forming portion affixed to said link, a connecting link between said cam link and the first section, a second cam-forming portion affixed to the third section, a member slidable between said cam-forming portions, a lever pivoted to the third section, linkage means adapted to move said lever in response to relative movements between the third and fourth sections, and a drag link connecting said lever with said slidable member, said lever and drag link being adapted in response to action of said linkage upon relative movements between the third and fourth sections to drive said slidable member between said cam-forming portions, said cam link through said connecting link positively driving said first section toward the third section.

2,947,998
APPARATUS FOR SUPPORTING INFANTS
John J. Murphy, 4 Williams Place, Wallingford, Conn.
Filed Mar. 14, 1955, Ser. No. 493,983
2 Claims. (Cl. 5—77)



1. An apparatus for supporting infants comprising a table including a relatively flat, elongated table top member and a supporting leg structure to support the top member from the floor, and a supporting frame hinged adjacent one end to the table top member to swing to various adjusted positions with respect thereto, means to hold said frame in said adjusted positions, said leg structure comprising a pair of U-shaped members having horizontal bight portions disposed in substantially parallel relation, lengthwise of the top member, and depending leg portions, and the latter being crossed and pivoted together intermediate their lengths whereby the leg structure may be collapsed, a rigid plate member pivotally attached to the horizontal portion of one of said U-shaped members and detachably connected to the horizontal portion of the other member, and said table top being pivoted to said plate member to swing in a horizontal plane.

2,947,999
METAL BED RAIL WITH SHOULDERED BED LOCK
Emerson F. Hooker, Box 249, Lexington, N.C.
Filed Dec. 10, 1958, Ser. No. 779,439
8 Claims. (Cl. 5—286)



1. A metal bed rail assembly simulating the appearance of a wooden bed rail and including a bed rail having an end member secured to an end thereof with a bed hook projecting outwardly from and extending through said end member, said bed rail comprising a unitary metal sheet having a flat vertical single thickness web extending longitudinally thereof with upper and lower longitudinal edge portions of said web folded in upon one side of the latter and providing tubular top and bottom beads which are open at the ends of said rail, said end member comprising a pair of integral perpendicular flat metallic first and second plates, said first plate being secured directly to said one side of said web and the second plate being secured directly to an end of said web and said tubular beads for closing the latter and reinforcing said rail end, said second plate having a slot therethrough, said bed hook having a head portion and a shank portion, said shank portion extending through said slot and being engaged in side-by-side relation upon said first plate and being secured thereto.

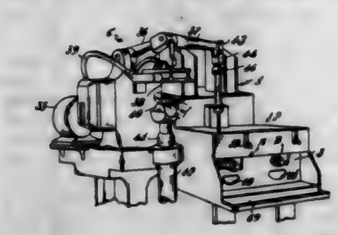
2,948,000
REFINISHING TOOL FOR TAPPED HOLE AND SEAT
James H. Borland, Smithfield, R.I.
(64 Eagle St., Providence, R.I.)
Filed May 28, 1957, Ser. No. 662,103
1 Claim. (Cl. 10—1)



A combination tapped hole and seat refinishing tool comprising a shank, an enlarged head mounted at the upper end of said shank, said shank having a wider lower portion equal to the major diameter of the hole being refinished and terminating in an abrupt shoulder at its upper end, means integral with the lower portion of said

shank for cleaning a tapped hole, said means comprising external threads on said lower portion and a plurality of flutings extending upwardly from the bottom end to a point midway of said threads, and means slidably mounted on said shank for scraping the seat around said hole, the lower tip of said shank forming an unthreaded pilot equal in diameter to the minor diameter of said tapped hole, said scraping means including a collar slidably mounted on said shank, said collar having a vertical keyway in the inner surface thereof, a pin mounted transversely through said shank above said threaded portion and extending into said keyway, said collar having cutting teeth on its bottom edge and a coil spring surrounding the upper end of said shank, the upper end of said coil spring bearing against said enlarged head and the lower end of said coil spring bearing on the upper end of said collar, said collar extending over the upper end of said threads above said flutings and having an internal shoulder bearing against said lower portion abrupt shoulder, to form a lower stop element for said collar, said collar being vertically slidable on said shank to raise the bottom edge of said collar above the upper end of said external threads.

2,948,001
METHOD OF AND APPARATUS FOR CONDITIONING SHOE FILLER COMPOSITIONS
John B. Reid, Brighton, and Robert A. Spence, Lincoln, Mass., assignors to North American Chemical Company, Cambridge, Mass., a corporation of Massachusetts
Filed May 7, 1958, Ser. No. 733,757
3 Claims. (Cl. 12—18.2)



1. Apparatus for use in applying shoe filler compositions to the bottom cavities of shoes, which comprises a vertical substantially angularly shaped feed chamber, with downwardly and outwardly flaring side walls, for the cakes of filler and having an opening at its flared bottom portion discharging tangentially into a horizontal cylindrical conditioning chamber, a conveyor shaft, having helical blades mounted and closely fitting within the cylindrical conditioning chamber, heating means within the helical conveyor shaft, heating means in the wall of the conditioning chamber, an outlet opening in the end of the conditioning chamber to deliver a plastic mass to be applied to the shoe being operated on, and power means for rotation of the conveyor shaft.

2,948,002
SHAPING MACHINE FOR USE IN SHOE MANUFACTURING, ETC.
Howard H. Hoffman, Nashville, Tenn., assignor to Southern Shoe Machinery Company, Nashville, Tenn., a corporation of Tennessee
Filed Mar. 31, 1958, Ser. No. 725,382
12 Claims. (Cl. 12—97)

1. In a machine for the shaping of such articles going into the fabrication of shoes as vamps, the combination of a frame, a die shaping member movably carried by said frame, pivoted clamping members mounted upon the frame at opposite sides of said die, and means for simultaneously actuating the clamping members to clamp marginal portions of the article to be clamped at opposite



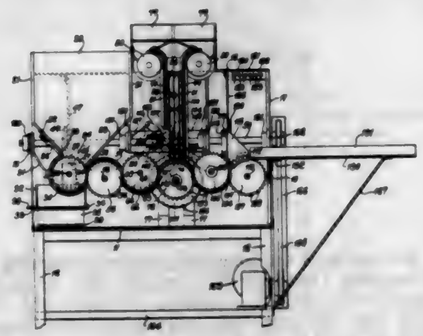
sides of said die and for moving the die at the same time to stretch the article for shaping purposes.

2,948,003
DELINTING SWEEP
Louise Tamsberg, 240 W. 14th St., New York 11, N.N.Y.
Filed June 19, 1958, Ser. No. 743,191
3 Claims. (Cl. 15—1.5)



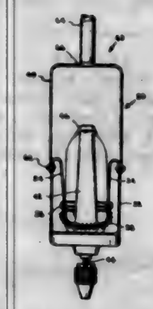
1. A sweep for removing lint and other detritus from a fabric surface or the like comprising a blank member of crisp, stiff, open net fabric made of filamented, static accumulating material, and formed to provide a gripping portion and a cleansing portion, the said cleansing portion comprising a serrated edge presenting outwardly directed free filament portions.

2,948,004
APPARATUS FOR CLEANING VIALS AND INSERTING A PLUNGER INTO ONE END OF EACH CLEANED VIAL
Walter A. Shields, 181—41 Henley Road, Jamaica, N.Y.
Filed Nov. 22, 1955, Ser. No. 548,368
7 Claims. (Cl. 15—4)



1. Apparatus for cleaning open ended vials and inserting a plunger into one end of each cleaned vial, transporting means for moving the vials substantially horizontally in a vertically undulating path having a plurality of rises and dips, uniformly spaced means including outwardly faced openings on said transporting means for receiving the vials, a continuously rotating drive shaft, means connected with said shaft for producing intermittent movement of said transporting means a distance corresponding to the uniform spacing of the openings, gravitationally acting dispensing means arranged above said transporting means for delivering vials into said openings adjacent the beginning of said undulating path, means located below the vial delivering means, adjacent the first dip in the undulating path for cleaning the vials, means adjacent the first rise in the undulating path for supplying rinse fluid, means adjacent the second dip in the undulating path for supplying drying fluid, means adjacent the second rise in the undulating path for inserting a plunger in one end of each vial to close said one end, means at the ascending side of the third rise of the undulating path to inject a sequence of different types of fluids, including a cleaning fluid, into the end of each vial opposite the closed end, and means for receiving the vials from the transporting means as they leave the crest of the third rise in the undulating path, a plurality of cams mounted on said drive shaft for operating said vial cleaning means, said plug inserting means and said fluid injecting means during rest periods in the intermittent movement of said transporting means.

2,948,005
POLISHING MACHINE
Aldine J. Anderson, 889 Russell St., St. Paul, and Leroy J. Schoephoerster, 1012 Essex St., Minneapolis, Minn.
Filed Apr. 7, 1958, Ser. No. 726,880
3 Claims. (Cl. 15—98)



3. In combination with a portable polishing machine wherein a casing houses an electric motor which drives a short shaft to whose lower end a disk may be attached, the center of gravity of the motor and casing being close to the plane of rotation of the disk so that the disk supports the motor and casing in a stable equilibrium, an inverted U-shaped clamp member, upwardly extending arms formed on the legs of the inverted U-shaped clamp member, the upwardly extending arms detachably secured to the sides of the casing, resilient means connected between the upper ends of the upwardly extending arms and fitting a portion of the casing, a bail pivotally mounted on the legs of the clamp, a handle formed on the bail.

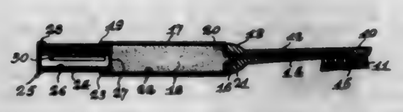
2,948,006
APPARATUS FOR CLEANING STRIP MATERIAL
Charles R. Russell, Homewood, and Edward A. Schulz, Clarendon Hills, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 2, 1958, Ser. No. 739,109
3 Claims. (Cl. 15—102)

1. An apparatus for cleaning surfaces of strip material which comprises a first block, a second block pivotally connected to the first block, said first and second blocks having a plurality of grooves therein on facing surfaces of the blocks, compressible abrasive material positioned on the grooved surfaces of the blocks,



a separate grill pivotally mounted to each block over the abrasive material to enter the grooves to compress portions of the abrasive material within the groove, and latch means for holding the grills in the grooves so that the outer surfaces of the uncompressed abrasive materials extend beyond the outer surfaces of the grills.

2,948,007
FOUNTAIN TOOTHBRUSH
Florent Tanguay, 2749 Bossuet St., Montreal, Quebec, Canada
Filed Sept. 28, 1959, Ser. No. 842,672
5 Claims. (Cl. 15—137)



1. A fountain toothbrush comprising a head having bristles, a handle for said head, said head and handle having a bore for feeding toothpaste to said bristles, said bore opening within said bristles and at the free end of said handle, a reservoir having a nipple at one end secured to said handle and in communication with said bore, said reservoir being fully opened at its other end and having a threaded cylindrical internal surface extending substantially the entire length of said reservoir, a piston formed of at least two telescopic cylindrical parts, namely an external part and an internal part, said external part having external threads in threaded engagement with the threaded internal surface of said reservoir and forming a piston head to force the paste contained within said reservoir through said bore and into said bristles, said internal part slidably fitting and capable of longitudinal movement within the external part of said piston, means to prevent relative rotation between said two parts of said piston, said internal part having an outer end projecting outwardly from said reservoir and a collar formed on said outer end of said internal part and adapted to abut against said other end of said reservoir.

2,948,008
DISPENSING CONTAINERS
Walter W. Leeds, New York, N.Y., Theodore Loew, Stamford, Conn., and Lewis A. Micallef, New York, N.Y., assignors to Leeds and Micallef, New York, N.Y., a partnership
Filed Apr. 29, 1957, Ser. No. 655,810
9 Claims. (Cl. 15—139)

1. A dispensing container for liquids comprising a receptacle having an opening at one end, a dispensing closure mounted thereon, said dispensing closure comprising an upstanding flexible, liquid-impermeable plastic cap having a liquid-tight fit with said opening at its base, a wick within the cap, a discharge opening in the cap adjacent the end thereof, said container having means for supporting said wick in position to substantially fill the

cap, whereby bending of the cap from its normal upstanding position will compress said wick and force liquid



therein through said discharge opening, said wick having a portion extending substantially to the bottom of the receptacle.

2,948,009
FOLDING TOOTHBRUSH WITH A POSITIVE LATCH
Phillip J. Meal, 2411 N. Clybourn Ave., Elmwood Park, Ill.
Filed Sept. 15, 1958, Ser. No. 760,989
4 Claims. (Cl. 15—144)



3. In a folding toothbrush which comprises an elongated brush part including an inner end face and bristles secured to a lateral face of the part and an elongated handle part including an inner end face which parts, in the operative relation thereof, are aligned with the respective end faces in juxtaposition, the improvement comprising: a hinge and latch means for effecting folding of said parts in adjacency and for latching said parts in the unfolded, extended position, said hinge comprising a pair of ears on the brush part adjacent the inner end thereof and a pair of ears on the handle part adjacent the inner end thereof, the said pairs of ears being respectively overlapped and provided with aligned bores receiving a through hinge pin, said handle part having a longitudinal slot therethrough opening at said inner end face thereof, said latch means including a bar having a face slidable on co-planar faces of said brush and handle parts, said hinge pin being spaced from said co-planar faces an amount substantially equal to the thickness of the latch bar for frictional engagement of said bar between said pin and co-planar faces when the latch bar is moved to latching position, said latch means also including an actuating button having a face slidable on co-planar faces of the brush and handle parts opposite said first co-planar faces and a neck passing through said slot integral with said latch bar and actuating button to unite the same for joint movement, said neck travelling in said slot upon movement of the latch means between latching and unlatching positions.

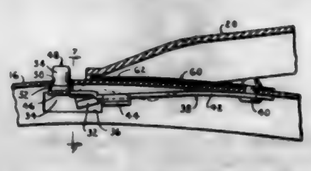
2,948,010
WINDSHIELD CLEANER
John R. Oisbel, Buffalo, and Raymond Deibel, Cheektowaga, N.Y., assignors to Trico Products Corporation, Buffalo, N.Y.
Filed Apr. 19, 1956, Ser. No. 579,361
1 Claim. (Cl. 15—250.27)

A windshield cleaner for a vehicle having a windshield of the panoramic type with frontal and lateral areas joined by more sharply curved crest areas, said cleaner comprising spaced wiper shafts each journaled at the lower side of an associated windshield adjacent a respective crest area thereof for oscillating carried wiper means over the latter and downwardly on the joined frontal and respective lateral areas, medial wiper shaft means journaled at the lower side of the frontal area between said spaced wiper shafts and oscillating carried wiper means in a path of movement across the center of the frontal area that intersects the top margins of the paths of movement of the spaced wiper means above the forward lines of sight of vehicle occupants at oppo-



site sides of the center, the path of movement of the medial wiper means overlapping the paths of the spaced wiper means on the frontal area and for a distance beneath the forward lines of sight to provide within the latter area doubly wiped forward vision fields on both sides of the center, and drive means to oscillate all said carried wiper means in substantially parallel relation, said drive means operating differentially on said spaced wiper shafts and said wiper shaft means to impart to said medial wiper shaft means a relatively greater and faster speed of movement, said wiper means acting to sweep away any deposit left by a previous wiping at the margins of such doubly wiped vision fields.

2,948,011
WINDSHIELD WIPER BLADE ASSEMBLY
Fred A. Krohm, Hobart, Ind., assignor to Productive Inventions, Inc., a corporation of Indiana
Filed Feb. 8, 1957, Ser. No. 639,015
12 Claims. (Cl. 15—250.42)



11. In combination: a windshield wiper blade, a pressure device comprising a pair of pressure members operatively connected to the blade, a bridge having ends respectively rockably connected to the members, and a resiliently flexible element constructed of sheet material secured in a transversely flexed condition between one of the pressure members and one of the ends of the bridge.

2,948,012
DOCTORS FOR PAPER-MAKING AND OTHER MACHINES
Harold Eric Balliol Scott, The Heath, Weybridge, England, assignor to Vickerys Limited, London, England
Filed Dec. 14, 1956, Ser. No. 628,431
Claims priority, application Great Britain Jan. 13, 1956
7 Claims. (Cl. 15—256.5)

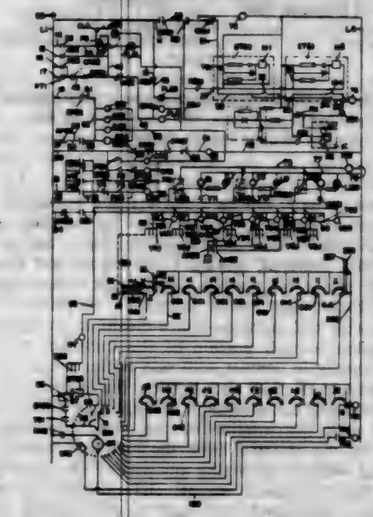
1. A doctor for application to a roll of a paper-making or other machine comprising a blade, a blade holder formed of two parts both extending for the full length of the blade, means securing said parts of the holder together, the part of said holder remote from said roll

having a longitudinally extending recess and a forwardly projecting nose and the other part of said holder having a groove, the rear face of which constitutes an abutment for the rear edge of the blade, and a lip in advance of said groove, said nose and said lip both extending at least



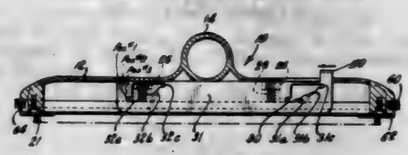
for substantially the whole length of said blade, and a spring member accommodated in said recess and extending for substantially the whole length of the blade, said spring member being in contact throughout its length with one face only of the blade remote from said roll and maintaining the opposite faces of the blade respectively in contact with said nose and with said lip.

2,948,013
PROGRAM CONTROL FOR SOOT BLOWERS
Henry Patrick Bearse, Jr., Erie, Pa., assignor, by mesne assignments, to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Filed Sept. 7, 1955, Ser. No. 532,904
12 Claims. (Cl. 15—316)



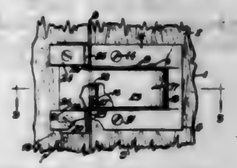
5. In combination, a sequence control and a plurality of soot blowers for blowing deposits of foreign matter from the tubes of steam boilers comprising a plurality of soot blowers, a stepping relay, a stepping switch, said stepping relay having a plurality of spaced terminals and a common terminal, said common terminal being connected to a source of electrical power, motor means operably connected to said common terminal moving it over said spaced terminals to connect said power to said spaced terminals, said stepping switch having a plurality of movable terminals mechanically connected to move together, a plurality of sets of fixed terminals on said stepping switch, each said movable terminal having common means to move it over one set of said fixed terminals to electrically connect one said movable terminal in turn with each said fixed terminal on one said set of fixed terminals, each said spaced terminal on said stepping relay being connected to one of said movable terminals on said stepping switch, a jack board, a plurality of first jacks on said jack board, each of said fixed terminals on said stepping switch being connected to one of said first jacks, second jacks on said jack board, a plurality of said second jacks being connected to an actuating means for each said soot blower, patch cords, each said patch cord connecting one of said first jacks to one of said second jacks, and means on and associated with each said soot blower to actuate said means on said stepping switch to advance said movable terminals thereon to another fixed terminal thereon after the said soot blower then connected through said movable terminal has completed its blowing cycle.

2,948,014
SELECTIVELY POSITIONED BRUSH NOZZLE
Oliver L. Allen, Riverside, Conn., assignor to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed Oct. 26, 1954, Ser. No. 464,893
6 Claims. (Cl. 15—371)



5. In a vacuum cleaner tool, a member having a suction passageway therethrough terminating in a downwardly opening cleaning nozzle disposed in a normally horizontal plane, a brush structure reciprocably mounted on said member in circumposed relation to said nozzle for movement downwardly and upwardly with respect to said plane, said brush including front and rear portions, cam means on said member including portions sequentially engageable with said front and rear brush portions for reciprocating said brush portions upwardly and downwardly with respect to said plane to extend and retract a lower effective end of each brush portion to below and above said plane independently and in combination, a single manually operable member for actuating said cam means, and resilient means engaging said brush structure and biasing at least a portion thereof into operative free floating position in the absence of pressure applied by said cam means.

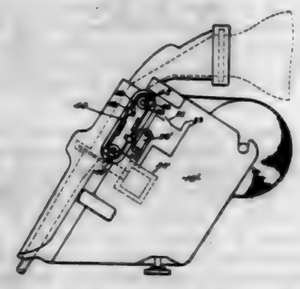
2,948,015
DOOR HINGE
Wilford M. Hansen, P.O. Box 311, Cardston, Alberta, Canada
Filed Oct. 3, 1957, Ser. No. 688,040
2 Claims. (Cl. 16—145)



1. The combination of a door frame, a swingable door, and a hinge attaching said door to said frame for swinging movement through 180° between open and closed positions, said hinge comprising a first hinge member in the form of a normally V-shaped resilient strip having one end portion thereof secured to one side of said door frame and having its other end normally disposed in outwardly spaced relation from the relatively opposite side of the door frame when the door is open, a hinge

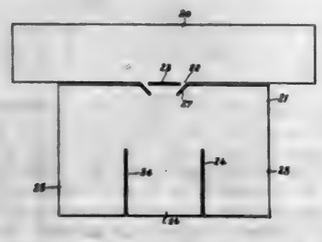
pin carried by said other end of said strip, and a second hinge member in the form of a tapered channel secured in a recess provided in said door adjacent the door frame and having said hinge pin connected thereto, said channel receiving said other end portion of said strip during swinging movement of the door through 180° from a fully open position parallel to and at the outside of said opposite side of the door frame to a closed position coplanar with the door frame during which movement said strip is resiliently compressed from a substantially V-shaped to a substantially U-shaped form, and coacting means provided on the first and second hinge members for releasably retaining said door in its closed position.

2,948,016
STRIP SEVERING MECHANISM
William F. Spang, Medfield, Mass., assignor to Needham Manufacturing Company Inc., Needham, Mass., a corporation of Massachusetts
Filed July 2, 1957, Ser. No. 669,531
2 Claims. (Cl. 17—32)



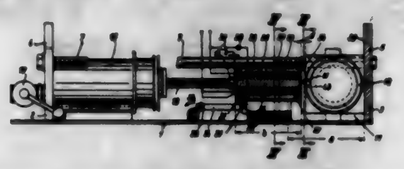
1. A machine for severing into uniform lengths a strip of material moving longitudinally along a predetermined path, comprising a knife disposed transversely of said path, power-operated mechanism including an electric circuit for moving the knife forwardly in cutting direction to sever the strip, an electric switch in said circuit, means including a plurality of uniformly spaced tripping elements mounted for movement in an endless predetermined path past said switch, and means adapted to cooperate with the strip to move the elements continuously along said path synchronously with the movement of the strip and trip the switch and cause the power-operated mechanism to operate the knife and sever the strip as each element passes the switch.

2,948,017
MEANS FOR PRODUCING A PLASTER OR LIKE CAST
Geoffrey Stephen Chase, Geerwen, Criccieth, North Wales
Filed July 16, 1957, Ser. No. 672,196
3 Claims. (Cl. 18—5.7)



1. A holder for the support of a dental impression tray, to receive a moulded impression over which a mouldable substance such as Plaster of Paris is poured, for the production of a cast of the impression, as in the manufacture of false teeth, comprising a unitary flexible member having a base, the rearward portion of which extends upwardly as a wall and which further extends laterally beyond the base to form flexible, variably overlappable sidewall members which when overlapped laterally form, with said base, an open cup-shaped container and means for engaging and retaining the sidewalls in their overlapped position adjacent the upper surface of said base.

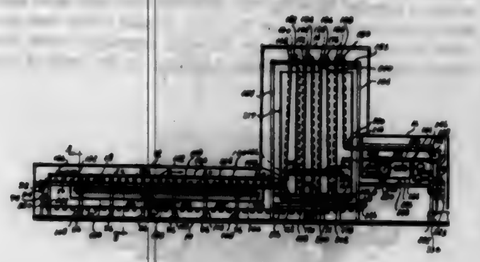
2,948,018
APPARATUS FOR THE PRODUCTION OF DENTAL PLATES AND THE LIKE FROM PLASTIC MATERIAL
Marcel Hintermann, Emmendingen, and Philipp Ostermann, Kehl (Rhine), Germany; said Ostermann assignor to said Hintermann
Filed Aug. 8, 1957, Ser. No. 677,120
Claims priority, application Germany Aug. 13, 1956
7 Claims. (Cl. 18—5.7)



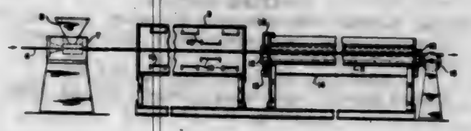
1. In an apparatus for injecting heat plasticizable material into a mold structure, the combination which comprises, entrance orifice means constituting part of said mold structure for the introduction of said material into said mold structure; supply conduit means for said plasticized material having a delivery end associated with said orifice means; a supply cartridge adapted to be placed in said conduit means comprising a casing containing said material, having a rupturable end portion; mounting means for placing said conduit means together with said cartridge placed therein in cooperative relationship with said entrance orifice means so arranged that said rupturable wall portion of the cartridge casing is placed directly in contact with said orifice means so that upon rupture of said wall portion the interior of said cartridge casing communicates through said orifice means directly with the interior of the mold providing for transfer of the material from the cartridge directly into said mold without contacting any part of the delivery end of said supply conduit means; and pressure means cooperatively associated with said supply conduit means operable to exert pressure upon the material in said cartridge casing effective to rupture said end wall portion thereof so that the material is displaced from the casing through the rupture directly into said mold.

2,948,019
METHOD FOR CASTING BUTTONS AND THE LIKE
Richard O. A. Peterson, Chatham, N.J., assignor to John L. Burns, Greenwich, Conn., as trustee
Filed Mar. 14, 1955, Ser. No. 494,003
3 Claims. (Cl. 18—47.5)

1. A continuous method of making buttons including the steps of conveying a plurality of open molds successively past a molding material feed station, depositing by gravity respective measured charges of heat reactive synthetic resin in the open molds at said feed station, passing said open molds through a curing zone to cure the resin deposits to form button blanks, conveying said molds through an ejecting station, ejecting said button blanks from said molds at said ejecting station as they pass through said station, feeding blanks under the influence of gravity from said ejecting station in timed relationship to a drilling station, receiving and supporting said button blanks at said drilling station, drilling said button blanks at said drilling station and controlling said feeding step to permit said drilling step to be performed on one blank before a succeeding blank is fed to said drilling station.



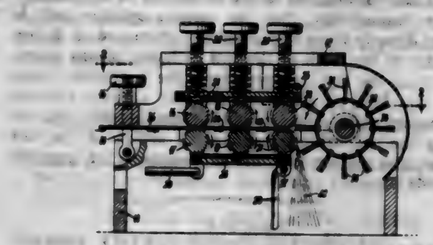
2,948,020
METHOD OF MAKING HIGH FREQUENCY CABLE
Ralph G. D'Ascoli, Yonkers, N.Y., assignor to Anaconda Wire and Cable Company, a corporation of Delaware
Filed Nov. 6, 1953, Ser. No. 390,583
3 Claims. (Cl. 18—59)



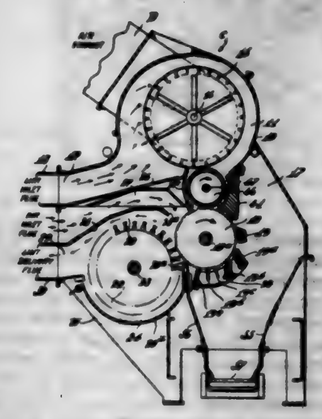
1. The method of forming a high frequency cable which comprises extruding a mixture of polyethylene, a dark-colored pigment and a blowing agent as an insulating layer about a wire, heating substantially the entire mass of said layer to above the decomposition temperature of the blowing agent but below the fusion temperature of the polyethylene, whereby a porous, cellular structure is imparted thereto, exposing the resulting cellular insulation layer on the wire to a source of radiant heat from electrical resistance heating elements maintained at a temperature substantially above the melting temperature of the polyethylene, and holding the wire thus exposed until polyethylene within the surface portion of said layer fuses to a dense, non-porous glossy smooth protective outer skin on said cellular insulation layer.

2,948,021
ATTENUATING APPARATUS
Fred H. Bailliff, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York
Filed Mar. 28, 1957, Ser. No. 649,152
3 Claims. (Cl. 19—65)

3. Attenuating apparatus comprising a drafting head in which is journaled a series of rolls through which a sliver passes, and a beater roll provided with bunches of thin, narrow elastic filaments in staggered relation on the periphery of said beater roll, said beater roll being journaled in position so that the ends of said filaments whip close to the nip of the final drafting rolls to disintegrate the attenuated sliver into individual fibers.



2,948,022
COTTON CLEANING APPARATUS
Dewey D. Day, Dallas, Tex., assignor to The Murray Company of Texas, Inc., Dallas, Tex., a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,412
19 Claims. (Cl. 19—72)

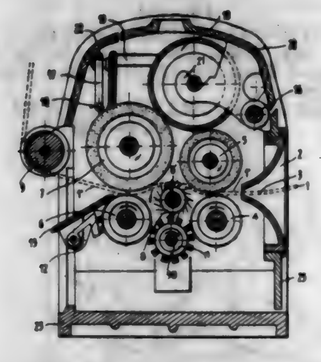


1. In a cotton lint cleaner wherein the cleaning instrumentalities include a rotatable saw cylinder and spaced grid bars arranged about an arc of the peripheral surface of the saw cylinder, and having a rotating screen drum whose axis is parallel to that of the saw cylinder, and on whose peripheral surface the lint to be cleaned is pneumatically deposited as a thin layer; in combination, a toothed carding cylinder turning about an axis parallel to the axes of the screen drum and saw cylinder with its toothed periphery closely adjacent, at circumferentially spaced points, to a tangent to the screen drum and to a tangent to the saw cylinder respectively, said toothed cylinder being driven at such a linear velocity and in such a direction as to doff lint directly from the screen drum and to deliver it directly to the teeth of the saw cylinder, said toothed cylinder constituting the sole mechanical means for transferring lint from the screen drum to the saw cylinder.

13. In a cotton cleaner of the kind which comprises a rotary saw cylinder, a plurality of spaced, parallel grid bars arranged about an arc of the peripheral surface of the saw cylinder, a condenser drum on whose peripheral surface lint is deposited as a thin layer while the major portion of a lint-carrying air current is being separated from the lint, in combination, a toothed carding cylinder and condenser drum, said toothed carding cylinder being

of such a diameter and having its axis so located that spaced points in the periphery of the carding cylinder are so close to tangents to the condenser drum and saw cylinder, respectively, that the carding cylinder acts to doff lint directly from the condenser drum and to deliver it directly to the teeth of the saw cylinder, means operative to keep the lint, removed from the condenser drum, within the field of action of the said carding cylinder along an arc of the latter cylinder exceeding 90°, and for keeping the lint within the field of action of the saw cylinder through an arc of its periphery of approximately 45°

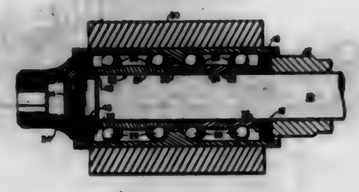
2,948,823
APPARATUS FOR DRAFTING TEXTILE FIBERS
Ettore Bonalumi, Bergamo, Italy (% Ing. A. Giambrocono, via Durini 4, Milan, Italy)
Filed Aug. 5, 1957, Ser. No. 676,302
5 Claims. (Cl. 19—130)



1. An apparatus for drawing textile fibres in the form of a web immediately after doffing from a carding machine comprising in combination, means for condensing the web into a sliver, a frame, a pair of co-operating driven feed rollers mounted on rotatable shafts arranged one above the other, a pair of co-operating delivery rollers mounted on rotatable shafts arranged one above the other, said feed rollers and said delivery rollers having a drawing action therebetween, a stationary support on said frame for the rotatable shafts of said rollers arranged such that the distance between the axes of the top feed roller and the top delivery roller is smaller than the distance between the axes of the lower feed roller and the lower delivery roller, the distance between the axes of the lower rollers being approximately equal to the average length of fibre to be treated, a revolving needle roller, mounted between said feed rollers and said delivery rollers, a rotary brush below said needle roller mounted to clean said needle roller, and at the same time to clean the periphery of said lower feed roller and said lower delivery roller, resilient pressure means arranged to urge said top delivery roller against said bottom delivery roller, and said top feed roller against said bottom feed roller and means for distributing the force exerted by said pressure means such that the pressure exerted between said delivery rollers is greater than the pressure between said feed rollers.

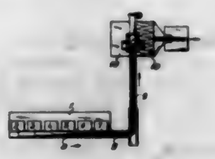
2,948,824
LINT SEALING ASSEMBLY FOR TEXTILE DRAFTING ROLLS
Kenneth P. Swanson, 284 Chapel St., Abington, Mass.
Filed June 29, 1956, Ser. No. 594,872
2 Claims. (Cl. 19—142)

1. In a top roll assembly for textile drafting machines, an arbor having a cylindrical end portion and including means providing an annular and coaxial outwardly facing shoulder at the inner end of said portion and a stud integral with and projecting outwardly beyond the free end of said portion, a ball bearing assembly including balls disposed in annular ball races on and about a sleeve assembly coaxial with and fitting said end portion of the arbor, a tubular drawing roll disposed coaxially over said portion and supported on the balls in said races, two annular dust sealing members disposed coaxially about the arbor within and respectively adjacent to the ends of the



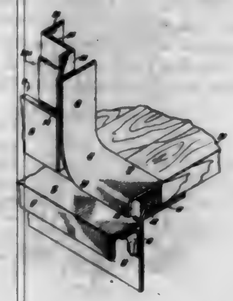
roll and having their peripheries in continuous frictional engagement therewith, two annular assemblies coaxial with the arbor and respectively in abutting relation with the inner and outer ends of the sleeve assembly, each of said two assemblies having its periphery disposed adjacent to but not contacting the roll and having an annular gap therein receiving the adjacent sealing member for free rotation therein, and a clamping member on said stud binding said two assemblies and the sleeve assembly into a fixed unit between the clamping member and said shoulder.

2,948,825
METHOD AND APPARATUS FOR PROCESSING TEXTILE FIBERS
Erwin Schütz, Kaiserslautern, Germany, assignor to Kammgarnspinnerei Kaiserslautern, Kaiserslautern, a firm of Germany
Filed Oct. 21, 1957, Ser. No. 691,402
Claims priority, application Germany Oct. 22, 1956
8 Claims. (Cl. 19—157)



1. In an apparatus for conveying textile fibers from one processing machine to the next processing machine: at least two containers arranged at the inlet side of said next machine; first conveying means for conveying at least one sliver from said one processing machine to a point above said containers; depositing means spaced from said containers for depositing said sliver in said containers; said depositing means comprising a runway above said containers, a travelling carriage movable on said runway along a first line, and at least one pendulum-like feed unit pivotally suspended on one end of said carriage; means for pivoting said feed unit back and forth above said container along a second line at an angle to said first line; second conveying means for conveying said sliver from said first conveying means to said feed unit; and driving means for moving said carriage back and forth above said container along said first line and for driving said feed unit and said second conveying means.

2,948,826
DOORWAY CORNER CONSTRUCTION
Lee H. Sills, Lecula, N.J., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed Sept. 9, 1958, Ser. No. 759,940
11 Claims. (Cl. 20—11)



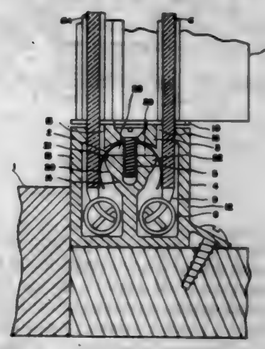
1. A doorway corner construction for a wall having a sill, said sill having a horizontal flange and a vertical flange extending upwardly therefrom, said wall having two door posts connected to said vertical flange and each having a flange extending transversely of said wall and defining a side of a door opening, said door opening extending below the top of the portion of said vertical flange beyond said opening and said vertical flange between said door posts being reduced in height, said wall having a threshold plate defining a major portion of the bottom of said door opening and resting on the top of said reduced portion of said vertical flange, said construction comprising a corner piece of metal plate formed with a horizontal body portion extending substantially in the plane of and being integral with said threshold plate, a substantially vertical arm portion extending in parallel contact with said transversely extending flange of one of said posts and firmly connected thereto, and a fillet portion connecting said arm and body portions, said vertical flange of said side sill having an upper surface in continuous contact along the length of the undersurfaces of said fillet and of said body portions and being secured to said fillet and body portions.

2,948,827
HINGED WINDOW CONSTRUCTION
Harvey J. Gill, Jr., Charles K. Sitterly, and Willi Preu, Dubuque, Iowa, assignors to Caradco Incorporated, a corporation of Iowa
Filed Dec. 23, 1957, Ser. No. 704,428
5 Claims. (Cl. 20—42)



5. In a hinged casement window construction having a window frame and a window sash mountable in a window opening in the frame, a hinge mechanism for mounting the sash to swing about an upright axis between open and closed positions, comprising, a horizontal guide track in the window frame along the bottom of the window opening, a guide block slidable in the track, means pivotally connecting the sash to the block to swing about an upright axis as the block slides, and a sash link having one end pivoted on the sash and the other end pivoted on the frame to cause the block to slide as the sash swings, said track having a guide wall facing the window opening, and said guide block having one side facing said guide wall and having raised bearing surfaces thereon providing limited bearing areas engageable with the guide wall to reduce friction as the block slides, said bearing surfaces being spaced apart laterally on the block and extending longitudinally in the direction of block movement.

2,948,828
WEATHERSTRIPPING FOR DOUBLE HUNG WINDOWS
Donald J. Cameron, Thornhill, Ontario, Canada, assignor to Cameron Windows Aluminum Limited, Brampton, Ontario, Canada
Filed Dec. 16, 1957, Ser. No. 703,005
3 Claims. (Cl. 20—52.4)

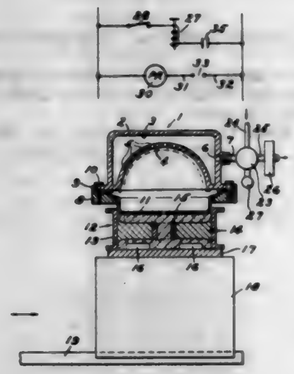


1. A double hung window structure comprising a window frame having opposite sides to each of which is attached a channel member, said channel member having inner, outer and intermediate walls connected by a base member and defining two vertically extending tracks therebetween, glass window panes vertically slidable in said tracks, said intermediate wall being formed with a substantial taper converging outwardly toward said channel base and a substantially flat surface defining thereby a pair of projecting inner corners, a weatherstripping element formed of resilient strip material secured to and straddling said intermediate wall, and a plurality of securing means substantially equally spaced vertically along said channel member securing said weatherstripping element to said substantially flat surface of said intermediate wall and being adjustable inwardly and outwardly, said weatherstripping element being spaced at its middle portion from said substantially flat surface of said intermediate wall, contacting said intermediate wall at its projecting inner corners, and terminating in outer edge portions extending beyond said projecting corners into said tracks adjacent opposite sides of said intermediate wall to frictionally engage opposing faces of said glass panes, and said securing means coacting with said weatherstripping element middle portion whereby inward and outward movement of said securing means influences corresponding inward and outward movement of said middle portion, which latter movement causes said weatherstripping element outer edges portions to pivot about said intermediate wall projecting corners, moving generally transversely of said glass pane opposing faces to vary the pressure exerted by said outer edge portions against said faces.

2,948,829
SAFETY CONTROL FOR MOLDING MACHINES
Burton C. Ferris, Detroit, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed July 29, 1957, Ser. No. 674,823
4 Claims. (Cl. 22—35)

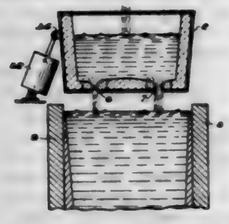
1. Molding apparatus comprising a molding machine having means including a flexible, fluid pressure operated

diaphragm for packing sand in a flask, means for subjecting said diaphragm to fluid under pressure to press said diaphragm against sand in the flask to pack the sand, a sand hopper, means for filling the flask with a measured quantity of sand from said hopper, and con-



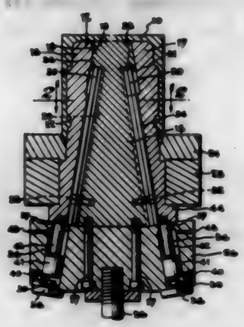
trol means dependent upon the quantity of sand in said hopper for rendering said second-mentioned means operative and inoperative, said control means rendering said second-mentioned means operative when the sand in said hopper is above a predetermined level sufficient to adequately fill the flask and inoperative when the sand in said hopper falls below said predetermined level.

2,948,030
METHOD AND APPARATUS FOR THE CONTINUOUS CASTING OF MOLTEN METAL
Rufus Easton, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
Filed Mar. 13, 1957, Ser. No. 645,849
3 Claims. (Cl. 22—57.2)



1. In apparatus for continuously casting molten metal, a tiltable tundish having a substantially uninterrupted molten metal compartment and having a substantially oblong horizontal cross sectional area, said tundish compartment providing a single source of molten metal for simultaneously forming a plurality of individual castings, said tundish being tiltable about its major axis and having metal pouring outlet means on opposite sides of said tilting axis for simultaneously pouring molten metal into said molds, said outlet means on such opposite sides of said tilting axis each including spaced small and large outlets with the large outlets on one side of said tilting axis substantially aligned with the small outlets on the other side of said tilting axis so that the axes of aligned large and small outlets lie in a common plane substantially normal to said tundish tilting axis, and spaced open-ended mold means positioned beneath said outlet means so that each mold means receives molten metal strands simultaneously from aligned large and small outlets.

2,948,031
PISTON MOLDING CORE
Thomas L. Webb, 3117 W. Tower Ave., Cincinnati 38, Ohio
Filed Sept. 9, 1957, Ser. No. 682,852
4 Claims. (Cl. 22—178)

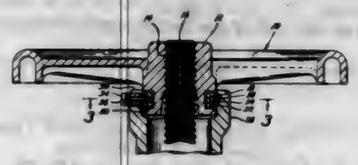


1. In a multi-section piston molding core having a three piece middle section, the improvement in the middle section comprising a center piece having side faces which taper symmetrically upwardly with respect to the vertical central axis of the piece, two corner blocks, each block having a tapered face mating with the tapered face of a side of the center piece, the center piece having downwardly presented shoulders opposite side faces within the upper fourth thereof, an elongated key which is T-shaped in cross section affixed to each of the side faces of the center piece and extending from the shoulder to the bottom of the center piece in the plane of the vertical central axis of the piece, a keyway in each of the mating faces of the corner blocks slidably receiving said keys, the angulation of the mating faces of the center piece and the two corner blocks being such that downward movement of the center piece causes the two corner blocks to move inwardly toward each other, abutments on the corner blocks engageable with said downwardly presented shoulders on the center piece to limit downward movement of the center piece with respect to the two corner blocks, the spacing between the abutments and the shoulders being such as to permit substantial inward movement of the corner blocks prior to engagement of the shoulders with the abutments, and means biasing the corner blocks upwardly with respect to the center piece to hold the corner blocks up during downward movement of the center piece to the abutments, the last named means comprising a yoke secured to the lower end of the center piece and having portions thereof below the corner blocks, each of said yoke portions having a cylinder therein which is generally parallel to a keyway, a rod secured to the lower end of each corner block and extending into a cylinder, and a free piston in each cylinder, whereby application of fluid pressure to the cylinders underneath the pistons drives the pistons upwardly within the cylinders and into contact with the rods therein to force the rods relatively upwardly.

2,948,032
METAL CASTING MOLDS
Raymond Reuter, Orland Park, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed May 5, 1958, Ser. No. 732,798
5 Claims. (Cl. 22—193)

1. The process of producing a ceramic shell mold by a lost wax process which comprises coating an expendable pattern with a ceramic slip comprising an aqueous colloidal silica sol vehicle having suspended therein a granular, fused silica having a thermal coefficient of expansion of not more than about 6×10^{-7} cm./cm./° C. and a silica content, expressed as SiO_2, of at least 97% by weight, stuccoing the treated pattern with a granular, fused silica having a thermal coefficient of expansion of not more than 6×10^{-7} cm./cm./° C. and a silica content, expressed as SiO_2, of at least 97% by weight, drying the stuccoed, coat, forming a plurality of superposed similar coatings on said pattern, and removing the expendable pattern from the ceramic shell, by heating said coated pattern to a temperature of at least 700° F. for a period of time sufficient to remove the expendable pattern from the ceramic shell.

2,948,033
METHOD OF FORMING HUB ASSEMBLY
Ronald A. Gulick, Bellaire, Tex., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey
Filed May 31, 1957, Ser. No. 662,729
4 Claims. (Cl. 22—202)



1. The process of forming an assembly provided with an integral, rotatable, annular bearing member, said process comprising: utilizing a bearing member formed of two sections, each section being a ring of load carrying material having a thin layer of polytetrafluoroethylene bonded to one side, the unbonded sides of the bearing being face-to-face, positioning the bearing in the cavity of the die with the unbonded faces spaced apart, introducing the assembly material into the die, the assembly material being such that its temperature does not exceed the high temperature endurance characteristics of the polytetrafluoroethylene.

2,948,034
CASTING MOLD AND METHOD OF CASTING CARBON-CONTAINING ALLOYS
Hans Schneider, Winterthur, Switzerland, assignor to Sulzer Frères, Societe Anonyme, Winterthur, Switzerland
No Drawing. Filed Oct. 9, 1957, Ser. No. 689,061
Claims priority, application Switzerland Dec. 18, 1953
14 Claims. (Cl. 22—216.5)

14. An article of manufacture comprising a ceramic mold having a member of the group consisting of an alkaline earth metal carbide and an alkaline earth metal cyanide evenly dispersed throughout the mold body, said ceramic mold being substantially free of water when having an alkaline earth metal carbide dispersed throughout the mold body.

2,948,035
HOLDERS FOR BIBS AND THE LIKE
Justin H. McCarthy, 205 12th Ave., San Francisco, Calif.
Filed Jan. 11, 1957, Ser. No. 633,663
6 Claims. (Cl. 24—9)

1. A holder for a sheet of the character described, comprising a tube bent into a generally arcuate form, a longitudinal strip being severed from a curved portion of the outer periphery of said tube, the ends of said severed portion being united with the wall of the tube so that said strip complements the outer curve of said tube, said ends causing said strip portion to bulge outwardly when the tube is straightened to permit the insertion and clamping of said sheet between said strip



portion and the adjacent walls of the tube, and releasable means to secure the opposite ends of said tube together to hold the tube in circular form.

2,948,036
COMPOSITE ARTICLE
Robert M. Heller, Birmingham, Mich., assignor to Watts Electric & Mfg. Co., Birmingham, Mich., a corporation of Michigan
Filed Apr. 15, 1957, Ser. No. 652,724
5 Claims. (Cl. 24—73)



1. A fastening device comprising a sheet metal clip provided with a pair of fastening tang portions extending transversely therefrom, said tang portions being movable away from each other after insertion in an opening in a support body to secure the device therein, the aforesaid transversely extending tang portions being completely embedded within a block of yieldable sealing material, said block having a groove extending transversely across its end between said tang portions to facilitate movement of said tangs away from each other.

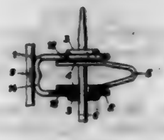
2,948,037
WASHABLE STRINGS FOR MACHINISTS' AND SIMILAR TYPE APRONS
Edward T. Bugyi, Bridgeport, Conn.
(190 Knollwood Drive, Stratford, Conn.)
Filed Apr. 15, 1958, Ser. No. 728,650
4 Claims. (Cl. 24—73)



1. A hook member adapted for securing a supporting string to a garment by means of a grommet in the form of a ring, said hook comprising a piece of wire provided with a transverse loop at one end through which the string is threaded, an intermediate portion including two substantially straight sections bent at an obtuse angle to each other at a point spaced from the transverse loop, and a substantially straight free end portion bent back

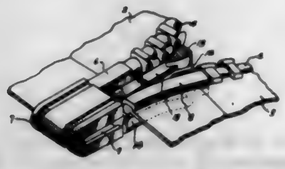
over the intermediate section farthest from the loop with its free end opposite the bend in the intermediate portion and spaced therefrom a distance somewhat greater than the width of the opening in the grommet.

2,948,038
LOCKING DEVICE FOR JEWELRY
Emil Benda, 261 Salzburgerstrasse, Linz, Upper Austria, Austria
Filed Dec. 27, 1955, Ser. No. 555,677
Claims priority, application Austria Nov. 12, 1955
2 Claims. (Cl. 24—157)



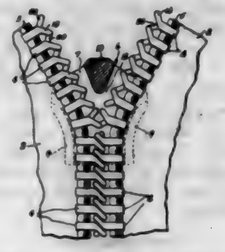
1. A locking device for jewelry comprising a U-shaped support including legs, each leg having adjacent its free end a bearing on a side symmetrical to the bearing side of the other leg, and each leg having a slot formed therein, with said slots being in alignment and opening through the same lateral edges of the legs and extending radially to the approximate centers of said bearings, a fork-like resilient member including legs positionable within the support, each leg of the fork-like resilient member having adjacent its free end and on a side symmetrical with respect to the bearing side of the other leg a bearing yieldably coacting with the corresponding bearing on the support, said member having a slot extending from the center of the bearing of one leg thereof to the center of the other bearing thereof, and an element fitting the ends of the slots in the support and fork-like member and capable of being inserted into such slots when the slots of the fork-like member are in alignment with the slots of the support, and lateral removal of the element from the locking device being prevented when the fork-like member is in any position wherein the slots thereof are out of alignment with the slots of the support, each of the support bearings being a recess provided in one of the confronting inner sides of the support legs, each bearing of the fork-like member including a sleeve-like projection received in the recess; and each of the symmetrical sides of the legs of the fork-like member having a projection extending radially from the end of the slot and adapted when in alignment with a slot of the support to fit in such slot.

2,948,039
SLIDE FASTENER
Alan A. Sim, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Feb. 14, 1957, Ser. No. 640,249
1 Claim. (Cl. 24—205.11)



In a slide fastener of the class described comprising a pair of stringer tapes having a series of spaced-apart interlocking fastener elements attached to their opposed edges, a slider arranged on said elements for longitudinal movement therealong for engaging and disengaging the same, said slider consisting of a pair of spaced-apart wings connected by a neck portion at one end thereof so as to provide a substantially Y-shaped channel therebetween, each of said fastener elements having an attaching portion and a reduced head portion so as to provide substantially a longitudinally extending continuous groove centrally of the fastener elements on both sides thereof when they are interengaged, a longitudinally extending rib-like portion arranged on the inner surface of each of said wings in opposed relation and centrally thereof, which rib-like portions are adapted to be disposed in the respective grooves on each side of the fastener, a separating end connection arranged at one end of said fastener comprising a tube-like member attached to the edge of one of said stringers at the end thereof, a box-like retainer member attached to said tube-like member, a pin-like member attached to the edge of the other of said stringers at the same end thereof, said retainer adapted to house both the tube-like and pin-like members which members are spaced-apart from one another a distance slightly greater than the width of the rib-like portions of said slider wings whereby the rib-like portions will be disposed therebetween when the slider is moved to its fully open position at that end of the fastener and cooperate therewith.

2,948,040
SLIDE FASTENER
Frank W. Clarke, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Filed Mar. 19, 1957, Ser. No. 647,082
7 Claims. (Cl. 24—205.13)

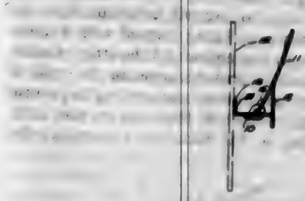


1. In a slide fastener, a pair of stringer tapes having a series of spaced-apart interlocking fastener elements attached to the opposed edges thereof, each of said elements consisting of an attaching portion and an interlocking head portion, said head portion having a pair of identical spaced-apart, finger-like portions extending outwardly from the attaching portion beyond the edge of the tape to one side of the medial plane of the element and angularly relative thereto so as to provide a space therebetween, and another identical finger-like portion extending outwardly from the attaching portion beyond the edge of the tape to the opposite side of the medial plane of the element and angularly relative thereto and in a plane substantially parallel to said first mentioned finger-like portions, said last mentioned finger-like portion disposed in a plane between said first mentioned finger-like portions and adapted to extend into the space between said pair of finger-like portions of the next succeeding element in the series positioned along the edge of the tape.

2,948,041
EAR CLIP COMPONENT
Andrew J. Evans, Greenville, R.I., assignor to E. A. Adams & Son, Inc., Providence, R.I., a corporation of Rhode Island
Filed Oct. 15, 1957, Ser. No. 690,345
1 Claim. (Cl. 24—252)

A base member for an earring clip comprising an elongated flap portion stamped from sheet stock and having

integral upstanding ears at each side edge, said ears having pivot openings, one end of said flat portion being bent at right angles to form an attaching portion, said attaching portion having a central opening there-



through, and a length of solder wire locked in said central opening, each end of said central opening being chamfered, each end of said length of solder wire being flattened to spread into said chamfered portions.

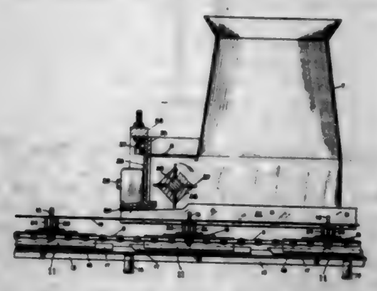
2,948,042
APPARATUS FOR MAKING HOLLOW REINFORCED CONCRETE BODIES
Kenneth D. Sylvester, Long Beach, Calif., assignor to Ben C. Gerwick, Inc., San Francisco, Calif., a corporation of California
Filed Mar. 14, 1955, Ser. No. 494,036
5 Claims. (Cl. 25—30)



1. In apparatus for forming hollow concrete bodies of extended length having longitudinal pre-stressed reinforcement therein, a rigid horizontal casting bed, means for anchoring tensioned reinforcing members to the ends of the bed with said members being spaced circumferentially about the horizontal axis of the bed, the upper surface of the bed providing a lower portion of a casting form, additional casting form means being positioned upon the bed to form therewith a complete form for casting the exterior of the body, said form means having openings therein at longitudinally spaced intervals for the introduction of a concrete mix, and a core aligned with the axis of the bed and disposed within the reinforcement, said core having a length substantially less than the length of the bed and a slightly tapered configuration so as to be readily movable lengthwise thereof to different positions for successive casting operations to form one finished body, said core being further provided with annular guide means adjacent its point of greatest diameter and adapted to sliding movements relative to said reinforcement and exterior form.

2,948,043
TILE MANUFACTURING MACHINE
Frank A. Gory, Hialeah, Fla.
(865 NW. 198th St., Miami, Fla.)
Filed May 13, 1958, Ser. No. 734,933
2 Claims. (Cl. 25—42)

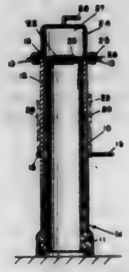
1. In a tile machine of the character described, means forming a frame, an endless conveyor for transporting a continuous plurality of tile pallets comprising a chain means engaged on rotary members journalled in opposite end portions of said frame with the upper portion of said chain means adapted for uni-directional linear movement, power means coupled to said chain means for driving same when energized, a hopper means on said frame positioned over said chain means for receiving periodic loads of plastic material in the form of a column therein for gravity loading said pallets when the latter are moved thereunder, said hopper forming a loading chamber divergent toward the said chain means, a pair of stationary parallel positioned forming plates attached to said hopper in the lower portion of said hopper at opposite sides thereof in close proximity to the path of travel of the sides of said pallets whereby said material in said hopper will gravitate into the space over each of said pallets bounded on two sides by said forming plates when said power means is energized and said pallets are continuously moved by carriages in one direction, a housing forming a feeding chamber secured to said frame straddling said conveyor and positioned adjacent to and opening into one side of said hopper means for receiving therefrom and confining portions of said material therein, an impeller means having a plurality of radially extending blades journalled for rotation in said chamber transverse to said conveyor with the path of movement of the outer edges of said blades substantially parallel to and spaced a predetermined distance from the path of movement of said pallets, power means for rotating said impeller means when energized, a bridge member secured to the frame, a combination compacting and forming shoe secured to said bridge member and positioned to transverse the path of movement of said pallets and spaced from said impeller



means, said shoe having a lower forming shape divergent with respect to said impeller means whereby the movement of each of said pallets under said hopper said chamber and said shoe will loosely load said pallets with said material from said hopper and said pallets will receive a further compressed loading of additional material in said housing by the rotation of said impeller means and the stricture action of said shoes for forming a tile of predetermined shape on each of said pallets when both said power means are energized, a finishing cylinder journalled for rotation on said frame with its axis of rotation positioned transverse to the movement of said pallets, said cylinder being located a predetermined distance above said loading path, said cylinder having a predetermined transverse outer contour substantially equal to the forming shape of said shoe, power means for rotating said cylinder whereby each tile carried by each of said pallets from beneath said shoe will move under said cylinder and be burnished and finished to a predetermined shape thereby when said last named power means is energized, a pair of equi-spaced linear rails positioned parallel to and under said chain means, each of said rails having upper inverted inclined sides forming an inverted V, a plurality of equi-spaced pallet carriages pivotally secured to said chain means, each of said carriages having a pair of parallel spaced downwardly extending portions terminating in parallel shoes located on opposite sides of said chain means, each portion having an inclined inverted V face corresponding to the inclined sides of said rails, a plurality of facing means each having upper and lower inverted

V faces whereby to adjust said carriages vertically toward and away from said shoe and said cylinder, the upper faces of said facing means being engageable by the inverted faces of said shoes and the lower faces of said facing means being in removable engagement with the said faces of said rails, each of said pallet carriages having an integral pallet separator positioned above and transverse to said chain means for forming the opposite ends of a tile, and a pallet support on each carriage located at each side of one of said separators for supporting a pallet bridged between each pair of said adjacent separators on each pair of adjacent carriages.

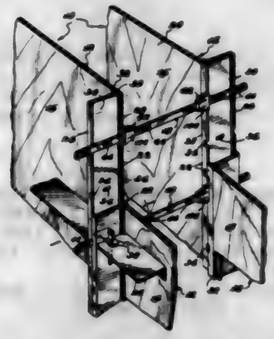
2,948,644
PIPE MOLD AND EJECTOR
Benjamin F. Dawson, Jr., 3913 SW. Spring Garden, Portland, Oreg.
Filed Feb. 19, 1959, Ser. No. 794,296
1 Claim. (Cl. 25—120)



A molding apparatus comprising a one piece tubular external mold having a flange at one end, a pallet provided with a central bore engageable in said one piece mold at one end thereof, a resilient plug detachably engageable in said bore, a flanged air dome, means detachably securing said flanges together to secure air dome to said one piece mold at the end thereof adjacent said pallet, an air conduit means connected to said dome for supplying high pressure air to the interior of said dome forcing said pallet through said mold and ejecting a molded pipe therefrom, a turntable detachably secured to said flange for supporting one end of one piece mold, and an upstanding boss integrally formed on said turntable centrally thereof, the bore in said pallet engaging over said boss prior to engagement of said plug.

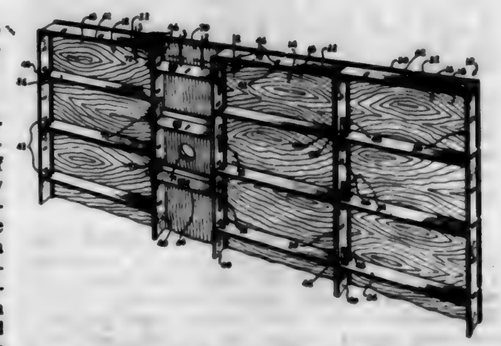
2,948,645
TIE ROD ASSEMBLY FOR CONCRETE WALL FORMS AND CONE THEREFOR
John E. Imonetti, Prospect Heights, Ill., assignor to Symons Clamp & Mfg. Co., Chicago, Ill., a corporation of Delaware
Filed Sept. 4, 1958, Ser. No. 759,094
7 Claims. (Cl. 25—131)

1. In a tie rod assembly for holding a pair of upstanding concrete wall forms in spaced relationship, said assembly comprising in combination a one-piece strip of flat metal stock presenting straight parallel longitudinally extending side edges, one of said side edges being provided at a region spaced inwardly from one end of the strip with a notch the existence of which establishes a reduction in the transverse width of the strip and a consequent weakening of the metal of the strip in said inwardly spaced region, thus dividing the strip into a fixed section adapted to remain at least in part embedded in the concrete which is poured between the wall forms and a free section adapted to project at least in part outwardly from one face of the poured concrete, and be wrested from the fixed section by working of the free section bodily back and forth in the general plane of the flat metal stock, and a tubular cone encompassing said region of the strip and extending a short distance longitudinally from said region toward said one end of the strip, said cone having extreme end regions closely hugging the sides of the strip to exclude concrete from the interior of the cone, said cone being formed with a longitudinal bore therethrough through which the strip extends, and an inwardly projecting protuberance on the wall of said bore extending into said notch and serving to prevent longitudinal shifting movement of the cone on said strip, said tubular cone being in the form of a generally flat



hexahedron having symmetrical trapezoidal side faces extending parallel to the general plane of the metal stock of said strip, rectangular end faces extending normal to the general plane of the metal stock of said strip, and rectangular top and bottom faces which converge relative to each other and which extend at an acute angle to the longitudinal axis of the strip, said cone being disposed on said strip with the large base of said trapezoidal side faces being positioned next adjacent to said one end of the strip, and a tapered rib formed on one of said side faces and extending longitudinally of the cone, said rib increasing in thickness toward the end thereof adjacent the end of the cone remote from said one end of the strip.

2,948,646
CONCRETE FORM FILL-IN STRUCTURE
John E. Imonetti, Prospect Heights, Ill., assignor to Symons Clamp & Mfg. Co., Chicago, Ill., a Delaware corporation
Filed Nov. 3, 1958, Ser. No. 771,854
2 Claims. (Cl. 25—131)



1. In a concrete wall form structure, in combination, a pair of aligned prefabricated panel units spaced longitudinally from each other and presenting opposed marginal vertical metal frame bars and a plywood panel facing, there being an elongated slot in each of said opposed marginal frame bars at substantially the same height in the form wall, an extension bracket extending between said opposed frame bars, said extension bracket comprising an elongated horizontally disposed metal angle bar including a horizontal flange and a vertical flange, each presenting parallel end edges, a flat attachment tongue formed on each end edge of the horizontal flange and lying in the plane of the same, the attachment tongues being of substantially the same thickness as the width of the slots and projecting horizontally through said slots respectively, each tongue being provided with an elongated longitudinally extending slot therein on the side of the adjacent vertical frame bar remote from the angle bar, a wedge member disposed in each longitudinally extending slot for clamping the adjacent end of the bracket hard against the adjacent frame bar, there being a series of nail holes in said vertical flange, a form extension board bridging the distance between said opposed frame bars and having an inside face flush with the inside faces of said panel unit facings, and a series of attachment nails extending through said nail holes and secured in said board.

2,948,647
METHOD OF BUILDING STRUCTURES
Lawrence F. Peeler, 3943 Hawthorne, and Eugene L. La Foy, 5027 Willis Ave., both of Dallas, Tex.
Filed Dec. 27, 1955, Ser. No. 555,565
2 Claims. (Cl. 25—154)



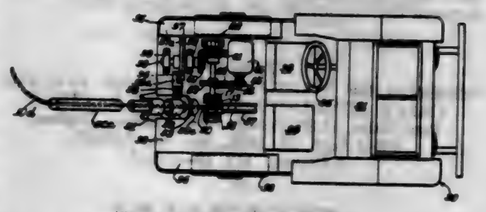
1. A method of building structures which comprises arranging a supporting fabrication of inter-crossing and relatively slidable flexible elements on a flat plane, attaching expandable fabric covering material to the supporting fabrication, in rows of overlapping, individually movable sections, to form one of a plurality of structural units, exerting a force laterally against one edge of each of the units while restraining the opposite edge of the unit against movement to create a curve in the unit along one axis, hoisting the units successively from relatively spaced points between their ends to cause the units to curve along an axis transverse to the first axis under their own weight, joining the units together along their contiguous edges, and finally applying a cementitious material to the covering material.

2,948,648
ORIENTED THERMOPLASTIC FILAMENT HAVING A SATINY APPEARANCE
Austin L. Jankens, Bay City, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Michigan
Filed Nov. 4, 1955, Ser. No. 544,966
1 Claim. (Cl. 28—82)



A filamentary article composed of a normally crystalline vinylidene chloride polymer having elongated microscopic voids throughout the body of the article, the longitudinal axis of each void being parallel with the longitudinal axis of said article, said article characterized by having a satiny appearance.

2,948,649
APPARATUS FOR DISTRIBUTING BARBED METAL BAND
Allen B. Wilson, Chicago, Ill., assignor to Acme Steel Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 7, 1955, Ser. No. 551,707
4 Claims. (Cl. 29—7.1)



1. In combination with a vehicle including a platform and maneuverable over a distribution area, support means mounted on said platform to hold a roll of flat metal strip during maneuvering of said vehicle over the distribution area, forming means mounted on said platform adjacent to said support means for receiving the strip therefrom and forming thereon sharp projections to provide a barbed metal band during the maneuvering of said vehicle over the distribution area, distributing means mounted on said platform adjacent to said forming means to receive the barbed metal band therefrom and to pay out and to distribute the band onto the distribution area, and common drive mechanism for said forming means and said distributing means, whereby the strip is fed from said support means to said forming means at a predetermined rate to provide barbed metal band from said forming means to said distributing means at a predetermined rate and to pay out and distribute the barbed metal band from said platform onto the distribution area at the predetermined rate and in a first predetermined pattern while said vehicle is maneuvered over the distribution area in a second predetermined pattern.

2,948,650
METHOD OF MANUFACTURING ELECTRODE SYSTEMS COMPRISING SEMI-CONDUCTIVE BODIES, MORE PARTICULARLY CRYSTAL DIODES OR TRANSISTORS
Jan Coenraad Van Vessem and Theodorus Le Grand, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 29, 1954, Ser. No. 478,424
Claims priority, application Netherlands Apr. 20, 1954
3 Claims. (Cl. 29—25.3)



1. A method of manufacturing a semi-conductor device containing a point electrode in contact with a semiconductive body, which comprises subjecting at least a portion of the surface of said body to a treatment including etching wherein said surface portion is cleaned and polished and thereby becomes subject to contamination from various elements present in the atmosphere

and the like, immediately thereafter covering said surface with a layer of dense, substantially atmospheric-proof, insulating material to thereby prevent said contaminating elements from contacting said cleaned surface portion, thereafter mounting said point electrode in contact with the semi-conductive body by urging said point electrode through the insulating layer into contact with said cleaned surface, thereafter surrounding the insulating layer with a viscous fill to prevent said contaminating elements from contacting the cleaned surface through the aperture in the insulating layer formed by the point electrode, and thereafter centrifuging the device to cause rigid adherence between the viscous fill and the insulating layer.

2,948,851
METHOD OF MANUFACTURING AN ELECTRICALLY CONDUCTIVE WINDING PATTERN
Paul Eisler, 32 Shaftesbury Ave., London, England
Filed Sept. 20, 1952, Ser. No. 310,693
8 Claims. (Cl. 29—155.5)



1. A method of manufacturing an electrically conductive winding pattern from a sheet of metal, comprising the steps of first deforming said sheet vertically to its plane so that the portions of the sheet other than those forming part of the desired winding pattern are substantially situated in the two boundary planes of the deformed sheet, the portions of the sheet forming part of the desired winding pattern being situated in planes intermediate to said boundary planes, filling the depressions formed on both sides of the sheet by the deformation thereof with a hardening insulation material above the apex levels of said boundary planes, and finally removing the insulation material above said apex levels together with the sheet portions substantially situated in said two boundary planes thereof, thereby obtaining the desired winding pattern embedded in said insulation material.

2,948,852
METHOD OF MANUFACTURING HOLLOW POPPET VALVES FOR INTERNAL COMBUSTION ENGINES
Gerhard Kubera, Blumberg, Baden, Germany, assignor to Alfred Teves Maschinen- und Armaturenfabrik KG., Frankfurt am Main, Germany
Filed May 27, 1957, Ser. No. 661,647
Claims priority, application Germany June 30, 1956
3 Claims. (Cl. 29—156.7)



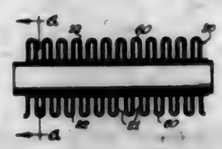
1. The method of manufacturing hollow poppet valves for internal combustion engines which comprises the steps of piercing a blind hole in a billet, next heating the billet to forging temperature and glowing state, inserting into the blind hole of the billet a steel core portion which has been previously tempered to a given hardness, subjecting said billet with the steel core portion therein to a forging operation for forming a valve body, removing the steel core piece from the valve body thus formed, and finally closing the open end of the valve body.

2,948,663
METHOD OF MANUFACTURING REFRIGERATING APPARATUS
Maurice A. Goff, Ambler, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 23, 1956, Ser. No. 573,536
1 Claim. (Cl. 29—157.3)



A method of constructing a restrictor for a refrigerating evaporator unit consisting of metal sheeting roll-forged to provide passageways therein, said method comprising the steps of: making a duct in said unit, by the roll-forging of said sheeting, in such a way that such duct has transverse size similar to that of at least some of said roll-forged passageways, and has first and second end portions; connecting the first end portion of said duct with one end of said passageways; connecting said second end portion of said duct with outside atmosphere by an opening through the sheeting of said unit; thereafter inserting through said opening into said duct a hard, elongate core, of transverse size much smaller than the duct; then swaging a portion of said sheeting, along a longitudinally limited portion of said duct, around said core, so as to restrict said limited portion of the duct to the transverse size of said core and to harden the swaged portion of the sheeting, for making the restricted size permanent; and then removing the core through said opening, whereby said restrictor is formed as an integral part of said sheeting with cross-section much smaller than said passageways, and without distortion of such passageways.

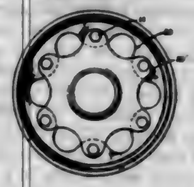
2,948,954
METHOD OF FABRICATING FINNED HEAT TRANSFER TUBING
Richard W. Kritzer, % Peerless of America, 5830 N. Pulaski Road, Chicago, Ill.
Filed June 14, 1956, Ser. No. 591,492
4 Claims. (Cl. 29—157.3)



1. The method of fabricating finned heat transfer tubing from flat sheet metal fin stock and cylindrical tube stock which comprises: creating in the fin stock a longitudinally extending row of equally spaced cup-shaped bulges which project out of the plane of the fin stock alternately in opposite directions, piercing the apices of said bulges to provide apertures therethrough, while simultaneously shaping the bases of the bulges to substantially cylindrical form, removing the metal of the pierced apices of the bulges so as to provide in the flat sheet metal fin stock a longitudinally extending row of equally spaced circular tube openings surrounded by annular

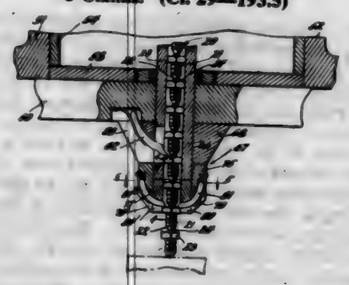
truly continuous spacer flanges which project out of the plane of the fin stock alternately in opposite directions, bending the thus formed fin stock transversely midway between adjacent tube openings alternately in opposite directions to bring the spacer flanges into axial alignment and substantial contiguity, with said spacer flanges extending unidirectionally from the rims of the various openings, and thereby providing an accordion-pleated structure having substantially parallel folds, inserting a length of cylindrical tube stock of a diameter less than the diameter of said tube openings and their surrounding spacer flanges, and, thereafter, uniformly expanding said tube stock radially within the tube openings into intimate face-to-face frictional contact with the inside surfaces of said annular spacer flanges.

2,948,955
METHOD OF MAKING WHEELS
John C. Baxter, East Grand Rapids, and Maurice De Graaf and Egbert Weidring, Grand Rapids, Mich., assignors to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan
Filed Sept. 27, 1956, Ser. No. 612,417
4 Claims. (Cl. 29—159.01)



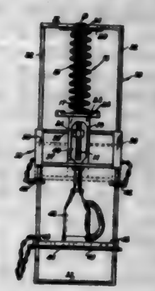
1. In a method of fabricating a wheel comprising the steps: providing a cylindrical hub member; providing two circular blanks each having a central hub opening adapted to receive said hub member; severing a peripheral section from a central section of each blank along a line of varying radial distance from said hub openings; separating said sections; securing said central sections on said cylindrical hub member; installing a wheel tire between said peripheral sections of said blank; arranging said sections on a common axis with the portions of greatest radial dimension of said central sections overlapping the portions of least radial dimension of said peripheral sections; detachably securing said peripheral sections to said central sections at said overlapping portions.

2,948,956
DRIVE LINK SCREWS
Herman G. Muenchinger, Chaplin, Conn., assignor to American Screw Company, Willimantic, Conn., a corporation of Rhode Island
Filed May 28, 1957, Ser. No. 662,258
5 Claims. (Cl. 29—193.5)



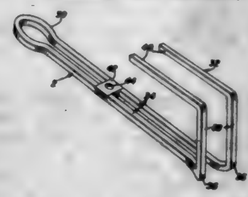
1. As an article of manufacture, a rod of recurring pattern comprising an integral strand of individual fasteners fabricated from a single length of metal stock, each such fastener comprising head and shank portions, the shank of each fastener being joined to the head of the next fastener by a relatively thin element of said stock, the shank portion of each fastener being provided with generally circumferential ridges interrupted by at least one longitudinal flute.

2,948,957
PRESS FOR SHOCK ABSORBING SPRING ASSEMBLIES OF CRAWLER TRACTORS
Joseph E. Dagenais, Box 1486, Cranbrook, British Columbia, Canada
Filed Mar. 8, 1956, Ser. No. 570,399
1 Claim. (Cl. 29—227)



A press for shock absorbing spring assemblies of crawler tractors comprising a frame adapted to receive said assembly and having an end plate to which is secured a pair of spaced parallel perpendicular side bars; said end plate having an aperture of a size adapted to admit the head of a tractor long-bolt therethrough; a compression member slidably associated with said side bars for advancing movement toward and retreating movement from said end plate; said compression member being provided with a housing having a central void disposed in axial alignment with the aperture of said plate and adapted to receive a portion of a tractor long-bolt and the nut thereof; said housing having an open side through which the nut and portion of said long-bolt is accessible; said side bars having a plurality of apertures spaced longitudinally thereof and disposed in laterally aligned pairs; pins in selected pairs of said apertures and manually movable to other selected pairs for securing said compression member to said side bars with respect to said end plate according to manual selection; and powered means for advancing and retracting said compression member.

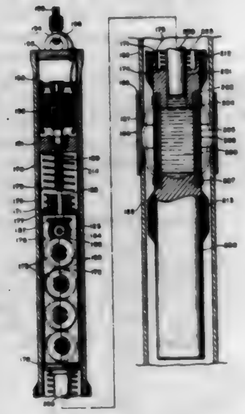
2,948,958
TOOL FOR COMPRESSING A BIASING SPRING OF AN ELECTRIC DRUM CONTROLLER
Martin Culkosky, 621 W. 43rd Ave., Gary, Ind.
Filed Aug. 30, 1957, Ser. No. 681,385
1 Claim. (Cl. 29—227)



A tool for moving a biased collar along a shaft against the force biasing the collar of an electric controller having a bar, a bracket rigidly disposed on the bar, a contact

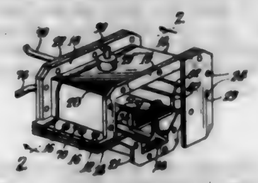
finger carried by said bracket, said shaft projecting from said bracket and through said contact finger and mounting said finger on said bracket, said collar being slidably mounted on said shaft, a collar keeper pin removably disposed on said shaft on the end thereof remote from said bracket and finger, said biasing force being a helical compression spring circumferentially disposed on said shaft with one end normally bearing against said finger and the other end normally bearing against said collar, which tool comprises a handle, a first pair of spaced legs extending from said handle, said legs being parallel along the majority of their lengths, the ends of said legs remote from said handle diverging laterally from each other, said legs being adapted to receive said shaft and keeper pin therebetween but not said collar, a second pair of spaced parallel legs integral with said first pair of legs and extending from said ends of said first pair of legs substantially normal thereto, and a third pair of spaced parallel legs integral with and extending normal to said second pair in the direction of said handle and parallel to the longitudinal axis of said first pair of legs, the legs in each of said second pair and of said third pair being spaced apart a substantially uniform distance, said distance being greater than the distance between the legs in said first pair, the legs of each of said second pair and of said third pair being adapted to engage said contact finger and said bracket therebetween, the space between said first pair of legs and said third pair of legs being of such dimension that said spring is compressed and said collar is moved axially of said shaft away from said keeper pin when the tool is applied to said drum controller with said first pair of legs astride said shaft between said collar and said keeper pin and said third pair of legs bearing on said bar astride said bracket and said contact finger.

2,948,059
SONIC SYSTEM FOR UNSCREWING THREADED PIPE JOINTS
Albert G. Bodine, Jr., 13120 Moorpark St., Van Nuys, Calif.
Filed July 12, 1957, Ser. No. 671,612
4 Claims. (Cl. 29—427)



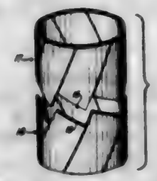
1. The method of unscrewing tightly bound cylindrical male and female screw coupling members, each having a different resonant frequency, that comprises: elastically vibrating the coupling members radially in a dilating and contracting mode, at a frequency more nearly matching the resonant frequency of one of the members than the other, whereby the member vibrated at its resonant frequency will tend to separate from the other, and exerting an unscrewing torque on the members.

2,948,060
METHOD OF ASSEMBLING A LIMP DIAPHRAGM ACTUATOR
Joseph F. Engelberger, Monroe, Conn., assignor to Manning, Maxwell & Moore, Inc., Stratford, Conn., a corporation of New Jersey
Original application May 6, 1955, Ser. No. 506,488, now Patent No. 2,839,886, dated June 17, 1958. Divided and this application Oct. 18, 1957, Ser. No. 690,921
4 Claims. (Cl. 29—454)



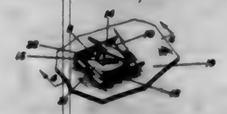
1. The method of making a pressure responsive actuator having a body member provided with side walls and end plates defining a rectangular opening therein, a piston mounted within said opening and a thin flexible diaphragm positioned within said opening and connected to said piston, said diaphragm having two opposed sides thereof supported on said body member adjacent said side walls, which comprises filling the ends of said body member with a low melting point solder with said end plates disassembled to prevent relative movement of said diaphragm, said body member and said piston, finishing the exposed end portions of said body member and said diaphragm to a high degree of flatness, thereafter removing said low melting point solder to permit movement of said piston and diaphragm relative to said body member, and thereafter assembling said end plates to said body member with said end portions of said diaphragm in contiguity therewith.

2,948,061
METHOD OF FABRICATING CYLINDRICAL SHELL STRUCTURES
Fred A. Carstens, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Jan. 13, 1958, Ser. No. 708,617
6 Claims. (Cl. 29—463)



1. In a method of fabricating a cylindrical structure, the steps of providing a plurality of trapezoidal plates having a square end and correspondingly equal angles, temporarily securing to the square end of each trapezoidal plate and in longitudinal alignment therewith a second plate having a square end and a width corresponding to that of the trapezoidal plate to form a plurality of plate members each having parallel sides normal to the temporarily secured square ends and an oblique end, arranging a plurality of plate members in longitudinal arrangement side to side and with the oblique ends in longitudinally aligned relation and thereby placing the temporarily secured square ends of the respective plate members in parallel, offset relation, welding the adjacent plate members together along their sides with the welds extending outwardly from the respective offset temporarily secured square ends leaving the offset distance between the temporary securements unwelded, said arrangement of plate members including as many members as are required for the circumference of the cylindrical structure, breaking the temporary securement to form individual blank portions having opposed, matched saw-tooth edges, individually shaping the blank portions into cylindrical form and joining the opposed free ends of the blank portions together to provide a pair of cylinders, arranging the pair of cylinders with saw-toothed edges in adjacent and matched relation, and welding the cylinders together along the saw-toothed edges to form the cylindrical structure.

2,948,062
METHOD OF FORMING A SELF-CLINCHING AND SEALING FASTENER
George A. Tinnerman, 17864 Beach Road, Lakewood, Ohio
Filed July 17, 1957, Ser. No. 672,483
3 Claims. (Cl. 29—513)



1. The method of forming a self-clinching and sealing fastener designed to be secured to a panel in conjunction with an aperture therein, said fastener having a base carrying a clinching tongue adapted to pass through an orifice in the base to engage a deflecting and clinching element and also including a locking lip struck from said base which comprises forming said base, tongue, orifice, deflector and lip, bending said tongue as to position the free end thereof in alignment with said orifice and deflector but spaced therefrom, placing a section of yieldable sealing material on said base and between said base and tongue and overlying said orifice and orifice of said struck tongue and underlying said tongue and deflecting said tongue to an extent sufficient partially to pierce said section of sealing material as to retain it on said base to form a composite sealing fastener, and whereby finally to clamp and compress said section and cause it to project partially into said orifices and said aperture in said panel when said tongue is deformed to clamp said base on said panel.

2,948,063
HEAD FOR ELECTRICALLY OPERATED HAIR CLIPPING AND SHAVING DEVICE
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed May 28, 1957, Ser. No. 660,279
3 Claims. (Cl. 30—43)



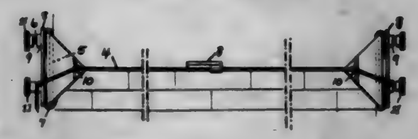
1. A head for a dry shaver comprising a cutter having a pair of outwardly extending flanges, two rows of cutter teeth defined along the outer ends of said flanges, depressed portions formed in said flanges parallel to and immediately adjacent said rows of teeth to strengthen said flanges and prevent twisting thereof, the portion of each said flange connecting the row of teeth to said depressed portion extending downwardly at a sharp angle to the plane defined by the upper face of said teeth, a comb having two rows of teeth thereon, and resilient means biasing said cutter teeth into engagement with said comb teeth, said flanges engaging said comb only along said two rows of cutter teeth.

2,948,064
BUTTER RULER
Robert J. Westzel, 837 Lake Ave., Racine, Wis.
Filed Aug. 13, 1958, Ser. No. 754,870
2 Claims. (Cl. 31—15)



1. A butter ruler and cutter comprising a molded thin flat strip of synthetic material having a width corresponding to the width of one side of a regular quarter pound stick of butter and a total length substantially greater than said stick, said strip having a body portion corresponding in length generally to the length of a regular quarter pound stick of butter and having a blade portion at one end thereof continuing the same thickness as said body portion and with its opposite side edges tapered to provide for cutting and spreading of butter while said body portion is utilized as a handle, the longitudinal edge portions of said body portion being substantially thicker than the body and blade portions of said strip to strengthen the same and provide necessary stiffness, one raised edge portion on each side of the strip having raised transverse markings spaced to measure and mark the butter stick in terms of a one-half cup and fractions thereof, the other raised edge portion on each side of the strip having raised transverse markings spaced to measure and mark the butter stick in terms of both tablespoons and teaspoons, the markings on one side of said strip being for a long stick of butter and those on the opposite side of said strip being for a short stick of butter, and the body portion of said strip intermediate said raised edge portions having markings on opposite sides of the strip indicative of long and short stick application for the corresponding measurement markings.

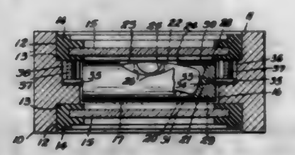
2,948,065
MASONS' LINE HOLDING DEVICE
Joseph K. Simonic, Burnham, Pa.
Filed May 28, 1957, Ser. No. 662,146
3 Claims. (Cl. 33—85)



1. In a masons' line guide for a wall being built, said guide having end members constituting line holding means, each end member defining one rectangular portion and a line supporting portion apertured to receive a guide line and support the same, said rectangular portion having threaded bolts extending therefrom, said portions being substantially at a right angle to each other, said bolts having first and second nuts on each bolt, a stretchable rubber strip having apertured ends, said strip being stretched over said rectangular portion, and, respectively, anchored over said bolts, a plate having apertures received, respectively, by said bolts and extending over the

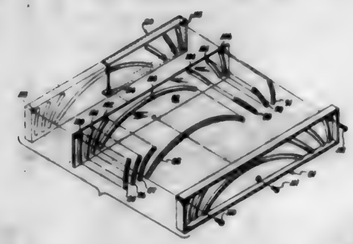
apertured ends of said strip and clamped to said rectangular portion by said first nuts on each bolt and said second nuts adapted to clamp the line against said first nuts.

2,948,066
GRAVITY WEIGHTED SPIRITS FOR SPIRIT LEVELS
Johannes U. Rosenholm, 43—01 46th St., Long Island City, N.Y.
Filed Oct. 15, 1957, Ser. No. 690,230
3 Claims. (Cl. 33—211)



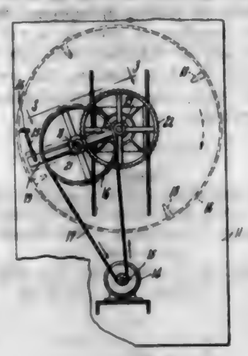
1. A spirit level employing a stock, the stock having, at end portions and centrally thereof, chambers for mounting spirit elements therein for visibility through opposed surfaces of the stock, a spirit element mounted in each chamber, some of the spirit elements being disposed transversely of the stock and one of said elements being arranged longitudinally of the stock, each element comprising a tube with a spirit vial in said tube, weight members within end portions of the tube, said members weighting the tube for gravity positioning of the element in taking a reading from the element in the use of the stock, and means engaging end portions of the tube and aligned with geometric axis of the tube for providing a substantially frictionless rotatable support of each element freely in its chamber.

2,948,067
LEVEL
Charles J. Mistretta, 300 S. Work St., Falconer, N.Y.
Filed May 10, 1956, Ser. No. 584,030
2 Claims. (Cl. 33—212)



1. A level comprising secured front and back frame members, each of said frame members having a plurality of arcuate grooves therein, said grooves being arcuate in a manner described by consecutive arcs of a semi-circle, said grooves being of substantially equal vertical height as described by mutually parallel chords of a semi-circle wherein said chords divide a radius perpendicular to said chords into a plurality of substantially equal portions, a slotted separating index plate secured between said front and back frame members and coextensive therewith, said slots in said plate conforming with said arcuate grooves, transparent tubes containing spirit fluid and a bubble, said tubes conforming substantially to said arcuate grooves in said frame members, and said tubes located in the respective cooperating grooves of said frame members and said slots of said index plate.

2,948,068
TUMBLER DRIVE MECHANISM FOR DRYERS
Gordon F. Walker, South Dartmouth, Mass., assignor to Hoyt Mfg. Corp., Westport, Conn., a corporation of Massachusetts
Filed Oct. 29, 1958, Ser. No. 770,426
2 Claims. (Cl. 34—133)



1. In a dryer for clothes and the like having a barrel-shaped tumbler for the clothes which is rotatable about a horizontal axis, and an electric motor to rotate the tumbler, the combination with said tumbler and said motor of a tumbler drive mechanism including a variable pitch pulley disposed in driven relation to the motor, said pulley being biased in the direction of maximum effective diameter, a fixed pitch pulley mounted for rotation by said variable pitch pulley, a belt for operatively connecting the pulleys, an epicyclic gear train having a planetary gear disposed in driven relation to said fixed pitch pulley and a sun gear disposed in driving relation to the tumbler, a movable mounting arm supporting said fixed pitch pulley for limited movement thereof toward and away from said variable pitch pulley, means for moving said arm in response to orbital motion of said planetary gear, and biasing means for said mounting arm to urge said pulleys apart, thereby to decrease the effective diameter of said variable pitch pulley and decrease the speed of the tumbler as the moisture content and hence the dynamic load of the clothes decreases.

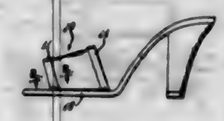
2,948,069
DEVICE FOR STIMULATING THE MENTAL PROCESSES
Darrell M. Johnson, 121 E. Hill St., Thomson, Ga.
Filed Oct. 11, 1957, Ser. No. 689,714
3 Claims. (Cl. 35—8)



1. A device for stimulating the functioning of the nervous system and associated muscles employed in expression comprising an object shaped to simulate the face of a human being, said object including two simulated eye-like portions, each of said simulated eye-like portions comprising a member having an outwardly rounded surface adapted to transmit and disseminate light, illuminating means mounted behind the face-like object and rearwardly of the eye-like portions adapted to transmit

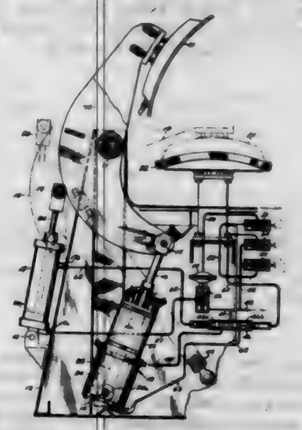
light through the eye-like portions, movably mounted simulated eyelids positioned above said eye-like portions for movement downward to a position to cover the eye-like portions, sound responsive means mounted within said object, means connecting the sound responsive means with the illuminating means and the eyelids whereby the sound of a human voice directed to the sound responsive means actuates the movement of the eyelids and actuates the illuminating means to simulate a human reaction to the sound of a voice.

2,948,070
SHOES
Ruth Lewis, 130 East End Ave., New York, N.Y.
Filed June 2, 1958, Ser. No. 739,311
3 Claims. (Cl. 36—2.5)



1. A sandal comprising a sole, a pair of elongated pieces of flexible material connected throughout their lengths and having edge portions folded over, means securing the ends of said pieces to side edges of said sole, a completely removable decorative insert formed of material having substantially greater stiffness than the first said material and of a length to extend from one edge of the sole to the other and of a width to form a wide foot retaining means, the elongated side edges of said insert being disposed between the folded edge portions and the end edges engaging the adjoining edges of the sole, said insert affording both a finished appearance and a support for the first said flexible edge pieces.

2,948,071
HYDRAULIC LAUNDRY PRESS
Edmund N. Neckel and Leo B. Wessel, Cincinnati, Ohio, assignors to The American Laundry Machinery Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 15, 1957, Ser. No. 671,756
19 Claims. (Cl. 38—41)



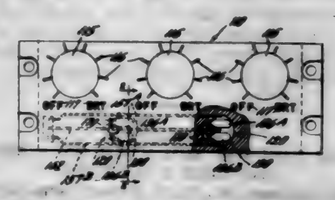
1. In a laundry press of the type wherein the work is disposed between two pressing members, one of which members is movable into operative contact with the other, means for effecting such contact including a hydraulic cylinder, a first piston in said hydraulic cylinder, means operatively connecting said first piston with said movable pressing member, an air cylinder in axial registry with said hydraulic cylinder, a second piston in said air cylinder, a ram operably carried by said second piston and having a portion extendable axially into said hydraulic cylinder whereby, when air is admitted behind said second piston in said air cylinder, the extendable portion of said ram is advanced to exert hydrostatic pressure upon the first said piston.

2,948,072
TICKET HOLDER
Josephine Frankel, 14 Rue Albe, Marseille, France
Filed Mar. 21, 1957, Ser. No. 647,728
Claims priority, application France Mar. 23, 1956
4 Claims. (Cl. 40—10)



1. A price exhibitor comprising a housing including a base, a rear wall, and two side walls, said housing having an opening at the front, a plurality of elongated price-indicating tablets having two numerals positioned one above the other, and a retaining bar of approximately half the height of the opening slidably engaged at its ends with the side walls of the housing and passing across the opening of the housing to hold the tablets within the housing, said bar being removable from the housing by sliding it along and off the end of the side wall remote from the base.

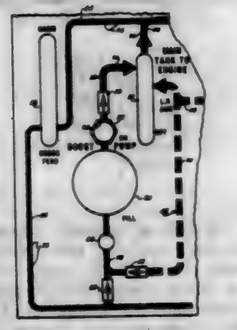
2,948,073
ILLUMINATED INSTRUMENT PANEL
John M. Roper, Washington, D.C., assignor to Grimes Manufacturing Company, Urbana, Ohio, a corporation of Ohio
Filed Sept. 2, 1954, Ser. No. 453,832
3 Claims. (Cl. 40—130)



1. An instrument console panel installation comprising, in combination, a panel plate composed of light transmitting material, and having a rear surface adapted to come into close proximity to instruments or mechanism to be controlled, and a front surface bearing indicia adapted to serve as reference media for controlling devices movable adjacent said panel, said indicia adapted to be illuminated by light transmitted edgewise through the panel plate, the illuminated insignia on the front surface of the plate being produced by at least one thin covering layer of material applied to said surface, and at least one similar covering layer applied to the rear surface of said plate, a light fixture, an opening in said plate spaced from the edges thereof which receives said fixture, which opening passes substantially through the plate proper but not through the front and rear covering layers; the entire lighting fixture disposed within said opening and between said covering layers, conductors leading to said lighting fixture and also disposed substantially within the confines of the planes of said front and rear covering

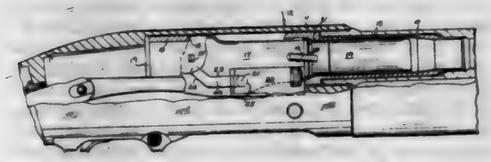
layers, and connections between said fixture and said conductors made within said opening wherein said panel defines a water-tight seal for said fixture and said connections.

2,948,074
ILLUMINATED PLASTIC PANEL AND METHOD OF FABRICATING SAME
James N. Dupree, Hollywood, Calif., assignor, by mesne assignments, to California Pinstock, Inc., Los Angeles, Calif., a corporation of California
Filed July 25, 1956, Ser. No. 600,110
6 Claims. (Cl. 41—22)



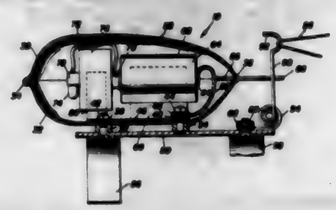
1. In the construction of a panel having a design formed by translucent material masked by opaque background material, which design includes relatively wide lines for observation both by reflected light in an illuminated environment and by light transmitted through the material of the panel in a darkened environment, the improvement which consists in representation of the relatively wide lines by minutely spaced minute openings in the opaque background material exposing correspondingly minute areas of the translucent material with the width of a relatively wide line including several of the minute areas with a consequent halftone effect, whereby the relatively wide lines appear in full width by both reflected light and transmitted light but the transmitted light is masked over a substantial portion of the area of a relatively wide line to prevent undue illumination of the relatively wide line in a darkened environment.

2,948,075
FIREARM EJECTOR MOUNTED ON A MOVABLE CHAMBER EXTENSION
Arthur S. Yeomans, Jr., North Haven, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed July 19, 1957, Ser. No. 672,906
2 Claims. (Cl. 42—25)



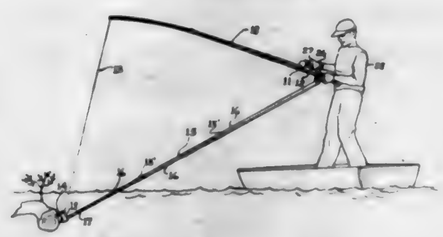
1. In a firearm including a receiver, a movable chamber unit having a chamber and a chamber extension, a pair of slides movable within the receiver, a bolt carried by the extension, cam means connecting the slides, the bolt and the chamber extension operative to effect a lost motion connection between the bolt and the chamber unit whereby the bolt is movable relative to the chamber unit, the improvement comprising: ejector means mounted on the movable chamber extension effective to engage the head of a spent shell to eject the shell whenever relative motion occurs between the bolt and said unit the mobility of said chamber being effective to cushion impact between the spent shell and said ejection means.

2,948,076
FISH STRIKE SIGNAL
Fred A. Patricello, 495 Mundy Lane, Mount Vernon, N.Y.
Filed Mar. 27, 1958, Ser. No. 724,325
1 Claim. (Cl. 43—17)



A fish strike signal comprising an insulative housing supported by a conductive bracket, resilient means for mounting said bracket on a stake, a source of electrical energy carried within said housing, signal means carried within said housing and electrically connected between said source and said bracket, actuating means carried between said bracket and said housing for completing an electrical circuit between said source and said signal, said actuating means including a conductive ring extending externally of said housing electrically connected to said energy source, a conductive flexible hook terminally and electrically retained by said bracket and extending through said ring, said hook adapted to confine a fishing line whereby a pull on said line will force said hook into contact with said ring for completing an electrical circuit to said signal.

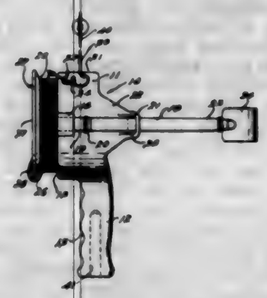
2,948,077
FISHING HOOK OR LURE RETRIEVING DEVICE
Bernard Karpes, 3046 W. Irving Park Road, Chicago, Ill.
Filed Sept. 26, 1958, Ser. No. 763,551
1 Claim. (Cl. 43—17.2)



A fishing hook and lure retrieving device comprising an elongated pole, an arm supported element at one end of the pole to permit the pole to be freely suspended from an arm of a fisherman, a retrieving head at the opposite end of said pole, said head comprising a rectangularly shaped body having spaced apart adjacent openings formed therethrough, one of said openings arranged to receive the end of a pole and the other to have a fishing line extended therethrough, one of the side walls of said body having a slot formed therein extending at an angle with respect to the long axis of the body

bisecting the openings, said slot communicating with said other opening and having an entrance located in said one side wall of said body at a point between said openings for receiving said fishing line, said retrieving head bearing upon said line adjacent the point where a hook or lure on said line is snagged to a log or the like in a direction opposite to the normal direction of said line when the latter is freely suspended from the arm of the fisherman.

2,948,078
CATAPULT LINE CASTING DEVICE
Harvey R. Miotke, 19314 Hamburg, Detroit 5, Mich.
Filed Oct. 9, 1957, Ser. No. 690,180
1 Claim. (Cl. 43—19)



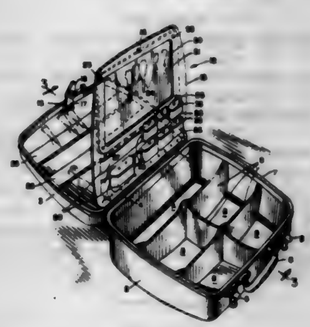
A line casting device adapted to propel a projectile carrying line comprising a cylindrical body member provided with an axially extending bore therethrough, handle means located at substantially the rear portion of said body member and extending radially thereof, said body member at the front thereof being provided with line receiving means, said line receiving means having a flanged front face and a line receiving recess extending rearwardly thereof over which the line is adapted to unreel from said recess, elastic sling members, slotted means located rearwardly of said recess on said body member for retaining one end of each sling member, said sling members extending rearwardly of said body member from said slotted means, said body member being provided with longitudinally extending appendages thereon through which said sling members pass, said appendages supporting and guiding said sling members intermediate the ends thereof, projectile engaging means attached to the other ends of said sling members, and retaining means comprising a U-shaped spring clip having an elongated curved center portion extending circumferentially across the top of said body member and leg portions extending longitudinally of said body member, the end portions of said leg portions terminating in coiled portions attached to said body member and providing for flexing of said center portion away from the peripheral surface of said body member of receive a part of a lure means attached to said line therebeneath, said spring clip being adapted to releasably hold said part of the lure means against said peripheral surface until said lure means is forceably disengaged therefrom in a direction axially of said body member by the momentum of said projectile upon the latter being propelled axially through the body member bore by said sling members, the distance from said appendages to the projectile engaging means in unextended condition of the sling members being less than the distance between the front of said line receiving means to said appendages whereby said projectile engaging means is normally unable to follow a projectile through the bore in the body member to the extent that entanglement of said line would occur as the latter unreels.

2,948,079
FISHHOOK ASSEMBLY
Arthur F. Malchert, 120 Lathrop, Forrest Park, Ill.
Filed July 18, 1957, Ser. No. 672,725
2 Claims. (Cl. 43—42.4)



1. Fishhook holding apparatus comprising a body member, fish line attaching means on one end of said body member to which means the end of a fish line is to be connected, fishhook-end attaching means on the opposite end of said body member, at least three substantially equally spaced snag-inhibiting resilient arms, at least one of which has a loop thereon, said arms being fixedly connected to said body member and inclining outwardly and away from the end of the body member having said fish line attaching means, and a fishhook having a shank passing through said arm loop and extending along said associated arm, and the inner end of said fishhook being removably rigidly connected to said fishhook-end attaching means.

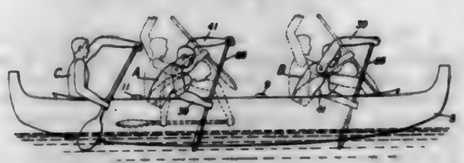
2,948,080
FISHING TACKLE CASE
Don Milligan Hawley, Geneva, Ill., assignor to Hawley Products Company, St. Charles, Ill., a corporation of Delaware
Filed Feb. 24, 1956, Ser. No. 567,540
1 Claim. (Cl. 43—54.5)



In combination with a fishing tackle carrying case, a divider panel comprising a substantially flat supporting member having a cut-away portion in approximately one-half thereof and having a piece of puncturable material removably secured over said cut-away portion, said puncturable material being capable of holding fishhooks attached thereto from either side of said panel, said supporting member being provided with a plurality of paired holes regularly spaced across the remainder of said supporting member in two parallel lines generally parallel to one of the sides of said cut-away portion, a continuous endless elastic band for holding small individual containers stretched flat against said supporting member between said parallel lines and means for holding said band on said supporting member comprising two outer rods which press laterally outwardly against the opposing looped ends of said band, and a plurality of removable inner rods intermediate the looped ends of said band secured to said supporting member and transversely pressing said band against said supporting member at

points adjacent either side of said individual containers, each of said rods having ends inserted through a pair of said holes located transversely with respect to said band and then fastened to said supporting member, said elastic band slipping freely under each of the fastened rods.

2,948,681
ANIMATED TOY
George B. Starr, P.O. Box 8265, Honolulu 15, Hawaii
Filed Oct. 28, 1958, Ser. No. 770,180
1 Claim. (Cl. 46—92)



In an animated toy of the character described, a mobile body member having a hollow portion, a power unit positioned in said hollow portion, a pair of spaced shafts horizontally arranged in said unit, a figure pivotally mounted on each of said spaced shafts, pivoted arms carried by said figures, geared linkage connecting said pivoted arms and said shafts, a sleeve secured to each of said figures and rotatable on its respective shaft, means differentially rotating said sleeves independently of their shafts, and means simultaneously rocking said shafts, said arms carried by said figures being movable by said shafts in a differential out of phase action relative to said figures to simulate paddling.

2,948,682
METHOD OF MAKING SYNTHETIC QUARTZ CAT'S-EYE GEM
John Estell Watson, 874 Medford Drive, Cleveland Heights 21, Ohio
Filed Dec. 26, 1957, Ser. No. 705,437
2 Claims. (Cl. 49—78.1)

1. That method of making a cat's-eye gem which comprises drawing a rod from molten quartz having gas bubbles therein to produce a rod having capillaries therein parallel to each other and parallel to the axis of the rod, cutting a transverse section from the rod and grinding a convex surface from such section and thereafter polishing the convex surface.

2,948,683
GUTTER SCREEN
Homer M. Steele, 706 Bellefonte Princess Road, Bellefonte, Ashland, Ky.
Filed Dec. 2, 1955, Ser. No. 550,691
1 Claim. (Cl. 50—S)



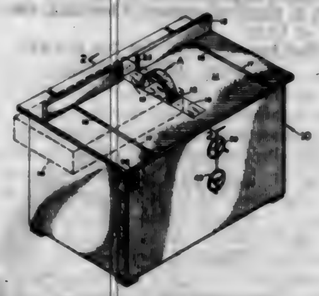
In combination, an eaves trough disposed at the edge of a roof for receiving water therefrom, said eaves trough having an outer wall with a generally horizontal and inwardly extending edge portion, said edge portion having a flat upper and lower surface, a screen construction comprising an elongated mesh screen member constructed of resilient material, a U-shaped reinforcing strip on each longitudinal edge of the screen member, said screen member having the inner edge freely resting against the upper surface of the roof with the outer edge disposed adjacent to the inwardly extending edge portion thereby forming a complete covering screen for the trough for permitting entry of water into the trough, said screen forming substantially a continuation of the roof whereby leaves and other foreign material will be precluded from entry into the trough and will be discharged from the outer edge of the screen member and eaves trough, and means for attaching the outer strip of the screen member to the inwardly extending edge portion of the trough for urging the inner strip resiliently against the roof by maintaining the screen member in a slightly downwardly flexed condition, said means including a plurality of mounting clips rigidly mounted on the outer strip for engagement with the inwardly extending edge portion, each of said mounting clips being generally U-shaped and including a web and a pair of generally normally parallel legs extending therefrom, one of said legs being received and retained between the screen member and the reinforcing strip, said strip being provided with inwardly projecting detents extending into said one leg of the clip thereby rigidly mounting and interlocking the clip to the screen member, said outer strip on the screen member underlying the inwardly extending edge portion of the trough, the other leg of the clip engaging the flat upper surface of the inwardly extending edge portion of the trough in opposition to the area of engagement between the reinforcing strip and the flat lower surface of the inwardly extending edge portion of the trough, the other leg of the clip coacting with the strip on the screen member for clampingly engaging the screen member to the horizontally disposed inwardly extending edge portion of the trough thereby urging the screen member towards a horizontal position thus resiliently urging the inner strip on the screen member towards the roof and maintaining the screen member in a slightly downwardly flexed condition, said other leg of the clip extending beyond the inwardly extending edge portion of the gutter, the outer end of the other leg of the clip extending downwardly into engagement with the outer surface of the outer wall of the trough for preventing inward movement of the screen member in relation to the trough thereby securing the screen member in place.

2,948,684
TIE ROD FOR CONCRETE BLOCK
Lovell Shockey, Shaker Heights, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 28, 1957, Ser. No. 649,201
3 Claims. (Cl. 50—426)



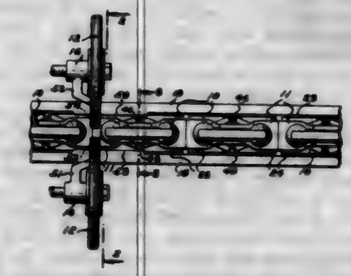
3. In a centrally-open type building block comprising: a pair of side sections of concrete, a pair of spaced tie rods supporting said concrete sections in spaced rigid relationship; each rod having an end portion imbedded in both of the concrete sections and comprising: a plurality of radially extending ribs extending substantially the full length of the rod, and a group of annular flanges spaced lengthwise of said axis in each of said end portions for locking the rod in each concrete section in an axial direction; at least two flanges of each group being flattened on diametrically opposite sides with the flattened portions of one flange being at right angles with respect to the flattened portions of the other flange; each of said groups being symmetrically arranged relative to the longitudinal midpoint of the rod; all of said flanges having a common diameter; said ribs being scalloped between adjacent flanges of each of said groups.

2,948,685
PIPE INSULATION CUTTING MACHINE
Edgar G. Cassidy, 2355 SW. 18th Ave., Fort Lauderdale, Fla.
Filed Apr. 1, 1959, Ser. No. 803,525
5 Claims. (Cl. 51—74)



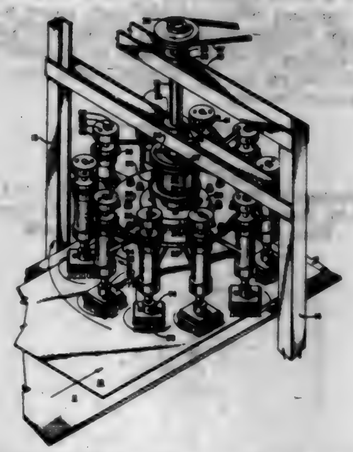
1. A pipe insulation cutting machine comprising hollow cylindrical cutting means having an axis, roller means mounted substantially parallel with said axis in contact relation with the outside surface of said cylindrical cutting means, further roller means mounted substantially parallel with said axis in contact relation with the inside surface of said cylindrical cutting member for maintaining said cylindrical cutting means in frictional engagement with said first named roller means, all of said roller means lying on the same side of a plane passing through the axis of said hollow cylindrical cutting means and power operated means for rotating said cylindrical cutting means.

2,948,686
SELECTIVELY OPERABLE WORK HOLDERS FOR BUFFING MACHINES
Edward F. Eger and George W. Piper, Jr., Indianapolis, Ind., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 3, 1957, Ser. No. 656,826
7 Claims. (Cl. 51—80)



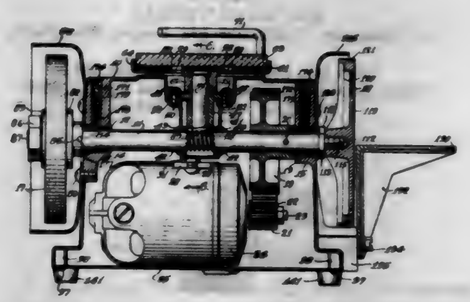
1. In a carrier system for advancing articles past a movably mounted fabricating device, a plurality of article carriers each having selectively operable article gripping means, a trackway for guiding said carriers past the fabricating device, means actuated by movement of the carriers past the fabricating device for operating said gripping means, and means mounted on said carrier for controlling the positionment of said movably mounted fabricating device.

2,948,687
PLATE GRAINING APPARATUS
Thomas Raymer Caton, Malverne, N.Y., assignor to Reproduction Research Laboratories, Inc., Valley Stream, N.Y., a corporation of Florida
Filed Nov. 3, 1958, Ser. No. 771,405
9 Claims. (Cl. 51—120)



1. An apparatus for applying a grain to the surface of a plate, comprising a plurality of rotatable brushes for forcing pumice against the surface of said plate to put a grain on said surface, means for holding said brushes in fixed, spaced relationship to each other and against said pumice on said plate, means for revolving said brushes together about a single axis, and means for rotating said brushes individually about substantially parallel axes, adjacent ones of said brushes being rotated in opposed directions by said rotating means, so that each of said brushes simultaneously revolves and rotates to force said pumice against said plate and the opposed directions of rotation of said adjacent ones of said brushes tends to keep said pumice on said plate.

2,948,688
ABRADING MACHINE
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 6, 1957, Ser. No. 682,349
3 Claims. (Cl. 51—166)



1. In an abrading machine, a unitary inverted cup-shaped housing having a recess in one wall thereof and also being provided with horizontally aligned openings in the walls of said recess, a first shaft extending through said openings, bearing means supported by said housing for rotatably mounting said first shaft, seals mounted in

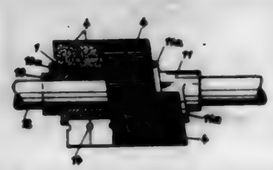
said openings, a second shaft, a cover plate closing said recess and having an opening for said second shaft, bearing means supported in said recess and mounting said second shaft for rotation about a vertical axis, gear means in said recess below said cover plate connecting said first and second shafts, said seals and said cover plate serving with the walls of said recess to form a grease-tight compartment, a motor mounted on the inside of said unitary housing displaced from said first shaft, power transmission means interconnecting said motor and said first shaft, and abrasive wheels mounted on the ends of said first shaft and on the top of said second shaft outside of said unitary housing.

2,948,089
LAPPING TOOL
Herbert W. Hundt, Hasbrouck Heights, N.J.
(% M.K.M. Machine Co., 325 Main St., Little Ferry, N.J.)
Filed Aug. 27, 1959, Ser. No. 836,458
12 Claims. (Cl. 51—184.3)



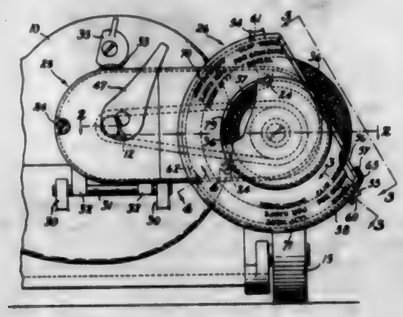
1. In a lapping tool, a metallic body having narrowly spaced opposite side faces and a lapping opening extending through said side faces, said body having a slot extending inwardly from its periphery and through said side faces and opening into said lapping opening on one side and extending beyond said lapping opening on the opposite side, said body having a slot extending through said side faces and inwardly from the periphery thereof at each side of said lapping opening to approximately the depth of said first mentioned slot to thereby provide a segment of said body at each side of said first mentioned slot which is connected with the body at its inner end, and wedging means insertable in said slots for wedging said segments for varying the width of said first mentioned slot and thereby the width between opposite portions of said lapping opening.

2,948,090
ABRASIVE WHEELS
Carl Klingspor, Waldstrabe 13a, Siegen, Westphalia, Germany
Filed Jan. 13, 1959, Ser. No. 786,588
Claims priority, application Austria Jan. 15, 1958
5 Claims. (Cl. 51—193.5)



1. An abrasive wheel comprising, in combination: a rotary spindle; a plurality of abrasive members mounted on the spindle, each member comprising a continuous helical ring of uniform width bounded by a pair of helical end surfaces whose lead is less than the width of the ring whereby a recess and a projection is formed at each end of the ring, and a plurality of similar substantially radially arranged abrasive flaps each having an inner end embedded in the material of the the ring, the flaps of each abrasive member forming a helix surrounding the respective ring and the flaps of adjacent abrasive members forming a continuous multi-turn helix about said spindle; and means for retaining the rings against rotation with respect to said spindle.

2,948,091
SAFETY DEVICE
Charles H. MacFarland, Rocky River, Ohio, assignor to The Scott & Fetzer Company, Cleveland, Ohio, a corporation of Ohio
Filed June 19, 1959, Ser. No. 821,423
6 Claims. (Cl. 51—241)



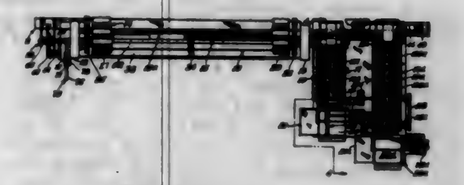
1. In attachments for vacuum cleaners of the type having a fan casing with a vacuum opening for attachment of a vacuum nozzle and a fan shaft that projects through the opening and a belt receiving portion outside the casing and which include a housing having an attaching portion engageable in said vacuum opening in surrounding spaced relationship with said fan shaft, and a tubular body portion surrounding a tool shaft which is mounted in parallelism with said fan shaft and which has a grinding wheel and knife sharpening wheel mounted thereon, said tubular body portion extending as part of the housing in surrounding relationship with the grinding wheel and being coaxial with the grinding wheel, the improvement comprising a cover positionable in surrounding relationship with the knife sharpening wheel and having a tubular cover portion receivable in mating and seating engagement with said tubular body portion at first and second relative rotative positions of said cover portion with respect to said body portion, said seating engagement being deeper when the cover and body portions are engaged at said second relative rotative position than when they are engaged at said first relative rotative position, said tubular body portion and said tubular cover portion each having a truncated side defining an open face, a slot in said cover oriented along planes normal to the axis of the grinding and sharpening wheels, said open faces in said tubular cover and body portions being rotatively registered with each other to expose the grinding wheel and said cover slot being longitudinally out of register with the operative portion of said sharpening wheel when the tubular cover and body portions are in mating and seating engagement at said first relative rotative position, said open face of said tubular body portion being covered by said tubular cover portion and said cover slot being longitudinally in register with the operative portion of said sharpening wheel when the tubular cover and body portions are in mating and seating engagement at said second relative rotative position.

2,948,092
METHOD FOR CLEANING JET AND GAS TURBINE ENGINES
Lawrence J. Fuller, Box 124, R.D. 1, Norristown, Pa.
Original application Mar. 4, 1955, Ser. No. 492,280. Divided and this application Apr. 26, 1956, Ser. No. 580,943
12 Claims. (Cl. 51—282)



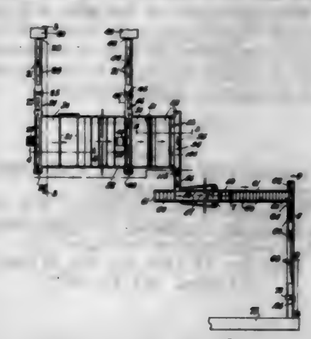
1. The method of cleaning the internal operative surfaces of turbo jet, turbo prop, gas turbine and similar engines having rotating blades comprising operating the engine, introducing into the intake of the engine an oxidizing gas having generally uniformly suspended finely divided inorganic cleaning material of particles of a size below 30 Tyler standard mesh per linear inch, and having sharp crystalline edges which fracture into sharp crystalline particles to maintain the abrasive characteristics of the particles and being free from fusing, softening and burning at temperatures as high as 1600° F., moving said oxidizing gas with the suspension of finely divided particles through the turbine under the pressure of the compressor to form a moving atmosphere of suspended particles, rotating the blades of the engine over a range of speeds from high to low speed to move the blades through the particle laden gas to abrade the particles against the blade to remove deposits therefrom and force the particle laden gas through the passages of the engine to remove deposits therein.

2,948,093
METHOD AND APPARATUS FOR ASSEMBLING CYLINDRICAL OBJECTS
Ernest Bonami, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed June 24, 1957, Ser. No. 667,389
15 Claims. (Cl. 53—26)



1. The method of assemblying a group from a plurality of generally cylindrical objects moving along a conveyor in a given direction, said method comprising positioning said objects in sequential order end to end with their cylindrical axes in alignment, moving said objects along a path so aligned, at a point in said path moving each object as it arrives at said point at substantially right angles along a second path while maintaining the angular position of each object to obtain a stream of objects in spaced side by side relationship, rotating said objects about their axes while moving along said second path to permit visual inspection of the entire cylindrical surface of said objects, stopping one of said objects at a point along said second path and continuing to move the following objects until each reaches the preceding object, weighing the stopped objects until a weight indicative of a group is reached to form a group, pushing against one end of each object of said group only upon said weight being reached to move said group along the cylindrical axes of said objects out of said second path, and stopping the objects following said group commencing with the next subsequent object to arrive at said point.

2,948,094
PACKAGING
Roger Wells, Plattsburgh, N.Y., assignor to Diamond National Corporation, a corporation of Delaware
Filed Jan. 11, 1956, Ser. No. 558,523
32 Claims. (Cl. 53—37)



26. The method of handling and packaging rolls of web material comprising moving first groups of a plurality of axially aligned rolls in an axial direction, separating individual rolls in said first groups, moving said separated groups in a transverse direction while maintaining their alignment, moving second groups of a plurality of axially aligned rolls in an axial direction, separating individual rolls in said second groups, moving said separated second groups in a transverse direction and maintaining their alignment, accumulating said first groups with said second groups.

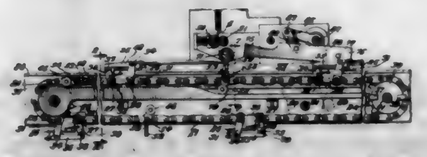
2,948,095
DEVICE FOR ENCLOSING DRY CLEANED CLOTHES IN INVERTED BAGS
James B. Nelson, Corona, N.Y.
(33—12 90th St., Jackson Heights, N.Y.)
Filed Sept. 22, 1958, Ser. No. 762,454
1 Claim. (Cl. 53—241)



A clothes handling device of the character described, comprising a pole, an inverted hook at the upper end of said pole adapted to hook on an elevated supporting member and thereby to support the pole in a vertical, hanging position, and a hook pivoted to said pole adjacent the lower end of said pole, said pivoted hook being adapted to pivot downwardly to a horizontal position wherein it is adapted to support a clothes hanger carrying a garment and being adapted to pivot upwardly to an inoperative

position to facilitate slipping an inverted bag upwardly upon the pole, said hook being further adapted when in horizontal position, to support said bag on said pole preparatory to slipping the bag downwardly upon said clothes hanger and the garment carried thereby, a cut-out being formed in said pole adjacent its lower end to receive the pivoted hook, one end of said hook being pivoted to said pole by means of a pivotal connection within said cut-out, the pivotal axis being transverse of the longitudinal dimension of the pole, said pivoted hook being adapted to pivot on said pivotal connection to bring its free end into said cut-out to avoid snagging a bag which is being drawn up on the pole, a fixed shoulder being provided on said pole at the lower end of said cut-out to support the pivoted hook in its horizontal position and thereby to enable said hook to support said clothes hanger and the garment carried thereby.

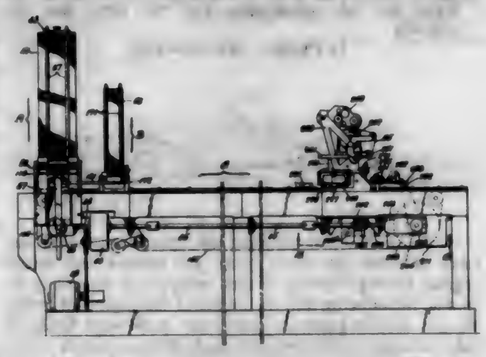
2,948,096
MECHANISM FOR FEEDING AND COVERING CONTAINERS
Andrew W. Anderson, West Caldwell, N.J., assignor to Scandia Packaging Machinery Company, North Arlington, N.J., a corporation of New Jersey
Filed Oct. 31, 1958, Ser. No. 771,086
6 Claims. (Cl. 53—287)



1. In a machine for feeding and covering containers, a support, means for feeding containers along said support, means in conjunction with said feeding means for engaging and holding down the rear edges of said containers and means carried by said feeding means for folding one end of a flexible covering sheet under the forward end of the container and holding said end in said position during the further feeding movement of the container.

2,948,097
BOX FORMING MACHINE
Joseph P. Mancuso, Jamesburg, and Robert R. Maffett, Westfield, N.J., assignors to Robert E. Bauer, Wyndmoor, Pa.
Original application June 8, 1954, Ser. No. 435,154, now Patent No. 2,860,549, dated Nov. 18, 1958. Divided and this application Sept. 30, 1958, Ser. No. 773,534
4 Claims. (Cl. 53—296)

1. In a packaging machine operable to secure a sheet of cellophane or like material over the open upper end of a box, a conveyor operable to advance said boxes longitudinally of said machine, support means mounting a roll of said sheet material upwardly adjacent said conveyor, a downwardly inclined feed table over which said sheet material passes terminating at the lower end thereof adjacent said conveyor, means operable to feed said sheet material downwardly over said feed table, cutting means operable to engage and cut said sheet material transversely into sheets of predetermined length, glue applying means mounted upwardly adjacent said conveyor operable to engage opposite ends of said box and apply glue thereto, said conveyor actuatable after glue is applied to said box to advance said box to a position beneath said feed table with the leading edge of said box beneath the lower end of said feed table, rotatable brush means mounted for vertical movement between upper and lower limit positions and operable during movement to its lower limit position to force the edge of said cut sheet of material against the glued end of said box, means operable to actuate said brush means between said upper and



lower limit positions, and a positioning plate mounted adjacent said brushes and actuatable between upper and lower limit positions along with said brushes operable during movement to its downward limit position thereof to engage said box and force said box into engagement with said brushes.

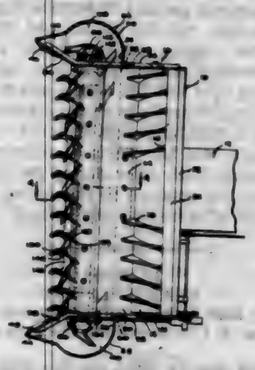
2,948,098
BALE SEALING MACHINE
Glen N. Hanson, 244 Washburn Ave. N., and Erick Werdier, 1631 Queens Ave. N., both of Minneapolis, Minn.
Filed Nov. 1, 1956, Ser. No. 619,876
9 Claims. (Cl. 53—378)



1. A machine for sealing bales of the type described which comprises in combination, a frame structure providing an elongated passageway, means on one end of the frame structure for moving a plurality of bales in a row through said passageway, and means mounted on the frame structure over said passageway for folding and sealing the open mouths of the bales as they are moved therethrough, said means comprising in succession along the structure a divider shoe transversely centered over the passageway with a pair of scoring plates one at each side of the shoe and spaced therefrom and hinged to the frame structure for folding and unfolding movement over the shoe to form each of the bale mouths into a pair of opposing flaps adapted to be folded one over the other, a glue dispenser mounted on the frame structure for applying glue to the underside of the one of said flaps, and a sealing device for folding the flaps and applying downward pressure thereto as the bales move along the passageway.

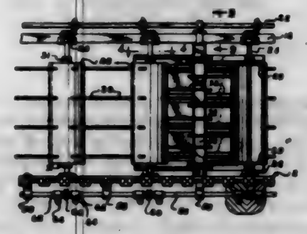
2,948,099
ENDLESS CUTTING MECHANISM
John Johnson, P.O. Box 1047, Brockton, Mont.
Filed Nov. 21, 1958, Ser. No. 775,568
3 Claims. (Cl. 56—25)

1. Cutting mechanism for a harvesting machine comprising a mobile support, an elongated endless chain mounted on said support for movement in a substantially horizontal plane, a plurality of stationary plates on said support along one flight of said chain, each of said plates being provided with an outwardly and down-



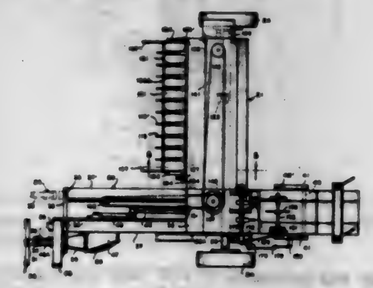
wardly disposed cutting edge, and a plurality of cutters on said chain extending outwardly and downwardly therefrom in coacting relation to said plates and cutting edges.

2,948,100
GRAIN GATHERING ATTACHMENT FOR COMBINES
Irvin D. McEachern, Rte. 2, Hale Center, Tex.
Filed Nov. 19, 1958, Ser. No. 775,054
4 Claims. (Cl. 56—119)



1. In a combine for the harvesting of grain, including cutter means and a conveyor apron structure for receiving the grain, the combination therewith of a gathering attachment for row crops, which attachment comprises a header bar mounted on said combine and supported above said cutter means, spaced apart bearings mounted on said header bar, a horizontally arranged drive shaft journaled in said bearings so as to be in approximately aligned relation with said cutter means, a second series of bearings, which bearings are mounted on said cutter means at spaced intervals therealong, an upstanding shaft mounted in each of said bearings on said cutter means, gearing on said horizontal shaft, a gear on the upper end of each of said upstanding shafts, which gears on said upstanding shafts are adapted to complementally engage the respective gears on the horizontal shaft in such manner that alternate upstanding shafts will be driven in opposite directions, a cylinder of substantially greater diameter than the respective upstanding shafts mounted on and fixedly secured to each of said upstanding shafts for rotation therewith, the axis of each said upstanding shaft and the axis of the respective cylinder mounted thereon being coaxial, each said upstanding shaft extending throughout the length of said cylinder thereon, fingers fixedly secured to and extending from said respective cylinders in circumferentially arranged rows, which rows are spaced apart longitudinally on the respective cylinders, which fingers of adjacent cylinders on opposite sides of a row of grain are in the same plane and overlap each other in a horizontal direction, said gearing being adapted to rotate said cylinders bearing said fingers, in timed relation to direct stalks of grain therebetween.

2,948,101
HAY BALER
William R. Long, Tarboro, N.C., assignor to Long Manufacturing Co., Inc., Tarboro, N.C.
Filed Apr. 22, 1957, Ser. No. 654,320
16 Claims. (Cl. 56—341)

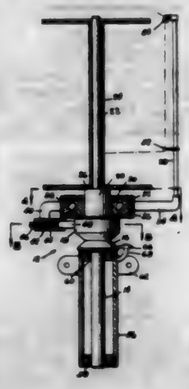


8. A hay baler comprising an elongated apron on which the hay is supported, substantially straight rail means positioned above said apron and extending in the same direction as said apron, means defining a bale forming chamber at one end of said apron and at one end of said rail means, said bale forming chamber being provided with an entrance opening at said one end of said apron for the entrance of hay, a ledger blade mounted at the rear edge of said opening, a carriage mounted on said rail means for reciprocating movement in the elongated direction of said rails, means to reciprocate said carriage including means above said apron connected to said carriage, tine means pivotally mounted on said carriage for movement in a direction toward and away from said bale forming chamber in the direction of the rails, means associated with said tine means and carriage limiting the pivotal movement of said tine means in a direction away from said bale forming chamber, said tine means being free to pivot in a direction toward said bale forming chamber whereby the reciprocation of said carriage and said tine means in a direction toward said bale forming chamber causes hay supported on said apron to be moved into said bale forming chamber and upon movement of said tine means in the opposite direction away from said bale forming chamber said tine means are pivotally moved by inertia forces and by contact with the hay to freely pass over the hay between said carriage and said apron.

2,948,102
YARN SPINNING APPARATUS
Fred M. Baucom, Rte. 3, Gastonia, N.C.
Filed May 9, 1958, Ser. No. 734,161
4 Claims. (Cl. 57—59)

4. In a yarn spinning apparatus, a vertically disposed rotatable spindle, a pulley carried by said spindle adapted to embracingly receive a drive belt for imparting rotational movement to said spindle, a driven collar projecting from one face of said pulley and fixedly secured to said pulley, a driven boss projecting from the face of said collar remote from said one face of said pulley and fixedly secured to said collar, a shaft projecting vertically from and fixedly carried by said boss, a bobbin having yarn wound therearound circumposed about and connected to said shaft for movement therewith, an inner bearing member carried by said boss, an outer bearing member connected to said inner bearing member for rotation there-

around, a flier arm positioned in vertical spaced relation with respect to said bobbin and connected to said outer bearing member for rotation therewith, a friction applying means embodying a braking pin engaging said drum

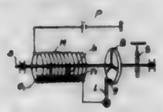


collar and connected to said outer bearing member for movement therearound, said flier arm being provided with means for receiving and guiding the yarn from said bobbin to a take-up spool as the bobbin is rotating.

2,948,103
PROCESS FOR THE MANUFACTURE OF INTERRUPTED FILAMENT YARNS
Alfredo Nai, 18 Corso di Porta Vittoria, Milan, Italy
No Drawing. Filed Apr. 25, 1955, Ser. No. 503,773
Claims priority, application Italy Jan. 13, 1955
2 Claims. (Cl. 57—157)

1. A process for transforming continuous filament artificial yarn into interrupted filament yarns, which comprises submitting the continuous filament to a first tearing, cutting, abrading or roughening for production of broken filament yarn while twisting, collecting the yarn in cakes, immersing the cakes into a bath formed of a solution of sulfonation products selected from the group consisting of vegetable oils, higher fatty acids, animal fats and higher fatty alcohols, said solution containing in dispersion an oil selected from the group including mineral oils and vegetable oils, submitting the cakes coming from the bath to centrifugation and then further submitting the yarn to a second tearing, cutting, abrading or roughening for the production of broken filament yarn, while twisting.

2,948,104
ELECTRICALLY DRIVEN CLOCKWORK
Serge Simon Held, 31 Rue de Chazelles, Paris 8e, France
Filed Dec. 9, 1955, Ser. No. 552,192
Claims priority, application Switzerland June 6, 1955
12 Claims. (Cl. 58—28)



1. In an electrically driven clockwork including an oscillating balance adapted to oscillate to either side of a position of non-stable equilibrium, the combination of a power supply, a switch including a movable contact-piece carried by the balance and a stationary contact-piece engaged by the movable contact-piece in said position of non-stable equilibrium, a circuit fed by the power supply and including a winding the convolutions of which lie on a cylindrical surface coaxial with the balance, said winding connecting the power supply with the stationary contact-piece to close the circuit through the movable contact-piece in said position of non-stable equilibrium, a rotary spindle rigid with the balance and extending along the axis of the winding and two similar elongated soft iron bars, extending in parallelism with said spindle and of which one is rigid with the spindle and the other is stationary and lies substantially along a generating line of its cylindrical surface very near the locus of the bar rigid with the spindle, said bars being simultaneously magnetized and repelling each other during the short energization of the winding obtained by the closing of the switch in said position of non-stable equilibrium.

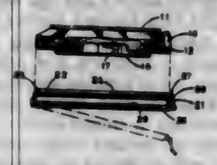
2,948,105
ALARM WATCH
Adrien Levy, Biel, Switzerland, assignor to Manufacture des Montres & Chronographes Pierre S.A., Biel, Switzerland
Filed June 24, 1954, Ser. No. 438,970
Claims priority, application Switzerland June 25, 1953
2 Claims. (Cl. 58—57.5)



1. An alarm structure for a watch having a movement, comprising a casing enclosing said movement, alarm sound means in said casing and including a gong member peripherally disposed in said casing, an escapement wheel driven by said movement and having teeth on the periphery thereof, a lever pivotally mounted in said casing and having projecting means engaging said teeth, a hammer on said lever for pivotable movement toward and away from said gong member, a sound regulating bar in said casing shiftable to a high intensity sound position and to a low intensity sound position, respectively, anvil means interposed between said hammer and said gong member and in striking contact with both, when said regulating bar is in said high intensity sound position, a high intensity alarm sound being created by striking of said anvil means through said hammer against said gong member and a simultaneous low intensity alarm sound by the impact of said teeth against said lever projecting means, said hammer being disengaged from striking contact with said anvil means when said sound regulating bar is moved to said low intensity sound position so that only a low intensity alarm sound is produced due to the impact of said teeth of said escapement wheel with said projecting means of said lever.

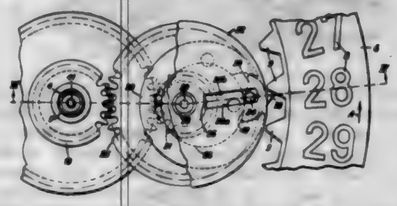
2,948,106
WATCH AND PILL CASE OR THE LIKE
Abraham Blumstein, 98—03 69th Ave., Forest Hills, N.Y.
Filed Sept. 9, 1957, Ser. No. 682,957
3 Claims. (Cl. 58—57.5)

1. In combination, an alarm watch having a sounding diaphragm projecting from a substantially flat retaining ring and forming therewith the back face of the watch, a sounder cooperable with said diaphragm and a side rim projecting outwardly beyond said retaining ring; a container having a side wall engageable within said watch side rim; a flange extending inwardly substantially perpendicular to said container side wall; a flexible diaphragm seated on said flange and having substantial surface engagement with said sounding diaphragm over the



entire surface of the latter when said container wall is engaged in said watch rim; and a cover hinged to said container wall and cooperating with the latter and with said flexible diaphragm to form the container; said flexible diaphragm augmenting the sound when said sounder strikes said sounding diaphragm and said container acting as a sound resonator.

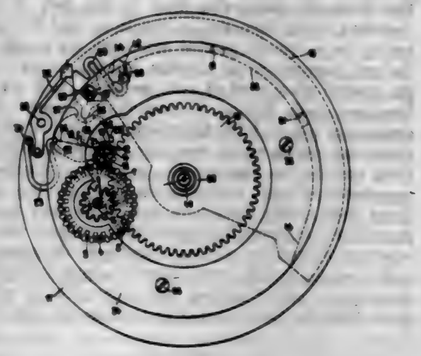
2,948,107
DATE-WATCH
Paul-Léon Marmier, Buren (Aare), Switzerland, assignor to Buren Watch Company S.A., Bern, Switzerland
Filed May 8, 1959, Ser. No. 811,880
Claims priority, application Switzerland May 10, 1958
7 Claims. (Cl. 58—58)



1. A date-watch comprising in combination date indicating means, resilient means normally holding said date indicating means in predetermined indicating positions, and driving means to move said indicating means one step forward every twenty-four hours, said driving means comprising a rotary eccentric making a whole number of revolutions in twenty-four hours and a driving member mounted for rotation around said eccentric and making also a whole number of revolutions in twenty-four hours, the number of revolutions of said driving member in twenty-four hours being greater than one and having no common divisor greater than one with the number of revolutions of said eccentric in twenty-four hours.

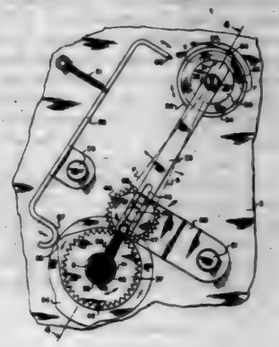
2,948,108
OVERWIND PREVENTER FOR TIMEPIECE
Friedrich Meyer, Grenchen, Switzerland, assignor to Felsa S.A., Grenchen, Switzerland
Filed July 26, 1955, Ser. No. 524,343
Claims priority, application Switzerland Sept. 14, 1954
7 Claims. (Cl. 58—83)

3. In an overwind preventer for a timepiece comprising oscillating weight winding mechanism including a barrel and a barrel arbor, a frame, a differential gear mounted on said frame and operably connected between the barrel and the barrel arbor, control means in driving connection with said differential gear to be alternately driven in opposite directions, a rocking member loosely mounted on said frame to alternately cooperate with said control means, lost motion-coupling means on said rocking member, a spring pivoted on said frame and engaging said rocking member to alternately press said rocking member against said control means in opposite directions and to alternate swing said rocking member in opposite directions, a spring-held locking member for the oscillating weight rockingly mounted on said frame and having



lost motion-coupling means separated from the lost motion-coupling means of said rocking member except in the end positions of said rocking member.

2,948,109
MECHANISM FOR AUTOMATICALLY ADJUSTING CLOCK REGULATORS
Roy Witte, Wheaton, Ill., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware
Filed June 13, 1957, Ser. No. 665,569
16 Claims. (Cl. 58—109)



1. In a clock, a movement including a rate regulator, hands driven by said movement, setting mechanism for said hands, a pivotally mounted regulator adjusting lever having a slip drive connection with said regulator, said lever being rotatable in either direction from a normal central position, means operated by the setting mechanism for moving said lever from said central position in either direction during a correction of the hands, means operated by the clock movement for returning said lever to the central position, and means for holding said regulator in adjusted position during said return action.

2,948,110
BRACELET LINKAGE WITH DETACHABLE PIVOTS
Howard F. Williams, Cranston, and Anthony L. Minutoli, Pawtucket, R.I., assignors to Kestenman Bros. Mfg. Co., Providence, R.I., a corporation of Rhode Island
Filed June 23, 1958, Ser. No. 743,774
1 Claim. (Cl. 59—79)

An expansible bracelet linkage comprising a plurality of link-units each consisting of a pair of relatively narrow top and bottom members disposed in crossing re-

lationship, a headed stud pivotally connecting said top and bottom members at the center to adapt them to swing into open relationship for expanding said bracelet, projecting headed studs at the ends of said bottom members pivotally connecting them to the ends of said top members, a key-hole slot in certain of said top members having its narrower portion extending outwardly toward the end thereof and its circular opening located adjacent the central pivot-stud of said members, said certain top members each having a latch-plate formed with an opening at one end for mounting it on the related center pivot-stud, detent means engaging between each said latch-plate and its top member for preventing relative rotary movement of said related latch-plate and top member about their center pivot-stud, and a relatively thin sheet-metal shell overlying the upper face of each of said certain top members with its side walls enclosing the edges thereof and extended in tabs bent around the under side of its top member to hold it against the under side of said latch-plate with the latter seated in slots in the side walls of



the shell on its top member, said latch-plate formed with an arcuate portion projecting outwardly from said central pivot-stud and curved upwardly with its end extending downwardly in a curved lip projecting into and then at least slightly out of the end of said narrow portion of said key-hole slot adjacent the larger circular portion thereof, the end of said lip being adapted to engage positively against the related end pivot-stud on an adjacent bottom link-member beneath the circular head thereof to prevent said related end stud from sliding out of the narrow portion of said key-hole slot after it has been entered thereinto, the convex side of said curved lip at the end of the latch-plate being engageable by the head of said related end stud by canting the stud in the narrow portion of said key-hole slot whereby to flex said latch-plate and displace it into position to permit the head of the related end stud to slide thereacross into register with the circular opening at the end of said key-hole slot for withdrawing it therethrough to disengage the end of said adjacent bottom link from an adjacent top link in the series for removing sections of said bracelet to adjust its length.

2,948,111

MEANS TO INCREASE STATIC PRESSURE AND ENHANCE FORWARD THRUST OF AIRCRAFT COMPONENTS

Norman E. Nelson, Los Angeles, Calif., assignor to Doak Aircraft Co., Inc., Torrance, Calif., a corporation of California

Filed May 2, 1955, Ser. No. 505,377
2 Claims. (Cl. 60—35.5)



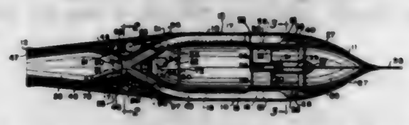
1. An aircraft capable of supplementing the normal thrust output of the aircraft's engine by greater than 30% during flight conditions of hovering, low speed, or take-off, comprising: an open-ended duct having inner, outer and forward wall surfaces; said forward surface having a blunt leading edge of appreciable thickness which is rounded in its normal condition, said inner surfaces converging to provide a throat of smaller internal diameter rearwardly from said leading edge; thrust-generating means mounted centrally within said duct and located at said throat for drawing and increasing the velocity of air over said wall surfaces and through said duct; said forward surface and the section of said outer surface adjacent said forward surface comprising elastic and resilient means capable of being expanded to form an uninterrupted, continuous and enlarged frontal surface; and means for expanding and increasing the normal rounded thickness of said frontal surface by 50% to 300%, said increase in frontal surface thickness effecting increased areas of reduced static pressure adjacent the duct surfaces and producing an increase of greater than 30% of the normal thrust axially of the duct for hovering, low speed or take-off flight conditions wherein an increase of below 50% of the normal thickness of said frontal surface will be incapable of producing any appreciable increase in thrust.

2,948,112

COMBINED ROCKET AND RAM-JET ENGINE

Kenneth W. Smith, 519 S. Edgefield St., Dallas, Tex.

Filed Dec. 14, 1953, Ser. No. 397,886
3 Claims. (Cl. 60—35.6)



3. A power plant convertible from rocket to ram-jet stage and from ram-jet to rocket stage and including: an elongated body having a combustion chamber therein with an outlet from said combustion chamber at the rear of said body, said body also having a flow passageway from the forward end of the body communicating with the combustion chamber; a nose valve member disposed in said passageway and movable to a position opening said passageway and to a position closing said passageway to control flow of air therethrough to said combustion chamber; means for moving said nose valve member selectively to either of said positions; second means in said body movable to a position separating the combustion chamber from the flow passageway and to a position permitting communication between said flow passageway and said combustion chamber; fuel supply means and means for conducting fuel from said fuel supply means to said combustion chamber; an oxidant supply means; means for conducting such oxidant from said supply means to said combustion chamber; valve means for controlling flow of oxidant through said conducting means; and means actuated by the movement of the nose valve member for controlling said valve means to control flow of oxidant through said oxidant conducting means to said combustion chamber to provide for flow of oxidant to the combustion chamber when the nose valve member is closed and to shut off such flow of oxidant when said nose valve member is open.

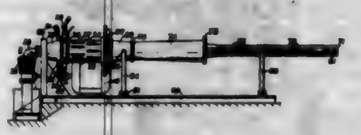
2,948,113

INTERNAL COMBUSTION JET PROPULSION ENGINE HAVING A REFLECTED PRESSURE WAVE ENGINE CONTROL DEVICE

George Butt Miller, Harleypark House, Callan, County Kilkenny, Ireland; Lettice Mary Miller, executrix of said George Butt Miller, deceased

Filed Feb. 7, 1955, Ser. No. 486,508
Claims priority, application Great Britain Feb. 9, 1954
5 Claims. (Cl. 60—35.6)

4. A jet engine comprising a piston motor having a pressure chamber, a cylinder head in communication with the pressure chamber of said piston motor, ignition means including a spark plug provided in said cylinder head, a cylinder body connected to said cylinder head and formed with at least two axially spaced ports; a sleeve rotatably mounted within said cylinder body and formed with at least two further axially spaced ports co-operating with said two ports, compressed air supply means connected to one of said ports, fuel injection means including a fuel injection nozzle located between said spark plug and said port connected to said air supply means, a fuel pump arranged for the supply of fuel to said fuel injection means, a chain sprocket mounted on



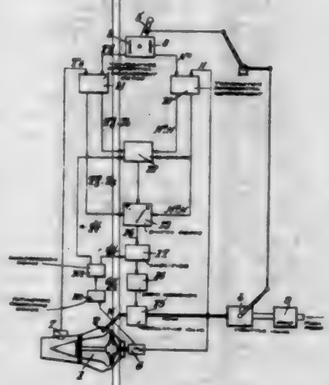
said sleeve, a chain drivably connected with said chain sprocket, driving means for said fuel pump, ignition means and sleeve, said driving means being drivably connected to said sleeve by means of said chain, a first tube secured to said cylinder body having a substantially circular cross-section tapering towards the end remote from said cylinder body, a second tube secured end to end with first tube having a substantially circular cross-section at the end near said first tube and its cross-section progressively becoming elliptical towards the end remote from said first tube, two ducts secured to said second tube having their ends remote from said second tube closed and a jet tube open at both ends and having one end secured to said second tube.

2,948,114

ENGINE FUEL CONTROL INCLUDING ACCELERATION-BIASED CONTROL SIGNAL SELECTOR

Jacques Pierre Joseph Bailler, Puteaux, Leon Cotadze, Carrieres-sur-Seine, and Pierre Chaffiotte, Cormeilles-en-Parisis, France, assignors to Societe d'Exploitation des Materiels Hispano-Suiza, Bois-Colombes, France, a French society

Filed Aug. 8, 1956, Ser. No. 602,802
Claims priority, application France Mar. 17, 1956
4 Claims. (Cl. 60—35.6)



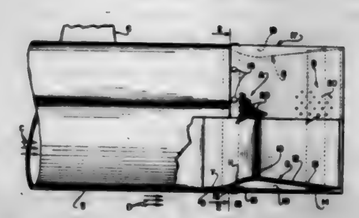
1. For use with a turbo-jet engine including a gas turbine, means for feeding fuel to said turbine, valve means for controlling the flow rate of fuel from said feeding means to said turbine, a discharge nozzle downstream of said turbine, movable control means for adjusting said fuel feeding means, and two means operatively connected with said control means for indicating the respective theoretical values of two operational factors of said engine corresponding to the position of said control means, one of said factors being the speed of said turbine, a regulating system for said engine which comprises, in combination, two devices each for measuring the actual value of one of said factors, two differential measurement devices, each having its input connected on the one hand with said actual value measuring device for one of said factors respectively and on the other hand with said theoretical value indicating means for the same factor, each of said differential measurement devices being capable of measuring the algebraic difference between said theoretical value and said actual value, said two differential measurement devices being calibrated so that the values they measure are comparable, a comparator device having its input connected with the outputs of said two differential measurement devices, said comparator supplying at its output two different signals according as one or the other of said algebraic differences is smaller than the other, a regulating servo-mechanism for controlling said valve means operative in response to variations of the value measured by either of said differential measurement devices, switch means responsive to said signals for connecting with said servo-mechanism, at any time, that of said two differential measurement devices, switch means responsive to said signals for connecting with said servo-mechanism, at any time, that of said two differential measurement devices which is measuring an algebraic difference smaller than that measured by the other differential measurement device, and accelerometric means responsive to variations of the rotational speed of said turbine and operatively connected with said comparator device for causing said comparator device to keep transmitting the signal concerned with the turbine speed to the servo-mechanism as long as said speed is increasing.

2,948,115

DRAG REDUCTION SHROUD FOR JET ENGINES

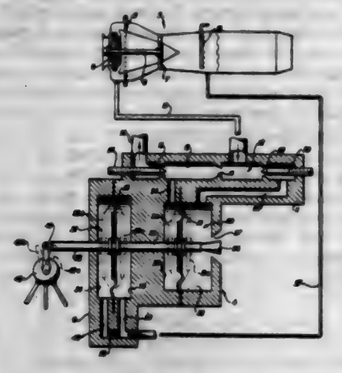
Lorne C. Dunsworth, Van Nuys, and Arthur N. Thomas, Jr., Northridge, Calif., assignors to The Marquardt Corporation, Van Nuys, Calif., a corporation of California

Filed Feb. 3, 1958, Ser. No. 712,981
10 Claims. (Cl. 60—35.6)



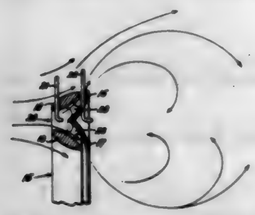
1. In a jet engine, a cylindrical engine section forming an exterior surface of said engine adjacent the air flow past the engine during movement of the engine, an exit nozzle secured to the rear end of said section, and a cylindrical shroud secured to the rear end of said section and surrounding said exit nozzle, said shroud containing a plurality of openings located directly opposite at least a portion of said nozzle and of such size as to be substantially opaque to air flow past said shroud while permitting direct flow of radiant energy from the exit nozzle to the air flow past said shroud.

2,948,116
FLUID ACTUATED TOGGLE MECHANISM
Robert G. Olander, Granada Hills, Calif., assignor to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed May 25, 1959, Ser. No. 815,381
11 Claims. (Cl. 60—35.6)



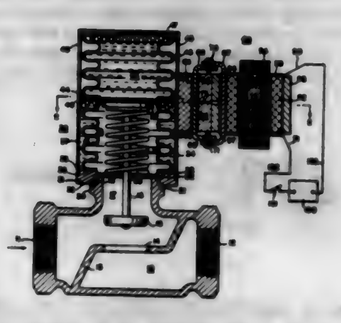
1. A fluid actuated toggle mechanism comprising a source of fluid at a supply pressure, means for obtaining a first fraction of said supply pressure, pressure differential means movable from one extreme position to another, means for introducing said first fraction to one side of said differential means, means responsive to the position of said differential means for obtaining at the other side of said differential means a variable fraction of said supply pressure which is larger than said first fraction when said differential means is in one extreme position and smaller than said first fraction when said differential means is in the other extreme position, and means for applying a force to said differential means to initiate movement of said differential means towards either one of the extreme positions.

2,948,117
AFTERBURNER FLAMEHOLDER
Anthony J. Nerad, Alplaus, and Robert H. Johnson, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Filed Oct. 1, 1956, Ser. No. 613,036
7 Claims. (Cl. 60—39.72)



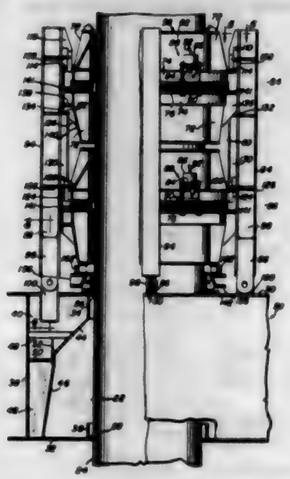
1. In a jet engine exhaust gutter type flameholder of a predetermined frontal area, the improvement of providing greater turbulence from the same predetermined frontal area, comprising in combination, a pair of arm members, positioned in the said exhaust in spaced apart relationship, said arm members being angularly disposed relative to each other and mounted with the smaller end in the upstream direction, a plurality of vortex generators next adjacent the downstream ends of said arm members and within said arm members, vanes on said vortex generators generating a free vortex downstream of said flameholder and rotating about a longitudinal axis with respect to the gas flow and at least one fuel nozzle arranged to spray fuel into the vortices developed by said vortex generators.

2,948,118
ELECTROMAGNETIC PUMP ACTUATED DEVICE
William L. Carlson, Jr., and Frank M. Exner, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 28, 1955, Ser. No. 490,954
13 Claims. (Cl. 60—52)



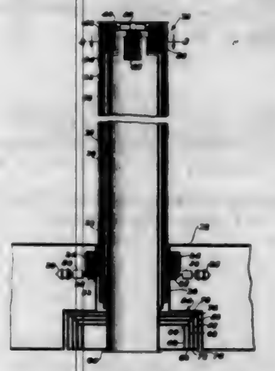
13. In a device of the class described: an actuator including first and second chambers containing a conductive fluid and at least one of said chambers being variable in volume and being always filled with said fluid; said actuator having an unbiased position and having yieldable means urging said actuator to a biased position; and an electromagnetic conductive fluid pump providing a pumping pressure and having an inlet connected to said first chamber and an outlet connected to said second chamber; said pumping pressure varying the variable volume chamber to move said actuator to said unbiased position; said yieldable means returning said actuator to said biased position upon loss of said pumping pressure.

2,948,119
STRUCTURE INCLUDING JACK AND MOUNTING THEREFOR
George E. Suderow, States Island, N.Y., assignor to De Long Corporation, New York, N.Y., a corporation of Delaware
Filed Feb. 17, 1955, Ser. No. 488,841
12 Claims. (Cl. 61—46.5)



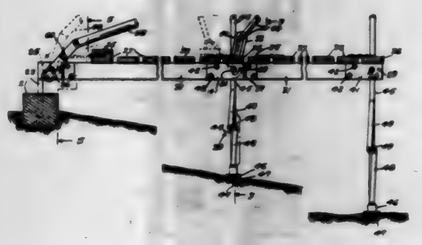
1. Jack means for effecting relative movement between a platform and a substantially upright, elongated platform-supporting member guided on the platform for substantially vertical movement therebetween and for limited canting movement in any direction comprising: at least one pair of upper and lower holding means adapted to be spaced along the length of the member and each independently releasably engageable therewith symmetrically thereabout against movement relative thereto in said longitudinal directions, and means for forcing said upper and lower holding means selectively away from each other and toward each other in said longitudinal directions; a plurality of elongated elements adapted to extend generally parallel to the member and arranged symmetrically about said jack means; means for connecting one end of each of said elements to the platform for limited canting movement in any direction; means loosely connecting each of said elements to said jack means for limiting relative movement therebetween in any direction extending transversely of said jack means; abutment means on each of said elements engageable by said upper holding means for limiting the extent of upward movement thereof relative to said elements; and additional abutment means on each of said elements engageable by said lower holding means for limiting the extent of downward movement thereof relative to the platform.

2,948,120
SUPPORTING LEG ASSEMBLY FOR MARINE PLATFORM
George E. Suderow, New York, N.Y., assignor to De Long Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 28, 1956, Ser. No. 612,815
3 Claims. (Cl. 61—46.5)



1. In apparatus of the type described, the combination comprising: a platform, a vertically extending telescopic supporting leg including an outer section, an intermediate section, and an inner section, guide means on said platform mounting said outer section for substantially vertical movement in either direction relative to said platform, first vertically extending rack means fixed to the outer periphery of said outer section, first worm gear means carried by said platform operatively engaging said first rack means, first power means for driving said first worm gear means in either direction, second vertically extending rack means fixed to the inner periphery of said outer section, second worm gear means carried by the upper end of said intermediate section operatively engaging said second rack means, second power means for driving said second worm gear means in either direction, third vertically extending rack means fixed to the outer periphery of said intermediate section, third worm gear means carried by the upper end of said inner section operatively engaging said third rack means and third power means for driving said third worm gear means in either direction.

2,948,121
PORTABLE SECTIONAL PIER
Sylvester Frank Karst, 105 Mill St., Oshkosh, Wis.
Filed Nov. 15, 1957, Ser. No. 696,741
1 Claim. (Cl. 61—48)

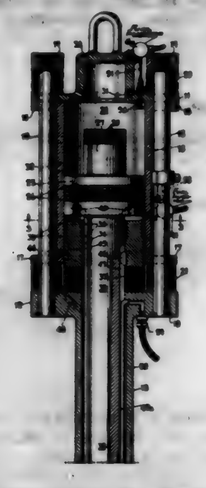


A sectional portable pier including a plurality of sections pivotally secured together in end-to-end relation with each of said sections comprising a pair of spaced parallel stringers, a plurality of transverse floor boards secured to said stringers, a pair of spaced parallel legs for each section, a first pair of plates secured to opposite sides of one end of each stringer at one end of each section with said plates projecting beyond the ends of said stringers, a second pair of plates secured to opposite sides of the other end of each stringer at the other end of each section with said pairs of plates projecting beyond the other ends of said stringers, a shaft extending transversely of one end of said section extending through and supported in said first pairs of plates at said one end of said section, said shaft extending beyond said first pair of plates, means adjustably securing the extending ends of said shaft to the adjacent pair of legs, a lock pin parallel to said shaft extending across and supported in each of said first pair of plates with said shaft positioned between said locking pins and said stringers, and means on said second pairs of plates at the other end of each section for pivotally engaging the shaft of and releasably locking to the locking pin of the next adjacent section, said last named means including a horizontal slot formed in said second pair of plates opening through the end thereof opposite said stringers and pivotally engaging said shaft and a semi-circular slot formed in said second pair of plates opening through the end thereof opposite said stringers below said horizontal slot, said last named slot slidably engaging said locking pin on pivotal movement of one section with respect to the other from a vertical position to a horizontal position.

2,948,122
COMBUSTIBLE FUEL OPERATED PILE DRIVING HAMMERS AND THE LIKE
Edward A. Smith, Chatham, N.J., assignor to Raymond International Inc., New York, N.Y., a corporation of New Jersey
Filed May 3, 1956, Ser. No. 582,386
14 Claims. (Cl. 61—76)

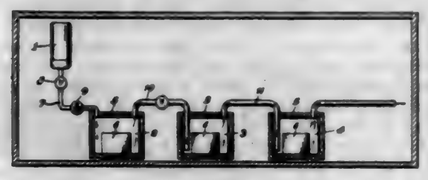
1. A hammer construction for driving piles and the like and operating by internal combustion of fuel, comprising in combination: a cylinder; a hammer base means beneath said cylinder; a piston contained in said cylinder and having a ram secured as a unit therewith and to the underside thereof; a sleeve surrounding said ram beneath the piston located at a position to receive driving impacts from the piston and ram unit; slidable sealing means between said sleeve and the cylinder walls and also between said sleeve and the ram; resilient cap block

means surrounding the ram and interposed between said sleeve and the hammer base means for transmitting the



impacts to the latter from the sleeve; and means for injecting fuel into said cylinder between said piston and sleeve.

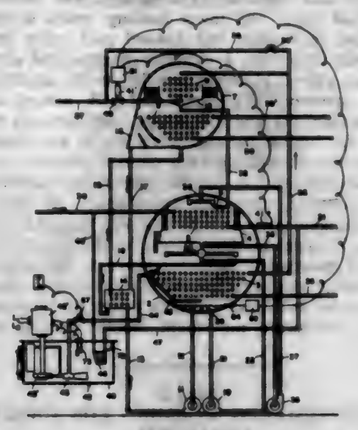
2,948,123
METHOD OF FREEZING FOODSTUFFS AND THE LIKE
Willard Langdon Morrison, Lake Forest, Ill., assignor, by mesne assignments, to Liquefreeze Company, Inc., New York, N.Y., a corporation of New York
Filed Aug. 20, 1957, Ser. No. 679,311
3 Claims. (Cl. 62—64)



1. The method of shipping perishable material such as foodstuffs which comprises the steps of packing a multiplicity of packages of the material wrapped in liquid pervious wrappers in an insulated liquid tight shipper container, pouring liquid nitrogen at atmospheric pressure into the container in contact with the packages until the packages are wet with the liquid whereby the heat of the material vaporizes the liquid to expel the air from the container and a desired low temperature far below zero degrees F. is reached, and closing the packed container for storage and shipment while the surfaces of the packages are still wet with the liquid.

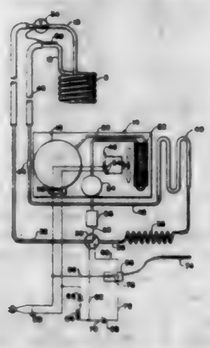
2,948,124
ABSORPTION REFRIGERATION SYSTEMS
Joseph E. Embury, Sr., Memphis, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Apr. 11, 1957, Ser. No. 652,205
10 Claims. (Cl. 62—104)

6. In a method of operation of an absorption refrigeration system, the steps which consist in supplying weak solution from the absorber to the generator, supplying strong solution from the generator to the absorber, heating solution in the generator to concentrate the solution, vapor so formed passing to the condenser, passing cooling medium through the condenser to condense vapor therein, condensate so formed returning to the evaporator, passing medium to be cooled through the evaporator in heat exchange relation with refrigerant therein, governing



the capacity of the system by regulating the flow of cooling medium through the condenser in heat exchange relation with vapor therein to condense the same, and discontinuing the flow of cooling medium through the condenser responsive to a predetermined decrease in the level of solution in the absorber to prevent overconcentration of solution in the generator.

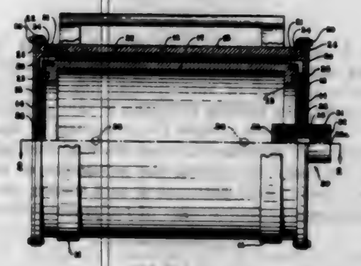
2,948,125
SCIENTIFIC APPLIANCE TEMPERATURE CONTROL ARRANGEMENT
Joseph A. Lawler, Chicago Heights, Ill., assignor to Blue M Electric Company, Blue Island, Ill., a corporation of Illinois
Filed Dec. 10, 1956, Ser. No. 627,399
6 Claims. (Cl. 62—199)



1. In a scientific appliance for close tolerance lower range temperature control, a control temperature chamber, a primary evaporating coil in said chamber, a secondary evaporating coil outside said chamber, a refrigerant compressor having an intake port and an output port, a condenser operatively connected to the output port, a fan adjacent the condenser and arranged to bathe the latter in ambient air, a two-way valve arranged to receive refrigerant from the condenser, a first line from the valve to the intake side of the primary coil, a second line from the valve to the intake side of the secondary coil, a first expansion device in said first line before said

intake side of said primary coil, a second expansion device in said second line before said intake side of said secondary coil, said first expansion device being operative to variably admit refrigerant to the primary coil in response to load on said primary coil, conduit means manifold to said intake port and connected to the outlet side of said primary and secondary coils, and electrically operated control means arranged to induce continuous operation of said compressor and fan and continuous refrigerant circulation, said control means including means to selectively operate said two-way valve to alternately direct refrigerant to the primary and secondary coils in response to the temperature condition in said chamber, said last mentioned means including a sensing bulb in said chamber, a switch connected to the bulb and operable in response to bulb action to change the direction of refrigerant flow through said two-way valve.

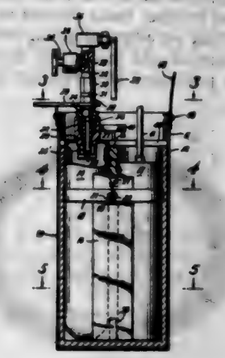
2,948,126
PROTECTIVE CONTAINER FOR ELECTRONIC ASSEMBLIES
Kenneth E. Woodward, McLean, Va., assignor to the United States of America as represented by the Secretary of the Army
Filed Sept. 3, 1959, Ser. No. 838,084
2 Claims. (Cl. 62—316)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A container for housing electronic components comprising: first and second hollow cylinders, said first cylinder being encased in said second cylinder, the longitudinal axis of said first cylinder being substantially coaxial to the longitudinal axis of said second cylinder, a substantially cylindrical member positioned between said first and second cylinders, said member consisting of a spongy cellular material and a pair of resilient rings, said rings forming the corners of said member, said material being partially impregnated with an evaporative coolant liquid, and vents in said first cylinder for permitting the escape of coolant gas therethrough.

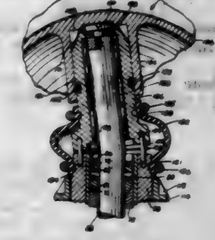
2,948,127
PORTABLE REFRIGERATION SYSTEM FOR REFRIGERATING SCINTILLATION DETECTORS AND THE LIKE
William H. Carter, Jr., % Electro-Mechanical Development Co., 2337 Bissonnet, Houston, Tex.
Filed July 30, 1956, Ser. No. 600,817
5 Claims. (Cl. 62—384)

1. The combination of a refrigerant container, a device to be cooled as a scintillation detector, a thermal conductive block of rigidity therebetween positioning said container and said device in parallel spaced apart relation with axes in parallel, spaced apart, vertically coextensive diametral planes, an insulator surrounding said container, block, and device, and a housing surrounding said insulator, said container having a refrigerant therein in solidified state, a conduit from said container and an expansion valve in said conduit through which said refrigerant may expand when said valve is opened to escape from said conduit as a gas at substantially atmospheric



pressure, heat thereby being drawn from said device and dissipated to the atmosphere along with the escape of said gas.

2,948,128
WOBBLE AGITATOR RESTRAINING ASSEMBLY
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed Oct. 28, 1957, Ser. No. 692,905
2 Claims. (Cl. 64—10)

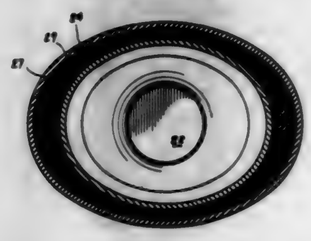


1. In a coupling member having a carrier member, a driven member positioned adjacent said carrier member and movable through a cone of revolution by an oblique extension of a drive means, means limiting relative axial movement between said members, a ring of tapered recesses in said carrier member about the axis of said cone of revolution and a ring of tapered recesses in said driven member encircling said oblique extension; the invention residing in a restraining pin structure including a plurality of flexible restraining pins having opposite ends tapered and in engagement with said recesses in said carrier member and said drive member, said restraining pins being connected at their midpoints by a flexible connector ring.

2,948,129
ELLIPTICAL VIBRATION DAMPER
William J. Troyer, Martinsville, Ind., assignor to Schwitzer Corporation, Indianapolis, Ind., a corporation
Filed June 23, 1958, Ser. No. 743,893
6 Claims. (Cl. 64—11)

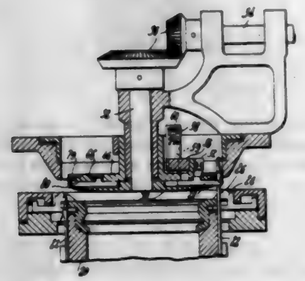
1. A coupling assembly for joining axially aligned driving and driven shafts, said assembly including a driving member adapted for mounting in concentric relation to the driving shaft for rotation therewith, said driving mem-

ber being formed to provide a concave surface having an elliptical configuration in a plane normal to the axes of said shafts, a driven member adapted for mounting in concentric relation to the driven shaft for rotation therewith, said driven member being formed to provide a convex surface having an elliptical configuration in a plane normal to the axes of said shafts, said driving and driven members being positioned with relation to each other so



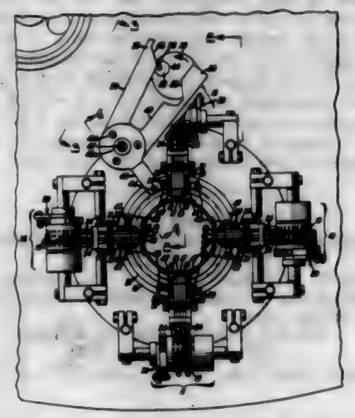
that the major and minor axes of said concave and convex surfaces lie in the same plane, and an elastic element interposed between said concave and convex surfaces having a radial thickness varying with its mean radius, whereby upon the application of relatively low magnitude torque to said driving member said elastic element is subjected primarily to shear stress and upon the applicatiton of higher magnitude torque said elastic element is subjected primarily to compressive stress.

2,948,130
MULTIPLE-FEED CIRCULAR KNITTING MACHINES
John J. McDonough, Laconia, N.H., assignor to Scott & Williams, Inc., Laconia, N.H., a corporation of Massachusetts
Filed June 12, 1956, Ser. No. 591,259
11 Claims. (Cl. 66—41)



1. The method of producing an inturned welt having a combined make-up and set-up on a multi-feed hosiery knitting machine having a circular series of independent needles, sinkers, and welt transfer jacks movable radially from within the needle series, which comprises, first from bare needles forming an initial setting-up course of loops upon the jacks and upon alternate needles of said series, retiring the transfer jacks, but permitting them to retain their loops, holding said setting-up loops on the transfer jacks and subsequently knitting a plurality of courses on all of the needles of said series to form a welt fabric, imparting relative movements to needles of said series and to said transfer jacks to transfer the loops of said setting-up course held by the jacks to the needles, retiring said transfer jacks, and thereafter continuing to knit on needles of said series.

2,948,131
YARN FEEDING CONTROL MEANS FOR CIRCULAR KNITTING MACHINES
Nathan Levin, Trenton, N.J., assignor to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania
Filed Dec. 18, 1956, Ser. No. 629,127
26 Claims. (Cl. 66—138)



20. A circular knitting machine having at least one knitting station and adapted to reciprocatorily knit at said station, a plurality of yarn feeding fingers movable into and out of yarn feeding positions at said station, pattern means to selectively control the movement of said fingers between said positions at said station, and additional means to cyclically control the movement of said yarn fingers between said positions at said station, the control cycle comprising four strokes of reciprocatory knitting.

2,948,132
SURGICAL STOCKINGS
John Gift, Greensboro, N.C., assignor, by mesne assignments, to Kayser-Roth Corporation, New York, N.Y., a corporation of New York
Division of application Ser. No. 561,758, Jan. 27, 1956. Continuation of application Ser. No. 541,556, Oct. 20, 1955. This application June 13, 1957, Ser. No. 666,801
10 Claims. (Cl. 66—178)



1. As a new product of manufacture, a surgical stocking of knitted fabric having courses of covered rubber yarn in alternation with courses in which loops of a plain thermoplastic yarn are doubled with loops of a preset torsioned thermoplastic stretch yarn.

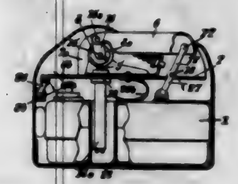
2,948,133
STRAND PROCESSING
Ira Schwartz, 615 W. Arbutus St., Philadelphia, Pa.
Filed Jan. 9, 1957, Ser. No. 633,303
5 Claims. (Cl. 66—201)

5. A balanced boucle-like fabric formed of alternate knitted courses of two composite strands with each composite strand being formed of a pair of strands which are helically crimped unequally to each other, with one strand



of each composite strand being crimped equally and oppositely to a strand in the other composite strand.

2,948,134
LIGHTERS
Marcel Quercia, Paris, France, assignor to Societe d'Etudes et de Recherches Techniques, Paris, France, a society of France
Filed Feb. 27, 1958, Ser. No. 717,961
Claims priority, application France Mar. 1, 1957
7 Claims. (Cl. 67—7.1)



1. A lighter which comprises, in combination, a casing, a reservoir in said casing containing a liquefied gas under pressure, a burner mounted on said reservoir, a valve movable with respect to said reservoir for controlling the communication between the inside of said reservoir and said burner, an ignition mechanism for projecting igniting sparks toward streams of said gas allowed to flow out through said burner, a support for said ignition mechanism movably mounted in said casing, means operatively connecting said support with said valve for opening said valve in response to the displacement of a portion of said support in a given direction with respect to said reservoir, resilient means interposed between said reservoir and said support portion for yieldingly opposing such a displacement thereof, a push-piece movably connected with both said support and said casing, resilient means interposed between said support and said push-piece so that actuation of said push-piece urges said support portion to move in said direction, said last mentioned resilient means being stronger than said first mentioned resilient means, and means operatively connecting said push-piece with said ignition mechanism to produce gas igniting sparks in response to displacement of said push-piece with respect to said support effected against the resistance of said second mentioned resilient means.

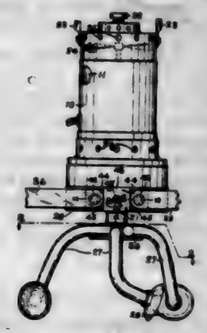
2,948,135
CANDLE HOLDER
William E. Campbell, 4175 Valley St., Dayton, Ohio
Filed July 22, 1957, Ser. No. 673,250
1 Claim. (Cl. 67—23)

A candle holder for use in supporting candles on an anniversary cake or the like, said candle holder including a cup-shaped body portion having a cavity tapering from top to bottom, and supporting means for the cup-shaped body portion including two annular cylindrical rings, one above the other, a horizontal annular flange portion for connecting the top margin of the upper ring to the outside and below the top of the cup-shaped body portion, a second horizontal annular flange portion for connecting the lower margin of the upper ring to the top margin of the lower ring, the cup-shaped body portion, the two



flanges and the rings all having substantially the same thickness, and a horizontally and outwardly directed spear-like support extending outwardly from the bottom margin of the lowest ring and adapted to support the candle holder on the side of a cake or the like.

2,948,136
CLOTHES WASHING MACHINE
Ellis G. Flint, Deland, S. Dak.
Filed Aug. 31, 1956, Ser. No. 607,344
5 Claims. (Cl. 68—132)

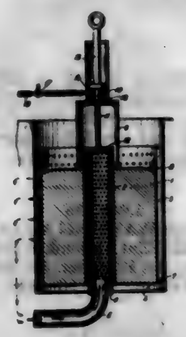


4. In a clothes washing machine, a lavatory bowl; a motor housing having an axis; a motor in said housing; a shaft oscillatingly driven by said motor; a plurality of arms of flat metal pivotally secured to one end portion of said housing and movable between a folded position approximately parallel to the axis of said housing and an extended position approximately perpendicular to the axis of said housing and in which they protrude from the housing and are capable of supporting the housing on the lavatory bowl, the plane of the flat outer end portions of each of said arms being horizontal when the machine is supported on a lavatory bowl; flat tubular extension members telescopically disposed on the flat outer end portions of said arms providing length extension of said arms; a tube of elastic padding material fitted over each flat tubular extension member adapted to contact the top of a lavatory bowl when the machine is on a bowl; stop means limiting outward swinging movement of each of said arms; and a driven agitator carried by said shaft and positioned in the lavatory bowl when the housing is supported on the bowl.

2,948,137
APPARATUS FOR DYEING SLIVERS
Erwin Schütz, Kaiserslautern, Germany, assignor to Kammgarnspinnerei Kaiserslautern, Kaiserslautern, Germany, a firm of Germany
Filed Oct. 21, 1957, Ser. No. 691,403
Claims priority, application Germany Oct. 22, 1956
2 Claims. (Cl. 68—187)

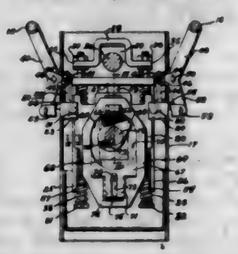
1. In an apparatus for dyeing slivers: a perforated container with a bottom and an open end for receiving

sliver to be dyed, a perforated tube substantially centrally arranged within said container and defining therewith a chamber for receiving slivers to be dyed, said perforated tube having a closed upper end and having an opening at its lower end, conduit means leading into said perforated tube through said opening and adapted to be connected with a dyeing liquor supply source for feeding dyeing liquor into said perforated tube and through the latter into said sliver receiving chamber, a cover adapted to



be loosely inserted into said container and around said perforated tube for acting upon the upper surface of slivers received in said sliver receiving chamber, and a fluid operable cylinder piston system arranged for connection with a pressure fluid source and comprising a stationary plunger fixedly but detachably connected to said perforated tube and also comprising a movable member forming the cylinder for said plunger and having a tubular extension operable telescopically to move over said perforated tube and to act upon said cover for moving the latter relative to said tube.

2,948,138
WRINGER
Jack Pickard, Ancaster, Ontario, Canada, assignor to N. Slater Company, Limited, Hamilton, Ontario, Canada, a corporation of Canada
Filed Oct. 31, 1956, Ser. No. 619,554
6 Claims. (Cl. 68—258)



6. In a wringer, a frame, a first roll journaled in said frame, a second roll parallel to said first roll, a pair of bearing means journalling said second roll, means guiding said pair of bearing means in said frame for movement of said second roll toward and away from said first roll, a pair of rod elements extending in parallel directions perpendicular to the axes of said rolls and parallel to a plane through said axes of said rolls, a pair of clutch plates disposed in generally transverse relation to said rod elements and having edge portions arranged to bitingly engage said rod elements upon tilting movement of said clutch plates relative to said rod elements, a pair of coupling plates engaging said clutch plates at points spaced away from said rod elements and movable parallel to said rod elements for initially effecting biting engagement of said edge portions with said rod elements and for thereafter effecting longitudinal movement of said rod elements, means connecting said rod elements to said pair of bearing means for urging said bearing means in a direction to move said second roll toward pressure set engagement with said first roll in response to said longitudinal movement of said rod elements, releasable latch means for releasably retaining the rolls in pressure set condition, drive means for driving one of said rolls, a pair of cams driven by said drive means, a pair of cam plates carried by said coupling plates and engageable with said cams, and means for moving said cam plates relative to said coupling plates into the path of said cams.

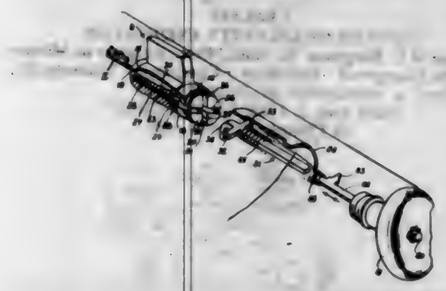
2,948,139
HANDCUFFS
Alfred J. Howe, 1996 E. 27th St., Oakland, Calif.
Filed Apr. 9, 1958, Ser. No. 727,464
2 Claims. (Cl. 70—16)



1. In a handcuff having a rigid stock supporting a nipper cuff at a first end of said stock, said nipper cuff including an integral, rigid arcuate extension having an arcuate rack member pivoted thereto, said rigid integral extension having means therein for receipt of the free end of said rack member, said means including a pawl for engaging said rack member, wherein a plunger is slidably mounted within said stock, said plunger having a first end operatively associated with said pawl whereby to provide means for engaging said pawl with the teeth of said rack member whereby to lock said rack member in a closed position, said plunger having a second end extending toward the opposite end of said stock, wherein said rigid stock supports a housing on the second end thereof, said housing supporting a retractile gripper cuff, said gripper cuff having a retractile link pivoted at one end of said link to said housing, said retractile link having a cam surface adjacent the pivoted end thereof contacting the second end of said plunger and urging said plunger toward the first end of said stock when the said retractile link is projected from said housing and passing out of contact with said plunger second end when the said retractile link is retracted, said retractile link having resilient means secured thereto and to said said stock for urging said retractile link into a projected position, said retractile link having an arcuate member pivoted to the free end thereof, and wherein a second arcuate member is pivoted to said housing opposite said retractile link and the said arcuate member pivoted thereto, said two arcuate members having means at the free ends thereof for registering with one another and locking together, the improvements comprising: a trigger pivoted at one end thereof in said housing with the portion thereof on one side of the pivot point thereof being

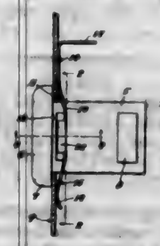
normally exposed above said housing and the portion on the opposite side of the said pivot point being recessed within said housing, the recessed end of said trigger terminating in a tip directly contacting said retractile link adjacent and beneath the cam surface thereof and locking the said retractile link in a retracted position when said trigger is in a normal position, said tip pivoting from beneath said retractile link and releasing said link when said trigger is depressed.

2,948,140
HOTEL FUNCTION LOCK
Morris H. Etsten, Leominster, Mass., assignor to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed Jan. 18, 1957, Ser. No. 635,011
2 Claims. (Cl. 70—216)



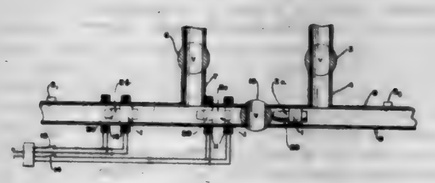
1. In a cylindrical lock mechanism having inner and outer knob members, said inner knob member including dogging means manually shiftable to disable said mechanism from normal latch operation from the outside, a tumbler assembly mounted in said outer knob member comprising a tumbler casing and a plug mounted for rotation in said casing, a keyway in said plug, an indicator slidably mounted within said plug, the inner end of said plug being formed to define a plurality of slots, one of said slots exposing the inner end of said keyway and another of said slots exposing the inner end of said indicator, an actuator bar slidably mountable in said plug in two positions with respect thereto, branch members on said actuator bar spaced to register, respectively, with said indicator slot and said keyway slot in one said mounted position of said bar to said plug, one of said branch members lying out of registry with said keyway in said other mounted position of said bar to said plug.

2,948,141
MEANS FOR RETAINING A LOCK CYLINDER IN A PANEL
Carl A. Vahlstrom, New Britain, Conn., assignor to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Filed May 31, 1957, Ser. No. 662,849
6 Claims. (Cl. 70—370)



1. A lock structure including in combination a lock cylinder having a body portion insertable through an opening in a panel member and a flange on said body portion engageable with the outer surface of said panel member for locating the lock cylinder thereon, the said body portion having slots in its opposite sides with inner edges facing said flange and spaced therefrom a distance greater than the thickness of said panel member, a resilient retaining clip for securing said lock cylinder to said panel member, said clip having spaced legs insertable through said slots and engageable with the inner surface of said panel member at opposite sides of said lock cylinder, the intermediate portions of said legs being bowed inwardly and adapted to press against the said inner edges of the slots whereby force is exerted inwardly on said lock cylinder to retain it in proper position, and abutments extending outwardly from the intermediate portions of said legs and engageable with the inner surface of said panel member to prevent excessive outward bending of said legs upon the application of an outwardly directed force to said lock cylinder.

2,948,142
APPARATUS FOR IMPELLING OBJECTS WITHIN A PIPELINE
Martin U. Zimmerman, Jr., Shaker Heights, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed May 17, 1957, Ser. No. 659,848
3 Claims. (Cl. 73—3)

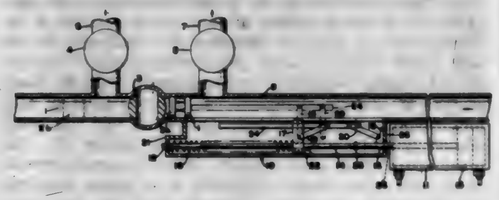


1. As a liquid flowmeter calibrating device, a closed continuous loop of pipe comprising a calibration loop, an inlet and an outlet connected into said calibration loop, a pipeline section between said inlet and said outlet joining said calibration loop into a continuous loop of pipe, a valve means in said pipeline section for interrupting flow in said loop of pipe, a plug device disposed within said continuous loop of pipe so as to form a liquid seal therewith, magnetic means for propelling the plug from a position within said pipeline section into the remaining portion of said continuous loop of pipe, and switch means in said calibration loop actuated by said plug as it moves through said calibration loop.

2,948,143
APPARATUS FOR IMPELLING OBJECTS WITHIN A PIPELINE
William J. Pruitt, Sheffield Lake, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 16, 1957, Ser. No. 684,240
3 Claims. (Cl. 73—3)

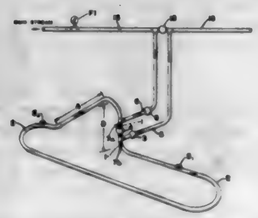
3. In a liquid flowmeter calibrating device having a closed continuous loop of pipeline, an inlet and an outlet thereto, a plug device disposed within said loop, a smooth bore valve disposed between said inlet and said outlet through which said plug can pass, and an electrical switch means mounted in longitudinally spaced relationship in said loop which are actuated by said plug as it moves through said pipeline, the improvement comprising a chamber mounted on the exterior of and communicating with said loop, a plunger normally positioned within said chamber so as not to obstruct the flow of liquid in said loop, means for introducing said plunger into said loop

and in contact with said plug and for moving said plunger and plug within said pipeline section so that said plug is advanced through said valve from a position between said



inlet and said outlet into the remaining portion of said loop, and means for retracting said plunger from said loop to a position entirely within said chamber.

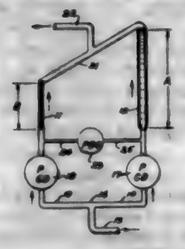
2,948,144
CALIBRATION LOOP FOR CALIBRATING FLOWMETERS
Hugh D. Applequist, Euclid, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed Oct. 3, 1957, Ser. No. 687,895
3 Claims. (Cl. 73—3)



3. A continuous loop for calibrating liquid flowmeters comprising a first section of conduit, a plug device disposed within said conduit, a pair of sensing means disposed within said first section of conduit in a spaced relation whereby the travel of said plug device past said sensing means will be indicated, a second section of conduit joined to the end of said first section and ascending gradually therefrom, a third section of conduit joined to and descending from said second section to said first section whereby said loop is completed and said plug device may be returned to said first section for a new run past said sensing means, an inlet and an outlet in said third section of conduit to permit the introduction and withdrawal of liquid from said calibration loop, and a valve means disposed in said third conduit section between said inlet and outlet whereby the travel of said plug device within said calibration loop may be interrupted.

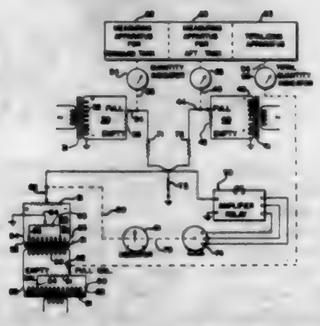
2,948,145
CONTINUOUS CONSISTOMETER AND METHOD OF MEASURING LIQUIFORM PRODUCT CONSISTENCY CONTINUOUSLY
Dave Eolkin, San Lorenzo, Calif., assignor to Gerber Products Company, Fremont, Mich., a corporation of Michigan
Filed May 21, 1954, Ser. No. 431,441
34 Claims. (Cl. 73—54)

1. A continuous consistometer comprising a conduit through which a fluid flows, first means in fluid communication with said conduit for establishing at least two zones of different rates of shear in the flow of fluid, the viscous resistance at both said zones increasing with increase in consistency, and second means communicating with said first means between said zones for measuring



the difference in viscous resistance to shear of the fluid in said zones.

2,948,146
CENTER OF GRAVITY INDICATOR
Raymond L. Bergeson, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 3, 1955, Ser. No. 526,177
10 Claims. (Cl. 73—65)

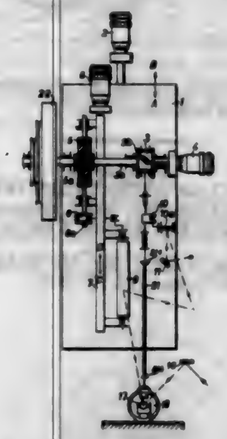


7. A rebalanceable center of gravity system for a craft having a load the center of gravity of which changes with the amount of the load and the attitude of the craft, comprising: means responsive to the quantity of the load; signal source means connected to the first named means and having an output the magnitude of which is indicative of the moment of the load about an arbitrary axis and having a first or an opposite sense depending on whether the center of gravity of the load is on a first or second side of the arbitrary axis; craft attitude responsive means connected to said signal source means to adjust the output thereof according to changes in attitude of the craft which affect the center of gravity of the load; signal responsive means connected to the output of said signal source means to derive a rebalance signal of equal magnitude but of opposite sense to the output of said signal source means; means connecting the rebalance signal to the output of said signal source means; and means connected to said signal responsive means being indicative of the center of gravity of the load.

2,948,147
APPARATUS FOR MEASURING AND RECORDING THE DYNAMIC MODULUS OF ELASTICITY
Hermann Roetig and Josef Schmahl, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Aug. 23, 1955, Ser. No. 530,159
Claims priority, application Germany Sept. 2, 1954
10 Claims. (Cl. 73—89)

1. Testing apparatus for evaluating the damping loop of elastic materials comprising reciprocating drive means,

force responsive means, means for holding a test specimen of elastic material between said reciprocating drive means and force responsive means, a force indicator mirror mounted for tilting actuation by said force responsive means, a travel mirror, means for partially rotating said



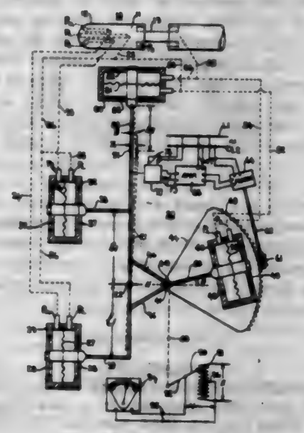
travel mirror back and forth in synchronization with said reciprocating drive, a screen, means for projecting a beam of light from said force indicating mirror to said travel mirror onto said screen, and means including indicator means cooperating with said drive means for varying the phase angle of synchronization between said reciprocating drive and partial rotation of said travel mirror.

2,948,148
SUPERSONIC WIND-TUNNEL FOR A VARIABLE MACH NUMBER
Louis M. G. de Jurquet de la Salle d'Anfreville, Paris, Jean H. Bertin, Neuilly-sur-Seine, and Marcel Kadosch, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed Dec. 20, 1955, Ser. No. 554,358
Claims priority, application France Dec. 20, 1954
5 Claims. (Cl. 73—147)



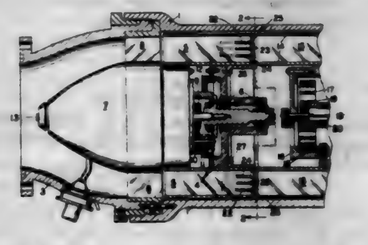
1. A supersonic wind-tunnel comprising a test chamber, a duct communicating with said chamber and having a convergent-divergent wall, means for circulating air through said duct and chamber, means providing a nozzle opening through said duct and chamber, means providing a nozzle in the form of a slot-like passage opening through said wall at the throat thereof and facing in an upstream direction, and controllable means for supplying pressure fluid to said nozzle, thereby forming in said throat a jet separating from said wall as it issues from said nozzle.

2,948,149
ANGLE OF ATTACK INDICATING DEVICE
Oscar Hugo Schuck, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Nov. 27, 1953, Ser. No. 394,653
14 Claims. (Cl. 73—180)



1. A device for indicating attitude of an aircraft with respect to the surrounding air stream including indicating means, a member pivotally mounted on a pivot and having a neutral position, a sensing head attached to said aircraft having impact orifices for sensing pressures at two spaced points on said aircraft, means responsive to the difference of said pressures connected to said member for exerting a turning moment on said member to rotate said member from said neutral position about said pivot, linkage means attached to said member, means responsive to air speed of the aircraft and pivotally connected to said linkage means remote from said pivot of said member for exerting an opposing moment on said member, means including a sensing means controlled by a departure of said member from said neutral position for rotating said air speed responsive means about a fixed point remote from said pivot to vary the amount of said opposing moment by varying its effective moment arm until said turning and opposing moments are in balance, with said member in said neutral position, and means connecting said last named means to said indicating means to position the latter in accordance with the rotation of said air speed responsive means.

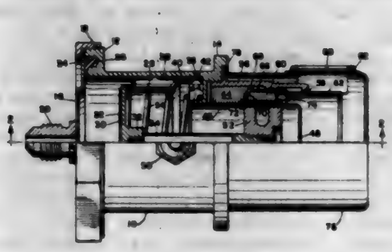
2,948,150
MASS FLOWMETER BAFFLE
Richard H. Cornell, Marblehead, Mass., assignor to General Electric Company, a corporation of New York
Filed Feb. 28, 1956, Ser. No. 568,354
9 Claims. (Cl. 73—194)



1. A fluid flowmeter comprising a fluid-tight housing having a substantially cylindrical fluid chamber therein,

means for coupling said chamber into a fluid flow path, a substantially cylindrical rotatable impeller within and substantially coaxial with said fluid chamber and having a plurality of fluid-conducting passages therethrough which are linear and parallel with the axis of rotation of said impeller, each of said passages being subdivided to form smaller passages at different spaced radial distances from said axis, means for rotating said impeller at a substantially constant speed, each of said smaller fluid-conducting passages being of sufficient thinness such that fluid pressures due to centrifugal force at its radially innermost and radially outermost positions are substantially the same, a substantially cylindrical angularly movable turbine within and substantially coaxial with said chamber in a downstream relationship to said impeller and having a plurality of fluid-conducting openings therethrough which are linear and parallel with the axis of angular movement of said turbine, said turbine openings being proportioned in directions radially from said turbine axis to admit fluid from all of said impeller passages, and measuring means responsive to angular movements of said turbine in relation to said housing.

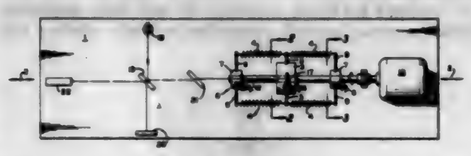
2,948,151
DIFFERENTIAL PRESSURE GAUGE
Jaromir Astl, 4053 Alameda Drive, San Diego, Calif.
Filed Dec. 12, 1958, Ser. No. 779,910
3 Claims. (Cl. 73—406)



1. A differential pressure gauge, comprising: a hollow body having a high pressure inlet and a low pressure inlet; a piston axially slidably mounted in said body between said inlets; a spring mounted between said piston and said body to bias the piston toward said high pressure inlet; said body having a closed, axially extended portion; a magnet fixedly connected to said piston and axially movable in said extended portion; a clutch collar comprising magnetic material and disposed externally of and concentric with said extended portion to move axially in response to movement of said magnet in said extended portion; a bearing sleeve fixed at one end to said body coaxially with said extended portion; an indicator sleeve axially slidably mounted in said bearing sleeve; said clutch collar having a flange engageable with one end of said indicator sleeve to shift the same in one direction.

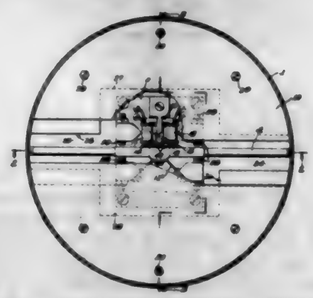
2,948,152
ACCELEROMETER
Franklin Meyer, Franklin Square, N.Y., assignor to Servomechanisms, Inc., Hawthorne, Calif., a corporation of New York
Filed Dec. 27, 1956, Ser. No. 630,833
2 Claims. (Cl. 73—514)

1. An accelerometer for detecting and measuring acceleration along a defined axis comprising a rotating shaft having an axis of rotation along said defined axis; a seismic mass supported on said rotating shaft; an air bearing between said seismic mass and said rotating shaft; means restricting the movement of the seismic mass upon said rotating shaft to displacements along the sensitive axis



only; and means for measuring the displacement of said seismic mass along said defined axis.

2,948,153
ANGULAR ACCELEROMETER
Cecil K. Stedman, Enumclaw, Wash., assignor to Statham Laboratories, Inc., Los Angeles, Calif., a corporation of California
Filed Apr. 8, 1957, Ser. No. 651,335
8 Claims. (Cl. 73—516)



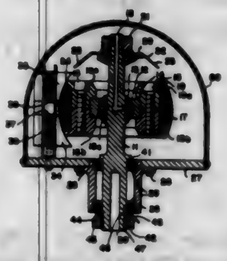
1. A motion sensing device, comprising a case, a liquid in said case, a paddle in said case immersed in said liquid, a mounting for said paddle for relative motion of said paddle with respect to the case, a yieldable constraint connecting said paddle to said case, a baffle extending along said paddle and spaced therefrom, dividing said case into a plurality of subchambers, the space between the paddle and said baffle forming a liquid communicating passageway from one subchamber to the other subchamber, and additional baffles in at least one of said subchambers, said additional baffles forming with said subchamber a plurality of elongated passageways in said subchamber between said last named baffles, and means for sensing the angular displacement of said paddle with respect to said case.

2,948,154
ACOUSTIC IMPEDANCE TRANSFORMER
Claus Kleesattel, Kew Gardens, N.Y., assignor to Cavitron Corporation, a corporation of New York
Filed Feb. 16, 1956, Ser. No. 565,905
8 Claims. (Cl. 74—1)



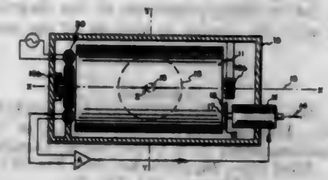
1. An acoustic impedance transformer for transmission of longitudinal vibrations from an electromechanical transducer to a tool, comprising an input section fixed at one end to the transducer, an output section integral at one end with the other end of said input section, said output section having a longitudinal open ended axial passage therein extending therethrough, the cross sectional area of said output section being greater at the input end than at the output end, and being a minimum intermediate the input and output ends, the change in cross sectional area along the length of the output section being gradual to prevent abrupt change in total stress, the wall of said passage adjacent the output end thereof being provided with screw threads, and a coupling member of hard, light weight material and provided with a stud having screw threads therein adapted to mate with the threads on the wall of said passage, said coupling member being provided with means for ready attachment thereto of a tool.

2,948,155
STABILIZING GYRO
John E. Burkam, Rutledge, Pa., assignor to Altoscan Company, Lansdowne, Pa., a corporation of Pennsylvania
Filed July 17, 1956, Ser. No. 598,458
8 Claims. (Cl. 74—5.6)



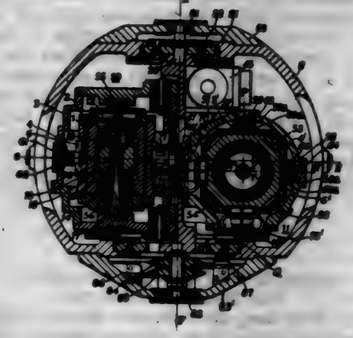
1. An instrument for dynamically stabilizing an aircraft in two planes of motion respectively perpendicular to each other, having a mounting plate affixed to the aircraft in a third plane perpendicular to each of said two planes of motion, a shaft rotatively assembled thereto and extending normally thereof, drive means connected to said shaft, a balance wheel, and a ball and socket joint having a selected frictional and damping characteristic concentrically assembling and coupling said wheel to said shaft, said wheel having a hole centrally thereof selectably larger than the diameter of the shaft so as to permit oscillation of the wheel in any direction relative to the shaft, said wheel having a rim of spherically convex contour and built up of a plurality of highly permeable steel rings, a pair of composite modified E-configuration variable reluctance electrical pickoffs affixed to said mounting plate, each such pickoff having a core built up of highly permeable steel laminations and having a central arm and two adjacent arms, a primary winding about said central arm and a secondary winding about each of said adjacent arms, the pole face of each of the arms being spherically concaved and juxtapositioned with respect to said wheel rim for uniform and minimum airgap therebetween, each pickoff being positioned so that its two adjacent arms are in the plane to motion within which it is responsive and so that tilting of the balance wheel relative to the aircraft in such plane of motion will increase the susceptance of the magnetic path including the balance wheel rim and the adjacent arm toward which it moves while reducing the susceptance of the magnetic path including the other one of said adjacent arms, a source of power and the primary winding of each pickoff being connected thereto, and the outputs of the two secondary windings in each pickoff being connected together so as to oppose each other in phase.

2,948,156
LINEAR INTEGRATING TORQUING MECHANISM
Clare E. Barkalow, Comstock Park, Mich., assignor to Lear, Incorporated
Filed Nov. 1, 1957, Ser. No. 693,960
5 Claims. (Cl. 74—5.6)



1. In a device having a housing, first and second members mounted in close proximity to each other for angular movement relative to said housing, a fluid cooperating with said members and having Newtonian characteristics for linearly transmitting torquing action from said first member to said second member, pickoff means for detecting angular movement of said second member relative to said housing, motor means controlled by said pickoff means connected to rotate said first member relative to said housing.

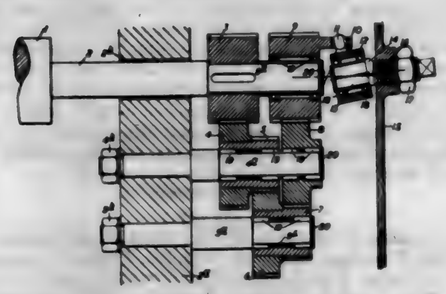
2,948,157
GYROSCOPICALLY STABILIZED PLATFORMS
Hugh Brougham Sedgfield, Hampton, England, assignor, by mesne assignments, to The Sperry Gyroscope Company, Limited, Brentford, England, a British company
Filed May 12, 1951, Ser. No. 225,937
Claims priority, application Great Britain May 16, 1950
9 Claims. (Cl. 74—5.34)



1. In a gyroscopic horizon for moving vehicles, a universally gimballed platform, a casing journalled on said platform with freedom about the vertical axis, a gyro vertical journalled therein for spinning about a vertical axis with freedom about two horizontal axes and a vertical axis and having accelerometers thereon adapted to be stabilized thereby and to generate signals proportional to accelerations in two directions in azimuth, a directional gyro also mounted in said casing for spinning about a horizontal axis with freedom about at least one horizontal axis, a servomotor controlled by said directional gyro for fixing said casing and said accelerometers in azimuth, servomotors for stabilizing said casing and accelerometer from said gyro vertical, torquers acting between said casing and gyro vertical and controlled by said accelerometers for applying torques on the gyro vertical about its two horizontal axes normal to the direction of response of its accelerometer, integrating networks between said accelerometers and torquers whereby

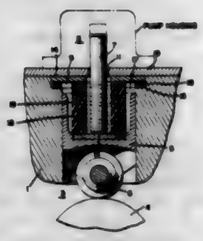
the resulting precession of the gyro is equal to the change in the vertical due to the change in geographic position of the vehicle, a third accelerometer thereon adapted to generate signals proportional to accelerations in the vertical direction, a torquer controlled thereby for applying a torque on said directional gyro and an integrating network between said accelerometer signal and torquer whereby the resulting precession of the directional gyro is varied with the change in altitude of the craft.

2,948,158
ROLLER VIBRATOR MECHANISM
Nils Norlin, Halsingborg, Sweden, assignor to Carl Allers Etablissements A/S, Copenhagen, Denmark
Filed Nov. 28, 1958, Ser. No. 776,953
7 Claims. (Cl. 74—22)



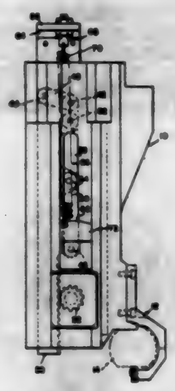
1. For use in reciprocating a rotating roller, a device comprising a follower which is moved in a closed looped path, means holding the follower against axial movement with respect to the roller, a stationary component which is angularly adjustable about an axis co-planar with the axis of the looped path and at an angle to the latter axis, the component having a circular track the axis of which is at an angle to the axis of adjustment of the component, and means operable on said track and being operatively connected to said follower for varying the axial position of the follower as it moves in the closed path whereby the extent of axial movement of the follower can be regulated by angularly adjusting the component.

2,948,159
INJECTION PUMP FOR INTERNAL COMBUSTION ENGINE
Robert J. Wirsching, Korntal, near Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed Mar. 25, 1957, Ser. No. 648,008
Claims priority, application Germany Apr. 4, 1956
10 Claims. (Cl. 74—55)



1. A force-transmitting connection between a fuel injection pump for an internal combustion engine provided with a piston and a pump-actuating cam driven by a cam shaft comprising means between said cam shaft and pump piston including a tappet for transmitting the forces from said cam to said pump piston, and a cylindrical rubber spring within said tappet surrounding the lower end of said pump piston to thereby provide a complete sealing of the pump side from the cam shaft space.

2,948,160
SLIDE
Leo W. Bodker, 21015 Beaconsfield, East Detroit, Mich.
Filed May 3, 1956, Ser. No. 582,569
2 Claims. (Cl. 74—110)

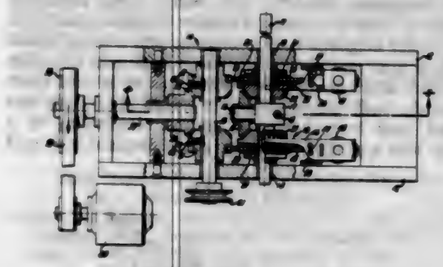


1. Apparatus for increasing the stroke of a machine slide while retaining the power during the working portion of the stroke comprising an actuator having a short predetermined stroke, a toggle device comprising a lever and a link having the adjacent ends pivotally connected together, means pivotally connecting said lever to said actuator at a point intermediate the ends of said lever, a slide movable parallel to said actuator, means pivotally connecting the other end of said link to said slide, and means for breaking said toggle device during movement of said actuator in one direction and for straightening said toggle device during movement of said actuator in the other direction to cause movement of said slide in excess of said actuator, said last-mentioned means including an arm having one end pivotally connected to the other end of said lever, a fixed support, and means pivotally connecting the other end of said arm to said fixed support for swinging movement about an axis spaced laterally from the pivotal connection between said actuator and lever.

2,948,161
INCREMENTAL BIDIRECTIONAL DRIVE MECHANISM
Eugene A. Levin, Seattle, Wash., assignor to Tally Register Corporation, Seattle, Wash., a corporation of Washington
Filed May 18, 1959, Ser. No. 813,716
9 Claims. (Cl. 74—379)

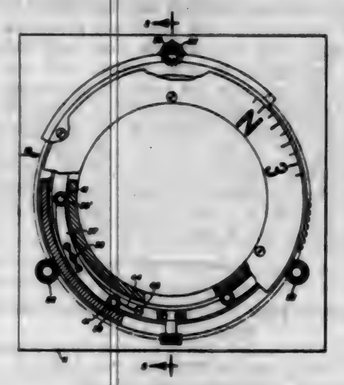
1. A bi-directional drive mechanism comprising first and second escapement wheels each having a plurality of escapement teeth thereon, drive means for impositively and separately rotating said escapement wheels, first and second pallet levers biased into engagement with the escapement teeth of said first and second escapement wheels, respectively, to restrain rotation of said wheels by said drive means, means to selectively move one of said pallet levers out of engagement with the escapement teeth engaged thereby, an output shaft, and means

to rotate said shaft in one direction upon rotation of said first escapement wheel by said drive means and to ro-



tate said shaft in an opposite direction upon rotation of said second escapement wheel by said drive means.

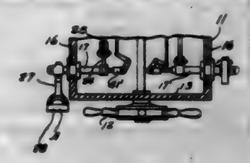
2,948,162
RING ASSEMBLY
Charles W. Bing, Newark, N.J., assignor to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed Aug. 7, 1953, Ser. No. 753,672
9 Claims. (Cl. 74—399)



9. An arrangement for rotatably mounting coaxial inner, outer and center rings comprising, a base plate, a plurality of posts extending from the base plate, bearings mounted on the posts, means forming an internal and external raceway on the said outer ring, the bearings on the posts engaging the external raceway on the ring, means forming an external raceway on the said inner ring, a plurality of rocker arms, each of the said rocker arms being pivotally supported intermediate the ends thereof and rotatable about a radially movable axis on the said center ring, bearings mounted on the rocker arms adjacent the ends thereof, and means pivotally biasing the said rocker arms about the radially movable axis to maintain the corresponding bearing means adjacent one end in engagement with the said internal raceway on the outer ring and the corresponding bearing means adjacent the other end in engagement with the said external raceway on the inner ring.

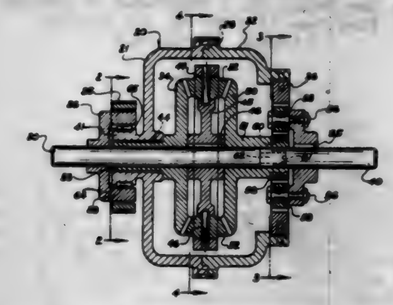
2,948,163
THROTTLE AND GEAR CONTROL FOR OUTBOARD MOTOR
Billy R. Stone, 1443 W. Malone, San Antonio, Tex.
Filed Jan. 10, 1958, Ser. No. 708,229
3 Claims. (Cl. 74—472)

1. In combination with an engine having a throttle, a transmission and throttle-controlling device comprising a support, a hollow shaft rotatably mounted on said support and adapted to be connected to a transmission, said shaft having a forward position, a reverse position and a neutral position, an arm rigidly secured to and extending radially from said shaft, a handle member rotatably mounted in said arm and extending from the end



thereof at an angle thereto and lying in the same radial plane as said arm, a throttle-operating rod slidably mounted in said shaft, means to connect said rod to the throttle of the engine to operate the throttle responsive to axial movement of the rod, and means on said handle member drivingly engaging said rod and being formed and arranged to move said rod axially responsive to rotation of said handle member around its own axis.

2,948,164
AUTOMATIC TRANSMISSION
Benjamin T. Neal, 91 Acton Road, Columbus, Ohio
Filed May 24, 1957, Ser. No. 661,499
5 Claims. (Cl. 74—705)

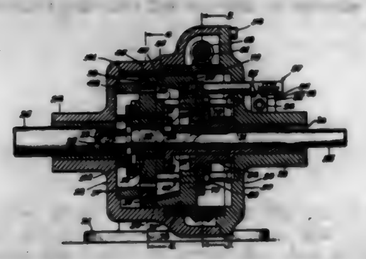


1. A transmission apparatus comprising, in combination, an input shaft for driven connection with a prime mover; an output shaft for driving connection with a load; first and second beveled gears rotatably mounted relative to said shafts said first beveled gear including a bore surrounding said input shaft, said input shaft being rotatable in said bore; a member carried by said first beveled gear; braking means for applying braking action to said member; a carrier mounted on said input shaft in keyed relationship therewith; a plurality of beveled planetary gears mounted on said carrier and in mesh with said first and second beveled gears; a second plurality of planetary gears carried by said output shaft; a ring gear carried by said first beveled gear and in mesh with said second plurality of planetary gears; a sun gear carried by said second beveled gear and in mesh with said second plurality of planetary gears; and means for retarding rotation of said first beveled gear independently of said input shaft, said second beveled gear and said sun gear being mounted on a hub that forms a bearing hole for said input and output shafts.

2,948,165
VARIABLE SPEED GEAR REDUCTION UNIT
Robert Lathi, Plantation, Fla., assignor of forty percent to Kenneth T. Snow, Wheaton, Ill.
Filed Apr. 13, 1959, Ser. No. 805,803
20 Claims. (Cl. 74—804)

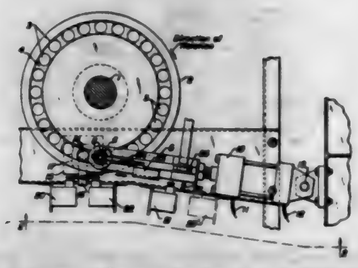
1. A gear reduction unit comprising a housing, a planet gear mounted in said housing, adjustable eccentric means

disposed in said housing and arranged to drive said planet gear, said adjustable eccentric means arranged and constructed to vary the orbit of travel of said planet gear, said adjustable eccentric means constituting the driver



member of this gear reduction unit, a one piece split ring reaction gear mounted in said housing and in meshing engagement with said planet gear, and means varying the effective pitch diameter of said one piece split ring reaction gear.

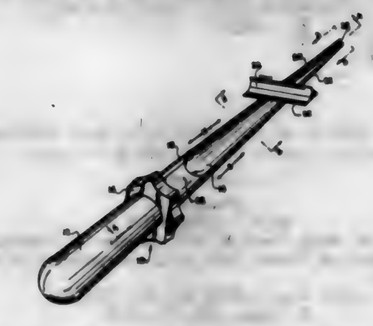
2,948,166
ROTARY DRIVE MECHANISM
Frank V. Purse, Skokie, and Edward A. Young, Des Plaines, Ill., assignors to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Filed June 22, 1959, Ser. No. 821,782
7 Claims. (Cl. 74—822)



1. In a rotary drive mechanism, a rotatable member, a reciprocable driving member, a disengageable connection means carried by said driving member connecting the latter with said rotatable member whereby said driving member in one direction of movement thereof is pivotally engaged with the rotatable member for effecting rotation of the latter through a predetermined angle and in the other direction of movement thereof is disengaged from the rotatable member, a reciprocable locking member positioned adjacent said rotatable member, said locking member in one of its extended positions engaging with and restraining the rotatable member from movement while disengaging said connection means from said rotatable member and in the other of its extended positions being disengaged from said rotatable member and permitting unimpeded rotation of the latter, and interlocking control means connecting with both said driving member and said locking member and actuating the alternate movement of said members.

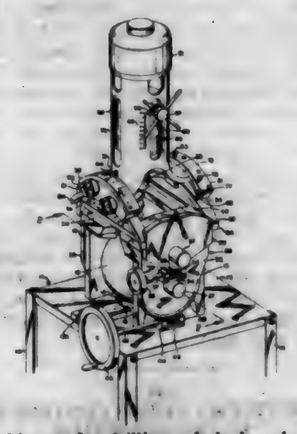
2,948,167
RAZOR HONE WITH MAGNETIC BODY
Anthony T. Spano, Box 888, Rocky Point, N.Y.
Filed June 19, 1958, Ser. No. 737,810
1 Claim. (Cl. 76—82)

A razor hone, comprising an elongated body, said body having a concave side defining two long coplanar edges, said body being magnetized with a magnetic field extending transversely across the body so that one of said edges has one magnetic polarity and the other edge has a different magnetic polarity, said body being uniformly tapered in form to provide a smaller cross-sectional area and weaker magnetic field at one end and a larger cross-sectional area and stronger magnetic field near the other end, said edges being most widely spaced at said other end of the body and most closely spaced at said one end thereof, said body having a portion terminating in a handle with a generally annular guard disposed near said



other end of the body between said handle and said other end, said body having a flat ribbed side extending outside of said edges and said concave side, said body being generally rectangular in cross section, with said ribbed side being formed with one grade of coarseness of corrugations, said body having another flat ribbed side formed with another grade of coarseness of corrugations, said body having still another concave side disposed opposite the first-named concave side to provide another two coplanar edges of different magnetic polarity respectively, whereby the razor is honed with varying pressure during movement from end to end of said body.

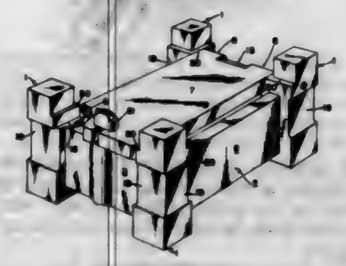
2,948,168
MACHINE FOR DRILLING FINGER HOLES IN BOWLING BALLS
Rayna H. McCormick, 125 S. Canton Road, Akron, Ohio
Filed June 24, 1958, Ser. No. 744,130
19 Claims. (Cl. 77—31)



1. A machine as for drilling a hole in a bowling ball or the like, comprising a relatively fixed support, mounting means on said support for releasably mounting the ball in relatively fixed position, a rotary cutter, means for mounting said rotary cutter on said support to be

movable toward and from cutting engagement with the ball, said mounting means including a relatively fixed part having downwardly presented ball seat means and a vertically relatively movable part having an upwardly presented ball seat means, and means for urging said movable part from a retracted ball-receiving position upwardly to a position in which the ball is clamped between said means of the fixed and movable parts.

2,948,169
BOX JIGS AND IMPROVED METHODS OF FORMING THE SAME
Arthur H. Stanton, Jr., Novelty, and Le Isle D. Noble, Hudson, Ohio, assignors to The Standard Parts Company, Bedford, Ohio, a corporation of Ohio
Filed Nov. 4, 1957, Ser. No. 694,420
2 Claims. (Cl. 77—62)



1. A box jig comprised of spaced cast-iron posts each having a plurality of holes therethrough spaced one from the other by post gussets, and a cast aluminum structure having walls between adjacent posts, said structure extending through and completely filling the holes in the respective posts to form a continuous and endless aluminum body, said aluminum body having a cast jig floor, the aluminum material in the post holes intersecting two relatively angular wall faces of the respective posts, and the interior angles formed by adjacent parts of said aluminum material in the post holes being acute ones.

2,948,170
APPARATUS FOR MAKING A JOINT BETWEEN A METAL TUBE AND AN OBJECT ENGAGEABLE THEREIN
Cyril Frank Kemp, Wilmington St., Ayr, Queensland, Australia
Filed Sept. 4, 1957, Ser. No. 682,038
Claims priority, application Australia Sept. 4, 1956
5 Claims. (Cl. 81—15)



1. A joining tool for making a joint between a metal tube and an object engaged therein including a frame sleeve, a mounting bracket secured to and having its lower portion below the frame sleeve, a spindle threadedly engaged in the frame sleeve, two detachable follower rolling wheels mounted rotatably in the lower part of the mounting bracket, their axes being substantially parallel and spaced equidistantly to opposite sides of a downward prolongation of the axis of the spindle, a stem slidably engaged in the lower part of the frame sleeve, means for restraining the stem against rotation, said stem having an axial aperture in the upper part thereof to receive the lower part of the spindle, means for restraining the stem against longitudinal movement relative to the spindle, a handle on the upper end of the spindle, a thrust rolling wheel carrier at the lower end of the stem, and a thrust rolling wheel rotatably mounted in the thrust rolling wheel carrier, the follower and thrust rolling wheels being such that a plane passing centrally through them perpendicular to their parallel axes is off-set to one side of the axis of the stem, said stem being detachable from the spindle and replaceable by a stem having a tube piercing tool rotatably mounted at its lower end and tapering downwardly to a point.

2,948,171
TOOL FOR ADJUSTING THE SNAP-ACTION OF A LEAF-TYPE OPERATING DEVICE
Louis V. Lucibello, 1858 Dixwell Ave., Hamden 14, Conn.
Filed Oct. 2, 1958, Ser. No. 764,869
1 Claim. (Cl. 81—15)

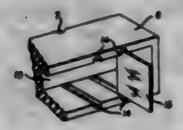


A plier-type tool for increasing or decreasing the holding force of pivot-mounted jewelry holders having clamp-on endlengths remote from, and remaining continuing lengths to, their pivot mounts, and longitudinal leaf-type snap-action arms struck from their remaining lengths and continuous with their endlengths, comprising a pair of levers pivoted intermediate their ends to provide opposed jaws and opposed handles on opposite sides of the pivot axis, with the jaws having three porjections terminating in fulcrum ends, of which two first projections extend from one jaw toward the other jaw and the remaining projection extends from said other jaw toward said one jaw substantially midway between said first projections, said first projections being spaced apart to span at least the greater part of a snap-action arm, and said first and remaining projections being adapted for application to a snap-action arm therebetween in reversible fashion and to impart on their variable closure on the arm variable permanent flexure in either of two opposite directions to the latter and thereby increase or decrease the holding force of its holder, and said jaws being between the pivot connection of said levers and the nearest projection on said one jaw spaced from each other sufficiently to provide clearance space for the reception of the clamp-on endlength with which the arm is continuous with freedom to respond in free motion to the permanent flexing of the arm.

2,948,172
ARRANGEMENTS FOR VISE JAWS
Gustav Sloboda, 3002 Broadway, Astoria, N.Y., and Carl Weissenstein, 63—61 99th St., Forest Hills 74, N.Y.
Filed Oct. 9, 1958, Ser. No. 766,290
1 Claim. (Cl. 81—38)

An attachment for vise jaws comprising a hollow body of resilient material defining a chamber of a configuration complementary to the outer configuration of said

vise jaws, said chamber having inner top and bottom faces, lateral faces and an inner front face, all said faces being integrally connected with an adjacent one of said faces and being adapted to engage the corresponding outer faces of said vise jaws, and means provided on said



vise jaws for retaining said hollow body on said vise jaws, said inner top and bottom faces having oppositely disposed slots extending from the rear of the respective top and bottom faces towards the front wall of said hollow body, and at least one dividing plate inserted into said oppositely disposed slots in order to permit of use of the same hollow body for different sizes of said vise jaws.

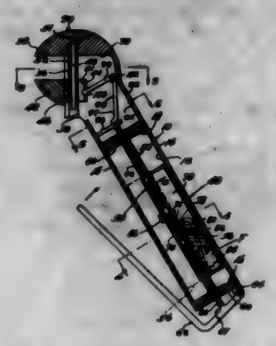
2,948,173
HAND TOOL WITH ADJUSTABLE TORQUE RELEASE
Paul F. Herrmann, Lakewood, Calif.
(15942 Minnesota Ave., Paramount, Calif.)
Filed Apr. 15, 1959, Ser. No. 806,711
3 Claims. (Cl. 81—52.4)



1. A predetermined torque release hand tool comprising: a tool-holding member having a shank with a pair of longitudinally spaced coaxially aligned cylindrical bearing surfaces formed thereon; a handle member adapted to rotatably support said tool-holding member in simultaneous engagement with both of said bearing surfaces; and adjustable linkage means for selectively imparting rotation of said handle member to said tool-holding member, said adjustable linkage means including a spring supported by said handle member in relatively fixed position with respect thereto, a ball carried by one end of said spring for rolling engagement with a rotating surface portion of said tool-holding member, and manually operable means for adjusting the pressure exerted on said ball by said spring; said tool-holding member having formed in said rotating surface portion thereof an indentation adapted to restrain said ball, one side of said indentation having an inclined slope up which said ball rolls against the force of said spring when the driving torque applied to said handle member exceeds a pre-determined magnitude, the other side of said indentation having a substantially steeper slope over which said ball rolls only when the reverse driving torque is of substantially greater magnitude.

2,948,174
HYDRAULIC HAND TOOL HAVING OPPOSED WORK-ENGAGING JAWS
John A. Bourne, P.O. Box 88, Hamilton, Bermuda
Filed Dec. 12, 1958, Ser. No. 780,013
9 Claims. (Cl. 81—129)

1. In a hydraulic tool of the class described, a body including a fixed jaw; a movable jaw mounted on the body for movement toward and away from the fixed jaw; and an operating mechanism for the movable jaw including a support rod engaged in the body and a hydraulic cylinder eccentrically disposed in respect to the rod and mounted thereon for rotation to a plurality of



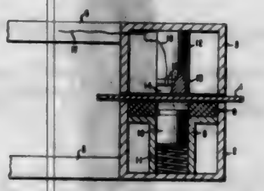
positions in respect to the body, the eccentric disposition of the cylinder in respect to the rod offsetting the center of gravity of the cylinder from the rod, whereby the cylinder will move to each of said positions by gravitational action.

2,948,175
WEDGE-LOCK MEANS FOR SLIDABLE SIDE JAW WRENCHES
Teodi L. Bonkowski, 8720 Wonderland Ave., Los Angeles 46, Calif.
Filed Nov. 12, 1958, Ser. No. 773,405
7 Claims. (Cl. 81—154)



1. A wrench, comprising: a body member having a fixed jaw and a wedge cavity at one side of said fixed jaw; a movable jaw confronting said fixed jaw; a first wedge carried by said movable jaw and slidable in said wedge cavity; a second wedge mounted in said wedge cavity, said wedges having mutually engageable surfaces and remote surfaces, the latter engageable with the opposite sides of said wedge cavity, the sides of said wedges and wedge cavity converging in a direction away from said fixed jaw; said wedges cooperating to lock said movable jaw against movement away from said fixed jaw; means for manually operating said second wedge to release said first wedge and movable jaw for adjustment of the position of said movable jaw relative to said fixed jaw; abutment means at the larger end of said wedge cavity confronting the larger end of each wedge; and a spring disposed between each abutment means and its corresponding wedge, to urge each of said wedges independently into wedging relation, whereby on release of said second wedge said movable jaw is urged to its distal position relative to said fixed jaw.

2,948,176
SAMPLING OF STRIP METAL BY USE OF DIE AND AN OPPOSED SHAPED CHARGE
Charles H. Cramer, Woodbury, N.J., Edward J. Surrett, Montreal, Quebec, Canada, and James F. Swed, Gibbstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 23, 1956, Ser. No. 586,722
5 Claims. (Cl. 83—53)



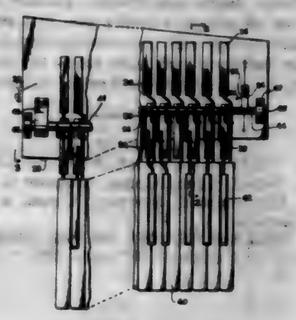
1. A method for removing a sample from a moving metal strip which comprises positioning closely adjacent to one surface of said strip a supporting die having a sharp-edged well of the peripheral dimensions and contours of the desired sample, positioning adjacent to the opposite surface of said strip and in alignment with said well a cutting charge of a high velocity detonating explosive, said charge having essentially the same dimension and contour as said well and comprising means for concentrating the explosive effect of said charge above and around the periphery of said well, and thereafter detonating said explosive charge and thereby creating a force concentrated on the upper side of said metal strip directly above and around the entire periphery of said well.

2,948,177
WEB CUTTING MECHANISM
Bengt A. Arvidson, Chicago, Ill., assignor to Miller Wrapping & Sealing Machine Co., a corporation of Illinois
Filed May 29, 1956, Ser. No. 588,166
4 Claims. (Cl. 83—155)



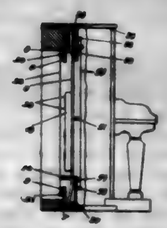
1. A web cutting mechanism comprising, in combination, a base, a scissors-type cutter supported on said base including a fixed knife and a knife bar pivotally mounted at one end on the base adapted to carry a cooperating knife, means located forwardly of and beyond the cutter for supporting and intermittently advancing said web including a belt conveyor beyond the cutter having a plurality of laterally spaced belts, a finger mounting plate adjustably mounted on said knife bar, and a plurality of laterally spaced fingers mounted on said mounting plate and extending rearwardly to positions overlying the belt conveyor, each of said fingers comprising a leaf spring having a downwardly angled mid-section and a free end extending generally parallel to the belt conveyor and away from the knife bar, and a pressure pad carried on the free end of each leaf spring normally at a level beneath the lower edge of the movable knife for engagement with the web on said support means prior to the movable knife, whereby movement of the knife bar causes said fingers to engage the web and place the web under tension prior to the cutting of the web by the movable knife.

2,948,178
ELECTRONIC MUSICAL REED INSTRUMENTS
Jesse Jacobson, 108—38 63rd Ave., Forest Hills, N.Y.
Filed Mar. 31, 1959, Ser. No. 803,166
4 Claims. (Cl. 84—1.15)



1. A musical instrument, comprising a sound box, a plurality of metal plates carried in spaced disposition on said box, each of said plates carrying a pair of vibratable reeds, wire coils surrounding said plates, said reeds being magnetized and inducing voltages in said coils when the reeds are vibrated, switch means connected across ends of the coils for selectively opening and short circuiting the coils, there being an electrical amplifier connected to the ends of the coils in parallel with said switch means, and sound reproducing means connected to said amplifier for converting said voltages into sounds, said switch means comprising a rod pivotally mounted on said sound box, a movable switch contact carried by said rod and a fixed contact carried by the sound box and normally closed with said movable contact, said sound box having a plurality of sound chambers therein, valve members pivotally mounted over openings in said sound box, said openings communicating with said chambers, and keys connected to the valve members for actuating said valve members, said rod being operated by said keys for pivotal movement thereby.

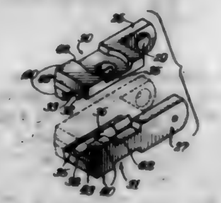
2,948,179
PIANO AND THE LIKE MUSICAL INSTRUMENTS
Kiuya Yamamoto, Kitatamagun, and Hideo Itokawa, Setagayaku, Tokyo, Japan, assignors to Masato Yamai, Tokyo, Japan
Filed June 6, 1956, Ser. No. 589,703
Claims priority, application Japan Sept. 2, 1955
6 Claims. (Cl. 84—198)



1. In an upright piano having one vertically extending sound board mounted therein; a first set of pins mounted in the forward side of said sound board; a set of conventional strings tensionally carried by said first set of pins; a second set of pins mounted on the rear side of said sound board; a first set of secondary strings tensionally carried by said second set of pins in spaced relationship to said set of conventional strings; said first set of secondary strings being substantially perpendicular to said set of

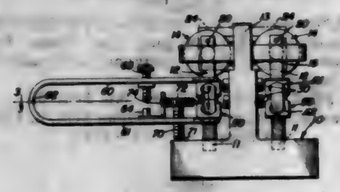
conventional strings; a third set of pins mounted on the rear side of said sound board, and a second set of secondary strings tensionally carried by said third set of pins in spaced relationship to said conventional set of strings and said first set of secondary strings; said second set of secondary strings being substantially parallel to said conventional set of strings, whereby said first and second set of secondary strings will respectively vibrate sympathetically when medium and high tones or low tones are emitted from said conventional set of strings.

2,948,180
TWO-PART PLASTIC FLANGE
Orville T. Wood, Essex, Conn., assignor to Pratt, Read & Co., Incorporated, Ivoryton, Conn., a corporation of Connecticut
Filed Apr. 16, 1956, Ser. No. 578,466
9 Claims. (Cl. 84—251)



1. A flange for use in a piano action comprising a rigid body portion having a pair of arms extending therefrom and having aligned bearings in end portions thereof, said body portion including at least two coacting parts each of which includes one of said arms, and means engaging said coacting parts for holding the same in assembled relation and for securing said flange to a support.

2,948,181
TUNING VIBRATORY ELEMENTS
Henry P. Birkemeier, Chicago, Ill., assignor, by mesne assignments, to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois
Filed Feb. 21, 1957, Ser. No. 641,751
11 Claims. (Cl. 84—409)



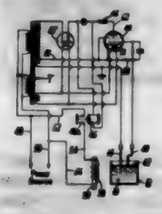
1. An adjustable frequency vibratory element comprising a base, an elongated vibratory reed having one end thereof secured to said base, a frequency altering clip frictionally held at a predetermined position on said reed and vibratable in unison with said reed, said clip including a resilient body having a pair of spaced apertures therein, said body being bendable transversely to place said apertures in partial alignment and said vibratory reed extending through both of said apertures, the resiliency of said body tending to straighten said body from its bent state and thereby urge the opposite edges of said apertures to frictionally engage with the reed to hold said clip in place on said reed, said clip being releasable from said reed by movement of the opposite ends thereof toward one another whereby said clip may be located longitudinally of said reed to result in the clip-carrying reed having a predetermined desired vibration frequency.

2,948,182
BRAIDED BAND
Karl Huppertsberg, Florastrasse 46, Wuppertal-Elberfeld, Germany
Filed Apr. 21, 1955, Ser. No. 502,940
Claims priority, application Germany May 3, 1954
3 Claims. (Cl. 87—2)



1. A braided band comprising, in combination, a plurality of elongated longitudinally stretchable elastic strips located beside each other and distributed across the band while extending longitudinally thereof, each strip including stretchable elastic warp thread means and inelastic fibre thread means, said inelastic thread means being interlaced with one another and with said elastic warp thread means to form the stretchable elastic strip; and a plurality of substantially unstretchable flexible strands braided across the band and around said strips to form the band with the latter, whereby the band is longitudinally stretchable and whereby, when the band is transversely curved so that it has a through-like configuration, said stripe will be transversely curved also.

2,948,183
AUTOMATIC LIQUID FEEDING SYSTEM IN A FLAME SPECTROPHOTOMETER
Arthur L. Maloy, South Charleston, and Frederick L. Boggs, Dunbar, W. Va., assignors to Union Carbide Corporation, a corporation of New York
Filed May 22, 1956, Ser. No. 586,459
2 Claims. (Cl. 88—14)



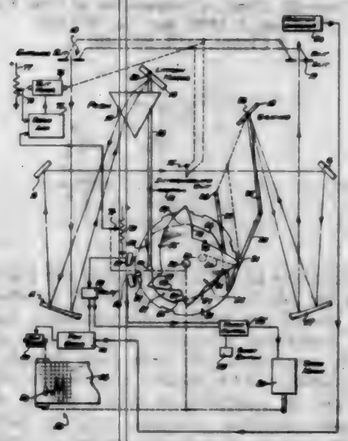
1. In combination with a flame spectrophotometer wherein a sample solution is aspirated from a sample solution-containing vessel through an electrically-conductive capillary tube into a flame zone for measurement, apparatus for automatically supplying sample solution to said vessel to maintain the solution level therein at a constant predetermined value comprising, a reservoir of such sample solution positioned to permit flow of solution to said vessel by gravity; conduit means communicating between said reservoir and said vessel and containing electromagnetic valve means for arresting the flow of solution therethrough; electrically-conductive probe means positioned in said vessel so as to complete an electric circuit through said solution when said solution reaches a predetermined level one of said probe means comprising said electrically-conductive capillary tube; and electric circuit relay means communicating with said electrically-conductive probe means for energizing said electromagnetic valve to permit the flow of solution through said conduit means when said electrically-conductive probe means is not short-circuited by said solution attaining said predetermined level and for de-energizing and closing said electromagnetic valve to arrest the flow of solution through said conduit means when said solution is at a level of said predetermined value.

2,948,184
CONCAVE GRATING SPECTROGRAPHIC INSTRUMENT
Peter D. Johnson, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed July 3, 1957, Ser. No. 669,722
6 Claims. (Cl. 88—14)



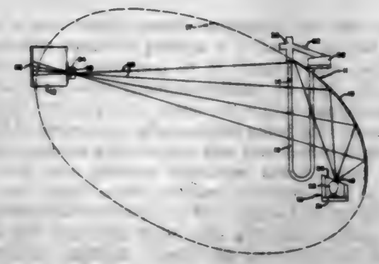
2. A concave grating spectrographic instrument comprising entrance and exit slits located upon the Rowland circle for normal incidence operation, and a concave grating mounted for rotation in the plane of the Rowland circle about an axis parallel to the rulings of said grating, external of the Rowland circle, and removed from the geometrical center of the grating, the locus of equivalent positions of the grating with respect to the Rowland circle intersecting the Rowland circle at two points.

2,948,185
SPECTROPHOTOMETRIC SYSTEM
William M. Ward, Brea, and Joseph Ashley, Whittier, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Feb. 24, 1958, Ser. No. 717,146
14 Claims. (Cl. 88—14)



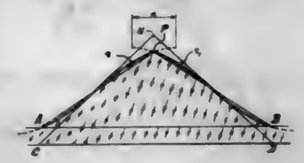
1. In a monochromator, the combination of: means defining a radiation path including in series first slit means, refractive dispersing means including a prism, intermediate slit means, grating means, and second slit means, said intermediate slit means being adapted to limit the range of wavelengths traversing said path between said refractive means and said grating means; first drive means for actuating said refractive means to vary the wavelengths passing along said path between said first and intermediate slit means; second drive means for varying the angular disposition of said grating means with respect to said path, said second drive means including a multi-lobe cam adapted on unidirectional actuation to drive said grating means through a plurality of forward angular excursions alternating with reverse angular excursions; and means for coupling said second drive means to said first drive means for simultaneous operation through different patterns as determined by the respective drive means, with said grating means and said refractive dispersing means coacting on successive forward excursions of said grating means to direct different predetermined orders of wavelengths along said path.

2,948,186
PRECISION MICROMANOMETER
James M. Kendall, Coral Hills, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Nov. 14, 1956, Ser. No. 622,230
9 Claims. (Cl. 88—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A precision manometer for precision measurement of meniscus heights comprising, in combination, a vertically disposed transparent manometer tube containing a liquid column with a meniscus, an elliptical reflector immovably arranged adjacent said tube with the focal axes on opposite sides thereof, a source of light immovably located behind the tube at one of said axes providing illumination of the meniscus by light that is substantially collimated in a vertical direction, and an optical system including lens means in front of the tube at the other of said axes for reading the height of the meniscus.

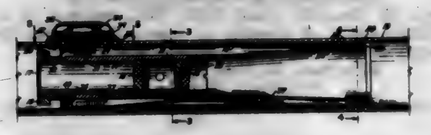
2,948,187
PICTURE PROJECTION SCREENS
Johan S. Jacobson, The Hague, Netherlands, assignor of part interest to N.V. Exploitatie Maatschappij "Het Hof van Holland," Amsterdam, Netherlands, a company of the Netherlands
Filed June 16, 1955, Ser. No. 515,810
Claims priority, application Netherlands June 28, 1954
1 Claim. (Cl. 88—28.93)



A picture projection screen for images which can be viewed from the side of the screen turned away from a projector comprising a sheet of light permeable material, projecting portions on at least one of the sides of the sheet and having contacting bases, said projecting portions having flanks, the generatrices of which are each a portion

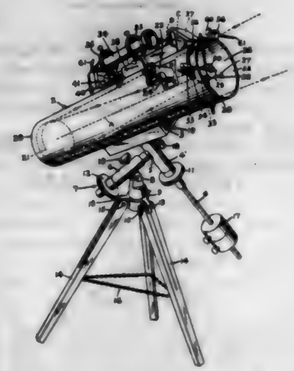
of a sine curve, the latter said portion being less than the full sine curve and including the point of inflection of said curve and extending between points at which the tangents to the sine curve enclose with the sheet angles of at least 5° so that the portions of each sine curve substantially parallel to the sheet are omitted, the tangent to said curve at the point of inflection thereof enclosing with the sheet an angle which is smaller than the critical angle of total reflection.

2,948,188
TELESCOPE SIGHT
Ernst Otto Kollmorgen, Amherst, Mass., assignor, by mesne assignments, to Redfield Gun Sight Co., Denver, Colo., a Colorado limited partnership
Filed Aug. 25, 1958, Ser. No. 756,937
5 Claims. (Cl. 88—32)



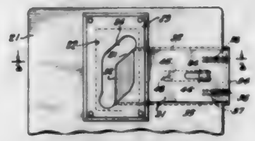
1. A unit for supporting erector lenses and a reticle in the tubular barrel of a sighting telescope comprising: a parallax tube adapted to be positioned in said barrel; an erector tube of smaller diameter than said parallax tube positioned within the latter, said parallax tube and said erector tube being susbtantially coextensive in length, said erector lenses and said reticle being mounted in said erector tube; means resiliently securing said tubes together at one extremity; resilient means urging the other extremity of said erector tube in a lateral direction; and screw means contacting said other extremity and acting to guide and limit the said lateral direction, said means for reseiliently securing the extremities of said tubes together at one extremity comprising an annular layer of resilient material bonded to and between said latter extremities.

2,948,189
REFLECTING TELESCOPE WITH INTERCHANGEABLE OPTICAL SYSTEMS
Robert E. Fischer, 72—10 112th St., Forest Hills, N.Y.
Filed Apr. 6, 1959, Ser. No. 804,448
5 Claims. (Cl. 88—32)



1. A reflecting telescope, comprising a cylindrical housing, a large concave reflecting mirror mounted in said housing at one end thereof and having the reflecting surface thereof facing the other end of said housing, said housing having a first aperture in the region of said other end thereof, said housing having a second aperture that is displaced circumferentially thereon from the first aperture, an eye-piece viewing system mounted on said housing and having the optical axis thereof directed through the first aperture, a camera and shutter-actuating mechanism therefor likewise mounted on said housing and having the optical axis thereof directed through the second aperture, a small plane reflecting mirror supported by mounting means within said housing to intersect the optical axis of said concave reflecting mirror at an angle thereto, said small plane mirror and said mounting means presenting no substantial obstruction to light that passes into said housing through the open end thereof to said large concave mirror, said mounting means comprising a plurality of rods mounted on said cylindrical housing and extending inwardly to form a spider support and rotatable means carried by said spider support and fixedly attached to said small plane reflecting mirror for rotative movement therewith, said spider support and rotatable means carried thereby being so constructed and arranged that said small plane reflecting mirror may be rotated on said optical axis of said large concave reflecting mirror to a first position wherein it intersects said optical axis of said eye-piece viewing system, and to a second position on said optical axis of said large concave mirror wherein it intersects said optical axis of said camera, and operating means for rotating said rotatable means and said small plane mirror affixed thereto, said operating means comprising a member operatively connected to said rotatable means and having an end thereof extending through an opening in said housing, said member being positioned in substantially the same radial plane as is at least one of said rods of said spider support when said small plane mirror is in either of said first and second positions, and means for tripping said shutter-actuating mechanism of said camera, said last-named means being actuated upon movement of said operating means to the position wherein said plane reflecting mirror is rotated to said second position.

2,948,190
MICROTOME BYPASS SLIDE
Josef Blum, Norwalk, Conn., assignor to Ivan Sorvall, Inc., Norwalk, Conn., a corporation of New York
Filed Jan. 9, 1958, Ser. No. 707,965
8 Claims. (Cl. 88—40)



1. A microtome having a cutting knife and a specimen advancing bar which is caused cyclically to advance a specimen toward said knife in predetermined equal increments, comprising a support, a guide plate on said support, an aperture in said guide plate through which said bar extends, said bar slidably engaging the edges of said aperture for producing an orbital motion of said bar for each specimen advancing cycle of movement thereof, the contour of said aperture being arranged to cause the specimen on said bar to be cut by said knife during one portion of each cycle and to bypass said knife during another portion of each cycle, a slide plate movably supported on said support and adapted to be removably positioned at will across a portion of said aperture, the edge portion of said slide plate that is superimposed across said aperture being contoured in a manner to cooperate with the edge of the remainder of said aperture to cause said bar to move in a restricted path excluding that portion of movement through which said bar carries the specimen across the cutting edge of said knife.

2,948,191
RETROREFLECTING SURFACE
George T. Hodgson, Jr., Melrose, and Robert C. Wells, Bedford, Mass., assignors, by mesne assignments, to Cataphote Corporation, Toledo, Ohio, a corporation of Ohio
Filed June 6, 1956, Ser. No. 589,751
5 Claims. (Cl. 88—82)



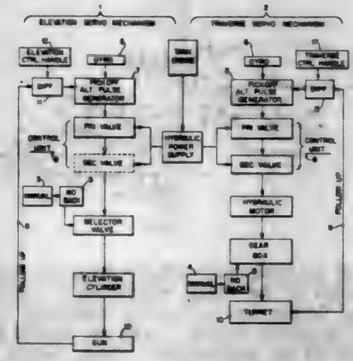
1. A substantially smooth, retroreflecting area, comprising a reflecting material, retroreflecting beads in close relationship to one another, and in fixed contacting relationship to said reflecting material, a flexible transparent film ranging in thickness from about 1 to 2.5 mils overlying and substantially coextensive with said reflecting material, and means for maintaining said transparent film in fixed relationship to said reflecting material and out of contact with and unattached to a major portion of said retroreflecting beads, said means including a plurality of anchoring points distributed over the area of the said reflecting material and being of sufficient height to provide a layer of air of at least molecular thickness between said transparent film and said retroreflecting beads.

2,948,192
REMOTE SAFETY FIRING MECHANISM
Paul I. Evans, Livermore, and Maurice R. Ransom, Torrance, Calif., assignors to the United States of America as represented by the Secretary of the Army
Filed Mar. 4, 1959, Ser. No. 797,319
1 Claim. (Cl. 89—28)



A firing mechanism for a gun of the type having two safety devices, one manually controllable and the other electrically and remotely controllable, said mechanism comprising a hammer, an L shaped sear locking the hammer against actuation for rendering the gun safe, a pivotal support for said sear, one arm of said sear engaging said hammer, a pivotal locking lever engaging another arm of said sear and by means of which the said sear may be manually locked, or unlocked when said lever is disengaged from said sear, a spring biasing said sear to a locking position, a sear retainer pivoted adjacent said sear, a sear release mounted in said retainer for releasing the sear from said hammer, said remotely controllable safety device including means for removably clamping the same to a gun, a housing, an electromagnet within said housing and including an armature coaxially mounted within a coil of said electromagnet, a locking pin extension of said armature, a spring cooperating with said housing and armature for biasing said pin to a locking position substantially contiguous to said sear release when said pin is extended by said housing spring to a position where said pin blocks any sear releasing movement of said retainer, and when said pin is retracted by said electromagnet the sear retainer and release are free for sear releasing movement and whereby in event of failure of said electromagnet the pin is moved to its locking position by said armature spring.

2,948,193
ALTERNATING-PULSE SERVO SYSTEM
Ward Leathers, Brooklyn, Frank J. Farmen, Endicott, and Hugo A. Panicaldi, Binghamton, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 8, 1953, Ser. No. 378,696
5 Claims. (Cl. 89—41)

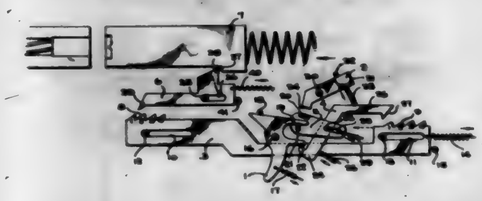


5. In combination with a hydraulic cylinder and piston arranged to be connected to a gun and its supporting body for variably elevating the gun by varying the volume of liquid in the cylinder from one side of the piston to the other, said piston having equal areas on both sides subject to pressure; an hydraulically controlled valve for varying the volume of liquid in said cylinder, pressure lines connecting said valve and said cylinder, an electrically controlled valve for controlling the actuation of said hydraulically controlled valve, manual pump means having a pair of normally closed hydraulic lines connecting the same with said cylinder, gyroscopic means including an electric circuit for controlling said electrically controlled valve in order to automatically control said cylinder and piston, hydraulic pressure operated changeover valve means for by-passing fluid between said pressure lines and for opening said normally closed hydraulic lines between said manual pump and said motor to convert said system from automatic to manual control of said cylinder and piston when the system pressure falls below a predetermined minimum, said changeover valve means having an operating cam and a spring for biasing said cam to manual control position, and a surface on said cam subject to system pressure for holding the same in automatic position so long as the system pressure exceeds the pressure of said spring.

2,948,194
BURST LIMITING DEVICE FOR AUTOMATIC WEAPONS
Charles Louis Godar, Paris, France, assignor to Etude et Realisation d'Outillage de Precision C. L. Godar et Cie, Courbevoie, France, a corporation of France
Filed Apr. 16, 1957, Ser. No. 653,224
Claims priority, application France Apr. 19, 1956
9 Claims. (Cl. 89—129)

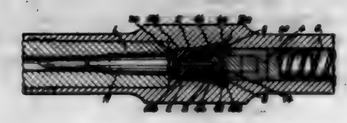
1. In an automatic firearm, including a movable breech block and a trigger mechanism consisting of interconnected elements; a burst limiting device for limiting the duration of bursts from the firearm; said device com-

prising a toothed member capable of displacement in tooth by tooth fashion corresponding to each shot of a burst, a return spring connected to the toothed member for returning it to a starting position after the firing of a predetermined number of shots corresponding to a given number of teeth, a drive member arranged between the breech block and the toothed member and having means for engaging the teeth of the toothed member and moving the toothed member in tooth by tooth fashion, means normally retaining the drive member out of engagement with the toothed member, means carried by the drive member for engagement with the breech block so that the drive member is actuated by the translation of the breech block to displace the toothed member by the



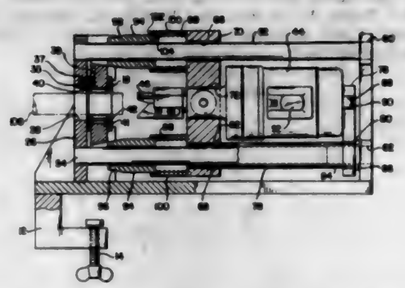
amount of one tooth upon each shot fired, a locking member actuated by the trigger mechanism in position for firing the firearm and operatively associated with the toothed member to lockingly retain the toothed member after each of its displacements, means carried by the toothed member for engagement with the trigger mechanism upon a predetermined extent of displacement of the toothed member in order to interrupt the connection between the elements of the trigger mechanism so as to stop the firing of the firearm after a predetermined number of shots, said locking member, upon release of the trigger, having means for releasing it from the toothed member so as to permit the return spring of the toothed member to return the toothed member to its initial position before the firearm is again fired and a new burst is started.

2,948,195
BREECH MECHANISM FOR AUTOMATIC FIREARMS
Friedrich Linder, Zurich, Switzerland, assignor to Machine Tool Works Oerlikon, Administration Company, Zurich-Oerlikon, Switzerland, a company of Switzerland
Filed Feb. 3, 1958, Ser. No. 712,813
Claims priority, application Switzerland Feb. 7, 1957
1 Claim. (Cl. 89—183)



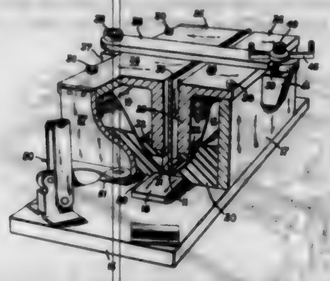
A breech mechanism for an automatic firearm, comprising in combination a receiver substantially extending along a longitudinal axis of said firearm, said receiver comprising a first abutment face inclined to said axis; a two-part breech block movably guided in said receiver, including a breech head loaded by the rearward thrust of a fired cartridge and reciprocable between a battery breech mass lock position, a recoiled position and an intermediate positive lock position, said breech block further including a rear breech portion comprising a second abutment face inclined to said axis and a locking tongue with a forward end, said tongue extending axially from said further abutment face toward said breech head; a recoil spring engaging said rear breech portion to bias said breech block toward the said battery breech mass lock position; locking means movably arranged in said receiver and engaging said breech head, said locking means in said battery breech mass locking position being spaced from said locking tongue and simultaneously engaging both said abutment faces, said locking means in said intermediate positive lock position further simultaneously engaging said first named abutment face and said tongue, said locking means upon a rearward movement of said breech head out of said battery breech mass locking position caused by the thrust of a fired cartridge effecting a sliding movement along said first abutment face towards said intermediate, positively locked position, thereby diminishing said spacing, and simultaneously effecting a further sliding movement along said second abutment face to impart a recoiling movement to said rear breech portion, said locking means sliding during said recoiling movement along said tongue up to said forward end and thereupon becoming disengaged from said tongue, and said locking means upon reaching said forward end of said tongue under the influence of the thrust of a fired cartridge becoming disengaged from said first abutment face thereby to unlock said breech head.

2,948,196
APPARATUS FOR MACHINING BAR STOCK OR THE LIKE
John A. Brenday, 111 Front St., Middletown, Conn.
Filed Apr. 23, 1958, Ser. No. 730,341
5 Claims. (Cl. 90—14)



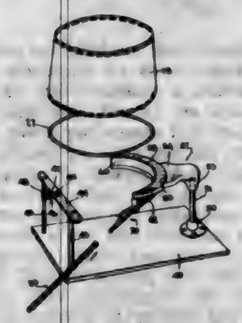
1. Apparatus for machining an end portion of a section of bar stock or the like comprising a longitudinal base, a transverse chuck supporting frame mounted on the base, a chuck carried by the supporting frame and having a pair of opposing jaws adapted to be cammed radially inwardly toward the chuck center line into holding engagement with a section of stock, said chuck jaws being adapted to accommodate sections of bar stock of different diameters and to securely hold the same with their center lines on the chuck center line when cammed radially inwardly, a longitudinally movable tool supporting frame for moving a cutting tool on the chuck center line toward and away from stock engaged by the chuck, a pair of camming plungers, and spring means connecting each plunger to the tool supporting frame for longitudinal movement therewith, the said camming plungers being operable respectively to urge one of said chuck jaws radially inwardly into holding engagement with a section of stock as the tool supporting frame moves a cutting tool toward the stock and the said spring means thereafter accommodating additional movement of the cutting tool relative to the stock.

2,948,197
MANUFACTURE OF BLADES
Daniel J. Clarke, Bay City, Mich., assignor to Stalker Corporation, a corporation of Michigan
Filed Apr. 25, 1958, Ser. No. 731,003
8 Claims. (Cl. 90—59)



1. In combination in an apparatus for supporting a hollow blade blank for internally grooving the nose wall thereof comprising a supporting fixture, a back-up plate mounted on said fixture, contoured bearing means fixed on said fixture for bearing against each of the contoured walls of a blade blank externally thereof, a removable mandrel positioned between said walls, releasable means for pressing said mandrel against the inner surface of said nose wall to bottom said nose against said plate in accurate relation thereto and throughout the length thereof, releasable hold-downs operable to press said walls against their respective bearing means with said nose wall supported on said back-up plate and accessible internally to a grooving tool while so supported.

2,948,198
LAMPSHADES AND APPARATUS FOR ASSEMBLING THE SAME
Albert Freundlich, New York, N.Y., assignor to Freundlich-Gomez Machinery Corp., College Point, N.Y., a corporation of New York
Filed Apr. 30, 1956, Ser. No. 581,484
13 Claims. (Cl. 93—1)



1. An inserting device for opening the fingers of tubular plastic binders comprising a solid, tubular front tip member pointed at one end, a rear member of resilient sheet material comprising a split tubular portion formed with two longitudinal flanges, one flange extending outwardly radially and running the length of said tubular portion, said other flange having a leading edge connecting the leading edge of said first flange, and having a rearward running portion diverging away from the first flange, said rearward portion of said second flange being curved away from said first flange and having a guide extension following concentrically about the rear end of said tubular portion in outwardly spaced relation thereto, said front tip member being fixed at its rear end to the front end of said rear member.

2,948,199
METHOD FOR FABRICATING MOUNTS HAVING DISPLAY MATERIAL
Carroll N. Cross, Rte. 2, Box 304, Maitland, Fla.
Filed Nov. 28, 1958, Ser. No. 777,006
4 Claims. (Cl. 93—1)

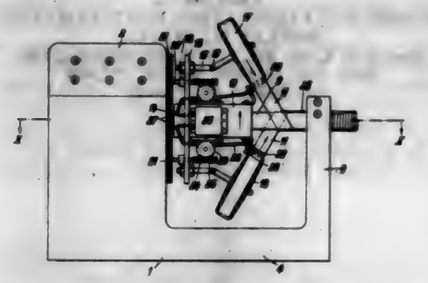


1. The method of forming encasing mounts and encasing display material therein which comprises the steps of forming a cutout well in a backboard, superimposed upon the backboard an intermediate board having therein a cutout whose peripheral dimensions are less than the corresponding peripheral dimensions of the material to be encased whereby the intermediate board is adapted to overlap the peripheral edges of such material, superimposing a faceboard over the intermediate board, binding with a decorative facing material the face and at least three edges of the boards so assembled, cutting in said faceboard and in the facing material covering the same a display window having peripheral dimensions greater than corresponding dimensions of the cutout in the intermediate board whereby said intermediate board bears the pressure of the cutting operation, thereafter inserting display material through said well in said backboard such that the marginal edges thereof abut the marginal area of said intermediate board defining the cutout therein, and finally securing the inserted display material by adhesively attaching a flexible lining material to the rear face of said backboard.

2,948,200
METHOD AND APPARATUS FOR WINDING AND CEMENTING TUBES OR HOSE
Lorenz Westerburkey, Zum Stillen Frieden 22, Gutersloh, Germany
Filed Jan. 13, 1958, Ser. No. 708,644
2 Claims. (Cl. 93—80)

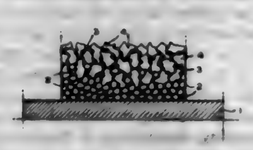
1. An apparatus for producing a flexible tube, which comprises a stationary winding mandrel, a plurality of reels, each reel adapted to carry a supply of strips of flexible material and disposed at an oblique angle to the mandrel, means for storing and feeding a liquid adhesive to said material at a point intermediate at least one of said reels and said mandrel, means for revolving said reels and said adhesive storing and feeding means about said stationary mandrel, whereby a helically wound tube is formed on said mandrel from said strips when the strips are applied to the mandrel and drawn off the reels upon revolution thereof, said revolving means comprising a main shaft coaxial with said stationary mandrel, means for rotating said shaft, and means for mounting said reels and adhesive storing and feeding means on said shaft so as to be rotatable with said shaft, said

adhesive storing and feeding means comprising a container constituting said liquid adhesive storing means, the adhesive feeding means comprising at least one pump mounted on said main shaft and rotatable therewith,



positive transmission means between the shaft and the pump for driving said pump upon rotation of the shaft, means for applying said adhesive upon said flexible material, and means for connecting said container with said pump and said pump to said applying means.

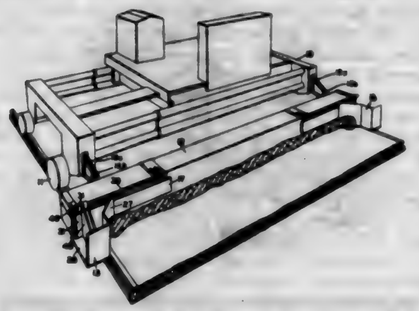
2,948,201
PAVEMENT AND METHOD OF PRODUCING THE SAME
Harry S. Nagin, Merion, Pa., and Donald H. Russell, Pennsauken, N.J., assignors to Reliance Steel Products Company, McKeesport, Pa., a corporation of Pennsylvania
Filed Mar. 9, 1960, Ser. No. 11,014
26 Claims. (Cl. 94—5)



4. As a new article of manufacture a pavement provided with a supporting base, an intermediate layer comprising a thermosetting resin carrying dispersed therethrough a mineral aggregate, said intermediate layer being adhesively bonded to said supporting base, said thermosetting resin substantially completely enveloping the particles of mineral aggregate, said thermosetting resin compriaing the air-cured reaction product of a syrup-like epoxy resin and a curing catalyst therefor, said resin being resistant to softening at summer temperature and resistant to fracturing at winter temperature, said intermediate layer having disposed thereon an adherent upper layer of abrasive particles of such density as to provide a substantially continuous exposed surface of abrasive particles, at least a portion of said particles being pressed into the intermediate layer and lodged in the resin between the bonded particles of mineral aggregate.

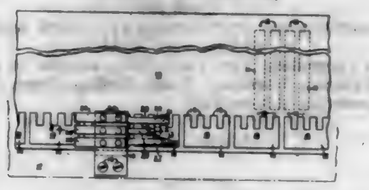
2,948,202
SCREED STRUCTURE
Arnold S. Millikin, Columbus, Ohio, assignor to The Jaeger Machine Company, Columbus, Ohio, a corporation of Ohio
Filed July 3, 1957, Ser. No. 669,824
3 Claims. (Cl. 94—45)

1. A screed adapted to extend over side forms to engage and act on the surface of paving material disposed therebetween, said screed being of fixed length and having an upright material-engaging forward face against which surplus material may accumulate as the screed is moved along the side forms, an end shoe and baffle unit at each end of the screed and having an upright material-engaging face extending forwardly from said forward screed face, means for mounting said shoe and baffle unit for movement longitudinally of the screed so as to move the upright material-engaging face of the unit along the upright material-engaging face of the screed, and means connected betwen the screed and each unit for positively



and indepenently moving such unit on the end of the screed in accordance with variations in spacing between the side forms to move said shoe and baffle face of said unit adjacent the cooperating side form to prevent any of said surplus material which may accumulate in front of said upright screed face from feeding outwardly over said side form.

2,948,203
PHOTOCOMPOSING MACHINE
William A. Hadley, Tappan, and Daniel H. Robbins, Bronxville, N.Y., assignors to Mergenthaler Linotype Company, a corporation of New York
Filed Oct. 8, 1956, Ser. No. 614,738
12 Claims. (Cl. 95—4.5)

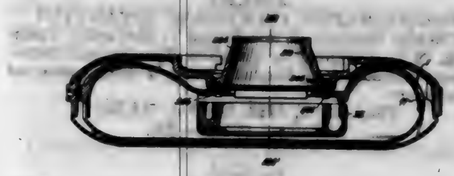


1. In a photocomposing machine, the combination of a font of characters which are selectively imaged at a photographic station, a sensitized film on which lines of type characters are imaged, one after another, in column formation, and means responsive to signalling means to advance the film after the imaging of one line of characters thereon to present an unexposed portion thereof at the photographic station preparatory to the imaging of the succeeding line of characters, characterized in that the sensitized film has a plurality of electrically conducting reference marks arranged in spaced relation along one edge portion thereof, and including electrical means for cooperating with said reference marks to detect and indicate the advance or non-advance of said film.

2,948,204
CAMERAS
Wilhelm Kopp, Wiesbaden-Sonnenberg, Hermann Plom, Wiesbaden-Kastel, and Hans Heil, Wiesbaden-Frauenberg, Germany, assignors to Adox Kamerawerk G.m.b.H., Wiesbaden-Biebrich, Germany
Filed Apr. 15, 1957, Ser. No. 652,960
Claims priority, application Germany Apr. 13, 1956
13 Claims. (Cl. 95—31)

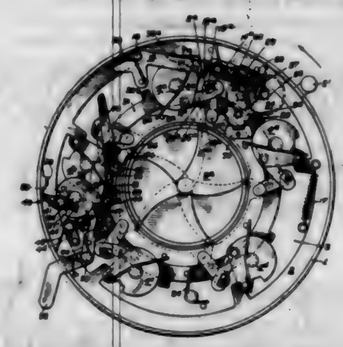
1. In a camera, in combination, a camera housing adapted to receive a magazine in its interior; a magazine

housing insertable into and removable from said camera housing; a rigid objective carrier carried by said camera housing and having a rear surface directed toward the rear of said camera housing; a rigid film guide carried by said magazine housing for guiding film for movement in the magazine housing and for locating the film during exposure thereof in a predetermined film plane, said rigid film guide having a front surface directed toward said objective carrier; and positioning means carried by said sur-



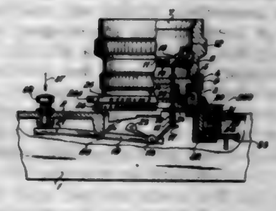
faces of said objective carrier and film guide for locating said film guide at a precisely determined position along the optical axis so as to precisely determine the position of the film plane, at least one of said housings being formed with a plurality of openings and said postioning means including a plurality of rigid pins respectively extending with clearance through said openings so that bending or deformation of said one housing will have no influence on said pins.

2,948,205
INTRA LENS SHUTTER
Waldemar Traugott Rentschler, Calmbach (Enz), Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach (Enz), Germany, a corporation of Germany
Filed Nov. 12, 1952, Ser. No. 319,880
Claims priority, application Germany Dec. 15, 1951
8 Claims. (Cl. 95—63)



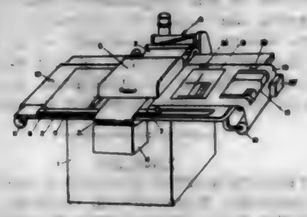
3. A shutter mechanism comprising shutter blades, each of said blades having independent spring charged means for operating said blades in a continuous movement from shutter closed position through shutter open position and then to shutter closed position, a movable cocking ring, yieldable means normally urging the cocking ring into a retracted position, cooperative abutting cocking means on said ring and said spring charged members for moving each of said spring charged members into cocked position in response to the movement of the cocking ring against the action of said means urging said ring to retracted position, means for locking each of said spring charged members in cocked position, means urging the latter means into locking association with said spring charged members when the latter are in cocked position, means for locking said ring in driving connection with all said cocking means through said cooperative abutting means for operation of all of said spring charged means as a single unit, means for moving said means for locking said spring charged members in cocked position out of cocking connection therewith for simultaneous operation of all of said spring charged means while they are interconnected by said ring including manually operable release means, and means for alternately releasing said ring from driving connection with all of said spring charged members independently of and prior to release of said spring charged members from said means for locking said spring charged members in cocked position.

2,948,206
PHOTOGRAPHIC REFLEX CAMERA
Walter Swarofsky, Braunschweig, Germany, assignor to Voigtlander A.G., Braunschweig, Germany, a corporation of Germany
Filed June 25, 1957, Ser. No. 667,744
Claims priority, application Germany July 7, 1956
5 Claims. (Cl. 95—64)



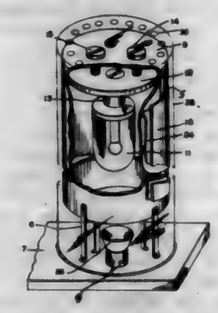
1. In a one-eye photographic reflex camera constructed and arranged to have interchangeably mounted thereon objectives each having a built-in diaphragm; a device, for preselecting diaphragm values, built-in in the camera body and comprising, in combination, power transmission members, for connecting said device with an objective diaphragm arranged on the mount of the objective, and said members extending and acting substantially in the direction of the optical axis; a shutter ring for adjustment of shutter time values; an adjusting handle member included in said device in the form of a second ring coaxial with said shutter ring and with the optical axis, said shutter ring and said second ring being constructed and arranged for coupling together for adjustment of exposure values; a control cam on said second ring; a feeler member adapted to engage said control cam to adjust the diaphragm through said transmission members; a shutter release key; means controlled by said shutter release key and operable, only during actuation of the latter, to effect engagement of said control cam by said feeler member; said last named means comprising a first two-armed lever pivoted about a stationary pivot and being adapted to be moved about said pivot by action of the shutter release key on one arm of said first lever; the feeler member consisting of a second two-armed lever tiltably fastened to the other arm of said first lever, whereby the control cam provided on the ring for preselection of the diaphragm value is in the range of movement of a first arm of said second lever; the body of the camera comprising an axially displaceably arranged feeler pin included in said transmission members; the objective mount comprising an axially displaceably arranged diaphragm adjusting pin, a first end of which is engaged by an adjacent end of said feeler pin, while the other end of the latter is engaged by the second arm of said second lever; the second end of said diaphragm adjusting pin being adapted to engage an inclined surface provided on a ring for setting the lamellae of the diaphragm.

2,948,207
PHOTOGRAPHIC PRINTING APPARATUS
Donald Ansel, London, and Malcolm Harry Wright, Beckenham, Kent, England, assignors to Copycat Limited, London, England
Filed June 18, 1958, Ser. No. 742,813
6 Claims. (Cl. 95—75)



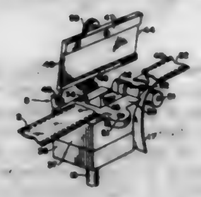
1. Photographic printing apparatus having a printing position, means for guiding a web of photo-sensitive sheet material through said printing position, means for superimposing a first master to be copied upon said web at said printing position, a band extending through the printing position transversely of said web, said band including a plurality of longitudinally spaced-apart, other masters to be copied, said band having a plurality of longitudinally spaced-apart indicia each one correlated with one of said other masters, drive means operable in response to energization effecting longitudinal movement of said band to move one of said other masters into superimposition with said web at said printing position, said drive means in response to de-energization arresting said band, means for printing said first master and said other master located at said printing position upon said web, means responsive to the completion of each such printing operation, to advance said web whereby to bring a fresh length of said web into said printing position and to energize said drive means for said band, and sensing means located at a given position in the path of and responsive to the movement of each of said indicia past said position to de-energize said drive means.

2,948,208
APPARATUS FOR DEVELOPING DIAZOTYPE MATERIAL, PARTICULARLY FOILS
Clifford E. Herrick, Jr., Cheyenne Forks, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed July 18, 1957, Ser. No. 672,596
1 Claim. (Cl. 95—89)



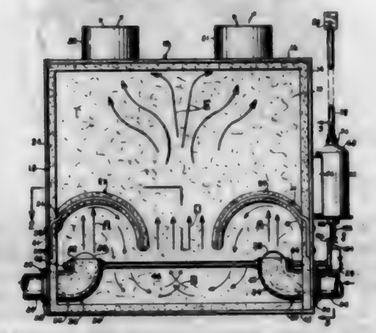
Apparatus for development of diazo sensitized material, particularly foils, comprising, in combination, a cylindrical support, a spring biased clip for retaining said material around said support, a transparent cylindrical cover over said support enabling the viewing of the progress of development and of sufficiently larger diameter to form an annular space for the developing gas, an electrically-heated cup-shape container located axially to said cylinder and adapted to hold pellets of ammonium carbonate for generating developing gas to permeate said space, vents in said cover for permitting residual air to escape and an incandescent lamp mounted inside said support for maintaining said support at an elevated temperature thereby preventing the formation of condensate of the developing gas upon said sensitized material.

2,948,209
PHOTOGRAPHIC PROCESSING APPARATUS
Joel Neidle, Huntington, and Joseph V. McCarthy, Flushing, N.Y., assignors to Fairchild Camera and Instrument Corporation, Syosset, N.Y., a corporation of Delaware
Filed Oct. 3, 1958, Ser. No. 765,242
3 Claims. (Cl. 95—89)



1. A solution applicator for applying solution in a uniform thin layer to a moving photographic film or the like which comprises a metering member having an apertured surface over which the film passes, a cover for the metering member provided with means which cooperate with the surface to guide the film and hold it in precise position as it passes over the aperture, means for supplying a solution under pressure to the aperture, and a recess in the surface which is contiguous with and beyond the aperture in the direction of film travel, said recess having an edge which shears off the excess solution leaving a uniform thin layer on the film.

2,948,210
AIR MIXING AND DISTRIBUTING UNITS
John P. Conlan, 570 W. 156th St., New York, N.Y.
Filed Jan. 29, 1958, Ser. No. 711,854
3 Claims. (Cl. 98—38)



1. An air mixing and distributing apparatus, comprising a rectangular housing having a back wall and side walls and open at the front, a removable cover plate over the opening in the front of the housing, opposed side walls having opposed openings at one end of the housing, air inlet pipes in said openings, one of the side walls connecting said opposed side walls having outlet openings therein, outlet pipes fitted in said outlet openings, elbow pipes inside the housing connected at one end to the air inlet

pipes, said inlet pipes opening toward the outlet openings, butterfly valves rotatably mounted in the open ends of the elbow pipes, said valves arranged in mutually perpendicular planes, means for rotating said valves, and baffle plates secured to said opposite side walls and closely spaced inwardly of the open ends of the elbow pipes said plates being curved with the concave sides thereof extending over the open ends of the elbow pipes to deflect air from said elbow pipes toward the adjacent side wall opposed to the side wall having the outlet openings, said latter side wall deflecting the air toward the outlet openings, said deflected air being mixed in the space between the baffle plates and discharged through the outlet openings into the outlet pipes.

2,948,211
LOUVER CONTROL FOR AIR CONDITIONING GRILLE
Oscar C. Melgaard, Phoenix, Ariz., assignor to Wright Mfg. Company, Phoenix, Ariz., a corporation of Arizona
Filed May 10, 1957, Ser. No. 658,259
12 Claims. (Cl. 98—40)



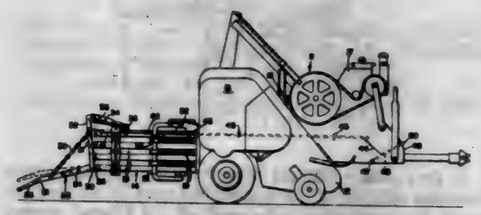
1. An air directing grille having a frame, a series of horizontal slats tiltably mounted on said frame to rock about horizontal axes, a series of vertical slats tiltably mounted on said frame to rock about a vertical axis, means on said horizontal slats connecting the same to tilt in unison, means on said vertical slats connecting the same to tilt in unison, and a control device formed with a pair of right angularly disposed slots, said slots defined by side walls diverging outwardly from the central portion of said control device, the narrowest portions of said slots being of a width substantially equal to the thickness of said slats, said control device mounted on one of said horizontal slats and one of said vertical slats engaged in said slots to provide the sole means for effecting the independent and simultaneous tilting of both of said series of slats.

2,948,212
DISPOSABLE STRAINER CUPS FOR COFFEE PERCOLATORS
Irving Sieselman, 9720 Kings Highway, Brooklyn, N.Y., and Jack Gallin, 18 Bluebell Lane, Babylon, N.Y.
Filed Dec. 31, 1958, Ser. No. 784,352
4 Claims. (Cl. 99—310)



1. A percolator strainer cup, comprising a circular disk of metal foil folded to cup-shape form with a circular bottom portion and upstanding cylindrical wall, said wall having a rolled circular edge, said wall being formed with folds reinforcing the wall, said bottom portion having a central hole for fitting on a percolator tube and a plurality of fine strainer holes surrounding said central hole, said foil being stiff enough to retain coffee grounds and percolating water therein during use and being thin enough to be readily crushable by hand to enclose the spent grounds in the crushed cup, said bottom portion being formed with a tab extending radially inwardly at said central hole, said bottom portion having a first cut extending from the central hole and connecting radially spaced fine holes and a second cut extending circumferentially from said radially spaced fine holes to provide means whereby an annular strip of selected width may be torn from the center of said bottom portion to enlarge said central hole and provide a serrated edge therefor.

2,948,213
SCALE ATTACHMENT FOR BALERS
George Jay, 602 Merle Lane, and Everett V. Rankins, 904 Trinity St., both of Manteca, Calif.
Filed May 12, 1959, Ser. No. 812,777
9 Claims. (Cl. 100—99)



1. In a hay baler wherein hay is baled in a column, tied with baling wires and discharged from said column; the improvement which comprises a tailgate adjacent the end of said column onto which each bale of hay is discharged, means pivotally mounting said tailgate on said column, resilient means biasing said tailgate upwardly, a reciprocable rod, means mounting said rod for slidable movement on said baler, flexible means interconnecting said tailgate and said rod whereby downward movement of said tailgate causes rearward movement of said rod, an indicator pivotally mounted proximate the forward end of said bale, means interconnecting said rod and indicator to pivot said indicator in a first direction when said rod is moved rearwardly, and reset means for pivoting said indicator in a second direction opposite said first direction to reset said indicator.

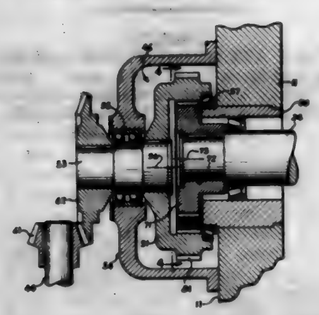
2,948,214
EMBOSSING SEAL AND METHOD OF MAKING SAME
Joseph M. Lotsch, Rockville Center, N.Y.
Filed Jan. 22, 1957, Ser. No. 635,368
5 Claims. (Cl. 101—3)



1. An embossing seal press comprising a body of channel formation having a bottom wall and upstanding flanges therefrom, an upper part of said flanges being formed as goose-necks with a gap therebelow with said flanges having top edges constituting the bottoms of said gaps under said goose-necks, a strap looped medially of itself and providing enlarged end portions wider than said press body and providing a shank portion insertable between said flanges at the inner end of said gap, one of said enlarged portions adapted to seat on said top edges next to the front end of said gap, said top edges having

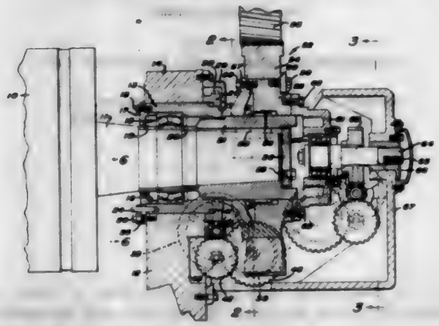
notches therein and said one enlarged portion of the strap having lugs at its under side spaced apart the same distance as spacing of said flanges, said lugs being adapted to register with and snap into said notches for retaining said strap releasably in place in said press.

2,948,215
CONSTANT BACKLASH GEARING FOR A PRINTING COUPLE
Louis S. Tyma, Jr., Hinsdale, and Peter E. F. Loew, Chicago, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Filed Oct. 23, 1958, Ser. No. 769,206
8 Claims. (Cl. 101—216)



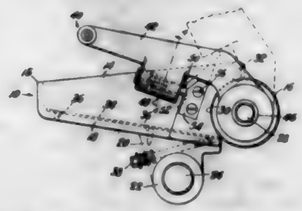
1. In a rotary printing press having a printing couple with one cylinder of the couple supported by an eccentric sleeve for impression adjustment of the couple, gearing for driving the couple comprising, in combination, a driven input shaft journaled on an axis which coincides with the true axis of said sleeve, and a pair of meshing gears coupling said shaft and the eccentrically mounted cylinder, one of said gears being an internal gear and the other an external gear whose pitch radii differ from one another by the amount of eccentricity of said sleeve.

2,948,216
PLATE CYLINDER REGISTER MECHANISM
Robert H. Thompson, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed July 28, 1958, Ser. No. 751,376
7 Claims. (Cl. 101—248)



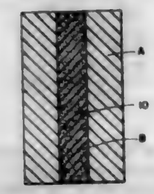
1. Registering mechanism for a plate cylinder of a printing press including a pair of spaced side frames, a shaft supporting said cylinder between the side frames and having ends extending outwardly from the cylinder, a pair of non-rotatable, endwise movable sleeves mounted in said side frames and journaling the shaft ends, means restraining the shaft and sleeves against relative endwise movement, a nut surrounding one of said sleeves, means restraining the nut against endwise movement, cooperating screw threads on the nut and the one sleeve, means operable during rotation of said cylinder for rotating said nut to impart an endwise movement to said sleeve and thereby to said shaft and cylinder, the shaft end adjacent said nut extending outwardly a short distance from its side frame, a helical driven gear, means mounting said gear on the shaft extension, said mounting means enabling relative endwise movement between the gear and shaft but restraining them against relative rotative movement, a helical drive gear meshing with the driven gear, and means operatively connected to and concentric with the driven gear for bodily moving it endwise to thereby impart a circumferential movement to the plate cylinder with respect to the drive gear through the helical teeth on said gears, said last named means being operable during rotation of the cylinder.

2,948,217
INK FOUNTAIN
Edgar C. Witt, Granby, Mass., assignor to Diamond National Corporation, a corporation of Delaware
Filed Jan. 9, 1958, Ser. No. 707,904
6 Claims. (Cl. 101—364)



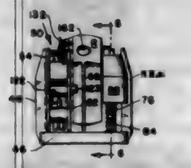
4. An ink fountain for rotary printing machines, comprising an open-topped trough having peripheral side and end walls and having a transverse opening extending across the trough at one end thereof, said opening including arcuate cutouts formed in opposite side walls of the trough, a roller mounted adjacent to the trough and adapted to fit into said opening in sealing contact with the arcuate sides thereof but permitting feeding of ink therefrom upon rotation of the roller, said trough being removably pivotally mounted in loose sliding engagement upon a fixed shaft disposed parallel to and spaced from the roller, and yieldable connection means for detachably holding the trough against the roller, including a quickly releasable spring connected catch for urging the trough against the roller.

2,948,218
CONTROLLED FRAGMENTATION OF IMPULSIVELY LOADED BODIES BY STRESS WAVE INTERFERENCE
John Pearson and John S. Rinehart, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed June 27, 1955, Ser. No. 518,424
3 Claims. (Cl. 102—67)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A fragmentation device comprising a solid body having at least a portion thereof in the form of a polyhedron, said polyhedron having regular polygonal ends having equal numbers of sides and planar lateral face surfaces in the form of quadrilaterals, said body having a central cylindrical chamber containing means to impulsively load the body to initiate a compression stress wave in the body, the thickest wall portions of said body operable to be fractured by tensile stress waves caused by said impulsive loading means, the thinnest wall of said body being of a thickness to prevent fracture in shear from said impulsive loading means.

2,948,219
ROCKET FUZE
Winfred F. Sapp, Arcadia, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 12, 1953, Ser. No. 342,039
7 Claims. (Cl. 102—78)
(Granted under Title 35, U.S. Code (1952), sec. 266)



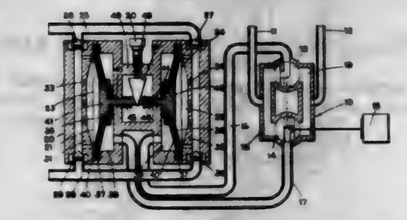
1. Acceleration actuated mechanism, comprising; an unbalanced rotor mounted for rotation in response to bodily acceleration of the mechanism adapted to normally rotate in one direction only between an initial and a final position, an escapement device operatively connected to the rotor adapted to be actuated thereby in response to rotation of the rotor and to govern the speed of rotation thereof, a weight movable in response to bodily acceleration of the mechanism operatively associated with the rotor adapted to lock same against rotation in said initial position when the acceleration is below a predetermined magnitude and to unlock the rotor for rotation when the acceleration is above said predetermined magnitude and permit the rotor to rotate toward said final position.

2,948,220
FUZE SELF DESTRUCTION DELAY AND POINT DETONATION MECHANISM
Arthur S. Bennett, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Dec. 29, 1958, Ser. No. 783,629
3 Claims. (Cl. 102—86.2)



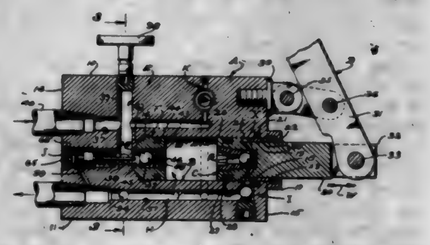
1. In a fuze for attachment to a projectile including a body, a detonating charge in said body, and a hollow nose cap, a point detonating mechanism for said fuze in said body comprising a spring-loaded firing pin slidably mounted in said body and defining a forwardly extending stem portion, said stem being notched at its forward portion thereof, a release member defining a rearwardly notched portion for detachable engagement with said forwardly notched portion on said firing pin, a wire connecting said release member to said hollow nose cap for holding said firing pin in a retracted position and to release said firing pin upon destruction of said nose cap, a self-destruction mechanism adapted to release said firing pin upon failure of the destruction of said nose cap after a predetermined period of time comprising a first lever pivoted at one end in said body, a second lever having a shorter length than said first lever pivoted to the free end of said lever and defining a rounded nose at its free end, said nose adapted to be received in a rounded recess in said release member to retain said firing pin and said release member in engaged relation, a time delay escapement mechanism mounted in said body forwardly of said release member, a circular cam having a circumferential notch adapted to be rotated by said escapement mechanism, a bar pivoted at one end to the free end of said first lever, a lug integral to the free end of said bar and extending under the circumferential surface of said cam and spring means urging said lug towards said circumferential surface of said cam whereby said notch on said cam engages said lug upon rotation of said cam to move said bar and said first lever and displace said second lever to move said nose on said second lever out of said recess in said release member to release said firing pin.

2,948,221
PUMPS FOR LIQUIDS
Philip Walker Carver, Nuthall, Nottingham, England, assignor to Kontak Manufacturing Co. Ltd., Grantham, Lincolnshire, England, a British company
Filed May 22, 1957, Ser. No. 660,933
Claims priority, application Great Britain May 29, 1956
10 Claims. (Cl. 103—37)



1. A metering pump for delivering a measured quantity of liquid per unit of time comprising in combination, a housing having a compartment, a flexible diaphragm dividing said compartment into two chambers, the entire volumes of which it sweeps on each delivery and suction stroke, a one-way inlet valve and a one-way discharge valve connected to one of said chambers for handling the per-stroke measured quantity of pumped liquid, sources of continuous suction and pressure, valve means arranged to alternately connect said sources to the other of said chambers to cause the diaphragm to reciprocate in its compartment and means independent of the suction and pressure sources to actuate said valve means at a fixed speed.

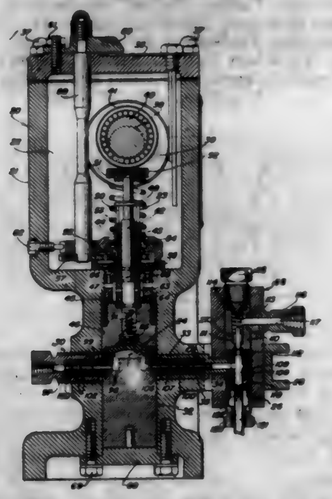
2,948,222
PUMP
William S. Pine, 1635 E. 22nd St., Los Angeles, Calif.
Filed Aug. 4, 1958, Ser. No. 753,063
15 Claims. (Cl. 103—46)



1. A pump of the character referred to including, a body having a cylinder bore therein terminating at a

bottom, a head closing the open end of the bore, a ported piston slidably engaged in the bore and having an elongate rod projecting therefrom and through the head, operating means coupled with the rod and operable to reciprocate the piston in the bore, an inlet duct communicating with the bottom of the bore, a check valve checking the flow of fluid outwardly through the inlet duct, a check valve carried by said ported piston and adapted to allow for the flow of fluid through the piston towards the open end of the bore, a delivery duct communicating with the bore adjacent the open end thereof, a check valve related to said delivery duct to check the flow of fluid from said duct into the bore and a fluid pressure actuated means related to said first mentioned check valve and operable in response to the fluid pressure in the delivery duct to open said first mentioned check valve and render the same ineffective.

2,948,223
DIAPHRAGM TYPE PUMP
William H. Manbeater, 63 W. Illinois, Palatine, Ill.
Filed Jan. 21, 1958, Ser. No. 710,226
6 Claims. (Cl. 103—44)



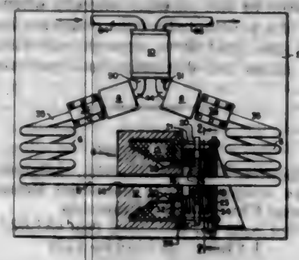
1. In a pump, the combination with a housing providing a reservoir chamber, said housing having a central bore extending from the reservoir chamber to the opposite end of the housing, means including a diaphragm pumping assembly located within the bore, a plunger pumping assembly located in the reservoir chamber in alignment with the bore, said diaphragm pumping assembly including a valve seat member, a body reagent head and a flexible diaphragm sealed around its peripheral edge by being confined between the member and head, whereby the diaphragm forms a pumping compartment with said reagent head and which provides the end wall of the compartment, said head having spaced inlet and outlet openings formed therein and connecting with the pumping compartment, the said body reagent head also having a groove extending from the inlet opening to the outlet opening and which is located in the end wall of the pumping compartment, said groove forming an hydraulic ejection passage for facilitating flow of fluids having non-condensable gases entrained therein, and a covering for the diaphragm for covering the surface thereof exposed to the fluids being pumped in the pumping compartment, said covering also being confined between the member and head to form a seal therewith and said covering consisting of a material having sufficient flexibility to pulsate with the diaphragm.

2,948,224
HYDRAULIC PUMP
Beryl A. Bailey and Alvin G. Bailey, both of 601 N. Commercial St., Aransas, Tex.
Filed Nov. 9, 1959, Ser. No. 851,626
5 Claims. (Cl. 103—46)



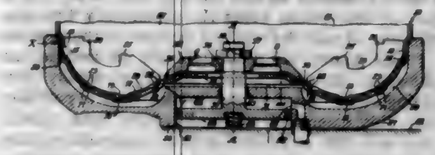
1. In a hydraulic pump including two vertically aligned double acting cylinders spaced from one another and including a single shaft extending between said cylinders and carrying a piston within each of said cylinders, a vertically disposed valve chamber, an upper intake port in said valve chamber, a lower intake port in said valve chamber, a central intake port in said valve chamber, means communicating said upper and lower and central valve ports in said valve chamber with a pressure source, a rod within said valve chamber, an upper sleeve valve mounted on said rod, a lower sleeve valve mounted on said rod and spaced from said upper sleeve valve by a distance less than the spacing between said upper and lower intake ports, an upper relief port in said valve chamber and spaced from said lower intake port by a distance equaling the spacing between said upper and lower sleeve valves, a lower relief port in said valve chamber and spaced from said upper intake port by a distance equaling the spacing between said upper and lower sleeve valves, a sleeve slidably mounted on said rod between said sleeve valves, an upper blocking valve mounted on said sleeve, a lower blocking valve mounted on said sleeve, a central blocking valve mounted on said sleeve between said upper and lower blocking valves, an upper exhaust port in said valve chamber and positioned above said central intake port and spaced from said lower relief port by a distance greater than the spacing between said upper and lower blocking valves, a lower exhaust port in said valve chamber and positioned below said central intake port and spaced therefrom equidistantly with the spacing of said upper exhaust port from said central intake port, an upper pressure drive port in said valve chamber and positioned above said central intake port and spaced therefrom by a distance equaling one-half the distance between said upper and central blocking valves, means communicating said upper pressure drive port with the lower portion of said upper cylinder, a lower pressure drive port in said valve chamber positioned below said central intake port and spaced therefrom by a distance equaling one-half the distance between said lower and central blocking valves, means communicating said lower pressure drive port with the upper portion of said lower cylinder, means communicating said upper and lower relief ports with the discharge system of said pump, and means actuated by said pistons longitudinally displacing said rod.

2,948,225
FLUID PUMP
John C. Fisher, 45 Sparks St., Cambridge, Mass.
Filed Oct. 24, 1956, Ser. No. 617,933
7 Claims. (Cl. 103—76)



1. A fluid pump comprising an elongate tube having a radially non-expansible wall, the opposite ends of said tube terminating in coiled sections, a propellant fluid in said tube and coiled sections, manually controllable means for oscillating said tube at a uniform frequency and in opposite directions along its longitudinal axis so as to produce an alternating fluid flow therein, and a fluid rectifier having an intake port, a discharge port, valve means for opposing fluid flow outwardly through said intake port and inwardly through said discharge port, and inlets between said valve means connected with said coiled sections that a unidirectional fluid flow through said discharge port takes place in response to alternating fluid flow in said tube and coiled sections.

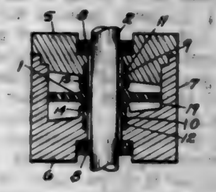
2,948,226
HYDRODYNAMIC COUPLING
Richard L. Smirl, La Grange Park, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed May 27, 1955, Ser. No. 511,591
2 Claims. (Cl. 103—115)



1. A vaned element of a hydrodynamic coupling device comprising a hollow substantially semi-toroidal flexible housing including an axially facing concave surface normally of a first radius of curvature, said housing being formed with means defining a plurality of slots; and a plurality of vanes in said housing respectively provided with convex curved marginal portions of a radius of curvature greater than that of said concave portion and generally complementary in contour thereto disposed in engagement with said concave surface, each of said vanes being provided with a plurality of outwardly extending tabs adapted to be received in said slots upon distortion of said housing, whereby said concave surface assumes a radius of curvature greater than said first radius of curvature and said housing is stretched to apply a compressive force to said vane portions so that said vanes are held in tight engagement with said housing.

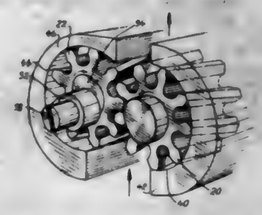
2,948,227
PUMP
Richard S. Neely, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Nov. 19, 1958, Ser. No. 774,972
4 Claims. (Cl. 103—117)

1. A rotary pump having a housing with end walls having an axial separation which varies angularly about the axis of the pump from a maximum to a minimum and back to a maximum, a rotary impeller having a hub at the center, a tubular sleeve of flexible material united to the impeller concentric with and projecting axially from the hub, a plurality of angularly spaced flexible blades carried by the hub and bridging the space between the end walls and being deflected axially to change the volume between adjacent blades as the impeller is rotated,



said blades having notches radially outside and adjacent said sleeve, said housing having a tubular projection radially outside and telescoped over and making sealing engagement with said sleeve and complementary to and received in said notches, and an inlet on the side of the housing in which the volume between adjacent blades is increasing and an outlet on the side of the housing in which the volume between adjacent blades is decreasing as the impeller is rotated.

2,948,228
GEAR ARRANGEMENT FUNCTIONING AS PUMP OR MOTOR
Karl Gustav Åhlén, Stockholm, Sweden, assignor to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden
Filed Apr. 17, 1956, Ser. No. 578,836
7 Claims. (Cl. 103—126)



1. A rotary unit having a casing providing a chamber, a drive gear and a follower gear disposed in said chamber, said gears intermeshing with each other, an adjusting shaft angularly adjustably mounted in said casing in spaced relationship to the axis of said drive gear, said adjusting shaft being provided with a cylindrical bearing surface eccentric to the axis of said adjusting shaft, said bearing surface supporting said follower gear for adjustment of the intermesh between said gears by angular adjustment of the adjustment shaft, from one extreme limiting position in which the gears are in maximum mesh giving maximum capacity to a second extreme limiting position in which the gears are moved apart and are in minimum mesh giving minimum capacity, said chamber having a cylindrical surface in sealing relation with the outer periphery of the teeth of the drive gear and a non-adjustable enveloping surface in sealing relation with the outer periphery of the teeth of the follower gear, said casing having opposed radial high pressure and low pressure ports communicating with said chamber between said cylindrical surface and said enveloping surface with said surfaces terminating at said ports, said enveloping surface comprising one portion constituting a cylindrical area having a radius slightly greater than the radius of said follower gear and extend-

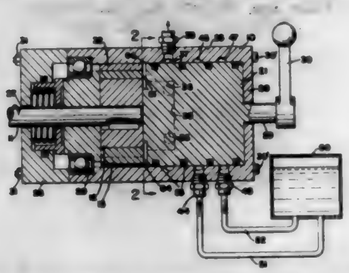
ing from said high pressure port, said portion having a center of curvature coinciding with the center of the follower gear when in its extreme limiting position for maximum mesh and having a length corresponding to at least the space width between two teeth of the follower gear, a second portion constituting a cylindrical area having a radius equal to the sum of the radius of the follower gear, the width of the eccentricity of the bearing surface in relation to the center of the adjusting shaft and the necessary clearance between the follower gear and the surface and with a center of curvature coinciding with the center of said adjusting shaft, said second portion merging into said first portion along a line lying in the radial plane from the center of said adjusting shaft through the center of said follower gear in the extreme limiting position for maximum mesh, and a third portion constituting a cylindrical area having a radius slightly greater than the radius of said follower gear and with a center of curvature coinciding with the center of said follower gear when in extreme limiting position for minimum mesh, said third portion terminating at said low pressure port and merging into said second portion along a line lying in the radial plane from the center of said adjusting shaft through the center of said follower gear when in extreme limiting position for minimum mesh.

2,948,229

METHOD AND ARRANGEMENT FOR COOLING VARIABLE VOLUME HYDRAULIC PUMPS AT LOW VOLUMES

Robert W. Brundage, 26521 Parklawn Drive, Euclid 17, Ohio

Filed Apr. 24, 1957, Ser. No. 654,858
4 Claims. (Cl. 103—120)



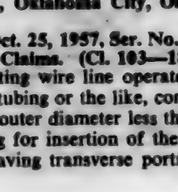
1. A variable volume hydraulic pump comprised of a plurality of members movable relatively to each other and defining a plurality of pumping chambers revolving in a fixed closed path of movement, said chambers gradually increasing in volume after they pass a fixed point of minimum volume on said path of movement until they reach a fixed point of maximum volume on said path of movement and then gradually decreasing in volume until they reach said fixed point of minimum volume; means defining an arcuate inlet and an arcuate outlet manifold including a pair of lands one at each arcuate end of said manifolds and sealingly separating said manifolds one from the other, said manifolds having approximately the same arcuate length, an opening for each chamber revolving therewith, each of said openings moving past said lands to alternately communicate its associated chamber with either said inlet or said outlet manifold, both of said lands being adjustable in the path of movement of said chambers so as to change the point in the path of movement in which each opening moves past each land and shifts communication of its chamber from one of the manifolds to the other whereby the output volume of the pump may be varied; the improvement which comprises, a third land sealingly separating said inlet manifold into a pair of minor inlet manifolds, said openings also moving past said third land to shift the communication of its associated chamber from one of said minor inlet manifolds to the other of said minor inlet manifolds, a passage from each of said minor manifolds and means externally of said pump for inter-communicating both of said passages whereby when said lands are adjusted to a position where the pump has zero volume output, hydraulic fluid flows through said external communicating means and dissipates heat generated in said fluid.

2,948,230

FLUID PUMP

Luther L. Shelton, Kansas City, Mo., assignor, by direct and mesne assignments, to Industrial Research Company, Kansas City, Mo., a partnership

Filed Apr. 15, 1957, Ser. No. 653,022
1 Claim. (Cl. 103—123)



A rotary pump comprising in combination, a casing having a cylindrical chamber presenting a pair of opposed flat walls and an annular wall, each of the flat walls having an intake port and an exhaust port, said casing having a first passage formed therein interconnecting the intake ports and a second passage formed therein interconnecting the exhaust ports; a rotatable element carried by the casing concentric with the annular wall; a piston secured obliquely to said element for rotation therewith in said chamber and having a circular periphery in close proximity to said annular wall; a portion of one face of said piston being in substantially line contact with one of said flat walls, a portion of the opposite face of said piston being substantially in line contact with the other flat wall; a boss extending radially from said casing, said boss being provided with a partition-receiving slot extending outwardly from said annular wall and said flat walls having partition-receiving slots registering with the slot in said boss; and a partition disposed within said slots, said partition spanning the distance between the flat walls and extending radially from said element to said annular wall, the intake ports being on one side of the partition and the exhaust ports on the opposite side of the partition, said partition comprising a pair of face to face plates having means yieldably biasing the same in opposite directions against the piston in alignment with the path of reciprocation of the partition, said biasing means comprising coil springs disposed in cavities between said plates, on each side of said piston receiving slot respectively and in alignment with the direction of reciprocation of said partition.

2,948,231

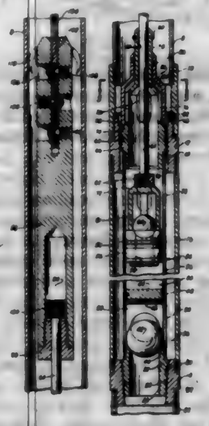
WIRE LINE OPERATED WELL PUMP

Merida L. Hart, Oklahoma City, Okla., assignor to Hart Industries, Inc., Oklahoma City, Okla., a corporation of Oklahoma

Filed Oct. 25, 1957, Ser. No. 692,300
5 Claims. (Cl. 103—181)

1. A reciprocating wire line operated pump assembly for use in a well tubing or the like, comprising a working barrel having an outer diameter less than the inner diameter of the tubing for insertion of the working barrel in the tubing and having transverse ports in the upper and

lower end portions thereof, means for sealing the working barrel in the tubing above the upper ports and below the lower ports, a well fluid inlet in the lower end of the working barrel, a standing valve in the lower portion of the working barrel for opening and closing said inlet, a plug sealed in the lower portion of the working barrel above the lower ports and the standing valve, a tubular plunger slidingly disposed in the working barrel above said plug, a traveling valve in said plunger, a pump rod extending upwardly from said plunger through the upper end of the working barrel for connection with the wire line and reciprocation of the plunger, an elongated tubular head rigidly secured on the upper end of the working barrel and having its side walls extending vertically upward from the working barrel, the upper end portion of said head being reduced in diameter to form a guide and slidingly receive the pump rod, said head having transverse ports through the vertical side walls thereof between the reduced end portion and the point of connection of the head to the working barrel, an upwardly facing annular seat formed in the outer periphery of the head below said ports, and a tubular valve slidingly disposed on the head having its inner diameter shaped to conform with the outer diameter of said head above said seat and having a seating area on its lower end for mating with the seat on the head, whereby said tubular valve is reciprocated by fluid pressure upon reciprocation of said plunger and alternately opens and closes the ports in the head.



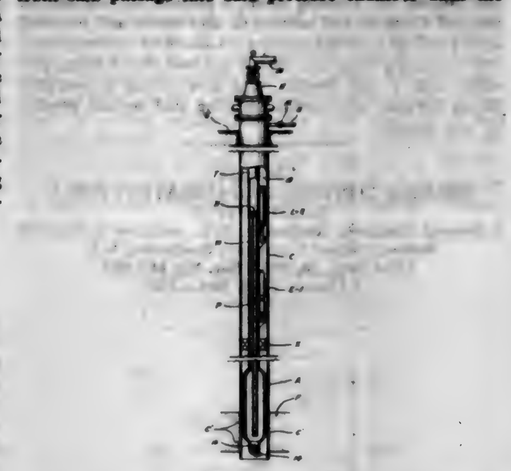
2,948,232

GAS LIFT METHOD AND APPARATUS

John H. McCarvell and Willis C. Carlisle, both of 1525 Prince St., Houston, Tex.

Filed July 18, 1957, Ser. No. 672,731
14 Claims. (Cl. 103—232)

3. An apparatus for lifting liquid in a well with a gas under pressure, comprising a well casing, a well tubing disposed in said well casing with a longitudinal passage therebetween, means on said tubing for introducing gas under pressure into said longitudinal passage to develop a predetermined gas pressure in said passage, said well tubing having a pressure chamber with a closed upper end formed therein and an open lower end in communication with the bore of the tubing so as to provide a confined area above the level to which the liquid rises in said chamber, means on said tubing for admitting the gas in said passage at said predetermined pressure into said chamber to force the liquid level downwardly in said chamber and upwardly in the rest of the tubing to create a differential in liquid levels between the liquid in the pressure chamber and the liquid in the tubing externally of the pressure chamber which develops a predetermined back pressure in said pressure chamber, and additional means on said tubing for introducing the gas from said passage into said pressure chamber until the



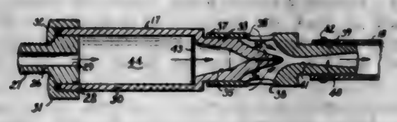
pressure in said pressure chamber falls below said predetermined back pressure for thereby providing a surge of pressure gas in said tubing for forcing a quantity of the liquid in the pipe to discharge therefrom at an elevated point with respect to said pressure chamber.

2,948,233

EVAPORATIVE COOLER

Emil Frank Scharfe, 5106 Caswell Ave., Austin, Tex.

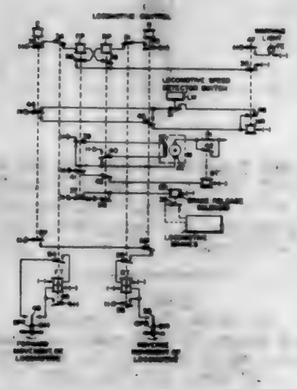
Filed July 2, 1957, Ser. No. 669,573
2 Claims. (Cl. 103—262)



1. In an evaporative cooler having a lower base, an overflow pipe arranged adjacent said base, a housing extending upwardly from said base and including walls which are made of absorbent material defining evaporative pads, a first conduit extending into said housing and adapted to be connected to a source of supply of water and a manually operative valve connected to said first conduit, the improvement comprising a jet pump adapted to be connected to said conduit, a second conduit extending upwardly from said jet pump for discharging water, said jet pump including a frame embodying spaced parallel vertically disposed end plates and spaced parallel side pieces, a reticulated member having a major portion of arcuate formation, said reticulated member having the side edge portions thereof secured beneath the side pieces of said frame and the remaining edge portions of said reticulated member being in engagement with the edges of the end plates thereby preventing foreign particles from entering the jet pump, a plug including a threaded neck adapted to be connected to said first conduit, there being a longitudinally extending bore in said plug for the passage therethrough of water, a cylindrical sleeve connected to said plug and extending therefrom, a collar engaging said plug and having a portion surrounding an end of said sleeve, a screen mounted in said sleeve, a reduced diameter end portion extending from said sleeve and terminat-

ing in a pointed tip, there being a tapered chamber in said reduced diameter end portion terminating in a passageway of reduced size, said passageway extending through said pointed tip, a casing having a portion surrounding the reduced diameter end portion of said sleeve and provided with a pair of opposed openings, a shank of reduced diameter extending from said casing and said shank being provided with a bore therein, said bore having a restricted throat portion, and means securing said second conduit to said shank.

2,948,234
REMOTE CONTROL ORGANIZATION FOR A LOCOMOTIVE
J Donald Hughson, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Filed Sept. 30, 1957, Ser. No. 687,008
4 Claims. (Cl. 104—26)



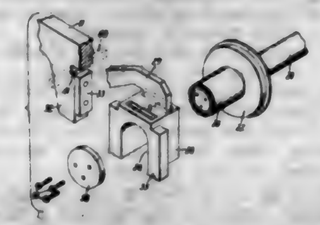
1. In a system for the automatic operation of a vehicle having a reversible motive power means and running over a stretch of track, the combination comprising, radiation communication apparatus including transmitting means at a fixed location and receiving means on said vehicle, means for controlling said transmitting means to transmit distinctive signals to said receiving means, said receiving means being differently controlled by said distinctive signals respectively for selectively operating said motive power means alternatively to forward and reverse and deenergized conditions, control communicating apparatus including trackside means positioned along said track at at least one designated point defining a terminus of an operating zone on said stretch of track for said vehicle and also including vehicle-carried means operated by said trackside means only as said vehicle passes said designated point, said trackside means operating said vehicle-carried means from a normal first condition to a second condition as said vehicle moves out of said operating zone, means controlled by said vehicle-carried means when in its said second condition for deenergizing said motive power means and preventing further operation of said motive power means in the direction taken by said vehicle as it passes out of said zone past said designated point, and means being distinctively controlled by said receiving means to restore said vehicle-carried means to its said normal first condition when once operated to said second condition only when said receiving means receives a control from said transmitting means normally effective to deenergize said motive power means, whereby said motive power means is deenergized when said vehicle moves out of said operating zone and can subsequently be energized to effect forward or reverse motion of said vehicle only by first transmitting a deenergizing control to said receiving means.

2,948,235
CAR SHIFTING APPARATUS HAVING COMBINED CAR-ADVANCING AND CAR-RETARDING ACTIONS
William R. Stansler and Lobron W. Miller, Paris, Ky., assignors to The W. R. Stansler Corporation, Paris, Ky., a corporation of Kentucky
Filed Nov. 10, 1958, Ser. No. 772,953
13 Claims. (Cl. 104—162)



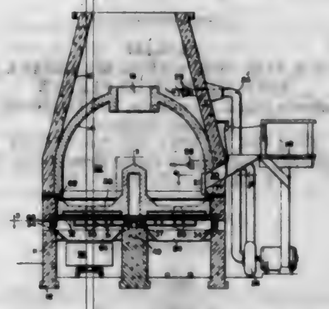
1. A car shifting apparatus comprising a pair of fluid power cylinders arranged in substantially parallel relation to each other, barneys connected to pistons in said power cylinders respectively to be actuated thereby, at least one car-advancing dog and one car-retarding dog being pivotally mounted on each barney and movable between a first car-engaging position and a second car-disengaging position, means interconnecting said barneys for causing the advancing barney to retract the other barney, a fluid power source, valve means for directing power fluid from said source alternately into each of said power cylinders and exhausting fluid from the other power cylinder into an exhaust conduit maintained under a predetermined back pressure, valve means for maintaining said back pressure, a compensating fluid circuit receiving fluid from said exhaust conduit, a compensating cylinder assembly in said compensating circuit having enlarged piston means connected to said barney interconnecting means, said enlarged piston means being constructed to slide a limited distance in the direction of car travel and in opposition to the fluid pressure in said compensating cylinder assembly, means for returning excess fluid from said exhaust conduit and from said compensating circuit to said power source, and means for moving to its second position the car-retarding dog of the barney whose cylinder is receiving power fluid during the movement of said enlarged piston means in the direction of car travel.

2,948,236
JOURNAL BOX ARRANGEMENT
Richard N. Cross, Erie, Pa., assignor to General Electric Company, a corporation of New York
Filed Dec. 16, 1957, Ser. No. 702,918
4 Claims. (Cl. 105—220)



1. A railroad vehicle truck comprising a pair of side frame members, a rigid cross member connecting said side frame members, a first pair of aligned journal box cavities, one of said first pair of cavities being defined in one of said side frame members and the other of said first pair of cavities being defined in the other of said side frame members, a second pair of aligned journal box cavities, one of said second pair of cavities being defined in one of said side frame members and the other of said second pair of cavities being defined in the other of said side frame members, an axle mounted in each of said pairs of journal box cavities, each of said cavities having a housing member positioned therein, a bearing within the housing member for rotatably journaling one end of the corresponding axle, a thrust bearing member on the ends of each axle extending radially therefrom to provide a thrust bearing surface between the end of each axle and the corresponding housing member, each housing member having flanges only on the outside of the corresponding side frame member to impart lateral thrust between the housing and the outside of the corresponding side frame member, whereby only compressive stresses are applied to said cross member.

2,948,237
REVOLVING HEARTH FOR A COMBUSTION CHAMBER
Florian C. Toepel, 3829 46th Ave. NE., Seattle, Wash.
Filed Feb. 17, 1958, Ser. No. 715,701
3 Claims. (Cl. 110—13)



1. In a garbage disposal unit having a primary combustion chamber which has a dome-shaped top with a large discharge opening centered in said top and has means therein for burning refuse under forced air and at high temperatures and a shield wall which tapers, as it extends upwards, disposed concentrically around said primary combustion chamber, the improvement, comprising: a supporting foundation wall for said disposal unit formed as a continuation of said shield wall; a charging chute which discharges materials directly into the primary combustion chamber; a tangentially disposed duct in communication with said combustion chamber, for supplying, under pressure, the bulk of the air needed to support combustion; a revolvable hearth forming the floor of said primary combustion chamber and having openings therein through which unburnables may pass downward; platforms disposed below said openings and supported from said hearth to travel with it at all times; said platforms spaced from said hearth just sufficiently to allow unburnables to pass through the said openings in small quantities together with ash but to form a base preventing the fire from passing downwardly; the foundation wall having an opening therein, on the same general horizontal plane as the platforms, to facilitate selectively raking the unburnables off of the platforms as the hearth is revolving; means for moving the unburnables out from under said hearth; and variable speed drive means for revolving said hearth.

2,948,238
FLUID INJECTION DEVICE
William M. Hoffman, Dayton, Ohio, assignor of one-half to Frederic C. Von Derau, Dayton, Ohio
Filed Apr. 14, 1959, Ser. No. 806,293
3 Claims. (Cl. 111—7.4)

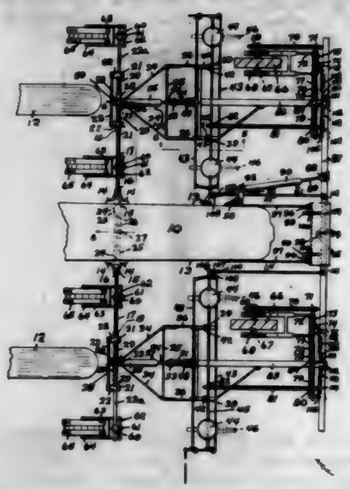
1. A device for injecting fluids containing plant foods and the like into the root systems of household type plants and the like, comprising: a housing member having a substantially closed chamber therein adapted to contain said fluids; a tubular member having one end affixed to said housing member and having the opposite end thereof adapted for insertion into the soil surrounding the root system of said plants, said tubular member being apertured to permit fluid flow therefrom; and a fluid actuator removably disposed within said chamber, said actuator having a hollow projection depending therefrom in mating engagement with said one end of said tubular member such that the hollow constituting outlet fluid passage portion of said projection is substantially in axial alignment with respect to the fluid passage of said tubular member, an inlet fluid passage communicating with said chamber, and a bore communicating with both of said fluid passages, said actuator further including a piston slidably disposed within said bore, a first valve means operable for closing communication between said bore and said outlet fluid passage during outward movement of said piston whereby a measured amount of fluid is permitted to be withdrawn from said chamber into said bore, a second valve means operable for closing communication between said bore and said inlet fluid passage during inward movement of said piston whereby said measured amount of fluid is permitted to be discharged from said bore into said tubular member, and manually operable actuating means operatively connected to said piston and adapted for manipulation by the operator of said fluid injection device.



2,948,239
CORN PLANTER
Sverre Amundsen, 414 Benson Bldg., Sioux City, Iowa
Filed Dec. 29, 1955, Ser. No. 556,285
1 Claim. (Cl. 111—52)

A corn planter assembly comprising brackets for attachment to the sides of a tractor, laterally extending generally horizontal rods attached to said brackets such that said rods extend outwardly from the opposite sides of the tractor, a bracket for attachment to the forward end of the tractor, a horizontal bar pivotally attached to the last mentioned bracket about a vertical axis substantially intermediate the ends of the bar with the bar extending on opposite sides of the tractor generally parallel with said rods, a hydraulic piston and cylinder assembly for attachment at one end to the tractor and its opposite end being connected to said bar remote from its pivot axis to selectively pivot the bar, a forward frame unit disposed on each side of the tractor including a strap disposed generally parallel thereto, ball and socket means articulating the forward end of each strap to said bar, each forward frame unit also including vertically spaced frame members rigid with the rearward portion

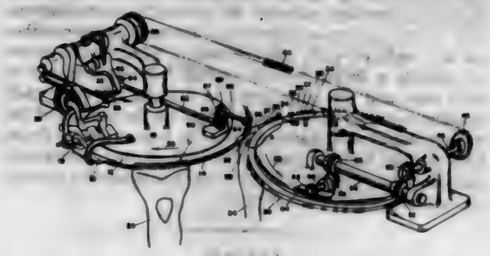
of each strap, a corn planter unit including a hopper and a furrow opener mounted on each strap, a rearward frame unit disposed on each side of the tractor, each rearward frame unit including frame elements extending forwardly from an associated horizontal rod and terminating at their forward ends in the region of the rearward ends of an associated one of said forward frame units, a vertical rod carried between said vertically spaced frame elements of each forward frame unit, a collar on each vertical rod and spring means bearing between the vertically spaced frame elements and the opposite sides of each collar resiliently positioning the collar between the vertically spaced frame elements, means pivotally con-



necting the forward ends of each rearward frame unit to an associated collar to provide resilient articulation between the forward and rearward frame units, a hollow tube slidably embracing each of said horizontal rods, spring means carried by each horizontal rod and bearing against opposite sides of each hollow tube to resiliently position the same upon the horizontal rods, ball and socket means articulating the rearward portion of each rearward frame unit to an associated hollow tube, and a piston and cylinder assembly connected at its opposite ends between each horizontal rod and the associated rearward frame unit to effect vertical movement of the latter.

2,948,240
LOOPING MACHINE AND METHOD
Samuel I. Bard, New York, and Nathan Mayer and Walter B. Berman, Yonkers, N.Y., assignors to Prestige, Inc., New York, N.Y., a corporation of Pennsylvania
Filed Apr. 6, 1959, Ser. No. 804,535
12 Claims. (Cl. 112—25)

1. The combination with the rotary dial of a looping machine which dial includes peripheral, equally spaced fabric supporting points adapted to receive all of the stitches of a course of knit fabric to support the fabric while its edge portion is being looped, of a support having spaced groups of loading points extraneous to said dial and engageable with corresponding groups of stitches of said course, means presenting said loading points to the corresponding supporting points on the dial to align all of the stitches of the entire course with said supporting points, and mechanical means for successively impaling all of the stitches of said course on said supporting points, the number of loading points being less than the number of supporting points for any given course of stitches, and the distance between the endmost of said loading points being greater than the distance between the endmost supporting points for any given



course of stitches whereby the stitches in said course are presented to said points in a relatively stretched condition to facilitate impalment of said stitches on said supporting points.

2,948,241
DEVICE FOR PREPARING MATERIAL FOR STITCHING INTO PLEATS
Gisela Antonia Maria Wyndham, 185 Goldhurst Terrace, London, England
Filed Oct. 22, 1957, Ser. No. 691,745
Claims priority, application Great Britain Oct. 24, 1956
2 Claims. (Cl. 112—146)

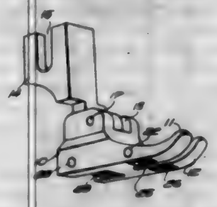


1. A pleat forming device for sewing machines and adapted to fold a flat strip of material into a series of stepped pleats which comprises a plate provided with a front end and with a rear end, a plurality of longitudinally extending converging arcuate corrugations becoming deeper and narrower and stepped and directed from said front end toward said rear end, material retaining members carried by said plate for pressing the material so that the latter follows closely the contour of said plate, and an end member secured to said rear end, said end member having a plurality of overlapping and consecutively communicating slots arranged in stepped relation to each other and registering with said corrugations at said rear end, whereby the strip of material entering said front end in flat condition emerges from the slots in the rear end in a stepped pleated arrangement.

2,948,242
PRESSER FOOT
Abraham Shuman, Union Mill #1, Fall River, Mass.
Filed July 17, 1958, Ser. No. 749,237
1 Claim. (Cl. 112—235)

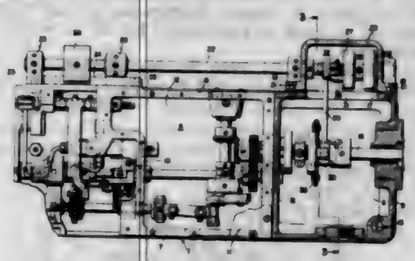
A presser foot for a sewing machine having a vertically reciprocable needle and a cam operated feed dog for feeding the material beneath the needle, comprising a

generally rectangular portion having spaced parallel feet extending integrally forwardly therefrom, each of said feet having a rectangular opening extending vertically therethrough, a shaft extending transversely through said feet through said openings, said shaft having a central U-shaped slot to permit vertical passage of the sewing machine needle through the axis of said shaft, a roller rotatably mounted on said shaft in each of said openings, the rear of said rectangular portion having an opening



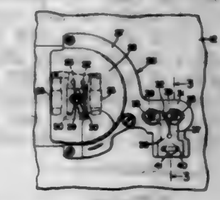
extending upwardly from the bottom rear corner and partially through said rectangular portion, a shaft extending through said opening, a roller rotatably mounted on said shaft, the roller on the right foot having a toothed surface, said rollers being mounted tangentially to the bottom of the presser foot, and means for mounting said presser foot on a sewing machine, whereby said rollers will be positioned over the feed dog and the sewing machine needle will reciprocate through said U-shaped slot and between said rollers on said feet.

2,948,243
PULLER FEED MECHANISMS FOR SEWING MACHINES
Hans Hacklander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Mar. 25, 1957, Ser. No. 648,051
7 Claims. (Cl. 112—256)



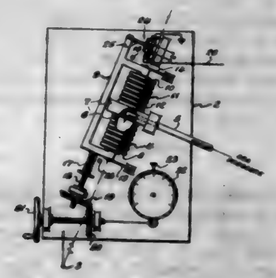
1. In a sewing machine having a frame including a bed, a closed splash-lubricated compartment internally of said bed, a housing secured to said bed, said bed and housing having a communicating opening having a lower edge vertically above the bottom of said housing to define a well in the bottom of said housing, a first shaft extending into said housing, a main shaft journaled longitudinally of said bed and having a portion within said compartment, an adjustable eccentric on said main shaft within said compartment, a one-way clutch on said first shaft within said housing and extending into said well, a pitman extending through said opening and operatively connecting said eccentric to said clutch, and means for moving lubricant through the opening into said well during operation of the machine.

2,948,244
FEED COVER-PLATES FOR SEWING MACHINES
John P. Enos, Union, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Feb. 15, 1955, Ser. No. 488,215
3 Claims. (Cl. 112—260)



1. A feed cover-plate for a sewing machine having a frame provided with a pair of tapped attachment fastener securing holes, said feed cover-plate being formed with an arm having opposite sides of which one side is adapted to abut said sewing machine frame, a pair of fastening screws each having a threaded shank formed with a narrowed neck portion, said feed cover-plate arm being formed with an elongate aperture, said elongate aperture having a width slightly larger than the diameter of the threaded portions of said fastening screws, said fastening screws each being disposed for axial movement through said elongate aperture, a fastening screw retainer secured to said feed cover-plate arm at a point remote from said elongate aperture therein and at the side of said arm opposite that which is adapted to abut said sewing machine frame, and a pair of separate resilient members carried by said fastening screw retainer, each of said resilient members being bifurcated and formed with a keyhole shaped space between bifurcations, of which keyhole shaped space the narrowest portion has a width less than the diameter of the necked portion of said fastening means and the widest portion has a width less than the diameter of the threaded shank and greater than the diameter of said necked portion of said fastening screws each to embrace the necked portion of one of said fastening screws over the elongate aperture of said feed cover plate arm.

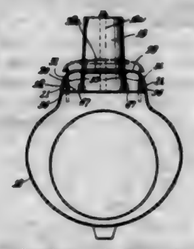
2,948,245
FLUID PRESSURE-RESPONSIVE APPARATUS FOR CONTROLLING NAVIGABLE CRAFT
Frederick B. Brand, Sea Cliff, and Joseph H. Chadwick, Jr., Levittown, N.Y., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 12, 1955, Ser. No. 481,293
14 Claims. (Cl. 114—16)



8. In depth control apparatus for a submarine craft, a pressure sensitive element mounted at a location offset both vertically and horizontally above a normally horizontal axis of movement of said craft, said element being in operative communication with said pressure medium

and including a portion movable toward and away from said craft axis in response, respectively, to increases and decreases sensed in the pressure of said supporting medium as said element moves vertically relative thereto, and mass means coupled to said movable portion so as to impart a gravity-derived force thereto having a component toward said craft axis that varies in dependence upon the inclination of said craft about said axis, said component having a maximum value when the craft is so inclined as to bring said offset element directly above said axis and having a value for all inclinations that prevents said movable portion from responding to pressure changes resulting from vertical movements of said element due solely to inclinations of said craft about said axis.

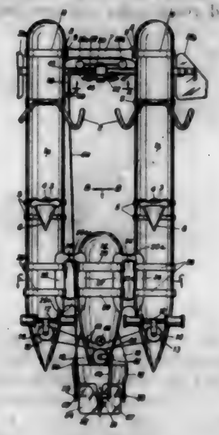
2,948,246
SUBMARINE DECK AND MISSILE-LAUNCHING CONSTRUCTION
John J. Sullivan, 3920 Granby St., Norfolk, Va.
Filed Apr. 14, 1958, Ser. No. 728,335
11 Claims. (Cl. 114—16)



1. A submarine having a hull in the form of a large elongate tube tapered at both ends, said hull being provided with an expansive deck extending longitudinally thereof from a point adjoining the stern to a point adjoining the bow, said deck having an average width substantially greater than the width of a conning tower for such hull; a solid, water-tight railing extending along both sides of the deck substantially for the full length thereof; upright tapered enclosures disposed above the hull on the bow and stern of the same and beyond the ends of the deck, said enclosures projecting upward above the said railings and having smooth, sloping exteriors; means comprising at least one inflexible inverted shell, providing a water-tight enclosure above the said deck and openable at the sides thereof, said means having rigid, pressure-resistant roof sections adapted at the ends to engage the said upright enclosures and to constitute a continuous substantially straight and horizontal pressure-resistant roof extending between the upper surfaces of the enclosures as continuations thereof, said roof sections having dependent side portions adapted to engage the said railings and to constitute continuations of the outer surfaces thereof; and a mechanism for raising and opening the said means to provide space above the railings, and for lowering and closing the said means to effect the said water-tight enclosure.

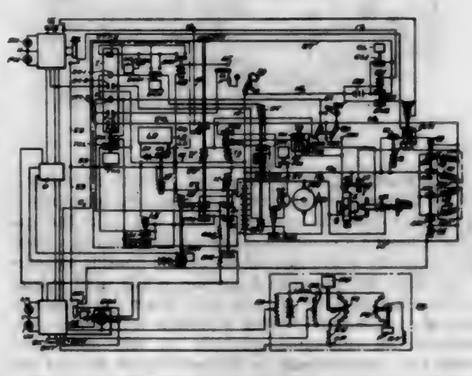
2,948,247
TWO-SEATER SUBMARINE VESSEL
Dimitri Issaiewitch Rebikoff, 35 Blvd. Carnot, Cannes, Alpes Maritimes, France
Filed Sept. 16, 1958, Ser. No. 761,366
Claims priority, application France Sept. 16, 1957
6 Claims. (Cl. 114—16)

1. A first and second seater submarine vessel comprising two streamlined shells each adapted to be mounted by a diver, means interconnecting said shells at the front end thereof, a third streamlined shell disposed between said two shells at the rear end thereof, means connecting said third shell with said two shells, propulsion means disposed in said third shell, hydroplanes mounted at the front of said vessel, steering and diving planes mounted at the rear of said vessel, common manually operable control means coupled to said hydroplanes and said diving planes first and second handles connected to said control means, each of said



handles adapted to actuate said control means, said first handle extending closer to said first shell than said second handle and said second handle extending closer to said second shell than said first handle and two sets of operating pedals coupled to said steering planes one of said sets mounted to said first shell and the other of said sets mounted to said second shell.

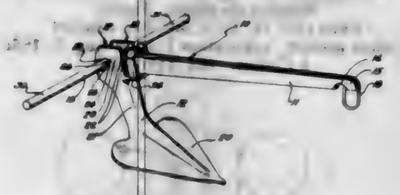
2,948,248
STEERING SYSTEM FOR A HOMING TORPEDO
Thomas A. Daly and Stephen Kowalyshyn, Jr., Sharon, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Sept. 24, 1946, Ser. No. 699,040
7 Claims. (Cl. 114—21)



1. In a conveyance adapted for operation in a fluid medium and having steering and elevating rudders for control thereof in the medium, the combination of, electroresponsive steering and elevating means, respectively,

for controlling the steering and elevating rudders, gyroscope actuated control means for producing electrical quantities in dependence of a departure in angular relation from a prearranged angular relation of said gyroscope control means and conveyance, depth responsive control means for producing electrical quantities indicative of a departure in depth and change in angular position of operation of said conveyance from a prearranged depth, directional control means for producing electrical quantities in dependence of the directional disposition of a target with respect to said conveyance, elevational control means for producing electrical quantities in dependence of the elevational disposition of said target with respect to said conveyance, and timing means constructed and arranged to first apply the electrical quantities produced by said gyroscope actuated control means and said depth control means, respectively, to said steering and elevating control means, and thereafter to remove said electrical quantities of said gyroscope actuated control means and said depth control means and to apply the electrical quantities produced by said directional and elevational control means, respectively, to said steering and elevating control means.

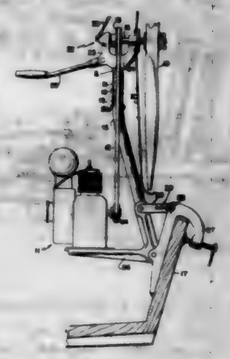
2,948,249
SINGLE FLUKE ANCHOR
Harry M. Gesmer, 4775 Topeka Drive, Tarzana, Calif., and Harry L. Myers, Santa Monica, Calif.; said Myers assignor to said Gesmer
Filed Oct. 22, 1956, Ser. No. 617,449
13 Claims. (Cl. 114—208)



1. A single fluke anchor comprising: a shank; a fluke; means including a crossarm for connecting said fluke to said shank, said means being manually operable to readily disconnect said shank and fluke to allow complete disassembly of said anchor; means operatively associated with said crossarm for urging said anchor into a position in which said fluke is properly disposed for engaging the bottom when said anchor is dropped; and resilient clamp means operatively associated with said shank and fluke for normally maintaining said shank and fluke in a fixed relationship, said means being releasable to allow variation of said fixed relationship to facilitate release of said anchor from engagement with the bottom.

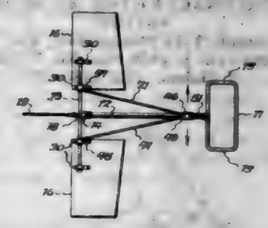
2,948,250
AIR THRUST BOAT
Fred M. Peterson, 3308 Mohawk Trail, Fort Worth, Tex.
Filed Mar. 7, 1955, Ser. No. 492,395
2 Claims. (Cl. 115—5)

1. A steering device for an air thrust propeller driven boat, said steering device including a vertical support carried by said boat and extending upwardly thereabove, a vertical pivot shaft rotatably received in the upper end of said vertical support, a bearing mount rotatably mounted in the upper end of said vertical shaft, a horizontal shaft journalled in said bearing mount and adapted to support and rotate the propeller, a driven pulley mounted on said horizontal shaft and positioned over the axial center of the upper end of said vertical shaft, a drive pulley beneath the upper end of said vertical shaft and in alignment with the axis of said shaft, a belt around said pulleys and positioned outwardly of and along opposite sides of said ver-



tical support and said pivot shaft, and a tiller connected with said bearing mount.

2,948,251
DIVING PLANE
Edward H. Replogle, 230 Getzville Road, Buffalo 26, N.Y.
Filed Oct. 18, 1957, Ser. No. 691,108
7 Claims. (Cl. 115—6.1)

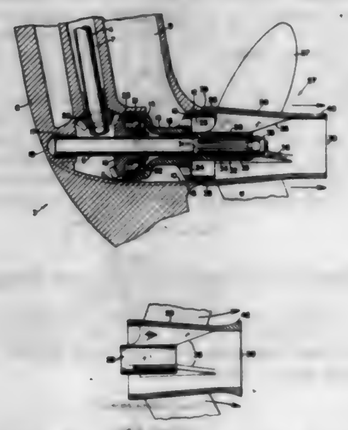


1. An underwater towed diving plane comprising a frame member having an upwardly curved forward portion, a wing mounted on said forward portion for rotation about a lateral axis for depth control purposes, and an underarm occupant retention bar disposed substantially parallel to said lateral axis and arranged above the rearward end of said frame member.

2,948,252
PROPELLER HUB EXHAUST SYSTEM
Charles F. Alexander, Jr., Oshkosh, Wis., assignor to Kiekhaefer Corporation, Cedarburg, Wis., a corporation of Wisconsin
Filed Oct. 31, 1957, Ser. No. 693,661
10 Claims. (Cl. 115—17)

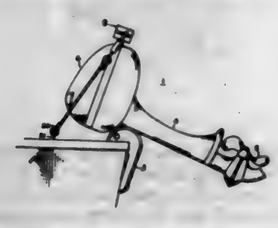
1. In an outboard motor including an underwater unit having a passage for conducting exhaust gases through said unit to an opening rearwardly of the units communicating with said passage, a propeller hub mounted rotatably in alignment with said opening rearwardly thereof and comprising an annular hub member defining a second passage having a diameter at the forward end thereof corresponding generally to that of the first named opening for receiving the exhaust gases from said first named passage and terminating in a discharge opening at the rear of said member for discharging the exhaust gases, said annular hub member carrying the propeller blades radially outwardly thereof and providing a smooth outer surface tapering rearwardly gradually to a smaller diameter in the region of said blades and extending for a substantial distance beyond said region with an outer surface shaped to provide a peripheral water converging

retarding surface ahead of said discharge opening to substantially eliminate any immediate radial inward com-



ponent in the water flowing over the hub in service at the discharge opening.

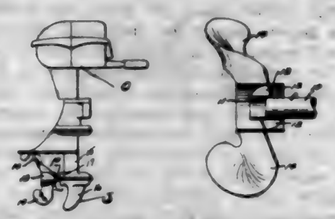
2,948,253
HOLDING-BRACKET FOR AN OUTBOARD MOTOR
Noble S. Coonrod, 2316 Market Ave., Fort Worth, Tex.
Filed Feb. 3, 1958, Ser. No. 712,947
7 Claims. (Cl. 115—17)



1. A bracket assembly for holding an outboard motor in a raised position at the stern of a boat, wherein the upper housing of said motor is formed with a projection extending from the rear thereof, comprising: a pair of cables individually connectable to opposite sides of said boat, a bracket formed with a recessed portion and two flanges, a holding block mounted in said recessed portion and formed with a shaped opening adapted to fit snugly over said projection, and means mounted to each of said cables for fastening said cables to said flanges when said block is fitted over said projection, to thereby hold said motor in a raised position and prevent it from turning or shifting.

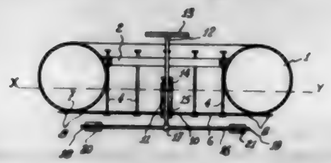
2,948,254
PROPELLER
George A. Witt, 1537 Owen St., Saginaw, Mich.
Filed Aug. 12, 1959, Ser. No. 833,355
2 Claims. (Cl. 115—17)

1. In combination, an outboard motor including a depending skeg and a horizontal drive shaft supported a considerable distance above the lower end of the skeg, a propeller fixed on said drive shaft a spaced distance rearward of the skeg comprising an inner sleeve fitting on said shaft and an outermost sleeve concentric with said inner sleeve a spaced distance radially outward thereof, circumferentially spaced, outer, helical blades of relatively high pitch secured at their inner ends to said outermost sleeve with their outer ends free to contact water from all directions, circumferentially spaced, helical, inner blades of substantially lower pitch than said outer blades secured at their inner and outer ends to the inner and outermost sleeves respectively with the said skeg extending beyond said inner blades so that at high speeds an air pocket is formed behind the skeg and no water



reaches the inner blades so that the outer blades of high pitch solely drive through the water at high speeds, said different pitches of the inner and outer blades being such that at low starting speeds the inner blades drive through the water while at high speeds no water reaches the inner sleeve behind the skeg and the outer blades drive through the water and exert the thrust.

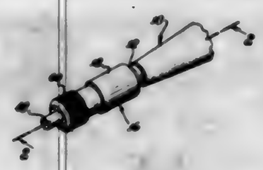
2,948,255
NAUTICAL PROPULSION SYSTEM USING WEBS AND CRAFT FITTED WITH SUCH SYSTEM
Adolphe Sbrana, 16 Rue du Gaz, Martigues, Bouches-du-Rhone, France
Filed Oct. 16, 1956, Ser. No. 616,229
Claims priority, application France Aug. 9, 1956
6 Claims. (Cl. 115—28)



1. In a water craft, a floating structure which is substantially circular in shape, a vertical shaft projecting through and journalled in the center of said structure, horizontal arm means secured to the shaft under water and below said structure, a means for oscillating the shaft about its vertical axis and the arm means along a horizontal plane, propulsion members supported from said arm on opposite sides of said shaft and having edge portions above and below said horizontal plane, each propulsion member being deformable to alter the spacing of its edge portions from the horizontal plane in which said arm oscillates and being adapted to spread open when moved in one direction and to close when moved in the opposite direction by motion of said arm in the plane relative to the water.

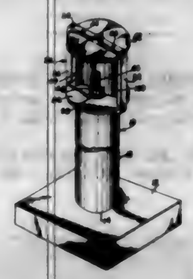
2,948,256
TIRE PRESSURE INDICATOR
Leonard L. Tapp, 12922 Shreve Road, Whittier, Calif.
Filed Sept. 16, 1957, Ser. No. 684,272
8 Claims. (Cl. 116—34)

1. A tire pressure indicating device including a housing having a base portion with an internally threaded recess therein for threadedly engaging said housing over an externally threaded tire valve stem, abutment means mounted in said base portion and operatively engageable with the valve core in said valve stem to open the tire valve when said housing is threadedly engaged over the valve stem, a cylindrical chamber having an inner end and an outer end in said housing, the inner end of said chamber communicating with said recess and the outer end of said chamber communicating with the outside of said housing, a plunger slideably mounted in said chamber, said plunger including an inner portion in sealing engagement with the cylindrical wall of said chamber and an outer indicating portion extending out through the outer end of said chamber, said plunger being mov-



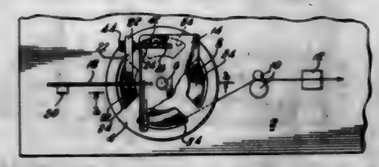
able between an extended position in which the outer portion of said plunger projects a substantial distance outwardly from said housing and a retracted position in which the outer portion of said plunger is substantially withdrawn within said housing, and spring means mounted in said housing and operatively engaged with said plunger to urge said plunger toward a retracted position.

2,948,257
WARNING BLINKER SIGNAL FOR AUTOMOBILES
Maurice Levey, Hotel Berkeley Carteret, Boardwalk, Asbury Park, N.J.
Filed May 18, 1959, Ser. No. 814,035
2 Claims. (Cl. 116—63)



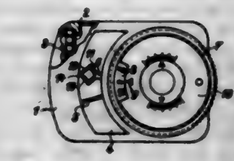
1. In a highway signaling device, a flat base, having a central socket, a solid cylindrical post supported in said socket, said post having a central bore in the top end thereof, an open frame mounted on the top end of said post and protruding thereabove, said frame constituted by a flat metal bar having side walls, a top wall connecting the side walls, bottom wall portions spaced from each other and extensions depending from the ends of said bottom wall portions, said extensions disposed on opposite sides of the top end of the post and fixed thereto, a circular disk at the top of said frame, another circular disk at the bottom of the frame, a signaling assembly rotatably mounted on the top of said post, said assembly including a bearing member having a solid cylindrical body with an extension at one end thereof, said extension being slit centrally for its length, the other end of said body having a central socket, a shaft having one end fixed in the socket of said body and extending into the bore in said post, anti-friction units sleeved around said shaft at its top and bottom ends and a sheet metal vane disposed verically in the slit in said extension and secured to said extension, said vane confined within the walls and disks of said frame and adapted to be engaged by the wind, said surface having one surface colored red and its other surface colored yellow, the body of said vane being curved at its ends in opposite directions.

2,948,258
SIGNAL DEVICE FOR TAPE RECORDERS
Walter P. Koechel, 117 73rd Ave., St. Petersburg Beach, Fla.
Filed July 30, 1958, Ser. No. 751,914
7 Claims. (Cl. 116—67)



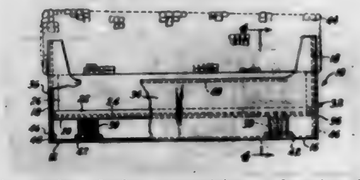
1. The combination with a tape recorder and reproducer having a reel which rotates about a vertical axis during withdrawal of tape therefrom, the reel comprising two discs having arcuate apertures therein and an intermediate hub portion between the discs and about which the tape is wound, of a device for signaling near depletion of the tape on the reel which comprises a member supported by the upper reel disc with a portion thereof maintained in alignment with the axis of rotation of the reel, means holding said member against rotation with the reel, a horizontal shaft mounted in said member and extending over the arcuate apertures in the upper reel disc, an element pivotally mounted at one end on said shaft and having a free end positioned to drop by gravity into successive apertures in the reel disc during rotation of the reel, the extent of movement of the free end of the element being limited by engagement with the tape when more than a predetermined number of turns of tape remain on the reel, and means responsive to increase in depth of penetration of the apertures by the free end of the element due to near depletion of the tape, for producing an audible signal.

2,948,259
POINTER ARRANGEMENT FOR METERS
Paul Frost and Willy Kaden, Munich, Germany, assignors to Agfa Aktiengesellschaft, Leverkusen, Germany
Filed Mar. 27, 1958, Ser. No. 724,344
Claims priority, application Germany Apr. 2, 1957
4 Claims. (Cl. 116—136.5)



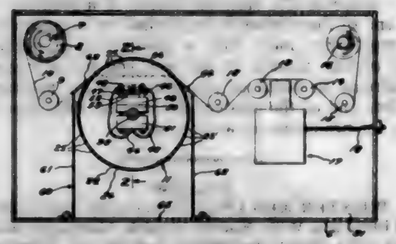
1. For use in a meter such as an exposure meter, in combination, a first pointer moved automatically by the meter; and a second pointer moved manually by the operator to a position aligned with said first pointer with one of said pointers overlying the other pointer for indicating certain informaton to the operator, said second pointer having a free end provided with a pair of legs spaced from each other and respectvely terminating at the extreme end of said second pointer in a pair of leg portions which are directed toward each other and which terminate respectively in extremities defining between themselves a gap having a width approximately equal to the width of said first pointer so that the alignment of the latter with said gap indicates accurate alignment of said pointers.

2,948,260
CORN BUTTERING DEVICE
Terry S. Labore, 6909 Riggs Road, West Hyattsville, Md.
Filed July 24, 1958, Ser. No. 750,729
9 Claims. (Cl. 118—13)



1. A coating device comprising a housing having a bottom wall, side walls, and an open top; a vertically movable tray having a rigid bottom within said housing; resilient means acting on said rigid bottom for supporting said tray and urging said tray upwardly; a shroud telescopically slidable about said housing; and means carried by said shroud for limiting the upward movement of said tray.

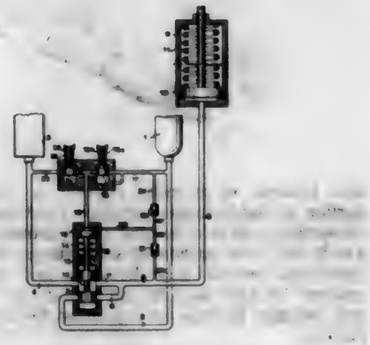
2,948,261
APPARATUS FOR PRODUCING PRINTED WIRING BY METAL VAPORIZATION
George P. McGraw, Jr., Downers Grove, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 7, 1956, Ser. No. 626,897
4 Claims. (Cl. 118—49)



1. An apparatus for producing printed wiring having transversely extending metallic circuit paths comprising an evacuated chamber having therein an arbor for supporting a supply of insulating material in web form, a take-up arbor for withdrawing said web of insulating material from the supply thereof, a rotative drum having elongated slots in its cylindrical wall to define a predetermined pattern of elongated slots in said cylindrical wall, said pattern of elongated slots extending circumferentially and axially along the peripheral surface of the drum, means for guiding a web of insulating material from the supply arbor to the take-up arbor over the drum for engaging and rotating the drum, a metal vaporizer within said drum for directing vaporized metal through said elongated slots onto the surface of said web to form metallic circuit patterns extending longitudinally and transversely of the web, and a second vaporizer for vaporizing another metal adjacent to the path of said web for applying a coating of said second metal on the previously applied metallic pattern on the web.

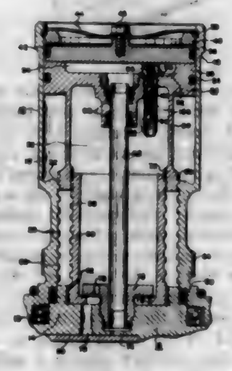
2,948,262
PRESSURE-LIMITING DEVICE
Jean Louis Gratzmuller, 30 Ave. Georges Mandel, Paris 16e, France
Filed Feb. 19, 1957, Ser. No. 641,113
Claims priority, application France Mar. 2, 1956
4 Claims. (Cl. 121—38)

1. A hydraulic system for selectively feeding a hydraulic circuit with liquid from a source of pressure liquid and thereafter limiting at any time the pressure in said circuit at a value at most equal to the instantaneous pressure at the outlet of said source, said system comprising a feeding duct connecting said source with a portion of said circuit, valve means to selectively open said duct until said circuit portion is filled with liquid and then to tightly re-close said duct, a by-pass to connect said



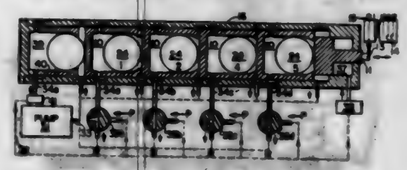
circuit portion with said source without passing through said valve means and a non-return means interposed in said by-pass to permit free flow of liquid from said circuit portion towards said source whenever the pressure in said circuit portion is higher than that at the outlet of said source while tightly preventing at any time flow of liquid from said source towards said circuit through said by-pass.

2,948,263
PROPELLER TORQUE UNIT CONSTRUCTION
Darrell E. Royer, Vandalia, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,324
10 Claims. (Cl. 121—38)



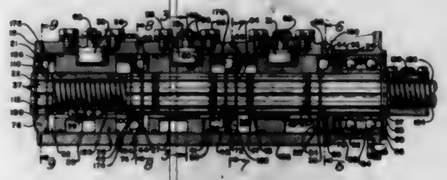
1. A propeller pitch adjusting servo motor including, a cylinder having a cylinder head at one end, a double acting piston disposed within said cylinder and dividing said cylinder into an increase pitch chamber and a decrease pitch chamber, said piston being capable of fluid pressure actuation in both directions between maximum and minimum pitch positions, said maximum pitch position being constituted by engagement of said piston with said cylinder head, and pressure relief valve means carried by said piston for limiting the maximum pressure potential in said increase pitch chamber when said piston is in the maximum pitch position.

2,948,264
DISCRETE POSITIONING MECHANISM
Marshall E. Freeman, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed June 25, 1959, Ser. No. 822,963
6 Claims. (Cl. 121—38)



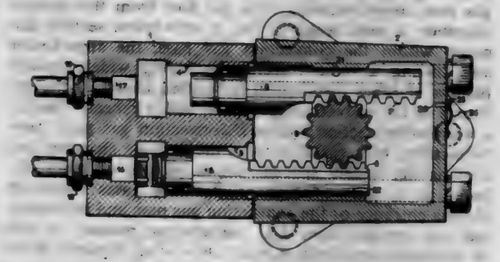
1. A mechanism for selectively positioning an element to any one of a plurality of discrete positions comprising: a plurality of capsule units, a housing mounting said units in serial motion transmitting relationship, biasing means disposed in said housing urging said units to a home position wherein adjacent units are in contact, a ball disposed for rolling engagement in each capsule unit and arranged to protrude past an open end of said unit a predetermined distance to move succeeding units a corresponding amount, pressure supply means connected to each unit, means for controlling said supply means to cause selective movement of each said ball to a protruded position, and means mounted for movement with the last capsule unit for transmitting the cumulative motion of said units to said element.

2,948,265
FLUID MOTOR
Raymond W. Jensen, Louis T. King, and Robert M. Bush, Phoenix, Ariz., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Nov. 20, 1957, Ser. No. 697,608
14 Claims. (Cl. 121—39)



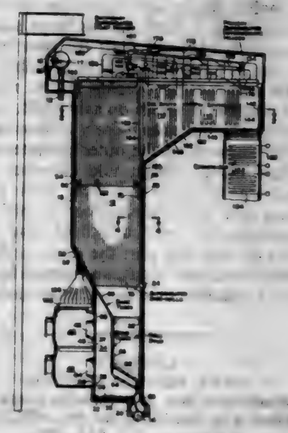
1. In a fluid operated motor the combination of: a housing having a bore therein; a hollow shaft rotatably mounted in said housing concentric with said bore; a jackscrew internally of said hollow shaft; a nut operable by said shaft and screw-threadedly connected to said jackscrew to shift it axially of said shaft; piston means mounted concentrically on said shaft and movable in said bore; rotary valve means carried by said shaft and disposed to apply fluid pressure from an external source to said piston means and direct used fluid to exhaust; spline means interconnecting said shaft and said piston means whereby fluid pressure may force said piston means to slide axially of said shaft while said piston means is coupled for rotation with said shaft; axially undulated cam means concentric with said shaft; and follower means engaging said cam means and operable to cause rotation of said piston means and shaft when motive fluid forces said piston means axially of said shaft, said valve means being timed and said cam and follower means being disposed to cause said piston means to transmit continuous torque to said shaft.

2,948,266
FLUID PRESSURE MOTOR
Jean Louis Gratzmuller, 66 Blvd. Maurice Barres, Neuilly-sur-Seine, France
Filed Mar. 18, 1958, Ser. No. 722,286
Claims priority, application France Mar. 29, 1957
2 Claims. (Cl. 121—120)



1. A fluid motor comprising a box, two pressure fluid cylinders in said box, two pistons each slidably mounted in one of said cylinders, a rotary shaft projecting at one end out of said box, transmission means interposed between said pistons and the inner part of said shaft to impart to the latter a reciprocating angular movement in response to alternate feeding of said cylinders with pressure fluid, control means to alternately admit pressure fluid in each one of said cylinders while evacuating fluid from the other, said box being entirely inclosed except for the hole accommodating said shaft projecting end and the respective ports through which said pressure fluid is introduced into said box and flows out therefrom, and an overload valve controlling a port through a wall of said box, for letting out any excess of pressure fluid while preventing any ingress of foreign material into said box.

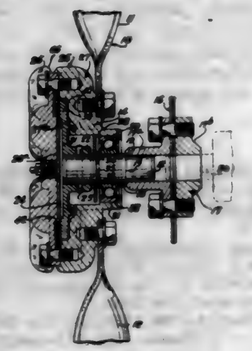
2,948,267
STEAM GENERATING UNIT HAVING A SUPERHEATER AND REHEATER EACH INCLUDING A RADIANT SECTION AND A CONVECTION SECTION
Paul H. Koch, Bernardsville, William D. Stevens, Hackensack, and Murray Wiener, Newark, N.J., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed May 10, 1955, Ser. No. 507,438
7 Claims. (Cl. 122—481)



1. In a steam generating unit having a section including steam generating wall tubes, fuel burning means asso-

ciated with the steam generating section for developing high temperature combustion gases from which heat is radiantly transmitted to the steam generating wall tubes, steam superheating wall tubes defining a large volume radiant heat absorption zone of a furnace chamber receiving the high temperature gases, a convection section including an arrangement of walls forming a convection gas pass communicating with gas flow from the furnace chamber, a superheater having a convection section disposed within the convection gas pass, the superheater also having a radiant section including widely spaced platens of tubes disposed at a position ahead of the entrance of the convection gas pass, and a reheater having a convection section within a convection gas pass communicating with gas flow from the furnace chamber and also having widely spaced radiant platens of tubes disposed in a zone of high temperature gases ahead of the gas entrance of the convection gas pass and intermediate and spaced from said superheater platens, a part of the steam superheating wall tubes being disposed ahead of the reheater platens relative to gas flow.

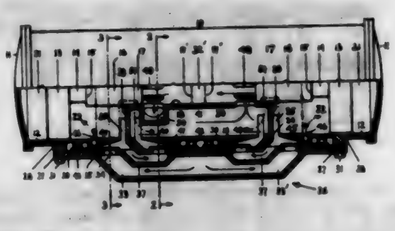
2,948,268
ENGINE ACCESSORY AND DRIVE MECHANISM THEREFOR
Daniel W. Roper, Roseville, and Sidney Oldberg, Birmingham, Mich., assignors to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Aug. 26, 1957, Ser. No. 680,241
9 Claims. (Cl. 123—41.11)



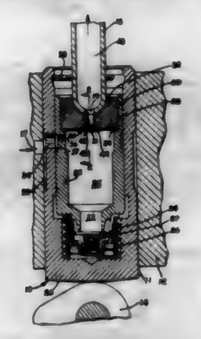
1. In an engine having an engine fan, drive means for said fan comprising a shaft driven from said engine, a drive disk connected to said shaft for rotation therewith, a chamber member defining a fluid chamber about said disk, a single anti-friction bearing mount rotatably supporting said chamber member on said shaft, said chamber having internal wall surfaces closely following but spaced from the outer surfaces of the outer peripheral portion of said disk, fluid means within said chamber cooperating with said surfaces to provide a shear drive between said members, said disk and said chamber member having cooperating portions for restricting fluid flow between the opposite sides of said disk past the outer periphery thereof, means for driving said shaft, and means for connecting said fan to said chamber member so as to be carried thereby.

2,948,269
FREE PISTON ENGINE
Jules Haltenberger, Box 131, Rancho Santa Fe, Calif.
Filed Apr. 16, 1956, Ser. No. 578,269
5 Claims. (Cl. 123—46)

1. In a free piston engine powergas generator an outer housing, a machined single plane adapting surface thereon, a piston having a bouncing chamber at one side, and an air piston compressor on the other, reciprocating in said housing, a manifold unit having a single plane mounting surface secured on said first mentioned surface, said unit including an ambient air inlet duct that terminates in an inlet valve port having a valve seat with an inwardly opening reed valve thereon, an air passage from said valve to said compressor, and from said compressor an air passage to a high pressure passage disposed in said manifold unit and terminating in an outlet valve port having a valve seat and an inwardly opening reed valve thereon, and an air passage from said outlet valve to a scavenging air reservoir, said reed valves are operatively secured on said manifold single plane surface, whereby, at manifold removal the reed valves and their respective valve seats become accessible for inspection and servicing.



2,948,270
MEANS FOR METERING LUBRICATING OIL FROM AN HYDRAULIC TAPPET TO A HOLLOW PUSH ROD
Paul F. Bergmann, North Muskegon, Mich., assignor to Johnson Products, Inc., Muskegon, Mich., a corporation of Michigan
Filed Apr. 17, 1959, Ser. No. 807,189
12 Claims. (Cl. 123—90)



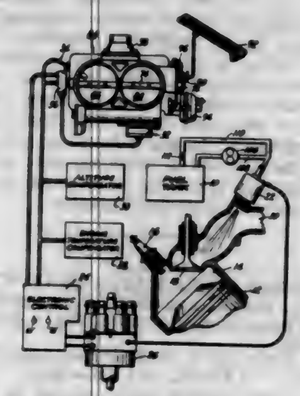
1. A hydraulic tappet comprising: a hollow plunger member having an open end; a rod seat member disposed at and closing said open end of said hollow plunger member, said rod seat member having a passageway; and a partition member between said rod seat member and the interior of said hollow plunger member, said partition member having an abutting portion abutting said rod seat member and entirely surrounding said passageway to prevent passage of liquid between said abutting portion and said rod seat member, and located between the center of said passageway and said abutting portion a depressed portion with a surface thereof depressed from said abutting portion with a part of said depressed surface underlying said passageway and another part of said depressed surface having an aperture therethrough.

2,948,271
AUTOMATIC MOTOR SPEED CONTROL APPARATUS
Vladimir Ignatjev, 45 Cove Ave., East Norwalk, Conn.
Filed Nov. 8, 1957, Ser. No. 695,253
15 Claims. (Cl. 123—102)



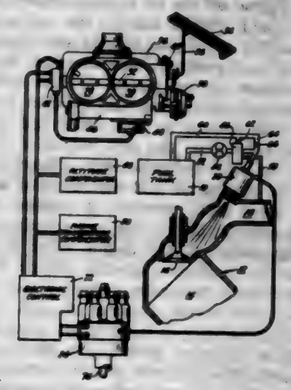
1. Speed control apparatus for a motor having a speed regulating member comprising, an actuator responsive to differential in pressure from separate fluid pressure sources and operatively connected to adjust said regulating member in accordance with variable amounts of said differential in pressure, and a selector control device including a valve member manually settable to directly vary the amount of pressure on said actuator from one of said sources, said control device including electromagnetic means effective when operated for disconnecting said actuator from said one pressure source, whereby a preselected pressure differential will be maintained on said actuator to effect a corresponding adjustment of said regulating member until said electromagnetic means become operative.

2,948,272
FUEL SUPPLY SYSTEM
Stephen G. Woodward and Curtis A. Hartman, Elmira, N.Y., assignors to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Nov. 14, 1956, Ser. No. 622,617
7 Claims. (Cl. 123—119)



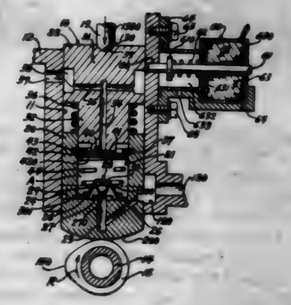
1. In a fuel supply system for an engine having a throttle and an induction passage, means energizable to supply fuel to said engine, means for energizing said first mentioned means for a controllable time duration, means responsive to induction passage pressure for varying said time duration, mnaually variable means for varying said time duration, and means operatively connected to the throttle for selectively connecting in accordance with throttle position the last two mentioned means to the second mentioned means to render one of said last two mentioned means effective at a time to vary said time duration.

2,948,273
FUEL SUPPLY SYSTEM
Ward C. Suttle, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed May 22, 1957, Ser. No. 660,853
5 Claims. (Cl. 123—140)



1. A fuel supply system for an internal combustion engine having an induction passage and a source of fuel comprising a nozzle, a discharge orifice in said nozzle opening into said passage, a conduit connecting said source with said nozzle, a valve in said conduit adapted to control the time duration of fuel flow through said orifice independent of engine speed and means responsive to induction passage pressure for maintaining a substantially constant pressure differential across said orifice throughout the operating range of said engine.

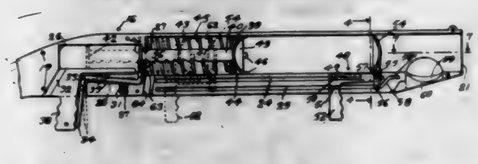
2,948,274
MEANS FOR MODIFYING THE OPERATING CHARACTERISTICS OF INTERNAL COMBUSTION ENGINES
George Wood, Southfield Township, Mich.
(17310 Melrose, Detroit 35, Mich.)
Filed May 21, 1958, Ser. No. 736,762
2 Claims. (Cl. 123—198)



1. In an internal combustion engine, a block, a plurality of engine cylinders in said block, intake and exhaust valves for each engine cylinder spring loaded to their closed positions, a cam operated valve train operating each said valve, a hydraulic lash adjuster in each said valve train comprising a cylinder having one open end and one closed end, a piston reciprocatingly mounted axially in said cylinder forming an oil chamber therein, said piston extending from said cylinder and having a shouldered lock-out groove therearound, the said cyl-

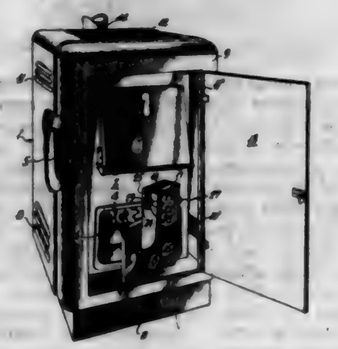
inder and piston having passages therein providing a free flow of engine oil under pressure through said hydraulic lash adjuster, said piston having an inwardly disposed central annular collar thereon with a flat valve seat formed at the inner end thereof, an apertured valve disc reciprocatingly mounted in said cylinder including spring means constantly urging it toward said piston valve seat to close off the oil passage therethrough, a retainer ring in said cylinder limiting the said spring loaded movement of the valve disc toward said piston and the movement of said piston in the direction of said valve disc, compression spring means in said cylinder constantly urging said piston and said cylinder to move longitudinally with respect to each other and piston valve seat off said valve disc, the said normal flow of engine oil through the said hydraulic lash adjuster being interrupted by the seating of said piston valve seat on said valve disc when axial pressure is applied on the hydraulic lash adjuster during the cam opening of the normally spring loaded closed engine valve of said valve train, means for rendering selected engine cylinders inoperative to reduce the power output of said engine comprising a lock-out device mounted on said engine block adjacent the valve lifter of the exhaust valve of each said selected engine cylinder including a spring loaded pin adapted to enter the lock-out groove of the piston of the exhaust valve lifter of each said selected engine cylinder when each said valve lifter is in its exhaust valve open position whereby to engage said exhaust valve lifter piston and hold it and the exhaust valve of each said selected engine cylinder open, the said valve lifter cylinder continuing to follow the engine cam and remain in contact therewith while the exhaust valve lifter piston is held in its exhaust valve open position, and solenoid means for retracting said spring loaded pin means whereby to release said exhaust valve lifters of said selected engine cylinders and permit said engine to function at full power.

2,948,275
SNOWBALL MAKER AND LAUNCHER
Robert D. Smith, Box 67, Maple Drive, Iroquois, Ontario, Canada
Filed Aug. 28, 1958, Ser. No. 756,144
5 Claims. (Cl. 124—27)



4. In combination with an elongated launcher body including a barrel having an open muzzle end, a spring projected plunger unit slidably mounted in a rear portion of the bore of the barrel and spring urged forwardly to a projected position, and a manually actuated combination trigger and sear unit for releasably latching the plunger unit in a retracted, cocked position; a pump unit including a piston disposed for sliding movement within the barrel and longitudinally thereof, said piston having a size and shape substantially corresponding to the cross sectional size and shape of the barrel bore, a manually actuated slide slidably connected to the launcher body, means pivotally connecting the piston to the slide, said piston being displaceable rearwardly in the barrel for moving a mass of snow rearwardly within the barrel and for compressing the mass of snow between the piston and a head, constituting the forward end of the plunger, and for thereafter displacing the plunger rearwardly to a retracted cocked position, means slidably connecting the piston to the launcher body and cooperating with the pivotal connection of the piston and slide for swinging the piston outwardly of the barrel bore at the forward extremity of movement of said piston.

2,948,276
COAL-FIRED SPACE HEATER
George W. Harding, Lynchburg, Va., assignor to Automatic Draft and Stove Co., Inc., Lynchburg, Va., a corporation of Virginia
Filed Jan. 24, 1956, Ser. No. 560,996
7 Claims. (Cl. 126—67)



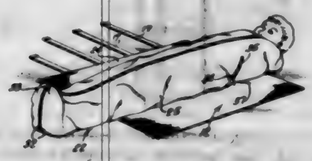
1. In a coal burning circulating space heater of the type having a body with a grate intermediately positioned therein defining therewith a combustion chamber above and an ash pit below the grate and having a cabinet surrounding the body in spaced relation thereto with an air inlet opening in its lower part and a relatively high outlet opening therethrough providing for circulation of room air between said body and said cabinet, the improvement comprising, a down draft conduit within the space between said body and cabinet positioned in heat receiving proximity to said combustion chamber to conduct primary air for combustion downwardly into said ashpit and having its intake end opening within the space between said body and cabinet adjacent said combustion chamber and its outlet end communicating with said ash pit, a damper within said conduit and a bimetallic thermostat controlling said damper mounted on said conduit to be heated thereby, and so positioned as to be bathed by the relatively cool circulating air in transit from said air inlet opening to said air outlet opening.

2,948,277
TWO TEMPERATURE WATER HEATING SYSTEM
Edward D. Dennis, Kenilworth, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Apr. 2, 1959, Ser. No. 803,795
7 Claims. (Cl. 126—362)

2. In a water heating system adapted to deliver two temperatures of heated water and including a hot water heater and a hot water storage tank, the improvement comprising a high temperature water conduit connected between the water heater and the storage tank to conduct heated water at a high temperature to the storage tank, an apparatus to utilize water at said high temperature, a discharge conduit of minimum length connected to the apparatus, a looped delivery conduit having the ends thereof connected to said high temperature water conduit and said discharge conduit being connected to said delivery conduit at a location intermediate said ends, said delivery conduit having an internal cross sectional area substantially smaller than that of said high temperature conduit, and flow control means disposed in the high temperature conduit between the locations of connection of the ends of the delivery conduit to said high temperature conduit, said flow control means being adjustable to provide a flow of heated water at said high temperature from the water heater through said high temperature conduit and through said delivery conduit to the storage tank during periods when high temperature water is not being drawn to the apparatus to thereby prevent cooling of the water in said delivery conduit below said high temperature and on drawing water to said apparatus said high temperature water flowing from said high temperature conduit through both ends of said delivery conduit to said discharge conduit and then to the apparatus.



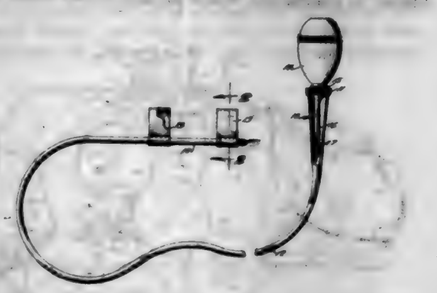
2,948,278
BODY RESTRAINER
Peter Topa, 39 Sargent St., Hartford, Conn.
Filed June 10, 1958, Ser. No. 741,081
7 Claims. (Cl. 128—134)



1. A body restrainer comprising a fabric sheet adapted to be wrapped around a person's body, a coat-like garment attached to the inner surface of said sheet, a pair of opposing panels on said garment extending from the neck of the person to the feet thereof, a slide fastener adapted to secure said opposing panels together over the body prior to wrapping said sheet around said garment, and a plurality of spaced apart substantially parallel straps secured to the outer surface of said sheet and extending laterally across said sheet, said straps being positioned to encircle and bind the body of the person after said sheet has been wrapped around the fastened garment.

2,948,279
MEDICAL DEVICE
Arthur E. Mann, 701 Union St., Braintree, Mass.
Filed July 18, 1957, Ser. No. 672,689
2 Claims. (Cl. 128—232)

1. In a medical appliance, a support member having a tapered shape and provided with an open end, the inner portion of said support member being threaded adjacent the open end thereof, a tube extending from said support member, a plurality of spaced apart bands connected to a portion of said tube, and a syringe including a manually operable bulb arranged outside of said support member, said syringe including a threaded neck arranged in threaded engagement with the threaded portion of said support member, and a stem projecting into said support member and connected to said bulb.



2,948,280
EAR CLEANER AND DRYER
Otto A. Vicik, Tuckahoe, N.Y., assignor to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed July 16, 1958, Ser. No. 748,913
4 Claims. (Cl. 128—304)

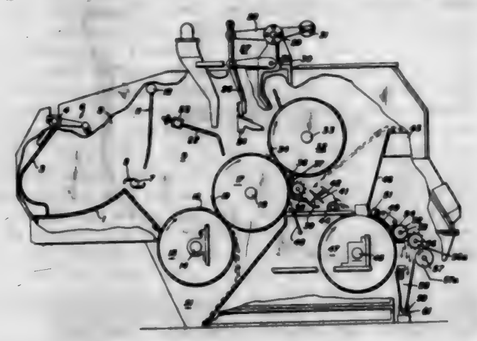


1. A towel comprising, in combination, a flexible sheet of fabric, a plurality of bulbous elements, and fastening means securing said bulbous elements in predetermined spaced-apart relationship upon said flexible sheet of fabric, each of said bulbous elements comprising a resilient core, and a flexible water absorbent cover completely enclosing said core.

2,948,281
CONTROL SYSTEM FOR TOBACCO HOPPERS
Earl W. De Voto, Albert M. Garton, and Joseph E. Horner, Richmond, Va., assignors to Philip Morris Incorporated, New York, N.Y., a corporation of Virginia
Filed July 17, 1958, Ser. No. 749,186
16 Claims. (Cl. 131—21)

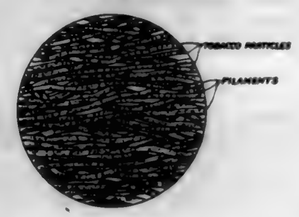
1. A mechanism for feeding comminuted material comprising a reservoir for comminuted material, a relatively high inertia feeding mechanism for feeding comminuted material to said reservoir, a relatively low inertia feeding mechanism for withdrawing comminuted material from said reservoir and supplying it to a utilization mechanism, detector means responsive to the quantity being so supplied for controlling the speed of operation of said low inertia mechanism so as to maintain the rate at which it feeds said material to said utilization mechanism substantially constant, and electrical sensing and control means for controlling the speed of said high inertia feeding mechanism in accordance with

the speed of said low inertia mechanism, said reservoir having a capacity such that the quantity of material therein is maintained within predetermined limits during



the interval required for said high inertia mechanism to attain a feed rate equal to the withdrawal rate of said low inertia mechanism upon a change in the withdrawal rate as dictated by said detector means.

2,948,282
FIBROUS TOBACCO SMOKE FILTER ELEMENTS
James C. White, Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed June 28, 1954, Ser. No. 439,920
2 Claims. (Cl. 131—208)



1. A filter for a cigarette comprised essentially of a filter element made up of a bundle of longitudinally oriented filaments, the filaments making up the bundle being characterized in that said filaments:

(*a*) are comprised of cellulose acetate,

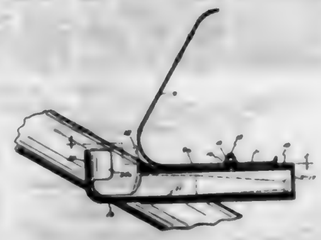
(*b*) are continuous, crimped filaments,

(*c*) carry a content of plasticizer,

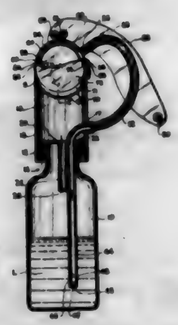
(*d*) carry tobacco particles of 100–200 mesh dispersed on the surface of the filaments, and the filaments of the bundle are coalesced to other filaments at random points of contact and to the tobacco particles by means of bonds obtained to a substantial extent by the aforesaid plasticizer content.

2,948,283
HOLDER FOR TOBACCO PIPES
Jack F. Holderness, Box 305, Odessa, Wash.
Filed Feb. 24, 1958, Ser. No. 717,054
4 Claims. (Cl. 131—260)

1. A pipe holder adapted for attachment to the instrument panel of an automobile comprising a tube having means to secure it to the instrument panel to extend substantially horizontal, a pipe holder having a mounting portion slidably telescoping with the tube and frictionally held thereby, said portion and said tube having cooperating parts thereon substantially preventing turning of said portion with respect to the tube while they are telescoped, said pipe holder having an upturned end portion spaced from said mounting portion to receive a pipe bowl therebetween, and having a bottom wall extending from the mounting portion and supporting said upturned end portion, the end portion having wings diverging therefrom and curved toward the mounting portion, the tube having an end confronting the wings operable to hold a pipe bowl seated in the holder against the confronting end of the tube when the pipe has its stem extended into said tube.



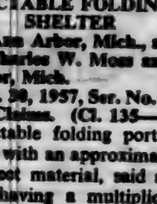
2,948,284
HOME PERMANENT HAIR WAVING DEVICES
David Zakaria, 260—47 Union Turnpike, Glen Oaks, N.Y.
Filed Apr. 16, 1959, Ser. No. 806,841
9 Claims. (Cl. 132—9)



1. A lotion applicator for a curled strand of hair, comprising a cradle for receiving said curled strand, a cover hinged to the cradle and provided with spring means for clamping the hair between abutting edges of the cradle and cover, said cradle and cover defining a compartment for treating said curled strand with said lotion, a squeeze bottle communicating with said compartment for spraying said lotion therefrom upon the curled strand, and valved means communicating said compartment with said bottle for draining excess lotion from the sprayed curled strand back into the bottle, said cover having an inner perforated wall defining a chamber for receiving the lotion from the bottle and distributing the lotion in a spray into said compartment, there being a tube having a one-way valve disposed in the bottle for receiving the lotion therefrom, and a flexible plastic tube connected between the first-named tube and said chamber for passing the lotion into the chamber.

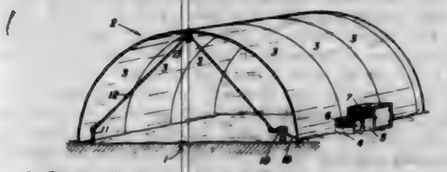
2,948,285
EQUIPMENT FOR CLEANING SPRAY GUNS AND OTHER JET EQUIPPED MACHINES
Benjamin F. Poe, Washougal, Wash. (1915 W. 37th St., Vancouver, Wash.); and Alfred N. Barnes, Washougal, Wash. (P.O. Box 672, St. Francisville, La.)
Filed June 3, 1955, Ser. No. 513,139
3 Claims. (Cl. 134—102)

1. In paint spray gun and painting tool cleaning equipment: a tank open at the top; a lid fittable on top of said tank, said lid having vent holes therethrough and a concavo-convex baffle plate secured to its under side, said baffle plate being dimensioned slightly smaller than the interior dimensions of the tank; a mesh platform positioned within the lower portion of said tank, having a hole positioned at its center; brackets secured to the sides of the lower portion of said tank supporting said platform; a nozzle positioned immediately below said



platform and the hole therethrough, said nozzle having a hemispherical upper surface and a plurality of holes through said surface; a compressed air supply line from a source of compressed air to the said nozzle; a solvent reservoir formed by the lower portion of said tank below said mesh platform and below said nozzle; a solvent supply line from said solvent reservoir to the nozzle; and an air filter between the tank and the source of compressed air.

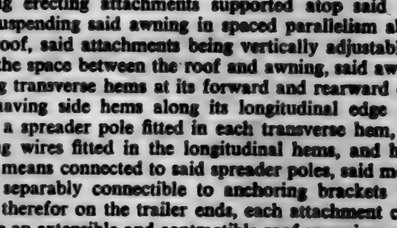
2,948,286
AIR-SUPPORTED BUILDING
Harold Dale Turner, 1372 Yokayo Drive, Ukiah, Calif.
Filed Nov. 19, 1956, Ser. No. 623,093
5 Claims. (Cl. 135—1)



1. In an air-supported building comprising a covering member of flexible material and blower means adapted to introduce air into the interior of said building, said blower means being provided with a switch, apparatus for controlling air pressure within said building comprising means which moves as a result of movement of at least a portion of said covering member and means for causing said movement of said means to operate said switch, said switch being adapted to cause operation and non-operation of said blower means.

2,948,287
QUICKLY-ERECTABLE FOLDING PORTABLE SHELTER
Samuel J. Rupert, Ann Arbor, Mich., assignor, by mesne assignments, to Charles W. Moss and Henry Stribley, both of Ann Arbor, Mich.
Filed Sept. 30, 1957, Ser. No. 687,064
15 Claims. (Cl. 135—4)

1. A quickly-erectable folding portable tent-supporting structure for use with an approximately hemispherical cover of flexible sheet material, said structure comprising a rib support having a multiplicity of rib pivots mounted thereon at peripherally-spaced locations thereabout and also having a central bore and a rotation-preventing locking recess extending laterally from said bore, a multiplicity of elongated ribs of resilient material adapted to be connected to the cover and having their upper end portions pivotally mounted on said pivots at said peripherally-spaced locations around said rib support, and a movable rib-flexing locking unit including an elongated rod reciprocably and rotatably mounted in said bore and having a rotation-preventing locking projection extending longitudinally along a part only of the length of said rod and projecting laterally therefrom into said recess in rotation-preventing engagement therewith, said rib-flexing locking unit also including a rib-flexing abutment disposed on said rod above said projection and movable unitarily therewith into engagement with said upper end portions of said ribs; said ribs being adapted to flex arcuately and resiliently into distending engagement with the cover in response to the urging of said upper end portions of said ribs by said abutment into positions substantially perpendicular to said rod.



2,948,288
HOUSE TRAILER AWNING WITH ATTACHING MEANS
Leland K. Nelson, 11717 Corrigan Ave., Downey, Calif.
Filed Oct. 3, 1957, Ser. No. 687,890
3 Claims. (Cl. 135—5)

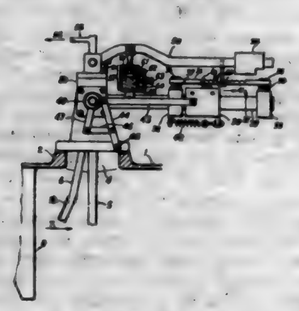
1. In combination, a trailer having a conventional-type roof, a portable canvas awning of a width equal to the width of said roof and of a length greater than the length of said roof, readily applicable and removable awning erecting attachments supported atop said roof and suspending said awning in spaced parallelism above said roof, said attachments being vertically adjustable to vary the space between the roof and awning, said awning having transverse hems at its forward and rearward ends and having side hems along its longitudinal edge portions, a spreader pole fitted in each transverse hem, stabilizing wires fitted in the longitudinal hems, and holddown means connected to said spreader poles, said means being separably connectible to anchoring brackets provided therefor on the trailer ends, each attachment comprising an extensible and contractible roof-spanning member and L-shaped fixtures at the ends thereof, each fixture being carried by a vertically adjustable post, said post having means at the bottom securing the same in a given position of said roof, portions of said stabilizing wires being secured to said fixtures, said holddown means embodying at least one stress and strain equalizing bridle, a strap adjustably linked to said bridle, an elastic guy element attached to the lower end of said strap, and an anchoring bracket fixed to a lower portion of the trailer with said guy element releasably connected to the bracket.

2,948,289
OFFSET UMBRELLA
Jerry A. Owczarek, 2180-A Daisy Lane, Schenectady, N.Y.
Filed May 14, 1958, Ser. No. 735,231
3 Claims. (Cl. 135—20)



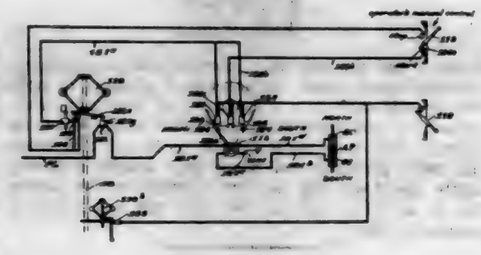
1. An umbrella comprising a dome, an opening and closing frame including a plurality of ribs of varying lengths pivotally connected adjacent the top of a carrying staff substantially offset from the center of said dome and adapted to extend radially therefrom when said umbrella is opened, said frame having a longitudinal axis of symmetry in which each rib on the opposite sides thereof is of a different length, and a frame opening and closing linkage mechanism including a plurality of links of varying lengths, each link being pivotally connected at one end to a member slidably mounted on said staff and on the opposite end being pivotally connected to one of said ribs, the pivot points on each rib for said links on each side of said axis of symmetry being located at different distances from the pivot connections of the ribs near the top of the carrying staff to provide rib sections between said pivot points and said pivot connections that are of different lengths, the sum of the length of each said rib section plus the length of its corresponding link being equal to the sum of the length of every other such rib section and its corresponding link.

2,948,290
METHOD OF AND MECHANISM FOR THE ACTUATION OF A QUICK-ACTION SHUT-OFF DEVICE FOR PRESSURE-PIPE LINES
Hans Schnyder, Balsthal, Switzerland, assignor to Gesellschaft der Ludw. von Roll'schen Eisenwerke AG., Gerlafingen, Switzerland, a company of Switzerland
Filed Feb. 21, 1955, Ser. No. 489,724
Claims priority, application Switzerland Feb. 22, 1954
17 Claims. (Cl. 137—10)



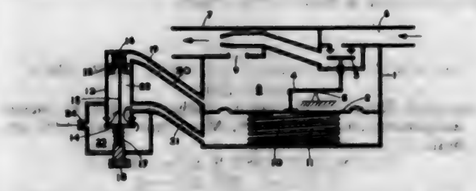
14. A method of controlling the flow of a medium through a pipe, comprising the steps of sensing a change in said flow of said medium in said pipe, producing a first physical displacement proportionate with a positive rate of change of flow sensed in said medium to thereby obtain as a measure of rate of change of said flow of said medium an indication of the velocity of said first physical displacement, converting said first physical displacement into a second physical displacement when said velocity of said first physical displacement exceeds a predetermined value, and directing said second physical displacement to cut-off said flow of medium through said pipe in accordance with an excessive positive rate of change of flow therein.

2,948,291
JET POWER LAUNCHING SYSTEM
Donald B. Doolittle, Wilmington, and Robert J. Haber, New Castle, Del., assignors to All American Engineering Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 19, 1955, Ser. No. 553,903
22 Claims. (Cl. 137—22)



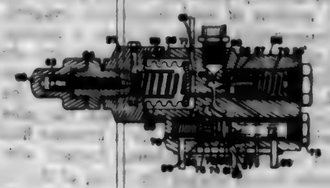
10. In combination, a turbine having dual reaction elements adapted one to each direction of rotation and a flow gate for controlling the flow of combustion gases to said reaction elements, said flow gate comprising a housing having a single inlet and a pair of outlets, and first and second banks of adjustable flow control vanes mounted one across each of said outlets whereby when said first bank of vanes is in an open position said turbine will be driven in one direction of rotation, when said second bank of vanes is in an open position said turbine will be driven in the opposite direction of rotation and when both said first and second banks of vanes are opened an equal amount said turbine will remain stationary.

2,948,292
BREATHING APPARATUS
Peter William Fitt, West Headford, England, assignor to Normalair Limited, Somerset, England
Filed June 7, 1957, Ser. No. 664,889
Claims priority, application Great Britain June 16, 1956
3 Claims. (Cl. 137—64)



1. A demand regulator for breathable gas having a respiratory responsive member controlling the demand valve thereof, said responsive member having one surface subjected to breathing pressure and the other surface subjected alternatively to ambient pressure or to pressure greater than ambient, means providing such alternative pressure comprising first and second operatively coupled valves, said first valve controlling communication between one side of said responsive member and the other, said second valve controlling communication between the side of said responsive member remote from said breathing pressure and ambient atmosphere.

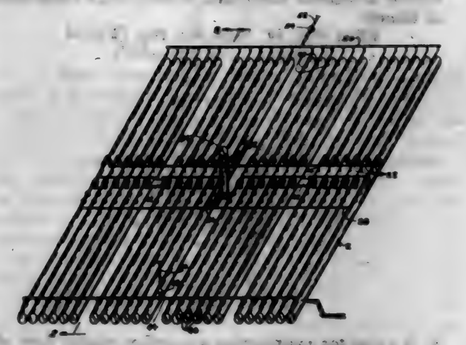
2,948,293
CAPACITY CONTROL FOR COMPRESSORS
Karl M. Gertels, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Original application Feb. 26, 1954, Ser. No. 412,793, now Patent No. 2,836,345, dated May 27, 1958. Divided and this application Aug. 1, 1957, Ser. No. 675,726
1 Claim. (Cl. 137—107)



Regulating valve mechanism for controlling fluid flow comprising a casing including means forming a first passageway having an inlet and an outlet for the passage of fluid through said casing, said casing including a cylinder having a section interposed between said inlet and said outlet so as to form a portion of the first passageway, means forming a second passageway communicating with the first passageway, condition responsive control means regulating flow through said second passageway thereby varying the flow characteristics of the fluid flowing through said first passageway outlet, said casing being provided with a chamber having communication with said first passageway and with a second portion of said cylinder remote from the portion forming a part of the first passageway, means forming a second outlet serving as a cylinder drain, a piston disposed within said cylinder, said piston being provided with an axial projection and a slight clearance with respect to the cylinder wall and resilient biasing means urging the piston to a first operating position wherein said piston overlies the first passageway inlet with the axial projection in engagement with one end of the cylinder while establishing communication between the chamber and the second outlet serving as a drain through the second portion of the cylinder for the purpose of draining fluid from said mechanism, and a second operating position, attainable in response to an increase in pressure in the inlet to a predetermined force represented by the pressure of fluid in the space defined by the engagement of the axial projection and the end of the cylinder due to leakage about the piston, overlying the communication between the chamber and the second portion of the cylinder while establishing communication between the inlet and outlet of said first passageway so that the fluid flow from said first passageway outlet is responsive only to the action of the condition responsive control in said second passageway.

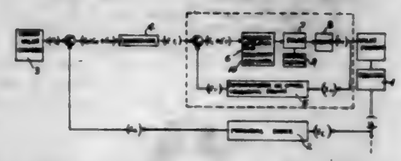
2,948,294
STORAGE ARRANGEMENT FOR HIGHLY VOLATILE LIQUIDS
Sydney S. Smith, Scarsdale, N.Y., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 21, 1956, Ser. No. 566,813
1 Claim. (Cl. 137—263)

In a receiving, storage and dispensing arrangement for volatile liquid, the combination of a plurality of separate elongated product tanks disposed underground, a pump associated with each tank and including an inlet means communicating with the bottom of said tank, said tank being in graded relationship to said pump inlet means to accommodate gravity liquid flow to its pump inlet means, an intake manifold having a connection to a product source, a first line communicating with each tank and each line having a connection to the manifold, each line having independently operated stop valve means, a discharge header, a second line communicating with each tank at its pump outlet means and each having a connection to the discharge header, each of said pumps being operative to deliver liquid from its tank to the header under pressure, a check valve in each of said second lines accommodating flow from the tank to the header only, other independently operated stop valve means in each of the second lines, a pressure tank above the ground, a first conduit establishing communication between the discharge header and the pressure tank, control valve means in the



first conduit to selectively close said last mentioned communication, a second conduit having a connection to the pressure tank, variable capacity pump means operatively associated with the second conduit to evacuate product from the pressure tank at selectible varying rates, and pressure relief means including a second header in communication with each of the underground tanks, a third conduit communicating with said second header and extending above the ground, and means operable in response to a predetermined pressure in the third conduit for venting said tanks.

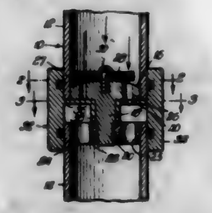
2,948,295
ELECTRICAL VALVE POSITIONER
Paul E. Smith, Jr., Littleton, Mass., assignor to Conval Corporation, Belmont, Mass., a corporation of Massachusetts
Filed Sept. 13, 1955, Ser. No. 534,020
9 Claims. (Cl. 137—487.5)



2. A means for positioning a valve in accordance with an electrical signal derived from a standard signal and a controlled variable which is a function of the material passing through the valve, comprising, means including said valve defining a closed feedback loop, the position of said valve affecting the value of said variable, means outside said feedback loop for deriving a variable electrical signal characteristic of the value of said variable, means inside said feedback loop for providing an actual position electrical signal representative of the actual position of said valve, a source of said standard signal, means outside said feedback loop for combining said standard signal with said variable signal to derive a control signal, a controller outside said feedback loop responsive to said control signal for providing a desired position signal rep-

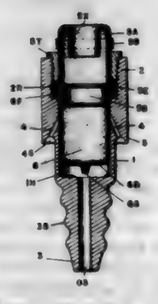
resentative of a desired position of said valve, means within said feedback loop for combining said desired position signal with said actual position signal to provide a positioning signal, and means within said feedback loop responsive to said positioning signal for altering said valve position to lessen the difference between said actual position and said desired position.

2,948,296
VARIABLE CONSTANT FLOW DEVICE
David H. Thorburn, Oak Park, Ill., assignor to The Powers Regulator Company, Skokie, Ill., a corporation of Illinois
Filed Mar. 24, 1958, Ser. No. 723,334
7 Claims. (Cl. 137—517)



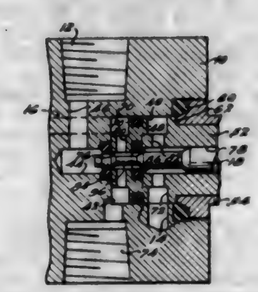
1. A valve for maintaining a constant rate of flow of a fluid regardless of wide variations in the pressure of the fluid comprising a casing, a valve seat in said casing, said valve seat having a plurality of orifices, means for selectively opening at least one of said orifices to vary the capacity of said valve, and a resilient disk mounted on the upstream side of said valve seat, said resilient disk radially overlying said orifices and normally being resiliently spaced from said orifices, to permit flow of fluid around said disk and through at least one of said orifices, at least those portions of said resilient disk overlying said open orifice being deflected downwardly toward said open orifice an amount dependent upon pressure of the fluid passing through said valve so as to decrease the space between said disk and valve seat whereby an increase in pressure is counterbalanced by an increase in restriction so that the flow of the fluid is maintained at the preselected capacity.

2,948,297
AUXILIARY NOZZLE
Jesse D. Langdon, Long Beach, Calif.
(1 John St., East Rockaway, N.Y.)
Filed Nov. 29, 1954, Ser. No. 471,607
2 Claims. (Cl. 137—525.1)



1. A nozzle having a hollow body forming a casing made of a single piece of material comprising an inlet end adapted for pressure connection to a source of fluid supply and an outlet end adapted for connection to a delivery line, including a flanged sleeve made of distortable material inserted in the inlet end of said hollow body and secured in position by the sleeve flange concomitant said inlet end of said hollow body, the opposite end of said sleeve extended toward the outlet of said hollow body and provided with a slit diaphragm closing the distal end of the distortable sleeve and having an imperforate portion secured in position bordering the slitted portion of said diaphragm secured to and standing transversely across at least a portion of the outlet end of the sleeve partially closing and obstructing pressure fluid flow thru said sleeve, causing said sleeve to expand against the surrounding wall of the hollow body above said diaphragm; wherein the inlet end is provided with coupling means for a pressure fluid supply source, said coupling means being formed with an annular shoulder facing toward the flange of the distortable sleeve for pressure sealed connection between the shoulder and the flange surrounded by the inlet end of the hollow body, a tubular portion concomitant, secured to and extended from said coupling means beyond said shoulder and into said distortable sleeve securing and supporting the wall and flange of the sleeve in normal position within the inlet end of the hollow body, whereby said distortable sleeve is held in operative position against being displaced by the pressure fluid flow therethru.

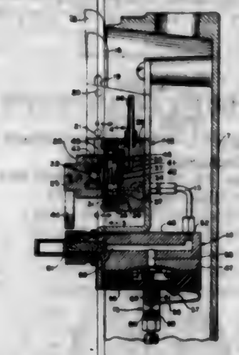
2,948,298
VALVE
Lawrence H. Gardner, North Olmsted, Ohio
(7313 Associate Ave., Cleveland 9, Ohio)
Filed Nov. 21, 1958, Ser. No. 775,567
5 Claims. (Cl. 137—620)



1. A valve for controlling the supply and exhaust of air to and from a work cylinder, comprising a valve body having a cylindrical valve chamber opening from one end thereof, an annular valve seat member having an inner end of smaller diameter than the diameter of said valve chamber seated against the end wall of said chamber, said valve seat member having an annular flange at its other end sealingly engaging the cylindrical wall of said chamber to define an annular passage between said flange and the chamber end wall, a valve guide element having an annular shoulder spaced from said valve seat member to define a second annular passage between said valve seat member and said valve guide element, said valve seat member having an axial passage therein, said valve body having a bore opening from said end wall and aligned with the axial passage in said valve seat member, a valve stem extending through said axial passage, a radial passage in said valve seat member between the axial passage therein and said first annular passage, means defining a passage connecting said axial passage and said second annular passage, seal means providing a valve seat between said bore and the axial passage in said valve seat member, seal means providing a second valve seat between said

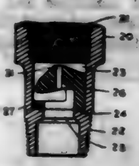
axial passage and said second annular passage, said valve stem in one position thereof being engageable with said first valve seat to close communication between said bore and said first annular passage while establishing communication between the latter and said second annular passage, said valve stem in a second position thereof being engageable with said second valve seat to close communication between said annular passages while establishing communication between said first annular passage and said bore, said valve body having an air inlet port, an exhaust port and a work port therein, said work port being connected to said first annular passage and said inlet and exhaust ports being connected one to said bore and the other to said second annular passage, and means for moving said valve stem from one of said positions to the other.

2,948,299
DETECTOR UNIT VALVE CONSTRUCTION
Joseph L. Cassell, New York, N.Y., assignor to Automatic Fire Alarm Company, New York, N.Y., a corporation of New York
Original application Mar. 5, 1954, Ser. No. 414,442, now Patent No. 2,842,758, dated July 8, 1958. Divided and this application Apr. 4, 1958, Ser. No. 726,452
3 Claims. (Cl. 137—625.4)



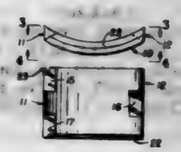
1. A test valve for an aero detector unit, comprising a valve body having a chamber with ports opening thereinto and in communication with said valve chamber through one of the chamber walls and grouped about a central axis, O-rings about said ports, a larger O-ring encircling all of said ports, a diaphragm loosely covering said ports and secured in sealed engagement with the encircling O-ring, a valve stem rotatably mounted on said axis and slidable toward and away from said diaphragm, said diaphragm being interposed between said valve stem and said chamber ports, a pad carried by the inner end of said valve stem and positioned to press the diaphragm against any one of the smaller O-rings surrounding the valve ports, a spring for holding the valve stem thrust toward the diaphragm and a handle for pulling the valve stem outward and for rotating the same to thereby withdraw the pad from holding engagement with the diaphragm over one of the port surrounding O-rings and to carry it into position for engagement with the diaphragm over one of the other of said port surrounding O-rings, a member controlling operation of said aero detector unit shiftable from unit operative to unit inoperative position, means urging said shiftable member from unit operative to unit inoperative position and means carried by said valve stem for holding said member in the unit operative position and for releasing said member on said outward movement preparatory to rotary movement of the valve stem.

2,948,300
FLOW CONTROL UNIT
James Fraser, Wilmington, Del., assignor to Speakman Company
Filed Apr. 23, 1958, Ser. No. 730,461
8 Claims. (Cl. 138—45)



1. A water flow control device comprising; a casing having a passageway extending therethrough, a shoulder in said passageway facing the up-stream side thereof and extending radially inwardly from the side walls thereof, an elastic member seated on said shoulder comprising a base portion with a central opening therein, said opening being at least as large as the opening in the shoulder portion, said base portion having a single flexible neck portion extending upwardly on one side only therefrom, a head portion supported on one side thereof by said neck portion and being otherwise unsupported, said head portion being smaller in diameter than said passageway and moving with increased pressure towards the base portion and thereby restricting the flow of water.

2,948,301
MODULAR CIRCULAR SEGMENT STRUCTURE
David E. Tomkins, New Castle, Pa., assignor to Shenango China, Inc., New Castle, Pa., a corporation of Pennsylvania
Filed July 28, 1958, Ser. No. 751,497
3 Claims. (Cl. 138—91)

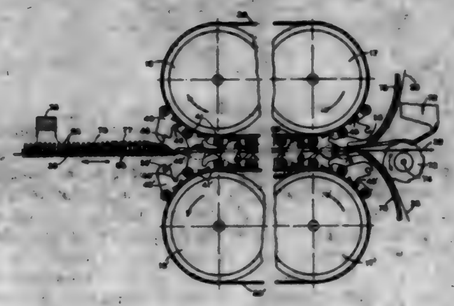


3. A circular structure comprising a plurality of arcuate slabs, each of said slabs having opposite and staggered end faces, said end faces being parallel to the radius of the slab drawn to its center, notches in said slab interposed between said end faces, said notches having bottom faces which are at an angle to the adjacent end faces, said notch faces being on the inner surface of said slab and the angle between the notch faces and adjacent end faces being equal to the arc subtended by each arcuate slab.

2,948,302
WEAVING APPARATUS
Walter Bejeuhr, Mount Vernon, N.Y.
(Old Penny Road, Pawling, N.Y.)
Filed Apr. 24, 1956, Ser. No. 580,202
5 Claims. (Cl. 139—11)

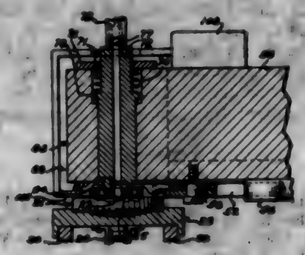
1. For use in weaving apparatus, a pair of superposed endless conveyors having adjacent runs in relatively closely spaced relation; means for driving said conveyors in synchronism in the same direction in said adjacent runs; of said conveyors carrying, on its outer surface, a plurality of identical links pivotally interconnected in end to end relation to form a chain and arranged in transverse rows, the links in adjacent rows being staggered transversely of the associated conveyor; the rows of links on the two conveyors being transversely aligned with

each other with the links of each conveyor overlapping and fitting transversely between the links of the other conveyor in said adjacent runs, whereby the links of the two conveyors are aligned in alternation longitudinally of the conveyors; each of said links having means forming a convexly curved yarn guiding surface facing outwardly from the associated conveyor and extending longitudinally thereof; whereby, when yarns are laid along the aligned guiding surfaces of the longitudinally alternated



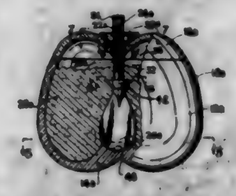
links of the two conveyors, an "expanded weave" is formed by the links in said adjacent runs; said links being formed with transverse aperture means, and said aperture means being in transverse alignment to form openings throughout the rows of links when the links of the two conveyors are overlapped and interfitted in said adjacent runs to receive elongated needle means slidably mounted in alignment with the aperture means in the associated row of links.

2,948,304
APPARATUS FOR FILLING AND CAPPING TELEPHONE TRANSMITTER COMPONENTS
Harry W. Holdergett, Indianapolis, Ind., and Warren O. Simpson, Findlay, Ohio, assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 29, 1957, Ser. No. 693,115
12 Claims. (Cl. 141—75)



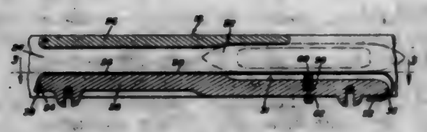
1. In an apparatus for metering material into a component, a carrier for holding a component, means for advancing a metering head into engagement with the component, means for gripping the component, means for elevating the metering head and gripping means from the carrier, and means for vibrating the gripped elevated component.

2,948,305
CONTAINERS FOR ICE CREAM PRODUCTS AND THE LIKE
Savas P. Savides, 92—09 Rockaway Beach Blvd., Rockaway Beach, N.Y.
Filed Nov. 19, 1957, Ser. No. 697,484
1 Claim. (Cl. 141—112)



A container of the class described comprising an upwardly opening receptacle shaped in simulation of a particular fruit, a lid thereon, said lid having an opening, and a spoon including a collar overlying the lid to hold the same in engagement with the receptacle, said spoon extending through said opening, said collar rigid with the adjacent portion of the spoon, said collar in concentric relation to said opening, and formed to a diameter greater than that of the opening so as to bear against the edge portion of the opening while completely closing the opening, said spoon being of sectional formation, and including a main portion formed with a bowl and an upper portion, the upper portion having a threaded extension and the main portion having a threaded axial recess receiving said extension, the main portion formed with an annular flange, adjacent the bowl, whereby a solidified product within the receptacle will bear against the flange to hold the spoon against upward movement, in a position in which the collar of the spoon bears against the lid, the receptacle having a bottom wall the inner surface of which has a slot in which the bowl removably engages to hold the lower portion of the spoon against rotation during threading of the upper portion into and out of the recess, said spoon occupying the position of a core of a particular fruit.

2,948,383
SPRING GUIDE BOX FRONT FOR LOOM SHUTTLE BOX
William B. Cathey, R.F.D. #2, Anderson, S.C.
Filed June 6, 1957, Ser. No. 663,978
6 Claims. (Cl. 139—185)



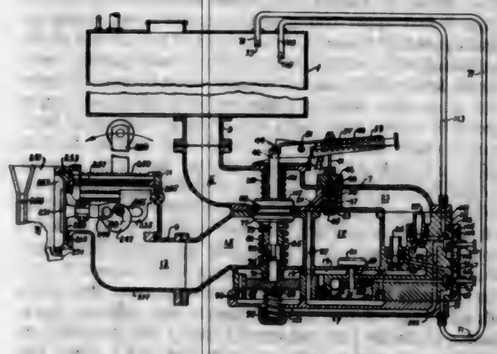
1. The combination of a loom shuttle box including an elongated back wall and an elongated front wall spaced from said back wall, said front wall having an outer end and an inner end portion projecting longitudinally beyond the corresponding inner end of the back wall, and means for guiding a shuttle into said box and resiliently urging the same against the back wall of the box, said means comprising a flat shuttle engaging leaf spring disposed at the rear surface of said front wall, said spring having a forwardly and inwardly turned outer end embracing and anchored to the outer end portion of the front wall, the inner end portion of said spring being resiliently urged away from the front wall toward the back wall, said spring having a forwardly and outwardly turned inner end loosely embracing the inner end of the front wall to permit movement of the spring toward the back wall, and said turned inner end of the spring being engageable with the front surface of the front wall to limit the movement of the spring toward the back wall.

2,948,306
AIRCRAFT REFUELING SYSTEM
William Alexander Kurseff, Bronx, N.Y., assignor to Standard-Vacuum Oil Company, White Plains, N.Y., a corporation of Delaware
Filed Feb. 27, 1959, Ser. No. 796,869
14 Claims. (Cl. 141—231)



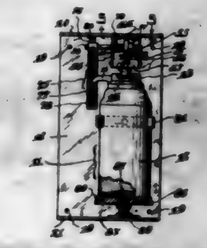
1. In a system for refueling airplanes or the like which comprises a supply line through which is pumped liquid fuel under pressure and an outlet hydrant connected to said supply line; a servicer unit which comprises an extensible and contractible inlet lazy tongs conduit comprising a plurality of pipe nipples joined at their ends to provide swing joints, said lazy tongs conduit, having an outer end connectable to and disconnectable from said hydrant and an inlet end, a transmitter assembly, said lazy tongs conduit inlet end being connected to said transmitter assembly, a movable conduit having an inlet end connected to said transmitter assembly and having an outer end, a fitting mounted on said outer end of said movable conduit connectable to and disconnectable from the inlet port of a fuel receiving tank, counterweight means connected to said lazy tongs to balance the forces when said lazy tongs is manually extended and contracted.

2,948,307
TANK FILLING APPARATUS
Howard E. Rittenhouse, Fort Wayne, and Sherwood Hinds, Columbia City, Ind., assignors of one-half to Tokheim Corporation, a corporation of Indiana, and one-half to Bowser, Inc., Fort Wayne, Ind., a corporation of Indiana
Original application May 5, 1950, Ser. No. 160,266, now Patent No. 2,816,567, dated Dec. 17, 1957. Divided and this application Feb. 28, 1957, Ser. No. 643,911
14 Claims. (Cl. 141—348)



1. In a quick connect mechanism, a conduit tip having an outwardly closing valve, a conduit having a receptacle provided with an outwardly opening valve, a locator mounted on said receptacle, means on said locator for engaging the tip and for aligning it with the receptacle, means mounted on said receptacle and including a lever which is operable through the initial portion of its stroke for relatively moving said tip and receptacle to establish a seal therebetween and means operable by the lever through the final portion of its stroke for opening said receptacle valve, said receptacle valve comprising means for engaging the valve in said tip to open same.

2,948,308
DISPENSING OF PRESSURIZED MATERIAL
Louis C. Regina, 200 New Jersey Ave., Phillipsburg, N.J.
Filed Aug. 25, 1958, Ser. No. 756,864
4 Claims. (Cl. 141—363)



1. In a dispensing receptacle for containers of pressurized material of the type having a discharge nozzle projecting laterally and downwardly therefrom, valved means within the container for controlling the flow of material through said nozzle, a flexible top wall on said container for actuating said valved means, a slidable plunger mounted in the receptacle and movable toward and away from the flexible top wall of said container, a cam member mounted in the receptacle having the cam surface thereof bearing against the upper end of said slidable plunger for reciprocatory movement of the plunger against the flexible top wall of said container to effect the operation of said valved means, means carried by the receptacle for supporting an object on to which the material is to be dispensed, means for adjusting the position of said supporting means whereby the object supported thereby is positioned offset from the container and beneath the discharge end of the nozzle, and means engageable by the object on said supporting means for operating said cam member when the object is inserted into the receptacle to cause a quantity of the material to be discharged through said nozzle on to the object.

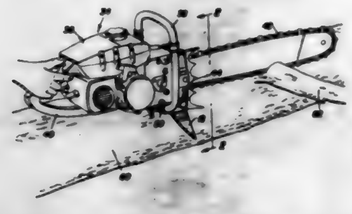
2,948,309
CHAIN SAW BAR CONSTRUCTION
Harry J. Hoff and Stephen J. Hoff, Richmond, Ind., assignors to Hoffco, Inc., Richmond, Ind., a corporation of Indiana
Filed Apr. 26, 1955, Ser. No. 503,870
2 Claims. (Cl. 143—32)



1. A cutter-bar for a chain saw, said bar having along its opposite side edges and around its end a medial groove for the reception of guiding tongues on a saw chain and comprising a plate-like body, that portion of said groove extending around the end of the bar being defined by spaced, parallel rails of a wearing element, the edge of the bar-body and the inner edge of said wearing element having overlapping flanges locating the wearing element in the plane of the bar-body, said rails being rigidly connected within the wearing element whereby such element may be applied to and removed from the bar body as a unit, and means for securing the wearing element to the bar-body, said rails being parallel metal strips

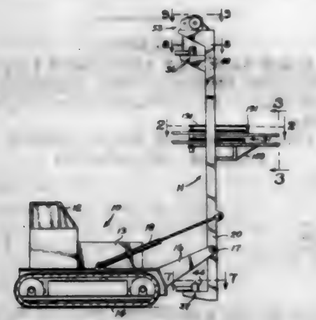
secured together in parallel spaced relation by shouldered rivets, the flange on said bar-body being medially located and the inner edge portions of the strips constituting the flanges of the wearing element.

2,948,310
LIMBING ATTACHMENT FOR POWER SAWS
Harrison H. Herron, Rte. 1, Omak, Wash.
Filed Mar. 25, 1958, Ser. No. 723,985
3 Claims. (Cl. 143—32)



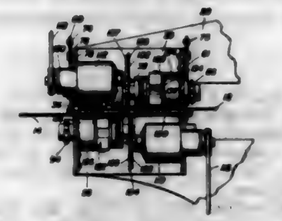
1. A power saw comprising an engine, a saw chain operatively connected to said engine, a handle, means mounting said handle to said saw, bucking spikes, means connecting said bucking spikes to said saw forwardly of said handle, a spiked bracket attached to said saw with said bracket extending substantially transversely of the plane of said chain, said bracket including a horizontal plate, spikes depending downwardly and outwardly from either end of said plate, means fastening said plate to said saw, said fastening means including upstanding flanges extending from either side of said plate and having openings formed therethrough for attachment to said saw, one of said flanges being secured to said saw by said handle mounting means, the other of said flanges being secured to said saw by said bucking spikes connecting means.

2,948,311
TREE HARVESTING APPARATUS
Melvin W. McCollum, P.O. Box 1049, Klamath Falls, Oreg.
Filed Oct. 20, 1958, Ser. No. 768,357
4 Claims. (Cl. 143—32)



1. Apparatus for trimming growth from the trunk of a standing tree comprising a vertically and horizontally movable frame, a pair of laterally spaced, elongated, horizontal guides fixed to the frame in oppositely disposed relation and joined at one set of ends thus to define a U-shaped cradle structure for cradling three sides of a tree trunk, the other set of ends of said guides being open and defining an open mouth for the cradle structure, a pair of elongated arms and pivot connections spaced laterally outwardly of said guides adjacent their joined ends pivotally mounting one set of ends of the arms on the frame, with one arm on one side and one arm on the other side of the cradle structure, said pivot connections accommodating pivotal movement of the arms about vertical axes from a position on either side of the cradle structure to a position where the nonpivoted ends of the arms swing across each other and the arms close off the open mouth of the cradle structure, a pair of power-driven, continuous cutting belts occupying substantially horizontal planes and having an inner set of runs disposed substantially oppositely each other, and means mounting the cutting belts on said frame with said inner runs in spread-apart position and with one substantially on one side and one substantially on the other side of said cradle structure whereby the mouth of said cradle structure is left open, the mounting for the belts including sprockets mounted on the nonpivoted ends of the arms, one for each belt, training one set of ends of the inner runs of the belts and positioned to swing across one another on movement of the arms whereby movement of the arms to a position closing off the cradle structure is accompanied by movement of the ends of the inner runs of the belts to a position where the belts cross each other.

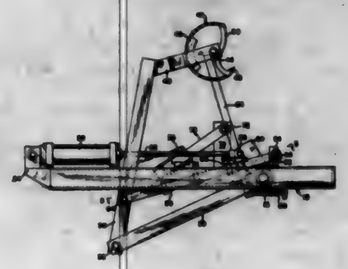
2,948,312
MACHINE TO PREPARE PRECISELY THE EDGES OF SHEET MATERIAL FOR VENEERING AND THE LIKE
Ivan W. Rothrock, 315 Hawthorne Ave., Eugene, Oreg.
Filed June 13, 1958, Ser. No. 741,778
4 Claims. (Cl. 143—55)



1. A machine for preparing adjacent edges of sheet material for a sheet material taping or veneer processor, said machine comprising a main frame provided with an inlet throat to receive two sheets substantially edge to edge, a first upper frame and a second lower frame beneath said first frame, a lower group of rollers and shafts consisting of a pair of horizontally spaced parallel horizontal lower shafts carried by said second frame, a larger and a smaller friction roller on each shaft, an upper group of rollers and shafts consisting of two upper horizontal shafts and an upper larger and smaller friction roller on each of said upper shafts, the upper smaller rollers being directly vertically above said larger lower rollers and said upper larger rollers being located directly vertically above said smaller lower rollers, means movably connected to said first frame for mounting said upper shafts for up and down adjustment with respect to said lower shafts to thereby correspondingly move the rollers of said upper group to compensate for different thicknesses of sheets received in said throat and propelled by and between said rollers, an upper saw and a lower saw mounted between said shafts to simultaneously cut the adjacent edges of both sheets on the different levels established by the arrangement of larger and smaller rollers thereby preparing the adjacent edges of the sheets for subsequent exact registration with each other, a bed plate disposed between said upper shafts and in an approximately horizontal plane at the adjacent portions of the surfaces of said upper and lower rollers, a first upper

pressure plate above a portion of said bed plate, yielding means pressing said upper pressure plate toward the top surface of said bed plate to bear against the upper surface of the upper sheet, a lower pressure plate beneath another portion of said bed plate, and resilient means biasing said second pressure plate toward the lower surface of said bed plate to bear against the lower surface of the other sheet on the lower surface of the bed plate.

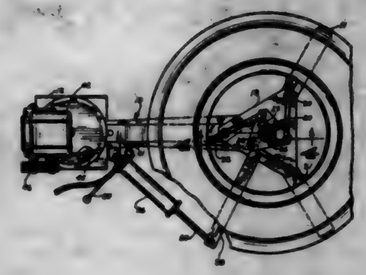
2,948,313
SAWMILL LOG TURNER
John S. Mellott, R.R. 6, Hagerstown, Md., and Hayes E. Mellott, R.R. 1, Mercersburg, Pa.
Filed Apr. 22, 1959, Ser. No. 808,136
8 Claims. (Cl. 143—103)



5. For use in combination with a sawmill having means for supporting a log with the axis of the log extending in a horizontal direction; a log turner assembly comprising a vertically inclined arm, a log engaging member mounted upon a pivot at the upper end of said arm for pivotal movement relative to said arm about a first axis extending parallel to the axis of a log supported on the sawmill, a prong and an abutment surface on said log engaging member facing outwardly of said first axis from said arm and normally disposed in a rest position wherein said prong is located below said first axis and said abutment surface is located above said first axis, pivotal support means at the lower end of said arm supporting said arm for pivotal movement about a second axis parallel to said first axis, and means for driving said pivotal support means from a lower rest position to an elevated actuated position to drive said log engaging member along a path of movement wherein said pivot is driven toward the axis of said log until said prong and said abutment surface are engaged with the log and is subsequently driven upwardly around the axis of the log with said prong fixedly engaged with the log until the log has been rotated about its axis through an angle of approximately 180°.

2,948,314
WHEEL CENTERING AND SUPPORTING DEVICE
Walter A. Bishman, Minneapolis, Minn., assignor to Bishman Manufacturing Company, Osseo, Minn., a corporation of Minnesota
Filed June 4, 1956, Ser. No. 589,317
9 Claims. (Cl. 144—288)

1. A heavy duty tire changer machine comprising a low-level horizontal base, a substantially perpendicular stationary sleeve extending through said base and projecting above said base, an inner sleeve mounted for rotation within said stationary sleeve, a tire changing tool holding element adjustably mounted for rotational movement with said inner sleeve and vertical movement with said inner sleeve, said tool holding element including a transverse sleeve for receiving a tool and means for adjustably retaining said tool, means for rotating said inner sleeve and tool holding element, the top of said tool holding element when in its lowermost position is lower than the highest portion of the opening thru the rim to be held in the changer when the rim is positioned vertically beside the machine, an outer sleeve mounted for rotation about said stationary sleeve above said base, a pair of spaced plates mounted for rotation with said outer sleeve, a plurality of at least three elongated rim engaging arms of substantially equal length each pivotally mounted at one end between said plates and uniformly arrayed around the central axis of said sleeves, each of said elongated rim engaging arms being provided with a



hardened metal rim engaging rollers, one of said rollers being stationary and having biting teeth for engaging a rim, the remainder of said rollers being rotatably mounted, a plurality of guide members mounted on said base equal in number to said elongated rim engaging arms, each of said guides having a channel through which said arm may move slidably, said guide being uniformly arrayed about said central axis and displaced out of radial alignment with the pivot points of said arms, a lever arm for rotating said spaced plates and fluid pressure cylinder means for moving said lever arm.

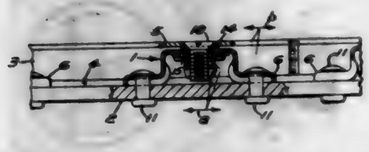
2,948,315
SAW TOOTH SHIELD
Charles E. Pfarrer, 2211 Atlantic St., Melrose Park, Ill.
Filed Aug. 19, 1957, Ser. No. 679,042
1 Claim. (Cl. 145—35)



A protection guard for a saw, having at least a toothed blade and a handle with a depression in its top edge, comprising a shield having opposite generally parallel spaced legs of a length and height to receive therebetween and encase the toothed edge portion of the saw blade, means at one end of the shield to engage over a top edge of the free end of the saw blade to hold down said end in said shield, said means comprising a stud like element bridging the gap between said legs of the shield and being adjustably securable in any one of a series of holes in one of said guard legs to accommodate different sizes and shapes of saw blades, and a resilient rubber-like band extending transversely of the other and opposite end of said shield, said band being fastened at one end to said shield and having a resilient loop at its other end transversely of and above the gap between said shield legs and being resiliently stretchable upwardly away from said shield to engage over the top of the saw handle, said loop being of a width to fit in said handle depression to hold detachably

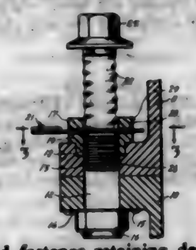
the handle end of the blade in said shield and to assist in resisting longitudinal shifting of the blade out of engagement with said stud.

2,948,316
FLOATING ANCHOR NUT ASSEMBLY WITH FLANGE CONSTRUCTION TO MINIMIZE HEAT TRANSFER
Daniel Y. Sing, Kenmore, and Albert Bonas, Tonawanda, N.Y., assignors to Bell Aircraft Corporation, Wheatfield, N.Y.
Filed Jan. 24, 1957, Ser. No. 636,086
1 Claim. (Cl. 151—41.7)



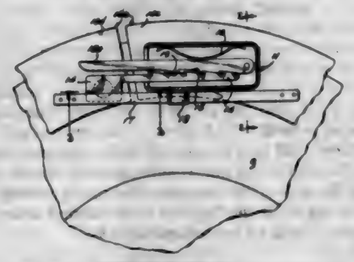
A floating anchor nut device comprising a base member including a pair of tab portions formed at opposite ends thereof, said tab portions being integral with an intermediate raised spacer portion comprising side wall portions extending substantially normally to said tab portions and a top wall portion extending between said side wall portions substantially normally to said side wall portions, means for attaching said tab portions to a support, said top wall portion having an elongated slot formed therethrough and extending longitudinally of said base member, and a floating anchor nut supported by said top wall portion, said anchor nut comprising an elongated body having an internally threaded opening formed longitudinally therethrough, said anchor nut including a neck portion fitted within said slot and being of slightly less lateral dimension than said slot to permit lengthwise movement of the anchor nut relative to the base member, said anchor nut including a first laterally extending annular flange adjacent the upper end thereof, said first annular flange having a lateral dimension greater than that of said slot whereby said first annular flange is slidably supported on the upper surface of said top wall portion, said anchor nut including a second flange spaced from said first flange by a distance substantially equal to the thickness of said top wall portion, said top wall portion adjacent said slot being slidably received in the space between said flanges with the upper surface of said second flange being in slidable engagement with the bottom surface of the top wall portion thereby locking the anchor nut to the top wall portion, said second flange including flat edge portions, said top wall portion including depending integral flanges formed along the opposite lateral edges thereof, the flat edge portions of said second flange being disposed closely adjacent the inner surfaces of the depending flanges formed on the top wall portion to thereby prevent rotation of said anchor nut with respect to said base member, each of said end tab portions including depending integral flanges formed along the marginal edges thereof and adapted to engage a support member for spacing the base member from a support member, said last-mentioned flanges extending continuously along said end tab portions and around the juncture between said end tab portions and said side wall portions and extending upwardly along a partial portion of said side wall portions, the flanges on said top wall portions and said last-mentioned flanges being spaced a substantial distance from one another adjacent the junctures between said side wall portions and said top wall portions to provide maximum mechanical strength and to minimize the transfer of heat from the anchor nut portion to an associated support member.

2,948,317
THREADED FASTENER RETAINING DEVICE WITH RESILIENT HOLDING MEANS
John F. Munro, Cincinnati, Ohio, assignor to General Electric Company, a corporation of New York
Filed July 1, 1957, Ser. No. 668,976
2 Claims. (Cl. 151—69)



1. A threaded fastener retaining device comprising a housing, a headed fastener including a head and a shank, said housing having an axial bore therethrough to slidably receive said shank, a threaded portion at the free end of said shank adapted to extend through said housing and to engage threads on a member to be secured on said housing, threads of greater pitch than the threads of said first threaded portion on the shank between the head and the first threaded portion of said headed fastener, a flexible member located on said housing to engage said shank to hold the first threaded portion of said headed fastener within said housing bore, and said flexible member adapted to resiliently engage said second threads and to feed said shank through the bore to engage the first threaded portion with threads on the member to be secured to said housing.

2,948,318
DETACHABLE TIRE TREAD
Thor A. Firestone, Forest Hills, N.Y. (1270 5th Ave., New York 29, N.Y.)
Filed June 9, 1958, Ser. No. 740,862
4 Claims. (Cl. 152—175)

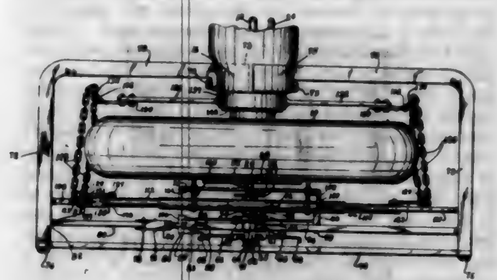


1. A detachable shoe for tires comprising a casing having a special tread surface adapted to embrace the tread of a tire and extend downwardly upon the sides thereof, being severed at one point to provide two ends to facilitate application to a tire, a ratchet arm extending rigidly out from one end of said shoe, and a socket member rigidly attached to the other end of said shoe having an opening in alignment with said ratchet arm, and releasable means within said socket member for engaging said ratchet arm to hold the shoe in place.

2,948,319
AUTOMATIC ANTI-SKID CHAINS FOR AUTOMOBILES
Salvatore Cannella, 1432 Needham Ave., Bronx, N.Y.
Filed Feb. 2, 1959, Ser. No. 790,573
11 Claims. (Cl. 152—219)

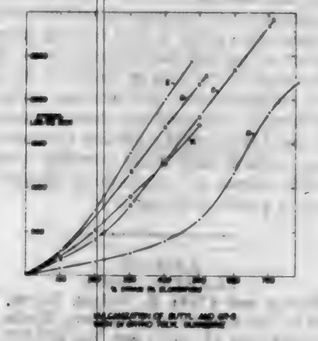
1. An anti-skid device for a wheel rotatably mounted on an axle, in a stationary axle housing, comprising a

tube, a pair of rods telescopically mounted in opposite ends of the tube, a band rotatably mounted on the axle housing, chains connected between outer ends of the rods and said band, means for retracting said rods so that the chains engage the wheel and for extending the rods



so that the chains disengage the wheel, means for holding the tube and rods stationary while the chains are disengaged from the wheel, and means for rotating the tube, rods and band together with the wheel when the chain are engaged with the wheel.

2,948,320
CO-VULCANIZED BUTYL RUBBER WITH HIGHLY UNSATURATED RUBBERS BY AMINO COMPOUNDS
Francis P. Ford, Watchung, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Filed May 2, 1955, Ser. No. 505,168
18 Claims. (Cl. 152—330)



1. A composition comprising an accelerator-free covulcanizable admixture of a major amount of a rubbery copolymer containing a major proportion of a C_4–C_8 olefin and a minor proportion of a C_4–C_{14} multiolefin with a minor amount of a more highly unsaturated rubber; about 0.1 to 3 parts of sulfur; and an organic nitrogen-containing compound containing at least one

$$-\overset{H}{N}-$$

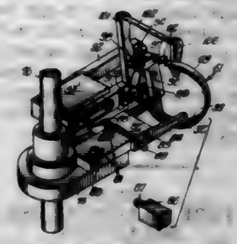
group, said compound being selected from the group consisting of triethyl-trimethylene triamine, hexamethylene tetramine, diphenyl guanidine, diortho tolyl guanidine, 2-mercapto-imidazoline, tertiary butyl-2-benzothiazole-sulfenamide, N-cyclohexyl-2-benzothiazole sulfenamide, reaction product of aniline and butyr-aldehyde, and reaction product of para-toluidine and formaldehyde.

2,948,321
METHOD OF AND MEANS FOR PROLONGING THE LIFE OF PNEUMATIC TIRES
Lewis Charles Mote, 227 Fillmore, Ottumwa, Iowa
Filed July 9, 1958, Ser. No. 747,376
4 Claims. (Cl. 152—330)



1. In combination, a wheel rim, a pneumatic tire on said wheel rim, and a metallic ribbon extending around on the inside of said tire and having its two end portions extending outwardly between the tire and wheel rim, and communicating with the outside atmosphere.

2,948,322
APPARATUS FOR FORMING AN OIL SEAL INNER SHELL
William J. Coz, Oak Park, Ill., and Merle H. Dreher, Niles, Mich., assignors to The Quadriga Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed May 23, 1956, Ser. No. 586,746
5 Claims. (Cl. 153—2)



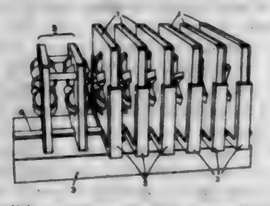
3. Apparatus for use in forming an annular inner shell spacing and pressure member for an oil seal, said apparatus including spiral forming means for receiving a continuous metallic strip to bend said strip into a continuous helix, ring cutting means cooperating with the delivery end of said spiral forming means to divide said helix into separate ring sections, and ring section removal means operatively interconnected with said ring cutting means to separately move each ring section out of association with said cutting means after said ring section has been cut, said removal means being mounted for reciprocating movement relative to said cutting means and including a cam actuated finger resiliently positionable into operative and non-operative positions, said finger being movable past a portion of each cut ring section toward the center thereof without contact with the same in its non-operative position and being actuatable to its operative position to subsequently engage the inner surface of a portion of each cut ring section to remove said ring section, said ring section removal means carrying camming means moving therewith and cooperating with separately mounted cam actuated ring bending means movable in opposite directions relative to one another and at least partially past one another to engage with opposite free ends of each of said cut ring sections to move the same in opposite directions relative to one another and past dead center relation to reversely bend the free ends and bring about juxtapositioning therebetween upon release.

2,948,323
CLAMPING AND BENDING IMPLEMENT
George A. Kerr, 3930 Napier St., North Burnaby, British Columbia, Canada
Filed Feb. 10, 1958, Ser. No. 714,185
3 Claims. (Cl. 153—38)



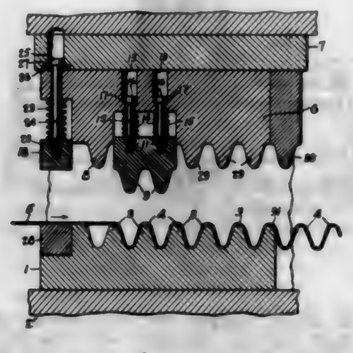
1. A clamping and bending implement comprising a triangularly arranged series of rollers and a triangular frame, said frame comprising a base side bar for positioning alongside elongated stock and a pair of first and second auxiliary side bars intersecting the base side bar and intersecting each other at a point spaced from the base side bar, said series of rollers including a pair of first and second presser rollers spaced along said base side bar for engaging one side of such stock and a third roller at the point of intersection of said auxiliary bars for engaging the other side of such stock at a point intermediate said first and second rollers, transverse bolts connecting the first auxiliary bar to the base side bar at the points of intersection thereof and said auxiliary bars at the point of intersection thereof and having the first and third rollers journaled thereon, a transverse bolt connecting the second auxiliary bar to the base side bar at the point of the intersection therewith, said base side bar having an end portion extending outwardly beyond the second auxiliary side bar, and screw feed means mounting the second roller on said extending end portion of the base side bar outwardly of said second auxiliary side bar for advance against such stock.

2,948,324
MANUFACTURE OF TUBING AND TUBULAR SHEATHING
James Ronald Penrose, Watford, England, assignor to Pirelli-General Cable Works Limited, London, England, a British company
Filed Oct. 18, 1956, Ser. No. 616,726
Claims priority, application Great Britain Oct. 18, 1955
2 Claims. (Cl. 153—54)



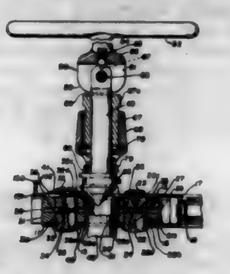
1. Convertible apparatus for manufacturing tubing from metal strip in a plurality of successive forming stages arranged in tandem, comprising in combination a set of changeable forming means including a plurality of longitudinally spaced plates having aligned apertures, through which apertures the strip during its formation into a tube is successively passed, each of said plates including a series of forming rollers mounted for free rotation on its plate about an axis of rotation at right angles to the direction of travel of a strip being formed by said apparatus, and support frame means longitudinally spaced and slidably supporting each plate for free manual removal and replacement in the general plane of said plate normal to the path of movement of said strip.

2,948,325
DIE CONSTRUCTION FOR FORMING CORRUGATED SHEETS
Theodore O. Wellndt, Kaukauna, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed May 6, 1957, Ser. No. 657,386
5 Claims. (Cl. 153—76)



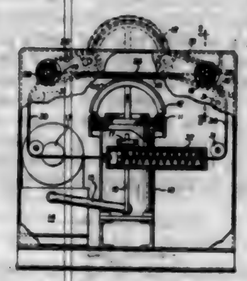
1. In an apparatus for forming relatively deep corrugations in a metal sheet; a first die member having a working surface formed of a series of corrugations; and a second die member movable relative to said first die member and comprising a forming member disposed to cooperate with said working surface of the first die member to successively form corrugations in the metal sheet, a plurality of holding members movable with respect to said forming member and located forwardly of said forming member along the path of travel of said metal sheet and disposed to clamp the previously formed corrugations to the first die member working surface to prevent movement of the sheet as successive corrugations are formed, said holding members being normally biased from said forming member towards said first die member to engage said sheet prior to said forming member, and a plurality of sizing members located forwardly of the holding members in the path of travel of the sheet and disposed to cooperate with the working surface of the first die member to shape and size those corrugations previously disposed between the holding members and first die working surface, said sizing members being fixedly mounted with respect to said forming member and disposed to act in unison therewith.

2,948,326
FLARING TOOL
Carl H. Ingwer and Clyde E. Wright, Elyria, Ohio, assignors to The Ridge Tool Company, Elyria, Ohio
Filed May 31, 1957, Ser. No. 662,789
2 Claims. (Cl. 153—79)



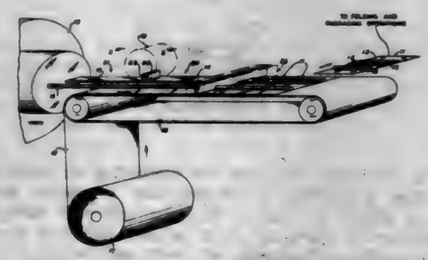
1. A flaring tool comprising a base having means for supporting a tube to be flared, a support mounted on said base and having a threaded central opening therein, an externally threaded sleeve threadedly mounted in said opening and having a lengthwise passage, a rod slidably and rotatably received in said passage in the sleeve, a flaring element connected eccentrically to the inner end of said rod for engagement with the end of the tube to be flared, a spring under compression against the sleeve and urging the flaring element toward the tube to be flared, a crank having a pivotal connection to the outer end of the rod, said crank having a portion spaced from the outer end of the sleeve in one position of the handle and movable into engagement with the outer end of the sleeve at one side of said passage therein upon pivotal movement of the crank about its pivotal connection to the rod to a second position, said crank by such pivotal movement retracting the rod outwardly with respect to the sleeve and compressing said spring further, said crank upon being turned about the axis of said rod while in said second position frictionally engaging the outer end of the sleeve due to the compression of the spring and turning the sleeve with it inward along said opening in the support toward the end of the tube to be flared and carrying the rod and the flaring element inward toward said tube until the flaring element engages said tube, and means providing a coupling between the crank and the rod in said one position of the crank for turning the rod about its axis when the handle is turned about the axis of the rod to move the flaring element about the axis of the rod.

2,948,327
APPARATUS FOR FORMATION OF COMPOSITE PRINTING PLATES
Ellwood J. Horner, Armonk, N.Y., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Filed June 20, 1957, Ser. No. 666,886
3 Claims. (Cl. 154—1)



1. Plate bending mechanism comprising, in combination, a saddle having control means for holding a flat plate while leaving the plate edges free to bend around the saddle, hydraulic mechanism supporting the saddle and moving it vertically, a draw sheet for wrapping the plate on the saddle to bend the same, and means holding and guiding the edges of the draw sheet, whereby the draw sheet is substantially flat and horizontal when the saddle is in a lower position and is wrapped around conforming to the saddle when the saddle is in an upper position, in which the means holding and guiding the edges of the draw sheet comprises bars along the edges of the sheet, rollers carried at the ends of the bars, and guide tracks receiving the rollers extending diagonally upward and inwardly toward each other, whereby as the central part of the draw sheet is moved upwardly, the edges move upwardly at a slower rate and also move toward each other.

2,948,328
APPARATUS FOR CUTTING TACKY MATERIAL
Henry J. Coventry, Baltimore, Md., assignor, by mesne assignments, to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 7, 1957, Ser. No. 695,888
9 Claims. (Cl. 154—1)

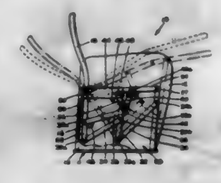


2. Apparatus for cutting out a portion of tacky material from an advancing composite composed of a strip of tacky material adhering to the upper surface of a backing sheet of nontacky material, which comprises a rotatable drum, a hollow cutter secured to the periphery of said drum and projecting outwardly therefrom, said drum being mounted a predetermined distance above the advancing composite so that said cutter at its lowest point extends substantially completely through portions of the tacky strip to be cut but not into contact with the backing sheet, means for rotating said drum in such direction that said cutter at its lowest point travels in the same direction as the advancing composite and at such speed that the peripheral speed of the cutting edges of said cutter is substantially the same as the speed of advancement of the composite, whereby a portion of the tacky strip is cut out by said cutter as it moves into and out of engagement therewith, which cutout portion is retained within said hollow cutter, the remaining portions of the tacky strip adjacent to said cutting blades tending to stick to the outsides of said cutter so as to be withdrawn from the backing sheet as said cutter moves out of cutting engagement with the tacky strip, and means for stripping the remaining portions of the tacky strip adjacent to said cutter away therefrom and for pushing such remaining portions back into position on the backing sheet substantially simultaneously with the movement of said cutter out of engagement with the tacky strip.

2,948,329
MICA PAPER
George L. Gaines, Jr., Scotia, and Arthur M. Boeche, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
No Drawing. Filed Sept. 24, 1956, Ser. No. 611,774
3 Claims. (Cl. 154—2.6)

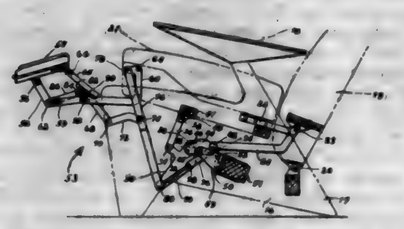
1. The method of obtaining a mica paper having improved tensile strength and moisture resistance which comprises the essential steps of (1) impregnating the mica paper with an anhydrous alkyl orthosilicate, (2) subjecting the alkyl silicate in the mica paper for the first time to acidic conditions generated by externally derived moisture to effect hydrolysis of the alkyl silicate, and (3) heating the mica paper containing the hydrolyzed alkyl silicate at a temperature sufficient to remove the volatile hydrolysis products and to leave behind a hydrolyzed alkyl silicate containing silicon-bonded alkoxy groups.

2,948,330
ARTICLE OF REPOSE FOR SUPPORTING THE BODY OF A PERSON
Anton Lorenz, Ocean Ridge, Boynton Beach, Fla.
Filed Aug. 5, 1955, Ser. No. 526,635
15 Claims. (Cl. 155—106)



1. An article of repose for supporting the body of a person, comprising in combination: a support having pivot means thereon, a back-rest and seat swingably mounted on said pivot means on said support, a controlling mechanism including relatively movable means operatively interconnecting said seat and back-rest to control the swinging movements of the former relative to the latter in response to the swinging movements of the latter for a first portion of the swinging movements of the latter, and means included in said controlling mechanism to limit the relative movement of said seat relative to said back-rest for a second portion of the swinging movement of said back-rest following said first portion of the swinging movement whereby said seat and said back-rest move together in a fixed relationship to each other.

2,948,331
ADJUSTABLE RECLINING CHAIR
Fridtjof F. Schliephacke, Berlin-Dahlem, Germany, assignor to Anton Lorenz, Boynton Beach, Fla.
Filed July 20, 1956, Ser. No. 599,078
10 Claims. (Cl. 155—106)



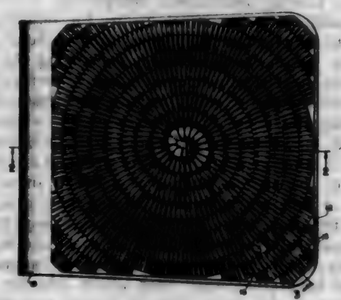
1. In a reclining chair, a support, a body-supporting unit including a back-rest and seat adapted to be mounted on said support for reclining and inclining movement respectively, and means movably mounting said body-supporting unit on said support including a carrier mounted on said support for turning movement, means releasably engaging said carrier and holding said carrier against turning movement during a first portion of chair movement, an actuating member mounted on said carrier for turning movement, a seat control operatively connected to said actuating member and to said seat for inclining said seat in response to turning movement of said actuating member, means interconnected between said carrier and said actuating member and effective to disengage the holding means after said first portion of chair movement, turning movement of said carrier during a further portion of said chair movement being effective to further incline said seat, and means operatively connected between said body-supporting unit and said actuating member for effecting turning movement of the latter in response to said reclining movement.

2,948,333
FOLDING CHAIR
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Cosco, Inc., a corporation of Indiana
Filed Sept. 6, 1957, Ser. No. 682,366
8 Claims. (Cl. 155—142)



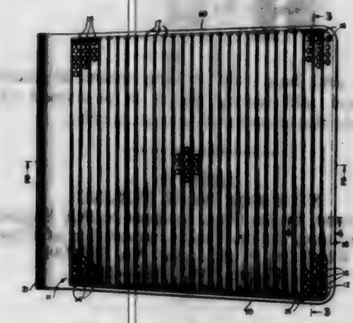
2. A collapsible chair having a back and a downwardly collapsible seat, comprising rear legs mounted to said back and engageable with the floor or other supporting surface, means pivotally interconnecting the chair seat to said rear legs on a fixed pivotal axis, a U-shaped front-supporting member comprising a transverse section pivotally supported across the chair back and a pair of generally parallel front legs movable about said pivotal support between a retracted position generally coplanar with the rear legs and an operative position in which the lower stretches of said legs are disposed well forwardly of the rear legs, said front legs intersecting the plane of said seat at its mid-portion in operative position, a seat-supporting rod interconnecting said front legs and adapted to support the seat in an operative position, link means extending between said rod and a pivotal axis on the seat and forming a toggle linkage fixing the relative positions of said front and rear legs, said seat upon chair collapse being swingable upwardly about said first means to carry the rear ends of said link means upwardly, said upward movement breaking the toggle linkage and allowing the front legs to swing rearwardly through said pivot axis and the seat to swing downwardly into its collapsed position.

2,948,333
VENTILATED SEAT CUSHION
Joseph Goldstein, 343 Bloomfield Ave., Verona, N.J.
Filed Apr. 22, 1959, Ser. No. 808,209
5 Claims. (Cl. 155—182)



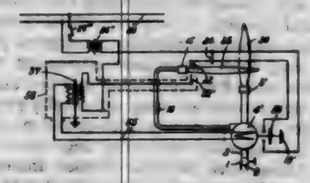
1. A ventilated seat cushion comprising a plurality of units, each unit being arched and comprising spaced side wall portions joined by a crown, said crown being higher than said side wall portions so that said units are convex on the upper surfaces thereof, said units lying adjacent each other in tiers, the side wall portions of one unit at their lower ends being joined with the side wall portions of adjacent units at the lower ends of said side wall portions of said adjacent units, the junctures of said side wall portions constituting ribs for engaging a support for said cushion, said arched units having slots transversely thereof extending through the said crowns thereof and also partially through the side walls thereof, whereby said units provide high strength with flexibility and said slots permit circulation of air from within said arched units.

2,948,334
VENTILATED SEAT CUSHION
Joseph Goldstein, 343 Bloomfield Ave., Verona, N.J.
Filed Apr. 22, 1959, Ser. No. 808,210
3 Claims. (Cl. 155—182)



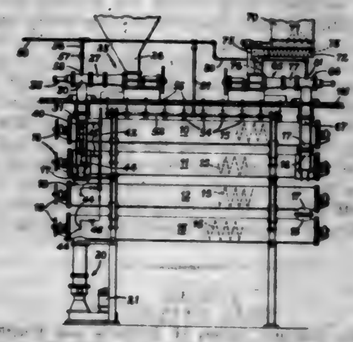
1. An integral ventilated seat cushion of molded plastic material comprising a series of longitudinally extending supporting members, each said member being generally triangular in transverse cross-section and having a first substantially vertically extending wall and a second sloping wall, a curved integral crown portion joining the upper margins of said walls and constituting the contact area between each said member and a person seated thereon, the lower margin of the sloping wall of one member being integrally joined to the substantially vertical wall of the next adjacent member, and a plurality of apertures extending through each of said walls, whereby said seat cushion may be integrally molded of plastic material, and will provide for ventilation therethrough.

2,948,335
SAFETY DEVICE FOR FLUID FUEL BURNERS
Georg Hegwein, Wiesbadenerstrasse 17, Stuttgart-Bad Cannstatt, Germany
Filed June 2, 1954, Ser. No. 434,035
Claims priority, application Germany June 9, 1953
8 Claims. (Cl. 158—128)



1. In a fuel burner installation having a fuel supply line, a main burner and a pilot burner adapted to ignite a main flame in front of said main burner by means of a pilot flame issuing from said pilot burner, in combination, electrically operable fuel control means connected between said main burner and said fuel supply line for controlling the flow of fuel to said main burner; a plurality of electrode means forming a plurality of air gaps therebetween arranged adjacent to said pilot burner within the area occupied by said pilot flame when established; first circuit means connected to those of said electrode means which form one of said air gaps for applying electrical potential thereto for producing sparks across said gap between said electrode means to ignite said pilot flame; second circuit means connected to those of said electrode means which form another one of said gaps for establishing a current flow across said other gap through a portion of said pilot flame within said other gap when said pilot flame is established; step-up transformer means for transforming line voltage into a high voltage and connected on its secondary side to said first and second circuit means for supplying said electrical potential at said high potential to said plurality of electrode means and for supplying said current to flow across said portion of said pilot flame when established; step-down transformer means having a primary winding connected in said second circuit means and a secondary winding in circuit with said control means for causing a low voltage current to flow through said electrically operable control means for energizing the latter so as to permit flow of fuel to said main burner whenever said pilot flame is established; and switch means movable between open and closed positions and connected in said first circuit means for initiating the application of said electrical potential to said electrodes for igniting said pilot flame.

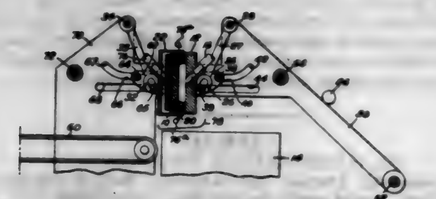
2,948,336
CONTINUOUS DIGESTER
Leonard G. Durant and Alphonse Surino, Pittsfield, Mass., assignors to Pandia, Inc., New York, N.Y., a corporation of New York
Filed June 6, 1955, Ser. No. 513,456
1 Claim. (Cl. 162—236)



Continuous apparatus for simultaneously digesting a plurality of different cellulosic materials each requiring a different digestion treatment time to produce a pulp composed of said different materials in substantially uniformly mixed digested condition, comprising an elongated conduit tube having an inlet and an outlet, means for establishing and maintaining in said tube a hot vapor-bearing atmosphere, feeding means for continuously introducing to said inlet of said tube a quantity of a first cellulosic material requiring maximum digesting treatment, additional feeding means located downstream of said tube from said first named feeding means for continuously introducing into said tube a quantity of a different cellulosic material requiring a shorter digesting treatment than said first cellulosic material, means mount-

ing said feeding means in rigid relation with each other, means connecting one of said feeding means with said tube, a sleeve connected with the other said feeding means to receive the discharge therefrom and having an opening in the side thereof, a T-member slidably mounted on said sleeve with the projecting arm portion thereof angularly aligned with said opening, means connecting said arm portion to said tube, means forming a movable seal between said T-member and said sleeve on both sides of said opening to seal said members together while providing for movement of said T-member with said tube and with respect to said sleeve in response to thermal expansion and contraction of said tube, and means in said tube for effecting continuous advance of all of said cellulosic material therein to said outlet thereof while continuously agitating said material to expose all particles of said material to said atmosphere and to mix said different cellulosic material with said first cellulosic material while conveying said materials through said atmosphere to said outlet.

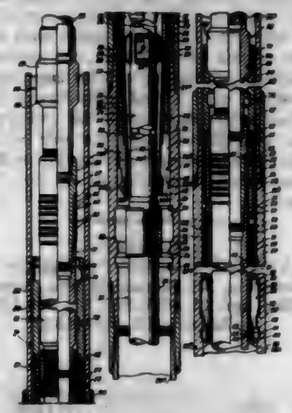
2,948,337
PULP MOLDING APPARATUS
Harry A. Wolter, Akron, Ohio, assignor to Diamond National Corporation, a corporation of Delaware
Filed May 10, 1957, Ser. No. 658,409
13 Claims. (Cl. 162—392)



1. Pulp molding apparatus, comprising a molding die having a foraminous forming face designed to form pulp articles by deposition of pulp fibers from a slurry thereof, means for vertically reciprocating the molding die between a molding position immersed in pulp slurry and an elevated position above the slurry, said molding die forming face being disposed generally horizontally and facing its immersed position during its reciprocation into and out of the slurry, a compression die movably mounted adjacent to said elevated position for cooperation with the molding die, means for turning the molding die and the compression die to bring them into alignment facing each other above the slurry, and means for horizontally reciprocating both of these dies to bring them into mating relationship, thereby compressing a molded pulp article therebetween.

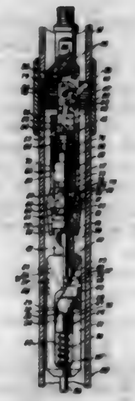
2,948,338
WELL PACKER
George Max Raulins, James H. Bostock and Turner G. Garwood, Dallas, Tex., assignors to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Filed Jan. 25, 1957, Ser. No. 636,320
9 Claims. (Cl. 166—123)

1. A well tool comprising: an elongate tubular member; locking means resiliently supported on said tubular member and having outwardly projecting boss means disposed below the lower end of said tubular member and adapted to move laterally between retracted and projecting position to extend outwardly of said tubular member; a sleeve insertable into the upper end of and movable longitudinally into said tubular member to a position to engage and hold said locking means with the boss means in projecting position; cooperating sealing means on said tubular member and said sleeve for sealing therebetween; and means on said tubular member and said sleeve engageable with each other for limiting movement of said sleeve longitudinally into said tubular member, whereby said sleeve is positioned in said tubular member



to engage and hold said locking means in projecting position and said sealing means is positioned to seal between said sleeve and said tubular member.

2,948,339
STOP FOR WELL TUBING
John V. Fredd, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Filed Oct. 9, 1953, Ser. No. 385,248
11 Claims. (Cl. 166—215)



1. A stop for well devices adapted to be run into a well pipe by a detachable running tool, said stop including: a body having a central opening and a plurality of upwardly and outwardly extending slots communicating with said opening; a stop dog slidably mounted in each slot for movement between a retracted position wherein said dog does not impede movement of said body through a well flow conductor and an expanded position, said dog having an integral laterally projecting boss at its upper end and having a lower end portion extending into said opening; said stop dogs each having an upwardly facing lock shoulder formed thereon and movable into said body opening when the dog is moved downwardly to retracted position in its slot, said shoulder being adapted to be engaged by a member movable in the body opening from above by said running tool

for positively holding said dog in such retracted position; a plunger slidably disposed in said body and abutting the lower ends of said stop dogs; and resilient means in said opening biasing said plunger upwardly whereby said stop dogs are biased for upward and outward movement in said slots toward expanded positions, said biasing means moving said stop dogs toward expanded position when said shoulders are not engaged by said holding means.

2,948,340
WELL TOOLS
James H. Bostock and John V. Fredd, Dallas, Tex., assignors to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Filed July 9, 1954, Ser. No. 442,260
18 Claims. (Cl. 166—215)



1. A running tool for a collar stop positionable in a well tubing and having a body, a plurality of stop dogs and means biasing said dogs for upward movement toward expanded positions, said running tool including: an elongate body having a longitudinal cavity therein; a plunger slidable longitudinally in said cavity; holding means in said running tool body engageable with said plunger to hold said plunger in an upper locked position in said running tool body; release means connected with said plunger and having a portion extending outwardly from said running tool body disposed to engage a downwardly facing obstruction in a well tubing upon upward movement of the running tool in the well tubing for releasing said holding means to free said plunger for movement from said upper locked position to a lower unlocked position in said running tool body; a prong carried by said running tool body and adapted to engage stop dogs of a collar stop to hold said stop dogs in retracted positions; said prong being held in a lowered position with respect to said plunger when said plunger is in upper locked position and adapted to engage stop dogs of the collar stop when in such lowered position to hold said stop dogs in retracted position on the stop body; said prong being movable upwardly from said lowered position with respect to said plunger when said plunger is freed for movement from upper locked position to lower unlocked position, whereby said prong is moved upwardly with respect to the stop dogs to free said stop dogs for movement toward expanded position; securing means carried by said plunger adapted to engage a collar stop for detachably securing said collar stop to said running tool, said securing means being operable to release said collar stop from said running tool, said securing means comprising means for engaging a downwardly facing shoulder of the stop body.

2,948,341
OFFSET CIRCULATING NIPPLE AND TOOLS
John V. Fredd, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Filed June 2, 1958, Ser. No. 739,060
14 Claims. (Cl. 166—218)

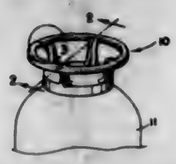


1. Apparatus of the character described comprising: an elongated offset mandrel having a vertical main bore therethrough, means forming an open topped, well tool receiving pocket in the lower end of said mandrel and offset from said main bore, a tubular guide shoe mounted in the upper end of said main bore concentric therewith, said guide shoe having spaced apart vertical wall portions forming a longitudinal slot therebetween extending from the upper to the lower surface of said guide shoe; a vertically disposed running tool comprising an elongated body member adapted to pass through said guide shoe, a guide key projecting outwardly from said body member and having a width enabling it to fit within said guide shoe slot, an elongated plunger telescopically mounted in said body member for longitudinal movement relative thereto, means to prevent relative rotation between said plunger and said body member, an elongated attachment member pivotally mounted at its upper end to the lower end of said plunger, said attachment member having means on its lower end for releasably engaging a well tool and a shoulder on its upper end offset from the axis thereof, a sleeve member surrounding said plunger and telescopically mounted thereon for longitudinal movement relatively thereto, said sleeve member having a lower portion engageable with said attachment member shoulder, and spring means confined between said body member and said sleeve member for biasing said sleeve member downwardly against said attachment member shoulder, said guide key and plunger being angularly related to the angular relation of said guide shoe slot and said offset pocket whereby pivotal movement of said attachment member relative to said plunger when said guide key is in said guide shoe slot will cause the lower end of said attachment member to move towards the open end of said offset pocket.

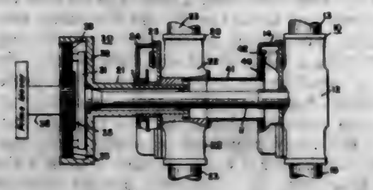
2,948,342
FIRE EXTINGUISHER WHEEL CAP
Charles K. Hutheing, Sr., Culver City, Calif., assignor to General Pacific Corporation, a corporation of California
Filed Sept. 9, 1955, Ser. No. 533,288
1 Claim. (Cl. 169—1)

A fire extinguisher wheel cap comprising: an annular base member having an upper end closure; a ring handle co-axial with and spaced above said end closure a given

distance, said handle having an inner diameter greater than the outer diameter of said base member; a plurality of upright members rigidly connected between said end closure and said ring handle, each of said upright members including a vertical portion radiused into and extending upwardly from said end closure and a horizontal portion extending radially outwardly from the upper end of said vertical portion to connect with said ring handle, said horizontal portion being radiused into the upper end of said vertical portion, and comprising an integral continuation of said vertical portion and said horizontal portion having an upper surface in a plane including the uppermost peripheral points of said ring handle.



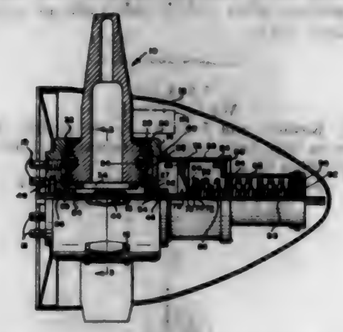
2,948,343
PROPELLER MECHANISM
Francis E. Conn, Piqua, and James R. Kessler, Vandalia, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Dec. 4, 1953, Ser. No. 396,214
8 Claims. (Cl. 170—135.24)



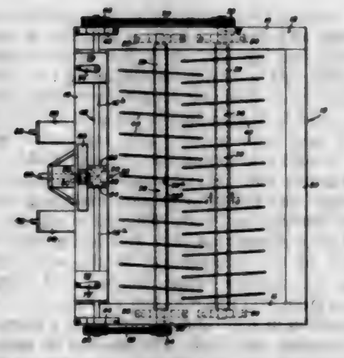
1. The combination with a propeller assembly having oppositely rotatable inboard and outboard variable pitch propeller elements, and means operatively associated with the inboard propeller element for automatically adjusting the pitch position thereof so as to maintain a substantially constant speed, of means for rotating said propeller elements in opposite directions so as to maintain a predetermined torque balance therebetween, a governor assembly carried by the outboard propeller element and having parts rotatable with both propeller elements, and pitch adjusting means controlled by said governor whereby the speed of the outboard propeller element is maintained equal to the speed of the inboard propeller element by pitch adjustment thereof.

2,948,344
CONSTANT SPEED AND FEATHERING PROPELLER
David Biermann, Piqua, Ohio, assignor to Hartzell Propeller, Inc., Piqua, Ohio, a corporation of Ohio
Filed Mar. 18, 1957, Ser. No. 646,792
4 Claims. (Cl. 170—160.32)

1. A propeller having a hub, a plurality of blades mounted on said hub for limited rotation about their axes, a mass on each of said blades for generating centrifugal forces on said blades tending to urge said blades to the decreased pitch position during operation of the propeller, a cylinder mounted on said hub coaxially with the rotational axis thereof, a piston slidably mounted in said cylinder, said piston being linked to said blades to rotate said blades upon movement of said piston in said cylinder, resilient means on one side of said piston tending to urge said blades to the increased pitch position and exerting a force substantially counterbalancing said centrifugal force, and adjustable hydraulic means acting on the other side of said piston to produce a force tending to urge said blades to the decreased pitch position and substantially counterbalancing the aerodynamic forces acting on said blades when the propeller is in operation which tend to urge said blades to the increased pitch position so that a reduction in the force produced by said hydraulic means will enable said resilient means and the aerodynamic forces acting on the propeller blades to move said blades to the full pitch or feathered position.

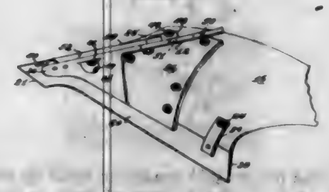


2,948,345
SOIL BUFFER
Albert Brewster, 3305 W. 8th St., Yuma, Ariz.
Filed Nov. 6, 1957, Ser. No. 694,831
1 Claim. (Cl. 172—49)



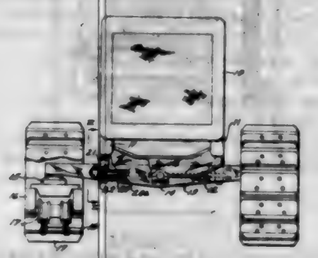
A soil buffer comprising a horizontally disposed open rectangular frame including a pair of parallel side members and parallel front and rear members connected to the ends of said side members, adjustable support means adapted to space said horizontal frame above the ground, a pair of spaced bearings mounted on each side member, each bearing being aligned with a corresponding bearing on the opposite side member, parallel disk shafts journaled for rotation in said aligned bearings, each of said shafts having fixedly secured thereon a plurality of ground-cultivating disks, the disks of each shaft respectively parallel to each other and all of said disks being mounted oblique to the shaft on which they are carried, said disks being spaced by tubular spacer members each having its ends cut off oblique to its longitudinal axis, said disk shafts being close enough together so that the disks on one shaft intermesh with the disks on the other shaft, drive means adapted to be driven by a power takeoff from a propelling vehicle, said drive means being operatively connected to said shafts and including individual gear boxes adapted to change speed of each of said shafts respectively with relation to the other of said shafts, whereby an occasional pinching action of the soil between the intermeshing disks on the two shafts may be assured.

2,948,346
PLOW BOTTOM
Richard H. Sheppard, 101 Philadelphia St., Hanover, Pa.
Filed Aug. 29, 1956, Ser. No. 606,926
4 Claims. (Cl. 172—754)



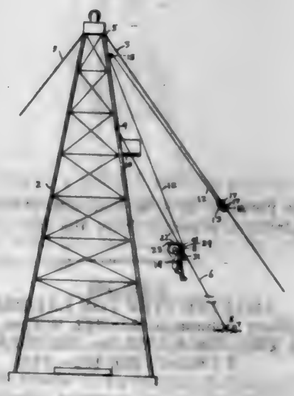
2. A plow share comprising an elongated relatively flat body member having at one long side a wing cutting edge, having at the opposite long side a narrow flat face adapted to engage an edge of a moldboard, said share having a rear face sloping to match the moldboard, a forward cutting edge at an angle to said long side cutting edge and merging therewith by a curved breaker cutting edge, a sloping short face extending from the forward cutting edge to the moldboard engaging flat face, a downwardly extending curved calk of three-sided pyramid shape at the junction of the said sloping short face and said moldboard engaging face, one face of the calk forming an abutment to protect the forward edge of a landside, another face of the calk curving along the short face to the forward cutting edge and the third face of the calk forming a portion of said sloping short face.

2,948,347
TORSION BAR CUSHIONING MEANS FOR TRACTOR EQUALIZER BAR
Norman E. Rink, Peoria, and Jesse L. Holden, East Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Mar. 4, 1959, Ser. No. 797,142
3 Claims. (Cl. 180—9.5)



1. In front end suspension for tractors wherein a cross member of the tractor main frame rests on an equalizer bar which bridges the tractor truck frames, resilient means to resist rocking movement of the equalizer bar with respect to the tractor comprising a torsion bar supported by the tractor in a position substantially parallel to the equalizer bar, and means connecting the ends of the torsion bar to the equalizer bar at points on opposite sides of its center, said means comprising levers each fixed against rotation to the torsion bar, and a link with a ball and socket joint connecting it at one end to each said lever and at the other end to the equalizer bar to permit rocking movement of the equalizer bar and swinging movement of the lever about the axis of the torsion bar.

2,948,348
ESCAPE MECHANISM
Winston F. Bott, P.O. Box 1006, Alice, Tex.
Filed June 11, 1956, Ser. No. 590,610
5 Claims. (Cl. 182—11)



1. An escape device for moving down a cable to enable rapid egress from elevated positions comprising, a body having a cable receiving aperture for mounting the body on the cable, a roller means mounted in said body to ride on top of the cable, brake drum means mounted in said body below said roller means and adapted to engage the opposite side of said cable relative to that engaged by said roller, said body including a lever extending upwardly and inclined outwardly behind the cable which receives said body, a rearward extension on said body extending in the same general direction from said body as said lever, and means on said rearward extension for engaging the operator and supporting him on said device in a position laterally spaced from said drum, said lever and last named means being cooperable to shift the application of the operator's weight to increase and decrease the braking effort of said brake drum means on said cable as desired.

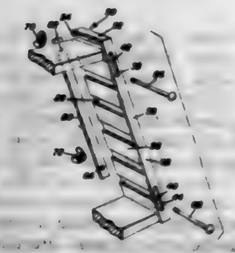
2,948,349
FOOT REST AND WORK PLATFORM ATTACHMENT FOR LADDERS
John W. Reddy, 737 N. Lincoln St., Park Ridge, Ill.
Filed Oct. 6, 1958, Ser. No. 765,602
6 Claims. (Cl. 182—121)

1. A foot rest and work platform attachment for a rung type ladder comprising, a first foot rest platform and a second work equipment supporting platform both being dimensioned for insertion between the side rails of a ladder, a first and second side wall members, said first side wall member being secured to one edge of each of said first and second platforms, said second side wall member being secured to the opposite edge of each of said first and second platforms, each of said side wall members having three projecting flange portions each having at least one rung receptive slot means dimensioned and positioned to receive one of three consecutive ladder rungs respectively, the first and third of said projecting flange portions being positioned beneath said first and second platforms respectively, the second projecting flange portion being positioned between said first and second plat-

forms so that said attachment may be secured to the top two rungs of said ladder by said first and second projecting flange portions only so that said second work supporting platform projects above the top of said ladder.



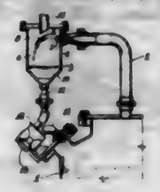
2,948,350
ADAPTER STEP FOR LADDERS
Hillory Bohannan, Box 742, Willcox, Ariz.
Filed Feb. 6, 1959, Ser. No. 791,665
4 Claims. (Cl. 182—121)



1. An adapter for stepladders to enable removable steps to be added to the stepladder intermediate the fixed rungs comprising a rigid rectangular frame including a top member, a bottom member and a pair of side members, a plurality of vertically spaced grooves in each of said side members, opposed grooves in said side members adapted to slidably receive a step therebetween, and means for securing said frame to a stepladder, said means including a pair of strap members, said strap members secured to said side members, said strap members including a top hook portion, said hook portion adapted to be suspended from said stepladder rungs, apertures in said side members, slots in said strap members, said apertures and slots being aligned to receive bolts therethrough, a pair of stripe, said strips having apertures therein receiving said bolts, nuts received on said bolts outwardly of said strips for securing said strip adjacent said grooves for preventing slidable removal of a step therefrom in one direction.

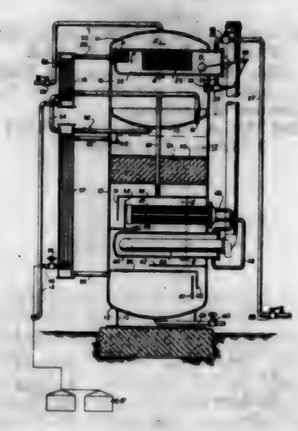
2,948,351
FOAM BREAKING DEVICE
Kenneth L. Phillips and Henry R. Sallans, Saskatoon, Saskatchewan, Canada, assignors to National Research Council, Ottawa, Ontario, Canada, a body corporate of Canada
Filed Sept. 22, 1958, Ser. No. 762,612
5 Claims. (Cl. 183—2.5)

1. In combination with a vessel containing liquid and a body of foam above the level of said liquid caused by foaming conditions in said liquid, a foam breaking device comprising a separation chamber, a nozzle having an outlet orifice communicating with said chamber and a substantially horizontally disposed axis, a conduit leading from said vessel above said liquid level to said nozzle; said conduit being substantially uninterrupted throughout its length and constituting a sole outlet for said body of foam, said conduit having a relatively large internal diameter for unrestricted entrance of foam therein, said nozzle having a single cylindrical passage leading to said orifice and said orifice being of a relatively much smaller



diameter than that of said conduit to build up pressure in said body of foam of the order of three to five pounds per square inch in said vessel whereby said foam flows through said restricted passage at high speed under the influence of said pressure to break up said foam and a fixed baffle in said chamber, said baffle having a single downwardly directed uninterrupted surface located in adjacent opposed relation to said outlet orifice for impingement by and deflection of liquid issuing from said orifice, said surface being at an angle of not substantially more than 45° to said axis of said nozzle.

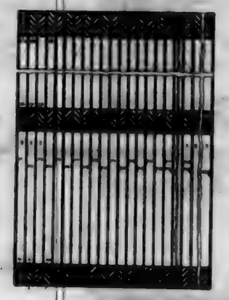
2,948,352
EMULSION TREATING METHOD AND MEANS
Jay P. Walker and Joseph L. Maher, Tulsa, Okla, assignors to National Tank Company, Tulsa, Okla., a corporation of Nevada
Filed Aug. 16, 1957, Ser. No. 678,737
31 Claims. (Cl. 183—2.7)



1. The method of treating emulsified well streams including, flowing the emulsified stream into a higher pressure gas separation zone and withdrawing gas in this zone at an elevated pressure, accumulating separated liquids in the higher pressure zone and withdrawing said liquids to a lower pressure gas separation zone, passing gas separated in the lower pressure zone in heat exchange relationship with fluids passing through the high pressure zone, withdrawing liquids separated in the lower pressure zone to a heating and treating zone and therein heating said liquids, withdrawing water and clean oil, withdrawing gas

from the heating and treating zone at a pressure below that at which gas is withdrawn from the higher pressure zone, and passing the gas withdrawn from the heating and treating zone in heat exchange relationship with at least a portion of the well stream prior to the flowing of the latter into the heating and treating zone.

2,948,353
GAS-CLEANING PRECIPITATOR
Gaylord W. Penney, 316 Louis Road, Pittsburgh 35, Pa.
Filed Jan. 8, 1958, Ser. No. 707,789
17 Claims. (Cl. 183—7)



1. A two-stage gas-cleaning precipitator, comprising an ionizing stage for ionizing the particles which are to be precipitated, a collector-stage for precipitating the ionized particles, and a means for causing the gas to pass first through the ionizing stage and then through the collector-stage; said collector-stage comprising a close-spaced collector comprising a plurality of closely spaced precipitator-plates which are individually so flexible as to be non-self-supporting in a lateral direction, the space between said precipitator-plates extending in the direction of gas-flow; a plurality of spacer-means for holding successive precipitator-plates in closely spaced relation, said spacer-means being disposed at spaced intervals, spaced laterally of the direction of gas-flow; and a power-supply means, including individual circuit-means for the precipitating spaces between said precipitator-plates, for supplying limited amounts of current to said precipitator-plates to maintain a predetermined range of potential-gradients in said precipitating spaces, said individual circuit-means including sufficient resistances to confine the serious deleterious operative effects of an accidental short-circuit between any two successive precipitator-plates to the immediate vicinity of the short-circuited portion, without imposing an excessive drain on the power-supply means; the closeness of the plate-spacings and the flexibility of the individual precipitator-plates being such as to make an accidental short-circuit an expectable contingency which must be provided for in the design.

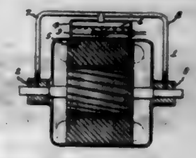
2,948,354
DUST COLLECTOR BAG CLEANING MEANS
Niles H. Hammink, Rocky River, Ohio, assignor to The Scott & Fetzer Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 8, 1957, Ser. No. 644,869
2 Claims. (Cl. 183—60)

1. Dust collector means for vacuum cleaners comprising a porous tubular dust collector bag for filtering the dust out of dust-laden air exhausted by a vacuum cleaner while allowing the air to pass, said bag having a first open bag end terminating in a first mouth defined by a collar and also having a second closed bag end, a flexible sleeve having a first sleeve end terminating in a second mouth which opens through the side of said tubular dust collector bag, said sleeve having a second closed sleeve end normally positioned within said dust collector



bag and movable to a position adjacent said first mouth, a cleaning member fixed to said second closed sleeve end and graspable from the interior of said sleeve upon insertion of the hand into the sleeve from the exterior of said dust collector bag.

2,948,355
OIL MIST LUBRICATION APPARATUS AND SYSTEM
Edwin H. Hall, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 13, 1957, Ser. No. 696,126
3 Claims. (Cl. 184—6)

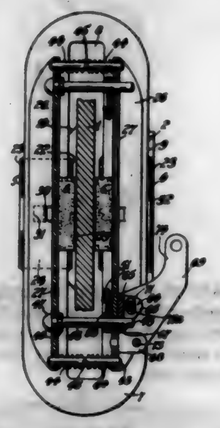


1. An electric motor comprising in combination, a stator, a rotor, a porous sleeve bearing for said rotor, and a lubrication system for said bearing comprising, an oil reservoir positioned adjacent said stator and in contact therewith to derive heat therefrom, a supply of oil in said reservoir, said lubricant being free from any vaporizing fraction which will vaporize below a predetermined temperature necessary to supply a lubricant vapor, said oil being vaporized at a predetermined temperature less than the operating temperature of the motor, an external conduit leading from said reservoir to said bearing to transport oil vapor to said porous bearing, and means to condense said vapor at said bearing.

2,948,356
DISC BRAKES AND AUTOMATIC ADJUSTING DEVICES THEREFOR
Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Filed Mar. 28, 1958, Ser. No. 724,546
Claims priority, application Great Britain Apr. 3, 1957
16 Claims. (Cl. 188—73)

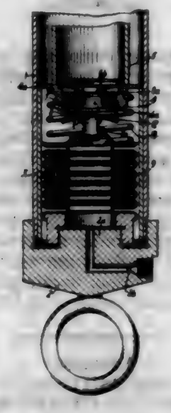
1. A disc brake comprising a rotatable disc, a housing non-rotatably associated with said disc, a pair of pressure plates associated with said housing and located one on each side of said disc, a friction member associated with each said pressure plate, brake-applying means operable to move said pressure plates in said housing to force said friction members into frictional engagement with opposite sides of said disc, said spring means to withdraw said

pressure plates away from said disc upon release of said brake-applying means, a connecting member secured to one said pressure plate and having a sliding engagement with the other pressure plate and a tab member having a pivotal engagement with said other pressure plate and



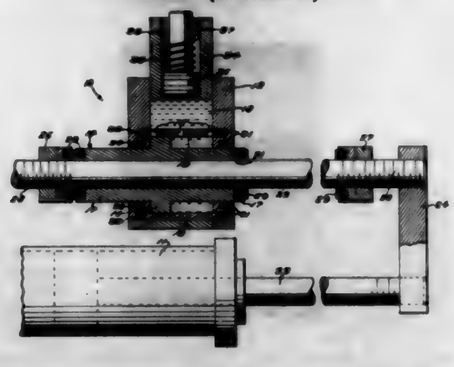
having an edge contacting said connecting member to permit said connecting member to slide freely thereon when said pressure plates move toward said disc and to swing and jam on said connecting member when said pressure plates move away from said disc to limit the extent of said last-named movement.

2,948,357
HYDRAULIC SHOCK ABSORBER
Eric Cookson, 14 Wilkinson Ave., Blackpool, England
Filed Feb. 5, 1957, Ser. No. 636,377
1 Claim. (Cl. 188—97)



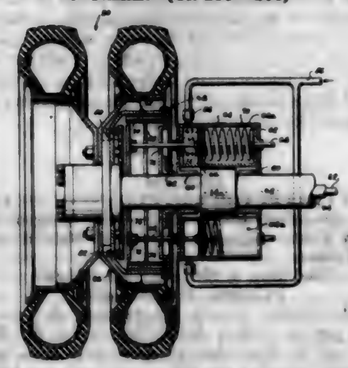
In a telescopic shock absorber, a reserve tube, a pressure tube connected thereto and inside said reserve tube, a chamber connected to an end of said pressure tube, a passageway between said pressure tube and chamber, a first valve member cooperating with said passageway to control flow of fluid from said pressure tube to said chamber, another valve member cooperating with said passageway to control flow of fluid through said passageway, pressure responsive means in said chamber connected to said other valve member for moving it relative to said passageway to vary the resistance to flow of fluid through said passageway and means connected to the shock absorber for supplying fluid under pressure to actuate said pressure responsive means, said latter means being responsive to said fluid pressure supply and to pressure in said chamber.

2,948,358
HYDRAULIC SHOCK ABSORBER
James H. Born, Leonhard, Willard D. Drukker, Downers Grove, and Helen F. Runge, Brookfield, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Feb. 18, 1953, Ser. No. 714,394
3 Claims. (Cl. 188—97)



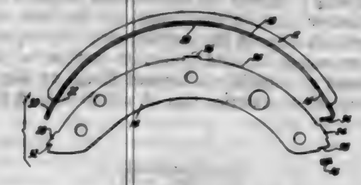
1. A shock absorber for a moving member comprising a fluid retaining reservoir, a cylinder mounted within the reservoir having a plurality of orifices formed therein, a primary piston mounted within the cylinder having end portions extending through the walls of the reservoir and having a bore extending therethrough, said orifices arranged in a predetermined pattern for controlling the acceleration of the primary piston, a shaft connected to the moving member and mounted in the bore for engaging and moving the primary piston to cover and uncover successive orifices, a secondary piston mounted in said reservoir, and means for urging the secondary piston against the fluid within the reservoir for absorbing the instantaneous shock upon the initial movement of the primary piston.

2,948,359
VEHICLE BRAKE APPARATUS
Calvin J. Barrett, Long Beach, Calif., assignor of forty-nine percent to Albert F. Crane, Long Beach, Calif.
Filed Dec. 31, 1957, Ser. No. 706,329
9 Claims. (Cl. 188—106)



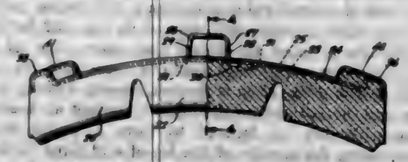
1. A brake apparatus, comprising: a rotatable drum; an internal fluid-impelled expanding brake means within said drum; an annular, axially-movable friction element for braking cooperation with said drum and mounted concentrically within said expanding brake means, means for biasing said element into braking engagement with said drum; fluid pressure means having a source of fluid pressure in common with said expanding brake means resisting the action of said biasing means; and valve means for varying the force of said fluid pressure means to actuate said element independently of and concurrently with actuation of said expanding brake means.

2,948,360
BRAKE SHOE
Clark R. Lupton, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Continuation of abandoned application Ser. No. 145,365, Feb. 21, 1950. This application April 6, 1955, Ser. No. 499,545
3 Claims. (Cl. 188—234)



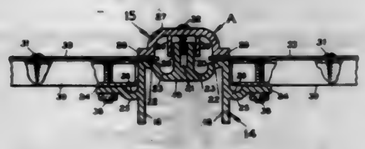
1. A T-section shoe comprising a rim and web having spaced slots and projections respectively, said slots removably receiving therein corresponding projections, one end of said rim being turned inwardly to provide a flat laterally-extending ledge, at least one of said projections having a portion which cooperatively engages a portion of its slot to cause the web and rim to be brought into tighter engagement at the web is urged toward the end of the rim remote from said ledge, the end of the web adjacent said ledge being notched, and a resilient member for holding the web and rim in engagement comprising a semielliptic plate spring element of rectangular cross section, a transverse depression having a width substantially equal to the thickness of the web formed in the outer side of said spring element between the ends thereof, said spring element being inserted between the end of said web and said ledge with the depression straddling said web in the notched portion thereof, said spring element exerting a force tending to urge the rim and web in opposite directions whereby the rim and web are brought into tighter engagement.

2,948,361
BRAKE SHOES
Robert B. Pogue, West Orange, N.J., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Filed Aug. 10, 1956, Ser. No. 603,406
1 Claim. (Cl. 188—251)



A railroad brake shoe consisting essentially of: a composition brake body having a predetermined length, width, and thickness and having a predetermined longitudinal curvature; a back member consisting of expanded steel mesh embedded in said composition body and limited to a portion of said body closely adjacent the convex surface thereof and having a length, width, and curvature approximately corresponding to the length, width, and curvature of said composition body; a plurality of mounting lug elements each constituting an integral part of said composition brake body and comprising composition material extending above the convex surface thereof; a corresponding number of lug-reinforcing elements each comprising an integral part of said back member deformed to correspond to the configuration of an individual one of said lug members; and a metal lug member, affixed to the concave surface of said back member and extending through said back member and said composition body above the convex surface thereof, for mounting said brake shoe upon a brake head.

2,948,362
BUILDING STRUCTURE
Herbert S. Jones, 300 NW. 18th Ave., Miami, Fla.
Filed July 19, 1957, Ser. No. 672,960
3 Claims. (Cl. 189—2)



3. A building structure comprising a plurality of pairs of elongated structural members extending in spaced and substantially parallel relation to each other, each of said structural members having an end portion in abutting relation with an end portion of the other structural member forming a pair, said structural members each having a pair of elongated spaced leg portions substantially parallel to each other, a web portion connecting said leg portions, a pair of flanged members mounted on said web portion in spaced and substantially parallel relation, said flanged members extending in a direction opposite to that of said leg portions, an outwardly extending flanged member mounted on each of said leg portions intermediate their ends, said last named flange members having a recess adjacent said leg portions, a plurality of cross members extending between said main structural members and resting on said outwardly extending flanged members, means securing said cross members to said outwardly extending flanged members, panel means extending between said structural members and mounted on said cross members, means securing said panel members to said cross members, said panel means having edge portions resting on said web portions, cap means mounted over said web portion and engaging said edge portions of said panel means and a ridge cap mounted transversely on said structural members at said end portions.

2,948,363
TELESCOPING ELEVATORS
Fred P. Hopfeld, Elmwood Park, Ill., assignor to Grand Specialties Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 11, 1955, Ser. No. 527,851
2 Claims. (Cl. 189—14)

1. An elevator of the kind described adapted to be erected from a collapsed condition and comprising in nested assembly, a plurality of generally cubical sections of diminishing lateral dimension telescoped one within another and including a first or outer such section and a last or innermost section and a plurality of intermediate sections between said first and last sections, the outer or

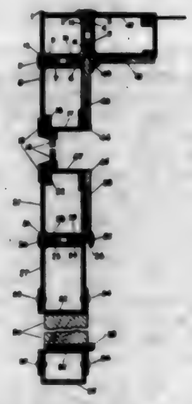
first one of said sections being stationarily mounted on a base structure having wheels thereon enabling the elevator to be manually moved about, idlers carried at the upper end of said intermediate sections, flexible connectors each attached at one end to anchor means on an outer section below the top thereof, passed over the idlers on the next inner section and then attached at the other ends to anchor means on the second next inner section, a hydraulically operated piston substantially centered within the innermost one of said sections and adapted through transmitting links to apply a lifting force to the bottom of the outermost one of said intermediate sections, a work platform carried by the innermost one of said sections so as to be elevated to a height that is a multiple of the distance through which the outermost one of said intermediate sections is advanced, said intermediate sections each having at the four corners thereof elongated vertical angle bars arranged in substantially



back-to-back relation with the channels thereof facing inwardly and outwardly relative to the assembly respectively in opposite directions, the first or outer section having a like angle bar at a corner thereof with the channel of that bar facing inwardly relative to the assembly and the last or innermost section having a like angle bar at a corner thereof with the channel of that bar facing outwardly relative to the assembly, and a flange of each of said angle bars having fixed thereon a flat narrow guide plate projecting therefrom a substantial distance and fitting in complemental fashion into the channel of the opposed angle bar, each corner of said intermediate sections having two such guide plates one of which extends inwardly relative to the assembly and which is fixed to the channel bar having the inwardly facing channel, and the other of which extends outwardly relative to the assembly and which is fixed to the channel bar having the outwardly facing channel.

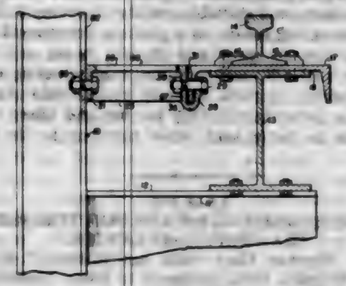
2,948,364
INTERLOCKING BUILDING SECTIONS AND METHOD OF MAKING BUILDINGS
Ben Cooper, 1455 Coen Ave., Long Beach, Calif.
Filed Feb. 6, 1956, Ser. No. 563,651
1 Claim. (Cl. 189—34)

Portable building structure units comprising: a lengthy hollow corner column having a square cross-section; a decorative molding strip formed integrally on one corner of said column and extending the length thereof, said molding strip being parallel with one face of said column and having an overhanging lip extending outwardly parallel to said face of said column and in the same plane thereof; an L-shaped flange extending the length of said column, said flange having one leg tapered, depending outwardly, and with the narrow tapered end extending away, from said molding strip so as to form a wedge shaped groove the length of the face of said column perpendicular to said molding strip; an L-shaped flange formed integrally with said face of said column perpendicular said molding strip, said flange having one leg tapered and depending in the same direction as said tapered leg of said flange on said molding strip at a spaced distance therefrom to form a second wedge shaped groove the length of said column; a pair of L-shaped flanges extending the length of and on the outside edge of the face of said corner column parallel to the face upon which said molding strip is located, each of said flanges having its leg parallel to the column tapered so that the pair of flanges forms a pair of wedge shaped grooves along the length of said face of said column; a first U-shaped lengthy column having a pair of flanges integrally formed thereon on the intermediate face thereof, each of said flanges having a tapered leg directionally opposed to each of the tapered legs on the flanges on the face of said corner column adacent the molding strip formed thereon adapted to engage the said flanges on said corner column in a wedged relationship; a tapered flange on the inner-side of one of the exterior legs of said U-shaped column



forming a tapered groove therein; a second U-shaped column adapted to fit within the legs of the first U-shaped column having flanges thereon, said second U-shaped column having one leg adapted to be engaged in the tapered groove formed on one leg of said first U-shaped column and to wedge into position an outer sheet of building material; and a third U-shaped column having a pair of flanges each flange having a tapered leg thereon adapted to engage the pair of flanges upon the face of said corner column parallel the face having the molding strip, said third U-shaped column having a decorative molding strip extending parallel with one of its legs and having a lip thereon adapted to engage the outer edge of said corner column where said columns meet said leg upon which said molding strip is formed, having formed at the other end thereof and on the interior thereof an L-shaped flange with one leg tapered to form a wedge shaped groove along the interior of one leg of said third U-shaped column and a last U-shaped column adapted to fit within the legs of said third U-shaped column one leg of said last U-shaped column fitting within said wedge shaped groove on one leg of said third U-shaped column and fastening by wedge action a sheet of building material therein.

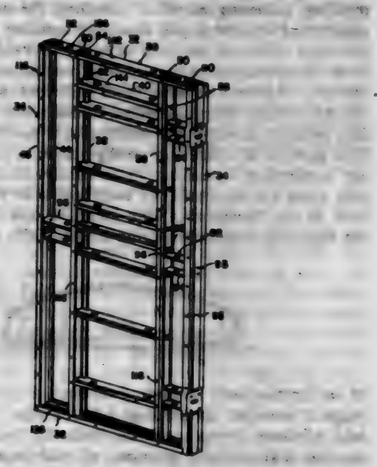
2,948,365
FLEXIBLE CONNECTION FOR RUNWAY GIRDERS
James A. Evans, 2131 Amherst Road NE., Massillon, Ohio
Filed Sept. 28, 1956, Ser. No. 612,662
5 Claims. (Cl. 189—36)



1. A flexible connection for runway girders having a top flange comprising a dependent flange projecting downward from said top flange, a vertical column with a seat shoulder on said column and on which said girder rests, said column having a portion extending vertically thereabove and a portion extending vertically therebelow, a strut element and a connecting means secured thereto, said strut extending between the depending flange of the crane runway girder and the portion of the vertical column extending vertically above the seat shoulder, said strut element being secured to the depending flange of the crane runway girder and to the portion of the vertical column extending vertically above the seat shoulder in approximate alignment with the top flange of the girder and transverse the longitudinal axis thereof in order to take any direct thrust which may be exerted upon said top flange, said connecting means on the strut comprising an enclosing portion in the shape of a return bend, said depending flange being fitted between the bend and the return bend portion, said connecting means on the strut and the depending flange having means therein to permit limited movement longitudinally of the members while holding the members rigidly in a direction transverse thereto, whereby limited longitudinal movement of said crane runway girder in deflection may be permitted while at the same time accepting the cross thrust in the strut.

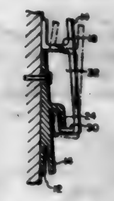
2,948,366
METAL DOOR STRUCTURE
Clyde W. Kelly and Donald J. McKinnon, Detroit, Mich., and Joseph F. Heintzel and Arthur C. Harper, Jr., Erie, Pa., assignors to Fenestra, Incorporated, Detroit, Mich., a corporation of Michigan
Filed June 25, 1957, Ser. No. 667,845
13 Claims. (Cl. 189—46)

1. A metal door construction including a frame assembly having a lock stile, a hinge stile and end members comprising the peripheral edge of the frame, vertical inner stile members extending between said end members, horizontal members between said vertical stile members, all of said frame members being fabricated from channel shaped material having a web and two flanges, panel members, means for attaching said panel members to the outer faces of the flanges of said frame members, a reinforcing plate received between the web of one of said end members and the web of an adjacent horizontal member, the web of said one end member having a slot whose length slightly exceeds the width of said plate and whose width is greater than the thickness of said plate, a tab at the inner edge of said plate, said adjacent horizontal member having a slot receiving said tab, the outer edge portion of said plate being retained in the slot in said one member, and a portion of said plate intermediate its inner



and outer edge portions being in reinforcing abutting relation to one of said panel members.

2,948,367
INTERLOCKING SIDING
Salvatore R. Uglietto, 732 Belmont St., Watertown, Mass.
Filed Dec. 4, 1958, Ser. No. 778,254
2 Claims. (Cl. 189—86)



1. An assembly of siding elements for buildings, each siding element comprising an elongated panel having an outer and an inner wall converging together and connected along their upper margins, a longitudinal rib joining the lower portion of said inner wall with said outer wall and defining in the panel a sealed longitudinal thermal-insulating chamber triangular in cross section, a downwardly facing channel formed lengthwise on the outer face and adjacent the upper margin of said panel for interlocking with the lower portion of another panel of similar construction, an upwardly facing channel formed lengthwise on the inner face and along the lower margin of said panel interlocking with the upper portion of an adjacent panel of similar construction and forming therewith an additional thermal-insulating chamber, the upper margin of said panel bearing against the longitudinal rib of an adjacent panel to support said adjacent panel in positive fixed relation thereto.

2,948,368
MOLDING FASTENER
Graham A. Arnold, Middleboro, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed May 9, 1957, Ser. No. 658,077
1 Claim. (Cl. 189—88)

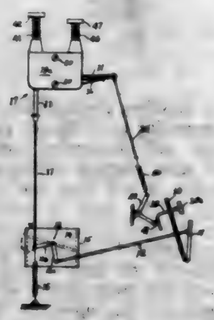
A molding and like installation comprising, in combination, a support member having a pair of laterally spaced

openings, a hollow molding having inturned flange portions engaging the surface of said support member and a molding fastening member attaching the molding to the supporting structure, said fastening member having a base provided with two portions laterally movable toward and away from each other and a fold portion connecting said movable portions of said base, said fold portion having spaced vertical arms connected to one another at their top free ends by downwardly inclined arm portions defining a fold portion M-shaped in configuration, a support engaging projection extending in inwardly inclined relationship from the underside of each movable portion of said base in the direction of one another, said support member engaging projections being substantially identical, each



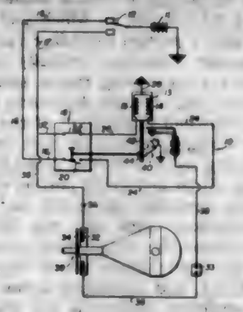
of said projections extending through an opening in said support member in inclined relationship therewith, said fold portions being squeezed inwardly thereby laterally moving said movable portions of said base toward each other and holding said fastener member to said support member with said projections engaging the edges of said openings, said two portions having molding engaging portions facing away from said fold and at the opposite ends of said base in engagement with said flange portions of said molding strip whereby the forceable engagement of the molding on said molding engaging portions tightens the engagement of said support engaging projections with the support member.

2,948,369
ACCELERATOR CONTROL
Leon G. Arpin, 340 Mountain Ave., North Caldwell, N.J.
Filed Oct. 2, 1958, Ser. No. 764,977
5 Claims. (Cl. 192—3)



1. An automotive accelerator control in combination with a carburetor having a throttle valve member and idling spring means for normally moving said valve member to its idling position, said control comprising a shiftable member, control spring means for moving said shiftable member, connecting means directly connecting said valve member and said shiftable member, frictional sliding locking means engageable with said shiftable member for releasably locking said shiftable member in selected longitudinal positions thereof, said control spring means operating to actuate said shiftable member when said shiftable member is released, said connecting means having independent movement and thereby being operative to permit advanced and retracted movement of said valve member while said shiftable member is locked against movement, said connecting means being further operative to retain said valve member in a selected advanced position thereof when said shiftable member is released and free to move under the action of said control spring means to a position limited by said connecting member, said shiftable member being adapted to be held in a locked position while said valve member is advanced to a position corresponding to a predetermined speed, releasing means permitting momentary actuation of said locking means to release said shiftable member movement limited by said connecting means to a position corresponding to said predetermined speed and thereby retain said valve member in said advanced position, said releasing means being thereafter operable to again release said shiftable member for movement thereby leaving said idling spring means free to move said valve member to its idling position.

2,948,370
SYNCHRONIZING MEANS FOR TORQUE TRANSMITTING DEVICE
Martin P. Winther, Gate Mills, and Robert C. Russell, Shaker Heights, Ohio, assignors to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 4, 1956, Ser. No. 576,168
16 Claims. (Cl. 192—4)



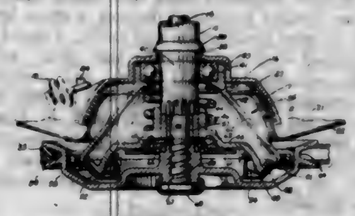
1. In a vehicle having a propeller shaft, a multi-speed transmission, a two speed axle having high and low speed ratios, braking means interposed between said transmission and said axle, said braking means being operative to retard the speed of said propeller shaft when said axle is shifted from said low speed ratio to said high speed ratio and said brake being released when said shift to said high speed ratio is effected.

2,948,371
COMBINED MAGNETIC CLUTCH AND BRAKE MECHANISM
Henry C. Lebde, P.O. Box 212, Northport, N.Y.
Filed Oct. 28, 1958, Ser. No. 776,148
20 Claims. (Cl. 192—12)



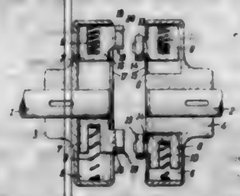
1. A highly compact magnetic clutch and brake mechanism of limited over-all dimension whose clutching and braking actions can be effected in minimum time and which comprises; a rotor assembly adapted to be externally driven and having a circular rotor member, a pair of pole forming elements presented by said rotor member and a magnet coil sandwiched between said pole forming elements; a clutch assembly of low moment of inertia designed to be driven by said rotor assembly and having a circular driven member presenting a relatively thin clutch section having one face thereof directly adjacent the magnet coil and pole elements of said rotor assembly to provide a narrow gap between the adjacent surfaces of said clutch section and rotor pole elements for containing flowable magnetic gap bridging material; a brake assembly including a relatively stationary circular member, a pair of pole forming elements presented by one side of said circular member and a brake magnet coil sandwiched between said pole forming elements, said brake coil and associated pole elements being positioned directly adjacent the opposite face of the clutch section of said clutch assembly to provide a relatively narrow gap therebetween for the reception of flowable magnetic bridging material; and a control circuit operative to selectively energize said rotor coil and braking coil.

2,948,372
DRIVE ASSEMBLY
John D. Goodlaxson, Colfax, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Filed May 2, 1955, Ser. No. 505,231
12 Claims. (Cl. 192—18)



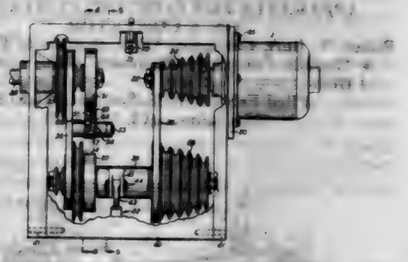
1. In a drive assembly comprising, a support, a first shaft journalled in said support, a rotor connected to and axially moveable on said first shaft, a brake stator connected to said support, means urging said rotor against said stator to brake rotary movements of said first shaft relative to said support, a second shaft coaxial to said first shaft, a helix on said second shaft, a driven member threaded on said helix, drive means for rotating said driven member, and clutch means controlled by said driven member for moving said rotor away from said stator and rotating said first shaft with said driven member.

2,948,373
OVERLOAD RELEASING CLUTCH
Karl Schild, Munich, Germany, assignor to Ortwin Stieber, Munich, Germany
Filed June 23, 1958, Ser. No. 743,833
Claims priority, application Germany June 25, 1957
7 Claims. (Cl. 192—56)



1. An overload releasing clutch between opposite facing ends of a driving rotating shaft and a driven rotating shaft, comprising coupling halves rigidly secured on said shaft ends with opposite spaced face sides, radial guide grooves at the opposite spaced face sides of said coupling halves, flyweight bodies radially slidably disposed in said radial guide grooves, rigidly engaging members on the flyweight bodies of one coupling half and movable engaging members on the flyweight bodies of the opposite coupling half axially projecting into the space between the opposite face sides of said coupling halves for mutual interengaging contacting action in a circumferential direction, radially acting resilient means for yieldingly urging said flyweight bodies of both coupling halves toward their inward end position in said radial guide grooves, abutment means on each of said rigidly engaging members of said one coupling half having at least two abutment surface portions oriented at different inclination angles with respect to the radial direction for engaging said movable engaging members on said opposite coupling half, an abutment surface portion defining a smaller inclination angle with respect to the radial direction being adapted to cooperate with the movable engaging members at the beginning of the rotating movement of the coupled shafts when the engaging members are in their inward end position, and another abutment surface portion defining a larger inclination angle with respect to the radial direction being adapted to cooperate with the movable engaging members of said opposite coupling half during the rotating movement of the coupled shafts when the engaging members are in their outward end position.

2,948,374
VARIABLE SPEED DRIVE
Robert M. Husband, R.R. #3, Fort Wayne, Ind.
Filed June 12, 1958, Ser. No. 741,668
8 Claims. (Cl. 192—135)

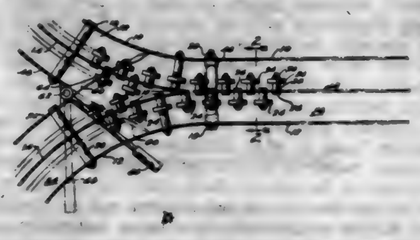


1. A variable speed drive comprising a housing, a first cone pulley journaled in said housing, a plate pivotally connected adjacent one end to said housing for swinging movement toward and away from said first cone pulley about an axis parallel to the axis of said first pulley, a second cone pulley journaled on said plate, a belt connecting said pulleys, a door hingedly connected to said housing for swinging movement about an axis parallel to the axis of said plate, and a toggle linkage pivotally connected at one end to said door and pivotally connected at its opposite end to the other end of said plate to swing said plate pivotally toward said first cone pulley to loosen said belt on said pulleys when said door is opened and to swing said plate pivotally away from said first cone pulley to tighten said belt on said pulleys when said door is closed, the axes of both pivotal connections of said toggle linkage being parallel to the axis of swing of said plate.

2,948,375
ROLLERWAY CHUTING
Michael Dabich, St. Clair Shores, Mich., assignor to F. Jos. Lamb Co., Warren, Mich., a corporation of Michigan
Filed Feb. 24, 1959, Ser. No. 794,907
2 Claims. (Cl. 193—35)

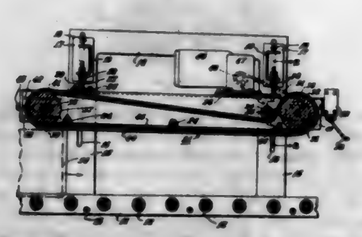
1. Chuting comprising a pair of opposed flexible side guide rails, a pair of spaced flexible carrier rails disposed

between and parallel to said side rails, said side rails and said carrier rails having longitudinally spaced apertures therein, bolts extending through the apertures in each side rail and the apertures in the adjacent one of said carrier rails to secure each carrier rail to one of said side rails, spacers on said bolts to maintain said carrier rails spaced from said side rails with the space between said carrier rails unobstructed to form a longitudinally extending slot between said carrier rails, each of said



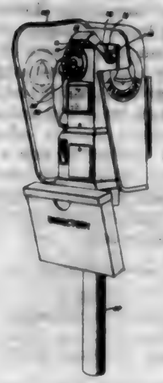
side rails extending upwardly above the carrier rail secured thereto, a series of rollers mounted on each of said carrier rails with a peripheral portion of each roller projecting above the carrier rail to which it is secured, said rollers being arranged relative to each other so as to provide a rolling support for an article confined between said side rails, and means independent of said bolts for securing said side rails in spaced parallel relation.

2,948,376
APPARATUS FOR STOPPING CONTAINERS ON A CONVEYOR
Robert V. Burt, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 21, 1958, Ser. No. 716,673
12 Claims. (Cl. 193—40)



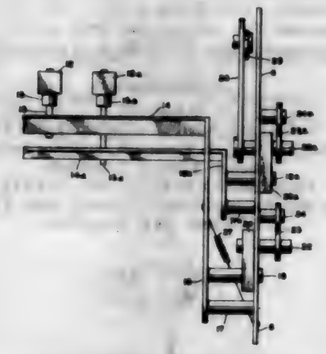
1. Apparatus for stopping containers on a roller conveyor comprising a frame rigidly mounted astraddle said conveyor, a belt frame suspended from said frame and overhanging said conveyor, a pair of pulleys mounted on said belt frame, an endless belt having a high friction facing mounted for movement by said pulleys, said belt being driven by one of said pair of pulleys, said one of said pair being the drive pulley, the lower flight of said belt being slightly inclined to and spaced from said roller conveyor so that the distance from the rollers to the belt is slightly greater than the height of containers being handled at one end and slightly less at the other end, a smooth unyielding supporting surface contiguous to said lower flight of said belt to prevent substantial deflection thereof, means for driving said belt, and means for stopping said driving means whereby further movement of containers wedged between said belt and said roller conveyor is stopped, said containers acting as a stop for successive containers coming down said roller conveyor.

2,948,377
SHIELD FOR COIN GAUGE ON COIN COLLECTORS
William J. Kennedy, Homestead Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 20, 1957, Ser. No. 704,115
4 Claims. (Cl. 194—1)



1. A coin operated telephone set comprising a casing, a switch hook extending from said casing, and having a telephone handset positioned thereon, a gauge for the reception of coins mounted on said casing, a shield normally positioned over and covering said gauge, said shield pivotally mounted on said casing and provided with means operatively associated with said handset by its removal thereof from said switch hook to expose said gauge, and additional means operatively associated with said switch hook by the replacement thereon of said handset for returning said shield automatically to its normal position.

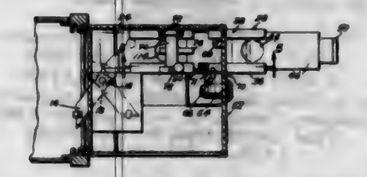
2,948,378
VENDING MACHINE
Irving Goldbert, Mountainside, and John Henry Schendorf, Metuchen, N.J.; said Schendorf assignor to said Goldbert
Filed July 27, 1956, Ser. No. 600,601
3 Claims. (Cl. 194—58)



1. In a vending machine of the character described, a series of operating plungers having depending fingers of varying length adapted to selectively make contact with and arcuately move one or more pivoted operating bars, cam bases attached to said operating bars and means for translating the arcuate movement of said operating bars into a horizontal movement of said cam bases, cam surfaces on said cam bases and cam interlocking

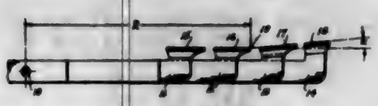
means normally blocking horizontal movement of said cam bases, a coin separator adapted to separate coins of varying denomination and present them to said cam surfaces thereby causing said cam surface to become altered by the introduction of said coins, thus permitting horizontal movement of said cam bases only when said coins are presented to said cam surfaces.

2,948,379
KEY AND COIN COMBINATION LOCK
Robert K. Hensley, Jr., 2503 Lyons Ave., Hillcrest Heights, Md.
Filed Nov. 28, 1956, Ser. No. 624,886
6 Claims. (Cl. 194—92)



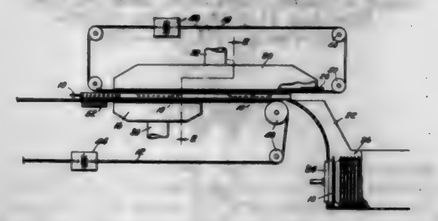
1. A key and coin controlled actuation device for closure means comprising a channel-shaped guide including a bottom plate having upwardly extending sides with flanges extending inwardly towards each other from the upper part of said sides, a slide movably positioned in said guide, said slide having an aperture therethrough, said slide having recesses therein communicating with said aperture, said flanges overlying said recesses, said guide having an opening in one of the sides thereof, said slide having a slot therein, and a key actuated latch pivotally mounted for movement into engagement with said slot in said slide, said latch extending through said opening, a slug receivable in said slot and supported by the bottom plate of said guide for preventing entry of the latch into the slot, said bottom plate of the guide having a hole therethrough through which said slug can fall after said slide has been moved all the way inwardly thereby allowing the latch to engage the slot when aligned therewith for locking the slide.

2,948,380
STENOGRAPHIC MACHINE KEYBOARDS
Howard B. Smith, 1439 Rhode Island Ave., Washington, D.C.
Filed May 19, 1958, Ser. No. 736,349
1 Claim. (Cl. 197—98)



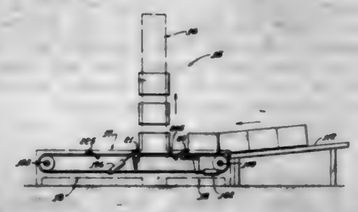
In a stenographic machine, the combination of a horizontal pivot, a set of key bars mounted on said pivot for movement in vertical arcs between initial and depressed positions, and a set of actuating keys provided on the respective key bars in banks arranged at different distances from said pivot, the keys in a bank relatively close to the pivot having upper finger-engaging surfaces which are horizontal when the keys are in their initial position but which are declined in a direction away from the pivot when the keys are depressed, and the keys in a bank relatively further away from said pivot having upper finger-engaging surfaces which are inclined in a direction away from the pivot when the keys are in their initial position but which are substantially horizontal when the keys are depressed, the plane of inclination of the upper surfaces of the keys in the second mentioned bank intersecting the horizontal plane of the upper surfaces of the keys in the first mentioned bank substantially at edges of the keys in the first bank most remote from said pivot when all said key bars are in their initial positions.

2,948,381
ARTICLE TRANSFER AND SPACING DEVICE
John J. Penn, Darien, Conn., assignor to Diamond National Corporation, a corporation of Delaware
Filed Sept. 10, 1958, Ser. No. 760,108
4 Claims. (Cl. 198—34)



1. An article transfer and spacing device, comprising a first perforated endless belt conveyor disposed horizontally for supporting a succession of lightweight articles to be conveyed on its upper course, a second perforated endless belt conveyor disposed horizontally directly above the first conveyor and spaced closely thereto, an air pressure chamber mounted below the upper course of the first conveyor for directing a blast of air upwardly through said first conveyor to lift the articles successively therefrom and blow them against the underside of the upper conveyor, a vacuum chamber mounted above the lower course of the upper conveyor opposite the pressure chamber for holding the articles by suction on the underside of the upper conveyor as they are carried along over to a discharge point, an adjustable baffle mounted at one end of the vacuum chamber for adjusting the position of the discharge point by terminating the suction to cause the articles to drop from the upper conveyor, and means for advancing the upper conveyor at a higher speed than that of the lower conveyor to increase the space between successive articles as they are transferred.

2,948,382
BOX STACKING MECHANISM
Kenneth F. Russell, Pomona, Calif., assignor to Pomona Foundry, Inc., Pomona, Calif., a corporation of California
Filed Dec. 4, 1956, Ser. No. 626,178
21 Claims. (Cl. 198—35)



1. In a stacking mechanism for boxes and the like, the combination of: frame means providing a vertical stack pathway and a stack discharge opening; elevator means carried by said frame means for raising in spaced relation a plurality of boxes in said stack pathway; a single continuous conveyor means extending across the bottom end of the stack pathway and providing an infeed conveyor section and an outfeed conveyor section; a first gate means in said infeed section to interrupt flow of

boxes to said stack pathway; a second gate means on the outfeed section adjacent the stack discharge opening for longitudinally positioning each box; and means on the second gate means responsive to pressure of a box thereagainst to cause actuation of the elevator means whereby each box except the last box of a stack to be formed is lifted by said elevator means.

2,948,383
CARRIER, ESPECIALLY FOR RADIOACTIVE LOADS
Henry J. Modrey, Eagle Drive, Stamford, Conn.
Filed Apr. 11, 1958, Ser. No. 727,894
16 Claims. (Cl. 198—179)



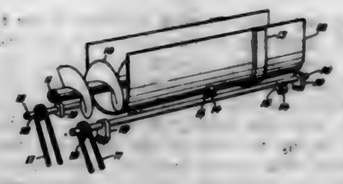
1. In a remote controlled load carrying assembly, a load carrier adapted to be locked to a receiver at the load to be carried, said load carrier comprising an outer sleeve, an inner sleeve within the outer sleeve, a clamping rod within the inner sleeve fixedly secured to the outer sleeve, said clamping rod terminating at one end in a clamping head one-sidedly overhanging the clamping rod and protruding from said inner and outer sleeves, said inner sleeve being slidable relative to the outer sleeve and the clamping rod and supporting at its end adjacent to the clamping head a centering means which in a forward position of the inner sleeve relative to the clamping head constitutes, in conjunction with the clamping head, a centering and locking structure for locking the carrier to the receiver centered relative thereto, and release means for retracting the inner sleeve in unison with said centering means from said forward position, said release means comprising a motion transmitting member extending within the outer sleeve and secured to the inner sleeve at the end thereof opposite said centering means and means spaced apart from said inner sleeve to apply an axial pull to said member for retracting the inner sleeve from said forward position.

2,948,384
BELT CONVEYOR STRUCTURE
Robert L. Pate, Pittsburg, Kans., assignor to The McNally Pittsburg Manufacturing Corporation, Pittsburg, Kans., a corporation of Kansas
Filed Oct. 27, 1958, Ser. No. 769,683
9 Claims. (Cl. 198—192)

1. In belt conveyor mechanism, in combination with conveyor framework providing transversely spaced frame elements, a flexible cable suspended between said spaced frame elements, fastening means at each end of the flexible cable for fixedly securing the cable to the elements respectively, a plurality of idler rollers mounted on the cable, at least one bearing assembly for each idler roller for journalling the roller on the flexible cable, each bearing assembly including a sleeve in telescoping relation on the flexible cable, and bearing structure interposed between the said sleeve and the idler roller.

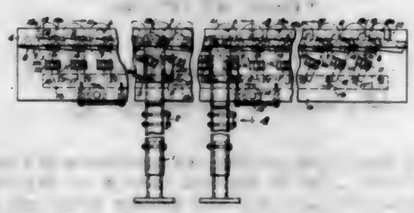


2,948,385
SCREW CONVEYOR APPARATUS
William E. Todd, South Norfolk, Va., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 28, 1956, Ser. No. 579,633
6 Claims. (Cl. 198—213)



1. The combination comprising: a conveyor conduit formed from resilient flexible material; a rotatable drive shaft mounted outside and parallel to said conduit; flexor means mounted on said drive shaft engageable with and capable of deforming said conduit at spaced locations during at least part of the rotation of said shaft; and means to rotate said drive shaft.

2,948,386
CONVEYING AND STORING UNITS
John G. Kay, Detroit, and Michael Dubich, St. Clair Shores, Mich., assignors to F. Jos. Lamb Company, Detroit, Mich., a corporation of Michigan
Filed May 26, 1958, Ser. No. 737,814
8 Claims. (Cl. 198—219)



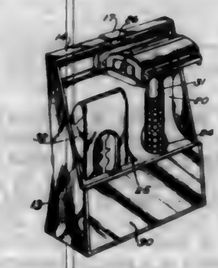
1. A conveying unit comprising a fixed workpiece supporting structure including a plurality of track sections, each track section having an article supporting surface inclined downwardly toward its forward end, the rear extremity of each track section projecting above the forward end of the track section immediately behind it to provide a stop for the workpiece traveling along the track section behind it, a plurality of elevating members movably mounted on said structure, means for moving said members in one direction to lift workpieces stopped against said rear extremities of said track sections and deposit them on the next forward track sections, said members being movable back to their original positions by gravity, each of said members when moved in said one direction having a portion thereof disposed in the path of the workpiece following the workpiece which it elevates to prevent movement of said following workpiece along its track section until said member returns to its original position under the influence of gravity, each said member being engaged by the workpiece it has elevated to prevent return movement of each member as long as the workpiece it has elevated is stopped against the next forward member, whereby said workpieces are advanced in succession along said track sections beginning with the leading workpiece.

2,948,387
CONTAINER
Sherman S. Fishman, San Francisco, Calif.
Filed July 28, 1958, Ser. No. 751,529
2 Claims. (Cl. 206—5)



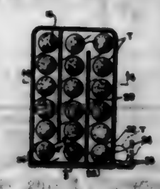
2. A container for contact lenses made of water resistant resilient solid synthetic resin consisting of a base plate having two upright cylindrical bodies affixed to it so placed that one is separated from the other, each of said upright bodies having a hemispherical depression on its top surface, each of said cylinders having a small shelf-like projection into each of the said hemispherical depressions, said shelf being level with the uppermost part of said cylindrical body and a cap for each cylindrical body adapted to cover said depression, said cap having an air vent so positioned that said cap may be rotated to close the air vent by bringing it into contact with the shelf-like projection.

2,948,388
SAFETY RAZOR SET CASE
Charles L. Metzler, Palisades Park, N.J., and William H. Dennerlein, Bethpage, and Leon B. Bernstein, Hicksville, N.Y., assignors to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed Jan. 12, 1959, Ser. No. 786,090
8 Claims. (Cl. 206—16)



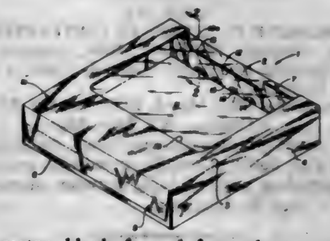
1. A carrying and display case for a safety razor and blades, comprising a stand-up body having a base, upwardly tapering side walls and a narrow top wall, a front panel having a forwardly offset lower portion merging through a rearwardly inclined intermediate portion into an upright upper portion, the upper portion having a projecting overhead flange for supporting the head of a safety razor, and the intermediate portion having an aperture to receive the handle of the razor and another aperture to receive a blade package, and means for fastening the front panel within the base and walls of said stand-up body.

2,948,389
PILL DISPENSE UNITS
Richard Horland, 29 Crestmont Road, West Orange, N.J.
Filed May 7, 1958, Ser. No. 733,731
1 Claim. (Cl. 206—42)



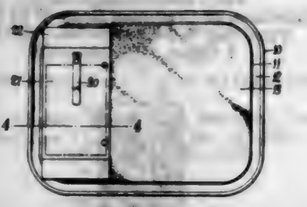
A dispenser for tablets and the like comprising a rectangular flat container having partitions defining a tortuous path for movement of the tablets therethrough and having a dispensing opening at one corner thereof, a closure device for said opening slidably mounted on one end of the container, ribs along the outer surfaces of said one end of the container, said closure device including an elongated channel-shaped member having a web portion, side walls and inwardly extending flanges at the free ends of the side walls for riding on said ribs, a spring closure tongue at one end of the channel-shaped member, said closure tongue extending above the free ends of the side walls and adapted to close the dispensing opening in the container, said side walls having recesses adjacent the closure tongue, said closure tongue adapted to prevent rolling of the contents of the container off of the web portion of the closure device, said side walls having recesses adjacent the closure tongue whereby the contents dispensed through the dispensing opening and held by the closure tongue may be grasped by the fingers of the user and removed.

2,948,390
WINDOW CARTON
Merle L. Wagaman, Lynwood, Calif., assignor to Fibreboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Filed June 23, 1959, Ser. No. 822,286
8 Claims. (Cl. 206—45.31)



1. A carton blank formed from sheet material and including a pair of adjacent hingedly connected wall panels, a window opening extending into both of said panels across the hinged connection therebetween, a coating of adhesive applied to one side of said sheet material in a peripheral line around said window opening, a reinforcing strip on said one side adjacent to said window opening, said reinforcing strip having at least one perforation therethrough overlying said adhesive to expose said adhesive therethrough, a film of transparent sheet material covering said window opening and secured to said panels by said peripheral strip of adhesive, said window being secured over said reinforcement strip by the adhesive exposed through said perforation.

2,948,391
SERVING TRAY
Norman P. McLeod, 1114 W. St. Andrew Place, Santa Ana, Calif.
Filed May 28, 1959, Ser. No. 816,543
6 Claims. (Cl. 206—.81)



1. In a serving device, a base plate forming a tray surface and having outwardly flaring walls about its margin, and a cash receiving device secured to said base plate adjacent to one of said flaring walls, said receiving device comprising a base block having a pluality of slots therein opening toward said one flaring wall and of a width to receive coins of various denominations, a relatively shallow receptacle hinged to said base block at the edge thereof opposite to said one flaring wall to serve as a cover for said coin slots and as an overlying currency receiving receptacle, and a top cover member hinged to said receptacle.

2,948,392
TREATMENT OF ALUMINUM SURFACES
James H. Young, Niagara Falls, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 18, 1956, Ser. No. 591,795
7 Claims. (Cl. 206—84)

7. A package comprising a container having an interior aluminum surface coated with a non-porous, non-adsorptive oxide coating and containing an aqueous hydrogen peroxide solution in contact with said oxide coating, said oxide coating having been formed upon said aluminum surface by the action of a nitric acid solution of a strength in the range 25 to 75%, and having been rendered non-porous and non-absorptive by a subsequent treatment thereof with water at a temperature of at least 80° C.

2,948,393
BROMINE IN A SAFETY CONTAINER
Albert A. Gunkler, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 4, 1959, Ser. No. 810,592
2 Claims. (Cl. 206—84)

2. An article of manufacture which comprises: bromine in a glass bottle externally coated with polyethylene, said polyethylene coating being between approximately 1/32 and 1/4 inch in thickness.

2,948,394
ARTICLE ALINING AND FEEDING MECHANISM
Anton Richard Frank, Jamaica, and William H. Giles, Brooklyn, N.Y., assignors, by mesne assignments, to Van Buren Machine Corp., Brooklyn, N.Y., a corporation of New York
Filed June 29, 1955, Ser. No. 518,812
7 Claims. (Cl. 209—97)

6. In a mechanism for alining and feeding articles, a main feed belt for advancing the articles, means mounted above the belt forming channels through which the articles are fed by the feed belt, said means engaging, straightening and alining the articles, article feeding means mounted in advance of said main feed belt in the direction of the line of feed of the articles for receiving and feeding the articles received from the main feed belt



and means disposed intermediate the main feed belt and the article feeding means for ejecting from the line of feed articles which are under size.

2,948,395
PROCESS FOR BENEFICIATING ORES
John H. Diamant, El Paso, Tex., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Filed July 21, 1958, Ser. No. 749,584
5 Claims. (Cl. 209—127)

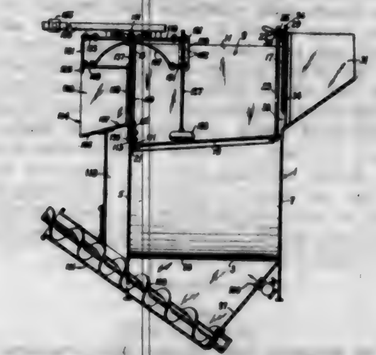
1. A method of concentrating the heavy minerals in a silica concentrate containing heavy minerals, silica and cationic flotation reagent, said silica concentrate having been obtained as a float product of a cationic flotation in a process for recovering phosphate values from a phosphate ore containing silica and heavy minerals which comprises heating said concentrate to a temperature within the range of from about 200° F. to about 1000° F., inducing the heated concentrate while still at a temperature of at least 150° F. to accept differential electrical charges, and passing the charged particles into an electrostatic field without substantial alteration of their charge to separate a heavy minerals concentrate.

2,948,396
PROCESS AND APPARATUS FOR THE SORTING OF SOLID PRODUCTS
Elie Condolios, Grenoble, Isere, France, assignor to Etablissements Neyrpic, Grenoble, France, a corporation of France
Filed Feb. 2, 1956, Ser. No. 563,172
Claims priority, application France Feb. 3, 1955
7 Claims. (Cl. 209—156)



1. Process for the sorting of mixtures of solid materials whereof one constituent has a different velocity limit of deposit from another constituent which comprises supplying liquid in sufficient amount to fill a lengthy conduit with a continuous flow of the liquid, intermittently introducing said mixture in separate amounts into the liquid supplied to said conduit, circulating the liquid through such conduit at a velocity between the respective limits of deposit of the constituents to be separated to cause the constituent having the greater tendency to deposit in each separate amount of such mixture to deposit in the form of a dune on the bottom of the conduit, the velocity of flow of the liquid being such as to cause the deposited constituents forming the dune mass to move within the area of the mass so that the mass as a whole advances along the bottom of the conduit and so that as the dune mass advances the constituents having less tendency to deposit entrapped therein are freed therefrom and entrained by suspension in such liquid, continuing such advancement of each dune mass as a whole along the conduit until such mass has turned over a plurality of times upon itself and during such repeated turning has substantially freed itself of the constituents having less tendency to deposit entrapped therein and becomes composed substantially entirely of the more readily deposited constituent, and withdrawing the whole of such resulting dune mass from the liquid flow at a single place of withdrawal at the end of such path of advancement of the dune mass.

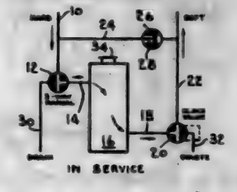
2,948,397
MINERAL CONCENTRATING APPARATUS
Charles Ray Johnson, Route 2, Deepwater, Mo.
Filed Apr. 26, 1957, Ser. No. 655,420
6 Claims. (Cl. 209—455)



3. A mineral jig comprising a hutch, a screen compartment on the hutch, a screen at the bottom of the screen compartment, said screen being inclined downward toward one end of the compartment constituting its discharge end, means for pulsating water in the hutch, the water passing up and down through the screen to stratify material on the screen according to its specific gravity, said compartment having a discharge opening at its discharge end immediately above the discharge end of the screen, a gate for said discharge opening comprising a rubber flap attached along an upper margin thereof to the portion of the screen compartment immediately above the discharge opening, said flap, when generally flat, extending downward from said portion of the screen compartment to the bottom of said discharge opening for completely closing off the discharge opening, said flap being adapted to bend around any relatively large piece of material that it may encounter in moving toward closed position so that it may close without jamming if such a piece of material is present, and float-operated mechanism for controlling the gate comprising a float in the screen compartment adapted to float on top of a strata of material having a desired specific gravity and to sink through a material of lower specific gravity, and a linkage interconnecting the float and the outside of the rubber flap for bending the flap up and outward away from the bottom of the discharge opening to open the discharge opening upon rising of the float.

2,948,398
DIRECT SALTING SYSTEM FOR WATER SOFTENERS
Richard K. Engholdt, Milwaukee, Wis., assignor to Erie Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed Dec. 2, 1954, Ser. No. 472,711
2 Claims. (Cl. 210—130)

1. In a direct salting water softener system the combination of, a softener tank having an inlet and an outlet, a manually operable three-way valve connected to said inlet, a hard water line and a drain line connected to said manual valve, said manual valve adapted to connect said inlet to either said hard water or drain line, a clock controlled three-way valve connected to said outlet, a house line and a waste line connected to said clock controlled valve, said clock controlled valve adapted to normally connect said outlet with said house line and further adapted to connect said outlet with said waste line for a pre-selected period of time and to then restore the connection to said house line, a bypass conduit interconnecting said hard water and house lines, and a pressure responsive valve in said bypass conduit, said pressure responsive valve adapted to automatically open and pass water from said hard water line through said clock controlled valve to said tank outlet for backwashing said tank when said manual three-way valve is actuated to connect said tank inlet to said drain line, said pressure responsive valve further adapted to open during the rinse or direct salting operations if the house line is opened to thereby insure water pressure in the house at all times.

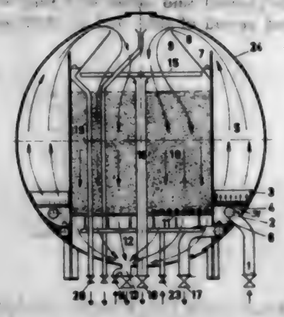


2,948,399
SURFACE DRAINS
Martha A. Sisk, 1010 House Bldg., Pittsburgh 22, Pa.; Lulu E. Sisk executrix of said Martha A. Sisk, deceased
Filed Feb. 20, 1956, Ser. No. 566,698
3 Claims. (Cl. 210—166)



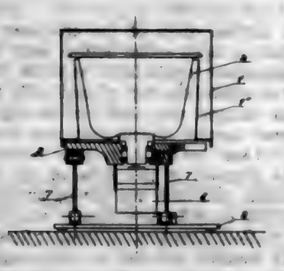
1. In a surface drain of the character described, in combination, an open ended hollow body formed of relatively inexpensive rough-finish material for installation in a floor structure, the top of said body terminating in an annular integral rim, said rim having on its upper face an inner annular downwardly and inwardly extending seat, said seat having at its outer periphery a feather edge to be disposed in the plane of the surface of the floor structure, said body rim having an outer peripheral surface which extends downwardly into and is assembled with the floor structure, an annular finish rim of high-finish rigid material mounted on said body rim seat independently of said floor surface structure, said finish rim having an upper peripheral surface coinciding with the peripheral face of said body rim seat and a bottom surface conforming to and covering said body rim seat, a grate closing said body opening at the level of the floor surface and supported within said finish ring and means for removably securing said finish rim upon the integral rim of the body.

2,948,400
FILTERING APPARATUS
Joseph Hagen, Birsfelden, near Basel, Switzerland, assignor, by mesne assignments, to Sanl & Co., Newark, N.J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust
Filed Aug. 27, 1956, Ser. No. 606,375
Claims priority, application Switzerland Sept. 2, 1955
3 Claims. (Cl. 210—256)



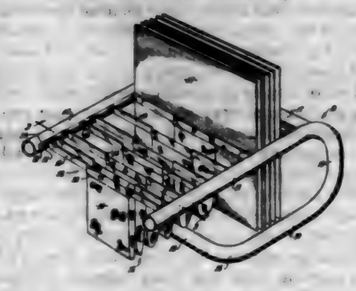
1. A filtering apparatus, particularly adapted for the filtration of river water and sea water with the aid of flocculating agents, comprising a single outer casing, a filter bed in said casing extending vertically thereof from adjacent the top of said casing all the way to the bottom thereof and having outlet means from said casing in the lower end of said filter bed, a substantially vertical flocculation chamber adjacent said filter bed connected only to the upper end of said filter bed, at least one settling chamber below said flocculation chamber, and liquid distribution means having apertures therein between the lower end of said flocculation chamber and said settling chamber, whereby the water to be filtered flows only upwardly through said flocculation chamber to the filter bed and reversal of flow takes place only after flocculation is complete, and the flocculated matter settles downwardly through the flocculation chamber and through the apertures in said liquid distribution means into said settling chamber.

2,948,401
ANTI-VIBRATORY SUSPENSION FOR CENTRIFUGALLY DRYING WASHING MACHINE
Vladimir Obermajer, Paris, France, assignor to Procedes Sauter, Paris, France, a corporation of France
Filed June 12, 1957, Ser. No. 665,226
Claims priority, application France June 12, 1956
7 Claims. (Cl. 210—365)



1. In a machine for treating textiles with liquid, a base, a centrifuging unit for drying the textiles, said unit including a member rotatable about a vertical axis and carrying said textiles during centrifugal extraction of liquid therefrom and drive means connected to said member rotatably driving the latter, and anti-vibration means for supporting said unit on said base, said supporting means comprising a plurality of vertically extending elongated arms and resilient bearing means at opposite ends of each arm connecting said ends respectively to said base and to said unit, the bearing means for each respective arm being spaced one above the other by an elongated intermediate portion of the arm, the length of said arms being such, and the arms being spaced horizontally to such an extent, that a useful space of substantial vertical and horizontal extent is provided in the midst of said arms, which space accommodates a vertically extending portion of the structure of said centrifuging unit in spaced relationship with respect to said base, each said bearing means comprising inner and outer coaxial members and elastic material compressed therebetween, the respective axes of said members at opposite ends of each arm being oriented at 90° relative to each other, the axes of said members at the upper ends of said arms being directed in a plurality of different directions one of said members of each said bearing means being secured to said arm and the other member being secured to a respective one of said base and said unit, said elastic material being subject to torsional and flexing stresses during oscillatory movement of said unit relative to said base, said centrifuging unit being displaceable transversely of said vertical axis due to unbalanced forces occurring thereon during centrifuging operation, said arms being located at spaced points around said axis and at a substantial distance therefrom and being so constructed and arranged as to provide at each arm generally the same resistance to displacement of the centrifuging unit in the direction radially from said axis.

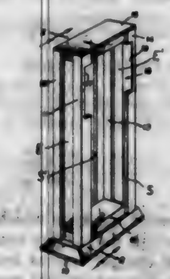
2,948,402
RECORD FILE
Jared W. Patterson, 1689 Kaweah Drive, Pasadena, Calif.
Filed Aug. 25, 1958, Ser. No. 756,835
6 Claims. (Cl. 211—40)



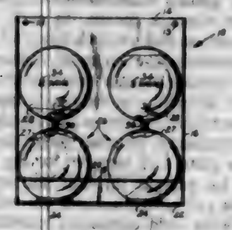
1. A record file comprising a frame including a base and a pair of horizontally extending parallel tubular supports having elongated slots in their opposing sides, a succession of hangers terminally received within said slots for sliding movement therein, and means forming record-receiving pockets between and connected to said hangers, said frame being formed of a single pipe length extending below parallel to the supports and also transversely of the frame at its base.

2,948,403
LOCK DISPLAY DEVICE
James Valles, Minneapolis, Minn., assignor to Independent Lock Company, Fitchburg, Mass., a corporation of Massachusetts
Filed July 15, 1958, Ser. No. 748,717
7 Claims. (Cl. 211—49)

1. A lock display device arranged to support a plurality of locks mounted in display mounts, with the knob and latch bolt portions of said locks extending therefrom, comprising a base, a plurality of guide members affixed to said base and spaced to define an open guideway having opposed side and end slots arranged operatively to receive the knob and latch bolt portions, respectively, of a lock mechanism, a capping member secured to the ends of said guide members not affixed to said base, a gate comprising a cutout portion formed in at least one of said guide members whereby individual display mounts may be introduced into or removed from said guideway in a direction substantially parallel to the plane of said base.

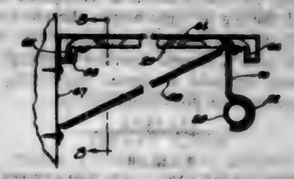


2,948,484
TIMER SUPPORT
Belva G. Harrod, R.R. 1, Diller Road, Elida, Ohio
Filed Mar. 16, 1959, Ser. No. 799,678
3 Claims. (Cl. 211—74)



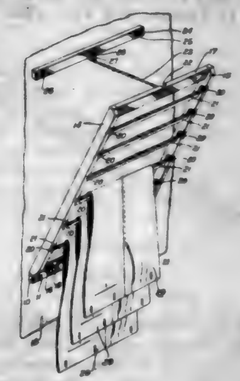
1. A supporting bracket adapted to be suspended upon a vertical wall and for supporting units spaced apart from each other in parallel relationship relative to the vertical wall, including a vertical rectangular shaped rigid flat back panel having openings in each of its opposite upper corners thereof adapted to receive securing means therethrough, a horizontal rectangular flat shelf rigidly secured to the lower edge portion of said back panel and extending outwardly therefrom, said shelf composed of a plurality of spaced apart parallel longitudinally extending rods lying in a common plane, the outermost longitudinal extending rod forming the outermost longitudinal edge of said horizontal flat shelf, a pair of angular extending brace rods, one of said brace rods arranged at each end of said bracket, the lower ends of said brace rods rigidly secured to the opposite ends of said outermost longitudinal edge of said flat shelf, the upper portions of said brace rods extending upwardly and rearwardly with the upper ends thereof rigidly secured to the opposite upper corners of said back panel adjacent said openings therein, and a pair of transversely outwardly extending shelf end rods, one of said shelf end rods rigidly secured at each end of the shelf to the opposite ends of said longitudinally extending rods, the rear ends of said transverse end rods secure to the opposive lower corners of said flat back panel, the forward ends of said end rods secured to the opposite ends of said outermost longitudinal extending rod, whereby the angular rods and the transverse end rods combined with the ends of said pack panel form a triangular end wall for said supporting bracket.

2,948,485
SHELF AND SUPPORTS THEREFOR
Lester L. Smith, 3300 N. Adams St., Peoria, Ill.
Filed Dec. 5, 1956, Ser. No. 626,475
6 Claims. (Cl. 211—90)



3. A shelf structure for mounting on a support structure and comprising, in combination, an extensible shelf fabricated from sheet metal and having telescopically engaging end parts of substantially predetermined width, said parts having integral marginal reinforcing portions of similar structure extending longitudinally along opposite edges thereof and each including an outer flange, an inner flange and a web adjoining the flanges to form a channel section opening upwardly, said inner flanges having edges spaced from the inner bottom surfaces of the shelf parts, a transverse support for the shelf including a member having a length somewhat less than the predetermined width of the shelf and a formed section of a size to fit between the edges of the inner flanges and the bottom surface of one of the shelf parts, and said member of the transverse support having flanges on its opposite ends spaced from one another to extend into said channel sections and embrace oppositely facing inner surfaces of said inner flanges.

2,948,486
TROUSER HANGERS
Dudley M. Steele, Box 456, Palm Desert, Calif.
Filed May 6, 1957, Ser. No. 657,273
1 Claim. (Cl. 211—99)



A multiple trouser hanger, comprising a substantially rectangular frame, said frame having top and bottom end pieces and parallel side bars, hinge means on said bottom piece adapted to pivotally mount said frame on a vertical supporting surface, a plurality of transverse elongated supporting members of oblong cross section

extending between said side bars and removably secured therein, a plurality of complementary opposed securing mortise formed and in spaced apart relation in the inner surfaces of said side bars and adapted to receive the outer ends of said transverse supporting members, each of said mortise forming an L-shaped securing means for said supporting members, one leg of the L-shaped mortise being in axial relation to the said side bars and the other leg of the L-shaped mortise being at right angles thereto, the said axial leg being of substantially greater length than the ends of the transverse elongated supporting members and the leg at right angles thereto being larger than the ends of the said oblong transverse supporting members, the said L-shaped mortise forming a positive securing means for said elongated supporting members when said members are positioned therein.

2,948,407
MAGNETIC CURTAIN AND DRAPERY RODS
Walter Wiszuk, 209 E. 58th St., New York, N.Y.
Filed May 18, 1959, Ser. No. 813,961
2 Claims. (Cl. 211—105.3)



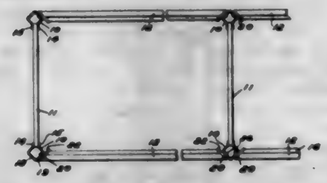
1. A curtain or drapery rod, comprising an elongated telescopic body removably mounted on a pair of supports, said supports being permanently magnetized members, adapted to be mounted on permanently magnetic plates; each of said members being a bracket having a flat base with a pedestal extending perpendicular thereto centrally thereof, said pedestal having a cut-out extending from the top edge thereof, said cut-out having a plurality of concentric sections of different widths and depths.

2,948,408
DEVICE FOR THE SUSPENSION OF TOBACCO LEAVES AND ANALOGOUS PURPOSES
Frederick Tildon Edridge, P.R. 1083, Marandellas, Southern Rhodesia
Filed July 15, 1959, Ser. No. 827,240
11 Claims. (Cl. 211—124)



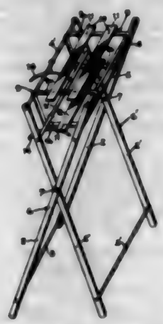
1. A device for suspension of articles comprising a pair of parallel, laterally spaced apart, elongated members, means to maintain the lateral spacing of said members throughout their length, a plurality of compression elements engaged about and freely slidable along both elongated members, said elements being resiliently separable from one another and each comprising a strip of resilient material in zig-zag form having at least three legs, the free ends thereof and the intervening bends being disposed loosely about the respective elongated members.

2,948,409
RACK CONSTRUCTION
Richard E. Wroblewski, Roseville, and Herbert L. Nelson, Warren, Mich., assignors to Equipment Manufacturing, Inc., Warren, Mich., a corporation of Michigan
Filed July 11, 1958, Ser. No. 748,010
6 Claims. (Cl. 211—147)



6. A rack structure of the type which consists of upright frames and side rails detachably connectable thereto characterized by said upright frames each comprising a pair of spaced interconnected upright members, each upright member forming one end of a frame and having a pair of vertically extending attachment surfaces which converge toward such end, a slot extending the length of said upright member, said slot facing generally oppositely from said attachment surfaces, transverse members connected between a pair of uprights to form a frame, the ends of said transverse members each engaging one of said slots and being connected to the side walls thereof, each of said side rails having a pair of connector plates defining the ends thereof, said connector plates converging toward the inner longitudinal edge of said side rail with an angular relation corresponding to the said convergence of said upright attachment surfaces, and interlocking connector element means on each upright member attachment surface and on each side rail connector plate, said means comprising a series of vertically spaced apertures formed in each upright member attachment surface, each aperture including an enlarged upper portion and a lower portion which includes a pair of tapered converging side walls, a connector member projecting from each side rail connector plate, said member having a headed portion dimensioned for passage through said aperture on movement of a side rail horizontal and normal to its said inner longitudinal edge, said connector member also including a shank portion having converging tapered sides for engagement with said aperture side walls on vertical movement of a side rail relative to an upright.

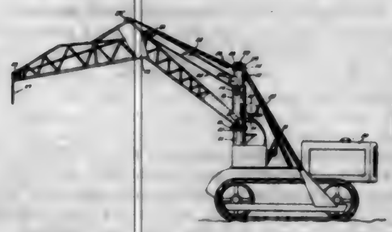
2,948,410
FOLDING HAT AND COAT RACK
Robert B. Maddox, 130 Wellington Place, Cincinnati 19, Ohio
Filed Oct. 24, 1956, Ser. No. 617,991
6 Claims. (Cl. 211—149)



1. A portable collapsible garment rack comprising sets of legs pivoted together, a pair of cross bars between

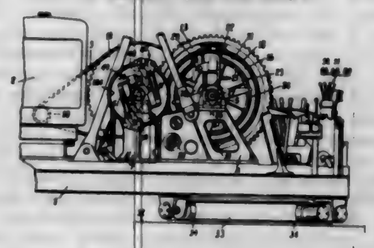
the top ends of the legs of each set disposed in vertically spaced apart relation, a plurality of spaced-apart flexible bands enveloping the pairs of cross bars of each set for providing upper and lower reaches and limiting the spread of the legs, and a pair of shelves supported on the bands between corresponding cross bars of each pair.

2,948,411
BOOM PEDESTAL
Jay M. Lynch, Palouse, Wash.
Filed Sept. 22, 1958, Ser. No. 762,453
6 Claims. (Cl. 212—66)



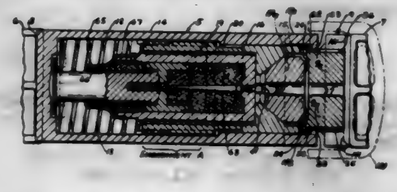
6. A pedestal for mounting a boom arm on a powered vehicle comprising an inner tubular stationary member, a sleeve member surrounding a part of said inner member and spaced therefrom, bearings on the inner member at the top and bottom of the sleeve member supporting said sleeve member for rotation about the inner member, boom arm mounting means on the sleeve member, a hydraulic jack in the inner member having a cross head thereon movable by said jack up and down in the inner member, the inner member having diametrically opposed slots in the walls thereof within said sleeve and the cross head extending through the slots, the sleeve having diametrically opposed pairs of helical guide strips on the interior surface thereof, each end of the cross head being positioned between a pair of said helical guide strips.

2,948,412
APPARATUS FOR AUGMENTING HOIST BRAKE CAPACITY
Edmund Allen Nix, Valois, Montreal, Quebec, Canada, assignor to Dominion Engineering Works Limited, Montreal, Quebec, Canada
Filed Nov. 15, 1956, Ser. No. 622,316
3 Claims. (Cl. 212—69)



3. A portable hoist having a deck rotatably supported from the carrier frame and hoist means mounted on said deck, said hoist means including, power means including a power shaft, a first shaft, means interconnecting said first shaft and said power shaft for rotating said first shaft by said power means, a second shaft, gear means interconnecting said first and second shafts for rotating said second shaft by rotation of said first shaft, a hoisting drum freely rotatable on said second shaft, clutch means mounted on said second shaft for rotating the drum with the shaft, brake means cooperating with said drum for retaining the drum in a predetermined position, slewing means including a pair of bevel gears freely rotatable on said first shaft, an output shaft and a bevel gear on said output shaft, a ring gear fixed on the carrier frame and a gear on said output shaft in engagement with the ring gear, a pair of clutch means operatively connected with said pair of bevel gears and alternatively engageable for rotating the output shaft to rotate the deck in opposite directions with respect to the carrier frame, a drive clutch means mounted on said power shaft, and means for simultaneously engaging said pair of clutch means to lock said first and second shafts together to prevent rotation of said hoisting drum when said drive clutch means is disengaged and when the hoist drum clutch is engaged.

2,948,413
DRAFT GEAR
Andrey L. Zanow, Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Apr. 14, 1958, Ser. No. 728,350
20 Claims. (Cl. 213—43)

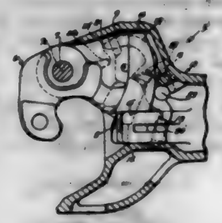


1. In a railway draft gear: a casing and a first follower fixed therewith at one end of the casing; a second follower in relatively movable adjacent relation with the other end of the casing and adapted for reciprocal movements in the end-to-end direction of the casing; and means for transmitting a force from the first follower to the second follower comprising: a resilient device and a compressible hydraulic device extending collaterally in said direction and disposed between said followers for resisting movement of one follower toward the other, and a force-multiplying friction means in interposed operative relation with one of said devices and the second follower for transmission of said force through said friction means; said friction means being operatively disposed between the second follower and the casing for sliding engagement with the casing, said friction means being responsive to said force in a direction lateral with respect to said direction to generate frictional force between the casing and the friction means; said resilient device being positioned during operation between said followers in a condition of compression and interconnected with the hydraulic device for urging the draft gear and the hydraulic device into a longitudinally extended condition adapting the followers for engagement with forward and rearward stops of a draft gear pocket.

2,948,414
CAR COUPLER
William J. Metzger, East Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed July 31, 1957, Ser. No. 675,359
10 Claims. (Cl. 213—127)

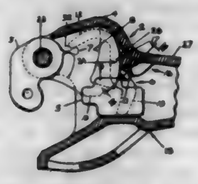
1. A coupler comprising: a head; a knuckle having a tail; a knuckle-thrower having a knuckle-engaging arm and a lock-engaging arm extending in substantially diverging directions from the pivotal axis of the thrower, said knuckle and said thrower being supported within the head along generally parallel axes with the ambits of rotation of the tail and the knuckle-engaging arm overlapping

each other; said knuckle tail having radially spaced projections extending axially from one face thereof providing a pair of thrower-engaging surfaces extending radially and axially with respect to the knuckle pivotal axis; said knuckle-engaging arm having a pair of surfaces radially spaced with respect to the thrower axis and adapted to



rotate into engagement with said thrower-engaging surfaces within the region in which said ambits overlap; said pairs of surfaces being arranged with the thrower-engaging surface further from its axis and the knuckle-engaging surface nearer its axis to engage before engagement of the other thrower-engaging surface and the other knuckle-engaging surface.

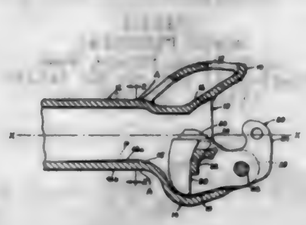
2,948,415
CAR COUPLER
William J. Metzger, East Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed July 31, 1957, Ser. No. 675,361
6 Claims. (Cl. 213—144)



1. In a knuckle-type car coupler having a head; a knuckle thrower having an upper trunnion and a lower trunnion, both of which comprise coaxial lateral surfaces; the head having an upper bearing surface and a lower bearing surface spaced for engaging said trunnions and supporting the thrower for pivotal movement about a normally generally vertical axis; the upper bearing surface having an arcuate section complementary to a corresponding lateral surface of the upper trunnion of not greater than 180 degrees in angular length, and an end-thrust surface extending radially inwardly from the upper end of, and toward the axis of, said arcuate surface adapted for engaging the end surface of the upper trunnion; the lower bearing surface being substantially complementary to the lateral surface of the lower trunnion, but being slightly larger in circumference than the lower trunnion to provide clearance whereby the thrower may be tilted away from said arcuate surface and lifted upwardly and out of the head without interference with said end-thrust surface.

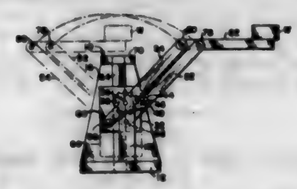
2,948,416
CAR COUPLER
William J. Metzger, East Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 28, 1957, Ser. No. 643,101
3 Claims. (Cl. 213—151)

1. In a car coupler comprising a head; a hollow shank extending rearwardly lengthwise of a longitudinal center line of the coupler from a rigid juncture with the head; the shank having bottom and top walls and opposite side walls of which the outer surfaces are arranged in two opposite facing pairs with respect to which said center line is centered between the surfaces of each pair; each of said surfaces being straight in a lengthwise direction of the coupler; a knuckle supported by said head along an



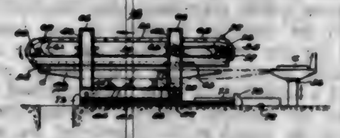
axis in laterally spaced relation with a normally vertical center plane containing said center line; said side walls being generally uniform in thickness except for a thickened forward portion of the side wall on the same side of said center plane as said knuckle axis; the thickness of said thickened side wall portion being a maximum at said juncture and decreasing rearwardly from the juncture to said uniform thickness.

2,948,417
WORKPIECE HANDLING DEVICE
Arnt U. Haanes, 522 S. Laurel Ave., Royal Oak, Mich.
Filed May 26, 1955, Ser. No. 511,280
1 Claim. (Cl. 214—1)



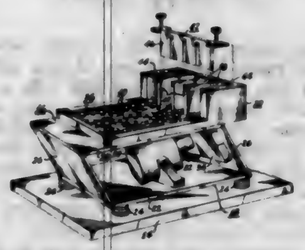
A workpiece handling device comprising a mounting structure, a link-supporting member mounted on said structure for reciprocating motion relatively thereto, means on said structure for guiding said supporting member in reciprocation between predetermined opposite positions, a pair of elongated approximately parallel link members pivotally connected at their inner ends to said supporting member for motion to and fro relatively thereto, a workpiece handling element pivotally connected to the outer ends of said link members in transverse relationship therewith, a workpiece holder mounted on said workpiece handling element, and mechanism including a crank rotating device mounted on said structure and a crank connected to said rotating device and pivotally connected to one of said link members for simultaneously reciprocating said supporting member and swinging said link members to and fro relatively to said supporting member, said crank rotating device and said crank being constructed and arranged to move said crank in an arcuate path curved away from said mounting structure during swinging of said link members in one direction and in an arcuate path curved toward said mounting structure during swinging of said link members in the opposite direction whereby to cause said work holder to advance along one path of travel but to return along a different path of travel.

2,948,418
MATERIAL HANDLING APPARATUS
Theodor H. W. Hammer and Steven W. Meyer, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
Filed Jan. 4, 1957, Ser. No. 632,494
2 Claims. (Cl. 214—1)



1. A material handling apparatus for transferring material from one supporting means to another comprising a movable carriage having a wheel base and a horizontal skid table fixedly mounted thereabove, said skid table comprising a plurality of parallel, spaced skid members having cantilevering end portions extending over those ends of said wheel base lying in the direction of travel of said carriage, one of said cantilevering end portions of said parallel spaced skid members being adapted to mesh with complementary parallel spaced skid members of said supporting means, a plurality of spaced endless drag conveyors extending over said skid table parallel to said skid members and between said cantilevering end portions, said drag conveyors each having drag dogs mounted thereon, and power means for said endless drag conveyors to actuate said conveyors so that said drag dogs drag material from said one cantilevering end portion of said skid table adapted to be intermeshed with said supporting means to the other cantilevering end portion of said table.

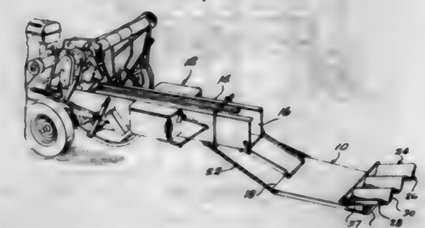
2,948,419
ARTICLE ORIENTING AND STACKING DEVICE
Ralph Spurgeon Selbert, Jr., New Brunswick, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 16, 1957, Ser. No. 684,250
4 Claims. (Cl. 214—6)



1. Apparatus for stacking flat-like articles each having a length and width substantially greater than the thickness thereof comprising an elongated compartment having a vertically oriented magazine at one end thereof, said compartment and said magazine having a continuous horizontal floor, said magazine having an aperture therein communicating with said compartment adjacent said floor, said aperture extending to a height above said floor slightly greater than the thickness and substantially less than the length and width of said articles and vibratory means adapted to vibrate said floor along a line oblique thereto upward and toward said magazine.

2,948,420
BALE STACKER DEVICE
Milton Stoecker, Box 182, McLaughlin, S. Dak.
Filed July 26, 1957, Ser. No. 674,426
2 Claims. (Cl. 214—9)

1. The combination with a mobile work vehicle adapted to travel over a ground surface and a chute projecting from and carried by said vehicle and having a discharge end remote from said vehicle for delivery in turn to the discharge end freshly formed bales of forage, of a device for stacking the bales in stacked relation and discharging the bales while in stacked relation to the ground surface, said device comprising a platform arranged so that one end thereof is inwardly of and adjacent the discharge end of said chute and the other end is remote from said chute discharge end and connected to said vehicle for movement with the latter, a bale stacker unit including a floor having a plurality of V-shaped corrugations extending from one end to the other end thereof, and an end member extending over one end of said floor and secured thereto, said stacker unit being positioned upon said platform so that the end member is transversely of the platform and spaced inwardly of the other end of said platform with the end of the floor of said stacker unit adjacent said end member normally resting upon the adjacent portion of said platform and the other end of the floor of said stacker unit spaced rearwardly of and normally lying above the level of the other

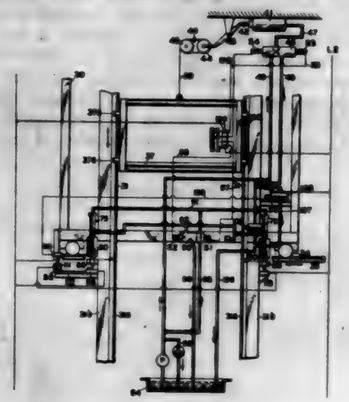


end of said platform and connected to said platform for movement from the aforesaid position to a position in which the end of the floor of said stacker unit adjacent said end member is spaced above said platform and the other end of the floor of said stacker unit is adjacent to said ground surface, the floor of said stacker unit being adapted to receive and support in each of the V-shaped corrugations two adjacent sides of a bale with one end of the bale abutting against said end member and the portion adjacent the other end of the bale projecting beyond the other end of the flood of the stacker unit and with other bales interlockingly stacked upon the bales supported in the V-shaped corrugation of said stacker unit floor, said stacker unit when having the bales supported on said floor in the aforesaid relation and upon being moved to the position in which the stacker unit floor other end is adjacent the ground surface the projecting other end portions of the bales supported upon said floor surface engage the ground surface and responsive to traveling movement of said vehicle the bales in stacked relation are shifted from the stacker unit floor and deposited upon said ground surface.

2,948,421
INTERLOCK AND CONTROL SYSTEM FOR THE ELEVATOR OF A MECHANICAL PARKING GARAGE
Robert W. Smith and Robert A. Vaughan, Columbus, Ohio, assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed May 21, 1958, Ser. No. 736,910
24 Claims. (Cl. 214—16.1)

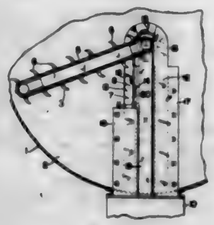
1. In a mechanical parking garage or the like having a plurality of vertically superposed decks including a lower deck disposed alongside of an elongated elevator shaft, an elevator tower mounted for movement horizontally along said shaft at a selected level higher than the lower deck, an elevator mounted for vertical movement on upper vertical guides in said tower relative to said

decks, lower vertical elevator guides extending from the higher level to the lower deck at a predetermined location along said shaft so that the upper guides on the tower can be brought into alignment with the lower guides by movement of the tower along said shaft, an interlock structure between the upper guides and the lower guides for interlocking the upper and lower guides in alignment, means for moving the elevator vertically on said upper vertical guides of the tower, means for preventing downward movement of the elevator from the lower ends of said upper guides unless said interlock structure is in interlock condition to hold said upper and lower guides in alignment so that the elevator can



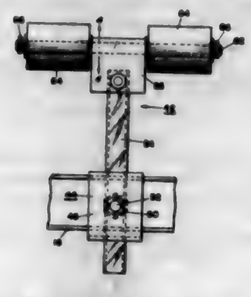
move downwardly into association with said lower guides, means on the elevator for controlling said means for moving the elevator vertically, means on the elevator for controlling said interlock structure, said means for moving the elevator vertically comprising hydraulic lift means and said interlock structure being actuated by a hydraulic ram, said hydraulic lift means and said ram being connected in a hydraulic circuit, said means for preventing downward movement of the elevator comprising a normally open exhaust valve connected in said circuit to the exhaust of said lift means and actuated by downward movement of the elevator in the tower to a predetermined level at the lower end thereof to block said exhaust.

2,948,422
FLOOR CONSTRUCTION FOR A STORAGE STRUCTURE
James B. Hilderbrand, Kankakee, Ill., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Filed Nov. 28, 1958, Ser. No. 777,020
3 Claims. (Cl. 214—17)



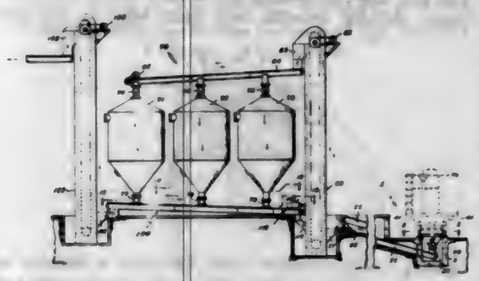
1. A storage structure, comprising a foundation having a trough extending from the central portion of the foundation to the periphery thereof, a silo mounted on the foundation, a cutter arm rotatably mounted at the central portion of the foundation and disposed to rotate within the silo and cut the stored material and convey the same to the inner end of the trough, a plurality of conveyor members disposed within the trough and traveling in an endless path from the inner end of the trough to the exterior of the silo to convey the stored material to the exterior, a first fixed cover plate disposed above the path of the conveyor members moving from the exterior of the silo toward the inner end of the trough and extending substantially the entire length of said trough, and a second fixed cover plate disposed above the path of the conveyor members moving from the inner end of the trough to the exterior of the storage structure and extending from the outer end of the trough to a position substantially adjacent the longitudinal center of the trough to provide an entry to the trough at a location where said conveyor members are moving from the inner end of the trough to the exterior of the silo.

2,948,423
BOAT TRAILER
Carmen Joseph Capuano, Philadelphia, Pa., assignor to Scallon Metal Fabricators, Philadelphia, Pa., a partnership
Filed Mar. 16, 1959, Ser. No. 799,593
2 Claims. (Cl. 214—84)



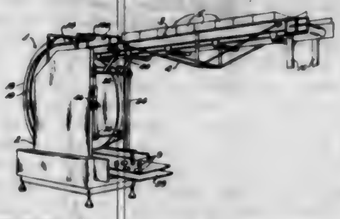
1. A boat trailer comprising a frame mounted on wheels, said frame having a pair of side rails and a plurality of rails connecting said side rails at longitudinally spaced points along the side rails, means on said connecting rails for supporting the keel of a boat, and a pair of adjustable hull supports on at least one of said connecting rails on opposite sides of said keel supporting means, each of said hull supports comprising a U-shaped clamp fitting around said connecting rail with the base of the clamp extending vertically across one side of the connecting rail, and the arms of the clamp being planar and extending horizontally across the connecting rail and projecting beyond the other side of the connecting rail, a post extending through aligned holes in the arms of said clamp, said post being perpendicular to said connecting rail and extending vertically across the other side of the connecting rail, a locking screw threaded through the base of said clamp and engaging said connecting rail to clamp the post tightly against the connecting rail, a rod pivotably mounted on the top end of said post, and a pair of rollers rotatably mounted on said rod, each of the boat hull supports including a U-shaped clevis fitting over the upper end of the post with the ends of the arms of the clevis overlapping opposite sides of the post, a bolt extending through the arms of the clevis and the post, a nut threaded on the end of the bolt, said clevis being mounted freely pivotable on said bolt, the rod extending through the clevis and being secured intermediate its ends to the inside of the base of said clevis, and the rollers being mounted on said rod on opposite sides of said clevis.

2,948,424
METHOD FOR HANDLING SUGAR
Joseph Corrigan, Newton, Mass., assignor to J. C. Corrigan Company, Inc., Dorchester, Mass., a corporation of Massachusetts
Original application Oct. 14, 1954, Ser. No. 462,181, now Patent No. 2,856,083, dated Oct. 14, 1958. Divided and this application Feb. 17, 1958, Ser. No. 715,787
7 Claims. (Cl. 214—152)



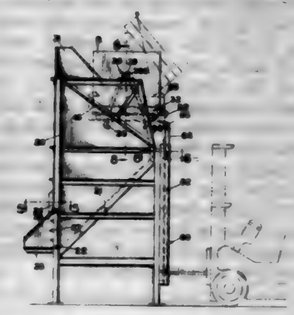
1. The method of preventing and eliminating caking of bulk granulated hygroscopic material during storage thereof, comprising the steps of mechanically conveying discrete particles of said material to storage means and mechanically conveying all said material as discrete particles optionally along either of two paths, one leading from the storage means to a point of use of said material, the other path leading back to the storage means, all conveying being effected without substantial pressure on said material.

2,948,425
BOX OPENING AND DUMPING APPARATUS
Bruce G. Coppieg, Akron, Ohio, assignor to Atkron, Inc., Cuyahoga Falls, Ohio, a corporation of Ohio
Filed Oct. 11, 1956, Ser. No. 615,287
8 Claims. (Cl. 214—311)



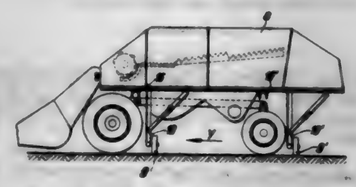
1. Apparatus for automatically opening closed and filled cardboard boxes having a pair of side closing flaps and a pair of inner end closing flaps, which apparatus comprises a frame, box opening means including a plow for engaging a box and prying open the side closing flaps on the box as it is moved by the plow and hook means for engaging and opening the trailing end flap of the box, a conveyor having a discharge end adjustably carried by said frame for vertical movement with relation to said box opening means, chute means on said frame for receiving the partly opened boxes and moving them in an arc of approximately 180° with the opened flaps held in such position, said chute means retaining the contents in the partly opened boxes, a pair of driven drum means journalled on said frame in parallel spaced relation at the discharge end of said chute means and extending forwardly and upwardly therefrom; a pair of endless belts journalled on said frame in parallel spaced relation and having portions of their lengths confined against parts of said drums for engaging side flaps of a box as discharged from said chute means to secure such box to said drums to lift such box and move it forwardly and upwardly in the apparatus, means journalled on said frame for vibrating a box as it is being discharged from said chute means, and means for engaging a box as released by said endless belt means and drum means to discharge it from the apparatus.

2,948,426
RECEPTACLE DUMPING MECHANISM
Robert W. Smith and Robert A. Vaughan, Columbus, Ohio, assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed Nov. 4, 1957, Ser. No. 694,229
13 Claims. (Cl. 214—314)



1. In combination with a hopper or the like for receiving the contents of a receptacle to be dumped therein, dumping mechanism mounted on said hopper, said dumping mechanism comprising a receptacle receiving carriage which is mounted for rocking movement relative to the hopper, an actuating frame mounted for reciprocating movement on the hopper, an operative connection between the reciprocable actuating frame and the receptacle carriage for rocking the receptacle carriage upon reciprocation of the actuating frame, and mechanism for locking the receptacle to the carriage and actuated by rocking of the carriage said locking mechanism comprising locking members fixed on the carriage for engaging one side of the receptacle when it it is moved into receptacle-dumping position and locking levers pivoted to the carriage for engaging the other side of the receptacle when the carriage is moved into such position, and an actuating mechanism mounted for movement on the carriage towards said fixed locking members and connected to said locking levers for swinging them into engagement with said receptacle when said carriage is moved into receptacle-dumping position, said actuating mechanism including yieldable means for normally swinging said locking levers out of receptacle-engaging position.

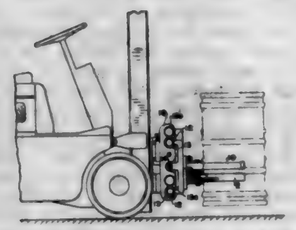
2,948,427
APPARATUS FOR HANDLING A LOAD
August Claas, 64 Neustrasse, Harsewinkel, Germany
Filed Mar. 5, 1957, Ser. No. 644,082
Claims priority, application Germany July 14, 1956
2 Claims. (Cl. 214—515)



1. Apparatus for handling a load, comprising in combination with an implement carrier having a longitudinal

frame member, a front cross frame member connected to one end of said longitudinal frame member and extending perpendicularly thereto, a rear cross frame member connected to the other end of said longitudinal frame member and extending perpendicularly thereto, said three frame members extending substantially in the same horizontal plane, a driving axle, a motor connected with said driving axle and said front cross frame member, a steering axle connected to said rear cross frame member, and wheels carried by said axles and extending in the direction of said longitudinal frame member; a combine-harvester having a horizontal frame, collapsible struts pivotally connected to the last-mentioned frame and movable from an upright position to a collapsed position and vice versa, said struts being located on opposite sides of the last-mentioned frame, means connected with said struts for locking them in the upright position, and wheels carried by said struts and extending perpendicularly to the direction of the first-mentioned wheels, the last-mentioned wheels maintaining the last-mentioned horizontal frame at a level higher than that of the horizontal plane of the three frame members of said implement carrier when said struts are in said upright position, whereby the combine-harvester may be moved into the space enclosed by the three frame members of said implement carrier and thereupon the frame of said combine-harvester may be placed upon the three frame members by moving said struts to said collapsed position.

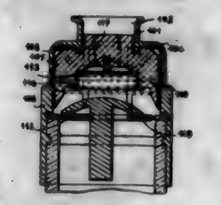
2,948,428
DRUM HANDLING APPARATUS
Edwin R. Kughler, 115–117 E. 129th St., New York, N.Y.
Filed Nov. 4, 1957, Ser. No. 694,277
11 Claims. (Cl. 214—653)



1. Drum handling attachments for lift trucks and the like comprising a supporting member for attachment to said truck or the like, drum gripping members mounted thereon for pivotal movement in both vertical and horizontal planes, means for normally holding the unloaded gripping members in their upwardly tilted positions, means for causing said arms to move toward each other upon the relatively upward movment of said supporting member with respect to a drum whose rim is engaged by the said members, stationary drum engaging means intermediate said movable arms whereby the upward movement of the attachment when said pivoted arms are in engagement with the under side of the rims of two adjacent barrels will cause said arms to swing inwardly and grip said barrel against said stationary means.

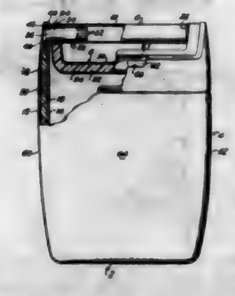
2,948,429
SAFETY STOPPER FOR LIQUID CONTAINERS
Fernand Child, Lyon, France, assignor to Proplastex, Chauffailles (Saone-&-Loire), France, a company of France
Filed July 27, 1959, Ser. No. 829,758
Claims priority, application France Aug. 6, 1958
10 Claims. (Cl. 215—21)

1. A safety stopper for a liquid-carrying bottle and the like container provided with an opening in its neck, comprising a hollow chamber-defining body fitted coaxially with reference to the opening of the container, provided with coaxial openings registering with the outer atmosphere and with the inside of the container respectively and including a seat surrounding the opening registering with the inside of the container, a valve slidingly resting on said seat, deflecting means fitted inside the body chamber including radial fins extending between said seat and the opening in the body facing the atmosphere, defining between their inner edges a free axial



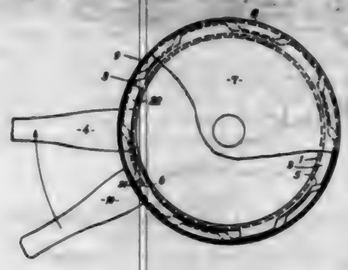
opening and underneath which the valve is shiftable between its normal position of rest on its seat and a released position occupied by it upon setting of the container at a sufficient slope to allow passage of liquid between said valve and its seat, an inverted cup-shaped member fitted releasably within an annular space inside the fins to face the valve and adapted to drop on the latter upon introduction of a foreign member through the opening in the body which registers with the atmosphere and between successive fins.

2,948,430
ICE BUCKET
Walter D. Teague, Jr., and Benjamin H. Stansbury, Jr., Alpine, N.J., assignors to W. R. Grace and Company, New York, N.Y., a corporation of Connecticut
Filed Jan. 14, 1959, Ser. No. 786,861
9 Claims. (Cl. 220—9)



1. An ice bucket or the like comprising the combination of a container formed by a double-walled structure having an outer shell and an inner shell with there being a peripheral skirt extending downwardly from the upper edge of the inner shell and attached to the upper edge of the outer shell; a body of insulation substantially filling the space between the two shells and providing heat insulation and support between the shell walls; said container having a pair of oppositely disposed wall portions which project above the other wall portions and which provide supporting means for the container; a substantially cylindrical handle structure attached at its ends to said supporting means and extending therebetween, the connection between each end of said handle and said supporting means comprising a end portion on the handle projecting through an opening in said inner shell and a snap ring positioned in a slot in the end of the handle between the inner shell and its skirt, said inner shell and its skirt having an integral lug portion which is positioned in a recess in the top of the end portion of the handle; and a lid for said container swingably supported upon said handle and adapted to swing to and from a position wherein it closes the top of said container.

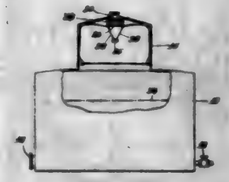
2,948,431
PRESSURE COOKERS
Jacques R. Kuhn, Rikon, Switzerland, assignor to Max Keller, Zurich, Switzerland
Filed Apr. 21, 1958, Ser. No. 729,903
Claims priority, application Switzerland Apr. 26, 1957
5 Claims. (Cl. 220—40)



1. A pressure cooker comprising, in combination: an open pot which is provided about its open end with an outwardly extending flange having a circular edge formed with spaced lugs; a lid having a depending cylindrical flange, the lower end of which is formed with inwardly extending spaced lugs equal in number to the number of lugs on the pot and constituting with the lugs on said pot a bayonet joint lockable and unlockable upon rotation of the lid with respect to the pot; a packing ring located in and adjacent to the flange of said lid for forming a seal between the lid and the pot when the bayonet joint is in locking position; a member carried by, and extendable into the interior of said lid for moving a portion of said ring away from sealing contact with the pot; and resilient means operatively connected with said member for constantly urging same in a direction to extend into the lid; the flange and the lugs of said pot constituting cam means for moving said member toward and away from the center of the lid when the lid is rotated with respect to said pot, the cam means permitting said resilient means to extend the member into the interior of the lid whereby to displace a portion of the ring when the bayonet joint is unlocked, and the cam means moving the member against the action of said resilient means when the bayonet joint is in locking position whereby the ring is free to form a seal between the pot and the lid.

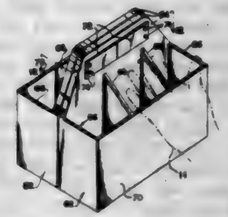
2,948,432
BREATHER RESERVOIR
Robert W. Bodley, Highland, Reign C. Ulm, Schererville, and Lester A. Wilkin, East Chicago, Ind., assignors, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey
Filed Jan. 16, 1957, Ser. No. 634,121
2 Claims. (Cl. 220—85)

1. A breather reservoir arrangement comprising a closed tank for storing volatile liquid and including a lower portion and an upper portion having a substantially smaller cross section than the lower portion, said upper portion having a closed top, an inflatable flexible diaphragm of impervious material secured to the tank for dividing the tank into an upper and lower chamber, said diaphragm being inflatable by vapor pressure developed by the volatile liquid, vent means supported by the center part of said closed top for permitting air to pass into and out of the upper chamber in response to deflation and inflation of said diaphragm, said diaphragm being constructed to extend downwardly away from said vent means when deflated and the liquid level is below a predetermined level and to extend upwardly into engagement with substantially all of the center portion of said closed top adjacent said vent means when inflated by vapor pressure, means secured centrally of said diaphragm in spaced relation to said tank and including a



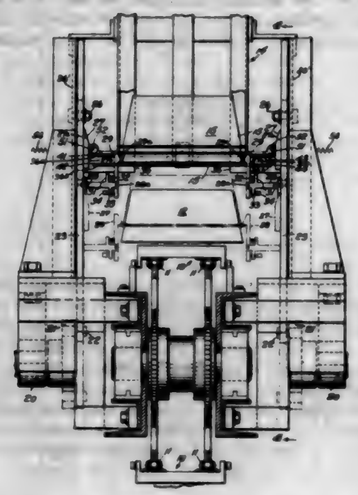
floor member and a perforate upstanding wall member, said wall member having an upper rim part for coacting with the center part of the closed top adjacent said vent means, said wall member partially engaging said diaphragm when said diaphragm is deflated and in contact with said liquid to provide a buoyant float arrangement and said upper rim part coacting with that portion of the center part surrounding said valve means when said diaphragm is inflated to prevent the diaphragm from obstructing the operation of said vent means.

2,948,433
CONTAINER FOR MILK BOTTLES
Vincent P. Finco, South Hempstead, N.Y. (494 Willow St., South Hempstead, N.Y.)
Filed Oct. 7, 1957, Ser. No. 688,689
1 Claim. (Cl. 220—102)



A carrier for milk bottles comprising a container adapted for engaging in a milk box and for holding a plurality of milk bottles, thus to permit said bottles to be carried conjointly from the box, said carrier including handle means disposed to extend clear of the bottles in position to facilitate the transportation of the carrier, said carrier having a flat bottom and including a back wall at one side of the bottom, a front wall at the other side of the bottom, and a plurality of partitions extending between the walls, the back wall being projected upwardly a distance higher than the front wall and having an opening constituting the handle means, said back wall lying wholly in a vertical plane, for disposition of two of the carriers in back-to-back relation to permit their being conjointly carried, said carrier further including interlocking means to interengage an adjacent carrier with which the carrier is disposed in back-to-back relation, comprising a pair of spring leaves disposed end-to-end and anchored at one end to the carrier and normally closing the opening in said carrier, said spring leaves being flexible transversely through the opening of said carrier and through the registering opening of the adjacent carrier on insertion of a hand through the first-named opening.

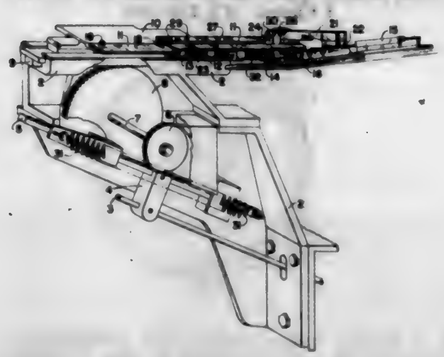
2,948,434
TRAY FEEDING APPARATUS
Harry A. Welter, Akron, Ohio, assignor to Diamond National Corporation, a corporation of Delaware
Filed Dec. 27, 1957, Ser. No. 705,643
6 Claims. (Cl. 221—221)



6. In a dispenser, a magazine for retaining a stack of articles to be dispensed, retaining and releasing means associated with said magazine comprising first and second upper plates disposed oppositely to each other on either side of said magazine and first and second lower plates respectively underlying said first and second upper plates, means fixedly connecting said first upper plate to said second lower plate and said second upper plate to said first lower plate, crank means disposed adjacent to said magazine means to cause a part of said crank means to have rotary motion about a horizontal axis, cam plate means on said crank means, cam follower means on said upper plates and operatively engaging said cam plate means, a support block extending from said crank, and a pair of spaced spring-urged pull-down fingers pivotally mounted on said support block, whereby upon actuation of said crank means, said upper plates will move toward each other while said lower plates move away from each other, and said pull-down fingers will engage the bottom-most article of the stack of articles in said magazine to pull said bottom-most article downwardly.

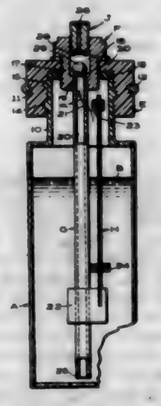
2,948,435
CONTAINER FEED APPARATUS
Theodore George Klink, Spring Valley, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed June 17, 1958, Ser. No. 742,552
6 Claims. (Cl. 221—251)

1. In a container feeding apparatus for feeding containers such as bottles, vials, ampoules and the like, individually under controlled feed conditions from a side by side relationship in a gravity chute to a processing station wherein the chute is removably attached to the apparatus and is adapted to discharge a container from its lower end onto an uncovered stationary pathway whereon the container is retained by contact with a stop means positioned adjacent the pathway at a point across the pathway from the bottom of the chute and wherein a reciprocating pusher means removably attached to a reciprocating drive means is adapted to shove on its forward stroke the container along the pathway to the processing station, while simultaneously by sliding contact therewith, preventing the next container in the chute from dropping to the pathway until the return stroke of the reciprocating pusher rod is complete; the improvement which comprises, in combination, a guide member removably attached to said reciprocating drive means, said guide member describing a continuous semi-complete overhanging shelter not only for said reciprocating pusher means but also for a substantial zone in front of said reciprocating pusher means, a retention cam removably attached to said reciprocating drive means, a removably



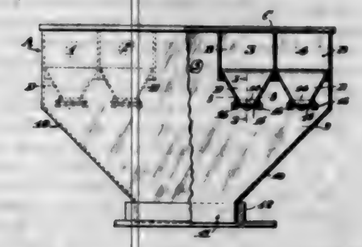
and pivotably attached retention arm, said retention arm being in continuous engagement with said retention cam, and a resilient friction means attached to said retention arm, said resilient friction means rising and falling over the lower portion of said gravity chute in timed relationship with the action of said reciprocating pusher means, the said rising occurring as said reciprocating pusher means is completing its backward stroke and the said falling occurring as said reciprocating pusher means is commencing its forward stroke.

2,948,436
AUTOMATIC DRYING AGENT RINSE INJECTOR FOR DISHWASHING MACHINES
George J. Federighi and Tore H. Noren, both of 333 11th St., San Francisco, Calif.
Filed July 21, 1958, Ser. No. 749,727
6 Claims. (Cl. 222—54)



1. In an automatic drying agent rinse injector for dishwashing machines; an injector bottle adapted to contain a non-sudsing drying agent liquid; the injector bottle being adapted to be mounted in a dishwashing machine in an upright position to be impinged by hot rinse water sprays; a cap removably secured to a neck of the bottle; a fitting carried by the cap and being fashioned with a passageway extending therethrough; a tube having a bore communicating at its upper end with the passageway of the fitting; the tube extending downwardly into the bottle and the liquid therein; the tube being provided with a port in a side wall thereof; a bimetallic strip mounted in the bottle to extend lengthwise of the tube, and being adapted to be flexed toward and away from the tube in response to changes in temperature due to the impingement of the hot rinse water sprays on the injector bottle; a valve carried by the strip in a position to close the port when the strip is flexed toward the side of the tube, and to uncover the port when the strip is flexed away from the tube; and a plug carried by the fitting and having an outlet orifice communicating with the passageway of the fitting for discharge of the drying agent liquid, when the hot rinse water striking the bottle has created sufficient expansion of air and liquid in the bottle to force the liquid upwardly through the tube.

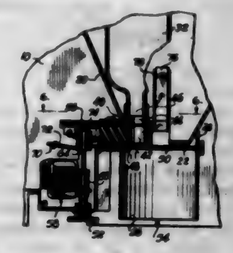
2,948,437
AUTOMATIC DISPENSER ATTACHMENT FOR WASHING MACHINES
Clarence E. Nielsen, 5091 Peacock Lane, Arlington, Calif.
Filed Apr. 24, 1957, Ser. No. 654,707
4 Claims. (Cl. 222—70)



1. In a detergent dispensing appliance for washing machines having a detergent intake, a dispensing unit having a discharge outlet, means for delivering materials from said discharge outlet to said detergent intake, a hopper embodied in said dispensing unit having inclined walls leading to said discharge outlet, a slide valve controlling said outlet, spring means connected to said slide valve urging the valve to its closed position, a resilient block carried by an inclined wall of said hopper against which said valve abuts when moved to its closed position by said spring means, and means for opening said valve at timed intervals.

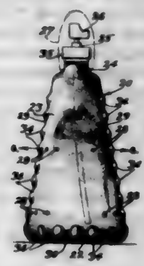
2,948,438
CORN AND SALT DISPENSER FOR POPCORN MACHINES
William G. Lippert, Kansas City, Mo., assignor to Manley, Inc., Kansas City, Mo., a corporation of Missouri
Filed Sept. 29, 1958, Ser. No. 763,935
9 Claims. (Cl. 222—145)

1. In a dispenser, an open bottom supply receptacle for a first ingredient; an open bottom supply container for a second ingredient; a measuring compartment beneath the container and the receptacle, said compartment being open at its upper end and at its lower end, and communicating at its uppermost end with the receptacle; a measuring chamber within the receptacle between the container and the compartment, said chamber being open at its upper end and at its lower end, and communicating at its uppermost end with the container, said uppermost end of the compartment communicating with the lowermost end of the chamber; a pair of gates for the compartment, one of the gates normally closing the lower end of the compartment, the other gate being movable to a position closing the upper end of the compartment and the lower end of the chamber as said one gate is opened; a valve normally closing the upper end of the chamber; and actuating means operably coupled with said gates and with



the valve for simultaneously opening said one gate and the valve, and moving the other gate to said position, said chamber discharging its contents downwardly through its said lowermost open end, directly into said compartment, for admixture with the contents of the latter, as said other gate moves out of said position, and as the ingredients from the receptacle gravitate into the compartment.

2,948,439
REINFORCED GLASS AEROSOL CONTAINERS AND METHOD OF MAKING SAME
William S. Glover, Vineland, and Joseph F. West, Millville, N.J., assignors to Wheaton Glass Company, Millville, N.J., a corporation of New Jersey
Filed Nov. 16, 1956, Ser. No. 622,647
7 Claims. (Cl. 222—183)



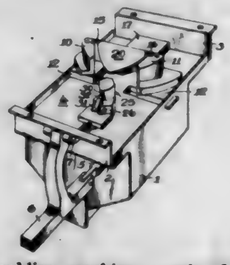
1. A container adapted to contain a product under pressure to be dispensed in aerosol form comprising a frangible bottle having a discharge opening, said bottle having at least one linearly projecting ridge, a continuous sheath of elastically expansible plastic material freely overlying substantially the entire exterior surface of the bottle and secured to said surface in sealing engagement therewith only adjacent said discharge opening, said bottle having a plurality of spaced localized external projections underlying said sheath along said ridge and extending from and beyond the line of said ridge, to produce substantially point impact location on said ridge, said sheath being elastically expansible by said pressure when released upon explosive fracture of the bottle, said sheath having tensile and tear strengths to withstand the initial explosive force and when expanded having tensile and tear strengths operable within the elastic limit of said sheath to confine and retain said pressure and the fracture fragments of the bottle, and said sheath having at least one vent therein operable upon expansion of said sheath to gradually exhaust said pressure therefrom while still retaining therein the fracture fragments of said bottle.

2,948,440
UNIVERSAL CAPTIVE CAP FOR COLLAPSIBLE TUBES AND BOTTLES
Domenick P. Barravecchia, 54 Stillman Ave., Westerly, R.I.
Filed June 24, 1957, Ser. No. 667,483
1 Claim. (Cl. 222—545)



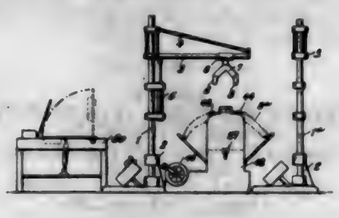
A closure comprising a body member which embodies an upper portion and a lower portion, said body member having a smooth outer surface throughout its entire length, there being an L-shaped passageway in said body member which terminates in an outlet opening, said passageway embodying first and second portions which are arranged substantially at right angles with respect to each other, a manually operable collar movably mounted on said body member, said collar having its outer peripheral surface completely knurled, said collar having its outside diameter uniform in size throughout the entire length thereof, said collar being slidably mounted for movement into and out of opened and closed relation with respect to said outlet opening, said collar being of a size so that the distance from one end to the other is less than the length of either the upper or lower portions of the body member, the lower outer portion of said body member being of uniform diameter, the upper outer portion of said body member having a tapered formation whereby the diameter thereof progressively increases towards the top thereof, the junction of the upper and lower portions of said body member being approximately midway between the ends of the body member, the interior of said collar being smooth and being provided with a tapered bore, the tapered bore and the collar being such that the upper portion of the bore is of greater diameter than the lower portion of the bore, and wherein the collar has a wall thickness which gradually increases from top to bottom, there being threads in the interior of said body member, said threads having their upper ends terminating at a point which generally coincides with the junction of the upper and lower portions of the body member, said outlet opening being counter-sunk, the second portion of said passageway being of smaller diameter than the first portion of said passageway.

2,948,441
COLLAR MOLDING MEANS
Roy M. Schultz, Chicago, Ill., assignor to David A. Freeman
Filed Oct. 2, 1956, Ser. No. 613,552
11 Claims. (Cl. 223—52.1)



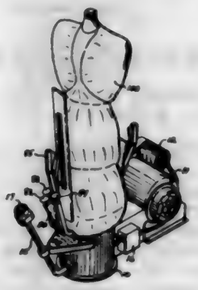
1. In a collar molding machine, a pair of side blocks and a front block relatively movable toward and away from each other for engaging the inside of a garment collar to tension the same, said front block being disposed in a position to engage the front of the inside of the garment collar, and guide means cooperatively disposed at the front of the front block to engage the front of the garment collar and guide the same to the front block and to a correct position against the front of the front block when the garment collar is tensioned by movement of the blocks away from each other.

2,948,442
SHIRT CONVEYOR
Irvin R. Kremer, Schuylkill Haven, and William E. Delker, Pottsville, Pa., assignors to Phillips-Van Heusen Corporation, New York, N.Y., a corporation of New York
Filed Apr. 17, 1959, Ser. No. 807,183
10 Claims. (Cl. 223—57)



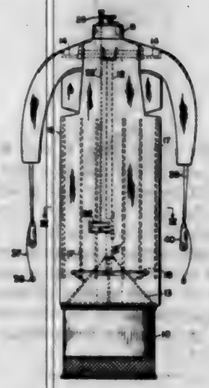
1. A transporting device for shirts and similar garments comprising, a vertically-mounted pressing device on which a shirt is fitted, a rotatively-mounted vertical shaft, an arm extending radially from the shaft, shirt-gripping means carried by the arm, means for rotating the shaft to an extent to position the arm above a shirt located on the pressing device, means for vertically moving the arm to bring the gripping means thereon into gripping engagement with the shirt on the pressing device, means for operating the gripping means in a manner to cause them to grip the shirt, the arm-moving means being then effective to raise the arm and by such raising movement withdraw the shirt from the pressing device, the shaft-rotating means being then effective to rotate the shaft to an extent sufficient to move the arm to a position remote from the pressing device for shirt delivery.

2,948,443
GARMENT FINISHER
Frank H. Richterkessing and William M. Cissell, Louisville, Ky., assignors to W. M. Cissell Manufacturing Company, Louisville, Ky., a corporation of Kentucky
Filed May 23, 1956, Ser. No. 586,710
9 Claims. (Cl. 223—67)



1. In a garment finisher having an elongated fluid-pervious bag, an inner form for supporting said bag and comprising a front support member, a rear support member and a cross member rigidly joining said front and rear members intermediate the ends thereof, a bearing in said cross member, a base assembly for directing processing fluids into said bag and having a stationary fluid conduit extending into said form between said front and rear members said conduit including a valve mounted thereon for controllably releasing fluid therefrom, a rod mounted externally of said conduit and internally of said bearing for actuating said valve, and a bearing surface on said conduit in contact with the bearing in said cross member thereby to mount the form and bag upon said base assembly.

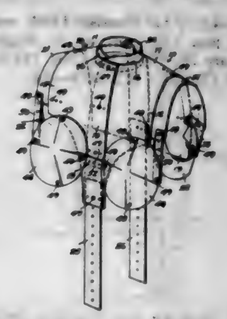
2,948,444
GARMENT PRESSING AND FINISHING APPARATUS
August F. Paris, Oak St., Brockway, Pa.
Filed June 1, 1956, Ser. No. 588,876
10 Claims. (Cl. 223—67)



1. In combination with a garment pressing machine including in its make-up a base portion, a center post secured to and extending vertically above said base portion; shoulder supports secured to said post and spaced from and located above said base portion; a base ring supported on said base portion surrounding said post and located adjacent to and above said base portion; a flexible fabric form suspended from said shoulder supports and surrounding said post and with the lower open edge thereof surrounding and secured to the upper edge of said base portion; a plurality of spaced, flexure-resistant rods permanently secured to said form at points above the lower edge thereof and extending substantially vertically toward the upper portion of said form; and means for moving each such rod so that the lower end thereof engages said base ring and the upper end thereof moves inwardly toward the central axis of said form.

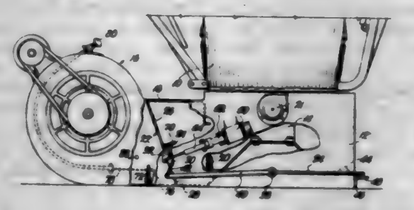
2,948,445
DRESS FORM
Jessie S. Stoddard, 2821 Congress St., Fairfield, Conn.
Filed Feb. 2, 1956, Ser. No. 563,004
1 Claim. (Cl. 223—68)

A dress form comprising an identical pair of reversely opposite right and left yoke members simulating in their external shape the respective right and left shoulders of a human body and the forward chest and rearward back portions of the body immediately below the shoulders, each formed of a single piece of normally flat flexible relatively stiff sheet material and each including a forward chest portion having inner and outer edges, a rearward back portion having inner and outer edges, and an arched shoulder portion, integrally continuous with and spanning said chest and back portions, having a concavely curved inner edge lying in a substantially horizontal plane and defining substantially one-half of a circular neck opening having its crown directed outwardly, and an arched outer edge lying in a substantially vertical plane, the inner marginal portions of said chest and back portions of said right and left yoke members adjacent their inner edges being overlapped in laterally adjusted relation whereby the size of the neck opening defined by said curved inner edges of said shoulder portions is adjustable, fastening means in said overlapped marginal portions securing said yoke members in their positions of adjustment, a pair of arched shoulder extension members, each in the form of a single piece of normally flat flexible relatively stiff sheet material, respectively overlappingly engaged at their inner marginal portions with the outer marginal portions of said respective yoke members adjacent the outer arched edges of said shoulder



portions, fastening means in said last mentioned overlapped marginal portions securing said extension members to said yoke members, a pair of bust members each comprising a pair of substantially circular pieces of flexible relatively stiff sheet material each having radial slit means permitting adjustable overlapping and fastening of the portions of said material at each side of said slit means to form said pieces of material into cup form, a connection member in the form of a strip of flexible relatively stiff sheet material adjustably connected for horizontal adjustment between the inner edges of said respective bust members, and hanger members in the form of strips of flexible relatively stiff sheet material adjustably connected for vertical adjustment between the outer edge portions of said respective bust members and the forward end portions of said respective shoulder extension portions extending outwardly from said yoke members.

2,948,446
FLUID CONTROL APPARATUS FOR GARMENT FINISHING MACHINES
Nolan C. Jackson, Wichita, Kans., assignor to Wichita Precision Tool Company, Inc., Wichita, Kans., a corporation of Kansas
Filed May 1, 1958, Ser. No. 732,321
9 Claims. (Cl. 223—70)



1. In a garment finisher, a throat; and structure for controlling the flow of air through the throat comprising a shaft traversing the throat; a damper plate secured to the shaft within the throat; a pair of cranks connected to

the shaft; a power unit operably coupled with one of said cranks for rotating the shaft to open and close the damper plate; and a manually manipulable device coupled with the other of said cranks for rotating the shaft, said other crank being swingable on the shaft, there being a lost motion connection between said other crank and the shaft, rendering said power unit operable independently of the device, said connection including parts on the shaft and on said other crank disposed for interengagement upon swinging of the other crank a predetermined amount relative to the shaft.

2,948,447
DEVICE TO FACILITATE THE PRESSING OF SLEEVES OF GARMENTS ON STEAM AIR PRESSES
Clarence E. Journey, P.O. Drawer 1430, and Harvey E. Caldwell, P.O. Box 171, both of St. Augustine, Fla.
Filed July 28, 1958, Ser. No. 751,264
7 Claims. (Cl. 223—74)



1. In a sleeve pressing and shaping device, the combination of a pair of elongated sleeve conforming strips, a pair of bowed springs connected at their convex sides one to each of the facing surfaces of each of said strips intermediate the ends of the strips, means connecting the ends of said springs together, each of said springs when expanded having a reversely curved portion intermediate the points of connection to the strips and one of the connected ends of the springs.

2,948,448
HANGER COVER
George V. States, Brooklyn, Mich., assignor to Brooklyn Products, Inc., Brooklyn, Mich., a corporation of Michigan
Filed Sept. 17, 1956, Ser. No. 610,196
1 Claim. (Cl. 223—98)



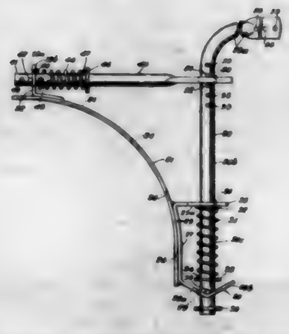
An elastic cover for clothes hangers having end portions, said cover adapted to be stretched over the hanger to dispose the hanger end portions in pockets defined by the cover to drape the cover in a tensioned condition over the supporting surface of the hanger, said cover comprising an elongated strip of elastic material having a center hole to receive the hanger hook, the ends of said strip having juxtapositioned tabs of substantially equal length defined by an axially extending slit intersecting each end of the strip, one of said tabs having an opening having a continuous periphery defined therein adjacent its inner end, the other of said tabs being adapted to be threaded through said opening to form an end pocket, said opening being located such that upon tucking said end pocket under to define a pocket on the opposite side of said cover and inserting the hanger end portion therein places the hanger end portion upon the tab extending through the opening at the point of passing therethrough, thereby compressing the threaded tab to prevent withdrawal from said opening.

2,948,449
GUN HOLDER
Theodore F. Arenson, 60 Crescent Beach Road, Glen Cove, N.Y., and Floyd A. Lyon, Old Wheatley Road, Brookville, N.Y.
Filed Jan. 16, 1959, Ser. No. 787,148
2 Claims. (Cl. 224—1)



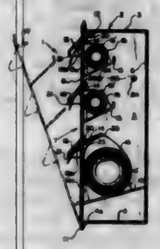
2. A gun holder comprising a cup having an oval shape adapted to receive the end of a gun stock, a shoulder strap connected to said cup and adapted to suspend said cup against the side of the leg between the waist and knee substantially below the hip in a substantially vertical position, said strap being connected at two separate points to the body side forward portion at an angle from upper front to lower middle of said cup and connected at two separate points to the outside rear portion of said cup at an angle from upper rear to lower middle.

2,948,450
FLEXIBLE HOSE SUPPORT
Harold L. Dobrikin, Chicago, Ill., assignor to Berg Manufacturing and Sales Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 24, 1956, Ser. No. 611,505
4 Claims. (Cl. 224—42.1)



1. In a support, a mounting plate, a first bracket on said mounting plate, an aperture in said bracket, a main arm having a portion extending through and rotatably mounted in said aperture, said aperture having a diameter greater than that of said main arm, said bracket having an inclined portion, a positioning element on said arm positioned normally to seat upon said bracket and to ride along said inclined portion in response to rotation of said arm and thereby to cause longitudinal movement of said arm in one direction in said aperture and yielding means positioned to urge said arm in the opposite longitudinal direction through said aperture to move said positioning element in the opposite direction along said inclined portion to return said arm to its original position, said arm being tiltably supported on said bracket by said positioning element, shock absorbing means flexibly connected at one end to said arm and at another end to said plate, said shock-absorbing means including an arm slidably supported on said plate, yielding means surrounding said last-named arm and having its opposite ends in contact with said arm and said plate whereby said yielding means is compressed in response to tilting of said main arm on said bracket in one direction.

2,948,451
ROLL PAPER DISPENSING APPARATUS
Frank R. Swanson, 607 S. Washington, Owosso, Mich.
Filed Sept. 26, 1957, Ser. No. 686,464
4 Claims. (Cl. 225—38)



1. A roll paper dispenser construction adapted for installation between two adjacent joists of a building comprising a substantially hollow body having an open side; a closure member hingedly mounted on said body flush with said open side for closing said open side, said closure member being of larger area than said open side so as to extend beyond all edges of the latter, said closure member having at least one slit therein; and paper roll supporting means mounted on said closure member in a position to be within said body when said open side is closed by said closure member, said supporting means comprising a shelf and means mounting said shelf on said closure member in such position as to form with said closure member a substantially V-shaped receptacle for a paper roll when said open side is closed by said closure member, said body having other openings therein for the accommodation of means for securing said body to said adjacent joists.

2,948,452
SANITARY DRIP CATCHING DEVICE
Cecile M. Grogan, Leominster, and Lester T. Sawyer, Sterling, Mass.; said Grogan assignor to said Sawyer
Filed Dec. 30, 1957, Ser. No. 705,926
3 Claims. (Cl. 229—1.5)



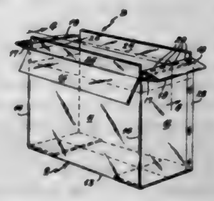
1. A drip protector for ice-cream cones and the like comprising a unitary hollow tapered member of a semi-resilient molded plastic material, said member having a size and shape to receive an ice-cream cone therein with the wider end of the latter extending well beyond the wider end of the tapered member, the latter having a thin section to provide for at least a slight degree of gripping action on the cone at the wider end of the tapered member preventing accidental dislodgment of the cone from the member and providing for the drip from the ice-cream to flow exteriorly of the tapered member, said tapered member being easily separable from the ice-cream cone, and a drip-catching tray adjacent the thin section at the wider end of the tapered member but spaced therefrom, said tray surrounding the latter, said tray comprising an outwardly extending peripheral flange secured to the tapered member and an upwardly extending rim secured to the outermost edge of said flange.

2,948,453
NON-SPILLABLE LIQUID DRINKING CONTAINER
Harold J. Drown, 158 W. Alta Vista, Ottumwa, Iowa
Filed Nov. 7, 1958, Ser. No. 772,521
5 Claims. (Cl. 229—7)



1. In a non-spillable liquid container, a cup, a detachable lid in said cup, a tube attached to said lid and extending downwardly in and terminating short of the inside bottom of said cup, a sucking tube slidably extending through said lid and said first mentioned tube and having its lower end closed, at least one intake opening in the side wall of the lower end portion of said sucking tube, and a means for yieldingly holding said sucking tube in an upward position of its sliding movement whereby its intake opening will be within said first mentioned tube.

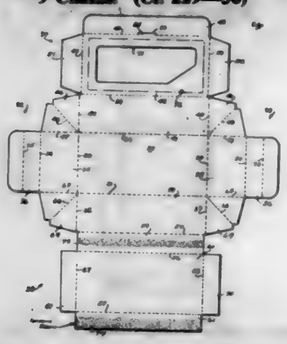
2,948,454
HORIZONTAL COMPARTMENTALIZED NURSERY BOX
John E. Gilmore, Sr., Tampa, Fla., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Mar. 21, 1958, Ser. No. 722,961
3 Claims. (Cl. 229—23)



1. A relatively tall paperboard container comprising a body member and an interiorly suspended tray member, said body member having opposed pairs of connected together side and end walls complete with bottom closure flaps, each side wall having an integral top closure flap, an inner body member suspending flap integral with the top edge of each end wall with an outer body member suspending flap integral and coextensive in width therewith, said tray member having a flat bottom panel with integral side flaps, integral with each end of the said tray bottom panel, an inner tray

member suspending flap with an outer tray member suspending flap integral and co-extensive in width therewith, means for suspending the tray bottom panel horizontally intermediate the height of the body member, said means comprising securing together the outer body and tray member suspending flaps in flatwise juxtaposed relation, thereby forming with the inner body and tray member suspending flaps, a multiple hinged extension for suspending the tray bottom panel into the body member.

2,948,455
CARTON
William P. Frankenstein, 7260 E. Lawn Ave., Cincinnati, Ohio
Filed June 18, 1951, Ser. No. 232,145
9 Claims. (Cl. 229—36)



1. A carton formed from a single blank comprising a bottom panel, a first extension from one side of the bottom panel, a second extension from the other side of the bottom panel, the first extension being subdivided to include a back wall panel, a panel forming the carton top and a panel forming a depending front flange from the top panel, the second extension being subdivided to include a front wall panel and a panel forming the carton platform to be disposed within the carton between the front and back walls and downwardly of the upper edges of said front and back walls, a glue flap in the second extension adapted to be attached to the back wall panel of the first extension so that said carton may be folded flat with the bottom panel, top panel, and platform panel superimposed on one another in carton knocked-down positions, said glue flap retaining the platform in position downwardly of the upper edges of said front and back walls upon erection of the carton, said first extension having an opening therethrough located wholly within the borders of said extension and without regard as to the panels thereof and said opening extending, in one direction, between points inwardly of the edges of the extension, and extending, in the other direction between points inwardly of the end of the extension and inwardly of the bottom panel that will not be below the platform when in carton erected position, and extensions from the remaining ends of the bottom panel subdivided into panels to provide end walls inner and outer wall members.

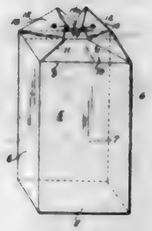
2,948,456
SNAP LOCK CLOSURE FOR A RECTANGULAR CONTAINER
Charles V. Grisetti, New Brighton, Pa., and William J. Langton, Webster Groves, Mo., assignors to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Filed Jan. 8, 1959, Ser. No. 785,621
2 Claims. (Cl. 229—39)

1. A blank of foldable material for forming a rectangular container with a snap lock closure comprising opposed pairs of side and end walls hingedly connected by vertical corner score lines; said blank including pairs of opposed side and end wall flaps substantially the width of the respective side and end walls joined to the lower edges of the walls by a horizontal hinge line, the two opposed end flaps each having corresponding side edges cut diagonally from substantially the mid-width of the outer edges thereof to the juncture of the flap hinge line and the vertical corner score line and two opposed side flaps having the sides which are adjacent to the vertical side edges of the end flaps cut diagonally inwardly from the juncture of the vertical corner score line and the hinge line to a point on the outer marginal edge thereof that is recessed toward the opposite side



edges of the flaps to a distance substantially equal to the length of the end flaps and substantially one half the width of the container thence the marginal edge extending in a line substantially parallel to the horizontal hinge line to a point at the approximate mid-width of the said side flaps and from that point extending outwardly in a line substantially parallel to the vertical side edges of said side flaps for a distance of not more than one half the width of the container, thence extending in substantially a line parallel to the horizontal hinge line to the vertical marginal side edge of the said flaps and thence in a line substantially parallel to the vertical corner score lines extending toward and terminating at the horizontal hinge line.

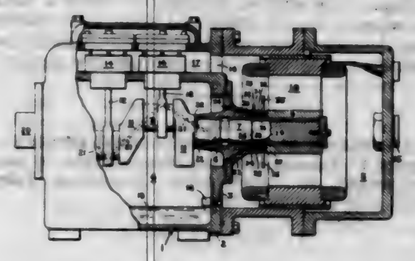
2,948,457
BAG FOR FLOUR AND THE LIKE
Edward G. Thiele, 4217 Lynn Ave., Minneapolis, Minn.
Filed Nov. 12, 1957, Ser. No. 695,610
4 Claims. (Cl. 229—62)



1. A bag containing pulverulent material, comprising continuous side walls with a closed bottom and the upper marginal end portions of said side walls being folded inwardly to provide top closure flaps adapted for easy opening and re-closing of the top, and providing a pouring spout when opened, said top closure flaps including an innermost underlying flap extending a substantial distance across the opening of the bag top, a pair of diagonally-disposed folds extending diagonally toward the longitudinal center line of said bag from the respective corners of said first-mentioned closure flap, and providing a pair of opposed outermost overlying side flaps formed from the upwardly-extending side portions of the container walls and respectively connected to underlying portions

of said first-mentioned closure flap and a pair of diagonal folds extending respectively inwardly in converging relation from the opposite corners of said bag and forming a generally triangular closure flap overlying said first-mentioned closure flap and having only the side portions thereof interposed between said side flaps and said first mentioned closure flap with means for removably adhering the innermost portion thereof to the underlying portion of said first-mentioned closure flap to permit said generally triangular flap to be lifted and pulled out from between the end flaps and said first-mentioned closure flaps to provide with said end flaps a pouring spout for the material confined within the bag, and permitting re-insertion of said generally triangular flap between the end flaps and said first-mentioned flap to reclose the bag.

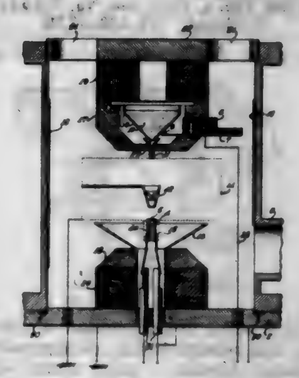
2,948,458
HERMETIC MOTOR-COMPRESSOR UNIT
Andrew J. Nicholas, Suffield, Conn., and Henri Soumeral, Springfield, Mass., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,919
4 Claims. (Cl. 230—58)



1. In a hermetic motor-compressor unit in which the motor has a rotor and the compressor has pistons, the combination of a crankcase compartment, a motor compartment through which suction gas passes to the compressor, a partition separating the compartments, a bearing in the partition, a shaft extending through the bearing and connected at one end to the rotor of the motor and at the other end to the pistons of the compressor, a passageway through said bearing and providing communication between the crankcase compartment and motor compartment, an ejector mounted adjacent said bearing and including a suction inlet communicating with said passageway for flowing gas from the crankcase compartment to the motor compartment, and a check valve in the partition for returning lubricant from the motor compartment to the crankcase compartment.

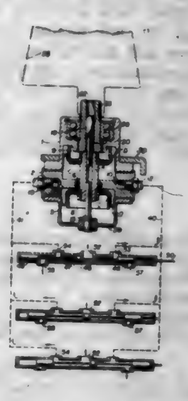
2,948,459
ION GETTER PUMP
Manfred von Ardenne, Dresden-Weisser Hirsch, Germany, assignor to VEB Vakutronik Dresden, Dresden, Germany
Filed July 22, 1958, Ser. No. 750,255
Claims priority, application Germany Oct. 12, 1957
10 Claims. (Cl. 230—69)

1. An ion getter pump for producing a vacuum by means of the evaporation of a getter material and the ionization of the residual gas in an ionization space by electrons emitted by a cathode, comprising a housing having an opening for communicating with a container to be evacuated, an integral evaporator-cathode of refractory conducting material mounted in said housing and having a cathode portion and an evaporator portion distinct from said cathode portion, means connected to said evaporator-cathode for passing electric heating current therethrough, means adjacent the evaporator-cathode for supplying getter material to the evaporator portion of said



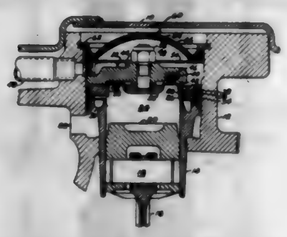
evaporator-cathode, and means in said housing spaced from the evaporator-cathode for collecting the evaporated getter material and the ions of the residual gas in said housing.

2,948,460
FLUID ACTUATED MOTION TRANSLATING DEVICE
Ladimir R. Zeman, 1765 Belvoir Blvd., Cleveland, Ohio
Filed Aug. 20, 1956, Ser. No. 605,138
4 Claims. (Cl. 230—114)



1. In a motion translating device, the combination of a housing having a fixed transverse wall positioned for dividing the interior of the housing into two pressure chambers and having a central circular opening, reciprocating means slidably extending through the opening in the said dividing wall, a rigid non-circular post slidably engaging the reciprocating means along its axis for preventing rotation thereof with relation to the housing, means in each chamber rigidly connected to the reciprocating means and each adapted to be subject to fluid pressure to move the reciprocating means, an actuating member rigidly connected to the reciprocating means, a rotating element embracing the actuating member, interengaging steep spiral shoulders on the actuating means and the rotating element whereby when the actuating means is reciprocated, the driven element is rotated.

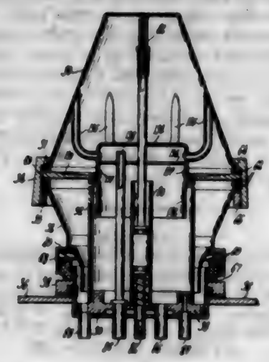
2,948,461
RECIPROCATING COMPRESSOR
Arne Frank, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Feb. 6, 1958, Ser. No. 713,619
5 Claims. (Cl. 230—232)



1. The combination of a compressor, a cylinder in said compressor, said cylinder having a compression chamber and a discharge chamber, a spring loaded suction valve operably associated with said compression chamber to admit gaseous fluid to said compression chamber, suction valve plate means secured above said spring loaded suction valve to bias said valve to the closed position, a spring loaded discharge valve located between said compression and discharge chambers, a discharge valve cage means secured above said spring loaded discharge valve to bias said discharge valve to the closed position, piston means in said compression chamber to allow gaseous fluid to enter compression chamber thru said suction valve on the down stroke and to compress and force said gaseous fluid thru said discharge valve into said discharge on the up stroke, tab means on the discharge side of the discharge valve cage means, a flexible retaining member above and in contact with said tabs to retain said discharge valve cage on said suction valve plate, a lower disc secured above said flexible retaining member to receive the vibrations created by the piston, an upper disc superincumbent and loosely fit over said lower disc to dampen the vibrations transmitted to said lower disc, and retaining means in contact with said upper disc to maintain said upper and lower discs in contact with one another.

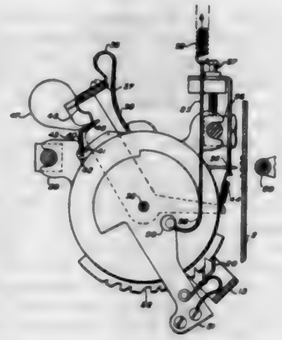
2,948,462
SEPARATION CENTRIFUGE
James L. Tullis, Newton, Mass., assignor to Protein Foundation, Incorporated, Cambridge, Mass., a corporation of Massachusetts
Original application Apr. 12, 1955, Ser. No. 500,746. Divided and this application Jan. 23, 1959, Ser. No. 792,454
4 Claims. (Cl. 233—15)

1. A centrifuge comprising a bottom bowl and a closed top bowl having a central opening therein at the bottom of the bowl, and an outwardly and downwardly flaring conical side wall, a stationary base positioned beneath said central opening, sealing means interposed between said base and said bottom bowl, an internal centrifuge element having a central baffle consisting of a flat circular plate fitting within said bowl and extending radially inwardly thereof with a central opening, a cylindrical member extending upwardly therefrom and having a plurality of jet tubes extending radially outwardly and upwardly toward the side wall of said bowl forming passages from the inner surfaces of said cylindrical member to a point closely adjacent said side wall, inwardly extending flanges spaced above and below the lower opening of said tubes on the inner surface of the cylindrical member, and a passage adjacent the innermost edge of said central baffle extending toward said bottom opening, stationary feed means extending upwardly from said base through said bottom opening and displaced from the axis of rotation of said centrifuge, said feed means terminating radially inwardly of said tubes, and means disposed below said bottom opening for



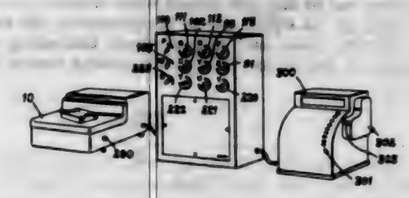
collecting liquid discharged from said centrifuge, said centrifuge being adapted for rotation about a vertical axis, whereby liquids discharged from said centrifuge during spinning thereof may be collected separately from liquids discharged when said centrifuge is stopped.

2,948,463
MECHANICAL CHART READING DEVICE
Maynard C. Yeasting, Elmore, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Filed Mar. 4, 1957, Ser. No. 643,708
3 Claims. (Cl. 235—1)



1. A chart sensing and translating device comprising, in combination, a chart having raised indicia, a plurality of sensing pins adapted to engage the indicia, a plurality of permutation members individually connected to the pins, each of said members having a smooth peripheral section and a first and second notch spaced in the direction of movement of the member, a bail movable along the periphery of the members, springs individually connecting each member to the bail for urging the member in a direction to drive its pin against the chart, a pawl mounted on the bail and adapted to engage the notches to oppose spring urged movement of the members, and means for moving the bail toward the chart until the pawl is disengaged from the notches and engaged with the smooth peripheral section of at least one member as its pin engages the indicia on the chart and arrests the movement of said member, and means for moving the bail in a return direction during which the pawl leaves the smooth section and selectively engages the notches according to the arrested position of the members to move the members to retracted positions that vary according to the arrested positions.

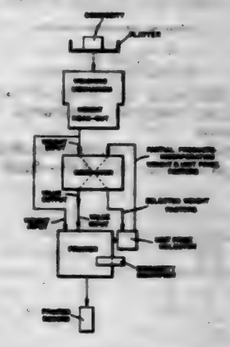
2,948,464
COMPUTING MECHANISM
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed June 11, 1954, Ser. No. 436,218
25 Claims. (Cl. 235—58)



1. In a system for weighing, computing and printing a record of the weight and value of each of a plurality of successively weighed loads, the combination of a scale including a weighing mechanism adapted to be deflected away from a zero reference position in proportion to the weight of a load applied to the scale to a balance position corresponding to said load, a computer for computing the value of each weighed load, means for reading out data corresponding to said balance position of said weighing mechanism and transmitting said data to said computer, control means responsive to establishment of said balance position of said weighing mechanism for initiating the operation of said readout means, means establishing a range of weight for said system having maximum and minimum limits, means for sensing a balance position of said weighing mechanism outside of said range, means responsive to completion of the computing operation of said computer for printing a record of the weight and value of said load, and means controlled by said sensing means for preventing the printing of said record by said printing means whenever said balance position of said weighing mechanism is outside of said range.

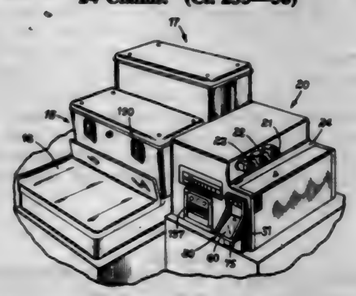
2,948,465
RECORDING SCALE
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Nov. 21, 1955, Ser. No. 548,148
26 Claims. (Cl. 235—58)

1. In a system for weighing and producing a printed record of the weight and of the unit price and value of commodities of different types and unit prices, the combination of a weighing mechanism including electrical means for producing representation of the weight factor in digital form, a printer having inputs for the weight and unit price factors and for value, a unit price selector mechanism forming part of said printer and including a plurality of elements each representing different columns of unit price and movable to a series of positions corresponding to different integer values in said columns, commodity identifying means associated with said printer and adapted to be set to represent different commodities, a computer having a digital weight input and an output representing value in digital form, electrical connections from said weighing mechanism for supplying said weight factor digits to said computer and said printer weight inputs, electrical interconnections between said unit price selector mechanism and said computer for developing data in digital form incorporating the unit price factor and for introducing said digital data to said computer, electrical connections from said computer output to said printer value input to transmit the computed value data thereto, switch means for sensing a change in the setting of said commodity identifying means, switch means for sensing the setting of any one of said unit price selector



elements to a position other than an integer value position, switch means for sensing a change in the setting of said unit price selector mechanism occurring during the course of operation of said computer, means for causing said printer to carry out a printing cycle utilizing said data from said weighing mechanism and said computer, and means connected with each of said sensing means responsive to actuation of any one of said sensing means for preventing said cycle of said printer.

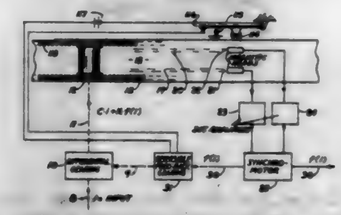
2,948,466
SCALES
Kenneth C. Allen, Dayton, and David A. Mocker, Troy, Ohio, assignors to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Jan. 25, 1956, Ser. No. 561,336
24 Claims. (Cl. 235—58)



1. In a system for weighing articles and producing a printed record thereof, the combination of a weighing mechanism, a computer for computing the value of an article weighed by said weighing mechanism, a printer including means for printing and issuing a ticket identifying the weight and value of an article weighed by said weighing mechanism, means electrically interconnecting said weighing mechanism with said computer and printer to cause said computing and printing operations thereof in response to the weighing operation of said weighing mechanism on each successive said article, means connected with said printer for receiving each successive ticket issued by said printer and including

means responsive to completion of the operation of said printer for delivering each said ticket to a delivery station, means effective at a predetermined point in the operation of said printer and said delivering means for blocking subsequent operation of said printer, and means adjacent said delivery station for actuation by the operator in conjunction with the withdrawal of said ticket from said delivery station to release said blocking means for subsequent operation of said printer.

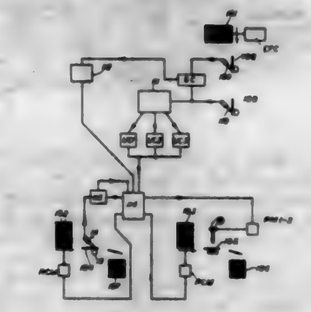
2,948,467
FUNCTION UNIT
Gary Muffly, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 631,726
6 Claims. (Cl. 235—61.6)



1. Apparatus in which motion of an output shaft bears a predetermined functional relationship to motion of an input shaft comprising an input shaft whose rotation represents values of an independent variable, an output shaft, whose rotation represents values of a dependent variable, an elongate magnetizable record tape, means for longitudinally moving said record tape including a differential motion-combining means transmitting motion from said input shaft to said record tape and additively transmitting motion from said output shaft to said record tape, at least two magnetic record tracks on said record tape, said record tracks respectively comprising signals representative of vector components of the desired rotation angle of said output shaft when the rotation angle of the output shaft is related to the rotation angle of said input shaft by a predetermined function, at least two transducing means traversed by said record tape and respectively responsive to said record tracks and respectively producing electric signals whose intensity is proportional to the vector components recorded on said record tracks, a synchro-motor having multiphase windings, means respectively electrically connecting each of said transducing means to a phase winding of said synchro-motor, and means transmitting motion from said synchromotor to said output shaft.

2,948,468
COMBINATIONS OF STATISTICAL MACHINES
Ivor Vivian Rigby, Letchworth, England, assignor to International Computers and Tabulators Limited, London, England, a British company
Filed Oct. 14, 1957, Ser. No. 689,984
Claims priority, application Great Britain Oct. 15, 1956
13 Claims. (Cl. 235—61.7)

1. Statistical apparatus comprising a master machine for operation on a first set of records which each carry a value-representing recording and are arranged in successive groups, the records carrying identifying recordings for use in detecting the ends of the groups, said master machine including means for successively feeding and sensing the records of said first set to derive signals representing the values recorded on them, accumulating means registering the sum of value-representing signals fed to it, means feeding said derived signals to the accumulating means, and control means controlling the operation of the master machine and including means responsive to detection of the feeding of the last card of a group for generating a control signal, the statistical apparatus also comprising a slave machine for operation on a second set of records which each carry a value-representing recording and each correspond to a different single group of the first set of records, said second set being assembled in the same order as the groups of the first set, the slave machine including record feeding and sensing means for successively feeding and sensing the records of said second set to derive signals representing the values recorded on them, signal comparison means comparing two value-representing signals and arranged to assume one of first and second states respectively corresponding to the signals fed to it representing the same and different values and control means controlling the operation of the second feeding and sensing means, the

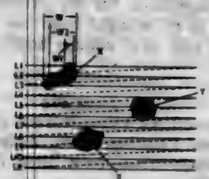


statistical apparatus further including electrical connections between the master machine and the slave machine and the slave machine control means further including means responsive to the receipt of the master machine control signal over one of said connections to cause feeding and sensing of a record of the second set and feeding of the derived value-representing signal to the comparison means, a second one of said connections connecting the comparison means and the accumulating means to permit comparison of the value registered in the accumulating means with that represented by the signal fed to the comparison means from the slave machine sensing means, and a third one of said connections connecting the comparison means to the master machine control means, said latter control means responding to the comparison means being in its first state to continue feeding the first set of records and in its second state to prevent further feeding of the first set of records.

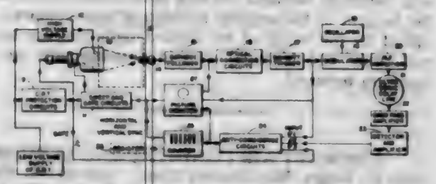
2,948,469
APPARATUS FOR COUNTING PARTICLES
James William Phillips, Cheltenham, David Gurney Arnold Thomas, Deerhurst, Walton, and William Henry Walton, Byfleet, England, assignors to Coal Industry (Patents) Limited, London, England, a British company
Filed Aug. 8, 1955, Ser. No. 527,092
9 Claims. (Cl. 235—92)

1. Apparatus for determining the number and/or size or distribution of sizes of elements in a collection of elements comprising a beam of radiation or charged particles, means for traversing the beam uninterruptedly along a succession of substantially parallel lines to scan every element or image of the collection, means for producing an electric signal each time the beam traverses an element or image thereof, a plurality of continuous magnetic tracks movable together and corresponding in number to the maximum number of scanned lines which

the largest element is likely to encounter and on which each signal is temporarily recorded and stored for the operation of counting circuits, said tracks moving continuously at a speed such that one complete cycle is effected during the period of one line scan or multiple or submultiple thereof, counting means cooperable electrically with the said magnetic tracks to count such signals, means for recording corresponding signals in successive scanning lines on the first of said tracks, means for transferring each signal from one track to the next during each line scanning period, means for erasing from each track a signal after it has been transferred to the next track, and electronic switches operable upon the transfer of the first signal to the last track to switch all the signals from their respective tracks to corresponding counters.

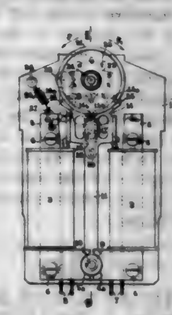


2,948,470
PARTICLE COUNTER
Carl Berkley, Great Notch, Hyman P. Mansberg, Fairlawn, George N. Thomas, Paterson, and Yoshiko Yamagami, Montclair, N.J., assignors to Allen B. Du Mont Laboratories, Inc., Clifton, N.J., a corporation of Delaware
Filed Mar. 15, 1957, Ser. No. 646,397
5 Claims. (Cl. 235—92)



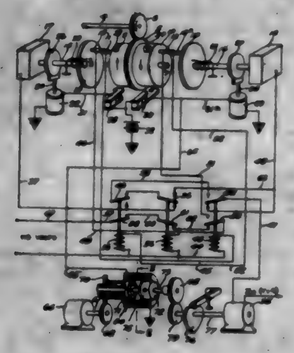
1. A particle counter for counting the number of particles in a given area comprising scanning means for scanning said area in a succession of sweeps, sensing means for indicating the presence of a particle at the point of incidence of said scanning sweep with said particle, an automatic intensity control for regulating the output of said sensing means to maintain a relatively constant average value, a trigger circuit for producing an output of substantially rectangular waveform corresponding to the output of said sensing means, an oscillator for generating a high frequency electrical signal, a modulator connected to modulate the output of said oscillator in response to the signal from said trigger circuit, a delay line having a delay equal to the time between successive sweeps of said scanning means and connected to receive the modulated high frequency signal from said modulator, a detector connected to receive the output from said delay line and adapted to convert said modulated high frequency signal to a rectified signal having a waveform substantially equivalent to the envelope of said modulated high frequency, an anti-coincidence circuit comprising a first input terminal, a second input terminal, a third input terminal, an output terminal, differentiator means connected to said first input terminal for generating pulses of one polarity in response to the leading edge of a pulse from said first input terminal and generating pulses of opposite polarity in response to trailing edges of a pulse from said first input terminal, a leading edge pulse selector connected to receive an output signal from said differentiator means, a trailing edge pulse selector connected to receive an output signal from said differentiator means, a signal storage element connected to receive the output from said leading edge pulse selector for maintaining the signal level of a signal from said leading edge pulse selector, said signal storage element also being connected to said second and third input terminals and being adapted to be restored to a datum level by any portion of an input pulse from either said second or third input terminal, an "and" circuit having one input connected to said storage element and a second input connected to receive the output of said trailing edge pulse selector, means for connecting said first anti-coincidence circuit input terminal to receive the output of said sensing means, means for connecting said second anti-coincidence circuit input terminal to receive the delayed signal from said detector means, means for connecting said third input terminal to receive a signal from said scanning means during the retrace of the scanning means sweep, whereby a pulse is produced at the ouput of said anti-coincidence circuit for the first interception of a particle by said scanning means and further pulses from the same particle on successive sweeps of said scanning means during retrace of said sweep are inhibited.

2,948,471
ELECTRO-MAGNETIC COUNTER
Pierre Laboissière, 1 Boulevard du Temple, Paris, France
Filed Sept. 18, 1957, Ser. No. 684,712
Claims priority, application France Sept. 18, 1956
2 Claims. (Cl. 235—92)



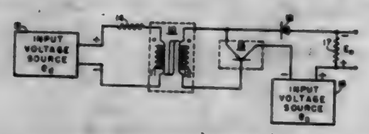
1. Electro-magnetic counter comprising a totalising pinion which can rotate and register in both directions, two electromagnets, a ferrite core selectively moved in one direction or the other from its inoperative position by said electromagnets, a member provided with two pegs rigid with said ferrite core, two knee levers pivotally mounted, each of these levers comprising an arm the end of which is formed in the shape of a pawl and which can be rotated by one of the pegs in such a way that, when the ferrite core rotates in one direction, one of the pegs rotates the corresponding arm and its pawl engages a tooth of the pinion to rotate it, the rotation of said pinion along a complete pitch being blocked by the pawl which engages the teeth of the pinion, and locking means urged by a resilient member so as to hold the pinion in position and to complete the rotation movement of said pinion when said ferrite core is restored in their inoperative position.

2,948,472
AMPLITUDE PREDICTION MECHANISM
Norbert Westheimer, Forest Hills, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Oct. 19, 1956, Ser. No. 617,073
5 Claims. (Cl. 235—186)



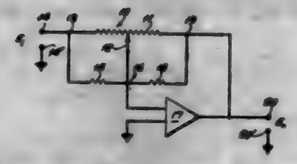
1. A mechanism for predicting the amplitude Z_0 of a periodic function $f(\theta)$ comprising a shaft settable in accordance with the amplitude of said function, a pair of voltage producing devices, each of said devices being adapted to yield a voltage output proportional to a mechanical movement settable therein, mechanical means for alternately restoring said devices and connecting the devices to said shaft at the beginning of each half cycle of shaft oscillation so that at the end of each half cycle one of said devices will yield a voltage Z_0 (max) proportional to the maximum amplitude of the function as determined by the half cycle of oscillation of said shaft, a trigonometric resolver adapted to generate a voltage analog of $f(\theta)$, selective means for alternately connecting the devices to the resolver as the connection of said devices to said shaft is disestablished, and conveying thereto said maximum amplitude voltage Z_0(max) alternately determined by said devices, means for driving said resolver in accordance with the period of said function and with a preselected phase relation with respect to said function, said resolver having an output continuously determinative of the amplitude of the function $f(\theta)$ at a time in the future established by said preselected phase relation.

2,948,473
STATIC ANALOGUE DIVIDER
David H. Schaefer, % Naval Research Laboratory, Washington 25, D.C.
Filed Mar. 20, 1956, Ser. No. 572,777
8 Claims. (Cl. 235—196)
(Granted under Title 35, U.S. Code (1952), sec. 266)



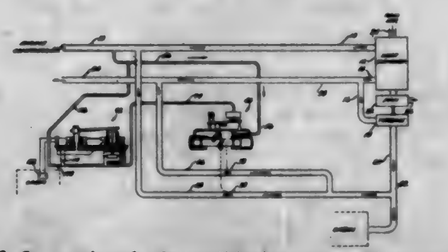
1. An analogue computing device comprising a core of a material having a substantially rectangular hysteresis characteristic, first and second mutually inductive windings wound thereon, a first voltage source of sufficient magnitude to bring said core material from one saturation level to the other, means applying said first voltage source across said first winding, an output load impedance, a second voltage source, plus on-off switching means having control means for controlling the operational state thereof, means connecting said control means to said second winding such that said switching means is responsive to the polarity of the voltage across said second winding and said operational state is determined thereby, means serially connecting said second voltage source and said on-off switching means across said output load impedance, said switching means being operative to apply said second voltage source across said output load impedance for the period required for said core material to be brought from one saturation level to the other by said first voltage source.

2,948,474
TANGENT COMPUTER CIRCUIT
Perry A. Seay, Flushing, N.Y., assignor to Reeves Instrument Corporation, New York, N.Y., a corporation of New York
Filed July 12, 1954, Ser. No. 442,461
9 Claims. (Cl. 235—197)



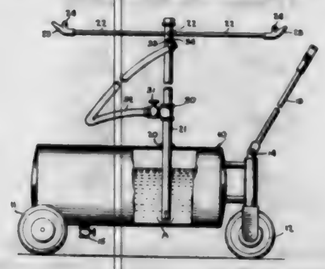
1. A computing device comprising an amplifier having an input terminal, an output terminal, and a common terminal, a potentiometer having a pair of end terminals and a movable contactor, means connecting one end terminal of said potentiometer to the output terminal of said amplifier, means connecting said contactor to the input terminal of said amplifier, and a resistor connected between each end terminal of said potentiometer and said contactor, said computing device producing an output voltage between the output terminal of said amplifier and said common terminal varying substantially according to the tangent of the angular position of said contactor multiplied by the value of an applied input voltage between said other end terminal of said potentiometer and said common terminal.

2,948,475
AIRCRAFT AIR CONDITIONING SYSTEM
John C. Beggs, Manchester, Conn., Harvey W. Currier, Springfield, Mass., and Thomas P. Farkas, Bloomfield, Conn., assignors to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Filed Dec. 13, 1956, Ser. No. 628,032
11 Claims. (Cl. 236—13)



3. In an aircraft air conditioning system of the type having a plurality of conduits carrying air under pressure at different temperatures for mixture in selected proportion to supply a compartment with air at controlled temperature, the combination comprising a throttle valve in one of the conduits, a valve actuator including a piston and means defining a fluid chamber around each end of the piston whereby the piston can be reciprocated by establishing an alternating pressure differential between the chambers, motion transmitting means connected between the piston and the valve to open and close the valve responsive to piston reciprocation, the said chambers being adapted for connection to a common source of fluid under pressure and each chamber having means defining an outlet orifice, reciprocable means for restricting one orifice while opening the other and vice versa whereby to establish a pressure differential between the chambers, means biasing the reciprocable means in one direction, fluid pressure responsive means biasing the reciprocable means in the opposite direction, a servo conduit connected with the pressure responsive means and connectible with a source of fluid under pressure and having a vent, and means for varying the effective opening of said vent whereby to vary the fluid pressure in said servo conduit and in said pressure responsive means, said means comprising a pivotally supported armature which is movable in one direction to reduce the vent opening, resilient means biasing the armature in the opposite direction, and a variable strength solenoid which varies responsive to temperature change in said compartment urging said armature in said one direction.

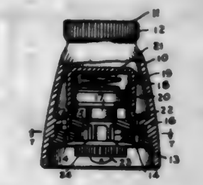
2,948,476
MOVABLE DRINKING FOUNTAIN
James E. Don, 172 Santa Rosa Ave., Oakland 10, Calif.
Filed Sept. 10, 1958, Ser. No. 760,123
1 Claim. (Cl. 239—24)



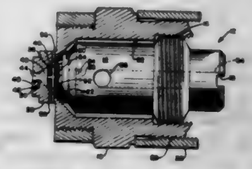
In a construction of the class described, a horizontal tank adapted to hold a supply of drinking water, wheels for supporting said tank in a horizontal position, said wheels comprising a pair of wheels for supporting the rear end of the tank and a single steering wheel for supporting the front end of the tank, a handle operably attached to the steering wheel, a vertical rigid pipe supported by said tank, said pipe running from a point near the bottom of said tank and then above said tank, a series of pipes attached to and extending laterally from said vertical pipe, a valve controlled drinking nozzle supported on each of said laterally extending pipes for use as drinking fountains through the movement of water from said tank through said pipe and to said nozzles, and means including a valved opening in said vertical pipe for admitting water into said tank from a source of water under pressure whereby to place water in the bottom of said tank under air pressure solely through utilization of the air in the upper part of the tank, said air pressure effecting the flow of water vertically through said pipe to said nozzles.

2,948,477
AUTOMATIC SHOWER HEAD
James Fraser, Wilmington, Del., assignor to The Speakman Company
Filed Feb. 20, 1958, Ser. No. 716,492
3 Claims. (Cl. 239—109)

1. In a self-cleaning shower head, a casing having a water supply inlet and outlet therefor, a disk arranged across the outlet having a central opening therein, a movable piston arranged within this opening, said piston having a skirt on the lower end thereof, the upper end of said piston fitting within a cylinder and having biasing means within the cylinder above the piston, said cylinder being within said casing, vented through the piston, said piston having valve means thereon which contacts the upper surface of said disk when in the closed position and the skirt being beyond the disk when in the closed position, said piston being forced upwardly by the flow of water acting against biasing means within the cylinder and forcing the skirt into contact with the disk to produce shower producing sprays.



2,948,478
NOZZLE
Bruce R. Walsh, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,916
5 Claims. (Cl. 239—405)

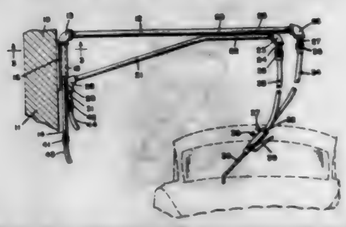


1. In a gun-type burner nozzle, apparatus comprising a hollow nozzle body having a central axis, the interior of the nozzle body having a substantially frusto-conical surface adjacent one end thereof that is coaxial with the central axis, a swirl stem coaxially positioned in the nozzle body having a substantially frusto-conical portion adjacent one end thereof that is complementary to and seated flush against the frusto-conical surface of the nozzle body, said one end of the swirl stem being spaced from the nozzle body to define a swirl chamber therebetween, said one end of the nozzle body being provided with a discharge orifice coaxial with the swirl chamber, means defining a plurality of circumferentially spaced slots at the seated juncture of the swirl stem and the nozzle body extending along the axial length of such juncture and arranged essentially tangential to the swirl chamber, a passageway extending through the swirl stem and the nozzle body from the center of said one end of the swirl stem to the exterior of the nozzle body, said passageway passing through the seated juncture of the swirl stem and the nozzle body intermediate the slots.

2,948,479
WASHING DEVICE
Donald D. Gracensan, 4701 Humboldt Ave. S., Minneapolis 9, Minn.
Filed Mar. 31, 1959, Ser. No. 803,229
2 Claims. (Cl. 239—413)

1. A washing device comprising a bracket formed with a horizontal arm and a vertical reach connected thereto and constructed of pipe, a bearing receiving said verti-

cal reach as a journal and supporting said bracket for swinging movement, a brace connected to said vertical reach below said bearing and to said horizontal arm near the outer end thereof, said brace being constructed of pipe, hose connections connected to the outer end of



said horizontal arm and said brace, a nozzle using two fluids, two hose connecting said nozzle with said hose connections, conduits connected to the vertical reach of said bracket and to the other end of said brace, and means feeding fluids to said conduits.

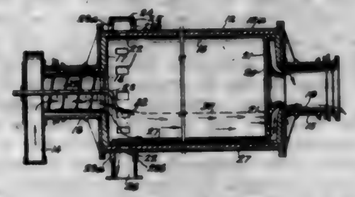
2,948,480
SPRAYING DEVICE
Gilbert G. Badwig, 3400 Bayside Walk, Mission Beach, Calif.
Filed July 5, 1956, Ser. No. 596,037
2 Claims. (Cl. 239—418)



1. A combined hand sprinkler and aspirator for irrigating and applying chemicals to plants, comprising: an irrigation nozzle arranged for attachment to a hose and having a relatively large discharge orifice; an impingement means for deflecting water issuing from said orifice into a fan-shaped stream; said impingement means including an elongated impingement and deflecting surface positioned for obtuse engagement by water issuing from said nozzle, and upstanding walls forming with said deflecting surface an upwardly open and open-ended channel, said walls diverging from said nozzle to confine the water to said deflecting surface and limit the included angle of the fan-shaped stream discharged therefrom; a depressed area in said impingement surface; means defining an aspirator passage intersecting said depression for upward flow of aspirated fluid into said water stream; and a raised transversely elongated spreader element on said impingement surface downstream of said depressed area, said spreader element having its greatest vertical height substantially midway between said side walls and converging toward said impingement surface laterally thereof toward said side walls, said spreader element functioning to laterally distribute fluid withdrawn from said aspirator passage.

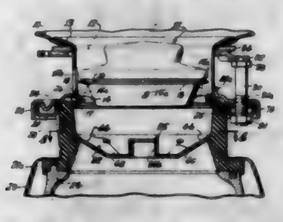
2,948,481
METHODS AND APPARATUS FOR COMMINUTING ORES OR THE LIKE
Arthur C. Daman, Denver, Colo., assignor, by mesne assignments, to Denver Equipment Company, Denver, Colo., a corporation of Colorado
Filed June 30, 1955, Ser. No. 519,205
2 Claims. (Cl. 241—41)

1. The combination with a rotary, drum-type grinding mill mounted for rotation about a substantially horizontal axis and having at least one end feed trunnion and a discharge outlet for ground product remote from the point of feed introduction into the mill, of means in the feed trunnion for directing a spiralling component of movement to entering pulp feed inwardly of the mill,



means for spraying said pulp during the spiralling movement, and means internally of the mill and adjacent the feed end of the mill for separating and discharging primary slimes of the entering feed before it is subjected to any substantial comminuting action of the mill.

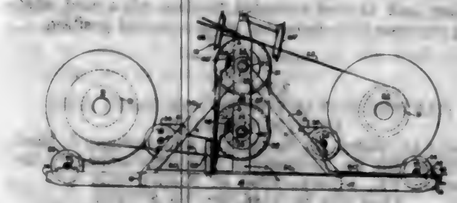
2,948,482
SPLASH GUARD WITH PLUG FOR WASTE DISPOSAL APPARATUS
Hans Jordan, Los Angeles, Calif., assignor to Given Machinery Company, Los Angeles, Calif., a partnership
Filed Nov. 25, 1957, Ser. No. 698,566
5 Claims. (Cl. 241—100.5)



1. In combination in waste disposal apparatus: a sink having a drain opening; a grinder housing suspended under said opening and having a waste receiving throat; a resilient ring device disposed between said sink and said housing and cushioning the latter to limit transmission of vibrations to said sink; and an antisplash diaphragm carried by said resilient device, said diaphragm having a circular body portion and a temporary closure attached thereto centrally to close a discharge passage therethrough, said diaphragm having readily rupturable joint means connecting said temporary closure to said body portion to retain waste materials thereon, and being rupturable for removal of said closure to open said discharge passage.

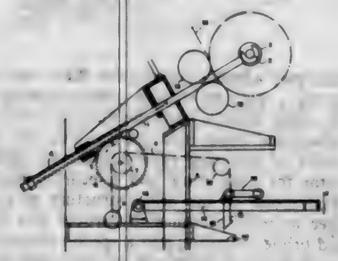
2,948,483
CABLE STRINGING APPARATUS
Gerald A. M. Petersen, 460 Kifer Road, Santa Clara, Calif.
Filed Dec. 31, 1954, Ser. No. 479,041
9 Claims. (Cl. 242—54)

1. A tensioning device for transmission cable comprising a trunnion tower, a pair of shafts supported in spaced parallel relation on said trunnion tower, a sheaved bull wheel journaled on the upper one of said shafts, a sheaved bull wheel on the lower one of said shafts, the sheave grooves of said lower bull wheel being offset one half sheave groove relative to the sheave grooves on the upper one of said bull wheels whereby said cable strung around said upper and lower bull wheels follows a spiral path during turning of said bull wheels, and means for restraining turning of said bull wheels relative to said trunnion tower for tensioning the strand of cable as it is pulled therefrom comprising a sleeve shaft on each of said pair of shafts and secured to the bull wheel thereon for turning therewith, a brake disc flange on each said sleeve shaft in spaced relation to the bull wheel thereon,



a pair of brake shoes embracing said brake disc, means supporting said brake shoes adjacent said brake disc for concerted movement toward and from the latter, and manually operated means connected to said brake shoes for optionally moving the latter into frictional contact with said brake disc.

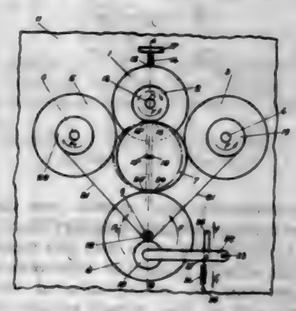
2,948,484
MOVABLE ROLL SUPPORT FOR A BALLER
Gianni Bider, Corso Matteotti 1A, Milan, Italy
Filed Jan. 17, 1955, Ser. No. 482,356
Claims priority, application Italy Dec. 18, 1954
5 Claims. (Cl. 242—54.4)



1. In a baller, in combination, a ball roller adapted to have a sliver wound thereon; mounting means for mounting said ball roller for rotation about a first axis and for movement along a path lying in a plane containing said first axis, said mounting means including a movable element movabe in the direction of said path; a driving roller mounted for rotation about a second axis parallel to said first axis, said driving roller being arranged in said path and adapted to be engaged by the sliver wound upon said ball roller; yielding biasing means connected to said movable element of said mounting means for continuously urging said ball roller for movement along said path toward said driving roller so that the same continuously engages the sliver wound upon said ball roller; and control means operatively connected to said movable element of said mounting means for moving, whenever desired, said movable element and said ball roller along said path away from said driving roller against the action of said biasing means.

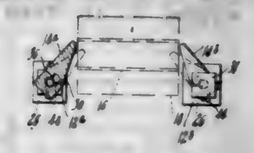
2,948,485
DRIVING ARRANGEMENT FOR RECORD TAPE
Henri Cotte, Paris, France, assignor to Jacques Lory, Paris, France
Filed Nov. 15, 1955, Ser. No. 546,991
Claims priority, application France Nov. 16, 1954
6 Claims. (Cl. 242—55.12)

1. Driving arrangement for a record tape of a magnetic recording or scanning apparatus, comprising a base plate, a reversible electric motor mounted upon said base plate, a shaft driven by said motor and carrying a driving disc, a single transmission disc in permanent frictional driving contact with said driving disc, a first axle mounted upon said base plate, a fly-wheel freely mounted upon said first axle and in permanent frictional driving contact with said transmission disc, a guiding roller integral with said fly-wheel, a second axle and a third axle mounted upon said base plate, driven discs freely mounted respectively



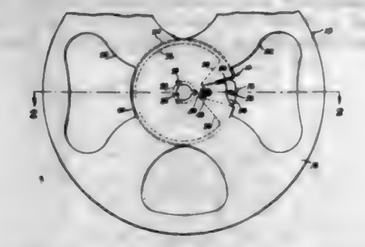
on said second and third axles, bobbins adapted for the reception of the magnetic tape and frictionally mounted on respective driven discs, and means responsive to the direction of rotation of the shaft by the reversible motor for bodily displacing said transmission disc with a movement to translation in its own plane between two extreme positions to bring it at will into driving contact with either one of the two driven discs.

2,948,486
DISPENSING HOLDER FOR ROLLED MATERIAL
Leon A. Epaster, 215 N. Main St., Orange, Mass.
Filed Sept. 29, 1958, Ser. No. 764,082
2 Claims. (Cl. 242—55.55)



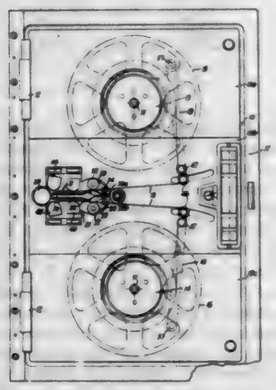
1. A dispensing holder for a roll of material having an axial opening at each end, said holder comprising a pair of rigid arms each having an enlarged mounting portion at its inner end such that the arms are adapted to be mounted on a vertical support in mutually spaced parallel relationship extending outwardly from said support at right angles thereto, each of said arms having a hub portion and an axial bore extending inwardly from the outer end thereof, a bladed pintle adapted to fit into each of said bores, a finger having a keyhole shaped aperture near one end, said finger adapted to be pivotally mounted by means of said aperture on each of said pintles for rotation about the axis of the respective pintle from a horizontal roll supporting position in which a surface of said aperture abuts said bladed portion and in which said fingers are mutually aligned with each other and adapted to be received into said opening of said roll, upwardly to a second position permitting installation and removal of said roll wherein a second surface of said aperture abuts said bladed portion of said pintle, a cap member having a cross section similar to the cross section of the hub portion of said arm disposed on the outer end of said pintle and a sliding bolt locking means disposed in one of said arms adapted to engage the cooperative finger to lock said finger in said horizontal roll supporting position.

2,948,487
TAPE-ANCHORING TAPE RECORDER REEL
Charles R. Lockie, 2140 Lochaven Road, Pontiac, Mich.
Filed May 15, 1957, Ser. No. 659,314
6 Claims. (Cl. 242—74.2)



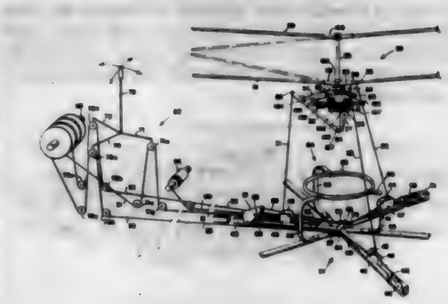
1. A tape-anchoring tape recorder reel comprising a hub member having side disc members thereon forming an annular tape-receiving space, said hub member having an outer substantially cylindrical tape-receiving portion with an approximately radially-directed wedge-shaped recess therein and an inner central portion coaxial with said outer portion and having therein a bore adapted to receive a reel-supporting axle and a tape-anchoring wedge radially reciprocably mounted in said recess, said recess and said wedge having coacting wedging surfaces converging toward the axis of rotation of said hub, one of said members having a wedge-reciprocation guideway therein, and said wedge having a wedge-guiding portion projecting therefrom into sliding engagement with said guideway.

2,948,488
MAGNETIC TAPE APPARATUS
Konrad W. Schoebel and Walter T. Selsted, Redwood City, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed Jan. 28, 1957, Ser. No. 636,596
6 Claims. (Cl. 242—75.43)



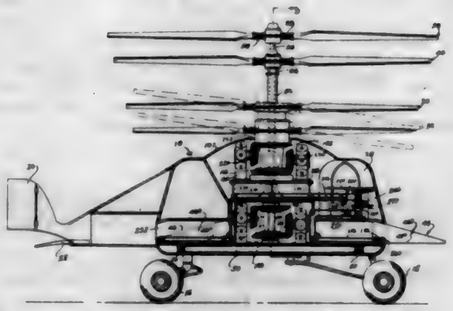
3. In magnetic tape apparatus, support means, a magnetic tape reel, means for rotatably mounting said reel on said support means, an idler roller on said support means with the magnetic tape extending from said reel looped thereabout, a driving capstan disposed on said support means in spaced relation to said idler roller and intermediate the legs of the loop in the tape, a pair of arms pivotally mounted on said support means, a roller carried by the free end of each arm, said arms being movable between an extended position wherein the rollers press the tape against said driving capstan and a retracted position wherein the rollers are spaced from said capstan, an operating member, means connected to said operating member for reciprocating said operating member between a first position and a second position, and means connected to said arms and to said operating member for moving said arms to said extended position when said operating member is reciprocated to said first position and to said retracted position when said operating member is reciprocated to said second position.

2,948,489
CAPTIVE ROTARY WING AIRCRAFT AND CONTROL SYSTEM
Charles C. Miller, Jr., Springfield, and Anthony J. Ricci, Drexel Hill, Pa., assignors to Aircrane Company, Lansdowne, Pa., a corporation of Pennsylvania
Filed Apr. 10, 1956, Ser. No. 577,418
10 Claims. (Cl. 244—17.17)



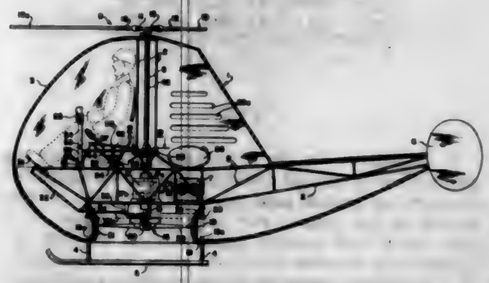
1. A helicopter adapted for captive flight and remote control having a pair of coaxial contra-rotating rotors mounted to rotate about a common vertical axis, a bridle structure assembled about said vertical axis and providing a plurality of tethering cable attachment points, an electric motor for each rotor and a bearing mount assembling said motor to the bridle structure so that said motor is free to rotate about said vertical axis with respect to said bridle structure, and a speed reducing transmission connecting each motor to its rotor and comprising a motor shaft pulley, a rotor shaft pulley, an intermediate pair of pulleys, and interconnecting belts.

2,948,490
HELICOPTER
Juan Verdugo Munoz, 2671 Bainbridge Ave., Bronx, N.Y.; now by judicial change of name Juan Munoz Verdugo
Filed Aug. 11, 1953, Ser. No. 373,523
16 Claims. (Cl. 244—17.19)



13. A helicopter comprising a fuselage, a pair of concentric counter-rotating shafts fixed relative to the fuselage, a pair of concentric counter-rotating collars surrounding said shafts, the collars being adapted each to support and supporting a propeller, means for securing said collars so as to be tiltable with respect to the axis of rotation of the shafts, and control surfaces comprising airfoil elements selectively extensible from the fuselage into the region of the wash from the tiltable propellers so as to effect a maneuvering force on said aircraft by virtue of the impingement of the wash from said propellers on said control surfaces.

2,948,491
HELICOPTER WITH SHROUDED OR DUCTED ROTOR
Bruno A. Nagler, Greenwich, Conn., assignor to Nagler Helicopter Co. Inc., White Plains, N.Y., a corporation of Delaware
Filed July 18, 1956, Ser. No. 598,560
7 Claims. (Cl. 244—17.21)



1. In an aircraft of the rotary wing type, the combination of an upper rotor and a lower rotor arranged to rotate coaxially, said upper rotor having means for controlling the cyclic pitch and the collective pitch of its blades, said lower rotor being of smaller diameter than the upper rotor and having an air duct structure closely surrounding it, an air-tranquilizing chamber arranged to deliver air to said air duct structure above said rotor, an engine mounted in fixed position in said aircraft, gearing interconnecting said engine and said rotors for driving said rotors in opposite directions and arranged to drive said lower rotor at a rotative speed sufficiently higher than that of said upper rotor so that the torques of said rotors approximately balance one another, and means for shifting said torque balance for controlling yaw and for directional control during hovering.

2,948,492
AIRFOIL WITH ADJUSTABLE THROUGH PASSAGE
Harry E. Barnes, Glendale, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Oct. 19, 1956, Ser. No. 617,142
2 Claims. (Cl. 244—42)



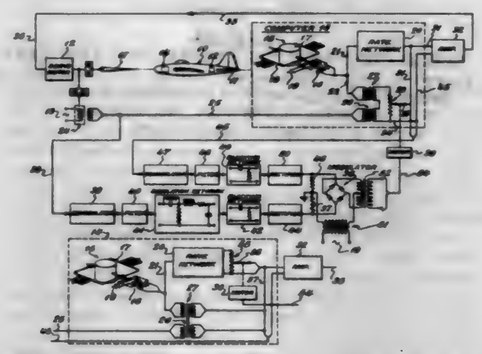
1. An airfoil section for an airplane provided with a through air passage extending between the upper and lower surfaces thereof, and a lift producing flap disposed in said air passage and of substantially the same size as said air passage, as seen in top plan view, said flap being hinged at its rear edge to said airfoil section and being swingable to a forwardly and upwardly inclined position relative to said airfoil section, whereby a portion of a rearwardly directed air current relative to said airfoil section during flight will be deflected downwardly by the underside of said flap through said air passage to impart lifting action to the airfoil section, said flap being additionally selectively swingable to a forwardly and downwardly inclined position for reversing the force produced by the deflected air current relative to said airfoil section.

2,948,493
AIRCRAFT FLAP MECHANISM
George T. Trifonoff, Wichita, Kans., assignor to Boeing Airplane Company, Wichita, Kans., a corporation of Delaware
Filed Jan. 2, 1958, Ser. No. 706,767
9 Claims. (Cl. 244—42)



3. In a vehicle having a wing and a flap on said wing, means for moving said flap rearwardly and downwardly from a position within the profile of said wing, comprising: a carriage and support means in said wing supporting said carriage for movement between a first forward position and a second rearward position, means operative to move said carriage between said positions, means pivotally connecting the forward portion of said flap to said carriage, an arm connected to said flap and said one arm being connected to said carriage at a point rearward of the point of pivotal connection between the flap and the carriage, and drive means operative to expand and contract said arm whereby said flap is moved forwardly and rearwardly with said carriage and said flap is pivoted up and down by expansion and contraction of said arm.

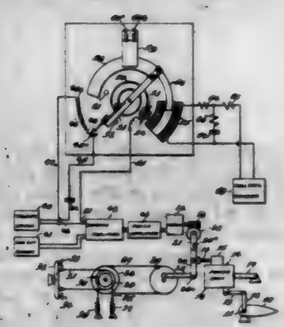
2,948,494
CONTROL SYSTEMS FOR DIRIGIBLE CRAFT
Robert S. Curry, Jr., Baldwin, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 13, 1954, Ser. No. 403,886
10 Claims. (Cl. 244—77)



1. A control system including an automatically piloted dirigible craft movable about an axis subject to changeable load conditions; automatic pilot means for the craft including a servomotor operable to move the craft about the axis, and means for computing the actual perform-

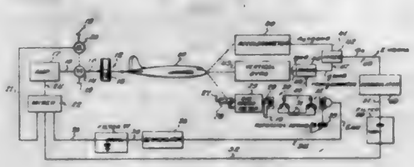
ance of the craft in the system providing a signal for operating said servomotor; means responsive to the output of said servomotor providing a signal in accordance with a performance standard for the craft in the control system for a particular load condition thereof, means for comparing a signal in accordance with the signal of said computing means with the signal of said performance standard means to provide a monitoring output, and means operated by the monitoring output of said comparing means for modifying the signal of said computing means to maintain the performance standard for the craft in the control system for other load conditions thereof.

2,948,495
CONTROL APPARATUS FOR AN AIRCRAFT
Kurt A. Marggraf, Lemont, Ill., assignor to Ampatco Laboratories Corporation, a corporation of Delaware
Filed Jan. 29, 1954, Ser. No. 407,121
9 Claims. (Cl. 244—77)



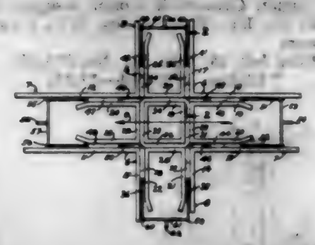
5. Control apparatus of the character described for the rudder of an aircraft, including: an automatic mechanism operatively connected to said rudder for moving it as a function of variation in a flight condition controllable by the rudder thereby to eliminate the variation in flight condition; a manual control mechanism operatively connected to said rudder for moving it thereby to effect a variation in said flight condition; and means responsive to rate of aircraft roll for rendering said automatic mechanism temporarily ineffective at initiation and completion of a turn without rendering it ineffective during the intermediate portion of the turn wherein the rate of aircraft roll is substantially zero.

2,948,496
SPEED CONTROLLING SYSTEM FOR AIRCRAFT
Everett S. Joline, Huntington Station, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Jan. 9, 1957, Ser. No. 633,281
9 Claims. (Cl. 244—77)



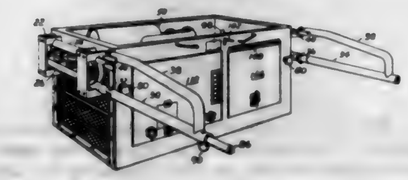
9. In a speed controlling system for aircraft that includes an air speed controlled servo loop with a motor providing long period control of the aircraft, the combination of, a short period control loop including the motor of the air speed loop, inertial speed change sensing means at the fore and aft axis of the craft providing an output, means for correcting the output of said inertial speed change sensing means for the effect of gravity and inclination of the craft from a level flight condition about its pitch axis, and means for operating said motor in accordance with the corrected output of said inertial speed change sensing means.

2,948,497
SLIDING FLANGEWAY FILLER AND TAPERED FILLER BLOCK FOR RAILROAD CROSSINGS AND FROGS
Norman F. Higgs, P.O. Box 1642, Fresno, Calif.
Filed Apr. 11, 1956, Ser. No. 577,523
4 Claims. (Cl. 246—389)



1. In a device for use in providing a continuous support surface at railroad crossings in which elongated rails intersect and provide gaps therein at the points of intersection so that railway cars may traverse either of the rails, which rails provide upper surfaces disposed in a substantially common horizontal plane, the combination of an elongated mounting block mounted longitudinally along each rail and extended from the gap in its respective rail away from the other rail and in alignment with the gap in its said other rail, each mounting block providing an upwardly disposed inclined surface from its extended end toward the gap in its respective other rail, a filler member slidably mounted on each of the mounting blocks on said inclined surface thereof for reciprocal movement along an inclined rectilinear path between a position with the uppermost end thereof disposed in the gap of its respective other rail and a retracted position removed from the gap, means for moving the filler members alternately and oppositely between gap filling and retracted positions, and means on the filler members engaging their respective rails in said gap filling positions and limiting upward movement of such filler members to positions with their uppermost ends flush with the upper surfaces of their respective rails.

2,948,498
ROLL-OUT MECHANISM
Clifford N. Johnsen and Emil T. Neubauer, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Filed Oct. 4, 1956, Ser. No. 613,951
5 Claims. (Cl. 248—17)



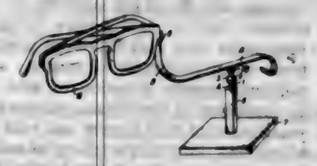
1. Apparatus adapted to be mounted beneath a vehicle comprising a pair of horizontal, parallel fixed tracks adapted to be supported from the underside of the vehicle body, extension tracks pivotally secured about vertical axes to the outer ends of said fixed tracks, said extension tracks being pivotally movable from a first position in which they extend toward and substantially in alignment with each other to a second position in which they are substantially in alignment with said fixed tracks, a unit, rolls mounted on said unit and resting normally on said fixed tracks and being capable of being rolled onto said extension tracks to move the unit from a position under the vehicle to a temporary position out from underneath the vehicle, an abutment secured to said fixed track in the path of rolling movement of said unit, resilient means secured to said unit in the path of pivotal movement of one of said extension tracks, and means for securing said extension tracks in substantially aligned positions to compress said resilient means to resiliently hold said unit against said abutment.

2,948,499
NURSING BOTTLE HOLDER
Vera B. Manny, 2380 Adrian St., Napa, Calif.
Filed Mar. 9, 1959, Ser. No. 798,201
4 Claims. (Cl. 248—106)



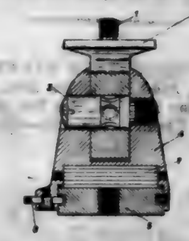
1. In a nursing bottle holder, the combination of a supporting frame having a horizontal base, means for securing said base upon an article of furniture with said supporting frame in a vertical position, a pair of stanchions supported in spaced relation upon said base by said frame having vertically spaced slots cut therein, a saddle of semi-cylindrical form having diametrically projecting tongues at the sides thereof adapted when compressed and without a nursing bottle for insertion into opposed slots of said stanchions, whereby said saddle will be secured against lateral movement and positioned to hold a nursing bottle between said stanchions at different levels above said base.

2,948,500
DEVICE FOR CARRYING ARTICLES ON DISPLAY
Emil Kühn, 23 Azenbergstrasse, Stuttgart, Germany
Filed Feb. 29, 1956, Ser. No. 568,655
Claims priority, application Germany Jan. 17, 1956
3 Claims. (Cl. 248—122)



1. A device for carrying eye glasses or the like on display, comprising, in combination, a base member; an elongated supporting member extending upwardly from said base member; a single-strip-shaped attaching member; ball joint means for turnably connecting said strip-shaped attaching member to the upper end of said supporting member, said attaching member being formed with a slot spaced from said ball joint means; and eye glasses having a portion not visible from the front thereof mounted on said slot.

2,948,501
PANORAMA HEADS FOR TRIPODS AND THE LIKE
Paul Heling, Radevormwald, Germany, assignor to Kürbi & Niggeloh, Radevormwald, Germany, a firm of Germany
Filed Feb. 25, 1957, Ser. No. 642,061
Claims priority, application Germany Feb. 22, 1956
2 Claims. (Cl. 248—183)



2. A panorama head for camera tripods and the like comprising a circular base plate adapted to be mounted in a stationary position, a head member rotatably mounted on said base plate, a camera supporting member pivotally mounted on said head member, quick-acting means for releasably securing said supporting member in any desired pivoted position relative to said head member, a permanent magnet secured within said head member and rotatable therewith, and having a lower surface slidably engaging the upper surface of said base plate so as to restrain said head member from freely rotating relative to said base plate by magnetic attraction between said surfaces, an annular member extending downwardly from said head member over the periphery of said circular base plate and in contact with the latter, and releasable quick-acting means on said head member adapted to engage with said stationary base member at the outer periphery thereof for locking said head member to said base member.

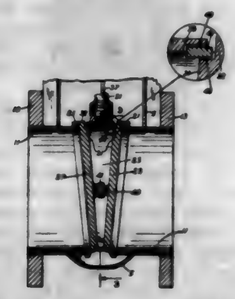
2,948,502
RESILIENT SUPPORTS
Philip Charles Hutton, Crawley, England, assignor to Silentbloc Limited, Crawley, England, a company of Great Britain
Filed Oct. 26, 1956, Ser. No. 618,541
Claims priority, application Great Britain Jan. 27, 1954
12 Claims. (Cl. 248—358)



1. A resilient support having a lower spring constant for a predetermined normal load than for larger and smaller loads, said support comprising a tubular outer socket member of approximately constant internal cross-section formed of relatively rigid material, an inner member of approximately constant external cross-section lying within and extending in the direction of the length of the socket and spaced from the wall of the socket, and a tubular intermediate member of resilient flexible material interposed between the inner and outer members, the inner member lying closely within the bore of the intermediate member, said intermediate member and socket having first, second and third areas of contact only, spaced from one another about the axis of the socket with the first area of contact opposite the space between the second and third areas of contact, the intermediate member being compressed within the socket by pressure applied through said areas of contact but separable from said outer member at said first area of

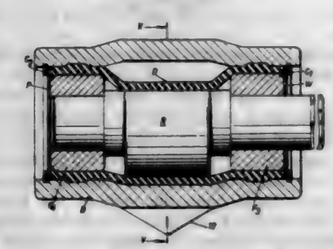
contact when urged away therefrom, and the second and third areas of contact on said intermediate member being circumferentially spaced from each other by a distance greater than the diameter of said inner member and connected by a cushion of said resilient material opposite said first contact area, which cushion is spaced from said outer member when said support is unloaded.

2,948,503
WEDGE GATE VALVE
John L. Williams, 2100 N. Albina Ave., Portland, Oreg.
Filed May 14, 1956, Ser. No. 584,568
6 Claims. (Cl. 251—85)



5. A wedge type gate valve comprising a valve body having a through flow passage, a pair of opposed angularly related valve seats surrounding said passage, a wedge gate mounted for movement in a direction normal to said passage and to and from a position in seating engagement with said seats, said wedge gate including a pair of circular disks, means pivotally connecting said disks for pivotal movement of one relative to the other, said means including a socket member on one disk and a pivot member on the other disk movably and cooperatively received within said socket member, said gate including a carrier supporting said disks, said socket member being generally of tubular form and said pivot member being of rod form, and keying means preventing said disks from turning movement relative to said carrier.

2,948,504
DIAPHRAGM VALVES
Ian Nuttall Merrill, Clarendon House, Briscliffe, Sheffield, England
Filed Nov. 29, 1955, Ser. No. 549,812
1 Claim. (Cl. 251—258)



A diaphragm valve comprising a valve body, having inlet and outlet apertures with a flow passage therebetween, said valve body having diametrically opposite bores transverse to the longitudinal axis of said flow passage, a closure member, metal sleeves, spring washers and a rotor, said inlet and outlet apertures being on opposite sides of said valve body, and said closure member comprising, a flexible tube of substantially uniform cross-sectional area throughout its length and said diametrically opposed bores having circumferentially extending grooves, said metal sleeves being pressed into the ends of said flexible tube to hold said flexible tube against rotation relative to said valve body so that said flexible tube expands into said circumferentially extending grooves, said spring washers being fitted into said bores to retain said metal sleeves with said valve body, said rotor having bearing means in said metal sleeves and being encased by said flexible tube, and said rotor having cylindrical ends sloping towards a lobe section near the mid-region thereof deforming an intermediate portion of said flexible tube, said lobe section being eccentric relative to said cylindrical ends, rotation of said rotor relative to said valve body and said flexible tube causing said flexible tube to be moved into or out of the flow passage through said valve, and said rotor working within an oil bath within said flexible sleeve.

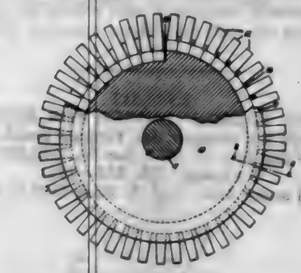
2,948,505
GAS TURBINE ROTOR
Gerhard Sonder, Cambridge, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 26, 1956, Ser. No. 630,612
3 Claims. (Cl. 253—39.15)



1. In a turbine, a turbine rotor comprising a turbine disk having a plurality of turbine blades located circumferentially around the periphery thereof, each of said blades comprising a bucket portion, a radially extending shank and a root portion, said root portions being attached to said disk with said shanks extending beyond the periphery of said disk in circumferentially spaced relation, an annular strip, and a plurality of resilient fingers attached at one end thereof to said strip and extending axially therefrom, the other end of said fingers being unsupported so as to be free to move radially; each of said fingers being spaced radially outward from the periphery of said disk and extending into the spaces between adjacent shanks, each of said shanks having a portion flared-out circumferentially and extending radially outwardly from adjacent fingers, each of said fingers engaging and wedged between said flared-out portions of ones of said shanks adjacent thereto, said fingers being urged into sealing engagement with said flared-out portions by centrifugal force when said rotor is rotated, whereby said fingers resiliently oppose vibration of said blades, said strip being supported in concentric relation to said rotor by said engagement of said fingers and said shanks; said fingers, said shanks, and the periphery of said disk forming axially extending cooling fluid passages through said rotor.

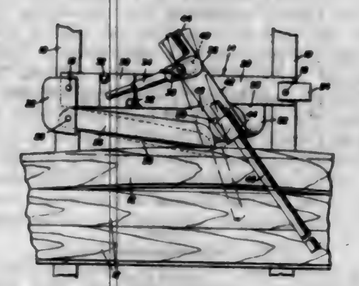
2,948,506
DAMPING TURBINE BUCKETS
Thomas H. Glamer, Ballston Lake, and Robert V. Klint, Rexford, N.Y., assignors to General Electric Company, a corporation of New York
Filed Sept. 18, 1958, Ser. No. 761,300
16 Claims. (Cl. 253—77)

1. An elastic fluid machine comprising in combination, a hub, a plurality of buckets having base and blade portions and mounted in a circumferential row in a common plane on said hub, each of said buckets being of a predetermined different length and a corresponding different natural period of vibration from any bucket of a



plurality of preceding adjacent and subsequent adjacent buckets to minimize vibration coupling between said buckets, and means providing a uniform exposure of said buckets to the fluid stream of said machine.

2,948,507
LUMBER COMPRESSING AND ALIGNING TOOL
Albert W. Gould, 16 W. Raley Ave., Orlando, Fla.
Filed Aug. 27, 1958, Ser. No. 757,589
10 Claims. (Cl. 254—15)



10. A floor tightening clamp comprising a flat metal strap comprising a base, means detachably securing said base to a floor structure for compressing lumber in side-by-side abutting engagement thereon, a pressure arm pivotally connected to said base for swinging movement towards and away from the latter, an actuating lever mounted for swinging movement relative to said base, wedge means pivoted upon said lever and engaging and movable upon adjacent edges of said base and pressure arm for causing thereby swinging movement of the latter relative to said base.

2,948,508
PUSHING DEVICE FOR SHIFTING MINING MACHINERY
Wesley Horace Barrett, Cinderford, England, assignor to Dowty Mining Equipment Limited, Tewkesbury, England, a British company
Filed Mar. 17, 1958, Ser. No. 721,931
Claims priority, application Great Britain Mar. 15, 1957
8 Claims. (Cl. 254—35)

1. A pushing device for shifting floor-supported mining machinery horizontally across the floor of a mine, comprising a horizontally disposed pushing jack arranged at one end for connection to such mining machinery, a generally upright strut formed at its lower end with a base frame convex at its floor-engaging surface, disposed to rock upon such surface in a vertical plane which includes the jack, and to slide over the floor, linkage means interconnecting the end of the jack opposite the latter's machinery-engaging end and the adjacent portion of the convex base frame, for rocking of the strut without vertical displacement of the jack, and the strut being of a length to jam its upper end into the mine roof when rocked uprightly upon such convex surface, and to disengage the roof and slide its base frame over the floor when rocked downwardly.



2,948,509
CAM CLAMP
Samuel J. Rounds and James G. Rounds, both of R.D. 1, Henderson, N.Y.
Filed Oct. 17, 1957, Ser. No. 690,785
7 Claims. (Cl. 254—77)



5. A cam clamp comprising a pair of elongated members, each having an elongated guide slot, each of said members at one end having guide means projecting into the slot of the other member, a cam pivotally mounted on one of said members adjacent the guide means thereof, and cam follower means on the other member disposed adjacent the guide means thereof, said cam follower means and said cam coacting together to effect relative longitudinal movement between said members upon rotation of said cam.

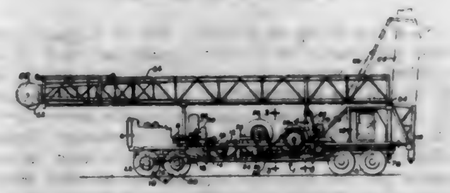
2,948,510
PORTABLE CABLE PULLER AND POWER UNIT
Alwin F. Kieser, 88 Alhambra Road, Massapequa, N.Y.
Filed Dec. 10, 1953, Ser. No. 397,375
4 Claims. (Cl. 254—139.1)

3. A cable-pulling device comprising a power unit comprising a rigid frame and a boom having one end thereof mounted on said frame of said power unit, said power unit comprising cable-pulling means for pulling a flexible cable, said boom comprising a plurality of longitudinally aligned sections, each of which comprises substantially parallel side bar means connected by cross pieces and which are disposed in relatively extensible, contacting, overlapping relation, and means for holding said sections together in rigid relation in various positions of adjusted extensibility, a sheave, spaced sheave-holding parts, means for mount-

ing said sheave for rotation relative to and between said sheave-holding parts, securing means for securing said sheave-holding parts respectively to said side bar means of each of said sections along opposite margins of said boom in various positions relative to the longitudinal extent thereof in substantially spaced relation to said end thereof, means for pivotally mounting said end of said boom on said frame of said power unit, said flexible cable extending linearly from said cable-pulling means and passing over said sheave, the axis of rotation of said rotatably mounted part being parallel with and adjacent to the pivotal axis of said boom whereby pull exerted on said cable imposes a load on said boom at said axis for pivotal movement of said boom in line with the longitudinal extent of said boom for different pivotal positions of said boom about said axis.

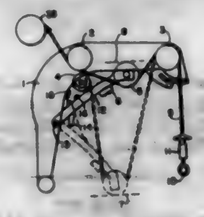


2,948,511
COMBINATION VEHICLE AND DRILLING RIG FRAME
John Hart Wilson, % Wilson Manufacturing Co. Inc., P.O. Box 1031, Wichita Falls, Tex.
Filed July 6, 1955, Ser. No. 520,233
3 Claims. (Cl. 254—166)



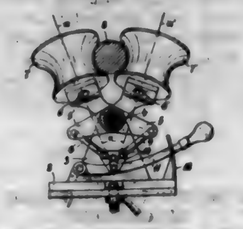
1. In a mobile well drilling and servicing rig, an elongated, integrally constructed frame, which frame has at least two spaced apart side members, at least two axles mounted transversely on the lower portion of said frame, one near each end thereof and secured thereto, a wheel mounted on each end of each of said axles, a prime mover mounted on said frame, a bearing mounted on a side of each of said side members intermediate the ends thereof, which bearings are in axially aligned relation, a drum shaft extending transversely of said frame and being journaled in said bearings on said side members, a drum, which drum is substantially the width of the space between said side members, mounted on said drum shaft, a sprocket mounted on said drum shaft exterior of one of said side members and being selectively connectable with said shaft, a gear drive unit positioned within the confines of said frame and having a countershaft extending outward therefrom transversely of said frame, bearings mounted on said countershaft on at least one of said side members, a sprocket mounted on said countershaft, exterior of said frame, and being in aligned, driving relation with said sprocket on said drum shaft, means connecting said prime mover and said gear drive unit in selected driving relation to selectively rotate said drum shaft, and means selectively connecting said wheels of said drilling and servicing rig with said prime mover in driving relation.

2,948,512
CONSTANT TENSION DEVICE FOR BOAT FALLS
Russell S. Crenshaw, Jr., Virginia Beach, Va.
Filed July 17, 1957, Ser. No. 672,524
3 Claims. (Cl. 254—172)
(Granted under Title 35, U.S. Code (1952), sec. 266)



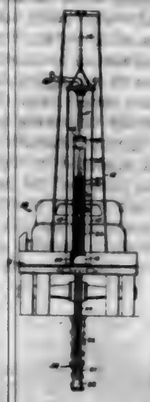
1. In combination, a crescent shaped davit having an upright section and a forwardly extending arm section, a pair of blocks mounted in a spaced relationship on said arm section, a hoisting line cooperating with said blocks, said line terminating at one end in a weighted hook and the other end at a winch drum, a riding block supporting a counterweight resting on said line, said counterweight and riding block having sufficient mass to overcome the weight of said hook, and means for regulating the vertical movement of said riding block whereby a substantially constant upward force is available at the hook over a predetermined length of travel thereof due solely to the action of said counterweight and riding block for expediting its attachment to an oscillating load.

2,948,513
GUIDE ROLLER DEVICE
Danckert Krohn-Holm, Oscarsgate 13, Oslo, Norway
Filed Oct. 27, 1958, Ser. No. 769,827
Claims priority, application Norway Nov. 7, 1957
4 Claims. (Cl. 254—190)



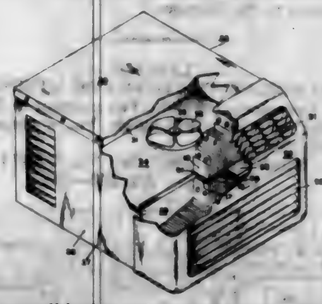
1. A guide roller device for the support of a cable or similar elongated element of circular cross section comprising a pair of complementarily arranged rollers, each roller having a guide groove of elliptical form in cross section, said rollers being arranged in relatively inclined side by side relationship and having axes of rotation forming an adjustable angle, the bisector of which extends perpendicularly through the cable, said rollers being tiltably arranged in relation to a plane perpendicular to the cable and about an axis normal to the axis of the cable.

2,948,514
ROTARY EARTH DRILLING APPARATUS AND METHOD
Gebhard J. Long, 3770 Nottingham St., Houston, Tex.
Filed May 17, 1955, Ser. No. 508,959
4 Claims. (Cl. 255—1.8)



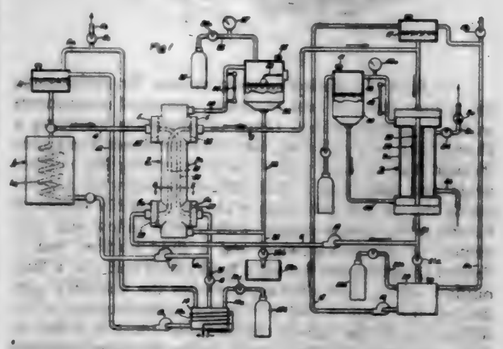
3. The method of rotary well drilling employing a power-driven rotary table located at a fixed distance from the ground, a drill string, and casing to be landed in the well, which consists of placing a length of casing in ground contact in substantially vertical position within said rotary table so that said casing protrudes to a point substantially above said rotary table, locating said drill string within said casing so that said drill string protrudes above said casing, connecting said rotary table to said drill string for rotation thereof at a point above said length of casing, rotating and forcing said drill string into the ground, and selectively coupling said casing to said drill string for rotating and forcing said casing into the ground in accompaniment with said drill string.

2,948,515
HEAT TRANSFER DEVICE
John Richard Mehalick, Fayetteville, and Edward R. Izzo, De Witt, N.Y., assignors to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Apr. 1, 1957, Ser. No. 650,042
1 Claim. (Cl. 257—137)



In an air conditioning unit including a housing having opposed side walls, an end wall and a cover forming a chamber having an open end; a fan mounted within said chamber; means dividing the chamber into a fan inlet section and a fan discharge section, said means including a coil engaging edge; a heat transfer coil mounted in the open end of said housing; a first group of extended surface elements angularly arranged with respect to the coil, having a portion, extending transversely of the element, upset from the plane thereof at a predetermined distance from one edge thereof, and a second group of extended surface elements angularly arranged with respect to the coil, having a portion extending transversely of the element upset from the plane thereof at a predetermined distance from the edge corresponding to the edge used to measure the distance in the first group, the distance measured in the second group being different than the distance measured in the first group, the extended surface elements of each group being alternated with and parallel to the other group so that the upset portion of each engages the confronting surface on the adjoining element to space the elements to form a continuous barrier; said coil engaging the chamber dividing means so that air induced through a portion of the coil into the inlet portion of the chamber by the fan may be discharged through the coil from the discharge portion of the chamber without intermixing of the air stream within the coil.

2,948,516
HEAT EXCHANGE SYSTEM WITH INTERMEDIATE HEAT CONDUCTIVE FLUIDS
Raymond C. Martinelli, deceased, late of Oakland, Calif., by Charlotta A. Martinelli, administratrix, Oakland, Calif., and Daniel R. Miller, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Original application Nov. 17, 1950, Ser. No. 196,218. Divided and this application Dec. 15, 1954, Ser. No. 475,516
6 Claims. (Cl. 257—192)

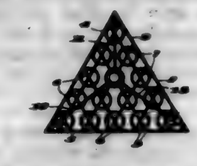


1. The method of indirectly transferring heat from a first fluid to a second fluid and detecting leakage of either of said fluids, which comprises introducing a liquid having suitable heat transfer qualities into a closed independent path completely within one of the fluids and completely surrounding the other of said fluids, whereby the desired heat transfer from the first fluid to the second fluid is through the liquid, and employing said liquid to indicate leakage thereto of one of said fluids.

2,948,517
TUBE BUNDLE ASSEMBLY
Donald L. Cosner, Baldwin, Md., assignor to The Martin Company, a corporation of Maryland
Filed Jan. 5, 1956, Ser. No. 557,500
5 Claims. (Cl. 257—248)

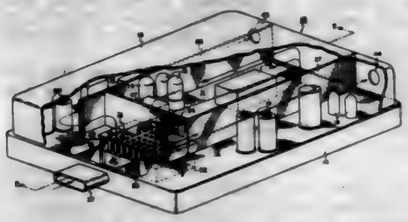
1. In a heat exchanging apparatus in which tubes are spaced in a bundle in a fixed parallel relationship, the combination with said tubes of a pair of sets of wires adjacent each end of the tubes, the wires of one set being angularly disposed with respect to the wires of the other set forming a network, said sets of wires being arranged in generally parallel planes spaced longitudinally of the tubes, the ends of said tubes in said bundles having pairs of diametrically opposed apertures, said

pairs of apertures at one end of the tube arranged to conform with the angularity of said wires in said network, a wire of each set passing through said diametrical-



ly opposed apertures to position the ends of each tube in fixed relationship to the ends of the others of said tubes at the intersection of said wires forming said network.

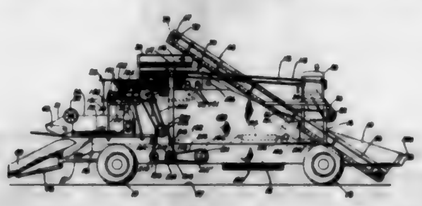
2,948,518
FLUID CIRCULATION COOLING SYSTEMS
Allan D. Kraus, Glen Cove, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Feb. 6, 1957, Ser. No. 638,533
2 Claims. (Cl. 257—313)



1. A fluid circulation cooling system for maintaining the temperature of heat radiating, electrical components within a predetermined range of operation including a chassis with heat radiating, electrical components mounted thereon having wall plates compartmenting the components and providing a fluid inflow passageway, a cover fitting the chassis providing a closed assembly therewith having a first compartment with a fluid inflow end connected to the passageway, and a fluid outflow end, a second compartment having a fluid inflow end, and a fluid outflow end, a heat exchanger within the assembly connecting the outflow end of the first compartment to the inflow end of the second compartment located in the inflow passageway of the chassis, means for supplementing the heat exchanger to maintain the temperature of the cooling fluid in the system within a predetermined range including a heater located in the first compartment of the assembly to prevent the temperature of the fluid from going below a predetermined low point and thermostatic means for controlling the operation of the heater in accordance with the temperature of the fluid in the first compartment to cut in at the low temperature point and cut off at a predetermined high temperature point, and means for circulating the fluid through the passageway, compartments and heat exchanger of the assembly to preheat the circulating fluid at the inflow passageway in accordance with the temperature of the fluid in the first compartment and to cool the circulating fluid at the inflow end of the second compartment.

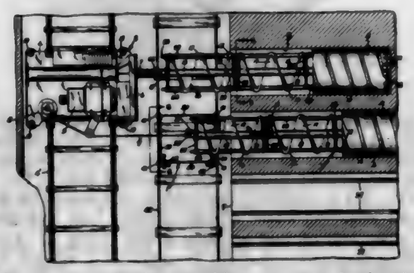
2,948,519
MOBILE EARTH SURFACING APPARATUS
Wilbert C. Bradshaw, Jr., and Dolph W. Ruschhaupt, Fresno, Calif., assignors to California Fresno Investment Corp., Fresno, Calif., a corporation of California
Filed July 21, 1958, Ser. No. 749,785
4 Claims. (Cl. 259—154)

1. A mobile earth surfacing machine comprising a support frame; ground engaging members mounting the frame for earth traversing movement; a housing mounted on the frame providing a mixing chamber having an outlet; means mounted on the frame for supplying aggregate to the chamber; means mounted on the frame for supplying asphalt emulsion to the chamber; means mounted on the frame for supplying water to the chamber, the aggregate, emulsion and water being adapted to be mixed in the chamber to produce an earth surfacing material; a common driving mechanism mounted on the frame having driving connection to the aggregate supplying means, the emulsion supplying means, and the water supplying means for synchronously delivering aggregate, emulsion and water to the mixing chamber in predetermined amounts; and means mounted in the frame for receiving said mix from the outlet of the mixing chamber and for discharging it onto a surface traversed by the support frame, each of the water and emulsion supplying means including a supply tank, a variable speed pump having an inlet connected to the tank and an outlet adapted



to pump fluid therefrom at a rate substantially proportional to the speed of the pump, an outlet conduit extended into the housing for conducting fluid into the chamber and being connected to the pump outlet, an adjustable outlet valve in the outlet conduit, a by-pass conduit in fluid communication with the inlet and outlet of the pump, an adjustable by-pass valve in the by-pass conduit, and adjustable means interconnecting the outlet and by-pass valves for alternately and oppositely opening and closing the valves whereby the total flow through the pump is adjustably selectively divided between the outlet and by-pass conduits and the sum of the flows in the outlet and by-pass conduits substantially equals the total flow through the pump for any given speed of the pump, said common driving mechanism being adjustable and being connected to the emulsion and water pumps for synchronously varying the speeds of the pumps and thereby synchronously varying the rates of the flow of water and emulsion to the chamber.

2,948,520
AUGER BORING MACHINE FOR MINING COAL
Neal W. Densmore, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 7, 1955, Ser. No. 532,873
12 Claims. (Cl. 262—26)

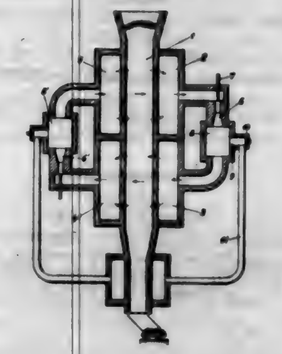


1. In an auger boring machine, a rotary boring head for forming a bore-hole, drilling cutters driven concurrently with said boring head rotating about axes parallel with the axis of head rotation for forming parallel grooves along the walls of the bore-hole as drilling progresses, and supporting and guiding means for said boring head for guiding the latter within the bore-hole including guiding elements received in and movable along said parallel grooves, said drilling cutters carried at the front ends of said guiding elements respectively.

3. In combination, a boring machine for driving a drill string composed of aligned sections and carrying a boring head, said drill string movable with the boring machine into parallel boring positions along a path extending in parallelism with the face of the work being drilled, and transfer means for receiving, supporting and moving stored sections of a drill string to positions for attachment to the drill string of the machine to increase the effective length of the drill string as boring progresses, said transfer means arranged near the working face and movable along a path extending in parallelism with the face between the latter and the path of lateral movement of said boring machine.

9. In an auger boring machine, a rotary auger comprising a series of aligned auger sections detachably coupled together, supporting means for supporting each of said auger sections independently of each other when uncoupled, a bearing housing at either end of said auger section having integral arms which are secured to said supporting means, said supporting means being coupled and uncoupled similarly to and simultaneous with said auger sections so that coupling of the auger sections also couples said supporting means.

2,948,521
PROCESS AND APPARATUS FOR HEATING A CROSS STREAM SHAFT FURNACE IN VIEW OF HEATING SOLID MATERIALS, PARTICULARLY FOR THE CALCINATION OF LIMESTONE
Hans Erich Werner Hellgenstodt, Volklingen, Germany, assignor to Röchling'sche Eisen- und Stahlwerke G.m.b.H., Volklingen, Germany, a firm of Germany
Filed July 11, 1957, Ser. No. 671,137
Claims priority, application Germany July 14, 1956
5 Claims. (Cl. 263—29)



3. A calcining apparatus, comprising in combination, a kiln or vertical shaft type including a vertical shaft having consecutively arranged therein an upper and a lower heating zone said vertical shaft including an inlet portion located above said upper heating zone, and an outlet portion located below said lower heating zone, so that material introduced into said inlet portion will move downwardly through said upper and lower heating zones to said outlet portion; first means for passing hot gas in a substantially horizontal direction of flow through one of said heating zones that first means having an inlet and an outlet end; first heating means connected to the outlet end of said first means for receiving gas passed through that one heating zone and for heating the same, said first heating means having an outlet end; second means for passing the thus heated gas through the other of said heating zones in a substantially horizontal direction substantially opposite to the direction of flow of said gas through that one heating zone, that second means having an inlet and an outlet end and said inlet end of said second means being connected to said outlet end of said first heating means; second heating means connected to the outlet end of said second means for receiving gas passed through that other heating zone and for reheating the same, said second heating means being connected to the inlet end of said first means for delivering reheated gas thereto.

2,948,522
LONG LIP CRUCIBLE
George R. Peters, Philadelphia, Pa., assignor to Ross-Tacony Crucible Co., Philadelphia, Pa., a corporation of Pennsylvania
Filed June 10, 1955, Ser. No. 514,544
5 Claims. (Cl. 263—48)

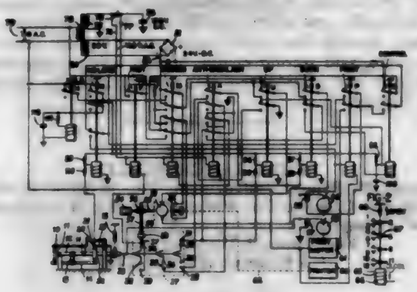


5. A long lip crucible, comprising a crucible body or pot of refractory material having a thickened wall portion at the upper part thereof, said portion having an outwardly facing recess leaving a residual wall portion, said recess extending downward from the top thereof and inwardly to said residual wall portion, said recess providing an essentially planar bottom ledge and having essentially planar inwardly divergent side surfaces, said planar surfaces meeting in corners at angles of at least 90° and a long pouring lip of refractory material having an entrance end portion dimensioned to fit tightly in said recess with the end of the lip tight against the wall, said end portion having an essentially planar bottom surface adapted to rest on the bottom ledge of the recess and having essentially planar side surfaces which are divergent toward said end, said surfaces of the lip being complemental to said surfaces of said recess for interlocking non-twistable engagement of said end portion of the lip with said wall portions by insertion of said end portion downwardly into said recess from the top thereof.

2,948,523
COMPUTING SCALE
Kenneth C. Allen, Dayton, Ohio, assignor to The Hobart Manufacturing Company, Troy, Ohio, a corporation of Ohio
Filed Aug. 24, 1953, Ser. No. 376,136
17 Claims. (Cl. 265—5)

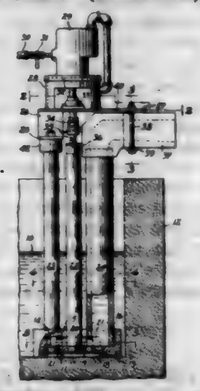
4. A power operated weighing scale having weighing mechanism and a lever adapted to occupy a no-load position and to be deflected away from said position in response to the application of a load to the scale, comprising switch contacts mounted on opposite sides of said lever and movable therewith, a follow-up member having oppositely located contacts arranged for cooperation with said pair of lever contacts to be selectively closed

in accordance with the direction of movement of said lever, a drive motor having a shaft the rotation of which is proportional to the weight of the load, means connecting said shaft to cause movement of said follow-up member selectively in opposite directions in accordance with the deflections of said lever to effect the opening of both pairs of said contacts at a balance point when said follow-up member has traveled a distance corresponding to the deflection of said lever, printing means controlled by



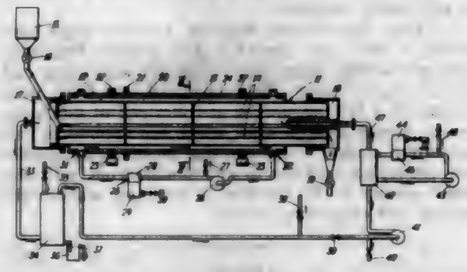
said shaft for printing a record of the weight of each load, means operable automatically to activate said printing means in response to reaching of the balance position by said shaft, means including one of said pairs of contacts for reversing the connections to said motor to return said shaft and follow-up member to their no-load position upon removal of the load from said scale, and means providing a delay in the return of said shaft to its no-load position following removal of said load and the closing of said one pair of contacts.

2,948,524
PUMP FOR MOLTEN METAL
Victor D. Sweeney, Merion Station, and Walter U. Kaji, Philadelphia, Pa., assignors to Metal Pumping Services, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 18, 1957, Ser. No. 640,686
7 Claims. (Cl. 266—38)



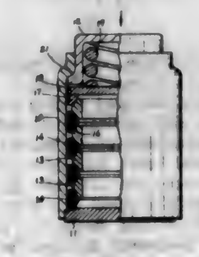
4. A pump rotor assembly for a pump for pumping molten metal comprising a circular body defined by a circular periphery and upper and lower opposite faces, an annular opening in said upper face and extending into said body, a pump shaft extending into said annular opening in spaced relation with the sides thereof and being fixed to said circular body at the bottom of said annular opening and being otherwise exposed to the interior of said annular opening, and open-ended passages extending predominantly radially outwardly through said body from said annular opening to a plurality of locations around the periphery of said impeller, whereby when said rotor assembly is rotating in a bath of molten metal, metal is drawn downwardly in surrounding and contacting relationship with said shaft and thence is impelled radially outwardly by shrouded impeller teeth constituted by said open-ended passages, said circular body and pump shaft comprising structural refractory material selected from the group consisting of carbon, graphite, graphitized carbon, clay-bonded graphite, carbon-bonded graphite and silicon carbide.

2,948,525
REDUCTION KILN
De Witt Henry West, Port Eynon, Stanley Charles Townshend, Clydach, Swansea, and Alexander Bowen Simpson, Brynmill, Swansea, Wales, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 9, 1957, Ser. No. 651,712
Claims priority, application Great Britain Apr. 12, 1956
1 Claim. (Cl. 266—43)



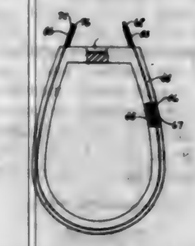
A rotary kiln for reducing nickel oxide to nickel metal powder comprising a steel kiln shell having on its interior surface a very thin completely continuous aluminum oxide coating, said coating being less than about 0.001 inch thick on a base made of about 90 to 95% aluminum with the balance essentially alumina, a jacket annularly spaced from the exterior surface of the kiln shell, means for introducing heating gases into the annular space between said jacket and said kiln shell, means for charging nickeliferous oxide material into said kiln shell, and means for introducing reducing gases into the kiln shell so that the reducing gases contact the nickeliferous oxide material and cause a reduction of the nickel oxide at a temperature from about 350° C. to about 500° C., said coating characterized by being substantially irreducible within said temperature range and by being free from sticking and caking of nickel oxide and of reduced nickel powder to its surface after prolonged exposure to hot reducing conditions.

2,948,526
BUFFER DEVICE
Karl W. Maier, Cheshire, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed May 1, 1958, Ser. No. 732,299
5 Claims. (Cl. 267—1)



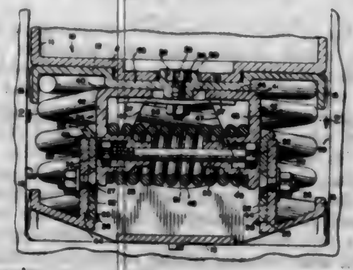
5. A buffer device comprising at least one assembly including a pair of rings, one ring being formed with an internal taper and the other being formed with a mating taper so that said one ring is operative to receive part of the other in telescoping fashion, said one ring being fabricated compositely of glass fibers suitably bonded together by a plastic material and having a hoop strength in excess of 250,000 p.s.i. and a metallic liner disposed between the rings, said other ring having a compression strength of at least 250,000 p.s.i.

2,948,527
GARTER SPRING CONSTRICTION RESTRICTOR
Vernon J. Gilbert, Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,719
3 Claims. (Cl. 267—1)



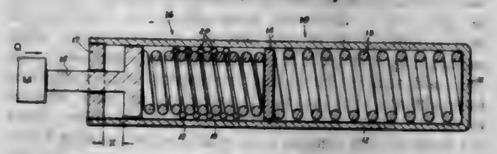
1. A garter spring structure comprising a section helical garter spring of predetermined length, a connector to fit the bore of said garter spring, the ends of said garter spring secured to said connector and forming an abutment, a second abutment in said garter spring inwardly of one end of said connector, and a constriction restrictor in the form of a wire section in the bore of said garter spring and longer than the unstretched length of said garter spring, the ends of said constriction restrictor engaging said second abutment and one end of said connector to restrict the constriction of said garter spring but free of said second abutment to permit expansion of said garter spring to a diameter greater than the length of said wire section.

2,948,528
STABILIZED SPRING GROUP FOR RAILWAY CAR TRUCK
Ray C. Williams, Chicago, Ill., assignor to Standard Car Truck Company, Chicago, Ill., a corporation of New Jersey
Filed Feb. 21, 1958, Ser. No. 716,712
3 Claims. (Cl. 269—9)



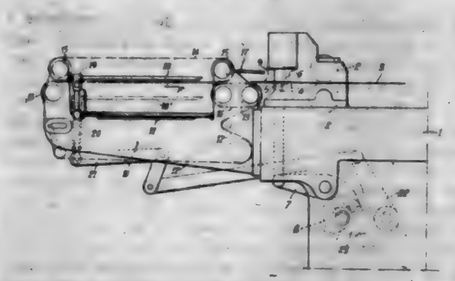
1. A spring group stabilizer unit for supporting an end of a truck bolster within a bolster window of a truck side frame, the said unit comprising a bottom follower adapted to be carried by the frame at a location within said window and provided with opposed friction walls, a plurality of load springs seated on the bottom follower, a top follower provided with a bottom face seated on the load springs, a pair of oppositely facing friction shoes positioned between said friction walls and each presenting a friction surface to one of said friction walls, means for resiliently clamping both of said shoes to the bottom face of the top follower with capacity for sliding movement thereon, and a helical stabilizer spring common to and interposed under compression between said friction shoes and serving to yieldingly urge said shoes against said opposed friction walls to damp the oscillations of said load springs.

2,948,529
BUFFER DEVICE
Karl W. Maier, Cranberry Lane, Cheshire, Conn.
Filed Mar. 24, 1958, Ser. No. 723,368
7 Claims. (Cl. 267—9)



1. A buffer device comprising a housing and a movable plunger cooperating with the housing, a recuperating spring means and a cooperating brake assembly positioned within the housing, said brake assembly being disposed between the spring and the plunger, said brake assembly comprising an inner coil spring and an outer coil spring, said outer coil spring being carried by the inner spring and having at least one turn, said outer coil spring making a relatively snug fit within said housing.

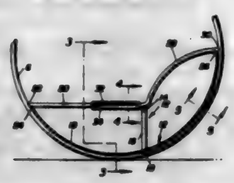
2,948,530
APPARATUS FOR RECEIVING AND STACKING BAGS
Maurice Louis van de Gent, "Gentiana" Dreve du Chateau Royal Meise B.T., Brussels, Belgium
Filed Dec. 20, 1957, Ser. No. 704,094
Claims priority, application France Dec. 21, 1956
2 Claims. (Cl. 271—68)



1. Apparatus for stacking thin plastic bags received from the exit of a welding and cutting machine in which the bags are produced from thermoplastic material; said apparatus comprising at least two sets of endless conveyor belts extending longitudinally from the exit of the welding and cutting machine and being laterally spaced apart so as to engage the bags received from said exit along the opposite longitudinal edges of the bags, each of said sets including upper and lower belts having straight lower and upper runs, respectively, pressing against each other to nip the related longitudinal edge of the received bag therebetween, said lower belt of each set extending closely adjacent to said exit of the welding and cutting machine, while the related upper belt is spaced longitudinally away from said exit by a substantial distance, a receptacle for the bags underlying said straight runs of the endless conveyor belts, an auxiliary lower conveyor belt disposed laterally between said sets and having an upper run at the level of said upper runs

of the first mentioned lower conveyor belts, said upper run of the auxiliary lower conveyor belt being substantially coextensive longitudinally with the portions of said upper runs of said first lower belts extending between said exit and said upper belts, thereby to avoid downward sagging of the received bags before the longitudinal edges of the latter are nipped between said sets of conveyor belts, longitudinal rods extending parallel to said straight runs of the sets of conveyor belts and arranged in the space between said sets and adjacent to the latter, a lateral bracket fixedly secured to said rods at the ends of the latter remote from said exit of the welding and cutting machine, rectilinearly movable support means rigidly carrying said bracket and disposed at the side of said receptacle remote from said exit to permit movement of said rods in directions perpendicular to the plane of said straight runs of the sets of conveyor belts while maintaining the parallel relationship between said rods and said straight runs, and mechanical means effecting intermittent, reciprocating movement of said support means to move said rods from a raised position above the level of said straight runs to a lowered position below said level so that said rods act downwardly and uniformly upon a bag to free the longitudinal edges of the bag from said straight runs and to deposit the freed bag in said receptacle.

2,948,531
OCCUPANT PROPELLED AMUSEMENT DEVICE
Carmen L. Johnson, Rte. 3, Council Grove, Kans.
Filed Mar. 19, 1958, Ser. No. 722,407
7 Claims. (Cl. 272—57)



1. An amusement and exercising device comprising a pair of spaced parallel endless hoops of prescribed and identical diameter, a substantially U-shaped rigid member having a knee accommodating bar bridging the space between the respective hoops and having lateral end portions rigidly joined to and radiating from diametrically opposite portions of the respective hoops, an occupant seat lateral to and adjacent to a median portion of said knee accommodating bar, the end portions of said bar extending beyond the edge portions of the seat so that the occupant of the seat may position his feet, legs and knees in a position to grab and hang on the bar when the bar is in an up position and the occupant is hanging down much in the manner accomplished when one hangs by his knees from a gymnasium bar, and a pair of hand rails in front of the seat and bar and between the bar and a forward upper portion of the hoops, said rails being spaced apart so that the occupant in a crouched seated position may lean against said rails to yank the rails in a manner to rock the hoops and to eventually impart sufficient momentum thereto in order to roll the hoops over through a complete circle.

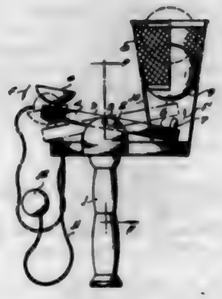
2,948,532
TETHERED BALL
Terman J. C. Jepsen, Los Angeles, Calif. (5624 Fair Ave., North Hollywood, Calif.)
Filed Nov. 1, 1957, Ser. No. 693,991
Claims priority, application Denmark Jan. 28, 1957
4 Claims. (Cl. 273—58)

1. In combination, a hollow resilent ball formed throughout solely of an elastometer, the ball having a portion of the wall provided with a channel having both of its ends open exteriorly of the ball, the channel from one open end to the other defining an unbroken arc walled solely by the elastomer material, an elongate elastic member of a length greater than that of the channel and extending through the channel, and of tubular form at least at one end, said one end of said elastic



member being approximately co-terminus with the corresponding end of the channel, and a plug body in the said tubular end of said elastic member and maintaining said tubular end expanded to an outside diameter greater than the diameter of the channel whereby the elastic member is secured from being pulled from the other end thereof through the channel.

2,948,533
TOY
Roberto Francisco Saravia and Guillermo Eduardo Broach, both of 1256 Pueyrredon Ave., Buenos Aires, Argentina
Filed Dec. 8, 1958, Ser. No. 778,818
2 Claims. (Cl. 273—96)

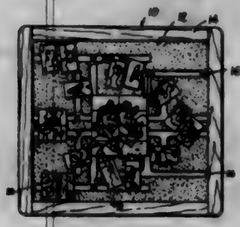


1. A toy of the class described comprising a bearing platform, a pair of laterally aligned shoulders projecting above said platform, a beam pivoted intermediate its ends on said shoulders, a ball receiving cup fixed to one end of said beam and a projection extending upwardly from the other end of said beam, a tapered receptacle open at its opposite ends and adapted to receive a relatively large ball with a diameter sufficiently great to prevent its complete emergence from the lower end of the receptacle, means supporting said receptacle on said platform with its lower open end out of contact therewith and with the axis of the receptacle in alignment with the axis of the projection, a second ball having a smaller diameter than said first ball and being adapted to be received in said cup, a string tethering said second ball to said platform adjacent said cup, and a handle secured to said platform for maneuvering said device to swing said second ball into said cup, whereby the beam will be swung about its pivot causing the projection thereon to strike the ball in said receptacle and drive it out of the upper open end thereof.

2,948,534
BODIES OF REVOLUTION
Kalman Z. Hauser, Fostor, Ohio
Filed Apr. 24, 1956, Ser. No. 580,359
1 Claim. (Cl. 273—106)

A sling shot pellet comprising a body of dehydrated clay material and a coating on said body, said coating being comprised of a solution of one ounce of aluminum bronze, five liquid ounces of carnauba wax emulsion and six liquid ounces of sodium silicate, said coating having a thickness resulting from an application of solution at the rate of three ounces per five square feet of pellet surface.

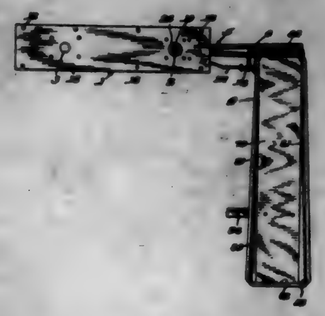
2,948,535
PUZZLE
Julius Ellman, 1672 E. 7th St., Brooklyn 30, N.Y.
Filed Oct. 29, 1956, Ser. No. 618,736
3 Claims. (Cl. 273—157)



1. A toy comprising in combination, a playing board having a plurality of isolated mazes, each maze having a feed slot extending inwardly from the outer edge of the board, a side slot intersecting and communicating with said feed slot and a positioning slot having one end communicating with said side slot, all of said positioning slots terminating in a dead end in a common area on said board with their respective terminals spaced apart from each other, a frame enclosing the outer edges of said board, and a similar plurality of selectively interchangeable blocks supported in each of said mazes for limited independent linear and rotational movement and every block in each of said mazes being matched for predetermined association with a corresponding block in an adjacent maze ending in said common area, each of said plurality of blocks in each maze bearing a different pictorial illustration of an identical body part, said blocks being selectively and independently movable to said common area for cooperative assembly with a block from each of the other mazes to form one of several complete pictures.

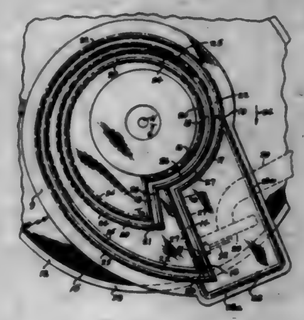
2,948,536
GOLF TEE
Ralph F. Koerner, 5730 W. Washington St., Chicago, Ill.
Filed Apr. 25, 1955, Ser. No. 503,431
8 Claims. (Cl. 273—201)

6. A golf ball teeing apparatus comprising supporting means for mounting the apparatus substantially in the plane of the tee, spaced teeing means and operator-operated means therefor operatively mounted on said supporting means, pivoted linkage means operatively connecting the teeing means at one end and the operator-operated means contiguous to the pivot connection for the linkage means, spring means for biasing the teeing means in its uppermost position, said spring means operatively connected to the horizontal supporting means at the upper end and to the linkage means, means for delivering under the action of gravity golf balls arranged for successive delivery, golf ball delivering means operatively mounted for to and fro movement between the means for delivering golf balls under the action of gravity and the teeing means, said golf ball delivering means operative from a golf ball receiving position to a golf ball delivering position, agitator means operatively mounted with respect to the means for delivering golf balls under the action of gravity, said agitator means operative to restrain a portion of the golf balls during the period in which a golf ball is delivered to the teeing means and upon return of the golf ball delivering means to its golf ball receiving position the agitator means permits golf balls to move



under the action of gravity, and linkage means interconnected with the aforesaid linkage means and the golf ball delivering means and agitator means for successively actuating the golf ball delivering means and agitator means to permit transfer successively upon the operation of the operator-operated means a golf ball from the means for delivering golf balls under the action of gravity by the golf ball delivering means to the teeing means within the cycle of the teeing means from its golf ball receiving position to its teeing position.

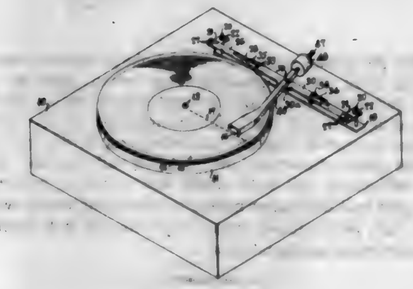
2,948,537
RECORD REPEATER
Robert A. Wells, Fairfield, Conn., assignor to Spear Products, Incorporated, Bridgeport, Conn., a corporation of Connecticut
Filed Apr. 11, 1958, Ser. No. 727,948
1 Claim. (Cl. 274—15)



A record repeater comprising a thin sheet of material adapted to rest on a phonograph record on a turntable and provided with an opening to receive the turntable spindle, said sheet provided with a radial slot through which a reproducing needle may engage the record, said sheet also including a laterally extending curved slot forming an extension of the inner end of the first slot and terminating at a free end, said sheet provided on its top surface with a curved guideway extending from the free end of the curved slot to the outer end of the radial slot adapted to receive and lift the needle from the curved

slot and carry it to the outer end of the radial slot by turning movement of the repeater with the record, said curved guideway and slots bounded on their opposite side edges by raised convexly curved ribs extending above the top surface of the sheet, said sheet also including a substantially rectangular portion providing a platform extending forwardly from the radial slot at the forward side thereof bounded by raised transversely curved ribs, said rectangular portion extending beyond the periphery of the phonograph and thereby providing a hand grip for the repeater, said rectangular portion also providing a support to hold the reproducing head at the free end of the tone arm of the phonograph while the needle is removed from the record.

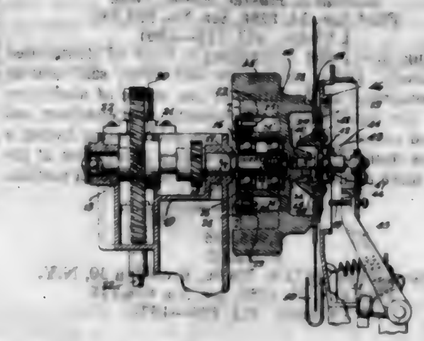
2,948,538
RECTILINEAR GUIDE MECHANISM FOR PHONOGRAPH PICKUP ARMS
Dominick S. Tomaselli, 227 E. 17th St., Huntington Station, N.Y.
Filed Feb. 11, 1959, Ser. No. 792,602
9 Claims. (Cl. 274—23)



1. In a sound reproducing system having a turntable and a pickup arm, and a stylus at the free end of said arm for engaging the sound groove in a disk record mounted on the turntable, guide means for said stylus comprising, a fixed member having a horizontally disposed rectilinear groove in its upper surface, a movable member having an elongated groove therein, said rectilinear groove being oppositely disposed and parallel to said elongated groove, each of said two last-named grooves being arcuate in cross section and substantially parallel to the radii of the disk and turntable, spaced balls fitting in said grooves to rollably support said movable member, each of said balls having a radius smaller than the radii of said oppositely disposed grooves, and means for fixedly attaching said arm to the movable member with said stylus engageable with the disk groove substantially along said disk radius, whereby said stylus will be moved substantially radially of the disk by the rotation of the latter, and whereby said balls and oppositely disposed grooves will yieldingly resist lateral displacement of the stylus from its mean path of travel in said disk groove.

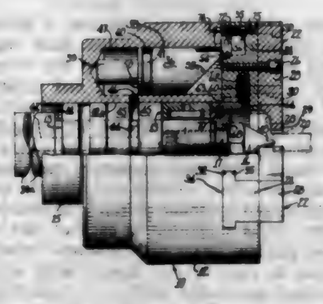
2,948,539
TURNTABLE
Mahlon W. Kenney, Oak Park, Ill., assignor, by mesne assignments, to The Seeburg Corporation, a corporation of Pennsylvania
Filed Aug. 3, 1951, Ser. No. 240,198
4 Claims. (Cl. 274—39)

1. In a phonograph mechanism, in combination, a shaft, a turntable having a recess receiving said shaft, roller-type bearing means in said recess having their inner and outer races secured to the shaft and turntable respectively mounting said turntable on said shaft in coaxial relation thereto, and a drive connection between said shaft and turntable including resilient means, said



turntable being connected to said shaft only by said connection and said roller-type bearing means.

2,948,540
AUTOMATIC WORK GRIPPING CHUCK
Waldo L. Garberding, Rte. 176 and Bradley Road, Libertyville, Ill.
Filed Jan. 18, 1957, Ser. No. 634,936
13 Claims. (Cl. 279—4)

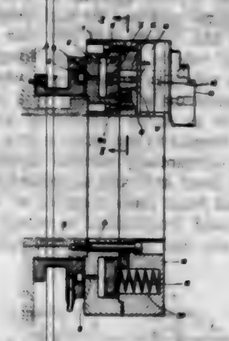


1. In a chuck assembly including a supporting shaft adapted to be mounted fixedly in a machine tool structure, a chuck head rotatably mounted on said shaft and carrying means for rotating the chuck head about the fixedly mounted shaft and a plurality of reciprocable work gripping jaws coactive to grip a work piece, said shaft carrying a dead center device about which said head rotates and adapted for holding a work piece on a fixed center and engageable by said jaws, and means carried by said chuck head for actuating said jaws to grip the work piece as centered by said dead center device.

2,948,541
CHUCK
Kurt Reich, Duesseldorf, Germany, assignor to Paul Forkardt Kommanditgesellschaft, Duesseldorf, Germany
Filed Mar. 26, 1958, Ser. No. 724,211
Claims priority, application Germany Apr. 2, 1957
2 Claims. (Cl. 279—4)

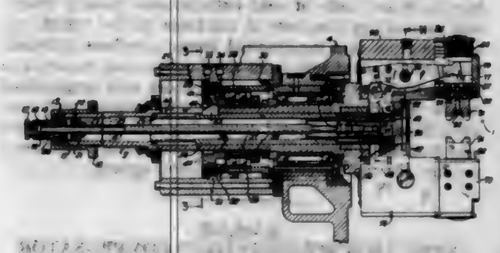
1. In a chuck having a plurality of radially movable jaws, the combination of: fluid operable axially movable piston means, means operatively interconnecting said piston means and said jaws for adjusting the latter in conformity with the movement of said piston means, a plurality of circularly spaced members extending in axial direction of said chuck and being axially guided therein,

said members being firmly connected to said piston means and being provided with helical teeth, and a gear ring in



mesh with the helical teeth of said members and rotatably journalled in said chuck.

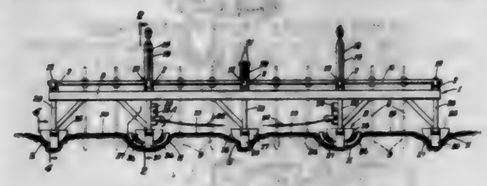
2,948,542
TWO-JAW INDEXING CHUCK
Lorenz Albert Leifer, Madison, Wis., assignor to Giddoit Machine Company, Madison, Wis., a corporation of Wisconsin
Filed May 29, 1958, Ser. No. 738,786
7 Claims. (Cl. 279—5)



1. In an indexing chuck having a pair of opposed workpiece holding jaws disposed on the same axis, a chuck housing, a spindle supporting each jaw and slideable within the housing on said axis, a toothed ratchet wheel secured to each spindle to provide rotation of the latter within the housing for indexing said jaws, a pair of cylinders provided by said housing, a piston disposed for sliding movement within each said cylinder, locking means disposed adjacent each said ratchet wheel and adapted for sliding movement laterally of said axis, said locking means being disposed in the path of movement of said piston, and means to move said piston toward said ratchet wheel and into engagement with the locking means whereby the latter engages a ratchet tooth and indexes said wheel until the locking means is wedged between a lateral face of a tooth and the housing wall.

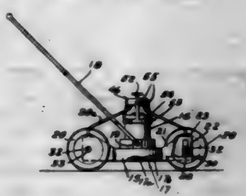
2,948,543
RUNNER ASSEMBLY FOR AGRICULTURAL IMPLEMENTS
Arnold A. Collier, P.O. Box 175, Dixon, Calif.
Filed Aug. 6, 1957, Ser. No. 676,537
4 Claims. (Cl. 280—8)

1. A tillage implement combination for use on a crop field having alternating longitudinal ridges and furrows, said combination comprising a tractor having drive wheels transversely spaced to simultaneously run in certain spaced ones of said furrows, an above-ground frame connected in draft relation to the tractor and adapted to span a plurality of furrows including said certain ones thereof, longitudinal runners corresponding to and tracking simultaneously in such plurality of furrows including



said certain ones, means rigidly securing the runners on the frame, the tractor wheels causing widening of said certain ones of the furrows, and supplemental runners on and increasing the effective width of those runners which track in said certain furrows.

2,948,544
WHEEL-ADJUSTING MECHANISMS FOR LAWN MOWERS
George L. Rowe and Herbert P. Spindler, both of 2551 Wellesley Ave, Los Angeles 64, Calif.
Filed May 8, 1958, Ser. No. 734,038
6 Claims. (Cl. 280—43.13)

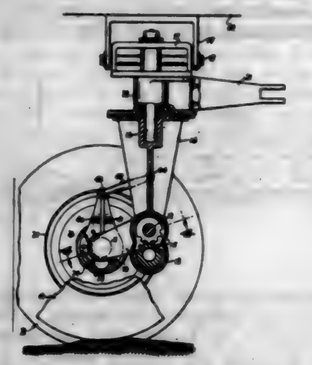


1. A mower, including: a chassis; wheels for the chassis; individual means for so mounting the wheels on the chassis that each wheel is adjustable vertically and rectilinearly on the chassis, said means each comprising an arm fixed to the chassis, a sleeve fixed on the arm, a member slidable in the sleeve, an axle fixed to the member and upon which the wheel is mounted, a worm shaft threaded in the member; mechanisms for individually rotating the worm shafts; manually operable means for simultaneously actuating said mechanisms; and a manually operable spring-loaded device engageable with said manually operable means for releasably locking the latter in various positions to maintain the wheels in any adjusted position.

2,948,545
BRAKE TORQUE REACTORS FOR STEERABLE WHEELS
Adolph Ronning, 4826 E. Weldon Ave., Phoenix, Ariz.
Original application June 20, 1952, Ser. No. 294,605, now Patent No. 2,812,953, dated Nov. 12, 1957. Divided and this application Oct. 18, 1957, Ser. No. 690,940
10 Claims. (Cl. 280—87)

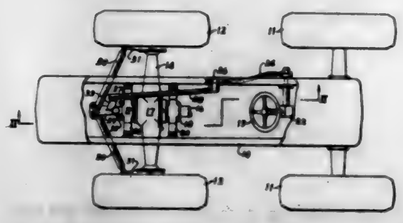
1. In a wheel suspension including a steerable element and wheels connected thereto by differentially connected cranked axles swingable up and down with respect to said steerable element, brake mechanisms for the wheels each comprising cooperating brake parts with one connected to rotate with the wheel and the other connected to the axle, the latter brake part being operatively jour-

naled for limited rotation on the axle as the result of brake torque reaction, and a link element connecting



each of said axle mounted brake parts to the steerable element for transmitting the brake torque reaction.

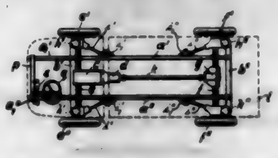
2,948,546
STEERING LINKAGE FOR WHEEL-TYPE TRACTOR
Raymond W. Faberé, Naperville, and Robert C. Wegner, Oswego, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Filed Feb. 13, 1959, Ser. No. 793,113
1 Claim. (Cl. 280—95)



In combination with a tractor having an axle housing, a pivotal support for said housing including trunnion bearings fixedly mounted centrally of the frame, and steerable wheels at the ends of the axle housing, means to steer said wheels including a tie rod connected with each wheel and with a lever, a drag link connected with said lever and operable by a steering wheel, and a pivotal support on one of said trunnion bearings for said lever, said tie rods being arranged to cross each other at the ends where they are pivoted to said lever.

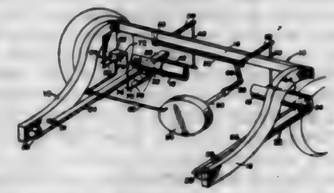
2,948,547
AXLE AND SPRING ARRANGEMENT FOR VEHICLES
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Filed May 12, 1955, Ser. No. 507,816
In Germany Oct. 1, 1948
Public Law 619, Aug. 23, 1954
Patent expires Oct. 1, 1968
1 Claim. (Cl. 280—124)

A motor vehicle comprising, in combination a pair of front wheels, a pair of rear wheels, a rigid front axle carrying said front wheels, a rigid rear axle carrying said rear wheels, a vehicle frame including two longitudinal members extending in a longitudinal direction in a single straight line at both sides of the vertical central longitudinal plane of said vehicle relatively close to said plane, and a front cross member attached to said longitudinal members adjacent to and in front of said front axle and extending transverse to said vehicle beyond said longitudinal members to a point adjacent to said front wheels, and a cross member attached to said longitudinal members adjacent to and behind said rear axle and extending transverse to said vehicle beyond said longitudinal members to a point adjacent to said rear wheels, said two axles being independently mounted with respect to said vehicle frame so as to be capable of an independent movement with respect to the latter, a pair of coil springs extending in a substantially vertical direction resiliently suspending said front axle and supported by the respective ends of said front cross member so as to lie completely outside said longitudinal members and in front of said front axle, and a pair of coil springs extending



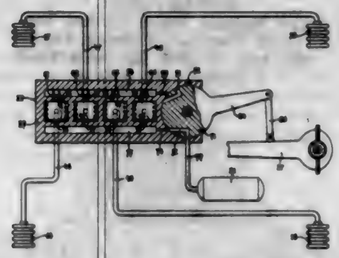
in a substantially vertical direction resiliently suspending said rear axle and supported at the respective ends of said rear cross member so as to lie completely outside said longitudinal members adjacent to said rear wheels and behind said rear axle, and a connecting member adjacent each of said wheels connected at one end thereof directly to said longitudinal frame member, and connecting the outer ends of said axles to said vehicle frame, said connecting members at the front of the vehicle extending from said longitudinal frame members obliquely outwardly toward said front axle, connecting members at the rear of the vehicle extending from said longitudinal frame members obliquely outwardly toward said rear axle, the extension of said connecting members to beyond said front axle and said rear axle respectively forming a support for the lower end of said coil springs.

2,948,548
VEHICLE SUSPENSION LOAD COMPENSATOR
Andrew S. Gill, Jr., South Euclid, Ohio, and Edward H. Lindeman, Detroit, Mich., assignors to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Jan. 24, 1956, Ser. No. 561,096
11 Claims. (Cl. 280—124)



1. A spring suspension system for a vehicle having a frame, a pair of spaced wheels, an axle connecting said wheels, a pair of torsion bars extending longitudinally adjacent respective sides of said frame, one end of each of said bars being affixed to said frame, the other ends of each of said bars being oscillatable about an axis proximate said axle but being spacially affixed with respect thereto, means including a transversely situated cross bar for applying stresses of either torsion bar to the other and further means including power means and valve means responsive to the relative positions of said frame and said axle to adjust the initial stresses in said torsion bars.

2,948,549
FLUID SUSPENSION SYSTEM FOR VEHICLES
Forrest O. E. Schultz, Owosso, Mich., assignor to Midland-Ross Corporation, a corporation of Ohio
Filed Oct. 11, 1957, Ser. No. 689,611
11 Claims. (Cl. 280—124)



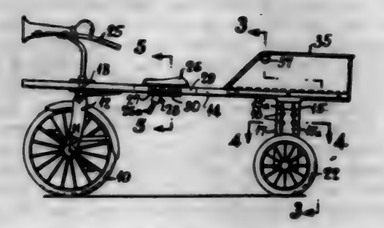
1. In a fluid suspension system including load supporting fluid containers disposed at spaced points between a load supporting structure and wheel supporting structures of a vehicle, means tending to equalize the pressures in said containers in response to relative movement of said structures including a supply chamber and a discharge chamber, passage means between each one of said containers and said chambers, first distributor valve means disposed in said passages and operative to deliver a supply of fluid to said containers in response to a pressure differential between each container and said supply chamber, second distributor valve means disposed in said passages and operative to exhaust fluid from said containers in response to a pressure differential between each container and said discharge chamber, and valve means continuously responsive to changes in relative positions of said structures and movable between a position admitting fluid to said supply chamber while maintaining said exhaust chamber closed and a position exhausting fluid from said discharge chamber while maintaining said supply chamber closed.

2,948,550
FOLDING STEP ATTACHMENT
Loyd P. Brown, 4210 S. Peoria Ave., Tulsa, Okla.
Filed Mar. 6, 1959, Ser. No. 797,689
1 Claim. (Cl. 280—166)



A step attachment for a motor vehicle having a bumper and bumper support arms, comprising an elongated channel support bar, a bracket plate welded to the outer end of said bar and secured to said bumper, a bolt at the inner end of said support bar adapted to secure said support bar to a bumper support arm, a step plate, a pair of parallel spaced apart ears on said step plate at an intermediate point, said ears and said channel support bar having aligned apertures therethrough, a pivot bolt extended through said apertures pivotally mounting said step on said channel support bar, a coil spring surrounding said bolt having one end bearing against one end of said step plate, said bracket plate having an opening therein, the other end of said spring extending through said opening, an integral stop formed on said one end of said step plate for engaging the underside of said channel support bar when said step plate is in horizontal position, and a pad on the opposite end of said step plate.

2,948,551
TRICYCLE WITH TANDEM SEATS
Richard A. Du Vall, 2104 Summit, Little Rock, Ark.
Filed Sept. 5, 1958, Ser. No. 759,166
2 Claims. (Cl. 280—282)

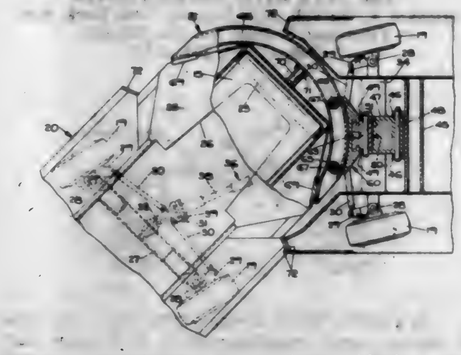


1. In a child's vehicle having a front wheel and a pair of relatively small spaced rear wheels of the same diameter, a coupling means between said front and rear wheels for providing increased ground clearance and resistance to overturning comprising, a vertically disposed fork member having downwardly extending prongs straddling said front wheel, the lower ends of said prongs being supported at the axis of rotation of the front wheel, means including said fork for guiding said front wheel, an upwardly extending column having its lower end supported by said rear wheels, a substantially straight elongated straddle bar having an upper surface adapted to support seated passengers, said bar rotatably connected to said fork member at a point above and adjacent the front wheel and rigidly connected to the upper portion of said column, an operator's seat positioned on said bar adjacent said front wheel guiding means, and a forwardly-facing scoop-shaped tandem seat mounted on said bar above said column and having its forward edge overhanging each side of the bar, whereby substantially the entire weight of the vehicle will be concentrated at the respective ends of the straddle bar and whereby the connected fork member, bar and column provide complete clearance between the front and rear wheels; the foregoing members being constructed and arranged about a center of gravity located rearwardly of the operator's seat and near said rear wheels; the upper surface of said bar and the bottom of said tandem seat lying in a common plane gently inclined downwardly and rearwardly at an angle with the ground level adapted for seating passengers, said angle being less than the angle formed between the ground level and a plane tangent to the upper peripheries of the front and rear wheels, whereby said center of gravity will be lowered while maintaining said complete ground clearance.

2,948,552
HITCH FOR MOBILE CONVEYOR
Sterling C. Moon, Dublin, Ohio, assignor to The Jeffrey Manufacturing Company, a corporation of Ohio
Filed Mar. 20, 1957, Ser. No. 647,369
4 Claims. (Cl. 280—447)

4. In an apparatus having at least two cars in a train with an end of one car disposed adjacent an end of another car, hitch means joining the adjacent ends of the cars one to the other in the train and permitting movement of the cars relatively to each other, said hitch means comprising connecting means connected to one car and including a longitudinally extending pivot means for adjustment of the positions of the cars relatively to each other about the axis of said pivot means, said connecting means in-

cluding a guide, an arcuate track on the other car disposed on the circumference of a circle and formed with a downwardly opening channel cross-section, said guide including spaced rollers engaging the track within the channel cross-section and adapted to ride along the track for guiding the movement of the adjacent ends of the cars



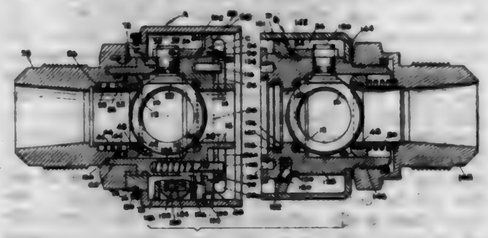
relatively to each other in accordance with the arcuate path defined by the track and constraining the cars to swing laterally relatively to each other, said guide also including an integral top plate overlying the track and supporting the connecting means on the track in planar alignment with the track.

2,948,553

QUICK DISCONNECT VALVED COUPLING

Vincent A. Gill, Montclair, and Harrison J. Britton, East Orange, N.J.; said Gill assignor, by mesne assignments, to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio

Filed July 13, 1956, Ser. No. 605,683
19 Claims. (Cl. 284—4)



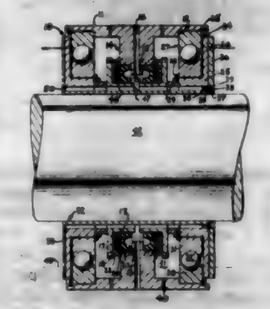
1. A quick disconnect coupling comprising a pair of coupling members, said members each comprising a hollow body and a plug valve mounted therein for rotation about an axis generally perpendicular to the line of flow through the body, a valve actuating ring rotatably mounted on each of said bodies, engaging means intermediate each valve actuating ring and its respective valve whereby rotation of the actuating rings with respect to their associated bodies will cause the valves to be rotated, connecting means provided on one of the bodies, a first ring on the opposite body having means formed for mating connection with said connecting means, means preventing rotation of said first ring when the coupling members are disconnected, means holding the second ring against rotation when the coupling members are disconnected, said means for preventing rotation of the first ring being responsive to the engagement of the rings to allow said first ring to rotate, the rotation of said first ring overcoming the force of the means holding the second ring against rotation, whereby pressing the coupling members together in an axial direction and turning the first ring causes the first ring to rotate and open its associated valve, the rotation of the first ring directly rotating the second ring so that both valves are opened in phase, the mating connecting means securely connecting the coupling members together.

2,948,554

ROTARY SEAL

Jack Maland, Harris County, Tex. (5706 Ridgeway, Houston, Tex.)

Filed July 29, 1957, Ser. No. 674,949
5 Claims. (Cl. 286—9)



1. A rotary seal comprising a housing having a ring centrally thereof projecting radially inwardly therefrom and a rim centrally of said ring projecting radially inwardly therefrom, a pair of cylindrical plungers each with a flange on the end thereof to be installed in coaxially spaced apart relation within, and radially spaced from said housing with said flanges longitudinally outwardly of said ring, a circular spring radially crimped carried on each plunger adjacent the flange thereof, a spacer ring carried by each plunger adjacent to and on the opposite side of the spring thereon from the plunger flange, axially extending dowel holes on opposite sides of said ring, a dowel extending from the flange of each plunger into the dowel hole adjacent thereto to guide the plunger in axial movement, a lip type seal on each side of said rim with lip in rim contact, said seal being confined radially outwardly by said ring, radially inwardly by the adjacent plunger, and axially outwardly by said spacer ring, a seal and bearing assembly at each end of said housing comprising a tubular carrier having a flange longitudinally outwardly thereon, a ball bearing assembly carried on said carrier concentric therewith, and adjacent said carrier flange, and a cylindrical carbon seal coaxially inwardly of said carrier and insertable thereinto, means inwardly of said bearing assembly latching it to said carrier, and means outwardly of said bearing assembly latching it to said housing and thereby positioning said carbon seal to be yieldably borne against by the plunger flange adjacent thereto as urged by the adjacent spring, a sleeve of lesser outer diameter than the inner diameters of said plungers, said carbon seals, and said carriers and insertable therewithin and having a flange on one end thereof to bear inwardly against the outer flange face of the adjacent carrier, means connecting said sleeve flange to the adjacent carrier flange to space said sleeve concentrically with relation to said plungers, carbon seals, and carriers to provide an air space therebetween, an annular flange of substantially the same inner diameter as the inner diameter of the sleeve and adapted for connection to the outer face of the other carrier flange, means for connecting said annular flange to the adjacent carrier flange, means provided by said annular flange and said sleeve to seal against fluid escape from said air space and past said annular flange, passage means from said air space outwardly through said sleeve flange, means to connect said sleeve for rotation with a rotary member upon

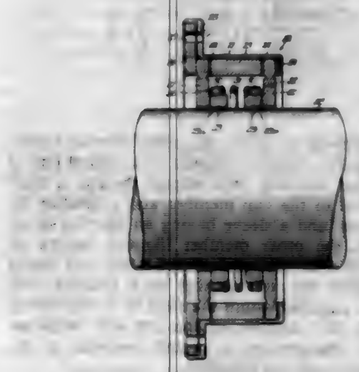
which said sleeve may be installed, and port means provided in said housing and extending inwardly through said rim whereby fluid under pressure may be injected to pass between said lip seals to sealably force them against said ring, said spacer rings, and said plungers to thereby bias said spacer rings against said circular springs and said circular springs against said plunger flanges to urge them into sealing contact with said carbon seals, said pressure fluid passing through the space between inner ends of said plungers into said air space and therefrom out through said sleeve flange as said sleeve, said carriers including said carbon seals, and the inner races of said ball bearing assemblies rotate with said rotary member and said carbon seals maintain rotary contact with said plungers which are held stationary.

2,948,555

CONTROLLED GAP SEAL

Robert D. Wright, Des Peres, Mo., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois

Filed Aug. 8, 1955, Ser. No. 527,826
4 Claims. (Cl. 286—11.13)



1. In combination, a shaft member, a shaft member seal and a shaft member housing said seal being received in said housing about said shaft member, said seal comprising a casing having received therein a sealing ring formed from a material having a thermal coefficient of expansion which is low as compared to that of the material of said shaft member, the inner surface of said sealing ring being in spaced relation to the surface of said shaft member and having a predetermined constant gap therebetween, and a thermal expansion controlling ring received about the outer surface of said sealing ring and being of smaller inside diameter than the outside diameter of said sealing ring to hold the same in a state of compression, the material of said expansion controlling ring having a thermal coefficient of expansion which is greater than that of said sealing ring to control thermal expansion thereof to maintain said gap during operation of said shaft member under elevated temperature conditions.

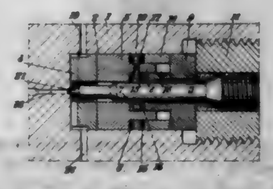
2,948,556

PACKING DEVICES FOR NEEDLE VALVES

Raymond Epain, Paris, Pierre Johannin, Bellevue, and Boris Vodar, Paris, France, assignors to Centre National de la Recherche Scientifique, Paris, France, a society of France

Filed Apr. 29, 1958, Ser. No. 731,701
Claims priority, application France May 2, 1957
3 Claims. (Cl. 286—26)

1. For use in connection with a needle valve, a body forming a cylindrical chamber having one end wall, said body containing a fluid under pressure higher than atmospheric pressure, a rod guided in said chamber coaxially therewith, a packing device for said rod which comprises, in combination, a rigid annular member interposed between said rod and the cylindrical wall of said chamber and having one end face that adjoins said end wall of the chamber at a fixed distance therefrom said annular member fitting slidably on said rod and said cylindrical wall, the other end face of said annular member including three coaxial annular areas, an outer one adjoining said chamber cylindrical wall, an inner one adjoining said rod, and an intermediate one, with two coaxial cylindrical surfaces extending respectively between the inner periphery of said outer area and the outer periphery of said intermediate area and between the inner periphery of said intermediate area and the outer periphery of said inner area, said intermediate area being at a greater distance from said chamber end wall than either of said inner and outer areas, a rigid annular unit interposed between said rod and the cylindrical wall of said chamber and located opposite the other end face of said annular member, the end face of said annular unit turned toward



said annular member including three coaxial annular areas, an outer one adjoining said chamber cylindrical wall, an inner one adjoining said rod, and an intermediate one, with two coaxial cylindrical surfaces extending respectively between the inner periphery of said last mentioned outer area and the outer periphery of said last mentioned intermediate area and between the inner periphery of said last mentioned intermediate area and the outer periphery of said last mentioned inner area, said two last mentioned cylindrical surfaces being dimensioned to cooperate with a sliding fit with said two first mentioned cylindrical surfaces respectively, said last mentioned intermedate area being at a greater distance from said chamber end wall than either of the two other last mentioned areas, two annular plastic packings interposed respectively between said two outer areas and between said two inner areas, and means mounted in said body for exerting a thrust on said annular unit toward said annular member to compress both of said packings, said intermediate areas being so positioned as to be at a distance from each other when both of said packings are compressed, the space between said two intermediate areas being in communication with the atmosphere.

2,948,557

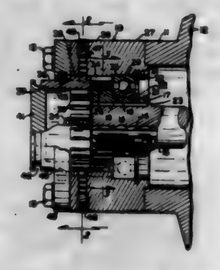
SELECTIVE DRIVE CLUTCH MECHANISM

John R. Howe, 2135 Meade St., and Joseph J. Cook, 1064 Adams St., both of Denver, Colo.

Filed June 25, 1956, Ser. No. 593,745
1 Claim. (Cl. 287—53)

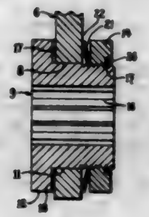
A clutch unit for use on the auxiliary drive assembly of multiple axle drive vehicles to selectively interconnect an auxiliary drive axle and a wheel thereon comprising a hub member secured to the said axle and providing through a portion of its length an external cylindrical surface, splines on said hub member raised above said external cylindrical surface and providing a shoulder at the end of said splines, a housing secured to said wheel and providing through a portion of its length an internal cylindrical surface in position aligned with the first named

cylindrical surface and radially spaced therefrom, splines on said housing raised above said internal cylindrical surface in position aligned with the splines on said hub member and further providing a second shoulder at the end of said splines, a non-directional free turning bearing having inner and outer race elements respectively engaging the external cylindrical surface of said hub member and the internal cylindrical surface of said housing for holding said members in spaced apart free turning relation, said bearing and all of said splines being cooperatively designed such that the total height of said splines above the respective cylindrical surfaces is less than the radial thickness of the bearing separating said surfaces whereby said splines are maintained in out-of-contact relation, said cylindrical surfaces further providing cut annular grooves disposed in axially aligned positions



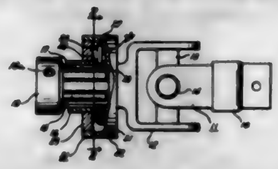
adjacent the respective race elements of said bearing, snap rings in said grooves for engagement with the inner and outer race elements of said bearing for holding said bearing in position and against said shoulders whereby said drive axle, hub member, housing and all of said splines will be maintained in assembled and aligned relation, reciprocal means movable to alternate positions for selectively interconnecting the splines of said hub member and housing when it is desired to interconnect the drive axle and said wheel and for disconnecting said splines when free rotation of the wheel on said bearing and about said drive axle is desired, said housing providing an opening aligned with said drive axle and hub member, and an extension on said reciprocal means extending out of said opening for movement with said reciprocal means whereby actuating movement of said extension is useful to selectively engage or disengage said reciprocal means.

2,948,558
SLACK ADJUSTER
Forrest O. E. Schmitz, Detroit, Mich., assignor to Midland-Ross Corporation, a corporation of Ohio
Filed Aug. 9, 1957, Ser. No. 677,491
3 Claims. (Cl. 287—53)



1. In an operating mechanism for a brake operating shaft, a first member presenting an aperture, a second member supported in said aperture for rotation and axial movement and adapted for connection to said shaft, said second member presenting a radially extending toothed portion facing one side of said first member, said one side of said first member presenting a complementary toothed portion, a lock element adjustable axially on said second member at the other side of said first member, resilient means interposed between said lock element and said first member for biasing said toothed portions into releasable engagement with each other during rotation of one of said members in both directions relative to the other of said members, said lock element maintaining said second member and resilient means attached to said first member for attachment to a brake operating shaft and being adjustable toward said first member to maintain said toothed portions in fixed engagement with each other for movement of said first and second members as a unit.

2,948,559
COUPLINGS
Florian B. Rackar, Hopkinton, Iowa
Filed Aug. 21, 1958, Ser. No. 756,346
6 Claims. (Cl. 287—119)



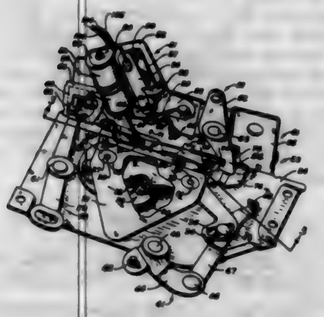
1. In a telescoping coupling, including tube and shaft members, a cup-like member adapted to surround one of the members and rotatable with respect thereto, a latch pivotally engaged to the cup member and projecting inwardly therefrom, and a sleeve having an opening to receive the latch, the other member likewise having an opening to receive the free end of the latch, and spring means for biasing the cup member to a position such that the latch is engaged within the slots in the members, but arranged so that rotation of the cup will withdraw the latch from engagement to permit removal of the shaft from the tube of the coupling.

2,948,560
LATCH MECHANISM
James O. Rep, Grandville, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Filed Feb. 15, 1957, Ser. No. 640,484
17 Claims. (Cl. 292—45)



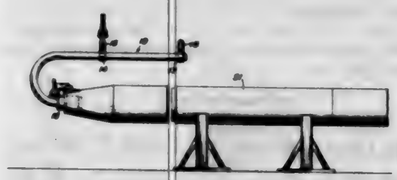
4. In a releasable latch mechanism, a keeper having two opposed sloping approach surfaces, a pair of bolt members for releasably engaging said keeper, pivotable in opposed directions to latching positions and in opposite directions to released positions, and bolt control means movable between two positions, said control means when in one of said positions permitting movement of said bolt members readily to said released positions and when in the other of said positions maintaining said bolt members in said latching positions, said bolt members being resiliently flexible whereby when said control means is in said other position the keeper-engaging portions of said bolt members may ride over said sloping approach surfaces and snap resiliently into their latching positions.

2,948,561
LATCH MECHANISM
Cloyde B. Eatinger, 136 N. 9th St., Fort Dodge, Iowa
Filed May 22, 1957, Ser. No. 660,837
4 Claims. (Cl. 292—280)



1. In an automobile door lock having a supporting structure, a rotary bolt means, a pivoted pawl assembly, a biasing means for urging and holding said pawl assembly in engagement with said bolt means whereby to prevent said bolt means from rotating, releasing means operable to move said pawl assembly against said biasing means and out of engagement with said rotary bolt means, and, safety means operable to render said releasing means ineffective, the combination of double-acting solenoid means secured to said supporting structure and including a stop member retractably movable into engagement with said pawl assembly for releasably holding said pawl assembly in a bolt-locking position, and magnetic means permanently attached to said structure and being operably associated with said stop member for maintaining said stop member in any assumed position.

2,948,562
WEAPON COMPONENT CARRIER
Vernon S. Foote, Jr., Marblehead, Mass., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 5, 1959, Ser. No. 831,921
5 Claims. (Cl. 294—67)



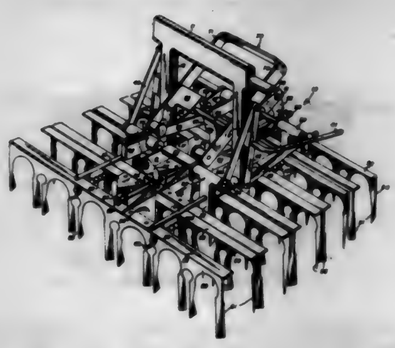
1. A weapon component carrier including a beam, a chuck rotatably mounted on the beam for engagement with a pair of connected missile components, spaced collars on the beam, a lifting eye on each of the collars, one of said collars being positioned above the center of gravity of both of said connected missile components and the other of said collars being positioned above the center of gravity of one of said components, latch means pivotally mounted on the chuck for releasably locking one of the connected missile components to the chuck, and means slidably mounted on the latch means in engagement with said chuck for maintaining the latch means in a releasably locked condition.

2,948,563
MEANS FOR RELEASABLY MOUNTING A STORE ON AN AIRCRAFT
John V. Landry, Manhattan Beach, Calif., assignor to Pastushin Aviation Corporation, Los Angeles, Calif., a corporation
Filed Sept. 28, 1955, Ser. No. 537,090
6 Claims. (Cl. 294—83)



1. In an apparatus for mounting a jettisonable store on an aircraft and for releasing the store with ejective force, the combination of: a forward suspension means and an aft suspension means, both unitary with said store; a forward engagement means and an aft engagement means on said aircraft operable to engage and release said forward and rearward suspension means respectively; tension means operatively interconnecting said two engagement means for simultaneous release actuation, said tension means having relatively movable longitudinal sections for contraction of the tension means to permit the two engagement means to function independently for individual engagement with the corresponding suspension means; a forward fluid-pressure-actuated ejector and an aft fluid-pressure-actuated ejector to exert ejective force against said store at forward and aft positions respectively; means to latch said two engagement means against release operation; means responsive to one of said ejectors to actuate said two engagement means for release of said two suspension means; and means responsive to the other ejector to release said latch, whereby the two engagement means are actuated to release said store only if both of the ejectors operate.

2,948,564
EXPANDING EGG LIFTER
Le Roy F. Carkhuff, Morris, Ill., assignor to Diamond National Corporation, a corporation of Delaware
Filed Sept. 4, 1959, Ser. No. 838,287
15 Claims. (Cl. 294—87)



7. An expanding egg lifter comprising three parallel groups of article engaging means, actuating rod means operatively connected with the article engaging means of each group operable to cause the article engaging means to move between gripping and release positions, a handle having depending apertured supporting legs, guide means

carried by said handle and extending transversely thereof, a pair of brackets parallel to and on opposite sides of said handle, said brackets having holes slidingly receiving said guide means, support means carried by said handle and said brackets for supporting at least one group of article engaging means from each said handle and brackets, respectively, pattern control means secured to said handle, force transmitting means connected to said brackets and pattern control means for extending and contracting said brackets relative to said handle on said guide means, and second force transmitting means on said handle and operatively connected to said actuating rod means for operating said actuating rod means when said brackets are either extended or contracted and for positioning said article engaging means in gripping or release position.

2,948,565
ARMREST FOR AUTOMOBILE WINDOWS
Cecil R. Johnson, 37941 Euclid Ave., Willoughby, Ohio
Filed Dec. 5, 1958, Ser. No. 778,517
1 Claim. (Cl. 296—49.2)



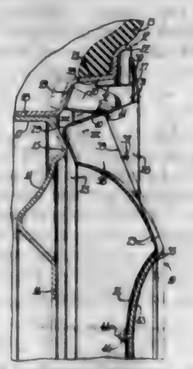
An armrest for use on motor vehicle windows of the type comprising a vertically slidable glass, said armrest including an elongated plate mounted longitudinally on the upper edge of the glass and having aligned, longitudinally extending, outwardly tapered slots in its end portions, bearings fixed on top of the plate on opposite sides of the slots, pins journalled in the bearings and traversing the inner end portions of the slots, generally U-shaped, resilient clips fixed on said pins and operable in the slots for straddling the glass and frictionally securing the plate thereon, said clips including long and short legs to facilitate application to the glass, said clips further being engageable with the inner end walls of the slots for positively preventing swinging movement of said clips beyond operative position, said clips still further being engageable under tension with the side walls of the slots for frictional retention thereby in operative and inoperative positions, and a compressible pad mounted on the plate.

2,948,566
SUN VISORS
John Bruce Massey, 665 High St., Newark, N.J.
Filed Feb. 9, 1959, Ser. No. 791,887
5 Claims. (Cl. 296—97)



1. An extension portion for a sun visor, comprising a resilient frame having two ends, said frame comprising a large inverted U-shaped portion disposed at one of said frame ends, a smaller inverted U-shaped portion disposed at the other one of said ends, said smaller inverted U-shaped portion having an uppermost point and said large inverted U-shaped portion having an uppermost point, said two uppermost points being on the same level, a straight upper longitudinal portion connecting the two uppermost points, two lower longitudinal portions, each connecting one end of said large inverted U-shaped portion with one end of said smaller inverted U-shaped portion, each of said lower longitudinal portions having a portion adjacent said large U-shaped portion parallel to said upper longitudinal portion, a portion adjacent said smaller U-shaped portion parallel to said upper longitudinal portion and a transverse portion interconnecting said parallel portions, the last-mentioned parallel portion being disposed closer than the first-mentioned parallel portion to said upper longitudinal portion; covering material disposed on said frame and extending from one of said lower longitudinal portions to said upper longitudinal portion and to the other of said lower longitudinal portions, and means connecting said covering material to said frame.

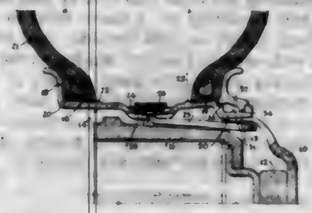
2,948,567
WHEEL COVER
George A. Lyon, Jr., Birmingham, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed June 20, 1955, Ser. No. 516,522
10 Claims. (Cl. 301—37)



2. In a cover for disposition at the outer side of a vehicle wheel, a circular cover member having an inner portion and a radially outer portion with an inwardly indented annular intermediate portion, and a spider-like cover component overlying said inner cover portion and having a series of generally radially extending spoke extensions secured in position across said intermediate cover portion, said overlying cover component comprising a central disk with the spoke extensions emanating from the edge of the disk.

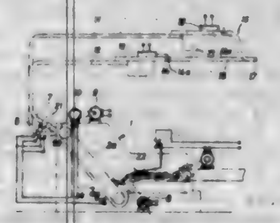
2,948,568
WHEEL DISK-RIM ASSEMBLY FOR TUBELESS TIRES
Paul G. Hykes, Fred T. Roberts, and John N. Bradley, Grosse Pointe, Mich., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 17, 1958, Ser. No. 709,688
4 Claims. (Cl. 301—63)

1. A wheel disk-rim assembly comprising in combination, a wheel disk provided with a peripheral axially extending flange, a rim having a drop center and on each side of the drop center having a tapered full-width bead seat for a tire bead, the bead seats each sloping upward radially in an axial direction away from the drop center, the higher outer side of the bead seat on the outer side being the highest part of the rim on that side, an integral side flange on the inner side of the rim beyond the bead seat on that side, an axially directed extension on the outer side of the rim beyond the bead seat on that side, said extension having a wide gutter with its bottom located radially below the outer edge of the rim at the bead seat and approximately even radially with the bottom of the drop center, said extension also having an outer flange disposed radially below the outer edge of



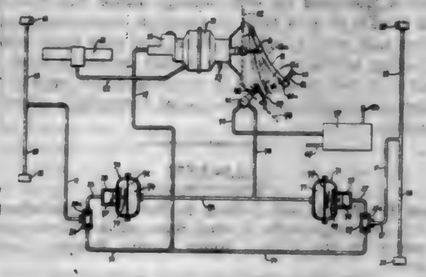
the rim at the bead seat, means securing the disk flange to the rim extension at the bottom of the gutter, and tire-retaining side ring means disposed wholly beyond the bead seat for retaining the tire on the rim-extension side, said side ring means having axially spaced elements supported by the extension on opposite sides of the gutter.

2,948,569
NEW AND IMPROVED METHOD AND MEANS FOR FEEDING CUT TOBACCO TO A PLURALITY OF CIGARETTE MACHINES
Fritz Bodner, Hamburg-Lohbrugge, Germany, assignor to Hauni-Werke Korber & Co. K.G., Hamburg-Bergedorf, Germany
Filed June 8, 1959, Ser. No. 818,642
Claims priority, application Germany June 14, 1958
2 Claims. (Cl. 302—28)



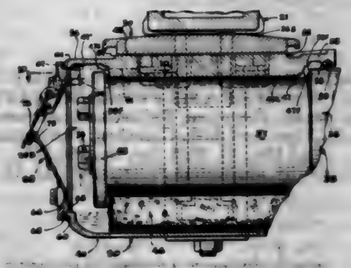
1. In an apparatus for feeding cut tobacco from a source of supply to a plurality of cigarette machines, a carding belt, electric motor means for moving said carding belt in one direction from a loading station to an unloading station, an electric circuit for said motor means, rake means rotatably mounted adjacent to said carding belt to keep the thickness of the layer of tobacco on said carding belt below a maximum value, a first suction conduit extending substantially horizontally from said unloading station, a second suction conduit extending at an angle of substantially thirty degrees upwardly from said unloading station, conduit means connecting said first and second suction conduit means separately with two cigarette machines, a delivery box in each of said connecting conduit means, a valve in each of said connecting conduit means between said delivery box and said cigarette machine, separate electromagnet means for operating said valves individually, an air pressure operated switch forming part of said motor circuit in each of said conduit means in the proximity of said unloading station, electrical circuit means interconnecting said motor circuit with said electromagnet means, air pressure switches, and cigarette machines, and means in said electrical circuit means for operating said electromagnet means and electric motor means in timed relation to intermittently and alternatingly furnish said cigarette machines with the cut tobacco.

2,948,570
EMERGENCY BRAKE SYSTEM INCLUDING LOW BRAKE PEDAL
John W. Pease, Hartsdale, N.Y., assignor to Midland-Ross Corporation, a corporation of Ohio
Filed Nov. 25, 1957, Ser. No. 698,570
3 Claims. (Cl. 303—63)



1. In a vehicle having a power hydraulic service brake system including a primary power booster means actuated by a foot pedal to combine manual and booster force in supplying hydraulic fluid under pressure through service brake lines to fluid pressure responsive brake actuators, an improved power emergency brake system comprising double acting check valve means in said service brake lines, secondary hydraulic booster means connected to said check valve means and being responsive to fluid under pressure to pass hydraulic fluid under pressure through said check valve means to said actuators, a source of fluid under pressure normally isolated from said brake system, valve means movable to admit fluid under pressure from said source to said secondary booster means to effect emergency braking, said valve means being arranged for movement by said foot pedal on overtravel thereof resulting from loss of hydraulic fluid in said service brake system, and preloaded spring means connected to said pedal and compressible under abnormal foot pedal pressure upon failure of said primary booster means to move said valve means relative to said pedal.

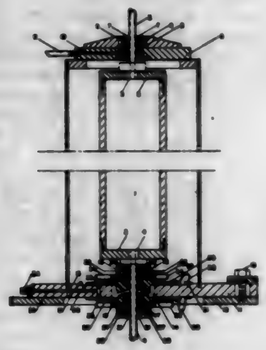
2,948,571
JOURNAL BEARINGS
Isaac Eugene Cox, Kirkwood, Mo., assignor to American Brake Shoe Company, Wilmington, Del., a corporation of Delaware
Filed Aug. 8, 1958, Ser. No. 754,211
17 Claims. (Cl. 308—79)



1. In a bearing for a journal, a body member in the form of a one-piece sleeve affording an internal bore in which said journal can be disposed to rotate therein, said body member having a rounded inner wall providing the main bearing surface for said journal, said inner wall being discontinuous at one area to expose a portion of said journal free of said bearing surface, said body member having an exterior outer wall and being provided with

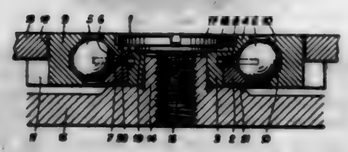
an enlarged reservoir chamber for lubricant within said bore to be relayed to the portion of the journal exposed by the discontinuous area of said bearing surface, said body member having an enlarged dust pocket opening in the exterior wall to communicate to the ambient atmosphere and spaced from said bore and said body member having formed in a solid portion thereof between said walls a restricted air vent passage means extended from said pocket to said bore to establish communication between said pocket and said bore, and said body member including additional passage means extended from said pocket to said outer wall to establish communication between said pocket and the ambient atmosphere about said bearing.

2,948,572
CENTRIFUGES
Jesse W. Beams and Leland B. Snoddy, Charlottesville, Va., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Mar. 28, 1944, Ser. No. 528,470
17 Claims. (Cl. 308—143)



1. In combination with a shaft supported for rotation about its longitudinal axis, means providing stationary axially spaced flat supporting surfaces normal to said shaft and freely surrounding the same, and independent bearing assemblies on said shaft spaced axially thereof a distance different from the spacing of the nodes of vibration waves at critical speeds of rotation of the shaft, a flange secured to each of said bearing assemblies each flange being disposed in sliding contact with one of said flat supporting surfaces for transverse movement relative to each other and said surfaces.

2,948,573
BEARING MEANS FOR THE ROTATABLE WINDING WEIGHT OF A SELFWINDING WATCH
Heinrich Stamm, Grenchen, Switzerland, assignor to Eta A.G., Ebauchesfabrik, Grenchen, Switzerland
Filed Dec. 20, 1955, Ser. No. 554,353
Claims priority, application Switzerland Dec. 22, 1954
12 Claims. (Cl. 308—197)



1. Bearing means for the rotatable winding weight of a selfwinding watch, consisting of a selfwinding mechanism frame having a shoulder, abutting means carried by said frame and provided with a plane face perpendicular to the axis of rotation of the weight, and a ball bearing comprising an outer annular part connected to said weight and formed on its inner face with two opposite conical faces constituting the outer ball-race of said bearing, and an inner part consisting of: a sleeve fixed to said frame so as to bear axially on said shoulder, and formed with a yielding wide-mouthed portion bearing on the plane face of said abutting means, the outer surface of said wide-mouthed portion comprising a conical face; and a ring pressed on to said sleeve and having a conical outer face opposite that of said wide-mouthed portion of the sleeve so as to form the inner ball-race therewith.

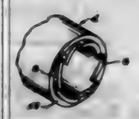
2,948,574
TISSUE DISPENSER FOR AUTOMOBILES
Forrest A. Brown, 314 N. Court St., Circleville, Ohio
Filed Feb. 8, 1956, Ser. No. 564,152
9 Claims. (Cl. 312—39)



1. A tissue dispenser for a motor vehicle having a dashboard comprising, in combination, a casing means including a front wall portion, side wall portions, and an opening in a rear portion of the casing means; mounting means for pivotally securing said casing means to a portion of said vehicle underneath the said dashboard thereof; a member disposed transversely intermediate said side wall portions, said member serving to extend into the open center of a roll of tissue for rotatably mounting said roll in said casing means; and mounting means for movably supporting said member relative to said casing means, said mounting means including an upwardly extending guide in supporting engagement with said member, said member being arrested against downward movement in said guide by the radial portion of said roll of tissue lying intermediate said member and said casing means, the line of engagement between said member and said guide being horizontally spaced from the center of gravity of said casing means whereby the periphery of said roll is constantly urged into frictional engagement with an inner portion of said casing means by the tendency of said member to move downwardly in said guide and by the tendency for the center of gravity of said casing means to move from a displaced location to a location vertically below the pivotal connection of said casing means to said dashboard.

2,948,575
DISPENSING CONTAINER FOR SHEET WRAPPING MATERIAL
Robert I. Kallman, Geneva, and Thomas M. Steinbach, Park Ridge, Ill., and Robert F. Stoming, Hammond, Ind., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Apr. 19, 1956, Ser. No. 579,267
6 Claims. (Cl. 312—39)

1. In combination, a wound supply package of sheet wrapping material, a hollow, cylindrical core for supporting said package having a longitudinally extending, ratcheted end with axially offset teeth, a container having side and end walls that closely accommodate said supply package, said container being adapted to receive said supply package and support it therein upon and against said walls, said container having an outlet through which sheet material from the supply package is dispensed, and a pawl tab positioned in said container transverse to the axis of said core to extend into and abut against the ratcheted end of said core between said axially offset teeth thereon.



2,948,576
MULTI-PURPOSE CAR TOP LUGGAGE CARRIER
Elmer A. Ball, 13920 Par Place NE., Seattle, Wash.
Filed Dec. 18, 1957, Ser. No. 703,654
6 Claims. (Cl. 312—240)



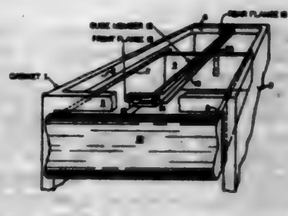
1. In a car top luggage container, two folding tables having the legs folded and placed so that the undersides are in facing relation and serving as the top and the bottom walls for the container and two benches laid on edge with one facing the other and serving as the side walls for the container, the side edges of the benches fitting in continuous troughs provided by skirts which circumscribe the tables, said troughs being characterized in that the inner wall thereof has a height exceeding that of the outer wall so that rain water entering the trough will spill over said outer wall before reaching the level of the inner wall.

2,948,577
WARDROBE CONSTRUCTION
Francis W. Hansen, Kenosha, Wis., assignor to Simmons Company, New York, N.Y., a corporation of Delaware
Filed June 4, 1958, Ser. No. 739,816
2 Claims. (Cl. 312—264)



1. A knock-down wardrobe cabinet or the like comprising a skeletal metal frame work including front and rear rectangular frames of angle iron, the flanges of said front frame being directed outwardly and rearwardly and the flanges of said rear frame being directed inwardly and forwardly, said respectively rearwardly and forwardly directed flanges of the two frames being aligned in common planes, angle iron braces extending between corresponding corners of said frames to maintain said framework in self-standing disposition with said frames in parallel spaced relation, said braces being removably secured to said frames with their flanges flat against the inside corners of said frames and having their portions between said frames offset into the common planes of the opposed flanges of said two frames, side and back panels enclosing said framework, means securing said panels to the outside of said framework including a front retaining strip having an edge extending rearwardly from the outwardly directed flange of said front frame and spaced from the other flange thereof, said side panels engaging the sides of said frames and braces and having forward edge portions disposed between said retaining strip edges and said other flanges, said rear panel engaging the inwardly directed flanges of said back frame, and clamping strips along the side back corners of said framework, said clamping strips being disposed on the outsides of said back corners and having sidewardly extending arms overlapping adjacent edge portions of said side panels and back panel, said clamping strips being secured to said framework by screws passing through the uprights of said back frame obliquely to both flanges thereof thereby to simultaneously secure said adjacent edges of the back and side panels to said framework.

2,948,578
MEANS FOR SUSPENDING AND GUIDING CABINET DRAWERS
Louis E. Himelreich, Louisville, Ky., assignor to H. J. Scheirich Company, Louisville, Ky., a corporation of Kentucky
Filed Oct. 26, 1956, Ser. No. 618,652
3 Claims. (Cl. 312—342)



3. A center drawer guide for centrally supporting and guiding the rear end of a horizontally movable drawer in the drawer space of a cabinet, comprising: a rigid horizontally elongate member of C-shaped cross section providing, in one of its vertical side faces, a horizontally elongate slot exposing its horizontally elongate interior, the vertical dimension of which between its uppermost and lowermost parts, is relatively greater than the vertical width dimension of said slot, said member being adapted for placement within and rigid securement to the interior of said cabinet in a location wherein it is in substantial vertical alignment with the longitudinal mid-portion of said drawer space and being operative, when secured, to provide a C-shaped drawer guide extending longitudinally along said drawer space in a horizontal direction paralleling the path of drawer movement, a lower rear half of the interior of said C-shaped guide being shaped to provide a horizontally extending lower track having, in vertical cross section, oppositely-disposed, downwardly-converging track surfaces and an upper front half of the interior of said C-shaped guide being shaped to provide, in vertical cross-section, oppositely-disposed, upwardly-converging track surfaces, another rigid member adapted for rigid securement to the rear end of said drawer and operative, when secured, to provide a bracket projecting vertically to the slotted face of said C-shaped guide and

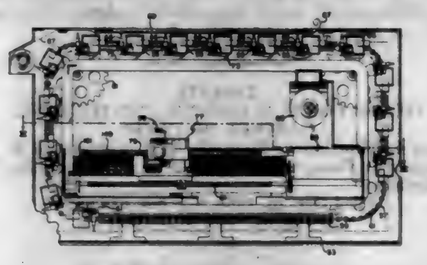
spaced laterally therefrom sufficiently to remain out of contact therewith during the drawer-carried movement of the bracket along the C-shaped guide; a stub shaft secured to the projecting end of said bracket to project horizontally through said slot into said C-shaped guide, said shaft being spaced vertically from the slot forming portions of said C-shaped guide sufficiently to remain out of contact therewith during the drawer-carried movement of the bracket therealong; and a roller located in the interior of said C-shaped guide and rotationally supported by said shaft for rolling engagement with the rear half of said lower track or the front half of said upper track depending upon the direction of movement of said drawer, the periphery of said roller being shaped to provide in radial cross section, oppositely-disposed, outwardly-converging track-engaging surfaces.

2,948,579

HIGH SPEED PLOTTING SYSTEM

Bernard J. Baecher, 1300 Hillside Place, Sea Cliff, N.Y.

Filed May 14, 1954, Ser. No. 430,063
15 Claims. (Cl. 346—8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



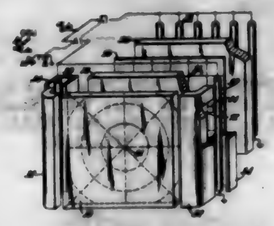
1. A point-by-point plotter comprising a support, a transparent plate carried by said support, a plurality of carriers, means mounting said carriers for movement on said support for movement in tandem succession, and in successive passes and always in the same direction along one face of, and in proximity to, said plate, an individual printing unit mounted on each carrier for movement therewith and also for separate movement thereon in a direction crosswise of its direction of travel with its said carrier, means for causing separate movement of each of said units on its carrier, during its travel with said carrier, into a position relative to the face area of said plate responsive and corresponding to the value of one selected variable, means responsive to and controlled by another variable for momentarily activating each unit to print an individual distinctive symbol against said plate as a platen when that unit in its movement with its said carrier reaches a position along the face area of said plate corresponding to the value at that time of said another variable, whereby individual distinctive symbols may be successively printed at one face of said plate to be visible through that plate representing successive changes in said variables.

2,948,580

DUAL COURSE RECORDER

Milton Eisenstark, Bronx, N.Y., assignor to Curtiss-Wright Corporation, a corporation of Delaware

Filed Aug. 27, 1959, Ser. No. 836,387
6 Claims. (Cl. 346—8)



1. In a plotting system for recording a plot alternatively to normal and expanded predetermined scales: mutually cooperating writing means and recording surface means, the latter including a light-transmissive member, a semi-transparent and a transparent plate-like member arranged one adjacent to the next in the order named proceeding to said writing means, said transparent and light transmissive members bearing indicia in accordance with one and the other of said two scales respectively, said transparent member serving as common recording surface for plotting according to both said scales; lighting means adapted upon energization to transmit light through said members in the order named; means adapted upon energization to edge-light said transparent member; drive means for imparting relative motion as between said two mutually cooperating means to produce a plotted trace on said transparent member; and switching means operable to switch said drive means and said two light means to alternative conditions, said conditions being operation of said drive means in accordance with the scale of said transparent member and simultaneous energization of said edge-light means on one hand, and operation of said drive means in accordance with the other scale and simultaneous energization of the other light means on the other hand, whereby a viewer may observe the indicia corresponding to the two scale plots separately.

CHEMICAL

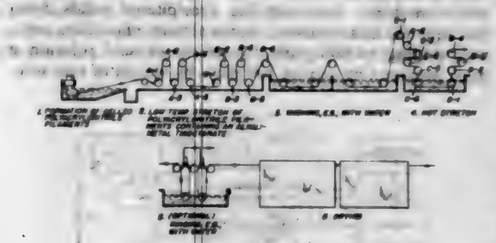
2,948,581

METHOD OF PRODUCING A SYNTHETIC FIBER

Percival W. Cummings, Jr., Cos Cob, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

Filed Dec. 20, 1955, Ser. No. 554,155
10 Claims. (Cl. 18—54)

1. The method of producing a polyacrylonitrile filamentary material which includes the steps of stretching an unwashed, wet-spun gelled, polyacrylonitrile filamentary material, directly after removal from the coagulating bath in which it was formed, at a temperature of from about −2° C. to about 40° C. to between one and one-half and four times its original length, said gelled, polyacrylonitrile filamentary material containing water, and also an alkali-metal thiocyanate in an amount corresponding to, on net-dry basis, from one-half to twice the weight of the net-dry acrylonitrile polymer that is present in the said filamentary material; treating the thusly stretched filamentary material for the removal of thiocyanate therefrom; stretching the treated filamentary material a second time to between one and one-half and ten times its once-stretched length, the second stretch being correlated with the first stretch so that the total stretch is to from three to fifteen times the length of the said filamentary material immediately before the first stretch, said second stretch being effected while the said filamentary material is in contact with moisture and at a temperature within the range of about 70° C. to about



110° C.; and drying the twice-stretched gelled filamentary material.

2,948,582

PROCESSING OF VISCOSE RAYON CAKES CONTAINING POLYACRYLAMIDE RESIN

Harold A. Haley, Glenolden, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Filed May 20, 1957, Ser. No. 660,127
8 Claims. (Cl. 18—54)

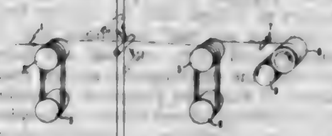
1. In a process wherein viscose containing polyacrylamide is box-spun, the yarn is cake-processed to remove impurities therefrom, and the processed yarn is treated with formaldehyde and thermally cured to form a resinous condensate of the polyacrylamide and formaldehyde, the improvement comprising adding a small amount of formaldehyde to the viscose along with the polyacrylamide prior to spinning, the amount of formaldehyde being sufficient to monomethylolate between about 2 and 11% of the amide groups in the resin, whereby the swelling of the yarn during cake-processing is reduced.

2,948,583

PROCESS FOR PRODUCING SHAPED ORIENTED POLYESTER ARTICLES HAVING A METALLIC LUSTER

Dustin S. Adams, Wilmington, Del., Albert Ernst, Buffalo, N.Y., and Robert S. Prengle, Kingston, Ohio, assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed Mar. 4, 1958, Ser. No. 719,124
19 Claims. (Cl. 18—54)



10. The process of producing a textile yarn which comprises spinning a filament of a molten, highly polymeric ester of a dicarboxylic acid and a dihydric alcohol, said ester being capable of being formed into filaments which when cold drawn show by characteristic X-ray pattern molecular orientation along the fiber axis under conditions whereby the filament has an as-spun birefringence of not more than 0.01, aging the filament for a period of at least one hour, and drawing the filament at its natural draw ratio to more than 5.0 times its original length at a drawing speed of at least 0.75 yard per minute and less than 50 yards per minute at a temperature of less than 80° C. whereby a metallic luster is imparted to said yarn and said yarn is highly oriented and uniformly drawn.

2,948,584

ACRYLONITRILE FIBERS AND PROCESS FOR PRODUCING SAME

Robert D. Euler and Robert L. Tichenor, Waynesboro, Va., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Filed May 20, 1958, Ser. No. 736,495
5 Claims. (Cl. 18—54)

1. The process for preparing synthetic filaments having a crenulated cross-sectional shape and a monolithic internal structure which comprises extruding a solution containing a polymer comprised of at least 85% acrylonitrile in dimethylformamide at a temperature from about 50° C. to about 80° C. through a spinneret into a spinning cell heated to a temperature from about 150° C. to about 180° C., simultaneously introducing a flow of a gaseous medium heated to a temperature from about 180° C. to about 200° C. containing from about 27% to about 43% by weight of dimethylformamide into said spinning cell and thereafter removing the filaments from said spinning cell at a rate from about 200 to 250 yards per minute.

2,948,585

PROCESS FOR APPLYING PEST CONTROL SUBSTANCES TO SEEDS

Maurice Fitzgibbon, 9 Haverbreaks Place, Lancaster, Lancashire, England

No Drawing. Filed Sept. 6, 1956, Ser. No. 608,181
Claims priority, application Great Britain Sept. 6, 1955
5 Claims. (Cl. 21—57)

1. Process for applying to seeds a pest control substance volatile in steam comprising forming a mixture of the substance in vapor form with water vapor, and condensing both the substance vapor and the water vapor on the seeds.

2,948,586

FUSED SALT PROCESS FOR RECOVERY OF VALUES FROM USED NUCLEAR REACTOR FUELS

Raymond H. Moore, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed July 24, 1958, Ser. No. 750,835
15 Claims. (Cl. 23—14.5)

1. A process of recovering plutonium values from a neutron-bombarded uranium mass also containing plutonium and fission products comprising dissolving said mass in fused alkali metal-aluminum double chloride in which the molal ratio of alkali metal chloride and aluminum chloride is about 1:1; adding aluminum metal to the mixture thus obtained; maintaining the mixture at a temperature of between 260 and 800° C. whereby uranium metal is obtained and a metal phase containing said uranium metal and a salt phase containing plutonium chloride and fission product chlorides form; and separating said metal phase from said salt phase.

2,948,587

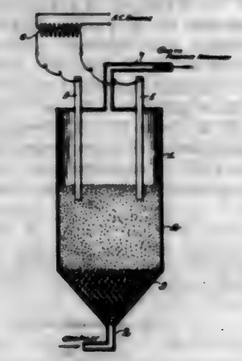
PROCESS FOR THE PREPARATION OF TITANIUM TETRACHLORIDE

Herbert S. Johnson and Arthur H. Andersen, Shawinigan Falls, Quebec, Canada, assignors to Shawinigan Chemicals Limited, Montreal, Quebec, Canada, a corporation of Canada

Filed Feb. 28, 1956, Ser. No. 568,325
1 Claim. (Cl. 23—87)

A process for preparing titanium tetrachloride which comprises passing a stream of chlorine gas upwardly through a bed of finely divided electrically conductive solid carbon particles of calcined fluid petroleum coke having sufficient electrical conductivity to prevent the formation of open arcs when an electric current is passed through the same, maintaining the solid particles in a

fluidized state by the passage of said stream of chlorine gas upwardly therethrough, passing an electric current through the fluidized bed without the formation of open arcs and with sufficient power to maintain it at an elevated temperature of at least about red heat for the formation of titanium tetrachloride when titania-bearing material is added to the thus fluidized bed, adding titania-bearing material to the fluidized bed so formed in a particle size of about the same size as the coke particles with the latter at red heat and recovering titanium tetrachloride from the gases coming off the fluidized bed.



2,948,588
METHOD OF MANUFACTURING ALKALI METAL TRIPOLYPHOSPHATES

Arthur N. Baumann, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Sept. 13, 1955, Ser. No. 534,177
5 Claims. (Cl. 23—106)

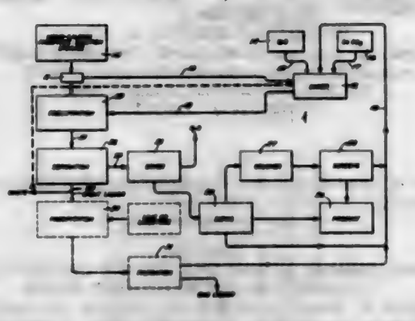
1. The method of preparing a homogeneous crystalline, substantially non-hygroscopic, mixed alkali metal tripolyphosphate containing potassium, sodium and phosphorus in the following mole ratio: 3 to 3.2K:2 to 1.8Na:3P, which consists essentially of reacting an aqueous solution of an alkali metal orthophosphate selected from the group consisting of the sodium and potassium orthophosphates with a compound of an alkali metal different from the alkali metal of said orthophosphate and selected from the group consisting of the sodium carbonate, sodium hydroxide, potassium carbonate and potassium hydroxide, said orthophosphate and said compound being utilized in proportions requisite to produce in the final product said mole ratio, concentrating to a solids content of at least about 70% and heating the resulting concentrated reaction mixture, without substantial fusion, at a temperature in the range between about 500° F. to about 1250° F. to produce said homogeneous crystalline mixed alkali metal tripolyphosphate.

2,948,589
GRANULAR PHOSPHATE MATERIAL

James G. Gilchrist, Bartow, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

Filed July 1, 1955, Ser. No. 519,588
6 Claims. (Cl. 23—109)

1. A method of producing granular precipitated dicalcium phosphate which comprises mixing phosphate rock with sulfuric acid in proportions of 60 parts by weight of phosphate rock of 68% bone phosphate of lime content with 36 parts by weight of 98% sulfuric acid added as approximately 53° Bé. aqueous solution, aging the mixture, leaching the aged mixture with aqueous medium to produce an aqueous monocalcium phosphate solution containing fluoride impurities and approximately 30% dissolved solids, defluorinating the leached solution with limestone, removing the precipitated solids from the aqueous defluorinated monocalcium phosphate solution, adding to 900 parts by weight of said solution a paste prepared by mixing 100 parts by weight of said solution with approximately 27.6 parts by weight of lime, approximately 40 parts by weight of undersized product, and approximately 48.8 parts by weight of limestone, reacting the said aqueous defluorinated monocalcium phosphate solution and said paste for a period of approximately one hour at 90° C., filtering the solids from spent solution and drying the product at a temperature of approximately 120° C. for approximately one hour.



2,948,590
PROCESS FOR THE MANUFACTURE OF DICALCIUM PHOSPHATE

Donald J. Smalter and Raymond E. Tuttle, Lakeland, Fla., assignors to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Filed Jan. 28, 1957, Ser. No. 636,468
4 Claims. (Cl. 23—109)

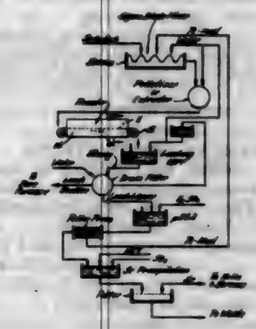
1. The process for the production of a granular, animal feed grade, dicalcium phosphate product which comprises forming a slurry having a solids content between about 50% and about 70% by weight of comminuted calcium carbonate and an aqueous medium, thoroughly mixing and reacting said slurry with defluorinated wet-process phosphoric acid preheated to a temperature of at least about 150° F. and having a concentration of between about 52% and 56% P_2O_5, and agitating the reaction mixture so formed until the reaction between said calcium carbonate and said phosphoric acid is substantially complete, said slurry and said acid being reacted in at least about the stoichiometric amount necessary for the formation of dicalcium phosphate to produce a substantially phosphoric acid and water-soluble calcium phosphate-free granular dicalcium phosphate product, the particle size of said product being substantially entirely minus eight mesh, at least about 50% of said product having a particle size in the range of minus twenty to plus one hundred mesh.

2,948,591
SELENIUM RECOVERY PROCESS

Erwin C. Handwerk, Lehighton, Pa., and Walter T. Monson, Newark, N.J., assignors to American Metal Climax, Inc., New York, N.Y., a corporation of New York

Filed Mar. 22, 1957, Ser. No. 647,819
5 Claims. (Cl. 23—139)

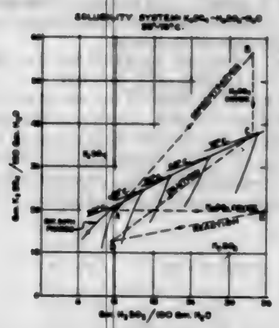
1. In the process for treating a selenium bearing material such as copper anode slimes, muds, sludges and dusts wherein the material in finely divided form is controllably heated in a selenium-oxidizing atmosphere to convert the selenium content thereto to an oxidized state without appreciably fusing the charge whereby the selective separation of selenium from said material is facilitated, the improvement which comprises intimately mixing the selenium-bearing material with a binder and sufficient water to provide a consistency of the mixture suitable for agglomeration, compacting the resulting mixture to provide porous agglomerates having a maximum thickness of from ⅛ to ¾ of an inch, subjecting a charge of said agglomerates consisting of a charge bed thickness in excess of 1 but less than 12 inches to said controlled heating in the presence of said oxidizing atmosphere to oxidize the selenium content of the charge at a temperature above 700° F. but below the fusion temperature of the agglomerates and separating the oxidized selenium from said charge.



2,948,592
PROCESS FOR PRODUCING PURE BORIC ACID AND POTASSIUM SULFATE

Frank H. May, Whittier, Calif., assignor to American Potash & Chemical Corporation, a corporation of Delaware

Filed Feb. 16, 1959, Ser. No. 793,630
6 Claims. (Cl. 23—149)

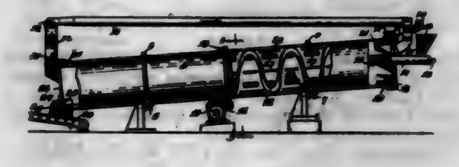


1. In a process for the preparation of boric acid wherein a potassium borate and sulfuric acid are added to a recycled aqueous solution containing dissolved boric acid and potassium sulfate and allowed to react to produce boric acid and potassium sulfate in quantities sufficient to precipitate boric acid at a temperature of about 35° C. while substantially all of said potassium sulfate remains in solution and wherein said solution is heated to a temperature sufficiently in excess of said 35° C. to dissolve all of said potassium sulfate and said boric acid and said solution is thereafter adjusted to about said 35° C. temperature to precipitate a crop of boric acid crystals about equivalent to the quantity of boric acid introduced by said reaction without precipitating potassium sulfate and said boric acid is separated therefrom, the improvements comprising: heating the mother liquor remaining after the separation therefrom of said boric acid crystals to a temperature in excess of about 75° C. to evaporate at least about one-half of said water therefrom to exceed the solubility of said potassium sulfate with respect to said liquor at a temperature of about 75° C.; thereafter cooling said mother liquor to about said 75° C. temperature to precipitate a crop of potassium sulfate crystals about equivalent to the quantity of potassium sulfate introduced by said reaction; separating said potassium sulfate; thereafter adding water to said mother liquor in an amount sufficient to replace that lost during said process, wherein to form an aqueous solution of a volume substantially equal to the said recycled aqueous solution initially present; and recycling the aqueous solution so formed in said process.

2,948,593
DIGESTER FOR CONVERTING INORGANIC MATERIAL INTO ASSIMILABLE PLANT FOOD

John David Larson, P.O. Box 162, Hinsdale, Ill.

Filed Apr. 15, 1957, Ser. No. 653,023
1 Claim. (Cl. 23—259.1)



A digester for converting inorganic material into assimilable plant food, comprising the combination of an elongated drum, a plurality of sets of supporting rollers upon which said drum is rotatably supported, means for rotating said drum, a spiral material propelling flange projecting inwardly from the walls of said drum, longitudinally extending agitating devices disposed between the spirals of said propelling flange, means for closing the ends of said drum so as to provide a substantially sealed fermentation chamber in which bacteriological activity in the material being treated is promoted, means for feeding material to be processed into the intake end of said drum, means for delivering the processed material from the other end of said drum, means for creating and maintaining a circulation of a gaseous fluid through said drum from end to end thereof in the direction of the travel of the material being processed therein, said circulating means including a conduit communicating with the delivery end and a conduit communicating with the intake end of said drum, a blower communicating with said first mentioned conduit, an intermediate conduit leading from the blower and said first mentioned conduit and thereby connecting the intermediate conduit with the feeding end of said drum, temperature control means in said conduit communicating with the intake end of said drum to automatically control the temperature in said drum, dehumidifying means in the conduit communicating with the delivery end of said drum for automatically removing excess moisture from the gaseous fluid in said last mentioned conduit, and moisture supply means in said conduit communicating with the intake end of said drum for supplying any required moisture to said circulating gaseous fluid to maintain a predetermined humidity in said drum.

2,948,594
MOLDED PULP COATED CHARCOAL AND CHARCOAL BRIQUETTES
William V. Doyle, Chesterton, Ind., assignor to Diamond National Corporation, a corporation of Delaware
Filed Aug. 6, 1956, Ser. No. 602,389
25 Claims. (Cl. 44—6)



1. A charcoal fuel comprising a lump of charcoal, an adherent coating of felted fibrous pulp molded around and completely covering the lump, and a projecting fin of molded fibrous pulp formed integrally with and extending circumferentially around the coating on the exterior of the lump.

2,948,595
ENGINE STARTING FLUID PROPELLANT
Charles P. Orr, Camden, N.J., assignor to Spray Products Corporation, Camden, N.J.
Filed July 7, 1959, Ser. No. 825,462
11 Claims. (Cl. 44—52)

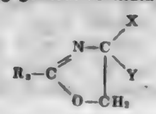
1. A priming fluid for an internal combustion engine consisting essentially of a lower alkyl ether confined in a container under pressure with a relatively smaller quantity of a propellant gas comprising nitrous oxide, the quantity of the said propellant gas being sufficient to atomize said combustible liquid under a positive atomizing pressure at temperatures substantially below 0° F.

2,948,596
NON-STALLING GASOLINE FUEL COMPOSITIONS
Henry A. Ambrose, Penn Township, Allegheny County, and Gardner E. Gaston, Tarentum, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Filed Dec. 20, 1955, Ser. No. 554,142
4 Claims. (Cl. 44—58)

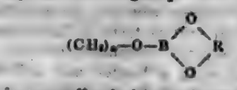
1. A gasoline fuel composition comprising a major amount of a hydrocarbon mixture that boils in the gasoline range, that has a 50 percent ASTM distillation point not greater than about 220° F. and that normally tends to promote stalling of internal combustion engines, and containing a combination of (*a*) 0.001 to about 0.1 percent by weight of the composition of a member selected from the group consisting of alkali metal, alkaline earth metal, ammonium and ethylol ammonium salts of dialkyl sulfosuccinic acids, the alkyl groups of which each contain 7 to 9 carbon atoms, at least 6 of which are in a straight chain, no group attached to the alpha carbon atom of said alkyl groups containing more than 7 carbon atoms, and (*b*) about 0.25 to about 0.75 percent by volume of the composition of a light lubricating oil having a viscosity at 100° F. of about 50 to about 500 S.U.S., the amount of said combination being sufficient to reduce the engine stalling characteristics of the gasoline composition.

2,948,597
NOVEL BORON COMPOUNDS AND GASOLINE CONTAINING THE SAME
Sarah H. Belden, Cleveland, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Dec. 30, 1958, Ser. No. 783,670
4 Claims. (Cl. 44—63)

1. A gasoline motor fuel containing the compound having the following general formula:



wherein X represents the group



in which *n* is a small whole number of from 1 to 3, R is selected from the group consisting of alpha and beta alkylene radicals having 3 to 20 carbon atoms; Y represents a radical selected from the group of X, hydrogen, and a lower alkyl radical having 1 to 3 carbon atoms; and R_x represents a hydrocarbon radical containing 7 to 19 carbon atoms in amounts to provide between 0.0001% and 0.005% of boron by weight in said fuel.

2,948,598
ANTI-RUST COMPOSITIONS
Allen E. Brehm, Griffith, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Oct. 17, 1956, Ser. No. 616,387
6 Claims. (Cl. 44—66)

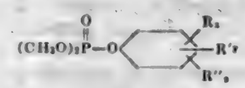
1. A composition consisting essentially of a major proportion of a normally liquid non-lubricating mineral oil fraction, from about 0.0001% to about 1.0% of a polymeric high molecular weight unsaturated carboxylic acid having a molecular weight above about 300 selected from the group consisting of dilinoleic acid and polymerized castor oil fatty acids consisting essentially of from about 45% to about 55% of a monomer and dimer fraction having a molecular weight of from about 300 to about 600 and from about 45% to about 55% of a trimer and higher polymer fraction having a molecular weight in excess of about 600, and from about 0.0001% to about 1.0% of a perfluoroalkyl surface active agent having the general formula

$$C_nF_{2n+1}CONHC_{n'}H_{2n'}N(C_{n'}H_{2n'+1})_x(C_{n''}H_{2n''+1})_yZ_z$$

in which *n* is an integer 6 to 10 inclusive, *n'* is an integer 1 to 3, *n''* is an integer 1 to 12 inclusive, *x* is an integer 2 to 3, *y* is an integer 0 to 1, Z is a halogen selected from the group consisting of bromine and iodine, and *z* is an integer 0 to 1, said polymeric acid and said perfluoroalkyl surface active agent being employed in the ratio of 2:1 to 1:2 respectively.

2,948,599
GASOLINE FUEL COMPOSITIONS
Harold D. Orloff, Detroit, and Francis X. Markley, Ferndale, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 26, 1954, Ser. No. 445,898
9 Claims. (Cl. 44—69)

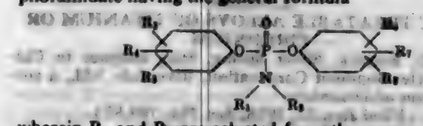
1. A fuel composition adapted for use in spark ignition internal combustion engines which consists essentially of hydrocarbons of the gasoline boiling range containing an antiknock quantity of an organolead antiknock agent and, in quantity sufficient to reduce deposit-induced autoignition, a dimethyl monophenyl phosphate having the formula



wherein R, R′, and R″ are methyl radicals and *x*, *y* and *z* are integers and are from 0 to 1.

2,948,600
ANTIKNOCK COMPOSITIONS
Melvin L. Larson, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 24, 1956, Ser. No. 617,925
10 Claims. (Cl. 44—69)

1. A hydrocarbon fuel of the gasoline boiling range adapted for use in spark ignition internal combustion engines containing an antiknock quantity of an alkyllead antiknock compound, said quantity being from about 0.02 to about 6.5 grams of lead per gallon of said fuel and, in amount sufficient to reduce surface ignition, a phosphoramidate having the general formula

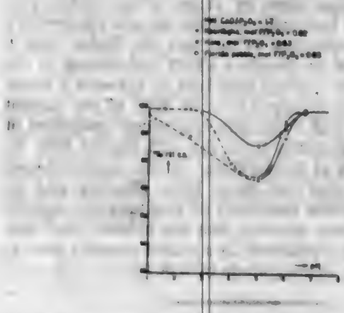


wherein R_1 and R_9 are selected from the group consisting of hydrogen and alkyl radicals containing from one to two carbon atoms, and R_3, R_4, R_5, R_6, R_7 and R_8 are selected from the group consisting of hydrogen and alkyl radicals containing from one to three carbon atoms.

2,948,601
DENSIFICATION OF NITROCELLULOSE
Vernon R. Grassie, Kennett Square, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 17, 1958, Ser. No. 774,075
7 Claims. (Cl. 52—20)

1. A process for densifying nitrocellulose which comprises contacting fibrous nitrocellulose with agitation in a heated aqueous bath with an organic liquid solvent which has active solvent power for said nitrocellulose and which forms a minimum boiling azeotropic mixture with water, said solvent being present in an amount to soften and destroy the fibrous structure of said nitrocellulose without dissolution thereof, said bath being heated to at least the boiling point of the water-solvent azeotrope during the entire period of contact between said nitrocellulose and said solvent, and thereafter removing substantially all of the solvent by distillation while continuing agitation to form smooth, hardened, densified and irregular particles of partially colloided nitrocellulose.

2,948,602
PRODUCTION OF PHOSPHATE FERTILIZERS AND RESULTANT PRODUCT
Leonardus J. Revallier and Willem Slot, both of Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands
Filed Mar. 1, 1957, Ser. No. 643,267
Claims priority, application Netherlands Mar. 2, 1956
3 Claims. (Cl. 71—39)

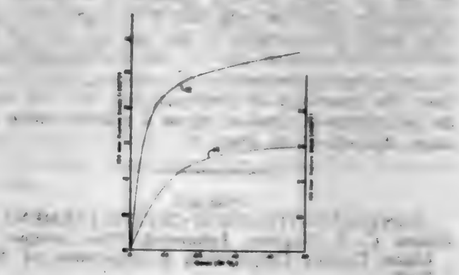


1. A process for producing from fluorine-containing raw calcium phosphate a mixed fertilizer comprising nitrogen, calcium and phosphate, wherein the phosphate is substantially completely soluble in ammonium citrate and soluble to a large extent in water, comprising the steps of: treating the raw phosphate with nitric acid to produce an acid decomposition liquor; adjusting the molar CaO/P_2O_5 ratio of the liquor to a value not greater than 2; continuously neutralizing the thus adjusted liquor to a pH within the range of 6 to 7.5 by simultaneously introducing streams of the adjusted liquor and NH_3 into a contacting vessel; reducing the pH of the neutralized liquor to about 4, whereby the ammonium-citrate solubility of the contained phosphate is not appreciably lowered; evaporating the neutralized liquor of the reduced pH to obtain a melt; thereafter drying said melt, and recovering the dried melt which forms the above mentioned mixed fertilizer.

2,948,603
NICKEL-FREE AUSTENITIC ELEVATED TEMPERATURE ALLOY
Richard K. Pitler, Albany, and William E. Blatz, Troy, N.Y., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
No Drawing. Filed Mar. 12, 1959, Ser. No. 798,815
7 Claims. (Cl. 75—125)

1. An austenitic precipitation hardening nickel-free alloy consisting of, from 0.5% to 1.0% carbon, from 7.0% to 14.0% manganese, from 12.0% to 18.0% chromium, from 1.5% to 6.0% molybdenum, from 0.5% to 2.0% vanadium, from 0.4% to 3.5% of the sum of columbium plus tantalum, from 0.2% to 0.5% nitrogen, from 1.0% to 4.0% copper, and the balance iron with incidental impurities.

2,948,604
NICKEL-FREE AUSTENITIC ELEVATED TEMPERATURE ALLOY
Richard Reed MacFarlane, Coboes, and Richard K. Pitler, Albany, N.Y., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed Mar. 27, 1959, Ser. No. 802,485
4 Claims. (Cl. 75—126)

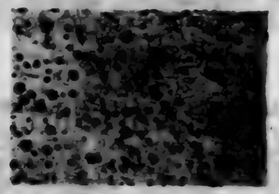


1. An austenitic iron base nickel-free alloy suitable for use at temperatures of up to 1500° F. and having a composition including from about 0.20% to about 0.35% carbon, from about 10.0% to about 15.0% manganese, to about 0.75% silicon, from about 11.5% to about 13.5% chromium, from about 2.0% to about 3.5% molybdenum, from about 0.7% to about 1.2% vanadium, from about 0.10% to about 0.30% nitrogen, from about 0.01% to about 0.40% boron and the balance substantially iron with incidental impurities.

2,948,605
NODULAR IRON
Harry K. Ihrig, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Oct. 11, 1952, Ser. No. 314,328
5 Claims. (Cl. 75—130)

1. An as-cast ferrous metal product of heat reaction between a molten graphite-yielding ferrous metal which if cast would yield a gray iron, sodium chloride, and a reducing agent consisting essentially of calcium, said as-cast product being characterized by the presence of an amount of spherulitic graphite in its metallic matrix effective to give said product a tensile strength of at least

60,000 p.s.i., a yield strength of from 50,000 to 85,000 p.s.i., an elongation of from about 2½ to 21 percent and a Brinell hardness of from about 155 to 220, said product being further characterized by a chemical composition substantially devoid of sodium and consisting of 0.8 to

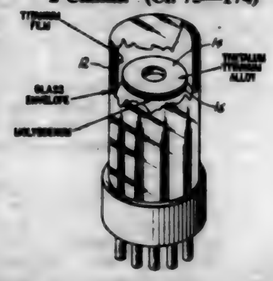


6.7 percent total carbon, about 1.5 to 5 percent silicon, about 0.015 to 0.10 percent phosphorus, up to 0.016 percent sulfur, 0.001 to less than 0.020 percent calcium, up to 0.5 percent manganese, and the remainder essentially iron.

2,948,606
HIGH TEMPERATURE NICKEL BASE ALLOY
Rudolf H. Thielemann, Palo Alto, Calif., assignor to Sierra Metals Corporation, a corporation of Delaware
No Drawing. Filed May 31, 1957, Ser. No. 662,577
6 Claims. (Cl. 75—171)

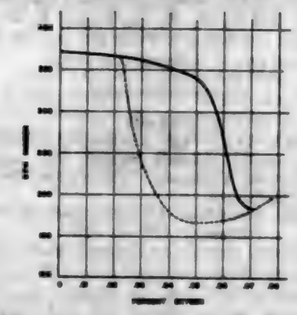
1. A high temperature, high strength nickel-chromium-cobalt base metal alloy composed by weight of about 15 percent to 25 percent chromium; about 5 percent to 30 percent cobalt; 0.5 percent to 4 percent titanium; 2 percent to 5 percent aluminum; 1 percent to 5 percent of a metal of the class consisting of tantalum, columbium and mixtures thereof; 5 percent to 11 percent tungsten, and the balance, essentially nickel, except for impurities and minor alloying constituents which do not substantially affect the properties of the basic alloy, said alloy being characterized in that the sum of (*a*) the percentage of tungsten, plus (*b*) one and one-half times the percentage of the member of said class, plus (*c*) two times the percentage of aluminum, plus (*d*) four times the percentage of titanium equals a number within the range of about 20 to about 30.

2,948,607
TANTALUM-TITANIUM GETTER ELEMENT
Johann C. S. Wagener, Lakewood, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Filed Oct. 25, 1957, Ser. No. 692,491
2 Claims. (Cl. 75—174)



1. An evacuated vessel having mounted therein a getter element composed of a binary alloy of titanium and tantalum, the titanium constituent of said alloy being the effective gettering agent of said element, the tantalum constituent of said alloy serving to prevent collapse of said element when the same is heated to the sublimation temperature of titanium, said temperature being above the melting point of titanium but below the melting point of said alloy whereby said element is effective to provide an active deposit of titanium upon the surface of said vessel, said alloy containing 5% to 75% titanium, the remainder tantalum.

2,948,608
HEAT TREATABLE ALLOYS OF TITANIUM OR ZIRCONIUM
Leroy D. Resnick, Silver Spring, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Filed Jan. 17, 1958, Ser. No. 709,576
1 Claim. (Cl. 75—175.5)



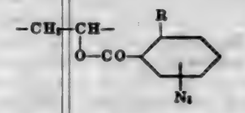
An alloy hardenable by at least 50 numbers Vickers by cooling rapidly the annealed alloy from a temperature of 900–1000° C., said alloy consisting of 0.3–1.0% iron, 0.03–0.05% oxygen, balance substantially all a metal selected from the group consisting of titanium and zirconium.

2,948,609
MANUFACTURE OF METAL ARTICLES FROM TUNGSTEN METAL POWDER
Tivadar Millner and Jenö Neugebauer, Budapest, Hungary, assignors to Egyesult Izzolampa es Villamossagi Reszvenytarsasag, Budapest, Hungary, a Hungarian enterprise
No Drawing. Filed Apr. 21, 1955, Ser. No. 503,021
Claims priority, application Hungary May 6, 1954
3 Claims. (Cl. 75—214)

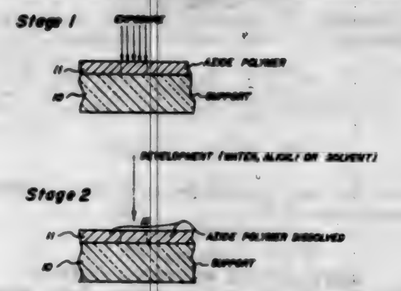
1. A method of manufacturing tungsten articles from tungsten metal powder containing non-tungsten ingredients in the form of additives and impurities, which comprises pressing porous bars from said powder, sintering said bars by heating them by means of an electric current of gradually increasing strength up to a temperature below fusion temperature of the bars, but higher than a moderate range of temperature which corresponds to the passage of current through said bars of between a lower limit of 30% and an upper limit of 60% of the current required to fuse said bars; removing excess quantities of non-tungsten ingredients from the still porous bars by heating said bars at temperatures in the range between said lower limit and said upper limit, effecting said removal of said excess quantities of non-tungsten ingredients up to an extent ensuring that the finished bars contain non-tungsten ingredients in a useful quantity not exceeding the order of magnitude of 0.001%.

2,948,610
LIGHT-SENSITIVE COMPOSITIONS AND THEIR USE IN PHOTOMECHANICAL PROCESSES
Stewart H. Merrill, Earl M. Robertson, and Henry C. Staehle, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed July 29, 1955, Ser. No. 525,271
6 Claims. (Cl. 96—33)

1. A photographic reproduction process which comprises exposing to an original a supported layer of an inherently light-sensitive film forming polymer containing from about 10 to 100 percent of recurring units having the formula:



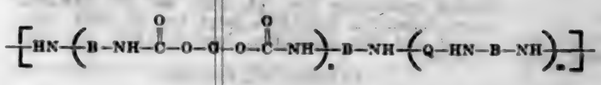
wherein R represents a member of the class consisting of a hydrogen atom and a carboxyl group any remaining recurring units of the polymer being selected from the class consisting of vinyl alcohol and vinyl ester units, until the



exposed regions of the layer become insoluble, dissolving only the polymer in the unexposed regions of the layer, and leaving an image of insoluble polymer remaining on the support.

2,948,611
PHOTOPOLYMERIZABLE COMPOSITIONS, ELEMENTS, AND PROCESSES
Arthur Livingston Barney, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 30, 1957, Ser. No. 693,256
7 Claims. (Cl. 96—35)

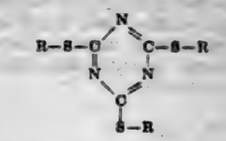
1. A photopolymerizable element comprising a support and a solid layer comprising (1) 0.01% to 10% by weight of a free radical generating addition polymerization initiator activatable by actinic light and inactive thermally below 85° C., (2) 10% to 60% by weight of a normally non-gaseous ethylenically unsaturated addition polymerizable compound containing a plurality of terminal ethylenic groups having a molecular weight within the range from about 100 to about 1500, there being at least one such group for every 100–250 units of molecular weight, said compound having a boiling point of over 100° C. at normal pressure and being capable of forming a high polymer by photoinitiated addition polymerization in the presence of such an initiator, and (3) the balance of the percentage by weight of the three components being a linear polyalkyleneether-polyurethane polymer essentially composed of recurring structural units having the formula



where —O—G—O— is a bivalent radical inert to isocyanate groups resulting from removal of terminal hydrogen atoms from a polyoxyalkyleneether glycol having a molecular weight of at least 400; —B— is a bivalent organic radical; —Q— is a radical selected from the group consisting of a carbonyl radical and a non-polymeric diacyl radical; *n* is an integer greater than 0 and *m* is an integer including 0; each of the said structural units being connected by a radical —Q— having the significance defined above; the overall ratio of the number of —B— to —O—G—O radicals in the polymer being between 1.1:1 and 12:1 and at least 60% of the total weight of the polymer being the bivalent radicals —O—G—O.

2,948,612
PHOTOGRAPHIC MATERIALS AND METHOD OF PRODUCING THE SAME
Millet R. De Angelus and Fritz Dersch, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Mar. 3, 1959, Ser. No. 796,756
11 Claims. (Cl. 96—66)

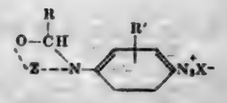
1. A light-sensitive material comprising a base and a light-sensitive silver halide emulsion thereon, said material containing an antifoggant and stabilizing compound having the following chemical formula:



wherein R is selected from the group consisting of thiazolyl, imidazolyl, oxazolyl, benzothiazolyl, benzimidazolyl and benzoxazolyl.

2,948,613
DIAZOTYPE MATERIALS SENSITIZED WITH N-HETERO-p-AMINOBENZENEDIAZONIUM SALTS
Robert J. Cox, Chenango Bridge, and Ralph G. D. Moore, Chenango Forks, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed July 26, 1957, Ser. No. 674,316
5 Claims. (Cl. 96—91)

1. Light-sensitive diazotype material comprising a base coated with a coupling component and, as the light-sensitive diazonium compound, a compound of the following formula:



in which R is selected from the class consisting of hydrogen, alkyl and aryl; Z represents the methylene groups necessary to complete a ring system selected from the class consisting of 5- and 6-membered heterocyclic ring systems; R′ is selected from the class consisting of hydrogen, alkyl, aryl, alkoxy, and aryloxy; and X is an anion.

2,948,614
STABILIZED PHOTOGRAPHIC SILVER HALIDE EMULSIONS CONTAINING 5-THIOCTIC ACID
Charles Francis Hitchcock Allen, Bernard D. Illingworth, and John J. Segura, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 11, 1957, Ser. No. 671,129
13 Claims. (Cl. 96—109)

1. A photographic silver halide emulsion containing (*a*) an alkylene oxide polymer selected from the group

consisting of polyalkylene glycols and condensation products of alkylene oxide containing from 2 to 4 carbon atoms with an organic compound containing an active hydrogen atom selected from the class consisting of alcohols, phenols, amines, mercaptans, acids, amides, and hydrocarbons, said alkylene oxide polymer having a molecular weight of at least 300, and (*b*) 5-thioctic acid.

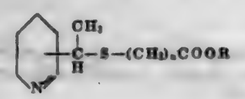
2,948,615

ANTIFOGGANTS AND STABILIZERS FOR PHOTOGRAPHIC SILVER HALIDE EMULSIONS

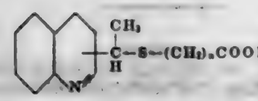
Fritz Dersch and Millet R. De Angelus, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Mar. 13, 1958, Ser. No. 721,100
6 Claims. (Cl. 96—109)

1. A light-sensitive photographic material comprising a base and a light-sensitive silver halide emulsion layer, said light-sensitive material containing as an antifoggant a compound selected from the class consisting of those of the following formulae:



and



wherein *n* is a whole number of from 1 to 3; R is selected from the class consisting of alkyl, aryl, aralkyl and a cation, and the sulfur-containing substituent group on the designated nitrogenous heterocyclic ring is in a position selected from the class consisting of the 2- and 4-position of such ring.

2,948,616

MALT LIQUOR AND METHOD OF PREPARING THE SAME

George H. Kineman, Wauwatosa, and Nison N. Hellman, Milwaukee, Wis., assignors to Basic Products Corporation, Milwaukee, Wis., a corporation of Wisconsin

No Drawing. Filed May 15, 1958, Ser. No. 735,390
5 Claims. (Cl. 99—48)

1. In the method of producing malt liquors such as beers and ales the step which consists of adding thereto the compound 2,4,5-trihydroxybutyrophenone.

2,948,617

PROCESSING OF BREWERS' WORT

Stanley William Thomas Paine, Cuckfield, England, assignor to The A.P.V. Company Limited, Crawley, England

Filed Sept. 3, 1957, Ser. No. 681,734
Claims priority, application Great Britain Sept. 7, 1956
4 Claims. (Cl. 99—52)

1. In the treatment of brewer's wort by the method which includes passing the wort in continuous movement through stages to convert the wort from sweet wort into hopped wort which is passed to a fermentation stage, the wort being subjected, at one stage prior to the fermentation stage to a high temperature treatment and a subsequent cooling treatment, the step which consists in re-circulating at least part of the wort after it has been cooled so that the wort is re-raised to the high temperature and re-cooled, the wort being re-circulated after it



passes to the stage in which the sweet wort is converted to hopped wort.

2,948,618

METHOD FOR BREWING COFFEE

T Ralph Saint, Bogota, N.J., assignor to Jabez Burns & Sons, Inc., New York, N.Y., a corporation of New York

Filed Dec. 23, 1957, Ser. No. 704,630
3 Claims. (Cl. 99—71)

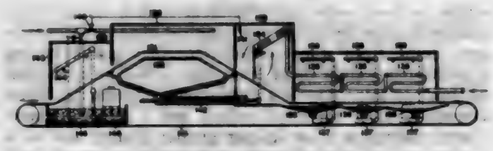
1. A process for brewing coffee comprising forming ground coffee in a mass, subjecting the coffee to streams of water at 185° F. to 200° F. impinging on the center portion of the mass and filling the mass with water forming a body of hot water with a layer of ground coffee floating on the surface of the water, subjecting the layer of ground coffee to streams of hot water impinging on the center of the body of hot water and carrying granules of coffee downward and then circulating the water upward to sweep the water along the bottom of the layer and remove coffee granules therefrom until a thin layer of ground coffee remains on the surface in bubbles of escaped gases, dropping the granules downward through the water to extract the coffee therefrom while separating the coffee brew from the coffee granules, subjecting the remaining thin layer of coffee to a dripping action over a period of time to strip the remaining coffee granules from the bubbles on the surface and finally separating the coffee brew from the coffee grounds to form a clear coffee brew.

2,948,619

METHOD AND APPARATUS FOR BLANCHING FOOD PRODUCTS

Carlyle Martin Ashley, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Original application Nov. 14, 1951, Ser. No. 256,315, now Patent No. 2,870,020, dated Jan. 20, 1959. Divided and this application June 2, 1958, Ser. No. 739,068
9 Claims. (Cl. 99—100)



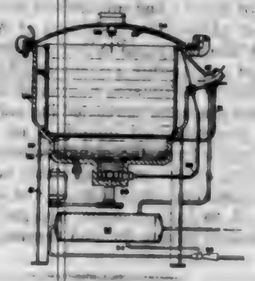
1. In the method of continuously blanching and cooling food products, the steps which consist in placing the food product on a conveyor, passing the food product on the conveyor through an inverted steam chamber to blanch the same, automatically maintaining the supply of steam in the chamber, collecting at least a portion of the condensate and nutrients given off by the food product in the chamber, passing the food product into a cooling chamber and distributing the collected condensate and nutrients over the food product on the conveyor.

2,948,620

METHOD AND APPARATUS FOR BLANCHING FOOD PRODUCTS

Carlyle Martin Ashley, Fayetteville, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Original application Nov. 14, 1951, Ser. No. 256,315, now Patent No. 2,870,020, dated Jan. 20, 1959. Divided and this application June 2, 1958, Ser. No. 739,194
5 Claims. (Cl. 99—100)



1. In a method for blanching food products, the steps which consist in placing the food product in an inner vessel, supplying heated vapor over the food product to heat the same thereby condensing at least a portion of the vapor, purging the inner vessel of non-condensible gases, discontinuing the supply of heated vapor to the food product, collecting condensate and nutrients in the sump of an outer vessel, cooling the food product, passing the condensate and nutrients from the sump to at least one spray member, and spraying the condensate and nutrients over the food product substantially restoring the dissolved nutrients to the food product.

2,948,621

PROCESS OF MANUFACTURING NUT FLAVORING ADDITIVES

Fitzhugh L. Avera, Alameda, Calif., assignor to Corn Products Company, a corporation of Delaware

No Drawing. Original application July 19, 1954, Ser. No. 444,395, now Patent No. 2,859,121, dated Nov. 4, 1958. Divided and this application July 14, 1958, Ser. No. 748,182
7 Claims. (Cl. 99—128)

1. A process of manufacturing a nut flavoring additive, said process comprising the steps of preparing a nut butter, cooling the nut butter to room temperature, and then introducing into the cooled nut butter an approximately 70% aqueous solution of sorbitol.

2,948,622

PROCESS FOR PRODUCING COLD WATER-SOLUBLE GELATIN COMPOSITIONS

Frank J. Cahn, Los Angeles, Calif., assignor to Louis Milani Foods, Inc., Los Angeles, Calif., a corporation of Illinois

No Drawing. Filed Mar. 10, 1959, Ser. No. 798,328
5 Claims. (Cl. 99—130)

1. In a process for producing gelatin-containing powder which dissolves in cold water and is capable of setting to a transparent gel, the step which consists in rapidly converting a fluid, ungelled film which is between 0.004 cm. and 0.03 cm. in thickness and which consists essentially of a solution of 1 part gelatin and between about 8 and about 10 parts sugar material in 10 parts water, into dry brittle solid material, by removing moisture from said fluid film while it is exposed to the atmosphere.

2,948,623

MANNER OF HANDLING MEAT

Thomas R. Anderson, Walnut Creek, Calif., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Aug. 13, 1958, Ser. No. 754,700
8 Claims. (Cl. 99—169)

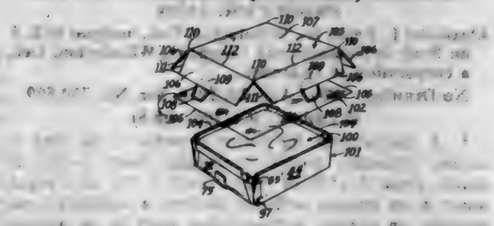
1. A process for handling meat which substantially reduces moisture loss therefrom which comprises maintaining on the surface of the meat an air-permeable moisture-retarding film of a fatty compound selected from the group consisting of ethyl stearate and fatty compounds having the formula R—OH, where R is selected from the group consisting of an aliphatic radical and an acyl radical having from 11 to 22 carbon atoms, whereby the bloom of said meat is maintained.

2,948,624

EXPANSIBLE METAL FOIL PACKAGE

Dighton L. Watson, 4033 13th Ave. S., and Forest K. Michaelson, 4008 46th Ave. S., both of Minneapolis, Minn.

Filed Dec. 16, 1954, Ser. No. 475,764
6 Claims. (Cl. 99—171)



1. A closed package of material capable of expansion when subjected to heat, the package including a pair of telescoped tray sections of metal foil capable of withstanding the elevated temperatures at which the material will expand, each tray section including a bottom wall, opposite side walls, and a single end wall connecting said side walls, one of said tray sections including flanges on its side walls folded over the side walls of the other section to slidably connect said sections, a cover overlying said tray sections and cooperating with said sections to completely enclose said contents, said sections including cooperable means limiting outward telescoping movement of said sections and to prevent separation thereof, said expandable material substantially filling said sections, and being in direct contact with all of the walls of the tray, when the sections are telescoped into fully telescoped relation, the volume within said tray sections substantially increasing when said sections are drawn apart to permit expansion of said expandable material upon subjection to heat.

2,948,625

ANTI-ICING FLUID FOR USE IN FREEZING RAIN

William E. MacKenzie, Collingdale, Pa., assignor to the United States of America as represented by the Secretary of the Navy

No Drawing. Filed July 23, 1959, Ser. No. 829,157
2 Claims. (Cl. 106—13)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An anti-icing composition consisting essentially of 75 parts by weight of an aqueous solution consisting es-

sentially of 97% by weight of lithium chloride brine, 0.2% by weight of carboxy methyl cellulose for increasing the viscosity of the aqueous solution, 0.5% by weight of imide oxide to inhibit vapor phase corrosion, 1% by weight of an alkyl quaternary ammonium salt as a corrosion inhibitor; and 27 parts by weight of a mixture consisting of 5 parts by weight of sorbitan sesquioleate and 23 parts by weight of a white mineral oil having a viscosity of 125 to 135 Saybolt Universal seconds whereby a delicately balanced water in oil emulsion is formed to present a water resisting surface so that the resulting composition is resistive to the rinsing effect of rain and snow.

2,948,626

EDIBLE PHARMACEUTICAL INK AND PROCESS OF USING SAME

Roy Y. Sanders, Jr., 745 Le Brun Road, Buffalo 26, N.Y.

No Drawing. Filed Oct. 24, 1958, Ser. No. 769,315
11 Claims. (Cl. 106—24)

1. A fast drying edible ink for applying indicia to resinous film-forming outer coated pharmaceutical tablets which consists essentially of dewaxed shellac, zein, a color forming substance selected from pigments and lakes, and 95% ethyl alcohol wherein the zein/shellac weight ratio is in the range of about 0.02 to 0.10.

2,948,627

MOLDING COMPOSITION AND PROCESS FOR PRODUCING SAME

Alexander L. Feild, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 24, 1958, Ser. No. 730,509
10 Claims. (Cl. 106—38.5)

1. A composition for forming molds to be used in casting refractory metals comprising about 5–15% of starch, about 6–15% of pitch, about 2–7% of a sugar, water in an amount sufficient to form a moldable composition, an organic surface-active agent in an amount sufficient to improve the water-dispersibility of the mixture, the remainder consisting essentially of graphite.

2,948,628

METHOD OF MAKING CERAMIC DIELECTRIC

Eugene Wainer, Cleveland Heights, Ohio, assignor to Horizons Incorporated, Princeton, N.J., a corporation of New Jersey

No Drawing. Filed Aug. 2, 1955, Ser. No. 526,058
6 Claims. (Cl. 106—39)

1. The method of preparing a temperature stabilized, non-aging, high dielectric ceramic consisting essentially of at least one ferroelectric material selected from the group consisting of alkaline earth metal titanates, lead titanate, alkaline earth metal zirconates, lead zirconate, alkaline earth metal and alkali metal tantalates, tungstates, and niobates, alkaline earth metal cerates, lead cerate, and alkaline earth metal stannates comprising: preparing a ceramic mixture of said ferroelectric material in the form of particles substantially all of which are smaller than about one micron in size, mixing a readily dissipated binder with the finely divided ferroelectric material, forming the mixture into a coherent body and maintaining said body at a temperature between about 2400° F. and about 2600° F. for a time not exceeding 10 minutes, and rapidly cooling the fired body to obtain a finished article in which the particle size of the individual crystallites is between about 1 and 5 microns.

2,948,629

IMPACT-RESISTANT CERAMICS FROM SYNTHETIC FLUORAMPHIBOLES AND PROCESSES OF MAKING SAME

Haskiel R. Shell, Norris, Tenn., assignor to the United States of America as represented by the Secretary of the Interior

No Drawing. Filed June 4, 1958, Ser. No. 739,947
5 Claims. (Cl. 106—39)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A ceramic article of manufacture consisting essentially of intermeshing fine acicular fluoramphibole crystals having the formula $W_{0-1}{\cdot}X_2{\cdot}Y_5{\cdot}(Z_4O_{11})_2{\cdot}F_2$ wherein W is selected from the class consisting of Na^+ and Li^+ and mixtures thereof, X is selected from the class consisting of Na^+, Ca^{++}, Mn^{++}, Mg^{++}, Cd^{++}, and Sr^{++} and mixtures, thereof, Y is selected from the class consisting of Mg^{++} and mixtures of Mg^{++} with at least one member of the class consisting of Al^{+++}, Co^{++}, Cu^{++}, Fe^{++}, Fe^{+++}, Li^+, Mn^{++}, and Ni^{++}, Z is selected from the class consisting of Si^{++++} and mixtures of Si^{++++} with at least one member of the class consisting of Al^{+++} and B^{+++}, said article being prepared by hot-pressing under elevated pressure and temperature a composition selected from the group consisting of sintered fluoramphibole of the above formula, and precursor unreacted ingredients thereof consisting of predetermined quantities of silica and compounds selected from the group consisting of fluorides, silicofluorides, oxides and compounds convertible to oxides under calcining conditions, of the said elements W, X, Y, and Z, to form a dense, non-porous, high impact strength product having the said formula.

2,948,630

METHOD FOR BURNING CLAY SLATE OR CLAY

Harry Alfred Reinhold Holm, Clausborg, Skovde, Sweden

Filed Nov. 5, 1956, Ser. No. 620,510
Claims priority, application Sweden Nov. 4, 1955
1 Claim. (Cl. 106—40)

A method of producing porous clinker from granules of a material selected from the group consisting of clay and clay slate, comprising discharging the material into a gas-filled heating chamber of an oven, depositing the material onto a bottom hearth of the oven so as to form a single layer of the granules thereon, vibrating the bottom hearth so as to cause the granules to be spread apart and to advance in direct contact with an upper surface of the hearth, the granules being separated from one another only by the gases of the heating chamber, heating the layer of granules from above so as to cause expansion and sintering of the granules, and cooling the bottom hearth so as to prevent the sintered granules from sticking to the hearth, thereby allowing the granules to move freely along the surface of the hearth and apart from one another.

2,948,631

REFRACTORY LIME

Robert W. McAllister, Box 85, Carlisle, Mass.

No Drawing. Filed June 6, 1957, Ser. No. 663,891
14 Claims. (Cl. 106—58)

1. Refractory composition consisting essentially of from about 65% to 85% high-calcium lime and from about 35% to 15% of a mixture of alumina and silica by total weight of said composition, said alumina and silica mixture containing between from about 35% to 60% by weight of alumina, and said high-calcium lime containing from about 2% to 5% magnesia.

2,948,632

SURFACE MODIFIED KAOLIN CLAY

Charles Gerald Albert, Basking Ridge, and James R. Wilcox, Westfield, N.J., assignors to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland

No Drawing. Filed Apr. 24, 1958, Ser. No. 730,550
7 Claims. (Cl. 106—308)

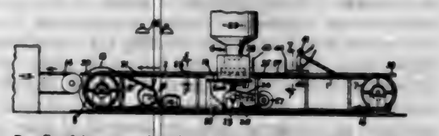
1. Kaolin clay of improved dispersibility in liquid organic media containing from 0.5 to 5.0%, based on the weight of the clay, of rosin amine stearate coated on the surface thereof.

2,948,633

FLOCKING MECHANISM AND METHOD

John E. Schriner, Willoughby, Charles R. Masters, Mentor-on-the-Lake, and Bruno T. Czacherski, Painesville, Ohio, assignors to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio

Filed July 17, 1956, Ser. No. 598,477
14 Claims. (Cl. 117—20)



1. In flocking mechanism for an elongated work piece comprising a movably mounted flocking table, power means for mechanically vibrating said table, conveyor-supporting decks on opposite sides of said table, an endless belt conveyor traveling along the upper surface of said decks and table, said conveyor belt having a resiliently distensible groove in its upper surface where thus passing across said deck and table, said groove having a cross-section substantially conforming to that of the portion of the work entering therein tightly to receive and hold such work, groove spreading means at a work loading station, and adhesive spray gun at a subsequent spray station operative to spray adhesive upon the exposed surface of work carried therepast by said belt, guard means laterally overlying the side portions of said belt at said spray station to prevent deposition of adhesive thereon, means on said table overlying and contacting the side edge portions of said belt to hold the latter snugly against said table for vibration therewith, an enclosure enclosing the region above said table through which said belt passes, means operative to deliver flock to such region to adhere to the vibrating adhesive coated work transported by said belt, and means operative to pry the flocked work from such groove in said belt at a later station.

14. A method of uniformly flocking an elongated article comprising firmly and integrally securing the article to a conveyor surface, moving the conveyor surface and article secured thereto unidirectionally in a general path of travel, applying an adhesive on such article, discharging flock over and onto such article during such movement, and simultaneously vibrating the conveyor surface to swing the conveyor surface and article in unison in and out of such general path of travel while maintaining said conveyor surface and article in fixed interrelation to embed the flock endwise into such adhesive and thereby provide a superior orientation and even distribution of the flock.

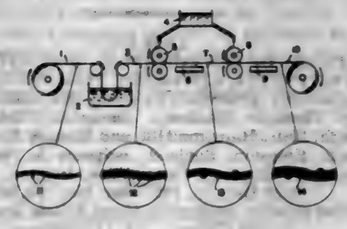
2,948,634

RIGID DRESSINGS

Allan Richard Benjamin Furendal, Karlskoga, Bo Thuresson af Ekenstam, Bofors, and Bror Holger Fredrik von Fleandt, Karlskoga, Sweden, assignors to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden

Filed Feb. 10, 1956, Ser. No. 564,841
17 Claims. (Cl. 117—28)

17. An article for forming a supporting dressing comprising a woven textile material of open mesh structure wherein the threads carry a surface distribution of discrete particles of hard plastic selected from the group consisting of polymethylmethacrylate, polyisobutylmeth-



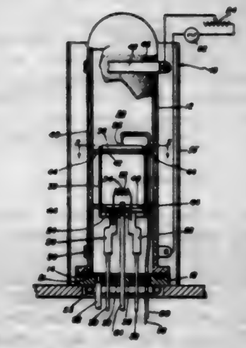
acrylate and polystyrene, the said threads and particles thereon being covered by a film of a soft adherent plastic of a poly lower alkylacrylate.

2,948,635

PHOSPHOR EVAPORATION METHOD AND APPARATUS

Lewis R. Koller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Filed Jan. 12, 1959, Ser. No. 786,190
16 Claims. (Cl. 117—33.5)



1. A method of producing a luminescent screen comprising the steps of heating a screen substrate to a temperature of from 400° C. to 700° C. in an enclosure having an atmosphere of hydrogen chloride gas, maintaining the walls of said enclosure at a temperature at least as great as the temperature of said substrate, evaporating in the region of said substrate a luminescent phosphor including a host material, an activator and a chlorine coactivator, said chlorine coactivator having a vapor pressure higher than that of said host material and said activator whereby said chlorine tends to re-evaporate from said heated substrate leaving the phosphor deposited thereon deficient in said coactivator and continuously replenishing and circulating hydrogen chloride gas in said enclosure to increase the concentration of chlorine in the region of said heated substrate and replenish the chlorine re-evaporated therefrom and assure the inclusion in said deposited phosphor of an adequate quantity of chlorine coactivator.

2,948,636

ANTIMONY COATING FOR GLASS

Thomas Robert Santelli and Thomas G. Erard, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

No Drawing. Filed July 16, 1957, Ser. No. 672,185
11 Claims. (Cl. 117—46)

1. The method of depositing antimony on a ceramic body, which comprises applying thereto the products of

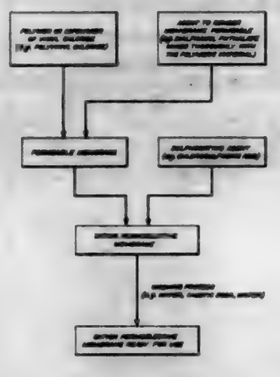
hydrolysis of a material having the general formula $Sb(OR)_3$, wherein R is a lower alkyl group, and subjecting said material to reducing conditions.

2,948,637

PROCESS OF SULFONATING A PLASTICIZED POLYVINYL CHLORIDE FILM TO FORM A CATION PERMSELECTIVE MEMBRANE

Harry Thurston Hookway, Hampton Wick, Douglas Knight Hale, Hampton Hill, and Richard George Goldsmith, Kingston, England, assignors to National Research Development Corporation, London, England

Filed Dec. 23, 1957, Ser. No. 704,305
Claims priority, application Great Britain Jan. 3, 1957
14 Claims. (Cl. 117—47)



1. A process for the preparation of cation-permselective membranes which comprises treating with a sulphonating agent selected from the class consisting of chlorosulphonic acid and mixtures thereof with sulphuric acid, sulphur trioxide and sulphuryl chloride, a membrane of a material selected from the class consisting of vinyl chloride polymers and copolymers which have been treated with an agent that favors the desired sulphonation reaction, said last mentioned agent being present to the extent of from 10 to 60 parts per 100 parts by weight of said membrane material and consisting of a substance having at least one of the actions swelling and plasticizing upon said membrane material.

2,948,638

COATED VINYL CHLORIDE PLASTISOL RESIN PARTICLES COATED WITH A CARBOXYLIC ACID SALT AND METHOD OF PREPARATION

Blake Orval Baird, Bay Village, Ohio, and Robert P. Davis, St. Albans, W. Va., assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Oct. 12, 1956, Ser. No. 615,461
11 Claims. (Cl. 117—100)

1. A dry, granular vinyl chloride plastisol resin consisting of particles, finer than about 5 microns and obtained from the polymerization of a monomeric material containing at least 90% by weight of vinyl chloride, and as a coating on said particles from about 0.1 to about 5% by weight based on said particles of a salt of an acid selected from the class consisting of the 3 to 8 carbon atom saturated monocarboxylic acids and polycarboxylic acids, 3 to 8 carbon atom unsaturated mono- and dicarboxylic acids and their anhydrides, and polymeric forms of said unsaturated mono- and dicarboxylic acids and their anhydrides wherein the said acid and anhydride constitutes at least 50 mol percent of the polymer.

2,948,639

METHOD OF COATING A SURFACE WITH A COMPOSITION COMPRISING A FURFURYL ALCOHOL RESIN, CELLULOSE, FILLER, AND CATALYST

Claude S. Price, Box 875, League City, Tex.

No Drawing. Filed May 15, 1958, Ser. No. 735,394
2 Claims. (Cl. 117—104)

1. In a method of producing a coating of a furan resin on the surface of an object to be protected, wherein a composition consisting essentially of 18 parts of a partially polymerized furfuryl alcohol resin; 14 parts of at least one filler selected from the group consisting of coke flour, zinc dust, barium sulfate, silica flour, porcelain dust, crushed brick, asbestos fiber, glass fibers, and fibers of synthetic resinous plastics; 1 part of cellulose; 3 parts of benzol; 76 parts of alcohol and 20 parts of xylol, all proportions being expressed in parts by weight, is formed into a homogeneous mixture and a catalyst from the group consisting of toluene sulfonic acid, sulfamic acid and toluene sulfonyl chloride is added to the resulting homogeneous hardenable coating composition, the improvements which comprise: cooling the composition to below room temperature, and to below about 50° F. before the addition of the catalyst thereto, whereby the interval of time before reaction in said composition is increased as compared with the interval of time before reaction in an uncooled mixture, of similar composition; and in applying said cooled catalyst-containing mixture onto the surface to be coated in the interval before reaction, polymerization and hardening of the furfuryl alcohol resin have occurred, whereby the setting, hardening and polymerization of said resin take place in the composition after it has been applied as a coating.

2,948,640

METHOD OF IMPREGNATING MICA PAPER WITH AN ALKYL ORTHOTITANATE, AND PRODUCT PRODUCED THEREBY

Myron L. Corrin, Tucson, Ariz., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Aug. 9, 1956, Ser. No. 603,162
6 Claims. (Cl. 117—119)

1. The method of preparing mica paper of improved physical properties which method comprises impregnating the mica paper with a composition consisting essentially of an alkyl orthotitanate in monomeric form, hydrolyzing the alkyl orthotitanate in the mica paper, and heating the mica paper.

2,948,641

FLAME RETARDING COMPOSITION AND FABRIC TREATED THEREWITH

John D. McCluer, Charlotte, N.C., assignor to Thermold Company, Trenton, N.J., a corporation of Delaware

No Drawing. Filed July 22, 1957, Ser. No. 673,162
11 Claims. (Cl. 117—126)

11. A flexible, resilient flame and heat retardant fabric characterized by a smoothness of texture and by a low over-all ignition loss after being subjected to high temperature, comprising an asbestos base meterial having deposited thereon and intermediate the fibers thereof at least about 1% of a fluoborate salt, at least about 0.75% mica and at least about 1% of a plasticizer, based upon the total weight of the fabric.

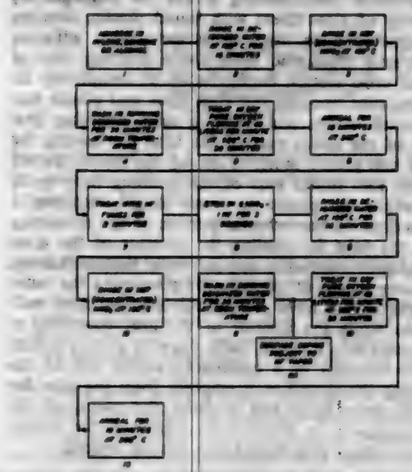
2,948,642

SURFACE TREATMENT OF SILICON DEVICES

Robert W. MacDonald, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Filed May 8, 1959, Ser. No. 811,896
6 Claims. (Cl. 148—1.5)

1. The method of treating surfaces of silicon semiconductor devices to provide a surface layer of a specific conductivity type comprising thermally oxidizing the surface of a semiconductive body, removing the resultant oxide layer, etching the exposed semiconductor body



surface, diffusing an element from the group consisting of gold and iron into the semiconductor body, regrowing the oxide layer and attaching electrodes.

2,948,643

PROCESS AND COMPOSITIONS FOR PRODUCING ALUMINUM SURFACE CONVERSION COATINGS

George H. Pimbley, Inglewood, Calif., assignor to Turco Products, Inc., Los Angeles, Calif., a corporation of California

No Drawing. Filed Jan. 22, 1958, Ser. No. 710,402
24 Claims. (Cl. 148—6.27)

1. A process for applying a coating to surfaces of objects of aluminum and its alloys, which comprises treating said objects in an aqueous acidic bath consisting essentially of about 0.5 to about 8.0 grams per liter of a cation of the group consisting of zinc, cadmium and mercury, a minor effective amount of a halogen-containing anion, and an anion containing hexavalent chromium in an amount equivalent to between about 0.5 and about 9.0 grams per liter of chromium.

2,948,644

PACK CARBURIZING WITH FURANE DERIVATIVES

Gerhard W. Ahrens, Brooklyn, N.Y.

No Drawing. Original application May 29, 1948, Ser. No. 30,220. Divided and this application Feb. 21, 1958, Ser. No. 716,563
6 Claims. (Cl. 148—16.5)

1. In the method of hardening metal articles made of iron, steel, and alloys thereof, in a chamber heated to the carburizing temperature, the step of carburizing the metal articles in the presence of a decomposable furane derivative, for sufficient time to decompose the furane derivative into carburizing gases and to carburize the metal articles to the desired depth of hardening.

2,948,645

METHOD FOR PRESSING LAMINATED GLASS

Laurence A. Kelm, Mount Lebanon, Pa., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

Filed Aug. 19, 1955, Ser. No. 529,404
14 Claims. (Cl. 154—2.7)

1. The method of treating an assembly comprising two matched curved glass sheets and a thermoplastic interlayer to bond the interlayer to the glass sheets substantially throughout the entire area which comprises enclosing the periphery and the margin only of the assembly with a flexible channel-shaped member made of a fluid-impervious material to place the member in engagement with a marginal portion of the outer surfaces of the assembly and in spaced relation to at least part of the periphery of the assembly to provide a conduit adjacent the periphery of the interfaces between the interlayer and the glass sheets, evacuating air from the conduit through the member to remove air from between



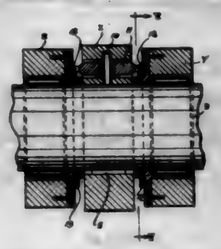
the interlayer and the glass sheets, heating the assembly and the material enclosing it to an elevated temperature to bond the interlayer to each glass sheet in at least its marginal area while continuing the evacuation to maintain the vacuum in the conduit, removing the member enclosing the assembly, and subjecting the assembly including the periphery of the interfaces between the interlayer and the glass sheets directly to an elevated temperature and an elevated fluid pressure substantially above atmospheric pressure and sufficient to bond the interlayer to the glass sheets substantially throughout the entire area of the assembly.

2,948,646

GLASS PRESSING NIPPER ROLLS

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor, by mesne assignments, to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Filed Mar. 23, 1956, Ser. No. 573,518
Claims priority, application Canada Apr. 12, 1955
10 Claims. (Cl. 154—2.7)



1. In a nipper roll press for the preliminary pressing of curved laminated glass sheets, a pair of upper and lower resilient nipper rolls, a pair of shafts for mounting said rolls, bearing means for supporting said shafts with their longitudinal axes maintained always in a common plane, means pressing said rolls tightly together, and means for driving one of said shafts, the nipper roll mounted on the driven shaft being divided transversely to the longitudinal axis of said roll into at least two coaxial sections, at least one of said sections being keyed to said driven shaft to rotate therewith, and at least one of said sections being free to rotate around said shaft independently of the rotation and of the spatial position thereof.

2,948,647
MANUFACTURE OF INSULATED ELECTRIC CONDUCTORS

Hermann Richard Lorch, Southport, and James Alexander McCleery, Sale, England, assignors to British Insulated Callender's Cables Limited, London, England, a British company

Filed Mar. 7, 1955, Ser. No. 492,545
Claims priority, application Great Britain Mar. 12, 1954
7 Claims. (Cl. 154—3.28)

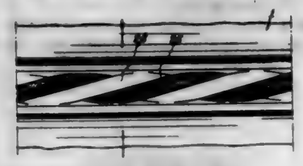


1. A method of making an electric cable comprising in sequence the steps of extruding about a wire a body of paste containing powdered heat-resisting insulant and water, enclosing the body of paste in a pervious covering, extruding over the covered paste body a metal sheath with a small clearance between the sheath and the body, said small clearance having a transverse dimension less than the transverse dimension of the body and being sufficient to provide a free path for the travel of steam along the cable, coiling the metal sheathed body and heating the coiled body in an oven to dry the insulant and finally drawing down the metal sheath to remove the clearance.

2,948,648
SIMULATED STITCHING

Eugene Douchet, Sarcelles, France, assignor of one-half to Society JOP, Sarcelles, and one-half to Société Taulet & Co., Villiers le Bel, France, both French societies

Filed Dec. 8, 1955, Ser. No. 551,839
Claims priority, application Belgium Oct. 6, 1955
13 Claims. (Cl. 154—46)



1. The combination of plastic sheet material having an outer visible surface, and simulated stitching defined by an exposed, bicolored, plastic cable twisted about its longitudinal axis and extending along said surface and bonded, along its entire length, to said surface.

2,948,649
METHOD OF MANUFACTURING SECTIONS AND RODS OF GLASS FIBRE-REINFORCED PLASTIC

Hans Johannes Joachim Pancherz, Erikslustvagen 38B, Malmo, Sweden

Filed Dec. 12, 1957, Ser. No. 702,350
Claims priority, application Sweden Dec. 14, 1956
6 Claims. (Cl. 154—91)



1. A method for manufacturing rods and sections of glass fiber-reinforced plastic comprising continuously moving glass fibers in the form of an elongated assembly from a supply through a bath of a liquid low pressure-low temperature thermosetting plastic for impregnating the assembly of glass fibers with liquid plastic, drawing the impregnated glass fibers with the plastic adhering thereto directly from said bath into a molding tube of the desired cross-section configuration to completely fill the molding tube, moving the glass fiber and plastic material forward within said molding tube, applying heat externally of the initial part of the tube for heating the glass fiber and plastic material during the travel thereof through the said initial part of the molding tube up to a point where the plastic is about to gel, applying a cooling medium to the external portion of the remaining length of the tube for cooling the exterior of the glass fiber and plastic material during the travel thereof through the remaining length of the tube for preventing the outer layer of the plastic from gelling adjacent the inner wall of the tube while the interior of the tube continues to gel and passes into a cured state, drawing the glass fiber and plastic material as a continuous strand out of the tube, heating the strand as it emerges from the tube for curing said outer layer and to finish the curing of the plastic throughout the entire cross section of the strand, and finally cutting said strand into desired lengths.

2,948,650
RESILIENT CUSHION AND METHOD OF MANUFACTURE

Ralph H. Jackson and Donald Van Wagenen, Alliance, Ohio, assignors to Armour and Company, Chicago, Ill., a corporation of Illinois

Filed June 28, 1955, Ser. No. 518,632
5 Claims. (Cl. 154—100)



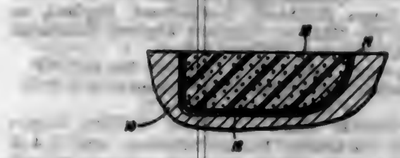
1. A continuous process for the production of hair-foam rubber cushion material which comprises spreading curled animal hair in an approximate stereo-reticulate mass in the form of a pad of substantially uniform thickness, partially dispersing through one surface of said pad a latex of a vulcanizable elastomer, drying the elastomer to a vulcanized condition, partially dispersing through the opposite surface of said pad a latex of a vulcanizable elastomer, drying the elastomer to a tacky but unvulcanized condition, applying a woven fabric to said opposite surface of said pad, continuously spreading and levelling a substantially homogeneous foam latex onto said fabric to form a layer of foam rubber of desired thickness thereon, and vulcanizing the resulting laminate.

2,948,651
PLASTIC ARTICLE AND METHOD OF PRODUCING SAME

Harry O. Waag, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Feb. 24, 1956, Ser. No. 567,548
2 Claims. (Cl. 154—110)

1. In a method of securely bonding a vinyl plastic sheet to a plastic resin foam without the use of any additional adhesives, comprising the steps of applying an uncured plastisol of a vinyl plastic to the bare face of a mold to form a single vinyl sheet free from any additional adhesives, spraying directly onto the entire surface of said adhesive-free uncured sheet a plurality of short fiber particles in a manner to partially embed the individual particles in said sheet, curing said vinyl plastisol to form a self sustaining sheet having said particles firmly attached therein and partially extending therefrom, pouring an uncured pore-forming resin into said mold immediately adjacent said cured sheet to embed the extending portions of said particles therein, curing and expanding said pore-forming resin, and removing the bonded article from the mold.



2,948,652
WET STRENGTH PAPER CONTAINING LINEAR POLYAMIDE RESIN

Yun Jen, Anaheim, Calif., and Ronald R. House, Darien, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed June 9, 1958, Ser. No. 740,534
8 Claims. (Cl. 162—166)

5. Process of making paper of improved wet and dry strength which comprises forming a dilute aqueous slurry of cellulose papermaking fibers, adding thereto a small but effective amount as strengthening agent of a water-soluble cationic thermosetting methylenebisacrylamide-alkylenepolyamine-cyanate-formaldehyde resin, said resin being prepared by reacting a water-soluble methylenebisacrylamide-alkylenepolyamine condensation product having a Gardner-Holdt viscosity of at least B as a 33% by weight aqueous solution at 25° C. first with sufficient of a water-soluble metal cyanate to carbamylate at least 80% of all primary and secondary nitrogen atoms therein and then with sufficient formaldehyde to convert said carbamylated condensation product to thermosetting form, sheeting said fibers to form a web, and heating said web at 190°–250° F. to dry the same and develop the strengthening properties of the resin thereon.

2,948,653
ITACONIC ACID DIESTER ADDUCTS AS PLANT FUNGICIDES

Abraham Bavley, Brooklyn, and Bryce E. Tate, Kew Gardens, N.Y., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed July 2, 1957, Ser. No. 669,470
3 Claims. (Cl. 167—22)

1. The process of controlling fungal attack on plants which comprises contacting the plant with a fungicidal amount of a 1:1 adduct of bromotrichloromethane and an itaconic acid diester, the alcohol residues of said diester being alkyl and containing from 1 to 4 carbon atoms.

2,948,654
INSECTICIDAL COMPOSITION COMPRISING SESOXANE AND METHOXYCHLOR

Homer E. Fairchild, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 24, 1957, Ser. No. 685,813
4 Claims. (Cl. 167—30)

2. An insecticidal composition comprising a mixture of "Sesoxane" and methoxychlor.

2,948,655
NON-DUSTY WATER-DISPERSIBLE FUNGICIDAL COMPOSITION

Albert L. Flenner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Apr. 3, 1958, Ser. No. 726,028
2 Claims. (Cl. 167—42)

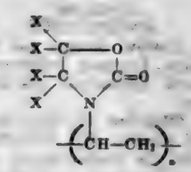
1. A non-dusty, water-dispersible fungicidal composition containing from about 63–68 parts by weight of tetramethyl thiuram disulfide, 1–3 parts by weight of bentonite, 25–30 parts by weight of kaolinite, 0.25–0.75 part by weight of sodium lignin sulfonate, 0.25–0.75 part by weight of sodium alkyl aryl sulfonate, 0.5–1.5 parts by weight of alkylated aryl polyether alcohol, and 1.0–3.0 parts by weight of paraffinic summer spray oil, the total parts by weight in any one composition being 100, such composition being composed of particles whose average diameters are not greater than about 20 microns.

2,948,656
HAIR SETTING COMPOSITION CONTAINING A RING SUBSTITUTED N-VINYL-2-OXAZOLIDINONE POLYMER

William F. Tousignant, Wilhelm E. Walles, and Thomas Houtman, Jr., Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Jan. 28, 1958, Ser. No. 711,560
13 Claims. (Cl. 167—87.1)

1. A composition for setting hair comprising a ring substituted N-vinyl-2-oxazolidinone polymer of the structural formula:



(I)

wherein each X is independently selected from the group consisting of hydrogen and alkyl radicals containing from 1 to about 4 carbon atoms with the limitation that at least one of said substituents is an alkyl radical, and *n* is a whole number of average value from about 10 to about 5000, said polymer being dispersed in a solvent therefor that is selected from the group consisting of water, lower alkyl alcohols containing from 1 to 4 carbon atoms and their mixtures.

2,948,657
SKIN COLORING COMPOSITIONS

Nicholas Bernard Siccama, 659 Squaw Brook Road, N.H., Paterson 3, N.J., and William L. Wirbelauer, deceased, late of Wyckoff, N.J., by Donald J. Chapman and Harry E. Hasselmans, executors, both of 70 Pine St., New York 5, N.Y.

No Drawing. Filed Oct. 9, 1957, Ser. No. 689,044
10 Claims. (Cl. 167—90)

1. A skin coloring lotion comprising an aqueous solution of a substantially colorless leuco indigoid ester compound developing color upon exposure to actinic light and a water soluble fixative compound selected from the group consisting of urea, thio-urea, guanidine, a lower alkyl derivative of said urea fixative compound, a hydroxy lower alkyl derivative of said urea fixative compound, a lower amino acid, and a soluble salt of a lower amino acid, said composition having a pH in the range of about 7.5 to 8.5.

2,948,658
PROCESS FOR PRODUCING DIHYDROXY ACETONE

Samuel R. Green, Westfield, N.J., assignor to Baxter Laboratories, Inc.

No Drawing. Filed Feb. 25, 1960, Ser. No. 10,888
11 Claims. (Cl. 195—43)

1. A method for the production of dihydroxyacetone by microbial fermentation which comprises preparing an inoculum by growing *Acetobacter suboxydans* in a growth medium which contains glycerol and which has a pH of from 5.0 to 5.9, introducing the inoculum into a fermentation medium which contains corn steep liquor and more

than 6% by weight of glycerol, and permitting the fermentation to proceed until there has been substantial conversion of the glycerol to dihydroxyacetone.

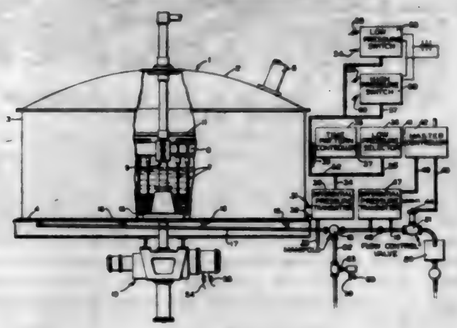
2,948,659
SYNTHESIS OF 2-KETO-L-GULONIC ACID
Richard N. Shoemaker, Huntington Station, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 10, 1954, Ser. No. 449,000
2 Claims. (Cl. 195—47)

1. A process for preparing 2-keto-l-gulonic acid which process comprises subjecting to the oxidizing system produced by cultivating a mixture of ATCC 11867 and ATCC 11868 under aerobic conditions on an otherwise sterile nutrient medium, a compound selected from the group consisting of l-idonic acid and a non-toxic l-idonate.

2,948,660
ANTIBIOTICS
Winston Keanay Anslow, Slough, and George Desmond Wilkin, Uxbridge, England, assignors to Glaxo Laboratories Limited, Greenford, Middlesex, England, a British company
No Drawing. Filed Jan. 10, 1957, Ser. No. 633,380
11 Claims. (Cl. 195—80)

1. A process for the production of an antibiotic-containing medium of improved titre which comprises culturing *Streptomyces ostreogriseus* N.R.R.L. No. 2558 under submerged aerobic conditions in a liquid culture medium containing from 30–135 parts per million of available iron.

2,948,661
LAUTERING METHOD AND APPARATUS
Paul J. O'Neill, Jr., Sausalito, Calif., assignor to Union Machine Company
Filed Apr. 21, 1958, Ser. No. 729,827
10 Claims. (Cl. 195—134)

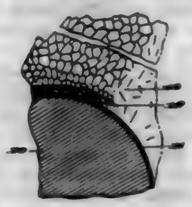


1. In combination with a lauter tank having a perforated false bottom for draining wort therethrough, filter bed compaction measuring means responsive to the differential pressure existing between points above and below said false bottom, means for registering a predetermined ideal wort flow rate at any time during the lautering cycle, signal means for transmitting signals from said measuring and registering means at magnitudes proportional to the values of said differential pressure and said ideal flow rate respectively, control means for varying the wort draw-off rate, said control means being responsive to the one signal from said measuring means and registering means that corresponds to the greater rate of flow.

2,948,662
CHEMICAL PROCESS
Frederick James Bellringer, Leatherhead, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a company of Great Britain
No Drawing. Filed May 7, 1957, Ser. No. 657,490
Claims priority, application Great Britain June 2, 1956
8 Claims. (Cl. 202—57)

8. The process which comprises distilling impure chloroprene containing 1-chlorobutadiene and 3:4-dichlorbutene-1 as impurities, in the presence in the still of nitric oxide, having the formula NO.

2,948,663
COMPOSITION OF MATTER INCLUDING TITANIUM CRYSTAL INTERGROWTHS AND METHOD OF MAKING SAME
Reginald S. Dean, Hyattsville, and William W. Gullett, College Park, Md., assignors to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Filed Jan. 15, 1957, Ser. No. 634,364
2 Claims. (Cl. 204—64)



1. A composition of matter comprising a non-porous titanium plate, from 0.1–2.5 mils thick, attached to a layer of solidified salt bath with dispersed fine titanium crystals, said layer being from 1–50 mils thick, and attached on its other surface to a layer of pure alpha titanium crystal intergrowths, said intergrowths constituting at least 90% by weight of the composition arranged with respect to the titanium plate to form open branching limbs, said intergrowths all being at least ¼ inch in their longest dimension the improvement which consists of the intergrowths being of parallel variety composed of crystals of cubic form pseudomorphic after beta titanium.

2. In a process for producing the composition of claim 1, by the steps of providing a mass of comminuted crude titanium having at least 100 square feet of surface per pound in contact with an inert anode basket, in a bath consisting essentially of at least one molten alkalinous chloride in association with 3–8% soluble titanium as chloride, with an average titanium valence of more than 2.0 and less than 2.05 at 3% soluble titanium and 2.6 at 8% soluble titanium and dissolved alkalinous metal equivalent to 1–20 cc. evolved H_2 per gram of salt in acidified ferric salt solution, and an inert metal cathode surface, the improvement which consists in maintaining the temperature at 900–950° C. while passing a direct current between anode and cathode, said current being gradually increased to a maximum of 30–100 amperes per pound of comminuted crude titanium in the anode material and selecting the cathode surface so that the initial current density thereon will be 150–1000 amperes per square foot, the instantaneous open circuit voltage of the cell being less than 100 mv. at all times, whereby to produce crystals of cubic form without changing the bath composition by the electrolytic step, draining the salt bath from said cathode surface and adhering titanium without exposure to air.

2,948,664
METHOD OF MAKING CELLULAR POLYETHYLENE
Louis C. Rubens and Demetrius Urchick, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 18, 1956, Ser. No. 616,658
8 Claims. (Cl. 204—154)

1. In a process for making polyethylene foam wherein a polymeric composition comprising essentially polyethylene having a normally gaseous agent intimately incorporated therewith under pressure at temperatures above the melting point of the polymer is expanded by suddenly reducing the pressure sufficiently to cause expansion of the composition with resultant formation of a foam, the steps which consist in subjecting polyethylene to an amount of ionizing radiation corresponding to a total dose of from 2 to 20 mega-R.E.P.'s sufficient to cause the polyethylene to be insoluble in boiling decalin and insufficient to prevent appreciable flow of the polyethylene at temperatures between 100° and 200° C., placing the irradiated polyethylene under pressure of a normally gaseous agent selected from the group consisting of tetramethylmethane, monochlorodifluoromethane, dichlorodifluoromethane and dichlorotetrafluoroethane, at temperatures above the crystalline melting point of the polyethylene and without mechanical working of the heat-plastified polymer and suddenly releasing the pressure.

2,948,665
PROCESS FOR MAKING CELLULAR POLYETHYLENE ARTICLES
Louis C. Rubens, John D. Griffin, and Demetrius Urchick, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Oct. 18, 1956, Ser. No. 616,662
5 Claims. (Cl. 204—154)

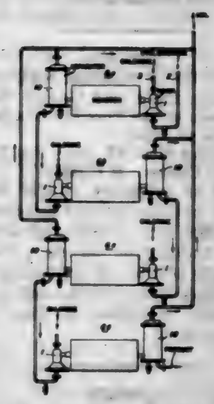


1. In a process for making polyethylene foam wherein a flowable gel comprising essentially polyethylene having a normally gaseous agent selected from the group consisting of tetramethylmethane, monochlorodifluoromethane, monochlorotrifluoromethane, dichlorodifluoromethane and dichlorotetrafluoroethane, intimately incorporated therewith under pressure is expanded by suddenly releasing the pressure by extruding the gel into a zone of lower pressure sufficient to cause expansion of the extruded material with resultant formation of a foam, the step which consists in subjecting the gel under pressure to ionizing radiations in amount corresponding to a total dose of from 1 to 20 mega-R.E.P.'s in a field having an intensity of at least 3 mega-R.E.P.'s per second and sufficient to bring about an increase in resistance to flow of the polyethylene at a temperature of 100° C. and insufficient to prevent appreciable flow of the polyethylene at said temperature, at a point just prior to extruding the material into the zone of lower pressure.

2,948,666
IRRADIATION PROCESS
Elliott J. Lawton, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Nov. 21, 1956, Ser. No. 623,703
14 Claims. (Cl. 204—154)

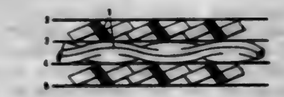
1. Solid irradiatively cross-linked polypropylene, which is characterized by (1) its resistance to oxidation in air, (2) its freedom from substantially all of the radiation-induced free radicals, and (3) its freedom from substantial degradation by oxygen.

2,948,667
PROCESS FOR THE PHOTOCHEMICAL CHLORINATION OF CYCLOHEXANE IN THE LIQUID PHASE
Jean Lissido, Paris, France, and Francis De Pauw, Tertre, Belgium, assignors to Institut Français du Petrole des Carburants et Lubrifiants, Paris, France
Filed June 10, 1957, Ser. No. 664,756
3 Claims. (Cl. 204—163)



1. A continuous process for the manufacture of monochlorocyclohexane in the liquid phase, which comprises homogeneously admixing cyclohexane with not more than about 0.06 mole of chlorine per mole of cyclohexane in absence of light, then subjecting the resultant solution which consists essentially of chlorine and cyclohexane, to the action of ultraviolet rays while moving the mixture successively through a plurality of interconnected elongated and horizontally disposed reaction zones, removing hydrochloric acid liberated at the end of each reaction zone from the reaction mixture and admixing the latter, after cooling, with not more than about 0.13 mole of chlorine per mole of initial cyclohexane in the absence of light as the mixture passes from said reaction zone to the next, withdrawing the reaction mixture from the last reaction zone and recovering monochlorocyclohexane therefrom.

2,948,668
ELECTRODIALYSING APPARATUS WITH SUPPORTED MEMBRANES
Christopher Hugh de Whalley, Rickmansworth, England, and Cornelis van Hoek, Leiderdorp, Netherlands, assignors to Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek, The Hague, Netherlands
Filed Nov. 3, 1958, Ser. No. 771,454
Claims priority, application Netherlands Nov. 2, 1957
2 Claims. (Cl. 204—301)



1. In a multicell electrodialyzing apparatus comprising a membrane stack of alternately arranged cationic and anionic permselective membranes, insulating spacers interposed between said membranes to give a series of concentration and depletion cells, means for supplying

and discharging liquids from said individual concentration and depletion cells and means of supplying an electric current across said concentration and depletion cells, the improvement which comprises using as said insulating spacer an integral sheet of semi-rigid, plastic, electrically-insulating, unexpanded spaced material incised and expanded at each incision to provide surfaces on each side of the sheet spaced from each other by a distance greater than original thickness of the unexpanded sheet, said surfaces being separated by apertures approximately rhomb-spaced with rounded obtuse angles, the plane of the material between each two adjacent obtuse angles of said rhombs being in an inclined position with regard to the plane of said surfaces.

2,948,669

PRODUCTION OF SUPERIOR NEUTRAL OILS

Nathaniel L. Remes, Elgin, and George W. Ayers, Chicago, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Nov. 17, 1955, Ser. No. 547,547
16 Claims. (Cl. 208—7)

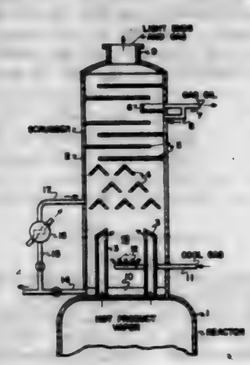
1. The process of preparing neutral lubricating oil comprising lightly cracking residual petroleum oil having a viscosity higher than that of neutral oil under conditions to convert it to distillate oil having a viscosity corresponding to that of neutral oil containing a substantial amount of unsaturated hydrocarbons, and epoxidizing said converted oil under conditions to form a substantial amount of epoxides in situ.

2,948,670

RECOVERY OF GAS OIL FROM A FLUID COKER

William W. Bray, Jr., Scotch Plains, N.J., and Murdo M. MacFarquhar, West Newbury, Mass., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 23, 1957, Ser. No. 654,549
5 Claims. (Cl. 208—100)



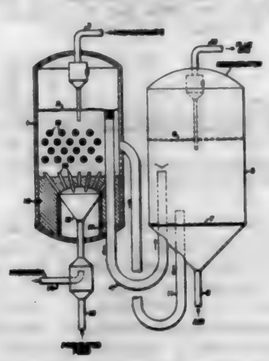
1. A process for improving recovery of gas oil from hot vaporous cracked products comprising the effluent from a fluid coking reaction zone, which comprises passing such hot vaporous cracked products directly from said coking zone into a region above the bottom of a fractionating zone and above a mixing section therein for upward flow through said fractionating zone for contact with downflowing liquid hydrocarbons therein including condensate oil and for rectification of desired fractions, collecting a residual bottoms fraction in the bottom of said fractionating zone, removing uncondensed vapors and gases overhead from said fractionating zone, cooling the introduced vaporous cracked products with said downflowing liquid hydrocarbons and enhancing recovery of a gas oil hydrocarbon fraction by introducing above the level of said collected bottoms fraction a light hydrocarbon gas having an atmospheric boiling point of less than 200° F. and at a temperature below about 300° F. into said mixing section arranged in the bottom portion of said fractionating zone, contacting said relatively cool hydrocarbon gas with said downflowing liquid hydrocarbons in said mixing section so as to cool said downflowing liquid hydrocarbons and strip volatile material therefrom while heating said hydrocarbon gas to substantially the temperature of said vaporous cracked products by the time said hydrocarbon gas reaches the region of entrance of said vaporous cracked products to said fractionating zone, and contacting said thus heated hydrocarbon gas with said hot vaporous cracked products and said downflowing liquid hydrocarbons as said heated hydrocarbon gas passes upwardly through said fractionating zone to depress the hydrocarbon partial pressure of vaporous gas oil hydrocarbons passing up through said fractionating zone without condensing gas oil hydrocarbons to increase the recovery of a liquid gas oil fraction further up said fractionating zone, said hydrocarbon gas being selected from the group consisting of C_4 and lighter hydrocarbon gases, and removing said liquid gas oil fraction from the upper portion of said fractionating zone.

2,948,671

FLUID HYDROFORMER REACTOR DISTRIBUTOR

John W. Packie, Maplewood, and Cyril O. Rhys, Jr., Morristown, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Nov. 14, 1955, Ser. No. 546,528
7 Claims. (Cl. 208—134)



7. An improved hydroforming process which comprises maintaining a dense turbulent bed of fluidized hydroforming catalyst in a reaction zone at hydroforming reaction conditions of temperature and pressure, continuously withdrawing catalyst from said dense bed, regenerating the withdrawn catalyst under fluidizing conditions in an external regeneration zone by contact with a free oxygen containing gas to remove carbonaceous deposits, returning the regenerated catalyst to the dense bed in the reaction zone, recovering vaporous conversion products overhead from said reaction zone, recovering a free hydrogen containing gas from said conversion products, heating the gas so recovered to a high temperature, mixing preheated vapors of hydrocarbons boiling in the naphtha range with the gas so heated, injecting the resulting mixture at a temperature above 1000° F. and a velocity in the range of 50 to 125 ft./sec. into said bed from a central point as a multiplicity of upwardly directed, uniformly spaced, discrete streams, the velocity of said mixture at some point in each of said discrete streams being above 140 ft./sec., one of said discrete streams being provided for every 0.90 to 1.10 sq. ft. of bed cross-sectional area, and the total holding time of said mixture from the time of mixing until injection into said bed being less than 1.0 sec.

2,948,672

IMPREGNATED PLATINUM-ALUMINA CATALYSTS FOR USE IN THE HYDROFORMING OF HYDROCARBONS

Harry M. Brennan, Hammond, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Nov. 29, 1955, Ser. No. 549,875
9 Claims. (Cl. 208—139)

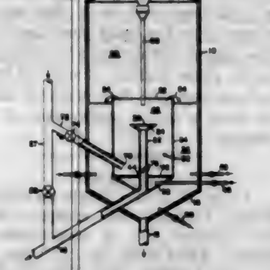
7. A hydrocarbon conversion process which comprises contacting a hydrocarbon charging stock under conversion conditions with a platinum-alumina hydroforming catalyst of improved activity having between about 0.05 and 1 percent by weight of platinum, based on dry Al_2O_3, uniformly distributed therein, prepared by impregnating solid, hydrous alumina containing between about 1 and 30 percent by weight of combined water, dry basis, with a solution of a platinum compound in a quantity whereby platinum is added thereto in a proportion within said range, and drying and calcining the resulting catalytic mixture, said impregnation being carried out in the presence of an aqueous solution of a halogen-containing aliphatic carboxylic acid having from 2 to 5 carbon atoms in the molecule and an ionization constant greater than about 10^{-3} at 25° C. in a molar ratio to alumina between about 0.001 and 0.05.

2,948,673

CATALYTIC CRACKING OF HYDROCARBONS

Charles E. Hemminger, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 30, 1957, Ser. No. 656,971
7 Claims. (Cl. 208—164)



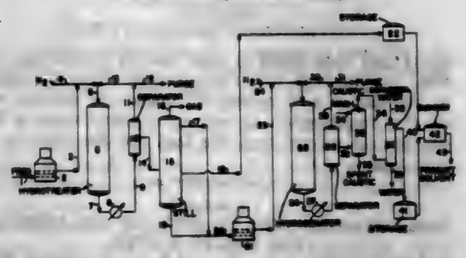
6. A method for the catalytic cracking of high boiling hydrocarbon oil feeds which comprises passing a mixture of hydrocarbon oil and freshly regenerated catalyst particles as an upwardly flowing confined stream submerged in a dense fluidized bed of catalyst particles in a cracking zone and discharging said mixture of oil and catalyst particles upwardly into said fluidized bed but at a short distance below the upper level of the dense fluidized bed, passing hydrocarbon vapors upwardly through the dense fluidized catalyst bed, removing cracked hydrocarbon vapors from above said dense fluidized catalyst bed, circulating spent catalyst from the upper portion of said fluidized catalyst bed to the lower portion thereof below the region of oil-catalyst mixture discharge into a soaking zone in the absence of added oil feed to increase the time of soaking of the spent catalyst particles and to increase the amount of cracking of residual high boiling hydrocarbons absorbed on said catalyst particles, introducing hot freshly regenerated catalyst particles into said soaking zone in the lower portion of said fluidized catalyst bed below the region of oil-catalyst mixture discharge to increase the temperature of the spent catalyst particles in said soaking zone to effect faster removal of residual high boiling hydrocarbons absorbed on said cracking catalyst, passing spent catalyst particles from the dense fluidized bed into an annular stripping zone surrounding said cracking zone and stripping the spent catalyst particles to remove volatile cracked hydrocarbons therefrom.

2,948,674

LOW ODOR SOLVENTS

Ibrahim A. Eldib, Roselle, N.J., and Laurence F. King, Mooretown, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Mar. 6, 1958, Ser. No. 719,690
14 Claims. (Cl. 208—218)



1. A process for the preparation of hydrocarbon solvents having improved odor characteristics and solvent powers which comprises desulfurizing a petroleum distillate including aromatic constituents boiling between about 360° and 390° F., recovering aromatic hydrocarbons boiling between about 360° and about 390° F. from said distillate, and blending said aromatic hydrocarbons with a substantially nonaromatic, sulfur-free hydrocarbon fraction boiling between about 100° F. and about 500° F. in proportions to produce a blend having an aromatics content of from about 1 to 25% by volume.

2,948,675

PROCESS FOR REMOVING HEAVY METALS FROM PETROLEUM WITH AN OIL-INSOLUBLE SULFONIC ACID

Everett N. Case, Homewood, and Robert Koncos, Park Forest, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 29, 1958, Ser. No. 783,148
3 Claims. (Cl. 208—252)

1. In a process for demetallizing a heavy metal containing heavy hydrocarbon, the steps comprising contacting said hydrocarbon with a liquid, oil-insoluble aromatic sulfonic acid at a temperature of up to about 150° F. in an amount sufficient to reduce the heavy metals content of said hydrocarbon and separating a hydrocarbon phase reduced in heavy metal content from a sulfonic acid phase.

2,948,676

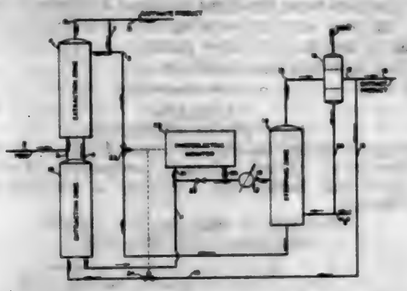
CONTROL OF SOLVENT EXTRACTION BY PHOTOELECTRICALLY MONITORING A PHASE THEREFROM

Thomas Hutson, Jr., Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed May 28, 1956, Ser. No. 587,634
6 Claims. (Cl. 208—322)

6. A solvent extraction operation which comprises extracting a feed stock with a selective solvent, obtaining and removing from the operation a raffinate phase and an extract phase, separating extract product from said extract phase and recycling a portion of said extract product as a reflux for said extraction operation, monitoring at least

one of said removed raffinate phase and extract phase by passing at least a portion of one of said phases as said phase through a photoelectric monitor wherein light passed through said phase passing through said monitor is photoelectrically detected resulting in a current of elec-



tricity and controlling at least one of the solvent feed rate, and the feed rate responsive to changes indicated by changes in said current by using said current, with suitable amplification, to operate a control upon at least one of said solvent feed, the feed and the reflux to the operation.

2,948,677

BIOFLOTATION TREATMENT OF OIL-CONTAINING WASTE WATER

Robert J. Austin, Crete, Ill., and James F. Grutsch, Hammond, and Russell C. Mallatt, Crown Point, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Filed Aug. 29, 1956, Ser. No. 606,919
2 Claims. (Cl. 210—44)



1. The method of treating oil-refinery waste water containing oil in dispersed form which comprises adjusting its acidity to a level in the pH range of about 6½ to 8½, passing said oil refinery waste water at a temperature in the range of about 40 to 100° F. in series through a plurality of aerobic zones with holding times in each zone in the range of about .3 to 3 hours, triturating air into the water at the upper surface of the water in a horizontal area extending across the upper inlet end of each of said zones to form, disperse and impel downwardly therein a myriad of fine air bubbles, restricting any increased surface flow rate and turbulence caused by the beating step to the inlet end of each zone whereby the water downstream therefrom is relatively quiescent so that growth of bacterial slime is promoted, oil and organic matter coalesce thereon and oil-slime particles are buoyed to the surface by residual components of entrapped air bubbles, skimming floating accumulated oily slime from the upper part of each zone so that substantially scum-free water is discharged therefrom and employing an average flow rate through said zones in the range of about .1 to 10 feet per minute.

2,948,678

BENEFICIATED CLAY COMPOSITIONS AND METHOD OF BENEFICIATING CLAY

Finis Turner and Edward T. Dillon, Houston, Tex., assignors to Magnet Cove Barium Corporation, Houston, Tex.

Filed Aug. 5, 1957, Ser. No. 676,190
14 Claims. (Cl. 252—8.5)

10. A composition in the production of viscous clay slurries comprising a clay selected from sodium montmorillonite and calcium montmorillonite, from 0.1 to 10 pounds per ton of clay of a copolymer selected from the group consisting of ethylene-maleic anhydride copolymer having a specific viscosity of at least 0.1 and isobutylene-maleic anhydride copolymer having a specific viscosity of at least 0.5, and, when the selected clay is of the calcium montmorillonite type, a water-soluble ionizable alkali metal compound having an anion capable of reacting with a calcium ion to form a water-insoluble precipitate, said compound being present in an amount in the range of 1 to 7 percent by weight of said clay.

2,948,679

METHOD OF PREPARING SOLID-THICKENED GREASES

Harry V. Rees, Chappaqua, and Lobbous C. Kemp, Jr., Scarsdale, N.Y., assignors to Texaco Development Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 24, 1953, Ser. No. 400,266
9 Claims. (Cl. 252—28)



1. In a continuous method for compounding a grease including a petroleum lubricating oil and finely-divided particles of a solid gelling agent, mixing relatively coarse particles of said solid gelling agent with said oil in a grease thickening proportion to form a flowable mixture; passing said flowable mixture into the initial portion of a long tubular zone; beating said flowable mixture at least to above the lower limit of the boiling range of said oil thereby vaporizing said oil and forming in said tubular zone a dispersion of particles of said solid in the vapor of said oil; passing said dispersion of solid particles in oil through the latter portion of said tubular zone at high velocity in turbulent flow such that said solid gelling agent is converted to fine solid particles of a size reduced greatly below the original size of said particles and sufficiently fine to cause gelling of said oil upon subsequent cooling; and cooling said dispersion to condense said oil vapors and form a gelled suspension of said fine solid particles therein.

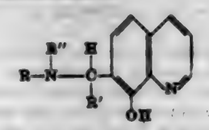
2,948,680

LUBRICANT COMPOSITIONS

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

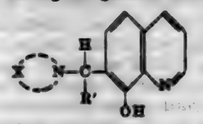
No Drawing. Filed Mar. 15, 1957, Ser. No. 646,219
10 Claims. (Cl. 252—32.7)

1. A lubricant composition comprising a major proportion of an oleaginous compound and from about 0.01% to about 10% of an oil-soluble compound selected from the class consisting of a compound having the general structural formula



(I)

and a compound having the general structural formula



(II)

in which R′ and R″ are selected from the class consisting of hydrogen, a hydrocarbon radical containing from 1 to about 40 carbon atoms, and a heterocyclic radical containing from 1 to about 40 carbon atoms, R is a hydrocarbon radical containing from 1 to about 40 carbon atoms, and X is the remainder of the nucleus of an N-hetero ring selected from the class consisting of a 5-membered N-hetero ring and a 6-membered N-hetero ring.

2,948,681

WIRE-DRAWING LUBRICATING COMPOSITION

Ernest C. Milberger, Maple Heights, and William P. Klaassman, Jr., Euclid, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Oct. 25, 1956, Ser. No. 542,771
2 Claims. (Cl. 252—33.4)

1. A composition consisting of an amount of mineral oil having a viscosity of 100 SSU at 100° F. in the range of about 23 to about 77.5% by weight of the composition, an amount of lard oil in the range of about 10 to 30% by weight of the composition, an amount of glycerol monolaurate in the range of about 5 to about 15% by weight of the composition, an amount of an oil soluble alkali metal petroleum sulfonate in the range from about 5 to about 25% by weight of the composition, and an amount of ethylene glycol monobutyl ether in the range from about 2.5 to about 7% by weight of the composition.

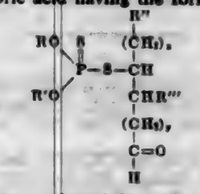
2,948,682

FORMYL TRIESTERS OF DITHIOPHOSPHORIC ACID AND LUBRICATING OIL COMPOSITIONS CONTAINING SAME

Gifford W. Crosby, River Forest, Allen F. Millikan, Crystal Lake, and Elmer W. Brennan, Dundee, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Filed Dec. 24, 1956, Ser. No. 630,088
7 Claims. (Cl. 252—46.6)

1. A lubricating oil composition comprising a major amount of an oleaginous liquid from the group consisting of mineral oil, synthetic silicones and synthetic diesters, and a minor amount, sufficient to enhance the antiwear characteristics of said liquid, of a formyl triester of dithiophosphoric acid having the formula:



where R and R′ are selected from the group consisting of saturated alkyl radicals having 2 to 20 carbon atoms, aryl and alkylaryl radicals containing from 1 to 16 carbon atoms in the saturated alkyl substituent group, R″ is selected from the group consisting of hydrogen and phenyl, R‴ is a substituent selected from the group consisting of hydrogen, methyl, and ethyl, and x and y are integers from 0 to 8, inclusive.

2,948,683

CORROSION INHIBITION OF DIMETHYL SULFOXIDE

Vincent A. Sullivan, Jr., and Tor Halfdan Smedshaug, Chicago, Ill., assignors to The Stephan Chemical Company, Chicago, Ill., a corporation of Illinois

No Drawing. Original application Jan. 4, 1954, Ser. No. 402,154. Divided and this application Dec. 6, 1957, Ser. No. 707,073
7 Claims. (Cl. 252—75)

1. A composition consisting essentially of aqueous dimethyl sulfoxide and, as a corrosion inhibitor, a soluble inert inorganic salt of a strong base and a weak acid dissolved therein in a concentration of 0.005–0.1 mol per liter and imparting a pH of 8–12 to the composition.

2,948,684

DISINFECTANT AND DEODORANT SOAP COMPOSITION

Frederik August Johan Tilsle, Vlaardingen, Netherlands, assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Filed May 9, 1958, Ser. No. 734,126
Claims priority, application Great Britain May 10, 1957
1 Claim. (Cl. 252—107)

A tablet comprising a water-soluble soap and from about 1 to about 5% of a synergistic mixture of one part of tetramethylthiuramdisulfide and from one to three parts of 3.3′.5.5′.6.6′-hexachloro-2.2′-dihydroxydiphenylmethane.

2,948,685

BORE CLEANING COMPOSITIONS

Earl E. Fisher, Glenolden, Pa., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Filed June 4, 1954, Ser. No. 434,643
4 Claims. (Cl. 252—118)

1. A bore cleaning composition comprising a mineral oil and incorporated therein from about 1 to about 15 percent by weight of water, and a sufficient amount to provide a homogeneous, bright solution of a combination of from about 0.25 to about 2.5 percent by weight of an alkanolamine selected from the group consisting of primary, secondary and tertiary alkanolamines whose alkanol substituents contain from 2 to 3 carbon atoms, 0.75 to about 10.0 percent by weight of a fatty acid containing from 12 to 24 carbon atoms, the fatty acid: alkanolamine mol ratio being in excess of 1:1, from about 0.1 to about 1.0 percent by weight of an amine salt of a primary aliphatic amine containing from 8 to 18 carbon atoms and a dialkyl orthophosphoric acid, the alkyl substituents of which contain from 3 to 10 carbon atoms, from about 1 to about 5 percent by weight of an alkali metal salt of an oil-soluble sulfonic acid, and from about 2 to about 15 percent by weight of a coupling agent selected from the group consisting of butanol, 2-butoxyethanol and diethylene glycol monobutyl ether, and an amount of ethylene glycol sufficient to render the composition stable at −20° F. for 24 hours, said amount being from about 1 to about 10 percent by weight.

2,948,686

THIXOTROPIC AND FAST BREAKING SKIN CLEANER EMULSION AND PROCESS FOR PRODUCING THE SAME

James L. Gianiadis, University City, Mo., assignor to G. H. Packwood Manufacturing Company, St. Louis, Mo., a corporation of Missouri

No Drawing. Filed July 14, 1955, Ser. No. 522,170
6 Claims. (Cl. 252—153)

1. A skin cleaning thixotropic and fast breaking skin cleaning water-in-oil emulsion composed of 20% to 70% water, 25% to 70% of a liquid, paraffinic, hydrocarbon solvent, a non-ionic hydrophilic organic detergent in an amount less than 10%, a polar organic liquid solvent selected from the group consisting of alcohol ketones, nitro paraffins and fatty acids in an amount up to 10%, and about 2% of an organo-philic quaternary ammonium clay complex, all percentages by weight.

2,948,687

HYDROGENATION CATALYST

Robert L. Hadley, Louisville, Ky., assignor to General Electric Company, a corporation of New York

No Drawing. Filed Dec. 13, 1955, Ser. No. 552,708
4 Claims. (Cl. 252—470)

1. A catalyst for use in hydrogenation processes composed of a finely divided alloy consisting essentially of

from about 0.25 to 12.0 weight percent molybdenum, and the balance substantially all nickel, said catalyst having been produced by dissolving aluminum from an aluminum-nickel-molybdenum alloy.

2,948,688
COMPOSITIONS COMPRISING 4-VINYLCYCLOHEXENE DIOXIDE
Howard L. Bender, Bloomfield, N.J., and Benjamin Phillips, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed May 21, 1957, Ser. No. 660,488
17 Claims. (Cl. 260—2)

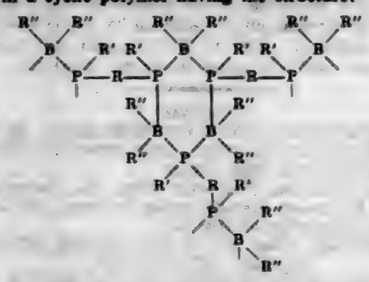
1. A curable composition comprising 4-vinylcyclohexene dioxide and an organic polyfunctional amine which contains at least two amino hydrogen atoms, said composition containing from about 0.3 to 4.0 amino hydrogen atoms of said polyfunctional amine for each epoxy group of said 4-vinylcyclohexene dioxide.

2,948,689
PHOSPHINOBORINE COMPOUNDS AND THEIR PREPARATION
Anton B. Burg, Los Angeles, and Rose I. Wagner, Montebello, Calif., assignors, by mesne assignments, to American Potash & Chemical Corporation, a corporation of Delaware
No Drawing. Filed Nov. 8, 1957, Ser. No. 695,230
17 Claims. (Cl. 260—2)

1. A phosphinoborine polymer composed of phosphinoborine monomeric units, said units having the general formula

$$[R''_2BP(R')R(R')PBR''_2]$$

wherein R is selected from the class consisting of phenylene, methylene and polymethylene, wherein R' is selected from the class consisting of aromatic radicals and aliphatic radicals and wherein R'' is selected from the class consisting of H, aromatic radicals and aliphatic radicals, each of said monomeric units being linked to two adjacent monomeric units by means of boron-to-phosphorus bonds to form a cyclic polymer having the structure:



where the additional boron valence requirements are satisfied by a phosphorus of an adjacent of said monomeric units and the additional phosphorus valence requirements are satisfied by the boron of an adjacent of said monomeric units.

2,948,690
PHOSPHORUS CONTAINING POLYURETHANES
Robert B. Fox, Glen Echo Heights, Md., assignor to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Sept. 16, 1957, Ser. No. 684,378
11 Claims. (Cl. 260—2.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preparing linear polyurethanes which comprises reacting a hydrocarbon diisocyanate in equimolar proportion with a tertiary amine salt of a trifunctional compound selected from the group consisting of hypophosphorus acid and bis (hydroxyalkyl) phosphinic acids and in the presence of an inert volatile organic solvent for the tertiary amine salt.

2,948,691
HIGH MOLECULAR WEIGHT POLYETHER URETHANE POLYMERS
Erwin Windemuth, Hermann Schnell, and Otto Bayer, Leverkusen, Germany, assignors, by direct and mesne assignments, of one-half to Mobay Chemical Company, St. Louis, Mo., a corporation of Delaware; and one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen Bayerwerk, Germany, a corporation of Germany
No Drawing. Filed May 6, 1952, Ser. No. 286,425
Claims priority, application Germany May 10, 1951
28 Claims. (Cl. 260—2.5)

2. A process for making polymers which comprises reacting a polyalkylene ether of a saturated aliphatic hydrocarbon polyol, said polyalkylene ether having at least two hydroxyl groups per molecule and a molecular weight of at least about 500, and an organic isocyanate containing only hydrocarbon radicals and NCO.

2,948,692
SHEET COMPRISING LEATHER FIBERS, ETHYLENE OXIDE-DICYANDIAMIDE CONDENSATION PRODUCT AND RUBBER LATEX AND PROCESS FOR PREPARING SAME
Donald E. Puttlitz, New York, and Carl Polowenyk, Elmhurst, N.Y., assignors to Michigan Research Laboratories, Inc., Long Island City, N.Y., a corporation of Michigan, and Electro-Chem Fiber Seal Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 1, 1957, Ser. No. 656,222
6 Claims. (Cl. 260—6)

1. The process of producing a leather sheet comprising the steps of forming an aqueous suspension of shredded leather fiber, adding an ethylene oxide-dicyandiamide condensation product to said suspension, thereafter adding to the suspension a curable elastomeric latex selected from the group consisting of polymers of 2-chloro-1,3-butadiene and natural rubber, forming the suspension into a sheet and curing the elastomer.

2,948,693
MALEIMIDE-MODIFIED OILS
Pliny O. Tawney, Passaic, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
No Drawing. Filed June 26, 1957, Ser. No. 668,023
7 Claims. (Cl. 260—21)

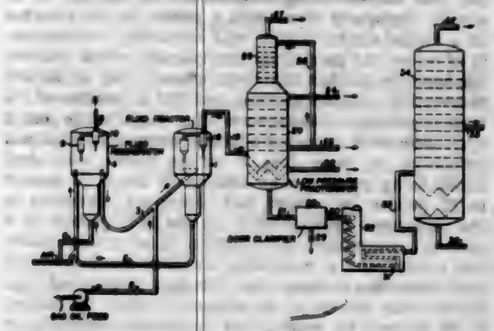
1. The liquid products of reaction of maleimide and an ester of a non-conjugated olefinic non-hydroxylated aliphatic acid having from 12 to 24 carbon atoms with a saturated aliphatic alcohol, said products being substantially free of insoluble polymers of said maleimide.

2,948,694
VINSOL-EPOXY COMPOSITIONS
Francis E. Reed, Louisville, Ky., assignor to Devoe & Raynolds Company, Inc., a corporation of New York
No Drawing. Filed Nov. 10, 1958, Ser. No. 772,733
10 Claims. (Cl. 260—24)

1. A composite article comprising at least two elements adhered together by a thin layer of a cured composition containing as its sole reactive ingredients Vinsol, a dark colored, hard, pine resin which is soluble in aromatic hydrocarbons, substantially insoluble in petroleum hydrocarbons and has an acid number of 90 to 105, and an ethoxyline resin selected from the group consisting of monomeric and straight chain polymeric epoxy ethers, esters and oils having molecular weights of 250 to 8,000,

and at least one of the ethoxyline resin cross-linking agents, urea and melamine aldehyde resins, amines, amides, boron trifluoride amine complexes and polycarboxylic anhydrides.

2,948,695
POLYVINYL CHLORIDE COMPOSITION CONTAINING HYDROCARBON TAR
Francis P. Ford, Roselle, N.J., Gabriel E. Jasper, Brownville, N.Y., and Joseph F. Nelson, Westfield, and Lester M. Welch, Madison, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Sept. 17, 1953, Ser. No. 380,724
6 Claims. (Cl. 260—28.5)



3. A composition of matter with increased flexibility comprising 100 parts of polyvinyl chloride, 10 to 45 parts of an alkyl ester selected from the group consisting of di-2-ethylhexyl phthalate, di-n-octyl phthalate, tri-2-ethylhexyl phosphate, and mixtures thereof, and 5 to 40 parts of a wax-free, asphaltene-free heavy tar; said heavy tar being prepared by providing a hydrocarbon petroleum fraction with a boiling range of about 380° to 1000° F.; cracking said hydrocarbon petroleum fraction in the presence of a finely divided silica-alumina catalyst at a temperature between about 750° and 1050° F.; distilling said cracked petroleum fraction to produce a heavy, gas-oil fraction boiling in the range of about 545° to 750° F.; subjecting said heavy, gas-oil fraction to thermal cracking at a temperature between about 850° and 1200° F.; distilling said cracked gas-oil fraction to produce said heavy tar with a boiling range between about 600° and 780° F. and a refractive index between about 1.56 and 1.65.

2,948,696
PROCESS FOR PREPARING HEAT SEALABLE FILMS, COMPOSITIONS USEFUL THEREIN AND THE ARTICLES PRODUCED THEREBY
William R. R. Park, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Aug. 1, 1958, Ser. No. 752,401
12 Claims. (Cl. 260—28.5)

5. A coating composition useful for coating the polymerizates of monoalkenyl monomers, said composition consisting essentially of (1) about 25 parts of an aqueous latex composed of 60 percent styrene and 40 percent butadiene; (2) from 15 to 40 parts of an aqueous latex of a polymer composed of about 80 percent styrene and 20 percent butadiene; (3) from 30 to 60 parts of an aqueous latex of a terpolymer composed of at least 70 percent vinylidene chloride, not more than 10 percent of an alkyl acrylate, with the remainder being vinyl chloride; (4) from 2 to 10 parts of a wax having a melting point of from about 60° to 100° C.; and (5) from 0.3 to 3 parts of a solid lubricant for said polymerizate.

2,948,697
PLASTICIZED POLYVINYL ALCOHOL COMPOSITION
James A. Robertson, Lewiston, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 23, 1958, Ser. No. 730,255
6 Claims. (Cl. 260—29.2)

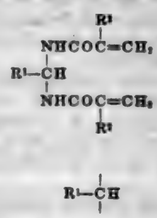
1. A composition comprising a grade of polyvinyl alcohol prepared by replacement of 85 to 95% of the acetate groups of polyvinyl acetate by hydroxyl groups and a plasticizer composition for said polyvinyl alcohol consisting of a mixed phosphate ester represented by the formula, $(C_4H_9O)_aPO[O(CH_2CH_2O)_bH]_{3-a}$, where a is an integer from 1 to 2 and b is an integer from 1 to 4, and a polypropylene glycol containing at least 90% by weight of tetrapropylene glycol.

2,948,698
POLYAMIDE MOLDING COMPOSITIONS
Alfred Joseph Cocci, Leominster, Mass., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 31, 1957, Ser. No. 675,287
14 Claims. (Cl. 260—32.6)

1. Nylon molding granules, particularly suitable for injection molding, comprising granules of a macromolecular superpolyamide having an intrinsic viscosity in m-cresol between 0.4 and 1.8, said superpolyamide being one which has carboxamide linkages forming an integral part of the polymer chains and which, upon hydrolysis, yields monomeric compounds selected from at least one member of the group consisting of (1) mixtures of dicarboxylic acids and diamines and (2) ω-aminomonocarboxylic acids, said granules having a coating of from 0.005% to 0.10% by weight of an aliphatic carboxylic amide selected from the group consisting of the monoamides and the ethylene-bis-diamides of the aliphatic monocarboxylic acids containing from 12 to 20 carbon atoms.

2,948,699
CONCRETE CONTAINING POLYMERS OF ALKYLIDENE BISACRYLAMIDE AND PROCESS OF MAKING
Roy William Roth and Daniel Elmer Nagy, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Aug. 19, 1957, Ser. No. 679,055
6 Claims. (Cl. 260—41)

1. Concrete of improved strength comprising at least 75% by weight stony aggregate and sand having incorporated therein a small but effective amount, from 0.05% to 2% by weight of said concrete, of a polymer from the polymerization in situ of a water soluble copolymerizable mixture comprising between about 0.5% and about 30% by weight of polymer of a monomeric alkylidene bisacrylamide of the formula:



in which



is a hydrocarbon residue of an aldehyde and R^2 is a member of the group consisting of hydrogen and methyl, and the copolymerizable remainder of another ethylenic comonomer of at least about 2 percent by weight solubility in water at 20 degrees centigrade, which monomeric composition is convertible by a copolymerization reac-

tion to a substantially water-insoluble mass, and the remainder essentially the hydration products of cement and water.

2,948,700

HEAT REACTING BUTYL RUBBER, HALOGENATED BUTYL RUBBER AND ZINC OXIDE, AND COMPOSITION OBTAINED THEREBY

Lawrence T. Eby, Linden, and Robert M. Thomas, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Apr. 4, 1957, Ser. No. 650,647
13 Claims. (Cl. 260—41.5)

1. In a method for processing a polymer selected from the group consisting of homopolymers of C_4 to C_7 isoolefins, isoolefin-multiolefin butyl rubber copolymers, and mixtures thereof, said polymers having viscosity average molecular weights of between about 300,000 and 15,000,000, the improvement which comprises heating said polymer, prior to such processing, at a temperature level of between about 200° and 400° F. with a minor proportion of an admixture of a halogenated isoolefin-multiolefin butyl rubber copolymer, the halogen in said halogenated copolymer having an atomic number of at least about 17, and zinc oxide.

2,948,701

FINELY DIVIDED METAL SILICATE PRODUCTS

Chester L. Baker, Narberth, and John Frankie Austin, Philadelphia, Pa., assignors to Philadelphia Quartz Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 11, 1958, Ser. No. 720,534
9 Claims. (Cl. 260—41.5)

1. In the manufacture of finely divided metal silicate products, the process which consists essentially in

(*a*) preparing an aqueous solution of sodium silicate having a weight percent ratio of Na_2O to SiO_2 within the range of from about 2:1 to 1:4 and a concentration of SiO_2 ranging from about 1 to 30 percent by weight;

(*b*) mixing said aqueous solution with a water miscible organic agent capable of coacervating silicate solutions in a quantity and under conditions tending to produce a state of incipient coacervation but without the formation of an insoluble precipitate, the incipient coacervation being indicated by the first appearance of a faint opalescence in the mixture;

(*c*) more than incipient coacervation being prevented by mixing in an aqueous solution of an insolubilizing agent comprising a metal compound which forms an insoluble silicate before the appearance of more than a faint opalescence in the mixture, and completing the mixing in of said insolubilizing agent before precipitation occurs;

(*d*) the quantity of said insolubilizing agent employed being sufficient to convert at least a substantial proportion of the sodium silicate into an insoluble precipitate, and said insolubilizing agent being mixed with the sodium silicate solution no earlier than the organic coacervating agent is mixed therewith;

(*e*) maintaining the environmental conditions of concentration, temperature and pH substantially constant during the entire period of formation of the insoluble precipitate by completing the mixing in of the insolubilizing agent within a period not substantially exceeding 10 seconds, and

(*f*) recovering the resulting finely-divided substantially gel-free precipitate.

6. The process of claim 1 wherein rubber latex is present in the mixture during the formation of the precipitate and the insolubilizing agent is one capable of coagulating the latex, whereby a rubber crumb is recovered impregnated with the finely divided metal silicate formed in the process.

2,948,702

COATING COMPOSITIONS CONTAINING ALKENYL PHENOL-ALDEHYDE RESINS AND STRUCTURES PREPARED THEREFROM

Henry A. Vogel, Richland Township, Pa., and Robert F. Roach, Milwaukee, Wis., assignors to Pittsburgh Plate Glass Company

No Drawing. Filed May 14, 1957, Ser. No. 658,977
8 Claims. (Cl. 260—43)

1. A composition which can be spread upon metal and baked to a clear, light-colored film, said composition comprising a mixture of (1) a resinous condensation product of an aldehyde containing only atoms of carbon, hydrogen and oxygen, with a mixture of alkenylphenols containing at least 4 carbon atoms in each alkenyl radical, said mixture being obtained by the reaction of an acyclic conjugated diene with a phenol in the presence of a Friedel-Crafts catalyst, and consisting predominantly of ortho- and paramonoalkenylphenols, which resinous condensation product has been refluxed with an alkanol in an acidic reaction medium, and (2) a member of the class consisting of copolymers of a vinyl halide and a vinyl ester of a saturated aliphatic monocarboxylic acid containing no more than 6 carbon atoms, said vinyl halide being present in an amount of about 50 percent to 95 percent by weight, said copolymer containing in the copolymer chain about 1 percent to 3 percent of a carboxyl component, and copolymers of a vinyl halide and a vinyl ester of a saturated aliphatic monocarboxylic acid containing no more than 6 carbon atoms, said vinyl halide being present in an amount of about 50 percent to 95 percent by weight, said copolymer containing in the copolymer chain from about 1 percent to 3 percent of a hydroxyl component, the resinous condensation product (1) in said composition being present in an amount of from 5 percent to 35 percent by weight.

2,948,703

METHOD FOR POLYMERIZING STYRENE AND ACRYLONITRILE IN THE PRESENCE OF POLYBUTADIENE AND STYRENE-ACRYLONITRILE COPOLYMER LATICES AND PRODUCT OBTAINED THEREBY

Juel P. Schroeder, Springfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Apr. 30, 1956, Ser. No. 581,278
12 Claims. (Cl. 260—45.5)

11. A strong, tough thermoplastic styrene-acrylonitrile grafted polybutadiene material made by admixing a latex of polybutadiene with a latex of a styrene-acrylonitrile copolymer composed predominantly of styrene polymerized therein, in amounts of about 0.5 to about 1.5 parts by weight of said copolymer per part of said polybutadiene, adding styrene and acrylonitrile monomers to said mixture of latices, heating the monomer-containing mixture in the presence of a free radical polymerization catalyst and polymerizing the styrene and acrylonitrile and recovering the polymeric product thus produced having a milling time at 170° C. of between about 5 to about 8 minutes.

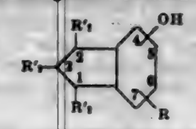
2,948,704

ALKYLATED INDANOLS AS DETERIORATION RETARDERS FOR RUBBERS

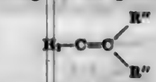
Roger E. Morris, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Filed Sept. 10, 1956, Ser. No. 608,699
6 Claims. (Cl. 260—45.95)

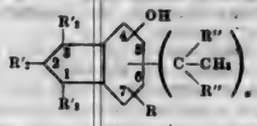
1. A sulfur-vulcanized rubbery composition comprising a rubbery diolefinic polymer in which is dispersed from 0.3 to 10 parts by weight on the said polymer of a highly effective heat stabilizing and superior anti-flex-cracking deterioration retarder resulting from the chemical reaction between an indanol and an alpha-olefin, the indanol being of the general formula



wherein R is a monovalent substituent selected from the class consisting of hydrogen and alkyl and aralkyl radicals having from 1 to 8 carbon atoms, R′ is a monovalent substituent selected from the class consisting of hydrogen and alkyl radicals having from 1 to 8 carbon atoms, the alpha-olefin being of the general formula



wherein R″ is a monovalent substituent selected from the class consisting of hydrogen and alkyl and aralkyl radicals having from 1 to 8 carbon atoms, the resulting reaction producing a deterioration retarder of the general formula



wherein each R and R″ is a monovalent substituent selected from the class consisting of hydrogen and alkyl and aralkyl radicals having from 1 to 8 carbon atoms, R′ is a monovalent substituent selected from the class consisting of hydrogen and alkyl radicals having from 1 to 8 carbon atoms, and *n* is an integer ranging from 1 to 2.

2,948,705

RESINOUS COMPOSITION

Charles Franklin Robinson, Woodbury, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Feb. 10, 1956, Ser. No. 564,633
2 Claims. (Cl. 260—47)

1. Composition of matter comprising an epoxy resin selected from the group consisting of glycidyl polyethers of polyhydric alcohols and glycidyl polyethers of polyhydric phenols and having a 1,2-epoxide equivalency greater than one and a mixture of pyromellitic dianhydride and maleic anhydride in which from 25 to 65% of the anhydride groups of the anhydride mixture are contributed by the pyromellitic dianhydride, the amount of the anhydride mixture being that which provides 0.7 to 0.9 anhydride group for each epoxide group of said epoxy resin.

2,948,706

LIGHT-SENSITIVE HIGH MOLECULAR COMPOUNDS

Wolf-Dietrich Schellenberg, Leverkusen, and Herbert Bardi, Köln-Stammheim, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Dec. 18, 1956, Ser. No. 628,991
Claims priority, application Germany Dec. 19, 1955
6 Claims. (Cl. 260—66)

1. A method for making a light-sensitive compound which comprises reacting a member selected from the group consisting of gelatin, cellulose and synthetic resinous organic compounds having at least one group selected from the class consisting of —NCO groups and groups reactive with —NCO groups containing reactive hydrogen as determined by the Zerewitinoff method and a ketone having a phenyl radical and a styryl radical joined by a ketone group, said ketone having at least one group selected from the class consisting of an —NCO group and a group reactive with —NCO groups containing reactive hydrogen as determined by the Zerewitinoff method attached to an aromatic ring with the proviso that said ketone contains a group containing reactive hydrogen when said organic compound contains an —NCO group and said ketone contains an —NCO group when said organic compound contains a group containing reactive hydrogen.

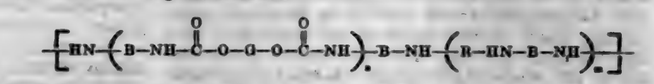
2,948,707

ISOCYANATE-BASED POLYMERS CONTAINING AT LEAST TWO DIFFERENT TYPES OF POLYMERIC SEGMENTS

Anthony F. Benning, Woodstown, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Sept. 14, 1955, Ser. No. 534,378
15 Claims. (Cl. 260—77.5)

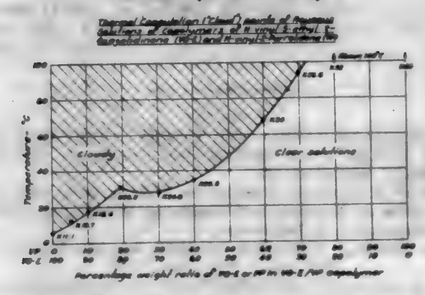
1. A segmented, isocyanate-based polymer, containing at least two different classes of polymeric radicals, said polymer consisting essentially of interconnected units having the formula:



wherein O—G—O is a bivalent, polymeric radical obtained by removing the terminal active hydrogen atoms from an organic compound having a molecular weight of at least 750 selected from the group consisting of the following classes: (1) polyalkyleneether glycols, (2) polyalkylene-aryleneether glycols, (3) polyhydrocarbon glycols of the formula HO—L—OH wherein L is a bivalent radical formed by the polymerization of ethylenically unsaturated monomers at least 50 percent of which are conjugated dienes, (4) polyalkylene-aryleneether-thioether glycols and (5) polyalkyleneether-thioether glycols; B is a bivalent, non-polymeric, organic radical, said radical being inert to isocyanate groups; R is a bivalent radical selected from the group consisting of carbonyl, non-polymeric diacyl radicals and polymeric hydrocarbon radicals containing terminal acyl groups, said polymeric hydrocarbon radicals being formed by the polymerization of ethylenically unsaturated monomers at least 50 percent of which are conjugated dienes, with the proviso that when R is a polymeric hydrocarbon radical containing terminal acyl groups, O—G—O is other than a radical obtained from said polyhydrocarbon glycol; *n* is an integer greater than zero; and *m* is an integer including zero; each of said units being connected to the next by a radical selected from the group consisting of carbonyl radicals, non-polymeric diacyl radicals and polymeric diacyl radicals the polymeric portion of which is selected from the group consisting of the following classes: (1) polyalkyleneether radicals, (2) polyalkylene-aryleneether radicals, (3) polymeric hydrocarbon radicals formed by the polymerization of ethylenically unsaturated monomers at least 50 percent of which are conjugated dienes, (4) polyalkylene-aryleneether-thioether radicals and (5) polyalkyleneether-thioether radicals, with the proviso that when said units are connected by a polymeric diacyl radical, the polymeric O—G—O radical is not of the same class as the polymeric diacyl radical; there being at least two different of said classes of polymeric radicals in the polymer with not more than 95 mol percent of any one present and at least 60 percent of the total weight of

the polymer being polymeric radicals, each of said polymeric radicals having a molecular weight of at least about 750.

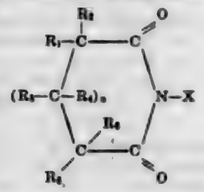
2,948,708
WATER-SOLUBLE COPOLYMERS OF RING SUBSTITUTED N-VINYL-2-OXAZOLIDINONE
Wilhelm E. Walles and William F. Tousignant, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Apr. 3, 1958, Ser. No. 726,256
6 Claims. (Cl. 260—77.5)



1. A normally solid copolymer consisting essentially of between about 1 and 99 weight percent, based on the weight of the copolymer, of copolymerized N-vinyl-5-ethyl-2-oxazolidinone with from about 99 and 1 weight percent, based on the weight of the copolymer, of a copolymerized monomer selected from the group consisting of N-vinyl-2-pyrrolidone, N-vinyl-2-piperidone, N-vinyl-2-caprolactam, N-vinyl-succinimide, N-vinyl-3-morpholinone, and their mixtures.

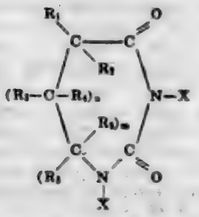
2,948,709
CATALYZED HALOGENATION OF RUBBERY COPOLYMERS
Irving Kuntz, Roselle Park, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Dec. 27, 1956, Ser. No. 630,770
10 Claims. (Cl. 260—85.3)

1. In a process for halogenating rubbery isoolefin-multiolefin copolymers, the improvement which comprises dissolving the copolymer in an inert solvent, reacting said copolymer with a cyclic N-halogeno compound as the halogenating agent at a temperature level of between about 10° and 75° C. in the presence of about 0.01 to 25 weight percent based on copolymer of a peroxide catalyst, said cyclic N-halogeno compound having a structure selected from the group consisting of:



(I)

and



(II)

n and *m* being about 0 to 20, R_1 to R_8 being selected from the group consisting of hydrogen, and C_1 to C_{18} alkyl groups, and X being selected from the group consisting of chlorine and bromine, the halogenation reaction being conducted until the copolymer contains at least about 0.5 weight percent combined halogen but not more than 3.0 X weight percent combined halogen in which:

$$X=\frac{M_3L}{(100-L)M_1+L(M_2+M_3)}\times 100$$

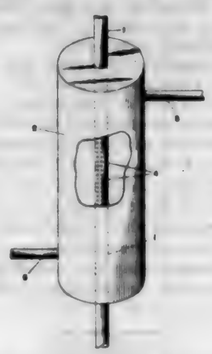
and:

L=mole percent of the multiolefin in the polymer
M_1=molecular weight of the isoolefin
M_2=molecular weight of the multiolefin
M_3=atomic weight of chlorine or bromine.

2,948,710
SUSPENSION POLYMERIZATION IN THE PRESENCE OF TRICALCIUM PHOSPHATE AND SODIUM BETANAPHTHALENE SULFONATE
Gaetano F. D'Alelio, South Bend, Ind., and Melvin Silberberg, Worcester, Mass., assignors, by mesne assignments, to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
No Drawing. Filed July 29, 1957, Ser. No. 674,556
10 Claims. (Cl. 260—85.5)

1. In a process for preparing polymer beads, the step of polymerizing in a stable aqueous suspension a polymerizable composition comprising at least one suspension-polymerizable vinyl aromatic monomer, said suspension comprising finely divided tricalcium phosphate as the stabilizing agent and containing an amount of sodium betanaphthalene sulfonate in the range of 0.1 to 2.00% by weight of total suspension.

2,948,711
PREPARATION OF POLYOLEFINS
Robert M. Kennedy, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Nov. 27, 1956, Ser. No. 624,697
8 Claims. (Cl. 260—88.2)



1. Process for the preparation of solid polymers of normally gaseous olefins which comprises contacting, under polymerizing conditions, a normally gaseous olefin with surfaces of solid particles of a catalyst consisting essentially of (A) a halide of a metal selected from the group consisting of titanium, zirconium, hafnium, vanadium, niobium, chromium, molybdenum, and tungsten in combination with (B) a metallic reducting agent therefor wherein the metal of said metal halide is present in a valence state other than its highest valence state, said catalyst particles being positioned in a multiplicity of apertures in a tubular conduit, whereby fluid communication through said apertures is blocked, said contacting occurring on only one side of said tubular conduit, whereby polymer formation occurs on the contacted surfaces of the solid catalyst particles, and subsequently contacting surfaces of the solid catalyst particles not exposed to polymer formation with a solvent for the catalyst particles, thereby dissolving said catalyst particles without dissolving the solid olefin polymer.

2,948,712
OLEFIN POLYMERIZATION CATALYST CONTAINING ALUMINUM, TITANIUM TETRAHALIDE, AND TITANIUM ALCOHOLATE
Harry W. Coover, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Apr. 3, 1958, Ser. No. 726,037
14 Claims. (Cl. 260—93.7)

1. In the polymerization of α-monoolefinic hydrocarbons containing from 3–10 carbon atoms to form solid crystalline polymer, the improvement which comprises catalyzing the polymerization with a catalytic mixture consisting essentially of aluminum and a titanium tetrahalide selected from the group consisting of tetrachloride, tetrabromide and tetraiodide in a weight ratio of 1:1.5 to 1:7 and a weight ratio of titanium tetrahalide and a titanium alcoholate selected from the group consisting of phenoxides and alkoxides wherein the alkoxide radicals contain from 1–4 carbon atoms within the range of 1:0.5 to 1:2.

2,948,713
METHOD OF PREPARING HIGH MOLECULAR WEIGHT LINEAR HYDROCARBON POLYMERS
Theodore Lemiszka, Rahway, and Stanley B. Mirviss and Isidor Kirshenbaum, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed July 5, 1957, Ser. No. 669,952
2 Claims. (Cl. 260—94.9)

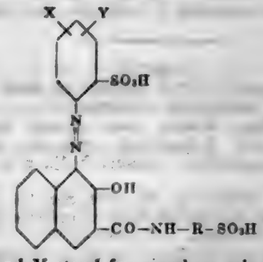
1. The process of polymerizing ethylene which comprises intimately contacting the olefin with a catalyst consisting of a triisoalkyl aluminum compound in an inert hydrocarbon diluent, the catalyst concentration in the diluent being in the range of about 15 to 80 wt. percent, under a pressure of 500 to 10,000 p.s.i.g. at 10 to 150° C. until an essentially linear, solid polymer having a Harris molecular weight of 100,000 to 3,000,000 is recovered.

2,948,714
NEW N-BENZYL PEPTIDES AND A PROCESS OF MAKING SAME
Gaston Amiard, Noisy-le-Sec, and Leon Velluz, Paris, France, assignors to UCLAF, Paris, France, a body corporate of France
No Drawing. Filed Feb. 16, 1955, Ser. No. 488,702
Claims priority, application France Feb. 19, 1954
7 Claims. Cl. 260—112)

1. In a process of producing polypeptide compounds, the steps comprising adding, portion by portion, the hydrochloride of an acid chloride of an N-benzylated amino acid to a solution, in dioxane, of an amino compound selected from the group consisting of an amino acid and a peptide, the carboxyl group of said amino compound being converted into an ester group, keeping the temperature during addition of said N-benzylated compound at a temperature between about 0° C. and about 5° C. and the pH value of the mixture at a pH between about 7.0 and about 8.0 by the addition of alkali hydroxide solution, removing the dioxane by distillation in a vacuum, extracting the reaction mixture by means of chloroform, agitating the resulting chloroform solution with hydrochloric acid, evaporating the acid-treated chloroform solution to dryness, and saponifying the hydrochloride of the ester of the resulting N-benzylated peptide by boiling under reflux its solution in methanolic alkali hydroxide solution.

2,948,715
PIGMENT DYESTUFFS
Arthur Siebert and Kurt Renner, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Aug. 19, 1958, Ser. No. 755,888
Claims priority, application Germany Aug. 23, 1957
5 Claims. (Cl. 260—204)

1. Lakes selected from the group consisting of barium, calcium and strontium lakes of azo-dyestuffs corresponding to the following general formula



wherein X and Y stand for members selected from the group consisting of hydrogen, chlorine, methyl and methoxy, R represents a member selected from the group consisting of benzene and naphthalene, and wherein the sulfonic acid group stands in p-position to the NH-group.

2,948,716
PURIFICATION OF SUGAR ESTERS
Trevor C. M. Davis, 1036 Sunnyhill Road, Oakland, Calif.
No Drawing. Filed Apr. 12, 1956, Ser. No. 577,653
2 Claims. (Cl. 260—234)

2. The method of preparing a sugar monoester in purified form from a mixture of sugar, sugar monoesters and fatty impurities comprising reducing the mixture to a form in which the sugar is substantially in a non-crystalline state, adding a heated solvent which precipitates the sugar content while dissolving the sugar monoester and said fatty impurities, separating the precipitated sugar from the hot solution, cooling the solution to cause precipitation of the desired sugar monoester, and then separating the precipitated sugar monoester from the cooled solution containing the said fatty impurities.

2,948,717
SUGAR ESTER PREPARATION AND PURIFICATION
Vigen K. Babayan, Livingston, and Agop K. Atikian, Boonton, N.J., assignors to E. F. Drew & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 14, 1959, Ser. No. 786,682
12 Claims. (Cl. 260—234)

1. The method of preparing sugar esters comprising dissolving sugar in water, making the solution alkaline, slowly adding organic acid chloride while turbulently agitating and maintaining the mixture alkaline whereby crude sugar ester is formed, maintaining the temperature of the reaction below 65° C. and at which the acid chloride is still fluid, washing said crude ester with a solution of a salt which does not change the alkalinity of the mixture and is adapted to cause precipitation of ester and soap from aqueous solutions and permitting said mixture to separate into an ester-soap layer and an electrolyte-sugar layer, removing said electrolyte-sugar layer, drying said ester-soap layer, extracting the ester with a ketone, and recovering substantially pure ester from said ketone.

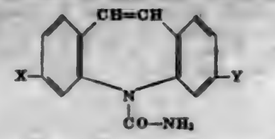
2,948,718

NEW N-HETEROCYCLIC COMPOUNDS

Walter Schindler, Riehen, near Basel, Switzerland, assignor to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 20, 1958, Ser. No. 775,120
Claims priority, application Switzerland, Dec. 20, 1957
2 Claims. (Cl. 260—239)

1. An N-heterocyclic compound of the formula



wherein each of X and Y represents a member selected from the group consisting of hydrogen and halogen.

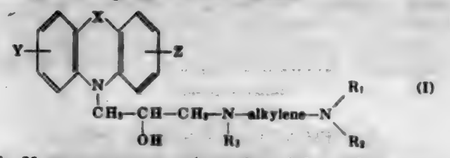
2,948,719

N-SUBSTITUTED AZEPINES AND DIHYDRO-AZEPINES

Walter Schindler, Riehen, near Basel, and Franz Hüfliger, Basel, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 11, 1958, Ser. No. 779,557
Claims priority, application Switzerland Dec. 20, 1957
6 Claims. (Cl. 260—239)

1. A member selected from the group consisting of an N-heterocyclic compound of the formula



wherein X represents a member selected from the group consisting of the ethylene and vinylene group, Y and Z represent a member selected from the group consisting of hydrogen and halogen atoms, each of R_1 and R_2 represents a lower alkyl radical, R_3 represents a member selected from the group consisting of hydrogen and a lower alkyl radical and R_2 and R_3 together represent a lower alkylene radical, and "alkylene" represents an alkylene radical having from 2 to 4 carbon atoms, the pharmacologically acceptable acid addition salts of the said compounds, and the pharmacologically acceptable quaternary ammonium salts of the said compounds with lower alkyl halides, lower alkyl sulfates, lower alkenyl halides, benzylhalides and p-chlorobenzyl halides.

2. 5 - [3' - (N-dimethylaminoethyl-N-n-propylamino)-2'-hydroxypropyl]-iminodibenzyl.

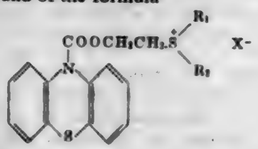
2,948,720

SULFONIUM COMPOUNDS AND THEIR PREPARATION

Stanley O. Winthrop, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 15, 1959, Ser. No. 813,346
14 Claims. (Cl. 260—243)

1. A compound of the formula



where R_1 and R_2 each represent lower alkyl and X represents a halogen selected from the group which consists of bromine and iodine.

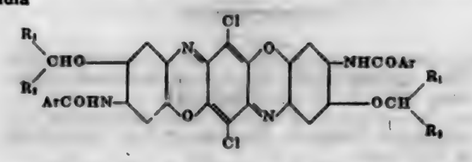
2,948,721

DIOXAZINE DYESTUFFS

Christoph Frey, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Filed July 21, 1958, Ser. No. 749,626
Claims priority, application Switzerland Aug. 28, 1957
5 Claims. (Cl. 260—246)

1. A dioxazine dyestuff which corresponds to the formula



in which R_1 and R_2 represent alkyl groups having at most 4 carbon atoms and Ar represents a member selected from the group consisting of phenyl, halophenyl, lower alkoxyphenyl, diphenyl and naphthyl.

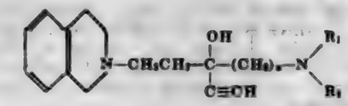
2,948,722

1-(1,2,3,4-TETRAHYDROISOQUINOLINO)-3-AMINO-3-ETHINYL-3-HYDROXY ALKANES

John H. Biel, Milwaukee, Wis., assignor, by mesne assignments, to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

No Drawing. Filed May 5, 1958, Ser. No. 732,838
7 Claims. (Cl. 260—247.5)

1. A member of the group consisting of compounds of the formulae

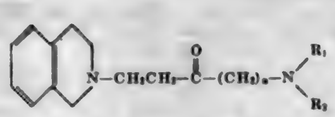


and nontoxic acid addition salts and nontoxic quaternary ammonium salts of the group consisting of methyl chloride, ethyl bromide and methyl sulfate, wherein n is an integer not less than 2 and not larger than 3, and R_1 and R_2 are members of the group consisting of lower alkyl groups and groups in which R_1 and R_2 are joined so that the group

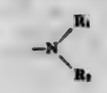


represents a member of the group consisting of the pyrrolidino, morpholino, piperidino and 4-lower alkyl piperazino.

2. A member of the group consisting of compounds of the formulae



and nontoxic acid addition salts and nontoxic quaternary ammonium salts of the group consisting of methyl chloride, ethyl bromide and methyl sulfate, wherein n is an integer not less than 2 and not larger than 3, and R_1 and R_2 are members of the group consisting of lower alkyl groups and groups in which R_1 and R_2 are joined so that the group



represents a member of the group consisting of the pyrrolidino, morpholino, piperidino and 4-lower alkyl piperazino.

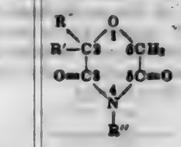
2,948,723

DERIVATIVES OF 3,5-MORPHOLINEDIONES

John B. Bicking, 138 Wayne Ave., Hatfield, Pa., Glenn S. Skinner, 74 Alastol Ave., Newark, Del., and John R. Lovett, 111 Newman St., Metuchen, N. J.

No Drawing. Filed Jan. 2, 1958, Ser. No. 706,572
3 Claims. (Cl. 260—247.7)

1. Compounds having the structure:



in which R is selected from the group consisting of hydrogen and straight and branched chain lower alkyl radicals having from 1 to 6 carbon atoms, R' is phenyl and R'' is selected from the group consisting of hydrogen, methyl and ethyl.

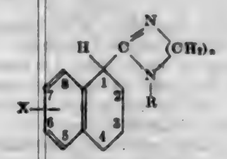
2,948,724

HALOGENATED DERIVATIVES OF TETRAHYDRO-1-NAPHTHYL CYCLIC AMIDINES

Melville Sakyan and John A. Faust, Santa Barbara, Calif.; said Faust assignor to said Sakyan, doing business as Sakyan Laboratories, Santa Barbara, Calif.

No Drawing. Filed Apr. 21, 1958, Ser. No. 729,558
8 Claims. (Cl. 260—251)

1. Halogenated 1,2,3,4-tetrahydro-1-naphthyl cyclic amidines having the formula:



wherein X represents a halogen atom selected from the group consisting of chlorine and bromine; R is selected from the group consisting of the hydrogen atom and lower alkyl radicals; and n is an integer from 2 to 3 inclusive.

5. 2 - (8 - chloro - 1,2,3,4 - tetrahydro - 1 - naphthyl) - 1,4,5,6-tetrahydro-pyrimidine.

2,948,725

5-FLUOROOROTIC ACID AND PREPARATION THEREOF

Robert Duschinsky, 11 Hawthorne Road, Essex Fells, N.J., and Charles Heidelberger, % McArdle Memorial Laboratory, University of Wisconsin, Madison, Wis.

No Drawing. Original application Sept. 26, 1956, Ser. No. 612,088, now Patent No. 2,802,005, dated Aug. 6, 1957. Divided and this application May 17, 1957, Ser. No. 659,745
5 Claims. (Cl. 260—260)

1. A compound selected from the group consisting of 5-fluoroorotic acid and salts thereof with medicinally acceptable bases.

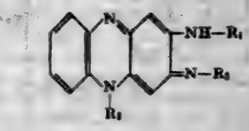
2,948,726

NEW PHENAZINE DERIVATIVES

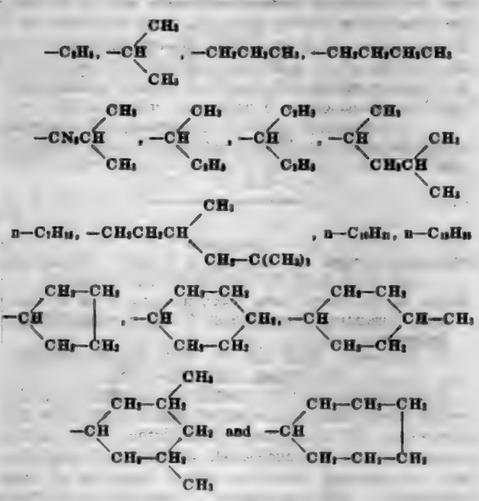
Vincent C. Barry, Rathgar, Dublin, James G. Belton, Terenure, Dublin, Michael L. Conalty, Dublin, Dermot Twomey, Terenure, Dublin, and John F. O'Sullivan, Rathgar, Dublin, Ireland, and Ernst Hodel, Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Apr. 25, 1957, Ser. No. 654,983
Claims priority, application Switzerland Apr. 27, 1956
4 Claims. (Cl. 260—267)

1. Phenazine derivatives of the formula:



wherein two of the symbols R_1, R_2 and R_3 represent the same aryl radicals selected from the group consisting of phenyl, chlorophenyl, lower alkylphenyl and lower alkoxyphenyl, and the third symbol represents a radical selected from the group consisting of



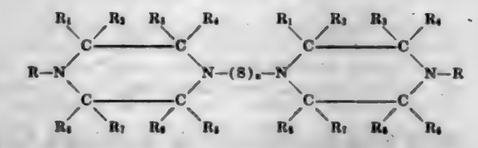
2,948,727

THIOBISPIPERAZINES

John J. D'Amico, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,862
3 Claims. (Cl. 260—268)

1. A compound selected from the group consisting of compounds of the structure



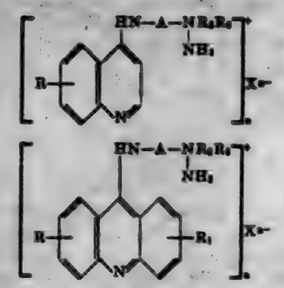
where R is selected from the group consisting of a methyl group and halogen substituted allyl, R_1, R_2, R_3, R_4, R_5, R_6, R_7 and R_8 are selected from the group consisting of hydrogen and lower alkyl and n is an integer at least two but not more than four and acid addition salts thereof.

2,948,728
QUINOLINE AND ACRIDINE COMPOUNDS

Bernard Rudner, Pittsburgh, Pa., and Aristotle G. Prapas, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Oct. 15, 1958, Ser. No. 767,259
9 Claims. (Cl. 260—279)

1. Hydrazinium-amino compounds selected from the group consisting of



and their non-toxic mineral acid salts wherein R and R_1 are substituents selected from the group consisting of hydrogen, halo and lower alkoxy; R_2 and R_3 are lower alkyl radicals; A is a divalent alkylene radical having 2 to 6 carbon atoms inclusive; X is a pharmaceutically acceptable anion; and *n* is an integer less than four.

7. 1,1 - diethyl - 1 - [4 - (3 - chloro - 7 - methoxyacridyl-9-amino)amyl] hydrazinium chloride hydrochloride.

2,948,729
PURIFICATION OF WEAKLY BASIC ALKALOIDS BY THE USE OF NAPHTHOATE SALTS

Ralph Salkin, New York, N.Y., assignor to S. B. Penick and Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Jan. 17, 1958, Ser. No. 709,478
17 Claims. (Cl. 260—286)

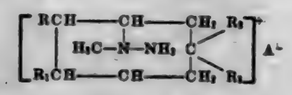
1. Sparingly soluble crystalline naphthoate salts of weakly basic Rauwolfia alkaloids selected from the group consisting of reserpine, raunormine, rescinnamine, raunescine and iso-raunescine, wherein said naphthoate salts are selected from the group consisting of alpha-naphthoate, beta-naphthoate, 1-hydroxy-2-naphthoate, naphthalene-1,8-dicarboxylate and beta-naphthoxyacetate.

2,948,730
8-AMINOTROPANIUM COMPOUNDS

Bernard Rudner, Pittsburgh, Pa., and Aristotle G. Prapas, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Filed Feb. 4, 1959, Ser. No. 791,033
8 Claims. (Cl. 260—292)

1. Compounds having the general formula:



wherein R and R_1 taken individually are hydrogen; R and R_1 taken collectively are oxygen completing the oxirane ring; R_2 taken alone is a member selected from the group consisting of hydroxyl, phenoxy and diphenyloweralkoxy; R_2 taken collectively with R_3 form a carbonyl oxygen completing the carbonyl group; R_3 taken alone is hydrogen; and A^- is a pharmaceutically acceptable anion.

2,948,731
DERIVATIVES OF THIAZOLINE-2-ONES

George de Stevens, New Providence, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey

No Drawing. Filed Dec. 13, 1957, Ser. No. 702,539
16 Claims. (Cl. 260—293.4)

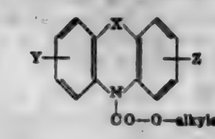
15. A member of the group consisting of a 3-R-(Z-cycloalkano)[d]thiazoline-2-one, in which R stands for a member of the group consisting of hydrogen and lower alkyl, the group Z represents a member of the group consisting of N,N-lower alkylene-imino-lower alkyl, N,N-(hydroxy-substituted lower alkylene)-imino-lower alkyl, N,N-(hydroxyl-lower alkyl substituted lower alkylene)-imino-lower alkyl and N,N-(lower alkyl-substituted lower alkylene)-imino-lower alkyl, attached to one of the carbon atoms of the cycloalkano ring, which contains from 5 to 7 carbon atoms as ring members, a therapeutically acceptable acid addition salt, a lower alkyl quaternary ammonium halide and a lower alkyl quaternary ammonium sulfate thereof.

2,948,732
N-HETEROCYCLIC COMPOUNDS

Walter Schindler, Riehen, near Basel, and Franz Hüfliger, Basel, Switzerland, assignors to Geigy Chemical Corporation, Ardsley, N.Y., a corporation of Delaware

No Drawing. Filed Dec. 11, 1958, Ser. No. 779,558
Claims priority, application Switzerland Dec. 28, 1957
6 Claims. (Cl. 260—294.3)

1. A member selected from the group consisting of an N-heterocyclic compound of the formula



(I)

wherein X represents a member selected from the group consisting of the ethylene and vinylene group, Y and Z represent a member selected from the group consisting of hydrogen and halogen atoms, Am represents a member selected from the group consisting of lower dialkylamino, pyrrolidino, piperidino and morpholino, and alkylene represents an alkylene radical having at least two and at most four carbon atoms, and the hydrochlorides thereof.

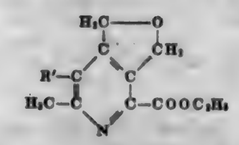
4. 5-(carbo-piperidino-ethoxy)-iminodibenzyl.

2,948,733
INTERMEDIATES FOR PYRIDOXINE AND PROCESS

Peter L. Pollak, Scotch Plains, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application Nov. 14, 1956, Ser. No. 621,983, now Patent No. 2,904,551, dated Sept. 15, 1959. Divided and this application Oct. 17, 1957, Ser. No. 690,635
5 Claims. (Cl. 260—295)

1. A compound of the formula:



wherein R' is selected from the group consisting of amino and hydroxy.

2,948,734
ESTERIFICATION OF PYRIDINE CARBOXYLIC ACIDS

Irwin W. Sanegrelet, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Filed Nov. 8, 1956, Ser. No. 620,208
8 Claims. (Cl. 260—295.5)

1. A process for preparing esters of pyridine carboxylic acids comprising reacting at reflux conditions, a mixture of a pyridine carboxylic acid with an alkanol having 4 to 5 carbon atoms in the presence of an inert, water-immiscible organic solvent and a lower alkyl sulfonic acid catalyst, said catalyst being present from about 0.1 to about 0.2 part by weight of the pyridine carboxylic acid, continuing said refluxing for no longer than 20 hours, removing formed water in the reaction as a constant boiling water-solvent azeotrope, thereafter, distilling said solvent and unreacted alcohol from the said mixture, and recovering from the residue the ester of pyridine carboxylic acid.

2,948,735
PROCESS FOR THE INTRODUCTION OF CARBOXYL GROUPS INTO HETEROCYCLIC COMPOUNDS

Bruno Blaser, Duesseldorf-Urdenbach, Werner Stein, Duesseldorf-Holthausen, and Hubert Schirp, Duesseldorf, Germany, assignors to Henkel & Cie. G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Feb. 27, 1958, Ser. No. 717,811
Claims priority, application Germany Apr. 5, 1957
11 Claims. (Cl. 260—295.5)

1. A process for the introduction of carboxyl groups into pyridine which comprises heating pyridine under anhydrous conditions to a temperature above about 350° C. in the presence of carbon dioxide and an acid-binding agent selected from the group consisting of the carbonates of alkaline earth and alkali metals and recovering pyridine polycarboxylic acids in the form of their salts.

2,948,736
NEW ANILIDES AND PROCESS FOR THEIR PRODUCTION

Henry Martin, Zurich, Switzerland, assignor to Ciba-Chemie Aktiengesellschaft, Schaffhausen, Switzerland, a Swiss company

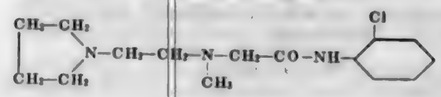
No Drawing. Filed Aug. 5, 1957, Ser. No. 676,356
12 Claims. (Cl. 260—326.3)

1. A member selected from the group consisting of amines and acid addition salts thereof, said amines having the formula

$$Y—NH—CO—R_3—X—R_1—Z$$

wherein Y is a phenyl radical substituted in the 2-position by a radical selected from the group consisting of lower alkyl, lower alkoxy, chlorine and bromine radicals, and substituted in the 6-position by a radical selected from the group consisting of lower alkyl, lower alkoxy, chlorine, bromine and hydrogen radicals, R_1 and R_3 each represents a lower alkylene radical, X represents a hetero-linking radical selected from the group consisting of —O—, —S—, —NH—, >N-lower alkyl, >N-(phenyl-lower alkyl), >N-(chlorophenyl-lower alkyl), and >N-(phenoxy-lower alkyl) radicals, and Z represents a radical selected from the group consisting of lower alkylamino, di-lower alkylamino, pyrrolidino and piperidino radicals.

3. A compound having the formula



2,948,737
PROCESS FOR THE PRODUCTION OF THIOPHENE CARBOXYLIC ACIDS

Bruno Blaser, Duesseldorf-Urdenbach, Werner Stein, Duesseldorf-Holthausen, and Hubert Schirp, Duesseldorf, Germany, assignors to Henkel & Cie, G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Filed Mar. 6, 1959, Ser. No. 797,562
Claims priority, application Germany July 30, 1958
6 Claims. (Cl. 260—332.2)

2. A process for the introduction of carboxyl groups into thiophene which comprises heating thiophene to a temperature above 300° C. and below the temperature at which substantial decomposition of the starting material and reaction products takes place in the presence of carbon dioxide, an alkali-metal carbonate and a compound capable of binding the water produced by the reaction selected from the group consisting of carbides and nitrides of aluminum, carbides and nitrides of alkali metals, carbides and nitrides of alkaline earth metals, and alkali metal carbonates in excess of that required for the neutralization of the carboxyl groups formed during the reaction and recovering thiophene-2,5,-dicarboxylic acids in the form of their salts.

2,948,738
STEROIDS AND PROCESS FOR MAKING SAME

Tadeus Reichstein, Weissensteinstrasse 22, Basel, Switzerland; Stefan Antoni Szpilfogel, Prinses Beatrixlaan 10, Oss, Netherlands; and David Adriaan Van Dorp, Hertogin Johannastngel 17, Oss, Netherlands

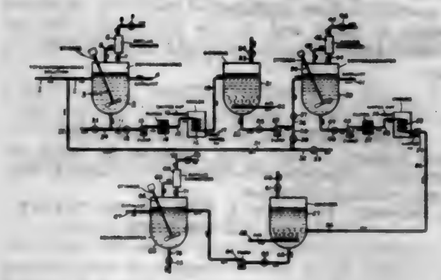
No Drawing. Filed Jan. 27, 1958, Ser. No. 711,163
Claims priority, application Switzerland Feb. 18, 1954
3 Claims. (Cl. 260—340.9)

1. A member of the group consisting of the lactone of $\Delta^{4,16}$-11β-hydroxy-17-formyl-D-homo - androstadiene - 3-one-18-acid and the 3-ketal with lower alkylene glycol.

2,948,739
CONVERSION OF TETRAHYDROANTHRAQUINONE COMPOUND TO ANTRAQUINONE COMPOUND

Robert L. Harris, Morris Township, Morris County, and Douglas R. Olsen, Morristown, N.J., assignors to Allied Chemical Corporation, a corporation of New York

Filed Jan. 9, 1957, Ser. No. 633,324
7 Claims. (Cl. 260—369)

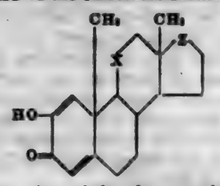


1. A process for the treatment of a mixture of alkylated anthraquinone and alkylated tetrahydroanthraquinone resulting from nuclear hydrogenation during hydrogenation of alkylated anthraquinone in the process for the production of hydrogen peroxide which comprises heating in a first stage the mixture to a temperature in excess of 150° C. in the substantial absence of hydrogen and in the presence of a dehydrogenation catalyst selected from the group consisting of palladium and platinum to effect conversion of up to 50% of the tetrahydroanthraquinone to the corresponding anthraquinone, subjecting the partially dehydrogenated mixture to oxidation with elemental oxygen, and subjecting the reac-

tion product from oxidation to a second stage dehydrogenation at a temperature in excess of 150° C. in the substantial absence of hydrogen, i.e. less than a few mol percent of hydrogen and in the presence of a dehydrogenation catalyst selected from the group consisting of palladium and platinum to effect further dehydrogenation of the tetrahydroanthraquinone.

2,948,740
2-HYDROXY-$\Delta^{1,4}$-STEROIDS
John S. Baran, Chicago, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 27, 1957, Ser. No. 686,594
7 Claims. (Cl. 260—397.4)

1. A compound of the structural formula



wherein X is a member of the class consisting of methylene and carbonyl groups and the hydroxymethylene group in which the hydroxyl radical is in the β-position and Z is a member of the class consisting of the carbonyl group and radicals of the formula

>CH—OH, >CH—O—CO—(lower alkyl), >CH—$COCH_3$,
>C(lower alkyl)—OH, >CH—CO—CH_2—O—CO—(lower alkyl),
and >C(OH)—CO—CH_2OH

2,948,741
RECOVERY OF TELOMER ACID
William S. Bernhart, Cranford, and Charles W. Weber, Jersey City, N.J., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed Mar. 21, 1956, Ser. No. 572,852
9 Claims. (Cl. 260—408)

1. A method for the recovery of a perchlorofluoroalkyl carboxylic acid from a dilute aqueous solution containing at least 98 percent by weight of water which comprises adding to said dilute aqueous solution a member of the group consisting of sulfuric and phosphoric acids in sufficient quantity to form a solution of about 1 to 10 percent by weight of added acid, thereby precipitating the perchlorofluoroalkyl carboxylic acid, and separating the precipitate.

2,948,742
HYDROGENATION OF MARINE OILS
Mykola Zajcew, Newark, N.J., assignor, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
No Drawing. Filed May 5, 1958, Ser. No. 732,812
7 Claims. (Cl. 260—409)

1. A method for hydrogenating marine oils which comprises treating the oil to be hydrogenated with hydrogen in the presence of a palladium metal catalyst to produce a hydrogenate product having an iodine number in the range of about 60–85.

2,948,743
OXO-ALUMINUM ACYLATES, ALKOXIDES AND PHENOXIDES
Jacobus Rinse, Bernardsville, N.J., assignor to J. W. Ayers & Co., Easton, Pa., a corporation of Delaware
No Drawing. Filed Sept. 8, 1955, Ser. No. 533,235
Claims priority, application Netherlands Sept. 11, 1954
9 Claims. (Cl. 260—414)

1. A process for the production of oxo-aluminum carboxylates which comprises reacting an aliphatic monocarboxylic acid free of any functional groups which would interfere with the reaction herein specified with an aluminum R-oxide in the mol proportion of substantially 1:1 during heating of the reaction mixture at a temperature of at least 150° C. whereby R-hydroxide is liberated, continuing the heating until one mol proportion of the R-hydroxide has distilled off, adding an additional mol proportion of the monocarboxylic acid to the reaction mass, heating the reaction mass at a temperature of at least 150° C. until an additional mol proportion of R-hydroxide is liberated by the reaction and distilled off, heating the resulting reaction mass to a higher temperature of at least 200° at which ester is liberated and continuing the heating until a total of substantially one mol proportion of ester has been liberated by the reaction, said R radicals being selected from the group consisting of hydrocarbon radicals of alcohols and phenols of a volatility permitting vaporization of the R-hydroxide formed in the steps hereinbefore specified.

2,948,744
PROCESS FOR THE PREPARATION OF CYCLOPENTADIENYL MANGANESE TRICARBONYL
Vincent F. Hnizda, Huntington Woods, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 12, 1957, Ser. No. 665,126
2 Claims. (Cl. 260—429)

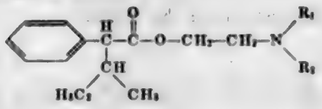
1. A process for the preparation of a monomeric cyclopentadienyl manganese tricarbonyl, said process being characterized by heating to a temperature between about 100 and 300° C. a liquid mixture of dimeric manganese pentacarbonyl with an excess of the dimer of a cyclopentadiene selected from the class consisting of unsubstituted and monoalkyl substituted cyclopentadienes in which the alkyl group has up to 4 carbon atoms, to cause the materials to react and form said monomeric compound.

2,948,745
TREATMENT OF SYNTHETIC NAPHTHA
Michael D. Riordan and Marc F. Fontaine, Fishkill, and Jack Ryer, South Wappingers Falls, N.Y., assignors to Texaco Inc., a corporation of Delaware
No Drawing. Filed Jan. 16, 1958, Ser. No. 709,166
8 Claims. (Cl. 260—450)

1. A process for the production of a motor fuel of improved quality from a synthetic naphtha produced by the catalytic hydrogenation of carbon monoxide which comprises contacting said synthetic naphtha at a temperature between about 800 and 1400° F. with a catalyst comprising zinc oxide and zinc chromite, the zinc oxide being present in an amount between 25 and 75% by weight based on the combined weights of zinc oxide and zinc chromite.

2,948,746
BASIC ESTERS OF α-ALKYL PHENOL ACETIC ACIDS AND DERIVATIVES THEREOF, AND A PROCESS OF MAKING SAME
Werner Stuehmer, Eldagsen, near Hannover, and Siegfried Funke, Hannover, Germany, assignors to Kali-Chemie Aktiengesellschaft, Hannover, Germany, a stock company of Germany
No Drawing. Filed July 14, 1954, Ser. No. 443,442
Claims priority, application Germany July 15, 1953
6 Claims. (Cl. 260—477)

3. A compound selected from the group consisting of esters having the formula



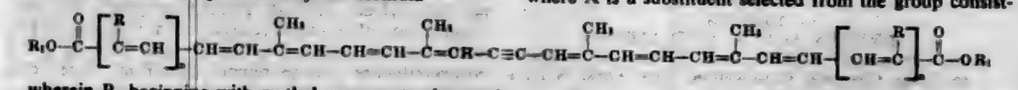
wherein R_1 and R_2 are lower alkyl and the therapeutically useful acid addition salts and lower alkyl quaternary ammonium salts thereof.

2,948,747
PROCESS OF PREPARING METALLO DERIVATIVES OF ACETOACETIC ACID ESTERS
August C. Karbum and James C. Bong, Detroit, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 1, 1954, Ser. No. 472,530
6 Claims. (Cl. 260—483)

1. A process of preparing liquid, metal organic material which comprises the steps of forming a mixture of a liquid, aliphatic ester of acetoacetic acid and in an ionic compound of a metal that reacts with said ester to form a chelate of the metal, and heating this mixture to a temperature of about 100° C. and less than 250° C. for a time sufficient to cause the above reaction and to form a product in which the metal is chemically bound but which remains liquid at ordinary temperatures.

2,948,748
POLYENE DICARBOXYLIC ACIDS AND ESTERS THEREOF
Waldemar Goez, Bottmingen, Otto Isler, Basel, Rudolf Rüegg, Bottmingen, and Gottlieb Ryser, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 24, 1958, Ser. No. 775,695
Claims priority, application Switzerland Nov. 27, 1957
13 Claims. (C. 260—485)

6. A compound represented by the formula



wherein R, beginning with methyl, represents alternately a member of the group consisting of methyl and hydrogen, R_1 represents a member of the group consisting of hydrogen and alkyl, and *n* represents an integer from 1 to 3.

2,948,749
PRODUCTION OF 1,2,3,4-TETRAHYDRO-1-NAPHTHOIC ACID
Jay S. Buckley, Jr., Groton, and Rudolph G. Berg, Noank, Conn., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 13, 1955, Ser. No. 540,339
4 Claims. (Cl. 260—515)

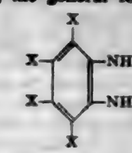
1. A process for producing 1,2,3,4-tetrahydro-1-naphthoic acid comprising hydrogenating 1,2,3,4-tetrahydro-4-oxo-1-naphthoic acid in the presence of a Raney nickel catalyst and a solvent at a pressure of at least 500 pounds per square inch and an elevated temperature of from about 110° to 175° C., said solvent being a stable organic liquid solvent for said acids and being reaction inert under said pressure and temperature conditions.

2,948,750
PROCESS FOR THE INTRODUCTION OF CARBOXYL GROUPS INTO AROMATIC HYDROCARBONS
Bruno Blaser, Duesseldorf-Urdenbach, Hubert Schirp, Duesseldorf, and Werner Stein, Duesseldorf-Holthausen, Germany, assignors to Henkel & Cie. G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany
No Drawing. Filed Sept. 25, 1957, Ser. No. 686,007
Claims priority, application Germany Oct. 2, 1956
12 Claims. (Cl. 260—515)

1. A process for the introduction of carboxyl groups into aromatic hydrocarbons selected from the group consisting of benzene and naphthalene which comprises heating said aromatic hydrocarbon to a temperature above about 350° C. and below the temperature at which substantial decomposition of the starting material and reaction products takes place in the presence of carbon dioxide, an alkali metal carbonate as an acid binding agent and a water binding compound selected from the group consisting of aluminum carbide, nitride and phosphide, alkali and alkaline earth metal carbides, nitrides and phosphides, boron, silicon, and tetraphenyl silicon, and recovering carboxylic acids of said aromatic hydrocarbons having from two to four carboxyl groups in the form of their salts.

2,948,751
PREPARATION OF ORGANO-BORON COMPOUNDS
Robert J. Brotherton, Fullerton, Calif., assignor to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada
No Drawing. Filed Aug. 8, 1958, Ser. No. 753,866
1 Claim. (Cl. 260—551)

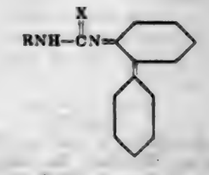
The method of producing a 5H,12H,19H-tris(benzo-1,3,2-diazaborolo)borazine which comprises heating under reflux a boric acid ester selected from the group consisting of isopropyl borate and ethyl borate with o-phenylenediamine having the general formula



where X is a substituent selected from the group consisting of hydrogen, alkyl radicals having from 1–5 carbon atoms, alkoxy radicals having from 1–5 carbon and halogen radicals, allowing the reaction mass to cool to about ambient temperature and crystallizing the borazine from the reaction mass.

2,948,752
COMBINED FUNGISTATIC AND BACTERIOSTATIC AGENTS
Ctirad Podesva, Montreal, Quebec, and Arthur F. McKay, Quebec, Quebec, Canada, assignors to Monsanto Canada Limited, La Salle, Quebec, Canada
No Drawing. Filed May 18, 1959, Ser. No. 813,697
7 Claims. (Cl. 260—552)

1. A compound of the formula



in which X is selected from the group consisting of S and O, and R is selected from the group consisting of hydrogen atom, ethyl, allyl, naphthyl, hexenyl, cyclohexenyl, benzyl, chlorobenzyl, dichlorobenzyl, hydroxybenzyl, phenyl, chlorophenyl, dichlorophenyl and hydroxyphenyl.

2,948,753
N-BIS(p-DIALKYLAMINOPHENYL)METHYL SULFONAMIDES
Frederick H. Kranz, Buffalo, N.Y., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Filed May 12, 1958, Ser. No. 734,419
14 Claims. (Cl. 260—556)

1. N-bis(p-dialkylaminoaryl)methyl sulfonamides in which the alkyl groups of the dialkylamino radicals each have 1 to 5 carbon atoms; the aryl radicals are each selected from the group consisting of phenylene and phenylene monosubstituted by a member of the group consisting of lower alkyl, lower alkoxy, fluorine, chlorine, bromine, di-lower alkylamino, lower alkanoylamino, and $-SO_2NH_2$; and the sulfonamide radicals have the formula:

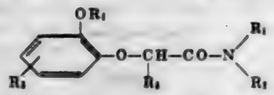


wherein:

R^5 represents a radical selected from the group consisting of (A) alkyl up to 18 carbon atoms; octadecenyl; cycloalkyl in which the ring contains 5 to 6 carbon atoms; phenyl-lower alkyl; (B) phenyl, tolyl, xylyl, naphthyl, biphenyl, indenyl, pyridyl, quinolyl, benzothiazyl, benzofuryl and phenothiazyl, and the radicals of (B) monosubstituted by a member of the group consisting of lower alkyl, lower alkoxy, fluorine, chlorine, bromine, di-lower alkylamino, lower alkanoylamino and $-SO_2NH_2$; and the naphthosultam radical which is part of the same radical jointly with R^6, and R^6 represents a radical selected from the group consisting of hydrogen and the radicals represented by R^5.

2,948,754
ARYLOXY ACETIC ACID AMIDES
Franz Litvan and Willy Stoll, Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Nov. 4, 1957, Ser. No. 694,129
Claims priority, application Switzerland Nov. 9, 1956
3 Claims. (Cl. 260—559)

1. Aryloxy acetic acid amides corresponding to the formula:



wherein:

R_1 represents a member selected from the group consisting of lower alkyl, lower alkenyl, cyclohexyl, phenyl, chlorophenyl, bromophenyl, methylphenyl, methoxyphenyl, benzyl, chlorobenzyl, methylbenzyl and methoxybenzyl, and

R_2 represents a member selected from the group consisting of hydrogen, lower alkyl and lower alkenyl radicals, and

R_1 and R_2 taken jointly represent a member selected from the group consisting of a tetramethylene and a pentamethylene radical,

R_3 represents a lower alkyl radical,

R_4 represents a lower alkyl radical, and

R_5 represents a member selected from the group consisting of hydrogen and a lower alkyl radical.

2,948,755
PREPARATION OF AROMATIC AMINES
Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Mar. 7, 1958, Ser. No. 719,763
10 Claims. (Cl. 260—581)

1. A process which comprises reacting an aromatic hydrocarbon selected from the group consisting of benzene and alkyl benzenes with anhydrous ammonia in the presence of a compound of a metal selected from the group consisting of molybdenum, tungsten and chromium and an easily reducible oxide of a metal selected from the group consisting of copper, iron, nickel, silver and gold at a temperature in the range of from about 200° to about 600° C. and at a pressure in the range of from about atmospheric to about 200 atmospheres, and recovering the resultant aromatic amine.

2,948,756
TEREPHTHALALDEHYDE PREPARATION
Irving S. Bengelsdorf, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Mar. 29, 1957, Ser. No. 649,322
1 Claim. (Cl. 260—599)

The method of preparing terephthalaldehyde which comprises heating for from 5 to 7 hours p-xylylene dichloride at a temperature of from about 102 to 110° C. with nitric acid having a concentration of from 10 to 19 percent, there being employed from about 2–50 moles of nitric acid per mole of xylylene dichloride, and removing the terephthalaldehyde from the reaction mixture.

2,948,757
TRIHYDROXY POLYOXYALKYLENE ETHERS OF GLYCEROL
Malcolm E. Pruitt and William A. Rogers, Jr., Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Dec. 7, 1953, Ser. No. 396,773
9 Claims. (Cl. 260—615)

1. A composition having exceptional antifoam properties and consisting essentially of a mixture of trihydroxy polyoxyalkylene ethers of glycerol in which the polyoxyalkylene ether chains consist of a polyoxy-1,2-propylene portion adjacent to the glycerol nucleus and a polyoxyethylene portion remote therefrom, there being an average of at least 54 oxyalkylene groups per glycerol nucleus of which there are an average of at least 48 oxy-1,2-propylene groups present constituting greater than 66 mole percent of the total oxyalkylene groups.

2,948,758
PURIFICATION OF PHENOL BY ADSORPTION OF IMPURITIES
Leo J. Filar, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 8, 1954, Ser. No. 442,219
1 Claim. (Cl. 260—621)

The method of purifying phenol produced by cleavage of cumene hydroperoxide and containing minute amounts of cumene, α-methylstyrene and butyl benzenes as genetic impurities, which comprises contacting said phenol in the liquid state with a nonpolar solid adsorbent selected from the group consisting of fuller's earth, precipitated chalk, heat activated clay, talc, bentonite and activated carbon, separating the treated phenol from the adsorbent and fractionally distilling the treated phenol to separate a fraction of pure phenol.

2,948,759
PROCESS OF NITRATING AROMATIC HYDROCARBONS AIDED BY AN AROMATIC ION EXCHANGE RESIN
Oscar L. Wright, Pittsburgh, Pa., assignor to Pittsburgh Coke & Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Feb. 11, 1958, Ser. No. 714,483
15 Claims. (Cl. 260—646)

1. A process of nitrating an aromatic hydrocarbon comprising carrying out the nitration with nitric acid in the presence of a nuclear sulfonated copolymer of a monovinyl aromatic hydrocarbon and a polyvinyl aromatic hydrocarbon ion exchange resin.

2,948,760
PRODUCTION OF DICHLORBUTENE
Clifford William Capp, Ewell, Henry Peter Crocker, Lower Kingswood, and Francis Edward Salt, Banstead, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company
Filed May 7, 1957, Ser. No. 657,661
Claims priority, application Great Britain May 15, 1956
20 Claims. (Cl. 260—654)

1. The process for the production of dichlorbutenes by the additive chlorination of butadiene-1:3 which comprises carrying out the chlorination of the butadiene in the vapor phase at an elevated temperature in the presence of another carbon selected from the group consisting of alkanes and alkenes each having four carbon atoms, and forming substantial amounts of dichlorbutenes as well as substantial amounts of a chlorinated hydrocarbon from a hydrocarbon of said group.

2,948,761
PRODUCTION OF CHLOROPRENE
Philip Aldwyn Jenkins, Ashtead, England, assignor to The Distillers Company Limited, Edinburgh, Scotland, a company of Great Britain
No Drawing. Filed Nov. 18, 1958, Ser. No. 774,605
Claims priority, application Great Britain Nov. 28, 1957
5 Claims. (Cl. 260—655)

1. A process for the production of chloroprene which comprises heating 3:4-dichlorbutene-1 with an aqueous solution of alkali in the presence of a substance furnishing thiocyanate ions selected from the group consisting of alkali metal and alkaline earth metal thiocyanates.

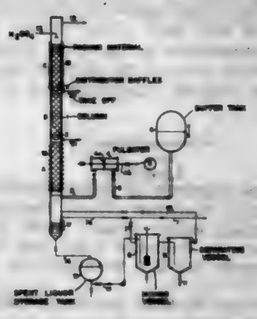
2,948,762
PROCESS FOR PREPARING ALKALINE METALS HAVING HIGH REACTIVE POWER
Werner Muench, Cesano Maderno, and Luigi Notarbartolo and Giuliana Silvestri, Milan, and Vincenzo Ruoti, Cesano Maderno, Italy, assignors, by mesne assignments, to Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A., Milan, Italy, a company of Italy
No Drawing. Filed Mar 18, 1957, Ser. No. 646,553
Claims priority, application Italy Mar. 23, 1956
7 Claims. (Cl. 260—665)

1. A process of forming an alkali-metal compound of a normally solid polynuclear aromatic hydrocarbon containing 2–10 atoms alkali-metal comprising stirring an alkali-metal with said aromatic hydrocarbon for at least about two hours in an inert anhydrous liquid hydrocarbon at atmospheric temperature under a non-oxidizing atmosphere and then heating to about 100° C. to about 110° C. with stirring until a dark precipitate forms.

2,948,763
ALKYLATION OF AROMATIC COMPOUNDS
Richard D. Ashmore, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 17, 1954, Ser. No. 437,589
10 Claims. (Cl. 260—671)

1. An improved process for producing alkylated aromatic hydrocarbons which comprises forming an organometal halide complex catalyst by reacting aluminum with an anhydrous hydrogen halide in a hydrocarbon medium, separating the aluminum halide formed from the hydrocarbon medium as a slurry, reacting said slurry with an aromatic hydrocarbon and an olefin, and introducing the preformed complex catalyst thus produced into an alkylator with an alkylatable aromatic hydrocarbon and an olefin under conditions for alkylating said aromatic hydrocarbon with said olefin.

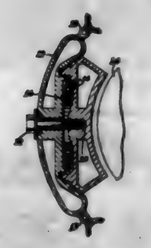
2,948,764
PROCESS FOR REDUCING THE QUANTITY OF THIOPHENES IN AN AROMATIC HYDROCARBON
Adriaan P. Oele, Mathias J. G. Muytjens, and Johan R. H. Goris, all of Geleen, Netherlands, assignors to Stamicarbon N.V., Heerlen, Netherlands
Filed July 25, 1958, Ser. No. 751,026
Claims priority, application Netherlands July 29, 1957
7 Claims. (Cl. 260—674)



1. A process for reducing the quantity of thiophenes in an aromatic hydrocarbon by treatment thereof with sulphuric acid having a concentration of at least 95%, said process comprising the steps of counter-currently and continuously passing said sulphuric acid and said hydrocarbon in the liquid state at a temperature between 20 and 45° C., through a packed vertical column containing solid packing material and having a free space therein amounting to from 50 to 96% of the space occupied by the packing, the hydrocarbon being passed upwardly through said column, and pulsating the liquids during their passage through said column, from 100–300 pulses being imparted to the liquids per minute.

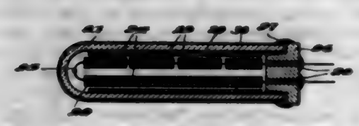
ELECTRICAL

2,948,765
ELECTRODE HOLDERS FOR ELECTRIC SMELTING FURNACES
Nils Johan Haavik, Oslo, Norway, assignor to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway
Filed Apr. 11, 1958, Ser. No. 727,947
Claims priority, application Norway Apr. 17, 1957
6 Claims. (Cl. 13—16)



1. In an electrode holder an external pressure ring forming a substantial cylinder about the electrode so that it can conveniently pass through the roof of an electric furnace, a plurality of contact clamps within the ring adapted to be pressed against an electrode and a disc spring associated with each clamp located in a plane substantially perpendicular to the radius of said pressure ring and interposed between the pressure ring and each contact clamp so that the cylindrical form of the holder is not distorted.

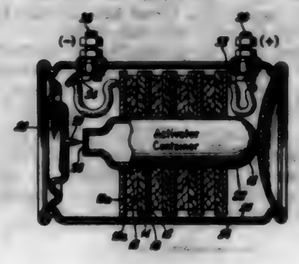
2,948,766
TUNGSTEN/RHENIUM THERMOCOUPLES
Günther Schneider, Frankfurt (Main), Eschersheim, and Alfred Boettcher, Hanau (Main), Hohe Tanne, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
Filed Apr. 30, 1956, Ser. No. 581,478
Claims priority, application Germany Apr. 30, 1955
10 Claims. (Cl. 136—5)



10. A thermocouple which comprises one element composed of rhenium and another element composed of a refractory metal from the group consisting of tungsten and molybdenum, said elements being joined at one end.

2,948,767
GAS-ACTIVATED PRIMARY CELLS
Richard E. Johnson, Cleveland, William G. Darland, Jr., Parma, Carl A. Grulke, Berea, Nelson C. Cahoon, Fairview Park, and Hugh F. Schaefer, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Filed Aug. 3, 1956, Ser. No. 601,865
22 Claims. (Cl. 136—90)

1. A deferred action, primary galvanic cell adapted to be activated by a gas selected from the group consisting of boron trifluoride and silicon tetrafluoride, which comprises a consumable metal anode selected from the group consisting of zinc, nickel, cadmium, lead, aluminum, iron, manganese, and magnesium; a metal oxide depolarizer; a bibulous separator permeable to gas and containing dry electrolyte-forming materials adapted to provide water

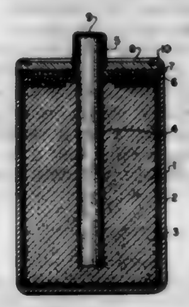


upon reaction with said selected activating gas, said electrolyte-forming materials being electrically insulated from contact with an electrode of said cell until said activating gas is admitted thereto; and means providing access for said gas to said electrolyte-forming materials.

2,948,768
SULFAMATE PRIMARY CELL
Samuel Ruben, 52 Seacord Road, New Rochelle, N.Y.
Filed Oct. 14, 1957, Ser. No. 690,126
5 Claims. (Cl. 136—100)

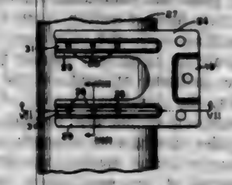
1. A primary dry cell comprising a magnesium anode, a cathode depolarizer comprising a mixture of an oxide of copper and carbon, and an electrolyte absorbed in said cathode depolarizer, said electrolyte being composed of an aqueous solution of a sulfamate salt of a metal which is not displaced by magnesium.

2,948,769
ELECTRIC CURRENT PRODUCING CELL
Samuel Ruben, 271 North Ave., New Rochelle, N.Y.
Filed Oct. 3, 1957, Ser. No. 687,927
8 Claims. (Cl. 136—102)



1. An electric current producing cell comprising a zinc anode, a substantially neutral electrolyte composed of an aqueous solution of a sulfamate salt selected from the group consisting of alkali metal sulfamates, zinc sulfamate and magnesium sulfamate being substantially devoid of free sulfamic acid, and a cathode depolarizer the major portion of which is composed of mercuric dioxysulfate.

2,948,770
MOUNTING FOR COMBINED CAPACITOR ARRANGEMENTS
Anthony J. Rancito, Williamstown, and Harold V. May, Pittsfield, Mass., assignors to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Aug. 29, 1957, Ser. No. 681,016
2 Claims. (Cl. 174—52)



1. A bracket for supporting an electrically charged metal container having in combination a flat plate, a cut-out portion of said plate, a pair of parallel-extending legs formed in said plate by said cut-out portion, an oval metal container, said legs being curved to conform to the exterior surface of said container, a U-shaped channel in each of said legs, a narrow strip of surface formed on each channel and running longitudinally of the channel in contact with said container surface, a series of small area depressions in said strip welding the channel to said container-surface and the end of said bracket remote from said legs being provided with a dish-shaped means for receiving a complementary bracket member.

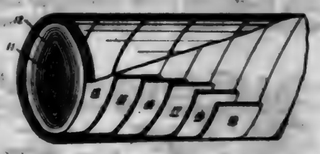
2,948,771
PLUG-IN BUSWAY
Lawrence E. Fisher, Southington, Conn., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1956, Ser. No. 619,580
1 Claim. (Cl. 174—99)



An electric power busway comprising a plurality of elongated generally parallel bus bar conductors, an elongated generally rectangular housing, insulating means supporting said bus bar conductors in side-by-side relation in a row transversely of said housing, comprising a plurality of insulating spacer blocks between said bus bar conductors, said insulating spacer blocks comprising a generally rectangular block of insulating material having a shoulder provided on one lateral face thereof adapted to support the edge of one of said bus bar conductors, and a generally rectangular projecting area on the opposite face of said insulating block adapted to press against a side of one of said bus bar conductors and to retain said bus bar conductor on the shoulder portion of the adjacent insulating spacer block.

2,948,772
NEOPRENE COMPOUND, SELF-ADHERING TO LEAD
Louis A. Bopp, Fair Haven, N.J., assignor to General Cable Corporation, New York, N.Y., a corporation of New Jersey
Filed Jan. 25, 1960, Ser. No. 4,531
2 Claims. (Cl. 174—107)

2. An electric cable comprising a conductor, insulation therefor, a lead sheath enclosing the insulated conductor, and a neoprene jacket over said lead sheath, the said neoprene jacket being characterized by its being closely adhered directly to the lead, the adherent face

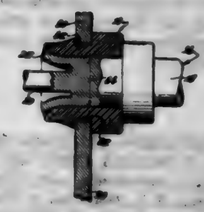


immediately adjacent the lead consisting essentially of a composition containing the following:

	Parts by weight
Neoprene	100
Gilsonite	30 to 85

wherein the gilsonite contains about 3 to 15 percent by weight of paraffin and about 2 to 15 percent by weight of microcrystalline wax, the total wax content of said gilsonite being at least about 11 percent, with at least 3 percent being paraffin.

2,948,773
ELECTRICAL TERMINAL HAVING INSULATING BUSHING
Roland C. Hawes, 771 Oakglade Drive, Monrovia, Calif., assignor to Applied Physics Corporation, Pasadena, Calif., a corporation of California
Filed Apr. 29, 1955, Ser. No. 504,925
11 Claims. (Cl. 174—153)



8. An electrical terminal unit including a preformed resilient insulating bushing having first and second large terminal parts joined by a narrow intermediate part of reduced external diameter, said second terminal part being tapered toward one end of said bushing with the large end of said tapered part being adjacent said intermediate part, and a single-piece metallic pin passing through said bushing, said pin having an enlarged portion on one side thereof normally resting on the external side of the first large part of said bushing, said pin also having a locking portion extending through said second large member, said locking portion being bendable to engage said second large portion of said bushing parts to compress said bushing between said locking portion and said enlarged portion of said pin and against opposite surfaces of a terminal board, said tapered part being deformable to permit insertion through a terminal board hole that is smaller than said tapered part.

2,948,774
COLOR KILLER SYSTEM
George W. Singleback, Pennsauken, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 2, 1955, Ser. No. 485,681
10 Claims. (Cl. 178—5.4)

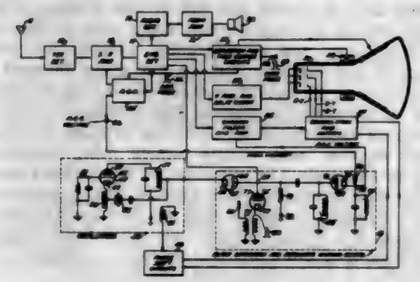
1. In a color television receiver, the combination of, a source of television signals which contain color synchronizing bursts during color transmission and in which signals there is an absence of said color synchronizing

bursts during monochrome transmission, chrominance amplifier means, means to apply a selected frequency range of said television signals to said amplifier means, means coupled to said source for converting said color synchronizing bursts into a first continuous signal during color transmission, means for generating a second con-



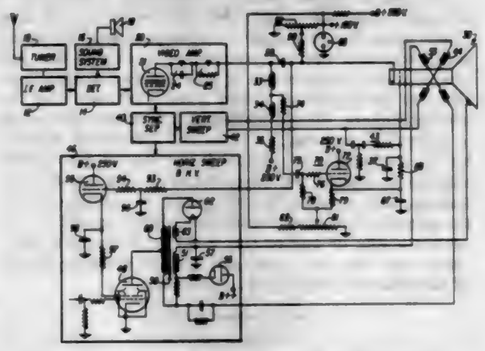
tinuous signal during both color and monochrome transmission, means responsive to said first and second continuous signals to develop a reference signal indicative of the presence or the absence of said color synchronizing bursts, and means for utilizing said reference signal for disabling said amplifier means in the absence of said color synchronizing bursts.

2,948,775
COLOR TELEVISION AUTOMATIC CHROMA CONTROL CIRCUIT
Norbert D. Larky, Somerville, and Charles B. Oakley, Hamilton Square, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Continuation of abandoned application Ser. No. 463,448, Oct. 20, 1954. This application June 2, 1958, Ser. No. 739,434
8 Claims. (Cl. 178—5.4)



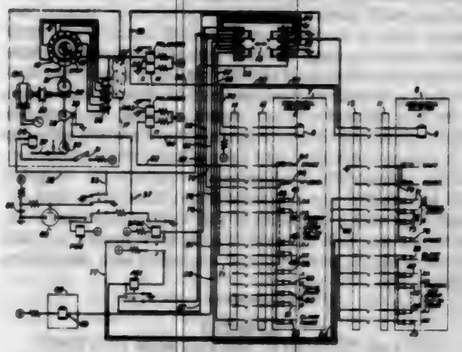
5. In a color television receiver adapted to receive a color television signal which includes color synchronizing bursts having a predetermined phase and frequency, a chrominance signal, a luminance signal, and deflection synchronizing signals, an automatic chroma control circuit comprising in combination, a chrominance signal amplifier adapted to be supplied with at least said chrominance signal and having a gain control means, an oscillator circuit means including at least a piezo-electric crystal oscillatory circuit which has a resonant frequency substantially that of said color synchronizing burst, a first rectifier device, a second rectifier device, each of said first and second said rectifier devices having at least an anode and a cathode, a potential source and a resonant circuit, means for coupling said color television signal, said potential source and said resonant circuit to the anodes of both said first and said second rectifier devices, means for coupling the cathode of said first rectifier circuit to said oscillator circuit means, a keying signal generator including apparatus for producing pulses which have duration intervals corresponding to and coinciding with the duration interval of said color synchronizing burst and means for applying said pulses to the cathode of said second rectifier device whereby during the duration interval of said pulses said color synchronizing bursts are caused to pass through said first rectifier device and through said piezo-electric crystal oscillatory circuit means to perform the function of phase control of the oscillations produced by said oscillator circuit means and whereby said oscillations of said oscillator circuit means and also said color synchronizing bursts are caused to be both produced across said resonant circuit, a detector circuit means coupled to said resonant circuit and having an output circuit at which appears a first reference signal which is therefore indicative of not only the amplitude level of said color synchronizing burst but also of the amplitude level of said oscillations produced by said oscillator circuit means, an automatic gain control circuit means responsive to said color television signal and including apparatus for producing a second reference signal which is indicative of the strength of said deflection synchronizing signals, means for applying said second reference signal to the output circuit of said detector circuit means whereby a composite reference signal made up of prescribed magnitudes and polarities of said first reference signal and said second reference signal is produced, and means for applying said composite reference signal to said gain control means whereby the gain of said chrominance amplifier varies with a predetermined relationship with respect to the amplitude of said composite reference signal.

2,948,776
TELEVISION RECEIVER
Richard A. Kraft, Elmhurst, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed June 16, 1958, Ser. No. 742,267
3 Claims. (Cl. 178—7.5)



1. A cathode ray reproducing system with a high voltage regulating system, including in combination, a cathode ray tube having cathode, grid and anode electrodes for producing and controlling an electron beam, circuit means for applying display signals between said cathode and grid electrodes, a potentiometer for biasing said cathode electrode with respect to a reference point, resistor means connecting said potentiometer to said cathode electrode, a sweep system providing signals at line and field frequencies for deflecting the beam in said cathode ray tube, said sweep system having horizontal output circuit means with an output tube driving a transformer and rectifier circuit to provide line deflection signals and a high voltage energizing potential with respect to the reference point for said anode electrode of said cathode ray tube, said output tube having a plurality of electrodes including a screen grid, control circuit means including a control tube having a control grid and further having an anode and cathode series coupled in an energizing circuit for said screen grid of said output tube, and a passive direct current conductive circuit connected between said cathode electrode of said cathode ray tube and said control grid of said control tube so that an increase in beam current in said cathode ray tube causes increased conduction of said control tube and said output tube, whereby the line deflection signals and the high voltage energizing potential are regulated as a direct function of the beam current in said cathode ray tube.

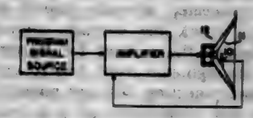
2,948,777
TEST SET FOR SELECTOR MECHANISM
Clayton F. Andrews, West Springfield, Mass., and Daniel W. Chamberlin, Westeagh, and James T. Nolswinter, Garden City, N.Y., assignors to American Telephone and Telegraph Company, a corporation of New York
Filed Mar. 19, 1956, Ser. No. 572,290
5 Claims. (Cl. 178—69)



1. In a test apparatus for a signal responsive selector mechanism having selectable members operable selectively in response to predetermined signals and answer-back signal generating means activated incident to selective operation of certain of said selectable members, a signal transmitter connected to transmit to said selector mechanism, a signal storage record for controlling said transmitter including said predetermined signals, a start magnet for said transmitter having an energizing circuit, means controlled by said transmitter in each transmitting cycle for interrupting said energizing circuit, and timing means for effecting delayed reclosure of said circuit for precluding transmission of a signal during operation of said answer-back signal generating means.

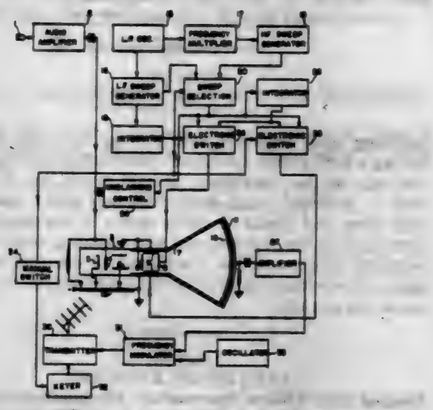
2,948,778
SOUND REPRODUCING MEANS
Warner W. Clements, Los Angeles, Calif. (13435 Java Drive, Beverly Hills, Calif.)
Filed May 7, 1956, Ser. No. 583,106
16 Claims. (Cl. 179—1)

6. A marketable component of sound reproducing apparatus comprising a moving-coil type loudspeaker and a direct-measuring accelerometer, said accelerometer



being built-into said loudspeaker in such a manner as to be responsive to vibrations of the moving system thereof.

2,948,779
SCRAMBLING SYSTEM
James L. Russell and Elvin E. Herman, Washington, D.C.
Filed Dec. 16, 1943, Ser. No. 514,484
1 Claim. (Cl. 179—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

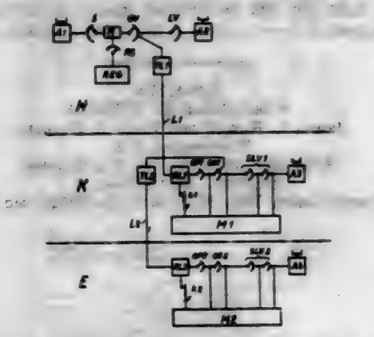


In combination, a cathode ray tube including an electron gun for generating an electron beam, a target receiving said beam, sweep generator means comprising a low frequency saw-tooth generator, a medium frequency saw-tooth generator operable at a frequency which is a selected multiple of said low frequency, and a high frequency saw-tooth generator operable at a frequency which is the said selected multiple of the medium frequency, beam deflection means, means for applying the low and medium frequency saw-tooth waves to the beam deflection means to sweep the beam over a locus of adjacent parallel paths defining an area on the target, means becoming operative on the completion of said locus to apply the medium and high frequency saw-tooth waves to the beam deflection means to retrace said target area with a second locus of parallel paths orthogonal to the first paths at a higher velocity, beam modulation means operative to apply an intelligence signal to the beam during one sweep locus generation, and output circuit means responsive to the progressive voltage shift of the target during the other sweep locus generation.

2,948,780
AUTOMATIC TELEPHONE SYSTEM
Anders Karlby Bergmann, Hagersten, Jan Brynildsen, Stockholm, and Johan Claes Georg Bergstrom and Jacques Bernhard Goos, Hagersten, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Nov. 7, 1956, Ser. No. 620,908
Claims priority, application Sweden Jan. 9, 1956
2 Claims. (Cl. 179—16)

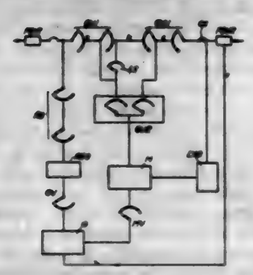
1. In an automatic telephone system, in combination, an originating register, a switching stage composed of cross-bar switches, a marker, a two-conductor trunk line terminating in said switching stage, means connecting

said register to said trunk line, means connecting said switching stage to said marker, signal receiving means in said marker connected between ground and the two conductors of said trunk line, contacts controlling signal transmitting relays in the register for transmitting consecutive signals through said trunk line to said signal receiving means by connecting different potentials between ground and the two conductors of said trunk line, an



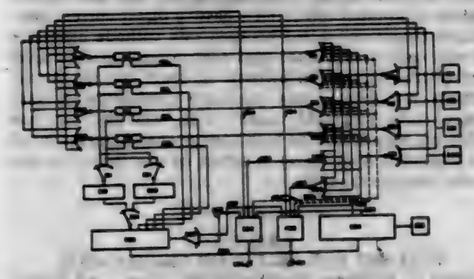
initiating relay means in said register including a relay having a high ohmic resistance connected between ground and one of the conductors of said trunk line in series with a potential, said high resistance relay operating each time said signal receiving relays in the marker are connected to the register, and said initiating relay means switching said trunk line conductors to contacts on said signal transmitting relays for the transmission of a signal to the marker.

2,948,781
ELECTRONIC REGISTER
Gunnar Erik William Sparrendahl, Johanneshov, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Aug. 27, 1956, Ser. No. 606,492
Claims priority, application Sweden Aug. 31, 1955
4 Claims. (Cl. 179—18)



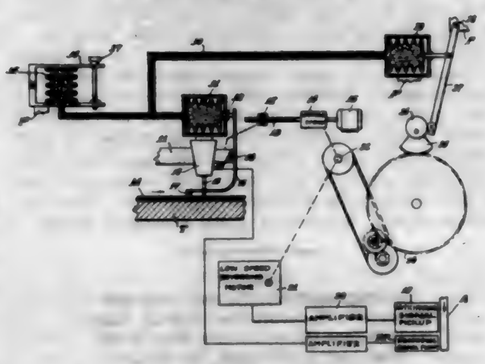
1. In an automatic telephone system an electronic register for receiving, recording and retransmitting data including digits dialled by a calling subscriber and required for establishing a connection, said system comprising at least one magnetostrictive delay line memory means including at least one transmitting coil at one end and at least one receiving coil at the other end for storing the data received, means for recirculating the data information in said line as a time division pulse code, the value of each datum being determined by how many and which of a number of possible time positions pulses, means for introducing said information into the delay line in a determined sequence, means for connecting a utilization circuit to the register, means for transferring the information stored in said delay line to said utilization circuit in the same pulse code as is used in the delay line, and a second delay line for storing synchronization pulses to control the reception of information and the transmission of information from said first delay line.

2,948,782
AUTOMATIC TELEPHONE EXCHANGES HAVING CONNECTIONS TO EXTERNAL LINES
Willem Hendrik Johannes Nicolai, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed May 19, 1958, Ser. No. 736,072
Claims priority, application Netherlands June 7, 1957
4 Claims. (Cl. 179—18)



1. An automatic telephone exchange of the type having a plurality of subscribers sets and at least one external line, said exchange comprising at least one register means, a plurality of connecting circuit means, first reducing stage means connecting said register means to said connecting circuit means, second reducing stage means connecting said subscribers sets to said connecting circuit means, selecting stage means, controlling means operable in cooperation with said register means to selectively connect said connecting circuit means to a desired subscribers set by way of said selector means, external line repeater means connected to said external line, and line selecting stage means connected to said repeater means, said controlling means being operable in response to outgoing calls to establish a connecting channel between said external line and a subscribers set, said connecting channel comprising said external line repeater means and said line selecting stage means and excluding said connecting circuit means.

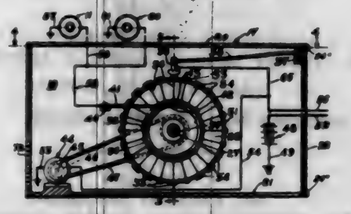
2,948,783
CUTTER CONTROL MEANS FOR CUTTING RECORDING GROOVES
Lawrence J. Scully, 62 Walter St., Bridgeport, Conn.
Filed May 23, 1958, Ser. No. 737,319
5 Claims. (Cl. 179—100.4)



1. In a machine for cutting recording grooves in a master, means for supporting said master for rotation,

cutter means for cutting a groove in said master in accordance with a signal, means including a closed fluid circuit having a first bellows operable to displace fluid in said circuit and a second bellows connected to the cutter means for controlling the depth of cut made by said cutter means and for varying the depth of cut in accordance with the displacement of the fluid in said circuit by said first bellows, and means connected to the first bellows for operating said first bellows to displace said fluid to vary the depth of cut.

2,948,784
SIGNAL TRANSMITTER FOR AUTOMOBILES—SOS FLASHER
Milton R. Yarger, 300 1st St., Morgantown, W. Va.
Filed Oct. 24, 1956, Ser. No. 617,968
3 Claims. (Cl. 200—38)



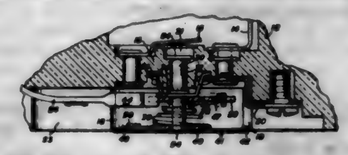
1. A signal transmitter for automobiles or the like comprising a substantially circular plate of electrically non-conductive material, means rotatably mounting said plate about its central axis, said means comprising a rectangular housing having front and rear, top and bottom walls, aligned bearing members on the inner face of said front and rear walls, a shaft mounted within said bearing members and connecting the same, said bearing members being spaced apart, said plate having a central rearwardly extending hub rotatably mounting said shaft with the rear end of said hub abutting said rear wall bearing, said plate having a forwardly extending hub portion receiving said shaft therethrough and abutting the rear end of said front wall bearing, a plurality of angularly spaced electrical contacts mounted on the periphery of said plate, a hollow cylindrical conductor of less diameter than said plate mounted on one face thereof concentric therewith, a plurality of angularly spaced, radially extending conductors connecting each of said first contacts with said cylindrical conductor, a stationary contact adapted to contact said first contacts upon rotational motion of said plate continuously, a second stationary contact continuously contacting said cylindrical conductor during rotation of said plate and electric motor means for rotating said plate.

2,948,785
IGNITION TIMER
Orrin H. Thomas, Williamsport, Pa., assignor to Joseph G. Saricks, Clearfield, Pa.
Filed June 11, 1959, Ser. No. 819,751
1 Claim. (Cl. 200—30)



In an ignition timer for internal combustion engines, an assembly plate, a spring tensioned arm oscillatably mounted on said assembly plate, said assembly plate having a flange in the path of the free end of said spring tensioned arm, a pair of elongated cylindrical contacts secured to said flange, said pair of contacts being arranged in spaced parallel relation with respect to each other, said contacts being secured to said flange throughout the entire longitudinal junction between the contacts and flange, said spring tensioned arm having a single elongated cylindrical contact secured thereto and said single contact being adapted to pass into and partially between said pair of contacts to provide peripheral contacting engagement with the pair of contacts, the longitudinal axis of said single contact being parallel to the longitudinal axes of the pair of contacts, said single contact having its longitudinal axis perpendicular to the longitudinal axis of the adjacent portion of the arm, all three of said contacts being of elongated cylindrical formation and all of said contacts being of the same diameter, the distance between said pair of contacts being slightly less than the diameter of said single contact.

2,948,786
PULL CHAIN MECHANISM FOR BOX MOUNTED LAMP HOLDER
Donald W. Scott, Syracuse, N.Y., assignor to Pass & Seymour, Inc., Syracuse, N.Y., a corporation of New York
Filed Nov. 21, 1958, Ser. No. 775,601
8 Claims. (Cl. 200—51.15)

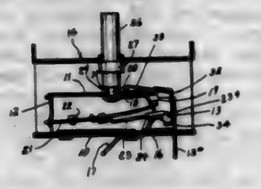


1. In a pull chain type of switch housed in a well of insulating material having stationary switch contacts on the bottom thereof and an opening in said bottom, in combination, a headed fastener extending through said opening, a contact bridge rotatable on said fastener for cooperation with said contacts, a chain actuated disc oscillatable between limits on said fastener to drive said bridge, a conical spring having its small end secured to the chain disc, a dust-cover for closing said well having a central opening receiving said fastener, means to secure the large end of the spring non-rotatively to said cover, a peripheral seat for said cover in the insulating material surrounding the top of the well, means on said cover and seat whereby to interlock them in each of several relative adjusted positions whereby the spring tension may be adjusted by relative rotation of cover and well housing, and said fastener being secured over said cover to complete the assembly and fix the adjustment.

2,948,787
CIRCUIT BREAKER WITH SAFETY RESET
Cleon F. Frey, R.R. 2, Sebastian, Fla., and Myron F. Melvin, 1107 Layman Ave., Indianapolis, Ind.
Filed Apr. 16, 1959, Ser. No. 806,821
7 Claims. (Cl. 200—116)

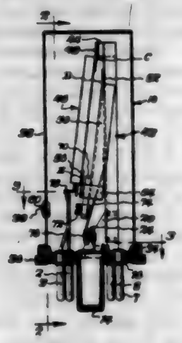
1. An overload circuit breaker comprising a base plate and an overlying housing, a fixed contact mounted on the base plate, a tripping element pivotally mounted at each of its ends adjacent said fixed contact and including a bimetal blade, said tripping element being under deforming compressive stress and movable between first and second stable positions on opposite sides of its axis of support, an auxiliary blade mounted on said tripping element and extending undirectionally

therewith, a movable contact carried by said auxiliary blade and cooperating with said fixed contact, said bimetal blade being adapted to deflect in response to a predetermined current carried by said contacts to move said tripping element from its said first stable position to its said second stable position, a reset member movably supported on said housing and accessible exteriorly thereof, said reset member being adapted when actuated to return said tripping element from its said second position to its said first position, and means for preventing



closure of said contacts until said reset member is deactuated, said means including a reset lever movably supported on said housing and having a portion engageable with the free end of said auxiliary blade and a further portion engageable with said reset member whereby upon actuation of said reset member said lever blocks movement of said auxiliary blade to contact-closing position and upon deactuation of said reset member said lever frees said auxiliary blade for movement to contact-closing position.

2,948,788
ELECTRO THERMAL RELAY
William C. Brooksmyser, Brooklyn, N.Y., assignor to G-V Controls Inc., East Orange, N.J., a corporation of New Jersey
Filed Jan. 28, 1957, Ser. No. 636,628
34 Claims. (Cl. 200—122)



1. In an electro-thermally actuated relay, in combination, a base, a first contact mounted on said base, a relay movement comprising a frame mounted on said base, an elongated electrically heated expansible controlling member, means mounting one end of said controlling member on said frame, an elongated compensating member, means mounting one end of said compensating member on said frame and disposing said compensating member in spaced relationship with said controlling member, connecting means joining the free end of said controlling member and the free end of said compensating member, a second contact, support means for said second contact, and means carried by said joined ends of said controlling member and said compensating member and the conjoint lateral movement of the connected ends of said controlling member and said compensating member and operative in response to the expansion of said controlling member when said controlling member is heated for effecting relative movement between said second and said first contact.

2,948,789
FIRE PROTECTION WIRE OR CABLE
Bruce I. Caldwell, Bradford, Pa., assignor, by direct and mesne assignments, to said Caldwell, Maurice A. Caldwell, Bradford, and Russell W. Fuller, Jersey Shore, Pa.
Filed July 7, 1958, Ser. No. 746,753
3 Claims. (Cl. 200—143)

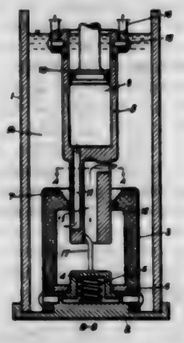


2. A fire protection cable comprising two conductors, each conductor having a coating of hydrate of alum

$$(Al_2(SO_4)_3/K_2SO_4/24H_2O)$$

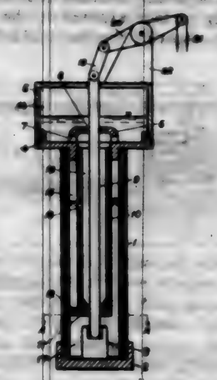
said conductors being intertwined helically.

2,948,790
OIL CIRCUIT BREAKERS
Haakon Forwald, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed May 15, 1958, Ser. No. 735,554
Claims priority, application Sweden May 21, 1957
2 Claims. (Cl. 200—150)



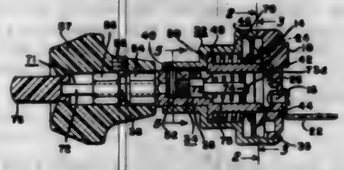
1. An oil circuit breaker comprising an oil container, an extinguishing chamber located inside said container and having an opening through which it communicates with the container, a first stationary contact located inside said chamber, a second contact movable in said container in the direction of its own longitudinal axis, one end of said second contact being arranged to close said opening and to project into the chamber, a said second contact having space in the other end otherof, a stationary piston closing one end of said space, the space being decreased during opening movement of the second contact, the cross-section of the piston being substantially equal to the cross-sectional area of said opening whereby the forces generated by the pressure in said chamber and actuating the second contact are substantially equalized and the speed of the contacts is independent of the current, and the second contact having at least one separate equalizing channel connecting said chamber with said space and at least one separate escape channel to connect said chamber with said container when the second contact extends into the chamber.

2,948,791
EXTINGUISHING CHAMBER IN OIL CIRCUIT BREAKERS FOR MEDIUM VOLTAGES
Sven Jonasson and Walter Puchler, Ludvika, Sweden, assignors to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Filed June 5, 1958, Ser. No. 740,131
Claims priority, application Sweden June 6, 1957
1 Claim. (Cl. 200—150)



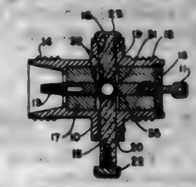
An oil circuit breaker comprising a container with a chamber in the bottom thereof, a cover for the container, a stationary contact arranged inside the said chamber, a cooperating vertically movable contact, an insulating sleeve surrounding said movable contact and attached at its upper part to the cover of the container, an oil magazine, at least one oil opening in the said cover providing communication between the said oil magazine and the interior of the said sleeve, a nozzle which is substantially closed by the movable contact as it approaches the stationary contact, said nozzle being arranged in the lower part of the said sleeve, an annular space being formed by said sleeve and by said container and cover and said space being closed at its top but being in permanent communication with the said chamber at the bottom of the container and in permanent communication with the said oil magazine and an oil opening arranged in the wall of the said sleeve in spaced relation to the said cover and serving to determine the level of the oil in the said annular space.

2,948,792
CIRCUIT CONTROLLER
Harold V. Elliott and Marvin T. Carlson, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 15, 1958, Ser. No. 761,110
11 Claims. (Cl. 200—156)



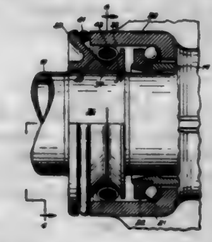
1. A circuit controller comprising, an insulating block carrying a plurality of contacts, a housing, means for securing said housing to said insulating block, a driver member positioned within said housing, a rotatable contactor carried by said driver member and positioned to engage said fixed contacts, a plunger positioned within said driver member, a longitudinally extending slot defined by a pair of walls in said driver member, a cam surface formed integral with said housing, and a pin attached to said plunger and passing through said slot into engagement with said cam surface, said plunger when moved inwardly being adapted to complete an electric circuit between two contacts that are supported by said insulating block, said pin causing said driver member to be driven by contact with said walls.

2,948,793
ELECTRICAL SWITCH
Donald H. Lanctot, Malibu, Calif., assignor to Don-Lan Electronics Co., Inc., a corporation of California
Filed Feb. 2, 1959, Ser. No. 790,715
7 Claims. (Cl. 200—163)



1. A switch comprising: a casing filled with dielectric material and having a transverse passage extending therethrough; a movable switching bar disposed in said passage; two conductors extending into opposite sides of said casing and dielectric material and having their inner ends terminating adjacent to opposite sides of said passage and their outer ends extending to the exterior of said casing, said dielectric material rigidly securing said inner ends in a fixed position so that the spacing between said inner ends is held constant; and a conducting ring of resilient material coupled to said switching bar within said passage and lying in a plane including said inner ends and the axis of movement of said switching bar, said spacing between said inner ends of said two conductors being less than the outside diameter of said ring, whereby movement of said switching bar in one direction urges said ring between said inner ends to electrically connect the same, and resiliently distorts said ring into an oval to apply contact pressure at substantially diametrically opposite portions of said ring in engagement with said inner ends, and movement of said switching bar in an opposite direction removes said ring from between said inner ends.

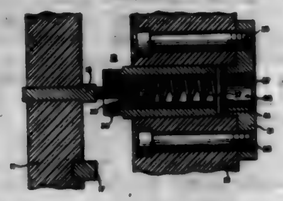
2,948,794
ELECTRIC SWITCH
Thorsten A. Fjellstedt, Ingleside, Ill., and Robert F. Jones, Milwaukee, Walter Kowalski, South Milwaukee, and James J. Sonquist, West Allis, Wis., assignors to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Filed Mar. 1, 1957, Ser. No. 643,429
7 Claims. (Cl. 200—166)



1. An air disconnect switch comprising a stationary terminal, blade means adapted to rotate on its longitudinal axis for cooperating electrically with said terminal, blade

guide means including a cylindrical portion surrounding a portion of said blade means in concentric spaced relation to define an annular gap, at least one of said portions being provided with an annular groove defined by diverging sides that are presented toward said other portion, contact means disposed in said gap for effecting sliding electrical connection between said blade and guide means, said contact means comprising a toroidally shaped helical spring-like member including a multiplicity of turns which have spaced points on their peripheries tangent to the diverging sides of said groove and at least another point tangent to the other of said portions whereby short parallel current paths are created in each turn bridging said gap, the individual turns having their planes inclined at an angle with respect to a plane passing axially through said blade means, whereby the inherent resiliency of said turns maintains them in firm frictional relation between said portions.

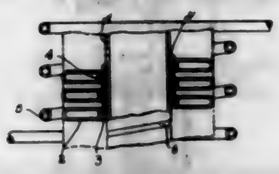
2,948,795
COMMUTATOR BRUSH ASSEMBLY
John F. Brinster and Everett B. Garretson, Princeton, N.J., assignors to General Devices, Inc., Princeton, N.J., a corporation of New Jersey
Filed July 17, 1958, Ser. No. 749,208
7 Claims. (Cl. 200—166)



1. In a commutator brush assembly for high speed switching of low level information signals the combination of a metallic cylindrical body brush retainer having an axial bore, a brush partially mounted within said bore for limited displacement axially thereof comprising a brush head of high conductivity metallized graphite material having an end portion defining a brush contact surface for engagement with opposed commutator contacts and a portion spaced therefrom of cylindrical section in close sliding frictional engagement with the inner surface of said bore together with a metallic tubular extension of said head coaxial with said bore of substantially greater axial extent than said cylindrical head portion and having a longitudinal slot therein, the outside diameter of said extension being of the order of but not greater than the diameter of said cylindrical head portion, a pin monted on said brush retainer and diametrically disposed within said bore for engagement with the slotted portion of said tubular extension to prevent rotation of the brush within said bore, and compression spring means having an abutment on said pin and engaging at the free end thereof said brush head to urge the brush toward the exterior of the brush retainer.

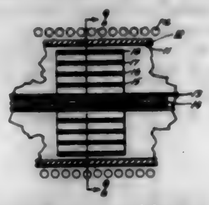
2,948,796
HEAT TRANSMITTING TUBES
Alan J. Wall, Lincoln, England, assignor to Clayton Dewandre Company Limited, Lincoln, England
Filed Apr. 30, 1958, Ser. No. 731,903
Claims priority, application Great Britain May 24, 1957
6 Claims. (Cl. 219—9.5)

1. A method for use in making a heat exchanger having a heat transmitting tube and a heat transfer wire coil encircling said tube for increasing the heat exchange capacity of said heat exchanger, the steps of affixing the wire coil to said tube comprising forming said coil with a hollow loop cross section, winding said wire coil helically around said tube, providing a binding wire of substantially flattened cross section, providing a bonding wire having a cross sectional width at least equal to that of said binding wire and approaching the internal width of the loop cross section of said wire coil, feeding the binding and bonding wires through the wire coil with the bonding wire superimposed upon the outwardly facing surface of said binding wire in screening relation thereto and having its outwardly facing surface exposed to the interior of said wire coil and its edges in abutment with the walls of said



wire coil whereby the wire coil exerts a restraining force on the bonding wire to prevent displacement thereof relative to said binding wire, and thereafter passing said tube and the wire coil assembly through a high frequency induction coil and heating the wire coil assembly to cause the bonding wire to melt and flow over the base of the wire loop cross section of said wire coil and surface of said tube wherein the bonding wire screens the binding wire from the electric magnetic field produced by the induction coil to maintain the temperature of the binding wire substantially equal to the temperature of said tube as it is passed through said induction coil.

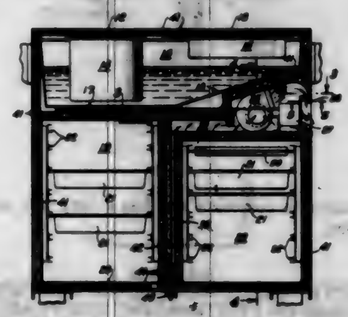
2,948,797
ANNEALING FURNACE
Henry J. Kurtz, Terrace Park, and Alfred Miles, Cincinnati, Ohio, assignors to General Electric Company, a corporation of New York
Filed Jan. 30, 1959, Ser. No. 790,190
2 Claims. (Cl. 219—10.79)



1. An annealing furnace comprising an outer insulated tube, induction heating means surrounding said outer tube, an inner insulated tube positioned concentrically within the outer tube and spaced therefrom, a magnetic core positioned within the inner tube, said inner tube provided with a coolant passage, said inner tube adapted to support a hollow member therearound, and said core extending beyond the ends of said member by a distance equal approximately to the radius defined by the distance from the outer surface of said inner tube to the outer surface of said member.

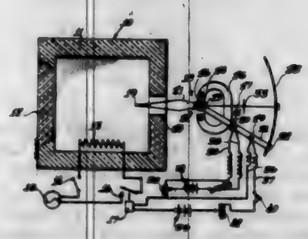
2,948,798
MOBILE HOT AND COLD FOOD CART
William H. C. Ness, Los Angeles, Calif., assignor to National Cornice Works, Los Angeles, Calif., a corporation of California
Filed Oct. 17, 1958, Ser. No. 767,912
1 Claim. (Cl. 219—19)

A hot and cold food cart having a hot food compartment and a cold food compartment disposed side by side, an electrically operated heating member disposed beneath said hot food compartment, an electrically operated fan disposed above said cold food compartment, an electrical control box disposed between said fan and one side of said cart, a side air passage extending across the entire side of said cold food compartment which is adjacent to said hot food compartment, a back air passage extending across the entire back of said cold food compartment, said air passages extending from the bottom of said cold food compartment to the top thereof, a top air passage extending across the entire top of said cold food compartment, the side of said cart adjacent to said con-



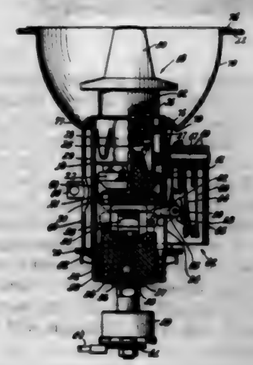
trol box having a recess extending inwardly from the side of said cart to the front of said control box, the top of said recess being substantially horizontal, a plurality of air outlets formed in the top of said recess, air directing means carried by said fan to direct air from said top air passage past the top of said control box and out through said air outlets past the front of said control box, the movement of air out of said top air passage causing air to be circulated from beneath said cart through said side and back air passages into said top air passage to insulate said cold food compartment and to cool and dry said control box.

2,948,799
ELECTRICAL CONTROL CIRCUITS UTILIZING THERMISTORS
Erwin K. Weise, Urbana, Ill., assignor to Semicon Inc., a corporation of Illinois
Filed May 22, 1956, Ser. No. 586,621
15 Claims. (Cl. 219—20)



1. In an electric control system for controlling the temperature of a body heated by an electrically operated heating element, a source of radiant energy, a thermistor having a high temperature coefficient of resistance mounted in cooperation with said source of radiant energy so that said source of radiant energy directly heats said thermistor to lower the resistance of said thermistor to a certain value, a temperature meter mountable in cooperation with said body for indicating the temperature of said body, said temperature meter including a pointer and a scale for indicating the temperature of said body upon said scale, means movably carrying said source of radiant energy and said thermistor in said meter in cooperation with said scale so that said source of radiant energy and said thermistor are selectively positionable at different temperature readings on said scale, means carried by said pointer and cooperating with said source of radiant energy and said thermistor for interrupting the emission of radiant energy from said source of radiant energy to said thermistor when said pointer indicates the temperature reading on said scale at which said source of radiant energy and said thermistor are selectively positioned to permit the resistance of said thermistor to rise to another certain value, and means connected to said thermistor and associated with said heating element for said body for energizing said heating element responsive to the lowering of the resistance of said thermistor to said certain value and for deenergizing said heating element responsive to the raising of the resistance of said thermistor to said another certain value, said last mentioned means having a voltage-current characteristic so that the resistance of said thermistor varies directly as the resistance for the portion of the voltage-current curve of said thermistor wherein the current substantially greatly changes for relatively small changes in voltage.

2,948,800
CIGAR LIGHTER
Lawrence E. Fenn, Anchorage Drive, Bridgeport, Conn.
Filed Oct. 11, 1957, Ser. No. 689,640
21 Claims. (Cl. 219—32)



1. In a wireless type cigar lighter having a removable plug adapted to be energized by normal household electricity and a transformer for transforming the household voltage to a voltage utilizable by the lighter, the improvement comprising a normally open switch electrically connected in the primary of the transformer and adapted to be actuated by the plug, said switch including a stationary contact arm, a movable contact arm and a flat spring, means mounting the arms and spring in aligned, insulated relation, and a pivoted actuator adapted to be moved to a switch closing position by the plug wherein the two arms are in electrical engagement and the spring and movable arm exert a force tending to move the actuator to its normal switch open position.

2,948,801
DOMESTIC APPLIANCE
Robert D. Bremer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 3, 1958, Ser. No. 712,991
6 Claims. (Cl. 219—37)

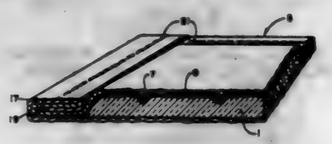
6. A clamp for pivotally supporting and selectively positioning in a yieldably locked position a surface heating element having a protuberance thereon; said clamp

comprising a base section, a support portion in said base section for pivotally receiving said protuberance; and



means integral with said clamp engaging said protuberance for positioning said heating element.

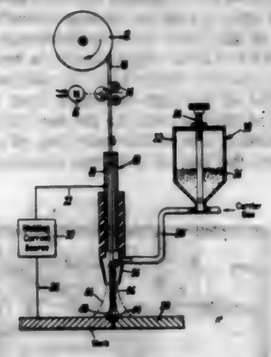
2,948,802
ELECTRIC BLANKET
Robert F. Shaw, Davenport, Iowa, assignor to the United States of America as represented by the Secretary of the Army
Filed May 5, 1958, Ser. No. 733,217
2 Claims. (Cl. 219—46)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electrically heated blanket comprising at least one layer of expanded, closed cellular, insulating material and heating means attached on one side of said layer, a cover therefor comprising a moistureproof fabric encompassing said insulating layer and said heating means, said fabric being adhesively attached respectively to said insulating layer and said heating means, juxtaposed edges thereof being disposed interlocked and folded, said edges being adhesively secured together to provide a sealed inclosure for said insulating layer and said heating means, and stitching being disposed along said edges spaced from the closed interior of said cover in a manner to provide a sealed portion of said fabric between said stitching and said closed interior.

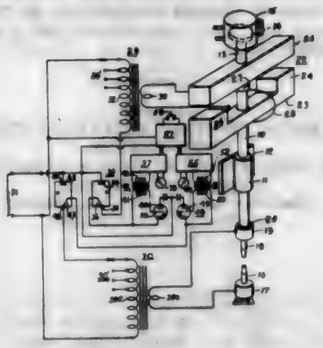
2,948,803
ELECTRIC ARC HIGH-ALLOY METAL DEPOSITION
Jack L. Wilson, Niagara Falls, Harry E. Rockefeller, Bronxville, and Thomas E. Butler, Niagara Falls, N.Y., assignors to Union Carbide Corporation, a corporation of New York
Filed May 4, 1956, Ser. No. 582,832
2 Claims. (Cl. 219—74)

1. High temperature non-ferrous alloy electric arc welding process which comprises energizing a welding arc between the end of a bare wire electrode composed essentially of cobalt and a metal workpiece, coating the end portion of said electrode with powdered non-ferrous metal particles each of which is composed mainly of cobalt, chromium and tungsten, while feeding said electrode continuously toward such arc by continuously feeding such powdered metal particles around the electrode in an annular stream of inert gas, wherein the cobalt contained in each particle acts as a magnetic component, causing such powdered metal particles to adhere as a coating on the wire electrode as the latter is so-fed toward the arc, while such annular stream of inert gas protects the such coating, arc and weld zone from the surrounding atmosphere, the ratio of metal deposited by the powdered metal being substantially equal to that deposited by said electrode to produce a solid substantially slag-free weld deposit composed of high temperature alloy that is exceptionally high



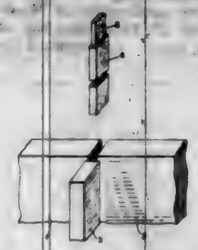
in resistance to corrosion and has a very low coefficient of friction.

2,948,804
MAGNETIC FORCE RESISTANCE WELDERS AND METHOD OF CONTROLLING THE PHASE RELATION OF THE MAGNETIC FORCE APPLIED TO THE ELECTRODES WITH REFERENCE TO THE PHASE RELATION OF THE WELDING CURRENT
Arthur W. Schueler, Ernest J. Funk, and Lawrence W. Meckienborg, all of Cincinnati, Ohio, assignors to Precision Welder & Flexopress Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed June 3, 1957, Ser. No. 663,141
4 Claims. (Cl. 219—86)



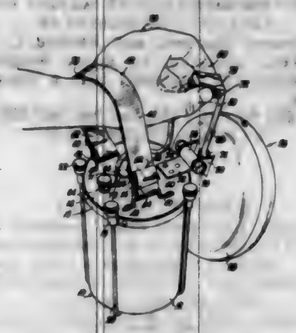
1. A magnetic force welding system comprising: a pair of welding electrodes adapted to clamp work therebetween, one of said electrodes being movable toward and away from the other electrode; an electromagnetically operated armature connected to said movable electrode; an energizing winding mounted in fixed position with respect to the other electrode and adapted when energized to attract said armature and said movable electrode toward the other electrode: a first welding transformer having a primary and a secondary winding and means connecting the respective ends of said secondary winding to the respective welding electrodes; a second transformer having a primary and a secondary winding and means connecting the respective ends of the secondary winding thereof to the respective ends of said energizing winding; a source of alternating potential; a pair of control devices connected in parallel and to said source and means connecting said control devices, respectively, to the primary windings of the respective transformers, said control devices being adapted to control energization of said transformers from said source; and means for simultaneously initiating operation of said control devices.

2,948,805
METHOD OF ENCLOSED WELDING
Josef Ter Berg and Andre Lerigaldie, Bobigny, France, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,852
Claims priority, application Netherlands Nov. 16, 1956
2 Claims. (Cl. 219—137)



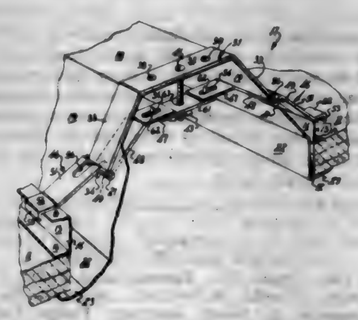
1. A method of enclosed welding two members with similarly-shaped end surfaces; comprising arranging the members with the end surfaces spaced apart to form a welding space; inserting into the welding space an elongated welding electrode having a core and a non-conductive slag-forming coating, a thickness slightly less than the corresponding width of said welding space and a longitudinal cross section which is an enlargement in only the length direction of the end surface of the members, the enlargements being approximately the same as the ratio of a cross-sectional area of the welding space to the corresponding cross-section of the core; carrying out the welding while moving the electrode into the welding space, and at least partly enclosing the sides and bottom of the welding space during the welding.

2,948,806
UNDERWATER ELECTRIC LANTERN
Harold J. Anderson, 28 E. Dartmouth Road, Kansas City, Mo.
Filed Sept. 30, 1957, Ser. No. 686,943
6 Claims. (Cl. 240—10.66)



1. In combination, a case having a top wall and containing a battery; a lamp alongside said case and mounted on the top wall; a pair of spaced, diametrically opposed hanger elements secured to the top wall; an elongated, flexible strap having opposed ends, each swingably attached to a corresponding hanger element, the strap extending upwardly from the top wall, forming a first loop adapted for loose suspension from one wrist of a user, and disposed to direct light beams emanating from the lamp outwardly beyond said wrist in alignment therewith; a flexible, conductive cable operably coupling the battery with the lamp and having one end thereof terminating at the top wall between said elements, said cable extending upwardly from the top wall, forming a second loop between the lamp and the strap substantially in alignment with said wrist and said light beams; and a switch interposed in said cable intermediate the ends thereof for ready accessibility to that hand of the user adjacent said one wrist when the strap is looped over the latter, thereby leaving the other hand and wrist free.

2,948,807
HANGER CONSTRUCTION FOR CEILING-RECESSED LIGHTING FIXTURES
Anthony Maciel, Jr., San Mateo, and Dan Jaster, San Francisco, Calif., assignors, by mesne assignments, to All-Brite Fluorescent Fixtures, Inc., a corporation of California
Filed July 1, 1957, Ser. No. 669,331
4 Claims. (Cl. 240—78)

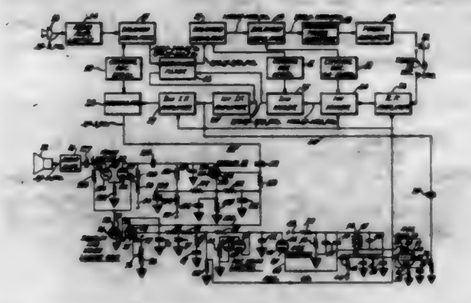


3. In combination, a troffer having a top and opposed sides, said sides being formed with opposed apertures, a strap overlying said top and extending down over said sides and terminating adjacent the upper edges of the apertures in said sides, a pair of clamp arms each extending through one of said apertures, each said arm having an outer end outside said troffer shaped with a gripping terminal and an inner end within said troffer, and means for drawing said inner ends toward said strap to cause said outer ends to pivot downwardly, the lower ends of said strap being formed with projecting tongues and said arms being apertured to receive said tongues, said tongues extending across the apertures in said troffer to retain said arms on said troffer.

2,948,808
SINGLE SIDEBAND COMMUNICATION SYSTEM
Karl L. Neumann, West Orange, and Charles E. Schneider, Elberon, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Mar. 5, 1958, Ser. No. 719,272
12 Claims. (Cl. 250—13)

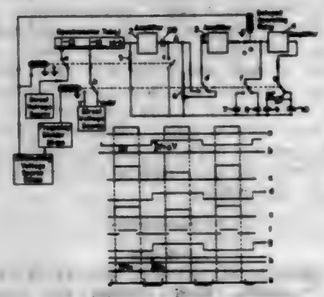
1. A single sideband receiver, comprising in combination, means to derive an intermediate frequency single sideband signal from a received radio frequency single sideband signal, means connected to the output of said first-mentioned means to derive an audio frequency signal from said intermediate frequency signal, a squelch circuit connected to the output of said second-mentioned means, a noise limiter circuit connected to the output of said squelch circuit and a sound reproducing device connected to the output of said noise limiter circuit, a control circuit connected to said first-mentioned means and responsive to said intermediate frequency signal to produce a direct current signal having a level determined

according to the average level of said received signal, means to apply said direct current signal from said control circuit to said first-mentioned means, said first-mentioned means being responsive to said direct current signal to determine the gain of said intermediate frequency signal according to the level of said direct current signal, means to apply said direct current signal from



said control circuit to said squelch circuit to operate said squelch circuit to pass said audio frequency signal applied to said squelch circuit from said second-mentioned means to said noise limiter circuit, means to apply said direct current signal from said control circuit to said noise limiter circuit to determine the limiting level of said noise limiter circuit according to the level of said direct current signal.

2,948,809
MASS SPECTROMETER
Albert Jean Louis Van Egmond and Pieter Cornelis Veenstra, Utrecht, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 18, 1957, Ser. No. 640,790
Claims priority, application Netherlands Feb. 27, 1956
10 Claims. (Cl. 250—41.9)



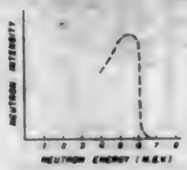
1. A mass spectrometer circuit arrangement comprising a spectrometer tube having means for controlling the ionization of a gas mixture in said tube, means for controlling the acceleration of the ions of said gas mixture and means for collecting said ions, switching means for cyclically permitting the ionization of said gas mixture, means for cyclically applying acceleration voltages having different levels of magnitude during consecutive periods to said acceleration controlling means thereby producing an output voltage at said collecting means comprising a series of pulses having consecutive levels of magnitude corresponding to the ions produced by the components of said gas mixture, said switching means and said means for cyclically applying acceleration voltages having a predetermined frequency and phase relationship to each other, means for detecting said output voltage in synchronism with the operation of said switching means to produce at least two voltages having magnitude levels determined by the ions produced by the components of said gas mixture, and means for determining the difference between said two voltages thereby establishing the ratio of the concentrations of ions of the components of said gas mixture.

2,948,810
DELAYED GAMMA RADIATION LOG OF OXYGEN
Richard L. Caldwell and Stanley E. Turner, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Oct. 25, 1954, Ser. No. 464,564
8 Claims. (Cl. 250—83.3)



1. The method of determining variations in oxygen concentration in earth formations which comprises moving a source of neutrons of energy of at least 9.5 m.e.v. along a well bore to bombard formations adjacent the well bore, detecting gamma radiation following cessation of bombardment by an interval of the order of the half-life of nitrogen 16 at successive points in said well bore, and selectively recording the intensity of the component of the detected gamma radiation characteristic as to time and energy of emanations from nitrogen 16 produced upon disintegration of oxygen as a function of depth in said well bore.

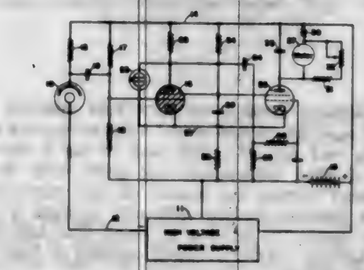
2,948,811
NEUTRON PRODUCTION BY ALPHA DISINTEGRATION OF BORON 10
Tom W. Bonner, Houston, and Richard L. Caldwell, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York
Filed Nov. 8, 1954, Ser. No. 467,320
6 Claims. (Cl. 250—83.3)



1. A source of neutrons adapted for radioactive well logging comprising an alpha rayer selected from the group consisting of polonium and plutonium and a target formed of boron highly enriched in the isotope $_5B^{10}$.

4. A system for logging the carbon content of formations penetrated by a borehole which comprises a source of neutrons including a capsule of boron highly enriched in the isotope $_5B^{10}$ mixed with an alpha rayer selected from the group consisting of polonium and plutonium, a shield substantially impervious to the gamma radiation attendant the production of neutrons by said source, and a detecting system including a detecting element adjacent said shield on the side thereof opposite said source but exposed to radiation from said formations and which is adapted to detect prompt gamma radiation resulting from the neutron bombardment of said formations having energies of at least 4.8 m.e.v.

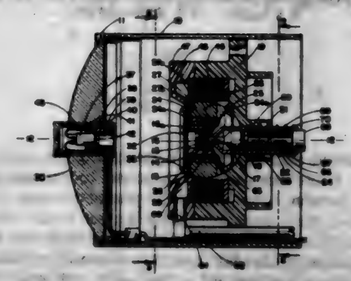
2,948,812
CIRCUIT FOR GEIGER COUNTERS
Halsey P. Quinn, Whippany, N.J., assignor, by mesne assignments, to Tung-Sol Electric Inc., Newark, N.J., a corporation of Delaware
Filed May 23, 1957, Ser. No. 661,092
5 Claims. (Cl. 250—83.6)



1. A Geiger counter circuit for indicating the presence of ionizing radiation comprising: a Geiger counter tube having an anode and a cathode within a gas-filled envelope and adapted to be made conductive when subjected to ionizing radiation; a monostable multivibrator circuit including a normally conducting and a normally nonconducting electron discharge device each of which contain a cathode, an anode, and a control electrode, said multivibrator circuit adapted to shift conductance from said normally conducting device to said normally nonconducting device when a negative pulse is applied to the control electrode of the normally conducting device, a coupling capacitor connected between the anode of said Geiger tube and the control electrode of said normally conducting device for applying a negative pulse thereto; an indicating means in the anode circuit of said normally nonconducting device for indicating the integral value of current caused by said shift of conductance; and a two-electrode gaseous discharge device connected across the anode and cathode of said normally conducting device, said discharge device being normally nonconducting but adapted to conduct and lower the voltage drop across said anode and cathode when said voltage drop has reached a predetermined value.

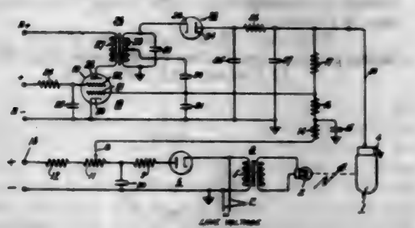
2,948,813
TRACKING SYSTEM
William E. Osborne, North Hollywood, Calif., assignor, by mesne assignments, to Aerojet-General Corporation, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 21, 1950, Ser. No. 180,610
8 Claims. (Cl. 250—203)

1. A seeker for sighting on an object which is remote from the seeker and gives off optical radiant energy comprising: a mounting, a gyro rotor, a universal bearing on which the rotor is mounted on the mounting so that the axis of rotation of the rotor can be precessed, a reflecting mirror mounted on and rotatable with the rotor, means for directing some of the radiant energy from the object to the mirror for reflection from the rotating mirror, a cell fixed relative to the mounting and in proximity to and responsive to the reflection from the mirror, the reflecting surface of the mirror being eccentric with respect to the axis of rotation of the rotor, whereby the reflection describes a path which does not move across the cell when the axis of rotation of the rotor is sighting on the object, and which moves across the cell when said axis is not sighting on the object, and means responsive to the cell, when



the reflection moves across the cell, for precessing the rotor, whereby when the axis of rotation is directed away from the object the radiant energy reflected from the mirror moves across the cell during each revolution of the rotor to produce precession of the rotor in the direction which moves the axis of rotation toward the object.

2,948,814
COMPENSATED LIGHT METER POWER SUPPLY
Theodore A. Rich, Scotia, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 31, 1956, Ser. No. 562,401
11 Claims. (Cl. 250—205)



1. In a power supply for a photoelectric device illuminated by a light source energized from a source of unregulated voltage, the combination comprising a variable amplitude oscillator having a regenerative feedback circuit for sustaining oscillations, electron discharge means in said feedback circuit for controlling the amount of feedback, first rectifying means coupled to said oscillator to rectify the oscillations produced thereby to provide a unidirectional operating voltage for said photoelectric device, a second rectifying means coupled to said source of unregulated voltage to provide a unidirectional control voltage which varies with any variations of the unregulated voltage, regulating means coupled to said second rectifying means to provide a constant reference voltage, means coupling said control voltage to said electron discharge means to control the amount of feedback and vary the amplitude of oscillators as an inverse function of any variations of the unregulated voltage, means connected to said regulating means and said rectifying means for comparing said unidirectional operating voltage and said constant reference voltage to provide a regulating voltage for said electron discharge device to maintain the operating voltage constant in the absence of any control voltage variations irrespective of changes in the oscillator parameters.

2,948,815
CIRCUIT ARRANGEMENT COMPRISING A PHOTOTRANSISTOR

Ebertus Willems, Eindhoven, and Erik Netten, Rotterdam, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Jan. 23, 1956, Ser. No. 560,598
Claims priority, application Netherlands Feb. 18, 1955
8 Claims. (Cl. 250—211)

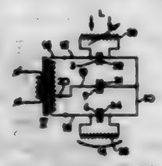


1. A circuit arrangement for linearizing the output signal of a phototransistor in response to radiations impinging thereon, comprising a phototransistor having emitter and base electrodes defining an input electrode system and a collector electrode defining with one of said first mentioned electrodes an output electrode system, said phototransistor undergoing variations in collector current in response to radiations impinging thereon, means for impinging radiations on said phototransistor, means for deriving an output signal from said output electrode system, and feedback means coupled to said output system and input electrode system for applying to said input electrode system a negative feedback current proportional to said output signal, said output signal varying substantially linearly with the intensity of said radiations due to the application of said feedback current.

2,948,816
SOLID STATE IMAGE INTENSIFIER

Johannes Gerrit van Santen and Gesinus Diemer, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Filed Apr. 12, 1957, Ser. No. 652,429
Claims priority, application Netherlands May 16, 1956
12 Claims. (Cl. 250—213)



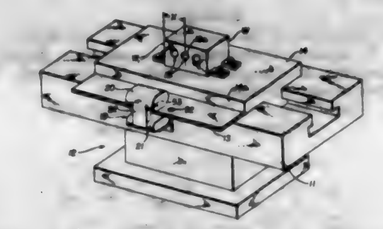
1. A solid-state image-intensifying device comprising an electro-luminescent element, a radiation-receiving, photo-sensitive, variable-impedance element, a fixed-impedance element, a source of potential including terminals providing a given voltage difference and means furnishing a voltage at a value below the said voltage difference, means connecting the variable-impedance and fixed-impedance elements in series across the terminals providing the given voltage difference, and means connecting the electro-luminescent element between the means furnishing the voltage at said lower value and the junction of the variable-impedance and fixed-impedance elements, whereby the elements form a bridge circuit with the electro-luminescent element in the central branch.

2,948,817
LOCATING DEVICE FOR PRECISION TOOLS

Albert J. Carpenter, Canton, Ohio, assignor to Portage Machine Company, Akron, Ohio, a corporation of Ohio

Filed Mar. 29, 1957, Ser. No. 649,467
8 Claims. (Cl. 250—231)

1. A locating device for precision machine tools that includes a stationary frame and a movable table, comprising; a first housing secured to said frame and having a light aperture; a second housing secured to said frame and having a light aperture; a bar dividing said aperture in said second housing into equal segments; a pair of light sources emitting light beams from and being carried by said first housing; a pair of light-sensitive surfaces carried by said second housing and each emitting current proportional to light received thereon; means for directing said light beams simultaneously onto said light-

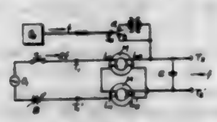


sensitive surfaces through said first light aperture and said equal segments of said second aperture; a guide strip secured to said movable table and having a through aperture of fixed dimensions; said guide strip during travel thereof varying the amount of light received on each light sensitive surface until said aperture is centered with respect to said bar at which time said light-sensitive surfaces receive an equal amount of light and emit equal current.

2,948,818
RESONATOR CIRCUITS

Eiichi Goto Meguro-ku, Tokyo, Japan, assignor, by mesne assignments, to Parametron Institute, Tokyo, Japan, a juridical foundation of Japan

Filed May 16, 1955, Ser. No. 508,668
Claims priority, application Japan May 28, 1954
14 Claims. (Cl. 307—88)



1. An electric circuit for binary digital operations comprising a plurality of resonant circuits each having a resonant frequency of near f and each including an input, an output and a variable reactance the value of which is a parameter determining the resonant frequency of said resonant circuit, said resonant circuits being coupled to each other with the output of a preceding resonant circuit being coupled to the input of a succeeding resonant circuit, means for varying said parameters comprising at least two alternating power supply circuits each having a frequency $2f$ and a source of D.C. bias, and means applying said $2f$ frequency from one of said power supply circuits to said variable reactances at least in alternate resonant circuits and applying said frequency $2f$ from the other of said power supply circuits to the variable reactances in the remaining resonant circuits to vary the values of said reactances and thereby generate in said resonant circuits parametric oscillations having a frequency f, said power supply circuits being coupled to said resonant circuits in balanced bucking relationship so that said frequency $2f$ of the power supply circuits is not transmitted to said resonant circuits and the frequency f of said resonant circuits is not transmitted back to said power supply circuits, and means for controlling each of said power supply circuits for interrupting the oscillations of frequency f in said preceding circuit at a time just after the parametric oscillations are generated in the succeeding resonant circuits, whereby the binary digits are represented by the phase of the parametric oscillations and the phase of the frequency f generated in a preceding resonant circuit controls the phase of the frequency f generated in a subsequent resonant circuit and the oscillation generated in the subsequent resonant circuits is maintained even after the oscillations in the preceding resonant circuit are interrupted.

2,948,819
DEVICE COMPRISING PARAMETRICALLY EXCITED RESONATORS

Eiichi Goto, Nakameguro, Meguro-ku, Tokyo, Japan, assignor to Kokusai Denshin Denwa Co., Ltd., Tokyo, Japan, a company of Japan

Filed Feb. 27, 1956, Ser. No. 568,121
Claims priority, application Japan Mar. 12, 1955
6 Claims. (Cl. 307—88)



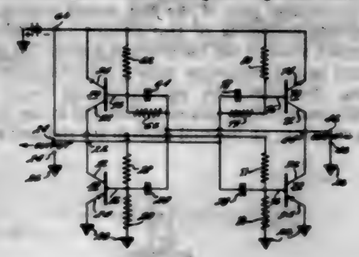
1. In an electric digital computing device having a plurality of electric resonators, each of said resonators having at least one reactor, the reactance of which is made to vary at frequency $2f$, whereby oscillation of frequency f is produced in each of said resonators, digital signals in said device being represented by the phase difference in said oscillation of said resonators at frequency f, said resonators being in a plurality of stages, and said oscillations being produced in said resonators successively in the same order as the order of said stages, the oscillation voltage of said resonators in each of said stages being transmitted to said resonators in the succeeding stage to said each stage, whereby the oscillation phase of said resonators in said succeeding stage is controlled when the oscillation in said succeeding stage is restarted after interruption, that improvement comprising a phased signal transmitting coupling means connected between the resonators in adjacent stages for transmitting the oscillation voltage of the resonators in one stage to the resonators in the next succeeding stage, and a voltage opposing coupling means provided between the resonators in one stage and the resonators in succeeding stages, for diminishing the back coupling voltage which is produced by said phased signal transmitting coupling means, and which is impressed on the resonators in said one stage from the resonators in the second succeeding stage through the resonators in the next succeeding stage when the resonators in the next succeeding stage are not excited.

2,948,820
MULTIVIBRATOR CIRCUIT

Theodore P. Bothwell, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed June 4, 1956, Ser. No. 589,157
25 Claims. (Cl. 307—88.5)

1. A multivibrator circuit comprising a first pair of semiconductor devices of one conductivity type, a second pair of semiconductor devices of another conductivity type, each of said semiconductor devices including a base electrode and a collector electrode, the collector electrodes of one of the semiconductor devices of each of said pairs being coupled together and to the base electrodes of the other semiconductor device of each of said pairs, and the collector electrodes of said other semiconductor devices of each of said pairs being coupled together and to the



base electrodes of said one semiconductor device of each of said pairs.

2,948,821
MOTOR FOR ELECTRIC WATCHES

John A. Van Horn, Lancaster, Philip E. Biemiller, Landisville, and James H. Reese, Manheim, Pa., assignors to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania

Filed Dec. 31, 1956, Ser. No. 631,686
8 Claims. (Cl. 310—27)



1. In a battery powered timepiece, a battery, a coil mounted on a staff for oscillation, a hairspring associated with said staff, an arcuate magnetic member, a first pole piece engaging one end of said magnetic member and having an upper portion extending toward said staff, a second pole piece engaging the other end of said magnetic member and having a lower portion extending toward said staff, said pole pieces having arcuate portions mating with arcuate portions on the inner side of said arcuate magnetic member, said upper extending portion terminating in a pair of upper pole arms, said lower extending portion terminating in a pair of lower pole arms which at least partially underlie said upper arms in spaced relation, said extending portions being plate-like and having diverging side walls, said coil having a pair of parallel sides and being mounted for movement through the spaces between said upper and lower arms, and means synchronized with the movement of said coil for periodically connecting said coil with said battery.

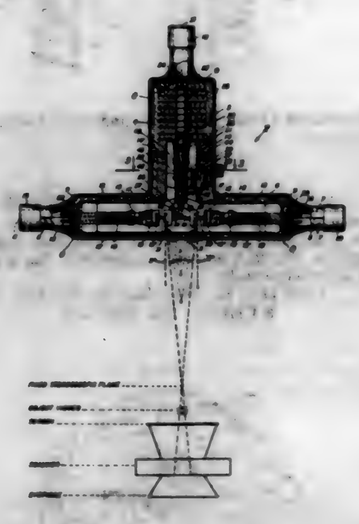
2,948,822
X-RAY TUBES

Leopold Parocelli, Demarest, N.J., assignor of one-half to Mario Ghia, Dumont, N.J.

Filed Jan. 22, 1959, Ser. No. 788,450
7 Claims. (Cl. 313—56)

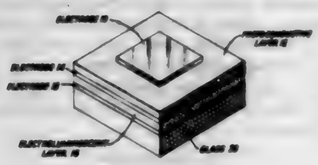
1. An X-ray tube housed in a ray proof, windowed envelope having a longitudinal portion of substantially uniform diameter and a centrally disposed and integral neck portion extending therefrom of uniform and greater

diameter, the tube having a longitudinal tubular section and an integral transversely extending section extending from the medial part of the first named section, the improvements consisting of two fixedly mounted cathodes in opposite sides of the longitudinal section, an anode rod mounted in the transverse section terminating in two depending shoulders, two anodes having target sections pivotally mounted on said shoulders and in the same plane as the cathodes, an internal shaft in the rod and extending



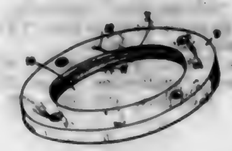
through and beneath the shoulders, links on the lower end of the shaft pivotally connected to the anodes, an electric motor controlled from outside the envelope mounted on the transverse section of the tube, gearing connecting the motor and shaft for longitudinal movement of the shaft in the rod whereby the angle of the target sections of the anodes with respect to the cathodes may be changed and a plurality of converging angles, of the emitted X-rays are produced.

2,948,823
ELECTROLUMINESCENT DEVICE
Moe Wasserman, Massapequa Park, N.Y., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed July 14, 1959, Ser. No. 827,126
5 Claims. (Cl. 313—108)



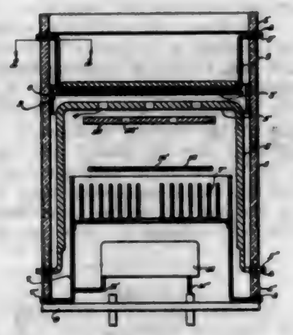
1. An electroluminescent device comprising first, second and third electrodes, the third electrode and at least one of the first and second electrodes being transparent, the area of the first electrode being less than that of said second electrode, the ratio of the area of the first electrode to that of the second electrode falling within the approximate range of 0.25–0.50; an electroluminescent layer interposed between said second and third electrodes; and a photoconductive layer interposed between said first and second electrodes, the surface areas of both of said layers being substantially equal.

2,948,824
DEVICE FOR IGNITING GASEOUS OR LIQUID FUELS
Wytze Beye Smits, Voorburg, Netherlands, assignor to Smitsvonk N.V., Leidschendam, Netherlands
Filed Nov. 26, 1956, Ser. No. 624,433
1 Claim. (Cl. 313—130)



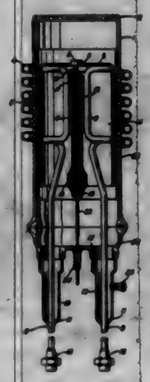
A device for providing a surface discharge form of spark to ignite an explosive mixture, comprising a conductive gasket with the inside annular surface thereof immediately adjacent said mixture, an insulative coating on said surface and having an outside surface entirely exposed to said mixture, and a thin conductive wire of small thickness secured along a portion of said annular surface and substantially entirely exposed to said mixture, the sparking end of said wire terminating at an edge of said outside surface of said coating.

2,948,825
ELECTRIC-DISCHARGE DEVICE
Daniel F. Riley, Braintree, Seymour Goldberg, Lexington, and Kenneth J. Germeshausen, Newton Centre, Mass., assignors to Edgerton, Germeshausen and Grier, Inc., Boston, Mass., a corporation of Massachusetts
Filed July 23, 1958, Ser. No. 750,488
4 Claims. (Cl. 313—193)



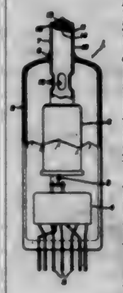
1. An electric-discharge device having, in combination, electrode surfaces defining a discharge region therebetween and disposed within an insulating envelope with the edges of the electrode surfaces spaced from the inner wall of the envelope, and a conductor electrically isolated from the electrode surfaces and embracing the discharge region in the space between said inner wall and said edges of the electrode surfaces, said conductor extending at least the length of the discharge region between said electrode surfaces.

2,948,826
INDUCTION LAMP
Warren H. Hay, Beverly, and Philip J. N. Hansen, Beverly Farms, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Apr. 9, 1956, Ser. No. 577,125
1 Claim. (Cl. 313—223)



An electric induction lamp comprising a sealed envelope, a refractory carbide induction target therein, and a filling therein consisting essentially of inert gas and about 2% to 8% hydrogen.

2,948,827
ELECTRIC DISCHARGE DEVICE
Joe F. Stephens, Owensboro, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 16, 1959, Ser. No. 806,813
11 Claims. (Cl. 313—318)



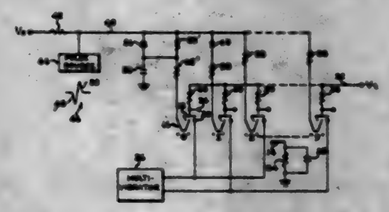
1. For use in manufacturing an electric discharge device an assembly comprising an electrode, a tubular conductor for mounting said electrode in an envelope with a portion of said tubular conductor extending through said envelope for making an electrical connection to said electrode, the outer end of said conductor being closed except for a single relatively small aperture therein, a vitreous tubulation sealed to the outer surface of said end of said conductor, and said end of said conductor including a surface extending longitudinally of said conductor and providing a greater sealing area for glass from said tubulation after tip off thereof than would be provided by a plane transverse end surface of said conductor.

2,948,828
TRAVELING WAVE TUBE INTERACTION CIRCUIT
Arthur Ashkin, Far Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 21, 1956, Ser. No. 623,623
16 Claims. (Cl. 315—3.6)



1. In a traveling wave tube utilizing a wave transmission circuit for propagating electromagnetic waves in field coupling relation with an electron stream, the combination including a transmission circuit comprising a helix portion having predetermined variations in pitch along its length in the region of said field coupling relation, and means coupled to said helix portion for counteracting the effect of the variations in pitch upon the uniformity of phase velocity of a wave propagated therealong.

2,948,829
ELECTRON BEAM CLEARING AND RESETTING CIRCUITS
Arpad Somlyody, Raritan, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 15, 1958, Ser. No. 735,529
15 Claims. (Cl. 315—8.5)

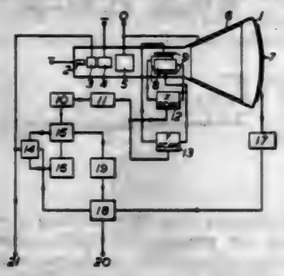


1. An electron beam clearing and resetting circuit comprising an electron beam tube including an electron emitting cathode and a plurality of groups of electrodes arrayed in electron beam receiving relation with respect to said cathode, each of said groups of electrodes including an electron beam target electrode and a spade electrode adapted to form and hold an electron beam on its associated target electrode; means coupled to one of said spade electrodes for slowly changing its potential in a predetermined direction, and means coupled to the adjacent spade electrode for rapidly changing its potential in said direction.

2,948,830
ELECTRICAL STORAGE APPARATUS
Frederic Calland Williams, Timperley, and Tom Kilburn, Northfield, England, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 20, 1948, Ser. No. 50,136
Claims priority, application Great Britain Oct. 2, 1947
38 Claims. (Cl. 315—12)

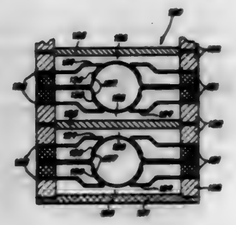
34. Apparatus for creating a charge pattern indicative of at least two kinds of information on a beam target associated with an electron storage apparatus that com-

prises means to produce a beam of charged particles while controlling a characteristic thereof such that upon striking said target the number of secondary electrons liberated is greater than the number of primary electrons arriving in said beam, means to bombard selected discrete



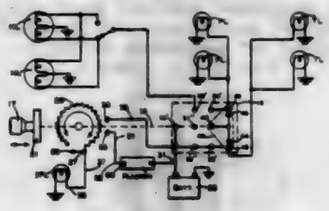
areas of said target with said beam to produce one kind of information and to bombard other selected discrete areas of said target and areas contiguous with said other selected discrete areas with said beam to produce the other kind of information.

2,948,831
OVERVOLTAGE PROTECTIVE GAPS
Herman O. Stoelting, Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Filed Aug. 1, 1956, Ser. No. 601,454
5 Claims. (Cl. 315—36)



1. A spark gap device including spaced metallic electrodes forming a main spark gap between adjacent pairs of electrodes, each such main spark gap including a pair of superimposed spacers disposed between said adjacent electrodes and maintaining them in spaced apart relation, a metallic auxiliary control electrode having a first portion interposed between said spacers and a second portion in radially spaced relationship with one only of said pair of electrodes and together therewith providing a control spark gap having a spacing which is only a minor fraction of the main gap spacing, the spacer disposed between said one electrode and said control electrode being a resistor, the other spacer, together with said control electrode and the other electrode, comprising a capacitor, said control electrode being removed from the main discharge path between said electrodes, the sparkover potential of said control gap being only a minor fraction of that of said main gap, the change in impedance of said capacitor with frequency resulting in a relatively greater voltage appearing across said resistor when a steep wave front impulse is impressed across said spark gap device than when a sixty cycle voltage of the same magnitude is impressed across said device, sparkover of said auxiliary control spark gap incident to a predetermined voltage drop across said resistor ionizing said main discharge gap and lowering the sparkover potential thereof.

2,948,832
CONTROL SWITCHES FOR AUTOMOTIVE VEHICLES
Jesse R. Hollins, Brooklyn, N.Y., assignor to Signal-Stat Corporation, Brooklyn, N. Y., a corporation of New York
Filed July 23, 1958, Ser. No. 750,418
4 Claims. (Cl. 315—82)

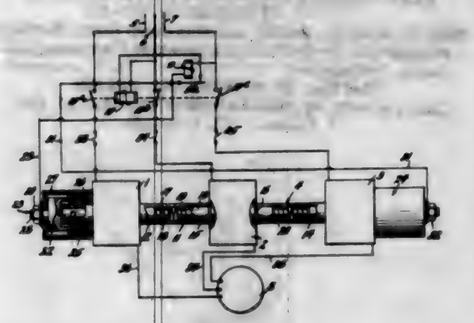


1. In combination, an automotive vehicle headlamp control switch having battery, tail lamp, parking lamp and instrument panel lamp terminals, a switch operator movable between an off position, in which said battery terminal is disconnected from the other terminals, and an on position, connecting said battery terminal to said parking and tail lamp terminals, a rheostat including a resistance winding element and a contact arm element, circuit means connecting one element to said tail lamp terminal and the other element to said instrument panel lamp terminal, and control means selectively operable to effect relative rotation of said elements to vary the resistance in circuit between said tail lamp and instrument panel lamp terminals to vary the illumination of the instrument panel lamps in the on position of said switch operator; a contact adjacent and connected to said resistance element at substantially the part thereof engaged by said contact arm element in the position of said rheostat providing minimum resistance in the instrument panel lamp circuit and connected to said contact arm element only through said resistance winding element; a contact arm engageable only with said contact and only in such position of said rheostat; means, including said switch operator, interconnecting said parking lamp and tail lamp terminals in the off position of said switch operator; and a flasher connected between said battery terminal and said contact arm; whereby, when said contact arm is engaged with said contact and said switch operator is in the off position, said parking lamp and tail lamp terminals are connected to said battery terminal through said flasher for flashing of the parking lamps and tail lamps as emergency warning signals.

2,948,833
ELECTRICAL SWITCHING APPARATUS
Harvey W. Boyd, Midland, Tex., assignor to The Superior Oil Company, Midland, Tex., a corporation of California
Filed May 4, 1956, Ser. No. 582,819
8 Claims. (Cl. 317—46)

4. A system for de-energizing a load in response to failure of at least a single feed line, comprising an electromagnetic relay including an elongated insulating tube having a plurality of magnetic cores disposed within the bore of the tube with the one core being rigidly fixed relative the tube and another core slidable therein, accommodating separation means interposed between adjacent ends of said movable and fixed cores and electrically connected thereto, an electrical contact positioned in a contacting relationship with the end of said movable core away from said fixed core, means establishing an electrical connection to said fixed core, a plurality of coils enveloping said tube and individually coupled to a different core, means for applying line energy to said load

including a different coil serially-connected in a different line so that the resulting energization of said coils causes adjacent core ends to assume repulsive magnetic polarities, and means energized in response to the energization of a circuit from said end contact to said connection means through said cores and accommodating means for



maintaining the energizing circuits for said load, said latter means opening all the lines in which said coils are connected in response to failure in at least a single line whereby said movable core is at least momentarily attracted to said fixed core in opposition to said intervening accommodating means thereby disconnecting said end contact from said connection means.

2,948,834
PRINTED CIRCUIT WIRING
Meguer V. Kalfaian, 962 Hyperion Ave., Los Angeles 29, Calif.
Filed Nov. 10, 1958, Ser. No. 773,666
2 Claims. (Cl. 317—101)



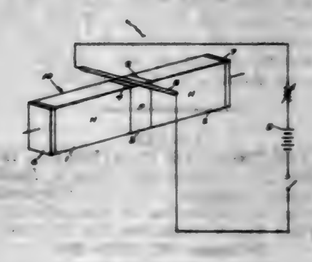
1. In an electrical alternating voltage filament supply assembly highly critical to filament voltage radiation to adjacent electrical assembly, an assembly structure for providing high filament currents to a plurality of electrical discharge devices, and for suppressing filament voltage radiation from current carrying conductors to adjacently located electrical assembly, said assembly comprising a first insulating sheet; a first planar conductor on one surface, and a second planar conductor on the other surface of said sheet, said conductor surfaces having large surface areas and said sheet being substantially thin, so as to provide large capacitive coupling and large electric field between the two conductor surfaces, thereby confining said conductor radiation within said field, including provision of large current carrying surfaces; plurality of receptacle sockets for said plurality of electric discharge devices, having at least first and second filament terminating prongs; prelocated mounting holes in said first sheet and said first and second surfaces for insertion of the prongs of said sockets; means for inserting the prongs of said sockets through said holes from the first conductor surface, and means for electrically terminating said first and second filament terminating prongs with that of said first and second conductor surfaces, respectively; a second insulating sheet overlying said second conductor surface; and a third conductor surface overlying the second insulating sheet, and means for terminating last said conductor to a common ground terminal, for further suppressing residual remains of said filament conductor radiation.

2,948,835
TRANSISTOR STRUCTURE
Walter R. Runyan, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 21, 1958, Ser. No. 768,581
3 Claims. (Cl. 317—234)



1. In a transistor assembly including a transistor bar contained within an enclosure having a metal part, the improvement comprising heat dissipation means for the transistor bar composed of a block of high resistivity, high thermal conductivity material in heat conducting relation with said transistor bar and the metal part of said enclosure.

2,948,836
ELECTRODE CONNECTIONS TO SEMICONDUCTIVE BODIES
George Freedman, Newton, Mass., assignor to Raytheon Company, a corporation of Massachusetts
Filed Mar. 30, 1955, Ser. No. 497,853
7 Claims. (Cl. 317—235)

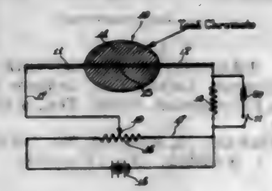


1. An electrical translation device comprising a body of semiconductive material having two zones of the same electrical conductivity type between which is sandwiched another zone of different electrical conductivity type, electrical connections to each of said two zones, and a third connection to said other zone said third connection comprising a line contact electrode having a cross-sectional dimension smaller than the thickness of said other zone.

2,948,837
SOLID STATE ELECTRONIC SWITCH AND CIRCUITS THEREFOR
Robert H. Postal, Clifton, N.J., assignor, by mesne assignments, to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Filed Sept. 4, 1956, Ser. No. 607,861
6 Claims. (Cl. 317—238)

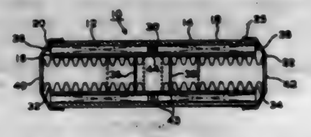
1. A solid-state electronic switch capable of being transformed between conductive and non-conductive states comprising two pointed electrodes of like metals having adjacent terminal portions with surfaces in close proximity to each other, and a body of an oxidic, semiconductive

material bonded onto said electrodes across said adjacent portions thereof with interposition of a continuous film



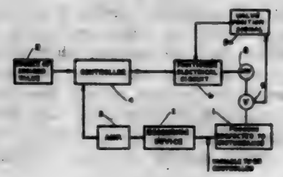
of the semiconductive material between said surfaces and in direct contact therewith.

2,948,838
TUBULAR CAPACITOR
Victor M. Obenhaus, North Adams, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed June 13, 1956, Ser. No. 591,065
5 Claims. (Cl. 317—242)



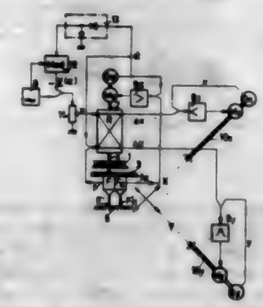
1. A capacitor comprising a generally tubular capacitance section having electrodes separated by reconstituted mica paper spacers and having a central bore completely therethrough, said section mounted within a substantially tubular housing having an open end, an expansion bellows with an open mouth mounted within said central bore with said open mouth sealed to said open end, said capacitance section and the space within said housing filled with a silicone oil, whereby said bellows accommodates the volume change of said silicone oil between temperatures of about −55° C. to +150° C.

2,948,839
MOTOR CONTROL FOR POSITIONING DEVICE
Paul E. Smith, Jr., Littleton, and Hans A. Dudler, Cambridge, Mass., assignors to Conval Corporation, Belmont, Mass., a corporation of Massachusetts
Filed Apr. 9, 1956, Ser. No. 576,928
5 Claims. (Cl. 318—29)



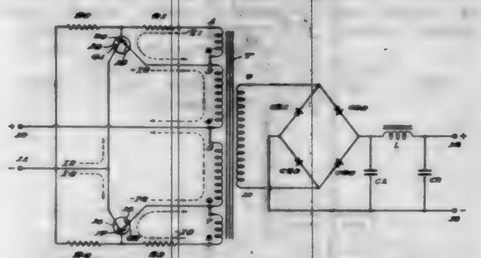
1. A circuit for controlling the operation of a positioning mechanism having a motor controlled actuating arm, said circuit comprising means for independently receiving a desired level signal and an actual level signal and combining said signals to provide a deviation signal, characteristic of the difference therebetween said actual level signal being at all times representative of the actuating arm position, motor means controlling the position of said arm, a two section circuit with each section adapted when closed to provide power to said motor means for operation in opposite directions, relay means responsive to said deviation signal for closing a selected section dependent upon the sign of said deviation signal, and a damping circuit across said motor means, said actuating arm being moved so as to reduce the difference between said reference level and said actual level signals.

2,948,840
ELECTRO-MECHANICAL CURVE SENSING SYSTEM
Heinz Haldemann, Zurich, and Hansruedi Stutz, Oberengstringen Zh., Switzerland, assignors to Contraves, AG., Zurich, Switzerland
Filed Mar. 24, 1958, Ser. No. 723,339
Claims priority, application Switzerland Mar. 27, 1957
8 Claims. (Cl. 318—29)



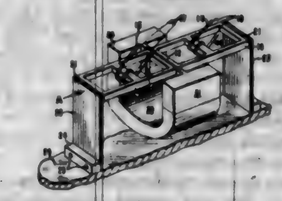
1. In an electro-mechanical sensing system designed to follow a given curve existing in a two-coordinate system determining a system plane, in combination, a carrier movable in two coordinate directions in a plane parallel with said system plane; first and second electrical drive means for moving said carrier in said coordinate directions, respectively; a feeler means assembly supported by said carrier for movement therewith in said two coordinate directions and rotatably connected therewith for turning relatively thereto about an axis perpendicular to said plane; third electrical drive means for imparting a turning motion to said feeler means assembly; said feeler means assembly including first feeler means, adapted to contact a body at an edge thereof which embodies said given curve, and including first voltage control means for controlling said first and second drive means so as to move said carrier in at least one of said coordinate directions for correcting a deviation thereof from said edge whenever said first feeler means indicate such a deviation; said feeler means assembly further including second feeler means adapted to contact said edge adjacent to said first feeler means and including second voltage control means for controlling said third electrical drive means so as to turn said feeler means assembly about said axis an angular amount whenever said second feeler means indicates that the orientation of said feeler means assembly during its movement along said edge requires a turn in said angular amount in order to orient said feeler means assembly corresponding to a change in the curve shape of said edge adjacent to the sensed point where it is in contact with said second feeler means at a given moment; circuit means including a source of electrical energy in circuit with said first, second and third electrical drive means and with said electrical control means for controlling said first, second and third electrical drive means; and trigonometric computer means mounted in operative connection with said feeler means assembly to be capable of reacting to any angular turn thereof and being connected in said circuit means for translating an input voltage from said source and an input voltage modified by said first voltage control means into componental output voltages to be supplied to said first and second electrical drive means, respectively, and being suitable for causing said first and second drive means to move said carrier substantially in the direction of said curve edge at said sensed point as determined at a given moment by said angular turn of said feeler means assembly with respect to said two-coordinate system.

2,948,841
TRANSISTOR POWER SUPPLY
Bart N. Locanthi and Allen D. Diercks, Altadena, Calif., assignors to Computer Engineering Associates, Inc., Pasadena, Calif., a corporation of California
Filed Apr. 21, 1958, Ser. No. 729,780
3 Claims. (Cl. 321—2)



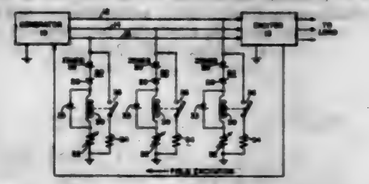
2. A multivibrator power supply comprising a positive and a negative power input terminal, a transformer having two load windings and two feedback windings, the positive input terminal being connected to one end of both load windings, the other end of each load winding being connected to one end of a feedback winding, the junction between each load winding and its associated feedback winding being connected to the emitter of a PNP transistor, a resistor connected in series between the other end of each feedback winding and the base of its associated transistor, another resistor connected in series between the base of each transistor and the negative power input terminal, the collector of each transistor being connected to the negative power input terminal, a secondary winding on said transformer, a rectifier connected to the secondary winding, a capacitance in parallel with the output of the rectifier, an inductor connected in series with the output of the rectifier between the capacitance and the rectifier, said inductor having a saturable core which saturates with a value of current flow therethrough less than the normal output current of the rectifier, and a second capacitance connected in parallel with the output of the rectifier between the inductor and the rectifier, said second capacitance having a capacity that is small relative to the capacity of the first said capacitance.

2,948,842
TRANSDUCER
Richard S. Ditto, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Dec. 27, 1955, Ser. No. 555,543
6 Claims. (Cl. 323—51)



2. An electrical transducer comprising in combination two transformers fixedly attached one to another along an adjacent side with the transformer cores in a common plane constituting a unitary transformer assembly, the primary windings of said transformers being connected in series electrical circuit with an A.-C. power source, a magnetic saturating means disposed in proximity to said transformer cores and maintaining a substantially constant direct magnetic flux through said cores, one member of the pair consisting of said magnetic saturating means and said unitary transformer assembly being movable with respect to the other member and said magnetic saturating means being adapted to differentially saturate one of said transformer coils over the other of said transformer cores in proportion to the extent of relative movement of the movable member of said pair consisting of said magnetic saturating means and said unitary transformer assembly from null position with respect to the other member, and output leads in electrical circuit with the secondary windings of said transformers.

2,948,843
VOLTAGE LIMITER
Leon Klein, Waynesboro, Va., assignor to General Electric Company, a corporation of New York
Filed Aug. 28, 1959, Ser. No. 836,688
9 Claims. (Cl. 323—81)



7. A system for limiting, to a predetermined magnitude, the voltage between a line and a point of reference potential, said line being adapted to be coupled between a source of potential and a load; comprising a series circuit coupled between said line and said point of reference potential, said series circuit comprising a first rectifier device coupled into said series circuit to permit current to flow through said series circuit in substantially only a first direction, a source of unidirectional potential that causes a normal current to flow therefrom in a given direction, said source of unidirectional potential being coupled into said series circuit so that said normal current flow caused by said source of unidirectional potential is in a direction opposite to said first direction; switching means coupled to said series circuit and responsive to current flow in said first direction through said series circuit; and loading means adapted to be coupled between said line and said point of reference potential in response to said switching means responding to current flow in said first direction through said series circuit.

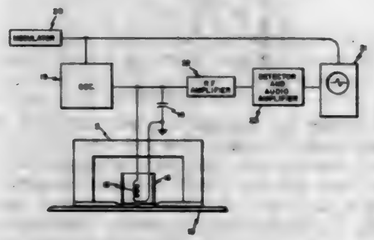
2,948,844
MAGNETIC AMPLIFIER
Raymond E. Morgan, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 31, 1955, Ser. No. 512,007
9 Claims. (Cl. 323—89)



1. A magnetic amplifier comprising: a magnetic core member; a power winding in magnetic flux exchange rela-

tionship with said core member; a current rectifier connected in series with said power winding; a source of periodically varying electrical currents connected in series with said power winding, said current rectifier and a load device for delivering unidirectional power pulses to said power winding capable of driving said core member into positive saturation; a control winding in flux exchange relationship with said core member for governing the control level of the magnetic flux in said core; a bias winding in flux exchange relationship with said core member; means for supplying electrical flux reset pulses of relatively short duration to said bias winding during the period between said unidirectional power pulses, said flux reset pulses being of sufficient magnitude to drive said core to negative saturation and terminating a brief time interval before the commencement of the next succeeding power pulse to permit the flux in said core member to return to a control flux level set by said control winding, whereby succeeding power pulses operate said core member wholly on one side of its major hysteresis loop.

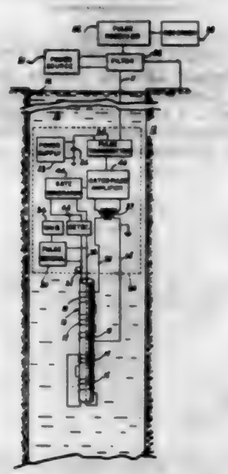
2,948,845
MAGNET ASSEMBLY FOR NUCLEAR MAGNETIC RESONANCE APPARATUS
Neil E. Handel, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Filed Dec. 23, 1957, Ser. No. 704,625
6 Claims. (Cl. 324—.5)



5. In apparatus for making nuclear magnetic resonance measurements on thin sheet material during the movement thereof, the improvement comprising a pair of thin and relatively long pole pieces disposed in the same plane and having adjacent ends spaced to form a relatively narrow gap having a width corresponding to the length of said pole pieces, means magnetically saturating the ends of said pole pieces to establish a uniform magnetic field across said gap, and means for moving the sheet material under test in a plane parallel to the plane containing the pole pieces and in a direction parallel to the ends of said pole pieces whereby a section of the sheet adjacent the gap is subjected to a magnetic field parallel to the plane of the sheet.

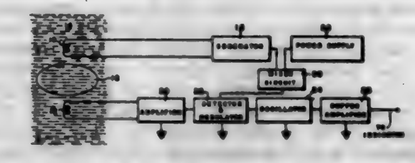
2,948,846
WELL LOGGING SYSTEMS
Maurice A. Coufleau, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed Nov. 1, 1956, Ser. No. 619,900
15 Claims. (Cl. 324—6)

8. In apparatus for investigating an electrical property of earth formations traversed by a borehole, the combination comprising transmitter and receiver coil means spaced for longitudinal movement through a borehole, means for passing a discontinuous sinusoidal current wave train portion through said transmitter coil means to induce in said receiver coil means a signal having a conductive component dependent upon the conductivity of adjacent formations and a component in phase quadrature with the conductive component, means responsive to the transition of the potential developed across said transmitter coil means through a reference value for producing a gate signal having a relatively short duration compared with the interval between wave train portions, means responsive



to said pulse signal during the occurrence of said gate signal for producing a measure signal varying as a function of formation conductivity, and means for transmitting said measure signal to the surface for utilization.

2,948,847
ELECTROMAGNETIC CONDUCTIVITY DETECTION
Frank Bravenec and Richard H. Huddleston, Jr., Houston, Tex., assignors, by mesne assignments, to Welex, Inc., a corporation of Delaware
Filed May 3, 1957, Ser. No. 656,876
8 Claims. (Cl. 324—34)



3. In a system for the detection of conductivity having a transmitter means for producing an alternating electromagnetic flux field of substantially constant magnitude in a surrounding medium whereby eddy currents will be established responsive to the conductivity of the said medium, a receiver means axially disposed apart from said transmitter means for producing a voltage induced by said flux field and also by a secondary flux field established by said eddy currents, and a detection means for detecting only that component of the receiver voltage representative of said secondary flux field, said detection means comprising, means in connection with said receiver means and a first circuit for superimposing said receiver voltage as an alternating ripple of a direct current voltage, said first circuit having a first and a second branch in respective connection with a first and second measuring terminal, a first and second resistance respectively connected between said terminals and a current return, a first and second rectifier means respectively connected into said first and second branches for passing current in one direction of flow, a filtering means connected into said second branch for filtering out said superimposed receiver voltage, a second circuit in connection with a source of alternating current voltage of like frequency and preselected phase relation to said receiver voltage, said second circuit having a third and a fourth branch in respective connection with said measuring terminals, a third and a fourth rectifying means respectively connected in said third and fourth branches for passing current in one direction of flow, and means connected across said terminals for producing a voltage representative of said component of the receiver voltage.

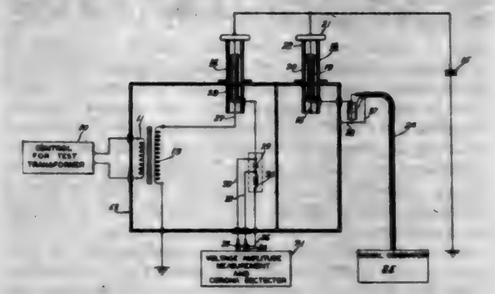
2,948,848
FAULT DETECTING AND INDICATING SYSTEM
Anders Ingvar Arnäo, Vasteras, Sweden, assignor to Aktiebolaget Svenska Metallverken, Vasteras, Sweden, a joint stock company limited
Filed June 27, 1956, Ser. No. 594,169
Claims priority, application Sweden July 1, 1955
5 Claims. (Cl. 324—34)



1. An arrangement for detecting and indicating a particularly undesired fault, such as a surface irregularity, a homogeneity defect, a foreign inclusion or the like in a material positively advanced at a predetermined velocity, including an electrical bridge circuit having a pair of branches, said bridge circuit having a solenoid included in one branch and adapted to receive said material, means for supplying an alternating voltage of a predetermined frequency to the other branch of said bridge whereby the output of said bridge is adapted to contain the predetermined frequency as a fundamental or carrier frequency and a fault impulse frequency modulating said fundamental frequency being impressed thereon as the magnetic state of said solenoid is altered by the defects in the material advanced therethrough, a carrier frequency amplifier connected to the output of said bridge, detecting means for rectifying the amplified voltage of said bridge, a low pass filter adapted to filter out said fundamental frequency and to pass the low, fault impulse frequencies impressed thereon, a tuned amplifier circuit connected to said low-pass filter and adapted to be resonant to one of the low, fault impulse frequencies passed by said low-pass filter and an indicator responsive to the output of said tuned amplifier circuit and adapted to yield an indication of the fault frequency selectively passed thereby.

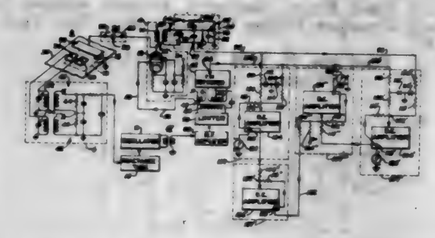
2,948,849
METHOD AND APPARATUS FOR MEASURING APPARENT CORONA CHARGE
William P. Foster, Lansdowne, Pa., assignor to James G. Biddle Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed June 27, 1957, Ser. No. 668,395
12 Claims. (Cl. 324—54)

1. The method of calibrating corona test equipment comprising connecting a calibrating capacitance and a terminating impedance in series across the test sample so that one side of the terminating impedance is grounded, and connecting another impedance in parallel therewith, applying a calibrating signal of known voltage across the terminating impedance, applying test voltage across the test sample and comparing the known signal detected across the other impedance with the actual corona pulse



resulting from a corona discharge also detected across the other impedance.

2,948,850
APPARATUS FOR ANALYZING WEIGHT COMPOSITION OF MATERIALS
Norbert Ederer, Fairlawn, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Feb. 10, 1958, Ser. No. 714,173
14 Claims. (Cl. 324—61)

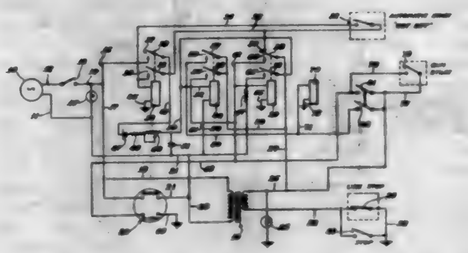


1. Apparatus for measuring the weight of continuously produced material composed of a plurality of ingredients from portion to portion thereof, comprising a variable amplitude, variable frequency oscillation system; electrical translating means disposed in proximity to said material, included in said system and effective to vary both the amplitude and frequency of the oscillation each jointly and severally in accordance with the two variables of weight of one of said ingredients and weight of the remaining ingredient; A.M. detector means and F.M. detector means connected to said system, respectively for amplitude and frequency demodulation of said oscillation, and providing a pair of demodulated similar signals representing a pair of simultaneous equations in said two variables; and means for combining said pair of similar signals in predetermined weighted relation to one another to produce a single signal representing the solution of said equations for one of the two variables.

2,948,851
ELECTRIC CONTROL FOR TIMER
George J. Dekan, Glen Ellyn, Ill., assignor of one-half to Ward Miller, Glen Ellyn, Ill.
Filed June 25, 1957, Ser. No. 667,857
14 Claims. (Cl. 324—70)

9. In a control arrangement for an electrical timer, a power source, electrically operated signaling means, a first relay means, a second relay means, a third relay means, means for momentarily operating said first relay means, said first relay means operating to complete a circuit for the operation of said second relay means and

completing a locking circuit for maintaining said first relay means operated, said second relay means operable to simultaneously initially connect said power source to said electrically operated signaling means and to said timer for operations thereof and to complete a circuit for the



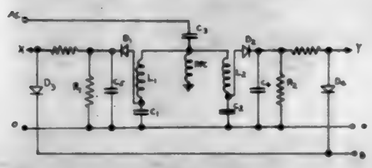
operation of said third relay means, said third relay means operable to open said locking circuit for said first relay means so that said first and second relay means and said signaling means restore and for simultaneously completing a circuit for maintaining said power source connected to said timer.

2,948,852

SYSTEMS FOR DETECTING RELATIVE MOVEMENTS USING FERRO-RESONANT SYSTEMS

Kenneth Frank Bacon, Southwick, England, assignor to North American Philips Company, Inc., New York, N.Y.

Filed Apr. 10, 1958, Ser. No. 727,619
8 Claims. (Cl. 324—70)



1. Electrical apparatus comprising input means for an alternating voltage of given frequency, a first circuit arrangement comprising inductance and capacitance, said inductance undergoing variations in value upon changes in the magnetic flux thereof and at a given flux exhibiting a value producing electrical resonance with said capacitance at said given frequency, a second circuit arrangement comprising inductance and capacitance, said second inductance undergoing variations in value upon changes in the magnetic flux thereof and at a given flux exhibiting a value producing electrical resonance with said second capacitance at said given frequency, means responsive to current flow through one of said circuits for limiting current flow through the other of said circuits, and means for selectively varying the flux of the inductance of one of said circuits thereby to produce resonance in said circuit and to limit current flow in the other of said circuits.

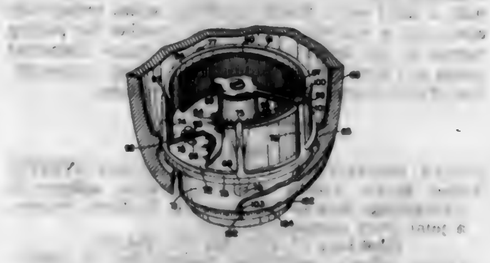
2,948,853

MULTI-RANGE HOOK-ON ELECTRICAL INDICATING INSTRUMENT

Arnold L. Nylander, Swampscott, Mass., assignor to General Electric Company, a corporation of New York

Filed Feb. 13, 1958, Ser. No. 715,018
7 Claims. (Cl. 324—115)

1. In a multi-range electrical indicator of the hook-on type, comprising a current coil, an indicating-meter in shunt with said current coil, and a resistance in shunt with said current coil to obtain the desired range of current indication; the improvement wherein said shunt resistance comprises a rheostat unit including only a single resistance element, a movable arm contacting said re-



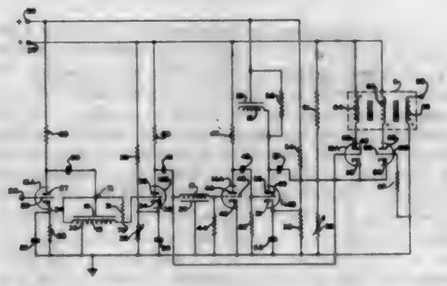
sistance element, and a plurality of adjustable stops positioned intermediate the ends of said resistance element and adapted to engage said movable arm, each of said stops establishing a respective meter range.

2,948,854

PULSE DECODER HAVING PULSE WIDTH AND PULSE SPACING DISCRIMINATING MEANS

Leon Bess, Boston, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Filed Sept. 17, 1945, Ser. No. 616,918
9 Claims. (Cl. 328—56)



1. In a decoding system, a decoder comprising two delay lines, a limiter-inverter circuit, an inverter-driver circuit, a coincidence circuit, means for impressing a series of code pulses on one input of said coincidence circuit and on the input of the first of said delay lines, means for connecting the output of said first delay line to the input of said limiter-inverter circuit, means for connecting the output of said limiter-inverter circuit to the input of said inverter-driver circuit, means for connecting the output of said inverter-driver circuit to a second input of said coincidence circuit and to the input of the second of said delay lines, means for connecting the output of said second delay line to said second input of said coincidence circuit, and means for abstracting the output of said coincidence circuit.

2,948,855

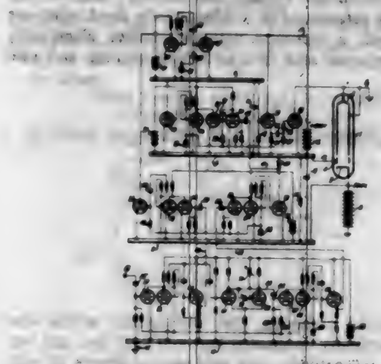
ELECTRICAL PULSE-FORMING

Joseph P. Swanson, Menlo Park, and Gene E. Tallmadge, Redwood City, Calif., assignors to Levinthal Electronic Products, Inc., Palo Alto, Calif., a corporation of California

Filed June 11, 1957, Ser. No. 665,050
9 Claims. (Cl. 328—67)

2. Electrical pulse-forming apparatus comprising the following combination: first and second electrical conductors having therebetween an interconductor resistance

and an interconductor capacitance, said resistance and said capacitance having a large time constant relative to the duration of the electrical pulses that are to be formed; first and second normally non-conductive electron tubes each having an anode and a cathode, the cathode of said first tube and the anode of said second tube being connected to said first conductor, the cathode of said second tube being connected to said second conductor; means for providing first and second triggering electric pulses in sequence; means for causing said first tube to conduct a pulse of current responsive to said first triggering pulse,



said current charging said capacitance to produce a sudden voltage increase between said first conductor and said second conductor; means for rendering said second tube conductive responsive to said second triggering pulse, whereupon said capacitance discharges through said second tube to produce a sudden voltage decrease between said first conductor and said second conductor; and a cathode follower connected in responsive relation to the voltage between said first and second conductors for providing a low-impedance source of essentially rectangular-waveform electric pulses.

2,948,856

DIRECT READING TYPE MEASURING SYSTEM FOR TIME DIFFERENCE OR PHASE DIFFERENCE BETWEEN TWO RECEIVED SIGNAL WAVES

Isokazu Tanaka, Suginami-ku, Tokyo-to, and Shizuo Kurimura, Ota-ku, Tokyo-to, Japan, assignors to Kabushiki-Kaisha Koden Seisakusho, Shinagawa-ku, Tokyo-to, Japan

Filed Dec. 5, 1957, Ser. No. 700,858
Claims priority, application Japan Dec. 12, 1956
6 Claims. (Cl. 328—110)



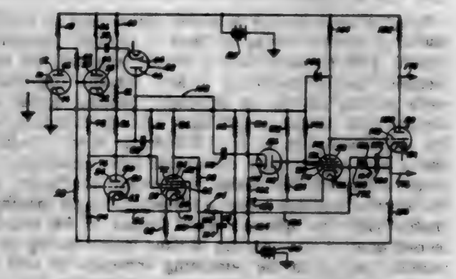
5. Apparatus for indicating a time interval of variable duration by the transmission of first and second signals, each of said first signals indicating the start of a time interval, each of said second signals indicating the termination of a time interval comprising, a source of signal oscillations of a predetermined frequency, a frequency dividing means responsive to said source of signal oscillations to generate a series of said first signals, a plurality of frequency dividers independently responsive to said source of signal oscillations and individually responsive to said frequency divider means to generate synchronized trains of signals, the train of signals from each of said frequency dividers having a frequency which is a different submultiple of said predetermined frequency, a plurality of variable phase shifting means respectively responsive to said plurality of frequency dividers, drivable means coupled to said variable phase shifting means selectively driven for causing the relative phase shift introduced by each of said variable phase shifting means to be proportional to the frequency of the associated train of signals, and detecting means responsive to each of said variable phase shifting means for transmitting second signals upon the simultaneous reception of a signal from each of said trains of signals from said variable phase shifting means.

2,948,857

SWEEP GENERATORS FOR CATHODE RAY OSCILLOGRAPHS

Warren W. Welcome, Berkeley, Calif., assignor to Land-Air, Inc., Chicago, Ill., a corporation of Illinois

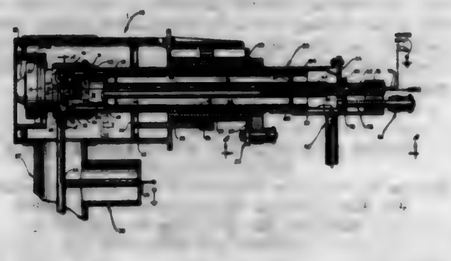
Filed Nov. 23, 1956, Ser. No. 624,049
9 Claims. (Cl. 328—185)



1. A constant amplitude sweep generator comprising pulse shaping means for shaping and amplifying input pulses, said pulse shaping means including a monostable multivibrator adapted to produce an output pulse of constant amplitude and duration for each input pulse, an integrating network connected to said pulse shaping means for integrating the pulses to produce a direct current voltage proportional to the repetition rate of the input pulses and a sweep generating network connected to said pulse shaping means and to said integrating network for producing sweep voltages of constant amplitude over the range of input pulse repetition frequencies, said sweep generating network comprising a first discharge device including an anode, a cathode, a suppressor grid and a control grid, a second discharge device including an anode, a cathode and a control grid, capacitance means connected between said control grid of said first discharge device and the cathode of said second discharge device, means for applying the direct current voltage from said integrating network to said control grid of said first discharge device, means for applying pulses from said pulse shaping means to the suppressor grid of said first discharge device to terminate anode current flow therein, means connecting the anode of said first discharge device to the control grid of said second discharge device for causing the potential on said cathode of said second discharge device to be raised in response to the termination of anode current flow in said first discharge device, the increase in potential in said cathode resulting in current flow to said ca-

pacitance and means to raise the potential on the control grid of said first discharge device to increase anode current flow therein whereby the rate of current flow into said capacitance means is dependent upon the value of direct current voltage applied from said integrating network and hence dependent upon the repetition rate of the input pulses to the end that the output sweep voltage from said second discharge device is maintained at a constant amplitude over the range of repetition frequencies of the input pulses.

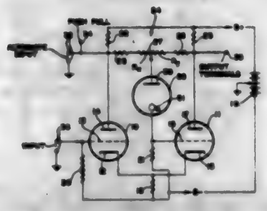
2,948,858
CAVITY RESONATOR CIRCUIT
Spiro A. Stamatoff, Fullerton, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed July 18, 1958, Ser. No. 749,550
4 Claims. (Cl. 303—54)



1. A radio-frequency amplifier comprising an electron discharge device having at least a cathode terminal, a control grid terminal and a heater terminal, an input resonant cavity including a first tunable one-quarter wave section having an extremity coupled across said control grid terminal and said cathode terminal, said first section having a first cylindrical outer conductor and a first substantially cylindrical inner conductor disposed concentrically within said outer conductor, said first inner conductor being of adjustable length thereby to enable said first quarter wave section to be tuned; a second quarter wave section of fixed length having an extremity coupled to the remaining extremity of said first quarter wave section, said second quarter wave section having a second substantially cylindrical outer conductor attached and electrically connected to said first outer conductor and a second hollow cylindrical inner conductor disposed concentrically within said second outer conductor and attached and electrically connected to said first inner conductor; a third quarter wave section folded back from said second quarter wave section, said third quarter wave section being provided by a third cylindrical inner conductor disposed concentrically within said second inner conductor and being attached thereto with a shorting termination one-quarter wavelength from the extremity thereof that is common with the remaining extremity of said second section; means coupled to said second inner conductor for simultaneously exciting said second and third quarter wave sections with an input signal; and means attached to said third inner conductor for slidably moving one extremity of said first inner conductor thereby to tune said input resonant cavity.

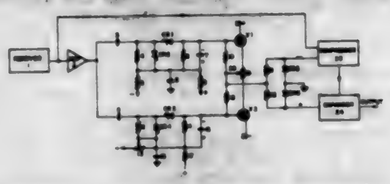
2,948,859
ISO-LEVEL PHASE INVERTER CIRCUIT
John Linn Hostetter, Tucson, Ariz., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 1, 1956, Ser. No. 619,995
2 Claims. (Cl. 330—117)

1. An electronic circuit for producing a balanced iso-level push-pull output signal between first and second output terminals in response to a single phase input signal applied to either a first or second input terminal, said first input and output terminals being electrically connected to each other, said circuit comprising: first and second electron tubes having first and second cathodes, respectively, first and second control grids, respectively, and first and second anodes, respectively, said first and second anodes being electrically connected to the first and second output terminals, respectively, and said first control grid being electrically connected to the second input terminal; first and second sources of negative and positive direct-current voltage, respectively, each of said sources being referenced to a substantially fixed reference potential level; a common cathode resistor electrically connected between said first source of voltage and said



first and second cathodes; first and second anode load resistors electrically connected between said first and second anodes, respectively, and said second source of voltage, said first and second anode resistors being substantially of equal ohmic value; first and second grid resistors electrically connected between said first and second control grids, respectively, and said first source of voltage; first and second voltage divider resistors of substantially equal ohmic value and a potentiometer electrically connected therebetween, said first and second voltage divider resistors and said potentiometer being electrically connected between said first and second anodes; and means electrically connected between the movable contact arm of said potentiometer and said second control grid for maintaining a substantially constant potential difference between said contact arm and said control grid.

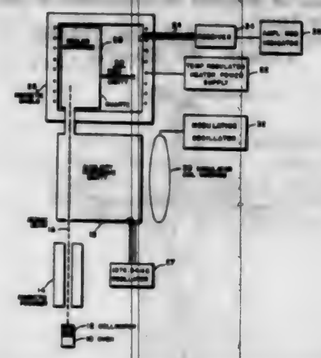
2,948,860
AUDIO LEVEL GOVERNING DEVICE
Charles J. Affelder, 7704 Marbury Road, Bethesda, Md.
Filed Dec. 11, 1957, Ser. No. 702,214
7 Claims. (Cl. 330—134)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with an amplifier circuit which is to be controlled, a gain control circuit comprising, a first circuit means responsive to a first predetermined signal level for providing a first negative voltage for signal levels in excess of said first predetermined signal level, second circuit means responsive to a second predetermined signal level for providing a second negative voltage for signal levels in excess of said second predetermined level, said second predetermined signal level being greater than said first predetermined signal level and both said predetermined signal levels being less than the normal signal level, third circuit means responsive to said

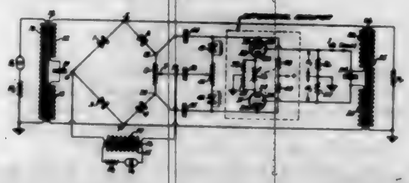
first and second negative voltages, and so constructed and arranged as to provide an increasing gain control voltage in response to said first negative voltage, a decreasing gain control voltage in response to said second negative voltage, and a substantially constant level control voltage for conditions of normal signal input, as well as, for the condition of no signal input and means for applying the respective voltage to said amplifier circuit to maintain the input signal at substantially constant level.

2,948,861
QUANTUM MECHANICAL RESONANCE DEVICES
David D. Babb, Cambridge, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed July 29, 1957, Ser. No. 674,981
18 Claims. (Cl. 331—3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



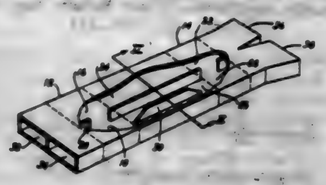
1. A quantum mechanical resonance device comprising a cavity resonator, a gas contained in a portion of said resonator and comprising a mixture of particles in at least two energy states, the number of particles in the higher energy state being greater than that which exists when said gas is in a state of thermal equilibrium, whereby upon passing to a lower energy state they radiate waves of a predetermined microwave frequency, said resonator being tuned in a fundamental mode to said frequency, the walls of said portion of said resonator being of a dielectric material which will not produce relaxation when said particles come into contact therewith a number of times, whereby said particles will travel for a longer time before relaxation occurs.

2,948,862
BALANCED MODULATOR CIRCUIT
Frank M. Brock, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 8, 1955, Ser. No. 533,692
9 Claims. (Cl. 332—47)



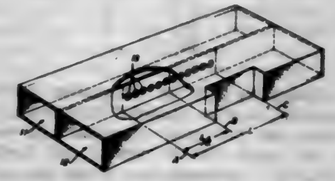
1. A balanced modulator circuit comprising a rectifier modulator of the balanced shunt type, means for applying modulation frequency energy to said modulator, means for applying carrier frequency energy to said modulator, means coupling an output circuit to said modulator whereby said modulator is normally balanced with respect to said carrier frequency energy, said last named means having means to provide a direct current component of carrier leakage, and means responsive to said direct current component of carrier frequency leakage appearing present in said output circuit for returning said modulator substantially to its normally balanced condition, thereby to reduce the amplitude of said direct current components.

2,948,863
SIGNAL CHANNELING SYSTEM
Hajime Honda, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 21, 1953, Ser. No. 376,799
3 Claims. (Cl. 333—10)



1. A waveguide channeling system comprising first and second waveguide directional couplers, each of said directional couplers having two input waveguides and two output waveguides, the characteristics of said directional couplers being such that energy introduced into either input waveguide divides equally between the two output waveguides with the energy in one output waveguide shifted 90° in phase with respect to energy into the other output waveguide, a first waveguide section coupling an output waveguide of said first directional coupler to an input waveguide of said second directional coupler, and a second waveguide section coupling the other output waveguide of said first directional coupler to the other input waveguide of said second directional coupler, first and second adjustable phase shifting means disposed in said first and second waveguide sections, respectively, and means associated with said two phase shifting means for simultaneously adjusting said phase shifting means, said adjustment being such as to vary the effective electrical lengths of said two waveguide sections in the same direction and by unequal amounts.

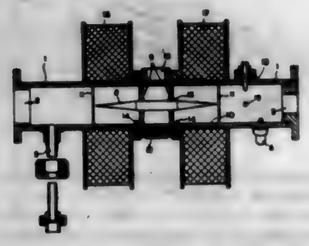
2,948,864
BROAD-BAND ELECTROMAGNETIC WAVE COUPLER
Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 2, 1957, Ser. No. 687,729
11 Claims. (Cl. 333—10)



1. In an electromagnetic wave transmission system, a first communication channel having a phase constant β_1, a second communication channel having a phase constant β_2 where β_2 is different than β_1, means for distributively coupling between said first and second chan-

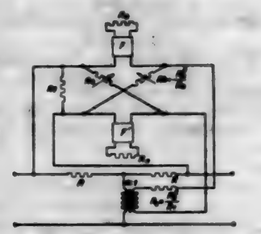
nels over a given length of said transmission system with a coupling coefficient c, $(\beta_1-\beta_2)$ and c thereby being parameters of said system, and means for abrupty reversing the sense of one of said parameters at least once along said given length of distributive coupling with the absolute value of each of said parameters remaining constant over said given length, whereby coupling between said first and second channels is rendered uniform over a broad frequency band.

2,948,865
MODE ELLIPTICITY CORRECTING DEVICE
Frederick Warren Smith, Brixton, London, England, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 25, 1956, Ser. No. 600,125
Claims priority, application Great Britain Aug. 8, 1955
3 Claims. (Cl. 333—21)



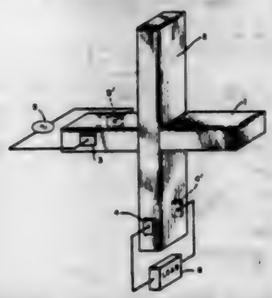
1. A waveguide arrangement comprising a symmetrical waveguide, means for providing a polarized electromagnetic wave in said waveguide, said polarized wave having an undesired ellipticity, and means for correcting said ellipticity, said last-named means comprising at least one reactance member extending inwardly from the wall of said waveguide and located at an angle of 45 degrees with respect to both the major and minor axes of said ellipticity, said reactance member introducing substantially less than 90 degrees phase shift to said wave.

2,948,866
ADJUSTABLE CORRECTING NETWORKS
Jacques Oswald, Versailles, France, assignor to Compagnie Industrielle des Telephones, Paris, France, a French corporation
Filed Nov. 3, 1958, Ser. No. 771,566
4 Claims. (Cl. 333—28)



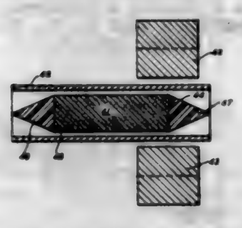
2. In a transmitting line an attenuation correcting network comprising a main bridged-T four-terminal network including two horizontal branches, one vertical branch and one bridge branch, each of said horizontal branches including a resistance equal to the value of the constant characteristic impedance of the line, and at least one cut-all antimetric auxiliary four-terminal network, the input thereof being inserted in said bridge branch and the output thereof being coupled with said vertical branch, said auxiliary four-terminal network being a lattice-type network and having a mean characteristic impedance R_0 and comprising a first pair of opposite branches having resistances which are adapted to vary while maintaining their product equal to R_0^2 and a second pair of opposite branches including fixed impedances of which the product is also equal to R_0^2; wherein said fixed impedances include the input circuits of two filters of which the output circuits are connected each to a respective resistance of R_0 value, said filters being adapted to have a non-zero composite attenuation in a certain frequency band, and a negligible composite attenuation outside said frequency band whereby said attenuation-correcting network only affects the produced attenuation throughout a domain of correction including said frequency band.

2,948,867
PIEZOELECTRIC CERAMIC RESONATORS
Oskar E. Mattiat, Santa Barbara, Calif., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 17, 1958, Ser. No. 774,564
6 Claims. (Cl. 333—72)



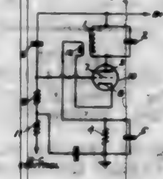
1. In a piezoelectric ceramic filter, two polarized rod-shaped resonators intersecting each other at their respective geometrical centers and vibrating in their lengthwise mode, one resonator being dimensioned to vibrate in its first overtone whereas the other is dimensioned to vibrate in its second overtone, the first and the second overtones corresponding to the same frequency.

2,948,868
FREQUENCY SENSITIVE ELECTROMAGNETIC WAVE DEVICE
Marvin L. Reeves, Seattle, Wash., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 14, 1955, Ser. No. 546,392
1 Claim. (Cl. 333—73)



In combination, a conductively bounded electro-magnetic wave transmission path having an input and an output end and a cutoff frequency f_0, a source of wave energy including a band of frequencies extending between a lower frequency f_1 higher than f_0 and a frequency f_2 higher than f_1 and including a frequency f_3 between f_1 and f_2 connected to said input end, filtering means disposed within said path comprising an element of magnetically polarizable material capable of exhibiting gyromagnetic effects over said band of frequencies and having a sharp gyromagnetic resonance characteristic with respect to said band, said element having a uniform transverse cross section that extends longitudinally along said path, means for inducing gyromagnetic resonance in said element over a preselected range of frequencies extending from f_1 to f_2 comprising a pair of magnetic pole pieces uniformly spaced to receive a portion only of said element, said pole pieces extending longitudinally beyond one end of said element to produce at said end a maximum field intensity in said element that induces gyromagnetic resonance at said one end at frequency f_2, the remainder of said element extending longitudinally beyond said pole pieces at the other end thereof to produce at said other end a minimum field intensity in said element that induces gyromagnetic resonance at said other end at a frequency no greater than f_0, and means for utilizing said applied wave energy between the frequencies f_3 and f_2 to the exclusion of said frequencies within said preselected range of frequencies between f_1 and f_2 connected to said output end.

2,948,869
REACTANCE NETWORKS
John F. Bigelow, Philadelphia, Pa., assignor to Raytheon Company, a corporation of Delaware
Filed Dec. 27, 1955, Ser. No. 555,535
5 Claims. (Cl. 333—80)



1. A variable reactance circuit comprising an electrical translation device having at least an input electrode, an output electrode, and an electrode common to the circuits of said input and output electrodes, an output load in circuit with said output electrode and said common electrode, feedback means directly connected to said common electrode and cooperative with said load for applying a feedback voltage from said output load to said common electrode which is 180° out of phase with and responsive to changes in a first voltage existing across said load whereby the current flowing through said load remains substantially constant with changes in said first voltage, and means interconnected between said load and said input electrode for simultaneously applying a second voltage substantially out of phase with said feedback voltage to said input electrode whereby current flowing through said device is out of phase with the voltage across said device.

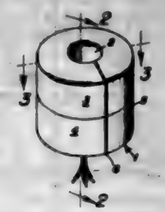
2,948,870
MICROWAVE MODE SUPPRESSORS
Albert M. Clogston, Mendham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 13, 1956, Ser. No. 571,185
4 Claims. (Cl. 333—98)

1. In combination, a wave guide transmission line, means for applying to said line for transmission therealong a preferred mode of electromagnetic wave energy at microwave frequency having a circular symmetric field configuration within the wave guide, said preferred mode tending to degenerate during transmission into at least one other mode having a second configuration of magnetic field different from said circular symmetric field configuration, a selective mode suppressor disposed along said line comprising a plurality of thin plates cut from a single crystal of ferromagnetic material of low conductivity, the maximum dimension of each of said plates being not greater than a quarter of the maximum transverse dimension of said wave guide and the thickness of each of said plates being approximately five per cent of the maximum dimension of the plates so that each of said plates is capable of gyromagnetic precession



in different modes depending upon the strength of a unidirectional magnetic field applied to said plates, and means for applying a unidirectional magnetic field to said plates of the strength which produces the one of said precessional modes within said plates that corresponds substantially to the configuration of said second magnetic field configuration and is substantially different from said circular symmetric field configuration so that wave energy in said second configuration is substantially absorbed and wave energy in said circular symmetric field configuration is freely passed.

2,948,871
MINIATURE INDUCTIVE DEVICES
Theodore L. Craige, Lynbrook, N.Y., assignor to United Transformer Corporation, New York, N.Y., a corporation of New York
Filed July 26, 1957, Ser. No. 674,342
13 Claims. (Cl. 336—83)



3. An inductive device including a hollow magnetic shell, said shell including two conjoined members, each of said members having axial symmetry about a common axis and substantially equal diameters, said members when conjoined providing a substantially closed annular enclosure having a cylindrical inner wall, at least one of said members having two circular walls abutting against and metallically contacting the other of said members, and a radial slot extending through said members so arranged that said shell constitutes an open loop circumferentially, the area of abutment and contact of said abutting circular walls being adjustable and defining an air gap of selective extent, said shell being fabricated of magnetic unpowdered laminate material having walls of uniform thickness.

2,948,872
SENSING MEANS
Paul Beckman, 1037 Tremont Drive, Glenolden, Pa.
Filed May 18, 1959, Ser. No. 813,832
8 Claims. (Cl. 338—3)

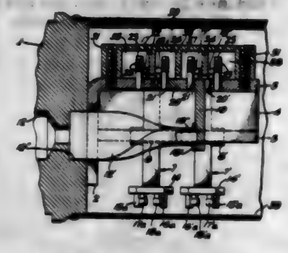
1. A temperature compensated electrical strain gage comprising, in combination, an elongated shield of elec-

trical insulation, a temperature compensating electrical resistance element extending through the opposite ends of the shield and disposed freely therein so that no strain can be transmitted through the shield to the temperature compensating element, a strain responsive electrical resistance element disposed lengthwise of and outside of said shield and connected at a junction point to one end of the temperature compensating element, leads connected respectively to said junction point and to the other ends of said resistance elements, and electrical insulation means for bonding the shield and the strain responsive element



throughout its effective length to a member whose strain is to be measured, whereby the strain responsive element is subject to changes in electrical resistance in response to both strain and temperature and the temperature compensating element is subject to changes in electrical resistance in response only to temperature variations so that the two electrical elements when disposed in adjacent arms of a measuring bridge will cancel their changes in electrical resistances arising from temperature variations thereby allowing only the strain response to be measured.

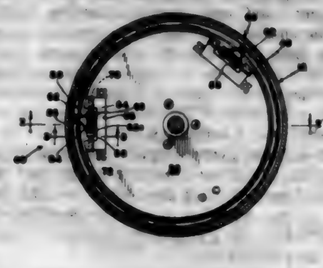
2,948,873
STRAIN WIRE TRANSDUCER
Mario Di Giovanni, Pacific Palisades, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Filed Feb. 24, 1958, Ser. No. 717,139
8 Claims. (Cl. 338—4)



1. An unbonded strain wire transducer comprising a force summing means, a frame, an armature assembly, a flexure positioned on said armature assembly intermediate the ends of said armature assembly, a wire support on said armature assembly at one side of said flexure, a second wire support mounted on said force summing means and a third wire support mounted on said frame adjacent the said second wire support, a strain wire extending in tension from the third to the first wire supports and from the first to the second wire support.

2,948,874
VARIABLE RESISTOR
Kenneth W. Jarvis, 1140 Cherry St., Winnetka, Ill.
Filed Aug. 21, 1959, Ser. No. 835,819
10 Claims. (Cl. 338—167)

1. A variable resistor comprising a mounting member, a resistance element secured to the mounting member, electrical contact means slidably abutting the resistance element including a generally shaped rigid member pivotally mounted at two corners on an axis generally parallel to the confronting surface of the resistance element, the third corner of the member having an electrically conducting surface in slidable contact with the resistance element, means coupled to the shaped member to exert a pressure on the resistance element, means secured to the mounting member to translate the contact means along the resistance element including an electrically conducting surface electrically connected to the contact of the contact means, and a second electrical contact means comprising a pin, a pair of electrically conducting arms journalled about the pin having electrical contacts at one end



thereof in slidable engagement with the electrically conducting surface of the translating means, a helical spring disposed about the pin having outwardly extending legs at each end, one of said legs being attached to the end of each arm opposite to the electrical contact and spring biasing the spring attached ends of the arms toward each other, thereby exerting a pressure on the electrical contacts at the other ends of the arms against the electrically conducting surface.

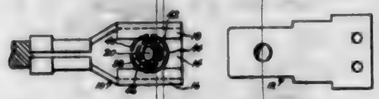
2,948,875
GANG ELECTRIC CONNECTOR
Hugh W. Batcheller, Newton Highlands, Mass., assignor to Kent Mfg. Corp., Newton, Mass., a corporation of Massachusetts
Filed May 31, 1955, Ser. No. 511,964
4 Claims. (Cl. 339—48)



1. An electric connector comprising two rigid normally parallel plates of insulation having mutually registering apertures therethrough, a conductor projecting through each said aperture, each said conductor consisting of a strip of resilient metal doubled upon itself to form a flat tongue projecting from one face of one of said plates, the extremities of each said strip engaging the opposite face of its plate and extending away from each other at acute angles to the plane of its plate, and means clamping the margins of the plates with the extremities of the conductors in one plate pressing against the extremities of the corresponding conductors in the other plate.

2,948,876
CONNECTOR MEMBER WITH RESILIENTLY SUPPORTED CENTRAL BOSS
Hugh W. Batcheller, Newton Highlands, Mass., assignor to Kent Mfg. Corp., Newton, Mass., a corporation of Massachusetts
Filed Apr. 5, 1956, Ser. No. 576,337
1 Claim. (Cl. 339—258)

An electrical connector member consisting of a single piece of strip metal shaped to have a floor, side walls, and inturned flanges along the tops of these side walls, said floor having a central boss projecting up above the level of the otherwise flat floor, said floor having two circular series of arcuate slots concentric with said boss, the slots of the inner of said two series defining narrow radial necks equally spaced about said boss, the slots of the outer of said two series defining an equal number



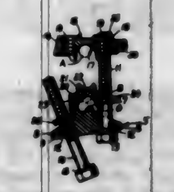
of narrow radial necks equally spaced from the nearest necks of the inner series and equally spaced from one another.

2,948,877
ELECTRICAL CONNECTOR MEMBER WITH T-SPLIT FLOOR
Hugh W. Batcheller, Newton, Mass., assignor to Kent Mfg. Corp., Newton, Mass., a corporation of Massachusetts
Filed Oct. 12, 1956, Ser. No. 615,628
2 Claims. (Cl. 339—258)



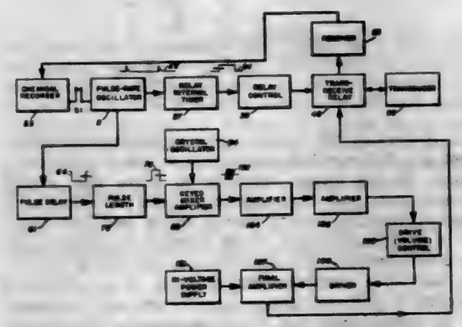
1. A female connector member comprising a piece of sheet metal in the form of a shallow channel adapted to receive at one end thereof a male connector member of the spade type, said female member having a floor, side walls, and inturned flanges on said walls, said floor having a T-slit therethrough consisting of a transverse slit extending substantially from one said wall to the other and a longitudinal slit extending from the mid point of said transverse slit to a point near said end of said channel, said slits forming two pointed fingers the ends of which are bulged up toward said inturned flanges to form a half-dome above the level of the floor.

2,948,878
ELECTRICAL CONNECTORS
John A. Toedtman, Richmond Heights, Mo., assignor to Jasper Blackburn Corporation, St. Louis, Mo., a corporation of Missouri
Filed Sept. 5, 1957, Ser. No. 682,137
2 Claims. (Cl. 339—265)



1. An electrical connector comprising an upper, a lower and an intermediate clamping plate, said lower and intermediate plates having outstanding channelled ribs extending longitudinally on the upper sides thereof, said upper and intermediate clamping plates having longitudinal grooves in the lower sides thereof to receive said channelled ribs and provide circumferentially closed wire passages, clamping bolts at one side of said wire passages extending freely through relatively enlarged eye openings in said lower and intermediate plates, and threadedly into eye openings in the upper plate, means for preventing complete withdrawal of said bolts from said threaded eye openings, other clamping bolts at the opposite sides of said wire passages extending freely through enlarged eye openings in said lower plate and threadedly into eye openings in said upper plate, and bolt retaining collars on said other clamping bolts located between said upper and lower clamping plates, said intermediate plate being recessed laterally to accommodate said other bolts and collars.

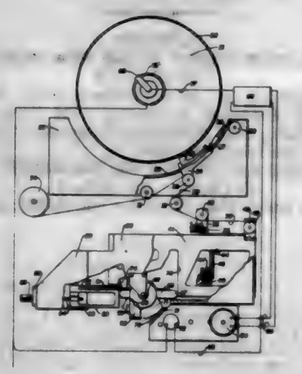
2,948,879
HIGH POWER SHORT PULSE TRANSMITTING APPARATUS
Louis R. Padberg, Jr., 4126 Middlesex Drive, San Diego 16, Calif.; Frederick D. Parker, 3784 Brems St., San Diego, Calif.; and Milton D. Papineau, 2303 Cecilia Terrace, San Diego 10, Calif.
Filed Apr. 27, 1955, Ser. No. 504,391
13 Claims. (Cl. 340—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A transmitter comprising a transducer having a predetermined resonant frequency and generator means coupled with said transducer for supplying signal pulses of said frequency and at a predetermined repetition rate, said generator means including a free running crystal stabilized oscillator, means for generating a train of gating pulses at said predetermined repetition rate, means for modulating the output of said oscillator with said gating pulses to produce said signal pulses, means for generating a train of timing pulses at said repetition rate and of a length greater than the signal pulse length, and switching means controlled by said timing pulse for connecting the signal pulse train to the transducer after the timing pulse has been initiated whereby a stabilized frequency signal pulse free from switching distortions is provided.

13. An acoustic energy transmittting and receiving apparatus comprising gating means for generating a train of gating pulses of predetermined length, means for triggering said gating means at pulse repetition rate, oscillator means for generating a continuous signal of fixed frequency, crystal means for stabilizing the frequency of said oscillator, mixing means coupled with said gating means and with said oscillator means for generating a train of fixed frequency signal pulses of said predetermined length at said repetition rate, means controlled by said triggering means for generating a train of timing pulses of length greater than said signal pulse length, means for delaying said timing pulse train, means for delaying said signal pulse train relative to said timing pulse train, a transducer resonant at said fixed frequency, a receiver, switch means for alternately coupling said transducer with said receiver and with the output of said mixing means, said switch means controlled by said timing pulse train whereby said transducer is coupled to said mixing means before the initiation of a corresponding signal pulse and uncoupled from said mixing means after the termination of said corresponding signal pulse.

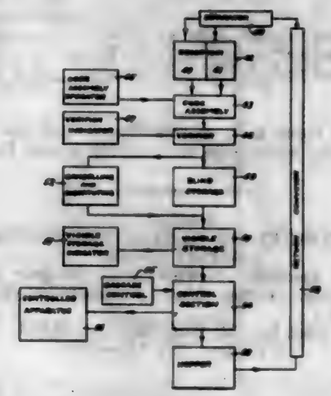
2,948,880
APPARATUS FOR PRODUCING SEISMIC RECORDS
Russell S. Thatcher, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,881
9 Claims. (Cl. 340—15)



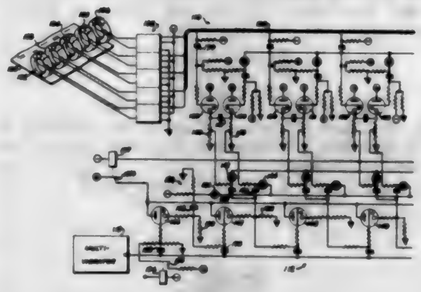
1. Apparatus for producing a predetermined movement of a first member relative to a second member comprising driving means operative to move said second member past said first member in one direction at a constant velocity, biasing means urging said first member in said one direction, a slide member, a tension member interconnecting said slide member and said first member, said slide member being movable in an advancing direction to pull said tension member and said first member in opposition to said biasing means and in a retracting direction to slacken said tension member, a rotatable cam carrier, an elongate cam member longitudinally slidable in said carrier in the path of movement of said slide member, setting means for moving said cam member on said cam carrier to bring one end thereof into engagement with said slide member to move said slide member a predetermined amount in said advancing direction, means for locking said cam member on said carrier, and means for rotating said cam carrier to pivot said cam member in the plane of said slide member.

2,948,881
DISPLAY SWITCHING SYSTEMS AND APPARATUS THEREFOR
Roland J. Berti, 1019 S. 55th St., Omaha 6, Nebr., and David C. Bettison, 4903 Cass St., Omaha, Nebr.
Filed Dec. 13, 1954, Ser. No. 474,668
13 Claims. (Cl. 340—23)

1. In a mechanical code-handling system for storing codes in a prescribed order, said codes being in the form of a plurality of independent, discrete, flowable, mechanical bodies each having one of a plurality of distinctive physical characteristics, means forming a plurality of mechanical code stations, each station having flow-passage means formed with an inlet and an outlet for movement of said codes therethrough, conveying means including independent switching means for each station and flow-passage means successively connecting said stations for successively transmitting each code serially therethrough from the last station to the first station, said switching means of each station normally blocking movement of a code through the flow-passage means thereof and being actuatable for advancing a code from the inlet too the outlet thereof, individual slave-control means for each station except the first for actuating the switching means of such station, said slave-control means each including means responsive to the presence of a code at the immediately preceding station for rendering the same inoperative during the time when the immediately preceding station is occupied by a code, independent control means for actuating the switching means of the first station for discharging a code thereat, and sensing means including means for each station except the first responsive to the presence of a code at its associated station for actuating the slave-control means of such station.

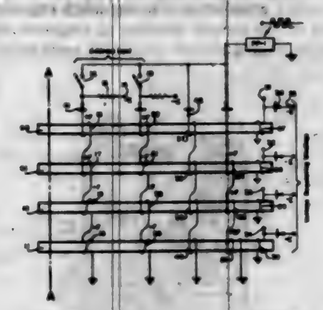


2,948,882
MAGNETIC DATA HANDLING SYSTEM
Charles R. Fisher, Jr., Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed May 17, 1957, Ser. No. 659,883
11 Claims. (Cl. 340—174)



1. A data translating system comprising a first magnetic storage device including a first magnetic member for storing code combinations of permuted mark and space signals, storage means for storing the mark and space signals forming single code combination, reproducing means controlled by said first magnetic member for operating said storage means to concurrently store all the bits of a combinational code, a second magnetic storage device having a continuously moving second magnetic member for storing code combinations of mark and space signals, and means controlled by said storage means for continuously magnetizing said second magnetic member in one polarity in accordance with stored space signals and for continuously magnetizing said second magnetic member in a second polarity in accordance with stored mark signals to provide a continuous and sequentially recorded bipolar record on said second member representing said single stored code combination.

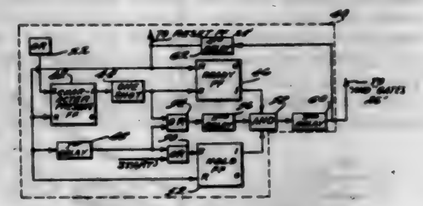
2,948,883
MAGNETIC SELECTING DEVICE
Joseph D. Lawrence, Jr., Philadelphia, Pa., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed May 23, 1955, Ser. No. 510,223
16 Claims. (Cl. 340—174)



11. In a switching system, a plurality of cores formed from magnetic material capable of assuming stable remanence conditions and exhibiting a hysteresis loop having saturated and unsaturated regions of operation, a source of regularly occurring positive and negative going pulses, a first series circuit comprising a winding on each of said cores, a second series circuit comprising a plurality of further windings carried by certain cores but not all of said cores, first rectifier means coupling said source to said first series circuit whereby first polarity excursions of said source apply a pulse of magnetizing force to all of the cores, of magnitude sufficient to drive all of the cores into one of the saturated regions of their hysteresis loops, second rectifier means poled oppositely to said first rectifier means and coupling said source to said second series circuit whereby second polarity excursions of said source apply a pulse of magnetizing force to those cores having windings thereon included in said second series circuit, of magnitude sufficient to nullify the effect of the pulses applied by said first polarity excursions of said source to said first series circuit, a plurality of input windings carried by said cores, said input windings being wound to aid the effect of certain of said further windings and to oppose the effect of others of said further windings, and a plurality of input means for applying current pulses to selected ones of said input windings in coincidence with selected second polarity excursions of said source, said input windings coacting with said further windings so that for each of the various possible combinations of pulsed input windings, all of said cores except a selected one are switched to the opposite saturated region of their hysteresis loops.

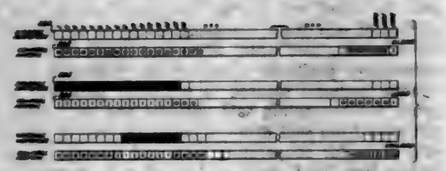
2,948,884
GATING PULSE GENERATOR
Howard P. Guerber, Barrington, and Bernard Adler, Haddon Heights, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed June 1, 1956, Ser. No. 588,714
8 Claims. (Cl. 340—174)

3. In a system for transmitting information represented by nominally simultaneously occurring signals in parallel channels but wherein the simultaneity of said signals is subject to disturbance in point of time, the combination comprising a plurality of storage means each adapted to be connected to a separate one of said parallel channels, a plurality of gating means each connected to the output of a separate one of said storage means, and pulse generating means adapted to be connected to receive said parallel channel signals, said generating means being responsive to said signals to apply gating impulses simultaneously to said gating means, said generating means including means to provide pulses as said gating impulses, a first conditioning means and a second conditioning means connected to condition said pulse providing means, said first conditioning means being responsive to the first occurring signal of said nominally simultaneously occurring signal group, said second conditioning means being responsive to the output of said generating means representing a gating impulse generated by the preceding information signal group and delayed by a specified minimum signal group interval,



said pulse providing means being adapted to emit each said gating impulse when fully conditioned by said first and second conditioning means, a delaying means connected to said pulse providing means to delay said gating impulses for a specified interval to permit all of said nominally simultaneously occurring signals to appear at said storage means before applying each said gating impulse to said gating means, and another delaying means connected to receive said delayed gating impulse to further delay said gating impulse before applying said gating impulse to said second conditioning means.

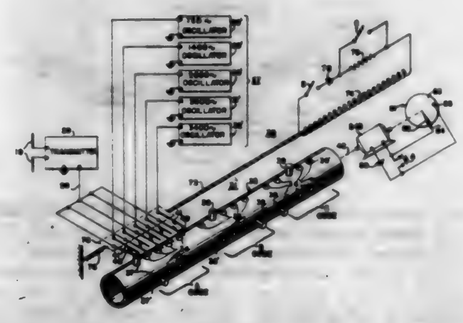
2,948,885
MEMORY APPARATUS
Raymond Stuart-Williams, Pacific Palisades, Calif., assignor to Telemeter Magnetics, Inc., Los Angeles, Calif., a corporation of New York
Filed Apr. 8, 1957, Ser. No. 651,244
9 Claims. (Cl. 340—174)



1. The combination with a data-storage system of the type wherein each data location has a different address, data is read from the said storage system in the same sequence as it was written, and there is a means for establishing the address of a location into which it is desired to write and a means for establishing the address of a location from which it is desired to read, of means for indicating the storage condition of a data-storage location comprising a plurality of magnetic storage cores each having two states of magnetic remanence and being capable of being driven from one to the other state, a different one of said cores being associated with a different one of said data-storage locations, means responsive to said means for establishing the address of a location into which it is desired to write to detect the state of magnetic remanence of the core associated with the location addressed and to drive the core associated with a location previous to the one being addressed to one state of magnetic remanence, and means responsive to said means for establishing the address of a location from which it is desired to read to detect the state of magnetic remanence of the core associated with the location

addressed and to drive the core associated with a location previous to that of the one being read to the other state of magnetic remanence.

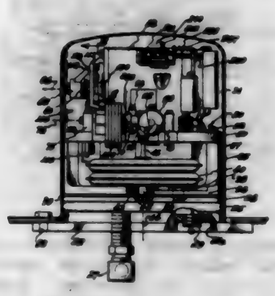
2,948,886
CODE-SETTING DEVICE
Knox McIlwain, Huntington, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 28, 1955, Ser. No. 484,612
19 Claims. (Cl. 340—345)



16. A code-setting device for an electrical identification system comprising: a drum having a plurality of approximately radially disposed apertures extending through the wall thereof and arranged in a plurality of predetermined patterns; a corresponding plurality of members adapted to be confined by frictional surface engagement in predetermined ones of said apertures selected in accordance with a corresponding plurality of predetermined codes, each of said members having a length greater than the thickness of said wall and a width throughout said length substantially equal to the width of any one of said apertures with one end of said member lying in an inoperative position below the outer surface of said drum and the other end thereof extending beyond the inner surface of said drum; a housing having an opening therein for admitting said drum when said members are in said inoperative positions; a removable protective jacket of opaque material secured to the outer periphery of said drum for concealing said patterns and said codes until removed from said drum; a cutter secured to one end of said drum for cooperating with said housing to cut said jacket from said drum as the latter is inserted in said opening in said housing; means within said housing at said opening shaped for insertion axially within said drum into engagement with said other ends of said members to push said one ends thereof beyond the outer surface of said drum into operative positions; means for rotating said drum with said members in said operative positions; and circuit control means including a plurality of electrical contact fingers and a support therefor adjustable axially of said drum to individual ones of a corresponding plurality of different positions for engagement with said members in said operative positions.

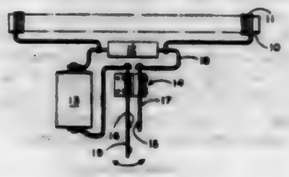
2,948,887
PRESSURE RESPONSIVE INSTRUMENT
Carlyle A. Mounteer, Pasadena, Harry M. Riegelman, Jr., Los Angeles, and Arthur C. Hughes, Jr., Pacific Palisades, Calif., assignors to Giannini Controls Corporation, a corporation of New York
Filed June 6, 1955, Ser. No. 513,378
6 Claims. (Cl. 340—345)

1. A pressure responsive device, comprising a frame, structure mounted with respect to the frame and forming a chamber that is deformable in response to fluid pressure applied thereto, an output member movably mounted with respect to the frame, output means responsive to movement of the member and acting to develop a signal that represents the position of the member, driving means releasably engageable between the chamber and the output member and acting when engaged to cause movement of the output member in response to chamber deformation, caging means releasably engageable between



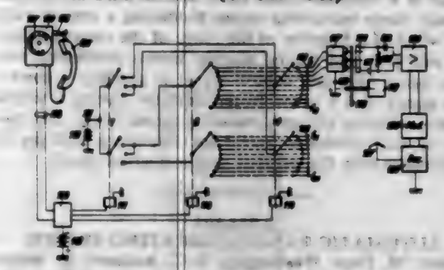
the output member and the frame and acting when engaged to confine the output member to a definite position with respect to the frame, and solenoid control means comprising a solenoid coil and two solenoid armatures movable in response to selective energization of the coil, movement of one armature acting to control engagement of the driving means and movement of the other armature acting to control engagement of the caging means.

2,948,888
MAGNETIC ENERGY TRANSMITTER FOR A REMOTE CONTROL SYSTEM FOR A TELEVISION RECEIVER
Joseph G. Andre Bourget, Chicago, Ill., assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Filed Mar. 15, 1957, Ser. No. 646,396
2 Claims. (Cl. 340—345)



1. In a wireless magnetic energy system for controlling the operation of a television receiver from a remote location, apparatus for generating magnetic energy in a selected audio frequency range, the combination comprising: an antenna coil wound on a cylindrical ferrite core, the ratio of the length to the diameter of said ferrite core being high, the windings of said antenna coil being distributed over substantially the entire length of said core; a condenser connected across said coil forming a resonant tank circuit at said selected audio frequency; and a source of direct current and a vibrating switch in series with said coil, said switch having a manually operable vibratile member with a period of vibration at a rate which is substantially lower than said selected audio frequency, whereby said selected audio frequency is modulated with a wave form having the frequency of said vibratile member.

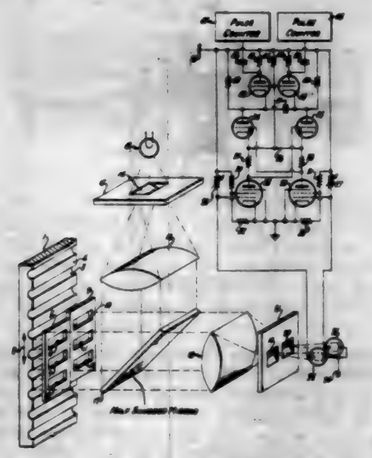
2,948,889
SELECTIVE CALL SIGNAL SYSTEM
Werner Knabl, Berlin-Charlottenburg, Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Filed Dec. 20, 1955, Ser. No. 554,339
Claims priority, application Germany Dec. 30, 1954
3 Claims. (Cl. 340—347)



1. In an apparatus for converting a primary call signal into a secondary call signal, said primary signal being a permutation of sequentially transmitted signal elements and said secondary signal being a combination of simultaneously transmitted dissimilar signal elements mutually superimposed, comprising a plurality of units, each of which when energized initiates a unique secondary signal element, which elements when combined form a secondary call signal; banks of multi-position selector switches, each position selecting a different one of said units; first mechanical actuating means for advancing the selector switches in unison; preselector switch means for determining which of said banks of selector switches will be energized; second mechanical actuating means for advancing said preselector switch means, said second actuating means being responsive to part of the sequential primary signal elements, and said first actuating means being responsive to the remainder of said sequential primary signal elements, each of said units comprising an electric lamp; power supply means connected to one side of each of said lamps and to said preselector switch means to energize lamps selected by said banks and by said switch means; and photo-electric generating means associated with each of said lamps for generating corresponding secondary signal elements.

2,948,890
POSITION METER
Hans Barth, Palo Alto, and Carl H. Odell, Mountain View, Calif., assignors to O'Dell Brothers, Mountain View, Calif., a corporation of California
Filed Apr. 26, 1956, Ser. No. 580,766
5 Claims. (Cl. 340—347)

5. A position meter comprising a movable scale, first and second electrical switching devices each having substantially conductive and substantially non-conductive selective operating conditions, means for switching each of said devices at different times to the substantially conductive condition and the substantially non-conductive condition alternately as repeating functions of scale position as said scale moves, means interconnecting said first and second devices to delay the switching of either to the substantially conductive condition so long as the other is substantially conductive, each of said devices having an output terminal supplying a positive electric pulse when the device is switched to the substantially non-conductive condition and supplying a negative electric pulse when the device is switched to the substantially conductive condition, first, second, third, and fourth vacuum tube sections each containing an anode and a control grid and a cathode, the cathodes of said first and second sections being connected together and being connected to ground through a first cathode resistor, the cathodes of said third and fourth sections being connected together and being connected to ground through a second cathode resistor, the control grid of said first section being connected to ground through a grid leak resistor, the control grid of said second section being connected to the cathode of said second section through another grid leak resistor, the control grid of said third section being connected to the cathode of said third section through another grid leak resistor, the control grid of said third section being connected to the cathode of said third section through another grid leak resistor, the control grid of said fourth section being connected to ground through another grid leak resistor, means supplying positive electric potentials to said four anodes, whereby said second and third sections are normally substantially conductive and said first and fourth sections are normally substantially non-conductive, capacitors connecting

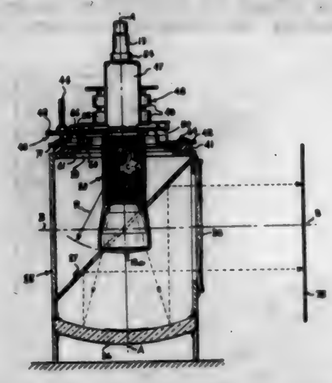


the control grids of said first and third sections to the output terminal of said first switching device, capacitors connecting the control grids of said second and fourth sections to the output terminal of said second switching device, whereby an electric pulse is provided at the anode of said first section only at each time that said first switching device becomes substantially non-conductive and said second switching device simultaneously becomes substantially conductive, and an electric pulse is provided at the anode of said fourth section only at each time that said first switching device becomes substantially conductive and said second switching device simultaneously becomes substantially non-conductive, and pulse-counting means additively responsive to electric pulses produced at the anode of said first setcion and subtractively responsive to electric pulses produced at the anode of said fourth section.

2,948,891
TELEVISION RECEIVERS
Merton L. Smith, Woodstock, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 20, 1957, Ser. No. 666,923
6 Claims. (Cl. 178—7.85)

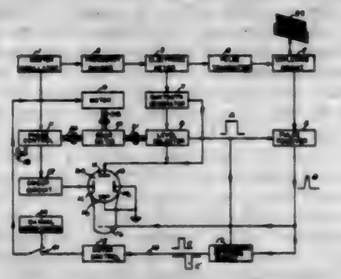
1. In a device of the character described for use with a housing having optical projection means therein with the projection axes of said projection means being prelocated in fixed predetermined relation with each other and having receiving means embodying engagement means and locating means in predetermined fixed relation with respect to each of said optical axes of said optical pro-

jection means, said device comprising a plurality of kinescopes each having a mounting plate thereon provided with a side surface for engaging the engagement means of a respective receiving means of the housing and peripheral edge portions for engaging the locating means of said receiving means, each of said kinescopes being initially supported with its image-producing means focused along a given axis and having its respective mounting plate pre-located and supported with its side surface which is to engage said engagement means being located at a given fixed distance from the face of said focused kinescope and in a controlled fixed angular relation with respect to the given axis of said focused kinescope and having its peripheral edge portions which



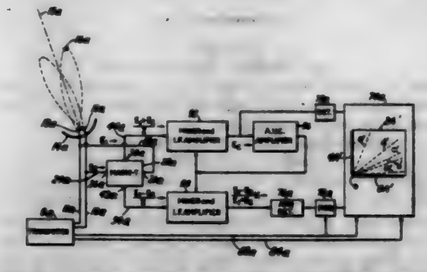
are to engage with the locating means on the housing being pre-positioned at a fixed distance from said given axis, one of said locating means of said receiving means and one of said peripheral edge portions of said mounting plate being in the form of a notch and the other in the form of a projection fitting in said notch to fix the orientation of the kinescope in said receiving means, and means for permanently securing said mounting plate to said kinescope in said pre-located position, whereby the focused kinescope, when its mounting plate is assembled with its respective receiving means on the housing, will automatically properly orient said kinescope and locate its given axis in aligned relation with the optical axis of the respective associated optical projection means in the housing.

2,948,893
AUTOMATIC RANGE INDICATING SYSTEM
Robert M. Page, Washington, D.C., assignor, by mesne assignments, of eight percent to John Robert Page, sixteen percent to Grace Gowens Leaf, as trustee, twelve and five-sixths percent to La Verne R. Philpott, and thirty-seven and one-half percent to Leo C. Young
Filed Apr. 6, 1943, Ser. No. 481,970
19 Claims. (Cl. 343—7.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)



19. In a system of the character described, means for producing ultra high frequency energy in pulses, a radiator for emitting such pulses, a receiver responsive to energy reflected from a distant object, means for generating waves of pulse rate frequency, phase shifting means connected to said means for generating waves of pulse rate frequency for delaying said waves for a time equal to the interval between the emission of a pulse and the reception of energy reflected from the object due to the pulse, means connected to said phase shifting means for forming said phase shifted waves into distant reference pulses, and indicator means for revealing the time relationship between the received and phase shifted pulses.

2,948,892
PRECISION INDICATING RADAR SYSTEM
Warren D. White, West Hempstead, N.Y., assignor, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Sept. 28, 1949, Ser. No. 118,400
24 Claims. (Cl. 343—5)

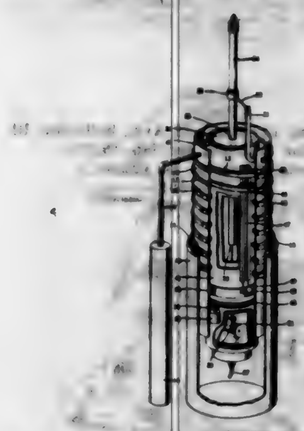


23. In a radar system, apparatus comprising first and second antenna receiving elements having angularly directed radiation patterns and arranged to produce first and second signals, receiving means coupled to said antennas and arranged to produce third and fourth signals which are functions, respectively, of the sum and difference of said first and second signals, means connected to said receiving means arranged to produce a fifth signal which is a function of the ratio of said third and fourth signals, range measuring means producing a control voltage which is a function of the range of the target producing said first and second signals, means combining said fifth signal with said control signal to produce a correction signal, and a radar target indicator having a visible target-indicating pip and including means under the control of said correction signal for displacing said pip in accordance with the value of said correction signal.

2,948,894
HELICAL-AND-WHIP ANTENNAS
Frank C. Carpenter, Jr., Sierra Madre, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Filed Mar. 13, 1959, Ser. No. 799,324
8 Claims. (Cl. 343—725)

1. A helical-and-whip antenna comprising: first means including a whip antenna; second means including a helical antenna having first and second portions, said first portion of said helical antenna being slidably connected to said whip antenna; a grounding means slidably connected to said second portion of said helical antenna for shorting out a section of said second portion; third means for increasing and decreasing the length of the section of said second portion of said helical antenna that is shorted out by said grounding means; fourth means for increasing and decreasing the effective length

of said whip antenna by varying the location along the length of said whip antenna of the connection between



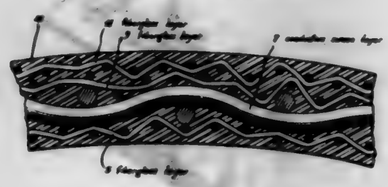
said helical and whip antennas; and a radio-frequency tap slidably connected to said helical antenna.

2,948,895
SLOTTED COUPLING DEVICE FOR WAVEGUIDE
Rabindra Nath Ghose, Los Angeles, Calif., and Anatole Turecki, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed June 21, 1957, Ser. No. 667,236
2 Claims. (Cl. 343—767)



1. A device for coupling radio frequency energy between the interior of a waveguide and the surrounding space thru a slot in said waveguide, comprising a pair of probes attached to opposite edges of said slot at points which are on opposite sides of and removed from the respective midpoints of said edges of said slot by substantially one-quarter wavelength at the mean operating frequency of the energy in the wave guide, said probes extending different distances from said points into said interior.

2,948,896
WEATHERPROOF ANTENNA AND REFLECTOR AND METHOD OF MAKING THE SAME
Frederick R. Hart, Jr., West Concord, Mass., assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio
Filed Sept. 8, 1952, Ser. No. 308,363
28 Claims. (Cl. 343—873)



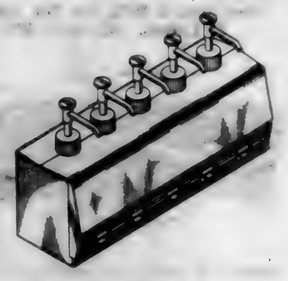
1. A method of making a weatherproof antenna that comprises assembling one or more fabric layers with a porous radio-wave conducting sheet, applying liquid weatherproofing material to the assembled layers and sheet, pressing the assembled layers and sheet together to bring them into intimate interpenetrating relation and to force the liquid weatherproofing material into the pores of the sheet, and maintaining the assembled layers and sheet intimately pressed together until the weatherproofing material hardens in order to unite the sheet, the layers and the hardened weatherproofing material into a unitary weatherproof antenna.

17. A weather-proof radio-wave antenna constituted of a radio-wave conducting wire antenna embeded within and integrated with a hardened plastic covering comprising fiberglass strands generally coextensive with the wire antenna and held in intimate structural strengthening contact therewith.

DESIGNS

AUGUST 9, 1960

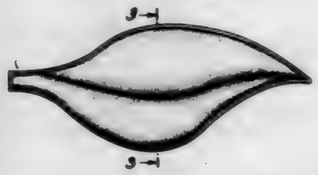
188,527
COSMETIC DISPENSER
Wayne M. Becker, Studio City, Calif., assignor to Derse Products, Inc., San Marino, Calif., a corporation of California
Filed May 25, 1959, Ser. No. 56,663
Term of patent 14 years
(Cl. D2—3)



188,528
TOP FOR A WATER DISPENSING STATION
Vera C. Markley, Jr., Grand Haven, Mich., assignor to Grand Haven Stamped Products Co., Grand Haven, Mich., a corporation of Michigan
Filed Aug. 12, 1959, Ser. No. 57,156
Term of patent 14 years
(Cl. D2—3)



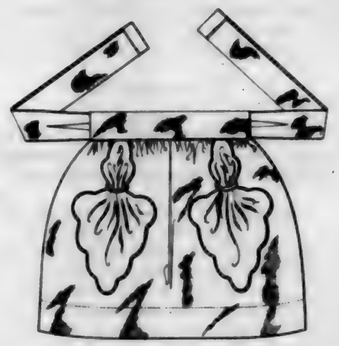
188,529
PILLOW
Livia Szamosi, Los Angeles, Calif., assignor of one-third to Andrew P. Solt and George Solt, both of Los Angeles, Calif.
Filed Mar. 21, 1960, Ser. No. 59,799
Term of patent 14 years
(Cl. D3—9)



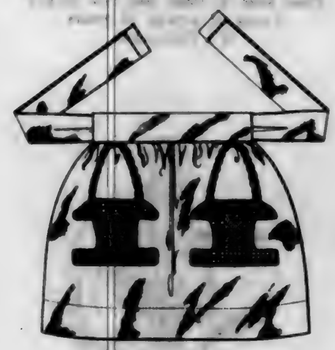
188,530
APRON
Annette E. Fuhs, 119 Portland Ave., Belleville, Ill.
Filed Mar. 21,1960, Ser. No. 59,823
Term of patent 14 years
(Cl. D3—26)



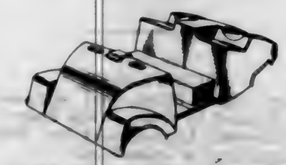
188,531
APRON
Annette E. Fuhs, 119 Portland Ave., Belleville, Ill.
Filed Mar. 21, 1960, Ser. No. 59,824
Term of patent 14 years
(Cl. D3—26)



188,532
APRON
Annette E. Fuhs, 119 Portland Ave., Belleville, Ill.
Filed Mar. 21, 1960, Ser. No. 59,825
Term of patent 14 years
(Cl. D3—26)



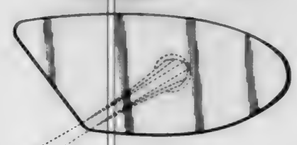
188,533
BODY FOR A GOLFER'S VEHICLE OR THE LIKE
Raymond L. Nimmo, 3316 Hamilton St., and Wess A. Culwell, 600 E. Roberts St., both of Fort Worth, Tex.
Filed May 20, 1959, Ser. No. 55,990
Term of patent 14 years
(Cl. D14—3)



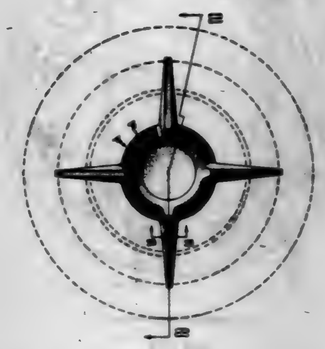
188,534
SHIFT LEVER KNOB
Wayne R. Howard, Jackson, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Aug. 22, 1958, Ser. No. 52,348
Term of patent 14 years
(Cl. D14—6)



188,535
VEHICLE MIRROR
Roger H. David, Sr., 818 Chippewa, St. Paul, Minn.
Filed June 8, 1959, Ser. No. 56,244
Term of patent 7 years
(Cl. D14—6)



188,536
ORNAMENT FOR AN AUTOMOBILE WHEEL COVER
Robert C. Nixon, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Mar. 31, 1959, Ser. No. 55,286
Term of patent 7 years
(Cl. D14—30)



188,537
WHEEL COVER
Moto Shimano, Los Angeles, Calif., assignor to Shore-Calvenar, Inc., Paramount, Calif., a corporation of California
Filed Apr. 15, 1960, Ser. No. 60,207
Term of patent 14 years
(Cl. D14—30)



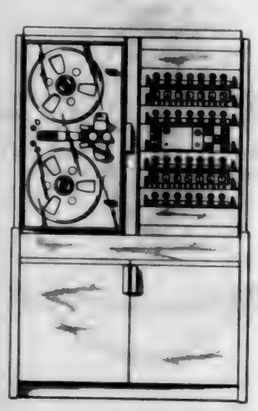
188,538
LOCATION INDICATOR
Sylvia Young, Indianapolis, Ind., assignor to The S. K. Smith Company, Chicago, Ill., a corporation of Illinois
Filed Apr. 3, 1958, Ser. No. 50,325
Term of patent 3½ years
(Cl. D25—1)



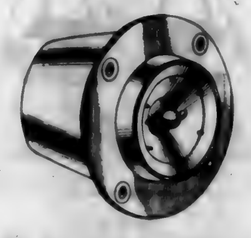
188,539
TELEPHONE HANGER BRACKET
Helmut W. Dettloff, 1011 E. Main St., and Quentin V. Wagner, Prairie Road, both of Bellevue, Ohio
Filed Nov. 27, 1959, Ser. No. 58,467
Term of patent 14 years
(Cl. D26—14)



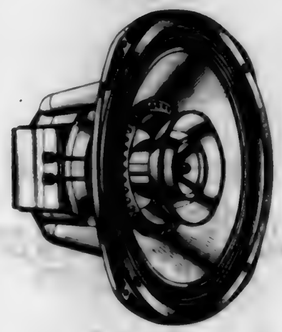
188,540
MAGNETIC TAPE APPARATUS
Frank T. Walsh and Francis A. Farey, Palo Alto, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Filed July 29, 1959, Ser. No. 56,986
Term of patent 14 years
(Cl. D26—14)



188,541
LOUDSPEAKER
Earl Matsuoka, Thornwood, and Bernard C. Sharp, White Plains, N.Y., assignors to University Loudspeakers, Inc., White Plains, N.Y., a corporation of New York
Filed Mar. 8, 1960, Ser. No. 59,674
Term of patent 14 years
(Cl. D26—14)



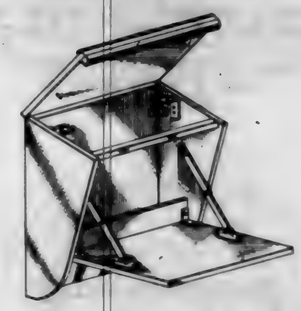
188,542
LOUDSPEAKER
Sidney E. Levy, White Plains, Earl Matsuoka, Thornwood, and Bernard C. Sharp, White Plains, N.Y., assignors to University Loudspeakers, Inc., White Plains, N.Y., a corporation of New York
Filed Mar. 22, 1960, Ser. No. 59,921
Term of patent 14 years
(Cl. D26—14)



188,543
LEG FOR A TABLE OR SIMILAR ARTICLE
Albert W. Lindberg, Jr., 125 W. 4th St., Bayonne, N.J.
Filed Oct. 15, 1957, Ser. No. 40,107
Term of patent 3½ years
(Cl. D33—14)



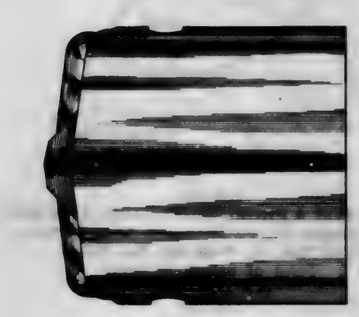
188,544
COMBINED STORAGE CABINET AND DESK
Macy M. Carothers, 328 N. Remington Road, Columbus, Ohio
Filed May 26, 1959, Ser. No. 56,069
Term of patent 7 years
(Cl. D33—19)



188,545
ILLUMINABLE GRIP STRENGTH INDICATOR
Klaus Johannes Ylinen, Frejgatan 13, Stockholm, Sweden
Filed Dec. 30, 1959, Ser. No. 58,854
Term of patent 14 years
(Cl. D34—5)



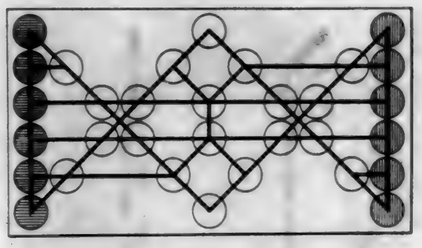
188,546
FOUL DETECTOR HOUSING OR THE LIKE
George E. Schaefer, Muskegon Heights, Mich., assignor to Brunswick Corporation, a corporation of Delaware
Filed Mar. 8, 1960, Ser. No. 59,671
Term of patent 14 years
(Cl. D34—5)



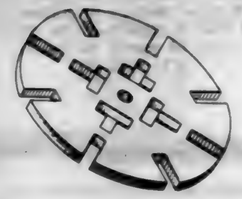
188,547
FOUL DETECTOR HOUSING OR THE LIKE
George E. Schaefer, Muskegon Heights, Mich., assignor to Brunswick Corporation, a corporation of Delaware
Filed Mar. 11, 1960, Ser. No. 59,696
Term of patent 14 years
(Cl. D34—5)



188,548
GAME BOARD
Charles P. Chalcroft, 815 25th Ave. W., Eugene, Oreg.
Filed Apr. 8, 1960, Ser. No. 66,100
Term of patent 14 years
(Cl. D34—6)



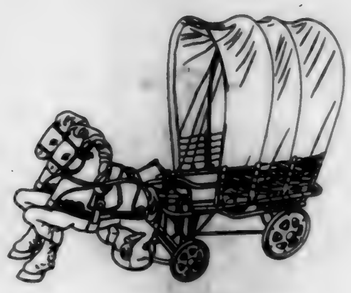
188,549
CONSTRUCTION TOY ELEMENT
Bradford O. Prew, Mamaroneck, N.Y., and Leo B. Hanafee, Riverside, Conn., assignors to Diamond National Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 17, 1959, Ser. No. 58,700
Term of patent 14 years
(Cl. D34—15)



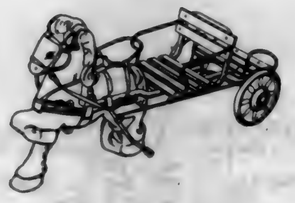
188,550
MODEL FOR A PROPULSION TUBE AIRCRAFT
Joseph T. Yeager, Sr., 37 Stevenson Ave., Trenton, N.J.
Filed Mar. 18, 1958, Ser. No. 50,087
Term of patent 14 years
(Cl. D34—15)



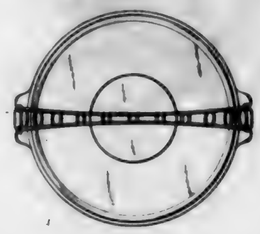
188,551
CHILD'S VEHICLE
Cecil Arthur Rassler, Erith, England, assignor to D. Sebel & Company Limited, Erith, England
Filed Apr. 2, 1958, Ser. No. 50,190
Term of patent 14 years
(Cl. D34—15)



188,552
CHILD'S FOOT PROPELLED VEHICLE
Cecil Arthur Rassler, Erith, England, assignor to D. Sebel & Company Limited, Erith, England
Filed Apr. 2, 1958, Ser. No. 50,312
Term of patent 14 years
(Cl. D34—15)



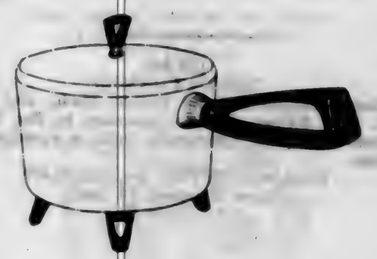
188,553
HANDLED CONTAINER
Earl S. Tupper, Smithfield, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Filed Sept. 3, 1958, Ser. No. 52,487
Term of patent 14 years
(Cl. D44—1)



188,554
HOUSING FOR FOOD MIXER
Alfred W. Waltmann, Box 99, Newtown, Conn.
Filed July 20, 1959, Ser. No. 56,987
Term of patent 14 years
(Cl. D44—1)



188,555
SAUCE PAN OR THE LIKE
George H. Frost, Ashland, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed June 22, 1959, Ser. No. 56,439
Term of patent 14 years
(Cl. D44—1)



188,556
HOLDER FOR PAPER PLATES
Ralph W. Theisen, Chicago, Ill., assignor to Hascot Corp., Chicago, Ill., a corporation of Illinois
Filed June 10, 1959, Ser. No. 56,303
Term of patent 7 years
(Cl. D44—10)



188,557
HANDLE FOR A VESSEL OR SIMILAR ARTICLE
George H. Frost, Ashland, Ohio, assignor to Westinghouse Electric Corporation, a corporation of Pennsylvania
Filed June 22, 1959, Ser. No. 56,438
Term of patent 14 years
(Cl. D44—29)



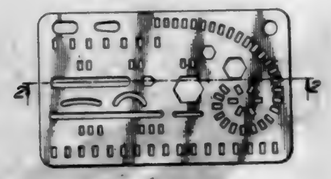
188,558
FLUORESCENT LIGHTING PANEL
Kurt Franck, Newark, Ohio, assignor to Holophane Company, Inc., New York, N.Y., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 50,367
Term of patent 14 years
(Cl. D48—16)



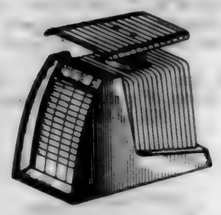
188,559
LUMINAIRE LENS
Kurt Franck and Veari S. Wince, Newark, Ohio, assignors to Holophane Company, Inc., New York, N.Y., a corporation of New York
Filed Mar. 6, 1959, Ser. No. 54,881
Term of patent 14 years
(Cl. D48—16)



188,560
ERASURE SHIELD
George B. Kaster, 15163 Strathmoor, Detroit, Mich.
Filed June 8, 1959, Ser. No. 56,243
Term of patent 7 years
(Cl. D52—1)



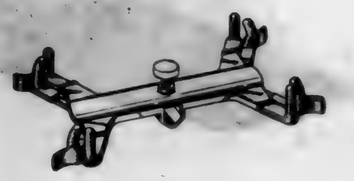
188,561
POSTAL SCALE
Dana W. Mox, Glenview, Ill., assignor to Hanson Scale Company, a corporation of Illinois
Filed Dec. 9, 1959, Ser. No. 58,603
Term of patent 14 years
(Cl. D52—10)



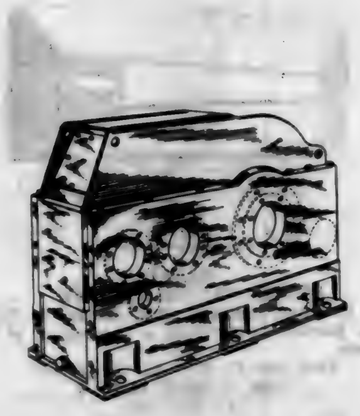
188,562
CLEAT FOR BOATS
William R. Tritt, 3608 Lake St., Newport Beach, Calif.
Filed Oct. 27, 1959, Ser. No. 58,079
Term of patent 14 years
(Cl. D54—11)



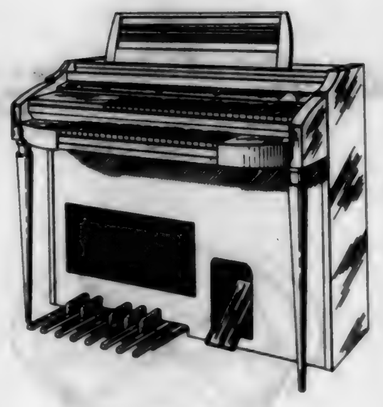
188,563
BURETTE HOLDER
Leslie F. Vixler, Rocky River, Ohio, assignor to Labasco, Inc., Durham, N.C., a corporation of North Carolina
Filed Apr. 13, 1959, Ser. No. 55,476
Term of patent 14 years
(Cl. D54—13)



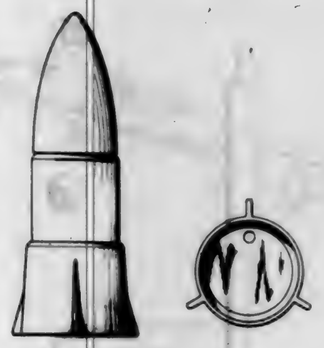
188,564
SPEED REDUCER HOUSING OR SIMILAR ARTICLE
Clifford Brooks Stevens, Fox Point, and John J. Hughes, Jr., Milwaukee, Wis., assignors to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Filed July 13, 1959, Ser. No. 56,744
Term of patent 14 years
(Cl. D55—1)



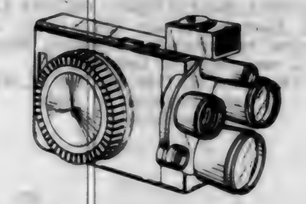
188,565
ORGAN CONSOLE
William Millington, Grand Rapids, Mich., and Wilbur M. Day, Kenwood, Ohio, assignors to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 25, 1959, Ser. No. 58,466
Term of patent 14 years
(Cl. D56—2)



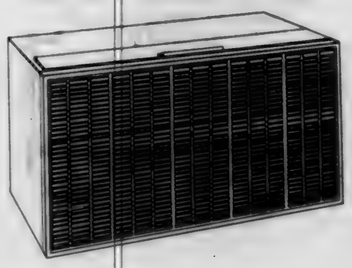
188,566
BOTTLE
John P. Morina, Ridgewood, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed Apr. 21, 1959, Ser. No. 55,595
Term of patent 14 years
(Cl. D58—9)



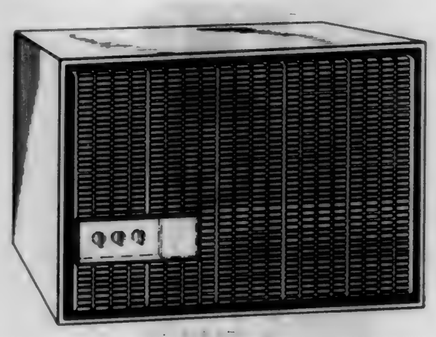
188,567
MOTION PICTURE CAMERA
Raymond A. Grosso, Royal Oak, Mich., assignor to Sylvania Electric Products Inc., a corporation of Delaware
Filed Sept. 3, 1959, Ser. No. 57,416
Term of patent 14 years
(Cl. D61—1)



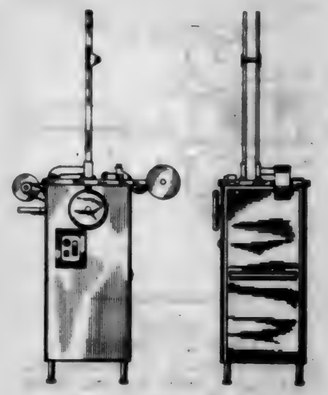
188,568
ROOM AIR CONDITIONER
Robert W. Blee, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 1, 1958, Ser. No. 51,618
Term of patent 14 years
(Cl. D62—4)



188,569
ROOM AIR CONDITIONER
Robert W. Blee, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed July 1, 1958, Ser. No. 51,619
Term of patent 14 years
(Cl. D62—4)



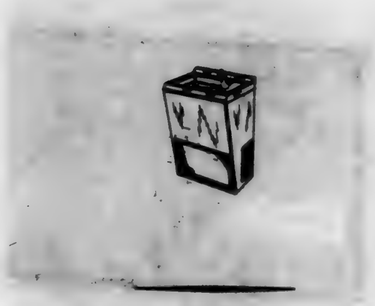
188,570
PRINTING MACHINE
Joseph J. Ackell, Amityville, N.Y., assignor to Dow Jones & Company, Inc., New York, N.Y., a corporation of Delaware
Filed Feb. 6, 1959, Ser. No. 54,487
Term of patent 14 years
(Cl. D64—11)



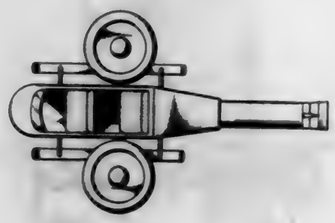
188,571
COPY MACHINE
Kim Yamasaki, Lombard, Ill., assignor to Speed-O-Print Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 16, 1959, Ser. No. 57,579
Term of patent 14 years
(Cl. D64—11)



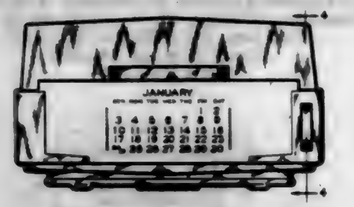
188,572
WALL MOUNTED WATER COOLER OR THE LIKE
Herman B. Castillo, Detroit, Mich., assignor to Temprite Products Corporation, Birmingham, Mich., a corporation of Michigan
Filed Apr. 20, 1959, Ser. No. 55,568
Term of patent 14 years
(Cl. D67—4)



188,573
JEEP OR THE LIKE
Norman E. Nelson, Los Angeles, Calif., assignor to Doak Aircraft Co., Inc., Torrance, Calif., a corporation of California
Filed June 18, 1959, Ser. No. 56,421
Term of patent 14 years
(Cl. D71—1)



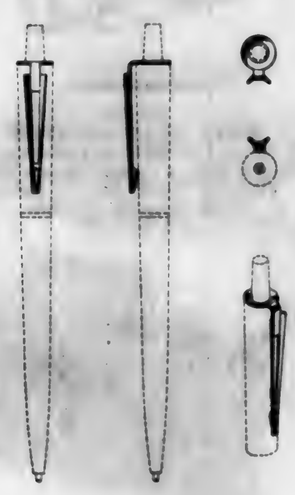
188,574
DESK CALENDAR
Howard L. Moore, Cochranton, Pa.
Filed Mar. 2, 1960, Ser. No. 59,582
Term of patent 14 years
(Cl. D74—5)



188,575
BALL POINT PEN OR THE LIKE
Harold E. Zierbut, Granada Hills, Calif., assignor to Paper Mate Manufacturing Company, Culver City, Calif., a corporation of Delaware
Filed Nov. 6, 1957, Ser. No. 46,378
Term of patent 14 years
(Cl. D74—17)



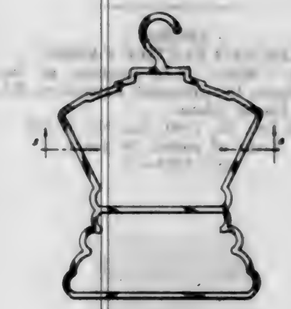
188,576
WRITING INSTRUMENT OR THE LIKE
Harold E. Zierbut, Granada Hills, Calif., assignor to Paper Mate Manufacturing Company, Santa Monica, Calif., a corporation of Delaware
Filed June 16, 1958, Ser. No. 51,384
Term of patent 14 years
(Cl. D74—17)



188,577
CAFETERIA COUNTER UNIT
Delmar D. Rhoads, 3230 S. Calhoun St., Fort Wayne, Ind.
Filed June 9, 1958, Ser. No. 51,238
Term of patent 14 years
(Cl. D60—2)



188,578
CLOTHES HANGER
Jack Zuckerman, 1963 Walton Ave., Bronx, N.Y.
Filed Feb. 16, 1959, Ser. No. 54,623
Term of patent 14 years
(Cl. D60—8)



188,579
PORTABLE BRAZIER
Warren A. Musser, 3111 Warm Springs Road, Glen Ellen, Calif.
Filed June 8, 1959, Ser. No. 56,242
Term of patent 14 years
(Cl. D61—10)



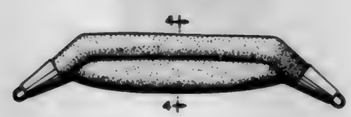
188,580
COMBINED FURNACE AND CLOTHES DRYER FOR HOUSE TRAILERS
Arthur F. Habener, 217 E. Water, Anaheim, Calif.
Filed May 18, 1959, Ser. No. 55,933
Term of patent 14 years
(Cl. D61—19)



188,581
FIREPLACE TOOL
Jens H. Quistgaard, Copenhagen, Denmark, assignor to Dansk Designs, Inc., Great Neck, N.Y., a corporation of New York
Filed Nov. 27, 1959, Ser. No. 58,489
Term of patent 7 years
(Cl. D61—24)



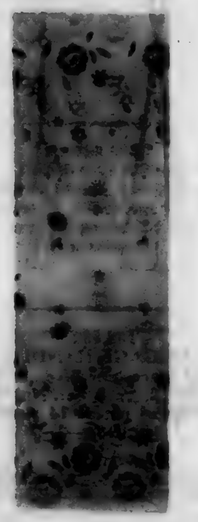
188,582
LUGGAGE HANDLE
Sol Koffler, 600 Blackstone Blvd., Providence, R.I.
Filed Nov. 2, 1959, Ser. No. 58,183
Term of patent 14 years
(Cl. D87—2)



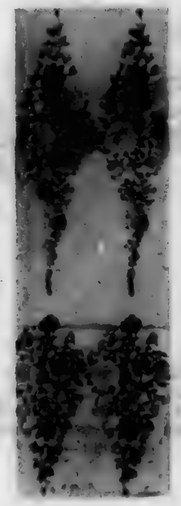
188,583
COMBINED CARRYING CASE AND TRAY
Charles William Moss, 1415 Beechwood Drive, Ann Arbor, Mich.
Filed Dec. 15, 1959, Ser. No. 58,665
Term of patent 14 years
(Cl. D87—5)



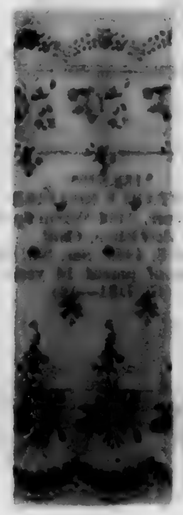
188,584
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Feb. 9, 1960, Ser. No. 59,320
Term of patent 14 years
(Cl. D92—1)



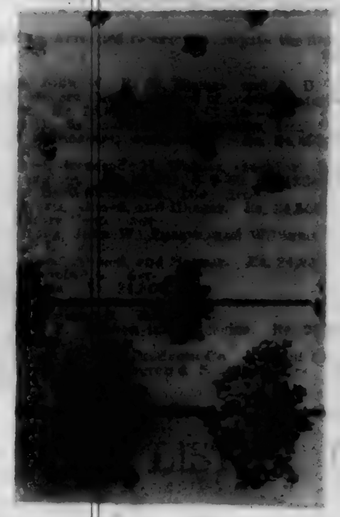
188,585
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Feb. 9, 1960, Ser. No. 59,321
Term of patent 14 years
(Cl. D92—1)



188,586
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Feb. 10, 1960, Ser. No. 59,335
Term of patent 14 years
(Cl. D92—1)

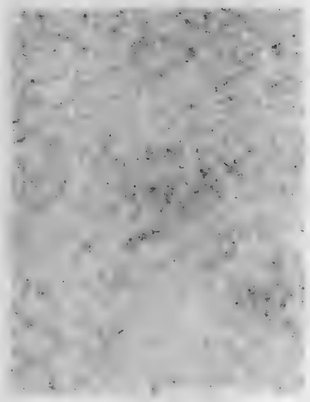


188,587
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Feb. 11, 1960, Ser. No. 59,357
Term of patent 14 years
(Cl. D92—1)



188,588
FILE FABRIC FLOOR COVERING
Ernest R. Knepfer, Cornwall-on-the-Hudson, N.Y.
Filed July 17, 1958, Ser. No. 51,814
Term of patent 14 years
(Cl. D92—4)







LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Armstrong, John W., R. W. Spears, and R. D. Williams, to General Motors Corp. Method of coating interior of tubing with zinc. Re. 24,852, 8–9–60, Cl. 29—429.

Biel, John H., to Lakeside Laboratories, Inc. "4,5 (Disubstituted aminoalkyl) acetylenes." Re. 24,853, 8–9–60, Cl. 260—247.5.

Buchi, Alfred, deceased; H. Walder, executor. Internal combustion engines. Re. 24,851, 8–9–60, Cl. 123—32.

Connecticut Hard Rubber Co., The: *See*—
Panagrossi, Ahmed, and Hauser. Re. 24,856.

General Motors Corp.: *See*—
Armstrong, John W., Spears, and Williams. Re. 24,852.

Hauser, Ray L.: *See*—
Panagrossi, Ahmed, and Hauser. Re. 24,856.

Hawley Products Co.: *See*—
Kyle, Colin. Re. 24,860.

Inland Steel Co.: *See*—
Luellen, Leland B. Re. 24,859.

Knight, John P. Ribbon inking device. Re. 24,854, 8–9–60, Cl. 118—260.

Kyle, Colin, to Hawley Products Co. Method and apparatus for making hollow accreted fibrous bodies. Re. 24,860, 8–9–60, Cl. 162—219.

Lakeside Laboratories, Inc.: *See*—
Biel, John H. Re. 24,853.

Luellen, Leland B., to Inland Steel Co. Furnace structure. Re. 24,859, 8–9–60, Cl. 263—15.

Noel, Eugene M. Continuous griddle. Re. 24,855, 8–9–60, Cl. 107—57.

Panagrossi, Ahmed, and R. L. Hauser, to The Connecticut Hard Rubber Co. Lamination or coating of fluorine-substituted polyethylenes with or on other substances. Re. 24,856, 8–9–60, Cl. 154—139.

Phipps, Clarence R. Heated fishing rod handle. Re. 24,858, 8–9–60, Cl. 126—208.

Spears, Richard W.: *See*—
Armstrong, John W., Spears, and Williams. Re. 24,852.

Walder, Herman: *See*—
Buchi, Alfred. Re. 24,851.

Wasp, Edward J. Fluid heaters. Re. 24,857, 8–9–60, Cl. 110—98.

Williams, Richard D.: *See*—
Armstrong, John W., Spears, and Williams. Re. 24,852.

LIST OF PLANT PATENTEES

Jackson & Perkins Co.: *See*—
Morey, Dennison H., Jr. 1,964.

McDonald, William C. Rose plant. 1,965, 8–9–60, Cl. 47—61.

Merrill, Grant. Peach tree. 1,963, 8–9–60, Cl. 47—62.

Morey, Dennison H., Jr., to Jackson & Perkins Co. Rose plant. 1,964, 8–9–60, Cl. 47—61.

Sullivan, Charles E. Walnut tree. 1,963, 8–9–60, Cl. 47—62.

LIST OF DESIGN PATENTEES

Ackell, Joseph J., to Dow Jones & Co., Inc. Printing machine. 188,570, 8–9–60, Cl. D64—11.

Ampex Corp.: *See*—
Walsh, Frank T., and Farey. 188,540.

Baldwin Piano Co., The: *See*—
Millington, William, and Day. 188,565.

Becker, Wayne M., to Derse Products, Inc. Cosmetic dispenser. 188,527, 8–9–60, Cl. D2—3.

Blee, Robert W., to General Electric Co. Room air conditioner. 188,568, 8–9–60, Cl. D62—4.

Blee, Robert W., to General Electric Co. Room air conditioner. 188,569, 8–9–60, Cl. D62—4.

Brunswick Corp.: *See*—
Schaefer, George E. 188,546.
Schaefer, George E. 188,547.

Carothers, Macy M. Combined storage cabinet and desk. 188,544, 8–9–60, Cl. D33—19.

Castillo, Herman B., to Temprite Products Corp. Wall mounted water cooler or the like. 188,572, 8–9–60, Cl. D67—4.

Chalcroft, Charles P. Game board. 188,548, 8–9–60, Cl. D34—5.

Chrysler Corp.: *See*—
Nixon, Robert C. 188,536.

Clark Equipment Co.: *See*—
Howard, Wayne R. 188,534.

Culwell, Wess A.: *See*—
Nimmo, Raymond L., and Culwell. 188,533.

Dansk Designs, Inc.: *See*—
Quistgaard, Jens H. 188,581.

David, Roger H., Sr. Vehicle mirror. 188,535, 8–9–60, Cl. D14—6.

Day, Wilbur M.: *See*—
Millington, William, and Day. 188,565.

Decorative Fabrics Co. Inc.: *See*—
Leavy, Natalie. 188,584.
Leavy, Natalie. 188,585.
Leavy, Natalie. 188,586.
Leavy, Natalie. 188,587.

Derse Products, Inc.: *See*—
Becker, Wayne M. 188,527.

Dettloff, Helmut W., and Q. V. Wagner. Telephone hanger bracket. 188,539, 8–9–60, Cl. D26—14.

Diamond National Corp.: *See*—
Preu, Bradford O., and Hanafee. 188,549.

Doak Aircraft Co., Inc.: *See*—
Nelson, Norman E. 188,573.

Dow Jones & Co., Inc.: *See*—
Ackell, Joseph J. 188,570.

Falk Corp., The: *See*—
Stevens, Clifford B., and Hughes. 188,564.

Farey, Francis A.: *See*—
Walsh, Frank T., and Farey. 188,540.

Franck, Kurt, to Holophane Co., Inc. Fluorescent lighting panel. 188,558, 8–9–60, Cl. D48—16.

Franck, Kurt, and V. S. Wince, to Holophane Co., Inc. Luminaire lens. 188,559, 8–9–60, Cl. D48—16.

Frost, George H., to Westinghouse Electric Corp. Sauce pan or the like. 188,555, 8–9–60, Cl. D44—1.

Frost, George H., to Westinghouse Electric Corp. Handle for a vessel or similar article. 188,557, 8–9–60, Cl. D44—29.

Fuhs, Annette E. Apron. 188,530, 8–9–60, Cl. D3—26.

Fuhs, Annette E. Apron. 188,531, 8–9–60, Cl. D3—26.

Fuhs, Annette E. Apron. 188,532, 8–9–60, Cl. D3—26.

General Electric Co.: *See*—
Blee, Robert W. 188,568.
Blee, Robert W. 188,569.

Grand Haven Stamped Products Co.: *See*—
Markley, Vern C., Jr. 188,528.

Grosso, Raymond A., to Sylvania Electric Products Inc. Motion picture camera. 188,567, 8–9–60, Cl. D61—1.

Habener, Arthur F. Combined furnace and clothes dryer for house trailers. 188,580, 8–9–60, Cl. D81—19.

Hanafee, Leo B.: *See*—
Preu, Bradford O., and Hanafee. 188,549.

Hanson Scale Co.: *See*—
Mox, Dana W. 188,561.

Hascot Corp.: *See*—
Theisen, Ralph W. 188,556.

Holophane Co., Inc.: *See*—
Franck, Kurt. 188,558.
Franck, Kurt, and Wince. 188,559.

Howard, Wayne R., to Clark Equipment Co. Shift lever knob. 188,534, 8–9–60, Cl. D14—6.

Hughes, John J., Jr.: *See*—
Stevens, Clifford B., and Hughes. 188,564.

Koffler, Sol. Luggage handle. 188,582, 8–9–60, Cl. D87—2.

Kuepfer, Ernest R. Pile fabric floor covering. 188,588, 8–9–60, Cl. D92—4.

Kueter, George B. Erasure shield. 188,560, 8–9–60, Cl. D52—6.

Labasco, Inc.: *See*—
Vixler, Leslie F. 188,563.

Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 188,584, 8–9–60, Cl. D92—1.

Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 188,585, 8–9–60, Cl. D92—1.

Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 188,586, 8–9–60, Cl. D92—1.

Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 188,587, 8–9–60, Cl. D92—1.

Levy, Sidney E., E. Matsuoka, and B. C. Sharp, to University Loudspeakers, Inc. Loudspeaker. 188,542, 8–9–60, Cl. D26—14.

Lindberg, Albert W., Jr. Leg for a table or similar article. 188,543, 8–9–60, Cl. D33—14.

Markley, Vern C., Jr., to Grand Haven Stamped Products Co. Top for a water dispensing station. 188,528, 8–9–60, Cl. D2—3.

Matsuoka, Earl: *See*—
Levy, Sidney E., Matsuoka, and Sharp. 188,542.

Matsuoka, Earl, and B. C. Sharp, to University Loudspeakers, Inc. Loudspeaker. 188,541, 8–9–60, Cl. D26—14.

Millington, William, and W. M. Day, to The Baldwin Piano Co. Organ console. 188,665, 8–9–60, Cl. D56—2.

Moore, Howard L. Desk calendar. 188,574, 8–9–60, Cl. D74—5.

Morian, John P., to Olin Mathieson Chemical Corp. Bottle. 188,560, 8–9–60, Cl. D58—9.

Moss, Charles W. Combined carrying case and tray. 188,583, 8–9–60, Cl. D67—5.

Mox, Dana W., to Hanson Scale Co. Postal scale. 188,561, 8–9–60, Cl. D52—10.

Musser, Warren A. Portable brazier. 188,579, 8–9–60, Cl. D81—10.

Nelson, Norman E., to Doak Aircraft Co., Inc. Jeep or the like. 188,573, 8–9–60, Cl. D71—1.

Nimmo, Raymond L., and W. A. Culwell. Body for a golfer's vehicle or the like. 188,533, 8–9–60, Cl. D14—3.

Nixon, Robert C., to Chrysler Corp. Ornament for an automobile wheel cover. 188,536, 8–9–60, Cl. D14—30.

Olin Mathieson Chemical Corp.: *See*—
Morian, John P. 188,560.

Paper Mate Mfg. Co.: *See*—
Zierhut, Harold E. 188,575.
Zierhut, Harold E. 188,576.

Preu, Bradford O., and L. B. Hanafee, to Diamond National Corp. Construction toy element. 188,549, 8–9–60, Cl. D34—15.

Quistgaard, Jens H., to Dansk Designs, Inc. Fireplace tool. 188,581, 8–9–60, Cl. D81—24.

Rassier, Cecil A., to D. Sebel & Co. Ltd. Child's vehicle. 188,551, 8–9–60, Cl. D34—15.

Rassier, Cecil A., to D Sebel & Co. Ltd. Child's foot propelled vehicle. 188,552, 8–9–60, Cl. D34—15.

Rhoads, Delmar D. Cafeteria counter unit. 188,577, 8–9–60, Cl. D80—2.

Schaefer, George E., to Brunswick Corp. Foul detector housing or the like. 188,546, 8–9–60, Cl. D34—5.

Schaefer, George E., to Brunswick Corp. Foul detector housing or the like. 188,547, 8–9–60, Cl. D34—5.

Sebel, D., & Co. Ltd.: *See*—
Rassier, Cecil A. 188,551.
Rassier, Cecil A. 188,552.

Sharp, Bernard C.: *See*—
Levy, Sidney E., Matsuoka, and Sharp. 188,542.

Sharp, Bernard C.: *See*—
Matsuoka, Earl, and Sharp. 188,541.

Shimano, Moto, to Shore-Calnevar, Inc. Wheel cover. 188,537, 8–9–60, Cl. D14—30.

Shore-Calnevar, Inc.: *See*—
Shimano, Moto. 188,537.

Smith, S. K., Co., The: *See*—
Young, Sylvia. 188,538.

Solt, Andrew P.: *See*—
Szamosi, Livia. 188,529.

Solt, George: *See*—
Szamosi, Livia. 188,529.

Speed-O-Print Corp.: *See*—
Yamasaki, Kim. 188,571.

Stevens, Clifford B., and J. J. Hughes, Jr., to The Fulk Corp. Speed reducer housing or similar article. 188,564, 8–9–60, Cl. D35—1.

Sylvania Electric Products Inc.: *See*—
Grosso, Raymond A. 188,567.

Szamosi, Livia, ⅛ to A. P. and G. Solt. Pillow. 188,529, 8–9–60, Cl. D3—9.

Temprite Products Corp.: *See*—
Castillo, Herman B. 188,572.

Theisen, Ralph W., to Hascot Corp. Holder for paper plates. 188,556, 8–9–60, Cl. D44—10.

Tritt, William R. Cleat for boats. 188,562, 8–9–60, Cl. D54—11.

Tupper Corp.: *See*—
Tupper, Earl S. 188,553.

Tupper, Earl S., to Tupper Corp. Handled container. 188,553, 8–9–60, Cl. D44—1.

University Loudspeakers, Inc.: *See*—
Levy, Sidney E., Matsuoka, and Sharp. 188,542.
Matsuoka, Earl, and Sharp. 188,541.

Vixler, Leslie F., to Labasco, Inc. Burette holder. 188,563, 8–9–60, Cl. D54—13.

Wagner, Quentin V.: *See*—
Dettloff, Helmut W., and Wagner. 188,539.

Wakeman, Alfred W. Housing for food mixer. 188,554, 8–9–60, Cl. D44—1.

Walsh, Frank T., and F. A. Farey, to Ampex Corp. Magnetic tape apparatus. 188,540, 8–9–60, Cl. D26—14.

Westinghouse Electric Corp.: *See*—
Frost, George H. 188,555.
Frost, George H. 188,557.

Wince, Vearl S.: *See*—
Franck, Kurt, and Wince. 188,559.

Yamasaki, Kim, to Speed-O-Print Corp. Copy machine. 188,571, 8–9–60, Cl. D64—11.

Yeager, Joseph T., Sr. Model for a propulsion tube aircraft. 188,550, 8–9–60, Cl. D34—15.

Ylinen, Klaus J. Illuminable grip strength indicator. 188,545, 8–9–60, Cl. D34—5.

Young, Sylvia, to The S. K. Smith Co. Location indicator. 188,538, 8–9–60, Cl. D25—1.

Zierhut, Harold E., to Paper Mate Mfg. Co. Ball point pen or the like. 188,575, 8–9–60, Cl. D74—17.

Zierhut, Harold E., to Paper Mate Mfg. Co. Writing instrument or the like. 188,576, 8–9–60, Cl. D74—17.

Zuckerman, Jack. Clothes hanger. 188,578, 8–9–60, Cl. D80—8.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 9TH DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Gulick, Ronald A. 2,948,033.
Shilo, Lee H. 2,948,026.

A.P.V. Co. Ltd., The: *See*—
Paine, Stanley W. T. 2,946,617.

Abbott Laboratories: *See*—
Sangrelet, Irwin W. 2,948,784.

Acme Steel Co.: *See*—
Wilson, Allen B. 2,948,049.

Adams, Dustin S., A. Ernst, and R. S. Prengle, to E. I. du Pont de Nemours and Co. Process for producing shaped oriented polyester articles having a metallic luster. 2,948,583, 8–9–60, Cl. 18—54.

Adams, E. A., & Son, Inc.: *See*—
Evans, Andrew J. 2,948,041.

Adler, Bernard: *See*—
Guerber, Howard P., and Adler. 2,948,884.

Adox Kamerawerk G.m.b.H.: *See*—
Kopp, Wilhelm, Ploss, and Heil. 2,948,204.

Aerojet-General Corp.: *See*—
Osborne, William E. 2,948,813.

Affelder, Charles J. Audio level governing device. 2,948,860, 8–9–60, Cl. 330—134.

Agfa Aktiengesellschaft: *See*—
Frost, Paul, and Raden. 2,948,259.

Ahlen, Karl G., to Svenska Rotor Maskiner Aktiebolag. Gear arrangement functioning as pump or motor. 2,948,228, 8–9–60, Cl. 103—120.

Ahrens, Gerhard W. Pack carburizing with furane derivatives. 2,948,644, 8–9–60, Cl. 148—16.5.

Aktiebolaget Bofors: *See*—
Furendal, Allan H. B., Thuresson Af Ekenstam, and von Fleandt. 2,948,634.

Aktiebolaget Svenska Metallverken: *See*—
Arnelo, Anders I. 2,948,848.

Albert, Charles G., and J. R. Wilcox, to Minerals & Chemicals Corp. of America. Surface modified kaolin clay. 2,948,632, 8–9–60, Cl. 106—308.

Alexander, Charles F., Jr., to Kiekhaefer Corp. Propeller hub exhaust system. 2,948,252, 8–9–60, Cl. 115—17.

All American Engineering Co.: *See*—
Doolittle, Donald B., and Haber. 2,948,291.

All-Brite Fluorescent Fixtures, Inc.: *See*—
Maciel, Anthony, Jr., and Jaster. 2,948,807.

Allegheny Ludlum Steel Corp.: *See*—
MacFarlane, Richard R., and Pitler. 2,948,604.
Pitler, Richard K., and Blatz. 2,948,603.

Allen, Charles F. H., B. D. Illingsworth, and J. J. Sagura, to Eastman Kodak Co. Stabilized photographic silver halide emulsions containing 6-thioctic acid. 2,948,614, 8–9–60, Cl. 96—109.

Allen, Kenneth C., to The Hobart Mfg. Co. Computing mechanism. 2,948,464, 8–9–60, Cl. 235—58.

Allen, Kenneth C., to The Hobart Mfg. Co. Recording scale. 2,948,465, 8–9–60, Cl. 235—58.

Allen, Kenneth C., to The Hobart Manufacturing Co. Computing scale. 2,948,523, 8–9–60, Cl. 265—5.

Allen, Kenneth C., and D. A. Meeker, to The Hobart Mfg. Co. Scales. 2,948,466, 8–9–60, Cl. 235—58.

Allen, Oliver L., to Electrolux Corp. Selectively positioned brush nozzle. 2,948,014, 8–9–60, Cl. 15—371.

Allera, Carl, Etablissements A/S: *See*—
Norlin, Nils. 2,948,158.

Allied Chemical Corp.: *See*—
Harris, Robert L., and Olsen. 2,948,739.
Krans, Frederick H. 2,948,753.

Allis-Chalmers Mfg. Co.: *See*—
Ihrig, Harry K. 2,948,605.

Allmanna Svenska Elektriska Aktiebolaget: *See*—
Forwald, Haakon. 2,948,790.
Jonasson, Sven, and Pucher. 2,948,791.

Altoscan Co.: *See*—
Burkam, John E. 2,948,155.
Miller, Charles C., Jr., and Ricci. 2,948,489.

Ambrose, Henry A., and G. E. Gaston, to Gulf Research & Development Co. Non-stalling gasoline fuel compositions. 2,948,596, 8–9–60, Cl. 44—58.

American Brake Shoe Co.: *See*—
Cox, Isaac E. 2,948,571.
Pogue, Robert B. 2,948,361.

American Cyanamid Co.: *See*—
Cummings, Percival W., Jr. 2,948,581.
Jen, Yun, and House. 2,948,652.
Klink, Theodore G. 2,948,435.
Roth, Roy W., and Nagy. 2,948,699.

American Hardware Corp., The: *See*—
Vahlstrom, Carl A. 2,948,141.

American Home Products Corp.: *See*—
Winthrop, Stanley O. 2,948,720.

American Laundry Machinery Co., The: *See*—
Neckel, Edmund N., and Wessel. 2,948,071.

American Metal Climax, Inc.: *See*—
Handwerk, Erwin C., and Monson. 2,948,591.

American Optical Co.: *See*—
Smith, Merton L. 2,948,891.

American Potash & Chemical Corp.: *See*—
Burg, Anton B., and Wagner. 2,948,689.
May, Frank H. 2,948,592.

American Screw Co.: *See*—
Muenchinger, Herman G. 2,948,056.

American Telephone and Telegraph Co.: *See*—
Andrews, Clayton F., Chamberlin, and Neiswinter. 2,948,777.

American Viscose Corp.: *See*—
Haley, Harold A. 2,948,562.

Amiard, Gaston, and L. Vellus, to UCLAF. New N-benzyl peptides and a process of making same. 2,948,714, 8–9–60, Cl. 260—112.

Ampatco Laboratories Corp.: *See*—
Marggraf, Kurt A. 2,948,495.

Ampex Corp.: *See*—
Schoebel, Konrad W., and Selsted. 2,948,488.

Amsel, Donald, and M. H. Wright, to Copycat Ltd. Photographic printing apparatus. 2,948,207, 8–9–60, Cl. 95—75.

Amundsen, Sverre. Corn planter. 2,948,230, 8–9–60, Cl. 111—52.

Anaconda Wire and Cable Co.: *See*—
D'Ancoli, Ralph G. 2,948,020.

Andersen, Arthur H.: *See*—
Johnson, Herbert S., and Andersen. 2,948,587.

Anderson, Aldine J. and L. J. Schoephoerster. Polishing machine. 2,948,005, 8–9–60, Cl. 15—98.

Anderson, Andrew W., to Scandia Packaging Machinery Co. Mechanism for feeding and covering containers. 2,948,096, 8–9–60, Cl. 53—287.

Anderson, Harold J. Underwater electric lantern. 2,948,806, 8–9–60, Cl. 240—10.66.

Anderson, Thomas R., to Swift & Co. Manner of handling ment. 2,948,623, 8–9–60, Cl. 99—169.

Andrews, Clayton F., D. W. Chamberlin, and J. T. Neiswinter, to American Telephone and Telegraph Co. Test set for selector mechanism. 2,948,777, 8–9–60, Cl. 178—69.

Ansiow, Winston K., and G. D. Wilkin, to Glaxo Laboratories Ltd. Antibiotics. 2,948,660, 8–9–60, Cl. 195—80.

Applequist, Hugh D., to The Standard Oil Co. Calibration loop for calibrating flowmeters. 2,948,144, 8–9–60, Cl. 73—3.

Applied Physics Corp.: *See*—
Hawes, Roland C. 2,948,773.

Armour and Co.: *See*—
Jackson, Ralph H., and Van Wagenen. 2,948,650.

Arnelo, Anders I., to Aktiebolaget Svenska Metallverken. Fault detecting and indicating system. 2,948,848, 8–9–60, Cl. 324—34.

Arnold, Graham A., to United-Carr Fastener Corp. Molding fastener. 2,948,368, 8–9–60, Cl. 189—88.

Aronson, Theodore F., and F. A. Lyon. Gun holder. 2,948,449, 8–9–60, Cl. 224—1.

Arpin, Leon G. Accelerator control. 2,948,369, 8–9–60, Cl. 192—3.

Arvidson, Bengt A., to Miller Wrapping & Sealing Machine Co. Web cutting mechanism. 2,948,177, 8–9–60, Cl. 83—155.

Ashkin, Arthur, to Bell Telephone Laboratories, Inc. Traveling wave tube interaction circuit. 2,948,828, 8–9–60, Cl. 315—3.6.

Ashley, Carlyle M., to Carrier Corp. Method and apparatus for blanching food products. 2,948,619, 8–9–60, Cl. 99—100.

Ashley, Carlyle M., to Carrier Corp. Method and apparatus for blanching food products. 2,948,620, 8–9–60, Cl. 99—100.

Ashley, Joseph: *See*—
Ward, William M., and Ashley. 2,948,185.

Ashmore, Richard D., to Monsanto Chemical Co. Alkylation of aromatic compounds. 2,948,763, 8–9–60, Cl. 260—671.

Asti, Jaromir. Differential pressure gauge. 2,948,151, 8–9–60, Cl. 73—406.

Atikian, Agop K.: *See*—
Babayan, Vigen K., and Atikian. 2,948,717.

Atkron, Inc.: *See*—
Copping, Bruce G. 2,948,425.

Austin, John F.: *See*—
Baker, Chester L., and Austin. 2,948,701.

Austin, Robert J., J. F. Grutsch, and R. C. Mallatt, to Standard Oil Co. Bioflotation treatment of oil-containing waste water. 2,948,677, 8–9–60, Cl. 210—44.

Automatic Draft and Stove Co., Inc.: *See*—
Harding, George W. 2,948,276.

Automatic Fire Alarm Co.: *See*—
Cassell, Joseph L. 2,948,299.

Avco Mfg. Corp.: *See*—
Bourget, Joseph G. 2,948,888.

Avera, Fitzhugh L., to Corn Products Co. Process of manufacturing nut flavoring additives. 2,948,621, 8–9–60, Cl. 99—128.

Ayers, George W.: *See*—
Romeo, Nathaniel L., and Ayers. 2,948,669.

Ayers, J. W., & Co.: *See*—
Rinse, Jacobus. 2,948,743.

Babayan, Vigen K., and A. K. Atikian, to E. F. Drew & Co., Inc. Sugar ester preparation and purification. 2,948,717, 8–9–60, Cl. 260—234.

Babb, David D., to United States of America, Army. Quantum mechanical resonance devices. 2,948,861, 8–9–60, Cl. 331—3.

Babcock & Wilcox Co., The: *See*—
Koch, Paul H., Stevens, and Wiener. 2,948,267.

Bacon, Kenneth F., to North American Philips Co., Inc. Systems for detecting relative movements using ferro-resonant systems. 2,948,852, 8–9–60, Cl. 324—70.

Baecher, Bernard J. High speed plotting system. 2,948,579, 8–9–60, Cl. 346—8.

Bailey, Alvia G.: *See*—
Bailey, Beryl A. and A. G. 2,948,224.

Bailey, Beryl A. and A. G. Hydraulic pump. 2,948,224, 8–9–60, Cl. 103—46.

Bailiff, Fred H., to Union Carbide Corp. Attenuating apparatus. 2,948,021, 8–9–60, Cl. 19—65.

Baird, Blake O., and R. P. Davis, to The B. F. Goodrich Company. Coated vinyl chloride plastisol resin particles coated with a carboxylic acid salt and method of preparation. 2,948,638, 8–9–60, Cl. 117—100.

Baker, Chester L., and J. F. Austin, to Philadelphia Quartz Co. Finely divided metal silicate products. 2,948,701, 8–9–60, Cl. 210—41.5.

Ball, Elmer A. Multi-purpose car top luggage carrier. 2,948,576, 8–9–60, Cl. 312—240.

Banas, Albert: *See*—
Sing, Daniel Y., and Banas. 2,948,316.

Baran, John S., to G. D. Searle & Co. 2-hydroxy-$\Delta^{1,4}$-steroids. 2,948,749, 8–9–60, Cl. 260—397.4.

Barkalow, Clare E., to Lear, Inc. Linear integrating torquing mechanism. 2,948,156, 8–9–60, Cl. 74—5.6.

Barnes, Alfred N.: *See*—
Poe, Benjamin F., and Barnes. 2,948,285.

Barnes, Harry E., ½o to Gadget-Of-The-Month Club, Inc. Airfoil with adjustable through passage. 2,948,492, 8–9–60, Cl. 244—42.

Barney, Arthur L., to E. I. du Pont de Nemours and Co. Photopolymerizable compositions, elements and processes. 2,948,611, 8–9–60, Cl. 96—35.

Barnhart, William S., and C. W. Weber, to Minnesota Mining and Mfg. Co. Recovery of telomer acid. 2,948,741, 8–9–60, Cl. 260—408.

Barravecchia, Domenick P. Universal captive cap for collapsible tubes and bottles. 2,948,440, 8–9–60, Cl. 222—545.

Barrett, Calvin J., 49% to A. F. Cruse. Vehicle brake apparatus. 2,948,359, 8–9–60, Cl. 188—106.

Barrett, Wesley H., to Dowty Mining Equipment Ltd. Pushing device for shifting mining machinery. 2,948,508, 8–9–60, Cl. 254—35.

Barth, Hans, and C. H. Odell, to O'Dell Brothers. Position meter. 2,948,890, 8–9–60, Cl. 340—347.

Bartl, Herbert: *See*—
Schellenberg, Wolf-Dietrich, and Bartl. 2,948,706.

Barry, Vincent C., J. G. Belton, M. L. Conalty, D. Twomey, J. F. O'Sullivan, and E. Hodel, to Geigy Chemical Corp. New phenesine derivatives. 2,948,726, 8–9–60, Cl. 260—267.

Basic Products Corp.: *See*—
Kinsman, George H., and Hellman. 2,948,616.

Batcheller, Hugh W., to Kent Mfg. Corp. Gang electric connector. 2,948,875, 8–9–60, Cl. 339—48.

Batcheller, Hugh W., to Kent Mfg. Corp. Connector member with resiliently supported central boss. 2,948,876, 8–9–60, Cl. 339—258.

Batcheller, Hugh W., to Kent Mfg. Corp. Electrical connector member with T-split floor. 2,948,877, 8–9–60, Cl. 339—258.

Baucom, Fred M. Yarn spinning apparatus. 2,948,102, 8–9–60, Cl. 57—59.

Bauer, Robert E.: *See*—
Mancuso, Joseph P., and Maffett. 2,948,097.

Baumann, Arthur N., to International Minerals & Chemical Corp. Method of manufacturing alkali metal tripolyphosphates. 2,948,586, 8–9–60, Cl. 23—106.

Bayley, Abraham, and B. E. Tate, to Chas. Pfizer & Co., Inc. Itaconic acid diester adducts as plant fungicides. 2,948,053, 8–9–60, Cl. 167—22.

Baxter, John C., M. De Graaf, and E. Woldring, to The Rapids-Standard Co., Inc. Method of making wheels. 2,948,055, 8–9–60, Cl. 29—159.01.

Baxter Laboratories, Inc.: *See*—
Green, Samuel R. 2,948,658.

Bayer, Otto: *See*—
Windemuth, Erwin, Schnell, and Bayer. 2,948,691.

Beams, Jesse W., and L. B. Snoddy, to United States of America, Atomic Energy Commission. Centrifuges. 2,948,572, 8–9–60, Cl. 308—143.

Bearer, Henry P., Jr., to Blaw-Knox Co. Program control for soot blowers. 2,948,013, 8–9–60, Cl. 15—316.

Beckman Instruments, Inc.: *See*—
Ward, William M., and Ashley. 2,948,185.

Beckman, Paul. Sensing means. 2,948,872, 8–9–60, Cl. 338—3.

Bedker, Leo W. Slide. 2,948,160, 8–9–60, Cl. 74—110.

Beggs, John C., H. W. Carrier, and T. P. Farkas, to United Aircraft Corp. Aircraft air conditioning system. 2,948,475, 8–9–60, Cl. 236—13.

Bejeuhr, Walter. Weaving apparatus. 2,948,302, 8–9–60, Cl. 139—11.

Belden, Sarah H., to The Standard Oil Co. Novel boron compounds and gasoline containing the same. 2,948,597, 8–9–60, Cl. 44—63.

Bell Aircraft Corp.: *See*—
Sing, Daniel Y., and Banas. 2,948,316.

Bell & Gossett Co.: *See*—
Birkemeier, Henry P. 2,948,181.

Bell Telephone Laboratories, Inc.: *See*—
Ashkin, Arthur. 2,948,828.
Clogston, Albert M. 2,948,870.
Kennedy, William J. 2,948,377.
Macdonald, Robert W. 2,948,642.
Miller, Stewart E. 2,948,864.
Reeves, Marvin L. 2,948,868.

Baltringer, Frederick J., to The Distillers Co. Ltd. Chemical process. 2,948,662, 8–9–60, Cl. 202—57.

Belton, James G.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,948,726.

Bemis, Emil. Locking device for jewelry. 2,948,036, 8–9–60, Cl. 24—157.

Bender, Howard L., and B. Phillips, to Union Carbide Corp. Compositions comprising 4-vinylcyclohexene dioxide. 2,948,688, 8–9–60, Cl. 260—2.

Bendix Aviation Corp.: *See*—
Lupton, Clark R. 2,948,360.
Suttle, Ward C. 2,948,273.
Woodward, Stephen G. and Hartman. 2,948,272.

Bengeleder, Irving S., to General Electric Co. Terephthalaldehyde preparation. 2,948,756, 8–9–60, Cl. 260—599.

Bennett, Arthur G., to United States of America, Army. Fuze self destruction delay and point detonation mechanism. 2,948,220, 8–9–60, Cl. 102—86.2.

Benning, Anthony F., to E. I. du Pont de Nemours and Co. Isocyanate-based polymers containing at least two different types of polymeric segments. 2,948,707, 8–9–60, Cl. 260—77.5.

Berg, Josef T., and A. Larigaldie, to North American Philips Co., Inc. Method of enclosed welding. 2,948,803, 8–9–60, Cl. 219—137.

Berg Mfg. and Sales Co.: *See*—
Dobrikin, Harold L. 2,948,450.

Berg, Rudolph G.: *See*—
Buckley, Jay S., Jr., and Berg. 2,948,749.

Bergeson, Raymond L., to Minneapolis-Honeywell Regulator Co. Center of gravity indicator. 2,948,146, 8–9–60, Cl. 73—65.

Bergmann, Anders K., J. Brynildsen, J. C. G. Borgstrom, and J. B. Goos, to Telefonaktiebolaget LM Ericsson. Automatic telephone system. 2,948,780, 8–9–60, Cl. 179—16.

Bergmann, Paul F., to Johnson Products, Inc. Means for metering lubricating oil from an hydraulic tappet to a hollow push rod. 2,948,270, 8–9–60, Cl. 123—90.

Berkley, Carl, H. P. Mansberg, G. N. Thomas, and Y. Yamagami, to Allen B. Du Mont Laboratories, Inc. Particle counter. 2,948,470, 8–9–60, Cl. 235—92.

Berman, Walter H.: *See*—
Burd, Samuel I., Mayer, and Berman. 2,948,240.

Bernstein, Leon R.: *See*—
Metsler, Charles L., Dennerlein, and Bernstein. 2,948,-388.

Berti, Roland J., and D. C. Bettison. Display switching systems and apparatus therefor. 2,948,881, 8–9–60, Cl. 340—23.

Bertin, Jean H.: *See*—
De Jurquet de la Salle d'Anfreville, Louis M. G., Bertin, and Kadosch. 2,948,148.

Besilier, Jacques P. J. L., Cotadse, and P. Chaffotte, to Societe d'Exploitation des Materiels Hispano-Suiza. Engine fuel control including acceleration-biased control signal selector. 2,948,114, 8–9–60, Cl. 60—35.6.

Bess, Leon, to United States of America, Navy. Pulse decoder having pulse width and pulse spacing discriminating means. 2,948,854, 8–9–60, Cl. 328—58.

Bettison, David C.: *See*—
Berti, Roland J., and Bettison. 2,948,881.

Bicking, John B., G. S. Skinner, and J. R. Lovett. Derivatives of 3,5-morpholinedione. 2,948,723, 8–9–60, Cl. 260—247.7.

Biddle, James G., Co.: *See*—
Foster, William P. 2,948,849.

Bider, Gianni. Movable roll support for a baler. 2,948,-494, 8–9–60, Cl. 242—34.4.

Biel, John H., to Lakeside Laboratories, Inc. 1-(1,2,3,4-tetrahydroisoquinoline)-ω-amino-2-ethiazyl-3-hydroxy alkanes. 2,948,722, 8–9–60, Cl. 260—247.5.

Biemiller, Philip E.: *See*—
Van Horn, John A., Biemiller, and Reese. 2,948,621.

Biermann, David, to Hartzell Propeller, Inc. Constant speed and feathering propeller. 2,948,344, 8–9–60, Cl. 170—160.32.

Bigelow, John F., to Raytheon Co. Reactance networks. 2,948,869, 8–9–60, Cl. 333—80.

Bing, Charles W., to Daystrom, Inc. Ring assembly. 2,948,-152, 8–9–60, Cl. 74—399.

Birkemeier, Henry P., to Bell & Gossett Co. Tuning vibratory elements. 2,948,181, 8–9–60, Cl. 84—409.

Bishman Mfg. Co.: *See*—
Bishman, Walter A. 2,948,314.

Bishman, Walter A., to Bishman Mfg. Co. Wheel centering and supporting device. 2,948,314, 8–9–60, Cl. 144—288.

Blackburn, Jasper, Corp.: *See*—
Toedtman, John A. 2,948,678.

Blaser, Bruno, W. Stein, and H. Schirp, to Henkel & Cie. G.m.b.H. Process for the introduction of carboxyl groups into heterocyclic compounds. 2,948,735, 8–9–60, Cl. 260—295.5.

Blaser, Bruno, W. Stein, and H. Schirp, to Henkel & Cie. G.m.b.H. Process for the production of thiophene carboxylic acids. 2,948,737, 8–9–60, Cl. 260—332.2.

Blaser, Bruno, H. Schirp, and W. Stein, to Henkel & Cie. G.m.b.H. Process for the introduction of carboxyl groups into aromatic hydrocarbons. 2,948,750, 8–9–60, Cl. 260—515.

Blatz, William E.: *See*—
Pitler, Richard K., and Blatz. 2,948,608.

Blaw-Knox Co.: *See*—
Bearer, Henry P., Jr. 2,948,013.

Blue M Electric Co.: *See*—
Lawler, Joseph A. 2,948,125.

Blum, Josef, to Ivan Sorvall, Inc. Microtome bypass slide. 2,948,190, 8–9–60, Cl. 88—40.

Blumstein, Abraham. Watch and pill case or the like. 2,948,-106, 8–9–60, Cl. 58—57.5.

Boag, James C.: *See*—
Karbum, August C., and Boag. 2,948,747.

Bodine, Albert G., Jr. Sonic system for unscrewing threaded pipe joints. 2,948,059, 8–9–60, Cl. 29—427.

Bodley, Robert W., R. C. Ulm, and L. A. Wilkin, to Union Tank Car Co. Breather reservoir. 2,948,482, 8–9–60, Cl. 220—85.

Bodner, Fritz, to Hauni-Werke Korber & Co. K.G. New and improved method and means for feeding cut tobacco to a plurality of cigarette machines. 2,948,560, 8–9–60, Cl. 306—25.

Boeing Airplane Co.: *See*—
Trifonoff, George T. 2,948,493.

Boettcher, Alfred: *See*—
Schneider, Günther, and Boettcher. 2,948,766.

Boggs, Frederick L.: *See*—
Maloy, Arthur L., and Boggs. 2,948,183.

Bohannan, Hillory. Adapter step for ladders. 2,948,350, 8–9–60, Cl. 182—121.

Bonaiuti, Ettore. Apparatus for drafting textile fibers. 2,948,023, 8–9–60, Cl. 19—130.

Bonanni, Ernest, to Swift & Co. Method and apparatus for assembling cylindrical objects. 2,948,093, 8–9–60, Cl. 53—28.

Bonkowski, Teofil L. Wedge-lock means for slidable side jaw wrenches. 2,948,175, 8–9–60, Cl. 81—154.

Bonner, Tom W., and R. L. Caldwell, to Socony Mobil Oil Co., Inc. Neutron production by alpha disintegration of boron 10. 2,948,811, 8–9–60, Cl. 250—83.3.

Bopp, Louis A., to General Cable Corp. Neoprene compound, self-adhering to lead. 2,948,772, 8–9–60, Cl. 174—107.

Borg-Warner Corp.: *See*—
Smirl, Richard L. 2,948,226.

Borgstrom, Johan C. G.: *See*—
Bergmann, Anders K., Brynildsen, Borgstrom, and Goos. 2,948,780.

Borland, James H. Refinishing tool for tapped hole and seat. 2,948,000, 8–9–60, Cl. 10—1.

Born, James H., W. D. Drukker, and H. F. Runge, to Western Electric Co., Inc. Hydraulic shock absorber. 2,948,358, 8–9–60, Cl. 188—97.

Bostock, James H.: *See*—
Raulins, George M., Bostock, and Garwood. 2,948,338.

Bostock, James H., and J. V. Fredd, to Otis Engineering Corp. Well tools. 2,948,340, 8–9–60, Cl. 166—215.

Bothwell, Theodore P., to Radio Corp. of America. Multivibrator circuit. 2,948,820, 8–9–60, Cl. 307—88.5.

Bott, Winston F. Escape mechanism. 2,948,348, 8–9–60, Cl. 182—11.

Bourget, Joseph G. A., to Avco Mfg. Corp. Magnetic energy transmitter for a remote control system for a television receiver. 2,948,888, 8–9–60, Cl. 340—345.

Bourne, John A. Hydraulic hand tool having opposed work-engaging jaws. 2,948,174, 8–9–60, Cl. 81—129.

Bowser, Inc.: *See*—
Rittenhouse, Howard E., and Hinds. 2,948,307.

Boyd, Harvey W., to The Superior Oil Co. Electrical switching apparatus. 2,948,883, 8–9–60, Cl. 317—46.

Bradley, John N.: *See*—
Hykes, Paul G., Roberts, and Bradley. 2,948,568.

Bradshaw, Wilbert C., Jr., and D. W. Ruschhaupt, to California Fresno Investment Corp. Mobile earth surfacing apparatus. 2,948,519, 8–9–60, Cl. 259—154.

Brand, Frederick B., and J. H. Chadwick, Jr., to Sperry Rand Corp. Fluid pressure-responsive apparatus for controlling navigable craft. 2,948,245, 8–9–60, Cl. 114—16.

Branday, John A. Apparatus for machining bar stock or the like. 2,948,196, 8–9–60, Cl. 90—14.

Bravenec, Frank, and R. H. Huddleston, Jr., to Weiex, Inc. Electromagnetic conductivity detection. 2,948,847, 8–9–60, Cl. 324—50.

Bray, William W., Jr., and M. M. MacFarquhar, to Esso Research and Engineering Co. Recovery of gas oil from a fluid coker. 2,948,670, 8–9–60, Cl. 208—100.

Breham, Allen E., to Standard Oil Co. Anti-rust compositions. 2,948,598, 8–9–60, Cl. 44—64.

Bremer, Robert D., to General Motors Corp. Domestic appliance. 2,948,801, 8–9–60, Cl. 219—37.

Brennan, Elmer W.: *See*—
Crosby, Gifford W., Millikan, and Brennan. 2,948,682.

Brennan, Harry M., to Standard Oil Co. Impregnated platinum-alumina catalysts for use in the hydroforming of hydrocarbons. 2,948,672, 8–9–60, Cl. 208—139.

Brewster, Albert. Soil buffer. 2,948,345, 8–9–60, Cl. 172—49.

Brinster, John F., and E. B. Garretson, to General Devices, Inc. Commutator brush assembly. 2,948,795, 8–9–60, Cl. 200—166.

British Insulated Callender's Cables Ltd.: *See*—
Lorch, Hermann R., and McCleery. 2,948,647.

Britton, Harrison J.: *See*—
Gill, Vincent A., and Britton. 2,948,553.

Broach, Guillermo E.: *See*—
Saravia, Roberto F., and Broach. 2,948,533.

Brock, Frank M., to Radio Corp. of America. Balanced modulator circuit. 2,948,862, 8–9–60, Cl. 332—47.

Broekhuysen, William C., to G-V Controls Inc. Electro thermal relay. 2,948,788, 8–9–60, Cl. 200—122.

Brooklyn Products, Inc.: *See*—
States, George V. 2,948,448.

Brotherton, Robert J., to United States Borax & Chemical Corp. Preparation of organo-boron compounds. 2,948,751, 8–9–60, Cl. 260—551.

Brown, Forrest A. Tissue dispenser for automobiles. 2,948,-574, 8–9–60, Cl. 312—39.

Brown, Loyd P. Folding step attachment. 2,948,550, 8–9–60, Cl. 280—166.

Brundage, Robert W. Method and arrangement for cooling variable volume hydraulic pumps at low volumes. 2,948,229, 8–9–60, Cl. 103—120.

Brynildsen, Jan: *See*—
Bergmann, Anders K., Brynildsen, Borgstrom, and Goos. 2,948,780.

Buck, Harlan M., Inc.: *See*—
Saulson, Saul. 2,947,995.
Saulson, Saul and S.H. 2,947,994.

Buckley, Jay S., Jr., and R. G. Berg, to Chas. Pfizer & Co., Inc. Production of 1,2,3,4-tetrahydro-1-naphthoic acid. 2,948,749, 8–9–60, Cl. 260—515.

Budd Co., The: *See*—
Hykes, Paul G., Roberts, and Bradley. 2,948,568.

Budwig, Gilbert G. Spraying device. 2,948,480, 8–9–60, Cl. 239—416.

Buesche, Arthur M.: *See*—
Gaines, George L., Jr., and Buesche. 2,948,329.

Bugyi, Edward T. Washable strings for machinists' and similar type aprons. 2,948,037, 8–9–60, Cl. 24—73.

Burd, Samuel I., N. Mayer, and W. B. Berman, to Prestige, Inc. Looping machine and method. 2,948,240, 8–9–60, Cl. 112—25.

Buren-Watch Co. S.A.: *See*—
Marmier, Paul-Léon. 2,948,107.

Burg, Anton B., and E. I. Wagner, to American Potash & Chemical Corp. Phosphinoborine compounds and their preparation. 2,948,689, 8–9–60, Cl. 260—2.

Burkam, John E., to Altoscan Co. Stabilizing gyro. 2,948,155, 8–9–60, Cl. 74—5.6.

Burns, Jabez, & Sons, Inc.: *See*—
Saint, T Ralph. 2,948,618.

Burns, John L.: *See*—
Petersen, Richard O. A. 2,948,010.

Burroughs Corp.: *See*—
Somlyody, Arpad. 2,948,829.

Burt, Robert V., to The Procter & Gamble Co. Apparatus for stopping containers on a conveyor. 2,948,376, 8–9–60, Cl. 198—40.

Bush, Robert M.: *See*—
Jensen, Raymond W., King, and Bush. 2,948,265.

Butler, Henry J., to Dunlop Rubber Co. Ltd. Disc brakes and automatic adjusting devices therefor. 2,948,356, 8–9–60, Cl. 188—73.

Butler, Thomas E.: *See*—
Wilson, Jack L., Rockefeller, and Butler. 2,948,803.

Cahn, Frank J., to Louis Milani Foods, Inc. Process for producing cold water-soluble gelatin compositions. 2,948,622, 8–9–60, Cl. 99—130.

Cahoon, Nelson C.: *See*—
Johnson, Richard E., Darland, Grulke, Cahoon, and Schaefer. 2,948,767.

Caldwell, Bruce I., to said B. I. and M. A. Caldwell, and R. W. Fuller. Fire protection wire or cable. 2,948,789, 8–9–60, Cl. 200—143.

Caldwell, Harvey E.: *See*—
Journey, Clarence E., and Caldwell. 2,948,447.

Caldwell, Maurice A.: *See*—
Caldwell, Bruce I. 2,948,789.

Caldwell, Richard L.: *See*—
Bonner, Tom W., and Caldwell. 2,948,811.

Caldwell, Richard L., and S. E. Turner, to Socony Mobil Oil Co., Inc. Delayed gamma radiation log of oxygen. 2,948,810, 8–9–60, Cl. 250—83.3.

California Fresno Investment Corp.: *See*—
Bradshaw, Wilbert C., Jr., and Ruschhaupt. 2,948,519.

California Plasteck, Inc.: *See*—
Dupree, James N. 2,948,074.

Cameron, Donald J., to Cameron Windows Aluminum Ltd. Weatherstripping for double hung windows. 2,948,028, 8–9–60, Cl. 20—52.4.

Cameron Windows Aluminum Ltd.: *See*—
Cameron, Donald J. 2,948,028.

Campbell, William E. Candle holder. 2,948,135, 8–9–60, Cl. 67—23.

Cannella, Salvatore. Automatic anti-skid chains for automobiles. 2,948,319, 8–9–60, Cl. 152—214.

Capp, Clifford W., H. P. Crocker, and F. E. Salt, to The Distillers Co. Ltd. Production of dichlorbutene. 2,948,760, 8–9–60, Cl. 260—654.

Capuano, Carmen J., to Scallon Metal Fabricators. Boat trailer. 2,948,423, 8–9–60, Cl. 214—84.

Caradco Inc.: *See*—
Gill, Harvey J., Jr., Sitterly, and Preu. 2,948,027.

Carkhuff, Le Roy F., to Diamond National Corp. Expanding egg lifter. 2,948,564, 8–9–60, Cl. 294—87.

Carlisle, Willis C.: *See*—
McCarvell, John H., and Carlisle. 2,948,232.

Carlson, Marvin T.: *See*—
Elliott, Harold V., and Carlson. 2,948,792.

Carlson, William L., Jr., and F. M. Exner, to Minneapolis-Honeywell Regulator Co. Electromagnetic pump actuated device. 2,948,118, 8–9–60, Cl. 60—52.

Carpenter, Albert J., to Portage Machine Co. Locating device for precision tools. 2,948,817, 8–9–60, Cl. 250—231.

Carpenter, Frank C., Jr., to Hoffman Electronics Corp. Helical-and-whip antennas. 2,948,894, 8–9–60, Cl. 343—725.

Carrier Corp.: *See*—
Ashley, Carlyle M. 2,948,619.
Ashley, Carlyle M. 2,948,620.
Embury, Joseph E., Sr. 2,948,124.
Gerteis, Karl M. 2,948,293.
Mehalick, John R., and Isao. 2,948,515.

Carrier, Harvey W.: *See*—
Beggs, John C., Carrier, and Farkas. 2,948,475.

Carstens, Fred A., to A. O. Smith Corp. Method of fabricating cylindrical shell structures. 2,948,061, 8–9–60, Cl. 29—463.

Carter, William H., Jr. Portable refrigeration system for refrigerating scintillation detectors and the like. 2,948,127, 8–9–60, Cl. 62—384.

Carver, Philip W., to Kontak Mfg. Co. Ltd. Pumps for liquids. 2,948,221, 8–9–60, Cl. 103—37.

Casady, Edgar G. Pipe insulation cutting machine. 2,948,085, 8–9–60, Cl. 51—74.

Case, Everett N., and R. Koncos, to Sinclair Refining Co. Process for removing heavy metals from petroleum with an oil-insoluble sulfonic acid. 2,948,675, 8–9–60, Cl. 208—252.

Cassell, Joseph L., to Automatic Fire Alarm Co. Detector unit valve construction. 2,948,299, 8–9–60, Cl. 137—625.4.

Cataphote Corp.: *See*—
Hodgson, George T., Jr., and Wells. 2,948,191.

Caterpillar Tractor Co.: *See*—
Fubere, Raymond W., and Wegner. 2,948,546.
Risk, Norman E., and Holden. 2,948,347.

Cathey, William B. Spring guide box front for loom shuttle box. 2,948,303, 8–9–60, Cl. 150—185.

Caton, Thomas R., to Reproduction Research Laboratories, Inc. Plate graining apparatus. 2,948,087, 8–9–60, Cl. 51—120.

Cavitron Corp.: *See*—
Kleesattel, Claus. 2,948,154.

Centre National de la Recherche Scientifique: *See*—
Epain, Raymond, Johannin, and Vodar. 2,948,556.

Chadwick, Joseph H., Jr.: *See*—
Brand, Frederick B., and Chadwick. 2,948,245.

Chaffiotte, Pierre: *See*—
Beslier, Jacques P. J., Cotadæ, and Chaffiotte. 2,948,114.

Chamberlin, Daniel W.: *See*—
Andrews, Clayton F., Chamberlin, and Neiswinter. 2,948,777.

Chapman, Donald J.: *See*—
Siccama, Nicholas B., and Wirbelauer. 2,948,657.

Chase, Geoffrey S. Means for producing a plaster or like cast. 2,948,017, 8–9–60, Cl. 18—5.7.

Chicago Development Corp.: *See*—
Dean, Reginald S., and Gullett. 2,948,663.
Resnick, Leroy D. 2,948,608.

Chicago Rawhide Mfg. Co.: *See*—
Wright, Robert D. 2,948,555.

Child, Fernand, to Proplastex. Safety stopper for liquid containers. 2,948,429, 8–9–60, Cl. 215—21.

Ciba Ltd.: *See*—
Frey, Christoph. 2,948,721.

Ciba Pharmaceutical Products, Inc.: *See*—
De Stevens, George. 2,948,731.

Citag-Chemie Aktiengesellschaft: *See*—
Martin, Henry. 2,948,736.

Cissell, W. M., Mfg. Co.: *See*—
Richterkessing, Frank H., and Cissell. 2,948,443.

Cissell, William M.: *See*—
Richterkessing, Frank H., and Cissell. 2,948,443.

Claas, August. Apparatus for handling a load. 2,948,427, 8–9–60, Cl. 214—515.

Clarke, Daniel J., to Stalker Corp. Manufacture of blades. 2,948,197, 8–9–60, Cl. 90—59.

Clarke, Frank W., to Talon, Inc. Slide fastener. 2,948,040, 8–9–60, Cl. 24—205.13.

Clayton Dewandre Co. Ltd.: *See*—
Wall, Alan J. 2,948,796.

Clements, Warner W. Sound reproducing means. 2,948,778, 8–9–60, Cl. 179—1.

Clogston, Albert M., to Bell Telephone Laboratories, Inc. Microwave mode suppressors. 2,948,870, 8–9–60, Cl. 333—98.

Coal Industry (Patents) Ltd.: *See*—
Phillips, James W., Thomas, and Walton. 2,948,469.

Cocci, Alfred J., to E. I. du Pont de Nemours and Co. Polyamide molding compositions. 2,948,698, 8–9–60, Cl. 260—32.6.

Collier, Arnold A. Runner assembly for agricultural implements. 2,948,543, 8–9–60, Cl. 280—8.

Collum, Samuel J., and T. A. Sulkowski. Nail-driving device. 2,947,991, 8–9–60, Cl. 1—46.

Compagnie Industrielle des Telephones: *See*—
Oswald, Jacques. 2,948,866.

Computer Engineering Associates, Inc.: *See*—
Locanthi, Bart N., and Diercks. 2,948,841.

Conalty, Michael L.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,948,726.

Condolios, Elie, to Etablissements NEYRPIC. Process and apparatus for the sorting of solid products. 2,948,396, 8–9–60, Cl. 209—156.

Conlan, John F. Air mixing and distributing units. 2,948,210, 8–9–60, Cl. 98—38.

Conn, Francis E., and J. R. Kessler, to General Motors Corp. Propeller mechanism. 2,948,343, 8–9–60, Cl. 170—135.24.

Contraves, AG.: *See*—
Haldemann, Heinz, and Stutz. 2,948,840.

Conval Corp.: *See*—
Smith, Paul E., Jr. 2,948,295.
Smith, Paul E., Jr., and Dudler. 2,948,839.

Cook, Joseph J.: *See*—
Howe, John R., and Cook. 2,948,557.

Cookson, Eric. Hydraulic shock absorber. 2,948,357, 8–9–60, Cl. 188—87.

Coonrod, Noble S. Holding-bracket for an outboard motor. 2,948,253, 8–9–60, Cl. 115—17.

Cooper, Ben. Interlocking building sections and method of making buildings. 2,948,844, 8–9–60, Cl. 189—34.

Coover, Harry W., Jr., to Eastman Kodak Co. Olefin polymerization catalyst containing aluminum, titanium tetrahalide and titanium alcoholate. 2,948,712, 8–9–60, Cl. 260—93.7.

Coppling, Bruce G., to Atkron, Inc. Box opening and dumping apparatus. 2,948,425, 8–9–60, Cl. 214—311.

Copycat Ltd.: *See*—
Ameel, Donald, and Wright. 2,948,207.

Corn Products Co.: *See*—
Avera, Fitzhugh L. 2,948,621.

Cornell, Richard H., to General Electric Co. Mass flowmister baffle. 2,948,150, 8–9–60, Cl. 73—194.

Corrigan, J. C., Co., Inc.: *See*—
Corrigan, Joseph. 2,948,424.

Corrigan, Joseph, to J. C. Corrigan Co., Inc. Method for handling sugar. 2,948,424, 8–9–60, Cl. 214—152.

Corrin, Myron L., to General Electric Co. Method of impregnating mica paper with an alkyl orthotitanate, and product produced thereby. 2,948,640, 8–9–60, Cl. 117—119.

Cosner, Donald L., to The Martin Co. Tube bundle assembly. 2,948,517, 8–9–60, Cl. 257—248.

Cotadæ, Leon: *See*—
Beslier, Jacques P. J., Cotadæ, and Chaffiotte. 2,948,114.

Cotte, Henri, to J. Lory. Driving arrangement for record tape. 2,948,485, 8–9–60, Cl. 242—55.12.

Couffeau, Maurice A., to Schlumberger Well Surveying Corp. Well logging systems. 2,948,846, 8–9–60, Cl. 324—6.

Coventry, Henry J., to Western Electric Co., Inc. Apparatus for cutting tacky material. 2,948,328, 8–9–60, Cl. 154—1.

Cox, Isaac E., to American Brake Shoe Co. Journal bearings. 2,948,571, 8–9–60, Cl. 308—70.

Cox, Robert J., and R. G. D. Moore, to General Aniline & Film Corp. Diazotype materials sensitized with N-hetero-P-aminobenzenediazonium salts. 2,948,613, 8–9–60, Cl. 96—91.

Cox, William J., and M. H. Dreher, to The Quadriga Mfg. Co. Apparatus for forming an oil seal inner shell. 2,948,322, 8–9–60, Cl. 153—2.

Craige, Theodore L., to United Transformer Corp. Miniature inductive devices. 2,948,871, 8–9–60, Cl. 336—83.

Cramer, Charles H., R. J. Surrett, and J. P. Swed, to E. I. du Pont de Nemours and Co. Sampling of strip metal by use of die and an opposed shaped charge. 2,948,176, 8–9–60, Cl. 83—53.

Crenshaw, Russell S., Jr. Constant tension device for boat falls. 2,948,512, 8–9–60, Cl. 254—172.

Crocker, Henry P.: *See*—
Capp, Clifford W., Crocker, and Salt. 2,948,760.

Crosby, Gifford W., A. F. Milliman, and E. W. Brennan, to The Pure Oil Co. Formyl triesters of dithiophosphoric acid and lubricating oil compositions containing same. 2,948,682, 8–9–60, Cl. 252—46.6.

Cross, Carroll N. Method for fabricating mounts having display material. 2,948,199, 8–9–60, Cl. 93—1.

Cross, Richard N., to General Electric Co. Journal box arrangement. 2,948,236, 8–9–60, Cl. 105—220.

Crown Zellerbach Corp.: *See*—
Gilmore, John E., Sr. 2,948,454.
Grisetti, Charles V., and Langton. 2,948,456.

Cruse, Albert F.: *See*—
Barrett, Calvin J. 2,948,359.

Culkosky, Martin. Tool for compressing a biasing spring of an electric drum controller. 2,948,058, 8–9–60, Cl. 29—227.

Cummings, Percival W., Jr., to American Cyanamid Co. Method of producing a synthetic fiber. 2,948,581, 8–9–60, Cl. 18—54.

Curry, Robert S., Jr., to Sperry Rand Corp. Control systems for dirigible craft. 2,948,494, 8–9–60, Cl. 244—77.

Curtiss-Wright Corp.: *See*—
Ederer, Norbert. 2,948,850.
Eisenstark, Milton. 2,948,580.

Cutler-Hammer, Inc.: *See*—
White, Warren D. 2,948,892.

Czacherski, Bruno T.: *See*—
Schriner, John E., Masters, and Czacherski. 2,948,633.

Dabich, Michael: *See*—
Kay, John G., and Dabich. 2,948,386.

Dabich, Michael, to F. Jos. Lamb Co. Rollerway chuting. 2,948,375, 8–9–60, Cl. 193—35.

Dagenais, Joseph E. Press for shock absorbing spring assemblies of crawler tractors. 2,948,057, 8–9–60, Cl. 29—227.

Daimler-Benz Aktiengesellschaft: *See*—
Nallinger, Friedrich K. H. 2,948,547.
Wirsching, Robert J. 2,948,159.

D'Alelio, Gaetano F., and M. Silberberg, to Foster Grant Co., Inc. Suspension polymerization in the presence of tricalcium phosphate and sodium betanaphthalene sulfonate. 2,948,710, 8–9–60, Cl. 260—85.5.

Daly, Thomas A., and S. Kowalyshyn, Jr., to United States of America, Navy. Steering system for a homing torpedo. 2,948,248, 8–9–60, Cl. 114—21.

Daman, Arthur C., to Denver Equipment Co. Methods and apparatus for comminuting ores or the like. 2,948,481, 8–9–60, Cl. 241—21.

D'Amico, John J., to Monsanto Chemical Co. Thiobispiperazines. 2,948,727, 8–9–60, Cl. 260—268.

Darland, William G., Jr.: *See*—
Johnson, Richard E., Darland, Jr., Grulke, Cahoon, and Schaefer. 2,948,767.

D'Ascoli, Ralph G., to Anaconda Wier and Cable Co. Method of making high frequency cable. 2,948,020, 8–9–60, Cl. 18—59.

Davie, Robert P.: *See*—
Baird, Blake O., and Davie. 2,948,639.

Davis, Trevor C. M. Purification of sugar esters. 2,948,716, 8–9–60, Cl. 260—234.

Dawson, Benjamin F., Jr. Pipe mold and ejector. 2,948,044, 8–9–60, Cl. 25—129.

Day, Dewey D., to The Murray Co. of Texas, Inc. Cotton cleaning apparatus. 2,948,022, 8–9–60, Cl. 19—72.

Daystrom, Inc.: *See*—
Bing, Charles W. 2,948,162.

Dean, Reginald S., and W. W. Gullett to Chicago Development Corp. Composition of matter including titanium crystal intergrowths and method of making same. 2,948,663, 8–9–60, Cl. 204—64.

De Angelus, Millet R.: *See*—
Dersch, Fritz, and De Angelus. 2,948,615.

De Angelus, Millet R., and F. Dersch, to General Aniline & Film Corp. Photographic materials and method of producing the same. 2,948,612, 8–9–60, Cl. 96—66.

De Graaf, Maurice: *See*—
Baxter, John C., De Graaf, and Woldring. 2,948,955.

Delbel, Raymond: *See*—
Oinbel, John R., and Delbel. 2,948,010.

De Jurquet de la Salle d'Anfreville, Louis M. G., J. H. Bertin, and M. Kadosch, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Supersonic wind-tunnel for a variable mach number. 2,948,148, 8–9–60, Cl. 73—147.

Dekan, George J., ½ to W. Miller. Electric control for timer. 2,948,851, 8–9–60, Cl. 324—70.

Delker, William E.: *See*—
Kremer, Irvin R., and Delker. 2,948,442.

De Long Corp.: *See*—
Suderow, George E. 2,948,119.
Suderow, George E. 2,948,120.

Dennerlein, William H.: *See*—
Metzler, Charles L., Dennerlein, and Bernstein. 2,948,388.

Dennis, Edward D., to A. O. Smith Corp. Two temperature water heating system. 2,948,277, 8–9–60, Cl. 126—362.

Densmore, Neal W., to Joy Mfg. Co. Auger boring machine for mining coal. 2,948,520, 8–9–60, Cl. 262—26.

Denver Equipment Co.: *See*—
Daman, Arthur C. 2,948,481.

De Pauw, Francis: *See*—
Limido, Jean, and De Pauw. 2,948,667.

Dersch, Fritz: *See*—
De Angelus, Millet R., and Dersch. 2,948,612.
Dersch, Fritz, and M. R. De Angelus, to General Aniline & Film Corp. Antifoggants and stabilizers for photographic silver halide emulsions. 2,948,615, 8–9–60, Cl. 96—109.

De Stevens, George, to Ciba Pharmaceutical Products, Inc. Derivatives of thianoline-2-ones. 2,948,731, 8–9–60, Cl. 260—293.4.

Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Schneider, Günther, and Boettcher. 2,948,766.

De Villers, Edmund J., and W. J. Long, to Paperlynen Co. Disposable type paper head dress. 2,947,992, 8–9–60, Cl. 2—198.

Devoe & Raynolds Co., Inc.: *See*—
Reed, Francis E. 2,948,694.

De Voto, Earl W., A. M. Garton, and J. E. Horner, to Philip Morris Inc. Control system for tobacco hoppers. 2,948,281, 8–9–60, Cl. 131—21.

De Whalley, Christopher H., and C. Van Hoek, to Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek. Electrodialysing apparatus with supported membranes. 2,948,668, 8–9–60, Cl. 204—301.

Diamond National Corp.: *See*—
Carkhuff, Le Roy P. 2,948,564.
Doyle, William V. 2,948,594.
Penn, John J. 2,948,381.
Wells, Roger. 2,948,094.
Witt, Edgar C. 2,948,217.
Wolter, Harry A. 2,948,337.
Wolter, Harry A. 2,948,434.

Diemer, Gesinus: *See*—
Van Santen, Johannes G., and Diemer. 2,948,816.

Diercks, Allen D.: *See*—
Locanthi, Bart N., and Diercks. 2,948,841.

DiGiovanni, Mario, to Statham Instruments, Inc. Strain wire transducer. 2,948,873, 8–9–60, Cl. 338—4.

Dillon, Edward T.: *See*—
Turner, Finis, and Dillon. 2,948,678.

Dismant, John H., to International Minerals & Chemical Corp. Process for beneficiating ores. 2,948,395, 8–9–60, Cl. 209—127.

Distillers Co. Ltd., The: *See*—
Bellringer, Frederick J. 2,948,662.
Capp, Clifford W., Crocker, and Salt. 2,948,760.
Jenkins, Philip A. 2,948,761.

Ditto, Richard S., to E. I. du Pont de Nemours and Co. Transducer. 2,948,842, 8–9–60, Cl. 323—51.

Doak Aircraft Co., Inc.: *See*—
Nelson, Norman E. 2,948,111.

Dobrikin, Harold L., to Berg Mfg. and Sales Co. Flexible hose support. 2,948,450, 8–9–60, Cl. 224—42.1.

Dominion Engineering Works Ltd.: *See*—
Nix, Edmund A. 2,948,412.

Don, James E. Movable drinking fountain. 2,948,476, 8–9–60, Cl. 239—24.

Don-Lan Electronics Co., Inc.: *See*—
Lanctot, Donald H. 2,948,798.

Donath, Ernest. Garment having set-in inverted box pleat structure. 2,947,993, 8–9–60, Cl. 2—243.

Doolittle, Donald E., and R. J. Haber, to All American Engineering Co. Jet power launching system. 2,948,291, 8–9–60, Cl. 137—22.

Douchet, Eugene, ½ to Society JOP, and ½ to Societe Taulet & Co. Simulated stitching. 2,948,648, 8–9–60, Cl. 154—46.

Dow Chemical Co., The: *See*—
Gunkler, Albert A. 2,948,393.
Jankens, Austin L. 2,948,048.
Kallman, Robert L., Steinbach, and Stoming. 2,948,575.
Park, William R. R. 2,948,698.
Pruitt, Malcolm E., and Rogers. 2,948,757.
Rubens, Louis C., Griffin, and Urchick. 2,948,665.
Rubens, Louis C., and Urchick. 2,948,664.
Tousignant, William F., Wallen, and Houtman. 2,948,656.
Wallen, Wilhelm E., and Tousignant. 2,948,708.

Dowty Mining Equipment Ltd.: *See*—
Barrett, Wesley H. 2,948,508.

Doyle, William V., to Diamond National Corp. Molded pulp coated charcoal and charcoal briquettes. 2,948,594, 8–9–60, Cl. 44—6.

Dreher, Merle H.: *See*—
Cox, William J., and Dreher. 2,948,322.

Dresser Industries, Inc.: *See*—
Smith, Robert W., and Vaughan. 2,948,421.
Smith, Robert W., and Vaughan. 2,948,426.
Thatcher, Russell S. 2,948,880.

Drew, E. F., & Co., Inc.: *See*—
Babayan, Vigen K., and Atikian. 2,948,717.

Drown, Harold J. Non-spillable liquid drinking container. 2,948,453, 8–9–60, Cl. 229—7.

Drukker, Willard D.: *See*—
Born, James H., Drukker, and Runge. 2,948,358.

Dudler, Hans A.: *See*—
Smith, Paul E., Jr., and Dudler. 2,948,839.

Du Mont, Allen B., Laboratories, Inc.: *See*—
Berkley, Carl, Mansberg, Thomas, and Yamagami. 2,948,470.

Dunlop Rubber Co. Ltd.: *See*—
Butler, Henry J. 2,948,356.

Dunsworth, Lorne C., and A. N. Thomas, Jr., to The Marquardt Corp. Drag reduction shroud for jet engines. 2,948,115, 8–9–60, Cl. 60—35.6.

Du Pont de Nemours, E. I., and Co.: *See*—
Adams, Dustin S., Ernst, and Prengle. 2,948,583.
Barney, Arthur L. 2,948,611.
Benning, Anthony F. 2,948,707.
Cocci, Alfred J. 2,948,698.
Cramer, Charles H., Surrett, and Swed. 2,948,176.
Ditto, Richard S. 2,948,842.
Euler, Robert D., and Tichenor. 2,948,584.
Fairchild, Homer E. 2,948,654.
Feild, Alexander L., Jr. 2,948,627.
Flenner, Albert L. 2,948,655.
Robertson, James A. 2,948,697.
Robinson, Charles F. 2,948,705.
Young, James H. 2,948,392.

Dupree, James N., to California Plasteck, Inc. Illuminated plastic panel and method of fabricating same. 2,948,074, 8–9–60, Cl. 41—22.

Durant, Leonard G., and A. Surino, to Pandia, Inc. Continuous digester. 2,948,336, 8–9–60, Cl. 162—236.

Duschinsky, Robert, and C. Heidelberger. 5-fluoroorotic acid and preparation thereof. 2,948,725, 8–9–60, Cl. 260—260.

Du Vall, Richard A. Tricycle with tandem seats. 2,948,551, 8–9–60, Cl. 280—202.

Eagle-Picher Co., The: *See*—
Schriner, John E., Masters, and Czacherski. 2,948,633.

Eastman Kodak Co.: *See*—
Allen, Charles F. H., Illingsworth, and Sagura. 2,948,814.
Coover, Harry W., Jr. 2,948,712.
Merrill, Stewart H., Robertson, and Staehle. 2,948,610.
White, James C. 2,948,282.

Easton, Rufus, to Koppers Co., Inc. Method and apparatus for the continuous casting of molten metal. 2,948,030, 8–9–60, Cl. 22—57.2.

Eatinger, Cloyde B. Latch mechanism. 2,948,561, 8–9–60, Cl. 292—280.

Eaton Mfg. Co.: *See*—
Gill, Andrew S., Jr., and Lindeman. 2,948,548.
Roper, Daniel W., and Oldberg. 2,948,268.
Winther, Martin P., and Russell. 2,948,370.

Eby, Lawrence T., and R. M. Thomas, to Esso Research and Engineering Co. Heat reacting butyl rubber, halogenated butyl rubber and zinc oxide, and composition obtained thereby. 2,948,700, 8–9–60, Cl. 260—41.5.

Ederer, Norbert, to Curtiss-Wright Corp. Apparatus for analysing weight composition of materials. 2,948,850, 8–9–60, Cl. 324—41.

Edgerton, Germeshausen and Grier, Inc.: *See*—
Riley, Daniel F., Goldberg, and Germeshausen. 2,948,825.

Edridge, Frederick T. Device for the suspension of tobacco leaves and analagous purposes. 2,948,408, 8–9–60, Cl. 211—124.

Eger, Edward F., and G. W. Piper, Jr., to Western Electric Co., Inc. Selectively operable work holders for buffing machines. 2,948,086, 8–9–60, Cl. 51—80.

Egyesult Izzolampa es Villamossagi Reszvenytarsasag: *See*—
Millner, Tivadar, and Neugebauer. 2,948,609.

Eisenstark, Milton, to Curtiss-Wright Corp. Dual course recorder. 2,948,580, 8–9–60, Cl. 346—6.

Eisler, Paul. Method of manufacturing an electrically conductive winding pattern. 2,948,051, 8–9–60, Cl. 29—155.5.

Eldib, Ibrahim A., and L. F. King, to Esso Research and Engineering Co. Low odor solvents. 2,948,674, 8–9–60, Cl. 208—218.

Electro-Chem Fiber Seal Corp.: *See*—
Pattilloch, Donald K., and Polowcsyk. 2,948,692.

Electrolux Corp.: *See*—
Allen, Oliver L. 2,948,014.

Elektrokemisk A/S: *See*—
Haavik, Nils J. 2,948,765.

Elliott, Harold V., and M. T. Carlson, to General Motors Corp. Circuit controller. 2,948,792, 8–9–60, Cl. 200—156.

Elman, Julius. Puzzle. 2,948,535, 8–9–60, Cl. 273—157.
Embury, Joseph E., Sr., to Carrier Corp. Absorption refrigeration systems. 2,948,124, 8–9–60, Cl. 62—104.
Engelberger, Joseph F., to Manning, Maxwell & Moore, Inc. Method of assembling a limp diaphragm actuator. 2,948,060, 8–9–60, Cl. 29—454.
Engelhard Industries, Inc.: *See*—
Zajcew, Mykola. 2,948,742.
Engtvoldt, Richard K., to Erie Manufacturing Co. Direct salting system for water softeners. 2,948,308, 8–9–60, Cl. 210—130.
Enos, John P., to The Singer Manufacturing Co. Feed coverplates for sewing machines. 2,948,244, 8–9–60, Cl. 112—260.
Eolkin, Dave, to Gerber Products Co. Continuous consistometer and method of measuring liquiform product consistency continuously. 2,948,145, 8–9–60, Cl. 73—54.
Epain, Raymond, P. Johannin, and B. Vodar, to Centre National de la Recherche Scientifique. Packing devices for needle valves. 2,948,556, 8–9–60, Cl. 286—26.
Epeneter, Leon A. Dispensing holder for rolled material. 2,948,486, 8–9–60 Cl. 242—55.55.
Equipment Manufacturing, Inc.: *See*—
Wroblewski, Richard E., and Nolen. 2,948,400.
Erard, Thomas G.: *See*—
Santelli, T. Robert, and Erard. 2,948,636.
Erie Manufacturing Co.: *See*—
Engholdt, Richard K. 2,948,398.
Ernst, Albert: *See*—
Adams, Dustin S., Ernst, and Prengle. 2,948,583.
Esso Research and Engineering Co.: *See*—
Bray, William W., Jr., and MacFarquhar. 2,948,670.
Eby, Lawrence T., and Thomas. 2,948,700.
Eldib, Ibrahim A., and King. 2,948,674.
Ford, Francis P. 2,948,320.
Ford, Francis P., Jasper, Nelson, and Welch. 2,948,695.
Hemminger, Charles E. 2,948,673.
Kuntz, Irving. 2,948,709.
Lemiszka, Theodore, Mirviss, and Kirshenbaum. 2,948,713.
Packie, John W., and Rhys. 2,948,671.
Eta, A. G., Ebauchesfabrik: *See*—
Stamm, Heinrich. 2,948,573.
Etablissements NEYRPIC: *See*—
Condolios, Elie. 2,948,396.
Ethyl Corp.: *See*—
Hnizda, Vincent F. 2,948,744.
Karbum, August C., and Boag. 2,948,747.
Larson, Melvin L. 2,948,600.
Orloff, Harold D., and Markley. 2,948,599.
Etsten, Morris H., to Independent Lock Co. Hotel function lock. 2,948,140, 8–9–60, Cl. 70—216.
Etude et Realisation d'Outillage de Precision C. L. Godoar et Cie: *See*—
Godar, Charles L. 2,948,194.
Euler, Robert D., and R. L. Tichenor, to E. I. du Pont de Nemours and Co. Acrylonitrile fibers and process for producing same. 2,948,584, 8–9–60, Cl. 18—54.
Evans, Andrew J., to E. A. Adams & Son, Inc. Ear clip component. 2,948,041, 8–9–60, Cl. 24—252.
Evans, James A. Flexible connection for runway girders. 2,948,365, 8–9–60, Cl. 189—36.
Evans, Paul L., and M. R. Banson, to United States of America, Army. Remote safety firing mechanism. 2,948,192, 8–9–60, Cl. 89—28.
Exner, Frank M.: *See*—
Carlson, William L., Jr., and Exner. 2,948,118.
Fabere, Raymond W., and R. C. Wegner, to Caterpillar Tractor Co. Steering linkage for wheel-type tractor. 2,948,546, 8–9–60, Cl. 280—95.
Fairchild Camera and Instrument Corp.: *See*—
Neidle, Joel, and McCarthy. 2,948,209.
Fairchild, Homer E., to E. I. du Pont de Nemours and Co. Insecticidal composition comprising sesoxane and methoxychlor. 2,948,654, 8–9–60, Cl. 167—30.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Roelig, Hermann, and Schmahl. 2,948,147.
Schellenberg, Wolf-Dietrich, and Bartl. 2,948,706.
Windemuth, Erwin, Schnell, and Bayer. 2,948,691.
Farbwerke Hoechst Aktiengesellschaft: *See*—
Siebert, Arthur, and Renner. 2,948,715.
Farkas, Thomas P.: *See*—
Beggs, John C., Carrier, and Farkas. 2,948,475.
Faust, John A.: *See*—
Sahyun, Melville, and Faust. 2,948,724.
Federighi, George J., and T. H. Noren. Automatic drying agent rinse injector for dishwashing machines. 2,948,436, 8–9–60, Cl. 222—54.
Feild, Alexander L., Jr., to E. I. du Pont de Nemours and Co. Molding composition and process for producing same. 2,948,627, 8–9–60, Cl. 106—38.5.
Felsa S. A.: *See*—
Meyer, Friedrich. 2,948,108.
Fenestra, Inc.: *See*—
Kelly, Clyde W., McKinnon, Heintzel, and Harper. 2,948,366.
Fenn, Lawrence E. Cigar lighter. 2,948,800, 8–9–60, Cl. 219—32.
Ferris, Burton C., to Kelsey-Hayes Co. Safety control for molding machines. 2,948,029, 8–9–60, Cl. 22—35.
Fibreboard Paper Products Corp.: *See*—
Wagaman, Merle L. 2,948,390.
Fidelity Union Trust Co.: *See*—
Hagen, Joseph. 2,948,400.
Fields, Ellis K., to Standard Oil Co. Lubricant compositions. 2,948,680, 8–9–60, Cl. 252—32.7.
Fifarek, Charles E. Saw tooth shield. 2,948,315, 8–9–60, Cl. 145—35.
Filar, Leo J., to Hercules Powder Co. Purification of phenol by adsorption of impurities. 2,948,758, 8–9–60, Cl. 260—621.
Fineo, Vincent P. Container for milk bottles. 2,948,433. 8–9–60, Cl. 220—102.
Firestone, Tibor A. Detachable tide tread. 2,948,318, 8–9–60, Cl. 152—175.
Fischer, Robert E. Reflecting telescope with interchangeable optical systems. 2,948,180, 8–9–60, Cl. 88—32.
Fisher, Charles R., Jr., to General Dynamics Corp. Magnetic data handling system. 2,948,882, 8–9–60, Cl. 340—172.5.
Fisher, Earl E., to Gulf Oil Corp. Bore cleaning compositions. 2,948,685, 8–9–60, Cl. 252—118.
Fisher, John C. Fluid pump. 2,948,225, 8–9–60, Cl. 103—76.
Fisher, Lawrence E., to General Electric Co. Plug-in busway. 2,948,771, 8–9–60, Cl. 174—99.
Fishman, Sherman S. Container. 2,948,387, 8–9–60, Cl. 206—3.
Fitt, Peter W., to Normalair Ltd. Breathing apparatus. 2,948,292, 8–9–60, Cl. 137—44.
Fitzgibbon, Maurice. Process for applying pest control substances to seeds. 2,948,585, 8–9–60, Cl. 21—57.
Fjellstedt, Thorsten A., R. F. Jones, W. Kowalski, and J. J. Seaquist, to McGraw-Edison Co. Electric switch. 2,948,794, 8–9–60, Cl. 200—166.
Flenner, Albert L., to E. I. du Pont de Nemours and Co. Non-dusty water-dispersible fungicidal composition. 2,948,655, 8–9–60, Cl. 167—42.
Flint, Ellis G. Clothes washing machine. 2,948,136, 8–9–60, Cl. 68—132.
Fontaine, Marc F.: *See*—
Riordan, Michael D., Fontaine, and Ryer. 2,948,745.
Foote, Vernon S., Jr., to United States of America, Navy. Weapon component carrier. 2,948,562, 8–9–60, Cl. 294—67.
Ford, Francis P., to Esso Research and Engineering Co. Covulcanized butyl rubber with highly unsaturated rubbers by amino compounds. 2,948,320, 8–9–60, Cl. 152—330.
Ford, Francis P., G. E. Jasper, J. F. Nelson, and L. M. Welch, to Esso Research and Engineering Co. Polyvinyl chloride composition containing hydrocarbon tar. 2,946,695, 8–9–60, Cl. 260—28.5.
Forkardt, Paul, Kommanditgesellschaft: *See*—
Reich, Kurt. 2,948,541.
Forwald, Haakon, to Allmanna Svenska Elektriska Aktiebolaget, Oil circuit breakers. 2,948,790, 8–9–60, Cl. 200—150.
Foster Brothers Mfg. Co.: *See*—
Helton, William J. 2,947,997.
Foster Grant Co., Inc.: *See*—
D'Alelio, Gaetano F., and Silberberg. 2,948,710.
Foster, William P., to James G. Biddle Co. Method and apparatus for measuring apparent corona charge. 2,948,849, 8–9–60, Cl. 324—54.
Fox, Robert B., to United States of America, Navy. Phosphorous containing polyurethanes. 2,948,690, 8–9–60, Cl. 260—2.2.
Frank, Anton B., and W. H. Giles, to Van Buren Machine Corp. Article alining and feeding mechanism. 2,948,394, 8–9–60, Cl. 209—97.
Frank, Arne, to The Trane Co. Reciprocating compressor. 2,948,401, 8–9–60, Cl. 230—232.
Frankenstein, William P. Carton. 2,948,455, 8–9–60, Cl. 229—36.
Fraser, James, to Speakman Co. Flow control unit. 2,948,300, 8–9–60, Cl. 138—45.
Fraser, James, to The Speakman Co. Automatic shower head. 2,948,477, 8–9–60, Cl. 239—109.
Fredd, John V.: *See*—
Bostock, James H., and Fredd. 2,948,340.
Fredd, John V., to Otis Engineering Corp. Stop for well tubing. 2,948,339, 8–9–60, Cl. 166—215.
Fredd, John V., to Otis Engineering Corp. Offset circulating nipple and tools. 2,948,341, 8–9–60, Cl. 166—218.
Freedman, George, to Raytheon Co. Electrode connections to semiconductive bodies. 2,948,836, 8–9–60, Cl. 317—235.
Freeman, David A.: *See*—
Schultz, Roy M. 2,948,441.
Freeman, Marshall E., to International Business Machines Corp. Discrete positioning mechanism. 2,948,264, 8–9–60, Cl. 121—38.
Frenkel, Josephine. Ticket holder. 2,948,072, 8–9–60, Cl. 40—10.
Freundlich, Albert, to Freundlich-Gomes Machinery Corp. Lampshades and apparatus for assembling the same. 2,948,198, 8–9–60, Cl. 93—1.
Freundlich-Gomes Machinery Corp.: *See*—
Freundlich, Albert. 2,948,198.
Frey, Christoph, to Ciba Ltd. Dioxazine dyestuffs. 2,948,721, 8–9–60, Cl. 260—240.
Frey, Cleon F., and M. F. Melvin. Circuit breaker with safety reset. 2,948,787, 8–9–60, Cl. 200—116.
Frost, Paul, and W. Kaden, to Agfa Aktiengesellschaft. Pointer arrangement for meters. 2,948,259, 8–9–60, Cl. 116—136.5.
Fuller, Lawrence J. Method for cleaning jet and gas turbine engines. 2,948,092, 8–9–60, Cl. 51—282.
Fuller, Russell W.: *See*—
Caldwell, Bruce I. 2,948,789.
Funk, Ernest J.: *See*—
Schueler, Arthur W., Funk, and Mecklenborg. 2,948,804.
Funke, Siegfried: *See*—
Stuehmer, Werner, and Funke. 2,948,746.
Furendal, Allan R. B., B. Thuresson Af Ekenstam, and B. H. F. von Pleandt, to Aktiebolaget Bofors. Rigid dressing. 2,948,634, 8–9–60, Cl. 117—28.
Furman, Frank J.: *See*—
Leathers, Ward, Furman, and Paniszidi. 2,948,198.

G-V Controls Inc.: *See*—
Brookhuysen, William C. 2,948,788.
Gabriel Co., The: *See*—
Hart, Frederick E., Jr. 2,948,696.
Gadget-Of-The-Month Club, Inc.: *See*—
Barnes, Harry E. 2,948,492.
Vicik, Otto A. 2,948,280.
Gaines, George L., Jr., and A. M. Buechc, to General Electric Co. Mica paper. 2,948,329, 8–9–60, Cl. 154—2.6.
Gallin, Jack: *See*—
Sissolman, Irving, and Gallin. 2,948,212.
Garberding, Waldo L. Automatic work gripping chuck. 2,948,540, 8–9–60, Cl. 279—4.
Gardner, Lawrence H. Valve. 2,948,298, 8–9–60, Cl. 137—620.
Garretson, Everett B.: *See*—
Brinster, John F., and Garretson. 2,948,795.
Garrett Corp., The: *See*—
Jensen, Raymond W., King, and Bush. 2,948,265.
Gartos, Albert M.: *See*—
De Voto, Earl W., Garton, and Horner. 2,948,261.
Garwood, Turner G.: *See*—
Raulins, George M., Bostock, and Garwood. 2,948,338.
Gaston, Gardner E.: *See*—
Ambrose, Henry A., and Gaston. 2,948,596.
Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Waldemar T. 2,948,205.
Geigy Chemical Corp.: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,948,726.
Litvan, Frank, and Stoll. 2,948,754.
Schindler, Walter. 2,948,716.
Schindler, Walter, and Hädiger. 2,948,719.
Schindler, Walter, and Hädiger. 2,948,732.
General Aniline & Film Corp.: *See*—
Cox, Robert J., and Moore. 2,948,613.
De Angelus, Millet E., and Dersch. 2,948,612.
Dersch, Fritz, and De Angelus. 2,948,615.
Herrick, Clifford E., Jr. 2,948,208.
General Cable Corp.: *See*—
Bopp, Louis A. 2,948,772.
General Devices, Inc.: *See*—
Brinster, John F., and Garretson. 2,948,795.
General Dynamics Corp.: *See*—
Fisher, Charles R., Jr. 2,948,882.
General Electric Co.: *See*—
Bengeledorf, Irving S. 2,948,756.
Cornell, Richard H. 2,948,150.
Corrin, Myron L. 2,948,640.
Cross, Richard N. 2,948,286.
Fisher, Lawrence E. 2,948,771.
Gaines, George L., Jr., and Buechc. 2,948,329.
Glasser, Thomas H., and Klint. 2,948,506.
Hadley, Robert L. 2,948,687.
Hull, Edwin H. 2,948,355.
Johnson, Peter D. 2,948,184.
Klein, Leon. 2,948,843.
Koller, Lewis R. 2,948,635.
Kurtz, Henry J., and Miles. 2,948,797.
Lawton, Elliott J. 2,948,666.
Martinelli, Raymond C., and Miller. 2,948,516.
Morgan, Raymond L. 2,948,844.
Munro, John F. 2,948,317.
Nerad, Anthony J., and Johnson. 2,948,117.
Nylander, Arnold L. 2,948,853.
Rich, Theodore A. 2,948,814.
Sonder, Gerhard. 2,948,505.
Stephens, Joe F. 2,948,527.
General Motors Corp.: *See*—
Bramer, Robert D. 2,948,801.
Conn, Francis E., and Kessler. 2,948,343.
Elliott, Harold V., and Carlson. 2,948,792.
Royer, Darrell E. 2,948,263.
Waag, Harry O. 2,948,651.
General Pacific Corp.: *See*—
Huthsing, Charles K., Sr. 2,948,842.
General Railway Signal Co.: *See*—
Hughson, J. Donald. 2,948,284.
General Time Corp.: *See*—
Witte, Roy. 2,948,109.
Gerber Products Co.: *See*—
Eolkin, Dave. 2,948,145.
Germeshausen, Kenneth J.: *See*—
Riley, Daniel F., Goldberg, and Germeshausen. 2,948,825.
Gerteis, Karl M., to Carrier Corp. Capacity control for compressors. 2,948,293, 8–9–60, Cl. 137—107.
Gerwick, Ben C., Inc.: *See*—
Sylvester, Kenneth D. 2,948,042.
Gesellschaft der Ludw, von Roll'schen Eisenwerke AG.: *See*—
Schnyder, Hans. 2,948,290.
Gesner, Harry M., and H. L. Myers; said Myers assor. to said Gesner. Single fluke anchor. 2,948,249, 8–9–60, Cl. 114—206.
Ghia, Mario: *See*—
Parocelli, Leopold. 2,948,822.
Ghose, Rabindra N., and A. Tureckl, to Radio Corp. of America. Slotted coupling device for waveguide. 2,948,895, 8–9–60, Cl. 343—767.
Gianladis, James L., to G. H. Packwood Mfg. Co. Thixotropic and fast breaking skin cleaner emulsion and process for producing the same. 2,948,686, 8–9–60, Cl. 252—153.
Gianpini Controls Corp.: *See*—
Mountzer, Carlyle A., Riegelman, and Hughes. 2,948,887.
Gift, John, to Kayser-Roth Corp. Surgical stockings. 2,948,132, 8–9–60, Cl. 66—178.
Gilbert, Vernon J., to Stratron Co. Garter spring constriction restrictor. 2,948,527, 8–9–60, Cl. 267—1.
Gilchrist, James G., to International Minerals & Chemical Corp. Granular phosphate material. 2,948,589, 8–9–60, Cl. 23—109.
Giles, William H.: *See*—
Frank, Anton B., and Giles. 2,948,394.
Gill, Andrew S., Jr., and E. H. Lindeman, to Eaton Mfg. Co. Vehicle suspension load compensator. 2,948,548, 8–9–60, Cl. 280—124.
Gill, Harvey J., Jr., C. K. Slitterly, and W. Preu, to Caradco Inc. Hinged window construction. 2,948,027, 8–9–60, Cl. 20—42.
Gill, Vincent A., and H. J. Britton; said Gill assor. of ½ to The Weatherhead Co. Quick disconnect valved coupling. 2,948,553, 8–9–60, Cl. 284—4.
Gillette Co., The: *See*—
Metzler, Charles L., Dennerlein, and Bernstein. 2,948,388.
Gillmore, John E., Sr., to Crown Zellerbach Corp. Horizontal compartmentalized nursery box. 2,948,454, 8–9–60, Cl. 229—23.
Gisholt Machine Co.: *See*—
Leifer, Lorens A. 2,948,542.
Given Machinery Co.: *See*—
Jordan, Hans. 2,948,482.
Glasser, Thomas H., and R. V. Klint, to General Electric Co. Damping turbine buckets. 2,948,506, 8–9–60, Cl. 253—77.
Glaxo Laboratories Ltd.: *See*—
Anslow, Winston K., and Wilkin. 2,948,660.
Glover, William S., and J. F. West, to Wheaton Glass Co. Reinforced glass aerosol containers and method of making same. 2,948,430, 8–9–60, Cl. 222—183.
Godar, Charles L., to Etude et Realisation d'Outillage de Precision C. L. Godar et Cie. Burst limiting device for automatic weapons. 2,948,194, 8–9–60, Cl. 89—129.
Goff, Maurice A., to Philco Corp. Method of manufacturing refrigerating apparatus. 2,948,063, 8–9–60, Cl. 29—157.3.
Goldberg, Seymour: *See*—
Riley, Daniel F., Goldberg, and Germeshausen. 2,948,825.
Goldbert, Irving, and J. H. Schendorf; said Schendorf assor. to said Goldbert. Vending machine. 2,948,378, 8–9–60, Cl. 194—58.
Goldsmith, Richard G.: *See*—
Hookway, Harry T., Hale, and Goldsmith. 2,948,637.
Goldstein, Joseph. Ventilated seat cushion. 2,948,333, 8–9–60, Cl. 155—182.
Goldstein, Joseph. Ventilated seat cushion. 2,948,334, 8–9–60, Cl. 155—182.
Goodlaxson, John D., to The Maytag Co. Drive assembly. 2,948,372, 8–9–60, Cl. 192—18.
Goodrich, B. F., Co., The: *See*—
Baird, Blake O., and Davie. 2,948,638.
Morris, Roger E. 2,948,704.
Goris, Johan B. H.: *See*—
Oele, Adriaan P., Muytjens, and Goris. 2,948,764.
Gory, Frank A. Tile manufacturing machine. 2,948,043, 8–9–60, Cl. 25—42.
Goto, Eiichi, to Parametron Institute. Resonator circuits. 2,948,818, 8–9–60, Cl. 307—88.
Goto, Eiichi, to Kokusai Denshin Denwa Co., Ltd. Device comprising parametrically excited resonators. 2,948,819, 8–9–60, Cl. 307—88.
Gould, Albert W. Lumber compressing and aligning tool. 2,948,507, 8–9–60, Cl. 254—15.
Grace, W. R., & Co.: *See*—
Rudner, Bernard, and Prapas. 2,948,728.
Rudner, Bernard, and Prapas. 2,948,730.
Teague, Walter D., Jr., and Stansbury. 2,948,430.
Graceman, Donald D. Washing device. 2,948,479, 8–9–60, Cl. 239—413.
Grand Specialties Co.: *See*—
Hopfeld, Fred P. 2,948,363.
Grassie, Vernon R., to Hercules Powder Co. Densification of nitrocellulose. 2,948,601, 8–9–60, Cl. 52—20.
Gratzmuller, Jean L. Pressure-limiting device. 2,948,262, 8–9–60, Cl. 121—38.
Gratzmuller, Jean L. Fluid pressure motor. 2,948,266, 8–9–60, Cl. 121—120.
Green, Samuel R., to Baxter Laboratories, Inc. Process for producing dihydroxy acetone. 2,948,658, 8–9–60, Cl. 195—93.
Griffin, John D.: *See*—
Rubens, Louis C., Griffin, and Urchick. 2,948,665.
Grimes Mfg. Co.: *See*—
Roper, John M. 2,948,073.
Grisetti, Charles V., and W. J. Langton, to Crown Zellerbach Corp. Snap lock closure for a rectangular container. 2,948,456, 8–9–60, Cl. 229—39.
Grogan, Cecile M., and L. T. Sawyer; said Grogan assor. to said Sawyer. Sanitary drip catching device. 2,948,452, 8–9–60, Cl. 229—1.5.
Grulke, Carl A.: *See*—
Johnson, Richard E., Darland, Grulke, Cahoon, and Schaefer. 2,948,767.
Grutsch, James F.: *See*—
Austin, Robert J., Grutsch, and Mallatt. 2,948,677.
Guerber, Howard P., and B. Adler, to Radio Corp. of America. Gating pulse generator. 2,948,884, 8–9–60, Cl. 340—174.
Guex, Waldemar, O. Isler, R. Rüegg, and G. Ryser, to Hoffmann-La Roche Inc. Polyene dicarboxylic acids and esters thereof. 2,948,748, 8–9–60, Cl. 260—485.
Gulf Oil Corp.: *See*—
Fisher, Earl E. 2,948,685.
Gulf Research & Development Co.: *See*—
Ambrose, Henry A., and Gaston. 2,948,596.
Muffly, Gary. 2,948,467.
Walsh, Bruce R. 2,948,478.
Gulick, Ronald A., to ACF Industries, Inc. Method of forming hub assembly. 2,948,033, 8–9–60, Cl. 22—202.
Gullett, William W.: *See*—
Dean, Reginald S., and Gullett. 2,948,663.
Gunkler, Albert A., to The Dow Chemical Co. Bromine in a safety container. 2,948,393, 8–9–60, Cl. 206—84.
Haanes, Arnt U. Workpiece handling device. 2,948,417, 8–9–60, Cl. 214—1.

Haavik, Nils J., to Elektrokemisk A/S. Electrode holders for electric smelting furnaces. 2,948,765, 8-9-60, Cl. 13—16.

Haber, Robert J.: *See*—
Doolittle, Donald B., and Haber. 2,948,291.

Hacklander, Hans, to The Singer Mfg. Co. Puller feed mechanisms for sewing machines. 2,948,243, 8-9-60, Cl. 112—256.

Hadley, Robert L., to General Electric Co. Hydrogenation catalyst. 2,948,687, 8-9-60, Cl. 252—470.

Hadley, William A., and D. H. Robbins, to Mergenthaler Linotype Co. Photocomposing machine. 2,946,203, 8-9-60, Cl. 95—4.5.

Hilfiger, Frans: *See*—
Schindler, Walter, and Hafliger. 2,948,719.
Schindler, Walter, and Hilfiger. 2,948,732.

Hagen, Joseph, to Saul & Co., as Nominee of Fidelity Union Trust Co., executive trustee under Sandos Trust. Filtering apparatus. 2,948,400, 8-9-60, Cl. 210—256.

Haldemann, Heinz, and H. Stutz, to Contraves, A.G. Electromechanical curve sensing system. 2,948,840, 8-9-60, Cl. 318—29.

Hale, Douglas K.: *See*—
Hookway, Harry T., Hale, and Goldsmith. 2,948,687.

Haley, Harold A., to American Viscose Corp. Processing of viscose rayon cakes containing polyacrylamide resin. 2,948,582, 8-9-60, Cl. 18—54.

Haltenberger, Jules. Free piston engine. 2,948,269, 8-9-60, Cl. 123—46.

Hamilton Cosco, Inc.: *See*—
Hamilton, Earl F. 2,948,332.

Hamilton, Earl F., to Hamilton Cosco, Inc. Folding chair. 2,948,332, 8-9-60, Cl. 115—142.

Hamilton Watch Co.: *See*—
Van Horn, John A., Biemiller, and Reese. 2,948,821.

Hammink, Niles H., to The Scott & Fetzer Co. Dust collector bag cleaning means. 2,948,354, 8-9-60, Cl. 183—60.

Handel, Neil E., to Industrial Nucleonics Corp. Magnet assembly for nuclear magnetic resonance apparatus. 2,948,845, 8-9-60, Cl. 243—5.

Handwerk, Erwin C., and W. T. Monson, to American Metal Climax, Inc. Selenium recovery process. 2,948,591, 8-9-60, Cl. 23—139.

Hansen, Francis W., to Simmons Co. Wardrobe construction. 2,948,577, 8-9-60, Cl. 312—264.

Hansen, Frithjof N.: *See*—
Hay, Warren H., and Hansen. 2,948,826.

Hansen, Wilford M. Door hinge. 2,948,015, 8-9-60, Cl. 16—145.

Hanson, Glenn N., and E. Werdier. Bale sealing machine. 2,948,098, 8-9-60, Cl. 53—378.

Harding, George W., to Automatic Draft and Stove Co., Inc. Coal-fired space heater. 2,948,276, 8-9-60, Cl. 126—67.

Harper, Arthur C., Jr.: *See*—
Kelly, Clyde W., McKinnon, Heintzel, and Harper. 2,948,906.

Harris-Intertype Corp.: *See*—
Thompson, Robert H. 2,948,216.

Harris, Robert L., and D. R. Olsen, to Allied Chemical Corp. Conversion of tetrahydroanthraquinone compound to anthraquinone compound. 2,948,739, 8-9-60, Cl. 260—369.

Harrod, Belva G. Timer support. 2,948,404, 8-9-60, Cl. 211—74.

Hart, Frederick R., Jr., to The Gabriel Co. Weatherproof antenna and reflector and method of making the same. 2,948,896, 8-9-60, Cl. 343—873.

Hart Industries, Inc.: *See*—
Hart, Merida L. 2,948,231.

Hart, Merida L., to Hart Industries, Inc. Wire line operated well pump. 2,948,231, 8-9-60, Cl. 103—181.

Hartman, Curtis A.: *See*—
Woodward, Stephen G., and Hartman. 2,948,272.

Hartzell Propeller, Inc.: *See*—
Biermann, David. 2,948,344.

Hasselmann, Harry E.: *See*—
Siccama, Nicholas B., and Wirbelauer. 2,948,657.

Hauni-Werke Korber & Co. K.G.: *See*—
Bodner, Fritz. 2,948,569.

Haussner, Theodor H. W., and S. W. Meyer, to Koppers Co., Inc. Material handling apparatus. 2,948,418, 8-9-60, Cl. 214—1.

Hawes, Roland C., to Applied Physics Corp. Electrical terminal having insulating bushing. 2,948,773, 8-9-60, Cl. 174—153.

Hawley, Don M., to Hawley Products Co. Fishing tackle case. 2,948,080, 8-9-60, Cl. 43—54.5.

Hawley Products Co.: *See*—
Hawley, Don M. 2,948,080.

Hay, Warren H., and F. N. Hansen, to Sylvania Electric Products Inc. Induction lamp. 2,948,826, 8-9-60, Cl. 313—223.

Haseltine Research, Inc.: *See*—
McIlwain, Knox. 2,948,886.

Hegwein, Georg. Safety device for fluid fuel burners. 2,948,335, 8-9-60, Cl. 158—128.

Heidelberger, Charles: *See*—
Duschinsky, Robert, and Heidelberger. 2,948,725.

Heidergott, Harry W., and W. O. Simpson, to Western Electric Co., Inc. Apparatus for filling and capping telephone transmitter components. 2,948,304, 8-9-60, Cl. 141—75.

Heiligenstaedt, Hans E. W., to Rochling'sche Eisen- und Stahlwerke G.m.b.H. Process and apparatus for heating a cross stream shaft furnace in view of heating solid materials, particularly for the calcination of limestone. 2,948,521, 8-9-60, Cl. 263—29.

Heintzel, Joseph F.: *See*—
Kelly, Clyde W., McKinnon, Heintzel, and Harper. 2,948,906.

Held, Serge S. Electrically driven clockwork. 2,948,104, 8-9-60, Cl. 58—28.

Helling, Paul, to Kürbi & Nizgeloh. Panorama heads for tripods and the like. 2,948,501, 8-9-60, Cl. 248—183.

Hell, Hans: *See*—
Kopp, Wilhelm, Ploss, and Hell. 2,948,204.

Heller, Robert M., to Watts Electric & Mfg. Co. Composite article. 2,948,036, 8-9-60, Cl. 24—73.

Hellman, Nison N.: *See*—
Kinsman, George H., and Hellman. 2,948,616.

Helton, William J., to Foster Brothers Mfg. Co. Folding sofa bed structure. 2,947,997, 8-9-60, Cl. 5—13.

Hemminger, Charles R., to Esso Research and Engineering Co. Catalytic cracking of hydrocarbons. 2,948,673, 8-9-60, Cl. 208—164.

Henkel & Cie. G.m.b.H.: *See*—
Blaser, Bruno, Schirp, and Stein. 2,948,750.
Blaser, Bruno, Stein, and Schirp. 2,948,787.
Blaser, Bruno, Stein, and Schirp. 2,948,735.

Hensley, Robert K., Jr. Key and coin combination lock. 2,948,379, 8-9-60, Cl. 194—92.

Hercules Powder Co.: *See*—
Filar, Leo J. 2,948,758.
Grasde, Vernon R. 2,948,601.

Herman, Elvin E.: *See*—
Russell, James L., and Herman. 2,948,779.

Herrick, Clifford E., Jr., to General Aniline & Film Corp. Apparatus for developing diazotype material particularly foils. 2,948,208, 8-9-60, Cl. 95—89.

Herrmann, Paul F. Hand tool with adjustable torque release. 2,948,173, 8-9-60, Cl. 81—52.4.

Herron, Harrison H. Limbing attachment for power saws. 2,948,310, 8-9-60, Cl. 143—32.

Higgs, Norman F. Sliding flangeway filler and tapered filler block for railroad crossings and frogs. 2,948,497, 8-9-60, Cl. 246—380.

Hilderbrand, James B., to A. O. Smith Corp. Floor construction for a storage structure. 2,948,422, 8-9-60, Cl. 214—17.

Himelreich, Louis E., to H. J. Scheirich Co. Means for suspending and guiding cabinet drawers. 2,948,578, 8-9-60, Cl. 312—342.

Hinds, Sherwood: *See*—
Rittenhouse, Howard E., and Hinds. 2,948,307.

Hintermann, Marcel, and P. Ostermann; said Ostermann assor. to said Hintermann. Apparatus for the production of dental plates and the like from plastic material. 2,948,018, 8-9-60, Cl. 18—5.7.

Hnizda, Vincent F., to Ethyl Corp. Process for the preparation of cyclopentadienyl manganese tricarbonyl. 2,948,744, 8-9-60, Cl. 260—429.

Hobart Mfg. Co., The: *See*—
Allen, Kenneth C. 2,948,464.
Allen, Kenneth C. 2,948,465.
Allen, Kenneth C. 2,948,523.
Allen, Kenneth C., and Meeker. 2,948,466.

Hodel, Ernst: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,948,720.

Hodgson, George T., Jr., and R. C. Wells, to Cataphote Corp. Retroreflecting surface. 2,948,191, 8-9-60, Cl. 88—82.

Hoe, R., & Co., Inc.: *See*—
Horner, Ellwood J. 2,948,327.

Hoff, Harry J. and S. J., to Hoffco, Inc. Chain saw bar construction. 2,948,309, 8-9-60, Cl. 143—32.

Hoff, Stephen J.: *See*—
Hoff, Harry J. and S. J. 2,948,309.

Hoffco, Inc.: *See*—
Hoff, Harry J. and S. J. 2,948,309.

Hoffman Electronics Corp.: *See*—
Carpenter, Frank C., Jr. 2,948,894.

Hoffman, Howard H., to Southern Shoe Machinery Co. Shaping machine for use in shoe manufacturing, etc. 2,948,002, 8-9-60, Cl. 12—97.

Hoffman, William M., ½ to F. C. Von Deran. Fluid injection device. 2,948,238, 8-9-60, Cl. 111—7.4.

Hoffmann-La Roche Inc.: *See*—
Guex, Waldemar, Isler, Rüegg, and Ryser. 2,948,748.

Holden, Jesse L.: *See*—
Risk, Norman E., and Holden. 2,948,347.

Holderness, Jack F. Holder for tobacco pipes. 2,948,283, 8-9-60, Cl. 131—260.

Hollins, Jesse R., to Signal-Stat Corp. Control switches for automotive vehicles. 2,948,832, 8-9-60, Cl. 315—82.

Holm, Harry A. R. Method for burning clay slate or clay. 2,948,630, 8-9-60, Cl. 106—40.

Honda, Hajime, to Philco Corp. Signal channeling system. 2,948,863, 8-9-60, Cl. 333—10.

Hooker, Emerson F. Metal bed rail with shouldered bed lock. 2,947,999, 8-9-60, Cl. 5—286.

Hookway, Harry T., D. K. Hale, and R. G. Goldsmith, to National Research Development Corp. Process of sulfonating a plasticized polyvinyl chloride film to form a cation permselective membrane. 2,948,637, 8-9-60, Cl. 117—47.

Hopfeld, Fred P., to Grand Specialties Co. Telescoping elevators. 2,948,363, 8-9-60, Cl. 189—14.

Horizons Inc.: *See*—
Wainer, Eugene. 2,948,628.

Horland, Richard. Pill dispense units. 2,948,389, 8-9-60, Cl. 206—42.

Horner, Ellwood J., to R. Hoe & Co., Inc. Apparatus for formation of composite printing plates. 2,948,327, 8-9-60, Cl. 154—1.

Horner, Joseph E.: *See*—
De Voto, Earl W., Garton, and Horner. 2,948,281.

Hostetter, John L., to Hughes Aircraft Co. Iso-level phase inverter circuit. 2,948,859, 8-9-60, Cl. 330—117.

House, Ronald R.: *See*—
Jen, Yun, and House. 2,948,652.

Houtman, Thomas, Jr.: *See*—
Tousignant, William F., Wailes, and Houtman. 2,948,656.

Howe, Alfred J. Handcuffs. 2,948,139, 8-9-60, Cl. 70—16.

Howe, John R., and J. J. Cook. Selective drive clutch mechanism, 2,948,557, 8-9-60, Cl. 287—53.

Hoyt Mfg. Co.: *See*—
Walker, Gordon F. 2,948,068.

Huddleston, Richard H., Jr.: *See*—
Bravenec, Frank, and Huddleston. 2,948,847.

Hughes Aircraft Co.: *See*—
Hostetter, John L. 2,948,859.
Stameson, Spiro A. 2,948,858.

Hughes, Arthur C., Jr.: *See*—
Mounteer, Carlyle A., Riegelman, and Hughes. 2,948,887.

Hughson, J Donald, to General Railway Signal Co. Remote control organization for a locomotive. 2,948,234, 8-9-60, Cl. 104—26.

Hull, Edwin H., to General Electric Co. Oil mist lubrication apparatus and system. 2,948,355, 8-9-60, Cl. 184—6.

Hundt, Herbert W. Lapping tool. 2,948,089, 8-9-60, Cl. 51—184.3.

Huppertsberg, Karl. Braided band. 2,948,162, 8-9-60, Cl. 87—2.

Husband, Robert M. Variable speed drive. 2,948,374, 8-9-60, Cl. 192—135.

Huszar, Kalman Z. Bodies of revolution. 2,948,534, 8-9-60, Cl. 273—106.

Hutbsing, Charles K., Sr., to General Pacific Corp. Fire extinguisher wheel cap. 2,948,342, 8-9-60, Cl. 169—1.

Hutson, Thomas, Jr., to Phillips Petroleum Co. Control of solvent extraction by photoelectrically monitoring a phase therefrom. 2,948,676, 8-9-60, Cl. 208—322.

Hutton, Philip C. to Silentbloc Ltd. Resilient supports. 2,948,502, 8-9-60, Cl. 248—358.

Hykes, Paul G., F. T. Roberts, and J. N. Bradley, to The Budd Co. Wheel disk-rim assembly for tubeless tires. 2,948,568, 8-9-60, Cl. 301—63.

Ignatjev, Vladimir. Automatic motor speed control apparatus. 2,948,271, 8-9-60, Cl. 123—102.

Ihrig, Harry K., to Allis-Chalmers Mfg. Co. Nodular iron. 2,948,605, 8-9-60, Cl. 75—130.

Illingsworth, Bernard D.: *See*—
Allen, Charles F. H., Illingsworth, and Sagura. 2,948,614.

Imonetti, John E., to Symons Clamp & Mfg. Co. Tie rod assembly for concrete wall forms and cone therefor. 2,948,045, 8-9-60, Cl. 25—131.

Imonetti, John E., to Symons Clamp & Mfg. Co. Concrete form fill-in structure. 2,948,046, 8-9-60, Cl. 25—131.

Independent Lock Co.: *See*—
Etsten, Morris H. 2,948,140.
Valles, James. 2,948,403.

Industrial Nucleonics Corp.: *See*—
Handel, Neil E. 2,948,845.

Industrial Research Co.: *See*—
Shelton, Luther L. 2,948,230.

Ingwer, Carl H., and C. E. Wright, to The Ridge Tool Co. Flaring tool. 2,948,326, 8-9-60, Cl. 153—79.

Institut Francais du Petrole des Carburants et Lubrifiants: *See*—
Limido, Jean, and De Pauw. 2,948,667.

International Business Machines Corp.: *See*—
Freeman, Marshall E. 2,948,264.
Leathers, Ward, Furman, and Paniaidi. 2,948,193.
Williams, Frederic C., and Kilburn. 2,948,880.

International Computers and Tabulators Ltd.: *See*—
Rigby, Ivor V. 2,948,468.

International Minerals & Chemical Corp.: *See*—
Baumann, Arthur N. 2,948,588.
Diemant, John H. 2,948,395.
Gilchrist, James G. 2,948,589.
Smalter, Donald J., and Tuttle. 2,948,590.

International Nickel Co., Inc., The: *See*—
West, De Witt H., Townshend, and Simpson. 2,948,525.

Isler, Otto: *See*—
Guex, Waldemar, Isler, Rüegg, and Ryser. 2,948,748.

Itokawa, Hideo: *See*—
Yamamoto, Kinya, and Itokawa. 2,948,179.

Izso, Edward R.: *See*—
Mehalick, John R., and Izso. 2,948,515.

Jackson, Nolan C., to Wichita Precision Tool Co., Inc. Fluid control apparatus for garment finishing machines. 2,948,449, 8-9-60, Cl. 223—70.

Jackson, Ralph H., and D. Van Wagenen, to Armour and Co. Resilient cushion and method of manufacture. 2,948,650, 8-9-60, Cl. 154—100.

Jacobson, Jesse. Electronic musical reed instruments. 2,948,178, 8-9-60, Cl. 84—1.15.

Jacobson, Johan S., assignee of part interest to N.V. Exploitatie Maatschappij "Het Hof van Holland." Picture projection screens. 2,948,187, 8-9-60, Cl. 88—28.93.

Jaeger Machine Co., The: *See*—
Millikin, Arnold S. 2,948,202.

Jankens, Austin L., to The Dow Chemical Co. Oriented thermoplastic filament having a satiny appearance. 2,948,048, 8-9-60, Cl. 28—82.

Jarvis, Kenneth W. Variable resistor. 2,948,874, 8-9-60, Cl. 338—167.

Jasper, Gabriel E.: *See*—
Ford, Francis P., Jasper, Nelson, and Welch. 2,948,695.

Jaster, Dan: *See*—
Maciel, Anthony, Jr., and Jaster. 2,948,807.

Jay, George, and E. V. Rankins. Scale attachment for balers. 2,948,213, 8-9-60, Cl. 100—99.

Jeffrey Manufacturing Co., The: *See*—
Moon, Sterling C. 2,948,552.

Jen, Yun, and R. R. House, to American Cyanamid Co. Wet strength paper containing linear polyamide resin. 2,948,652, 8-9-60, Cl. 162—166.

Jenkins, Philip A., to The Distillers Co. Ltd. Production of chloroprene. 2,948,761, 8-9-60, Cl. 260—655.

Jensen, Raymond W., L. T. King, and R. M. Bush, to The Garrett Corp. Fluid motor. 2,948,265, 8-9-60, Cl. 121—39.

Jepsen, Terman J. C. Tethered ball. 2,948,532, 8-9-60, Cl. 273—58.

Jepson, Ivar, to Sunbeam Corp. Head for electrically operated hair clipping and shaving device. 2,948,063, 8-9-60, Cl. 30—43.

Jepson, Ivar, to Sunbeam Corp. Abrading machine. 2,948,088, 8-9-60, Cl. 51—166.

Jervis Corp.: *See*—
Koop, James O. 2,948,560.

Johannin, Pierre: *See*—
Epain, Raymond, Johannin, and Vedar. 2,948,556.

Johnsen, Clifford N., and E. T. Neubauer, to The Trane Co. Roll-out mechanism, 2,948,408, 8-9-60, Cl. 248—17.

Johnson, Carmen L. Occupant propelled amusement device. 2,948,531, 8-9-60, Cl. 272—57.

Johnson, Cecil R. Armrest for automobile windows. 2,948,565, 8-9-60, Cl. 296—49.2.

Johnson, Charles R. Mineral concentrating apparatus. 2,948,307, 8-9-60, Cl. 209—455.

Johnson, Darrell M. Device for stimulating the mental processes. 2,948,069, 8-9-60, Cl. 35—8.

Johnson, Herbert S., and A. H. Andersen, to Shawinigan Chemicals Ltd. Process for the preparation of titanium tetrachloride. 2,948,587, 8-9-60, Cl. 23—87.

Johnson, John. Endless cutting mechanism. 2,948,000, 8-9-60, Cl. 56—25.

Johnson, Peter D., to General Electric Co. Concave grating spectrographic instrument. 2,948,184, 8-9-60, Cl. 88—14.

Johnson Products, Inc.: *See*—
Bergmann, Paul F. 2,948,270.

Johnson, Richard E., W. G. Darland, Jr., C. A. Grulke, N. C. Cahoon, and H. F. Schaefer, to Union Carbide Corp. Gas-activated primary cells. 2,948,767, 8-9-60, Cl. 136—90.

Johnson, Robert H.: *See*—
Nerad, Anthony J., and Johnson. 2,948,117.

Joline, Everett S., to Sperry Rand Corp. Speed controlling system for aircraft. 2,948,496, 8-9-60, Cl. 244—77.

Jonasson, Sven, and W. Pucher, to Allmanna Svenska Elektriska Aktiebolaget. Extinguishing chamber in oil circuit breakers for medium voltages. 2,948,791, 8-9-60, Cl. 200—150.

Jones, Herbert S. Building structure. 2,948,962, 8-9-60, Cl. 189—2.

Jones, Robert F.: *See*—
Fjellstedt, Thorsten A., Jones, Kowalski, and Seaquist. 2,948,794.

Jordan, Hans, to Given Machinery Co. Splash guard with plug for waste disposal apparatus. 2,948,482, 8-9-60, Cl. 241—100.5.

Journey, Clarence E., and H. E. Caldwell. Device to facilitate the pressing of sleeves of garments on steam air presses. 2,948,447, 8-9-60, Cl. 223—74.

Joy Manufacturing Co.: *See*—
Densmore, Neal W. 2,948,520.

Kabushiki-Kaisha Kodn Seisakusho: *See*—
Tanaka, Isokazu, and Kurimura. 2,948,656.

Kaden, Willy: *See*—
Frost, Paul, and Kaden. 2,948,259.

Kadosch, Marcel: *See*—
De Jurquet de la Salle d' Anfreville, Louis M. G., Bertin, and Kadosch. 2,948,148.

Kaji, Walter U.: *See*—
Sweeney, Victor D., and Kaji. 2,948,524.

Kalfaian, Meguer V. Printed circuit wiring. 2,948,534, 8-9-60, Cl. 317—101.

Kali-Chemi Aktiengesellschaft: *See*—
Stuehmer, Werner, and Funke. 2,948,746.

Kallman, Robert I., T. M. Steinbach, and R. F. Stoming, to The Dow Chemical Co. Dispensing container for sheet wrapping material. 2,948,576, 8-9-60, Cl. 312—39.

Kammgarnspinnerei Kaiserslautern: *See*—
Schütz, Erwin. 2,948,025.
Schütz, Erwin. 2,948,137.

Karbum, August C., and J. C. Boag, to Ethyl Corp. Process of preparing metallo derivatives of acetoacetic acid esters. 2,948,747, 8-9-60, Cl. 260—463.

Karpes, Bernard. Fishing hook or lure retrieving device. 2,948,077, 8-9-60, Cl. 43—17.2.

Karst, Sylvester F. Portable sectional pier. 2,948,121, 8-9-60, Cl. 61—48.

Kay, John G., and M. Dabich, to F. Jos. Lamb Co. Conveying and storing units. 2,948,386, 8-9-60, Cl. 198—219.

Kayser-Roth Corp.: *See*—
Gift, John. 2,948,132.

Keim, Laurence A., to Pittsburgh Plate Glass Co. Method for pressing laminated glass. 2,948,645, 8-9-60, Cl. 154—2.7.

Keller, Max: *See*—
Kuhn, Jacques R. 2,948,431.

Kelly, Clyde W., D. J. McKinnon, J. F. Heintzel, and A. C. Harper, Jr., to Fenestra, Inc. Metal door structure. 2,948,366, 8-9-60, Cl. 189—46.

Kelsey-Hayes Co.: *See*—
Ferris, Burton C. 2,948,029.

Kemp, Cyril F. Apparatus for making a joint between a metal tube and an object engageable therein. 2,948,170, 8-9-60, Cl. 81—15.

Kemp, Lebbeus C., Jr.: *See*—
Rees, Harry V., and Kemp. 2,948,679.

Kendall, James M., to United States of America, Navy. Precision micromanometer. 2,948,186, 8-9-60, Cl. 88—24.

Kennedy, Robert M., to Sun Oil Co. Preparation of polyolefins. 2,948,711, 8-9-60, Cl. 260—88.2.

Kennedy, William J., to Bell Telephone Laboratories, Inc. Shield for coin gauge on coin collectors. 2,948,377, 8-9-60, Cl. 194—1.

Kenney, Mahlon W., to The Seeburg Corp. Turntable. 2,948,529, 8–9–60, Cl. 274—39.

Kent Mfg. Corp.: *See*—
Batcheller, Hugh W. 2,948,875.
Batcheller, Hugh W. 2,948,876.
Batcheller, Hugh W. 2,948,877.

Kerr, George A. Clamping and bending implement. 2,948,323, 8–9–60, Cl. 153—36.

Kessler, James R.: *See*—
Conn, Francis E., and Kessler. 2,948,343.

Kestenman Bros. Mfg. Co.: *See*—
Williams, Howard F., and Minutoli. 2,948,110.

Kiekhaefer Corp.: *See*—
Alexander, Charles F., Jr. 2,948,252.

Kieser, Alwin F. Portable cable puller and power unit. 2,948,510, 8–9–60, Cl. 254—139.1.

Kilburn, Tom: *See*—
Williams, Frederic C., and Kilburn. 2,948,330.

King, Laurence F.: *See*—
Eldib, Ibrahim A., and King. 2,948,674.

King, Louis T.: *See*—
Jensen, Raymond W., King, and Bush. 2,948,266.

Kinneman, William P., Jr.: *See*—
Milberger, Ernest C., and Kinneman. 2,948,681.

Kinsman, George H., and N. N. Hellman, to Basic Products Corp. Malt liquor and method of preparing the same. 2,948,616, 8–9–60, Cl. 99—48.

Kirshenbaum, Isidor: *See*—
Lemiszka, Theodore, Mirvis, and Kirshenbaum. 2,948,718.

Klessattel, Claus, to Cavitron Corp. Acoustic impedance transformer. 2,948,154, 8–9–60, Cl. 74—1.

Klein, Leon, to General Electric Co. Voltage limiter. 2,948,843, 8–9–60, Cl. 323—81.

Klingspor, Carl. Abrasive wheels. 2,948,090, 8–9–60, Cl. 51—193.5.

Klink, Theodore G., to American Cyanamid Co. Container feed apparatus. 2,948,435, 8–9–60, Cl. 221—251.

Klint, Robert V.: *See*—
Glasser, Thomas H., and Klint. 2,948,506.

Koch, Paul H., W. D. Stevens, and M. Wiener, to The Babcock & Wilcox Co. Steam generating unit having a superheat and reheater each including a radiant section and a convection section. 2,948,267, 8–9–60, Cl. 122—481.

Koechel, Walter P. Signal device for tape recorders. 2,948,258, 8–9–60, Cl. 116—67.

Koener, Ralph F. Golf tee. 2,948,536, 8–9–60, Cl. 273—201.

Kokusai Denshin Denwa Co., Ltd.: *See*—
Goto, Etichi. 2,948,819.

Koller, Lewis R., to General Electric Co. Phosphor evaporation method and apparatus. 2,948,635, 8–9–60, Cl. 117—38.5.

Kollmorgen, Ernst O., to Redfield Gun Sight Co. Telescope sight. 2,948,188, 8–9–60, Cl. 88—32.

Koncos, Robert: *See*—
Case, Everett N., and Koncos. 2,948,675.

Kontak Mfg. Co. Ltd.: *See*—
Carver, Philip W. 2,948,221.

Kopp, Wilhelm, H. Plose, and H. Hell, to Adox Kamerawerk G.m.b.H. Cameras. 2,948,204, 8–9–60, Cl. 95—31.

Koppers Co., Inc.: *See*—
Easton, Rufus. 2,948,080.
Haussner, Theodor H. W., and Meyer. 2,948,418.

Kowalski, Walter: *See*—
Fjellstedt, Thorsten A., Jones, Kowalski, and Seaquist. 2,948,704.

Kowalyshyn, Stephen, Jr.: *See*—
Daly, Thomas A., and Kowalyshyn. 2,948,248.

Kraft, Richard A., to Motorola, Inc. Television receiver. 2,948,776, 8–9–60, Cl. 178—7.5.

Krans, Frederick H., to Allied Chemical Corp. N-bis(p-dialkylaminophenyl)methyl sulfonamides. 2,948,763, 8–9–60, Cl. 260—558.

Kraus, Allan D., to Sperry Rand Corp. Fluid circulation cooling systems. 2,948,618, 8–9–60, Cl. 257—313.

Kremer, Irvin R., and W. E. Delkis, to Phillips-Van Heusen Corp. Shirt conveyor. 2,948,442, 8–9–60, Cl. 223—67.

Kritzer, Richard W. Method of fabricating finned heat transfer tubing. 2,948,064, 8–9–60, Cl. 29—157.3.

Krohm, Fred A., to Productive Invention, Inc. Windshield wiper blade assembly. 2,948,011, 8–9–60, Cl. 15—250.42.

Krohn-Holm, Danckert. Guide roller device. 2,948,518, 8–9–60, Cl. 254—190.

Kubera, Gerhard, to Alfred Teves Maschinen-und Armaturenfabrik KG. Method of manufacturing hollow poppet valves for internal combustion engines. 2,948,062, 8–9–60, Cl. 29—156.7.

Kuehl, Werner, to Telefunken G.m.b.H. Selective call signal system. 2,948,889, 8–9–60, Cl. 340—347.

Kughler, Edwin R. Drum handling apparatus. 2,948,426, 8–9–60, Cl. 214—653.

Kuhn, Emil. Device for carrying articles on display. 2,948,500, 8–9–60, Cl. 248—122.

Kuhn, Jacques R., to M. Kellar. Pressure cookers. 2,948,431, 8–9–60, Cl. 220—40.

Kuntz, Irving, to Esso Research and Engineering Co. Catalyzed halogenation of rubbery copolymers. 2,948,709, 8–9–60, Cl. 260—85.3.

Kuraeff, William A., to Standard-Vacuum Oil Co. Aircraft refueling system. 2,948,306, 8–9–60, Cl. 141—231.

Kürbi & Niggeloh: *See*—
Heling, Paul. 2,948,501.

Kurimura, Shizuo: *See*—
Tanaka, Isokazu, and Kurimura. 2,948,856.

Kurtz, Henry J., and A. Miles, to General Electric Co. Annealing furnace. 2,948,797, 8–9–60, Cl. 219—10.79.

Laboissiere, Pierre. Electro-magnetic counter. 2,948,471, 8–9–60, Cl. 235—92.

Lakeside Laboratories, Inc.: *See*—
Biel, John H. 2,948,722.

Lamb, F. Jos., Co.: *See*—
Dabich, Michael. 2,948,375.
Kay, John G., and Dabich. 2,948,386.

Lanctot, Donald H., to Don-Lan Electronics Co., Inc. Electrical switch. 2,948,793, 8–9–60, Cl. 200—163.

Land-Air, Inc.: *See*—
Welcome, Warren W. 2,948,857.

Landry, John V., to Pastushin Aviation Corp. Means for releasably mounting a store on an aircraft. 2,948,563, 8–9–60, Cl. 294—83.

Langdon, Jesse D. Auxiliary nozzle. 2,948,297, 8–9–60, Cl. 137—525.1.

Langton, William J.: *See*—
Grisetti, Charles V., and Langton. 2,948,456.

Larigaldie, Andre: *See*—
Berg, Josef T., and Larigaldie. 2,948,805.

Larky, Norbert D., and C. B. Oakley, to Radio Corp. of America. Color television automatic chrome control circuit. 2,948,775, 8–9–60, Cl. 178—5.4.

Larson, John D. Digester for converting inorganic material into assimilable plant food. 2,948,593, 8–9–60, Cl. 23—259.1.

Larson, Melvin L., to Ethyl Corp. Antiknock compositions. 2,948,600, 8–9–60, Cl. 44—69.

Lawler, Joseph A., to Blue M Electric Co. Scientific appliance temperature control arrangement. 2,948,125, 8–9–60, Cl. 62—199.

Lawrence, Joseph D., Jr., to Sperry Rand Corp. Magnetic selecting device. 2,948,883, 8–9–60, Cl. 340—174.

Lawton, Elliott J., to General Electric Co. Irradiation process. 2,948,666, 8–9–60, Cl. 204—154.

Leaf, Grace G.: *See*—
Page, Robert M. 2,948,893.

Lear, Inc.: *See*—
Barkalow, Clare E. 2,948,150.

Leathers, Ward, F. J. Furman, and H. A. Panissidi, to International Business Machines Corp. Alternating pulse servo system. 2,948,193, 8–9–60, Cl. 89—41.

Leeds and Micallef: *See*—
Leeds, Walter W., Loew, and Micallef. 2,948,008.

Leeds, Walter W., T. Loew, and L. A. Micallef, to Leeds and Micallef. Dispensing containers. 2,948,008, 8–9–60, Cl. 15—139.

Le Grand, Theodorus: *See*—
Van Vessem, Jan C., and Le Grand. 2,948,050.

Lehde, Henry C. Combined magnetic clutch and brake mechanism. 2,948,371, 8–9–60, Cl. 192—12.

Leifer, Lorens A., to Gisholt Machine Co. Two-jaw indexing chuck. 2,948,542, 8–9–60, Cl. 279—5.

Lemiszka, Theodore, S. B. Mirvis, and I. Kirshenbaum, to Esso Research and Engineering Co. Method of preparing high molecular weight linear hydrocarbon polymers. 2,948,713, 8–9–60, Cl. 260—94.9.

Lever Brothers Co.: *See*—
Thiele, Frederik A. J. 2,948,684.

Levey, Maurice. Warning blinker signal for automobiles. 2,948,257, 8–9–60, Cl. 116—63.

Levin, Eugene A., to Tally Register Coorp. Incremental bidirectional drive mechanism. 2,948,161, 8–9–60, Cl. 74—379.

Levin, Nathan, to Textile Machine Works. Yarn feeding control means for circular knitting machines. 2,948,131, 8–9–60, Cl. 66—138.

Levinthal Electronic Products, Inc.: *See*—
Swanson, Joseph P., and Tallmadge. 2,948,855.

Levy, Adrien, to Manufacture des Montres & Chronographes Pierre S.A. Alarm watch. 2,948,103, 8–9–60, Cl. 58—57.5.

Lewis, Ruth. Shoes. 2,948,070, 8–9–60, Cl. 36—2.5.

Limido, Jean, and F. De Pauw, to Institut Francais du Petrole des Carburants et Lubrifiants. Process for the photochemical chlorination of cyclohexane in the liquid phase. 2,948,667, 8–9–60, Cl. 204—163.

Lindeman, Edward H.: *See*—
Gill, Andrew S., Jr., and Lindeman. 2,948,548.

Linder, Friedrich, to Machine Tool Works Oerlikon, Administration Co. Breech mechanism for automatic firearms. 2,948,195, 8–9–60, Cl. 89—163.

Lippert, William G., to Manley, Inc. Corn and salt dispenser for popcorn machines. 2,948,438, 8–9–60, Cl. 222—145.

Liquefreeze Co., Inc.: *See*—
Morrison, Willard L. 2,948,123.

Litvan, Frans, and W. Stoll, to Geigy Chemical Corp. Aryloxy acetic acid amides. 2,948,754, 8–9–60, Cl. 260—559.

Locanthi, Bart N., and A. D. Diercks, to Computer Engineering Associates, Inc. Transistor power supply. 2,948,841, 8–9–60, Cl. 321—2.

Locklin, Charles R. Tape-anchoring tape recorder reel. 2,948,487, 8–9–60, Cl. 242—74.2.

Loew, Peter E. F.: *See*—
Tyma, Louis S., Jr., and Loew. 2,948,215.

Loew, Theodore: *See*—
Leeds, Walter W., Loew, and Micallef. 2,948,008.

Long, Gebhard J. Rotary earth drilling apparatus and method. 2,948,514, 8–9–60, Cl. 255—1.8.

Long Mfg. Co., Inc.: *See*—
Long, William R. 2,948,101.

Long, William J.: *See*—
De Villers, Edmund J., and Long. 2,947,992.

Long, William R., to Long Mfg. Co., Inc. Hay baler. 2,948,101, 8–9–60, Cl. 56—341.

Lorch, Hermann R., and J. A. McCleery, to British Insulated Callender's Cables Ltd. Manufacture of insulated electric conductors. 2,948,647, 8–9–60, Cl. 154—2.28.

Lord Mfg. Co.: *See*—
Neely, Richard S. 2,948,227.

Lorenz, Anton: *See*—
Schliephacke, Fridtjof F. 2,948,331.

Lorenz, Anton. Article of repose for supporting the body of a person. 2,948,830, 8–9–60, Cl. 155—106.

Lory, Jacques: *See*—
Cotte, Henri. 2,948,485.

Lotsch, Joseph M. Embossing seal and method of making same. 2,948,214, 8–9–60, Cl. 101—8.

Lovett, John E.: *See*—
Bicking, John H., Skinner, and Lovett. 2,948,723.

Lubore, Terry S. Corn buttering device. 2,948,260, 8–9–60, Cl. 118—13.

Lucibello, Louis V. Tool for adjusting the snap-action of a leaf-type operating device. 2,948,171, 8–9–60, Cl. 81—15.

Lupton, Clark E., to Bendix Aviation Corp. Brake shoe. 2,948,360, 8–9–60, Cl. 188—234.

Luthi, Robert, 40% to K. T. Snow. Variable speed gear reduction unit. 2,948,165, 8–9–60, Cl. 74—804.

Lynch, Jay M. Boom pedestal. 2,948,411, 8–9–60, Cl. 212—66.

Lyon, Floyd A.: *See*—
Aronson, Theodore F., and Lyon. 2,948,449.

Lyon, George A., Jr., to Lyon Inc. Wheel cover. 2,948,567, 8–9–60, Cl. 301—37.

Lyon Inc.: *See*—
Lyon, George A., Jr. 2,948,567.

Macdonald, Robert W., to Bell Telephone Laboratories, Inc. Surface treatment of silicon devices. 2,948,642, 8–9–60, Cl. 148—1.5.

MacFarland, Charles H., to The Scott & Fetzer Co. Safety device. 2,948,091, 8–9–60, Cl. 51—241.

MacFarlane, Richard R., and R. K. Pitler, to Allegheny Ludlum Steel Corp. Nickel-free austenitic elevated temperature alloy. 2,948,604, 8–9–60, Cl. 75—126.

MacFarquhar, Murdo M.: *See*—
Bray, William W., Jr., and MacFarquhar. 2,948,670.

Machine Tool Works Oerlikon, Administration Co.: *See*—
Linder, Friedrich. 2,948,195.

Maciel, Anthony, Jr., and D. Jaster, to All-Brite Fluorescent Fixtures, Inc. Hanger construction for ceiling-recessed lighting fixtures. 2,948,807, 8–9–60, Cl. 240—78.

MacKenzie, William E., to United States of America, Navy. Anti-icing fluid for use in freezing rain. 2,948,625, 8–9–60, Cl. 106—13.

Maddox, Robert B. Folding hat and coat rack. 2,948,410, 8–9–60, Cl. 211—149.

Maffett, Robert R.: *See*—
Mancuso, Joseph P., and Maffett. 2,948,097.

Magnet Cove Barium Corp.: *See*—
Turner, Finis, and Dillon. 2,948,678.

Mahand, Jack. Rotary seal. 2,948,554, 8–9–60, Cl. 286—9.

Maher, Joseph L.: *See*—
Walker, Jay P., and Maher. 2,948,352.

Maier, Karl W., to Olin Mathieson Chemical Corp. Buffer device. 2,948,526, 8–9–60, Cl. 267—1.

Maier, Karl W. Buffer device. 2,948,529, 8–9–60, Cl. 267—9.

Maichert, Arthur F. Fishhook assembly. 2,948,079, 8–9–60, Cl. 43—43.4.

Mallatt, Russell C.: *See*—
Austin, Robert J., Grutsch, and Mallatt. 2,948,677.

Maloy, Arthur L., and F. L. Bonzi, to Union Carbide Corp. Automatic liquid feeding system in a flame spectrophotometer. 2,948,183, 8–9–60, Cl. 88—14.

Mancuso, Joseph P., and R. R. Maffett, to R. E. Bauer. Box forming machine. 2,948,097, 8–9–60, Cl. 53—296.

Manley, Inc.: *See*—
Lippert, William G. 2,948,438.

Mann, Arthur R. Medical device. 2,948,279, 8–9–60, Cl. 128—233.

Manning, Maxwell & Moore, Inc.: *See*—
Engelberger, Joseph F. 2,948,060.

Manny, Vera B. Nursing bottle holder. 2,948,499, 8–9–60, Cl. 248—106.

Mansberg, Hyman P.: *See*—
Berkley, Carl, Mansberg, Thomas, and Yamagami. 2,948,470.

Manufacture des Montres & Chronographes Pierre S.A.: *See*—
Levy, Adrien. 2,948,105.

Margeral, Kurt A., to Ampatco Laboratories Corp. Control apparatus for an aircraft. 2,948,495, 8–9–60, Cl. 244—77.

Markley, Francis X.: *See*—
Orloff, Harold D., and Markley. 2,948,599.

Marmier, Paul-Leon, to Buren Watch Co. S.A. Date-watch. 2,948,107, 8–9–60, Cl. 58—58.

Marquardt Corp., The: *See*—
Dunsworth, Lorne C., and Thomas. 2,948,115.
Olander, Robert G. 2,948,116.

Martin Co., The: *See*—
Cosner, Donald L. 2,948,517.

Martin, Henry, to Chag-Chemie Aktiengesellschaft. New anilides and process for their production. 2,948,736, 8–9–60, Cl. 260—326.3.

Martinelli, Charlotta A.: *See*—
Martinelli, Raymond C., and Miller. 2,948,516.

Martinelli, Raymond C., deceased (by C. A. Martinelli, administratrix), and D. R. Miller, to General Electric Co. Heat exchange system with intermediate heat conductive fluids. 2,948,516, 8–9–60, Cl. 257—192.

Mashinter, William H. Diaphragm type pump. 2,948,223, 8–9–60, Cl. 103—44.

Massey, John B. Sun visors. 2,948,566, 8–9–60, Cl. 296—97.

Masters, Charles R.: *See*—
Schriner, John E., Masters, and Cracherski. 2,948,633.

Mattiat, Oskar E., to United States of America, Army. Piezoelectric ceramic resonators. 2,948,867, 8–9–60, Cl. 333—72.

May, Frank H., to American Potash & Chemical Corp. Process for producing pure boric acid and potassium sulfate. 2,948,592, 8–9–60, Cl. 23—149.

May, Harold V.: *See*—
Ruscito, Anthony J., and May. 2,948,770.

Mayer, Nathan: *See*—
Burd, Samuel I., Mayer, and Berman. 2,948,240.

Maytag Co., The: *See*—
Goodlaxson, John D. 2,948,372.
Smith, Thomas R. 2,948,128.

McAllister, Robert W. Refractory lime. 2,948,681, 8–9–60, Cl. 106—58.

McCarthy, Joseph V.: *See*—
Neddie, Joel, and McCarthy. 2,948,209.

McCarthy, Justin H. Holders for bibs and the like. 2,948,085, 8–9–60, Cl. 24—9.

McCarvell, John H., and W. C. Carlisle. Gas lift method and apparatus. 2,948,232, 8–9–60, Cl. 103—232.

McCleery, James A.: *See*—
Lorch, Hermann R., and McCleery. 2,948,647.

McCluer, John D., to Thermoid Co. Flame retarding composition and fabric treated therewith. 2,948,641, 8–9–60, Cl. 117—126.

McCollum, Melvin W. Tree harvesting apparatus. 2,948,311, 8–9–60, Cl. 143—32.

McCormick, Rayna H. Machine for drilling finger holes in bowling balls. 2,948,168, 8–9–60, Cl. 77—31.

McDonough, John J., to Scott & Williams, Inc. Multiple-feed circular knitting machines. 2,948,130, 8–9–60, Cl. 66—41.

McEachern, Irvin D. Grain gathering attachment for combines. 2,948,100, 8–9–60, Cl. 56—119.

McGraw-Edison Co.: *See*—
Fjellstedt, Thornsten A., Jones, Kowalski, and Seaquist. 2,948,704.
Postal, Robert H. 2,948,837.
Stoelting, Herman O. 2,948,831.

McGraw, George P., Jr., to Western Electric Co., Inc. Apparatus for producing printed wiring by metal vaporization. 2,948,261, 8–9–60, Cl. 118—49.

McIlwain, Knox, to Haseltine Research, Inc. Code-setting device. 2,948,886, 8–9–60, Cl. 340—345.

McKay, Arthur F.: *See*—
Podesva, Otirad, and McKay. 2,948,752.

McKinnon, Donald J.: *See*—
Kelly, Clyde W., McKinnon, Heintzel, and Harper. 2,948,366.

McLeod, Norman P. Serving tray. 2,948,391, 8–9–60, Cl. 206—81.

McNally Pittsburg Mfg. Corp., The: *See*—
Pate, Robert L. 2,948,384.

Mecklenborg, Lawrence W.: *See*—
Schueler, Arthur W., Funk, and Mecklenborg. 2,948,804.

Meeker, David A.: *See*—
Allen, Kenneth C., and Meeker. 2,948,466.

Mehalick, John R., and E. R. Izzo, to Carrier Corp. Heat transfer device. 2,948,515, 8–9–60, Cl. 257—137.

Meigaard, Oscar C., to Wright Mfg. Co. Louver control for air conditioning grille. 2,948,211, 8–9–60, Cl. 98—40.

Mellott, Hayes R.: *See*—
Mellott, John S. and H. R. 2,948,313.

Mellott, John S. and H. R. Sawmill log turner. 2,948,313, 8–9–60, Cl. 143—103.

Melvin, Myron F.: *See*—
Frey, Cleon F., and Melvin. 2,948,787.

Merck & Co., Inc.: *See*—
Pollak, Peter L. 2,948,733.

Mergenthaler Linotype Co.: *See*—
Hadley, William A., and Robbins. 2,948,203.

Merrill, Ian N. Diaphragm valves. 2,948,504, 8–9–60, Cl. 251—258.

Merrill, Stewart H., E. M. Robertson, and H. C. Staehle, to Eastman Kodak Co. Light-sensitive compositions and their use in photomechanical processes. 2,948,610, 8–9–60, Cl. 96—33.

Mesi, Phillip J. Folding toothbrush with a positive latch. 2,948,009, 8–9–60, Cl. 15—144.

Metal Pumping Services, Inc.: *See*—
Sweeney, Victor D., and Kaji. 2,948,524.

Metzger, William J., to National Malleable and Steel Castings Co. Car coupler. 2,948,414, 8–9–60, Cl. 213—127.

Metzger, William J., to National Malleable and Steel Castings Co. Car coupler. 2,948,415, 8–9–60, Cl. 213—144.

Metzger, William J., to National Malleable and Steel Castings Co. Car coupler. 2,948,416, 8–9–60, Cl. 213—151.

Metzler, Charles L., W. H. Dennerlein, and L. B. Bernstein, to The Gillette Co. Safety razor set case. 2,948,388, 8–9–60, Cl. 206—16.

Meyer, Franklin, to Servomechanisms, Inc. Accelerometer. 2,948,152, 8–9–60, Cl. 73—514.

Meyer, Friedrich, to Fulza S.A. Overwind preventer for timepiece. 2,948,108, 8–9–60, Cl. 58—83.

Meyer, Steven W.: *See*—
Haussner, Theodor H. W., and Meyer. 2,948,418.

Micallef, Lewis A.: *See*—
Leeds, Walter W., Loew, and Micallef. 2,948,008.

Michaelson, Forest K.: *See*—
Watson, Dighton L., and Michaelson. 2,948,624.

Michigan Research Laboratories, Inc.: *See*—
Pattilloch, Donald K., and Polowczyk. 2,948,692.

Midland-Ross Corp.: *See*—
Pease, John W. 2,948,570.
Schultz, Forrest O. E. 2,948,549.
Schultz, Forrest O. E. 2,948,558.

Miehle-Goss-Dexter, Inc.: *See*—
Tyma, Louis S., Jr., and Loew. 2,948,215.

Milani, Louis, Foods, Inc.: *See*—
Cahn, Frank J. 2,948,622.

Milberger, Ernest C., and W. P. Kinneman, Jr., to The Standard Oil Co. Wire-drawing lubricating composition. 2,948,681, 8–9–60, Cl. 252—33.4.

Miles, Alfred: *See*—
Kurtz, Henry J., and Miles. 2,948,797.

Miller, Charles C., Jr., and A. J. Ricci, to Altoscan Co. Captive rotary wing aircraft and control system. 2,948,489, 8–9–60, Cl. 244—17.17.

Miller, Daniel R.: *See*—
Martinelli, Raymond C., and Miller. 2,948,516.

Miller, George R., deceased (by L. M. Miller, executrix). Internal combustion jet propulsion engine having a reflected pressure wave engine control device. 2,948,113, 8–9–60, Cl. 60—35.6.

Miller, Labron W.: *See*—
Stamler, William R., and Miller. 2,948,235.

Miller, Lettice M.: *See*—
Miller, George B. 2,948,113.

Miller, Stewart E. to Bell Telephone Laboratories, Inc. Broad-band electromagnetic wave coupler. 2,948,864, 8–9–60, Cl. 333—10.

Miller, Ward: *See*—
Dekan, George J. 2,948,851.

Miller Wrapping & Sealing Machine Co.: *See*—
Arvidson, Bengt A. 2,948,177.

Millikan, Allen F.: *See*—
Crosby, Gifford W., Millikan, and Brennan. 2,948,682.

Millikin, Arnold S., to The Jaeger Machine Co. Screed structure. 2,948,202, 8–9–60, Cl. 94—45.

Millner, Tivadar, and J. Neugebauer, to Egyesult Izzolampa es Villamossagi Reszvenytarsasag. Manufacture of metal articles from tungsten metal powder. 2,948,609, 8–9–60, Cl. 75—214.

Minerals & Chemicals Corp. of America: *See*—
Albert, Charles G., and Wilcox. 2,948,632.

Minneapolis-Honeywell Regulator Co.: *See*—
Bergeson, Raymond L. 2,948,146.
Carlson, William L., Jr., and Exner. 2,948,118.
Schuck, Oscar H. 2,948,149.

Minnesota Mining and Mfg. Co.: *See*—
Barnhart, William S., and Weber. 2,948,741.

Minutoli, Anthony L.: *See*—
Williams, Howard F., and Minutoli. 2,948,110.

Miotke, Harvey R. Catapult line casting device. 2,948,078, 8–9–60, Cl. 43—19.

Mirviss, Stanley B.: *See*—
Lemizska, Theodore, Mirviss, and Kirshenbaum. 2,948,713.

Mistretta, Charles J. Level. 2,948,067, 8–9–60, Cl. 33—212.

Mobay Chemical Co.: *See*—
Schellenberg, Wolf-Dietrich, and Bartl. 2,948,706.
Windemuth, Erwin, Schnell, and Bayer. 2,948,691.

Modrey, Henry J. Carrier, especially for radioactive loads. 2,948,383, 8–9–60, Cl. 198—179.

Monsanto Canada Ltd.: *See*—
Podesva, Ctirad, and McKay. 2,948,752.

Monsanto Chemical Co.: *See*—
Ashmore, Richard D. 2,948,763.
D'Amico, John J. 2,948,727.

Monson, Walter T.: *See*—
Handwerk, Erwin C., and Monson. 2,948,591.

Moon, Sterling C., to The Jeffrey Mfg. Co. Hitch for mobile conveyor. 2,948,552, 8–9–60, Cl. 280—447.

Moore, Ralph G. D.: *See*—
Cox, Robert J., and Moore. 2,948,613.

Moore, Raymond H., to United States of America, Atomic Energy Commission. Fused salt process for recovery of values from used nuclear reactor fuels. 2,948,586, 8–9–60, Cl. 23—14.5.

Morgan, Raymond E., to General Electric Co. Magnetic amplifier. 2,948,844, 8–9–60, Cl. 323—89.

Morris, Philip, Inc.: *See*—
De Veto, Earl W., Garton, and Horner. 2,948,281.

Morris, Roger E., to The B. F. Goodrich Co. Alkylated indanols as deterioration retarders for rubbers. 2,948,704, 8–9–60, Cl. 260—45.95.

Morrison, Willard L., to Liquefreeze Co., Inc. Method of freezing foodstuffs and the like. 2,948,123, 8–9–60, Cl. 62—64.

Moss, Charles W.: *See*—
Rupert, Samuel J. 2,948,287.

Mote, Lewis C. Method of and means for prolonging the life of pneumatic tires. 2,948,321, 8–9–60, Cl. 152—330.

Motorola, Inc.: *See*—
Kraft, Richard A. 2,948,776.

Mountcer, Carlyle A., H. M. Riegelman, Jr., and A. C. Hughes, Jr., to Giannini Controls Corp. Pressure responsive instrument. 2,948,387, 8–9–60, Cl. 340—345.

Muench, Werner, L. Notarbartolo, G. Silvestri, and V. Ruoti, to Snia Viscosa Societa Nazionale Industria Applicazioni Viscose S.p.A. Process for preparing alkaline metals having high reactive power. 2,948,762, 8–9–60, Cl. 260—545.

Muenchinger, Herman G., to American Screw Co. Drive link screws. 2,948,056, 8–9–60, Cl. 29—193.5.

Muffly, Gary, to Gulf Research & Development Co. Function unit. 2,948,467, 8–9–60, Cl. 235—61.6.

Munoz, Juan V., now by judicial change of name to J. M. Verdugo. Helicopter. 2,948,490, 8–9–60, Cl. 244—17.19.

Munro, John F., to General Electric Co. Threaded fastener retaining device with resilient holding means. 2,948,317, 8–9–60, Cl. 151—69.

Murphy, John J. Apparatus for supporting infants. 2,947,998, 8–9–60, Cl 5—77.

Murray Co. of Texas, Inc., The: *See*—
Day, Dewey D. 2,948,022.

Muytjens, Mathias J. G.: *See*—
Oele, Adriaan P., Muytjens, and Goris. 2,948,764.

Myers, Harry L.: *See*—
Gesner, Harry M., and Myers. 2,948,249.

N.V. Exploitatie Maatschappij "Het Hof van Holland": *See*—
Jacobson, Johan S. 2,948,187.

Nagin, Harry S., and D. H. Russell, to Reliance Steel Products Co. Pavement and method of producing the same. 2,948,201, 8–9–60, Cl. 94—5.

Nagler, Bruno A., to Nagler Helicopter Co., Inc. Helicopter with shrouded or ducted rotor. 2,948,491, 8–9–60, Cl. 244—17.21.

Nagler Helicopter Co., Inc.: *See*—
Nagler, Bruno A. 2,948,491.

Nagy, Daniel E.: *See*—
Roth, Roy W., and Nagy. 2,948,690.

Nai, Alfredo. Process for the manufacture of interrupted filament yarns. 2,948,103, 8–9–60, Cl. 57—157.

Nalco Chemical Co.: *See*—
Reuter, Raymond. 2,948,032.

Nallinger, Friedrich K. H., to Daimler-Benz Aktiengesellschaft. Axle and spring arrangement for vehicles. 2,948,547, 8–9–60, Cl. 280—124.

National Cornice Works: *See*—
Ness, William H. C. 2,948,798.

National Malleable and Steel Castings Co.: *See*—
Metzger, William J. 2,948,414.
Metzger, William J. 2,948,415.
Metzger, William J. 2,948,416.
Shockey, Lovell. 2,948,064.
Zanow, Andrey L. 2,948,413.

National Research Council: *See*—
Phillips, Kenneth L., and Sallans. 2,948,351.

National Research Development Corp.: *See*—
Hookway, Harry T., Hale, and Goldsmith. 2,948,637.

National Tank Co.: *See*—
Walker, Jay P., and Maher. 2,948,352.

Neal, Benjamin T. Automatic transmission. 2,948,164, 8–9–60, Cl. 74—705.

Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek: *See*—
De Whalley, Christopher H., and Van Hoek. 2,948,668.

Neckel, Edmund N., and L. B. Wessel, to The American Laundry Machinery Co. Hydraulic laundry press. 2,948,071, 8–9–60, Cl. 38—41.

Needham Mfg. Co. Inc.: *See*—
Spang, William F. 2,948,016.

Neely, Richard S., to Lord Mfg. Co. Pump. 2,948,227, 8–9–60, Cl. 103—117.

Neidle, Joel, and J. V. McCarthy, to Fairchild Camera and Instrument Corp. Photographic processing apparatus. 2,948,200, 8–9–60, Cl. 95—89.

Neiswinter, James T.: *See*—
Andrews, Clayton F., Chamberlin, and Neiswinter. 2,948,777.

Nelson, James B. Device for enclosing dry cleaned clothes in inverted bags. 2,948,096, 8–9–60, Cl. 53—241.

Nelson, Joseph F.: *See*—
Ford, Francis P., Jasper, Nelson, and Welch. 2,948,095.

Nelson, Leland K. House trailer awning with attaching means. 2,948,288, 8–9–60, Cl. 135—5.

Nelson, Norman E., to Doak Aircraft Co., Inc. Means to increase static pressure and enhance forward thrust of aircraft components. 2,948,111, 8–9–60, Cl. 60—35.5.

Nerad, Anthony J., and R. H. Johnson, to General Electric Co. Afterburner flameholder. 2,948,117, 8–9–60, Cl. 60—39.72.

Ness, William H. C., to National Cornice Works. Mobile hot and cold food cart. 2,948,798, 8–9–60, Cl. 219—19.

Netten, Erik: *See*—
Willems, Ebertus, and Netten. 2,948,815.

Neubauer, Emil T.: *See*—
Johnsen, Clifford N., and Neubauer. 2,948,496.

Neugebauer, Jeno: *See*—
Millner, Tivadar, and Neugebauer. 2,948,609.

Neumann, Karl L., and C. B. Schneider, to Radio Corp. of America. Single sideband communication system. 2,948,505, 8–9–60, Cl. 250—13.

Newman, Louis B. Hydrotherapy tank. 2,947,996, 8–9–60, Cl. 4—178.

Nicholas, Andrew J., and H. Soumeral, to Worthington Corp. Hermetic motor-compressor unit. 2,948,459, 8–9–60, Cl. 230—58.

Nicolai, Willem H. J., to North American Philips Co., Inc. Automatic telephone exchanges having connections to external lines. 2,948,782, 8–9–60, Cl. 179—18.

Nielsen, Clarence E. Automatic dispenser attachment for washing machines. 2,948,457, 8–9–60, Cl. 222—70.

Nix, Edmund A., to Dominion Engineering Works Ltd. Apparatus for augmenting hoist brake capacity. 2,948,412, 8–9–60, Cl. 212—89.

Noble, Le Isle D.: *See*—
Stanton, Arthur H., Jr., and Noble. 2,948,168.

Nolen, Herbert I.: *See*—
Wroblewski, Richard E., and Nolen. 2,948,409.

Noren, Tore H.: *See*—
Federighi, George J., and Noren. 2,948,436.

Norlin, Nils, to Carl Allers Etablissements A/S. Roller vibrator mechanism. 2,948,158, 8–9–60, Cl. 74—22.

Normalair Ltd.: *See*—
Pitt, Peter W. 2,948,292.

North American Chemical Co.: *See*—
Reid, John E., and Spence. 2,948,001.

North American Philips Co., Inc.: *See*—
Bacon, Kenneth F. 2,948,853.
Berg, Josef P., and Lariviere. 2,948,805.
Nicolai, Willem H. J. 2,948,782.
Smith, Frederick W. 2,948,595.
Van Egmond, Albert J. L., and Vesnstra. 2,948,809.
Van Sanden, Johannes G., and Diemer. 2,948,816.
Van Veessem, J. C., and Le Grand. 2,948,050.
Willems, Ebertus, and Netten. 2,948,815.

Notarbartolo, Luigi: *See*—
Muench, Werner, and Notarbartolo, Silvestri, and Ruoti. 2,948,762.

Nylander, Arnold L., to General Electric Co. Multi-range hook-on electrical indicating instrument. 2,948,562, 8–9–60, Cl. 324—115.

Oakley, Charles B.: *See*—
Larky, Norbert D., and Oakley. 2,948,775.

Obenhaus, Victor M., to Sprague Electric Co. Tubular capacitor. 2,948,838, 8–9–60, Cl. 317—242.

Obermajer, Vladimir, to Procedes Sauter. Anti-vibratory suspension for centrifugally drying washing machine. 2,948,401, 8–9–60, Cl. 210—365.

O'Dell Brothers: *See*—
Barth, Hans, and Odell. 2,948,890.

Odell, Carl H.: *See*—
Barth, Hans, and Odell. 2,948,890.

Oele, Adriaan P., M. J. G. Muytjens, and J. R. H. Goris, to Stamicarbon N.V. Process for reducing the quantity of thiophenes in an aromatic hydrocarbon. 2,948,764, 8–9–60, Cl. 260—674.

Olshei, John R., and R. Deibel, to Trico Products Corp. Windshield cleaner. 2,948,010, 8–9–60, Cl. 15—250.27.

O'Kelley, O'Dell. Apparatus for forming and driving joint nails. 2,947,990, 8–9–60, Cl. 1—44.4.

Olander, Robert G., to The Marquardt Corp. Fluid actuated toggle mechanism. 2,948,116, 8–9–60, Cl. 60—35.6.

Oldberg, Sidney: *See*—
Roper, Daniel W., and Oldberg. 2,948,268.

Olin Mathieson Chemical Corp.: *See*—
Maier, Karl W. 2,948,526.
Yeomans, Arthur S., Jr. 2,948,075.

Olsen Douglas H.: *See*—
Harris, Robert L., and Olsen. 2,948,739.

O'Neill, Paul J., Jr., to Union Machine Co. Lautering method and apparatus. 2,948,661, 8–9–60, Cl. 195—134.

Orloff, Harold D., and F. X. Markley, to Ethyl Corp. Gasoline fuel compositions. 2,948,599, 8–9–60, Cl. 44—69.

Orr, Charles F., to Spray Products Corp. Engine starting fluid propellant. 2,948,595, 8–9–60, Cl. 44—52.

Osborne, William E., to Aerojet-General Corp. Tracking system. 2,948,813, 8–9–60, Cl. 250—203.

Ostermann, Philipp: *See*—
Hintermann, Marcel, and Ostermann. 2,948,018.

O'Sullivan, John F.: *See*—
Barry, Vincent C., Belton, Conaity, Twomey, O'Sullivan, and Hodel. 2,948,726.

Oswald, Jacques, to Compagnie Industrielle des Telephones. Adjustable correcting networks. 2,948,866, 8–9–60, Cl. 333—28.

Otis Engineering Corp.: *See*—
Bostock, James H., and Fredd. 2,948,340.
Fredd, John V. 2,948,339.
Fredd, John V. 2,948,341.
Rauling, George M., Bostock, and Garwood. 2,948,338.

Owensrek, Jerry A. Offset umbrella. 2,948,280, 8–9–60, Cl. 135—20.

Owens-Illinois Glass Co.: *See*—
Santelli, T. Robert, and Erard. 2,948,636.

Packie, John W., and C. O. Rhys, Jr., to Esso Research and Engineering Co. Fluid hydroformer reactor distributor. 2,948,671, 8–9–60, Cl. 208—134.

Packwood, G. H., Mfg. Co.: *See*—
Gianiadis, James L. 2,948,686.

Padberg, Louis R., Jr., F. D. Parker, and M. D. Papineau. High power short pulse transmitting apparatus. 2,948,879, 8–9–60, Cl. 340—1.

Page, John R.: *See*—
Page, Robert M. 2,948,893.

Page, Robert M., 8⅓% to J. R. Page, 16⅔% to G. G. Leaf, as trustee, 12½% to L. R. Philpott, and 37½% to L. C. Young. Automatic range indicating system. 2,948,893, 8–9–60, Cl. 343—7.3.

Paine, Stanley W. T., to The A.P.V. Co. Ltd. Processing of brewers' wort. 2,948,617, 8–9–60, Cl. 99—52.

Panchera, Hans J. J. Method of manufacturing sections and rods of glass fibre-reinforced plastic. 2,948,649, 8–9–60, Cl. 154—97.

Pandia, Inc.: *See*—
Durant, Leonard G., and Surino. 2,948,336.

Paniasidi, Hugo A.: *See*—
Leathers, Ward, Furman, and Paniasidi. 2,948,193.

Paperlynen Co.: *See*—
De Villiers, Edmund J., and Long. 2,947,992.

Papineau, Milton D.: *See*—
Padberg, Louis R., Jr., Parker, and Papineau. 2,948,879.

Parametron Institute: *See*—
Goto, Eiichi. 2,948,818.

Paris, August F. Garment pressing and finishing apparatus. 2,948,444, 8–9–60, Cl. 223—67.

Park, William R. R., to The Dow Chemical Co. Process for preparing heat sealable films, composition useful therein and the articles produced thereby. 2,948,696, 8–9–60, Cl. 260—28.5.

Parker, Frederick D.: *See*—
Padberg, Louis R., Jr., Parker, and Papineau. 2,948,879.

Paroselli, Leopold, ½ to M. Ghia. X-Ray tubes. 2,948,822, 8–9–60, Cl. 313—56.

Pass & Seymour, Inc.: *See*—
Scott, Donald W. 2,948,786.

Pastushin Aviation Corp.: *See*—
Landry, John V. 2,948,563.

Pate, Robert L., to The McNally Pittsburg Mfg. Corp. Belt conveyor structure. 2,948,384, 8–9–60, Cl. 198—192.

Patricello, Fred A. Fish strike signal. 2,948,076, 8–9–60, Cl. 43—17.

Patterson, Jared W. Record file. 2,948,402, 8–9–60, Cl. 211—40.

Pattilloch, Donald K., and C. Polowczyk, to Michigan Research Laboratories, Inc., and Electro-Chem Fiber Seal Corp. Sheet comprising leather fibers, ethylene oxidedicyandiamide condensation product and rubber latex and process for preparing same. 2,948,692, 8–9–60, Cl. 260—8.

Pearson, John, and J. S. Rinehart, to United States of America, Navy. Controlled fragmentation of impulsively loaded bodies by stress wave interference. 2,948,218, 8–9–60, Cl. 102—67.

Pease, John W., to Midland-Ross Corp. Emergency brake system including low brake pedal. 2,948,570, 8–9–60, Cl. 303—63.

Peeler, Lawrence F., and E. L. La Foy. Method of building structures. 2,948,047, 8–9–60, Cl. 25—154.

Penick, S. B., and Company: *See*—
Salkin, Ralph. 2,948,729.

Penn, John J., to Diamond National Corp. Article transfer and spacing device. 2,948,381, 8–9–60, Cl. 198—34.

Penney, Gaylord W. Gas-cleaning precipitator. 2,948,353, 8–9–60, Cl. 183—7.

Penrose, James R., to Pirelli-General Cable Works Ltd. Manufacture of tubing and tubular sheathing. 2,948,324, 8–9–60, Cl. 153—54.

Peters, George R., to Ross-Tacony Crucible Co. Long lip crucible. 2,948,522, 8–9–60, Cl. 263—48.

Petersen, Gerald A. M. Cable stringing apparatus. 2,948,483, 8–9–60, Cl. 242—54.

Petersen, Richard O. A., to J. L. Burns, as trustee. Method for casting buttons and the like. 2,948,019, 8–9–60, Cl. 18—47.5.

Peterson, Fred M. Air thrust boat. 2,948,250, 8–9–60, Cl. 115—.5.

Pfizer, Chas., & Co., Inc.: *See*—
Bavley, Abraham, and Tate. 2,948,653.
Buckley, Jay S., Jr., and Berg. 2,948,749.
Shoemaker, Richard N. 2,948,659.

Philadelphia Quartz Co.: *See*—
Baker, Chester L., and Austin. 2,948,701.

Phileo Corp.: *See*—
Goff, Maurice A. 2,948,058.
Honda, Hajime. 2,948,863.

Phillips, Benjamin: *See*—
Bender, Howard L., and Phillips. 2,948,688.

Phillips, James W., D. G. A. Thomas, and W. H. Walton, to Coal Industry (Patents) Ltd. Apparatus for counting particles. 2,948,469, 8–9–60, Cl. 235—92.

Phillips, Kenneth L., and H. R. Sallans, to National Research Council. Foam breaking device. 2,948,351, 8–9–60, Cl. 183—2.5.

Phillips Petroleum Co.: *See*—
Hutson, Thomas, Jr. 2,948,676.

Phillips-Van Heusen Corp.: *See*—
Kremer, Irvin R., and Delker. 2,948,442.

Philpott, La Verne R.: *See*—
Page, Robert M. 2,948,893.

Pickard, Jack, to N. Slater Co., Ltd. Wringer. 2,948,138, 8–9–60, Cl. 68—258.

Pimbley, George H., to Turco Products, Inc. Process and compositions for producing aluminum surface conversion coatings. 2,948,643, 8–9–60, Cl. 148—6.27.

Pine, William S. Pump. 2,948,222, 8–9–60, Cl. 103—40.

Piper, George W., Jr.: *See*—
Eger, Edward F., and Piper. 2,948,086.

Pitler, Richard K.: *See*—
MacFarlane, Richard R., and Pitler. 2,948,604.

Pitler, Richard K., and W. E. Blatz, to Allegheny Ludlum Steel Corp. Nickel-free austenitic elevated temperature alloy. 2,948,603, 8–9–60, Cl. 75—125.

Pittsburgh Coke & Chemical Co.: *See*—
Wright, Oscar L. 2,948,759.

Pittsburgh Plate Glass Co.: *See*—
Keim, Laurence A. 2,948,645.
Richardson, Ronald E. 2,948,646.
Vogel, Henry A., and Roach. 2,948,702.

Ploss, Hermann: *See*—
Kopp, Wilhelm, Ploss, and Heil. 2,948,204.

Podesva, Ctirad, and A. F. McKay, to Monsanto Canada Ltd. Combined fungistatic and bacteriostatic agents. 2,948,752, 8–9–60, Cl. 260—352.

Poe, Benjamin F., and A. N. Barnes. Equipment for cleaning spray guns and other jet equipped machines. 2,948,286, 8–9–60, Cl. 134—102.

Pogue, Robert B., to American Brake Shoe Co. Brake shoes. 2,948,361, 8–9–60, Cl. 188—251.

Pollak, Peter I., to Merck & Co., Inc. Intermediates for pyridoxine and process. 2,948,733, 8–9–60, Cl. 260—295.

Polowczyk, Carl: *See*—
Pattilloch, Donald K., and Polowczyk. 2,948,692.

Pomona Foundry, Inc.: *See*—
Russell, Kenneth F. 2,948,382.

Portage Machine Co.: *See*—
Carpenter, Albert J. 2,948,817.

Postal, Robert H., to McGraw-Edison Co. Solid state electronic switch and circuits therefor. 2,948,837, 8–9–60, Cl. 317—238.

Powers Regulator Co., The: *See*—
Thorburn, David H. 2,948,296.

Prapas, Aristotle G.: *See*—
Rudner, Bernard, and Prapas. 2,948,728.
Rudner, Bernard, and Prapas. 2,948,730.

Pratt, Read & Co., Inc.: *See*—
Wood, Orville T. 2,948,180.

Precision Welder & Flexopress Corp.: *See*—
Schueler, Arthur W., Funk, and Mecklenborg. 2,948,804.

Prengle, Robert S.: *See*—
Adams, Dustin S., Ernst, and Prengle. 2,948,583.

Prestige, Inc.: *See*—
Burd, Samuel I., Mayer, and Berman. 2,948,240.

Preu, Willi: *See*—
Gill, Harvey J., Jr., Sitterly, and Preu. 2,948,027.

Price, Claude S. Method of coating a surface with a composition comprising a furfuryl alcohol resin, cellulose, filler and catalyst. 2,948,639, 8–9–60, Cl. 117—104.

Procedes Sauter: *See*—
Obermajer, Vladimir. 2,948,401.

Procter & Gamble Co., The: *See*—
Burt, Robert V. 2,948,376.

Productive Invention, Inc.: *See*—
Krohm, Fred A. 2,948,011.

Proplastex: *See*—
Child, Fernand. 2,948,429.

Protein Foundation, Inc.: *See*—
Tullis, James L. 2,948,442.

Pruitt, Malcolm E. and W. A. Rogers, Jr., to The Dow Chemical Co. Trihydroxy polyoxyalkylene ethers of glycerol. 2,948,757, 8–9–60, Cl. 260—615.

Pruitt, William J., to The Standard Oil Co. Apparatus for impelling objects within a pipeline. 2,948,143, 8–9–60, Cl. 73—3.

Pucher, Walter: *See*—
Jonasson, Sven, and Pucher. 2,948,791.

Pure Oil Co., The: *See*—
Crosby, Gifford W., Millikan, and Brennan. 2,948,682.
Remes, Nathaniel L., and Ayers. 2,948,669.

Purse, Frank V., and E. A. Young, to Universal Oil Products Co. Rotary drive mechanism. 2,948,168, 8–9–60, Cl. 74—822.

Quadriga Mfg. Co., The: *See*—
Cox, William J., and Dreher. 2,948,822.

Quercia, Marcel, to Societe d'Etudes et de Recherches Techniques. Lighters. 2,948,134, 8–9–60, Cl. 67—7.1.

Quinn, Halsey P., to Tung-Sol Electric Inc. Circuit for Geiger counters. 2,948,812, 8–9–60, Cl. 250—83.6.

Radio Corp. of America: *See*—
Bothwell, Theodore P. 2,948,820.
Brock, Frank M. 2,948,562.
Ghose, Rabindra N., and Turecki. 2,948,895.
Guerber, Howard P., and Adler. 2,948,884.
Larky, Norbert D., and Oakley. 2,948,775.
Neumann, Karl L., and Schneider. 2,948,808.
Seibert, Ralph S., Jr. 2,948,419.
Singleback, George W. 2,948,774.

Rankins, Everett V.: *See*—
Jay, George, and Rankins. 2,948,213.

Ransom, Maurice R.: *See*—
Evans, Paul L., and Ransom. 2,948,192.

Rapids-Standard Co., Inc., The: *See*—
Baxter, John C., De Graaf, and Woldring. 2,948,055.

Raulins, George M., J. H. Bostock, and T. O. Garwood, to Otis Engineering Corp. Well packer. 2,948,338, 8–9–60, Cl. 166—123.

Raymond International Inc.: *See*—
Smith, Edward A. 2,948,122.

Raytheon Co.: *See*—
Bigelow, John F. 2,948,869.
Freedman, George. 2,948,836.

Rebikoff, Dimitri I. Two-seater submarine vessel. 2,948,247, 8–9–60, Cl. 114—16.

Recker, Florian B. Couplings. 2,948,559, 8–9–60, Cl. 287—119.

Reddy, John W. Foot rest and work platform attachment for ladders. 2,948,349, 8–9–60, Cl. 182—121.

Redfield Gun Sight Co.: *See*—
Kollmorgen, Ernst O. 2,948,188.

Reed, Francis E., to Devoe & Raynolds Co., Inc. Vinsol-epoxy compositions. 2,948,694, 8–9–60, Cl. 260—24.

Rees, Harry V., and L. C. Kemp, Jr., to Texaco Development Corp. Method of preparing solid-thickened greases. 2,948,679, 8–9–60, Cl. 252—28.

Reese, James H.: *See*—
Van Horn, John A., Biemiller, and Reese. 2,948,621.

Reeves Instrument Corp.: *See*—
Seay, Perry A. 2,948,474.

Reeves, Marvin L., to Bell Telephone Laboratories, Inc. Frequency sensitive electromagnetic wave device. 2,948,868, 8–9–60, Cl. 333—73.

Regina, Louis C. Dispensing of pressurized material. 2,948,308, 8–9–60, Cl. 141—362.

Reich, Kurt, to Paul Forkardt, Kommanditgesellschaft. Chuck. 2,948,541, 8–9–60, Cl. 279—4.

Reichstein, Tadeus, S. A. Szpilfogel, and D. A. Van Dorp. Steroids and process for making same. 2,948,738, 8–9–60, Cl. 260—340.9.

Reid, John B., and R. A. Spence, to North American Chemical Co. Method of and apparatus for conditioning shoe filler compositions. 2,948,001, 8–9–60, Cl. 12—18.2.

Reliance Steel Products Co.: *See*—
Nagin, Harry S., and Russell. 2,948,201.

Remes, Nathaniel L., and G. W. Ayers, to The Pure Oil Co. Production of superior neutral oils. 2,948,669, 8–9–60, Cl. 208—7.

Renner, Kurt: *See*—
Siebert, Arthur, and Renner. 2,948,715.

Rentschler, Waldemar T., to Alfred Gauthier, G.b.m.H. Intra lens shutter. 2,948,205, 8–9–60, Cl. 95—53.

Repiogle, Edward H. Diving plane. 2,948,251, 8–9–60, Cl. 115—63.3.

Reproduction Research Laboratories, Inc.: *See*—
Caton, Thomas R. 2,948,087.

Resnick, Leroy D., to Chicago Development Corp. Heat treatable alloys of titanium or zirconium. 2,948,608, 8–9–60, Cl. 75—175.5.

Reuter, Raymond, to Nalco Chemical Co. Metal casting molds. 2,948,032, 8–9–60, Cl. 22—193.

Revallier, Leonardus J., and W. Slot, to Stamicarbon N.V. Production of phosphate fertilisers and resultant product. 2,948,602, 8–9–60, Cl. 71—39.

Rhys, Cyril O., Jr.: *See*—
Packie, John W., and Rhys. 2,948,671.

Ricci, Anthony J.: *See*—
Miller, Charles C., Jr., and Ricci. 2,948,489.

Rich, Theodore A., to General Electric Co. Compensated light meter power supply. 2,948,814, 8–9–60, Cl. 250—205.

Richardson, Ronald E., to Pittsburgh Plate Glass Co. Glass pressing nipper rolls. 2,948,648, 8–9–60, Cl. 154—2.7.

Richterkessing, Frank H., and W. M. Cissell, to W. M. Cissell Mfg. Co. Garment finisher. 2,948,443, 8–9–60, Cl. 223—57.

Ridge Tool Co., The: *See*—
Ingwer, Carl H., and Wright. 2,948,326.

Riegelman, Harry M., Jr.: *See*—
Mounteer, Carlyle A., Riegelman, and Hughes. 2,948,857.

Rigby, Ivor V., to International Computers and Tabulators Ltd. Combinations of statistical machines. 2,948,468, 8–9–60, Cl. 235—61.7.

Riley, Daniel F., S. Goldberg, and K. J. Germeshausen, to Edgerton, Germeshausen and Grier, Inc. Electric-discharge device. 2,948,820, 8–9–60, Cl. 315—104.

Rinehart, John S.: *See*—
Pearson, John, and Rinehart. 2,948,218.

Rinse, Jacobus, to J. W. Ayers & Co. Oxo-aluminum acylates, alkoxides and phenoxides. 2,948,740, 8–9–60, Cl. 260—414.

Riordan, Michael D., M. F. Fontaine, and J. Ryer, to Texaco Inc. Treatment of synthetic naphtha. 2,948,746, 8–9–60, Cl. 260—450.

Risk, Norman E., and J. L. Holden, to Caterpillar Tractor Co. Torsion bar cushioning means for tractor equaliser bar. 2,948,347, 8–9–60, Cl. 180—9.6.

Rittenhouse, Howard E., and W. Hinds, ½ to Tokheim Corp. and ½ to Bowser, Inc. Tank filling apparatus. 2,948,307, 8–9–60, Cl. 141—348.

Roach, Robert F.: *See*—
Vogel, Henry A., and Roach. 2,948,702.

Robbins, Daniel H.: *See*—
Hadley, William A., and Robbins. 2,948,203.

Roberts, Fred T.: *See*—
Hykes, Paul G., Roberts, and Bradley. 2,948,568.

Robertson, Earl M.: *See*—
Merrill, Stewart H., Robertson, and Staehle. 2,948,610.

Robertson, James A., to E. I. du Pont de Nemours and Co. Plasticized polyvinyl alcohol composition. 2,948,697, 8–9–60, Cl. 260—29.2.

Robinson, Charles F., to E. I. du Pont de Nemours and Co. Resinous composition. 2,948,706, 8–9–60, Cl. 260—47.

Rochling'sche Eisen-und Stahlwerke G.m.b.H.: *See*—
Hellgenstaedt, Hans E. W. 2,948,521.

Rockefeller, Harry E.: *See*—
Wilson, Jack L., Rockefeller, and Butler. 2,948,803.

Roelig, Hermann, and J. Schmahl, to Farbenfabriken Bayer Aktiengesellschaft. Apparatus for measuring and recording the dynamic modulus of elasticity. 2,948,147, 8–9–60, Cl. 73—89.

Rogers, William A., Jr.: *See*—
Pruitt, Malcolm E., and Rogers. 2,948,757.

Ronning, Adolph. Brake torque reactors for steerable wheels. 2,948,545, 8–9–60, Cl. 280—87.

Rop, James O., to Jervis Corp. Latch mechanism. 2,948,560, 8–9–60, Cl. 292—45.

Roper, Daniel W., and S. Oldberg, to Eaton Mfg. Co. Engine accessory and drive mechanism therefor. 2,948,266, 8–9–60, Cl. 123—41.11.

Roper, John M., to Grimes Mfg. Co. Illuminated instrument panel. 2,948,078, 8–9–60, Cl. 40—130.

Rosenholm, Johannas U. Gravity weighted spirits for spirit levels. 2,948,066, 8–9–60, Cl. 33—211.

Ross-Tacony Crucible Co.: *See*—
Peters, George R. 2,948,522.

Roth, Roy W., and D. E. Nagy, to American Cyanamid Co. Concrete containing polymers of alkylidene bisacrylamide and process of making. 2,948,699, 8–9–60, Cl. 260—41.

Rothrock, Ivan W. Machine to prepare precisely the edges of sheet material for veneering and the like. 2,948,312, 8–9–60, Cl. 143—55.

Rounds, James G.: *See*—
Rounds, Samuel J. and J. G. 2,948,509.

Rounds, Samuel J. and J. G. Cam clamp. 2,948,509, 8–9–60, Cl. 254—77.

Rowe, George L., and H. F. Spindler. Wheel-adjusting mechanisms for lawn mowers. 2,948,544, 8–9–60, Cl. 280—43.13.

Royer, Darrell E., to General Motors Corp. Propeller torque unit construction. 2,948,263, 8–9–60, Cl. 121—38.

Ruben, Samuel. Sulfamate primary cell. 2,948,768, 8–9–60, Cl. 136—100.

Ruben, Samuel. Electric current producing cell. 2,948,769, 8–9–60, Cl. 136—102.

Rubens, Louis C., and D. Urchick, to The Dow Chemical Co. Method of making cellular polyethylene. 2,948,664, 8–9–60, Cl. 204—154.

Rubens, Louis C., J. D. Griffin, and D. Urchick, to The Dow Chemical Co. Process for making cellular polyethylene articles. 2,948,665, 8–9–60, Cl. 204—154.

Rudner, Bernard, and A. G. Prapas, to W. R. Grace & Co. Quinoline and acridine compounds. 2,948,728, 8–9–60, Cl. 260—279.

Rudner, Bernard, and A. G. Prapas, to W. R. Grace & Co. 8-aminotropanium compounds. 2,948,730, 8–9–60, Cl. 260—292.

Rüegg, Rudolf: *See*—
Guez, Waldemar, Isler, Rüegg, and Ryser. 2,948,748.

Runge, Heins F.: *See*—
Born, James H., Drukker, and Runge. 2,948,358.

Runyan, Walter R., to Texas Instruments Inc. Transistor structure. 2,948,836, 8–9–60, Cl. 317—234.

Ruoti, Vincenso: *See*—
Muensch, Werner, Notarbartolo, Silvestri, and Ruoti. 2,948,762.

Rupert, Samuel J., to C. W. Moss and H. Stribley. Quickly-erectable folding portable shelter. 2,948,287, 8–9–60, Cl. 135—4.

Ruschhaupt, Dolph W.: *See*—
Bradshaw, Wilbert C., Jr., and Ruschhaupt. 2,948,519.

Ruscito, Anthony J., and H. V. May, to Sprague Electric Co. Mounting for combined capacitor arrangements. 2,948,770, 8–9–60, Cl. 174—52.

Russell, Charles R., and E. A. Schuls, to Western Electric Co., Inc. Apparatus for cleaning strip material. 2,948,006, 8–9–60, Cl. 15—102.

Russell, Donald H.: *See*—
Nagin, Harry S., and Russell. 2,948,201.

Russell, James L., and E. R. Herman. Scrambling system. 2,948,779, 8–9–60, Cl. 178—1.5.

Russell, Kenneth F., to Pomona Foundry, Inc. Box stacking mechanism. 2,948,382, 8–9–60, Cl. 198—35.

Russell, Robert C.: *See*—
Winther, Martin F., and Russell. 2,948,870.

Ryer, Jack: *See*—
Riordan, Michael D., Fontaine, and Ryer. 2,948,745.

Ryser, Gottlieb: *See*—
Guez, Waldemar, Isler, Rüegg, and Ryser. 2,948,748.

Sagura, John J.: *See*—
Allen, Charles F. H., Illingsworth, and Sagura. 2,948,614.

Sahyun Laboratories: *See*—
Sahyun, Melville, and Faust. 2,948,724.

Sahyun, Melville, and J. A. Faust; said Faust assor. to said Sahyun, d.b.a. Sahyun Laboratories. Halogenated derivatives of tetrahydro-1-naphthyl cyclic amidines. 2,948,724, 8–9–60, Cl. 260—251.

Saint, T. E., to Jabez Burns & Sons, Inc. Method for brewing coffee. 2,948,618, 8–9–60, Cl. 99—71.

Salkin, Ralph, to S. B. Penick and Company. Purification of weakly basic alkaloids by the use of naphthoate salts. 2,948,729, 8–9–60, Cl. 260—286.

Sallans, Henry R.: *See*—
Phillips, Kenneth L., and Sallans. 2,948,351.

Salt, Francis E.: *See*—
Capp, Clifford W., Crocker, and Salt. 2,948,760.

Sanders, Roy Y., Jr. Edible pharmaceutical ink and process of using same. 2,948,626, 8–9–60, Cl. 106—24.

Sandos Trust: *See*—
Hagen, Joseph. 2,948,400.

Saugrelet, Irwin W., to Abbott Laboratories. Esterification of pyridine carboxylic acids. 2,948,734, 8–9–60, Cl. 260—295.5.

Santelli, T. R., and T. G. Erard, to Owens-Illinois Glass Co. Antimony coating for glass. 2,948,630, 8–9–60, Cl. 117—46.

Sapp, Winfred F., to United States of America, Navy. Rocket fuse. 2,948,219, 8–9–60, Cl. 102—78.

Saravia, Roberto F., and G. E. Broach. Toy. 2,948,533, 8–9–60, Cl. 273—90.

Saricks, Joseph G.: *See*—
Thomas, Orrin H. 2,948,785.

Saul & Co.: *See*—
Hagen, Joseph. 2,948,400.

Saulson, Saul, to Harlan M. Buck, Inc. Sitz bath. 2,947,995, 8–9–60, Cl. 4—6.

Saulson, Saul and S. H., to Harlan M. Buck, Inc. Sitz bath. 2,947,994, 8–9–60, Cl. 4—6.

Saulson, Stanley H.: *See*—
Saulson, Saul and S. H. 2,947,994.

Savides, Savas P. Containers for ice cream products and the like. 2,948,305, 8–9–60, Cl. 141—112.

Sawyer, Lester T.: *See*—
Grogan, Cecile M., and Sawyer. 2,948,452.

Sbrana, Adolphe. Nautical propulsion system using webs and craft fitted with such system. 2,948,255, 8–9–60, Cl. 115—28.

Scandia Packaging Machinery Co.: *See*—
Anderson, Andrew W. 2,948,096.

Schaefer, David H. Static analogue divider. 2,948,473, 8–9–60, Cl. 235—196.

Schaefer, Hugh F.: *See*—
Johnson, Richard E., Darland, Grulke, Cahoon, and Schaefer. 2,948,787.

Scharfe, Emil F. Evaporative cooler. 2,948,233, 8–9–60, Cl. 103—262.

Scheirich, H. J., Co.: *See*—
Himelreich, Louis E. 2,948,578.

Schellenberg, Wolf-Dietrich, and H. Bartl, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Light-sensitive high molecular compounds. 2,948,706, 8–9–60, Cl. 260—96.

Schendorf, John H.: *See*—
Goldbert, Irving, and Schendorf. 2,948,378.

Schild, Karl, to O. Stieber. Overload releasing clutch. 2,948,373, 8–9–60, Cl. 192—56.

Schindler, Walter, to Geigy Chemical Corp. New N-heterocyclic compounds. 2,948,718, 8–9–60, Cl. 260—239.

Schindler, Walter, and F. Häfliger, to Geigy Chemical Corp. N-substituted azepines and dihydro-azepines. 2,948,719, 8–9–60, Cl. 260—239.

Schindler, Walter, and F. Häfliger, to Geigy Chemical Corp. N-heterocyclic compounds. 2,948,732, 8–9–60, Cl. 260—294.3.

Schirp, Hubert: *See*—
Blaser, Bruno, Schirp, and Stein. 2,948,750.
Blaser, Bruno, Stein, and Schirp. 2,948,735.
Blaser, Bruno, Stein, and Schirp. 2,948,737.

Schliephacke, Fridtjof F., to A. Lorenz. Adjustable reclining chair. 2,948,331, 8–9–60, Cl. 155—106.

Schlumberger Well Surveying Corp.: *See*—
Cousseau, Maurice A. 2,948,846.

Schmahl, Josef: *See*—
Roelig, Hermann, and Schmahl. 2,948,147.

Schmerling, Louis, to Universal Oil Products Co. Preparation of aromatic amines. 2,948,755, 8–9–60, Cl. 260—581.

Schneider, Charles E.: *See*—
Neumann, Karl L., and Schneider. 2,948,808.

Schneider, Günther, and A. Boettcher, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Tungsten/rhenium thermocouples. 2,948,766, 8–9–60, Cl. 136—5.

Schneider, Hans, to Sulzer Frères, Société Anonyme. Casting mold and method of casting carbon-containing alloys. 2,948,034, 8–9–60, Cl. 22—216.5.

Schnell, Hermann: *See*—
Windemuth, Erwin, Schnell, and Bayer. 2,948,691.

Schnyder, Hans, to Gesellschaft der Ludw. von Roll'schen Eisenwerke AG. Method of and mechanism for the actuation of a quick-action shut-off device for pressure-pipe lines. 2,948,290, 8–9–60, Cl. 137—10.

Schoebel, Konrad W., and W. T. Selsted, to Ampex Corp. Magnetic tape apparatus. 2,948,488, 8–9–60, Cl. 242—75.43.

Schoepboerster, Leroy J.: *See*—
Anderson, Aldine J., and Schoepboerster. 2,948,005.

Schriner, John E., C. R. Masters, and B. T. Czacherski, to The Eagle-Picher Co. Flocking mechanism and method. 2,948,633, 8–9–60, Cl. 117—30.

Schroeder, Juel P., to Union Carbide Corp. Method for polymerizing styrene and acrylonitrile in the presence of polybutadiene and styrene-acrylonitrile copolymer latices and product obtained thereby. 2,948,703, 8–9–60, Cl. 260—45.5.

Schuck, Oscar H., to Minneapolis-Honeywell Regulator Co. Angle of attack indicating device. 2,948,149, 8–9–60, Cl. 73—180.

Schueler, Arthur W., E. J. Funk, and L. W. Mecklenborg, to Precision Welder & Flexopress Corp. Magnetic force resistance welders and method of controlling the phase relation of the magnetic force applied to the electrodes with reference to the phase relation of the welding current. 2,948,804, 8–9–60, Cl. 219—86.

Schultz, Forrest O. E., to Midland-Ross Corp. Fluid suspension system for vehicles. 2,948,549, 8–9–60, Cl. 280—124.

Schultz, Forrest O. E., to Midland-Ross Corp. Slack adjuster. 2,948,558, 8–9–60, Cl. 287—53.

Schultz, Roy M., to D. A. Freeman. Collar molding means. 2,948,441, 8–9–60, Cl. 223—52.1.

Schuls, Edward A.: *See*—
Russell, Charles R., and Schuls. 2,948,006.

Schütz, Erwin, to Kammgarnspinnerei Kaiserslautern. Method and apparatus for processing textile fibers. 2,948,025, 8–9–60, Cl. 19—157.

Schütz, Erwin, to Kammgarnspinnerei Kaiserslautern. Apparatus for dyeing slivers. 2,948,187, 8–9–60, Cl. 68—187.

Schwartz, Ira. Strand processing. 2,948,133, 8–9–60, Cl. 66—201.

Schwitzer Corp.: *See*—
Troyer, William J. 2,948,129.

Scott, Donald W., to Pass & Seymour, Inc. Pull chain mechanism for box mounted lamp holder. 2,948,786, 8–9–60, Cl. 200—51.15.

Scott & Fetzer Co., The: *See*—
Hammink, Niles H. 2,948,354.
MacFarland, Charles H. 2,948,091.

Scott, Harold E. B., to Vickers Ltd. Doctors for paper-making and other machines. 2,948,012, 8–9–60, Cl. 15—256.5.

Scott & Williams, Inc.: *See*—
McDonough, John J. 2,948,130.

Scully, Lawrence J. Cutter control means for cutting recording grooves. 2,948,783, 8–9–60, Cl. 179—100.4.

Seallon Metal Fabricators: *See*—
Capuano, Carmen J. 2,948,423.

Seaquist, James J.: *See*—
Fjellstedt, Thorsten A., Jones, Kowalski, and Seaquist. 2,948,794.

Searle, G. D., & Co.: *See*—
Baran, John S. 2,948,740.

Seay, Perry A., to Reeves Instrument Corp. Tangent computer circuit. 2,948,474, 8–9–60, Cl. 235—197.

Sedgfield, Hugh B., to The Sperry Gyroscope Co. Ltd. Gyroscopically stabilized platforms. 2,948,157, 8–9–60, Cl. 74—5.34.

Seeburg Corp., The: *See*—
Kenney, Mahlon W. 2,948,539.

Seibert, Ralph S., Jr., to Radio Corp. of America. Article orienting and stacking device. 2,948,419, 8–9–60, Cl. 214—66.

Selsted, Walter T.: *See*—
Schoebel, Konrad W., and Selsted. 2,948,488.

Semicon Inc.: *See*—
Weise, Erwin K. 2,948,799.

Servomechanisms, Inc.: *See*—
Meyer, Franklin. 2,948,152.

Shaw, Robert F., to United States of America, Army. Electric blanket. 2,948,802, 8–9–60, Cl. 219—46.

Shawinigan Chemicals Ltd.: *See*—
Johnson, Herbert S., and Andersen. 2,948,587.

Shell, Haskiel R., to United States of America, Interior. Impact-resistant ceramics from synthetic fluoramphiboles and processes of making same. 2,948,629, 8–9–60, Cl. 106—39.

Shelton, Luther L., to Industrial Research Co. Fluid pump. 2,948,230, 8–9–60, Cl. 103—123.

Shenango China, Inc.: *See*—
Tomkins, David E. 2,948,301.

Sheppard, Richard H. Plow bottom. 2,948,346, 8–9–60, Cl. 172—754.

Shields, Walter A. Apparatus for cleaning vials and inserting a plunger into one end of each cleaned vial. 2,948,004, 8–9–60, Cl. 15—4.

Shils, Lee H., to ACF Industries, Inc. Doorway corner construction. 2,948,026, 8–9–60, Cl. 20—11.

Shockey, Lovell, to National Malleable and Steel Castings Co. Tie rod for concrete block. 2,948,084, 8–9–60, Cl. 50—426.

Shoemaker, Richard N., to Chas. Pfizer & Co., Inc. Synthesis of 2-keto-L-gulonic acid. 2,948,659, 8–9–60, Cl. 195—47.

Shuman, Abraham. Presser foot. 2,948,242, 8–9–60, Cl. 112—235.

Siccama, Nicholas B., and W. L. Wirbelauer, deceased (by D. J. Chapman and H. E. Hasselmann, executors). Skin coloring compositions. 2,948,657, 8–9–60, Cl. 167—90.

Siebert, Arthur, and K. Renner, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Pigment dyestuffs. 2,948,715, 8-9-60, Cl. 260—204.

Sierra Metals Corp.: *See*—
Thielemann, Rudolf H. 2,948,606.

Signal-Stat Corp.: *See*—
Hollins, Jesse R. 2,948,832.

Silberberg, Melvin: *See*—
D'Alello, Gaetano F., and Silberberg. 2,948,710.

Silentbloc Ltd.: *See*—
Hutton, Philip C. 2,948,502.

Silvestri, Giuliana: *See*—
Muench, Werner, Notarbartolo, Silvestri, and Ruotl. 2,948,762.

Sim, Alan A., to Talon, Inc. Slide fastener. 2,948,030, 8-9-60, Cl. 24—205.11.

Simmons Co.: *See*—
Hansen, Francis W. 2,948,577.

Simonic, Joseph K. Mason's line holding device. 2,948,065, 8-9-60, Cl. 33—85.

Simpson, Alexander B.: *See*—
West, De Witt H., Townshend, and Simpson. 2,948,525.

Simpson, Warren O.: *See*—
Heidergott, Harry W., and Simpson. 2,948,304.

Sinclair Refining Co.: *See*—
Case, Everett N., and Koncos. 2,948,675.

Sing, Daniel Y., and A. Banas, to Bell Aircraft Corp. Floating anchor nut assembly with flange construction to minimise heat transfer. 2,948,316, 8-9-60, Cl. 151—41.7.

Singer Mfg. Co., The: *See*—
Enos, John P. 2,948,244.
Hacklander, Hans. 2,948,243.

Singleback, George W. to Radio Corp. of America. Color killer system. 2,948,774, 8-9-60, Cl. 178—5.4.

Sisk, Lulo E.: *See*—
Sisk, Martin A. 2,948,399.

Sisk, Martin A., deceased; L. E. Sisk, executrix. Surface drains. 2,948,399, 8-9-60, Cl. 210—166.

Sisselman, Irving, and J. Gallin. Disposable strainer cups for coffee percolators. 2,948,212, 8-9-60, Cl. 99—310.

Sitterly, Charles K.: *See*—
Gill, Harvey J., Jr., Sitterly, and Preu. 2,948,027.

Skinner, Glenn S.: *See*—
Bicking, John B., Skinner, and Lovett. 2,948,723.

Slater, N., Co., Ltd.: *See*—
Pickard, Jack. 2,948,138.

Sloboda, Gustav, and C. Weissenstein. Arrangements for vise jaws. 2,948,172, 8-9-60, Cl. 81—38.

Slot, Willem: *See*—
Revallier, Leonardus J., and Slot. 2,948,602.

Smalter, Donald J., and R. E. Tuttle, to International Minerals & Chemical Corp. Process for the manufacture of dicalcium phosphate. 2,948,500, 8-9-60, Cl. 23—109.

Smedslund, Tor H.: *See*—
Sullivan, Vincent A., Jr., and Smedslund. 2,948,683.

Smiri, Richard L., to Borg-Warner Corp. Hydrodynamic coupling. 2,948,226, 8-9-60, Cl. 103—115.

Smith, A. O., Corp.: *See*—
Carstens, Fred A. 2,948,061.
Dennis, Edward D. 2,948,277.
Hilderbrand, James B. 2,948,422.
Welindt, Theodore O. 2,948,325.

Smith, Edward A., to Raymond International Inc. Combustible fuel operated pile driving hammers and the like. 2,948,122, 8-9-60, Cl. 61—76.

Smith, Frederick W., to North American Philips Co., Inc. Mode ellipticity correcting device. 2,948,865, 8-9-60, Cl. 333—21.

Smith, Howard B. Stenographic machine keyboards. 2,948,380, 8-9-60, Cl. 197—98.

Smith, Kenneth W. Combined rocket and ram-jet engine. 2,948,112, 8-9-60, Cl. 60—35.6.

Smith, Lester L. Shelf and supports therefor. 2,948,405, 8-9-60, Cl. 211—90.

Smith, Merton L., to American Optical Co. Television receivers. 2,948,891, 8-9-60, Cl. 340—369.

Smith, Paul E., Jr., to Conval Corp. Electrical valve positioner. 2,948,295, 8-9-60, Cl. 137—487.5.

Smith, Paul E., Jr., and H. A. Dudler, to Conval Corp. Motor control for positioning device. 2,948,839, 8-9-60, Cl. 318—29.

Smith, Robert D. Snowball maker and launcher. 2,948,275, 8-9-60, Cl. 124—27.

Smith, Robert W., and R. A. Vaughan, to Dresser Industries, Inc. Interlock and control system for the elevator of a mechanical parking garage. 2,948,421, 8-9-60, Cl. 214—16.1.

Smith, Robert W., and R. A. Vaughan, to Dresser Industries, Inc. Receptacle dumping mechanism. 2,948,426, 8-9-60, Cl. 214—314.

Smith, Sydney S., to Union Tank Car Co. Storage arrangement for highly volatile liquids. 2,948,294, 8-9-60, Cl. 137—263.

Smith, Thomas R., to The Maytag Co. Wobble agitator restraining assembly. 2,948,128, 8-9-60, Cl. 64—10.

Smits, Wytse B., to Smitsvonk N.V. Device for igniting gaseous or liquid fuels. 2,948,824, 8-9-60, Cl. 313—130.

Smitsvonk N.V.: *See*—
Smits, Wytse B. 2,948,824.

Snia Viscosa Societa Nazionale Industria Applicazioni Viscosa S.p.A.: *See*—
Muench, Werner, Notarbartolo, Silvestri, and Ruotl. 2,948,762.

Snoddy, Leland B.: *See*—
Beams, Jesse W., and Snoddy. 2,948,572.

Snow, Kenneth T.: *See*—
Luthi, Robert. 2,948,165.

Societe d'Etudes et de Recherches Techniques: *See*—
Quercia, Marcel. 2,948,134.

Societe d'Exploitation des Materiels Hispano-Suisa: *See*—
Besiler, Jacques P. J., Cotadse, and Chaffiotte. 2,948,114.

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
de Jurquet de la Salle d'Anfreville, Louis M. G., Bertin, and Kadosch. 2,948,148.

Societe Tunlet & Co.: *See*—
Douchet, Eugene. 2,948,648.

Society JOP: *See*—
Douchet, Eugene. 2,948,648.

Socony Mobil Oil Co., Inc.: *See*—
Bonner, Tom W., and Caldwell. 2,948,811.
Caldwell, Richard L., and Turner. 2,948,810.

Somlyody, Arpad, to Burroughs Corp. Electron beam clearing and resetting circuits. 2,948,829, 8-9-60, Cl. 315—8.5.

Sonder, Gerhard, to General Electric Co. Gas turbine rotor. 2,948,505, 8-9-60, Cl. 253—39.15.

Sorvoll, Ivan, Inc.: *See*—
Blum, Josef. 2,948,100.

Soumeral, Henri: *See*—
Nicholas, Andrew J., and Soumeral. 2,948,458.

Southern Shoe Machinery Co.: *See*—
Hoffman, Howard H. 2,948,002.

Spang, William F., to Needham Mfg. Co. Inc. Strip severing mechanism. 2,948,016, 8-9-60, Cl. 17—32.

Spano, Anthony T. Razor hone with magnetic body. 2,948,167, 8-9-60, Cl. 76—82.

Sparrendahl, Gunnar E. W., to Telefonaktiebolaget L M Ericsson. Electronic register. 2,948,781, 8-9-60, Cl. 179—18.

Speakman Co., The: *See*—
Fraser, James. 2,948,300.
Fraser, James. 2,948,477.

Spear Products, Inc.: *See*—
Wolfe, Robert A. 2,948,537.

Spence, Robert A.: *See*—
Reid, John B., and Spence. 2,948,001.

Sperry Gyroscope Co. Ltd., The: *See*—
Sedgfield, Hugh B. 2,948,157.

Sperry Rand Corp.: *See*—
Brand, Frederick B., and Chadwick. 2,948,245.
Curry, Robert S., Jr. 2,948,494.
Joline, Everett S. 2,948,496.
Kraus, Allan D. 2,948,518.
Lawrence, Joseph D., Jr. 2,948,883.

Sperry Rand Corp., Ford Instrument Co. Div.: *See*—
Westheimer, Norbert. 2,948,472.

Spindler, Herbert P.: *See*—
Rowe, George L., and Spindler. 2,948,544.

Sprague Electric Co.: *See*—
Obenhaus, Victor M. 2,948,838.
Ruscito, Anthony J., and May. 2,948,770.

Spray Products Corp.: *See*—
Orr, Charles P. 2,948,595.

Staehle, Henry C.: *See*—
Merrill, Stewart H., Robertson, and Staehle. 2,948,610.

Stalker Corp.: *See*—
Clarke, Daniel J. 2,948,197.

Stameson, Spiro A., to Hughes Aircraft Co. Cavity resonator circuit. 2,948,858, 8-9-60, Cl. 330—56.

Stamicarbon N.V.: *See*—
Oele, Adriaan P., Muytjens, and Goris. 2,948,764.
Revallier, Leonardus J., and Slot. 2,948,602.

Stamler, W. R., Corp., The: *See*—
Stamler, William R., and Miller. 2,948,235.

Stamler, William R., and L. W. Miller, to The W. R. Stamler Corp. Car shifting apparatus having combined car-advancing and car-retarding actions. 2,948,235, 8-9-60, Cl. 104—162.

Stamm, Heinrich, to Eta A.G., Ebauchesfabrik. Bearing means for the rotatable winding weight of selfwinding watch. 2,948,573, 8-9-60, Cl. 308—197.

Standard Car Truck Co.: *See*—
Williams, Ray C. 2,948,528.

Standard Oil Co. (Indiana): *See*—
Austin, Robert J., Grutsch, and Mallatt. 2,948,677.
Brehm, Allen E. 2,948,598.
Brennan, Harry M. 2,948,672.
Fields, Ellis K. 2,948,680.

Standard Oil Co., (Ohio), The: *See*—
Applequist, Hugh D. 2,948,144.
Belden, Sarah H. 2,948,597.
Milberger, Ernest C., and Kinneman. 2,948,681.
Pruitt, William J. 2,948,143.
Zimmerman, Marlin U., Jr. 2,948,142.

Standard Parts Co., The: *See*—
Stanton, Arthur H., Jr., and Noble. 2,948,169.

Standard-Vacuum Oil Co.: *See*—
Kuraeff, William A. 2,948,306.

Stansbury, Benjamin H., Jr.: *See*—
Teague, Walter D., Jr., and Stansbury. 2,948,430.

Stanton, Arthur H., Jr., and L. D. Noble, to The Standard Parts Co. Box jigs and improved methods of forming the same. 2,948,169, 8-9-60, Cl. 77—62.

Starr, George B. Animated toy. 2,948,081, 8-9-60, Cl. 46—92.

States, George V., to Brooklyn Products, Inc. Hanger cover. 2,948,448, 8-9-60, Cl. 223—98.

Statham Instruments, Inc.: *See*—
Di Giovanni, Mario. 2,948,873.

Statham Laboratories, Inc.: *See*—
Stedman, Cecil K. 2,948,153.

Stedman, Cecil K., to Statham Laboratories, Inc. Angular accelerometer. 2,948,153, 8-9-60, Cl. 73—516.

Steele, Dudley M. Trouser hangers. 2,948,406, 8-9-60, Cl. 211—99.

Steele, Homer M. Gutter screen. 2,948,083, 8-9-60, Cl. 50—5.

Stein, Werner: *See*—
Blaser, Bruno, Schirp, and Stein. 2,948,750.
Blaser, Bruno, Stein, and Schirp. 2,948,735.
Blaser, Bruno, Stein, and Schirp. 2,948,737.

Steinbach, Thomas M.: *See*—
Kallman, Robert I., Steinbach, and Stoming. 2,948,575.

Stephan Chemical Co., The: *See*—
Sullivan, Vincent A., Jr., and Smedslund. 2,948,683.

Stephens, Joe F., to General Electric Co. Electric discharge device. 2,948,827, 8-9-60, Cl. 313—318.

Stevens, William D.: *See*—
Koch, Paul H., Stevens, and Wiener. 2,948,267.

Stieber, Ortwin: *See*—
Schild, Karl. 2,948,373.

Stoddard, Jessie S. Dress form. 2,948,445, 8-9-60, Cl. 223—68.

Stoecker, Milton. Bale stacker device. 2,948,420, 8-9-60, Cl. 214—9.

Stoelting, Herman O., to McGraw-Edison Co. Overvoltage protective gaps. 2,948,831, 8-9-60, Cl. 315—36.

Stoming, Robert F.: *See*—
Kallman, Robert I., Steinbach, and Stoming. 2,948,575.

Stone, Billy R. Throttle and gear control for outboard motor. 2,948,163, 8-9-60, Cl. 74—472.

Stribley, Henry: *See*—
Rupert, Samuel J. 2,948,267.

Stoll, Willy: *See*—
Litvan, Franz, and Stoll. 2,948,754.

Stuart-Williams, Raymond, to Telemeter Magnetics, Inc. Memory apparatus. 2,948,885, 8-9-60, Cl. 340—174.

Stuehmer, Werner, and S. Funke, to Kali-Chemi Aktiengesellschaft. Basic esters of α-alkyl phenyl acetic acids and derivatives thereof, and a process of making same. 2,948,746, 8-9-60, Cl. 260—477.

Stutz, Hansruedi: *See*—
Haldemann, Heins, and Stutz. 2,948,840.

Suderow, George E., to De Long Corp. Structure including jack and mounting therefor. 2,948,119, 8-9-60, Cl. 61—46.5.

Suderow, George E., to De Long Corp. Supporting leg assembly for marine platform. 2,948,120, 8-9-60, Cl. 61—46.5.

Sulkowski, Thaddeus A.: *See*—
Collum, Samuel J., and Sulkowski. 2,947,991.

Sullivan, John J. Submarine deck and missile-launching construction. 2,948,246, 8-9-60, Cl. 114—16.

Sullivan, Vincent A., Jr., and T. H. Smedslund, to The Stephan Chemical Co. Corrosion inhibition of dimethyl sulfoxide. 2,948,683, 8-9-60, Cl. 252—75.

Sulzer Frères, Société Anonyme: *See*—
Schneider, Hans. 2,948,034.

Sun Oil Co.: *See*—
Kennedy, Robert M. 2,948,711.

Sunbeam Corp.: *See*—
Jepson, Ivar. 2,948,063.
Jepson, Ivar. 2,948,088.

Superior Oil Co., The: *See*—
Boyd, Harvey W. 2,948,833.

Surino, Alphonse: *See*—
Durant, Leonard G., and Surino. 2,948,336.

Surrett, Edward J.: *See*—
Cramer, Charles H., Surrett, and Swed. 2,948,176.

Suttle, Ward C., to Bendix Aviation Corp. Fuel supply system. 2,948,273, 8-9-60, Cl. 123—140.

Svenska Rotor Maskiner Aktieboiag: *See*—
Ahlen, Karl G. 2,948,228.

Swanson, Frank R., Roll paper dispensing apparatus. 2,948,451, 8-9-60, Cl. 225—38.

Swanson, Joseph P., and G. E. Tallmadge, to Levinthal Electronic Products, Inc. Electrical pulse-forming. 2,948,855, 8-9-60, Cl. 328—67.

Swanson, Kenneth P. Lint sealing assembly for textile drafting rolls. 2,948,024, 8-9-60, Cl. 19—142.

Swarofsky, Walter, to Voigtlander A.G. Photographic reflex camera. 2,948,206, 8-9-60, Cl. 95—64.

Swed, James P.: *See*—
Cramer, Charles H., Surrett, and Swed. 2,948,176.

Sweeney, Victor D., and W. U. Kaji, to Metal Pumping Services, Inc. Pump for molten metal. 2,948,524, 8-9-60, Cl. 266—38.

Swift & Co.: *See*—
Anderson, Thomas R. 2,948,623.
Bonami, Ernest. 2,948,093.
Todd, William E. 2,948,385.

Sylvania Electric Products Inc.: *See*—
Hay, Warren H., and F. N. Hansen. 2,948,820.
Wasserman, Moe. 2,948,823.

Sylvester, Kenneth D., to Ben C. Gerwick Inc. Apparatus for making hollow reinforced concrete bodies. 2,948,042, 8-9-60, Cl. 25—30.

Symons Clamp & Mfg. Co.: *See*—
Imonetti, John E. 2,948,045.
Imonetti, John E. 2,948,046.

Syntron Co.: *See*—
Gilbert, Vernon J. 2,948,527.

Szpilfogel, Stefan A.: *See*—
Reichstein, Tadeus, Szpilfogel, and Van Dorp. 2,948,738.

Tallmadge, Gene E.: *See*—
Swanson, Joseph P., and Tallmadge. 2,948,855.

Tally Register Corp.: *See*—
Levin, Eugene A. 2,948,161.

Talon, Inc.: *See*—
Clarke, Frank W. 2,948,040.
Sim, Alan A. 2,948,039.

Tamsberg, Louise. Delinting sweep. 2,948,003, 8-9-60, Cl. 15—1.3.

Tanaka, Isokazu, and S. Kurimura, to Kabushiki-Kaisha Koden Seisakusho. Direct reading type measuring system for time difference or phase difference between two received signal waves. 2,948,856, 8-9-60, Cl. 328—110.

Tanguay, Florent. Fountain toothbrush. 2,948,007, 8-9-60, Cl. 15—137.

Tapp, Leonard L. Tire pressure indicator. 2,948,256, 8-9-60, Cl. 116—34.

Tate, Bryce E.: *See*—
Bayley, Abraham, and Tate. 2,948,633.

Tawney, Pliny O., to United States Rubber Co. Maleimide-modified oils. 2,948,693, 8-9-60, Cl. 260—21.

Teague, Walter D., Jr., and B. H. Stansbury, Jr., to W. R. Grace and Co. Ice bucket. 2,948,430, 8-9-60, Cl. 220—9.

Telefonaktiebolaget L M Ericsson: *See*—
Bergmann, Anders K., Brynildsen, Borgstrom, and Goos. 2,948,780.
Sparrendahl, Gunnar E. W. 2,948,781.

Telefunken G.m.b.H.: *See*—
Kuehl, Werner. 2,948,889.

Telemeter Magnetics, Inc.: *See*—
Stuart-Williams, Raymond. 2,948,885.

Teves, Alfred, Maschinen- und Armaturenfabrik KG.: *See*—
Kubera, Gerhard. 2,948,052.

Texaco Development Corp.: *See*—
Bees, Harry V., and Kemp. 2,948,679.

Texaco Inc.: *See*—
Riordan, Michael D., Fontaine, and Ryer. 2,948,745.

Texas Instruments Inc.: *See*—
Runyan, Walter R. 2,948,835.

Textile Machine Works: *See*—
Levin, Nathan. 2,948,131.

Thatcher, Russell S., to Dresser Industries, Inc. Apparatus for producing seismic records. 2,948,880, 8-9-60, Cl. 340—15.

Thermoid Co.: *See*—
McCluer, John D. 2,948,641.

Thiele, Edward G. Bag for flour and the like. 2,948,457, 8-9-60, Cl. 229—62.

Thiele, Frederik A. J., to Lever Brothers Co. Disinfectants and deodorant soap composition. 2,948,684, 8-9-60, Cl. 252—107.

Thielemann, Rudolf H., to Sierra Metals Corp. High temperature nickel base alloy. 2,948,606, 8-9-60, Cl. 75—171.

Thomas, Arthur N., Jr.: *See*—
Dunsworth, Lorne C., and Thomas. 2,948,115.

Thomas, David G. A.: *See*—
Phillips, James W., Thomas, and Walton. 2,948,469.

Thomas, George N.: *See*—
Berkley, Carl, Mansberg, and Thomas. 2,948,470.

Thomas, Orrin H., to J. G. Sarieks, Ignition timer. 2,948,785, 8-9-60, Cl. 200—30.

Thomas, Robert M.: *See*—
Eby, Lawrence T., and Thomas. 2,948,700.

Thompson, Robert H., to Harris-Intertype Corp. Plate cylinder register mechanism. 2,948,216, 8-9-60, Cl. 101—248.

Thorburn, David H., to The Powers Regulator Co. Variable constant flow device. 2,948,296, 8-9-60, Cl. 137—517.

Thuresson Af Ekenstam, Bo: *See*—
Furendal, Allan R. B., Thuresson Af Ekenstam, and von Pfeandt. 2,948,634.

Tichenor, Robert L.: *See*—
Euler, Robert D., and Tichenor. 2,948,584.

Tiunerman, George A. Method of forming a self-clenching and sealing fastener. 2,948,062, 8-9-60, Cl. 29—513.

Todd, William E., to Swift & Co. Screw conveyor apparatus. 2,948,385, 8-9-60, Cl. 198—213.

Toedtman, John A., to Jasper Blackburn Corp. Electrical connectors. 2,948,878, 8-9-60, Cl. 339—265.

Toepel, Florian C. Revolving hearth for a combustion chamber. 2,948,237, 8-9-60, Cl. 110—13.

Tokheim Corp.: *See*—
Rittenhouse, Howard E., and Hinds. 2,948,307.

Toledo Scale Corp.: *See*—
Yeasting, Maynard C. 2,948,463.

Tomaselli, Dominick S. Rectilinear guide mechanism for phonograph pickup arms. 2,948,538, 8-9-60, Cl. 274—23.

Tomkins, David E., to Shenango China, Inc. Modular circuit segment structure. 2,948,301, 8-9-60, Cl. 138—81.

Tope, Peter. Body restrainer. 2,948,278, 8-9-60, Cl. 128—134.

Tousignant, William F.: *See*—
Walles, Wilhelm E., and Tousignant. 2,948,708.

Tousignant, William F., W. E. Walles, and T. Houtman, Jr., to The Dow Chemical Co. Hair setting composition containing a ring substituted N-vinyl-2-oxazolidinone polymer. 2,948,656, 8-9-60, Cl. 167—87.1.

Townshend, Stanley C.: *See*—
West, De Witt H., Townshend, and Simpson. 2,948,525.

Trane Co., The: *See*—
Frank, Arne. 2,948,461.
Johnsen, Clifford N., and Neubauer. 2,948,498.

Trico Products Corp.: *See*—
Oishei, John R., and Deibel. 2,948,010.

Trifonoff, George T., to Boeing Airplane Co. Aircraft flap mechanism. 2,948,493, 8-9-60, Cl. 244—42.

Troyer, William J., to Schwitzer Corp. Elliptical vibration damper. 2,948,129, 8-9-60, Cl. 64—11.

Tullis, James L., to Protein Foundation, Inc. Separation centrifuge. 2,948,462, 8-9-60, Cl. 233—15.

Tung-Sol Electric Inc.: *See*—
Quinn, Halsey P. 2,948,812.

Turco Products, Inc.: *See*—
Pimbley, George H. 2,948,643.

Turecki, Anatole: *See*—
Ghose, Rabindra N., and Turecki. 2,948,895.

Turner, Finis, and E. T. Dillon, to Magnet Cove Barium Corp. Beneficiated clay compositions and method of beneficiating clay. 2,948,678, 8-9-60, Cl. 252—8.5.

Turner, Harold D. Air-supported building. 2,948,286, 8-9-60, Cl. 135—1.

Turner, Stanley E.: *See*—
Caldwell, Richard L., and Turner. 2,948,810.

Tuttle, Raymond E.: *See*—
Smalter, Donald J., and Tuttle. 2,948,590.

Twomey, Dermot: *See*—
Barry, Vincent C., Belton, Conalty, Twomey, O'Sullivan, and Hodel. 2,948,726.

Tyma, Louis S., Jr., and P. E. F. Loew, to Mishle-Goss-Dexter, Inc. Constant backlash gearing for a printing couple. 2,948,215, 8-9-60, Cl. 101—216.

UCLAF: *See*—
Amiard, Gaston, and Vellux. 2,948,714.

Uglietta, Salvatore R. Interlocking siding. 2,948,367, 8-9-60, Cl. 189—96.

Ulm, Reign C.: *See*—
Bodley, Robert W., Ulm, and Wilkin. 2,948,432.

Union Carbide Corp.: *See*—
Bailiff, Fred H. 2,948,021.
Bender, Howard L., and Phillips. 2,948,688.
Johnson, Richard E., Darland, Grulke, Caboon, and Schaefer. 2,948,767.
Maloy, Arthur L., and Boggs. 2,948,183.
Schroeder, Juel P. 2,948,703.
Wagener, Johann C. S. 2,948,607.
Wilson, Jack L., Rockefeller, and Butler. 2,948,803.

Union Machine Co.: *See*—
O'Neill, Paul J., Jr. 2,948,661.

Union Tank Car Co.: *See*—
Bodley, Robert W., Ulm, and Wilkin. 2,948,432.
Smith, Sydney S. 2,948,294.

United Aircraft Corp.: *See*—
Beggs, John C., Carrier, and Farkas. 2,948,475.

United-Carr Fastener Corp.: *See*—
Arnold, Graham A. 2,948,368.

United States Borax & Chemical Corp.: *See*—
Brotherton, Robert J. 2,948,751.

United States of America
Army: *See*—
Babb, David D. 2,948,861.
Bennett, Arthur S. 2,948,220.
Evans, Paul I., and Ransom. 2,948,192.
Mattiat, Oskar E. 2,948,867.
Shaw, Robert F. 2,948,802.
Woodward, Kenneth E. 2,948,126.
Atomic Energy Commission: *See*—
Beams, Jesse W., and Snoddy. 2,948,572.
Moore, Raymond H. 2,948,586.
Interior: *See*—
Shell, Haskiel B. 2,948,629.
Navy: *See*—
Bess, Leon. 2,948,854.
Daly, Thomas A., and Kowalyahyn. 2,948,248.
Foote, Vernon S., Jr. 2,948,562.
Fox, Robert B. 2,948,690.
Kendall, James M. 2,948,186.
MacKenzie, William M. 2,948,625.
Pearson, John, and Rinehart. 2,948,218.
Rapp, Winfred F. 2,948,219.

United States Rubber Co.: *See*—
Tawney, Pliny O. 2,948,693.

United Transformer Corp.: *See*—
Craige, Theodore L. 2,948,871.

Universal Oil Products Co.: *See*—
Purse, Frank V., and Young. 2,948,166.
Schmerling, Louis. 2,948,755.

Urchick, Demetrius: *See*—
Rubens, Louis C., Griffin, and Urchick. 2,948,665.
Rubens, Louis C., and Urchick. 2,948,664.

VEB Bakutronik Dresden: *See*—
Von Ardenne, Manfred. 2,948,459.

Vahlstrom, Carl A., to The American Hardware Corp. Means for retaining a lock cylinder in a panel. 2,948,141, 8-9-60, Cl. 70—370.

Valles, James, to Independent Lock Co. Lock display device. 2,948,403, 8-9-60, Cl. 211—49.

Van Buren Machine Corp.: *See*—
Frank, Anton R., and Giles. 2,948,394.

Van de Gent, Maurice L. Apparatus for receiving and stacking bags. 2,948,530, 8-9-60, Cl. 271—68.

Van Dorp, David A.: *See*—
Reichstein, Tadeus, Szpilfogel, and Van Dorp. 2,948,738.

Van Egmond, Albert J. L., and P. C. Veenstra, to North American Philips Co., Inc. Mass spectrometer. 2,948,809, 8-9-60, Cl. 250—41.9.

Van Hoek, Cornelis: *See*—
De Whalley, Christopher H., and Van Hoek. 2,948,668.

Van Horn, John A., P. E. Blemiller, and J. H. Reese, to Hamilton Watch Co. Motor for electric watches. 2,948,-821, 8-9-60, Cl. 310—27.

Van Santen, Johannes G., and G. Diemer, to North American Philips Co., Inc. Solid state image intensifier. 2,948,816, 8-9-60, Cl. 250—213.

Van Vessem, Jan C., and T. Le Grand, to North American Philips Co., Inc. Method of manufacturing electrode systems comprising semi-conductive bodies, more particularly crystal diodes or transistors. 2,948,050, 8-9-60, Cl. 29—25.3.

Van Wagenen, Donald: *See*—
Jackson, Ralph H., and Van Wagenen. 2,948,650.

Vaughan, Robert A.: *See*—
Smith, Robert W., and Vaughan. 2,948,421.
Smith, Robert W., and Vaughan. 2,948,426.

Veenstra, Pieter C.: *See*—
Van Egmond, Albert J. L., and Veenstra. 2,948,809.

Vellux, Leon: *See*—
Amiard, Gaston, and Vellux. 2,948,714.

Verdugo, Juan M.: *See*—
Munoz, Juan V. 2,948,490.

Vicik, Otto A., to Gadget-of-The-Month Club, Inc. Ear cleaner and dryer. 2,948,280, 8-9-60, Cl. 128—304.

Vickerys Ltd.: *See*—
Scott, Harold R. B. 2,948,012.

Vodar, Boris: *See*—
Spain, Raymond, Johannin, and Vodar. 2,948,556.

Vogel, Henry A., and R. F. Roach, to Pittsburgh Plate Glass Co. Coating compositions containing alkenyl phenolaldehyde resins and structures prepared therefrom. 2,948,702, 8-9-60, Cl. 260—43.

Voigtlander A.G.: *See*—
Swarotsky, Walter. 2,948,206.

Von Ardenne, Manfred, to VEB Bakutronik Dresden. Ion getter pump. 2,948,459, 8-9-60, Cl. 250—69.

Von Duran, Frederic C.: *See*—
Hoffman, William M. 2,948,288.

Von Fleandt, Brer H. F.: *See*—
Furendal, Allan B. B., Ekenstam, and von Fleandt. 2,948,634.

Waag, Harry O., to General Motors Corp. Plastic article and method of producing same. 2,948,651, 8-9-60, Cl. 154—110.

Wagaman, Merle L., to Fibreboard Paper Products Corp. Window carton. 2,948,390, 8-9-60, Cl. 206—45.21.

Wagener, Johann C. S., to Union Carbide Corp. Tantalum-titanium getter element. 2,948,607, 8-9-60, Cl. 75—174.

Wagner, Rose L.: *See*—
Burg, Anton B., and Wagner. 2,948,689.

Wainer, Eugene, to Horizons Inc. Method of making ceramic dielectric. 2,948,628, 8-9-60, Cl. 106—39.

Walker, Gordon F., to Hoyt Mfg. Corp. Tumbler drive mechanism for dryers. 2,948,068, 8-9-60, Cl. 34—133.

Walker, Jay F., and J. L. Maher, to National Tank Co. Emulsion treating method and means. 2,948,352, 8-9-60, Cl. 183—2.7.

Wall, Alan J., to Clayton Dewandre Co. Ltd. Heat transmitting tubes. 2,948,796, 8-9-60, Cl. 219—9.5.

Walles, Wilhelm E.: *See*—
Tousignant, William F., Walles, and Houtman. 2,948,656.

Walles, Wilhelm E., and W. F. Tousignant, to The Dow Chemical Co. Water-soluble copolymers of ring substituted N-vinyl-2-oxazolidinone. 2,948,704, 8-9-60, Cl. 260—77.5.

Walsh, Bruce E., to Gulf Research & Development Co. Nozzle. 2,948,478, 8-9-60, Cl. 239—405.

Walton, William H.: *See*—
Phillips, James W., Thomas, and Walton. 2,948,469.

Ward, William M., and J. Ashley, to Beckman Instruments, Inc. Spectrophotometric system. 2,948,185, 8-9-60, Cl. 88—14.

Wasserman, Moe, to Sylvania Electric Products Inc. Electroluminescent device. 2,948,823, 8-9-60, Cl. 313—108.

Watson, Dighton L., and F. K. Michaelson. Expansible metal foil package. 2,948,624, 8-9-60, Cl. 99—171.

Watson, John E. Method of making synthetic quarts cat's-eye gem. 2,948,082, 8-9-60, Cl. 49—78.1.

Watts Electric & Mfg. Co.: *See*—
Heller, Robert M. 2,948,036.

Weatherhead Co., The: *See*—
Gill, Vincent A., and Britton. 2,948,553.

Webb, Thomas L. Piston molding core. 2,948,031, 8-9-60, Cl. 22—170.

Weber, Charles W.: *See*—
Barnhart, William S., and Weber. 2,948,741.

Wegner, Robert C.: *See*—
Fabere, Raymond W., and Wegner. 2,948,546.

Weise, Erwin K., to Semicon Inc. Electrical control circuits utilising thermistors. 2,948,799, 8-9-60, Cl. 219—20.

Weissenstein, Carl: *See*—
Sloboda, Gustav, and Weissenstein. 2,948,172.

Welch, Lester M.: *See*—
Ford, Francis P., Jasper, Nelson, and Welch. 2,948,695.

Welcome, Warren W., to Land-Air, Inc. Sweep generators for cathode ray oscillographs. 2,948,857, 8-9-60, Cl. 328—185.

Welex, Inc.: *See*—
Bravenec, Frank, and Huddleston. 2,948,847.

Wellndt, Theodore O., to A. O. Smith Corp. Die construction for forming corrugated sheets. 2,948,325, 8-9-60, Cl. 153—76.

Wells, Robert C.: *See*—
Hodgson, George T., Jr., and Wells. 2,948,101.

Wells, Roger, to Diamond National Corp. Packaging. 2,948,094, 8-9-60, Cl. 53—37.

Wentzel, Robert J. Butter ruler. 2,948,064, 8-9-60, Cl. 31—15.

Werdier, Erick: *See*—
Hanson, Glen N., and Werdier. 2,948,096.

Wessel, Leo B.: *See*—
Neckel, Edmund N., and Wessel. 2,948,071.

West, De Witt H., S. C. Townshend, and A. B. Simpson, to The International Nickel Co., Inc. Reduction kiln. 2,948,525, 8-9-60, Cl. 266—43.

West, Joseph F.: *See*—
Glover, William S., and West. 2,948,439.

Westerbarkey, Lorenz. Method and apparatus for winding and cementing tubes or hose. 2,948,200, 8-9-60, Cl. 93—80.

Western Electric Co., Inc.: *See*—
Born, James H., Drukker, and Runge. 2,948,358.
Coventry, Henry J. 2,948,328.
Eger, Edward F., and Piper. 2,948,086.
Heidergott, Harry W., and Simpson. 2,948,304.
McGraw, George P., Jr. 2,948,261.
Russell, Charles R., and Schuls. 2,948,006.

Westheimer, Norbert, to Sperry Rand Corp., Ford Instrument Co. Division. Amplitude prediction mechanism. 2,948,472, 8-9-60, Cl. 235—186.

Wheaton Glass Co.: *See*—
Glover, William S., and West. 2,948,439.

White, James C., to Eastman Kodak Co. Fibrous tobacco smoke filter elements. 2,948,282, 8-9-60, Cl. 131—208.

White, Warren D., to Cutler-Hammer, Inc. Precision indicating radar system. 2,948,892, 8-9-60, Cl. 343—5.

Wichita Precision Tool Co., Inc.: *See*—
Jackson, Nolan C. 2,948,446.

Wiener, Murray: *See*—
Koch, Paul H., Stevens, and Wiener. 2,948,267.

Wilcox, James R.: *See*—
Albert, Charles G., and Wilcox. 2,948,632.

Wilkin, George D.: *See*—
Anslow, Winston K., and Wilkin. 2,948,660.

Wilkin, Lester A.: *See*—
Bodley, Robert W., Ulm, and Wilkin. 2,948,432.

Willems, Ebertus, and E. Netten, to North American Philips Co., Inc. Circuit arrangement comprising a phototransistor. 2,948,815, 8-9-60, Cl. 250—211.

Williams, Frederic C., and T. Kilburn, to International Business Machines Corp. Electrical storage apparatus. 2,948,830, 8-9-60, Cl. 315—12.

Williams, Howard F., and A. L. Minutoli, to Kestenman Bros. Mfg. Co. Bracelet linkage with detachable pivots. 2,948,110, 8-9-60, Cl. 59—79.

Williams, John L. Wedge gate valve. 2,948,503, 8-9-60, Cl. 251—85.

Williams, Ray C., to Standard Car Truck Co. Stabilized spring group for railway car truck. 2,948,528, 8-9-60, Cl. 267—9.

Wilson, Allen B., to Acme Steel Co. Apparatus for distributing barbed metal band. 2,948,049, 8-9-60, Cl. 29—7.1.

Wilson, Jack L., H. E. Rockefeller, and T. E. Butler, to Union Carbide Corp. Electric arc high-alloy metal deposition. 2,948,803, 8-9-60, Cl. 219—74.

Wilson, John H. Combination vehicle and drilling rig frame. 2,948,511, 8-9-60, Cl. 254—166.

Windemuth, Erwin, H. Schnell, and O. Bayer, to Mobay Chemical Co., and to Farbenfabriken Bayer Aktiengesellschaft. High molecular weight polyether urethane polymers. 2,948,691, 8-9-60, Cl. 260—2.5.

Winther, Martin P., and R. C. Russell, to Eaton Mfg. Co. Synchronizing means for torque transmitting device. 2,948,370, 8-9-60, Cl. 192—4.

Winthrop, Stanley O., to American Home Products Corp. Sulfonium compounds and their preparation. 2,948,720, 8-9-60, Cl. 260—243.

Wirbelauer, William L.: *See*—
Siccama, Nicholas B., and Wirbelauer. 2,948,657.

Wirsching, Robert J., to Daimler-Benz Aktiengesellschaft. Injection pump for internal combustion engine. 2,948,159, 8-9-60, Cl. 74—55.

Wiszuk, Walter. Magnetic curtain and drapery rods. 2,948,407, 8-9-60, Cl. 211—105.3.

Witt, Edgar C., to Diamond National Corp. Ink fountain. 2,948,217, 8-9-60, Cl. 101—364.

Witt, George A. Propeller. 2,948,254, 8-9-60, Cl. 115—117.

Witte, Roy, to General Time Corp. Mechanism for automatically adjusting clock regulators. 2,948,109, 8-9-60, Cl. 58—109.

Woldring, Egbert: *See*—
Baxter, John C., De Graaf, and Woldring. 2,948,055.

Wolfe, Robert A., to Spear Products, Inc. Record repeater. 2,948,537, 8-9-60, Cl. 274—15.

Wolter, Harry A., to Diamond National Corp. Pulp molding apparatus. 2,948,337, 8-9-60, Cl. 162—392.

Wolter, Harry A., to Diamond National Corp. Tray feeding apparatus. 2,948,434, 8-9-60, Cl. 221—221.

Wood, George. Means for modifying the operating characteristics of internal combustion engines. 2,948,274, 8-9-60, Cl. 123—198.

Wood, Orville T., to Pratt, Read & Co., Inc. Two-part plastic flange. 2,948,180, 8-9-60, Cl. 84—281.

Woodward, Kenneth E., to United States of America, Army. Protective container for electronic assemblies. 2,948,126, 8-9-60, Cl. 62—316.

Woodward, Stephen G., and C. A. Hartman, to Bendix Aviation Corp. Fuel supply system. 2,948,272, 8-9-60, Cl. 123—119.

Worthington Corp.: *See*—
Nicholas, Andrew J., and Soumeral. 2,948,458.

Wright, Clyde E.: *See*—
Ingwer, Carl H., and Wright. 2,948,326.

Wright, Malcolm H.: *See*—
Amsel, Donald, and Wright. 2,948,207.

Wright Mfg. Co.: *See*—
Melgaard, Oscar C. 2,948,211.

Wright, Oscar L., to Pittsburgh Coke & Chemical Co. Process of nitrating aromatic hydrocarbons aided by an aromatic ion exchange resin. 2,948,769, 8-9-60, Cl. 260—646.

Wright, Robert D., to Chicago Rawhide Mfg. Co. Controlled gap seal. 2,948,555, 8-9-60, Cl. 286—11.13.

Wroblewski, Richard E., and H. I. Nolen, to Equipment Mfg., Inc. Rack construction. 2,948,409, 8-9-60, Cl. 211—147.

Wyndham, Gisela A. M. Device for preparing material for stitching into pleats. 2,948,241, 8-9-60, Cl. 112—146.

Yamagami, Yonehisa: *See*—
Berkley, Carl, Mansberg, Thomas, and Yamagami. 2,948,470.

Yamai, Masato: *See*—
Yamamoto, Kinya, and Itokawa. 2,948,179.

Yamamoto, Kinya, and H. Itokawa, to Masato Yamai. Piano and the like musical instruments. 2,948,179, 8-9-60, Cl. 84—193.

Yarger, Milton R. Signal transmitter for automobiles—S.O.S. flasher. 2,948,784, 8-9-60, Cl. 200—28.

Yeasting, Maynard C., to Toledo Scale Corp. Mechanical chart reading device. 2,948,463, 8-9-60, Cl. 235—1.

Yeomans, Arthur S., Jr., to Olin Mathieson Chemical Corp. Firearm ejector mounted on a movable chamber extension. 2,948,075, 8-9-60, Cl. 42—25.

Young, Edward A.: *See*—
Purse, Frank V., and Young. 2,948,166.

Young, James H., to E. I. du Pont de Nemours and Co. Treatment of aluminum surfaces. 2,948,392, 8-9-60, Cl. 206—84.

Young, Leo C.: *See*—
Page, Robert M. 2,948,893.

Zajcew, Mykola, to Engelhard Industries, Inc. Hydrogenation of marine oils. 2,948,742, 8-9-60, Cl. 260—409.

Zakarin, David. Home permanent hair waving devices. 2,948,284, 8-9-60, Cl. 132—9.

Zanow, Andrey L., to National Malleable and Steel Castings Co. Draft gear. 2,948,413, 8-9-60, Cl. 213—43.

Zeman, Ladimir R. Fluid actuated motion translating device. 2,948,460, 8-9-60, Cl. 230—114.

Zimmerman, Marlin U., Jr., to The Standard Oil Co. Apparatus for impelling objects within a pipeline. 2,948,142, 8-9-60, Cl. 73—3.

CLASSIFICATION OF PATENTS

ISSUED AUGUST 9, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 44.4: 2,947,990
46: 2,947,991
2— 196: 2,947,992
243: 2,947,993
4— 6: 2,947,994
2,947,995
176: 2,947,996
5— 13: 2,947,997
77: 2,947,998
256: 2,947,999
10— 1: 2,948,000
12— 18.2: 2,948,001
97: 2,948,002
13— 16: 2,948,765
15— 1.5: 2,948,003
4: 2,948,004
88: 2,948,005
102: 2,948,006
137: 2,948,007
139: 2,948,008
144: 2,948,009
250.27: 2,948,010
250.42: 2,948,011
256.5: 2,948,012
316: 2,948,013
371: 2,948,014
16— 145: 2,948,015
17— 22: 2,948,016
19— 5.7: 2,948,017
2,948,018
47.5: 2,948,019
54: 2,948,581
2,948,582
2,948,583
2,948,584
59: 2,948,020
19— 65: 2,948,021
72: 2,948,022
130: 2,948,023
142: 2,948,024
157: 2,948,025
20— 11: 2,948,026
42: 2,948,027
52.4: 2,948,028
21— 57: 2,948,585
22— 35: 2,948,029
37.2: 2,948,030
170: 2,948,031
193: 2,948,032
202: 2,948,033
214.5: 2,948,034
23— 14.5: 2,948,580
87: 2,948,587
106: 2,948,588
109: 2,948,589
2,948,590
139: 2,948,591
149: 2,948,592
259.1: 2,948,593
24— 9: 2,948,035
73: 2,948,036
2,948,037
157: 2,948,038
205.11: 2,948,039
205.13: 2,948,040
252: 2,948,041
25— 30: 2,948,042
42: 2,948,043
120: 2,948,044
131: 2,948,045
2,948,046
154: 2,948,047
28— 82: 2,948,048
29— 7.1: 2,948,049
25.3: 2,948,050
155.5: 2,948,051
156.7: 2,948,052
157.3: 2,948,053
2,948,054
159.01: 2,948,055
193.5: 2,948,056
227: 2,948,057
2,948,058
427: 2,948,059
429: Re.24,852
454: 2,948,060
463: 2,948,061
513: 2,948,062
30— 43: 2,948,063
31— 15: 2,948,064
33— 85: 2,948,065
33— 211: 2,948,066
212: 2,948,067
34— 123: 2,948,068
35— 8: 2,948,069
36— 2.5: 2,948,070
38— 41: 2,948,071
40— 10: 2,948,072
130: 2,948,073
41— 22: 2,948,074
42— 25: 2,948,075
43— 17: 2,948,076
17.2: 2,948,077
19: 2,948,078
42.4: 2,948,079
54.5: 2,948,080
44— 6: 2,948,594
52: 2,948,595
58: 2,948,596
63: 2,948,597
66: 2,948,598
69: 2,948,599
2,948,600
45— 92: 2,948,081
47— 61: P.P.1,964
P.P.1,965
62: P.P.1,963
P.P.1,966
49— 78.1: 2,948,082
50— 5: 2,948,083
426: 2,948,084
51— 74: 2,948,085
80: 2,948,086
120: 2,948,087
166: 2,948,088
184.3: 2,948,089
198.5: 2,948,090
241: 2,948,091
282: 2,948,092
53— 20: 2,948,601
52— 26: 2,948,093
37: 2,948,094
241: 2,948,095
257: 2,948,096
296: 2,948,097
378: 2,948,098
56— 35: 2,948,099
119: 2,948,100
341: 2,948,101
57— 89: 2,948,102
157: 2,948,103
58— 28: 2,948,104
57.5: 2,948,105
2,948,106
58: 2,948,107
83: 2,948,108
109: 2,948,109
59— 79: 2,948,110
60— 35.5: 2,948,111
35.6: 2,948,112
2,948,113
2,948,114
2,948,115
2,948,116
39.72: 2,948,117
52: 2,948,118
61— 46.5: 2,948,119
2,948,120
48: 2,948,121
76: 2,948,122
62— 64: 2,948,123
104: 2,948,124
199: 2,948,125
316: 2,948,126
384: 2,948,127
64— 10: 2,948,128
11: 2,948,129
66— 41: 2,948,130
138: 2,948,131
176: 2,948,132
201: 2,948,133
67— 7.1: 2,948,134
23: 2,948,135
68— 132: 2,948,136
187: 2,948,137
238: 2,948,138
70— 16: 2,948,139
216: 2,948,140
370: 2,948,141
71— 39: 2,948,602
73— 3: 2,948,142
73— 3: 2,948,143
2,948,144
54: 2,948,145
65: 2,948,146
69: 2,948,147
147: 2,948,148
180: 2,948,149
194: 2,948,150
406: 2,948,151
514: 2,948,152
516: 2,948,153
74— 1: 2,948,154
5.34: 2,948,157
5.6: 2,948,155
2,948,156
22: 2,948,158
53: 2,948,159
110: 2,948,160
379: 2,948,161
390: 2,948,162
472: 2,948,163
705: 2,948,164
804: 2,948,165
822: 2,948,166
75— 125: 2,948,603
126: 2,948,604
130: 2,948,605
171: 2,948,606
174: 2,948,607
175.5: 2,948,608
214: 2,948,609
76— 82: 2,948,167
77— 81: 2,948,168
62: 2,948,169
81— 15: 2,948,170
2,948,171
38: 2,948,172
52.4: 2,948,173
129: 2,948,174
154: 2,948,175
83— 53: 2,948,176
155: 2,948,177
84— 1.15: 2,948,178
198: 2,948,179
251: 2,948,180
409: 2,948,181
87— 2: 2,948,182
88— 14: 2,948,183
2,948,184
2,948,185
24: 2,948,186
28.93: 2,948,187
32: 2,948,188
2,948,189
40: 2,948,190
82: 2,948,191
89— 28: 2,948,192
41: 2,948,193
129: 2,948,194
183: 2,948,195
90— 14: 2,948,196
59: 2,948,197
93— 1: 2,948,198
2,948,199
80: 2,948,200
94— 5: 2,948,201
45: 2,948,202
95— 4.5: 2,948,203
31: 2,948,204
53: 2,948,205
54: 2,948,206
75: 2,948,207
89: 2,948,208
2,948,209
96— 33: 2,948,610
35: 2,948,611
66: 2,948,612
91: 2,948,613
109: 2,948,614
2,948,615
98— 38: 2,948,210
40: 2,948,211
99— 48: 2,948,616
52: 2,948,617
71: 2,948,618
100: 2,948,619
2,948,620
128: 2,948,621
130: 2,948,622
169: 2,948,623
99— 171: 2,948,624
210: 2,948,212
100— 99: 2,948,213
101— 3: 2,948,214
216: 2,948,215
248: 2,948,216
264: 2,948,217
102— 67: 2,948,218
78: 2,948,219
86.2: 2,948,220
103— 37: 2,948,221
40: 2,948,222
44: 2,948,223
46: 2,948,224
76: 2,948,225
115: 2,948,226
117: 2,948,227
120: 2,948,228
2,948,229
123: 2,948,230
181: 2,948,231
232: 2,948,232
252: 2,948,233
104— 26: 2,948,234
162: 2,948,235
105— 220: 2,948,236
106— 13: 2,948,625
24: 2,948,626
86.5: 2,948,627
99: 2,948,628
2,948,629
40: 2,948,630
58: 2,948,631
308: 2,948,632
107— 67: Re.24,855
110— 13: 2,948,237
98: Re.24,857
111— 7.4: 2,948,238
32: 2,948,239
112— 25: 2,948,240
146: 2,948,241
235: 2,948,242
256: 2,948,243
260: 2,948,244
114— 16: 2,948,245
2,948,246
2,948,247
21: 2,948,248
208: 2,948,249
115— .5: 2,948,250
6.1: 2,948,251
17: 2,948,252
2,948,253
2,948,254
28: 2,948,255
116— 34: 2,948,256
63: 2,948,257
67: 2,948,258
136.5: 2,948,259
117— 20: 2,948,633
28: 2,948,634
33.5: 2,948,635
46: 2,948,636
47: 2,948,637
100: 2,948,638
104: 2,948,639
119: 2,948,640
120: 2,948,641
118— 13: 2,948,260
49: 2,948,261
260: Re.24,854
121— 28: 2,948,262
2,948,263
2,948,264
30: 2,948,265
120: 2,948,266
122— 481: 2,948,267
123— 32: Re.24,851
41.11: 2,948,268
46: 2,948,269
90: 2,948,270
102: 2,948,271
119: 2,948,272
140: 2,948,273
198: 2,948,274
124— 27: 2,948,275
126— 67: 2,948,276
208: Re.24,858
262: 2,948,277
128— 134: 2,948,278
128— 232: 2,948,279
304: 2,948,280
131— 21: 2,948,281
208: 2,948,282
260: 2,948,283
132— 9: 2,948,284
134— 102: 2,948,285
135— 1: 2,948,286
4: 2,948,287
5: 2,948,288
20: 2,948,289
136— 5: 2,948,766
90: 2,948,767
100: 2,948,768
102: 2,948,769
137— 10: 2,948,290
22: 2,948,291
64: 2,948,292
107: 2,948,293
263: 2,948,294
487.5: 2,948,295
517: 2,948,296
525.1: 2,948,297
620: 2,948,298
625.4: 2,948,299
138— 45: 2,948,300
81: 2,948,301
139— 11: 2,948,302
185: 2,948,303
141— 75: 2,948,304
112: 2,948,305
231: 2,948,306
348: 2,948,307
362: 2,948,308
143— 32: 2,948,309
2,948,310
2,948,311
55: 2,948,312
103: 2,948,313
144— 288: 2,948,314
145— 35: 2,948,315
148— 1.5: 2,948,642
6.27: 2,948,643
16.5: 2,948,644
151— 41.7: 2,948,316
69: 2,948,317
152— 175: 2,948,318
214: 2,948,319
330: 2,948,320
2,948,321
153— 2: 2,948,322
38: 2,948,323
54: 2,948,324
76: 2,948,325
79: 2,948,326
154— 1: 2,948,327
2,948,328
2.28: 2,948,647
2.6: 2,948,329
2.7: 2,948,645
2,948,646
46: 2,948,648
91: 2,948,649
100: 2,948,650
110: 2,948,651
139: Re.24,856
155— 106: 2,948,330
2,948,331
142: 2,948,332
182: 2,948,333
2,948,334
158— 128: 2,948,335
162— 166: 2,948,652
219: Re.24,860
236: 2,948,336
392: 2,948,337
166— 128: 2,948,338
215: 2,948,339
2,948,340
218: 2,948,341
167— 22: 2,948,653
30: 2,948,654
42: 2,948,655
87.1: 2,948,656
90: 2,948,657
169— 1: 2,948,342
170-135.24: 2,948,343
160.32: 2,948,344
172— 49: 2,948,345
754: 2,948,346
174— 52: 2,948,770
99: 2,948,771
107: 2,948,772
153: 2,948,773
178— 5.4: 2,948,774
2,948,775
7.5: 2,948,776
7.55: 2,948,891
89: 2,948,777
179— 1: 2,948,778
1.5: 2,948,779
16: 2,948,780
18: 2,948,781
2,948,782
100.4: 2,948,783
180— 9.5: 2,948,347
182— 11: 2,948,348
121: 2,948,349
2,948,350
183— 2.5: 2,948,351
2.7: 2,948,352
7: 2,948,353
80: 2,948,354
184— 6: 2,948,355
188— 73: 2,948,356
87: 2,948,357
97: 2,948,358
106: 2,948,359
234: 2,948,360
251: 2,948,361
189— 2: 2,948,362
14: 2,948,363
34: 2,948,364
36: 2,948,365
45: 2,948,366
60: 2,948,367
88: 2,948,368
192— 3: 2,948,369
4: 2,948,370
12: 2,948,371
18: 2,948,372
50: 2,948,373
135: 2,948,374
193— 35: 2,948,375
40: 2,948,376
194— 1: 2,948,377
58: 2,948,378
92: 2,948,379
195— 43: 2,948,658
47: 2,948,659
80: 2,948,660
134: 2,948,661
197— 96: 2,948,350
198— 34: 2,948,381
35: 2,948,382
179: 2,948,383
192: 2,948,384
213: 2,948,385
219: 2,948,386
200— 28: 2,948,784
30: 2,948,785
31.15: 2,948,786
116: 2,948,787
122: 2,948,788
143: 2,948,789
170: 2,948,790
2,948,791
156: 2,948,792
163: 2,948,793
166: 2,948,794
2,948,795
202— 57: 2,948,662
204— 64: 2,948,663
154: 2,948,664
2,948,665
2,948,666
163: 2,948,667
201: 2,948,668
206— .81: 2,948,391
5: 2,948,387
16: 2,948,388
42: 2,948,389
45.31: 2,948,390
64: 2,948,392
2,948,393
208— 7: 2,948,669
100: 2,948,670
134: 2,948,671
139: 2,948,672
164: 2,948,673

208— 218: 2,948,674
262: 2,948,675
322: 2,948,676
209— 97: 2,948,394
127: 2,948,395
156: 2,948,396
455: 2,948,397
210— 44: 2,948,677
130: 2,948,398
166: 2,948,399
256: 2,948,400
365: 2,948,401
211— 40: 2,948,402
49: 2,948,403
74: 2,948,404
90: 2,948,405
99: 2,948,406
105.3: 2,948,407
124: 2,948,408
147: 2,948,409
149: 2,948,410
212— 66: 2,948,411
69: 2,948,412
213— 43: 2,948,413
127: 2,948,414
144: 2,948,415
151: 2,948,416
214— 1: 2,948,417
2,948,418
6: 2,948,419
9: 2,948,420
16.1: 2,948,421
17: 2,948,422
84: 2,948,423
152: 2,948,424
211: 2,948,425
314: 2,948,426
516: 2,948,427
683: 2,948,428
215— 21: 2,948,429
219— 9.5: 2,948,796
10.79: 2,948,797
19: 2,948,798
30: 2,948,799
32: 2,948,800
37: 2,948,801
46: 2,948,802
74: 2,948,803
86: 2,948,804
137: 2,948,805
220— 9: 2,948,430
40: 2,948,431
85: 2,948,432
102: 2,948,433
221— 221: 2,948,434
251: 2,948,435
222— 54: 2,948,436
70: 2,948,437
145: 2,948,438
183: 2,948,439
545: 2,948,440
223— 52.1: 2,948,441
57: 2,948,442
67: 2,948,443

223— 67: 2,948,444
68: 2,948,445
70: 2,948,446
74: 2,948,447
98: 2,948,448
224— 1: 2,948,449
42.1: 2,948,450
225— 38: 2,948,451
229— 1.5: 2,948,452
7: 2,948,453
23: 2,948,454
36: 2,948,455
39: 2,948,456
62: 2,948,457
230— 58: 2,948,458
69: 2,948,459
114: 2,948,460
332: 2,948,461
233— 15: 2,948,462
235— 1: 2,948,463
58: 2,948,464
2,948,465
2,948,466
51.6: 2,948,467
61.7: 2,948,468
92: 2,948,469
2,948,470
2,948,471
186: 2,948,472
196: 2,948,473
197: 2,948,474
236— 13: 2,948,475
239— 24: 2,948,476
109: 2,948,477
405: 2,948,478
413: 2,948,479
418: 2,948,480
240—10.66: 2,948,806
78: 2,948,807
241— 41: 2,948,481
100.5: 2,948,482
242— 54: 2,948,483
54.4: 2,948,484
55.12: 2,948,485
55.55: 2,948,486
74.2: 2,948,487
75.43: 2,948,488
244—17.17: 2,948,489
17.19: 2,948,490
17.21: 2,948,491
42: 2,948,492
2,948,493
77: 2,948,494
2,948,495
2,948,496
246— 380: 2,948,497
248— 17: 2,948,498
106: 2,948,499
122: 2,948,500
183: 2,948,501
358: 2,948,502
250— 13: 2,948,808
41.9: 2,948,809

250— 83.3: 2,948,810
2,948,811
83.6: 2,948,812
203: 2,948,813
205: 2,948,814
211: 2,948,815
213: 2,948,816
231: 2,948,817
251— 85: 2,948,503
258: 2,948,504
252— 8.5: 2,948,678
28: 2,948,679
32.7: 2,948,680
33.4: 2,948,681
46.6: 2,948,682
75: 2,948,683
107: 2,948,684
118: 2,948,685
153: 2,948,686
470: 2,948,687
253—39.15: 2,948,505
77: 2,948,506
254— 15: 2,948,507
35: 2,948,508
77: 2,948,509
139.1: 2,948,510
166: 2,948,511
172: 2,948,512
190: 2,948,513
255— 1.8: 2,948,514
257— 137: 2,948,515
192: 2,948,516
248: 2,948,517
313: 2,948,518
259— 154: 2,948,519
260— 2: 2,948,688
2,948,689
2.2: 2,948,690
2.5: 2,948,691
8: 2,948,692
21: 2,948,693
24: 2,948,694
28.5: 2,948,695
2,948,696
29.2: 2,948,697
32.6: 2,948,698
41: 2,948,699
41.5: 2,948,700
2,948,701
43: 2,948,702
45.5: 2,948,703
45.95: 2,948,704
47: 2,948,705
96: 2,948,706
77.5: 2,948,707
2,948,708
85.3: 2,948,709
85.5: 2,948,710
88.2: 2,948,711
93.7: 2,948,712
94.9: 2,948,713
112: 2,948,714
204: 2,948,715

200— 234: 2,948,716
2,948,717
239: 2,948,718
2,948,719
243: 2,948,720
246: 2,948,721
247.5: Re.24,853
2,948,722
247.7: 2,948,723
251: 2,948,724
260: 2,948,725
267: 2,948,726
268: 2,948,727
279: 2,948,728
286: 2,948,729
292: 2,948,730
293.4: 2,948,731
294.3: 2,948,732
295: 2,948,733
295.5: 2,948,734
2,948,735
326.3: 2,948,736
332.2: 2,948,737
340.9: 2,948,738
369: 2,948,739
397.4: 2,948,740
408: 2,948,741
409: 2,948,742
414: 2,948,743
429: 2,948,744
450: 2,948,745
477: 2,948,746
483: 2,948,747
485: 2,948,748
515: 2,948,749
2,948,750
551: 2,948,751
552: 2,948,752
556: 2,948,753
559: 2,948,754
581: 2,948,755
599: 2,948,756
615: 2,948,757
621: 2,948,758
646: 2,948,759
654: 2,948,760
655: 2,948,761
665: 2,948,762
671: 2,948,763
674: 2,948,764
262— 26: 2,948,520
263— 15: Re.24,859
29: 2,948,521
48: 2,948,522
265— 5: 2,948,523
266— 38: 2,948,524
43: 2,948,525
267— 1: 2,948,526
2,948,527
9: 2,948,528
2,948,529
271— 68: 2,948,530
272— 57: 2,948,531

273— 58: 2,945,532
90: 2,948,533
106: 2,948,534
157: 2,948,535
201: 2,948,536
274— 15: 2,948,537
23: 2,948,538
39: 2,948,539
279— 4: 2,948,540
2,948,541
5: 2,948,542
280— 8: 2,948,543
45.13: 2,948,544
87: 2,948,545
95: 2,948,546
124: 2,948,547
2,948,548
2,948,549
166: 2,948,550
202: 2,948,551
447: 2,948,552
284— 4: 2,948,553
286— 9: 2,948,554
11.13: 2,948,555
26: 2,948,556
287— 53: 2,948,557
2,948,558
119: 2,948,559
292— 45: 2,948,560
290: 2,948,561
294— 67: 2,948,562
83: 2,948,563
87: 2,948,564
296—49.2: 2,948,565
97: 2,948,566
301— 37: 2,948,567
63: 2,948,568
302— 28: 2,948,569
303— 63: 2,948,570
307— 88: 2,948,818
2,948,819
88.5: 2,948,820
308— 79: 2,948,571
143: 2,948,572
197: 2,948,573
310— 27: 2,948,821
312— 39: 2,948,574
2,948,575
240: 2,948,576
264: 2,948,577
342: 2,948,578
313— 56: 2,948,822
108: 2,948,823
130: 2,948,824
163: 2,948,825
223: 2,948,826
318: 2,948,827
315— 8.6: 2,948,828
8.5: 2,948,829
12: 2,948,830
88: 2,948,831
82: 2,948,832
317— 46: 2,948,833

317— 101: 2,948,834
234: 2,948,835
235: 2,948,836
238: 2,948,837
242: 2,948,838
318— 29: 2,948,839
2,948,840
321— 2: 2,948,841
323— 51: 2,948,842
81: 2,948,843
89: 2,948,844
324— 5: 2,948,845
6: 2,948,846
30: 2,948,847
34: 2,948,848
54: 2,948,849
61: 2,948,850
70: 2,948,851
2,948,852
115: 2,948,853
328— 56: 2,948,854
67: 2,948,855
110: 2,948,856
185: 2,948,857
330— 56: 2,948,858
117: 2,948,859
134: 2,948,860
331— 3: 2,948,861
332— 47: 2,948,862
333— 10: 2,948,863
2,948,864
21: 2,948,865
28: 2,948,866
72: 2,948,867
73: 2,948,868
80: 2,948,869
98: 2,948,870
336— 83: 2,948,871
338— 3: 2,948,872
4: 2,948,873
167: 2,948,874
339— 48: 2,948,875
258: 2,948,876
2,948,877
265: 2,948,878
340— 1: 2,948,879
15: 2,948,880
28: 2,948,881
174: 2,948,882
2,948,883
2,948,884
345: 2,948,885
2,948,886
2,948,887
2,948,888
347: 2,948,889
2,948,890
343— 5: 2,948,892
7.3: 2,948,893
725: 2,948,894
767: 2,948,895
873: 2,948,896
346— 8: 2,948,579
2,948,580

Classification of Designs

D 2— 3: 188,527
188,528
D 3— 9: 188,529
26: 188,530
188,531
188,532
D14— 3: 188,533
6: 188,534
188,535
30: 188,536
188,537

D25— 1: 188,538
D26— 14: 188,539
188,540
188,541
188,542
D33— 14: 188,543
19: 188,544
D34— 5: 188,545
188,546
188,547
188,548

D34— 15: 188,549
188,550
188,551
188,552
D44— 1: 188,553
188,554
188,555
10: 188,556
29: 188,557
D48— 16: 188,558

D48— 16: 188,559
D52— 1: 188,560
10: 188,561
D54— 11: 188,562
13: 188,563
D55— 1: 188,564
D56 2: 188,565
D58— 9: 188,566
D61— 1: 188,567
D62— 4: 188,568

D62— 4: 188,569
D64— 11: 188,570
188,571
D67— 4: 188,572
D71— 1: 188,573
D74— 5: 188,574
17: 188,575
188,576
D80— 2: 188,577
8: 188,578

D81— 10: 188,579
19: 188,580
24: 188,581
D87— 2: 188,582
5: 188,583
D92— 1: 188,584
188,585
188,586
188,587
4: 188,588

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TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 296,578 (IMPERIAL), M. Epstein, doing business as The Midwest Cap Works, Men's hats and caps, filed June 27, 1960, D.C., S.D.N.Y., Doc. 60/2542, *Maurice Epstein et al. v. Bond Stores, Inc.*

Reg. No. 272,869 (LIFE), Time, Incorporated, Weekly magazine and pamphlets containing material taken from such magazine, filed June 27, 1960, D.C., S.D.N.Y., Doc. 60/2528, *Time, Incorporated v. Crowford Manufacturing Company, Inc.*

Reg. No. 696,881 (WAMSUTTA AND DESIGN), Wamsutta Mills, Cotton piece goods, sheets and pillow cases, filed June 30, 1960, D.C., S.D.N.Y., Doc. 60/2600, *M. Lowenstein & Sons, Inc. v. Simco Sportswear.*

Reg. No. 696,414 (GATOR), Peterson Bros., Boat trailers; 2,722,068, W. F. Peterson et al., Boat trailer, filed June 24, 1960, D.C., S.D. Fla. (Jacksonville), Doc. 3879-T, *Peterson Bros. Inc. v. James J. Murphy et al.*

Reg. No. 617,121 (VOLKSWAGEN), Volkswagenwerk G.m.b.H., Land, air and water craft, motor cars, vehicle parts and spares, etc., filed Mar. 7, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c853, *Volkswagenwerk G.m.b.H. et al. v. Volkboat, Inc.* Consent decree; defendant enjoined June 22, 1960.

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancellation will be proceeded with as in the case of default.

Rice-Stix, Inc., assignee of Rice Stix Dry Goods Company, St. Louis, Mo., Reg. No. 186,297, Canc. No. 7473.

Ray A. Wilson, Houston, Tex., Reg. No. 681,881, Canc. No. 7486.

Morris Weinstein, New York, N.Y., Reg. No. 410,146, Canc. No. 7500.

Weathercraft Company, New York, N.Y., Reg. No. 417,128, Canc. No. 7507.

Monarch Manufacturing Company, Milwaukee, Wis., Reg. No. 552,884, Canc. No. 7509.

ARTHUR W. CROCKER,
First Assistant Commissioner of Patents.

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 10,802
Date of oldest new application ..... Feb. 1, 1960
Date of oldest amended application ..... Jan. 14, 1960

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	-	
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	3-1-60	2-16-60
Renewals (All Classes)	3-4-60	1-14-60
Sec. 12 (c) Publications (All Classes)	6-7-60	6-23-60
	6-14-60	-------

Applications filed during the month of June 1960—1,895

Registrations Issued ..... 312—No. 702,423 to No. 702,734
Renewals Issued 100

For the quarter—April 1, 1960 through June 30, 1960

Applications filed 5,957
Registrations issued 4,822
Renewals issued 1,004
Cancellations under Section 8 1,392

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 21 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 79,903. Aaron Zimmer, d.b.a. Circle Z Kennels, Pomfret Center, Conn. Filed Aug. 19, 1959.



For Live Dogs, More Particularly German Shepherds and Weimaraners.
First use during 1953.

SN 89,749. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Jan. 27, 1960.

ANTRON

Owner of Reg. Nos. 440,280 and 518,714.
For Man-Made Fibers and Filaments for Generalized Use in the Industrial Arts.
First use Nov. 30, 1959.

SN 92,735. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 14, 1960.

ORLON SAYELLE

Owner of Reg. Nos. 529,080, 536,272, and others.
For Man-Made Fibers and Filaments for Generalized Use in the Industrial Arts.
First use on or about Mar. 7, 1960.

Class 2—Receptacles

SN 43,621. The Maryland Cup Company, Baltimore, Md. Filed Jan. 8, 1958.



The mark consists of a line of hearts of indefinite length connected by a sinuous line. Owner of Reg. No. 619,714.
For Paper Cups.
First use in or about January 1947.

SN 86,846. Ster-Wood Corp., Brooklyn, N.Y. Filed Dec. 7, 1959.

MIRACLE-LITE

For Portable Plastic Racks for Dishes Used in Washing Dishes in Kitchens and Dishwashing Machines.
First use Aug. 15, 1959.

SN 89,557. Crescent Box Corporation, Philadelphia, Pa. Filed Jan. 25, 1960.

AQUA BOARD

Applicant disclaims any rights to the term "Board" not in connection with the term "Aqua."
For Impregnated, High Wet Strength, Water Resistant Corrugated Fibreboard Shipping Containers.
First use June 8, 1959.

SN 90,020. W. H. Curtin & Company, Houston, Tex. Filed Feb. 1, 1960.

HYDROCASE

For Carrying Cases for Hydrometers.
First use Jan. 10, 1955.

SN 91,392. Keyes Fibre Company, Waterville, Maine. Filed Feb. 23, 1960.



The words "Molded Products" are disclaimed apart from the mark as shown. Owner of Reg. No. 72,457.
For Plates and Dishes Made of Molded Paper Pulp.
First use before Jan. 1, 1950.

SN 92,024. S. H. Kress and Company, New York, N.Y. Filed Mar. 2, 1960.



The drawing is lined for blue and red. Owner of Reg. Nos. 562,353 and 683,292.
For Paper Plates.
First use Nov. 30, 1959.

SN 92,066. American Can Company, New York, N.Y. Filed Mar. 3, 1960.

MARALOK

For Paper Cartons.
First use Aug. 25, 1959.

SN 92,148. Duplex Manufacturing Corporation, Fort Smith, Ark. Filed Mar. 4, 1960.

DUPLEX

For Tool Boxes.
First use Mar. 20, 1928.

SN 92,160. Inland Container Corporation, Indianapolis, Ind. Filed Mar. 4, 1960.

RIGI-WET

For Fibreboard Containers.
First use Sept. 24, 1959.

SN 92,227. Fibreboard Paper Products Corporation, San Francisco, Calif. Filed Mar. 7, 1960.

LOOK-N-LOCK

For Paperboard Lids for Boxes.
First use Nov. 28, 1959.

SN 92,238. Fibreboard Paper Products Corporation, San Francisco, Calif. Filed Mar. 7, 1960.

FIBRE FLO

For Paperboard Boxes.
First use Mar. 27, 1959.

Class 4—Abrasives and Polishing Materials

SN 89,360. W. D. MacDermid Chemical Company, Plymouth, Conn. Filed Jan. 20, 1960.

ROTEX

For Chemical Tumbling Compounds and Materials in Dry Powder, Liquid, or Paste Form, for Use in Preparing the Surfaces of Metals Prior to Inspection, Electroplating, Painting or Lacquering, Whether Coated or Uncoated, To Protect Such Surfaces From Wear, Corrosion, To Enhance the Appearance of the Product, Removing Contamination, and Various Types of Soil or To Obtain a More Brilliant Surface Appearance.
First use Nov. 29, 1956.

SN 93,127. The Anderson Company, Gary, Ind. Filed Mar. 18, 1960.

ANCO

Owner of Reg. No. 376,452.
For Hand Glass Cleaner Comprising a Squeegee and Abrasive Member for Cleaning Glass and Tiling.
First use Nov. 27, 1934.

Class 5—Adhesives

SN 73,039. Robert E. Doyle, d.b.a. Preferred Chemical Company, New Rochelle, N.Y. Filed May 6, 1959.



For Liquid Plastic, Repair Cement, Made From Vinyl Plastic Resins and Solvents for the Specific Purpose of Repairing and Sealing Vinyl Plastic Products.
First use Aug. 11, 1958.

SN 81,380. A. Z. Bogert Company, Inc., West Point, Pa. Filed Sept. 15, 1959.

Redy-Mastic

For Flooring Adhesives for the Building Material Industry.
First use Dec. 22, 1958.

Class 6—Chemicals and Chemical Compositions

SN 56,089. W. J. Bush & Company Limited, London, England. Filed July 28, 1958.



Owner of British Reg. Nos. 721,925, 721,926, 721,927, 721,928, 721,929, 721,930, and 721,931, all dated Sept. 21, 1953.
For Chemical Substances for General Industrial Use Including Preservatives, Colors, Essential Oils, Essences, and Flavors.

SN 56,947. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Aug. 11, 1958.

COREPAL

Owner of German Reg. No. 536,122, dated Aug. 27, 1941.
For Chemical Products for Industrial Purposes—Namely, Synthetic Resins for the Production of Varnishes, Lacquers, Adhesives, and Rubber Substitutes.

SN 91,593. The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada. Filed Feb. 25, 1960.

COMINCO

Owner of Canadian Reg. No. 108,196, dated Oct. 4, 1957; and U.S. Reg. Nos. 545,491, 645,961, and 646,129.
For Sulphuric Acid, Oleum, and Ammonia.

SN 91,717. T.M. Products Co., Chicago, Ill. Filed Feb. 26, 1960.

PERK UP

For Resin Base Starch Spray.
First use Feb. 19, 1960.

SN 93,794. Genie Metallurgique et Chimique, S.A., Brussels, Belgium. Filed Mar. 28, 1960.



Owner of Belgian Reg. No. 87,693, dated Aug. 20, 1959.
For Vanadium Catalyst.

SN 93,903. Australian Titan Products Pty. Ltd., Melbourne, Victoria, Australia. Filed Mar. 29, 1960.

AUSTIOX

Owner of Australian Reg. No. 135,179, dated Jan. 2, 1958.
For Titanium Dioxide for Paints.

SN 94,054. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 31, 1960.

TELAR

Owner of Reg. No. 597,810.
For Anti-Freeze and Anti-Rust Coolant.
First use Mar. 15, 1960.

SN 94,373. Union Carbide Corporation, New York, N.Y. Filed Apr. 4, 1960.

UNION CARBIDE

For Liquefied Petroleum Gas for Domestic, Industrial, and Commercial Uses.
First use about August 1959.

SN 95,478. California Spray-Chemical Corporation, Richmond, Calif. Filed Apr. 21, 1960.

KLEENUP

Owner of Reg. No. 292,828.
For Herbicides.
First use Dec. 29, 1959.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 97,861. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed May 25, 1960.

SUPER-MATCH

Owner of Reg. Nos. 159,784 and 565,201.
For Sporting and Small Arms Ammunition and Components Thereof.
First use on or about Apr. 27, 1960.

Class 10 — Fertilizers

SN 89,019. Pfanstiehl Laboratories, Inc., Waukegan, Ill. Filed Jan. 14, 1960.

AGRON

For Metal Chelate Compositions for Use as Agricultural Nutrients.
First use Feb. 14, 1956.

SN 89,116. Andersen-Smith Milling Co., San Francisco, Calif. Filed Jan. 18, 1960.

VEGETEIN

For Soil Conditioner Derived From Natural Marl and Used as a Fertilizer.
First use 1960.

SN 89,743. Commercial Solvents Corporation, New York, N.Y. Filed Jan. 27, 1960.

Hi-N-Dri

For Nitrogen Solutions Used as or in the Production of Soil Fertilizers.
First use Nov. 17, 1959.

SN 89,744. Commercial Solvents Corporation, New York, N.Y. Filed Jan. 27, 1960.

DRI-SOL

For Nitrogen Solutions Used as or in the Production of Soil Fertilizers.
First use Nov. 18, 1959.

Class 12 — Construction Materials

SN 58,118. The Ruberoid Co., New York, N.Y. Filed Aug. 29, 1958.

RUBEROID RANCH TABS

Owner of Reg. Nos. 50,919, 688,556, and others.
For Asphalt Shingles.
First use July 1, 1958.

SN 77,053. American-Marietta Company, Chicago, Ill. Filed July 6, 1959.

TOP ROPE

In this application, applicant makes no claim to the word "Rope" apart from the mark as shown. Owner of Reg. No. 693,697.
For Preformed Extruded Ribbons of Mastic Sealing Material.
First use June 8, 1959.

SN 77,054. American-Marietta Company, Chicago, Ill. Filed July 6, 1959.

TOP BEAD

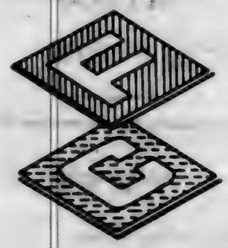
In this application, applicant makes no claim to the word "Bead" apart from the mark as shown. Owner of Reg. No. 693,697.
For Preformed Extruded Ribbons of Mastic Sealing Material.
First use May 22, 1959.

SN 78,793. Marsh Wall Products, Inc., Dover, Ohio. Filed July 31, 1959.

TRENDWOOD

For Construction Board, and More Specifically a Finish (or a Decorative Coated Surface Finish) for Fiber Board, Insulating Board, Composite Board, Hardboard, and Synthetic Lumber or Artificial Lumber.
First use June 26, 1959.

SN 81,268. Fome-Cor Corporation, Springfield, Mass. Filed Sept. 14, 1959.



The drawing is lined for red and gray, but these particular colors are not claimed as a feature of the mark.
For Laminated Panel Composed of at Least One Lamina of Expanded Polystyrene and at Least One Other Lamina, Such as Paper, Metal Foil, or Plastic Film.
First use July 31, 1959.

SN 82,161. Sonoco Products Company, Hartsville, S.C. Filed Sept. 25, 1959.

P. I. PIPE

The word "Pipe" is disclaimed apart from the mark as shown. Owner of Reg. No. 664,271.
For Pitch Impregnated Fiber Pipe.
First use Sept. 2, 1959.

SN 83,191. Trip-L-Seal, Inc., Washington, D.C. Filed Oct. 13, 1959.

TRIP-L-CRETE

For Patching Cement.
First use October 1947.

SN 84,302. General Mills, Inc., Minneapolis, Minn. Filed Oct. 30, 1959.

Concrete in a Can

For Resinous Topping Compound.
First use Oct. 2, 1959.

SN 88,542. F. D. Kees Manufacturing Company, Beatrice, Nebr. Filed Jan. 6, 1960.

TIMBERLOCK

Owner of Reg. No. 403,664.
For Framing Anchors for Building Constructions.
First use June 1954.

SN 90,067. Kaiser Gypsum Company, Inc., Oakland, Calif. Filed Feb. 1, 1960.

QUILT-LOK

For Wallboard.
First use on or about Sept. 25, 1959.

SN 90,487. Berry Asphalt Company, Magnolia, Ark. Filed Feb. 8, 1960.

BAROMIX

Owner of Reg. No. 590,430.
For Dry Mixture of Barium Sulphate and Powdered Asphalt With or Without Powdered Rubber for Use in Paving Roads, Streets and the Like, and as a Joint Sealer for Sewers.
First use June 30, 1947.

SN 92,790. National Gypsum Company, Buffalo, N.Y. Filed Mar. 14, 1960.

THERMAFORM

For Mineral Fibre Insulating Blanket.
First use Dec. 18, 1958.

SN 92,791. National Gypsum Company, Buffalo, N.Y. Filed Mar. 14, 1960.

THERMASLAB

For Mineral Fibre Insulating Blanket.
First use Nov. 18, 1959.

SN 92,879. O. P. Grant, Inc., Alhambra, Calif. Filed Mar. 15, 1960.

FIBRA-SORB

For Acoustical Tile.
First use Dec. 22, 1959.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 78,137. Olin Mathieson Chemical Corporation, East Alton, Ill. Filed July 21, 1959.

SKREW-SET

For Sheet Metal Fasteners.
First use on or about Sept. 30, 1958.

SN 78,959. The Yale and Towne Manufacturing Company, New York, N.Y. Filed Aug. 3, 1959.

HYDRO-HINGE

For Door Closers.
First use Feb. 19, 1947.

SN 80,207. United Silver & Cutlery Company, Los Angeles, Calif. Filed Aug. 25, 1959.

Crown Awards

For Metal Tableware.
First use June 5, 1956.

SN 89,984. Aktieselskabet Ernst Voss's Fabrik, Fredericia, Denmark. Filed Feb. 1, 1960.



The drawing is lined to indicate red, gray, and black. The words "Danish Cook Ware" and "Enameled Cast Iron" are disclaimed apart from the mark as shown. Owner of Danish Reg. No. 981—1958, dated May 31, 1958.

For Kitchen Articles and Table Articles Such as e.g. Pots, Pans, Gratin Dishes, Omelet Dishes, Saucepans, Covers, Gravy-Boats, Butter-Boats, Plate-Warmers and Trivets, Said Articles Being Manufactured of Enameled Cast Iron.

SN 91,586. P. S. Batten Service Company, Inc., Astoria, N.Y. Filed Feb. 25, 1960.



No claim is made to the representation of the goods, apart from the mark shown.

For Hangers for Battens on Cargo Ships.
First use Dec. 23, 1959.

SN 92,660. Talon, Inc., Meadville, Pa. Filed Mar. 11, 1960.

ZEPHYR

For Slide Fasteners.
First use on or about Feb. 19, 1960.

SN 92,661. Talon, Inc., Meadville, Pa. Filed Mar. 11, 1960.

WHISP

For Slide Fasteners.
First use on or about Feb. 19, 1960.

SN 92,795. Olympic Screw & Rivet Corporation, Downey, Calif. Filed Mar. 14, 1960.

"OSCAR"

For Blind Rivets.
First use Feb. 19, 1960.

SN 92,796. Olympic Screw & Rivet Corporation, Downey, Calif. Filed Mar. 14, 1960.

"HIT"

For Blind Rivets.
First use Feb. 19, 1960.

SN 92,811. Leonard L. Ross, d.b.a. Rex Supply Company, Pittsburgh, Pa. Filed Mar. 14, 1960.

REXCEL

For Bathtubs, Lavatories, Water Closets, and Kitchen Cabinets.
First use Sept. 15, 1959.

SN 92,885. Illinois Tool Works, Chicago, Ill. Filed Mar. 15, 1960.

ATECO

For Lock Washers.
First use Mar. 9, 1960.

SN 92,891. LCN Closers, Inc., Princeton, Ill. Filed Mar. 15, 1960.

PACER

For Door Check and Door Closer.
First use about Aug. 6, 1959.

SN 92,960. Modesto Callejo, d.b.a. Bidoro Manufacturing Company, East Northport, N.Y. Filed Mar. 16, 1960.

BIDORO

Owner of Reg. No. 516,905.
For Valves To Prevent Back Flow.
First use Nov. 20, 1947.

SN 93,069. Grip Nut Company, South Whitley, Ind. Filed Mar. 17, 1960.

GRIPCO

Owner of Reg. No. 426,534.
For Self-Locking Nuts, Weld Nuts, Clinch Nuts, and Nut Fasteners.
First use June 1, 1946.

SN 93,348. Prestole Corporation, Toledo, Ohio. Filed Mar. 21, 1960.

FLEX-NUT

For Fastening Devices Including Spring Sheet Metal Cages for Application to an Apertured Panel and Receiving Nut Bodies or Stud Heads.
First use Feb. 12, 1960.

Class 14—Metals and Metal Castings and Forgings

SN 78,883. Lock Thread Corporation, Detroit, Mich. Filed Aug. 3, 1959.

MIN·O·DEE

For Threaded Inserts and Like Parts, Formed of Metal or Like Material and With Internal and/or External Threads or Other Means of Retention Within Receptive Apertures.
First use on or about July 17, 1959.

SN 92,166. Midvale-Heppenstall Company, Philadelphia, Pa. Filed Mar. 4, 1960.

MIDVAC

For Ferrous Alloys.
First use Oct. 17, 1957.

Class 15—Oils and Greases

SN 63,474. Monsanto Chemical Company, St. Louis, Mo. Filed Dec. 1, 1958.

ORBIT

For Gasoline, Motor Oils, and Lubricating Greases.
First use Nov. 4, 1958.

Class 16—Protective and Decorative Coatings

SN 75,682. American Machine & Tool Company, Inc., Royersford, Pa. Filed June 15, 1959.

PLASTI-SHIELD

For Transparent Adhesive Sheet of Plastic Material for Covering Cards, Licenses, Photographs and the Like.
First use Apr. 6, 1959.

SN 82,392. M. A. Bruder & Sons, Incorporated, Philadelphia, Pa. Filed Sept. 30, 1959.

Acra-Lux

For Protective Coating for Exterior Masonry.
First use Aug. 12, 1959.

SN 91,251. Benjamin Foster Company, Philadelphia, Pa. Filed Feb. 19, 1960.

FOSTCRETE

Owner of Reg. No. 596,258.
For Compositions for Producing Protective Coatings.
First use Oct. 26, 1959.

SN 93,221. Thermomet, San Fernando, Calif. Filed Mar. 18, 1960.

THERMOMET

For Metal, Alloy, and/or Plastic Protective and Decorative Coatings.
First use Sept. 22, 1959.

Class 17—Tobacco Products

SN 4,467. Philip Morris Incorporated, New York, N.Y. Filed Mar. 13, 1956.

FLIP-TOP

For Cardboard Boxes Containing Cigarettes.
First use October 1954.

Class 18—Medicines and Pharmaceutical Preparations

SN 76,735. Societe D'Exploitation des Laboratoires Lavril, S.A.R.L., Paris, France. Filed June 29, 1959.

MYCOSIN

Owner of French Reg. No. 480,473, dated May 21, 1959 (Seine); Natl. Inst. No. 126,296.
For Pharmaceutical Preparation for External Use Against Bacteria and Fungi.

SN 76,962. The S. E. Massengill Company, Bristol, Tenn. Filed July 2, 1959.

ACTOL

For Pharmaceutical—Namely, an Intestinal Bactericide.
First use June 11, 1959.

SN 78,409. Ames Company, Inc., Elkhart, Ind. Filed July 27, 1959.

SCRIPTSTARTER

For Sample Package of Ethical Pharmaceuticals for Druggists Which May Be Used To Partially Compound a Doctor's Prescription.
First use May 19, 1959.

SN 88,074. New Products Corporation, Denver, Colo. Filed Dec. 28, 1959.

MELOSEM

For Dental Decay-Inhibiting Chemical Composition in Tablet Form.
First use Oct. 27, 1959.

SN 88,913. The G. F. Harvey Company, Inc., New York, N.Y. Filed Jan. 13, 1960.

FUNGACIDIN

Owner of Reg. Nos. 662,138 and 681,709.
For Preparation for the Treatment of Fungus Infections.
First use Jan. 6, 1960.

SN 90,319. Ethicon, Inc., Somerville, N.J. Filed Feb. 4, 1960.

ETHICON

Owner of Reg. Nos. 270,970, 680,172, and others.
For Pharmaceutical Powders and Waxes.
First use June 1943.

SN 90,320. Ethicon, Inc., Somerville, N.J. Filed Feb. 4, 1960.

ETHICAINE

Owner of Reg. Nos. 270,970, 662,658, and others.
For Anaesthetic.
First use Nov. 18, 1959.

SN 90,321. Ethicon, Inc., Somerville, N.J. Filed Feb. 4, 1960.

ETHIZYME

Owner of Reg. Nos. 270,970, 662,658, and others.
For Enzymatic Preparations.
First use Nov. 18, 1959.

SN 91,695. Iowa Cooperative Association, d.b.a. Diamond Laboratories, Des Moines, Iowa. Filed Feb. 26, 1960.

KEOSUL

For Preparation Both in Liquid and Tablet Form for Use in the Treatment of Enteric Infections in Animals.
First use Aug. 8, 1958.

SN 93,340. Northrup Pharmaceutical Co., Minneapolis, Minn. Filed Mar. 21, 1960.

ROTASE-MITTE

Owner of Reg. No. 685,453.
For Sedative, Anti-Convulsant, and Anti-Spasmodic Drug.
First use Feb. 2, 1960.

SN 93,367. G. D. Searle & Co., Skokie, Ill. Filed Mar. 21, 1960.

ALDACTAZIDE

For Medicinal and Pharmaceutical Preparation—Namely, a Diuretic.
First use Feb. 24, 1960.

SN 93,562. American Cyanamid Company, New York, N.Y. Filed Mar. 24, 1960.

DIRAGESIC

For Steroid Preparation.
First use Mar. 8, 1960.

SN 93,588. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Mar. 24, 1960.

DARCIL

For Antibiotic Preparations.
First use Feb. 19, 1960.

SN 93,843. Nordson Pharmaceutical Laboratories, Inc., Irvington, N.J. Filed Mar. 28, 1960.

DRYNOR

For Preparation for the Treatment of Athlete's Foot and Other Skin Conditions Where Excessive Skin Moisture Is a Contributing Factor.
First use Mar. 14, 1960.

SN 93,844. Nordson Pharmaceutical Laboratories, Inc., Irvington, N.J. Filed Mar. 28, 1960.

DRYPED

For Preparation for the Treatment of Athlete's Foot and Other Conditions Where Excessive Skin Moisture Is a Contributing Factor.
First use Mar. 14, 1960.

SN 90,264. A. H. Robins Company, Inc., Richmond, Va. Filed June 20, 1960.

MATASIL

For Antacid Medicinal Preparation.
First use Sept. 8, 1959.

Class 19—Vehicles

SN 49,261. Allen Mfg. Co., Inc., Nashville, Tenn. Filed Apr. 8, 1958.

fabuglas

For Boats and Boat Kits Made of Fiberglass-Reinforced Plastics.
First use on or about Dec. 1, 1956.

SN 58,914. Peterson Bros., Inc., Jacksonville, Fla., assignee of Craig Mfg. Co., Inc., Jacksonville, Fla. Filed Sept. 15, 1958.



For Boat Trailers.
First use Feb. 1, 1957.

SN 83,120. Pabst Boats, Inc., La Crosse, Wis. Filed Oct. 12, 1959.

pabst

For Boats—Namely, Small Boats, Outboard Runabouts and Utilities, Racing Boats, and Cruisers.
First use Oct. 29, 1948.

SN 84,840. Carl F. W. Borgward G.m.b.H., Bremen, Germany. Filed Nov. 9, 1959.

ISABELLA

Owner of U.S. Reg. No. 633,518.
For Automotive Vehicles—Namely, Passenger Vehicles, Trucks, Tricycles for Use by Adults, Truck Tractors and Structural Parts Thereof, Motor-Equipped Station Wagons and Parts Thereof.
First use Aug. 6, 1954; in commerce Aug. 6, 1954.

SN 89,801. Rayson Craft, Inc., Gardena, Calif. Filed Jan. 27, 1960.

RAYSON-CRAFT

For Boat Hulls.
First use Sept. 10, 1958.

SN 94,168. E. N. Jacobs, d.b.a. Dri-View Mfg. Co., Louisville, Ky. Filed Apr. 1, 1960.

DRIZZLE GARD

For Auto Rain-Visor.
First use Oct. 15, 1959.

SN 94,271. Delhi Manufacturing Corp., Delhi, La. Filed Apr. 4, 1960.



For Boats.
First use Feb. 11, 1960.

SN 94,367. Storecrafters, Houston, Tex. Filed Apr. 4, 1960.



For Boats.
First use Jan. 8, 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 45,502. Vector Manufacturing Company, Houston, Tex. Filed Feb. 7, 1958.

VECTOR

For Transformers and Electrical Cables and Accessories Therefor Including Takeouts, Geophone Clips, Cable End Plugs, Waterproof Casing for Cable End Plugs, Waterproof Casing for Geophones, Cable Junctions Including Waterproof Junctions, Adapters To Connect Dissimilar Electrical Fittings, and Parts for the Above-Listed Goods.
First use Nov. 20, 1947.

SN 62,518. Bassani S.p.A., Milan, Italy. Filed Nov. 17, 1958.

UB
TICINO

Owner of Italian Reg. No. 133,951, dated Dec. 7, 1957; and U.S. Reg. No. 693,445.
For Electric Apparatus and Their Parts—Namely, Switches, Commutators, Inverters, Teleswitches, Push-Buttons and Knobs, Safety Valves, Electromagnetic Valves, Thermo-Electric Valves, Relays, Disconnecting Devices, Door Chimes, Signal and Alarm Apparatus, Electric Conductors, Terminals, and Transformers.

SN 71,236. The Stanley Works, New Britain, Conn. Filed Apr. 9, 1959.

STANLEY

For Automatic Door Operating Equipment and Parts Thereof.
First use on or about Apr. 1, 1931.

SN 75,863. Ideal Industries, Inc., Sycamore, Ill. Filed June 16, 1959.

WIRE NUT

Owner of Reg. Nos. 424,062, 531,715, and 624,837.
For Connecting Members for Joining the Ends of Electric Wires or Conductors.
First use 1946.

SN 77,426. Cyclodynamics Incorporated, Detroit, Mich. Filed July 10, 1959.

CYCLEMATIC

For Electrical Controls for Electro-Magnetic Clutch and Brake Assemblies for Use as Power Drive Cycling Equipment.
First use Jan. 30, 1957.

SN 79,845. The Electric Auto-Lite Company, Toledo, Ohio. Filed Aug. 19, 1959.

POWER TIP

For Spark Plugs, Spark Plug Insulators and Components Thereof.
First use Aug. 28, 1955.

SN 80,573. Nic-L-Silver Battery Co., Santa Ana, Calif. Filed Aug. 31, 1959.

SUN POWER

For Storage Batteries.
First use on or about July 15, 1959.

SN 81,092. Pratt & Whitney Company, Incorporated, West Hartford, Conn. Filed Sept. 9, 1959.

PRATT & WHITNEY

Owner of Reg. Nos. 525,956, 547,727, and 646,436.
For Electrical Controls, Electromechanical Controls, Electronic Controls, Electropneumatic Controls, and Electrohydraulic Controls for Use in Industrial Operations, Such as Gaging, Testing, Classifying, and Material Processing and Parts and Associated Equipment Thereof.
First use Jan. 11, 1955.

SN 83,234. Motorola, Inc., Chicago, Ill. Filed Oct. 14, 1959.

MOTRAC

Owner of Reg. Nos. 275,837, 665,761, and others.
For Radio Receiving Apparatus and Radio Transmitting Apparatus Used for Two-Way Voice Communication for Mobile and Fixed Station Installations.
First use Nov. 15, 1958.

SN 83,935. American Energetics Corporation, Washington, D.C. Filed Oct. 26, 1959.



The word "Steam" is disclaimed apart from the mark as shown. The drawing is lined for red.
For Electric Steam Generators.
First use Sept. 15, 1959; Jan. 25, 1959, as to words "Minit Steam."

SN 84,311. Jet Corporation of America, Philadelphia, Pa. Filed Oct. 30, 1959.

Swizzle

For Portable, Electrically Operated Mixers.
First use on or about Jan. 27, 1959.

SN 85,344. I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed Nov. 16, 1959.

XL

For Electrical Distribution Systems Comprising Electrical Busway, Including Tap-Offs, Feed-Ins, and Other Attachments and Fittings Therefor.
First use Oct. 15, 1959.

SN 90,035. Duro-Test Corporation, North Bergen, N.J. Filed Feb. 1, 1960.

FLAME-LITE

For Incandescent Lamps.
First use Dec. 18, 1959.

SN 90,223. Burndy Corporation, Norwalk, Conn. Filed Feb. 3, 1960.

EDGE-ON

For Electrical Connectors for Printed Circuits.
First use Dec. 2, 1959.

SN 90,424. Ghost Beacon Corporation, Miami, Fla. Filed Feb. 5, 1960.

GHOST BEACON

For Retractable Signal Device Which Conceals Itself When Not in Use on Law Enforcement Vehicles and Boats.
First use May 20, 1958.

SN 90,687. Joslyn Manufacturing and Supply Company, Chicago, Ill. Filed Feb. 10, 1960.

VAC-RUPT

Owner of Reg. No. 696,693.
For Electrical Apparatus, Machines, and Supplies—Namely, Vacuum Circuit Breakers.
First use Jan. 25, 1960.

SN 90,715. Symphonic Radio and Electronic Corporation, New Brunswick, N.J. Filed Feb. 10, 1960.

SYMPHONIC

Owner of Reg. No. 525,834.
For Radio Receiving Sets and Manual and Electrical Phonograph Recorders and Players.
First use 1936.

SN 91,524. Chicago Dynamic Industries, Inc., Chicago, Ill. Filed Feb. 24, 1960.

C·D·I

For Thumbwheel Switches, Rotary Switches.
First use May 18, 1959.

SN 92,261. Illinois Tool Works, Chicago, Ill. Filed Mar. 7, 1960.

PAKTRON

For Electronic Components Comprising Modules, Capacitors, Resistors, Precision Ceramic Parts, Transistors, Diodes, and the Like.
First use Feb. 15, 1960.

SN 92,333. Union Carbide Corporation, New York, N.Y. Filed Mar. 7, 1960.

INTENSARC

For Welding Electrodes.
First use about July 31, 1936.

SN 92,617. Jerrold Electronics Corporation, Philadelphia, Pa. Filed Mar. 11, 1960.

MAGIC-CARPET

For Broadband VHF Antennas.
First use Feb. 3, 1960.

SN 94,233. The Aranair Corporation, Wooster, Ohio. Filed Apr. 4, 1960.

ARANAIRE

For Electrical Air Purifiers, Which Purify Air by Oxidation of Impurities Therein.
First use Dec. 24, 1959.

SN 94,354. Santon Limited, Newport, England. Filed Apr. 4, 1960.

SANTON

Owner of British Reg. No. 653,047, dated Oct. 29, 1946.
For Electrical Switches.

SN 94,641. Acromag, Incorporated, Southfield, Mich. Filed Apr. 8, 1960.



For Series Magnetic Amplifiers.
First use Mar. 28, 1960.

SN 94,666. Haddad and Sons, Inc., New York, N.Y. Filed Apr. 8, 1960.

H A D S O N

For Radio Receiving Sets.
First use December 1955.

SN 94,835. Juan Casas Simón, Barcelona, Spain. Filed Apr. 11, 1960.

NOVOTERM

Owner of Spanish Reg. No. 290,897, dated May 24, 1955.
For Electric Pads, Electric Dryers, Heaters, Radiators and Heating Devices, Electric Cookers, Electric Boilers, Electric Ovens and Cooking-Stoves, Electric Blankets, and Electric Toasters.

SN 94,875. Belden Manufacturing Company, Chicago, Ill. Filed Apr. 12, 1960.

BELDURE

Owner of Reg. Nos. 146,555, 673,135, and others.
For Electrical Wire.
First use Mar. 31, 1960.

SN 94,884. Electronic Communications, Inc., St. Petersburg, Fla. Filed Apr. 12, 1960.



For Radio Transmitting and Receiving Equipment and Component Parts Therefor, Electronic Circuitry, Electrical Motors, Facsimile Recording Equipment and Component Parts Therefor, and Electronic Circuit Components.
First use Oct. 24, 1958.

SN 94,904. Mitchell Camera Corporation, Glendale, Calif. Filed Apr. 12, 1960.

ASTROMICS

For Electrical Switches.
First use on or about Mar. 17, 1960.

SN 94,951. American Statronic Corp., New York, N.Y. Filed Apr. 13, 1960.

STATRONIC

Owner of Reg. Nos. 683,608 and 694,855.
For Electronic Dirt and Dust and/or Odor Control Systems and Negative Ionising Systems, Consisting of Combinations of an Electronic Generator and a Screen or Series of Screens, or a Filter or Series of Filters Through Which Fluid Passes, and Parts Thereof.
First use June 1, 1958.

SN 95,020. Union Carbide Corporation, New York, N.Y. Filed Apr. 13, 1960.

SIGMATIC

Owner of Reg. No. 684,720.
For Electric Welding Machines.
First use on or about Mar. 22, 1960.

SN 95,234. Arvin Industries, Inc., Columbus, Ind. Filed Apr. 18, 1960.



For Electric Heat Panels and Electric Baseboard Heaters.
First use Sept. 4, 1959.

SN 95,289. Julie Research Laboratories, Incorporated, New York, N.Y. Filed Apr. 18, 1960.



Owner of Reg. No. 677,679.
For Electrical Apparatus and Supplies—Namely, Resistors, Relay Control Apparatus, Capacitor Newworks.
First use November 1955.

SN 95,466. Robert C. Wuerth, Hollywood, Fla. Filed Apr. 20, 1960.

SURGITRON

For Electrical Circuiting Device for Initially Limiting Current to Filamentary Loads.
First use Mar. 7, 1960.

SN 95,547. American Pamcor Incorporated, Havertown, Pa. Filed Apr. 22, 1960.

API

Owner of Reg. Nos. 626,516 and 627,280.
For Electrical Terminals and Connectors.
First use Mar. 28, 1960; Apr. 6, 1953, in lower case letter form.

SN 96,550. B & K Manufacturing Co., Chicago, Ill. Filed Apr. 22, 1960.

PONY

For Rechargeable Battery and a Charger Therefor.
First use Jan. 28, 1960.

SN 96,881. Corning Glass Works, Corning, N.Y. Filed Apr. 27, 1960.

FOTOCERAM

For Components for Electrical Apparatus, Including Attenuator Plates and Circuit Grid Boards, Produced From a Crystalline Material Made From Glass.
First use on or about Oct. 1, 1954.

SN 96,983. Dixie Controller, Inc., Birmingham, Ala. Filed Apr. 28, 1960.

CONTOURAMA

For Control System, Including the Lift Unit, Power Unit, and Pre-Selective Control Panel for Raising and Lowering Theatre and Stage Curtains.
First use Oct. 11, 1957.

SN 96,108. The Electric Storage Battery Company, Philadelphia, Pa. Filed Apr. 29, 1960.

ACTIVERTER

For Static Electronic Devices for Converting Direct Current to Alternating Current, and Battery Chargers.
First use Mar. 30, 1960.

Class 22 — Games, Toys, and Sporting Goods

SN 87,418. Ed-U-Cards Mfg. Corp., Long Island City, N.Y. Filed Dec. 16, 1959.



Owner of Reg. Nos. 443,664, 576,034, and 576,035.
For Equipment Sold as a Unit for Playing Card, Board, and Similar Type Educational and Parlor Games.
First use January 1959.

SN 87,913. Sav-A-Bat Company, St. Louis, Mo. Filed Dec. 23, 1959.

Sav-a-bat

The bat design is disclaimed apart from the mark as shown.
For Repair Kits for Baseball Bats.
First use Nov. 23, 1959.

SN 91,407. Marjanne Enterprises, Rockford, Ill. Filed Feb. 23, 1960.

WATCH MY LINE

For Equipment Comprising a Viewer, Mirror, and Slate for Playing an Optical Coordination Game.
First use Oct. 2, 1959.

SN 91,508. Bowl-Mor Company, Inc., Littleton, Mass. Filed Feb. 24, 1960.

BOWL-MOR

For Bowling Pinsetting Machines.
First use May 30, 1949.

SN 93,466. A. G. Spalding & Bros., Inc., Chicopee, Mass. Filed Mar. 22, 1960.

POLYMIRACLE

For Golf Ball Covers.
First use Jan. 25, 1960.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 65,062. Egidio Bonacina, Airuno, Como, Italy. Filed Dec. 30, 1958.

DUPLICARBO

Owner of Italian Reg. No. 140,182, dated Nov. 19, 1959.
For Duplicators.

SN 67,293. Biz-E-Boy Products Company (new firm), Kansas City, Mo., assignee of Biz-E-Boy Products Company, Kansas City, Mo. Filed Feb. 9, 1959.

BIZ-E-BOY

For Lawnmowers.
First use Jan. 6, 1959.

SN 73,681. Fischer & Porter Company, Hatboro, Pa. Filed May 14, 1959.

FP

Owner of Reg. No. 664,700.
For Chemical Feeding Equipment—Namely, Chlorinators, Fluorinators, Ammoniators, and Chlorine Evaporators.
First use in the early part of 1952.

SN 76,197. John H. Graham & Co., Inc., New York, N.Y. Filed June 22, 1959.

British SANDPIPER

For Outboard Motors.
First use May 22, 1959.

SN 79,178. Moore & Wright (Sheffield) Limited, Sheffield, England. Filed Aug. 7, 1959.

M&W

Owner of British Reg. No. 696,725, dated Mar. 13, 1951.
For Hand Tools, Including, Chisels, Toolmakers Clamps, Punches, Automatic Punches, Saws, Saw Blades, Scrapers, Screwdrivers, Soldering Irons, Box Spanners, Surface Plates, Tap Wrenches, Tinmans Shears, Beam Trammels, and Cabinet Scrapers.

SN 80,208. United Silver & Cutlery Company, Los Angeles, Calif. Filed Aug. 25, 1959.

Grain Awards

For Cutlery.
First use June 5, 1956.

SN 81,663. M. Earl Adams Co., Johnston, R.I. Filed Sept. 21, 1959.

MEACO

For Screw Machine Products.
First use June 30, 1959.

SN 82,889. The Englishtown Corporation, New York, N.Y. Filed Oct. 8, 1959.

WAVECREST

For Kitchenware—Namely, Knives, Forks, and Spoons.
First use Aug. 15, 1959.

SN 83,552. Production Finance Limited, Vancouver, British Columbia, Canada. Filed Oct. 19, 1959.

HOMAWAY

Owner of Canadian Reg. No. 117,086, dated Feb. 26, 1960.
For Machines for Vending Articles, Such as Cigarettes, Tooth Brushes, Tooth Paste, Razor Blades, and the Like.

SN 86,701. Universo (S.A.) Société Générale des Fabriques d'Aiguilles, La Chaux de Fonds, Switzerland. Filed Dec. 4, 1959.

MACHINES UNIVERSO

Applicant disclaims the word "Machines." Owner of Swiss Reg. No. 175,140, dated Apr. 1, 1959.
For Machines Intended for Precision Production—Namely, Machine Tools Equipped With Pneumatic or Hydraulic Control Valves and Parts Thereof.

SN 90,677. Aim Engineering Company, Seattle, Wash. Filed Feb. 15, 1960.

HYDRO PAK

For Through-Transom Marine Drive Unit.
First use on or about Nov. 2, 1959.

SN 92,865. J. H. Carruthers & Company Limited, Glasgow, Scotland. Filed Mar. 15, 1960.

Flowmaster

Owner of British Reg. No. 758,076, dated Sept. 29, 1956.
For Pumps.

SN 93,089. Aktieselskabet Burmeister & Wain's Maskin-og Skibsbyggeri, Copenhagen, Denmark. Filed Feb. 23, 1960.

BUR-WAIN

Owner of Danish Reg. No. 944-1939, dated Nov. 4, 1939.
For Diesel Engines, Reduction Gears, Reversing Gears, Couplings, Clutches, and Other Accessories for Diesel Engines.

SN 93,053. Glen A. Cordle, Norfolk, Va. Filed Mar. 17, 1960.

GLENCO

For Sewing Machines and Parts Thereof.
First use on or about May 1, 1959.

SN 93,101. James A. Sinclair, d.b.a. The Jimsin Company, Franklin, La. Filed Mar. 17, 1960.

JIMSIN

For Grass Cutters.
First use February 1960.

SN 93,110. Wenger Mixer Manufacturing, Sabetha, Kans. Filed Mar. 17, 1960.

Wenger

For Molasses Feed Blenders, Animal Fat Mixers, Multi-Blenders, Dressers and Blenders, Pellet Mills, Dog Food Machines, Pellet Coolers, Liquid Feeders, Storage Tank Pumps, Belt Conveyors, Bulk Feed Unloaders, Feed Shakers, Steam Boilers, Crumblizers, Feed Toasters, and Metered Flow Pumps.
First use December 1957.

SN 93,286. Dyna-Thrust Corporation, Columbia, S.C. Filed Mar. 21, 1960.

Dyna-thrust

For Light-Weight Internal Combustion Bicycle Engine.
First use on or about Feb. 20, 1960.

SN 93,379. Sunbeam Corporation, Chicago, Ill. Filed Mar. 21, 1960.

INTERNATIONAL

For Electric Dry Shavers and Parts Thereof.
First use Mar. 7, 1960.

SN 93,425. Food Systems, Inc., Berkeley, Calif. Filed Mar. 22, 1960.

TRANS-VAC

For Egg Lifting Mechanism.
First use Sept. 25, 1959.

SN 93,456. S & S Corrugated Paper Machinery Company, Inc., Brooklyn, N.Y. Filed Mar. 22, 1960.

DIE MASTER

For Sheet Die Cutting and Creasing Machines.
First use Feb. 9, 1960.

SN 93,495. Barnick Manufacturing Company, Inc., Fargo, N. Dak. Filed Mar. 23, 1960.

BIG HAND

For Pneumatic Tire Demounting Devices.
First use December 1947.

SN 93,512. Essex Wire Corporation, Fort Wayne, Ind. Filed Mar. 23, 1960.

ESSEX AUTOMATER

Owner of Reg. Nos. 536,430 and 618,128.
For Power Presses for Forming Electrical Connectors and Attaching the Same to Electrical Conductors.
First use Feb. 15, 1960.

SN 93,513. Essex Wire Corporation, Fort Wayne, Ind. Filed Mar. 23, 1960.

ESSEX TERMINATOR

Owner of Reg. Nos. 536,430 and 618,128.
For Power Presses for Forming Electrical Connectors and Attaching the Same to Electrical Conductors.
First use Feb. 15, 1960.

SN 95,546. American Pamcor Incorporated, Havertown, Pa. Filed Apr. 22, 1960.

API

Owner of Reg. Nos. 626,516 and 627,280.
For Electrical Terminal Applying Devices.
First use Mar. 28, 1960; Apr. 6, 1953, in lower case letter form.

Class 26—Measuring and Scientific Appliances

SN 70,676. The Polycast Corporation, Stamford, Conn. Filed Apr. 1, 1959.

POLYCAST

For Finished Polymer Plastic Goods—Namely, Optical Filters, Lenses, and Cast Plastic Sheets.
First use Apr. 27, 1955.

SN 73,683. Fischer & Porter Company, Hatboro, Pa. Filed May 14, 1959.

FP

Owner of Reg. No. 664,700.
For Glass Products—Namely, Measuring, Laboratory and Scientific Glassware, Sight Glasses, Manometers, Pressure Vessels, and Stopcocks.
First use in the early part of 1952.

SN 75,793. The Alva T. Smith Company, Milwaukee, Wis. Filed June 15, 1959.

BLEND-RITE

For Proportional Gasoline and Oil Mixing Devices.
First use on or about Apr. 10, 1959.

SN 81,175. Controls Company of America, Schiller Park, Ill., assignee of Electrosnap Corporation, Chicago, Ill. Filed Sept. 11, 1959.

TREYLITE

For Combination Switch Actuator and Signalling Indicator Used in Testing Scientific Apparatus and Controlling Computer Operations To Determine the Successful or Unsuccessful Completion of the Phases Involved.
First use Aug. 4, 1959.

SN 81,176. Controls Company of America, Schiller Park, Ill., assignee of Electrosnap Corporation, Chicago, Ill. Filed Sept. 11, 1959.

UNILITE

For Combination Switch Actuator and Signalling Indicator Used in Testing Scientific Apparatus and Controlling Computer Operations To Determine the Successful or Unsuccessful Completion of the Phases Involved.
First use Aug. 4, 1959.

SN 81,206. Tel-Air Corporation, Dallas, Tex. Filed Sept. 11, 1959.

TEL-AIR

The drawing is lined for the color red.
For Low Tire Pressure Measuring and Alarm Devices.
First use June 15, 1959.

SN 81,927. Optique et Precision de Levallois, Levallois-Perret, Seine, France. Filed Sept. 23, 1959.

FOCAFLEX

Owner of French Reg. No. 482,043, dated July 28, 1959 (Seine); Natl. Inst. No. 129,800; and U. S. Reg. No. 429,658.
For Reflex Cameras.

SN 83,101. Jetronic Industries, Inc., Philadelphia, Pa. Filed Oct. 12, 1959.

WINTRONIX

For Electrical Marine Depthmeters.
First use August 1959.

SN 84,452. John Robert Powers Products Co. Inc., New York, N.Y. Filed Nov. 2, 1959.

BEAUTY LENS

The word "Lens" is disclaimed apart from the mark as shown.
For Optical Comparator for Identifying a Woman's Complexion Color by Comparison With Established Color Standards.
First use on or about Nov. 25, 1955.

SN 85,519. Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany. Filed Nov. 17, 1959.

TELE-ARTON

Owner of German Reg. No. 687,285, dated Feb. 7, 1956.
For Optical and Photographic Apparatus and Devices and Parts Thereof, Particularly Objectives.

SN 86,358. Stanhope-Seta Limited, Englefield Green, Surrey, England. Filed Nov. 30, 1959.

SETA

Owner of British Reg. No. 698,454, dated May 24, 1951.
For Apparatus for Testing the Properties of Petroleum and Petroleum Products.

SN 86,402. De Jur-Amsco Corporation, Long Island City, N.Y. Filed Dec. 1, 1959.

VARI-ZOOM

For Photographic and Projection Lenses.
First use Sept. 9, 1959.

SN 87,308. David Louis Wheeler, d.b.a. Wheeler Electronics, Georgetown, Mass. Filed Dec. 14, 1959.

FIDELISCOPE

For Oscilloscopes With Associated Circuits.
First use Oct. 6, 1959.

SN 89,896. Albert A. Weiss & Son, Inc., Brooklyn, N.Y. Filed Jan. 20, 1960.

Vari-angle

For Industrial Thermometers.
First use Oct. 30, 1959.

SN 90,777. North American Aviation, Inc., Los Angeles, Calif. Filed Feb. 11, 1960.

AI

Owner of Reg. Nos. 638,026 and 638,027.
For Atomic Reactors and Components Thereof.
First use Oct. 12, 1955.

SN 91,237. Century Electronics & Instruments, Inc., Tulsa, Okla. Filed Feb. 19, 1960.

STRAINISTOR

For Strain Gauges.
First use on or about Jan. 30, 1960.

SN 91,286. Royal McBee Corporation, Port Chester, N.Y. Filed Feb. 19, 1960.

ROYFAX

For Contact Office Copy Printer and Processer and Parts Thereof.
First use Dec. 1, 1959.

SN 91,300. Standard Scientific Supply Corp., New York, N.Y. Filed Jan. 7, 1960.

VACUPUMP

For Portable Laboratory High Vacuum Pump.
First use Nov. 16, 1959.

SN 91,482. Westinghouse Air Brake Company, Pittsburgh, Pa. Filed Feb. 23, 1960.

READALL

For Indicating Instruments—Namely, Visual Indicators Capable of Receiving Data in Binary or Decimal Form and Storing Said Data, and/or Converting Binary Data to Decimal Form, and/or Converting Decimal Data to Binary Form, and/or Retaining Data Visually and Electrically, and/or Visually Displaying Data in Decimal Form, and/or Transferring Data Visually and Electrically.
First use Jan. 25, 1960.

SN 91,753. The Budd Company, Philadelphia, Pa. Filed Feb. 29, 1960.

PHOTOSTRESS

For Photoelastimetric Equipment, Accessories, and Supplies, Including Strain Sensitive Plastics and Instruments for Measuring Strains on Surfaces of Materials by Photoelastic Means.
First use June 4, 1957.

SN 92,631. Molectronics Corporation, South El Monte, Calif. Filed Mar. 11, 1960.

MOLECTRONIC

For Oscilloscopes.
First use Feb. 12, 1960.

SN 92,667. U.S. Photo Supply Co., Inc., Washington, D.C. Filed Mar. 11, 1960.

CINEVISION

For Motion Picture Film Editors and Viewers.
First use on or about Feb. 25, 1960.

SN 92,768. Hoover Brothers, Inc., Kansas City, Mo. Filed Mar. 14, 1960.

DA-MASTER

For Combination Movie Projector and Screen.
First use Dec. 1, 1959.

SN 92,877. Franklin Manufacturing Co., Inc., Westmont, N.J. Filed Mar. 15, 1960.

TA-LI-TRON

For Vehicle Tail Light Testing Apparatus.
First use Jan. 15, 1960.

SN 93,124. The Anderson Company, Gary, Ind. Filed Mar. 18, 1960.

ANCO

For Windshield Wiper Arm Pressure Indicator.
First use Sept. 27, 1957.

SN 93,219. Tax-O-Graph, Inc., Boston, Mass. Filed Mar. 18, 1960.

TAX-O-GRAPH

For Tax Computation Devices.
First use Feb. 19, 1960.

SN 93,287. Eastman Kodak Company, Rochester, N.Y. Filed Mar. 21, 1960.

DAKON

Owner of Reg. No. 384,642.
For Photographic Lenses.
First use July 7, 1955.

SN 93,418. Comptometer Corporation, d.b.a. Radiation Electronics Company, Skokie, Ill. Filed Mar. 22, 1960.

THERMOPAN

For Infrared Scanning Radiometer.
First use May 4, 1960.

SN 93,510. Eastman Kodak Company, Rochester, N.Y. Filed Mar. 23, 1960.

SUPERMITE

For Photographic Flashlighting Apparatus and Flashguards.
First use Sept. 29, 1959.

SN 93,563. Taylor Instrument Companies, Rochester, N.Y. Filed Mar. 23, 1960.

SENSAIRE

For Fluid Actuated Instrument for Measuring a Characteristic of a Variable Medium and Converting This Measurement Into a Corresponding Pneumatic Pressure for Actuating a Pneumatically Operated Receiver for Indicating, Recording, or Controlling of the Measured Value.
First use December 1958.

SN 93,592. Chance Vought Aircraft, Incorporated, Dallas, Tex. Filed Mar. 24, 1960.

ONGERPRINT

For Automatic Guidance Systems for Aerial Vehicles and Parts Therefor.
First use Mar. 8, 1960.

SN 93,593. Chance Vought Aircraft, Incorporated, Dallas, Tex. Filed Mar. 24, 1960.

FINGERPRINT

For Automatic Guidance Systems for Aerial Vehicles and Parts Therefor.
First use Mar. 8, 1960.

SN 93,675. Eastman Kodak Company, Rochester, N.Y. Filed Mar. 25, 1960.

ELIPTON

For Photographic Enlargers and Parts Thereof.
First use July 10, 1958.

SN 93,838. Charles E. Myers, d.b.a. Tru Check Rain Gauge Co., Albert Lea, Minn. Filed Mar. 28, 1960.

TOWN & COUNTRY

For Rain Gauges.
First use Jan. 9, 1960.

SN 93,894. Zenith Radio Corporation, Chicago, Ill. Filed Mar. 28, 1960.

ZENITH

For Audiometers.
First use on or about Aug. 31, 1960.

SN 93,897. Toastmasters International, Santa Ana, Calif. Filed Mar. 21, 1960.

TMI

For Electrically or Mechanically Operated Timers for Indicating the Passage of Predetermined Time Intervals, as in Timing Speeches.
First use Feb. 18, 1960.

SN 94,134. B & H Instrument Company, Inc., Fort Worth, Tex. Filed Apr. 1, 1960.

AUTOTAK

For Apparatus for Measuring and/or Indicating Rotational Speed or Frequency.
First use May 25, 1956.

SN 94,135. B & H Instrument Company, Inc., Fort Worth, Tex. Filed Apr. 1, 1960.

AUTOTEMP

For Apparatus for Measuring and/or Indicating Temperatures.
First use May 25, 1956.

SN 94,204. Herschel J. Stroyman, New York, N.Y. Filed Apr. 1, 1960.

ME-HI

For Device for Measuring Height.
First use Mar. 16, 1960.

SN 94,763. Hornstein Photo Sales, Inc., Chicago, Ill. Filed Apr. 11, 1960.

SQUIRE

For Binoculars.
First use in or about December 1957.

SN 94,961. Buffalo Meter Company, Inc., Buffalo, N.Y. Filed Apr. 13, 1960.

ELECTRICONTACT

For Liquid Meters for Indicating When Pre-Set Quantity of Liquid Has Been Delivered.
First use March 1939.

Class 27 — Horological Instruments

SN 91,022. Marcus Purchasing Co. Inc., New York, N.Y. Filed Feb. 16, 1960.

VANTIME

For Watches.
First use Jan. 25, 1960.

SN 91,278. Ronsie Watch Company, Inc., New York, N.Y. Filed Feb. 19, 1960.

MINIVOX

For Clocks and Parts Thereof.
First use Feb. 15, 1960.

SN 91,279. Ronsie Watch Company, Inc., New York, N.Y. Filed Feb. 19, 1960.

CHRONOVOX

For Clocks and Parts Thereof.
First use Feb. 15, 1960.

SN 91,563. Sunbeam Corporation, Chicago, Ill. Filed Feb. 24, 1960.

GOLDEN NUGGET

For Alarm Clocks.
First use Feb. 8, 1960.

SN 91,592. A. Cohen & Sons Corp., New York, N.Y. Filed Feb. 25, 1960.

SONAC

For Clocks, Watches, Watch Cases, Watch Movements and Parts Thereof.
First use Oct. 15, 1959.

SN 93,834. Bulova Watch Company, Inc., Flushing, N.Y. Filed June 13, 1960.

CARAVELLE

Owner of Reg. No. 698,123.
For Watches.
First use June 6, 1960.

Class 28 — Jewelry and Precious-Metal Ware

SN 72,489. Esposito Jewelry, Inc., Providence, R.I. Filed Apr. 29, 1959.

BERBAJJE

For Stones Set in and Forming Part of Finger Rings.
First use on or about Apr. 1, 1959.

Class 31 — Filters and Refrigerators

SN 50,543. Springer Industries, Inc., Long Island City, N.Y. Filed Apr. 28, 1958.



For Refrigerator Furniture and Refrigerated Parts.
First use on or about Jan. 1, 1948.

SN 86,410. Filtros, Incorporated, East Rochester, N.Y. Filed Dec. 1, 1959.

STERI-PORE

For Filters.
First use April 1959.

SN 86,563. Filtros, Incorporated, East Rochester, N.Y. Filed Dec. 3, 1959.

STERI-PORE

For Filters.
First use April 1959.

SN 90,305. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 4, 1960.

MICROLOX

For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Oct. 29, 1959.

SN 90,306. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 4, 1960.

MICROEDGE

For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Oct. 29, 1959.

SN 90,307. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 4, 1960.

MICROFIL

For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Oct. 29, 1959.

SN 90,308. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 4, 1960.

MICROMESH

For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Oct. 29, 1959.

SN 90,309. Bendix Aviation Corporation, Detroit, Mich. Filed Feb. 4, 1960.

MICROPLEAT

For Filters and/or Demulsifiers, and Parts Therefor, for Purifying Fluids.
First use Oct. 29, 1959.

SN 92,102. McGraw-Edison Company, Milwaukee, Wis. Filed Mar. 3, 1960.



For Electrostatic Filters and Absorption Filters.
First use June 9, 1958.

Class 32 — Furniture and Upholstery

SN 44,906. U.S. Mattress Corporation, Irvington, N.J. Filed Jan. 30, 1958.

US
Mattress

Applicant disclaims the word "Mattress" apart from the mark as shown.
For Furniture and Upholstery—Namely, Box Springs and Mattresses.
First use Oct. 26, 1956.

SN 77,749. Jarke Manufacturing Company, Chicago, Ill. Filed July 15, 1959.



For Racks, Including Bar and Pipe Racks, Barrel and Drum Storage Racks, Oil Stock Racks, and General Purpose Storage Racks, Wire Racks, and Steel Racks.
First use June 19, 1959.

SN 80,126. Serta Associates, Inc., Chicago, Ill. Filed Aug. 24, 1959.

TILT-A-BED

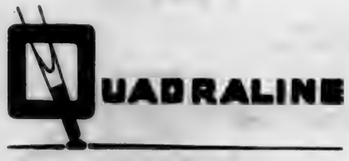
For Adjustable Bed Containing Mechanisms for Raising Either or Both Ends.
First use on or about Mar. 6, 1959.

SN 82,884. Dayco Corporation, Dayton, Ohio, by change of name from The Dayton Rubber Company, Dayton, Ohio. Filed Oct. 8, 1959.

NIGHT 'N' DAY

For Pillows.
First use November 1955.

SN 87,175. American Desk Manufacturing Company, Temple, Tex. Filed Dec. 14, 1959.



For Chairs, Chair Desks, Tablet Arm Chairs, and Combination Chair and Desk Units.
First use June 1957.

SN 94,958. Blenswanger Glass Co., Richmond, Va. Filed Apr. 13, 1960.

TRU-FLECT

For Mirrors.
First use January 1951.

SN 95,145. Curtis Companies Incorporated, Clinton, Iowa. Filed Apr. 15, 1960.

FLAIRWOOD

For Kitchen Cabinets.
First use Mar. 9, 1960.

SN 95,395. Sealy, Incorporated, Chicago, Ill. Filed Apr. 19, 1960.

EXQUISITE SLEEP

For Mattresses and Box Springs.
First use Feb. 11, 1960.

SN 95,442. Kent-Coffey Manufacturing Company, Lenoir, N.C. Filed Apr. 20, 1960.

VINTAGE

For Articles of Household and Office Furniture.
First use Mar. 31, 1960.

SN 96,063. Kason Hardware Corporation, Brooklyn, N.Y. Filed Apr. 26, 1960.

ROOM-WARE

For Knockdown Furniture and Wood Shelving Therefor.
First use Mar. 9, 1960.

Class 33 — Glassware

SN 47,413. Northwestern Glass Company, Seattle, Wash. Filed Mar. 10, 1958.

ELECTROGLAS

For Glass Bottles and Glass Jars.
First use Feb. 28, 1958.

SN 67,093. Spiegelglaswerke Germania A.G., Porz-Urbach, Germany. Filed Feb. 6, 1959.

DURO-GLAS

Owner of German Reg. No. 694,415, dated Aug. 31, 1956.
For Safety Glass Made of Crystal Mirror Glass.

SN 82,621. Airko Manufacturing Co., Clermont, Fla. Filed Oct. 5, 1959.

Free FLOW

For Glass Salt and Pepper Shakers.
First use July 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 91,230. The Auer Register Company, Cleveland, Ohio. Filed Feb. 19, 1960.

VALUAIRE

For Air Registers for Heating Systems.
First use Oct. 15, 1959.

SN 91,281. Retail Stores Service, Inc., Baltimore, Md. Filed Feb. 19, 1960.

HOME-MARK

For Air Conditioners.
First use Feb. 1, 1960.

SN 93,356. The Pyramid Rubber Company, Ravenna, Ohio. Filed Mar. 21, 1960.

EVENFLO

Owner of Reg. Nos. 562,145, 566,385, and others.
For Non-Electrical Apparatus for Heating Infant Feeding Equipment, Including Sterilizers and Bottle Warmers.
First use August 1952.

SN 93,547. Revco, Inc., Deerfield, Mich. Filed Mar. 23, 1960.

REVERSAMATIC

For Household Heating and Air-Conditioning Equipment of the Heat Pump Type.
First use Jan. 19, 1959.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 62,385. C. E. Erdman Tire Company, Baltimore, Md. Filed Nov. 13, 1958.



For Retreaded Automobile Tires and New Automobile Tubes.
First use Mar. 26, 1958.

SN 85,796. Western Auto Supply Company, Kansas City, Mo. Filed Nov. 20, 1959.

DAVIS

Owner of Reg. No. 309,854.
For Pneumatic Tires and Inner Tubes.
First use Apr. 1, 1932.

SN 92,282. Jarrow Products, Inc., Chicago, Ill. Filed Mar. 7, 1960.

JARROW PRODUCTS

Applicant disclaims the right to the exclusive use of the word "Products" apart from the mark.
For Gaskets and Gasket Parts for Doors, Windows, Counters, and the Like.
First use October 1927.

Class 36 — Musical Instruments and Supplies

SN 79,049. Cosmopolitan Exchange Corporation, New York, N.Y. Filed Aug. 5, 1959.



For Harmonicas.
First use April 1954.

SN 82,381. Grand Award Record Co., Inc., New York, N.Y., assignee of Award Publishing Corporation, Harrison, N.J. Filed Sept. 30, 1959.

COMMAND

For Phonograph Records.
First use June 22, 1959.

SN 88,370. Dooto Record Manufacturing, Inc., Los Angeles, Calif. Filed Jan. 4, 1960.

DOOTO

The triangular element and circular element which it intersects and which are a part of the mark, have a dual purpose: they represent the letters DO; and the circle represents a phonograph record, and the triangle intersecting same represents a phonograph needle.
For Phonograph Record Covers, Jackets or Containers, Usually Sold With Phonographs.
First use Oct. 22, 1959.

SN 92,282. Gerald David Parker, Cohoes, N.Y. Filed Mar. 7, 1960.

PLEASON

For Talking Machine Phonograph Record Disc.
First use Jan. 4, 1960.

Class 39 — Clothing

SN 67,014. Men's Hats, Inc., Baltimore, Md. Filed Feb. 3, 1959.

HOPKINS

For Hats for Men.
First use 1895.

SN 71,549. Miss Brooks, Inc., New York, N.Y., assignee of Billie Brooks Talls, Inc., New York, N.Y. Filed Apr. 15, 1959.

BILLIE BROOKS TALLS

The word "Talls" is disclaimed apart from the mark as shown. Owner of Reg. No. 654,160.
For Dresses.
First use Feb. 11, 1959.

SN 77,743. Haggar Company, Dallas, Tex. Filed July 15, 1959.

tonga
WEAVE

No claim is made to the word "Weave" apart from the mark as shown.
For Men's and Boys' Clothing—Namely, Wash and Wear Slacks.
First use on or about September 1955.

SN 81,679. Champion Knitwear Co., Inc., Rochester, N.Y. Filed Sept. 21, 1959.

ENDURALL

For Yarn Sold Only in Finished Apparel—Namely, Sportswear.
First use Oct. 1, 1958.

SN 81,992. Godman Shoe Company, Columbus, Ohio, assignee of The H. C. Godman Company, Columbus, Ohio. Filed Sept. 24, 1959.

Toral Trod
Hit-a-Peds

Owner of Reg. No. 633,689.
For Women's Shoes.
First use July 14, 1959.

SN 84,145. Arthur C. Kaufmann and Associates, Inc., Philadelphia, Pa. Filed Oct. 28, 1959.

"TIE-ON"

For Men's Shirts.
First use Sept. 29, 1959.

SN 87,589. Stork Mates, Inc., Boston, Mass. Filed Dec. 18, 1959.

STORK MATES

For Maternity Garments—Namely, Jackets, Skirts, Outer Shorts and Pants, Jerkins, Sweaters, Bathing Suits, Slacks, and Dresses.
First use August 1956.

SN 89,356. Interwoven Stocking Company, New Brunswick, N.J. Filed Jan. 20, 1960.

SOCKS UP

Owner of Reg. No. 374,299.
For Hosiery.
First use Nov. 11, 1938.

SN 89,037. Bernard Industries, Inc., New York, N.Y. Filed Jan. 26, 1960.

Comte de France

The English translation of "Comte de France" is "Count of France."
For Men's Neckwear and Cravats.
First use Sept. 15, 1959.

SN 89,777. Malcolm Kenneth Co., Boston, Mass. Filed Jan. 27, 1960.

SHEFFIELD

Owner of Reg. No. 598,316.
For Men's Topcoats, Overcoats, Sport Coats, Suits, Work and Armed Service Uniforms, and Women's Coats.
First use 1946.

SN 89,822. Zatlow Brothers Co., Inc., New York, N.Y. Filed Jan. 27, 1960.

Mr. Zee

For Ladies' Jackets and Sweaters.
First use Dec. 1, 1959.

SN 89,868. Peter Pan Foundations, Inc., New York, N.Y. Filed Jan. 28, 1960.

NETWORK

For Brassieres and Corsets.
First use Jan. 10, 1960.

SN 89,943. Bernard E. Powers, Fitchburg, Mass. Filed Jan. 29, 1960.

KOM-OVA

For Sport Shirts and Pullover Sweaters, Jackets, and Blouses.
First use Dec. 1, 1959.

SN 90,340. Kayser-Roth Corporation, New York, N.Y. Filed Feb. 4, 1960.

SATILENE

For Nylon Tricot Made Up Into Women's and Children's Slips, Petticoats, Gowns, and Nightrobes.
First use Dec. 11, 1959.

SN 92,746. Flexnit Company, Inc., Elizabeth, N.J. Filed Mar. 14, 1960.

LADY CUE

For Foundation Garments.
First use on or about Jan. 2, 1947.

Class 41 — Canes, Parasols, and Umbrellas

SN 86,495. Frankford Umbrella Manufacturing Company, Philadelphia, Pa. Filed Dec. 2, 1959.



The drawing is lined to reproduce lines appearing in the mark on the specimens.
For Umbrellas.
First use Nov. 13, 1959.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 53,105. Beaunit Mills, Inc., New York, N.Y. Filed June 9, 1958.

Beaunaire

For Knitted Fabrics—Namely, Nylon Tricot Underwear Fabric.
First use on or about May 2, 1958.

SN 66,242. Roman Smucer, d.b.a. Roman Smucer Woolen Company, New York, N.Y. Filed Jan. 21, 1959.

ROMANELLA

For Woolen Fabrics in the Piece.
First use in January 1957.

SN 66,244. Roman Smucer, d.b.a. Roman Smucer Woolen Company, New York, N.Y. Filed Jan. 21, 1959.

ROMANTICA

For Woolen Fabrics in the Piece.
First use Oct. 15, 1958.

SN 83,272. Joseph Bancroft & Sons Company, Wilmington, Del. Filed Oct. 15, 1959.



The word "Fabric" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 354,038, 673,589, and others.
For Cotton Piece Goods.
First use Oct. 6, 1959.

SN 87,685. The Jaunty Fabric Corporation, New York, N.Y. Filed Dec. 21, 1959.

JAUNTY QUILT

Without waiving its common law rights and for purposes of this registration only, applicant makes no claim herein to the word "Quilt" apart from the mark as shown. Owner of Reg. No. 203,040.
For Broadwoven Fabrics, of Man-Made Fibers, Interlined and Quilted.
First use Nov. 2, 1959.

SN 87,686. The Jaunty Fabric Corporation, New York, N.Y. Filed Dec. 21, 1959.

SOFTIE QUILT

Without waiving its common law rights and for purposes of this registration only, applicant makes no claim herein to the word "Quilt" apart from the mark as shown.
For Broadwoven Fabrics, of Man-Made Fibers, Interlined and Quilted.
First use Nov. 2, 1959.

SN 89,532. Weil & Durrse, Inc., New York, N.Y. Filed Jan. 22, 1960.

WILENDURE

Owner of Reg. No. 379,377.
For Tablecloths, Napkins, Place Mats, Towels, Furniture Scarfs and Throws, Curtains, Drapes, Bedspreads, Toweling, Table-Cover Fabrics, and Cotton Piece Goods.
First use March 1958; October 1939 in spelling "Wilendur."

SN 89,773. K.S. Corp., New York, N.Y. Filed Jan. 27, 1960.

X-TEL

For Acid and Chemical Resistant Fabric for Use in Making Garments.
First use May 5, 1959.

SN 90,072. S. H. Kress and Company, New York, N.Y. Filed Feb. 1, 1960.

GUIDED COTTONS

No exclusive rights are claimed to the word "Cottons" apart from the mark as shown and applicant waives none of its common law rights in said word.
For Cotton Piece Goods.
First use Oct. 8, 1959.

Class 43 — Thread and Yarn

SN 92,784. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 14, 1960.

ORLON SAYELLE

Owner of Reg. Nos. 529,080, 530,272, and others.
For Yarns and Threads of Man-Made Fibers.
First use on or about Mar. 7, 1960.

Class 44 — Dental, Medical, and Surgical Appliances

SN 81,196. Millers Forge Mfg. Corp., New York, N.Y. Filed Sept. 11, 1959.

VARALLOY

For Non-Ferrous Metal Sold Only in the Form of Such Finished Articles as Tweezers, Forceps, Nippers, Clippers, Nail Files, and Scissors.
First use Aug. 26, 1959.

SN 91,980. Gesellschaft fur Elektronische Rohren Comet Bern, Bern, Switzerland. Filed Feb. 12, 1960.

PANORAMIX

Owner of Swiss Reg. No. 177,376, dated Sept. 26, 1959.
For X-Ray Tube for X-Raying the Body.

SN 92,287. Ortho-Aides, Inc., Inglewood, Calif. Filed Mar. 7, 1960.

ORTHO-AIDE

For Orthopedic Abduction Splint.
First use Oct. 25, 1957.

SN 92,721. Cory Corporation, Chicago, Ill. Filed Mar. 14, 1960.

SARASOTA

For Flexible Vibratory Heat Pads.
First use Sept. 9, 1959.

Class 46 — Foods and Ingredients of Foods

SN 25,956. Central Manufacturing Company, Wichita Falls, Tex. Filed Mar. 12, 1957.

CEMCO

For By-Products of Rendering Plants, Such as Meat and Bone Meal, Poultry By-Product Meal, Hydrolyzed Feathers and Fats, Which Are Used as Blending Concentrates in Live Stock and Poultry Feeds, but Which Products Are Not for Human Consumption, Which Concentrates Are Sold in Wholesale Quantities to Large Feed Mills and Are Not Sold to the Retail Trade.
First use Nov. 1, 1956.

SN 77,184. George Woo, Los Angeles, Calif. Filed July 6, 1959.

SWEET WOO

Owner of Reg. No. 556,507.
For Fresh Sweet Potatoes.
First use Nov. 1, 1957.

SN 77,278. Eckerd Drugs, Inc., Charlotte, N.C. Filed July 8, 1959.

HERITAGE HOUSE

For Ice Cream and Ice Milk.
First use on or about May 15, 1959.

SN 87,577. F. H. Peavey & Company, Minneapolis, Minn. Filed Dec. 18, 1959.

PIG HUSTLE-TONE

The word "Pig" is disclaimed apart from the mark as shown.
For Animal Feed—Namely, Pig Feed.
First use August 1956.

SN 87,579. R. K. Ransom, d.b.a. Hickory Farms of Ohio, Toledo, Ohio. Filed Dec. 18, 1959.

HICKORY FARMS OF OHIO

Applicant disclaims the word "Ohio" apart from the mark.
For Sausage.
First use March 1952.

SN 87,643. J. S. Danenberg, d.b.a. Danny Danenberg, El Centro, Calif. Filed Dec. 21, 1959.

YELLOW RING

For Fresh Onions in Their Natural State.
First use Apr. 20, 1959.

SN 87,674. Globe Products Company, Inc., Clifton, N.J. Filed Dec. 21, 1959.

808

For Food Product—Namely, Cream-Type Filling for Eclairs, Cream Puffs, and Like Bakery Products.
First use Sept. 25, 1959.

SN 90,757. H. P. Hood & Sons, Inc., d.b.a. H. P. Hood & Sons, Boston, Mass. Filed Feb. 11, 1960.

SUNSHINE CUP

For Orange Water Ice.
First use Mar. 18, 1957.

SN 93,133. Davis Beauchamp, Calipatria, Calif. Filed Mar. 16, 1960.

CAL-PAT

For Fresh Onions.
First use Mar. 10, 1960.

SN 93,399. Ben F. Adamek, d.b.a. Sunrise Packing Company, Blythe, Calif. Filed Mar. 22, 1960.

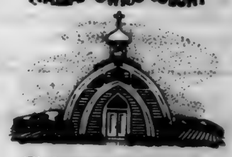
EARLY RISER

For Fresh Lettuce.
First use Mar. 15, 1960.

Class 47 — Wines

SN 63,163. United Vintners, Inc., San Francisco, Calif., by change of name from Allied Wine Company, assignee of Italian Swiss Colony, San Francisco, Calif. Filed Nov. 25, 1958.

ITALIAN SWISS COLONY



CAPPELLA

The Italian word "Cappella" means "chapel." Owner of Reg. Nos. 360,492, 373,734, and 378,139.
For Wines.
First use Sept. 19, 1958.

Class 50 — Merchandise Not Otherwise Classified

SN 81,846. Jacobson Co., Elmhurst, N.Y. Filed Sept. 18, 1959.



Applicant disclaims the representation of the hat and the word "Hats" appearing on the drawing.
For Novelty Hats and Party Hats.
First use Jan. 2, 1959.

SN 86,898. Nautalloy Products Incorporated, d.b.a. Crysto-Mat Co., Auburn, N.Y. Filed Dec. 8, 1959.

CRYSTO-MAT

For Transparent Floor Mats for Use Under Chairs.
First use Jan. 17, 1958.

SN 91,944. Industrial Ladder Co., Oakland, Calif. Filed Mar. 1, 1960.

LADR-HIDE

For Anti-Splinter Covering for Wooden Ladder Rails.
First use July 1, 1959.

SN 92,153. W. R. Grace & Co., Cambridge, Mass. Filed Mar. 4, 1960.

POLYFIBRON

For Offset Press Blanket.
First use Nov. 3, 1959.

SN 92,301. Rose-Matthai Corporation, New York, N.Y. Filed Mar. 7, 1960.

ROMAT

For Plastic Products—Namely, Plastic Table Place Mats and Card Table Covers.
First use Jan. 27, 1960.

SN 92,768. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed Mar. 14, 1960.

PROFI-MATIC

Owner of Reg. Nos. 602,823 and 651,948.
For Feeders and Waterers (Detached From Plumbing) for Livestock, Pig Brooders, and Poultry Nests.
First use Mar. 25, 1954, on feeders and waterers.

Class 51—Cosmetics and Toilet Preparations

SN 74,634. Viviane Woodard Corporation, Panorama City, Calif., by change of name from Viviane Woodard Cosmetics, Panorama City, Calif. Filed May 27, 1959.

ELASON

For Cuticle Conditioner and Fingernail Base Coat and Polish Protector Coat.
First use Dec. 11, 1958.

SN 74,636. Viviane Woodard Corporation, Panorama City, Calif., by change of name from Viviane Woodard Cosmetics, Panorama City, Calif. Filed May 27, 1959.

STYLE-EYES

For Eye Shadow, Eyebrow Pencil, Eyelash Liner Pencil, Mascara and Eyelash Combs.
First use Jan. 24, 1959.

SN 83,304. Helen Neushaefer, Inc., d.b.a. Helen Neushaefer, College Point, N.Y. Filed Oct. 15, 1959.

HELEN NEUSHAEFER

Owner of Reg. No. 443,196.
For Nail Polish and Lipstick.
First use Sept. 24, 1940.

SN 84,731. Cippy Inc., Clifton, N.J. Filed Nov. 6, 1959.

*sque

For Roll-On Deodorant.
First use Nov. 2, 1959.

SN 87,439. Barth Levitt Products, Lynbrook, N.Y. Filed Dec. 16, 1959.

GERI-DERM

For Skin Cream.
First use Oct. 22, 1959.

SN 89,267. The Gillette Company, Boston, Mass. Filed Jan. 19, 1960.

K-34

For Hexachlorophene Incorporated as an Ingredient in Shaving Cream.
First use Aug. 12, 1947.

SN 90,708. Sea Breeze Laboratories, Inc., Pittsburgh, Pa. Filed Feb. 10, 1960.

Set 'n' Go

For Hair Setting Lotion.
First use Jan. 27, 1960.

SN 91,796. Richard Hudnut, Morris Plains, N.J. Filed Feb. 29, 1960.

BRIGHT BEAUTY

For Eye Mascara.
First use Feb. 10, 1960.

SN 91,819. Prince Matchabelli, Inc., New York, N.Y. Filed Feb. 29, 1960.

BELOVED MOMENT

For Perfumes, Colognes, and Dusting Powder.
First use Feb. 9, 1960.

SN 97,907. Muriel Bell, Incorporated, New York, N.Y. Filed May 2, 1960.

Anniversary

For Perfumes and Colognes.
First use Apr. 14, 1947.

Class 52—Detergents and Soaps

SN 93,129. The Anderson Company, Gary, Ind. Filed Mar. 18, 1960.

ANCO

For Windshield Washer Solvent.
First use Feb. 20, 1951.

SERVICE MARKS

Class 100—Miscellaneous

SN 79,092. Independent Petroleum Association of America, Tulsa, Okla. Filed Aug. 21, 1959.

IPAA

For Association Services, Including Research Studies, Informational Programs, and Promotion of the Interests of Its Members in the Petroleum Industry.
First use August 1953.

SN 84,471. Sigalert and Airwatch, Inc., Los Angeles, Calif. Filed Nov. 2, 1959.

SIGALERT

Owner of Reg. No. 661,327.
For Transmitting Emergency Bulletins and Notices, Issued by Governmental Bodies and Agencies From Time to Time Through the Medium of Radio and/or Television to the General Public or to Selected Portions Thereof.
First use Sept. 5, 1956.

Class 101—Advertising and Business

SN 64,461. Fifth Avenue Lithographic Associates, Inc., New York, N.Y. Filed Dec. 17, 1958.

FALA

For Advisory, Layout and Printing Services.
First use Jan. 3, 1956.

SN 70,373. Knife & Fork Club, Inc., Green Bay, Wis. Filed Mar. 27, 1959.

KNIFE-FORK

Dinner Club

For Promoting the Restaurant Services of Others Through the Issuance of Certificates Entitling Holders Thereof to Food Service in Participating Restaurants.
First use Feb. 10, 1959.

Class 102—Insurance and Financial

SN 76,066. Eastern Brokerage Company, Philadelphia, Pa. Filed June 10, 1959.

Eastern
BROKERAGE COMPANY

For Brokerage in Meat Products.
First use October 1949.

SN 79,556. D-S Agency, Inc., d.b.a. Amalgamated Credit Systems, St. Louis, Mo. Filed Aug. 14, 1959.



Applicant disclaims the word "Systems" apart from the mark as shown.
For Account Collection Services.
First use June 15, 1959.

SN 88,170. Preston State Bank, Dallas, Tex. Filed Dec. 29, 1959.



No claim is made to the words "Charge Plan" apart from the mark.
For Banking Services—Namely, Credit and Collection.
First use Feb. 1, 1953.

Class 105—Transportation and Storage

SN 78,987. Garber's Travel Service, Inc., Brookline, Mass. Filed Aug. 4, 1959.

MAGIC CARPET

Owner of Reg. No. 591,440.
For Travel Agency Services and All-Expense Travel Tours (Including Food and Lodging).
First use January 1948.

Class 107—Education and Entertainment

SN 59,874. American Machine & Foundry Company, New York, N.Y. Filed Oct. 1, 1958.

MAGIC TRIANGLE

Owner of Reg. Nos. 168,704, 665,632, and others.
For Rental and Maintenance of Automatic Pin Setting Machines for Bowling; Stimulating Interest in Bowling by Operating Instructural Clinics and by Means of Brochures, Newspaper and Periodical Advertisements.
First use at least as early as September 1956.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

702,423. VERELITE. The Dow Chemical Company. SN 74,728. Pub. 5-24-60. Filed 5-29-59.

702,424. BAVICO. J. T. Baker Chemical Company. SN 83,161. Pub. 5-24-60. Filed 10-13-59.

702,425. ACRYTHERM. J. T. Baker Chemical Company. SN 83,198. Pub. 5-24-60. Filed 10-13-59.

Class 2—Receptacles

702,426. REXILITE ETC. AND DESIGN. Eubanks Industries, Incorporated. SN 66,606. Pub. 1-5-60. Filed 1-28-59.

Class 5—Adhesives

702,427. LION-BOND AND REPRESENTATION OF LION'S HEAD. The Cambridge Tile Mfg. Co. SN 61,781. Pub. 8-25-59. Filed 11-3-58.

702,428. VISQUEEN. Union Carbide Corporation. SN 89,036. Pub. 5-24-60. Filed 1-14-60.

Class 6—Chemicals and Chemical Compositions

702,429. AGICIDE. Dr. David Roberts Veterinary Co., Inc. SN 58,371. Pub. 5-24-60. Filed 9-4-58.

702,430. BLUE DYNE. Neirad Industries, Inc. SN 65,437. Pub. 5-24-60. Filed 1-7-59.

702,431. SENSI-DISC. Baltimore Biological Laboratory, Inc. SN 72,003. Pub. 12-29-59. Filed 4-22-59.

702,432. MAGNADOR NO. 41 M.M. & R. Magnus, Mabee & Reynard, Inc. SN 72,134. Pub. 5-24-60. Filed 4-23-59.

702,433. MAGIC TOUCH. Seaboard Chemical Corporation. SN 75,653. Pub. 5-24-60. Filed 6-12-59.

702,434. DI-CROBE. Huntington Laboratories, Inc. SN 76,953. Pub. 5-24-60. Filed 7-2-59.

702,435. OX-RIM. Foote Mineral Company. SN 79,404. Pub. 5-24-60. Filed 8-12-59.

702,436. HAGATREAT. Hagan Chemicals & Controls, Inc. SN 80,424. Pub. 5-24-60. Filed 8-28-59.

702,437. OXY-LEAK. Oxygen Equipment & Service Company. SN 81,501. Pub. 5-24-60. Filed 9-16-59.

702,438. COMPAKTA. Dr. Ing. Georg Kropfhammer, d.b.a. Baustoff-Chemie Dr. Ing. Georg Kropfhammer. SN 82,120. Pub. 5-24-60. Filed 9-25-59.

702,439. SUPLEX. Diamond Alkali Company. SN 82,404. Pub. 5-24-60. Filed 9-30-59.

702,440. DISFLAMOLL. Farbenfabriken Bayer Aktiengesellschaft. SN 83,609. Pub. 5-24-60. Filed 10-20-59.

702,441. VORANOL. The Dow Chemical Company. SN 90,026. Pub. 5-24-60. Filed 2-1-60.

Class 8—Smokers' Articles, Not Including Tobacco Products

702,442. KWIK-FIL. Continental Merchandise Co. Inc. SN 15,873. Pub. 4-2-57. Filed 9-18-56.

702,443. SPYRON. Jonsales Limited. SN 82,237. Pub. 5-24-60. Filed 9-28-59.

Class 10—Fertilizers

702,444. ANA-GREEEN. Spencer Chemical Company. SN 80,578. Pub. 12-8-59. Filed 10-13-58.

Class 12—Construction Materials

702,445. MORTA-LOK AND DESIGN. Rockwell Lime Company. SN 76,343. Pub. 5-24-60. Filed 6-23-59.

702,446. IDOR AND DESIGN. Ador Corporation. SN 82,057. Pub. 5-24-60. Filed 9-25-59.

702,447. HYLAG. Hylag Products Corp. SN 82,897. Pub. 5-24-60. Filed 10-8-59.

702,448. NODRIFIL. Poly-Sil Incorporated. SN 83,181. Pub. 5-24-60. Filed 10-13-59.

702,449. N NATIONAL AND DESIGN. Union Carbide Corporation. SN 84,268. Pub. 5-24-60. Filed 10-29-59.

702,450. WC LB AND DESIGN. West Coast Lumbermen's Association. SN 88,834. COLLECTIVE MARK. Pub. 5-24-60. Filed 1-20-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

702,451. FAS'NAIL AND DESIGN. International Staple and Machine Company. SN 71,846. Pub. 5-24-60. Filed 4-20-59.

702,452. MODERNMESH. Anchor Post Products, Inc. SN 74,979. Pub. 5-24-60. Filed 6-3-59.

702,453. NUTLOK. Thornhill-Craver Company, Inc. SN 75,129. Pub. 5-24-60. Filed 6-4-59.

702,454. RAM-PAK. Yuba Consolidated Industries, Inc. SN 76,997. Pub. 5-24-60. Filed 7-2-59.

702,455. GASOFLEX. Metallschlauchfabrik Pforzheim vorm. Hch. Witzenmann G.m.b.H. SN 81,000. Pub. 5-24-60. Filed 9-8-59.

702,456. BEAUTY-FLO. The Imperial Brass Manufacturing Company. SN 84,763. Pub. 3-22-60. Filed 11-6-59.

702,457. STER-O-HYDRO. Joseph W. Streigler. SN 87,159. Pub. 5-24-60. Filed 12-11-59.

Class 14—Metals and Metal Castings and Forgings

702,458. EASTERN CONTINENTAL METALS. Eastern Rolling Mills, Inc. SN 83,071. Pub. 5-24-60. Filed 10-12-59.

Class 15—Oils and Greases

702,459. HOPPE'S ETC. AND DESIGN. Frank A. Hoppe, Inc. SN 75,860. Pub. 5-24-60. Filed 6-16-59.

702,460. DINIMITE. Burton S. Price, d.b.a. Enzrust Co. SN 85,391. Pub. 5-24-60. Filed 11-16-59.

702,461. OXYLUBE. Drilube Company. SN 88,029. Pub. 5-24-60. Filed 12-28-59.

702,462. DRIVOUT. Burton S. Price, d.b.a. Enzrust Co. SN 88,422. Pub. 5-24-60. Filed 1-4-60.

Class 16—Protective and Decorative Coatings

702,463. COLOR KING. Elliott Paint & Varnish Company. SN 77,008. Pub. 5-24-60. Filed 7-3-59.

702,464. POLY-EP. D. J. Peterson, d.b.a. D. J. Paterson Company. SN 77,585. Pub. 12-29-59. Filed 7-13-59.

702,465. GLAIZE. Spray-O-Bond Company. SN 78,939. Pub. 5-24-60. Filed 8-3-59.

702,466. CHEMSINE. The Lofstrand Company. SN 83,963. Pub. 5-24-60. Filed 10-26-59.

702,467. C-I-L IN OVAL DESIGN. Canadian Industries Limited. SN 84,727. Pub. 5-24-60. Filed 11-6-59.

702,468. WOODZAN AND DESIGN. Woodzan Industries, Inc. SN 87,526. Pub. 5-24-60. Filed 12-17-59.

702,469. SPARZAN. Woodzan Industries, Inc. SN 87,527. Pub. 5-24-60. Filed 12-17-59.

Class 18—Medicines and Pharmaceutical Preparations

702,470. HYDRASUM. Summers Laboratories, Inc. SN 56,807. Pub. 5-24-60. Filed 8-7-58.

702,471. TRAVAX. American Scientific Laboratories, Inc. SN 60,875. Pub. 5-24-60. Filed 10-20-58.

702,472. PRUDENTIAL. Kalash Vitamin Corporation. SN 71,852. Pub. 5-24-60. Filed 4-20-59.

702,473. LIDOPROC. Swedish Pharmaceuticals Limited. SN 79,028. Pub. 5-24-60. Filed 8-4-59.

702,474. PHENYL-DRANE. Thomas J. Mahon, Inc. SN 79,499. Pub. 2-16-60. Filed 8-13-59.

702,475. CANKEROLE. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,575. Pub. 5-24-60. Filed 12-3-59.

702,476. FERRISOL. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,954. Pub. 5-24-60. Filed 12-9-59.

702,477. SPARANIL. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 89,043. Pub. 5-24-60. Filed 1-15-60.

702,478. NEO-APOIDINA. Parke, Davis & Company. SN 90,651. Pub. 5-24-60. Filed 2-9-60.

702,479. SUIPASTIN. American Scientific Laboratories, Inc. SN 90,810. Pub. 5-24-60. Filed 2-12-60.

702,480. TRIPLVAX. American Scientific Laboratories, Inc. SN 90,882. Pub. 5-24-60. Filed 2-15-60.

702,481. TASPIRIN. Kenwood Laboratories, Inc. SN 90,925. Pub. 5-24-60. Filed 2-15-60.

Class 19—Vehicles

702,482. CADDY-VEYOR. Universal Products Corporation. SN 68,620. Pub. 5-24-60. Filed 2-27-59.

702,483. HOLSALL. Joseph E. Fernly, d.b.a. Fernly Products Company. SN 77,529. Pub. 5-24-60. Filed 7-13-59.

702,484. SHIP-O-MATIC. ACF Industries, Incorporated. SN 84,043. Pub. 5-24-60. Filed 10-27-59.

702,485. SKY RIDER. McNamee Coach Corporation, d.b.a. McNamee Coach Corp. SN 87,099. Pub. 5-24-60. Filed 12-21-59.

702,486. THE COVERED WAGON AND DESIGN. Covered Wagon Trailer Mfg. Inc. SN 88,300. Pub. 5-24-60. Filed 12-31-59.

702,487. COMMANDER. The Firestone Tire & Rubber Company. SN 88,311. Pub. 5-24-60. Filed 12-31-59.

Class 21—Electrical Apparatus, Machines, and Supplies

702,488. RADO-MATIC AND DESIGN. The Rado-Matic Corporation, by change of name from The Rado Corporation. SN 16,263. Pub. 3-19-57. Filed 9-24-56.

702,489. E. W. BLISS CO. E. W. Bliss Company. SN 57,592. Pub. 5-24-60. Filed 8-21-58.

702,490. YASHICA. Kabushiki Kaisha Yashica. SN 70,832. Pub. 5-24-60. Filed 3-3-59.

702,491. DOYLE. Doyle Vacuum Cleaner Company. SN 75,710. Pub. 5-24-60. Filed 6-15-59.

702,492. FPE FEDERAL PACIFIC AND DESIGN. Federal Pacific Electric Company. SN 78,701. Pub. 5-24-60. Filed 7-30-59.

702,493. THERMOGUN. Raycind Tubes, Inc. SN 84,941. Pub. 5-24-60. Filed 11-9-59.

702,494. UNDERCOM. Underwater Electronics Corporation. SN 86,236. Pub. 5-24-60. Filed 11-27-59.

702,495. GENISCO. Genisco, Inc. SN 87,424. Pub. 5-24-60. Filed 12-16-59.

702,496. IONA. The Iona Manufacturing Company. SN 88,609. Pub. 5-24-60. Filed 1-7-60.

702,497. DRI-LOK. Jefferson Electric Company. SN 89,167. Pub. 5-24-60. Filed 1-18-60.

702,498. SANI-PAK. Air-Way, Inc. SN 89,492. Pub. 5-24-60. Filed 1-22-60.

702,499. SAPPHIRE I. World-Wide Automobiles Corp. SN 89,584. Pub. 5-24-60. Filed 1-22-60.

702,500. BLAZELOG. Rustic Craft Co. Inc. SN 89,807. Pub. 5-24-60. Filed 1-27-60.

702,501. UNDERCOM AND DESIGN. Underwater Electronics Corporation. SN 91,131. Pub. 5-24-60. Filed 2-17-60.

702,502. TWO WING DESIGN. Bell & Howell Company. SN 91,748. Pub. 5-24-60. Filed 2-29-60.

Class 22—Games, Toys, and Sporting Goods

702,503. OSKI. Associated Students of the University of California. SN 40,298. Pub. 5-24-60. Filed 10-28-57.

702,504. PLAY A TOY. Play A Toy Company of Illinois. SN 54,782. Pub. 5-24-60. Filed 7-3-58.

702,505. HANDICAPS. Elmer L. Tarbox. SN 74,169. Pub. 5-24-60. Filed 5-20-59.

702,506. 5 STAR AND DESIGN. Five Star Industries, Inc. SN 75,075. Pub. 5-24-60. Filed 6-4-59.

702,507. POWER FLEX. South Bend Tackle Company, Inc. SN 77,858. Pub. 5-24-60. Filed 7-16-59.

702,508. JY ETC. AND DESIGN. Jones and Yandell Manufacturing Co. Inc. SN 79,578. Pub. 5-24-60. Filed 8-14-59.

702,509. ONE ARM BANDIT. K & W Tackle Manufacturers. SN 79,664. Pub. 5-24-60. Filed 8-17-59.

702,510. SOMA. Gem Color Co. Inc. SN 80,655. Pub. 5-24-60. Filed 9-1-59.

702,511. SKINY-MINY. Yakima Bait Company. SN 80,942. Pub. 5-24-60. Filed 9-4-59.

702,512. DEWZEE. D. E. Wood Sales Company. SN 82,310. Pub. 5-24-60. Filed 9-28-59.

702,513. FLAIR AND DESIGN. Almy and Orrin Incorporated. SN 83,435. Pub. 5-24-60. Filed 10-19-59.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

702,514. GUARDIAN. Chain Bike Corporation. SN 74,986. Pub. 5-24-60. Filed 6-3-59.

702,515. FIESTA. Knickerbocker Rubber Company, d.b.a. Wells Specialty Company. SN 75,096. Pub. 5-24-60. Filed 6-4-59.

702,516. H WITHIN A CIRCLE. Bertenhoff & Drobes A.-G. SN 75,601. Pub. 5-24-60. Filed 6-12-59.

702,517. HERBORN. Maschinenfabrik Herborn Berkenhoff & Drobes A.-G. SN 75,641. Pub. 5-24-60. Filed 6-12-59.

702,518. WALTERSCHEID. Jean Walterscheid. SN 77,699. Pub. 5-24-60. Filed 6-18-59.

702,519. OHIO LINE AND DESIGN. The Ohio Gear Company. SN 77,884. Pub. 5-24-60. Filed 6-22-59.

702,520. KRONA. Eversharp, Inc. SN 79,233. Pub. 5-24-60. Filed 8-11-59.

702,521. CORTEX. Per Gunnar Brundell. SN 80,048. Pub. 5-24-60. Filed 8-24-59.

702,522. ORIGINAL DIOSNA AND DESIGN. Dierks & Sohne. SN 81,548. Pub. 5-24-60. Filed 9-17-59.

702,523. PEERLESS. Van Brode Milling Co., Inc. SN 84,195. Pub. 5-24-60. Filed 10-28-59.

702,524. DI. Dresser Industries, Inc. SN 86,641. Pub. 5-17-60. Filed 12-4-59.

702,525. GENISCO. Genisco, Inc. SN 87,425. Pub. 5-24-60. Filed 12-16-59.

702,526. LEEDER-FLEX. The Leeds Conveyor Manufacturing Co. SN 87,436. Pub. 5-24-60. Filed 12-16-59.

702,527. NAVKUT AND DESIGN. Solidaire, Inc. SN 87,585. Pub. 5-24-60. Filed 12-18-59.

702,528. TURN-RITE. Norman W. Bowers. SN 87,628. Pub. 5-24-60. Filed 12-21-59.

702,529. SADDLE-MATIC. Chicago Machinery Laboratory, Inc. SN 87,636. Pub. 5-24-60. Filed 12-21-59.

702,530. CADILLAC. Clements Mfg. Co. SN 87,638. Pub. 5-24-60. Filed 12-21-59.

702,531. BRINOMAT. International Salt Company. SN 87,682. Pub. 5-24-60. Filed 12-21-59.

702,532. PENGUIN. The Midland Company. SN 87,701. Pub. 5-24-60. Filed 12-21-59.

702,533. FORTO. Robinco New York, Inc. SN 88,807. Pub. 5-24-60. Filed 1-11-60.

702,534. KONTOUR-KICKER. S&S Corrugated Paper Machinery Co., Inc. SN 88,809. Pub. 5-24-60. Filed 1-11-60.

Class 24 — Laundry Appliances and Machines

702,535. FRANTZ-PORTAWASHER. Frantz Electric Industries, Inc. SN 85,481. Pub. 5-24-60. Filed 11-17-59.

Class 26 — Measuring and Scientific Appliances

702,536. ASCORLUX. American Speedlight Corporation. SN 57,327. Pub. 5-24-60. Filed 8-18-58.

702,537. MINIFACT. Societe d'Exploitation de Produits Industriels, SEPI. SN 66,651. Pub. 5-24-60. Filed 1-28-59.

702,538. INDIKON. The Indikon Company, Inc. SN 68,145. Pub. 5-24-60. Filed 2-20-59.

702,539. AMERICAN OPTICAL. American Optical Company. SN 73,312. Pub. 5-24-60. Filed 5-11-59.

702,540. TIMIT. Knight-Gordon Engineering. SN 75,637. Pub. 5-24-60. Filed 6-12-59.

702,541. BINO-SPECS. Hill Novelties Mfg. Corp. SN 76,207. Pub. 5-24-60. Filed 6-22-59.

702,542. VISUCOLOR. Visucolor Laboratories. SN 76,294. Pub. 5-24-60. Filed 6-22-59.

702,543. T/C AND DESIGN. Taurus Corporation. SN 76,757. Pub. 5-24-60. Filed 6-29-59.

702,544. DRILL-O-METER. Donna Lee Harrison. SN 77,098. Pub. 5-24-60. Filed 7-6-59.

702,545. NUMEC. Nuclear Materials and Equipment Corporation. SN 77,220. Pub. 5-24-60. Filed 7-7-59.

702,546. DOSCAR. Doscar Corporation. SN 78,341. Pub. 5-24-60. Filed 7-24-59.

702,547. A.T.C. Allan T. Chaney. SN 78,395. Pub. 5-3-60. Filed 7-25-59.

702,548. STEDY-MOUNT. The Viltor Manufacturing Co. SN 79,732. Pub. 5-24-60. Filed 8-17-59.

702,549. RADCELL. The Victoreen Instrument Company. SN 82,168. Pub. 5-24-60. Filed 9-25-59.

702,550. LOCKER CON-VEY. Lockers (Engineers) Limited. SN 82,585. Pub. 5-24-60. Filed 10-2-59.

702,551. VUEMASTER. Mueller Brass Co. SN 85,604. Pub. 5-24-60. Filed 11-18-59.

702,552. U-D AND DESIGN. Doyle C. Udy, d.b.a. Udy Analyzer Company. SN 89,221. Pub. 5-24-60. Filed 1-18-60.

702,553. LUMINAC. Airequipt Manufacturing Co., Inc. SN 89,320. Pub. 5-24-60. Filed 1-20-60.

702,554. EVERLAST. W. H. Curtis & Company. SN 90,019. Pub. 5-24-60. Filed 2-1-60.

Class 27 — Horological Instruments

702,555. COTILLION. General Time Corporation. SN 73,558. Pub. 2-9-60. Filed 5-13-59.

702,556. SONNET. General Time Corporation. SN 80,540. Pub. 2-16-60. Filed 8-31-59.

702,557. COLIBRI. Colibri Lighters Limited. SN 83,946. Pub. 4-19-60. Filed 10-26-59.

Class 28 — Jewelry and Precious-Metal Ware

702,558. LUSTRAR. J. J. White Manufacturing Company. SN 87,755. Pub. 5-24-60. Filed 12-21-59.

702,559. GIOVANNI. Giovanni, Inc. SN 87,860. Pub. 5-24-60. Filed 12-23-59.

Class 29 — Brooms, Brushes, and Dusters

702,560. TWIN-ACTION. American-Marietta Company, O-Cedar Division. SN 53,762. Pub. 4-19-60. Filed 6-18-58.

702,561. THIRSTEE. William A. Dolan, d.b.a. Dolan Sponge Company. SN 84,297. Pub. 5-24-60. Filed 10-30-59.

702,562. STRATUS. Jack H. Raphael. SN 85,684. Pub. 5-24-60. Filed 11-19-59.

702,563. MITTMOP AND DESIGN. George F. Barth, d.b.a. Marketing-Sales Plans Company. SN 85,808. Pub. 5-24-60. Filed 11-23-59.

Class 31 — Filters and Refrigerators

702,564. OVAL-LINE AND DESIGN. Bendix-Westinghouse Automotive Air Brake Company. SN 57,185. Pub. 5-24-60. Filed 8-14-58.

702,565. SR (STYLIZED MONOGRAM). Sears, Roebuck and Co. SN 77,960. Pub. 5-24-60. Filed 7-17-59.

702,566. GENISCO. Genisco, Inc. SN 87,426. Pub. 5-24-60. Filed 12-16-59.

702,567. AFCO. American Felt Company. SN 87,533. Pub. 5-24-60. Filed 12-18-59.

Class 32 — Furniture and Upholstery

702,568. FORM-A-STORE. Bernheim/Siegel Corporation. SN 62,409. Pub. 5-24-60. Filed 12-1-58.

702,569. MAPLELUX. Sprague & Carleton, Inc. SN 81,544. Pub. 5-24-60. Filed 9-14-59.

702,570. MOTORSHELF. Wheelder Manufacturing Co., Inc. SN 87,604. Pub. 5-24-60. Filed 12-18-59.

702,571. FUTURE FOAM. Charles Schneider & Co., Inc., d.b.a. Future Foam & Co. SN 88,181. Pub. 5-24-60. Filed 12-29-59.

702,572. GLENN. Glenn of California. SN 88,662. Pub. 5-24-60. Filed 1-8-60.

702,573. UNIMOLD. Wieland Furniture Co. SN 88,833. Pub. 5-24-60. Filed 1-11-60.

Class 33 — Glassware

702,574. TWIN STAR. General Mills, Inc. SN 82,894. Pub. 5-24-60. Filed 10-8-59.

702,575. HIGH-FIDELITY. Pittsburgh Plate Glass Company. SN 83,392. Pub. 5-24-60. Filed 10-16-59.

Class 34 — Heating, Lighting, and Ventilating Apparatus

702,576. QUIK-HEAT. Clements Mfg. Co. SN 56,298. Pub. 7-28-59. Filed 7-30-58.

702,577. SR. Sears, Roebuck and Co. SN 77,959. Pub. 5-24-60. Filed 7-17-59.

702,578. CTL AND DESIGN. Studebaker-Packard Corporation, assignee of C.T.L., Inc. SN 81,537. Pub. 5-24-60. Filed 9-17-59.

702,579. IGETRIC AND DESIGN. General Electric Company. SN 88,382. Pub. 5-24-60. Filed 1-4-60.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

702,580. GASOFLEX. Metallschlauchfabrik Pforsheim vorm. Hch. Witzenmann G.m.b.H. SN 81,001. Pub. 5-24-60. Filed 9-9-59.

702,581. LAWN VUE. Mercantile Stores Company, Inc. SN 88,409. Pub. 5-24-60. Filed 1-6-60.

Class 36 — Musical Instruments and Supplies

702,582. SUPER-SENSITIVE. Harold V. Allbaugh, d.b.a. Super Sensitive Musical String Co. SN 84,030. Pub. 5-24-60. Filed 7-19-57.

702,583. TEMPLE. Winter & Company, Inc. SN 64,670. Pub. 5-24-60. Filed 12-19-58.

702,584. DORE AND REPRESENTATION OF FEATHER. Dore Records. SN 64,676. Pub. 5-24-60. Filed 12-24-58.

702,585. ROXY. Roxy Organ Corporation. SN 77,394. Pub. 5-24-60. Filed 7-9-59.

702,586. DOMINION. Recordings Incorporated. SN 88,688. Pub. 5-24-60. Filed 1-8-60.

Class 37 — Paper and Stationery

702,587. TEN-DEX. Le Febure Corporation. SN 52,654. Pub. 5-24-60. Filed 5-26-58.

702,588. LAMASTRIPE. Riegel Paper Corporation. SN 58,455. Pub. 5-24-60. Filed 9-5-58.

702,589. RESISTO. J. S. Staedtler. SN 60,960. Pub. 5-24-60. Filed 10-20-58.

702,590. DIXIE KRAFT. Albemarle Paper Manufacturing Company. SN 61,037. Pub. 5-24-60. Filed 9-8-59.

702,591. PREP-TOWLS. Bay West Paper Company. SN 86,476. Pub. 5-24-60. Filed 12-2-59.

702,592. TURN-TOWLS. Bay West Paper Company. SN 86,477. Pub. 5-24-60. Filed 12-2-59.

Class 38 — Prints and Publications

702,593. UNITED GROCERS LTD. RETAILER-OWNED ETC. AND DESIGN. United Grocers, Ltd. SN 54,837. Pub. 5-24-60. Filed 6-26-58.

702,594. ELECTRICAL TRADE BOOK AND DESIGN. Biddle Trade Publishing Co., d.b.a. E.T.B. Co. SN 64,248. Pub. 5-24-60. Filed 12-15-58.

702,595. ELECTRICAL TRADE BOOK. Biddle Trade Publishing Co., d.b.a. E.T.B. Co. SN 64,250. Pub. 5-24-60. Filed 12-15-58.

702,596. THE NEBBISHES. Herbert Gardner. SN 65,837. Pub. 5-24-60. Filed 1-14-59.

702,597. WORK SMARTER NOT HARDER AND DESIGN. Jerry Lahr. SN 65,849. Pub. 5-24-60. Filed 1-14-59.

702,598. DURATAG. The Hopp Press, Inc. SN 67,356. Pub. 5-24-60. Filed 2-9-59.

702,599. POLYTECHNIC PRESS. Polytechnic Institute of Brooklyn. SN 72,228. Pub. 5-24-60. Filed 4-24-59.

702,600. SGP AND DESIGN. Sturgis-Grant Productions, Incorporated. SN 76,989. Pub. 5-24-60. Filed 7-2-59.

702,601. BOOKKEEPERS BUSINESS SERVICE CO'S. BBS SYSTEM AND DESIGN. Bookkeepers Business Service Co. Inc. SN 77,718. Pub. 5-24-60. Filed 7-15-59.

702,602. WORLD WIDE ABSTRACTS OF GENERAL MEDICINE. Warner-Lambert Pharmaceutical Company. SN 78,665. Pub. 5-24-60. Filed 7-29-59.

702,603. CABOCHON-ARTE DESIGNS. Raymond Du Pre, assignee of H. E. Roth, d.b.a. Cabochon-Arte Designs. SN 78,759. Pub. 5-24-60. Filed 7-31-59.

702,604. SOUTHERN FURNITURE DAILY. Southern Furniture, Inc. SN 82,794. Pub. 5-24-60. Filed 10-6-59.

702,605. LAWRENCE EAGLE-TRIBUNE. Eagle-Tribune Publishing Company. SN 83,788. Pub. 5-24-60. Filed 10-22-59.

702,606. NATIONAL WILDLANDS NEWS. Devereux Butcher. SN 86,871. Pub. 5-24-60. Filed 12-8-59.

702,607. THE COGITATOR. Francis Monroe Chartrand. SN 87,112. Pub. 5-24-60. Filed 12-11-59.

Class 39 — Clothing

702,608. FOAM-FLEX. National Shoes, Inc. SN 637,285. Pub. 4-14-59. Filed 10-28-52.

702,609. FOAMFLEX AND DESIGN. National Shoes, Inc. SN 637,286. Pub. 4-14-59. Filed 10-28-52.

702,610. HEIR CRAFT AND DESIGN. Freitag Mfg. Co., Inc. SN 46,161. Pub. 5-5-59. Filed 3-21-58.

702,611. NECK ZONE TAILORING AND DESIGN. Merit Clothing Company. SN 49,332. Pub. 5-24-60. Filed 3-10-58.

702,612. 4 POINT TAILORING AND DESIGN. Merit Clothing Company. SN 49,334. Pub. 5-24-60. Filed 3-10-58.

702,613. ELEGANT AND DESIGN. Maria Castagna. SN 57,246. Pub. 5-24-60. Filed 8-15-58.

702,614. TUFKNIT. Slane Hosiery Mills, Inc. SN 62,879 Pub. 1-5-60. Filed 11-20-58.

702,615. DEFENDER. The B. F. Goodrich Company. SN 63,711. Pub. 12-8-59. Filed 12-5-58.

702,616. THE PIPER. Thomas Begg, Inc. SN 65,349. Pub. 2-9-60. Filed 1-6-59.

702,617. ROMANELLA. Roman Smucer, d.b.a. Roman Smucer Woolen Company. SN 66,241. Pub. 5-24-60. Filed 1-21-59.

702,618. ROMANTICA. Roman Smucer, d.b.a. Roman Smucer Woolen Company. SN 66,243. Pub. 5-24-60. Filed 1-21-59.

702,619. LANDMARK AND DESIGN. The Farm Bureau Cooperative Association, Inc. SN 69,060. Pub. 5-24-60. Filed 5-5-59.

702,620. CUSTOM EDITION ETC. AND DESIGN. Witty Brothers, Inc. SN 69,861. Pub. 5-24-60. Filed 3-18-59.

702,621. PUCCINI AND DESIGN. Kalmon Shoe Manufacturing Company. SN 73,115. Pub. 1-19-60. Filed 5-7-59.

702,622. HARDY CLOTH. Superba Cravats, Inc. SN 75,455. Pub. 5-24-60. Filed 6-1-59.

702,623. CHALON. Miami Sportswear Co., Inc. SN 77,301. Pub. 5-24-60. Filed 7-8-59.

702,624. BESTMAID. New York Merchandise Co., Inc. SN 84,239. Pub. 5-24-60. Filed 10-29-59.

702,625. THE CARRIAGE COLLECTION AND DESIGN. Regal Shoe Company. SN 84,693. Pub. 4-19-60. Filed 11-5-59.

702,626. TOWN TOPICS ETC. AND DESIGN. Feldan Brothers, Inc. SN 85,119. Pub. 5-24-60. Filed 11-12-59.

702,627. LADY MAE. Marks Bros., Inc. SN 85,144. Pub. 5-24-60. Filed 11-12-59.

702,628. PEERESS BY PRESTON. Preston Shirt Company, Inc. SN 85,241. Pub. 5-24-60. Filed 11-13-59.

702,629. PRESTON GIRL AND DESIGN. Preston Shirt Company, Inc. SN 85,242. Pub. 5-24-60. Filed 11-13-59.

702,630. PANT-HER. College-Town Sportswear. SN 85,302. Pub. 5-24-60. Filed 11-16-59.

702,631. CAROL RODGERS. D. F. Rodgers Mfg. Co., Inc. SN 85,666. Pub. 5-24-60. Filed 11-19-59.

702,632. "LIVABLE-LOUNGER." Josephine A. Sabatini. SN 87,824. Pub. 5-24-60. Filed 12-22-59.

702,633. APPARITION. Maiden Form Brassiere Company, Inc. SN 88,058. Pub. 5-24-60. Filed 12-28-59.

702,634. VF. Vanity Fair Mills, Inc. SN 88,273. Pub. 5-10-60. Filed 12-30-59.

702,635. GIGI. Bestform Foundations, Inc. SN 88,293. Pub. 5-24-60. Filed 12-31-59.

702,636. RONTINI. Mr. Fred, Inc. SN 89,081. Pub. 5-24-60. Filed 1-15-60.

702,637. COMBO TIGHTS AND DESIGN. Madison Hosiery Corporation. SN 89,179. Pub. 5-24-60. Filed 1-18-60.

Class 40 — Fancy Goods, Furnishings, and Notions

702,638. MAYBELLINE. Maybelline Co. SN 82,265. Pub. 5-24-60. Filed 9-28-59.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

702,639. PRIDE OF VERMONT. Bates Manufacturing Company. SN 62,723. Pub. 5-24-60. Filed 11-19-58.

702,640. SOIL SAVER. Ludlow Manufacturing & Sales Co. SN 72,331. Pub. 5-24-60. Filed 4-27-59.

702,641. SILQUISITE. Oberland Silk Manufacturing Company Ltd. SN 75,771. Pub. 5-24-60. Filed 6-15-59.

702,642. TAMU. Textron, Inc. SN 78,519. Pub. 5-24-60. Filed 7-27-59.

702,643. FASSTIC. M. J. Fassler & Co., Inc. SN 85,003. Pub. 5-24-60. Filed 11-10-59.

702,644. AUTOGRAPH. M. Lowenstein & Sons, Inc. SN 85,230. Pub. 5-24-60. Filed 11-13-59.

702,645. SPAND-O-LASTIC. Darlington Fabrics Corporation. SN 87,787. Pub. 5-24-60. Filed 12-22-59.

702,646. K-S AND DESIGN. Kimberly-Stevens Corporation. SN 87,810. Pub. 5-24-60. Filed 12-22-59.

702,647. CAMPUS SQUARE. Sam's Inc. SN 87,825. Pub. 5-24-60. Filed 12-22-59.

Class 43 — Thread and Yarn

702,648. K.B.K. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd. SN 84,769. Pub. 5-24-60. Filed 11-6-59.

702,649. RISING SUN DESIGN. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd. SN 85,748. Pub. 5-24-60. Filed 11-20-59.

702,650. KANEBO GOLDEN BELL AND DESIGN. Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd. SN 85,751. Pub. 5-24-60. Filed 11-20-59.

702,651. ZEFRAN. The Dow Chemical Company. SN 87,648. Pub. 5-24-60. Filed 12-21-59.

Class 44 — Dental, Medical, and Surgical Appliances

702,652. E-J. Everest & Jennings, Inc. SN 626,371. Pub. 4-28-58. Filed 3-13-52.

702,653. CHA-FREE. Ru-Ell Novelties. SN 76,344. Pub. 5-24-60. Filed 6-23-59.

702,654. SOLUSET. Abbott Laboratories. SN 83,196. Pub. 5-24-60. Filed 10-14-59.

702,655. ENAMELETTES. William D. Higby. SN 84,067. Pub. 5-24-60. Filed 10-27-59.

702,656. RESPIR-ETTE. Pulmosan Safety Equipment Corporation. SN 85,683. Pub. 5-24-60. Filed 11-19-59.

702,657. ULTROTOME. LKB Produkter Fabriksaktiebolag. SN 85,979. Pub. 5-24-60. Filed 11-24-59.

Class 46 — Foods and Ingredients of Foods

702,658. KITTY. Food Specialty Co., Inc. SN 1,676. Pub. 2-3-59. Filed 1-30-56.

702,659. QUEEN BEE. Queen Bee Food Products, Inc., assignee of Specialty Bakers' Services, Inc. SN 49,986. Pub. 5-24-60. Filed 4-18-58.

702,660. ELITE. Pacific View Produce Co. SN 64,485. Pub. 5-24-60. Filed 12-17-58.

702,661. NATIONAL'S AND DESIGN. National Tea Co. SN 68,721. Pub. 5-24-60. Filed 3-2-59.

702,662. POLKA. Arthur S. Davis. SN 68,802. Pub. 5-24-60. Filed 3-3-59.

702,663. H.T. AND S. H. W. Butler & Brothers, Inc. SN 69,243. Pub. 5-24-60. Filed 3-10-59.

702,664. MATADOR. Mogens Berg, d.b.a. Matador Food & Export Co. SN 70,182. Pub. 5-24-60. Filed 3-25-59.

702,665. OWL AND DESIGN. Watsonville Exchange, Inc. SN 70,827. Pub. 2-2-60. Filed 4-3-59.

702,666. BROTHER BENEDICT'S. Benedictine Fathers. SN 71,798. Pub. 5-24-60. Filed 4-20-59.

702,667. BROTHER BENEDICT'S AND DESIGN. Benedictine Fathers. SN 71,799. Pub. 5-24-60. Filed 4-20-59.

702,668. PO LO. Polo Wholesale Grocery Company. SN 72,144. Pub. 5-24-60. Filed 4-23-59.

702,669. WHITE HEATHER. Wilson & Co., Inc. SN 72,671. Pub. 5-24-60. Filed 4-30-59.

702,670. WILSCO. Wilson & Co., Inc. SN 72,674. Pub. 5-24-60. Filed 4-30-59.

702,671. NUTRITION VILLAGE. Jacob Tucker. SN 75,603. Pub. 5-24-60. Filed 6-12-59.

702,672. VITA-BITS. Lewis Food Company, d.b.a. Ross Food Co. SN 77,117. Pub. 5-24-60. Filed 7-6-59.

702,673. ASK AND DESIGN. Andels Svineslagteriet I Kolding, d.b.a. A.S.K. SN 77,715. Pub. 5-24-60. Filed 7-15-59.

702,674. ALTASOL AND DESIGN. Wesson Oil & Snowdrift Co., Inc. SN 79,199. Pub. 5-24-60. Filed 8-7-59.

702,675. DEEP BLUE. Cats American Co., Inc. SN 82,959. Pub. 5-24-60. Filed 10-9-59.

702,676. BRITLET. C. J. Van Houten & Zoon N.V. SN 83,593. Pub. 5-24-60. Filed 10-2-59.

702,677. GORMIE. Gormie Kitchens, Inc. SN 84,223. Pub. 5-24-60. Filed 10-29-59.

702,678. REQUEST PACK. Kellogg Company. SN 87,817. Pub. 5-24-60. Filed 12-14-59.

702,679. "HEAVENLY CHICKEN" AND DESIGN. John H. Greene. SN 87,771. Pub. 5-24-60. Filed 12-17-59.

Class 47 — Wines

702,680. PARMA. Cella Vineyards. SN 40,029. Pub. 5-24-60. Filed 11-4-57.

702,681. MERCIER. S.A. Champagne Mercier. SN 72,537. Pub. 5-24-60. Filed 4-29-59.

702,682. ONANA. Garvey, S.A. Bodegas de San Patricio-Jerez de la Frontera. SN 75,965. Pub. 5-24-60. Filed 6-19-59.

Class 49 — Distilled Alcoholic Liquors

702,683. BACO BROTHERS. Ben Arnold Co., Inc. SN 36,046. Pub. 9-16-58. Filed 8-23-57.

Class 50 — Merchandise Not Otherwise Classified

702,684. RE-DRAPE FOLDER. Max Zimmerman, d.b.a. Zimmerman Products Co. SN 50,137. Pub. 5-24-60. Filed 4-21-58.

702,685. DYMO. Dymo Corporation. SN 84,651. Pub. 5-24-60. Filed 11-5-59.

Class 51 — Cosmetics and Toilet Preparations

702,686. COME ALIVE BROWN. Clairol Incorporated (Delaware corporation), assignee of Clairol Incorporated (Connecticut corporation). SN 54,377. Pub. 5-24-60. Filed 6-27-58.

702,687. EDITH REHNBORG DERMAJEUNE CREAM. Nutrilite Products, Inc. SN 62,597. Pub. 12-1-59. Filed 11-17-58.

702,688. SHEER MADNESS. Prince Matchabelli, Inc. SN 72,073. Pub. 5-24-60. Filed 4-22-59.

702,689. MARETAN. Key Manufacturing Company. SN 79,245. Pub. 5-24-60. Filed 8-10-59.

702,690. NO GOAT. Elmer Hepler. SN 79,856. Pub. 5-24-60. Filed 8-19-59.

702,691. SWEET BREATH AND DESIGN. A. C. Alvin Co. SN 80,397. Pub. 5-24-60. Filed 8-28-59.

702,692. FYF FOR YOUR FEET AND DESIGN. Luis D. Coca. SN 81,681. Pub. 5-24-60. Filed 9-21-59.

702,693. CASTEL BLEU. Etablissements Chevallier, d.b.a. Société des Anciens Etablissements Chevallier Pere. SN 81,694. Pub. 5-24-60. Filed 9-21-59.

702,694. MAYBELLINE. Maybelline Co. SN 82,264. Pub. 5-24-60. Filed 9-28-59.

702,695. PROFUMERIE DAMA TORINO AND DESIGN. Pasqualina Zandrino-Oddenino, d.b.a. "Profumerie Dama-Torino" di Zandrino-Oddenino Pasqualina. SN 82,252. Pub. 5-24-60. Filed 9-28-59.

702,696. PURORYL. Lucente Enterprises, Inc. SN 82,518. Pub. 5-24-60. Filed 10-1-59.

702,697. MILLICENT K. The Realistic Company, d.b.a. Beauty Specialties Company. SN 82,787. Pub. 5-24-60. Filed 10-6-59.

702,698. EVER-PERM. Helene Curtis Industries, Inc. SN 84,130. Pub. 5-10-60. Filed 10-28-59.

Class 52 — Detergents and Soaps

702,699. FUR-FEEL. Kandu Chemicals, Inc. SN 2,788. Pub. 1-28-58. Filed 2-16-56.

702,700. LA HOLANDESA AND DESIGN. Purex Corporation, Ltd. SN 79,707. Pub. 5-24-60. Filed 8-17-59.

Service Marks

Class 100 — Miscellaneous

702,701. SHIRT VALET AND DESIGN. Shirt Valet—The National Shirt Rental Plan, Inc. SN 54,788. Pub. 5-24-60. Filed 7-3-58.

702,702. C-E AND DESIGN. Combustion Engineering, Inc. SN 66,534. Pub. 5-24-60. Filed 1-27-59.

702,703. CEMOTON. Dresser Industries, Inc. SN 72,714. Pub. 5-24-60. Filed 5-1-59.

702,704. SOIL CONSERVATION SOCIETY OF AMERICA AND DESIGN. Soil Conservation Society of America, Inc. SN 77,775. Pub. 5-24-60. Filed 7-15-59.

702,705. PAM. Pam Associates, Inc. SN 80,682. Pub. 5-24-60. Filed 9-1-59.

702,706. ROTARY. Rotary International. SN 83,000. Pub. 5-24-60. Filed 10-9-59.

Class 101 — Advertising and Business

702,707. ARMOR PRODUCTS AND DESIGN. Armor Products, Inc. SN 49,406. Pub. 5-24-60. Filed 4-10-58.

702,708. CARLITE. The Carey System, Inc. SN 72,792. Pub. 5-24-60. Filed 5-4-59.

702,709. BIG GAME HUNTING SERVICE AND DESIGN. James S. Crane, d.b.a. Big Game Hunting Service. SN 81,465. Pub. 5-24-60. Filed 9-16-59.

Class 102 — Insurance and Financial

702,710. ML SINCE 1900 AND DESIGN. The Ministers Life and Casualty Union. SN 82,007. Pub. 5-24-60. Filed 9-24-59.

702,711. EFP. Nationwide Mutual Insurance Company. SN 83,114. Pub. 5-24-60. Filed 10-12-59.

Class 103 — Construction and Repair

702,712. MORTONIZED. Morton's Inc. SN 83,385. Pub. 5-24-60. Filed 10-16-59.

Class 105 — Transportation and Storage

702,713. OCEAN HIWAY. Ocean Hiway Association. SN 73,422. Pub. 5-24-60. Filed 5-11-59.

702,714. OZARK AIR LINES AND DESIGN. Ozark Air Lines, Inc. SN 82,137. Pub. 5-24-60. Filed 9-25-59.

702,715. JETHAWK SERVICE. Pacific Air Lines, Inc. SN 82,139. Pub. 5-24-60. Filed 9-25-59.

702,716. SAFE-GUARD. United Van Lines, Inc. SN 87,460. Pub. 5-24-60. Filed 12-16-59.

Class 106 — Material Treatment

702,717. KL KROM-LUME ETC. AND DESIGN. George Hompesch, d.b.a. Service Hard-Chromium Co. SN 57,809. Pub. 5-24-60. Filed 8-25-58.

702,718. CL CHROM-LUME ETC. AND DESIGN. George Hompesch, d.b.a. Service Hard-Chromium Co. SN 57,810. Pub. 5-24-60. Filed 8-25-58.

702,719. "TURNED CORNER" DESIGN. Eastman Kodak Company. SN 58,513. Pub. 5-24-60. Filed 9-8-58.

702,720. KODACOLOR. Eastman Kodak Company. SN 87,416. Pub. 5-24-60. Filed 12-16-59.

Class 107 — Education and Entertainment

702,721. HAVE GOOD OUTDOOR MANNERS AND GROTESQUE OF RACOON. The Pennsylvania Forestry Association. SN 60,784. Pub. 5-24-60. Filed 10-16-58.

702,722. COLLEGE SKILLS CENTER AND DESIGN. College Skills Center. SN 85,887. Pub. 5-24-60. Filed 1-15-59.

702,723. PHILCO FACTORY-SUPERVISED SERVICE AND DESIGN. Philco Corporation. SN 66,934. Pub. 5-24-60. Filed 3-4-59.

702,724. THIS WEEK IN MEDICINE. Medical News, Inc. SN 73,133. Pub. 5-24-60. Filed 5-7-59.

702,725. FAST DRAW. Raymond Y. Dexter. SN 73,333. Pub. 3-22-60. Filed 5-11-59.

702,726. UNCLE LOONEY. Thomas Jefferson Hughes, Jr. SN 75,186. Pub. 5-24-60. Filed 6-5-59.

Collective Membership Marks

Class 200

702,727. AMERICAN-INTERNATIONAL CHAROLAIS ASS'N. American-International Charolais Ass'n. SN 76,910. Pub. 5-24-60. Filed 7-2-59.

702,728. NABET, ETC. AND DESIGN. National Association of Broadcast Employees and Technicians, AFL-CIO, CLC. SN 80,256. Pub. 5-24-60. Filed 8-26-59.

Certification Mark

Class A — Goods

702,729. SWISS FABRIC ETC. AND DESIGN. Swiss Fabric Group, Inc. SN 86,907. Pub. 5-24-60. Filed 12-8-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

702,730. Milprint, Inc., Milwaukee, Wis. SN 60,360. Filed P.R. 10-9-58; Am. S.R. 6-10-60.

LIFT-SE-WINDOW

For Commodity Cartons.
First use on or about Sept. 16, 1958.

Class 12 — Construction Materials

702,731. The Cincinnati Sash & Door Co., Cincinnati, Ohio. SN 85,301. Filed P.R. 11-16-59; Am. S.R. 6-13-60.

SUPER LIFT

For Window Units.
First use June 1, 1959.

Class 19 — Vehicles

702,732. Sun Manufacturing Company, Yakima, Wash. SN 77,966. Filed P.R. 7-17-59; Am. S.R. 5-27-60.

Kar Karrier

The lining on the drawing reproduces the mark as shown on the specimen, and is not for showing color.
For Vehicle Luggage Rack.
First use Apr. 1, 1959.

Class 28 — Jewelry and Precious-Metal Ware

702,733. Speidel Corporation, Providence, R.I. SN 76,121. Filed P.R. 6-19-59; Am. S.R. 6-10-60.

GOLDEN LEATHA

For Watch Bracelets.
First use June 4, 1959.

Class 39 — Clothing

702,734. Mylan Manufacturing Co. Inc., New York, N.Y. SN 77,218. Filed P.R. 7-7-59; Am. S.R. 6-7-60.

Travelrobe

For Men's and Boys' Robes.
First use June 1, 1959.

TRADEMARK REGISTRATIONS RENEWED

129,686. REPRESENTATION OF AN EAGLE WITH SPREAD WINGS. Cl. 11. 2-9-20.
131,822. PNEUMERCATOR. Cl. 26. 5-25-20.
131,955. ASHLAND AND DESIGN. Cl. 1. 6-8-20.
132,074. SUN SHINE AND DESIGN. Cl. 4. 6-8-20.
132,362. DURATOP. Cl. 42. 9-23-20.
132,868. E AND DIAMOND DESIGN. Cl. 37. 6-29-20.
132,924. KING EIDER AND DESIGN. Cl. 22. 7-6-20.
133,178. AVRO. Cl. 22. 7-13-20.
133,241. KNIGHT KLAD. Cl. 39. 7-20-20.
133,505. AVRO AND DESIGN. Cl. 22. 7-27-20.
134,081. WHEATCO AND DESIGN. Cl. 46. 8-10-20.
134,239. DINNER BELL. Cl. 46. 8-24-20.
134,240. REPRESENTATION OF A GIRL RINGING A BELL. Cl. 46. 8-24-20.
134,339. NUGGETS. Cl. 38. 8-31-20.
134,465. WONDER-NUT. Cl. 46. 8-31-20.
134,466. WONDER-NUT OLEOMARGARINE AND DESIGN. Cl. 46. 8-31-20.
135,027. CADUM. Cl. 4. 9-21-20.
135,346. TINKERTOY FIGURE. Cl. 22. 9-28-20.
135,562. TIFFIN ROOM. Cl. 46. 10-12-20.
135,593. BOILO. Cl. 44. 10-19-20.
135,616. SEALO. Cl. 37. 10-19-20.
135,696. FASHION. Cl. 37. 10-19-20.
135,706. BABY BUNTING. Cl. 46. 10-19-20.
136,064. UNOIT. Cl. 17. 10-26-20.
136,797. SMILES. Cl. 52. 11-9-20.
136,843. KLEINERT'S. Cl. 44. 11-9-20.
136,876. NATIONAL. Cl. 21. 11-9-20.
137,155. BOCK Y CA. Cl. 17. 11-23-20.
137,156. LA FLOR DE HENRY CLAY ETC. Cl. 17. 11-23-20.
137,198. DOLD QUALITY. Cl. 46. 11-23-20.
137,199. NIAGARA. Cl. 46. 11-23-20.
137,203. DOLD QUALITY AND DESIGN. Cl. 46. 11-23-20.
137,453. REPRESENTATION OF AN ALLIGATOR. Cl. 23. 11-23-20.
137,464. SOHMER AND DESIGN. Cl. 36. 11-23-20.
137,701. SIMONIZ. Cl. 4. 11-30-20.
376,003. PUNKIN-SEED. Cl. 22. 3-12-40.
376,191. NELSON-PAIGE. Cl. 39. 3-12-40.
376,647. GREYHOUND AND DESIGN. Cl. 22. 4-2-40.
377,017. STACON. Cl. 26. 4-16-40.
377,031. CANADIAN FLYER. Cl. 22. 4-16-40.
377,037. PUNCH AND JUDY AND DESIGN. Cl. 39. 4-16-40.
377,483. BEAR BRAND AND DESIGN. Cl. 6. 5-7-40.
377,512. COUNTRY CLUB. Cl. 45. 5-7-40.
377,641. WARCONYL. Cl. 6. 5-7-40.
377,738. SLEEP SWEETS. Cl. 39. 5-14-40.
378,230. PRIMUS AND DESIGN. Cl. 34. 6-4-40.
378,365. SILVA AND DESIGN. Cl. 22. 6-4-40.
378,390. GUNEX. Cl. 15. 6-11-40.
378,391. WHO'S WHO IN CHICAGO & VICINITY. Cl. 36. 6-11-40.
378,392. WHO'S WHO IN NEW ENGLAND. Cl. 38. 6-11-40.
378,414. CEDACOTE. Cl. 6. 6-11-40.
378,479. PENN TRIUMPH. Cl. 15. 6-11-40.
378,494. CYSTAN. Cl. 6. 6-11-40.
378,562. CLOCREAM. Cl. 18. 6-11-40.
378,660. PARGRAN. Cl. 18. 6-11-40.
378,892. TACK-MASTER. Cl. 23. 6-25-40.
378,930. GREEN VALLEY. Cl. 39. 6-25-40.
378,938. WESTREX AND DESIGN. Cl. 26. 6-25-40.
379,035. FRIENDLY. Cl. 46. 6-25-40.
379,036. GRAIN BELT FRIENDLY. Cl. 46. 6-25-40.
379,037. THE FRIENDLY BEER. Cl. 46. 6-25-40.
379,100. RPM DELO. Cl. 15. 7-2-40.
379,252. ALKAZENE. Cl. 6. 7-9-40.
379,421. WARCOLUX. Cl. 6. 7-9-40.
379,422. WARCOTEX. Cl. 6. 7-9-40.
379,520. GRIPPER. Cl. 40. 7-16-40.
379,524. UTILIGHT. Cl. 21. 7-16-40.
380,121. SIGNET. Cl. 22. 8-6-40.
380,328. MAYR'S WORM CHASER AND DESIGN. Cl. 18. 8-20-40.
380,359. ZEPHYR AUTODEX. Cl. 37. 8-20-40.
380,426. ARTRA. Cl. 51. 8-20-40.
380,489. TEVIROL. Cl. 18. 8-20-40.
380,599. SWEETZELS ETC. AND DESIGN. Cl. 46. 8-27-40.
380,736. MONAMEL. Cl. 16. 8-27-40.
380,748. STER-O-SLEEP. Cl. 32. 8-27-40.
380,749. STER-O-TEX. Cl. 32. 8-27-40.
380,935. TRI-TEST. Cl. 46. 9-10-40.
381,122. BARAVIT. Cl. 18. 9-10-40.
381,520. Q-FIN. Cl. 13. 9-24-40.
381,715. DRAPERTOWN. Cl. 39. 10-1-40.
381,728. ELECTREX. Cl. 14. 10-1-40.
381,915. SENCO. Cl. 6. 10-15-40.
381,998. ISO-LAN. Cl. 51. 10-15-40.
382,001. TEGOSEPT. Cl. 51. 10-15-40.
382,002. TEGO STEARATE. Cl. 51. 10-15-40.
382,028. HYDROPEL. Cl. 12. 10-15-40.
382,099. TRAVIBOL. Cl. 18. 10-15-40.
382,134. RUSTICON. Cl. 6. 10-15-40.
382,387. GAY NINETIES FRUIT CAKE AND DESIGN. Cl. 46. 10-29-40.
382,409. ITALISCOSA. Cl. 1. 10-29-40.
382,637. STRAIGHTAWAY. Cl. 39. 11-5-40.
382,739. DEEP ROCK STOV-O-LENE. Cl. 15. 11-12-40.
382,881. TEDDY BEAR PANDA AND DESIGN. Cl. 22. 11-12-40.
382,942. NORTHERN MAGIC AND DESIGN. Cl. 46. 11-19-40.
382,943. NORTHERN ACE. Cl. 46. 11-19-40.
382,957. SCHOBLE AND DESIGN. Cl. 39. 11-19-40.
382,966. RAINBO. Cl. 46. 11-19-40.
383,056. VARCON AND DESIGN. Cl. 35. 11-19-40.
383,061. RAY-LOC. Cl. 21. 11-19-40.
383,186. LADY ADAM. Cl. 39. 11-26-40.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

296,291. MIRAX. Cl. 26. 8-2-32.
326,104. SCHINASI BROS. NATURAL AND DESIGN. Cl. 17. 6-11-35.
653,670. CHEMGARD. Cl. 16. 10-29-57.
665,899. PUR-REX AND DESIGN. Cl. 37. 8-5-58.
670,922. PRO-FILE. Cl. 32. 12-9-58.
685,876. ADVANCE. Cl. 23. 9-29-59.
685,877. PACIFIC. Cl. 23. 9-29-59.

Section 8

125,174. CALSUN. Cl. 46. 4-15-19.
273,458. LANCE'S P-CHEE. Cl. 46. 8-5-30.
378,284. HOBBIES. Cl. 39. 6-4-40.

414,531. M MINNEAPOLIS KNIT AND DESIGN. Cl. 39. 6-12-45.
417,932. KNIT'NS. Cl. 39. 11-20-45.
435,179. BUNKER HILL WOOLENS AND DESIGN. Cl. 42. 12-16-47.

The following registrations issued June 28, 1954

591,518. TRA-SUR POT AND DESIGN. Cl. 2.
591,521. REMBRANDT. Cl. 3.
591,522. DURAX AND DESIGN. Cl. 4.
591,527. MAGIC STRIP. Cl. 6.
591,528. AEROTIL. Cl. 10.
591,529. JIFFY. Cl. 10.
591,531. RAINIER. Cl. 12.

591,534. DURA-BRIK. Cl. 12.
591,535. CONSOL. Cl. 12.
591,537. PALCO INSULATION BOARD AND DESIGN. Cl. 12.
591,541. TUB-ETTE. Cl. 13.
591,544. AVR. Cl. 13.
591,545. CAMLOC. Cl. 13.
591,547. DUAL-CRAFT. Cl. 13.
591,556. PORTATUBE. Cl. 13.
591,563. PETROCUT. Cl. 15.
591,565. PROTECTOLUBE. Cl. 15.
591,573. FEED-ANI. Cl. 18.
591,576. BILIOBAR. Cl. 18.
591,582. LITTLE DAVIDS. Cl. 18.
591,589. LIORESYL. Cl. 18.
591,596. MC AND DESIGN. Cl. 18.
591,598. MARCUMAR. Cl. 18.
591,600. CIBEMONE. Cl. 18.
591,605. LIGHT-N-WATER. Cl. 21.
591,612. SUPEROTOR. Cl. 21.
591,617. HI-Q HOW'S YOUR'S. Cl. 22.
591,620. HOWE TELEPRINT. Cl. 23.
591,624. KROMLOK. Cl. 23.
591,626. TRI-JAX. Cl. 23.
591,627. QUARDAIR. Cl. 23.
591,633. LO-HEET HI-BEEEEE AND DESIGN. Cl. 24.
591,635. DUPRILOY. Cl. 25.
591,637. HONEYWELL WITHIN DESIGN. Cl. 26.
591,638. CORO-FLASH AND DESIGN. Cl. 26.
591,640. CEC AND DESIGN. Cl. 26.
591,643. MAGNIGLOW AND DESIGN. Cl. 26.
591,644. TASCO WITHIN DESIGN. Cl. 26.
591,645. SELF-RATER. Cl. 26.
591,651. NOSTRANA. Cl. 27.
591,652. SUPERA. Cl. 27.
591,653. VUF. Cl. 27.
591,654. 3D. Cl. 27.
591,655. TEMPO ROYAL AND DESIGN. Cl. 27.
591,667. MARY-JO. Cl. 28.
591,673. JONCO. Cl. 31.
591,676. OLD SOUTH SEA ISLAND. Cl. 34.
591,680. AMAZON. Cl. 37.
591,684. SEC'S APPEAL. Cl. 38.
591,686. BALLYHOO. Cl. 38.
591,689. MISS SWANK STRAIGHT-PLUS-BIAS. Cl. 39.
591,692. BOOT-EZE. Cl. 39.
591,693. FOOTPADS CASUALS BY MANFIELD AND DESIGN. Cl. 39.
591,694. MANFIELD COUNTRY WALKER. Cl. 39.
591,695. M MANFIELD WEE WINTER WALKER AND DESIGN. Cl. 39.
591,696. M MANFIELD WINTER WALKER AND DESIGN. Cl. 39.
591,700. CAMUJO. Cl. 39.
591,701. DEPAYNE. Cl. 39.
591,704. DOVE-PRODUCTS AND DESIGN. Cl. 39.
591,705. ST. ANNE. Cl. 39.
591,707. LONDON BOBBIES. Cl. 39.
591,708. SELTEX. Cl. 39.
591,709. PEEPERS. Cl. 39.
591,711. NORSTON. Cl. 39.
591,714. SOFT SHELLS BY PRIMA. Cl. 39.
591,716. VOGUETTE. Cl. 40.
591,717. SEW-KRAFT. Cl. 40.
591,718. WINDOW WONDER. Cl. 42.
591,719. FUTUREWOOLS SIXLAIN. Cl. 42.
591,722. PERMATRON. Cl. 42.
591,727. BELCRAFT AND DESIGN. Cl. 42.
591,729. SNUGS. Cl. 42.
591,731. MOORE-PERMA-BASE. Cl. 44.
591,735. VITA-SEAL. Cl. 44.
591,738. PROLENGETTES AND DESIGN. Cl. 44.
591,746. GREEN MAGIC. Cl. 46.
591,748. GREEN MAGIC. Cl. 46.
591,749. ROME AND DESIGN. Cl. 46.
591,754. PAPAZIAN COFFEROMA ETC. AND DESIGN. Cl. 46.
591,767. TEXO SWEETIES. Cl. 46.
591,771. SCAN-A-PLAC. Cl. 50.
591,773. LADY PRESIDENT. Cl. 52.
591,777. THE BUNK HOUSE. Cl. 101.
591,780. QUICKE VACATION. Cl. 105.
591,782. GLAMOUR WHITE. Cl. 106.
591,784. PATHE AND DESIGN. Cl. 106.
591,787. TUFEDGE. Cl. 2.
591,788. RIBBON REEL. Cl. 2.
591,792. ROTGARD. Cl. 6.
591,793. BEV-L-EDGE. Cl. 12.
591,794. SURE FIT BACKSPLASH AND DESIGN. Cl. 12.
591,795. BUY MILES NOT GALLONS. Cl. 15.
591,797. FLO-SATIN. Cl. 16.
591,799. NEIL'S NOPAINE. Cl. 18.
591,801. SAVE-A-LINE ADD-ON-SINKER AND DESIGN. Cl. 22.
591,802. GRASSHAVER. Cl. 23.
591,806. KLIP-ON. Cl. 23.
591,811. DI NAPOLI. Cl. 46.
591,812. EAT-ALL. Cl. 46.
591,813. STA-WIP. Cl. 46.
591,815. SPEEDE (FANCIFUL). Cl. 52.
591,816. TUYA MEXICAN EXPRESS AND DESIGN. Cl. 105.

Section 18

666,770. KV AND DESIGN. Cl. 18. 9-9-58.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

366,882. RUGLYDE. Cl. 15. 5-2-39. Florence Rosen, doing business as American Grease Stick Company, Muskegon Heights, Mich. Amended to appear:

RUGLYDE

591,215. GREAT BOOKS. Cl. 38. 6-15-54. The Great Books Foundation, Chicago, Ill. Amended: In the statement, column 2, lines 7 and 8 are deleted, and the drawing is amended to appear:

GREAT BOOKS

592,390. CHEM-O-SHOT. Cl. 23. 7-13-54. Proportioneers, Inc. B-I-F Industries, Inc., Providence, R.I. Amended to appear:

CHEM-O-SHOT

603,367. ETTES. Cl. 46. 3-15-55. The Creamette Company, Minneapolis, Minn. Amended: In the statement, column 2, lines 1 through 4, the description of goods, "macaroni food for infants and children, comprising only macaroni prepared in a form for quick and complete cooking" is deleted and *dry macaroni products* is inserted.

608,073. CALF-O-LIFE. Cl. 46. 6-28-55. Nutrena Mills, Inc., Minneapolis, Minn. Amended to appear:

CALF-O-LIFE

637,085. AUTOLITE. Cl. 21. 11-13-56. The Electric Auto-Lite Company, Toledo, Ohio. Amended to appear:

AUTOLITE

668,352. MERCEDES-BENZ. Cl. 26. 10-14-58. Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. Amended: In the statement, column 2, lines 6 and 7, "calculating machines, cash registers" are deleted.

680,308. MAX MEYER. Cl. 16. 6-16-59. Colorificio Italiano Max Meyer S.p.A., Milan, Italy. Corrected:

MAX MEYER

691,592. LUMA. Cl. 21. 1-19-60. Kooperativa Forbundet Ekonomisk Forening, doing business as Lumalampan AB Stockholm 20, Stockholm, Sweden. Corrected: In the statement, column 2, line 7, "Swedish" should be deleted and *United States* should be inserted.

693,743. LATAN. Cl. 18. 3-1-60. American Home Products Corporation, doing business as Ayerst Laboratories, New York, N.Y. Corrected: In the statement, column 2, line 3, "1958" should be deleted and *1959* should be inserted.

696,175. MERCI. Cl. 47. 4-12-60. United Vintners, Inc., by change of name from Allied Wine Company, assignee of United Vintners, Inc., San Francisco, Calif. Corrected: In the heading, "695,175" should be deleted and *696,175* should be inserted.

697,577. MIRACO AND DESIGN. Cl. 52. 5-10-60. Wink Soap Co., Inc., Racine, Wis. Corrected: In the statement, column 2, line 3, after "1958" second occurrence, *; 1930 as to soap in a different form* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

150,270. C. W. BURGOON. Cl. 6. Charles W. Burgoon. 1-3-22. New Cert. Sec. 7(c) to K. O. Hoffman, North Baltimore, Ohio.

226,962. KEROSTAT ETC. AND DESIGN. Cl. 50. American Steel Products Co. 4-26-27. New Cert. Sec. 7(c) to Honeggers' & Co., Inc., Fairbury, Ill.

508,696. ACCENTUETTES. Cl. 40. Forms Incorporated. 4-19-49. New Cert. Sec. 7(c) to California Forms, Inc., Culver City, Calif.

585,220. FLEXO-LURE. Cl. 22. Charles I. Burke, doing business under the assumed name Burke Flexo-Products Company. 2-2-54. New Cert. Sec. 7(c) to Burke Flexo-Products Co., Traverse City, Mich.

696,340. REPRESENTATION OF MAN AND WHEELBARROW. Cl. 19. Buch Manufacturing Company. 4-19-60. New Cert. Sec. 7(c) to Moto-Mower, Inc., Oak Park, Mich.

INDEX OF REGISTRANTS

AUGUST 9, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A./B. Broderna Kjellstrom, Stockholm, Sweden, to Silva Industries, Inc., New York, N.Y. 378,365, ren. 8–9–60. Cl. 22.
A/BB/A/ Hjorth & Co., to Aktiebolaget Bahco, Stockholm, Sweden. 378,250, ren. 8–9–60. Cl. 34.
ACP Industries, Inc., New York, N.Y. 702,484, pub. 5–24–60. Cl. 19.
A.S.K.: *See*—
Andels Svineslagteriet I Kolding.
Abbott Laboratories, North Chicago, Ill. 702,654, pub. 5–24–60. Cl. 44.
Adam Hat Stores, Inc., to Miller Bros. Hat Co. Inc., New York, N.Y. 383,186, ren. 8–9–60. Cl. 39.
Ador Corp., Fullerton, Calif. 702,446, pub. 5–24–60. Cl. 12.
Airequipt Mfg. Co., Inc., New Rochelle, N.Y. 702,553, pub. 5–24–60. Cl. 26.
Air-Way, Inc., Toledo, Ohio. 702,498, pub. 5–24–60. Cl. 21.
Aktiebolaget Bahco: *See*—
A/BB/A/ Hjorth & Co.
Albemarle Paper Mfg. Co., Richmond, Va. 702,590, pub. 5–24–60. Cl. 37.
Aliber, Marvin M., d.b.a. Save A Line Sinker Co., Des Moines, Iowa. 591,801, canc. Cl. 22.
Allbaugh, Harold V., d.b.a. Super Sensitive Musical String Co., Chicago, Ill. 702,582, pub. 5–24–60. Cl. 36.
Allied Wine Co.: *See*—
United Vintners, Inc.
Almagia, Joele P., New York, N.Y. 591,700, canc. Cl. 39.
Almy and Orrin Inc., San Francisco, Calif. 702,513, pub. 5–24–60. Cl. 22.
Aluminum Co. of America, Pittsburgh, Pa. 591,556, canc. Cl. 13.
Alvin, A. C., Co., Des Moines, Iowa. 702,691, pub. 5–24–60. Cl. 51.
American Bitumuls & Asphalt Co.: *See*—
American Bitumuls Co.
American Bitumuls Co., Wilmington, Del., and San Francisco, Calif., to American Bitumuls & Asphalt Co., San Francisco, Calif. 382,028, ren. 8–9–60. Cl. 12.
American Cyanamid Co., New York, N.Y. 591,528, canc. Cl. 10.
American Cystoscope Makers, Inc., Pelham Manor, N.Y. 378,494, ren. 8–9–60. Cl. 6.
American Felt Co., Glenville, Conn. 702,567, pub. 5–24–60. Cl. 31.
American Grease Stick Co.: *See*—
Rosen, Florence.
American Home Products Corp., d.b.a. Ayerst Laboratories, New York, N.Y. 693,743, cor. Cl. 18.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 702,475–6, pub. 5–24–60. Cl. 18.
American Home Products Corp., d.b.a. Wyeth Laboratories, New York, N.Y. 702,477, pub. 5–24–60. Cl. 18.
American-International Charolais Ass'n., Houston, Tex. 702,727, pub. 5–24–60. Cl. 200.
American-Marietta Co., O-Cedar Division, Chicago, Ill. 702,560, pub. 4–19–60. Cl. 29.
American Optical Co., Southbridge, Mass. 702,539, pub. 5–24–60. Cl. 26.
American Scientific Laboratories, Inc., Madison, Wis. 702,471, pub. 5–24–60. Cl. 18.
American Scientific Laboratories, Inc., Madison, Wis. 702,479–80, pub. 5–24–60. Cl. 18.
American Speedlight Corp., New York, N.Y. 702,536, pub. 5–24–60. Cl. 26.
American Steel Products Co., to Honeggers' & Co., Inc., Fairbury, Ill. 226,952, new cert. Cl. 50.
American Tobacco Co., The, New York, N.Y. 325,104, canc. Cl. 17.
Anchor Post Products, Inc., Baltimore, Md. 702,452, pub. 5–24–60. Cl. 13.
Andels Svineslagteriet I Kolding, d.b.a. A.S.K., Kolding, Denmark. 702,673, pub. 5–24–60. Cl. 46.
Anderson Co., The, Gary, Ind. 591,544, canc. Cl. 13.
Ansell, Alexander A., New York, N.Y., to H. Carstens Mfg. Co., Harwood Heights, Ill. 135,593, ren. 8–9–60. Cl. 44.
Apparel Industries, Inc.: *See*—
Strutwear Knitting Co.
Aristocrat Leather Products, Inc., New York, N.Y., to Rexall Drug Co., Los Angeles, Calif. 591,521, canc. Cl. 3.
Armor Products, Inc., New York, N.Y. 702,707, pub. 5–24–60. Cl. 101.
Arnold Ben, Co., Inc., Columbia, S.C. 702,683, pub. 9–16–58. Cl. 49.
Aronov, Philip, Los Angeles, Calif. 591,707, canc. Cl. 39.
Asher & Boretz, Inc., New York, N.Y. 591,680, canc. Cl. 37.
Ashland Leather Co., Ashland, Ky., and Chicago, Ill., to Swift & Co., Chicago, Ill. 131,955, ren. 8–9–60. Cl. 1.
Assembled Products, Inc., Milford, Conn. 591,717, canc. Cl. 40.
Associated Merchandising Corp., The, New York, N.Y. 591,711, canc. Cl. 39.
Associated Students of The University of California, Berkeley, Calif. 702,503, pub. 5–24–60. Cl. 22.
Ayerst Laboratories: *See*—
American Home Products Corp.
B-I-F Industries, Inc.: *See*—
Proportioneers, Inc.
Baker, J. T., Chemical Co., Phillipsburg, N.J. 702,424–5, pub. 5–24–60. Cl. 1.
Baltimore Biological Laboratory, Inc., Baltimore, Md. 702,431, pub. 12–29–59. Cl. 6.
Barnes-Ross Co., Inc., The: *See*—
Barnes-Ross Co., The.
Barnes-Ross Co., The, to The Barnes-Ross Co., Inc., Indianapolis, Ind. 134,339, ren. 8–9–60. Cl. 38.
Barth, George F., d.b.a. Marketing-Sales Plans Co., New York, N.Y. 702,563, pub. 5–24–60. Cl. 29.
Bates Mfg. Co., Lewiston, Maine. 702,639, pub. 5–24–60. Cl. 42.
Bay West Paper Co., Green Bay, Wis. 702,591–2, pub. 5–24–60. Cl. 37.
Beauty Specialties Co.: *See*—
Realistic Co., The.
Begg, Thomas, Inc., New York, N.Y. 702,616, pub. 2–9–60. Cl. 39.
Belgian Quality Craftsmen Society, Brussels, Belgium. 591,727, canc. Cl. 42.
Bell & Howell Co., Chicago, Ill. 702,502, pub. 5–24–60. Cl. 21.
Bendix-Westinghouse Automotive Air Brake Co., Evansville, Ind. 702,564, pub. 5–24–60. Cl. 31.
Benedictine Fathers, Benet Lake, Wis. 702,666–7, pub. 5–24–60. Cl. 46.
Berg, Mogens, d.b.a. Matador Food & Export Co., Charlottenlund, near Copenhagen, Denmark. 702,684, pub. 5–24–60. Cl. 46.
Bergeron, Victor J., San Francisco, Calif. 591,676, canc. Cl. 34.
Berkenhoff & Drebes A.-G., Assiarer Huette, near Wetzlar, Germany. 702,516, pub. 5–24–60. Cl. 23.
Bernheim/Siegel Corp., Philadelphia, Pa. 702,566, pub. 5–24–60. Cl. 32.
Bestform Foundations, Inc., Long Island City, N.Y. 702,635, pub. 5–24–60. Cl. 39.
Biddle Trade Publishing Co., d.b.a. E.T.B. Co., Los Angeles, Calif. 702,594–5, pub. 5–24–60. Cl. 38.
Big Game Hunting Service: *See*—
Crane, James.
Bliss, E. W., Co., Canton, Ohio. 702,489, pub. 5–24–60. Cl. 21.
Bookeepers Business Service Co. Inc., Pomona, Calif. 702,601, pub. 5–24–60. Cl. 38.
Bowers, Norman W., Sunnyvale, Calif. 702,528, pub. 5–24–60. Cl. 23.
Brown Co., to Brown Co., Berlin, N.H. 135,616, ren. 8–9–60. Cl. 37.
Buch Mfg. Co., to Moto-Mower, Inc., Oak Park, Mich. 696,340, new cert. Cl. 19.
Burgoon, Charles W., to K. O. Hoffman, North Baltimore, Ohio. 150,270, new cert. Cl. 6.
Burke, Charles I., d.b.a. Burke Flexo-Products Co., to Burke Flexo-Products Co., Traverse City, Mich. 585,220, new cert. Cl. 22.
Burke Flexo-Products Co.: *See*—
Burke, Charles I.
Burlington Industries, Inc.: *See*—
Ely & Walker Dry Goods Co.
Burrus Feed Mills: *See*—
Burrus Mills, Inc.
Burrus Mills, Inc., d.b.a. Burrus Feed Mills, Dallas, Tex. 591,767, canc. Cl. 46.
Butler, H. W., & Brothers, Inc., Winchester, Va. 702,663, pub. 5–24–60. Cl. 46.
Byrne, J. P., & Sons Co., Omaha, Nebr. 591,667, canc. Cl. 28.
C. T. L., Inc.: *See*—
Studebaker-Packard Corp.
Cabochon-Arte Designs: *See*—
Du Pre, Raymond.
California Forms, Inc.: *See*—
Forms Inc.
Caloric Stove Corp., Philadelphia, Pa. 591,633, canc. Cl. 24.
Cambridge Tile Mfg. Co., The, Cincinnati, Ohio. 702,427, pub. 8–25–59. Cl. 5.
Camloc Fastener Corp., Paramus, N.J. 591,545, canc. Cl. 13.
Campbell-Taggart Associated Bakeries, Inc., Dallas, Tex. 382,966, ren. 8–9–60. Cl. 46.
Canadian Industries Ltd., Montreal, Quebec, Canada. 702,467, pub. 5–24–60. Cl. 16.
Carey System, Inc., The, Charleston, W. Va. 702,708, pub. 5–24–60. Cl. 101.
Carstens, H., Mfg. Co.: *See*—
Ansell, Alexander A.
Carter, William, Co., The, Needham Heights, Mass. 591,729, canc. Cl. 42.
Castagna, Maria, South Bend, Ind. 702,613, pub. 5–24–60. Cl. 39.
Cats American Co., Inc., New York, N.Y. 702,675, pub. 5–24–60. Cl. 46.
Cedacote Products Inc., to Fletcher Hall, Woodside, N.Y., to Fletcher Hall, Memphis, Tenn. 378,414, ren. 8–9–60. Cl. 6.

Celia Vineyards, Reedley, Calif. 702,680, pub. 5–24–60. Cl. 47.
Chain Bike Corp., Rockaway Beach, N.Y. 702,514, pub. 5–24–60. Cl. 23.
Chaney, Allan T., Newark, Ohio. 702,547, pub. 5–3–60. Cl. 26.
Chartrand, Francis Monroe, Collinsville, Ill. 702,607, pub. 5–24–60. Cl. 38.
Cheneweth, James E., National City, Calif. 591,518, canc. Cl. 2.
Chesapeake Industries, Inc., New York, N.Y. 591,784, canc. Cl. 106.
Chicago Machinery Laboratory, Inc., Chicago, Ill. 702,529, pub. 5–24–60. Cl. 23.
Christopher Oil Co., North Little Rock, Ark. 591,565, canc. Cl. 15.
Ciba Ltd., Basel, Switzerland. 591,589, canc. Cl. 18.
Ciba Ltd., Basel, Switzerland. 691,600, canc. Cl. 18.
Cincinnati Sash & Door Co., The, Cincinnati, Ohio. 702,731. Cl. 12.
Clairol Inc., New York, N.Y., from Clairol Inc., Stamford, Conn. 702,686, pub. 5–24–60. Cl. 51.
Clark, David, Co., Inc., Worcester, Mass. 382,637, ren. 8–9–60. Cl. 39.
Clark, Mary, East Orange, N.J. 591,596, canc. Cl. 18.
Clay, Henry, and Bock & Co., Ltd., to Cuban Tobacco Co. Inc., New York, N.Y. 137,155–6, ren. 8–9–60. Cl. 17.
Clements Mfg. Co., Chicago, Ill. 702,530, pub. 5–24–60. Cl. 23.
Clements Mfg. Co., Chicago, Ill. 702,576, pub. 7–28–59. Cl. 34.
Coca, Luis D., Union City, N.J. 702,602, pub. 5–24–60. Cl. 51.
Colgate-Palmolive Co.: *See*—
Omega Chemical Co., The.
Colibri Lighters Ltd., London, England. 702,557, pub. 4–19–60. Cl. 27.
College Skills Center, New York, N.Y. 702,722, pub. 5–24–60. Cl. 107.
College-Town Sportswear, Boston, Mass. 702,630, pub. 5–24–60. Cl. 39.
Colorificio Italiano Max Meyer S.p.A., Milan, Italy. 680,308 cor. Cl. 16.
Columbia Tool Steel Co., Chicago Heights, Ill. 381,728, ren. 8–9–60. Cl. 14.
Columbus Production Mfg. Co., Columbus, Ohio. 591,626, canc. Cl. 23.
Colyear Motor Sales Co., Los Angeles, Calif. 383,061, ren. 8–9–60. Cl. 21.
Combustion Engineering, Inc., New York, N.Y. 702,702, pub. 5–24–60. Cl. 100.
Computer Research Corp. of California, Hawthorne, Calif. 591,640, canc. Cl. 26.
Constructors Ltd., Erdlington, Birmingham, England. 591,535, canc. Cl. 12.
Continental Chemical Corp., Washington, D.C., to S. C. Johnson & Son, Inc., Racine, Wis. 591,522, canc. Cl. 4.
Continental Merchandise Co. Inc., New York, N.Y. 702,442, pub. 4–2–57. Cl. 8.
Coronet Ltd., Birmingham, England. 591,638, canc. Cl. 26.
Country Club Soda Co., Inc., Springfield, Mass. 377,512, ren. 8–9–60. Cl. 45.
Covered Wagon Trailer Mfg. Inc., Elkhart, Ind. 702,486, pub. 5–24–60. Cl. 19.
Crane, James S., d.b.a. Big Game Hunting Service, Palo Alto, Calif. 702,709, pub. 5–24–60. Cl. 101.
Creamette Co., The, Minneapolis, Minn. 603,367. Am. 7(d). Cl. 46.
Croton Watch Co., Inc., New York, N.Y. 591,654, canc. Cl. 27.
Cuban Tobacco Co., Inc.: *See*—
Clay, Henry, and Bock & Co.
Cumberland (Aylestone) Ltd., Leicester, England. 132,924, ren. 8–9–60. Cl. 22.
Curtin, W. H., & Co., Houston, Tex. 702,554, pub. 5–24–60. Cl. 26.
Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. 668,352. Am. 7(d). Cl. 26.
Darlington Fabrics Corp., New York, N.Y. 702,645, pub. 5–24–60. Cl. 42.
Davis, Arthur S., New York, N.Y. 702,662, pub. 5–24–60. Cl. 46.
Deep Rock Oil Corp., Tulsa, to Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. 382,739, ren. 8–9–60. Cl. 15.
Deeter, Raymond Y., Bellflower, Calif. 702,725, pub. 3–22–60. Cl. 107.
Dell Publishing Co., Inc., New York, N.Y. 591,686, canc. Cl. 38.
Devereux Butcher, Washington, D.C. 702,606, pub. 5–24–60. Cl. 38.
Diamond Alkali Co., Cleveland, Ohio. 702,439, pub. 5–24–60. Cl. 6.
Dierks & Sohne, Osnabruck, Germany. 702,522, pub. 5–24–60. Cl. 23.
Dodd, Alice, & Co., Inc., to Atlas Biscuit Corp., New York, N.Y. 382,387, ren. 8–9–60. Cl. 46.
Dolan Sponge Co.: *See*—
Dolan, William A.
Dolan, William A., d.b.a. Dolan Sponge Co., New York, N.Y. 702,561, pub. 5–24–60. Cl. 29.
Dold, Jacob, Packing Co., Buffalo, N.Y., to Hygrade Food Products Corp., Detroit, Mich. 137,198–9, ren. 8–9–60. Cl. 46.
Dold, Jacob, Packing Co., Buffalo, N.Y., to Hygrade Food Products Corp., Detroit, Mich. 137,203, ren. 8–9–60. Cl. 46.
Dore Records, Hollywood, Calif. 702,584, pub. 5–24–60. Cl. 36.
Doscar Corp., New York, N.Y. 702,546, pub. 5–24–60. Cl. 36.
Dove Products Co., Saugatuck, Conn. 591,704, canc. Cl. 39.
Dow Chemical Co., The, Midland, Mich. 702,423, pub. 5–24–60. Cl. 1.
Dow Chemical Co., The, Midland, Mich. 702,441, pub. 5–24–60. Cl. 6.
Dow Chemical Co., The, Midland, Mich. 702,651, pub. 5–24–60. Cl. 43.
Dow Chemical Co., The, San Francisco, Calif., to The Dow Chemical Co., Midland, Mich. 377,483, ren. 8–9–60. Cl. 6.
Dow Chemical Co., The, to The Dow Chemical Co., Midland, Mich. 379,252, ren. 8–9–60. Cl. 6.
Doyle Vacuum Cleaner Co., Grand Rapids, Mich. 702,491, pub. 5–24–60. Cl. 21.
Draper Brothers Co., Canton, Mass. 435,179, canc. Cl. 42.
Dresser Industries, Inc., Dallas, Tex. 702,524, pub. 5–17–60. Cl. 23.
Dresser Industries, Inc., Dallas, Tex. 702,703, pub. 5–24–60. Cl. 100.
Drilube Co., Glendale, Calif. 702,461, pub. 5–24–60. Cl. 15.
Du Pre, Raymond, from H. E. Roth, d.b.a. Cabochon-Arte Designs, Waterloo, Iowa. 702,603, pub. 5–24–60. Cl. 38.
Dura-Brick Co., Inc., Milwaukee, Wis. 591,534, canc. Cl. 12.
Duratex Co., The, Newark, N.J., to The General Tire & Rubber Co., Akron, Ohio. 132,362, ren. 8–9–60. Cl. 42.
Dymo Corp., Berkeley, Calif. 702,685, pub. 5–24–60. Cl. 50.
E.T.B. Co.: *See*—
Biddle Trade Publishing Co.
Eagle Printing Ink Co., The, Jersey City, N.J., and New York, N.Y., to Sun Chemical Corp., New York, N.Y. 129,686, ren. 8–9–60. Cl. 11.
Eagle-Tribune Publishing Co., Lawrence, Mass. 702,605, pub. 5–24–60. Cl. 38.
Eastern Rolling Mills, Inc., New York, N.Y. 702,458, pub. 5–24–60. Cl. 14.
Eastman Kodak Co., Rochester, N.Y. 702,719–20, pub. 5–24–60. Cl. 106.
Eat-All Frozen Food Co., Inc., The, Philadelphia, Pa. 591,812, canc. Cl. 46.
Edison, Thomas A., Inc., West Orange, N.J., to Riley Stoker Corp., Worcester, Mass. 377,017, ren. 8–9–60. Cl. 26.
Ehle, Robert W., Syracuse, N.Y. 591,777, canc. Cl. 101.
El Dorado Refining Co., The, Eldorado, Kans. 591,795, canc. Cl. 15.
Electric Autolite Co., The, Toledo, Ohio. 637,085. Am. 7(d). Cl. 21.
Electrical Research Products Inc., to Westrex Corp., New York, N.Y. 378,938, ren. 8–9–60. Cl. 26.
Elliott Paint & Varnish Co., Chicago, Ill. 702,463, pub. 5–24–60. Cl. 16.
Ely & Walker Dry Goods Co., St. Louis, Mo., to Burlington Industries, Inc., Greensboro, N.C. 133,241, ren. 8–9–60. Cl. 39.
Empire Soap Co., New York, N.Y., to The Hewitt Soap Co., Inc., Dayton, Ohio. 136,797, ren. 8–9–60. Cl. 52.
Ensruet Co.: *See*—
Price, Burton S.
Etablissements Chevallier, d.b.a. Societe des Anciens Etablissements Chevallier Pere, Angers, Maine, Loire, France. 702,693, pub. 5–24–60. Cl. 51.
Eubanks Industries, Inc., Hialeah, Fla. 702,426, pub. 1–5–60. Cl. 2.
Everest & Jennings, Inc., Los Angeles, Calif. 702,652, pub. 4–28–53. Cl. 44.
Eversharp, Inc., New York, N.Y. 702,520, pub. 5–24–60. Cl. 23.
Ewing, Nathaniel D., Viaconnes, Ind. 591,582, canc. Cl. 18.
Fairchild Camera and Instrument Corp., Syosset, N.Y. 591,771, canc. Cl. 50.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 702,440, pub. 5–24–60. Cl. 6.
Farm Bureau Cooperative Association, Inc., The, Columbus, Ohio. 702,619, pub. 5–24–60. Cl. 39.
Fassler, M. J., & Co., Inc., Brooklyn, N.Y. 702,643, pub. 5–24–60. Cl. 42.
Federal Pacific Electric Co., Newark, N.J. 702,492, pub. 5–24–60. Cl. 21.
Feldan Brothers, Inc., New York, N.Y. 702,626, pub. 5–24–60. Cl. 39.
Fernly, Joseph E., d.b.a. Fernly Products Co., Muskegon Heights, Mich. 702,483, pub. 5–24–60. Cl. 19.
Fernly Products Co.: *See*—
Fernly, Joseph E.
Fineman & Co. Inc., Baltimore, Md. 591,716, canc. Cl. 40.
Firestone Tire & Rubber Co., The, Akron, Ohio. 702,487, pub. 5–24–60. Cl. 19.
Five Star Industries, Inc., Hoboken, N.J. 702,506, pub. 5–24–60. Cl. 22.
Fletcher Hall: *See*—
Cedacote Products Inc.
Food Specialty Co., Inc., Seattle, Wash. 702,658, pub. 2–3–59. Cl. 46.
Foote Mineral Co., Philadelphia, Pa. 702,435, pub. 5–24–60. Cl. 6.
Forms Inc., to California Forms, Inc., Culver City, Calif. 508,695, new cert. Cl. 40.
Fort Dodge Laboratories, Inc.: *See*—
American Home Products Corp.
Frantz Electric Industries, Inc., Cleveland, Ohio. 702,535, pub. 5–24–60. Cl. 24.
Frazar Trading Corp.: *See*—
Warner, E. F.
Fred, Mr., Inc., New Bedford, Mass. 702,636, pub. 5–24–60. Cl. 39.
Freeman, Elaine Bernice, Vermilion-on-the-Lake, Ohio. 591,684, canc. Cl. 38.
Freitag Mfg. Co., Inc., New York, N.Y. 702,610, pub. 5–5–59. Cl. 39.
Future Foam & Co.: *See*—
Schneider, Charles, & Co., Inc.
Gamble-Skogmo, Inc.: *See*—
Gamble Stores Inc.

Gamble Stores Inc., to Gamble-Skogmo, Inc., Minneapolis, Minn. 383,056, ren. 8–9–60. Cl. 35.
Gardner, Herbert, New York, N.Y. 702,596, pub. 5–24–60. Cl. 38.
Garvey, S.A. Bodgas de San Patricio-Jeres de la Frontera, Jeres de la Frontera, Spain. 702,682, pub. 5–24–60. Cl. 47.
Gem Color Co. Inc., New York, N.Y. 702,510, pub. 5–24–60. Cl. 22.
Gem Rubber Corp., New York, N.Y. 591,692, canc. Cl. 39.
General Electric Co., Schenectady, N.Y. 702,579, pub. 5–24–60. Cl. 34.
General Mills, Inc., Minneapolis, Minn. 702,574, pub. 5–24–60. Cl. 33.
General Paint Corp. of Canada, Ltd., to General Paint Corp. of Canada Ltd., Vancouver, British Columbia, Canada. 380,736, ren. 8–9–60. Cl. 16.
General Time Corp., New York, N.Y. 702,555–6, pub. 2–9–60. Cl. 27.
General Tire & Rubber Co., The: *See*—
Duratex Co., The.
Genisco, Inc., Los Angeles, Calif. 702,495, pub. 5–24–60. Cl. 21.
Genisco, Inc., Los Angeles, Calif. 702,525, pub. 5–24–60. Cl. 23.
Genisco, Inc., Los Angeles, Calif. 702,566, pub. 5–24–60. Cl. 31.
George, Robert K., d.b.a. Precision Attachments Co., Indianapolis, Ind. 591,735, canc. Cl. 44.
Giovanni, Inc., Providence, R.I. 702,559, pub. 5–24–60. Cl. 28.
Glenn of California, Arcadia, Calif. 702,572, pub. 5–24–60. Cl. 32.
Glidden Co., The: *See*—
Glidden Nut Butter Co., The.
Glidden Co., The: *See*—
Wonder-Nut Food Products Co.
Glidden Nut Butter Co., The, Chicago, Ill., to The Glidden Co., Cleveland, Ohio. 134,239–40, ren. 8–9–60. Cl. 46.
Glowmeter Corp., Buffalo, N.Y. 591,643, canc. Cl. 26.
Goldenberg, M., & Sons, Inc., Philadelphia, Pa. 378,930, ren. 8–9–60. Cl. 39.
Golding Bros. Co., Inc., New York, N.Y. 380,748–9, ren. 8–9–60. Cl. 32.
Goldschmidt Chemical Corp.: *See*—
Th. Goldschmidt Corp.
Goodrich, B. F., Co., The, Akron, Ohio. 702,615, pub. 12–2–59. Cl. 39.
Gormis Kitchens, Inc., Norristown, Pa. 702,677, pub. 5–24–60. Cl. 46.
Grand Rapids Varnish Corp., Grand Rapids, Mich. 653,670, canc. Cl. 16.
Grand Rapids Varnish Corp., Grand Rapids, Mich. 591,797, canc. Cl. 16.
Great Books Foundation, The, Chicago, Ill. 591,215. Am. 7(d). Cl. 38.
Green Magic, Inc., West Palm Beach, Fla. 591,746, canc. Cl. 46.
Greene, John H., Gossville, N.H. 702,679, pub. 5–24–60. Cl. 46.
Griscom Russell Co., The, New York, N.Y., to The Griscom Russell Co., Massillon, Ohio. 381,520, ren. 8–9–60. Cl. 13.
Groveton Papers Co., Groveton, N.H. 665,399, canc. Cl. 37.
Guardair Co., The, Bridgeport, Conn. 591,627, canc. Cl. 23.
Hagan Chemicals & Controls, Inc., Pittsburgh, Pa. 702,436, pub. 5–24–60. Cl. 6.
Hall Brothers Inc., Kansas City, Mo. 591,788, canc. Cl. 2.
Harrison, Donna Lee, Dallas, Tex. 702,544, pub. 5–24–60. Cl. 26.
Heddon's, James, Sons, Dowagiac, Mich. 376,003, ren. 8–9–60. Cl. 22.
Helene Curtis Industries, Inc., Chicago, Ill. 702,698, pub. 5–10–60. Cl. 51.
Hepler, Elmer, Carlsbad, N. Mex. 702,690, pub. 5–24–60. Cl. 51.
Hewitt Soap Co., Inc., The: *See*—
Empire Soap Co.
Higby, William D., Bakersfield, Calif. 702,655, pub. 5–24–60. Cl. 44.
Hill Novelties Mfg. Corp., New York, N.Y. 702,541, pub. 5–24–60. Cl. 26.
Hoberg, John Co., The, Green Bay, Wis., to The Procter & Gamble Co., Cincinnati, Ohio. 135,696, ren. 8–9–60. Cl. 37.
Hoffman, K. O.: *See*—
Burgoon, Charles W.
Hoffmann-La Roche Inc., Nutley, N.J. 591,598, canc. Cl. 18.
Hompesch, George, d.b.a. Service Hard-Chromium Co., Union, N.J. 702,717–18, pub. 5–24–60. Cl. 106.
Honeggers & Co., Inc.: *See*—
American Steel Products Co.
Hopp Press, Inc., The, New York, N.Y. 702,598, pub. 5–24–60. Cl. 38.
Hoppe, Frank A., Inc., Philadelphia, Pa. 702,459, pub. 5–24–60. Cl. 15.
Horn, Murray, d.b.a. Willard Neil Labs, Bergenfield, N.J. 591,790, canc. Cl. 18.
House of Huston, Inc., Coral Gables, Fla. 591,748, canc. Cl. 46.
Howe Scale Co., The, Rutland, Vt. 591,620, canc. Cl. 23.
Hubner, Cornelius A., Butler, N.J. 591,803, canc. Cl. 23.
Huggins Candy Co., to Standard Candy Co., Nashville, Tenn. 135,708, ren. 8–9–60. Cl. 46.
Hughes, Thomas Jefferson, Jr., Roanoke, Va. 702,726, pub. 5–24–60. Cl. 107.
Huntington Laboratories, Inc., Huntington, Ind. 702,434, pub. 5–24–60. Cl. 6.
Hygrade Food Products Corp.: *See*—
Dold, Jacob, Packing Co.
Hylag Products Corp., New York, N.Y. 702,447, pub. 5–24–60. Cl. 12.
Imperial Brass Mfg. Co., The, Chicago, Ill. 702,456, pub. 5–22–60. Cl. 13.
Imperial Shirt Corp.: *See*—
Mylish, Mann & Drucker.
Indikon Co., Inc., The, Watertown, Mass. 702,536, pub. 5–24–60. Cl. 26.
International Flouncing Co., Inc., New York, N.Y. 591,722, canc. Cl. 42.
International Salt Co., Scranton, Pa. 702,531, pub. 5–24–60. Cl. 23.
International Staple and Machine Co., Pittsburgh, Pa. 702,451, pub. 5–24–60. Cl. 13.
Iona Mfg. Co., The, Manchester, Conn. 702,496, pub. 5–24–60. Cl. 21.
Italviscosa S.A., to Italviscosa S.p.A. Milan, Italy. 382,409, ren. 8–9–60. Cl. 1.
Jackson Electrical Instrument Co., The, Dayton, Ohio. 591,648, canc. Cl. 26.
Jefferson Electric Co., Bellwood, Ill. 702,497, pub. 5–24–60. Cl. 21.
Johnson, S. C., & Son, Inc.: *See*—
Continental Chemical Corp.
Jones and Yandell Mfg. Co. Inc., Canton, Miss. 702,508, pub. 5–24–60. Cl. 22.
Jonsales Ltd., London, England. 702,443, pub. 5–24–60. Cl. 8.
K.V. Products Co., Oklahoma City City, Okla. 666,770, canc. Cl. 18.
K & W Tackle Manufacturers, Warrenburg, Mo. 702,509, pub. 5–24–60. Cl. 22.
Kabushiki Kaisha Yashica, Chuo-ku, Tokyo, Japan. 702,490, pub. 5–24–60. Cl. 21.
Kalash Vitamin Corp., Pasadena, Calif. 702,472, pub. 5–24–60. Cl. 18.
Kalmon Shoe Mfg. Co., St. Louis, Mo. 702,621, pub. 1–19–60. Cl. 39.
Kandu Chemicals, Inc., New York, N.Y. 702,699, pub. 1–28–58. Cl. 52.
Kanegafuchi Boseki Kabushiki Kwaisha, d.b.a. Kanegafuchi Spinning Co., Ltd., Milyakojima-ku, Osaka, Japan. 702,648–50, pub. 5–24–60. Cl. 43.
Kanegaufuchi Spinning Co., Ltd.: *See*—
Kanegafuchi Boseki Kabushiki Kwaisha.
Kanner, Joseph, Hat Co., Inc.: *See*—
Schoble Hats, Inc.
Kellogg Co., Battle Creek, Mich. 702,678, pub. 5–24–60. Cl. 46.
Kenwood Laboratories, Inc., Brooklyn, N.Y. 702,481, pub. 5–24–60. Cl. 18.
Kerr-McGee Oil Industries, Inc.: *See*—
Deep Rock Oil Corp.
Key Mfg. Co., Marathon, Fla. 702,689, pub. 5–24–60. Cl. 51.
Kimberly-Stevens Corp., New York, N.Y. 702,646, pub. 5–24–60. Cl. 42.
Kleinert, I. B., Rubber Co., New York, N.Y. 136,643, ren. 8–9–60. Cl. 44.
Knickerbocker Rubber Co., d.b.a. Wells Specialty Co., Chicago, Ill. 702,515, pub. 5–24–60. Cl. 23.
Knight-Gordon Engineering, Tulsa, Okla. 702,540, pub. 5–24–60. Cl. 26.
Kooperativa Forbundet Ekonomisk Forening, d.b.a. Lumalampan AB Stockholm 20, Stockholm, Sweden. 691,592, cor. Cl. 21.
Kropfhammer, Dr. Ing. Georg, d.b.a. Baustoff-Chemie Dr. Ing. Georg Kropfhammer, Post Seebruck, Germany. 702,438, pub. 5–24–60. Cl. 6.
LKB Produkter Fabriksaktiebolag, Stockholm, Sweden. 702,657, pub. 5–24–60. Cl. 44.
Lahr, Jerry, Fort Lauderdale, Fla. 702,597, pub. 5–24–60. Cl. 38.
Lance Packing Co., Charlotte, N.C. 273,458, canc. Cl. 46.
Larus & Brother Co., Richmond, Va. 136,064, ren. 8–9–60. Cl. 17.
Leader Electronics, Inc., Cleveland, Ohio. 591,612, canc. Cl. 21.
Leeds Conveyor Mfg. Co., The, East Haven, Conn. 702,526, pub. 5–24–60. Cl. 23.
Le Febure Corp., Cedar Rapids, Iowa. 702,587, pub. 5–24–60. Cl. 37.
Lewis Food Co., d.b.a. Ross Food Co., Los Angeles, Calif. 702,672, pub. 5–24–60. Cl. 46.
Little Countess Girls Coats Co., Inc., New York, N.Y. 591,705, canc. Cl. 39.
Lockers (Engineers) Ltd., Warrington, England. 702,550, pub. 5–24–60. Cl. 26.
Lofstrand Co., The, Rockville, Md. 702,466, pub. 5–24–60. Cl. 16.
Lowenstein, M., & Sons, Inc., New York, N.Y. 702,644, pub. 5–24–60. Cl. 42.
Lucente Enterprises, Inc., Youngstown, Ohio. 702,696, pub. 5–24–60. Cl. 51.
Ludlow Mfg. & Sales Co., Needham Heights, Mass. 702,640, pub. 5–24–60. Cl. 42.
Lumalampan AB Stockholm 20: *See*—
Kooperativa Forbundet Ekonomisk Forening.
Madison Hosiery Corp., New York, N.Y. 702,637, pub. 5–24–60. Cl. 39.
Magnus, Mabee & Reynard, Inc., New York, N.Y. 702,432, pub. 5–24–60. Cl. 6.
Mahon, Thomas J., Inc., Englewood Cliffs, N.J. 702,474, pub. 2–16–60. Cl. 18.
Maiden Form Brassiere Co., Inc., New York, N.Y. 702,633, pub. 5–24–60. Cl. 39.
Manfield and Sons, Ltd., Northampton, England. 591,693–6, canc. Cl. 39.
Manifattura Lane Ugo Rista S.p.A., Milan, Italy. 591,719, canc. Cl. 42.
Marketing-Sales Plans Co.: *See*—
Barth, George F.
Marks Bros., Inc., Cleveland, Ohio. 702,627, pub. 5–24–60. Cl. 39.

Markwell Mfg. Co. Inc., to Markwell Mfg. Co., Inc., New York, N.Y. 378,892, ren. 8–9–60. Cl. 23.
Marquis, A. N., Co., The, to Marquis Who's Who, Inc., Chicago, Ill. 378,391–2, ren. 8–9–60. Cl. 38.
Marquis-Who's Who, Inc.: *See*—
Marquis, A. N., Co., The.
Maschinenfabrik Herborn Berkenhoff & Drebes A.-G., Herborn, Dillkreis, Germany. 702,517, pub. 5–24–60. Cl. 23.
Matador Food & Export Co.: *See*—
Berg, Mogens.
Matchabelli, Prince, Inc., New York, N.Y. 702,688, pub. 5–24–60. Cl. 51.
Matejka, Karl, Brunn, Czechoslovakia, to Taeschner & Co., Kipfenberg, Germany. 378,390, ren. 8–9–60. Cl. 15.
May Department Stores Co., The, St. Louis, Mo. 376,647, ren. 8–9–60. Cl. 22.
May Department Stores Co., The, St. Louis, Mo. 377,087, ren. 8–9–60. Cl. 39.
Maybelline Co., Chicago, Ill. 702,638, pub. 5–24–60. Cl. 40.
Maybelline Co., Chicago, Ill. 702,694, pub. 5–24–60. Cl. 51.
Mayr, I. K., d.b.a. Mayr's Seed & Feed, to Mayr's Seed & Feed, Ltd., Beaver Dam, Wis. 380,328, ren. 8–9–60. Cl. 18.
Mayr's Seed & Feed, Ltd.: *See*—
Mayr, I. K.
McNamee Coach Corp., d.b.a. McNamees Coach Corp., El Monte, Calif. 702,485, pub. 5–24–60. Cl. 19.
Medical News, Inc., New York, N.Y. 702,724, pub. 5–24–60. Cl. 107.
Mercantile Stores Co., Inc., Wilmington, Del. 702,581, pub. 5–24–60. Cl. 35.
Merit Clothing Co., Mayfield, Ky. 702,611–12, pub. 5–24–60. Cl. 39.
Metallschlauchfabrik Pforzheim vorm. Heh. Witzenmann G.m.b.H., Pforzheim, Baden, Germany. 702,455, pub. 5–24–60. Cl. 13.
Metallschlauchfabrik Pforzheim vorm. Heh. Witzenmann G.m.b.H., Pforzheim, Baden, Germany. 702,580, pub. 5–24–60. Cl. 35.
Miami Sportswear Co., Inc., Opa Locka, Fla. 702,623, pub. 5–24–60. Cl. 39.
Midland Co., The, South Milwaukee, Wis. 702,532, pub. 5–24–60. Cl. 23.
Miller Bros. Hat Co. Inc.: *See*—
Adam Hat Stores, Inc.
Milprint, Inc., Milwaukee, Wis. 702,730. Cl. 2.
Ministers Life and Casualty Union, The, Minneapolis, Minn. 702,710, pub. 5–24–60. Cl. 102.
Minneapolis Brewing Co., Minneapolis, Minn. 379,035–7, ren. 8–9–60. Cl. 48.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 591,637, canc. Cl. 26.
Minneapolis Knitting Works, Minneapolis, Minn. 378,254, canc. Cl. 39.
Minneapolis Knitting Works, Minneapolis, Minn. 414,531, canc. Cl. 39.
Minneapolis Knitting Works, Minneapolis, Minn. 417,932, canc. Cl. 39.
Moore, Edgar D., Charlotte, N.C. 591,731, canc. Cl. 44.
Morgan and Bush, Inc., Bakersfield, Calif. 591,573, canc. Cl. 18.
Morton's Inc., Boston, Mass. 702,712, pub. 5–24–60. Cl. 103.
Motch & Merryweather Machinery Co., The, Cleveland, Ohio. 591,624, canc. Cl. 23.
Moto-Mower, Inc.: *See*—
Buch Mfg. Co.
Mueller Brass Co., Port Huron, Mich. 702,551, pub. 5–24–60. Cl. 26.
Mylan Mfg. Co. Inc., New York, N.Y. 702,734. Cl. 39.
Mylish, Mann & Drucker, Philadelphia, Pa., to Imperial Shirt Corp., New York, N.Y. 376,191, ren. 8–9–60. Cl. 39.
National Association of Broadcast Employees and Technicians, AFL-CIO, CLC, Chicago, Ill. 702,726, pub. 5–24–60. Cl. 200.
National Cash Register Co., The, to The National Cash Register Co., Dayton, Ohio. 136,876, ren. 8–9–60. Cl. 21.
National Shoes, Inc., New York, N.Y. 702,608–9, pub. 4–14–59. Cl. 39.
National Tea Co., Chicago, Ill. 702,661, pub. 5–24–60. Cl. 46.
Nationwide Mutual Insurance Co., Columbus, Ohio. 702,711, pub. 5–24–60. Cl. 102.
Neil, Willard, Labs: *See*—
Horn, Murray.
Neirad Industries, Inc., Darien, Conn. 702,430, pub. 5–24–60. Cl. 6.
New York Merchandise Co., Inc., New York, N.Y. 702,624, pub. 5–24–60. Cl. 39.
Nickerson, John H., Co., Fort Wayne, Ind. 591,673, canc. Cl. 31.
Nixon, George C., d.b.a. The Steel Treating Equipment Co., Dearborn, Mich. 591,792, canc. Cl. 6.
Nuclear Materials and Equipment Corp., Apollo, Pa. 702,545, pub. 5–24–60. Cl. 26.
Nutrena Mills, Inc., Minneapolis, Minn. 608,073. Am. 7(d). Cl. 46.
Nutrilite Products, Inc., Burna Park, Calif. 702,687, pub. 12–1–59. Cl. 51.
Oberland Silk Mfg. Co. Ltd., Chan, Zug, Switzerland. 702,641, pub. 5–24–60. Cl. 42.
Ocean Hiway Association, Wilmington, Del. 702,713, pub. 5–24–60. Cl. 105.
Ohio Gear Co., The, Cleveland, Ohio. 702,519, pub. 5–24–60. Cl. 23.
Olin Mathieson Chemical Corp.: *See*—
Squibb, E. R., & Sons.
Omega Chemical Co., The, to Colgate-Palmolive Co., New York, N.Y. 135,027, ren. 8–9–60. Cl. 4.
Orloff Co., Inc., The, Philadelphia, Pa. 591,655, canc. Cl. 27.
Oxygen Equipment & Service Co., Chicago, Ill. 702,437, pub. 5–24–60. Cl. 6.
Ozark Air Lines, Inc., St. Louis, Mo. 702,714, pub. 5–24–60. Cl. 105.
Pacific Air Lines, Inc., San Francisco, Calif. 702,715, pub. 5–24–60. Cl. 105.
Pacific Lumber Co., The, San Francisco, Calif. 591,537, canc. Cl. 12.
Pacific Mufflers, Inc., Gardena, Calif. 685,876–7, canc. Cl. 23.
Pacific View Produce Co., Los Angeles, Calif. 702,660, pub. 5–24–60. Cl. 46.
Pam Associates, Inc., Baltimore, Md. 702,705, pub. 5–24–60. Cl. 100.
Papasian Coffee Co.: *See*—
Papasian, Garabed S.
Papasian, Garabed S., d.b.a. Papasian Coffee Co., Staten Island, N.Y. 591,754, canc. Cl. 46.
Parfums Chevalier Garde, Inc., New York, N.Y., to Schering Corp., Bloomfield, N.J. 380,426, ren. 8–9–60. Cl. 51.
Parke, Davis & Co., Detroit, Mich. 702,478, pub. 5–24–60. Cl. 18.
Parker Brothers Inc., Salem, Mass. 382,881, ren. 8–9–60. Cl. 22.
Pasqualina: *See*—
Pasqualina Zandrino-Oddenino.
Pasqualina Zandrino-Oddenino, d.b.a. Pasqualina, Turin, Italy. 702,695, pub. 5–24–60. Cl. 51.
Pennsylvania Forestry Association, The, Harrisburg, Pa. 702,721, pub. 5–24–60. Cl. 107.
Pennsylvania Refining Co., Butler, Pa. 591,563, canc. Cl. 15.
Per Gunnar Brundell, Gavle, Sweden. 702,521, pub. 5–24–60. Cl. 23.
Perfect Foods, Inc., to Perfect Foods Inc., Lansdale, Pa. 380,599, ren. 8–9–60. Cl. 46.
Permanent Stainless Steel, Inc., Chicago, Ill. 591,547, canc. Cl. 13.
Peterson, D. J., Co.: *See*—
Peterson, D. J.
Peterson, D. J., d.b.a. D. J. Peterson Co., Sheboygan, Wis. 702,464, pub. 12–29–59. Cl. 16.
Philadelphia Quartz Co., Philadelphia, Pa. 382,134, ren. 8–9–60. Cl. 6.
Philco Corp., Philadelphia, Pa. 702,723, pub. 5–24–60. Cl. 107.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 702,575, pub. 5–24–60. Cl. 33.
Play A Toy Co. of Illinois, Chicago, Ill. 702,504, pub. 5–24–60. Cl. 22.
Pneumercator Co., New York, N.Y. 131,822, ren. 8–9–60. Cl. 26.
Polo Wholesale Grocery Co., Hoboken, N.J. 702,668, pub. 5–24–60. Cl. 46.
Poly-Sil Inc., Pittsburgh, Pa. 702,448, pub. 5–24–60. Cl. 12.
Polytechnic Institute of Brooklyn, Brooklyn, N.Y. 702,599, pub. 5–24–60. Cl. 38.
Precision Attachments Co.: *See*—
George, Robert K.
Preston Shirt Co., Inc., New York, N.Y. 702,628–9, pub. 5–24–60. Cl. 39.
Price, Burton S., d.b.a. Enzrust Co., Newton, Mass. 702,460, pub. 5–24–60. Cl. 15.
Price, Burton S., d.b.a Enzrust Co., Newton, Mass. 702,462, pub. 5–24–60. Cl. 15.
Prima Footwear Co., Columbus, Ohio. 591,714, canc. Cl. 39.
Procter & Gamble Co., The: *See*—
Hoberg, John, Co., The.
Proportioneers, Inc. B-I-F Industries, Inc., Providence, R.I. 592,399. Am. 7(d). Cl. 23.
Pulmosan Safety Equipment Corp., Brooklyn, N.Y. 702,656, pub. 5–24–60. Cl. 44.
Purex Corp., Ltd., South Gate, Calif. 702,700, pub. 5–24–60. Cl. 52.
Pyle-National Co., The: *See*—
Steber Mfg. Co.
Queen Bee Food Products, Inc., from Specialty Bakers' Services, Inc., Detroit, Mich. 702,659, pub. 5–24–60. Cl. 46.
Rado Corp., The: *See*—
Rado-Matic Corp., The.
Rado-Matic Corp., The, by change of name from The Rado Corp., Chestertown, Md. 702,488, pub. 3–10–57. Cl. 21.
Ralph, Millard J., Chula Vista, Calif. 591,605, canc. Cl. 21.
Raphael, Jack H., New York, N.Y. 702,562, pub. 5–24–60. Cl. 29.
Rayclad Tubes, Inc., Redwood City, Calif. 702,493, pub. 5–24–60. Cl. 21.
Realistic Co., The, d.b.a. Beauty Specialties Co., Cincinnati, Ohio. 702,697, pub. 5–24–60. Cl. 51.
Recordings Inc., Baltimore, Md. 702,586, pub. 5–24–60. Cl. 36.
Regal Shoe Co., Whitman, Mass. 702,625, pub. 4–19–60. Cl. 39.
Rexall Drug Co.: *See*—
Aristocrat Leather Products, Inc.
Riegel Paper Corp., New York, N.Y. 702,588, pub. 5–24–60. Cl. 37.
Riley Stoker Corp.: *See*—
Edison, Thomas A., Inc.
Roberts, Dr. David, Veterinary Co., Inc., Waukesha, Wis. 702,429, pub. 5–24–60. Cl. 6.
Robinco New York, Inc., New York, N.Y. 702,533, pub. 5–24–60. Cl. 23.
Rockwell Line Co., Chicago, Ill. 702,445, pub. 5–24–60. Cl. 12.
Rodgers, D. F., Mfg. Co., Inc., New York, N.Y. 702,631, pub. 5–24–60. Cl. 39.
Roe, A. V., & Co. Ltd., Manchester, England. 133,178, ren. 8–9–60. Cl. 22.
Roe, A. V., & Co., Ltd., Manchester, England. 133,505, ren. 8–9–60. Cl. 22.
Root, L. S., Laboratories, Inc., Long Island City, N.Y. 591,527, canc. Cl. 6.

Rosen, Florence, d.b.a. American Grease Stick Co., Muskegon Heights, Mich. 366,882. Am. 7(d). Cl. 15.
Ross Food Co.: *See*—
Lewis Food Co.
Rotary International, Evanston, Ill. 702,706, pub. 5–24–60. Cl. 100.
Roth, H. E.: *See*—
Du Pre, Raymond.
Roxy Organ Corp., New York, N.Y. 702,585, pub. 5–24–60. Cl. 36.
Royal Home Products, Inc., Cincinnati, Ohio. 591,529, canc. Cl. 10.
Ru-Ell Novelties, Bronx, N.Y. 702,653, pub. 5–24–60. Cl. 44.
Rustic Craft Co. Inc., Englewood, N.J. 702,500, pub. 5–24–60. Cl. 21.
S.A. Champagne Mercier, Epernay, Marne, France. 702,681, pub. 5–24–60. Cl. 47.
"S. & M." Dye Works, Inc., Philadelphia, Pa. 591,782, canc. Cl. 106.
S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y. 702,534, pub. 5–24–60. Cl. 23.
Sabatini, Josephine A., New York, N.Y. 702,632, pub. 5–24–60. Cl. 39.
Samfred Drug Co.: *See*—
Silber, Samuel.
Sam's Inc., Detroit, Mich. 702,647, pub. 5–24–60. Cl. 42.
San Fernando Canning Co., San Fernando, Calif. 125,174, canc. Cl. 46.
Save A Line Sinker Co.: *See*—
Aliber, Marvin M.
Schering Corp.: *See*—
Parfums Chevalier Garde, Inc.
Schering Corp., Bloomfield, N.J. 380,489, ren. 8–9–60. Cl. 18.
Schering Corp., Bloomfield, N.J. 381,122, ren. 8–9–60. Cl. 18.
Schering Corp., Bloomfield, N.J. 382,099, ren. 8–9–60. Cl. 18.
Schneider, Charles, & Co., Inc., d.b.a. Future Foam & Co., Council Bluffs, Iowa. 702,571, pub. 5–24–60. Cl. 32.
Schobis Hats, Inc., Philadelphia, Pa., to Joseph Kanner Hat Co., Inc., South Norwalk, Conn. 382,957, ren. 8–9–60. Cl. 39.
Schreiber Milling & Grain Co., to Schreiber Mills, Inc., St. Joseph, Mo. 134,081, ren. 8–9–60. Cl. 46.
Schreiber Mills, Inc.: *See*—
Schreiber Milling & Grain Co.
Scott, Elmer P., Co. Inc., New York, N.Y. 591,718, canc. Cl. 42.
Scott, Gary, Commodities Corp., New York, N.Y. 591,651–3, canc. Cl. 27.
Scovill Mfg. Co., Waterbury, Conn. 379,520, ren. 8–9–60. Cl. 40.
Seaboard Chemical Corp., Livingston, N.J. 702,483, pub. 5–24–60. Cl. 6.
Sears, Roebuck and Co., Chicago, Ill. 702,565, pub. 5–24–60. Cl. 31.
Sears, Roebuck and Co., Chicago, Ill. 702,577, pub. 5–24–60. Cl. 34.
Seinsheimer, H. A., Co., The, Cincinnati, Ohio. 381,715, ren. 8–9–60. Cl. 39.
Selby Shoe Co., The, Portsmouth, Ohio. 591,709, canc. Cl. 39.
Selecta Glove Corp., New York, N.Y. 591,708, canc. Cl. 39.
Sennewald Drug Co., Inc., St. Louis, Mo. 381,915, ren. 8–9–60. Cl. 6.
Service Hard-Chromium Co.: *See*—
Hompesch, George.
Shelton Mfg. Co., Inc., Newark, N.J. 591,787, canc. Cl. 2.
Shirt Valet-The National Shirt Rental Plan, Inc., New York, N.Y. 702,701, pub. 5–24–60. Cl. 100.
Silber, Samuel, d.b.a. Samfred Drug Co., Newark, N.J. 591,738, canc. Cl. 44.
Silva Industries, Inc.: *See*—
A./B. Broderna Kjellstrom.
Simonis Co.: *See*—
Simons Mfg. Co.
Simons Mfg. Co., to Simonis Co., Chicago, Ill. 137,701, ren. 8–9–60. Cl. 4.
Skinner Chuck Co., The, New Britain, Conn. 137,458, ren. 8–9–60. Cl. 23.
Slane Hosiery Mills, Inc., High Point, N.C. 702,614, pub. 1–5–60. Cl. 39.
Smith, Kenneth, Kansas City, Mo. 380,121, ren. 8–9–60. Cl. 22.
Smucer, Roman, d.b.a. Roman Smucer Woolen Co., New York, N.Y. 702,617–18, pub. 5–24–60. Cl. 39.
Smucer, Roman, Woolen Co.: *See*—
Smucer, Roman.
Societe des Anciens Etablissements Chevallier Pere: *See*—
Etablissements Chevallier.
Societe d'Exploitation de Produits Industriels, Sept, Paris, France. 702,537, pub. 5–24–60. Cl. 26.
Sohmer & Co. Inc.: *See*—
Sohmer, Harry J.
Sohmer, Harry J., to Sohmer & Co. Inc., New York, N.Y. 137,484, ren. 8–9–60. Cl. 36.
Soil Conservation Society of America, Inc., Des Moines, Iowa. 702,704, pub. 5–24–60. Cl. 100.
Solidaire, Inc., Monrovia, Calif. 702,527, pub. 5–24–60. Cl. 23.
Soukup, Carl R., to Tub-Ette Co., Inc., Chicago, Ill. 591,541, canc. Cl. 13.
South Bend Tackle Co., Inc., South Bend, Ind. 702,507, pub. 5–24–60. Cl. 22.
Southern Furniture, Inc., High Point, N.C. 702,604, pub. 5–24–60. Cl. 38.
Spalding, A. G., & Bros., Inc.: *See*—
Toy Tinkers, The.
Specialty Bakers' Services, Inc.: *See*—
Queen Bee Food Products, Inc.
Speede Products: *See*—
Thompson, Ted.
Speidel Corp., Providence, R.I. 702,733. Cl. 28.
Spencer Chemical Co., Kansas City, Mo. 702,444, pub. 12–8–59. Cl. 10.
Sprague & Carleton, Inc., Keene, N.H. 702,569, pub. 5–24–60. Cl. 32.
Spray-O-Bond Co., Milwaukee, Wis. 702,465, pub. 5–24–60. Cl. 16.
Squibb, E. R., & Sons, to Olin Mathieson Chemical Corp., New York, N.Y. 378,660, ren. 8–9–60. Cl. 18.
Staedtler, J. S., Nurnberg, Germany. 702,589, pub. 5–24–60. Cl. 37.
Standard Candy Co.: *See*—
Huggins Candy Co.
Standard Milling Co., New York, N.Y., to Standard Milling Co., Kansas City, Mo. 382,942–3, ren. 8–9–60. Cl. 46.
Standard Oil Co. of California, San Francisco, Calif. 379,100, ren. 8–9–60. Cl. 15.
Stanley Home Products, Inc., Westfield, Mass. 591,773, canc. Cl. 52.
Sta-Whip, Inc., St. Louis, Mo. 591,813, canc. Cl. 46.
Steber Mfg. Co., to The Pyle-National Co., Chicago, Ill. 379,524, ren. 8–9–60. Cl. 21.
Steel Treating Equipment Co., The: *See*—
Nixon, George C.
Stefan, Edwin, d.b.a. Sure Fit Backsplash Co., Chicago, Ill. 591,794, canc. Cl. 12.
Streigler, Joseph W., Houston, Tex. 702,457, pub. 5–24–60. Cl. 13.
Studebaker-Packard Corp., South Bend, Ind., from C. T. L., Inc., Cincinnati, Ohio. 702,578, pub. 5–24–60. Cl. 34.
Sturgis-Grant Productions, Inc., New York N.Y. 702,600, pub. 5–24–60. Cl. 38.
Strutwear Knitting Co., Minneapolis, Minn., to Apparel Industries, Inc., New York, N.Y. 377,738, ren. 8–9–60. Cl. 39.
Summers Laboratories, Inc., Ambler, Pa. 702,470, pub. 5–24–60. Cl. 18.
Sun Chemical Corp.: *See*—
Eagle Printing Ink Co., The.
Warwick Chemical Co.
Sun Garden Packing Co., San Jose, Calif. 591,811, canc. Cl. 46.
Sun Mfg. Co., Yakima, Wash. 702,732. Cl. 19.
Super Sensitive Musical String Co.: *See*—
Allbaugh, Harold V.
Superba Cravats, Inc., Rochester, N.Y. 702,622, pub. 5–24–60. Cl. 39.
Sure Fit Backsplash Co.: *See*—
Stefan, Edwin.
Swank, Miss, Inc., New York, N.Y. 591,689, canc. Cl. 39.
Swedish Pharmaceuticals Ltd., New York, N.Y. 702,473, pub. 5–24–60. Cl. 18.
Swift & Co.: *See*—
Ashland Leather Co.
Swiss Fabric Group, Inc., New York, N.Y. 702,729, pub. 5–24–60. Cl. A.
Taeschner & Co.: *See*—
Matejka, Karl.
Tagliero, Alberto J., Buenos Aires, Argentina. 591,701, canc. Cl. 39.
Tarbox, Elmer L., Big Spring, Tex. 702,505, pub. 5–24–60. Cl. 22.
Tasco Motion Picture Productions, Inc., Atlanta, Ga. 591,644, canc. Cl. 26.
Taurus Corp., Lambertville, N.J. 702,543, pub. 5–24–60. Cl. 26.
Textron, Inc., Providence, R.I. 702,642, pub. 5–24–60. Cl. 42.
Th. Goldschmidt Corp., to Goldschmidt Chemical Corp., New York, N.Y. 381,998, ren. 8–9–60. Cl. 51.
Th. Goldschmidt Corp., to Goldschmidt Chemical Corp., New York, N.Y. 382,001–2, ren. 8–9–60. Cl. 51.
Thompson, Ted, d.b.a. Speede Products, Forth Worth, Tex. 591,815, canc. Cl. 52.
Thornhill-Craver Co., Inc., Houston, Tex. 702,453, pub. 5–24–60. Cl. 18.
Toy Tinkers, The, Evanston, Ill., to A. G. Spalding & Bros., Inc., Chicopee, Mass. 135,346, ren. 8–9–60. Cl. 22.
Trans World Airlines, Inc., Kansas City, Mo. 591,780, canc. Cl. 105.
Tryne Co., The, to Tryne Specialty, Inc., Sayville, N.Y. 591,617, canc. Cl. 22.
Tryne Specialty, Inc.: *See*—
Tryne Co., The.
Tucker, Jacob, Boca Raton, Fla. 702,671, pub. 5–24–60. Cl. 46.
Tuya Cuban Express Corp., Havana, Cuba. 591,816, canc. Cl. 105.
Udy Analyzer Co.: *See*—
Udy, Doyle C.
Udy, Doyle C., d.b.a. Udy Analyzer Co., Pullman, Wash. 702,552, pub. 5–24–60. Cl. 26.
Underwater Electronics Corp., West Hartford, Conn. 702,494, pub. 5–24–60. Cl. 21.
Underwater Electronics Corp., West Hartford, Conn. 702,501, pub. 5–24–60. Cl. 21.
Union Carbide Corp., New York, N.Y. 702,428, pub. 5–24–60. Cl. 5.
Union Carbide Corp., New York, N.Y. 702,449, pub. 5–24–60. Cl. 12.
Union Hardware Co.: *See*—
Wood, Joseph T., Co.
United Grocers, Ltd., San Francisco, Calif. 702,593, pub. 5–24–60. Cl. 38.
United Van Lines, Inc., St. Louis, Mo. 702,716, pub. 5–24–60. Cl. 105.
United Vintners, Inc.: *See*—
United Vintners, Inc.
United Vintners, Inc., by change of name from Allied Wine Co., from United Vintners, Inc., San Francisco, Calif. 696,175, cor. Cl. 47.

Universal Products Corp., Secaucus, N.J. 702,482, pub. 5–24–60. Cl. 19.
Upjohn Co., The, to The Upjohn Co., Kalamazoo, Mich. 378,562, ren. 8–9–60. Cl. 18.
Van Brode Milling Co., Inc., Clinton, Mass. 702,523, pub. 5–24–60. Cl. 23.
Van Houten, C. J., & Zoon N.V., Weesp, Netherlands. 702,676, pub. 5–24–60. Cl. 46.
Vanity Fair Mills, Inc., Reading, Pa. 702,634, pub. 5–10–60. Cl. 39.
Venango Refining Co. Inc., Franklin, Pa. 378,479, ren. 8–9–60. Cl. 15.
Victoreen Instrument Co., The, Cleveland, Ohio. 702,549, pub. 5–24–60. Cl. 26.
Vilter Mfg. Co., The, Milwaukee, Wis. 702,548, pub. 5–24–60. Cl. 26.
Vimco Macaroni Products Co., Carnegie, Pa. 591,749, canc. Cl. 46.
Visucolor Laboratories, Los Angeles, Calif. 702,542, pub. 5–24–60. Cl. 26.
Vogel, K. A., Sons, Inc., Chicago, Ill. 591,806, canc. Cl. 23.
Vonnegut Hardware Co., Indianapolis, Ind. 591,635, canc. Cl. 25.
Walterscheid, Jean, Bachstrasse Siegburg, Germany. 702,518, pub. 5–24–60. Cl. 23.
Wander, Dr. A., S.A., Berne, Switzerland. 591,576, canc. Cl. 18.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 702,602, pub. 5–24–60. Cl. 38.
Warner, R. F., to Frazar Trading Corp., New York, N.Y. 380,935, ren. 8–9–60. Cl. 46.
Warwick Chemical Co., West Warwick, R.I., to Sun Chemical Corp., New York, N.Y. 377,641, ren. 8–9–60. Cl. 6.
Warwick Chemical Co., West Warwick, R.I., to Sun Chemical Corp., New York, N.Y. 379,421–2, ren. 8–9–60. Cl. 6.
Watsonville Exchange, Inc., Watsonville, Calif. 702,665, pub. 2–2–60. Cl. 46.
Wells Specialty Co.: *See*—
Knickerbocker Rubber Co.
Wesson Oil & Snowdrift Co., Inc., New Orleans, La. 702,674, pub. 5–24–60. Cl. 46.
West Coast Lumbermen's Association, Portland, Oreg. 702,450, pub. 5–24–60. Cl. 12.
Western Shake & Cedar, Inc., Seattle, Wash. 591,531, canc. Cl. 12.
Western Shake & Cedar, Inc., Seattle, Wash. 591,793, canc. Cl. 12.
Westrex Corp.: *See*—
Electrical Research Products Inc.
Wheeldex Mfg. Co., Inc., Peekskill, N.Y. 702,570, pub. 5–24–60. Cl. 32.
White, J. J., Mfg. Co., Providence, R.I. 702,558, pub. 5–24–60. Cl. 28.
Wieland Furniture Co., Bay City, Mich. 702,573, pub. 5–24–60. Cl. 32.
Wilson & Co., Inc., Chicago, Ill. 702,669–70, pub. 5–24–60. Cl. 46.
Wink Soap Co., Inc., Racine, Wis. 697,577, cor. Cl. 52.
Winter & Co., Inc., New York, N.Y. 702,563, pub. 5–24–60. Cl. 28.
Witty Brothers, Inc., New York, N.Y. 702,620, pub. 5–24–60. Cl. 39.
Wolferman, Fred, Co., to Fred Wolferman, Inc., Kansas City, Mo. 135,562, ren. 8–9–60. Cl. 46.
Wolferman, Fred, Inc.: *See*—
Wolferman, Fred, Co.
Wonder-Nut Food Products Co., Jefferson, Wis., to The Glidden Co., Cleveland, Ohio. 134,465–6, ren. 8–9–60. Cl. 46.
Wood, D. E., Sales Co., Saginaw, Mich. 702,512, pub. 5–24–60. Cl. 22.
Wood, Joseph T., Co., Ware, Mass., to Union Hardware Co., Torrington, Conn. 377,031, ren. 8–9–60. Cl. 22.
Woodzan Industries, Inc., Lodi, N.J. 702,468–9, pub. 5–24–60. Cl. 16.
World-Wide Automobiles Corp., Long Island City, N.Y. 702,490, pub. 5–24–60. Cl. 21.
Wyeth Laboratories: *See*—
American Home Products Corp.
Yakima Bait Co., Granger, Wash. 702,511, pub. 5–24–60. Cl. 22.
Yawman and Erbe Mfg. Co., Inc., Rochester, N.Y. 670,922, canc. Cl. 32.
Yuba Consolidated Industries, Inc., Buffalo, N.Y. 702,454, pub. 5–24–60. Cl. 13.
Zeiss Ikon Aktiengesellschaft, Dresden, Germany. 296,291, canc. Cl. 26.
Zellerbach Paper Co., San Francisco, Calif. 132,868, ren. 8–9–60. Cl. 37.
Zephyr American Corp., New York, N.Y. 380,359, ren. 8–9–60. Cl. 37.
Zimmerman, Max, d.b.a. Zimmerman Products Co., Cincinnati, Ohio. 702,684, pub. 5–24–60. Cl. 50.
Zimmerman Products Co.: *See*—
Zimmerman, Max.
Zoes, C. A., Mfg. Co.: *See*—
Zoes, Christ A.
Zoes, Christ A., to C. A. Zoes Mfg. Co., Chicago, Ill. 132,074, ren. 8–9–60. Cl. 4.

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
August 16, 1960 Volume 757 Number 3

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of July 1960

Examiner affirmed	155
Examiner affirmed in part	28
Examiner reversed	56
Total	239

Erratum

In the OFFICIAL GAZETTE, issue of June 28, 1960, under the heading "Patent Suits," page 935, Patent No. 2,811,040, Blackman and Smith, line 4 thereof, for "(Columbus)" read —(Dayton)—.

Adjudicated Patents

(C.A.N.Y.) Clark Patent No. 2,263,204 (311—107), for furniture top construction, *Held* invalid. *Yawman & Erbe Mfg. Co. v. Cole Steel Equipment Company, Inc.*, 277 F.2d 876; 125 USPQ 320.

(C.A. Mo.) Brown Patent No. 2,673,005 (222—56), for fountain dispenser. Claim 10 *Held* invalid. *Selmix Dispensers, Inc. v. Multiplex Faucet Co.*, 277 F.2d 884; 125 USPQ 378.

(D.C. Fla.) Kistner Patent No. 2,318,382 (38—77), for steam hand iron. Claim 8 *Held* invalid but not infringed. *Kistner v. Burt*, 183 F. Supp. 179; 125 USPQ 96.

(D.C. Fla.) Kistner Patent No. 2,384,839 (38—77), for steam-electric pressing and ironing device. Claim 15 *Held* invalid. *Id.*

(C.A. Calif.) Reachi et al. Design Patent No. 174,398 (D45—16), for lamp, *Held* not infringed. *Reachi et al. v. Edmond*, 277 F.2d 850; 125 USPQ 265.

Disclaimers

2,834,309.—*Harvey W. Russell*, Nyack, and *Norman Wennacott*, Scarsdale, N. Y. OVEREDGE SEWING MACHINE FOR MAKING SAFETY SEAM. Patent dated May 13, 1958. Disclaimer filed July 13, 1960, by the assignee, *Willcox & Gibbs Sewing Machine Company*.

Hereby enters this disclaimer to claims 8 and 9 of said patent.

2,897,237.—*Marion B. Carpenter*, Nutley, *William M. Baxter, Jr.*, Hasbrouck Heights, and *Thomas F. Wood*, Little Falls, N.J. SUBSTITUTED TETRAHYDRONAPHTHALENES. Patent dated July 28, 1959. Disclaimer filed June 29, 1960, by the assignee, *The Givaudan Corporation*.

Hereby enters this disclaimer to claims 5 and 10 of said patent.

Classification Order No. 306

The following transfers are hereby ordered to take effect on Monday, July 25, 1960:

From Division 34 to Division 52
Class 209, CLASSIFYING, SEPARATING AND ASSORTING SOLIDS
Subclasses 71–126

From Division 50 to Division 31
Class 260, CHEMISTRY, CARBON COMPOUNDS
Subclasses 6–8, 17.5, 28, 28.5, 37–40

From Division 50 to Division 60
Class 260, CHEMISTRY, CARBON COMPOUNDS
Subclasses 85.5, 86.1, 86.3, 86.7, 88.7, 89.3, 89.5

M. C. ROSA,
Director, Patent Examining Operation.

New Applications Received During June 1960

Patents	7,040
Designs	370
Plant Patents	12
Reissues	12
Total	7,434

Issue

Patents	712—No. 2,948,897 to No. 2,949,608, incl.
Designs	61—No. 188,589 to No. 188,649, incl.
Plant Patents	1—No. 1,967
Total	774

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1960

Total number of pending applications (excluding Designs)	195, 885
Total number of pending Design applications	5, 037
Total number of applications awaiting action (excluding Designs)	57, 039
Total number of Design applications awaiting action	1, 511
Date of oldest new application	Feb. 24, 1959
Date of oldest amended application	Feb. 14, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. O., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 89, 58, 59, 60, 62, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 68.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 27, 28, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 52, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 9, 20, 29, 33, 36, 40, 53, 65.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 32, 33, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 31, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	1-6-60	1-6-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-14-60	1-14-60
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	12-10-59	12-8-60
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-8-59	11-3-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminuters; Fences; Gates; Music; Signals and Indicators; Acoustics	8-8-60	8-8-60
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	12-1-59	12-2-60
7. (IV) ANDERSON, E. G., Optics	10-6-59	10-6-59
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-4-60	1-4-60
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-16-59	10-14-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-31-59	12-16-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-24-59	11-9-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-28-59	1-5-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	11-9-59	11-6-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-30-59	9-27-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-13-60	1-6-60
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	8-3-59	7-6-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-11-60	11-12-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-4-60	1-4-60
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-28-60	12-15-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-4-60	1-4-60
21. (III) MADER, R. C., Textiles	1-10-60	11-30-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-30-59	10-15-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	2-24-59	2-14-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	10-1-59	10-1-59
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	10-1-59	9-29-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	10-1-58	9-1-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	9-1-59	9-1-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	1-4-60	1-4-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-24-59	11-24-59
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	1-5-60	1-4-60

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	1-11-60	1-11-60
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	12-9-59	12-8-59
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	10-15-59	10-1-59
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	4-20-59
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	12-9-59	12-9-59
36. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	10-19-59	10-19-59
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	10-1-59	10-5-59
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-31-59	8-24-59
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-3-59	12-1-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-4-60	1-4-60
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television; Telegraphy (part)	12-4-59	12-1-59
42. (II) REYNOLDS, E. B., Electric Signaling; Telegraphy (part)	10-26-59	10-26-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	10-8-59	10-12-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	7-9-59	7-3-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-29-59	12-14-59
46. (I) WILES, W. G., Actinide Series (e.g., Plutonium) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-7-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-9-59	12-14-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-2-59	11-5-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	9-4-59	9-4-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-59	9-15-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	11-3-59	11-2-59
52. (V) LE ROY, C. A., Supports and Racks	3-16-60	3-3-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	1-4-60	1-5-60
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-4-60	12-30-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-59	10-23-59
56. (I) SPECK, J. R., Abrading-Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-14-59	12-4-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	10-1-59	10-5-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	11-3-59	11-3-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-8-59	9-2-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-7-60	1-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-4-60	1-5-60
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-4-60	1-4-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	10-16-59	10-19-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-4-59	8-30-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-28-59	12-30-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	8-21-59	8-6-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	9-30-59	9-4-59
81. (III) MONCURE, J. A., Industrial Arts	4-4-60	4-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	4-13-60	4-20-60
91. BAILEY, J. S., Ornamentation	3-7-60	3-24-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	2-12-60	2-1-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	1-5-60	1-4-60
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	1-4-60	1-11-60
95. ANGEL, C. D., Metallic Building Structures; Packed Rod Joints; Joint Packings	11-3-59	10-16-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	1-4-60	12-4-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 56 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1959*.

Patents	Numbers 2,925,570 to 2,938,534, inclusive
Plant Patents	Numbers 897 to 899, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE TED R. TROUTMAN

No. 6567. Decided May 24, 1960

[47 CCPA —; — F.2d —; 126 USPQ 56]

1. PATENTABILITY — INVENTION — SEPARABLE OR INTEGRAL PARTS.

In connection with claims to a cutting torch, *Held* that "Whether the tip of the torch is an integral part of the stem or a separate nozzle member threaded onto the stem is nothing more than a matter of choice or design."

2. SAME—EVIDENCE—AFFIDAVIT—COMMERCIAL SUCCESS NOT SUFFICIENT TO JUSTIFY ALLOWANCE OF CLAIMS UNLESS PATENTABILITY OTHERWISE DOUBTFUL.

"Appellant has presented a number of affidavits allegedly showing extensive sales and substantial commercial success of his torch. The torch to which the affidavits relate is identified only as being 'described and claimed' in appellant's application and its actual structure is not explained. Aside from the fact that the quoted statement is merely a conclusion, the application discloses several modifications and contains claims of varying scope. Accordingly, we agree with the Board that the affidavits do not show that the alleged commercial success was due to any particular feature set forth in the appealed claims. Moreover, evidence of commercial success is not sufficient to justify the allowance of claims unless their patentability is otherwise doubtful."

3. SAME—PARTICULAR SUBJECT MATTER—CUTTING TORCH.

In an application for a patent on a cutting torch, certain claims *Held* unpatentable over the cited prior art, and certain other claims *Held* patentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 411,105.

MODIFIED.

James F. Weiler for Ted R. Troutman.

Clarence W. Moore, Joseph Schimmel (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL.

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the Primary Examiner's rejection of claims 1, 2, 4, 5, 6, 8, 13, and 14 of appellant's application for a patent on a cutting torch. Claims 1, 4, and 13 are typical of the appealed claims and read:

1. A cutting torch comprising a torch base, said base having conduits therein for conducting combustible gas, preheating oxygen, and cutting oxygen, a seat on the end of said base, said seat including an annular groove communicating with the conduits conducting said combustible gas and said preheating oxygen, a tip stem adapted to be mounted on said seat, the end of said tip stem cooperating with said groove to provide and [sic] annular primary mixing chamber, means operative to retain said tip stem on said seat, said stem having a longitudinal passage communicating with said conduit conducting cutting oxygen, a plurality of passages directly communicating with said primary mixing chamber, a tubular extension on said stem including said cutting oxygen passage, and a nozzle secured on said stem, said nozzle denning an annular orifice about said tubular extension, said nozzle cooperating with the end of said stem to define a secondary mixing chamber communicating with said annular orifice said nozzle terminating at the free extremity of said cutting oxygen passages, said plurality of passages communicating with said secondary mixing chamber.

4. A cutting torch comprising a base, a recessed seat in said base, a stem secured on said seat, said seat having an annular groove therein, said stem sealing the edges of said groove to define an annular chamber, said base having a fuel conduit and an oxygen conduit communicating with said chamber, said base having a wide-mouth cutting oxygen conduit, said stem having a cutting oxygen passage communicating with the wide-mouth of the cutting oxygen conduit, a tubular extension on said stem enclosing said cutting oxygen passage, a nozzle secured on said stem, said nozzle having a conical bore therein, said bore being closed by the end of said stem to define a second annular chamber, said stem having a passage directly communicating said annular chambers, said nozzle being spaced form [sic] said tubular extension to provide an annular orifice and terminating at the free extremity of the passage in said stem, the portion of the stem secured on said seat being substantially spherical to permit pivoting of the stem.

13. A cutting tip for use with a torch base having conduits therein for conducting combustible gas, preheating oxygen, and cutting oxygen, a seat on one end of said torch base, said seat including an annular groove communicating with the conduits containing said combustible gas and said preheating oxygen; said cutting tip comprising a tip stem adapted to be mounted on said seat, the end of said tip stem cooperating with said groove to provide an annular primary mixing chamber, means operative to retain said tip stem on the seat, said stem having a longitudinal passage communicating with said conduit conducting cutting oxygen and having a plurality of passages directly communicating with said primary mixing chamber, a tubular extension on said stem including said cutting oxygen passage, a nozzle secured on said stem, said nozzle defining an annular orifice about said tubular extension and cooperating with the end of said stem to define a secondary mixing chamber communicating with said annular orifice, said plurality of passages communicating with said secondary mixing chamber.

The references relied on are

Drager, 1,460,662, July 3, 1923.
Jones, 2,192,661, March 5, 1940.
Hill, 2,417,491, March 18, 1947.
Smith, 2,531,006, November 21, 1950.

Appellant's application relates to a cutting torch of the kind in which a stream of cutting oxygen is projected from a nozzle, surrounded by an annular stream of a mixture of oxygen and a gaseous fuel such as acetylene or hydrogen. The torch, as shown, comprises a cylindrical base having an axial oxygen passage and a passage on each side of the axis parallel thereto. The end of the base is hollowed out in the form of a cylindrical chamber in which the passages terminate, the mouth of the axial passage being flared toward the chamber. The tip stem of the torch is in the form of a cylindrical member having a spherical enlargement at one end which engages the flared mouth of the axial passage in the cylindrical chamber in the base, and also engage the outer edge of the wall of the chamber, thus forming an annular space with which the outer passages in the base communicate. Oxygen is supplied through one of those passages and fuel through the other, and the two receive a preliminary mixing in the annular space. An axial passage extends through the tip stem and communicates with the flared mouth of the axial oxygen passage in the base, while longitudinal passages in the stem parallel to its axis conduct the oxygen and fuel from the mixing space to the outer end of the stem.

The outer end of the stem is cut away to provide an axial extension of small diameter through which the oxygen passage extends, with an annular shoulder around the extension, in which the passages for the fuel and oxygen mixture terminate. The wall of the outer end of the stem is externally threaded to engage an internally threaded nozzle member having an axial opening which surrounds the extension on the stem to form a narrow annular passage through which the oxygen and fuel mixture passes out, the nozzle and extension terminating in the same plane. The inside of the nozzle tip is tapered and forms an annular space around the base of the extension, into which space the oxygen and fuel passages open, thus forming a further mixing chamber adjacent the nozzle outlet.

With this arrangement the cutting oxygen passes axially through the base and stem of the torch while the preheating oxygen and fuel are preliminarily mixed in the chamber in the base and, after passing through the stem, are further mixed adjacent the nozzle. The engagement of the spherical enlargement on the stem with the annular wall of the cylindrical chamber in the base permits a limited angular movement of the stem without interrupting the flow of oxygen or fuel to the nozzle.

The patent to Jones, the basic reference, shows a cutting torch having a stem portion formed of two coaxially arranged tubular members spaced to provide an annular passage between them. The inner member is restricted at the nozzle end to form an annular chamber having an opening which surrounds the outlet of the inner member, and the mouth of this opening and of the inner member terminate in the same plane. At the rear end of the stem the inner member projects beyond the outer and enters a cylindrical chamber in the base member of the torch where it communicates with an axial oxygen passage therein. The outer member of the stem adjoins the outer wall of the cylindrical chamber, and the interior of that chamber communicates through several openings with the space between the tubular members of the stem. A mixture of oxygen and fuel is supplied to this chamber through a passage in the base member, which mixture leaves the chamber through the last-mentioned openings, passes between the members of the stem, enters the annular chamber adjacent the nozzle and finally escapes through the annular passage surrounding the stream of cutting oxygen.

The principal differences between Jones and appellant are that Jones does not supply his oxygen and fuel separately to the chamber in the base as appellant does, but supplies a mixture thereto; that Jones does not have a separate nozzle member as appellant does; and that Jones does not provide appellant's spherical engaging member for permitting angular movement of the stem with respect to the base.

The Smith patent was cited to show it to be old to supply oxygen and fuel separately to a chamber in the torch base, where the initial mixing takes place, instead of supplying a mixture to such a chamber as is done by Jones.

Drager was cited to show the use of a separate nozzle member on a cutting torch of the general type involved here, while Hill was relied on to show use of a spherical fluid coupling to permit angular movement of the coupled parts without interrupting the flow of fluid.

Claims 1, 2, 5, 8, 13, and 14 were rejected on Jones in view of Smith and Drager, while claims 4 and 6 were rejected on the same references in combination with Hill. Claims 13 and 14 were further rejected as indefinite.

Appealed claims 1, 2, 5, 8, 13, and 14 distinguish from the Jones patent by reciting, in slightly different ways, that the preheating oxygen and fuel are supplied to the mixing chamber in the base by separate conduits, and that the tip of the torch is formed by a nozzle which is distinct from the stem.

While Jones unites his preheating oxygen and fuel before supplying them to the torch base, it is evident that they would be mixed in the annular chamber there in substantially the same manner as in appellant's device. We agree with the Board that it has not been shown to be material whether the mixing which takes place in the base is an initial mixing or a further mixing of gases which have already been brought together. Even in the absence of Smith which, as noted, shows it to be old to supply oxygen and fuel separately to a mixing chamber in the torch base, it would be obvious to supply them in that manner in the Jones torch. The fact that Jones does not expressly refer to the annular chamber in the base of his torch as a mixing chamber is immaterial, since mixing will obviously take place in it.

[1] Whether the tip of the torch is an integral part of the stem or a separate nozzle member threaded onto the stem is nothing more than a matter of choice or design. It is old, as shown by Drager, to employ a separate nozzle member and it would be obvious that such a member could be used in the Jones structure if desired.

[2] Appellant has presented a number of affidavits allegedly showing extensive sales and substantial commercial success of his torch. The torch to which the affidavits relate is identified only as being "described and claimed" in appellant's application and its actual structure is not explained. Aside from the fact that the quoted statement is merely a conclusion, the application discloses several modifications and contains claims of varying scope. Accordingly, we agree with the Board that the affidavits do not show that the alleged commercial success was due to any particular feature set forth in the appealed claims. Moreover, evidence of commercial success is not sufficient to justify the allowance of claims unless their patentability is otherwise doubtful. We find no such doubt in the case of claims 1, 2, 5, 8, 13, and 14.

We have carefully considered appellant's arguments but are of the opinion that the differences over the Jones device which are set forth in claims 1, 2, 5, 8, 13, and 14 involve nothing more than obvious variations in design, and that the rejection of those claims was therefore proper. It is accordingly unnecessary to consider the further rejection of claims 13 and 14 on the ground of indefiniteness.

Claims 4 and 6 add to the structure recited in the other rejected claims the limitations that the axial oxygen passage in the base has a wide mouth, and that the enlarged head on the stem is spherical to permit pivoting. The Hill patent, which was relied on as showing those features, does not relate to a torch but to a fluid joint of general application. Moreover, in Hill the spherical coupling member fits closely in a correspondingly shaped socket so that there is no annular chamber such as shown by appellant and recited in claims 4 and 6. The structure set forth in those claims provides a simple and compact arrangement of a mixing chamber and angularly adjustable torch stem which is not suggested by the references, singly or collectively and, in our opinion, involves more than an obvious combination of features shown by them.

It may be conceded that the broad idea of mount-

ing the Jones torch for universal movement would be obvious, but we very seriously doubt that appellant's specific mounting means would be so. It seems to us that the obvious way to apply Hill's joint to the Jones structure would be to insert it in the supply pipes at the base of the nozzle rather than to redesign the mixing chamber in such a way as to incorporate a universal joint as a part thereof. In our opinion, the latter arrangement would require the exercise of hindsight in light of appellant's disclosure. We think claims 4 and 6 should have been allowed.

[3] The decision of the Board of Appeals is modified, being affirmed as to claims 1, 2, 5, 8, 13, and 14, and reversed as to claims 4 and 6.

MODIFIED.

U.S. Court of Customs and Patent Appeals

IN RE KARL L. HERRMANN

No. 6576. Decided May 24, 1960

[47 CCPA —; — F.2d —; 126 USPQ 59]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—CLAIMS CONSIDERED AS IF AMENDED TO AVOID ERROR THEREIN.

"* * *, each of the appealed claims states that the cylinders are in alinement with the shaft, whereas actually they are parallel with it. The Board, however, did not reject on that ground, but stated that the error was obviously merely 'inadvertent or typographical' and that the claim would be considered as if amended to avoid it, which appellant proposed to do by changing each of the appealed claims to state that the cylinders are parallel with the shaft. We shall accordingly consider the claims as if they had been so amended."

2. PATENTABILITY—PARTICULAR SUBJECT MATTER—INTERNAL COMBUSTION ENGINE.

Claims to an internal combustion engine *Held* patentable over the cited prior art, with expression of the view: "While the change made by appellant seems, in retrospect, to have been comparatively simple, we do not feel that it can properly be said to have been obvious within the meaning of 35 U.S.C. 103."

APPEAL from the Patent Office. Serial No. 549,965.

REVERSED.

Joseph G. Denny III for Karl L. Herrmann.

Clarence W. Moore, Joseph Schimmel (*Jack E. Armore* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the rejection by the Primary Examiner of claims 12 and 13 of appellant's application for a patent on an internal combustion engine. Claim 12, which is representative, is as follows:

12. An internal combustion engine comprising, a housing, a shaft rotatable in the housing, the shaft having a cylindrical compression chamber therein and inlet and outlet ports at the ends of said compression chamber, a series of compression cylinders at one end of the housing, a series of combustion cylinders at the other end of the housing in axial alinement with the compression cylinders and the shaft, double headed pistons in the axially alined cylinders of the two series, a circular cam mounted on the shaft for rotation by the pistons, and a fuel flow control member on the shaft, said member having passages therein for fuel to the compression cylinders and passages for the fuel from the compression cylinders through the shaft compression chamber to the combustion cylinders.

The references relied on by the Board are:

Lind, 1,610,060, December 7, 1926.

Hall, 2,417,487, March 18, 1947.

Appellant's application discloses an internal combustion engine comprising two groups of cylinders uniformly spaced about a hollow shaft at its opposite ends, with their axes parallel to the shaft. One cylinder of each group is in axial alinement with the corresponding cylinder of the other group, and a double headed-piston is arranged in each pair of cylinders. A circular cam is mounted on the shaft between the groups of cylinders and is engaged by the pistons so that the shaft is rotated when the pistons are reciprocated.

The cylinders of one group are adapted to receive a combustible mixture, compress it and deliver it to the hollow portion of the shaft, while those of the other group receive the compressed mixture from the shaft. The mixture is burned in the conventional manner in the latter cylinders. Admission of the fuel to the shaft and its delivery therefrom are controlled by a suitable arrangement of rotating parts, the details of which are not involved here.

The Lind patent discloses an engine having the same general arrangement of groups of compression and combustion cylinders and pistons around opposite ends of a shaft as is shown in appellant's application. Line also shows a driving disk mounted on the shaft between the groups of cylinders and actuated by the pistons to rotate the shaft. The disk is mounted in a closed chamber and the compressed mixture from the compression cylinders passes through suitably controlled ports into the chamber and thence to the combustion cylinders.

The Hall patent also shows two groups of cylinders spaced about opposite ends of a shaft and containing pistons which drive the shaft by means of a cam spaced between the groups. In Hall's device, however, combustion takes place in all the cylinders and the fuel mixture is not supplied under compression but by suction, being drawn from a carburetor through the shaft, which is hollow, thence to the cylinders.

[1] As noted by the Board, each of the appealed claims states that the cylinders are in alinement with the shaft, whereas actually they are parallel with it. The Board, however, did not reject on that ground, but stated that the error was obviously merely "inadvertent or typographical" and that the claim would be considered as if amended to avoid it, which appellant proposed to do by changing each of the appealed claims to state that the cylinders are parallel with the shaft. We shall accordingly consider the claims as if they had been so amended.

The claims were rejected on Lind on the ground that it would be obvious in view of Hall to make Lind's shaft hollow and to use it for transmitting the combustible mixture from the compression cylinders to the combustion cylinders. The Board was of the opinion that the driving disk of Lind "appears to be accurately designated as a circular cam" within the meaning of the appealed claims. We agree with that position, and since appellant did not assign error with respect to it in his reasons of appeal and does not appear to controvert it here, it need not be further considered. The sole issue, therefore, is whether the Hall patent would suggest the use of a hollow shaft for transmitting the combustible mixture of the Lind patent from one group of cylinders to the other in the manner set forth in the appealed claims.

It seems to us that appellant's device presents a distinct advantage over that of Lind in that the fuel mixture in passing through appellant's hollow shaft does not lose velocity, as it does in entering Lind's relatively large cam chamber, nor does it come into contact with and dissolve the oil used to lubricate the cam mechanism, as the fuel mixture does in the Lind engine. The Patent Office does not appear to dispute that superiority.

While the Hall patent discloses the idea of passing a fuel mixture through a hollow shaft having two groups of cylinders mounted around it, the mixture is not under pressure and is not supplied from one group of cylinders to the other, as in appellant's device, but to the cylinders of each group. So far as pertinent to the instant claims, therefore, that patent merely shows that it is possible to feed a fuel mixture to an engine through a hollow shaft. Hall was not confronted with the problems which have been solved by appellant.

[2] While the change made by appellant seems, in retrospect, to have been comparatively simple, we do not feel that it can properly be said to have been obvious within the meaning of 35 U.S.C. 103. In view of the substantial differences between the construction and operation of the Lind and Hall engines, it is not likely that the latter would have been looked to for suggestions in solving problems arising in the former. Under such circumstances it becomes necessary to reverse the decision appealed from.

REVERSED.

U.S. Court of Customs and Patent Appeals

IN RE WILLIAM C. NILGES

No. 6622. Decided May 24, 1960

[47 CCPA —; — F.2d —; 126 USPQ 50]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE THE COURT—BOARD'S REASONS FOR REFUSING CLAIMS.—35 U.S.C. 112.

Where, to support its rejection of appellant's claims 3, 5, 12, 16, 17, 22, and 23 as not particularly pointing out and distinctly claiming appellant's invention in a spinning piston pump (35 U.S.C. 112), the Board of Appeals stated that the failure of those claims to recite the critical relationship between the multiple pistons and the cam shape of the piston actuating means meant that those claims included structures which offered no advantage over the cam design of a reference patent to one De Stoutz and consequently covered only an arbitrary difference in shape from De Stoutz; and where the Board did not extend that rationale to appellant's claims 24 and 25, but the Examiner had rejected all said claims for the same reasons in view of a patent to Hawley, and the only reason Hawley was not applied by the Board was that it was considered to be "cumulative" to De Stoutz, *Held* that "We shall consider the reasons for the section 112 rejection made by the Board as applicable to all of the claims before us."

2. PATENTABILITY—INVENTION—35 U.S.C. 112, PARAGRAPH 2.

Upon consideration, in connection with claims to a spinning piston pump reciting a sine squared velocity cam and pistons, of the issue of the scope of appellant's invention, that is, whether the invention lay in the admittedly novel combination of the sine squared velocity cam in a pump, or in a specific relationship of the parts whereby new and advantageous results were necessarily obtained, *Held* that "Claiming a cam which comprises a sine squared velocity curve without also reciting in the claims the spatial relationship of the pistons to that cam is not in and of itself sufficient to warrant their allowance because such claims do not comply with paragraph 2 of section 112," that "There is nothing of record which indicates that the alleged advantages can be achieved without having the specific cam-pistons relationship described by the Examiner," that "The mere recitation of a sine squared velocity cam does not patentably distinguish appellant's device from the prior art," and that "Therefore, without a recitation in the claims of the number of pistons and the relationship of those pistons to the cam we find appellant's device as claimed unpatentable over the De Stoutz patent."

3. SAME—PARTICULAR SUBJECT MATTER—"FLUID PUMPS, MOTORS AND METHODS THEREFOR."

Certain claims in an application entitled "Fluid Pumps, Motors and Methods Therefor" *Held* unpatentable over the cited prior art, as failing under 35 U.S.C. 112 to particularly point out and distinctly claim appellant's invention, with the comment that "Although the Board has affirmed the rejection of some of the appealed claims on specific word and antecedent deficiencies, we believe that a detailed analysis of each such claim is unnecessary since they are all subject to the overall criticism we have made."

APPEAL from the Patent Office. Serial No. 177,807.

AFFIRMED.

Slough & Slough (*J. Helen Slough* of counsel) for William C. Nilges.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL.

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals affirming the final rejection of claims 3, 5, 12, 16, 17, and 22–25 in application Serial No. 177,807 entitled "Fluid Pumps, Motors and Methods Therefor." Several claims have been allowed.

The Nilges specification discloses a spinning piston pump having a stationary cylindrical housing adapted to receive and rotatably support a cylinder block. The block is rigidly associated with an axial shaft extending exteriorly of the housing. Four reciprocating hollow cylindrical pistons closed at one end are disposed parallel to the shaft in individual bores in the block and are equi-distantly spaced from and around the shaft at 90° intervals. The closed ends of the cylindrical pistons are resiliently urged against a fixedly mounted barrel cam at one end of the cylindrical housing. The open ends of the pistons are disposed adjacent inlet and outlet ports in the other end of the housing and cooperate with valve means attached to the cylinder block. Those valve means comprise a plate having four kidney-shaped apertures therein, each aperture communicating with a piston bore on one side thereof at all times and with the inlet and outlet means on the other side alternately during operation. The inlet and outlet ports are also kidney-shaped. However, they have a greater peripheral or angular extent than the valve apertures with which they are in sliding contact, each of them extending peripherally less than 180°. The angular extent of each is identical. Also identical are the peripheral extents of the dead center areas which provide sealed cross-over points for the pistons as they pass from communication with the inlet to the outlet and from the outlet to the inlet.

In operation the cylinder block rotates, and during each revolution thereof each piston moves sequentially from communication with the inlet port, to a first dead center area, where it communicates with neither inlet nor outlet, to the outlet port, and to a second dead center area, whereupon the cycle is repeated. At all times each piston is spring biased against the barrel cam. The cam has a shape which is the development of a sine squared velocity curve from the first dead center point through the inlet stroke to the second dead center point, and an inverse sine squared velocity curve therefrom through the outlet stroke back to the first dead center point.

The advantage of using such a cam when the four pistons are equi-distantly spaced around the shaft is that the pump yields a constant output with a minimum of chatter. The constant output is directly attributable to the fact that the scalar sum of the velocities of the pistons on the output or discharge side is always the same resulting in a constant total displacement. The minimum of chatter is due to the relatively gradual acceleration changes in the dead center regions. Also the result of the Nilges construction is greater sealing (less leakage) at the cross-over areas between the inlet and outlet sides of the pump.

Claim 3 is representative:

> Piston actuating means for a fluid device of the type having a housing therefor, a drive shaft, a plurality of pistons, cylinders therefor, said shaft, pistons, cylinders, and piston actuating means being disposed within said housing, fluid inlet and outlet ports for said housing, passages disposed within said housing communicating with said cylinders for said pistons to provide ingress and egress of fluid, the said piston actuating means being so formed and the pistons so positioned with respect to the said piston actuating means that relative rotation between the piston and piston actuating means effects a piston velocity which varies directly as the sine squared of a constant times the angle of relative rotation between the said piston actuating means and the cylinder housing.

The only reference relied on by the Board of Appeals is De Stoutz, United States Patent No. 2,061,144 issued November 17, 1936. With respect to De Stoutz, it is sufficient to say that the sole difference between the *claimed* subject matter and the structure of the reference is in the respective cam shapes. The De Stoutz cam is based upon the development of a parabolic curve; that of the application upon the development of a sine squared curve.

It has been conceded by the Patent Office that the combination of the pump, pistons and sine squared cam shape defined by the claims is novel and useful, and that when properly defined such a combination would be patentable. The basis for the rejection of the claims here on appeal, apart from the formal rejection of several claims, is that they fail to particularly point out and distinctly claim the invention. (35 U.S.C. 112)

The Board quoted approvingly the following statement by the Examiner:

> There is none of the critical correlation among the four pistons, the spacings therebetween, the sine squared *cam*, the outlet port, etc.

The Board itself stated:

> It is clear to us that claims 3, 5, 12, 16, 17, and 22 to 25 do not set forth the critical relationship between the multiple pistons and the cam shape of the piston actuating means, *particularly with respect to their correlative dead center positions*, whereby the smooth and quiet pump operation appellant desires may be obtained. [Emphasis added.]

Its conclusion was that the failure to recite those relationships meant that claim 3 includes "structures which offer no advantage over the cam design of the patent to De Stoutz and consequently covers only an arbitrary difference in shape from De Stoutz." Claims 5, 12, 16, 17, 22 and 23 were also rejected by the Board for the same reason.

[1] The Board did not extend that rationale to claims 24 and 25. However, the Examiner in his final action rejected all of the claims before us for the same reasons in view of Hawley.[1] The only reason that Hawley was not applied by the Board of Appeals was that it was considered to be "cumulative" to De Stoutz. We shall consider the reasons for the section 112 rejection made by the Board as applicable to all of the claims before us.

Appellant does not contend that he is the first to have designed a sine squared velocity cam, but rather that he is the first to have suggested and claimed the use of such a cam in a pump combination. For that reason appellant asserts that he is entitled to broad patent protection and "should not be required to narrow his inventive concept" to specifics such as the relationship of the cam and pistons to the inlet and outlet ports, etc.

The issue thus presented for our determination is the scope of the invention, that is, whether it lies in the admittedly novel combination of the sine squared velocity cam in a pump, or in a specific relationship of the parts whereby the new and advantageous results are necessarily obtained.

The practicability and the attainment of the alleged advantages of appellant's device reside in the sine squared cam and the number and spacing of the pistons and these factors are determined by a mathematical calculation. Appellant's specification discloses the exact location of the pistons with respect to the cam and the resulting function in these words:

> The cam imparts to the pistons a piston velocity which varies directly as the sine squared of a constant times the drive shaft angle, which is determined as theta (θ).
>
> In a four cylinder pump or motor of the type described, $K_2=1$ and since the pistons are separated by 90° the reference piston will be driven at a velocity proportional to the sine squared of theta and a piston spaced 90° therefrom, as indicated by ordinary trigonometric considerations, will be driven at a velocity proportional to the co-sine squared of theta; the net sum of the velocity of said pistons being a constant and the fluid flow thus being uniform.

We believe the Examiner accurately analyzed appellant's disclosure. He stated:

> In applicant's pump, the *four* pistons 15 are reciprocated by rotating with cylinder barrel 19 and being pushed to the right in Fig. 1 by contact with stationary cam 50, and being returned by springs 38. Cam 50 has a *sine squared* rate of rise. Thus, with four pistons and cylinders and a sine squared cam shape, applicant apparently achieves constant pump output since the combined rate of pumping of the two cylinders on their pumping strokes at any given time is constant. If one piston, two pistons, three pistons, five pistons, etc. were used, the sine squared cam obviously would not achieve constant pump delivery. Further, if the *four* pistons were not equi-angularly spaced about the rotational axis, constant delivery would not be obtained. For example, piston spacings of 85°, 90°, 95° and 90° (360° total) would not cooperate with a *sine squared* cam to produce the alleged unexpected result. Further, the discharge port must be located opposite the "rising" portion with respect to the cam and long enough that the two pistons pumping at any given time are discharging into this common outlet port so that the maximum rate of discharge for the one, plus the minimum for the other, or intermediate rates of both combined, always equals a *constant* to give constant discharge flow.

None of the appealed claims recite these critical relationships referred to by the Examiner.

[2] Claiming a cam which comprises a sine squared velocity curve without also reciting in the claims the spatial relationship of the pistons to that cam is not in

[1] U.S. Patent No. 1,922,951 issued August 15, 1933.

and of itself sufficient to warrant their allowance because such claims do not comply with paragraph 2 of section 112. There is nothing of record which indicates that the alleged advantages can be achieved without having the specific cam-pistons relationship described by the Examiner. The mere recitation of a sine squared velocity cam does not patentably distinguish appellant's device from the prior art. Therefore, without a recitation in the claims of the number of pistons and the relationship of those pistons to the cam we find appellant's device as claimed unpatentable over the De Stoutz patent.

[3] Although the Board has affirmed the rejection of some of the appealed claims on specific word and antecedent deficiencies, we believe that a detailed analysis of each such claim is unnecessary since they are all subject to the overall criticism we have made. We, therefore, affirm the rejection of claims 3, 5, 12, 16, 17, 22 to 25.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,255,813, C. Ellis, Ethylenic-alpha-beta synthetic resins, **filed June 24, 1960, D.C., S.D.N.Y., Doc. 60/2526, *Ellis-Foster Company* v. *Atlas Powder Company.***

2,416,596, S. Rosenthal, Fountain pen, **filed Feb. 10, 1960, D.C., S.D.N.Y., Doc. 60/555, *Speedry Chemical Products, Inc.* v. *Nissho California Corporation.*** Consent judgment; defendant enjoined June 22, 1960.

2,621,211, W. A. Lutz, Spreading attachments, **filed Sept. 18, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c1717, *Seaman-Andwall Corporation* v. *Flint Company.*** Complaint and counterclaim dismissed May 21, 1960.

2,621,757, E. Anderson, Extendable and collapsible filter bag; **2,787,368**, same, Vacuum cleaner filter bag, **filed June 24, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–608, *Electrolux Corporation* v. *Dust Pack Limited, Inc. et al.***

2,668,102, K. B. Olander, Ironing table, **filed Nov. 3, 1958, D.C., S.D. Ind. (Indianapolis), Doc. 58–C–288, *The J. R. Clark Company et al.* v. *Jones & Laughlin Steel Corporation.*** Order overruling defendant's motion for summary judgment and counterclaim for Declaratory Judgment; plaintiff's motion to amend the complaint and for summary judgment sustained; claim 1 of patent held valid and infringed; injunction granted May 9, 1960. Appeal filed June 3, 1960, C.C.A., 7th Circuit.

2,708,889, Petzal and Wohlfarth, Pleating operations, **filed Feb. 11, 1957, D.C., S.D.N.Y., Doc. 117/194, *Mayflower Electronic Devices, Inc. et al.* v. *Frank Friedman and Sons.*** Order of dismissal for lack of prosecution June 14, 1960.

2,717,015, M. J. Berry, Bag, **filed Feb. 20, 1957, D.C., S.D.N.Y., Doc. 117/305, *Fashioncraft Products* v. *Gimbel Brothers, Inc.*** Order of dismissal for lack of prosecution June 14, 1960.

2,721,955, Sin-Pih Fan et al., Multi-position beam tube; **2,764,711**, S. Kuchinsky, same; **2,794,147**, J. R. Bethke, Beam tube switching circuits; **2,804,568**, S. Kuchinsky, Protective device for vacuum tubes; **2,874,320**, H. J. Hampel, Indicating device; **2,878,407**, J. H. Engleman et al., Ion control means, **filed June 16, 1960, D.C. Mass. (Boston), Doc. 60/411–S, *Burroughs Corporation* v. *Baird-Atomic, Inc.***

2,737,283. (See 2,621,757.)

2,746,581, J. P. Ritter, Jr., Soft-sided luggage cases, **filed June 21, 1960, D.C., E.D. Wis. (Milwaukee), Doc. 60–C–103, *Hartmann Luggage Company* v. *Garb's.***

2,764,711. (See 2,721,955.)

2,794,147. (See 2,721,955.)

2,804,568. (See 2,721,955.)

2,855,735, F. A. Groth, Packaging process, **filed June 22, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c996, *Paper Converting and Finishing Company* v. *Union Carbide Corporation.***

2,874,320. (See 2,721,955.)

2,878,407. (See 2,721,955.)

2,927,320, H. C. Pierce, Street sweeper brush winding machine, **filed June 20, 1960, D.C. Oreg. (Portland), Doc. 60/237, *Harold C. Pierce* v. *Ben-Ko-Matic, Inc. et al.***

Des. 182,708, Billig and Ziskin, **filed June 20, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 699/60–WM, *Kromex Corporation* v. *United Silver & Cutlery Company et al.***

PLANT PATENTS

GRANTED AUGUST 16, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,967
AVOCADO
James S. Reed, 3767 Valley St., Carlsbad, Calif.
Filed Apr. 7, 1959, Ser. No. 804,855
1 Claim. (Cl. 47—62)

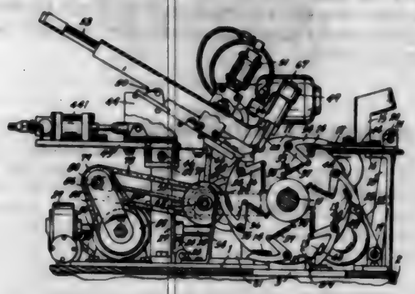
The variety of avocado tree described herein and particularly characterized by: April maturity, small size of fruit, slender shape of tree, high oil content of fruit, nutty flavor, smooth and creamy consistency of meat, consistently heavy bearing, good keeping quality of fruit, and resistance to frost, salt burn, and avocado sun blotch disease.

PATENTS

GRANTED AUGUST 16, 1960

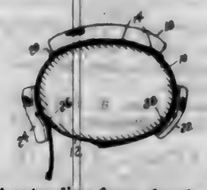
GENERAL AND MECHANICAL

2,948,897
MACHINE FOR USE IN MANUFACTURING BLIND SLATS AND THE LIKE
Glenn L. Sherwood, Benton Harbor, Mich., assignor to Kaywood Corporation, Benton Harbor, Mich., a corporation of Michigan
Filed Apr. 19, 1957, Ser. No. 653,992
20 Claims. (Cl. 1—125)



1. A machine of the class described comprising a base, complementary units disposed in side by side relation on said base, a work holder shaft common to both units, one unit being mounted for lateral adjustment relative to the other, a work holder comprising a work holder member on each unit having driving engagement with said shaft, one work holder being splined to said shaft for adjustment axially thereof, said work holder members having aligned angularly spaced tangentially disposed work holder recesses opening to the peripheries thereof and facing rearwardly relative to the direction of rotation of the work holder, inwardly facing spring biased work clamps mounted on the inner sides of said work holder members to engage work seated in said recesses, means for driving said work holder step by step, a pivot cutter comprising saw and shaper elements, a rotatable friction driven cutter support on which said cutter is mounted in radially spaced relation to its axis, said support being provided with a counterbalance for said cutter and with a stop member provided with a keeper, a stop dog operatively associated with said cutter support keeper and coacting therewith to stop said cutter support on each revolution thereof, and driving means for said cutter.

2,948,898
SHOOTING GARMENT
Robert E. Allen, 211 Court, Des Moines, Iowa
Filed July 18, 1957, Ser. No. 672,733
1 Claim. (Cl. 2—94)



A hunting coat extending from the shoulders to below the hips of the wearer and having vertically disposed fastening means at the front for securing the coat together about the wearer, a belt disposed entirely within said coat, means on said belt at the front for securing said belt about the waist of the wearer, spaced fastening means extending through said belt and coat and projecting outwardly of the rear outer surface of said coat, said last named fastening means being disposed only across the rear portion of said coat to fix the rear portion only of said belt against movement relative to said coat, a game bag detachably secured along the upper edge to the projecting portions of said last named fastening means and extending downwardly therefrom on the rear portion of said coat, means for detachably securing the lower edge of said game bag to said coat, pockets on opposite sides of said coat disposed below said belt and a belt loop secured to the inner surface of said coat intermediate the width of each pocket with said belt threaded through said loops, whereby the weight of said pockets and said game bag is supported substantially entirely from said belt with said coat in either open or closed condition.

2,948,899
WRINKLE FREE GUN BUTT PAD FOR SHOOTING GARMENT
Robert E. Allen, 211 Court, Des Moines, Iowa
Filed July 18, 1957, Ser. No. 672,734
2 Claims. (Cl. 2—94)

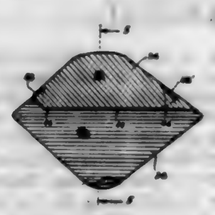


1. A garment having an anti-wrinkle set gun butt pad comprising; a back panel; a pair of front panels jointed to said back panel at the shoulders and lower sides; a pliable, rough surfaced gun butt bearing element secured to the front surface of one of said front panels and extending from the shoulder to approximately the armpit line thereof; said pliable, rough surfaced gun butt bearing element being quilted to said one front panel; a pocket secured to the rear surface of said one panel behind and generally coextensive with said pliable, rough surfaced gun butt bearing element; and a resilient, moisture proof, pad, thin in relation to its length and width, filling said pocket to exert an anti-wrinkle set, straightening force on said pocket and said pliable, rough surfaced gun butt bearing element.

2,948,900
MULTIPLE PURPOSE HAT BODY
Ruth B. Ebenstein, 120 Fitz Randolph Road, Princeton, N.J.
Filed Dec. 14, 1956, Ser. No. 628,444
7 Claims. (Cl. 2—209.1)

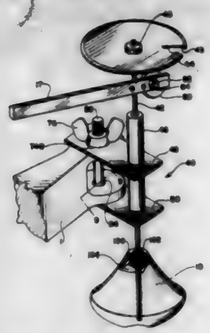
6. A play hat body comprising a main part made up of two equal substantially square pieces having two

connected edges of one piece joined to the corresponding connected edges of the other piece, and having the remaining two edges of one piece free of the remaining two edges of the other piece, the said main part forming a hat crown with two substantially right isosceles triangular sides and two substantially right isosceles triangular flaps, each side and flap being connected hypot-



enuse to hypotenuse, said main part being made of material of a first color, two substantially right isosceles triangular pieces of a different color and having an area and shape corresponding to the flaps, said pieces being laminated to the flaps in symmetrical relation relative to the hat crown, all of said pieces being made of material suitable to be worn on the outside.

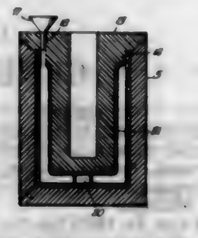
2,948,901
FLUSH TANK GUIDE
Robert V. Bernier, Dayton, Ohio, assignor to Globe Industries, Inc., Dayton, Ohio, a corporation of Ohio
Filed Mar. 25, 1958, Ser. No. 723,733
7 Claims. (Cl. 4—57)



1. A flush valve guide assembly for use with a flush tank including a valve seat, and an overflow pipe extending upwardly from and laterally offset relatively to the valve seat, comprising in combination: a guide yoke having a guide opening therein and adapted to be secured to and supported by the overflow pipe, a valve stem guide tube, a mounting means including an upper and a lower clamping plate for enclasping said guide yoke therebetween, said tube being affixed to one of said plates and being held by the other said plate, and means for drawing said plates together and retaining them in fixed position with respect to the yoke to form a fixed parallelogram linkage.

2,948,902
METHOD OF MAKING HOLLOW-WALLED FLUSH TANKS
John S. Clifford, Woodstock, Ill., assignor to Chicago Pottery Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 8, 1954, Ser. No. 408,696
5 Claims. (Cl. 4—68)

1. The method of producing a hollow-walled vessel which comprises, casting the outer shell by introducing slip into the mold cavity formed between an outer mold and a core, removing said core so as to leave in the outer mold the green casting of said outer shell, inserting a second core into said mold so as to form a mold cavity



defining the inner wall of said vessel, filling this latter mold cavity with slip, and draining off the liquid slip from the interior of the completed casting after the inner wall thereof has formed.

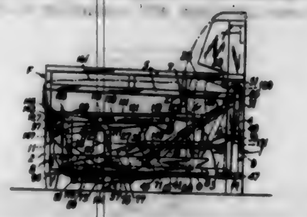
2,948,903
NECK REST FOR HAIR SHAMPOO BOWLS
Mary Katherine Gilmer, 2734 Gentry Drive, Wichita, Kans.
Filed Dec. 1, 1958, Ser. No. 777,355
1 Claim. (Cl. 4—159)



A neck rest adapted for attachment to hair shampoo bowls comprising a U-shaped body of resilient sheet material having a long flat leg provided with a relatively wide portion at the free end thereof, a relatively short, downturned leg having an inwardly curled portion at its free end whereby to engage the bowl and a bight portion interconnecting said legs and normally overlying the edge of the bowl; a pad of flexible substance mounted on the outer face of the body, said pad overlying the bight, the downturned portion of the short leg and that portion of the long leg immediately adjacent the bight; and a sheet of water repellent material covering the pad, extending beyond its edges and bonded to the sheet material of the U-shaped body.

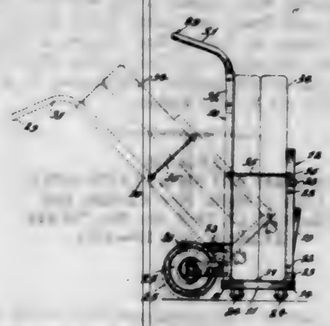
2,948,904
FOLDING SOFA BED STRUCTURE
William J. Helton, Affton, Mo., assignor to Foster Brothers Manufacturing Company, St. Louis, Mo., a corporation of Delaware
Original application Mar. 6, 1957, Ser. No. 644,291. Divided and this application Oct. 28, 1957, Ser. No. 692,870
4 Claims. (Cl. 5—13)

1. A sofa bed structure comprising successive pivotally interconnected frame sections movable to a coplanar bed-forming relation and to a folded sofa-forming relation in which two sections are substantially parallel and spaced one above the other and an intermediate upright frame section extends between their forward edges, a fabric extending substantially throughout the intermediate frame section and one of the adjacent frame sections, another fabric extending substantially throughout the other adjacent frame section, the fabrics being secured to the sides of the corresponding frame sections, there being an angle iron cross brace between the side bars of the intermediate frame section with the legs of the angle iron cross brace disposed diagonally of the



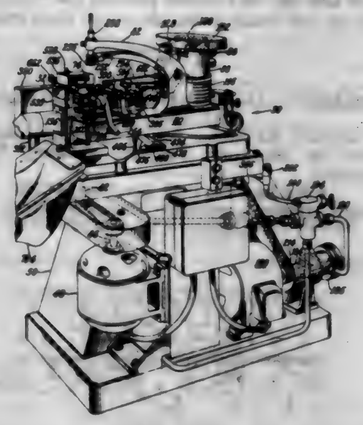
general plane of the intermediate frame section and the edges of the angle legs substantially in the plane of the fabric when the frames are in coplanar relation, each of said fabrics having an end margin independently secured to a respective leg of the angle iron cross brace and the corner of the angle iron cross brace being below the level of the fabric when the frame sections are in co-planar bed-forming relation and being at the level of and beyond the end of the fabric in the upper frame section when the frame sections are in folded sofa-forming relation.

2,948,905
ROLL-AWAY BEDS
John G. Sevcik, Berwyn, Ill., assignor to Burton-Dixie Corporation, Chicago, Ill., a corporation of Delaware
Filed Nov. 5, 1957, Ser. No. 694,628
3 Claims. (Cl. 5—111)



1. In a roll-away bed, a bed frame therefor comprising articulated end sections and an intermediate horizontal section with the end sections folded inwardly and upwardly to upright position when the bed is not in use and to support a mattress folded between the end sections and resting on the intermediate section, means for pivotally connecting the adjoining ends of said end sections to the ends of said intermediate section, floor-engaging casters on said intermediate section for supporting the folded bed frame in upright position when not in use, a pair of rearwardly projecting spaced brackets each mounted at one end on a side of one of said end sections adjacent to but above its pivotal connecting means, a shaft journalled at its ends in the rearwardly projecting end of said brackets and relatively large wheels carried by said shaft within the confines of said brackets and the sides of said bed frame, said wheels being supported above the floor and rearwardly of said bed when the bed is folded and supported in upright position upon said casters, and an upwardly and rearwardly projecting handle connected to the outer end of said last mentioned end section of said bed frame and above said wheels for transporting said folded bed when the latter is tilted from its upright folded position to wholly support the folded bed upon said large wheels with the casters elevated above the floor and when the bed is opened said wheels providing an intermediate support for the bed, said wheels being mounted within the sides of said bed frame to facilitate moving the folded bed through relatively narrow doorways or access openings when in tilted position.

2,948,906
MACHINES FOR TRIMMING SHOE-ATTACHED HEELS
Frank Pulaffer, Hamilton, Mass., assignor to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Filed July 2, 1958, Ser. No. 746,252
14 Claims. (Cl. 12—87)

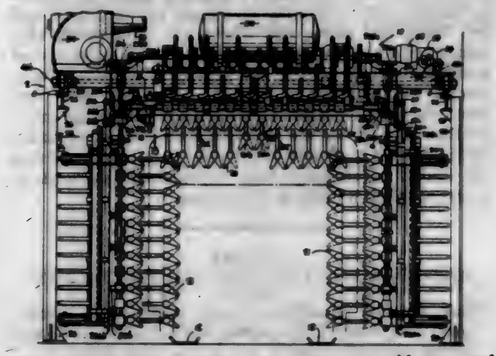


1. A machine for shaping the ends of shoes having, in combination, a power driven tool for operating on the periphery of an end of a shoe, a support for the shoe, said support being movably suspended from a universal joint, means acting through the joint for rotating the shoe about an axis heightwise thereof to present the shoe end periphery progressively to the tool, means acting on said joint for swinging the support to move the shoe bodily relatively to the tool, and means thereupon acting on the support at points nearer the tool than said joint to modify the position of the shoe relatively to the tool during operation of the tool thereon.

2,948,907
APPARATUS FOR WASHING AND CLEANING AUTOMOBILES AND OTHER SURFACES AND THE LIKE
Edward Schmidt, 14301 Bidwell Ave., Cleveland, Ohio
Filed Mar. 31, 1958, Ser. No. 725,260
36 Claims. (Cl. 15—97)

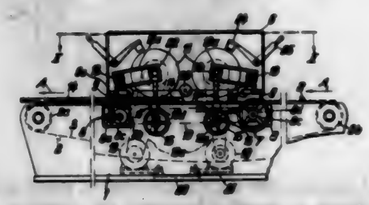
20. Apparatus for cleaning a surface comprising a cleaning head, means to move said surface and cleaning head in a predetermined lineal direction relative to each other, shaft means supported on said head and having a longitudinal axis extending transversely of said predetermined lineal direction, a brush supported on said shaft means for pivotal motion about said longitudinal axis, means resiliently biasing said brush in a predetermined

position at a predetermined angle with said surface and predetermined lineal direction, said brush comprising a housing, an arm mounted on said housing for movement relative thereto and adapted to extend and retract rela-



tive thereto, and cleaning pad means on said arm and adapted to engage said surface to clean same, means urging said arm into an extended position and retracting said arm when said brush pivots about said shaft means.

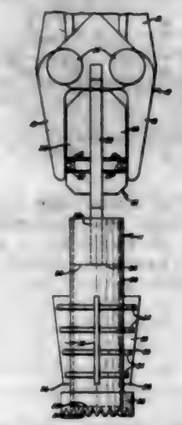
2,948,908
POLISHING MACHINES FOR WOOD PLATES AND THE LIKE
Max Schmidt, Karlsruhe, Baden, Germany, assignor to Firma B. Raimann G.m.b.H., Freiburg, Breisgau, Germany
Filed June 24, 1958, Ser. No. 744,091
Claims priority, application Germany July 1, 1957
7 Claims. (Cl. 15—102)



1. A machine for polishing surfaces of wood plates and like products comprising, in combination, a base; conveyor means supported by said base for advancing the plates in a plane; a housing supported by said base and having an open side adjacent to and facing the plane in which said plates are advanced; a pair of buff roller means in said housing and being each turnable about an axis substantially parallel to said plane and extending in a direction transverse to the direction in which the plates are advanced; adjustable connecting means operatively connected to said housing and said base for moving said housing toward and away from said plane; and means operatively connected to said base and each of said buff roller means for independently adjusting the distance of each buff roller means axis from said plane.

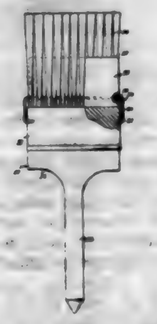
2,948,909
APPARATUS FOR CLEANING SOAKING PIT BURNER PORTS
Edward W. Haeckler, McKeesport, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed May 7, 1957, Ser. No. 657,575
2 Claims. (Cl. 15—104.1)

1. A tool for operation by the tongs of a conventional ingot crane in the removal of cinder and slag accumulations from the annular space about a burner pipe in the burner port of a bottom center-fired soaking pit comprising, a supporting frame, means at the upper end of said frame for suspending it from said ingot tongs for rotational and vertical movement thereby, a hollow cylinder secured to and depending from said frame with its axis extending vertically and adapted for arrangement in an operating position with such axis aligned with the axis of said port, a trepan secured to the lower end of said cylinder in a concentric position with respect thereto for cutting movement downwardly through said annular space in response to rotary and vertical movement thereof by said frame and tongs, and a plurality of circumferen-



tially spaced and axially extending cutting blades secured to and projecting radially outwardly from said cylinder in positions above said trepan, said blades respectively having axially tapered cutting edges along their radially outer surfaces that converge in an axially downward direction from points at their upper ends which are located radially outwardly with respect to the outer edge of said trepan, to points at their lower ends which are located radially inwardly with respect to the said outer edge of said trepan, said lower end points being spaced axially above said trepan so that vertical downward movement of said frame will cause said blade cutting edges to enter and impart an axially tapered enlargement to a cylindrical opening cut by said trepan.

2,948,910
NO DRIP BRUSH ATTACHMENT
Louis J. Halla, New Carlisle, Ind.
Filed Oct. 27, 1958, Ser. No. 769,823
2 Claims. (Cl. 15—159)



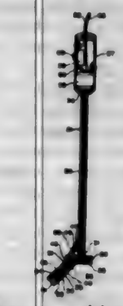
1. In a paint brush, a handle, a plurality of bristles extending from said handle, and a body member positioned within said bristles and arranged contiguous to said handle, said body member including a rounded end portion which is arranged contiguous to the handle, the other end portion of the body member being tapered to a substantially sharp outer edge and a clamp for maintaining the body member pivotally connected to the handle.

2,948,911
SCOURING PAD
Max S. Steiner, 200 E. Chestnut St., Chicago, Ill.
Filed June 5, 1956, Ser. No. 589,538
8 Claims. (Cl. 15—209)



1. A composite cleaning and polishing device comprising in combination, an external envelope formed of open mesh plastic fabric, and an internal pad formed of metallic fibres, said external envelope having at least one extensible restrictive opening through which said internal pad may be inserted and removed, and which opening serves to expose a portion of the surface of the metallic pad unobstructed by the strands of the plastic fabric, the exposed surface of said metallic pad being disposed in a plane which is not outwardly of the plane of the outer surface of the adjacent top part of the external envelope.

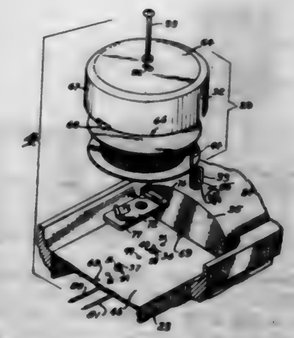
2,948,912
WIPER OF THE TYPE IN WHICH WIPING ELEMENT IS STATIONARY AND ARTICLE TO BE WIPED IS MOVED
Betty J. Wisdom, 945 Pacific Beach Drive, San Diego, Calif.
Filed Jan. 28, 1957, Ser. No. 636,612
9 Claims. (Cl. 15—250.1)



1. A dentist mirror comprising a handle; supporting means carried by the handle; an article to be wiped movably carried by the supporting means and having a mirror surface; a stationary wiper engaging the article; and means for imparting movement to the article whereby it is wiped by the wiper.

2,948,913
VACUUM CLEANER CONSTRUCTION
Bernard J. Tamaris, Flourtown, Pa. (% Vacuum Cleaners Corp. of America, 1724 W. Indiana Ave., Philadelphia, Pa.)
Filed July 20, 1954, Ser. No. 444,585
6 Claims. (Cl. 15—323)

6. In a vacuum-cleaner, a generally stationary insulatedly-supported electrical terminal extending through a wall of, and carried by said cleaner, the inner end of said terminal being electrically connected with the motor thereof, a brush-carrying block having a contact-brush thereon and having a terminal engaging electrical connector electrically connected with said contact-brush and adapted to engage the outer end of said terminal when the brush-



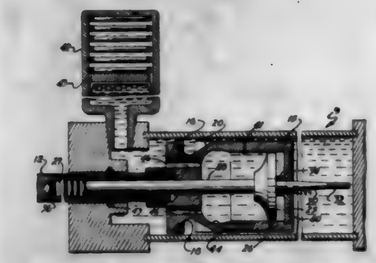
block is applied thereto, a cord-reel including an insulatedly-carried slip-ring and fastener means for fastening said reel to said cleaner and for maintaining said slip-ring in operative juxtaposition to said brush and for maintaining said brush-block in operative juxtaposition to said stationary terminal.

2,948,914
CASTER FOR A MECHANIC'S CREEPER OR THE LIKE
Glenn Ludgate Fitkin, Jr., 3945 Hopewell Place, Toledo, Ohio
Filed June 29, 1956, Ser. No. 594,760
2 Claims. (Cl. 16—45)



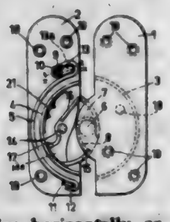
1. A caster for a mechanic's creeper comprising: a stamped circular disc having a rounded edge portion near the outer periphery which is adapted to contact the surface on which the creeper rides at an angle of approximately 45°, said disc having an integral, annular wall concentrically located at the central portion thereof, at least on the side of said disc toward which the edge portion is rounded; a tube permanently, concentrically attached to the same side of said disc, said tube having a diameter approximately the same as the diameter of said annular wall to fit therewith and be concentrically located with respect to said disc, the longitudinal axis of said tube being perpendicular to the plane of rotation of said disc, said tube forming a closed end, cylindrical recess with said disc, and said tube having a slot in a wall thereof extending throughout its length; brazing metal disposed between said tube and said annular wall and in said slot but leaving a groove at least on the inner surface of said tube; a rod having one end extending into said tube in closely fitting relationship and the other end of said rod being adapted to be attached to the underside of said creeper; and means for holding said rod in rotatable but non-slidable relationship with respect to said tube.

2,948,915
HYDRAULIC HOLD OPEN MECHANISM FOR HINGED MEMBERS
Robert W. Vose, West Springfield, Mass., assignor to Moore Drop Forging Company, Springfield, Mass., a corporation of Massachusetts
Filed July 15, 1957, Ser. No. 672,031
10 Claims. (Cl. 16—82)



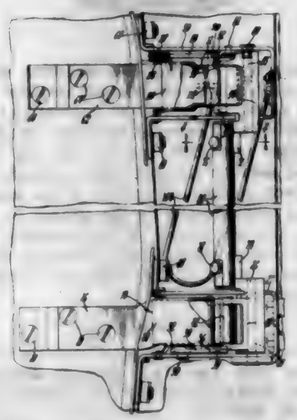
10. Hydraulic mechanism for preventing movement of a hinged member in a given direction unless said member is urged in said given direction with a force sufficient to generate an hydraulic pressure within said mechanism which exceeds a predetermined value, said mechanism comprising a movable piston and fluid filled cylinder, a rod fixed to the piston and slidable in said cylinder and attachable to one of a pair of hinged members with the cylinder connected to the other member, first valve means for permitting movement of said piston for relative movement of said hinged members in one direction and preventing movement of said piston in the opposite direction, a second valve means actuated by fluid pressure in said cylinder for enabling said piston to be moved in said opposite direction and including means for yieldably resisting actuation of said second valve means until said fluid pressure exceeds said predetermined value and means responsive to fluid pressures substantially lower than said predetermined value for maintaining said second valve in an actuated condition.

2,948,916
PIVOT BEARING FOR HORIZONTAL AND VERTICAL PIVOTED WINDOWS
Gunnar Erik Werner Lewin, Viggbyholm, Sweden, assignor to Aktiebolaget Atvidaberga Butiksinredningar, Stockholm, Sweden, a joint-stock company of Sweden
Filed Apr. 2, 1957, Ser. No. 650,248
Claims priority, application Sweden May 16, 1956
7 Claims. (Cl. 16—140)



1. A bearing for horizontally or vertically pivoted window sash comprising, in combination, a first fitting adapted to be secured to a window frame, said fitting having a semicylindrical flange thereon, a second fitting adapted to be secured to the window sash and having two concentric semicylindrical flanges thereon, the radially outermost of said flanges on said sash fitting being positionable to frictionally engage the semicylindrical flange of the frame fitting, said semicylindrical flanges forming the sole support for the sash during movement from closed to substantially completely open position, a pin in said frame fitting, a semicylindrical bearing surface extending axially from said sash fitting at the center of curvature of said flanges, said bearing surface engaging the uppermost portion of said pin as the semicylindrical flanges approach disengaged position whereby in the open position the sash is carried entirely by the said pin, and said sash may be lifted off said pin to remove it from the frame.

2,948,917
HINGE ASSEMBLY
David D. Campbell, Detroit, and Louis P. Garvey, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 13, 1956, Ser. No. 621,589
1 Claim. (Cl. 16—163)

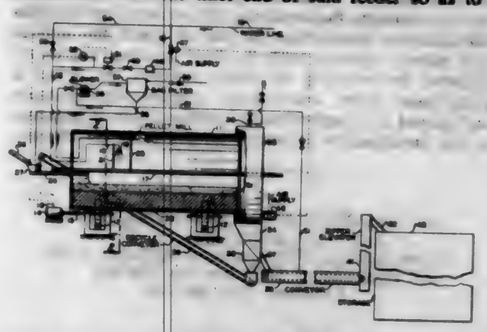


A hinge assembly for an enclosure door, comprising a pair of spaced hinge devices each including a hinge butt adapted to be connected to the door for swinging bodily therewith and a hinge link pivotally connected to said butt and adapted to be pivotally connected to said enclosure, one only of said devices including a control link pivotally connected to the butt associated with the one of said devices and adapted to be connected to said enclosure to impart certain defined swinging hinge movement to said last-mentioned butt about a movable center, a stabilizing link rigidly connected to the hinge links of said spaced hinge devices to impart said same swinging movement to the butt of the other of said hinge devices about said same movable center, the said other of said devices having combined therewith a torsion bar having an end fixed to the butt of said latter device and a second end adapted to be anchored to the enclosure to assist in opening the door, and a door hold-open link adapted to be pivotally connected to said enclosure having detent means associated therewith and with the butt of the said other of said hinge devices to maintain said door in a predetermined open position.

2,948,918
WATER SPRAY IN PELLET MILLS
Oliver K. Austin, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 16, 1953, Ser. No. 386,585
21 Claims. (Cl. 18—1)

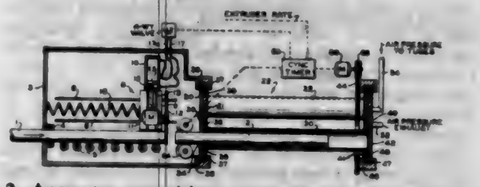
7. Apparatus for pelleting carbon black comprising in combination a horizontally elongated rotatable cylindrical pellet mill having an unobstructed smooth inner cylindrical surface, a carbon black feeder leading into one end, and a pellet outlet in the opposite end spaced from the periphery of said mill; a spray means in said mill

provided with orifices downwardly directed to spray liquid onto a pellet bed in a lower section thereof spaced downstream from the inlet end of said feeder so as to



permit dry pelleting between said feeder and the spray area and having a water line connected therewith; and an exhaust line leading from said mill having an exhaust means therein.

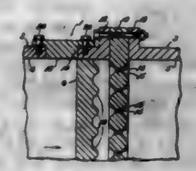
2,948,919
METHOD AND APPARATUS FOR PRODUCING EXTRUDED PIPE UNDER INTERNAL PRESSURE
Robert W. Matthews, Dewey, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Oct. 28, 1957, Ser. No. 692,743
5 Claims. (Cl. 18—1)



2. Apparatus comprising a pressurizable cutting chamber having a pipe inlet at one end, a seal at said inlet adapted to seal around a pipe as the pipe passes through said inlet, and an end plate with a pipe outlet therein at the opposite end; a power saw within said chamber; means within said chamber for supporting and guiding said saw parallel with the pipe; means for moving said saw transversely through the path of pipe moving from said inlet toward said outlet; means for urging said saw along the conveying means toward said inlet; an assembly comprising first and second rotatable end plates, a plurality of tubes spaced from a common axis and fixed between said first and said second rotatable end plates in sealing engagement therewith, said first rotatable end plate engaging said end plate on the outlet end of said chamber in sealed relation therewith, and means for rotatably supporting said assembly; a fixed plate positioned to sealably engage said second rotatable end plate, said fixed plate being blind to the tube that is aligned with said outlet, and having a removal port therein spaced along an arcuate path of rotation of said tubes from said outlet; means for rotating said assembly so that said tubes pass successively from alignment with said outlet to alignment with said removal port.

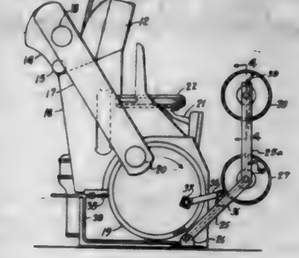
2,948,920
ALIGNED DOUBLE CYLINDERS AND RAMS FOR PLASTIC MIXING APPARATUS
John M. Hausman, 3581 Edgewood Drive, Stow, Ohio
Filed Oct. 28, 1957, Ser. No. 692,873
2 Claims. (Cl. 18—2)

1. Plastic mixing and/or working apparatus comprising a pair of axially aligned axially spaced cylinders of the same diameter providing plastic working chambers, a mixing plate having a plurality of plastic working apertures therein positioned between and axially separating said cylinders but providing a connection therebetween, said mixing plate being slidably engaged with said cylinders and having a discharge opening therein so that said plastic working apertures and said discharge opening can alternately be aligned with said cylinders, individual ram



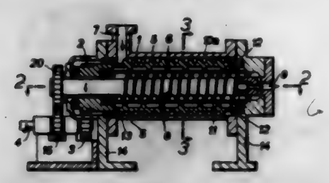
and piston means in each of said cylinders for forcing plastic material therefrom through said mixing plate, said piston means being of a size to pass through said discharge opening, and a discharge plate removably secured to a sidewall portion of one of said cylinders spaced from but adjacent said mixing plate whereby plastic material can be forced from the pair of cylinders by said ram means when said discharge plate is removed.

2,948,921
APPARATUS FOR POST-CURING INFLATION OF PNEUMATIC TIRES
Alfred J. Laube, Richard L. Southard, and Tomy W. Cornwell, Findlay, Ohio, assignors to Cooper Tire & Rubber Company, Findlay, Ohio, a corporation of Delaware
Filed Dec. 23, 1958, Ser. No. 782,437
3 Claims. (Cl. 18—4)



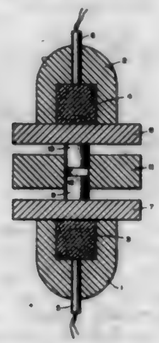
1. Apparatus for post-curing inflation of pneumatic tires, said apparatus constituting an attachment for a conventional tire molding machine having mold opening and closing mechanism, said apparatus comprising, in combination, a lever pivotally mounted at one side of said molding machine for oscillatory movement in a vertical plane, at least one tire rim mounted at a free end of said lever, linkage connecting said lever to said mold mechanism constructed and arranged to swing said lever to a position in front of said molding machine at "mold-open" position and to a position beside said molding machine at "mold-closed" postion, a source of air under pressure substantially greater than the normal road pressure of tires molded on said molding machine, an air line to said rim for feeding air into the interior of a tire mounted thereon, an air valve for said line, and an air valve actuator carried by an element of said mold mechanism for feeding such air under pressure to a tire on said rim at the initiation of a mold-closed part of a molding cycle and for venting air therefrom at the beginning of a mold-open part of a molding cycle.

2,948,923
SCREW CONVEYOR
Walter Meskat and Juri Pawlowski, Dormagen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, a corporation of Germany
Original application Dec. 11, 1951, Ser. No. 261,016. Divided and this application May 24, 1956, Ser. No. 586,971
9 Claims. (Cl. 18—12)



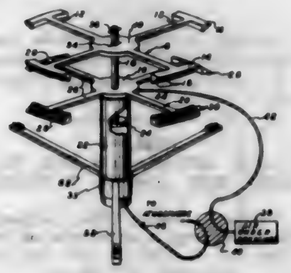
1. Screw conveyor comprising housing defining an inlet and an outlet, a hollow, tubular member rotatably positioned within said housing defining a first worm thread along its outer surface and a second worm thread along its inner surface, said worm threads defining in series a substantially continuous path of flow for material in the direction from said inlet to said outlet and being dimensioned and rotatable with said hollow tubular member for conveying material along said path of flow, a portion of at least one of said worm threads defining a braking worm thread for exerting a smaller counter thrust against the greater conveying force of the remaining portion of said worm threads.

2,948,923
HIGH PRESSURE, EXPLOSIVE-ACTIVATED PRESS
Edward W. La Rocca and John Pearson, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed June 4, 1958, Ser. No. 739,948
1 Claim. (Cl. 18—16.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A detonating explosive actuated high pressure press comprising two movable, hollow, elongated, steel, confining shells, each of said shells having a flat surface on one end thereof and a cavity in one end portion abutting said flat surface, a high explosive charge filling said cavity, and a channel interconnecting said cavity with the exterior of the other end of the shell, a pair of electric detonators, each of said detonators being disposed within a respective channel for detonating the explosive charges, a pair of flat steel plates respectively abutting the flat surfaces of said shells and enclosing said cavities, a pair of pistons respectively adjoined to said plates at one end thereof; a central plate disposed between said pair of plates in close proximate spaced relation therewith and having a circular bore therethrough, each of said pistons extending into said bore for sliding movement therein as the pair of plates are suddenly moved toward each other and concurrently therewith the shells are moved in opposite directions away from the pair of plates, the ends of said pistons together with the bore forming a pressure chamber for receiving an object whereby the object is compressed under momentarily applied high pressure and shaped to a predetermined configuration in response to the simultaneous detonation of the explosive charges.

2,948,924
TIRE SHAPING AND TREAD CENTERING DEVICE
Maurice Clapp, 1703 Rossmont, Redlands, Calif.
Filed May 2, 1957, Ser. No. 656,542
2 Claims. (Cl. 18—18)



1. A tire tread centering device comprising in combination an annular mold for receiving a tire to encompass the tread of the tire with the beads of the tire exposed; a cylinder connected to one part of the mold to be in axial alignment with the tire; a single piston adapted for reciprocating movement within the cylinder; a piston rod extending outwardly through one end of the cylinder coaxially with the axis of the tire; first and second spiders each including a hub having a central aperture through which the piston rod passes, a plurality of radially extending arms, each arm being provided with a tire bead-engaging segment at its outer end, said bead-engaging segments being shaped to engage the outer portion of the beads of the tire, said first spider being mounted for slidable movement along the piston rod; means connecting said second spider to said one end of the cylinder; means at the outer end of the rod to confine said first spider between said last-named means and the cylinder; and means for introducing fluid under pressure within the cylinder to either side of the piston, the radially extending arms shaped to enable the beads of the tire to be compressed together between the tire bead-engaging segments of the first and second spiders respectively, when the spiders are brought together upon application of pressure to one side of the piston.

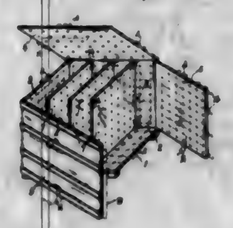
2,948,925
MACHINE AND METHOD FOR MOLDING HEAT-CURABLE ARTICLES
Arthur A. Johnson, Bridgeport, Conn., assignor to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
Filed Aug. 26, 1957, Ser. No. 680,247
9 Claims. (Cl. 18—21)

1. In a molding machine for producing in continuous succession articles, having a base, a carrier having a series of article-forming units traveling in an endless path with each unit having a pair of coaxial cooperative forming-dies together providing a molding cavity, means for causing said dies to open in succession at a discharge station and to be open at a loading station, means for guiding a continuous strip of molding material between said forming-dies while the latter are respectively at said loading station, and means to close each pair of forming-dies and blank out from said strip a quantity of molding material sufficient to fill the molding cavity: the improvement comprising core means for each of said pairs of forming-dies



cooperating therewith to form an article mounted on the carrier independently of said pairs of dies, and means for moving each of said core means into cooperating position between its related pair of forming-dies at said loading station and retracting said core means from said position at said article-discharging station.

2,948,926
MOLD FOR AND A METHOD OF PRODUCING LARGE BODIES OF FOAMED POLYSTYRENE
Richard Kühn, Grünstadt, Pfalz, Germany, assignor to C.I.C.O.M.I. Compagnie Internationale pour le Commerce et l'Industrie, Luxembourg, Luxembourg, a company of Luxembourg
Filed Nov. 8, 1957, Ser. No. 695,301
4 Claims. (Cl. 18—39)

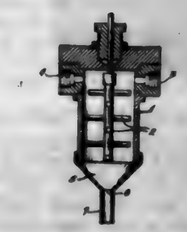


2. A mold for the manufacture of large rectangular blocks of foamed polystyrene by heating and expanding pre-foamed material under the influence of steam comprising an outer cubical mold frame composed of two adjacent side walls rigidly connected to the mold bottom, two further adjacent side walls each of which being articulated to one of said rigid side walls, a cover equally articulated to one of said rigid side walls, means for locking said articulated side walls to each other and to the bottom and for locking said articulated cover to the mold frame when being in closed position, a plurality of parallel perforated vertical partitions within the mold frame extending from the mold bottom to the mold cover for subdividing the mold into a plurality of chambers of substantially equal dimensions serving as expansion chambers for the development of the expandable material under the influence of heat, said vertical partitions being loosely connected to opposite side walls of the mold frame by means allowing a restricted reciprocal movement of the partitions in horizontal direction normally to their main surfaces, and means for connecting at least some of the side walls of the mold frame to a steam connection supplying hot steam into the mold for the development of the material to be expanded.

2,948,927
METHOD OF MANUFACTURING FIBROUS AND POROUS MATERIALS
Ole-Benoit Rasmussen, Bilberg Minde, Taarbaek Strandvej 144, Klampenborg, Copenhagen, Denmark
No Drawing. Filed Apr. 29, 1957, Ser. No. 655,421
5 Claims. (Cl. 18—47.5)

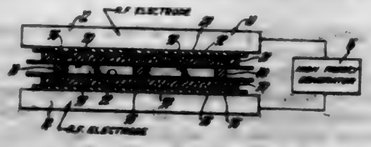
2. In a fiberizing process, the steps of introducing an expandible finely disperse phase into a high-molecular organic orientable material, shaping the material into a stretchable body, strongly orienting the material containing the disperse phase, and causing the disperse phase to expand within the material.

2,948,928
PROCESS FOR MANUFACTURING FOAMED POLYURETHANE ARTICLES
Harold Ehrech and Hans Falk, Leverkusen, Germany, assignors, by mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed Dec. 17, 1956, Ser. No. 628,579
Claims priority, application Germany Dec. 16, 1955
2 Claims. (Cl. 18—48)



1. In the preparation of a solidified cellular polyurethane by a process which comprises mixing liquid components together in a mixing chamber and flowing the resulting mixture into a suitable shaping device while it is still liquid and before any substantial amount of chemical reaction between said components, the method of predetermining the cell size and the number of cells per unit of area of solidified product which comprises flowing the said mixture while still liquid through an elongated enclosed passageway thereby retarding the flow thereof from said chamber and building up a back pressure, whereby said cell size of the product after solidification is larger and the number of cells per unit area smaller the greater the retardation of flow of liquid from said chamber.

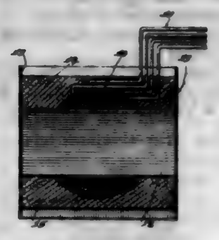
2,948,929
DIELECTRIC EMBOSSING
Ralph M. Stallard, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 7, 1957, Ser. No. 688,545
2 Claims. (Cl. 18—56)



1. In a process for dielectrically embossing articles each of which includes a sheet of porous material containing cement plus moisture and having a thermoplastic trim surface thereon, the steps of mounting a first such article on an electrode with the thermoplastic trim material

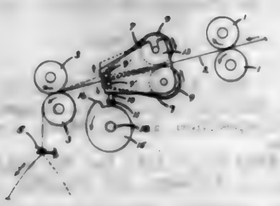
remote from the electrode, placing a die member on said thermoplastic material, inverting a second such article and placing the same on said die, moving a second electrode into engagement with said second article, applying sufficient pressure to compress said articles against the opposite faces of said die while entrapping a volume of air between the die and the opposed thermoplastic surfaces of said articles, and simultaneously dielectrically heating said articles whereby in each of said articles said thermoplastic material is embossed with the pattern formed on said die.

2,948,930
METHOD OF POTTING ELECTRICAL EQUIPMENT
Clarence A. Herbst, Park Ridge, Ill., assignor to Biwax Corporation, a corporation of Illinois
Filed Aug. 9, 1955, Ser. No. 527,225
3 Claims. (Cl. 18—59)



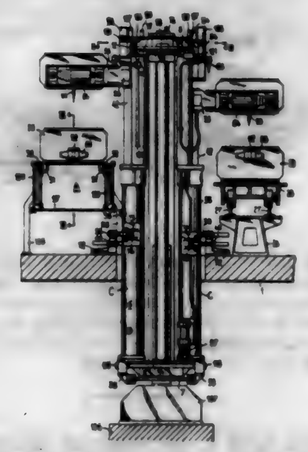
1. The method of forming a highly heat conductive potting compound in electrical equipment comprising, the steps of filling the space to be occupied by the compound with dry heat conductive granular inert inorganic non-metallic particles of generally uniform size, vibrating the granules to substantially maximum density, dispersing a liquid resinoid substantially throughout the voids between the compacted granules without substantially affecting the compacted state of said particles and then solidifying the resinoid to form a solid mass of potting compound.

2,948,931
THICK AND THIN YARN PRODUCING APPARATUS
Robert Allen Smith, Drexel Hill, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 695,035
3 Claims. (Cl. 19—143.3)



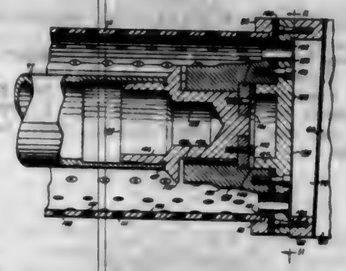
1. Apparatus for producing a thick and thin spun type yarn according to a prearranged thick-thin pattern comprising a fiber sliver drafting or spinning assembly of the Casablanca type including sliver nipping belts supported for rotation in a frame the exit end of said frame being capable of slight vertical reciprocation, and a cam assembly which cooperates with the exit end of the frame to vertically reciprocate the exit end of the frame, said cam assembly including a rotating cam having an abruptly terminating high spot which causes the exit end of the frame to drop suddenly on its downward path.

2,948,932
TRANSFER SYSTEM FOR FOUNDRY MOLDS
Erwin Bührer, 117 Alpenstrasse, Schaffhausen, Switzerland
Filed June 5, 1957, Ser. No. 663,720
Claims priority, application Switzerland June 6, 1956
16 Claims. (Cl. 22—20)



1. A system for transferring mold halves from a first continuously moving conveyor to a second continuously moving conveyor, each of said conveyors having mold supporting surfaces adapted to transport a mold half thereon; comprising lifting means intermediate said first and second conveyors and movable in a closed path, said closed path extending along and between said first and second conveyors, respectively, from a mold receiving location adjacent said first conveyor to a mold delivery location adjacent said second conveyor, support means for said lifting means guiding the latter along said closed path, mold carrying means arranged for upward and downward movement along said lifting means and perpendicularly with respect to said mold supporting surfaces, a mold gripping mechanism mounted on said mold carrying means and adapted to engage and disengage a mold half, mold centering means on said carrying means and adapted to provide for a predetermined relative horizontal position of said mold carrying means with respect to a mold half to be engaged by said gripping mechanism, first and second operating means each including a cylinder and a piston, said first operating means being mounted on said lifting means and operatively connected to said mold carrying means, said second operating means being supported on said mold carrying means and connected to said mold gripping mechanism, drive means operatively connected with at least one of said conveyors for continuously moving said lifting means on said support means along said closed path, control means for said first and second operating means operatively connected with said drive means and fluid supply means interconnecting said control means with said first and second operating means to thereby effect engagement of a mold half at said mold receiving location upon actuation of second operating means, lifting of said mold half from said first conveyor and lowering of said mold half onto said second conveyor, respectively, upon actuation of said first operating means, and disengagement of said mold half at said delivery location upon subsequent actuation of said second operating means, said respective actuations being carried out successively and commensurate with movement of said lifting means along said closed path.

2,948,933
PIPE MOLDING MACHINE AND METHOD
Thomas E. Molloy, Tyler, and John D. Walters, Winona, Tex., assignors, by mesne assignments, to Woodward Iron Company, Woodward, Ala., a corporation of Delaware
Filed Nov. 12, 1957, Ser. No. 695,481
8 Claims. (Cl. 22—36)



1. In a pipe molding machine, means for forming a sand mold in a hollow cylindrical flask including means for supporting the flask with its longitudinal axis in a substantially horizontal plane, a substantially cylindrical and coextensive pattern member for extending coaxially of the flask in spaced relation to its inner wall and coacting therewith to form an annular elongated sand receiving and shaping chamber, means for imparting relative longitudinal movement to the pattern member to position said member in and withdraw the same from the flask, a coaxial pattern element for extending through one end of the flask into mating engagement with said pattern member, means for directing sand under air pressure into the annular chamber endwise around the pattern element, means for permitting air to escape from said chamber while retaining sand therein so as to fill said chamber with packed sand, said pattern element having a stationary portion forming a portion of the shaping chamber and carrying a portion of enlarged diameter, said portion of enlarged diameter forming an internal shoulder on the sand mold, the enlarged portion being movable outwardly and longitudinally of the flask relative to said stationary portion of the pattern element upon engagement by the inwardly moving pattern member, and means for moving said enlarged portion inwardly of the flask upon the outward movement of said pattern member whereby its enlarged diameter compacts the shoulder of the sand mold.

2,948,934
APPARATUS FOR THE MANUFACTURE OF CENTRIFUGALLY CAST TUBULAR METAL ARTICLES
Frank H. Coupland, Jr., Edwin H. Phelps, John M. Cranford, and Kenneth R. Daniel, Birmingham, Ala., assignors to American Cast Iron Pipe Company, Birmingham, Ala., a corporation of Georgia
Original application Feb. 23, 1951, Ser. No. 212,468. Divided and this application Apr. 15, 1953, Ser. No. 348,952
6 Claims. (Cl. 22—113.5)



5. A refractory lined mold for use in centrifugally casting tubular metal articles comprising a hollow, substantially cylindrical metal mold having a plurality of vent holes in the wall thereof, a relatively thin, smooth, continuous, resin bonded granular refractory lining adherent to the mold wall and covering the inner ends of said vent holes, the resin in said lining being of such a character as to burn under the heat of the cast metal and thereby destroy the bond between the refractory granules of the lining, the gases generated in said lining during casting escaping through said vent holes, each of said vent holes having a relatively short inner portion of less diameter than its outer portion, the outer portion being packed with a relatively coarse, unbonded granular refractory, and means for preventing the escape of said packing through the outer ends of said vent holes.

2,948,935
PROCESS OF MAKING REFRACTORY SHELL FOR CASTING METAL
Richard T. Carter, % Hitchiner Manufacturing Co. Inc., Milford, N.H.
No Drawing. Filed Apr. 7, 1958, Ser. No. 726,658
7 Claims. (Cl. 22—196)

1. A process for making a refractory shell into which molten metal may be cast which involves forming a multi-layer shell around an expendable pattern, comprising the steps of coating said pattern at least twice with a slurry containing a silica binder and refractory powders, applying a stucco of coarse refractory material to the slurry deposited on said pattern after each slurry coating step and applying to each stucco coat a dry alkaline binder material and thereafter removing said pattern from said shell and firing said shell.

2,948,936
NECKTIE HOLDER
Mitchell Winthrop, South Miami, Fla., assignor to Swank, Inc., a corporation of Delaware
Filed Feb. 5, 1959, Ser. No. 791,330
5 Claims. (Cl. 24—49)



1. A necktie holder comprising a first ornamental member to overlie the obverse face of the necktie and having a pin with a sharp point to pass rearwardly through the necktie, an anchor member to releasably grip the pin and prevent its withdrawal through the tie, and an arm in a plane extending generally perpendicular to said pin and held thereto, said arm at a location spaced from the pin having a portion extending forwardly generally parallel to the pin and means comprising a second ornament carried by the said portion of said arm to overlie the face of the necktie adjacent an edge thereof, and means to tether said anchor to the shirt of the wearer.

2,948,937
PLASTIC FASTENING DEVICE
George M. Rapata, Park Ridge, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Oct. 7, 1955, Ser. No. 539,114
14 Claims. (Cl. 24—73)

1. A molded one-piece resilient plastic device of the type described for application to a work structure of predetermined thickness and having an aperture therethrough of predetermined diameter, comprising an aper-

tured head portion engageable with one side of the work structure, a hollow shank portion extending axially from said head portion for insertion through said aperture and having a length greater than said predetermined thickness and a diameter less than said predetermined diameter and a substantially uniform wall thickness throughout, a resilient end wall disposed adjacent to the entering end of and substantially traversing said hollow shank portion, and a substantially annular junction portion integrally joining the entering end of said shank portion and said end wall and initially having an outside diameter substantially equal to said shank portion diameter, said end wall initially extending radially inwardly and axially of said



junction portion and being disposed substantially at one side of a plane normal to the shank portion axis and intersecting said junction portion, said end wall being sufficiently thin to render it flexible to permit its flexing across said plane to a position at the opposite side thereof and thereafter to be flexed to its original position, if desired, the entering end of said shank portion and said junction portion being radially expanded upon initial flexing of the end wall across said plane for engaging a side of the work structure opposite from said head portion, and said end wall, when initially flexed to said opposite side of the plane, providing a resilient strut for yieldably pressing said expanded junction portion against said opposite side of the work structure.

2,948,938

CLIPS FOR MOLDINGS, CABLES AND THE LIKE

Robert J. Helton, Cleveland, Ohio, assignor to Tinnerman Products, Inc., Cleveland, Ohio, a corporation of Ohio

Filed Oct. 24, 1955, Ser. No. 542,417

5 Claims. (Cl. 24—73)



3. A clip comprising a malleable-like sheet metal body providing a generally planar base having partially severed portions defining a pair of spaced movable arms, said arms comprising a pair of tabs projecting from one surface of said base and being hinged to said base generally along the plane of the latter, outwardly directed shank portions projecting from the other surface of said base and being carried by said tabs, each of said shank portions merging with the respective one of said tabs in slightly spaced relation to said plane of said base, said shank portions being disposed generally inwardly of said hinged connections of said tabs to said base, and a comparatively soft plastic plug molded onto said shank portions with the latter being substantially completely embedded in the said plug, said clip being adapted to be received over a work opening in a supporting part with said plug and embedded shank portions projecting through said work opening, said shank portions being movable outwardly with respect to one another responsive to simultaneous inward movement of said tabs, whereby the free ends of said shank portions break through the defining surfaces of said plug to engage said supporting part remote from said work opening and cause portions of said plug to flow into engaged sealing relation with the periphery of said work opening, to seal the latter against the passage of foreign matter in the secured position of said shank portions.

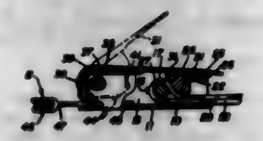
2,948,939

QUICK RELEASE BUCKLE WITH REMOVABLE STRAP GRIPPING BARS

Ernest Preta, Jr., Van Nuys, Calif., assignor to Gordon D. Brown, Greenwich, Conn.

Original application Dec. 27, 1955, Ser. No. 555,380, now Patent No. 2,901,794, dated Sept. 1, 1959. Divided and this application July 11, 1957, Ser. No. 671,389

5 Claims. (Cl. 24—171)



1. A belt buckle, comprising: a frame structure including spaced side flanges each having an L-shaped notch opening at one end, said notches being aligned transversely of said frame; a bar having its ends slidably supported in said notches and being removable through the open ends of the notches; fingers respectively projecting inwardly from said side flanges adjacent said open ends; and a locking bar having a grooved under surface for removably receiving said fingers, whereby the locking bar is removably mounted thereon, said locking bar extending substantially parallel to said first bar and normally opposing removal thereof through the open ends of said notches, but upon removal of said locking bar permitting removal of said first bar through said open ends.

2,948,940

SELF-LOCKING DETACHABLE CLAMP

Louis F. Degener, South Ozone Park, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Filed July 1, 1957, Ser. No. 669,351

2 Claims. (Cl. 24—257)



1. A self locking clamp of resilient strip material having a flat base, a first locking and gripping part having a middle portion extending angularly from the base and an S-shaped bent end portion extending angularly from the middle portion having a concave inner gripping surface adjacent the middle portion and a convex inner locking surface spaced from the middle portion, a second locking and gripping part having a middle portion extending angularly from the base in spaced substantially parallel relation to the first middle portion and an S-shaped bent end portion extending angularly from the second middle portion having a convex outer locking surface adjacent the second middle portion underlying the convex inner locking surface of the first S-shaped end portion and a concave outer gripping surface spaced from the second middle portion underlying the concave inner gripping surface of the first S-shaped end portion, the second S-shaped end portion substantially spanning the space between the parallel middle portions and being shorter than the lengthwise dimension of the second middle portion.

2,948,941

REPLACEABLE END LINKS FOR EXPANSION WATCH BANDS

La Verne E. Brehm, Elgin, Ill., and Vincent H. McLaren, Jr., Providence, R.I., assignors to Elgin National Watch Company, Elgin, Ill., a corporation of Illinois

Filed Apr. 16, 1958, Ser. No. 727,735

6 Claims. (Cl. 24—265)



1. For use with a wrist watch having spaced lugs adapted to receive a hollow bracelet terminal therebetween, a tube adapted to extend through the hollow terminal and having spring pins therein adapted to snap into recesses in the watch lugs, a cover member of resilient material adapted to cover the tube, the cover member being tubular and having a slot on the side next to the bracelet, the length of the cover member approximating the distance between the watch lugs and the width of said slot being less than the diameter of said hollow terminal so that the slot must be sprung open to snap the cover member over the hollow terminal, the length of the terminal being less than the space between said lugs to provide a gap between each end of the terminal and the adjacent lug, and ears at the ends of the cover member extending into said gaps past the ends of the terminal to restrain endwise movement of the terminal.

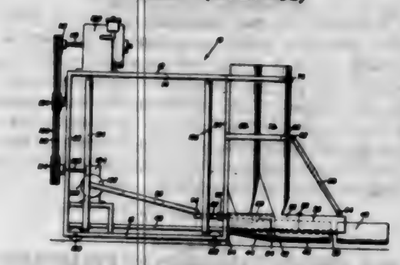
2,948,942

CONCRETE PIPE MACHINE

Alvin C. Gordan, Bradshaw, Nebr.

Filed Sept. 3, 1957, Ser. No. 681,655

1 Claim. (Cl. 25—32)



A concrete pipe forming machine comprising a relatively narrow frame mounted upon supporting rollers and adapted to be received in a trench in which a concrete pipe is to be formed, said frame having vertically disposed rollers mounted on opposite sides for engagement with the sides of a trench, a longitudinally and horizontally extending arcuate plate mounted on said frame and extending rearwardly therefrom within said trench for shaping the top and side surfaces of a pipe to be formed, a rearwardly extending arcuate auxiliary plate hingedly mounted on the rear end of said first mentioned plate, brace means connecting said auxiliary plate and said frame to hold said auxiliary plate in operative position, an elongated cylindrical drum carried by said frame disposed longitudinally thereof in spaced relation beneath said plate to provide a core, the forward end of said drum being tapered to provide a conical forward nose portion, a hopper for concrete mounted on said frame and disposed directly above said nose portion for discharging concrete around said nose portion and into the bottom of the trench to form the bottom portion of the pipe, a second hopper for concrete mounted on said frame rearwardly of said first hopper and disposed above the cylindrical portion of said drum for discharging concrete around the upper and side surfaces of said drum to fill the space between the concrete deposited from the first hopper and the lower surface of said plate, a reciprocating tamper mounted on said frame between said drum and said plate, said tamper surrounding the upper side surfaces of said drum and extending downwardly to a point substantially in alignment with the lowermost surface of said drum and movable from a point between said first and second hoppers to a point rearwardly of said second hopper to compact concrete deposited between said plate and said drum and means for reciprocating said tamper.

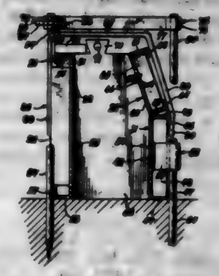
2,948,943

TIE BARS FOR SPACING CURB FORMS

Frank Torrelli, 40 Arthur St., Cheektowaga, N.Y.

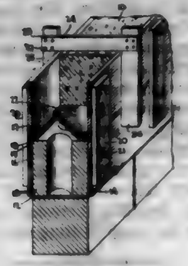
Filed July 5, 1955, Ser. No. 519,699

2 Claims. (Cl. 25—118)



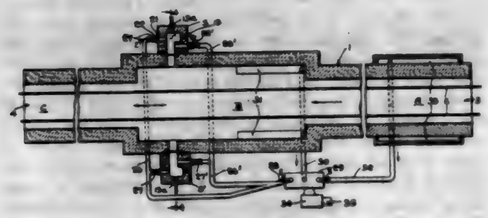
1. In a curb form having side mold sections spaced to form the sides of the curb from Portland cement poured therebetween, pairs of stakes driven into the ground on opposite sides of the curb form along the outer sides of said mold sections and projecting above said mold sections, and means connecting said mold sections to said stakes, the combination therewith of means for spacing the stakes of each pair at a predetermined distance from each other and holding the stakes of each pair at such predetermined distance while said poured Portland cement is setting, comprising a metal strap having a generally straight body part, a horizontally and reversely extending integral hook forming one end of said body toward the opposite end of said body and said hook fitting around the upper end of one of said stakes and to rotate around said one of said stakes as a pivot in a horizontal plane, a pair of spaced flanges permanently fixed to and projecting laterally and horizontally in the same direction from said opposite end of said body and spaced from each other a distance approximately equal to the thickness of said stakes, said flanges being provided, at a distance from said body approximately equal to the thickness of said stakes, with holes in horizontal alinement with each other along a line generally parallel with said body, and a pin extending through said holes and arranged to retain a stake from displacement from between said flanges, said flanges being spaced from said hook a distance approximately equal to said predetermined distance whereby upon hooking said hook around one stake said body can be swung in a horizontal plane to bring its flanges toward the companion stake can be brought between said flanges to position the stakes at said predetermined distance, said pin being thereafter insertable through said holes to retain said flanges from displacement from said companion stake.

2,948,944
FORM FOR LINTEL CONSTRUCTION
Dana A. Graves, 7523 Ridge Road, Largo, Fla.
Filed Jan. 26, 1959, Ser. No. 788,973
2 Claims. (Cl. 25—131)



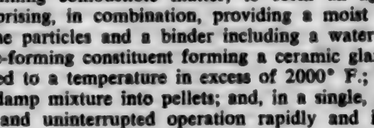
1. In a form construction for lintels over a wall with openings therein, said wall being the thickness of the lintel, a trough formed by right and left side members spaced apart the thickness of the wall, and adapted to hug such wall, each side member having superimposed lower and upper uprights held together by any desired means, narrow steel plates attached to the top of the lower upright and extending inwardly through the length of said lower upright, said plates are adapted to span the lintel opening and rest on the masonry adjacent the lintel opening, a bottom beam the width of the lintel resting on and covering the steel plates, and means to prevent the spreading of the side members.

2,948,945
TUNNEL KILN
Philip Dressler, P.O. Box 1888, Pittsburgh, Pa.
Filed Aug. 19, 1955, Ser. No. 529,411
8 Claims. (Cl. 25—142)



1. In combination, a kiln having a preheat zone, a burning zone and a cooling zone through which ware passes in successive order, exhaust means for withdrawing gases from said kiln, a first duct means having an inlet disposed adjacent the border between the preheat zone and the burning zone of said kiln and having an outlet operatively connected to said exhaust means, salt vapor generating means movable relative to said kiln to and from an operative position adjacent said burning zone, a second duct means for conveying salt vapor from said salt vapor generating means to said burning zone when said salt vapor generating means is in said operative position, a third duct means having an inlet connected to said salt vapor generating means and an outlet operatively connected to said exhaust means, damper means for controlling the flow of gases in said duct means from their respective inlets to said exhaust means, said damper means including means for opening said first duct means and closing said third duct means whereby to permit salt vapor generated in said salt vapor generating means to pass into said burning zone of said kiln through said second duct means and out through said first duct means along with hot gases in said burning zone, and for closing said first duct means and opening said third duct means whereby to draw off salt vapor from said salt generating means and thereby prevent it from passing into said burning zone of said kiln through said second duct means.

2,948,946
METHOD AND APPARATUS FOR SALT GLAZING CERAMIC WARES
Philip Dressler, Pittsburgh, Pa., assignor to Swindell-Dressler Corp., Philadelphia, Pa., a corporation of Pennsylvania
Filed Mar. 7, 1956, Ser. No. 570,117
8 Claims. (Cl. 25—142)



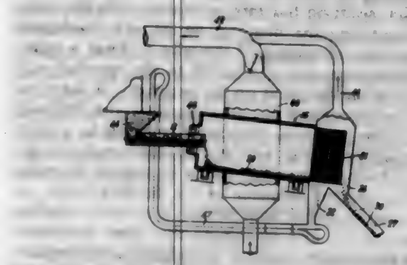
1. The method of firing and glazing ceramic wares in a kiln chamber, which consists in maintaining said wares at a glazing temperature by passing fluid fuel and combustion air into said chamber through at least one burner having fuel and air supply means, passing a solution containing glazing material into said burner at regular intervals, and purging said solution containing glazing material from said burner at the end of each of said intervals with a liquid solvent, and then purging said solvent with a gas.

2,948,947
METHOD FOR MANUFACTURING REINFORCED LIGHTWEIGHT CONCRETE
John Valter Berg, Gavle, and Carl Gustav Harald Stare, Skelleftehamn, Sweden, assignors, by mesne assignments, to Casius Corporation Limited, Montreal, Quebec, Canada
No Drawing. Filed Nov. 10, 1955, Ser. No. 546,258
Claims priority, application Sweden Dec. 10, 1954
3 Claims. (Cl. 25—154)

1. A method for manufacturing reinforced lightweight concrete products which comprises positioning a reinforcement within a mold, casting a lightweight concrete mass containing a gas developing agent into the mold about the reinforcement, allowing the concrete to expand by the development of gas bubbles in the mass, raising the reinforcement, and then lowering it at a time at which the expansion of the mass and the gas developing process is in its final phase.

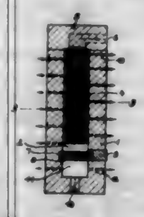
2,948,948
FLY ASH RECLAMATION BY PELLETIZING
Victor J. Duplin, Jr., Harrisburg, Pa., and George B. Ebersole, deceased, late of Westfield, N.J., by Mabel G. Ebersole, executrix, Harrisburg, Pa., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Continuation of application Ser. No. 94,184, May 19, 1949. This application Dec. 10, 1956, Ser. No. 627,971
7 Claims. (Cl. 25—156)

2. A method of agglomerating finely divided particles containing combustible matter, to form an aggregate, comprising, in combination, providing a moist mixture of the particles and a binder including a water soluble glaze-forming constituent forming a ceramic glaze when heated to a temperature in excess of 2000° F.; forming the damp mixture into pellets; and, in a single, continuous and uninterrupted operation rapidly and intensely heating the damp pellets to a pellet surface temperature of at least 2000° F. to generate steam from the moisture with the water soluble glaze-forming constituent carried toward the surface of the pellets and to burn out the combustible matter within the pellets while fusing



the binder to bond the particles and form a ceramic glaze on the surface of the pellets, to form structurally stable low density granules having a multiplicity of voids therein.

2,948,949
METHOD OF FIRING CERAMIC TUBES SUSPENDED IN A SHAFT OVEN
Julius Schüffler, Am Hochofen 42, and Werner Van Ackeren, Am Hochofen 40, both of Duesseldorf-Heerdt, Germany
Filed Sept. 9, 1958, Ser. No. 759,901
Claims priority, application Germany Sept. 26, 1957
6 Claims. (Cl. 25—157)



1. In a process of treating elongated ceramic workpieces such as straight rods and tubes, the steps of suspending a plurality of said ceramic workpieces in a vertical position in a shaft kilns so that the axes of said workpieces, respectively, extend vertically and parallel to each other; and passing a stream of heating gas along said suspended ceramic workpieces in a direction of flow parallel to said axes, the temperature of said stream of heating gas being sufficiently high to heat said workpieces to a temperature of at least 800° C. while, due to the parallel direction of flow of said heating gas, lateral movement of said workpieces is prevented.

2,948,950
REINFORCED TRANSLUCENT PANEL
Joseph S. Finger and Raymond W. Meyer, Bellaire, Tex., assignors, by mesne assignments, to L-O-F Glass Fibers Company, Toledo, Ohio, a corporation of Ohio
Filed July 21, 1953, Ser. No. 369,494
10 Claims. (Cl. 28—80)

1. A reinforced translucent panel comprising a woven translucent fibrous core impregnated with a resinous material and then cured comprising a woven translucent fibrous core including a plurality of spaced groups of intersecting warp yarns and weft yarns, the yarns of each group or warp yarns being interlaced with the yarns of each group of weft yarns at said points of intersection to provide a plurality of alternating high and low surface areas on both surfaces on said woven fibrous core, said woven translucent fibrous core being impregnated with a resinous material to form a coating thereon so that the resinous material on said high and low surface areas assumes a convex curvature, said high surface areas on one surface of said woven translucent fibrous core being disposed opposite to the low surface areas on the other surface of said woven translucent fibrous core, and said low surface areas on said one surface being disposed opposite to the high surface areas on said other surface



of said woven translucent fibrous core, said resinous material on each of said opposite high and low surface areas forming a double convex lens to high light the high surface areas on one surface of said reinforced translucent panel when that surface is viewed from an angle inclined to the plane of the panel.

2,948,951
FORMATION OF POINT CONTACT TRANSISTORS
Edwin F. Dillaby, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Nov. 19, 1957, Ser. No. 697,500
4 Claims. (Cl. 29—25.3)

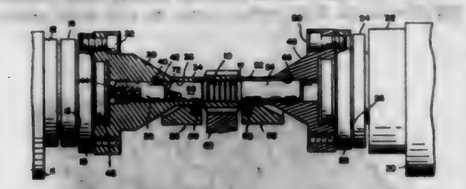


1. The method of constructing a high-frequency response point contact transistor which comprises mounting a germanium crystal on a conducting base, rigidly securing the base on a support, etching the exposed surface of said crystal, sharpening a stainless steel emitter electrode to provide a contact point, sharpening a bronze collector electrode to provide a contact point, doping each of said contact points with selenic acid, arranging the doped points in contact with the etched surface in closely spaced insulated relation to each other, rigidly securing said electrodes to said support to maintain the position of said points and applying forming pulses having a current level of the same order of magnitude as the load current.

2,948,952
LOCATING SMALL PINIONS ON ARBORS
John J. Sigman, Jr., Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan
Filed June 17, 1957, Ser. No. 665,981
8 Claims. (Cl. 29—98)

1. Work support structure comprising head and tail stocks, aligned spindles in said stocks mounted therein for rotation and for relative movement toward and away from each other, an arbor fixed to one of said spindles, said arbor being designed for use with work pieces hav-

ing holes whose internal diameters have a predetermined manufacturing tolerance below the required finished diameter, said arbor having thereon a plurality of narrow annular lands separated by shallow annular relief chan-



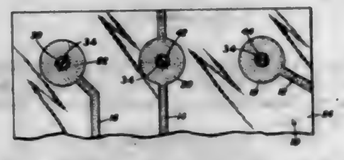
nels, said lands being of an external diameter accurately held to the desired finished hole diameter of the work piece, said arbor being hardened to burnish the hole in the work piece to the desired finished diameter.

2,948,953

METHOD FOR FORMING A WIRE CONNECTOR

Charles C. Rayburn, Falls Church, Va., assignor, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois

Filed Feb. 2, 1956, Ser. No. 563,091
5 Claims. (Cl. 29—155.55)



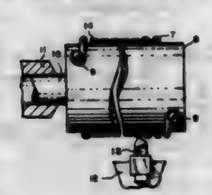
1. The method of forming a terminal on an insulating panel having an electrically conductive coating on one surface thereof, said method comprising the steps of forming a passageway through said panel and a portion of said conductive coating and extending from said one panel surface to an opposite surface of said panel, positioning a flexible wire on said opposite panel surface and bridging said passageway, anchoring said panel and the free ends of said flexible wire to prevent rotation thereof, simultaneously applying twisting and thrusting motions to the portion of said wire bridging said passageway whereby a coil helix is formed and threaded into said passageway, continuing said twisting and thrusting motions to said wire until said helix contacts said conductive coating on said one panel surface.

2,948,954

SMALL SIZED HELIXES AND METHOD OF THEIR FABRICATION

Alexander P. Ramm, Neptune, N.J., assignor to the United States of America as represented by the Secretary of the Army

Filed Mar. 8, 1956, Ser. No. 570,396
4 Claims. (Cl. 29—155.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of fabricating small metallic wire helixes of high precision such as those used in traveling wave tubes comprising helically winding a wire of larger size than that of the finally processed wire upon a cylindrical mandrel having a diameter several times that of the finished helix, securing the wire in contact with the mandrel, while rotating the mandrel on its axis machining the outer peripheral surface of the wire to form a cylindrical conformation coaxial parallel to the mandrel axis and defined by the flat faces on the periphery of the wire, removing the wire from the first mandrel and helically winding it upon a second cylindrical mandrel in a helix having the desired pitch with its flat face engaging the mandrel, said second mandrel having its outside diameter equal to the internal diameter of the finished helix, securing the wire in contact with the mandrel, while rotating the mandrel on its axis machining the outer peripheral surface of the wire to form a cylindrical conformation coaxial parallel to the mandrel and defined by the flat faces on the periphery of the wire, during each machining accurately controlling the outside diameter of the helix until its final diameter is obtained with a high degree of precision such as that required for use in traveling wave tubes.

2,948,955

FRICTION ARTICLE

Alfred W. Allen, Urbana, Ill., and Robert H. Herron, South Bend, Ind., assignors to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Filed Oct. 8, 1957, Ser. No. 688,917
11 Claims. (Cl. 29—182.5)



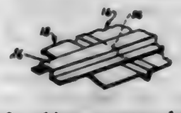
2. A friction producing device wherein two surfaces are rubbed together to produce surface temperatures above approximately a red heat, and wherein one of the rubbing surfaces includes a readily oxidizable form of iron: one of said surfaces being formed by a sintered powdered material consisting principally of a powdered metal matrix which remains solid at operating conditions and having a ceramic friction producing material distributed uniformly therethrough, said last mentioned one of said surfaces further including from about 1% to about 12½% by weight of a metal from the group consisting of molybdenum and tungsten for the purpose of inhibiting the formation of the higher oxides of iron upon the surfaces.

2,948,956

METHOD OF MAKING A KNOCKDOWN GARAGE DOOR

John S. Colombini, 19962 Consant, Detroit 34, Mich.

Filed May 28, 1956, Ser. No. 587,804
1 Claim. (Cl. 29—411)



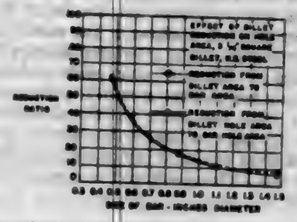
The method of making a garage door which comprises providing two separate sheet metal door sections each of which is approximately one-half the size of the door to be formed, forming complementary grooves along one edge of each section, arranging said sections in a common plane with said grooves in overlapped but unfastened relation to provide a single panel the size of a complete door which is separated along the said overlapped portions of said separate door sections, placing a series of frame elements on one side of said panel with each frame element extending transversely across said grooves to substantially the opposite edges of said two door sections, securing each frame element to each door section, and severing said frame elements along the line of said overlapped grooves to separate the door into two separate halves each consisting of one of said door sections and a series of frame elements secured thereto and adapted to align with the frame elements on the other half of the door upon final assembly of the door.

2,948,957

MANUFACTURE OF METAL STOCK HAVING INTERNAL HOLES

Charles F. Sawyer, Jr., Latrobe, Pa., assignor to Vanadium-Alloys Steel Company, Latrobe, Pa., a corporation of Pennsylvania

Filed Mar. 26, 1956, Ser. No. 573,964
1 Claim. (Cl. 29—423)



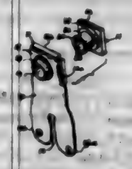
The method of manufacturing oil hole drill bar stock having suitably spaced and dimensioned holes which comprises graphically relating to the degree of reduction the ratio of distance between billet holes to distance between bar stock holes for a billet mechanically reduced to bar stock, drilling holes in a billet spaced apart a distance corresponding to said graphical relationship for the hole spacing required in bar stock of size approximately of the finished drill, the ratio of the area of said drilled holes to the required area of the holes in said bar stock approximately equalling the ratio of the cross-sectional area of said billet to that of said bar stock, inserting a core in each hole supporting the hole walls against change in form, mechanically reducing the billet to bar stock of size approximately that of the finished drill, and removing the cores.

2,948,958

METHOD OF ASSEMBLING A FASTENING DEVICE

Lawrence H. Flora, North Olmsted, Ohio, assignor to Tinnerman Products, Inc., Cleveland, Ohio, a corporation of Ohio

Original application May 22, 1957, Ser. No. 660,846. Divided and this application Mar. 18, 1958, Ser. No. 720,327
3 Claims. (Cl. 29—432)



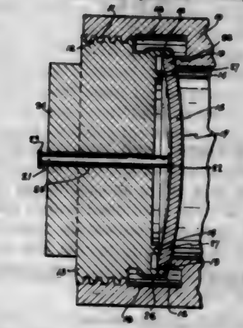
1. A method of assembling a plastomeric nut and a metallic fastener comprising extruding a tubular portion from the body of the fastener until it is connected thereto on a weakened line; providing a plastomeric nut having a base, a shank, a shouldered portion on the end of the shank and a shouldered portion adjacent the connection between the base and shank, forcing the shank and the shouldered portion on the end of the shank into the tubular portion of the body by forward motion thereof relative to the body of the fastener until the shouldered portion on the end of the shank projects through said tubular portion of the body, utilizing the shouldered portion adjacent the base on the nut to sever the tubular portion from the body at the weakened line by continued motion of the nut, the shank of the nut having a tight fitting engagement with the tubular portion severed from the body, whereby the severed portion operates to reinforce the shank of the nut.

2,948,959

METHOD OF ESTABLISHING A FLUID-TIGHT CLOSURE

William H. Bowes, Peterborough, Ontario, Canada, assignor to Atomic Energy of Canada Limited, Ottawa, Ontario, Canada

Filed May 6, 1958, Ser. No. 733,446
Claims priority, application Canada March 25, 1958
1 Claim. (Cl. 29—446)



A method of establishing a fluid-tight closure in an assembly comprising a tubular member, an annular seating surface formed on said member, a flexible sealing disc mounted with a sealing area of the inner face thereof in register with said annular seating surface for pressure sealing engagement therewith, a plug for engagement with said tubular member, bearing surfaces projecting from the inner end of said plug positioned for engagement with areas of the outer face of said disc radially intermediate the centre thereof and said sealing area, and disc-controlling means for deflecting inwardly the centre of said disc to force the sealing area thereof against said seating surface, said means extending from the exterior of the assembly to the central area of said disc whereby to be operable from the exterior of the assembly; said method comprising initially partially assembling the parts by introducing the plug into the tubular member sufficiently to bring said sealing area of the disc at least approximately into substantially pressureless contact with said seating surface, acting on said disc-controlling means to flex the centre of the disc inwardly and urge its sealing area into engagement with said seating surface to increase the pressure between said sealing area and said seating surface, then moving said plug further into said tubular member to bring said bearing surfaces on said plug into pressure engagement with said intermediate areas of said disc, and finally releasing said disc-controlling means.

2,948,960

SCORING TOOL

Morris Eckstein, 1935 E. 17th St., Brooklyn, N.Y.

Filed July 22, 1955, Ser. No. 523,690
1 Claim. (Cl. 30—162)

A tool comprising an elongated hollow handle body of substantially rectangular cross section having an open

end, a rectangular removable cap fitted onto said open end, screw means securing said cap to said body, said body adjacent said cap having an elongated longitudinal slot, a channel-shaped guide removably secured at the inner end to the inside of said handle side behind said slot, said cap having a transverse slot receiving upwardly therewithin the outer end of said guide, said guide having



an elongated slot aligned wtih said body slot and being open at the outer end thereof, a knife handle slidably positioned within said guide and including an outwardly extending knob slidably positioned within said guide and body slots and extending outwardly therefrom, and a knife blade fixed to said knife handle and adapted to be retracted and extended from said guide upon corresponding movement of said knob.

2,948,961
PUSH BUTTON KNIFE
Samuel Ortner, 169 Murray St., Newark, N.J.
Filed July 21, 1959, Ser. No. 828,494
3 Claims. (Cl. 30—162)



1. A push button knife comprising a pair of handle halves detachably secured together along a longitudinally extending vertical plane, a carriage mounted for longitudinal sliding movement in said handle, said carriage comprising a bar, a guide boss on the side of said bar adjacent the rear end extending longitudinally thereof, a pair of vertically spaced angular offsets formed in said bar adjacent said guide boss, a pair of closely spaced studs formed on said carriage adjacent the front end thereof for supporting a generally flat knife blade thereon, a shaft mounted in the offsets on said carriage for vertical sliding movement therein, a plurality of notches formed in said handle in longitudinally spaced apart relation adjacent said carriage, a head formed on said shaft for selective engagement in said notches, a push button integrally formed on the outer end of said shaft for moving said shaft inwardly with respect to said carriage and sliding said shaft longitudinally to move said carriage longitudinally of said handle, and a coil spring encompassing said shaft engaging between said carriage and said head for normally biasing said head into seating engagement in a selected one of said notches.

2,948,962
PLIERS
Howard H. Manning, Meadville, Pa., assignor to Champion De Arment Tool Company, Meadville, Pa., a corporation of Pennsylvania
Filed Dec. 24, 1953, Ser. No. 782,791
1 Claim. (Cl. 30—186)



Heavy duty pliers having a pair of members each with a cross section intermediate the ends and each having a handle at one side of its cross section and having on the other side of its cross section a jaw with a cutting edge, a pivot for the members at right angles to and displaced eccentrically in said cross sections toward the jaws to provide increased leverage for cutting, the cross sections having guide surfaces remote from the pivot and the jaws for preventing tilting of the members about an axis at right angles to the pivot and thereby holding the cutting edges in alignment, said guide surfaces comprising an arcuate rib concentric with the pivot and projecting radially from the cross section of one member on the side of the pivot adjacent the handle, and a pin having a shank fixed in the other of said members and having a head spaced from said other member and overlapping said rib.

2,948,963
DENTAL JACKET-CROWNS AND FRAMES THEREFOR
Irving Neustadter, 246 Bay 19th St., Brooklyn, N.Y.
Filed May 19, 1958, Ser. No. 736,187
11 Claims. (Cl. 32—12)



1. A dental jacket-crown for a restoration of the frame supported type, said jacket-crown having an edge extending from the labial internal wall surface of the jacket-crown toward the lingual side thereof, the lingual wall of the jacket-crown having mesial and distal edges extending toward the occlussal edge of the tooth along convexly curved surfaces, said lingual wall edges meeting the vertical edge portions of the jacket-crown above the incisal edge of said crown, said labial wall edge and said mesial and distal edges of the lingual wall forming a continuous inner peripheral shoulder for mounting on a corresponding shoulder in the supporting frame.

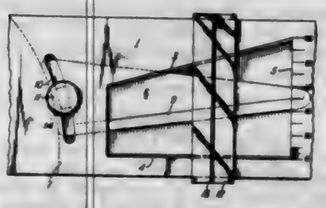
2,948,964
SHOE FITTING DEVICE
Guillermo Barcena, 2318 Tremont, El Paso, Tex.
Filed Oct. 14, 1959, Ser. No. 846,438
1 Claim. (Cl. 33—3)

A shoe fitting device comprising a shoe measuring self-contracting tape, a tape casing and a shoe horn integrally extending from a part of said casing, said tape casing comprising a housing formed of a single piece of sheet material, said shoe measuring tape being coiled within said housing and having one end thereof anchored within said housing, said housing having a tape dispensing aperture at one side thereof, the other end of said tape extending through said aperture, a heel support arm secured on said extending tape end exteriorly of said housing, said shoe horn integrally extending from the side of said housing opposite to said tape aperture side, said shoe horn providing a handle for said tape casing when said shoe measuring tape is extended for use, said tape casing providing a handle for said shoe horn for shoe horn use when said tape is contracted within said casing, said housing comprising a base, said shoe horn extending



integrally from one end of said base, the other end of said base extending integrally upwardly, curving toward said shoe horn end and extending downwardly to said shoe horn base end providing a coil tape space housing cover, the opposite sides of said base extending integrally up to said housing cover, and side securing connecting means extending through said opposite sides centrally thereof within said self-contracting tape, and providing anchoring means within said housing for said one end of said tape to limit the extension of said tape outside of said housing, said heel support arm preventing the entrance of said extending tape end into said housing.

2,948,965
MEASURING INSTRUMENT
Reginald Hayler, Lancing, England, assignor to Hawkaley & Sons, Limited, London W. 1, England
Filed Jan. 12, 1959, Ser. No. 786,207
1 Claim. (Cl. 33—129)



An instrument of the character described comprising a first and a second plate-like member secured together in spaced superimposed relation, said first plate-like member being formed with three straight lines representing respectively the base and part of the hypotenuse and perpendicular of a right-angled triangle, a guide member secured between said first and second members and having a part circular edge, the circle of which the edge of said guide member forms a part being centered on a point where the hypotenuse and perpendicular lines would intersect if extended, a reference member movably mounted between said first and second members being of generally triangular shape and having the base portion toward the point at which said circle has its center, the apex portion of said reference member extending to beneath said base line on said first plate member, the edge of said base portion being curved and being in engagement with the said part circular edge of said guide member, said reference member being formed with a straight reference line extending in a radial direction from said point, and a cursor slidably mounted on said first member for movement in a direction normal to the said base line.

2,948,966
DRIER
William A. Hanson, 6178 Sepulveda Blvd., Van Nuys, Calif.
Filed Sept. 29, 1958, Ser. No. 763,929
6 Claims. (Cl. 34—1)



1. In a drier, the combination of: a cylindrical metallic drum; a variable speed power drive for said drum; means for heating the drum at a substantially constant rate of heat energy application; means for loading the material to be dried on one side of the drum; means for removing the material from the other side of the drum, the drum being capable of rotation with its outer surface travelling from the loading side to the removal side; a metal sheet of a relatively narrow width mounted at a small radial interval from the drum between the said loading and removal points; and a moisture sensing apparatus consisting of a low power, radio frequency oscillator, the said drum and metal sheet being included as a capacitor in the output circuit of said oscillator and the variable load output of said oscillator being the signal means of the sensing system and being connected to vary the speed of said variable speed power drive in inverse ratio to the moisture content of the material as it passes between said drum and metal sheet.

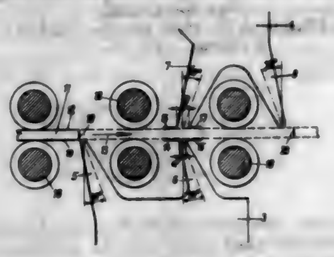
2,948,967
PROCESS FOR TREATING ALKALI METAL CARBONATES
Clyde B. Myers, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,257
9 Claims. (Cl. 34—12)

1. A process for treating dry, solid alkali metal carbonate particles to decrease their tendency to form cohesive masses which comprises the step of contacting a mass of said particles of a particle size not in excess of 12 mesh, not more than 5% of said particles exceeding 20 mesh, with at least 15% of said particles of a particle size not in excess of 200 mesh, with a gas comprising carbon dioxide, not more than 5% of said gas being water vapor, the remaining constituents of which gas are chemically inert with respect to the alkali metal carbonate, said contact being at a temperature below that at which calcination of said alkali metal carbonate occurs.

2,948,968
METHOD AND APPARATUS FOR REMOVING LIQUIDS FROM GLASS PLATES
Eberhard Breyer, Gartringen, Germany, assignor, by mesne assignments, to Firma Beka Lufttechnik G.m.b.H., Bielefeld, Germany, a company of Germany
Filed July 25, 1956, Ser. No. 600,027
Claims priority, application Germany Aug. 1, 1955
8 Claims. (Cl. 34—156)

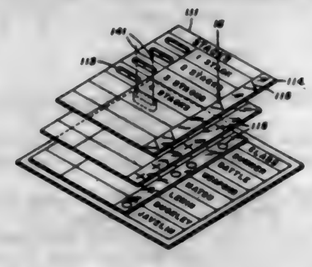
1. An apparatus for removing a liquid from non-hygroscopic plates comprising a plurality of feed rollers arranged in pairs vertically opposite to each other and adapted to engage the upper and lower sides of a plate to be dried for moving the same in one direction of travel, at least two nozzles at both lateral sides of at least one upper and lower feed roller, one of said upper and lower nozzles being disposed substantially vertically to each other and directed at an oblique angle opposite to said direction of travel, the other lower nozzle being directed similar to said first two nozzles but spaced from and dis-

posed in front of the first lower nozzle, while the other upper nozzle is directed at an oblique angle to and in the



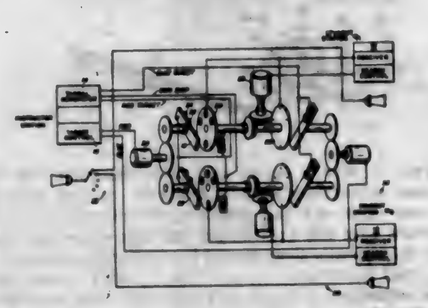
direction of travel and disposed behind the first upper nozzle, and means for blowing air currents through said nozzles upon said plate.

2,948,969
METHODS AND MEANS FOR SOLVING PROBLEMS BY PROGRESSIVE ANALYSIS
Charles G. Coleman, Jr., 4718 Park Lane SE., and Hank Weiner, 1911 18th St. SE., both of Washington 20, D.C.
Filed Mar. 23, 1955, Ser. No. 496,357
3 Claims. (Cl. 35—9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



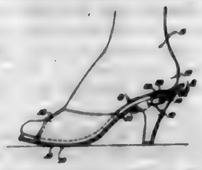
3. For use with a base having a guide means for holding a stack of cards and having indicia thereon corresponding to solutions for a class of problems, a plurality of cards each one correlated with a feature common to the solutions and problems and having a plurality of apertures therein and having a shape similar to that of the base, some of the apertures being arranged in a first row along one edge for cooperation with the base guide means whereby the card can be placed on the base in any one of several possible positions, the remainder of the apertures being arranged in a plurality of parallel arranged rows orthogonally positioned with respect to said first row; a plurality of identical markings, each marking representing said feature and located adjacent a respective aperture in said first row, designations representing variations of said feature, each designation located adjacent a respective aperture and in close proximity to a respective marking and encompassing at least one of the parallel rows; the number of and relative positioning of the apertures in each parallel row having a functional relationship with the encompassing designation, said relationship being such that when a first aperture adjacent a first designation representing a first feature variation cooperates with said guide means, the indicia on said base representing solutions which have the first feature variation are visible through the parallel row of apertures encompassed by the first designation and when a second aperture adjacent a second designation representing a second feature variation cooperates with said guide means the indicia on said base representing solutions which have the second feature variation are visible through the parallel row of apertures encompassed by the second designation.

2,948,970
SONAR TRAINER
Walter W. Carruthers, Los Angeles, and Claude L. Kirkpatrick, San Diego, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Nov. 23, 1948, Ser. No. 61,968
6 Claims. (Cl. 35—10.4)



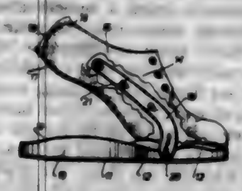
1. In combination in a search mechanism for a training device, a movable member, another member, a first pair of coils, a respective one of said first pair of coils mounted on each of said members whereby said coils pass near each other and have appreciable inductive coupling over a portion of the range of movement of said member, a second pair of coils, a respective one of said second pair of coils mounted on each of said members whereby they pass near each other and have appreciable inductive coupling at the center part of said portion of the range of movement, whereby each of said pairs of coils constitutes a separate signal channel, circuit connections for operating these two signal channels in parallel, and means for making the transmission and frequency discriminating characteristics of the two channels different.

2,948,971
FOOTWEAR
George O. Shecter, Los Angeles, and Irwin L. Hirsch, North Hollywood, Calif., assignors, by direct and mesne assignments, of one-twelfth to Jerome B. Rosenthal, one-twelfth to Samuel P. Norton, one eighteenth to Gordon MacRae, one-eighteenth to Doris Day Melcher, one-eighteenth to Martin Melcher, and one-sixth to Kirk Douglas
Filed Aug. 3, 1956, Ser. No. 601,964
9 Claims. (Cl. 36—2.5)



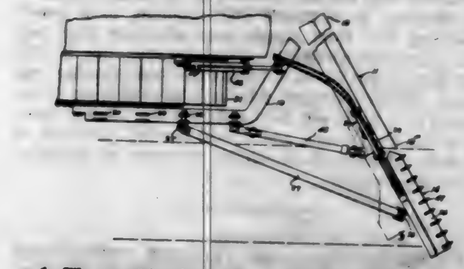
1. In footwear: a shoe having a heel portion; a magnet member; an armature member; one of said members being secured to the heel portion; the other of said members being adapted to be carried by the wearer of the shoe adjacent the underside of the heel of the foot in position for attraction by said one of said members.

2,948,972
SURGICAL FOOTWEAR
Aigot Andersen, 23 Henkelandsveien, Bergen, Norway
Filed Sept. 2, 1959, Ser. No. 837,727
Claims priority, application Norway Sept. 8, 1958
3 Claims. (Cl. 36—8.3)



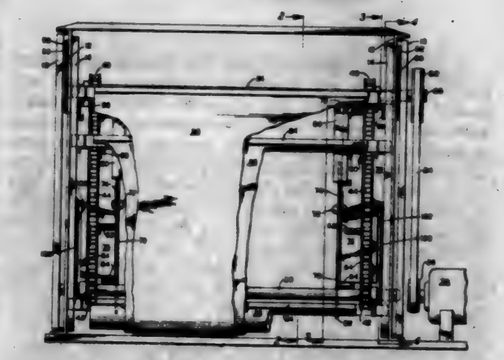
1. A surgical footwear comprising a substantially rigid bottom sole member, built-up pads arranged on the upper face of said bottom sole member according to a predetermined pattern to support the foot, an upper member shaped to conform with the outer shape of the foot, a weak and pliable bottom member forming a bottom sole of said upper member, a pair of rigid arms secured to the sides of said upper member and terminating in an end portion extending below the bottom member of said upper member beneath the ball of the foot, and a fulcrum connection between each of said end portions and said rigid bottom sole member, the fulcrum connections of said end portions being coaxial and extending transversely of the longitudinal direction of the foot beneath the ball portion thereof.

2,948,973
DITCH CLEARING ATTACHMENT FOR BULLDOZER BLADES
Clarence E. Magouirk and William Monroe Stone, both of P.O. Box 687, San Benito, Tex.
Filed July 18, 1956, Ser. No. 596,902
4 Claims. (Cl. 37—144)



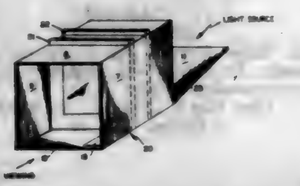
1. The combination with a mobile frame having a forward end, and an upstanding dozer blade positioned in front of and spaced from the forward end of said frame so that it extends in a direction crosswise of said frame with one of its ends near the forward end of said frame and the other of its ends remote from the forward end of said frame and connected to said frame for movement from the aforesaid position to a position in which said one end is remote from the forward end of said frame and said other end is near the forward end of said frame, of a ditch bank clearing attachment comprising a clearing blade positioned to one side of said dozer blade so that it is in longitudinal end to end alignment with said dozer blade, means connecting said clearing blade to said dozer blade for swinging movement from the longitudinal alignment position to a position forwardly of and at an angle with respect to dozer blade and for up and down movement with respect to said dozer blade, said means comprising a vertical pivot pin carried by the end of said dozer blade adjacent the end of said clearing blade, a coupling member connected to said pivot pin for swinging movement about said pin as an axis, a vertically extending plate carried by said adjacent end of said clearing blade, and a horizontal pivot pin carried by said coupling member and extending through said vertically extending plate.

2,948,974
MULTIPOSTER
Lafayette Chace Grover, San Francisco, and John H. Schmorde, Belmont, Calif., assignors to Multiposter, Inc., a corporation of Ohio
Filed May 8, 1959, Ser. No. 811,848
3 Claims. (Cl. 40—36)



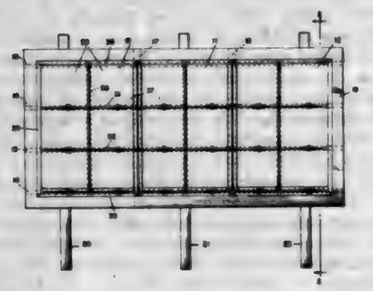
1. In a frame-mounted display device containing a show window and having a plurality of compacted, overlaying displays moveably restrained in and partially filling a first closed circuit therefor, said device having a motor-driven means to move said displays one at a time along an empty portion of said circuit, said empty portion being at the back of said device, each of said displays being mounted on a carrier therefor, said device having a pair of endless, flexible chains moveable over like paths extending across the empty portion of said circuit and across that portion of said circuit adjacent the display window, each of said chains being stretched between and mounted about sprocket-wheels keyed to shafts therefor, said shafts being mounted parallel to the display portion of said circuit said sprocket-wheels being mounted in planes perpendicular to the said display window whereby each of said chains describes a second circuit within the said first circuit of a shape similar to said first circuit but of lesser dimensions, the improvements comprising: a first means for securing in place at the base of said first circuit and thereafter releasing at a predetermined time an individual carrier, the first means comprising a first and a second pair of pivoted levers having detents at one end thereof, said levers being pivoted to the frame of said device, the said detents of each pair of levers cooperating with one another whereby to block the path of a carrier bar through the said first circuit in either direction when the said carrier bar is at a point adjacent the upward portion of the circuit over the rear of the device, a second means for advancing said carrier when said first means releases said carrier, said second means comprising dogs secured at corresponding points on each of said endless chains, said dogs being adapted to engage said carrier when said dogs are brought into close proximity therewith by the motion of said chains; third means mounted adjacent the top of said device for supporting a carrier bar carried by said dogs against the effects of gravity; and a fourth means carried by said chains for actuating said first means whereby to release said carrier at a point immediately preceding contact of said dogs with said carriers.

2,948,975
COLOR SLIDE VIEWING ACCESSORY
Irving H. Fowle, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 13, 1957, Ser. No. 696,086
1 Claim. (Cl. 40—106.1)



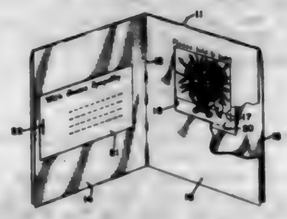
A collapsible viewing device for photographic transparencies which are placed in cardboard mounts and packed in a container for shipment comprising rectangular top, bottom and side walls formed of a single piece of flexible material bent along scorings therein to form an open ended rectangular hollow structure when in the erect position and a flat structure when collapsed, a pair of adjacent cutouts in one of said walls each of a size to accommodate one slide mount, a rectangular projection extending from and integral with one of said walls at one end of the structure, the flexible material having a score line at the juncture of the projection and the wall from which it extends whereby said projection may be positioned at an angle to the wall from which it extends, said projection having a light reflecting surface whereby when said projection is positioned at an angle to the wall from which it extends said light reflecting surface will reflect incident light falling thereon axially into the interior of said hollow structure for viewing a transparency and a removable diffusing screen of substantially the same size as the slide mount, positioned in one of said pair of cutouts between the slide mount and the reflecting surface, whereby the structure may be erected from its collapsed condition by pressing opposite edges thereof and the structure will be maintained in its erect condition by placing a slide mount in the cutout.

2,948,976
BILLBOARD CONSTRUCTION
William N. Miller, Jr., Greenville, S.C., assignor to Miller Outdoor Advertising Products Company, Inc., Greenville, S.C., a corporation of South Carolina
Filed Jan. 16, 1957, Ser. No. 634,511
3 Claims. (Cl. 40—125)



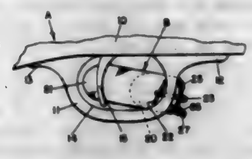
1. A light-weight panel assembly for use with a billboard and adapted to have advertising media posted directly thereon, said panel assembly comprising a rigid framework including border frame members and substantially vertical and substantially horizontal cross frame members defining a lattice separated by a number of open areas so as to provide a light-weight yet rigid structure, an individual sheet of thin, light-weight metallic material rigidly affixed to said framework and covering each of the open areas defined by said lattice, thereby defining a plurality of sheets mounted upon said framework, said sheets having forward faces disposed substantially in a single plane, whereby all of such sheets as mounted on the framework define a smooth even surface upon which advertising media may be posted, each of said sheets, by itself, being insufficiently rigid for posting advertising media thereon, each of said individual sheets having an offset flange formed along each marginal edge thereof, each of said frame members having an elongated continuous integral retaining lip formed thereon, each of the flanges on said sheets being in engagement with one of said lips whereby the sheets are positively supported on each side and held in taut rigid condition, and means carried by said framework for removably securing the same to an associated billboard support structure.

2,948,977
FLORAL GIFT PHOTOGRAPH AND SYMPATHY CARD FOLDER
Scott C. Meissner, Cardington, Ohio (% Photo Acknowledgement Service, Inc., Film Bldg., 2108 Payne Ave., Cleveland 14, Ohio)
Filed Oct. 1, 1954, Ser. No. 459,589
1 Claim. (Cl. 40—158)



A folder containing a reproduction of a floral gift in association with the identification of the donor, comprising adjoining front panels and adjoining back panels underlying said front panels, said adjoining front and back panels having fold lines therebetween, one of said front panels and its underlying back panel having registering window openings therein, a photographic transparency of a floral gift mounted over the window opening of the back panel, and a card bearing the name of the donor of said gift detachably mounted on the other of said front panels.

2,948,978
TRIGGER GUARD WITH TRIGGER PROTECTOR
Robert E. Salverda, 2118 N. Dale St., St. Paul 13, Minn.
Filed Sept. 4, 1958, Ser. No. 759,920
3 Claims. (Cl. 42—1)



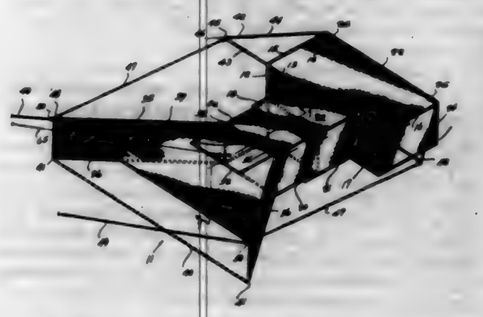
1. A trigger protector for use in conjunction with a trigger guard of loop shaped form, the protector including a body having a cross member designed to extend transversely of the trigger guard at the forward end thereof and arms at opposite ends of said cross member designed to extend rearwardly on opposite sides of said trigger guard, an elongated clamping plate extending through the trigger guard and of lesser length than the distance between said arms for securing said cross member to the forward end of the trigger guard, a clamping bolt on each side of said guard engaging both said cross member and said plate for retaining said plate in a substantially parallel relationship with said cross member while drawing said plate toward said cross member for the purpose of securing same, and one of said arms being relatively long to prevent insertion of a finger into the trigger guard from one side thereof, and the other of said arms being relatively shorter to permit insertion of a finger into the trigger arm to engage the trigger therein.

2,948,979
BAITING DEVICE
Harry W. Kulp, 1350 Quarry Lane, Lancaster, Pa.
Filed Aug. 18, 1959, Ser. No. 834,623
6 Claims. (Cl. 43—4)



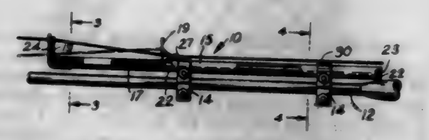
1. A device for baiting a hook on a fishing line comprising a needle having a bait receiving end, said end having an opening to receive the point of the hook, and means mounted on said needle at a position spaced axially from said one end for releasably clamping said line taut to thereby hold the hook point in said opening to facilitate the sliding of the bait from the needle to the hook.

2,948,980
COMMERCIAL SHRIMP NET
Joseph T. Worcester, Box 351, Fairhope, Ala.
Filed Oct. 30, 1959, Ser. No. 849,774
6 Claims. (Cl. 43—9)



1. A shrimp trawling device comprising a main receptacle including a rigid framework and foraminous mesh material covering said framework and defining an enclosure, said mesh material being constructed and arranged to define relatively elongated apertures therein of sufficient size to allow the passage of small fish therethrough, an inlet duct communicating with one wall of said main receptacle, an inlet conduit member telescopically received in said inlet duct, a forwardly flaring intake conduit connected to the forward end of said inlet conduit member, means limiting forward extension of said intake conduit with respect to the main receptacle, and a flexible drag member secured transversely across the bottom portion of the forward end of said intake conduit.

2,948,981
FISHING AID
Walter Kowalczyk, Wyandotte, Mich., assignor to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Nov. 7, 1957, Ser. No. 694,949
1 Claim. (Cl. 43—16)



A fishing pole comprising, in combination, an elongated rod, a handle and reel carried at one end of said rod, a flexible fishing line connected to said reel and extending along substantially the entire length of said rod, tension sensitive means carried on said rod intermediate the ends of said rod, said tension sensitive means comprising a tube having a longitudinal slot spaced above and extending substantially parallel to said rod, a loop at the rearward extremity of said slot, a releasable friction clamp extending substantially perpendicular to said tube adapted for engaging said line and being slidably supported for longitudinal movement within said slot, elastic means acting between said clamp and said tube urging said clamp toward said one end of said rod, the opposite forward transverse end of said tube defining a pair of bearing surfaces, one on each side of the open end of said slot selectively and slidably maintaining said clamp in an angularly rotated adjusted position about the longitudinal axis of said tube and out of communication with said slot, one of said surfaces being substantially perpendicular to said slot and the other surface having a slightly curved edge, a guide arm mounted on the said opposite end of said tube extending outwardly past the surfaces sufficiently to allow movement of said clamp between the arm and said surfaces and being substantially perpendicular to the longitudinal axis of said tube and in alinement with said slot, said line extending from the reel, passing through said loop and connected to said clamp and continuing outwardly on the side of the arm opposite to said clamp in order for an outward pull on the line to effect rotation of said clamp into communication with said slot for inward movement by said elastic means thereby jerking said line.

2,948,982
FISH LURES
Gerald G. Galpin, 144 Elm St., Montpelier, Vt.
Filed May 1, 1957, Ser. No. 656,442
5 Claims. (Cl. 43—42.15)



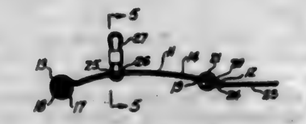
1. In a fish lure, first and second body members of approximately the same cross sectional size and shape and pivotally interconnected in end-to-end but offset and overlapping relationship, the leading end of each member including a bevelled face disposed approximately in a plane at right angles to the plane of the other member when the axes of the two members are parallel.

2,948,983
FISH LURE
Cecil O. Locklear, 2409 Chapel Hill Road, Durham, N.C.
Filed May 29, 1959, Ser. No. 816,807
6 Claims. (Cl. 43—42.18)



1. A fish lure comprising a fishhook including a shank, a barbed point, a bend portion disposed between an end of the shank and the barbed point, and an eye located at the opposite end of said shank and disposed approximately coplanar with the bend of the hook, and a lure body formed from a bar including a forward portion and a rear portion, said bar portions each being substantially flat and forming an obtuse angle with one another, said forward bar portion being longer than the rear bar portion and having an opening adjacent a forward end thereof, said hook eye having a part interengaged with the pening to position another part of the hook eye beyond the forward end of the bar, said forward bar portion being disposed beneath the hook shank and the rear bar portion extending upwardly therefrom and having an outwardly opening notch in which a part of the fishhook is clamped for anchoring said lure body immovably to the hook.

2,948,984
FISH LURE
Walker Crawford, Rte. 1, Box 894, Belmont, N.C.
Filed Sept. 5, 1958, Ser. No. 759,228
1 Claim. (Cl. 43—42.39)



A fish lure comprising a body portion which is oval in outline, straight in transverse cross section, and arcuate in longitudinal cross section, the forward end of said body tapering inwardly and being rolled along the transverse axis to form a circular weight receiving portion, a lead plug in said weight receiving portion, said body having a first pair of aligned openings therein along its longitudinal axis adjacent its rear end, a gang hook having a stem and an eye on said stem, a ring in said first pair of openings engaging said eye whereby said stem engages the underside of the rear end of said body to limit movement of said gang hook in an upward direction, said body having a second pair of openings therein aligned with said first pair of openings at substantially the point of balance of said body, a snap connection engaged in one end in said second pair of openings, a swivel connected to the other end of said snap connector, and a line secured to said swivel.

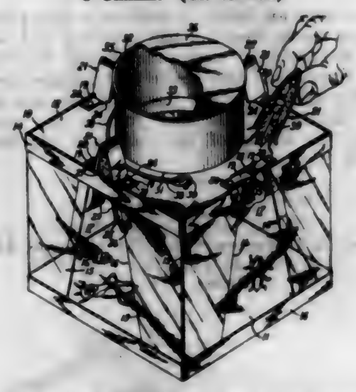
2,948,985
TRAP-TYPE FISH HOOK
Ira D. Kiser, Rte. 2, Prescott, Ark.
Filed July 1, 1957, Ser. No. 669,178
4 Claims. (Cl. 43—43.4)

1. A trap-type fish hook having parts forming a normally-closed elongated, wire loop including: a U-shaped shank having arms of unequal length, the longer arm forming a stem, a pointed bill and barb upon the shorter arm; a coil spring being integrally formed upon the outer portion of the longer stem arm; the wire of the coil being continued around as an integral extension generally parallel to the stem of the shank, the extension at the outer end thereof having an integrally formed hood portion adapted to overlie the bill from the outside of the loop to thereby close said loop, said spring serving



to urge the hood against said bill; a spreader member, for the coil end of the loop, having a pair of eyes formed on the ends thereof for encircling the extension and the stem end of the shank respectively and slidable freely thereupon; a pair of rings set upon the stem of the shank on either side of the spreader eye for limiting the movement of the spreader along the stem; and means for securing a line to the spreader.

2,948,986
BAIT HOLDER AND DISPENSER
Carl S. Williamson, Seminole Ave., Orangeburg, S.C.
Filed July 8, 1957, Ser. No. 670,559
5 Claims. (Cl. 43—55)

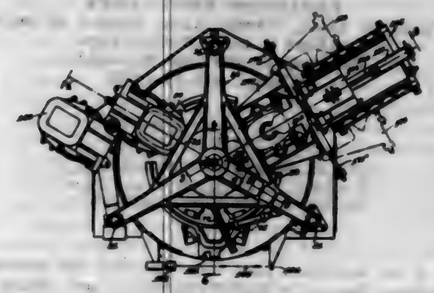


1. A bait carrying and dispensing device comprising a receptacle body portion adapted to contain bait, said body portion including side wall means upwardly tapering areas constructed so that the bait may readily climb thereon and slick areas on opposite sides of said tapering areas upon which the bait cannot climb, said body portion having a top wall provided with openings adjacent to the climbing areas of the side walls, and removable dispensing tweezers positioned within said openings and having sides between which the bait may climb into position for being individually dispensed by said tweezers.

2,948,987
SELECTIVE GAMETOCIDAL PROCESS
Le Roy Powers, Fort Collins, Colo., and John W. Dudley, Raleigh, N.C., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Filed June 3, 1959, Ser. No. 817,959
14 Claims. (Cl. 47—58)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A selective gametocidal process for inducing male sterility in cultivated forms of the species *Beta vulgaris*, L. which comprises planting at least two populations of cultivated forms of the species *Beta vulgaris*, L. in proximate relationship with each other but sufficiently segregated to permit treatment of a selected population without substantial exposure of the other population, said treatment comprising applying to said selected population before flowering thereof at least one compound which in water-solution forms anions of a chlorinated aliphatic carboxylic acid that contains from three to four carbon atoms and from two to four chlorine atoms at a concentration of from 0.1 to 4.0% by weight of said compound in an inert carrier and at a total dosage of from one pound to seventy-five pounds per acre, said dosage being less than that which causes serious plant injury or serious seed impairment, continuing growth of said population with development of flowers thereon, fertilizing flowers of the treated plants by the application of pollen from untreated plants, allowing the seed to mature on said treated plants, and collecting the seed therefrom.

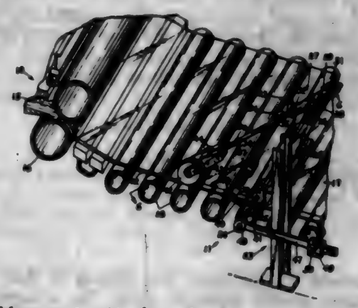
2,948,988
MACHINE FOR SEALING FACE PLATES TO CATHODE-RAY TUBES
William A. Stutzke and Ted C. Sheets, Toledo, Ohio, assignors to Kimble Glass Company, a corporation of Ohio
Filed Aug. 22, 1956, Ser. No. 605,676
3 Claims. (Cl. 49—1)



1. In an apparatus for forming a composite glass article from a plurality of glass parts, a parts carriage adapted to be indexed rotationally for conveying juxtaposed parts to and from a welding station, a radial electrode carriage linearly movable radially of said parts carriage and a transverse electrode carriage movable transversely of the parts carriage, electrodes carried by one of said electrode carriage for contact with said parts at said station, actuatable power means for indexing said parts carriage, separately actuatable power means for said radial carriage and said transverse carriage, respectively, and means interposed in the path of movement of said transverse carriage for preventing movement of said radial carriage until said transverse carriage has been actuated and means interposed in the path of movement of the radial carriage to prevent movement of the parts carriage from the station until said electrodes are entirely removed from contact with said parts.

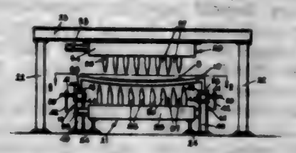
2,948,989
APPARATUS FOR PRODUCING SHEET GLASS
Delmar E. Carney, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Oct. 22, 1956, Ser. No. 617,643
6 Claims. (Cl. 49—3)

6. An apparatus adapted to engage the marginal portions of an endless plate glass ribbon which is being continuously carried along a continuous pathway from plate glass ribbon forming rollers to an annealing lehr, which apparatus includes, glass shaping means disposed along opposite sides of the plate glass ribbon, means mounting said glass shaping means in bearing contact with the plate glass ribbon along a line substantially transverse to the direction of movement of the plate glass ribbon along the continuous pathway, said mounting means including first adjusting means shifting said glass shaping means transversely of the plate glass ribbon, and adjusting means inclining the transverse line of contact, between the plate



glass ribbon and said glass shaping means, at an acute angle with respect to the substantially flat surface of the plate glass ribbon between the edges of the plate glass ribbon so that the edge thickness of at least a portion of the plate glass ribbon along both edges, where contacted by the glass shaping means, will be less than the thickness of the plate glass ribbon between the edges, and means operatively connected to said mounting means for controlling the amount of pressure exerted by said glass shaping means on the plate glass ribbon.

2,948,990
TEMPERING OF SHEET MATERIAL
Gerald White, Rossford, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed June 14, 1955, Ser. No. 515,274
4 Claims. (Cl. 49—45)

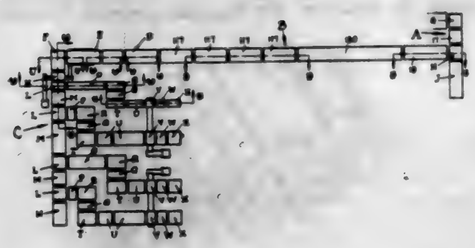


1. Apparatus for treating sheets or plates, comprising a support for holding a sheet to be treated, means for directing a fluid medium onto a surface of said sheet, said last named means including a relatively long slot through which the fluid medium may pass, deflecting fins rigidly mounted adjacent said slot for deflecting the fluid medium away from its normal path toward said sheet after it passes through said slot, and means for creating relative movement between said sheet support and said slot in a direction substantially parallel to said slot to cause a fluid medium passing through said slot to contact the surface of said sheet.

2,948,991
AUTOMATIC GLASS CUTTING MACHINE
Emmett L. Walters and Alfred H. Miller, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Oct. 22, 1956, Ser. No. 617,304
14 Claims. (Cl. 49—48)

1. A sheet glass cutting machine adapted to separate glass blanks into a plurality of individual cut portions

which machine includes, a primary cutting unit adapted to score the blanks longitudinally with respect to their path of movement, a breaking unit adapted to break said scored blanks into individual cut portions, first conveying means adapted to transport the blanks through said primary cutting unit and to said breaking unit, a plurality of secondary cutting units adapted to score the individual



cut portions longitudinally with respect to their path of movement, second conveyor means for selectively conveying cut portions of the glass sheets to the secondary cutting units from said breaking unit and means automatically controlling the movement of the glass sheets through said cutting units, breaking unit and conveyor means.

2,948,992
GLASS COMPOSITIONS AND GLASS-TO-METAL SEALS

Lucy Florence Oldfield, Harrow Weald, England, and John Henry Partridge, deceased, late of Pinner, England, by Ethel Partridge and Michael John Anthony Partridge, administrators, Pinner, England, assignors to The General Electric Company Limited, London, England, a British company

Filed Feb. 21, 1958, Ser. No. 716,561
Claims priority, application Great Britain Feb. 21, 1957
8 Claims. (Cl. 49—92.5)

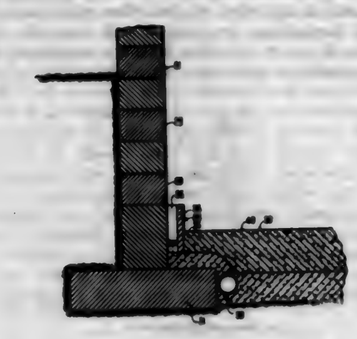
1. A glass for sealing to nickel and to metals and alloys having thermal expansion characteristics such that the mean coefficients of thermal expansion over the temperature ranges of 20° C. to 450° C. and 20° C. to 500° C. do not differ from those of nickel over the same temperature ranges by more than 0.5×10^{-6} cm./cm./° C., which has a composition, by weight, in the range of 45% to 50% silica (SiO_2), 12% to 22% sodium oxide (Na_2O), 0 to 10% potassium oxide (K_2O), 20% to 30% alkaline earth metal oxides (BaO+SrO+CaO) including only 0 to 5% calcium oxide, 0 to 2% fluorine (F_2), 0 to 2% alumina (Al_2O_3), 0.5% to 10% zinc oxide (ZnO), and 0.5% to 3% of one of the oxides selected from the group consisting of zirconia (ZrO_2) and titania (TiO_2), the total content of alkali metal oxides (Na_2O+K_2O) being in the range of 18% to 22%.

2,948,993
DRAIN CONSTRUCTION FOR WALLS

Angelo P. Marchi, 1407 Sunbury Road, Columbus, Ohio

Filed June 28, 1956, Ser. No. 594,500
2 Claims. (Cl. 50—114)

1. A side wall and floor construction for basements comprising vertical side walls defining the basement area with each of said side walls having outer and inner surfaces thereof, a vertical passage-forming, water-impermeable member positioned in laterally spaced relation to the inner surface of at least one of said side walls adjacent the bottom edge thereof, a plurality of spacer means in laterally spaced relation connecting said passage-forming member to the inner surface of said side wall thereby defining a plurality of vertical passageways spaced along the inner surface of said wall, and a poured concrete floor, the side edge of said floor being in en-

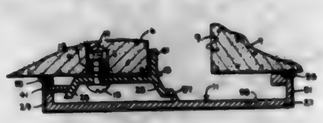


gagement with the free face of said passage-forming member with the top surface of said floor lying below the top free edge of said passage-forming member.

2,948,994
EXPANSION JOINT COVER

Wenzel W. Thom, Wichita, Kans., assignor of one-half to Cecil D. Jones, Wichita, Kans.

Filed Sept. 16, 1957, Ser. No. 684,126
6 Claims. (Cl. 50—173)

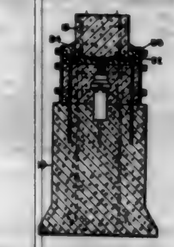


1. An expansion joint cover assembly for structural sections disposed in spaced relationship and defining an elongated joint therebetween, said assembly comprising an elongated, relatively rigid base member adapted to be mounted on the outer face of one of the structural sections adjacent the margin thereof, said base member being provided with spaced, longitudinally extending first and second member portions projecting outwardly therefrom and from each other; an elongated, relatively rigid cover member overlying said base member and adapted to overlie the joint between said structural sections and a longitudinal segment of the other structural section in proximity to said joint, said cover member being provided with a plurality of spaced, inwardly projecting, longitudinally extending member portions, a pair of said member portions on the cover member being positioned outwardly of and in proximity to corresponding first and second member portions on the base member, one of said pair of member portions on the cover member being positioned at an angle to complementally engage the second member portion on said base member in slidable and interlocking relationship thereto; and connector means on the other of said pair of member portions on the cover portion in proximity to the first member portion on said base member and disposed to releasably engage the said first member portion and thereby lock the cover member to said base member, said cover member having a third inwardly projecting, longitudinally extending member portion spaced transversely of the cover member from said pair of member portions thereon and adapted to slidingly overlie said segment of said other structural section.

2,948,995
CONNECTIONS BETWEEN REINFORCED, PRE-CAST CONCRETE STRUCTURES AND METHOD OF MAKING SAME

Myles H. R. Cegan, Houston, Tex., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Feb. 24, 1953, Ser. No. 338,293
20 Claims. (Cl. 50—179)

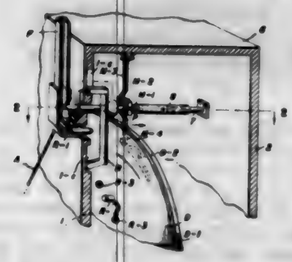


13. The combination uniting separately cast, metal-reinforced concrete structures which comprises: a first and a second pre-cast concrete structure, each said structure having a bounding surface and the said bounding surfaces of the structure being situated in opposed and spaced relation, each of said structures having a plurality of metal reinforcing rods embedded therein and projecting beyond said surface thereof towards the other structure; a firm connection between each of the said reinforcing rods projecting from one structure and a reinforcing rod projecting from the other structure adapted to transmit tensile stress; and a firm, essentially non-plastic and cohesive, load-sustaining material consisting essentially of hardened hydraulic cementitious aggregate which contains hardened expanding cement extending continuously between said surfaces and surrounding the said projecting rods and the said connections thereon, said material being under compressive stress and said connected projecting reinforcing rods being under tensile stress.

2,948,996
APPARATUS FOR STRING POLISHING WORK PIECES

Richard F. Rule, Keene, N.H., assignor of ninety percent to Eva A. Rule, Keene, N.H.

Filed Feb. 24, 1959, Ser. No. 795,007
6 Claims. (Cl. 51—145)

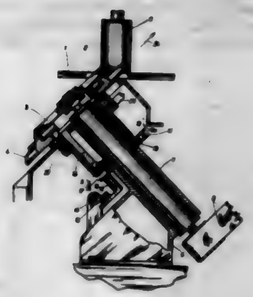


1. In an apparatus for string polishing work pieces, the combination of a casing; the drive disc journaled in said casing; a mandrel rotatably mounted in said casing, and having one end projected from said casing; a hopper for the work pieces, mounted above said casing and having a feed chute with a discharge throat; means actuated by said disc, adapted to move said chute relative said mandrel to mount a work piece in said throat on said end of said mandrel; means, actuated by said disc, adapted to intermittently rotate said mandrel to spin the work piece mounted thereon; a pair of forwarding rollers mounted in said casing, intermittently rotated by said disc, and adapted to draw the string into the apparatus; a second pair of forwarding rollers mounted in said casing, intermittently rotated by said disc, and adapted to draw the string out of the apparatus, the string being led from said first pair of rollers, over the work piece on the mandrel, to said second pair of rollers, and being held under tension against the work piece to polish it when the mandrel spins the work piece; and means intermittently actuated by said disc, adapted to oscillate the portion of the string in the apparatus relative the spinning work piece.

2,948,997
ADJUSTING DEVICE FOR GRINDING DISCS

Alfred K. Seirig, Dusseldorf, Adolf Enders, Lubeck, and Hans Joachim Strunck, Koln, Germany, assignors to Wernicke & Co. K.G., Dusseldorf-Eller, Germany

Filed Feb. 4, 1959, Ser. No. 791,990
Claims priority, application Germany Feb. 6, 1958
5 Claims. (Cl. 51—165)



1. In an adjusting mechanism for two grinding discs, especially for use in connection with grinding devices for spectacle glasses: a first grinding disc, first power conveying means drivingly connected to said first disc and including a supporting member firmly connected to said first disc for rotation therewith, said first power conveying means being operable to rotate said first disc, two eccentric members adjustably arranged one within the other, one of said eccentric members freely rotatably supporting said supporting member, a second grinding disc, second power conveying means drivingly connected to said second grinding disc and including a rotatable member rotatably mounted on the other one of said eccentric members, and link means respectively connected to said eccentric members and operable to adjust said eccentric members to thereby vary the positions of the first and second grinding discs relative to each other.

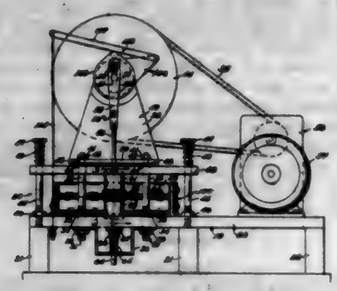
2,948,998
PACKAGING

Fred B. Pfeiffer, 270 Ferndale Ave., Akron, Ohio, assignor of one-half to Jesse R. Crossen

Filed Feb. 17, 1959, Ser. No. 793,730
13 Claims. (Cl. 53—28)

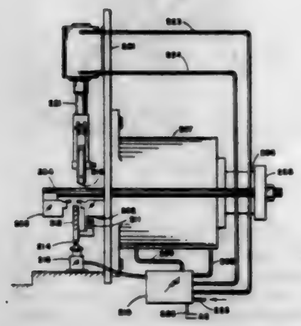
2. A method of packaging which includes the steps of forming a plurality of pockets in a sheet of wrapping material, concurrently wrinkling and returning the walls of the pockets to the plane of the sheet, moving said

sheet with the pockets formed therein to a wrapping station, re-establishing the pockets, and inserting material



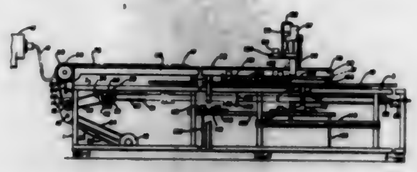
to be packaged into successive said pockets as they come to said station.

2,948,999
MANUFACTURE OF SUTURE PACKAGES
Earle George Schlayer, Henry Gegner, and Leonard William Ballwig, Danbury, and Jerome R. Sheridan, Newtown, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Sept. 24, 1957, Ser. No. 685,935
17 Claims. (Cl. 53—39)



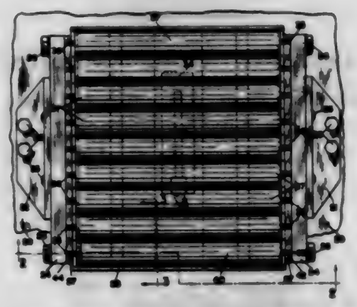
1. The method of sealing a volatile liquid containing beaded-edge envelope of thermoplastic heat-sealable, oriented, fusible, resin composition film which comprises: placing a liquid-containing fused-beaded-edge envelope in which the liquid in the envelope substantially fills the envelope and rises by capillarity adjacent the fused-beaded-edges to interfere with heat sealing, said envelope being closed on three sides, in an open-end up position, crushing together a narrow zone of said envelope, with the open lips of the envelope extending slightly above the level of the crushed zone, with sufficient pressure that the edge beads of the envelope are crushed and the two facing films of the envelope are compressed together in liquid-tight relationship, thereby cutting off the capillary rise of liquid, but not sufficient pressure to cut through and sever the films, and while maintaining the films so compressed together, directing radiant energy against the extending lips of the envelope to evaporate any liquid above the crushed zone and to cause the lips to melt together and form a sealing bead, then cooling said sealing bead until solidified, and releasing the sealed envelope.

2,949,000
APPARATUS FOR RECEIVING LINEAR MATERIAL FROM EXTRUDING OR SIMILAR MACHINES
Smith M. Johnson, Pawling, N.Y., and John A. Farnwald, Middlefield, Ohio, assignors to Imperial Manufacturing and Engineering Company, Middlefield, Ohio, a corporation of Michigan
Original application June 26, 1956, Ser. No. 593,872. Divided and this application Feb. 24, 1959, Ser. No. 796,195
9 Claims. (Cl. 53—123)



1. In apparatus of the character described, a supporting structure, a carriage reciprocable along said structure and incorporating a receiver for linear material, means for propelling the carriage forwardly at one speed and for propelling it rearwardly at a considerably increased speed, a conveyor arranged with its discharge end over the path of movement of the carriage for delivering linear material to the receiver, an extension supported for reciprocation beneath the discharge end of the conveyor, and means for projecting the extension beyond said end of the conveyor while the carriage is moving rearwardly and for retracting the extension while the carriage is moving forwardly.

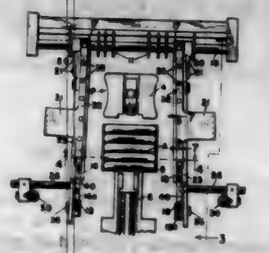
2,949,001
HEATER FOR WRAPPING MACHINE
Michael Zwarycz, Wilbraham, Mass., assignor to Crompton & Knowles Packaging Corporation, Holyoke, Mass., a corporation of Massachusetts
Filed Mar. 3, 1958, Ser. No. 718,775
8 Claims. (Cl. 53—141)



8. In a wrapping machine to operatively place a thermoplastic wrapper around a package movable from a wrapped package receiving station to a wrapper heat sealing station having a series of rotatable heating rolls to heat seal the wrapper in position around said package, a hollow rotatable porous cylinder between said receiving station and said heating rolls and containing a lubricant for seepage through the pores of said cylinder to the periphery thereof, said cylinder and said rolls being rotatably mounted so as to have their peripheries extend into and maintained in a path traversed by one side of said package to engage said rolls when the package moves from said receiving station to said sealing station, and means to move said package along said path to cause said one side to first engage and rotate said cylinder to effect a deposit of lubricant on said wrapper from said

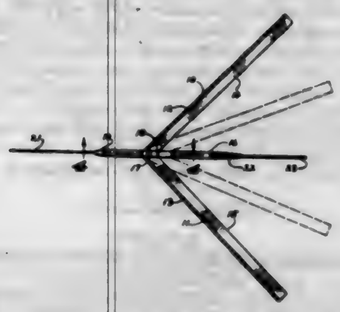
periphery and then to engage and rotate the heating rolls to deposit a thin film of lubricant on the peripheries thereof from said wrapper to prevent the latter from sticking to the heating rolls while said package is moving therealong during a heat sealing operation.

2,949,002
WRAPPER FEED MECHANISM
Michael Zwarycz, Wilbraham, Mass., assignor to Crompton & Knowles Packaging Corporation, Holyoke, Mass., a corporation of Massachusetts
Filed Apr. 22, 1959, Ser. No. 808,218
10 Claims. (Cl. 53—389)



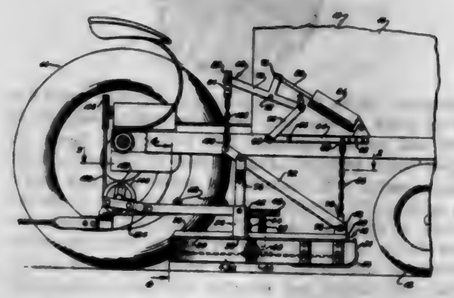
1. In a wrapping machine having a vertically movable elevator for an article to be wrapped and having means to supply sheets of wrapping material to be moved from a feeding station to a wrapping position over the elevator, a pair of endless flexible conveyors moving from the feeding station along diverging paths effective to carry a sheet thereon to the wrapping position, the conveyors having parts thereof in engagement with the sheet inclined downwardly and away from each other, and weighted means holding the sheet down on said conveyors and said inclined parts thereof.

2,949,003
UNDERWATER WEED CUTTER
Merrill B. Wilcox, 809 Hilledale Ave., Minneapolis, Minn.
Filed Jan. 16, 1959, Ser. No. 787,244
2 Claims. (Cl. 56—8)



1. An underwater plant cutter including an elongated guide element having a rearwardly extending vertical stabilizing fin extending along the longitudinal axis thereof, said guide element being provided with a centrally located horizontal slot extending therethrough, a pivot pin mounted in said guide element and extending vertically through said horizontal slot at a forward portion thereof, a pair of flat, elongated knives each pivotally mounted on said guide element about said pivot pin, said knives each extending outwardly and rearwardly from said pivot pin along opposite sides of said guide element, each of said knives having a sharpened leading edge and a trailing edge, a replaceable, frangible, destructible shear pin supported in said guide element and extending through said horizontal slot to be in adjacent contacting relationship to each of said trailing edges of said knives, and a towing line attached to a forward end of said guide element along the longitudinal axis thereof.

2,949,004
MOWER LIFT MEANS
William L. Jones, Selma, Ala., assignor to Bush Hog Manufacturing Company, Inc., Selma, Ala., a corporation of Alabama
Filed Nov. 27, 1957, Ser. No. 699,323
4 Claims. (Cl. 56—25.4)

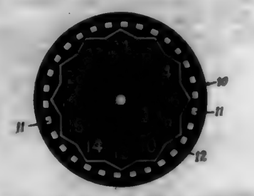


1. A device for attachment to a tractor and adapted to adjust the height of a mower suspended below the tractor between the front and rear wheels thereof, said device comprising a lower lift arm having a pivot point intermediate its ends for pivotal attachment to a tractor, an upper lift arm positioned above said lower lift arm and having a pivot point intermediate its ends for pivotal attachment to a tractor, the pivot point of said upper lift arm being rearwardly displaced from the pivot point of said lower lift arm, a connecting link extending between the proximate ends of said upper and lower lift arms and pivotally attached thereto, a first chain extending from the end of said lower lift arm remote from said end attached to said connecting link downwardly for attachment to a mower, a bracing bar secured to the lower end of said first chain and extending rearwardly and upwardly, a pair of struts secured to the rearward portion of said bracing bar and extending downwardly for attachment to a mower, a second chain extending from the end of said upper lift arm remote from said end attached to said connecting link downwardly to and secured to the rearward end of said bracing bar, and means secured to said upper lift arm for engagement by a source of forward torque on a tractor, whereby the application of a forward torque to said engagement means causes a pivoting of said lift arms to effect a simultaneous raising of said first chain and said pair of struts.

2,949,005
CLOCK DIAL FOR REDUCED PHOTOGRAPHING
Andre R. Brault, Merrick, N.Y., assignor to OPTOmechanisms, Inc., Mineola, N.Y., a corporation of New York
Filed Nov. 17, 1958, Ser. No. 774,545
1 Claim. (Cl. 58—127)

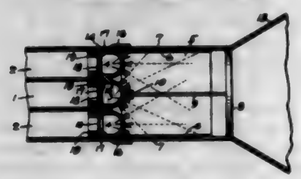
A clock dial for a clock for use with the photographing of the screen of a cathode ray tube with a substantial reduction in its size for photographing the same without obliteration of the markings comprising a dial having an outer edge and a zero position, a band of 30 rectangular figures of solid color circularly spaced in a band adjacent the outer edge of the dial and spaced apart a circumfer-

ential distance equal to the circumferential dimension of the rectangular figures, the leading edge of the first rectangle being at zero position on the dial, the rectangular figures having a substantial radial depth and an inward edge, the rectangular figures having a leading edge and a trailing edge in a clockise direction, a series of outwardly directed arrows radially inwardly of the band of rectangular figures extending circularly of the dial and at or adjacent to the inner edge of the rectangular figures, each alternate arrow having its point in alignment with the leading edge of the first and every sequential fifth



rectangular figure, each intermediate alternate arrow having its point in alignment with the trailing edge of the third and every sequential fifth rectangular figure, the arrows being angularly directed lines of substantial width interconnected with the adjacent arrow lines and providing an inwardly directed point at the midpoint of the outwardly directed arrows and forming a continuous serrated figure, and numerals from 2 to 24 circumferentially around the dial progressing in multiples of two and adjacent each arrow, and the dial being of a substantially contrasting dark color from that of the rectangular figures.

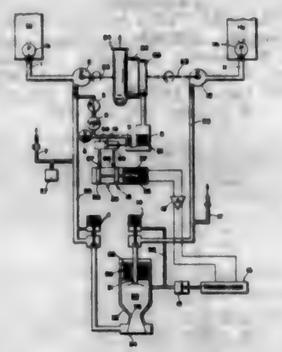
2,949,006
IGNITION SYSTEM FOR ROCKET MOTORS
Kenneth C. Halliday, Jr., Port Washington, N.Y., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 14, 1955, Ser. No. 481,981
7 Claims. (Cl. 60—35.4)



2. The method of employing a substantially non-fluid organic hypergole having a viscosity of greater than about 250 centistokes at 70° F. for initiating the ignition of non-hypergolic hydrocarbon fuels comprising applying said hypergole to the contact surface of a reaction motor combustor and impinging jets of a non-hypergolic hydrocarbon fuel nitric acid oxidizer onto said hypergole, said hypergole consisting of the polymerization product of a catechol selected from the group consisting of allyl catechol, diallyl catechol and pyrocatechol and a compound selected from the group consisting of tetramethyl dihydro pyridine, pentamethyl tetrahydro pyrimidine, pyrrole, pyrrolidine, cumidine, allyl amine and 2-amino-3-methyl pyridine.

2,949,007
ROCKET ENGINE FEED SYSTEM
David E. Aldrich, Whittier, and André P. Bignon, Reseda, Calif., assignors to North American Aviation, Inc.
Filed Feb. 24, 1955, Ser. No. 490,518
4 Claims. (Cl. 60—35.6)

1. A rocket engine feed system comprising a monopropellant, a liquid propellant, a normally closed monopropellent valve actuatable upon the attainment of a predetermined monopropellent pressure, a decomposition means within a rocket engine thrust chamber, said monopropellent valve allowing continuous flow of all increments of said monopropellant through said decomposition means, means consisting of the decomposition prod-



ucts of said monopropellant to build up pressure in said thrust chamber, a liquid propellent valve actuatable to an open position upon the attainment of a predetermined pressure in said thrust chamber, and means downstream of said liquid propellant valve to inject said liquid propellant into said thrust chamber.

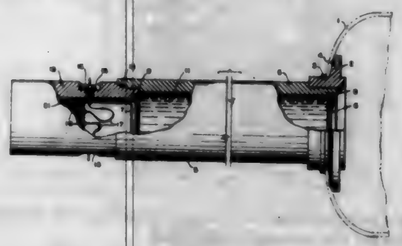
2,949,008
RESIDUAL FUELS
Albert G. Rocchini, Springdale, and Charles E. Trautman, Cheswick, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Filed Jan. 29, 1958, Ser. No. 711,829
6 Claims. (Cl. 60—35.6)

6. In a gas turbine plant in which a fuel oil containing vanadium is burned and which includes heat resisting metallic parts exposed to hot combustion gases and liable to be corroded by the corrosive vanadium-containing ash resulting from combustion of said oil, the method of reducing said corrosion which comprises introducing into said plant upstream of said parts a small amount of a vanadium-free mixture of a magnesium compound and an alkali metal compound, the amount of said magnesium compound being sufficient to yield about 1 atom weight of magnesium per atom weight of vanadium in said fuel oil and the amount of said alkali metal compound being sufficient to yield about 1 atom weight of alkali metal per atom weight of vanadium in said fuel oil.

2,949,009
VARIABLE THRUST SOLID PROPELLANT ROCKET MOTOR
Charles L. D'Ooge, Citrus Heights, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Apr. 20, 1959, Ser. No. 807,738
1 Claim. (Cl. 60—35.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

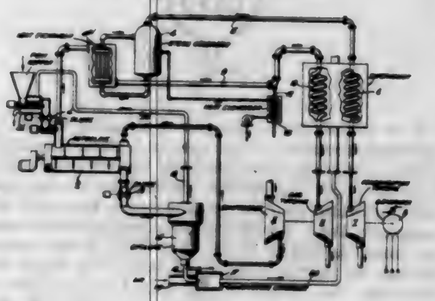
In combination: a solid propellant rocket motor having a casing in which are defined a longitudinal axis and a casing head; an adaptor member secured to said casing head and having a cylindrical passageway extending through said casing head and substantially in alignment with said axis; a quenching structure of generally cylindrical configuration, directly and threadedly engaged at one end with said adaptor member, extending away from said casing in alignment with said axis, and having

a pressurizing section at the other end thereof; said pressurizing section containing a multi-perforated gas-generator grain and a multiplicity of electrical squibs distributed therein, for extremely rapid development of pressure when a squib-firing voltage is applied, and said pressurizing section having external terminals leading to said squibs; said quenching structure having a cylindrical bore therein extending from said pressurizing section along said axis and through said adaptor member into



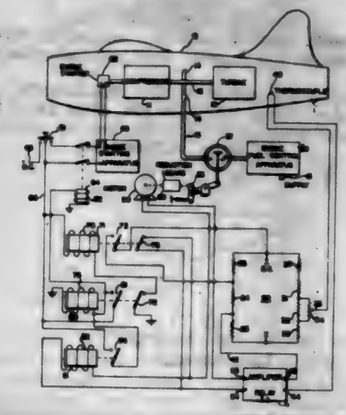
unrestricted direct communication with said casing; a pair of pressure-rupturable sealing disks closing off said cylindrical bore at said pressurizing section and at said adaptor member and defining therebetween a sealed container; and a quenching liquid stored in said sealed container; whereby to provide a burst of quenching liquid into said rocket motor casing and correspondingly terminate rocket motor thrust upon application of a firing voltage to said terminals.

2,949,010
CONTINUOUS METHOD OF BURNING HIGHLY HYDROUS ORGANIC MATERIALS
Karl Nicolaus Cederquist, Falun, Sweden, assignor to Stora Kopparbergs bergslags Aktiebolag, Falun, Sweden, a joint-stock company limited
Filed Mar. 24, 1955, Ser. No. 496,624
Claims priority, application Sweden Oct. 11, 1954
15 Claims. (Cl. 60—39.05)



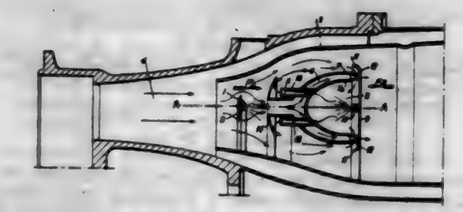
1. A method for producing fuel and power from an aqueous suspension of a peat material which comprises, supplying said aqueous suspension to a combustion zone maintained under superatmospheric pressure, supplying an oxygen-containing gas to said combustion zone, combusting a portion of said peat material forming said suspension by means of said oxygen-containing gas at a temperature in the range between about 150° and 300° C. to evaporate a portion of the water forming said suspension, employing the gaseous combustion products and vaporized portion of said water for the production of power, removing the hot, unburned portion of said peat material and remaining water from said combustion zone to cause evaporation of said remaining water under substantially atmospheric pressure, the quantity of water evaporated during said combustion providing a solid fuel comprising said unburned portion of said peat material upon evaporation of said remaining water under atmospheric pressure.

2,949,011
CHECKING MEANS FOR TEMPERATURE LIMITER AT START OF ENGINE
John W. Bancroft, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Aug. 29, 1955, Ser. No. 531,149
5 Claims. (Cl. 60—39.09)



2. In an engine temperature limiting checking apparatus for an engine control means, a starter switch, engine temperature responsive means for providing an output indicative of engine temperature, circuit means connecting said temperature responsive means in controlling relation to said engine control means, additional circuit means effective upon closing the engine starter switch for modifying said first mentioned circuit means to simulate an excessive temperature condition, and relay means associated with said first mentioned circuit means connecting the starter switch in such relation to effect engine starting whenever said modified circuit means responds in a manner indicative of an excessive temperature condition.

2,949,012
VAPORISATION BURNER DEVICE
Franck Guillaume Michel Ferrie, Cachan, and Pierre Négre, Paris, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company
Filed Feb. 25, 1958, Ser. No. 717,479
Claims priority, application France Mar. 1, 1957
9 Claims. (Cl. 60—39.71)



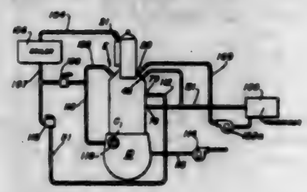
1. A combustion device for a combustion chamber comprising an inner wall forming a capacity closed upstream and protecting a combustion zone, an outer wall coaxially mounted with said inner wall to provide an annular passage, an open inlet in the outer wall at the

upstream side thereof, means to introduce fuel into said annular passage through said open inlet, a plurality of ducts passing through said annular passage, each duct having at one end an inlet open to receive the combustion gases from said combustion zone and at the other end an outlet in the region exterior to the outer wall, and means to reverse said combustion gases into contact with said outer wall, so that the mixture of fuel and air passes through said annular passage between said inner and outer walls both heated and is therefrom vaporized.

2,949,013
STEAM POWER SYSTEM

Abner Doble, Santa Rosa, Calif., assignor to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin

Continuation of application Ser. No. 280,978, Apr. 7, 1952, now Patent No. 2,730,996, dated Jan. 17, 1956. This application Mar. 14, 1955, Ser. No. 493,921
3 Claims. (Cl. 60—65)



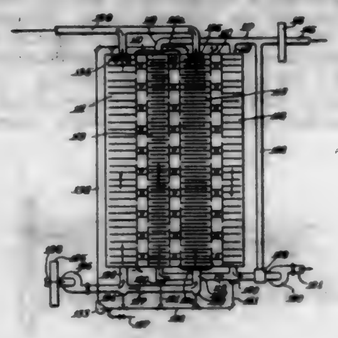
1. In a steam power system: a cylinder including walls forming a water receiving space contiguous to said cylinder; a piston operative in said cylinder through consecutive power and exhaust strokes; a crankcase connected to the cylinder having a crankshaft opening; a crankshaft in said crankcase connected to said piston and having a portion which extends out through said opening; means for sealing around said crankshaft where it passes through said opening so as to prevent entry of fluid through said opening into said crankcase; steam supply means including a boiler having an inlet connected to said water-receiving space of said cylinder and a condenser having its outlet connected to said water receiving space which is in turn connected to said boiler; inlet steam valve means for connecting said boiler to said cylinder; means forming an exhaust port for said cylinder; means for conducting exhaust steam from said exhaust port to said condenser; and suction pump means connected to said crankcase for producing a sub-atmospheric pressure in said crankcase at least during the exhaust strokes of said piston and minimizing flow of oily vapors from the crankcase past the piston into the cylinder.

2,949,014
THERMOELECTRIC AIR CONDITIONING APPARATUS

Joseph F. Belton, Jr., and Leo Swerbinsky, St. Joseph, Mich., assignors to Whirlpool Corporation, a corporation of Delaware

Filed June 2, 1958, Ser. No. 739,045
29 Claims. (Cl. 62—3)

16. Heat transfer apparatus, comprising: a thermocouple panel having a pair of spaced sets of junctions one of which is cold and the other of which is hot when direct current is passed through said sets in one direction, these thermal conditions being reversed when said current is passed in the opposite direction, the one set of junctions including substantially flat, substantially coplanar, heat transfer members thermally exposed on one surface of the panel, the other set of junctions being spaced from the one set to provide a hollow space for heat transfer fluid, the other set of junctions having a plurality of open-



ings associated therewith communicating with said hollow space for the passage of said fluid.

2,949,015
COLD TRAP

Wade L. Fite, Encinitas, Calif., assignor to General Dynamics Corporation, New York, N.Y., a corporation of Delaware

Filed Dec. 30, 1957, Ser. No. 706,066
3 Claims. (Cl. 62—40)



1. A cooling device comprising a double walled, open mouthed receptacle, a first conduit connected to and extending outwardly from the outer wall of said receptacle near the upper end thereof, the interior of said conduit communicating with the space between the walls of the receptacle, and a second conduit connected to and extending from the bottom of the inner wall of the receptacle through the interior thereof and beyond the mouth of the receptacle, the interior of said second conduit also communicating with the space between the walls of the receptacle, the space between the second conduit and the inner wall of the receptacle being adapted for receiving a coolant material, and the space between the double walls of the receptacle, at the lower end thereof, being adapted to collect condensed vapors.

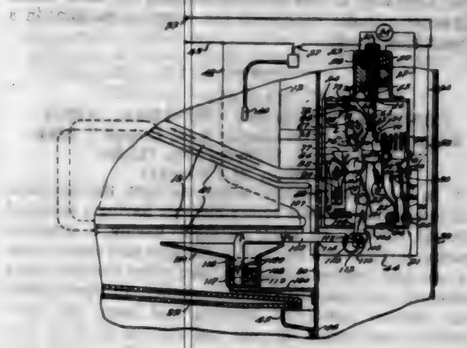
2,949,016
DEFROSTING CONTROL MEANS FOR REFRIGERATION APPARATUS

Robert H. Thorner, 3410 W. Chicago Blvd., Detroit, Mich.

Filed Jan. 5, 1955, Ser. No. 480,025
28 Claims. (Cl. 62—153)

8. In a control mechanism having means adapted to be controlled dependent on the freezing of liquid, a device for controlling said controlled means, a fixed

liquid-filled vessel associated with said device, said device including a sensing member immersed in said liquid and movable in a direction towards a wall of said vessel when said liquid is not frozen, said sensing member being so arranged in relation to said wall of said vessel to be constrained from movement by abutment with said frozen

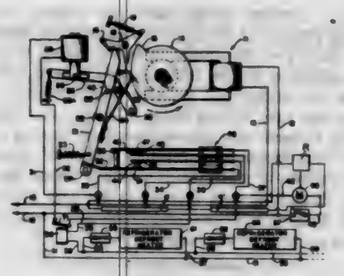


liquid tending to be compressed therebetween when said liquid freezes, the abutting position of said member being progressively altered smoothly when said frozen liquid gradually melts, and said sensing member being so arranged in relation to said controlled means that said freezing and melting of said liquid effects a control of said controlled means.

2,949,017
TIME TEMPERATURE DEFROST CONTROL

Sven V. Swanson, Niles, Mich., assignor to Tyler Refrigeration Corporation, Niles, Mich., a corporation of Michigan

Filed June 7, 1957, Ser. No. 664,238
7 Claims. (Cl. 62—155)

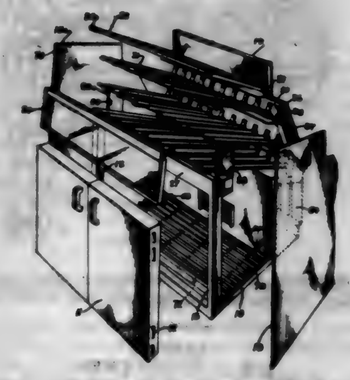


1. In a refrigerating system having a refrigerator coil, means for cooling said coil, and an electrically operated heater for defrosting the refrigerator coil, a defrost cycle control means comprising, a normally open circuit for energizing said heater, thermostatic switch means connected in series circuit with said heater for interrupting the same in response to a predetermined temperature of said refrigerating coil, a normally closed circuit for energizing said cooling means, timing means, first contact means controlled by said timing means for opening said cooling circuit, second contact means controlled by said timing means for closing said heater circuit, solenoid means conditioned by the closing of said heater circuit for subsequent activation to render said second contact means ineffective, and means controlled by the opening of said thermostatic switch means for activating said solenoid means.

2,949,018
CABINET FOR MERCHANDISING PACKAGES OF FROZEN FOOD

Kendrick T. Parsell, 57 Sunset Drive, Manhasset, N.Y.

Filed Oct. 18, 1955, Ser. No. 541,241
9 Claims. (Cl. 62—251)



1. A cabinet for merchandising packages of frozen food which comprises a compartment adapted for the storage of packages of frozen food therein, a cover for said compartment, rack means laterally disposed in the upper portion of said compartment adapted to support a plurality of rows one above the other of packages of frozen food each of which rows extends from adjacent the rear of said compartment to adjacent the front of said compartment and extends beyond said cover for disposing packages supported by the forward end of said rack means in position displayed and accessible to purchasers, and said rack means being adapted to receive packages of frozen food at the rearward end thereof and being inclined and adapted for advancement by gravity of packages supported by said rack means forwardly from the rear end of each row to replace any packages removed from the forward end of the row, closure means at the rear of said compartment mounted for ready removal to provide access to packages stored in said compartment and to the rear end of said rack means, packages stored in said compartment below said rack means and packages supported by said rack means being in contact with a common body of atmosphere, and means for refrigerating said common body of atmosphere comprising refrigerating coils disposed immediately subjacent packages supported by said rack means for each of said rows.

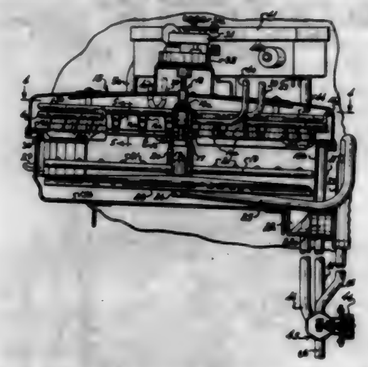
2,949,019
INVERTED MOLD APPARATUS FOR PRODUCING ICE CUBES

Benjamin K. Roberts, Lyle, Minn.; Esther G. Roberts, administratrix of the estate of said Benjamin K. Roberts, deceased, assignor, by mesne assignments, to King-Seeley Corporation, Ann Arbor, Mich., a Michigan corporation

Filed Mar. 31, 1954, Ser. No. 420,125
6 Claims. (Cl. 62—347)

1. An ice cube producing machine comprising a sump tank, means defining a freezing compartment having a drain conduit communicating with said sump tank, a mold structure sealingly dividing said compartment into an upper and a lower chamber, a single conduit connected with the upper chamber and forming both a drain and an inlet conduit therefor, a water heater tank, conduit means delivering therefrom, a single multiple ported valve inter-

connecting said conduits to control the flow relationship therebetween and having a sump tank drain conduit con-



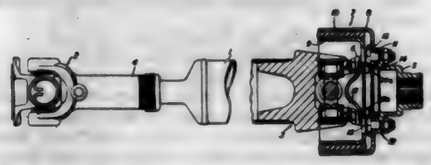
nected therewith with an outlet drain conduit, said valve controlling communication between said drain conduits.

2,949,020
ICE CUBE SHUCKERS
Frederick L. Erickson, South Houston, Tex., and Robert W. Fisk, Evansville, Ind., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed July 9, 1957, Ser. No. 670,744
5 Claims. (Cl. 62—366)



3. An ice cube shucker comprising: a support for holding an ice cube tray in an upwardly opening disposition; a grid for dividing the ice cube tray into a plurality of spaces, said grid comprising a plurality of movably associated partitions; a first lever pivotally mounted on the support and connected to said grid; and means operating said lever to move said grid between a disposition within the ice cube tray held in the support and a disposition spaced from the tray permitting removal of the tray from the support, said means including a second lever pivotally mounted on the support and having a slot extending radially of the axis of pivoting of the second lever, said first lever having a portion slidable in said slot for transferring movement of said second lever to said first lever.

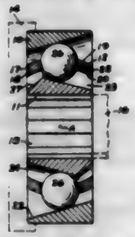
2,949,021
UNIVERSAL JOINTS
Thomas Richard Charlesworth, Sheffield, England, assignor to Laycock Engineering Limited, Sheffield, England
Filed Aug. 22, 1958, Ser. No. 756,643
Claims priority, application Great Britain Sept. 4, 1957
14 Claims. (Cl. 64—11)



6. The combination of a universal joint and flexible coupling and damping means comprising two cup-shaped members disposed one within the other and arranged coaxially with respect to one axis of the joint, said members both having cylindrical side walls, and an annular cushion of resilient material compressed between said side walls and bonded to the inner of said members, said annular cushion being roughly trapezoidal in cross-section in its free form and said inner member being fixed to the universal joint with its side wall surrounding the latter whilst said outer member is adapted for coupling the joint in a transmission system.

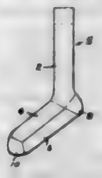
2,949,022
CONSTANT VELOCITY UNIVERSAL JOINT
Edgar D. Lees, 3359 Gratiot Ave., Detroit 7, Mich.
Filed Apr. 2, 1958, Ser. No. 725,861
12 Claims. (Cl. 64—21)

3. In a constant velocity universal joint, the combination comprising an inner rotary member having a spherical external surface, an outer member having a spherical internal surface, said external surface on said inner member and said internal surface on said outer member being concentric and spaced from one another, an intermediate cage member positioned between said inner and outer members and having internal and external surfaces concentric with said spherical surfaces on said members, said inner member having an even number of axially extending grooves in its outer periphery, the longitudinal axes of said grooves being straight and lying in common planes with the axis of said member, said grooves being inclined at equal angles to the axis of said member,



said outer member having an even number of axially extending grooves in its inner periphery, the longitudinal axes of said last mentioned grooves being straight and lying in common planes with the axis of said outer member, said last mentioned grooves being inclined at equal angles to the axis of said outer member, said cage member being formed with circumferentially spaced openings, balls in said openings in register with said grooves, adjacent grooves in each said member being inclined in opposite directions with respect to the axis of said member, and diametrically opposed grooves in each said member being parallel to one another.

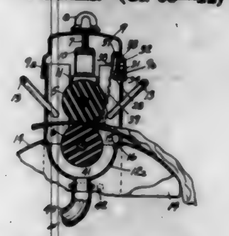
2,949,023
HOSIERY
Mark N. Holmes, Burlington, N.C., assignor to Burlington Industries, Inc., Greensboro, N.C., a corporation of Delaware
Filed Aug. 19, 1958, Ser. No. 756,012
1 Claim. (Cl. 66—178)



A circularly knit, combination semi-surgical and dress stocking knit throughout with a synthetic thermoplastic

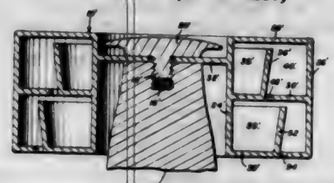
polymer multiply stretch yarn, and having an elastomeric yarn laid into spaced courses throughout the leg portion, said elastomeric yarn being covered with yarn of the same composition as said stretch yarn and the heel and toe portions of said stocking being free from said elastomeric yarn.

2,949,024
WRINGER WITH CLOTHES RINSING DEVICE
Raymond G. Miller and Charles H. Hocking, Erie, Pa., assignors to Lovell Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Filed Jan. 26, 1959, Ser. No. 789,019
4 Claims. (Cl. 68—22)



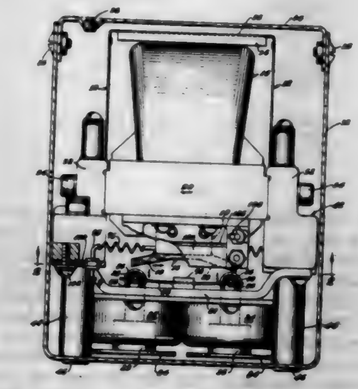
4. In a wringer of the type having upper and lower rolls with a bite therebetween through which clothes are drawn, a valve having an inlet from a water supply and an outlet connectable under the control of the valve to the water supply, a deflector having a wall leading to a reverse curved section with a lip directed tangentially toward one of the rolls in advance of the bite of the rolls, a nozzle for discharging a stream of water at an acute angle against and along said wall toward said reversely curved section, said stream being fanned out by the reversely curved section and discharged in a thin sheet tangentially against said one roll, and a tube connecting the outlet of the valve to said nozzle whereby rinse water is supplied ahead of the bite of the rolls and is squeezed into the clothes passing through the bite of the rolls.

2,949,025
CLOTHES TREATING LIQUID DISPENSER FOR AUTOMATIC WASHING MACHINES
Loyal H. Tingley, Jr., P.O. Box 392, Ipava, Ill.
Filed July 3, 1957, Ser. No. 669,776
2 Claims. (Cl. 68—207)



1. In a washing machine adapted to proceed through a sequence of operations including a washing operation, a first centrifugal extraction operation including two extraction stages interrupted by a pause, a rinsing operation and a second centrifugal extraction operation, a rotatable clothes basket, an agitator disposed within said clothes basket, drive means for oscillating said agitator for washing clothes and for rotating said basket to extract liquid centrifugally from said clothes, said agitator rotating with said basket during the rotation thereof, and a rinse agent dispenser mounted on said agitator for discharging a rinse agent into said basket after said first extraction operation to treat the liquid in said basket during said rinsing operation, said dispenser including a first receptacle section for accommodating said rinse agent during the oscillation of said agitator during said washing operation, a first compartment generally U-shaped in cross section disposed outward of said first receptacle section and opening toward said first receptacle section for receiving and holding said rinse agent during the first stage of said first centrifugal extraction operation, a second receptacle section located below said first receptacle section and inwardly of said first compartment, means communicating the first compartment and the second receptacle section for discharge of said rinsing agent from said first compartment into the second receptacle section during said pause between the first and second extraction stages of said first extraction operation, a second compartment generally U-shaped in cross section disposed outwardly of said second receptacle section for receiving and holding said rinsing agent upon the rotation of said agitator during said second stage of said first centrifugal extraction operation, and outlet means for discharging said rinsing agent from said second compartment into said basket upon the completion of said second stage.

2,949,026
ACCELEROMETER WITH BUILT-IN PRECHECK MEANS
Philip Glades, Los Angeles, and Arthur C. Hughes, Jr., Pacific Palisades, Calif., assignors to Genisco, Inc., Los Angeles, Calif., a corporation
Filed Apr. 21, 1958, Ser. No. 729,754
8 Claims. (Cl. 73—1)

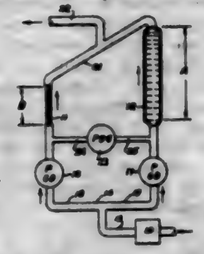


1. In an accelerometer having a sensing mass yieldingly movable along a sensing axis from a normal null position, together with means responsive to the movement of the sensing mass, precheck means to shift the sensing mass to test the operating condition of the accelerometer, said precheck means comprising: cam means carried by the sensing mass and presenting a cam surface on one longitudinal side of the sensing mass; follower means adjacent said cam means and movable against the cam means in a direction transverse of said sensing axis; and remotely controlled means to actuate said follower means to cause the sensing mass to shift along its axis.

2,949,027
CONTINUOUS DENSITOMETER
Dave Eolkin, San Lorenzo, Calif., assignor to Gerber Products Company, Fremont, Mich., a corporation of Michigan
Filed July 18, 1955, Ser. No. 522,669
22 Claims. (Cl. 73—32)

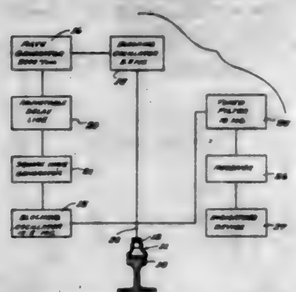
1. A continuous densitometer comprising a conduit through which a fluid flows, means for flowing fluid through said conduit, means for establishing effectively constant flow through said conduit, first means in said conduit establishing at least two zones of different rates of shear in the flow of fluid, said first means being dimen-

sioned whereby flow of fluid is turbulent in both said zones, said zones being of different length, and means



for measuring the flow resistance of the fluid in said different zones.

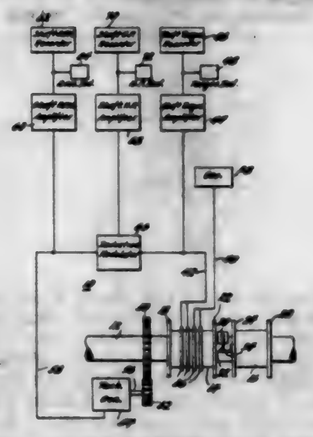
2,949,028
APPARATUS FOR ULTRASONIC MATERIALS TESTING
Ivan L. Joy, 1616 W. Dudley Road, Topeka, Kans.
Filed Nov. 3, 1955, Ser. No. 544,634
13 Claims. (Cl. 73—67.9)



13. In apparatus for testing the structural characteristics of a body by the use of elastic waves capable of being reflected from discontinuities therein; said apparatus including electromechanical transducer means operatively coupled to the body under test for transmitting and receiving vibrations to and from said body, first means operatively connected to said transducer means for sequentially producing vibrational wave energy therein at a first frequency characteristic and at a second frequency characteristic different from said first frequency characteristic and timed in duration and occurrence relative to the propagation characteristics of the body under test such that said transducer means is subjected to vibration at said second frequency characteristic prior to and during the arrival at said transducer means of reflected vibration of said first frequency characteristic, receiving means operatively connected to said transducer means to produce output from energy derived from the energy of said reflected vibration of said first frequency characteristic that arrives at said transducer means while said transducer means is subjected to vibration of said second frequency characteristic, and indicating means responsive to output from said receiving means.

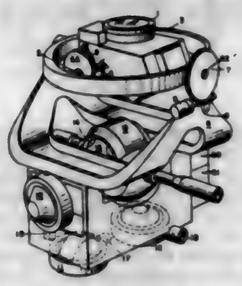
2,949,029
SHAFT HORSE POWER INDICATOR AND RECORDER
Barney E. Bayles, Rockville, Md., and Paul V. Rueca, Elizabeth, N.J.
Filed Sept. 24, 1957, Ser. No. 685,991
4 Claims. (Cl. 73—136)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A linear shaft horse power recording system comprising a stabilized oscillator for generating an alternating electric wave of constant frequency and amplitude; a linear differential transformer comprising two equal primary windings connected in series addition and connected to said oscillator, a magnetic core located centrally in said windings and adapted to be operated by a torque lever arm on said shaft, and two equal output windings placed around said core connected in series opposition; an induction modulator for calculating the horse power transmitted by said shaft comprising a stationary magnetic core having an A.C. winding thereon connected to said output windings of said transformer and a movable coil mounted in the magnetic circuit of said stationary core; a D.C. tachometer geared to said shaft for generating a



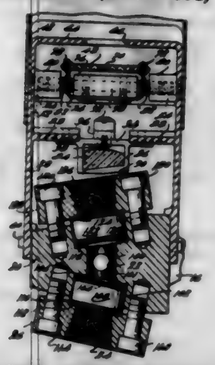
voltage proportional to the rotational speed of said shaft; wire means for connecting the output of said tachometer to said movable coil whereby said coil will be deflected by an amount proportional to the speed of said shaft; and an indicator and a recorder connected to said movable coil responsive to the A.C. voltage induced in said coil which is proportional to said deflection and to the voltage on said A.C. winding whereby a useful linear output proportional to the horse power transmitted by said shaft may be obtained.

2,949,030
GYROSCOPICALLY STABILIZED OPTICAL SYSTEM PLATFORM
Robert Bruce Horsfall, Jr., Whittier, John M. Slater, Inglewood, and John A. Widenmann, South Pasadena, Calif., assignors to North American Aviation, Inc.
Filed Apr. 9, 1949, Ser. No. 86,424
9 Claims. (Cl. 73—178)



8. In combination with an optical system mounted with two degrees of angular freedom and adapted to be successively trained on a plurality of celestial bodies from a moving body, record means for carrying preselected functions of time and the angular coordinates of said celestial bodies, inertial means for generating a signal proportional to the angular distance traversed by said system, and computer means responsive to said record means and to said generating means for rotating said optical system to thereby train it on successive celestial bodies.

2,949,031
MULTI-PORT LIQUID LEVEL GAUGE
John G. Bruni and Paul E. Miller, Lancaster, Ohio, assignors to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio
Filed Feb. 4, 1955, Ser. No. 486,133
2 Claims. (Cl. 73—331)



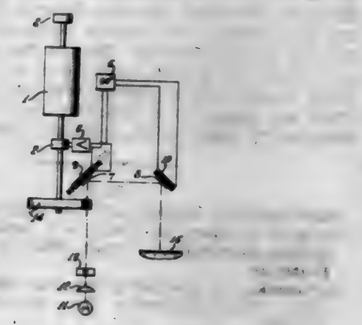
1. In a liquid level gauge, particularly for indicating boiler water level, a body portion having a generally upright elongated, columnar passage for liquid and vapor and within which a liquid level is adapted to be maintained, a transverse light passage having walls intersecting an intermediate portion of said columnar passage, a light-transmitting barrier sealing the outer end of said transverse passage and forming with the walls of said transverse passage a lateral pocket opening into said columnar passage, a bottom drain portion in said pocket extending inwardly and downwardly from a position near the barrier to juncture with said columnar passage at a lower position, the walls of said transverse passage being provided with serrations extending in substantially vertical planes and intersecting and terminating at opposite sides of said drain portion, whereby any condensate in said columnar passage and pocket above a liquid level therein may be guided downwardly and away from said barrier, within said serrations and thence onto and downwardly through said drain portion to a position below the barrier while being prevented from attaining a position where such condensate would overlie any part of the light passage through the barrier.

2,949,032
THERMOMETER
Jerome Bell, Schoolcraft, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
Filed Apr. 2, 1959, Ser. No. 803,613
2 Claims. (Cl. 73—353)



1. A floatable thermometer comprising a bimetallic spring with needle indicator attached thereto and a disk-like plastic housing for said bimetallic spring having a face comprising a raised portion and a lowered portion with a hole therein below said raised portion, said bimetallic spring being mounted on the underside of said raised portion of said face over said hole with the free end of said indicator being positioned above the upper surface of said lowered portion of said face, said housing having a series of vertical walls depending from the lower surface of and extending outwardly from the center of said face and forming, cooperatively with said face, compartments opening downwardly only, said compartments having a volume sufficient to render the thermometer floatable when placed face up in water.

2,949,033
APPARATUS FOR INDICATING UNBALANCE OF ROTATING BODIES
Albrecht Riedel, Kleinmachnow, near Berlin, Germany, assignor to VEB Gerate- und Regler-Werke Teltow, Teltow, near Berlin, Germany
Filed Oct. 22, 1954, Ser. No. 464,139
Claims priority, application Germany Mar. 25, 1954
3 Claims. (Cl. 73—462)



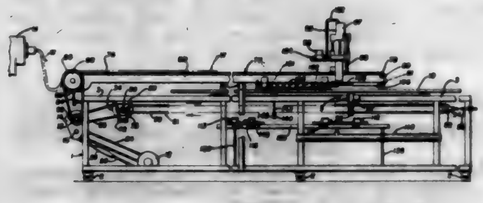
1. Apparatus for indicating the unbalance of a rotary body, comprising means for supporting said body for rotation about an axis, said supporting means being arranged for swinging movement in a direction substantially transverse to said axis of rotation, means responsive to swinging movement of said supporting means for generating an alternating energy field having frequency and phase characteristics proportional to said swinging movement, means for shifting the phase of a portion of said alternating energy field 90° relative to the phase of the remainder of said alternating energy field, an indicating screen provided with a reference mark, a pair of mirrors arranged perpendicularly to one another and adapted to be oscillated about perpendicular axes, a source of light emitting a stationary light beam toward one of said mirrors for deflection by the same to the other of said mirrors and by the latter to said screen, respective means responsive to the phase-shifted portion of said alternating energy field and to the unshifted remainder of said alternating energy field for oscillating said mirrors about said axes in such a manner that said stationary light beam if uninterrupted would form a circular trace on said screen, and shutter means rotatable in synchronism with said body and located intermediate said light source and said one mirror, said shutter means being provided with an eccentrically located aperture to permit only periodic passage of said stationary light beam to said one mirror, thereby blocking all of the potential circular trace except for a single light spot the position of which relative to said reference mark indicates the magnitude and location of said unbalance of said body.

2,949,834

CARRIAGE RECIPROCATING MECHANISM

Smith M. Johnson, Pawling, N.Y., and John A. Farnwald, Middlefield, Ohio, assignors to Imperial Manufacturing and Engineering Company, Middlefield, Ohio, a corporation of Michigan

Filed June 26, 1956, Ser. No. 593,872
13 Claims. (Cl. 74—37)



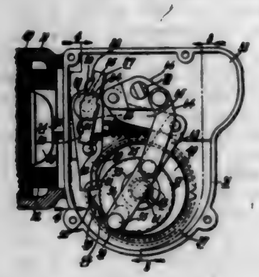
1. In apparatus of the character described, two endless belts, a member driven by said belts, means by which the belts are sustained adjacent and substantially parallel to the path of movement of said member, a continuously prevailing connection between the member and one flight of one belt, a similar connection between the member and the opposite flight of the other belt, and mechanism for actively driving each of said belts in a given direction in alternation with the other belt and while said other belt is caused to travel in the opposite direction by reason of its connection with the member.

2,949,835

WINDSHIELD WIPER ACTUATING MECHANISM

Walter D. Harrison, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Continuation of application Ser. No. 450,890, Aug. 19, 1954. This application Dec. 11, 1958, Ser. No. 779,683
17 Claims. (Cl. 74—70)



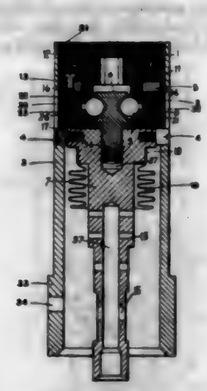
1. Windshield wiper actuating mechanism including, a rotatable driving member, a driven element rotatably journaled on and yieldably coupled to said driving member, a wiper actuating driven member, means interconnecting said driving and driven members including a variable throw crank, and means whereby stopping rotation of said yieldably coupled driven element during continued rotation of said driving member varies the throw of said crank, said last recited means comprising a cam which carries said crank, said cam having a circular aperture therein, and a complementary circular eccentric received in said aperture and connected to said driven element.

2,949,836

DEVICES FOR PRODUCING LINEAR MOVEMENT

Peter James Ellis, Three Bridges, Sussex, England, assignor to North American Philips Company, Inc., New York, N. Y.

Filed Sept. 4, 1958, Ser. No. 759,058
Claims priority, application Great Britain Sept. 6, 1957
3 Claims. (Cl. 74—89)



1. A device wherein relative linear movement between a first part thereof and a second part thereof is produced as the result of relative rotation between said first part and a third part of the device, the said first part comprising a cylindrical barrel provided adjacent one end thereof with an internal screw thread, the said second part comprising a central spindle located coaxially within the barrel, two bearing surfaces formed on the said spindle and means secured to the spindle for inhibiting rotation of the spindle relative to the barrel, said third part comprising an annular lower bearing member located coaxially within the barrel, a screw thread on the outer surface of the said lower bearing member which thread is adapted to engage the thread formed on the inside of the barrel, an annular bearing surface formed on the inside of the lower bearing member, an upper bearing member also located inside the barrel and secured to the lower bearing member and an annular bearing surface formed on the upper bearing member, the two bearing surfaces on the centre bearing member and the two bearing surfaces formed respectively on the lower bearing member and the upper bearing member forming a channel and ball bearings disposed within said channel so that the arrangement of bearing members and balls forms a two-directional thrust bearing, the arrangement being such that rotation of the upper and lower bearing members within the barrel results in axial movement of the spindle relative to the barrel.

2,949,837

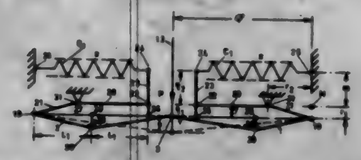
INSTRUMENT IN WHICH DISPLACEMENT OF AN ELEMENT IS DIRECTLY PROPORTIONAL TO THE SQUARE ROOT OF A FORCE APPLIED TO THE ELEMENT

Otto Knappe, Bad Oeynhausen-Rehme, Germany, assignor to Schoppe & Faeser G.m.b.H., Westfalen, Germany, a limited liability company of Germany

Filed Jan. 27, 1958, Ser. No. 711,431
Claims priority, application Germany Feb. 1, 1957
20 Claims. (Cl. 74—106)

1. A second power instrument device having a point of movement acted on by bias means wherein when force is applied at said point the square of the amount of displacement varies substantially directly with the applied force, said device comprising, a pair of toggle-like members pivotally connected at their inner ends, the pivotal

connection including said point of movement and movable in an approximately straight working line to distended positions, each member having an outer pivotal point, the outer pivotal points and said point of movement lying in a straight line when the instrument is zeroed, an urging means acting on at least one of the members at the said outer point and approximately in the direction of the line of said zero position, to tend to urge the point of movement along the working line; an angular lever having a fixed fulcrum and for each member on which means acts and having an arm pivotally connected to such member at the outer pivotal point thereof, the other arm lying



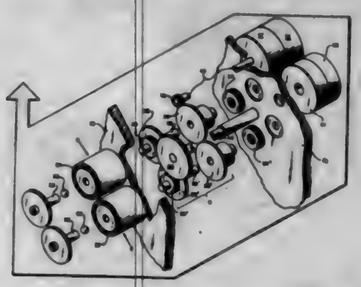
approximately perpendicular to said working line when the instrument is zeroed, and having a floating pivot, and means including a resilient part effectively connecting the floating pivot to the member to which the lever is pivoted and remote from the outer point for imparting force on the member in a direction approximately parallel with the working line when the floating pivot shifts under load, said device being proportional so that for angular movement of the members up to about at least 5½ degrees, an external force exerted on the inner pivotal point of the members equals a constant multiplied by the square of the displacement of that point in the direction of the working line.

2,949,838

REVERSIBLE TRANSMISSION

Howard B. Jepson, Warrington, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Original application Nov. 2, 1953, Ser. No. 389,899, now Patent No. 2,894,236, dated July 7, 1959. Divided and this application June 5, 1958, Ser. No. 740,172
4 Claims. (Cl. 74—361)
(Granted under Title 35, U.S. Code (1952), sec. 266)



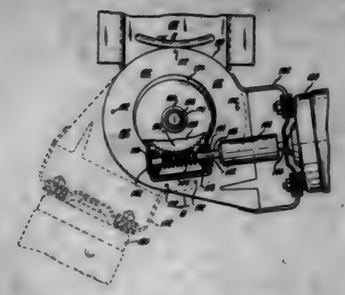
1. A mechanism comprising, in combination, a relatively flat hollow housing having a first generally planar side wall and a second generally planar side wall parallel to said first side wall, a drive gear centrally disposed within said housing, a rotatable drive shaft carrying said drive gear and extending through said first side wall, a unidirectional continuously running drive motor mounted upon the outer surface of said first side wall and driving said drive shaft, a driven element mounted upon the outer surface of said first side wall, first and second axially shiftable clutch plate means mounted in said housing, a driven gear fixed to each said clutch plate means, a first input gear journaled in said housing coaxial with and having one side thereof adapted to be engaged by said first clutch plate means and driven by said drive gear, a second input gear enmeshed with and driven by said first input gear and coaxial with and having one side thereof adapted to be engaged by said second clutch plate means, an output gear enmeshed with said driven gears and adapted to drive said driven element in one direction when said first input gear is engaged with said first clutch plate means and in a reverse direction when said second input gear is engaged with said second clutch plate means, first and second solenoids mounted on the outer surface of said second side wall and each having individual actuating means projecting through said second side wall respectively fixed to said first and second clutch plate means.

2,949,839

POWER OPERATED WINDOW REGULATORS

Nicholas Dudchik, Royal Oak, Mich., assignor to Hupp Corporation, Detroit, Mich., a corporation of Virginia

Filed Nov. 21, 1956, Ser. No. 623,590
9 Claims. (Cl. 74—384)



1. A window regulator assembly comprising a stamped sheet metal main mounting member, said mounting member having an elongated substantially flat central portion, a gear sector mounted on one side of said central portion and adapted to drive a window actuating linkage, coplanar marginal flanges extending along a portion only of the opposite sides of said central portion, said flanges being substantially parallel with said central mounting portion and offset from the plane of said central portion in a direction away from said gear sector, said main mounting member also having a substantially flat mounting portion projecting integrally from one end of said central portion beyond the ends of said flanges, and an auxiliary mounting member having a flange, a motor and a drive unit connecting said motor to said gear sector, means supporting said motor and said drive unit on said flange said auxiliary mounting member having a substantially flat annular mounting area having a shape and size complementary to the mounting portion of said main mounting member whereby said auxiliary mounting member may be secured to said main mounting member in a plurality of angular positions to thereby facilitate the mounting of said window regulator assembly in a wide variety of installations and means securing the mounting portion of said auxiliary mounting member to the mounting portion of said main mounting member in a preselected angular position.

2,949,848

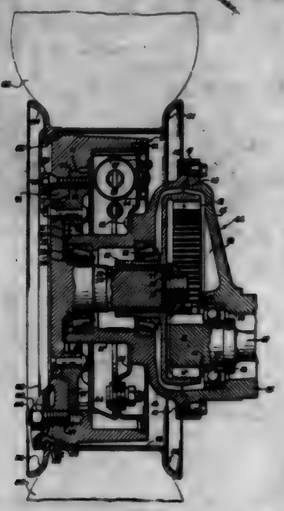
VEHICLE DRIVE MECHANISM

Leo A. Bixby, Niles, Mich., assignor to Rockwell-Standard Corporation, a corporation of Pennsylvania

Filed June 30, 1954, Ser. No. 440,498
2 Claims. (Cl. 74—390)

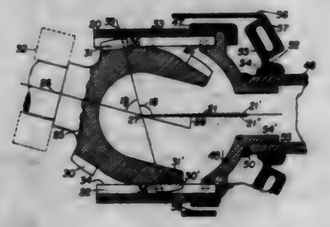
2. In a heavy duty drive axle assembly, a hollow axle housing having an enlarged outer end serving as one side of a reduction gear housing; a housing member serving

as the other side of said gear reduction housing removably secured to said axle housing outer end and enclosing a space, said housing member having an outwardly extending tubular portion outside of said space; an axle shaft extending through said axle housing; a drive gear rigid with said axle shaft and extending into said space; a ring gear within said space constantly meshing with said drive gear and having a hub extending outwardly from said space to the outside of said reduction gear housing in concentric spaced relationship to said housing member tubular portion; a wheel spindle coaxially received through said hub in coaxial spaced relationship to said tubular portion; a wheel mounting flange rigid with



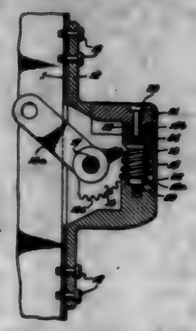
said spindle adjacent the outer end thereof and extending outwardly beyond said tubular portion; means for non-rotatably connecting the inner end of said spindle to said ring gear hub; and means between said wheel mounting flange and said space for rotatably supporting said spindle and said ring gear and the load applied thereto through said wheel mounting flange and said axle shaft comprising a first bearing rotatably mounting said ring gear hub directly on said housing member tubular portion to thereby rotatably support the inner end of said spindle received through said hub and a second bearing axially spaced from said first bearing and rotatably mounting said spindle directly on said housing member tubular portion at a position adjacent to and inwardly from said wheel mounting flange.

2,949,041
ANGULAR GEAR DRIVE
Ernest Wildhaber, 124 Summit Drive, Rochester 20, N.Y.
Filed Apr. 24, 1957, Ser. No. 654,791
18 Claims. (Cl. 74—416)



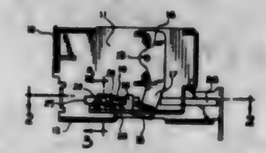
1. An angular gear drive comprising an internally toothed gear member and an externally toothed gear member having different numbers of teeth and axes intersecting at an angularity of at least ten degrees, said members being adapted to mesh with each other in two diametrically opposite regions, so that the tooth loads at said regions add up to a turning moment.

2,949,043
JALOUSIE OPERATOR
James C. Bennett, Los Angeles, Calif., assignor to Mission-West Manufacturing Company, Los Angeles, Calif., a corporation of Delaware
Filed Mar. 31, 1958, Ser. No. 725,178
11 Claims. (Cl. 74—425)



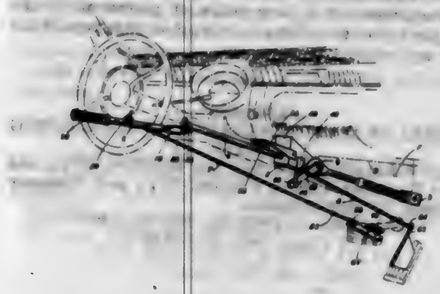
1. Operating mechanism of the class described comprising: a housing having opposed side walls and an open end; a worm gear segment pivotally mounted in said housing and having an operating arm projecting from the housing; a worm rotatably disposed in said housing in engagement with said worm gear segment; a member closing said open end; said closure member and one side wall of said housing having complemental bearing portions projecting angularly from said housing; an operating handle having an end portion embraced by said bearing portions; said end portion and said worm having coengaged gears thereon for rotating said worm upon rotation of said handle; said bearing portions and said handle end portion having cooperative means including an annular groove and an annular flange disposed in said groove for retaining said handle end portion between said bearing portions.

2,949,043
LINK
Ludwig J. Fichter, Chicago, and Edward J. Mastney, Hinsdale, Ill., assignors to Oak Mfg. Co., a corporation of Illinois
Filed Sept. 26, 1958, Ser. No. 763,591
4 Claims. (Cl. 74—469)



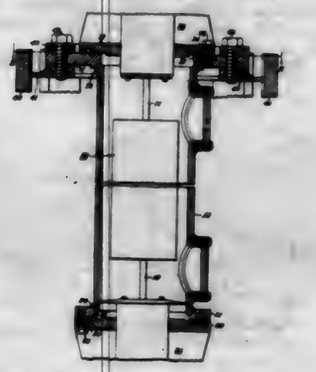
1. A link comprising a thin flat strip of spring material having at least one end provided with a non-circular aperture and a slot extending longitudinally from the free end of the link past said aperture laterally offset therefrom and extending well along into the body of said link, said slot intersecting the aperture to provide a long flat narrow tongue, the free edge of said tongue providing a boundary for said apertured portion and cooperating with the edge of the apertured portion for tightly gripping a cylindrical pin.

2,949,044
CAR HAND CONTROLS
Harry W. Hughes, Rte. 1, Garland, Tex.
Filed July 16, 1957, Ser. No. 670,983
7 Claims. (Cl. 74—481)



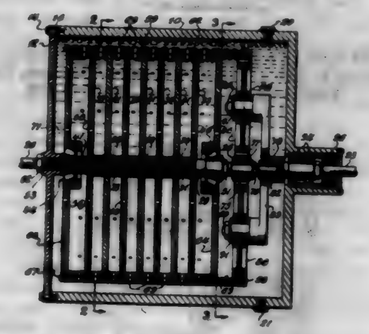
1. An apparatus of hand driving equipment for a vehicle having a floor board, a dash, a steering column, an accelerator pedal, and a brake pedal, comprising: A hand control lever, a shaft substantially parallel to said steering column, a bearing block adjustably attached to said dash, a bearing hole completely through said block to support said shaft for a rotary motion therein, the lower end of said shaft being extended through said block and being mechanically biased to return said shaft to a normal angular rotational position, the upper end of said shaft being pivotally connected to said lever in such a manner to permit independent downward forward movement of said lever and to cause said shaft to rotate when said lever is moved in a counterclockwise direction, and linkage means between said lever and said brake pedal to permit an operating force to be applied to said brake pedal by said forward movement, and linkage means between said shaft and said accelerator pedal to permit an operating force to be applied to said accelerator pedal by said counterclockwise movement.

2,949,045
HOUSINGS AND MOUNTINGS FOR CENTRIFUGES
Frank C. Rushing, Pittsburgh, Pa., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 30, 1944, Ser. No. 561,096
3 Claims. (Cl. 74—609)



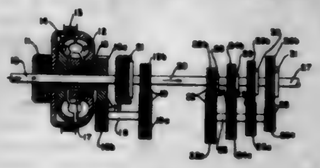
1. A protective device for a centrifuge having a rotatably mounted rotor comprising, in combination, a cylindrical housing surrounding said rotor and extending at least the full length thereof, a radially extending annular flange member secured to said housing, a stationary supporting member abutting said flange, one of said members having arcuate slots therein, and a plurality of mounting pins secured to the other member, each of said pins extending into one of said arcuate slots.

2,949,046
INFINITE RATIO TORQUE CONVERTER AND MULTIPLIER
Anthony A. Critelli, 125 Terhune Ave., Jersey City, N.J.
Filed Dec. 17, 1957, Ser. No. 703,307
7 Claims. (Cl. 74—688)



1. A torque converter comprising an input unit, said input unit having disks for cooperating with a fluid, a governing unit having an orbit gear connected to a perforated cylinder, perforated spacers maintained in concentric adjacent relationship, disks in said cylinder held in predetermined spaced relationship by said spacers for cooperating with said first named disks and said fluid and an output unit, said output unit having a shaft, planetary gears carried by said shaft, said planetary gears meshing with said orbit gear and a gear connected to said input unit.

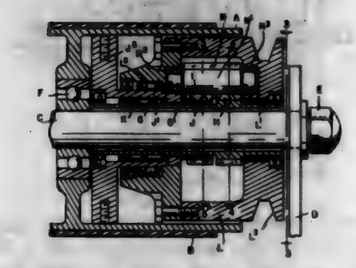
2,949,047
HYDRODYNAMIC CHANGE-SPEED TRANSMISSION
Manfred H. Burckhardt, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Filed July 10, 1957, Ser. No. 671,089
Claims priority, application Germany July 12, 1956
32 Claims. (Cl. 74—732)



1. A transmission unit comprising input means, output means, a hydrodynamic transmission device, means constituting two motion transmitting trains for selectively and alternately connecting said input means with said output means, one of the said motion transmitting trains including said hydrodynamic device, change gear means having a predetermined transmission ratio and selectively engageable clutch means for connecting said hydrodynamic device and said change gear means with said input and output means, the other of said motion transmitting trains including further clutch means for directly connecting said input means with said output means in by-passing relationship with respect to said hydrodynamic device

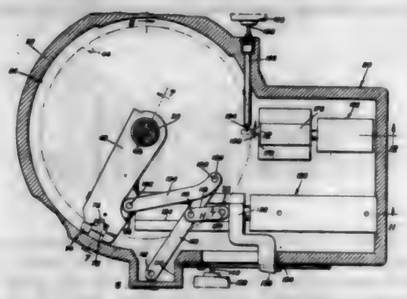
and said change gear means, said hydrodynamic device being operative at varying slippages with one predetermined slippage thereof being the most favorable one as regards operation of said hydrodynamic device, said predetermined ratio being so selected that said output means rotates at essentially the same speed as said input means with said first-mentioned clutch means engaged and with said hydrodynamic device operating at said most favorable slippage, and automatic control means for automatically disengaging said first clutch means and engaging said further clutch means upon essentially equality in rotational speeds between said input means and said output means when said hydrodynamic device operates essentially at said most favorable slippage.

2,949,845
PLANETARY GEAR REDUCTION UNIT
George E. Lewis, 140 E. Wayne St., Dunkirk, Ohio
Filed Aug. 26, 1957, Ser. No. 680,268
2 Claims. (Cl. 74—802)



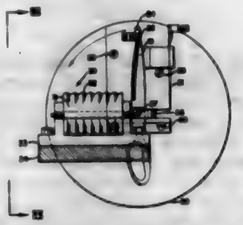
1. A belt supporting pulley, a non-rotating shaft on which said pulley is journaled, a second pulley also journaled on said shaft, a planetary reduction gearing for driving one pulley from the other at a differential speed, planetary gearing securing means detachably mounted to one end of said shaft, said gearing being slidable from said shaft on removal of said securing means whereby said belt supporting pulley may be freely rotated by the belt supplied thereby.

2,949,849
INDEX TABLE
Frank B. Doemer, 4139 Samoset, Royal Oak, Mich.
Filed Nov. 1, 1956, Ser. No. 619,705
8 Claims. (Cl. 74—822)



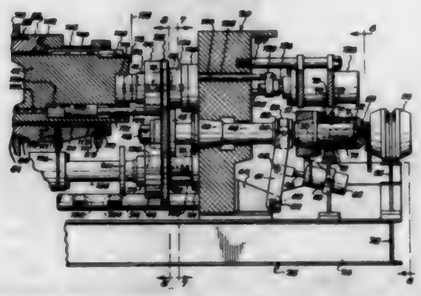
1. An index table comprising a base, an index plate rotatably mounted on said base, an index arm swingably mounted on said base and having means on the free end thereof for detachable engagement with the index plate, means for swinging said index arm, means for selectively latching the arm to the plate for movement of the plate with the arm, and means for rigidly locking the index plate in index position in response to movement of the arm swinging means, said means for actuating said index arm including a fluid operated piston and cylinder arrangement, a linkage mechanism interconnecting the piston and cylinder arrangement and the index arm, said linkage mechanism including an arrangement for converting the small scope of movement created by the piston and cylinder arrangement to a large scope of movement of the index plate, thus permitting a compact arrangement of the piston and cylinder arrangement.

2,949,850
METHOD OF MAKING PINKING OR SCALLOPING SHEARS
Samuel Briskman, 102 Prince St., Brooklyn, N.Y., and Curt Weidauer, Clinton Corners, N.Y.; said Weidauer assignor to said Briskman
Filed Dec. 24, 1956, Ser. No. 630,139
1 Claim. (Cl. 76—104)



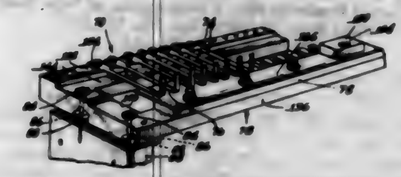
The method of forming undulated profile cuts in a shear blade with the aid of an elongated tool, said tool having an array of cutting teeth complementary to the desired profile, which comprises the steps of positioning the blade at a first inclination relative to a plane of rotation containing the principal dimension of the blade, rotating the blade in said plane about a center lying substantially in line with said principal dimension at a location remote from the blade portion to be profiled, positioning said tool with its array of teeth parallel to said plane and extending in generally radial direction with respect to said center, forming a first set of cuts in said blade by advancing the tool so positioned toward said blade during rotation of the latter, and forming a second set of cuts on said blade inclined relatively to said first set by repeating the steps of rotating and advancing with said blade positioned at a second inclination relative to said plane.

2,949,851
COLD EXTRUSION PRESS
Otto Hoffmann, Kenmore, and Alexander Krynytzky, Ebenezer, N.Y., assignors to Lake Erie Machinery Corporation, a corporation of New York
Filed Apr. 12, 1957, Ser. No. 652,522
13 Claims. (Cl. 78—18)



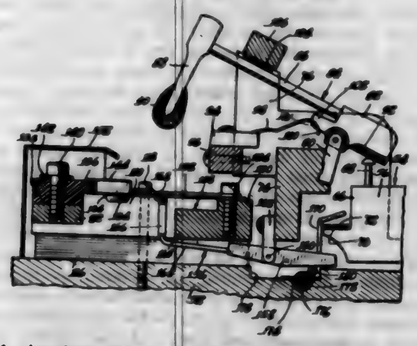
1. In an extrusion press having a cylinder platen, an open ended main cylinder mounted on said cylinder platen and, a main ram in said main cylinder, the combination therewith of means for aiming said ram in its axial movement comprising a cylindrical ring fast to said cylinder platen in line with the open end of said cylinder and through which said main ram travels, an annular series of individual bearing members surrounding said main ram and interposed between said main ram and ring and means for adjusting each of said bearing members radially with reference to said ring to adjust the aim of said main ram.

2,949,852
TONE GENERATING ASSEMBLY FOR ELECTRONIC PIANO
Clifford W. Anderson, De Kalb, Ill., assignor to The Rudolph Wurlitzer Company, North Tonawanda, N.Y., a corporation of Ohio
Filed June 9, 1955, Ser. No. 514,348
14 Claims. (Cl. 84—1.04)



1. A tone bar assembly for an electronic musical instrument comprising a massive support of open, generally rectangular outline including relatively long front and rear members rigidly interconnected by relatively short side members, a plurality of vibratile tone generators of different frequencies mounted directly on one of said relatively long members and extending toward the other, pick up means mounted on the other of said relatively long members and cooperable with said tone generators, and means rigidly mounted on said support over a distance longitudinally thereof greater than the spacing between adjacent tone generators to avoid resonance of said support at any of the frequencies of said tone generators.

2,949,853
TONE GENERATOR
Clifford W. Andersen, De Kalb, Ill., assignor to The Rudolph Wurlitzer Company, North Tonawanda, N.Y., a corporation of Ohio
Filed June 1, 1954, Ser. No. 433,564
9 Claims. (Cl. 84—1.06)



1. An electronic musical instrument comprising a common reed support, a plurality of reeds with bases fixed on said common support and with vibratile tongues projecting in the same direction therefrom in side-by-side substantially coplanar parallelism from said support, a plurality of hammers respectively percussively engageable with the tongues of said reeds respectively to set said reed tongues in decadent free vibration, a plurality of manually engageable keys respectively operatively connected to said hammers for selectively moving said hammers into such percussive engagement with said reed tongues, a pickup member of comb-like configuration having a plurality of parallel teeth and an intermediate plurality of slots each opening at one end, means mounting said pickup member in opposition to said reeds substantially in a common plane therewith with the reeds projecting into the slots between the teeth, the teeth on opposite sides of a reed extending substantially the same distance therealong, there being at least one reed tongue in each slot, and each reed being closely adjacent a pickup tooth along a longitudinal edge of said reed, said pickup teeth terminating at free ends short of the reed bases, the hammers respectively percussively engaging the reed tongues between the reed bases and the free ends of the adjacent pickup teeth, said reeds and said pickup member comprising electrostatic tone generating means, means establishing an electric potential between said reeds and said pickup member, electric oscillations being generated in accordance with the change in capacity between said reeds and said pickup member resulting from free decadent vibration of said reeds relative to said pickup member, electronic amplifying means connected to said reeds and said pickup member for amplifying the oscillations generated by the decadent free vibration of said reed tongues, and electro-acoustic translating means connected to said amplifying means for converting the amplified oscillations into audible tones.

2,949,854
THREADED SHAFT OF GLASS FIBER REINFORCED PLASTIC
Roger B. White, Cleveland, Ohio, assignor to The Glastic Corporation, Cleveland, Ohio, a corporation of Ohio
Filed July 19, 1954, Ser. No. 444,199
1 Claim. (Cl. 85—47)

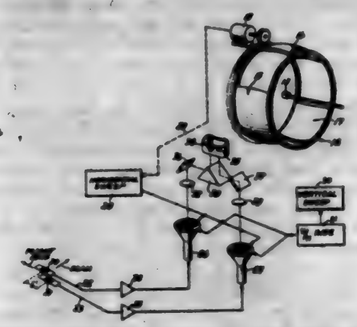


An externally threaded, glass fiber reinforced, hardened plastic member composed of a plurality of glass fibers impregnated with a hardened plastic material, said member having oppositely disposed externally threaded portions on its periphery and between said threaded portions having flat sides which extend parallel to each other and parallel to the longitudinal axis of said member and which are located nearer to the longitudinal axis of said member than the root diameter of said threaded portions, said member having a plurality of said glass fibers therein which extend transverse to the longitudinal axis of the member and substantially parallel to said flat sides and have their ends disposed in said threaded portions.

2,949,855
STEREOSCOPIC SCANNER
Henry Blackstone, Northport, N.Y., assignor to Servo Corporation of America, New Hyde Park, N.Y., a corporation of New York
Filed July 9, 1954, Ser. No. 442,330
10 Claims. (Cl. 88—1)

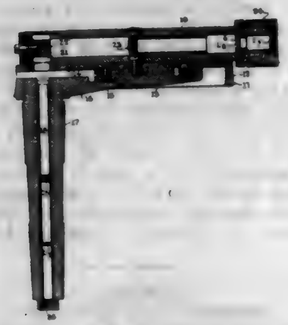
1. In combination, radiation-responsive means producing an electrical output in accordance with radiation incident thereon, an optical scanner including a movable optical element for causing said radiation-responsive means periodically to scan one axis of a field of view,

displacement means for causing said scanner to progress generally transversely of said one axis in order to develop successive line scans over the field of view, said scanner including means producing for each optical scan by said element independent electrical video responses to radiation on two separate radiation-responsive alignment axes that are divergent at a constant angle from each other and from said one axis, whereby said separate video responses represent the scanning of separate transversely spaced scan lines in said field of view, the line-



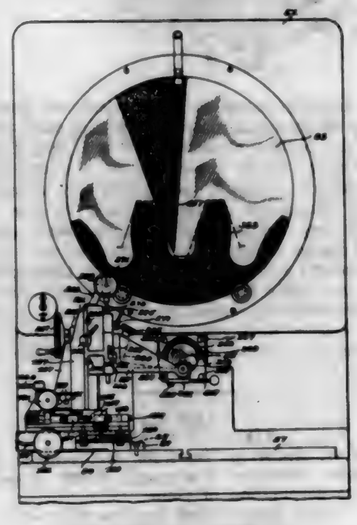
scan repetition rate for each of said alignment axes being sufficient to develop from each of said video responses a separate picture of the same scanned area, and two separate display means separately responsive to said separate video responses, each said display means including sweep means synchronized with the action of said scanner and with said displacement means for simultaneously displaying two pictures representing the integrated outputs of said two video responses of said radiation-responsive means, whereby said displays may be stereoscopically viewed.

2,949,856
OPTICAL PLUMMET
Günther F. E. Loeck, Troy, N.Y., assignor to W. & L. E. Gurley, Troy, N.Y., a corporation of New York
Filed July 11, 1955, Ser. No. 521,239
3 Claims. (Cl. 88—2.3)



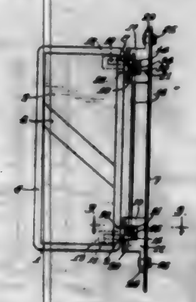
1. An optical plummet for a surveying instrument of the type having a spindle, the spindle having a small axial bore therethrough, said plummet including a telescope tube, whose longitudinal axis intersects the axis of said bore, said tube being rotatable about said bore as an axis; an objective lens system comprising a front lens element in said bore and having a short focal length whereby a primary image smaller than the bore is produced therein of a field of view many times greater in size; a projecting lens system including second and third lens elements in said bore and a fourth lens element in said tube, said second lens element being a convergent lens element designed to transmit light rays from all parts of said primary image to said third lens element within the optical aperture thereof; an optical reflecting element at the intersection of said longitudinal axes whereby the axis of said tube is optically aligned with the axis of said spindle; a reticule in said tube at the plane of the projected image formed by said projecting lens system; and a viewing eyepiece in the end of said tube remote from said intersection for simultaneously viewing the projected image and the reticule.

2,949,857
OPTICAL GEAR ANALYZING MEANS
Edward C. Polkior, Irondequoit, N.Y., assignor to Optical Gaging Products, Inc., a corporation of New York
Filed Sept. 20, 1954, Ser. No. 457,114
8 Claims. (Cl. 88—24)



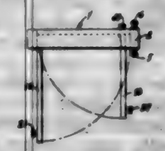
1. Gear analyzing means comprising an optical projector for illuminating an object in a focal plane and projecting a magnified image of the illuminated object onto a viewing plane, comparison chart means located at said viewing plane and containing a stationary magnified visible outline of a plurality of gear rack teeth of a gear rack adapted to mesh properly with a theoretically perfect example of the gear to be analyzed, means for holding a simulated rack tooth in stationary position substantially in said focal plane, means for holding a gear to be analyzed in position for rotation substantially in said focal plane and with one tooth of the gear in engagement with said simulated rack tooth, and means for shifting said gear holding means relatively to said comparison chart means in a direction laterally with respect to the rotary axis of the gear while maintaining engagement between said rack tooth and said tooth of the gear, so as to roll said gear against said rack tooth and to enable visual observation of the magnified images of other teeth of the rolling gear teeth than the gear tooth engaged by said simulated rack tooth with relation to the outline of said gear rack teeth on said comparison chart means.

2,949,858
REFLECTING GUIDING ATTACHMENT FOR VEHICLE BEING PASSED AT NIGHT
George F. Daly, Park County, Mont. (% A. E. Walbern, Box 643, Livingston, Mont.)
Filed Oct. 5, 1956, Ser. No. 614,226
2 Claims. (Cl. 88—31)



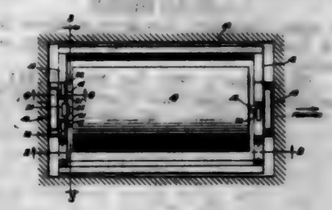
1. A night guide safety pass adapted for mounting on a vehicle comprising, in combination, a reflector plate having light reflecting material on both sides thereof, and means for movably mounting said plate with respect to a section of a vehicle including a pair of connectors adjacent the upper and lower end of the plate, each of said connectors having an eyelet spaced from the plate, a pair of mounting brackets associated one with each of said connectors and each being bifurcated to form a pair of spaced legs between which an eyelet is positioned, a mounting rod extending between said brackets and through said eyelets, a pair of torsion springs mounted on said rod and positioned one between each pair of bracket legs and acting between said plate and bracket, said springs arranged to operate in opposite directions to yieldingly oppose pivoting of said plate with respect to said brackets, said bracket legs having their ends adjacent the reflector plate rounded to facilitate pivoting of said plate and having sections behind said ends forming stops to limit pivotal movement of said plate.

2,949,059
MULTIPLE IMAGE DOOR
Nicholas Sollimine, 47 Marine Ave., Brooklyn, N.Y.
Filed Aug. 12, 1958, Ser. No. 754,550
1 Claim. (Cl. 88—85)



A door assembly comprising a door frame hingedly mounted within a doorway for opening and closing movement, a first mirrored panel hingedly mounted within said frame, said panel forming a door extending across said frame along one side thereof and nesting within said frame when closed and swinging away therefrom to assume an open position, a second and third mirrored panel disposed along the opposing side of said door frame, said second panel being hingedly secured to said door frame along one side edge thereof and said second and third panels being hingedly secured to each other along their respective side edges opposed thereto whereby said second and third panels extend across said door frame along said opposing side thereof when closed and form a door nestling within said frame, said second and third panels being capable of being swung away from each other to form with the first panel a three-mirrored panel along the opposing side of said door and said first and third panels being capable of cooperating with the second panel to form a three-mirrored panel along the first side of said door frame, said door frame being hingedly movable in said doorway to provide a passageway therethrough when said panels are in nestled position therein.

2,949,060
ARTICLE SUSPENSION ARRANGEMENT FOR AIRCRAFT
Gottfried Karl Gantschnigg, Baltimore, Louis Muehlberger, White Marsh, and Albert C. Hake, Middle River, Md., assignors to The Martin Company, Middle River, Md., a corporation of Maryland
Filed Nov. 3, 1955, Ser. No. 544,762
1 Claim. (Cl. 89—1.5)

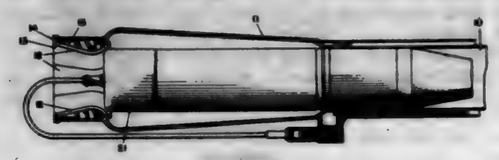


A suspension arrangement for an aircraft for releasably supporting an elongated weapon that utilizes at least one support pin at its one end and at least a pair of spaced pins at its other end, said suspension arrangement comprising a rotary door having a bottom portion and end portions, means pivotally mounting said door in registry with a bay opening in said aircraft, said end portions being of substantial construction and having means for receiving the pins of a weapon so that the weapon will be supported solely and directly by said end portions, said receiving means on one of said end portions having ejection means for contacting the pin on the one end of a weapon and the receiving means on the other of said end portions having spaced ejection means for contacting a pair of spaced pins, said ejection means in said end portions positively separating the ends of a weapon from said door when the weapon is to be dispersed, and release assisting means on the aft end of said door for preventing damage during release of a weapon, said release assisting means comprising a roller arranged to contact and roll along the rearmost portion of the weapon during its release from said door, whereby said bottom portion of said door can be of minimum structural thickness and thereby enable a large diameter weapon to be carried on said door by virtue of the fact that said bottom portion need not be of high-strength construction.

2,949,061
RECOILLESS RIFLE WITH EXPANDING NOZZLE
Albert Benditt, Philadelphia, Pa., and C Walton Musser, Beverly, Mass., assignors to the United States of America as represented by the Secretary of the Army
Filed Aug. 3, 1959, Ser. No. 831,446
1 Claim. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A recoilless rifle including a chamber having a rear extension with internal longitudinal grooves near its rear end, a plurality of nozzle forming segments within said extension and each having an external groove near its rear end, and a one-piece resilient member resting at one end against an outer surface of said chamber and having at the other end a plurality of tangs each in a different one of said longitudinal grooves and a plurality of in-

wardly bent ends each in a different one of said external grooves whereby said segments are expanded upon the



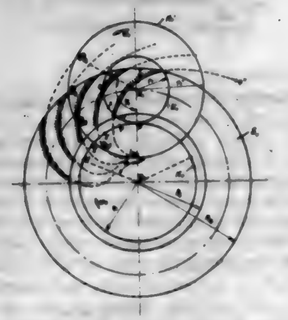
insertion of a cartridge into said chamber and are automatically retracted by said resilient member to lock said cartridge in said chamber and to form a nozzle at the rear thereof.

2,949,062

METHODS OF CONTINUOUSLY CUTTING GEARWHEELS

Gerhard Apitz, Hamburg, Germany, assignor to Heidenreich & Harbeck, Wiesendamm, Germany, a German partnership

Filed May 7, 1957, Ser. No. 657,561
Claims priority, application Germany May 7, 1956
6 Claims. (Cl. 90—5)



1. A method of continuously cutting teeth in a workpiece to produce a gear wheel having teeth which are arcuate in their length direction which method comprises disposing the cutting edges of a tool on a circle representing the curved teeth of an imaginary matching wheel which would mesh with the gear to be cut, effecting a generating movement between the tool and the workpiece by moving the tool in a circle which is concentric with the workpiece and rolling the circle about a circle on the workpiece while the latter is imagined to be stationary so that the cutting edges describe a cycloidal path relatively to the workpiece, rotating the workpiece around its axis to convert the cycloidal movement of the cutting edges into an arcuate movement and selecting the position and nature of the movement of the tool circle relatively to the circle on the workpiece about which it rolls so that the tool circle is the matching circle of the cutting circle and during rolling generates the same cycloid as the cutting circle.

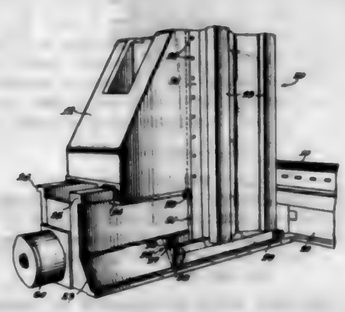
2,949,063

MILLING MACHINE

Fred R. Swanson and Sterling A. Hanson, Rockford, Ill., assignors to Sundstrand Corporation, a corporation of Illinois

Filed Dec. 31, 1956, Ser. No. 631,886
6 Claims. (Cl. 90—11)

1. In a milling machine, in combination, a first base portion, a work table reciprocable longitudinally on said first base portion, a second base portion extending laterally from the first base portion in a direction normal to the length of the first base portion, a column slidable on the second base portion toward and away from the work table and extending upwardly from the level of the work table, a pair of parallel vertically elongated guides fixed on one side of said column, spaced apart in the direction of the length of the second base portion, and extending in a vertical direction from a position near the



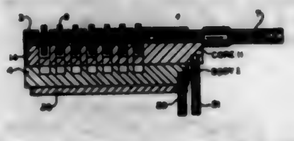
top of the column to a position below the top of the work table and near the bottom of the second base portion, for slidably receiving a spindle head for vertical movement on the guides, and a guideway on said one side of the second base portion extending toward and away from the first base portion, slidably supporting the lower ends of said guides.

2,949,064

TOOL FOR ROUGHENING WALLS OF BOWLING BALL FINGER HOLES

Kenneth Adcock, Box 213, R.R. #1, Jeffersonville, Ind.

Filed Sept. 15, 1958, Ser. No. 761,123
4 Claims. (Cl. 90—12)



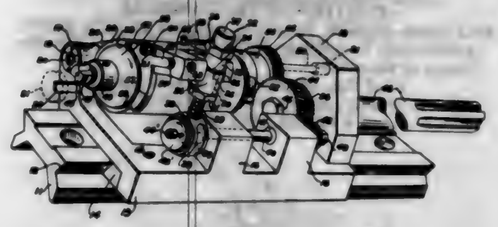
1. A tool for roughening the bore wall of a finger hole in a bowling ball, comprising: an elongate body member adapted for endwise insertion into and removal from said hole and having a longitudinally extending eccentric bore; an elongate cylindrical core member journaled in said bore for partial rotation about the center axis thereof and also having a longitudinally extending eccentric bore; the opposite sides of the eccentric bore of each member being separated from its periphery by relatively thick and thin walls; each member also having a correspondingly located transverse slot passing entirely through its thin wall and bore and partly through its thick wall; a cutting assembly including an elongate shaft rotationally journaled in said core bore for rotary movement about the center axis thereof and a cutting wheel located in said slots and mounted on said shaft for rotation therewith about the center of said core bore; means for partially rotating said core within said body so as to move said cutting assembly bodily along an arcuate path from an inoperative position, wherein said cutting wheel is wholly confined within said body, to an operative position, wherein a chord-like portion of said cutting wheel transversely projects outwardly beyond the peripheral confines of said body on the thin wall side thereof; and means for rotating said cutting assembly relatively to said core and body members.

2,949,065

ATTACHMENT FOR MILLING OR SLOTTING METAL PARTS

Steve M. Kulasic, Warren, Mich.
(P.O. Box 25456, Ryan Road, Centerline, Mich.)

Filed Oct. 16, 1957, Ser. No. 690,530
4 Claims. (Cl. 90—15)



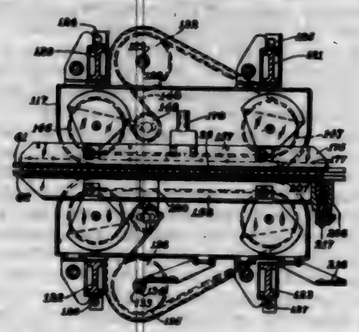
1. An attachment of the character described comprising in combination, a base, a drive spindle adapted to be rotatably driven through one end thereof by drive mechanism and journaled and supported on said base, a tool spindle carrier housing arranged longitudinally of the base and pivotally mounted along one longitudinal side upon said base adapted for reciprocal vertical movements thereon, continuously movable vertically reciprocal means pivotally joined to the opposite side of said housing, a tool spindle rotatably journaled in said housing axially thereof, a longitudinally disposed driveshaft journaled on said base including at one end an eccentric extension rotatably connected with said vertically reciprocal means, a bladed cutter secured to one end of said tool spindle, gearing operatively connecting the other end of said drive spindle to the other end of said tool spindle for rotation at the same speeds, and additional speed change gearing operatively connecting the other end of said drive spindle with the other end of said driveshaft for rotation at proportionately higher speeds.

2,949,066

METHOD AND APPARATUS FOR CREASING BLANKS

Leon E. La Bombard, Nashua, N.H., assignor to The International Paper Box Machine Company, Nashua, N.H., a corporation of New Hampshire

Filed Jan. 20, 1958, Ser. No. 709,977
15 Claims. (Cl. 93—58.3)



5. In a machine for making paper boxes frictional endless carrier means for advancing paper box blanks individually and successively in spaced relation longitudinally along a path at a predetermined speed; rotatable creaser bar means along said path for simultaneously pinch creasing a plurality of parallel, linear, longitudinal crease lines in each said advancing means for rotating said creaser bar means at a surface speed less than said predetermined speed of said blanks and registration means, mounted on said rotatable creaser bar means, for temporarily registering each said blank just prior to the pinch creasing thereof.

2,949,067

TRAFFIC INTERSECTION

Arturo Olivero Cedeno, Ocampo 1073, Monterrey, Nuevo Leon, Mexico

Filed May 24, 1957, Ser. No. 661,470
5 Claims. (Cl. 94—1)



1. A street crossing interchange comprising, a first street and a second street each having a plurality of approach lanes and a plurality of departure lanes for traffic travelling in opposite directions with the through lanes of the second street crossing the through lanes of the first street at different grade levels, said second street approach through lanes being in approximately the middle of said second street and in one of said levels at points adjacent said first street, left turn lanes branching from said through lanes as said left turn lanes approach said first street and extending along the left sides of said first street and connecting with the departure through lanes of said first street, others of said second street approach lanes including right turn lanes extending along approximately the center of said second street on the left sides of said approach through lanes to the other level and then curving right as they approach said first street and connecting with departure lanes of said first street, said first street approach through lanes being in approximately the middle of said first street and in the other level at points adjacent said second street, and right turn lanes branching from said through lanes as said right turn lanes approach said second street and extending along the right sides of said second street and connecting with the departure lanes of said second street, others of said first street approach lanes including left turn lanes extending along approximately the center of said first street on the right sides of said approach through lanes to said one level and then curving left as they approach said second street, said first street left turn lanes extending along the left sides of said second street and connecting with the second street departure through lanes, said second street approach and departure lanes with the exception of the departure right turn lanes from said first street crossing each other at different elevations at points remote from and on opposite sides of said first street, said first street approach lanes crossing said departure left turn lanes from said second street at different elevations at points remote from and on opposite sides of said second street.

2,949,068

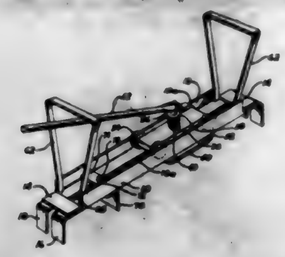
ROAD AND SIDEWALK JOINTER

Garnett Gresham, 1225 Sycamore St., Middletown, Ohio

Filed Oct. 11, 1956, Ser. No. 615,416
5 Claims. (Cl. 94—45)

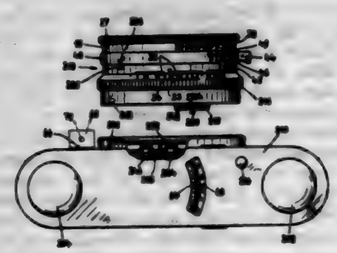
1. A concrete jointer for making a groove in newly laid concrete such as sidewalks, roads, et cetera, which concrete is confined in forms, said jointer including a pair of parallel horizontal angle bars having the lower flanges arranged in a horizontal plane and spaced apart so as

to form a slot therebetween, the vertical flanges of the angle bars being located along the outer margins of the horizontal flanges, means engaging the ends of the angle bars for holding the angle bars in fixed spaced relation from each other, a carriage having wheels mounted on top of the horizontal flanges and positioned between the vertical flanges, a smoothing plate mounted on the under side of the horizontal flanges, said smoothing plate having upwardly curved ends engaging the under side of the



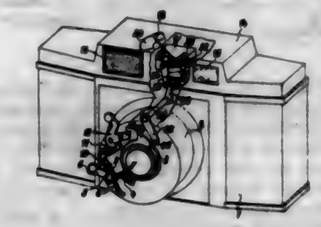
horizontal flanges, yieldable means extending through the slot and secured to the carriage and to the smoothing plate for biasing the curved ends against said flanges, said smoothing plate having a downwardly directed scoring tool, and handle means attached to the carriage for actuating the carriage upon the horizontal flanges to cause the scoring tool to form a groove in the underlying concrete and to cause the smoothing plate to smoothen the concrete on the sides of the groove.

2,949,869
EXPOSURE VALUE SETTING MEANS WITH DETACHABLE OPTICAL UNIT
Kurt Gebele, Munich, Germany, assignor to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a German firm
Filed Jan. 28, 1958, Ser. No. 711,605
Claims priority, application Germany Jan. 29, 1957
4 Claims. (Cl. 95—10)



1. A photographic camera structure comprising a camera unit and an interchangeable optical unit detachably mounted in operative position on the camera unit, said structure including a shutter speed setting member and a diaphragm aperture setting member, at least one of which setting members is mounted on said optical unit and removable therewith from the camera unit, an exposure meter and a meter follow-up pointer both mounted on said camera unit and remaining thereon when said optical unit is detached from said camera unit, and disengageable connecting means for operatively connecting said follow-up pointer on said camera unit to a setting member on said optical unit to move therewith, said connecting means including a rotary member rotatable about an axis parallel to the optical axis of said camera unit, characterized by means rendered effective by relative movement between said camera unit and said optical unit in a disengaging direction, for maintaining said member of said connecting means in a predetermined angular position required for again mounting said optical unit in operative position on the camera unit.

2,949,870
EXPOSURE CONTROL DEVICE FOR PHOTOGRAPHIC CAMERAS
Paul Frost, Munich, Germany, assignor to Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany, a corporation of Germany
Filed Feb. 25, 1958, Ser. No. 717,348
Claims priority, application Germany Feb. 28, 1957
6 Claims. (Cl. 95—10)



1. A compact control device for automatically regulating the effective aperture of a photographic camera having a body and a lens tube in accordance with the ambient illumination as detected by a photoelectric exposure meter incorporating a movable galvanometer element, said control device comprising an exposure-regulating element mounted upon said lens tube, a sensing device mounted within said body adjacent said lens tube, said sensing device having a detecting element which is operatively associated with said movable galvanometer element for detecting its position at predetermined moments with a corresponding arrestment of said detecting element, an actuating means operatively associated with a shutter, a release lever, elastic means connecting said exposure-regulating element with said release lever in a manner which causes movement of said release lever to progressively reduce the exposure setting of said exposure-regulating element, a connecting linkage operatively associating said release lever with said actuating means, a coupling means operatively connecting said exposure-regulating element with said sensing device for arresting said progressive motion of said exposure-regulating element when said movable galvanometer element is detected and said detecting element is arrested to provide an exposure setting of said exposure-regulating element which is related to the detected position of said movable galvanometer element while said release lever continues its movement to trigger said actuating means, said coupling means including a shaft which is rotatably mounted about its own axis which is disposed parallel to the axis of said lens tube and extending from said exposure-regulating element to said sensing device, said photoelectric exposure meter and movable galvanometer element being disposed within an upper portion of said camera casing, said shaft being disposed within said lens tube, said exposure-regulating element including a cam element, a follower lever being connected to the end of said shaft disposed adjacent said exposure-regulating element, said follower lever being disposed in operative contact with said cam element, the end of said shaft remote from said exposure-regulating element being connected to a coupling lever which is operatively engaged with said detecting element of said sensing device, a resilient means connected to said detecting element for urging it in a direction to react upon said coupling lever and through said shaft to maintain said follower lever in forceful resilient contact with said cam element at all

times thereby insuring the smooth transmission of forces between said exposure-regulating element and said sensing device.

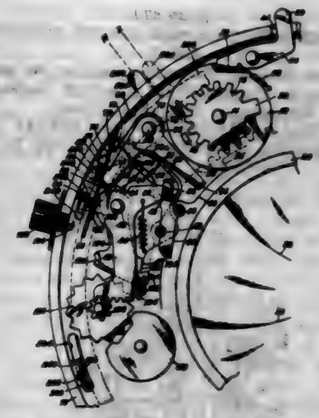
2,949,871
ENDOSCOPIC CAMERA SYSTEM
André Fourez, 11 rue Marguerite, Paris, France
Filed Mar. 12, 1957, Ser. No. 645,437
Claims priority, application France Mar. 19, 1956
6 Claims. (Cl. 95—11)



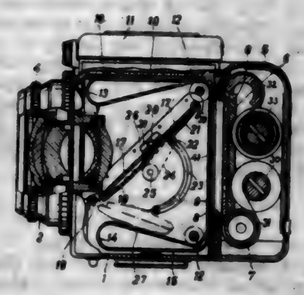
1. In a practitioner's endoscopic camera for examination of a patient's body, a tube adapted to engage the patient's body, an optic system inside the outer section of said tube, a flash bulb and an illuminating bulb in the inner section of the tube adapted to illuminate selectively the part of the body to be photographed and to produce an image thereof through the optic system, an eyepiece at the outer end of the tube for examination of the image thus formed, a reflecting surface fitted inside the tube between the eyepiece and the optic system and adapted to rock round an axis perpendicular to the axis of the optic system between a position for which it provides for the passage of the image conveying light beam from the optic system into the eyepiece and a position for which it deflects said beam from the optic system radially with reference to the axis of said optic system through the wall of the tube, a film adapted to move outside the tube in a plane parallel with the axis of the tube across the deflected beam produced by the reflecting surface in its second position, and means for lighting in succession the illuminating bulb and the flash bulb in synchronism with the rocking of the reflecting surface between its first and second positions.

2,949,872
PHOTOGRAPHIC SHUTTER WITH BUILT-IN SYNCHRONIZER
Kurt Gebele, Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a German firm
Filed Apr. 16, 1957, Ser. No. 653,228
Claims priority, application Germany Apr. 10, 1952
5 Claims. (Cl. 95—11.5)

4. A photographic shutter comprising blades movable between closed and open positions, a blade ring mounted for oscillating movement and operatively connected to said blades to open and close them, said blade ring being movable from an initial position in which said blades are closed to an intermediate position in which said blades are still closed and thence to a blade-open position, driving means for urging said ring from said initial position toward said blade-open position, a movable latch member engageable directly with a part on said blade ring for latching said blade ring in said intermediate position to prevent further movement thereof toward blade-open position notwithstanding the urging of said driving means, clockwork timing mechanism urged for movement from an initial tensioned position toward a run-down position, means for holding said clockwork timing mechanism in its initial tensioned position, electric flashlight switch mechanism including a switch closing member mounted for movement independently of said clockwork timing mechanism, means controlled by movement of said blade ring from its initial position to its said intermediate position for moving said switch closing member to close said electric switch and for releasing said clockwork timing mechanism so that it may begin to run down from its initial tensioned position toward its run-down position, and a part movable with said clockwork timing mechanism for engaging said latch member after said timing mechanism commences its running down movement, further movement of said timing mechanism following such engagement serving to release said latch member from said part on said blade ring so that said blade ring may complete its movement from its said intermediate position to blade-open position, said part movable with said clockwork timing mechanism being initially spaced from said latch member by a sufficient distance of idle movement so that said clockwork timing mechanism may overcome initial starting resistance and acquire normal running-down speed before engaging said latch member to move the same.



2,949,873
REFLEX CAMERA
Richard Weiss, Braunschweig, Germany, assignor to Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate, Braunschweig, Germany, a firm
Filed Apr. 7, 1958, Ser. No. 726,846
Claims priority, application Germany Apr. 12, 1957
8 Claims. (Cl. 95—42)

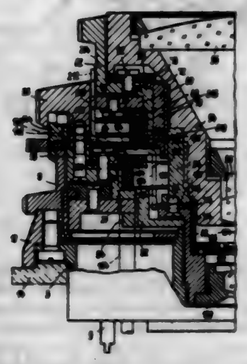


1. A pivoted mirror reflex camera comprising a housing, means for holding film, means for admitting light into said housing to form an image on the film, a focusing screen mounted in said housing, a pivoted mirror for reflecting image rays onto said focusing screen, said mirror being divided into two portions, means for providing a

pivotal axis along an outer edge of one of said portions, means for hinging said portions along an axis parallel to said pivotal axis, said mirror being movable between a focusing position wherein said two portions lie adjacent one another in substantially the same plane in an oblique orientation and a focusing position wherein said two portions are folded one upon the other in a space opposite said focusing screen, and means connected to the other of said two portions for guiding and moving said mirror between said positions.

2,949,074
PHOTOGRAPHIC CAMERA WITH OBJECTIVE LENS

Kurt Gebele, Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a firm of Germany
Filed July 19, 1956, Ser. No. 598,943
Claims priority, application Germany July 22, 1955
4 Claims. (Cl. 95—44)

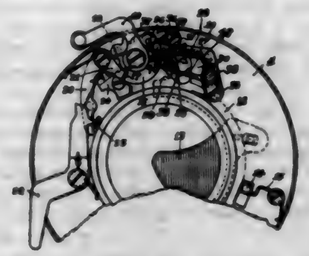


1. A photographic camera and range finder structure including a focusing lens mount having an optical axis, said lens mount also having a body portion normally stationary both rotationally and axially during focusing, a focus adjusting ring mounted on said body portion for rotation thereon without axial movement, a lens carrier mounted for axial movement on said body portion without rotation and operatively coupled to said focus adjusting ring to be moved axially by rotation of said ring, a range finder control cam mounted on said body portion for rotation concentric with said optical axis, and means for rotating said cam in conjunction with rotation of said focus adjusting ring, characterized by a first seating surface on said body portion against which said focus adjusting ring is rotatably mounted, first spring means resiliently urging said adjusting ring axially in a direction to keep it seated against said first seating surface, a second seating surface on said body portion against which said range finder control cam is rotatably mounted, and second spring means resiliently urging said range finder control cam axially in a direction to keep it seated against said second seating surface.

2,949,075
INTRA LENS SHUTTER

Waldemar T. Rentschler, Calmbach, Enz, Germany, assignor to Alfred Gauthier G.m.b.H., Calmbach, Enz, Germany, a corporation of Germany
Filed Mar. 15, 1954, Ser. No. 416,292
Claims priority, application Germany Mar. 18, 1953
4 Claims. (Cl. 95—63)

1. A camera shutter comprising at least on reversibly movable member, means connected to said shutter comprising an element engageable for opening and closing movement of said shutter, said element having a shutter opening movement and a shutter closing movement, a spring charged means operable to move said element to open and close said shutter, means for selectively effecting one of two different modes of operation of said shutter by said spring charged means including a first movable actuating member and a second movable actuating member, said first movable actuating member being movable by said spring charged means in abutting engagement with said element to effect opening and closing movement of said element and said shutter, said spring charged means having a normal path of movement while effecting opening and closing movement of said shutter, said first movable actuating member being movable by said spring charged means in a forward and a reverse direction to effect respectively, the opening and closing movements of said shutter through said first movable actuating member's abutting engagement with said element, said second movable actuating member being operable in abutting connection with said element to move said element through its shutter opening movement, means for connecting said second movable actuating member to said spring charged means for operation



of said element through shutter opening movement by said second movable actuating member, the latter means being operative to connect said second movable actuating member to said spring charged means upon movement of said spring charged means through a portion of its said normal path and after initial movement of said first movable actuating member in said forward direction, said first movable actuating member being normally operative through movement in the latter direction to effect opening of said shutter, means operably engageable with said first movable actuating member to alter its path of movement in said first direction so that said first movable actuating member does not cause shutter opening movement of said element and said shutter while moving in said forward direction and so that shutter opening movement of said element and said shutter is effected by said recond movable actuating member, said first movable actuating member being operative to close said shutter through movement by said spring charged means in said reverse direction whenever said shutter is opened by said spring charged means, said second movable actuating member being mounted for effective engagement with said element during opening movement of said shutter only.

2,949,076
IRIS DIAPHRAGM

Karl Fiukl, Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a German firm
Filed June 11, 1956, Ser. No. 590,525
Claims priority, application Germany June 16, 1955
1 Claim. (Cl. 95—64)

An iris diaphragm, particularly for photographic purposes, comprising stationary supporting means defining a circular maximum exposure aperture, a diaphragm adjusting ring rotatably mounted on said supporting means to turn concentrically with respect to said exposure aperture, a series of cam slots in said ring, each cam slot extending obliquely in a generally circumferential direction and having a circumferential extent materially greater than its extent in a direction radially with respect to said aperture, a first set of substantially flat aperture-adjusting leaves equal in number to the number of cam slots in said ring, each leaf of said first set being relatively long and narrow with a length substantially greater than the diameter of said maximum exposure aperture and a width at its widest point substantially less than the radius of said maximum exposure aperture and having one longitudinal edge concavely curved and faced in a direction toward the center of said maximum exposure aperture, a second set of substantially flat gap-closing leaves equal in number to the leaves of the first set, each leaf of the second set being substantially shorter than the diameter of said maximum exposure aperture and substantially narrower than the radius of said maximum exposure aperture, a pivot pin fixed to each leaf of the first set near one end thereof and projecting from only one face of such leaf and passing through a companion leaf of the second set near one end thereof and into said stationary supporting means so that two companion leaves, one from each set, may swing on the pivotal axis defined by the center of each pivot pin, and the effective length of each of said gap-closing leaves, from its pivot pin to its remote end, is greater than the distance



between any two adjacent pins, and in which each of said gap-closing leaves, when adjusted to position for maximum effective aperture, overlaps the pivot pin of the next adjacent gap-closing leaf on one side thereof, a control pin fixed to each leaf of the first set in a position spaced from the pivot pin thereof and projecting from the face thereof opposite to the face from which said pivot pin projects, each leaf of said first set having an outwardly facing notch adjacent its respective control pin, and a control pin fixed to each leaf of said second set in a position spaced from the pivot pin on which such leaf is mounted and projecting from the face of such leaf of the second set whch is faced toward the companion leaf of the first set, the two control pins of each pair of two companion leaves both entering the same cam slot of said adjusting ring in such position that when said ring is turned in one direction, all of the leaves of the first set will be swung toward the center of said maximum exposure aperture to define by their collective concave edges an effective exposure aperture smaller than said maximum exposure aperture and all of the leaves of the second set will be swung to a lesser extent toward the center of said maximum exposure aperture to close any gaps otherwise formed between the edges of said maximum exposure aperture and the outer edges of the leaves of the first set, each of said control pins of said leaves of said second set entering its respective notch in the leaves of said first set when said ring is turned in the other direction toward a position of maximum effective aperture.

2,949,077
PRINTING FRAME

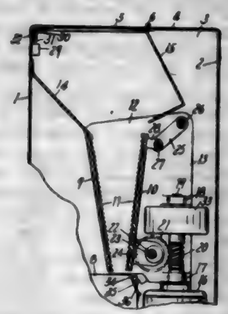
Murray Friedel, Miami Beach, Fla., assignor to Statmaster Corporation, New York, N.Y.
Filed Apr. 17, 1958, Ser. No. 729,146
2 Claims. (Cl. 95—77)



1. A printing frame comprising a framework provided with a fixed transparent front panel and a pair of pivotal translucent rear panels, the rear panels being sand-blasted upon their surfaces adjacent the front panel, one rear panel longitudinally hinged to the framework along one edge and hinged to the second rear panel along its opposite edge, a rod bolted longitudinally to the framework behind the first rear panel adjacent the second rear panel, a spring mounted on the rod and disposed to tension the rear panels against the front panel, the second rear panel provided with a finger piece and a pair of plates secured thereto adjacent its top and bottom edges, the plates provided with arms disposed perpendicular to the panel, and roller bearings secured to the arms, the roller bearings adapted to come in registry with and contact the rod upon pivotal movement of the second rear panel, whereby pressure of the roller bearings against the rod raises the first rear panel from contact engagement with the front panel against the spring tension to allow insertion of sensitized paper between the front panel and the rear panels.

2,949,078
CRUSHING MACHINE

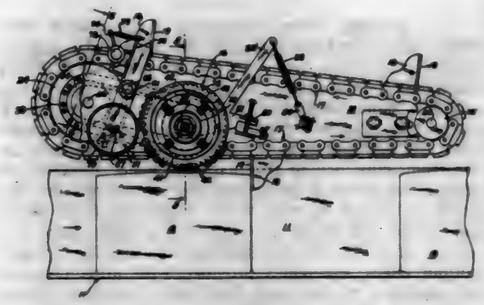
Linwood L. Reed, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich.
Filed Jan. 26, 1959, Ser. No. 788,870
16 Claims. (Cl. 100—43)



14. In a crushing machine, the combination with a housing having a charging opening at the upper end thereof and provided with a closure for said opening, a pair of downwardly converging jaws disposed transversely of the housing one of said jaws being movable relative to the other, a supporting link for the upper end of the movable jaw, said movable jaw having a bearing on its outer side adjacent its lower end, a driven eccentric coacting with said bearing and with said link in supporting said movable jaw, said link and eccentric coacting to support and impart a combined inward and downward crushing stroke to said movable jaw relative to said fixed jaw, an electric motor having driving connection to said eccentric, a main control switch for said motor operatively associated with said closure so it is automatically closed on the opening of the closure and opened on the complete

closing of the closure, and means on said closure member acting to open said switch when the closure member is in fully closed position.

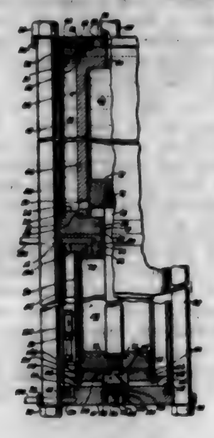
2,949,079
ROTARY CASE PRINTER
Earl L. Beattie, 41 Freelon St., San Francisco 7, Calif.
Filed Oct. 3, 1958, Ser. No. 765,287
1 Claim. (Cl. 101—35)



In apparatus for automatically delineating indicia on each case of a succession of cases carried on a moving conveyer, a base plate, a standard fixedly secured to said base plate in juxtaposition to said moving conveyor, a vertically disposed shaft journaled in said base plate, a main hub of predetermined diameter rotatably mounted on said standard, a first sprocket carried on said shaft, a second sprocket carried on said main hub, an endless chain trained about said first sprocket and said second sprocket to effect rotation of said main hub upon rotation of said shaft, a plurality of printing rings, a central hub on each of said printing rings of slightly greater diameter than the diameter of said main hub for effecting frictional engagement and removable mounting of each of said rings on said main hub and rotation of said rings in unison with the rotation of said main hub, a series of individual type yieldably mounted on and about the periphery of each of said rings; said yieldably mounted individual type on said rings being adapted to yieldably engage an outer surface of each case of a succession of cases on said moving conveyor and to delineate a message of one or more lines thereon, and means for moving said main hub and said endless chain toward and away from said moving conveyor in order to compensate for different sizes of cases carried on said moving conveyor, said means comprising an intermediate plate fitted between said shaft and said standard above said base plate, an arm carried on said intermediate plate, an adjustable link secured to said base plate, and a tension spring anchored to said arm and to said adjustable link; adjustment of said link in one direction effecting the increase of tension of said spring to move said main hub and endless chain toward said conveyor while adjustment of said link in the opposite direction effecting the relief of tension on said spring to move said hub and said endless chain away from said conveyor.

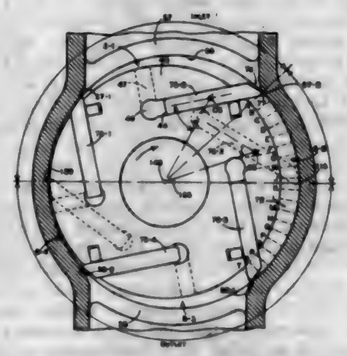
2,949,080
PRESSURE GENERATOR
Jack B. Ottestad, Claremont, and Samuel A. Sheen, Jr., West Covina, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 709,992
16 Claims. (Cl. 103—50)

1. A pressure generator comprising cylinder means, means defining an outlet opening in the cylinder means, piston means slidably positioned in the cylinder means, said piston means having a plunger surface and an actuator surface rigidly interconnected to provide a unitary structure, said plunger surface confronting fluid disposed in the cylinder means, a plate confronting said actuator surface and defining an orifice, a resilient seal element disposed between the actuator surface and the plate for effecting pressure sealing therebetween about said orifice, means for exerting a setting force on said piston means



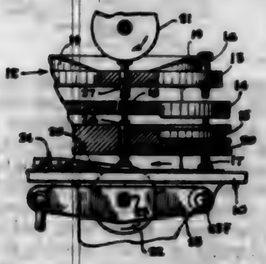
to urge the actuator surface toward said plate to cover the orifice and effect said pressure sealing, and means for establishing an actuating pressure independent of said setting force to act upon a portion of said actuator surface within the resilient seal element to overbalance the setting force and expose an increased area of the actuator surface to the actuating pressure, whereby thrust is exerted on said piston means to produce output pressure in said fluid.

2,949,081
PUMPING CAVITY FOR ROTARY VANE PUMP
Desire J. Deschamps, San Fernando, Calif., assignor to Hydro-Aire, Inc., Burbank, Calif., a corporation of California
Filed Apr. 25, 1956, Ser. No. 580,482
7 Claims. (Cl. 103—120)



1. A rotary vane pump comprising, in combination, means forming a cylindrical pumping cavity having circumferentially spaced inlet and outlet ports in its cylindrical surface; a cylindrical pump rotor mounted for rotation in said cavity with its axis parallel to the axis of said cavity, the diameter of said rotor being less than that of said cavity; and vanes slidably mounted in circumferentially spaced longitudinal slots in said rotor for engagement of their outer ends with the cylindrical surface of said cavity; the cylindrical surface of said cavity consisting entirely of consecutive circular arcs about at least two axes spaced from each other and including the axis of said rotor and the normal axis of said cavity, being at a maximum distance from the surface of said rotor at the closing edge of the inlet port, and converging toward said rotor surface from a point intermediate the closing edge of the inlet port and the opening edge of the outlet port to a point intermediate the closing edge of the outlet port and the opening edge of the inlet port; the cylindrical surface of said cavity between the closing edge of the inlet port and said first mentioned point being a first circular arc about the axis of said rotor and, between said points, being a second circular arc about the normal axis of said cavity.

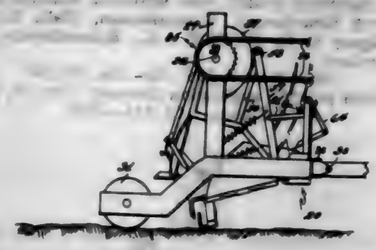
2,949,082
TABLET MACHINE
Lyndell T. McCarley, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
Filed Mar. 19, 1958, Ser. No. 722,595
4 Claims. (Cl. 107—17)



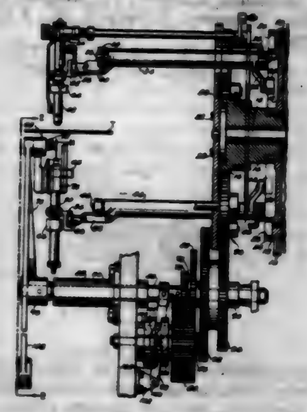
1. In a rotary tablet-compressing machine comprising a frame, a rotating head moving in a given direction, an upper punch and a lower punch, said punches being reciprocally mounted in said head for cooperating axial movement relative to each other, an upper and lower compression roller positioned at the top and bottom of the said head and contacting the upper and lower punches respectively; a cam element extending in said direction from the top of said lower roller, the end of said cam at said roller riding on said roller, said cam being pivotally mounted on said frame adjacent the end of said cam in said direction, said end of said cam in said direction being at a substantially greater elevation than said end of said cam at said roller, said cam having a curved cam track; and means to resiliently urge said end of said cam at said roller toward said roller.

2,949,083
SOD PLUG PLANTER
Charles M. Knowles, 2318 36th Ave. N., St. Petersburg, Fla.
Filed Nov. 8, 1957, Ser. No. 695,278
2 Claims. (Cl. 111—3)

1. A sod plug planter comprising a frame, means securing the forward end of said frame to a tractor vehicle, a roller journalled in said frame and supporting the rear end of said frame, a cam member journalled in said frame for rotational movement therein and having a plurality of cam faces rigidly formed thereon, means connected to said cam members driven from said tractor vehicle for rotating said cam member in said frame, a sod guide pivotally secured to said frame for vertical swinging movement, a first cam follower on said sod guide engaging one of said cam faces for pivoting said sod guide on said frame, a cutter blade fixed to said frame, a cutter plate fixed to said sod guide, said cutter blade and said cutter plate cooperating to sever sod supported therebetween in said sod guide on upward movement of said sod guide and thus forming a sod plug, gripping forks mounted on said frame for gripping a sod plug severed from the sod in said sod guide, a second cam follower connected to said gripping forks for engagement with a second one of said cam faces upon rotation of said cam, digging fingers carried by said sod guide and depending therefrom for movement into and away from the earth upon pivotal movement of said sod guide, a plunger bar for pressing a sod plug held by said gripping fingers into the ground into a hole dug by said digging fingers, a third cam follower mounted on said plunger bar for engagement with a third one of said cam faces for controlling the sod pressing stroke of said plunger bar, and a fourth cam follower connected to said plunger bar for engagement with a fourth one of said cam faces for permitting movement of said gripping fingers to plug gripping position.



2,949,084
SEWING MACHINE LOOPER MECHANISM
Carl W. Johnson, Brooklyn, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Original application May 7, 1956, Ser. No. 583,027, now Patent No. 2,900,939, dated Aug. 25, 1959. Divided and this application Jan. 20, 1958, Ser. No. 710,096
12 Claims. (Cl. 112—171)



1. In a sewing machine, the combination with a needle and opposed needle bars, of means for alternately connecting said needle with said bars and projecting said needle with a thread having a fixed end and a loose end through work to be stitched, a drum located adjacent one of said bars, a thread puller device co-operating with

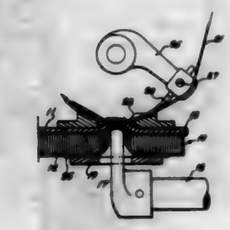
said drum to pull the loose end of said thread through the work and lay it on said drum, driving means for operating said needle bars at a predetermined normal cyclical rate of speed, and mechanism for rotating said thread puller, said mechanism including means for revolving said thread puller through a plurality of revolutions during each thread pulling operation, whereby the loose end of said thread is pulled rapidly through said work and disposed on said drum.

2,949,685
PRESSER FOOT FOR SEWING MACHINE
Emerich Schenkengel, Kaiserslautern, Pfalz, Germany, assignor to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany
Filed Nov. 7, 1957, Ser. No. 695,149
Claims priority, application Germany Nov. 21, 1956
5 Claims. (Cl. 112—235)



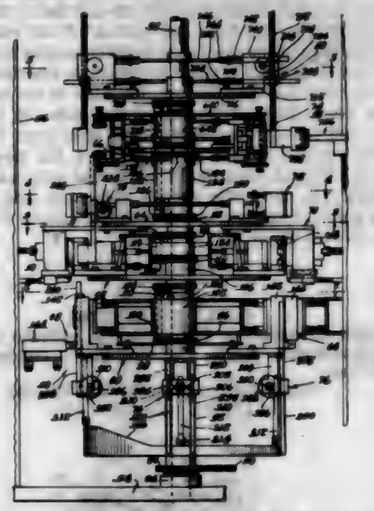
1. Presser foot for sewing machine of the type adapted to be mounted on the presser bar of the machine and having a shank member and a horizontal arm extending substantially at right angles to said shank member, said foot comprising a sole having coupling elements disposed on the upper surface thereof, each of said coupling elements presenting a slot and having a closed end, supporting elements on said arm adapted to slidably engage said slots on said coupling elements in a direction substantially parallel to the working surface of the machine and a rigid latch member pivotally supported on said arm presenting a transverse bar movable over said closed ends of said coupling elements for the locked position of said sole.

2,949,686
METHOD OF SEWING BINDING TAPE TO PILE FABRIC
Ray D. McFaddin, Glasgow, Va., assignor to James Lees and Sons Company, Bridgeport, Pa., a corporation of Delaware
Filed Dec. 2, 1958, Ser. No. 777,766
4 Claims. (Cl. 112—267)



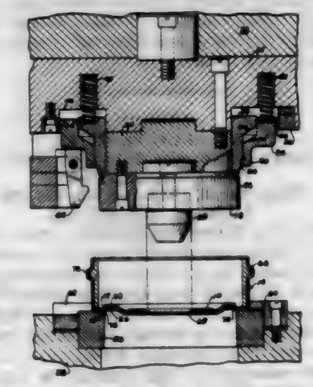
1. The method of sewing an edge binding tape to a pile fabric which comprises the steps of feeding a length of the fabric and the tape through a blind stitch sewing machine to sew the tape to the fabric by means of a series of stitches along one edge of the binding tape, simultaneously interposing a protective web between the sewing machine and the pile surface of the fabric in the zone to be stitched to thereby prevent excessive crushing of the pile along the line of the stitches, and sewing the tape to the fabric.

2,949,857
APPARATUS FOR MAKING CANS
Peter Bogner, 1930 11th St. S., Rockford, Ill.
Filed Nov. 12, 1953, Ser. No. 391,498
13 Claims. (Cl. 113—10)



1. An apparatus for processing can bodies comprising an elongated shaft, support means rotatably mounted on said shaft, a plurality of means disposed on and spaced around said support means for cutting an elongated strip of sheet material stock into a plurality of can body blanks, a second support means rotatably mounted on said shaft, a plurality of means disposed on and spaced around said second support means for forming said blanks into can bodies, a plurality of means movable with said support means for transferring blanks from said cutting means to said forming means, and means for continuously rotating said support means and for actuating said cutting means, said forming means and said transferring means in time with each other.

2,949,861
JOINING SHEET METAL PARTS
Stanley N. Johnson, Lansing, Mich., assignor to Motor Wheel Corporation, Lansing, Mich., a corporation of Michigan
Filed Nov. 15, 1957, Ser. No. 696,746
7 Claims. (Cl. 113—116)



1. The method of forming a sheet metal brake drum which comprises forming a sheet metal drum back with a

circular outer periphery, forming a sheet metal drum ring with a circular inner periphery smaller in diameter than the drum back, placing the drum ring on a die having a circular opening therein, the edge of which forms a cutting edge having generally the same diameter as the drum back, placing the drum back on the drum ring, centering the drum back and drum ring relative to the cutting edge of the die, driving the drum back into the drum ring to pierce the drum ring and tightly engage the drum back in the opening pierced in the drum ring and while the drum back and drum ring are in the thus assembled condition, welding them together along the mating edges thereof.

2,949,889
RADIO CONTROLLED TORPEDO
Donald V. Reid, 1315 Evergreen Ave., Asbury Park, N.J.
Filed Dec. 3, 1957, Ser. No. 700,483
2 Claims. (Cl. 114—21)



1. In a vessel, a longitudinally divided hull, a plurality of transverse ribs attached to the inside of said hull, a plurality of direction control fins adjustably secured to said hull, a propeller, a propeller shaft in said hull and to which said propeller is secured, a water tight housing in said hull and containing an electric motor, said housing having walls, one of said walls having an aperture through which said propeller shaft extends, a seal connected at said aperture and engaging said shaft to exclude water from said housing, electrically operative means in said housing and having linkages extending through openings in said housing for actuating said control fins, a battery source of electrical potential in said housing, a radio receiver in said housing and having means for controlling the energization of said motor and said electrically operative means by said battery source, and the radio receiver having a collapsible antenna which is attached to said hull and which rises therefrom.

2,949,890
WEATHER-VANE STREAMLINE FAIRING
Charles F. Gerber, Poquonnock Bridge, Conn., assignor to the United States of America as represented by the Secretary of the Navy
Filed Feb. 18, 1955, Ser. No. 489,313
4 Claims. (Cl. 114—90)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An antenna supporting mast for a submarine which offers a minimum of resistance to air and water as the submarine turns and operates in submerged, partly submerged, and surfaced conditions which comprises an upright, rigid cylindrical post mounting a whip antenna rod on the top thereof to form an upward extension thereof, and a plurality of similar, weather-vane, streamlined fairings individually and freely rotatable on said post in a stacked relationship on the post, each fairing having as its leading edge a partly cylindrical surface which has its axis of curvature coincident with the longitudinal axis of said post, the sides of each fairing being approximate planes tangent to the opposite sides of said cylindrical forward surface and tapering to a minimum thickness at the trailing edge, whereby each fairing may individually swivel on said post independently of the positions of the other fairings and freely assume positions in which it offers minimum resistance to the air or water in which it may



be disposed at any time as the submarine turns, dives, surfaces, or runs partly submerged.

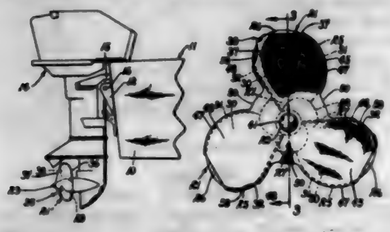
2,949,891
HATCH COVER MECHANISM
Jack Lovell, Chagrin Falls, Ohio, assignor to Cleveland Pneumatic Industries, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 2, 1958, Ser. No. 764,893
8 Claims. (Cl. 114—202)

1. In a hatchway cover having a plurality of panels and a track along the edge of the hatchway, a truck comprising a hinge link adapted to be pivotally connected to adjacent edges of adjacent panels, a pair of similar opposed jacking arms each pivoted on said hinge link, a roller on each arm movable along said track, said arms being rotatable from an unjacked position wherein each roller is horizontally spaced to one side of its arm pivot and to a jacked position wherein each roller is horizontally spaced on the other side of its arm pivot, a fluid motor having a piston pivotally connected to one of said arms and a cylinder pivotally connected to the other of said arms, said piston and cylinder being axially movable relative to each other to operate said arms between said jacked and unjacked positions and changing the vertical spacing between said hinge link and track.

2,949,892
PROPELLER SHROUD
Donald A. Fortune, 1284 Wilson Ave., Fresno, Calif.
Filed Mar. 9, 1959, Ser. No. 798,203
11 Claims. (Cl. 115—18)

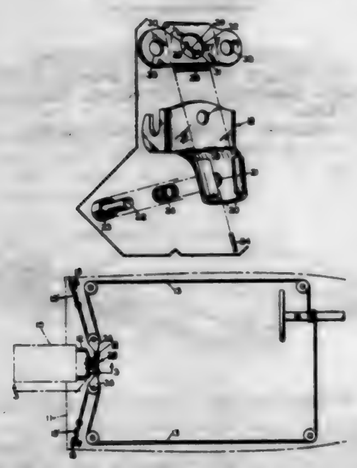
10. A shroud for a propeller having a hub and a plurality of blades outwardly extended from the hub comprising an envelope of elastic material adapted releasably to fit over a propeller in stretched substantially fitted relation about the blades and providing an external surface when so mounted on a propeller of a shape of substantially less propelling efficiency than said propeller,

the envelope having water admitting openings adjacent to the hub of the propeller and water emitting openings



at the ends of the propeller blades and through which the tips of the blades extend.

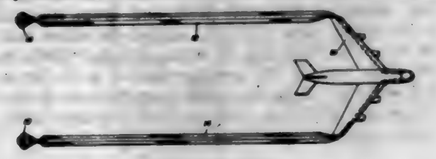
2,949,093
DETACHABLE SOCKET-TYPE STEERING CONNECTION ASSEMBLY FOR OUTBOARD MOTORS
Walter N. Smith, 928 SE. 7th Ave., Portland, Oreg.
Filed Apr. 24, 1959, Ser. No. 808,616
4 Claims. (Cl. 115—18)



1. In a boat having an outboard motor removably mounted on the rear of the boat and a steering cable, a detachable socket-type assembly for connecting said steering cable with said outboard motor, said assembly including a bracket secured to said motor, a coupler, means for connecting said steering cable to said coupler, means for mounting said coupler on said bracket, said latter mentioned means including a socket on said bracket, an integral portion of said coupler insertable into said socket and manually operable locking means for locking said coupler on said bracket, whereby said coupler may be removed from said bracket and motor without disconnecting said steering cable from said coupler.

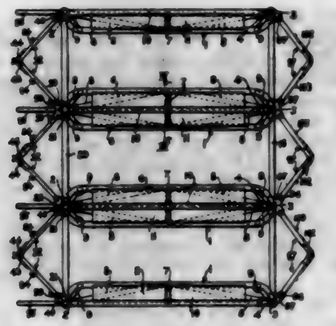
2,949,094
VISUAL AIRCRAFT FINDER
Fred H. Clothier, Route 1, Corinth, N.Y.
Filed Feb. 20, 1958, Ser. No. 716,346
6 Claims. (Cl. 116—124)

1. For use on an aircraft, a visual aircraft finder comprising the combination of a banner that has an inner end and an outer end, a holder carried by the aircraft and within which the banner is stored, means releasably holding the outer end of the banner in the holder, the last mentioned means having a control structure under the control of the aircraft personnel, and means releasably retaining the inner end of the banner in place on said holder, said inner end of said banner having a ring secured thereto, said means releasably retaining the inner end of the banner on said holder including a rod reciprocably movably mounted on said holder in alignment



with said ring, spring means normally biasing said rod to a position extending through said ring, and cable means operatively connected to said rod and extending to a point remote therefrom acting in opposition to said spring whereby said rod may be withdrawn from said ring so as to separate said banner from said holder.

2,949,095
STARTING STALLS FOR USE ON RACECOURSES
Edwin Haswell Wood, Wairere Road, Belmont, Lower Hutt, Wellington, New Zealand
Filed Apr. 9, 1958, Ser. No. 727,379
Claims priority, application New Zealand Jan. 28, 1958
7 Claims. (Cl. 119—15.5)



1. A starting unit for racing animals comprising a plurality of spaced vertical partitions defining stalls in side-by-side relation, guide rails on said vertical partitions and spaced from the ground, said guide rails extending into said stalls for centering the animals therein, base members at opposite ends of the partitions and operatively associated therewith in detachable relation to support the same on the ground, said base members being substantially rectilinear and horizontal members extending completely across said unit, an overhead rail extending completely across said unit and operatively associated with said partitions in detachable relation to secure the partitions in position, tread plates on said guide rails for supporting riders for the animals in the stalls, pivots on the vertical partitions at the fronts of the stalls whereby said pivots are off-set from said guide rails, and gates on the pivots for releasing said animals.

2,949,096
PNEUMATIC ACTUATOR
Jack B. Ottestad, Claremont, and Samuel A. Skeen, West Covina, Calif., assignors to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Sept. 13, 1957, Ser. No. 683,955
16 Claims. (Cl. 121—38)

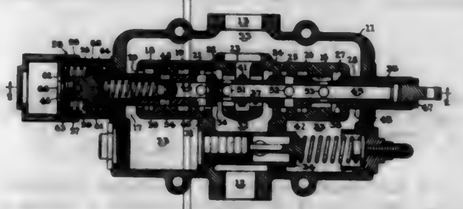
1. In a pneumatic actuator having a piston movable in a cylinder by pressurized gas to produce useful output

thrust, and having means defining an orifice within the cylinder adapted to be sealed by a setting pressure urging said piston toward said means to engage pressure sealing means positioned therebetween, a metering member carried by said piston for regulating flow of said pressurized gas through said orifice upon disengagement of said sealing means by said gas, said metering member comprising



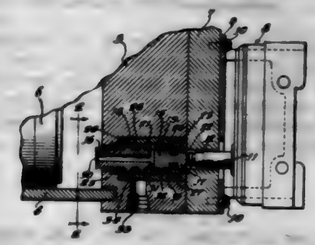
a contoured metering section for regulating flow of said pressurized gas through said orifice to produce a predetermined acceleration-time pattern on the piston, and a section closely fitting said orifice substantially to prevent passage of said gas therethrough upon said disengagement of the sealing means until said contoured section regulates flow, whereby premature output thrust is prevented.

2,949,097
FIVE POSITION CONTROL VALVE HAVING POWER FLOAT POSITION
Henry A. Vander Kaay, Kalamazoo, Mich., assignor to The New York Air Brake Company, a corporation of New Jersey
Filed Dec. 11, 1957, Ser. No. 702,147
3 Claims. (Cl. 121—46.5)



1. A valve comprising a housing having inlet and exhaust ports and first and second motor ports; passageways interconnecting the four ports; a movable valve element carrying valving heads which cooperate with seats in the housing to control flow through the passageways, the valve element being shiftable in reverse directions from a neutral position and having four other operative positions; and means for shifting the valve element between two limiting positions located on opposite sides of the neutral position, the valve element when moving between limiting positions passing successively through a first operative position in which means carried by the valve element and the housing connect the inlet and exhaust ports with the first and second motor ports, respectively, and isolate the inlet and exhaust ports from each other, the neutral position in which means carried by the valve element and the housing interconnect the inlet and exhaust ports and isolate each motor port from the other three ports, a third operative position in which means carried by the valve element and the housing connect the inlet and exhaust ports with the second and first motor ports, respectively, and isolate the inlet and exhaust ports from each other, a fourth operative position in which means carried by the valve element and the housing connect the two motor ports with the inlet port and establish unrestricted communication between the inlet port and the exhaust port, and a fifth operative position in which means carried by the valve element and the housing connect the two motor ports with the inlet port and establish restricted communication between these three ports and the exhaust port.

2,949,098
ACTUATOR FOR SERVICE IN PISTON AND CYLINDER DEVICES
Francis S. Flick, Oak Park, Ill., assignor to Flick-Reedy Corporation, a corporation of Illinois
Filed Mar. 21, 1956, Ser. No. 572,851
4 Claims. (Cl. 121—148)

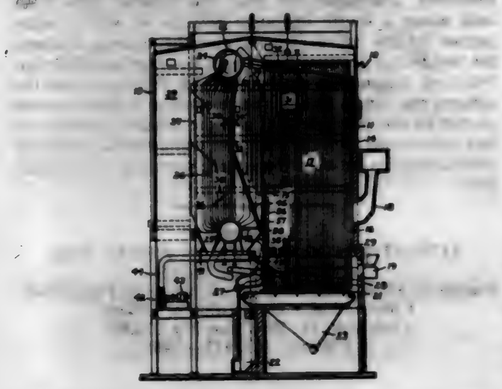


2. An actuator assembly for a piston and cylinder device adapted to move a means responsive to physical movement thereof by a piston in the cylinder, comprising: a spool slidably mounted in a bore in the cylinder head communicating with the interior of the cylinder, said spool having a stem portion extending into the cylinder for contact and movement by the piston and an intermediate enlargement, said stem and enlargement having sliding support in said bore; a seal about the stem preventing application of cylinder pressure fluid to one side of the enlargement; and said stem having a fluid passage leading to the other side of the enlargement so that pressure fluid within the cylinder may urge the spool toward the cylinder.

2,949,099
FLY ASH SEPARATION
Earle C. Miller, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Filed Apr. 21, 1958, Ser. No. 729,626
3 Claims. (Cl. 122—235)

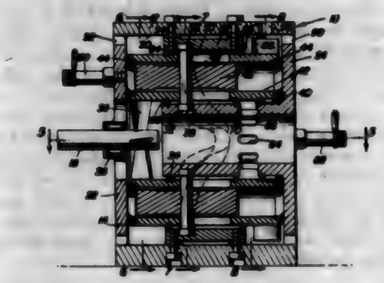
1. A steam generating unit, comprising a combustion chamber having front, rear, and side walls, a horizontal convection passage extending away from the chamber and overlying the rear back wall of the chamber, a first passage extending downwardly from the said convection passage behind the said rear wall of the chamber, a second horizontal passage extending rearwardly from the lower end of the said first passage, a back passage extending upwardly from the second horizontal passage, a series of baffles causing the products of combustion to flow sinuously through the said back passage, the said second horizontal passage causing a radical change of direction of the products of combustion in passing from the first passage to the back passage, a hopper located adjacent the

said second horizontal passage and generally in line with the original direction of the products of combustion as they pass downwardly through the first passage, and a separator through which the gas is passed during the said reversal located adjacent the hopper and lying in a plane inclined substantially to the original direction



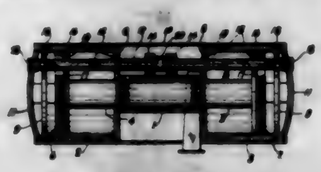
with its lower end located adjacent the said rear wall of the combustion chamber opposite the second horizontal passage, a narrow opening between the lower end of the separator and the said rear wall of the combustion chamber, and a damper mounted in the said opening to control the passage of gas therethrough.

2,949,100
ROTARY ENGINE
Axel L. Peterson, Box 975, Indio, Calif.
Filed Sept. 26, 1958, Ser. No. 763,557
13 Claims. (Cl. 123—43)



1. A rotating cylinder engine comprising a stator, a rotor therein and a power shaft connected to said rotor, said stator comprising a cylindrical casing having an opening therein, a pair of end walls mounted in the ends of said opening and secured to said casing, one of said end walls having a centrally disposed tubular sleeve reentrant into said opening, the inner surface of said casing and the outer surface of said sleeve being concentric and defining an annular chamber therebetween, means journaling said rotor for rotation in said annular chamber about an axis concentric with said inner and outer surfaces, a plurality of cylinders extending axially through said rotor and disposed parallel to and equidistant from said axis, sealing means at the opposite ends of each cylinder slidably engaging an end wall, double-ended pistons slidably received in each cylinder, a pair of sinuous inner and outer cam tracks on said inner and outer surfaces, a cam follower carried by each piston and slidably employed in each cam track, means for supplying and means for exhausting propulsive fluid from said cylinders.

2,949,101
SYNCHRONIZING MECHANISM FOR INTERNAL COMBUSTION FREE PISTON ENGINES
Anton Braun, Kingston, Ontario, Canada, assignor to Queen's University, Kingston, Ontario, Canada
Filed Aug. 12, 1957, Ser. No. 677,424
3 Claims. (Cl. 123—46)

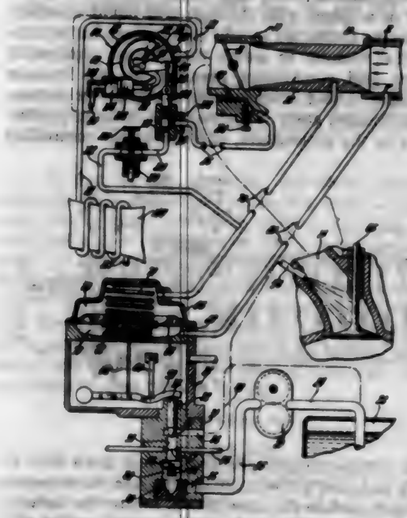


1. In a free piston machine having a pair of opposed spaced-apart axially-aligned compressor cylinders in which the confronting and outer ends of each of said compressor cylinders are closed by means of confronting and outer discs, respectively, and a power cylinder mounted intermediate said confronting discs of said compressor cylinders and being in axial aligned communication with said compressor cylinders and said power cylinder having a substantially smaller bore than said compressor cylinders, a free compressor piston reciprocally mounted in each of said compressor cylinders, a power piston axially joined to each of said compressor pistons, each of said power pistons being reciprocally mounted in said power cylinder, and having a means coupling the movement of said compressor pistons to bring about synchronization of their relative movements, the improvement in said synchronization means comprising, in combination, a synchronizer rod having spaced apart end portions, and a center portion, helical tracks on said end portion of said rod, one of said end portions of said rod extending through each of said compressor cylinders parallel with said axis of said compressor cylinder, and journaled for rotation in said confronting and outer disc of each of said compressor cylinders, said center portion of said synchronizer rod being spaced outward from said power cylinder, each of said compressor pistons having an aperture to receive an end portion respectively of said synchronizer rod, and track follower means operatively associated with said aperture to cause said synchronizer rod to rotate when said compressor pistons are reciprocated whereby unsynchronized relative movement of said compressor pistons is restrained.

2,949,102
COLD ENRICHMENT DEVICE
Zora Arkus-Duntov, Grosse Pointe Shores, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 29, 1957, Ser. No. 655,627
4 Claims. (Cl. 123—119)

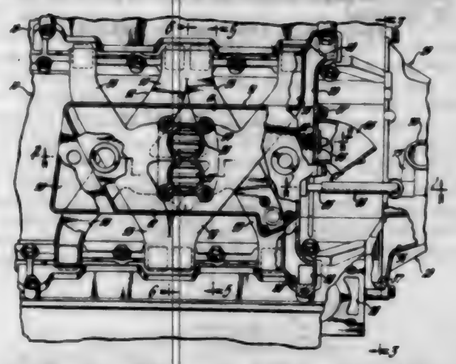
1. A fuel injection system for an internal combustion engine comprising an air induction passage, a venturi in said passage, a throttle valve in said passage posterior to said venturi, a source of fuel under pressure, conduit means for communicating said fuel source with the cylinders of said engine, a valve disposed intermediate said fuel source and said conduit means for metering the quantity of fuel flowing to said cylinders, a device for controlling said metering valve, first conduit means communicating said venturi with said control device to normally position the metering valve in accordance with the mass of air flowing through the induction passage, second conduit means communicating said control device with the induction passage posteriorly of said throttle, valve means in said second conduit means for conveying manifold vacuum to said control device, a temperature responsive element connected to and tending to open said valve

means, and a manifold vacuum responsive element also connected to and tending to close said valve means



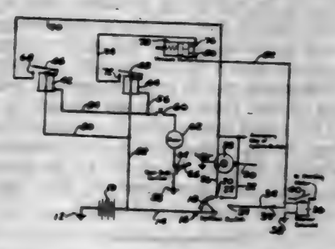
whereby the manifold vacuum force acting on the control device is inversely proportional to engine temperature.

2,949,103
LIQUID CIRCULATING SYSTEM FOR LIQUID COOLED INTERNAL COMBUSTION ENGINE
Chester L. Carlton, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 11, 1959, Ser. No. 839,338
9 Claims. (Cl. 123—122)



2. A liquid circulating system for liquid cooled internal combustion engines and comprising an engine block having a row of cylinders with liquid cooling cavities formed therein and surrounding said cylinders, a head for said row of cylinders with liquid cooling cavities formed therein and connected to said cavities in said block, said head having inlet and exhaust passages terminating at the inner extremities thereof in a lower wall of said head forming a part of the combustion chambers for the cylinders of said engine, said inlet and exhaust passages extending from said lower wall and through said cavities in said head and terminating in opposite side walls of said head, said exhaust passages being spaced from said lower wall at a lower part of said lower wall and providing a continuous circulating passage extending throughout the length of said head and beneath said exhaust passages and adjacent the side wall of said head in which the outer ends of said exhaust passages terminate, a cooling liquid circulating pump at one end of said engine and connected to said cavities in said block for supplying cooling liquid to said cavities in said block, said connection between said cavities in said block and said cavities in said head being at the opposite end of said engine from said pump and being in direct communication with said continuous circulating passage in said head, said head being formed at said one end of said engine adjacent said pump to provide an upwardly extending outlet passage communicating with said cavities in said head and terminating in an outlet port in the other side wall of said head, outlet passage means formed in said engine and connecting said outlet port to the liquid cooling radiator for said engine, said cavities in said head being elongated and relatively restricted and continuous-flow cavities providing a rapid flow of cooling liquid through said head for limiting the cooling liquid contained in said head and for rapidly cooling said head, said cavities in said head communicating with said cavities in said block only through said connection at said opposite end of said engine from said pump, said circulating passage in said head supplying cooling liquid beneath the surfaces of said exhaust passages and beneath the surfaces of said wall forming a part of said combustion chamber to be heated by said surfaces throughout the length of said head to rise in said cavities in said head to the upper parts of said cavities throughout the length of said head and to flow in said upper parts of said cavities toward said upwardly extending outlet passage leading to said outlet port.

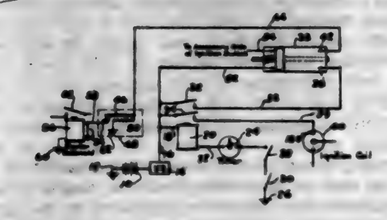
2,949,104
AUTOMATIC STARTING MECHANISM FOR ENGINES
Roscoe Davis, Base Line, Mich., assignor, by direct and mesne assignments, to Thermo Auto-Matic Starter, Incorporated, East Detroit, Mich., a corporation of Michigan
Filed Feb. 4, 1957, Ser. No. 637,993
6 Claims. (Cl. 123—179)



1. In an electrical control system for an internal combustion engine having an ignition switch connected with the battery and having contacts thereon for closing circuits to an ignition coil and to an engine starting device when the ignition switch is actuated, means for automatically starting the engine without actuating said ignition switch comprising two pair of normally opened contacts in parallel circuit, one pair of said contacts being arranged to close a second circuit between the battery and the ignition coil and the other pair of contacts being arranged to close a second circuit between the battery and the starting device, said second circuit between the battery and starting device including a second pair of contacts therein which are opened in response to operation of the engine and are biased to close and remain in closed position when the engine is stopped and means for simultaneously closing said first two pair of contacts comprising means forming an additional circuit which includes said battery and electrically operated means which, when

energized, close said first two pair of contacts, said additional circuit also including a pair of contacts which when closed energize said electrically operated means and a time clock mechanism for closing said last mentioned pair of contacts, said time clock mechanism being manually settable and arranged to close said last mentioned contacts and keep them closed upon the elapse of a predetermined time interval controlled by the setting of the time clock mechanism.

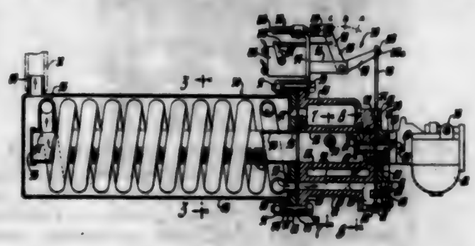
2,949,105
AUTOMATIC STARTING MECHANISM FOR AUTOMOTIVE VEHICLES
Roscoe Davis, Van Dyke, Mich., assignor, by direct and mesne assignments, to Thermo Auto-Matic Starter, Incorporated, East Detroit, Mich., a corporation of Michigan
Filed Mar. 17, 1958, Ser. No. 721,753
13 Claims. (Cl. 123—179)



1. In an electrical control system for an automotive vehicle having an electrical system including a motor starter and electrically operated accessories in circuit with a battery, means for automatically starting the motor comprising a vacuum operated switch in said circuit connected with the intake manifold of the motor, said switch being arranged to close the circuit to the motor starter and open the circuit to the accessories in response to a relatively high pressure in the intake manifold and to open the circuit to the motor starter and close the circuit to the accessories in response to a high vacuum in the intake manifold and a timer switch in said circuit for conditioning the circuit to open and close in response to the pressure obtaining in the intake manifold after a predetermined time interval, said circuit also including a thermostatic switch in circuit between said motor starter and said vacuum switch and a heater element in shunt relation to the thermostatic switch, said thermostatic switch being responsive to heat from the heater element to open the circuit to the motor starter after the elapse of a predetermined time interval subsequent to the energizing of said heater element to open the circuit to the motor starter after the elapse of a predetermined time interval subsequent to the energizing of said heater element.

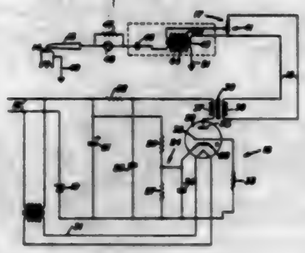
2,949,106
BOOSTER HEATERS FOR WATER CIRCULATING SYSTEMS
James J. Sunday, Detroit, Mich., assignor to International Manufacturing Company, Hazel Park, Mich., a corporation of Michigan
Filed June 9, 1958, Ser. No. 740,751
4 Claims. (Cl. 126—350)

1. In a heater for heating the liquid in a circulating system, the combination comprising a head having a combustion chamber, means for supplying a mixture of fuel and air to said chamber, ignition means in said chamber for igniting the mixture of fuel and air, means for controlling the flow of fuel and air from said fuel and air supplying means to said combustion chamber, means in said head defining a liquid cavity surrounding said combustion chamber, said liquid cavity having an inlet and an outlet, means positioned adjacent said head and defining a liquid chamber communicating with the outlet of said cavity in said head, said liquid chamber being provided with an outlet, means for directing the gases of combustion from said combustion chamber in said head in a closed path through said liquid chamber, vacuum means connected to said latter means for producing a partial vacuum to induce the flow of combustion gases from said combustion chamber to said vacuum means, means in said head defining a bypass for bypassing the combustion gases away from said vacuum-producing means to the atmosphere, and means for controlling



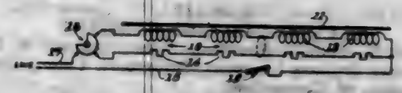
said latter means whereby the combustion gases may be selectively and alternatively directed to the vacuum-producing means and to the atmosphere, means for controlling said ignition means, and means interconnecting said means for controlling said ignition means and said means for controlling said bypass-defining means whereby said ignition means is energized when the combustion gases are being directed to the vacuum-producing means and are deenergized when said combustion gases are being directed to the atmosphere.

2,949,107
APPARATUS FOR DETERMINING THE VITALITY OF TEETH
Eugene Russell Ziegler, Spencerport, N.Y., assignor to Ritter Company, Inc., Rochester, N.Y., a corporation of Delaware
Filed Apr. 6, 1953, Ser. No. 346,936
7 Claims. (Cl. 128—3.1)



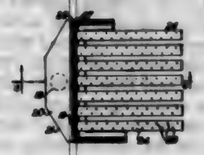
1. Apparatus for testing the vitality of teeth comprising, in combination, a source of high frequency current, a patient circuit, said patient circuit comprising, a casing adapted to be grasped by a dentist, an elongated element adapted to be applied to the tooth being tested detachably carried by said casing, and a light source mounted in said elongated element, means for connecting said source of current to said patient circuit, a variable potentiometer to vary the current flow through said circuit, said light source being of high resistance whereby it is illuminated and passes an appreciable amount of current only when the potential applied to it is at a value above that at which the vitalitiy of the tooth is determined.

2,949,108
THERAPEUTIC VIBRATOR PAD
Luigi Vecchio, 6003 Fair Ave., North Hollywood, Calif.
Filed Sept. 3, 1957, Ser. No. 681,667
3 Claims. (Cl. 128—24.1)



1. A pad of the character described comprising a plurality of plural, series-connected close-wound coils, each plural coil embodying both a vibration-inducing wire coil and a heating wire coil, a metal armature disposed in the magnetic field that is induced in the vibration-inducing wire, said armature being disposed to increase the impedance and inductance of the latter wire, said heating and vibration-inducing coils being connected in parallel, and a common switch to connect said coils, selectively, either simultaneously or separately in an energizing alternate current circuit.

2,949,109
THERAPEUTIC SHOWER
Stanley R. Kocinis, New York, N.Y., assignor, by mesne assignments, to Duo-Temp Manufacturing Corp., Hoboken, N.J., a corporation of New Jersey
Filed Dec. 31, 1952, Ser. No. 328,950
6 Claims. (Cl. 128—66)



4. Hot and cold fluid spray device adapted to spray independent jets of fluid in a temperature differential for stimulating the skin of the human body comprising the combination of a hot fluid header having a row of spaced tubes fixed therein, each of said tubes being angularly bored to subdivide fluid in each tube into a plurality of fine needle-like jets, combined with a cold fluid header having a plurality of tubes fixed therein each cold tube being bored with a series of fine openings to subdivide the fluid into a plurality of fine needle-like cold jets, said manifolded hot tubes and cold tubes being assembled together as a spray unit in alternate spaced relationship to each other whereby both independently hot and cold fluid jets may be simultaneously emitted as a single spray from the assembly as a spray head.

2,949,110
TRACTION WEIGHT SHIELD
Joseph E. Lee, Houston, Tex., assignor of one-third to T. T. Peck, Jr., Baytown, Tex.
Filed Apr. 8, 1959, Ser. No. 804,966
2 Claims. (Cl. 128—75)

1. A shield for traction weights, comprising, an elongate, rigid, tubular body closed throughout its length and having an axial bore guidingly enclosing traction weights suspended therein, said body having an open upper end formed to slope at an angle to its longitudinal axis, a shaft mounted on the body transversely of said open upper end at the mid-point thereof, a pulley mounted in the center of the shaft receiving a traction weight-supporting line extending through said open end into the bore of the body, said traction weight supporting line having one end connected to said traction weights, and a pair of mounting fixtures secured to the opposite ends of said body for securing said shield to a supporting frame, said mounting fixtures comprising elongate straps



extending parallel to the longitudinal axis of the body and projecting beyond the ends thereof, and U-bolts separably secured to the projecting ends of said straps.

2,949,111
DROP-FOOT BRACE
Veikko Samuli Rautoistenmaki, Vasamkatu 21 C 50, Helsinki, Finland
Filed Sept. 23, 1958, Ser. No. 762,823
11 Claims. (Cl. 128—80)



1. A drop-foot brace comprising, in combination: a supporting sole member adapted to be placed into a shoe and beneath the foot of a handicapped person; a leg embracing member releasably applicable to the leg of said person; at least one bundle of closely adjacent flat springs having an upper end, a lower end, and extending along one side of the leg of said person when the brace is put to use; means for connecting the lower end of the bundle with said sole member; and means for connecting the upper end of the bundle with said leg embracing member, the springs of the bundle being bendable in forward and rearward directions when the brace is applied to the leg but preventing sidewise movements of the foot.

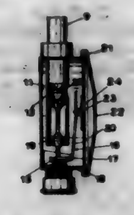
2,949,112
INTERDIGITAL TOE-POSITIONER
Alan E. Murray, 130 W. 10th St., New York 14, N.Y.
Filed Oct. 27, 1954, Ser. No. 465,109
3 Claims. (Cl. 128—81)



1. A toe positioner comprising a resilient molded piece having a member which spans a plurality of the toes of the feet which member has resilient three dimensional form exactly conforming to the contours of the exposed

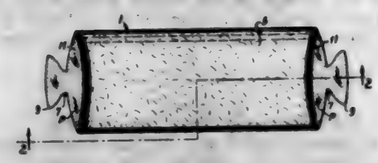
surface portion of the toes, a plurality of interdigital elements carried by said member each of which is adapted to fit into a space between the toes, said interdigital elements being resilient and having a three dimensional form that corresponds to and faithfully follows the natural contours of the toes adjacent the space whereby the toes are separated by resilient yielding members that apply pressure conforming to the natural contour of the toes and in which structure the said member that spans a plurality of the toes of the feet completely envelops the front portion of the foot.

2,949,113
UNDERWATER BREATHING APPARATUS
Claude Ogilvie Bisset, 102 Clive Athol Ameshoff St., Braamfontein, Johannesburg, Transvaal, Union of South Africa
Filed Apr. 3, 1957, Ser. No. 650,354
Claims priority, application Union of South Africa Apr. 4, 1956
3 Claims. (Cl. 128—142)



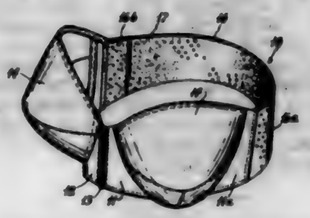
1. An underwater breathing apparatus comprising a mask shaped to cover the nose of a diver, said mask being closed against the exit of air and an air inlet valve mounted on and connected to discharge directly into the mask said valve comprising a discharge nozzle, a valve head movable axially to open and close said nozzle, a pressure responsive diaphragm in communication with the interior of the mask on one side and with the surrounding pressure on the other side and a bell crank lever operatively positioned between the diaphragm and valve and positively connected to said diaphragm, a spring adapted to load said bell crank lever and means for adjusting the spring.

2,949,114
DISPOSABLE ABSORBENT PADS
Irvin S. De Wonkin, 1110 Washington Ave., St. Louis, Mo.
Filed Dec. 12, 1955, Ser. No. 552,611
3 Claims. (Cl. 128—290)



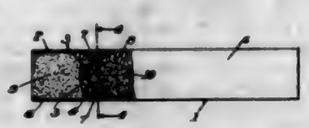
1. A sanitary napkin comprising a body of flocky absorbent material and a porous wrapper, the ends of the wrapper and the body being conterminous, the ends of the napkin each being formed to have a generally centrally projecting integral stem narrower than the width of the napkin and an integral head on the end of the stem wider than the stem and narrower than the width of the napkin, said stems and heads each including integral portions of the body of flocky absorbent material and the wrapper which are continuous with the portions of the body of flocky absorbent material and wrapper intermediate said ends, portions of the napkin including said stems, heads and end regions across the full width of the napkin being compressed flatwise to be of less thickness and stiffer than the portion of the body intermediate its ends, and being impregnated with a material for holding them compressed and stiffening them.

2,949,115
BRASSIERE OR LIKE GARMENT
Stanley H. Phillips, Stratford, Conn., assignor to The Warner Brothers Company, Bridgeport, Conn., a corporation of Connecticut
Filed Nov. 20, 1956, Ser. No. 623,328
2 Claims. (Cl. 128—482)



1. A strapless brassiere, comprising a front section including a pair of fabric breast cups, a back section permanently uniting the outer, mutually remote, end portions of said breast cups and comprising a one-piece integral deposited rubber latex member, means for separably uniting the juxtaposed inner end portions of said breast cups while said front and back portions engirdle the body of a wearer, the end portions of said back section being reinforced with fabric permanently adhered thereto and being stitched to the corresponding one of the rearwardly presented end portions of said front section with the threads forming said stitches extending through said end portions of the back section, the reinforcing fabric associated therewith and the fabric of the corresponding end portion of said front section.

2,949,116
ADJUSTABLE CIGARETTE FILTER
Solomon Balkind, 109 S. Sycamore Ave., Los Angeles, Calif.
Filed Apr. 1, 1957, Ser. No. 649,854
1 Claim. (Cl. 131—10)

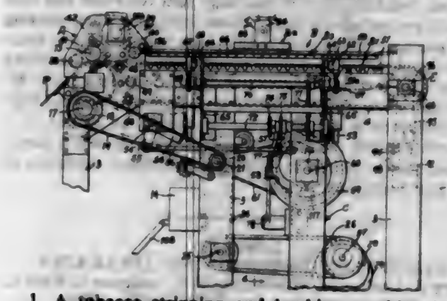


In a cigarette structure, the combination of: a paper tube having two sections of tobacco filling therein of unequal size the smaller being at the mouth of said tube; an imperforate, substantially circular, liquid absorbent disk located between said sections, said disk being of a diameter less than the interior of said tube whereby the peripheral edge of said disk defines a narrow annular space between it and the inner wall of said tube; and a mass of fibrous filtering material completely surrounding said disk and being disposed on both sides thereof and in said narrow annular space whereby said fibrous mass fills said space to support said tube wall around said space and locate said disk with its edge in spaced relation with the inner surface of said tube, said fibrous mass in said space also serving to filter smoke by-passing said disk, the size of the annular space being adjustable by external pressure on said tube in the region of said disk in order to enlarge said space by compressing said disk while still maintaining said space filled with said fibrous mass.

2,949,117
TOBACCO PRODUCT
Andrew Eugene Carmellini, Mount Vernon, N.Y., and Eric Bell Hotelling, Westport, Conn., assignors to American Machine & Foundry Company, a corporation of New Jersey
No Drawing. Filed Apr. 6, 1959, Ser. No. 804,073
9 Claims. (Cl. 131—15)

1. A composition of matter comprising in combination finely divided tobacco, a water insoluble adhesive and a material selected from the group consisting of polyesters, aminomethyl phenols and hydroxymethyl phenols.

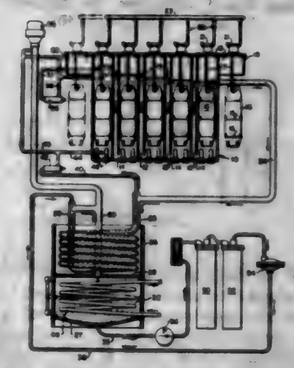
2,949,118
TOBACCO STRIPPING AND BOOKING MACHINE
Benjamin H. Long, Roselle, N.J., assignor to Tobacco Machine Supply Company, Inc., a corporation of New Jersey
Filed Dec. 13, 1957, Ser. No. 702,669
4 Claims. (Cl. 131—125)



1. A tobacco stripping and booking machine including a stripping station and a booking station in horizontally spaced relation to each other, said stripping station having means for stripping tobacco leaves, an intermittently movable conveyor for carrying stripped leaves in succession in a horizontal plane away from said stripping station and for stopping said leaves in succession at said booking station, leaf-elevating mechanism at the booking station including a leaf-engaging element movable upwardly in timed relation to the movement of said conveyor for raising each stopped leaf vertically upwardly and holding it momentarily above the conveyor and then movable downwardly away from the leaf, and a book supporting mechanism and means for moving it horizontally in timed relation to said leaf-elevating element into spaced overlying relation to the conveyor and beneath each elevated leaf while the latter is held by said leaf-engaging element and for supporting said leaf during downward movement of said elevating element and upward movement thereof with the next leaf, said conveyor including two drum pulleys and a plurality of narrow belts running over said pulleys in spaced relation to each other longitudinally of the pulleys with their upper reaches in said horizontal plane to carry the leaves, and said leaf-engaging element comprising a plurality of plates mounted in vertical planes between the upper reaches of said belts and with their upper edges normally located below said plane of said upper reaches of the belts, said stripping mechanism including coacting rotary leaf-cutting elements at least one of which is mounted on one of said drum pulleys intermediate the length thereof.

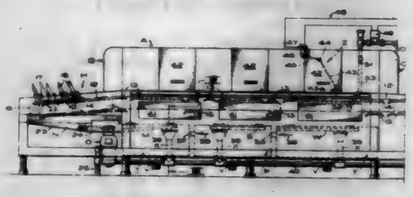
2,949,119
LIQUID HANDLING APPARATUS
Verity C. Smith, Dedham, Mass., assignor to Barnstead Still and Sterilizer Co., Boston, Mass., a corporation of Massachusetts
Filed Mar. 4, 1958, Ser. No. 719,379
1 Claim. (Cl. 134—60)

Washing apparatus including a washing tank having an inlet and an outlet and formed with a plurality of chambers interconnected for serial flow of liquid from chamber to chamber, means for moving articles to be washed through said tank from chamber to chamber, heating means for said liquid, a bed of sorbent material capable of removing impurities from said liquid at a lower temperature and means for continuously circulating said liquid from the outlet of said tank to said bed of sorbent material and back to the inlet of said tank comprising a countercurrent double passage heat



exchanger having a first passage in out-of-contact heat exchange relation with a second passage, first conduit means for flowing liquid from the outlet of said tank to said bed including said first passage, second conduit means for flowing liquid from said bed to said inlet including said second passage connected in countercurrent relation to said first passage, and cooling means adapted to control the temperature of the liquid in said bed.

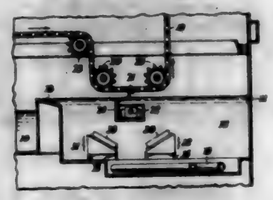
2,949,120
DISHWASHING MACHINE PROVIDED WITH A GARBAGE GRINDER DISPOSAL UNIT
George J. Federighi and Tore H. Noren, both of 333 11th St., San Francisco, Calif.
Filed July 9, 1958, Ser. No. 747,543
1 Claim. (Cl. 134—115)



In a dishwashing machine provided with a garbage grinder disposal unit: a housing having an entrance end; a dish-conveying conveyor extending in front of the entrance end of the housing to define an unobstructed loading section where dishes may be placed on the conveyor; the conveyor further extending through the housing; the housing defining a scrap-removing zone; spray nozzles arranged in said zone to discharge water against the dishes to wash scraps therefrom; an open top tank supported in a lower portion of said zone below the conveyor; pumping means operable to withdraw water from the tank and discharge it through the spray nozzles onto the dishes; a strainer pan mounted over the tank in a position to receive scraps and water flowing from the dishes being cleaned; a drain pan arranged underneath the loading section of the conveyor and projecting forwardly of the entrance end of the housing; the strainer pan being inclined forwardly and being positioned rearwardly of the

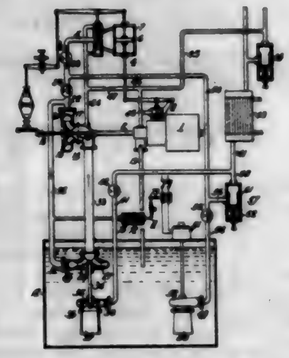
drain pan to sluice the scraps and water into the drain pan; and a garbage grinder disposal unit connected to the drain pan for receiving scraps and water from the drain pan.

2,949,121
CLEANING APPARATUS
Thomas J. Kearney, Detroit, Mich., assignor to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Oct. 3, 1956, Ser. No. 613,657
1 Claim. (Cl. 134—130)



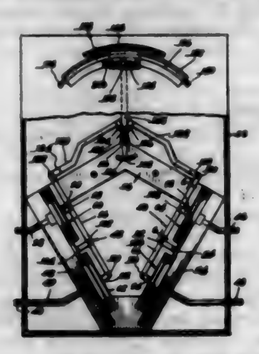
Apparatus for degreasing a work object comprising a well being adapted to contain a chlorinated hydrocarbon liquid, transducer means including a pair of spaced apart transducers mounted below the surface of said liquid for emitting ultrasonic waves, each of said transducers having a flat emitting surface from which said ultrasonic waves are emitted in a direction normal to said emitting surface, said transducer means having said emitting surfaces inclined toward each other at an angle of 30 degrees to the horizontal so that the ultrasonic waves from one overlap the ultrasonic waves from the other to create a non-uniform sound field including a wave overlapping zone of higher intensity and a non-overlapping zone of lower intensity, and means for carrying the work object through said overlapping zone so that every part of the work object is bombarded by the waves of said overlapping zone.

2,949,122
HYDRAULIC SYSTEM FOR STEAM TURBINE
Clarence R. Kenney, Hartland, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Nov. 6, 1953, Ser. No. 390,472
2 Claims. (Cl. 137—17)



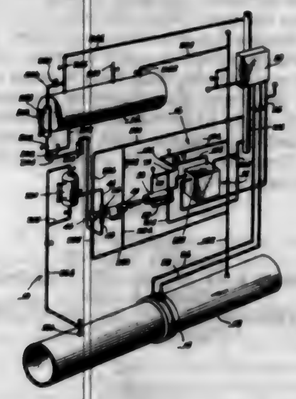
1. In a hydraulic system for supplying a liquid at a high pressure and a liquid at a lower pressure to a machine, the combination of: a first pump driven by said machine, said first pump discharging liquid at a high pressure; a hydraulic turbine; a first conduit connecting said first pump with said hydraulic turbine so high pressure liquid discharged from said first pump drives said hydraulic turbine; a second conduit connecting said hydraulic turbine and said first pump so liquid discharged from said hydraulic turbine returns to said first pump; a third conduit connecting said first pump with said machine to supply said high pressure liquid to said machine; a fourth conduit connecting said machine and said first pump so liquid supplied by said third conduit that is discharged from said machine returns to said first pump; said first, second, third and fourth conduits forming a first hydraulic circuit including said first pump and said hydraulic turbine; a liquid reservoir, a second pump located in said reservoir and driven by said hydraulic turbine, said second pump taking liquid from said reservoir and discharging said liquid at a pressure lower than said high pressure; a fifth conduit connecting said second pump with said machine to supply liquid at said lower pressure to said machine, a sixth conduit connected between said machine and said reservoir so liquid supplied by said fifth conduit that is discharged from said machine returns to said reservoir; said fifth and sixth conduits forming a second hydraulic circuit including said reservoir and said second pump; an auxiliary means operable when starting said machine for providing said high and said lower pressure liquid including a third pump and a pressure reducing valve, said auxiliary means arranged to automatically deenergize when said first pump delivers liquid at said high pressure, and a seventh conduit having an orifice, said seventh conduit connecting the suction of said first pump to said second circuit to maintain the primed condition of said first hydraulic circuit.

2,949,123
FLUID FLOW DETERMINING APPARATUS
Harry J. Lawrence, Milwaukee, Wis., assignor to Perc C. Sorenson and Lee Jewell, Wauwatosa, Wis.
Filed Nov. 2, 1955, Ser. No. 544,586
6 Claims. (Cl. 137—88)



1. In an apparatus of the type described, the combination comprising support means, a first pair of adjacently disposed pressure responsive devices connectable with spaced areas of a Venturi or the like in a fluid conduit and each including a flexible diaphragm, a lever operatively connected to said diaphragms and mounted for movement about a fixed pivot disposed between said diaphragms so that the diaphragms act upon the lever in opposition to each other, a second pair of adjacently disposed pressure responsive devices connectable with spaced areas of a second Venturi or the like in a second fluid conduit and each including a flexible diaphragm, a second lever operatively connected with said second mentioned diaphragms and mounted for movement about a fixed pivot disposed between said second mentioned pressure responsive devices so that said second mentioned diaphragms act upon the second lever in opposition to each other, means mounted on said support means for rotation about a predetermined axis, means for transmitting a force provided by said first lever to said rotatable means at a point radially spaced from said axis, and means for transmitting a force provided by said second lever to said rotatable means at a point spaced radially from said axis and in opposing relationship with respect to said first mentioned force to position said rotatable means in accordance with the ratio between the rates of fluid flow through said conduits.

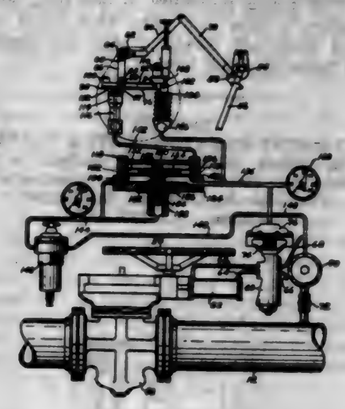
2,949,124
PROPORTIONING MECHANISM
Dennis L. Eidson, Oak Park, and Jay N. Swarz, Elmhurst, Ill., assignors to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 21, 1955, Ser. No. 554,475
8 Claims. (Cl. 137—99)



1. A fluid operated control apparatus comprising means operable in accordance with fluid pressure signals supplied thereto, means supplying fluid under pressure, fluid passageway means connected with said supply means, valve means connected in said passageway means for alternately venting said passageway means and establishing communication between said passageway means and supply means so that fluid pressure in said passageway means is alternately decreased and increased to provide pressure signals, signal transmitting means energized by said signals operatively connected between said passageway means and said first mentioned means, and fluid operated means connected with said supply means and operable by fluid supplied therefrom for providing additional fluid pressure signals for actuating said valve means at a predetermined frequency.

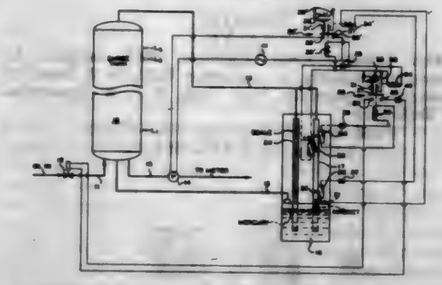
2,949,125
FLUID FLOW SYSTEM AND CONTROL THEREFOR
Edward R. Gilmore and Harold E. Spore, Tulsa, Okla., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 28, 1952, Ser. No. 322,921
17 Claims. (Cl. 137—100)

1. A control system for controlling the fluid pressure in one conduit in response to variations in the flow of fluid through a second conduit, said system comprising a flow measuring instrument connected to said second conduit and having a flow indicating member movable between limit positions in response to variations in the flow through said second conduit to assume positions indicative of the flow therethrough, a pressure relief valve controlling fluid pressure in said first conduit comprising a valve member and a valve seat, a lost motion linkage connecting said flow indicating member to said valve member and operative upon assumption of one of said limit positions by said flow indicating member to open said pressure relief valve, means responsive to the relief of pressure in said first conduit for effecting relative separatory displacement of said valve seat and member independently of the movement of said linkage whereby closure of said relief valve under control of said linkage



and said flow indicating member is prevented until said flow indicating member reaches the other of said limit positions, said last named means being effective upon reestablishment of pressure in said first conduit to reestablish the initial relative positions of said valve seat and member.

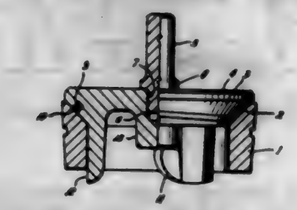
2,949,126
LIQUID LEVEL CONTROL
Louis E. Kuntz and Marvin A. Remke, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 1, 1958, Ser. No. 752,610
2 Claims. (Cl. 137—207)



1. Apparatus for controlling the flow of liquid comprising a tank; first conduit means communicating with said tank to introduce liquid therein; a valve in said first conduit means; second conduit means communicating with the bottom of said tank to remove liquid from said tank; a pump in said second conduit means; an upright conduit; a liquid reservoir communicating with the lower end of said conduit; said reservoir being adapted to contain a liquid immiscible with and of greater density than the liquid in the tank to be measured; third conduit means communicating between the bottom of said tank and said reservoir so that the pressure exerted by liquid in said tank tends to displace the liquid in said reservoir upwardly in said upright conduit to a height representative of the height of liquid in said tank; fourth conduit means communicating between the top of said tank and the top of said upright conduit so that the pressure in said tank is applied to said upright conduit; first, second

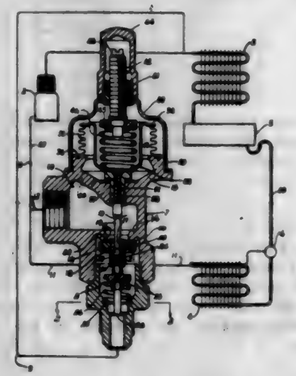
and third level indicating means associated with said upright conduit to measure levels of fluid therein at respective first, second and third progressively higher levels; means responsive to said second level indicating means to actuate said pump when liquid rises to said second level; means responsive to said third level indicating means to close said valve when liquid is above said third level; and means to stop said pump when liquid is below said first level.

2,949,127
CURRENT ROTATING CHECK VALVE
Robert B. Malina, Houston, Tex., assignor to Pioneer Well Tools, Inc., Houston, Tex., a corporation of Texas
Filed Dec. 22, 1958, Ser. No. 785,385
3 Claims. (Cl. 137—332)



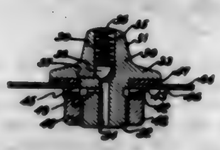
1. In a valve a seating member having an inwardly tapering seating face, a body member vertically movable within the seating member and having an inwardly tapered annular face having a common axis with the body member and being movable into contact with the seating face of the seating member, an eccentric groove in the seating face of the body member formed in a plane which is positioned at an angle to a plane normal to the axis of the body member and a yieldable packing means mounted in said groove, and means on said body member for rotation of said body member during its vertical movement in said seat.

2,949,128
VALVE
Franklyn Young Carter, Dearborn, Mich., assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 10, 1956, Ser. No. 627,225
1 Claim. (Cl. 137—505.37)



A valve comprising a valve housing defining an inlet chamber, outlet chamber, and main port therebetween; a main valve element on the upstream side of said port for controlling main flow therethrough; a bleed opening through said main valve element; a cage structure carried by said valve element and defining an abutment surface in registry with said bleed opening; an auxiliary valve element floatably positioned within said cage structure for movement between the abutment surface and bleed opening; wall element means exposed and responsive to outlet chamber pressure variations for fluctuating movement; thrust means extending from said wall element means through the bleed opening into releasable contact with the auxiliary valve element; a relatively light compression spring means acting within the cage structure on the auxiliary valve element to maintain it in operative engagement with the thrust means; a relatively heavy spring means acting on the wall element means in opposition to the outlet chamber pressure for moving the auxiliary valve element to an open position against the abutment surface, and thereafter operating through the cage structure to open the main valve element; and a third spring means of intermediate effective force seated in the inlet chamber and operatively engaging the main valve element whereby to maintain the main valve element in operative relation to the thrust means; reverse movement of said wall element means by increasing outlet chamber pressure serving to initially close the main valve against the main port and thereafter close the auxiliary valve element against the bleed opening.

2,949,129
SAFETY DEVICE
Frederick L. O. Roehrig, 6762 Valaria Drive, Highland, Calif.
Filed Apr. 15, 1957, Ser. No. 652,990
1 Claim. (Cl. 137—539)

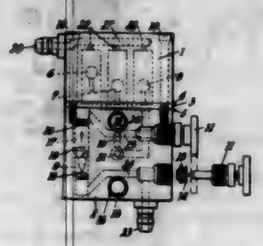


A valve construction adapted to be secured to a container for relieving vapor pressure from within the container to the atmosphere, said valve including: a body provided with an external flange, axially aligned bosses on both sides of said flange, one of said bosses being screw threaded for reception of a nut; said screw threaded boss formed with an annular groove adjacent one surface of the flange, an inlet bore in the screw threaded flange, and an inlet counterbore in the other boss; a spring pressed valve and its seat within the counterbore and normally closing the bore against passage therethrough by opening when excess pressure occurs, the screw threaded boss provided with radial ports extending between the inlet bore and the annular groove, a washer provided with radial facial grooves carried upon the screw threaded boss with the radial grooves in communication with the ports communicating with the annular groove and the inlet bore in the boss whereby sudden splash flow past said inlet bore is received by said washer grooves, annular groove and radial ports and conducted thereby back down through said inlet bore without unseating the valve.

2,949,130
MIXING VALVE
Philip Henry Knight, Potters Bar, and Roland John O'Donovan, Wellington, England, assignors to Bell Brothers (Domestic) Limited, Wellington, England
Filed June 21, 1956, Ser. No. 592,918
7 Claims. (Cl. 137—552)

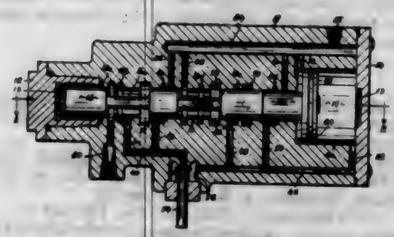
1. A mixing device for control of the degree of saturation of a solution displaced from an enclosed vessel, said device comprising a body of transparent material,

first liquid inlet passage means in said body for the diluent for the solution, a flow rate indicating means inserted in said inlet passage whereby by measuring the rate of flow of the solvent the flow rate of the solution discharged from the device is indicated, second passage means in said body arranged to receive the outflow of liquid diluent from said flow rate indicator means, said second passage means being bifurcated, one bifurcation of said second passage means constituting means adapted to be connected to said enclosed vessel to convey a portion of the flow of liquid diluent from said flow rate indicating means to said enclosed vessel whereby saturated solution may be displaced from said enclosed vessel, specific gravity indicating means in said body, the other



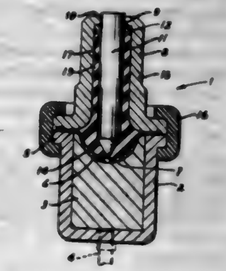
bifurcation of said second passage means constituting means to convey the liquid diluent to said specific gravity indicating means, an adjustable valve element in said other bifurcation of said second passage means, a third passage means in said body adapted to be connected to said enclosed vessel and connected to said other bifurcation of said second passage means between said adjustable valve element and said specific gravity means whereby saturated solution from said vessel is injected into said diluent to form a solution, the degree of saturation of which is to be controlled, and a fourth enclosed passage means in said body leading from said specific gravity indicating means to form a discharge passage from the device.

2,949,131
FLUID CONTROL VALVE
John E. Collins, Akron, Ohio, assignor, by mesne assignments, to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Filed Aug. 15, 1956, Ser. No. 604,247
14 Claims. (Cl. 137—623)



1. A plunger valve for controlling the flow of pressurized fluid comprising a housing having a bore therein closed at its ends, said bore having an enlarged chamber at one end thereof, a plunger disposed in said bore for reciprocation therein, said plunger having a head at one end disposed in said chamber and adapted for sliding, leak-proof engagement with the longitudinal wall of the chamber, said head having opposing ends of different cross-sectional areas, said housing having a plurality of fluid passageways in communication with said bore including a fluid supply chamber adapted for connection to a source of pressurized fluid exteriorly of the housing, a fluid supply passageway leading from said supply chamber to that end of said enlarged chamber adjacent the smaller end of said head for supplying pressurized fluid thereto, a fluid supply duct leading from said supply chamber to a predetermined location in one side of the bore, a fluid supply line leading from said location at another side of the bore to that end of the enlarged chamber adjacent the larger end of said head, and an exhaust passageway leading from a point in the bore adjacent said location to the exterior of the housing, said plunger having spaced, necked-down locations to permit fluid flow between said passageways in a predetermined manner when said plunger is disposed in predetermined positions in the bore including a necked-down portion allowing fluid to flow from said fluid supply duct through the bore, and through said fluid supply line and to that end of said enlarged chamber opposite the larger end of said head when said plunger is disposed at one position in the bore, and allowing fluid to flow from said last-named end of said enlarged chamber through said supply line, through the bore to the exhaust passageway when the plunger is disposed at another position in the bore, said fluid supply line having a valve for controlling the flow of fluid in the line.

2,949,132
PRESSURE RESPONSIVE POWER ELEMENT
George Asakawa and Sergius Vernet, Yellow Springs, Ohio, assignors to Antioch College, Yellow Springs, Ohio, an Ohio corporation
Filed June 2, 1955, Ser. No. 512,707
2 Claims. (Cl. 137—789)



1. A power element comprising a cup; pressure-producing material within said cup; a concavo-convex diaphragm having its peripheral edge seated on the rim of the cup and having its central portion depending into the cup interior; an annular housing having an annular face clampingly seated on the diaphragm periphery and having an elongated tubular extension projecting axially away from the cup; an annular wall projecting radially inward from the terminal end of the extension to define an opening substantially smaller than the internal diameter of said extension; a piston closely fitting the opening and slidably extending therethrough to a point adjacent the diaphragm; a body of solid pliable, pressure-transmitting material surrounding the piston in the space between the diaphragm and wall opening; said pressure-transmitting material comprising discrete solid resinous particles dispersed in and coated by a flowable binder so as to permit the material to easily reshape itself in accordance with pressure changes without tendency to return to its original shape; whereby, on development of increased pressures within the cup the diaphragm is caused to flex in the direction of the housing so as to force the easily reshapable pressure-transmitting material to squeeze against the piston and drive it through the opening; the easily reshapable character of the pressure-transmitting material allowing it to efficiently transmit the pressures, and the solid character of the pressure-transmitting material preventing it from easily leaking

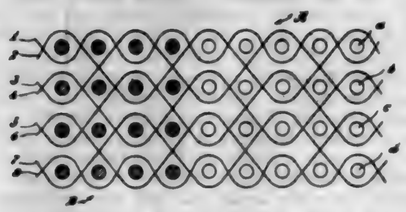
through the wall opening; the annular portion of the pressure-transmitting material within the tubular extension being packed therein to act as a piston guide as well as a seal preventing the entrance of ambient media.

2,949,133
FLEXIBLE CONDUIT
Edward M. Rothermel and Russell B. Waddell, Jr., Waynesville, N.C., assignors to Dayco Corporation, a corporation of Ohio
Filed Mar. 24, 1955, Ser. No. 496,507
6 Claims. (Cl. 138—56)



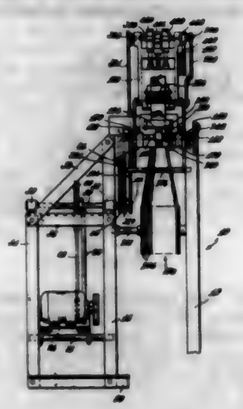
1. A flexible relatively noncollapsible conduit comprising a circumferential reinforcing member in the form of a coiled helix having spaced turns, said member having a plastic surface, a relatively thin plastic and deformable tube embracing and partially surrounding said reinforcing member, said tube having corrugations formed therein which depend between the turns of the helix, with the inner surface of the tube between the coils of said helix extending substantially to the plane of the innermost surface portion of said coiled member and with the inner surface of said tube which embraces said reinforcing member being bonded thereto over a portion only of the embraced area at the crests of said corrugations along the outer periphery of said reinforcing member with the remaining area of said surface embraced by said tube being left unbonded leaving the innermost surface area of the coiled member exposed, the resultant conduit having a corrugated exterior and a relatively smooth and continuous interior surface defined by the inner portions of the tube between corrugations and the exposed inner surface of said coiled member, whereby on the application of tension as by bending or stretching the portion of the tube normally embracing but unbonded to the reinforcing member will pull away therefrom and return to embracing position on release of said tension.

2,949,134
PAPERMAKERS' FELTS AND LIKE INDUSTRIAL WOVEN TEXTILE FABRICS
Thomas Hindle, Sam Lord, and Edward Race, Blackburn, England, assignors to Scapa Dryers Limited, Blackburn, England, a corporation of England
Filed Aug. 15, 1956, Ser. No. 604,278
Claims priority, application Great Britain Sept. 23, 1955
15 Claims. (Cl. 139—426)



1. A papermakers' dryer felt consisting of non-felting fibrous material, a portion of said fibrous material being Dacron which is electro-negative as compared with cotton, and another portion of said fibrous material being nylon which is electro-positive as compared with cotton, the relative proportions of the Dacron and nylon being such as to render the felt, as a whole, substantially neutral electrostatically, the Dacron constituting from 3.6% to 72% of the total weight of the felt, and the nylon constituting from 3% to 50% of the total weight of the felt.

2,949,135
FABRIC MAKING MACHINE
William L. Hanna, Foxboro, Mass., assignor to Bugbee and Niles Co., Plainville, Mass., a corporation of Massachusetts
Filed June 4, 1956, Ser. No. 589,038
15 Claims. (Cl. 140—3)

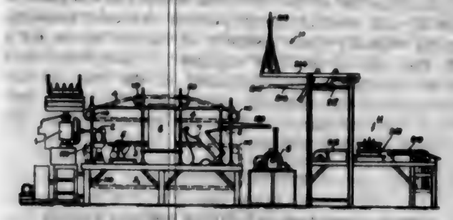


1. In a fabric forming machine, a fabric forming station, means at the fabric forming station to support a plurality of components in positions to be joined by connector elements, a connector element forming station, a carrier movable relative to the stations having a part arranged to coincide with the fabric forming station for supplying connector elements thereto, while another part coincides with the connector forming station in a position to receive a charge of connector elements, means for moving the carrier to bring the part filled with connector elements opposite the fabric forming station and an empty part opposite the connector forming station, and means at each station simultaneously operable to discharge connector elements from the carrier at the fabric forming station into clinching engagement with the components at the fabric forming station and to form and charge connector elements into the carrier at the connector forming station.

2,949,136
APPARATUS FOR THE AUTOMATIC PRODUCTION OF CLOSED LOOPS OF WIRE FROM WIRE STOCK
Horace Walter White, Kidderminster, England, assignor to The National Standard Company Limited, Kidderminster, England, a British company
Filed July 5, 1956, Ser. No. 596,002
Claims priority, application Great Britain July 7, 1955
3 Claims. (Cl. 140—88)

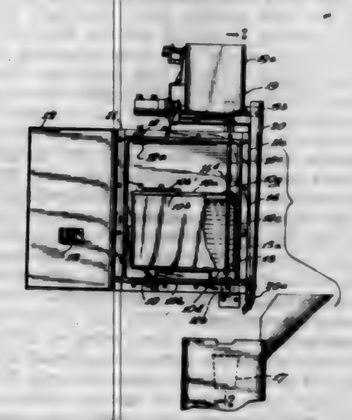
1. In a machine for automatically forming closed wire loops from linear wire stock, the combination comprising, a rotatable loop former including a drum receptive of the wire stock, gripper means for engaging and releasing the free end of the wire stock tangentially of the drum, means for periodically operating said loop former to partially rotate said drum between stop limits to produce a single open-ended loop of wire thereabout, means severing such loop from the stock, means releasing said gripper means, means for holding said severed loop on said drum, means for stripping such open-ended loop from said drum

including additional holding means, deforming means for deforming opposed end portions of said loop, means for positioning a substantially cylindrical sleeve member between said end portions, means for inserting said end portions into opposite ends of said sleeve member and abuttingly engaging the same therewithin, means for swaging said sleeve onto said deformed end portions to



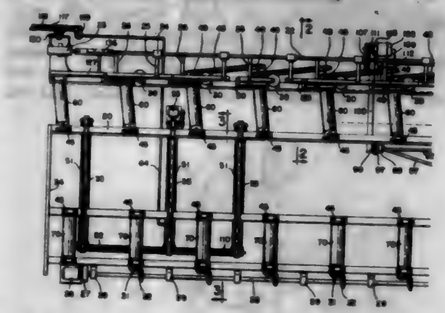
rigidly lock the same together and close the loop means for transferring loops from said additional holding means to said deforming, positioning, inserting and swaging means, and means for driving and synchronizing the activities of said several means in accordance to a preselected and integrated cycle of operation to accomplish the automatic production of closed loops.

2,949,137
LIQUID DISPENSER
Leslie Arnett and William G. Freise, Chicago, Ill., assignors to United Coffee Corp., Chicago, Ill., a corporation of Delaware
Filed Aug. 10, 1956, Ser. No. 603,368
7 Claims. (Cl. 141—9)



6. The method of dispensing a substantially constant volume of liquid to each of a plurality of receptacles, comprising the steps of: providing a plurality of receptacles; providing a quantity of liquid in a container having a controlled outlet opening in the bottom thereof, said quantity being predetermined to permit dispensing of a desired smaller quantity into each of a predetermined number of said receptacles; positioning one at a time each of said receptacles to receive liquid from said outlet opening; successively opening said outlet for a predetermined period of time to permit liquid to flow by gravity into each of the predetermined number of receptacles; and successively opening said outlet for an additional predetermined period of time to permit additional liquid to flow by gravity into each of a portion of the predetermined number of receptacles, said portion being the last portion of the number.

2,949,138
TIMBER HANDLING APPARATUS FOR RESAWING MILLS
Caleb Edgerton Card, Snow Road, Ontario, Canada
Filed Sept. 25, 1958, Ser. No. 763,365
14 Claims. (Cl. 143—4)



12. In a resawing machine, a cant supporting and conveying organization comprising a first series of upright rolls and a second series of powered horizontal feeding rolls for moving a cant therealong, a saw fixed in the machine having its kerf plane lying in the path of cant movement, a saw fence aligned with said upright rolls extending ahead of and beyond said saw, a pair of powered pressure rolls having axes parallel with said upright rolls spaced apart transversely of and along said path carrying a moving belt therebetween, biasing means for yieldably pressing said rolls and belt toward said fence for holding a cant against said fence by pressure of the roll nearer the fence and for advancing the cant into the saw, and means for bodily moving said upright rolls and said fence in a direction normal to said cant advance whereby to determine thickness of sawed lumber.

2,949,139
MITER BOX FOR PORTABLE ELECTRIC SAWS
Louis C. Nolte, 415 E. Potter, Wood Dale, Ill.
Filed Oct. 19, 1959, Ser. No. 847,411
15 Claims. (Cl. 143—6)

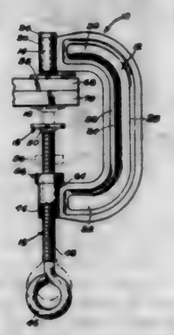


15. A miter box for a portable electric saw comprising in combination an elongated base including an upper surface and downwardly extending side portions, at least one side wall mounted for vertical adjustment on said base and extending above said upper surface, said side wall terminating in an upper supporting surface, a guide track for a portable electric saw, a portion of said guide track resting on the upper supporting surface of the side wall so that the guide track is movable vertically therewith, said guide track mounted for pivotal movement in a horizontal plane over said upper surface, and positioning means cooperating with said track so that the guide track can be pivoted into various predetermined angular relationships with said elongated base.

2,949,140
QUICK ACTING CLAMP
Charles O. Larson, P.O. Box 358, Sterling, Ill.
Filed July 1, 1957, Ser. No. 669,330
2 Claims. (Cl. 144—385)

2. A quick acting C-clamp comprising a frame including a pair of spaced-apart arms, a first clamping mem-

ber mounted upon one of said arms, a substantially cylindrical sleeve formed on the other arm and disposed in general alignment with said first clamping member, a threaded shank slidably received in said sleeve, a rotatable clamping member mounted on the end of said shank disposed toward said first clamping member, a threaded nut threadedly engaging said shank between said rotatable clamping member and said sleeve, the end of said sleeve disposed toward said rotatable clamping member and the edge of said other arm disposed toward said one arm lying substantially in the same plane, said nut



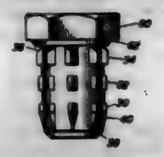
having substantially plane sides disposed parallel to each other and parallel to the plane in which lie said sleeve and said other arm edge, and a stop lug on the side of said nut disposed toward said sleeve and extending toward said sleeve and disposed radially outwardly beyond the surface of said sleeve, said stop lug being adapted to contact said other arm when the adjacent side of said nut is disposed against said sleeve whereby to stop rotation of said nut with respect to said frame thereby permitting said shank to be threadedly moved with respect to said nut toward said first clamping member.

2,949,141
NUT WITH A WASHER SECURED THERETO BY SEPARABLE MEANS
Harold S. Van Buren, Jr., Cambridge, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Oct. 18, 1956, Ser. No. 616,733
1 Claim. (Cl. 151—38)



A sealing nut device for assembly onto a threaded member extending through a panel opening comprising a pre-assembled sheet metal nut and a thread sealing member forming a two-piece assembly, said nut having an outer barrel portion, an inner barrel portion disposed within said outer barrel portion in spaced, substantially parallel relationship therewith, said inner and outer barrel portions being united at one end thereof, the inner surface of said inner barrel portion being threaded forming an axial extending threaded central bore in the nut for receiving a threaded bolt therein, and an outwardly and downwardly extending deformable flange portion joined to the opposite end of said outer barrel portion and lying below the free end of said inner barrel portion; said resilient sealing member, prior to assembly of the nut to a bolt, having a generally conical shaped flange portion generally conforming to the contour of said deformable flange portion of said nut, and a retaining portion having a diameter greater than that of said inner barrel portion and extending upwardly from the center of said flange portion for frictionally engaging threads of the inner barrel portion of said nut adjacent the lower free end thereof to provide the only means for holding the nut and sealing member in mechanical assembly, said retaining portion having a central aperture forming a relatively thin peripheral wall of a diameter less than that of the bolt to be inserted at the jointure point of said conical flange portion and said retaining member whereby upon assembly of the nut device on a bolt, the end of the bolt engages the peripheral wall thereby shearing, upon tightening of the bolt, of the upper end of the retaining portion and forcing a portion of the peripheral wall in the space between the threads of the bolt and nut.

2,949,142
THREADED INSERT WITH PROJECTIONS
Paul J. Sumerak, 1525 Westfield Ave., Reno, Nev.
Filed Aug. 16, 1957, Ser. No. 678,595
1 Claim. (Cl. 151—41.73)

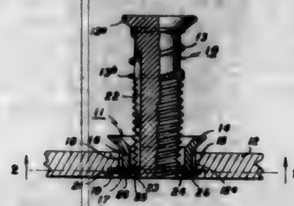


An insert for providing a new bore of predetermined size in a member having a bore therein comprising a cylindrical body having a bore of predetermined size therein, said body being beveled at one end to facilitate insertion into said member bore, said body having a cylindrical exterior surface of uniform diameter, a plurality of projections on said body extending laterally from said exterior surface, said projections being disposed in a plurality of circumferentially extending rows, said rows being spaced axially of said cylindrical body, the projections in each row being spaced circumferentially of each other, projections in different rows being axially spaced from and in axial alignment with each other, the row adjacent said beveled end having its projections provided with wedge-shaped extremities adjacent said beveled end, the row adjacent the other end of said surface having its projections provided with wedge-shaped extremities adjacent said other end, the adjacent ends of projections in adjacent rows having parallel flat surfaces substantially perpendicular to the axis of said member, the projections of different rows being of different dimensions, the projections of the row adjacent said other end being of greater extent laterally of said body than those of the other rows, a laterally enlarged head on said body beyond said other end of said surface, an annular rib of triangular cross-section on said head projecting towards and of greater diameter than that of the adjacent row of projections, said body having internal threads in its axial bore.

2,949,143
FASTENING MEANS FOR PANELS, SHEETS AND THE LIKE
Ira Shur, Bayside, N.Y., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Filed Oct. 12, 1956, Ser. No. 615,632
2 Claims. (Cl. 151—69)

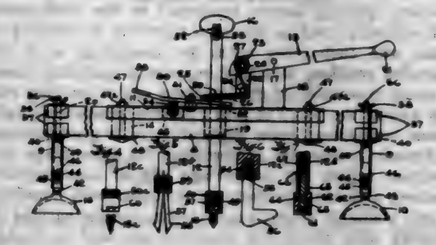
1. In a bolt and nut-type fastener for connecting panels and the like having bolt openings, the combination of a bolt adapted to extend through said openings for cooperation with a nut, a shear sleeve for relieving the

bolt from shear forces to which it may be subjected due to the connected panels tending to strain and/or shift laterally of one another, and means for holding both said bolt and shear sleeve captive to the relatively outer panel and also for holding said bolt in a normal position of partial retraction within the opening of said outer panel from which it, together with said sleeve, is freely movable to fully retracted positions in which their corresponding inner ends are flush with the inner face of said outer panel, said shear sleeve consisting of a radially rigid, circumferentially continuous sleeve member disposed within said opening and coaxial with said bolt, said sleeve member having external diameter less than that of the panel openings and axial length greater than the thickness of said outer panel as permits its entry into the opening of the inner panel when said panels are connected, said sleeve member further having internal diameter and wall thickness as provides for the accommodation of bolt-retracting means between bolt and sleeve and protection of the bolt from the aforesaid shear forces, and said sleeve member further having radial enlargements at both its ends, of which the outer-end radial enlargement has greater diameter than that of the opening of said outer panel and the inner-end radial enlargement has diameter substantially equal to that of said opening and defines an axially-outwardly facing shoulder, said outer panel having a countersunk recess in the outer face for accommodating said outer-end enlargement and a countersunk recess in its inner face whose bottom wall forms an axially-inwardly facing shoulder extending about



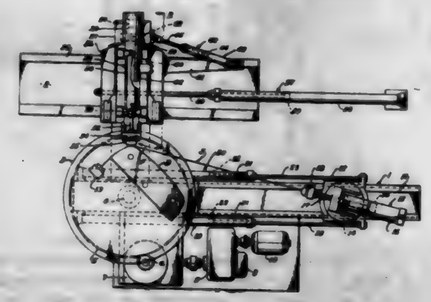
the inner end of its said opening, a first retaining ring encircling said sleeve member and being held thereto by said inner-end enlargement thereon and having an outside diameter corresponding substantially to that of said inner-end recess, whereby said ring is operative between said shoulders to secure the sleeve member against outward separation from said outer panel while permitting its retraction therefrom, the axial thickness of said retaining ring and said inner-end enlargement substantially equaling the axial depth of the countersunk recess whereby the inner end of the sleeve is disposed substantially flush with the inner face of said outer panel when said sleeve member is fully retracted, as aforesaid, means for securing the bolt to the sleeve member while permitting its outward movement to a fully retracted position with respect thereto, such means including a second retaining ring encircling said bolt and having a key and slot connection therewith and whose outer edge seats in an internal groove provided in the inner wall of said sleeve member near its inner end, said connection comprising a key-like formation protruding from the inner edge of said second ring which extends into an axial slot in the periphery of the bolt, said slot being closed at its inner end by a shoulder which is spaced from the said inner end a distance such that when the key engages on same the inner end of the bolt is flush with the inner end of said sleeve member, and resilient bolt-retracting means on said bolt effective between the bolt and said sleeve member for urging said bolt to a normal, partially retracted position with respect to said outer panel, the construction and arrangement being such that in being further moved to its fully retracted position the bolt effects movement of the sleeve member to its fully retracted position aforesaid.

2,949,144
BODY AND FENDER STRAIGHTENER
Arthur P. Dredske and Arthur P. Dredske, Jr., both of 9912 N. 2nd St., Rockford, Ill.
Filed Aug. 7, 1958, Ser. No. 753,815
13 Claims. (Cl. 153—38)



1. A metal panel straightener comprising a frame, supporting legs for said frame engageable with the panel at spaced points, a manually oscillatable lever carried on said frame, a pull rod slidably guided in a bearing carried on said frame, said rod being movable endwise in said bearing substantially at right angles relative to said frame, said rod being operatively connectible at one end with a dented portion of said panel to be straightened, one-way clutch means mechanically connecting the aforesaid lever with said rod, and another one-way clutch means mechanically connecting said rod with said frame to hold the rod against return movement after it has been pulled by operation of said lever.

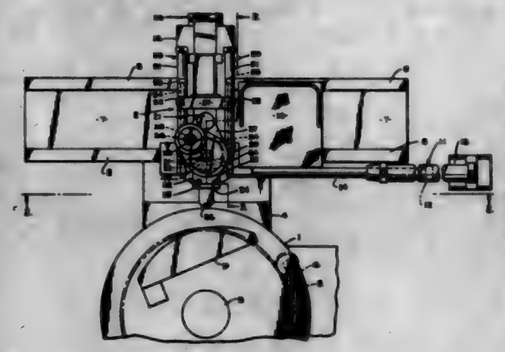
2,949,145
SAFETY LATCH AND RELEASE DEVICES FOR WIPE FORMING MACHINES
Peter P. Matthews, Willoughby, Ohio, assignor to The Cyril Bath Company, Solon, Ohio, a corporation of Ohio
Filed Sept. 4, 1958, Ser. No. 759,075
12 Claims. (Cl. 153—40)



1. In a metal forming machine, a table, a side face die mounted on one face of the table, clamping means for clamping a length of stock at one portion in fixed relation to the die, a metal forming tool, a wipe forming assemblage connected to the tool and extensible and contractible in directions generally toward and away from the die face for maintaining the tool in operative relation to the die face, supporting means supporting the table and assemblage for rotation relative to each other about a predetermined axis normal to said face of the table for causing the tool to travel along the die face, power means to cause

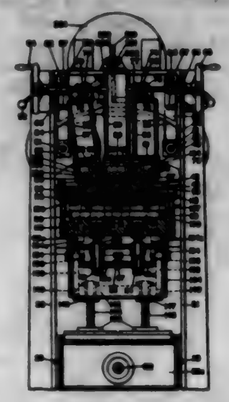
said relative rotation, yieldable pressure means yieldably urging the assemblage to extended condition, complementary latch means including latch members operatively connected to the assemblage and to the supporting means, respectively, and movable into and out of latching relation with respect to each other, connecting means connecting the assemblage to the supporting means for bodily movement of the assemblage relative to the supporting means into an operative position wherein the assemblage can maintain the tool in engagement with the die and out of said operative position, respectively, yieldable pressure applying means connected to the latch means and yieldably holding the latch members in latching relation with each other when the assemblage is in said operative position, said latching means including means to cause movement of the members out of latching relation against the force of said yieldable pressure applying means consequent upon application of a predetermined maximum component of force on the assemblage in a direction urging the assemblage out of said operative position, a variable pressure device operatively connected to said yieldable pressure applying means for varying the pressure with which the members are held in latching engagement by the yieldable pressure applying means, and control means operatively interconnecting the device and assemblage for operating the device, in relation to the extension and retraction of the assemblage, so as to increase the pressure engagement of the members upon extension of the assemblage and to decrease the pressure engagement upon retraction of the assemblage.

2,949,146
OSCILLATING AND OVERLOAD RELEASING MEANS FOR WIPE FORMING ASSEMBLAGE OF METAL FORMING MACHINES
Donald R. Whiteman, Maple Heights, Ohio, assignor to The Cyril Bath Company, Solon, Ohio, a corporation of Ohio
Filed Dec. 18, 1958, Ser. No. 781,483
4 Claims. (Cl. 153—40)



1. In a wipe forming machine, a die supporting horizontal table, a wipe forming assemblage including a shoe carriage, a side face die supported on the table, means supporting the table and assemblage for movement relative to each other for moving the shoe along the die face, power means for effecting said relative movement, a movable support supporting the shoe carriage, a frame supporting the movable support for relative movement in a horizontal plane toward and away from the die face, whereby a shoe on the carriage can be applied to the side face of said die, upright pivot means offset from said die face and connecting the shoe carriage to the support for swivelling about the axis of the pivot means relative to the support, reversible power means on the frame and connected to the carriage for applying force to the carriage at a location in eccentric relation to the axis of the pivot means in a direction generally toward and away from the side face of the die for swivelling said carriage about the axis of the pivot means, and means for holding the carriage in predetermined swivelled positions, selectively, about the axis of the pivot means, and for releasing the carriage for swivelling, selectively, whereby, when the carriage is so held, the said reversible power means moves the carriage and support toward and away from the table, selectively, while the carriage and support are in fixed relation to each other, and when the carriage is released, the same reversible power means swivels the carriage on the support, and means to control the reversible power means.

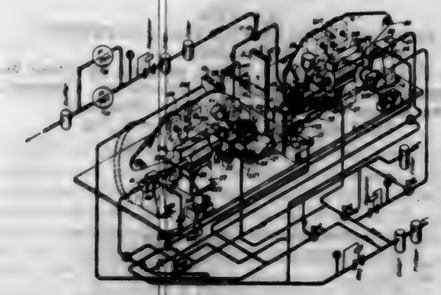
2,949,147
ROLLER LEVELER WITH DRIVEN BACK-UP ROLLS
Frederick K. Maust, 85—36 212th St., Queens Village 27, N.Y.
Filed Dec. 30, 1955, Ser. No. 556,677
18 Claims. (Cl. 153—106)



1. A roller leveler comprising rows of straightening rolls and supporting rolls, one of said rows including a center group and two end groups of straightening and supporting rolls, means to tilt each of said end groups about the longitudinal axes of the respective supporting rolls at the ends of the center group, adjustable power means for changing the tilt positions of each of said end groups, and other adjustable power means for varying the opening between said rows of straightening rolls for changing the crosswise taper of that opening for leveling sheets having tapered longitudinal cross-sections.

2,949,148
RESISTOR TAPE APPLICATOR
Charles C. Rayburn and James G. Black, Jr., Falls Church, and George R. Perez, Alexandria, Va., assignors, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Dec. 29, 1955, Ser. No. 556,356
13 Claims. (Cl. 154—1)

1. An applicator for applying tape portions to a component, a sliding shaft, said shaft being mounted for rotation about its axis, a yoke mounted at its base to one end of said shaft with its arms projecting forwardly of the shaft extremity, a rotatable head having a plurality of lateral faces mounted between said yoke arms with its axis transverse to the axis of said shaft, mounting means for rotatably and slidably supporting said shaft, a panel member connected with said shaft and yoke and rotatable therewith, power means mounted on the panel member and connected to said head for rotating said head about its axis to move said lateral faces in sequence through a plurality of positions, guide means for supporting a component adjacent to one of the faces of said rotatable head when located in one of said positions, means mounted on said panel member for feeding one end portion of said tape to one of said lateral faces of said head, means including a port for applying a vacuum to said tape end portion to hold said tape end portion on said head when said head is rotated, a cutting element mounted on said panel member for cutting said tape prior to movement of said head to a position locating said tape adjacent to said component, power means for sliding said shaft and said head to cause the latter to move the severed tape into engagement with said component when the face of said head carrying said tape is positioned adjacent to said component, and a valve structure in said port to open said port to atmosphere when the tape is applied to the component.

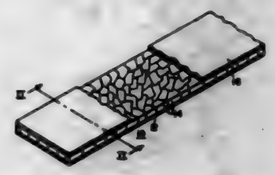


2,949,149
APPARATUS FOR MAKING A LAMINATE
Edward T. Strickland, Palm Springs, Calif., assignor to Philbrick-Strickland Laminates, Inc., a corporation of Washington
Original application Jan. 22, 1957, Ser. No. 635,210. Divided and this application June 16, 1958, Ser. No. 742,224
7 Claims. (Cl. 154—1.7)



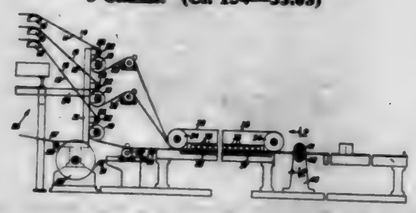
1. Apparatus for providing a laminate over a form having cross sectional areas of different sizes at spaced locations normal to an axis thereof comprising a plurality of spaced apart yarn loop engaging means disposed about said form; means supporting said yarn loop engaging means for travelling movement substantially axially of said form; means moving said yarn loop engaging means unequal axial distances; and yarn cut-off means carried by said yarn loop engaging means.

2,949,150
FLEXIBLE BONDED MICA INSULATION
Edward J. Traynor, Jr., Monroeville, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 16, 1957, Ser. No. 672,289
4 Claims. (Cl. 154—2.6)



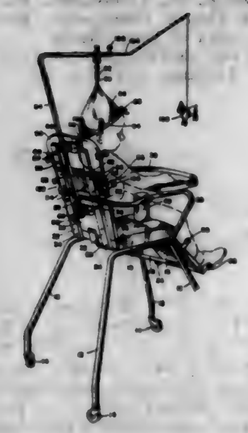
4. A flexible electrically insulating material comprising a layer of polytetrafluoroethylene, a layer of mica flakes disposed thereon, and a flexible bonding agent binding the layer of polytetrafluoroethylene and the mica flakes into a whole, said bonding agent comprising a polysiloxane material composed essentially of (*a*) 5 to 70 percent by weight of a benzene soluble resin copolymer composed essentially of structural units of SiO_2 and $(CH_3)_3SiO_{1/2}$ and in said copolymer the ratio of $(CH_3)_3SiO_{1/2}$ units is between 0.6 to 0.9 inclusive and (*b*) 95 to 30 percent by weight of a benzene soluble organosiloxane of at least 1,000,000 centistokes at 25° C. and said organosiloxane having the general formula R'_2SiO where R' is a monovalent hydrocarbon radical selected from the group consisting of methyl and phenyl and at least 90 percent of the total number of R' radicals are methyl to bind the layers of polytetrafluoroethylene and the mica flakes into a whole.

2,949,151
METHOD AND MACHINE FOR MAKING TRIPLE WALL CORRUGATED PAPER BOARD
Samuel Goldstein, New York, N.Y., assignor to Tri-Wall Containers, Inc., New York, N.Y., a corporation of New York
Filed Aug. 16, 1956, Ser. No. 604,436
3 Claims. (Cl. 154—33.05)



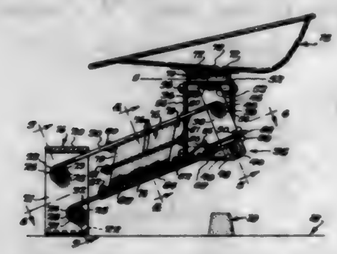
1. A method of making multiple wall corrugated paper board which comprises interposing at least three corrugated sheets between at least four liner sheets spaced by said corrugated sheets, adhesively securing the sheets together to form a composite sheet, partially drying the composite sheet to bond the several sheets together whereby the sheets are incompletely set, forming score lines in said incompletely set composite sheet longitudinally thereof at spaced intervals between the edges thereof and trimming and crushing a strip along at least one edge longitudinally thereof, the flutes of the corrugations extending transversely to the longitudinal direction of crushing, the crushed strip being tapered toward the edge of the composite sheet and the flutes at the edge being squeezed to an extent such that they are substantially sealed.

2,949,152
CHAIR BRACE
Herbert E. Hipps, 1604 Columbus, Waco, Tex., and Eugene J. Kovjack, Chicago, Ill. (928 Talcott Road, Park Ridge, Ill.)
Filed May 28, 1956, Ser. No. 587,787
6 Claims. (Cl. 155—28)



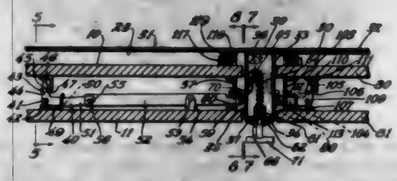
1. An invalid's chair brace compriaing a connected back and seat, the back comprising a plurality of sections, one section having a permanent connection to the seat and a clamp thereon, separate top and intermediate sections, and means connected to the top section for adjustably engaging the clamp and securing all of the back sections together.

2,949,153
SEAT STRUCTURE
Albert F. Hickman, Eden, N.Y., assignor to Hickman Industries, Inc., Eden, N.Y., a corporation of New York
Filed June 30, 1955, Ser. No. 519,122
5 Claims. (Cl. 155—55)



1. A seat structure comprising a base bracket having spaced upright side walls, a pair of horizontal transverse pivot pins extending through said side walls and bridging the space therebetween, one of said pivot pins being arranged above and in advance of the other pivot pin, an upper bar having its front end journalled on said one of said pivot pins, a lower bar parallel with said upper bar and having its front end journalled on said other pivot pin, a seat bracket having spaced upright side walls embracing the rear ends of said bars, an upper horizontal transverse pivot pin extending through said side walls of said seat bracket and pivotally supported on the rear end of said upper bar, a lower horizontal transverse pivot pin extending through said side walls of said seat bracket and pivotally supported on the rear end of said lower bar below and in rear of said last pivot pin, a rubber body interposed between said upper and lower bars, a pair of plates vulcanized to the opposite upper and lower sides of said rubber body, means securing one of said plates to one of said bars, and means adjustably securing the other of said plates at different positions along the other of bars whereby the upper and lower portions of said rubber body are stressed essentially rectilinearly in shear in opposite directions lengthwise of said bars by the relative longitudinal movement of said bars when a load is applied to said seat part.

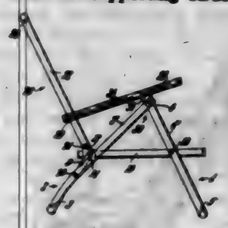
2,949,154
FOLDING TABLES AND WALL SUPPORTS THEREFOR
John E. Hoesme, St. Paul, Minn., assignor, by mesne assignments, to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Filed Mar. 17, 1958, Ser. No. 721,732
13 Claims. (Cl. 155—124)



10. A table and bench structure in combination with an enclosure including spaced recesses for containing the table and benches, the structure including a table having inner and outer table top sections hingedly connected together, means pivotally connecting said inner section to said enclosure within one of said recesses, a leg unit hingedly connected to each section near the end opposite the hinge connection between said sections, means maintaining said leg units in generally vertical relation, said bench including inner and outer bench sections pivotally connected together, means pivotally connecting said inner bench section to said enclosure within the other of said recesses, a keeper connected to one of said table sections, a latch connected to the other of said table sections and engageable with said keeper to hold said table sections in substantially parallel vertical relation, a keeper on one of said bench sections, a latch on the other of said bench sections and engageable with said last named keeper to hold said bench sections in substantially vertical parallel relation, and unlatching means mounted on said enclosure between said recesses and selectively engageable with said latches for actuating the same to disengage them from their respective keepers.

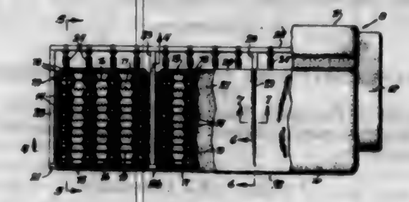
2,949,155
MECHANISM FOR LOCKING BACK OF ARTICLE OF FURNITURE IN ADJUSTED POSITION
Richard L. Panicci, Northampton, Mass., assignor to Hampden Specialty Products, Inc., Easthampton, Mass., a corporation
Filed Dec. 8, 1958, Ser. No. 778,700
2 Claims. (Cl. 155—139)

1. In an article of furniture including a body supporting frame with upper portions extending upwardly at opposite sides thereof intermediate forward and rear ends thereof and a back frame swingably connected to the body supporting frame for movement between adjusted positions and elongated arms pivoted at their rear ends to the back frame and having forward portions swingable and reciprocable adjacent the upper portions of the body supporting frame in lock-releasing and lock-engaging positions, the improvement in means for releasably locking the back frame in adjusted positions comprising, each elongated arm being tubular in configuration and provided with an elongated slot on a side thereof and having a series of longitudinally spaced transverse pins extending diametrically therethrough, locks reciprocable and swingable in the elongated arms and having ear portions extending through the slots thereof, pivotal connections between the ear portions and upper portions of the supporting structure for the



swinging of said locks between locking and non-locking positions said locks being provided with means for engaging and releasing said pins in locking and non-locking positions thereof, and means carried by said locks oscillatably engaging the interior of said arms operable as the arms are swung in opposite directions to swing said locks for disengaging and engaging said pins and pin engaging means.

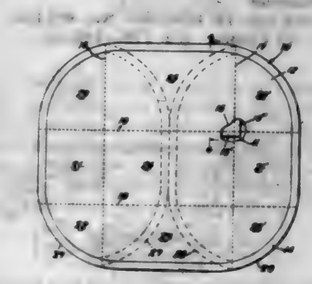
2,949,156
SPRING FOUNDATION FOR DAVENPORTS AND THE LIKE
Ernest F. Becher, Waterport, and Roland C. Howell, Jr., East Aurora, N.Y., assignors to S. A. Cook & Co., Medina, N.Y., a corporation of New York
Filed May 28, 1958, Ser. No. 738,394
6 Claims. (Cl. 155—179)



1. A spring suspension for a multiple occupancy seat having a frame, comprising a plurality of single occupancy spring units each having a plurality of horizontally spaced vertically acting springs and border wires positionally maintaining said springs of each unit, means pivotally connecting the lower parts of fronts of said units to said frame to swing about a common horizontal axis parallel with said fronts, resilient means connecting the rear ends of said units to said frame to permit upward and downward movement of each individual unit about said axis substantially without disturbing the occupant of an adjacent unit, and a horizontal rod arranged substantially directly above said axis along and secured to the upper front edges of said units to provide a continuous resilient edge extending the full length of said spring suspension along the upper front corner thereof.

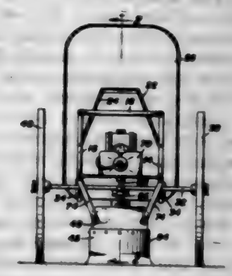
2,949,157
POCKETED CUSHION
Bernard Barbato, 9102 Colonial Road, Brooklyn 9, N.Y.
Filed Apr. 28, 1958, Ser. No. 731,229
2 Claims. (Cl. 155—182)

1. A cushion of the character described, comprising a body of cushioning material having facing sheets on opposed surfaces thereof, the facing sheets being secured to said body by a first set of parallel rows of spaced stitchings extending across the cushion to the edges thereof and a second set of parallel rows of widely spaced stitchings crossing the first stitchings and extending to edges of the cushion, said stitchings forming a plurality of sections along the edge portions and a section at the central portion of the cushion, the sections along two opposed edges of the cushion being foldable inwardly on the second named pair of stitchings, the



cushion thus folded being further foldable on the first named rows of stitchings to dispose the various edge sections upon the central section, means forming a pocket in on edge section between the second set of parallel rows of stitchings, said pocket defined by opposed relatively movable walls, said pocket opening at said edge, one wall of said pocket being reversely foldable in turning said pocket inside out, and said folded section being compressed into a smaller volume in positioning the same within said pocket.

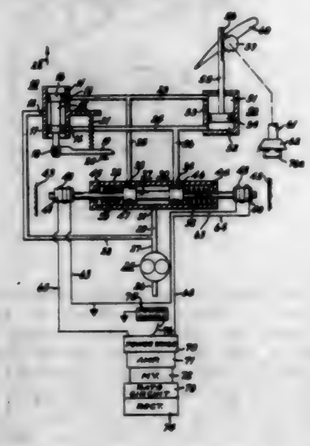
2,949,158
FIRE EXTINGUISHING MACHINE
Albert H. Lowry, 1644 Grand Ave., San Diego, Calif.
Filed Dec. 12, 1958, Ser. No. 780,114
4 Claims. (Cl. 169—1)



1. A mobile fire extinguishing machine comprising a vacuum unit having a flexible depending skirt, a housing to which said flexible skirt is secured, said housing enclosing a vacuum chamber, a bottom inlet in said vacuum chamber housing and within the confines of the flexible skirt, a hose connected with said chamber whereby upon placement of said skirt onto a surface containing sand and the like, air laden sand is drawn through said air inlet and into said chamber and expelled through said hose, an air impeller in said vacuum chamber and having an upright shaft, an extremity of said shaft protruding upwardly of said chamber and adapted to be rotated by a source of power, and a sieve extending across said air inlet to sift the sand laden air as it passes into said vacuum chamber,

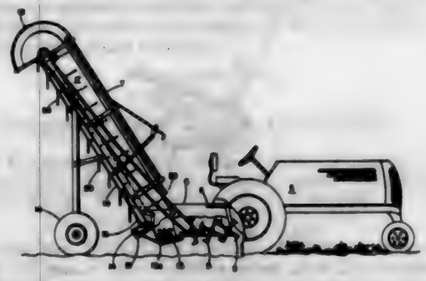
said sieve being fixed on said shaft for rotation thereby to throw off particles of sand too large to pass through the sieve.

2,949,159
PROPELLER SPEED CONTROLLER
James R. Kessler, Troy, Dale W. Miller, Brookville, and Robert K. Skinner, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Jan. 20, 1954, Ser. No. 405,154
19 Claims. (Cl. 170—160.14)



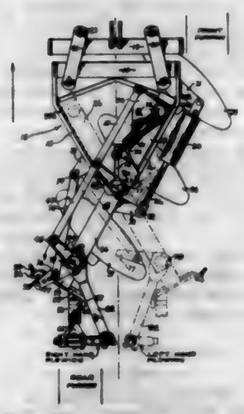
1. Speed control means for a prime mover driven propeller having pitch adjustable blades, including in combination, a fluid pressure system for adjusting the pitch position of said blades including, a source of fluid pressure, a centrifugally responsive governor valve rotatable with the propeller having a control curve with a no response range, a fluid motor for adjusting the pitch position of said blades, and a fluid circuit interconnecting said source, said valve and said motor, said valve being in an on-speed equilibrium position at a predetermined rotative speed of said propeller so as to control the application of fluid pressure to said motor to alter the pitch position of said blades when propeller speed deviates from said predetermined speed, said on-speed equilibrium position of said governor valve being at one end of said no response range an electrically operable valve connected between said fluid motor and said source in parallel with said centrifugally responsive valve for applying unbalanced fluid flow to said motor when said centrifugally responsive valve is in an on-speed position so as to adjust the pitch of said blades and increase the rotative speed of the propeller, said governor valve being responsive to the increase in the rotative speed of said propeller so as to be moved to an off-speed position away from said one end of the no response range whereat the unbalanced flow of said electrically operable valve is counteracted by fluid flow from said governor valve to establish a speed level for said propeller higher than said predetermined rotative speed, and a control organization connected to said electrically operable valve and operable to actuate said electrically operable valve, said control organization including pulse producing means having an output comprising, alternate electrical impulses for actuating said valve, equal during constant speed propeller operation and unequal during changes in propeller speed to provide acceleration sensitivity so as to stabilize propeller operation during speed changes.

2,949,160
CLEANING AND CONVEYING UNIT FOR BEET HARVESTER
Sylvester F. Soucie, Rte. 3, Box 145, and Alexander J. Bauer, Rte. 1, both of Longmont, Colo.
Filed Dec. 18, 1958, Ser. No. 781,260
9 Claims. (Cl. 171—101)



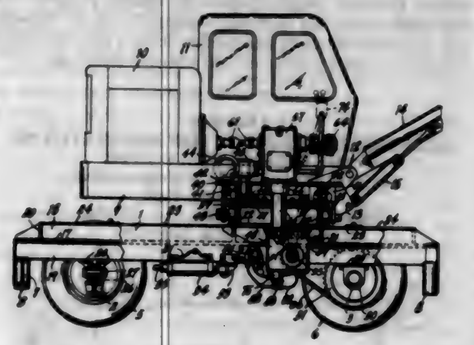
1. In a harvester for beets or the like, a forward section having means for lifting a rooted row crop from the row in which it is grown after topping of the leaves from the roots, and having means for conveying said roots rearwardly in an elevated position separate from the tops, a rearward section distant from said conveying means including elevating means for moving said roots to an upper point of discharge, and a pivotally-mounted grizzly inclusive of a plurality of tines disposed with its tines disposed to substantially fill the space between said conveying means and said elevating means for separating roots from associated matter in the passage of said roots from said forward section to said rearward section, and means for selectively elevating the outer ends of the tines so as to selectively position the grizzly relative to the ground over which the harvester passes.

2,949,161
REVERSIBLE DISC PLOW AND REAR WHEEL SYSTEM
Donald J. Campbell, Stockton, Calif., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Aug. 31, 1955, Ser. No. 531,715
7 Claims. (Cl. 172—212)



1. A reversible disc plow implement having a frame, a rear wheel system carried by said frame and cooperating with the rear furrow to resist side thrust caused by the plowing operation, an arm swingable to and fro on said frame on a substantially vertical axis when the plow is reversed, a mounting for said rear wheel system pivoted on end of said arm on a substantially vertical axis shiftable in opposite directions transversely of the line of draft, said rear wheel system being rockable on said mounting on a longitudinal axis substantially parallel with the line of draft so as to reverse the angle of inclination of said wheel system to the furrow line when the furrow is reversed, the implement including means for limiting the pivotal movement of the mounting on the arm in accordance with the pivotal movement of the arm on the frame so as to maintain the rocking axis of the rear wheel system substantially parallel with the longitudinal axis, and means for positively rocking said rear wheel system on said mounting and around said longitudinal axis as an incident to the swinging of the arm.

2,949,162
CARRIAGE AND DRIVING MECHANISM FOR A MOBILE BOOM MACHINE
George Davis, Benton Harbor, Mich., assignor to Davis Engineering Incorporated, Benton Harbor, Mich.
Filed Dec. 22, 1955, Ser. No. 554,853
1 Claim. (Cl. 180—85)



A boom carriage comprising a chassis formed of a wide web I-beam disposed on its side, a dead axle pivotally mounted intermediate of its ends on the underside of one end of the I-beam about a longitudinally extending horizontal axis, steerable road wheels on the ends of said axle, a fixed axle on the other end of said I-beam, drive wheels rotatably mounted on the ends of said fixed axle, a bed plate welded on the tops of the side flanges of the I-beam, a differential case secured to the under side of said bed plate and depending through a hole provided therefor in the web of said I-beam, a circular base for a turntable welded on top of said bed plate, a turntable rotatably mounted on said base, two transversely extending shafts mounted in said differential and supported at their outer ends by the lower flanges of said I-beam, and chains drivingly connecting said transversely extending shafts to said drive wheels.

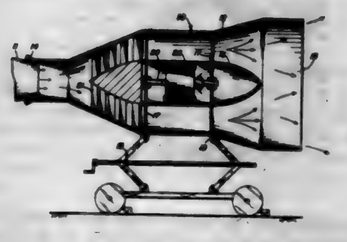
2,949,163
LOUDSPEAKER BAFFLE ASSEMBLY
Norman Friedman, St. Louis, Mo., assignor to Soundoller, Inc., St. Louis, Mo., a corporation of Missouri
Filed May 6, 1957, Ser. No. 657,339
2 Claims. (Cl. 181—31)

1. In a loud speaker baffle assembly, an inner housing formed of sheet metal and having a front opening, an annular side wall of gradually increasing diameter from front to rear, and a flat detachable rear wall having a central circular opening of smaller area than said front wall opening, said rear and side walls having snugly interfitting rim portions, releasable latching means for securing said rim portions together in assembly, a perforated cover extending across the front opening of said housing, and means for mounting a loud speaker in said housing with the diaphragm thereof extending across and contiguous to said perforated cover; a pan-shaped sheet-metal outer enclosure having an annular side wall of gradually decreasing diameter from front to rear ar-



ranged concentrically with respect to said inner housing, and a flat rear wall, studs projecting forwardly from the rear wall of said outer enclosure, the detachable rear wall of said inner housing being mounted on said studs in closely spaced parallel relation to the rear wall of said outer enclosure, said inner housing having sound-absorbing material on the inner surfaces thereof.

2,949,164
PORTABLE SOUND SUPPRESSORS FOR AIRCRAFT JET ENGINES
Conrad J. Morgan, Reading, Mass.
Filed June 25, 1958, Ser. No. 744,623
5 Claims. (Cl. 181—36)
(Granted under Title 35, U.S. Code (1952), sec. 266)

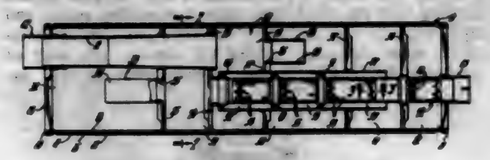


1. Apparatus for reducing the heat and noise created by the exhaust gases of jet engines, said apparatus comprising an outer shell having an inlet and outlet opening, a portable jack fixedly secured to said shell, said shell having a first, second and third section intermediate said inlet and outlet openings, said first section being downstream of and connected to said inlet opening and being provided with a first gas expansion means, said second section being downstream of and connected to said first section and being provided with a temperature absorbing means, said third section being downstream of and connected to said second section and being provided with a second gas expansion means, said outlet being connected to the downstream end of said third section, whereby said first, second and third sections cooperate to reduce the heat and noise created by the exhaust gases.

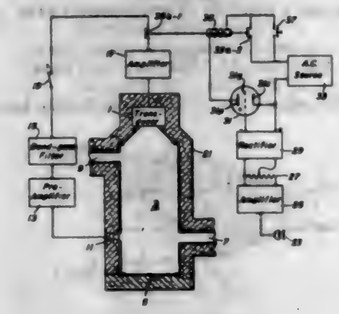
2,949,165
MUFFLER
Leonard M. Morrish and Lloyd E. Muller, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 26, 1954, Ser. No. 471,240
2 Claims. (Cl. 181—54)

1. A muffler for an internal combustion engine comprising a tubular casing having end closures, said casing having at least three internal transverse partitions, an imperforate inlet pipe extending from one end through an end closure and through two of said partitions, and an exhaust pipe extending from the opposite end through the opposite end closure and two of said partitions, the

middle partition having an opening therethrough for passage of gases, the partitions adjacent the middle partition each having an opening therein opposite the said inlet and exhaust pipes respectively.



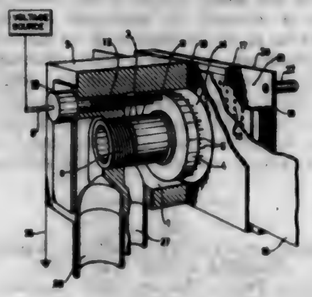
2,949,166
APPARATUS FOR SONIC TREATMENT OF GASES AND FLUIDIZED BEDS
William E. Coleman, Monroeville, and Thomas F. Reed, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey
Filed June 27, 1957, Ser. No. 668,473
3 Claims. (Cl. 183—1)



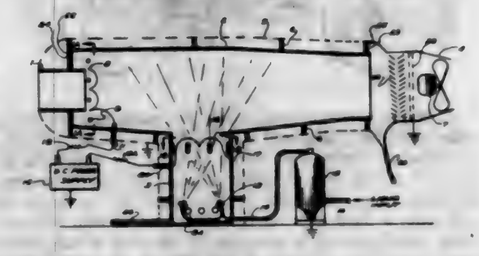
3. Apparatus for the sonic treatment of finely divided solids dispersed in a gas comprising a treating chamber resonant at two or more major frequencies and having inlet and outlet ports for the material to be treated; a transducer mounted in said chamber and positioned to generate a sound wave therein; a microphone positioned to sound waves in said chamber and convert the same to electrical energy of the same frequency; a band-pass filter adapted to pass a band of frequencies including only one of said mapor resonant frequencies and electrically connected to the microphone to receive the electrical output thereof, and a power amplifier electrically connected to the band-pass filter to receive the output thereof and electrically connected to the transducer to supply power thereto, said microphone, band-pass filter, amplifier, transducer and chamber forming a self-excited, wave-transmitting loop which automatically oscillates at a resonant frequency of the chamber.

2,949,167
ELECTROSTATIC PRECIPITATOR
Bengt Allan Bergstedt, Solna, Sweden, assignor to Aktiebolaget Atomenergi, Stockholm, Sweden, a Swedish company
Filed June 4, 1956, Ser. No. 589,131
Claims priority, application Sweden June 8, 1955
4 Claims. (Cl. 183—7)

1. An electrostatic precipitator for aerosols comprising a housing having a cylindrical chamber therein, a tubular emission electrode coaxially arranged in and spaced from the wall of said housing chamber, said emission electrode having a planar end surface transverse to the longitudinal axis thereof and a plurality of mutually spaced point electrodes of equal length projecting from said end surface over a given active area thereof, a collection electrode having a planar precipitation surface parallel to and spaced from the plane defined by the tips of said point electrodes, means for applying a high electric potential to said emission electrode to cause each point electrode to produce a broomshaped conical corona discharge having an apex angle of about 50–75°, and conduit means in said housing for creating a passage of the aerosol in either direction about the outside periphery of said tubular emission electrode, through the space between said emission electrode and said collection electrode, and through the inner portion of said emission electrode.

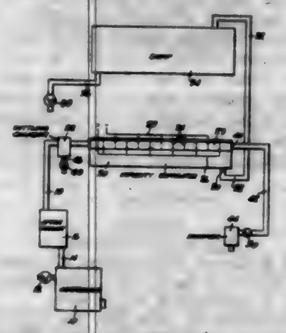


2,949,168
ELECTRICAL PRECIPITATOR APPARATUS OF THE LIQUID SPRAY TYPE
Floyd V. Peterson, 20728 Ventura Blvd., Woodland Hills, Calif.
Filed Dec. 3, 1956, Ser. No. 625,752
10 Claims. (Cl. 183—7)



1. An electrical precipitator apparatus of the liquid spray type cooperable for removing particles of foreign material from gas and requiring only limited charging potentials, comprising: gas duct means cooperable to transmit gas therethrough and including an input portion, an intermediate mixing portion having insulatingly separated inner and outer walls, and an output portion; first ionizing means cooperable with said input portion and the input gas carrying particles of foreign material and flowing therethrough for ionizing said particles of foreign material in said input portion, said first ionizing means comprising discharging electrode means, non-discharging electrode means cooperably spaced with respect to said discharging electrode means to define gas-flow space therebetween, and electric power supply means cooperable to apply unidirectional electric potential at a predetermined polarity and voltage between said discharging electrode means and said non-discharging electrode means and across said gas-flow space and the input gas flowing therethrough; spray chamber means having insulatingly separated inner and outer walls laterally displaced from and connected to said intermediate mixing portion; spray input means positioned in said spray chamber means at a location substantially laterally displaced from and substantially completely out of the line of flow of gas through said intermediate mixing portion and comprising nozzle means cooperable for producing and disseminating a liquid spray in said intermediate mixing portion across the flow path of said gas carrying particles of foreign material which have been ionized by said first ionizing means; second ionizing means cooperable with respect to said spray input means and liquid spray therefrom for ionizing particles of said liquid spray prior to dissemination thereof in said intermediate mixing portion, said second ionizing means comprising discharging electrode means, non-discharging electrode means cooperably spaced with respect to said discharging electrode means to define spray-passage space therebetween, and electric power supply means cooperable to apply unidirectional electric potential between said discharging electrode means and said non-discharging electrode means and across said spray-passage space and the particles of liquid spray moving therethrough, with the discharging electrode means at a predetermined potential and polarity opposite to the polarity of the discharging electrode means of the first ionizing means whereby the charged particles of spray precipitate oppositely charged particles of foreign material carried by said gas; said non-discharging electrode means of said second ionizing means being coated by insulating material, and said inner walls being effectively provided with electrical isolation means, thereby confining the electrical conduction to the liquid spray particles to a region isolated from ground by said inner walls and by the insulating material on said non-discharging electrode means; the outer walls of said intermediate mixing portion and said spray chamber means comprising an electrically conductive shield insulatingly spaced from and substantially encompassing said inner walls and being grounded; condenser-precipitator means cooperable with said output portion for separating particles of liquid spray carrying particles of foreign material from the mingled spray and gas stream; and discharge means for removing such separated liquid from said output portion.

2,949,169
DEVICE FOR SEPARATING IMPURITIES FROM GASES
Frank Sprague, % Sprague Devices, Inc., Michigan City, Ind.
Filed July 5, 1957, Ser. No. 670,003
7 Claims. (Cl. 183—32)



1. A device for separating impurities from gases, comprising a gas compressor, means for precipitating impurities from gas, said means including a housing having a gas inlet, a gas outlet, and an impurity outlet at the bottom of the housing and below the level of said gas outlet, a sump, a receiver, a conduit connecting said compressor with said gas inlet, a conduit connecting said gas outlet with said receiver, and a conduit connecting said impurity outlet with the upper part of said sump.

2,949,170
DEVICE IN TIME METERS FOR LIMITING AT TWO DETERMINED END POSITIONS THE MOTION OF A MEMBER MOVABLE IN TWO OPPOSITE DIRECTIONS
Friedrich Meyer, Grenchen, Switzerland, assignor to Ebauches S.A., Neuchatel, Switzerland
Filed July 23, 1957, Ser. No. 673,682
Claims priority, application Switzerland May 29, 1957
3 Claims. (Cl. 185—43)

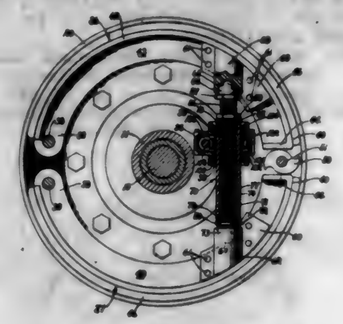


3. A timer including a drive spring, a hand operable winding stem adapted to be rotated to wind the spring, a pillar plate, a drive wheel attached to the winding stem for rotation therewith and carried by the pillar plate, a first pin carried by the drive wheel, a collar member rotatably carried by the drive wheel and in axial alignment therewith, a second pin carried by the rotatable collar member, the pillar plate having an arcuate shaped slot therein of a predetermined length and adapted to limit the arcuate movement of the second pin member, and a stop member extension projecting radially from the rotatable collar member made of a predetermined width thus providing two sides, the stop member extension adapted to engage the first pin member, so that at the rundown position of the drive spring the movement of the winding stem is limited by the first pin member in contact with one side of the stop member extension and the second pin in contact with one end of the slot, and in the wound position the movement of the winding stem is limited by the first pin in contact with the other side of the stop member extension and the second pin in contact with the other end of the slot.

2,949,171
EMERGENCY BRAKE CONTROLLING APPARATUS
Stanley P. Kissinger, 1504 S. Main St., Milpitas, Calif.
Filed Oct. 14, 1957, Ser. No. 689,791
9 Claims. (Cl. 188—106)

1. In combination with a support, a pair of elongated controlled elements, and means pivotally mounting the elements in the support for movement toward and away from each other; an apparatus for controlling movement of said elements comprising receptacles connected to the elements and having opposed recesses, one of the recesses being substantially semi-cylindrical and the other recess being fractionally spherical, said semi-cylindrical recess being substantially concentric to an axis parallel to the pivot axis of one of the elements; a telescopically adjustable control member including a first end portion having a substantially semi-cylindrical end key comple-

mentarily movably fitted in the semi-cylindrical recess for pivotal movement around the axis of the semi-cylindrical recess but being locked against rotation relative to its receptacle, and a second end portion expansible and con-

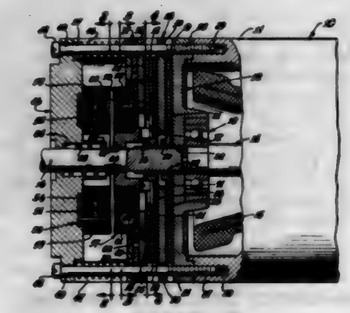


tractible relative to the first end portion having a fractionally spherical ball-shaped end complementarily universally fitted in the fractionally spherical recess; and means connected to the control member for effecting expansion and contraction thereof.

2,949,172
POSITIVE LOCK ELECTROMAGNETIC BRAKE STRUCTURE

Robert L. Simons, Buena Park, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California

Filed Dec. 16, 1958, Ser. No. 780,797
6 Claims. (Cl. 188—171)

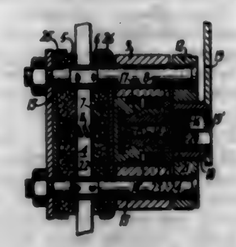


1. In a combination positive brake structure: a rotary shaft; movable detent means carried by the shaft for rotation therewith and biased inwardly toward the axis of the shaft and mounted for movement away from the shaft by centrifugal action so that said detent means describes an orbit; a releasable drag brake structure for the shaft including a member mounted for limited movement in an axial direction for controlling the drag brake structure; said member having a non-rotary part adapted to project within the orbit of said detent means at one limited position; said part having means forming a space in which the detent means may be received upon movement of the detent means inwardly and upon angular alignment of the space and the detent means; said space opening laterally whereby the member part is retracted from the detent means upon movement of the member to its other limited position.

2,949,173
AUTOMATIC DEVICES FOR ADJUSTING DISK BRAKES

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, a French works

Filed June 3, 1958, Ser. No. 739,629
Claims priority, application France June 4, 1957
3 Claims. (Cl. 188—196)



1. An automatic adjustment device for disc brakes having a pair of brake linings to compensate automatically for wear of the brake linings comprising, in combination, a first piston and a second piston co-axial therewith adapted to receive a fluid under pressure therebetween upon application of the brakes to drive said pistons apart, said first piston being positioned to act upon one of said linings in a first direction and the second piston being positioned to act on the other of said linings in the opposite direction, whereby movement of said cylinders away from each other causes said linings to move into braking relationship, resilient means normally urging said linings apart, a threaded rod carried axially by said first piston, a screw-threaded socket slidably carried by said rod, the thread of said socket having the form of a rectangular trapezoid and having a predetermined pitch, and a nut integral with said second piston and threadedly engaging said socket, said socket in one direction of rotation providing a thread contact similar to that of a square thread screw and in the opposite direction of rotation providing a thread contact similar to that of a standard thread screw having a sharply inclined generatrix, whereby said socket may rotate in said nut in one direction of rotation but cannot rotate in said nut in the other direction of rotation, said socket being adapted to undergo limited sliding movement relatively to said first piston to provide an axial clearance between said socket and said first piston upon actuation of the brakes whereby said socket may rotate in said nut, but said socket moving to close said clearance upon release of the brakes and movement of said pistons toward one another in response to the action of said resilient means.

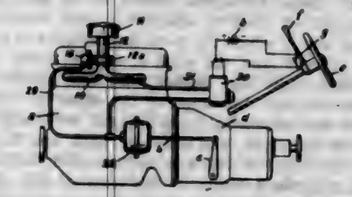
2,949,174
CLUTCH CONTROL

Franz Josef Bomhard, Schweinfurt, Germany, assignor to Firma Fichtel & Sachs A.G., Schweinfurt am Main, Germany, a corporation of Germany

Filed Mar. 15, 1956, Ser. No. 571,753
Claims priority, application Germany Mar. 16, 1955
12 Claims. (Cl. 192—.08)

11. In an internal combustion engine having an air filter, a suction line for drawing in filtered air which air in turn draws in fuel, a throttle controlling air drawn into said suction line, a clutch disengageable upon reduction of the engine speed beyond a predetermined minimum

and disengageable upon shifting gears regardless of the engine speed, and manually operable gear shifting means; the improvement comprising means for increasing the idling speed of said engine during gear shifting comprising a valve casing, a displaceable diaphragm subdividing said casing into two chambers one of which communicates with said suction line beyond said throttle, auxiliary fuel supply means and air inlet means communicating with said one chamber, a valve connected to said diaphragm for displacement therewith, said valve normally closing off the communication between said one cham-

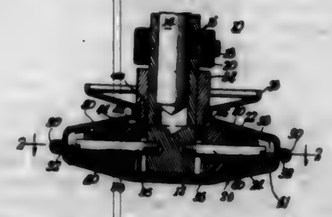


ber and said suction line, pipe means connecting the other of said chambers with said suction line, and a master control valve normally closing off said pipe means, said master control valve being operatively connected with said gear shifting means, whereby upon operating said gear shifting means said master control valve is opened and said other chamber is placed under the suction of said suction line to thereby displace said diaphragm and permitting free communication of said air inlet means and said auxiliary fuel supply means with said suction line through said one chamber to thereby increase the idling speed of said engine.

2,949,175
CLUTCH MECHANISM AND LUBRICANT THEREFOR

Charles Reykjalin, Melrose Park, Ill., assignor, by mesne assignments, to Koren Research & Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Apr. 11, 1955, Ser. No. 500,511
8 Claims. (Cl. 192—113)

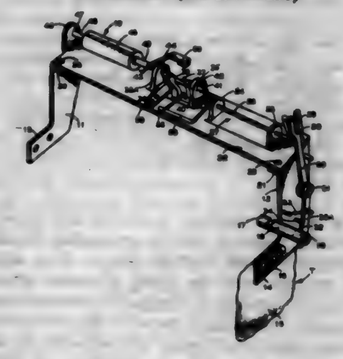


1. A torque sensitive coupling device comprising a rotatable driving shaft, a coaxial rotatable driven housing partially enclosing said shaft and defining a sealed enclosure, said housing having a pair of opposed convergent generally conic faces extending outwardly from said shaft, a plurality of fly weights maintained in a uniform spaced relationship about said shaft and radially movable relative thereto, each of said weights defining radially convergent surfaces corresponding to the convergent faces of said housing, clutch pad means on said surfaces, the clutch pad means on one of said surfaces being disposed generally along two spaced radials of said shaft, and the clutch pad means on the other of said surfaces being disposed generally along a radial of said shaft intermediate said two spaced radials, and comminuted friction controlling means partially filling said enclosure and adapted to adhere to said pads and form a film of predetermined frictional character.

2,949,176
INKING ATTACHMENT FOR TYPEWRITING MACHINES

Max E. Ebert, Ridgefield, and Clarence F. Selzer, Fort Lee, N.J., assignors to Inventors Clinic, Fort Lee, N.J., a partnership

Filed Oct. 2, 1958, Ser. No. 764,976
17 Claims. (Cl. 197—150)



1. In a typewriting machine having type bars with type faces thereon movable between rest and typing positions, improved means for inking the type face of actuated type bars comprising ink transfer means movably mounted in the path of movement of the actuated type bar for contact with the type face thereof, and movable means movable independently of the movement of said ink transfer means to a predetermined position in response to the actuation of a selected type bar, said movable means upon reaching said predetermined position being operative to accelerate the movement of said ink transfer means initiated by contact of the type face of the actuated type bar therewith and thereby rapidly move said ink transfer means out of the path of said type face.

2,949,177
LINE INDICATING AND POSITIONING ARRANGEMENT FOR TYPEWRITERS

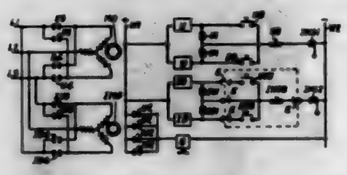
Günter Kernchen, Wilhelmshaven, Germany, assignor to Olympia Werke A.G., Wilhelmshaven, Germany

Filed May 20, 1959, Ser. No. 814,452
Claims priority, application Germany May 28, 1958
9 Claims. (Cl. 197—187)



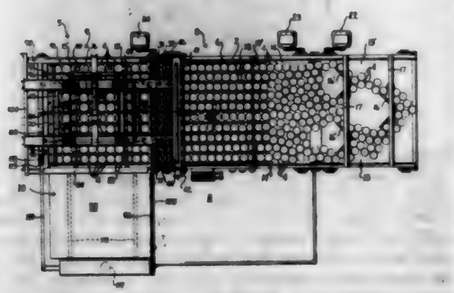
1. Line and position indicating arrangement for a business machine, and comprising, in combination, an indicator member having an edge and graduations along said edge; a paper guide means including two first holder means operatively connected to said indicator members, said first holder means being spaced in the direction of said edge, and each first holder means being adjustable in a direction transverse to said edge for holding said indicator member in a position in which said edge extends exactly along a typewritten line; and second holder means operatively connected to said indicator member and being mounted on said paper guide means for adjustment in the direction of said edge for holding said indicator member in a position in which said graduations are adapted to coincide with the letters of the typewritten line.

2,949,178
SLOW SPEED INSPECTION DEVICE FOR MOVING STAIRWAY
Andrew Fabula, Hoboken, N.J., assignor to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 24, 1958, Ser. No. 769,467
6 Claims. (Cl. 198—16)



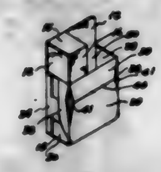
1. In a moving stairway having a first drive motor with a rotating element and an energizing circuit which when energized causes said element to drive said stairway at a normal operating speed, a second drive motor having a second rotating element and a second energizing circuit therefor, said second motor being mounted in sliding relation upon a stationary base adjacent to said first motor, and being movable on said base to engage its rotating element with the rotating element of said first motor, a mechanical interlocking switching means operative in response to movement of said second motor on its base and having contacts connected in the energizing circuits of said first and second motors whereby the energizing circuit of the second motor is completed and that of the first motor is interrupted when the two rotating elements are in full engagement to drive said stairway at reduced speed by means of the second motor, and whereby the energizing circuit of said second motor is interrupted and the energizing circuit of said first motor is completed when the two rotating elements are completely disengaged to drive said stairway normally by means of the first motor, and whereby the energizing circuits of both the first and second motors are interrupted during the period when said rotating elements are in the process of engaging and disengaging so that neither motor can be energized at this time.

2,949,179
MACHINE FOR STACKING CANS ON PALLETS
Curtis T. Busse, Randolph, Wis., assignor of fifty percent to Gilbert W. Busse, Randolph, Wis.
Filed Mar. 21, 1958, Ser. No. 723,031
18 Claims. (Cl. 198—30)



1. In a machine for arranging upright cylindrical containers in a compact rectangular pattern of straight laterally adjacent files with the containers in alternate files displaced half a diameter in one direction lengthwise of the files out of lateral alignment with the containers in the remaining files: an elongated supporting frame; a conveyor mounted on said frame and having a straight substantially horizontal stretch extending longitudinally of the frame, upon which upright cylindrical containers may be carried; means for driving said conveyor to move said stretch thereof forwardly; longitudinal divider means mounted on the frame for vertical movement to an inoperative position vertically spaced from the conveyor into an operative position adjacent to said stretch of the conveyor and at which the divider means define lanes in which containers carried by the conveyor may be held in straight files; two sets of stops mounted on the frame for up and down movement to an inoperative position vertically spaced from said stretch of the conveyor and to an operative position adjacent to said stretch of the conveyor and in which the stops are disposed in the front portion of each lane, the stops of one set being disposed in alternate lanes and aligned with one another across the conveyor, and the stops of the other set being disposed in the remaining lanes, aligned with one another across the conveyor, and movable back and forth relative to the stops of the first set between defined rearward and forward limits, at the forward one of which the stops of said other set are displaced half a container diameter out of alignement with the stops of said one set, all of said stops being engageable by containers carried along the lanes by the conveyor to align the containers in straight ranks across the conveyor when the stops of said other set are at their rearward limits and to stagger the files of containers when the stops of said other set are at their forward limits; and means on the frame for vertically moving said stops and the divider means to the inoperative position removed from containers on the conveyor to permit containers filling said lanes and positioned in staggered files by the stops to be moved laterally off of the conveyor.

2,949,180
LEAF MATCH CASE ASSEMBLY
Leon E. Smith, 2750 Starkevant, Detroit 6, Mich.
Filed Jan. 25, 1960, Ser. No. 4,545
3 Claims. (Cl. 206—48)



1. A leaf match case comprising a flexible strip of material, including an upright backing, a book of leaf matches lying against and mounted upon said backing, an upper portion of said strip above said backing being reverse folded downwardly forming a self retaining cover overlying said book of matches and backing, upright portions of said strip upon both sides of said backing and outer portions of said cover laterally of said backing flexibly joined to upper ends of said upright portions as extensions thereof reverse folded downwardly into engagement therewith extending rearwardly at right angles to said backing, said upright portions defining a pair of side walls, at least one of said side walls terminating in an inwardly directed right angularly related rear wall parallel to and spaced from said backing and joined to the other side wall defining an upright chamber of rectangular cross section adapted to receive a package of cigarettes, the rearwardly folded extensions of said cover normally maintaining the said cover snugly over said book of matches, said cover and adjacent outer portions thereof including elongated cutouts, rendering said cover outer portions freely flexible facilitating manual lifting of said cover to extend normally outward of said backing for access to said matches.

2,949,181
SUTURE PACKAGE AND PROCESS OF MAKING SAME
Gaetano Salvatore Buccino, Danbury, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Filed Nov. 13, 1958, Ser. No. 773,606
12 Claims. (Cl. 206—63.3)



1. A suture package comprising a sterile surgical suture in a plastic laminate envelope having a liquid-tight, ethylene-oxide permeable, strippable seal, said envelope being formed from at least one laminate of a polyester film and a film selected from the group consisting of polyvinyl film and polyethylene film heat sealed to form a closed envelope with the faces of the film selected from said group in contact.

2,949,182
ELECTRICAL COMPONENTS PACKAGE
Sidney B. Williams, Milwaukee, Wis., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Feb. 8, 1956, Ser. No. 572,606
1 Claim. (Cl. 206—65)



In a package of electrical components, the combination of: disc-shaped electrical components arranged face-to-face comprised of body portions and parallel extending leads, a tubular member containing the arranged electrical components, arcuate walls forming a cylindrical section shaped to fit around said electrical components, a channel-shaped portion formed adjacent to the arcuate portion of said tubular member conforming to the configuration of the leads and in cooperative attachment with said arcuate walls, the bottom of said channel-shaped portion being W-shaped in cross section thereby forming two smaller channels which contain said extending leads, wall edges in said tubular member defining a longitudinally extending opening on the opposite side of the cylindrical section from the channel-shaped portion, said longitudinally extending opening providing said arcuate walls with a means of adjustment to the irregularities of the body dimensions of said body portions and a low friction finish in said tubular member whereby said electrical components are free to easily fit in said cylindrical section and said components are easily removed from the tubular member for insertion in a circuit.

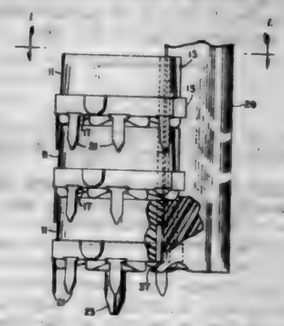
2,949,183
MULTIPLE CONTAINER PACKAGE AND CARRIER DEVICE
John V. Fisher, Los Angeles, Calif., assignor of twenty percent to Larry Crosby, Los Angeles, Calif., and twenty percent to Kenneth M. Crawford, San Marino, Calif.; Constance M. Fisher, administratrix of said John V. Fisher, deceased
Filed Oct. 8, 1956, Ser. No. 614,720
18 Claims. (Cl. 206—65)

1. A package comprising a plurality of containers each having a vertically extending side wall and a top wall and each having an upstanding and laterally projecting peripheral bead at the upper end of the container about said top wall, and a holder individually attached to said containers and securing them together as a unit, said holder being formed of sheet material having, associated with each container, a first portion extending essentially vertically along said side wall of the container and a second portion integrally connected to said first portion and bent relative thereto at a predetermined hinge location to a position extending across the top of the container generally parallel to said top wall to a location radially inwardly beyond said bead, said sheet material having a cut formed therein defining a slot at approximately said hinge location, said bead of the associated container having a portion projecting laterally through said slot and beyond said side wall of the container, said first vertically extending portion of the sheet material having an upper edge defining the bottom of said slot



and positioned under said portion of the bead which projects through the slot, said cut which forms the slot being shaped to form a tab from said sheet material which is connected to said second portion of the sheet material and is forced tightly against the radially inner side of said bead by virtue of the bending of the second portion toward said container top wall to said position across the top of the container, and which thereby locks the container in the holder, said sheet material being sufficiently stiff to retain said second portion thereof in said essentially horizontally bent position, during carrying of the package, solely by the stiffness of the material and without being otherwise secured in said position, said tab and said first portion of the holder being constructed to prevent detachment of the container from the holder except by relative deformation of said tab and said first portion against the resistance offered by said stiffness of the sheet material.

2,949,184
SOCKET PACKAGE
William L. Lehner, Snyder, and Carl F. Carlson, Buffalo, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Oct. 22, 1956, Ser. No. 617,425
4 Claims. (Cl. 206—65)



1. A socket packaging comprising the combination of a plurality of similar sockets in stacked oriented array, said sockets each having contact apertures, downward depend-

ing solder lugs and a vertical aperture joined to the outer side surface by an opening narrower than the width of said vertical aperture, each of said sockets also having a body formed to allow a portion of the length of the socket body internal the contact apertures to nest within the solder lugs of the adjacent upper socket in the stack, a packaging strip extending from the top to the bottom of the socket stack through said vertical aperture in each socket, said strip having a forward edge larger than said opening positioned internal said vertical socket aperture and means positioned at the ends of said strip for preventing sliding movement of said sockets relative to said strip.

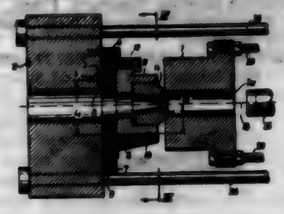
2,949,185
PADLOCK DISPLAY CARDS
Daniel J. Foote, Wauwatosa, and Nathan L. Berkowitz, Whitefish Bay, Wis., assignors to Master Lock Company, Milwaukee, Wis., a corporation of Wisconsin
Filed May 19, 1958, Ser. No. 736,312
2 Claims. (Cl. 206—80)



1. A display package, comprising a card which includes a multi-layered panel having a hollow, triangular base section connected to a lower margin thereof, a clip extending through the layers of the panel medially of its side margins and securing the same together, said clip having a prong bent against the rear face of the panel, a leg parallel to and bearing against the front face of the panel and an apertured flange projecting forwardly of the front face of the panel and at right angles to its plane, there being a large opening in the inclined wall of the base section below said clip and narrow opening in said inclined wall of the base section laterally of said large opening, the panel, above said narrow opening having a slot therein, a key ring removably engaging said panel slot and having keys depended therefrom whose shank portions are removably received by said narrow opening, and a shackle-equipped padlock having its body portion removably seated in said large opening, the shackle of the padlock being extended through the apertured flange of the clip.

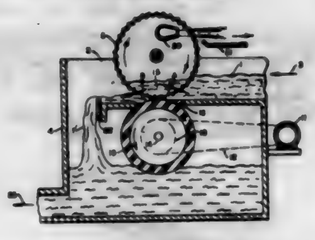
2,949,186
EXTRUSION PRESS
Peter Billes, Leverkusen-Kuppersteg, Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany
Filed July 8, 1957, Ser. No. 670,545
Claims priority, application Germany July 11, 1956
3 Claims. (Cl. 207—1)

1. An extrusion press, comprising: a counter-holder formed with a horizontal groove of dovetail-shaped cross section at a level above the extrusion axis of the press, a die-holder carrier, a horizontal tongue of dovetail-shaped cross section on the said carrier engaging in the groove of the counter-holder and thus supporting the weight of the carrier without hindering the expansion and contraction of the carrier in a vertical direction, a horizontal slide track on the carrier below the level of the axis of the press, and a die-holder resting on the said



slide track, and so mounted as to be free to expand and contract in a vertical direction.

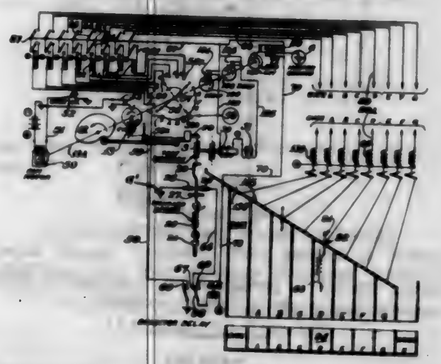
2,949,187
REMOVING IMPURITIES FROM FLUID SUSPENSIONS
Thomas M. Owens, Newton Falls, N.Y.
Filed Mar. 28, 1957, Ser. No. 649,198
7 Claims. (Cl. 209—3)



1. Means for removing impurities from pulp comprising the combination of a channel providing an inflow of fluid containing fibers and impurities suspended therein, a moving screen of a fineness adapted to intercept the good fibers and the suspended impurities on the incoming side of said screen as it moves while the remaining fluid flows through the screen to the other side, a compression member placed along the path of the moving screen so as to form a nip, said nip serving to squeeze said fibers on the outside of said screen and to embed impurities in it, means providing an outward flow of fluid through the screen to assist in carrying off the fibers of said inflowing pulp fluid which thereupon revert to a suspension in the outgoing fluid as before while leaving the impurities embedded in the screen, and means for removing said embedded impurities at a subsequent part of the travel of the screen, so that the cleaned screen can return to repeat the foregoing cycle of operation.

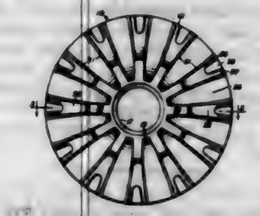
2,949,188
SPRING TESTING AND SELECTING APPARATUS
Donald E. Hooker, Wilmette, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased
Filed June 29, 1956, Ser. No. 594,897
8 Claims. (Cl. 209—79)

5. Apparatus for testing coil springs and comprising: a jig for holding a specimen spring and including a first movable part engageable with one end of said spring for tensioning same; a rotatable member and means drivingly connecting same with said first movable part for progressively tensioning the specimen spring responsive to angular movement of said rotatable member; a second movable part for the jig engaged by the other end of the specimen spring; contact means opened and closed responsive to back and forth movement of said second movable part; an adjustable standard spring connecting with said second movable part and normally urging the latter to a starting condition with said contact means open, and further moved by action of said tensioning means in tensioning the specimen spring to close said contact means when the effort of the two springs is substantially matched; relay means connected with said contact means to be operably controlled by the latter, and a test control circuit including connections opened and closed by said relay means.



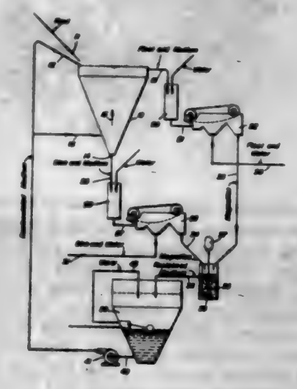
6. Apparatus according to claim 5 further characterized by the provision in said test control circuit of a rotary switch and means driving same synchronously with said rotatable member to establish independent sorting circuits each corresponding to a certain angular position of the rotatable member; and electromagnetic spring-stripping and releasing means energizable and deenergizable by switch means actuated by a switch-operating means moved in step with said rotatable member to strip a test spring from said jig near the end of each cycle of angular travel of the rotatable member; means providing sorting receptacles to receive stripped springs of different rate; and electromagnetically actuated sorting means selectively actuated by said sorting circuits for directing released stripped springs into particular sorting receptacles.

2,949,189
CONICAL ELEMENT FOR SIZING ROLL
Harold Haines, 243 Main St., Presque Isle, Maine
Filed Dec. 11, 1957, Ser. No. 702,119
1 Claim. (Cl. 209—106)



A cone-shaped element for a sizing roll comprising, a body portion formed of resilient material having a small diameter end and a large diameter end, said body portion having a cylindrical opening therethrough extending from the large diameter end to the small diameter end, a generally conical outer surface on said body portion, a cylindrical peripheral surface on said body portion adjacent said large diameter end, an annular exterior concave surface on said body portion extending from said small diameter end to said cylindrical peripheral surface, circumferentially spaced radially disposed ribs integral with the body portion extending from the small diameter end of the body portion along said exterior surface, bifurcated arms forming the end of each of said ribs adjacent the large diameter end of said body portion, said bifurcated arms terminating flush with said cylindrical peripheral surface, an open area between said bifurcated arms unobstructed outwardly from said concave surface, and the free edges of said ribs and the free edges of the bifurcated arms being of concave shape substantially parallel to said annular exterior concave surface.

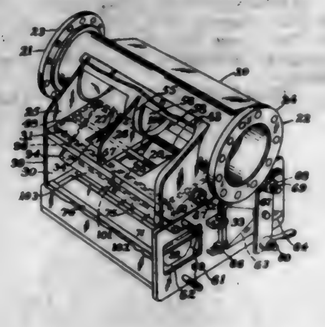
2,949,190
SEPARATION OF FINE SIZED SOLIDS
Joseph Ross Pagnotti, Old Forge, Pa., and Samuel Barron, West Long Branch, N.J., assignors to Mineral Processing Corporation, Dover, Del., a corporation of Delaware
Filed Sept. 19, 1957, Ser. No. 685,000
5 Claims. (Cl. 209—172.5)



1. A process for the gravity separation of a mixture of fine sized non-magnetic solids containing light and heavy particles into a light fraction and a heavy fraction containing said light and heavy particles, respectively, said light and heavy particles being in the size range extending from about ¼ inch down to and including minus 200 mesh, which process includes the steps of introducing said mixture of said solids into a relatively quiescent bath composed of an aqueous suspension of magnetically permeable particles, said bath being characterized by a gravity gradient and a viscosity gradient, both gradients decreasing from the bottom to the top of said bath in such a manner as to establish a separating zone of low specific gravity and low viscosity adjacent the top of said bath, whereby said heavy particles fall freely and rapidly through said separating zone, introducing a first quantity of aqueous suspension of magnetically permeable particles having a specific gravity less than that of said light particles adjacent the top of said bath to assist in conveying said light particles across said bath, introducing a second quantity of said aqueous suspension having the same specific gravity as that of said first quantity at a point below said separating zone in sufficient amount to carry said heavy particles downwardly from adjacent said point and to induce a movement of said bath upwardly from adjacent said point, said upward movement establishing and maintaining constant said gravity gradient of said bath while combining with the buoyant force of said bath to permit only the light particles to float, withdrawing said light fraction containing said light particles together with a portion of the aqueous suspension from the top of said bath, withdrawing said heavy fraction con-

taining said heavy particles together with a portion of the aqueous suspension through a restricted opening at the bottom of said bath.

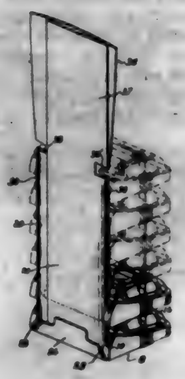
2,949,191
MAGNETIC SEPARATOR
Ralph L. Draper, Andover, and Edward J. Witzgall, Lawrence, Mass., assignors to John W. Bolton & Sons, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed Oct. 18, 1957, Ser. No. 689,345
9 Claims. (Cl. 210—222)



1. In a magnetic separator adapted to be coupled into a fluid pipe system, a housing having a horizontal partition dividing the same into an upper and a lower chamber; a lateral vertical partition dividing said upper chamber into a forward inlet compartment and a rearward outlet compartment; a longitudinal vertical partition dividing said lower chamber into a pair of side by side, longitudinally extending separation compartments, longitudinally extending magnetic plates forming the floor of each said separation compartment; said horizontal partition having a pair of side by side inlet ports, each connecting said inlet compartment with one of said separation compartments and a pair of side by side outlet ports, each connecting said outlet compartment with one of said separation compartments; longitudinally extending baffle means within each said separation compartment adapted to direct influent material laterally to one side of the magnetic plates therein and thence laterally across said plates to reach the outlet port of said compartment; a pair of inlet gates and a pair of outlet gates for opening and closing the inlet and outlet ports of each said separation compartment; gate actuating means extending outside said housing for selectively actuating said gates and detachable closure means on said housing for removal of tramp metal from said separation compartments.

2,949,192
DISPLAY RACKS
John D. Maliff, South Boston, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Filed June 11, 1956, Ser. No. 590,439
3 Claims. (Cl. 211—49)

1. The combination of an elongated rack and a detachable merchandise case, said case forming a base for said rack for supporting said rack in an upright position, said rack being formed of resilient material and having a top, bottom and continuous parallel side mounting edges and stop means positioned adjacent the bottom, said case having opposed re-entrant vertically-extending channels therein, said mounting edges being positioned in and frictionally engaging said channels of said case and said stop means engaging the bottom portion of said case, said edges and stop means positioning said case substantially normal to said rack and adjacent the bottom thereof so that said case, when the



bottom thereof is positioned on a supporting surface, supports said rack in upright position.

2,949,193
REFRIGERATOR SHELF CONSTRUCTION
Harold C. Mather, Knoxville, Ill., assignor to Midwest Manufacturing Corporation, Galesburg, Ill., a corporation of Illinois
Filed May 29, 1957, Ser. No. 662,439
5 Claims. (Cl. 211—143)

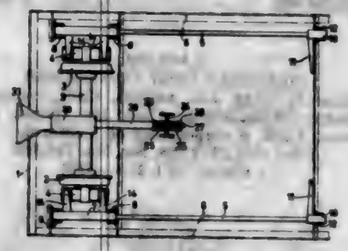


1. A shelf construction for a cabinet having rear and side walls including a rear socket member connected to the rear wall and having resilient compressible means therein and a front socket member secured to the side wall near the front of the cabinet, a guide rod having a rear end disposed in the rear socket member and having a front guide member disposed on the other end, said guide member having means for locking engagement with the front socket member, a shelf, a shelf support rod disposed alongside the guide rod and having a rear guide and shelf support member slidably connected to the guide rod and having means for interlocking engagement with said shelf, said front guide member having means for slidably engaging the support rod, and shelf support means on the front end of the support rod having means for interlocking engagement with said shelf.

2,949,194
COUPLING DEVICE FOR WHEELED VEHICLES
Erik Vilhelm Aspenberg, Linkoping, Sweden, assignor to Aktiebolaget Svenska Järnvägsverkstäderna, Tannefors, Linkoping, Sweden, a Swedish joint-stock company
Filed Mar. 25, 1957, Ser. No. 648,187
4 Claims. (Cl. 213—45)

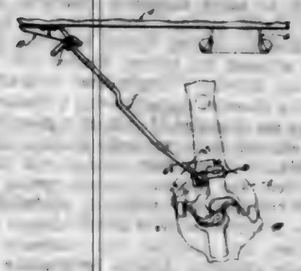
1. A wheeled support and coupling assemblage for a railroad car, comprising a non-rotatable axle, means to support a car resiliently on said axle, a pair of wheels rotatably supporting said axle, a guide fixedly mounted centrally of said axle between said wheels and extending generally longitudinally of said car, a coupling assemblage including a coupling element to extend beyond the adjacent end of said car, an extension rigidly secured to

said coupling element received and supported by said guide, and a draw rod secured to said coupling assem-



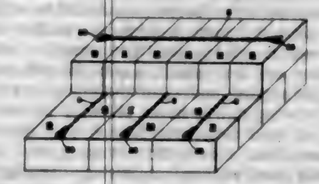
blage at one end and resiliently secured to said car at the other end.

2,949,195
COUPLER OPERATING MECHANISM
Edward Kozak, Cleveland, Ohio, assignor to National Malleable and Steel Castings Company, Cleveland, Ohio, a corporation of Ohio
Filed May 31, 1956, Ser. No. 588,552
15 Claims. (Cl. 213—168)



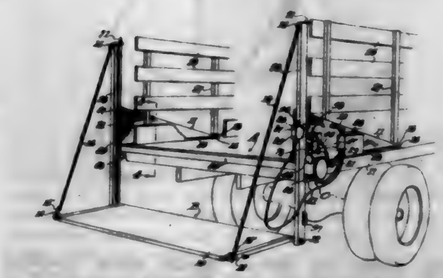
8. In a railway car coupling mechanism, the combination of a railway car coupler having a locking mechanism therein, rotor means for releasing said locking mechanism, said rotor means having at one end thereof a head portion which head portion has a cavity therein for receiving an end of an operating rod for the rotor means and an opening providing access to said cavity through which said one end of said rod passes, an operating rod having a portion extending substantially axially of said rotor means and means on said one end of said operating rod extending into said cavity through said access opening for rotating said rotor means when said operating rod is rotated and means for disengaging said rod end from said head portion upon a predetermined angular movement of said operating rod relative to the axis of said rotor means.

2,949,196
BALE BINDERS
Kenneth E. Vaughn, Box 195, Rush City, Minn.
Filed Sept. 8, 1958, Ser. No. 759,782
1 Claim. (Cl. 214—10.5)



To be used in combination with a plurality of rectangular bales of material arranged side by side in a row, a pair of binding devices, each comprising a flat sheet steel base with a T-shaped hole adjacent one end and prongs protruding outwardly therefrom at an angle of approximately seventy-five degrees adjacent the other end and a connecting chain, which is engaged in the holes in the devices, and extending across the top of the row of bales; thereby binding the bales together.

2,949,197
DEMOUNTABLE TAIL GATE ELEVATOR
Carlton J. Lomen, Herlong, and Kenneth G. Coleman, San Rafael, Calif.
Filed Apr. 14, 1958, Ser. No. 728,580
2 Claims. (Cl. 214—75)
(Granted under Title 35, U.S. Code (1952), sec. 266)

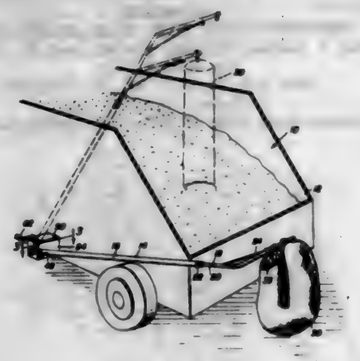


1. Elevator mechanism for vertically moving a vehicular tail gate between a position below a flat vehicular platform and a position level therewith, comprising the combination with a vehicle chassis having opposite longitudinally extending side bars provided with corresponding openings extending substantially vertically therethrough, a pair of substantially right angled triangular side plates demountably carried uprightly edgeways upon upper surfaces of said side bars, each of said plates being disposed upon a corresponding long edge resting upon the side bars and having a retaining flange projecting from corresponding ends of the plates and extending into and through the openings in the side bars of the vehicle chassis and engaging bottom surfaces of the side bars adjacent to the openings for removably retaining the side plates in upright position on the side bars when in service, a pair of vertically movable elevator beams carried by said side plates and attached to opposite side portions of the tail gate, guide rollers in said elevator beams mounted on said side plates for guidance of said elevator beams during vertical movements of said elevator beams and tail gate, and operating mechanism for said elevator beams including a motor mounted upon a bracket plate extending perpendicularly from one of said side plates, a second bracket plate also extending perpendicularly from the side plate, a mechanical drive carried by said second bracket plate and mechanically coupled to said motor and flexible drive means interconnecting said elevator beams and said mechanical drive for operating said elevator beams and tail gate simultaneously and uniformly between the positions thereof.

2,949,198
LOADING DEVICE
Tom L. Abbott, Rte. 3, Levelland, Tex.
Filed Dec. 9, 1957, Ser. No. 701,589
3 Claims. (Cl. 214—77)

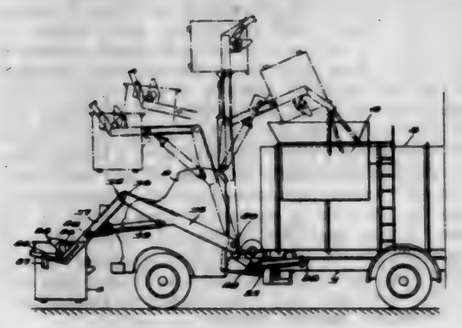
1. An attachment for lifting and emptying cotton sacks, comprising, vertically swingable lift means pivotally connected to a cotton field vehicle, extensible arm means connected to said lift means and having a horizontally disposed transverse portion extending transverse-

ly across the vehicle, said lift means being operative to raise or lower said arm means while maintaining said transverse portion horizontal, suspension means horizontally spaced on said arm means, said suspension means including a first portion connected to a closed end of a cotton sack and a second portion slidably mounted on the arm means for movement parallel to a horizontal axis through said transverse portion, in a direction trans-



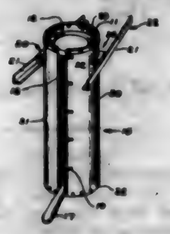
versely across the vehicle, release means extending through said lift means and operatively connected at an upper end to the second portion of the suspension means for moving the second portion to release an open end of the cotton sack for dumping of cotton therein into the vehicle when said arm means has been raised, and actuating means mounted on said lift means and operatively connected to said release means at a lower end thereof.

2,949,199
CONTAINERS FOR SELF-LOADING VEHICLES
Harry W. Jones, Knoxville, Tenn., assignor to Dempster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Filed July 14, 1955, Ser. No. 522,943
13 Claims. (Cl. 214—302)



1. A dumping container for a self-loading cargo vehicle having lifting arm units mounted on the vehicle for upward swinging movement relative thereto, said container comprising an elongated body portion having means on opposite ends thereof adapted for engagement by the lifting arm units for elevating the container thereby, brackets adjacent opposite ends of the container adapted to be engaged by a bar connected with the lifting arm units for turning over the container when raised to an elevated position, and means mounting the brackets on the body portion of the container including guideways mounted on the body portion and slide portions on the brackets engaged in the guideways for slidable detachment therefrom.

2,949,200
MULTIPLE DISH CONTAINER
William T. Haag, Los Angeles, Calif., assignor to Gadget-Of-The-Month Club, Inc., North Hollywood, Calif., a corporation of California
Filed Oct. 13, 1958, Ser. No. 766,980
1 Claim. (Cl. 214—310)

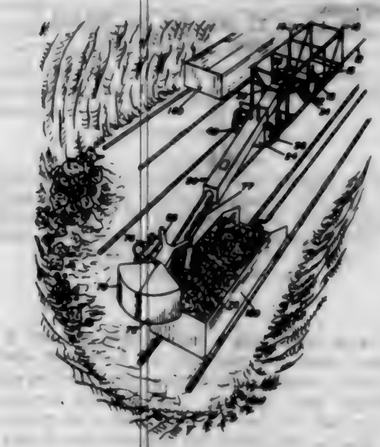


A multiple dish container adapted to store a plurality of dishes in an easily accessible, insertible, removable, and transportable manner, comprising: a longitudinal vertically directed housing having perforate dish-retaining means adjacent the bottom thereof and having an open top and defining a longitudinal vertically directed dish-receiving chamber therein having a diameter slightly greater than the diameter of each of a plurality of similar dishes adapted to be vertically stacked therein, said housing being provided with vertical slot means; and movable ascent and descent platform means positioned within said chamber for underlying abutment with the bottom one of the plurality of dishes adapted to be positioned therein, and provided with manually graspable handle means extending directly horizontally outwardly through said vertical slot in said housing for convenient manual access from the exterior of the housing to facilitate loading and unloading of said dishes into and out of said chamber; longitudinal horizontal track means consisting of spaced horizontal rails adapted to communicate two horizontally spaced stations between which the housing is to be moved; and downwardly directed horizontally rollable track-engageable roller means carried by said housing above the center of gravity thereof for horizontal rolling engagement with said spaced horizontal rails of said longitudinal horizontal track means for easy transport of said dish-containing housing therealong and therebetween.

2,949,201
MUCKING MACHINE
Roderick T. MacAlpine, Fenelon Falls, Ontario, Canada, and Lawrence A. James, Wallace, Idaho, assignors to Shaft Machines Limited, Toronto, Ontario, Canada
Filed July 30, 1957, Ser. No. 675,138
6 Claims. (Cl. 214—657)

6. In a mucking machine having a telescopic boom which comprises a first section connected to a fixed member by a universal joint, a telescopic section carried by said first section and mounted for retraction into and extension from said first section, a material collecting, carrying and discharging bucket of the clam type formed of two co-operating half sections pivotally mounted on the free end of said telescopic section and operator controlled pneumatic means for actuating said boom and said bucket into material collecting, carrying and discharging positions, the improvement which comprises a pair of plates fixedly secured to the free end of said telescopic boom section and extending therefrom, each

plate overlying the inner wall of a half section of said clam when in closed position and remaining in fixed position when the half sections are opened, and co-operating



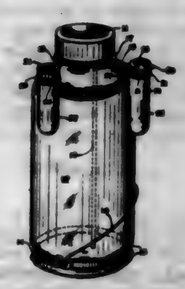
means carried by the first and telescopic boom sections to retain said telescopic boom section against rotation on its longitudinal axis.

2,949,202
LOADING AND UNLOADING DEVICE
Michael Treshow, Hinsdale, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed May 17, 1956, Ser. No. 585,582
1 Claim. (Cl. 214—650)



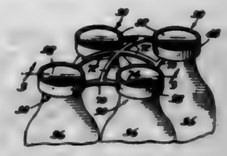
A device for loading and unloading fuel rods in and out of a reactor tank through an access tube in the top thereof to and from guide tubes in the tank parallel to but out of alignment with the access tube, said device comprising a carriage fitting the access tube and slidably mounted therein for axial movement into and out of the reactor, a gripper for engaging the ends of the fuel rods, means including parallel links connecting the gripper and the carrier for enabling the gripper to remain parallel to itself in all positions and thus to handle the fuel rods between the parallel guide tubes and a position of alignment with the access tube, and means fixing the parallel links against movement, whereby a fuel rod is moved into or out of its guide tube or through the access tube by axial movement of the carriage in the access tube.

2,949,203
PILOT TUBE
Robert Henry Berg, Antioch, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
Filed Dec. 22, 1958, Ser. No. 782,164
5 Claims. (Cl. 215—6)



1. A pilot tube device for fluids comprising in combination; an integrally molded semirigid, plastic ring collar adapted to circumferentially rest on the neck of a container and a pair of pilot tubes integrally molded therewith and connected to the said ring collar by a frangible connecting segment, said pilot tubes having an annular flange about the upper edge of said tubes and extending outwardly therefrom, and each said pilot tube having an integral cap member composed of a semirigid plastic material hinged to said tube by means of a band of semirigid plastic material, and a retaining rib circumferentially extending within the interior of each cap which coacts with the said annular flange to retain the cap in closed position on the said pilot tube.

2,949,364
CLOSURE DEVICE
Bryant Edwards, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Original application Dec. 31, 1954, Ser. No. 479,031, now Patent No. 2,814,405, dated Nov. 26, 1957. Divided and this application Oct. 1, 1957, Ser. No. 687,595
11 Claims. (Cl. 215—41)



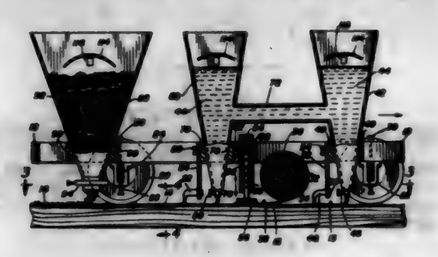
8. Closure means comprising a plurality of like closure devices, each such closure device comprising a cap element of readily deformable elastic material having an annular peripheral portion with a lateral surface adapted to engage and to conform intimately to the wall of a bottle or the like adjacent the opening thereof, said cap element having an integral transverse wall spanning said annular peripheral portion for closing off the opening of said bottle or the like, retaining means complementary to and telescoping with said annular peripheral portion and engaging opposite to said wall engaging surface to force said wall engaging surface tightly and intimately against the wall of said bottle or the like, and means interconnecting said closure devices and integral therewith, being of said readily deformable elastic material and adapted for gripping by the fingers to lift a plurality of bottles associated with said closure devices.

2,949,205
BOTTLE CAP
Harold C. Fitz, Jr., Albuquerque, N. Mex.
(139 Valley Road, Charlottesville, Va.)
Filed Sept. 2, 1958, Ser. No. 758,332
3 Claims. (Cl. 215—45)



1. A bottle cap comprising a sealing cap having a sealing means and a normally outsprung holding means, an operating cap slidable relatively to the sealing cap and having a part to slide over and compress the holding means, and spring fingers fitted under compression between the two caps to develop frictional and elastic resistance to the relative movement of the caps.

2,949,206
ROOFING METHOD AND APPARATUS
Carroll C. Figge, Batavia, Ill.
(315 W. Madison St., Chicago, Ill.)
Filed Dec. 27, 1955, Ser. No. 555,636
6 Claims. (Cl. 216—20)



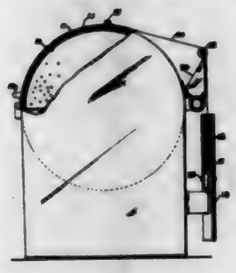
1. A complete multi-layer roof laying apparatus for simultaneously finishing a portion of a roof, comprising a frame, wheels supporting said frame for movement over the surface of a roof to be covered, a support in the frame having a transverse axis for holding a roll of sheet roofing material above the roof surface, means carried by the frame in advance of a roll carried by the support for applying a coating of adhesive to a roof surface below a strip of roofing material as it is discharged from a roll, adhesive supply and applying means carried by the frame following the roll support and laterally displaced so as to extend outwardly beyond and overlapping one edge of a roll of roofing material carried by said support, and surface covering material supply means carried by the frame following the last named adhesive applying means and laterally displaced to extend beyond and overlapping the edge of a roll of roofing material carried by the support arranged so that the surface covering material discharged from its supply means will register with and adhere to the last named adhesive in its path overlying and extending beyond one edge of a roll, thereby applying the covering material simultaneously to its adhesive on top of the edge of the strip of roofing material carried in the frame and discharged from the support.

2,949,207
MILK CRATE
Houston Rohrig, Los Angeles, Calif., assignor to Rohrig-Pacific Company, Los Angeles, Calif., a corporation of California
Filed Sept. 22, 1958, Ser. No. 762,333
10 Claims. (Cl. 220—19)



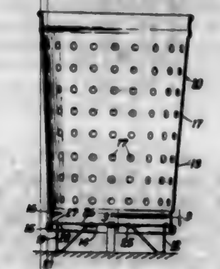
1. A crate comprising a hollow side rail and a side wall seated upon said side rail and having an aperture therein, and a securing clip having a first portion extending through said aperture and clinched downwardly against one side of said side wall, and a leg portion extending downwardly along the opposite side of said side wall and projecting downwardly into said side rail, said leg having a lower terminal projection angularly related to said leg portion and confined within said side rail.

2,949,208
WASHING MACHINE DOOR
Albert F. Widigen, Davenport, Iowa, assignor to American Machine and Metals, Inc., East Moline, Ill., a corporation of Delaware
Filed May 13, 1957, Ser. No. 658,729
4 Claims. (Cl. 220—41)



1. A counterbalance arrangement for a washing machine having an upper portion containing an opening providing access to the interior of the machine, and a door for covering said opening, said door being rotatably mounted with respect to said upper portion on a horizontal axis of rotation, the path of travel of said door extending from a closed position substantially in a front upper quadrant to an opened position substantially in a rear upper quadrant, said quadrants being defined with respect to said machine by horizontal and vertical planes intersecting substantially along said horizontal axis of rotation, said counterbalance arrangement comprising a vertically movable weight located rearwardly of said washing machine, means connecting said door to said weight, and a guide means over which said connecting means travels, said guide means being located in the rear upper quadrant outside the path of travel of said door, said connecting means and said guide means for all positions of said door being disposed in a plane extending through the path of travel of the door, substantially perpendicular to and intersecting said horizontal and vertical planes, so that when said door is initially moved rearwardly the weight moves downwardly, urging the door in a rearward direction until after the center of gravity of the door passes from said front to said rear quadrant and the line of action of the connecting means between said door and said guide means has passed through a position coincidental with a radial line extending from the axis of rotation of said door and disposed in said plane extending through the path of travel of said door, whereupon the weight moves upwardly opposing the rearward movement of the door.

2,949,209
LEG CONSTRUCTION FOR A TRASH BURNER
William C. Schott, Green Township, Hamilton County, Ohio, assignor to The Cincinnati Galvanizing Company, Cincinnati, Ohio, a corporation of Ohio
Filed Oct. 2, 1957, Ser. No. 687,690
3 Claims. (Cl. 220—69)



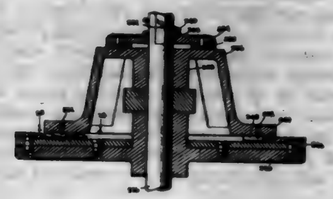
1. A trash burning receptacle comprising a body having a side wall and a bottom panel attached to the lower edge of the side wall and a plurality of leg units attached to the bottom panel, each of said leg units including an upright portion having a T-shaped projection at its upper end and a sloping portion integral with the lower end thereof, the T-shaped projection extending through a substantially radial slot in the bottom panel adjacent the edge thereof, and means for attaching the free end of the sloping portion of the unit to the bottom spaced substantially radially from the slot thereof to lock the T-shaped projection in a position extending transversely of the slot with the cross bar of the projection above the bottom panel and the neck thereof in the slot, there being a plurality of air holes in the bottom panel, the legs supporting the bottom panel spaced above a supporting surface, whereby air can freely enter the air holes in the bottom panel.

2,949,210
COIN CONTROLLED GAME APPARATUS
Moyce H. Sikes, 1266 Boulevard NE., Atlanta, Ga.
Filed Mar. 23, 1956, Ser. No. 573,501
4 Claims. (Cl. 221—7)



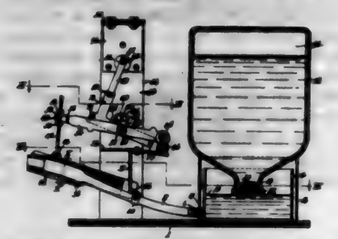
1. In an article dispensing device in which the articles are successively discharged responsive to successive displacements of a movable barrier, a resettable mechanism for normally limiting such displacements of the barrier to a predetermined number between resettings, said mechanism comprising a ratchet element movable through a limited range, resilient retracting means urging said element toward one end of said range, a feeding pawl operatively connected to said barrier and in driving engagement with said element to feed the latter toward the other end of its range responsive to movement of said barrier, a holding pawl cooperating with said ratchet element in proximity to said feeding pawl, a primary means for retracting both said pawls to permit return of said element to said one end of its range, a secondary means for retracting said pawls, manually controllable means for actuating said secondary means, a plurality of abutments spaced along said element in the direction of its movement, and a detent movable by said manually controllable means to a position for engagement with one of said abutments each time said secondary means is actuated.

2,949,211
METHOD AND SYSTEM FOR MAKING SEPARABLE BOTTOM STOPS FOR SLIDE FASTENERS
Elliot Levine, Brooklyn, N.Y. (% American Eyelet Co. Inc., 225 Varick St., New York 14, N.Y.)
Filed Apr. 29, 1957, Ser. No. 655,283
4 Claims. (Cl. 221—169)



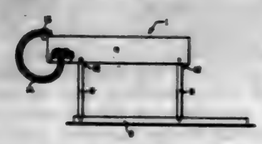
1. In a machine for attaching to the bottom ends of coupled stringers pins for a separable bottom stop each of which pins constitute an elongated bottom wall, upstanding side walls, inturned flanges spaced from one another and extending from the upper edges of the side walls, and a closure member at one end only of the bottom wall, that improvement comprising the combination of: an inclined plate, a bell mounted to turn on said plate and having its rim immediately adjacent the same, said plate being provided with an opening for admitting to the space between the bell and plate a mass of randomly disposed bottom stop pins, said rim having channels on the surface thereof adjacent the plate, said channels extending in a generally radial direction from the interior to the periphery of the bell and being wide enough to pass a bottom stop pin moving axially therethrough, a plurality of discriminating pins carried by the bell, each of said pins being located in a different one of said channels and having its tip within the channel, the space between each discriminating pin and each side of its associated channel being less than the width of the bottom stop pin, said discriminating pin being narrower than the space between said flanges, said plate being provided with a recess below the center of rotation of the bell and adjacent the path of travel of the discriminating pins, the uppermost end of said recess being located slightly higher than said path of travel a distance considerably less than the length of a bottom stop pin, whereby a bottom stop pin travelling axially through a channel with the closure member rearmost and the bottom wall of the bottom stop pin remote from the bottom of the channel will be checked in its movement through the channel by abutment of the discriminating pin against the closure member after the remainder of the bottom stop pin has passed the discriminating pin and thereafter will at least in part fall into said recess to permit further travel of the bottom stop pin through the channel to leave the bell.

2,949,212
LIQUID FEEDER
Orin E. Watson, 2811 W. 67th St., Mission Hills, Kans.
Filed Aug. 11, 1958, Ser. No. 757,171
5 Claims. (Cl. 222—70)



1. A liquid feeder comprising a base, a liquid container carried by said base, a flexible tube interconnected at its one end to said container below the liquid level therein and being open at its opposite end, a frame carried by said base, a carrier member supported on said frame and normally supporting a portion of said tube in an elevated position above said liquid level, whereby flow of liquid through said tube is prevented, said carrier being movable relative to said frame to a lowered position in which the normally elevated portion of said tube is disposed below said liquid level whereby liquid flows through said tube and is discharged from the open end thereof by gravity, and actuating means carried by said frame and which when energized oscillates said carrier and tube regularly between their elevated position and their lowered position, whereby liquid flows through said tube during only a portion of each oscillation.

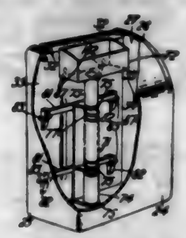
2,949,213
DRAINAGE PAN
Thomas L. Barbee, 329 Zorn Ave., Louisville, Ky.
Filed Nov. 2, 1956, Ser. No. 620,067
8 Claims. (Cl. 222—160)



1. A drainage-receiving unit of the type intended to be moved along the floor into and out of the space between the floor and the lower drain cock of an automobile, comprising: an upwardly open drain pan, which is relatively elongate horizontally and shallow vertically; drainage means on said pan for draining its contents; means for maintaining said drainage means normally inoperative; a frame, which is relatively elongate horizontally and shallow vertically; and means mounting said pan on said frame for movement from a low drainage receiving position, wherein the frame and pan cooperate to form a unit which is relatively elongate horizontally and shallow vertically, to a relatively high drainage discharge position, in which the pan is spaced upwardly from the frame, said mounting means supporting said pan in the same relative horizontal position during said movement.

2,949,214
PUMPS
Samuel Howard Davey, 10 Brazerton St., London, England
Filed May 10, 1956, Ser. No. 584,137
Claims priority, application Great Britain May 12, 1955
12 Claims. (Cl. 222—381)

1. A reciprocating pump for pumping viscous fluids comprising a first tube, a second tube co-axial with said first tube and having an end portion in relatively closely-spaced overlapping telescopic relationship with an end portion of said first tube, both of said tubes being axially reciprocable relative to each other, outlet valve means at the end of said first tube remote from said overlapping end portion to permit flow out of the interior of the tubes but to prevent flow in the reverse direction, inlet valve means at the end of the second tube remote from said overlapping portion to permit flow into the interior of the tubes but to prevent flow in the reverse direction, said inlet valve means including a stationary closure member against which the remote end of said second tube



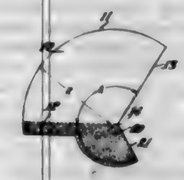
normally seats, and at least when the pump is in use, a layer or film of viscous fluid separating the overlapping portions of the two tubes and which, by its viscosity, provides a coupling between the tubes, whereby when said first tube is reciprocated towards the second tube the volume of the interior of the tubes is decreased, forcing fluid out of the outlet valve means, said second tube being seated against the closure member to close the inlet valve means, while when said first tube is moved away from the second tube, the latter, due to the fluid coupling, temporarily moves with the first tube and away from the closure member to permit fluid to flow into the interior of the tubes.

2,949,215
DISPENSING CAPS FOR COLLAPSIBLE CONTAINERS
Will M. Mudge, St. Louis Park, Minn. (2301 Westridge Lane, Minneapolis 16, Minn.); and Robert C. Alexander, 3015 Fairchild Ave., and James W. Alexander, 3003 Fairchild Ave., both of Wayzata, Minn.
Filed Mar. 17, 1958, Ser. No. 722,059
1 Claim. (Cl. 222—490)



A dispensing cap for a collapsible container having a neck for the discharge of material therefrom, said cap being of resilient material having a skirt adapted to be applied to such container neck and having a nozzle extending from said skirt longitudinally thereof, said nozzle having relatively thin walls including opposed side walls, opposed end walls and an elongated terminal wall, said terminal wall being longitudinally arched and having a slit-score cut thereinto at one face thereof as with a knife edge, said slit-score preparing the terminal wall for its ready fracturing severance through the thickness of said wall continuing from and left uncut by said slit-score, such slit-score extending longitudinally of the terminal wall and defining therein opposed lips at the opposite sides of the slit-score, said nozzle walls being adapted to flex under squeezing pressure exerted by the fingers against the nozzle's opposed end walls, the arched terminal wall being adapted under such squeezing pressure to arch more sharply and to fracture through said thickness thereof prepared for fracturing in the cutting of said slit-score, thereby completing a discharge slit in said terminal wall between said lips, said walls of said nozzle being adapted upon cessation of such squeezing pressure against them to resume their initial undistorted condition wherein the respective fracture-formed and score-cut surface portions of the confronting edges of said lips meet each other and effectively close said discharge slit, the walls of the nozzle being adapted to flex under internal pressure exerted against them by material forced into the nozzle from the container when collapsing force is applied to the container, said lips of the terminal wall being adapted thereby to be parted from each other opening said slit for the extrusion of material therethrough from within the nozzle, said nozzle walls when relieved from such internal pressure being adapted to resume their said initial undistorted condition and thereby reclose said slit.

2,949,216
BLANK FOR TRUNCATED CONICAL CUPS
Clarence T. Brewer, Oak Park, Ill., assignor to Dixie Cup Company, Easton, Pa., a corporation of Delaware
Filed Sept. 30, 1958, Ser. No. 764,312
3 Claims. (Cl. 229—1.5)



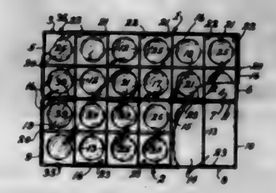
1. A blank for forming a truncated, conical paper cup having a circular sector for forming the conical cup wall, said sector having an arcuate, convex outer edge for forming the open mouth edge of the cup and having two straight edges meeting at their inner ends to form the cup apex, an adhesive extension on one edge, and an additional arcuate sector adjacent the cup apex and said extension, said additional sector having substantially the same angular extent as the angle between the straight edges of the first named sector.

2,949,217
ONE-PIECE CARTON AND SIPPER STRAW HOLDER
William A. Pugh, Sr., 5200 S. Harper Ave., Chicago, Ill.
Filed Oct. 7, 1958, Ser. No. 765,745
5 Claims. (Cl. 229—17)



1. A one piece beverage containing carton having a peak top including upwardly converging front and rear top walls terminating in front and rear peak forming panels connected together, a reinforcing panel on said front peak forming panel folded downwardly behind the same and the front top wall and adhesively secured thereto, a tear-out strip on said reinforcing panel including an apertured ear for holding a sipper straw upright in the carton, a tear-out tab in said front wall in front of said strip for forming an opening in said front wall for exposing said strip for tearing out and pulling said strip and ear out of the opening in order to provide access to a sipper straw carried by said ear, and a downwardly opening hook on said reinforcing panel spaced from said ear and with which said straw may be terminally engaged when bent from said ear.

2,949,218
DISPLAY AND COLLAPSIBLE CARTONS
Francis J. Sloan, Springfield, Mass., assignor to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts
Filed Jan. 7, 1957, Ser. No. 632,837
11 Claims. (Cl. 229—28)

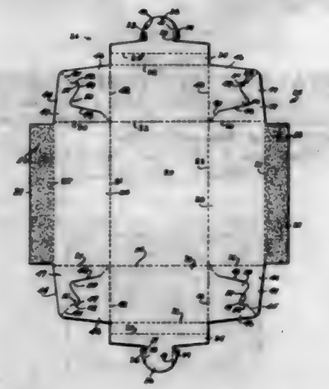


1. A carton comprising two frames open at top and bottom and hinged together along one edge for swinging movement to and from a superposed position and a side by side position with their mating faces in a common plane, a continuous sheet of thin flexible sheet material extending over the mating faces of both frames when said faces are in a common plane, the edge portions of the sheet being secured to the unhinged edges only of the frames, the sheet folding upon itself along a line substantially coinciding with the hinge line of the frames when the latter are in superposed position, and opposed mating pockets formed in said sheet to receive and substantially conformably enclose an article between them when the frames are in superposed position to support the article out of contact with the adjacent frame members.

2,949,219
CARTONS
William P. Frankenstein, Roselawn, Ohio (7260 Easthawn Drive, Cincinnati 37, Ohio)
Filed Mar. 12, 1956, Ser. No. 570,968
11 Claims. (Cl. 229—31)

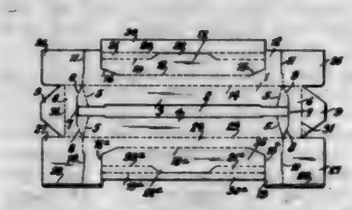
1. In a box or carton of the class described comprising a rectangular base or bottom panel, side walls upstanding from two opposed edges of said base or bottom panel, end walls including an outer wall member upstanding from each of the remaining two opposed edges of said base or bottom panel, a corner piece hingedly connected with adjacent edges of the side walls and end walls outer wall members with each corner piece having a diagonal fold line forming in each corner piece a pair of triangle portions with said fold line in each corner piece forming the hypotenuse of said triangle portions, each corner piece having therein a pair of lugs formed by cut lines extending from the diagonal fold line thereof, said corner pieces each folded on itself on its diagonal fold line and disposed transversely of the base or bottom panel as a tucking flap and with said corner pieces-tucking flaps at each end of the base or bottom panel extending toward one another and each

said corner piece-tucking flap having its lugs projecting ahead of it and with said lugs of each corner piece-tucking flap vertically arranged one above the other but with the free ends of said lugs stopping short of one another to provide a space therebetween, an inner wall member integrally, hingedly, connected with each end wall outer wall member foldable onto said end wall outer wall member to embrace the transversely disposed corner pieces-tucking flaps, and a locking tab integral with but of less width than and depending from each end wall inner wall member with each locking tab having a free end of less width than the width thereof adjacent



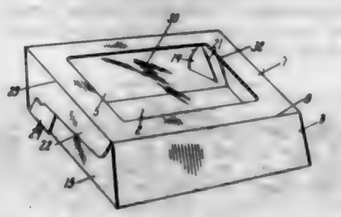
the inner wall member and lateral side edges angularly extending upwardly and outwardly from its free end and with each locking tab having its free end below the space between the locking lugs and the angularly extending lateral side edges beneath the lower of the vertically arranged locking lug and above the upper of the vertically arranged locking lug of each of its corner pieces-tucking flaps locking the carton walls in erected positions, and said locking tabs each having a shoulder outwardly of its connection with its inner wall member engaging the said upper arranged locking lugs to prevent inadvertent withdrawal of said locking tabs.

2,949,220
CARTONS
David Levkoff, Great Neck, N.Y., assignor of one-fourth to Evelyn S. Levkoff, one-fourth to Henry S. Levkoff, and one-fourth to Edith L. Sennet, all of Great Neck, N.Y.
Original application May 7, 1956, Ser. No. 583,964, now Patent No. 2,880,923, dated Apr. 7, 1959. Divided and this application June 4, 1958, Ser. No. 739,717
1 Claim. (Cl. 229—31)



In a carton, a bottom panel consisting of a pair of overlapped panels adhesively and facially united adjacent to their ends, each of said panels being inwardly and transversely slit at spaced points for a portion of its width to provide a foldable wing located between the slits, each wing being folded on parallel longitudinal lines and slit between the lines in a manner to form an upstanding tab, the carton having outer side walls, the wings being folded to form inner side walls spaced from the outer side walls, the tabs forming merchandise supports and positioned substantially parallel to the outer side walls, the folding of the wings on their parallel fold lines producing a ledge on each wing along the tops of the inner and outer side walls, said ledge being interrupted by the upstanding tab, the wings also including a downwardly-extending fastening strip contacting and adhesively attached to the inside face of an adjacent outer side wall.

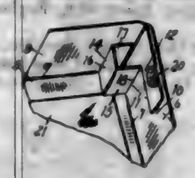
2,949,221
CARTON
Thomas Vander Lugt, Jr., Kalamazoo, Mich., assignor, by mesne assignments, to KVP Sutherland Paper Company, a corporation of Delaware
Filed Apr. 27, 1959, Ser. No. 809,034
6 Claims. (Cl. 229—40)



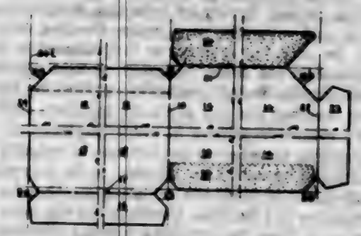
1. A carton having a generally parallelogram transverse contour when erected formed integrally of paperboard cut and scored to provide a bottom, a front wall at one side edge of the bottom and an inner rear wall panel at its other side edge, a top hingedly connected to the upper edge of the front wall and having an outer rear wall panel on its swinging edge dimensioned to overlap said inner rear wall panel, said outer rear wall panel having a closure flap on its outer edge adapted to be lapped upon the under side of the bottom, inner end wall members of parallelogram contour hingedly connected to said bottom, said inner end wall members and said front wall having inwardly foldable corner flaps hingedly connected thereto, and outer end wall members hingedly connected to said top for positioning in downwardly projecting overlapping relation to said inner end wall members, said closure flap having anchoring flaps on its end edges foldable upwardly into overlapping relation to said outer end wall members and interlockingly engageable therewith and having upper end portions disposed on the inner sides thereof with its upper end in downthrust supporting engagement with the top, said inner end wall members being provided at their rear ends with locking flaps having upwardly facing tongues, said inner rear wall member having angled slits therein positioned to receive said tongues and with which said tongues are interlockingly engaged when the carton is erected.

2,949,222
CARTONS AND COVERS THEREFOR
Merrill J. Coe, Santurce, Puerto Rico, assignor, by mesne assignments, to KVP Sutherland Paper Company, a corporation of Delaware
Filed Apr. 2, 1959, Ser. No. 803,660
6 Claims. (Cl. 229—41)

1. A carton comprising an article supporting bottom member of rectangular section and including vertically spaced bottom and top walls, the top wall having article receiving openings therein, and a collapsible cover including hingedly connected top, side and end walls and dimensioned to telescopingly embrace the bottom member and having a vertical width substantially exceeding that of the bottom member, the side walls having hinging flap portions at the ends thereof foldable thereon, the cover end walls having corner flaps hingedly connected thereto and disposed on the inner sides and fixedly secured to said hinging flaps of said side walls, said corner flaps having upper portions thereof projecting therefrom and provided with three laterally spaced vertical post member section defining scores, the outer of said sections being disposed upon and fixedly secured to the end walls so that the post members are automatically erected and collapsed by the erecting and collapsing of the walls, said post members being in supported engagement with said bottom member when the cover is arranged thereon.



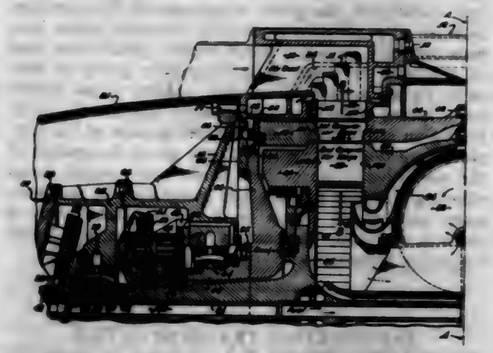
2,949,223
FILE AND MAIL ENVELOPE
George E. Eichenlaub, 218 Hess Ave., Erie, Pa.
Filed Dec. 24, 1956, Ser. No. 630,361
2 Claims. (Cl. 229—68)



1. A filing and mailing cover comprising a face sheet and a back sheet connected together along a first line, a first tab attached along a second line to said face sheet along a third perforated line, and a second tab attached along a fourth line to said back sheet at the side thereof opposite said first tab, said first tab being outfolded and said second tab being infolded, said infolded second tab being sealed to said face sheet on the inside surface thereof, the edge of said first tab and the edge of said second tab remote from said face sheet and said back sheet, respectively, being substantially parallel to each other, said first tab and said second tab being of substantially the same width, the corners of each said face sheet being waste cut, said cover being producible from a continuous sheet of material wherein said first tab is formed by material remaining in the sheet at the side of the material cut therefrom to form said second tab.

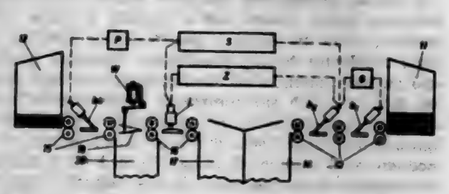
2,949,224
SUPERSONIC CENTRIPETAL COMPRESSOR
Vladimir H. Pavlecka, Pacific Palisades, Calif., assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed Aug. 19, 1955, Ser. No. 529,584
25 Claims. (Cl. 230—124)

1. A centripetal compressor for dynamically compressing a working fluid, said compressor comprising a stationary, centripetal flow contra-prerotation stage having two side-walls and a plurality of cambered blades mounted between said side-walls; said blades being shaped to define acceleration channels for accelerating said fluid, at the exit from said stationary stage, to a maximum absolute velocity of said fluid within said compressor when said compressor is in operation; and a plurality of centripetal flow compression stages, each stage having a plurality of cambered blades defining, respective centripetal flow channels; said blades having wedge-shaped leading portions, formed by first and second flat surfaces, for compressing said fluid by means of supersonic shocks when said compressor is in operation; said first surface being a leading surface and said second surface being a



lagging surface of said blades, said lagging second surface being parallel to the direction of flow of said fluid at the entry of said fluid into the respective compression stage, said direction of flow being represented by the supersonic relative velocity of said fluid at the entry into the respective compression stages when said compression stages are rotated at their normal, operating angular velocities, said leading surface creating at least an oblique supersonic compression shock in said fluid, said shock extending diagonally into the flow channel from the tip of said wedge-shaped leading portion to the inner portion of said second flat, lagging surface.

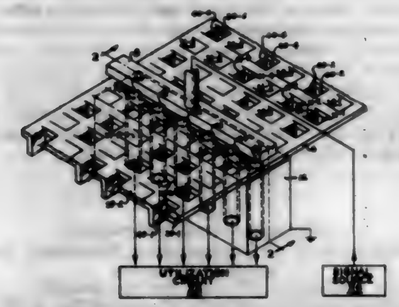
2,949,225
SUMMARY CARD PUNCHES
Michael Maul, 88 Penzendorferst, Schwabach, near Nuremberg, Germany
Filed Nov. 27, 1953, Ser. No. 394,828
Claims priority, application Germany Dec. 5, 1952
15 Claims. (Cl. 235—61.7)



1. Summary punch card arrangement comprising, in combination, item card feeding means for feeding groups of item cards having different group designations; accumulator means for totalizing items in each group of said item cards; analyzer means for said item cards and controlling said accumulator means; summary punch means controlled by said accumulator means for punching totals of groups of items into summary cards and for punching group designations into said summary cards; summary card feeding means for feeding summary cards to said summary punch means, each summary card being associated with one group of item cards; a group control

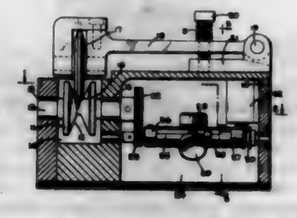
mechanism for detecting a change in group designations of fed item cards, said group control mechanism actuating upon a group designation change of fed item cards said summary card feeding means to feed summary cards to said summary punch means while stopping said item card feeding means, and actuating said item card feeding means while stopping said summary card feeding means upon punching of a summary card by said summary punch means; and control means including an analyzing device for said summary cards, said control means cooperating with said group control mechanism and controlling said summary punch means so that, upon agreement of the group designation of a group of fed item cards with the group designation of the summary card fed after all item cards of a respective group have been fed, said summary punch means punches the total of a number of items of the respective group of item cards on the summary card, said control means including a means movable to an operative position for manifesting an error when the group designation of the summary card does not agree with the group designation of the respective group of item cards, said control means effecting punching of the group designation by said summary card punch means on a summary card only if there is no group designation already punched in the respective summary card.

2,949,226
INFORMATION TRANSFER DEVICE
Samuel Lubkin, Bayside, N.Y., assignor, by mesne assignments, to Curtiss-Wright Corporation, Carlstadt, N.J., a corporation of Delaware
Filed Aug. 16, 1955, Ser. No. 528,769
6 Claims. (Cl. 235—61.11)



2. In an information detecting system comprising an electrical signal source and a linearly movable record medium fabricated from a thin formable metallic electrical conductor having preselected recording positions, said medium having a slit formed therein at each recording position, each slit comprising three sides of a substantially rectangular figure, the unslitted portion of said figure being aligned with the direction of motion of said medium, said medium defining a record by deformation of selected slitted portions therein whereby rigid tabs and apertures are established, means for maintaining said record medium at a fixed electrical potential, a support having a plurality of parallel grooves in a plane parallel to the linear motion of said record medium and adapted to slidably receive said tabs, sensing means mounted in said support for detecting the information recorded in said record medium, said electrical signal source transmitting a signal via a section of said record medium to said sensing means such that the presence of an aperture in said record medium is effective to pass an electrical signal transmitted by said electrical signal source to said sensing means while the presence of slitted undeformed portions in said record medium is effective to shield said electrical signal, and each of said tabs being individually and selectively formable into and out of registry with said record medium.

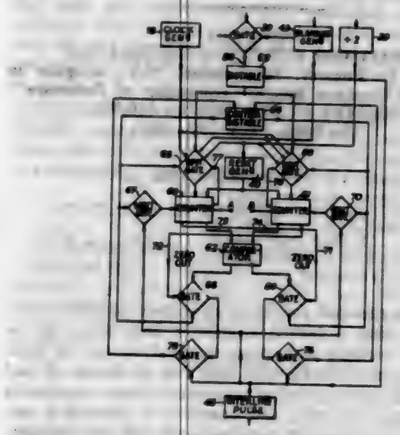
2,949,227
COUNTER DEVICES
Gordon Howard Townsend, Bilbrook, and Walter Horton, Wolverhampton, England, assignors to G.K.N. Group Services Limited, Smethwick, England, a British company
Filed Oct. 7, 1953, Ser. No. 384,566
Claims priority, application Great Britain Oct. 16, 1952
16 Claims. (Cl. 235—91)



4. A stock feed counter comprising, a stock engaging member, means supporting same for rotation about an axis, means for urging elongated stock to which endwise feed movements are imparted intermittently into engagement with a contact face on the stock engaging member, so that this latter is rotated intermittently and unidirectionally through angular displacements of magnitudes corresponding to the magnitudes of said feed movements, a counting register having an actuating member movable forwardly and reversely, stop means limiting said movement of the actuating member to that adapted to produce unit increase in the count indicated on said register, and a transformation device operatively connecting the stock engaging member and the actuating member, said device including means responsive in every displacement of the stock engaging member to an increase in velocity of the stock engaging member but adapted to be overridden by said stop means to move the actuating member forwardly and responsive to a decrease in velocity of the stock engaging member to move the actuating member reversely thereby enabling such forward and reverse movements to be executed in response to each feed movement of the stock while the stock engaging member remains in contact with and is controlled by the stock.

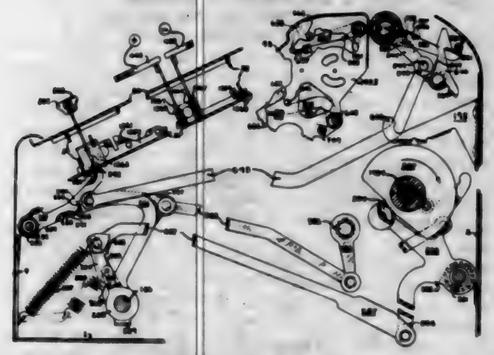
2,949,228
CIRCUITS EMBODYING ELECTRONIC COUNTERS
Christopher Edmund Gervase Bailey, London, George Ogilvie Norrie, Seamans Green, and John Hugh Smith, Send, England, assignors to The Solartron Electronic Group Limited
Filed Mar. 28, 1958, Ser. No. 722,732
Claims priority, application Great Britain Mar. 25, 1957
2 Claims. (Cl. 235—92)

1. Apparatus for generating from a succession of groups of pulses a voltage dependent upon the maximum or minimum number of pulses in any one group of the succession, said apparatus comprising an input terminal for the application of the said groups of pulses, two electronic counters each generating a count voltage dependent upon the number of pulses applied thereto, an input gate coupled between said terminal and each of said counters, a comparator coupled to said counters and having two output terminals, control means having two stable conditions, means coupling said control means to each of said input gates to permit one input gate to open and inhibit the other input gate in one condition and to permit the said other input gate to open and inhibit said one input gate in the other condition, means coupling said comparator output terminals to said control means to change the condition of said control means in response to a predetermined voltage relation at said output terminals, and reset means coupled to each said counter and



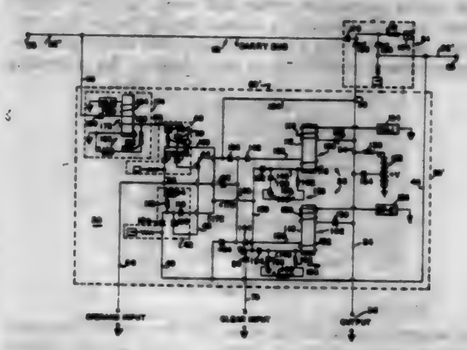
to said control means and permitting resetting of one counter in one of said stable conditions and permitting resetting of the other counter in the other of said stable conditions.

2,949,229
REGISTER CLEARING MECHANISM
William S. Gubelmann, Convent, N.J., assignor to Realty and Industrial Corporation, Convent, N.J., a corporation of New Jersey
Original application Nov. 6, 1950, Ser. No. 194,273. Divided and this application May 16, 1955, Ser. No. 508,440
15 Claims. (Cl. 235—144)



1. In a machine having a register and mechanism operable to effect a numerical registration therein, a clearing device for zeroizing said register, a reciprocatory motivating means automotive for forward stroke operation only, said motivating means having a coupling engageable with said device for effecting operation of said device on said forward stroke of said motivating means, means cooperating with said coupling for effecting disengagement thereof from said device upon completion of said forward stroke, a manually operable initiatory control for initiating said automotive operation of said motivating means, and a reengaging means operable in response to and concurrently with said mechanism for returning said motivating means thereby to reengage said coupling with said device and to render said motivating means responsive again to said control at the completion of the current registration by said mechanism.

2,949,230
PARALLEL BINARY ADDER UNIT
John Presper Eckert, Jr., Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 9, 1955, Ser. No. 527,223
45 Claims. (Cl. 235—175)

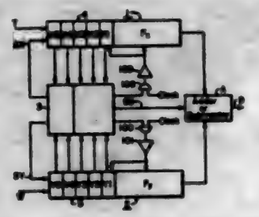


1. An adder unit for parallel binary arithmetic systems comprising accumulator means to retain an operand, means to shift said accumulator means between two states, means for receiving an incoming operand pulse, means coupled with the operand receiving means and the accumulator means for controlling the shifting of the accumulator means in accordance with the state thereof upon receipt of an operand pulse, means to produce a carry pulse in response to an operand pulse if the logic of addition of the operands so dictates, carry bus means, means responsive to the state of the accumulator means for gating an incoming carry pulse directly along the carry bus means when the accumulator means is in one of said states, means to receive an incoming carry pulse from the carry bus means, and means coupled with the carry receiving means and the accumulator means for controlling the shifting of the accumulator means in accordance with the state thereof upon receipt of a carry pulse, said accumulator means comprising a magnetic device having at least one magnetic core, said means for shifting the accumulator means including at least one control winding on the magnetic core, said means to produce a carry pulse and the operand responsive shift controlling means including separate outputs respectively of a first gating device which is connected with the output of the accumulator means to be enabled thereby for passing the operand pulse from one of said separate outputs to said control winding when the accumulator device is in a first one of its two possible states, said carry responsive shift controlling means including a second gating device connected to the output of the accumulator means so as to be enabled to pass a received carry pulse to said magnetic device when the accumulator is in said first state, and said means for gating an incoming carry directly along the carry bus means including a carry gating device connected with the output of the accumulator means so as to be enabled when the accumulator means is in the said first state.

2,949,231
ARITHMETIC UNIT FOR FLOATING RADIX NOTATION
Ernest J. Schubert, Berwyn, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 24, 1958, Ser. No. 717,192
3 Claims. (Cl. 235—177)

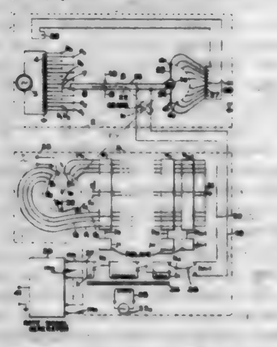
1. In a computer, a comparator for controlling the combination of two digital expressions in floating radix

form comprising a pair of digital registers for receiving said expressions and having scale factor and fraction portions, said scale factor portions comprising a plurality of signals representing the most significant digital values and a plurality of remaining signals, a first matrix means for comparing the most significant digital values of said expressions and having means to eliminate the smaller of said digital expressions when said most significant digital values are not identical, a second matrix means for comparing the remaining signals of said scale factor portions, control means connected to said matrices for activating



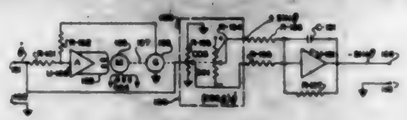
said second matrix means when said first matrix compares identical most significant digital values, second control means for causing the smaller digital values of said scale factor portions and its associated fraction portion to be repositioned until said scale factor portion is identical to the scale factor portion of the larger digital expression, combining means connected to said registers, and a third control means connected to said second matrix for causing said digital expressions to be inserted into said combining means in response to identical remaining digits in said scale factor portions.

2,949,232
RATE EVALUATING APPARATUS
Rolf Edmund Spencer, West Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Aug. 27, 1954, Ser. No. 452,647
Claims priority, application Great Britain Sept. 3, 1953
6 Claims. (Cl. 235—183)



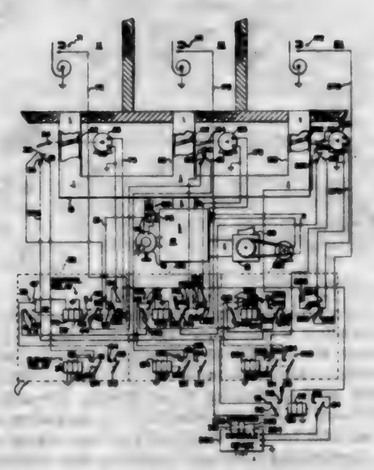
1. Apparatus for evaluating the rate of change of one variable with respect to a second variable comprising means for observing values of the first variable at successive values of the second variable, a plurality of stores for storing a plurality of part-representations of observed values of the first variable, each during a predetermined interval of time corresponding to a predetermined interval of the second variable, each part-representation being a representation of lower order digits of the respective observed values, means responsive to said observing means for selectively modifying the stored part-representations to cause them to differ by the same amounts as the respective observed values of the first variable, and means responsive to the selectively modified part-representations for generating a signal representing the desired rate of change.

2,949,233
COMPUTER FUNCTION GENERATOR
Laurence E. Fogarty, Binghamton, N.Y., assignor to General Precision Inc., a corporation of Delaware
Filed Oct. 19, 1956, Ser. No. 616,995
10 Claims. (Cl. 235—186)



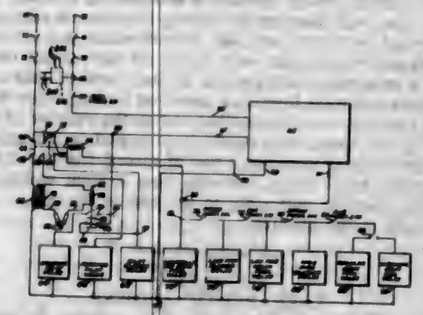
1. Apparatus for providing an output potential commensurate with a desired non-linear function of an independent variable comprising in combination, an input potential commensurate with time rate of change of said variable, electromechanical integrating means responsive to said input potential and operative to provide a mechanical output quantity commensurate with said variable, a potentiometer excited by said input potential and adjusted by said mechanical output quantity to provide a second potential, said potentiometer having a characteristic corresponding to the derivative of said desired non-linear function with respect to said variable, and an electronic integrator responsive to said second quantity to provide said output potential.

2,949,234
ZONE TEMPERATURE CONTROL APPARATUS WITH SHIFTING AUTHORITY
Clarence W. Nessell, Mount Prospect, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Sept. 19, 1956, Ser. No. 610,732
3 Claims. (Cl. 236—11)



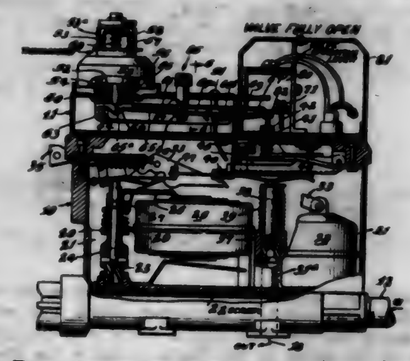
1. In a zone controlled air conditioning system having an air conditioning unit connected to supply conditioned air to a plurality of zones, each of which has an individual air supply duct; a movable air flow control damper in each of the ducts to control the flow of air therethrough, condition responsive means in each of the zones, each of said condition responsive means being responsive to the need for conditioned air in its respective zone, means connecting each of said condition responsive means in controlling relation to the flow control damper in the duct of its respective zone to thereby control the flow of conditioned air to its respective zone in accordance with the need therefore, and control means for said air conditioning unit including means associated with each of said dampers and responsive to one of said dampers which is a position indicating a greater need for conditioned air in its respective zone to connect its respective condition responsive means in controlling relation to said air conditioning unit and thereby insure that said air conditioning unit is at all times controlled by a condition responsive means which is experiencing the greatest demand for conditioned air.

2,949,235
CONTROLS FOR COMBUSTION APPARATUS
Minor W. Stout, 550 Ridge Ave., Webster Groves, Mo.
Original application May 1, 1953, Ser. No. 352,500, now Patent No. 2,805,652, dated Sept. 10, 1957. Divided and this application June 7, 1957, Ser. No. 664,197
7 Claims. (Cl. 236—26)



1. A control for multi-burner combustion apparatus that comprises a first switch responsive to steam pressure, a first switch responsive to air pressure, a second and separate switch responsive to steam pressure, a second and separate switch responsive to air pressure, a first electrically responsive device controlling the flow of fuel to a first burner of said combustion apparatus to provide a low fire, a second electrically responsive device controlling the flow of fuel to a second of said burners of said combustion apparatus to provide a high fire, a first blower to supply air to said first burner and to actuate said first air responsive switch, a second blower to supply air to said second burner and to actuate said second air responsive switch, and a circuit connecting said first electrically responsive device with said first air responsive switch and with said first steam responsive switch and connecting said second electrically responsive device with said second air responsive switch and with said second steam responsive switch and with said first air responsive and steam responsive switches, said first steam responsive switch being adapted to actuate said first blower and thereby cause said first air responsive switch to actuate said first electrically responsive device and to supply current to said second steam responsive switch, said second steam responsive switch being adapted to actuate said second blower and thereby cause said second air responsive switch to actuate said second electrically responsive device, said first steam responsive switch closing at a first predetermined pressure to actuate said first blower and opening at a second and higher predetermined pressure to deactivate said first blower, said second steam responsive switch closing at an intermediate predetermined pressure to actuate said second blower.

2,949,236
BURNER CONTROL
Kenneth S. Jensen, Wisconsin Rapids, Wis., assignor to Preway, Inc., a corporation of Wisconsin
Filed July 3, 1958, Ser. No. 746,487
4 Claims. (Cl. 236—48)

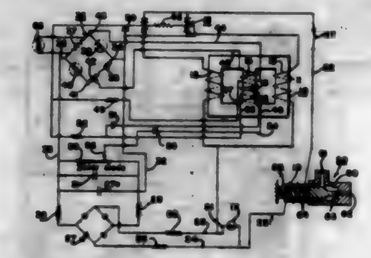


1. For a burner fuel valve having a housing, a reciprocable valve actuating pin, and means biasing the pin outwardly of the housing in a valve opening direction, a control, comprising, a support mountable on the housing adjacent the pin, a fulcrum on the support, an actuating lever pivoted on the fulcrum, a temperature responsive motor on the support for pivoting the actuating lever in a valve closing direction, a control lever pivoted on said fulcrum and overlying the actuating lever, an operating lever pivoted on said control lever and engageable with said pin, a toggle spring connected between said actuating lever and said operating lever biasing the operating lever against the control lever so that the three levers are movable in unison in a valve closing direction under urge of said motor, a stop on the control lever engageable with the housing to limit movement of the control lever in a valve closing direction beyond a pilot fire position, said motor being operable to pivot the actuating lever away from the control lever in a valve closing direction after engagement of said stop with said housing to snap said operating lever and spring overcenter away from the control lever to a valve closed position, and a selectively operable latch for locking the actuating lever to the control lever to prevent relative movement therebetween and thereby prevent the snap action valve closing movement of the operating lever comprising a screw threaded in the actuating lever projecting upwardly through an opening in the control lever and having a manually accessible portion thereon for adjustment thereof, and a shoulder on the screw engageable with the control lever on rotation of the screw in one direction to hold the levers against relative movement and disengageable from the control lever on rotation in the opposite direction to permit relative movement between the levers.

2,949,237
MODULATING VALVE CONTROL SYSTEM
Andries C. de Wilde, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 29, 1957, Ser. No. 662,468
11 Claims. (Cl. 236—78)

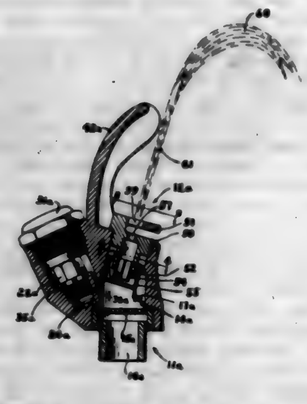
1. In a control system having an output circuit and three input control circuits for controlling the signal obtained from the output circuit; a fluid control valve, a solenoid winding for operating said valve, said solenoid winding being connected in said output circuit, temperature responsive means producing a signal proportional to

temperature for energizing one of said input control circuits, said signal having one polarity when the controlled temperature is higher than the setting of the temperature responsive means and an opposite polarity when the controlled temperature is lower than the setting of the temperature responsive means, means for energizing a second



of said input control circuits in proportion to the magnitude of the signal in the output circuit, and means energizing the third input control circuit when the magnitude of the signal in the output circuit is less than a predetermined value for reducing the signal in the output circuit to a minimum and permit closure of said valve.

2,949,238
PROJECTORS FOR WATER DRINKING FOUNTAINS
Halsey W. Taylor, 137 North NW., Warren, Ohio
Filed June 27, 1957, Ser. No. 668,477
1 Claim. (Cl. 239—31)



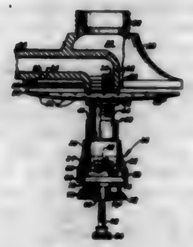
A projector for a drinking fountain, comprising a hollow body having an inlet connectable to a source of water and an outlet for issuing water in a stream for drinking purposes, a valve body carried at the side of said hollow body and having a valve bore the axis of which is at an angle of more than 90° to the axis of said inlet, and said bore having a valve chamber at its upper end, the lower end of said bore communicating by means of a first passage with the interior of said hollow body at a lower portion of the latter and said valve chamber communicating with the interior of said hollow body by means of a second passage disposed alongside said first passage and entering the interior of said hollow body at a point spaced upwardly from the entrance of said first passage, valve means in said valve chamber for controlling flow of liquid through said first and second passages, a sleeve disposed within said hollow body to form an upright space therewith, water from said second passage entering said upright space at a point upwardly from the bottom thereof and flowing downwardly in said space and transversely through openings in the lower part of said sleeve to the interior of said sleeve and then upwardly in the latter to the outlet of said hollow body.

2,949,239
DRIPLESS STEAM SHOWER PIPE
Francis Henry Geyette, Worcester, Mass., assignor to Lodding Engineerings Corporation, Auburn, Mass., a corporation of Massachusetts
Filed June 24, 1959, Ser. No. 822,495
9 Claims. (Cl. 239—120)



1. A steam shower device of the class described comprising an elongated steam-conducting pipe having orifices therein, means forming a surrounding chamber for said pipe, said chamber comprising in general a relatively enlarged portion at one side thereof and a pair of relatively converging side walls connected thereto and forming a relatively small portion of the chamber, said converging side walls forming a spout for leading steam from the pipe through the chamber and to the exterior of the latter, said spout being relatively elongated, and interiorly of the chamber including a pair of spaced, free-ended longitudinal walls which converge from a point within the steam chamber outwardly to the end of the spout, and a drain in the chamber.

2,949,240
THERAPEUTIC SHOWER
Stanley R. Kocinis, New York, N.Y., assignor, by mesne assignments, to Duo-Temp Manufacturing Corp., Hoboken, N.J., a corporation of New Jersey
Filed Mar. 24, 1955, Ser. No. 496,529
7 Claims. (Cl. 239—280)



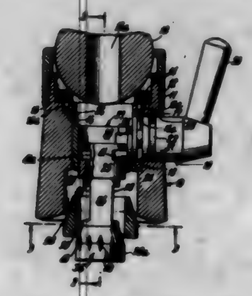
1. In a shower head the combination of means for independently but simultaneously spraying hot and cold fluids in substantially concentric sprays comprising a plurality of small fluid jets, the hot fluid being sprayed from an annular housing having a perforated outlet wall whereby to emit hot fluid therefrom in a plurality of jets from the several perforations as a hollow conical spray, said annular housing surrounding and supporting a centrally mounted duct adapted to conduct cold fluid to the center of the said hollow conical spray, said centrally mounted duct having an independent spray means for spraying cold fluid passing therethrough in a central jet independently of the surrounding hot conical spray comprising jets of fluid emitted from the surrounding annular housing, the plane of fluid projection from said central spray means being disposed substantially below the plane of said perforated outlet housing wall.

2,949,241
LAWN AND CROP SPRINKLER
Samuel Stenins, Richmond Hill, N.Y., assignor to Comet Metal Products Co., Inc., Richmond Hill, N.Y., a corporation of New York
Filed Sept. 23, 1957, Ser. No. 685,755
6 Claims. (Cl. 239—383)



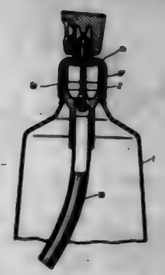
2. A sprinkler device comprising in combination a hollow fitting having one open inlet end at one side for connection to a pressurized fluid supply conduit, portions of said fitting defining an outlet aperture in another side of said fitting, baffle means supported adjacent to said outlet aperture for dispersing a fluid stream flowing outwardly from said hollow fitting through said outlet aperture toward said baffle, and deflector means at the opposite side of said baffle for deflecting said baffle-dispersed fluid stream, said baffle means comprising a plate of substantially the same cross-sectional configuration as said outlet aperture, said plate having a beveled peripheral edge, a rod extending axially through said aperture and threadedly secured at one end to said fitting and at the opposite end to said baffle for adjustably supporting said peripheral edge of said plate a selected distance from the outlet aperture-defining portions of said fitting, said deflector means comprising a rotor plate pivotally mounted on an extension of said rod in axially spaced relationship from said baffle plate, said rotor plate being of substantially greater cross-sectional area than said baffle plate and being supported for rotation about the longitudinal axis common to the center of said plates, and reaction means carried by said rotor plate for effecting rotation of said rotor plate in response to the reaction of a fluid stream thereagainst from said baffle plate, said reaction means comprising blades tangent to a circle concentric with said longitudinal axis.

2,949,242
SHOWER HEAD
Benjamin Blumberg, 1851 E. 26th St., Philip Blumberg, 2631 W. 2nd St., and Theodore Taubman, 532 Georgia Ave., all of Brooklyn, N.Y.
Filed Dec. 2, 1958, Ser. No. 777,730
7 Claims. (Cl. 239—460)



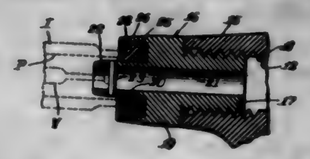
1. A shower head comprising a housing; an outer spray directing member slidably received within said housing and having an end portion provided with a plurality of peripheral notches extending in the general direction of the axis of said outer spray directing member; an inner spray directing member slidably received within said outer spray directing member and having an end portion provided with a plurality of peripheral notches extending in the general direction of the axis of said inner spray directing member; means secured to said housing and extending radially inwardly thereof having means independently engaging each of said spray directing members for slidably positioning said spray directing members in simultaneous adjusted relationship relative to said housing, said spray directing members being adjusted at differential rates.

2,949,243
AEROSOL VALVE
Wilhelm Josef Rasche and Hans Ranchmann, both of Neustrasse 26, Stolberg, Rhineland, Germany
Filed Jan. 7, 1958, Ser. No. 707,622
Claims priority, application Germany Jan. 8, 1957
13 Claims. (Cl. 239—579)



13. An aerosol valve comprising a fixed stationary valve body, a valve seat defining an outlet passage for the contents of an aerosol container to which the valve is attached, said valve seat being positioned in sealing engagement with said valve body and movable in relationship to said valve body for movement upon manual actuation to a position in spaced relationship to said body, and a movable diaphragm connected for movement with said valve seat, dimensioned and positioned to be acted upon by the pressure in an aerosol container to which the valve is attached, to resiliently force the valve seat into sealing engagement with the valve body.

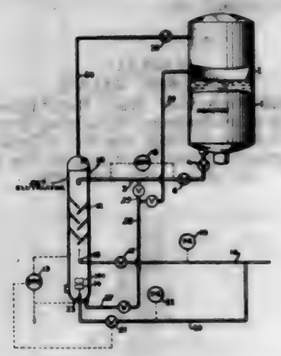
2,949,244
AIR NOZZLE ADAPTER
Howard L. Philippe, Chicago, Ill., assignor to The Imperial Brass Manufacturing Company, a corporation of Illinois
Filed Sept. 5, 1957, Ser. No. 682,130
2 Claims. (Cl. 239—589)



2. An adapter for use with an air nozzle, comprising: a rigid member defining an air passage, and having an outer end provided with a central thin-walled tubular projection having its outer peripheral end surface narrowing away from the opposite end of the adapter, and a concentrically radially outwardly spaced annular flange defining radially between said tubular projection and said flange an annular space, the outer peripheral end surface

of said flange being tapered to narrow away from said opposite end of the adapter; and a yieldable sealing ring in said space.

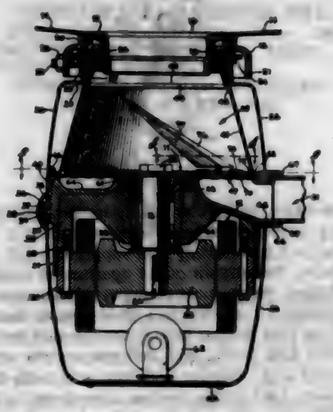
2,949,245
ELUTRIATION OF SOLIDS
Kenneth H. Faulk, Lake Charles, La., assignor to Cities Service Refining Corporation, Lake Charles, La., a corporation of Delaware
Filed Mar. 19, 1957, Ser. No. 647,136
4 Claims. (Cl. 241—5)



1. A method of controlling catalyst particle size in a fluidized system to maintain therein a predetermined catalyst particle size range which comprises continuously withdrawing a representative portion of catalyst particles from a fluidized reaction zone, said representative portion including catalyst particles of a size greater than the desired size range, introducing said representative portion into an elutriation column, passing a gas stream upwardly through said representative portion, said gas stream being passed at a rate sufficient to separate from the representative portion particles having a size within the desired particle size range, allowing the remaining particles to fall by gravity into an accumulation zone, passing a second gas stream through the accumulated particles, said gas stream being of a velocity sufficient to aid in the reduction in size of the particles and to separate from the particles reduced in size those having a size within the desired range, reducing the remaining accumulated particles to a size within the desired range, and combining the catalyst first separated with catalyst of the desired particle size obtained by reduction in size and returning the combined catalyst to the fluidized reaction zone.

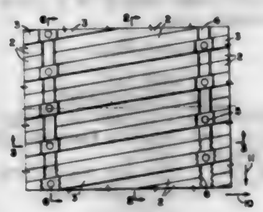
2,949,246
GARBAGE DISPOSAL UNIT
Robert W. Hyde, Cincinnati, Ohio, assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Continuation of abandoned application Ser. No. 262,626, Dec. 20, 1951. This application Nov. 18, 1953, Ser. No. 392,873
19 Claims. (Cl. 241—46)

5. In a garbage disposal unit, the combination comprising a circular disc rotatable about a vertical axis, fixed cutting elements on the upper face of said disc presenting cutting edges in the direction of rotation thereof, a casing surrounding said disc and extending upwardly therefrom to define a chamber into which garbage may be placed for comminution by said rotating disc, at least one vane associated with the wall of said casing and projecting therefrom into said chamber to overhang the marginal edge of said disc, said vane presenting a face into the path of garbage on the rotating member, and said face being disposed on a slant such that the upper end thereof is in advance of the lower end thereof in the direction of rotation of the disc and such that a trace of an extension of the surface of said face lies upon a chord of the circle generated by a point on the outer edge of the rotating disc and such that said chord is of



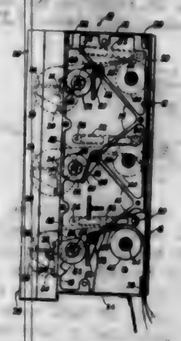
substantial length but subtends an arc of less than 180°, whereby garbage impinging upon said face under the action of the rotating disc is directed downwardly by said face onto the cutting elements and inwardly of the outer edge of the disc generally along a path which extends across the disc between the center and outer edge thereof.

2,949,247
LINERS FOR BALL AND TUBE MILLS
Per Olof Rosenqvist and Zeth Eugen Forsén, Stora Vika, Sweden, assignors to Aktiebolaget Bofors, Bofors, Sweden, a Swedish company
Filed Nov. 18, 1957, Ser. No. 697,272
Claims priority, application Sweden Nov. 20, 1956
3 Claims. (Cl. 241—183)



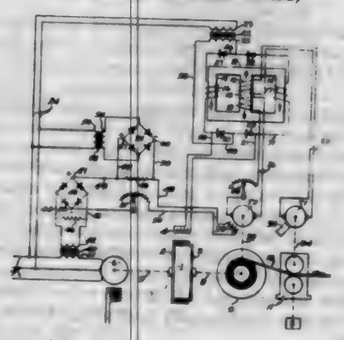
1. A liner for ball and tube mills comprising, in combination, a plurality of generally longitudinally extending helical rods secured in side by side abutting reationship within a mill casing, each of said rods being twitted an equal amount about the longitudinal axis thereof and about the longitudinal axis of said casing, said rods being of different thicknesses and arranged in predetermined relationship to define a plurality of alternate substantially helical projections and depressions within the interior of said casing, each of said rods having parallel inner and outer surfaces and inclined ends whereby each said rod is of substantially trapezoidal longitudinal cross section, the facing inclined ends of an aligned pair of said rods defining a socket of trapezoidal configuration flaring inwardly of said liner toward the longitudinal axis of said casing and clamp means within each said socket securing the ends of each pair of said rods to said casing against rotation of each said rod about the individual longitudinal axis thereof.

2,949,248
ROLL FILM MAGAZINE
Floyd W. Flynn and Norman C. Schutt, Glen Cove, N.Y., assignors to Powers Chemco, Inc., Glen Cove, N.Y., a corporation of New York
Filed July 18, 1957, Ser. No. 672,680
10 Claims. (Cl. 242—55.3)



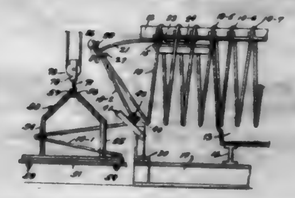
2. A film dispenser comprising in combination a plurality of rotatably mounted film rolls, an individual feed roll for each film roll with the feed roll and the film being urged into engagement for feeding of the film in response to rotation of the feed roll, means adjacent each feed roll controlling contact of the feed roll and the film and including a rotatable member effective throughout a limited angular extent of its total rotation to separate the film and the feed roll, common operating means for all of the rotatable members and connected therewith to simultaneously rotate the same, the connection of said members with the operating means and the shape of the rotatable members being such as to prevent simultaneous engagement of film with more than one of said feed rolls.

2,949,249
WINDING AND UNWINDING CONTROLS
Paul R. Gravenstreter, Willowick, and Leslie A. Koenig, Cleveland, Ohio, assignors to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio
Filed Dec. 19, 1955, Ser. No. 553,759
23 Claims. (Cl. 242—75.51)



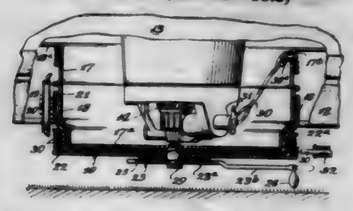
1. A control for maintaining constant tension in a strip that is being wound on a reel and that comes to the reel at constant linear speed, the control comprising a motor, and a slipping clutch between the motor and the reel; the clutch having an energizing winding and constructed to transmit torque from the motor to the reel commensurable with energization of the winding; a generator driven at speed proportional to reel speed and having an output commensurable with its speed; the generator having a field winding; means energizing the field winding commensurably with the torque transmitted to the reel to thereby vary the generator output commensurably with variations of transmitted torque; and means energizing the clutch winding commensurably with changes of generator output effected by changes of reel speed and transmitted torque.

2,949,250
WIRE COILING APPARATUS
Walter J. Manson, South Bend, Ind., assignor to National-Standard Company, Niles, Mich., a corporation of Delaware
Filed July 2, 1958, Ser. No. 746,179
2 Claims. (Cl. 242—83)



1. In a device for treating wire while being continuously fed and supported in the form of a rotating helix with a horizontal axis, comprising in combination, a horizontal supporting means for supporting a multiplicity of consecutive coils of a rotating wire helix, and means for collecting the wire as it reaches the end of the horizontal supporting means, said collecting means comprising a positioned collecting device having a core means around which the wire is wound below the level of the horizontal axis of said helix, means for supporting said collecting device from above so that it is free to rotate on a vertical axis, additional support means positioned between the end of the horizontal supporting means and the axis of the collecting device for movably supporting at least one turn of the wire helix at a lower level than the horizontal supporting means, said additional support means including at least one arm supporting rotating elements adapted to position a top portion of the said helical coil in a position intermediate the horizontal supporting means and the collecting device whereby the wire itself rotates the freely rotatable collecting device.

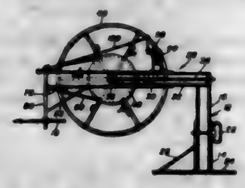
2,949,251
CORD REEL
Charles H. Sparklin, St. Joseph, Mich., assignor to Whirlpool Corporation, a corporation of Delaware
Filed Apr. 9, 1958, Ser. No. 727,404
3 Claims. (Cl. 242—86.5)



1. A cord winding and storage mechanism for use on an electrical appliance such as a vacuum cleaner, comprising: a substantially stationary member arranged to receive turns of a cord, said cord having a portion anchored adjacent said member; a rotatable reel portion arranged to receive turns of the cord spaced from said member, said reel having a substantially flat centrally located area; a rotatable member interposed between said first member and reel portion and arranged to move relative thereto; a pulley carried by said rotatable member having a section of the cord passing thereover for directing it onto said stationary member and reel portion, the

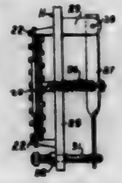
axis of rotation of said pulley being generally radial; a shaft rotatably carried at one end by said stationary member and passing through said reel portion and said rotatable member, said shaft having one portion substantially rigidly connected to said rotatable member and another portion allowing said reel portion to rotate thereabout; rotating means attached to the other end of said shaft outwardly of said reel portion for rotating said rotatable member, said means having a substantially flat supporting portion; and a friction reducing bearing interposed between said flat area on said reel portion and said supporting portion thereby providing a friction reducing support for said reel portion during rotation of said rotatable member.

2,949,252
WIRE STORAGE AND PAY OUT DEVICE
Marvin A. Schumann, Carrington, and Alvin C. Du Vall, Bottineau, N. Dak.
Filed Apr. 30, 1959, Ser. No. 814,943
3 Claims. (Cl. 242—85)



1. A device for paying out wire comprising a support including inner and outer telescoping sleeves, the inner sleeve being fixed and the outer sleeve telescoped thereover and rotatably adjustable on the inner sleeve, a shaft extending transversely through the outer sleeve, a pair of reels on said shaft journaled thereon at opposite sides of said outer sleeve and together with the shaft being tiltable by rotation of the outer sleeve, a rod in said sleeves secured to said shaft and rotatably secured in one end of the inner sleeve for holding said outer sleeve on the inner sleeve while permitting rotary adjustment of the outer sleeve on the inner sleeve to tilt said reels.

2,949,253
TENSION DEVICE FOR USE IN PROCESSING TEXTILE YARNS
Nicholas J. Stoddard, Philadelphia, and Warren A. Seem, Gwynedd, Pa., assignors to Leesona Corporation, a corporation of Massachusetts
Filed Apr. 25, 1955, Ser. No. 503,526
1 Claim. (Cl. 242—154)



In an integral yarn tensioning device comprising a pair of vanes with spaced tine projections respectively disposed in clearing interlapping relation and between which the yarn is adapted to pass, a bracket to which one of the vanes is fixedly secured and on which the other low vane is pivoted for swinging movement of its tine projections through the intervals between the tine projections of the fixed vane, a lever arm fulcrumed at one end of the bracket, a tension spring connected at one end to the swinging vane and at the other end to the lever arm at a point intermediate the ends of the latter, and a micrometric regulatable adjusting screw threadedly engaged in the bracket and serving as a stop for the other end of the lever arm.

2,949,254
HELICOPTER STRUCTURES
Richard Bauer, Prinzstrasse 16, Augsburg, Germany
Filed Apr. 29, 1955, Ser. No. 504,731
4 Claims. (Cl. 244—17.27)



1. A helicopter comprising a cabin body, a tail assembly therefor, a main rotor assembly having a hub and a single rotor blade extending radially therefrom, said rotor assembly having its center of gravity offset from the axis of rotation of said hub to counterbalance the air resistance force on said rotor assembly, drive means operatively connected to said rotor assembly for rotating the same, universal joint means, and resilient means operatively interconnecting through said universal joint means said rotor assembly and said body for permitting oscillatory movement of said rotor assembly as a unit relative to said body in such a manner that at least one component of said oscillatory movement lies in the plane of rotary movement of said blade, whereby transmission of undesirable vibrations to said body from said rotor assembly is reduced to a minimum, said universal joint means being suspended by said resilient means.

2,949,255
AIRCRAFT
Jonathan P. Glasby, Jr., 29 Mountain Road, Verona, N.J.
Filed Nov. 25, 1957, Ser. No. 698,601
3 Claims. (Cl. 244—42)

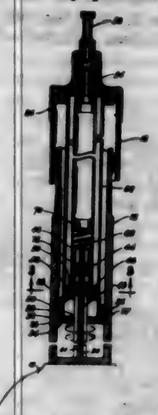


1. In an aircraft, the combination of an airfoil having a main portion and a control member portion, said portions each being provided with a chamber and each having an upper surface provided with openings in fluid flow communication with said chamber, a first aspirating device having an inlet in fluid flow communication with said main portion chamber and having an outlet in fluid flow communication with the atmosphere, a second aspirating device having an inlet in fluid flow communication with said control member portion chamber and having an outlet in fluid flow communication with the atmosphere, and conduit means connected to said aspirating devices and adapted to be connected to a source of pressurized gas, whereby the lift of both of said airfoil portions is increased when said aspirating devices are in operation.

2,949,256
APPARATUS AND METHOD FOR PREVENTING BACKLASH IN STEERING MECHANISMS
George C. Stout, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Filed Oct. 2, 1956, Ser. No. 613,424
13 Claims. (Cl. 244—50)

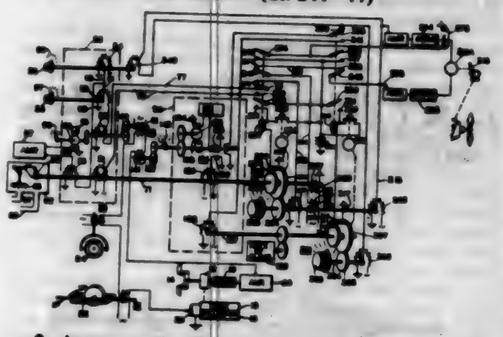
12. In a steering apparatus, a wear compensator comprising a reciprocable member having a keyway formed

therein, two interlocked driving members having keys slidably received in said keyway for drivable connection therewith, and torsion means urging the driving members angularly whereby the key portions thereof are main-



tained in drivable connection with the keyway regardless of wear of said keys so that turning in either direction of the reciprocable member acts through the driving members without lost motion therebetween.

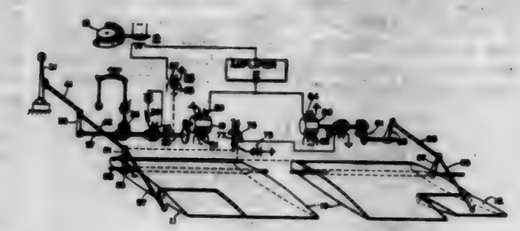
2,949,257
PITCH CONTROL SYSTEM FOR AIRCRAFT
Christopher A. Rafferty, Brooklyn, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed Mar. 17, 1953, Ser. No. 342,781
14 Claims. (Cl. 244—77)



2. An automatic pilot system for an aircraft having a movable surface for controlling the craft about its pitch axis, a servomotor for moving said surface, a first reference means for developing a signal corresponding to the deviation of said craft from a predetermined pitch attitude, a second reference means responsive to rate of climb and airspeed of the craft for developing a signal corresponding to a desired flight path angle, and means connecting said reference means with said servomotor for operating the latter.

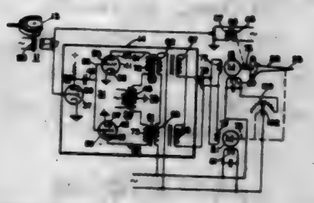
2,949,258
MONITORING APPARATUS FOR AUTOMATIC PILOT SYSTEMS
Charles R. Bell, Bergenfield, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed June 30, 1953, Ser. No. 365,017
14 Claims. (Cl. 244—77)

1. An automatic steering system for aircraft having a main control surface and a trim surface, comprising first means operatively connected with said main control surface for operating the latter, second means operatively connected with said trim surface for operating the latter, the operation of said trim surface relative to said main



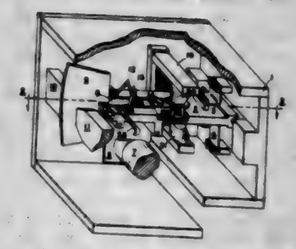
surface exerting a torque on the latter, and means operatively connected with said second named means and responsive to a torque on said main surface in excess of a predetermined maximum for stopping the operation of said second means on said trim surface.

2,949,259
AUTOMATIC STEERING SYSTEM FOR AIRCRAFT
Charles R. Bell, Bergenfield, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed Aug. 25, 1953, Ser. No. 376,466
6 Claims. (Cl. 244—77)



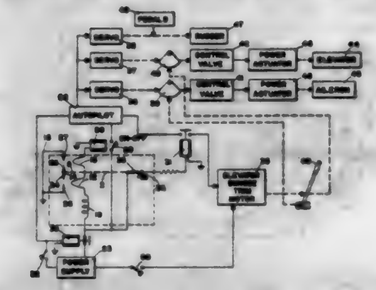
1. A control system for a craft having a control surface provided with a trim tab, comprising control surface power means, trim tab power means, control means for both said power means, craft attitude responsive means for operating said control means, and means operated by said trim tab power means for limiting maximum power of said control surface power means in response to said control means.

2,949,260
LOAD FACTOR CUT-OUT SWITCH FOR AIRCRAFT
Robert E. Smith and William D. Mullins, Jr., Downey, and Robert H. Cannon, Jr., and Frederick W. Morgenthaler, Whittier, Calif., assignors to North American Aviation, Inc.
Filed Jan. 4, 1954, Ser. No. 402,098
12 Claims. (Cl. 244—77)



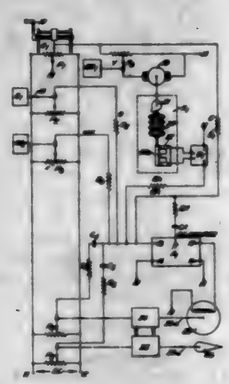
2. In an aircraft, means for anticipating excessive forces on said aircraft comprising means for generating a

signal proportional to linear acceleration, means for gen-



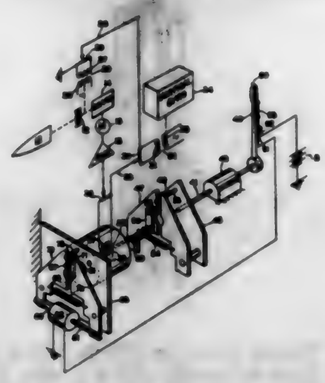
erating a signal responsive to rate of change of linear acceleration, and means combining said signals.

2,949,261
AIRCRAFT NAVIGATION APPARATUS
Hugh Brougham Sedgfield, Hampton, and Richard Lennox-Napier, Brokenhurst, England, assignors to The Sperry Gyroscope Company Limited, Brentford, England, a British company
Filed Feb. 18, 1954, Ser. No. 411,224
Claims priority, application Great Britain Mar. 3, 1953
11 Claims. (Cl. 244—77)



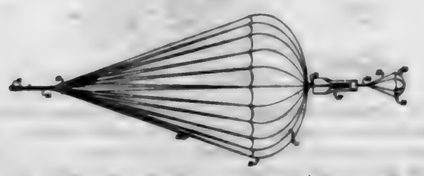
1. Aircraft navigation apparatus including a pitch angle measuring device producing a first primary signal (θ), settable means for presetting a desired flight path angle (θ_f) and for producing a second primary signal (θ_1), means controlled from a combination of said two primary signals (θ and θ_1) and a third primary signal (θ_h), said third primary signal (θ_h) being produced by means comprising means for supplying a signal dependent on craft airspeed, a barometric means, and means including a motor for varying the position of said barometric means in accordance with a desired rate of change of altitude corresponding to said desired flight path angle setting, said motor being connected to be controlled by said primary signal (θ_1) and said secondary signal, and said third primary signal (θ_h) being dependent upon the error between the actual instantaneous height of the craft as determined by the barometric means and the desired instantaneous height of the craft as determined by operation of said motor.

2,949,262
CONTROL SYSTEM FOR AIRCRAFT
Albert J. Newland, Glen Rock, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Filed Mar. 1, 1956, Ser. No. 568,887
6 Claims. (Cl. 244—77)



6. In an aircraft control system, power means for moving a control surface of the craft, signal means operatively connected to the power means for developing a signal to operate the power means in a direction and to an extent corresponding to the sense and magnitude of the signal, a controller movable from a normal position, means including resilient means operatively connecting the controller to the signal means, and means for operating the resilient means to selectively change the extent of operation of the signal means for a given movement of the controller.

2,949,263
DRAG CHUTE SYSTEM FOR AIRCRAFT
Augustus J. Steinthal, New York, N.Y., assignor to M. Steinthal & Co., Inc., New York, N.Y., a corporation of New York
Filed Sept. 28, 1956, Ser. No. 612,623
24 Claims. (Cl. 244—113)



13. A drag chute system for aircraft, said system including a main drag chute having a canopy and shroud lines, said shroud lines being attached to a riser for detachably connecting said main chute to an aircraft, a deployment bag having a compartment adapted to receive said main chute prior to deployment, a bridle attached to said canopy adjacent the center thereof and connected to said bag, a second compartment in said bag, a pilot chute having a canopy and shroud lines, a second bridle attached to said last named shroud lines and connected to said bag, said second compartment adapted to receive said pilot chute and said second bridle prior to deployment of said pilot chute, said deployment bag providing a unitary package for storage in the drag chute compartment of the aircraft, means associated with said second compartment to open the same and release said pilot chute therefrom and means associated with said first compartment to open the same and permit deployment of said main chute therefrom, said pilot chute comprising a fabric cone having the base thereof attached to the pilot chute canopy substantially at the center, the shroud lines of said pilot chute being attached to said cone substantially at the apex thereof and providing a loop for attachment of said second bridle, a weight comprising a mass secured to the canopy of said pilot chute and the base of said cone substantially in alignment with said cone, an impact tension strap secured to said weight and extending downwardly and around said loop to be attached to said second bridle, the length of said strap from said weight to said loop being less than the length of said cone, a compression spring disposed in said cone and means for securing the lower end of said spring to said cone whereby upon opening of said second compartment said spring will project said pilot chute therefrom and said tension strap will absorb substantially the full impact of said weight.

2,949,264
MULTIPLE WALL ATTACHMENT ELEMENT
Remo J. Laureti, Stow, Ohio, assignor to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Jan. 25, 1957, Ser. No. 636,299
3 Claims. (Cl. 244—127)



1. A catenary curtain attachment for airship envelopes and the like, and including in combination a plurality of flexible sheet members extending at desired angles between each other from a common axis, flexible core means positioned substantially at the common axis, a plurality of flexible strand means extending substantially parallel to the core means, said strand means defining a plurality of planes equal to twice the number of sheet members joined whereby each pair of planes receives a sheet member therebetween, and flexible cord means extending in a lateral direction from the core means and in woven relation with the strand means in the various planes, said cord means being endless and continuous and common to all planes and always extending from one plane of strand means to a position contacting the core means and to another plane of strand means, said attachment having a T-shape in cross section and wherein the cord means extending to and from the leg of the T extend over the core means and the cord means extending between opposite sides of the cross bar of the T extend below the core means.

2,949,265
ARTICULATED AIRCRAFT REFUELING BOOM
Robert P. Person, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Mar. 22, 1954, Ser. No. 417,871
6 Claims. (Cl. 244—135)

1. The combination of a first aircraft in flight and mechanism for transferring fuel from said first aircraft to a second aircraft in flight, said mechanism comprising first pivot means on said first aircraft, supporting elongated rigid tubular means pivotally carried by said first pivot means for swinging of said rigid tubular means to a position depending from said first aircraft, a supported rigid tubular member offset from said supporting tubular means, second pivot means remote from said first pivot means connecting said supporting tubular means and said supported tubular member and guiding said supporting tubular means and said supported tubular member for relative swinging between an operative position in which said supported tubular member projects a substantial distance behind said supporting tubular means and a stored position in which said supported tubular member is disposed alongside and substantially parallel to said supporting tubular means, means carried by said supported tubular member for connection with such second aircraft, and actuating means connected between said first aircraft and said supported tubular member and operable to swing said supported tubular member relative to said supporting tubular means about said second pivot means into such substantially parallel stored position and said supporting tubular means forwardly and upwardly about said first pivot means.



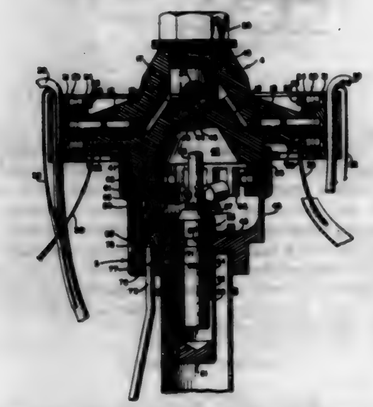
2,949,266
ROTATING PARACHUTE
Oscar W. Sepp, Jr., Dayton, Ohio, assignor to M. Steinthal & Co., Inc., New York, N.Y., a corporation of New York
Filed Feb. 5, 1959, Ser. No. 791,299
12 Claims. (Cl. 244—145)



1. A rotating parachute including an inflating cap and a circular band type canopy, said inflating cap comprising a generally circular fabric base, a plurality of radially disposed cups of half cone configuration on the upper surface of said base and a plurality of lines secured to the peripheral edge of said base at spaced points and terminating in a single tension line disposed in alignment with the center of said base, said circular band type canopy comprising a plurality of elongated fabric panels secured together in end to end relationship to provide a band surrounding said cap in spaced relation thereto, the inner and outer edges of each panel being substantially parallel, one end of each panel being free between the inner and outer edges to provide an opening for the passage of air in a direction substantially at right angles to a diameter of said band, each panel when inflated providing an upper surface having an airfoil configuration, radial tapes connecting the peripheral edge of said cap and the ends of each panel, diagonal tapes secured to said radial tapes between the inner periphery of said band and the peripheral edge of said cap and secured to the inner edge of each panel substantially midway between the ends to prevent inversion of said circular band type canopy during inflation and shroud lines connected to the outer periphery of said band at spaced points and connected at their opposite ends to a swivel, said tension line being connected to said swivel and being of a length

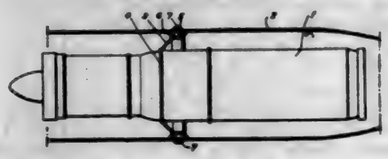
to take the entire pull of said cap and relieve said shroud lines of load prior to inflation of said circular band type canopy, said panels providing turbine type blades for causing rotation of said canopy and cap during movement of said parachute through the air.

2,949,267
FAST-ACTING PARACHUTES
Fred B. Stencel, Asheville, N. C., assignor to Amcel Propulsion, Inc.
Filed Feb. 28, 1958, Ser. No. 718,361
3 Claims. (Cl. 244—147)



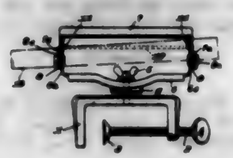
1. In a fast-acting parachute, the combination of a projected assembly comprising an elongated support member, a parachute canopy disposed in a series of annular folds surrounding said support member, deployment means mounted on said support member and operatively connected to said canopy to deploy the same, and inertia-operated actuating means operatively associated with said deployment means, said actuating means including a safety latch movable between latching and non-latching positions and resiliently biased to its non-latching position; a mounting and projection assembly operatively associated with said projected assembly to project the same; a latch retainer secured to said mounting and projection assembly and releasably engaged with said safety latch to retain the same in its latching position until said projected assembly is projected away from said mounting and projection assembly; and arresting line means connected to said projected assembly to decelerate the same, at a given point in its projected flight, to cause said actuating means to actuate said deployment means.

2,949,268
AIRCRAFT JET PROPULSION UNIT MOUNT
Gerhard Eggers and Erich Habertorn, Dammarie-les-Lys, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a company of France
Filed July 10, 1957, Ser. No. 670,970
Claims priority, application France July 30, 1956
2 Claims. (Cl. 248—5)



1. A structure for mounting an aircraft jet propulsion unit comprising a nacelle of generally cylindrical shape enclosing the same, a substantially rigid frame in the form of a hollow tore-shaped member of revolution around the axis of said unit, said rigid frame being rigidly secured along its outer periphery to said nacelle at an intermediate section thereof and extending around and at a distance from said unit, and a sheet-metal annular flange of generally frusto-conical shape, secured along its outer periphery to said frame and along its inner periphery to said unit.

2,949,269
FISHING-ROD HOLDER
Soichiro Kimura, No. 8, 5-Chome, Terashima-cho, Sumida-ku, Tokyo-to, Japan
Filed July 11, 1956, Ser. No. 597,243
Claims priority, application Japan Dec. 20, 1955
3 Claims. (Cl. 248—41)



2. Device for holding a fishing rod which comprises a U-shaped holder having front and rear fork-shaped holding arms, each of said arms having a pivot hole therein, a pair of arcuate segments each pivoted to one front arm at said pivot holes, another pair of arcuate segments each pivoted to one of said rear arms at said pivot holes, each pair of segments being adapted to receive a fishing rod therebetween, a pair of plates, each connecting a front and rear segment on the same side, respectively, of said holder, a shaft fixed at its both ends to one pair of said arms on one side of said holder, another shaft fixed at its both ends to another pair of said arms on the other side of said holder and a lug piece integral with one of said segments and extending perpendicularly from said segment for guiding the adjacent segment to enclose an inserted fishing rod in response to the force exerted by the weight of said rod on said segments.

2,949,270
SPRING SUPPORT
Joseph Kaye Wood, Stamford, Conn.
Filed Oct. 8, 1957, Ser. No. 689,000
22 Claims. (Cl. 248—54)



1. An improved constant support of the spring type in which the force of the spring means is transferred to the supported load by means of an intervening lever, said improved support providing an effective vertical line of action of the supporting force to the load irrespective of arcuate movement of the lever comprising a frame, mounting means secured to the frame for mounting said frame in a fixed position, at least one lever swingably mounted on said frame by a main pivot, spring means operatively connected between said frame and said lever for applying a turning moment to the lever, said lever having a pivot thereon swingable in an arc about the main pivot, a rigid link connected to said arcuately movable pivot, and horizontal guide means having two interengaging parts, one of said parts including a straight

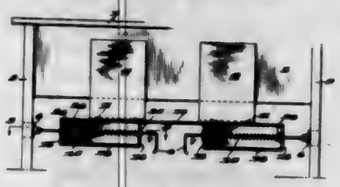
horizontal track and the other of said parts including bearing means engaging said track in at least two spaced points, said track and bearing means being relatively movable, one of said interengaging parts being connected to said rigid link and the other being arranged for connection to a supported load.

2,949,271
SECONDARY RACK GUIDES
Eugene S. Kraus, Jr., Media, John I. MacPherson, Fort Washington, and Archibald T. Flower, Glenside, Pa. (% Philadelphia Electric Company, 1000 Chestnut St., Philadelphia, Pa.)
Filed Jan. 14, 1960, Ser. No. 2,462
8 Claims. (Cl. 248—65)



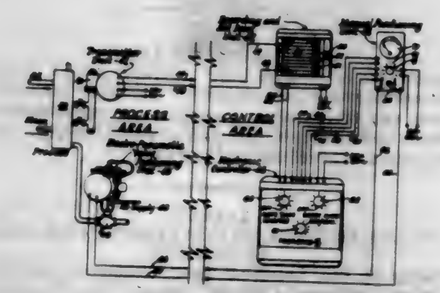
1. A secondary rack guide for engagement with a secondary rack having spaced substantially horizontal bracket arms and opposed faces between bracket arms and a vertical pin at the outer end of said arms comprising a pair of spaced panels at least one of which has upper and lower margins for engagement with said faces, a central upright between said panels and providing with said panels a socket for the reception of the rack pin therein, an outer upright between said panels, said panels having upper marginal portions between said uprights spaced below said upper margins, and a resiliently impelled latching member carried by said panels for engagement with said rack pin.

2,949,272
ADJUSTABLE SUPPORTING DEVICE
James Walls, R.D. #5, Lebanon, Pa.
Filed May 12, 1959, Ser. No. 812,608
6 Claims. (Cl. 248—205)



1. A quick detachable equipment mounting device for use with a desk having four supporting legs and side panels therebetween comprising a sheetmetal horizontally disposed rectangular base member of a length less than the distance between two legs of said desk, a plurality of side plates adjustably mounted upon said base member, each plate consisting of a vertical portion and a horizontally disposed portion integral therewith and being at a right angle to said vertical portion and being of a width substantially equal to the width of said base member, two pairs of spaced downwardly disposed abutment plates arranged at right angles to said base member transversely thereof, a rod common to each pair of said abutment plates and slidably carried by said plates, said rod being spaced parallel to said base member and projecting beyond said abutment plates forming thereby one end portion to which a detachable desk leg clamp is attached and a second end portion forming an operating handle, a coiled spring mounted upon and surrounding said rod between said abutment plates and compressibly confined therebetween to urge said desk leg clamp against a desk leg, and an abutment member at two spaced points on said rod adjacent each of said abutment plates to limit the movement of said rod towards said desk leg.

2,949,273
AUTOMATIC PROCESS CONTROL SYSTEM
Charles G. Roper, Fairfield, and Edgar S. Gilchrist, Easton, Conn., assignors, by mesne assignments, to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Nov. 2, 1953, Ser. No. 389,564
20 Claims. (Cl. 251—26)

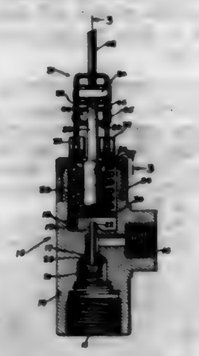


19. In an automatic process control system of the type having a primary measuring element for producing a current proportional to a measured variable of the process and means for developing an electrical error signal proportional to the deviation of said current from a predetermined set point, amplifier means including input-means and an output circuit, means for connecting said error signal to a first point in said amplifier input means, an electrical signal responsive output control circuit, means connecting said output circuit to said signal responsive control circuit, a control network including a condenser, and means connecting said condenser between said output circuit and a second point in said amplifier input means, thereby to provide automatic reset mode of control of the process.

2,949,274
CONTROL HEAD
Henry H. Heigis, Nutley, and Theodore Kalisher, Bloomfield N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Filed Feb. 27, 1956, Ser. No. 568,053
7 Claims. (Cl. 251—74)

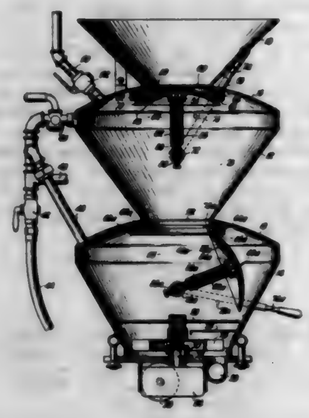
1. A control head comprising a housing, an actuating shaft extending through said housing, a spring for urging said shaft into said housing, an upright member pivotally mounted on said shaft adjacent the outer end of said shaft and located at one side of said shaft for movement in a plane parallel to the longitudinal axis of said shaft and having portions at its lower end normally in engagement with the exterior of said housing adjacent said shaft whereby movement of said shaft under the influence of said spring is prevented, means for rocking said member in a direction to cause one of said portions to move past the longitudinal axis of said shaft, whereby said member is rendered ineffective to restrain said shaft and said member is actuated under the influence of said spring, said member having stop means thereon spaced from one side of said shaft and facing said housing, an element normally disposed and held captive between said stop means and said housing, and a pull cord attached to

said element and extending through the space between said shaft and said stop means, which, upon being pulled



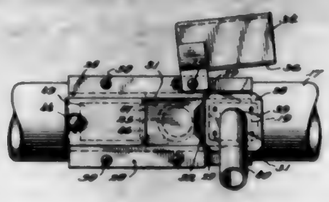
rocks said first mentioned member and moves said stop means with respect to said shaft to widen the space therebetween and to release said element.

2,949,275
VALVE MECHANISM FOR CEMENT GUNNING MACHINES
George M. Pro, Leawood, Kans., assignor to Air Placement Equipment Company, Kansas City, Mo., a corporation of Missouri
Filed Mar. 7, 1955, Ser. No. 492,397
6 Claims. (Cl. 251—86)



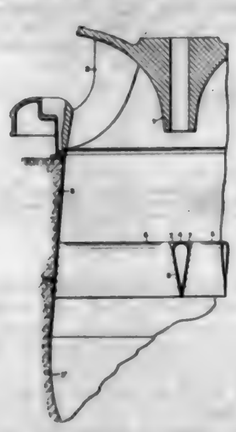
1. In a machine for handling particulate material, the combination of a pressure hopper for said material having a material inlet port and a circular seat in the hopper adjacent the port; a valve in the hopper having an inner face and a convex outer face shaped substantially in conformity with a sector of a sphere, said outer face normally bearing against the seat in closing relationship to the port; a shaft traversing the hopper and rotatably carried thereby; a lateral extension mounted on the shaft within the hopper; and means on said inner face of the valve mounting the latter on the extension for radial movement relative to the shaft toward and away from the seat, and swinging movement with the extension to and from a position opening the port upon rotation of the shaft, said seat being resilient whereby material becoming lodged between the seat and the valve when the latter is closed is pressed into the seat by pressure in the hopper acting on the valve, thereby maintaining a seal around the seat.

2,949,276
VALVE
Thomas W. Merritt, St. Charles, and Chester A. Thomas, Lake Forest, Ill., assignors to Babcon Bros. Co., a corporation of Illinois
Filed June 25, 1959, Ser. No. 822,875
10 Claims. (Cl. 251—146)



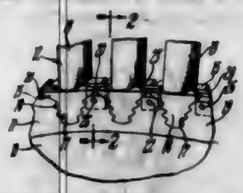
1. In a milk pipeline valve: a base mounted on and extending along said pipeline and having a solid wall portion; a valve seat communicating with said pipeline and extending through the wall portion of said base; rail guide means on said base, open at one end and closed at the other; a valve closure plate slidable in said rail guide means inside said closed end; a cover pivoted over the open end of said rail guide means; and a connector element insertable and removable through said open end of said guide means and slidable therein.

2,949,277
HYDRAULIC REACTION TURBINES
Paul Dériaz, Rugby, England, assignor to The English Electric Company Limited, London, England, a company of Great Britain
Filed Sept. 16, 1957, Ser. No. 684,340
Claims priority, application Great Britain Sept. 28, 1956
3 Claims. (Cl. 253—22)



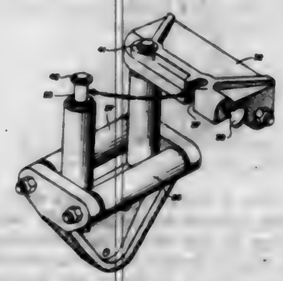
1. A hydraulic reaction turbine comprising in combination: a turbine runner having fixed runner vanes, a draft tube having a bend arranged downstream the said turbine runner, and a spider arranged stationarily in the draft tube substantially midway between the said turbine runner and the said bend in the draft tube, the said spider having arms extending across the draft tube and of a pear-shaped profile, i.e. with the maximum thickness adjacent the leading edge and tapering towards the trailing edge.

2,949,278
TURBINE BLADE RETENTION
Hamilton L. McCormick, Carmel, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 5, 1956, Ser. No. 595,874
3 Claims. (Cl. 253—77)



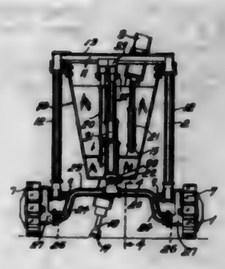
1. A turbine wheel assembly comprising, in combination, a wheel having faces and including a rim and having dovetail blade slots extending continuously transversely of the rim between the faces; turbine blades including dovetail blade roots mounted in the blade slots with dovetail engagement therein and blade platforms projecting circumferentially of the wheel rim from the blade roots adjacent the wheel rim; and means for retaining the blades against displacement longitudinally of the blade slots, the retaining means comprising means defining a key slot extending radially and circumferentially of the wheel rim intersecting the blade slots; means on the blade platforms defining notches therein aligned with the key slot having axially facing walls; a plurality of keys, received in the key slot between adjacent blade slots and extending into the notches, abutting the axially facing walls of the key slots in the wheel and the axially facing walls of the notches in the blade platforms; each key being substantially a rectangular parallelepiped and having a hole therein extending transversely of the rim; the rim having holes therein between the blade slots aligned with the holes in the keys; and a pin located in the hole in each key and in the hole in the rim aligned therewith and frictionally retained in the said holes retaining the key in the key slot.

2,949,279
CABLE GUIDING DEVICE
Jay Miller Eitel, 235 Francis Drive, Los Altos, Calif.
Filed Feb. 25, 1957, Ser. No. 641,907
3 Claims. (Cl. 254—190)



3. In a cable guiding device, a body having a pair of horizontal ears lying in the same plane and a pair of parallel vertical extensions, a pair of spaced substantially parallel vertical pins mounted on said ears, first and second rollers mounted on said pins for rotation about vertical axes, a horizontal pin carried by said extensions, a third roller rotatably mounted on said last named pin for rotation about a horizontal axis, said third roller having its ends in adjacent overlapping relation to the corresponding ends of the first and second rollers, a rigid mounting member having one end pivotally mounted on one of said vertical pins to permit swinging movement of the mounting member in a horizontal plane, the mounting member having depending spaced parallel vertical portions, a horizontal pin carried by said portions, a fourth roller rotatably mounted on said last named pin for rotation about a horizontal axis, and means carried by the mounting member for releasably engaging the other of said vertical pins whereby when said mounting member is in engagement with the other of said vertical pins, said fourth roller is in cable engaging position and has its ends in adjacent overlapping relation with the other ends of the first and second rollers and when said mounting member is out of engagement with said other vertical pin an intermediate portion of a length of cable can be placed between the first and second rollers.

2,949,280
MOBILE ROCK DRILL RIG
John C. Curtis, Newport, N.H., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 14, 1957, Ser. No. 659,158
12 Claims. (Cl. 255—51)

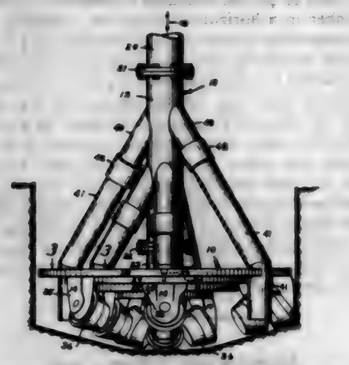


1. In a drilling apparatus, a mobile base having spaced apart side frames carrying ground engaging means and mounted for independent tilting movement in upright planes to permit said ground engaging means to travel over an uneven ground surface and adjustable drill supporting structure, means for mounting said side frames for independent tilting movements and said drill supporting structure for adjusting movement in vertical planes, a cross connecting frame extending between said side frames at a point spaced longitudinally of said base from said mounting means, means for universally pivotally connecting said cross connecting frame at its ends to said side frames whereby the latter may tilt while connected transversely by said cross connecting frame, and an elevating device connected to said cross connecting frame and to said adjustable supporting structure for adjusting the latter on its mounting means on said base thereby to vary the elevation of a drill supported thereby.

2,949,281
LARGE DIAMETER EARTH BORING DRILL
George W. Baur, Pasadena, and Erwin A. Morlan, Houston, Tex., assignors to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Filed Sept. 6, 1957, Ser. No. 682,373
8 Claims. (Cl. 255—327)

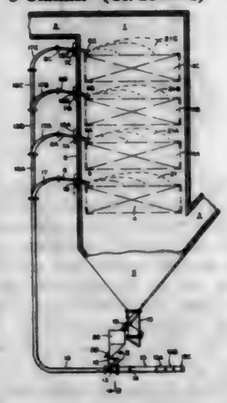
1. In an earth boring drill, a head comprising a plurality of overlapping annular plates secured together and presenting stepped, downwardly facing, annular surfaces. cutter assemblies secured to said surfaces and extending downwardly therefrom, each of said cutter assemblies including a rolling cutter having radially extending cutting elements thereon, said head including a stem ex-

tending axially thereof, there being at least one passage from the interior of said stem to the nether side of the



head for conducting flushing fluid to remove cuttings from the bottom of the hole being formed by the drill.

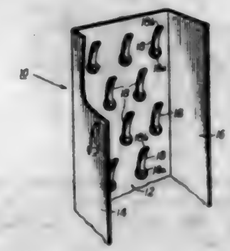
2,949,282
APPARATUS FOR CLEANING HEAT EXCHANGE MEANS
Albert H. Kirkby, Mill Hill, London, England, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Nov. 18, 1955, Ser. No. 547,796
Claims priority, application Great Britain Nov. 23, 1954
3 Claims. (Cl. 257—1)



1. Apparatus for cleaning heat exchange means including vertically spaced banks of horizontally arranged tubes disposed in an upright gas pass wherein said vertically spaced banks of tubes are sufficiently spaced for transverse distribution of solid cleaning particles completely across said gas pass, comprising means for supplying to the pass said solid cleaning particles in order that the particles may fall within the pass and in falling may impact with deposits on surfaces of the heat exchange means to be cleaned including separate particle discharge means positioned in each of said interbank spaces, and means for introducing controlled amounts of cleaning particles to each of said separate particle discharge means.

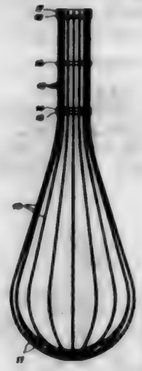
2,949,283
APPARATUS FOR HEAT TRANSFER
Millard F. Smith, Rayfield, Conn.
Filed May 11, 1956, Ser. No. 584,226
2 Claims. (Cl. 257—137)

1. Temperature regulating apparatus for maintaining the temperature of heat-generating equipment within preselected and acceptible limits, comprising, in combination, a heat-conducting member in thermal contact with said heat-generating equipment and a plurality of bimetallic thermally-conductive heat-dissipating elements, each having a fixed end secured to said heat-conducting member and a projecting free end disposed substantially parallel to the surface of said member when the temperature of said equipment is below a preselected value, said ele-



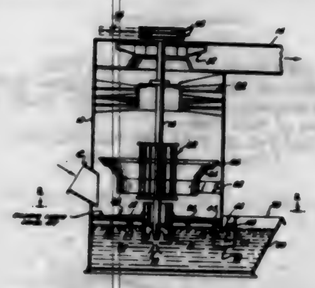
ments being intermittently spaced over the area of said heat-conducting member and adapted to increase their curvature progressively in response to progressive increases in the temperature of said equipment, and means for passing a fluid coolant over the surfaces of said member and elements, whereby the ambient fluid is induced to flow over increasing effective immersed surface areas of said elements as the temperature of said equipment increases.

2,949,284
STIRRING WHIPS
Lawrence E. Egedal, 2580 N. Frederick Ave., Milwaukee 11, Wis.
Filed July 29, 1957, Ser. No. 674,650
1 Claim. (Cl. 259—144)



In a stirring whip, a plurality of looped wires forming a bulbous stirring end and having generally parallel end portions extending in one direction, a plurality of retainer members distinct from each other and each having a separate aperture in its periphery for receiving each wire end portion, means fixedly securing the wire end portions in the said apertures, said retainer members having a central opening therethrough of sufficient diameter to receive a cleaning brush and being spaced from each other along the wire end portions to define a handle having therein an axially extending space bounded laterally by the wires of the handle through which a cleaning brush can be passed to clean the interior of the handle and the whip.

2,949,285
GAS WASHING APPARATUS
Emil Umbricht, Northville, Gerrit Steenbergen, Walled Lake, and Dewey M. Evans, Plymouth, Mich., assignors to Afem Laboratories, Inc., Detroit, Mich.
Original application Jan. 20, 1955, Serial No. 483,026, now Patent No. 2,833,417, dated May 6, 1958. Divided and this application Apr. 22, 1958, Ser. No. 730,233
6 Claims. (Cl. 261—3)



1. Gas-liquid contact apparatus comprising means defining a passage for the gas, liquid spray apparatus producing a spray in said passage, said spray apparatus including a liquid reservoir having a predetermined height of liquid therein, means for collecting said liquid spray after contact with the gas, said collecting means including a removable shed plate inclined slightly to the horizontal and positioned a small distance beneath the surface of said liquid, a recirculation path for said liquid from said collecting means back to said spray apparatus, a continuous band of perforate filter material, means movably mounting said band to move continuously through said path and out again, and mechanism exterior to said path for washing said band.

2,949,286
CONTINUOUS DRYING KILN FOR SHEATHED WELDING ELECTRODES
Max Böhler, Zurich, Switzerland, assignor to Werkzeugmaschinenfabrik Oerlikon Bührle & Co., Abt. Elektrodenfabrik, Zurich, Switzerland, a company of Switzerland and F. J. Ballard and Company Limited, Tividale, Tipton (Staffs), Great Britain, a company of Great Britain
Filed May 6, 1957, Ser. No. 657,146
Claims priority, application Switzerland May 4, 1957
5 Claims. (Cl. 263—36)



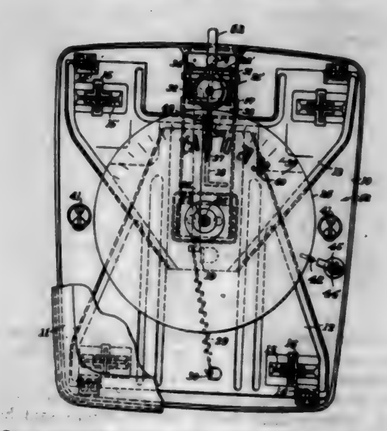
1. A kiln for treating sheathed welding electrodes, wherein said kiln has an inlet and an outlet; comprising a kiln housing, a plurality of separate conveyor frames for supporting said electrodes, a plurality of channel members in said housing partitioning said housing into serially arranged chambers through which air flows, a duct in each of said chambers dividing each chamber into two cells of which a first cell is provided with first means for stacking said frames on a rising stack by placing each frame successively below said rising stack and operating means for raising said frames in a rising stack, and of which a second cell is provided with second means for lowering the frames in a descending stack and operable means for successively removing the lowermost frame of said descending stack, and at least three superposed horizontally movable pushers mounted in said kiln, the center pusher of said pushers extending below all of said stacks and below said channel and duct members and for moving said frames into and through the kiln from the descending stack of one chamber to the rising stack of the next chamber and then out of said kiln, the upper pusher of said pushers extending above all of said stacks for removing the top frame from each of said rising stacks within the kiln to place said top frame on the top of each of said descending stacks, the bottom pusher of said pushers being positioned below said chambers for returning treated frames from said outlet to said inlet.

2,949,287
POSTAL SCALE
Douglas F. Linsley, 31 Evergreen Ave., Westport, Conn.
Filed Oct. 29, 1957, Ser. No. 693,126
5 Claims. (Cl. 265—49)



1. A weighing scale for letters or the like comprising a balance beam having a transverse fulcrum means provided at an intermediate point thereof and adapted to rest upon a horizontal supporting surface, the one arm of said beam having weight scale indications, and a weight carried by the beam and positionable therealong relative to said indications, the opposite arm of the beam having gauge means at the top for defining the position of a letter placed flatwise upon said opposite arm with the center of gravity of the letter thereby positioned a predetermined distance from the fulcrum means, said gauge means comprising an abutment formed at the outer end of the arm for engagement with an edge of a letter to be weighed.

2,949,288
BATHROOM SCALES
Mike A. Provi, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois
Filed July 21, 1955, Ser. No. 523,519
16 Claims. (Cl. 265—68)



1. In a weighing scale comprising a base, a platform, weighing mechanism yieldably supporting said platform on said base, and weight indicating means operatively connected with said weighing mechanism to turn from a

zero position through an angle proportionate to the weight to be indicated, the improvement which consists in the provision of a single magnetizable element movable with the weight indicating means in the operation thereof providing a single effective magnetic pole, and a single magnet independent of the weighing mechanism supported in fixed relationship to said base adjacent the path of movement of said magnetizable element and arranged to exert an effective pull laterally on said single magnetic pole upon return of the weight indicating means approximately to zero position so as to cause zero positioning thereof.

2,949,289

GRATE BAR FOR SINTERING APPARATUS

Werner Veith, Frankfurt am Main, Germany, assignor to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany

Filed Jan. 19, 1959, Ser. No. 787,666
Claims priority, application Germany Feb. 1, 1958
3 Claims. (Cl. 266—21)



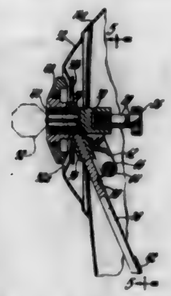
1. A grate for a sintering apparatus comprising supporting beams having flat surfaced grate bar supporting flanges, a grate bar supported upon said beams and composed of an elongated body, forked end portions on said body with the distance between the forks at each end, respectively, being greater than the thickness of the flange of the beam it engages, and one leg of each fork having a wedge-shaped cross-section with the apex of the wedge directed toward the opposite leg of the fork and being unenclosed and in engagement with the flat supporting surface of said flange.

2,949,290

WINDOW REGULATOR OPERATING APPARATUS

Julius Hezler, Jr., East Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Sept. 18, 1958, Ser. No. 761,843
5 Claims. (Cl. 268—126)



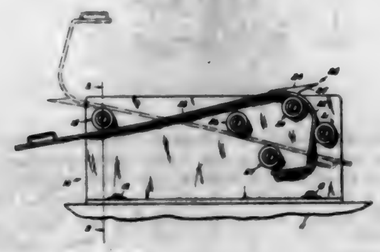
1. In combination in a vehicle having a hollow wall member, a window mounted on said wall member, regulator means within said wall member for moving said window between open and closed positions, said window when in open position being carried within said hollow wall member, a rotatable shaft connected to said regulator means, said shaft having a hub on the outer end thereof, a bearing portion on said hub arranged obliquely to the axis of said shaft, a crank arm slidably mounted in said bearing portion for movement obliquely outwardly from said hub between retracted inoperative position wherein the shaft is housed substantially entirely within said hollow wall member and an extended operative position, a gripping knob rotatably mounted on the outer end of said crank arm, locking means on said crank arm having a portion engageable with said hub to lock the crank arm in inoperative position, and spring means on said hub engaging the crank arm for sliding the crank arm toward operative position when the locking means is released.

2,949,291

ARTICLE HOLDING DEVICE

Karl R. Olofson, Sr., Lawrence, N.Y., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Filed Feb. 9, 1959, Ser. No. 792,826
5 Claims. (Cl. 269—104)



1. A holding device for a lineman's climber having a relatively straight elongated leg iron portion and a relatively short stirrup portion attached to one end of and at a substantially right angle to the leg iron portion and a gaff having an inner and outer surface extending from the junction between the leg iron portion and stirrup so that a climber is held in a first position for exposing the outer surface of the gaff for filing and in a second position for exposing the inner surface of the gaff for filing, which comprises a support, a first pair of studs mounted on the support in fixed relationship to each other for engaging opposing surfaces of the stirrup portion of the climber therebetween when the climber is in the first position, a second pair of studs mounted on the support in fixed relationship to each other, said second pair being displaced adjacent to the longitudinal axis of the leg iron portion of the climber for engaging opposing surfaces of the leg iron portion therebetween when the climber is in the second position, a common stud mounted on the support in fixed relationship to the first and second pairs for engaging one or the other surface of the leg iron portion when it is held in the two different positions, resilient coverings affixed on the studs for exerting forces on opposing surfaces of the climber when temporarily deformed and positioned between the common stud and the first pair so as to expose the outer surface of the gaff in the first position and between the common stud and second pair so as to expose the inner surface of the gaff in the second position thereby preventing chattering during the sharpening thereof.

2,949,292

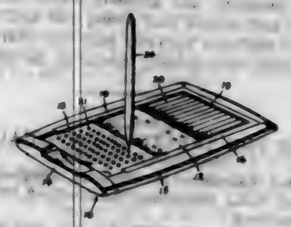
PERFORATING APPARATUS

Carl F. Abissi, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Oct. 29, 1957, Ser. No. 693,080
7 Claims. (Cl. 269—160)

1. Backing means for use in removing punch-outs from an area of a sheet-like member as the latter is punched,

comprising resilient means having two portions thereof capable of being flexed relative to each other and normally disposed in close opposed relation to form a surface, means for aligning and receiving a sheet-like member with the area thereof to be punched and the portion of the sheet-like member immediately adjacent thereto



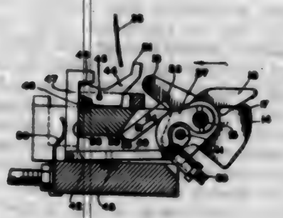
aligned with and juxtaposed to said surface, and holding means for supporting said resilient means with said portions thereof free to flex and open a slot under pressure for receiving a punch-out from said sheet-like member and to close said slot as the pressure is removed therefrom.

2,949,293

SIGNATURE FEED DEVICE

William Leslie Fields, Waynetown, and Clayborn Y. Cain, Crawfordsville, Ind., assignors to R. R. Donnelley & Sons Company, a corporation of Delaware

Filed Mar. 2, 1956, Ser. No. 569,843
8 Claims. (Cl. 270—56)



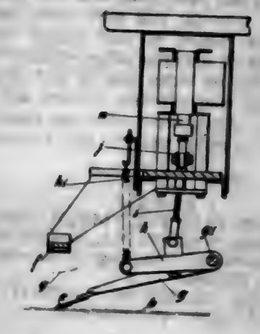
8. In a signature feeder, in combination: a traveling signature carrying member having a fixed jaw and a movable jaw movable relative thereto for gripping and releasing a signature; indicating means mounted on the feeder and having a detector finger positioned adjacent the carrying member adapted to be contacted to indicate whether the jaws are gripping material of a thickness different than the thickness of a single signature; actuating means carried by the traveling member for contacting the detector finger including a lever system responsive to the position of the movable jaw, said system including a first lever pivotally mounted for swinging movement in response to movement of the movable jaw, a bell crank lever pivoted for movement into and out of position for engaging the detector finger, means yieldingly urging the bell crank lever in one direction about the pivot thereof; a link member connecting the first lever and bell crank lever opposing said urging, said link member being movable into position for contacting the detector finger when the jaws grip material of greater thickness than a single signature and said link member moving the bell crank into said position when the jaws grip material of lesser thickness than a single signature; and means for adjusting the position of the lever system relative to the movable jaw to permit the jaws to grip a single signature of desired thickness without actuating the indicating means.

2,949,294

FOLDING MACHINES FOR LAUNDRY FLATWORK

William Broadbent Gordon Cran, Huddersfield, England, assignor to Thomas Broadbent & Sons Limited, Huddersfield, England, a British company

Filed July 9, 1958, Ser. No. 747,419
Claims priority, application Great Britain July 16, 1957
7 Claims. (Cl. 270—68)



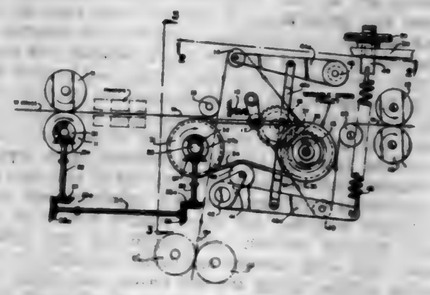
1. In a folding machine for laundry flatwork, a conveyor for carrying flatwork to be folded, a lifting plate normally lying on said conveyor to receive the leading edge of flatwork to be folded, a lifting device for said lifting plate comprising a lever, two lifting means, one operatively associated with each end of said lever, means connecting said lifting plate with the center of said lever, means including a pair of feeler arms in the path of flatwork approaching said lifting plate arranged for successive operation of said lifting means by said flatwork on said conveyor, a gripper bar located above said lifting plate positioned so that the leading edge of flatwork lifted by said lifting plate will be gripped and held when both said lifting means are actuated and the first of said lifting means lifting one end of said lever through a shorter vertical distance, and the second of said lifting means lifting the other end of said lever a greater vertical distance, whereby upon deactivation of said first lifting means the flatwork may be released from said gripping bar without returning said lifting plate to its original position.

2,949,295

WEB TENSION CONTROL MECHANISM

William F. Huck, Forest Hills, N.Y., assignor to Huck Co., New York, N.Y., a partnership

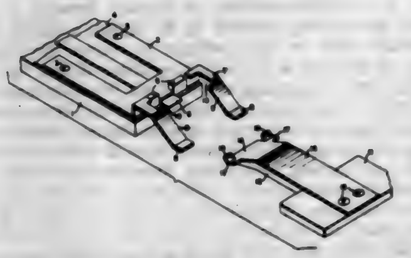
Filed Aug. 8, 1957, Ser. No. 677,143
10 Claims. (Cl. 271—2.3)



1. A device for regulating the tension of a moving web on opposite sides of a location between reference points along said web, comprising a drive roller at said location for driving said web, a first control roller engaging

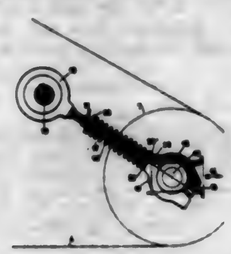
said web on one side of said location, a second control roller engaging said web on the other side of said location, an H-frame having a pair of arms and a bridge piece pivotally connected at opposite ends to said arms, respectively, said control rollers being mounted on said H-frame near diagonally opposite extremities of the respective arms, the arms being pivoted on a framework near their other ends whereby said control rollers may be moved toward and away from said web reciprocally, a variable speed drive for said drive roller, and means responsive to the motion of said control rollers for changing the speed of said drive roller, whereby variations of the web tension on either side of said location are transmitted to said control rollers to move said H-frame to vary the speed of said drive roller and adjust the tension of said web to compensate for said variations.

2,949,296
SPLICING TAPE FEED MECHANISM
Francis Peter Allos, Westfield, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 22, 1958, Ser. No. 730,123
1 Claim. (Cl. 271—3.5)



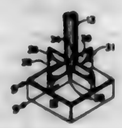
In a mechanism for feeding and positioning a continuous adhesive article in a splicing apparatus, the combination comprising on the one hand, (1) supporting and guiding means for introducing said adhesive article in a path into a splicing zone, and a first leaf spring secured to said supporting and guiding means, said first leaf spring mounted to releasably clamp said adhesive article, said first leaf spring having two finger members one on each side of the path of said adhesive article and projecting forwardly into said splicing zone, said finger members each having a slot on its side adjacent said path and having a guiding surface extending downwardly into said splicing zone, and, on the other hand, (2) a block member having a tapered forward tip portion, and a second leaf spring secured to said block member and in close, continuous contact therewith, said second leaf spring being of narrower width than the distance between said two finger members and mounted to releasably grasp said adhesive article between said block member and said second leaf spring, said second leaf spring having projecting wing portions one on each side, said wing portions projecting wider than the distance between said two finger members and of smaller dimensions than said slot, said block member being capable of reciprocating motion in the direction of said path and so positioned with respect to said supporting and guiding means whereby, (*a*) upon relative motion of said block member towards said supporting and guiding means, said wing portions are guided upwardly by said guiding surface, raising the said second leaf spring from contact with the forward tip portion of said block member, until reaching and dropping through said slots, whereupon said second leaf spring coacts with said block member to grasp firmly therebetween said adhesive article, and, (*b*) upon subsequent relative motion of said block member away from said supporting and guiding means, said wing portions by pushing upwardly against said finger members effect separation of said first leaf spring from said supporting and guiding means, thereby releasing said adhesive article from between said first leaf spring and said supporting and guiding means, and, (*c*) at the completion of said subsequent relative motion of said block member, said adhesive article remains firmly grasped by said second leaf spring and said block member at one end and between said first leaf spring and said supporting and guiding means at the other end.

2,949,297
PRESSES FOR TREATING MATERIAL IN THE FORM OF SHEETS
Henri Bobst, Lausanne, Switzerland, assignor to J. Bobst and Son S.A., Lausanne, Switzerland, a corporation of Switzerland
Filed Apr. 3, 1957, Ser. No. 650,361
Claims priority, application Switzerland Apr. 16, 1956
8 Claims. (Cl. 271—45)



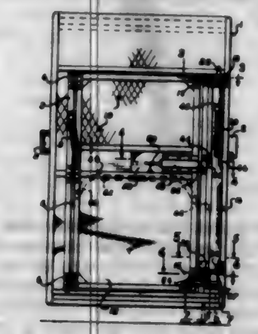
1. A press for treating sheet material and having a feeding zone and an operational zone comprising an endless conveyor passing through said zones, wheels supporting said conveyor, gripper means on said conveyor for engaging a sheet at the feeding zone and transporting the sheet to the operational zone, stops positioned adjacent the conveyor to engage the gripper means and properly position the same relative to said zones, resilient means coupled to one of the wheels for displacing the same for placing the conveyor under tension to enable a proper positioning of the gripper means, and control means coupled to the resilient means for selectively controlling the tensioning provided thereby to enable a truing of the positioning of the gripper means, said press further comprising a slideway supporting said one wheel for displacement to tension the conveyor, said resilient means engaging the latter said wheel to displace the same in the slideway; said control means engaging the resilient means and providing a force supplementing the forces provided by the resilient means.

2,949,298
OSCILLATOR
Daniel L. Speelman, Rte. 1, Box 374, New Market, N.J.
Filed Nov. 3, 1958, Ser. No. 771,637
1 Claim. (Cl. 272—1)



A selectively oscillatory inverted pendulum exercising device comprising an immovable base, spring means fixedly secured in said base, a longitudinal normally vertical shaft secured at its bottom to said spring means, a platform perch secured fixedly to the top of said shaft, said immovable base consisting of a heavy block having interlocked channel bars immovably embedded therein at right angles to each other, a plurality of rockers secured to the bottom of said shaft and adapted to be disposed in the channels of said bars, said spring means being secured to the respective ends of said rockers and said bars for returning said shaft to a normally vertical position, and a plurality of ladder rungs disposed in spaced-apart relationship in said shaft whereby a person mounts said shaft to said perch for effecting oscillatory motion to said perch by shift of body weight.

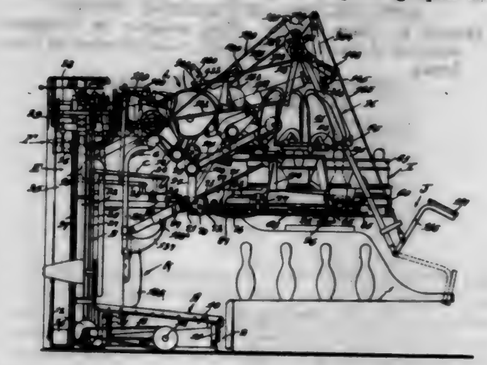
2,949,299
SAFETY CARS FOR AMUSEMENT RIDES
Wayland D. Keith, P.O. Box 2446, Wichita Falls, Tex.
Filed May 26, 1958, Ser. No. 737,955
7 Claims. (Cl. 272—49)



1. A safety car for an amusement ride comprising; a car frame, a covering for said car frame, a car support mounted on a side of said car for pivotally supporting said car for movement about an axis, a door hingeably mounted on a side of said car frame and covering the greater portion of said side when said door is in closed position, said door having apertured lugs secured thereto, one near each end thereof on the side opposite the hinge mounting of said door, stem support means mounted on said frame opposite the hinge mounting of said door, an elongated, upright stem slidably mounted within said stem support means, a spring connected in resilient relation between said stem support means and said slidable stem for urging said stem in one direction, outwardly projecting pins secured to said stem, one near each end thereof and being movable therewith, which pins are adapted to register with the respective apertures in the respective lugs when said stem is in one position and to disengage said lugs when said stem is in another position, and means attached to said stem to enable manual movement of said stem against the resilient action of said spring.

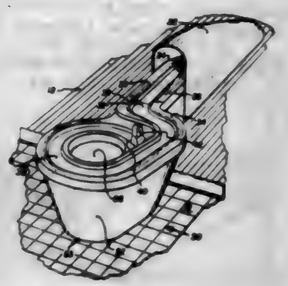
2,949,300
AUTOMATIC PINSETTERS
William F. Huck, Forest Hills, N.Y., and Alexander J. Albrecht, Teaneck, and David P. Sanford, Union, N.J., assignors, by mesne assignments, to The Brunswick Automatic Pinsetter Corporation, Paramus, N.J., a corporation of Delaware
Filed Nov. 25, 1955, Ser. No. 549,075
34 Claims. (Cl. 273—43)

1. In an automatic pinsetter for use on a bowling alley having an alley bed, in combination, a frame, a deck, a deck-operating shaft extending transversely of the frame and movably supported therein, a pair of arms extending forwardly from the deck-operating shaft and connected to the deck, a crank-driven slotted link, a pin connected to the deck-operating shaft and slidably mounted in said slotted link, a crank-driven hook member selectively engageable with said pin for imparting a shorter stroke to the deck, cam means for moving the hook member in or out of engagement with the pin when the deck is in its upper position, a pin pickup and pin-setting operating cam, a first cam follower engageable with said cam for controlling the pickup of pins, a second cam follower engageable with said cam for controlling the setting of pins, a second hook member selectively engageable with the deck to hold the deck in its upper position while the slotted link is idly driven, and means responsive to the level of the deck depending upon the



presence or absence of standing pins after the rolling of a first ball in a frame to control the operation of the machine through a reset or new set cycle including a new set lever for blocking the first hook member so as to permit descent of the deck under control of the slotted link and to block the first cam follower and permit operation of the second cam follower, and a plural ball frame lever for causing overcycling of the machine at the end of the normal cycle upon the occurrence of standing pins and engagement of the second hook member with the deck to hold the deck up during the overcycling whereupon the machine will commence operating at an advanced point in its cycle upon rolling of a second ball in a frame.

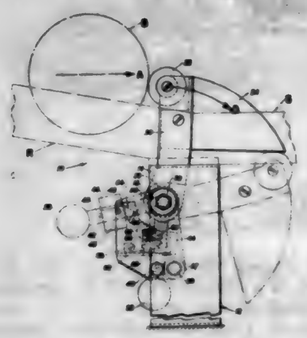
2,949,301
BALL TERMINAL FOR BOWLING ALLEYS
Elmer G. Bay, Minneapolis, Minn., assignor to American Machine & Foundry Company, New York, N.Y., a corporation of New York
Filed Feb. 3, 1958, Ser. No. 712,775
8 Claims. (Cl. 273—47)



1. In a bowling ball storage rack the combination of a generally horizontal storage member including a track for conducting and storing balls in said member, a ball return track having a discharge end connected to at least

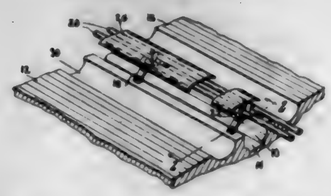
a portion of said storage member, said track of said storage member forming a substantially uninterrupted continuation of said return track and constructed and arranged to conduct balls delivered to said member from said ball return track in a generally arcuate path of travel to a point of rest with the terminal end thereof disposed relatively close to the infeed portion of said ball storage member, the outer lateral dimensions of the resulting configuration of said storage member being only a relatively small portion of the width of the approach area of a bowling alley.

2,949,302
BOWLING BALL RETARDING DEVICE
Donald E. Place, Shelby, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Filed May 19, 1958, Ser. No. 736,069
16 Claims. (Cl. 273—47)



1. A ball retarding device for a bowling alley ball return runway comprising a ball check-arm located in position to be engaged by a ball rolling along said runway, a ball engaging device carried by one end of said arm, means pivotally supporting said arm, a counterweight on a portion of said arm remote from said ball engaging device for normally biasing said arm into ball-engaging position, a member slidably mounted on said arm, means normally maintaining said member in a pre-determined operating position on said arm, means for moving said member on said arm when said ball engaging device is contacted by a ball on said runway pivoting said arm, stop means for engaging said member in said moved position whereby said arm and said ball-engaging device are maintained in position in the path of travel of said ball.

2,949,303
ILLUMINATION FOR BOWLING ALLEYS
Kenneth C. Sherman, Monessen, Pa.
(Box 67, Gambrills, Md.)
Filed Oct. 7, 1958, Ser. No. 765,823
3 Claims. (Cl. 273—51)



1. In combination with a pair of adjoining bowling alleys, an open ball-return channel between said alleys, said channel having its bottom below the level of the alley surfaces, a series of electric lighting units mounted over said channel a few inches above the level of said surfaces, and a screen mounted over said lighting units arranged to direct light from said units to said surfaces and to shield the eyes of observers from direct rays of light from said units.

2,949,304
GOLF PUTTER HANDLE
Willis S. Williams, 1612 16th Ave., San Francisco, Calif.
Filed Mar. 1, 1957, Ser. No. 643,277
3 Claims. (Cl. 273—81.3)



1. In a golf putter, the combination with the shaft of a golf putter and the putter head extended from one end of the shaft at an angle to the axis of said shaft, and said shaft having a grip on its other end; of a handle grip device comprising a stubshaft fixedly secured to said other end of said putter shaft generally in axil agilnment with said putter shaft, longitudinal parallel splines on the circumference of said stub shaft being generally parallel with the axis of said putter shaft, an integral handle including a socket portion having parallel grooves therein fitting over said splines, and a grip portion extending intergrally from said socket portion at a fixed angle to said socket portion and in a plane substantially parallel with a generally horizontal plane containing the longitudinal axis of the putter head, the direction of extension of said grip portion being adjustable about the axis of said shaft relatively to the putter head by the selected engagement of said socket grooves with said splines, and releasable means to secure said socket portion on said stubshaft in said selected engagement.

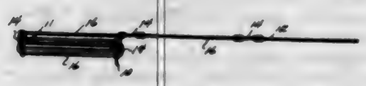
2,949,305
TARGET DEVICE
William T. Davis, 3258 Wightman St., San Diego, Calif.
Filed June 19, 1958, Ser. No. 743,057
1 Claim. (Cl. 273—102.1)



A target device comprising a generally vertically disposed target plate having greater horizontal width than vertical height, a bull's-eye target at one end of the target plate, said bull's-eye target being defined by a plurality of concentrically spaced rings, said plate having an aperture therein defining the center of the bull's-eye target,

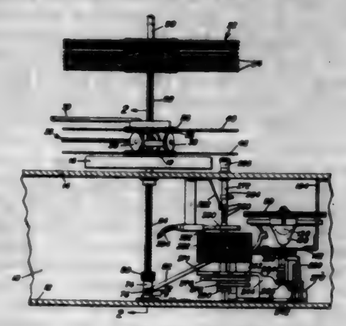
a bellcrank having the apex portion pivotally supported from the rear of the plate, a circular plate on the end of one leg of said bellcrank and forming a closure for said aperture whereby a projectile passing through the opening will impinge against the circular plate and force it rearwardly thereby pivoting said bellcrank, the other leg of said bellcrank extending rearwardly from the target plate, an elongated latch bar pivotally connected to the outer end of the other leg of said bellcrank and extending toward the other end of said target plate in generally parallel relation to the rear of the target plate, guide means mounted on the rear of the target plate and slidably receiving the end portion of the bar remote from the bellcrank, spring means interconnecting the guide means and the latch bar and urging the latch bar towards the other end of said target plate thereby maintaining the circular plate against the rear of the target plate, the end of said bar adjacent the guide means being inclined, said target plate having an opening therein adjacent the other end and generally in horizontal alignment with the aperture, a tubular member mounted on the target plate and extending forwardly therefrom, a lightweight spherical projectile disposed in said tubular member in alignment with the opening, a tubular housing mounted on the target plate and extending rearwardly therefrom in alignment with the opening, a plunger slidably mounted in said housing, spring means interconnecting said housing and plunger for urging the plunger towards said projectile, a handle on said plunger for retracting the plunger and tensioning said spring means, a laterally extending lug rigidly mounted on said plunger, said housing having a slot slidably receiving said lug, said inclined end of the latch bar being disposed in the path of movement of the lug when the plunger is retracted thereby camming the latch bar longitudinally until the lug passes outwardly beyond the latch bar whereby the latch bar will then retain the plunger retracted until impingement of a projectile on the circular plate moves the circular plate and latch bar for releasing the plunger and projecting the spherical projectile from the tubular member.

2,949,306
CHANGEABLE GAME BOARD
Martin D. Gitelson, 8504 Hood St., Takoma Park, and Robert L. Folstein, 1005 Osage St., Silver Spring Md.
Filed Feb. 3, 1959, Ser. No. 790,832
2 Claims. (Cl. 273—130)



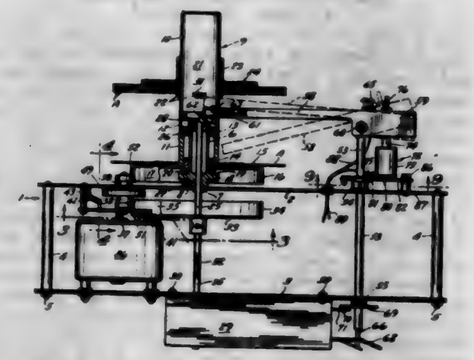
1. A game board comprising a pair of elongated generally flat rectangular plates, upper and lower rows of panels hingedly secured together and to the upper and lower portions respectively of said plates, a center row of panels hingedly secured together and to the central portions of said plates, with all but one panel of each of said upper and lower rows of panels wound completely about one of said plates and all but one panel of said central row of panels wound completely about the other of said plates whereby said plates may be simultaneously rotated to unwind the respective panels thereon while simultaneously winding them on the opposite plate.

2,949,307
SELECTIVE RECORD LOWERING, LIFTING, AND RELEASING MEANS FOR AUTOMATIC INTERLOCKING AND CONVENTIONAL RECORD PLAYERS
Herman H. Mueller, Ephrata, Pa.; Elizabeth M. Mentzer, executrix of the will of said Herman H. Mueller, deceased
Filed June 2, 1953, Ser. No. 359,882
28 Claims. (Cl. 274—10)



1. In an automatic record player having a spindle and turntable, means for supporting above said turntable a stack of records to be played and a record supporting and driving means adapted to be operatively and drivingly connected to said turntable; record lifting and lowering means disposed in said spindle and engaging a record at a location spaced from its sound track and operable to lower a record from the bottom of said stack to said record supporting and driving means and from the latter to said turntable, operating means for said lifting and lowering means and effecting operation of the latter in properly timed relation to the operation of the record player, control means operatively connected to said operating means for adjusting the action of the latter to thereby vary the range of vertical movement of the lifting and lowering means, said lifting and lowering means including a member for engaging a record at the underside thereof for supporting said record.

2,949,308
RECORD PLAYER
Andrew Maxim, Cleveland, Ohio, assignor, by mesne assignments, to Imperial Manufacturing Corporation, a corporation of Massachusetts
Filed June 28, 1955, Ser. No. 518,586
5 Claims. (Cl. 274—10)

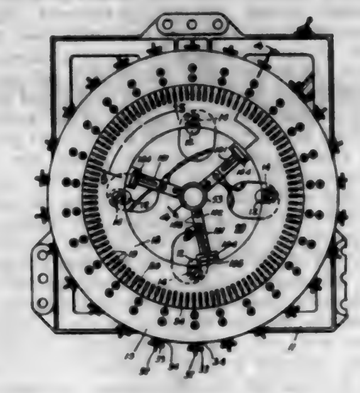


1. In an automatic record player for playing both sides of each of a plurality of record discs in succession

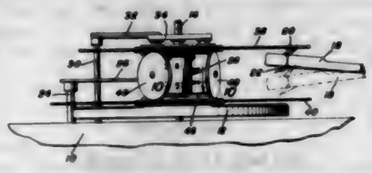
including a generally horizontally disposed mounting plate, a pick-up head means equipped arm mounted on said mounting plate for swinging movements about a generally horizontal axis between vertically spaced operative record engaging positions and an inoperative position intermediate said operative positions and for swinging movements about a generally vertical axis between said inoperative position intermediate record discs that are disposed in vertically spaced relationship to each other and a second inoperative position radially outwardly of the spaced record discs, and record disc engaging styli extending outwardly from opposite sides of the pick-up head means, the improvement comprising, in combination with the record player of record disc mounting means for rotatably mounting the record discs in the spaced relationship to enable rotation thereof in opposite directions relative to each other, said record disc mounting means including a turntable overlying the mounting plate, a mounting spindle extending axially upwardly from the turntable comprising axially aligned upper and lower spindle sections for supporting the record discs in the spaced relationship, said lower spindle section being connected to the turntable for common rotation therewith and projecting axially upwardly therefrom and terminating intermediate the spaced record discs, a tubular bearing member secured to the mounting plate and extending axially upwardly through the lower spindle section, said tubular bearing member supporting both the upper and lower spindle sections for independent rotation, an elongated axially extending drive shaft concentrically journalled in the bearing member, said drive shaft being connected at the upper end portion thereof to the upper spindle section for common rotation therewith and extending downwardly therefrom through the turntable and mounting plate, a rotary member secured fast to the drive shaft and disposed thereon axially below the mounting plate, said turntable and rotary member each having circumferential drive surfaces, and means for imparting simultaneous rotation to the turntable and lower spindle section in one direction and to the drive shaft and upper spindle section in an opposite direction, said means including a drive motor and a pair of driving rotors, one of said driving rotors being in operative engagement with the drive surface of the turntable and the other driving rotor being in operative engagement with the drive surface of the rotary member.

2,949,309
SELECTOR DEVICE FOR AUTOMATIC PHONOGRAPHS
John H. Riggs, Kenmore, N.Y., assignor to The Rudolph Wurlitzer Company, Chicago, Ill., a corporation
Filed Mar. 13, 1956, Ser. No. 571,221
9 Claims. (Cl. 274—10)

1. A selector apparatus adapted to cooperate with an automatic phonograph having a mechanism for selecting and presenting a record for playing and manually operable number and letter switches, comprising an annular array of spaced selector pins normally latched in an idle position and unlatchable to move into position to cooperate with said mechanism to control its operation for presenting a selected record for playing, a series of stationary solenoids disposed concentrically and outwardly of said pins and arranged to respond to said number switches, a wheel rotatably mounted coaxially of said solenoids, pin selector members mounted on said wheel between said solenoids and said pins and corresponding in number with the number of solenoids for unlatching said pins, each selector member including an elongated arm disposed transversely of its cooperating solenoid and having a pin-engaging portion, means for rotating said wheel through an arc corresponding approximately in length with the length of said arm, spaced stops disposed for movement into the path of movement of a portion of said wheel for positioning said selector members with their pin-engaging portions in operative relation to different selector pins, and electromagnetic means for moving one of said stops into said path of movement in response to actuation of one of said letter switches, whereby each selector member may be moved into operative relation with any one of a group of selector pins.



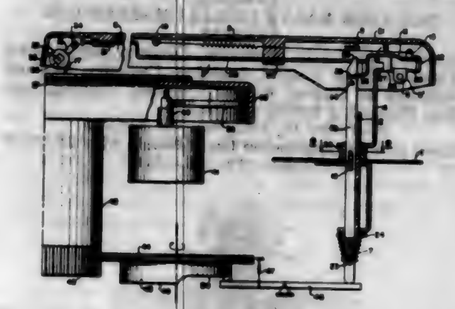
2,949,310
RECORD SUPPORT AND DRIVE MEANS
Herman H. Mueller, Ephrata, Pa.; Elizabeth M. Mentzer, executrix of the will of said Herman H. Mueller, deceased
Filed Nov. 28, 1956, Ser. No. 624,889
21 Claims. (Cl. 274—10)



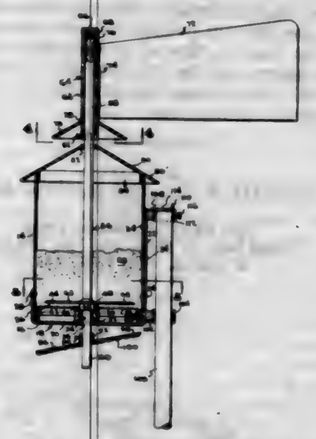
1. In an apparatus for inscribing or reproducing a message upon a record disk and of the type wherein said record disk is supported upon but in a position above and driven by a turntable or a record disk thereon, a record support and drive means comprising a casing open at its top and bottom, upper and lower cylinder sections, means whereby said sections are mounted in said casing for free rotation, means including gearing in said casing engaging both said sections for relatively reverse rotation, the opposite ends of said sections extending through the open ends of said casing, connecting means on said opposite ends for locking engagement respectively with a record and with a record or turntable.

2,949,311
TONE ARM FOR RECORD PLAYERS
Joachim Machts, Hannover-Sued, and Werner Bonk, Hannover-Linden, Germany, assignors to Telefunken G.m.b.H., Berlin, Germany
Filed Mar. 14, 1958, Ser. No. 721,435
Claims priority, application Germany Mar. 30, 1957
8 Claims. (Cl. 274—23)

1. In a device for reproducing a signal from a grooved record having a starting groove; the combination of a displaceable light-weight pickup arm, a stylus supported adjacent one end of said pickup arm, a support member carried by said pickup arm and disposed adjacent said stylus, means in registry with said support member for moving the same relative to said stylus so as to extend either rearwardly of said stylus or forwardly beyond said stylus in an advanced position, whereby movement of said pickup arm across said record causes scanning of the latter by means of said advanced support member contacting said record so as to determine the size of said record and to locate the starting groove thereof, and means in registry with said pickup arm for increasing contact pressure between said pickup arm and said record during the scanning operation, said support member upon reaching the peripheral edge of said record retracting inwardly, thereby freeing said stylus for insertion of the same into the starting groove of said record.



2,949,312
BROADCASTING DEVICE
Arthur M. Anderson, Squirrel, Idaho
Filed Feb. 27, 1959, Ser. No. 796,031
11 Claims. (Cl. 275—15)



1. A broadcasting device comprising an elongated substantially hollow cylindrical receptacle having an elongated substantially cylindrical side wall provided with a pair of opposed open ends, a bracket extending across one of said open ends and having portions thereof fixedly secured to said side wall, said bracket having an aperture transversely therethrough coaxially aligned with the longitudinal axis of said receptacle, a substantially cylindrical boss mounted on said bracket and having a bore extending therethrough coaxially aligned with said aperture, a first screen disc disposed within said receptacle and having a centrally disposed annular bushing fixedly secured thereto, said first screen disc having a laterally extending circumferential flange clampingly engaged between a pair of circular bands, said side wall having internal bead adjacent its said one end, said screen being disposed within said side wall with said bands engaging against and being supported on said bead with said bushing engaged against said boss, a closure member for the other of said open ends of said side wall, an elongated shaft extending through said side wall and coaxially aligned therewith, said shaft having one end thereof projecting through said annular bushing, said boss and said aperture for rotation therein and extending beyond said one open end, a closure member for the other of said open ends, the other end of said shaft projecting through and being journaled for rotation in said closure member, a cap shaft telescoped over said other end of said shaft, a wind vane connected to said cap shaft, and lost-motion means connecting said cap shaft with said shaft.

2,949,313
EXPANDING CHUCK MECHANISM
Henry W. Moser, Haddonfield, N.J., and William H. Moore, Oreland, Pa., assignors to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey
Filed Dec. 29, 1958, Ser. No. 783,261
9 Claims. (Cl. 279—2)

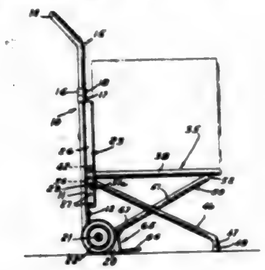


1. A supporting spindle for a roll of material having a core opening extending axially therethrough, comprising a tubular spindle having an axial counterbore extending inwardly from one end thereof, means mounting said spindle for rotation with a roll of material during unwinding thereof, a chuck fixedly mounted at said one end of the spindle coaxially thereof, a plurality of chuck members mounted in said chuck at equally spaced intervals circumferentially thereof for radial sliding movement between inner closed and outer expanded positions, means normally urging the chuck members radially inward to closed chuck position, a shaft slidably mounted coaxially within the spindle, a cam member having a sleeve portion slidable axially within the spindle counterbore and connected to said shaft for movement therewith axially of the spindle and chuck in cooperative engagement with the radially slidable members thereof to actuate said members radially outward to their expanded position upon movement of said cam member in one direction and upon movement thereof in the opposite direction to cause said members to be urged radially inward to their closed position, means to actuate the shaft and cam member in respectively opposite directions relative to the spindle and chuck between one limit position in which the chuck members are expanded and another limit position in which the chuck members are closed, and means in said spindle bore cooperable with the sleeve portion of the cam member to predeterminedly limit the stroke of the latter.

2,949,314
FOLDING CARRIER DEVICE
Richard G. Strohmaier, 9117 Crenshaw Blvd., Inglewood, Calif.
Filed May 12, 1958, Ser. No. 734,609
2 Claims. (Cl. 280—36)

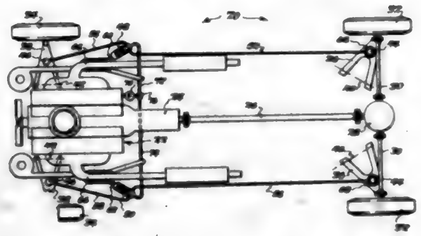
1. A folding structure of the class described comprising: a main frame comprising a relatively long frame structure having longitudinally extending side members and a handle adjacent the upper end; a shaft; means securing said shaft to said frame structure adjacent the

lower end thereof; wheels operably mounted on said shaft; substantially vertical guides attached to the sides of the frame structure at the lower end thereof; an article supporting frame having a member slidably and rotatably mounted in said guides and movable between an upper and a lower position; a pair of legs, each leg being pivoted on said member of the article supporting frame; a bracing frame; means pivotally securing one end of the bracing frame on said shaft so that said bracing frame may swing on the axis of said shaft; means pivotally connecting said bracing frame to the legs, intermediate the ends of the latter, said bracing frame being positioned to support the free end of the article supporting frame when said member of the article supporting frame is in its lower position, the legs then supporting said bracing frame; the main frame, legs, article supporting frame and bracing frame being moved into the folded position when said



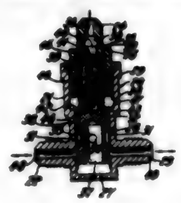
member of the article supporting frame is moved to the upper position thereof; a plate for each side member of the main frame secured to the lower end portions of said side members and extending forwardly thereof and having their forward free ends in a plane forwardly of the forwardmost parts of the wheels; and a blade device extending transversely of the structure and including a generally horizontal blade member, and a stop member extending upwardly along the rear edge of said blade member, said stop member being secured adjacent the ends thereof to the forward ends of the respective plates, said stop member being in the path of movement of the lower end portions of the legs, there being notches extending downwardly of the upper end of the stop member in the path of movement of said lower end portions of the legs to provide openings through which said lower portions of the legs may pass when being moved between the folded and the unfolded positions.

2,949,315
COMPRESSIBLE LIQUID VEHICLE SUSPENSION AND POWER SYSTEM
Paul H. Taylor, North Tonawanda, N.Y., assignor to Tayco Developments, Inc., North Tonawanda, N.Y., a corporation of New York
Filed May 16, 1957, Ser. No. 659,629
25 Claims. (Cl. 280—124)



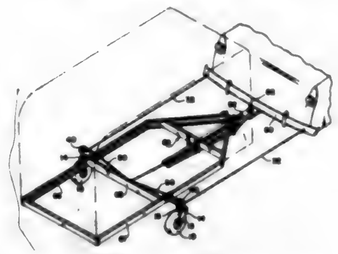
1. A suspension system for a vehicle having a body and a plurality of supporting wheels, comprising a compressible liquid spring operatively disposed between each of said wheels and said body for resiliently supporting the body, separate compressible liquid accumulator means, and conduit means hydraulically interconnecting said accumulator means with at least some of said liquid springs.

2,949,316
ISOLATOR VALVE FOR FLUID-PRESSURE SYSTEM
Raymond John Davies, Coundon, Coventry, and Bernard Fernand Didier Pacaud, Earlsdon, Coventry, England, assignors to Dunlop Rubber Company Limited, London, England, a British company
Filed May 16, 1958, Ser. No. 735,733
Claims priority, application Great Britain May 29, 1957
8 Claims. (Cl. 280—124)



1. An isolator valve for a vehicle suspension system comprising a housing having at one end a pressure-fluid inlet passage and adjacent the other end a plurality of pressure-fluid outlet passages, means slidable in said housing and adapted normally to be held in a central position by a spring acting in opposite directions thereupon and to provide a restricted flow of pressure-fluid between said inlet and outlet passages and between said outlet passages, in either direction, said means being adapted to slide in said housing against said spring in response to a fluid-pressure differential between said inlet passage and any one or more of said outlet passages to permit the free interflow of pressure-fluid between said outlet passages and the free flow of pressure-fluid between said inlet passage and any one or more of said outlet passages or vice versa.

2,949,317
AUTOMOTIVE TRAILER HAVING CASTER WHEELS
Abe Zaha, Pendleton, Oreg.
Filed Sept. 5, 1958, Ser. No. 759,266
4 Claims. (Cl. 280—456)



1. A trailer adapted to use lockable caster supporting wheels, comprising: a frame having spaced side frame members adaptable for attaching caster wheel mounts and terminating at its front end with a trailer hitch; a horizontal tubular wheel mount adapted to be fixedly secured to each of the side frame members in a position extending horizontally, outwardly therefrom; a trailer supporting wheel mounted in said wheel mount; a vertical caster shaft revolvably mounted at the outer end of said wheel

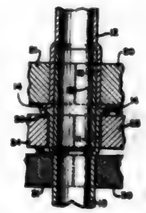
mount and having secured thereto, in axial alignment, a cable reel and a toothed, reel locking wheel; a caster shaft lock disc having a single locking notch secured to said shaft by means permitting variable toe-in adjustment of said wheel when it is locked against castering; pawl means operatively disposed within said wheel mount for locking said reel locking wheel and said caster shaft lock disc; separate trailer positioning cables disposed on the cable reel of each wheel unit assembly and having their outer ends secured to the prime mover for said trailer, the used portion of said cables being disposed substantially parallel with the longitudinal axis of said trailer; said pawl means for said caster shaft lock disc and said cable reel locking wheel having means for operating said locking pawls, arranged to withdraw one pawl from its locking position as the other pawl is moved to its locking position and remote operating means for said pawl operating means.

2,949,318
AUTOGRAPHIC REGISTER
Frederick B. Diesbach, Hamilton, Ohio, assignor to Paul Benninghofen and F. B. Diesbach, both of Hamilton, Ohio, trustees
Filed May 28, 1958, Ser. No. 738,488
1 Claim. (Cl. 282—3)



A portable autographic register for manifolding stationery of the type comprising a plurality of sets of forms folded in zig-zag fashion to provide a packet, the uppermost set of forms only of the packet having sheets of carbon paper interleaved therewith, said sheets of carbon paper being wider than the forms to provide substantially wide marginal edges which project beyond the sides of the forms, said register comprising a casing, a writing platen in said casing which is substantially no wider than said forms upon which the uppermost set of forms in the packet is placed upon the loading of the register, whereby the marginal edges of the sheets of carbon paper project beyond the sides of the writing platen, said platen being spaced above the bottom of the casing to provide a storage compartment for the other sets of forms of the packet and having means at the end thereof adjacent to the forward end of the casing to guide forms from the storage compartment onto the platen, a lid hinged to the forward end of the casing, said lid having side walls which project down along the sides of the writing platen when the lid is closed, two sets of leaf springs, the leaf springs of one set being disposed at opposite sides of the platen below said projecting marginal edges of carbon paper and at the ends of said sheets of carbon paper which are exposed to oncoming forms moving from the storage compartment onto the writing platen, the leaf springs of the other set being disposed at opposite sides of the writing platen below said projecting marginal edges of carbon paper but within the half of the writing platen which is spaced from the end thereof toward oncoming forms, said leaf springs projecting beyond the sides of the casing when the lid is open, whereby upon the closing of the lid the side walls thereof swing down and wipe the marginal edges of the carbon paper at the ends thereof toward oncoming forms down over the first set of leaf springs while pushing the springs inwardly, thereby initially tensioning the ends of said sheets of carbon paper toward oncoming forms, and thereafter wiping the marginal edges of the carbon paper down over the second set of springs to tension the carbon paper in the areas thereof between the second set of leaf springs, said springs having portions extending into said storage compartment, said portions being configured to provide positioning means for stationery within said compartment.

2,949,319
PIPE COUPLING BETWEEN RELATIVELY HARD AND SOFT TUBES
Everett C. Hutchins, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application Aug. 18, 1954, Ser. No. 450,600, now Patent No. 2,816,211, dated Dec. 10, 1957. Divided and this application Nov. 13, 1956, Ser. No. 621,845
1 Claim. (Cl. 285—173)

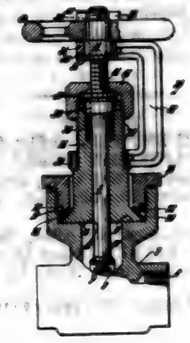


A joint between a relatively soft tube and a relatively hard tube, said tubes having substantially the same wall thickness, comprising: a bell at the end of said relatively soft tube; a first bell at the end of said relatively hard tube and of substantially the same inner dimension as that of said relatively soft tube bell; a second bell at the end of said first bell, said second bell being bulged outwardly to form an inner cavity and the end of said soft tube bell being bulged into said cavity; and a third tube of a hardness greater than said relatively hard tube within said bells and held against endwise displacement by the end walls of said first mentioned two bells, said third tube being of an outer dimension substantially the same as the inner dimension of said soft tube bell; and weld means joining adjacent surfaces of said relatively hard and relatively soft tubes, the end of said relatively soft tube being wedged between said relatively hard tube and said third tube.

2,949,320
VALVE CONSTRUCTION
Sidney Low, Wilbraham, and Orlo A. Powell, Jr., Agawam, Mass., assignors, by mesne assignments, to The Chapman Valve Manufacturing Company, Chicago, Ill., a corporation of Delaware
Filed Aug. 13, 1958, Ser. No. 754,795
1 Claim. (Cl. 285—356)

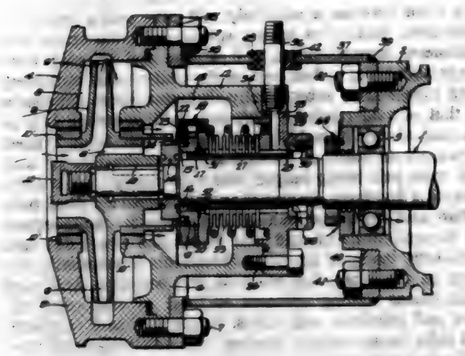
A coupling structure for a valve bonnet coacting with a body having a threaded well in one side comprising, a hollow bonnet having a lower extremity nestable in the well of the body, the lower portion of said bonnet being provided with a lower outwardly flaring peripheral surface, a seal ring disposed around said bonnet and within the wall of said well, a seal ring nut in threaded engagement with said well for applying pressure to said seal ring, said seal ring being formed from deformable elastic material and having a concave cross section between upper and lower peripheries thereof, the convex side of said seal ring being in engagement with the flaring peripheral surface of said bonnet and upper and lower peripheries thereof being in engagement with the underside of said seal ring nut and within the wall of said

well respectively whereby as pressure is applied to the said upper periphery said seal ring is deformed generally



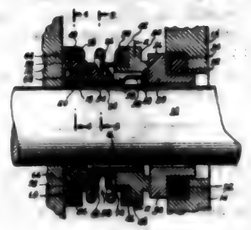
radially outwardly for sealing the flaring portion of said bonnet relative to said well.

2,949,321
MECHANICAL SEAL FOR LIQUID OXYGEN PUMP
Herbert E. Tracy, Alhambra, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Jan. 28, 1957, Ser. No. 636,613
14 Claims. (Cl. 286—9)



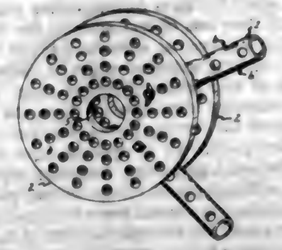
4. In a mechanical seal assembly comprising a shell having a seal chamber therein, a rotatable shaft projecting axially through said chamber, cooperative mechanical sealing means for sealing the chamber between said shell and said shaft against the leakage of fluid along said shaft, including a sealing element rotatable with said shaft and having a radially extended sealing surface, a sealing ring disposed adjacent to said sealing element for axial movement and having a radially extended sealing surface, means for biasing said sealing ring axially toward said sealing element to effect engagement of said sealing faces, and means supporting said sealing ring, that improvement wherein the supporting means for said sealing ring includes a sleeve carried by said shell and encircling said shaft in spaced relation thereto, a collar encircling said sleeve and centered on said sleeve, said collar having a peripheral channel, and said sealing ring having a portion disposed in said channel for supporting the sealing ring in said channel, a flexible element encircling said sleeve and sealed to said collar for preventing the passage of fluid from said chamber between said shell and said collar, and means for admitting a flushing fluid into the space between said flexible element and said sleeve and into the space between said sleeve and said shaft, said collar having passages therethrough to enable passage of said flushing fluid along said sleeve past said collar.

2,949,322
ROTARY MECHANICAL SEAL
George F. Closs, Palmyra, N.Y., assignor to Garlock, Inc., a corporation of New York
Filed Mar. 5, 1957, Ser. No. 644,100
10 Claims. (Cl. 286—11)



1. A rotary seal for effecting a fluid seal between a machine casing and a machine element which is rotatable relative to said casing, said seal comprising a metal sleeve surrounding, sealed with respect to and arranged to rotate with said rotary machine element, a rigid, rotary sealing ring adjacent to one end of said sleeve and adapted to effect a sliding, rotary seal with a surface associated with said machine casing, a flexible, sleeve-like, sealing bellows, encircling said metal sleeve and having one end portion in fixed sealing association with said rotary sealing ring, an opposite end portion in fixed sealing association with the other end of said metal sleeve, and an intermediate, cylindrical, bellows centering portion, of substantial width and thickness, in accurate contact fit with a within, substantially wide, cylindrical surface area of said sleeve, and a radial web, substantially thinner than said bellows centering portion, integrally interconnecting the latter and said one end portion of the bellows; said web being freely flexible with axial shifting of said rotary sealing ring and coacting with said bellows centering portion to restrain said rotary sealing ring against shifting other than axial shifting.

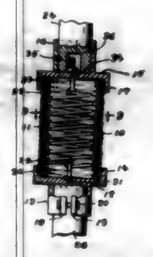
2,949,323
DISPLAY RACK STRUCTURE
Leslie D. Moorhead, 1616 Bond St., Niles, Mich.
Filed Mar. 13, 1957, Ser. No. 645,790
6 Claims. (Cl. 287—54)



6. An adjustable display rack structure, comprising two spaced upright members, each upright member including a pair of spaced disc-shaped plates having a center hole and a plurality of radially aligned holes concentrically

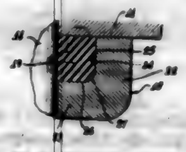
arranged around said first mentioned hole, the holes in one of said plates corresponding in position with the holes of the other plate and being equally spaced in the radial direction, a plurality of radially arranged tubular poles disposed between the plates of each member and having a plurality of diametrically opposite holes spaced the same distance apart along said poles as the holes on said plates are spaced radially from one another, a plurality of bolts extending through corresponding holes in the plates of each upright member and through opposed holes in said poles for securing said plates and poles together to form a rigid structure, and a pole extending through the center holes of said plate and connecting said upright members.

2,949,324
FLEXIBLE SIGN POST
Homer Birge, 341 S. West St., Thorntown, Ind., and Leonard Latham, 309 W. Main St., Lebanon, Ind.
Filed Mar. 17, 1959, Ser. No. 800,021
4 Claims. (Cl. 287—86)



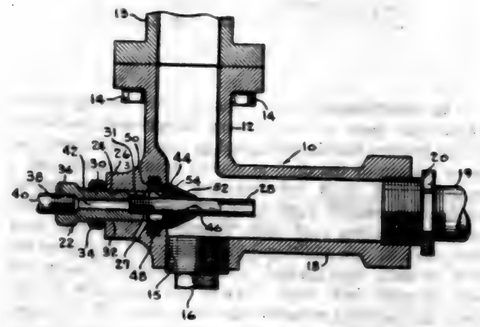
1. A spring assembly for a sign post comprising an upper head having a depending peripheral flange and a split sleeve extended upwardly therefrom for connecting the head to a post, a lower head having an upwardly extended peripheral flange and a depending split sleeve for connecting the lower head to a post, an inner tension spring extended between and positioned with ends thereof connected to the heads, and an outer spring nested in the flanges of the heads and surrounding the inner tension spring.

2,949,325
HIGH PRESSURE SEALING DEVICE
Joseph F. Nenzell, Culver City, Calif., assignor, by mesne assignments, to Parker Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 27, 1956, Ser. No. 567,877
8 Claims. (Cl. 288—23)



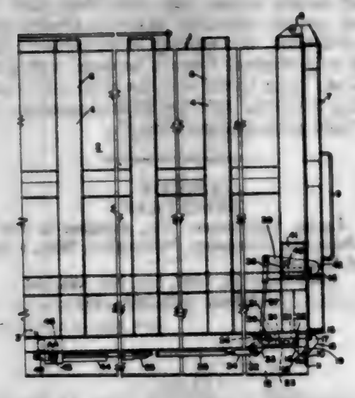
1. A sealing device, which comprises: a rigid retaining washer, having a central longitudinal axis, and defining an internal chamber, said washer having a first bearing surface, at least a portion of which is generally perpendicular to said central longitudinal axis, said washer also having an inner bearing surface at least a portion of which lies in a surface of revolution about said central longitudinal axis, said chamber opening axially in the direction of said first bearing surface and inwardly in the direction of said inner bearing surface, and being bounded by a first plane passing through said first bearing surface, and by said surface of revolution passing through said inner bearing surface portion, and intersecting said first plane; and a resilient deformable packing member, a part of which is fitted within said chamber, said packing member having a projecting portion extending axially beyond said first plane, and another projecting portion extending inwardly beyond said surface of revolution, said packing member having an inner recessed void channel formed between said projecting portions and lying within said chamber, said void channel having a volume sufficient to accommodate the material of said projecting portions.

2,949,326
SAND TRAP
John A. Lucas, Milwaukee, Wis., assignor to The Prime Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Filed Sept. 25, 1957, Ser. No. 686,164
2 Claims. (Cl. 291—11)



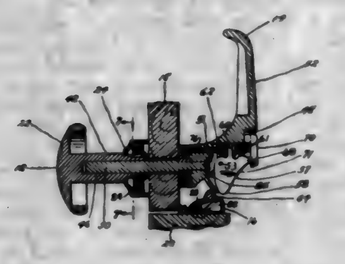
1. A sand trap comprising: a trap body having a sand inlet port, a sand outlet port and an air inlet port the inside surface of which is threaded; an externally threaded nozzle threaded into said air inlet port axially thereof and extending into the interior of said sand trap; and a substantially cylindrically shaped nozzle guard of resilient material mounted in said sand trap body axially of said air inlet port and said nozzle, said guard extending into the interior of said trap body and having an axial opening therethrough in which said nozzle is rotatably mounted with the inner end of said guard stressed to provide a snug fit on said nozzle and yet permit relative rotation of the nozzle and guard with each other so that the axial position of said nozzle can be adjusted by rotation thereof, said nozzle guard which extends into said trap body being tapered towards its inner end, said tapered portion of said nozzle guard lying below said sand inlet port and in unrestricted communication with said sand inlet port, the axis of which is substantially perpendicular to the axis of said nozzle guard so that when said nozzle is removed from said air inlet port the weight of sand from said sand inlet port bearing on the tapered portion of said nozzle guard will partially close off the opening in said guard and thereby restrict the flow of sand back through the opening in said guard, said nozzle guard being further characterized by being countersunk axially at its outer end to provide a space in which sand, water, and other foreign materials can collect, said trap body having a drain passageway therein communicating at one end with said countersunk space in said guard and extending downwardly therefrom to the exterior of said sand trap.

2,949,327
LATCH ASSEMBLY FOR TAIL GATES AND THE LIKE
Thomas C. Totaro, Marion, and John G. Sand, Galion, Ohio, assignors to Hercules Galion Products, Inc., Wilmington, Del., a corporation of Delaware
Filed Aug. 7, 1957, Ser. No. 676,743
9 Claims. (Cl. 292—26)



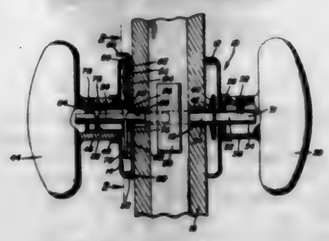
2. In combination with a dump body having a top-hinged rear door, a latch system comprising a series of pivotal bottom latches positioned to engage and clamp the lower margin of the door at spaced points thereacross, a common rock shaft for actuating said bottom latches arranged to extend transversely of the body, toggle link means connecting each such bottom latch to said rock shaft, at least one additional latch disposed to engage the door at each side thereof, means connecting each side latch to said rock shaft likewise for actuation by the same, an operating member secured to the shaft to extend forwardly therefrom relative to the dump body and to oscillate the shaft upon reciprocation, means including a toggle link for reciprocating said operating member, and a manual actuator located at a side of the dump body connected to said last-named means thereby to operate the latch system.

2,949,328
DOOR LOCK SET
Fred Kaiser, New York, N.Y.
(198—87 Dunton Ave., Hollis, N.Y.)
Filed Nov. 7, 1957, Ser. No. 694,976
4 Claims. (Cl. 292—207)



1. In a door lock set construction including a body which is attachable to a door, a handle element rotatably mounted on said body, a shaft rotated by said handle and a strike unit mounted on a door frame, improved lock bolt means comprising: an elongated lock bolt member arranged for substantially axial movement parallel to the axis of said shaft and rotation with said shaft, said body having a socket into which a portion of said lock bolt member is selectively engageable for locking said shaft against rotation, said handle element having a relatively stationary latch bolt thereon, of hollow configuration; a pivotally mounted lever member disposed within said latch bolt and having a first portion thereof projectable into the path of said strike unit, and a second portion pivotally engaged with said lock bolt member, whereby contact of the lever with said strike unit and relative movement therebetween causes shifting of the lock bolt member to the unlocked position thereof.

2,949,329
DOOR LOCK
Richard L. Shoalts, 347 Hastings St., South Williamsport, Pa.
Filed Mar. 1, 1957, Ser. No. 643,347
6 Claims. (Cl. 292—336.3)

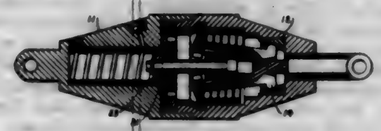


1. In a door lock mechanism, the combination of a longitudinally slidable latch operating shaft extending through a closure door, an inside door knob rigid with the inner end of the shaft and movable in respect to the door, an outside knob rotatably mounted on the door and rotatably and slidably receiving the outer end of said shaft, and means interconnecting the outside knob with the outer end of the shaft whereby the shaft will be rotated when either knob is rotated, said interconnecting means being disengaged in response to closing force being exerted on the inside knob which causes longitudinal movement of the shaft thereby rendering the outside knob ineffective for rotating the shaft, spring means connected with said shaft for urging said shaft to a normal position with the interconnecting means being engaged, latch means adjacent the outside knob, means resiliently urging said latch means into engagement with the shaft for retaining the shaft in position with the interconnecting means disengaged, said latch means being manually releasable from the outside of the door and means on said shaft operatively connected to said latch means releasing the latter in response to rotation of the inside knob whereby the spring means will move the shaft to normal position with the interconnecting means being engaged.

2,949,330
POST LANDING PARACHUTE RELEASE
C Walton Musser, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 11, 1958, Ser. No. 720,893
2 Claims. (Cl. 294—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A parachute release connection comprising a casing member, a load carrying member slidable within said casing and having a peripheral groove, said load carrying member being slidable, and expansible segmental jaws having their forward ends extending into said peripheral groove for holding said load member in a load carrying

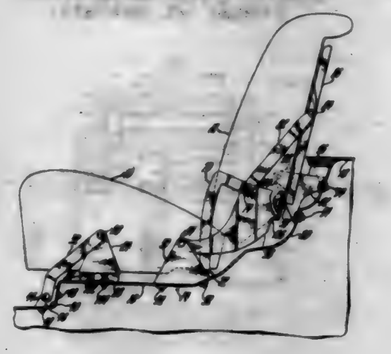
position, a collar in said casing having a radially inwardly and longitudinally outwardly tapered inner surface for holding the forward ends of said jaws engaged in said peripheral groove, an abutment member movable in said casing member, a partition in said casing member, a piston slidable in said casing member in rear of said partition, a piston rod extending forwardly from said piston through said partition and connected to said abutment member for moving it, radial inward and outward extensions on rear end portions of said jaws, a spring within said casing member radially outside said jaws cooperating with said casing member and with said radially outwardly extending jaw rear end portions whereby said spring is partially compressed when said jaws and load member are in a standby position, said spring holding said jaws against said abutment member and said abutment member against said partition when said jaws and load member are in a standby position, said spring being further compressed by said jaws on the application of load to said load carrying member and jaws as said load member and jaws are moved outwardly and the forward end portions of said jaws are moved further into said groove by said collar, the rear ends of said jaws being



radially outwardly moved about a rear edge portion of said groove as the forward jaw ends are moved into said groove by said collar, the rear ends of the jaws being opened to enable forward movement of the abutment member radially within said jaws, a second spring cooperating with said casing member and with said piston for moving said abutment member forwardly into said jaws after their rear ends have opened, a buffer cylinder within a rear portion of said casing member within which said piston may slide as a buffer, a fluid in said cylinder, a forward end of said cylinder being closed by said partition, said cylinder being provided with a fluid egress passageway whereby the timing of said abutment member's forward movement is delayed, the size of said abutment member being such as to preclude the forward ends of said jaws being opened to release said load member until after the abutment member has been moved forward of the radially inwardly extending portions of the jaw rear ends, whereby a release of load enables the first mentioned spring to move the jaws against the said partition and tilt the jaw forward ends about an intermediate portion of the jaw rear ends as a pivot when contiguous to said partition.

2,949,331
VEHICLE SEAT ASSEMBLY
John Himka, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Mar. 24, 1958, Ser. No. 723,195
2 Claims. (Cl. 296—66)

1. In a vehicle body of the type including a floor having an elevated floor portion, the combination comprising, a vehicle seat including a seat bottom and a seat back, means mounting said seat back on said body for movement between a normal upright position wherein said seat back extends upwardly above said elevated floor portion adjacent thereto and a folded position wherein said seat back is located above said seat bottom substantially flush with said elevated floor portion and spaced therefrom, a floor panel pivoted to said body on an axis adjacent said elevated floor portion and movable between a normal upright position wherein said panel extends upwardly above said elevated floor portion adjacent said seat back and an operative position wherein said panel is located in the space between said folded seat back and said elevated floor portion substantially flush with each,



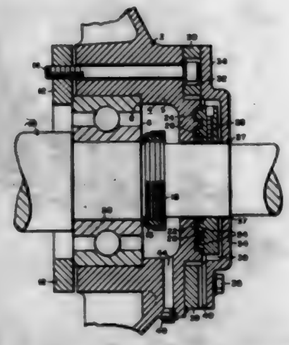
and link means having one end connected to said panel at a point above said axis when in upright position and having fixed at the other end pivot means connected to said back for moving said panel between said upright and operative position as an incident to folding movement of said seat back.

2,949,332
DEVICE FOR DISMOUNTING AND MOUNTING TIRE RIMS
Irven C. Madsen, Burbank, S. Dak.
Filed Feb. 28, 1958, Ser. No. 718,243
2 Claims. (Cl. 301—11)



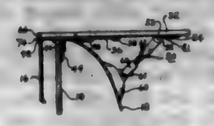
1. A device for dismounting and mounting a tire rim comprising a disc, a tire rim mounted thereon, said disc including an annular flange adapted to engage the inner annular side of said rim, a plurality of radially positioned bars, keepers attached to said disc through which said bars pass, an outwardly movable centrally positioned member to which said bars are pivotally attached, the outer terminals of said bars being adapted to engage against outer portions of said rim to thereby lock said rim to said disc, said centrally positioned member having an opening, a bolt received through said opening, said bolt having a head bearing against said centrally positioned member, a collar attached to said bolt and being positioned adjacently to said centrally positioned member, cross straps secured to said disc, said bolt being threadably engaged with the central portions of said cross straps, said disc including an outer annular flange attached thereto, said outer flange having slots receiving the terminals of said bars, said bar terminals being arcuate to snugly receive said rim portions.

2,949,333
WATERTIGHT BEARING HOUSING CONSTRUCTION FOR DYNAMOELECTRIC MACHINES
Jeanne M. Lesinski, Buffalo, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 1, 1958, Ser. No. 764,707
3 Claims. (Cl. 308—187.1)



1. In a dynamoelectric machine including an end bracket having a bearing cavity, a shaft extending through said end bracket, a bearing within said cavity rotatably supporting said shaft, a bearing plate on the inner side of said bearing, bolts extending through said end bracket securing said bearing plate against said bearing, a flinger mounted on said shaft, said flinger and the outboard side of the end bracket cooperating to form a close running seal, an annular member secured to the end bracket, said annular member having open ended recesses, said bolts having their heads completely within said recesses, a saucer-shaped plate secured to said annular member and covering the flinger and said openings, said plate having a close clearance with said shaft.

2,949,334
CAR WINDOW PLATFORM AND ARM REST FOR CAR
Paul M. Amerpohl, 2822 Southridge Drive, South Bend, Ind.
Filed Dec. 22, 1958, Ser. No. 782,157
6 Claims. (Cl. 311—22)



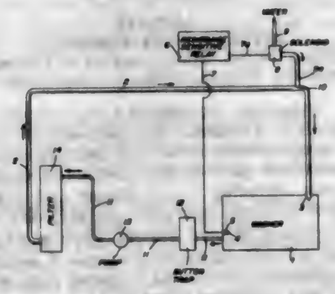
1. A window ledge device for automobile having windows adapted to roll down into the door or side, comprising a horizontal stationary platform, brackets secured to the under side of said platform and extending inwardly and downwardly for engaging a portion of the automobile structure adjacent a window, a leg for supporting the outside edge of said platform, a fixture adjustable transversely of said platform for pivotally attaching one end of said leg to the underside of said platform near the outside edge thereof, a suction cup pivotally attached to the other end of said leg for gripping an outside surface of the automobile, a magnet mounted along the inner edge of the platform on the underside thereof, a leaf positioned along the inner edge of said platform and lying across the top of the window when the latter is in its fully opened position, hinges pivotally connecting the leaf to said platform to permit said leaf to fold upwardly and outwardly when the window is raised, a spring for urging said leaf to its first mentioned position, and a support attached to the underside of said leaf for supporting the free edge thereof when the leaf is across the top of the window.

CHEMICAL

2,949,335
TREATMENT OF TANNED HIDES AND LEATHER WITH POLYMERS OF VINYL AND DIENE MONOMERS, EMULSIFIERS AND TANNING AGENTS
Gustav Mauthe, Opladen, Wilhelm Graulich, Leverkusen-Bayerwerk, and Heinz Röhling, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Mar. 7, 1956, Ser. No. 569,970
Claims priority, application Germany Mar. 11, 1955
4 Claims. (Cl. 8—94.23)

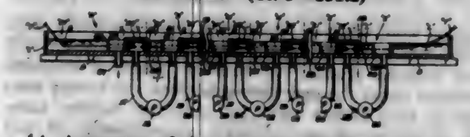
1. The process which comprises contacting tanned hides and leather with an aqueous emulsion of a member selected from the group consisting of homopolymers and copolymers of vinyl- and diene-monomers and with at least 2% of a member selected from the group consisting of anionic, non-ionic, and cationic emulsifiers in the presence of at least one tanning agent selected from the group consisting of anionic vegetable and synthetic tanning agents, said synthetic tanning agents being phenolic-hydroxyl-group-containing and sulfonic-acid-group-containing tanning agents, said contacting being conducted in a medium selected from the group consisting of a neutral, an acid, and a weakly alkaline medium, so as to preserve the acidity of the leather.

2,949,336
METHODS AND APPARATUS FOR DRY CLEANING
Edwin B. Michaels, Stamford, Conn., and Morris U. Cohen, Brooklyn, N.Y., assignors to Stamford Chemical Company, Stamford, Conn., a corporation of Connecticut
Filed May 28, 1956, Ser. No. 587,620
7 Claims. (Cl. 8—142)



1. A process for enhancing the dry cleaning of garments and fabrics by the regulation and control of water added to a detergent charged organic cleaning solvent system which comprises introducing soiled garments into a washing zone, subjecting said garments to the washing action of an organic cleaning solvent containing detergent while introducing water therein; regulating the incorporation of water in said solvent system so as to establish and maintain a predetermined terminal R.H. of the garments in the solvent cleaning zone of from about 60% to 80% and maintaining said predetermined relative humidity by incorporating a water sensing responsive device directly therein, said responsive device comprising an inert, integral, ionic-modified-surface dielectric synthetic resin material.

2,949,337
WASHING TOW BUNDLES OF SYNTHETIC FIBERS
Charles F. Oldershaw, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed June 24, 1957, Ser. No. 667,655
14 Claims. (Cl. 8—151.2)

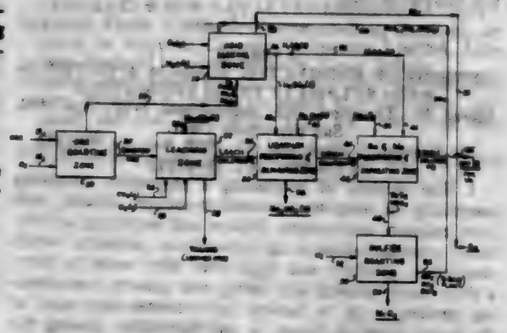


14. Apparatus of the character described and for the purposes indicated comprising a pan for containing an elongate bath of beneficial treating liquid for textile fibers; tow-advancing means for longitudinally passing a tow bundle of textile fibers in and through said bath; pump means for admitting fresh treating liquid at one end of said bath and circulating it therethrough in a path of flow generally countercurrent to said tow bundle; a sequential spaced plurality of liquid-confining chambers formed in and physically dividing said pan with adjacent open sections therebetween and at the tow-introducing end of said bath, each of said chambers having a pair of apertures formed one in each of their sides that extend across said pan, each of said apertures in said chambers being in liquid-transmitting communication with the adjacent open sections of said bath-containing pan between said chambers and being further adapted to longitudinally accommodate and transmit said tow bundle in submersion in said bath when it is being passed therethrough; a plurality of conduit means, each of said conduit means leading from one of said chambers into the bottom of the adjacent open section in said bath-containing pan toward the tow-introducing end of said bath, each of said conduit means being adapted to pass liquid from each of said open sections to each of said chambers adjacent thereto in the same direction as the general path of circulation of said liquid through said bath; a pump in each conduit for transmitting liquid in the indicated direction in each of said conduits; and a wier-like spillway at about the point of communication of each of said conduit means with each of said open sections for withdrawing liquid from each of said open sections into each of said conduits.

2,949,338
PREVENTING CORROSION OF FERROUS METAL SURFACES IN CONTACT WITH WATER
Carl B. Linn, Riverside, and Jerome A. Vesely, Park Ridge, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed May 9, 1957, Ser. No. 658,004
9 Claims. (Cl. 21—2.7)

1. The method of retarding corrosion of a ferrous metal upon contact with water which comprises effecting said contact in the presence of a water soluble corrosion inhibitor comprising an alkali metal salt of an aryl-1-desoxy-alduronic acid.

2,949,339
METHOD FOR THE RECOVERY OF URANIUM, SELENIUM AND MOLYBDENUM
Orrin F. Marvin, Cottonwood, Ariz., assignor to A. E. Butterfield, Tucson, Ariz., and A. K. Swann, Evansville, Ind.
Filed June 18, 1957, Ser. No. 666,431
15 Claims. (Cl. 23—14.5)



1. A process for the recovery of uranium, selenium and molybdenum values from composite ores including uranium oxides, molybdenum and selenium sulphides, water-insoluble molybdates, selenates, selenides, and selenites, which comprises: roasting said ore in the presence of an oxidizing gas at a temperature of between 400° and 800° C.; leaching the roasted ore with a hot aqueous alkali metal carbonate solution containing carbon dioxide and oxygen gases to form a first leach solution and tailings; selectively precipitating the uranium values from said first leach solution, the remaining solution including selenium and molybdenum values; jointly precipitating the selenium and molybdenum values from said remaining leach solution; and roasting said selenium and molybdenum precipitates at a temperature sufficiently high to decompose said selenium precipitate and to volatilize the selenium for subsequent recovery, said temperature being below that necessary to volatilize the molybdenum from its molybdenum precipitate to thereby separate the selenium values from the molybdenum values.

2,949,340
METHOD FOR THE RECOVERY OF ALKALINE SOLUTIONS CONTAINING GERMANIUM
Oskar Römer, Goslar, Germany, assignor to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Sept. 6, 1955, Ser. No. 532,752
1 Claim. (Cl. 23—51)

A method of separating and recovering germanium, in the form of ammonium germanate, from alkaline germanium-bearing solutions, comprising the step of admixing ammonium chloride with such solutions to precipitate out substantially all of the germanium in the form of ammonium germanate.

2,949,341
CRYSTALLIZATION
Charles P. Green, Memphis, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Oct. 15, 1957, Ser. No. 690,196
2 Claims. (Cl. 23—79)

1. In a continuous process for producing crystalline sodium cyanide wherein hydrogen cyanide, sodium hydroxide and water are continuously supplied to the process to produce sodium cyanide in solution, water is continuously evaporated from the sodium cyanide solution to produce a slurry of sodium cyanide crystals in mother liquor, the crystals are continuously separated from the

slurry by filtration with a rotary vacuum filter to form a filter-dewatered cake of sodium cyanide crystals and retained mother liquor, the method for improving the dewaterability of the filter cake to markedly reduce the amount of retained mother liquor which comprises controlling the iron content of said sodium cyanide solution to produce a filter cake containing a maximum of 22 parts per million of iron.

2,949,342

METHOD OF PRODUCING SODIUM AND POTASSIUM SULPHATE FROM PEGMATITE

Alfred M. Thomsen, 265 Buckingham Way, Apt. 402, San Francisco, Calif.

No Drawing. Filed Mar. 27, 1958, Ser. No. 724,252
2 Claims. (Cl. 23—121)

1. The method of processing a pegmatite, consisting essentially of aluminum-potassium-sodium silicate, with iron, calcium, magnesium, lithium and beryllium as combined complex silicates in subordinate amounts, which comprises; grinding said pegmatite with water to form a thin slurry; passing said slurry over gravity concentrating devices so as to remove as a concentrate most of the heavy minerals found in said pegmatite; passing the tailings from said gravity concentration over flotation devices to remove at least a portion of the free silica, quartz, contained therein; commingling the residual pegmatite minerals, after such purification and constituting the bulk of the original pegmatite, with one-fourth of its weight of carbon and with a mixture of sodium and potassium sulphates having the same sodium-potassium ratio as that of the purified pegmatite, said mixture of sodium and potassium sulphates being obtained and re-cycled from a later step in the process, the amount of such additive sulphates being approximately equal to weight of the commingled pegmatite; drying said mixture to produce a lumpy product; fusing said dried product with electrically generated heat to yield a complex silicate slag and a gaseous mixture of sulphur and carbon monoxide; burning said gaseous mixture with admixture of air to yield a gas containing sulphur dioxide and converting said sulphur dioxide into sulphuric acid of approximately 50° Bé.; grinding said complex silicate slag to a finely ground condition commingling said acid with the said finely ground complex silicate slag thus converting the resident metals into sulphates with attendant liberation of silica; commingling said sulphated material with water to produce a solution of metallic sulphates and insoluble, hydrated silica; separating said silica; commingling the solution of metallic sulphates with sufficient alkali metal carbonate to precipitate iron and aluminum as insoluble compounds and separating said insolubles; commingling the resultant solution with alkali metal hydroxide to precipitate beryllium as hydroxide and removing said hydroxide; commingling the resultant solution with a water-soluble, alkali metal phosphate to precipitate lithium as phosphate, and removing said phosphate; re-cycling such an amount of the residual solution, after the removal of lithium phosphate, as necessary to fulfill the requirements of the previous addition of alkali metal sulphates as previously specified, the unused remainder serving as a source of the sulphates of potassium and sodium.

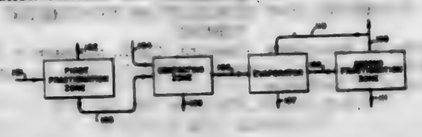
2,949,343

PURIFYING HYDROGEN PEROXIDE

George Clement Hood, Orinda, Calif., Randolph Eugene Smith, Anacortes, Wash., and Gino John Pierotti, El Cerrito, Calif., assignors to Shell Oil Company, New York, N.Y., a corporation of Delaware

Filed Sept. 6, 1955, Ser. No. 532,386
10 Claims. (Cl. 23—207)

1. The method of purifying aqueous hydrogen peroxide solution of at least 20% hydrogen peroxide content containing as impurities lower aliphatic alcohol, lower aliphatic carbonyl compound corresponding to the alcohol, and organic impurities comprising other oxygenated organic compounds than the alcohol and carbonyl compound and including organic peroxidic materials of divergent volatilities and stabilities, which comprises fractionally distilling said solution in a fractionation zone to take impurities comprising said lower aliphatic alcohol and said corresponding carbonylic compound overhead and to leave as bottoms product an aqueous solution of hydrogen peroxide comprising residual organic impurities comprising said organic peroxidic materials of divergent volatilities and stabilities, passing said distillation bottoms into an extraction zone, intimately con-



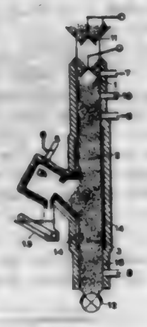
tacting said bottoms product in said extraction zone with a polar organic solvent substantially immiscible with said bottoms product, substantially inert to hydrogen peroxide under the operating conditions and having from four to eight carbon atoms per molecule, thereby forming an extract phase consisting predominantly of said polar organic solvent comprising said residual organic impurities comprising said organic peroxidic materials of divergent volatilities and stabilities and an aqueous raffinate phase consisting predominantly of aqueous hydrogen peroxide in said extraction zone, separately withdrawing said raffinate and said extract phases from said extraction zone, and distilling said raffinate phase to recover hydrogen peroxide as an aqueous hydrogen peroxide fraction therefrom.

2,949,344

GRAPHITIZING RESIDUES OF THE THERMAL DECOMPOSITION OF CARBONACEOUS MATERIALS

Heinrich Macura, 3 Neckarstrasse, Essen, Ruhr, Germany

Filed Sept. 6, 1957, Ser. No. 682,521
5 Claims. (Cl. 23—209.1)



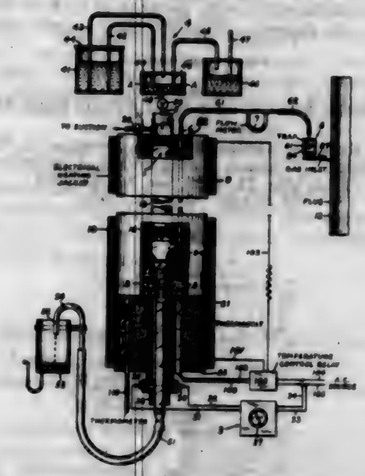
1. A process for graphitizing solid carbonaceous residues resulting from the thermal decomposition of carbonaceous materials comprising the steps of passing the solid carbonaceous residue to be graphitized in succession through a preheating zone having an inlet end, a heating and graphitizing zone and a cooling zone having an outlet end, all of said zones being located in a furnace in which the heating and graphitizing zone of the furnace is lined with carbon material resistant to the action of hot combustible reducing gases, producing hot combustible reducing gases outside the furnace for heating the solid carbonaceous residues by interacting oxygen with carbonaceous material at temperatures above 1600° C., passing the resulting hot fresh heating gases into the furnace in the heating and graphitizing zone and into direct contact with solid carbonaceous residue therein, said heating gases comprising hot combustible gases having a reducing action and a temperature above 1600° C. sufficient to effect graphitization of said carbonaceous residue in the heating and graphitizing zone, passing the hot combustible reducing gases introduced into the furnace through the heating and graphitizing zone in a direction countercurrent to the passage of the carbonaceous residue to be graphitized and in direct contact therewith and effecting graphitization thereof, passing the hot gases leaving the heating and graphitizing zone through the preheating zone in contact with the carbonaceous residue therein and preheating the carbonaceous residue to be graphitized and cooling the gases contacted therewith, and discharging the combustible reducing gases contacted with the residue in the preheating zone from its inlet end and introducing them into the outlet end portion of the cooling zone in contact with the graphitized material passing therethrough and thereby effecting cooling of the hot graphitized material with the combustible reducing gases.

2,949,345

SULFUR DIOXIDE DETERMINATION

James K. Clauss, Palo Alto, Calif., assignor to Allied Chemical Corporation, a corporation of New York

Original application June 20, 1949, Ser. No. 100,269. Divided and this application Dec. 24, 1956, Ser. No. 630,168
6 Claims. (Cl. 23—232)



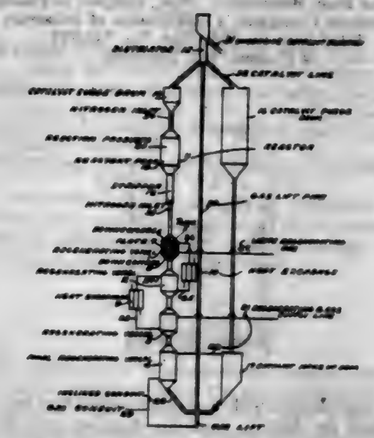
1. A method of determining the concentration of sulfur dioxide in a flowing gas mixture that is essentially free from other constituents which dissolve in water to form an electrolyte which comprises passing the gas mixture in intimate contact with a solution of sulfur dioxide in water of known electrical conductivity while maintaining a substantially constant temperature and pressure, controlling the rate of passage of the gas mixture and the relative amounts of the gas mixture and aqueous solution of sulfur dioxide to dissolve a portion of the sulfur dioxide in the solution and leave a substantial portion of the sulfur dioxide in the gas mixture undissolved, maintaining contact of the gas mixture with the aqueous solution of sulfur dioxide for sufficient time to establish substantial equilibrium between the resulting aqueous solution of sulfur dioxide and said gas mixture with respect to sulfur dioxide, separating the resulting aqueous solution of sulfur dioxide from the gas mixture, and measuring the electrical conductivity of the resulting separated aqueous solution of sulfur dioxide while substantially at said temperature and pressure, as an index of the concentration of sulfur dioxide in the gas mixture.

2,949,346

APPARATUS FOR CATALYST REGENERATION

Reginald Edwin Goddard, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

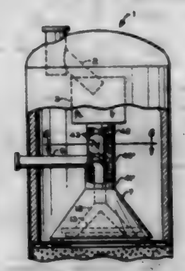
Original application June 12, 1953, Ser. No. 361,327, now Patent No. 2,897,157, dated July 28, 1959. Divided and this application Sept. 13, 1957, Ser. No. 683,960
Claims priority, application Great Britain July 12, 1952
1 Claim. (Cl. 23—288)



In an apparatus for effecting the regeneration of a body of carbonaceous material coated catalyst by a co-current stream of oxygen-containing gas, which comprises in combination with a cylindrical stripping vessel: at least three separate regenerating vessels successively disposed vertically below said stripping vessel, short vertical conduit means interconnecting said stripping vessel to the uppermost of said regenerating vessels, for permitting said catalyst to flow downwardly from said stripping vessel into the uppermost regenerating vessel, each of said regenerating vessels comprising a substantially cylindrical central body and substantially conical top and bottom portions, short vertical conduit means, arranged to interconnect the bottom conical portion of each upper regenerating vessel and the top conical portion of the adjacent lower regenerating vessel, to permit downward catalyst flow through said regenerating vessels, entry plate means including a plurality of pendant downcomers, said plate being disposed within and adjacent the top of each of said cylindrical bodies, said entry plate means permitting said catalyst to enter downwardly under gravity into each of said cylindrical bodies, gas inlet means, for introducing said oxygen-containing gas stream into said cylindrical bodies immediately below said entry plate means and above the lower end of said pendant downcomers, egress plate means including a plurality of pendant downcomer egress means, said egress plate being disposed within and adjacent the bottom of each of said cylindrical bodies, said egress plate means permitting said catalyst to egress downwardly under gravity from said cylindrical bodies, gas exit means, for removing said oxygen-containing gas stream from said cylindrical bodies immediately below said egress plate means and above the lower end of said pendant downcomers, supply gas con-

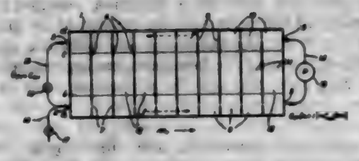
duit means connected to said gas inlet means of the lowermost of said regenerating vessels, gas conduit means arranged externally of said regenerating vessels connecting said gas exit means of each lower regenerating vessel to said gas inlet means for each next higher regenerating vessel to permit external upward flow of said gas stream between adjacent regenerating vessels, a heat exchanger disposed on said gas conduit means for controlling the temperature of said gas stream, and exit gas conduit means connected to said gas exit means of the uppermost regenerating vessel for removing said gas stream from said apparatus.

2,949,347
HYDROCARBON CONVERSION REACTION VESSEL
Joe Van Pool, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed June 13, 1958, Ser. No. 741,919
4 Claims. (Cl. 23—288)



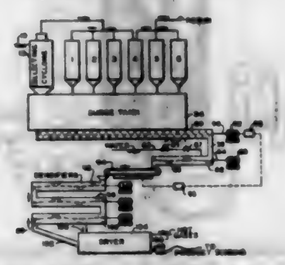
1. In combination with a reaction vessel that has conduit means for feeding materials thereinto and for removing materials therefrom, an improved construction of apparatus for disposition inside said reaction vessel comprising a first frusto-conically shaped hollow member disposed with its axis in a vertical direction and with the larger end lowermost; a second frusto-conically shaped hollow member with its larger end lowermost and its axis extending vertically, disposed coaxially within and being smaller than said first member, to thereby define an annular flow passage between said members; a chamber disposed above said first and second frusto-conically shaped hollow members; an elbow-shaped conduit comprising a horizontal portion that extends outside of said vessel and that is disposed at a level between the upper end of said first member and said chamber, and a vertical portion disposed coaxially with said first and second frusto-conically shaped hollow members that is connected between said horizontal portion and the upper end of said second frusto-conically shaped hollow member; the smaller upper end of said first frusto-conically shaped hollow member being disposed above the uppermost end of said second frusto-conically shaped hollow member to thereby define an annular space between the former and said vertical portion of said elbow-shaped conduit; and a vertically extending conduit means, surrounding at least a part of the vertical portion of said elbow-shaped conduit, for connecting said chamber to the upper end of the said first frusto-conically shaped hollow member, having a uniform cross-section of smaller area than said annular space extending vertically down from said chamber to at least the level where said elbow-shaped conduit extends horizontally and that increases to the cross-sectional area of said annular space between said level and said upper end of said first frusto-conically shaped hollow member; said elbow-shaped conduit being one of said conduit means for feeding materials.

2,949,348
SEPARATION PROCESS
William G. Pfann, Far Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 23, 1958, Ser. No. 730,458
10 Claims. (Cl. 23—310)



1. The method for redistributing ingredients of a fusible material containing at least one solute having a liquid-solid distribution coefficient which differs from unity in such material, comprising establishing in a solid phase of the said fusible material at least two moving solid-liquid interfaces having distinct paths of traversal and establishing at at least two positions along each of the said traversal paths a material transfer path transverse to the said traversal paths, the relationship between traversal paths and transfer paths being such that the said at least two solid-liquid interfaces move unidirectionally with respect to the said transfer paths, the said transfer paths being in opposite direction relative to the said traversal paths, and recycling at least a portion of the material withdrawn from the terminus of each of the said transfer paths through each of the other transfer paths.

2,949,349
CARBON BLACK WET PELLETING PROCESS AND APPARATUS
William R. King, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 20, 1957, Ser. No. 647,408
15 Claims. (Cl. 23—314)



6. A process for producing carbon black in pelleted form comprising passing an effluent gaseous suspension of carbon black from at least one carbon black furnace thru a gas-solids separation zone so as to remove the major portion of the carbon black; passing the effluent gas from said separation zone thru a first plurality of bag filters in parallel to remove the major portion of the residual carbon black; passing recovered carbon black to a wet pelleting mill and wet pelleting same therein; drying the effluent pellets; separating oversize pellets and fines from said effluent pellets; suspending said fines and oversize pellets in a gaseous stream as rerun carbon black; passing said stream thru a second plurality of bag filters in parallel, including one filter in said first plurality; preventing backflow from the common filter to other filters

in the first plurality; and passing the recovered rerun carbon black to said pelleting mill as a portion of the feed thereto.

9. Apparatus for producing wet carbon black pellets at a substantially constant rate comprising in combination, a pellet mill having an inlet line for carbon black and an effluent line for pellets; a water line leading into said mill having a flow control valve therein; a carbon black feeder in said inlet line; a motor arranged to drive said feeder; weighing means in said effluent line sensitive to the weight rate of pellets passing therethru which emits a signal of an intensity proportional to said weight rate; speed control means on said motor; control means directly responsive to said signal in direct control of said speed control means, adapted to maintain said weight rate substantially constant.

15. A process for pelleting flocculent carbon black with water comprising continuously feeding a stream of said black into a wet pelleting zone by means of a mechanical feeder; continuously passing a separate stream of water into said zone in suitable proportion to said black to form wet pellets; mixing and agitating the water and black in said zone so as to form a continuous effluent stream of wet pellets; continuously passing all of said effluent stream thru a weighing zone to determine the weight rate of producing wet pellets; and maintaining the proportions of water and black suitable for good pelleting by feeding a constant stream of water and regulating the rate of feeding said black by varying the rate of said mechanical feeder in response to said weight rate so as to maintain said weight rate of producing wet pellets substantially constant.

2,949,350
PROCESSING OF LIGNIT.
Robert V. Heinze, Whiting, Ind., and Lloyd H. Reyerson, St. Paul, Minn., assignors to Submerged Combustion, Inc., Hammond, Ind., a corporation of Indiana
Filed Dec. 23, 1954, Ser. No. 477,282
6 Claims. (Cl. 44—50)

1. A process of preparing lignite products which comprises subjecting lignite containing its natural moisture to partial oxidation with an oxidizing gas selected from the group consisting of oxides of nitrogen and halogens, to produce water-soluble carboxylic acids, and recovering said carboxylic acids.

2,949,351
HEAT-RESISTANT ABRASIVE WHEELS
Louis E. Viglietura, Jr., Worcester, Mass.
No Drawing. Filed Jan. 2, 1958, Ser. No. 706,542
4 Claims. (Cl. 51—298)

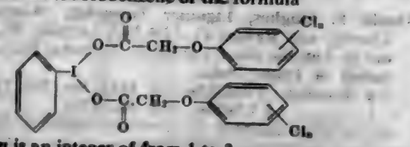
2. A sulfur-free abrasive wheel which consists of abrasive granules and a bond, said bond comprising essentially a heat-hardenable resin, and as a filler mixture about 20% to 38% by volume of cryolite, about 5% to 15% by volume of ammonium chloride, and about 2% to 15% by volume of chilled iron grit, the total volume of said filler mixture being from about 40% to 45%.

2,949,352
PROPELLANT COMPOSITION
Frank B. Cramer, Reseda, Calif., assignor to North American Aviation, Inc.
No Drawing. Filed Oct. 1, 1956, Ser. No. 612,967
20 Claims. (Cl. 52—.5)

1. A composition consisting essentially of (1) from about 50 to about 10 weight percent of a silicone rubber and (2) from about 50 to about 90 weight percent an inorganic perchlorate intimately distributed throughout said polymerized composition.

2,949,353
CHLOROPHENOXY ACETATES OF IODOSOBENZENE AND HERBICIDAL COMPOSITIONS AND METHODS EMPLOYING THE SAME
Robert E. Miller, Kettering, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Aug. 9, 1957, Ser. No. 677,218
8 Claims. (Cl. 71—2.6)

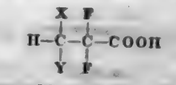
3. A herbicidal composition comprising an oil-in-water emulsion of an iodosobenzene of the formula



in which *n* is an integer of from 1 to 3.

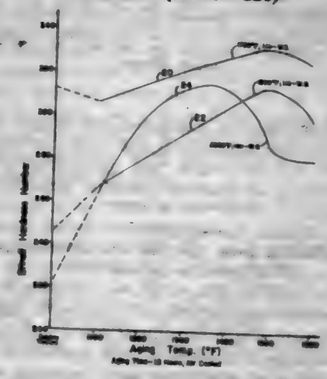
2,949,354
METHOD AND COMPOSITION FOR THE CONTROL OF UNDESIRED VEGETATION
Charles W. Todd, Thornbury Township, Delaware County, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 24, 1956, Ser. No. 605,946
6 Claims. (Cl. 71—2.7)

1. The method for the control of undesired vegetation comprising applying to the locus to be protected, in an amount sufficient to exert herbicidal action, a compound represented by the formula



and the salts, esters, N-unsubstituted amides and lower alkyl amides thereof, wherein X is selected from the group consisting of fluorine and chlorine, and Y is selected from the group consisting of hydrogen, fluorine, chlorine, monovalent alkyl groups of less than 12 carbon atoms, monovalent cycloalkyl groups of less than 12 carbon atoms, monovalent chloroalkyl groups of less than 12 carbon atoms and monovalent fluoroalkyl groups of less than 12 carbon atoms.

2,949,355
HIGH TEMPERATURE ALLOY
Wasil W. Dyrkacz, Newtonville, Edward E. Reynolds, Loudonville, Richard R. MacFarlane, Cohoes, and Richard K. Pitler, Albany, N.Y., assignors to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania
Filed July 27, 1955, Ser. No. 524,679
5 Claims. (Cl. 75—126)



5. A precipitation hardenable austenitic iron base alloy consisting of 0.30% to 0.35% carbon, 0.20% to 0.75%

silicon, 16.0% to 20.0% manganese, 11.5% to 13.5% chromium, 2.0% to 4.0% molybdenum, 0.60% to 0.95% vanadium, 0.10% to 0.25% nitrogen and the balance iron with incidental impurities.

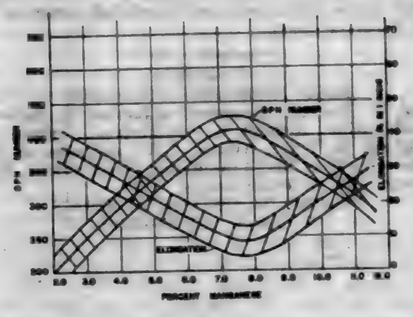
2,949,356
FERROUS ALLOYS AND ARTICLES MADE THEREFROM
David P. Hughes, Ligonier Township, Westmoreland County, and Stewart G. Fletcher, Latrobe, Pa., assignors to Latrobe Steel Company, Latrobe, Pa., a corporation of Pennsylvania
No Drawing. Filed Mar. 28, 1958, Ser. No. 724,503
8 Claims. (Cl. 75—126)

1. An alloy adapted for forming metals at high temperatures comprising about 0.65% to about 3.0% carbon, about 3.0% to about 10.0% vanadium, less than about 2% manganese, about 3.0% to about 8.0% chromium, up to about 2% tungsten, about 0.50% to 3.0% molybdenum, up to about 2% silicon, up to about 3% nickel, up to about 0.25% sulphur and the balance substantially iron with residual impurities in ordinary amounts in which alloy the vanadium appears in amounts within the foregoing limits such that the

$$\text{Carbon} - \frac{\text{vanadium} - 1}{4.2}$$

is within the limits of about 0.18% to about 0.86%.

2,949,357
HIGH PURITY TITANIUM-MANGANESE ALLOY
Leroy D. Resnick, Silver Spring, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Filed Jan. 16, 1958, Ser. No. 709,275
1 Claim. (Cl. 75—175.5)



An alloy of titanium, manganese and oxygen with substantially no other constituents, the content of manganese being about 8% by weight, and the content of oxygen corresponding to an electrode potential measured against pure titanium of 50–80 mv. at 1000° C. in an electrolyte of sodium chloride having dissolved therein from 1.0 to 6.0% titanium as lower chloride with an average valence of from 2.0 to 2.6, metallic sodium from 0.1 to 2% and from 0.1 to 2.0% manganese as lower chloride, said alloy, when examined metallographically, having a single structural constituent which constituent has a cubic structure corresponding to beta titanium with manganese in solid solution, said alloy having the same hardness within 30 numbers DPH when cast, quenched from 850° C. and furnace-cooled from 850° C.

2,949,358
REINFORCED HEAT RESISTANT REFRACTORY-METAL ALLOYS
Guy B. Alexander and Paul C. Yates, Brandywine Hundred, and Sherwood F. West, Christiana Hundred, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Sept. 23, 1957, Ser. No. 685,423
16 Claims. (Cl. 75—176)

1. A composition consisting essentially of a metal selected from the group consisting of molybdenum, rhenium, and tungsten, having uniformly dispersed therein sub-micron sized particles of a refractory metal oxide having a melting point above 1000° C. and a free energy of formation at 1000° C. of from 60 to 150 kilogram calories per gram atom of oxygen.

2,949,359
PROCESS FOR DEVELOPING SILVER HALIDE EMULSIONS
Elkan R. Blout, Belmont, Milton Green, Newton Highlands, and Myron S. Simon, Newton Center, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
No Drawing. Filed Aug. 26, 1957, Ser. No. 680,405
5 Claims. (Cl. 96—66)

1. A process for developing a photosensitive silver halide emulsion which comprises treating an exposed silver halide emulsion with an aqeuous alkaline solution of a compound of the formula:

$$Y-CH_2CH-NH-CH-R^3-Y$$
$$\quad\quad\quad R^1 \quad\quad R^2$$

wherein Y is selected from the group consisting of unsubstituted, alkyl-substituted and halogen-substituted ortho and para dihydroxyphenyl groups; R^1 is selected from the group consisting of hydrogen, methyl and ethyl groups; R^2 is selected from the group consisting of hydrogen and alkyl groups; and R^3 is an alkylene group, for a sufficient time to develop the latent image to silver.

2,949,360
PHOTOGRAPHIC COLOR FORMER DISPERSIONS
Donald B. Julian, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Aug. 31, 1956, Ser. No. 607,257
3 Claims. (Cl. 96—97)

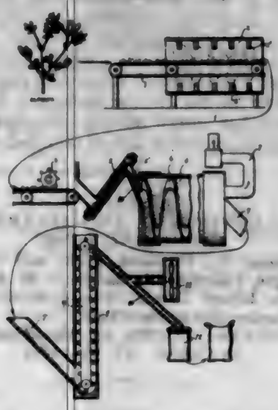
1. The method of incorporating a color coupler in a gelatino-silver halide emulsion, which comprises dissolving a water-insoluble color-forming compound capable of reacting with a primary aromatic amino developing agent on photographic development to form a dye, in a solvent including (*a*) at least an auxiliary solvent having a solubility of at least 2.5 parts of solvent in 100 parts of water and not more than 100 parts of solvent in 100 parts of water, said auxiliary solvent being selected from the group consisting of ethyl acetate, isopropyl acetate, ethyl-propionate, β-ethoxyethyl acetate, β-butoxyethyl β-ethoxyethyl acetate, methyl-n-propyl ketone and di(tetrahydrofurfuryl) adipate and (*b*) less than about one part per part of color-forming compound of a substantially water-insoluble, low molecular weight, organic crystalloidal solvent for the color-forming compound, said crystalloidal solvent having a boiling point above about 175° C. and a solubility of less than about 0.1 part of solvent in 100 parts of water and having a high solvent action for the color-forming compound and for dyes formed therefrom, and being permeable to photographic developer oxidation products, dispersing the solution in aqueous gelatin previously approximately saturated with at least one of said auxiliary solvents, chilling and setting the gelatin dispersion, removing substantially all of said auxiliary solvent from the dispersion and mixing the dispersion with a gelatino-silver halide emulsion.

2,949,361
PHOTOSENSITIVE COMPOSITIONS
Maynard C. Agens, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Filed Aug. 13, 1956, Ser. No. 603,568
21 Claims. (Cl. 96—115)



1. A photosensitive composition capable of producing a three-dimensional photographic image which comprises the product produced by partially polymerizing to the incipient gel state a mixture comprising (1) a styrene monomer selected from the group consisting of styrene, alkyl ring-substituted styrenes and alkoxy ring-substituted styrenes, (2) a compound copolymerizable with said styrene monomer, which is selected from the group consisting of compounds at least one $CH_2=C<$ group and liquid resinous polyesters of an ethylenically unsaturated dicarboxylic acid and a polyhydric alcohol, (3) a free-radical generating polymerization catalyst and (4) an auric salt.

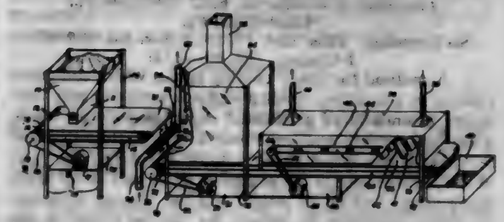
2,949,362
METHOD FOR PRODUCING ANIMAL FEED
John Branom, Wiley, Colo., assignor to Standard Alfalfa Milling Company, Wiley, Colo., a corporation of Colorado
Filed Jan. 19, 1959, Ser. No. 787,565
6 Claims. (Cl. 99—8)



1. A method for producing an animal feed comprising mowing plants, drying said mowed plants under atmospheric conditions, subjecting the mowed plants to steam, chopping the steamed plants into discrete particles, and then drying the chopped steamed particles.

2,949,363
PROCESS FOR INCREASING THE SOLUBILITY OF POWDERED MILK
Ray Hartley Bissell, Hamilton, Ontario, Canada, assignor to Mil-ko Products Limited, Hamilton, Ontario, Canada, a corporation of Canada
Filed Nov. 21, 1955, Ser. No. 547,939
Claims priority, application Canada Feb. 17, 1955
6 Claims. (Cl. 99—56)

1. A process for converting finely divided particles of powdered milk, a substantial proportion of the lactose of which is in the form of the beta anhydride, into readily soluble powdered milk having a larger particle size than said finely divided powdered milk and with a larger proportion of the lactose in the form of the alpha hydrate comprising the steps of forming said finely divided particles of powdered milk into a thin wide continuous screen like stream falling under the influence of gravity, impinging steam in a substantially horizontal direction against a surface of said stream throughout the full width of said surface while the stream is falling to contact the steam substantially simultaneously and for a short period with sub-



stantially all of the particles in a transversely extending portion of the stream thereby converting the finely divided particles into larger particles of powdered milk the lactose of which is to an increased extent in the form of the alpha hydrate, said large particles immediately passing under the combined influence of gravity and the force of said steam to a position where the large particles are out of contact with said steam and immediately removing said larger particles from said position.

2,949,364
METHODS OF MAKING BEVERAGE CONCENTRATE
Eugene N. Bilenker, Livingston, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 9, 1957, Ser. No. 633,216
17 Claims. (Cl. 99—71)

1. In a process for producing a dry soluble coffee powder wherein roasted coffee is contacted with a relatively cool extraction medium in order to prepare a coffee infusion, the resulting coffee infusion is separated from the residue of extracted coffee, and the separated extract is thereafter dried to a powdered coffee product, the improvement comprising subjecting the roasted coffee while being extracted by means of the extraction medium to ultrasonic vibrations.

2,949,365
BREAD DUSTING MIXTURE AND METHOD
Arthur C. Becker, 8724 S. Dalton Ave., Los Angeles, Calif.
No Drawing. Filed Apr. 28, 1958, Ser. No. 731,087
5 Claims. (Cl. 99—118)

1. In a dusting mixture for preventing sticking of baking dough to baking pans, the combination of: oleaginous material selected from the group consisting of substantially saturated edible fats and oils in the form of small semi-solid particles from about 0.0002 to about 0.0007 inch in diameter; and a grain flour having discrete particles from about 0.0029 to 0.0070 inch in diameter, said oleaginous particles being substantially uniformly dispersed throughout the flour.

2,949,366
COLD MILK PUDDINGS AND METHOD OF PRODUCING THE SAME
Austin R. Hunter, La Mesa, and James K. Rocks, San Diego, Calif., assignors to Kelco Company, San Diego, Calif., a corporation of Delaware
No Drawing. Filed Nov. 22, 1957, Ser. No. 698,048
24 Claims. (Cl. 99—131)

1. A new and useful composition suitable for producing a milk pudding comprising a water-soluble algi-

nate; a minor proportion of an edible phosphate solubilizing salt of which the calcium salt is substantially insoluble in water, and of which the cation does not precipitate algin; a slowly soluble edible acidic ingredient, and milk solids.

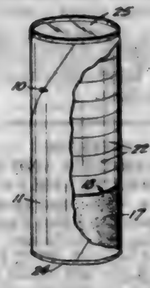
2,949,367
METHOD AND MIX FOR CANDY COATING APPLES
Lawrence S. Goldmeier, 6312 Anderson St., Philadelphia, Pa.
No Drawing. Filed Oct. 17, 1957, Ser. No. 690,662
2 Claims. (Cl. 99—134)

1. A method for candy coating apples which comprises placing in a cooking vessel a homogeneous dry mix consisting essentially of granulated sugar, corn syrup solids, a hardening agent and imitation flavor, the ratio of sugar to syrup solids being about 5 to 1 by weight, the ratio of hardening agent to the combined sugar and syrup solids being about 1 to 96 by weight and the amount of flavoring being sufficient to impart the desired flavor to the mix, adding water in the ratio of about 1 to 6 by weight to the mix in the cooking vessel, heating the thus wetted mix to a temperature of about 300° F., and while the mix thus produced is at said temperature, dipping an apple thereinto and thereafter removing the dipped apple to cool and harden the coating.

2,949,368
PURIFICATION OF FRUIT ESSENCES AND PRODUCTION OF SOLID COMPOSITIONS THEREFROM
Keene P. Dimick, Walnut Creek, and Benjamin Makower, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Original application July 14, 1953, Ser. No. 368,016, now Patent No. 2,904,440, dated Sept. 15, 1959. Divided and this application May 13, 1959, Ser. No. 817,964
2 Claims. (Cl. 99—140)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for purifying and concentrating a volatile flavoring essence being a solution of a minor proportion of flavoring components in a major proportion of water and low molecular weight alcohols which comprises extracting said essence with a non-volatile, oily vehicle in which the flavoring components are soluble but in which water and aqueous alcohol are essentially insoluble, and separating the vehicle extract containing the flavoring components.

2,949,369
COMPARTMENTED DOUGH PACKAGE
Richard J. Zoeller and James R. Henderson, Louisville, Ky., assignors to The Pillsbury Company, a corporation of Delaware
Filed Oct. 29, 1956, Ser. No. 619,041
2 Claims. (Cl. 99—172)



1. A dough product package, comprising a container, a quantity of expansible dough in the container, a quantity of substantially dry and packed edible material in the container and segregated from the dough, a moisture-impervious and circular divider wall in the container and positioned between the dough and dry material, said container including a cylindrical side wall constructed of kraft board material, said side wall having an elongated and circumferentially dispartable zone extending toward the opposite ends thereof from said divider wall, a metallic foil lining on the inner surface of said side wall, rigid covers crimped on the ends of the side wall, the side wall encompassing the divider wall and said foil lining slidably engaging and being crimped around the entire periphery of the divider wall, whereby to prevent migration of moisture from the dough to the dry material and to permit ready and easy access through the can side wall to the dough and dry material.

2,949,370
PACKAGE
William L. Hughes, Norfolk, Va., assignor to Roo-Cool Corporation, Norfolk, Va., a corporation of Virginia
Filed Sept. 23, 1957, Ser. No. 685,699
14 Claims. (Cl. 99—173)



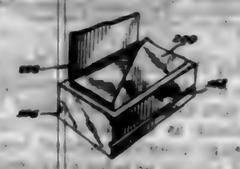
1. A bread package comprising a body wrapper, bread encased by said wrapper portion, said body wrapper being sealed at both ends thereof, said body wrapper having a slot extending completely therearound adjacent one closed end thereof separating said body wrapper into two portions spaced from one another, a pressure-sensitive resealable tape extending completely around the body wrapper along the slot to span same and unite the two portions thereof in spaced relation, the pressure-sensitive surface lying on the inside face of said body wrapper.

2,949,371
CASINGS, METHOD OF, AND APPARATUS FOR PRODUCING SAME
Gustav Freund II, Highland Park, and Joseph John Grabauskas, Chicago, Ill., assignors, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York
Filed Dec. 27, 1955, Ser. No. 555,670
16 Claims. (Cl. 99—176)



1. In a method of producing striped artificial sausage casing, the steps which comprise continuously passing a stream of coagulable cellulosic mass through a passage, continuously incorporating at least one narrow stream of a striping composition in the surface of said mass as it passes through said passage, the base of said striping composition being compatible with said cellulosic mass and containing a material which imparts characteristics different and detectable from said mass, thereafter continuously passing the composite cellulosic mass through an annular passage to form a tubular stream, annularly extruding said tubular stream to form seamless tubing, and then coagulating and regenerating the coagulable cellulose in said tubing.

2,949,372
PACKAGING
George Howard Kraft, Wilmette, Harry W. Greeson, Chicago, and Kenneth Bell, Matteson, Ill., assignors to National Dairy Products Corporation, a corporation of Delaware
Original application June 19, 1951, Ser. No. 232,366, now Patent No. 2,790,287, dated Apr. 30, 1957. Divided and this application May 3, 1954, Ser. No. 432,714
2 Claims. (Cl. 99—178)



1. A method of packaging cheese, which is in a heated, flowable condition, in a flexible wrapper comprising the steps of folding a flat, flexible wrapper into an open fluid receptacle having a bottom wall, upwardly extending side walls, and flaps respectively extending from each of the side walls, supporting the flexible fluid receptacle against collapse incident to the weight of the flowable cheese by placing the flexible fluid receptacle in a rigid mold having internal dimensions such that the flexible fluid receptacle fits snugly into the mold with the flaps extending upwardly beyond the upper edges of the mold, filling the flexible fluid receptacle with heated flowable cheese substantially to the level of the upper edges of the mold while continuing to support the flexible fluid receptacle in the mold, leveling the flowable cheese by placing on the surface thereof a flat, relatively stiff insert having dimensions resulting in engagement along substantially the entire length of each of the sides of the flexible fluid receptacle and by applying pressure to the insert while continuing to support the flexible fluid receptacle within the mold, folding the flaps along and over the respectively adjacent edges of the insert into mutually overlapping positions overlying the insert, and heat sealing the mutually overlapped flaps to each other to complete the package while the overlapping flaps are supported in planar condition on the surface of the flowable cheese by the insert and while continuing to support the flexible receptacle within the mold.

2,949,373
PRESSURIZED POLISHING COMPOSITION
Edward R. Kendall and Gerard W. Meister, Chicago, Ill., assignors to Simoniz Company, a corporation of Delaware
No Drawing. Filed Dec. 29, 1958, Ser. No. 783,079
8 Claims. (Cl. 106—10)

1. A pressurized polish product consisting essentially of about 0.1–25 parts of a propellant that is gaseous at ambient temperatures and atmospheric pressures and about 99.9–75 parts of a polishing composition, the polishing composition consisting essentially of: about 10–30% of finely divided abrasive; about 5–16% of a wax; about 2–12% polydialkylsiloxane; about 40–75% of a hydrocarbon solvent; about 1–4% of an ethylene glycol monoalkyl ether having 1–7 carbon atoms in the alkyl group; and about 1–10% of an oleophilic amorphous thickener dispersible in said solvent, all said parts and percentages being by weight.

2,949,374
POLISHING COMPOSITION
Edward R. Kendall, Chicago, Ill., assignor to Simonis Company, a corporation of Delaware
No Drawing. Filed Dec. 29, 1958, Ser. No. 785,008
15 Claims. (Cl. 106—10)

1. A polishing composition consisting essentially of: about 10–30% of finely divided abrasive; about 5–16% of a wax; about 2–12% of a polydialkylsiloxane; about 40–70% of a hydrocarbon solvent; and about 1–10% of an oleophilic thickener dispersible in said solvent, all said amounts being by weight of said composition.

2,949,375
SILICEOUS CASTING CORES
Raymond Reuter, Orland Park, Ill., assignor to Nalco Chemical Company, a corporation of Delaware
No Drawing. Filed Aug. 20, 1957, Ser. No. 679,128
9 Claims. (Cl. 106—38.3)

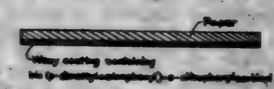
1. The process of producing a siliceous casting core which comprises the steps of blending a foundry sand with from 0.1% to 50% by weight of a silica flour having a U.S. sieve size of at least 80, adjusting the moisture content of such mixture to from 0.5% to 8% by weight by the addition thereto of at least 0.5% by weight of an aqueous colloidal silica sol which has a silica content of from 15% to 16.5% silica as SiO_2, a conductivity of at least 1800 micromhos, a pH of from 8.4 to 10 and a specific gravity of at least 1.047 at 68° F., and then forming these ingredients into a core.

2,949,376
COMPOSITION FOR GLASS TO METAL SEAL
Richard L. Comer, Grand Blanc, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Feb. 2, 1956, Ser. No. 563,102
2 Claims. (Cl. 106—53)

1. A glass for use in glass-to-metal seals having a composition showing upon analysis:

	Percent
SiO_2	30 to 60.
Al_2O_3	3 to 5.
B_2O_3	15 to 22.
PbO	20 to 30.
Alkaline oxide	5 to 12.
Co_2O_3 } Mn_3O_4 }	Present in an amount up to 1.
Alkaline earth oxide	Present in an amount up to 3.
TiO_2	Present in amount up to 2.

2,949,377
TRANSFER COMPOSITION CONTAINING A TRIPHENYLCARBINOL COMPOUND AND PRECIPITATED CALCIUM CARBONATE
David W. Steinhardt, New York, N.Y.; Amos Steinhardt and Franklin A. Goldwater, executors of said David W. Steinhardt, deceased
Filed Oct. 30, 1957, Ser. No. 693,418
2 Claims. (Cl. 106—272)



1. A composition of matter adapted for use as a coloring agent for a transfer duplicating process, comprising a mixture of a colorless dye intermediate triphenylcarbinol compound capable of being converted to a colored form by contact with an acid, a wax, an aliphatic primary amine, and finely divided precipitated calcium carbonate, in a minor amount sufficient to assist in transfer of the composition without undesirable dilution thereof.

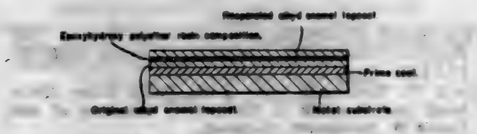
2,949,378
ASPHALT COMPOSITIONS
Per Henning Wilhelm Ågren and Göte Lennart Flemmert, Nynäshamn, Sweden, assignors to AB Nynäs-Petroleum, Nynäshamn, Sweden, a corporation of Sweden
Filed Dec. 6, 1954, Ser. No. 473,356
Claims priority, application Sweden Dec. 8, 1953
6 Claims. (Cl. 106—281)

1. A novel asphaltic composition having improved hardness, strength, and elasticity which comprises between about 75 and 99% by volume of an asphaltic material in admixture with between about 1–25% by volume of a finely divided solid filler, said filler having a mean particle size of within the range of about 0.005 to 0.05 micron and being selected from the group consisting of silicon dioxide, aluminum oxide, titanium dioxide and ferric oxide.

2,949,379
METHOD OF PREPARING FINELY DIVIDED ALUMINA-SILICA PIGMENTS
Mathias P. Boland, Wadsworth, Ohio, assignor to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware
No Drawing. Filed Mar. 18, 1957, Ser. No. 646,556
15 Claims. (Cl. 106—288)

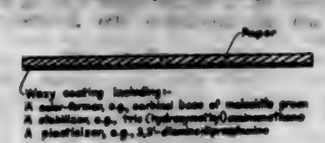
1. The method which comprises partially reacting in aqueous media a finely divided alkaline earth metal silicate having an average ultimate particle size of less than 1 micron with from 30 to 70 percent of stoichiometric of a water soluble aluminum salt having an anion which forms a water soluble alkaline earth metal salt, separating the resulting composition, and reacting said composition with sufficient water soluble aluminum salt to react with at least half the alkaline earth metal oxide present in said composition in aqueous media whereby to form a pigmentary finely divided alumina-silica composition.

2,949,380
COATING COMPOSITIONS CONTAINING EPOXYHYDROXY POLYETHER RESIN AND THE REOPERATION OF ALKYD ENAMELS WITH SAME
Harold Jennings Stuart, Salem, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 21, 1957, Ser. No. 647,569
11 Claims. (Cl. 117—2)



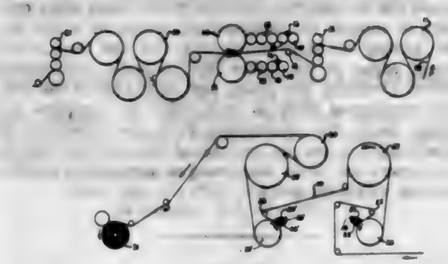
9. A process for reoperating alkyd enamels which comprises applying to the baked surface to be reoperated a coat of a composition consisting essentially of solvent, 100 parts by weight of epoxyhydroxy polyether resin having an epoxide equivalent of at least about 1300 and a melting point of at least about 115° C., curing agent for said epoxyhydroxy polyether resin in an amount chemically combinable with about from 5 to 100% of the epoxy groups in said resin and about from 10 to 25 parts by weight of swellable, organic ammonium-modified, aluminum silicate clay, said epoxyhydroxy polyether resin being present in solution in said solvent, applying a coat of alkyd enamel over said coat of epoxyhydroxy polyether resin composition and making the resulting finishing system.

2,949,381
DUPLICATING SHEET COATED WITH A COLORLESS WAXY TRANSFER MATERIAL
David W. Steinhardt, Rochester, N.Y.; Anna Steinhardt and Franklin A. Goldwater executors of said David W. Steinhardt, deceased
Filed Apr. 4, 1958, Ser. No. 726,582
2 Claims. (Cl. 117—36)



1. A duplicating sheet comprising a layer of sheet material having on one face thereof a coating, the portion of said coating next to said sheet material being a waxy substance containing as its active color-forming ingredient a substantially colorless carbinol base of a color-forming material capable of being developed by acid to a visible color, mixed with 3,3'-diaminodipropylamine as a plasticizer and with a minor quantity of glycerin as a solvent and with tris(hydroxymethyl)aminomethane as a stabilizer, said stabilizer being in such excess quantity with respect to the other ingredients in said coating that it tends to separate into two phases to form a first layer next to said sheet material and an overlying protective layer containing a greater concentration of stabilizer and glycerin than that in said first layer.

2,949,382
METHOD OF MAKING PRINTABLE COATED PAPER
Gilbert K. Dickerman, Frank Kasiakis, and Richard L. Savage, Wisconsin Rapids, Wis., assignors to Consolidated Water Power & Paper Company, Wisconsin Rapids, Wis., a corporation of Wisconsin
Filed Feb. 28, 1958, Ser. No. 718,367
5 Claims. (Cl. 117—65)

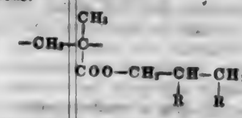


1. The method of making printable coated paper having a high degree of smoothness, brightness, opacity, and increased ink holdout, which comprises first applying onto the surface of a forwardly moving uncoated dry paper web, in a continuous paper-making process at paper-making speed, an aqueous coating composition comprising mineral pigment and adhesive by transferring said composition thereto from a resilient rotating surface, coated with a metered amount of said composition providing less than the desired final weight of coating but sufficient to prime-coat the web by covering fibers thereof and filling voids and surface irregularities therein to leave a level surface of substantially uniform receptivity and limited penetrability for a sequentially applied top coating, drying the resulting coated and filled web, carrying it forward by a resilient downwardly moving rotating surface and through a pool of a top aqueous coating composition of relatively lower viscosity than said first coating composition comprising mineral pigment and a proportion of a compatible adhesive to mineral pigment relatively lower than that in said first composition but sufficient to bind the pigment particles therein together and to the prefilled paper web and providing the balance of the desired final amount of solids and weight of coating, doctoring the resulting coating with a flexible blade upon emergence from said pool to level and smooth it and to remove excess while the web is carried by said resilient roll, and drying the resulting filled and coated web.

2,949,383
PROCESS OF COATING WITH METHYL METHACRYLATE COMPOSITION THEREFORE AND ARTICLE PRODUCED THEREBY
Jules Blake, Springfield, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 6, 1958, Ser. No. 733,400
18 Claims. (Cl. 117—72)

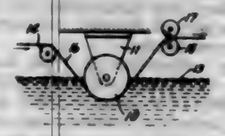


1. An article which comprises a substrate having an adherent multi-layer coating which comprises a pigmented prime coat in adherent contact with said substrate and a superposed topcoat in adherent contact with said prime coat, each layer of said topcoat having as the essential film-forming material at least one polymer of methyl methacrylate, at least one polymer of methyl methacrylate in the layer of said topcoat immediately adjacent to said prime coat containing in the polymer chain the radical:



wherein one R is selected from the class consisting of a hydroxyl group and an oxygen anion and the second R is an amino residue of a member of the class consisting of ammonia and monoamines, said residue being bonded through amino nitrogen, said radical exclusive of said amino residue constituting about from 20 to 0.2% of the total weight of polymer of methyl methacrylate in said topcoat layer containing said radical.

2,949,384
IMPREGNATING ROLLER
Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut
Filed Nov. 27, 1956, Ser. No. 624,657
13 Claims. (Cl. 117—93)



13. The method of processing a continuous web of material with a roller having an acoustically transparent periphery, which comprises continuously immersing at least a portion of the periphery of the roller in a processing liquid, continuously immersing the web in said liquid, passing the immersed portion of the web over the immersed portion of the roller and in direct contact therewith, and directly electroacoustically exciting said portion of the periphery in a direction that is generally radial with respect to the roller axis.

2,949,385
FIRE-RETARDANT PROCESS
John E. Malowan, Dayton, and Morris L. Nielsen, Centerville, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Jan. 27, 1953, Ser. No. 333,681
1 Claim. (Cl. 117—138)

A process for the treatment of cellulosic textile products which comprises applying to a cellulosic textile product a previously-prepared water-soluble hydrolysis product of the water-insoluble reaction product of phosphorus oxychloride and anhydrous ammonia having been formed at a temperature in the range of from 155° C. to 250° C., said water-soluble hydrolysis product exhibiting a pH within the range of from 7.0 to 7.5 in aqueous solution and having a molecular weight in the range of from 200–250, and thereafter heating said treated cellulosic product to at least 100° C., but below 200° C., said treated cellulosic product containing from 5% to 50% by weight of the said hydrolysis product wherein the said hydrolysis product is combined with the said cellulosic textile product.

2,949,386
NON-WOVEN FABRICS
Norman S. Cassel, Ridgewood, N.J., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio
No Drawing. Filed Nov. 3, 1958, Ser. No. 771,204
9 Claims. (Cl. 117—140)

8. The process for making non-woven fabric which consists of (1) uniformly applying to a web of overlapping intersecting fibers 5 to 200% by weight of cross-linkable binder consisting of 95 to 99 parts of a cross-linkable linear addition polymer and 1 to 5 parts of an imine cross-linking agent and (2) heating the web and binder to cause cross-linking of the polymer and cross-linking agent.

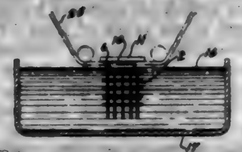
2,949,387
LIGHT TRANSMISSIVE ELECTRICALLY CONDUCTING ARTICLE
William Harry Colbert and Willard Leroy Morgan, Pittsburgh, Pa., assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Dec. 31, 1953, Ser. No. 401,499
4 Claims. (Cl. 117—211)



1. An electrically conductive transparent article, comprising a body of transparent glassy siliceous material having a smooth continuous surface, a continuous intermediate transparent adhesive layer deposited by molecular deposition on said smooth continuous surface, said adhesive layer comprising a metallic oxide characterized by strong molecular adhesion both to glassy siliceous material and to metals and being at least one molecule in thickness, the adjacent surfaces of said body and adhesive layer being in continuous direct surface-to-surface contact and defining a smooth continuous interface, and a continuous film consisting substantially of gold alloyed with 1% to 5% by weight of a metal selected from the group consisting of the hard metals of chromium, nickel, iron, manganese, vanadium, titanium, and palladium deposited by molecular deposition on said adhesive layer and permanently and directly adhered throughout its area to said adhesive layer by molecular forces, said film being substantially uniform and less than 150 Angstrom

units in thickness such that it has an electrical resistivity of not more than 150 ohms per square area, the light transmission of the article being at least 50% with the outer surface of said metal film being substantially smooth.

2,949,388
METHOD FOR COATING MODULES WITH A HEAT CURABLE PROTECTIVE COATING MATERIAL
Harold H. Fleursey, Jr., Arlington, and John L. Bodkin, Alexandria, Va., assignors, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Oct. 11, 1957, Ser. No. 689,784
3 Claims. (Cl. 117—212)



3. The method of applying a protective coating of heat curable material to a module, which module has wire conductors projecting from one end thereof which comprises wax coating a metal carrier by dipping same into a body of hot liquid wax, said wax having a melting temperature lower than the temperature at which said protective coating heat cures, maintaining said carrier in contact with said wax long enough to heat the carrier to substantially the temperature of said liquid wax, removing the wax coated carrier from said body of hot liquid wax, wax coating the wire conductors of the module which project from one end thereof, mounting said wax coated wire conductors on said carrier while the wax on the latter is still in a liquid condition, cooling the carrier and module to form a solidified wax bond therebetween, dipping the carrier supported module into a bath of heat curable protective coating material, and heating the module and carrier to simultaneously cure the protective coating and melt said wax bond, the latter effect facilitating detachment of the module from the carrier.

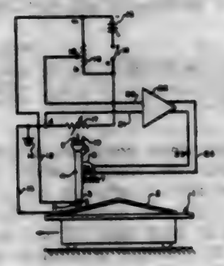
2,949,389
PRODUCTION OF LEVULOSE
Justin J. Murtaugh and John J. Mahlen, Newaygo, Mich., assignors to Dawe's Laboratories, Inc., Chicago, Ill., a corporation of Illinois
No Drawing. Filed Mar. 17, 1958, Ser. No. 721,649
11 Claims. (Cl. 127—36)

1. The method of maximizing the recovery of levulose from a syrup solution containing levulose and levulose polymers with a crystallization inhibiting component present in the syrup which comprises acidifying the solution by addition of a strong acid to adjust the pH to below 4, digesting the mixture at a temperature below 80° C., concentrating the solution by the evaporation of water, allowing the concentrated solution to stand to crystallize levulose from the solution, and then separating the crystals of levulose from the solution.

2,949,390
METHOD OF PROTECTING TANTALUM CRUCIBLES AGAINST REACTION WITH MOLTEN URANIUM
Harold M. Feder, Park Forest, and Norman R. Chellew, Joliet, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Aug. 7, 1957, Ser. No. 676,907
10 Claims. (Cl. 148—6)

1. A process of protecting the inner surface of a crucible of tantalum metal against the reaction with molten uranium with a well-sealing and well-adhering coating of tantalum monoboride, comprising contacting said inner surface with metallic boron at about 1800° C. in a vacuum whereby a layer of tantalum boride is formed on said surface of said crucible, discontinuing said contact with the boron, and heating said borided crucible to from 1800 to 2000° C. in vacuum whereby the boride is converted to the tantalum monoboride.

2,949,391
METHOD AND APPARATUS FOR AUTOMATIC TORCH POSITIONING
Nelson E. Anderson, Berkeley Heights, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 30, 1958, Ser. No. 731,959
6 Claims. (Cl. 148—9)

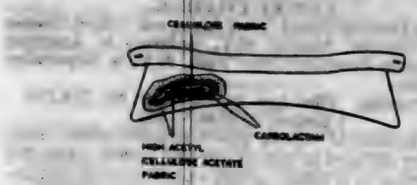


2. In apparatus for maintaining a predetermined separation of the tip of a flame supporting torch from a workpiece which apparatus includes means for passing electrical current through its flame and between said torch tip and said workpiece and also includes means which are automatically responsive to variations in the electrical conductivity of said flame for reducing the difference between the actual and a predetermined separation of said torch from said workpiece, the improvement which comprises a torch tip having in its end a recess, the diameter and depth of which are respectively about 1.5 times the diameter of the gas supply passageway in said torch for said flame, and within which the root of said flame stably recedes to maintain a low and substantially constant electrical contact with the internal surface thereof for the normally encountered pressure variations of the gas supplied through said passageway to said recess, whereby the total electrical resistance of said flame between said torch and said workpiece is more responsive to changes in its length with changes in the spacing of said torch tip from said workpiece.

2,949,392
METHOD OF RELIEVING RESIDUAL STRESSES IN LIGHT METAL ARTICLES
Lowell A. Willey, New Kensington, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Dec. 18, 1958, Ser. No. 781,198
10 Claims. (Cl. 148—125)

1. The method of relieving residual stresses in a light metal article comprising chilling said article to a temperature below —100° F. removing the article from the chilling medium and immediately after removal therefrom directing a current of condensable vapor having a temperature not lower than the boiling point of water over substantially the entire external surface of the article and at a velocity which sweeps away droplets of liquid condensate whereby the surface of said article is heated at a sufficiently rapid rate as to produce plastic flow in the metal.

2,949,393
LAMINATES
Maitland Walton Alford, Spondon, near Derby, and Arthur Richard Brearley, Chaddesden, England, assignors to British Celanese Limited, a company of Great Britain
Filed May 13, 1957, Ser. No. 658,665
Claims priority, application Great Britain May 23, 1956
5 Claims. (Cl. 154—46)



1. A laminate comprising three fabric layers, the two outer layers consisting of a fabric composed of cellulose triacetate yarns, the acetyl value being from 59 to 62.5 percent, and an interlining fabric, the layers being bonded together by means of a monomeric cyclic amide of an omega-amino paraffinic monocarboxylic acid at least part of which is dissolved in the cellulose triacetate.

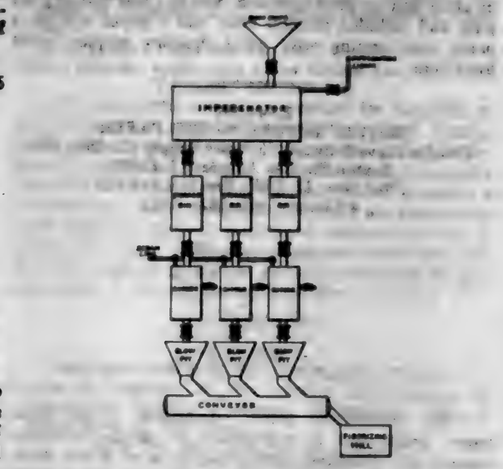
2,949,394
SHEET MATERIAL
Ernest A. Rodman, Newburgh, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Mar. 17, 1954, Ser. No. 416,761
2 Claims. (Cl. 154—50)



1. A plastic sheet material comprising a nonwoven mat consisting essentially of interlaced nylon staple fibers bound together with polyvinyl chloride distributed throughout said mat, said nylon fibers representing about 25% to 87% of the combined weight of nylon and polyvinyl chloride, said sheet material being characterized by high tear strength.

2,949,395
PULP PROCESS
Romulas S. van Hazmburg, Wilmette, Ill.
Filed Jan. 12, 1956, Ser. No. 558,627
3 Claims. (Cl. 162—84)

1. A process for preparing a semi-chemical pulp which comprises immersing wood chips having lengths predominantly between about 3/8 and 7/8 inch in an aqueous buffered sodium sulfite solution having a pH between about 7.5 and 12 for a time sufficient to thoroughly impregnate the chips with the sodium sulfite in an amount, on a dry weight basis, of between about 8 and 12 parts of sodium sulfite for each 100 parts of chips, thereafter draining the excess sulfite solution from said chips, cooking the chips containing between about 8 and 12 parts of sodium sulfite with steam under a pressure of between about 175 and 300 pounds per square inch at corresponding temperatures for a period of less than one hour but for a time sufficient to thoroughly soften the middle lamellae of said chips, and thereafter fiberizing said chips while still hot at a temperature of at least about 150° F. in the presence of added hot water whereby to form the desired pulp, the pH of said sodium sulfite solution prior to chip immersion being adjusted so that the residual



water in the cooked chips prior to fiberizing has a pH of between about 6 and 8.

2,949,396
WET STRENGTH PAPER
Francis A. Bonzagni, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed May 23, 1956, Ser. No. 586,656
7 Claims. (Cl. 162—167)

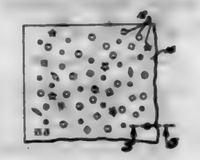
1. A process for preparing paper having high wet tensile strength which comprises adding to an aqueous suspension of cellulosic paper-making fibers a water-dispersible, acid-aged, cationic, sulfite-modified, melamine-formaldehyde resin and forming the treated cellulosic fibers into a waterlaid sheet, the quantity of resin added to the suspension of cellulosic paper-making fibers being sufficient to enhance the wet tensile strength of the waterlaid sheet; said water-dispersible, acid-aged, cationic, sulfite-modified, melamine-formaldehyde resin having been prepared by dispersing and aging a sulfite-modified, melamine-formaldehyde resin in an aqueous solution having a pH of 0.5–3.5, said sulfite-modified, melamine-formaldehyde resin, before acid-aging, containing 2.5–4.5 mols of formaldehyde and up to 0.2 mol of sulfonate groups per mol of melamine and having a viscosity of at least about 300 centipoises when measured in a 55% aqueous solution at 25° C.

2,949,397
MINERAL FILLED PAPER
Tyrrell H. Werner, Westbrook, William H. Marra, Portland, and Warren B. Gilman, Gorham, Maine, assignors to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts
No Drawing. Filed June 13, 1955, Ser. No. 515,238
9 Claims. (Cl. 162—178)

1. In a method of making mineral-filled paper the steps which consist in coating finely divided mineral filler particles with an aqueous colloidal dispersion of plant mucilage in the form of a substituted mannan selected from the group consisting of manno-galactans and gluco-mannans by mixing an aqueous colloidal dispersion of the substituted mannan and the mineral filler particles, forming an aqueous pulp suspension containing cellulose fibers, intimately mixing the coated finely divided mineral filler particles with the said aqueous pulp suspension of cellulose fibers whereby the said coated finely

divided mineral filler particles are attracted to the cellulose fibers and are retained in the said pulp in the absence of alum and its decomposition products and forming the pulp and included mineral filler into a paper web on a paper web-forming wire while draining surplus water therefrom.

2,949,398
SEQUIN IMPREGNATED PAPER
Charles Cleve Bolyard, % Paper Supply Co. Inc., 450 Sexton St., Los Angeles 13, Calif.
Filed Nov. 22, 1955, Ser. No. 548,432
4 Claims. (Cl. 162—181)



1. An ornamented paper, comprising: a flat tissue paper sheet; and a multiplicity of small, individual sequins of a thickness approximately equal to the thickness of the tissue paper sheet set into the tissue paper sheet and disposed in a plane common to said sheet, said sequins being held by filaments of the paper extending over onto the opposite surfaces of the sequins, the number and density of such filaments being insufficient to impair visibility of the individual sequins from either side of said tissue paper sheet.

2,949,399
2-THIOCYANOMETHYL-1,2-BENZISOTHIAZOLIN-3-ONE-1,1-DIOXIDE
Chien-Pen Lo, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,434
4 Claims. (Cl. 167—33)

4. A process of controlling fungi on living plants which comprises applying to said plants N-thiocyanomethyl-1,2-benzisothiazolin-3-one-1,1-dioxide.

2,949,400
STABLE ANTI-HEMORRHAGIC POWDERS
George Madison Sieger and Ernest Chu Yen, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 26, 1956, Ser. No. 600,166
13 Claims. (Cl. 167—81)

1. A dry, free-flowing, substantially non-dusting powder comprising a water-insoluble anti-hemorrhagic compound having vitamin K activity, an ester selected from the group consisting of diethyl succinate, di-n-butyl succinate, diethyl pimelate, and di-n-butyl pimelate, and a silica aerogel having a surface area of from about 100 to about 400 square meters/gram, said water insoluble anti-hemorrhagic compound being in solution in said ester and uniformly distributed in and throughout said silica aerogel.

2,949,401
BUCCAL TABLET CONTAINING VITAMIN A
Irving B. Wershaw, New York, N.Y., assignor, by mesne assignments, to Dome Chemicals, Inc., Indianapolis, Ind., a corporation of Indiana
No Drawing. Filed July 28, 1958, Ser. No. 751,138
9 Claims. (Cl. 167—81)

1. A buccal tablet having a hardness of at least 15 kilograms per square cm., which will not disintegrate when placed in water at 37° C. in less than one hour and consisting essentially of a thorough admixture of 10% to 20% by weight of vitamin A acetate, .3% to .4% by weight of an acid from the group consisting of citric and tartaric acids, 3% to 5% by weight of methyl cellulose, 0% to .02% by weight of ascorbic acid and 74% to 86% by weight of a filler chemically inert to the other constituents of the tablet.

2,949,402
TABLET COATING
Shahriar Mehrabi-Nejad, Pearl River, and Alfred Charles De Grunigen, Nanuet, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed Apr. 16, 1958, Ser. No. 728,776
4 Claims. (Cl. 167—82)

1. A method of coating pharmaceutical tablets which comprises the steps of applying to said tablets, while they are tumbling in a tablet coating pan, a solution containing a cellulose ester of a dicarboxylic acid as a film-forming substance and for each hundred parts thereof from 100 to 400 parts by weight of a polyalkylene glycol and from 25 to 50 parts by weight of hydroxypropylglycerol.

2,949,403
DIHYDROXYACETONE COMPOSITIONS FOR TANNING THE HUMAN EPIDERMIS
John T. Andreadis, New York, and Saul Miklean, Massapequa Park, N.Y.; said Miklean assignor to said Andreadis
No Drawing. Filed Feb. 9, 1960, Ser. No. 7,510
8 Claims. (Cl. 167—90)

1. A composition applicable to the human epidermis for imparting a tan thereto, said composition comprising a cosmetic base and dihydroxyacetone distributed through said base, said base comprising an oleaginous material.

2,949,404
METHOD OF PRODUCING ALLO-ISOCITRIC ACID BY FERMENTATION
Kinichiro Sakaguchi, Shigeo Abe, and Teruhiko Beppu, Tokyo, Japan, assignors to Kyowa Hakko Kogyo Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
No Drawing. Filed July 1, 1958, Ser. No. 745,813
11 Claims. (Cl. 195—36)

1. A method of producing allo-isocitric acid which comprises cultivating a strain of fungi selected from the group consisting of *Penicillium purpurogenum* Stoll var. *rubri-sclerotium* Thom (sclerotia producing strains and non-sclerotigenic type), *Penicillium sclerotiorum* van Beyma, *Penicillium expansum* (Link) Thom, *Penicillium verruculosum* Peyronel and *Penicillium aculeatum* Raper and Fennell, under aerobic conditions in a nutrient fermentation medium containing carbohydrate material, inorganic salts and nitrogen source at a pH of about 5.0 to about 7.5 and recovering allo-isocitric acid from the fermented culture medium.

2,949,405
MANUFACTURE OF DEHYDRO-COMPOUNDS OF THE STEROID SERIES
Albert Wettstein and Ernst Vischer, Basel, and Charles Meystre, Arlesheim, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.
No Drawing. Filed Feb. 6, 1956, Ser. No. 563,437
Claims priority, application Switzerland Feb. 7, 1955
5 Claims. (Cl. 195—51)

1. A process which comprises the steps of treating 9,11β-oxido-17α-hydroxy-cortexone acetate with an enzyme of a fungus selected from the group consisting of *Didymella lycopersici, Calonectria decora, Alternaria passiflorae, Ophiobolus heterostrophus* and *Ophiobolus miyabeanus* under aerobic conditions.

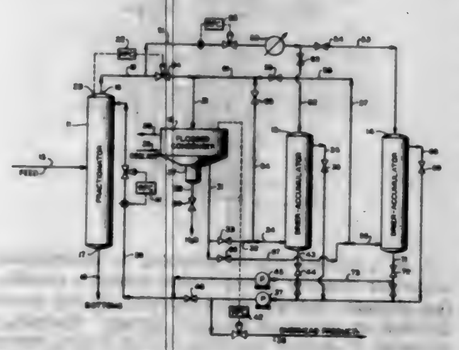
2,949,406
METHOD FOR PREPARING TETRACYCLINE II
Masao Arishima, Nakano-ku, and Yasuharu Sekizawa, Shibuya-ku, Tokyo, Japan, assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 4, 1956, Ser. No. 588,962
8 Claims. (Cl. 195—80)

1. In a method of producing tetracycline with microorganisms of the genus Streptomyces which produce chlortetracycline in a chloride containing fermentation medium the improvement which comprises the step of adding to said fermentation medium a small amount of a compound having a thiourea nucleus.

2,949,407
METHOD FOR PREPARING TETRACYCLINE III
Masao Arishima, Nakano-ku, and Yasuharu Sekizawa, Shibuya-ku, Tokyo, Japan, assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed June 4, 1956, Ser. No. 589,005
3 Claims. (Cl. 195—80)

1. A method of producing tetracycline which comprises the step of aerobically fermenting an aqueous medium with microorganisms of the Streptomyces genus which tend to produce chlortetracycline in a chloride containing medium said medium containing a small amount of thionalide effective in reducing the production of chlortetracycline.

2,949,408
DISTILLATION SYSTEM
Robert D. Bauer and Norris W. Mitchell, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Filed Mar. 1, 1956, Ser. No. 568,778
3 Claims. (Cl. 202—71)



1. In a distillation process wherein a moisture-containing still overhead product is condensed and recovered the improvement comprising separating any liquid water condensate and liquid product condensate into separate phases; removing liquid water; passing still overhead product condensate to at least one of a plurality of desiccant-containing zones; passing a stream of still overhead product condensate to the top of said still as reflux; recovering a stream of desiccant-containing zone effluent condensate as a product of the process; and drying desiccant-containing zones not being used to receive still overhead product condensate with heated still overhead product vapors.

2,949,409
ELECTROLYTIC RECORDING MEDIA
Robert Doughty Richards, Beckenham, England, assignor to Mairhead & Co. Limited, Beckenham, England
No Drawing. Filed July 16, 1957, Ser. No. 672,123
Claims priority, application Great Britain Dec. 20, 1956
7 Claims. (Cl. 204—2)

1. An electrolytic recording medium for facsimile or photo-telegraphic receivers comprising a base impregnated with an aqueous solution containing a polyhydroxy-phenolic compound which is water-soluble, substantially colourless in weak solution and capable of forming a dark-coloured water-insoluble lake with an appropriate metal, together with an electrolyte, sodium chlorate to deepen the colour of the recording and more than 1% of solution weight of sodium sulphate compound to promote rapid drying of the medium after recording.

2,949,410
METHOD OF MAKING A HOLLOW MOLD
George H. Bingham, Jr., Westminster, Md., assignor to Cambridge Rubber Company, Taneytown, Md., a corporation of Maryland
Filed Feb. 20, 1958, Ser. No. 716,371
1 Claim. (Cl. 204—9)



For making a unitary, seamless, hollow mold having walls of minimum thickness consistent with use of the mold in forming a boot by the slush molding process, that method which includes the steps of providing a flexible model boot, coating the boot with a film of conductive material, weighting the boot, with a material adapted to be poured into and from the boot, for submerging the boot in an electroplating bath, electroplating the boot for forming the mold, and removing the boot from the mold; in further combination with the intermediate steps of providing a hollow supporting form of stiffly resilient material having a normal size and shape corresponding to the inner surface of the boot, said form being adapted to be collapsed for inserting and withdrawing the form from the boot, inserting the stiffly resilient hollow form within the boot, prior to the weighting of the boot, the inserted form tending to expand so as to contact the inner surface of the boot upper at all points and thereby holding the boot fully distended and without distortion while the boot is submerged in the electroplating bath, and collapsing and withdrawing the form as a unit from the boot prior to removal of the boot from the mold.

2,949,411
TITANIUM ANODIZING PROCESS
Kenneth G. Beck, Henderson, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 13, 1957, Ser. No. 658,516
6 Claims. (Cl. 204—56)

1. In a process for anodizing the surface of an article composed of metal selected from the group consisting of titanium and titanium base alloys, the improvement which comprises, employing as an electrolyte in said anodizing process an aqueous solution of pH from about pH 3 to pH 12 consisting essentially of water and at least two cations selected from the group consisting of the alkali metals and ammonium, and a phosphate anion in amount at least 70 grams per liter.

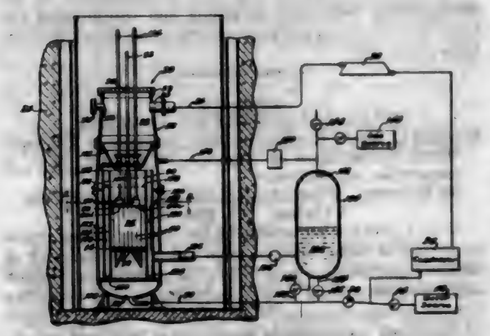
2,949,412
MERCURY-CELL ELECTROLYSIS OF SODIUM CHLORIDE BRINE
Marshall P. Nelpert, Robert D. Bliss, and Ralph M. Hunter, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Nov. 24, 1948, Ser. No. 61,822
5 Claims. (Cl. 204—99)

1. In the electrolysis in a mercury cathode electrolytic cell at a temperature of 40° to 100° C. of a substantially saturated sodium chloride brine substantially saturated with calcium sulfate and containing less than 0.01 gram per liter of magnesium and from 0.1 part per million to 0.01 gram per liter of iron, the improvement which comprises circulating the said brine through the cell while maintaining hydrochloric acid dissolved in the circulating brine entering the cell in a proportion to produce a pH value from 2 to 4.5 and adding to the brine sodium sulfate in such proportion as to maintain both sodium sulfate and total sulfate ion in concentrations less than 10 grams per liter but sufficient to repress the solubility of the calcium sulfate to not more than 3 grams per liter.

2,949,413
PROCESS FOR PURIFYING PROPYLENE OXIDE
David E. Harmer and Earl T. Heckaroth, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Nov. 6, 1957, Ser. No. 694,744
7 Claims. (Cl. 204—154)

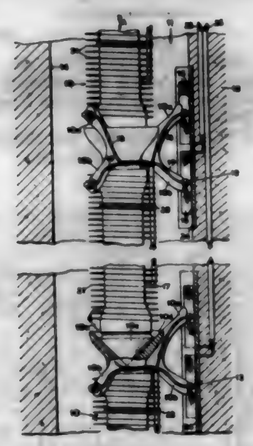
1. A process which comprises subjecting propylene oxide containing volatile by-product chlorine-containing impurities incident to its manufacture and difficultly separable therefrom by distillation to the effect of ionizing radiations corresponding to an intensity of at least 10,000 rad per hour for a total dose of at least 0.3 megarad at temperatures between 0° and 150° C. under a pressure sufficient to maintain the main portion of the material in liquid condition, whereby the volatile chlorine-containing by-product impurities therein are converted to a material which is non-volatile at the boiling point of propylene oxide, and thereafter redistilling the propylene oxide.

2,949,414
SELF-REGULATING BOILING-WATER NUCLEAR REACTORS
Jackson A. Ransohoff, Washington, D.C., and John D. Flawchan, San Rafael, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 18, 1958, Ser. No. 774,794
5 Claims. (Cl. 204—154.2)



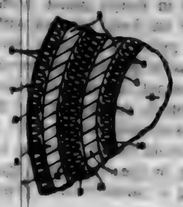
1. A self-regulating demand-responsive boiling-water nuclear reactor comprising a pressure vessel containing a mass of water, a reactor core containing material fissionable by neutrons of thermal energy mounted within the pressure vessel and submerged within the water, a source of water connected to the bottom of the pressure vessel, a steam line connecting the top of the pressure vessel to a demand system for the steam, said nuclear reactor being operated under conditions such that the mass of water boils in the pressure vessel, an annular reflector tank located within the pressure vessel and disposed about the reactor core, said reflector tank being open at the top to the interior of the pressure vessel, a source of pressurized gas connected to the upper portion of the surge tank, a surge tank located outside the pressure vessel, and a pipe connecting the reflector tank with the surge tank, said surge tank and reflector tank containing a mass of water, whereby changes in the demand for steam change the steam pressure in the pressure vessel and thereby change the height of water in the reflector tank.

2,949,415
ELECTRICAL MEASURING MEANS FOR NUCLEAR REACTORS
John Jeffrey Stubbs, Dennis Michael Watts, and Terence Ingham, all of Whetstone, near Leicester, England, assignors to The English Electric Company Limited, London, England, a British company
Filed Dec. 26, 1956, Ser. No. 630,668
Claims priority, application Great Britain Dec. 29, 1955
7 Claims. (Cl. 204—193.2)



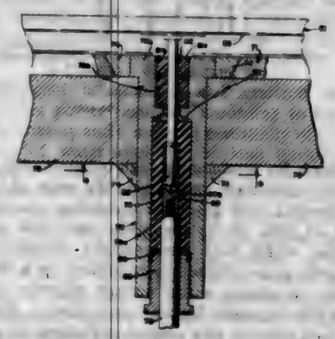
1. In a nuclear reactor including, in combination, a moderator structure having formed therein a plurality of fuel element channels and a plurality of fuel elements disposed in the respective fuel element channels, the provision of at least one fuel element having mounted thereon an electrical measuring device for measuring a desired parameter of the fuel element, two electrical contact devices, and electrical leads connecting the electrical measuring device with the respective contact devices, and for each fuel element carrying an electrical measuring device two electrical contact devices secured in the fuel element channel containing the fuel element and positioned so as to make electrical contact with the respective contact devices on the fuel element, and two electrical conductors secured in the moderator structure, being connected at one end to the respective electrical contact devices fixed in the channel and passing at the other end out of the reactor so as to enable the electrical measuring device to be connected in circuit when desired with electrical measuring apparatus disposed outside the reactor.

2,949,416
CONCENTRIC TUBULAR FUEL ELEMENT
Clifford Warren Wheelock, Canoga Park, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Jan. 16, 1959, Ser. No. 786,893
5 Claims. (Cl. 204—193.2)



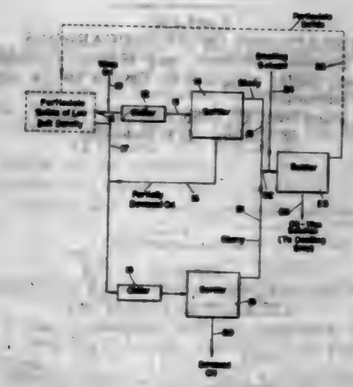
1. A fuel element for a nuclear reactor comprising inner and outer container tubes, a plurality of spaced, concentric fuel tubes positioned between said container tubes, each of said fuel tubes comprising a core of fissionable material with cladding on the sides thereof, each of said sides having a plurality of fins, said fuel tubes and said container tubes defining annular spaces for coolant flow, and said inner container tube defining a channel for a reactor moderator.

2,949,417
ELECTRICAL CONNECTION FOR CATHODIC PROTECTION
Herman S. Preiser, North Springfield, Va., and Fredrick L. Downs, Rye Beach, N.H.
Filed July 31, 1957, Ser. No. 675,503
4 Claims. (Cl. 204—196)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with the hull of a ship, a waterproof, pressureproof, and chemically resistant electrical connection for use with an impressed current cathodic protection system for the ship, the electrical connection passing through the hull of the ship, said electrical connection comprising a continuous tubular outer body member penetrating said hull and attached thereto, said tubular member having a radially extending flange spaced from the ends thereof, a first electrical conductor on the inward side of said hull, a bare second electrical conductor extending to the outer side of said hull and adapted to be connected to an anode located outside of said hull in contact with sea water electrolyte, said first conductor having a bared tip, a cylindrical electric connector having an end wall portion defining an inward hole receiving said bared tip, and having a slotted wall portion defining an outward hole for frictionally resiliently receiving an end of said second conductor, said connector being axially spaced from said flange, a rubber seal molded about said connector with said bared tip therein and a contiguous portion of said first conductor, thereby making an integral sub-assembly, said rubber seal completely covering the outside of said connector and said contiguous portion of said first conductor, said sub-assembly being slidable into and out of said tubular member through its inward end, an oxychloride-resistant tapered packing grommet between said molded rubber seal and said flange, a gland nut in threaded engagement with said tubular member for pressing said rubber seal against said grommet and said tubular member, and pressing said slotted wall of said connector against said second conductor, and an electricity insulating means including a packing between said tubular member and a portion of said second conductor, for holding said second conductor insulated from said tubular member, said insulating means being on the outward side of said inner flange.

2,949,418
SEPARATION OF WAX FROM OIL
James L. Jezl, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Filed Nov. 5, 1956, Ser. No. 620,430
6 Claims. (Cl. 208—31)

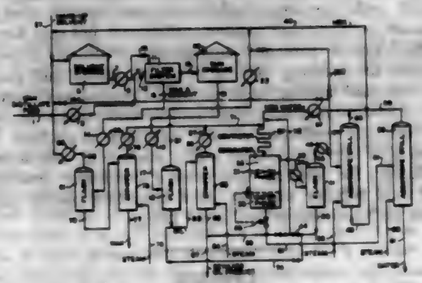


1. Method of obtaining a wax concentrate from an undiluted wax-bearing hydrocarbon oil containing paraffin wax which comprises forming an admixture of the wax-bearing hydrocarbon oil with particulate solids, having a particle density less than the density of said hydrocarbon oil, selected from the group consisting of polyethylene, polypropylene, polyvinyl alcohol, foamed plastics of the unicellular type, and vesiculated volcanic glass, subjecting said admixture to stratification at a temperature at which at least a portion of the wax is solidified to form an upper layer comprising a wax concentrate in admixture with particulate solids and a lower layer comprising oil of reduced wax content, and removing wax concentrate in admixture with said particulate solids from oil of reduced wax content.

2,949,419
DEOILING PETROLEUM WAX
Bruce C. Benedict, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Dec. 2, 1957, Ser. No. 700,213
7 Claims. (Cl. 208—31)

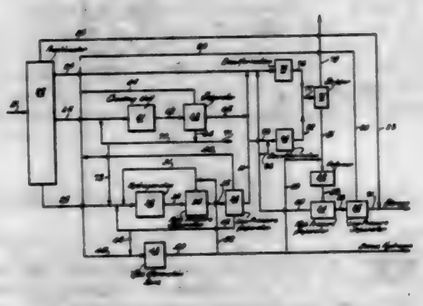
1. A process for dehydrating an aqueous oil-diluent mixture comprising, mixing a dewaxed oil with said mixture thereby producing an oil diluent phase containing said oil and dissolved water and a water phase containing

dissolved oil diluent, separating these phases, flash vaporizing the separated oil diluent phase thereby producing a vaporous oil diluent-water mixture and a flashed oil bottoms, condensing the vaporous mixture thereby



producing a condensate, distilling said condensate to produce an overhead vaporous azeotrope of said diluent and water and a dry bottoms of oil diluent and recovering this latter oil diluent as a dehydrated product of the operation.

2,949,420
TREATMENT OF HYDROCARBONS
Du Bois Eastman, Whittier, and Warren G. Schlinger, Pasadena, Calif., assignors to Texaco Inc., a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,218
18 Claims. (Cl. 208—79)

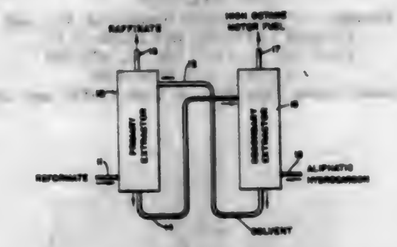


1. A process for the production of motor fuel which comprises fractionating a crude petroleum hydrocarbon liquid into a light fraction boiling below about 200° F., an intermediate fraction boiling between about 200 and 400° F., and a heavy fraction boiling above about 400° F., subjecting at least a portion of said heavy fraction to conditions of highly turbulent flow in a hydrogenation zone in the presence of hydrogen at a temperature between about 850 and 1600° F. and a pressure in excess of 1000 p.s.i.g., recovering from the reaction product a liquid fraction boiling up to about 400° F. combining said liquid fraction with said intermediate fraction to produce a combined naphtha stream, subjecting a portion of the balance of said reaction product to partial combustion to produce a gas containing hydrogen, introducing at least a portion of the hydrogen so produced into said combined naphtha stream and passing the resulting mixture into contact with a reforming catalyst at a temperature between about 800 and 1000° F. and a pressure between about 50 and 750 p.s.i.g. and combining the reformed liquid product with said light fraction to produce a motor fuel of high octane number.

2,949,421
PREPARATION AND USE OF ACID ACTIVATED CLAY
Iver W. Mills, Glenolden, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed Dec. 29, 1955, Ser. No. 556,061
6 Claims. (Cl. 208—299)

1. In a process for refining petroleum wherein petroleum is contacted in liquid phase with sulfuric-acid activated clay which has been washed with an aqueous material and dried prior to contact with petroleum, and wherein a corrosive product is normally obtained as a result of said contact, the improvement which comprises, prior to said contact, contacting the dried clay at a temperature not substantially above 300° F. with a hydrocarbon solvent in liquid phase, thereby to remove elemental sulfur remaining in the clay after drying, and thereby to permit obtaining a noncorrosive product from the first-named contacting.

2,949,422
SOLVENT EXTRACTION PROCESS FOR HIGH OCTANE GASOLINE
William W. Grimes, Cleveland, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Filed June 29, 1956, Ser. No. 594,927
1 Claim. (Cl. 208—321)

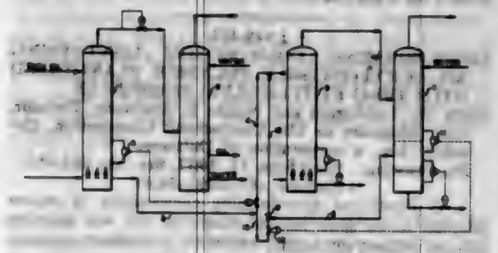


A process for producing a high octane motor fuel from a catalytic reformate, comprising the steps of contacting said reformate with a solvent consisting essentially of a mixture of 30% diethylene glycol and 70% phenylethanolamine which will preferentially dissolve aromatic compounds under extraction conditions in a first extraction zone to obtain a first extract mixture comprising an enriched aromatic fraction and solvent, passing said first extract mixture to a second extraction zone and contacting said first extract mixture therein under extraction conditions with a motor polymer fraction a predominant part of which boils within the boiling range of said aromatic fraction to extract said enriched aromatic fraction from said first extract mixture and form a high octane motor fuel comprising said enriched aromatic fraction and said motor polymer.

2,949,423
METHOD FOR RECOVERY OF ABSORPTION OIL
Adolph M. L. Kube, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Sept. 23, 1957, Ser. No. 685,569
8 Claims. (Cl. 208—341)

1. The method of transporting oil from a dephlegmator wherein water is the direct contact cooling agent to a still maintained at a temperature and a pressure higher than the temperature and pressure of said dephlegmator

which comprises entraining said oil at a temperature at least as high as that of said dephlegmator in a stream of



fluid passing to said still as feed therefor so as to impart velocity energy to said oil.

2,949,424
CLATHRATES
Lyon Mandelcorn, Robert W. Auxier, and Charles W. Lewis, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Filed Sept. 17, 1956, Ser. No. 610,395
1 Claim. (Cl. 252—1)

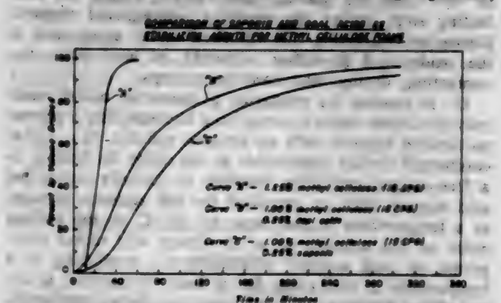
A clathrate comprising crystals of Dianin's compound and at least one electronegative gas contained therein, the gas having fluorine atoms in the molecule and being selected from the group consisting of sulfur hexafluoride, selenium hexafluoride and trifluoromethyl sulfur pentafluoride.

2,949,425
MIXED DETERGENT COMPOSITION
Peter T. Vitale, Fresh Meadows, and Robert Louis Bruns, Staten Island, N.Y., and Ralph Spencer Leonard, Berkeley Heights, N.J., assignors to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware
Filed May 28, 1956, Ser. No. 587,513
5 Claims. (Cl. 252—138)

1. A detergent composition characterized by controlled foaming power regulated according to variations in water hardnesses and consisting essentially of a ternary combination of water-soluble propylene tetramer benzene sulfonate detergent, water-soluble propylene pentamer benzene sulfonate detergent and water-soluble inorganic polyphosphate salt forming water-soluble complexes with hard water salts, the propylene tetramer benzene material of said sulfonate having an average molecular weight of about 242–250, the propylene pentamer benzene material of said sulfonate having an average molecular weight of about 260–310 and distillation ranges of less than about 50° F. from the initial boiling point to 10% recovery and less than 75° F. between the boiling points at 10% and 90% recovery, the ratio of the pentamer sulfonate detergent to tetramer sulfonate detergent being from 90:10 to 70:30 by weight, and the amount of said polyphosphate salt being from about 10 to 60% by weight of the composition.

2,949,426
STABILIZED FOAM-PROVIDING COMPOSITIONS
Bernard J. Thiegs, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed May 21, 1957, Ser. No. 660,671
5 Claims. (Cl. 252—307)

1. Stabilized foam-providing composition comprising water in which there is incorporated between about 0.25 and 25 weight percent, based on composition weight, of a spumiferous material selected from the group consisting of (*a*) water-soluble proteinous materials and (*b*) water-soluble cellulose ether derivatives that are relatively non-polar and adapted to provide a one percent aqueous solution at about 25° C. having a surface tension less than about 60 dynes per centimeter and a minor proportion of between about 0.05 and 5 weight percent, based on composition weight, of coal acids, which coal acids have an average molecular weight of about 250, an average equivalent weight of about 80, and contain an average of from about 2.5 to 5 carboxylic groups per aromatic nucleus in their molecule, said composition having a pH that is acidic.



2,949,427
BREAKING OF OXO ALCOHOL EMULSIONS
John W. Andersen and Robert A. Heinsch, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Oct. 17, 1957, Ser. No. 690,604
12 Claims. (Cl. 252—320)

1. Process for the resolution of emulsions of impure Oxo alcohols with aqueous alkaline solutions which comprises contacting the said emulsion with gaseous carbon dioxide.

2,949,428
PROCESS FOR RENDERING LOCUST BEAN GUM COLD-WATER SOLUBLE
Albert J. Lee, La Grange Park, Ill., assignor to National Pectin Products Company, Chicago, Ill., a corporation of Illinois
No Drawing. Filed Jan. 16, 1956, Ser. No. 559,124
5 Claims. (Cl. 252—363.5)

1. A process for rendering locust bean gum cold-water-soluble which comprises: agitating a mixture of locust bean gum flour and sugar, the weight ratio of locust bean gum to sugar being from 9:1 to 1:9; spraying the mixture with water during agitation, in a total amount of water not exceeding about 65% of the final weight of the entire mixture so that the amount of added moisture is not great enough to change the mixture to a liquid state; during spraying, heating the mixture to a temperature ranging from not substantially below 180° F. to the temperature at which the water boils, so that the mixture forms a spongy mass; comminuting the spongy mass; drying the comminuted material; and then milling the dried material.

2,949,429
PROCESS FOR PREPARING IMPROVED NICKEL OXIDE POLYMERIZATION CATALYSTS
Grant C. Bailey, Vernon C. F. Holm, and Alfred Clark, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Filed Apr. 6, 1956, Ser. No. 576,516
13 Claims. (Cl. 252—472)

1. A process for preparing an improved catalyst consisting essentially of nickel oxide on a porous support which comprises contacting a porous support with an

aqueous solution of a nickel compound readily convertible to the oxide by heating in a non-reducing ambient so as to adsorb on said support between 0.1 and 10 weight percent of nickel in the form of said compound; maintaining said solution at a temperature in the range of 70° C. to the boiling point thereof during the contacting step; drying the resulting impregnated support; thereafter converting the adsorbed nickel compound to the oxide; and thereafter repeating, at least once, the contacting, drying, and conversion steps.

11. A process for preparing a supported nickel oxide polymerization catalyst comprising impregnating a porous particulate support with an aqueous solution of a nickel compound readily convertible to the oxide by heating in a free-oxygen-containing ambient by initially contacting said support with an excess of the hot aqueous solution at a temperature in the range of 70° C. to the boiling point of the solution so as to adsorb said nickel compound on said support; continuing the contacting at a temperature in said range for at least 10 minutes; draining excess solution from said support; drying the resulting composite; and converting the nickel compound to the oxide.

2,949,430

PROCESS FOR THE PROTECTION OF CARBON ELECTRODES FOR ELECTRIC FURNACES

Rolf Jörgensen, Ardalstangen, Norway, assignor to A/S Årdal og Sunndal Verk, Oslo, Norway

Filed Aug. 2, 1957, Ser. No. 675,816
Claims priority, application Norway Aug. 7, 1956
4 Claims. (Cl. 252—502)

1. Process for the protection of carbon electrodes for electric furnaces to prevent loss of burning comprising adding boric acid in an amount of 0.2% to 1%, based on the weight of the electrode mass, to the carbon-containing raw materials for the electrode mass, mixing and evenly distributing the boric acid in said raw materials and introducing the obtained mixture into an electrode casing used for producing continuous, self-baking electrodes where the baking takes place in the electrode itself as the mass enters the hot part of the furnace.

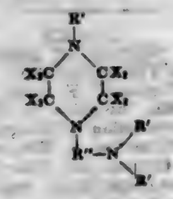
2,949,431

PREPARATION OF CELLULAR POLYURETHANES USING PIPERAZINE CATALYSTS

J. W. Britain, Hillside, W. Va., assignor to Mobay Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 17, 1957, Ser. No. 672,343
12 Claims. (Cl. 260—2.5)

1. In a method for making cellular polyurethane plastics comprising mixing a polyalkylene ether glycol having a molecular weight of at least about 500 and an hydroxyl number of at least about 15, an excess of an organic polyisocyanate over that required to react with all of the hydroxyl groups of the said glycol, and water, and effecting chemical reaction to produce a cellular polyurethane plastic, the improvement which comprises including in the reaction mixture a catalytic amount of a catalyst having the formula:



wherein R' is an alkyl radical having from 1 to 4 carbon atoms, R'' is an alkylene radical having from 2 to 4 carbon atoms and X is a member selected from the group consisting of hydrogen and an alkyl radical having from 1 to 4 carbon atoms.

2,949,433

FIBER-FORMING COMPOSITION CONTAINING AN ACRYLONITRILE POLYMER PLASTICIZED WITH TRI-(2-ETHYLHEXYL) PHOSPHATE

Terry W. Tarkington and Noalie T. Anderson, Decatur, Ala., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed Sept. 12, 1957, Ser. No. 683,456
4 Claims. (Cl. 260—30.6)

1. A plasticized fiber-forming composition of matter adapted to be spun into filaments by the wet spinning process without substantial loss of the plasticizer, comprising a polymer containing at least 80 weight percent of acrylonitrile and another monoolefinic monomer copolymerized therewith and tri-(2-ethylhexyl) phosphate as the plasticizer, said composition of matter containing 5 to 50 percent of said phosphate based on the weight of said phosphate and said polymer.

2,949,433

RESINOUS COMPOSITION COMPRISING POLYVINYL CHLORIDE PLASTICIZED WITH ADDUCTS OF TETRAHYDROPHTHALATE AND ENDOMETHYLENEHYDROPHTHALATE ESTERS WITH FUMARATE ESTERS

Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application Mar. 4, 1953, Ser. No. 492,300, now Patent No. 2,850,523, dated Sept. 2, 1958. Divided and this application Mar. 24, 1958, Ser. No. 723,145
5 Claims. (Cl. 260—31.8)

5. A resinous composition comprising polyvinyl chloride plasticized with an adduct of from 1 to 2 moles of an alkyl fumarate having from 1 to 8 carbon atoms in the alkyl radical and one mole of a partially hydrogenated phthalate compound selected from the class consisting of an alkyl 1,2,3,6-tetrahydrophthalate having from 1 to 8 carbon atoms in the alkyl radical and an alkyl 3,6 - endomethylene - 1,2,3,6-tetrahydrophthalate having from 1 to 8 carbon atoms in the alkyl radical, said adduct having been prepared by heating said fumarate with said tetrahydrophthalate at a temperature of 150° C. to 300° C. and being from 5 to 50% by weight of the composition.

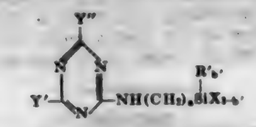
2,949,434

SILICON-CONTAINING COMPOUNDS

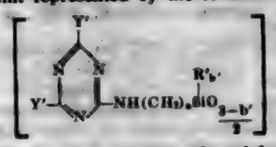
Donald L. Bailey, Snyder, and Ronald M. Pike, Grand Island, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Filed Oct. 12, 1956, Ser. No. 615,465
30 Claims. (Cl. 260—45.2)

1. Silicon-containing triazine compounds selected from the group consisting of silanes represented by the formula:



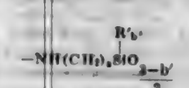
and siloxane polymers and copolymers containing the structural unit represented by the formula:



wherein R' represents a member selected from the group consisting of alkyl radicals, aryl radicals and aralkyl radicals; a is an integer having a value of at least 3, wherein the $(CH_2)_a$ group is a lower alkylene group; X represents a member selected from the group consisting of lower alkoxy radicals; b is an integer having a value of from 0 to 3; b' is an integer having a value of from 0 to 2; Y'' represents a member selected from the group consisting of halogen atoms, the amino radical, hydroxyl radicals, arylamino radicals, alkylamino radicals and

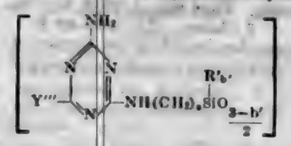


radicals; and Y' represents a member selected from the group consisting of halogen atoms, amino radicals, hydroxyl radicals, arylamino radicals, alkylamino radicals and

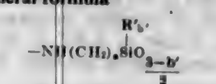


radicals.

11. A heat-curable resinous composition comprising a mixture of (1) a melamine-formaldehyde resin and (2) a silicon-containing triazine compound selected from the group consisting of siloxane polymers and copolymers containing the structural unit represented by the formula:



wherein R' represents a member selected from the group consisting of alkyl radicals, aryl radicals and aralkyl radicals; a is an integer having a value of at least 3, wherein the $(CH_2)_a$ group is a lower alkylene group; b' is an integer having a value of from 0 to 2; and Y''' represents a member selected from the group consisting of an amino radical and an aminoalkylsilyl radical represented by the general formula



2,949,435

METHOD FOR THE PREPARATION OF ACRYLONITRILE GRAFT COPOLYMER FIBER-FORMING SYSTEMS

Clyde W. Davis, Antioch, John F. Voeks, Concord, and Forrest A. Ehlers, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Mar. 5, 1956, Ser. No. 569,266
2 Claims. (Cl. 260—45.5)

1. Method of forming wet spun shaped articles which method consists of the steps of (1) dissolving, in an aqueous saline solution that is a solvent for polyacrylonitrile, (*a*) a monoethylenically unsaturated monomeric material comprised of at least a predominant proportion of acrylonitrile, any balance being another monoethylenically unsaturated monomeric material that is copolymerizable with acrylonitrile and (*b*) polyvinyl pyrrolidone; (2) polymerizing the dissolved monomeric material in the presence of the dissolved polyvinyl pyrrolidone to form a fiber-forming graft copolymer-containing polymeric substance in spinnable dispersion in said aqueous, polyacrylonitrile-dissolving, saline solution; then (3) extruding said fiber-forming polymeric substance in spinnable dispersion into a shaped article in a coagulating liquid for said spinnable dispersion.

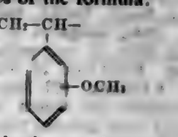
2,949,436

PROCESS OF POLYMERIZING STYRENE IN THE PRESENCE OF METHOXYSTYRENE POLYMER

Howard C. Haas and Pandurang M. Kamath, Arlington, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed June 6, 1956, Ser. No. 589,608
6 Claims. (Cl. 260—45.5)

1. A process of preparing a graft copolymer comprising polymerizing styrene in the presence of a polymer containing recurring groups of the formula:



and a cationic polymerization catalyst.

2,949,437

COMPOSITION CONTAINING BLEND OF ACRYLONITRILE COPOLYMERS AND CHLORINE-CONTAINING POLYMER

Patrick H. Hobson, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed Oct. 2, 1957, Ser. No. 687,623
7 Claims. (Cl. 260—45.5)

1. A composition of matter comprising from about 80 to about 90 weight percent of (1) a polymer blend of a copolymer of 80 to 99 weight percent acrylonitrile and 20 to one weight percent of another monoolefinic monomer and a copolymer of 10 to 70 weight percent acrylonitrile and 90 to 30 weight percent of a monovinylpyridine, said polymer blend having an overall monovinylpyridine content of 2 to 10 percent based on the weight of the blend, intimately blended with about 20 to about 10 weight percent of (2) a chlorine-containing polymer selected from the group consisting of polyvinyl chloride, polyvinylidene chloride, a copolymer of greater than 80 weight percent vinyl chloride and less than 20 weight percent of another monoolefinic monomer and a copolymer of greater than 80 weight percent vinylidene chloride and less than 20 weight percent of another monoolefinic monomer.

2,949,438

FILM-FORMING COMPOSITIONS COMPRISING CARBOXY-COPOLYMERS AND POLYEPOXIDES AND METHOD OF MAKING SAME

Darrell D. Hicks, Louisville, Ky., assignor to Devoe & Raynolds Company, Inc., a corporation of New York

No Drawing. Filed Nov. 4, 1957, Ser. No. 694,119
8 Claims. (Cl. 260—45.5)

8. A film forming composition comprising (1) a polyepoxide selected from the group consisting of glycidyl polyethers of polyhydric alcohols and phenols, and epoxidized esters, polyesters, drying oils, diolefins and cyclic aldehyde condensates each having at least two epoxy groups, and (2) a solution of a carboxy copolymer formed from thirty to eighty-five parts by weight of (*a*) an alkyl ester of a monounsaturated monocarboxylic acid wherein the alkyl group has not over ten carbon atoms and wherein the monocarboxylic acid is selected from the group consisting of acrylic acid and methacrylic acid, and fifteen to seventy parts by weight, the total being one hundred, of (*b*) an acid ester of a butenedioic acid and a saturated monohydric alcohol of not over twelve carbon atoms, said alcohol containing only carbon, hydrogen and oxygen and being free of oxygen-containing groups other than ether and hydroxyl groups, the ratio of (1) to (2) being 0.7 to 2 epoxide equivalents polyepoxide per carboxy equivalent copolymer, considering an epoxide equivalent polyepoxide as the weight of polyepoxide in

grams per epoxide group and a carboxyl equivalent copolymer as the weight of copolymer in grams per carboxyl group.

2,949,439

VINYL CHLORIDE RESINS STABILIZED WITH BORIC ACID-POLYHYDRIC ALCOHOL REACTION PRODUCTS

Charles H. Fuchsman, University Heights, Baruch Zaromsky, South Euclid, and Floyd R. Hansen, Bedford, Ohio, assignors to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed Sept. 20, 1957, Ser. No. 685,090
6 Claims. (Cl. 260—45.95)

1. A composition of matter comprising a chlorine containing vinyl resin selected from the group consisting of polyvinyl chloride, vinylchloride-vinylacetate copolymers, and vinylchloride-vinylidene chloride copolymers and from about 0.1 to about 10 parts per 100 parts of said resin of a stabilizer, said stabilizer comprising a borate ester of a polyhydric alcohol, said alcohol containing from 1 to 8 hydroxyl groups and a primary hydroxyl group, said ester having from 1 to 2 free acidic hydrogens per atom of boron and the mole ratio of polyhydric alcohol to boric acid being in the range from 1:8 to 8:1.

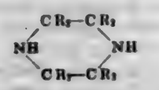
2,949,440

PREPARATION OF PIPERAZINE PHTHALAMIDE POLYMERS

Manfred Katz, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Nov. 28, 1956, Ser. No. 624,718
1 Claim. (Cl. 260—78)

A process for preparing a polyamide which comprises bringing together (A) a piperazine compound of the formula



wherein R is selected from the group consisting of hydrogen and lower alkyl, in one aqueous liquid phase, and (B) an organic dicarboxylic acid halide containing a major amount of a phthaloyl halide in a second liquid phase immiscible with the first phase and comprising chloroform, mixing the liquid phases to form a system comprised of two liquid phases in the form of an emulsion of fine particle size such that the piperazine compound and acid halide are in separate phases and maintaining the phases in admixture until an interfacial condensation polymerization has taken place with the formation of a synthetic, linear, orientable, fiber-forming polyamide having an inherent viscosity of at least about 1.5 in meta-cresol.

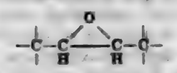
2,949,441

PROCESS FOR CURING MATERIALS POSSESSING INTERNAL EPOXY GROUPS

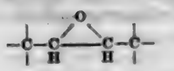
Herbert A. Newey, Lafayette, Calif., assignor to Shell Oil Company, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 17, 1955, Ser. No. 547,527
14 Claims. (Cl. 260—78.4)

1. A process for preparing hard resinified products from materials possessing a plurality of



groups selected from the group consisting of epoxidized fatty oil acid triglycerides, epoxidized esters of ethylenically unsaturated monohydric alcohols and ethylenically unsaturated monocarboxylic acids, epoxidized esters of ethylenically unsaturated monohydric alcohols and polycarboxylic acids, epoxidized esters of polyhydric alcohols and ethylenically unsaturated polycarboxylic acids, epoxidized polymers of diolefins and epoxidized bis(cyclohexenyl)propane, which comprises heating at a temperature between 50° C. and 200° C. the said material having the internal epoxy groups with at least .8 equivalents of a polycarboxylic acid anhydride in the presence of a small amount up to 10% by weight of a member of the group consisting of tertiary amines, their salts and quaternary ammonium salts, the expression "equivalent" as used refers to that amount needed to furnish one carboxylic acid anhydride group per



group.

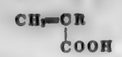
2,949,442

PROCESS FOR PREPARING AMPHOTERIC COPOLYMERS AND THE RESULTING PRODUCTS

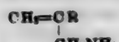
Alain Charles André Clavier, St. Maur les Fosses, and Jacques Fouradier, Bourg la Reine, France, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed May 4, 1955, Ser. No. 506,064
5 Claims. (Cl. 260—80.5)

1. A process for preparing an amphoteric copolymer which comprises mixing together unsaturated acid having the formula:



and a mineral acid salt of an amine having the formula:



R being selected from the group consisting of hydrogen, halogen and methyl, in the molar ratio of approximately 2:1 amine salt to unsaturated acid and holding the mixture thus obtained in the presence of a catalyst from the group consisting of peroxide, perborate and persulfate polymerization catalyst at 0–80° C. in an inert atmosphere for a time sufficient to cause polymerization to occur.

2,949,443

SURGICAL DRESSINGS

Frederic C. Merriam, Somerville, and Emily I. Hammer, Marblehead, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Filed Sept. 2, 1953, Ser. No. 382,168
6 Claims. (Cl. 260—80.5)



1. The film forming, water insoluble, water vapor permeable, resinous amphoteric polyelectrolyte polymer of 50 to 80% by weight of at least one member of the group consisting of esters of acrylic acid and methacrylic acid with an alcohol of which the radical attached to the hydroxyl group is a saturated alkyl group containing 1 to 10 carbon atoms and substantially the remainder comprising, in the indicated ratios, 25 to 47% by weight of at least one member of the group consisting of acrylic acid and methacrylic acid and 75 to 53% by weight of an ester of at least one member of the group consisting of acrylic acid and methacrylic acid with N,N-dialkylaminoalkyl alcohols in which the carbon chain of the alkyl alcohol has from 2 to 4 carbon atoms and the remaining alkyl groups contain 1 to 4 carbon atoms, said polyelectrolyte not containing more than 40 mol percent of methacrylic components.

2,949,444

INTERPOLYMERS OF ACRYLONITRILE AND 1-VINYLIMIDAZOLES

Julian Keith Lawson, Jr., Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed Aug. 2, 1957, Ser. No. 675,810
6 Claims. (Cl. 260—80.5)

1. An interpolymer of monomers consisting of (1) at least about 80 percent of acrylonitrile, (2) at least about 2 percent by weight of a monomer selected from the group consisting of 1-vinylimidazole and alkyl substituted 1-vinylimidazoles wherein the alkyl group contains no more than 5 carbon atoms and (3) from 1 to 18 percent of a third monomer selected from a group consisting of a vinyl ester, an alkyl acrylate, and styrene.

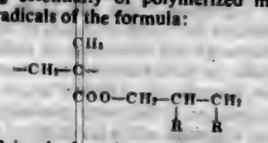
2,949,445

METHYL METHACRYLATE POLYMERS CONTAINING AMINO RESIDUES

Jules Blake, Springfield, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed May 6, 1958, Ser. No. 733,277
4 Claims. (Cl. 260—86.1)

1. A polymer predominately of methyl methacrylate having a relative viscosity of about from 1.117 to 1.196 and consisting essentially of polymerized methyl methacrylate and radicals of the formula:



wherein one R is a hydroxyl group and the second R is an amino residue of a member of the class consisting of ammonia and primary and secondary monoamines, said residue being bonded through amino nitrogen, said radical exclusive of amino residue constituting about from 3 to 0.2% by weight of the total weight of polymer.

2,949,446

COPOLYMERS OF STYRENE AND FLUORINATED DIENES

Francis J. Honn, Westfield, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Oct. 27, 1954, Ser. No. 465,135
6 Claims. (Cl. 260—87.5)

4. A copolymer of between about 5 and about 95 mol percent of styrene and between about 95 and about 5 mol percent of a fluorinated butadiene selected from the group consisting of 1,1-difluoro-2-methyl butadiene and 1,1-difluoro-3-methyl butadiene.

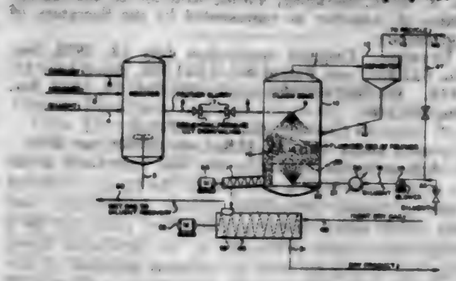
2,949,447

PROCESSING OF POLYMER MADE IN SLURRY PROCESS

Harold M. Hawkins and Walter A. Goldtrap, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 28, 1957, Ser. No. 643,041
18 Claims. (Cl. 260—93.7)

1. A method for recovering dry polymer of a 1-olefin of 2 to 8 carbon atoms from a slurry of polymer in a hydrocarbon diluent which comprises flashing diluent from polymer at an upper level in a flash zone, gravitating polymer to a fluidized bed of such polymer at a



low level in said flash zone, heating additional said hydrocarbon diluent and introducing same in vapor state to said fluidized bed as the fluidizing medium and continuously withdrawing dry polymer from said bed.

2,949,448

NEUTRALIZING LIGNIN-CONTAINING LIQUORS

Otmar Töppel, Aschaffenburg, Germany, assignor to Firma Aschaffenburger Zellstoffwerke A.G., Redenfelden, Upper Bavaria, Germany

Filed June 15, 1954, Ser. No. 436,877
Claims priority, application Germany June 23, 1953
5 Claims. (Cl. 260—124)

1. In a process of neutralizing lignin-containing liquors, the steps of pre-neutralizing an alkaline waste sulfite liquor which has undergone alkaline treatment and which contains lignin with carbon dioxide so as to lower the pH of said liquor to a value of at least 7.5; and adding to the thus pre-neutralized liquor at least one inorganic salt which upon hydrolysis in aqueous solution has an acid reaction and being selected from the group consisting of calcium chloride, magnesium chloride, aluminum chloride and aluminum sulfate in an amount sufficient to lower the pH of said lignin-containing liquor to a maximum value of 7.0, thereby neutralizing said liquor.

2,949,449

SYNTHESIS OF 3,5-DIAROYL-2-DEOXY-D-RIBOFURANOSYL UREAS

Max Hoffer, Nutley, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Filed Jan. 14, 1959, Ser. No. 786,709
15 Claims. (Cl. 260—210)

5. A process of making 3,5-diaroyl-2-deoxy-D-ribofuranosyl halide which comprises reacting 3,5-diaroyl-1-methyl-2-deoxy-D-ribofuranoside with anhydrous hydrogen halide; wherein the halide is selected from the group consisting of chloride and bromide and wherein that portion of the aroyl group which is exclusive of the carbonyl function is a radical containing not more than ten carbon atoms selected from the class consisting of monocyclic aryl hydrocarbon radicals and negatively substituted monocyclic aryl hydrocarbon radicals.

13. A process of making 1-(β-[lower alkoxy]-α-methylacryloyl)-3-(3,5-diaroyl-2-deoxy-D-ribofuranosyl)-urea which comprises reacting (3,5-diaroyl-2-deoxy-D-ribofuranosyl)urea with β-(lower alkoxy)-α-methylacryloyl halide; wherein that portion of the aroyl group which is exclusive of the carbonyl function is a radical containing not more than ten carbon atoms selected from the class consisting of monocyclic aryl hydrocarbon radicals and negatively substituted monocyclic aryl hydrocarbon radicals.

2,949,450
SEPARATIONS OF NITROGENOUS ORGANIC COMPOUNDS
John B. Stark, Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture
No Drawing. Original application July 18, 1955, Ser. No. 522,885, now Patent No. 2,891,945, dated June 23, 1959. Divided and this application Jan. 19, 1959, Ser. No. 791,246
5 Claims. (Cl. 260—211.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preparing the free base from a salt of a strong acid with a member of the group consisting of purine bases, pyrimidine bases, nucleosides, and amino acids which comprises applying such salt to a strongly-basic anion exchanger in the hydroxide form, eluting the exchanger with an aqueous solution of carbon dioxide and recovering the eluate being a solution of the free base corresponding to the salt so treated.

2,949,451
PREPARATION OF THYMIDINE AND DEOXYFLUOROURIDINE, AND INTERMEDIATES THEREFOR
Max Hoffer, Nutley, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 21, 1959, Ser. No. 807,769
9 Claims. (Cl. 260—211.5)

1. A process of making 2'-deoxy-5-fluorouridine which comprises reacting 3,5-diaroyl-2-deoxy-D-ribofuranosyl halide with mono(5-fluorouracilyl)mercury, thereby forming 1-(3',5'-diaroyl-2'deoxy-D-ribofuranosyl)-5-fluorouracil, and hydrolyzing the latter.

2,949,452
PROCESS FOR PREPARING ALKYL HYDROXYALKYL CELLULOSE ETHERS AND THE PRODUCT OBTAINED THEREBY
Albert B. Savage, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 30, 1956, Ser. No. 581,384
8 Claims. (Cl. 260—231)

1. The process of preparing alkyl hydroxyalkyl ethers of cellulose which are readily soluble in water, have higher gelation temperatures than the prior known ethers having the same substituents, and the temperature-viscosity curves of whose solutions are essentially free from hysteresis on heating and cooling, which consists essentially in causing cellulose to absorb from about 1.2 to about 2.8 mols of aqueous alkali metal hydroxide per mol. of cellulose, at a temperature from about 15° to about 30° C., and subjecting the resulting alkali cellulose at a temperature from 20° to 140° C. to the etherifying action of an alkyl halide having from 1 to 2 carbon atoms, an amount approximately equivalent to the amount of said absorbed alkali metal hydroxide, and to the etherifying action of an alkylene oxide having from 2 to 4 carbon atoms, until substantially all of the alkyl halide and from about 0.1 to about 0.5 part by weight of alkylene oxide per part of cellulose has reacted, and recovering the resulting mixed ether of cellulose.

2,949,453
3,20 - DIKETO - 11 - OXYGENATED - 17,21 - DIHYDROXY-ALLOPREGNANE 3-CYCLIC ALKYLENE KETAL 21-ORGANIC SULFONATE COMPOUNDS
Lewis H. Sarett, Princeton, N.J., assignor to Merck & Co. Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Original application Jan. 14, 1955, Ser. No. 481,957. Divided and this application Apr. 15, 1957, Ser. No. 652,678
5 Claims. (Cl. 260—239.55)

1. 3,11,20-triketo - 17α,21 - dihydroxyallopregnane 3-ethylene cyclic ketal 21-methane sulfonate.

2,949,454
CERTAIN 1,3-DIPHENYL-2-THIOUREAS
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,749
2 Claims. (Cl. 260—240)

1. A member of the group consisting of 1,3-diphenyl-2-thiourea, in which each of the phenyl radicals is substituted in the 4-position by the group of the formula Py—$(CH{=}CH)_n$—, in which Py represents a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, and *n* stands for a whole number from 1 to 2, and therapeutically acceptable acid addition salts thereof.

2,949,455
CERTAIN 2-PHENYL-IMINO-3-PHENYL-THIAZOLIDINES
Charles Ferdinand Huebner, Chatham, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,751
2 Claims. (Cl. 260—240)

1. A member of the group consisting of 2-phenyl-imino-3-phenyl-thiazolidine, in which each of the phenyl radicals is substituted in the 4-position by the group of the formula Py—$(CH{=}CH)_n$—, in which Py represents a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, and *n* a whole number from 1 to 2, and therapeutically acceptable acid addition salts thereof.

2,949,456
CERTAIN 2-PHENYL-IMINO-3-PHENYL-THIAZOLINES
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,754
2 Claims. (Cl. 260—240)

1. A member of the group consisting of 2-phenyl-imino-3-phenyl-4-lower alkyl-4-thiazoline, in which each of the phenyl radicals is substituted in the 4-position by the group of the formula Py—$(CH{=}CH)_n$—, in which Py represents a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, and *n* stands for a whole number from 1 to 2, and therapeutically acceptable acid addition salts thereof.

2,949,457
CERTAIN 2-PHENYL-IMINO-3-PHENYL-THIAZOLIDINE-4-ONES
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,755
2 Claims. (Cl. 260—240)

1. A member of the group consisting of 2-phenyl-imino-3-phenyl-thiazolidine-4-one, in which each of the phenyl radicals is substituted in the 4-position by the group of the formula Py—$(CH{=}CH)_n$—, in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, and *n* for a whole number from 1 to 2, and the therapeutically acceptable acid addition salts thereof.

2,949,458
CERTAIN 1,3-DIPHENYL-THIOPARABANIC ACIDS
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Nov. 28, 1958, Ser. No. 776,756
2 Claims. (Cl. 260—240)

1. A member of the group consisting of 1,3-diphenyl-2-thioparabanic acid, in which each of the phenyl radicals is substituted in the 4-position by the group of the formula Py—$(CH{=}CH)_n$—, in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, and *n* for a whole number from 1 to 2, and therapeutically acceptable acid addition salts thereof.

2,949,459
1,3-DI-SUBSTITUTED PHENYL-2-THIOUREAS
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,755
7 Claims. (Cl. 260—240)

1. A member of the group consisting of 1,3-diphenyl-2-thiourea, in which one of the phenyl radicals is subtituted in the 4-position by the group of the formula

Py—$[C(R){=}CH]_n$—

in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, R represents a member of the group consisting of hydrogen and lower alkyl, and *n* for a whole number from 1 to 2, and the other phenyl radical is subtituted in the 4-position by a member of the group consisting of alkoxy having from 4 to 5 carbon atoms and N,N-di-lower alkyl-amino-lower alkoxy, and therapeutically acceptable acid addition salts thereof.

3. 1 - (4 - isopentyloxy - phenyl) - 3 - {4-[2-(2-pyridyl)-ethenyl]-phenyl}-2-thiourea.

2,949,460
CERTAIN THIAZOLIDINE-4-ONES
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,756
11 Claims. (Cl. 260—240)

1. A member of the group consisting of 2-phenyl-imino-3-phenyl-thiazolidine-4-one, in which one of the phenyl radicals is substituted in the 4-position by a member of the group consisting of alkoxy having from 4 to 5 carbon atoms and N,N-di-lower alkyl-amino-lower alkoxy, and the other phenyl radical is substituted in the 4-position by the group of the formula

Py—$[C(R){=}CH]_n$—

in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, R represents a member of the group consisting of hydrogen and lower alkyl, and *n* represents a whole number from 0 to 2, and the therapeutically useful acid addition salts thereof.

8. 2 - (4 - isopentyloxy - phenyl) - imino - 3 - {4 - [2-(2-pyridyl)-ethenyl]-phenyl}-4-thiazolidine-4-one.

2,949,461
CERTAIN α-PHENYL-IMINO-3-PHENYL-THIAZOLINES
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,757
11 Claims. (Cl. 260—240)

1. A member of the group consisting of 2-phenyl-imino-3-phenyl-4-lower alkyl-4-thiazoline, in which one of the phenyl radicals is substituted in the 4-position by a member of the group consisting of alkoxy having from 4 to 5 carbon atoms and N,N-di-lower alkyl-amino-lower alkoxy, and the other phenyl radical is substituted in the 4-position by the group of the formula Py—$[C(R){=}CH]n$—, in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, R represents a member of the group consisting of hydrogen and lower alkyl, and *n* represents a whole number from 0 to 2, and therapeutically acceptable acid addition salts thereof.

8. 2-(4-isopentyloxy-phenyl)-imino-3-{4-[2-(2 - pyridyl)-ethenyl]-phenyl}-4-methyl-4-thiazoline.

2,949,462
THIAZOLIDINE DERIVATIVES
Charles Ferdinand Huebner, Chatham, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,758
11 Claims. (Cl. 260—240)

1. A member of the group consisting of 2-phenyl-imino-3-phenyl-thiazolidine, in which one of the phenyl radicals is substituted in the 4-position by a member of the group consisting of alkoxy having from 4 to 5 carbon atoms and N,N-di-lower alkyl-amino-lower alkoxy, and the other phenyl radical is substituted in the 4-position by a group of the formula Py—$[C(R){=}CH]_n$—, in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, R represents a member of the group consisting of hydrogen and lower alkyl, and *n* stands for a whole number from 0 to 2, and therapeutically useful acid addition salts thereof.

8. 2 - (4 - isopentyloxy - phenyl) - imino - 3 - {4 - [2-(2-pyridyl)-ethenyl]-phenyl}-thiazolidine.

2,949,463
CERTAIN 1,3-DIPHENYL-2-THIOPARABANIC ACIDS
Renat Herbert Mizzoni, Long Valley, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey
No Drawing. Filed Jan. 26, 1959, Ser. No. 788,759
9 Claims. (Cl. 260—240)

1. A member of the group consisting of 1,3-diphenyl-2-thioparabanic acid, in which one of the phenyl radicals is substituted in the 4-position by a member of the group consisting of alkoxy having from 4 to 5 carbon atoms and N,N-di-lower alkyl-amino-lower alkoxy, and the other phenyl radical is substituted in the 4-position by the group of the formula Py—$[C(R){=}CH]_n$—, in which Py stands for a member of the group consisting of 2-pyridyl, 3-pyridyl and 4-pyridyl, R for a member of the group consisting of hydrogen and lower alkyl, and *n* represents a whole number from 0 to 2, and therapeutically useful acid addition salts thereof.

2,949,464
3-AMINO-5-(PARA-HYDROXY-BENZYLIDENE) RHODANINE
Richard E. Strube, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware
No Drawing. Filed Feb. 2, 1959, Ser. No. 790,343
1 Claim. (Cl. 260—240)

3-amino-5-(p-hydroxybenzylidene)rhodanine.

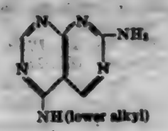
2,949,465
1-THIOCYANOMETHYL-1H-BENZOTRIAZOLE AND 3-THIOCYANOMETHYL-1,2,3-BENZOTRIAZIN-4(3H)-ONE
Chieu-Pen Lo, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Apr. 15, 1959, Ser. No. 806,432
3 Claims. (Cl. 260—248)

1. A compound selected from the class consisting of 1-thiocyanomethyl-1H-benzothiazole and 3-thiocyanomethyl-1,2,3-benzotriazin-4(3H)-one.

3. 3-thiocyanomethyl-1,2,3-benzotriazin-4(3H)-one.

2,949,466
PYRIMIDINE COMPOUNDS AND MEANS OF PRODUCING THE SAME
Milton L. Hoefle, Grosse Pointe Woods, and Robert F. Meyer, St. Clair Shores, Mich., assignors to Parke, Davis & Company, Detroit, Mich., a corporation of Michigan
No Drawing. Filed Mar. 4, 1958, Ser. No. 718,984
6 Claims. (Cl. 260—256.4)

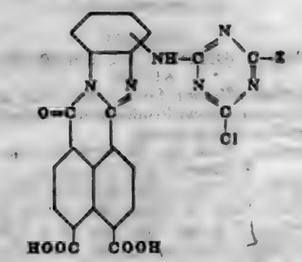
1. A pyrimido[4,5-d]pyrimidine of the formula



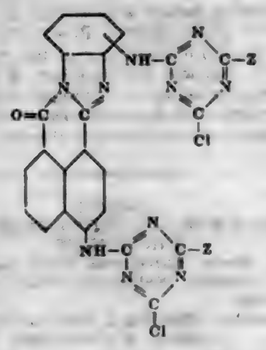
NH(lower alkyl)

2,949,467
PERINONE TRIAZINO DYESTUFFS
Max Staeubli, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland
No Drawing. Filed Mar. 11, 1958, Ser. No. 720,554
Claims priority, application Switzerland Mar. 18, 1957
5 Claims. (Cl. 260—249.5)

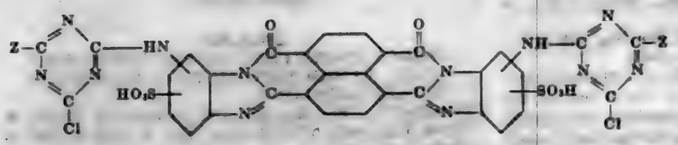
1. A perinone dyestuff selected from the group consisting of compounds of the formula



and

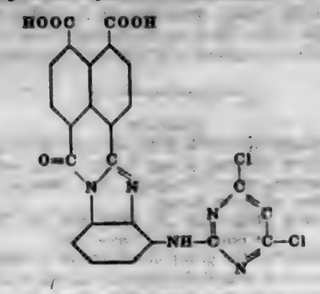


and



in which formulae Z is a member selected from the group consisting of Cl, hydroxy, amino, sulfophenylamino, carboxyphenylamino, sulfonaphthylamino, sulfophenoxy and (1'-amino-2'-sulfo-4'-anthraquinonylamino)-phenylamino.

2. The perinone dyestuff of the formula

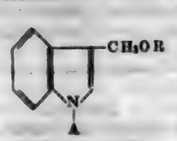


2,949,468
PROCESS OF EXTRACTING PYRIDINE CARBOXYLIC ACIDS AS BISULFATES
Louis L. Zeeuwinen, 276 Riverside Drive, New York, N.Y.
No Drawing. Filed Mar. 19, 1958, Ser. No. 722,373
2 Claims. (Cl. 260—295.5)

1. The process of recovering pyridine-carboxylic acids as bisulfates from mixtures of such acids with concentrated sulfuric acid which includes admixing such mixture with at least its own volume of a liquid, sulfuric acid stable oxygenated organic solvent selected from the group consisting of (*a*) ketones selected from the group consisting of acetophenone, and dialkyl and cycloalkyl alkyl ketones having only one carbonyl group and from 4 to 9 carbon atoms, (*b*) esters containing up to 9 carbon atoms of the group consisting of ethyl benzoate and acetates of alkanols, and (*c*) ethers selected from the group consisting of dialkyl ethers, said ethers having more than 4 and up to 8 carbon atoms, tetrahydrofurane, anisol and the lower alkyl diether compounds of ethylene glycol and diethylene glycol; said compounds being composed solely of carbon, hydrogen and oxygen.

2,949,469
PRODUCTION OF 3-INDOLEACETONITRILE FROM SUBSTITUTED INDOLES
James N. Coker and William H. Todd, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,132
4 Claims. (Cl. 260—319)

1. The process which comprises reacting a compound represented by the formula



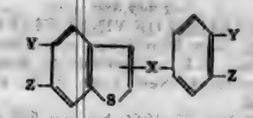
where A is a member selected from the group consisting of hydrogen and acetyl and R is a member selected from the group consisting of hydrogen, lower alkanoyl and alkyl, with alkali metal cyanide in solution to produce 3-indoleacetonitrile.

2,949,470
PYRROLIDINO-2,6-DIMETHYLACETANILIDE
Albert Schlesinger, Jackson Heights, and Samuel M. Gordon, Forest Hills, N.Y., assignors to Endo Laboratories Inc., Richmond Hill, Queens, N.Y., a corporation of New York
No Drawing. Original application Mar. 27, 1956, Ser. No. 574,092, now Patent No. 2,813,861, dated Nov. 19, 1957. Divided and this application Oct. 11, 1957, Serial No. 700,244
1 Claim. (Cl. 260—326.3)

Pyrrolidino-aceto-2,6-dimethyl aniline.

2,949,471
PREPARATION OF SUBSTITUTED THIONAPHTHENES
Vinzenz Prey, Vienna, Austria, assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Filed July 3, 1956, Ser. No. 593,580
6 Claims. (Cl. 260—330.5)

1. A phenylmercapto-thionaphthene of the formula



wherein

(*a*) "X" is a bridging group selected from the group consisting of (—S—) and (—CH_2S—), the bond to the thionaphthene nucleus being to one of the 2- and 3-positions;

(*b*) "Y" is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogeno, cyano, nitro, amino and lower alkylamino;

(*c*) "Z" is selected from the group consisting of hydrogen, halogeno, nitro, amino and lower alkylamino radicals.

2,949,472
1-CARBOALKOXYMETHYL-2-ACETONYL-2,4b-DIMETHYL-4-KETO-1,2,3,4,4a,4b,5,6,7,8,10,10a-DODECAHYDROPHENANTHRENE 7-KETALS AND PROCESSES OF PREPARING THEM
Glen E. Arth, Cranford, N.J., George L. Poos, Ambler, Pa., and Lewis H. Sarett, Princeton, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Original application Dec. 31, 1956, Ser. No. 631,495, now Patent No. 2,887,494, dated May 19, 1959. Divided and this application Mar. 20, 1958, Ser. No. 722,646
5 Claims. (Cl. 260—340.9)

1. 1-carbo(lower alkoxy)methyl-2-acetonyl-2,4b-dimethyl-4-keto-1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydrophenanthrene 7-lower alkylene ketal.

2. 1-carbomethoxymethyl-2-acetonyl-2,4b-dimethyl-4-keto-7-ethylenedioxy-1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydrophenanthrene.

2,949,473
DIHYDROPYRAN COMPOUNDS
Joachim Dazzl, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Apr. 18, 1956, Ser. No. 578,888
2 Claims. (Cl. 260—345.8)

1. The alkyl ester of (1,2-dicarboxyethyl)dihydropyran wherein the alkyl radical has from 1 to 8 carbon atoms.

2,949,474
NEW UNSATURATED GLYCIDYL ETHERS, POLYMERS THEREOF AND METHODS FOR PRODUCING THEM
Guy C. Murdock, Levittown, and Henry J. Schneider, Hatboro, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Feb. 6, 1956, Ser. No. 563,425
10 Claims. (Cl. 260—348)

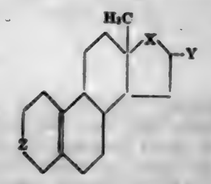
1. A compound of Formula I:

I 

where X is selected from the group consisting of O and S, and A is selected from the group consisting of alkylene groups having 2 to 12 carbon atoms; alkylene groups having 2 to 12 carbon atoms substituted with a member selected from the group consisting of cyclohexyl, phenyl, chlorophenyl, and benzyl; and groups of the general formula $—(C_nH_{2n}X)_xC_nH_{2n}—$ wherein *n* is an integer having a value of 2 to 12 and *x* is an integer having a value of 1 to 5.

2,949,475
3,17-BISOXYGENATED 16-HALOESTRENES AND INTERMEDIATE
William F. Johns, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed May 18, 1959, Ser. No. 813,671
6 Claims. (Cl. 260—397.3)

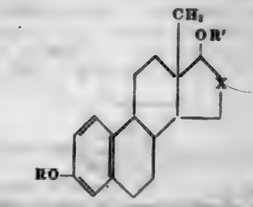
1. A compound of the structural formula



wherein X is selected from the group consisting of carbonyl, hydroxymethylene, and (lower alkanoyl)oxymethylene radicals; Z is selected from the group consisting of carbonyl, β-hydroxymethylene, and β-(lower alkanoyl)oxymethylene radicals; and Y is a halogen atom which has an atomic weight greater than 34.

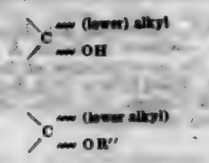
2,949,476
16-ALKYLESTRATRIENE-3,16,17-TRIOLS AND DERIVATIVES THEREOF
David A. Tyner, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Jan. 8, 1957, Ser. No. 632,980
10 Claims. (Cl. 260—397.5)

1. A compound of the structural formula



wherein R is a member of the group consisting of hydrogen and hydrocarbon radicals containing fewer than 9 carbon atoms; R' is a member of the group consisting of hydrogen, hydrocarbon radicals containing fewer than 9 carbon atoms, and acyl radicals of hydrocarbon car-

boxylic acids containing fewer than 9 carbon atoms; and X is a member of the class consisting of



and

groups wherein R'' is an acyl radical of hydrocarbon carboxylic acid containing fewer than 9 carbon atoms.

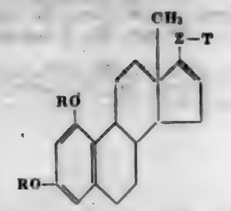
2,949,477

1,3,17-TRIACETOXYESTRA-1,3,5(10),16-TETRAENE AND CONGENERS

James Jin, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed Mar. 4, 1959, Ser. No. 797,013
8 Claims. (Cl. 260—397.5)

1. A compound of the formula



wherein R is selected from the group consisting of hydrogen and benzoyl and lower alkanoyl radicals; Z is selected from the group consisting of oxygen and sulfur; and T is selected from the group consisting of lower alkyl, benzoyl, and lower alkanoyl radicals.

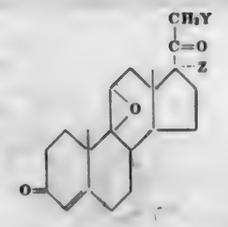
2,949,478

PROCESS OF CLEAVING 9,11 OXIDO STEROIDS WITH ALCOHOLS AND ORGANIC ACIDS

Josef Fried, New Brunswick, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed July 29, 1954, Ser. No. 446,667
6 Claims. (Cl. 260—397.45)

1. The process for producing a steroid of the pregnane series which comprises reacting a steroid of the general formula



wherein Y is selected from the group consisting of hydroxy, halogen, hydrogen and lower alkanoyloxy, and Z is selected from the group consisting of hydrogen and alpha-hydroxy, with a compound selected from the group consisting of lower alkanols, and lower alkanoic acids and recovering the product produced.

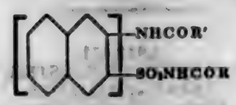
2,949,479

ACYL DERIVATIVES OF AMINONAPHTHALENESULFONAMIDE

Takeo Ueda, Tokyo, Sadataka Kato, Osaka-fu, Shigeki Toyoshima, Osaka, and Tamao Wachi, Tokyo, Japan, assignors to Dainippon Pharmaceutical Co., Ltd., Higashi-ku, Osaka, Japan

No Drawing. Original application June 17, 1954, Ser. No. 437,382. Divided and this application Apr. 5, 1957, Ser. No. 650,836
Claims priority, application Japan Sept. 17, 1953
6 Claims. (Cl. 260—401)

1. A compound which corresponds to the formula



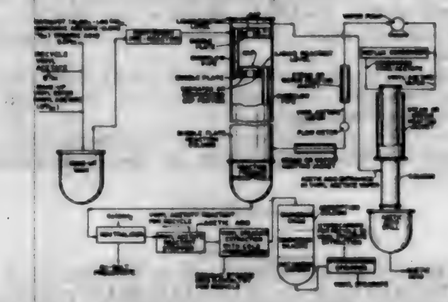
wherein R' is a C_1–C_4 alkyl radical and R is a C_7–C_{18} alkyl radical.

2,949,480

PREPARATION OF VINYL STEARATE

Allo J. Bazell, New Providence, and Thomas F. Rutledge, Madison, N.J., assignors to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

Filed Aug. 27, 1956, Ser. No. 606,496
17 Claims. (Cl. 260—410.9)



1. The method of separating vinyl stearate from a mixture of vinyl stearate and stearic acid which comprises extracting the vinyl stearate from the mixture with a paraffin hydrocarbon solvent having no more than seven carbon atoms.

2,949,481

PRODUCTION OF ALKYL HALOSILANES BY REACTING SILICATES WITH ALKYL ALUMINUM HALIDES

Robert Craig Anderson, Largs, and Geoffrey John Sleddon, Seamill, Scotland, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Filed Sept. 30, 1957, Ser. No. 686,834
Claims priority, application Great Britain Aug. 16, 1957
16 Claims. (Cl. 260—448.2)

1. A process for the production of alkyl- and alkyl halo-silanes comprising reacting together an inorganic silicate selected from the group consisting of bentonite, talc, china clay, albite felspar, olivine, wollastonite, mica, chrysotile asbestos, and sodium silicate, and an alkyl aluminum halide of the general formula $R_aR'_bAlX_{3-a-b}$ where R and R' are alkyl groups, X is a halogen, a is an integer of from 1 to 2, b is an integer of from 0 to 1 and $a+b$ is an integer of from 1 to 2.

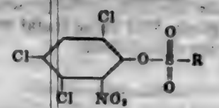
2,949,482

2-NITRO-3,4,6-TRICHLOROPHENYL BENZENESULFONATES

Jacqueline G. Sims, Midland, and Clarence L. Moyle, Clare, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Aug. 9, 1957, Ser. No. 677,199
6 Claims. (Cl. 260—456)

1. A 2-nitro-3,4,6-trichlorophenyl benzenesulfonate corresponding to the general formula



wherein R represents an aryl radical of the benzene series.

2,949,483

METHOD OF PURIFYING AROMATIC DICARBOXYLIC ACIDS

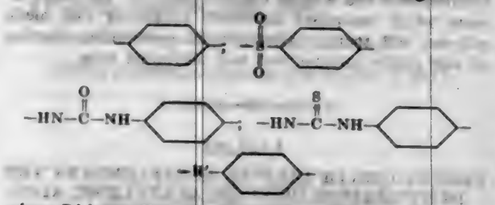
George E. Ham, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Filed July 30, 1954, Ser. No. 446,962
13 Claims. (Cl. 260—516)

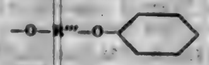
1. A process for purifying aromatic dicarboxylic acids having the formula:



wherein n is an integer from zero to one, inclusive, and R is a radical selected from the group consisting of



where R' is an alkyl group containing from 1 to 8 carbon atoms; —O—R''— where R'' is an alkyl group containing from 1 to 6 carbon atoms; and



where R''' is an alkyl group containing from 1 to 6 carbon atoms, which comprises dissolving the acid in a recrystallization solvent selected from the group consisting of N-methylpyrrolidone, 1,5-dimethylpyrrolidone, N-methylpiperidone and N-methylcaprolactam at a temperature in the range of 30° C. to 130° C. to form the salt of the solvent and dicarboxylic acid, cooling the solution to crystallize the salt, filtering to remove the crystallized salt, and washing the salt with hot water to regenerate the purified aromatic dicarboxylic acid.

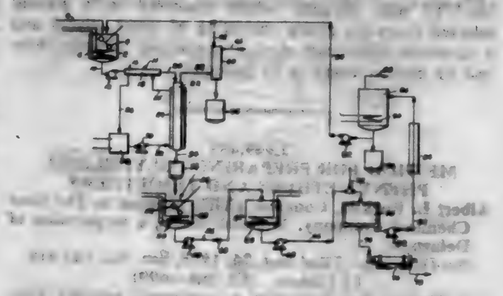
2,949,484

PREPARATION OF GUANIDINE COMPOUNDS

Johnstone S. Mackay, Pittsburgh, Pa., assignor to Pittsburgh Coke & Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

Filed Aug. 13, 1957, Ser. No. 677,959
15 Claims. (Cl. 260—564)

1. A process of preparing a guanidine nitrate comprising the steps of forming a liquid reaction mixture of 1 mol of a urea compound of the group consisting of urea, N-alkyl urea, N,N-dialkyl urea, N-phenyl urea, N-tolyl urea, N,N-diphenyl urea and N,N-ditolyl urea with 1 to 6 mols of a nitrate of the group consisting of ammonium nitrate, a monoalkylamine nitrate and a dialkylamine nitrate, passing said liquid mixture through a column of silica containing catalyst at a temperature



of from about 175 to about 225° C. and recovering the guanidine nitrate.

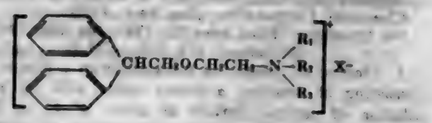
2,949,485

QUATERNARY AMMONIUM SALTS OF 2,2-DIPHENYL ETHYL—AMINO ETHYL ETHERS

William Oroshnik, Plainfield, N.J., and Alexander D. Mebane, New York, N.Y., assignors to Ortho Pharmaceutical Corporation, a corporation of New Jersey

No Drawing. Filed Jan. 29, 1957, Ser. No. 636,865
11 Claims. (Cl. 260—567.6)

1. Quaternary ammonium salts having the formula



in which R_1 and R_2 taken singly are alkyl radicals having less than four carbon atoms and which together with the nitrogen atom form a piperidinium ring, R_3 is selected from the group consisting of lower alkyl, lower hydroxyalkyl, lower alkenyl and benzyl, and X is a halide ion selected from the group consisting of chlorine, bromine and iodine.

2,949,486

PROCESS FOR PRODUCTION OF DEHYDRATED ALDOLS

William E. Weesner and Robert A. Heimoch, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 28, 1955, Ser. No. 516,762
2 Claims. (Cl. 260—604)

1. A process for the production of dehydrated aldols in a liquid phase process which comprises contacting an olefinic hydrocarbon having from 2 to 10 carbon atoms in the presence of carbon monoxide and hydrogen under a pressure of at least 1000 p.s.i. and at a temperature of from 100° to 180° C. in combination with from 1 to 20 percent by weight relative to the charge of the said olefin with a combination catalyst containing from 10 to 90 percent by weight of a cobalt salt and from 90 to 10 percent by weight of a manganese salt.

2,949,487

METHOD FOR PREPARING POLYCHLOROTHIOPHENOLS

Albert L. Rocklin, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 26, 1955, Ser. No. 543,017
19 Claims. (Cl. 260—609)

1. Method for preparing polychlorothiophenols which comprises reacting a polychlorobenzene in pyridic solu-

tion is in which the pyridine compound has at least one open position in the 2- and 6-position on the pyridine ring at a temperature between about 75° C. and about 180° C. with alkaline sulfide dissolved in a solvent selected from the group consisting of water, glycol and a saturated dihydroxy alcohol containing between three and six carbon atoms in its molecule.

2,949,488

METHOD FOR PREPARING POLYCHLOROPHENYL ETHERS AND THIOETHERS

Albert L. Rechlis, Concord, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Oct. 26, 1955, Ser. No. 543,018
13 Claims. (Cl. 260—609)

1. Method for preparing a compound selected from the group consisting of polychlorophenyl ethers and thioethers which comprises reacting a polychlorobenzene in pyridic solution in which the pyridine compound has at least one open position in the 2- and 6-position on the pyridine ring, with a reagent compound selected from the group consisting of the metal alcoholates of aliphatic mono- and dihydric alcohols and of aliphatic mono- and dithiols.

2,949,489

PREPARATION OF SOBREROL

Antony J. Durbetaki, Buffalo, and Seymour M. Linder, Eggertsville, N.Y., assignors to Food Machinery and Chemical Corporation, San Jose, Calif.

No Drawing. Filed June 23, 1958, Ser. No. 744,615
3 Claims. (Cl. 260—631.5)

1. Method of preparing sobrerol from α-pinene oxide, consisting of reacting α-pinene oxide with an aqueous solution of carbon dioxide at about 0° C. to 35° C. whereby said α-pinene oxide is converted to sobrerol.

2,949,490

PROCESS FOR THE PREPARATION OF ORGANIC NITROSO COMPOUNDS

Josef Heinrich Fritz Pieper, Berlin-Lichterfelde, and Johanna Elisabeth Viktoria Natalie Stasch, Berlin-Schlachtensee, Germany, assignors, by mesne assignments, to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 18, 1958, Ser. No. 722,142
Claims priority, application Germany May 13, 1954
6 Claims. (Cl. 260—647)

1. In a method for the production of nitrosocyclohexane by oxidation of cyclohexylhydroxylamine, the improvement which comprises oxidizing cyclohexylhydroxylamine free of contamination with other amines with an oxidizing agent of the group consisting of molecular oxygen and air in an inert organic solvent medium of the group consisting of aliphatic, aromatic, and cycloaliphatic hydrocarbons and chlorinated substitution products thereof at a pH not greater than 5.5 in the presence of a catalyst of the group consisting of the naphthenic acid salts of iron, cobalt, nickel and manganese which are soluble in said inert organic solvent medium.

2,949,491

SELECTIVE HYDROGENATION OF CHLOROBENZENES

John T. Rucker, Lewiston, N.Y., assignor to Hooker Chemical Corporation, a corporation of New York

No Drawing. Filed Nov. 29, 1957, Ser. No. 699,511
11 Claims. (Cl. 260—650)

1. A process for the selective de-chlorination of a chlorobenzene mixture, which comprises bubbling hydrogen at a moderate rate into a liquid mixture comprising said chlorobenzene mixture, in the presence of a catalyst consisting of a group VIII noble metal having an atomic number greater than forty-three, and maintaining the starting mixture between 100 degrees centigrade and reflux temperature.

7. A process for the production of 1,2,3-trichlorobenzene which comprises hydrogenating 1,2,3,4-tetrachlorobenzene at a temperature of about one hundred degrees centigrade to reflux in the presence of a catalyst consisting of a group VIII noble metal having an atomic number greater than forty-three.

2,949,492

PREPARATION OF ALKARYL HYDROCARBONS

Lee James Weaver, Creve Coeur, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed June 18, 1958, Ser. No. 742,724
3 Claims. (Cl. 260—671)

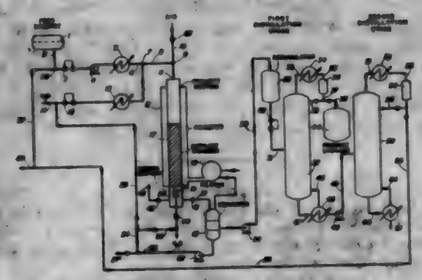
1. In a process for producing alkaryl hydrocarbons containing from 5 to 20 carbon atoms in the alkyl group, whereby an aromatic hydrocarbon and an olefin polymer are introduced into an alkylation zone and reacted in the presence of a Friedel-Crafts alkylation catalyst selected from the group consisting of hydrogen fluoride and metal halides, with consequent formation of and subsequent removal from said alkylation zone of an alkaryl hydrocarbon and a spent catalyst complex, the improvement which comprises intimately contacting said olefin polymer with spent catalyst complex prior to introduction of said olefin polymer into said alkylation zone.

2,949,493

PRODUCTION OF DIVINYL ACETYLENES BY THE DEHYDRATION OF VINYL ACETYLENIC ALCOHOLS IN THE PRESENCE OF STEAM

John Heppel, Hastings-on-Hudson, N.Y.; Charles J. Marsel, New York, N.Y.; and Joachim H. Blanch, Flushing, N.Y. (All of Department of Chemical Engineering, New York University, New York 53, N.Y.)

Filed Oct. 3, 1958, Ser. No. 765,163
7 Claims. (Cl. 260—678)



1. A process for the production of divinyl acetylenes which comprises contacting a tertiary vinyl acetylenic alcohol with a solid alumina catalyst in the presence of steam, the mole ratio of steam to alcohol being maintained at least greater than 1 to 1 during the catalyst contact period and at a temperature between about 150° and 400° C.

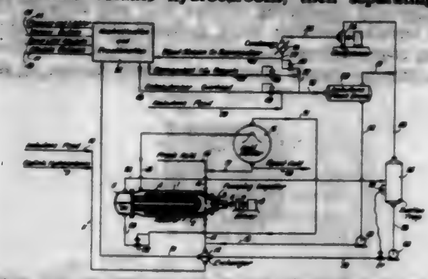
2,949,494

ALKYLATION OF HYDROCARBONS UTILIZING EVAPORATIVE COOLING

David H. Putney, Kansas City, Mo., assignor to Stratford Engineering Corporation, Kansas City, Mo., a corporation of Delaware

Filed Aug. 16, 1954, Ser. No. 450,192
7 Claims. (Cl. 260—683.58)

1. In a process of effluent refrigeration as applied to the alkylation of paraffinic hydrocarbons by olefinic hydrocarbons wherein the reaction is maintained under sufficient pressure to maintain the reactants in liquid phase, a mixture of hydrocarbons and catalyst is withdrawn from the reaction step, the catalyst is separated from the hydrocarbon phase in a first separating step and pressure is reduced on the hydrocarbon phase to refrigerate it and vaporize excess volatile hydrocarbons, the alkylate being nonevaporable under the pressures and temperatures existing in the system, the improvement which comprises directly passing the refrigerated hydrocarbon phase, including both liquid and vapor without separation, in indirect heat exchange with the mixture of hydrocarbons and catalyst in the reaction step to lower the temperature of the materials undergoing reaction and vaporize further volatile hydrocarbons, then separating the



liquid portion of the chilled hydrocarbon phase from the vapor portion thereof in a second separating step, and removing both liquid and vapor phase material separately from said second separating step.

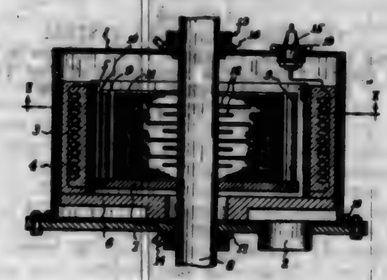
ELECTRICAL

2,949,495

VACUUM FURNACE FOR VAPOURISING THE VOLATILE CONSTITUENT OF AN ALLOY

Michel Caron, Sevres, Georges Chaudron, Paris, and Léon Moreau, Vitry, France, assignors to Commissariat a l'Energie Atomique, Paris, France

Filed Sept. 29, 1958, Ser. No. 764,157
Claims priority, application France Oct. 7, 1957
1 Claim. (Cl. 13—8)



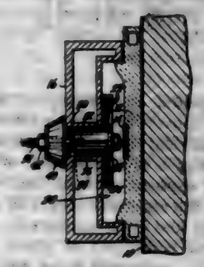
A vacuum furnace, comprising in combination a cylindrical chamber constructed and arranged to be evacuated, peripheral electrical resistances disposed inside the chamber and constructed and arranged to heat the chamber, refractory coverings on the resistances, plates made of an insulating material disposed inside the chamber radially inward from said resistances, a rotatable cylindrical container arranged inside said plates and coaxially with the chamber and constructed and arranged to support a metal band, a perforated cylindrical screen disposed inside the chamber and band and in the vicinity of the container and coaxially with the chamber and container, a pipe passing centrally through the chamber and constructed and arranged to conduct a cooling fluid, and vanes on the pipe, said vanes being disposed inside the chamber, whereby a volatile constituent of the band is vaporised in the chamber and condensed on the vanes.

2,949,496

ELECTRODE HOLDER CONSTRUCTION FOR ELECTRIC SMELTING FURNACES

Arne Hilder Ingolvsø and Nils Johan Henrik, Oslo, Norway, assignors to Elektrokemisk A/S, Oslo, Norway, a corporation of Norway

Filed Aug. 29, 1958, Ser. No. 758,137
Claims priority, application Norway Sept. 11, 1957
4 Claims. (Cl. 13—16)



1. An electrode holder for use with continuous electrodes in an electric smelting furnace, the combination of a pressure ring made up of interconnected sections, at least one electrode clamp member for each such section, a spring interposed between each clamp member and its pressure ring section, a bushing passing through the center portion of each pressure ring section tensioned by said spring toward the clamping member, a pressure bolt carried by the bushing arranged to press against the clamping member means for adjusting the position of said bolt in said bushing so that the pressure against the clamping member may be adjusted and means whereby said bushing and said pressure bolt may be moved outwardly away from the clamping member without relative movement between the pressure bolt and the bushing.

2,949,497

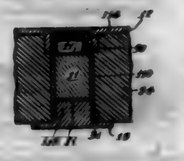
THERMOELECTRIC ASSEMBLY

Lactance A. Jarvis and John B. Heinicke, Benton Harbor, Mich., assignors to Whirlpool Corporation, a corporation of Delaware

Filed Mar. 5, 1958, Ser. No. 719,348
5 Claims. (Cl. 136—4)

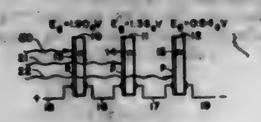
1. A thermoelectric assembly, comprising: a hollow dielectric connector; a pre-formed thermoelectric element

within said connector; a pair of spaced apart terminal members fastened to said connector and positioned one adjacent each end thereof with one terminal member in electrically conducting relation with said element, the other terminal member being provided with an opening having cross sectional dimensions at least equal to those of the thermoelectric element to permit passage of the



element therethrough; and a cap retained in said opening in electrical conductive relationship with said element, said other member and cap being provided with co-operating means permitting removal and installation of said cap relative to said opening while said other member is maintained in its position adjacent one end of the element.

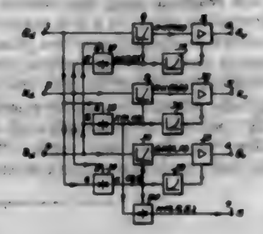
2,949,498
SOLAR ENERGY CONVERTER
Edmond D. Jackson, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Oct. 31, 1955, Ser. No. 543,846
17 Claims. (Cl. 136—89)



1. The combination comprising a prime electrical power source for converting light to electrical power and providing an electrical output therefrom, said prime power source having a high efficiency of conversion per unit area thereof exposed to light, and an external circuit connected to the electrical output of said prime electrical power source and powered thereby, said prime electrical power source comprised of plural layers of semiconductor material, each said layer having a p-n junction and composed of a semiconductor material having an energy gap different from the energy gaps characterizing the semiconductor materials composing said other layers, said layers being arranged to receive light in descending order of their energy gaps with the light energy absorbed by each said layer being transmitted through the layer of next higher energy gap material.

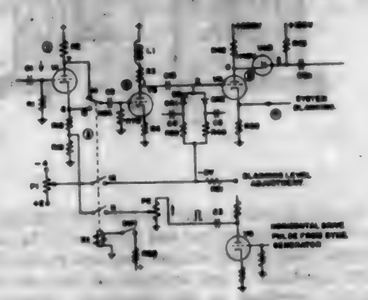
2,949,499
APPARATUS FOR RESOLVING THREE-COLOR SEPARATION INTO FOUR-COLOR SEPARATION
Fritz-Otto Zeyen, Kiel, and Wilfried Pawlowski, Kitzeberg, Germany; said Zeyen assignor to Dr.-Ing. Rudolf Hell Kommanditgesellschaft, Kiel, Germany, a company of Germany
Filed Nov. 13, 1956, Ser. No. 627,532
Claims priority, application Germany Nov. 14, 1955
2 Claims. (Cl. 178—5.4)

1. Apparatus for converting three color separations, namely, yellow, red, blue, into four color separations, namely, yellow, red, blue, black, which are equivalent in the printing result for reproduction, utilizing subtractive color mixing at least predominantly, particularly for intaglio printing reproduction, comprising three equivalent electrical amplifier channels each comprising in series relationship a suppressor circuit and a regulating amplifier, means for feeding to the inputs of said amplifier channels the color components of individual picture points of the three color separation to be transformed into proportional electric voltages, representing the color voltages, three similar double input control channels each for controlling one of said amplifier channels and comprising a selection circuit having a series connection of a circuit for selection of the lower one of two offered voltages and a distorter circuit, means for connecting the output of the selection circuit with the control input of the suppressor circuit and the output of the distorter



circuit with the control input of the regulating amplifier of the corresponding amplifier channel, means for connecting the double inputs of each control channel with the inputs of those two amplifier channels which do not belong to it, another selection circuit having a pair of inputs, and means for connecting the two inputs of said other selection circuit with the outputs of any two of the three selection circuits of the control channels, the outputs from said amplifier channels providing the respective transformed color voltages of the four color separation, and the output from said other selection circuit providing the black voltage of the four color separation.

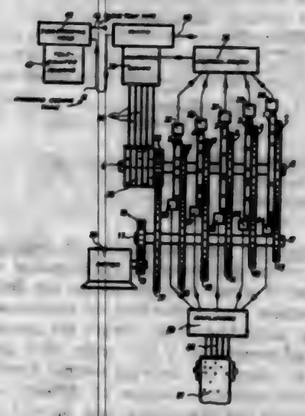
2,949,500
TELEVISION CAMERA SYSTEM
Wayland L. Shepard, Liverpool, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 10, 1958, Ser. No. 741,156
12 Claims. (Cl. 178—7.2)



4. Apparatus for providing selective television broadcasting of negative and positive film, said apparatus comprising means to provide a video signal responsive to projection of light through said film, means responsive to said means for providing a video signal for providing selective phase inversion and phase continuation of said last-named signals, means to provide selective clamping of said phase-inverted and said phase-continued signal to vary clamping levels selectively in accordance with phase-inversion and phase-continuation, means to provide a horizontal pulse input for a selected one of said phase-inverted and phase-continued signals, means to adjust the

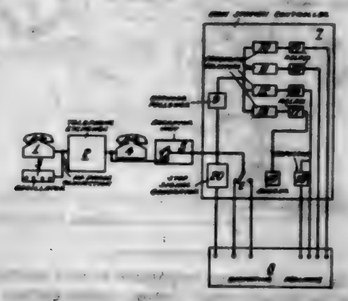
pulse level of said last-named means, and means to provide an output signal in accordance with the additive effect of said video signal and said pulse signal to thereby provide a spread between level of said output pulse and level of said video signal to provide for maximum efficiency of broadcast transmitting over the entire light to dark level signal range.

2,949,501
APPARATUS FOR PRODUCING PUNCHED CODING TAPES OF VERY LONG PERIOD
Rudolf Hell, Kiel-Dietrichsdorf, Germany, assignor to Kommanditgesellschaft Dr. Ing. Rudolf Hell, Kiel-Dietrichsdorf, Germany, a German firm
Filed Oct. 28, 1955, Ser. No. 543,549
Claims priority, application Germany Jan. 26, 1955
14 Claims. (Cl. 178—22)



1. Apparatus for producing in binary teleprinter code extended punched coding tapes of very long period, for use in a coding machine, utilizing relatively short, non-periodic, arbitrarily selected sequences of symbol element combinations, whereby the symbol element sequences formed of the respective symbol elements exhibit symbol element numbers no two of which have a common divisor, comprising storage means for successively storing the symbol elements of the respective symbol element sequences at a predetermined speed, each storage means having a number of storage elements corresponding to the number of symbol elements contained in the respective symbol element sequences, means for periodically reading with identical speed the respective stored symbol element sequences starting from a desired selectible relative starting position of the respective sequences one relative to the other, means for continuously comparing the successive read symbol element combinations formed by said symbol element sequences with a predetermined symbol element combination to ascertain occurrence of agreement between one of said read combinations and said predetermined combination, auxiliary means containing a further periodic arbitrarily selected sequence of all possible symbol element sequences which is aliquant to the other sequences, an operating device for receiving with identical speed the successively read and compared symbol element combinations and the symbol element combinations from said auxiliary means, said operating device being effective to select and to register from said symbol element sequences supplied by said auxiliary means those symbol element combinations which are respectively received at instants of ascertaining said agreement and being further effective to utilize said selected and registered symbol element combinations for producing the extended punched coding tape.

2,949,502
TELEPHONE DICTATING SYSTEM WITH IN-PHASE CONTROL SIGNALS
David Gerald Logan, Southchurch, Southend-on-Sea, England, assignor to Unilever Limited, Port Sunlight, England, a British company
Filed July 23, 1953, Ser. No. 369,838
Claims priority, application Great Britain Aug. 28, 1952
7 Claims. (Cl. 179—6)

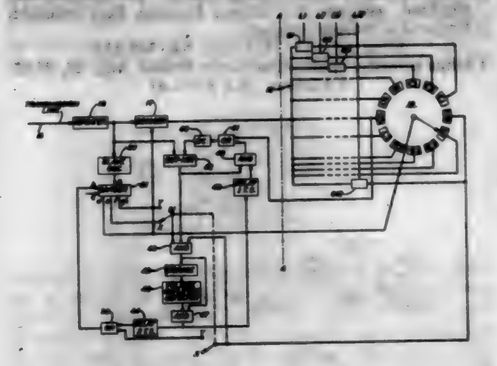


1. An apparatus for controlling a dictating machine over a telephone system having two transmission lines, which apparatus comprises a remote controller having generating means for producing a plurality of predetermined alternating current switching signals which differ from one another in frequency, said generating means being connected in phase to said lines at a dictating station for injection of the switching signals, and a main station controller having switching means for setting the dictating machine to a plurality of required conditions including a desired condition in full response to said switching signals to enable the recording of a message on and reproduction of at least part of the said message from the dictating machine during one telephone call, the main station controller having means to maintain the dictating machine in the desired condition for substantially only the period that the switching signal corresponding to the desired condition is being received, whereby said switching signals cause relatively little interference with speech transmission over the telephone lines.

2,949,503
PULSE MODULATION SYSTEM FRAMING CIRCUIT
Frederick T. Andrews, Jr., and Henry Mann, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 21, 1958, Ser. No. 736,724
17 Claims. (Cl. 179—15)

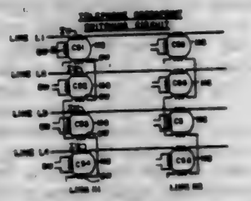
1. In a pulse communication system in which transmitted digits comprise framing digits of the ON-OFF pulse type and encoding digits, receiver apparatus comprising a decoder, a plurality of output channels, a distributor for distributing the output of said decoder to said output channels, and control means responsive to said framing and encoding digits for establishing and maintaining said decoder and said distributor in phase with said encoding digits, said control means comprising timing means for producing timing pulses which, when correctly phased with said framing and encoding digits and applied to said decoder and said distributor, cause said encoding digits to be correctly decoded and distributed to said output channels, means for applying said timing pulses to said decoder and said distributor, means timed by said timing means for sampling said transmitted digits so that when in phase said sampled digits comprise said framing digits, said sampling means producing an output of a first kind for each of said sampled digits when said

sampled digits comprise only said framing digits and an output of a second kind for at least one of said sampled digits when said sampled digits comprise said



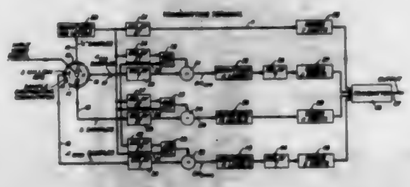
encoding digits, and means responsive to said second kind of outputs for causing said timing means output to be retarded in phase.

2,949,504
MAGNETIC SWITCHING DEVICES AND SYSTEMS
Morris Rubinoff, Sharon Hill, Pa., assignor to the United States of America as represented by the Secretary of the Army
Filed Nov. 26, 1958, Ser. No. 776,654
8 Claims. (Cl. 179—15)



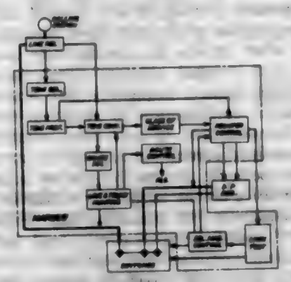
8. In an electronic switching office of a two-way voice telephone system, including the terminating portions of the two-wire lines of a plurality of telephone subscribers and a plurality of two-wire cross links for use in providing connections between the lines of different pairs of telephone subscribers for two-way voice communication between these subscribers at the request of one of them, a magnetic switching system comprising a plurality of crosspoint switches respectively located at each intersection of a voice line and a cross link, each comprising a substantially identical magnetic core made from a saturable magnetic material having a magnetization characteristic of the wasp-waisted type in that its remanent flux density is always very small compared to its saturated flux density and its permeability is negligible until a coercive magnetic field of a given minimum strength is applied thereto, and a plurality of inductive windings on the core including an input and an output winding and an auxiliary biasing winding, the input and output winding of each switch being respectively connected in circuit with a subscriber line and a cross link and forming a transformer for coupling them at their point of intersection, this transformer, since the initial permeability of the associated core material is negligible, providing negligible primary inductance and thus transformer coupling between the associated line and link in the neutral unmagnetized state of the core material, thereby effectively disconnecting this line and link electrically from each other in this state, and said transformer when a coercive magnetic field of said given minimum strength is applied to its core being set into a condition of high primary inductance and close coupling to couple the associated line and link together electrically, and means under control of a calling subscriber to supply control current to the auxiliary biasing windings of selected ones of said switches of such values as to provide the coercive field of the necessary strength to the cores of these switches to operate them to the latter condition.

2,949,505
REDUCED BANDWITH TRANSMISSION SYSTEM
Ernest R. Kretzmer, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 14, 1957, Ser. No. 678,193
20 Claims. (Cl. 179—15.6)



4. A system for the transmission of message signals comprising means for sampling said message signals to form a series of signal samples, means for dividing said series of samples into a plurality of interleaved sample sequences of ascending order, means for quantizing the amplitudes of samples of a first order to a given number of levels, means for deriving sample amplitude differences from adjacent samples of different order sequences, means for quantizing said derived amplitude differences to succeedingly smaller numbers of levels, and means for transmitting said quantized sample amplitudes to a receiving station.

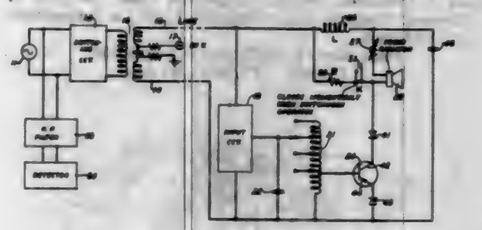
2,949,506
COORDINATE SWITCHING SYSTEM
Henry H. Abbott, Chatham, N.J., Robert O. Rippere, Huntington, N.Y., Robert D. Williams, Parsippany, N.J., and Oscar H. Williford, Bronxville, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 14, 1958, Ser. No. 735,158
23 Claims. (Cl. 179—22)



1. An automatic switching system comprising a plurality of crossbar switches having horizontal conductors thereof multipled throughout said switches to form a number of horizontal conductor links common to all switches, a plurality of functional circuits each terminated in at least one switch vertical individual thereto,

switch control means including a select magnet per switch corresponding to each switch horizontal and a hold magnet per switch corresponding to each switch vertical, a common control circuit effective to control said magnets to establish connections between vertical terminations of said functional circuits over only those parts of links extending between switch crosspoints individual to said connected functional circuits, and means in said control circuit for obtaining access to said functional circuits and to said magnets and to said links to effect the said control of said magnets, said access means to said links consisting solely of a test circuit connected between said links and said common control circuit to ascertain the condition of said links, said access means to said magnets including means controlled by said test circuit to effect select magnet operation corresponding to a link, said access means to said functional circuits including means controlled by said select magnet operation and by said functional circuits to operate hold magnets corresponding to switch verticals between which connections are to be effected over the link corresponding to the said select magnet operation.

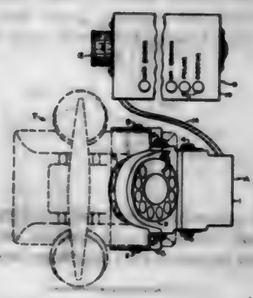
2,949,587
ELECTRICAL INFORMATION SYSTEM
Benjamin F. Lewis, Bayside, N.Y., and James R. Power, Chatham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 14, 1959, Ser. No. 813,258
6 Claims. (Cl. 179—84)



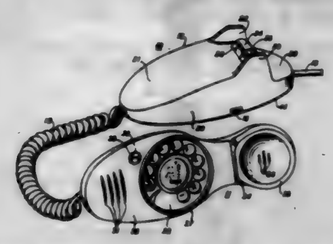
1. In a telephone system, a line terminating at one end in a central office and at the other end in a subscriber's station, signaling means at said subscriber's station responsive to current of a particular frequency, means for transmitting current of said particular frequency over said line from said central office to said subscriber's station, a switch at said subscriber's station, means momentarily effective upon operation of said switch for transmitting harmonics of said particular frequency over said line from said subscriber's station to said central office, and means at said central office for detecting said harmonics.

2,949,588
TELEPHONE DIALING DEVICE
George W. Rettie and Robert D. Hotchkiss, both of 2227 NE. 171st St., North Miami Beach, Fla.
Filed Oct. 7, 1958, Ser. No. 765,777
7 Claims. (Cl. 179—90)

1. An automatic dialing device for dial telephones having: dial engaging means; a first solenoid activated pawl means to rotate said dial engaging means; a second solenoid activated pawl means to control the direction of rotation of said dial engaging means; switch means operated by said first solenoid activated pawl means to control cycling of said second solenoid activated pawl means; motor driven cam disks having notches indexed in their periphery; and switch means to engage the notches in the periphery of said cam disks to provide momentary electrical impulses in timed groups to the said first solenoid activated pawl means.



2,949,589
UNIVERSAL TELEPHONE MOUNTING
William E. Whidden, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 23, 1959, Ser. No. 822,348
12 Claims. (Cl. 179—100)



1. A telephone set comprising a base including a planar surface serving as the mounting surface when mounted vertically or the bottom surface when positioned horizontally, a housing over said base including a first surface extending over a major length of said base and terminating at a lower step portion extending over the remaining minor length of said base, a pair of handset retaining elements in spaced juxtaposition in the region between said first surface and said lower step portion, said housing including an opening between said handset retaining elements, a handset conforming in shape to said surface and said step portion including a restricted portion corresponding to said handset retaining elements of said base, a switch hook assembly in said base including a shaft secured within said housing at the end of said base adjacent to said lower step portion, rotatable means secured to said shaft and extending toward the center of said base, an arcuate shaped hook member secured to said rotatable member and extending through the opening in said housing, said hook member having a radius of curvature about said shaft whereby said hook member describes an arcuate movement extending into said housing upon positioning of said handset into said base.

2,949,510
TELEPHONE HANGER
Harold M. Sichel, 38 Bulson Road, Rockville Centre, N.Y.
Filed Dec. 31, 1958, Ser. No. 784,320
8 Claims. (Cl. 179—146)

2. A support for a telephone receiver or the like comprising a support member having a pair of diverging arm

members, a cradle member joining said arm members into a unitary device, said cradle member including opposed sloping sides and a transverse seat connecting said sides,



whereby a self-centering support for the telephone receiver is provided, and means on said support member adapted to be removably mounted on a telephone box.

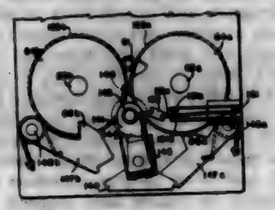
2,949,511
SWITCHES
Henry J. Glueckstein, Brookfield, and Kurt Stephan, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed Feb. 10, 1958, Ser. No. 714,385
9 Claims. (Cl. 200—11)



6. A switch comprising, a stator having a central opening therein, a disc-shaped rotor mounted for rotation in said opening, a plurality of separate rotor contacts mounted on opposite sides of said rotor, said rotor contacts arranged in a circle with the contacts on one side of said rotor spaced at angular positions intermediate the contacts on the other side of said rotor, a plurality of stator contacts mounted on opposite sides of said stator and adapted to make contact with said rotor contacts as said rotor is rotated, and means for electrically connecting pairs of adjacent contacts mounted on opposite sides of said rotor independently of the other pairs of adjacent rotor contacts, said means including conductors rigidly adhered throughout to the sides of said rotor and extending radially inwardly from said rotor contacts, said inner end portions of said radially extending conductors on one side of said rotor being angularly offset so that the inner end portion of each conductor on said one side of said rotor will be aligned with an inner end portion of a conductor on the other side of said rotor.

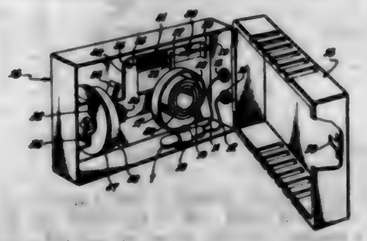
2,949,513
TIME-CONTROL DEVICE
Harold F. Elliott, 800 Westridge Drive, Menlo Park, Calif.
Original application May 13, 1953, Ser. No. 354,847, now Patent No. 2,947,366, dated Oct. 6, 1959. Divided and this application July 2, 1959, Ser. No. 824,725
6 Claims. (Cl. 200—38)

6. In a timing system including timing motor means, a time-control device comprising: a pair of timing mechanisms each including a time shaft adapted to be driven by said motor means, a time scale associated with and driven by said time shaft, an element driven by said time shaft but settable relative thereto, a function-time indicator connected to said driven element and registering with said time scale, and a control element operable in response to the position of said settable element; a pivoted lever having at one end thereof an element



pivoted thereon and supported thereby and biased to a fixed position relative thereto, said control elements having one-way actuating connections to said pivoted element; two-position control means actuated by said lever; a manually operable element connected to said lever for actuating said control means to either of its positions independently of said control elements; and a function indicator associated with said manually operable element.

2,949,513
EFFECTIVE TEMPERATURE THERMOSTAT
Evan J. Davidson, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California
Filed Sept. 3, 1957, Ser. No. 681,700
5 Claims. (Cl. 200—61.06)



1. In a control system: a thermostatic member having means movable in accordance with temperature for accomplishing a controlling function; a support for the thermostatic member; means mounting the support for movement in a path having a component corresponding to the direction of movement of the movable means; resilient means urging the support in one direction; a strand hygrometer urging the support in the opposite direction and maintained taut by said resilient means; and means for adjusting the strand tensioning force exerted by said resilient means.

2,949,514
CONDITION RESPONSIVE DEVICE
Roy W. Barthel, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,693
5 Claims. (Cl. 200—61.06)

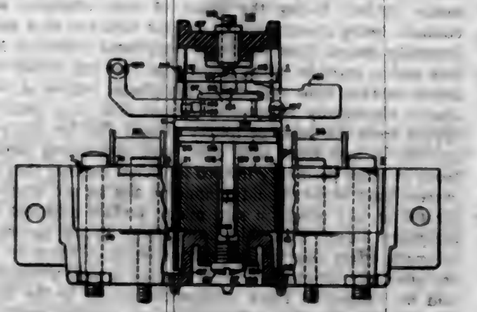
5. In a condition responsive device, a condition responsive element changing in position as a condition changes, means connected to respond to a change in position of said element, said means being connected to said element, a calibration lever attached to said element

whereby the effect of the position of said element on said first mentioned means can be selected, a strain release means, means connecting said release means to said lever,



and means for adjusting said means as said calibration level is adjusted to maintain said strain release substantially constant.

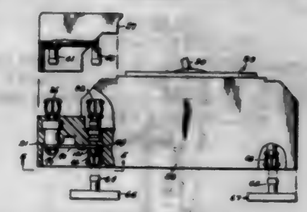
2,949,515
ALTERNATING CURRENT INDUCTION DEVICE
Gino J. Marieni, Parsippany, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 12, 1957, Ser. No. 677,639
7 Claims. (Cl. 200—87)



1. In an inductive relay device, a magnetic structure including a rim and a plurality of inwardly facing magnetic poles carried by said rim and having spaced inwardly facing surfaces, said poles being axially aligned with their axes lying in a medial plane, a cylindrical magnetic core, means supporting said core with its longitudinal axis extending substantially transversely to said plane and intermediate said pole surfaces and equally spaced therefrom to provide a plurality of air gaps, a hollow current conductive cylindrical member concentrically arranged with respect to said core and having its peripheral side wall in said gaps, said cylindrical member having a point intermediate its ends which divides said cylindrical member into two portions which are electrically and magnetically symmetrical, and means for rotatably supporting said cylindrcal member with said point in said medial plane.

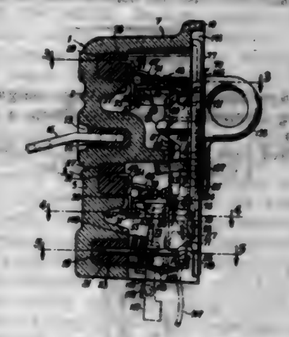
2,949,516
REPOSITION TERMINALS FOR CIRCUIT BREAKER BASE EXTENSION
William Harold Edmonds, Havertown, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 23, 1956, Ser. No. 623,883
5 Claims. (Cl. 200—114)

1. In combination; a circuit breaker having an extended base and a terminal; said circuit breaker having a pair of cooperable contacts movable between an engaged and a disengaged position, and a disconnect contact; said disconnect contact being in registry with a circuit breaker terminal position; said extended base carrying a disconnect contact; said circuit breaker disconnect contact and said extended base disconnect contact being constructed



to electrically connect a current limiting device in series with said pair of cooperating contacts when corresponding disconnect contacts of said current limiting device engage said circuit breaker and base disconnect contacts; said terminal being electrically connected to said extended base disconnect contact and positioned in registry with said circuit breaker disconnect contact.

2,949,517
FUSE CUTOUT
Joseph R. McBride, Centralia, Mo., assignor to A. B. Chance Company, Centralia, Mo., a corporation of Missouri
Filed July 21, 1958, Ser. No. 749,937
22 Claims. (Cl. 200—114)

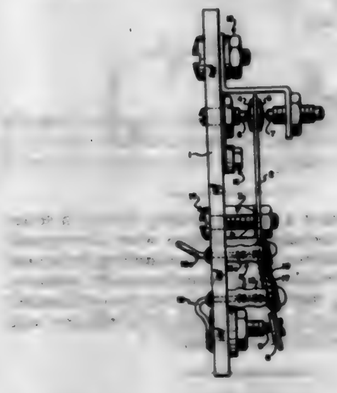


1. A fuse cutout comprising a box, shock-absorbing cantilever spring arms carried by the box, a door for the box, a hinge member pivotally mounting said door on said spring arms, a fuse tube including a fuse link mounted on the door, and shock-absorbing means connecting said fuse tube and said hinge member whereby upon blowing of the fuse link the resultant recoil of the fuse tube is transferred directly through said shock-absorbing connecting means to said hinge member and thence to said shock-absorbing pivot means.

2,949,518
THERMOSTATIC TIME DELAY RELAY
Marcus I. Nystuen, St. Paul, Minn., assignor to Economics Laboratory, Inc., St. Paul, Minn., a corporation of Delaware
Filed Apr. 24, 1959, Ser. No. 808,814
6 Claims. (Cl. 200—122)

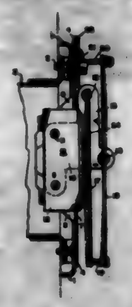
1. A time delay relay of the thermostatic type comprising a base, a mounting bracket secured to said base, a longitudinal bi-metal strip mounted at its midsection on said bracket so that its two ends can flex independ-

ently with respect thereto, a first movable contact carried on a first end of said strip, a first fixed contact positioned on the base in contacting alignment with said first movable contact, a heating coil secured to said strip between said first movable contact and said bracket, means connecting one end of said coil to one of said contacts and means adapted to connect the other end of said coil to



an electric source, a second movable contact carried on the second end of said strip, and a second fixed contact positioned on said base in contacting alignment with said second movable contact, said bracket being of heat-conductive material and being in heat-conductive contact with said strip, whereby to delay the transfer of heat from said coil into the second end of said strip.

2,949,519
THERMOSTAT
Charles E. Armstrong, Portland, Oreg., assignor to C. E. Armstrong Company, Gladstone, Oreg., a corporation of Oregon
Filed June 10, 1957, Ser. No. 664,565
2 Claims. (Cl. 200—138)



1. A thermostat of the class described comprising in combination a base, a switching mechanism carried by the base and connected into a load circuit by electrical conductors extending into and looped within the base, a switching mechanism carried by the base, a first temperature sensitive element hingedly attached at one of its ends to the base and intermediate its ends in operative contact with the switching mechanism, a second temperature sensitive element hingedly attached intermediate its ends to the base and in contact at one of its ends with an adjustable cam surface upon the base and at its opposite end in contact with the opposite end of the first temperature sensitive element, whereby the deflection of both temperature sensitive elements is combined in concentrated reaction against the switching mechanism to actuate the same, and said electrical conductors within the area of said base being so arranged relative to said temperature sensitive elements that the latter will partake of and react to the inherent heat of said conductors caused by the flow of current therethrough.

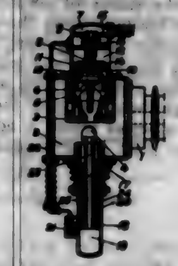
2,949,520
CONTACT STRUCTURE FOR AN ELECTRIC CIRCUIT INTERRUPTER
Harold N. Schneider, Springfield, Pa., assignor to General Electric Company, a corporation of New York
Filed Apr. 23, 1958, Ser. No. 730,413
18 Claims. (Cl. 200—144)



1. In an electric circuit interrupter, a pair of coacting contacts relatively movable from a position of engagement to a position of disengagement to establish a circuit-interrupting arc between said contacts, at least one of said contacts comprising a conductive disk having a major surface facing the other of said contacts, said contacts being constructed to initiate said arc at a point inwardly spaced from the outer peripheral region of said disk and to provide forces for driving said arc across said major surface onto said outer peripheral region, a conductor electrically connected to said disk at a location spaced from the outer periphery of said disk for carrying current to and from said disk, said disk being slotted from its outer periphery inward in such a manner that the current path between said conductor and an arc terminal located at any point on said major surface adjacent the periphery forms with said arc a loop circuit having a magnetic effect exerting a net component of force on the arc generally tangentially with respect to said periphery, said net tangential force component acting in the same angular direction for substantially all angular positions of said arc on said periphery and thereby causing said arc to travel rapidly in one angular direction along the outer peripheral region of said disk, the portions of said outer peripheral region on either side of any peripheral slot being sufficiently close together to enable said tangentially-acting component of force to drive said arc across said slot.

2,949,521
HIGH TENSION AIR BLAST CIRCUIT BREAKER
Richard Schulz, Friedberg, Hesse, Germany, assignor to Allmänna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a Swedish corporation
Filed Sept. 11, 1958, Ser. No. 760,357
Claims priority, application Germany Sept. 12, 1957
2 Claims. (Cl. 200—148)

1. A pneumatically operated circuit breaker comprising a first movable contact, a second movable contact, a container enclosing said contacts, said first contact being movable between a first and a second position, said second contact when said first contact is in its first position being movable between a first engaged position and a second disengaged position with respect to said first contact, said first contact in its second position being at an insulating distance from said second contact even when said second contact is in its first position, the said container being filled with compressed air at least when said second contact is in its second position, pneumatic operating means responsive to a predetermined pressure condition in the container for moving said first contact to its second position, and latch means



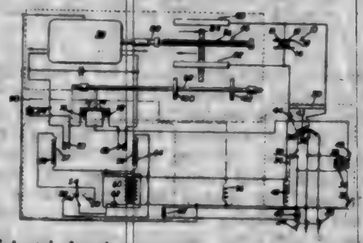
arranged to latch said first contact in its first position when said second contact is in its first engaged position.

2,949,522
ELECTRICAL COMPONENT
Henry J. Glueckstein, Brookfield, William J. Foy, Thiensville, and Kurt Stephan, Milwaukee, Wis., assignors to Globe-Union Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 31, 1957, Ser. No. 662,822
4 Claims. (Cl. 200—166)



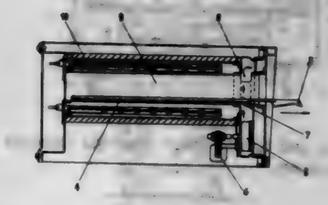
1. A plug-in switch comprising, a sheet of insulating material, a plurality of stationary contacts positioned on one face of said sheet, a plurality of hollow connector pins open at both ends and having an end portion engaging said sheet and said stationary contacts to mechanically hold said contacts to said sheet and electrically connect said connector pins to said stationary contacts, said connector pins each having a cylindrical portion extending from the other face of said sheet and adapted for engagement in a socket to electrically connect said stationary contacts to the circuits to be controlled by plug-in connection of said switch with a panel having sockets mounted therein, and a contactor movably mounted on said base for movement in and out of contact with said stationary contacts whereby electrical circuits can be selectively completed between said connector pins.

2,949,523
DIELECTRIC HEATING APPARATUS
Eric W. A. Smith, Harpenden, and Frank A. Rowley, Luton, England, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Oct. 17, 1957, Ser. No. 690,728
6 Claims. (Cl. 219—10.77)



1. Dielectric heating apparatus comprising a generator of radio-frequency current, a power supply input circuit connected with the generator, a load circuit, dielectric heating electrodes forming part of the load circuit, a tuning device in the load circuit, an electric motor to drive said device, an ammeter in said input circuit, a relay in the motor circuit adapted to be operated by the ammeter to start said motor at a given ammeter reading.

2,949,524
BAKING FURNACE
Romeo Scaioni, Via Fanti 2, Abbiategrasso, Italy
Filed Sept. 24, 1957, Ser. No. 685,829
Claims priority, application Italy July 17, 1957
1 Claim. (Cl. 219—35)

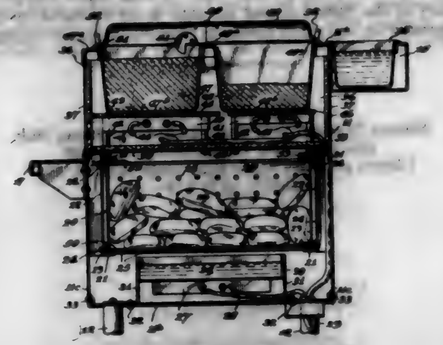


A baking furnace comprising a housing having a stokehole at one end, a plate supported in said housing and substantially horizontally removable therefrom through said stokehole, heating means disposed above and below said plate in said housing, a closed circuit conduit in said housing adjacent said stokehole for feeding an air stream upwardly passing the said stokehole and returning the air downwardly through laterally disposed portions of said conduit, thereby, providing a continuous air stream through said conduit and passing said stokehole, and means for moving said air stream at a predetermined speed through said conduit and across said stokehole, respectively, said moving means for said air-stream comprising a fan disposed in said conduit and causing higher than atmospheric pressure in the portion of said conduit moving said air stream upwardly and lower than atmospheric pressure in the portion of said conduit moving said air stream downwardly, and said housing comprising a plurality of horizontally disposed plates and a plurality of vertically disposed plates having horizontally disposed end flanges, said horizontally disposed plates resting on and engaging loosely corresponding of said end flanges, said horizontal plates defining a baking chamber and chambers receiving said heating means, respectively.

2,949,525
COOKER
Lyman D. Dunn, 2555 South Parkway, Chicago 16, Ill.
Filed May 21, 1958, Ser. No. 736,875
4 Claims. (Cl. 219—39)

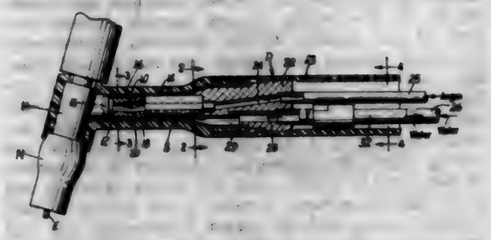
4. A cooking and serving device for use by a purveyor comprising: a cooking and warming compartment having side and bottom walls; a pair of heating units in said compartment; a pair of flat metal plates positioned in a substantially horizontal, coplanar heat transfer relationship over said units; a pair of food containers having substantially flat bottoms arranged to fit relatively snugly in said compartment with said bottoms resting on said metal plates; and a cover for said containers having two portions, the first of said portions being arranged to cover the first of said containers and having a plurality of extending tabs for gripping said first container, the second of said portions being hingedly attached to said first portion and arranged to cover the second container, and said second portion when folded back on said first portion also

arranged to cooperate with said first portion to act as a handle for transferring the first of said containers from



one heating unit to the other after the removal of said second containers.

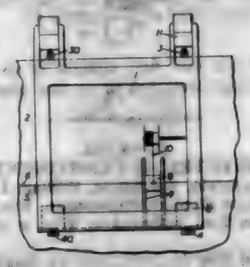
2,949,526
GAS SHIELDED ARC TORCH
Clifford W. Hill, Mountainside, and William J. Blanchard, Sr., Parlin, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Nov. 13, 1958, Ser. No. 773,742
4 Claims. (Cl. 219—75)



1. In a gas shielded arc torch comprising a torch head for supporting an electrode and a gas-directing nozzle surrounding said electrode, a neck joined to said head and disposed entirely on the rear side thereof for supplying current to said electrode and gas to said nozzle, and a handle joined to said neck for manipulating the torch, said head being constructed of metal of high heat conductivity for the rapid conduction of heat therethrough away from the arcing tip of said electrode, a water jacket in said neck close to said head means for blocking the passage of water from said jacket to the far side of said head, a water inlet passage through said handle for supplying cooling water to said jacket, and a water outlet passage in said handle for conducting away from said jacket the water heated therein by the heat conducted thereto through said head from said arcing tip.

2,949,527
ELECTRIC ARC WELDING
John A. Lacey, Newcastle-upon-Tyne, England, assignor to The British Oxygen Company Limited, a British company
Filed Mar. 30, 1959, Ser. No. 802,789
Claims priority, application Great Britain Apr. 9, 1958
5 Claims. (Cl. 219—126)

1. Apparatus for use in the welding of a substantially horizontal curved seam between an upper and a lower metal plate which together define a portion of a curved shell that corresponds approximately to a surface of revolution in which the radius of revolution varies in accordance with its position along the axis of revolution comprising: a support for a welding head; two driving rollers attached to the support and spaced transversely to the direction of the weld seam, one of which is adapted to drivingly engage the top edge of the upper plate being welded, and the other of which is adapted to drivingly engage the lower plate being welded; a welding head



mounted on the lower half of the support and arranged to be positioned in welding relationship to the weld seam; controlling means for detecting a tendency for the roller drivingly engaging the lower plate to lead or lag with respect to the roller drivingly engaging the upper plate and for controlling the speeds of the rollers to minimise this tendency; and means for positively driving the rollers at different peripheral speeds whose magnitudes are correlated by the controlling means to ensure an approximately steady movement of the welding head along the seam.

2,949,528
METHOD AND DEVICE FOR FLUX-COVERED ELECTRODE WELDING
Arthur A. Bernard, R.R. 2, and Richard A. Bernard, R.R. 1, both of Chicago Heights, Ill.
Filed Apr. 2, 1958, Ser. No. 726,091
4 Claims. (Cl. 219—138)



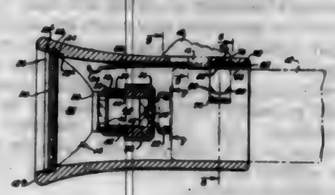
1. An electrode holder comprising a pair of tubes, an electrode gripping jaw secured to like ends of each tube, said jaws each having a cross-sectional area that is at least two times the cross-sectional area of the electrode, each jaw being internally recessed for a substantial portion of its length, the recess of each jaw being in communication with the conduit formed by the tube to which the jaw is secured, a resilient tubular bushing interposed between said jaws, securing means binding said jaws together against said tubular bushing, said jaws each being formed with conduit extending between its said recess and said bushing, and resilient means biasing said jaws toward each other, whereby, coolant may be circulated from one tube to the other through said jaws to remove heat from the jaws during welding.

2,949,529
ILLUMINATING DEVICES FOR THE PHONOGRAPH
Chisaku Ogawa, 30 Takanawa-Minami-cho, Shiba, Minato-ku, Tokyo, Japan
Filed May 29, 1957, Ser. No. 660,292
Claims priority, application Japan May 19, 1956
1 Claim. (Cl. 240—2.12)



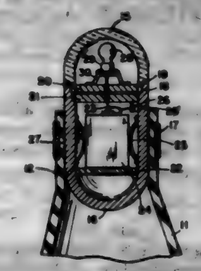
In combination with a phonograph including a pick up arm having a pick up head carrying a needle to play a grooved disk, an illuminating device comprising a downwardly projecting electric lamp mounted adjacent the free end of said pick up arm and directed toward said disk at a point directly in front of said needle, said lamp having an opaque covering provided with an opening at the tip of the lamp, the tip of said lamp being shaped to form a convex magnifying lens at the tip thereof projecting through said opening, whereby a light beam of said lamp is focused on an area of said disk directly in front of said needle and on the groove of said disk in which said needle is to be positioned, said area and said needle being equidistant from the center of said disk.

2,949,530
FLASHLIGHT
Richard E. Hagen, Madison, and Ralph T. Jacobsen, Stoughton, Wis., assignors, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Filed Mar. 22, 1957, Ser. No. 648,466
1 Claim. (Cl. 240—10.61)



The combination of a cylindrical primary dry cell battery and a flashlight attachment therefor, said battery having a sidewall terminal and a top terminal, said top terminal comprising a rigid head and a reduced neck intermediate said head and said battery, said flashlight attachment comprising a resilient tubular case having a light assembly mounted in one end thereof, the other end being open, said light assembly including a light having a first electric contact and a second electric contact, battery-sidewall-contact means mounted in said tubular case adjacent the open end thereof, said battery-sidewall-contact means comprising a curved resilient metal strip held at its center against the inside wall of the case and having a curvature generally conforming to the inside wall of the case, the opposite ends of the strip having at least one inwardly struck point which contacts the sidewall terminal of the battery and is adapted to pierce layers of paint or oxide to make electrical contact with said terminal, the first electric contact of said light being connected electrically to said battery-sidewall-contact means, the second electric contact being electrically connected to a resilient clutch having a reduced mouth and mounted in the center of said case and directed with its mouth towards the open end of said case, the open end of said case receiving the top of said battery in tight, resilient engagement with the side wall thereof, the resilient clutch engaging the reduced neck of said top terminal in snap installation over the head thereof, and the battery-sidewall-contact means engaging the sidewall terminal of said battery, whereby a circuit between the battery and said light is established and whereby said resilient case by engagement with the sidewall and the resilient clutch by engagement with the center terminal of the battery cooperate to hold said battery and said flashlight attachment together as a unitary structure.

2,949,531
ILLUMINATED HIGHWAY MARKER
Jerome H. Lemelson, 8B Garfield Apt., Metuchen, N.J.
Filed Sept. 6, 1955, Ser. No. 532,552
3 Claims. (Cl. 240—81)

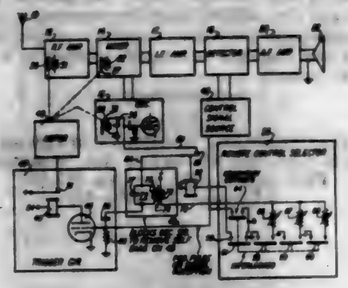


1. A portable illuminating highway marker device comprising in combination, an enclosure, a light source mounted within said enclosure, a support for said enclosure comprising a thin resilient wall structure defining a hollow tapered body whose broad end comprises a base for said device, said wall structure also defining a tubular neck portion of substantially constant diameter extending from the narrow end of said tapered body in a direction away from said base; said enclosure including a body portion engaged by and held in said neck portion of said support in an upright position, said enclosure also including rounded portions providing closures at both ends of said body portion whereby if said hollow tapered body is run over by the wheels of a motor vehicle and is collapsed thereby into contact with said enclosure, said enclosure will not penetrate the wall structure defining said hollow tapered body; a first of said rounded portions extending beyond said neck portion being constructed of transparent material; said light source being operatively positioned so as to be viewable for 360° around said housing.

2,949,532
STOP-ON-TUNE RECEIVER HAVING REMOTE CONTROL SPECIFIC CHANNEL SELECTOR
Frederick P. Hill, Elgin, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed May 18, 1956, Ser. No. 585,671
3 Claims. (Cl. 250—20)

1. In a radio receiver including oscillator means for producing a signal bearing a given frequency relation to a received signal and variable means for tuning the receiver and the oscillator means: a remote control tuning system for the receiver, including in combination, an electric motor for operating the variable means, a trigger circuit coupled to said motor for energizing and deenergizing the same, tuned circuit means coupled between the oscillator means and said trigger circuit and adapted to apply the signal from the oscillator means to said trigger circuit but tunable to effectively block the signal from the oscillator means, said trigger circuit being responsive to effective blocking of signals from the oscillator means by said tuned circuit means for deenergizing said electric motor, said tuned circuit means being adjustable in frequency response by application of a variable

direct current thereto, and a remotely adjustable direct current control circuit coupled to said tuned circuit means for tuning thereof to different frequencies, whereby remote



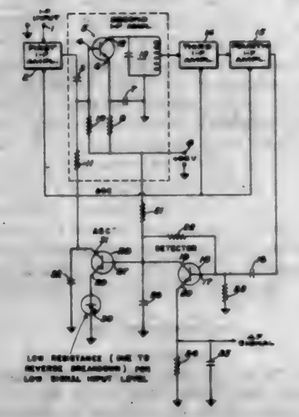
tuning of the receiver is effected by adjustment of said control circuit and operation of said motor so that the oscillator means is tuned to a signal associated with the adjustment of said tuned circuit means.

2,949,533

AUTOMATIC GAIN CONTROL CIRCUIT FOR USE IN TRANSISTOR AMPLIFIERS

Emanuel F. Read, Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Filed Apr. 17, 1959, Ser. No. 807,138
3 Claims. (Cl. 250—20)



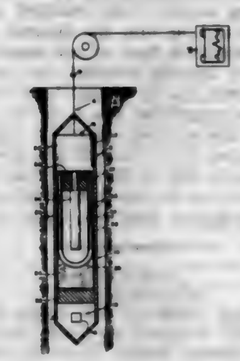
1. In an amplifier having an input circuit, a biasing circuit for changing the gain of the amplifier, and an output circuit, an automatic-gain-control circuit having a breakdown junction diode and a transistor that has an emitter, a base, and a collector, said automatic-gain control circuit having a nonlinear circuit that includes said diode, said base, and said emitter, means for detecting the output of said amplifier and for applying the detected output across said nonlinear circuit, a source of voltage, said biasing circuit being connected to said collector and to said source of voltage, said nonlinear circuit responding to a change in the output of said amplifier for changing the current flow in said biasing circuit and thereby for changing the gain of said amplifier, said diode being connected for current flow in its reverse direction so that a small change in current flow through said diode within a predetermined narrow range causes a rapid change in conductivity thereof, said diode having relatively low conductivity in response to signal above a predetermined level being applied to the input of said amplifier, and said diode becoming rapidly more conductive in response to said signal falling below said predetermined level to provide required current flow through said biasing circuit for obtaining substantially maximum gain of said amplifier.

2,949,534

HIGH TEMPERATURE SCINTILLATION DETECTOR

Arthur H. Youmans, Tulsa, Okla., assignor to Well Surveys, Incorporated, a corporation of Delaware

Filed Apr. 15, 1957, Ser. No. 652,744
11 Claims. (Cl. 250—71.5)



1. A subsurface instrument for radioactivity well logging comprising a thermally insulating container, a photosensitive device for translating light pulses into corresponding electrical signals, said photosensitive device being mounted inside of said container for protection against high temperatures, a scintillation phosphor capable of emitting light pulses in response to irradiation by radioactive emanations, said scintillation phosphor being mounted outside of said container, and means for passing light pulses emitted by said phosphor into said container to said photosensitive device.

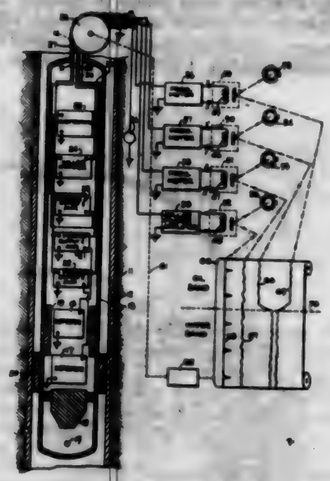
2,949,535

NUCLEAR WELL LOGGING METHOD AND APPARATUS

Serge A. Scherbatskoy, Littleton, Colo., assignor, by mesne assignments, to PGAC Development Company, Houston, Tex., a corporation of Texas

Filed Feb. 9, 1955, Ser. No. 487,141
2 Claims. (Cl. 250—83.3)

1. A well logging method for distinguishing the depth at which an hydrogenous earth formation traversed by a borehole contains a characteristic substance having a neutron capture cross section that is appreciably higher than the neutron capture cross section of hydrogen from those depths at which said formation does not contain said substance comprising the steps of, bombarding the formation with neutrons, measuring the intensity of the neutron rays of substantially thermal energy emanated from said formation responsively to such bombardment, simultaneously measuring the intensity of gamma rays of capture having energies in the neighborhood of 7 mev. emanated from said formation responsively to such bombardment, recording said intensities on a common record in correlation with depth, and comparing said intensities to locate regions wherein the presence of said substance causes an increase in the intensity of said gamma rays of capture relative to the intensity thereof if said substance is absent from the formation and also causes a decrease in the intensity of said measured neutrons relative



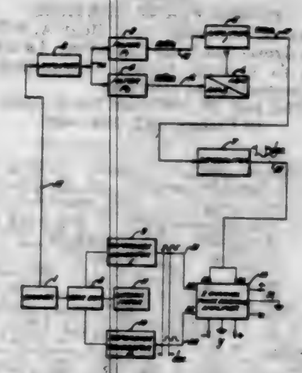
to the intensity thereof if said substance is absent from the formation.

2,949,536

METHOD AND MEANS FOR VERTICAL ATTITUDE DETERMINATION

William G. Langton, Lincoln, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Filed Feb. 4, 1957, Ser. No. 638,188
16 Claims. (Cl. 250—201)



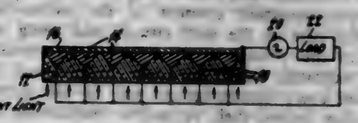
1. The method of determining the true vertical attitude of an object in flight at high altitudes with respect to the gravitational line from the said object to the earth comprising the steps of optically scanning in azimuth the horizon zone of the earth, orienting said optical scanning to view simultaneously a portion of the earth's horizon zone and its adjacent sky generating a pair of reference voltages corresponding to the *x* and *y* components of the instantaneous azimuthal position indicated by said scanning operation, generating a third voltage in a manner to cause its amplitude to vary in accordance with changes in the magnitude of signals being reflected back from said horizon zone and its adjacent sky, and continuously comparing the said third voltage to the said pair of reference voltages to determine the extent of deviation of the said object from the said vertical attitude.

2,949,537

RADIANT ENERGY SENSITIVE DEVICE

Benjamin Kazan, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Dec. 30, 1954, Ser. No. 478,707
12 Claims. (Cl. 250—213)



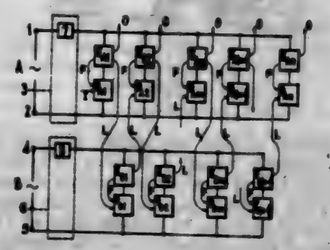
1. A radiant energy sensitive member comprising a plurality of contiguous elongated photoconductive elements in an array of extended area, said elements having photoconductive surfaces which are inclined with respect to said array and which extend across the entire array, said inclined surfaces defining an effective projected area which is substantially equal to the entire area encompassed by said array.

2,949,538

ELECTRICAL SWITCHING CIRCUITS

Terence Bernard Tomlinson, Harrow, England, assignor to The General Electric Company Limited, London, England

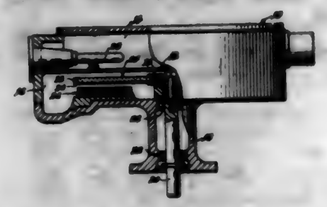
Filed July 2, 1957, Ser. No. 669,585
Claims priority, application Great Britain July 12, 1956
10 Claims. (Cl. 250—213)



1. An electrical switching circuit arrangement including a first pair of circuit input terminals arranged to be connected for operation of the circuit to terminals of an electrical supply, a second pair of circuit input terminals arranged to be connected for operation of the circuit to terminals of an electrical supply, an indicating circuit comprising a plurality of electro-optical pairs connected in parallel with each other between said first pair of circuit input terminals, a shift circuit comprising a plurality of electro-optical pairs connected in parallel with each other to the second pair of circuit input terminals, each electro-optical pair comprising a photo-conductive element and an electroluminescent element, the electro-optical pairs of the indicating and shift circuits being arranged alternately in a predetermined sequence with the photoconductive element of each electro-optical pair of the shift circuit arranged to receive part of the output radiation of the electroluminescent element of the preceding electro-optical pair of the indicating circuit, and the electroluminescent element of each electro-optical pair of the shift circuit arranged to direct part of its output radiation on to the photo-conductive element of the succeeding electro-optical pair of the indicating circuit, the electrical circuit also includng voltage control means, responsve to shift signals, normally holding the voltage across every electro-optical pair of the indicating circuit at a value above, and the voltage across every electro-optical pair of the shift circuit at a value below, their respective maintaining voltages, the voltage control means being operable in response to the receipt of each shift signal to reduce the voltage across every electro-optical

pair of the indicating circuit below, and increase the voltage across every electro-optical pair of the shift circuit above, their maintaining voltages for the duration of the signal for extinguishing any electroluminescent element of the indicating circuit which is excited to relatively high brightness and transferring the "on" condition to the electroluminescent element of the succeeding electro-optical pair of the shift circuit, and being operable to return the voltage across every electro-optical pair of the indicating circuit to a value above, and the voltage across every electro-optical pair of the shift circuit to a value below, their respective maintaining voltages at the termination of each shift signal for returning said electroluminescent element of the shift circuit to the "off" condition, and transferring the "on" condition to the electroluminescent element of the next electro-optical pair of the indicating circuit.

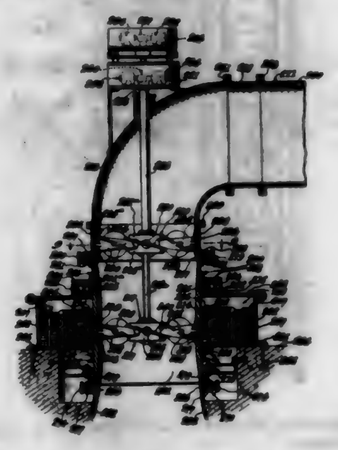
2,949,539
OPTICAL ENCODER
Wilfred K. Brown, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 21, 1956, Ser. No. 623,662
10 Claims. (Cl. 250—219)



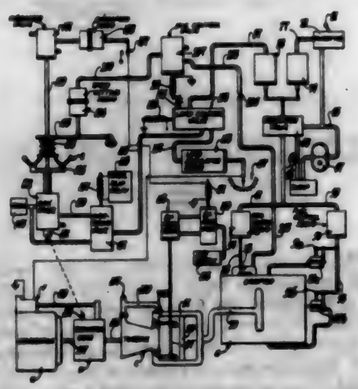
1. An optical encoder comprising, in combination: a photocell assembly having a plurality of pairs of electrodes having spaced confronting portions disposed on a common plane adjacent to each other, the electrodes of each pair being disposed on opposite sides of a common axis, a mass of photoconductive material disposed in contact with each pair of electrodes, a transparent strip mounted to the electrodes having one surface disposed adjacent to the electrodes, and a coating of opaque material disposed on a second surface of the transparent strip parallel to the first surface having a slit disposed in the opaque coating aligned with the common axis between the electrodes of the photocells; a light source confronting the slit; and a rotatable disc having a plurality of coaxial tracks disposed thereabout, one track being aligned between each pair of electrodes and the light source, and each track having a plurality of opaque and transparent sectors of greater length than the width of the slit.

2,949,540
COMBINATION HYDRAULIC TURBINE AND ELECTRIC GENERATOR
Mark M. Clayton, Portland, Oreg.
Filed June 27, 1957, Ser. No. 668,579
12 Claims. (Cl. 290—40)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A fluid turbine and electrical energy generating machine comprising activating fluid supply means, fluid flow valve means, servomotor means constructed and arranged to operate said valve means, turbine speed-responsive control means constructed and arranged to control said servomotor and fluid valve means, rotatable tubular conduit means constructed and arranged to convey fluid therethrough, turbine means including variable pitch impeller means disposed in said conduit to rotate said conduit responsive to flow of fluid through said conduit, electric generating means including rotor means carried and rotated by said tubular means and complementary electric stator means surrounding and electrically cooperating with said rotor means to generate electrical energy responsive to passage of fluid through said rotary conduit means, and electrical-mechanical governing and control means including a centrifugal governor to energize and control said servomotor and fluid valve means to vary the activating turbine fluid supply, and variable pitch means for the turbine impeller means to maintain synchronous speed of said turbine, conduit and rotor means to supply varying electrical power load demands on the machine.

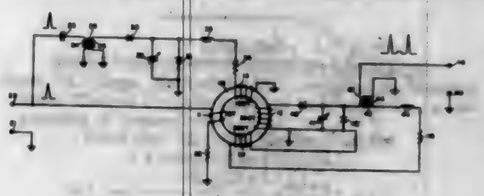


2,949,541
POWER PLANT CONTROL
Albert N. Addie, La Grange Park, Hugh A. Williams, Jr., Downers Grove, and Hugh C. Lafferty, La Grange, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 15, 1957, Ser. No. 671,990
19 Claims. (Cl. 290—40)



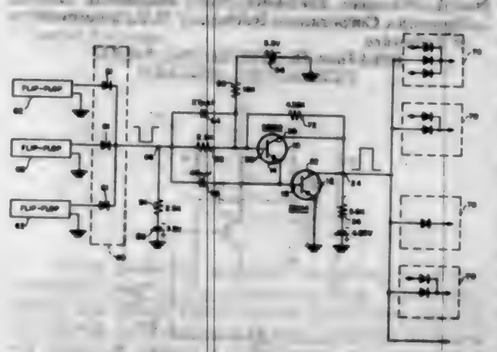
1. A power plant including a gasifier connected to supply a gas turbine, said turbine being mechanically independent of said gasifier, a variable load for said turbine, governor means connected to said turbine for controlling said load to maintain a predetermined turbine speed, and means connected to said governor for varying said predetermined speed in accordance with a power output condition of the gasifier without changing said power output condition.

2,949,542
SCALE-OF-TWO PULSE COUNTING CIRCUIT
Neil L. Wiseman, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 18, 1958, Ser. No. 742,806
5 Claims. (Cl. 307—88)



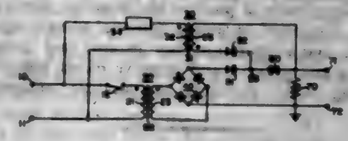
1. A scale of two pulse circuit comprising, a magnetic core having square hysteresis loop characteristics defining either a zero state or a one state for the core, an input winding on said core, a first bias winding on said core, a second bias winding on said core, an output winding on said core, first means to connect input pulses to said input winding in a sense to shift said core from the one state to the zero state, means including delay means to connect input pulses from said first means to said first bias winding in a sense to shift said core from the zero state to the one state after the decay of each input pulse, a pair of output terminals, means to connect an output pulse to said output terminals after the decay of each pulse induced in said output winding in response to the shifting of said core only from the one state to the zero state, and means to connect each output pulse from said output terminals to said second bias winding in a sense to shift said core from the one state to the zero state to thereby oppose and prevent the switching of the core in response to the pulse connected to said first bias winding upon the decay of each input pulse connected to said input winding that has switched the core from the one state to the zero state to induce the pulse in the output winding.

2,949,543
ELECTRONIC AMPLIFIER
John G. Nordahl, Elkins Park, and William D. Winter, Newton Square, Pa., assignors to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed July 22, 1957, Ser. No. 673,224
15 Claims. (Cl. 307—88.5)



1. An amplifier comprising a plurality of semiconductive devices each having base, emitter, and collector electrodes, means connecting each of the base-emitter and the collector-emitter paths of a first one of said devices in series with the base-emitter path of a second one of said devices, pulse means coupled to said base electrode of said first device for applying thereto input signals of magnitude sufficient to drive said first device into saturation, an output terminal, and means connecting the collector emitter paths of said devices in parallel circuits and to said output terminal, said connecting means being such that the potential difference from said second device collector electrode to said second device base electrode produced via said first device collector-emitter path during saturation of said first device tends to prevent forward conduction in the collector-base path of said second device, and a feedback means connected from said output terminal to said first device base electrode to reduce the overall gain of said devices.

2,949,544
SWITCHING APPARATUS
Earl R. Hill, Cincinnati, and Robert L. Klar, Jr., Madeira, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 4, 1957, Ser. No. 688,342
3 Claims. (Cl. 307—88.5)

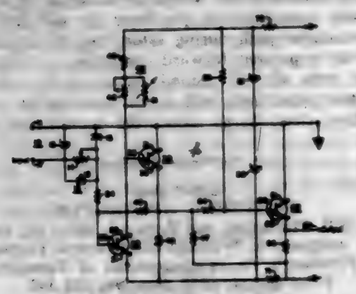


1. In a switching apparatus, in combination; transformer means, full wave rectifier means connected across the output of said transformer means, switching means, hyperconductive diode means and means for connecting a pulse source across said hyperconductive diode means in a reverse conduction direction: said transformer means coupling means for connecting an input pulsating potential source to means for connecting a load; said switching means being connected to interrupt the transformation of said input pulsating potential source by said transformer means; said hyperconductive diode means being serially connected with said means for connecting a load; said pulse source supplying pulses having a magnitude greater than the hyperconductive breakdown voltage of said hyperconductive diode means; said hyperconductive diode means having a controllable reversible breakdown characteristic; said characteristic allowing a large reverse current flow at a voltage substantially less than said breakdown voltage of said hyperconductive diode after said breakdown voltage has been attained; said switching apparatus being operative to supply said load with a pulsating potential in synchronism with said pulse source upon asynchronous closing of said switching means.

2,949,545
TIMING CIRCUIT
Marshall P. White, Grand Haven, Mich., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 14, 1957, Ser. No. 696,424
6 Claims. (Cl. 307—88.5)

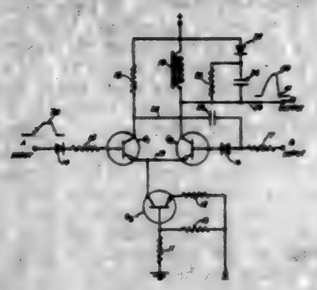
1. In a timing circuit, in combination; means for applying an input signal to said timing circuit; capacitive means for storing energy from said input signal; input, intermediate and output transistor means each having three electrodes; feedback means connecting a portion of the output of said intermediate transistor means to the input of said input transistor means; and means for connecting sources of positive and negative direct potentials to said timing circuit; said capacitive means being so connected to said input transistor means that the discharge of stored energy from said capacitive means is operative to bias said input transistor means to conduction; said intermedi-

ate transistor means being so connected to the output of said input transistor means that conduction by said input transistor means will bias said intermediate transistor means to conduction; said intermediate transistor means being so connected to said output transistor means that the output of said intermediate transistor means is oper-



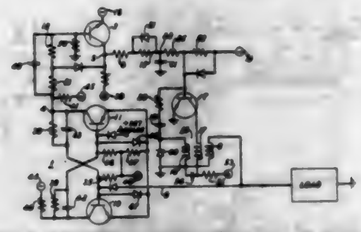
ative to switch the output state of said output transistor means; said sources of positive and negative direct potential being connected to supply potential to said input, intermediate and output transistor means; said means for connecting said positive and negative direct potentials to said timing circuit including temperature compensating means.

2,949,546
VOLTAGE COMPARISON CIRCUIT
Eugene S. McVey, Lafayette, Ind., assignor to the United States of America as represented by the Secretary of the Navy
Filed Dec. 9, 1957, Ser. No. 701,684
4 Claims. (Cl. 307—88.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



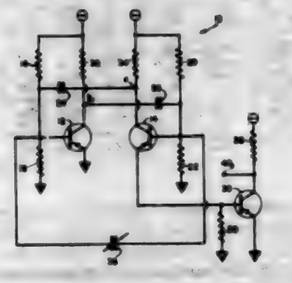
4. A voltage comparison circuit comprising: a pair of three-electrode transistors each having the base electrode coupled through a resistance and a unidirectional means oriented with the low forward resistance looking into the base electrode to an input terminal for receiving two separate voltages of the same polarity to be compared; a third transistor having its collector coupled in common to the emitters of said pair of transistors and its emitter coupled through resistance to a negative potential source; a positive potential source coupled through loads to each collector of said pair of transistors, the load in the coupling to one of said pair of transistors being a resistance and the load in the coupling to the other of said pair being an inductance in parallel with a negative signal eliminating network; a feedback circuit coupling the collector of said one transistor with the base of the other transistor through a capacitance; and an output lead coupled to the collector of said other transistor whereby the transistor of said pair having the higher voltage on the base thereof being conductive, the conduction being switched when this base voltage is exceeded to produce a voltage signal on said output.

2,949,547
DELAY TIMER
Elwood P. Zimmermann, East Rutherford, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 13, 1958, Ser. No. 741,890
17 Claims. (Cl. 307—88.5)



17. A delay network comprising first and second transistors having base, emitter and collector electrodes, flip-flop means for supplying control signals to said base electrode of said first transistor, said transistors being responsive to the reception of said control signals to vary from one impedance condition to another, potential supply means connected to said emitter and collector electrodes, means including impedance means connecting the collector electrode of said first transistor to the base electrode of said second transistor, a first capacitor connected to said impedance means, an asymmetrically conducting device connected in shunt with said impedance means, a second capacitor connected to said base electrode of said second transistor, said first capacitor being responsive to the transfer of said first transistor to one impedance condition to charge over a path including said potential supply means and said impedance means, said first capacitor being additionally responsive to the transfer of said first transistor to another impedance condition to discharge over a path including said first transistor and said asymmetrically conducting device, said second capacitor being responsive to the transfer of said second transistor to a particular impedance condition to effect further discharge therethrough of said first capacitor, and blocking oscillator means connected to said first capacitor and operative to generate an output pulse in response to the charging of said first capacitor for a predetermined time interval.

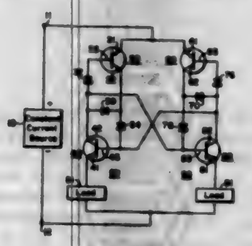
2,949,548
VARIABLE MULTIVIBRATOR
Neil L. Wiseman, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 18, 1958, Ser. No. 742,775
5 Claims. (Cl. 307—88.5)



1. A multivibrator comprising a pair of transistors each including at least an emitter electrode, a base electrode, and a collector electrode; a pair of capacitors each coupling the collector electrode of one of the transistors to the base electrode of the other of the electrodes; a po-

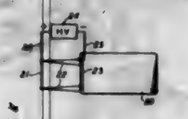
tential source connected to said emitter and collector electrodes for energizing said pair of transistors so that said transistors are alternatively rendered conductive for periods determined at least in part by the values of said capacitors; and a variable capacitor connected between the base electrodes of said transistors for adjusting the periods that both of said transistors are rendered conductive.

2,949,549
TRUE CURRENT FLIP-FLOP ELEMENT
Henri M. Hoge, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 15, 1958, Ser. No. 780,329
6 Claims. (Cl. 307—88.5)



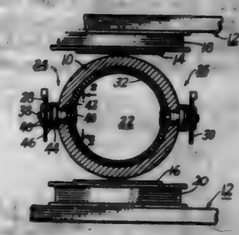
1. A flip-flop element, comprising, two parallel load circuits; each said load circuit including a pair of transistor devices of opposite semiconductivities; each of said transistor devices having three electrodes; a third electrode of said three electrodes of each transistor device of each pair being connected to one of two remaining electrodes of said three electrodes of the other transistor devices of each pair; circuit means including rectifier means connecting said one of two remaining electrodes of one transistor device of each pair to said one of two remaining electrodes of the other transistor devices in each pair; means connecting a current source to the other of said two remaining electrodes of each transistor device of each pair; and means connecting said third electrode of one of said transistor devices of each pair to said one of said two remaining electrodes of said like semiconductive transistor device in said other pair.

2,949,550
ELECTROKINETIC APPARATUS
Thomas Townsend Brown, Umatilla, Fla., assignor to Whitehall-Rand, Inc., Washington, D.C., a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,830
12 Claims. (Cl. 310—5)



1. Thrust producing apparatus comprising an electroconductive body having a relatively large, substantially smooth area thereof exposed to the surrounding medium, an electrode supported on said body, insulated therefrom and shaped to produce a concentrated electrostatic field when electrically charged with respect to said body, and power means connected between said body and electrode to impress high voltage thereon whereby to cause relative movement of an ionizable dielectric medium surrounding said electrodes.

2,949,551
ELECTRODE CONSTRUCTION FOR ELECTROMAGNETIC FLOWMETERS
Stocker S. Sturgeon, Foxboro, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts
Filed May 9, 1956, Ser. No. 583,761
5 Claims. (Cl. 310—11)

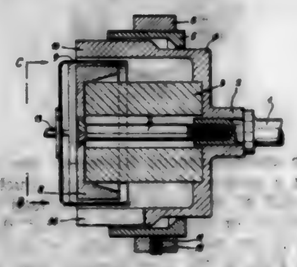


1. In an electromagnetic flowmeter, the combination comprising a section of pipe through which fluid may flow, the wall of said pipe being provided with a pair of holes located on opposite sides thereof, the cross-sectional area at any one point in either of said holes being at least as great as the cross-sectional hole area at any other point interiorly of said one point, insulating liner means comprising stiffly-resilient electrical insulating material fitted against the inner surface of said pipe in the regions of said pipe holes and adapted to prevent short-circuiting of electrical currents flowing through the fluid in said regions, said insulating material having a substantially uniform thickness and being provided with holes aligned with the holes through said pipe wall, a pair of electrically-conductive electrodes each including a stem and a head, the stems extending respectively through said holes in said pipe and said insulating material with the heads located in the interior of said pipe, the cross-sectional area of the end surfaces of said heads being greater than the cross-sectional area of the respective stems, the stems being joined to the heads by tapered sections the sloping sides of which are in direct contact with said liner of insulating material, the end surfaces of said heads having a cross-sectional area that is greater than the cross-sectional area of the corresponding holes through said insulating material, and pressure means urging said electrode heads towards the wall of said pipe, the sloping sides of said tapered sections being pressed tightly against said insulating material with sufficient pressure to deform said insulating material around the edges of the corresponding holes into an intimate mating engagement with said tapered sections with said electrode heads effectively flush with the interior surface of said insulating material, said insulating material serving to support said electrodes and prevent axial movement thereof outwardly of said pipe.

2,949,552
MAGNETIC DRIVES NOTABLY THOSE OF TACHOMETERS
Claude Armand Benoit, Paris, France, assignor to Société STEB, Courbevoie, France, a corporation of France
Filed May 13, 1958, Ser. No. 734,878
Claims priority, application France May 23, 1957
5 Claims. (Cl. 310—105)

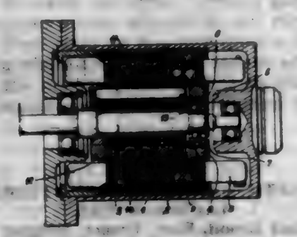
1. A magnetic drive device with adjustable torque, of the eddy current type, comprising in combination a rotating shaft, an element of soft iron in the shape of a cup fixed coaxially on said shaft, a permanent two-pole magnet of cylindrical shape with two terminal faces of opposite polarity fixed along one of said faces on the bottom of said cup coaxially with respect thereto, a cup-shaped pole plate having a cylindrical lateral surface fixed axially on the other free pole face of said magnet, said cup-shaped

soft iron element having in its annular wall notches delimiting the polar projections, the bottoms of the notches being at a distance from the plane of the external terminal face of the cup-shaped pole plate which is greater than the length taken along the axis of the external cylindrical surface of said cup-shaped pole plate, the periphery of said cup-shaped pole plate being a very small distance away from the polar projections of said element so as to form an air gap in which is thus created a radial field which is totally divergent or totally convergent depending on whether the polarity of said pole plate is North or South, said field being of great intensity in the



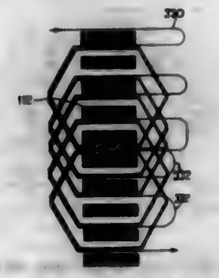
regions of the polar projections and of small intensity in the regions of the notches, a second shaft mounted in line with the first rotating shaft, the two shafts being mechanically independent with respect to each other, a driven element of non-magnetic metal in the shape of a hollow cylinder rigidly fixed to said second shaft, mounted coaxially with respect to said second shaft and extending into said air gap, a ring of soft iron surrounding the cup-shaped element and capable of axial displacement to cover the notches of said cup to a greater or less extent so that the relation of the fields in the region of a polar projection and in the region of a notch can be varied.

2,949,533
AUTOMATICALLY STARTING SYNCHRONOUS MOTOR OPERATING AT VARIABLE FREQUENCIES
Claude A. Benoit, Paris, France, assignor to Société STER, Courbevoie, France, a corporation of France
Filed June 9, 1958, Ser. No. 740,828
Claims priority, application France June 29, 1957
3 Claims. (Cl. 310—162)



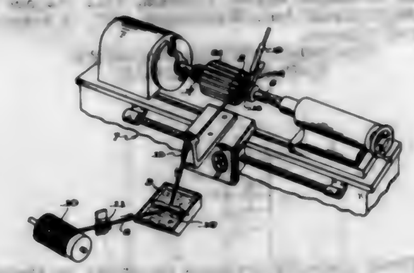
1. A synchronous motor comprising a stator fed with A.C., a compound rotor assembly including a shaft, a squirrel cage induction rotor rigid with said shaft and including an annular series of conductive bars to provide conductive paths, a resistant flange completing the paths of the cage formed by the bars at one end of said cage, the resistance of said flange determining the torque characteristic of the induction rotor, and a conductive flange provided with at least one annular slot coaxial with the shaft and completing said paths at the other end of the cage, a roller bearing fitted on the shaft and including coaxial races, a support rigid with the outer race of the roller bearing and including a projection extending in parallelism with the shaft and permanently engaging the corresponding slot in the flange of the induction rotor to ensure a driving connection between said support and the induction rotor in either direction with an angular clearance therebetween, and a permanent magnet rigidly secured to said support.

2,949,534
METHOD OF WINDING A LAP WINDING
John M. Biddison, Dayton, Ohio, assignor to Harry W. Moore, Dayton, Ohio
Original application May 5, 1953, Ser. No. 353,160. Divided and this application Apr. 4, 1956, Ser. No. 576,193
2 Claims. (Cl. 310—206)



1. The method of winding a single layer lap winding in the slots of an armature, said method including the steps of winding adjacent coils in opposite directions, forming commutator connection loops between adjacent coils, severing the loops to form leads adapted to extend from the ends of the coils to the commutator, and reversing the commutator connection leads of alternate coils as a preliminary to making commutator connections.

2,949,535
BANDING OR BINDING ELECTRICAL ROTORS OR ARMATURES
Theodore R. Paul, Pittsburgh, Pa. (P.O. Box 10836, Lebanon School Road, West Mifflin Boro, Pa.)
Filed Dec. 26, 1957, Ser. No. 705,254
4 Claims. (Cl. 310—271)



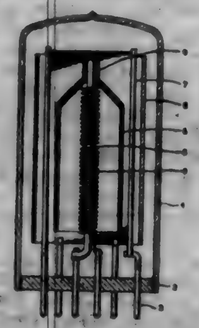
4. The combination with a rotor that has outwardly-open slots extending axially in its peripheral surface and electrical coils in said slots, of annular retaining bands disposed circumferentially of the armature and in overlying relation to said coils and the slots, each band comprising a roving of non-conductive fibers arranged in successive concentric layers and bonded into a dense homogeneous mass by a hardened resin, the resin being in sufficient quantity to form a glazed surface on the band.

2,949,556
ELECTRON DISCHARGE DEVICE
Albert E. Oberg, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed June 19, 1959, Ser. No. 821,565
4 Claims. (Cl. 313—82)



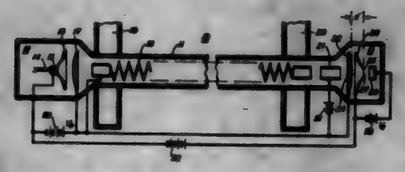
1. A cathode ray tube comprising an envelope including a neck portion, an electron gun structure to generate an electron beam, said structure comprising in the order along said beam from a cathode, a control grid, a screen grid, and an accelerating electrode, insulating rods spaced from said structure connected to and positioning said control grid, screen grid and said accelerating electrode with respect to each other, a centering device provided on said accelerating electrode for positioning said electron gun within said neck portion, supporting means provided in the region of said control grid comprising an annular member having projecting pins on its outer periphery which are impaled in said insulating rods and a glass stem member sealed to the end of said neck portion and provided with a plurality of stem lead members, three of said stem lead members attached to said annular member for supporting said electron gun structure within said neck portion.

2,949,557
EQUIPOTENTIAL CATHODE FOR ELECTRIC DISCHARGE TUBES
Hans Georg Gerlach and Eduard Gerhardus Dorgelo, Eindhoven, Netherlands, assignors to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Oct. 3, 1958, Ser. No. 765,254
Claims priority, application Netherlands, Oct. 4, 1957
6 Claims. (Cl. 313—346)



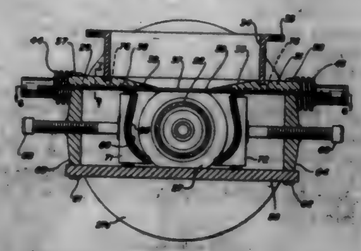
1. An indirectly heated equipotential cathode for an electric discharge tube comprising a body formed by a plurality of turns of tungsten thorium wire, adjacent turns of said wire being spaced by a distance substantially less than the diameter of said wire and having adjacent coplanar portions for providing a substantially continuous smooth tubular surface on the outer side of said body, and a layer of a refractory metal solder covering the inner surface of the body and extending between adjacent turns of the wire.

2,949,558
HIGH EFFICIENCY VELOCITY MODULATION DEVICES
Rudolf Kompfner, Fair Hills, and Calvin F. Quate, Berkeley Heights, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 21, 1957, Ser. No. 691,371
12 Claims. (Cl. 315—3.5)



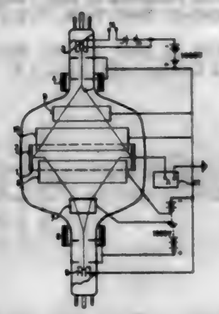
8. A high efficiency traveling wave tube comprising an evacuated envelope, means defining an interaction circuit within said envelope, means for projecting an electron stream along said interaction circuit, and means for collecting said electron stream after passage along said interaction circuit, said last mentioned means including a focusing electrode and a decelerating electrode spaced such that the D.-C. beam velocity decreases as the two-thirds power of distance, at least one of said electrodes having a concave surface toward said interaction circuit, target means upon which said electron stream impinges, and means for applying potentials to said electrodes such that a space charge region is established with equipotential lines extending in a direction normal to the decelerating paths of electron flow intermediate said electrodes.

2,949,559
KLYSTRON TUBE
George K. Merdinian, Daly City, Calif., assignor to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Filed Jan. 31, 1958, Ser. No. 712,354
10 Claims. (Cl. 315—5.46)



1. In combination, an electron tube and a cavity resonator, said cavity resonator including means for connecting a waveguide transmission system thereto, an opening formed in said resonator adapted to communicate with the associated waveguide transmission system, a pair of movable diaphragms serving to control the size of the opening, and means for moving said diaphragms simultaneously towards and away from one another, said movable diaphragms forming an adjustable iris for coupling the resonator to the associated waveguide transmission system.

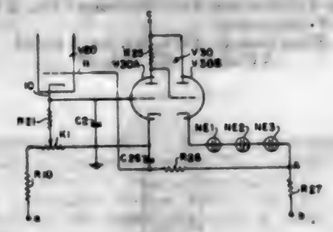
2,949,560
STORAGE TUBE WITH CIRCULAR SCANNING
Werner A. Veith, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, Germany, a corporation of Germany
Filed Apr. 19, 1957, Ser. No. 654,025
Claims priority, application Germany July 11, 1956
4 Claims. (Cl. 315—12)



1. In a double ended electron tube for storing electric signals and having an amplifier output for subsequent release and further utilization of said signals, a first system for generating a recording beam of fast electrons which beam is modulated by electric signals to be stored, and a second system disposed coaxially to the first system and axially spaced therefrom for generating a constant electron stream of slow electrons for the pick-up and release of the stored signals, a cylindrical storage electrode disposed between the beam generating systems, said cylindrical storage electrode being made of mica backed by a cylindrical metal sheet constituting a signal plate and extending coaxial to the axis of said beam generating system, first deflecting means generating a rotating field for causing the fast-electron signal-modulated recording beam to assume cone-like configuration so as to strike said cylindrical storage electrode obliquely on the inside thereof and to trace thereon a circular path, thereby impressing positive electric charges on said storage electrode corresponding to said signals for the purpose of storing said signals, second deflecting means generating a rotating field including electrostatic means for causing said slow-electron pick-up beam to assume cone-like configuration and to exert retarding action thereon and thereby causing said pick-up beam to strike the inside of said cylindrical storage electrode perpendicularly and to trace thereon a similar circular path which coincides spatially with the circular path of positive charges traced thereon by said recording beam, said pick-up beam sensing the positive charges stored on said storage electrode and causing release thereof for further utilization of the signals corresponding thereto.

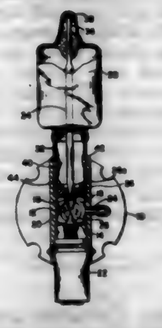
2,949,561
AUTOMATIC BEAM CURRENT CONTROL
Joseph F. Wiggin, Skaneateles, N.Y., assignor to General Electric Company, a corporation of New York
Filed Apr. 28, 1959, Ser. No. 809,551
11 Claims. (Cl. 315—12)

1. Means to compensate for drift of scanning beam current during warm-up of a television camera tube, said tube comprising a cathode and a control electrode, said compensating means comprising means to sample the cathode current of said tube to provide a voltage corresponding to but relatively large for relatively minute changes in cathode current, means to amplify and invert said voltage representing said sampled current, and means



to couple said amplified and inverted voltage to the control electrode of said tube.

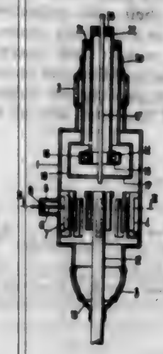
2,949,562
TRANSMIT-RECEIVE SWITCH TUBE STRUCTURE
William J. Stanney, Needham Heights, and George W. Caley, Hamilton, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Mar. 12, 1958, Ser. No. 720,932
1 Claim. (Cl. 315—39)



A method for assembling a transmit-receive gaseous discharge device of a type having a body portion provided with an internal cavity and a bore communicating with the cavity, and a gas reservoir including a glass bulb and a metal tube insertable in said bore, comprising the steps of: applying around the bottom of said bore a bead of fluid epoxy casting resin which upon curing forms a high-melting, flexible resinous material, inserting said tube into said bore to engage said bead of resin, curing the assembly at a suitable temperature and for a period to cure said resin whereby to form an hermetic seal between the inner end of said tube and said bore which does not release harmful constituents into said cavity, and thereafter soft soldering said tube to said body portion at the outer end of said bore, the seal formed by the resin precluding the entry into said cavity of harmful constituents of the flux employed in the step of soft-soldering.

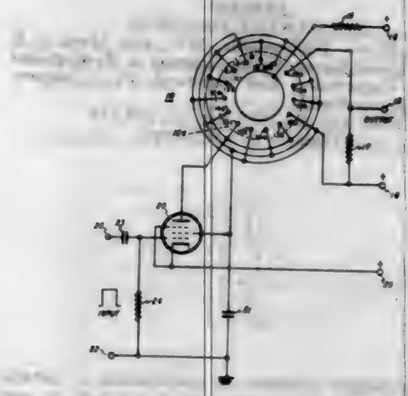
2,949,563
ELECTRONIC TUBES FOR USE AS BACKWARD WAVE OSCILLATORS
William Ernest Willshaw, Kenton, England, assignor to The General Electric Company Limited, London, England, a British company
Filed Aug. 22, 1957, Ser. No. 679,734
Claims priority, application Great Britain Aug. 23, 1956
2 Claims. (Cl. 315—39.3)

1. An electronic tube for use as a backward wave oscillator, comprising a delay line extending along a circular path and adapted to propagate an electromagnetic wave along said path from a first end of the delay line to a second end of the delay line, an output connection coupled to said second end of the delay line, means inhibiting direct transfer of high frequency energy between said ends of the delay line, a cylindrical electrode disposed coaxially within the delay line so as to form an



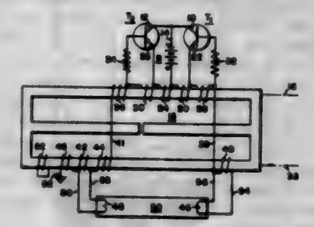
interaction space between it and the delay line, a cathode having an electron emissive surface disposed outside one end of, and extending substantially all around the axis of, the interaction space, and a further electrode system for guiding electrons emitted by the cathode into the interaction space.

2,949,564
DRIVE CIRCUIT FOR COUNTING TUBES
John E. Adams, Burlington, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Apr. 8, 1958, Ser. No. 727,113
5 Claims. (Cl. 315—84.6)



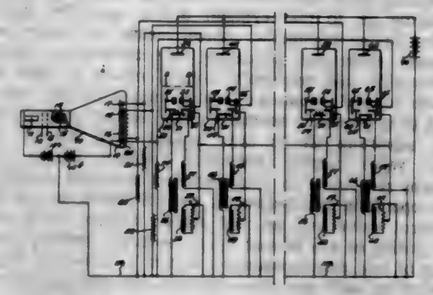
1. A drive circuit for providing overlapping negative voltage pulses to first and second sets of guide electrodes in a glow transfer tube in response to a positive input pulse comprising, a pentode electron tube having anode, cathode, and control and screen grid electrodes, means directly connecting the anode and screen grid of said pentode to said first and second set of guide electrodes, respectively, a capacitor connected between said screen grid and a point of reference potential, a source of potential more positive than said reference potential connected to the cathode of said pentode, and means for applying said input pulse to the control grid of said pentode.

2,949,565
DIRECT CURRENT TO ALTERNATING CURRENT INVERTER
Ebbe Rebloff, Nurnberg, and Laszlo Szecsi, Karlsruhe, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed Feb. 5, 1959, Ser. No. 791,324
Claims priority, application Germany Feb. 10, 1958
6 Claims. (Cl. 315—58)



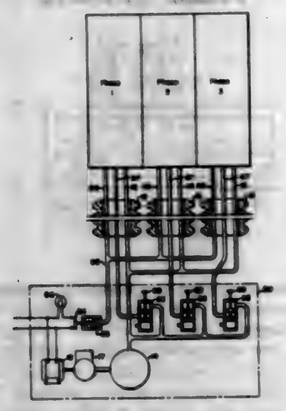
1. In a direct current to alternating current inversion system comprising, a direct current supply, a transformer, means for chopping the direct current voltage to alternating current, low voltage windings on a portion of the core of said transformer, a high voltage winding connected in series with one of said low voltage windings, the number of turns of said low voltage windings being so proportioned on said core as to produce a phase shift of the currents passing through the low voltage windings relative to the alternating current output.

2,949,566
ELECTRICAL SIGNALLING AND COMPUTING APPARATUS
Philip H. Allen, Box 457, Los Gatos, Calif., and Benjamin J. Chromy, 424 Colorado Bldg., Washington 5, D.C.
Filed Feb. 10, 1956, Ser. No. 564,737
13 Claims. (Cl. 315—183)



1. An electrical signalling circuit comprising a plurality of electric discharge devices, means for selectively energizing each of said devices for producing an indication thereby, a plurality of transformers each having a plurality of windings, means for connecting a winding of each of said transformers in series with a different one of said electric discharge devices so that an E.M.F. is induced into the other windings of a corresponding transformer when the discharge device connected to said corresponding transformer is energized, and means for connecting selected ones of said other windings of said transformers to all of said discharge devices to interrupt energization of any of said previously energized discharge devices when a selected one of said devices is energized through the operation of said first mentioned means.

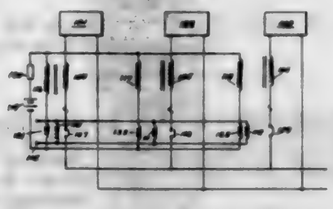
2,949,567
PHASE INTERLOCK FOR SERIES CAPACITOR
Floyd D. Johnson, Forest Hills, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 31, 1956, Ser. No. 619,581
4 Claims. (Cl. 317—12)



1. In a series capacitor installation for a three-phase alternating-current line having a capacitor adapted to be connected in series in one phase, having a second capacitor adapted to be connected in series in a second phase, having a third capacitor adapted to be connected in series in a third phase and having a protective system including a bypass switch connected across each of said capacitors; the improvement comprising an electropneumatic system on each phase for controlling said bypass switches, said electropneumatic system comprising a pneumatic cylinder device for actuating said bypass switch, a normally open first control valve for admitting and exhausting air to said cylinder device, said first control valve having pneumatic control means for closing said control valve and exhausting said cylinder, a conduit connecting said pneumatic control means on said first phase to said pneumatic control means on said second and third phases, a normally closed second control valve for admitting air to said conduit, said second control valve having pneumatic control means, and means responsive to predetermined abnormal conditions for operating said pneumatic control means on said first control valve and on said second control valve prior to closing of any of said bypass switches whereby operation of said electropneumatic system to close said bypass switch on said one phase operates the electropneumatic system to close said bypass switches on said second and third phases.

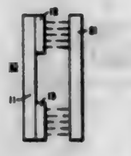
2,949,568
PROTECTION OF PARALLEL CONNECTED D.-C. SOURCES
Isidore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed July 13, 1956, Ser. No. 597,781
5 Claims. (Cl. 317—26)

1. In a system for energizing a D.-C. load; said system comprising a first and second source of D.-C. power and a first and second switching means; said first source of D.-C. power being connected in series with said first switching means; said second source of D.-C. power being connected in series with said second switching means; said series connection of said first source of D.-C. power and said first switching means being connected in parallel with said series connection of said second source of D.-C. power and said second switching means; said parallel connected series connections being connected in parallel with said D.-C. load; a first and second operating means for said first and second switching means respectively; said first and second operating means being operable to close their said respective first and second switching means; an energizing means for said first and second operating means; said energizing means being operable to energize said first and second operating means substantially simultaneously for substantially simultaneously closing said first and second switching means; a



first and second non-linear reactor connected in series with said first and second source of D.-C. power respectively and said first and second switching means respectively; a biasing means for said first and second non-linear reactors; said biasing means being operative to saturate said first and second non-linear reactors in a first direction prior to closure of said first and second switching means; current flow through said first and second non-linear reactors unsaturating said first and second non-linear reactors after closing of said first and second switching means and thereafter saturating said first and second non-linear reactors in a direction opposite to said first direction.

2,949,569
PERMANENT MAGNETS
Lawrence Pierce, Williamsville, N.Y., and Marshall P. White, Grand Haven, Mich., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 26, 1957, Ser. No. 680,215
6 Claims. (Cl. 317—201)



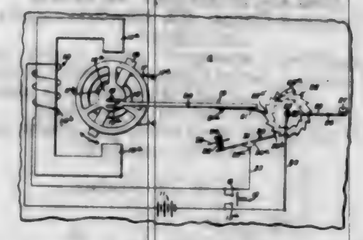
1. In a magnet structure, in combination, a metallic permanent straight bar magnet having a pole at each end and having a predetermined length to cross-sectional area ratio, relatively short flat legs of ceramic permanent magnet material having a higher coercive force than the metallic bar magnet and of a permeability of close to unity and having poles at the flat faces, the ceramic magnet legs having a relatively large cross-sectional area, the flat ceramic magnet legs being applied in direct contact with each end of one side of the metallic permanent bar magnet, each flat ceramic magnet leg being so applied that its unlike pole is in direct contact with the pole at its respective end of the bar magnet thereby to simulate a magnet structure having short legs extending in the same direction.

2,949,570
LOW VALUE WOUND CAPACITOR
Charles C. Rayburn, Falls Church, Va., assignor, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Filed Sept. 25, 1957, Ser. No. 686,069
3 Claims. (Cl. 317—260)



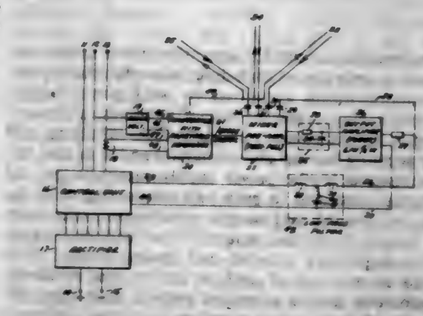
1. A convolutely wound series capacitor unit of predetermined low value below 4700 mmf. comprising a centrally located floating foil of predetermined width and length, spaced electrode foils disposed on the same side of said floating foil and each spaced from the other and overlapping opposed side marginal areas of said floating foil and electrically insulated one from the other, and dielectric tapes insulatingly interposed between said floating foil and said electrode foils, each of said electrode foils having a spiral side marginal portion projecting beyond a different one of the side edges of said dielectric tapes to provide a pair of relatively large electrical terminals for said capacitor unit, the area of said floating foil being substantially less than the areas of said electrode foils and dielectric tapes and the length of said floating foil being substantially less than the lengths of each of said electrode foils and dielectric tapes whereby a capacitor having electrical terminal areas of relatively high mechanical strength are provided and said capacitor may have a predetermined low value determined by the length of said floating foil.

2,949,571
ELECTRIC CLOCK MECHANISM
Paul G. Gerhard, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Filed May 28, 1958, Ser. No. 738,574
3 Claims. (Cl. 318—131)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An improved electric clock mechanism for use in a fuze comprising: a housing for said clock mechanism, a C magnet within said housing having aligned opposed poles, a balance wheel rotatably mounted by means of a concentric hub, said wheel having its center perpendicular to the longitudinal axis of said poles and centrally positioned with respect to the extremities of said poles, a bar armature connected to said wheel with its longitudinal axis intersecting the axis of rotation of said wheel, a pin on said hub positioned eccentrically with respect to the axis of rotation of said wheel, a pallet arm pivotally connected to said housing and having a yoke end and a spring end, the pivotal connection being located between said yoke and spring ends, said yoke end being driven by said pin, an index wheel rotatably mounted to said housing by means of a concentric rotatable shaft, the pivot axis of said pallet arm and the axes of rotation of said hub and rotatable shaft being substantially parallel, said index wheel being provided with a plurality of outwardly extending tooth portions on its periphery, said spring end of said pallet arm adapted to strike said tooth portions and drive the index wheel in one direction only, a wiping arm having a curved, pointed end in wiping contact with said tooth portions, said arm being centrally pivoted to said housing the other end of said arm provided with a spring which engages a bracket in said housing and resiliently urges said pointed end of said wiping arm into perpendicular contact with said tooth portions, a wire coil on said magnet having first and second leads, the first lead end connected to said wiping arm between said pointed end and said spring, the end of said second lead contacting said rotatable shaft, a battery source connected to said second lead, said rotatable shaft, wiping arm, index wheel and battery being electrically connected in series by said leads, the periodic contacting between the wiping arm and successive index wheel teeth causing the battery to periodically energize and pulse said magnet, the scraping action of the pointed end of said wiping arm at the same time serving to scrape foreign matter from said tooth portions, the pulsing of said magnet causing oscillation of said armature and hub, said oscillation causing the eccentric pin connected to said hub to cyclically drive said pallet arm thereby driving said index wheel and said rotatable shaft.

2,949,572
STATIC CURRENT REGULATOR FOR RECTIFIER USING FLUX REVERSAL CONTROL
Edward John Diebold, Palos Verdes Estates, Calif., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 26, 1957, Ser. No. 686,388
7 Claims. (Cl. 321—18)



3. In a rectifier comprising rectifying elements connectable between an A.-C. system and a D.-C. load; said rectifier elements being connected in series with saturable type reactors for controlling the length of time A.-C. voltage is impressed across said D.-C. load to thereby control the output voltage to said D.-C. load; a static current regulator connected to flux reversal windings of said saturable type reactors for controlling the flux reversal of said saturable type reactors; said static current regulator comprising means for measuring the current flowing to said D.-C. load, a reference standard means for comparing said measured load current to a predetermined value, D.-C. amplifying means having its output operatively connected to said flux reversal windings of said saturable type reactors, and a negative feed-back means;

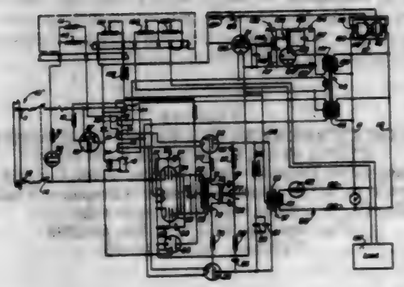
said current measuring means and said reference standard means being connected to develop an error signal responsive to variation of said measured current from said standard, circuit connections for connecting said error signal to the input of said D.-C. amplifier to control the output thereof to vary the flux reversal energization of said saturable type reactors and the D.-C. load current of said rectifiers to bring an error signal to zero; said negative feed-back means including circuit means for altering said error signal responsive to a change in said D.-C. load current; said static current regulator of said rectifier being cross-compounded with regulators of parallel connected rectifiers; said parallel connected rectifiers having cross-compounding circuit output signal proportional to a change in current of their respective rectifiers; said cross-compounding signals being added to said error signal in said static regulator to compound said rectifier with said parallel connected rectifiers.

2,949,573

INVERTER HAVING VOLTAGE REGULATED OUTPUT

Herbert C. Waterman, Chicago, Ill., assignor to Motorola, Inc., a corporation of Illinois

Filed Jan. 8, 1957, Ser. No. 633,021
4 Claims. (Cl. 321—19)



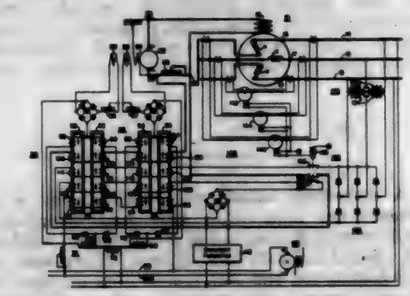
2. An inverter circuit for operation from direct current power supply means including in combination, push-pull oscillator means energized by said power supply means and having a pair of output windings, an output transformer having primary and secondary windings, said primary winding having end terminals and a center terminal connected to the power supply means, a pair of power tubes connected in push-pull relationship with the primary winding of said output transformer, said tubes having output electrodes connected to said end terminals of said primary winding and having control grids connected to one end of each of said output windings, a potentiometer having a resistor portion connecting the other ends of said output windings and also having a slider connected to one side of said power supply means, capacitor means connecting the ends of said resistor portion to said slider, a pair of output terminals, a barreter connected in series with the secondary winding of said output transformer to said output terminals, a saturable reactor having a control winding and also being provided with a pair of windings connected in series with one another and across said output terminals, means responsive to the voltage across said output terminals for controlling current through said control winding, and variable resistance means connected in parallel with said output terminals, whereby an increase in voltage across said output terminals causes an increase in current through said barreter and increases the voltage drop thereacross.

2,949,574

REGULATOR SYSTEM FOR GENERATORS

James T. Carleton, Severna Park, Md., Charles L. Wagner, Franklin Township, Westmoreland County, Pa., and Theodore J. Woth, Atlanta, Ga., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Filed Apr. 12, 1957, Ser. No. 652,586
5 Claims. (Cl. 322—25)



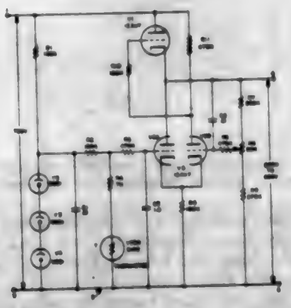
1. In a control system for a dynamoelectric machine having an excitation field winding and output terminals, the combination comprising means for detecting a fault in the dynamoelectric machine, a magnetic amplifier including magnetic core means and having a first control winding normally responsive to the terminal voltage of the dynamoelectric machine, a second control winding responsive to the excitation field current of the dynamoelectric machine when said fault detecting means detects a fault in the dynamoelectric machine, and a load winding connected to the excitation field winding during normal operation to maintain the terminal voltage of the dynamoelectric machine at substantially a predetermined voltage, said load winding being connected to the excitation field winding to reduce the excitation field current to substantially a negligible value when said fault detecting means detects a fault in the dynamoelectric machine.

2,949,575

TEMPERATURE COMPENSATED BOLOMETER BIAS SUPPLY

Paul W. Shadle, La Canada, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware

Filed Apr. 29, 1957, Ser. No. 655,876
9 Claims. (Cl. 323—22)



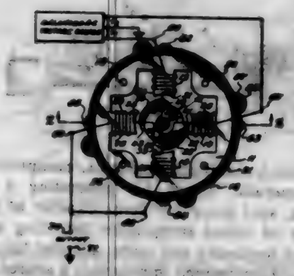
6. A regulated power supply having a variable output voltage, comprising: means for providing a reference voltage, variable with an independent variable, said independent variable being the ambient temperature of a signal sensing device which is biased by the output voltage of said power supply; means for providing a comparison voltage proportional to the output voltage of said power supply; means for comparing the magnitudes of said reference voltage and said comparison voltage; and means responsive to the difference in magnitude between said comparison voltage and said reference voltage for varying said output voltage according to said difference, whereby said comparison voltage is made effectively equal to said reference voltage.

2,949,576

ELECTROMAGNETIC PICK-OFF DEVICE

Robert Havelock Bolton, East Meadow, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Filed Oct. 4, 1954, Ser. No. 460,881
2 Claims. (Cl. 323—75)



1. An electromagnetic signal generator comprising a stator having two pairs of oppositely disposed inwardly extending arms each of which carries a winding, the windings about opposite ones of said arms being connected in series-aiding relationship with each other, a source of balanced voltage having its two output terminals connected to the ends of the windings carried by one pair of adjacent arms, respectively, the ends of the windings about the other pair of adjacent arms being connected to a common terminal which together with the electrical midpoint of said source of balanced voltage constitute a pair of output terminals for the device, and a rotor that cooperates with said stator for varying the reluctance of the magnetic flux path that passes through the windings carried by one pair of opposite arms and the reluctance of the magnetic flux path that passes through the windings carried by the other pair of opposite arms in opposite directions as said rotor is displaced relative to said stator.

2,949,577

APPARATUS FOR THE MEASUREMENT OF RESISTORS

George France, Blyth, Northumberland, England, assignor to Welwyn Canada Limited, London, Ontario, Canada, a corporation of Canada

Filed Mar. 15, 1957, Ser. No. 646,236
Claims priority, application Great Britain Mar. 16, 1956
4 Claims. (Cl. 324—62)



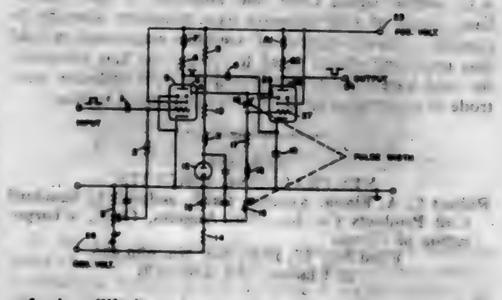
1. Apparatus for measuring the ohmic resistance of a high-resistance resistor comprising in combination a first voltage source of known magnitude, a first standard resistor of known ohmic value much less than that of the resistor to be measured, circuit means connecting said resistors in series across said voltage source, a second voltage source of known magnitude substantially greater than that of said first voltage source, second and third standard resistors of known magnitude connected in series across said second voltage source, a stable voltage amplifier having gain substantially equal to the voltage ratio of said first and second voltage sources and having a pair of high-impedance input terminals and a pair of lower-impedance output terminals, said input terminals being connected across said first standard resistor, and additional circuit means comprising a current indicator connecting said output terminals across one of said other standard resistors.

2,949,578

MILLIMICROSECOND PULSE CIRCUITS

Jan A. Narud, Concord, Mass., assignor to the United States of America as represented by the Secretary of the Navy

Filed Jan. 29, 1957, Ser. No. 637,681
4 Claims. (Cl. 328—34)



1. A millimicrosecond pulse generating circuit comprising, in combination, a secondary-emissive tube having as components thereof at least a cathode, control grid, dynode and anode, a diode connected between said cathode and a reference potential, means for biasing said control grid negatively with respect to said reference potential whereby said tube is normally maintained nonconductive, means for coupling said anode via a load resistor to a voltage source positive with respect to said reference potential, a coupling capacitor interconnected between the dynode and control grid of said tube for providing a positive regenerative action therebetween, and means for simultaneously triggering said tube by applying a positive pulse and a negative pulse to the control grid and cathode, respectively, of said tube, said trigger pulses cooperating to move the operating point of said tube from its first stable point at tube cutoff through its intermediate unstable operating point to its second stable operating point at plate current saturation whereby a negative going output pulse having an extremely fast rise time is generated at the anode of said tube, and means for varying the time constant of the discharge path of said coupling capacitor thereby to determine the time at which said tube returns to its first stable operating point and the trailing edge of said output pulse.

2,949,579

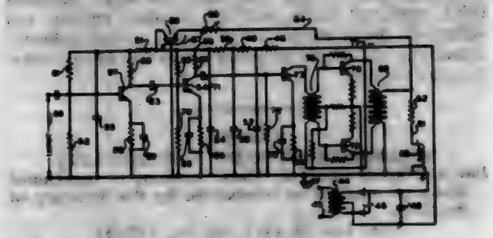
TRANSISTOR AMPLIFIER WITH A.V.C.

Bosco Wu, East Orange, N.J., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Filed Dec. 27, 1957, Ser. No. 705,667
6 Claims. (Cl. 330—13)

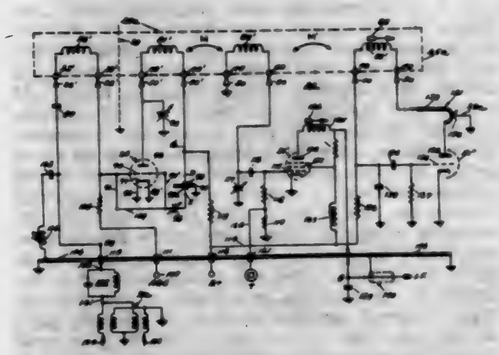
2. An amplifier including a transistor amplifier stage having base, emitter and collector electrodes and means for providing a D.C. bias potential in the base-emitter circuit and a D.C. bias potential for the collector electrode to cause said stage to operate as a class A amplifier, said amplifier stage having a gain which is decreased as the bias potentials for said base-emitter circuit and for said

collector electrode are reduced, means for feeding an A.C. input signal into said base-emitter circuit, an automatic volume control circuit including a common base transistor having a collector-base circuit coupled to said bias providing means and having its emitter-base circuit unbiased for Class B operation, and means for feeding the



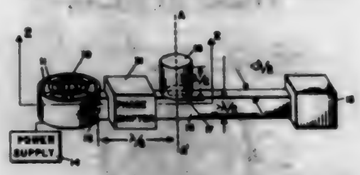
A.C. output signal from said amplifier to the emitter-base circuit of said common base transistor whereby to provide a direct current of variable magnitude in said bias providing means poled to reduce the bias potentials for said base-emitter circuit and for said collector electrode in proportion to the A.C. output signal voltage.

2,949,586
NEUTRALIZING CIRCUITS
Robert C. A. Eland, Arcadia, Calif., assignor to Standard Coil Products Co. Inc., Los Angeles, Calif., a corporation of Illinois
Filed July 27, 1956, Ser. No. 600,496
19 Claims. (Cl. 330—79)



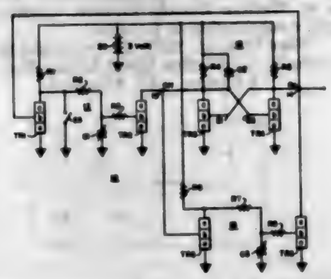
1. A V.H.F. television tuner for broadcast channels over the 54 to 216 megacycle range comprising a triode amplifier having a grid, a plate and a cathode electrode, an assembly containing a plurality of output inductances predetermined for the frequencies of operation of the tuner, means for selectively connecting one of said output inductances into the triode amplifier circuit, one end of the selected output inductance being connected to said plate, condenser means with negligible inductance having a conductive member and a metallic section capacitatively related to said conductive member, said metallic section being connected to signal ground, said conductive member having two spaced connection portions, a neutralizing capacitor, a first lead connecting one of said connection portions to the selected output inductance, a second lead connecting the other of said connection portions to said neutralizing capacitor and establishing a conductive connection between said selected output inductance and said capacitor through said conductive member, said metallic section coacting with said conductive member and being proportioned to effectively inhibit inductive coupling between said first and second leads, said neutralizing capacitor connecting to said grid electrode and having a predetermined capacitance value to provide counter signals to said grid electrode, stabilizing the tuner amplifier over the frequencies throughout the V.H.F. range.

2,949,581
FREQUENCY-STABILIZED OSCILLATOR
Jack Kline, Concord, Mass., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed May 2, 1957, Ser. No. 656,576
9 Claims. (Cl. 331—91)



1. A frequency-stabilized oscillator, comprising: high-frequency generator means for generating a high-frequency signal, said generator being capable of operation at a plurality of signal frequencies including a desired, predetermined frequency and being adapted for operation coupled to a predetermined impedance; a source of power for energizing said generator means; a load means having an impedance so chosen as to damp out oscillations of said generator means; resonant rejection filter means tuned to said predetermined frequency for rejecting a part of the energy of said desired signal at said predetermined frequency; and coupling means coupling said generator means and said load means with said rejection filter means therebetween to provide said predetermined impedance only for said desired signal frequency and said load impedance for all other frequencies thereby to provide a greater transfer of energy from said generator means to said load means at undesired signal frequencies than at said predetermined desired signal frequency substantially to damp out said undesired signals.

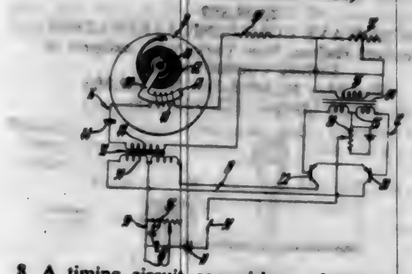
2,949,582
PULSE GENERATORS
Sheldon D. Silliman, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed Apr. 25, 1956, Ser. No. 580,616
9 Claims. (Cl. 331—113)



1. In a pulse generator; a bistable multivibrator having a first stable state wherein a voltage appears at one set of terminals in response to reduction of the voltage at another set of terminals below a predetermined value, and a second stable state wherein a voltage appears at said another set of terminals in response to reduction of

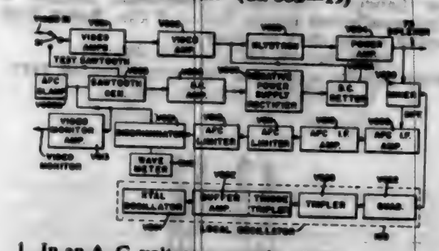
the voltage at said one set of terminals below a predetermined value; a delay circuit responsive to the reduction of voltage at said another set of terminals to reduce the voltage at said one set of terminals, and an additional delay circuit responsive to reduction of the voltage at said one set of terminals to reduce the voltage at said another set of terminals.

2,949,583
TIMING CONTROL CIRCUIT
Walter R. Sargeant, Huntington Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 2, 1956, Ser. No. 595,398
9 Claims. (Cl. 331—114)



8. A timing circuit comprising a feedback oscillator including a reactance element, a reactance varying member movable relative to the reactance element through a range of displacement in which the value of reactance tunes the oscillator to generate continuous electrical oscillations and through a range of displacement in which the value of reactance detunes the oscillator to terminate the electrical oscillations, and an oscillatory mass having a natural frequency of mechanical oscillation lower than the frequency of said electrical oscillations, said mass being coupled with the reactance varying member for displacing it through said ranges whereby the oscillator is alternately tuned and detuned and generates a train of electrical oscillations which are interrupted at the natural frequency of the oscillatory mass.

2,949,584
AUTOMATIC FREQUENCY CONTROL CIRCUIT
Thomas G. Castin, Baldwinsville, and Jack Smith, North Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Filed Nov. 20, 1957, Ser. No. 697,664
18 Claims. (Cl. 332—19)



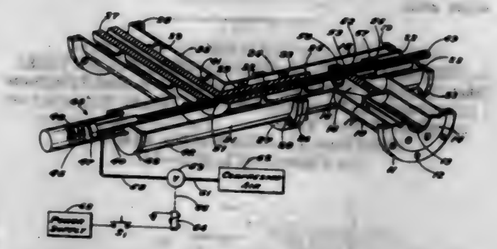
1. In an A.-C. voltage generating device, automatic frequency control means comprising a source of reference frequency A.-C. voltage, a mixer to heterodyne the A.-C. generated voltage and the reference voltage, discriminating means to provide an error signal representative of off-desired-frequency condition of said voltage generating device, a frequency control A.-C. voltage generator to provide an output waveform, means to conform the amplitude of said output waveform in accordance with said error signal, means to restore the frequency of said A.-C. voltage generating device to desired frequency in accordance with the amplitude of said output waveform and means to provide video monitoring of the output of said voltage generating device, said last-named means comprising a video amplifier, said frequency control A.-C. voltage constituting an approximately sawtooth voltage waveform, test means to feed a sample of said last-named test voltage into said video amplifier, the A.-C. voltage generating device being frequency modulated by the output of said video amplifier, and a discriminator responsive to said A.-C. voltage generating device to provide a signal for visual display of said modulation to enable taking a calibration.

2,949,585
DELAY LINE FOR ANGULAR MODULATION
Harold W. Katz, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 1, 1958, Ser. No. 732,310
13 Claims. (Cl. 332—29)



1. An electrical transmission line having a variable delay characteristic comprising a rod of easily magnetically saturable ferromagnetic material, a signal winding on the rod adapted to be supplied with an electromagnetic wave signal to be delayed, a tube of easily magnetically saturable ferromagnetic material surrounding the rod and signal winding, a ground conductor supported in capacitively coupled relation with the signal winding, and means for varying the degree of manetic saturation of said tube and rod comprising a magnetizing winding wound so as to provide a magnetizing field which is longitudinal to the tube and rod.

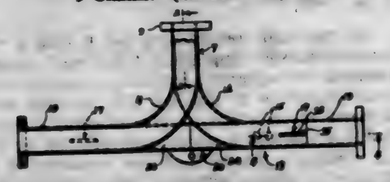
2,949,586
MICROWAVE ANTENNA SWITCH
Donald L. Holmchub and John W. Smith, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Filed Oct. 15, 1958, Ser. No. 767,304
1 Claim. (Cl. 333—7)



A coaxial waveguide switch comprising first, second, and third coaxial waveguides having inner and outer conductors, the inner conductors of the first and second coaxial waveguides in axial alignment with each other and terminating adjacent each other, the inner conductor of the third coaxial waveguide formed with a central opening which is in alignment with the first and second inner conductors and spaced therebetween and transverse with respect to the longitudinal dimension of the third coaxial waveguide, an electrical contact member en-

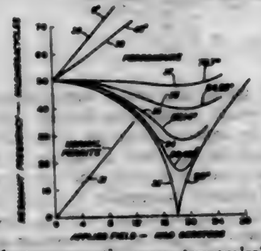
pagiable with the third inner conductor and movable within the opening formed therein from a first position electrically connecting the third inner conductor and the first inner conductor to a second position electrically connecting the third inner conductor and the second inner conductor, the first inner conductor formed with a longitudinal opening, the second inner conductor formed with a longitudinal opening, said second coaxial waveguide having a first portion in axial alignment with the first inner conductor and a second portion out of alignment with the first inner conductor, an opening formed in the second waveguide at the junction between the first and second portions and the central opening of the third coaxial waveguide in alignment with the longitudinal opening in the second inner conductor, an insulating shaft connected to the electrical contact member and extending through the longitudinal opening in the first inner conductor, the opening at the junction of the first and second portions of the second inner conductor, and the longitudinal opening in the second inner conductor, a piston attached to said insulating shaft, said piston mounted in a cylinder, and actuating means connected to said cylinder to move the piston.

2,949,587
MATCHED MAGIC TEE
Akira Okaya, 90 Glenwood Road, Englewood, N.J.
Filed Nov. 12, 1958, Ser. No. 773,361
9 Claims. (Cl. 333—11)



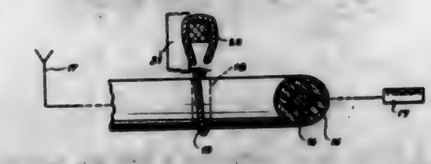
1. A matched magic tee comprising a first wave guide assembly having an energy input opening at one end and having two wave guides that diverge from one another, a second wave guide assembly having two wave guides, directional couplers connecting different diverged ends of the first wave guide assembly with different wave guides of the second wave guide assembly, the second wave guide assembly having an outlet and at which both arms of the second wave guide come together, the directional couplers for the different wave guides being located in positions to produce waves of opposite phase in the different wave guides of the second assembly at their oulet ends.

2,949,588
NON-RECIPROCAL GYROMAGNETIC DEVICE
Max T. Weiss, Elizabeth, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 13, 1954, Ser. No. 474,693
4 Claims. (Cl. 333—24)



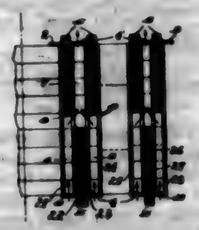
1. In an electromagnetic wave transmission system, a conductively bounded wave guiding structure for supporting electromagnetic wave energy of a given high frequency, an element of polycrystalline ferrite material of hexagonal crystal structure disposed in said wave guiding structure, each of said crystallites having the single hexagonal axis thereof coincident with the easy direction of magnetization thereof and being oriented so that the axis of each crystallite extends parallel to each other in a direction perpendicular to the direction of propagation of said wave energy, and means for applying a biasing magnetic field to said element perpendicular to said direction of propagation and with an angle that is greater than 70 degrees and not greater than 90 degrees between said crystal axes and said field.

2,949,589
MICROWAVE COMMUNICATION LINES
Theodore Hafner, New York, N.Y., assignor to Surface Conduction Inc.
Filed May 28, 1958, Ser. No. 739,803
12 Claims. (Cl. 333—95)



1. In a microwave communication syrtem, means for launching surface waves at a predetermined wave length range, means for receiving said surface waves, and a surface wave transmission line connecting said launching and receiving means including a longitudinal conductor including a dielectric layer exposed to the atmosphere and having an outer surface spaced from the conductor surface at a distance of the order of one wave length of said wave length range whereby said dielectric surface lies beyond the region of maximum intensity of the surface wave field; and a number of gas filled cavities in said dielectric layer between said outer surface and said conductor surface so distributed as to produce a dielectric constant of an overall value not substantially different from that of the atmosphere surrounding said layer; both said layer and cavities extending substantially over the entire length of said line as exposed to said atmosphere.

2,949,590
PLURAL-LAYER WINDING WITH COOLING SLITS
Anton Ellinger, Wettingen, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint-stock company
Filed Nov. 19, 1957, Ser. No. 697,441
Claims priority, application Switzerland Dec. 10, 1957
3 Claims. (Cl. 336—60)



1. A plural-layer winding for a high voltage coil adapted to be cooled by a cooling medium comprising a plurality of concentrically-arranged mutually-spaced substantially-tubular winding layers each having substantially the same length, connector means electrically

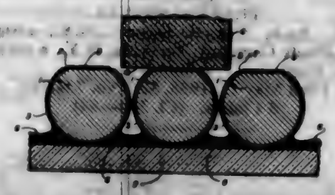
connecting said layers in series comprising connectors alternately connecting adjacent layers on opposite ends thereof, and solid annular insulation members intermediate each successive pair of said tubular winding layers at that end thereof which is opposite the connector electrically connecting said layers, said annular members extending intermediate said winding layers less than half the length of said winding layers, the winding layers intermediate the innermost and the outermost layers having openings in the walls thereof intermediate their ends, each successive pair of said winding layers being open at that end which is electrically connected by said connector to define cooling passages through the open end of a first successive pair of winding layers, through the opening in the wall of one of the winding layers of said pair, and through the open end of the next adjacent successive winding layer pair.

2,949,591
MINIATURE INDUCTIVE DEVICES
Theodore L. Craige, Lynbrook, N.Y., assignor to United Transformer Corporation, New York, N.Y., a corporation of New York
Filed Oct. 18, 1955, Ser. No. 539,395
8 Claims. (Cl. 336—83)



1. In combination, a sub-miniature cylindrical bobbin having a central hollow cylindrical element, and flanges extending radially from said element, at least one of said flanges having a radial slot, a winding on said bobbin, said winding having ends, said ends threaded through said radial slot, said bobbin constituting a magnetic core for said winding.

2,949,592
ADJUSTABLE TRANSFORMER WITH STABILIZED CONTACT TRACK
Gilbert Smiley, Hingham, Mass., assignor to General Radio Company, Cambridge, Mass., a corporation of Massachusetts
Filed Apr. 19, 1951, Ser. No. 221,878
1 Claim. (Cl. 336—148)



A variable-impedance auto-transformer having, in combination, a copper-wire single-layer substantially toroidal winding wound in successively disposed turns about an annular core to provide along the exterior of the winding a track extending across the successively disposed turns, there being bonded to the turns along the track coatings selected from the group consisting of gold, platinum, palladium, rhodium, silver and nickel, means for connecting the winding to a source of voltage, the winding being adapted to be connected also with a load circuit to exchange current with the load circuit at values not greater than a predetermined safe value above which the winding would become damaged by such exchange of current, and a carboniferous or graphitic resistive brush actuable along the track in contact with the coatings and adapted for connection with the load circuit, the width of the brush being greater than the distance between two successive turns of the winding in order that the brush may establish contact with the coating bonded to a turn before breaking contact with the coating bonded to the adjacently disposed turn with which it last contacted, thereby to prevent interruption of the current in the load circuit into the brush, means for connecting a point of the winding and the brush to the load circuit, and the brush being rotatable about the axis of the toroidal winding along the said track in engagement with the coatings of the successively disposed turns, the coatings maintaining the resistance between the brush and the track, during passage of the current of the predetermined safe value between them, substantially constant.

2,949,593
ELECTRICAL COIL FORMED FROM MULTI-LAYER STRIP CONDUCTOR
John Staley and Thomas E. Lewis, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed May 9, 1957, Ser. No. 658,845
3 Claims. (Cl. 336—186)



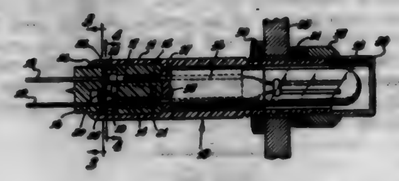
1. An electrical coil construction including a multilayer flexible strip conductor wound in turn layer form, said conductor comprising a first layer consisting of a single aluminum strip having first and second sides and rounded edges, and a second metallic layer having uninsulated first and second sides, said layers being substantially coterminous and being arranged in side-by-side contact with each other, each of said layers being physically separate from each other and readily bendable around a forming mandrel, said first layer having an aluminum oxide insulation covering said first side thereof and establishing an insulating relation with respect to the second side of said second layer in the next succeeding turn of said coil and being uninsulated on at least a portion of the second side thereof for uninsulated contact with the first side of said second layer, and terminals for said coil attached at at least one of said layers at the ends thereof and serving to connect said layers in parallel.

2,949,594
ELECTRIC TEMPERATURE DETECTOR
Alben J. Tava, Hicksville, James S. Adams, Great Neck, and Robert C. Van Aken, Albertson, N.Y., assignors to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Filed Oct. 1, 1956, Ser. No. 613,197
14 Claims. (Cl. 338—26)



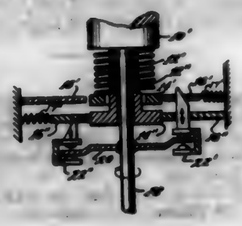
1. An electric device comprising two conducting electrodes spaced by a ferroelectric body comprising a ceramic of lead zirconate and lead oxide.

2,949,595
LAMP SOCKET RESISTOR
Henry Doelsman, El Monte, Calif., assignor to Eldema Corporation, El Monte, Calif., a corporation of California
Filed Jan. 12, 1959, Ser. No. 786,368
3 Claims. (Cl. 338—70)



1. A lamp socket assembly comprising, in combination: a tubular housing having an undercut portion of greater inside diameter than the remainder of said housing adjacent one end thereof; first and second electrodes; first and second pin sockets; a first holder in said housing of insulating material traversed by and retaining said first and second electrodes; a second holder in said housing of insulating material traversed by and retaining said first and second pin sockets; said second holder having a single-ended recess of tear-drop cross-section adapted to hold a pigtail resistor therein; a pigtail resistor having two leads in said recess in said second holders; an electrically conducting juncture between said one lead of said resistor and said first electrode; an electrically conducting juncture between said other lead of said resistor and said first pin socket; and an electrically conducting juncture between said second electrode and said second pin socket.

2,949,596
ELECTRICAL CONNECTING DEVICE
Martin L. Levene, Philadelphia, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed May 14, 1957, Ser. No. 659,041
7 Claims. (Cl. 339—3)



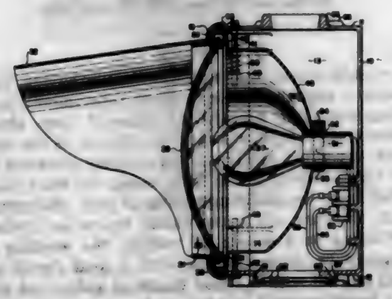
1. In a system having two bodies rotatable relative to each other, means for electrically coupling said bodies during their relative motion without interrupting said relative motion comprising a holding member electrically connected to one of said bodies, a spring assembly including a spring, said spring being mechanically connected between said assembly and the other of said bodies, means for selectively moving said holding member into engagement with said spring assembly for establishing an electrical connection between said bodies, said spring being stressed by said relative rotation when said spring assembly is engaged and being released when said spring assembly is disengaged.

2,949,597
ELECTRIC TERMINAL CONNECTOR
Willi Nerlich, Regensburg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Filed May 18, 1956, Ser. No. 585,091
Claims priority, application Germany May 25, 1955
3 Claims. (Cl. 339—272)



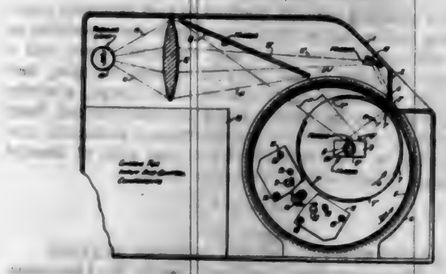
2. An electric terminal connector assembly comprising a connector including a body member having a base portion connecting a pair of spaced substantially parallel leg portions, each leg portion having an opening with the openings substantially aligned along a straight line extending transverse to the leg portions, a bare first conductor having a longitudinal axis and being of substantially rectangular cross-sectional area in a plane perpendicular to said axis, said first conductor extending through said openings, said first conductor and said openings being proportioned such that relative movement is substantially prevented between the first conductor and openings in directions radially of the straight line, said base portion being spaced from said first conductor to provide a passage between said leg portions, said body member being rotatable about the axis of the first conductor relative to said first conductor to permit rotation of said passage about said axis, a bare second conductor extending through said passage in transverse overlapping relation with said first conductor, a substantially U-shaped pressure applying device including a first portion located within said passage connecting a pair of spaced second portions, said first and second portions defining a channel within which said base portion is positioned whereby relative rotational movement is substantially prevented between said body member and said U-shaped device, and a pressure producing device for effecting tight engagement between said first portion and said second conductor terminal, said pressure producing device being supported by said base portion for adjustment relative to the body member towards and away from said first portion.

2,949,598
TRAFFIC SIGNAL
Harold L. Bush, Central Square, N.Y., assignor to Crouse-Hinds Company, Syracuse, N.Y., a corporation of New York
Filed May 12, 1958, Ser. No. 734,765
5 Claims. (Cl. 340—84)



1. A traffic signal comprising a boxlike housing having an open front, a door hinged to the housing to close said opening, a lens carried by the door, a pair of hinge pins mounted in the housing in spaced apart axial alignment in proximity to one side of said open front of the housing, a reflector formed with a radial flange at its open end, said flange being provided with a pair of apertured ears to receive said pins, said ears being spaced apart a distance greater than the spacing between the confronting ends of said hinge pins, said pins having fixed abutments spaced apart a greater distance than the spacing between said reflector ears, a spring interposed between one of the said abutments and one of said ears, whereby said reflector may be moved axially of said pins to effect disengagement of the other reflector ear from its associated pin to effect removal of the reflector from said pins.

2,949,599
ELECTRICAL SIGNALLING RECEIVER FOR DISPLAYING LINES OF CHARACTERS
John H. Jones, 384 Diablo Court, Palo Alto, Calif.
Filed Dec. 2, 1957, Ser. No. 700,160
17 Claims. (Cl. 340—154)



1. Signal-responsive apparatus for displaying different characters selectively, comprising a member having a plurality of different characters visibly marked thereon, means for imparting to said member a periodic motion such that each of said characters in succession passes through a common position, scanning means for providing a ribbon of light having a periodic motion in a direction substantially parallel to its thickness, said ribbon being composed of rays that intersect said member and sweep periodically across said common position, means for synchronizing the periodic motions of said member and said ribbon so that said rays sweep across a selected one of said characters at the same epoch in successive cycles of the motion of said member, whereby a selected character is displayed at said common position, and signal-responsive means for varying the phase relation between the periodic motions of said member and said ribbon so that each of said different characters, selectively, can be so displayed.

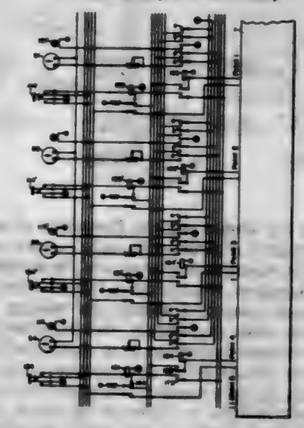
2,949,600
AUTOMATIC CONTROL SYSTEMS, ESPECIALLY FOR AUTOMATIC MACHINE TOOLS
Christopher Archibald Gordon Le May, Greenford, and Geoffrey Hason Stephenson, Ealing, London, England, assignors to Electric & Musical Industries Limited, Middlesex, England, a company of Great Britain
Filed Oct. 1, 1954, Ser. No. 459,794
Claims priority, application Great Britain Oct. 3, 1953
5 Claims. (Cl. 340—166)

1. An electrically operated switch comprising a relay winding the magnitude of the current in which determines the state of the switch, at least two input terminals, first and second unilaterally conductive devices connected respectively from one end of said winding to two of said input terminals, a third unilaterally conductive device connected from the other end of said winding to one of said input terminals, a hold switch operative by current in said winding to connect, when closed, the other end of said winding to a point of substantially fixed potential, said three unilaterally conductive devices being connected for the conduction of current in the same direction through said winding, means for applying biasing potential to said input terminals, means for applying simultaneously to two of said input terminals



switching pulses of polarity predetermined in relation to said potentials to produce a current change in said winding in one sense, thereby to establish the switch in one state, and means for applying to one of said input terminals a switching pulse of a polarity predetermined in relation to said potentials to produce a current change in said winding in the opposite sense thereby to establish the switch in a second state.

2,949,601
TELEMETERING APPARATUS
Willard A. Derr, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Filed May 2, 1955, Ser. No. 505,282
5 Claims. (Cl. 340—185)

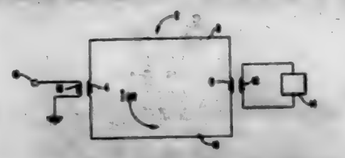


3. In combination, supervisory control equipment at a dispatching office including a plurality of point relays each operable in response to selection of a different point of the equipment, a common bridge circuit including an adjustable voltage divider element, means including a telemetering receiver operable to actuate the adjustable divider element, a plurality of indicating meters, and circuit means including a contact of a different point relay connecting each indicating meter in the common bridge circuit.

2,949,602
CRYOGENIC CONVERTER
James W. Crowe, Hyde Park, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 11, 1958, Ser. No. 727,919
3 Claims. (Cl. 340—347)

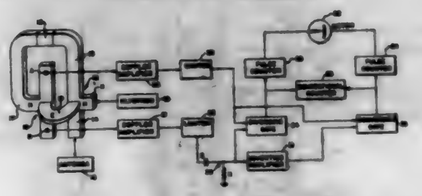
1. An analog to digital converter comprising a closed loop of superconductive material, said loop including a

first hard superconductor and a soft superconductor, a magnetic field producing means inductively coupled to said hard superconductor, such magnetic field producing means including a second hard superconductor inductively coupled to said first hard superconductor, means for supplying a varying signal as a driving current to said



magnetic field producing means so as to induce a circulating current in said closed loop, said circulating current being high enough to drive said soft superconductor to its normal resistive state but not high enough to drive said first hard superconductor to its normal resistive state, and means for sensing when said soft superconductor is driven normal resistive.

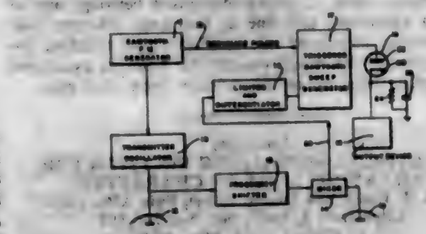
2,949,603
RELATIVE DISTANCE AND MOVEMENT INDICATOR
Stanley H. Logue, San Diego, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Filed Feb. 18, 1957, Ser. No. 640,701
12 Claims. (Cl. 343—9)



1. Means for comparing the frequency of continuous wave transmitted signals with echo return signals to determine the velocity of a target and its movement relative to said means comprising a two channel receiving system, means connected thereto for mixing said echo return signals with portions of said transmitted signals in a predetermined manner so as to pass signals in one of said channels out of phase with signals in the other of said channels in such manner that lead signals in one of said channels indicate a higher echo return signal frequency and lead signals in the other of said channels indicate a lower echo return signal frequency than the frequency of said transmitted signals, and counter means connected to said channels for comparing the number of lead signals in one channel with the number of lead signals in the other channel.

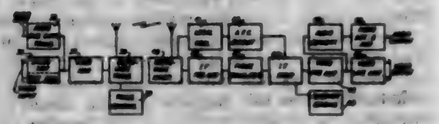
2,949,684
RADAR BLIND LANDING INDICATOR
Donald Dickinson Williams, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 631,843
6 Claims. (Cl. 343—14)

1. A blind landing indicating system for aircraft comprising: a transmitter; a first antenna coupled to said transmitter for radiating a signal generated by said transmitter; a frequency shifter coupled to said transmitter for cyclically shifting the frequency of a portion of the signal generated by said transmitter; a receiver for receiving ground echoes of the signals transmitted by said transmitter; a second antenna coupled to said receiver, said receiver being also coupled to said frequency shifter; a demodulating network coupled to said receiver for developing an audio frequency signal representative of the difference in frequency of the frequency shifted signals and the echo signals received by said receiver and corresponding to the rate of descent; sawtooth waveforming means connected to said demodulating network to respond to said difference in frequency to form a sawtooth



wave; a charging network coupled to said sawtooth waveforming means for developing a charge corresponding to said difference in period of said sawtooth wave; and a voltage indicating device coupled to said charging network for indicating the value of said charge, whereby an aircraft may be landed along a predetermined flare-out path by maintaining a predetermined indication corresponding to a predetermined rate and path of descent by means of said voltage indication device.

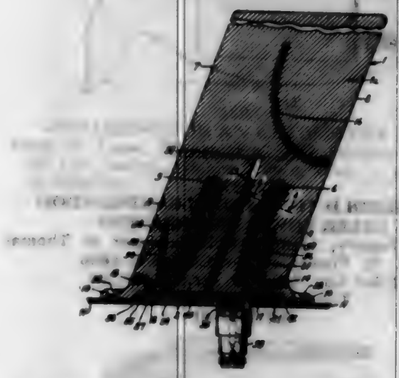
2,949,685
PORTABLE COLOR TELEVISION SYSTEM
Victor Graziano, Oak Park, and James R. Lincicome, Glen Ellyn, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Sept. 12, 1955, Ser. No. 533,802
12 Claims. (Cl. 343—892)



1. A color television transmission system including in combination a transmitting portion including a balanced amplifier for receiving a wide band video signal, subcarrier transmitting means for modulating a subcarrier wave by an audio signal, first video amplifier means for combining said wide band video signal and said audio subcarrier wave into a composite signal and amplifying the same, and transmitter means for frequency modulating a carrier wave by said amplified composite signal, and a receiver portion including a superheterodyne receiving section having an intermediate frequency amplifier, a detector and an output coupling circuit, second video amplifier means connected to said coupling circuit for amplifying the composite signal therefrom, third video amplifier means for deriving the video signal from said composite signal and for amplifying the same, audio converter means for deriving the audio signal from said composite signal and for reducing the frequency thereof, and audio detector and amplifier means for providing an audio output signal, said first and third video amplifiers each including a pair of electron discharge valves having cathodes to which signals having substantially the same phase are applied, and an attenuator circuit interconnecting said cathodes for providing negative feedback from the forward one of said valves to the rearward one of said valves, said attenuator circuit including a shunt path including a variable resistor and a variable capacitor for

controlling the frequency response of said amplifier, said coupling circuit including a cathode follower stage with a rectifier connected between the cathode thereof and a direct current potential to vary the loading with signal level to change the differential gain of the system, and said convertor means including a local oscillator and means for frequency modulating said local oscillator by a wave derived from said video signal for cancelling modulation of said subcarrier wave by said video signal during the transmission of said composite wave.

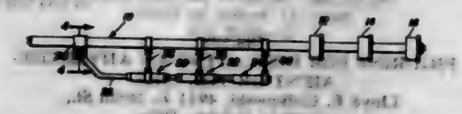
2,949,686
SLOTTED AIRFOIL ULTRA HIGH FREQUENCY ANTENNA
Arthur Dorne, Glen Head, N.Y., assignor to Dorne and Margolin, Inc., Westbury, N.Y., a corporation of New York
Filed July 31, 1958, Ser. No. 752,299
14 Claims. (Cl. 343—700)



6. An antenna for high speed vehicles comprising a conductive air foil having a body portion and base adapted to be mounted on and connected electrically to said vehicle with said body portion slanted with respect to the surface of said vehicle to provide lowered aerodynamic resistance and forming slanted leading and trailing edges, said body portion having a pair of slots, each extending upwardly from said base generally along but spaced from a respective edge, each of said edges having a gap adjacent said base and communicating with a respective slot and means for coupling an energy conductor to each of said edges at the side of its respective gap opposite said base.

2,949,687
MULTIPLE-BAND GAMMA MATCHED ANTENNA
Carl W. Lamb, 4301 Custer Road, Knoxville 18, Tenn.
Filed Sept. 5, 1958, Ser. No. 759,327
4 Claims. (Cl. 343—722)

4. A multi-band antenna comprising an antenna rod, resonant traps electrically connected to said antenna rod for establishing proper antenna half-wave lengths for desired frequency bands, an antenna feed line, a gamma match electrically connected between said antenna rod and said feed line for matching the respective impedances thereof, said gamma match including a single gamma rod terminally connected to said feed line, and a plurality of capacitive elements electrically connected between said gamma rod and said antenna rod, said capacitive elements including a conductive sleeve concentrically car-



ried around said gamma rod and a tubular insulator sandwiched between said sleeve and said gamma rod, a plurality of inductive elements, each of said inductive elements electrically connected between a sleeve and said antenna rod.

2,949,688
ANTENNA OPERATING ARRANGEMENT HAVING SAFETY MEANS OPERATIVE DURING JAMMED CONDITION
Erich Fischer, Esslingen (Neckar), Germany
Filed June 13, 1958, Ser. No. 741,934
4 Claims. (Cl. 343—903)

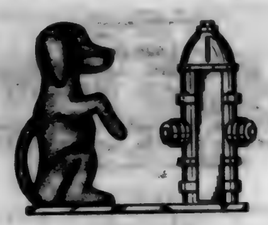


1. Antenna arrangement for a motor car comprising, in combination, an antenna movable between an inoperative position and an operative position; electric motor means; circuit means connected to said motor means and including a motor stop switch, reversing means for said motor means, and a start switch connected to said reversing means for selectively starting operation of said motor means in one of two opposite directions of rotation; operating means for said antenna and including a friction coupling, said operating means being driven by said motor means for moving said antenna between said positions of the same within a given time if said friction coupling does not slip; actuating means for operating said motor stop switch, said actuating means being positively driven by said motor means for operating said motor stop switch after a predetermined time greater than said given time whereby said motor means is stopped after said predetermined time when movement of the antenna is blocked in an intermediate position and said friction coupling slips, said antenna being normally stopped when said antenna reaches one of said positions thereof.

DESIGNS

AUGUST 16, 1960

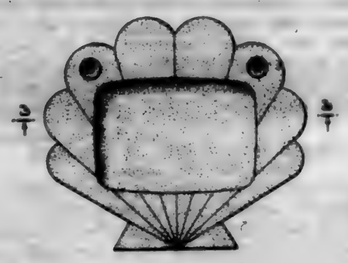
188,589
FIGURINE FOR DISPLAYING AN ADVERTISEMENT OR THE LIKE
Lloyd F. Golkowski, 4921 E. 106th St., Garfield Heights, Ohio
Filed Dec. 9, 1959, Ser. No. 58,613
Term of patent 14 years
(Cl. D1—2)



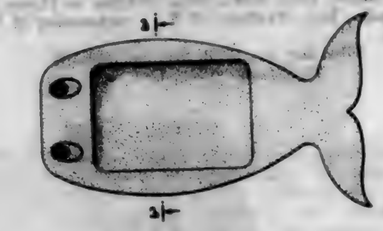
188,590
SHOE
Duke J. Rose, Nashville, Tenn., assignor to Genesco Inc., Nashville, Tenn., a corporation of Tennessee
Filed Apr. 28, 1959, Ser. No. 55,583
Term of patent 14 years
(Cl. D7—7)



188,591
BABY BATH SPONGE
Robert J. Arrix, Fort Lee, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed June 22, 1959, Ser. No. 56,457
Term of patent 14 years
(Cl. D9—2)



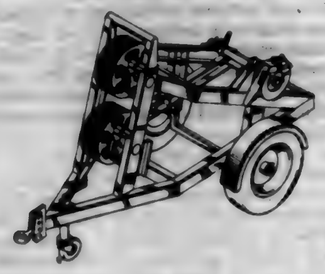
188,592
BABY BATH SPONGE
Robert J. Arrix, Fort Lee, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Filed June 22, 1959, Ser. No. 56,458
Term of patent 14 years
(Cl. D9—2)



188,593
HOUSEHOLD TOOL FOR CLEANING FOOD MIXER BOWLS AND BEATERS
John B. Tegarty, Mentor, Ohio, assignor to Thomas K. M. Victory, trustee, Cleveland, Ohio
Filed Aug. 26, 1959, Ser. No. 57,306
Term of patent 14 years
(Cl. D9—6)



188,594
COMBINED TRAILER AND WIRE TENSIONER
Gerald A. M. Petersen, Santa Clara, and Robert W. Goode, Morgan Hill, Calif.; said Goode assignor to said Petersen
Filed Sept. 4, 1958, Ser. No. 52,505
Term of patent 14 years
(Cl. D14—3)



188,595
FENDER FOR AN AUTOMOBILE
Homer C. La Gassey, Jr., Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Aug. 14, 1959, Ser. No. 57,189
Term of patent 7 years
(Cl. D14—6)

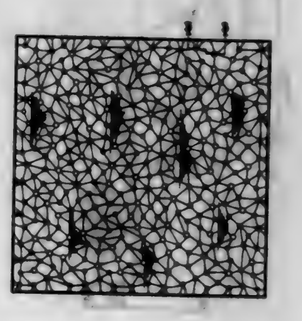


188,596
ORNAMENT FOR AN AUTOMOBILE HOOD
Virgil M. Exner, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed June 26, 1959, Ser. No. 56,566
Term of patent 7 years
(Cl. D14—18)

188,597
CHAIR
John J. Labberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed July 30, 1959, Ser. No. 57,009
Term of patent 14 years
(Cl. D15—1)



188,598
ACOUSTICAL CORRECTION TILE
James R. Radcliffe, Snyder, N.Y., assignor to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Filed Aug. 22, 1958, Ser. No. 52,347
Term of patent 14 years
(Cl. D18—2)



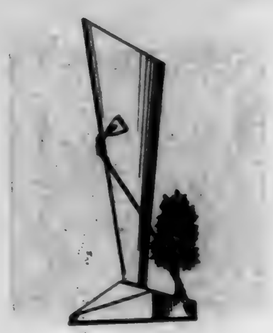
188,599
DRY SHAVER
Reinhard Willem Jacob Voorsema, Eindhoven, Netherlands, assignor to North American Philips Co., Inc.
Filed July 13, 1959, Ser. No. 56,758
Term of patent 14 years
(Cl. D22—3)



188,600
ELECTRIC SHAVER
Robert O. Ernest, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Filed Sept. 4, 1959, Ser. No. 57,427
Term of patent 14 years
(Cl. D22—3)



188,601
TROPHY CUP OR THE LIKE
Jean Mayeur, Forest Hills, N.Y., assignor to Cartier, Inc., New York, N.Y., a corporation of New York
Filed Aug. 7, 1959, Ser. No. 57,095
Term of patent 7 years
(Cl. D29—23)



188,602
FISH LURE
Manuel E. Mecate, 2658 S. Harvard, Los Angeles, Calif.
Filed June 22, 1959, Ser. No. 56,478
Term of patent 14 years
(Cl. D31—4)



188,603
HOLDER FOR RECORD ALBUMS
Joseph C. Cavella, Chicago, Ill.
Filed Sept. 10, 1959, Ser. No. 57,589
Term of patent 7 years
(Cl. D33—3)



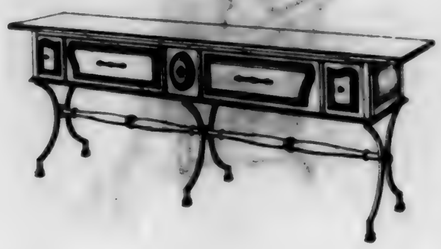
188,604
BUREAU
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed Oct. 1, 1959, Ser. No. 57,764
Term of patent 14 years
(Cl. D33—6)



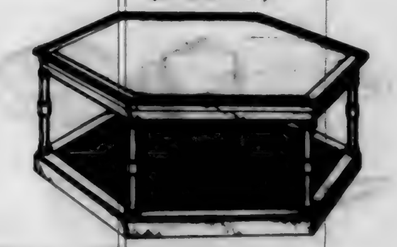
188,605
DESK
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed Oct. 1, 1959, Ser. No. 57,765
Term of patent 14 years
(Cl. D33—7)



188,606
SIDEBOARD
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed Sept. 21, 1959, Ser. No. 57,631
Term of patent 14 years
(Cl. D33—13)



188,607
TABLE
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed Sept. 21, 1959, Ser. No. 57,632
Term of patent 14 years
(Cl. D33—14)



188,608
CHEST
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed July 30, 1959, Ser. No. 57,008
Term of patent 14 years
(Cl. D33—19)



188,609
GOLF CLUB CARRIER
Will J. Worley, 1284 E. Delaware, Urbana, Ill.
Filed May 5, 1958, Ser. No. 58,736
Term of patent 14 years
(Cl. D34—5)



188,610
GAME DEVICE
Albert H. Hardman, 1220 Cochran Road, Pittsburgh, Pa.
Filed Sept. 30, 1959, Ser. No. 57,737
Term of patent 14 years
(Cl. D34—15)



188,611
TOY HELICOPTER OR SIMILAR ARTICLE
Howard E. Grant, Farmingdale, N.Y., assignor to Automatic Concessions Corporation, Westbury, N.Y., a corporation of New York
Filed Feb. 29, 1960, Ser. No. 59,548
Term of patent 14 years
(Cl. D34—15)



188,612
ABRADING TOOL OR SIMILAR ARTICLE
Charles H. Koeppel, Pleasant St., North Woodbury, Conn.
Filed Feb. 12, 1959, Ser. No. 54,584
Term of patent 14 years
(Cl. D37—1)



188,613
STORAGE BIN
Ronald B. Gottwegen, Evanston, Ill., assignor to Gotham Industries, Inc., Chicago, Ill., a corporation of New York
Filed May 9, 1960, Ser. No. 60,493
Term of patent 14 years
(Cl. D44—1)



188,614
CUP
William L. Niclaus, Parsippany-Troy Hills, Morris County, N.J. (170 Knoll Road, R.D. 1, Boonton, N.J.)
Filed Apr. 11, 1960, Ser. No. 60,146
Term of patent 14 years
(Cl. D44—9)



188,615
COMBINED WARMING DISH AND STAND THEREFOR
Victor J. Bergeron, Orinda, Calif. (20 Cosmo Place, San Francisco, Calif.)
Filed Mar. 28, 1960, Ser. No. 59,893
Term of patent 14 years
(Cl. D44—15)

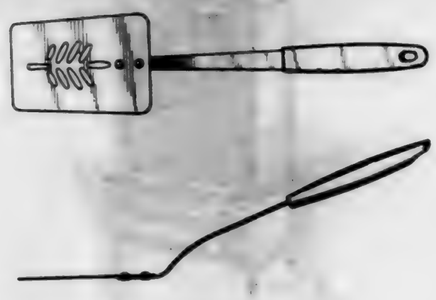
188,616
PLATE OR SIMILAR ARTICLE
Gerald S. Stone, Scarsdale, N.Y., assignor to Johnson Bros. (Hanley) Limited, Hanley Pottery, Hanley, Stoke-on-Trent, Great Britain, a British company
Filed Feb. 25, 1960, Ser. No. 59,524
Term of patent 14 years
(Cl. D44—15)



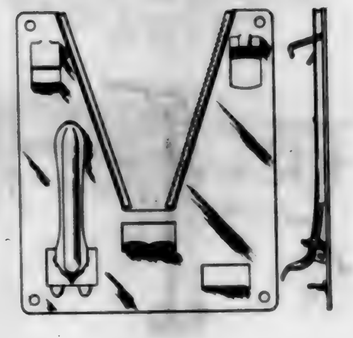
188,617
COFFEE MAKER
Oscar L. Lasko, 597 N. Franklin St., West Chester, Pa.
Filed Oct. 28, 1959, Ser. No. 58,105
Term of patent 14 years
(Cl. D44—26)



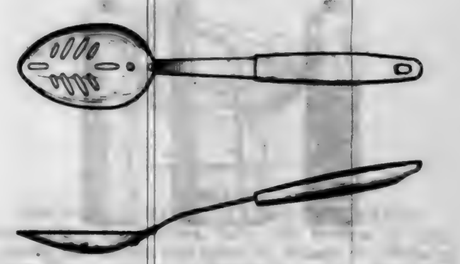
188,618
CULINARY TURNER
Richard S. Latham, Chicago, Ill., assignor to Elco Products Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 24, 1960, Ser. No. 59,852
Term of patent 14 years
(Cl. D44—29)



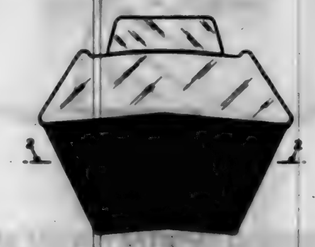
188,619
COMBINED CONTAINER OPENER AND KNIFE SHARPENER
Leonard R. Kortick, 88 Waldron Ave., Cranston, R.I.
Filed Jan. 18, 1960, Ser. No. 59,089
Term of patent 14 years
(Cl. D44—29)



188,620
SPOON
Richard S. Latham, Chicago, Ill., assignor to Elco Products Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 24, 1960, Ser. No. 59,853
Term of patent 14 years
(Cl. D44—29)



188,621
LIGHTING FIXTURE
Leo G. Stahlhut, Kirkwood, and Carl X. Meyer, St. Louis County, Mo., assignors to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri
Filed Apr. 27, 1960, Ser. No. 60,348
Term of patent 14 years
(Cl. D48—23)



188,622
LIGHTER OR SIMILAR ARTICLE
Seymour Rappoport, New York, N.Y., assignor to Ronson Corporation, Woodbridge, N.J., a corporation of New Jersey
Filed Sept. 24, 1959, Ser. No. 57,673
Term of patent 14 years
(Cl. D48—27)



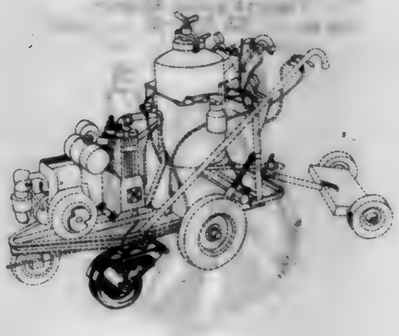
188,623
TRELLAGE
Jacob G. Braun, 609 S. Paulina St., Chicago, Ill.
Filed Dec. 9, 1955, Ser. No. 39,249
Term of patent 14 years
(Cl. D54—3)



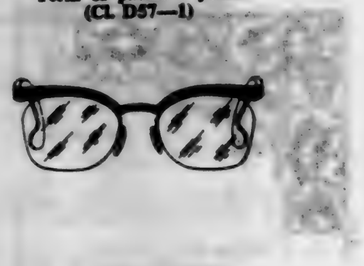
188,624
ADJUSTABLE LABORATORY CLAMP
Leslie F. Vizler, Rocky River, Ohio, assignor to Labasco, Inc., Durham, N.C., a corporation of North Carolina
Filed Mar. 6, 1959, Ser. No. 54,876
Term of patent 14 years
(Cl. D54—13)



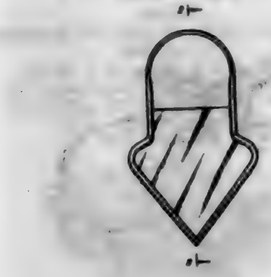
188,625
CYCLE ADJUSTER FOR A ROAD MARKING MACHINE
Robert B. Bagshaw, Huntingdon, Pa., assignor to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Filed Oct. 6, 1959, Ser. No. 57,833
Term of patent 14 years
(Cl. D55—1)



188,626
PAIR OF SPECTACLES
Bernard Crotti-Maltenay, Joinville-le-Pont, France, assignor to Societe en Commandite Simple et en Nom Collectif à l'Egard des Gerants, dite: Societe Industrielle & Commerciale des Ouvriers Lunetiers (Cottet, Poichet, Tagnon & Cie), Paris, France
Filed May 25, 1959, Ser. No. 56,043
Term of patent 7 years
(Cl. D57—1)



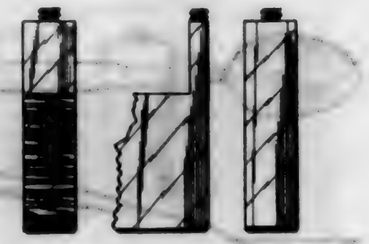
188,627
DISPLAY BAG FOR MERCHANDISE OR THE LIKE
Israel Corbo, 37 Central Mall, Brooklyn, N.Y.
Filed Aug. 6, 1959, Ser. No. 57,081
Term of patent 14 years
(Cl. D58—2)



188,628
BOTTLE
Walter T. Heintze, Lewisboro, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware
Filed Dec. 11, 1958, Ser. No. 53,734
Term of patent 14 years
(Cl. D58—6)



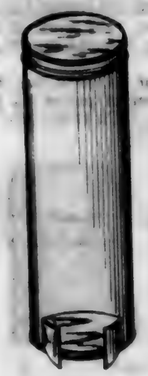
188,629
BOTTLE
Owen C. Hawkins, 315 E. 22nd St., Joplin, Mo.
Filed Aug. 12, 1959, Ser. No. 57,148
Term of patent 3½ years
(Cl. D58—6)



188,630
DISPENSING BOTTLE
Gerhard Neuhaus, Duesseldorf, Germany, assignor to Lingner-Werke G.m.b.H., Duesseldorf, Germany, a corporation
Filed Oct. 5, 1959, Ser. No. 57,812
Term of patent 14 years
(Cl. D58—6)



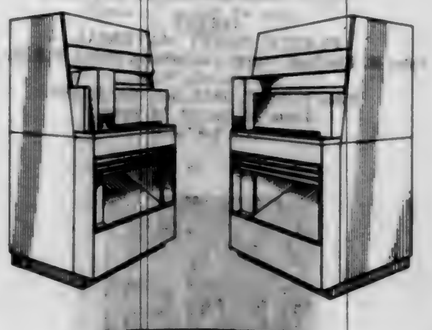
188,631
DISPENSING CANISTER FOR TEA BAGS
Oscar C. Gorenflo, New York, N.Y., assignor to McCormick & Company, Incorporated, Baltimore, Md., a corporation of Maryland
Filed Sept. 25, 1959, Ser. No. 57,682
Term of patent 14 years
(Cl. D58—17)



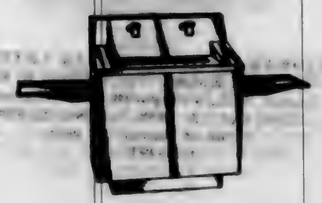
188,632
CLOSURE CAP FOR GAS TANKS OR THE LIKE
Eugene Kawecki, Detroit, Mich., assignor to Sturdevant Manufacturing Corporation, Detroit, Mich., a corporation of Michigan
Filed Nov. 23, 1959, Ser. No. 58,424
Term of patent 14 years
(Cl. D58—26)



188,633
DOCUMENT REPRODUCING APPARATUS
John Ruthus, Jr., Pontiac, N.Y., and William H. Armstrong, Bloomfield, and James G. Balmer, Jr., Birmingham, Mich., assignors to Haloid Xerox Inc., Rochester, N.Y., a corporation of New York
Filed May 20, 1960, Ser. No. 60,668
Term of patent 14 years
(Cl. D61—1)



188,634
WATER STATION
Herbert L. Shivek, Brookline, Mass., assignor to Serv-O-Lift Corporation, Boston, Mass., a corporation of Massachusetts
Filed Nov. 27, 1959, Ser. No. 58,485
Term of patent 14 years
(Cl. D67—4)



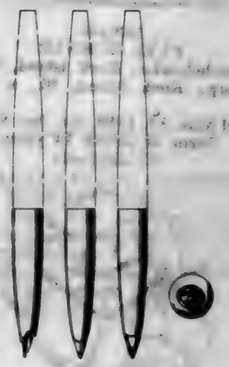
188,635
BOAT
Henry Donald Canazzi, 178 Jewett Parkway, Buffalo, N.Y.
Filed Mar. 23, 1959, Ser. No. 55,117
Term of patent 7 years
(Cl. D71—1)



188,636
TAPE DISPENSER
Joseph J. Ballato, Albany, and Laurence W. Brulin, New York, N.Y., assignors to Norton Company, Troy, N.Y., a corporation of Massachusetts
Filed Sept. 11, 1957, Ser. No. 67,709
Term of patent 14 years
(Cl. D74—1)



188,637
WRITING INSTRUMENT
Homer Theodore Green, Milton, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Filed Nov. 2, 1959, Ser. No. 58,151
Term of patent 14 years
(Cl. D74—17)



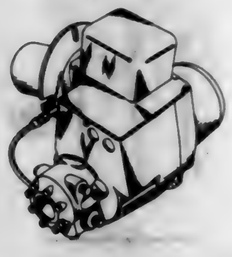
188,638
JET STEAMER MACHINE FOR STEAMING GRAIN OR THE LIKE
Paul J. Montgomery, 13 NE. 28th St., Oklahoma City, Okla.
Filed Nov. 20, 1959, Ser. No. 58,469
Term of patent 14 years
(Cl. D76—1)



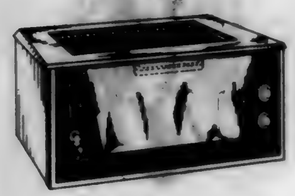
188,639
ROTATABLE DISPLAY STAND FOR GREETING CARDS OR THE LIKE
Herbert Schwartz, Millburn, N.J.
Filed Nov. 6, 1959, Ser. No. 58,242
Term of patent 14 years
(Cl. D88—9)



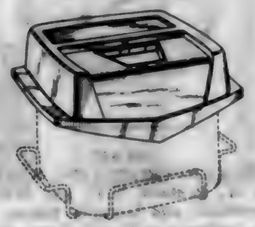
188,640
FUEL BURNER
Charles A. Reichelderfer, Rock Island, Ill., assignor to Nu-Way Corp., Rock Island, Ill., a corporation of Illinois
Filed Mar. 23, 1959, Ser. No. 55,114
Term of patent 14 years
(Cl. D81—2)



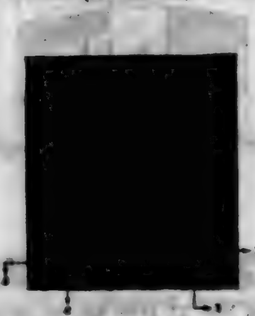
188,641
BARBECUE GRILL
Trace Christenson, Jr., and Robert L. Gallup, Niles, Mich., assignors to The Majestic Company, Inc., Huntington, Ind., a corporation
Filed Mar. 17, 1960, Ser. No. 59,775
Term of patent 14 years
(Cl. D81—25)



188,642
COMBINED MEDICINAL VAPORIZER AND HOLDER THEREFOR OR THE LIKE
Donald B. Lowe, Jr., Batavia, Ill., assignor to Northern Electric Company, Chicago, Ill., a corporation of Delaware
Filed June 18, 1959, Ser. No. 56,416
Term of patent 14 years
(Cl. D83—1)



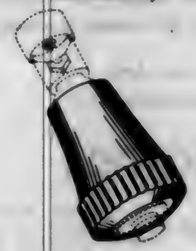
188,643
PLASTIC SHEET MATERIAL
John R. Ellefson, North Footertown Drive, R.F.D. 1, Newburgh, N.Y.
Filed Nov. 17, 1958, Ser. No. 53,399
Term of patent 14 years
(Cl. D67—3)



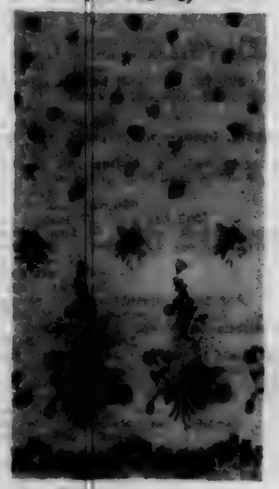
188,644
SHOWER HEAD OR SIMILAR ARTICLE
Herbert V. Kohler, Kohler, Wis., assignor to Kohler Co., Kohler, Wis., a corporation of Wisconsin
Filed Oct. 13, 1958, Ser. No. 52,959
Term of patent 14 years
(Cl. D91—3)



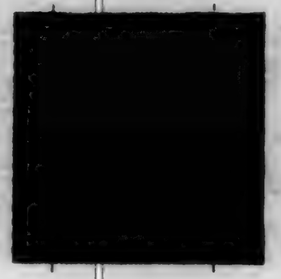
188,645
SHOWER HEAD OR SIMILAR ARTICLE
Herbert V. Kohler, Kohler, Wis., assignor to Kohler Co., Kohler, Wis., a corporation of Wisconsin
Filed Oct. 13, 1958, Ser. No. 52,961
Term of patent 14 years
(Cl. D91—3)



188,646
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Feb. 10, 1960, Ser. No. 59,328
Term of patent 14 years
(Cl. D92—1)



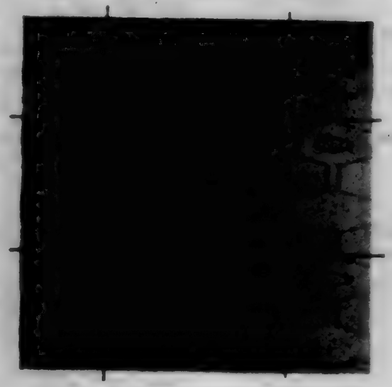
188,647
FLAT WOVEN FLOOR COVERING OR SIMILAR ARTICLE
Alan Brown, Higganum, Conn., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Oct. 22, 1958, Ser. No. 53,096
Term of patent 14 years
(Cl. D92—4)



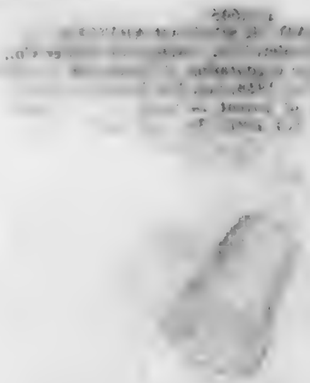
188,648
HARD SURFACE FLOOR COVERING OR SIMILAR ARTICLE
Harvey G. Cohen, Bloomfield, and William Currie, Kearny, N.J., assignors to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Mar. 15, 1960, Ser. No. 59,745
Term of patent 14 years
(Cl. D92—17)



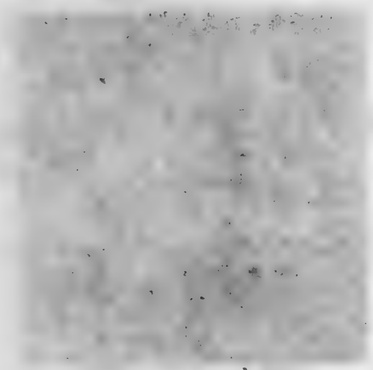
188,649
HARD SURFACE FLOOR COVERING OR SIMILAR ARTICLE
John M. Fedash, Jersey City, and Peter Zevas, Newark, N.J., assignors to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Mar. 29, 1960, Ser. No. 59,935
Term of patent 14 years
(Cl. D92—17)

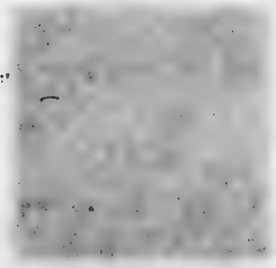












LIST OF PLANT PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Reed, James S. Avocado. 1,967, 8-16-60, Cl. 47—62.

LIST OF DESIGN PATENTEES

Armstrong, William H.: *See*—
Rutkus, John, Jr., Armstrong, and Balmer. 188,633.
Arrix, Robert J., to Johnson & Johnson. Baby bath sponge. 188,591, 8-16-60, Cl. D9—2.
Arrix, Robert J., to Johnson & Johnson. Baby bath sponge. 188,592, 8-16-60, Cl. D9—2.
Automatic Concessions Corp.: *See*—
Grant, Howard E. 188,611.
Bagshaw, Robert B., to Waid Industries, Inc. Cycle adjuster for a road marking machine. 188,625, 8-16-60, Cl. D55—1.
Ballato, Joseph J., and L. W. Brulin, to Norton Co. Tape dispenser. 188,636, 8-16-60, Cl. D74—1.
Balmer, James G., Jr.: *See*—
Rutkus, John, Jr., Armstrong, and Balmer. 188,633.
Bergeron, Victor J. Combined warming dish and stand therefor. 188,615, 8-16-60, Cl. D44—15.
Braun, Jacob G. Trellage. 188,622, 8-16-60, Cl. D54—2.
Bristol-Myers Co.: *See*—
Heintze, Walter T. 188,628.
Brown, Alan, to Congoleum-Nairn Inc. Flat woven floor covering or similar article. 188,647, 8-16-60, Cl. D92—4.
Brulin, Laurence W.: *See*—
Ballato, Joseph J., and Brulin. 188,636.
Canazzi, Henry D. Boat. 188,635, 8-16-60, Cl. D71—1.
Cartier, Inc.: *See*—
Mayeur, Jean. 188,601.
Cavella, Joseph C. Holder for record albums. 188,603, 8-16-60, Cl. D23—3.
Christenson, Trace, Jr., and R. L. Gallup, to The Majestic Co., Inc. Barbecue grill. 188,641, 8-16-60, Cl. D81—25.
Chrysler Corp.: *See*—
Exner, Virgil M. 188,596.
La Gassey, Homer C., Jr. 188,595.
Cohen, Harvey G., and W. Currie, to Congoleum-Nairn Inc. Hard surface floor covering or similar article. 188,648, 8-16-60, Cl. D92—17.
Congoleum-Nairn Inc.: *See*—
Brown, Alan. 188,647.
Cohen, Harvey G., and Currie. 188,648.
Fedash, John M., and Zevas. 188,649.
Corbe, Israel. Display bag for merchandise or the like. 188,627, 8-16-60, Cl. D68—2.
Cretin-Maitenaz, Bernard, to Societe en Commandite Simple et en Nom Collectif & l égard des Gerants, dite: Societe Industrielle & Commerciale des Ouvriers Lunetiers Cottet. Pair of spectacles. 188,626, 8-16-60, Cl. D57—1.
Currie, William: *See*—
Cohen, Harvey G., and Currie. 188,648.
Day-Brite Lighting, Inc.: *See*—
Stahlhut, Leo G., and Meyer. 188,621.
Decorative Fabrics Co. Inc.: *See*—
Leavy, Natalie. 188,646.
Ekco Products Co.: *See*—
Latham, Richard S. 188,618.
Latham, Richard S. 188,620.
Ellefson, John R. Plastic sheet material. 188,643, 8-16-60, Cl. D67—3.
Ernest, Robert O., to Sunbeam Corp. Electric shaver. 188,600, 8-16-60, Cl. D22—2.
Exner, Virgil M., to Chrysler Corp. Ornament for an automobile hood. 188,596, 8-16-60, Cl. D14—18.
Fedash, John M., and P. Zevas, to Congoleum-Nairn Inc. Hard surface floor covering or similar article. 188,649, 8-16-60, Cl. D92—17.
Gallup, Robert L.: *See*—
Christenson, Trace, Jr., and Gallup. 188,641.
Genesco Inc.: *See*—
Rose, Duke J. 188,590.
Golkowski, Lloyd F. Figurine for displaying an advertisement or the like. 188,589, 8-16-60, Cl. D1—2.
Goode, Robert W.: *See*—
Petersen, Gerald A. M., and Goode. 188,594.
Gorenšo, Oscar C., to McCormick & Co., Inc. Dispensing canister for tea bags. 188,631, 8-16-60, Cl. D68—17.
Gotham Industries, Inc.: *See*—
Gottsegen, Ronald B. 188,613.
Gottsegen, Ronald B., to Gotham Industries, Inc. Storage bin. 188,613, 8-16-60, Cl. D44—1.
Grant, Howard E., to Automatic Concessions Corp. Toy helicopter or similar article. 188,611, 8-16-60, Cl. D34—15.
Green, Homer T., to The Parker Pen Co. Writing instrument. 188,637, 8-16-60, Cl. D74—17.
Haloid Xerox, Inc.: *See*—
Rutkus, John, Jr., Armstrong, and Balmer. 188,633.
Hardman, Albert H. Game device. 188,610, 8-16-60, Cl. D34—18.
Hawkins, Owen C. Bottle. 188,629, 8-16-60, Cl. D58—6.
Heintze, Walter T., to Bristol-Myers Co. Bottle. 188,628, 8-16-60, Cl. D58—6.
Johnson Bros. (Hanley) Ltd.: *See*—
Stone, Gerald S. 188,616.
Johnson & Johnson: *See*—
Arrix, Robert J. 188,591.
Arrix, Robert J. 188,592.
Kawecki, Eugene, to Sturdevant Mfg. Corp. Closure cap for gas tanks or the like. 188,632, 8-16-60, Cl. D58—26.
Koeppel, Charles H. Abrading tool or similar article. 188,612, 8-16-60, Cl. D37—1.
Kohler Co.: *See*—
Kohler, Herbert V. 188,644.
Kohler, Herbert V. 188,645.
Kohler, Herbert V., to Kohler Co. Shower head or similar article. 188,644, 8-16-60, Cl. D91—3.
Kohler, Herbert V., to Kohler Co. Shower head or similar article. 188,645, 8-16-60, Cl. D91—3.
Kortick, Leonard R. Combined container opener and knife sharpener. 188,619, 8-16-60, Cl. D44—29.
Labasco, Inc.: *See*—
Vixler, Leslie F. 188,624.
La Gassey, Homer C., Jr., to Chrysler Corp. Fender for an automobile. 188,595, 8-16-60, Cl. D14—8.
Lasko, Oscar L. Coffee maker. 188,617, 8-16-60, Cl. D44—29.
Latham, Richard S., to Ekco Products Co. Culinary turner. 188,618, 8-16-60, Cl. D44—29.
Latham, Richard S., to Ekco Products Co. Spoon. 188,620, 8-16-60, Cl. D44—29.
Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 188,646, 8-16-60, Cl. D92—1.
Lingner-Werke G.m.b.H.: *See*—
Neuhaus, Gerhard. 188,630.
Lowe, Donald B., Jr., to Northern Electric Co. Combined medicinal vaporizer and holder therefor or the like. 188,642, 8-16-60, Cl. D32—1.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Chair. 188,597, 8-16-60, Cl. D15—1.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Bureau. 188,604, 8-16-60, Cl. D32—6.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Desk. 188,605, 8-16-60, Cl. D32—7.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Sideboard. 188,606, 8-16-60, Cl. D32—13.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Table. 188,607, 8-16-60, Cl. D32—14.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Chest. 188,608, 8-16-60, Cl. D32—19.
Majestic Co., Inc., The: *See*—
Christenson, Trace, Jr., and Gallup. 188,641.
Mayeur, Jean, to Cartier, Inc. Trophy cup or the like. 188,601, 8-16-60, Cl. D29—28.
McCormick & Co., Inc.: *See*—
Gorenšo, Oscar C. 188,631.
Mecate, Manuel R. Fish lure. 188,602, 8-16-60, Cl. D31—4.
Meyer, Carl X.: *See*—
Stahlhut, Leo G., and Meyer. 188,621.
Montgomery, Paul J. Jet steamer machine for steaming grain or the like. 188,638, 8-16-60, Cl. D76—1.
Mulder, Lambert J.: *See*—
Lubberts, John J., and Mulder. 188,597.
Lubberts, John J., and Mulder. 188,604-8.
National Gypsum Co.: *See*—
Radcliffe, James R. 188,598.
Neuhaus, Gerhard, to Lingner-Werke G.m.b.H. Dispensing bottle. 188,630, 8-16-60, Cl. D58—6.
Niclaus, William L. Cup. 188,614, 8-16-60, Cl. D44—9.
North American Philips Co., Inc.: *See*—
Veersema, Reinhard W. J. 188,599.
Northern Electric Co.: *See*—
Lowe, Donald B., Jr. 188,642.
Norton Co.: *See*—
Ballato, Joseph J., and Brulin. 188,636.
Nu-Way Corp.: *See*—
Reichelderfer, Charles A. 188,640.
Parker Pen Co., The: *See*—
Green, Homer T. 188,637.
Petersen, Gerald A. M., and R. W. Goode; said Goode assor. to said Petersen. Combined trailer and wire tensioner. 188,594, 8-16-60, Cl. D14—3.
Radcliffe, James R., to National Gypsum Co. Acoustical correction tile. 188,598, 8-16-60, Cl. D18—2.

Rappoport, Seymour, to Ronson Corp. Lighter or similar article. 188,621, 8-16-60, Cl. D48—27.
Reichelderfer, Charles A., to Re-Way Corp. Fuel burner. 188,640, 8-16-60, Cl. D81—2.
Ronson Corp.: See—
Rappoport, Seymour. 188,622.
Ross, Duke J., to Genesco Inc. Shoe. 188,629, 8-16-60, Cl. D7—7.
Rutten, John, Jr., W. H. Armstrong, and J. G. Balmer, Jr., to Haloid Xerox, Inc. Document reproducing apparatus. 188,632, 8-16-60, Cl. D61—1.
Schwartz, Herbert. Rotatable display stand for greeting cards, or the like. 188,630, 8-16-60, Cl. D60—9.
Serv-O-Lift Corp.: See—
Shivek, Herbert L. 188,634.
Shivek, Herbert L., to Serv-O-Lift Corp. Water station. 188,634, 8-16-60, Cl. D67—4.
Societe en Commandite Simple et en Nom Collectif A l'egard des Gerants, dite: Societe Industrielle & Commerciale des Ouvriers Lunetiers Cottet: See—
Crotin-Maitenaz, Bernard. 188,626.
Stahlhut, Leo G., and C. X. Meyer, to Day-Brite Lighting, Inc. Lighting fixture. 188,621, 8-16-60, Cl. D48—23.
Stone, Harold E., to Johnson Bros. (Hanley) Ltd. Plate or similar article. 188,616, 8-16-60, Cl. D44—12.
Strutzenant Mfg. Corp.: See—
Kavecki, Eugene. 188,632.
Sunbeam Corp.: See—
Ernest, Robert O. 188,600.
Tegarty, John B., to T. K. M. Victory, trustee. Household tool for cleaning food mixer bowls and beaters. 188,593, 8-16-60, Cl. D8—6.
Tomlinson of High Point: See—
Lubberts, John J., and Mulder. 188,597.
Lubberts, John J., and Mulder. 188,604-6.
Veerkamp, Reinhard W. J., to North American Philips Co., Inc. Dry shaver. 188,606, 8-16-60, Cl. D22—3.
Victory, Thomas K. M.: See—
Tegarty, John B. 188,593.
Vizker, Leslie F., to Labanco, Inc. Adjustable laboratory clamp. 188,624, 8-16-60, Cl. D84—13.
Wald Industries, Inc.: See—
Bagshaw, Robert B. 188,623.
Worley, Will J. Golf club carrier. 188,609, 8-16-60, Cl. D34—6.
Zavas, Peter: See—
Pobiak, John M., and Zavas. 188,649.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 16TH DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Nynas-Petroleum: See—
Ågren, Per H. W., and Flemmert. 2,949,378.
A/S Ardal og Sunndal Verk: See—
Jorgensen, Rolf. 2,949,430.
Abbott, Henry H., R. O. Rippere, R. D. Williams, and O. H. Williford, to Bell Telephone Laboratories, Inc. Coordinate switching system. 2,949,506, 8-16-60, Cl. 179—22.
Abbott Laboratories: See—
Berg, Robert H. 2,949,203.
McCarley, Lynden T. 2,949,062.
Abbott, Tom L. Loading device. 2,949,198, 8-16-60, Cl. 214—77.
Abe, Shigeo: See—
Sakaguchi, Kinichiro, Abe, and Beppu. 2,949,404.
Abiasi, Carl F., to International Business Machines Corp. Perforating apparatus. 2,949,293, 8-16-60, Cl. 269—160.
Adams, James S.: See—
Tave, Albert J., Adams, and Van Aken. 2,949,594.
Adams, John E., to Sylvania Electric Products Inc. Drive circuit for counting tubes. 2,949,564, 8-16-60, Cl. 315—84.6.
Adcock, Kenneth. Tool for roughening walls of bowling ball finger holes. 2,949,044, 8-16-60, Cl. 90—12.
Addie, Albert N., H. A. Williams, Jr., and H. C. Lafferty, to General Motors Corp. Power plant control. 2,949,541, 8-16-60, Cl. 290—40.
Ageus, Maynard C., to General Electric Co. Photosensitive compositions. 2,949,361, 8-16-60, Cl. 96—115.
Agfa Aktiengesellschaft: See—
Frost, Paul. 2,949,070.
Ågren, Per H. W., and G. L. Flemmert, to AB Nynas-Petroleum. Asphalt compositions. 2,949,376, 8-16-60, Cl. 106—281.
Air Placement Equipment Co.: See—
Pro, George M. 2,949,275.
Air Reduction Co., Inc.: See—
Anderson, Nelson R. 2,949,391.
Bassilli, Allo J., and Rutledge. 2,949,480.
Ajem Laboratories, Inc.: See—
Umbricht, Emil, Steenbagen, and Evans. 2,949,285.
Aktiebolaget Atomenergi: See—
Bergstadt, Bengt A. 2,949,167.
Aktiebolaget Atvidaberga Butiksinredningar: See—
Lewin, Gunnar E. W. 2,948,916.
Aktiebolaget Bofors: See—
Rosenqvist, Per O., and Forssén. 2,949,247.
Aktiebolaget Svenska Järnvägsverkstäderna: See—
Aspenberg, Erik V. 2,949,194.
Aktiengesellschaft Brown, Boveri & Cie: See—
Edlinger, Anton. 2,949,590.
Albrecht, Alexander J.: See—
Huck, William F., Albrecht, and Sanford. 2,949,300.
Aldrich, David E., and A. P. Bignon, to North American Aviation, Inc. Rocket engine feed system. 2,949,007, 8-16-60, Cl. 60—35.6.
Alexander, Guy B., P. C. Yates, and S. F. West, to E. I. du Pont de Nemours and Co. Reinforced heat resistant refractory-metal alloys. 2,949,358, 8-16-60, Cl. 75—176.
Alexander, James W.: See—
Mudge, Will M., and R. C. and J. W. Alexander. 2,949,215.
Alexander, Robert C.: See—
Mudge, Will M., and R. C. and J. W. Alexander. 2,949,215.
Alford, Maitland W., and A. R. Brearley, to British Celanese Ltd. Laminates. 2,949,393, 8-16-60, Cl. 154—46.
Allegheny Ludlum Steel Corp.: See—
Dyrkacz, Wasil W., Reynolds, MacFarlane, and Pitler. 2,949,355.
Allen, Alfred W., and R. H. Herron, to Bendix Aviation Corp. Friction article. 2,948,955, 8-16-60, Cl. 29—182.5.
Allen, Philip H., and B. J. Charomy. Electrical signalling and computing apparatus. 2,949,580, 8-16-60, Cl. 318—163.
Allen, Robert E. Shooting garment. 2,948,898, 8-16-60, Cl. 2—94.
Allen, Robert E. Wrinkle free gun butt pad for shooting garment. 2,948,899, 8-16-60, Cl. 2—94.
Alles, Francis P., to E. I. du Pont de Nemours and Co. Splicing tape feed mechanism. 2,949,296, 8-16-60, Cl. 271—2.5.
Allied Chemical Corp.: See—
Clauss, James K. 2,949,345.
Allis-Chalmers Mfg. Co.: See—
Kenney, Clarence E. 2,949,122.
Allmänna Svenska Elektriska Aktiebolaget: See—
Schuls, Richard. 2,949,521.
Aluminum Co. of America: See—
Willey, Lowell A. 2,949,392.
Amcel Propulsion, Inc.: See—
Stencel, Fred B. 2,949,267.
American Cast Iron Pipe Co.: See—
Coupland, Frank H., Jr., Phelps, Cranford, and Daniel. 2,948,934.
American Cyanamid Co.: See—
Arishima, Masao, and Sekizawa. 2,949,406.
Arishima, Masao, and Sekizawa. 2,949,407.
Buccino, Gaetano S. 2,949,181.
Mehrabi-Nejad, Shahriar, and De Gruntges. 2,949,402.
Prey, Vinzenz. 2,949,471.
Schlayer, Earle G., Gegner, Ballwig, and Sheridan. 2,948,900.
Sieger, George M., and Yen. 2,949,400.
American Machine & Foundry Co.: See—
Bay, Elmer G. 2,949,301.
Carmellini, Andrew E., and Hotelling. 2,949,117.
Johnson, Carl W. 2,949,064.
Pavlecka, Vladimir H. 2,949,224.
Place, Donald E. 2,949,302.
American Machine and Metals, Inc.: See—
Wildgen, Albert F. 2,949,208.
American National Bank and Trust Co. of Chicago: See—
Hooker, Donald K. 2,949,188.
American Radiator & Standard Sanitary Corp.: See—
Carter, Franklyn Y. 2,949,128.
Hyde, Robert W. 2,949,246.
American Viscose Corp.: See—
Smith, Robert A. 2,948,931.
Amerpohl, Paul M. Car window platform and arm rest for car. 2,949,324, 8-16-60, Cl. 211—22.
Anderson, Alget. Surgical footwear. 2,948,972, 8-16-60, Cl. 36—8.5.
Anderson, Clifford W., to The Rudolph Wurlitzer Co. Tone generating assembly for electronic piano. 2,949,052, 8-16-60, Cl. 84—1.04.
Anderson, Clifford W., to The Rudolph Wurlitzer Co. Tone generator. 2,949,053, 8-16-60, Cl. 84—1.06.
Anderson, John W., and E. A. Heinsch, to Monsanto Chemical Co. Breaking of oxo alcohol emulsions. 2,949,427, 8-16-60, Cl. 252—320.
Anderson, Arthur M. Broadcasting device. 2,948,812, 8-16-60, Cl. 275—15.
Anderson, Nealie T.: See—
Tarkington, Terry W., and Anderson. 2,949,432.
Anderson, Nelson R., to Air Reduction Co., Inc. Method and apparatus for automatic torch positioning. 2,949,391, 8-16-60, Cl. 148—9.
Anderson, Robert C., and G. J. Sleddon, to Imperial Chemical Industries Ltd. Production of alkyl haloalkanes by reacting silicates with alkyl aluminum halides. 2,949,481, 8-16-60, Cl. 260—448.2.
Andreadis, John T., and S. Miklean; said Miklean assor. to said Andreadis. Dihydroxyacetone compositions for tanning the human epidermis. 2,949,403, 8-16-60, Cl. 167—90.
Andrews, Frederick T., Jr., and H. Mann, to Bell Telephone Laboratories, Inc. Pulse modulation system framing circuit. 2,949,503, 8-16-60, Cl. 179—15.
Antioch College: See—
Asakawa, George, and Vernet. 2,949,132.
Apitz, Gerhard, to Heidenreich & Harbeck. Methods of continuously cutting gearwheels. 2,949,082, 8-16-60, Cl. 90—5.
Arishima, Masao, and Y. Sekizawa, to American Cyanamid Co. Method for preparing tetracycline II. 2,949,406, 8-16-60, Cl. 195—80.
Arishima, Masao, and Y. Sekizawa, to American Cyanamid Co. Method for preparing tetracycline III. 2,949,407, 8-16-60, Cl. 195—80.
Arkus-Duntov, Zora, to General Motors Corp. Cold enrichment device. 2,949,102, 8-16-60, Cl. 123—119.
Armstrong, C. E., Co.: See—
Armstrong, Charles E. 2,949,519.
Armstrong, Charles E., to C. E. Armstrong Co. Thermostat. 2,949,519, 8-16-60, Cl. 200—138.
Arnett, Leslie, and W. G. Freise, to United Coffee Corp. Liquid dispenser. 2,948,137, 8-16-60, Cl. 141—9.
Arth, Glen E., G. I. Poos, and L. H. Sarett, to Merck & Co., Inc. 1-carboalkoxymethyl-2-acetoxyl-2,4b-dimethyl-4-keto-1, 2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydrophenanthrene 7-ketals and processes of preparing them. 2,949,472, 8-16-60, Cl. 260—340.9.
Asakawa, George, and S. Vernet, to Antioch College. Pressure responsive power element. 2,949,133, 8-16-60, Cl. 137—789.
Aspenberg, Erik V., to Aktiebolaget Svenska Järnvägsverkstäderna. Coupling device for wheeled vehicles. 2,949,194, 8-16-60, Cl. 213—45.
Atomic Energy of Canada Ltd.: See—
Bowes, William H. 2,948,669.
Austin, Oliver K., to Phillips Petroleum Co. Water spray in pellet mills. 2,948,918, 8-16-60, Cl. 18—1.
Auxier, Robert W.: See—
Mandelcorn, Lyon, Auxier, and Lewis. 2,949,424.
Babcock & Wilcox Co., The: See—
Duplin, Victor J., Jr., and Ebersole. 2,948,946.
Kirkby, Albert H. 2,949,282.
Babson Bros. Co.: See—
Merritt, Thomas W., and Thomas. 2,949,276.

Bailey, Christopher R. G., C. O. Norrie, and J. H. Smith, to The Solatron Electronic Group Ltd. Circuits embodying electronic counters. 2,949,233, 8-16-60, Cl. 235—92.

Bailey, Donald L., and R. M. Pike, to Union Carbide Corp. Silicon-containing compounds. 2,949,494, 8-16-60, Cl. 260—46.2.

Bailey, Grant C., V. C. F. Holm, and A. Clark, to Phillips Petroleum Co. Process for preparing improved nickel oxide polymerization catalysts. 2,949,429, 8-16-60, Cl. 252—472.

Baldwin Piano Co., The: *See*—
Brown, Wilfred K. 2,949,530.

Balkind, Solomon. Adjustable cigarette filter. 2,949,116, 8-16-60, Cl. 131—10.

Ballard, F. J., and Co. Ltd.: *See*—
Bobier, Max. 2,949,286.

Ballwig, Leonard W.: *See*—
Schlayer, Earle G., Gegner, Ballwig, and Sheridan. 2,949,906.

Bancroft, John W., to Minneapolis-Honeywell Regulator Co. Checking means for temperature limiter at start of engine. 2,949,011, 8-16-60, Cl. 60—39.09.

Barbee, Thomas L. Drainage pan. 2,949,212, 8-16-60, Cl. 222—160.

Barbuto, Bernard. Pocketed cushion. 2,949,157, 8-16-60, Cl. 155—182.

Barcena, Guillermo. Shoe fitting device. 2,949,944, 8-16-60, Cl. 33—3.

Barnstead Still and Sterilizer Co.: *See*—
Smith, Verity C. 2,949,119.

Barron, Samuel: *See*—
Pagnotti, Joseph R., and Barron. 2,949,190.

Barthel, Roy W., to Minneapolis-Honeywell Regulator Co. Condition responsive device. 2,949,514, 8-16-60, Cl. 200—61.08.

Bath, Cyril, Co., The: *See*—
Matthews, Peter F. 2,949,145.
Whiteman, Donald R. 2,949,146.

Bauer, Alexander J.: *See*—
Soucie, Sylvester F., and Bauer. 2,949,160.

Bauer, Richard. Helicopter structures. 2,949,224, 8-16-60, Cl. 244—17.27.

Bauer, Robert D., and H. W. Mitchell, to Phillips Petroleum Co. Distillation system. 2,949,408, 8-16-60, Cl. 202—71.

Baur, George W., and E. A. Morian, to Hughes Tool Co. Large diameter earth boring drill. 2,949,281, 8-16-60, Cl. 255—327.

Bay, Elmer G., to American Machine & Foundry Co. Ball terminal for bowling alleys. 2,949,301, 8-16-60, Cl. 273—47.

Bayles, Barney H., and P. V. Rocca. Shaft horsepower indicator and recorder. 2,949,029, 8-16-60, Cl. 73—136.

Beattie, Earl L. Rotary case printer. 2,949,079, 8-16-60, Cl. 101—35.

Becher, Ernest F., and R. C. Howell, Jr., to S. A. Cook, & Co. Spring foundation for davenports and the like. 2,949,156, 8-16-60, Cl. 155—179.

Beck, Kenneth O., to Titanium Metals Corp. of America. Titanium anodizing process. 2,949,411, 8-16-60, Cl. 204—56.

Becker, Arthur C. Bread dusting mixture and method. 2,949,365, 8-16-60, Cl. 99—118.

Bell Brothers (Domestic) Ltd.: *See*—
Knight, Philip H., and O'Donovan. 2,949,130.

Bell, Charles R., to Bendix Aviation Corp. Monitoring apparatus for automatic pilot systems. 2,949,258, 8-16-60, Cl. 244—77.

Bell, Charles R., to Bendix Aviation Corp. Automatic steering system for aircraft. 2,949,289, 8-16-60, Cl. 244—77.

Bell, Jerome, to The Upjohn Co. Thermometer. 2,949,082, 8-16-60, Cl. 73—353.

Bell, Kenneth: *See*—
Kraft, George H., Grossen, and Bell. 2,949,372.

Bell Telephone Laboratories, Inc.: *See*—
Abbott, Henry H., Rippere, Williams, and Williford. 2,949,506.
Andrews, Frederick T., Jr., and Mann. 2,949,503.
Kompfner, Rudolf, and Quate. 2,949,558.
Kretzmer, Ernest R. 2,949,506.
Lewis, Benjamin F., and Power. 2,949,507.
Pfann, William G. 2,949,348.
Weiss, Max T. 2,949,558.
Whidden, William E. 2,949,309.
Zimmermann, Elwood P. 2,949,347.

Belton, Joseph P., Jr., and L. Swerbinsky, to Whirlpool Corp. Thermoelectric air conditioning apparatus. 2,949,-014, 8-16-60, Cl. 62—3.

Benditt, Albert, and C. W. Musser, to United States of America, Army. Recoilless rifle with expanding nozzle. 2,949,061, 8-16-60, Cl. 89—1.7.

Bendix Aviation Corp.: *See*—
Allen, Alfred W., and Herron. 2,948,955.
Bell, Charles R. 2,949,258.
Bell, Charles R. 2,949,259.
Newland, Albert J. 2,949,362.
Rafferty, Christopher A. 2,949,287.
Stout, George C. 2,949,256.

Benedict, Bruce C., to Phillips Petroleum Co. Desalting petroleum wax. 2,949,419, 8-16-60, Cl. 208—31.

Bennett, James C., to Mission-West Mfg. Co. Jalousie operator. 2,949,042, 8-16-60, Cl. 74—425.

Benninghofen, Paul: *See*—
Diesbach, Frederick B. 2,949,218.

Benoit, Claude A., to Societe STEB. Automatically starting synchronous motor operating at variable frequencies. 2,949,553, 8-16-60, Cl. 310—162.

Benoit, Claude A., to Societe STEB. Magnetic drives notably those of tachometers. 2,949,552, 8-16-60, Cl. 310—105.

Beppu, Teruhiko: *See*—
Sakaguchi, Kinichiro, Abe, and Beppu. 2,949,404.

Berg, John V., and C. G. H. Stare, to Castus Corp. Ltd. Method for manufacturing reinforced lightweight concrete. 2,948,947, 8-16-60, Cl. 25—154.

Berg, Robert H., to Abbott Laboratories. Pilot tube. 2,949,203, 8-16-60, Cl. 215—6.

Bergstedt, Bengt A., to Aktiebolaget Atomenergi. Electrostatic precipitator. 2,949,167, 8-16-60, Cl. 183—7.

Berkowitz, Nathan L.: *See*—
Foote, Daniel J., and Berkowitz. 2,949,195.

Bernard, Arthur A. and R. A. Method and device for flux-covered electrode welding. 2,949,525, 8-16-60, Cl. 219—125.

Bernard, Richard A.: *See*—
Bernard, Arthur A. and R. A. 2,949,526.

Bernier, Robert V., to Globe Industries, Inc. Flush tank guide. 2,948,901, 8-16-60, Cl. 4—57.

Biddison, John M., to H. W. Moore. Method of winding a lap winding. 2,949,534, 8-16-60, Cl. 310—208.

Bignon, Andre F.: *See*—
Aldrich, David E., and Bignon. 2,949,007.

Billeaker, Eugene N., to Curtiss-Wright Corp. Methods of making beverage concentrate. 2,949,364, 8-16-60, Cl. 99—71.

Billen, Peter, to Schloemann Aktiengesellschaft. Extrusion press. 2,949,186, 8-16-60, Cl. 207—1.

Bingham, George H., Jr., to Cambridge Rubber Co. Method of making a hollow mold. 2,949,410, 8-16-60, Cl. 204—6.

Birge, Homer, and L. Latham. Flexible sign post. 2,949,-324, 8-16-60, Cl. 287—56.

Bissell, Ray H., to Mil-ko Products Ltd. Process for increasing the solubility of powdered milk. 2,949,363, 8-16-60, Cl. 99—56.

Bisset, Claude O. Underwater breathing apparatus. 2,949,113, 8-16-60, Cl. 128—142.

Biwan Corp.: *See*—
Herbst, Clarence A. 2,948,930.

Bixby, Leo A., to Rockwell-Standard Corp. Vehicle drive mechanism. 2,949,040, 8-16-60, Cl. 74—390.

Black, James G., Jr.: *See*—
Baybarn, Charles C., Black, and Perez. 2,949,148.

Blackstone, Henry, to Servo Corp. of America. Stereoscopic scanner. 2,949,055, 8-16-60, Cl. 88—1.

Blake, Jules, to E. I. du Pont de Nemours and Co. Process of coating with methyl methacrylate composition therefor and article produced thereby. 2,949,383, 8-16-60, Cl. 117—72.

Blake, Jules, to E. I. du Pont de Nemours and Co. Methyl methacrylate polymers containing amino residues. 2,949,-445, 8-16-60, Cl. 260—88.1.

Blanchard, William J., Sr.: *See*—
Hill, Clifford W., and Blanchard. 2,949,526.

Blanck, Joachim H.: *See*—
Happel, John, Marsel, and Blanck. 2,949,493.

Blout, Elkan R., M. Green, and M. S. Simon, to Polaroid Corp. Process for developing silver halide emulsions. 2,949,359, 8-16-60, Cl. 96—66.

Blue, Robert D.: *See*—
Neipert, Marshall P., Blue, and Hunter. 2,949,412.

Blumberg, Benjamin and P., and T. Taubman. Shower head. 2,949,242, 8-16-60, Cl. 239—460.

Blumberg, Philip: *See*—
Blumberg, Benjamin and P., and Taubman. 2,949,242.

Bobet, Henri, to J. Bobet and Son S.A. Presses for treating material in the form of sheets. 2,949,297, 8-16-60, Cl. 271—45.

Bobet, J., and Son S.A.: *See*—
Bobet, Henri. 2,949,297.

Bodkin, John L.: *See*—
Flournoy, Harold H., Jr., and Bodkin. 2,949,366.

Boeing Airplane Co.: *See*—
Person, Robert P. 2,949,265.

Bogner, Peter. Apparatus for making cans. 2,949,087, 8-16-60, Cl. 113—10.

Bohler, Max, to Werkzeugmaschinenfabrik Oerlikon Buhrle & Co. Abt. Elektrodenfabrik, and F. J. Bullard and Co. Ltd. Continuous drying kiln for sheathed welding electrodes. 2,949,266, 8-16-60, Cl. 263—36.

Boland, Mathias P., to Columbia-Southern Chemical Corp. Method of preparing finely divided alumina-silica pigments. 2,949,379, 8-16-60, Cl. 106—288.

Bolton, John W., & Sons, Inc.: *See*—
Draper, Ralph L., and Witzgall. 2,949,191.

Bolton, Robert H., to Sperry Rand Corp. Electromagnetic pick-off device. 2,949,576, 8-16-60, Cl. 323—75.

Bolyard, Charles C. Sequin impregnated paper. 2,949,368, 8-16-60, Cl. 162—161.

Bombard, Franz J., to Firma Fichtel & Sachs A.G. Clutch control. 2,949,174, 8-16-60, Cl. 192—.06.

Bonk, Werner: *See*—
Machts, Joachim, and Bonk. 2,949,311.

Bonnagni, Francis A., to Monsanto Chemical Co. Wet strength paper. 2,949,396, 8-16-60, Cl. 162—167.

Borg-Warner Corp.: *See*—
Tracy, Herbert E. 2,949,121.

Bowes, William H., to Atomic Energy of Canada Ltd. Method of establishing a fluid-tight closure. 2,948,959, 8-16-60, Cl. 29—446.

Branom, John, to Standard Alfalfa Milling Co. Method for producing animal feed. 2,949,362, 8-16-60, Cl. 99—68.

Brault, Andre E., to OFTOmechanisme, Inc. Clock dial for reduced photographing. 2,949,005, 8-16-60, Cl. 58—127.

Braun, Anton, to Queen's University. Synchronising mechanism for internal combustion free piston engines. 2,949,-101, 8-16-60, Cl. 123—46.

Brearley, Arthur R.: *See*—
Alford, Maitland W., and Brearley. 2,949,293.

Brearley Co., The: *See*—
Provi, Mike A. 2,949,288.

Brewer, Clarence T., to Dixie Cup Co. Blank for truncated conical cups. 2,949,216, 8-16-60, Cl. 229—1.3.

Breyer, Eberhard, to Firma Beka Luftfotobau G.m.b.H. Method and apparatus for removing liquids from glass plates. 2,949,844, 8-16-60, Cl. 34—166.

Brickman, Samuel, and C. Wohlauer; said Wohlauer assor. to said Brickman. Method of making pinking or scalloping shears. 2,949,060, 8-16-60, Cl. 76—104.

Britain, J. W., to Mobay Chemical Co. Preparation of cellular polyurethane using piperazine catalysts. 2,949,431, 8-16-60, Cl. 260—2.5.

British Celanese Ltd.: *See*—
Alford, Maitland W., and Brearley. 2,949,293.

British Oxygen Co. Ltd., The: *See*—
Lucey, John A. 2,949,127.

Broadbent, Thomas & Sons Ltd.: *See*—
Cran, William B. G. 2,949,204.

Brown, Gordon D.: *See*—
Prete, Ernest, Jr. 2,949,999.

Brown, Thomas T., to Whitehall-Rand, Inc. Electrokinetic apparatus. 2,949,550, 8-16-60, Cl. 310—6.

Brown, Wilfred K., to The Baldwin Piano Co. Optical encoder. 2,949,589, 8-16-60, Cl. 250—219.

Bruhn, Le Verne E., and V. H. McFarren, Jr., to Elgin National Watch Co. Replaceable end links for expansion watch bands. 2,948,941, 8-16-60, Cl. 24—260.

Brust, John G., and P. E. Miller, to Diamond Power Specialty Corp. Multi-port liquid level gauge. 2,949,081, 8-16-60, Cl. 73—331.

Bruns, Robert L.: *See*—
Vitale, Peter T., Bruns, and Leonard. 2,949,436.

Brunswick Automatic Pinsetter Corp., The: *See*—
Huck, William F., Albrecht, and Sanford. 2,949,200.

Buccino, Gaetano S., to American Cyanamid Co. Suture package and process of making same. 2,949,161, 8-16-60, Cl. 206—63.2.

Bugbee and Niles Co.: *See*—
Hamm, William L. 2,949,135.

Buhrer, Erwin. Transfer system for foundry molds. 2,948,-932, 8-16-60, Cl. 22—20.

Burckhardt, Manfred H., to Daimler-Benz Aktiengesellschaft. Hydrodynamic change-speed transmission. 2,949,047, 8-16-60, Cl. 74—732.

Burlington Industries, Inc.: *See*—
Holmes, Mark N. 2,949,028.

Burton-Dixie Corp.: *See*—
Sevcik, John G. 2,948,905.

Buselli, Allo J., and T. F. Rutledge, to Air Reduction Co., Inc. Preparation of vinyl stearate. 2,949,480, 8-16-60, Cl. 260—410.9.

Bush, Harold L., to Crouse-Hinds Co. Traffic signal. 2,949,-504, 8-16-60, Cl. 240—24.

Bush Hog Mfg. Co., Inc.: *See*—
Jones, William L. 2,949,004.

Busse, Curtis T., 50% to G. W. Busse. Machine for stacking cans on pallets. 2,949,179, 8-16-60, Cl. 198—30.

Busse, Gilbert W.: *See*—
Busse, Curtis T. 2,949,179.

Butterfield, A. E.: *See*—
Marvin, Orrin F. 2,949,339.

C.I.C.O.M.I. Compagnie Internationale pour le Commerce et l'Industrie: *See*—
Kuhn, Richard. 2,948,926.

Cain, Clayborn Y.: *See*—
Fields, William L., and Cain. 2,949,293.

Caley, George W.: *See*—
Stanner, William J., and Caley. 2,949,562.

Cambridge Rubber Co.: *See*—
Bingham, George H., Jr. 2,949,410.

Campbell, David D., and L. F. Garvey, to General Motors Corp. Hinge assembly. 2,948,917, 8-16-60, Cl. 16—163.

Campbell, Donald J., to J. I. Case Co. Reversible disc plow and rear wheel system. 2,949,161, 8-16-60, Cl. 172—212.

Cannon, Robert H., Jr.: *See*—
Smith, Robert E., Mullins, Cannon, and Morgenthaler. 2,949,260.

Card, Caleb E. Timber handling apparatus for resawing mills. 2,949,138, 8-16-60, Cl. 143—4.

Carlston, James T. C. L. Wagner, and T. J. Woth, to Westinghouse Electric Corp. Regulator system for generators. 2,949,574, 8-16-60, Cl. 322—25.

Carlton, Chester L., to General Motors Corp. Liquid circulating system for liquid cooled internal combustion engine. 2,949,102, 8-16-60, Cl. 123—122.

Carlson, Carl P.: *See*—
Lohner, William L., and Carlson. 2,949,184.

Carmellini, Andrew E., and E. B. Hotelling, to American Machine & Foundry Co. Tobacco product. 2,949,117, 8-16-60, Cl. 131—15.

Carney, Delmar E., to Libbey-Owens-Ford Glass Co. Apparatus for producing sheet glass. 2,948,989, 8-16-60, Cl. 49—3.

Caron, Michel, G. Chaudron, and L. Moreau, to Commissariat A l'Energie Atomique. Vacuum furnace for vapourising the volatile constituent of an alloy. 2,949,495, 8-16-60, Cl. 13—8.

Carruthers, Walter W., and C. L. Kirkpatrick, to United States of America, Navy. Sonar trainer. 2,949,970, 8-16-60, Cl. 35—10.4.

Carter, Franklyn Y., to American Radiator & Standard Sanitary Corp. Valve. 2,949,128, 8-16-60, Cl. 137—505.37.

Carter, Richard T. Process of making refractory shell for casting metal. 2,948,935, 8-16-60, Cl. 22—199.

Case, J. I., Co.: *See*—
Campbell, Donald J. 2,949,161.

Castus Corp. Ltd.: *See*—
Berg, John V., and Stare. 2,948,947.

Cassel, Norman E., to Interchemical Corp. Non-woven fabrics. 2,949,356, 8-16-60, Cl. 117—140.

Cedeno, Arturo O. Traffic intersection. 2,949,007, 8-16-60, Cl. 94—1.

Cederquist, Karl N., to Stora Kopparbergs Bergslags Aktiebolag. Continuous method of burning highly hydrous organic materials. 2,949,010, 8-16-60, Cl. 60—39.05.

Champion DeArmeut Tool Co.: *See*—
Manning, Howard H. 2,948,962.

Chance, A. B., Co.: *See*—
McBride, Joseph R. 2,949,517.

The Chapman Valve Mfg. Co.: *See*—
Low, Sidney, and Powell. 2,949,320.

Charlesworth, Thomas R., to Laycock Engineering Ltd. Universal joints. 2,949,081, 8-16-60, Cl. 64—11.

Chaudron, Georges: *See*—
Caron, Michel, Chaudron, and Moreau. 2,949,495.

Chellew, Norman R.: *See*—
Feder, Harold M., and Chellew. 2,949,290.

Chemstrand Corp., The *See*—
Ham, George E. 2,949,433.
Hobson, Patrick H. 2,949,427.
Lawson, Julian K., Jr. 2,949,444.
Tarkington, Terry W., and Anderson. 2,949,432.

Chicago Developmeut Corp.: *See*—
Resnick, Leroy D. 2,949,357.

Chicago Pottery Co.: *See*—
Clifford, John S. 2,948,902.

Chromy, Benjamin J.: *See*—
Allen, Phillip, H., and Chromy. 2,949,566.

Ciba Ltd.: *See*—
Staeuble, Max. 2,949,487.

Ciba Pharmaceutical Products, Inc.: *See*—
Huebner, Charles F. 2,949,455.
Huebner, Charles F. 2,949,462.
Mizzoni, Renat H. 2,949,454.
Mizzoni, Renat H. 2,949,456-61.
Mizzoni, Renat H. 2,949,463.
Wettstein, Albert, Vischer, and Meystre. 2,949,405.

Cincinnati Galvanizing Co., The: *See*—
Schott, William C. 2,949,209.

Cities Service Refining Corp.: *See*—
Faulk, Kenneth H. 2,949,245.

Clapp, Maurice. Tire shaping and tread centering device. 2,948,924, 8-16-60, Cl. 12—13.

Clark, Alfred: *See*—
Bailey, Grant C., Holm, and Clark. 2,949,429.

Clark Controller Co., The: *See*—
Gravenstreter, Paul R., Willowick, and Koenig. 2,949,249.

Clauss, James K., to Allied Chemical Corp. Sulfur dioxide determination. 2,949,345, 8-16-60, Cl. 23—232.

Clavier, Alain C. A., and J. Pouradier, to Eastman Kodak Co. Process for preparing amphoteric copolymers and the resulting products. 2,949,442, 8-16-60, Cl. 260—80.5.

Clayton, Mark M. Combination hydraulic turbine and electric generator. 2,949,540, 8-16-60, Cl. 290—40.

Cleveland Pneumatic Industries, Inc.: *See*—
Lowell, Jack. 2,949,091.

Clevite Corp.: *See*—
Rösner, Oskar. 2,949,340.

Clifford, John S., to Chicago Pottery Co. Method of making hollow-walled flush tanks. 2,948,902, 8-16-60, Cl. 4—63.

Close, George F., to Garlock, Inc. Rotary mechanical seal. 2,949,322, 8-16-60, Cl. 286—11.

Clothier, Fred H. Visual aircraft finder. 2,949,094, 8-16-60, Cl. 116—124.

Coe, Merrill J., to KVP Sutherland Paper Co. Cartons and covers therefor. 2,949,222, 8-16-60, Cl. 229 141.

Cogan, Myles H. R., to Shell Oil Co. Connections between reinforced, pre-cast concrete structures and method of making same. 2,948,995, 8-16-60, Cl. 50—179.

Cohen, Morris U.: *See*—
Michaels, Edwin B., and Cohen. 2,949,336.

Coker, James N., and W. H. Todd, to E. I. du Pont de Nemours and Co. Production of 2-indolacetonitrile from substituted indoles. 2,949,469, 8-16-60, Cl. 260—319.

Colbert, William H., and W. L. Morgan, to Libbey-Owens-Ford Glass Co. Light transmissive electrically conducting article. 2,949,357, 8-16-60, Cl. 117—211.

Coleman, Charles G., Jr., and H. Weiner. Methods and means for solving problems by progressive analysis. 2,948,969, 8-16-60, Cl. 35—9.

Coleman, Kenneth G.: *See*—
Lemen, Carlton J., and Coleman. 2,949,197.

Coleman, William E., and T. F. Reed, to United States Steel Corp. Apparatus for sonic treatment of gases and fluidized beds. 2,949,166, 8-16-60, Cl. 183—1.

Colgate-Palmolive Co.: *See*—
Vitale, Peter T., Bruns, and Leonard. 2,949,435.

Collins, John E., to International Basic Economy Corp. Fluid control valve. 2,949,131, 8-16-60, Cl. 137—423.

Collins Radio Co.: *See*—
Holzschuh, Donald L., and Smith. 2,949,586.
Read, Emanuel F. 2,949,533.

Colombini, John S. Method of making a knockdown garage door. 2,948,956, 8-16-60, Cl. 29—411.

Columbia-Southern Chemical Corp.: *See*—
Boland, Mathias P. 2,949,379.

Comer, Richard L., to General Motors Corp. Composition for glass to metal seal. 2,949,376, 8-16-60, Cl. 106—53.

Comet Metal Products Co., Inc.: *See*—
Slonim, Samuel. 2,949,241.

Commissariat A l'Energie Atomique: *See*—
Caron, Michel, Chaudron, and Moreau. 2,949,495.

Compur-Werk Friedrich Deckel OHG: *See*—
Fiski, Karl. 2,949,076.
Gebele, Kurt. 2,949,069.
Gebele, Kurt. 2,949,072.
Gebele, Kurt. 2,949,074.

Consolidated Water Power & Paper Co.: *See*—
Dickerman, Gilbert K., Kaulakis, and Savage. 2,949,392.

Cook, S. A., & Co.: *See*—
Becher, Ernest F., and Howell, Jr. 2,949,158.

Cooper Tire & Rubber Co.: *See*—
Laube, Alfred J., Southard, and Cornwell. 2,948,921.

Cornwell, Tomy W.: *See*—
Laube, Alfred J., Southard, and Cornwell. 2,948,921.

Coupland, Frank H., Jr., E. H. Phelps, J. M. Cranford, and K. R. Daniel, to American Cast Iron Pipe Co. Apparatus for the manufacture of centrifugally cast tubular metal articles. 2,948,934, 8–16–60, Cl. 22—113.5.

Craige, Theodore L., to United Transformer Corp. Miniature inductive devices. 2,949,591, 8–16–60, Cl. 336—83.

Cramer, Frank B., to North American Aviation, Inc. Propellant composition. 2,949,352, 8–16–60, Cl. 52—5.

Cran, William B. G., to Thomas Broadbent & Sons Ltd. Folding machines for laundry flatwork. 2,949,294, 8–16–60, Cl. 270—68.

Cranford, John M.: *See*—
Coupland, Frank H., Jr., Phelps, Cranford, and Daniel. 2,948,934.

Crawford, Kenneth M.: *See*—
Fisher, John V. 2,949,183.

Crawford, Walker. Fish lure. 2,948,948, 8–16–60, Cl. 43—42.39.

Critelli, Anthony A. Infinite ratio torque converter and multiplier. 2,949,046, 8–16–60, Cl. 74—688.

Crompton & Knowles Packaging Corp.: *See*—
Zwaryez, Michael. 2,949,001.
Zwaryez, Michael. 2,949,002.

Crosby, Larry: *See*—
Fisher, John V. 2,949,183.

Crossan, Jesse R.: *See*—
Pfeifer, Fred B. 2,948,998.

Crouse-Hinds Co.: *See*—
Bush, Harold L. 2,949,596.

Crowe, James W., to International Business Machines Corp. Cryogenic converter. 2,949,602, 8–16–60, Cl. 340—347.

Curtis, John C., to Joy Mfg. Co. Mobile rock drill rig. 2,949,280, 8–16–60, Cl. 255—51.

Curtiss-Wright Corp.: *See*—
Bileniker, Eugene N. 2,948,364.
Lubkin, Samuel. 2,949,226.

Custin, Thomas G., and J. Smith, to General Electric Co. Automatic frequency control circuit. 2,949,584, 8–16–60, Cl. 332—19.

Daimler-Benz Aktiengesellschaft: *See*—
Burckhardt, Manfred H. 2,949,047.

Dainippon Pharmaceutical Co., Ltd.: *See*—
Ueda, Takeo, Kato, Toyoshima, and Wachi. 2,949,479.

Daly, George F. Reflecting fulding attachment for vehicle being passed at night. 2,949,058, 8–16–60, Cl. 88—81.

Daniel, Kenneth R.: *See*—
Coupland, Frank H., Jr., Phelps, Cranford, and Daniel. 2,948,934.

Davey, Samuel H. Pumps. 2,949,214, 8–16–60, Cl. 222—381.

Davidson, Evan J., to General Controls Co. Effective temperature thermostat. 2,949,513, 8–16–60, Cl. 200—81.06.

Davies, Raymond J., and E. F. D. Pacaud, to Dunlop Rubber Co. Ltd. Isolator valve for fluid-pressure system. 2,949,316, 8–16–60, Cl. 280—124.

Davis, Clyde W., J. F. Voeks, and F. A. Ehlers, to The Dow Chemical Co. Method for the preparation of acrylonitrile graft copolymer fiber-forming systems. 2,949,435, 8–16–60, Cl. 260—45.5.

Davis Engineering Inc.: *See*—
Davis, George. 2,949,162.

Davis, George, to Davis Engineering Inc. Carriage and driving mechanism for a mobile boom machine. 2,949,162, 8–16–60, Cl. 180—85.

Davis, Roscoe, to Thermo Auto-Matic Starter, Inc. Automatic starting mechanism for engines. 2,949,104, 8–16–60, Cl. 123—179.

Davis, Roscoe, to Thermo Auto-Matic Starter, Inc. Automatic starting mechanism for automotive vehicles. 2,949,105, 8–16–60, Cl. 123—179.

Davis, William T. Target device. 2,949,305, 8–16–60, Cl. 273—102.1.

Dawe's Laboratories, Inc.: *See*—
Murtaugh, Justin J., and Mahieu. 2,949,389.

Dayco Corp.: *See*—
Rothermel, Edward M., and Waddell. 2,949,133.

Dazzi, Joachim, to Monsanto Chemical Co. Resinous composition comprising polyvinyl chloride plasticised with adducts of tetrahydrophthalate and endomethylenetetrahydrophthalate esters with fumarate esters. 2,949,433, 8–16–60, Cl. 260—31.8.

Dazzi, Joachim, to Monsanto Chemical Co. Dihydropyran compounds. 2,949,473, 8–16–60, Cl. 260—345.8.

Degener, Louis F., to Sperry Rand Corp. Self-locking detachable clamp. 2,948,940, 8–16–60, Cl. 24—257.

De Gruniges, Alfred C.: *See*—
Mehrabi-Nejad, Shahriar, and De Gruniges. 2,949,402.

Dempster Brothers, Inc.: *See*—
Jones, Harry W. 2,949,199.

Derias, Paul, to The English Electric Co. Ltd. Hydraulic reaction turbines. 2,949,277, 8–16–60, Cl. 253—22.

Derr, Willard A., to Westinghouse Electric Corp. Telemetering apparatus. 2,949,601, 8–16–60, Cl. 340—185.

Deschampe, Desire J., to Hydro-Aire, Inc. Pumping cavity for rotary vane pump. 2,949,081, 8–16–60, Cl. 103—120.

Detrex Chemical Industries, Inc.: *See*—
Kearney, Thomas J. 2,949,121.

Devoe & Raynolds Co., Inc.: *See*—
Hicks, Darrell D. 2,949,438.

De Wilde, Andries C., to General Motors Corp. Modulating valve control system. 2,949,237, 8–16–60, Cl. 236—78.

De Wonkin, Irvin S. Disposable absorbent pads. 2,949,114, 8–16–60, Cl. 128—290.

Diamond Alkali Co.: *See*—
Myers, Clyde B. 2,948,967.

Diamond Power Specialty Corp.: *See*—
Bruni, John G., and Miller. 2,949,031.

Dickerman, Gilbert K., F. Kaulakis, and R. L. Savage, to Consolidated Water Power & Paper Co. Method of making printable coated paper. 2,949,382, 8–16–60, Cl. 117—65.

Diebold, Edward J., to I-T-E Circuit Breaker Co. Static current regulator for rectifier using flux reversal control. 2,949,572, 8–16–60, Cl. 321—18.

Diesbach, F. B.: *See*—
Diesbach, Frederick B. 2,949,318.

Diesbach, Frederick B., to P. Beninghoven and F. B. Diesbach, trustees. Autographic register. 2,949,318, 8–16–60, Cl. 282—3.

Dillaby, Edwin F., to United States of America, Air Force. Formation of point contact transistors. 2,948,951, 8–16–60, Cl. 29—25.3.

Dimick, Keene P., and B. Makower, to United States of America, Agriculture. Purification of fruit essences and production of solid compositions therefrom. 2,949,368, 8–16–60, Cl. 99—140.

Dixie Cup Co.: *See*—
Brewer, Clarence T. 2,949,210.

Doble, Abner, to McCulloch Corp. Steam power system. 2,949,013, 8–16–60, Cl. 60—65.

Doeleman, Henry, to Eldema Corp. Lamp socket resistor. 2,949,595, 8–16–60, Cl. 338—70.

Doemer, Frank B. Index table. 2,949,049, 8–16–60, Cl. 74—822.

Dome Chemicals, Inc.: *See*—
Wershaw, Irving B. 2,949,401.

Donneller, R. R. & Sons Co.: *See*—
Fields, William L., and Cain. 2,949,293.

D'Ooge, Charles L., to United States of America, Navy. Variable thrust solid propellant rocket motor. 2,949,009, 8–16–60, Cl. 60—35.6.

Dorgelo, Eduard G.: *See*—
Gerlach, Hans G., and Dorgelo. 2,949,537.

Dorne, Arthur, to Dorne and Margolin, Inc. Slotted airfoil ultra high frequency antenna. 2,949,606, 8–16–60, Cl. 343—708.

Dorne and Margolin, Inc.: *See*—
Dorne, Arthur. 2,949,606.

Dortort, Isadore K., to I-T-E Circuit Breaker Co. Protection of parallel connected D.-C. sources. 2,949,568, 8–16–60, Cl. 317—26.

Douglas, Kirk: *See*—
Sheeter, George O., and Hirsch. 2,948,971.

Dow Chemical Co., The: *See*—
Davis, Clyde W., Voeks, and Ehlers. 2,949,435.
Harmer, David E., and Heckeroth. 2,949,413.
Neipert, Marshall P., Blue, and Hunter. 2,949,412.
Oldershaw, Charles F. 2,949,337.
Rocklin, Albert L. 2,949,467.
Rocklin, Albert L. 2,949,468.
Savage, Albert B. 2,949,452.
Sims, Jacqueline G., and Moyle. 2,949,482.
Thiegs, Bernard J. 2,949,426.

Downs, Fredrick L.: *See*—
Preiser, Herman S., and Downs. 2,949,417.

Draper, Ralph L., and E. J. Witzgall, to John W. Bolton & Sons, Inc. Magnetic separator. 2,949,191, 8–16–60, Cl. 210—222.

Dredske, Arthur P., and A. P., Jr. Body and fender straightener. 2,949,144, 8–16–60, Cl. 153—38.

Dredske, Arthur P., Jr.: *See*—
Dredske, Arthur P., and A. P., Jr. 2,949,144.

Dressler, Philip. Tunnel kiln. 2,948,945, 8–16–60, Cl. 25—142.

Dressler, Philip, to Swindell-Dressler Corp. Method and apparatus for salt glazing ceramic wares. 2,948,946, 8–16–60, Cl. 25—142.

Dudchik, Nicholas, to Hupp Corp. Power operated window regulators. 2,949,039, 8–16–60, Cl. 74—334.

Dudley, John W.: *See*—
Powers, LeRoy, and Dudley. 2,948,987.

Dunlop Rubber Co. Ltd.: *See*—
Davies, Raymond J., and Pacaud. 2,949,316.

Dunn, Lyman D. Cooker. 2,949,525, 8–16–60, Cl. 219—35.

Duo-Temp Mfg. Corp.: *See*—
Koolnis, Stanley R. 2,949,109.
Koolnis, Stanley R. 2,949,240.

Duplin, Victor J., Jr., and G. B. Ebersole, deceased (by M. G. Ebersole, executrix), to The Babcock & Wilcox Co. Fly ash reclamation by pelletising. 2,948,948, 8–16–60, Cl. 25—156.

Du Pont de Nemours, E. I., and Co.: *See*—
Alexander, Guy B., Yates, and West. 2,949,358.
Alles, Francis P. 2,949,296.
Blake, Jules. 2,949,383.
Blake, Jules. 2,949,445.
Coker, James N., and Todd. 2,949,469.
Green, Charles P. 2,949,341.
Katz, Manfred. 2,949,440.
Rodman, Ernest A. 2,949,294.
Stuart, Harold J. 2,949,360.
Todd, Charles W. 2,949,354.

Durbetaki, Antony J., and S. M. Linder, to Food Machinery and Chemical Corp. Preparation of sobrerol. 2,949,469, 8–16–60, Cl. 260—631.5.

Du Vall, Alvin C.: *See*—
Schumann, Marvin A., and Du Vall. 2,949,252.

Dyrtacz, Wasil W., E. E. Reynolds, R. R. MacFarlane, and R. K. Pitler, to Allegheny Ludlum Steel Corp. High temperature alloy. 2,949,353, 8–16–60, Cl. 75—126.

Eagle-Picher Co., The: *See*—
Johnson, Arthur A. 2,948,925.

Eastman, du Bois, W., and W. G. Schlinger, to Texaco Inc. Treatment of hydrocarbons. 2,949,420, 8–16–60, Cl. 208—70.

Eastman Kodak Co.: *See*—
Clavier, Alain C. A., and Pouradier, Julian, Donald B. 2,949,442.

Ebauches S.A.: *See*—
Meyer, Friedrich. 2,949,170.

Ebenstein, Ruth B. Multiple purpose hat body. 2,948,900, 8–16–60, Cl. 2—209.1.

Ebersole, George B.: *See*—
Duplin, Victor J., Jr., and Ebersole. 2,948,948.

Ebersole, Mabel G.: *See*—
Duplin, Victor J., Jr., and Ebersole. 2,948,948.

Ebert, Max E., and C. F. Selzer, to Inventors Clinic. Inking attachment for typewriting machines. 2,949,176, 8–16–60, Cl. 197—150.

Ebneth, Harold, and H. Falk, ½ to Farbenfabriken Bayer Aktiengesellschaft and ½ to Mobay Chemical Co. Process for manufacturing foamed polyurethane articles. 2,948,928, 8–16–60, Cl. 16—48.

Eckert, John P., Jr., to Sperry Rand Corp. Parallel binary adder unit. 2,949,250, 8–16–60, Cl. 235—175.

Eckstein, Morris. Scoring tool. 2,948,960, 8–16–60, Cl. 30—162.

Economics Laboratory, Inc.: *See*—
Nystuen, Marcus I. 2,949,518.

Edlinger, Anton, to Aktiengesellschaft Brown, Boveri & Cie. Plural-layer winding with cooling slits. 2,949,590, 8–16–60, Cl. 336—60.

Edmunds, William H., to I-T-E Circuit Breaker Co. Repositing terminals for circuit breaker base extension. 2,949,516, 8–16–60, Cl. 200—114.

Edwards, Bryant, to Illinois Tool Works. Closure device. 2,949,204, 8–16–60, Cl. 215—41.

Egedal, Lawrence E. Stirring whips. 2,949,244, 8–16–60, Cl. 259—144.

Eggers, Gerhard, and E. Haberkorn, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Aircraft jet propulsion unit mount. 2,949,268, 8–16–60, Cl. 248—5.

Ehlers, Forrest A.: *See*—
Davis, Clyde W., Voeks, and Ehlers. 2,949,435.

Eichenlaub, George E. File and mail envelope. 2,949,223, 8–16–60, Cl. 229—69.

Eldeco, Dennis L., and J. N. Swarr, to Hills-McCanna Co. Proportioning mechanism. 2,949,124, 8–16–60, Cl. 137—99.

Eitel, Jay M. Cable guiding device. 2,949,279, 8–16–60, Cl. 254—190.

Eitel-McCullough, Inc.: *See*—
Merdinian, George K. 2,949,559.

Eland, Robert C. A., to Standard Coil Products Co. Inc. Neutralising circuits. 2,949,580, 8–16–60, Cl. 330—70.

Eldema Corp.: *See*—
Doeleman, Henry. 2,949,595.

Electric & Musical Industries Ltd.: *See*—
Le May, Christopher A. G., and Stephenson. 2,949,600.
Spencer, Rolf E. 2,949,232.

Electric Storage Battery Co., The: *See*—
Hagen, Richard E., and Jacobsen. 2,949,530.

Elektrokemisk A/S: *See*—
Ingelsrud, Arne H., and Haavik. 2,949,496.

Elgin National Watch Co.: *See*—
Bruhn, La Verne E., and McLaren. 2,948,941.

Elliott, Harold F. Time-control device. 2,949,512, 8–16–60, Cl. 200—38.

Ellis, Peter J., to North American Philips Co., Inc. Devices for producing linear movement. 2,949,036, 8–16–60, Cl. 74—89.

Enders, Adolf: *See*—
Seirig, Alfred K., Enders, and Strunck. 2,948,997.

Radio Laboratories Inc.: *See*—
Schlesinger, Albert, and Gordon. 2,949,470.

English Electric Co. Ltd., The: *See*—
Deriaz, Paul. 2,949,277.
Stubbs, John J., Watts, and Ingham. 2,949,415.

Eolkin, Dave, to Gerber Products Co. Continuous denstometer. 2,949,027, 8–16–60, Cl. 73—32.

Erickson, Frederick L., and R. W. Fink, to Whirlpool Corp. Ice cube shuckers. 2,949,020, 8–16–60, Cl. 62—356.

Evans, Dewey M.: *See*—
Umbricht, Emil, Strenhagen, and Evans. 2,949,385.

Fabula, Andrew, to Otis Elevator Co. Slow speed inspection device for moving stairway. 2,949,178, 8–16–60, Cl. 198—16.

Falk, Hans: *See*—
Ebneth, Harold, and Falk. 2,948,928.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Ebneth, Harold, and Falk. 2,948,928.
Mauthe, Gustav, Graulich, and Rohling. 2,949,335.
Meskat, Walter, and Pawlowski. 2,948,932.

Farmwald, John A.: *See*—
Johnson, Smith M., and Farmwald. 2,949,000.
Johnson, Smith M., and Farmwald. 2,949,034.

Faulk, Kenneth H., to Cities Service Refining Corp. Elutriation of solids. 2,949,345, 8–16–60, Cl. 241—6.

Feder, Harold M., and N. R. Chellew, to United States of America, Atomic Energy Commission. Method of protecting tantalum crucibles against reaction with molten uranium. 2,949,390, 8–16–60, Cl. 148—4.

Federighi, George J., and T. H. Norem. Dishwashing machine provided with a garbage grinder disposal unit. 2,949,120, 8–16–60, Cl. 134—115.

Ferrie, Franck G. M., and P. Negre, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Vaporisation burner device. 2,949,012, 8–16–60, Cl. 60—39.71.

Ferro Corp.: *See*—
Puchsman, Charles H., Zaremsky, and Hansen. 2,949,439.

Fichter, Ludwig J., and E. J. Mastney, to Oak Mfg. Co. Link. 2,949,043, 8–16–60, Cl. 74—469.

Fields, William L., and C. Y. Cain, to R. R. Donnelley & Sons Co. Signature feed device. 2,949,293, 8–16–60, Cl. 270—56.

Figge, Carrell C. Roofing method and apparatus. 2,948,366, 8–16–60, Cl. 216—20.

Finger, Joseph S., and R. W. Meyer, to L-O-F Glass Fibers Co. Reinforced translucent panel. 2,948,960, 8–16–60, Cl. 28—80.

Fink, Robert W.: *See*—
Erickson, Frederick L., and Fink. 2,949,020.

Finki, Karl, to Compur-Werk Friedrich Deckel OHG. Iris diaphragm. 2,949,076, 8–16–60, Cl. 95—64.

Firma Aschaffenburger Zellstoffwerke A.G.: *See*—
Toppel, Otmar. 2,949,448.

Firma Beka Lufttechnik G.m.b.H.: *See*—
Breyer, Eberhard. 2,948,968.

Firma Fichtel & Sachs A.G.: *See*—
Bombard, Franz J. 2,949,174.

Fischer, Erich. Antenna operating arrangement having safety means operative during jammed condition. 2,949,606, 8–16–60, Cl. 343—902.

Fisher, Constance M.: *See*—
Fisher, John V. 2,949,183.

Fisher, John V., deceased; C. M. Fisher, administratrix, 20% to L. Crosby and 20% to K. M. Crawford. Multiple container package and carrier device. 2,949,183, 8–16–60, Cl. 206—65.

Fitz, Wade L., to General Dynamics Corp. Cold trap. 2,949,015, 8–16–60, Cl. 62—40.

Fitkin, Glenn L., Jr. Caster for a mechanic's creeper or the like. 2,948,914, 8–16–60, Cl. 16—45.

Fitz, Harold C., Jr. Bottle cap. 2,949,205, 8–16–60, Cl. 215—45.

Flemmert, Gösta L.: *See*—
Ågren, Per H. W., and Flemmert. 2,949,378.

Fletcher, Stewart G.: *See*—
Hughes, David P., and Fletcher. 2,949,354.

Flick, Francis S., to Flick-Reedy Corp. Actuator for service in piston and cylinder devices. 2,949,098, 8–16–60, Cl. 121—148.

Flick-Reedy Corp.: *See*—
Flick, Francis S. 2,949,098.

Flora, Laurence H., to Tinnerman Products, Inc. Method of assembling a fastening device. 2,948,958, 8–16–60, Cl. 29—432.

Flournoy, Harold H., Jr., and J. L. Bodkin, to Illinois Tool Works. Method for coating modules with a heat curable protective coating material. 2,949,388, 8–16–60, Cl. 117—212.

Flower, Archibald T.: *See*—
Kraus, Eugene E., Jr., MacPherson, and Flower. 2,949,271.

Flynn, Floyd W., and N. C. Schutt, to Powers Chemco, Inc. Roll film magazine. 2,949,248, 8–16–60, Cl. 242—55.3.

Fogarty, Laurence E., to General Precision Inc. Computer function generator. 2,949,223, 8–16–60, Cl. 235—186.

Folstein, Robert L.: *See*—
Gitelson, Martin D., and Folstein. 2,949,206.

Food Machinery and Chemical Corp.: *See*—
Durbetaki, Antony J., and Linder. 2,949,469.

Foote, Daniel J., and N. L. Berkowitz, to Master Lock Co. Padlock display cards. 2,949,185, 8–16–60, Cl. 206—80.

Forsedn, Sten E.: *See*—
Rosengvist, Per O., and Forsedn. 2,949,247.

Fortune, Donald A. Propeller shroud. 2,949,092, 8–16–60, Cl. 115—16.

Foster Brothers Mfg. Co.: *See*—
Heiton, William J. 2,948,904.

Fouret, Andre. Endoscopic camera system. 2,949,071, 8–16–60, Cl. 95—11.

Fowle, Irving H., to General Aniline & Film Corp. Color slide viewing accessory. 2,948,975, 8–16–60, Cl. 40—106.1.

Foxboro Co., The: *See*—
Sturgeon, Stocker S. 2,949,551.

Foy, William J.: *See*—
Glueckstein, Henry J., Foy, and Stephan. 2,949,622.

France, George, to Welwyn Canada Ltd. Apparatus for the measurement of resistors. 2,949,577, 8–16–60, Cl. 324—62.

Franke &. Heidecke, Fabrik Photographischer Prazisions-Apparate: *See*—
Weise, Richard. 2,949,073.

Frankenstein, William P. Cartons. 2,949,219, 8–16–60, Cl. 229—31.

Freise, William G.: *See*—
Arnett, Leslie, and Freise. 2,948,157.

Freund, Gustav, II, and J. J. Grabauskas, to Union Carbide Corp. Casting method of, and apparatus for producing same. 2,949,371, 8–16–60, Cl. 99—176.

Fried, Josef, to Olin Mathieson Chemical Corp. Process of cleaving 9,11 oxido steroids with alcohols and organic acids. 2,949,473, 8–16–60, Cl. 260—397.45.

Friedel, Murray, to Stutmaster Corp. Printing frame. 2,949,077, 8–16–60, Cl. 95—77.

Friedman, Norman, to Soundoller, Inc. Loudspeaker baffle assembly. 2,949,168, 8–16–60, Cl. 181—31.

Frost, Paul, to Agfa Aktiengesellschaft. Exposure control device for photographic cameras. 2,949,070, 8–16–60, Cl. 95—10.

Puchsman, Charles H., B. Zaremsky, and F. R. Hansen, to Ferro Corp. Vinyl chloride resins stabilized with boric acid-polyhydric alcohol reaction products. 2,949,439, 8–16–60, Cl. 260—45.95.

G.K.N. Groupe Services Ltd.: *See*—
Townend, Gordon H., and Horton. 2,949,227.

Gadget-Of-The-Month Club, Inc.: *See*—
Haag, William T. 2,949,200.
Kowalczyk, Walter. 2,948,961.

Galpin, Gerald G. Fish lures. 2,948,982, 8–16–60, Cl. 43—42.15.

Gantschnigg, Gottfried K. L. Muehlberger, and A. C. Hake, to The Martin Co. Article suspension arrangement for aircraft. 2,949,080, 8–16–60, Cl. 89—1.6.

Garlock, Inc.: *See*—
Closs, George F. 2,949,322.
Garvey, Louis F.: *See*—
Campbell, David D. and Garvey. 2,948,917.
Gauthier, Alfred, G.m.b.H.: *See*—
Rentschler, Waldemar T. 2,949,075.
Gebele, Kurt, to Compur-Werk Friedrich Deckel OHG. Exposure value setting means with detachable optical unit. 2,949,069, 8–16–60, Cl. 95—10.
Gebele, Kurt, to Compur-Werk Friedrich Deckel OHG. Photographic shutter with built-in synchronizer. 2,949,072, 8–16–60, Cl. 95—11.5.
Gebele, Kurt, to Compur-Werk Friedrich Deckel OHG. Photographic camera with objective lens. 2,949,074, 8–16–60, Cl. 95—44.
Gegner, Henry: *See*—
Schlayer, Earle G., Gegner, Ballwig, and Sheridan. 2,948,900.
General Aniline & Film Corp.: *See*—
Fowle, Irving H. 2,948,975.
General Controls Co.: *See*—
Davidson, Evan J. 2,949,518.
General Dynamics Corp.: *See*—
Fitz, Wade L. 2,949,015.
Logue, Stanley H. 2,949,602.
Ottestad, Jack E., and Sheen. 2,949,060.
Ottestad, Jack E., and Sheen. 2,949,090.
Wiseman, Neil L. 2,949,542.
Wiseman, Neil L. 2,949,543.
General Electric Co.: *See*—
Agena, Maynard C. 2,949,361.
Custin, Thomas G., and Smith. 2,949,584.
Katz, Harold W. 2,949,595.
Schneider, Harold N. 2,949,520.
Shepard, Wayland L. 2,949,500.
Wiggin, Joseph F. 2,949,561.
General Electric Co. Ltd., The: *See*—
Oldfield, Lacy F., and Partridge. 2,948,992.
Tomlinson, Terence R. 2,949,633.
Willshaw, William R. 2,949,603.
General Motors Corp.: *See*—
Addie, Albert N., Williams, and Lafferty. 2,949,541.
Arius-Dantov, Zora. 2,949,102.
Campbell, David D., and Garvey. 2,948,917.
Carlton, Chester L. 2,949,103.
Comer, Richard L. 2,949,376.
De Wilde, Amiries C. 2,949,257.
Harrison, Walter D. 2,949,025.
Hesler, Julius, Jr. 2,949,250.
Himka, John. 2,949,231.
Hutchins, Everett C. 2,949,319.
Kessler, James R., Miller, and Skinner. 2,949,159.
McCormick, Hamilton L. 2,949,278.
Morrish, Leonard M., and Muller. 2,949,165.
Sargeant, Walter E. 2,949,583.
Smith, Eric W. A., and Rowley. 2,949,523.
Stallard, Ralph M. 2,948,929.
General Precision Inc.: *See*—
Fogarty, Laurence E. 2,948,233.
General Radio Co.: *See*—
Smiley, Gilbert. 2,948,592.
Geniaco, Inc.: *See*—
Gindes, Philip, and Hughes. 2,949,026
Gerber, Charles F., to United States of America, Navy. Weather-vane streamline fairing. 2,949,090, 8–16–60, Cl. 114—90.
Gerber Products Co.: *See*—
Bolkin, Dave. 2,949,027.
Gerhard, Paul G., to United States of America, Army. Electric clock mechanism. 2,949,571, 8–16–60, Cl. 318—131.
Geriach, Hans G., and R. G. Dorgelo, to North American Philips Co., Inc. Equipotential cathode for electric discharge tubes. 2,949,537, 8–16–60, Cl. 313—346.
Gilchrist, Edgar S.: *See*—
Roper, Charles G., and Gilchrist. 2,949,276.
Gillette Co., The: *See*—
Maitz, John D. 2,949,192.
Gilman, Warren R.: *See*—
Werner, Tyrrell H., Marra, and Gilman. 2,949,397.
Gilmer, Mary K. Neck rest for hair shampoo bowls. 2,948,903, 8–16–60, Cl. 4—159.
Gilmore, Edward R., and H. R. Spore, to Rockwell Mfg. Co. Fluid flow system and control therefor. 2,949,128, 8–16–60, Cl. 137—100.
Gindes, Philip, and A. C. Hughes, Jr., to Geniaco, Inc. Accelerometer with built-in proofcheck means. 2,949,026, 8–16–60, Cl. 73—1.
Gitelson, Martin D., and R. L. Folstein, Chanpeib'e game board. 2,949,206, 8–16–60, Cl. 273—130.
Glasby, Jonathan P., Jr. Aircraft. 2,949,255, 8–16–60, Cl. 244—42.
Glastic Corp., The: *See*—
White, Roger B. 2,949,054.
Globe Industries, Inc.: *See*—
Bernier, Robert V. 2,948,901.
Globe-Union Inc.: *See*—
Gluecksteln, Henry J., Foy, and Stephan. 2,949,522.
Gluecksteln, Henry J., and Stephan. 2,949,511.
Gluecksteln, Henry J., and K. Stephan, to Globe-Union Inc. Switches. 2,949,511, 8–16–60, Cl. 200—11.
Gluecksteln, Henry J., W. J. Foy, and K. Stephan, to Globe-Union Inc. Electrical component. 2,949,522, 8–16–60, Cl. 200—166.
Goddard, Reginald E. to Imperial Chemical Industries Ltd. Apparatus for catalyst regeneration. 2,949,346, 8–16–60, Cl. 23—288.
Goldmeier, Lawrence E. Method and mig for candy coating apples. 2,949,367, 8–16–60, Cl. 99—134.
Goldstein, Samuel, to Tri-Wall Containers, Inc. Method and machine for making triple wall corrugated paper board. 2,949,151, 8–16–60, Cl. 154—32.05.
Goldtrap, Walter A.: *See*—
Hawkins, Harold M., and Goldtrap. 2,949,447.
Goldwater, Franklin A.: *See*—
Steinhardt, David W. 2,949,377.
Steinhardt, David W. 2,949,381.
Goodyear Aircraft Corp.: *See*—
Lazzeri, Remo J. 2,949,264.
Gordan, Alvin C. Concrete pipe machine. 2,918,942. 8–16–60, Cl. 25—42.
Gordon, Samuel M.: *See*—
Schlesinger, Albert, and Gordon. 2,949,470.
Goyette, Francis H., to Lodding Engineering Corp. Dipless steam shower pipe. 2,949,239, 8–16–60, Cl. 236—120.
Grabauskas, Joseph J.: *See*—
Freund, Gustav, II, and Grabauskas. 2,949,271.
Graulich, Wilhelm: *See*—
Mauthe, Gustav, Graulich, and Rehling. 2,949,335.
Gravemeyer, Paul R., and L. A. Koenig, to The Clark Controller Co. Winding and unwinding controls. 2,949,249, 8–16–60, Cl. 242—75.51.
Graves, Dana A. Form for floor construction. 2,948,944, 8–16–60, Cl. 25—131.
Graziano, Victor, and J. R. Liscinsky, to Motorola, Inc. Portable color television system. 2,949,503, 8–16–60, Cl. 343—202.
Green, Charles F., to E. I. du Pont de Nemours and Co. Crystallization. 2,949,341, 8–16–60, Cl. 23—79.
Green, Milton: *See*—
Blount, Elias R., Green, and Simon. 2,949,359.
Gresham, Garnett. Road and sidewalk jointer. 2,949,069, 8–16–60, Cl. 94—46.
Grimes, William W., to The Standard Oil Co. Solvent extraction process for high octane gasoline. 2,949,422 8–16–60, Cl. 208—321.
Grossen, Harry W.: *See*—
Kraft, George H., Grossen, and Bell. 2,949,272.
Grover, Lafayette C., and J. H. Schmorde, to Multipoester, Inc. Multipoester. 2,948,574, 8–16–60, Cl. 40—36
Gubelmann, William S., to Realty and Industrial C.p. Register clearing mechanism. 2,949,320, 8–16–60, Cl. 235—144.
Gulf Research & Development Co.: *See*—
Rocchini, Albert G., and Trautman. 2,949,008.
Gurley, W. & L. E.: *See*—
Losch, Gunther F. E. 2,949,054.
Haag, William T., to Gadget-Of-The-Month Club, Inc. Multiple dish container. 2,949,200, 8–16–60, Cl. 214—310.
Haas, Howard C., and P. M. Kamath, to Polaroid Corp. Process of polymerizing styrene in the presence of methoxystyrene polymer. 2,949,436, 8–16–60, Cl. 260—45.5.
Haavik, Nils J.: *See*—
Ingeisrud, Arne H., and Haavik. 2,949,496.
Habertorn, Erich: *See*—
Eggers, Gerhard, and Habertorn. 2,949,268.
Haeckler, Edward W., to United States Steel Corp. Apparatus for cleaning soaking pit burner ports. 2,948,500, 8–16–60, Cl. 15—104.1.
Hafner, Theodore, to Surface Conduction Inc. Microwave communication lines. 2,949,589, 8–16–60, Cl. 333—95.
Hagen, Richard E., and R. T. Jacobsen to The Electric Storage Battery Co. Flashlight. 2,949,530, 8–16–60, Cl. 240—10.61.
Haines, Harold. Conical element for sizing roll. 2,949,189, 8–16–60, Cl. 209—138.
Hake, Albert C.: *See*—
Gantschnigg, Gottfried K., Muehlberger, and Hake. 2,949,093.
Halliday, Kenneth C., Jr., to United States of America, Army. Ignition system for rocket motors. 2,949,004, 8–16–60, Cl. 60—35.4.
Ham, George E., to The Chemstrand Corp. Method of purifying aromatic dicarboxylic acids. 2,949,483, 8–16–60, Cl. 260—516.
Hamilton Mfg. Co.: *See*—
Homme, John E. 2,949,154.
Hammer, Emily L.: *See*—
Merriam, Frederic C., and Hammer. 2,949,443.
Hampden Specialty Products, Inc.: *See*—
Paniell, Richard L. 2,949,155.
Hanna, William L., to Bugbee and Niles Co. Fabric making machine. 2,949,135, 8–16–60, Cl. 140—3.
Hansen, Floyd E.: *See*—
Fuchsman, Charles H., Zaremsky, and Hansen. 2,949,432.
Hanson, Sterling A.: *See*—
Swanson, Fred E., and Hanson. 2,949,063.
Hanson, William A. Drier. 2,948,966, 8–16–60, Cl. 34—1.
Happel, John, C. J. Mansel, and J. E. Blanck. Production of divinyl acetylenes by the dehydration of vinyl acetylenic alcohols in the presence of steam. 2,949,493, 8–16–60, Cl. 260—678.
Harmer, David E., and E. T. Hedreroth, to The Dow Chemical Co. Process for purifying propylene oxide. 2,949,413, 8–16–60, Cl. 204—154.
Harris Transducer Corp., The: *See*—
Harris, Wilbur T. 2,949,554.
Harris, Wilbur T., to The Harris Transducer Corp. Impregnating roller. 2,949,384, 8–16–60, Cl. 117—63.
Harrison, Walter D., to General Motors Corp. Windshield wiper actuating mechanism. 2,949,035, 8–16–60, Cl. 74—70.
Hausman, John M. Aligned double cylinders and rams for plastic mixing apparatus. 2,948,930, 8–16–60, Cl. 18—2.
Hawkins, Harold M., and W. A. Goldtrap, to Phillips Petroleum Co. Processing of polymer made in slurry process. 2,949,447, 8–16–60, Cl. 260—93.7.
Hawksley & Sons, Ltd.: *See*—
Hayler, Reginald. 2,948,965.

Hayler, Reginald, to Hawksley & Sons, Ltd. Measuring instrument. 2,948,965, 8–16–60, Cl. 33—125.
Heckerath, Earl T.: *See*—
Harmer, David E., and Heckeroth. 2,949,413.
Heidenreich & Harbeck: *See*—
Apitz, Gerhard. 2,949,062.
Heigis, Henry E., and T. Kallaher, to Specialties Development Corp. Control head. 2,949,274, 8–16–60, Cl. 251—74.
Heimach, Robert A.: *See*—
Andersen, John W., and Heimach. 2,949,027.
Wessner, William E., and Heimach. 2,949,498.
Heinicke, John B.: *See*—
Jarvis, Lactance A., and Heinicke. 2,949,497.
Heinse, Robert V., and L. H. Reyerson, to Submerged Combustion, Inc. Processing of lignite. 2,949,350, 8–16–60, Cl. 44—50.
Heil, Rudolf, to Kommanditgesellschaft Dr. Ing. Rudolf Heil. Apparatus for producing punched coding tapes of very long period. 2,949,501, 8–16–60, Cl. 178—22.
Heil, Dr.-Ing. Rudolf, Kommanditgesellschaft: *See*—
Keyen, Fritz-Otto, and Pawlowski. 2,949,499.
Helton, William J., to Foster Bros. Mfg. Co. Folding sofa bed structure. 2,948,904, 8–16–60, Cl. 5—13.
Henderson, James R.: *See*—
Boeller, Richard J., and Henderson. 2,949,330.
Herbst, Clarence A., to Elwax Corp. Method of potting electrical equipment. 2,949,350, 8–16–60, Cl. 18—59.
Hercules Galion Products, Inc.: *See*—
Totaro, Thomas C., and Sand. 2,949,327.
Hercules Powder Co.: *See*—
Pieper, Josef H. F., and Stauch. 2,949,480.
Herren, Robert H.: *See*—
Allen, Alfred W., and Herren. 2,948,955.
Hesler, Julius, Jr., to General Motors Corp. Window regulator operating apparatus. 2,949,290, 8–16–60, Cl. 268—126.
Hickman, Albert F., to Hickman Industries, Inc. Seat structure. 2,949,153, 8–16–60, Cl. 155—55.
Hickman Industries, Inc.: *See*—
Hickman, Albert F. 2,949,153.
Hicks, Darrell D., to Devoe & Raynolds Co., Inc. Film-forming compositions comprising carboxy-copolymers and polyepoxides and method of making same. 2,949,435, 8–16–60, Cl. 260—45.5.
Hill, Clifford W., and W. J. Blanchard, Sr., to Union Carbide Corp. Gas shielded arc torch. 2,949,536, 8–16–60, Cl. 219—75.
Hill, Earl R., and R. L. Klar, Jr., to Westinghouse Electric Corp. Switching apparatus. 2,949,544, 8–16–60, Cl. 307—84.5.
Hill, Frederick F., to Motorola, Inc. Stop-on-tune receiver having remote control specific channel selector. 2,949,532, 8–16–60, Cl. 250—20.
Hills-McCanna Co.: *See*—
Hidges, Dennis L., and Sweirr. 2,948,134.
Himka, John, to General Motors Corp. Vehicle seat assembly. 2,949,231, 8–16–60, Cl. 296—65.
Hindle, Thomas S. Lord, and E. Rose, to Scapa Dryers Ltd. Papermakers' felts and like industrial woven textile fabrics. 2,949,154, 8–16–60, Cl. 139—426.
Hinds, Herbert E., and E. J. Kupjack. Chair brace. 2,949,152, 8–16–60, Cl. 155—68.
Hirsch, Irvin L.: *See*—
Shecter, George O., and Hirsch. 2,948,971.
Hobson, Patrick H., to The Chemstrand Corp. Composition containing blend of acrylonitrile copolymers and chlorine-containing polymer. 2,949,437, 8–16–60, Cl. 260—45.5.
Hocking, Charles H.: *See*—
Miller, Raymond O., and Hocking. 2,949,024.
Hoefe, Milton L., and R. Meyer, to Parke, Davis & Co. Pyrimidine compounds and means of producing the same. 2,949,456, 8–16–60, Cl. 260—256.4.
Hoffer, Max, to Hoffmann-La Roche Inc. Synthesis of 3,5-diaryl-2-deoxy-D-ribofuranosyl urea. 2,949,449, 8–16–60, Cl. 260—210.
Hoffer, Max, to Hoffmann-La Roche Inc. Preparation of thymidine and deoxyuracrldine, and intermediates therefor. 2,949,451, 8–16–60, Cl. 260—211.5.
Hoffmann-La Roche Inc.: *See*—
Hoffer, Max. 2,949,449.
Hoffer, Max. 2,949,451.
Hoffmann, Otto, and A. Kryaytsky, to Lake Erie Machinery Corp. Cold extrusion press. 2,949,081, 8–16–60, Cl. 78—13.
Hoge, Henri H., to Westinghouse Electric Corp. True current zig-zag element. 2,949,540, 8–16–60, Cl. 307—88.5.
Holm, Vernon C. F.: *See*—
Bailey, Grant C., Holm, and Clark. 2,949,429.
Holmes, Mark M., to Burlington Industries, Inc. Hosiery. 2,949,023, 8–16–60, Cl. 66—178.
Holton, Robert J., to Tinnerman Products, Inc. Clips for moldings, cables and the like. 2,948,938, 8–16–60, Cl. 24—73.
Holzschuh, Donald L., and J. W. Smith, to Collins Radio Co. Microwave antenna switch. 2,949,589, 8–16–60, Cl. 333—7.
Homme, John E., to Hamilton Mfg. Co. Folding tables and wall supports therefor. 2,949,154, 8–16–60, Cl. 155—124.
Honn, Francis J., to Minnesota Mining and Mfg. Co. Copolymers of styrene and diorientalol diesel. 2,949,443, 8–16–60, Cl. 260—87.5.
Hood, George C., R. E. Smith, and G. J. Pierotti, to Shell Oil Co. Purifying hydrogen peroxide. 2,949,343, 8–16–60, Cl. 23—207.
Hooker Chemical Corp.: *See*—
Hecker, John T. 2,949,491.
Hooker, Donald E., to E. T. Mclaney, deceased, American National Bank and Trust Company of Chicago, executor. Spring testing and selecting apparatus. 2,949,188, 8–16–60, Cl. 207—79.
Horsfall, Robert B., Jr., J. M. Slater, and J. A. Widenmann, to North American Aviation, Inc. Gyroscopically stabilized optical system platform. 2,949,030, 8–16–60, Cl. 73—178.
Horton, Walter: *See*—
Townsend, Gordon H., and Horton. 2,949,227.
Hotchkiss, Robert D.: *See*—
Rettie, George W., and Hotchkiss. 2,949,508.
Hotelling, Erle E.: *See*—
Carmellini, Andrew E., and Hotelling. 2,949,117.
Howell, Roland C., Jr.: *See*—
Becher, Ernest P., and Howell. 2,949,156.
Huck Co.: *See*—
Huck, William F. 2,949,295.
Huck, William F., to Huck Co. Web tension control mechanism. 2,949,295, 8–16–60, Cl. 271—2.3.
Huck, William F., A. J. Albrecht, and D. F. Seaford, to The Brunswick Automatic Pinsetter Corp. Automatic pinsetters. 2,949,300, 8–16–60, Cl. 272—43.
Huebner, Charles F., to Ciba Pharmaceutical Products, Inc. Certain 2-phenyl-imino-3-phenyl-thiazolidines. 2,949,455, 8–16–60, Cl. 260—240.
Huebner, Charles F., to Ciba Pharmaceutical Products, Inc. Thiazolidine derivatives. 2,949,462, 8–16–60, Cl. 260—240.
Hughes Aircraft Co.: *See*—
Williams, Donald D. 2,948,894.
Hughes, Arthur C., Jr.: *See*—
Glides, Philip, and Hughes. 2,949,026.
Hughes, David P., and S. G. Fletcher, to Latrobe Steel Co. Ferrous alloys and articles made therefrom. 2,949,354, 8–16–60, Cl. 75—126.
Hughes, Harry W. Car hand controls. 2,949,044, 8–16–60, Cl. 74—481.
Hughes Tool Co.: *See*—
Baur, George W., and Morlan. 2,949,221.
Hughes, William L., to Eesl-Cool Corp. Package. 2,949,370. 8–16–60, Cl. 99—173.
Hulls, Louis J. No drip brush attachment. 2,948,910, 8–16–60, Cl. 15—159.
Hunter, Austin R., and J. K. Rocks, to Kelco Co. Cold milk puddings and method of producing the same. 2,949,366, 8–16–60, Cl. 99—131.
Hunter, Ralph M.: *See*—
Neipert, Marshall P., Blue, and Hunter. 2,949,412.
Hupp Corp.: *See*—
Dudchik, Nicholas. 2,949,029.
Hutchins, Everett C., to General Motors Corp. Pipe coupling between relatively hard and soft tubes. 2,949,519, 8–16–60, Cl. 285—172.
Hycon Mfg. Co.: *See*—
Shadle, Paul W. 2,949,575.
Hyde, Robert W., to American Radiator & Standard Sanitary Corp. Garbage disposal unit. 2,949,240, 8–16–60, Cl. 241—46.
Hydro-Aire, Inc.: *See*—
Deschamps, Desire J. 2,949,081.
I-T-E Circuit Breaker Co.: *See*—
Diebold, Edward J. 2,949,572.
Dortort, Isadore K. 2,949,542.
Edmunds, William H. 2,949,516.
Illinois Tool Works: *See*—
Edwards, Bryant. 2,949,204.
Flournoy, Harold H., Jr., and Bodkin. 2,949,283.
Rapata, George M. 2,949,287.
Rayburn, Charles C. 2,949,563.
Rayburn, Charles C. 2,949,570.
Rayburn, Charles C., Black, Jr., and Perez. 2,949,144.
Imperial Brass Mfg. Co., The: *See*—
Phillippe, Howard L. 2,949,244.
Imperial Chemical Industries Ltd.: *See*—
Anderson, Robert C., and Sieddon. 2,949,451.
Goddard, Reginald E. 2,949,346.
Imperial Mfg. Corp.: *See*—
Maxim, Andrew. 2,949,308.
Imperial Mfg. and Engineering Co.: *See*—
Johnson, Smith M., and Farnwald. 2,949,090.
Johnson, Smith M., and Farnwald. 2,949,094.
Ingeisrud, Arne H., and N. J. Haavik, to Elektrokemisk A/S. Electrode holder construction for electric smelting furnaces. 2,949,496, 8–16–60, Cl. 13–16.
Ingham, Terence: *See*—
Stubbs, John J., Watts, and Ingham. 2,949,415.
Interchemical Corp.: *See*—
Chassi, Norman S. 2,949,346.
International Basic Economy Corp.: *See*—
Collins, John E. 2,949,131.
International Business Machines Corp.: *See*—
Ablasi, Carl F. 2,949,292.
Crowe, James W. 2,948,602.
International Mfg. Co.: *See*—
Sunday, James J. 2,949,106.
International Paper Box Machine Co., The: *See*—
La Bombard, Leon H. 2,949,060.
Inventors Clinic: *See*—
Ebert, Max E., and Selzer. 2,949,176.
Jackson, Edmond D., to Texas Instruments Inc. Solar energy converter. 2,949,486, 8–16–60, Cl. 136–89.
Jacobsen, Ralph T.: *See*—
Hagen, Richard E., and Jacobsen. 2,949,530.
James, Lawrence A.: *See*—
MacAlpine, Roderick T., and James. 2,949,201.
Jarvis, Lactance A., and J. B. Heinicke, to Whirlpool Corp. Thermoelectric assembly. 2,949,497, 8–16–60, Cl. 136–4.
Jenson, Kenneth S., to Preway, Inc. Burner control. 2,949,234, 8–16–60, Cl. 236–48.
Jewell, Lee: *See*—
Lawrence, Harry J. 2,949,123.
Jesl, James L., to Sun Oil Co. Separation of wax from oil. 2,949,413, 8–16–60, Cl. 208–31.
Jiu, James, to G. D. Searle & Co. 1,5,17-trioxotaxyestra-1,3,5(10), 16-tetraene and congeners. 2,949,477, 8–16–60, Cl. 260–397.5.

Johns, William F., to G. D. Searle & Co. 3,17-bisoxygenated 18-haloestrenes and intermediates. 2,949,476, 8-16-60, Cl. 260—397.3.

Johnson, Arthur A., to The Eagle-Picher Co. Machine and method for molding heat-curable articles. 2,948,925, 8-16-60, Cl. 18—21.

Johnson, Carl W., to American Machine & Foundry Co. Sewing machine looper mechanism. 2,949,084, 8-16-60, Cl. 112—171.

Johnson, Floyd D., to Westinghouse Electric Corp. Phase interlock for series capacitor. 2,949,567, 8-16-60, Cl. 317—12.

Johnson, Smith M., and J. A. Farnwald, to Imperial Mfg. and Engineering Co. Apparatus for receiving linear material from extruding or similar machines. 2,949,900, 8-16-60, Cl. 56—138.

Johnson, Smith M., and J. A. Farnwald, to Imperial Mfg. and Engineering Co. Carriage reciprocating mechanism. 2,949,094, 8-16-60, Cl. 74—57.

Johnson, Stanley N., to Motor Wheel Corp. Joining sheet metal parts. 2,949,089, 8-16-60, Cl. 113—116.

Jones, Cyril D.: *See*—
Thom, Wensel W. 2,948,964.

Jones, Harry W., to Dempster Brothers, Inc. Containers for self-loading vehicles. 2,949,190, 8-16-60, Cl. 214—302.

Jones, John H. Electrical signalling receiver for displaying lines of characters. 2,949,609, 8-16-60, Cl. 340—154.

Jones, William L., to Bush Hog Mfg. Co., Inc. Mower lift means. 2,949,004, 8-16-60, Cl. 56—25.4.

Jopson, Howard R., to United States of America, Navy. Reversible transmission. 2,949,088, 8-16-60, Cl. 74—661.

Jorgensen, Rolf, to A/S Ardal og Sunndal Verk. Process for the protection of carbon electrodes for electric furnaces. 2,949,350, 8-16-60, Cl. 252—502.

Joy, Ivan L. Apparatus for ultrasonic materials testing. 2,949,032, 8-16-60, Cl. 73—67.9.

Joy Mfg. Co.: *See*—
Curtis, John C. 2,949,280.

Julian, Donald B., to Eastman Kodak Co. Photographic color former dispersions. 2,949,360, 8-16-60, Cl. 96—97.

KVP Sutherland Paper Co.: *See*—
Coe, Merrill J. 2,949,222.
Vander Lugt, Thomas, Jr. 2,949,221.

Kaiser, Fred. Door lock set. 2,949,836, 8-16-60, Cl. 292—207.

Kallsher, Theodore: *See*—
Heigis, Henry E., and Kallsher. 2,949,274.

Kamath, Pandurang M.: *See*—
Haas, Howard C., and Kamath. 2,949,436.

Kato, Sadatake: *See*—
Ueda, Takeo, Kato, Toyoshima, and Wachi. 2,949,479.

Katz, Harold W., to General Electric Co. Delay line for angular modulation. 2,949,585, 8-16-60, Cl. 332—39.

Katz, Manfred, to E. I. du Pont de Nemours and Co. Preparation of piperazine pathalamide polymers. 2,949,440, 8-16-60, Cl. 260—78.

Kaulakis, Frank: *See*—
Dickerman, Gilbert K., Kaulakis, and Savage. 2,949,382.

Kaywood Corp.: *See*—
Sherwood, Glenn L. 2,948,897.

Kazan, Benjamin, to Radio Corp. of America. Radiant energy sensitive device. 2,949,537, 8-16-60, Cl. 250—216.

Kearney, Thomas J., to Detrex Chemical Industries, Inc. Cleaning apparatus. 2,949,121, 8-16-60, Cl. 34—150.

Keith, Wayland D. Safety cars for amusement rides. 2,949,-200, 8-16-60, Cl. 272—40.

Keico Co.: *See*—
Hunter, Austin R., and Rocks. 2,949,368.

Kendall, Edward R., to Simonis Co. Polishing composition. 2,949,374, 8-16-60, Cl. 106—10.

Kendall, Edward R., and G. W. Meister, to Simonis Co. Pressurized polishing composition. 2,949,378, 8-16-60, Cl. 106—10.

Kenney, Clarence E., to Allis-Chalmers Mfg. Co. Hydraulic system for steam turbine. 2,949,122, 8-16-60, Cl. 137—17.

Kerschen, Günter, to Olympia Werke A.G. Line indicating and positioning arrangement for typewriters. 2,949,177, 8-16-60, Cl. 197—197.

Kessler, James B., D. W. Miller, and R. K. Skinner, to General Motors Corp. Propeller speed controller. 2,949,159, 8-16-60, Cl. 170—160.14.

Kimble Glass Co.: *See*—
Stutzke, William A., and Sheets. 2,948,968.

Kimura, Sonkichiro. Fishing-rod holder. 2,949,269, 8-16-60, Cl. 248—41.

King-Seeley Corp.: *See*—
Roberts, Benjamin K. 2,949,019.

King, William E., to Phillips Petroleum Co. Carbon black wet pelleting process and apparatus. 2,949,349, 8-16-60, Cl. 23—314.

Kirkby, Albert H., to The Babcock & Wilcox Co. Apparatus for cleaning heat exchange means. 2,949,252, 8-16-60, Cl. 257—1.

Kirkpatrick, Claude L.: *See*—
Carruthers, Walter W., and Kirkpatrick. 2,948,970.

Kissinger, Stanley P. Emergency brake controlling apparatus. 2,949,171, 8-16-60, Cl. 188—106.

Kiser, Ira D. Trap-type fish hook. 2,949,985, 8-16-60, Cl. 43—42.4.

Klar, Robert L., Jr.: *See*—
Hill, Earl R., and Klar. 2,949,544.

Kline, Jack, to Sanders Associates, Inc. Frequency-stabilized oscillator. 2,949,581, 8-16-60, Cl. 331—97.

Knappe, Otto, to Schoppe & Fasser G.m.b.H. Instrument in which displacement of an element is directly proportional to the square root of a force applied to the element. 2,949,087, 8-16-60, Cl. 74—106.

Knight, Philip H., and R. J. O'Donovan, to Bell Brothers (Domestic) Ltd. Mixing valve. 2,949,130, 8-16-60, Cl. 137—552.

Knowles, Charles M. Sod plug planter. 2,949,063, 8-16-60, Cl. 111—3.

Koenig, Leslie A.: *See*—
Gravenstretter, Paul R., and Koenig. 2,949,949.

Kommanditgesellschaft Dr. Ing. Rudolf Hell: *See*—
Hell, Rudolf. 2,949,501.

Kompfner, Rudolf, and C. F. Quate, to Bell Telephone Laboratories, Inc. High efficiency velocity modulation devices. 2,949,555, 8-16-60, Cl. 315—3.5.

Koolnis, Stanley R., to Duo-Temp Mfg. Corp. Therapeutic shower. 2,949,106, 8-16-60, Cl. 128—66.

Koolnis, Stanley R., to Duo-Temp Mfg. Corp. Therapeutic shower. 2,949,240, 8-16-60, Cl. 239—600.

Koren Research & Engineering Co.: *See*—
Reykjalin, Charles. 2,949,178.

Kowalczyk, Walter, to Gadget-Of-The-Month Club, Inc. Fishing aid. 2,948,981, 8-16-60, Cl. 43—16.

Kozak, Edward, to National Malleable and Steel Castings Co. Coupler operating mechanism. 2,949,196, 8-16-60, Cl. 213—168.

Kraft, George H., H. W. Greeson, and K. Bell, to National Dairy Products Corp. Packaging. 2,949,372, 8-16-60, Cl. 99—178.

Kraus, Eugene E., Jr., J. I. MacPherson, and A. T. Flower. Secondary rack guides. 2,949,271, 8-16-60, Cl. 248—65.

Kretzmer, Ernest R., to Bell Telephone Laboratories, Inc. Reduced bandwidth transmission system. 2,949,505, 8-16-60, Cl. 179—15.6.

Kryaytzky, Alexander: *See*—
Hoffmann, Otto, and Kryaytzky. 2,949,051.

Kuhe, Adolph M. L., to Phillips Petroleum Co. Method for recovery of absorption oil. 2,949,423, 8-16-60, Cl. 208—341.

Kühn, Richard, to C.I.C.O.M.I. Compagnie Internationale pour le Commerce et l'Industrie. Mold for and a method of producing large bodies of foamed polystyrene. 2,948,936, 8-16-60, Cl. 18—39.

Kulp, Harry W. Baiting device. 2,948,979, 8-16-60, Cl. 43—4.

Kulusic, Steve M. Attachment for milling or slotting metal parts. 2,949,068, 8-16-60, Cl. 90—15.

Kuntz, Louis E., and M. A. Remke, to Phillips Petroleum Co. Liquid level control. 2,949,126, 8-16-60, Cl. 137—207.

Kupjack, Eugene J.: *See*—
Hippe, Herbert E., and Kupjack. 2,949,152.

Kyowa Hakko Kogyo Kabushiki Kaisha: *See*—
Sakaguchi, Kinichiro, Abe, and Beppu. 2,949,404.

L-O-F Glass Fibers Co.: *See*—
Flanger, Joseph S., and Meyer. 2,948,650.

La Bombard, Leon E., to The International Paper Box Machine Co. Method and apparatus for creasing blanks. 2,949,066, 8-16-60, Cl. 93—56.2.

Lafferty, Hugh C.: *See*—
Addie, Albert N., Williams, and Lafferty. 2,949,541.

Lake Erie Machinery Corp.: *See*—
Hoffmann, Otto, and Kryaytzky. 2,949,051.

Lamb, Carl W. Multiple band gamma matched antenna. 2,949,607, 8-16-60, Cl. 343—722.

Langston, Samuel M., Co.: *See*—
Moser, Henry W., and Moore. 2,948,313.

Langton, William G., to United States of America, Air Force. Method and means for vertical attitude determination. 2,949,536, 8-16-60, Cl. 250—201.

La Rocca, Edward W., and J. Pearson, to United States of America, Navy. High pressure, explosive-activated press. 2,948,923, 8-16-60, Cl. 18—16.5.

Larson, Charles O. Quick acting clamp. 2,949,140, 8-16-60, Cl. 144—306.

Latham, Leonard: *See*—
Birge, Homer, and Latham. 2,949,234.

Latrobe Steel Co.: *See*—
Hughes, David P., and Fletcher. 2,949,356.

Laube, Alfred J., R. L. Southard, and T. W. Cornwell, to Cooper Tire & Rubber Co. Apparatus for post-curing inflation of pneumatic tires. 2,949,021, 8-16-60, Cl. 18—4.

Lauretl, Remo J., to Goodyear Aircraft Corp. Multiple wall attachment element. 2,949,264, 8-16-60, Cl. 244—127.

Lawrence, Harry J., to P. C. Boresson and L. Jewell. Fluid flow determining apparatus. 2,949,126, 8-16-60, Cl. 137—88.

Lawson, Julian K., Jr., to The Chemstrand Corp. Interpolymers of acrylonitrile and 1-vinylimidazoles. 2,949,444, 8-16-60, Cl. 260—80.5.

Laycock Engineering Ltd.: *See*—
Charlesworth, Thomas R. 2,949,021.

Lee, Joseph R., W. to W. T. Peck, Jr. Traction weight shield. 2,949,110, 8-16-60, Cl. 126—75.

Lees, James, and Sons Co.: *See*—
McFaddin, Ray D. 2,949,086.

Lenzona Corp.: *See*—
Stoddard, Nicholas J., and Senn. 2,949,358.

Lehner, William L., and C. F. Carlsen, to Sylvania Electric Products Inc. Socket package. 2,949,154, 8-16-60, Cl. 206—65.

Le May, Christopher A. G., and G. H. Stephenson, to Electric & Musical Industries Ltd. Automatic control systems, especially for automatic machine tools. 2,949,690, 8-16-60, Cl. 340—168.

Lemmeison, Jerome H. Illuminated highway marker. 2,949,531, 8-16-60, Cl. 240—81.

Lennox-Napier, Richard: *See*—
Sedgfield, Hugh E., and Lennox-Napier. 2,949,261.

Leo, Albert J., to National Pectin Products Co. Process for rendering locust bean gum cold-water soluble. 2,949,426, 8-16-60, Cl. 260—233.5.

Leon, Edgar D. Constant velocity universal joint. 2,949,032, 8-16-60, Cl. 64—21.

Leonard, Ralph S.: *See*—
Vitale, Peter T., Bruns, and Leonard. 2,949,425.

Lesinski, Jeanne M., to Westinghouse Electric Corp. Watertight bearing housing construction for dynamoelectric machines. 2,949,332, 8-16-60, Cl. 308—187.1.

Levene, Martin L., to Radio Corp. of America. Electrical connecting device. 2,949,596, 8-16-60, Cl. 339—2.

Levine, Elliot. Method and system for making separable bottom stops for slide fasteners. 2,949,211, 8-16-60, Cl. 221—199.

Levkoff, David, ½ to E. S. Levkoff, ¼ to H. S. Levkoff, and ¼ to R. L. Bennet. Cartons. 2,949,220, 8-16-60, Cl. 229—31.

Levkoff, Evelyn S.: *See*—
Levkoff, David. 2,949,230.

Levkoff, Henry S.: *See*—
Levkoff, David. 2,949,220.

Lewis, Gunnar H. W., to Aktiebolaget Atvidaberga Butiksinredningar. Pivot bearing for horizontal and vertical pivoted windows. 2,948,918, 8-16-60, Cl. 16—146.

Lewis, Benjamin F., and J. R. Power, to Bell Telephone Laboratories, Inc. Electrical information system. 2,949,507, 8-16-60, Cl. 179—84.

Lewis, Charles W.: *See*—
Mandelcorn, Lyon, Auzier, and Lewis. 2,949,424.

Lewis, George E. Planetary gear reduction unit. 2,949,048, 8-16-60, Cl. 74—802.

Lewis, Thomas E.: *See*—
Staley, John, and Lewis. 2,949,393.

Libbey-Owens-Ford Glass Co.: *See*—
Carney, Delmar E. 2,948,990.
Colbert, William F., and Morgan. 2,949,257.
Walters, Emmett L., and Miller. 2,948,991.
White, Gerald. 2,948,990.

Lincicome, James R.: *See*—
Graziano, Victor, and Lincicome. 2,949,606.

Linder, Seymour M.: *See*—
Durbetaki, Antony J., and Linder. 2,949,469.

Linn, Carl B., and J. A. Vesely, to Universal Oil Products Co. Preventing corrosion of ferrous metal surfaces in contact with water. 2,949,338, 8-16-60, Cl. 21—2.7.

Linsley, Douglas F. Postal scale. 2,949,287, 8-16-60, Cl. 265—49.

Lo, Chien-Pen, to Rohm & Haas Co. 2-thiocyanomethyl-1,2-benzisothiazolin-3-one-1,1-dioxide. 2,949,398, 8-16-60, Cl. 167—33.

Lo, Chien-Pen, to Rohm & Haas Co. 1-thiocyanomethyl-1H-bensotriazole and 5-thiocyanomethyl-1,2,3-bensotriazin-4(3H)-one. 2,949,465, 8-16-60, Cl. 260—249.

Lochner, Cecil O. Fish lure. 2,948,982, 8-16-60, Cl. 43—42.18.

Lodding Engineering Corp.: *See*—
Goyette, Francis H. 2,949,220.

Loeck, Gunther P. E., to W. & L. E. Gurley. Optical plummet. 2,949,036, 8-16-60, Cl. 33—2.2.

Logan, David G., to Unilever Ltd. Telephone dictating system with in-phase control signals. 2,949,502, 8-16-60, Cl. 179—6.

Logue, Stanley H., to General Dynamics Corp. Relative distance and movement indicator. 2,949,608, 8-16-60, Cl. 343—9.

Lomen, Carlton J., and K. G. Coleman. Demountable tail gate elevator. 2,949,197, 8-16-60, Cl. 214—75.

Long, Benjamin H., to Tobacco Machine Supply Co., Inc. Tobacco stripping and booking machine. 2,949,118, 8-16-60, Cl. 131—128.

Lord, Sam: *See*—
Hindle, Thomas, Lord, and Race. 2,949,134.

Lovell, Jack, to Cleveland Pneumatic Industries, Inc. Hatch cover mechanism. 2,949,091, 8-16-60, Cl. 214—502.

Lovell Mfg. Co.: *See*—
Miller, Raymond G., and Hocking. 2,949,024.

Low, Sidney, and O. A. Powell, Jr., to The Chapman Valve Mfg. Co. Valve construction. 2,949,320, 8-16-60, Cl. 285—356.

Lowry, Albert H. Fire extinguishing machine. 2,949,158, 8-16-60, Cl. 169—1.

Lubkin, Samuel, to Curtiss-Wright Corp. Information transfer device. 2,949,226, 8-16-60, Cl. 235—61.11.

Lucas, John A., to The Prime Manufacturing Co. Sand trap. 2,949,326, 8-16-60, Cl. 291—11.

Lucey, John A., to The British Oxygen Co. Ltd. Electric arc welding. 2,949,537, 8-16-60, Cl. 219—126.

MacAlpine, Roderick T., and L. A. James, to Shaft Machines Ltd. Mucking machine. 2,949,201, 8-16-60, Cl. 214—657.

MacFarlane, Richard E.: *See*—
Dyrkacz, Wasil W., Reynolds, MacFarlane, and Pitler. 2,949,355.

Machts, Joachim, and W. Benk, to Telefunken G.m.b.H. Tone arm for record players. 2,949,311, 8-16-60, Cl. 274—23.

Mackay, Johnstone S., to Pittsburgh Coke & Chemical Co. Preparation of guanidine compounds. 2,949,484, 8-16-60, Cl. 260—564.

MacPherson, John I.: *See*—
Kraus, Eugene E., Jr., MacPherson, and Flower. 2,949,271.

MacRae, Gordon: *See*—
Shecter, George O., and Hirsch. 2,948,971.

Macura, Heinrich. Graphitizing residues of the thermal decomposition of carbonaceous materials. 2,949,344, 8-16-60, Cl. 23—209.1.

Madsen, Irven C. Device for dismounting and mounting tire rims. 2,949,232, 8-16-60, Cl. 301—11.

Magwairk, Clarence E., and W. M. Stone. Ditch clearing attachment for bulldozer blades. 2,948,973, 8-16-60, Cl. 37—144.

Mahieu, John J.: *See*—
Murtaugh, Justin J., and Mahieu. 2,949,289.

Makower, Benjamin: *See*—
Dimick, Keene P., and Makower. 2,949,363.

Malig, John D., to The Gillette Co. Display racks. 2,949,-192, 8-16-60, Cl. 211—49.

Malina, Robert B. to Pioneer Well Tools, Inc. Current rotating check valve. 2,949,427, 8-16-60, Cl. 137—852.

Malowan, John E., and M. L. Nielsen, to Monsanto Chemical Co. Fire-retardant process. 2,949,385, 8-16-60, Cl. 117—138.

Mandelcorn, Lyon, E. W. Auzier, and C. W. Lewis, to Westinghouse Electric Corp. Clathrates. 2,949,424, 8-16-60, Cl. 252—1.

Mann, Henry: *See*—
Andrews, Frederick T., Jr., and Mann. 2,949,503.

Manning, Howard H., to Champion DeArmond Tool Co. Pliers. 2,949,942, 8-16-60, Cl. 30—186.

Manson, Walter J. to National-Standard Co. Wire coiling apparatus. 2,949,250, 8-16-60, Cl. 242—82.

Marchi, Angelo P. Drain construction for walls. 2,948,-993, 8-16-60, Cl. 50—114.

Marieni, Gino J., to Westinghouse Electric Corp. Alternating current induction device. 2,949,515, 8-16-60, Cl. 200—87.

Marra, William H.: *See*—
Werner, Tyrrell H., Marra, and Gilmon. 2,949,397.

Marsel, Charles J.: *See*—
Happel, John, Marsel, and Blanck. 2,949,493.

Martin Co., The: *See*—
Gantschnigg, Gottfried K., Muehlberger, and Hake. 2,949,060.

Marvin, Orrin F., to A. E. Butterfield, and A. K. Swann. Method for the recovery of uranium, selenium and molybdenum. 2,949,339, 8-16-60, Cl. 23—14.5.

Master Lock Co.: *See*—
Foote, Daniel J., and Berkowitz. 2,949,185.

Mastney, Edward J.: *See*—
Fichter, Ludwig J., and Mastney. 2,949,043.

Mather, Harold C., to Midwest Mfg. Corp. Refrigerator shelf construction. 2,949,193, 8-16-60, Cl. 211—148.

Matthews, Peter P., to The Cyril Bath Co. Safety latch and release devices for wipe forming machines. 2,949,-145, 8-16-60, Cl. 153—40.

Matthews, Robert W., to Phillips Petroleum Co. Method and apparatus for producing extruded pipe under internal pressure. 2,948,919, 8-16-60, Cl. 18—1.

Maul, Michael. Summary card punches. 2,949,235, 8-16-60, Cl. 235—61.7.

Maust, Frederick K. Roller leveler with driven back-up rolls. 2,949,147, 8-16-60, Cl. 153—106.

Mauthe, Gustav, W. Graulich, and H. Rohling, to Farbenfabriken Bayer Aktiengesellschaft. Treatment of tanned hides and leather with polymers of vinyl and diene monomers, emulsifiers and tanning agents. 2,949,330, 8-16-60, Cl. 8—94.23.

Maxim, Andrew, to Imperial Mfg. Corp. Record player. 2,949,306, 8-16-60, Cl. 274—10.

McBride, Joseph R., to A. B. Chance Co. Fuse cutout. 2,949,517, 8-16-60, Cl. 200—114.

McCarley, Lyndell T., to Abbott Laboratories. Tablet machine. 2,949,082, 8-16-60, Cl. 107—17.

McCormick, Hamilton L., to General Motors Corp. Turbine blade retention. 2,949,278, 8-16-60, Cl. 253—77.

McCulloch Corp.: *See*—
Doble, Abner. 2,949,013.

McFaddin, Ray D., to James Lees and Sons Co. Method of sewing binding tape to pile fabric. 2,949,060, 8-16-60, Cl. 112—267.

McGraw-Edison Co.: *See*—
Wu, Bosco. 2,949,579.

McLaren, Vincent H., Jr.: *See*—
Bruhn, La Verne E., and McLaren. 2,948,941.

McVey, Eugene S., to United States of America, Navy. Voltage comparison circuit. 2,949,546, 8-16-60, Cl. 307—88.5.

Mebane, Alexander D.: *See*—
Orochnik, William, and Mebane. 2,949,485.

Mehrabi-Nejad, Shahriar, and A. C. De Gruttgen, to American Cyanamid Co. Tablet coating. 2,949,402, 8-16-60, Cl. 167—82.

Meissner, Scott C. Floral gift photograph and sympathy card folder. 2,948,977, 8-16-60, Cl. 40—158.

Meister, Gerard W.: *See*—
Kendall, Edward R., and Meister. 2,949,373.

Melcher, Doris D.: *See*—
Shecter, George O., and Hirsch. 2,948,971.

Melcher, Martin: *See*—
Shecter, George O., and Hirsch. 2,948,971.

Mentzer, Elizabeth M.: *See*—
Mueller, Herman H. 2,949,307.
Mueller, Herman H. 2,949,310.

Merck & Co., Inc.: *See*—
Arth, Glen E., Poos, and Sarett. 2,949,472.
Sarett, Lewis H. 2,949,453.

Merdinian, George K., to Bitel-McCullough, Inc. Klystron tube. 2,949,569, 8-16-60, Cl. 315—5.46.

Merriam, Frederic C., and E. I. Hammer, to United Shoe Machinery Corp. Surgical dressings. 2,949,443, 8-16-60, Cl. 260—80.5.

Merritt, Thomas W., and C. A. Thomas, to Babcox Bros. Co. Valve. 2,949,276, 8-16-60, Cl. 251—146.

Meskat, Walter, and J. Pawlowski, to Farbenfabriken Bayer Aktiengesellschaft. Screw conveyor. 2,949,922, 8-16-60, Cl. 18—12.

Metallgesellschaft Aktiengesellschaft: *See*—
Veith, Werner. 2,949,289.

Meyer, Friedrich, to Rhaetches S.A. Device in time meters for limiting at two determined end positions the motion of a member movable in two opposite directions. 2,949,110, 8–16–60, Cl. 185—43.

Meyer, Raymond W.: *See*—
Flinger, Joseph S., and Meyer. 2,948,950.

Meyer, Robert F.: *See*—
Hoefle, Milton L., and Meyer. 2,949,466.

Meystre, Charles: *See*—
Wettstein, Albert, Vischer, and Meystre. 2,949,405.

Michaels, Edwin B., and M. U. Cohen, to Stamford Chemical Co. Methods and apparatus for dry cleaning. 2,949,334, 8–16–60, Cl. 8—142.

Midwest Mfg. Corp.: *See*—
Mather, Harold C. 2,949,193.

Miklean, Saul: *See*—
Andreadis, John T., and Miklean. 2,949,408.

Mil-ko Products Ltd.: *See*—
Bissell, Ray H. 2,949,362.

Miller, Alfred H.: *See*—
Walters, Emmett L., and Miller. 2,948,991.

Miller, Dale W.: *See*—
Kessler, James E., Miller, and Skinner. 2,949,150.

Miller, Earle C. to Riley Stoker Corp. Fly ash separation. 2,949,099, 8–16–60, Cl. 122—235.

Miller Outdoor Advertising Products Co., Inc.: *See*—
Miller, William N., Jr. 2,948,976.

Miller, Paul E.: *See*—
Brunt, John G., and Miller. 2,949,681.

Miller, Raymond G., and C. H. Hocking, to Lovell Mfg. Co. Wringer with clothes rinsing device. 2,948,024, 8–16–60, Cl. 8—32.

Miller, Robert E., to Monsanto Chemical Co. Chlorophenoxy acetates of hydrocarbenzene and herbicidal compositions and methods employing the same. 2,949,353, 8–16–60, Cl. 71—2.6.

Miller, William N., Jr., to Miller Outdoor Advertising Products Co., Inc. Billboard construction. 2,948,976, 8–16–60, Cl. 40—125.

Mills, Iver W., to Sun Oil Co. Preparation and use of acid activated clay. 2,948,421, 8–16–60, Cl. 208—309.

Mineral Processing Corp.: *See*—
Pagnotti, Joseph R., and Barron. 2,949,190.

Minneapolis-Honeywell Regulator Co.: *See*—
Bancroft, John W. 2,949,011.
Barthel, Roy W. 2,949,514.
Nessell, Clarence W. 2,949,224.

Minnesota Mining and Mfg. Co.: *See*—
Hoan, Francis J. 2,949,449.

Minston-West Mfg. Co.: *See*—
Bennett, James C. 2,949,042.

Mitchell, Norris W.: *See*—
Bauer, Robert D., and Mitchell. 2,949,408.

Mitscal, Ernst H., to Ciba Pharmaceutical Products, Inc. Certain 1,3-diphenyl-2-thioureas. 2,949,454, 8–16–60, Cl. 260—240.

Mitscal, Ernst H., to Ciba Pharmaceutical Products, Inc. Certain 2-phenyl-imino-3-phenyl-thiazolines. 2,949,456, 8–16–60, Cl. 260—240.

Mitscal, Ernst H., to Ciba Pharmaceutical Products, Inc. Certain 2-phenyl-imino-3-phenyl-thiazolidine-4-ones. 2,949,457, 8–16–60, Cl. 260—240.

Mitscal, Ernst H., to Ciba Pharmaceutical Products, Inc. Certain 1,3-diphenyl-thioparabanic acids. 2,949,458, 8–16–60, Cl. 260—240.

Mitscal, Ernst H., to Ciba Pharmaceutical Products, Inc. 1,3-di-substituted phenyl-2-thioureas. 2,949,459, 8–16–60, Cl. 260—240.

Mitscal, Ernst H. to Ciba Pharmaceutical Products, Inc. Certain thiazolidine-4-ones. 2,949,460, 8–16–60, Cl. 260—240.

Mitscal, Ernst H., to Ciba Pharmaceutical Products, Inc. Certain 4-phenyl-imino-3-phenyl-thiazolines. 2,949,461, 8–16–60, Cl. 260—240.

Mitscal, Ernst H. to Ciba Pharmaceutical Products, Inc. Certain 1,3-diphenyl-2-thioparabanic acids. 2,949,462, 8–16–60, Cl. 260—240.

Mobay Chemical Co.: *See*—
Britain, J. W. 2,949,431.
Roseth, Harold, and Falk. 2,948,936.

Molloy, Thomas E., and J. D. Walters, to Woodward Iron Co. Pipe molding machine and method. 2,948,933, 8–16–60, Cl. 25—36.

Moloney, Raymond T.: *See*—
Hooker, Donald H. 2,949,188.

Monsanto Chemical Co.: *See*—
Anderson, John W., and Helmuth. 2,949,427.
Bonanzgni, Francis A. 2,949,396.
Danzi, Joachim. 2,949,423.
Danzi, Joachim. 2,949,472.
Malowan, John E., and Nielsen. 2,949,385.
Miller, Robert E. 2,949,353.
Weaver, Leo J. 2,949,492.
Wessner, William R., and Helmuth. 2,949,496.

Moore Drop Forging Co.: *See*—
Vose, Robert W. 2,948,916.

Moore, Harry W.: *See*—
Biddison, John M. 2,948,554.

Moore, William H.: *See*—
Moore, Henry W., and Moore. 2,949,313.

Moorhead, Leslie D. Display rack structure. 2,949,323, 8–16–60, Cl. 287—54.

Moreau, Leon: *See*—
Caron, Michel, Chaudron, and Moreau. 2,949,495.

Morgan, Conrad J. Portable sound suppressors for aircraft jet engines. 2,949,164, 8–16–60, Cl. 181—36.

Morgan, Willard L.: *See*—
Colbert, William H., and Morgan. 2,948,287.

Morgenthaler, Frederick W.: *See*—
Smith, Robert E., Mullins, Cannon, and Morgenthaler. 2,949,260.

Morlan, Bryte A.: *See*—
Egar, George W., and Morlan. 2,949,281.

Morrish, Leonard M., and L. E. Muller, to General Motors Corp. Muffler. 2,949,166, 8–16–60, Cl. 181—54.

Moser, Henry W., and W. H. Moore, to Samuel M. Langston Co. Expanding chuck mechanism. 2,949,311, 8–16–60, Cl. 279—3.

Motor Wheel Corp.: *See*—
Johnson, Stanley M. 2,949,068.

Motorola, Inc.: *See*—
Graziano, Victor, and Lisciosmo. 2,949,605.
Hill, Frederick P. 2,949,532.
Waterman, Herbert C. 2,948,818.

Moyle, Clarence L.: *See*—
Sims, Jacqueline G., and Moyle. 2,949,482.

Mudge, Will M., R. C. and J. W. Alexander. Dispensing caps for collapsible containers. 2,949,215, 8–16–60, Cl. 222—490.

Muehlberger, Louis: *See*—
Quatschalgy, Gottfried K., Muehlberger, and Hahn. 2,949,060.

Mueller, Herman H., deceased; E. M. Mentzer, executrix. Selective record lowering, lifting, and releasing means for automatic interlocating and conventional record players. 2,949,307, 8–16–60, Cl. 274—10.

Mueller, Herman H., deceased; E. M. Mentzer, executrix. Record support and drive means. 2,949,310, 8–16–60, Cl. 274—10.

Muirhead & Co. Ltd.: *See*—
Richards, Robert D. 2,949,409.

Muller, Lloyd E.: *See*—
Morrish, Leonard M., and Muller. 2,949,165.

Mullins, William D., Jr.: *See*—
Smith, Robert E., Mullins, Cannon, and Morgenthaler. 2,949,260.

Multiplastics, Inc.: *See*—
Grover, Lafayette C., and Schmorde. 2,948,974.

Murdock, Guy C., and H. J. Schneider, to Rohm & Haas Co. New unsaturated glycidyl ethers, polymers thereof and methods for producing them. 2,949,474, 8–16–60, Cl. 260—949.

Murray, Alan E. Interdigital toe-positioner. 2,949,112, 8–16–60, Cl. 128—81.

Murtaugh, Justin J., and J. J. Mahler, to Dawe's Laboratories, Inc. Production of levulose. 2,949,389, 8–16–60, Cl. 127—30.

Musser, C Walton: *See*—
Benditt, Albert, and Musser. 2,949,061.

Musser, C Walton, to United States of America, Army. Post landing parachute release. 2,949,230, 8–16–60, Cl. 294—83.1.

Myers, Clyde B., to Diamond Alkali Co. Process for treating alkali metal carbonates. 2,948,587, 8–16–60, Cl. 34—12.

Nalco Chemical Co.: *See*—
Reuter, Raymond. 2,949,275.

Narod, Jan A., to United States of America, Navy. Millimicrosecond pulse circuits. 2,949,578, 8–16–60, Cl. 328—193.

National Broach & Machine Co.: *See*—
Sigman, John J., Jr. 2,948,992.

National Dairy Products Corp.: *See*—
Kraft, George H., Grosscup, and Bell. 2,949,372.

National Malleable and Steel Castings Co.: *See*—
Kosak, Edward. 2,949,195.

National Textile Products Co.: *See*—
Lee, Albert J. 2,948,428.

National-Standard Co.: *See*—
Manson, Walter J. 2,949,250.

National Standard Co. Ltd., The: *See*—
White, Horace W. 2,948,196.

Negre, Pierre: *See*—
Perrie, Franck G. M., and Negre. 2,949,012.

Neipert, Marshall F., R. D. Blue, and R. M. Hunter, to The Dow Chemical Co. Mercury-cell electrolysis of sodium chloride brine. 2,949,412, 8–16–60, Cl. 204—99.

Nessell, Joseph F., to Parker Hannifin Corp. High pressure sealing device. 2,949,225, 8–16–60, Cl. 285—23.

Nerlich, Willi, to Siemens-Schuckertwerke Aktiengesellschaft. Electric terminal connector. 2,949,597, 8–16–60, Cl. 339—272.

Nessell, Clarence W., to Minneapolis-Honeywell Regulator Co. Zone temperature control apparatus with shifting authority. 2,948,234, 8–16–60, Cl. 236—11.

Neustadter, Irving. Dental jacket-crowns and frames therefor. 2,948,963, 8–16–60, Cl. 32—12.

Newey, Herbert A., to Shell Oil Co. Process for curing materials possessing internal epoxy groups. 2,949,441, 8–16–60, Cl. 260—78.4.

Newland, Albert J., to Bendix Aviation Corp. Control system for aircraft. 2,949,262, 8–16–60, Cl. 244—77.

New York Air Brake Co., The: *See*—
Vander Kaay, Henry A. 2,949,097.

Nielsen, Morris L.: *See*—
Malowan, John E., and Nielsen. 2,949,385.

Nolte, Louis C. Miter box for portable electric saws. 2,949,139, 8–16–60, Cl. 143—6.

Nordahl, John G., and W. D. Winter, to Sperry Rand Corp. Electronic amplifier. 2,949,543, 8–16–60, Cl. 307—88.5.

Noren, Tore H.: *See*—
Federighi, George J., and Noren. 2,949,130.

Norrie, George O.: *See*—
Bailey, Christopher E. G., Norrie, and Smith. 2,949,228.

North American Aviation, Inc.: *See*—
Aldrich, David E., and Bigmon. 2,949,007.
Cramer, Frank B. 2,949,352.
Horsfall, Robert B., Jr., Slater, and Widenmann. 2,949,030.
Smith, Robert E., Mullins, Cannon, and Morgenthaler. 2,949,260.

North American Philips Co., Inc.: *See*—
Ellis, Peter J. 2,949,036.
Gerlach, Hans G., and Dorgelo. 2,949,557.

Norton, Samuel P.: *See*—
Shecter, George O., and Hirsch. 2,948,971.

Nystuen, Marcus L., to Economics Laboratory, Inc. Thermostatic time delay relay. 2,949,518, 8–16–60, Cl. 200—122.

Oak Mfg. Co.: *See*—
Fichter, Ludwig J., and Mastney. 2,949,043.

Oberg, Albert E., to Westinghouse Electric Corp. Electron discharge device. 2,949,556, 8–16–60, Cl. 313—82.

O'Donovan, Roland J.: *See*—
Knight, Philip H., and O'Donovan. 2,949,130.

Ogawa, Chusaku. Illuminating devices for the phonograph. 2,949,529, 8–16–60, Cl. 240—2.12.

Okaya, Akira. Matched magic tee. 2,949,587, 8–16–60, Cl. 333—11.

Oldershaw, Charles F., to The Dow Chemical Co. Washing tow bundles of synthetic fibers. 2,949,337, 8–16–60, Cl. 8—151.2.

Oldfield, Lucy F., and J. H. Partridge, deceased (by E. and M. J. A. Partridge, administrators), to The General Electric Co. Ltd. Glass compositions and glass-to-metal seals. 2,948,992, 8–16–60, Cl. 49—92.5.

Olin Mathieson Chemical Corp.: *See*—
Fried, Josef. 2,949,478.

Olofson, Karl E., Sr., to Western Electric Co., Inc. Article holding-device. 2,949,291, 8–16–60, Cl. 269—104.

Olympia Werke A.G.: *See*—
Kernchen, Günter. 2,949,177.

Optical Gaging Products, Inc.: *See*—
Polidor, Edward C. 2,949,057.

OPTOmechanisms, Inc.: *See*—
Brault, Andre R. 2,949,005.

Oroshnik, William, and A. D. Mebane, to Ortho Pharmaceutical Corp. Quaternary ammonium salts of 2,2-diphenyl ethyl-amino ethyl ethers. 2,949,485, 8–16–60, Cl. 260—567.6.

Ortho Pharmaceutical Corp.: *See*—
Oroshnik, William, and Mebane. 2,949,485.

Ortner, Samuel. Push button knife. 2,948,961, 8–16–60, Cl. 30—162.

Otis Elevator Co.: *See*—
Fabula, Andrew. 2,949,178.

Ottestad, Jack B., and S. A. Skeen, Jr., to General Dynamics Corp. Pressure generator. 2,949,080, 8–16–60, Cl. 103–80.

Ottestad, Jack B., and S. A. Skeen, to General Dynamics Corp. Pneumatic actuator. 2,949,096, 8–16–60, Cl. 121–38.

Owens, Thomas M. Removing impurities from fluid suspensions. 2,949,187, 8–16–60, Cl. 209–2.

PGAC Development Co.: *See*—
Scherbatskoy, Serge A. 2,949,535.

Pacaud, Bernard F. D.: *See*—
Davies, R. J., and Pacaud. 2,949,316.

Package Machinery Co.: *See*—
Sloan, Francis J. 2,949,218.

Pagnotti, Joseph R., and B. Barron, to Mineral Processing Corp. Separation of fine sized solids. 2,949,190, 8–16–60, Cl. 209–172.5.

Panicci, Richard L., to Hampden Specialty Products, Inc. Mechanism for locking back of article of furniture in adjusted position. 2,949,155, 8–16–60, Cl. 155–139.

Parke, Davis & Co.: *See*—
Hoefle, Milton L., and Meyer. 2,949,466.

Parker Hannifin Corp.: *See*—
Mensell, Joseph F. 2,949,325.

Parsell, Kendrick T. Cabinet for merchandising packages of frozen food. 2,949,018, 8–16–60, Cl. 62–251.

Partridge, Ethel: *See*—
Oldfield, Lucy F., and Partridge. 2,948,992.

Partridge, John H.: *See*—
Oldfield, Lucy F., and Partridge. 2,948,992.

Partridge, Michael J. A.: *See*—
Oldfield, Lucy F., and Partridge. 2,948,992.

Paul, Theodore R. Banding or binding electrical rotors or armatures. 2,949,555, 8–16–60, Cl. 310–271.

Pavlecka, Vladimir H., to American Machine & Foundry Co. Supersonic centripetal compressor. 2,949,224, 8–16–60, Cl. 230–124.

Pawlowski, Juri: *See*—
Meskat, and Pawlowski. 2,948,992.

Pawlowski, Wilfried: *See*—
Zeyen, Fritz-Otto, and Pawlowski. 2,949,499.

Pearson, John: *See*—
La Rocca, Edward W., and Pearson. 2,948,923.

Peck, T. T., Jr.: *See*—
Lee, Joseph E. 2,949,110.

Peras, Lucien, to Regie Nationale des Usines Renault. Automatic devices for adjusting disk brakes. 2,949,173, 8–16–60, Cl. 188–196.

Perez, George R.: *See*—
Rayburn, Charles C., Black, and Perez. 2,949,148.

Person, Robert P., to Boeing Airplane Co. Articulated aircraft refueling boom. 2,949,265, 8–16–60, Cl. 244–135.

Petersen, Axel L. Rotary engine. 2,949,100, 8–16–60, Cl. 123–43.

Peterson, Floyd V. Electrical precipitator apparatus of the liquid spray type. 2,949,168, 8–16–60, Cl. 183–7.

Pfaff, G. M., AG: *See*—
Schenkengel, Emerich. 2,949,085.

Pfam, William G., to Bell Telephone Laboratories, Inc. Separation process. 2,949,348, 8–16–60, Cl. 23–310.

Pfeiffer, Fred B., ½ to Crossan, Jesse R. Packaging. 2,948,998, 8–16–60, Cl. 53–28.

Phelps, Edwin H.: *See*—
Cosgland, Frank H., Jr., Phelps, Cranford, and Daniel. 2,948,934.

Philbrick-Strickland Laminates, Inc.: *See*—
Strickland, Edward T. 2,949,149.

Philippe, Howard L., to The Imperial Brass Mfg. Co. Air nozzle adapter. 2,949,244, 8–16–60, Cl. 239–589.

Phillips Petroleum Co.: *See*—
Austin, Oliver K. 2,948,918.
Bailey, Grant C., Holm, and Clark. 2,949,429.
Bauer, Robert D., and Mitchell. 2,949,408.
Benedict, Bruce C. 2,949,419.
Hawkins, Harold M., and Goldtrap. 2,949,447.
King, William R. 2,949,349.
Kube, Adolph M. L. 2,949,423.
Kuntz, Louis E., and Remke. 2,949,126.
Matthews, Robert W. 2,948,919.
Van Pool, Joe. 2,949,347.

Phillips, Stanley H., to The Warner Brothers Co. Brassiere or like garment. 2,949,115, 8–16–60, Cl. 128–482.

Pieper, Josef H. F., and J. E. V. N. Stauch, to Hercules Powder Co. Process for the preparation of organic nitroso compounds. 2,949,490, 8–16–60, Cl. 260–647.

Pierce, Lawrence, and M. P. White, to Westinghouse Electric Corp. Permanent magnets. 2,949,569, 8–16–60, Cl. 317–201.

Pierotti, Gino J.: *See*—
Hood, George C., Smith, and Pierotti. 2,949,343.

Pike, Ronald M.: *See*—
Bailey, Donald L., and Pike. 2,949,434.

Pillsbury Co., The: *See*—
Zoeller, Richard J., and Henderson. 2,949,309.

Pioneer Well Tools, Inc.: *See*—
Malina, Robert B. 2,949,127.

Pitler, Richard K.: *See*—
Dyrkacz, Wasil W., Reynolds, MacFarlane, and Pitler. 2,948,355.

Pittsburgh Coke & Chemical Co.: *See*—
Mackay, Johnstone S. 2,949,484.

Place, Donald E., to American Machine & Foundry Co. Bowling ball retarding device. 2,949,302, 8–16–60, Cl. 273–47.

Plawchan, John D.: *See*—
Ransohoff, Jackson A., and Plawchan. 2,949,414.

Polaroid Corp.: *See*—
Blout, Elkan R., Green, and Simon. 2,949,359.
Haas, Howard C., and Kamath. 2,949,436.

Polidor, Edward C., to Optical Gaging Products, Inc. Optical gear analyzing means. 2,949,057, 8–16–60, Cl. 88—24.

Poos, George I.: *See*—
Arth, Glen E., Poos, and Sarett. 2,949,472.

Pouradier, Jacques: *See*—
Clavier, Alain C. A., and Pouradier. 2,949,442.

Powell, Orlo A., Jr.: *See*—
Low, Sidney, and Powell. 2,949,320.

Power, James R.: *See*—
Lewis, Benjamin F., and Power. 2,949,507.

Powers Chemco, Inc.: *See*—
Flynn, Floyd W., and Schutt. 2,949,248.

Powers, LeRoy, and J. W. Dudley, to United States of America, Agriculture. Selective gametocidal process. 2,948,987, 8–16–60, Cl. 47—58.

Preiser, Herman S., and F. L. Downs. Electrical connection for cathodic protection. 2,949,417, 8–16–60, Cl. 204—196.

Prete, Ernest, Jr., to G. D. Brown. Quick release buckle with removable strap gripping bars. 2,948,939, 8–16–60, Cl. 24—171.

Preway, Inc.: *See*—
Jenson, Kenneth S. 2,949,236.

Prey, Vinzenz, to American Cyanamid Co. Preparation of substituted thionaphthenes. 2,949,471, 8–16–60, Cl. 260—330.5.

Prime Mfg. Co., The: *See*—
Lucas, John A. 2,949,326.

Pro, George M., to Air Placement Equipment Co. Valve mechanism for cement gunning machines. 2,949,275, 8–16–60, Cl. 251—86.

Provi, Mike A., to The Brearley Co. Bathroom scales. 2,949,288, 8–16–60, Cl. 265—68.

Pugh, William A., Sr. One-piece carton and sipper straw holder. 2,949,217, 8–16–60, Cl. 229—17.

Pulsifer, Frank, to United Shoe Machinery Corp. Machines for trimming shoe-attached heels. 2,948,906, 8–16–60, Cl. 12—87.

Putney, David H., to Stratford Engineering Corp. Alkylation of hydrocarbons utilizing evaporative cooling. 2,949,494, 8–16–60, Cl. 260—683.58.

Quate, Calvin F.: *See*—
Kompfner, Rudolf, and Quate. 2,949,558.

Queen's University: *See*—
Braun, Anton. 2,949,101.

Race, Edward: *See*—
Hindle, Thomas, Lord, and Race. 2,949,134.

Radio Corp. of America: *See*—
Kasan, Benjamin. 2,949,537.
Levene, Martin L. 2,949,596.

Raehs, Wilhelm J., and H. Rauchmann. Aerosol valve. 2,949,243, 8–16–60, Cl. 239—579.

Rafferty, Christopher A., to Bendix Aviation Corp. Pitch control system for aircraft. 2,949,257, 8–16–60, Cl. 244—77.

Ralmann, Firma B., G.m.b.H.: *See*—
Schmidt, Max. 2,948,908.

Ramsa, Alexander P., to United States of America, Army. Small sized helixes and method of their fabrication. 2,948,954, 8–16–60, Cl. 29—155.5.

Ransohoff, Jackson A., and J. D. Plawchan, to United States of America, Atomic Energy Commission. Self-regulating boiling-water nuclear reactors. 2,949,414, 8–16–60, Cl. 204—154.2.

Rapata, George M., to Illinois Tool Works. Plastic fastening device. 2,948,937, 8–16–60, Cl. 24—73.

Rasmussen, Ole-Bendt. Method of manufacturing fibrous and porous materials. 2,948,927, 8–16–60, Cl. 18—47.5.

Rauchmann, Hans: *See*—
Raehs, Wilhelm J., and Rauchmann. 2,949,243.

Rayburn, Charles C., to Illinois Tool Works. Method for forming a wire connector. 2,948,953, 8–16–60, Cl. 29—155.55.

Rayburn, Charles C., to Illinois Tool Works. Low value wound capacitor. 2,949,570, 8–16–60, Cl. 317—260.

Rayburn, Charles C., J. G. Black, Jr., and G. R. Peres, to Illinois Tool Works. Resistor tape applicator. 2,949,148, 8–16–60, Cl. 154—1.

Read, Emanuel F., to Collins Radio Co. Automatic gain control circuit for use in transistor amplifiers. 2,949,533, 8–16–60, Cl. 250—20.

Realty and Industrial Corp.: *See*—
Gubelmann, William S. 2,949,229.

Ree-Ceel Corp.: *See*—
Hughes, William L. 2,949,370.

Reed, Linwood L., to Union Steel Products Co. Crushing machine. 2,949,078, 8–16–60, Cl. 100—43.

Reed, Thomas F.: *See*—
Coleman, William E., and Reed. 2,949,166.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 2,949,173.

Rehrig, Houston, to Rehrig-Pacific Co. Milk crate. 2,949,207, 8–16–60, Cl. 220—19.

Rehrig-Pacific Co.: *See*—
Rehrig, Houston. 2,949,207.

Reid, Donald V., Radio controlled torpedo. 2,949,089, 8–16–60, Cl. 114—21.

Remke, Marvin A.: *See*—
Kuntz, Louis E., and Remke. 2,949,126.

Rentschler, Waldemar T., to Alfred Gauthier G.m.b.H. Intra lens shutter. 2,949,075, 8–16–60, Cl. 95—63.

Resnick, Leroy D., to Chicago Development Corp. High purity titanium-manganese alloy. 2,949,357, 8–16–60, Cl. 75—175.5.

Rettie, George W., and R. D. Hotchkiss. Telephone dialing device. 2,949,508, 8–16–60, Cl. 179—90.

Reuter, Raymond, to Nalco Chemical Co. Siliceous casting cores. 2,949,375, 8–16–60, Cl. 106—38.3.

Reyerson, Lloyd H.: *See*—
Helmse, Robert V., and Reyerson. 2,949,350.

Reykjalin, Charles, to Koren Research & Engineering Co. Clutch mechanism and lubricant therefor. 2,949,175, 8–16–60, Cl. 192—113.

Reynolds, Edward E.: *See*—
Dyrkacz, Wasil W., Reynolds, MacFarlane, and Pitler. 2,949,355

Reynolds Metals Co.: *See*—
Staley, John, and Lewis. 2,949,593.

Richards, Robert D., to Muirhead & Co. Ltd. Electrolytic recording media. 2,949,409, 8–16–60, Cl. 204—2.

Riedel, Albrecht, to VEB Gerate-und Regler-Werke Teltow. Apparatus for indicating unbalance of rotating bodies. 2,949,033, 8–16–60, Cl. 73—462.

Riggs, John H., to The Rudolph Wurlitzer Co. Selector device for automatic phonographs. 2,949,809, 8–16–60, Cl. 274—10.

Riley Stoker Corp.: *See*—
Miller, Earle C. 2,949,099.

Rippere, Robert O.: *See*—
Abbott, Henry H., Rippere, Williams, and Williford. 2,949,506.

Ritter Co., Inc.: *See*—
Ziegler, Eugene R. 2,949,107.

Roberts, Benjamin K., deceased; E. G. Roberts, administratrix, to King-Seeley Corp. Inverted mold apparatus for producing ice cubes. 2,949,019, 8–16–60, Cl. 62—347.

Roberts, Esther G.: *See*—
Roberts, Benjamin K. 2,949,019.

Robertshaw-Fulton Controls Co.: *See*—
Roper, Charles G., and Gilchrist. 2,949,278.

Rocchini, Albert G., and C. E. Trautman, to Gulf Research & Development Co. Residual fuels. 2,949,008, 8–16–60, Cl. 60—35.6.

Rochrig, Frederick L. O. Safety device. 2,949,129, 8–16–60, Cl. 137—539.

Rocklin, Albert L., to The Dow Chemical Co. Method for preparing polychlorothiophenols. 2,949,487, 8–16–60, Cl. 260—609.

Rocklin, Albert L., to The Dow Chemical Co. Method for preparing polychlorophenyl ethers and thioethers. 2,949,488, 8–16–60, Cl. 260—609.

Rocks, James K.: *See*—
Hunter, Austin R., and Rocks. 2,949,366.

Rockwell Mfg. Co.: *See*—
Gilmore, Edward R., and Spore. 2,949,125.

Rockwell-Standard Corp.: *See*—
Bixby, Leo A. 2,949,040.

Rodman, Ernest A., to E. I. du Pont de Nemours and Co. Sheet material. 2,949,394, 8–16–60, Cl. 154—50.

Rohling, Heinz: *See*—
Mauthe, Gustav, Graulich, and Rohling. 2,949,335.

Rohloff, Ebbe, and L. Ssecsi, to Siemens-Schuckertwerke Aktiengesellschaft. Direct current to alternating current inverter. 2,949,565, 8–16–60, Cl. 315—98.

Rohm & Haas Co.: *See*—
Lo, Chien-Pen. 2,949,399.
Lo, Chien-Pen. 2,949,465.
Murdoch, Guy C., and Schneider. 2,949,474.

Roper, Charles G., and E. S. Gilchrist, to Robertshaw-Fulton Controls Co. Automatic process control system. 2,949,273, 8–16–60, Cl. 251—26.

Rosenqvist, Per O., and Z. E. Forsedn, to Aktiebolaget Bofors. Liners for ball and tube mills. 2,949,247, 8–16–60, Cl. 241—183.

Rosenthal, Jerome B.: *See*—
Shecter, George O., and Hirsch. 2,948,971.

Rösner, Oskar, to Clevite Corp. Method for the recovery of alkaline solutions containing germanium. 2,949,340, 8–16–60, Cl. 23—51.

Rothermel, Edward M., and R. B. Waddell, Jr., to Dayco Corp. Flexible conduit. 2,949,133, 8–16–60, Cl. 138—56.

Rowley, Frank A.: *See*—
Smith, Eric W. A., and Rowley. 2,949,523.

Rubinoff, Morris, to United States of America, Army. Magnetic switching devices and systems. 2,949,504, 8–16–60, Cl. 179—15.

Rucker, John T., to Hooker Chemical Corp. Selective hydrogenation of chlorobenzenes. 2,949,491, 8–16–60, Cl. 260—650.

Rule, Eva A.: *See*—
Rule, Richard F. 2,948,996.

Rule, Richard F., 50% to E. A. Rule. Apparatus for string polishing work pieces. 2,948,996, 8–16–60, Cl. 51—148.

Ruotolotenmaki, Veikko S. Drop-foot brace. 2,949,111, 8–16–60, Cl. 128—80.

Ruscus, Paul V.: *See*—
Bayles, Barney E., and Ruscus. 2,949,029.

Rushing, Frank C., to United States of America, Atomic Energy Commission. Housings and mountings for centrifuges. 2,949,045, 8–16–60, Cl. 74—609.

Rutledge, Thomas F.: *See*—
Buonelli, Alio J., and Rutledge. 2,949,480.

Sakaguchi, Kinichiro, S. Abe, and T. Beppu, to Kyowa Hakko Kogyo Kabushiki Kaisha. Method of producing allo-isocitric acid by fermentation. 2,949,404, 8–16–60, Cl. 195—36.

Salverda, Robert E. Trigger guard with trigger protector. 2,948,078, 8–16–60, Cl. 42—1.

Sand, John G.: *See*—
Totaro, Thomas C., and Sand. 2,949,327.

Sanders Associates, Inc.: *See*—
Kline, Jack. 2,949,581.

Sanford, David P.: *See*—
Huck, William F., Albrecht, and Sanford. 2,949,300.

Sarett, Lewis H.: *See*—
Arth, Glen E., Poos, and Sarett. 2,949,472.

Sarett, Lewis H., to Merck & Co. Inc. 3,20-diketo-11-oxygenated-17,21-dihydroxallopregnane 2-cyclic alkylene ketal 21-organic sulfonate compounds. 2,949,453, 8–16–60, Cl. 260—239.55.

Sargeant, Walter E., to General Motors Corp. Timing control circuit. 2,949,583, 8–16–60, Cl. 331—114.

Savage, Albert E., to The Dow Chemical Co. Process for preparing alkyl hydroxyalkyl cellulose ethers and the product obtained thereby. 2,949,452, 8–16–60, Cl. 260—231.

Savage, Richard L.: *See*—
Dickerman, Gilbert K., Kaulakis, and Savage. 2,949,882.

Sawyer, Charles F., Jr., to Vanadium-Alloys Steel Co. Manufacture of metal stock having internal holes. 2,948,957, 8–16–60, Cl. 29—428.

Scapa Dryers Ltd.: *See*—
Hindle, Thomas, Lord, and Race. 2,949,134.

Scarioni, Romeo. Baking furnace. 2,949,524, 8–16–60, Cl. 219—35.

Schenkengel, Emerich, to G. M. Pfaff AG. Presser foot for sewing machine. 2,949,085, 8–16–60, Cl. 112—235.

Scherbatskoy, Serge A., to PGAC Development Co. Nuclear well logging method and apparatus. 2,949,535, 8–16–60, Cl. 250—83.3.

Schlayer, Earle G., H. Gegner, L. W. Ballwig, and J. R. Sheridan, to American Cyanamid Co. Manufacture of suture packages. 2,948,999, 8–16–60, Cl. 53—29.

Schlesinger, Albert, and S. M. Gordon, to Endo Laboratories Inc. Pyrrolidino-2,6-dimethylacetanilide. 2,949,470, 8–16–60, Cl. 260—326.3.

Schlinger, Warren G.: *See*—
Eastman, du Bois, and Schlinger. 2,949,420.

Schloemann Aktiengesellschaft: *See*—
Billen, Peter. 2,949,196.

Schmidt, Edward. Apparatus for washing and cleaning automobiles and other surfaces and the like. 2,948,907, 8–16–60, Cl. 15—97.

Schmidt, Max, to Firma B. Raimann G.m.b.H. Polishing machines for wood plates and the like. 2,948,908, 8–16–60, Cl. 15—102.

Schmorde, John H.: *See*—
Grover, Lafayette C., and Schmorde. 2,948,974.

Schneider, Harold N., to General Electric Co. Contact structure for an electric circuit interrupter. 2,949,520, 8–16–60, Cl. 200—144.

Schneider, Henry J.: *See*—
Murdoch, Guy C., and Schneider. 2,949,474.

Schoppe & Faeser G.m.b.H.: *See*—
Knappe, Otto. 2,949,037.

Schott, William C., to The Cincinnati Galvanizing Co. Leg construction for a trash burner. 2,949,209, 8–16–60, Cl. 220—69.

Schubert, Ernest J., to Westinghouse Electric Corp. Arithmetic unit for floating radix notation. 2,949,281, 8–16–60, Cl. 235—177.

Schüffer, Julius, and W. Van Acteren. Method of firing ceramic tubes suspended in a shaft oven. 2,948,949, 8–16–60, Cl. 26—157.

Schuls, Richard, to Allmänna Svenska Elektriska Aktiebolaget. High tension air blast circuit breaker. 2,949,521, 8–16–60, Cl. 200—148.

Schumann, Marvin A., and A. C. Du Vall. Wire storage and pay out device. 2,949,252, 8–16–60, Cl. 242—85.

Schutt, Norman C.: *See*—
Flynn, Floyd W., and Schutt. 2,949,248.

Searle, G. D., & Co.: *See*—
Jiu, James. 2,949,477.
Johns, William F. 2,949,475.
Tyner, David A. 2,949,476.

Sedgfield, Hugh B., and R. Lennox-Napier, to The Sperry Gyroscope Co. Ltd. Aircraft navigation apparatus. 2,949,261, 8–16–60, Cl. 244—77.

Seem, Warren A.: *See*—
Stoddard, Nicholas J., and Seem. 2,949,253.

Seirig, Alfred K., A. Enders, and H. J. Strunck, to Wernicke & Co. K.G. Adjusting device for grinding discs. 2,948,997, 8–16–60, Cl. 51—165.

Sekizawa, Yasuharu: *See*—
Arishima, Masao, and Sekizawa. 2,949,406.
Arishima, Masao, and Sekizawa. 2,949,407.

Selzer, Clarence F.: *See*—
Ebert, Max E., and Selzer. 2,949,176.

Sennet, Edith L.: *See*—
Levkoff, David. 2,949,220.

Sepp, Oscar W., Jr., to M. Steinthal & Co., Inc. Rotating parachute. 2,949,246, 8–16–60, Cl. 244—145.

Servo Corp. of America: *See*—
Blackstone, Henry. 2,949,035.

Sevcik, John G., to Burton-Dixie Corp. Roll-away beds. 2,948,905, 8–16–60, Cl. 5—111.

Shadle, Paul W., to Hycon Mfg. Co. Temperature compensated bolometer bias supply. 2,949,575, 8–16–60, Cl. 323—22.

Shaft Machines Ltd.: *See*—
MacAlpine, Roderick T., and James. 2,949,201.

Shecter, George O., and I. L. Hirsch, ⅓s to J. B. Rosenthal, ⅓s to S. P. Norton, ⅓s to G. MacRae, ⅓s to D. D. Meicher, ⅓s to M. Meicher, and ⅓ to K. Douglas. Footwear. 2,948,971, 8–16–60, Cl. 36—2.5.

Sheets, Ted C.: *See*—
Stutzke, William A., and Sheets. 2,948,988.

Shell Oil Co.: *See*—
Cogan, Myles H. R. 2,948,995.
Hood, George C., Smith, and Pierotti. 2,949,348.
Newey, Herbert A. 2,949,441.

Shepard, Wayland L., to General Electric Co. Television camera system. 2,949,500, 8–16–60, Cl. 178—7.2.

Sheridan, Jerome R.: *See*—
Schlayer, Earle G., Gegner, Ballwig, and Sheridan. 2,948,999.

Sherman, Kenneth C. Illumination for bowling alleys. 2,949,303, 8–16–60, Cl. 273—61.

Sherwood, Glenn L., to Kaywood Corp. Machine for use in manufacturing blind slats and the like. 2,948,807, 8–16–60, Cl. 1—125.

Shoaltz, Richard L. Door lock. 2,949,329, 8–16–60, Cl. 292—336.3.

Shur, Ira, to Waldes Kohinoor, Inc. Fastening means for panels, sheets and the like. 2,949,143, 8–16–60, Cl. 151—69.

Siebel, Harold M. Telephone hanger. 2,949,510, 8–16–60, Cl. 179—146.

Sieger, George M., and E. C. Yen, to American Cyanamid Co. Stable anti-hemorrhagic powders. 2,949,400, 8–16–60, Cl. 167—81.

Siemens & Halske Aktiengesellschaft: *See*—
Veith, Werner A. 2,949,560.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Nerlich, Willi. 2,949,597.
Rohloff, Ebbe, and Szecsi. 2,949,565.

Sigman, John J., Jr., to National Broach & Machine Co. Locating small pinions on arbors. 2,948,952, 8–16–60, Cl. 29—90.

Sikes, Moyce H. Coin controlled game apparatus. 2,949,210, 8–16–60, Cl. 221—7.

Silliman, Sheldon D., to Westinghouse Electric Corp. Pulse generators. 2,949,582, 8–16–60, Cl. 331—113.

Simon, Myron S.: *See*—
Blout, Elkan R., Green, and Simon. 2,949,359.

Simonis Co.: *See*—
Kendall, Edward R. 2,949,374.
Kendall, Edward R., and Meister. 2,949,373.

Simons, Robert L., to U.S. Electrical Motors, Inc. Positive lock electromagnetic brake structure. 2,949,172, 8–16–60, Cl. 188—171.

Sims, Jacqueline G., and C. L. Moyle, to The Dow Chemical Co. 2-nitro-3,4,6-trichlorophenyl benzenesulfonates. 2,949,482, 8–16–60, Cl. 260—456.

Skeen, Samuel A.: *See*—
Ottestad, Jack B., and Skeen. 2,949,096.

Skeen, Samuel A., Jr.: *See*—
Ottestad, Jack B., and Skeen. 2,949,080.

Skinner, Robert K.: *See*—
Kessler, James R., Miller, and Skinner. 2,949,159.

Slater, John M.: *See*—
Horsfall, Robert B., Jr., Slater, and Widenmann. 2,949,030.

Sleddon, Geoffrey J.: *See*—
Anderson, Robert C., and Sleddon. 2,948,481.

Sloan, Francis J., to Package Machinery Co. Display and collapsible cartons. 2,949,218, 8–16–60, Cl. 229—28.

Slonim, Samual, to Comet Metal Products Co., Inc. Lawn and crop sprinkler. 2,949,241, 8–16–60, Cl. 239—383.

Smiley, Gilbert, to General Radio Co. Adjustable transformer with stabilized contact track. 2,949,592, 8–16–60, Cl. 336—148.

Smith, Eric W. A., and F. A. Rowley, to General Motors Corp. Dielectric heating apparatus. 2,949,523, 8–16–60, Cl. 219—10.77.

Smith, Jack: *See*—
Custin, Thomas G., and Smith. 2,949,584.

Smith, John H.: *See*—
Bailey, Christopher E. G., Norrie, and Smith. 2,949,226.

Smith, John W.: *See*—
Holzschuh, Donald L., and Smith. 2,949,586.

Smith, Leon E. Leaf match case assembly. 2,949,150, 8–16–60, Cl. 206—48.

Smith, Millard, F. Apparatus for heat transfer. 2,949,283, 8–16–60, Cl. 257—137.

Smith, Randolph E.: *See*—
Hood, George C., Smith, and Pierotti. 2,949,343.

Smith, Robert A., to American Viscose Corp. Thick and thin yarn producing apparatus. 2,948,931, 8–16–60, Cl. 19—143.3.

Smith, Robert E., W. D. Mullins, Jr., R. H. Cannon, Jr., and F. W. Morgenthaler, to North American Aviation, Inc. Load factor cut-out switch for aircraft. 2,949,260, 8–16–60, Cl. 244—77.

Smith, Verity C., to Barnstead Still and Sterilizer Co. Liquid handling apparatus. 2,949,119, 8–16–60, Cl. 134—60.

Smith, Walter N. Detachable socket-type steering connection assembly for outboard motors. 2,949,093, 8–16–60, Cl. 115—18.

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
Eggers, Gerhard, and Haberkorn. 2,949,268.
Ferrie, Franck G. M., and Negre. 2,949,012.

Societe STEB: *See*—
Benoit, Claude A. 2,949,552.
Benoit, Claude A. 2,949,553.

Solatron Electronic Group Ltd., The: *See*—
Bailey, Christopher E. G., Norrie, and Smith. 2,949,228.

Solimine, Nicholas. Multiple image door. 2,949,059, 8–16–60, Cl. 88—85.

Sorenson, Pere C.: *See*—
Lawrence, Harry J. 2,949,123.

Soucie, Sylvester F., and A. J. Bauer. Cleaning and conveying unit for beet harvester. 2,949,160, 8–16–60, Cl. 171—101.

Soundolier, Inc.: *See*—
Friedman, Norman. 2,949,163.

Southard, Richard L.: *See*—
Laube, Alfred J., Southard, and Cornwell. 2,948,921.

Sparklin, Charles H., to Whirlpool Corp. Cord reel. 2,949,251, 8–16–60, Cl. 242—86.5.

Specialties Development Corp.: *See*—
Helgis, Henry E., and Kalisher. 2,949,274.

Speelman, Daniel L. Oscillator. 2,949,298, 8–16–60, Cl. 272—1.

Spencer, Rolf E., to Electric & Musical Industries Ltd. Rate evaluating apparatus. 2,949,232, 8–16–60, Cl. 235—183.

Sperry Gyroscope Co. Ltd., The: *See*—
Sedgfield, Hugh B., and Lennox-Napier. 2,949,261.

Sperry Rand Corp.: *See*—
Bolton, Robert H. 2,949,576.
Degener, Louis F. 2,948,940.
Eckert, John P., Jr. 2,949,230.
Nordahl, John G., and Winter. 2,949,543.
Tava, Alben J., Adams, and Van Aken. 2,949,594.

Spore Harold E.: *See*—
Gilmore, Edward R., and Spore. 2,949,125.

Sprague Electric Co.: *See*—
Williams, Sidney B. 2,949,182.

Sprague, Frank. Device for separating impurities from gases. 2,949,169, 8–16–60, Cl. 183—32.

Staeuble, Max, to Ciba Ltd. Perinone triazine dyestuffs. 2,949,467, 8–16–60, Cl. 260—249.5.

Staley, John, and T. E. Lewis, to Reynolds Metals Co. Electrical coil formed from multi-layer strip conductor. 2,949,593, 8–16–60, Cl. 336—186.

Stallard, Ralph M., to General Motors Corp. Dielectric embossing. 2,948,929, 8–16–60, Cl. 18—56.

Stamford Chemical Co.: *See*—
Michaels, Edwin B., and Cohen. 2,949,336.

Standard Alfalfa Milling Co.: *See*—
Branom, John. 2,949,362.

Standard Coil Products Co., Inc.: *See*—
Eland, Robert C. A. 2,949,580.

Standard Oil Co. (Ohio), The: *See*—
Grimes, William W. 2,949,422.

Stanney, William J., and G. W. Caley, to Sylvania Electric Products Inc. Transmit-receive switch tube structure. 2,949,562, 8–16–60, Cl. 315—39.

Stare, Carl G. H.: *See*—
Berg, John V., and Stare. 2,948,947.

Stark, John B., to United States of America, Agriculture. Separations of nitrogenous organic compounds. 2,949,450, 8–16–60, Cl. 260—211.5.

Statmaster Corp.: *See*—
Friedel, Murray. 2,949,077.

Stauch, Johanna E. V. N.: *See*—
Pieper, Josef H. F., and Stauch. 2,949,490.

Steenbagen, Gerrit: *See*—
Umbricht, Emil, Steenhagen, and Evans. 2,949,285.

Steiner, Max S. Scouring pad. 2,948,911, 8–16–60, Cl. 15—209.

Steinhardt, Amos: *See*—
Steinhardt, David W. 2,949,377.
Steinhardt, David W. 2,949,381.

Steinhardt, David W., deceased, A. Steinhardt and F. A. Goldwater, executors. Transfer composition containing a triphenylcarbinol compound and precipitated calcium carbonate. 2,949,377, 8–16–60, Cl. 106—272.

Steinhardt, David W., deceased, A. Steinhardt and F. A. Goldwater, executors. Duplicating sheet coated with a colorless waxy transfer material. 2,949,381, 8–16–60, Cl. 117—36.

Steinthal, Augustus J., to M. Steinthal & Co., Inc. Drag chute system for aircraft. 2,949,268, 8–16–60, Cl. 244—113.

Steinthal, M. & Co., Inc.: *See*—
Sepp, Oscar W., Jr. 2,949,266.
Steinthal, Augustus J. 2,949,263.

Stencel, Fred B., to Amcel Propulsion, Inc. Fast-acting parachutes. 2,949,267, 8–16–60, Cl. 244—147.

Stephan, Kurt: *See*—
Glueckstein, Henry J., Foy, and Stephan. 2,949,522.
Glueckstein, Henry J., and Stephan. 2,949,511.

Stephenson, Geoffrey H.: *See*—
Le May, Christopher A. G., and Stephenson. 2,949,600.

Stoddard, Nicholas J., and W. A. Seem, to Lessona Corp. Tension device for use in processing textile yarns. 2,949,253, 8–16–60, Cl. 242—154.

Stone, William M.: *See*—
Magowirk, Clarence E., and Stone. 2,948,973.

Stora Kopparbergs Bergslags Aktiebolag: *See*—
Cederquist, Karl N. 2,949,010.

Stout, George C., to Bendix Aviation Corp. Apparatus and method for preventing backlash in steering mechanisms. 2,949,256, 8–16–60, Cl. 244—50.

Stout, Minor W. Controls for combustion apparatus. 2,949,235, 8–16–60, Cl. 236—26.

Stratford Engineering Corp.: *See*—
Putney, David H. 2,949,494.

Strickland, Edward T., to Philbrick-Strickland Laminates, Inc. Apparatus for making a laminate. 2,949,149, 8–16–60, Cl. 154—1.7.

Strohmaier, Richard G. Folding carrier device. 2,949,314, 8–16–60, Cl. 280—36.

Strube, Richard E., to The Upjohn Co. 3-amino-5-(para-hydroxy-benzylidene) rhodanine. 2,949,464, 8–16–60, Cl. 260—240.

Strunck, Hans J.: *See*—
Seirig, Alfred K., Enders, and Strunck. 2,948,997.

Stuart, Harold J., to E. I. du Pont de Nemours and Co. Coating compositions containing epoxyhydroxy polyether resin and the reoperation of alkyd enamels with same. 2,949,380, 8–16–60, Cl. 117—2.

Stubbs, John J., D. M. Watts, and T. Ingham, to The English Electric Co. Ltd. Electrical measuring means for nuclear reactors. 2,949,415, 8–16–60, Cl. 204—193.2.

Sturgeon, Stocker S., to The Foxboro Co. Electrode construction for electromagnetic flowmeters. 2,949,551, 8–16–60, Cl. 310—11.

Stutske, William A., and T. C. Sheets, to Kimble Glass Co. Machine for sealing face plates to cathode-ray tubes. 2,948,988, 8–16–60, Cl. 49—1.

Submerged Combustion, Inc.: *See*—
Heinze, Robert V., and Reyerson. 2,949,350.

Sumerak, Paul J. Threaded insert with projections. 2,949,142, 8–16–60, Cl. 151—41.73.

Sun Oil Co.: *See*—
Jesl, James L. 2,949,418.
Mills, Ivor W. 2,949,421.

Sunday, James J., to International Mfg. Co. Booster heaters for water circulating systems. 2,949,106, 8–16–60, Cl. 126—350.

Sundstrand Corp.: *See*—
Swanson, Fred R., and Hanson. 2,949,063.

Surface Conduction Inc.: *See*—
Hafner, Theodore. 2,949,589.

Swank, Inc.: *See*—
Winthrop, Mitchell. 2,948,936.

Swann, A. K.: *See*—
Marvin, Orrin F. 2,949,339.

Swanson, Fred R., and S. A. Hanson, to Sundstrand Corp. Milling machine. 2,949,063, 8–16–60, Cl. 90—11.

Swanson, Sven V., to Tyler Refrigeration Corp. Time temperature defrost control. 2,949,017, 8–16–60, Cl. 62—155.

Swarr, Jay N.: *See*—
Eldson, Dennis L., and Swarr. 2,949,124.

Swerbinsky, Leo: *See*—
Belton, Joseph F., Jr., and Swerbinsky. 2,949,014.

Swindell-Dressler Corp.: *See*—
Dressler, Philip. 2,948,946.

Sylvania Electric Products Inc.: *See*—
Adams, John E. 2,949,364.
Lehner, William L., and Carlsen. 2,949,184.
Stanney, William J., and Caley. 2,949,562.

Szecsi, Laszlo: *See*—
Rohloff, Ebbe, and Szecsi. 2,949,565.

Tamarin, Bernard J. Vacuum cleaner construction. 2,948,913, 8–16–60, Cl. 15—323.

Tarkington, Terry W., and N. T. Anderson, to The Chemstrand Corp. Fiber-forming composition containing an acrylonitrile polymer plasticized with tri-(2-ethylhexyl) phosphate. 2,949,432, 8–16–60, Cl. 260—30.6.

Taubman, Theodore: *See*—
Blumberg, Benjamin, Blumberg, and Taubman. 2,949,242.

Tava, Alben J., J. S. Adams, and R. C. Van Aken, to Sperry Rand Corp. Electric temperature detector. 2,949,504, 8–16–60, Cl. 338—26.

Tayco Developments, Inc.: *See*—
Taylor, Paul H. 2,949,315.

Taylor, Halsey W. Projectors for water drinking fountains. 2,949,238, 8–16–60, Cl. 239—31.

Taylor, Paul H., to Tayco Developments, Inc. Compressible liquid vehicle suspension and power system. 2,949,315, 8–16–60, Cl. 280—124.

Telefunken G.m.b.H.: *See*—
Machts, Joachim, and Bonk. 2,949,311.

Texaco Inc.: *See*—
Eastman, du Bois, and Schlinger. 2,949,420.

Texas Instruments Inc.: *See*—
Jackson, Edmond D. 2,949,498.

Thermo Auto-Matic Starter, Inc.: *See*—
Davis, Roscoe. 2,949,104.
Davis, Roscoe. 2,949,105.

Thiega, Bernard J., to The Dow Chemical Co. Stabilized foam-providing compositions. 2,949,426, 8–16–60, Cl. 252—307.

Thom, Wenzel W., ¼ to C. D. Jones. Expansion joint cover. 2,948,994, 8–16–60, Cl. 50—173.

Thomas, Chester A.: *See*—
Merritt, Thomas W., and Thomas. 2,949,276.

Thomsen, Alfred M. Method of producing sodium and potassium sulphate from pegmatite. 2,949,342, 8–16–60, Cl. 23—121.

Thorner, Robert H. Defrosting control means for refrigeration apparatus. 2,949,016, 8–16–60, Cl. 62—153.

Tingley, Loyal H., Jr. Clothes treating liquid dispenser for automatic washing machines. 2,949,025, 8–16–60, Cl. 68—207.

Tinnerman Products, Inc.: *See*—
Fiora, Laurence H. 2,948,958.
Holton, Robert J. 2,948,938.

Titanium Metals Corp. of America: *See*—
Beck, Kenneth G. 2,949,411.

Tobacco Machine Supply Co., Inc.: *See*—
Long Benjamin H. 2,949,116

Todd, Charles W., to E. I. du Pont de Nemours and Co. Method and composition for the control of undesired vegetation. 2,949,354, 8–16–60, Cl. 71—2.7.

Todd, William H.: *See*—
Coker, James N., and Todd. 2,949,469.

Tomlinson, Terence B., to The General Electric Co. Ltd. Electrical switching circuits. 2,949,538, 8–16–60, Cl. 250—213.

Toppel, Otmar, to Firma Aschaffenburger Zellstoffwerke A.G. Neutralising lignin-containing liquors. 2,949,448, 8–16–60, Cl. 260—124.

Torrelli, Frank. Tie bars for spacing curb forms. 2,948,943, 8–16–60, Cl. 25—118.

Totaro, Thomas C., and J. G. Sand, to Hercules Galion Products, Inc. Latch assembly for tail gates and the like. 2,949,327, 8–16–60, Cl. 292—26.

Townend, Gordon H., and W. Horton, to G.K.N. Groups Services Ltd. Counter devices. 2,949,227, 8–16–60, Cl. 235—91.

Toyoshima, Shigeshi: *See*—
Ueda, Takeo, Kato, Toyoshima, and Wachi. 2,949,479.

Tracy, Herbert E., to Borg-Warner Corp. Mechanical seal for liquid oxygen pump. 2,949,321, 8–16–60, Cl. 286—9.

Trautman, Charles E.: *See*—
Rocchini, Albert G., and Trautman. 2,949,008.

Traynor, Edward J., Jr., to Westinghouse Electric Corp. Flexible bonded mica insulation. 2,949,150, 8–16–60, Cl. 154—2.6.

Treshow, Michael, to United States of America, Atomic Energy Commission. Loading and unloading device. 2,949,202, 8–16–60, Cl. 214—658.

Tri-Wall Containers, Inc.: *See*—
Goldstein, Samuel. 2,949,151.

Tyler Refrigeration Corp.: *See*—
Swanson, Sven V. 2,949,017.

Tyner, David A., to G. D. Searle & Co. 16-alkylestratriene-3,16,17-triols and derivatives thereof. 2,949,476, 8–16–60, Cl. 260—397.5.

Ueda, Takeo, S. Kato, S. Toyoshima, and T. Wachi, to Dainippon Pharmaceutical Co., Ltd. Acyl derivatives of aminonaphthalene-sulfonamide. 2,949,479, 8–16–60, Cl. 260—401.

Umbricht, Emil, G. Steenhagen, and D. M. Evans, to Ajem Laboratories, Inc. Gas washing apparatus. 2,949,285, 8–16–60, Cl. 261—3.

Unilever Ltd.: *See*—
Logan, David G. 2,949,502.

Union Carbide Corp.: *See*—
Bailey, Donald L., and Pike. 2,949,434.
Freund, Gustav, II, and Grabauskas. 2,949,371.
Hill, Clifford W., and Blanchard. 2,949,526.

Union Steel Products Co.: *See*—
Reed, Linwood L. 2,949,078.

United-Carr Fastener Corp.: *See*—
Van Buren, Harold S., Jr. 2,949,141.

United Coffee Corp.: *See*—
Arnett, Leslie, and Freise. 2,949,137.

United Shoe Machinery Corp.: *See*—
Merriam, Frederic C., and Hammer. 2,949,443.
Pulsifer, Frank. 2,948,906.

U. S. Electrical Motors, Inc.: *See*—
Simmons, Robert L. 2,949,172.

United States of America
Agriculture: *See*—
Dimick, Keene P., and Makower. 2,949,368.
Powers, Le Roy, and Dudley. 2,948,987.
Stark, John B. 2,949,450.
Air Force: *See*—
Dillahy, Edwin F. 2,948,951.
Langton, William G. 2,949,536.
Army: *See*—
Benditt, Albert, and Musser. 2,949,061.
Gerhard, Paul G. 2,949,571.
Halliday, Kenneth C., Jr. 2,949,006.
Musser, C. Watson. 2,949,330.
Ramsa, Alexander P. 2,948,954.
Rubinoff, Morris. 2,949,504.
Atomic Energy Commission: *See*—
Feder, Harold M., and Chellew. 2,949,390.
Ransohoff, Jackson A., and Plawchan. 2,949,414.
Rushing, Frank C. 2,949,045.
Treshow, Michael. 2,949,202.
Wheelock, Clifford W. 2,949,416.
Navy: *See*—
Carruthers, Walter W., and Kirkpatrick. 2,948,970.
D'Ooge, Charles L. 2,949,009.
Gerber, Charles F. 2,949,090.
Jopson, Howard B. 2,949,038.
La Rocca, Edward W., and Pearson. 2,948,923.
McVey, Eugene S. 2,949,546.
Narud, Jan A. 2,949,578.

United States Steel Corp.: *See*—
Coleman, William E., and Reed. 2,949,166.
Haeckler, Edward W. 2,948,909.

United Transformer Corp.: *See*—
Craige, Theodore L. 2,949,591.

Universal Oil Products Co.: *See*—
Linn, Carl B., and Vesely. 2,949,338.

Upjohn Co., The: *See*—
Bell, Jerome. 2,949,033.
Strube, Richard E. 2,949,464.

VEB Gerate- und Regler-Werke Teltow: *See*—
Riedel, Albrecht. 2,949,033.

Van Ackeren: *See*—
Schüffler, Julius, and Van Ackeren. 2,948,949.

Vanadium-Alloys Steel Co.: *See*—
Sawyer, Charles P., Jr. 2,948,857.

Van Aken, Robert C.: *See*—
Tava, Alben J., Adams, and Van Aken. 2,949,504.

Van Buren, Harold S., Jr., to United-Carr Fastener Corp. Nut with a washer secured thereto by separable means. 2,949,141, 8–16–60, Cl. 151—38.

Vander Kaay, Henry A., to The New York Air Brake Co. Five position control valve having power float position. 2,949,097, 8–16–60, Cl. 121—46.5.

Vander Lugt, Thomas, Jr., to KVP Sutherland Paper Co. Carton. 2,949,221, 8–16–60, Cl. 229—40.

Van Pool, Jos, to Phillips Petroleum Co. Hydrocarbon conversion reaction vessel. 2,949,347, 8–16–60, Cl. 23—288.

Vaughn, Kenneth B. Bale binders. 2,949,196, 8–16–60, Cl. 214—10.5.

Vecchio, Luigi. Therapeutic vibrator pad. 2,949,108, 8–16–60, Cl. 128—24.1.

Veith, Werner, to Metallgesellschaft Aktiengesellschaft. Grate bar for stationary apparatus. 2,949,289, 8–16–60, Cl. 266—21.

Veith, Werner A., to Siemens & Halske Aktiengesellschaft. Storage tube with circular scanning. 2,949,550, 8–16–60, Cl. 315—12.

Vernet, Bergius: *See*—
Asakawa, George, and Vernet. 2,949,132.

Vesely, Jerome A.: *See*—
Linn, Carl B., and Vesely. 2,949,338.

Vigilatura, Louis E., Jr. Heat-resistant abrasive wheels. 2,949,351, 8–16–60, Cl. 51—298.

Vischer, Ernst: *See*—
Wettstein, Albert, Vischer, and Meystre. 2,949,405.

Vitale, Peter T., R. L. Bruns, and R. S. Leonard, to Colgate-Palmolive Co. Mixed detergent composition. 2,949,425, 8–16–60, Cl. 252—158.

Voeks, John F.: *See*—
Davis, Clyde W., Voeks, and Ehlers. 2,949,435.

Von Hasmburg, Romulus S. Pulp process. 2,949,395, 8–16–60, Cl. 162—84.

Vose, Robert W., to Moore Drop Forging Co. Hydraulic hold open mechanism for hinged members. 2,948,915, 8–16–60, Cl. 16—82.

Wachi, Tsuneo: *See*—
Ueda, Takeo, Kato, Toyoshima, and Wachi. 2,949,479.

Waddell, Russell B., Jr.: *See*—
Rothermel, Edward M., and Waddell. 2,949,133.

Wagner, Charles L.: *See*—
Carleton, James T., Wagner, and Woth. 2,949,574.

Waldes Kohinoor, Inc.: *See*—
Shur, Ira. 2,949,143.

Walls, James. Adjustable supporting device. 2,949,272, 8–16–60, Cl. 248—208.

Walters, Emmett L., and A. H. Miller, to Libbey-Owens-Ford Glass Co. Automatic glass cutting machine. 2,948,991, 8–16–60, Cl. 49—48.

Walters, John D.: *See*—
Molloy, Thomas E., and Walters. 2,948,933.

Warner Brothers Co., The: *See*—
Phillips, Stanley H. 2,949,115.

Warren, S. D., Co.: *See*—
Werner, Tyrrell H., Marra, and Gilman. 2,949,397.

Waterman, Herbert C., to Motorola, Inc. Inverter having voltage regulated output. 2,949,573, 8–16–60, Cl. 321—19.

Watson, Orla B. Liquid feeder. 2,949,212, 8–16–60, Cl. 222—70.

Watts, Dennis M.: *See*—
Stubbs, John J., Watts, and Ingham. 2,949,415.

Weaver, Leo J., to Monsanto Chemical Co. Preparation of alkaryl hydrocarbons. 2,949,492, 8–16–60, Cl. 260—671.

Weesner, William E., and R. A. Heimsch, to Monsanto Chemical Co. Process for production of dehydrated aldols. 2,949,484, 8–16–60, Cl. 260—604.

Weidauer, Curt: *See*—
Brinkman, Samuel, and Weidauer. 2,949,050.

Weiner, Hank: *See*—
Coleman, Charles G., Jr., and Weiner. 2,948,969.

Weiss, Max T., to Bell Telephone Laboratories, Inc. Non-reciprocal gyromagnetic device. 2,949,588, 8–16–60, Cl. 333—24.

Weiss, Richard, to Franke & Heidecke, Fabrik Photographischer Prazisions-Apparate. Reflex camera. 2,949,072, 8–16–60, Cl. 95—42.

Well Surveys, Inc.: *See*—
Youmans, Arthur H. 2,949,534.

Welwyn Canada Ltd.: *See*—
France, George. 2,949,577.

Werkzeugmaschinenfabrik Oerlikon Buhrle & Co. Abt. Elektrodenfabrik: *See*—
Bohler, Max. 2,949,286.

Werner, Tyrrell H., W. H. Marra, and W. B. Gilman, to S. D. Warren Co. Mineral filled paper. 2,949,397, 8–16–60, Cl. 162—178.

Wernicke & Co. K.G.: *See*—
Seirig, Alfred K., Enders, and Strunck. 2,948,997.

Wershaw, Irving B., to Dome Chemicals Inc. Buccal tablet containing vitamin. 2,949,401, 8–16–60, Cl. 167—81.

West, Sherwood F.: *See*—
Alexander, Guy B., Yates, and West. 2,949,358.

Western Electric Co., Inc.: *See*—
Olofson, Karl R., Sr. 2,949,291.

Westinghouse Electric Corp.: *See*—
Carleton, James T., Wagner, and Woth. 2,949,574.
Derr, Willard A. 2,949,601.
Hill, Earl R., and Klar. 2,949,544.
Hoge, Henri H. 2,949,549.
Johnson, Floyd D. 2,949,567.
Lesinski, Jeanne M. 2,949,333.
Mandelcorn, Lyon, Auxier, and Lewis. 2,949,424.
Mariani, Gino J. 2,949,515.
Oberg, Albert E. 2,949,556.
Pierce, Lawrence, and White. 2,949,569.
Schubert, Ernest J. 2,949,231.
Sillilman, Sheldon D. 2,949,582.
Traynor, Edward J., Jr. 2,949,150.
White, Marshall P. 2,949,545.

Wettstein, Albert, E. Vischer, and C. Meystre, to Ciba Pharmaceutical Products Inc. Manufacture of dehydro-compounds of the steroid series. 2,949,405, 8–16–60, Cl. 195—51.

Wheelock, Clifford W., to United States of America, Atomic Energy Commission. Concentric tubular fuel element. 2,949,416, 8–16–60, Cl. 204—193.2.

Whidden, William E., to Bell Telephone Laboratories, Inc. Universal telephone mounting. 2,949,509, 8–16–60, Cl. 179—100.

Whirlpool Corp.: *See*—
Belton, Joseph F., Jr., and Swerbinsky. 2,949,014.
Erickson, Frederick L., and Fink. 2,949,020.
Jarvis, Lactance A., and Heinicke. 2,949,497.
Sparklin, Charles H. 2,949,251.

White, Gerald, to Libbey-Owens-Ford Glass Co. Tempering of sheet material. 2,948,990, 8–16–60, Cl. 49—45.

White, Horace W., to The National Standard Co. Ltd. Apparatus for the automatic production of closed loops of wire from wire stock. 2,949,136, 8–16–60, Cl. 140—68.

White, Marshall P.: *See*—
Pierce, Lawrence, and White. 2,949,569.

White, Marshall P., to Westinghouse Electric Corp. Timing circuit. 2,949,545, 8–16–60, Cl. 307—88.5.

White, Roger B., to The Glastic Corp. Threaded shaft of glass fiber reinforced plastic. 2,949,054, 8–16–60, Cl. 85—47.

Whitehall-Rand, Inc.: *See*—
Brown, Thomas T. 2,949,550.

Whiteman, Donald R., to The Cyril Bath Co. Oscillating and overload releasing means for wipe forming assemblage of metal forming machines. 2,949,146, 8–16–60, Cl. 153—40.

Widenmann, John A.: *See*—
Horsfall, Robert B., Jr., Slater, and Widenmann. 2,949,030.

Widgren, Albert F., to American Machine and Metals, Inc. Washing machine door. 2,949,208, 8–16–60, Cl. 220—41.

Wiggins, Joseph F., to General Electric Co. Automatic beam current control. 2,949,561, 8–16–60, Cl. 315—12.

Wilcox, Merrill B. Underwater weed cutter. 2,949,003, 8–16–60, Cl. 56—8.

Wildhaber, Ernest. Angular gear drive. 2,949,041, 8–16–60, Cl. 74—416.

Willey, Lowell A., to Aluminum Co. of America. Method of relieving residual stresses in light metal articles. 2,949,392, 8–16–60, Cl. 148—125.

Williams, Donald D., to Hughes Aircraft Co. Radar blind landing indicator. 2,949,604, 8–16–60, Cl. 343—14.

Williams, Hugh A., Jr.: *See*—
Addie, Albert N., Williams, and Lafferty. 2,949,541.

Williams, Robert D.: *See*—
Abbott, Henry H., Rippere, Williams, and Williford. 2,949,506.

Williams, Sidney B., to Sprague Electric Co. Electrical components package. 2,949,182, 8–16–60, Cl. 206—65.

Williams, Willis S. Golf putter handle. 2,949,304, 8–16–60, Cl. 273—81.3.

Williamson, Carl S. Bait holder and dispenser. 2,948,996, 8–16–60, Cl. 43—55.

Williford, Oscar H.: *See*—
Abbott, Henry H., Rippere, Williams, and Williford. 2,949,506.

Willshaw, William E., to The General Electric Co. Ltd. Electronic tubes for use as backward wave oscillators. 2,949,563, 8–16–60, Cl. 315—39.3.

Winter, William D.: *See*—
Nordahl, John G., and Winter. 2,949,543.

Winthrop, Mitchell, to Swank, Inc. Necktie holder. 2,948,936, 8–16–60, Cl. 24—49.

Wisdom, Betty J. Wiper of the type in which wiping element is stationary and article to be wiped is moved. 2,948,912, 8–16–60, Cl. 15—250.1.

Wiseman, Neil L., to General Dynamics Corp. Scale-of-two pulse counting circuit. 2,949,542, 8–16–60, Cl. 307—88.

Wiseman, Neil L., to General Dynamics Corp. Variable multivibrator. 2,949,545, 8–16–60, Cl. 307—88.5.

Witzgall, Edward J.: *See*—
Draper, Ralph L., and Witzgall. 2,949,191.

Wood, Edwin H. Starting stalls for use on racecourses. 2,949,095, 8–16–60, Cl. 119—15.5.

Wood, Joseph E. Spring support. 2,949,270, 8–16–60, Cl. 248—54.

Woodward Iron Co.: *See*—
Molloy, Thomas E., and Walters. 2,948,933.

Worcester, Joseph T. Commercial shrimp net. 2,948,960, 8–16–60, Cl. 43—9.

Woth, Theodore J.: *See*—
Carleton, James T., Wagner, and Woth. 2,949,574.

Wu, Bosco, to McGraw-Edison Co. Transistor amplifier with A.V.C. 2,949,579, 8–16–60, Cl. 330—13.

Wurlitzer, Rudolph, Co., The: *See*—
Andersen, Clifford W. 2,949,052.
Andersen, Clifford W. 2,949,053.
Riggs, John H. 2,949,809.

Yates, Paul C.: *See*—
Alexander, Guy B., Yates, and West. 2,949,358.

Yen, Ernest C.: *See*—
Bieger, George M., and Yen. 2,949,400.

Youmans, Arthur H., to Well Surveys, Inc. High temperature scintillation detector. 2,949,534, 8–16–60, Cl. 250—71.5.

Zaha, Abe. Automotive trailer having caster wheels. 2,949,317, 8–16–60, Cl. 280—456.

Zaremsky, Baruch: *See*—
Fuchsman, Charles H., Zaremsky, and Hansen. 2,949,439.

Zempliner, Louis L. Process of extracting pyridine carboxylic acids as bisulfates. 2,949,468, 8–16–60, Cl. 260—295.5.

Zeyen, Fritz-Otto, and W. Pawlowski; said Zeyen assor. to Dr.-Ing. Rudolf Hell Kommanditgesellschaft. Apparatus for resolving three-color separation into four-color separation. 2,949,490, 8–16–60, Cl. 178—5.4.

Ziegler, Eugene E., to Ritter Co., Inc. Apparatus for determining the vitality of teeth. 2,949,107, 8–16–60, Cl. 128—2.1.

Zimmermann, Elwood P., to Bell Telephone Laboratories, Inc. Delay timer. 2,949,547, 8–16–60, Cl. 307—88.5.

Zoeller, Richard J., and J. E. Henderson, to The Pillsbury Co. Compartmented dough package. 2,949,369, 8–16–60, Cl. 99—172.

Zwarycz, Michael, to Crompton & Knowles Packaging Corp. Heater for wrapping machine. 2,949,001, 8–16–60, Cl. 53—141.

Zwarycz, Michael, to Crompton & Knowles Packaging Corp. Wrapper feed mechanism. 2,949,002, 8–16–60, Cl. 53—389.

CLASSIFICATION OF PATENTS

ISSUED AUGUST 16, 1960

NOTE—First number=class, second number=subclass, third number=patent number

1— 135: 2,948,287
2— 94: 2,948,898
2,948,899
209.1: 2,948,900
4— 57: 2,948,601
68: 2,948,902
159: 2,948,903
5— 13: 2,948,904
111: 2,948,905
8—94.23: 2,949,338
142: 2,949,336
151.2: 2,949,337
12— 87: 2,948,906
13— 8: 2,949,495
16: 2,949,496
15— 97: 2,948,907
102: 2,948,908
104.1: 2,948,909
159: 2,948,910
209: 2,948,911
250.1: 2,948,912
328: 2,948,913
16— 45: 2,948,914
82: 2,948,915
140: 2,948,916
163: 2,948,917
18— 1: 2,948,918
2,948,919
2: 2,948,920
4: 2,948,921
12: 2,948,922
16.5: 2,948,923
18: 2,948,924
21: 2,948,925
30: 2,948,926
47.5: 2,948,927
48: 2,948,928
56: 2,948,929
59: 2,948,930
19—143.3: 2,948,931
21— 2.7: 2,949,338
22— 30: 2,948,932
36: 2,948,933
113.5: 2,948,934
196: 2,948,935
23— 14.5: 2,949,339
51: 2,949,340
79: 2,949,341
121: 2,949,342
207: 2,949,343
209.1: 2,949,344
232: 2,949,345
286: 2,949,346
2,949,347
310: 2,949,348
314: 2,949,349
24— 49: 2,948,936
73: 2,948,937
2,948,938
171: 2,948,939
257: 2,948,940
265: 2,948,941
25— 32: 2,948,942
118: 2,948,943
131: 2,948,944
142: 2,948,945
2,948,946
154: 2,948,947
156: 2,948,948
157: 2,948,949
28— 80: 2,948,950
29— 25.3: 2,948,951
90: 2,948,952
155.5: 2,948,954
155.55: 2,948,953
182.5: 2,948,955
411: 2,948,956
423: 2,948,957
432: 2,948,958
446: 2,948,959
30— 162: 2,948,960
2,948,961
186: 2,948,962
32— 12: 2,948,963
33— 3: 2,948,964
125: 2,948,965
34— 1: 2,948,966
12: 2,948,967
156: 2,948,968
35— 9: 2,948,969
10.4: 2,948,970
36— 2.5: 2,948,971
8.5: 2,948,972
37— 144: 2,948,973
40— 36: 2,948,974
106.1: 2,948,975
128: 2,948,976
158: 2,948,977
42— 1: 2,948,978
43— 4: 2,948,979
9: 2,948,980
16: 2,948,981
42.15: 2,948,982
42.18: 2,948,983
42.30: 2,948,984
43.4: 2,948,985
55: 2,948,986
44— 50: 2,949,340
47— 58: 2,948,987
62: P.P.1,967
49— 1: 2,948,988
3: 2,948,989
45: 2,948,990
48: 2,948,991
92.5: 2,948,992
50— 114: 2,948,993
173: 2,948,994
179: 2,948,995
51— 145: 2,948,996
155: 2,948,997
208: 2,949,341
52— 5: 2,949,342
53— 28: 2,948,998
20: 2,948,999
123: 2,949,000
141: 2,949,001
389: 2,949,002
56— 8: 2,949,003
25.4: 2,949,004
58— 127: 2,949,005
60— 35.4: 2,949,006
35.6: 2,949,007
2,949,008
2,949,009
39.05: 2,949,010
39.09: 2,949,011
39.71: 2,949,012
65: 2,949,013
62— 3: 2,949,014
40: 2,949,015
153: 2,949,016
155: 2,949,017
251: 2,949,018
347: 2,949,019
360: 2,949,020
64— 11: 2,949,021
21: 2,949,022
65— 178: 6,949,023
68— 22: 2,949,024
207: 2,949,025
71— 2.6: 2,949,353
2.7: 2,949,354
73— 1: 2,949,026
32: 2,949,027
67.9: 6,949,028
136: 2,949,029
178: 2,949,030
331: 2,949,031
353: 2,949,032
462: 2,949,033
74— 37: 2,949,034
70: 2,949,035
89: 6,949,036
106: 2,949,037
261: 2,949,038
264: 2,949,039
300: 2,949,040
416: 2,949,041
425: 2,949,042
469: 2,949,043
481: 2,949,044
609: 2,949,045
688: 2,949,046
732: 2,949,047
802: 2,949,048
822: 2,949,049
75— 126: 2,949,355
2,949,356
175.5: 2,949,357
176: 2,949,358
76— 104: 2,949,050
78— 18: 2,949,051
84— 1.04: 2,949,052
1.06: 6,949,053
85— 47: 2,949,054
88— 1: 2,949,055
2.3: 2,949,056
34: 2,949,057
81: 2,949,058
85: 2,949,059
90— 1.5: 2,949,060
1.7: 2,949,061
95— 5: 2,949,062
11: 2,949,063
12: 2,994,064
15: 2,949,065
98— 55.3: 2,949,066
94— 1: 2,949,067
45: 2,949,068
95— 10: 2,949,069
2,949,070
11: 2,949,071
11.5: 2,949,072
42: 2,949,073
44: 2,949,074
83: 2,949,075
94: 2,949,076
77: 2,949,077
96— 66: 2,949,359
97: 2,949,360
115: 2,949,361
99— 8: 2,949,362
86: 2,949,363
71: 2,949,364
118: 2,949,365
131: 2,949,366
134: 2,949,367
140: 2,949,368
172: 2,949,369
173: 2,949,370
176: 2,949,371
178: 2,949,372
100— 43: 2,949,078
101— 35: 2,949,079
103— 50: 2,949,080
120: 2,949,081
106— 10: 2,949,373
2,949,374
35.3: 2,949,375
53: 2,949,376
272: 2,949,377
281: 2,949,378
288: 2,949,379
107— 17: 2,949,082
111— 5: 2,949,083
112— 171: 2,949,084
235: 2,949,085
267: 2,949,086
113— 10: 2,949,087
116: 2,949,088
114— 21: 2,949,089
90: 2,949,090
202: 2,949,091
115— 18: 2,949,092
2,949,093
116— 124: 2,949,094
117— 2: 2,949,380
86: 2,949,381
65: 2,949,382
72: 2,949,383
93: 2,949,384
138: 2,949,385
140: 2,949,386
211: 2,949,387
212: 2,949,388
119— 15.5: 2,949,095
121— 38: 2,949,096
46.5: 2,949,097
148: 2,949,098
122— 235: 2,949,099
123— 43: 2,949,100
46: 2,949,101
119: 2,949,102
122: 2,949,103
179: 2,949,104
2,949,105
126— 350: 2,949,106
127— 36: 2,949,389
128— 2.1: 2,949,107
24.1: 2,949,108
66: 2,949,109
75: 2,949,110
80: 2,949,111
125— 81: 2,949,112
162: 2,949,113
260: 2,949,114
462: 2,949,115
121— 10: 2,949,116
15: 2,949,117
125: 2,949,118
124— 60: 2,949,119
115: 2,949,120
130: 2,949,121
126— 4: 2,949,407
89: 2,949,408
127— 17: 2,949,122
98: 2,949,123
99: 2,949,124
100: 2,949,125
207: 2,949,126
332: 2,949,127
506.37: 2,949,128
539: 2,949,129
552: 2,949,130
623: 2,949,131
789: 2,949,132
128— 56: 2,949,133
129— 426: 2,949,134
140— 3: 2,949,135
88: 2,949,136
141— 9: 2,949,137
143— 4: 2,949,138
6: 2,949,139
144— 305: 2,949,140
148— 6: 2,949,390
9: 2,949,391
125: 2,949,392
151— 38: 2,949,141
41.73: 2,949,142
60: 2,949,143
153— 38: 2,949,144
40: 2,949,145
2,949,146
106: 2,949,147
154— 1: 2,949,148
1.7: 2,949,149
2.6: 2,949,150
83.05: 2,949,151
46: 2,949,393
50: 2,949,394
155— 28: 2,949,152
55: 2,949,153
124: 2,949,154
130: 2,949,155
179: 2,949,156
182: 2,949,157
162— 84: 2,949,395
167: 2,949,396
178: 2,949,397
181: 2,949,398
167— 33: 2,949,399
81: 2,949,400
2,949,401
82: 2,949,402
90: 2,949,403
169— 1: 2,949,158
170–160.14: 2,949,159
171— 101: 2,949,160
172— 212: 2,949,161
178— 5.4: 2,949,499
7.2: 2,949,500
22: 2,949,501
179— 6: 2,949,502
15: 2,949,503
2,949,504
15.6: 2,949,505
22: 2,949,506
84: 2,949,507
90: 2,949,508
100: 2,949,509
140: 2,949,510
180— 85: 2,949,162
181— 31: 2,949,163
36: 2,949,164
50: 2,949,165
183— 1: 2,949,166
7: 2,949,167
2,949,168
32: 2,949,169
185— 43: 2,949,170
188— 106: 2,949,171
171: 2,949,172
196: 2,949,173
192— .08: 2,949,174
192— 113: 2,949,175
195— 36: 2,949,404
51: 2,949,405
80: 2,949,406
2,949,407
197— 150: 2,949,176
187: 2,949,177
198— 16: 2,949,178
30: 2,949,179
200— 11: 2,949,511
35: 6,949,512
61.06: 2,949,513
2,949,514
87: 2,949,515
114: 2,949,516
2,949,517
122: 2,949,518
138: 2,949,519
144: 2,949,520
146: 2,949,521
160: 2,949,522
202— 71: 2,949,408
204— 2: 2,949,409
9: 2,949,410
56: 2,949,411
99: 2,949,412
154: 2,949,413
154.2: 2,949,414
193.2: 2,949,415
2,949,416
196: 2,949,417
206— 48: 2,949,180
63.3: 2,949,181
65: 2,949,182
2,949,183
2,949,184
80: 2,949,185
207— 1: 2,949,186
208— 31: 2,949,418
2,949,419
70: 2,949,420
299: 2,949,421
321: 2,949,422
341: 2,949,423
209— 2: 2,949,187
79: 2,949,188
106: 2,949,189
172.5: 2,949,190
210— 222: 2,949,191
211— 49: 2,949,192
142: 2,949,193
213— 45: 2,949,194
168: 2,949,195
214— 10.5: 2,949,196
75: 2,949,197
77: 2,949,198
302: 2,949,199
310: 2,949,200
657: 2,949,201
658: 2,949,202
215— 6: 2,949,203
41: 2,949,204
45: 2,949,205
216— 20: 2,949,206
219—10.77: 2,949,523
35: 2,949,524
2,949,525
75: 2,949,526
126: 2,949,527
138: 2,949,528
220— 19: 2,949,207
41: 2,949,208
60: 2,949,209
221— 7: 2,949,210
169: 2,949,211
222— 70: 2,949,212
160: 2,949,213
351: 2,949,214
490: 2,949,215
229— 1.5: 2,949,216
17: 2,949,217
28: 2,949,218
31: 2,949,219
2,949,220
40: 2,949,221
41: 2,949,222
68: 2,949,223
230— 124: 2,949,224
235—61.11: 2,949,226
61.7: 2,949,225
91: 2,949,227
235— 92: 2,949,228
144: 2,949,229
175: 2,949,230
177: 2,949,231
183: 2,949,232
186: 2,949,233
236— 11: 2,949,234
25: 2,949,235
48: 2,949,236
78: 2,949,237
238— 31: 2,949,238
120: 2,949,239
370: 2,949,240
383: 2,949,241
480: 2,949,242
579: 2,949,243
589: 2,949,244
240— 2.12: 2,949,529
10.61: 2,949,530
81: 2,949,531
241— 5: 2,949,245
46: 2,949,246
183: 2,949,247
242— 55.3: 2,949,248
75.51: 2,949,249
83: 2,949,250
85: 2,949,252
86.5: 2,949,251
154: 2,949,253
244—17.27: 2,949,254
42: 2,949,255
50: 2,949,256
77: 2,949,257
2,949,258
2,949,259
2,949,260
2,949,261
2,949,262
113: 2,949,263
127: 2,949,264
135: 2,949,265
145: 2,949,266
147: 2,949,267
248— 5: 2,949,268
41: 2,949,269
54: 2,949,270
65: 2,949,271
205: 2,949,272
250— 20: 2,949,532
2,949,533
71.5: 2,949,534
83.5: 2,949,535
201: 2,949,536
213: 2,949,537
2,949,538
219: 2,949,539
251— 26: 2,949,273
74: 2,949,274
86: 2,949,275
146: 2,949,276
252— 1: 2,949,424
138: 2,949,425
307: 2,949,426
330: 2,949,427
363.5: 2,949,428
472: 2,949,429
502: 2,949,430
253— 22: 2,949,277
77: 2,949,278
254— 199: 2,949,279
255— 51: 2,949,280
327: 2,949,281
257— 1: 2,949,282
137: 2,949,283
259— 144: 2,949,284
260— 2.5: 2,949,431
30.6: 2,949,432
31.8: 2,949,433
45.2: 2,949,434
45.5: 2,949,435
2,949,436
2,949,437
2,949,438
45.95: 2,949,439
78: 2,949,440
78.4: 2,949,441
80.5: 2,949,442
2,949,443
2,949,444
86.1: 2,949,445
87.5: 2,949,446

260—	68. 7:	2,949,447	260—327. 3:	2,949,475	270—	56:	2,949,292	295—	9:	2,949,221	310—	271:	2,949,555	331—	113:	2,949,582
	124:	2,949,448	327. 45:	2,949,476		68:	2,949,294		11:	2,949,222	311—	22:	2,949,234		114:	2,949,583
	210:	2,949,449	327. 5:	2,949,476	271—	2. 3:	2,949,295	297—	64:	2,949,223	313—	82:	2,949,556	332—	19:	2,949,584
	211. 5:	2,949,450		2,949,477		2. 5:	2,949,296		66:	2,949,224		246:	2,949,557		20:	2,949,585
		2,949,451		451:	2,949,479		48:	2,949,297	298—	22:	2,949,225	315—	2. 5:	2,949,558	333—	7:	2,949,586
	231:	2,949,452		410. 9:	2,949,480	272—	1:	2,949,298	299—	40:	2,949,540		5. 45:	2,949,559		11:	2,949,587
	239. 55:	2,949,453		448. 2:	2,949,481		40:	2,949,299			2,949,541		12:	2,949,560		24:	2,949,588
	240:	2,949,454		456:	2,949,482	275—	43:	2,949,300	301—	11:	2,949,226			2,949,561		95:	2,949,589
		2,949,455		516:	2,949,483		47:	2,949,301	302—	26:	2,949,227		30:	2,949,562	336—	60:	2,949,590
		2,949,456		554:	2,949,484			2,949,302		207:	2,949,228		30. 3:	2,949,563		83:	2,949,591
		2,949,457		567. 6:	2,949,485		51:	2,949,303		238. 3:	2,949,229		84. 6:	2,949,564		148:	2,949,592
		2,949,458		604:	2,949,486		81. 3:	2,949,304	304—	53:	2,949,230		99:	2,949,565		186:	2,949,593
		2,949,459		609:	2,949,487		102. 1:	2,949,305	306—	66:	2,949,231		183:	2,949,566	338—	26:	2,949,594
		2,949,460			2,949,488		130:	2,949,306	307—	11:	2,949,232	317—	12:	2,949,567		70:	2,949,595
		2,949,461		631. 5:	2,949,489	274—	10:	2,949,307		88:	2,949,542		26:	2,949,568	339—	2:	2,949,596
		2,949,462		647:	2,949,490			2,949,308		88. 5:	2,949,543		201:	2,949,569		272:	2,949,597
		2,949,463		650:	2,949,491			2,949,309			2,949,544		260:	2,949,570	340—	84:	2,949,598
		2,949,464		671:	2,949,492			2,949,310			2,949,545	318—	131:	2,949,571		134:	2,949,599
	248:	2,949,465		678:	2,949,493		23:	2,949,311			2,949,546	321—	18:	2,949,572		166:	2,949,600
	249. 5:	2,949,467		683. 55:	2,949,494	275—	15:	2,949,312			2,949,547		19:	2,949,573		185:	2,949,601
	256. 4:	2,949,466	261—	3:	2,949,285	279—	2:	2,949,313			2,949,548	322—	35:	2,949,574		347:	2,949,602
	295. 5:	2,949,468	263—	28:	2,949,286	280—	36:	2,949,314			2,949,549	325—	22:	2,949,575	343—	9:	2,949,603
	319:	2,949,469	265—	40:	2,949,287		124:	2,949,315	308—187. 1:		2,949,333		75:	2,949,576		14:	2,949,604
	325. 3:	2,949,470		88:	2,949,288			2,949,316	310—	5:	2,949,550	324—	62:	2,949,577		202:	2,949,605
	330. 5:	2,949,471	266—	21:	2,949,289		455:	2,949,317		11:	2,949,551	328—	34:	2,949,578		706:	2,949,606
	340. 9:	2,949,472	269—	126:	2,949,290	282—	3:	2,949,318		105:	2,949,552	330—	13:	2,949,579		722:	2,949,607
	345. 5:	2,949,473	299—	104:	2,949,291	285—	173:	2,949,319		163:	2,949,553		79:	2,949,580		903:	2,949,608
	348:	2,949,474		160:	2,949,292		358:	2,949,320		206:	2,949,554	331—	91:	2,949,581			

Classification of Designs

D 1—	2:	188,589	D22—		188,600	D34—		188,611	D49—	23:	188,621	D58	17:	188,631	D81	25:	188,641
D 7—	7:	188,590	D29—	23:	188,601	D37—	1:	188,612		27:	188,622		26:	188,632	D83—	1:	188,642
D 9—	2:	188,591	D31—	4:	188,602	D44—	1:	188,613	D54—	2:	188,623	D61	1:	188,633	D87—	3:	188,643
		188,592	D33—	5:	188,603		9:	188,614		13:	188,624	D67—	4:	188,634	D91—	3:	188,644
	6:	188,593		6:	188,604		16:	188,615	D55—	1:	188,625	D71—	1:	188,635			188,645
D14—	3:	188,594		7:	188,605			188,616	D57—	1:	188,626	D74—	1:	188,636	D92—	1:	188,646
	6:	188,595		13:	188,605		26:	188,617	D58—	2:	188,627		17:	188,637		4:	188,647
	18:	188,596		14:	188,607		29:	188,618		6:	188,628	D76—	1:	188,638		17:	188,648
D15—	1:	188,597		19:	188,608			188,619			188,629	D80—	9:	188,639			188,649
D18—	2:	188,598	D34—	5:	188,609			188,620			188,630	D81—	2:	188,640			
D22—	3:	188,599		18:	188,610												

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 16, 1960 Volume 757 Number 3

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116: Trademark Act of July 5, 1946

Reg. No. 261,666 (FLARIKINS), Blue Swan Mills, Inc., Ladies' and children's underwear; Reg. No. 261,667 (IKINS), same; Reg. No. 261,668 (SMOOTHIKINS), same; Reg. No. 261,733 (SLENDIKINS), same; Reg. No. 282,480 (LASTIKINS), same; Reg. No. 284,176 (UNDIKINS), same; Reg. No. 284,231 (MOLDIKINS), same; Reg. No. 286,477 (WOOLIKINS), same; Reg. No. 286,689 (FRILLIKINS), same; Reg. No. 286,578 (KOOLIKINS), same; Reg. No. 286,711 (VELVIKINS), same; Reg. No. 287,060 (JUNIKINS), same; Reg. No. 486,986 (VICTRIKINS), same; Reg. No. 486,988 (PETTIKINS), same; Reg. No. 487,737 (BONNIKINS), same; Reg. No. 597,948 (PLISSIKINS), McKay Products Corporation, same, filed Mar. 7, 1958, D.C., S.D.N.Y., Doc. 130/351, *McKay Products Corporation* v. *Marlyle Sportswear Corp.* Stipulation and order of dismissal June 15, 1960.



CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 10,802
Date of oldest new application ..... Feb. 1, 1960
Date of oldest amended application ..... Jan. 14, 1960

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
(I) O. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	3-1-60	3-16-60
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	3-1-60	1-14-60
Renewals (All Classes)	6-7-60	6-23-60
Sec. 12 (c) Publications (All Classes)	6-14-60	.....

Applications filed during the month of June 1960—1,895

Registrations Issued ..... 321—No. 702,735 to No. 703,055
Renewals Issued 106

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 87,005. Union Carbide Corporation, New York, N.Y. Filed Dec. 9, 1959.

VISOLYTE

Owner of Reg. No. 259,990.
For Plastic Film and Sheeting.
First use on or about Oct. 28, 1959.

Class 2—Receptacles

SN 66,180. Plastics, Inc., St. Paul, Minn. Filed Sept. 4, 1958.

PLASTICS INC. ST. PAUL

For Plastic Cups, Dishes, Bowls, and Trays.
First use Apr. 15, 1944.

SN 79,180. St. Regis Paper Company, New York, N.Y. Filed Aug. 7, 1959.



For Paperboard Cartons and Blanks for Forming Same.
First use July 2, 1959.

SN 80,435. Mastercraft Plastics Co. Inc., Jamaica, N.Y. Filed Aug. 28, 1959.

SANI-TOP

For Trays, Dishes, and Other Holders for Displaying Food.
First use on or about May 1, 1948.

SN 80,759. St. Regis Paper Company, New York, N.Y. Filed Sept. 2, 1959.

WET-LOK

For Paperboard Cartons and Blanks for Forming Same.
First use June 4, 1959.

SN 88,417. Nyman Manufacturing Company, Providence, R.I. Filed Jan. 4, 1960.



The words "Vending Cup" and the representation of the cup on the drawing are disclaimed apart from the mark as shown.
For Paper Cup.
First use on or about Dec. 4, 1959.

SN 90,876. West Virginia Pulp and Paper Company, New York, N.Y. Filed Feb. 12, 1960.

WONDERWALL

For Multiwall Paper Bags.
First use Dec. 9, 1958.

SN 92,223. Crown Zellerbach Corporation, San Francisco, Calif. Filed Mar. 7, 1960.

CROWN VERSATOWL

Owner of Reg. Nos. 247,311, 602,383, and others.
For Towel Cabinets.
First use Mar. 18, 1959.

SN 92,789. Mustex, Inc., Graham, Tex. Filed Mar. 14, 1960.

TRASH-O-MATIC

For Underground Containers for Garbage Cans.
First use June 9, 1959.

SN 93,354. The Pyramid Rubber Company, Ravenna, Ohio. Filed Mar. 21, 1960.

EVENFLO

Owner of Reg. Nos. 562,145, 562,725, and 566,385.
For Baby Training Cup Caps and Units Consisting of a Training Cup Cap and a Bottle.
First use Apr. 23, 1956.

SN 94,366. Steiner American Corporation, Chicago, Ill. Filed Apr. 4, 1960.

SERVA-MATIC

For Paper Towel Dispensers.
First use Mar. 23, 1960.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 84,970. American Luggage Works, Inc., Warren, R.I. Filed Nov. 10, 1959.

HI-TAPER

Owner of Reg. Nos. 263,740 and 610,841.
For Luggage Including Train Cases, Cosmetic Cases, Hat Boxes, Overnight Cases, Weekend Cases, Wardrobe Cases, Pullman Cases, Wardrobe-Pullman Cases, Hat and Shoe Cases, and Two-Suiter Luggage.
First use Jan. 3, 1960.

SN 89,766. Roy D. Hoffman, Bedford, Pa. Filed Jan. 27, 1960.

KOMFY KOT

No claim is made to the word "Kot" apart from the mark.
For Dog Beds.
First use Dec. 16, 1959.

SN 90,756. Max Holzman, d.b.a. Style-Art Handbags, New York, N.Y. Filed Feb. 11, 1960.

STYLE-ART by Holzman

For Women's Handbags.
First use 1950; Jan. 2, 1959, as to "Style-Art."

Class 4—Abrasives and Polishing Materials

SN 79,470. The Butcher Polish Company, Malden, Mass. Filed Aug. 13, 1959.

BOSTON

For Wax for Polishing Floors and Other Surfaces.
First use May 24, 1933.

SN 80,779. Collins Polish Corp., Brooklyn, N.Y. Filed Sept. 3, 1959.

SELF-O-LAC

For Self-Polishing Wax for Polishing Auto Bodies, Furniture, Floors, Leather, and Windows.
First use Nov. 25, 1933.

SN 80,819. Oil Specialties & Refining Co., Inc., Brooklyn, N.Y. Filed Sept. 3, 1959.

SAF-T-WAX

For Polishing Waxes for Wood, Linoleum, and Floors.
First use Sept. 8, 1936.

SN 82,842. Penola Oil Company, New York, N.Y. Filed Oct. 7, 1959.

ENCO

For Polishing Materials in Semi-Solid and Liquid Form for General Use.
First use at least since Aug. 27, 1959.

SN 83,827. Franz Hofmann & Söhne, Neuburg (Donau), Germany. Filed Oct. 29, 1959.

SONAX

Owner of German Reg. No. 837,782, dated May 4, 1953.
For Automobile Polishes.

SN 91,880. Titanium Zirconium Company, Inc., Flemington, N.J. Filed Feb. 29, 1960.

LUSTROX

For Glass Polishing Compositions Containing Zirconium Oxide.
First use Nov. 25, 1957.

SN 92,988. S. C. Johnson & Son, Inc., Racine, Wis. Filed Mar. 16, 1960.

JOHNSON'S SHINE-UP

Owner of Reg. No. 300,218.
For Preparation for Cleaning and Waxing.
First use Aug. 29, 1958.

Class 5—Adhesives

SN 89,201. The Roberts Co., City of Industry, Calif., by change of name from Roberts Manufacturing Co., City of Industry, Calif. Filed Jan. 18, 1960.

RUB-ER-EGE

For Latex Adhesive.
First use April 1941.

SN 94,991. Humble Oil & Refining Company, Houston, Tex. Filed Apr. 13, 1960.

HUMBLE-WELD

For Epoxy Resin Based, High Viscosity Adhesive Product Used for Field Patching and Field Caulking of Ferrous Metals, Aluminum, Ceramics, and Concrete Surfaces.
First use Nov. 20, 1959.

SN 95,564. Peter Cooper Corporations, Gowanda, N.Y. Filed Apr. 22, 1960.

PV

For Liquid Resin Adhesive.
First use Feb. 14, 1957.

SN 95,566. Peter Cooper Corporations, Gowanda, N.Y. Filed Apr. 22, 1960.

ZETOL

For Dry Animal Glue Products.
First use Sept. 10, 1957.

SN 95,567. Peter Cooper Corporations, Gowanda, N.Y. Filed Apr. 22, 1960.

ZETEN

For Dry Animal Glue Products.
First use Nov. 30, 1956.

SN 95,568. Peter Cooper Corporations, Gowanda, N.Y. Filed Apr. 22, 1960.

ZETEX

For Dry Animal Glue Products.
First use Nov. 28, 1956.

Class 6—Chemicals and Chemical Compositions

SN 67,970. Antoine Francois Peyron, Paris, France. Filed Feb. 18, 1959.

DEDORAN

Priority claimed under Sec. 44(d) on French Reg. No. 474,364, dated Sept. 2, 1958 (Seine); Natl. Inst. No. 114,972.
For Room Deodorants.

SN 73,913. Glycolator Manufacturing Company, Valencia, Pa. Filed May 18, 1959.

glycosol

For Triethylene Glycol.
First use Oct. 6, 1950.

SN 76,371. Commercial Solvents Corporation, New York, N.Y. Filed June 24, 1959.

SILOFERM

Owner of Reg. Nos. 560,830 and 560,836.
For Silage Preservative Which Contains Zinc Bacitracin.
First use May 26, 1959.

SN 79,871. William Mihelich, d.b.a. Mihelich Nurseries, East Detroit, Mich. Filed Aug. 19, 1959.

— VETO 10 —

For Turf Fungicide.
First use Nov. 21, 1956.

SN 82,063. Ansul Chemical Company, Marinette, Wis. Filed Sept. 25, 1959.

PURPLE-K

For Potassium Bicarbonate Based Dry Chemical Fire Extinguishing Agent.
First use Sept. 15, 1959.

SN 83,946. Godfrey L. Cabot, Inc., Boston, Mass. Filed Oct. 26, 1959.

CAB-O-LIME

For Granular Oxide Primarily of Calcium or a Combination of Calcium and Magnesium for Reacting With or Fluxing Certain Undesirable Impurities in Molten Steel or Iron.
First use June 25, 1959.

Class 7—Cordage

SN 69,410. National Distillers and Chemical Corporation, New York, N.Y., by merger from Kordite Corporation, d.b.a. Holiday, Macedon, N.Y. Filed Mar. 12, 1959.

Holiday

For Clotheslines.
First use June 1, 1958.

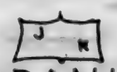
SN 80,034. William G. Thorn, d.b.a. W. G. Thorn & Co., San Francisco, Calif. Filed Jan. 14, 1960.



For Wire Products—Namely, Steel Bands, Bag Ties, and Bale Ties.
First use on or about July 28, 1959.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 84,903. Joseph Kump, d.b.a. The House of Joseph Kump, Avenel, N.J. Filed Nov. 9, 1959.



KUMPANION

For Smoking Pipes.
First use Dec. 15, 1958.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 73,122. Mattel, Incorporated, Los Angeles, Calif. Filed May 7, 1959.

STIK-M-CAPS

For Toy Percussion Caps.
First use Feb. 17, 1958.

SN 80,875. Atlas Powder Company, Wilmington, Del. Filed Feb. 10, 1960.

KOLMASTER

For Electric Blasting Caps.
First use Dec. 10, 1959.

SN 80,802. Exportaktiebolaget Norden, Stockholm, Sweden. Filed Feb. 8, 1960.

IMATREX

Owner of Swedish Reg. No. 86,438, dated Feb. 6, 1959.
For Explosive Substances and Semi-Manufactured Products Thereof Especially Chlorate of Potash.

Class 10—Fertilizers

SN 84,572. Stern's Nurseries, Inc., Geneva, N.Y. Filed Nov. 3, 1959.

MIRACLE MULCH

Exclusive use of the word "Mulch" alone is disclaimed separate and apart from the trademark. Owner of Reg. No. 668,565.
For Soil Conditioner in the Form of a Garden and Field Covering.
First use on or about May 3, 1958.

SN 90,210. Wilderness Valley Farms, Inc., Duluth, Minn. Filed Feb. 2, 1960.

LIVING EARTH

The mark is lined for gold and silver and is stippled to show gray coloring but no claim is made to color.
For Packaged Compost-Enriched Soil.
First use May 22, 1959.

SN 91,255. Halstead Distributing Corporation, Mount Kisco, N.Y. Filed Feb. 19, 1960.

JUST RIGHT

For Garden Supplies—Namely, Lawn Fertilizers.
First use June 16, 1958.

SN 92,445. Clover Chemical Company, Pittsburgh, Pa. Filed Mar. 9, 1960.

FERTI-PLANT

For Water-Soluble Solid Fertilizer.
First use Jan. 12, 1960.

SN 92,068. Pel-Star Fertiliser Company, Inc., Los Fresnos, Tex. Filed Mar. 17, 1960.



For Fertilizer.
First use Feb. 2, 1959.

SN 92,069. Pel-Star Fertiliser Company, Inc., Los Fresnos, Tex. Filed Mar. 17, 1960.

CHEMÁNURE

For Fertilizer.
First use Oct. 12, 1959.

SN 92,090. Pel-Star Fertiliser Company, Inc., Los Fresnos, Tex. Filed Mar. 17, 1960.

PEL-STAR

For Fertilizer and Potting Soil.
First use Mar. 30, 1960.

SN 93,345. Lee Patten Seed Company, Jersey City, N.J. Filed Mar. 21, 1960.

FEATHERWEIGHT

For Lawn Food.
First use Feb. 8, 1960.

SN 96,443. Unexcelled Chemical Corporation, New York, N.Y. Filed May 4, 1960.

GENERAL GREEN

For Fertilizers.
First use on or about Apr. 2, 1960.

Class 11—Inks and Inking Materials

SN 63,619. Günther Wagner, Hannover, Germany. Filed Dec. 3, 1958.

INTENSICOLOR

Owner of German Reg. No. 672,141, dated Feb. 28, 1955.
For Typewriter Ribbons, Carbon Paper, Including Carbon Paper for Typewriters, and Pen-and-Pencil Carbon Paper.

SN 67,906. General Printing Ink Co., Inc., Philadelphia, Pa., by change of name from Benstag Brothers and Deeney Incorporated in Pennsylvania, Philadelphia, Pa. Filed Aug. 25, 1958.

SPEED-E-BRITE

For Printing Inks.
First use in 1958.

SN 88,889. Kee Lox Manufacturing Company, Rochester, N.Y. Filed Oct. 23, 1959.

WONDER

Owner of Reg. No. 366,921.
For Carbon Paper.
First use about June 17, 1902.

SN 88,891. Kee Lox Manufacturing Company, Rochester, N.Y. Filed Oct. 23, 1959.

GOLD BOND

Owner of Reg. No. 125,148.
For Carbon Paper.
First use about Jan. 15, 1916.

SN 90,277. Sperry Rand Corporation, New York, N.Y. Filed Feb. 3, 1960.

BEAUTYRITE

Owner of Reg. No. 602,260.
For Inked Ribbons for Typewriters and Other Writing or Printing Machines.
First use Oct. 19, 1959.

Class 12 — Construction Materials

SN 72,396. West Coast Steel Company, San Leandro, Calif. Filed Apr. 27, 1959.

WEST COAST STEEL

For Prefabricated Metal Members for Buildings Including Structural Members Such as Purlins, Girders and Trusses, and Prefabricated Curtain Wall, Partitions, Prefabricated Metal Doors, Prefabricated Metal Windows, Parts, and Accessories Therefor.
First use Jan. 5, 1937.

SN 79,563. Lamont & Riley Co., Worcester, Mass. Filed Aug. 14, 1959.

EXPAND-O-FLASH

For Flexible Plastic Waterstop With Metal Edges for Use in Expansion Joints.
First use in January 1959.

SN 84,478. Sun Chemical Corporation, New York, N.Y. Filed Nov. 3, 1959.

JOINTEX

For Material Used for Pointing Mortar.
First use 1933.

SN 91,100. Mecklenburg-Duncan Company, Oklahoma City, Okla. Filed Feb. 17, 1960.

VINA-FOAM

For Weather Strip.
First use Dec. 6, 1957.

SN 92,201. Aluminum & Glass Products Company, Houston, Tex. Filed Mar. 7, 1960.

Kesko

For Prefabricated Windows and Window Frames and Prefabricated Wall Panels.
First use Oct. 1, 1958.

SN 93,183. Insular Lumber Company, Philadelphia, Pa. Filed Mar. 18, 1960.

ILCO

Owner of Reg. No. 568,020.
For Lumber and Lumber Products—Namely, Sidings, Panelings, Mouldings, Partitions, Ceilings, and Floorings.
First use 1918.

SN 93,400. Aetna Plywood & Veneer Company, Chicago, Ill. Filed Mar. 22, 1960.

MASTERBORD

Owner of Reg. No. 627,219.
For Pressed Fiber Board.
First use Jan. 21, 1960.

SN 94,000. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Mar. 30, 1960.

OXILINE

Owner of Reg. No. 661,543.
For Refractory Brick of Magnesia and Dolomite.
First use Mar. 8, 1960.

SN 94,001. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Mar. 30, 1960.

OXIBRIK

Owner of Reg. No. 661,543.
For Refractory Brick of Magnesia and Dolomite.
First use Mar. 8, 1960.

SN 94,430. Sivad Ceramic Corporation, Oak Hill, Ohio. Filed Apr. 5, 1960.

Perma-Set

For Refractory Bonding Cement.
First use July 1958.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 65,063. Automatic Valcanizers Corporation, New York, N.Y. Filed Dec. 30, 1958.

WONDER

For Tire Valves and Parts Thereof.
First use June 1, 1957.

SN 78,801. H. Pfaeffel Hardware Co., Inc., Pearl River, N.Y. Filed July 23, 1959.



For Racks, Holders, Supports, Shelves, Brackets, Knobs, Hooks, Bars, Handles, Decorative Metallic Designs for Walls and/or Furniture, Grill Work, Keyhole Covers, Decorative Bathroom Accessories, Decorative Furniture Hardware, Decorative Builders' Hardware.
First use Jan. 5, 1956.

SN 78,597. R. H. Baker & Company, Inc., Los Angeles, Calif. Filed July 29, 1959.

SHURSEAL

For Service Pipe Saddles for Use in Water Works Piping.
First use May 1949.

SN 78,723. Emil J. Paidar Company, Chicago, Ill. Filed July 30, 1959.

THEO. A. KOCHS

For Barber Bowls, Basket Strainers, Beauty Bowls, Casters, Diverter Faucets, Faucets, Hoses and Sprays, Lavatories, Manicure Bowls, Manicure Table Supports and Locks, Manicure Trays, Shampoo Bowls, Shampoo Faucets, Temperature Control Faucets, and Vacuum Breakers.
First use 1886.

SN 84,667. Jo-Li-Et Gutter Gard, Inc., Glenbrook, Conn. Filed Nov. 5, 1959.

JO-LI-ET GUTTER GARD

Applicant disclaims the words "Gutter Gard" apart from the mark as shown.
For Plastic Gutter Protectors.
First use Feb. 18, 1959.

SN 87,611. Kinkead Industries Incorporated, Chicago, Ill. Filed Dec. 22, 1959.



Owner of Reg. No. 692,679.
For Sink Rims and Sink Frames.
First use Aug. 3, 1959.

SN 90,335. Hays Manufacturing Company, Erie, Pa. Filed Feb. 4, 1960.

MESURFLO

For Fluid Flow Control Devices To Regulate Discharge Under Varying Pressure Conditions To Control Fluids.
First use July 18, 1947.

SN 90,355. The Ohio Nut & Bolt Company, Berea, Ohio. Filed Feb. 4, 1960.



The words "Weld Fasteners" are disclaimed apart from the mark as shown.
For Fastening or Attaching Devices Such as Screws, Nuts, Pins, Brackets, Knobs, and Clips Designed for Attachment to a Supporting Member by Electrical Resistance Welding.
First use Mar. 1, 1959.

SN 93,071. Hays Manufacturing Company, Erie, Pa. Filed Mar. 17, 1960.

L-P-D MULTI-MESURFLO

For Fluid Flow Control Devices for Regulating Discharge Under Varying Pressure Conditions To Handle a Variety of Fluids.
First use Mar. 1, 1956.

SN 93,480. Aeronca Manufacturing Corporation, Middletown, Ohio. Filed Mar. 23, 1960.

DUCHESS

For Stainless Steel Sinks.
First use Feb. 26, 1960.

Class 14—Metals and Metal Castings and Forgings

SN 79,347. Misco P.C., Inc., New York, N.Y. Filed Aug. 11, 1959.

Applicant disclaims the word "Vacuum" when used separate and apart from the mark.
For Steel Castings.
First use April 1959.

SN 80,937. Wallram Hartmetallwerk und Hartmetallwerkzeugfabrik Meutsch, Voigtlander & Co., Essen, Germany. Filed Sept. 4, 1959.

WALLRAMANT

Owner of German Reg. No. 725,996, dated June 12, 1959; and U.S. Reg. Nos. 367,382 and 644,155.
For Raw and Partly Treated Non-Precious Metals, Particularly Hard Metal Alloys Embedded With Diamonds; Machine Castings.

SN 82,995. National-Standard Company, Niles, Mich. Filed Oct. 9, 1959.

For Perforated Metals Used for Ornamental and Industrial Purposes.
First use on or about Dec. 27, 1949.

SN 86,646. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Dec. 4, 1959.

LOW AMP

Owner of Reg. No. 571,447.
For Alloys in Various Forms Suitable for Welding, Brazing, Soldering, and Hard-Surfacing Operations.
First use Oct. 19, 1951.

Class 15—Oils and Greases

SN 79,293. Richman Chemical Products Co., Chicago, Ill. Filed Aug. 10, 1959.

"GUN-IT"

For Gasoline Additive for Removing Varnish, Gum, Lacquer, and Moisture From Fuel Systems.
First use July 30, 1959.

SN 86,504. Vitramon, Incorporated, d.b.a. Inland Graphite and Chemical Company, Bridgeport, Conn. Filed Jan. 5, 1960.

KELGRAF

For Lubricants.
First use on or before Nov. 4, 1957.

SN 95,120. Rust Master Chemical Corporation, Worcester, Mass. Filed Apr. 14, 1960.

RUST MASTER

Owner of Reg. Nos. 379,841, 679,396, and others.
For Rubber Lubricant Particularly for Use in Lubricating, Dressing, and Preserving Motor Vehicle Tires.
First use May 5, 1958.

Class 16—Protective and Decorative Coatings

SN 88,018. Chicago Rawhide Manufacturing Company, Chicago, Ill. Filed Dec. 28, 1959.

CR

Owner of Reg. Nos. 518,600 and 627,718.
For Plastic Coating Materials.
First use Oct. 21, 1959.

SN 92,104. Mohawk Furniture Finishing Products, Inc., Amsterdam, N.Y. Filed Mar. 3, 1960.

MOHAWK TONE FINISH

For Furniture Lacquer Stains.
First use Aug. 10, 1959.

SN 93,979. Bright Beauty, Inc., Chicago, Ill. Filed Mar. 30, 1960.

MISTER MATCH

For Lacquer-Enamel.
First use Jan. 15, 1960.

Class 18—Medicines and Pharmaceutical Preparations

SN 51,773. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed May 16, 1958.

COMBICAIN

For Medicinal Preparation for the Topical Relief of Infections or Inflammation or Pain.
First use Apr. 22, 1958.

SN 61,144. Zirin Veticeuticals, Inc., Hialeah, Fla. Filed Oct. 22, 1958.

VETICEUTICAL

For Veterinary Medicines and Health Aids—Namely, Vitamins, Hormones, Blood Building Tonics, and Mineral Supplements for Treating Various Animal Ailments.
First use Jan. 16, 1957.

SN 63,446. Heilerde-Gesellschaft Luvos Just K.G., Bad Homburg vor der Hohe, Germany. Filed Dec. 1, 1958.

LUVOS

Owner of German Reg. No. 511,484, dated May 23, 1939.
For Medicated Bandages, Medicated Dressings, and Medicated Packs.

SN 70,755. Sunnen Products Company, d.b.a. The Emko Company, St. Louis, Mo. Filed Apr. 2, 1959.

EMKO

For Vaginal Antiseptic and Applicators Sold as a Unit.
First use Mar. 4, 1959.

SN 73,215. Foods Plus, Inc., New York, N.Y. Filed May 8, 1959.

GAIN N' GROW

For Vitamins in Liquid Form.
First use in June 1958.

SN 73,631. Stonehill-Tree Laboratories, Chicago, Ill. Filed May 13, 1959.

VIVEX

For High Potency Dietary Supplement in Tablet Form Consisting of Vitamins and Minerals.
First use Apr. 1, 1959.

SN 81,890. Dr. Peter Fahrney & Sons Co., Chicago, Ill. Filed Sept. 23, 1959.

DR. PETER FAHRNEY'S LAXITOL

Owner of Reg. Nos. 149,047, 377,478, and others.
For Laxative, Carminative, and Stomachic Preparation.
First use June 10, 1958.

SN 82,002. Kimberg Product Research Corporation, Englewood, N.J. Filed Sept. 24, 1959.

KIMTAB

For Multiple Vitamin-Mineral Preparation for Use as a Food Supplement.
First use on or about May 8, 1959.

SN 82,446. Schering Corporation, Bloomfield, N.J. Filed Sept. 30, 1959.

FULVIDERM

Owner of Reg. Nos. 667,476 and 694,146.
For Antifungal Topical Preparation.
First use Aug. 6, 1959.

SN 82,769. Imperial Chemical Industries Limited, London, England. Filed Oct. 6, 1959.

NASEPTIN

Owner of British Reg. No. 780,098, dated July 24, 1958.
For Antiseptic Preparations for the Treatment of the Ears, Nose, and Throat.

SN 85,802. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Nov. 23, 1959.

CLAYSORB

For Attapulgite Incorporated in Medicinal Preparations.
First use Mar. 12, 1957.

SN 86,564. American Home Products Corporation, New York, N.Y., assignee of Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. Filed Dec. 3, 1959.

B-SOL

For Vitamin Preparation for Veterinary Use.
First use May 25, 1949.

SN 87,067. Nebraska Consolidated Mills Company, d.b.a. Alabama Flour Mills, Omaha, Nebr. Filed Dec. 10, 1959.

FORTIMAX

For Dairy Feed Supplement Consisting Primarily of Vitamins and Minerals.
First use Nov. 12, 1959.

SN 90,713. Sterling Drug Inc., New York, N.Y. Filed Feb. 10, 1960.

VISBEL

For Preparation for the Medication and Care of the Eyes.
First use Jan. 11, 1960.

SN 90,945. Podiatrex, Ltd., Glendale, Calif. Filed Feb. 15, 1960.

PODIACORT

For Hydrocortamate Ointment.
First use Jan. 28, 1960.

SN 90,975. Harvey Wolfson, d.b.a. Columbia Medical Company, New York, N.Y. Filed Feb. 15, 1960.

MIDRAN

For Decongestant Tablets.
First use Aug. 27, 1959.

SN 91,006. The G. F. Harvey Company, Inc., New York, N.Y. Filed Feb. 16, 1960.

MONOPHOS

For Central Nervous System Stimulant and Anti-Depressant.
First use July 18, 1950.

SN 91,010. Jensen-Salsbery Laboratories, Inc., Kansas City, Mo. Filed Feb. 16, 1960.

JENOTONE

For Muscle Relaxant and Anti-Spasmodic for Veterinary Use.
First use Jan. 18, 1960.

SN 91,047. American Cyanamid Company, New York, N.Y. Filed Feb. 17, 1960.

CYZINE

For Agent for the Prevention and Control of Blackhead in Poultry.
First use Nov. 24, 1959.

SN 91,215. Strong Cobb Arner, Inc., Cleveland, Ohio. Filed Feb. 18, 1960.

HESOTIN

For Vasodilator.
First use Dec. 12, 1959.

SN 93,460. G. D. Searle & Co., Skokie, Ill. Filed Mar. 22, 1960.

DACTAZIDE

For Medicinal and Pharmaceutical Preparation—Namely, a Diuretic.
First use Mar. 17, 1960.

SN 93,656. American Scientific Laboratories, Inc., Madison, Wis. Filed Mar. 25, 1960.

STAFSTREPTIN

For Vaccine for Animals.
First use Mar. 14, 1960.

SN 93,725. Vick Chemical Company, New York, N.Y. Filed Mar. 25, 1960.

"A" PLUS

For Indigestion Tablets.
First use Mar. 7, 1960.

SN 93,736. American Home Products Corporation, d.b.a. Whitehall Laboratories, New York, N.Y. Filed Mar. 28, 1960.

PREPARATION H

No exclusive claim is made to the word "Preparation" apart from the mark as shown. Owner of Reg. No. 592,371.
For Medicinal Ointment and Suppositories.
First use May 10, 1949.

SN 93,845. Nordson Pharmaceutical Laboratories, Inc., Irvington, N.J. Filed Mar. 28, 1960.

LENOMET

For Preparation for an Appetite Depressant.
First use Mar. 14, 1960.

SN 93,857. The Purdue Frederick Company, New York, N.Y. Filed Mar. 28, 1960.

MYDRIAMIDE

For Mydriatic Preparation.
First use Mar. 24, 1960.

SN 93,950. The Schuemann-Jones Co., Cleveland, Ohio. Filed Mar. 29, 1960.

METHALGEN

For Medical Preparation for Use as a Counter-Irritant and Analgesic.
First use January 1935.

SN 94,246. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Apr. 4, 1960.

SAPICAT

Owner of German Reg. No. 212,426, dated Sept. 13, 1910.
For Virucide, Bactericidal, and Fungicidal Medical Preparations.

SN 94,527. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Filed Apr. 6, 1960.

NATRASCORB

For Pharmaceutical Product Containing Sodium Salt of Ascorbic Acid (Vitamin C).
First use Dec. 1, 1944.

SN 94,529. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Filed Apr. 6, 1960.

CAMINOIDS

For Pharmaceutical Preparation of Amino Acids and Polypeptides From Hydrolyzed Protein Foods.
First use Apr. 26, 1948.

SN 94,541. Xttrium Laboratories, Inc., Chicago, Ill. Filed Apr. 6, 1960.

EXATRATE

For Pharmaceutical Preparation Used for Vasal Dilation for Pains of Angina.
First use Mar. 23, 1960.

SN 94,557. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Apr. 7, 1960.

DIANEAL

For Peritoneal Dialysis Solution.
First use Feb. 25, 1960.

Class 19—Vehicles

SN 66,193. Airstream Trailer Sales, Inc., Jackson Center, Ohio. Filed Jan. 21, 1959.



The words "Land Yacht" are disclaimed apart from the mark as shown. The portrait is that of Wallace M. Byam, president of the applicant corporation. Owner of Reg. No. 607,324.
For House Trailers.
First use June 14, 1958.

SN 81,946. Toyo Kogyo Co., Ltd., Aki-gun, Hiroshima-ken, Japan. Filed Sept. 23, 1959.

Mazda

Owner of Japanese Reg. No. 425,000, dated May 8, 1953.
For Land Vehicles—Namely, Busses, Passenger Cars, Motorcycles, Motorscooters, Trucks, Trailers, and Component Parts Thereof, Except Lamps, Signals, and Similar Lighting Equipment for Land Vehicles.

SN 91,684. General Motors Corporation, Detroit, Mich. Filed Feb. 26, 1960.

TEMPEST

For Automobiles.
First use Feb. 9, 1960.

SN 92,220. Standun Machine Company, Los Angeles, Calif. Filed Mar. 7, 1960.



The word "Kart" separate and apart from the mark as shown is disclaimed.
For Miniature Gasoline Engined Automobiles.
First use Mar. 1, 1958.

SN 94,614. Paul Schearer Engineering Co., Wichita Falls, Tex. Filed Apr. 7, 1960.

"CARTENDER"

For Accessory Article Holder for Use in an Automobile or Other Vehicle for Holding Articles Within Convenient Access to the Occupants of the Vehicle, and Among Other Things, May Hold Maps, Beverage Containers, Refreshments, and Miscellaneous Articles.
First use Oct. 1, 1959.

SN 94,654. U.S. Fiberglass Products, Inc., Compton, Calif. Filed Apr. 11, 1960.

Performer

For Fiberglass Boats.
First use Mar. 8, 1954.

SN 94,925. Textron Inc., Providence, R.I. Filed Apr. 12, 1960.

HOMELITE SPITFIRE

Owner of Reg. Nos. 151,508, 663,783, and others.
For Motor-Karts.
First use Mar. 25, 1960.

SN 95,045. Adlerwerke vorm. Heinrich Kleyer A.G., Frankfurt am Main, Germany. Filed Apr. 20, 1960.

ADLER



Owner of German Reg. No. 730,457, dated Oct. 29, 1959.
For Land, Air, and Water Vehicles, Motor Cars, Motorcycles, Motor Bicycles, Motor Scooters, Cabin Scooters, Bicycles, and Parts of All These Vehicles.

Class 20—Linoleum and Oiled Cloth

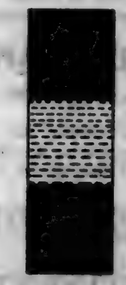
SN 78,800. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed July 31, 1959.

SCOTCH-TRED

Owner of Reg. No. 681,413.
For Granular Coated Sheet Material Adapted for Application to Other Articles and Surfaces (e.g. Walls, Floors, Pulleys, Golf Club Handles), To Impart Non-Slip Characteristics Thereto.
First use May 19, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 45,992. Neon Products, Inc., Lima, Ohio. Filed Feb. 17, 1958.



For Electrically Illuminated Display Signs.
First use on or about Mar. 11, 1957.

SN 49,551. Holt Manufacturing Company, Oakland, Calif. Filed Apr. 17, 1958.

Government Special

For Portable Electrical Floor Machines.
First use Jan. 27, 1958.

SN 68,271. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Feb. 24, 1959.

KATHENE

For Insulated Conductors.
First use Aug. 7, 1958.

SN 69,664. Model Engineering & Manufacturing, Inc., Huntington, Ind. Filed Mar. 16, 1959.

MEMCOR

For Electrical Amplifiers, Electrical Motors, Electrical Wave Guides, Electrical Resistors, Electrical Switches, Cable Harnesses, Electrical Capacitors, Power Amplifiers, and Slip Ring Assemblies.
First use Jan. 2, 1959.

SN 76,072. Filtors, Inc., Port Washington, N.Y. Filed June 19, 1959.

FILTORS

For Electric Relays Including Sub-Miniature General Purpose and Latching Relays of the Type Used in Electronic Components.
First use Oct. 17, 1958.

SN 76,754. Sunbeam Lighting Company, Los Angeles, Calif. Filed June 29, 1959.

CENTRON

For Fluorescent Lighting Fixtures—Namely, Lighting Fixtures for Hospital Beds, and Lighting Fixtures Associated With Service Control Consoles for Hospital Beds.
First use on or about Dec. 20, 1958.

SN 77,395. Associated Electrical Industries (Woolwich) Limited, London, England, by change of name from Siemens Edison Swan Limited, London, England. Filed July 9, 1959.

EDISWAN

Owner of British Reg. No. 645,552, dated Mar. 6, 1946; and U.S. Reg. No. 52,320.
For Electronic Tubes, Cathode Ray Tubes, and Semiconductor Devices—Namely, Diodes, Rectifiers, Controlled Rectifiers, Transistors, and Tunnel Diodes, All Incorporating Germanium or Silicon.

SN 78,264. Continental Mdse. Co., Inc., New York, N.Y. Filed July 23, 1959.

CONTINENTAL

For Electrical Equipment—Namely, Transistor Radios.
First use July 1, 1954; July 1929 generally for electrical equipment.
Subj. to Intf. with Reg. No. 695,216.

SN 79,531. Swiveller Company, Inc., Nanuet, N.Y. Filed Aug. 13, 1959.

"COUNTERPOINT"

For Adjustable Electrical Lighting Fixtures.
First use June 21, 1959.

SN 81,429. Speer Carbon Company, St. Marys, Pa. Filed Sept. 15, 1959.



Owner of Reg. No. 381,062.
For Finished and Unfinished Molded and Extruded Carbon and Graphite Shapes for General Use in the Industrial Arts.
First use September 1951.

SN 81,550. General Electric Company, Hudson Falls, N.Y. Filed Sept. 17, 1959.

ISOKRAFT

For High Voltage Electrical Capacitors.
First use during August 1959.

SN 82,031. The Siegler Corporation, Long Island City, N.Y. Filed Sept. 24, 1959.

ROBOTUNER

For Automatic Radio and Television Station and/or Volume Selecting Device.
First use Aug. 5, 1959.

SN 83,916. Solid State Research, North Hollywood, Calif. Filed Oct. 23, 1959.



Applicant's mark comprises a fanciful design, as shown.
For Ferromagnetic Materials Sold in Block Form.
First use Aug. 11, 1959.

SN 85,058. Tessier Industries, Incorporated, Cleveland, Ohio. Filed Nov. 10, 1959.



The drawing is lined for red, but color is not claimed as an integral portion of the mark.
For Radios.
First use June 19, 1959.

SN 85,131. The Hobart Manufacturing Company, Troy, Ohio. Filed Nov. 12, 1959.

RACK-O-MATIC

For Dishwashers.
First use Oct. 22, 1959.

SN 86,958. General Electric Company, Schenectady, N.Y. Filed Dec. 9, 1959.

POWER GROOVE

For Electric Lamps.
First use Aug. 12, 1956.

SN 88,015. Chicago Rawhide Manufacturing Company, Chicago, Ill. Filed Dec. 28, 1959.

CR

Owner of Reg. Nos. 518,600 and 627,718.
For Electronic Parts Made From High Temperature Plastic Materials.
First use July 7, 1959.

SN 88,780. Microsonics, Inc., Hingham, Mass. Filed Jan. 11, 1960.



The drawing is lined for red, but color is not claimed as an integral portion of the mark.
For Ultrasonic Solid Delay Lines.
First use Mar. 22, 1957.

SN 90,967. The Vulcan Radiator Company, Hartford, Conn. Filed Feb. 15, 1960.

TRIMLINE

Owner of Reg. No. 654,464.
For Electric Radiators—Namely, Finned-Tube Heat Transfer Elements and Enclosures Therefor.
First use November 1953.

SN 91,053. The Bettendorf Company, Bettendorf, Iowa. Filed Feb. 17, 1960.

BASKERVILLE

For Electrical Alarm System for Lighting Lights or Sounding a Warning in Response to the Bark of a Dog or Similar Sounds.
First use Feb. 6, 1960.

SN 92,067. American Super-Temperature Wires, Inc., Wilmington, Del. Filed Mar. 3, 1960.



For High Temperature Electrical Wire Products—Namely, High Temperature Tape, Fluorocarbon Resin Extruded Hook-Up Wire, Wrapped, Hook-Up and Magnet Wire, Airframe Wire, Coaxial Cables, and Miniature and Jumbo Cables.
First use on or about Jan. 30, 1960.

SN 92,647. Robotron Corporation, Detroit, Mich. Filed Mar. 11, 1960.

SPIKE POWER

For Electrical Circuitry for Controlling the Supply of Power to Electric Welding Machines.
First use Feb. 18, 1960.

SN 94,784. Cerro de Pasco Corporation, New York, N.Y. Filed Apr. 11, 1960.

PHOSROC

For Insulated Electrical Lead Wires.
First use Mar. 28, 1960.

SN 96,882. Electronic Communications, Inc., St. Petersburg, Fla. Filed Apr. 12, 1960.

ECI

For Radio Transmitting and Receiving Equipment and Component Parts Therefor, Electronic Circuitry, Electrical Motors, Facsimile Recording Equipment and Component Parts Therefor, and Electronic Circuit Components.
First use Oct. 24, 1958.

Class 22—Games, Toys, and Sporting Goods

SN 70,336. American Character Doll Corporation, Brooklyn, N.Y. Filed Mar. 27, 1959.

TOODLES SUPER KART

No claim is made to the words "Super Kart" apart from the mark as shown. Owner of Reg. No. 622,088.
For Doll and a Toy Shopping Cart in Which the Doll Is Seated.
First use Mar. 4, 1959.

SN 72,001. James E. Angelier, Santa Monica, Calif. Filed Apr. 22, 1959.

SHUF-L-BOWL

For Equipment (or Apparatus) Sold as a Unit for Playing a Modified Type of Bowling Game.
First use Mar. 18, 1959.

SN 73,496. George McArthur & Sons, Inc., Baraboo, Wis. Filed May 12, 1959.

SWING-TIME

For Hammocks.
First use Oct. 21, 1948.

SN 77,923. James Jenkins, d.b.a. Jenkins "Troy-Toy" Co., Troy, Ohio. Filed July 17, 1959.

"FLOAT-O-BALL"

For Floating Goal and Related Apparatus for Playing Games in Water.
First use June 8, 1959.

SN 82,069. Avalon Hill Company, Baltimore, Md. Filed Sept. 25, 1959.

U-BOAT

For Equipment Sold as a Unit for Playing a Board Game.
First use Aug. 20, 1959.

SN 93,751. Arreo Playing Card Company, Chicago, Ill. Filed Mar. 28, 1960.

GALLANT

For Playing Cards.
First use April 1952.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 46,724. H. Ernault-Batignolles, S.A., Paris, France. Filed Feb. 27, 1958.



For All Machine Tools.
First use Aug. 3, 1954; in commerce Aug. 3, 1954.

SN 61,634. The Korfund Company, Inc., Long Island City, N.Y. Filed Oct. 30, 1958.



Owner of Reg. No. 195,858.
For Isolators Both Base-Mounted and Suspension Type for the Control of Vibration, Shock, and Noise Caused by Machinery.
First use Sept. 1, 1958; Jan. 1, 1930, as to the word "Korfund."

SN 61,637. The Korfund Company, Inc., Long Island City, N.Y. Filed Oct. 30, 1958.

KORFUND

Owner of Reg. No. 195,858.
For Isolators Both Base-Mounted and Suspension Type for the Control of Vibration, Shock, and Noise Caused by Machinery.
First use Jan. 1, 1930.

SN 72,057. The Murray Company of Texas, Inc., d.b.a. Boston Gear Works, North Quincy, Mass. Filed Apr. 22, 1959.

STANDARDIZATION PAYS

For Machinery Gears and Power Transmission Chains, Machine Racks, Sprocket Wheels and Sprocket Wheel Bushings, Couplings and Inserts Therefor, Bushings, Pillow Blocks and Flanged Cartridges, Pulleys, Speed Changers, Bearings, Motor Bases, Variable Speed Drives, Stem Spur Pinions, Universal Joints, Gear Gauges, Shaft Supports, Ground Washers, Chain Breaker's Tool, Miter Gear Boxes, Set Screw Collars, Ball Bearing Sheaves, Pinion Wires and Motors.
First use Jan. 1, 1928.

SN 78,886. Southern Utilities Company, Washington, D.C. Filed July 21, 1959.

Q-AIR

For Pneumatic Machinery—Namely, Air Compressors and Parts Thereof.
First use Apr. 29, 1959.

SN 81,857. Aetna Engineering Company, Ashaway, R.I. Filed Sept. 22, 1959.



No claim is made to the words "Pumps," "Engineering Co." and "Service." The lining reproduces lining on the specimens and does not indicate color.
For Domestic and Industrial Pumps for Pumping Water and Other Liquids.
First use 1951.

SN 82,202. Conner Tool and Mfg. Company, Phoenix, Ariz. Filed Sept. 28, 1959.



For Machine Tools and Machine Parts Manufactured in Accordance With Proprietor's and Customer's Specifications.
First use Oct. 13, 1958.

SN 82,232. High Pressure Equipment Company, Inc., Erie, Pa. Filed Sept. 28, 1959.



For High Pressure Valves, High Pressure Pumps, Agitating Equipment, Dispensing Equipment, and Measuring Equipment.
First use Feb. 1, 1958.

SN 82,581. Plierench Company of America, Chicago, Ill. Filed Oct. 1, 1959.

PLIERENCH

For Multi-Purpose Tools—Namely, Combination Pliers, Wrench, Pipe Wrench, Clamping Vise, and Wire Wrench.
First use 1924.

SN 83,841. Pace Mfg. Co., Des Moines, Iowa. Filed Oct. 7, 1959.



Applicant disclaims the words "Screen Printer" apart from the mark as shown.
For Silk Screen Printing Press.
First use about July 16, 1957.

SN 82,890. Federal-Mogul-Bower Bearings, Inc., Detroit, Mich. Filed Oct. 8, 1959.

BOWER

Owner of Reg. No. 600,981.
For Tapered Roller Bearings, Straight Roller Bearings, Journal Roller Bearings and Parts Therof.
First use 1911.

SN 84,060. Elba-Werk, Ettlinger Baumaschinen- und Hebezeugfabrik G.m.b.H., Ettlingen, Baden, Germany. Filed Oct. 27, 1959.

WINCHDOZER

Owner of German Reg. No. 724,129, dated Apr. 17, 1959.
For Movable and Immovable Rope or Cable Hoists and Cable Puller Machines.

SN 84,061. Elba-Werk, Ettlinger Baumaschinen- und Hebezeugfabrik G.m.b.H., Ettlingen, Baden, Germany. Filed Oct. 27, 1959.

MOBY

Owner of German Reg. No. 719,378, dated Nov. 7, 1958.
For Movable and Immovable Rope or Cable Hoists and Cable Puller Machines.

SN 84,496. E. Lapp & Co. A.G., Zurich, Switzerland. Filed Oct. 2, 1959.

DEBLORA

Owner of Swiss Reg. No. 157,608, dated Aug. 17, 1955.
For Pumps.

SN 85,636. Vinson Supply Company, Tulsa, Okla. Filed Nov. 18, 1959.

MACARONI

For Sucker Rods and Pumping Rods.
First use Nov. 10, 1959.

SN 91,273. Pennsylvania Sewing Research Corp., Dunmore, Pa. Filed Feb. 19, 1960.



For Tools and Parts for Sewing Machines.
First use Dec. 1, 1959.

SN 91,301. Bruder Wiester, Vienna, Austria. Filed Feb. 2, 1960.

JEWEL

Owner of Austrian Reg. No. 41,020, dated Apr. 15, 1959.
For Saw Blades.

SN 91,320. American Screw Company, Willimantic, Conn. Filed Feb. 23, 1960.

POZ-I-DRIV

For Tools—Namely, Bits and Drivers for Driving Bolts, Screws, Rivets and Other Fasteners Having Recessed Heads; and Punches Which Are End Products for Machinery Used To Manufacture Screws, Bolts, Rivets and Other Fasteners Having Recessed Heads.
First use Jan. 19, 1960.

SN 91,323. American Screw Company, Willimantic, Conn. Filed Feb. 23, 1960.

TRI-WING

For Tools—Namely, Bits and Drivers for Driving Bolts, Screws, Rivets and Other Fasteners Having Recessed Heads; and Punches Which Are End Products for Machinery Used To Manufacture Screws, Bolts, Rivets and Other Fasteners Having Recessed Heads.
First use Feb. 10, 1960.

SN 91,829. Nebel Machine Tool Corporation, Cincinnati, Ohio. Filed Feb. 29, 1960.

MAGNAPILOT

For Machine Tools—Namely, Lathes, Shapers, and Parts Thereof and Accessories Therefor.
First use Jan. 5, 1960.

SN 92,026. Robert D. Marx, d.b.a. Bomar, Brooklyn, N.Y. Filed Mar. 2, 1960.

BOMAR

For Fluid Control Systems, Fluid Transportation and Storage Systems, Valves, Tank Configurations, Duct Arrangements, Truck Tank Internal Compartment and Vent Valves, Truck Tank Pneumatic and Hydraulic Control Systems.
First use 1936.

SN 93,686. Honolulu Iron Works Company, Honolulu, Hawaii. Filed Mar. 25, 1960.

HONIRON

For Sugar Manufacturing Equipment Including Sugar Cane Knives, Sugar Mills, Heaters, Evaporators, Pans, Crystallizers, Cane Washing Plants, and Vapor Separators.
First use in or about 1926.

SN 93,704. Patton Engineering Corporation, North Hampton, N.H. Filed Mar. 25, 1960.

SEA DOG

For Fluid Pumps.
First use Oct. 26, 1959.

SN 93,749. Anderson Screw Products, Inc., Jamestown, N.Y. Filed Mar. 28, 1960.

ANDERSON

Owner of Reg. No. 626,070.
For Products Produced by Hand or Automatic Screw Machines—Namely, Bushings, Screws, Studs, Pins, Threaded Plugs and Slotted Shafts, and Small Adjustable Eccentrics and Cams.
First use Aug. 6, 1951.

SN 93,774. Draper Corporation, Hopedale, Mass. Filed Mar. 28, 1960.

X2

For Looms and Parts Thereof.
First use July 11, 1941, on looms.

SN 93,972. American Brake Shoe Company, New York, N.Y. Filed Mar. 30, 1960.

RACOR

Owner of Reg. Nos. 169,851, 682,840, and others.
For Car Retarders.
First use May 23, 1959.

SN 94,953. Arvin Industries, Inc., Columbus, Ind. Filed Apr. 13, 1960.

TEMPO

For Automobile Sports Mufflers.
First use on or about Sept. 10, 1959.

SN 94,954. Arvin Industries, Inc., Columbus, Ind. Filed Apr. 13, 1960.

SOUND SEALD

For Automobile Mufflers.
First use on or about June 30, 1959.

SN 95,369. Gorham Manufacturing Company, Providence, R.I. Filed Apr. 19, 1960.

CHALET

For Stainless Steel Table Flatware and Table Cutlery.
First use Mar. 14, 1960.

Class 26—Measuring and Scientific Appliances

SN 54,068. Montecatini, Societa Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed June 23, 1958.

MOPLEN

Owner of Italian Reg. No. 133,573, dated Oct. 2, 1957.
For Parts of Scientific, Nautic, Geodetic, Photographic, Cinematographic, Optic, Measuring and Weighing, Signalling, Supervising and Controlling Apparatus and Instruments; Parts of Measuring and Scientific Apparatus and Instruments for Teaching Physics, Chemistry and Related Natural Sciences; Parts of Cash Registers and Calculating Devices; All of Said Parts Made of Synthetic Plastic.

SN 85,390. The Plastic Coating Corporation, Holyoke, Mass. Filed Nov. 16, 1959.

PC

For Coated Sheet Material in Both Cut Sheet and Roll Form—Namely, Expendable Photoelectrostatic Paper for Reproductive Purposes; and Coated Paper, Cloths, and Films for Photo and Diazo Sensitising Purposes.
First use Nov. 19, 1958, on expendable photoelectrostatic paper.

SN 85,771. Pictorial Machinery Limited, Crawley, England. Filed Nov. 20, 1959.

LITHOTEX

Owner of British Reg. Nos. 448,032 and 448,033, dated May 2, 1924, and 475,135, dated Nov. 22, 1926.
For Machinery, Equipment, and Supplies for Use in the Graphic Arts—Namely, Step and Repeat Cameras, Step and Repeat Contact Negative Printers, Machines for Coating and Developing Printing Plates, Ruling-Up Tables, Process Cameras, Optical Glassware, Prisms, Lenses, Engraved Screens of Glass, Photographic Reproducing Machines, Printing Down Frames, Microscopes, Light Measuring Meters, Arc Lamps for Photographic Use, Projection Lamps for Photographic Use, Air Heating and Drying Equipment for Photographic Use, and Parts and Accessories for the Foregoing.

SN 93,355. The Pyramid Rubber Company, Ravenna, Ohio. Filed Mar. 21, 1960.

EVENFLO

Owner of Reg. Nos. 562,145, 562,725, and 566,385.
For Thermometers and Thermometer Sets.
First use February 1960.

SN 94,027. Transistor Specialties, Inc., Plainview, N.Y. Filed Mar. 30, 1960.

APTI

For Industrial Counters.
First use Mar. 9, 1960.

SN 94,448. AMP Incorporated, Harrisburg, Pa. Filed Apr. 6, 1960.

AMP-MAD

Owner of Reg. Nos. 405,714, 698,115, and others.
For Multi-Aperture Devices, Employing Magnetic Memory Elements, Which Are Adaptable to Uses in Computing and Control Equipment.
First use Mar. 28, 1960.

Class 28—Jewelry and Precious-Metal Ware

SN 91,645. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG

Owner of Reg. Nos. 379,948, 682,904, and others.
For Ladies' Costume Jewelry; Flat and Hollow Tableware Made of Precious Metal, Including but not Limited to Eating and Serving Utensils; and Decanter Labels and Candlesticks of Precious Metal.
First use 1939 on flat and hollow tableware of silver.

SN 91,653. Williamsburg Restoration, Incorporated, Williamsburg, Va. Filed Feb. 25, 1960.

WILLIAMSBURG · RESTORATION · C W XX

Owner of Reg. Nos. 379,948, 682,903, and others.
For Ladies' Costume Jewelry; Flat and Hollow Tableware Made of Precious Metal, Including but not Limited to Eating and Serving Utensils; and Decanter Labels and Candlesticks of Precious Metal.
First use Mar. 20, 1947, on flat and hollow tableware of silver.

SN 92,679. Gorham Manufacturing Company, Providence, R.I. Filed Mar. 11, 1960.

COLONIAL EAGLE

For Sterling Silver Flatware and Table Cutlery.
First use Feb. 3, 1960.

SN 92,680. Gorham Manufacturing Company, Providence, R.I. Filed Mar. 11, 1960.

PERSPECTIVE

For Sterling Silver Flatware and Table Cutlery.
First use Feb. 3, 1960.

SN 92,681. Gorham Manufacturing Company, Providence, R.I. Filed Mar. 11, 1960.

VILLA

For Sterling Silver Flatware and Table Cutlery.
First use Feb. 1, 1960.

SN 92,682. Gorham Manufacturing Company, Providence, R.I. Filed Mar. 11, 1960.

BLITHE SPIRIT

For Sterling Silver Flatware and Table Cutlery.
First use Feb. 3, 1960.

SN 92,719. Coro, Inc., New York, N.Y. Filed Mar. 14, 1960.

Churchill Downs

For Charms and Charm Bracelets.
First use Feb. 8, 1960.

SN 93,108. Web Novelty Company, Philadelphia, Pa. Filed Mar. 17, 1960.

LUCK·E·LINK

For Bracelets and Chains for Personal Wear and Adornment.
First use Mar. 11, 1960.

Class 29—Brooms, Brushes, and Dusters

SN 64,042. American-Marietta Company, Chicago, Ill. Filed Dec. 11, 1958.

"150"

For Brooms.
First use on or about Oct. 1, 1958.

SN 79,315. Aesup Est., Vaduz, Liechtenstein. Filed Aug. 11, 1959.

bc

Owner of U.S. Reg. No. 677,317.
For Electrically Driven Toothbrush.
First use Dec. 10, 1957; in commerce Feb. 13, 1959.

SN 81,478. Gulf & West Indies Company, Inc., New York, N.Y. Filed Sept. 16, 1959.

MAR-VEL

Owner of Reg. No. 246,515.
For Sponges.
First use May 1, 1925.

SN 93,190. Lactona, Incorporated, St. Paul, Minn. Filed Mar. 18, 1960.

TOBY

For Toothbrushes.
First use July 13, 1953.

Class 31 — Filters and Refrigerators

SN 80,344. Carl F. H. Pfeiffer, Quincy, Ill. Filed Mar. 21, 1960.

Viso-Filter

For Visible Disposable Gasoline Filter for Outboard Motor.
First use Dec. 20, 1959.

SN 80,543. Protex-Gesellschaft Müller & Co. m.b.H., Garmisch-Partenkirchen, Germany. Filed Mar. 23, 1960.

DEGLUTAN

Owner of German Reg. No. 540,025, dated Dec. 5, 1941.
For Apparatus for the Treatment of Beer, Including Brewery Filters and Mixers, and Material for Use Therein, Including Chemical Products and Raw Materials for Brewery Purposes, Especially Absorption Media, Bentonite, Fuller's Earth, Active Charcoal, Silicic Acid.

Class 32 — Furniture and Upholstery

SN 40,081. Crown-Rest Bedding Co., Pittsburgh, Pa. Filed Nov. 4, 1957. CONCURRENT USE to be restricted to the States of Pennsylvania, Ohio, and West Virginia. Concurrent Use with Reg. No. 624,054.

FLEX-A-PEDIC

For Bed Mattresses and Bed Springs.
First use Apr. 18, 1952.

SN 62,972. Sto Rack Corp., Chicago, Ill. Filed Nov. 21, 1958.

STORACK

For Metal Racks and Shelving for Storage and Display of Merchandise.
First use January 1944.

SN 82,537. Royal Metal Manufacturing Co. of Jamestown, Inc., Jamestown, N.Y. Filed Oct. 1, 1959.

ARNOT

For Desks and Component Parts Thereof, Credenzas, Bookcases, Chairs, and Partitions.
First use Oct. 3, 1951.

SN 84,282. Art Metal Construction Company, New York, N.Y. Filed Oct. 30, 1959.

SHEERLINE

For Office Furniture Including Desks, Tables, Chairs, Typewriter Stands, Machine Stands, Credenzas, and Accessory Cabinets.
First use on or about May 25, 1959.

SN 85,400. Bertha H. Rowell, d.b.a. Lehana Company, Los Angeles, Calif. Filed Nov. 16, 1959.

WONDER-MIRRORS

For Mirror Arrays, Particularly Useful in Coiffure Work.
First use Sept. 12, 1957.

SN 82,855. Basic-Wits Furniture Industries, Inc., Waynesboro, Va. Filed Mar. 15, 1960.

BASICANNA

Owner of Reg. No. 548,098.
For Living Room, Bedroom, and Dining Room Furniture.
First use Dec. 1, 1959.

SN 82,553. Sealy, Incorporated, Chicago, Ill. Filed Mar. 23, 1960.

CONFORM-A-GRAPH

Owner of Reg. No. 624,541.
For Apparatus for Custom Fitting of Mattresses.
First use Mar. 2, 1960.

SN 84,966. B. G. Mosbery Corp., New York, N.Y. Filed Apr. 13, 1960.

MR. CHAIR

The word "Chair" is disclaimed apart from the mark as shown.
For Articles of Furniture—Namely, Chairs.
First use on or about Jan. 2, 1960.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 77,279. Lennox Industries Inc., d.b.a. Lima Register Company, Marshalltown, Iowa. Filed July 9, 1959.

LIMA

For Diffusers, Louver Valves, Registers, Grilles, and Return Faces for Air Heating and Cooling Apparatus.
First use 1945.

SN 81,772. Thermotank, Inc., Detroit, Mich. Filed Sept. 21, 1959.

AIR-TRAK

For Ceiling Outlets for Permitting Heating, Conditioning, and Ventilating Air To Be Admitted to and Removed From Rooms and Enclosures.
First use Nov. 15, 1958.

SN 84,258. Titus Manufacturing Corporation, Waterloo, Iowa. Filed Oct. 29, 1959.

AIRFOIL

For Grilles, Registers, Diffusers and Parts Thereof, for Use in Heating, Ventilating, and Air Conditioning Systems.
First use September 1947 on grilles.

SN 85,562. Cobell Industries, Cleburne, Tex. Filed Nov. 18, 1959.

Rangaire

Owner of Reg. No. 682,196.
For Furnaces.
First use on or about Jan. 1, 1958.

SN 89,771. The International Boiler Works Co., East Stroudsburg, Pa. Filed Jan. 27, 1960.

COAL-PAK AUTOMATIC

The word "Automatic" is disclaimed except in combination with the mark as shown.
For Packaged Unit of a Complete Bituminous Coal-Fired Boiler Sold in Condition for Installation.
First use Sept. 20, 1957.

SN 84,015. Peabody Engineering Corporation, New York, N.Y. Filed Mar. 30, 1960.

FLEXIPRO

For Gaseous Fuel Burners and Oil Burners.
First use June 22, 1959.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 73,221. Dayco Corporation, Dayton, Ohio, by change of name from The Dayton Rubber Company, Dayton, Ohio. Filed May 11, 1959.

THORO COOL

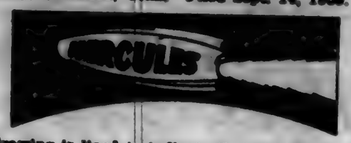
Owner of Reg. Nos. 151,732, 666,511, and others.
For Belts and Belting.
First use Apr. 8, 1959.

SN 81,230. The Hercules Tire & Rubber Company, Stamford, Conn., by change of name from The Atlas Rubber Products Company, Stamford, Conn. Filed Sept. 14, 1959.

HERCULES

For Tubes and Tires, Passenger and Truck.
First use Nov. 4, 1958.
Subj. to Intf. with SN 72,796.

SN 81,231. The Hercules Tire & Rubber Company, Stamford, Conn., by change of name from The Atlas Rubber Products Company, Stamford, Conn. Filed Sept. 14, 1959.



The drawing is lined to indicate the color blue.
For Tubes and Tires, Passenger and Truck.
First use Nov. 4, 1958.
Subj. to Intf. with SN 72,796.

SN 82,532. Atlas Supply Company, Newark, N.J. Filed Mar. 10, 1960.

ATLAS

Owner of Reg. Nos. 281,088 and 604,288.
For Grease Seals Used on Automobile Car Spindles To Seal the Grease on the Wheel Bearing Housing.
First use Feb. 23, 1960.

SN 84,926. Titeflex, Inc., Springfield, Mass. Filed Apr. 12, 1960.



The stippling is used to indicate a contrast in coloring either by the use of a different color, lighter in tone than that used in the upper portion of the design, or of a lighter shade of the same color used in said upper portion. The mark is not restricted to a particular combination of colors.
For Flexible Hose and Tubing.
First use June 15, 1959.

SN 85,030. White Stores, Inc., Wichita Falls, Tex. Filed Apr. 22, 1960.

WHITE SPORTSTER

For Vehicle Tires.
First use Mar. 23, 1960.

SN 85,731. Johns-Manville Corporation, New York, N.Y. Filed Apr. 25, 1960.

PLASTIMATIC

For Packings, Particularly Plastic Packings.
First use Dec. 18, 1959.

SN 85,732. Johns-Manville Corporation, New York, N.Y. Filed Apr. 25, 1960.

THERMOCORE

For Packings, Particularly Rod and Valve Stem Packing.
First use at least July 1959.

Class 36 — Musical Instruments and Supplies

SN 81,510. Alvin L. Swanson, Jr., Elmwood Park, Ill. Filed Sept. 16, 1959.

DIAL-O-MUSIC

For Device for Transposing Musical Notations From One Scale to Another and for Determining Harmonics of Musical Notations, Said Device Consisting of Flat, Concentric, Superimposed Manually Rotatable, Notation Bearing Disks.
First use May 26, 1959.

SN 82,946. Winter & Company, Inc., New York, N.Y. Filed Mar. 15, 1960.

PEASE

For Pianos.
First use on or about Dec. 1, 1958.

SN 84,824. Sears, Roebuck and Co., Chicago, Ill. Filed Apr. 11, 1960.

MEDALIST

For Automatic Phonograph Record Changer, Electric Phonographs, Tape Recorders.
First use on or about May 14, 1958.

SN 86,126. Treble Records, Inc., Chicago, Ill. Filed Apr. 14, 1960.

TREBLE RECORDS INC.

For Grooved Phonograph Records.
First use Mar. 10, 1960.

SN 66,594. Hammond Organ Company, Chicago, Ill. Filed Apr. 22, 1960.

PEDALVOX

For Electrical Musical Instrument Played by a Pedal Clavier.
First use Jan. 4, 1960.

Class 37 — Paper and Stationery

SN 48,056. St. Regis Paper Company, New York, N.Y. Filed Mar. 19, 1958.



The drawing is lined for yellow. Owner of Reg. Nos. 377,917 and 616,379.
For Bleached Sulphate Paper Board.
First use on or about Sept. 12, 1957.

SN 65,615. Avrick & Company, New York, N.Y. Filed Jan. 12, 1959.

Sky Rite

For Envelopes.
First use Dec. 31, 1958.

SN 65,721. Stuart Hall Company, Inc., Kansas City, Mo. Filed Jan. 12, 1959.

Budget Bond

For Writing Paper.
First use Dec. 9, 1958.

SN 67,472. Morris Perkin, d.b.a. Day-Timers, Allentown, Pa. Filed Feb. 10, 1959.

ACCOUNTANT'S DAY

For Binders and Fillers Therefor.
First use Sept. 23, 1957.

SN 67,473. Morris Perkin, d.b.a. Day-Timers, Allentown, Pa. Filed Feb. 10, 1959.

DAY-TIMER

For Binders and Fillers Therefor.
First use July 23, 1958.

SN 67,474. Morris Perkin, d.b.a. Day-Timers, Allentown, Pa. Filed Feb. 10, 1959.

LAWYER'S DAY

For Binders and Fillers Therefor.
First use Dec. 1, 1951.

SN 73,789. Kwik-Kover Manufacturing Company, Chicago, Ill. Filed May 15, 1959.

"AD"-a-BiB

For Protective Paper Cover for Garments Supported on Hangers.
First use Aug. 29, 1957.

SN 77,839. The Papercraft Corporation, Pittsburgh, Pa. Filed July 16, 1959.

KAYLENE

For Transparent Food Wrap of Polyethylene Film.
First use May 1, 1959.

SN 82,492. Di-Noc Chemical Arts, Inc., Cleveland, Ohio. Filed Oct. 1, 1959.

CARTOPLEX

Owner of Reg. No. 610,857.
For Paper Having an Aluminum Core and a Surface Suitable for Drawing Thereon.
First use April 1951.

SN 85,389. The Plastic Coating Corporation, Holyoke, Mass. Filed Nov. 16, 1959.



For Coated Sheet Material in Both Cut Sheet and Roll Form—Namely, Coated Cover and Label Papers and Plastic Coated Papers Especially Suitable for Leather Novelties, Luggage Linings, Turned Edge Work, and Many Types of Bindings; Drafting Paper, Drafting Cloth, Drafting Film, Transparentized Paper, and Thermo Mounting and Heat Sealing Sheet Materials.
First use Nov. 5, 1958, on cover and label papers.

SN 90,539. Marcalus Manufacturing Co., Inc., East Paterson, N.J. Filed Feb. 8, 1960.

CAMELLIA

For Toilet Paper.
First use June 28, 1949.

Class 39 — Clothing

SN 71,248. The Alligator Company, St. Louis, Mo. Filed Apr. 10, 1959.



Owner of Reg. Nos. 75,365, 346,414, and others.
For Raincoats, Water Repellent Coats, Topcoats, Coats With Zip-In Warmers, and Suburban Coats for Men, Women, and Children; Inner Linings for Men's, Women's, and Children's Coats; Sportswear for Men—Namely, Jackets, Parkas, Water Repellent Pants, Waterproof Protectors for Trousers, and Hats.
First use in 1949.

SN 72,201. Diamond-Sharkey-Zomick, Inc., New York, N.Y. Filed Apr. 24, 1959.



The word "Mills" is disclaimed apart from the mark as shown.
For Ladies' and Children's Cotton, Rayon, and Nylon Underwear and Sleepwear.
First use Mar. 17, 1959.

SN 79,719. Boris Smoler & Sons, Inc., Chicago, Ill. Filed Aug. 17, 1959.

WONDER WARDROBE

For Women's Dresses.
First use in October 1957.

SN 81,194. Men's Hats, Inc., Baltimore, Md. Filed Sept. 11, 1959.

EASY LIVIN'

For Straw Hats for Men.
First use Jan. 2, 1959.

SN 81,841. United States Rubber Company, New York, N.Y. Filed Sept. 22, 1959.

ESKILOOS

For Women's Boots and Shoes.
First use Feb. 17, 1959.

SN 85,667. Hoving Corporation, New York, N.Y. Filed Nov. 19, 1959.

EVE BARCLAY

Eve Barclay is a designer presently living, consent of record.
For Headbands, Veilings, Handkerchiefs, Belts, and Neckwear—Namely, Collars, Cuffs, Gilets, Dickeys, Scarfs, and Fillers.
First use Mar. 1, 1959.

SN 90,156. Nathan N. Gorchov, d.b.a. Zero-Glo Co., Philadelphia, Pa. Filed Feb. 2, 1960.

ZERO-GLO

For Insulated Underwear.
First use on or about Jan. 5, 1957.

SN 90,527. Robert Leonard Corporation, Lowell, Mass. Filed Feb. 8, 1960.

BARACRON

For Women's Dresses.
First use Dec. 28, 1959.

SN 90,572. Petite Sue Incorporated, New York, N.Y. Filed Feb. 8, 1960.

Petite Sue

For Ladies' Dresses.
First use Jan. 19, 1960.

SN 90,760. Izod, Ltd., New York, N.Y. Filed Feb. 11, 1960.
Owner of Reg. Nos. 655,860, 667,890, and 674,219.

IZOD

For Women's Suits and Dresses.
First use June 30, 1959.

SN 91,192. Alert Shoe Corporation, Milroy, Pa. Filed Feb. 16, 1960.

DAY DREAMS

For Women's Shoes.
First use Aug. 31, 1957.

SN 92,579. The Alligator Company, St. Louis, Mo. Filed Mar. 11, 1960.



Owner of Reg. Nos. 75,365, 346,414, and others.
For Raincoats, Water Repellent Coats, Topcoats, Coats With Zip-In Warmers, and Suburban Coats for Men, Women, and Children; Inner Linings for Men's, Women's, and Children's Coats; Sportswear for Men—Namely, Jackets, Golf, Fishing, and Sport Shirts, Parkas, Water Repellent Pants, Waterproof Protectors for Trousers and Hats.
First use in or about April 1959.

SN 92,625. Luv-Lee Frocks, Inc., New York, N.Y. Filed Mar. 11, 1960.

ROCKPORT

For Sportswear—Namely, Playsuits, Shorts, Shirts, Blouses, Slacks, Pedal Pushers, Jumpers, Skirts, and Jackets.
First use Jan. 29, 1960.

SN 93,458. S & R Infants Wear Co., Inc., New York, N.Y. Filed Mar. 22, 1960.

my Fair Baby

For Layette Kit, Comprising Nightgown, Receiving Blanket, Waterproof Pants, Diaper Pins, Rattle, Bath Toy, and Nursery Rhyme Plaque.
First use Feb. 2, 1960.

SN 93,525. Lov-4 Brassiere Company, d.b.a. Lov-4 Studios, Hollywood, Calif. Filed Mar. 22, 1960.

UPS-A-DAISY

For Brassieres.
First use Mar. 21, 1960.

Class 41—Canes, Parasols, and Umbrellas

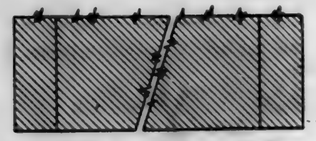
SN 91,302. Brueder Wuester, Vienna, Austria. Filed Feb. 2, 1960.

JEWEL

Owner of Austrian Reg. No. 41,020, dated Apr. 15, 1959.
For Parasols and Umbrellas and Frames Therefor.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 57,617. F. Grote & Hubbell Co., Inc., New York, N.Y. Filed Aug. 21, 1958.



The drawing is lined for green. The mark consists of a woven, thin, black line along the selvage along each edge of the green cloth.
For Green Billiard Cloth.
First use on or about July 1917.

SN 61,038. Ettinger Mills, Inc., New York, N.Y. Filed Oct. 21, 1958.

GLAY-SHEER

For Piece Goods of Cashmere and Silk.
First use Aug. 18, 1958.

SN 71,032. Pence Fabrics, Inc., New York, N.Y. Filed Apr. 7, 1959.

DURE-A-FRESH

For Piece Goods of Cotton and Mixtures of Cotton and Synthetic Yarn Sold in the Piece.
First use Jan. 14, 1959.

SN 80,168. Calloway Mills Company, La Grange, Ga. Filed Aug. 26, 1959.

KEXADIZED

Owner of Reg. Nos. 221,767, 585,691, and others.
For Wiping Towels, Which Have Been Treated With a Germicidal and Fungicidal Compound.
First use July 20, 1959.

SN 86,431. Kunstzijdespinnerij Nyma N.V., Nimeguen, Netherlands. Filed Dec. 1, 1959.

NYMCRYLON

Owner of Dutch Reg. No. 116,724, dated Oct. 13, 1953.
For Artificial Fur Fabrics; Embroidered, Crocheted and Net Fabrics; Canvas, Tent Fabrics, Filter Linen, Cheesecloth, and Pile Fabrics; Fabrics for Skirts, Trousers, Scarfs, Ties, Underwear, Dresses, Jackets, Sweaters, Coats, Linings, Suits, Curtains, Upholstery; Table-Cloths, Blankets, Bedspreads, and Textile Floor Coverings.

SN 88,331. B. H. Mexon & Sons Limited, Kirkburton, Huddersfield, England. Filed Dec. 31, 1959.

DOUBLAIRE

Priority is claimed under Sec. 44(d) on British Reg. No. 793,817, dated July 28, 1956.
For Bed and Table Covers and Overcoating and Suiting Textile Piece Goods.

SN 88,517. Borlan Corporation, New York, N.Y. Filed Jan. 6, 1960.

FLEXLAN

For Non-Woven Fabric.
First use Nov. 16, 1959.

SN 89,529. United States Rubber Company, New York, N.Y. Filed Jan. 22, 1960.

U.S. DOE-LON

For Pliant Synthetic Plastic Coated Fabrics for Use in Making Coats, Jackets, Upholstery, and the Like.
First use at least as early as 1953.

SN 90,163. Indian Head Mills, Inc., Boston, Mass. Filed Feb. 2, 1960.

IROQUOIS

Owner of Reg. Nos. 101,060 and 131,199.
For Cotton Piece Goods.
First use Jan. 15, 1960.

SN 91,242. David Crystal, Inc., New York, N.Y. Filed Feb. 19, 1960.

CRYSTALINE

Owner of Reg. Nos. 371,542 and 645,442.
For Piece Goods for Making Women's Suits, Coats, Dresses, and Blouses.
First use Feb. 4, 1960.

SN 93,057. Dublin-Haskell-Jacobson, Inc., New York, N.Y. Filed Mar. 17, 1960.

DAELON

For Coated Woven Fabric for Use in Collars of Men's Shirts.
First use Oct. 26, 1959.

SN 93,141. Burlington Industries, Inc., Greensboro, N.C. Filed Mar. 18, 1960.

BURLMERE

For Vinyl Fabrics for Use in Outerwear Garments.
First use Jan. 14, 1960.

SN 93,186. Johnson & Johnson, New Brunswick, N.J. Filed Mar. 18, 1960.

DAY-LEE

For Washcloths.
First use Jan. 8, 1960.

SN 93,200. Mutual Buying Syndicate, Inc., New York, N.Y. Filed Mar. 18, 1960.

HEARTH 'N HOME

For Piece Goods, Primarily Fabric for Upholstery, Draperies, and Furniture.
First use Jan. 5, 1960.

SN 93,825. Arthur V. Levey Associates, Inc., New York, N.Y. Filed Mar. 21, 1960.

SUPREL

For Water Repellent and Fire Retardant Woven Piece Goods for Tents, Awnings, Outdoor Upholstery, and Outdoor Sleeping Bags.
First use Sept. 15, 1959.

SN 93,873. Soft-Ease Pads Corporation, Watertown, N.Y. Filed Mar. 21, 1960.

SOFT-EASE

For Bed Pads.
First use May 28, 1959.

SN 93,421. David Crystal, Inc., New York, N.Y. Filed Mar. 22, 1960.

DOC

For Piece Goods for Making Ladies' Dresses and Suits.
First use Feb. 25, 1960.

SN 93,486. Bates Manufacturing Company, Lewiston, Maine. Filed Mar. 23, 1960.

GEORGE WASHINGTON'S CHOICE

Owner of Reg. No. 518,274.
For Sheets and Pillow Cases.
First use June 1959.

Class 43—Thread and Yarn

SN 69,133. The Elastic Corporation, Hickory, N.C. Filed Mar. 9, 1959.

REGAL

For Elastic Yarns.
First use on or about Jan. 15, 1959.

SN 74,044. Indian Head Mills, Inc., New York, N.Y. Filed S.R. May 19, 1959; Am. P.R. June 7, 1960.

FLUFdyed

For Yarn Which Has Been Dyed by a Special Process To Preserve Its Bulky and Lofty Characteristics.
First use Aug. 9, 1957.

SN 79,955. Ernest Scragg & Sons Limited, Macclesfield, England. Filed Aug. 20, 1959.

ASTRALON

Owner of British Reg. No. 781,314, dated Aug. 28, 1956.
For Crimped Continuous-Filament Textile Yarns Made of Thermoplastic Materials for Use by Knitwear Manufacturers in the Knitting of Socks, Gloves, Sweaters, Lingerie and the Like.

SN 79,956. Ernest Scragg & Sons Limited, Macclesfield, England. Filed Aug. 20, 1959.

ASTRALENE

Owner of British Reg. No. 781,313, dated Aug. 29, 1956.
For Crimped Continuous-Filament Textile Yarns Made of Thermoplastic Materials for Use by Knitwear Manufacturers in the Knitting of Socks, Gloves, Sweaters, Lingerie and the Like.

SN 86,430. Kunstzijdespinnerij Nyma N.V., Nimeguen, Netherlands. Filed Dec. 1, 1959.

NYMCRYLON

Owner of Dutch Reg. No. 116,724, dated Oct. 13, 1953.
For Fiber-Yarns; Semi-Synthetic Continuous Yarns and Threads, Also Mixed With Natural and/or Entirely Synthetic Yarns and Threads or the Mentioned Fiber-Yarns, Threads.

SN 87,635. The Chemstrand Corporation, Decatur, Ala. Filed Dec. 21, 1959.

CUMULOFT

For Yarn and Thread Filament.
First use Nov. 28, 1959.

SN 89,748. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Jan. 27, 1960.

ANTRON

Owner of Reg. Nos. 440,230 and 518,714.
For Yarns and Threads of Man-Made Fibers.
First use Nov. 30, 1959.

SN 89,997. Beaunit Mills, Inc., New York, N.Y. Filed Feb. 1, 1960.

44 HH

For Rayon Yarn.
First use 1945.

Class 44—Dental, Medical, and Surgical Appliances

SN 48,958. N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. Filed May 23, 1960.

PHILIPS

Owner of Dutch Reg. No. 92,614, dated June 21, 1948; and U.S. Reg. No. 661,200.

For (based on Dutch registration): X-Ray Apparatus for Medical and Dental Purposes and Parts and Accessories Therefor, Including Bucky Diaphragms, Cameras for Fluoroscopic Examination, Fluoroscopes, Patient Immobilising Devices, Cassette Frames, Cassette Holders, Cassettes, X-Ray Tubes, X-Ray Rectifier Tubes, X-Ray Tube Housings and Semi-Conductor Rectifiers, X-Ray Image Intensifiers and Parts and Accessories Therefor, Dose-Meters, Light-Beam Diaphragms, Serial Changers, Fluoroscopic Timers. Electro-Medical and Medical Hospital Equipment and Parts and Accessories Therefor, Including Apparatus for Colposcopy, Apparatus for Endoscopy and Cauterization, Apparatus for Galvanisation and Faradisation, Artificial Respirators, Cardioscopes, Chronaximeters, Electro-Cardiographs, Electro-Shock Apparatus, Electro-Surgery Apparatus, Epilation Equipment, Heart Sound Measuring Equipment, Incubators, Infrared and Ultra-Violet Irradiation Apparatus, Surgical Operating Tables and Accessories, Inhalation Apparatus. Nuclear Equipment for Medical Purposes Including Equipment for Detecting, Measuring and Recording Radioactivity and Parts and Accessories Therefor. Apparatus for Electron Microscopy and Microradiography, Including Contact and Projection Microradiography Apparatus and Parts and Accessories Therefor.

For (based on use in commerce): Dental X-Ray Apparatus; Diagnostic X-Ray Apparatus; X-Ray Therapy Apparatus; Cameras for X-Ray Diagnostic Apparatus; X-Ray Tube Housings; X-Ray Image Intensifiers.

First use during 1939; in commerce during 1939.

SN 92,845. Joseph C. Eshelman, Mather, Pa. Filed Mar. 15, 1960.

FE-CATH

For Female Catheter.
First use Jan. 1, 1960.

Class 45—Soft Drinks and Carbonated Waters

SN 69,939. Beverages of Billings, Inc., Billings, Mont. Filed Mar. 20, 1959.

Style line

For Soft Drinks.
First use Oct. 8, 1958.

SN 74,940. Kirsch Beverages, Inc., Brooklyn, N.Y., by change of name from Kirsch's Beverages, Inc., Brooklyn, N.Y. Filed June 2, 1959.

NO-CAL

Owner of Reg. No. 597,764.
For Soft Drinks.
First use Jan. 9, 1952.

SN 88,868. Daniel J. Leary, d.b.a. Jamboree Beverage Co., Waterbury, Conn. Filed Jan. 12, 1960.

JAMBOREE

For Carbonated Soft Drinks.
First use Dec. 7, 1959.
Subj. to Intf. with SN 88,714.

Class 46—Foods and Ingredients of Foods

SN 14,552. Filler Products, Inc., Atlanta, Ga. Filed Aug. 24, 1956.

FA-FAS

For Cornmeal Crackers or Wafers Prepared From Refined Cornmeal, Seasoning, and Oil.
First use July 18, 1956.

SN 46,270. ACF-Wrigley Stores, Inc., Detroit, Mich. Filed Feb. 21, 1958.

WRIGLEY'S

For Tea, Coffee, Fresh Orange Juice, Fresh Eggs, Oleomargarine, Butter, Bread, and Rolls.
First use Dec. 1, 1948, on eggs.

SN 54,338. United Grocers, Ltd., San Francisco, Calif. Filed June 26, 1958. COLLECTIVE MARK.



Applicant disclaims the words "Retailer" and "Owned" apart from the mark as shown.
For Canned Fruits, Vegetables, Meats, Fish, and Juices.
First use on or about May 15, 1958.

SN 60,569. Gilbert G. Ramirez, d.b.a. Gilbert's El Charro Famous Hot Sauce, Tyler, Tex. Filed Oct. 13, 1958.



The term "El Charro" means "cowboy." Applicant claims no exclusive rights in "Hot Sauce" as the name of the goods identified herein.
For Sauce for Meat, Sea Foods, Crackers, and Mexican Foods.
First use Mar. 1, 1957.

SN 68,006. Frankie's Prepared Foods, Inc., Youngstown, Ohio. Filed Nov. 6, 1958.



The wording, "The Secret is the Sauce" is disclaimed apart from the mark, without relinquishing any common law rights thereto.
For Packaged Prepared Italian Style Foods—Namely, Spaghetti, Rigatoni, Rotini, Sea Shells, and Pasta Fasul.
First use Mar. 13, 1958.

SN 71,815. Compagnie des Thes de Djiring Sarl, Biao, Vietnam. Filed Apr. 20, 1959.

PAK LAO



For Green Tea.
First use Dec. 1, 1958; in commerce Dec. 1, 1958.

SN 72,135. Magnus, Mabee & Reynard, Inc., New York, N.Y. Filed Apr. 23, 1959.

MAGNA CONCENTROL

Owner of Reg. Nos. 295,807, 571,580, and 571,581.
For Liquid Combination of Essential Oils and Oleoresins Distilled or Extracted From Herbs and Spices and Other Flavoring Materials and Used in Flavoring Foods and Food Products.
First use Feb. 26, 1958.

SN 73,992. Dewey Smith, d.b.a. Dewey's Town Talk Bar-B-Q, Hot Springs, Ark. Filed May 18, 1959.

TOWN TALK

For Barbecue Sauce.
First use Apr. 29, 1958.

SN 77,564. Kern County Land Company, San Francisco, Calif. Filed July 13, 1959.

LANDCO

For Fresh Potatoes.
First use May 20, 1959.

SN 77,565. Kern County Land Company, San Francisco, Calif. Filed July 13, 1959.



The drawing is lined to represent the colors red and blue.
For Fresh Potatoes.
First use May 20, 1959.

SN 77,911. Edinburg Improvement Association, Edinburg, Tex. Filed July 17, 1959.

VAL-KIST

For Fresh and Canned Citrus Fruits and Citrus Juices.
First use July 13, 1959.

SN 78,274. E. F. Drew & Co., Inc., New York, N.Y. Filed July 23, 1959.

PACESETTER

For Vegetable Oils for Use in Preparation of Baked Goods, Popcorn, Confectionery, and Ice Cream.
First use Mar. 25, 1959.

SN 80,002. Leo and Robert Meyer, d.b.a. Meyer Tomatoes, King City, Calif. Filed Aug. 21, 1959.



The English translation of "Rancho Del Ciervo" is "ranch of the stag."
For Fresh Tomatoes.
First use Aug. 3, 1954.

SN 80,443. National Fishcuring Company Limited, Aberdeen, Scotland. Filed Aug. 28, 1959.



The word "Brand" is disclaimed apart from the mark.
For Smoked Fish.
First use March 1931; in commerce March 1933.

SN 82,951. Leo C. Antles, d.b.a. L. C. Antles Pollen Supplies Co., Wenatchee, Wash. Filed Oct. 9, 1959.



No claim is made to the word "Pollen" apart from the mark shown.
For Food Supplement or Health Food, the Principal Ingredients of Which Are Plant Pollen and Honey.
First use on or about Mar. 14, 1958.

SN 88,097. Interchange Commercial Corp., New York, N.Y. Filed Oct. 12, 1959.

SUNNY COAST

For Frozen Shell Fish.
First use Sept. 14, 1959.

SN 88,098. Interchange Commercial Corp., New York, N.Y. Filed Oct. 12, 1959.

COSTA DEL SOL

"Costa Del Sol" is the Spanish equivalent of "sunny coast," freely translated; literally, "coast of sun."
For Frozen Shell Fish.
First use Sept. 14, 1959.

SN 86,482. H. C. Christians Co., Chicago, Ill. Filed Dec. 2, 1959.



Applicant claims no exclusive rights in "Butter" as the name of the goods identified herein.
For Butter.
First use on or about Aug. 14, 1959.

SN 87,033. Perry H. Chipurnoi, Inc., New York, N.Y. Filed Dec. 10, 1959.

AUSTRALIAN PRIDE

Applicant disclaims the word "Australian" separately from the mark as shown.
For Dried Fruit.
First use Nov. 17, 1958.

SN 88,014. Cardinal Foods, Incorporated, Leesburg, Va. Filed Dec. 28, 1959.



The drawing is lined for red. The word "Foods" is hereby disclaimed in the application.
For Frozen French Fried Potatoes.
First use Dec. 18, 1959.

SN 88,291. Andalusian Trading Corporation, New York, N.Y. Filed Dec. 31, 1959.

FLAMENCO

For Canned Olives.
First use Oct. 8, 1959.

SN 90,146. Cal-Sona, Inc., Phoenix, Ariz. Filed Feb. 2, 1960.



For Fresh Lettuce.
First use Dec. 17, 1959.

SN 90,932. Maurer-Neuer, Inc., d.b.a. Maurer-Neuer Meat Packers, Kansas City, Kans. Filed Feb. 15, 1960.

BUCKBOARD

For Bacon.
First use Jan. 26, 1960.

SN 90,973. Williamson Candy Company, Chicago, Ill. Filed Feb. 15, 1960.

Oh Nuts!

"Oh Henry's Little Brother"

Owner of Reg. Nos. 152,550, 607,354, and others.
For Confection Consisting of Candy and Nuts.
First use July 1956; Aug. 7, 1953, as to words "Oh Nuts"; November 1920 as to "Oh Henry."

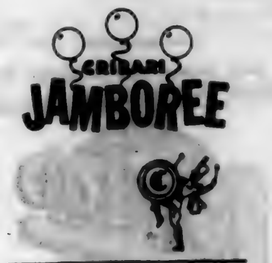
SN 93,677. Excelsior Baking Company, Minneapolis, Minn. Filed Mar. 25, 1960.

IRISH MOLLY

For Bread.
First use September 1954.

Class 47 — Wines

SN 88,714. Alta Vineyards Company, d.b.a. B. Cribari & Sons, Fresno, Calif. Filed Jan. 11, 1960.



Owner of Reg. Nos. 392,290, 661,737, and others.
For Wines.
First use Nov. 18, 1959.
Subj. to Intf. with SN 88,863.

Class 48 — Malt Beverages and Liquors

SN 68,100. Alvear S.A., Montilla, Cordoba, Spain. Filed Jan. 28, 1959.

Conde de la Cortina

The name "Conde de la Cortina," meaning "Count of Cortina," is that of a living individual whose consent is of record. Owner of Spanish Reg. No. 162,336, dated May 24, 1947.
For Beer.

Class 49 — Distilled Alcoholic Liquors

SN 75,248. Affiliated Distillers Brands Corp., d.b.a. Park & Tilford, New York, N.Y. Filed June 8, 1959.

LADYSHIP

For Blended Scotch Whisky.
First use May 12, 1959.

SN 84,988. Coates & Co. (Plymouth) Limited, Plymouth, England. Filed Nov. 10, 1959.

GINOMETRY

Priority claimed under Sec. 44(d) on British Reg. No. 791,741, dated June 5, 1959.
For Gin.

Class 50 — Merchandise Not Otherwise Classified

SN 67,319. Delphi Products Company, Delphi, Ind. Filed Feb. 9, 1959.

PUSH BUTTON

Owner of Reg. No. 680,904.
For Livestock Equipment—Namely, Bulk Bins, Feeders, and Waterers.
First use on or about Nov. 27, 1957.

SN 67,722. Western Felt Works, Incorporated, Chicago, Ill. Filed Feb. 13, 1959.

WESTEMP

For Heat Resistant Felt in Roll Form.
First use May 29, 1958.

SN 79,088. American Mat Corporation, Toledo, Ohio. Filed Aug. 5, 1959.

NYRACORD

For Protective and Cushioning Mats and Matting, Stair Treads, and Dock Bumpers for Boats Fabricated From Reinforced Rubber, Rubber Substitutes, and Similar Materials.
First use Apr. 22, 1959.

SN 82,241. The Kraus Accessories Company, d.b.a. California Custom Accessories Mfg. Co., Los Angeles, Calif. Filed Sept. 28, 1959.

FUZZY MIRROR-MUFF

For Decorative Cloth Piece for Attachment to Automobile Rear Vision Mirrors.
First use Mar. 10, 1959.

SN 82,227. William A. Carney, Caseville, Mo. Filed Sept. 29, 1959.

P-F-B-CO

For Prefabricated Flower Beds of Concrete.
First use on or about June 1, 1958.

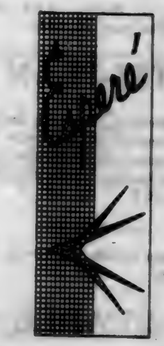
Class 51 — Cosmetics and Toilet Preparations

SN 87,048. Jacinto Sosa, d.b.a. Chanty, Brooklyn, N.Y. Filed Sept. 11, 1957.

CASPICIDA

For Hair Grooming Preparation That Is Incidentally Effective in the Treatment and Control of Dandruff and Scalp Itch.
First use Mar. 1, 1957.

SN 48,873. Norman C. Saute, d.b.a. S & S Cosmetic Distributors, Providence, R.I. Filed Apr. 1, 1958.



The word "Espere" is the past participle of the French verb "esperer" and translated means "hoped." The drawing is lined for black and gold.
For Perfumes.
First use Oct. 18, 1957.

SN 71,864. Vita A. Garrett, d.b.a. Vita of Hollywood Co., Hollywood, Calif. Filed Apr. 13, 1959.

SABRINA ROSE

For Facial and Hand Creams, Lipsticks, Rouges, Eye Shadows, Eyeliners, Face Powders, Liquid Foundation Powder, Perfumes, and Colognes.
First use Dec. 8, 1958.

SN 74,633. Viviane Woodard Corporation, Panorama City, Calif., by change of name from Viviane Woodward Cosmetics, Panorama City, Calif. Filed May 27, 1959.

MOISAN

For Skin Freshening Lotions, Facial Cleansing Lotions, and Liquid Facial Cream (Emollient Type).
First use Dec. 11, 1958.

Class 52 — Detergents and Soaps

SN 84,010. Parsons Ammonia Company, Inc., Clifton, N.J. Filed Oct. 26, 1959.

PARSONS' DETERGENT AMMONIA

Applicant claims no exclusive rights in "Detergent Ammonia" as the name of the goods identified herein. Owner of Reg. Nos. 60,715, 61,007, and 401,554.
For Ammonia-Detergent Used for Cleaning Purposes.
First use at least as early as Apr. 1, 1948.

SN 88,478. Edward James Moyle, d.b.a. Pinky Dink Sales Company, Carbondale, Pa. Filed Jan. 5, 1960.

PINKY DINK

For Liquid All-Purpose Household Cleaner.
First use Sept. 17, 1959.

SN 89,285. The Fuller Brush Company, East Hartford, Conn. Filed Jan. 19, 1960.

FULLPHENE

For Germicidal Detergent.
First use on or about Dec. 28, 1959.

SN 90,076. Lever Brothers Company, New York, N.Y. Filed Feb. 1, 1960.

DERMASIL

For Tribromsalicylanilide Incorporated as an Ingredient in Soap.
First use Nov. 7, 1959.

SERVICE MARKS

Class 100 — Miscellaneous

SN 47,326. Clayton J. Beaver, d.b.a. Beaver Enterprises, Portland, Oreg. Filed Mar. 10, 1958.

TRI-PLAN

For Promotion of Savings Accounts Banking for Newspaper Boys Through Cooperation With Their Newspapers by Arranging With the Banks and Newspapers for Such Accounts and by Supplying Brochures, Collection Bags, and the Like.
First use Dec. 16, 1957.

SN 55,687. Minnesota Rubber Company, Minneapolis, Minn. Filed July 21, 1958.

QUADEE

For Research and Development Service Offered to Prospective Purchasers of Rubber Products.
First use Apr. 1, 1958.

SN 55,689. Minnesota Rubber Company, Minneapolis, Minn. Filed July 21, 1958.



QUADEE

Owner of Reg. Nos. 685,946, 691,637, and others.
For Research and Development Service Offered to Prospective Purchasers of Molded Rubber Products.
First use Apr. 1, 1958.

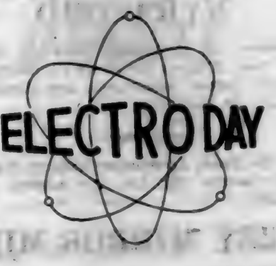
SN 80,840. Frank B. Pollard, d.b.a. Aircraft and Missile Consultants, Manhattan Beach, Calif. Filed Sept. 4, 1959.
The drawing is lined for blue and gray.



For Engineering and Advertising Consulting Services in the Field of Aircraft, Missile, and Rocket System Manufacture.
First use June 1, 1956.

Class 101 — Advertising and Business

SN 65,369. The Montana Power Company, Butte, Mont. Filed Jan. 6, 1959.



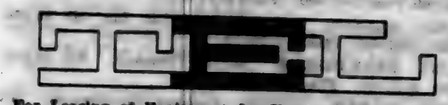
For Coordinating the Promotion and Advertising the Goods of Others, Particularly Electrical Appliances of All Kinds.
First use Dec. 14, 1956.

SN 65,370. The Montana Power Company, Butte, Mont. Filed Jan. 6, 1959.

ELECTRICAL TUESDAY

For Coordinating the Promotion and Advertising the Goods of Others, Particularly Electrical Appliances of All Kinds.
First use Mar. 4, 1959.

SN 85,533. Tishman Equipment Leasing Inc., New York, N.Y. Filed Nov. 17, 1959.



For Leasing of Equipment for Use by Business Entities.
First use Sept. 1, 1959.

SN 97,276. First Bank and Trust Company of South Bend, South Bend, Ind. Filed May 17, 1960.

ROTO-CREDIT

For Personal Credit Service.
First use Mar. 20, 1960.
Subj. to Intf. with SN 81,696.

Class 102 — Insurance and Financial

SN 87,375. The Philadelphia Saving Fund Society, Philadelphia, Pa. Filed Dec. 15, 1959.

PSFS

For Banking Services Rendered by a Mutual Savings Bank.
First use Jan. 1, 1933.

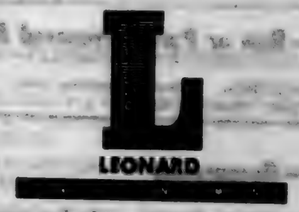
Class 103 — Construction and Repair

SN 79,549. Certified Refrigeration & Air Conditioning Foundation, Los Angeles, Calif. Filed Aug. 14, 1959. COLLECTIVE MARK.

CRAC

For Installation, Repair, and Maintenance of Refrigeration and Air Conditioning Equipment.
First use July 2, 1959.

SN 82,244. Leonard Construction Company, Chicago, Ill. Filed Sept. 28, 1959.



The drawing is lined for blue, but this color is not claimed as a feature of the mark.
For Construction and Repair of Buildings, Bridges, and Wharves, and the Installation of Industrial Equipment and Apparatus.
First use June 23, 1959.

Class 107 — Education and Entertainment

SN 59,873. American Machine & Foundry Company, New York, N.Y. Filed Oct. 1, 1958.



Owner of Reg. Nos. 168,740, 665,632, and others.
For Rental and Maintenance of Automatic Pin Setting Machines for Bowling; Stimulating Interest in Bowling by Operating Instructural Clinics and by Means of Brochures, Newspaper, and Periodical Advertisements.
First use at least as early as September 1958.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

702,735. FORTREL. Fiber Industries, Inc. SN 90,329. Pub. 5–31–60. Filed 2–4–60.

Class 2—Receptacles

702,736. CST AND DESIGN. U.S. Industries, Inc. SN 39,104. Pub. 5–31–60. Filed 10–17–57.

702,737. SWIFTY MAILER. Sobel Corrugated Containers, Inc. SN 52,996. Pub. 5–31–60. Filed 6–2–58.

702,738. DRUMS—"HARD TO BEAT." Continental Can Company, Inc. SN 66,418. Pub. 5–31–60. Filed 1–26–59.

702,739. SELF-LOCKING CUSHION ETC. AND DESIGN. Diamond National Corporation, by change of name from Diamond Gardner Corporation. SN 67,119. Pub. 5–31–60. Filed 2–5–59.

702,740. STA-LOK. Action Bag & Envelope Co., Inc. SN 76,451. Pub. 5–31–60. Filed 6–25–59.

702,741. CONSUL. Gebrueder Koellisch. SN 80,030. Pub. 5–31–60. Filed 6–17–59.

702,742. CROWN PRINCE. Crown Zellerbach Corporation. SN 80,504. Pub. 5–31–60. Filed 8–31–59.

702,743. PALLET-STOR. Hollander Storage & Moving Co. SN 81,484. Pub. 5–31–60. Filed 9–16–59.

702,744. TMC WITHIN A TRIANGULAR DESIGN. Thatcher Glass Manufacturing Company, Inc. SN 81,771. Pub. 5–31–60. Filed 9–21–59.

702,745. SPOBBIN. Akron Spool and Manufacturing Company. SN 85,074. Pub. 5–31–60. Filed 11–12–59.

702,746. ZYLONOX. Zylon Products Co., Inc. SN 85,946. Pub. 5–31–60. Filed 11–23–59.

702,747. GEOMETRIC DESIGN. Butler Manufacturing Company. SN 86,723. Pub. 5–31–60. Filed 12–7–59.

702,748. EYE FUL AND DESIGN. Stuart M. Lerner, Inc. SN 88,676. Pub. 5–31–60. Filed 1–8–60.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

702,749. CR. Chicago Rawhide Manufacturing Company. SN 88,020. Pub. 5–31–60. Filed 12–28–59.

Class 4—Abrasives and Polishing Materials

702,750. DESIGN OF GREEN AND WHITE DIAGONAL STRIPES. Pittsburgh Crushed Steel Company. SN 22,464. Pub. 5–31–60. Filed 1–11–57.

702,751. DESIGN OF RED AND WHITE DIAGONAL STRIPES. Pittsburgh Crushed Steel Company. SN 22,465. Pub. 5–31–60. Filed 1–11–57.

702,752. DESIGN OF BROWN AND WHITE DIAGONAL STRIPES. Pittsburgh Crushed Steel Company. SN 22,466. Pub. 5–31–60. Filed 1–11–57.

702,753. DESIGN OF YELLOW AND WHITE DIAGONAL STRIPES. Steel Shot Producers, Inc. SN 22,477. Pub. 5–31–60. Filed 1–11–57.

702,754. DESIGN OF LAVENDER AND WHITE DIAGONAL STRIPES. Globe Steel Abrasive Company. SN 22,749. Pub. 5–31–60. Filed 1–17–57.

702,755. DESIGN OF ORANGE AND WHITE DIAGONAL STRIPES. Globe Steel Abrasive Company. SN 22,750. Pub. 5–31–60. Filed 1–17–57.

702,756. DESIGN OF BLUE AND WHITE DIAGONAL STRIPES. Pittsburgh Crushed Steel Company. SN 22,769. Pub. 5–31–60. Filed 1–17–57.

702,757. GLANCE. S. C. Johnson & Son, Inc. SN 85,350. Pub. 5–31–60. Filed 11–16–59.

702,758. BEAR-DISKER. Nortec Company. SN 86,059. Pub. 5–31–60. Filed 11–28–59.

702,759. NU-TEX. Atlantic Abrasive Corporation. SN 88,838. Pub. 5–31–60. Filed 1–12–60.

Class 5—Adhesives

702,760. POGO. Sanford Ink Company. SN 70,948. Pub. 5–31–60. Filed 4–6–59.

702,761. BOOT-O-BOND. George Esev Bischitz, d.b.a. Boot-O-Bond Company. SN 86,682. Pub. 5–31–60. Filed 12–4–59.

Class 6—Chemicals and Chemical Compositions

702,762. NO-BUZZ. The Garden Protector Corporation. SN 74,736. Pub. 5–31–60. Filed 5–29–59.

702,763. ANSUL ETHER 161. Ansul Chemical Company. SN 87,324. Pub. 5–31–60. Filed 12–15–59.

702,764. ANSUL ETHER 121. Ansul Chemical Company. SN 87,325. Pub. 5–31–60. Filed 12–15–59.

702,765. NIMCOLAN. N. I. Malmstrom & Company. SN 87,973. Pub. 5–31–60. Filed 12–24–59.

702,766. PAV. Moser Paper Company. SN 89,447. Pub. 5–31–60. Filed 1–21–60.

702,767. DOWGARD. The Dow Chemical Company. SN 89,561. Pub. 5–31–60. Filed 1–25–60.

Class 8—Smokers' Articles, Not Including Tobacco Products

702,768. MONOGAS. Colibri Lighters Limited. SN 84,390. Pub. 5–31–60. Filed 11–2–59.

702,769. CARDINAL AND DESIGN. Cardinal Products Company, Inc. SN 85,716. Pub. 5–31–60. Filed 11–20–59.

Class 12—Construction Materials

702,770. P AND DIAMOND TRUSS TOWERS AND DESIGN. Pioneer Industries, Inc. SN 62,874. Pub. 5–31–60. Filed 11–20–58.

702,771. THE ROYAL FAMILY OF PLYWOODS. Harbor Plywood Corporation. SN 63,230. Pub. 5–31–60. Filed 11–26–58.

702,772. ASTRO-DOME AND DESIGN. Astro-Dome, Incorporated. SN 66,594. Pub. 5–31–60. Filed 1–28–59.

702,773. FRIGI-FOAM. General Motors Corporation. SN 66,617. Pub. 5–31–60. Filed 1–28–59.

702,774. ADJUST A PITCH AND DESIGN. Leslie Welding Co., Inc. SN 68,409. Pub. 5–31–60. Filed 2–25–59.

702,775. BAR-B. Roll Forming Corporation. SN 70,320. Pub. 5–31–60. Filed 2–26–59.

702,776. B BAR-B AND DESIGN. Roll Forming Corporation, d.b.a. Bar-B Products. SN 70,321. Pub. 5–31–60. Filed 2–26–59.

702,777. PLASTOID. Plastic Products Company. SN 72,227. Pub. 5–31–60. Filed 4–24–59.

702,778. BILT-RITE. Robert C. Guion, d.b.a. Bilt-Rite Products Company. SN 72,633. Pub. 5–31–60. Filed 5–4–59.

702,779. JIFFI-SOAK. Basic Incorporated. SN 75,158. Pub. 5–31–60. Filed 6–5–59.

702,780. TEX-VIT DELTA-SEAL AND DESIGN. Texas Vitrified Pipe Company. SN 75,376. Pub. 5–31–60. Filed 6–8–59.

702,781. ACOUSTI VEE. Diamond Manufacturing Company. SN 75,705. Pub. 5–31–60. Filed 6–15–59.

702,782. CIRCLGRID. J. A. Wilson Lighting & Display, Inc. SN 75,891. Pub. 5–31–60. Filed 6–18–59.

702,783. ROLICO LIME-COTE AND DESIGN. Rockwell Lime Company. SN 76,019. Pub. 5–31–60. Filed 6–19–59.

702,784. RAP-I-FORM. Arthur J. Brew. SN 76,254. Pub. 5–31–60. Filed 7–23–59.

702,785. ADANAC. Powell River Company Limited. SN 82,705. Pub. 5–31–60. Filed 10–5–59.

702,786. CHINOOK. Powell River Company Limited. SN 82,709. Pub. 5–31–60. Filed 10–5–59.

702,787. RUSTIC. Harris Manufacturing Company. SN 83,092. Pub. 5–31–60. Filed 10–13–59.

702,788. SEMBRANE. Stebbins Engineering and Manufacturing Company. SN 84,349. Pub. 5–31–60. Filed 10–30–59.

702,789. MECCO AND DESIGN. Morris E. Curtis, d.b.a. M. E. Curtis Manufacturing Company. SN 84,382. Pub. 5–31–60. Filed 11–2–59.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

702,790. TRUSTWORTHY. Liberty Distributors. SN 74,429. COLLECTIVE MARK. Pub. 5–31–60. Filed S.R. 5–25–59; Am. P.R. 9–8–59.

702,791. HOMEC AND DESIGN. Homec, Inc. SN 87,061. Pub. 5–31–60. Filed 12–10–59.

702,792. SCRULOX (FANCIFUL). Pan American Screw Corporation. SN 88,467. Pub. 5–31–60. Filed 1–5–60.

702,793. REPRESENTATION OF ORANGE BAND. The Youngstown Sheet and Tube Company. SN 88,949. Pub. 5–31–60. Filed 1–13–60.

702,794. BRITE-GARD. Republic Steel Corporation. SN 89,067. Pub. 5–31–60. Filed 1–15–60.

702,795. HI-CLINCH. Olympic Screw & Rivet Corporation. SN 89,196. Pub. 5–31–60. Filed 1–18–60.

702,796. STRATOLOK. Stratodex, Inc. SN 89,213. Pub. 5–31–60. Filed 1–18–60.

Class 14—Metals and Metal Castings and Forgings

702,797. WEHRBEST AND DESIGN. Wehr Steel Company. SN 78,668. Pub. 5–31–60. Filed 7–29–59.

702,798. GUARDSMAN AND DESIGN. Van Waters & Rogers, Inc. SN 84,631. Pub. 5–31–60. Filed 11–4–59.

702,799. VINYLCOIL. National Steel Corporation. SN 86,512. Pub. 5–31–60. Filed 12–2–59.

702,800. ENAMELCOIL. National Steel Corporation. SN 86,514. Pub. 5–31–60. Filed 12–2–59.

Class 15—Oils and Greases

702,801. 3XF. Shell Oil Company. SN 80,201. Pub. 5–31–60. Filed 6–25–59.

Class 16—Protective and Decorative Coatings

702,802. THIBAUT & WALKER ETC. AND DESIGN. The Thibaut & Walker Co., Inc. SN 86,212. Pub. 5–31–60. Filed 11–27–59.

702,803. LUXACRYLIC. Baker Paint & Varnish Co. SN 87,634. Pub. 5–31–60. Filed 12–31–59.

702,804. TREB. Franklin Research Company. SN 88,154. Pub. 5–31–60. Filed 12–29–59.

702,805. BEAUTY LAST. The Sherwin-Williams Company. SN 88,337. Pub. 5–31–60. Filed 12–31–59.

702,806. KANASTA. Kaybar, Inc. SN 88,400. Pub. 5–31–60. Filed 1–4–60.

Class 17—Tobacco Products

702,807. TOBAC-ETTES. American Snuff Company. SN 84,717. Pub. 5–31–60. Filed 11–6–59.

702,808. WHITE CLOUD AND DESIGN. United States Tobacco Company. SN 85,538. Pub. 5–31–60. Filed 11–17–59.

702,809. V.I.P. Lares & Brother Company. SN 85,879. Pub. 5–31–60. Filed 11–23–59.

Class 18—Medicines and Pharmaceutical Preparations

702,810. LIDOCIN. Swedish Pharmaceuticals Limited. SN 79,026. Pub. 5–31–60. Filed 8–4–59.

702,811. RAVENSBERG AND DESIGN. Ravensberg GmbH Chemische Fabrik. SN 84,456. Pub. 5–31–60. Filed 11–2–59.

702,812. TOCTUS. Boyle & Company, d.b.a. American Laboratories. SN 86,105. Pub. 5–31–60. Filed 11–27–59.

702,813. FORMA-ZINCOL. Marcelese G. Fisher, d.b.a. Forma-Zincol Company. SN 86,749. Pub. 5–31–60. Filed 12–7–59.

702,814. LATOMYCIN. The Upjohn Company. SN 88,107. Pub. 5–31–60. Filed 12–28–59.

702,815. DORNWAL. Wallace & Tiernan Incorporated. SN 88,354. Pub. 5–17–60. Filed 12–31–59.

702,816. POLYBACTRIN. Calmic Limited. SN 88,363. Pub. 5–31–60. Filed 1–4–60.

702,817. CYARON. Lloyd Brothers, Inc. SN 88,545. Pub. 5–31–60. Filed 1–6–60.

702,818. COCTRON. Lloyd Brothers, Inc. SN 88,547. Pub. 5–31–60. Filed 1–6–60.

702,819. CYRONCO. Lloyd Brothers, Inc. SN 88,552. Pub. 5–31–60. Filed 1–6–60.

702,820. FURONATAL. Metro Med, Inc. SN 88,932. Pub. 5–31–60. Filed 1–13–60.

702,821. NEUTRACARB. Burton, Parsons & Company. SN 90,678. Pub. 5–31–60. Filed 2–10–60.

702,822. VAGICORT. The William A. Webster Company. SN 90,875. Pub. 5–31–60. Filed 2–12–60.

702,823. M-L-V. American Home Products Corporation, d.b.a. Fort Dodge Laboratories. SN 90,961. Pub. 5–31–60. Filed 2–16–60.

702,824. ARICOK. Chemon Corporation. SN 90,992. Pub. 5–31–60. Filed 2–16–60.

702,825. PENTERON. Imperial Chemical Industries Limited. SN 91,007. Pub. 5–31–60. Filed 2–16–60.

702,826. X-SMOKE. Sentinel Laboratories, Inc. SN 91,032. Pub. 5-31-60. Filed 2-16-60.

702,827. EASY-SLIM. Sentinel Laboratories, Inc. SN 91,033. Pub. 5-31-60. Filed 2-16-60.

702,828. SYNDECON. Bristol-Myers Company. SN 91,057. Pub. 5-31-60. Filed 2-17-60.

702,829. CORDINE. The S. E. Massengill Company. SN 91,409. Pub. 5-31-60. Filed 2-23-60.

702,830. CHEMIPEN. Olin Mathieson Chemical Corporation. SN 91,427. Pub. 5-31-60. Filed 2-23-60.

702,831. ULOGESIC. Schenlabs Pharmaceuticals, Inc. SN 91,455. Pub. 5-31-60. Filed 2-23-60.

702,832. QYLOGESIC. Schenlabs Pharmaceuticals, Inc. SN 91,456. Pub. 5-31-60. Filed 2-23-60.

702,833. EPISTAT. The Purdue Frederick Company. SN 91,553. Pub. 5-31-60. Filed 2-24-60.

702,834. CERUBIOTIC. The Purdue Frederick Company. SN 91,554. Pub. 5-31-60. Filed 2-24-60.

702,835. TRANVET. Abbott Laboratories. SN 93,244. Pub. 5-31-60. Filed 3-21-60.

Class 19—Vehicles

702,836. SKY-RIDE. Eldervoy Manufacturing Co. SN 77,427. Pub. 5-31-60. Filed 7-10-59.

702,837. CRACKER BOY. Murray Marine Corporation. SN 79,872. Pub. 5-31-60. Filed 8-19-59.

702,838. BOATMASTER. Murray Marine Corporation. SN 79,873. Pub. 5-31-60. Filed 8-19-59.

702,839. CARDINAL. Daniel C. Larkin, d.b.a. The Cardinal Manufacturing Company. SN 85,672. Pub. 5-31-60. Filed 11-19-59.

702,840. ASTRA. The Astra Corporation. SN 88,001. Pub. 5-31-60. Filed 12-28-59.

702,841. SCORPION. Bug Engineering Co., d.b.a. Bug Engineering. SN 88,131. Pub. 5-31-60. Filed 12-29-59.

702,842. FLEA. Bug Engineering Co., d.b.a. Bug Engineering. SN 88,212. Pub. 5-31-60. Filed 12-30-59.

702,843. CARDIO MASTER. R-Columbia Products Co. SN 88,939. Pub. 5-31-60. Filed 1-13-60.

702,844. SKY CAR. Piasecki Aircraft Corporation. SN 89,455. Pub. 5-31-60. Filed 1-21-60.

Class 21—Electrical Apparatus, Machines, and Supplies

702,845. TRUSTWORTHY. Liberty Distributors, assignee of Liberty Distributors Group. SN 71,327. COLLECTIVE MARK. Pub. 5-31-60. Filed S.R. 3-19-59; Am. P.R. 9-8-59.

702,846. GROTESQUE OF ROBOT. McGraw-Edison Company. SN 74,530. Pub. 5-31-60. Filed 5-26-59.

702,847. MAGNATACK8. Crown City Lumber & Mill Company. SN 75,276. Pub. 5-31-60. Filed 6-8-59.

702,848. REPRESENTATION OF A CLOVERLEAF. The Fusite Corporation. SN 76,195. Pub. 5-31-60. Filed 6-22-59.

702,849. MESSENGER. E. F. Johnson Company. SN 79,172. Pub. 5-31-60. Filed 8-7-59.

702,850. HYPOPHONIC AND DESIGN. Standard Electric Manufacturing Company, Inc. SN 79,891. Pub. 5-31-60. Filed 8-19-59.

702,851. UNI-SON. Bendix Aviation Corporation. SN 80,305. Pub. 5-31-60. Filed 8-27-59.

702,852. ARK-TROL. Crouse-Hinds Company. SN 85,205. Pub. 5-31-60. Filed 10-14-59.

702,853. MISTY-GLOW. New York Merchandise Co., Inc. SN 85,514. Pub. 5-31-60. Filed 11-17-59.

702,854. SHORTSTUB. Bernard Welding Equipment Company. SN 87,023. Pub. 5-31-60. Filed 12-10-59.

702,855. PLANCOM. Boom Electric Corporation. SN 87,967. Pub. 5-31-60. Filed 12-24-59.

702,856. AMP AND DESIGN. AMP Incorporated. SN 89,102. Pub. 5-31-60. Filed 1-18-60.

702,857. CONEX. Sealectro Corporation. SN 89,948. Pub. 5-31-60. Filed 1-29-60.

702,858. NYTHERM. Essex Wire Corporation. SN 90,043. Pub. 5-31-60. Filed 2-1-60.

702,859. WET ALARM. Health Guardian Corporation. SN 90,056. Pub. 5-31-60. Filed 2-1-60.

Class 22—Games, Toys, and Sporting Goods

702,860. KITTY RIDDLE AND DESIGN. Walter A. Hise. SN 85,014. Pub. 5-31-60. Filed 11-10-59.

702,861. GOLF KING. The Worthington Ball Company. SN 86,037. Pub. 5-31-60. Filed 11-25-59.

702,862. TOBER ETC. AND DESIGN. Tober Baseball Manufacturing Co., Inc. SN 86,458. Pub. 5-31-60. Filed 12-1-59.

702,863. OMNI-ACTION. Shakespeare Company. SN 89,204. Pub. 5-31-60. Filed 1-18-60.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

702,864. SANDEX. Sandex, Inc., assignee of Nathan Ackerman. SN 40,794. Pub. 5-31-60. Filed 11-18-57.

702,865. AIRO DEEP THROAT DIMPLE-SLOTTER. Jerome G. Galvin, Jr., d.b.a. Airo Industries. SN 58,184. Pub. 5-31-60. Filed 9-2-58.

702,866. SEMKIT. Semco Research, Inc. SN 74,470. Pub. 5-31-60. Filed 5-25-59.

702,867. ERIE. Erie Foundry Company. SN 74,997. Pub. 5-31-60. Filed 6-3-59.

702,868. AERO-BOARD. Freightliner Corporation. SN 75,079. Pub. 5-31-60. Filed 6-4-59.

702,869. STOW. Stow Manufacturing Co. SN 75,657. Pub. 5-31-60. Filed 6-12-59.

702,870. ANGELUS. Imperial Knife Associated Companies, Inc. SN 77,747. Pub. 5-31-60. Filed 7-15-59.

702,871. TRANS-LOK. Ex-Cell-O Corporation. SN 77,913. Pub. 5-31-60. Filed 7-17-59.

702,872. GALA. A.E.I.-Hotpoint Limited. SN 78,396. Pub. 5-31-60. Filed 7-27-59.

702,873. CALIFORNIA. Imperial Knife Associated Companies, Inc. SN 81,066. Pub. 5-31-60. Filed 9-9-59.

702,874. CALIFORNIAN. Imperial Knife Associated Companies, Inc. SN 81,067. Pub. 5-31-60. Filed 9-9-59.

702,875. VALVMATIC. C. H. Wheeler Manufacturing Company. SN 81,605. Pub. 5-31-60. Filed 9-17-59.

702,876. CABOT AND DESIGN. Godfrey L. Cabot, Inc. SN 81,676. Pub. 5-31-60. Filed 9-21-59.

702,877. DIAL-A-FOLD. Pitney-Bowes, Inc. SN 83,239. Pub. 5-31-60. Filed 10-14-59.

702,878. PLANETTE. Hartleys (Stoke-on-Trent) Limited. SN 83,793. Pub. 5-31-60. Filed 10-22-59.

702,879. SUPERIOR. Van Brode Milling Co., Inc. SN 83,837. Pub. 5-31-60. Filed 10-22-59.

702,880. LANTZ. Lantz Manufacturing Company, Inc. SN 84,906. Pub. 5-31-60. Filed 11-9-59.

702,881. GOOPER. Benjamin Foster Company. SN 85,844. Pub. 5-31-60. Filed 11-23-59.

702,882. ADAST AND DESIGN. Adamovske Strojirny, Narodni Podnik. SN 86,387. Pub. 5-31-60. Filed 12-1-59.

702,883. HOMEC AND DESIGN. Homec, Inc. SN 87,060. Pub. 5-31-60. Filed 12-10-59.

702,884. GLARDON. Usines Metallurgiques de Vallorbe. SN 87,522. Pub. 5-31-60. Filed 12-17-59.

702,885. MICROFEED AND DESIGN. Landis Tool Company. SN 87,567. Pub. 5-31-60. Filed 12-18-59.

702,886. METEOR. H. D. Hudson Manufacturing Company. SN 87,804. Pub. 5-31-60. Filed 12-22-59.

702,887. DESIGN WITHIN A CIRCLE. The Midland Company. SN 87,891. Pub. 5-31-60. Filed 12-23-59.

702,888. CR. Chicago Rawhide Manufacturing Company. SN 88,016. Pub. 5-31-60. Filed 12-28-59.

702,889. FLEXIPERF. Koch Engineering Company, Inc. SN 88,050. Pub. 5-31-60. Filed 12-28-59.

702,890. LIBRASCOPE. Librascope, Incorporated. SN 88,237. Pub. 5-31-60. Filed 12-30-59.

702,891. TRICKLE TRAP. J. K. Adams Company, Inc. SN 88,507. Pub. 5-31-60. Filed 1-6-60.

702,892. TRU-SET. Dayco Corporation, by change of name from The Dayton Rubber Company. SN 88,529. Pub. 5-31-60. Filed 1-6-60.

702,893. SHORT HEAD. Nordberg Manufacturing Company. SN 88,793. Pub. 5-31-60. Filed 1-11-60.

702,894. MVP. Browning Manufacturing Company. SN 88,962. Pub. 5-31-60. Filed 1-14-60.

702,895. ELECTRA. Electra Manufacturing Co. SN 89,146. Pub. 5-31-60. Filed 1-18-60.

702,896. SCOOTAWAY. Harley-Davidson Motor Co. SN 89,158. Pub. 5-31-60. Filed 1-18-60.

Class 24—Laundry Appliances and Machines

702,897. NEW YORKER "NO-LIFT." New York Pressing Machinery Corp. SN 72,517. Pub. 5-31-60. Filed 4-29-59.

Class 26—Measuring and Scientific Appliances

702,898. BENDIX. Bendix Aviation Corporation. SN 87,779. Pub. 5-31-60. Filed 12-22-59.

702,899. SEELINE. Charles Meriam, d.b.a. Charles Meriam Company. SN 87,890. Pub. 5-31-60. Filed 12-23-59.

702,900. PLASTA. Combined Optical Industries Limited. SN 88,022. Pub. 5-31-60. Filed 12-28-59.

702,901. MERC. Vapor Heating Corporation. SN 88,699. Pub. 5-31-60. Filed 1-6-60.

702,902. FEATHER CLIP. The Electric Storage Battery Company. SN 88,740. Pub. 5-31-60. Filed 1-11-60.

702,903. MANUMATIC. Magee-Hale Park-O-Meter Company. SN 89,073. Pub. 5-31-60. Filed 1-15-60.

702,904. SUPERBA. Airequipt Manufacturing Co., Inc. SN 89,321. Pub. 5-31-60. Filed 1-20-60.

702,905. METER MATIC. Mansfield Industries, Inc. SN 89,778. Pub. 5-31-60. Filed 1-27-60.

702,906. SAILOROMETER. The Aetna Casualty and Surety Company. SN 89,825. Pub. 5-31-60. Filed 1-28-60.

Class 27—Horological Instruments

702,907. FAR AND WHITE LEVER DESIGN. Les Fabriques d'Assortiments Reunies. SN 87,101. Pub. 5-31-60. Filed 11-18-59.

702,908. FAR AND BLACK LEVER DESIGN. Les Fabriques d'Assortiments Reunies. SN 87,102. Pub. 5-31-60. Filed 11-18-59.

Class 28—Jewelry and Precious-Metal Ware

702,909. ADJUST-O-MATIC. Skalet Manufacturing Co., Inc. SN 65,980. Pub. 5-31-60. Filed 1-16-59.

702,910. ACANTHUS. Georg Jensen Inc. SN 89,259. Pub. 5-31-60. Filed 2-10-59.

Class 29—Brooms, Brushes, and Dusters

702,911. TRUSTWORTHY. Liberty Distributors. SN 74,423. COLLECTIVE MARK. Pub. 5-31-60. Filed S.R. 5-25-59; Am. P.R. 9-8-59.

702,912. COTTRAY. Easy Day Manufacturing Company. SN 85,319. Pub. 5-31-60. Filed 11-16-59.

702,913. FAS-TRIM. Fas-Trim Inc. SN 86,026. Pub. 5-31-60. Filed 11-25-59.

702,914. POCKETTE. Pro-phy-lac-tic Brush Company. SN 86,449. Pub. 5-31-60. Filed 12-1-59.

702,915. RAC-PAC. Pro-phy-lac-tic Brush Company. SN 86,450. Pub. 5-31-60. Filed 12-1-59.

Class 30—Crockery, Earthenware, and Porcelain

702,916. PRINCESS. Empire Crafts Corporation. SN 74,655. Pub. 5-31-60. Filed 5-28-59.

702,917. McNICOL CHINA AND DESIGN. McNicol China Company. SN 80,104. Pub. 5-31-60. Filed 8-24-59.

702,918. TWIN STAR. General Mills, Inc. SN 82,895. Pub. 5-31-60. Filed 10-8-59.

702,919. HOMEC AND DESIGN. Homec, Inc. SN 87,062. Pub. 5-31-60. Filed 12-10-59.

Class 32—Furniture and Upholstery

702,920. CINTIQUE. J. Cinnamon Limited, d.b.a. The Cintique Chair Company. SN 77,727. Pub. 5-31-60. Filed 7-15-59.

702,921. LITTLE HOME THEATRE. Vennice E. Mark, d.b.a. Little Home Office. SN 88,062. Pub. 5-31-60. Filed 12-28-59.

702,922. SILAS DEANE. Craddock Furniture Corporation. SN 88,217. Pub. 5-31-60. Filed 12-30-59.

702,923. EASY LIVING. Easy Living Foam Products, Inc. SN 90,238. Pub. 5-31-60. Filed 2-3-60.

Class 33—Glassware

702,924. SQUIRT AND DESIGN. The Squirt Company. SN 84,026. Pub. 5-31-60. Filed 10-26-59.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

702,925. FLYING A AIR WING AND DESIGN. Tidewater Oil Company. SN 75,036. Pub. 5-31-60. Filed 6-8-59.

702,926. DURO-TRED. The Borden Company. SN 81,454. Pub. 5-31-60. Filed 9-16-59.

702,927. CHROME LOCK. Products Research Company. SN 85,906. Pub. 5-31-60. Filed 11-23-59.

702,928. LIGHTNING. The Carlisle Corporation. SN 86,726. Pub. 5-31-60. Filed 12-7-59.

702,929. CR. Chicago Rawhide Manufacturing Company. SN 88,017. Pub. 5-31-60. Filed 12-28-59.

702,930. KRACO. Kraco Products, Inc. SN 88,772. Pub. 5-31-60. Filed 1-11-60.

702,931. SNOW-MASTER. The Original Tire Company. SN 89,017. Pub. 5-31-60. Filed 1-14-60.

702,932. MAGIC-AIRE. Universal Tire and Appliance Company, Inc. SN 89,090. Pub. 5-31-60. Filed 1-15-60.

702,933. V.I.P. Oliver Tire & Rubber Company. SN 89,451. Pub. 5-31-60. Filed 1-21-60.

Class 36 — Musical Instruments and Supplies

702,934. MASTERTAPES. Mastertapes Music, Inc., assignee of High Fidelity Sales, Incorporated. SN 80,139. Pub. 5-17-60. Filed 10-6-59.

702,935. GRAMDECK. W. H. Sanders (Electronics) Limited. SN 74,066. Pub. 5-31-60. Filed 5-19-59.

702,936. SYNCHROSHEET. Tokyo Denki Kagaku Kogyo Kabushiki Kaisha. SN 75,224. Pub. 5-31-60. Filed 8-5-59.

702,937. SONOCHORD. Alfred Dronge Music Co. Inc. SN 70,172. Pub. 5-31-60. Filed 9-22-59.

702,938. TENZAR. Minnesota Mining and Manufacturing Company. SN 89,285. Pub. 5-31-60. Filed 1-18-60.

702,939. ALFA AND DESIGN. Paco Betancourt. SN 89,638. Pub. 5-31-60. Filed 1-26-60.

Class 38 — Prints and Publications

702,940. MY BABY. Shaw Publications, Inc. SN 84,809. Pub. 5-31-60. Filed 11-6-59.

702,941. BITS OF GRIT. Mid-West Abrasive Company. SN 85,367. Pub. 5-31-60. Filed 11-16-59.

702,942. FOTO PLATE. E. Errett Smith, Inc. SN 87,080. Pub. 5-31-60. Filed 12-10-59.

702,943. CHRISTMAS FORMALS. H. S. Crocker Co., Inc., d.b.a. California Artists. SN 87,206. Pub. 5-31-60. Filed 12-14-59.

702,944. THE NORCROSS WISHING ROSE. Norcross, Inc. SN 89,450. Pub. 5-31-60. Filed 1-21-60.

702,945. THE NORCROSS CHAMPAGNE ROSE. Norcross, Inc. SN 90,556. Pub. 5-31-60. Filed 2-8-60.

702,946. THE NORCROSS ROSA STELLATA. Norcross, Inc. SN 90,557. Pub. 5-31-60. Filed 2-8-60.

702,947. THE NORCROSS ROSEBUD TAPESTRY. Norcross, Inc. SN 90,558. Pub. 5-31-60. Filed 2-8-60.

702,948. THE NORCROSS ROSE PARFAIT. Norcross, Inc. SN 90,559. Pub. 5-31-60. Filed 2-8-60.

702,949. THE NORCROSS BRONZE BEAUTY. Norcross, Inc. SN 90,560. Pub. 5-31-60. Filed 2-8-60.

702,950. THE NORCROSS ROSA BELLISSIMA. Norcross, Inc. SN 90,561. Pub. 5-31-60. Filed 2-8-60.

702,951. THE NORCROSS BLACK BEAUTY. Norcross, Inc. SN 90,562. Pub. 5-31-60. Filed 2-8-60.

Class 39 — Clothing

702,952. RUFF 'N READY. Remco, Inc. SN 41,939. Pub. 5-31-60. Filed 12-6-57.

702,953. FOLKWEAVE. H. Freeman & Son, Inc. SN 58,716. Pub. 5-31-60. Filed 9-10-58.

702,954. INVICTA. The Joseph & Feiss Company. SN 64,302. Pub. 5-31-60. Filed 12-15-58.

702,955. CLIPPER CONTINENTAL. Trimount Clothing Co., Inc. SN 67,167. Pub. 5-31-60. Filed 2-5-59.

702,956. SWEETIE. Joan-Doug Undergarment Co. Inc. SN 71,215. Pub. 5-31-60. Filed 4-8-59.

702,957. NECESSITY OF LIFE FASHIONS. Smoler Bros., Inc. SN 72,061. Pub. 5-31-60. Filed 4-22-59.

702,958. GAMINS. Gamins, Inc., by change of name from Andrew Geller Pens, Inc. SN 74,603. Pub. 5-31-60. Filed 5-27-59.

702,959. GOLDENAIRE. Edward Hyman Company. SN 76,567. Pub. 5-31-60. Filed 6-26-59.

702,960. CROWN JEWEL. Exquisite Form Brassiere, Inc. SN 77,737. Pub. 5-31-60. Filed 7-15-59.

702,961. WAITING MOTHER. Leading Lady Foundations, Inc. SN 78,570. Pub. 5-31-60. Filed 7-28-59.

702,962. 2020 AND DESIGN. Eagle Clothes, Inc. SN 79,632. Pub. 5-31-60. Filed 8-17-59.

702,963. BERMELLA. Bud Berman Sportswear, Inc. SN 79,974. Pub. 5-31-60. Filed 8-21-59.

702,964. TWINTRIQUE. Kayser-Roth Corporation. SN 81,521. Pub. 5-31-60. Filed 7-22-59.

702,965. THE VILLAGER. The Villager, Inc. SN 83,333. Pub. 5-31-60. Filed 10-15-59.

702,966. KING'S GARDE. B. W. Mayer & Cohan, Ltd. SN 83,810. Pub. 5-31-60. Filed 10-22-59.

702,967. VENIDA. The Rieser Co., Inc. SN 84,173. Pub. 5-31-60. Filed 10-28-59.

702,968. "WONDER WEDGE." Service Heel Company, Inc. SN 84,806. Pub. 5-31-60. Filed 11-6-59.

702,969. DORNA GORDON. Twin Cities Manufacturing Company, Inc. SN 84,817. Pub. 5-31-60. Filed 11-6-59.

702,970. VELURA. Blume Knitwear, Inc. SN 85,093. Pub. 5-31-60. Filed 11-12-59.

702,971. YIPPEES! Ripon Knitting Works. SN 85,159. Pub. 5-31-60. Filed 11-12-59.

702,972. CRADLE DAYS. George Marquette. SN 85,598. Pub. 5-31-60. Filed 11-18-59.

702,973. B & G WITHIN A CIRCLE. Beard and Gabelman, Inc., d.b.a. B & G Shops. SN 85,711. Pub. 5-31-60. Filed 11-20-59.

702,974. DAWSON AND DESIGN. Howard Stores Corporation. SN 85,865. Pub. 5-31-60. Filed 11-23-59.

702,975. ULLA. Ulla Fashions, Inc., d.b.a. Ulla. SN 86,004. Pub. 5-31-60. Filed 11-24-59.

702,976. SAMSONS. Samsons Inc. SN 86,456. Pub. 5-31-60. Filed 12-1-59.

702,977. TOMTOM. Shoecraft Inc. SN 86,620. Pub. 5-31-60. Filed 11-27-59.

702,978. MISS PRESTON AND DESIGN. Preston Shirt Company, Inc. SN 86,679. Pub. 5-31-60. Filed 12-4-59.

702,979. THREAD O LIFE. Hayward Hosiery Company. SN 87,562. Pub. 5-31-60. Filed 12-18-59.

702,980. CARRIAGE DESIGN. Preston Shirt Company, Inc. SN 87,717. Pub. 5-31-60. Filed 12-21-59.

702,981. CR. Chicago Rawhide Manufacturing Company. SN 88,019. Pub. 5-31-60. Filed 12-28-59.

702,982. GLITTER GLO'. Ben Cooper, Inc. SN 88,214. Pub. 5-31-60. Filed 12-30-59.

702,983. CONVERTABLE. Joseph F. Corcoran Shoe Co., Inc. SN 88,215. Pub. 5-31-60. Filed 12-30-59.

702,984. SHAHDAR. Maurice L. Rothschild & Company. SN 88,253. Pub. 5-31-60. Filed 12-30-59.

702,985. ROCHEL'S. Irving J. Reichelle, d.b.a. Rochel's. SN 88,424. Pub. 5-31-60. Filed 1-4-60.

702,986. ILLUSION-HOOD AND DESIGN. André Fantasies Inc. SN 88,512. Pub. 5-31-60. Filed 1-6-60.

702,987. BEAUTISPUN. Dutchess Underwear Corporation. SN 88,532. Pub. 5-31-60. Filed 1-6-60.

702,988. NASSAU. Cluett, Peabody & Co., Inc. SN 88,595. Pub. 5-31-60. Filed 1-7-60.

702,989. TRAVEL RITE. M. K. Weil Shoe Company. SN 88,703. Pub. 5-31-60. Filed 1-6-60.

702,990. PRESTON. Preston Shirt Company, Inc. SN 90,103. Pub. 5-31-60. Filed 2-1-60.

Class 40 — Fancy Goods, Furnishings, and Notions

702,991. UNITAPE. Ferro Corporation. SN 65,236. Pub. 5-31-60. Filed 1-2-59.

702,992. Q AND DESIGN. Quicklime Company. SN 75,026. Pub. 5-31-60. Filed 6-9-59.

702,993. VENIDA. The Rieser Co., Inc. SN 84,174. Pub. 5-31-60. Filed 10-28-59.

Class 41 — Canes, Parasols, and Umbrellas

702,994. SUPER-SLIDE. Polan, Katz & Company, Incorporated. SN 88,094. Pub. 5-31-60. Filed 12-30-59.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

702,995. SNUGGERS AND DESIGN. National Association of Consumer Organizations. SN 69,752. COLLECTIVE MARK. Pub. 5-31-60. Filed 3-17-59.

702,996. CAJMERON. The Bernhard Altmann Corporation. SN 81,961. Pub. 5-31-60. Filed 9-24-59.

702,997. STORMGUARD. McCampbell & Company, Inc. SN 83,229. Pub. 5-31-60. Filed 10-14-59.

702,998. SOF-WYP. American Associated Companies. SN 85,200. Pub. 5-31-60. Filed 11-13-59.

702,999. WISTAR. Deering, Milliken & Co. Inc. SN 85,720. Pub. 5-31-60. Filed 11-20-59.

703,000. STRAFFORD OF NEW HAMPSHIRE. Baxter Woolen Company Inc. SN 86,256. Pub. 5-31-60. Filed 11-30-59.

703,001. MJ. Morgan-Jones, Inc. SN 86,306. Pub. 5-31-60. Filed 11-30-59.

703,002. LOOMTEX. Loomtex Mills, Inc. SN 87,695. Pub. 5-31-60. Filed 12-21-59.

703,003. SARAVAN. Shirley Fabrics Corporation. SN 87,918. Pub. 5-31-60. Filed 12-23-59.

703,004. ACRANITE. Chatham Manufacturing Company. SN 88,522. Pub. 5-31-60. Filed 1-6-60.

703,005. TEMPO. Chatham Manufacturing Company. SN 88,523. Pub. 5-31-60. Filed 1-6-60.

703,006. ALIVE. The Springs Cotton Mills. SN 88,572. Pub. 5-31-60. Filed 1-6-60.

Class 43 — Thread and Yarn

703,007. GLENSPUN. Glen Raven Cotton Mills, Inc. SN 67,675. Pub. 5-31-60. Filed 2-13-59.

703,008. CROCHET TEACHER. Lily Mills Company. SN 88,238. Pub. 5-31-60. Filed 12-30-59.

Class 44 — Dental, Medical, and Surgical Appliances

703,009. CHIMES. Campus Chimes Cosmetic Corp. SN 57,127. Pub. 5-31-60. Filed 8-13-58.

703,010. GRACIOUS. The Gillette Company, d.b.a. The Toni Company. SN 86,278. Pub. 5-31-60. Filed 11-30-59.

Class 46 — Foods and Ingredients of Foods

703,011. NORTHLAND QUEEN. Reese Finer Foods, Inc. SN 27,134. Pub. 9-9-58. Filed 3-28-57.

703,012. QUIK-SERV. Auster Foods, Inc. SN 84,597. Pub. 5-31-60. Filed 11-4-59.

703,013. JAM DANDY. Chet's Famous Foods. SN 84,993. Pub. 5-31-60. Filed 11-10-59.

703,014. ROYAL CUP AND DESIGN. Royal Cup Inc. SN 86,065. Pub. 5-31-60. Filed 11-23-59.

703,015. SUMMER BEAUTY. Betts & Colucci. SN 87,561. Pub. 5-31-60. Filed 12-18-59.

703,016. CANINE JOY. Flavor Corporation of America. SN 87,865. Pub. 5-31-60. Filed 12-23-59.

703,017. WALL STREET AND DESIGN. J. & A. Farms, d.b.a. J & A Packing Co. SN 87,882. Pub. 5-31-60. Filed 12-23-59.

703,018. GEBHARDT'S AND DESIGN. Gebhardt Chili Powder Company. SN 88,708. Pub. 5-31-60. Filed 12-15-59.

703,019. BLENDAISE. T. Marzetti Company. SN 88,864. Pub. 5-31-60. Filed 1-12-60.

703,020. MARSONAISE. T. Marzetti Company. SN 88,865. Pub. 5-31-60. Filed 1-12-60.

703,021. BEEF-UP. Meat Industry Suppliers, Inc. SN 88,930. Pub. 5-31-60. Filed 1-13-60.

703,022. BLACK ANGUS. Meat Industry Suppliers, Inc. SN 88,931. Pub. 5-31-60. Filed 1-13-60.

703,023. TWINDIVIDUALS. Ralston Purina Company. SN 89,023. Pub. 5-31-60. Filed 1-14-60.

703,024. AROMOLASS. Flavor Corporation of America. SN 89,348. Pub. 5-31-60. Filed 1-20-60.

703,025. PIETRO'S. Pizza Frozen Foods, Inc., d.b.a. Pizza Frozen, Inc. SN 89,456. Pub. 5-31-60. Filed 1-21-60.

Class 49 — Distilled Alcoholic Liquors

703,026. SUTTERS GOLD. Hartley & Parker Limited Inc. SN 87,948. Pub. 5-31-60. Filed 12-24-59.

Class 50 — Merchandise Not Otherwise Classified

703,027. CAFLO PLASTI-DIPPED FLOWERS AND DESIGN. Carolina Florist-Artificial Flowers Import. SN 75,397. Pub. 5-31-60. Filed 6-9-59.

703,028. COPPERCOTE. The International Silver Company. SN 80,185. Pub. 5-31-60. Filed 8-25-59.

703,029. BRASSCOTE. The International Silver Company. SN 80,186. Pub. 5-31-60. Filed 8-25-59.

703,030. REPRESENTATION OF A PITCHER ETC. Israeli Art-Craft Importing Co., Inc. SN 82,898. Pub. 5-31-60. Filed 10-8-59.

703,031. CHICK MASTER. Chick Master Incubator Company. SN 85,666. Pub. 5-31-60. Filed 11-19-59.

703,032. GRACE-FORM. Grace Sumner Hiscock. SN 86,031. Pub. 5-31-60. Filed 11-25-59.

703,033. JETWAY. Pacific Iron & Steel Corporation of Los Angeles. SN 86,317. Pub. 5-31-60. Filed 11-30-59.

Class 51 — Cosmetics and Toilet Preparations

703,034. MALE CALL. The Mennen Company. SN 86,046. Pub. 5-31-60. Filed 11-25-59.

703,035. BUZZ. The Mennen Company. SN 86,047. Pub. 5-31-60. Filed 11-25-59.

703,036. VITA-NAIL. Lanolin Plus, Inc. SN 86,266. Pub. 5-31-60. Filed 11-30-59.

703,037. BEAUTY TIPS. Richard Hudnut. SN 86,422. Pub. 5–31–60. Filed 12–1–59.

703,038. CHARMACEUTICALS. Richard Hudnut. SN 86,425. Pub. 5–31–60. Filed 12–1–59.

703,039. FASHIONAIRE. The Mennen Company. SN 86,426. Pub. 5–31–60. Filed 12–1–59.

703,040. MONSIEUR CHRISTIAN DIOR. Christian Dior Perfumes Corporation. SN 87,935. Pub. 5–31–60. Filed 12–24–59.

Class 52 — Detergents and Soaps

703,041. GRACIOUS. The Gillette Company, d.b.a. The Toni Company. SN 86,276. Pub. 5–31–60. Filed 11–30–59.

Service Marks

Class 101 — Advertising and Business

703,042. NNL AND DESIGN. Berenice U. Briggs. SN 84,722. Pub. 5–31–60. Filed 11–6–59.

Class 102 — Insurance and Financial

703,043. EMBLEM DESIGN NATIONAL INSTITUTE OF REAL ESTATE BROKERS. National Institute of Real Estate Brokers. SN 56,499. COLLECTIVE MARK. Pub. 5–24–60. Filed 8–1–58.

703,044. PERMA-CREDIT. The Bank of Levittown. SN 85,807. Pub. 5–31–60. Filed 11–23–59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

703,045. Bemis Bro. Bag Co., Minneapolis, Minn. SN 57,459. Filed P.R. 8–19–58; Am. S.R. 4–18–60.

POLYWALL

For Plastic Bags.
First use July 28, 1958.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

703,046. Morris White Fashions, Inc., New York, N.Y., assignee of U.S. Handbag Corporation, New York, N.Y. SN 59,867. Filed P.R. 9–30–58; Am. S.R. 5–16–60.

"EVER SOFT"

For Handbags.
First use Sept. 24, 1958.

Class 4 — Abrasives and Polishing Materials

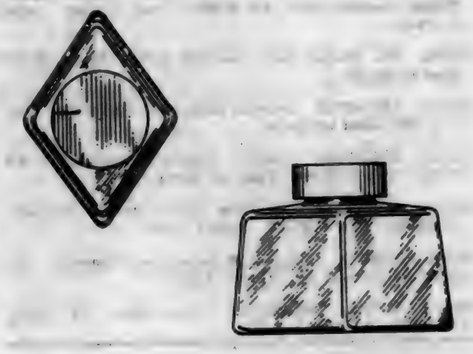
703,047. J. F. Kerns Chemical Corporation, Chicago, Ill. SN 81,286. Filed P.R. 9–14–59; Am. S.R. 6–24–60.

FLOR/CARE

For Floor Polish.
First use Jan. 12, 1959.

Class 11 — Inks and Inking Materials

703,048. The Parker Pen Company, Janesville, Wis. SN 89,536. Filed 1–26–60.



The mark comprises the particular configuration of the ink bottle, which is diamond-shaped in cross section as illustrated.
For Writing Ink.
First use June 16, 1959.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

703,049. Wm. Steinen Mfg. Co., Newark, N.J. SN 55,283. Filed P.R. 7–14–58; Am. S.R. 6–15–60.

VUE-PAK

For Industrial Nozzles for Oil Burners, for Spraying Liquids, Fertilizers, and Generally for Distributing and Spraying Aqueous and Non-Aqueous Liquids.
First use April 1957.

Class 16 — Protective and Decorative Coatings

703,050. Sprayon Products, Inc., Cleveland, Ohio. SN 48,360. Filed P.R. 3–24–58; Am. S.R. 6–17–60.



The drawing is lined for red or pink and gray, but the particular colors are not considered essential parts of the mark.
For Paints Packaged in Spray-Type Containers.
First use Mar. 3, 1958.

Class 17 — Tobacco Products

703,051. The United Kingdom Tobacco Company Limited, d.b.a. B. Muratti Sons & Co., London, England. SN 81,514. Filed 9–16–59.



Owner of Reg. Nos. 156,016 and 596,675.
For Cigarettes.
First use March 1954; in commerce Aug. 10, 1959.

Class 19 — Vehicles

703,052. Amerimex Corp., New York, N.Y. SN 62,514. Filed P.R. 11–17–58; Am. S.R. 6–2–60.



The drawing is lined to represent shading only.
For Convertible Canoes.
First use July 3, 1958.

Class 26 — Measuring and Scientific Appliances

703,053. Allied Optical Company, Pittsburgh, Pa. SN 75,149. Filed P.R. 6–5–59; Am. S.R. 6–3–60.

For High Fashions in Eye Fashions

For Eye Glass Lenses and Eye Glass Frames.
First use Jan. 2, 1955.

703,054. American Optical Company, Southbridge, Mass. SN 93,974. Filed 3–30–60.

TRUE-COLOR

For Ophthalmic Lenses, Sunglasses, and Lenses for Sunglasses.
First use March 1958.

Service Mark

Class 102 — Insurance and Financial

703,055. National Casualty Company, Detroit, Mich. SN 8,012. Filed P.R. 5–9–56; Am. S.R. 11–8–57.

"NO ACCIDENT SAVINGS PLAN"

For Underwriting Automobile Insurance—Namely, Bodily Injury, Property Damage, Medical Payments, Collision, Comprehensive Fire and Theft, and Road Service.
First use Apr. 20, 1956.

TRADEMARK REGISTRATIONS RENEWED

126,923. GOOD HUMOR. Cl. 46. 10–14–19.
130,327. PREMIERE. Cl. 39. 4–20–20.
130,871. REPRESENTATION OF AN ITALIAN SOLDIER. Cl. 46. 5–4–20.
131,492. ALMONDAL. Cl. 52. 5–18–20.
132,326. C–3. Cl. 12. 6–22–20.
132,751. VELVIA. Cl. 46. 6–29–20.
132,753. TRITON. Cl. 46. 6–29–20.
133,558. THE ONLIWON AND DESIGN. Cl. 2. 8–3–20.
133,820. KEEN KUTTER SYMBOLS IN RAZOR BLADE OUTLINE. Cl. 23. 8–3–20.
134,773. BOB WHITE. Cl. 52. 9–14–20.
135,071. NORLEIGH DIAMOND. Cl. 21. 9–21–20.
135,243. PERUVIA. Cl. 46. 9–28–20.
135,242. VELDYNE. Cl. 42. 9–28–20.
135,392. CHAMPION. Cl. 44. 10–12–20.
135,675. GRACIELLA. Cl. 42. 10–19–20.
135,999. DIANORA. Cl. 42. 10–26–20.
136,373. EL AGUILA DE ORO AND DESIGN. Cl. 17. 11–2–20.
136,516. VELVET. Cl. 17. 11–2–20.
136,577. BANNER. Cl. 6. 11–2–20.
136,758. SUNKIST. Cl. 21. 11–9–20.
136,909. GRIP-O-TAN. Cl. 35. 11–9–20.
136,980. RELYON. Cl. 37. 11–9–20.
137,256. CARBO. Cl. 23. 11–23–20.
137,462. SMITH. Cl. 23. 11–23–20.
137,630. JUVENILE SHOE SYSTEM AND DESIGN. Cl. 39. 11–30–20.
137,653. LUNA. Cl. 29. 11–30–20.
137,654. ARCTIC. Cl. 29. 11–30–20.
137,655. LILY. Cl. 29. 11–30–20.

137,680. PRINCE. Cl. 46. 11-30-39.
370,449. NO-HAL. Cl. 51. 8-29-39.
375,566. STAMINA. Cl. 46. 2-20-40.
376,433. REPORT FOR THE BUSINESS EXECUTIVE. Cl. 38. 3-26-40.
376,944. GABRIELEEN ADEPSOL. Cl. 51. 4-9-40.
377,134. VARSITY. Cl. 36. 4-22-40.
377,274. ELKINGTON. Cl. 28. 4-30-40.
377,449. ROYALE. Cl. 36. 5-7-40.
377,520. BRUCE AND DESIGN. Cl. 12. 5-7-40.
377,951. TRIP-L-SEAL. Cl. 12. 5-21-40.
377,980. DETEX AND DESIGN. Cl. 37. 5-21-40.
378,111. BRUCE AND DESIGN. Cl. 16. 5-28-40.
378,245. VICTORY AND DESIGN. Cl. 22. 6-4-40.
378,506. TOXOLEM. Cl. 18. 6-11-40.
378,663. RAVEN RED. Cl. 51. 6-11-40.
378,736. PROTOVAC. Cl. 5. 6-18-40.
378,814. MATCHTEX AND DESIGN. Cl. 42. 6-18-40.
379,083. Q-CONTROL. Cl. 21. 7-2-40.
379,120. SUPER-THRIFT. Cl. 21. 7-2-40.
379,234. CARBLEX. Cl. 46. 7-9-40.
379,268. ULRICI'S AND DESIGN. Cl. 18. 7-9-40.
379,282. CHARLES OF THE RITZ AND DESIGN. Cl. 51. 7-9-40.
379,429. WINTROL. Cl. 6. 7-9-40.
379,551. RANIER SPECIAL EXPORT. Cl. 48. 7-16-40.
379,582. BITUMINITE. Cl. 9. 7-16-40.
379,764. RAISANA. Cl. 46. 7-23-40.
379,977. THRIFTY AND DESIGN. Cl. 15. 8-6-40.
380,031. YORKTOWN BRAND. Cl. 46. 8-6-40.
380,200. VEGA. Cl. 47. 8-13-40.
380,271. MT. VERNON AND DESIGN. Cl. 51. 8-20-40.
380,334. RED COMET COAL. Cl. 1. 8-20-40.
380,504. SPENCER. Cl. 26. 9-3-40.
381,137. CONTAX. Cl. 9. 9-10-40.
381,202. ALUMI-SHIELD. Cl. 12. 9-17-40.
381,216. RANIER OLD STOCK ALE. Cl. 48. 9-17-40.
381,276. YOUTH. Cl. 28. 9-17-40.
381,352. SUNFLOWER AND DESIGN. Cl. 42. 9-17-40.
381,428. Y AND DESIGN. Cl. 46. 9-24-40.
381,473. KHAVORA. Cl. 42. 9-24-40.
381,474. LINKOLAINE. Cl. 42. 9-24-40.
381,518. STAR-KIST. Cl. 46. 9-24-40.
381,727. ORTHO-LITE. Cl. 44. 10-1-40.
381,734. ONDULAINE. Cl. 42. 10-1-40.
381,735. PEBBLONA. Cl. 42. 10-1-40.
381,736. POMOLA. Cl. 42. 10-1-40.
381,746. KRELORA. Cl. 42. 10-1-40.
381,790. SERANDA. Cl. 42. 10-1-40.
381,891. GREY CORE. Cl. 5. 10-15-40.
381,918. CALIPERS AND SCALE DEVICE. Cl. 15. 11-15-43.
381,930. JOE & ETHEL TURP. Cl. 36. 10-15-40.
381,999. TEGACID. Cl. 51. 10-15-40.
382,088. ATLAS. Cl. 52. 10-15-40.
382,110. INTOCOSTRIN. Cl. 18. 10-15-40.
382,150. CONALENE. Cl. 6. 10-15-40.
382,228. DAWN FRESH. Cl. 46. 10-22-40.
382,257. RCA MONOGRAM. Cl. 39. 10-22-40.
382,329. ZENITH. Cl. 51. 10-22-40.
382,383. GREY CORE. Cl. 37. 10-29-40.
382,482. GREEN TIDE. Cl. 46. 10-29-40.
382,483. SPRAY KIST. Cl. 46. 10-29-40.
382,490. BEEF-NAC. Cl. 46. 10-29-40.
382,491. PIC-NAC. Cl. 46. 10-29-40.
382,492. MAC-NAC. Cl. 46. 10-29-40.
382,493. HAM-NAC. Cl. 46. 10-29-40.
382,527. SPORTIME. Cl. 39. 10-29-40.
382,660. CHIX-NAC. Cl. 46. 11-5-40.
382,668. CHIPSO. Cl. 52. 11-5-40.
382,690. CARACREAM. Cl. 46. 11-5-40.
382,789. BEAUTY DUST. Cl. 51. 11-12-40.
382,813. SMO. Cl. 10. 11-12-40.
382,850. VALIANT. Cl. 37. 11-12-40.
382,974. AMBASSADOR. Cl. 39. 11-19-40.
383,004. DISSOLVO. Cl. 52. 11-19-40.
383,033. DAUNTLESS. Cl. 37. 11-19-40.
383,034. RADIANCE. Cl. 37. 11-19-40.
383,227. QUIX. Cl. 39. 11-26-40.
383,303. KITCHEN-KLATTER. Cl. 38. 12-3-40.
383,389. SETLO. Cl. 39. 12-3-40.

TRADEMARK REGISTRATIONS CANCELED

Section 8

46,392. SUCCESS AND DESIGN. Cl. 6. 9-10-05.
149,863. AVERILL. Cl. 10. 12-27-21.
249,427. K-M-DIE. Cl. 14. 11-13-28.
249,428. K-L-DIE. Cl. 14. 11-13-28.
249,571. K-RUSTLESS. Cl. 14. 11-20-28.
305,668. BOHEMIA ETC. AND DESIGN. Cl. 48. 8-22-33.
305,697. CARTA BLANCA ETC. Cl. 48. 8-22-33.
404,514. DOUBLE HEADER AND DESIGN. Cl. 46. 11-30-43.
589,088. JACQUES HEIM AND DESIGN. Cl. 51. 4-27-54.

The following registrations issued June 29, 1954

591,817. TYFLUX. Cl. 1.
591,820. POLAR-PAK. Cl. 2.
591,823. WONDER-FREEZ. Cl. 2.
591,836. PHENAMIN. Cl. 6.
591,840. DE LAIRE AND DESIGN. Cl. 6.
591,842. 53. Cl. 6.
591,845. WALL AND DESIGN. Cl. 6.
591,848. VO-3 AND DESIGN. Cl. 10.
591,871. GILSELGLOSS. Cl. 16.
591,879. PYCAZIDE. Cl. 18.
591,886. HEXTABS. Cl. 18.
591,891. ARBIDO. Cl. 18.
591,893. CAFFEASE AND DESIGN. Cl. 18.
591,898. CORTOPRAN. Cl. 18.
591,899. SANCOLIN. Cl. 18.
591,906. CORONA. Cl. 21.
591,910. MONOLOCK. Cl. 21.
591,911. ECHO ELECTRONIC. Cl. 21.
591,921. KEYSTONE AND DESIGN. Cl. 26.
591,927. WED AND DESIGN. Cl. 24.
591,928. PHOTOSWITCH MARINE DIVISION INC. AND DESIGN. Cl. 24.
591,929. ROYAL AMERICAN. Cl. 26.
591,930. MICRO-MIXER. Cl. 26.
591,935. REEL-TAINER. Cl. 26.
591,939. CINEGRAPH. Cl. 28.
591,944. FEATHERWEIGHTS AND DESIGN. Cl. 28.
591,948. PROTECTEERS. Cl. 28.
591,960. SAN-VALLE. Cl. 30.
591,964. SKANDEN. Cl. 31.
591,969. LADY MARYLAND AND DESIGN. Cl. 39.
591,970. REBEL KNIT. Cl. 39.
591,973. LORRIE CALIFORNIA. Cl. 39.
591,976. MINK MASTER. Cl. 39.
591,978. SIL-KOK. Cl. 39.
591,980. THE PEAK OF STYLE BLANKSON AND DESIGN. Cl. 39.
591,981. EASTFIELD ETC. AND DESIGN. Cl. 39.
591,982. TEENYMPH. Cl. 39.
591,984. TURN-AN-PAC. Cl. 39.
591,987. SPUNKY. Cl. 39.
591,991. COV-E-RAGE. Cl. 39.
591,992. SAFELITE. Cl. 39.
591,997. TARANTELLA AND HUMAN FEMALE DESIGN. Cl. 39.
591,999. NYLNET. Cl. 42.
592,000. CHROMBABK. Cl. 42.
592,001. HELLERIZED. Cl. 42.
592,002. MELL-A-DUR. Cl. 42.
592,006. SUPER-SPONGY ETC. Cl. 42.
592,007. PLEETARRA. Cl. 42.
592,008. WINDSORWEAVE. Cl. 42.
592,009. FABRIC REPRESENTATIVES AND DESIGN. Cl. 42.
592,016. SOLLIDEN. Cl. 44.

592,026. JOE JUNIOR. Cl. 46.
592,029. VITEQUESTRAIAN. Cl. 43.
592,034. PURE AND DESIGN. Cl. 52.
592,042. PHYLTRALL. Cl. 52.
592,046. MR. AND MRS. HILLBILLY. Cl. 104.
592,048. CAM-O. Cl. 106.
592,049. LAMIRIC. Cl. 106.
592,050. SPOKEN WORDS "THE ADVENTURES OF SALLY THE RABBIT AND JERRY THE SQUIRREL." Cl. 107.
592,051. KADDY RAK. Cl. 22.
592,054. RETROFOCUS. Cl. 26.
592,058. THE TELEPHONE WAY ETC. AND DESIGN. Cl. 102.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

349,947. ANTHONY HYDRAULIC AND DESIGN. Cl. 19. 9-14-37. Anthony Company, Streator, Ill. Corrected: In the certificate, lines 2 and 15, in the heading, signature, and in the statement, column 1, line 1, *Inc.* should be deleted.

350,396. ANTHONY. Cl. 19. 9-28-37. Anthony Company, Streator, Ill. Corrected: In the certificate, lines 2 and 15, in the heading, signature, and in the statement, column 1, line 1, *Inc.* should be deleted.

597,634. BLEYLE AND DESIGN. Cl. 39. 11-2-54. Wilh. Bleyle o.H.G., Stuttgart, Germany. Amended: In the statement, column 2, line 9 is deleted, and the drawing is amended to appear:



602,514. NEBRASKA. Cl. 46. 2-22-55. North Platte Rendering Co., doing business as Central Nebraska Packing Co., North Platte, Nebr. Amended to appear:

NEBRASKA

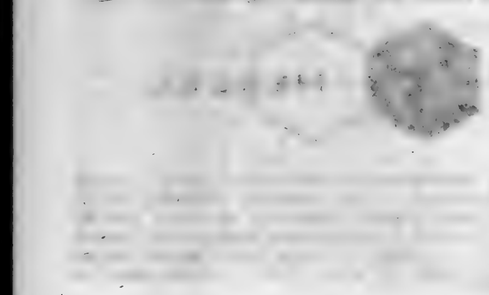
667,011. AL AND DESIGN. Cl. 9. 9-16-58. Alcan Paper Company, Alton, Ill. Corrected: In the statement, column 1, line 1, "Co., Inc." should be deleted and *Company* should be inserted.

679,473. FELTAN-BLUESTREAK. Cl. 9. 6-2-59. Alcan Paper Company, Alton, Ill. Corrected: In the statement, column 1, line 1, "Co., Inc." should be deleted and *Company* should be inserted.

688,155. HEXCEL AND DESIGN. Cl. 12. 11-17-59. Hexcel Products Inc., Berkeley, Calif. Amended to appear:



695,077. CONTRO-MATIC AND DESIGN. Cl. A. 3-22-60. The Professional Golfers' Association of America, assignee of Professional Golfers' Association of America, Dunedin, Fla. Corrected: In the statement, column 1, lines 5 and 6, "Florida corporation" should be deleted and *an unincorporated association of the State of Florida* should be inserted.



INDEX OF REGISTRANTS

AUGUST 16, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

A.E.T.-Hotpoint Ltd., London, England. 702,872, pub. 5–31–60. Cl. 23.
AMP Inc., Harrisburg, Pa. 702,836, pub. 5–31–60. Cl. 21.
A.P.W. Products Co., Inc.: *See*—
Albany Perforated Wrapping Paper Co.
Abbott Laboratories, North Chicago, Ill. 702,835, pub. 5–31–60. Cl. 18.
Abco, Inc., McKeesport, Pa. 592,042, canc. Cl. 52.
Action Bag & Envelope Co., Inc., Brooklyn, N.Y. 702,740, pub. 5–31–60. Cl. 2.
Adamovske Strojirny, Narodni Podnik, Adamovske, near Brno, Czechoslowakia. 702,882, pub. 5–31–60. Cl. 23.
Adams, J. K., Co., Inc., Dorset, Vt. 702,891, pub. 5–31–60. Cl. 23.
Aetna Casualty and Surety Co., The, Hartford, Conn. 702,906, pub. 5–31–60. Cl. 26.
Agricultural Mineral & Organic Compost Co., Alpine, Tex. 591,848, canc. Cl. 10.
Airequipt Mfg. Co., Inc., New Rochelle, N.Y. 702,904, pub. 5–31–60. Cl. 23.
Airo Industries: *See*—
Galvin, Jerome C., Jr.
Akron Spool and Mfg. Co., High Point, N.C. 702,745, pub. 5–31–60. Cl. 2.
Aladdin Industries, Inc.: *See*—
Aladdin Radio Industries, Inc.
Aladdin Radio Industries, Inc., Chicago, Ill., to Aladdin Industries, Inc., Nashville, Tenn. 570,063, ren. 8–16–60. Cl. 21.
Albany Perforated Wrapping Paper Co., Albany, to A.P.W. Products Co., Inc., New York, N.Y. 133,556, ren. 8–16–60. Cl. 2.
Alcan Paper Co., Alton, Ill. 679,473, cor. Cl. 9.
Allied Optical Co., Pittsburgh, Pa. 703,053. Cl. 26.
American Associated Companies, Atlanta, Ga. 702,993, pub. 5–31–60. Cl. 42.
American Cyanamid Co., New York, N.Y. 591,842, canc. Cl. 6.
American Distaids Co., Inc.: *See*—
Enrich Products Co., Inc.
American Home Products Corp., d.b.a. Fort Dodge Laboratories, Fort Dodge, Iowa. 702,822, pub. 5–31–60. Cl. 18.
American Laboratories: *See*—
Boyle & Co.
American Optical Co.: *See*—
Spencer Lens Co.
American Optical Co., Southbridge, Mass. 703,054. Cl. 26.
American Snuff Co., Memphis, Tenn. 702,807, pub. 5–31–60. Cl. 17.
Amerimex Corp., New York, N.Y. 703,052. Cl. 19.
Andre Fantasies Inc., Baltimore, Md. 702,986, pub. 5–31–60. Cl. 39.
Angenieux, Pierre, Saint-Heand (Loire), France. 592,054, canc. Cl. 26.
Ansul Chemical Co., Marinette, Wis. 702,763–4, pub. 5–31–60. Cl. 6.
Anthony Co., Streator, Ill. 349,947, cor. Cl. 19.
Anthony Co., Streator, Ill. 350,300, cor. Cl. 19.
Arcieri, Eugenio, New York, N.Y. 382,150, ren. 8–16–60. Cl. 4.
Ardsley Curtain Co., Inc., New York, N.Y. 592,000, canc. Cl. 42.
Astra Corp., Columbus, Ga. 702,840, pub. 5–31–60. Cl. 19.
Astro-Dome, Inc., Canton, Ohio. 702,772, pub. 5–31–60. Cl. 12.
Atlantic Abrasive Corp., South Braintree, Mass. 702,750, pub. 5–31–60. Cl. 4.
Atlas Supply Co., Newark, N.J. 382,088, ren. 8–16–60. Cl. 52.
Austex Foods, Inc., Austin, Tex. 703,012, pub. 5–31–60. Cl. 46.
Avon Products, Inc., New York, N.Y. 382,789, ren. 8–16–60. Cl. 51.
Avondale Mills, Sylacauga, Ala. 378,814, ren. 8–16–60. Cl. 42.
B & G Shops: *See*—
Beard and Gabelman, Inc.
Babbitt, B. T., Inc.: *See*—
Penn Chemical Works, The.
Baker Paint & Varnish Co., Jersey City, N.J. 702,803, pub. 5–31–60. Cl. 16.
Bally, Inc., New York, N.Y. 591,997, canc. Cl. 39.
Bank of Levittown, The, Levittown, N.J. 703,044, pub. 5–31–60. Cl. 102.
Bar-B Products: *See*—
Roll Forming Corp.
Bartz, Francis, d.b.a. Ruber Co., Boston, Mass. 591,893, canc. Cl. 18.
Basic Inc., Cleveland Ohio. 702,779, pub. 5–31–60. Cl. 12.
Bausch & Lomb Optical Co., Rochester, N.Y. 381,727, ren. 8–16–60. Cl. 44.
Baxter Woolen Co. Inc., East Rochester, N.H. 703,000, pub. 5–31–60. Cl. 42.
Beard and Gabelman, Inc., d.b.a. B & G Shops, Kansas City, Mo. 702,973, pub. 5–31–60. Cl. 39.
Becton, Dickinson & Co., Rutherford, N.J. 135,892, ren. 8–16–60. Cl. 44.
Bemis Bro. Bag Co., Minneapolis, Minn. 703,045. Cl. 2.
Bendix Aviation Corp., Detroit, Mich. 702,851, pub. 5–31–60. Cl. 21.
Bendix Aviation Corp., Detroit, Mich. 702,898, pub. 5–31–60. Cl. 28.
Berman, Bud, Sportswear, Inc., New York, N.Y. 702,963, pub. 5–31–60. Cl. 39.
Bernard Welding Equipment Co., Chicago, Ill. 702,854, pub. 5–31–60. Cl. 21.
Bernhard Altmann Corp., The, New York, N.Y. 702,996, pub. 5–31–60. Cl. 42.
Bilt-Rite Products Co.: *See*—
Guion, Robert C.
Bischitz, George E., d.b.a. Boot-O-Bond, New York, N.Y. 702,741, pub. 5–31–60. Cl. 5.
Blankson Clothes, Inc., New York, N.Y. 591,980, canc. Cl. 39.
Blessing Mfg. Co., New York, N.Y., to Sunkist Growers, Inc., Los Angeles, Calif. 136,758, ren. 8–16–60. Cl. 21.
Blume Knitwear, Inc., New York, N.Y. 702,970, pub. 5–31–60. Cl. 39.
Boom Electric Corp., Chicago, Ill. 702,855, pub. 5–31–60. Cl. 21.
Boot-O-Bond: *See*—
Bischitz, George E.
Borden Co., The, New York, N.Y. 378,736, ren. 8–16–60. Cl. 5.
Borden Co., The, New York, N.Y. 702,926, pub. 5–31–60. Cl. 25.
Boyle & Co., d.b.a. American Laboratories, Bell Gardens, Calif. 702,812, pub. 5–31–60. Cl. 18.
Bradstone Rubber Co., Woodbine, N.J. 591,992, canc. Cl. 39.
Branower, Beatrice, d.b.a. Branower Chemical Co., executrix of the estate of Dr. E. I. Branower, New York, N.Y. 370,449, ren. 8–16–60. Cl. 51.
Branower Chemical Co.: *See*—
Branower, Beatrice.
Branower, Dr. Edmund I.: *See*—
Branower, Beatrice.
Briggs, Berenice U., Dayton, Ohio. 703,042, pub. 5–31–60. Cl. 101.
Bristol-Myers Co., New York, N.Y. 702,828, pub. 5–31–60. Cl. 18.
Broad Brook Co., East Windsor, Conn. 592,008, canc. Cl. 42.
Brow, Arthur, Mesa, Ariz. 702,784, pub. 5–31–60. Cl. 12.
Browning Mfg. Co., Maysville, Ky. 702,804, pub. 5–31–60. Cl. 23.
Bruce, E. L., Co., Memphis, Tenn. 377,530, ren. 8–16–60. Cl. 12.
Bruce, E. L., Co., Memphis, Tenn. 378,111, ren. 8–16–60. Cl. 16.
Bug Engineering: *See*—
Bug Engineering Co.
Bug Engineering Co., d.b.a. Bug Engineering, West Covina, Calif. 702,841–2, pub. 5–31–60. Cl. 19.
Bureau of National Affairs, Inc., The: *See*—
Business Executive Publications, Inc.
Burt, Harry B., Youngstown, Ohio, to Good Humor Corp., Brooklyn, N.Y. 126,923, ren. 8–16–60. Cl. 46.
Burton, Parsons & Co., Washington, D.C. 702,821, pub. 5–31–60. Cl. 18.
Business Executive Publications, Inc., to The Bureau of National Affairs, Inc., Washington, D.C. 376,488, ren. 8–16–60. Cl. 35.
Butler Mfg. Co., Kansas City, Mo. 702,747, pub. 5–31–60. Cl. 2.
By-Products Processing Laboratories, Inc., Long Island City, N.Y. 591,836, canc. Cl. 6.
Cabot, Godfrey L., Inc., Boston, Mass. 702,876, pub. 5–31–60. Cl. 23.
California Artists: *See*—
Crocker, H. S., Co., Inc.
California Consumers Corp., Los Angeles, Calif. 382,482–3, ren. 8–16–60. Cl. 46.
California Paint Co., Oakland, Calif. 149,863, canc. Cl. 16.
California Spray-Chemical Corp., Richmond, Calif. 379,429, ren. 8–16–60. Cl. 6.
California Spray-Chemical Corp., Richmond, Calif. 381,137, ren. 8–16–60. Cl. 6.
Calmic Ltd., Crewe, England. 702,816, pub. 5–31–60. Cl. 18.
Campus Chimes Cosmetic Corp., New York, N.Y. 702,009, pub. 5–31–60. Cl. 44.
Cardinal Mfg. Co., The: *See*—
Larkin, Daniel C.
Cardinal Products Co., Inc., Louisville, Ky. 702,769, pub. 5–31–60. Cl. 8.
Carlisle Corp., The, Carlisle, Pa. 702,926, pub. 5–31–60. Cl. 35.
Carolina Florist-Artificial Flowers Import, Gastonia, N.C. 703,027, pub. 5–31–60. Cl. 50.
Celite Products Co., Los Angeles, Calif., and New York, to Johns-Manville Corp., New York, N.Y. 132,226, ren. 8–16–60. Cl. 12.
Central Nebraska Packing Co.: *See*—
North Platte Rendering Co.
Cervecería Cuauhtemoc, S.A., Monterrey, Mex. 305,685, canc. Cl. 45.
Cervecería Cuauhtemoc, S.A., Monterrey, Mex. 305,687, canc. Cl. 45.
Charles of The Ritz, Inc., to Charles of The Ritz, Inc., New York, N.Y. 379,282, ren. 8–16–60. Cl. 51.
Chatham Mfg. Co., Elkin, N.C. 703,004–5, pub. 5–31–60. Cl. 42.

Chatham Pharmaceuticals, Inc., Newark, N.J. 591,891, canc. Cl. 18.
Chemon Corp., Stamford, Conn. 706,824, pub. 5–31–60. Cl. 16.
Chet's Famous Foods, Eugene, Oreg. 703,013, pub. 5–31–60. Cl. 46.
Chicago Rawhide Mfg. Co., Chicago, Ill. 702,789, pub. 5–31–60. Cl. 3.
Chicago Rawhide Mfg. Co., Chicago, Ill. 702,866, pub. 5–31–60. Cl. 23.
Chicago Rawhide Mfg. Co., Chicago, Ill. 702,929, pub. 5–31–60. Cl. 35.
Chicago Rawhide Mfg. Co., Chicago, Ill. 702,961, pub. 5–31–60. Cl. 39.
Chick Master Incubator Co., Cleveland, Ohio. 703,051, pub. 5–31–60. Cl. 50.
Christian Dior Perfumes Corp., New York, N.Y. 705,040, pub. 5–31–60. Cl. 51.
Cinnamon, J., Ltd., d.b.a. The Cintique Chair Co., London, England. 702,920, pub. 5–31–60. Cl. 32.
Cintique Chair Co., The: *See*—
Cinnamon, J., Ltd.
Clay, Henry, and Bock & Co., Ltd., to Cuban Tobacco Co. Inc., New York, N.Y. 136,378, ren. 8–16–60. Cl. 17.
Cluett, Peabody & Co., Inc., New York, N.Y. 702,983, pub. 5–31–60. Cl. 39.
Colibri Lighters Ltd., London, England. 702,708, pub. 5–31–60. Cl. 8.
Combined Optical Industries Ltd., Slough, England. 702,900, pub. 5–31–60. Cl. 26.
Cone Mills Inc., New York, N.Y. 592,006, canc. Cl. 42.
Continental Can Co., Inc., New York, N.Y. 702,738, pub. 5–31–60. Cl. 2.
Cooper, Ben, Inc., Brooklyn, N.Y. 702,982, pub. 5–31–60. Cl. 39.
Corcoran, Joseph F., Shoe Co., Inc., Stoughton, Mass. 702,962, pub. 5–31–60. Cl. 39.
Cosgro, Daniel J., d.b.a. Sangamon Mills, to Edward C. Fisher, d.b.a. Sangamon Mills, Cohoes, N.Y. 381,352, ren. 8–16–60. Cl. 42.
Craddock Furniture Corp., Evansville, Ind. 702,922, pub. 5–31–60. Cl. 32.
Crocker, H. S., Co., Inc., d.b.a. California Artists, San Francisco, Calif. 702,943, pub. 5–31–60. Cl. 35.
Crouse-Hinds Co., Syracuse, N.Y. 702,852, pub. 5–31–60. Cl. 21.
Crowell, Robert G., Manchester, N.H. 592,058, canc. Cl. 102.
Crown City Lumber & Mill Co., Pasadena, Calif. 702,847, pub. 5–31–60. Cl. 21.
Crown Zellerbach Corp., San Francisco, Calif. 702,742, pub. 5–31–60. Cl. 2.
Cuban Tobacco Co. Inc.: *See*—
Clay, Henry, and Bock & Co., Ltd.
Curtis, M. E., Mfg. Co.: *See*—
Curtis, Morris E.
Curtis, Morris E., d.b.a. M. E. Curtis Mfg. Co., Boston, Mass. 702,789, pub. 5–31–60. Cl. 12.
Cyclops Steel Co., Inc., Titusville, Pa. 249,427–8, canc. Cl. 14.
Cyclops Steel Co., Inc., Titusville, Pa. 249,571, canc. Cl. 14.
Dayco Corp., by change of name from The Dayton Rubber Co., Dayton, Ohio. 702,892, pub. 5–31–60. Cl. 23.
Dayton Rubber Co., The: *See*—
Dayco Corp.
Deering, Milliken & Co. Inc., New York, N.Y. 702,999, pub. 5–31–60. Cl. 42.
De Laire, Inc., New York, N.Y. 591,840, canc. Cl. 6.
Detex Watchclock Corp., New York, N.Y. 377,960, ren. 8–16–60. Cl. 37.
Diamond Gardner Corp.: *See*—
Diamond National Corp.
Diamond Mfg. Co., Wyoming, Pa. 702,781, pub. 5–31–60. Cl. 12.
Diamond National Corp., by change of name from Diamond Gardner Corp., New York, N.Y. 702,739, pub. 5–31–60. Cl. 2.
Disston, Henry, & Sons, Inc., Philadelphia, Pa. 591,921, canc. Cl. 23.
Dow Chemical Co., The, Midland, Mich. 702,767, pub. 5–31–60. Cl. 6.
Driftmier Co.: *See*—
Driftmier, Leanna Field.
Drongo, Alfred, Music Co. Inc., Hoboken, N.J. 702,937, pub. 5–31–60. Cl. 36.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 383,004, ren. 8–16–60. Cl. 52.
Dutchess Underwear Corp., New York, N.Y. 702,987, pub. 5–31–60. Cl. 39.
Eagle Clothes, Inc., Brooklyn, N.Y. 702,962, pub. 5–31–60. Cl. 39.
Eastman Kodak Co., Rochester, N.Y. 591,989, canc. Cl. 26.
Easy Day Mfg. Co., Brookline, Mass. 702,912, pub. 5–31–60. Cl. 29.
Easy Living Foam Products, Inc., Miami, Fla. 702,923, pub. 5–31–60. Cl. 32.
Eisner, Sigmund, Co., Red Bank, N.J. 591,984, canc. Cl. 39.
Elderwear Mfg. Co., Lynwood, Calif. 702,836, pub. 5–31–60. Cl. 18.
Electra Mfg. Co., Kansas City, Mo. 702,895, pub. 5–31–60. Cl. 23.
Electric Storage Battery Co., The, Philadelphia, Pa. 702,902, pub. 5–31–60. Cl. 26.
Elkington & Co., Ltd., Walsall, England. 377,274, ren. 8–16–60. Cl. 28.
Empire Crafts Corp., Newark, N.Y. 702,816, pub. 5–31–60. Cl. 30.
Enrich Products Co., Inc., New York, to American Dietaids Co., Inc., Yonkers, N.Y. 375,566, ren. 8–16–60. Cl. 46.
Erie Foundry Co., Erie, Pa. 702,867, pub. 5–31–60. Cl. 23.
Essex Wire Corp., Ft. Wayne, Ind. 702,858, pub. 5–31–60. Cl. 21.
Ex-Cell-O Corp., Detroit, Mich. 702,871, pub. 5–31–60. Cl. 23.
Exquisite Form Brassiere, Inc., New York, N.Y. 702,960, pub. 5–31–60. Cl. 39.
Fair View Packing Co., Inc., Hollister, Calif. 592,026, canc. Cl. 46.
Fas-Trim Inc., Warren, Ohio. 702,913, pub. 5–31–60. Cl. 29.
Feld British Agencies, Ltd., New York, N.Y. 592,009, canc. Cl. 42.
Ferro Corp., Cleveland, Ohio. 702,991, pub. 5–31–60. Cl. 40.
Fiber Industries, Inc., Charlotte, N.C. 702,785, pub. 5–31–60. Cl. 1.
Fibreboard Paper Products Corp.: *See*—
Fibreboard Companies, Inc., The.
Fisher, Edward C.: *See*—
Cosgro, Daniel J.
Fisher, Marcelene G., d.b.a. Ferma-Zincol Co., San Francisco, Calif. 702,813, pub. 5–31–60. Cl. 18.
Flavor Corp. of America, Chicago, Ill. 703,016, pub. 5–31–60. Cl. 46.
Flavor Corp. of America, Chicago, Ill. 703,024, pub. 5–31–60. Cl. 46.
Fleischmann Malting Co., The, Chicago, Ill. 382,950, ren. 8–16–60. Cl. 46.
Food Machinery and Chemical Corp.: *See*—
Westvaco Chlorine Products Corp.
Ferma-Zincol Co.: *See*—
Fisher, Marcelene G.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 135,243–8, ren. 8–16–60. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 135,675, ren. 8–16–60. Cl. 42.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 135,999, ren. 8–16–60. Cl. 42.
Forstmann Woolen Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 381,478–4, ren. 8–16–60. Cl. 42.
Forstmann Woolen Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 381,734–6, ren. 8–16–60. Cl. 42.
Forstmann Woolen Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 381,749–50, ren. 8–16–60. Cl. 42.
Fort Dodge Laboratories: *See*—
American Home Products Corp.
Foster, Benjamin, Co., Philadelphia, Pa. 702,881, pub. 5–31–60. Cl. 23.
Franklin Research Co., Philadelphia, Pa. 702,804, pub. 5–31–60. Cl. 16.
Freeman, H., & Son, Inc., Philadelphia, Pa. 702,958, pub. 5–31–60. Cl. 39.
Freightliner Corp., Portland, Oreg. 702,886, pub. 5–31–60. Cl. 28.
French Sardine Co., to Star-Kist Foods, Inc., Terminal Island, Calif. 381,518, ren. 8–16–60. Cl. 46.
Freund, Fred, Co., Inc., New York, N.Y. 592,002, canc. Cl. 42.
Fusite Corp., The, Cincinnati, Ohio. 702,848, pub. 5–31–60. Cl. 21.
Gabrielsen Co., Chicago, Ill. 376,884, ren. 8–16–60. Cl. 51.
Galvin, Jerome G., Jr., d.b.a. Airo Industries, Los Angeles, Calif. 702,885, pub. 5–31–60. Cl. 22.
Gamins, Inc., by change of name from Andrew Geller Penn, Inc., Wilkes-Barre, Pa. 702,958, pub. 5–31–60. Cl. 39.
Garden Protector Corp., The, Revere, Mass. 702,762, pub. 5–31–60. Cl. 6.
Garlock Inc.: *See*—
Garlock Packing Co., The.
Garlock Packing Co., The, to Garlock Inc., Palmyra, N.Y. 381,919, ren. 8–16–60. Cl. 15.
Gebhardt Chili Powder Co., San Antonio, Tex. 703,018, pub. 5–31–60. Cl. 46.
Gebrueder Koellisch, Nuerberg, Bavaria, Germany. 702,741, pub. 5–31–60. Cl. 2.
General American Industries, Inc.: *See*—
Texas Tanning & Mfg. Co.
General Electric Co., Bridgeport, Conn. 591,910, canc. Cl. 21.
General Mills, Inc., Minneapolis, Minn. 702,918, pub. 5–31–60. Cl. 30.
General Motors Corp., Detroit, Mich. 702,773, pub. 5–31–60. Cl. 12.
Georgia Knitting Mills, Inc., Atlanta, Ga. 591,970, canc. Cl. 39.
Gilbert Paper Co., Menasha, Wis. 382,850, ren. 8–16–60. Cl. 37.
Gilbert Paper Co., Menasha, Wis. 383,033–4, ren. 8–16–60. Cl. 37.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 703,010, pub. 5–31–60. Cl. 44.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 703,041, pub. 5–31–60. Cl. 52.
Glen Raven Cotton Mills, Inc., Glen Raven, N.C. 703,007, pub. 5–31–60. Cl. 43.
Globe Steel Abrasive Co., Mansfield, Ohio. 702,754–5, pub. 5–31–60. Cl. 4.
Golden Eagle Refining Co., Inc.: *See*—
Sunset Oil Co.
Goldschmidt Chemical Corp.: *See*—
Th. Goldschmidt Corp.
Good Humor Corp.: *See*—
Burt, Harry B.
Gordon, Duff, & Co.: *See*—
Shaw, Munson G., Inc.
Greenbaum Novelty Corp., New York, N.Y., 591,944, canc. Cl. 28.
Greenebaum, Sam, d.b.a. San Valle Tile Kilns, Los Angeles, Calif. 591,950, canc. Cl. 30.
Guion, Robert C., d.b.a. Blit-Rite Products Co., Russellville, Ky. 702,778, pub. 5–31–60. Cl. 12.
Harbor Plywood Corp., Aberdeen, Wash. 702,771, pub. 5–31–60. Cl. 12.

Harley-Davidson Motor Co., Milwaukee, Wis. 702,896, pub. 5–31–60. Cl. 23.
Harrington & King Perforating Co., Inc., The, Chicago, Ill. 137,356, ren. 8–16–60. Cl. 2.
Harris Mfg. Co., Johnson City, Tenn. 702,787, pub. 5–31–60. Cl. 12.
Hartley & Parker Ltd. Inc., Bridgeport, Conn. 703,026, pub. 5–31–60. Cl. 49.
Hartleys (Stoke-On-Trent) Ltd., Stoke-On-Trent, England. 702,878, pub. 5–31–60. Cl. 23.
Haver-Glover Laboratories, Inc., Kansas City, Mo. 591,884, canc. Cl. 18.
Hayward Hosiery Co., Ipswich, Mass. 702,979, pub. 5–31–60. Cl. 39.
Health Guardian Corp., Monroe, Wis. 702,889, pub. 5–31–60. Cl. 21.
Helm, Jacques, Paris, France. 589,065, canc. Cl. 51.
Heller, William, Inc., New York, N.Y. 592,001, canc. Cl. 42.
Hemingway & Bartlett Mfg. Co., The, Watertown, Conn. 591,969, canc. Cl. 42.
Henderson, Donald H.: *See*—
Holton & Adams.
Hercules Powder Co., Wilmington, Del. 376,562, ren. 8–16–60. Cl. 9.
Herts Pharmaceuticals Ltd., Welwyn Garden City, England. 591,870, canc. Cl. 18.
Hezel Products Inc., Berkeley, Calif. 688,165. Am. 7(d). Cl. 12.
High Fidelity Sales, Inc.: *See*—
Mastertapes Music, Inc.
Hiscock, Grace S., New York, N.Y. 703,032, pub. 5–31–60. Cl. 50.
Hise, Walter, Baltimore, Md. 702,860, pub. 5–31–60. Cl. 22.
Hollander Storage & Moving Co., Elk Grove Village, Ill. 702,743, pub. 5–31–60. Cl. 2.
Holton & Adams, New York, N.Y., to D. H. Henderson, Chatham, N.J. 131,452, ren. 8–16–60. Cl. 52.
Homec, Inc., Williamsport, Pa. 702,791, pub. 5–31–60. Cl. 12.
Homec, Inc., Williamsport, Pa. 702,883, pub. 5–31–60. Cl. 23.
Homec, Inc., Williamsport, Pa. 702,919, pub. 5–31–60. Cl. 30.
Howard Stores Corp., New York, N.Y. 702,974, pub. 5–31–60. Cl. 39.
Hudnut, Richard, Morris Plains, N.J. 703,037–8, pub. 5–31–60. Cl. 51.
Hudson, H. D., Mfg. Co., Chicago, Ill. 702,886, pub. 5–31–60. Cl. 23.
Hush-A-Phone Corp., New York, N.Y. 591,911, canc. Cl. 21.
Huston, Chas. E., El Centro, Calif. 404,514, canc. Cl. 46.
Hygrade Food Products Corp.: *See*—
Kingan & Co. Inc.
Hyman, Edward, Co., Los Angeles, Calif. 702,959, pub. 5–31–60. Cl. 39.
Imperial Chemical Industries Ltd., London, England. 702,825, pub. 5–31–60. Cl. 16.
Imperial Knife Associated Companies, Inc., Providence, R.I. 702,870, pub. 5–31–60. Cl. 23.
Imperial Knife Associated Companies, Inc., Providence, R.I. 702,873–4, pub. 5–31–60. Cl. 23.
Inter-Coastal Paint Corp., East St. Louis, Ill. 591,871, canc. Cl. 16.
International Harvester Co., Chicago, Ill. 380,334, ren. 8–16–60. Cl. 1.
International Silver Co., The: *See*—
International Silver Co.
International Silver Co., to The International Silver Co., Meriden, Conn. 381,276, ren. 8–16–60. Cl. 28.
International Silver Co., The, Meriden, Conn. 703,028–9, pub. 5–31–60. Cl. 50.
Israeli Art-Craft Importing Co., Inc., Philadelphia, Pa. 703,030, pub. 5–31–60. Cl. 50.
J. & A. Farms, d.b.a. J & A Packing Co., Blythe, Calif. 703,017, pub. 5–31–60. Cl. 46.
J & A Packing Co.: *See*—
J. & A. Farms.
Jensen, Georg, Inc., New York, N.Y. 702,910, pub. 5–31–60. Cl. 28.
Jerry Long Productions, Maplewood, N.J. 592,050, canc. Cl. 107.
Joan-Doug Undergarment Co. Inc., New York, N.Y. 702,956, pub. 5–31–60. Cl. 39.
Johns-Manville Corp.: *See*—
Celite Products Co.
Johnson, E. F., Co. Waseca, Minn. 702,849, pub. 5–31–60. Cl. 21.
Johnson, S. C., & Son, Inc., Racine, Wis. 702,757, pub. 5–31–60. Cl. 4.
Jordan Mfg. Corp., New York, N.Y. 591,983, canc. Cl. 39.
Joseph & Feiss Co., The, Cleveland, Ohio. 702,954, pub. 5–31–60. Cl. 39.
Juvenile Shoe Corp. of America, Aurora, Mo. 137,630, ren. 8–16–60. Cl. 39.
Kaddy Rak Co.: *See*—
Morris, Dale E.
Kalbfell Laboratories, Inc., San Diego, Calif. 591,930, canc. Cl. 26.
Kayser, Inc., Birmingham, Mich. 702,806, pub. 5–31–60. Cl. 16.
Kayser-Roth Corp., New York, N.Y. 702,964, pub. 5–31–60. Cl. 39.
Kerns, J. F., Chemical Corp., Chicago, Ill. 703,047. Cl. 4.
King Features Syndicate, Inc., to The Hearst Corp., New York, N.Y. 381,930, ren. 8–16–60. Cl. 38.
King, Robert C., & Co., to Julian J. Leavitt d.b.a. Robert C. King & Co., New York, N.Y. 130,827, ren. 8–16–60. Cl. 39.
Kingan & Co. Inc., Indianapolis, Ind., to Hygrade Food Products Corp., Detroit, Mich. 380,031, ren. 8–16–60. Cl. 46.
Kingan & Co. Inc., Indianapolis, Ind., to Hygrade Food Products Corp., Detroit, Mich. 382,490–3, ren. 8–16–60. Cl. 46.
Kingan & Co. Inc., Indianapolis, Ind., to Hygrade Food Products Corp., Detroit, Mich. 382,660, ren. 8–16–60. Cl. 46.
Kleinert, I. B., Rubber Co., New York, N.Y. 382,527, ren. 8–16–60. Cl. 39.
Koch Engineering Co., Inc., Wichita, Kans. 702,889, pub. 5–31–60. Cl. 23.
Kraco Products, Inc., Compton, Calif. 702,980, pub. 5–31–60. Cl. 38.
Kushner, Harry L., & Co., New York, N.Y. 591,976, canc. Cl. 39.
Landis Tool Co., Waynesboro, Pa. 702,885, pub. 5–31–60. Cl. 23.
Lanolin Plus, Inc., Newark, N.J. 703,033, pub. 5–31–60. Cl. 51.
Lantz Mfg. Co., Inc., Valparaiso, Ind. 702,880, pub. 5–31–60. Cl. 22.
Larkin, Daniel C., d.b.a. The Cardinal Mfg. Co., Detroit, Mich. 702,839, pub. 5–31–60. Cl. 19.
Large & Brother Co., Richmond, Va. 702,809, pub. 5–31–60. Cl. 17.
Leading Lady Foundations, Inc., Cleveland, Ohio. 702,961, pub. 5–31–60. Cl. 39.
Leanna Field Driftmier, to Driftmier Co., Shenandoah, Iowa. 383,303, ren. 8–16–60. Cl. 38.
Leavitt, Julian J.: *See*—
King, Robert C., & Co.
Lerner, Stuart M., Inc., Brooklyn, N.Y. 702,748, pub. 5–31–60. Cl. 2.
Les Fabriques D'Assortiments Reunies, Le Locle, Switzerland. 702,907–8, pub. 5–31–60. Cl. 27.
Leslie Welding Co., Inc., Chicago, Ill. 702,774, pub. 5–31–60. Cl. 12.
Liberty Distributors, Philadelphia, Pa. 702,796, pub. 5–31–60. Cl. 13.
Liberty Distributors, Philadelphia, Pa. 702,911, pub. 5–31–60. Cl. 29.
Liberty Distributors Group: *See*—
Liberty Distributors.
Liberty Distributors, from Liberty Distributors Group, Philadelphia, Pa. 702,845, pub. 5–31–60. Cl. 21.
Librascope, Inc., Glendale, Calif. 702,890, pub. 5–31–60. Cl. 23.
Liggett & Myers Tobacco Co., New York, N.Y. 136,516, ren. 8–16–60. Cl. 17.
Lily Mills Co., Shelby, N.C. 703,008, pub. 5–31–60. Cl. 43.
Liquid Carbonic Corp., The, Chicago, Ill. 591,845, canc. Cl. 6.
Little Home Office: *See*—
Mark, Vennice E.
Lloyd Brothers, Inc., Cincinnati, Ohio. 702,817–19, pub. 5–31–60. Cl. 18.
Loomtex Mills, Inc., Dalton, Ga. 703,002, pub. 5–31–60. Cl. 42.
Ludlow Corp.: *See*—
Ware Coated Paper Co.
Magee-Hale Park-O-Meter Co., Oklahoma City, Okla. 702,932, pub. 5–31–60. Cl. 26.
Malmstrom, N. L., & Co., Brooklyn, N.Y. 702,785, pub. 5–31–60. Cl. 6.
Manhattan Shirt Co., The, New York, N.Y. 383,227, ren. 8–16–60. Cl. 39.
Manhattan Shirt Co., The, New York, N.Y. 383,389, ren. 8–16–60. Cl. 39.
Mansfield Industries, Inc., Chicago, Ill. 702,906, pub. 5–31–60. Cl. 26.
Mark, Vennice E., d.b.a. Little Home Office, Grand Rapids, Mich. 702,921, pub. 5–31–60. Cl. 32.
Marquette, George, Louisville, Ky. 702,972, pub. 5–31–60. Cl. 39.
Marshall-Wells Co., to Marshall-Wells Co., Duluth, Minn. 382,329, ren. 8–16–60. Cl. 31.
Maryland Hosiery Sales Corp., South Orange, N.J. 591,969, canc. Cl. 39.
Marsteller, W., Co., Columbus, Ohio. 703,019–20, pub. 5–31–60. Cl. 46.
Massasoit Co.: *See*—
Massasoit Mfg. Co.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laurelton, N.J. 137,653–5, ren. 8–16–60. Cl. 29.
Massengill, S. E., Co., The, Bristol, Tenn. 702,820, pub. 5–31–60. Cl. 18.
Mastertapes Music, Inc., from High Fidelity Sales, Inc., West Des Moines, Iowa. 702,934, pub. 5–17–60. Cl. 36.
Mathieson, Olin, Chemical Corp.: *See*—
Squibb, E. R., & Sons.
Mayer, B. W., & Cohan, Ltd., New York, N.Y. 702,966, pub. 5–31–60. Cl. 39.
Mayo, Inc., San Francisco, Calif. 591,935, canc. Cl. 26.
McCampbell & Co., Inc., New York, N.Y. 702,967, pub. 5–31–60. Cl. 42.
McGraw-Edison Co.: *See*—
McGraw Electric Co.
McGraw-Edison Co., Chicago, Ill. 702,846, pub. 5–31–60. Cl. 21.
McGraw Electric Co., to McGraw-Edison Co., Elgin, Ill. 379,120, ren. 8–16–60. Cl. 21.
McNicol China Co., Stonewood, Clarksburg, W. Va. 702,917, pub. 5–31–60. Cl. 30.
Meat Industry Suppliers, Inc., Northfield, Ill. 703,021–2, pub. 5–31–60. Cl. 46.
Mennen Co., The, Morris Township, Morris County, N.J. 703,034–6, pub. 5–31–60. Cl. 51.
Mennen Co., The, Morris Township, Morris County, N.J. 703,039, pub. 5–31–60. Cl. 51.
Meriam, Charles, d.b.a. Charles Meriam Co., Los Angeles, Calif. 702,899, pub. 5–31–60. Cl. 26.
Meriam, Charles, Co.: *See*—
Meriam, Charles.
Metro Med, Inc., Houston, Tex. 702,820, pub. 5–31–60. Cl. 18.

Michigan Mushroom Co.: *See*—
National Retailer-Owned Grocers, Inc.
Midland Co., The, South Milwaukee, Wis. 702,887, pub. 5–31–60. Cl. 28.
Mid-States Gummed Paper Co., Chicago, Ill., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 381,891, ren. 8–16–60. Cl. 5.
Mid-States Gummed Paper Co., Chicago, Ill., to Minnesota Mining and Mfg. Co., St. Paul, Minn. 382,883, ren. 8–16–60. Cl. 37.
Mid-West Abrasive Co., Owosso, Mich. 702,941, pub. 5–31–60. Cl. 28.
Milnan Mills, Inc., Lebanon, Pa. 591,987, canc. Cl. 39.
Minnesota Mining and Mfg. Co.: *See*—
Mid-States Gummed Paper Co.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 702,988 pub. 5–31–60. Cl. 38.
Morehouse Mfg. Co., Savannah, Ga. 46,892, canc. Cl. 6.
Morgan-Jones, Inc., New York, N.Y. 703,001, pub. 5–31–60. Cl. 42.
Morgan, Marguerite J., d.b.a. New Health Products Co., East Aurora, N.Y. 378,508, ren. 8–16–60. Cl. 18.
Morris, Dale E., d.b.a. Kaddy Bak Co., Portland, Oreg. 592,051, canc. Cl. 22.
Moser Paper Co., Chicago, Ill. 702,760, pub. 5–31–60. Cl. 6.
Mosley, Mabel V., Los Angeles, Calif. 591,948, canc. Cl. 26.
Murratti, E., Sons & Co.: *See*—
United Kingdom Tobacco Co. Ltd., The.
Murray Marine Corp., Tampa, Fla. 702,837–8, pub. 5–31–60. Cl. 19.
Musher Foundation, Inc., New York, N.Y. 379,234, ren. 8–16–60. Cl. 46.
National Association of Consumer Organizations, Beverly Hills, Calif. 702,995, pub. 5–31–60. Cl. 42.
National Biscuit Co., New York, N.Y. 152,751, ren. 8–16–60. Cl. 46.
National Biscuit Co., New York, N.Y. 152,753, ren. 8–16–60. Cl. 46.
National Biscuit Co., New York, N.Y. 379,764, ren. 8–16–60. Cl. 46.
National Casualty Co., Detroit, Mich. 703,055. Cl. 102.
National Institute of Real Estate Brokers, Chicago, Ill. 703,043, pub. 5–24–60. Cl. 102.
National Retailer-Owned Grocers, Inc., Chicago, Ill., to Michigan Mushroom Co., Niles, Mich. 382,228, ren. 8–16–60. Cl. 46.
National Steel Corp., Pittsburgh, Pa. 702,799–800, pub. 5–31–60. Cl. 14.
New Health Products Co.: *See*—
Morgan, Marguerite J.
New York Merchandise Co., Inc., New York, N.Y. 702,853, pub. 5–31–60. Cl. 21.
New York Pressing Machinery Corp., New York, N.Y. 702,897, pub. 5–31–60. Cl. 24.
Nonas, Elliott, New York, N.Y. 591,820, canc. Cl. 2.
Norcross, Inc., New York, N.Y. 702,944–51, pub. 5–31–60. Cl. 38.
Nordberg Mfg. Co., Milwaukee, Wis. 702,893, pub. 5–31–60. Cl. 22.
North Platte Rendering Co., d.b.a. Central Nebraska Packing Co., North Platte, Nebr. 602,514. Am. 7(d). Cl. 46.
Norton Co., Troy, N.Y. 702,758, pub. 5–31–60. Cl. 4.
Norton-Homer Mfg. Co., Chicago, Ill. 591,929, canc. Cl. 26.
Oberstein, Eli E.: *See*—
United States Record Corp.
Octagon Finishing Corp., New York, N.Y. 592,049, canc. Cl. 106.
Olin Mathieson Chemical Corp., New York, N.Y. 703,830, pub. 5–31–60. Cl. 18.
Oliver Tire & Rubber Co., Oakland, Calif. 702,935, pub. 5–31–60. Cl. 35.
Olympic Screw & Rivet Corp., Downey, Calif. 702,795, pub. 5–31–60. Cl. 13.
Original Tire Co., The, Cincinnati, Ohio. 702,931, pub. 5–31–60. Cl. 35.
Pacific Iron & Steel Corp. of Los Angeles, Los Angeles, Calif. 703,033, pub. 5–31–60. Cl. 50.
Paco Betancourt, San Benito, Tex. 702,939, pub. 5–31–60. Cl. 36.
Pan American Screw Corp., San Juan, P.R. 702,792, pub. 5–31–60. Cl. 13.
Paraffine Companies, Inc., The, to Fibreboard Paper Products Corp., San Francisco, Calif. 381,202, ren. 8–16–60. Cl. 12.
Parker Pen Co., The, Janesville, Wis. 703,048. Cl. 11.
Penn, Andrew G.: *See*—
Gamins, Inc.
Penn, Andrew Geller, Inc.: *See*—
Gamins, Inc.
Penn Chemical Works, The, Philadelphia, Pa., to R. T. Babbitt, Inc., New York, N.Y. 136,577, ren. 8–16–60. Cl. 6.
Photoswitch Inc., Cambridge, Mass. 591,929, canc. Cl. 26.
Pioneer Aircraft Corp., Philadelphia, Pa. 702,844, pub. 5–31–60. Cl. 19.
Pioneer Industries, Inc., Sioux City, Iowa. 702,770, pub. 5–31–60. Cl. 12.
Pitney-Bowes, Inc., Stamford, Conn. 702,877, pub. 5–31–60. Cl. 23.
Pittsburgh Crushed Steel Co., Pittsburgh, Pa. 702,750–2, pub. 5–31–60. Cl. 4.
Pittsburgh Crushed Steel Co., Pittsburgh, Pa. 702,756, pub. 5–31–60. Cl. 4.
Plaza Frozen Foods, Inc., d.b.a. Plaza Frozen, Inc., St. Louis, Mo. 702,025, pub. 5–31–60. Cl. 46.
Plaza Frozen, Inc.: *See*—
Plaza Frozen Foods, Inc.
Plastic Products Co., Detroit, Mich. 702,777, pub. 5–31–60. Cl. 12.
Polan, Katz & Co., Inc., Baltimore, Md. 702,804, pub. 5–31–60. Cl. 41.
Pottstown Broadcasting Co., Pottstown, Pa. 592,046, canc. Cl. 104.
Powell River Co. Ltd., Vancouver, British Columbia, Canada. 702,785–6, pub. 5–31–60. Cl. 12.
Preston Shirt Co., Inc., New York, N.Y. 702,978, pub. 5–31–60. Cl. 39.
Preston Shirt Co., Inc., New York, N.Y. 702,980, pub. 5–31–60. Cl. 39.
Preston Shirt Co., Inc., New York, N.Y. 702,990, pub. 5–31–60. Cl. 39.
Prince Macaroni Mfg. Co., Boston, to Prince Macaroni Mfg. Co., Lowell, Mass. 130,871, ren. 8–16–60. Cl. 46.
Prince Macaroni Mfg. Co., Boston, to Prince Macaroni Mfg. Co., Lowell, Mass. 137,680, ren. 8–16–60. Cl. 46.
Procter & Gamble Co., The, Cincinnati, Ohio. 382,688, ren. 8–16–60. Cl. 52.
Procter and Gamble Co., The, to The Procter & Gamble Co., Cincinnati, Ohio. 134,773, ren. 8–16–60. Cl. 52.
Products Research Co., Los Angeles, Calif. 702,927, pub. 5–31–60. Cl. 55.
Professional Golfers' Association of America: *See*—
Professional Golfers' Association of America, The.
Professional Golfers' Association of America, The, from Professional Golfers' Association of America, Dunedin, Fla. 696,077, cor. Cl. A.
Pro-phy-lac-tic Brush Co., Florence, Mass. 702,914–15, pub. 5–31–60. Cl. 39.
Purdue Frederick Co., The, New York, N.Y. 702,833–4, pub. 5–31–60. Cl. 18.
Pure Oil Co., The, Chicago, Ill. 592,034, canc. Cl. 52.
Quickline Co., Detroit, Mich. 702,992, pub. 5–31–60. Cl. 40.
RCA Mfg. Co., Inc., Camden, N.J., to Radio Corp. of America, New York, N.Y. 382,257, ren. 8–16–60. Cl. 39.
Radio Corp. of America: *See*—
RCA Mfg. Co., Inc.
Rainier Brewing Co., San Francisco, Calif., to Sicks' Rainier Brewing Co., Seattle, Wash. 379,551, ren. 8–16–60. Cl. 48.
Rainier Brewing Co., San Francisco, Calif., to Sicks' Rainier Brewing Co., Seattle, Wash. 381,216, ren. 8–16–60. Cl. 48.
Ralston Purina Co., St. Louis, Mo. 702,023, pub. 5–31–60. Cl. 46.
Ravensberg GmbH Chemische Fabrik, Konstanz, Germany. 702,811, pub. 5–31–60. Cl. 18.
Raycrest Mills, Inc., New York, N.Y. 592,007, canc. Cl. 42.
Raymond's, Inc., Boston, Mass. 591,961, canc. Cl. 39.
R-Columbia Products Co., Highwood, Ill. 702,843, pub. 5–31–60. Cl. 19.
Reese Finer Foods, Inc., Chicago, Ill. 703,011, pub. 9–9–58. Cl. 46.
Reichelle, Irving J., d.b.a. Rochel's, Washington, D.C. 702,985, pub. 5–31–60. Cl. 39.
Reitz & Colucci, Fresno, Calif. 703,015, pub. 5–31–60. Cl. 46.
Remco, Inc., Chicago, Ill. 702,952, pub. 5–31–60. Cl. 39.
Republic Steel Corp., Cleveland, Ohio. 702,794, pub. 5–31–60. Cl. 13.
Revlon, Inc.: *See*—
Revlon Products Corp.
Revlon Products Corp., to Revlon, Inc., New York, N.Y. 378,663, ren. 8–16–60. Cl. 51.
Rhoads, J. E., & Sons, Wilmington, Del. 136,909, ren. 8–16–60. Cl. 35.
Rieser Co., Inc., The, New York, N.Y. 702,967, pub. 5–31–60. Cl. 39.
Rieser Co., Inc., The, New York, N.Y. 702,995, pub. 5–31–60. Cl. 40.
Ripon Knitting Works, Ripon, Wis. 702,971, pub. 5–31–60. Cl. 39.
Rochel's: *See*—
Reichelle, Irving J.
Rockwell Lime Co., Chicago, Ill. 702,783, pub. 5–31–60. Cl. 12.
Roll Forming Corp., Shelbyville, Ky. 702,775–6, pub. 5–31–60. Cl. 12.
Rothschild, Maurice L., & Co., Chicago, Ill. 702,964, pub. 5–31–60. Cl. 39.
Royal Cup Inc., Birmingham, Ala. 703,014, pub. 5–31–60. Cl. 46.
Ruber Co., The: *See*—
Barta, Francis J.
Sam Valle Tile Kilns: *See*—
Greenebaum, Sam.
Samsons Inc., Kinston, N.C. 702,976, pub. 5–31–60. Cl. 39.
Sanders, W. H., (Electronics) Ltd., Stevenage, Hertfordshire, England. 702,935, pub. 5–31–60. Cl. 36.
Sandex, Inc., New York, from N. Ackerman, Brooklyn, N.Y. 702,864, pub. 5–31–60. Cl. 23.
Sanford Ink Co., Bellwood, Ill. 702,780, pub. 5–31–60. Cl. 5.
Sangamon Mills: *See*—
Cosgro, Daniel J.
Schenlabs Pharmaceuticals, Inc., New York, N.Y. 702,831–2, pub. 5–31–60. Cl. 18.
Schering Corp., Bloomfield, N.J. 591,898–9, canc. Cl. 18.
Schniewind, H. E., Haan Rhineland, Germany. 591,978, canc. Cl. 38.
Sealectro Corp., Mamaroneck, N.Y. 702,857, pub. 5–31–60. Cl. 21.
Sears, Roebuck and Co., Chicago, Ill. 591,906, canc. Cl. 21.
Semco Research, Inc., Inglewood, Calif. 702,868, pub. 5–31–60. Cl. 28.
Sentinel Laboratories, Inc., Little Rock, Ark. 702,826–7, pub. 5–31–60. Cl. 18.
Service Heel Co., Inc., Lawrence, Mass. 702,948, pub. 5–31–60. Cl. 39.
Shakespeare Co., Kalamazoo, Mich. 702,883, pub. 5–31–60. Cl. 22.
Shapleigh Hardware Co.: *See*—
Simmons Hardware Co.
Shapleigh Hardware Co., St. Louis, Mo. 135,071, ren. 8–16–60. Cl. 21.
Shaw, Manson G., Co., Inc., New York, N.Y., to Duff Gordon & Co., Port St. Mary's, Spain. 380,200, ren. 8–16–60. Cl. 47.

Shaw Publications, Inc., New York, N.Y. 702,940, pub. 5–31–60. Cl. 38.
Shell Oil Co., New York, N.Y. 702,801, pub. 5–31–60. Cl. 15.
Sherwin-Williams Co., The, Cleveland, Ohio. 702,805, pub. 5–31–60. Cl. 16.
Shirley Fabrics Corp., New York, N.Y. 703,003, pub. 5–31–60. Cl. 42.
Shoecraft Inc., New York, N.Y. 702,977, pub. 5–31–60. Cl. 39.
Shulton, Inc., Clifton, N.J. 380,271, ren. 8–16–60. Cl. 51.
Sicks' Rainier Brewing Co.: *See*—
Rainier Brewing Co.
Simmons Hardware Co., to Shapleigh Hardware Co., St. Louis, Mo. 133,820, ren. 8–16–60. Cl. 23.
Skalet Mfg. Co., Inc., New York, N.Y. 702,909, pub. 5–31–60. Cl. 28.
Skansen Swedish Glass Sales Corp., Staten Island, N.Y. 591,954, canc. Cl. 33.
Smith, E. Errett, Inc., New York, N.Y. 702,942, pub. 5–31–60. Cl. 38.
Smith, T. L., Co., The, Milwaukee, Wis. 137,462, ren. 8–16–60. Cl. 23.
Smoler Bros., Inc., Chicago, Ill. 702,957, pub. 5–31–60. Cl. 39.
Sobel Corrugated Containers, Inc., Cleveland, Ohio. 702,737, pub. 5–31–60. Cl. 2.
Solliden Inc., New York, N.Y. 592,016, canc. Cl. 44.
Spencer Lens Co., Buffalo, N.Y., to American Optical Co., Southbridge, Mass. 380,804, ren. 8–16–60. Cl. 26.
Sprayon Products, Inc., Cleveland, Ohio. 703,050. Cl. 16.
Springs Cotton Mills, The, Lancaster, S.C. 703,006, pub. 5–31–60. Cl. 42.
Squibb, E. R., & Sons, to Olin Mathieson Chemical Corp., New York, N.Y. 382,110, ren. 8–16–60. Cl. 18.
Squirt Co., The, Sherman Oaks, Calif. 702,924, pub. 5–31–60. Cl. 33.
Standard Electric Mfg. Co., Inc., West Berlin, N.J. 702,850, pub. 5–31–60. Cl. 21.
Star-Kist Foods, Inc.: *See*—
French Sardine Co.
Stebbins Engineering and Mfg. Co., Watertown, N.Y. 702,788, pub. 5–31–60. Cl. 12.
Steel Shot Producers, Inc., Butler, Pa. 702,753, pub. 5–31–60. Cl. 4.
Steinberg, Alex, San Francisco, Calif. 591,973, canc. Cl. 39.
Steinen, Wm., Mfg. Co., Newark, N.J. 703,049. Cl. 18.
Stevens, J. P., & Co., Inc.: *See*—
Forstmann & Huffmann Co.
Forstmann Woolen Co.
Stow Mfg. Co., Binghamton, N.Y. 702,869, pub. 5–31–60. Cl. 23.
Stratodex, Inc., Ft. Worth, Tex. 702,796, pub. 5–31–60. Cl. 13.
Sunkist Growers, Inc.: *See*—
Blessing Mfg. Co.
Sunset Oil Co., to Golden Eagle Refining Co., Inc., Los Angeles, Calif. 379,977, ren. 8–16–60. Cl. 15.
Swedish Pharmaceuticals Ltd., New York, N.Y. 702,810, pub. 5–31–60. Cl. 18.
Synthe Laboratories, Ingomar, Ohio. 592,029, canc. Cl. 46.
Telecoin Corp., New York, N.Y. 591,927, canc. Cl. 24.
Texas Tanning & Mfg. Co., Yoakum, Tex., to General American Industries, Inc., New York, N.Y. 382,974, ren. 8–16–60. Cl. 39.
Texas Vitrified Pipe Co., Mineral Wells, Tex. 702,780, pub. 5–31–60. Cl. 12.
Th. Goldschmidt Corp., to Goldschmidt Chemical Corp., New York, N.Y. 381,996, ren. 8–16–60. Cl. 51.
Thatcher Glass Mfg. Co., Inc., New York, N.Y. 702,744, pub. 5–31–60. Cl. 2.
Thibaut & Walker Co., Inc., The, Newark, N.J. 702,802, pub. 5–31–60. Cl. 16.
Tidewater Oil Co., New York, N.Y. 702,925, pub. 5–31–60. Cl. 35.
Tober Baseball Mfg. Co., Inc., Rockville, Conn. 702,863, pub. 5–31–60. Cl. 22.
Tokyo Denki Kagaku Kogyo Kabushiki Kaisha, Chiyoda-ku, Tokyo, Japan. 702,936, pub. 5–31–60. Cl. 36.
Toni Co., The: *See*—
Gillette Co., The.
Trimount Clothing Co., Inc., Boston, Mass. 702,955, pub. 5–31–60. Cl. 39.
Trip-L-Seal, Inc., to Trip-L-Seal, Inc., Washington, D.C. 377,951, ren. 8–16–60. Cl. 12.
Tri-State Plastic Molding Co., Henderson, Ky. 591,823, canc. Cl. 2.
Twin Cities Mfg. Co., Inc., White Hall, Ill. 702,969, pub. 5–31–60. Cl. 39.
Ulla: *See*—
Ulla Fashions, Inc.
Ulla Fashions, Inc., d.b.a. Ulla, New York, N.Y. 702,975, pub. 5–31–60. Cl. 39.
Ulrici Medicine Co., Inc., The, New York, N.Y. 379,268, ren. 8–16–60. Cl. 18.
Union Hardware Co.: *See*—
Wood, Joseph T., Co.
United Kingdom Tobacco Co. Ltd., The, d.b.a. B. Muratti Sons & Co., London, England. 703,051. Cl. 17.
United Mills Corp., Mount Gilead, N.C. 591,991, canc. Cl. 39.
United States Cam-O Corp., Kansas City, Mo. 592,048, canc. Cl. 106.
U.S. Handbag Corp.: *See*—
White, Morris, Fashions, Inc.
U.S. Industries, Inc., New York, N.Y. 702,786, pub. 5–31–60. Cl. 2.
United States Record Corp., New York, N.Y., to Eli E. Oberstein, Union City, N.J. 377,164, ren. 8–16–60. Cl. 36.
United States Record Corp., New York, N.Y., to Eli E. Oberstein, Union City, N.J. 377,448, ren. 8–16–60. Cl. 36.
United States Tobacco Co., New York, N.Y. 702,808, pub. 5–31–60. Cl. 17.
Universal Tire and Appliance Co., Inc., Nashville, Tenn. 702,932, pub. 5–31–60. Cl. 35.
Upjohn Co., The, Kalamazoo, Mich. 702,814, pub. 5–31–60. Cl. 18.
Usines Metallurgiques de Vallorbe, Vallorbe, Switzerland. 702,884, pub. 5–31–60. Cl. 23.
Vanadium Corp. of America, New York, N.Y. 591,817, canc. Cl. 1.
Van Brode Milling Co., Inc., Clinton, Mass. 702,878, pub. 5–31–60. Cl. 23.
Van Waters & Rogers, Inc., Seattle, Wash. 702,798, pub. 5–31–60. Cl. 14.
Vapor Heating Corp., Chicago, Ill. 702,901, pub. 5–31–60. Cl. 26.
Villager, Inc., The, Philadelphia, Pa. 702,965, pub. 5–31–60. Cl. 39.
Wallace & Tiernan Inc., Belleville, N.J. 702,815, pub. 5–17–60. Cl. 18.
Ware Coated Paper Co., Ware, to Ludlow Corp., Needham, Mass. 136,960, ren. 8–16–60. Cl. 37.
Webster, William A., Co., The, Memphis, Tenn. 702,822, pub. 5–31–60. Cl. 18.
Wehr Steel Co., Milwaukee, Wis. 702,797, pub. 5–31–60. Cl. 14.
Weil, M. K., Shoe Co., St. Louis, Mo. 702,989, pub. 5–31–60. Cl. 39.
Westvaco Chlorine Products Corp., to Food Machinery and Chemical Corp., New York, N.Y. 382,813, ren. 8–16–60. Cl. 10.
Wheeler, C. H., Mfg. Co., Philadelphia, Pa. 702,875, pub. 5–31–60. Cl. 23.
White, Morris, Fashions, Inc., from U.S. Handbag Corp., New York, N.Y. 703,046. Cl. 3.
Wilh. Bleyle o.H.G., Stuttgart, Germany. 597,634. Am. 7(d). Cl. 39.
Wilson, J. A., Lighting & Display, Inc., Erie, Pa. 702,782, pub. 5–31–60. Cl. 12.
Wood, Joseph T., Co., Ware, Mass., to Union Hardware Co., Torrington, Conn. 378,245, ren. 8–16–60. Cl. 22.
Worthington Ball Co., The, Elyria, Ohio. 702,861, pub. 5–31–60. Cl. 22.
Ybarra, Hijos de, S. A., Seville, Spain. 381,428, ren. 8–16–60. Cl. 46.
Youngstown Sheet and Tube Co., The, Boardman, Ohio. 702,793, pub. 5–13–60. Cl. 13.
Zylon Products Co., Inc., Pawtucket, R.I. 702,746, pub. 5–31–60. Cl. 2.

U.S. GOVERNMENT PRINTING OFFICE: 0—1960

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of July 1960

Examiner affirmed	155
Examiner affirmed in part	28
Examiner reversed	56
Total	239

Erratum

All references to Patent No. 2,947,461 to Charles H. Turpin, assignor to The Pillsbury Company, for Compartmented Carton, appearing in the OFFICIAL GAZETTE of August 2, 1960, should be deleted as the application was withdrawn from issue and the patent was not issued.

Disclaimers

2,782,820.—*Karl Zysset*, Lyss, Switzerland. VEGETABLE SHREDDER. Patent dated Feb. 26, 1957. Disclaimer filed July 12, 1960, by the patentee; the licensee, *New-Nel Kitchen Products Company*, consenting and approving.

Hereby enters this disclaimer to claim 1 of said patent.

2,814,031.—*Roderic A. Davis*, Hopewell Junction, N.Y. MAGNETIC STORAGE KEYBOARD. Patent dated Nov. 19, 1957. Disclaimer filed July 13, 1960, by the assignee, *International Business Machines Corporation*.

Hereby enters this disclaimer to claims 1, 2, 3, and 4 of said patent.

New Applications Received During June 1960

Patents	7,040
Designs	370
Plant Patents	12
Reissues	12
Total	7,434

Issue

Patents	871	No. 2,949,609 to No. 2,950,479, incl.
Designs	64	No. 188,650 to No. 188,713, incl.
Plant Patents	1	No. 1,968
Reissues	2	No. 24,861 to No. 24,862, incl.
Total	938	

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1960

Total number of pending applications (excluding Designs)	195,885
Total number of pending Design applications	5,937
Total number of applications awaiting action (excluding Designs)	87,039
Total number of Design applications awaiting action	1,511
Date of oldest new application	Feb. 24, 1959
Date of oldest amended application	Feb. 14, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 33, 43, 48, 59, 59, 60, 62, 63, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	15, 26, 37, 41, 42, 44, 45, 51, 54, 65.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 27, 28, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 63.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 32, 33, 49, 52, 69.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 38, 39, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 40, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	1-6-60	1-6-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-14-60	1-6-60
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	12-16-60	12-6-60
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-2-60	11-2-60
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-3-60	8-3-60
6. (I) LIDOFF, H. J. (MARCUS, L., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	12-1-60	12-2-60
7. (IV) ANDERSON, E. G., Optics	10-6-60	10-5-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-4-60	1-4-60
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-16-60	10-14-60
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-21-59	12-16-60
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clinching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-24-60	11-8-60
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	12-22-60	1-6-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	11-9-60	11-4-60
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-30-60	9-27-60
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-13-60	1-6-60
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	8-8-60	7-6-60
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-11-60	11-13-60
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-4-60	1-4-60
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-20-60	12-19-60
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-4-60	1-4-60
21. (III) MADER, R. C., Textiles	1-10-60	11-30-60
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-25-60	10-18-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	2-24-60	2-16-60
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	10-1-60	10-1-60
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	10-1-60	9-23-60
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	10-1-60	9-1-60
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	9-1-60	9-1-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	1-4-60	1-4-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-24-60	11-24-60
30. (VII) O'LEARY, R. A., Commutators; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	1-5-60	1-4-60

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	1-11-60	1-11-60
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	12-9-59	12-3-59
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	10-15-59	10-1-59
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	4-20-59
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	12-9-59	12-9-59
36. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	10-19-59	10-19-59
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	10-1-59	10-5-59
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Ase, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-21-59	8-24-59
39. (IV) WEIL, L., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-3-59	12-1-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-4-60	1-4-60
41. (II) LOVEWELL, N. M., Recorders (part); Sound Recording; Television; Telegraphy (part)	12-4-59	12-1-59
42. (II) REYNOLDS, E. B., Electric Signaling; Telegraphy (part)	10-26-59	10-26-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	10-9-59	10-12-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	7-2-59	7-2-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-23-59	12-14-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-7-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-9-59	12-14-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-3-59	11-2-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	9-4-59	9-4-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-59	9-18-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	11-3-59	11-3-59
52. (V) LE ROY, C. A., Supports and Racks	3-16-60	3-3-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Feed Apparatus; Closure Operators; Illumination	1-4-60	1-5-60
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-4-60	12-29-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-59	10-23-59
56. (I) SPECK, J. R., Abrading-Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-14-59	12-4-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	10-1-59	10-8-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Punching	11-3-59	11-3-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-6-59	9-3-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-7-60	1-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-4-60	1-5-60
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-4-60	1-4-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	10-16-59	10-19-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-4-59	8-20-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-28-59	12-29-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	8-31-59	8-6-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	9-25-59	9-4-59
81. (III) MONCURE, J. A., Industrial Arts	4-4-60	4-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	4-18-60	4-20-60
91. BAILEY, J. S., Ornamentation	3-7-60	3-24-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	2-12-60	2-1-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	1-5-60	1-4-60
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	1-4-60	1-11-60
95. ANGEL, C. D., Metallic Building Structure; Packed Rod Joints; Joint Packings	11-2-59	10-16-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Sterols; Synthetic Resins (part), i. e., Polyethylenes	1-4-60	12-4-60

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 816 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1960*.

Patents	Numbers 2,926,579 to 2,928,594, inclusive
Plant Patents	Numbers 697 to 699, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

FRANK L. PIERCE AND AMP, INCORPORATED

v.

ROBERT C. WATSON, COMMISSIONER OF PATENTS

No. 15,164. Decided February 25, 1960

[— U.S.App.D.C. —; 275 F.2d 890; 124 USPQ 356]

1. PATENTABILITY—ASSIGNEE'S PATENT AS REFERENCE—AFFIDAVIT UNDER RULE 131.

A patent granted on an application copending with a later application filed by a different inventor but having a common assignee *Held* a reference against the application for everything shown as of its filing date unless the applicant or the assignee could "swear back" of the patent.

2. REVIEW BY THE DISTRICT COURT FOR THE DISTRICT OF COLUMBIA—CIVIL ACTION UNDER 35 U.S.C. 145—PRESUMPTION THAT DECISION OF LOWER TRIBUNAL WAS CORRECT.

In a suit pursuant to 35 U.S.C. § 145, seeking authorization for the Commissioner of Patents to issue a patent, *Held* "that a Patent Office finding as to priority of invention must be accepted as controlling except that 'if the decision of the Patent Office is not warranted on the evidence before it, or if the new evidence reaches the necessary standards, the District Court may rule as the totality of the evidence may require.'"

3. PATENTABILITY—ASSIGNEE'S PATENT AS REFERENCE—AFFIDAVIT UNDER RULE 131.

On the issue whether a common assignee was entitled to a patent on a later-filed application claiming subject matter disclosed but not claimed in a patent granted on a copending application of a different inventor, *Held* that "we perceive no ground pertinent to the issue * * * upon which the co-assignee—simply by virtue of that status—can obtain a greater right as against the public than it would possess in the absence of common ownership."

4. SAME—PARTICULAR SUBJECT MATTER—ELECTRICAL CONNECTOR.

The finding of the District Court, that an application on an electrical connector did not "define novel subject matter in view of the disclosure in Figure 19 and the corresponding description in the specification relating thereto" of a patent granted on an earlier filed copending application by a different inventor but having a common assignee, sustained.

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Daniel L. Morris, with whom *Roger L. Hansel*, *Truman S. Safford*, *Marshall H. Holcombe*, and *William Hintze* were on the brief, for Frank L. Pierce and AMP, Incorporated.

Clarence W. Moore (*Joseph Schimmel* of counsel) for the Commissioner of Patents.

Before WASHINGTON, DANAHER, and BASTIAN, *Circuit Judges*

DANAHER, *Circuit Judge*:

Appellant herein, AMP, Inc., for itself as assignee and in behalf of Pierce, brought suit pursuant to 35 U.S.C. § 145, seeking authorization for the Commissioner to issue a patent on Pierce's assigned application hereinafter described. After entering findings of fact and conclusions of law in favor of the Commissioner, the District Judge dismissed the action, and this appeal followed.

Macy, claiming to have invented an electrical connector, swore to and filed his application dated December 23, 1946, which was assigned to AMP, Inc. Patent No. 2,600,012 was issued to the latter on June 10, 1952. Macy had disclosed but had not claimed in his described Figure 19 the application of an F-crimp through a plastic sleeve. Without more, the Patent Office argues, the unclaimed subject matter passed into the public domain one year after the issue date.

Pierce on August 19, 1948, swore to and filed application No. 46967 claiming that *he* was the inventor of the unclaimed subject matter disclosed by Macy's described Figure 19. AMP, Inc. claims in essence that as co-assignee of Macy and Pierce, it was entitled to decide which of its two assignors was the prior inventor, and that the Patent Office was bound by its election.

[1] The Macy patent having been issued on June 10, 1952, was cited by the Examiner on January 16, 1953. He noted that Pierce's claims were fully met by Macy's described Figure 19. Macy thus became a reference for everything shown as of his filing date in 1946[1] unless Pierce or his assignee could "swear back" of Macy.[2] On June 22, 1953, AMP, Inc., in response to the Office action of January 16, 1953, for the first time disclosed itself as assignee of Pierce. It then argued that the subject matter of Figure 19 was "clearly not claimed" in Macy and had been invented by Pierce. It urged that as common assignee, it was entitled to its patent on what Macy had claimed and entitled further to a patent on what Pierce had claimed. The Patent Office tribunals in 1956 ruled adversely to AMP, Inc. The latter then could have pursued an appeal to the Court of Customs and Patent Appeals pursuant to 28 U.S.C. § 1542 (1958). It there could have secured a ruling as to whether or not there had been adequate compliance with the appropriately applicable rule. Instead, AMP, Incorporated, sought relief in the District Court in a trial de novo.

[2] We have pointed out that a Patent Office finding as to priority of invention must be accepted as controlling except that "if the decision of the Patent Office is not warranted on the evidence before it, or if the new evidence reaches the necessary standard, the District Court may rule as the totality of the evidence may require."[3]

At the trial it clearly appeared that the Macy and Pierce applications were co-pending from 1948 to 1952. Both had been prepared by Mr. Safford, a patent attorney representing AMP, Inc. Although Patent Office Rule 79 authorizes a common assignee to protect itself in a situation such as this, AMP, Inc. filed no amendment to the Macy application.[4] There was no insertion in the Macy application that Pierce—not Macy—was the inventor of the subject matter of the described Figure 19. When questioned on this aspect, the witness replied: "I did not do that. I should have done it. I overlooked it. As I say, I usually do it by amendment later."

The record seems to us clearly to show that the Patent Office and the District Court did not err when they concluded that Pierce had not established himself as the first inventor.[5] [3] We perceive no ground pertinent to the issue here upon which the co-assignee—simply by virtue of that status—can obtain a greater right as against the public than it would possess in the absence of common ownership.[6]

Macy testified that it never occurred to him to have an F-crimp through an outer plastic sleeve, and that he first learned of the concept from Mr. Safford while the latter was preparing the Macy application.[7]

Mr. Safford testified that he received the plastic sleeve concept from Pierce in October, 1946. He discussed the Pierce disclosure thereafter with the president of AMP, Inc., with Pierce and one of the company engineers. Under examination by trial counsel the following evolved:

"Q. Can you explain the delay, Mr. Safford, between the disclosure by Mr. Pierce of the F-crimp with the plastic sleeve and the filing of the Pierce application in August of 1948?

"A. Yes, it was decided at this conference that I mentioned that this was something important enough that we should protect our priority on it and it was to be disclosed in this Macy application which we were going to have to file so that we would have a record date on it, and *it was to be covered by broad claims.*

"Q. What do you mean by that? Do you mean by that that the Pierce invention incorporated also the Macy invention?

"A. I was directed to make sure that *the claims on the Macy invention* did not have any unnecessary limitations which would exclude the application of the Macy invention where there was a plastic sleeve on it. The question of whether to file an application specifically on the Pierce application [*sic*] had to go over because the corporation was then small. It was making a great many inventions and it couldn't file on all of them at that time." [Emphasis added.]

He testified that Figure 19 of the Macy patent was Mr. Pierce's invention. "I put it *in Macy's application* because I believed that it was an improvement that was embodied in the best embodiment of his invention then known to us. *I filed both applications, not for the inventors, but for the assignee*; and I interpreted that to mean the best embodiment known to the assignee, since he was an actual party who filed the application." [Emphasis added.]

It seems clear that the co-assignee had exercised its claimed right "to select the application in which the claims to the subject matter common to several applications should be placed." Macy took only what he claimed.[8]

[4] The trial judge found that the Pierce application[9] did not "define novel subject matter in view of the disclosure in Figure 19 and the corresponding description in the specification relating thereto of the patent to Macy." He concluded that the Pierce claims are unpatentable.[10] We agree.

AFFIRMED.

United States Court of Appeals
District of Columbia Circuit

ROBERT C. WATSON, COMMISSIONER OF PATENTS

v.

CIRCUS FOODS, INC., AND USTCO PRODUCTS CORPORATION

No. 14,994. Decided February 25, 1960

[— U.S.App.D.C. —; 275 F.2d 893; 124 USPQ 358]

TRADEMARK—REGISTRABILITY.

The judgment of the District Court authorizing the Commissioner of Patents to register appellant's trademark as set forth in its application affirmed; and the Commissioner's contentions that the application showed false date of first use of the trademark and that the representations therein of use on the designated products were not supported by the facts, rejected.

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Clarence W. Moore (*George C. Roeming*, of counsel) for Robert C. Watson, Commissioner of Patents.

Henry Gifford Hardy, with whom *William E. Rollow* was on the brief, for Circus Foods, Inc., and Ustco Products Corporation.

Before WILBUR K. MILLER, BAZELON, and WASHINGTON, *Circuit Judges*

PER CURIAM:

The Commissioner of Patents appeals from a judgment of the United States District Court which held that Circus Foods, Inc., is entitled to register its trademark as set forth in its application, Serial No. 610,491, filed February 24, 1951, and which authorized the Commissioner to issue such registration. The appellant urges that the application showed false dates of first use of the trademark, that the representations in the application of use on the designated products are not supported by the facts, and that the judgment appealed from is therefore erroneous.

Upon consideration of the record, we reject the Commissioner's contentions and agree with the findings and conclusions of the District Court.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE EUGENE J. LORAND AND JOHN E. REESE (DECEASED) (HERCULES POWDER COMPANY, ASSIGNEE, SUBSTITUTED)

No. 6483. Decided May 24, 1960. Petition for rehearing denied July 20, 1960

[47 CCPA —; — F.2d —; — USPQ —]

1. PATENTABILITY—PROCESS—OBVIOUSNESS.

Upon review of the issue whether it would have been obvious to a person having the ordinary skills of the art to apply the processes for the oxidation of saturated hydrocarbons as disclosed by both a patent to Brewer and a patent to Farkas et al. to alkyl substituted aromatic hydrocarbons as cumene, and consideration of the disclosure in a patent to Hock et al. that cumene could be oxidized to its hydroperoxide, *Held* that "with the specific disclosure of Farkas et al. before us, and with the teachings of Hock et al. known to a chemist as a part of the art, we agree with the concurring findings of the Board of Appeals and the Examiner that the process here claimed would be obvious to one having the ordinary skills of this art."

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[1] *Milburn Co. v. Davis etc. Co.*, 270 U.S. 390 (1926). Only the first inventor is entitled to a patent. *Id.*

[2] Such procedure is authorized by Patent Office Rule 131 and, in certain situations, by Rule 132. 37 C.F.R. §§ 1.131 and 1.132, respectively (1949).

[3] *Esso Standard Oil Co. v. Sun Oil Co.*, 97 U.S.App.D.C. 154, 159, 229 F.2d 37, 42, cert. denied, 351 U.S. 973 (1956).

[4] If Macy and Pierce were co-inventors, of course, an application could have been filed under 35 U.S.C. § 116.

[5] Cases arising on direct appeal from the Patent Office are not inconsistent with this conclusion. See, e.g., *In re Beck*, 33 CCPA (Patents) 1060, 155 F.2d 398 (1946); cf. *In re Dunbar*, 51 App.D.C. 251, 278 Fed. 334 (1922).

[6] For comparable cases arising on direct appeal, see generally, *In re Ward*, 43 CCPA (Patents) 1007, 236 F.2d 428 (1956); *In re Keim*, 43 CCPA (Patents) 784, 229 F.2d 466 (1956); *In re Fischel*, 30 CCPA (Patents) 1085, 136 F.2d 254 (1943) and cases cited.

[7] In December, 1957, Macy sought and AMP, Inc. received a reissue of Patent No. 2,600,012. To accompany his reissue application, he filed an affidavit in which he again claimed to be first inventor of described Figure 19.

[8] Cf. discussion in *Ex parte Lindeman and Youngs*, 107 USPQ 331 (Bd. App. 1955) and compare with *Ex parte Coss*, 95 USPQ 333 (Bd. App. 1952). In *Ex parte Lemieux*, 115 USPQ 148 (Bd. App. 1957), there was no interferant or other adverse party nor was there evidence of invention by anyone else prior to the applicant's filing date.

[9] No affidavit by Pierce had been filed in the Patent Office proceeding other than his conventional affidavit in support of his 1948 application. He did not appear as a witness at the trial. It was testified, however, that an AMP, Inc. attorney had called Pierce in 1954 with a view to the procurement of a Rule 131 affidavit. Pierce did not remember when he made the invention or whether there were any records. He had made samples, he recalled. Diligent search yielded neither records nor samples. Cf. *In re Strain*, 38 CCPA (Patents) 933, 938–39, 187 F.2d 737, 741–42 (1951).

[10] 35 U.S.C. § 102(e) (1958).

2. SAME—SAME—SAME—COMBINING REFERENCES.

"Appellant, to avoid the Farkas et al. teaching, argues that the existence of a tertiary hydrogen atom on the tertiary carbon atom is not significant because in the prior art the tertiary carbon atom is a part of a cycloalkyl group, whereas in cumene the tertiary carbon is part of an alkyl chain. This argument is not persuasive in view of the Brewer teaching that the oxidation reaction will occur in straight chain alkyls. If applicant's argument for thus distinguishing over Farkas et al. is valid, then Brewer's teaching is most significant. We think it would be obvious to one having the ordinary skills of this art to apply the Farkas et al. process to the straight chain alkyls of Brewer. We are not persuaded that applicants have done anything more in their claimed oxidation of cumene."

3. SAME—SAME—SAME—SAME.

"Appellant also points out the presence of the double bond in the aryl group, which double bond would be on a carbon atom adjacent to the tertiary carbon atom. The teachings of Hock et al. that the oxidation will occur without rupture of the aromatic ring makes this distinction without merit so far as the issue of obviousness is concerned. There is no basis in the record for assuming that the presence of the aryl group would have any effect on the reaction. Even if presence of the aryl group was significant, Farkas et al. discloses the use of stocks containing aryl groups (benzyls)."

4. SAME—SAME—CONSTRUCTION OF REFERENCE.

"Appellant points out that both Brewer and Farkas et al. state in their specifications that the stock to which their processes are to be applied preferably should not contain more than 10% aromatic hydrocarbons. The stock specified by Brewer and Farkas et al. is straight cut gasoline, and there is nothing before us to negative the probability that cumene also is present in the aromatic hydrocarbons referred to. Appellant argues that we cannot speculate as to the reason for the limitation, yet appellant, in effect, asks us to speculate that the teachings of the references are not applicable to cumene. Since cumene is one of many possible aromatic hydrocarbons present, the most that can be properly inferred from the 10% limitation is that for some undisclosed reason the prior patentees desired to limit the amount of the aromatic hydrocarbons present in their stock. We do not find in this limitation adequate factual support for the inferences which appellant would have us draw from it."

5. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—DIMINUTION OF RECORD.

In connection with a motion by appellant to correct diminution of the record by the addition of two decisions of the Board of Appeals with respect to two patents issued to appellant, *Held* that "The language quoted by the appellant from those decisions, when viewed in the light of the facts of those cases, is not pertinent to the issue here," and that "The motion is therefore denied."

6. SAME—SAME—*In re Magat* DISTINGUISHED.

"* * *, appellant was granted permission to discuss in a memorandum the decision of this court in *In re Magat*, 44 CCPA 735, 240 F.2d 351, 112 USPQ 317. Appellant has pointed out many similarities between the facts and issue in the Magat case and the facts and issues in the instant case. However, appellant has overlooked the very significant consideration upon which the decision of the court was based in the Magat case, namely, that it was not 'satisfactorily shown that it would be obvious to a skilled worker in the art that the processes shown by the French patent for producing polyurethanes by interphase condensation could be adapted to the production of spinnable polyamides.' In the Magat case the Patent Office had not cited prior art having the required similarities to applicants' invention necessary to support its rejection that the invention was obvious to one skilled in the art. Here, by contrast, the Patent Office has found prior pertinent art from which it is reasonable to find that the invention here in issue would have been obvious to one skilled in the art."

7. SAME—PARTICULAR SUBJECT MATTER—PROCESS OF OXIDISING CUMENE.

Claims to a process for oxidising cumene to produce cumene hydroperoxide *Held* unpatentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 257,671.

AFFIRMED.

Clinton F. Miller for Eugene J. Lorand and John E. Reese (deceased) (Hercules Powder Company, Assignee, Substituted).

Clarence W. Moore (*Joseph Schimmel* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL.

SMITH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals affirming the Examiner's rejection of claims 26 through 32 of appellant's patent application on a process for oxidizing cumene to produce cumene hydroperoxide.

Claim 26 is representative of the claims on appeal and reads:

26. The process of oxidising cumene which comprises adding a peroxide oxidation initiator to a reaction mixture comprising essentially cumene in liquid phase and intimately contacting said reaction mixture with an oxygen-containing gas under anhydrous, noncatalytic conditions in the presence of an alkaline stabilising agent at a temperature between about 50° and about 150° C. to form a substantial yield of α,α-dimethylbenzyl hydroperoxide.

Inasmuch as the remaining claims, 27, 28, 29, 30, 31 and 32 merely specify reagents and quantities not deemed to be essential to a determination of the issues presented, those claims will stand or fall with claim 26.

The rejection by the Examiner, affirmed by the Board, was based upon a finding that applicants' invention would have been obvious to one skilled in the art.

The references cited are:

Farkas et al., 2,430,864, November 18, 1947.
Brewer, 2,447,794, August 24, 1948.
Hock et al., Berichte Deut. Chem. Gesell., Vol. 77, (1944) pp. 257–264.

Farkas et al. discloses a process for oxidizing naphthenes to their hydroperoxides in which naphthenes in the liquid phase are in contact with an oxygen-containing gas in the presence of naphthene peroxides as the oxidation initiators and in the presence of a basically reacting agent such as granulated alkali metal carbonates and bicarbonates. The oxidation is carried out at atmospheric or elevated pressures, and at temperatures within the range of 150° F. to 350° F. Brewer discloses substantially the same process as Farkas et al. but applies it to straight-chain saturated hydrocarbons.

Hock et al. discloses a process for oxidising cumene to cumene hydroperoxide in which cumene and dry oxygen are agitated under ultraviolet light.

Appellant asserts that there are four essential steps or conditions in a process embodying the claimed invention:

1. The addition of a peroxidic oxidation initiator to the reaction mixture,

2. The use of non-catalytic conditions,

3. The presence of an alkaline stabilizing agent in the reaction mixture, and

4. Maintenance of anhydrous conditions in the reaction mixture.

It is conceded that Brewer, and more specifically Farkas et al. disclose these steps or conditions and all other particulars of the claimed process except that neither Brewer nor Farkas et al. apply their processes to the oxidation of alkyl substituted aromatic hydrocarbons as taught by applicants. Thus we are presented with the issue of patentability of these differences in view of the prohibition in 35 U.S.C. 103.

Specifically, the issue to be here decided is whether it would have been obvious to a person having the ordinary skills in this art to apply the processes for the oxidation of saturated hydrocarbons as disclosed by both Brewer and Farkas et al. to alkyl substituted aromatic hydrocarbons as cumene.

The Examiner found that Hock et al. disclosed that cumene could be oxidised to its hydroperoxide, and more specifically that this oxidation occurs in an anhydrous reaction of cumene in the liquid phase. In view of this disclosure, the Examiner held that it would be obvious to one skilled in the art to accomplish the oxidation of cumene by using the explicit and detailed teachings of Farkas et al. and Brewer. The Board affirmed the Examiner and added the following comment:

Cumene, which is isopropyl benzene, is an aliphatic hydrocarbon containing an aryl substituent. As a matter of fact in view of the disclosure in lines 27 to 37 of column 3 of Farkas et al. that the presence of "a tertiary hydrogen atom facilitates peroxide formation," it is evident that cumene is particularly suitable for their process since it contains a "tertiary H atom."

[1] Appellant seeks a reversal of the Board contending that it would not be obvious to a person having the ordinary skills in this art to apply the teachings of Farkas et al. or Brewer concerning saturated hydrocarbons to aromatic hydrocarbons. However, with the specific disclosure of Farkas et al. before us, and with the teachings of Hock et al. known to a chemist as a part of the art, we agree with the concurring findings of the Board of Appeals and the Examiner that the process here claimed would be obvious to one having the ordinary skills of this art.

[2] Appellant, to avoid the Farkas et al. teaching, argues that the existence of a tertiary hydrogen atom on the tertiary carbon atom is not significant because in the prior art the tertiary carbon atom is a part of a cycloalkyl group, whereas in cumene the tertiary carbon is part of an alkyl chain. This argument is not persuasive in view of the Brewer teaching that the oxidation reaction will occur in straight chain alkyls. If applicant's argument for thus distinguishing over Farkas et al. is valid, then Brewer's teaching is most significant. We think it would be obvious to one having the ordinary skills of this art to apply the Farkas et al. process to the straight chain alkyls of Brewer. We are not persuaded that applicants have done anything more in their claimed oxidation of cumene.

[3] Appellant also points out the presence of the double bond in the aryl group, which double bond would be on a carbon atom adjacent to the tertiary carbon atom. The teachings of Hock et al. that the oxidation will occur without rupture of the aromatic ring makes this distinction without merit so far as the issue of obviousness is concerned. There is no basis in the record for assuming that the presence of the aryl group would have any effect on the reaction. Even if presence of the aryl group was significant, Farkas et al. discloses the use of stocks containing aryl groups (benzyls).

[4] Appellant points out that both Brewer and Farkas et al. state in their specifications that the stock to which their processes are to be applied preferably should not contain more than 10% aromatic hydrocarbons. The stock specified by Brewer and Farkas et al. is straight cut gasoline, and there is nothing before us to negative the probability that cumene also is present in the aromatic hydrocarbons referred to. Appellant argues that we cannot speculate as to the reason for the limitation, yet appellant, in effect, asks us to speculate that the teachings of the references are not applicable to cumene. Since cumene is one of many possible aromatic hydrocarbons present, the most that can be properly inferred from the 10% limitation is that for some undisclosed reason the prior patentees desired to limit the amount of the aromatic hydrocarbons present in their stock. We do not find in this limitation adequate factual support for the inferences which appellant would have us draw from it.

It is the specific structure of cumene with the hydrogen atom on the tertiary carbon atom which permits the oxidation to occur. This structure is disclosed in Farkas et al. and was found by the Board to be a sufficient teaching to make it obvious to one skilled in the art to apply the Farkas et al. process to the oxidation of cumene.

[5] During the oral arguments, appellant was granted permission to file a memorandum with respect to two matters. The first was a motion by appellant to correct diminution of the record by the addition of two decisions of the Board of Appeals with respect to two patents issued to appellant. The language quoted by the appellant from those decisions, when viewed in the light of the facts of those cases, is not pertinent to the issue here. The motion is therefore denied.

[6] Second, appellant was granted permission to discuss in a memorandum the decision of this court in *In re Magat*, 44 CCPA 735, 240 F.2d 351, 112 USPQ 317. Appellant has pointed out many similarities between the facts and issue in the Magat case and the facts and issues in the instant case. However, appellant has overlooked the very significant consideration upon which the decision of the court was based in the Magat case, namely, that it was not "satisfactorily shown that it would be obvious to a skilled worker in the art that the processes shown by the French patent for producing polyurethanes by interphase condensation could be adapted to the production of spinnable polyamides." In the Magat case the Patent Office had not cited prior art having the required similarities to applicants' invention necessary to support its rejection that the invention was obvious to one skilled in the art. Here, by contrast, the Patent Office has found prior pertinent art from which it is reasonable to find that the invention here in issue would have been obvious to one skilled in the art.

[7] Finding no reversible error in the decision below, we affirm the Board of Appeals.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

CREAM WIPT FOODS, INC. v. GENERAL FOODS CORPORATION

No. 6561. Decided May 24, 1960

[47 CCPA —; — F.2d —; 126 USPQ 55]

1. TRADEMARK — CONFUSING SIMILARITY — GOODS — CLOSELY RELATED FOOD PRODUCTS MARKETED THROUGH SAME STORES.

In oppositions by appellant, based on its registration and use of "Cream Wipt" as a trademark for salad dressings containing cream and of "Saladream" as a trademark for a blend of mayonnaise and whipped cream, to appellee's two applications for registration of "Dream Whip" as a trademark for a mix for use in making puddings, sauces, and toppings, and for a dessert topping mix, *Held* that "While the goods of the respective parties are not identical, absolute identity is not essential to a likelihood of confusion," that "They are closely related food products which are normally marketed through the same stores, in generally similar containers, and both are intended to be added to or mixed with other foods," and that "We think it clear, therefore, that they are products which might well be expected to emanate from the same source."

2. SAME—SAME—"CREAM WIPT" AND "DREAM WHIP" ON FOOD PRODUCTS.

"Regarding the marks 'Dream Whip' and 'Cream Wipt,' the final words 'Whip' and 'Wipt' are much the same in meaning and quite similar in both sound and appearance. The initial words 'Dream' and 'Cream' are identical except for the first letter, and bear a close resemblance in sound and appearance, although they differ in meaning. In our opinion, when the marks are considered in their entireties, the similarities outweigh the dissimilarities to such a degree that we think confusion in trade would be likely to result if they were applied by the parties to their respective goods."

APPEAL from the Patent Office. Opposition Nos. 37,361, and 37,362.

REVERSED.

Denny and Denny (*Joseph G. Denny III* of counsel) for Cream Wipt Foods, Inc.

Mack and Brown, Francis C. Browne, Frederick F. Mack (*Gordon R. Brown* of counsel) for General Foods Corporation.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Trademark Trial and Appeal Board of the United States Patent Office dismissing oppositions by appellant to two applications by appellee for registration of "Dream Whip" as a trademark for a mix for use in making puddings, sauces, and toppings, and a dessert topping mix, respectively. The oppositions were based on prior registration and use by appellant of "Cream Wipt" as a trademark for salad dressings containing cream, and of "Saladream" for a blend of mayonnaise and whipped cream. Appellant's priority is not questioned, thus the sole issue is whether the similarities between the marks and goods of the parties are such that concurrent use would result in a likelihood of confusion within the meaning of section 2(d) of the Lanham Act.

The Board found that "Considering the differences between the marks, together with the specific differences between the goods," confusion in trade would be unlikely.

[1] While the goods of the respective parties are not identical, absolute identity is not essential to a likelihood of confusion. They are closely related food products which are normally marketed through the same stores, in generally similar containers, and both are intended to be added to or mixed with other foods. We think it clear, therefore, that they are products which might well be expected to emanate from the same source. See *Dicinell-Wright Co. v. Grundlach, Etc.*, 28 CCPA 1348, 121 F.2d 639, 50 USPQ 141; *Roddenbery Co. v. Kalich*, 34 CCPA 745, 158 F.2d 289, 72 USPQ 138; *Hy-V Company, Inc. v. Campbell Soup Company*, 39 CCPA 777, 193 F.2d 338, 92 USPQ 212, and cases there cited.

[2] Regarding the marks "Dream Whip" and "Cream Wipt," the final words "Whip" and "Wipt" are much the same in meaning and quite similar in both sound and appearance. The initial words "Dream" and "Cream" are identical except for the first letter, and bear a close resemblance in sound and appearance, although they differ in meaning. In our opinion, when the marks are considered in their entireties, the similarities outweigh the dissimilarities to such a degree that we think confusion in trade would be likely to result if they were applied by the parties to their respective goods.

In view of our conclusion it is unnecessary to determine whether the evidence as to alleged instances of actual confusion is or is not hearsay. Neither is it necessary to consider opposer's mark "Saladream."

The decision of the Trademark Trial and Appeal Board is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,326,443, R. L. Dillon, Automobile radio antenna, **filed** July 5, 1960, D.C., E.D. Mich. (Detroit), Doc. 20269, *Daniel J. Sullivan v. Pioneer Specialty Company.*

2,360,036, C. E. Boucher, Industrial radiographic apparatus; **2,547,966**, F. T. Paden, Folding altar, **filed** June 29, 1960, D.C., S.D. Tex. (Houston), Doc. 13/226, *Industrial X-Ray Incorporated v. Industrial Radiography Supply, Inc. et al.* **Same, filed** same, Doc. 13/227, *Industrial X-Ray Incorporated v. Cherokee Industries, Inc., doing business as Industrial Welding & Testing Laboratory et al.* **Same, filed** June 30, 1960, D.C., W.D. Okla. (Oklahoma City), Doc. 8891, *Industrial X-Ray Incorporated v. Central X-Ray, Inc. et al.*

2,418,251, E. A. Drott, Loaders; **2,812,505**, same, Earth moving apparatus, **filed** June 29, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39245, *Drott Manufacturing Company v. Buran Equipment Company.*

2,522,612, W. C. Harben, Protective covering; **2,890,915**, same, Fender cover, **filed** June 29, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 750/60-T, *Leon R. Grosslight, doing business as The Allen-Rick Company v. William C. Harben, doing business as Vacuum Grip Cover Company.*

2,547,966. (See 2,360,036.)

2,633,439, F. G. Konstandt, Hollow panel door structures; **2,695,043**, Schauer and Konstandt, Planing tool for the manufacture of spiral like bodies; **2,697,461**, F. G. Konstandt, Method of making spirals for hollow panel structures, **filed** June 30, 1960, D.C., S.D. Fla. (Jacksonville), Doc. 10/081-M, *Francisco Goldberger Konstandt et al. v. Jones Shutter Products, Inc.*

2,640,763, Easley and Swayze, Etching; **2,826,199**, Hopkins and Easley, Etching, **filed** Dec. 4, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c1935, *The Dow Chemical Company v. Lacey Bros. Engraving Co.* Both patents held valid and infringed; defendants enjoined June 27, 1960.

2,657,618, W. Eisbein, Developing apparatus, **filed** June 30, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1053, *Copease Manufacturing Co., Inc. v. Speed-O-Print Corporation.*

2,695,043. (See 2,633,439.)

2,697,461. (See 2,633,439.)

2,719,461, N. Hack, Resilient shoe soles; **Reg. No. 649,356** (RIPPLE), Ripple Sole Corporation, Shoe soles and heels; **Reg. No. 649,381**, same, Shoes, athletic shoes and boots, **filed** June 28, 1960, D.C.N.H. (Concord), Doc. 2148, *Ripple Sole Corporation v. F. W. Woolworth Co.*

2,758,291, W. E. Lanham, Bread cooling system, **filed** May 1, 1958, D.C., N.D. Ga. (Atlanta), Doc. 6449, *William E. Lanham v. Southern Bakeries Co., Inc.* Judgment dismissing case July 5, 1960.

2,784,616, R. C. Quackenbush, Feed control attachment for hand tools; **2,882,776**, same, Automatic tool feeding device, **filed** June 30, 1960, D.C., S.D. Calif. (Los Angeles), Doc. 772-60-WB, *Robert C. Quackenbush et al. v. Gardner-Denver Company.*

757 O.G.—52

2,812,505. (See 2,418,251.)

2,818,832, G. H. Bushway, Box toe blank conditioning machine, **filed** Apr. 28, 1958, D.C. Mass. (Boston), Doc. 58/450-S, *Shu-Conditioner, Inc. v. Bixby Box Toe Company, Inc.* All claims of patent held invalid; complaint dismissed July 13, 1960.

2,825,194. (See 2,640,763.)

2,830,908, J. E. Morgan, Knitted fabric, **filed** July 7, 1960, D.C., M.D. Pa. (Scranton), Doc. 7022, *John E. Morgan Patents, Inc. v. Reidler Knitting Mills, Inc.*

2,871,502, W. J. Polzin, Identification bracelet, **filed** Mar. 24, 1959, D.C., E.D. Wis. (Milwaukee), Doc. 59-C-51, *Will Ross, Inc. v. Mark Clark, Inc.* Stipulation and order dismissing action without prejudice July 7, 1960.

2,890,915. (See 2,522,612.)

2,895,274. (See 2,784,616.)

2,931,468, R. R. Keller, Light-diffusing structural panels, **filed** July 5, 1960, D.C. Mass. (Boston), Doc. 60/476-W, *Robert J. Keller v. Walsh-Hannon-Gladwin, Inc.*

Des. 178,801, L. W. Sparks, Watch or similar article, **filed** Feb. 13, 1957, D.C., S.D.N.Y., Doc. 117/179, *Vacheron & Constantin-Le Coultre Watches, Inc. v. Benrus Watch Company, Inc.* Consent judgment; defendant enjoined July 1, 1960.

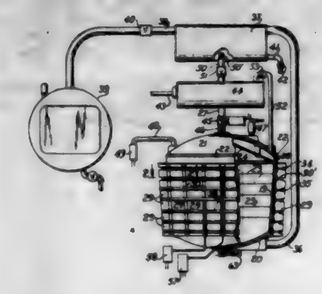
Des. 181,148, K. C. Hoffman, Textile fabric or similar article, **filed** July 11, 1960, D.C., S.D.N.Y., Doc. 60/2703, *Aileen Mills Co., Inc. et al. v. Ojay Mills, Incorporated.*

REISSUES

AUGUST 23, 1960

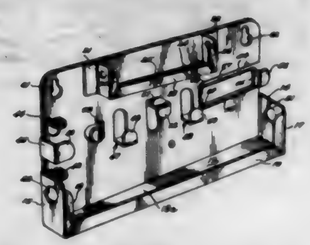
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,861
STORED HEAT STEAM GENERATORS
Harold N. Shaw, Everett, Mass.
Original No. 2,920,179, dated Jan. 5, 1960, Ser. No. 704,768, Dec. 23, 1957. Application for reissue Jan. 26, 1960, Ser. No. 4,842
18 Claims. (Cl. 219—39)



16. A stored heat steam generator comprising a wall having at least one side forming a steam generating surface, said wall being disposed to provide a top and to provide for flow of water downwardly from said top, means for initially heating said wall to a temperature above the critical temperature for steam generation, means for directing a sheet of water onto all portions of the top of said side of the wall to gravitate downwardly thereon and progressively cool said side, means for controlling the quantity of water so that water covers the portion of the wall which is cooled to a temperature under the critical temperature for steam generation to cause the critical temperature line to progress downwardly, and means for discharging the generated steam and the excess water thrown off the wall at the critical temperature line.

24,862
WALL RACK FOR MECHANICS' TOOLS
William H. Odlum, Wilmette, and John R. Gracious, Glenview, Ill., assignors to Duro Metal Products Co., Chicago, Ill., a corporation of Illinois
Original No. 2,841,289, dated July 1, 1958, Ser. No. 455,819, Sept. 14, 1954. Application for reissue Oct. 28, 1959, Ser. No. 849,423
10 Claims. (Cl. 211—87)



8. A holder for a plurality of socket wrenches, said holder comprising an upstanding plate having flanges extending forwardly and substantially normally to the plane of the plate from its bottom edge and from the side edges adjacent the bottom edge to form the bottom and sides of a retainer for a plurality of wrench sockets, a tab struck outwardly and downwardly from the plate, and laterally spaced tabs struck outwardly and upwardly from the plate at regions below and one on either side of the first-mentioned tab, all of said tabs being disposed above the flanges extending from the side edges of the plate and constructed to receive and hold between them the handle of a wrench or the like, and latching means formed on the plate and cooperating with the wrench handle for holding said handle against lateral movement in one direction with respect to the plate.

PLANT PATENTS

GRANTED AUGUST 23, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,968
BARBERRY PLANT
Harold S. Crawford, Ottawa, Kans., assignor to The Willis Nursery Company, Ottawa, Kans., a partnership
Filed Nov. 5, 1959, Ser. No. 851,206
1 Claim. (Cl. 47—59)

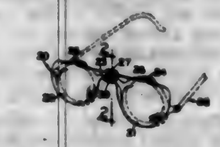
A new and distinct variety of barberry plant of the *Berberis thunbergi atropurpurea* type, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a uniform and symmetrical habit of growth, relatively large, round and dense foliage, and a distinctive Brilliant Red general color tonality of the foliage.

PATENTS

GRANTED AUGUST 23, 1960

GENERAL AND MECHANICAL

2,949,609
AUXILIARY SUN GLASSES
Robert H. Seger, 10298 Carnegie Ave., Cleveland, Ohio
Filed Sept. 30, 1957, Ser. No. 687,174
3 Claims. (Cl. 2—13)



1. Clip-on auxiliary eyeglasses for attachment to primary spectacles having a pair of oppositely disposed lens portions centrally joined by a horizontal bridge and all being in substantially the same vertical plane, comprising: a pair of auxiliary lens portions with a central connecting horizontal bridge joined to the adjacent edges of the lens portions and all being substantially in the same vertical plane, said auxiliary eyeglasses being adapted to be clamped on the primary spectacles with the planes thereof in fixed substantially parallel positions by a three-point contact clip arrangement, said three-point contact clip arrangement consisting of first and second lens portion engagement clips, each of which is on an edge of each of said auxiliary lens portions and projects laterally from the plane thereof and has a contact point for contacting with a corresponding contact point at the edge of each of said primary spectacles lens portions, the two lens portion engagement clips applying a clamping force in one direction vertically in the plane of the primary spectacles, and a third bridge-engaging clip projecting laterally from the plane of the bridge of said auxiliary glasses in the same lateral direction as said first and second clips to engage the primary spectacle bridge at a contact point to apply a clamping force in one direction vertically in the plane of the primary spectacles, said third clip being resilient and vertically deformable to curl around and engage the bridge of said primary spectacles at an edge which is opposed to the edges of said primary lens portions contacted by said first and second clips so as to apply a clamping force in a vertical direction which is opposite to that direction in which said first and second clips apply their vertical clamping force so as to clamp said primary spectacles between the three clips of said auxiliary eyeglasses, the vertical distance between the contact points of each of said first and second clips and the contact point of said third clip of said auxiliary glasses being normally less than the vertical distance between the corresponding contact point of each of said lens portions and said bridge of said primary spectacles whereby the resilient deformation of said third clip is necessary to clip the auxiliary glasses to said primary spectacles and to retain them in place thereon.

2,949,610
BOWLING GLOVE
Sidney Lutsky, 1490 Goodbar, Memphis, Tenn.
Filed June 2, 1958, Ser. No. 739,270
2 Claims. (Cl. 2—16)

1. Glove means adapted for use in bowling comprising a back panel of a porous absorbent fabric adapted to cover the back of the hand of a user, a plurality of digit sheaths connected with the upper part of said back panel and adapted to encase selected digits of such user, said sheaths including a thumb sheath and at least one finger sheath for an intermediate finger of the hand of a user, each said sheath being of a length to substantially completely cover the digits of such user and including a sheath back of said fabric connected with said back panel at the lower part of the sheath back and extending upwardly throughout a majority of the length of the sheath terminating at its upper end below the upper end of the sheath, each said sheath having a sheath front and a tip portion of membrane-like, tough, thin, resilient material connected to the perimeter of the sheath back,



said sheath front at its lower end terminating substantially at the level of the connection of the sheath back and said back panel and adapted thereby to extend along a digit of a user into adjacency with the base of the front of a digit of a user forwardly of said back panel leaving the palm area of the user free, said sheath front extending upwardly along the front of the sheath, said tip portion overlying the upper end of the sheath and extending a minor distance downwardly along the rear of the sheath joining the upper end of the sheath back, each said sheath thereby including a resilient front and tip and a fabric back, said back panel extending downwardly from said digit sheaths substantially to the wrist area of a user when said glove means is in use.

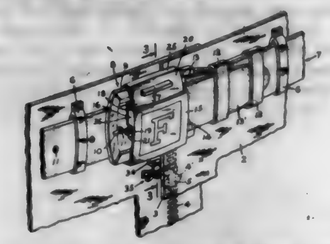
2,949,611
BIBS
Edna Schwable Wilkaitis, St. Louis, Mo., assignor to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri
Filed Apr. 3, 1958, Ser. No. 726,119
3 Claims. (Cl. 2—49)



1. A bib formed from a flat bag made of flexible sheet plastic material having two superposed walls joined together at the side edges of the bag by side seams, one of said walls having at one end of the bag a flap-forming portion extending the full width of the bag folded over

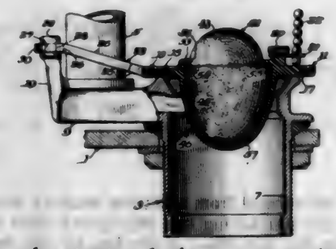
into flatwise engagement with the outside of said one wall, the end edges of said flap-forming portion being secured to the side edges of the bag by said side seams, integral ribbon-like portions of one of the walls of the bag extending transversely of the bag at the other end of the bag being cut away except adjacent the side seams, said ribbon-like portions being adapted to extend laterally outward from the side edges of the bag to form ties and said flap-forming portion providing a bib pocket.

2,949,612
COLLAPSIBLE RETAINING AND SIGNALING MEANS FOR SLIDE FASTENERS
Andrew Kafko, New York, N.Y. (915 E. 17th St., Brooklyn 30, N.Y.), and Cecil Fischer, 92 Liberty St., New York, N.Y.
Filed May 18, 1959, Ser. No. 814,015
19 Claims. (Cl. 2—234)



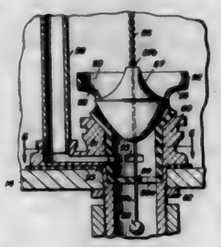
1. A combined retaining and signaling device for garment slide fasteners, comprising: a housing; attaching means mounted on said housing and adapted to be connected to the tab of a garment slide fastener; mounting means for supporting said housing in detachable relationship on the garment with which the slide fastener is associated; audible signaling means carried by said housing, said audible signaling means comprising an expandable sound chamber and a movable sounder element supported therein; means positively biasing said expandable sound chamber toward expanded condition when said housing is detached from said mounting means and freely suspended on said attaching means whereby said movable sounder element is free to move in said expanded sound chamber; and means for retaining said expandable sound chamber in collapsed condition and rendering said movable sounder element immovable when said housing is supported by said mounting means.

2,949,613
FLAPPER FLUSH VALVE
John E. Svabek, Jr., Westchester, Carl R. Stone, Lombard, and Edward G. Schmidt, La Grange, Ill., assignors to Crane Co., Chicago, Ill., a corporation of Illinois
Original application May 21, 1954, Ser. No. 431,435, now Patent No. 2,756,437, dated July 31, 1956. Divided and this application July 9, 1956, Ser. No. 596,694
6 Claims. (Cl. 4—57)



1. In a valve structure having a port opening and a valve seat around the opening, a closure member mounted for swinging movement into the open and closed positions, said closure member comprising a peripheral flange portion extending over and engaging the valve seat in the closed valve position and an integral central portion closing and sealing the center of the peripheral portion, said central portion being formed into a substantially liquid impervious pocket having an open mouth, a substantially liquid impervious float element received within the pocket, said closure member including an annular portion extending inwardly from the side of the pocket at the mouth thereof whereby to reduce the size of the mouth opening, said float element being substantially rigid and provided with surface means snugly engaging the annular portion continuously therearound, said float element being of at least generally the shape of a substantial portion of an egg vertically disposed within said open pocket, said egg portion having circular sections normal to the long axis of the egg, said float element having an axis corresponding to the long axis of the egg which extends at least generally normal to the plane of the port opening when the closure member is closed, said pocket of the central portion of the closure member at least substantially closely conforming to the float element therewithin, at least part of said closure member immediately adjacent the inwardly extending portion being deformable and resilient for insertion of the float element within said pocket.

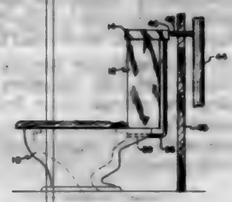
2,949,614
FLUSH MECHANISM FOR TOILETS
Cecil S. Eddowes, San Isidro, Lima, Peru, assignor to Guardian S.A., Lima, Peru, a corporation of Peru
Filed Dec. 17, 1957, Ser. No. 703,305
4 Claims. (Cl. 4—57)



1. In a flush tank which includes a stand pipe, a float operated valve operatively connected with said stand pipe, the improvement comprising an outflow fitting which has a seat disposed in it, said seat composed of a resilient material and having a cylindrical portion and a cup-shaped portion whose side wall is flared outwardly, a circular edge at the juncture of said liner portions, a flush ball having an outwardly sloped lower wall and movable between seated and unseated positions in the seat, said ball when seated making a line contact on said edge, said flush ball having side walls sloped in the same direction as said ball with the angle of slope being more acute than the slope of said seat side walls so that a portion only thereof contacts a portion of the laterally adjacent side walls of the cup-shaped portion of said seat.

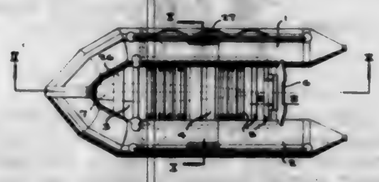
2,949,615
WATER CLOSET VENTILATOR
John William Farrell, 10320 W. 14th St., Denver, Colo.
Filed Jan. 2, 1958, Ser. No. 706,672
5 Claims. (Cl. 4—216)

1. A water closet ventilator comprising a bowl and associated flush tank, a cover on the flush tank provided with passageways therein communicating the interior and exterior of the flush tank and valve means in each of said passageways adapted to permit selective entry of a gas through a first passage into the interior of the flush



tank and selective exit of a gas through a second passage from the flush tank.

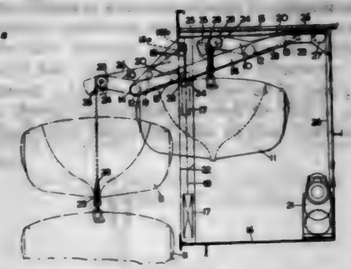
2,949,616
COLLAPSIBLE BOATS
Richard Desanges, Courbevoie, France, assignor to Societe Zodiac, Rochefort-sur-Mer, France, a corporation of France
Filed July 29, 1957, Ser. No. 674,870
Claims priority, application France Aug. 3, 1956
5 Claims. (Cl. 9—2)



1. A collapsible boat comprising a pair of inflatable tubes disposed in spaced, side by side fashion to form the sides of the boat and connected at one end to form the bow of the boat and spaced laterally apart at the other end to form the stern of the boat, a flexible member connected to and extending between the tubes and defining the bottom of the boat, a plurality of floor panels arranged transversely between the tubes and hingedly connected together to constitute the floor of the boat, a rear panel hingedly connected to the floor panels and disposed laterally between the tubes at the stern, locking means locating said rear panel in a fixed, substantially vertical position, an inflatable tubular member forming the keel of the boat and interposed between the bottom and the floor of the boat and extending symmetrically along the longitudinal axis of the boat, a cross member secured to the lower end of the rear panel and said locking means including an adjoining removable cross member at the rear transverse end of the floor panel and an interlocking tongue and groove connection between said cross member on the rear panel and said adjoining removable cross member.

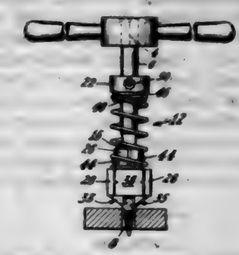
2,949,617
SHIPS' LIFEBOAT DAVITS
Humphrey George Taylor, deceased, late of Wolverhampton, England, by Harry R. Powell, Stourbridge, England, and Thomas H. Wolverson, 47 Queen St., Wolverhampton, England, administrators
Filed Oct. 18, 1956, Ser. No. 616,883
Claims priority, application Great Britain Oct. 18, 1955
5 Claims. (Cl. 9—41)

1. A ship's lifeboat davit of the type having two davit arms from the ends of which a lifeboat is suspended, a pair of fixed straight tracks disposed athwartships between two decks, rollers connected to said arms and engaging said tracks so as to permit movement of said davit arms between outboard and inboard positions, a pulley pivotally fixed to said tracks, a flexible element leading over said pulley and having one end anchored to said davit arms inboard of said pulley, and a weight



suspended from the opposite end of said flexible element to exert at all times a force on said davit arms in an outboard direction.

2,949,618
COMBINED TAP AND DEBURRING CUTTER HAVING CUTTER RESILIENTLY INTERLOCKED WITH TAP FLUTES
Leonard T. Peyser, White Plains, and William Halpern, Harrison, N.Y., assignors to Vermon Devices, Inc., Mount Vernon, N.Y., a corporation of New York
Filed July 10, 1957, Ser. No. 671,101
14 Claims. (Cl. 10—140)

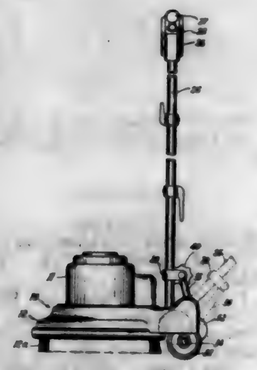


1. A deburring tool for use in conjunction with a threaded tap having axially extending flutes comprising a tool body having a blade holder defining a central axial bore for accommodating a threaded tap in concentric relationship, said blade holder being mounted on the tap concentrically thereof for sliding axial movement thereon, a spring means coaxially positioned about the tap, one end of said spring means engaging an end of said blade holder which is contiguous the shank portion of the tap, the opposite end of said spring means being adjustably fixed to the shank portion of the tap, whereby said spring means urges said blade holder toward the threaded end of the tap, said blade holder being made of a resilient material having a normal shape which may be deformed radially outwardly, a plurality of cutting blades supported by said blade holder to be maintained thereby resiliently in interlocking engagement with the flutes of said tap to provide a driving relationship therewith, said blade holder including abutment means limiting axial movement of said cutting blades in the direction of the shank end of the tap, and means maintaining said blade holder in a position in which the cutting blades are seated against the flutes of the tap.

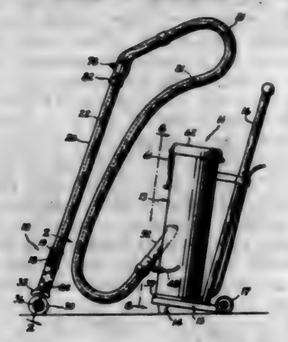
2,949,619
FLOOR MACHINE WITH RETRACTABLE WHEELS AND ADJUSTABLE HANDLE ASSEMBLY
William E. Holt, 651-657 20th St., Oakland, Calif.
Filed Apr. 11, 1957, Ser. No. 652,196
7 Claims. (Cl. 15—49)

1. A floor maintenance machine comprising a main housing, a rotary floor treating element positioned within

said main housing, a pair of laterally spaced auxiliary housings projecting rearwardly from the rear side of said main housing, a handle assembly pivotally mounted in and extending between said auxiliary housings, an axle mounted in and extending between said auxiliary housings rearwardly of the pivot axis of said handle assembly, a pair of bell-crank levers pivotally mounted on said axle, a pair of housing supporting wheels carried on the forward ends of said bell-crank levers and positioned within said auxiliary housings, means forming a pivotal connection between the rear ends of said bell-crank levers and said handle assembly and arranged to raise and lower said supporting wheels relative to said rotary floor treating element on movement of said handle assembly from an upright transport or storage position and a lower inclined operating position, respectively, and means for automatically locking said handle assembly in said lower inclined operating position and also when in said upright transport or storage position.

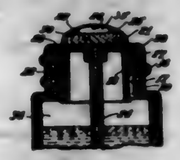


2,949,620
FLOOR MOPPING MACHINE
John W. Noble, R.D. 5, Fairmount Road, Alliance, Ohio
Filed Jan. 29, 1957, Ser. No. 637,017
5 Claims. (Cl. 15—98)



5. Floor cleaning apparatus comprising a handle, water-supplying means, first line means leading to the lower end of the handle and in communication with the water-supplying means, a vacuum source, second line means leading to the lower end of the handle and in communication with the vacuum source, a sponge supported at the lower end of the handle, a hollow shoe supported at the lower end of the handle and having a perforate face in apposite relationship with the sponge, the first line means opening from the lower end of the handle to the vicinity of the sponge to supply water in the vicinity of the sponge the second line means leading to and communicating with the shoe, means for turning the water-supplying means on and off, the shoe being fixed to the handle, the sponge depending below the shoe and being mounted for limited sliding movement with respect to the handle and toward and away from suction-applying contact with the shoe, and means for normally biasing the sponge away from contact with the shoe, whereby the shoe and sponge are brought into suction-applying contact by bearing down on the handle against the biasing means.

2,949,621
LIQUID APPLICATOR
Finn Clement, Cincinnati, Ohio, and John M. Sharf, Lancaster, Pa., assignors, by direct and mesne assignments, to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 11, 1957, Ser. No. 702,186
14 Claims. (Cl. 15—133)



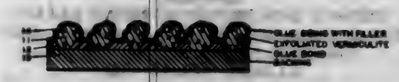
7. A liquid applicator comprising the combination of a container having liquid therein, said container having an opening, an adapter member fitted to said opening, said adatper member having a transverse wall portion with an aperture therein, a substantially hemispherical applicator diaphragm attached to said transverse wall to form a liquid reservoir, means for establishing flow of liquid from said container into said reservoir, at least one relatively small opening in said diaphragm whereby rubbing said diaphragm over a surface while said container is in upright condition causes outflow of liquid through the opening in the diaphragm.

2,949,622
LIQUID APPLICATORS
Finn Clement, Cincinnati, Ohio, assignor to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio
Filed July 6, 1959, Ser. No. 825,940
4 Claims. (Cl. 15—133)



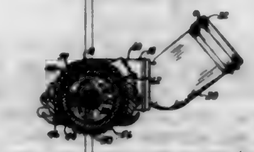
1. An applicator for a liquid container comprising an adapter member secured to the opening in said container, said adapter member having a wall with an aperture therein, a draft tube depending from said aperture and extending into the liquid inside the container body, a resilient, substantially hemispherical diaphragm peripherally secured to said adapter thereby encolsing a liquid reservoir between the diaphragm and the adapter, at least one concavity in the surface of the diaphragm, at least one relatively small opening in said concavity to permit outflow of liquid from said reservoir whereby the application of liquid from the reservoir is facilitated on initial rubbing of said diaphragm over a surface.

2,949,623
HIGH SPEED FRICTIONAL GLOSSIFYING MEDIUM
Lloyd E. Dimond, New Albany, Ind., assignor to General Plywood Corporation, Louisville, Ky., a corporation of Kentucky
Filed May 16, 1958, Ser. No. 735,885
8 Claims. (Cl. 15—209)



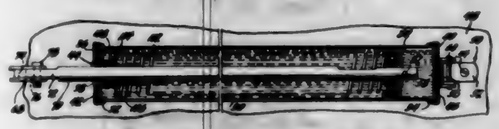
1. A frictional rubbing medium presenting a working face essentially including adherently-bonded, non-resilient, unabrasive, heat-insulating, expanded inorganic particles which are derived from hydrated unexpanded inorganic particles having the property of expanding from about six to about twenty times when suitably heated to form a relatively light material of low density.

2,949,624
SUCTION NOZZLE
Robert C. Lampe, Stamford, Conn., assignor to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,640
5 Claims. (Cl. 15—356)



1. In a vacuum cleaner nozzle, a hollow body formed with an elongated suction opening, a surface agitator rotatably mounted in said opening, a pair of surface engaging wheels, a gear train including a gear fixed to one of said wheels, an idler gear meshing therewith and with a gear fixed to said agitator for transmitting rotation from said wheel to said agitator, and means for mounting said wheels and said agitator, respectively, for independent vertical movements each with respect to said body through arcuate paths about a common center concentric with the center of said idler gear.

2,949,625
DOOR CLOSER
Hubert A. Gayer, 9 Brookside Drive, Richardson Park, Wilmington, Del.
Filed Feb. 21, 1956, Ser. No. 566,901
11 Claims. (Cl. 16—52)



9. In a door closer having a cylinder adapted to contain fluid and a piston rod extending into said cylinder, a piston slidable axially along said rod within said cylinder and comprising a member in slidable sealing engagement with the inner wall of said cylinder, said piston rod having a plurality of reduced sections of different size along which the piston may travel thereby providing a variable orifice between said piston and rod permitting variable flow of fluid past said piston during movement of the latter in both directions, and second orifice means in said piston operable to provide a relatively unrestricted path of flow of said fluid past said piston during movement of the latter in one direction and to obturate said path of flow of fluid past said piston during movement of the latter in the opposite direction.

2,949,626
SLIDING DOOR GUIDE UNIT
Dwight W. Blackmer, Elkhart, Ind., assignor to Elco Products Company, Chicago, Ill., a corporation of Illinois
Filed June 28, 1958, Ser. No. 743,431
8 Claims. (Cl. 16—90)



1. In a sliding door guide unit, the combination of a base member having longitudinally extending opposite side edges and transversely extending opposite end edges, means for securing said base member to the floor of a doorway with the side edges thereof abreast of the path of a sliding door operatively associated with said doorway, a pair of guide members with which said base member cooperates to join said guide members at fixed adjusted position in opposite directions from said base member along a line extending lengthwise of said side edges of the base member, each of said guide members comprising a metal strip having an upwardly bent tongue at one end thereof and a shank portion defined by the area of the strip between said tongue and the other end thereof, a first stop extending upwardly from said base member, a sheath of friction-free synthetic resinous material in which the upper end of the tongue of one of said guides is enclosed to provide a second stop which in cooperation with said first stop provides a pair of related guides with which a sliding door travelling at one side of said first stop is engageable, and a similar sheath in which the upper end of the tongue on the other guide member is similarly enclosed to define a third stop which in cooperation with said first stop provides a pair of related guides with which a sliding door travelling at the other side of said first stop is engageable.

2,949,627
FRICTION HINGE
Robert J. Holton, Cleveland, Ohio, assignor to Tinnerman Products Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 25, 1957, Ser. No. 642,898
4 Claims. (Cl. 16—140)



1. In a fastening device for embracing a swivel shaft of a vent window frame and the like, mounted on a support, to support the swivel shaft in frictional rotatable relation therewith, comprising, a one-piece sheet metal clip bent intermediately into a generally U-shaped configuration defining a base portion and a pair of resilient arm portions, said device comprising a back marginal edge and a front marginal edge, each of said arm portions being dis-

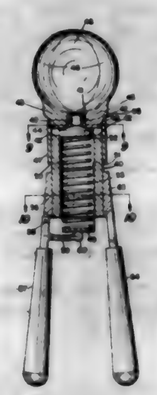
posed in confronting relation with respect to the other arm portion, each of said arm portions being deformed outwardly intermediate its ends and generally transverse of the respective arm portion, said deformed portions being oppositely disposed and coacting to form a socket for rotatably receiving the swivel shaft therein, each of said arm portions having a tab disposed at the free end thereof, adjacent said back marginal edge, said tabs being disposed in planes extending generally transverse to the lengthwise axis of said socket, each of said tabs comprising an aperture therethrough, said arm portions being adapted for movement toward one another against their spring-like resistance to deformation for frictionally embracing the swivel shaft when the latter is in said socket, whereby said tabs will be disposed in overlapping relation with said apertures therethrough generally axially aligned, for receiving a cooperating fastening element to attach said device to the support.

2,949,628
LOCKABLE HINGE FOR A CHILD'S CAR BED
Leo H. Kolton, 6622 N. Francisco St., Chicago, Ill.
Filed Jan. 27, 1958, Ser. No. 711,438
1 Claim. (Cl. 16—145)



A lockable hinge comprising, in combination, first and second flat elongated members adapted to hinge between a first position wherein the elongated members are overlappingly aligned with their longitudinal axes parallel and a second position wherein the members are overlappingly transverse to each other; a hinge pin extending through the longitudinal axes of said first and second members; the first member having, along its longitudinal axis and spaced, in order, from said hinge pin, a latch aperture through said member, a stop stud extending from said first member into the plane of the second member, and a manual control button slidably positioned in an aperture in said first member and presenting spaced heads thereon disposed on opposite sides of the first member, the second member having a relatively short portion thereof which overlaps said first member and which has, along its longitudinal axis and spaced in order, from said hinge pin, a latch aperture through said second member adapted to be aligned with said latch aperture in said first member and a stud-engaging part adapted to engage said stop stud when the first and second members are overlapping aligned, the adjacent terminal end of the second member being closer to the hinge pin than said manual control button; and a locking means for said hinge including an elongated flat spring member whose longitudinal axis lies parallel to the longitudinal axis of said first member, said spring member being disposed on the side of the first member opposite to said second member, one end of said spring member being secured to said first member at a point further from the hinge pin than the spacing of the control button from the hinge pin, the other end of said spring member defining a latch element extending transversely of the axes of said first and second members and normally positioned in the latch aperture of the first member and adapted to move under the bias of said spring member into the latch aperture of the second member, a portion of the spring member intermediate its ends overlying one head on said control button and adapted to be engaged and moved by said control button to selectively effect withdrawal of the latch element from the latch aperture in said second member to unlatch said hinge.

2,949,629
DEVICE FOR MOLDING MEAT BALLS
Michele Falco, 296 Liberty St., Painesville, Ohio
Filed Sept. 5, 1958, Ser. No. 759,274
4 Claims. (Cl. 17—32)



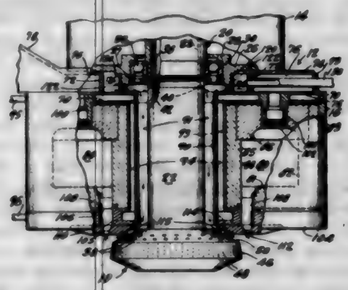
1. In a device for making meat balls, a cylindrical housing, a plurality of segments, not less than three in number, coacting when in a closed position, to form a hollow sphere, said segments being pivotally mounted on one end of said housing for movement between open and closed positions of said segments, each of said segments including a camming surface, a cylindrical member carried by and coaxially disposed about said housing and slidable axially relatively to said housing and having a camming edge at its upper end, spaced handles connected to said housing, and means associated with one of said handles for advancing said cylindrical member axially of said housing to cause said camming edge to coact with said camming surfaces of said segments to move said segments to the closed position.

2,949,630
TYING PLIABLE CONTAINERS
Gustav Sachsenröder, Sr., 305 Friedrich-Engels-Allee, Wuppertal-Barmen, Germany, and Theodor Schröder, 33 Kampchen, Wuppertal-Beyenburg, Germany
Filed Mar. 19, 1956, Ser. No. 572,251
Claims priority, application Germany Mar. 25, 1955
10 Claims. (Cl. 17—34)



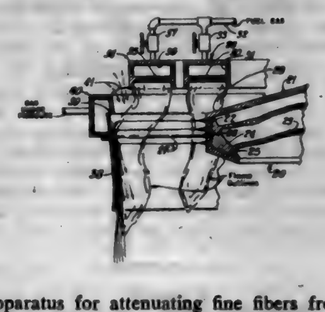
1. A machine for tying an end portion of a pliable container with a thread or the like, comprising in combination, a support; a knot forming device and a pleating device mounted on said support for movement relative to each other; said knot forming device including an elongated tubular member looped into the embryo shape of the knot to be tied, the loop defining an axial passage having two open ends and said member being formed with a longitudinal slit in said passage, and a source of fluid under pressure communicating with one end of said tubular member for longitudinally propelling a thread through said member by means of said fluid, whereby said thread is shaped into the embryo shape of the knot to be tied; and said pleating device including a carrier, a plurality of pleating blades, each having an edge portion, and mounted on said carrier to form two groups of blades movable relative to each other between a first position in which the edge portions of said groups of blades spacedly face each other, and a second position in which said edge portions of said groups of blades are meshed to define a plait pattern therebetween, and actuating means for simultaneously actuating movement of said blades between said first and second positions thereof and movement of said carrier axially relative to said passage in said looped tubular member in such a manner that said edge portions at least partially project from one of said open ends of said passage when in said first position thereof, and at least partially project from the other open end of said passage when in said second position, whereby an end portion of a pliable container fed to said one open end of said passage is grasped by said edge portions, pulled through said passage, simultaneously pleated, and positioned for subsequent tying of a knot by said knot tying device by the movements of said carrier and of said pleating blades.

2,949,631
APPARATUS FOR FORMING FIBERS
Dale Kleist, St. Louisville, and Henry J. Snow, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Dec. 6, 1956, Ser. No. 626,631
2 Claims. (Cl. 18—2.5)



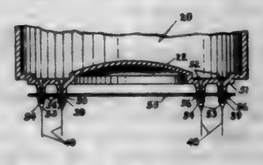
1. Apparatus for processing heat-softenable mineral material including, in combination, a support, a hollow rotor, a tubular shaft supporting the rotor, journal means carried by the support for rotatably supporting the tubular shaft and rotor, said tubular shaft being arranged to accommodate delivery of heat-softened mineral material into the rotor, means for rotating the shaft and rotor, said rotor having a peripheral wall formed with orifices through which the mineral material in the rotor is projected by centrifugal forces to form discrete bodies of the material, an annularly-shaped burner surrounding said shaft and having a combustion zone adapted to burn a combustible mixture, an annularly-shaped manifold adapted to supply combustible mixture to the combustion zone, said burner being formed with an annularly-shaped orifice substantially concentric with the peripheral wall of the rotor and through which hot gases of combustion from the combustion zone are discharged as a blast into engagement with the discrete bodies for attenuating the bodies to fibers, said tubular shaft being spaced from the burner to provide an elongated passage of annular cross-section, an annular chamber concentric with the annularly shaped manifold, a circular wall of the chamber arranged concentric with the tubular shaft being formed with circumferentially spaced restricted openings establishing communication between the annular chamber and the elongated passage, and means connected with said annular chamber for admitting a gas under pressure into said annular chamber for distribution through the openings in the circular wall of the chamber into the elongated passage and generally downwardly along the gases discharged from the annularly shaped orifice.

2,949,632
APPARATUS FOR CENTRIFUGALLY FORMING FIBERS
Dale Kleist, St. Louisville, and Henry J. Snow, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,870
15 Claims. (Cl. 18—2.5)



5. Apparatus for attenuating fine fibers from fiberizable material, said apparatus comprising, in combination, a rotary centrifuge the periphery theroef having a plurality of stream forming orifices therein, annular heat source positioned for applying heat onto the periphery of said centrifuge and into a first zone adjacent the periphery of said centrifuge, an annular blower having its blast emitting orifice radially spaced from said heat source and directed axially of said centrifuge, said heat source and said blower defining therebetween an annular passageway open outwardly to the surrounding atmosphere, said blower acting to apply tractive forces to fibers attenuated from said streams and to induce gases through said passageway into the space between the periphery of said centrifuge and said blower.

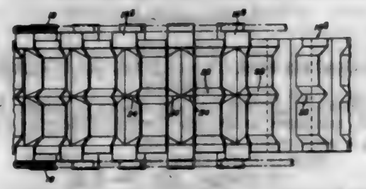
2,949,633
APPARATUS USED IN THE PRODUCTION OF GLASS FIBERS
Warren Wendell Drummond, Bowling Green, William B. Hullhorst, Rossford, and Jesse H. Plummer, Toledo, Ohio, assignors to L.O.F. Glass Fibers Company, Toledo, Ohio, a corporation of Ohio
Filed Dec. 31, 1956, Ser. No. 631,866
16 Claims. (Cl. 18—8)



1. A glass melting chamber having a wall adapted to contain molten glass, said wall being provided with an external projection defining an orifice through which molten glass is exuded, and a heat reflective member positioned in surrounding relation to said projection and

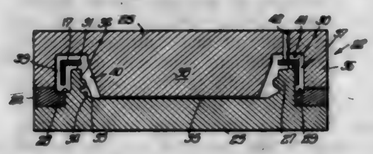
spaced from said wall, said heat reflective member being adapted to primarily deter radiant heat transfer from said wall to the extremity of said projection.

2,949,634
BRIQUETTING ROLL
Earl H. Shipley, Homewood, Ill., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 3, 1959, Ser. No. 790,884
2 Claims. (Cl. 18—9)



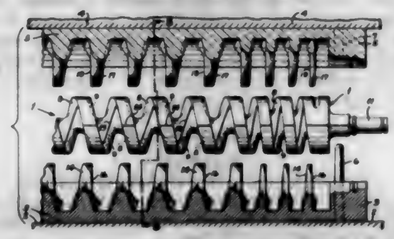
1. A briquetting roll comprising a substantially cylindrical body having uniformly spaced slots in its circumferential face extending the width of the body, and a groove extending around its circumference but being of less depth than said slots, respective inserts received in said slots, and means removably fixing said inserts to said body, said roll having briquette-forming cavities uniformly spaced around its circumferential face, each of said cavities having side, end and bottom working faces, said side working faces being formed on said inserts, said end and bottom working faces being formed on said body by the walls and bottom of said groove.

2,949,635
SEAL MOLDING APPARATUS
Louis L. Chiero, Chicago, Ill., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Feb. 26, 1957, Ser. No. 642,470
2 Claims. (Cl. 18—36)



1. Apparatus for forming a radially acting shaft type seal having an annular block-like body portion in which is embedded a reinforcing stamping of generally L-shape cross section and being defined by an axially directed flange integral with a radially inwardly directed flange, the inner periphery of said body portion having integrally formed therewith a radially acting flexible sealing lip portion, said apparatus comprising coacting top and bottom die members, said bottom die member having a raised cylindrical central seal forming portion receiving thereabout in resting engagement with a recessed peripheral shoulder a stripper ring, an inner surface portion of said stripper ring being grooved for cooperation with said bottom die member in forming the body portion of a seal, the outer periphery of said seal forming portion being provided with separate one-piece stamping positioning elements projecting above and radially outwardly therefrom for engagement with the inner surfaces of the flanges of a stamping to space and hold the same circumferentially uniformly out of engagement with the top and outer peripheral surfaces of said seal forming portion, said seal forming portion being centrally recessed to define a sealing lip portion forming cavity, said top die member having an outer depending annular collar receivable about the seal forming portion of said bottom die member in radially spaced relation thereto and in engagement with the top surface of said stripper ring, an annular seal shaping groove inwardly of said collar, and a downwardly projecting portion centrally receivable in the sealing lip portion forming cavity of said bottom die member in radially spaced relation to the inner periphery thereof, said seal shaping groove having downwardly projecting pin means therein for engagement with the outer surface of the radial flange of a stamping and coperating with said stamping positioning elements to hold said stamping within said apparatus to prevent dislocation of the same upwardly from said stamping positioning elements during the application of seal molding pressure.

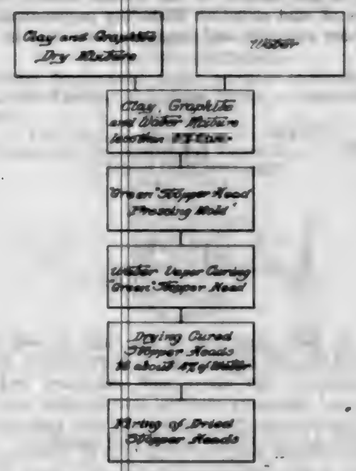
2,949,636
MOLD FOR MAKING A SPIRAL THREADED RUBBER MOLDED ARTICLE
Robert E. Mastin, Ridgewood, N.J., assignor to La Favorite Rubber Manufacturing Co., Hawthorne, N.J., a corporation of New Jersey
Filed July 14, 1958, Ser. No. 748,443
3 Claims. (Cl. 18—42)



1. A mold for forming a helical threaded article having a plurality of threads characterized by the fact that the mold consists of two molding halves, each half having molding surfaces of helical configuration, one side of the bottom molding half having fingers with molding surfaces of helical configuration extending upwardly through an angle of 135° to mold one side of the forward face of each thread, the corresponding side of the top molding half having fingers with molding surfaces of helical configuration extending downwardly through an angle of 135° to mold the same side of the rear face of each thread, the other side of the bottom molding half having fingers with molding surfaces of helical configuration extending upwardly through an angle of 135° to mold one side of the rear face of each thread, the other side of the top molding half having fingers with molding surfaces of helical configuration extending downwardly through an angle of 135° to mold the remaining side of the forward face of each thread, and all of the fingers having complementary non-molding surfaces, the non-molding surfaces of the fingers on the bottom molding half for the forward faces of the threads seating with the non-molding surfaces of the fingers on the top molding half for the rear faces of the threads and the non-molding surfaces of the fingers on the top molding half for the forward faces of the threads slidingly seating with the non-molding surfaces of the fingers on the bottom molding half for the rear faces of the threads when the mold halves are assembled.

2,949,637
PROCESS OF MAKING LADLE STOPPER HEADS
Michael O. Holowaty, Gary, and Albert M. Kroner, Valparaiso, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Filed Sept. 11, 1958, Ser. No. 760,317
6 Claims. (Cl. 18—47.5)

1. The process which comprises forming an intimate mixture of water, clay and graphite having a ratio of graphite to clay of not more than 0.35 and a maximum of 8% by weight of water in the mixture, pressing the mixture into a predetermined shape, water vapor curing



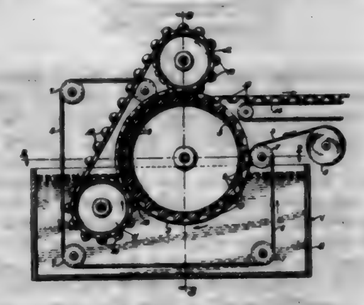
the pressed shape to develop a primary mineralogical cementing bond, drying the cured pressed shape to a moisture content of not more than 4%, and burning the dried cured pressed shape at an elevated temperature.

2,949,638
METHOD FOR PRODUCING SPECTACLE TEMPLATES
Cecil T. Butler, 12715 Atherton Drive, Silver Spring, Md.
Filed Apr. 2, 1958, Ser. No. 726,820
2 Claims. (Cl. 18—55.05)
(Granted under Title 35, U.S. Code (1952), sec. 266)



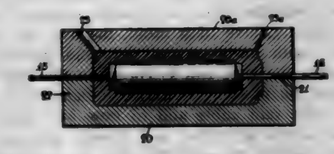
1. In a method of making individually fitted spectacle templates which are characterized by freedom from slippage and objectionable pressure on ears, temples and head of a wearer, the spectacles comprising a frame having plastic composition templates including ear loop portions and reinforcing metallic wires extending longitudinally through the templates including the ear loop portions and embedded in the plastic composition of the templates, the improvements which comprise completely removing the plastic composition of the templates between their ear loop portions and ends until corresponding lengths of the reinforcing wires are bared, applying the spectacles to a prospective wearer, producing a clearance between the templates of the spectacles and ears and adjacent head portions of the wearer by allowing the wearer to self-adjust the spectacles to a desired pressure, maximum comfort of fit, and exact positioning with respect to the ears and adjacent head portions of the wearer, shaping the resulting lengths of bared wires of the templates to conform approximately to the contours of the ears and adjacent head portions of the wearer while maintaining the clearance between the bared wires and the ears and adjacent head portions of the wearer, filling the clearances with an air-hardenable moldable material and embedding the bared wires therein, allowing the material to harden in situ for reproducing in its surface all details of configuration of surfaces of the ear and adjacent head portions of the wearer, and removing the templates together with their resulting embedded wires from the wearer without disturbance of the embedding hardened moldable material.

2,949,639
PROCESS FOR SHAPING SHEET PLASTIC MATERIAL
Hiram W. Woodward, R.D. 2, Owings Mills, Md.
Filed May 17, 1955, Ser. No. 508,964
1 Claim. (Cl. 18—56)



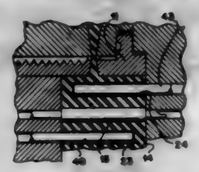
The process which comprises continually advancing a sheet of thermoplastic material with at least one surface thereof in contact with a liquid medium maintained at a temperature requisite to render said material moldable, continuously molding a series of article-receiving cavities along the length of said sheet while said sheet is in direct heat exchange relationship with said medium by bringing complementing male and female mold elements into cooperating molding relationship with the sheet material therebetween while the material is maintained in direct heat exchange relationship with said liquid medium, excluding said medium from said article-receiving cavities during said molding step by closure of said molds, removing said sheet from contact with said heated liquid medium, cooling it to shape retentive temperature, and thereafter separating said molded sheet in the form of a series of interconnected molded cavities from at least one of said mold members.

2,949,640
METHOD OF PRODUCING ELECTRIC CAPACITOR
Joseph Leo Collins, Mattapoisett, and Louis Kahn, North Dartmouth, Mass., assignors to Aerovox Corporation, a corporation of Massachusetts
Filed Sept. 24, 1953, Ser. No. 382,113
5 Claims. (Cl. 18—59)



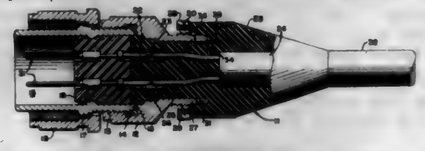
1. The method of impregnating an electrostatic capacitor section that consists essentially of a roll composed of electrodes with intervening and encompassing paper sheets, and terminals protruding therefrom by an impregnating cycle which comprises evacuating the section of air and moisture and introducing into the section under vacuum a mixture of polyunsaturated alkyd resin, alcoholized and acidulated and reacted to an acid number below 20 with a compatible free flowing liquid copolymerizable monomer and inhibitor at a temperature below 150 degrees F.

2,949,641
ELECTRICAL CONNECTOR MANUFACTURE
Edward Clarke Quackenbush, Hamden, Conn., assignor to The Whitney-Blake Company, New Haven, Conn., a corporation of Connecticut
Filed June 26, 1956, Ser. No. 593,863
2 Claims. (Cl. 18—59)



1. A method for forming connector bodies which comprises enclosing a rigid, open-ended connector shell in a mold having a pin projecting therefrom into the space within said shell, introducing dielectric molding composition into said mold to fill the space within said shell and about said pin, curing the said molding composition in said mold under suitable conditions of heat and pressure to form a solid dielectric insert within said shell, the surface of said pin being non-adherent to said molding composition whereby under said curing conditions the inherent volumetric shrinkage of said molding composition is predetermined to take place about said pin and said molding composition bonds to said shell.

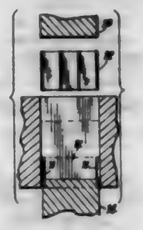
2,949,642
METHOD OF ASSEMBLING A MOLDED CABLE CONNECTOR
Morris S. Lieberman, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 14, 1957, Ser. No. 646,180
1 Claim. (Cl. 18—59)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A method of assembling a connector in moistureproof relation to a wire cable comprising the steps of securing an insert carrying contacts electrically connected to the wires of the cable in a metal backshell carrying an external ring near one end which has a multiplicity of longitudinal apertures, said backshell further having a multiplicity of lateral apertures near the same end, packing the interior of the backshell with a molding material to hold the connected wires in position, placing the ring into an annular groove of a mold, packing the interior of the mold with molding material, said molding material engaging the ring and surrounding the end of the cable, curing the molding material sufficiently to cause it to bond with said cable and to flow into said longitudinal and lateral apertures and thereby grip and lock the molded material to said ring and to said backshell, and removing the molded cable assembly from the mold.

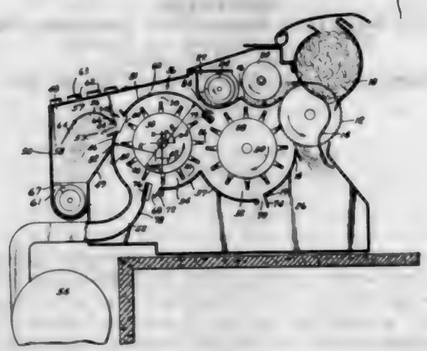
2,949,643
METHOD OF CO-MOULDING BRICK
Louis H. Hosbein, Glencoe, Ill., assignor to M. H. Detrick Company, Chicago, Ill., a corporation of Delaware
Filed Jan. 27, 1958, Ser. No. 711,401
5 Claims. (Cl. 18—59)

1. The method of co-moulding basic refractory material with a self sustaining metallic structure including inner members positioned internally of the finished brick, which consists in mounting and holding said metallic structure in a mould below the top edge of and in spaced relation to the bottom of the mould cavity, with the members of said structure extending perpendicularly to said bottom and with said inner members held in spaced



relation to each other and to the sides of said mould, filling said mould cavity with said refractory material below, between and above said members, and compressing said refractory material into finished brick form toward and between the members of said metallic structure from both above and below said structure.

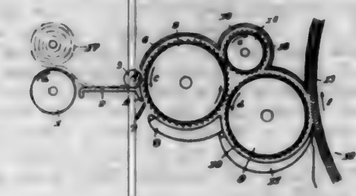
2,949,644
TRIPLE MOTING GIN
Frank E. Deeme and Joe E. Salmon, Birmingham, Ala., assignors to Continental Gin Company, Birmingham, Ala., a corporation of Delaware
Filed Dec. 8, 1954, Ser. No. 473,867
10 Claims. (Cl. 19—58)



1. In a centrifugal mote and trash separator for use in separating motes and trash from lint, in combination, a chamber, said chamber being of generally cylindrical configuration, a rotatable impeller mounted in said chamber comprising a generally cylindrical member having its axis of rotation longitudinally disposed with respect to said chamber, said chamber having an inlet opening for the introduction of a mixture of airborne lint and trash thereto and an outlet opening for the discharge of lint therefrom, said impeller forming a passage with the inner periphery of said chamber, with said lint being movable through said passage, a trash discharge opening intermediate said inlet and said outlet opening with said trash discharge opening being completely clear and unobstructed throughout the length of said chamber, the portion of said passage preceding said trash discharge opening being curved, with said trash discharge opening being tangent the outer periphery of the curved portion of said passage, said impeller being rotatable to move the mixture of airborne lint and trash through said inlet opening and along said passage to said trash discharge opening for

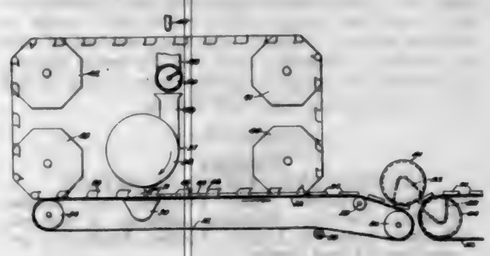
discharging said trash by centrifugal force and to move the lint outwardly through said outlet opening, means for rotating said impeller.

2,949,645
CARDING MACHINE
Shozo Noda, Nagoya-shi, Japan, assignor to Howa Kogyo Kabushiki-Kaisha, Aichi-ken, Japan, a corporation of Japan
Filed Jan. 4, 1954, Ser. No. 402,802
Claims priority, application Japan Apr. 1, 1953
7 Claims. (Cl. 19—105)



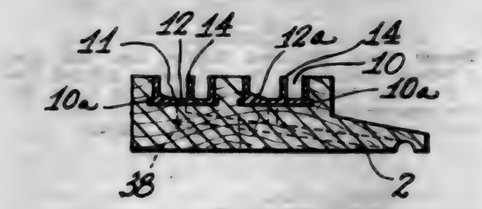
3. In a carding engine, the combination of a feed roller, a main cylinder, a first licker-in roller disposed adjacent said feed roller, a second licker-in roller disposed between said first licker-in roller and said main cylinder, said second licker-in roller directly cooperating with said first licker-in roller and with said main cylinder, and a transfer roller directly cooperating with said two licker-in rollers, whereby said transfer roller forms a triangle with said licker-in rollers, said licker-in rollers being mounted for rotation in a direction opposite to that of said cylinder, and said transfer roller being mounted for rotation in the same direction as said cylinder, said transfer roller and said two licker-in rollers each being provided with garnett wire, the direction of the garnett wire of said transfer roller being opposite to that of said two licker-in rollers.

2,949,646
METHOD FOR FORMING FIBROUS STRUCTURES
James d'A. Clark, Longview, Wash., assignor to Changewood Corporation, Chicago, Ill., a corporation of Illinois
Filed Nov. 24, 1953, Ser. No. 394,022
6 Claims. (Cl. 19—155)



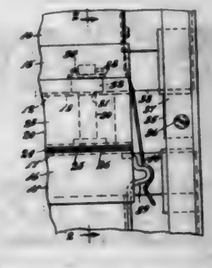
1. The method of depositing fibrous elements to form separated preforms of uniform thickness comprising the steps of issuing the fibrous elements in a substantially continuous stream in one direction through a stationary fiber depositing zone with the stream extending continuously crosswise of the zone, advancing an endless surface through the fiber depositing zone for receiving the stream of fibrous elements thereon in interfelted relation to form the fibrous structure, covering said endless surface with a masking member having a base with openings therethrough of the predetermined shape of the preform defined by vertical walls extending upwardly from the base to provide fiber receiving troughs on said base about the openings, moving the masking member at the same linear speed as the endless surface and with said surface through the depositing zone to receive fibrous elements in a layer of uniform thickness across said masking member including the openings therethrough, separating the masking member with the fibers deposited thereon from the surface to leave mats on the surface corresponding to the shape of the openings in the masking member, removing the elements deposited on the masking member, and returning the masking member to cover the surface in advance of passage through the depositing zone.

2,949,647
SASHLESS WINDOW FRAME STRUCTURE
Romuald Mignealt and Fernand W. Mignealt, both of 332 St. Andre St., Gatineau, Quebec, Canada
Filed June 16, 1958, Ser. No. 742,294
4 Claims. (Cl. 20—11)



1. In a sashless window structure having a wood frame, said frame comprising a sill, jambs and head, said sill having a glass panel receiving groove therein, a glass panel track comprising a channel strip of plastic composition having bottom and side walls engaging the bottom and side walls of said groove, and a longitudinally extending rib on said strip between and in parallel spaced relation to the side walls thereof, said rib extending from one end of said groove and terminating at a point adjacent the midsection thereof, said rib dividing a portion of said channel strip into two parallel paths of panel movement, the remaining portion of said channel strip being undivided to provide a single path of panel movement.

2,949,648
SAFETY ASTRAGAL FOR DUMBWAITER DOORS
William C. Heisler, Clifton Heights, Pa., assignor to Guilbert, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania
Filed Dec. 12, 1957, Ser. No. 702,411
6 Claims. (Cl. 20—19)



1. Closure apparatus for shaftway doors comprising two members one of which is vertically movable with respect to the other to provide a shaftway access opening and at least one of which is a door, a limit positioning device at a side margin of at least one of said members for determining the closed position of said members

and the space therebetween in closed position, said door having a lower horizontal portion extending from one end margin to the other end margin thereof with vertical outer side faces extending upwardly therefrom, a closure for closing the space between said members in closed position having a lower wall section disposed in parallel relation to said horizontal portion and extending therealong and vertical side flange portions extending upwardly along said side faces, spaced connecting pins interposed between said lower wall section and said lower horizontal portion mounting said closure in vertically slidable relation to said door, said connecting pins having stop portions in engagement therewith for limiting the downward movement of said closure, a centrally disposed flat strip of flexible fire resistant material mounted on the lower face of said lower wall section in face to face engagement therewith and extending therealong from one end to the other end of said lower face for engagement with the other of said first mentioned members.

2,949,649
CANOPY
Donald Macy, Richmond Heights, Mo., and Harry Nelson, McKeesport, Pa., assignors to Artcraft Venetian Blind Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Filed June 20, 1957, Ser. No. 666,943
10 Claims. (Cl. 20—57.5)



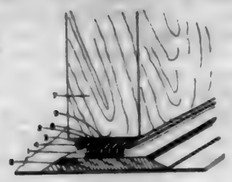
1. In a canopy, a frame comprising a plurality of laterally spaced brackets and a horizontal longitudinal element supported thereby, each bracket including an elongated upper bracket arm and an elongated lower bracket arm perpendicular to said longitudinal element, an angle clip interconnecting one end of the upper bracket arm with one end of the lower bracket arm, a pair of support clips interconnecting the interconnected ends of the upper and lower bracket arms with the longitudinal element, means for mounting the frame to a vertical wall, and a flexible covering disposed in overlying relation to the frame, said cover having one edge in detachable interlocking connection with the longitudinal element and an opposite edge in detachable interlocking connection with said mounting means.

2,949,650
ORNAMENTAL AWNING
William B. Kellett, 3715 E. 4th St., Tucson, Ariz.
Filed July 25, 1958, Ser. No. 751,092
2 Claims. (Cl. 20—57.5)



1. A side wall for an awning comprising a set of polygonal framework consisting essentially of a first set of joined lengths of angle iron forming a rectangular frame, the faces of said first set of joined lengths of angle iron which are disposed in vertical planes being positioned so as to face inwardly toward each other, a first set of scroll work located within and fixedly attached to the inner perimeter defined by the said inwardly turned angle iron faces, a flat-surfaced translucent sheet pressed directly against one entire face of said first set of scroll work, said translucent sheet extending beyond the said perimeter defined by the said inwardly turned angle iron faces but within the outermost boundaries of said first set of joined lengths of angle iron, means holding said translucent sheet within said rectangular frame and directly against said first set of scroll work, a second set of joined lengths of angle iron fixedly attached to said first set of joined lengths of angle iron and forming a right-angle triangular frame having for its base the length of angle iron constituting the upper member of said rectangular frame, the faces of said second set of joined lengths of angle iron which are disposed in vertical planes being positioned so as to face inwardly toward each other, and a second set of scroll work located within and fixedly attached to the inner perimeter defined by the last mentioned faces and the said upper member of said rectangular frame, said triangular frame being open to the free passage of air.

2,949,651
WEATHER STRIPPING
Benjamin J. Hill, 512 W. Midland, Shawnee, Okla., assignor of one-half to Victor Jay Hill, Tulsa, Okla.
Filed Jan. 20, 1958, Ser. No. 710,162
5 Claims. (Cl. 20—69)



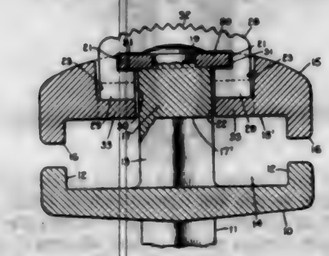
1. Weather stripping for sealing the opening between the underneath surface of a door and the threshold of a doorway which comprises in combination an elongated flat metal housing attachable to the underneath surface of the door, each long edge of said housing having an inward-opening, circular trough depending therefrom, an elongated elastic pliable strip having rounded lengthwise edges and being adapted to slide within said housing with one of said long edges residing within each trough in rotatable relation therewith, the upper surface of said strip defining a hollow groove with the metal housing, longitudinal fins integral with the lower surface of said strip and protruding from said housing.

2,949,652
CONTINUOUS CASTING OF METALS
John Francis Hobbs, Sutton Coldfield, and Thomas Thorley, Coventry, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Feb. 13, 1958, Ser. No. 715,185
Claims priority, application Great Britain Feb. 13, 1957
2 Claims. (Cl. 22—57.2)



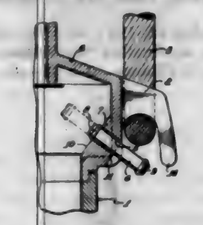
1. An insert for a mold wall of the character described comprising superimposed layers of metallic gauze brazed together and reduced in a rolling operation, said gauze having a smooth finish on the side thereof adapted to be positioned adjacent the mold cavity, and having fine passages therethrough to permit flow of coolant or lubricant through said insert.

2,949,653
JAM-FREEING SLIDER
Louis H. Morin, 888 Grand Concourse, Bronx, N.Y.
Filed June 10, 1954, Ser. No. 435,694
21 Claims. (Cl. 24—205.15)



1. A jam-freeing slider for separable fastener stringers, comprising a slider body defined by channeled walls, one wall having an integral web at one end thereof, said web having an extending bar arranged over and spaced with respect to said wall, the other wall being movable toward and from the first wall, the second named wall having an elongated aperture receiving said bar, said second wall having recessed portions at opposed sides of the aperture, each recessed portion having spaced cam surfaces, a plate fixed to said bar and having sides extending into the recessed portions of the second wall, a member slidably engaging the sides of the plate and having parts extending into said recessed portions, said parts being engageable with said cam surfaces for controlling movement of the second wall.

2,949,654
HOIST CABLE RETAINER
Frederick O. Luenberger, Los Angeles, Calif., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California
Filed Jan. 8, 1957, Ser. No. 633,108
1 Claim. (Cl. 24—238)



In combination: a casing member having an exterior wall, said member carrying a lifting lug; said lug extending in spaced relationship from and along the exterior surface of said wall to form therewith a downwardly opening space for a flexible lifting element; a retainer pin slidably supported by and passing through the wall, said wall being thickened to provide an extended guide for said pin, said pin being supported entirely by said guide, said pin sloping downwardly in a direction exteriorly of the wall, whereby gravity determines a stable position of said pin in which said pin projects substantially across the opening of said space; and means determining opposed limits to the sliding movement of the pin, said pin at one limited position preventing access to said space and at said opposite limited position permitting access to said space, whereby at said one position the flexible element is retained in said space, and at said opposite limited position said flexible element may be removed from or placed into said space, said pin throughout its limits of movement being maintained in sliding engagement with said wall and against separating movement with respect thereto.

2,949,655
METHOD AND APPARATUS FOR MAKING PRESTRESSED SPUN CONCRETE ARTICLES
Jose A. Berumen and Guillermo Berumen, both of Calle Blanco 234 Sur, Torreon, Coahuila, Mexico
Filed Feb. 11, 1957, Ser. No. 639,504
9 Claims. (Cl. 25—30)

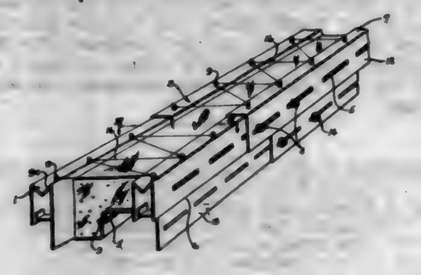


1. Apparatus for forming an article of concrete containing elongated prestressed reinforcing means which comprises: an assembly for maintaining tension in elongated reinforcing means, said assembly including a pair of spaced apart retaining means and elongated compressive-load-bearing means extending between and connected to said retaining means to resist inward movement thereof, said retaining means including connections for the ends of said reinforcing means to maintain said reinforcing means in tension; a light generally tubular form for containing concrete extending between said retaining means to surround said reinforcing means, said form being closed and having an inlet for concrete and an axis generally codirectional with said load-bearing means; means connecting said form to said assembly to restrict relative rotation therebetween about said axis, said form being substantially free of longitudinal-load-transferring connection to said assembly along the sides and at least one end of said form when said assembly is compressed under the pulling force of said reinforcing means so that substantially none of said force is transferred to said form; said load-bearing means transmitting substantially all of said force between said retaining means; said assembly and form comprising a unit rotatable about the axis of said form; and means connected to said unit to rotate said assembly and form about said axis to centrifuge the concrete while said assembly is maintaining tension in said reinforcing means.

2,949,656
FORM FOR WINDOW AND DOOR LINTELS AND THE LIKE
Max G. Pleitgen and Ernst M. Klaus, both of Worringerstr. 70, Dusseldorf, Germany
Filed Feb. 6, 1956, Ser. No. 563,791
2 Claims. (Cl. 25—118)

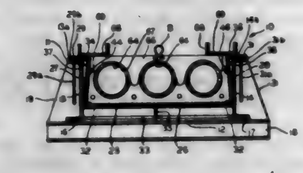
1. A form for pouring concrete, especially for pouring door and window lintels, which includes: a plurality of trough-shaped sheet metal form components telescopically slidable on each other in longitudinal direction of said form components, each of said form components including longitudinally and substantially vertically extending side walls, a plurality of stiffening means respectively rigidly connected to said side walls and located outwardly thereof, said stiffening means extending over a considerable portion of the height of the respective adjacent side walls and forming therewith U-shaped girders with the legs of said U-shaped girders extending downwardly,

spacer means interposed between the legs of each of said girders near the lower end of said legs, the girder of one of said form components telescopically engaging the ad-



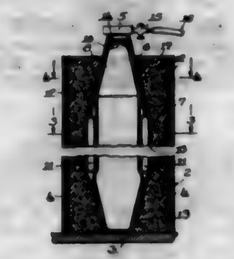
jacent girder of the other form component, and knob means mounted on the top surface of said girder for receiving tie wires for tying oppositely located girders of the same form component to each other.

2,949,657
APPARATUS FOR CASTING CONCRETE SECTIONS
Harold Anson, 6431 N. Damen Ave., Chicago, Ill.
Filed Mar. 5, 1959, Ser. No. 797,356
5 Claims. (Cl. 25—122)



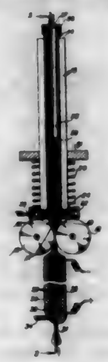
4. Apparatus of the class described for casting a concrete beam or the like wherein all of the operations of casting and stripping the finished casting are characterized by the elimination of any operation requiring turning over of the apparatus and the finished casting, said apparatus comprising a fixed longitudinally extending cradle including a base and laterally spaced rigid side walls secured to said base, a pan movable with respect to said cradle and adapted to be inserted between the walls of said cradle for the casting therein of a concrete shape, said pan being formed from resilient material and comprising a base portion with laterally spaced walls extending upward therefrom, the width of said base portion corresponding substantially to the interior spacing of the walls of said cradle, each wall of said pan and said base portion defining in the unconstrained position of said pan outside of said cradle an included angle greater than 90°, and means supported by the walls of said pan for constraining the walls thereof inward and angularly from the base portion of said pan, each wall of said pan and said base portion defining in the constrained position of said pan in said cradle an included angle less than 90°, the section cast in said pan being subsequently removable with said pan from said cradle by upward movement of said pan and the finished casting, the removal of the constraint upon the side walls of said pan causing said side walls to move elastically away from the finished cast section to a position affording clearance between the side walls of said pan and said cast section for the removal of the pan from the so finished cast section, said finished cast section being characterized by battered side walls.

2,949,658
MEANS FOR FORMING VOIDS IN PRECAST CONCRETE STRUCTURAL MEMBERS
Nathan A. Coon, Washington, D.C., assignor to American-Marietta Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 3, 1956, Ser. No. 613,726
6 Claims. (Cl. 25—128)



1. Means for forming a void having an elongated rectangular center section and tapered ends in a precast concrete structural member of elongated rectangular shape, with the outer surface planes of said structural member substantially parallel to the surface planes of the center section of said void and the cross sectional area of said void decreasing gradually from each end of said center section to each end of said structural member, said means comprising an inflatable, main rubber tube having tapered ends, a plurality of elongated auxiliary inflatable rubber tubes of smaller cross sectional diameters, positioned longitudinally in transversely spaced relative to each other against said first mentioned tube between said tapered ends, and an outer non-elastic, flexible casing enclosing said main tube and said auxiliary tubes, the cross sectional diameters of the auxiliary tubes being of such size relatively to the main tube, and of such spacing thereabout, so that when the tubes are inflated the outer casing enclosing the tube assembly will be stretched taut thereabout, so as to form substantially planar sections between adjacent auxiliary tubes, each of said planar sections contacting said main tube tangentially along a longitudinal line.

2,949,659
CRIMPING APPARATUS
James Watt Ijsbrand Heijnis and Conrad Joseph Gonsalves, Arnhem, Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed May 13, 1957, Ser. No. 658,779
Claims priority, application Netherlands May 24, 1956
14 Claims. (Cl. 28—1)



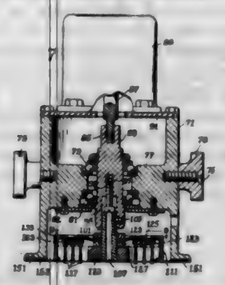
1. A device for crimping thread comprising a tubular member defining a crimping chamber, a pair of rollers for feeding thread into said chamber and a plurality of balls positioned within said chamber for preventing wrap of thread about said feed rollers and for resisting passage of thread through the crimping chamber.

2,949,660
METHOD OF MAKING FLOOR MATS OF IRREGULAR CONTOUR
Walter A. Rice, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Filed July 25, 1957, Ser. No. 674,146
5 Claims. (Cl. 28—74)



1. A method of forming a mat for covering a floor area of irregular contour, which comprises distorting a piece of stretchable fabric to give it the contour of the floor area to be covered by applying force to the opposite faces of the fabric, the force being applied to at least one surface of the fabric at a plurality of spaced points, applying to said surface between the points of application of the force a coating of a fluid capable of setting, and maintaining the fabric in distorted condition by the application of force until the coating has set.

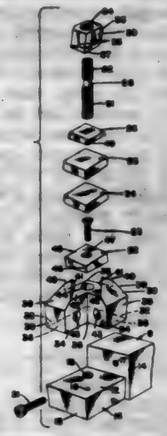
2,949,661
SURFACING TOOL
Harold John Credit, 39 Clinton St., Avon, N.Y.
Filed Oct. 20, 1955, Ser. No. 541,686
1 Claim. (Cl. 29—79)



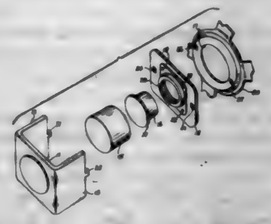
A surfacing head including a shank, a hollow frame secured to said shank, a plurality of elongated blades each having a multiplicity of pointed teeth along at least one edge of the blade, means for holding said blades in stationary position relative to said frame with the teeth on corresponding edges of all blades lying substantially in a common plane perpendicular to said shank, said holding means including slots in said frame into which the ends of the blades are removably received, resilient pad means overlying and pressing against certain edges of the blades to hold them in their respective slots, and spring means overlying and exerting pressure against said pad means.

2,949,662
METAL CUTTING TOOLS
Raymond F. Cook and Paul G. Cline, Cuyahoga Falls, Ohio; said Cline assignor to said Cook
Filed Nov. 25, 1957, Ser. No. 698,579
4 Claims. (Cl. 29—96)

1. A metal cutting tool, comprising: a shank having at least two flat intersecting surfaces, an L-shaped block seated against said surfaces and having symmetrical halves on opposite sides of a plane bisecting said block at the apex thereof, each block half including an outer surface conforming with one of said shank surfaces, an under surface conforming with another of said shank surfaces, an inner surface defining the edge portion of a seat for a metal cutting insert, and a top surface defining a portion of a slot extending between said inner surfaces and the apex of the block; a wedge seated against said block inner surfaces on one of said shank surfaces and having an upper surface providing a seat for a metal cutting insert; means securing said block and said wedge to said shank surfaces; at least one cutting insert seated on said wedge upper surface in contact with said block inner surfaces; and clamp means in said block slot projecting over said wedge securing the insert on said wedge upper surface.



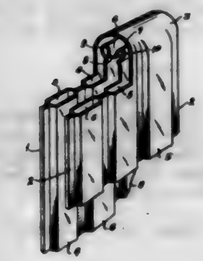
2,949,663
METHOD OF ASSEMBLY OF A LOUD SPEAKER
Charles A. Perry, Cleveland, Ohio, assignor to The Rola Company Inc., Cleveland, Ohio, a corporation of Ohio
Original application Oct. 1, 1956, Ser. No. 613,187. Divided and this application Dec. 9, 1957, Ser. No. 701,557
1 Claim. (Cl. 29—155.59)



In a loud speaker assembly having a diaphragm housing with a central voice coil opening and with apertures on either side thereof and having a magnetic field structure including a U-shaped yoke having side plates each with a projection extending therefrom and having a back plate joining said side plates, said back plate having a centered depressed portion adapted to receive a magnet, and a magnet and a flanged pole tip therefor, a front plate for the yoke having a central bore adapted to surround the pole tip and form a voice coil air gap and having apertures on either side thereof for receiving the side plate projections therethrough, and a non-magnetic resiliently flexible pole tip centering member having a de-

pressed portion adapted to have formed therein a central bore of substantially the same diameter as the pole tip, the method of assembly consisting of, fixing the centering member over the bore in the front plate by deforming coacting portions of the plate and centering members, then piercing to form a central bore through the depressed portion of the centering member in concentric relation to the front plate bore, placing and resiliently retaining the pole tip in the centering member bore thus formed with its flanged extremity disposed external thereto, placing the yoke back plate on a horizontal surface, placing the magnet on the back plate of the yoke in the centered depressed portion thereof with its axis parallel to and between the side plates, then mounting the front plate, the centering member and the pole tip as a subassembly on the yoke side plates by passing the side plate projections through the front plate apertures, then mounting the diaphragm housing on the front plate with the yoke side plate projections passing through the housing apertures, then axially pressing the housing against the front plate and yoke side plates to compress the depressed portion of the centering member against the pole tip flange and magnet, and thereafter deforming the side plate projections to secure the loud speaker assembly together with the pole tip accurately centered within the air gap.

2,949,664
METHOD OF MAKING A HEAT EXCHANGER TUBE
Theron F. Pauls, Godfrey, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Filed Jan. 13, 1956, Ser. No. 559,060
9 Claims. (Cl. 29—157.3)



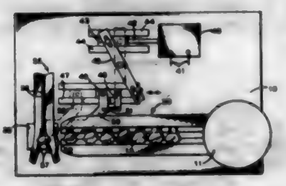
1. The method of making a folded tube structure from a flat longitudinally laminated sheet metal blank having a first component strip superposed upon a second strip the lateral edges of which are integral with the lateral edges of said first strip and the intervening portion of which includes at least one longitudinally extending area of separation between the opposing walls of said strips defining a corresponding longitudinally extending embryonic passageway, which comprises the steps of deforming a portion of said blank intermediate the longitudinal ends thereof and transverse said embryonic passageway into a V-shaped first bend transverse said embryonic passageway, bending said blank at the said portion in a direction reverse to said first bend into a second bend also transverse said embryonic passageway and including said first bend whereby the inner wall of said separation at said second bend is deformed into a W-shaped bulge, said bending disposing the portion of said blank adjacent said second bend into parallelism to form a tube blank loop, and subjecting said bent tube blank to internal fluid pressure along said area of separation to open a longitudinal tubular passageway portion of the folded tube blank and simultaneously distend a wall portion of the tubular passageway on the inside of the second bend for uninterrupted passage of fluid throughout the length of the resultant folded blank.

2,949,665
DISC CAPACITOR INSERTER
Charles H. Bergslund and Karl E. Neumeier, Stillwater, and Paul S. Peterson, St. Louis Park, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed Oct. 14, 1955, Ser. No. 540,541
1 Claim. (Cl. 29—203)



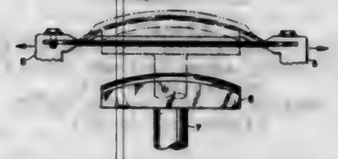
A mechanism for attaching a disc capacitor to a circuit board comprising a pair of opposed guide fingers arranged to support a disc capacitor therebetween and carrying it to a position adjacent the circuit board where the leads of the capacitor may be inserted into holes in the board, spring biasing means positioned to urge the fingers together to support the disc capacitor therebetween, a pusher member arranged to engage the disc capacitor when it has been moved to inserting position adjacent the circuit board and force the capacitor leads into holes in the circuit board, a pair of finger spreading cam surfaces attached to the inserter and movable therewith to spread the fingers and release the capacitor when the inserter engages the disc capacitor to thereby release the capacitor, the fingers mounted on the inserter for movement with the inserter along the path parallel the movement of the inserter, means for moving the inserter toward a circuit board, stop means in the path of the fingers to stop their travel when they have moved the capacitor into inserting position adjacent the circuit board, the pusher member continuing movement to insert the capacitor leads into the board, means to move the pusher away from the circuit board after the capacitor has been attached thereto, and latching means holding the guide fingers in a fixed position relative to the inserter after the capacitor has been inserted to thereby hold the cam surfaces between the guide fingers to maintain them in a spread position while the inserter and the fingers are being moved away from the circuit board and preventing the fingers from dragging the capacitor from the circuit board after the leads have been inserted.

2,949,666
MECHANISM FOR ASSEMBLING SLIDER TO SLIDE FASTENER CHAIN
Henry Rogers, Great Neck, and Paul Stama, Astoria, N.Y., assignors, by direct and mesne assignments, of one-half to said Rogers and one-half to Ernst G. Deutsch, Long Island City, N.Y.
Filed June 5, 1958, Ser. No. 740,050
4 Claims. (Cl. 29—211)



1. Mechanism for assembling sliders to separable slide fasteners of the type including a pair of tapes or stringers with interengaged teeth along their inner edges, comprising, in combination, a hopper arranged to contain a supply of sliders each having a pull tab; a track extending downwardly from the outlet of said hopper for gravity delivery of sliders from the hopper, said track including spaced parallel rails defining a narrow slot for endwise movement of the slider tabs along the track in depending relation to the sliders; an anvil aligned with the lower end of said track and having a slider support surface and a pull tab receiving slot aligned with the track slot; means releasably maintaining the leading slider on the track spaced from said anvil; movable means engaged behind the depending pull tab of such leading slider and operable, when actuated to push the leading slider onto the anvil with its tab in the anvil slot; a plunger spring pressed into the anvil slot to engage and frictionally retain a pull tab in the anvil slot; and whereby an operator may engage the laterally separated tapes of a slide fastener in the channels of the slider on the anvil, pull the tapes longitudinally to mesh such slider with the teeth, and lift the tapes to release the assembled slider from the anvil.

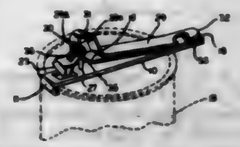
2,949,667
STRETCH FORMING OF METAL SHEETS PROVIDED WITH REENFORCING RIBS
Thomas A. Cameron, Silver Lake, and Howard F. Keyser, Tallmadge, Ohio, assignors to Goodyear Aircraft Corporation, Akron, Ohio, a corporation of Delaware
Filed Feb. 27, 1958, Ser. No. 717,920
4 Claims. (Cl. 29—428)



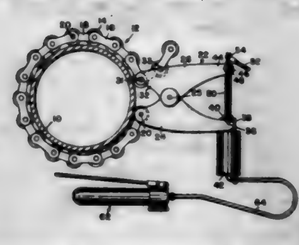
1. A method of stretch forming a flat metal sheet unit to a desired curved contour comprising securing a plurality of substantially parallel straight reenforcing ribs each having pairs of parallel continuous attaching flanges for engagement with the sheet and continuous spaced standing flanges substantially normal to one surface of the sheet with the ribs extending in a direction of desired curvature, each rib having a center section spaced from and bridging over a part of said sheet and secured to said flanges that are substantially normal to said sheet at the edges thereof remote from said sheet, the ends of such ribs being flattened against said sheet and substantially abutting against the edges of adjacent ribs, the ends of such ribs being secured to said sheet, gripping opposite ends of the assembled members at the flattened rib ends, tensioning the flat assembly in a direction parallel to the reenforcing ribs to stretch the unit by about 2½% and forming the unit of said sheet and ribs to a double curvature form to a degree so that the metal in the ribs and in the sheet is stretched beyond its elastic limit and to the desired curvature but not beyond its ultimate tensile strength and without collapse of said ribs.

2,949,668
CAN PIERCING DEVICES
Elno H. Wiemert, 3634 N. 51st St., Milwaukee, Wis.
Filed Aug. 4, 1959, Ser. No. 831,615
2 Claims. (Cl. 30—6.1)

1. In a device for simultaneously piercing a can at a pair of points for pouring and for venting a body member adapted to overlie a can lid and having a first aperture near one end thereof, a second aperture spaced from said first aperture, means formed on one end of said body and adjacent said first aperture for engaging the bead of a can being pierced, a resilient lever secured to the other end of said body member and supporting a pair of can piercing means each being in alignment respectively with said apertures, a swivel pin extending from said body member and through an opening in said resilient lever, an operating lever pivoted to said swivel pin, said resilient lever and said operating lever having coacting camming surfaces, said operating lever being adapted to pivot on said swivel pin to rock said resilient lever and its piercing means into can piercing position, and said operating lever being adapted to rock with respect to said swivel pin to a storing position.

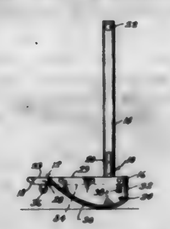


2,949,669
APPARATUS FOR PARTING A FRACTURABLE MEMBER
Charles J. Wheeler, 2048 W. Jackson St., Mentor, Ohio
Filed Sept. 2, 1958, Ser. No. 758,392
3 Claims. (Cl. 30—92)



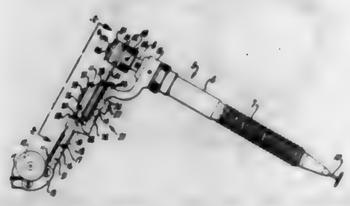
1. Apparatus for parting an elongated fracturable member comprising, in combination, a flexible nonextensible cutter chain adapted, while substantially stationary with respect to said elongated fracturable member, to effect parting thereof when disposed thereabout via application of squeeze pressure, said cutter chain comprising a series of peripherally spaced cutter means, said cutter means including at least a first terminal cutter means and a selectable second cutter means, clamp means having first and second clamp jaw means, said first clamp jaw means having engagement means thereon to engage said first terminal cutter means, said second clamp jaw means having engagement means thereon to engage said selectable second terminal cutter means, hydraulic means comprising cylinder and piston elements forming a fluid chamber, first means to make engagement between one of said elements and one of said jaw means, second means including adjustable means to make engagement between the other of said elements and the other of said jaw means, means to deliver fluid under pressure to said fluid chamber to move said clamp jaw means relative toward each other and draw said cutter chain tightly around said elongated fracturable member for parting same, said adjustable means comprising a nut and a rod having first and second end portions, said first end portion having threads threadably engaging the nut, means connecting said nut to said other of said jaw means, and turnable means connecting said second end portion of said rod to said other of said elements.

2,949,670
LAWN EDGER
Jesse J. Birchfield, 4571 McCrory Road, Memphis, Tenn.
Filed July 10, 1958, Ser. No. 747,627
4 Claims. (Cl. 30—315)



1. A lawn edger comprising a blade having an arcuate lower edge portion, a platform supporting said blade and extending rearwardly a predetermined distance beyond the blade and a handle secured in perpendicular, upstanding relationship to said platform and spaced from the rear edge of said platform a distance such that the platform provides a foot rest, the rear edge of the platform extending perpendicularly to the blade and having an arcuate configuration so that the platform may be pivoted by the handle upwardly therearound and the edger moved forwardly with said rear edge providing a skid.

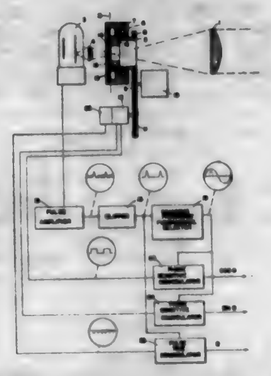
2,949,671
DENTAL HAND PIECE TRANSMISSION
Lloyd P. Flatland, 370 22nd Ave., San Francisco, Calif.
Filed Sept. 15, 1955, Ser. No. 534,427
6 Claims. (Cl. 32—26)



1. An apparatus for multiplying the rotational speed of a dental hand piece stem comprising a first pulley mounted on said stem, an offset link mounted on said hand piece and interposed between said hand piece stem and the adjacent connecting tube of a dental hand piece wrist joint, said offset link being rotatable with respect to said connecting tube, means on said link and said tube for limiting the relative rotation between said link and said tube to a predetermined angular amount, a stud mounted on said link, a second pulley rotatably mounted on said stud, a third pulley rotatably mounted on said stud and secured to said second pulley, said third pulley being rotatable by the cord drive of a dental unit, and means connecting said first pulley and said second pulley for effecting rotation of said first pulley as said second pulley is rotated.

2,949,672
STATIONARY FIELD SCANNING SYSTEM
Ralph H. Ostergren, Fullerton, Calif., assignor to North American Aviation, Inc.
Filed Feb. 18, 1952, Ser. No. 272,074
5 Claims. (Cl. 33—1)

2. Means for measuring the magnitude and direction of deviation of a line of sight to a star from a line in space comprising means for scanning the area including said star with angularly progressive radial sweeps, and electronic means responsive to said scanning means for measuring the polar coordinates of said star in said area to thereby measure the magnitude and direction of deviation of a line of sight to said star from a line in space, said scanning means comprising an optical system for gather-



ing light from said star, a reticle slotted from its center radially outward rotated about the optical axis of said system, and an opaque disc with uniformly spaced perforations about a circle thereon rotated about an axis displaced by the radius of said circle from said optical axis and disposed adjacent said reticle.

2,949,673
MASON'S CORNER-GUIDE AND COURSE-GAUGE
Mason E. Belcher, Athens Star Route, Mercer County, near Princeton, W. Va.
Filed Oct. 27, 1958, Ser. No. 769,795
5 Claims. (Cl. 33—85)



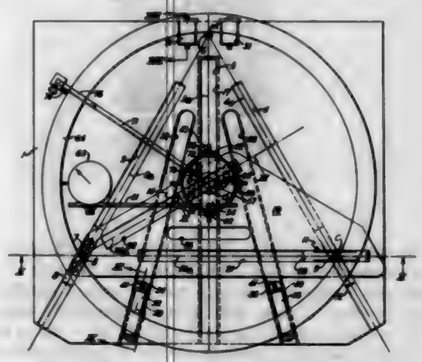
1. A mason's combined corner-guide and course-gauge device comprising an upright member forming a corner-guide post having adjustable gauge-line supports on the upper portion thereof; an anchor means for securing said upright member to a wall being constructed, said anchor means including an elongated rigid right-angle bar of less length than said upright member and forming a wall abutment member to extend lengthwise of a corner of said wall with the inner faces of its flanges opposing angular portions of said wall and, further, including means to removably secure said abutment means in position on and to said wall; adjustable means interconnecting and supporting the lower end of said upright member upwardly in spaced outwardly lateral relation from said abutment member, said means including elements arranged at substantially right angles to each other and mounted in the flange portions respectively of one of said members against longitudinal movement in said flanges and for transverse movement relative to said flanges, said elements being further mounted in the flanges of said other member for moving said members relative to each other, and an actuatable part on said elements for operating said elements, whereby the guide-post may be plumbed independently of and relatively to the abutment member, when the latter is secured to the wall, without disturbing the position of the abutment member on and/or its anchor connection to said wall.

2,949,674
CONTOUR GAUGE
Monroe L. Wexler, 1321 Spruce St., Philadelphia, Pa.
Filed Oct. 1, 1957, Ser. No. 687,420
24 Claims. (Cl. 33—175)



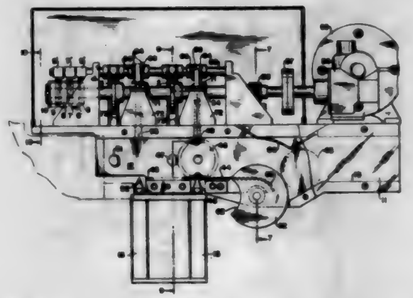
1. A contour gauge comprising a holder means, a plurality of magnetically susceptible rods of substantially uniform length slidably mounted side by side in said holder means and permanent magnet means operably associated with the holder means for applying magnetic attractive force to all the rods in a direction perpendicular thereto to attract all rods to the holder means with uniform force sufficient that when the holder means is moved toward an object the contour of which is to be duplicated the rods move with the holder means until individual rods abut the surface to be gauged whereupon those rods not yet in engagement with such surface continue to move with the holder means.

2,949,675
RADIUS AND CONCENTRICITY GAUGE
Robert T. McElhose, Oakmont, Pa., assignor to Edgewater Steel Company, a corporation of Pennsylvania
Filed Mar. 3, 1959, Ser. No. 796,821
7 Claims. (Cl. 33—178)



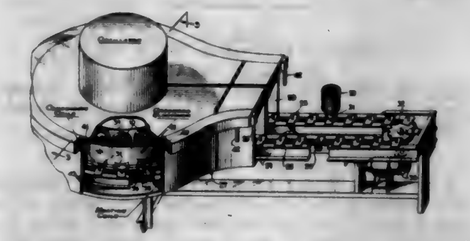
1. In a device of the type described, three vertex locating elements defining the vertices of an equilateral triangle, a center locating element within the triangle, means for simultaneously moving two of those vertex elements along two sides of the triangle towards and away from the third vertex element to define equilateral triangles of varying size, and means for simultaneously positioning the center locating element at the intersection of two straight lines, one of said lines bisecting the third vertex angle and the other of said lines bisecting one of the other vertex angles.

2,949,676
GEAR GAGING
William B. Finnegan, Wantagh, Joseph N. Huff, Bayside, and George A. Wilson, North Merrick, N.Y., assignors, by mesne assignments, to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Original application Aug. 15, 1955, Ser. No. 528,252. Divided and this application Feb. 15, 1957, Ser. No. 640,492
15 Claims. (Cl. 33—179.5)



1. An apparatus for gaging gears, the combination which comprises a trough for receiving gears, a rotatable gate wheel projecting into said trough, said trough being adapted and arranged to deliver gears to said gate wheel in succession, said gate wheel having at least one segmental recess shaped to receive a gear and feed the gear forward as the gate wheel rotates, and a fixed rack extending from said gate wheel to a gaging station, said rack having a curved portion extending partially around the axis of said gate wheel to mesh with a gear being fed thereby.

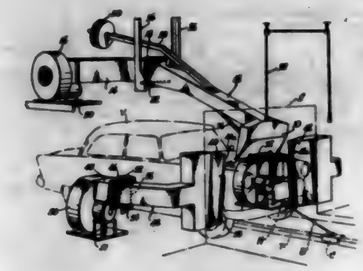
2,949,677
DIELECTRIC DRYING OF MATERIALS
Hugh J. Cameron, New Rochelle, N.Y., assignor to Magnetic Heating Corp., New Rochelle, N.Y., a corporation of New York
Filed July 30, 1956, Ser. No. 601,050
6 Claims. (Cl. 34—1)



4. A method for removing a volatile liquid from solid material in air at atmospheric pressure, said liquid in the vapor phase having a density different from that of said air, said method comprising generating heat in said material sufficient to cause said vapor to be evolved from said material by subjecting said material to a high frequency electric field between electrode means, said vapor

being urged away from said material and toward a point vertically spaced therefrom due to the difference in densities of said vapor and said air, condensing said vapor at said point and removing the condensate, and controlling the rate at which the material is heated dielectrically with respect to the rate at which said vapor is condensed so that vapor, substantially free of air, is maintained between said material and said air, and so that a layer of said air is maintained separate from but adjacent and in contact with said vapor without substantial circulation of air past said material during the heating thereof.

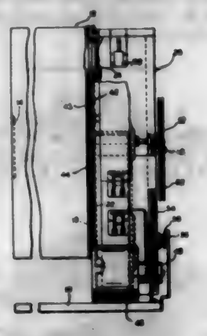
2,949,678
VEHICLE DRIER NOZZLE WITH SELF-POSITIONING MOUNT
Eldon H. Anderson, 2453 S.W. 120th, Seattle, Wash.
Filed Sept. 21, 1956, Ser. No. 611,195
5 Claims. (Cl. 34—105)



1. In a vehicle washing establishment, drier nozzle means comprising a nozzle having a discharge orifice therein adapted to be directed toward the surface of a vehicle to be dried, an elongated nozzle feed duct connected at one end to said nozzle in generally transverse relationship to the direction of discharge of said nozzle orifice, a blower, and flexible joint means connecting the opposite end of said nozzle feed duct to said blower to receive the blower discharge for conveying the same to said nozzle, said flexible joint means defining a pivot axis for said nozzle feed duct which is generally mutually perpendicular to the extent of said nozzle feed duct and to the direction of discharge of said nozzle orifice, said pivot axis being offset relative to the effective transverse center of said feed duct in the sense corresponding to the direction of discharge from said nozzle orifice, thereby to develop torque from the discharge of said blower into said feed duct which substantially balances out the opposing reaction torque exerted thereon by the nozzle discharge.

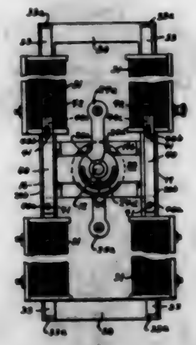
2,949,679
LAUNDRY MACHINE WITH HEAT STORAGE MEANS
Calvin D. MacCracken and George N. Miles, Tenafly, N.J., assignors to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed May 9, 1957, Ser. No. 658,157
2 Claims. (Cl. 34—133)

1. A clothes drying assembly for removing moisture from clothes during a drying period and adapted to require a low power consumption during said drying period and comprising a rotary clothes drying drum having an access opening in which the clothes are placed into the drum and having air flow openings therein whereby the drying air may enter the drum and carry off the evaporated moisture and be expelled from the drum, an air flow conduit communicating with the interior of the drum, means for forcing the flow of air through said conduit and into the drum, a heat storage means including a dimorphic heat transfer material positioned in surrounding relationship to the conduit whereby said storage means may be heated during a storage period and transmit heat to the air flowing through the conduit during a heat transfer period, a heating element in said conduit positioned for increasing the temperature of the heat storage means during the storage period and for heating air flowing through the conduit during the heat transfer period, an electrically operated



damper in the conduit adapted to be opened during the heat transfer period and be closed during the storage period to prevent the uncontrolled escape of heat, biasing means connected to the damper to close the damper in the absence of an electrical control current, and electrical control means connected to the damper to open the damper during the heat transfer period of operation and to operate the heating elements during the storage period and heat transfer period.

2,949,680
EDUCATIONAL DEVICE FOR TEACHING ELECTRIC MOTOR OR GENERATOR PRINCIPLES
Roy D. Black, Wabash, Ind., assignor to Leonard R. Crow, Vincennes, Ind.
Filed Oct. 10, 1958, Ser. No. 766,423
12 Claims. (Cl. 35—19)



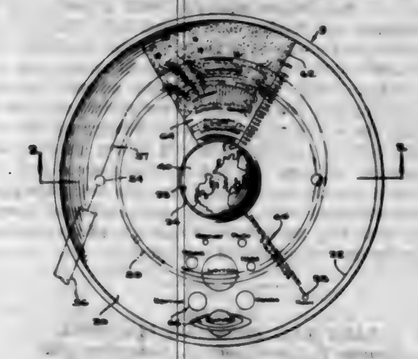
8. An educational training aid in the form of an electro-mechanical device comprising two U-cores of magnetizable material and each having spaced parallel legs initially free at one end, a motor-generator assembly, said motor-generator assembly having pole pieces and an armature rotatable between said pole pieces, and means detachably securing said pole pieces of said motor-generator assembly between said free ends of said U-cores of magnetizable material both mechanically and magnetically.

2,949,681
RECKONER FOR DEMONSTRATING ARITHMETICAL CALCULATIONS
Vitus Knefall, 42 Fullener Strasse, Meppen (Ems), Germany
Filed Jan. 5, 1959, Ser. No. 785,007
Claims priority, application Germany Jan. 4, 1958
4 Claims. (Cl. 35—30)



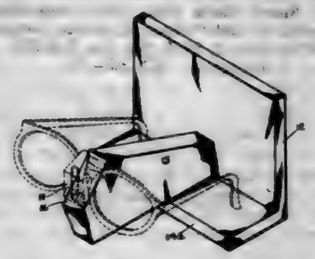
1. A manipulative reckoner for visually aiding in educational demonstrations, comprising a first circular board having a pin centrally projecting from its frontal face and having a plurality of notches cut at certain predetermined angular intervals into its rim portion, a second circular board having a central opening and being adapted to be coaxially and removably connected to the frontal face of said first circular board, the shortest distance from the center of said first circular board to the circumferential periphery thereof being substantially larger than the radius of said second circular board, said second circular board having peripheral indicia of predetermined relationship with respect to said angular intervals of said plurality of notches of said first circular board, at least one band secured to the back face of said first circular board, said band being adapted to be pulled through any one notch of said plurality of notches and radially extended across the front face of said first circular board and removably secured to said centrally projecting pin, said band also being adapted to be pulled through any one notch of said plurality of notches and radially extended across the front face of said first and second circular board, pulled around said centrally projecting pin and then removably secured to said first circular board at the location of another one notch of said plurality of notches.

2,949,682
SATELLITE ORBIT TOYS
Reuben J. Humbert, Box 563, Coos Bay, Oreg.
Filed May 9, 1958, Ser. No. 734,178
3 Claims. (Cl. 35—46)



1. A satellite orbit toy comprising a base, a bowl stationarily mounted upon said base, said bowl having a bottom wall and having a central opening therein, an earth simulating element positioned in said opening, a satellite ball rollable upon said bottom wall around the earth element in simulation of an earth satellite in orbit around the earth element, and a radial line extending on the surface of the bowl bottom wall from said opening, said line having graduations indicating planetary distances from the earth element with reference to the paths of the satellite ball around the bowl, said earth element being an earth globe having an upper portion rising above the bottom wall in the region of said opening and a lower portion extending below said bottom wall, said base having an earth globe supporting and rotating assembly comprising a cup into which said lower part of the globe is frictionally and rotatably seated, a pedestal fixed to and depending from said cup, means mounting said pedestal on the base for rotation on a vertical axis, and mechanical rotating means operatively connected to said pedestal.

2,949,683
SPECTACLE DISPLAY DEVICE
Anthony D. Glover, 615 N. Loop St., Austin, Tex.
Filed Mar. 14, 1958, Ser. No. 721,380
3 Claims. (Cl. 35—49)



1. A spectacle display device for supporting spectacles in open position, said device including support means, at least one nose-like projection mounted on said support means to receive and support a spectacle frame by its bridge in wearing position with respect to said nose-like projection, and at least one generally horizontal bow-supporting shelf supported by said support means and associated with and spaced rearwardly of said nose-like projection to support the ear engaging ends of the bows of said spectacles when in extended position whereby said spectacles are supported for display and for easy access.

2,949,684
HEELS WITH NAIL-HOLDING FILLERS
Edgar E. Joiner, Andover, and John P. Szumski, Marblehead, Mass., assignors to Fred W. Mears Heel Company, Inc., Lawrence, Mass., a corporation of Massachusetts
Filed Dec. 31, 1958, Ser. No. 784,159
3 Claims. (Cl. 36—40)

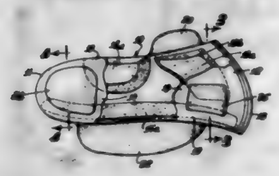
1. A heel for a shoe comprising a rigid lightweight heel member having its upper portion formed with a cavity of an area and depth to receive portions of heel attaching nails extending through the heel seat of a shoe in the heel attaching nailing pattern, said cavity being defined by walls flaring outwardly and terminating in relatively thin upper edges, leaving the top of said heel unobstructed to receive heel attaching nails over substantially its entire area, an insert of nailable material shaped to fit within said cavity having an upper face of size and shape to extend outside said heel attaching nailing pattern to receive and hold heel attaching nails, and a body of cured hard nailable resinous composition filling spaces between the walls of said cavity and said insert, and serving as the ex-

clusive means to hold said insert in fixed relationship to the walls of said cavity, and the exposed surfaces of said



curved resinous composition and said insert having a shape to fit against the heel seat of a corresponding shoe upper.

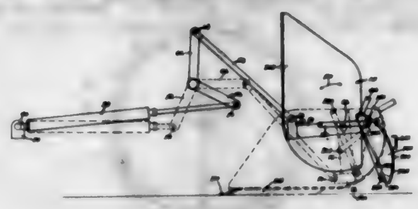
2,949,685
REMOVABLE SHOE PAD CONSTRUCTION
William C. Burns, Santa Ana, Calif.; Josephine Burns, executrix of said William C. Burns, deceased
Filed June 9, 1958, Ser. No. 740,758
6 Claims. (Cl. 36—71)



1. In a removable pad structure for use in a shoe in contact with the user's foot, a pad body adapted to underlie the foot posteriorly of the metatarsal-phalangeal joints, elements within the body forming elevated portions of greater thickness than the comparatively thinner remainder of the body, and an external layer member of relatively non-extensible material adhesively affixed to the underside of the pad body and in lamellar contact with a limited area of the relatively thinner portion thereof, said external layer member being in tension when the underside of the pad is flat and thereby serving to exert tension on contiguous area portions of the body to counteract a curling tendency of the body in such area portions.

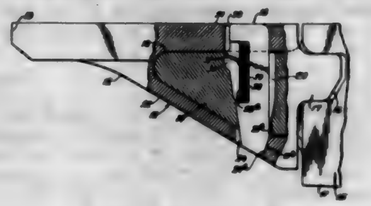
2,949,686
EARTH MOVING SCRAPER
Carl Straub, Boulder, Colo., assignor to Cornhusker Manufacturing Co., Inc., Omaha, Nebr., a corporation of Delaware
Continuation of application Ser. No. 535,312, Sept. 20, 1955, which is a continuation of application Ser. No. 235,777, July 9, 1951. This application Apr. 14, 1959, Ser. No. 806,393
5 Claims. (Cl. 37—129)

1. An earth scraper comprising a frame; wheels supporting said frame; a bucket revolvably supported on said frame for pivoting about a transverse axis, said bucket having an open forward end for receiving dirt and an open rearward end for dumping dirt; an end gate disposed in the rearward end of said bucket; a gate-bracing member secured to said frame and disposed in a position for engaging the rearward side of said gate when said gate is in an open position to hold said gate in a dirt spreading position; a first linkage pivotally secured at one end to the upper end of said gate on one side thereof and pivotally secured at its other end to said bucket at a point normally below said transverse axis; a second linkage pivotally secured at one end to the lower end of said gate on said one side thereof and pivotally secured at its other end to said bucket at a point normally above said transverse axis, said points of connection of said other ends of said first and second linkages being disposed nor-



mally forwardly of said transverse axis; third and fourth linkages similarly arranged and connected on the opposite side of said gate and bucket; a stop member on said gate; stop member engaging means secured to said frame to arrest downward movement of said gate; and means for causing said bucket to rotate in either direction about its axis.

2,949,687
EXCAVATING TOOTH
William P. Pekkay, Vancouver, Wash., and Thomas P. Kirby, Danville, Ill., assignors to Electric Steel Foundry Company, Portland, Oreg., a corporation of Oregon
Filed July 15, 1957, Ser. No. 672,090
4 Claims. (Cl. 37—142)

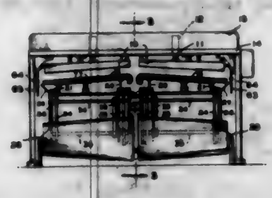


1. In an excavating tooth structure, a tooth point on an adapter, aligned vertically-extending openings in said tooth and adapter, a cavity in said adapter communicating with the opening therein, and an elongated metal pin extending through said aligned openings, said pin being provided with a recess in the side wall thereof intermediate the ends thereof and facing said cavity, a metal member in said recess equipped with a cavity-mating protuberance and having ends spaced from the ends of said recess, and a plug of resilient material interposed between said member and said pin in said recess, said pin being longitudinally tapered with the adapter opening contoured on one side thereof to bear against one side of said pin, the openings in said point bearing against the opposite side of said pin, said pin having its narrower cross-section adjacent the bottom end thereof and adjacent said bottom on said opposite side being equipped with an additional tapered portion, said additional tapered portion providing the surface in said pin effectve to bear against the bottom portion of said point.

2,949,688
PANT LEG PRESSING MACHINE
Thomas W. Carskadon, Sr., Columbus, Ohio
Filed Oct. 4, 1957, Ser. No. 688,197
4 Claims. (Cl. 38—22)

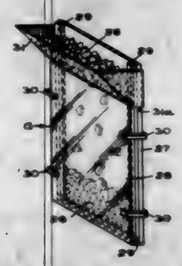
1. A machine for pressing both legs of a pair of trousers comprising a support for the trousers having

spaced leg supporting portions for each leg of a pair of trousers, a conveyor carrying said trousers support, pressing means including a pressing head for cooperation with each supporting portion for pressing each leg of the pair of trousers against its supporting portion, said conveyor providing means to move said trousers support relative



to said pressing means whereby a pair of trousers can be placed on said support without interference from said presser means with the trousers legs overlying the support portions, and means to simultaneously move said presser heads toward the cooperating support portion when the support portions and the trousers being supported thereon are in juxtaposition to said presser heads.

2,949,689
METHOD OF MANUFACTURE OF GLASS AND/OR CERAMIC MOSAICS
Alex Vlda, 537 Kansas St., San Francisco 10, Calif.
Filed Dec. 18, 1958, Ser. No. 781,246
4 Claims. (Cl. 41—23)



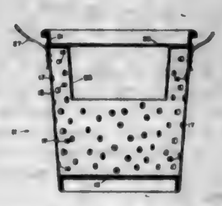
1. The method of forming mosaics by feeding chips of various sizes and shapes having irregular margins in a stream along a defined path having lateral boundaries, while permitting the chips to move laterally within the boundaries of the path so as to move adjacent chips into juxtaposed relation with one another and thereby close any spacious voids between the chips, regardless of the sizes and shapes of the chips; restraining said chips in a single layer thickness closely-grouped arrangement, with irregular margins of the adjacent chips touching each other at some points both longitudinally and laterally of the stream, and remaining spaced at other points both longitudinally and laterally of the stream to define irregular grouting spaces between said chips; moving in a stream in said path additional chips in a single layer coplanar relationship with said grouped arrangement to cause said additional chips to move into contact with adjacent chips in said grouped arrangement, with the additional chips being free to move laterally within the boundaries of the path when contacting adjacent chips, and thus be guided into stationary mosaic-forming relationship with the chips in said grouped arrangement solely by virtue of being moved into contact with the chips in said grouped arrangement; and uniting all of said chips into a unitary structure.

2,949,690
SAFETY FISH HOOK
Edward L. Clough, San Diego, Calif., assignor of one-half to Paul L. Hewey, San Diego, Calif.
Filed Nov. 22, 1957, Ser. No. 698,275
3 Claims. (Cl. 43—36)



1. A safety fish hook comprising, in combination, a cage, hook means slidably supported within said cage for longitudinal movement between a retracted and an extended position, and means for limiting said movement of said hook means, said cage being composed of an upper unit and a lower unit pivotally connected to each other, said upper unit being composed of an inverted U-shaped wire bail member with a centrally located eye at the upper and closed end thereof, the free ends of said wire bail member having eyelets formed therein, said lower unit being composed of an upper wire ring and a lower wire ring spaced apart by a pair of longitudinally extending wire stringers, said upper ring being provided with a pair of diametrically opposite pintles for rotatably receiving said eyelets thereon, whereby said lower unit is pivotally secured to said upper unit to effect free swinging movement to the lower unit, said hook means comprising an inverted one piece wire U-shaped member having oppositely outwardly directed hooks secured therewith at the lower free ends thereof, and said hooks being spring biased away from each other as said member slides partially outwardly through said lower ring of said lower unit of said cage, and said hooks being movable towards each other by said lower ring during retracted movement thereof within said cage.

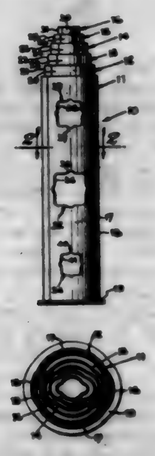
2,949,691
BAIT BOX
Sam W. Johnson, 674 Hewlett Road, Memphis, Tenn.
Filed Sept. 18, 1958, Ser. No. 761,773
3 Claims. (Cl. 43—55)



1. In a container for live bait for fishermen, a main body of paperboard or the like, said body comprising a downwardly and inwardly tapered frustum of a cone, a bottom closure fixed to said body, a cover removably mounted on the top of said body, said cover including a depending, open, imperforate collar comprising a downwardly and inwardly tapered frustum of a cone spaced inwardly from and substantially parallel to said body, said collar extending downwardly from said cover within said body a relatively minor distance

relative to the depth of said body and a distance in excess of the spacing of said collar inwardly from said body, the material of said body being outwardly substantially smooth and inwardly deformed to provide a plurality of ventilating apertures positioned in closely spaced relation throughout the surface area of said body, said body material so deformed providing a like plurality of inwardly protruding nipples integral with said body surrounding said apertures and projecting irregularly into the interior of said body.

2,949,692
CONSTRUCTION TOY
James O. Kuhn, Cincinnati, Ohio, assignor to Bromo-Mint Company, Inc., Cincinnati, Ohio, a corporation of Ohio
Filed Feb. 24, 1958, Ser. No. 717,104
3 Claims. (Cl. 46—28)



2. In a child's toy the combination of two elongated tubular members adapted to form a transverse joint, each of said members being formed of a slightly yieldable plastic material, the first of said members having a transverse opening formed therein for receiving and frictionally engaging the second of said tubular members, said transverse opening being of generally rectangular cross-section and having two opposed recesses formed therein, the second of said tubular members being configurated to form in cross-section a pair of opposed arcuate wall sections and a pair of opposed lobes interconnecting said arcuate wall portions, the outside dimension of said second tubular member across said lobes being less than the distance across the diagonal of said opening and slightly greater than the length of one side of the opening, whereby the second tubular member can be inserted in the first member by aligning the lobes of the second member with the diagonal of the opening and the second tubular member can be frictionally secured in place by effecting relative rotation of the second tubular member to bring the lobes of said second tubular member into registry with said recesses.

2,949,693
FLYING TOY
John W. McRoskey, West Los Angeles, Calif., assignor to Wen-Mac Corporation, Los Angeles, Calif., a corporation of California
Filed Jan. 19, 1959, Ser. No. 787,555
8 Claims. (Cl. 46—75)

3. In a toy engine-driven aircraft, the combination of: a motor having a vertically directed drive shaft; a vertically directed circular motor housing surrounding said motor; means mounting said motor adjacent the center of said motor housing; a horizontally directed propeller blade carried for rotation by said drive shaft, said propeller blade being substantially aligned with the upper edge of said motor housing; four horizontally directed elongated wings spaced at 90° intervals from each other and extending radially outwardly from the lower edge



of said motor housing, said wings being normally flat and somewhat resilient; an opening in each of said wings and a substantially circular ring extending through said openings, said ring being substantially concentric with said motor housing, said wings being bent to permit the passage of said ring through said openings so that the leading edges of said wings are slanted upwardly, the dihedral of said wings being opposite that of said propeller blade.

2,949,694
TOY PARACHUTE AND LAUNCHER
Raymond Aye, 4024 Cranberry Lane, St. Louis, Mo.
Filed Sept. 29, 1958, Ser. No. 764,182
2 Claims. (Cl. 46—86)

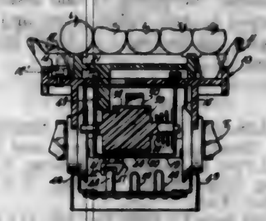


1. A toy parachute launcher comprising an elongated straight springy launching bar mounted on a rigid support block at the bottom portion of the bar and having an opposite free end which may be bent in a biased manner to a cocked position, said block consisting of a flat base attached to an upright triangular member with the bar being supported upon one of the sides of said triangular member pointing upwardly at an angle from the vertical, a parachute including a canopy and shroud lines having an elastic portion connecting the canopy to a weight, and means for launching the parachute from the bar consisting of an elastic ring connected to the top of the parachute which fits freely over the free end of said launching bar, said elastic ring being flexed when the parachute is held by said weighted figure of a man and moved backward against the force of the launching bar.

2,949,695
TOY DUMP VEHICLE
Moses Zion, Brooklyn, N.Y., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed Oct. 19, 1956, Ser. No. 616,978
3 Claims. (Cl. 46—243)

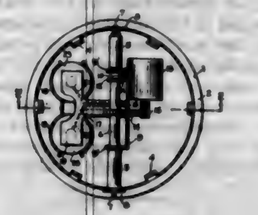
1. A toy vehicle comprising an elongated frame, wheels carried by said frame, a vehicle body secured to said frame, article retaining means pivoted to one edge of said body and movable from a substantially horizontal position to a tilted position for discharging said

articles, a cam follower carried by said frame and engageable with said article retaining means for tilting said article retaining means, an eccentric cam ratchet gear rotatably mounted in said frame and supporting said



cam follower, a pawl for rotating said ratchet gear, a plunger magnet coupled with said pawl for moving it in one direction upon energization to rotate said gear and spring means for moving the pawl in the other direction upon de-energization of the magnet.

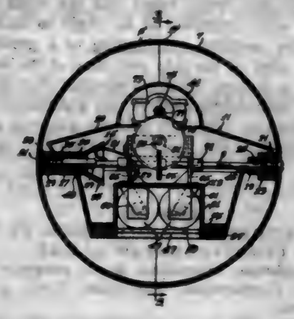
2,949,696
TOY
James M. Easterling, Chicago, Ill., assignor to Marvin I. Glass, Chicago, Ill.
Filed May 21, 1957, Ser. No. 660,550
8 Claims. (Cl. 46—243)



1. In a battery powered toy, a sphere comprising two separable sections, an axially slidable shaft extending within and across said sphere, a gear secured to the shaft, a frame carried by the shaft and rotatable thereabout, a motor carried by the frame, batteries carried by the frame in eccentric relation to the shaft, a pinion driven by the motor, said pinion engaging the gear to rotate the frame, motor and batteries about the longitudinal axis of the shaft, imparting rolling movement to the sphere and switch means carried within said frame for electrically connecting said batteries and motor, said switch means being in position for switching operation in response to axial movement of said shaft to thereby control operation of said motor.

2,949,697
TOY
Gunars Licitis and Marvin I. Glass, Chicago, Ill.; said Licitis assignor to said Glass
Filed June 14, 1957, Ser. No. 665,747
2 Claims. (Cl. 46—243)

1. A toy comprising a pair of interengaged hemispheres forming a sphere, a shaft extending through the center of said sphere perpendicular to the plane of engagement of said hemispheres, said shaft being rigidly connected to one of said hemispheres and being rotatably connected to the other of said hemispheres, a frame which is rotatably supported on said shaft and which is located within said sphere, power means carried on said frame in eccentric relation to said shaft, a gear secured to the shaft, said power means connected with said gear for rotating said frame relative to the sphere to thereby impart rolling movement to the sphere, switch means within the sphere for controlling the power means, and means operated by rotation of said hemisphere relative to one



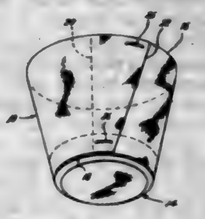
another connected to said switch means to actuate said switch means so as to energize and deenergize said power means.

2,949,698
RESILIENT PERMANENT MULCH PAD
Richard M. Downey, Roann, and Edwin L. Jamison, Syracuse, Ind., assignor to Midwest Insulations, Inc., Wabash, Ind., a corporation of Indiana; Airseal Insulations, Inc., Buffalo, N.Y., a corporation of New York; and Carney Corporation, Mankato, Minn., a corporation of Minnesota, in equal shares
Filed July 23, 1958, Ser. No. 750,383
3 Claims. (Cl. 47—9)



1. A resilient permanent mulching article comprising a fabricated pad of mineral wool fibers assembled together in predetermined relation to provide air spaces between fibers, the material of said fibers being stable and inert, said fibers being coated with a phenol-formaldehyde bonding agent, said fibers being bonded together into a resilient, blanket-like integrated pad having two opposite surfaces which are substantially parallel, said pad being permeable to water, said pad having an opening therethrough between the peripheral edges thereof, said pad further having an oblique slit therethrough extending from one of said edges to said opening.

2,949,699
FLOWER POT AND MATERIAL FOR MAKING THE SAME
Charles Joeseph Lapetina, 310 W. 18th St., and Victor Hugo Salinas, 407 W. 9th St., both of Houston, Tex.
Filed Dec. 17, 1956, Ser. No. 628,763
2 Claims. (Cl. 47—37)



1. A tapered flower pot formed entirely of open-mesh sheet-like material comprising a side wall having upper and lower substantially circular edges and end portions

secured together in overlapping relation, one end edge of said side wall extending substantially at right angles to said upper and lower edges and the other end edge of said side wall extending at an angle to said one end edge, said end portions overlapping to a greater extent at the upper edge of the side wall than at the lower edge thereof, and a bottom having a circular disc-like bottom wall and an upstanding conical rim positioned inside of and secured to said side wall with the external surface of the rim in contact with the internal surface of the side wall.

2,949,700

PRODUCTION OF CAROTENOIDS BY THE CULTIVATION OF ALGAE

Henry R. Kathrein, Muscatine, Iowa, assignor to Grain Processing Corporation, Muscatine, Iowa, a corporation of Iowa

No Drawing. Filed July 21, 1958, Ser. No. 749,586
20 Claims. (Cl. 47—58)

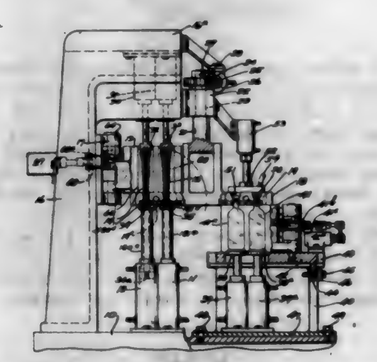
1. A process for the production of carotenoids which comprises cultivating a green alga of the division Chlorophyta in an aqueous organic nutrient medium containing a fermentable carbohydrate, between about 0.1 and about 5 percent by weight of a proteinaceous material, and between about 0.05 and about 4 percent by weight of urea.

2,949,701

APPARATUS FOR ALIGNING GLASS FORMING MOLDS

Ralph H. Olson and Urban P. Trudeau, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Filed Sept. 14, 1955, Ser. No. 534,265
2 Claims. (Cl. 49—9)



1. In an apparatus for aligning glass molding and shaping elements for molding molten glass, the combination of a base, a pair of blank mold halves having a common fulcrum mounted on said base, each half having a cavity formed therein, a glass forming insert half in each cavity, said blank mold halves and insert halves being movable about said fulcrum in an arcuate path into closed position, the meeting faces of all of said halves being disposed in a plane radial to said fulcrum, a rotatable table supported by said base, a pair of neck mold halves carried by said table and cooperating with said blank mold halves, each of said neck mold halves being relatively movable horizontally relative to said blank mold halves, means on said table restraining the horizontal movement of said neck mold halves in a direction transverse to said radial plane whereby said neck mold halves move only parallel to said radial plane, a vertically reciprocable pressing plunger, a piston for moving said plunger into the space between said inserts, a cylinder accommodating said piston, means supporting said cylinder for limited horizontal movement transverse to the axis thereof, means supported by said cylinder for guiding said plunger, said guide means cooperating with said neck molds to move therewith, means for effecting relative horizontal movement of said insert halves in a direction normal to said radial plane into closed relation, and means for locking said blank mold halves in closed relation.

2,949,702

GLASS-METAL SEALING METHOD

Wendell S. Blanding, Painted Post, and Laurence H. Foster and Paul F. Spremulli, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York

Filed June 13, 1956, Ser. No. 591,179
6 Claims. (Cl. 49—81)



1. The method of sealing the free edge of the skirt of a skirted hollow insert member whose skirt borders the only entry into its cavity to a wall of a glass body, which includes heating the skirt of such member while heating a localized region of such body wall to which such member is to be sealed to its workable temperature, mechanically engaging the insert member and pressing the skirt thereof into cavity sealing relation of the member with the softened region of such body wall, heating the gas entrapped in the cavity of such member in the meantime, and effecting a repositioning movement of said member with respect to such body wall by air pressure within said member while the glass in such body wall is still soft.

ERRATUM

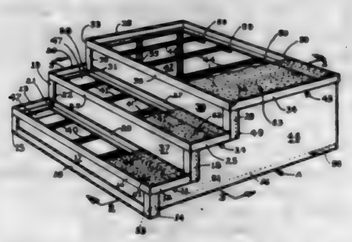
For Class 50—354 see:
Patent No. 2,949,763

2,949,703

PREFABRICATED STEP UNIT

Edmund R. Katzmarek, 1710 E. 8th St., Duluth, Minn.

Filed Nov. 12, 1957, Ser. No. 695,602
1 Claim. (Cl. 50—107)



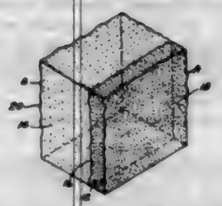
In a step unit, a series of steps each including a frame comprising longitudinal end angle members, a transverse inner angle member and a transverse nose angle member, a concrete body member formed and supported within the confines of the angle members of said frame, vertically disposed riser angle members connected to said inner and end angle members of one step and the nose and end angle members of the step above the denoted step, side plates connected to the inside surface of said angle riser members and the under surface of said end angle members, and riser plates connected to the inner transverse angle member of one step, to the riser angle members for said step and to the nose angle member for the step above.

2,949,704

REFRACTORY MATERIALS

Louis J. Jacobs, Chicago, Ill., assignor to The S. Obermayer Co., Chicago, Ill., a corporation of Ohio

Filed Sept. 26, 1957, Ser. No. 686,365
8 Claims. (Cl. 50—464)



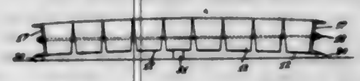
2. A laminated plastic refractory consisting essentially of a primary layer stable at temperatures up to 3400° F. and consisting essentially of plastic refractory of at least 60% tabular alumina and a supporting layer of plastic refractory which becomes a glass at a temperature above 2200° F. and which consists essentially of a homogeneous mixture of about 60% by weight calcined flint clay of between about 3 and about 10 mesh size, about 10% by weight kyanite of between about 20 and about 50 mesh size, about 10% by weight plastic kaolinite fire clay, about 10% by weight plastic ball clay, and the remainder water.

2,949,705

REINFORCED CONCRETE SLAB CONSTRUCTION

Harold R. Carper, Indianapolis, Ind., assignor, by direct and mesne assignments, of 35 20/30 percent to Carl F. Spickelmier, 32 8/30 percent to Edith S. Greer, and 32 8/30 percent to Betty S. Spickelmire, all of Indianapolis, Ind.

Filed June 5, 1953, Ser. No. 359,883
8 Claims. (Cl. 50—536)



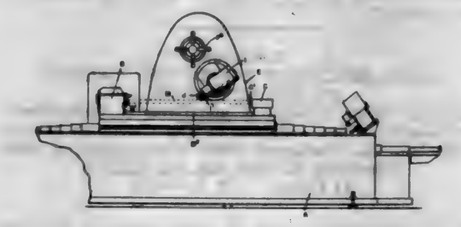
1. A method of making a composite slab from a plurality of blocks each having end faces which converge downwardly and one or more horizontal holes extending between said end faces, said holes being located in corresponding position in the several blocks and opening in said end faces at points spaced from the edges thereof whereby, when the blocks are aligned in a row with their end faces abutting, the holes will provide, extending from one end of the row to the other, a passage for the reception of a tension member and for the longitudinal flow of grouting from block to block, said method comprising the steps of so aligning said blocks with the end faces of adjacent blocks interengaging, disposing a tension member in said passage to extend into and between the end blocks of the row, forcing the end blocks toward each other with a predetermined effort to bring all the blocks into contact with each other adjacent their upper faces, forcing grouting into said passage, supporting the slab, while said effort is maintained, at longitudinally spaced points including two points at the ends of the slab and one or more intermediate points, and maintaining the slab so supported and under beam loading by virtue of its own weight until the grouting has set, the intermediate point or points at which the slab is supported being above the end points to impart a predetermined rise to the slab, and the downward convergence of the end faces of the blocks being sufficient to insure that in the supported slab the center of pressure at each joint between adjacent blocks will be above the line along which said effort is exerted.

2,949,706

APPARATUS FOR FORMING BROACH TYPE TOOLS

Samuel G. Brady, Birmingham, Mich., assignor, by mesne assignments, to Ex-Cell-O Corporation, Detroit, Mich., a corporation of Michigan

Filed Jan. 22, 1957, Ser. No. 635,437
11 Claims. (Cl. 51—34)



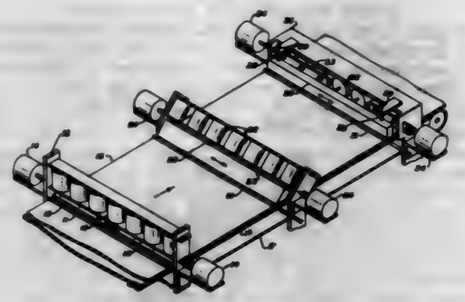
1. In a grinding machine, a bed, a holder for work thereon, a housing extending upward from said bed, a frame within said housing having a hollow trunnion pivotally engaging a circular opening in a wall of said housing, a rotatable grinder wheel unit including a grinder wheel mounted on said frame to be movable on said frame in transverse directions, said mounting extending through said hollow trunnion with the grinder wheel outside of said housing in operative relation to work in said holder, means for moving said unit in one of said directions to feed the grinder wheel into work in said holder, means for simultaneously reciprocating said unit transversely of the direction of feed, and means for angular adjustment of said frame about the axis of said trunnion to determine the angle of each of said movements in relation to work in said holder.

2,949,707

METHOD AND APPARATUS FOR GRINDING AND POLISHING SHEET GLASS

David H. Staelin, 2385 Evergreen Road, Ottawa Hills, Ohio

Filed Feb. 23, 1956, Ser. No. 567,122
11 Claims. (Cl. 51—60)



4. Apparatus for treating a surface of a sheet of hard, substantially non-yielding materials such as glass for a polish comprising a longitudinal tool member extending across the surface of a sheet of the material, means for advancing the sheet under the tool member in a direction transverse to the longitudinal orientation of said tool member, electromechanical transducer means for vibrat-

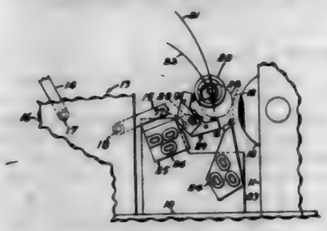
ing said tool member ultrasonically in a direction perpendicular to the surface across which it extends, means for interposing a liquid suspension of comminuted abrasive between said sheet surface and said tool member, said transducer means being so constructed that when operated in its normal intended manner, the relative vibration between the tool member and sheet surface are at an ultrasonic frequency such that with a small amplitude, the tool member drives the abrasive particles suspended in liquid under the tool member against the sheet surface, and electromechanical means for oscillating said member longitudinally across said sheet surface at substantially the same high frequency and small amplitude simultaneously with its vibration ultrasonically in the perpendicular direction.

2,949,708

GAGE HEAD FOR IN-PROCESS GAGING IN MACHINE TOOL

James G. Wiatt, Cincinnati, and Greig S. Butterworth, Columbus, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Filed June 24, 1959, Ser. No. 822,574
11 Claims. (Cl. 51—103)



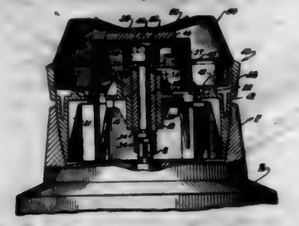
1. In a machine tool having a forming member and means to drive a workpiece in an operating position in contact with the forming member, a gage head having a body portion pivotally mounted adjacent a workpiece in the operating position, means connected to the body portion and adapted to engage a workpiece in said position relatively to locate said body portion and the workpiece, a sensing element carried in fixed relation to the gage head body portion in spaced relation to said locating means and in sensing engagement with the surface of a workpiece engaged with said locating means to detect movement of said workpiece surface relative to said sensing element.

2,949,709

KNIFE SHARPENER ATTACHMENT

Angelo C. de Angelis, New Shrewsbury, and Harry E. Butterfield, Jr., Maplewood, N.J., assignors, by mesne assignments, to Dynamics Corporation of America, New York, N.Y., a corporation of New York

Filed Apr. 15, 1958, Ser. No. 728,609
1 Claim. (Cl. 51—128)



A knife sharpener attachment adapted to be driven by an electric motor driven shaft which comprises a base having an upright annular shoulder and an upright peripheral rim, a first cylindrical bearing mounted axially within said housing, a drive shaft mounted within said bearing adapted at its lower end for engagement with said motor driven shaft, an upwardly projecting drive pin eccentrically mounted on the upper end of said drive shaft, a counterweight secured to said shaft opposite said drive pin, an upright resilient sleeve secured at its lower end to said annular shoulder, a second cylindrical bearing mounted on said drive pin, a circular support and motion transmission member having an annular depending sleeve receiving said cylindrical bearing and secured to the upper end of said resilient sleeve, tabs extending upwardly from said circular support member, a sharpening stone mounted on said support member between said tabs whereby rotation of said shaft imparts an orbital motion to said stone, a knife guide mounted on said upright peripheral rim above said stone for supporting a knife blade at an appropriate angle for sharpening.

2,949,710

GEL PACKAGING METHOD AND RESULTING PACKAGE

William H. Wheeler, New York, N.Y., assignor to Airkem, Inc., New York, N.Y., a corporation of New York

Filed Sept. 16, 1958, Ser. No. 761,340
11 Claims. (Cl. 53—21)



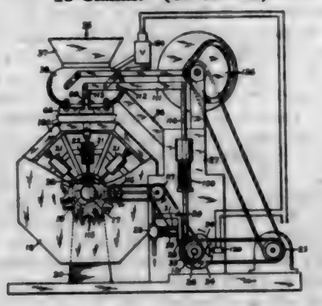
1. The method of packaging gel material to facilitate free discharge of a gel mass from a container that comprises filling liquid gel material into a container having a closed end, and straight to slightly tapered side walls extending to an open end having the maximum internal dimensions of said container, to a level slightly below the open end of the container, assembling the container thus filled with a closure means having an integral elongated stem adapted to extend centrally of the container to a point adjacent the closed end thereof, inverting the assemblage to dispose the liquid gel material in engagement with said closure means, thereby providing adjacent the closed end of said container an air space into which said stem extends, and retaining the assemblage in this inverted position until the gel material has set to a form retaining condition.

2,949,711

METHOD AND APPARATUS FOR FILLING CONTAINERS

Clarence W. Vogt, Weston, Conn.
(Rte. 4, Westport, Conn.)

Filed July 2, 1956, Ser. No. 595,249
18 Claims. (Cl. 53—24)



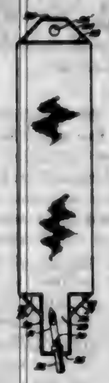
1. A method of filling receptacles comprising covering a receptacle having an opening therein with a member spaced from said receptacle and opposing said opening, blowing a finely divided material into said receptacle to fill it and introduce additional material between said member and said receptacle, venting the gas from the receptacle while said member retains the material therein, and compacting the material in the receptacle by moving said member and receptacle relatively toward each other while the gas is vented to enable the gas to be dissipated at least in part from the material.

2,949,712

LIQUID PACKAGING METHOD

Frederick W. Bieberdorf and John W. Rhoades, San Antonio, Tex., assignors, by mesne assignments, to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois

Application Feb. 8, 1954, Ser. No. 408,733, which is a substitute for application Ser. No. 151,638, Mar. 24, 1950. Divided and this application Jan. 18, 1955, Ser. No. 485,541
10 Claims. (Cl. 53—29)



1. In a method for the sterile packaging of liquids, the steps of forming a thermoplastic tube with inside sterile surfaces, sealing a length of the tube with the walls thereof in collapsed condition at its ends to form a sealed container, introducing a tube through a side wall of a portion of the container to pierce the same, filling the container through said tube, heat-sealing the container inside of the point at which the side wall was pierced and while said tube is within said container wall to seal off said portion from the remainder of the container, and then withdrawing said tube.

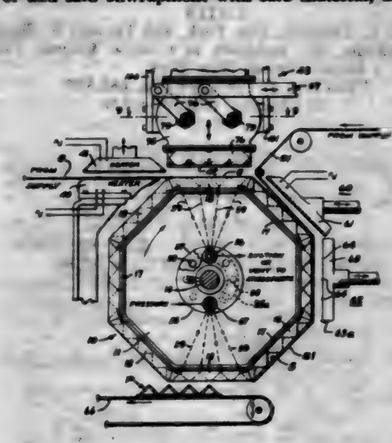
2,949,713

METHOD AND APPARATUS FOR FORMING AND FILLING PACKAGES

Clarence W. Vogt, Watson, Conn.
(Rte. 4, Westport, Conn.)

Filed May 18, 1956, Ser. No. 585,775
15 Claims. (Cl. 53—29)

1. A method of filling a package comprising placing an enwrapment between a mold element having a recess therein and a cover therefor forming with said recess an enclosed mold cavity, introducing fluent material under pressure into said mold cavity between said cover and said enwrapment to expand the latter into conformity with said recess and fill said mold cavity between said cover and said enwrapment with said material, and then



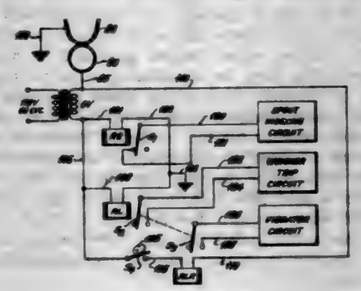
applying a closure sheet to and sealing it to said enwrapment.

2,949,714

LOST CONTAINER SWITCH MECHANISM FOR AUTOMATIC PACKAGING EQUIPMENT

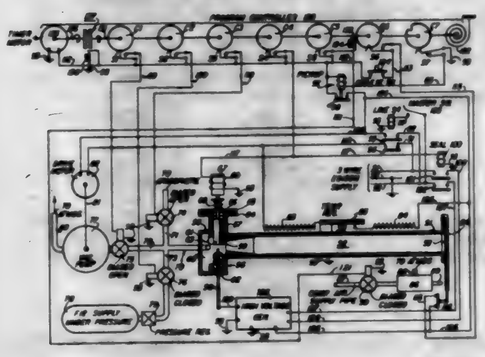
Robert F. Davis, Berwick, Pa., assignor to Wise Potato Chip Company, Berwick, Pa., a corporation of Pennsylvania

Filed Dec. 3, 1958, Ser. No. 777,951
4 Claims. (Cl. 53—63)



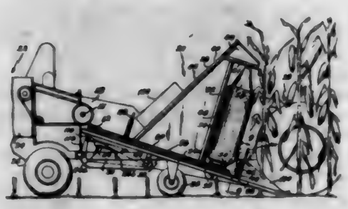
1. An automatic packaging mechanism comprising: a weigher provided with a product discharge spout, a turret indexer provided with an indexing circuit means and having a series of spouts thereon, a package sealer, and a container applicator to place a container on each of said spouts, said indexer having means for normal periodic rotation thereof to position said spouts successively before said container applicator, said weigher and said package sealer, an interrupter circuit to interrupt said means for normal periodic rotation and to continue movement of said indexer past said discharge spout without filling operation time lag and to stop operation of said weigher when said applicator does not properly function, a contact element positioned to sequentially contact said spouts during operation of said turret indexer, a feeler circuit energized by contact of said contact element with a spout having no container thereon, said feeler circuit thereby being energized, a relay in said feeler circuit to actuate said interrupter circuit for indexing movement of said indexing turret without awaiting the normal filling operation, and relay means in said feeler circuit to stop operation of said weigher and preset said first relay.

2,949,715
MACHINES FOR MAKING HEAT-INSULATING UNITS
Frederic L. Tarleton, Oak Park, and Thomas S. Simms, Bensenville, Ill., assignors to General Electric Company, a corporation of New York
Filed Oct. 8, 1957, Ser. No. 688,887
14 Claims. (Cl. 53—112)



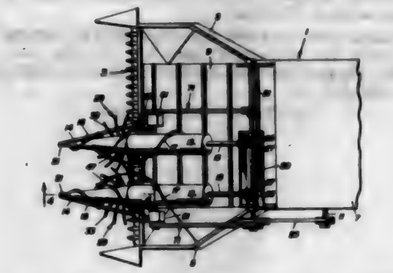
4. A machine for making a heat-insulating unit comprising structure defining a chamber having a doorway thereinto, a door cooperating with said doorway and movable between open and closed positions with respect thereto, said open chamber being adapted to receive through said doorway an assembly including a flexible bag having an opening thereinto and a self-supporting deformable porous slab of solid poor heat-conducting material enclosed in the bag, a program controller, first means governed by said program controller while said door is in its closed position for evacuating said closed chamber so as to remove the air therefrom and from the assembly therein, second means governed by said program controller then for introducing a gas having a coefficient of thermal conductivity lower than that of air into said closed chamber so as to fill the same and both to envelope and to fill the assembly therewith, sealing mechanism arranged in said chamber and operative hermetically to seal the opening into the bag while the assembly is in said closed chamber and is both enveloped and filled with the gas therein so as to trap a charge of the gas in the sealed bag, and third means governed by said program controller then for operating said sealing mechanism.

2,949,716
HARVESTING MACHINE FOR ROW CROPS
Edward Thomson, Fairfield Road, R.R. 7, Mount Vernon, Ill.
Filed Apr. 10, 1957, Ser. No. 652,004
9 Claims. (Cl. 56—15)



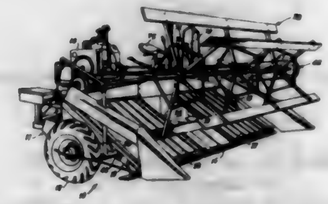
1. A corn harvesting machine including a frame having a receiving bed for harvested corn, means on said frame spaced rearwardly from the front end of said bed and extending upwardly to provide a collecting space for harvested corn, said means being open toward said front end, gathering means operably mounted upon said bed at the open end of the collecting space comprising a pair of rotatable members of generally cylindrical and elongated form extending upwardly and inclined forwardly, said members having yielding surfaces in adjacent relation over the greater part of the length thereof, drive means on said frame connected to said gathering means to rotate the rotatable members whereby the adjacent surfaces move rearwardly, and cutting means operably associated with said gathering means.

2,949,717
PICKUP MECHANISM FOR HARVESTERS
Walter L. Johannesen, Alta, Iowa
Filed Aug. 21, 1958, Ser. No. 756,390
6 Claims. (Cl. 56—23)



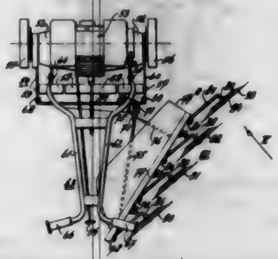
4. In a harvester, the combination of a supporting frame, a front sickle bar extending transversely of said frame, a crop conveyor extending rearwardly from said sickle bar, a pair of elongated pickup and conveyor rolls mounted on said frame in transversely spaced relation, said rolls having tapered front noses and being provided with oppositely pitched spiral blades, the noses of said rolls being disposed forwardly of the sickle bar with the rolls being rearwardly inclined to extend over the sickle bar and above said conveyor, means for rotating said rolls in opposite directions whereby the noses thereof may pick up and straighten fallen crop for feeding by said blades rearwardly between said rolls, a pair of rotary bladed crop gathering and roll stripping spiders mounted below the respective rolls above the sickle bar, the blades of said spiders interlapping between said rolls to gather the straightened crop and force the same into the sickle bar and to strip said rolls by rotation of the spiders in opposite directions, and means for rotating said spiders.

2,949,718
WINDROW REGULATING ATTACHMENT
J. W. (Amos) Buchanan, Rte. 3, Waxahachie, Tex.
Filed July 11, 1958, Ser. No. 747,926
8 Claims. (Cl. 56—192)



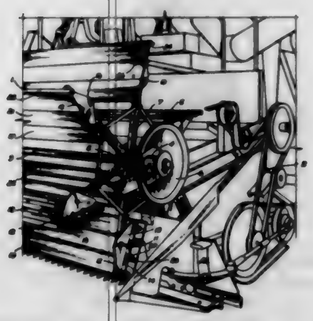
1. An attachment for a windrower having cutting means for cutting grain and a pair of rearwardly extending conveyors which are movable transversely to discharge grain cut by the cutting means through a discharge opening between such conveyors onto the ground to form a windrow comprising: means mountable on said windrower on opposite sides of said discharge opening and movable transversely in a single plane with respect to said windrower for effectively regulating the transverse width of said discharge opening.

2,949,719
SIDE DELIVERY RAKE AND MOWER
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to Cornelis van der Lely, Maasland, Netherlands
Filed July 6, 1956, Ser. No. 596,227
Claims priority, application Netherlands July 26, 1955
6 Claims. (Cl. 56—193)



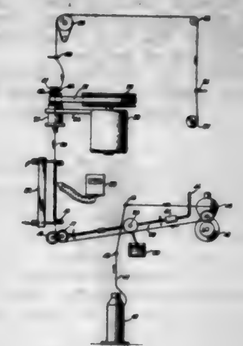
1. A lawn tending apparatus comprising a mowing device having a cutting means, wheels on the mowing device and supporting the same for ground traversing movement, a guide frame coupled to said device, handles on the guide frame for the manual guiding of the apparatus, and a side delivery rake coupled to the mowing device in trailing and laterally displaced relation to said mowing device, the rake including free-wheeling rake wheels arranged in echelon.

2,949,720
REEL BATS FOR HARVESTERS
Eldan L. Ansel, Ulysses, Kans.
Filed July 7, 1958, Ser. No. 746,982
1 Claim. (Cl. 56—220)



A lightweight bat for a harvester type reel having arms and comprising, an elongate bat of a single piece of thin sheet metal and being relatively wide, said bat having an inner face and a substantially smooth, uninterrupted planar outer face, ribs extending substantially perpendicularly from said inner face and extending longitudinally substantially the length of said bat in spaced parallel relation, said ribs being formed integrally with said bat, said ribs having a U-shaped cross-section with internal adjacent faces thereof engaging adjacent the outer face of the bat, a plurality of spaced screws extending transversely through said ribs for securing said internal adjacent faces together, flanges formed integrally with said bat and extending inwardly in substantially perpendicular relation to said inner face and extending along opposite longitudinal side edges thereof, said flanges terminating in a U-shaped portion to provide additional rigidity, said bat being mounted upon bracket members adapted to be secured to said arms of a harvester type reel whereby the crops to be harvested are contacted by a substantially smooth, uninterrupted planar face which results in a minimum of crop wastage.

2,949,721
PROCESS AND APPARATUS FOR MAKING CURLED THERMOPLASTIC YARN
Pieter van Dijk, Velp, Netherlands, assignor, by mesne assignments, to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed June 6, 1955, Ser. No. 513,442
Claims priority, application Netherlands June 17, 1954
7 Claims. (Cl. 57—34)



1. Apparatus for imparting a uniform curl to thermoplastic yarn comprising a tensioning device, a false twisting device, means located between said devices for presenting a smooth heated metal surface to the yarn, means for withdrawing the yarn from said false twisting device at a predetermined rate, supply means for feeding yarn to said tensioning device at a variable rate and means responsive to variation in tension in the running yarn for controlling the feed rate of said supply means, said last named means including a lever pivoted intermediate the ends thereof for supporting said tensioning device.

2,949,722
METHOD AND APPARATUS FOR PRODUCING A TRANSFER TAIL
William V. Henry, Asheville, Donald C. Cole, Candler, and Maxine L. Smathers, Asheville, N.C., assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
Filed Jan. 18, 1957, Ser. No. 635,025
6 Claims. (Cl. 57—34)



2. A method of producing a transfer tail during the threading in of yarn on the spool of a drawtwisting machine having a reciprocating ring mechanism, a ring

traveler, a rotating spindle and a slotted disc driven by the spindle comprising the steps of threading the yarn through the ring traveler, feeding the yarn temporarily to a waste collector along a path adjacent to the slotted disc, threading the yarn over a restraining plate and under a deflector bar of a tailmaking apparatus, shifting said deflector bar laterally with respect to said path thereby deflecting the yarn into contact with the rotating slotted disc and causing the yarn to break between the disc and the waste collector, positioning the restraining plate immediately adjacent to the rotating disc thereby restraining the yarn winding to one end of the spool, and removing the restraining plate from contact with the yarn after the desired transfer tail has been produced thereby releasing the yarn for traverse in response to reciprocation of the ring mechanism.

2,949,723

APPARATUS FOR CURLING THERMOPLASTIC THREADS

Hans Alwin Schrenk, Arnhem, Pieter van Dijk, Velp, and James Watt Ijsbrand Heijnis, Arnhem, Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Mar. 13, 1958, Ser. No. 721,281
Claims priority, application Netherlands Mar. 18, 1957
5 Claims. (Cl. 57—34)



1. A device for curling thread comprising a tubular member adapted for rotation and having at least two running surfaces from which the same is supported, at least two pair of discs rotatable about spaced axes and having peripheral surfaces adapted to cooperate with said running surfaces to support said tubular member for rotation, drive means for imparting rotation to said tubular member, a tubular heating element disposed coaxially with respect to said tubular member in its operative position, a base plate mounting said supporting discs and said tubular heating element in spaced relationship, and means permitting pivotal movement of said base plate toward and away from said driving means.

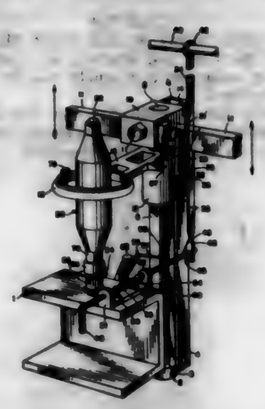
2,949,724

RING-TWIST MACHINE MECHANISM CAPABLE OF FORMING A TRANSFER TAIL

Otto Schröder, Remscheid-Lennep, Germany, assignor to Barmer Maschinenfabrik A.G., Wuppertal-Oberbarmen, Germany

Filed Apr. 2, 1958, Ser. No. 725,917
Claims priority, application Germany Apr. 6, 1957
6 Claims. (Cl. 57—34)

1. In filament-winding, ring-twisting machines comprising a plurality of units; individual bobbin-switching devices integral with each unit which comprise means adapted to effect vertical reciprocating motion in a ring carrier, a ring carrier vertically and slidably supported on vertical supporting means in cooperative spaced relation with said reciprocating means, means to detachably connect said reciprocating means to said ring carrier, means to control disconnection and connection of said de-



tachable connection means, said connection means comprising means to control elevation of said ring carrier when disconnected through a certain vertical distance upward along said vertical supporting means to dispose said connecting means in automatic reconnecting relation between said reciprocating means and said ring carrier.

2,949,725

TWISTING HEAD FOR TWO-FOLD YARN

Goffredo Renzini, Pizzighettone, Italy, assignor to Pirelli Societa per Azioni, Milan, Italy

Filed June 4, 1958, Ser. No. 739,701
Claims priority, application Italy June 6, 1957
7 Claims. (Cl. 57—58.36)



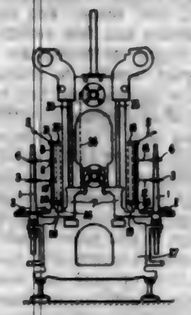
1. In a twisting head a rotatable axially bored pivot positioned on a generally vertical axis, support means fixed on the low end section of the pivot thereby to rotate therewith about the said axis, a cross shaft rotatable in the support means in a plane off-set with respect to the said axis, a pair of grooved pulleys respectively keyed on opposite ends of the cross shaft in planes parallel and symmetrical to the said axis, means for supplying a thread to one of the pulleys, means for supplying a second thread to the other pulley, and means for drawing-off the two threads in doubled and twisted condition through the bore in the pivot.

2,949,726

RING SPINNING AND TWISTING FRAMES

Hans Latus, Kempten, Allgau, Germany, assignor to Allgauer Maschinenbau G.m.b.H., Kempten, Allgau, Germany

Filed Jan. 13, 1959, Ser. No. 786,596
Claims priority, application Germany Jan. 16, 1958
20 Claims. (Cl. 57—106)



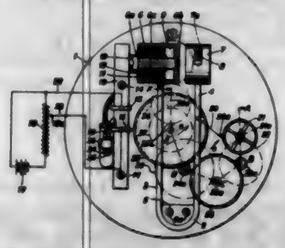
1. In a ring spinning and twisting machine, in combination, a support; a spindle mounted on said support; ring rail means including a traveler ring means and movably mounted on said support for moving said traveler ring means relative to said spindle; a guide member fixedly mounted on said ring rail means and extending parallel to said spindle; a plurality of restricting ring means mounted on said guide member for movement relative to each other and to said traveler ring means; and operating means connected to each restricting ring means for moving the same on said guide member independently of said traveler ring means and of the other restricting ring means.

2,949,727

ELECTRIC TIMEPIECE

Max Hetzel, Biel, Switzerland, assignor to Bulova Watch Company Inc., New York, Biel, Switzerland

Filed Feb. 14, 1956, Ser. No. 565,452
Claims priority, application Switzerland Feb. 16, 1955
2 Claims. (Cl. 58—23)



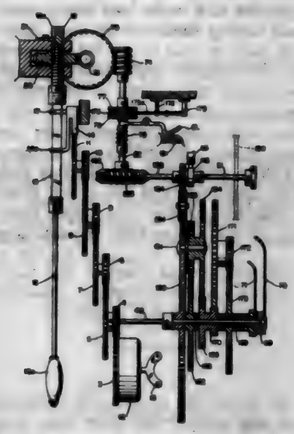
1. In an electric timepiece, in combination, a base plate; a tuning fork carried by said base plate and having a pair of tines spaced from said base plate; a permanent magnet carried by one of said tines, electrical coils disposed to cooperate with said permanent magnet for maintaining the oscillations of the tuning fork; a balance weight carried by the other of said tines and formed with a bore, said other tine and balance weight having a natural frequency substantially equal to the natural frequency of said one tine and permanent magnet; a member located within and shiftable along said bore of said balance weight for adjusting the natural frequency of said other tine and balance weight, and means including a pawl connected to the other tine of said fork and a ratchet wheel engageable by said pawl to convert the oscillations of said fork into a rotary movement.

2,949,728

CLOCK

Oscar H. Dicke, 211 S. Washington St., New Bremen, Ohio, and Robert H. Dicke, 37 Jefferson Road, Princeton, N.J.

Filed July 5, 1956, Ser. No. 596,067
14 Claims. (Cl. 58—109)



1. In combination; time manifesting means; mechanical time measuring mechanism including a main spring and escapement mechanism for driving said time manifesting means; rotatable rate regulating means for determining the rate of operation of said time measuring mechanism; rotatable setting means for setting said time manifesting means; a clutch connecting said setting means and said rate regulating means; said clutch comprising a rotatable friction driving member, a friction driven member coaxial with and biased toward said driving member, a clutch plate coaxial with and between said driving member and said driven member, stop means to permit limited rotation of said clutch plate in either direction and spring means for biasing said clutch plate to an intermediate rotated position with respect to said stop means; the operative connection afforded by said clutch between said setting means and said rate regulating means is such that if the time manifesting means is set forward the rate regulating means is operated in a direction to increase the rate of operation of said time measuring mechanism and if set backward the rate regulating means is operated in a direction to decrease the rate of operation of the time measuring mechanism and in each event the extent of rate regulation is limited to the extent afforded by the limited rotation of said clutch plate as determined by said stop means; and restoring means for temporarily separating said driving member and said driven member to an extent to permit said spring means to return said clutch plate to its intermediate rotated position after a setting operation.

2,949,729

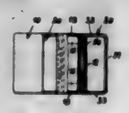
TWO-LAYER EXPANSIBLE LINKAGE OF HIGH FLEXIBILITY

David Jacobsen, Copenhagen, Denmark, assignor to Rodi & Wienenberger Aktiengesellschaft, Pforzheim, Germany

Filed Oct. 30, 1956, Ser. No. 619,339
Claims priority, application Denmark Nov. 11, 1955
2 Claims. (Cl. 59—79)

1. An elastic link strap comprising: a plurality of upper and lower links each having a substantially rectangular block-shaped configuration the longer dimension of which extends transversely to the longitudinal direction of the strap, said links being superimposed upon each

other to form two layers, said upper links being staggered relative to said lower links in said longitudinal direction of the strap by the width of one-half link, each of said links being in the form of a hollow shell-like casing, each of said upper links having an upper wall, opposite side walls, and opposite end walls, and being open in downward direction, each of said lower links having a bottom wall and opposite side walls, and being open in upward direction and having substantially open outer ends, said side walls of each of said lower links projecting at least partly into two adjacent upper links through the lower opening thereof and having slots at the outer ends thereof near said bottom wall, said end walls of said upper links being formed with extensions which are inwardly bent and constitute guide tabs that extend transversely at the level of said slots, said tabs being slidably received within said slots for connecting said upper and lower links with each other and for guiding said upper links for movement relative to said lower links in said longitudinal di-



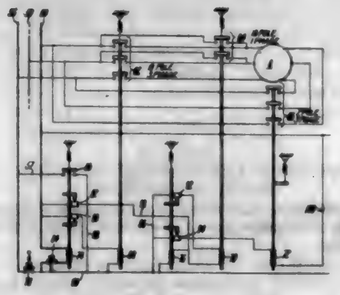
rection of the strap, the dimensions transversely of the band of each side wall of said lower links being materially less than the corresponding dimensions of the interior of the upper link receiving said side wall, the width and depth of said slots being sufficiently larger than the thickness and length of the tabs they receive to allow the strap to bend and flex transversely about two mutually perpendicular axes transverse to said longitudinal direction of the strap as well as to twist about a third axis extending in said longitudinal direction, and at least one pair of curved leaf springs disposed within each of said upper links and abutting one side wall of each of two adjacent lower links within each respective upper link, each such pair of leaf springs also abutting the two side walls of said respective upper link, whereby said spring will be at least partly flattened when the strap is expanded in said longitudinal direction, or is bent or twisted about the two first-mentioned axes, or is twisted about said third axis.

2,949,730

ELASTIC FLUID TURBINE TWO SPEED MOTOR CONTROL SYSTEM

Clarence E. Kenney, Hartland, and Robert C. Moore, Wauwatosa, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Filed Feb. 25, 1957, Ser. No. 641,883
4 Claims. (Cl. 60—1)



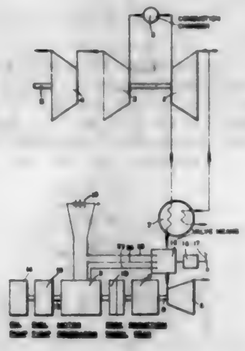
1. A control system for operating a multipole, two winding induction motor to rotate the spindle of a turbine fast enough to maintain uniform temperature of the spindle and casing and facilitate oil lubrication, wherein said two winding induction motor has a low speed winding and a high speed winding, said induction motor driving said spindle through a speed reducing gearing arrangement that includes a drive gear that is in driving engagement with said spindle, said drive gear automatically disengaging from driving engagement with said spindle when said spindle rotates faster than said drive gear, comprising: a supply of multiphase and single phase electrical current, first, second and third switch means, control means closing said first switch means and interconnecting said supply of multiphase electrical current with said low speed winding to provide a high torque, said control means opening said first switch means stopping said supply of multiphase electrical current in said low speed winding after a predetermined period of time and simultaneously closing said second switch means interconnecting said supply of single phase electrical current with said low speed winding, to operate said motor during a second predetermined period of time to decrease residual magnetism in said poles of said multipole motor, and finally, said control means after said second predetermined period of time opening said second switch means stopping the supply of said single phase electrical current in said low speed winding and simultaneously closing said third switch means interconnecting said multiphase electrical current with said high speed winding to bring said motor up to high speed.

2,949,731

GAS TURBINE POWER PLANT

Stewart K. Hambling, Coventry, England, assignor to The Standard Motor Company Limited, Coventry, Warwickshire, England

Filed Apr. 29, 1958, Ser. No. 731,715
Claims priority, application Great Britain May 20, 1957
1 Claim. (Cl. 60—6)



A gas turbine power plant comprising a compressor, a turbine, first shaft means connecting said turbine and compressor, combustion chamber means connected between said turbine and compressor, auxiliaries for said plant, an electric motor generator, second shaft means connecting said motor generator to the auxiliaries, an air turbine, duct means between the compressor and the air turbine to supply compressed air to the air turbine, a control valve positioned in said duct means, reduction gearing, a one-way driving device, third shaft means interconnecting, through said reduction gearing and said one-way driving device, said air turbine and said motor generator, an electrical circuit, whereby said motor generator can be operated alternatively as a motor and as a generator, and control means operative, on acceleration of the plant, to close said control valve and also so to change said electrical circuit that said motor generator can be operated as a motor to drive the auxiliaries, and, during other conditions of operation of the plant, to open said

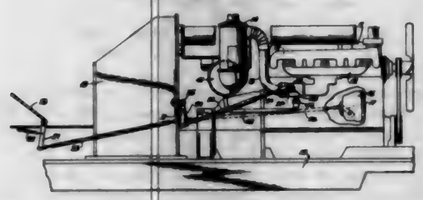
control valve and also so to change said electrical circuit that said motor generator can be operated as a generator, the auxiliaries then being driven by said air turbine, said control means including a cylinder, a piston slidable in said cylinder, a control member of the plant, a connection between said control member and said piston, a pressure-responsive element in said cylinder and means defining a leak opening between said piston and said element, whereby said element is responsive only to rapid movement of said piston.

2,949,732

VACUUM CONTROL FOR FUEL INJECTION ENGINES

Robert J. Schroeder, Wheeling, Ill., assignor, by mesne assignments, to Allis-Chalmers Manufacturing Company, West Allis, Wis., a corporation of Delaware

Filed Sept. 30, 1957, Ser. No. 687,083
3 Claims. (Cl. 60—14)



1. A vacuum generating means on a fuel injection engine of the type having a variable fuel pump, a movable control member for the pump, and an air supply conduit means, said vacuum generating means comprising a valve in the air supply conduit, a vacuum tank, a vacuum connection between said tank and the air supply conduit downstream from the valve, and linkage connecting the valve to the control member and including a yieldable link, the linkage being constructed and arranged to close the valve as the control member is moved in a direction to reduce the fuel supplied by the pump and to open the valve as the control member is moved in a direction to increase the fuel supply, the valve being fully opened by partial movement of the control member in said last named direction and the yieldable link yielding as the control member is moved further to increase the fuel supply to a maximum.

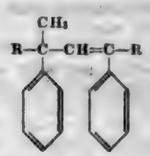
2,949,733

METHOD OF OPERATING A TURBOJET ENGINE AND HIGH ENERGY FUELS USED THEREIN

Edgar E. Hardy, New Martinsville, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed July 13, 1956, Ser. No. 597,573
4 Claims. (Cl. 60—35.4)

1. A method of operating a turbojet engine which comprises feeding a mixture of air and a partially hydrogenated polycyclic hydrocarbon mixture having a specific gravity of from about 0.85 at 30° C. to about 1.5 at 30° C., a pour point not substantially above 5° C., and a heat of combustion of at least 125,000 B.t.u. per gallon into the combustion chamber of said engine, subjecting the said mixture to combustion, passing the resulting hot gases through a turbine to expand the same and then passing the hot gases into the atmosphere by way of a nozzle, whereby thrust is produced, the said hydrogenated polycyclic hydrocarbon mixture being that obtained upon partial hydrogenation under heat and pressure in the presence of a catalyst, of a dimer of an α-alkyl styrene of the structure



wherein R is an alkyl group which contains from 1 to 4 carbon atoms inclusive.

2,949,734

REMOVABLE GRATE FOR JET DEFLECTION

Jean H. Bertin, Neuilly-sur-Seine, Henri Turinetti, Paris, Henri L. P. Meullen, Courbevoie, and Louis A. Banger, Vanves, France, assignors to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation, Paris, France, a French company

Filed July 5, 1955, Ser. No. 520,067
Claims priority, application France July 27, 1954
1 Claim. (Cl. 60—35.6)



A fastening device for securing a rigid vane assembly to the rear of the outlet nozzle of a jet propulsion engine, comprising an outwardly projecting annular flange for fixed connection to the nozzle and having a planar front face disposed in a radial plane and an inclined rear face cut in a bevel, an outwardly projecting annular flange for fixed connection to the vane assembly and having a planar rear face disposed in a radial plane parallel to the planar front face of the former flange and an inclined front face cut in a bevel of opposite inclination to the inclination of the bevelled rear face of said former flange, a ring made of at least two arcuate sections and having two inwardly projecting end sides in radial planes and bearing against the planar faces of said flanges and an inwardly directed central projection of V-shaped section, the faces of which have the same inclination as that of the bevelled faces of said flanges to engage the same, and tightening means joining the said arcuate sections of the ring and extending tangentially to said ring for drawing said sections radially toward each other.

2,949,735

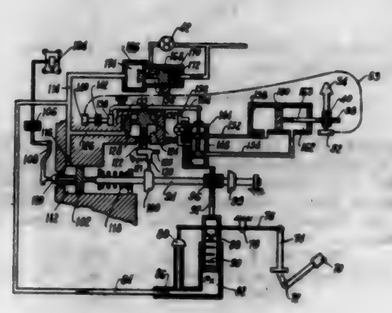
CONTROL APPARATUS FOR A PROPULSION ENGINE

Alexander A. Stefucza, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Filed Dec. 30, 1955, Ser. No. 556,747
5 Claims. (Cl. 60—39.29)

1. In a control apparatus for a gas turbine engine including an adjustable air flow guide member, a combination of piston means connected to said guide member and operable to control the air flow controlling position thereof, a transfer control valve operative to control said piston means in response to an input signal, lever means connected to said transfer control valve and operable to supply said input signal that varies with the position of said lever means, a three dimensional cam member movable in an axial and a rotational direction and having a surface contoured to produce an output

representative of the desired guide member position, engine speed responsive means and means responsive to an additional engine parameter each separately operative to position said cam member in one of said axial and rotational directions, said cam member connected to said lever means to position said lever means as a function of the desired guide member position, flexible cable feed-



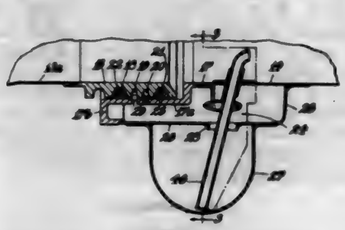
back means connected to said guide member and to said lever means to position said lever means as a function of the actual position of said guide member, said cam member and said feedback means further operable with said lever means such that the resultant controlling position thereof is a function of the error between said desired and actual guide member position.

2,949,736

EXPANSION JOINT WITH FUEL DRAINAGE COLLECTOR FOR DUCTING OF GAS TURBINE POWER PLANTS

Arthur Alexander Rubbra, Littleover, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Filed Sept. 28, 1953, Ser. No. 382,668
Claims priority, application Great Britain Oct. 3, 1952
12 Claims. (Cl. 60—39.32)



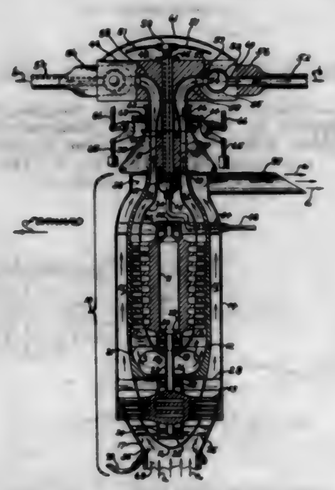
1. A gas-turbine power plant comprising a jet pipe for conveying a working fluid which jet pipe is liable to be heated in operation of the power plant and includes two adjacent ducting parts and an expansible joint connecting the two ducting parts and permitting relative axial displacement of the adjacent ends of the ducting parts, which expansible joint includes two seals in flow series in the leakage path through the joint from the passage through said jet pipe, fuel collector means formed on one only of said duct parts and having a fuel collecting space connected to the leakage path between said two seals to receive leakage fuel therefrom, the connection between the leakage path and the fuel collector means being maintained throughout said relative axial displacement, and means to deliver said leakage fuel from the collecting space to within a working fluid passage of said power plant.

2,949,737

HELICOPTER INCLUDING A JET DRIVEN ROTOR AND DRIVE SYSTEM

Charles J. Fletcher, Sparta, N.J., assignor to Fletch-Aire Company, Inc., Sparta, N.J., a corporation of New Jersey

Continuation of abandoned application Ser. No. 390,299, Nov. 5, 1953. This application Oct. 4, 1957, Ser. No. 690,175
2 Claims. (Cl. 60—39.35)



1. In an aircraft provided with a conventional combustion engine, radially extending rotors, and a jet unit mounted in the outer end of each of said rotors, the provision of means for furnishing a working fluid to said jet units, said means comprising a first cylindrical housing, a second cylindrical housing annularly spaced within said first cylindrical housing, a shaft axially positioned within said first and second cylindrical housings, an air intake conduit passing through said first cylindrical housing and communicating with said second cylindrical housing, an air compressor mounted on said shaft and arranged in said second cylindrical housing, a turbine affixed to said shaft within said first cylindrical housing, an exhaust gas conduit interconnecting one end of said first cylindrical housing and said conventional engine, an exhaust pipe connected to the other end of said first cylindrical housing, a plurality of fuel injectors mounted in the first cylindrical housing immediately inwardly of its juncture with said exhaust gas conduit, and compressed air conduits interconnecting said air compressor and said jet units.

2,949,738

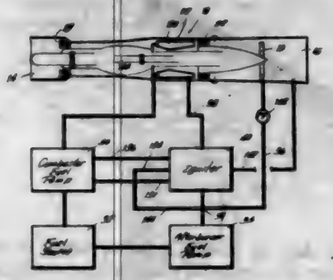
AFTERBURNER IGNITER

Hugh S. Crim, Glastonbury, and William W. Jacobus, Columbia, Conn., assignors, by mesne assignments, to United States of America as represented by the Secretary of the Navy

Filed July 28, 1959, Ser. No. 830,169
8 Claims. (Cl. 60—39.82)

1. In a power plant equipped with a combustor, an afterburner, a combustor fuel pressure source, and an afterburner fuel pressure source, an afterburner igniter comprising a fuel squirt valve having a valve bore and a piston therein dividing said bore into first and second chambers and movable by afterburner fuel pressure, a pilot valve controlling afterburner fuel pressure flow into and from said chambers having a valve bore and a piston therein, a first inlet provided with an inlet port normally

connecting said afterburner fuel pressure source through said pilot valve to said first chamber, a restricted outlet connecting said first chamber through said pilot valve to drain to permit filling said first chamber with fuel from said first inlet, a restricted conduit connecting said source of afterburner fuel pressure through said inlet port to said pilot valve to actuate said pilot valve piston upon said first chamber being filled with fuel and to stop fuel flow into said first chamber and therefrom through said



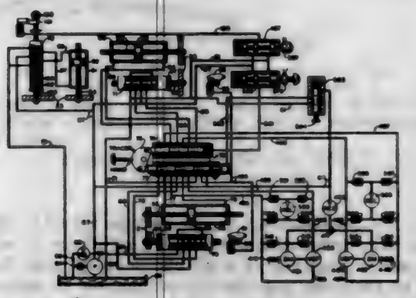
restricted outlet, a normally closed second outlet connecting said first chamber through said pilot valve to said combuster opened upon actuation of said pilot valve piston, and a normally closed second inlet connecting said inlet port through said pilot valve to said second chamber that is opened upon actuation of said pilot valve piston, whereby said fuel squirt valve piston is actuated to eject fuel from said first chamber through said second outlet into said combuster.

2,949,739

AUTOMATIC TRACING DEVICE

Thomas E. Dugle, Cincinnati, Ohio, and Loren J. Meyers, Garden Grove, Calif., assignors, by mesne assignments, to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Continuation of abandoned application Ser. No. 521,795, July 13, 1955. This application Sept. 11, 1958, Ser. No. 761,277
8 Claims. (Cl. 60—52)



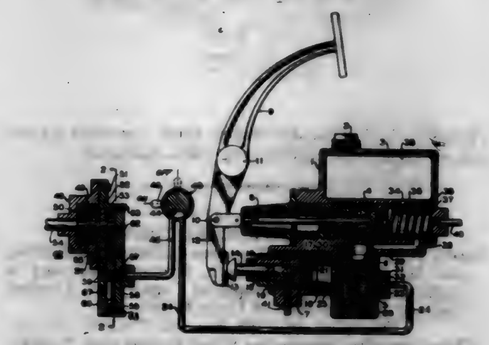
1. In a system for controlling a pair of transversely movable elements for effecting 360° relative movement between a tracer and a pattern carried thereby, the combination of a pair of reversible fluid motors for driving said elements, a variable displacement pump coupled to each of said motors for operating the same in either direction at variable speeds, means for driving both of said pumps, means controlled by said tracer for adjusting the displacements of said pumps in accordance with variations in the outline of said pattern so as to cause the tracer to follow the pattern, and means for varying the speed at which said pumps are driven by said driving means whereby the rate of movement of the tracer along the pattern may be varied independently of any change in the displacement of said pumps.

2,949,740

AUTOMOTIVE VEHICLE TYPE BRAKE APPARATUS WITH PULSATING FEATURE

Burton S. Aikman, St. Petersburg, Fla., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Filed Jan. 29, 1957, Ser. No. 636,997
4 Claims. (Cl. 60—54.6)



1. A pulsating brake apparatus comprising a brake controlling communication in which pressure of brake fluid is increased for effecting a brake application and reduced for effecting a brake release, pedal means operative by operator-applied pressure to be moved into an application zone to effect an increase in pressure of brake fluid in said brake control communication to a degree according to the degree of movement of said pedal means into the application zone, fluid pump means having a fluid intake chamber at atmospheric pressure and a fluid pressure discharge chamber from which fluid under uniform pressure is discharged, piston means effective when subjected to fluid under pressure to exert a force on said pedal means in opposition to operator-applied pressure, rotary valve means driven by said fluid pump means successively and repeatedly through one position in which the rotary valve means establishes a communication between said piston means and said pressure discharge chamber to cause application of said uniform pressure to said piston means, and through a second position in which the rotary valve means establishes communication between said piston means and said fluid intake chamber to relieve the pressure on said piston means.

2,949,741

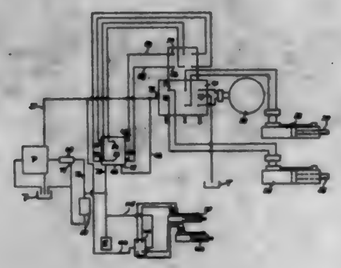
MOBILE AERIAL TOWER AND CONTROL

Herman J. Troche, Fairview Park, and Walter C. Webb, Cleveland, Ohio, assignors to J. H. Holan Corporation, Cleveland, Ohio, a corporation of Ohio

Filed Aug. 27, 1956, Ser. No. 606,288
6 Claims. (Cl. 60—97)

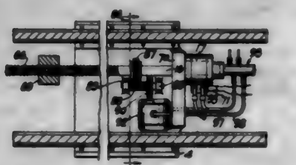
1. In a multi-element aerial tower having a plurality of fluid actuated motors for independently moving the tower elements relative to each other, a control system comprising, a variable pressure source of operating fluid having a low pressure stand-by output and a higher pressure operating output, a multistage distributing valve having a plurality of slide values controlling each stage, means operative in response to the application of the higher operating fluid pressure to selectively position the slide valves and divert the operating fluid to each of said fluid motors, pilot-controlled means for increasing the source output from a stand-by to an operating level and

for directing said operating fluid pressure to said distributing valve means, and means for controlling the flow of



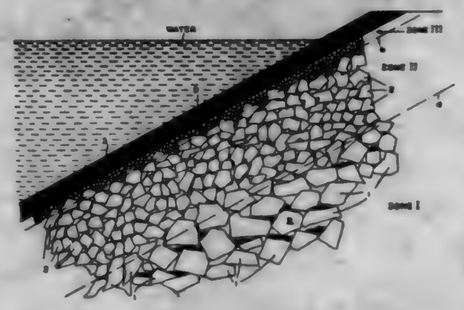
operating fluid to the distributing valve to provide a gradual response in the distributing valve operation.

2,949,742
SERVO-CONTROLLED DRIVES
David T. N. Williamson, Priorswood, Polton, Midlothian, and Harry Ogden, Edinburgh, Scotland, assignors to National Research Development Corporation, London, England, a corporation of Great Britain
Filed Nov. 20, 1958, Ser. No. 775,200
Claims priority, application Great Britain Dec. 2, 1957
7 Claims. (Cl. 60—97)



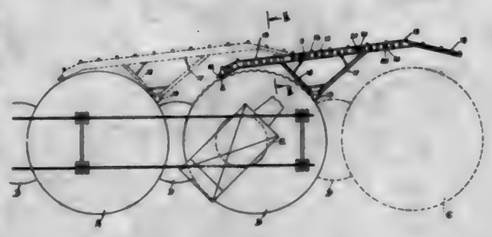
1. Apparatus for driving a first object along a predetermined path in relation to a second object comprising two driving mechanisms coupled together and to the first object and the second object in such a manner that movements of the first object relative to the second object along the said path are dependent upon the algebraic sum of the individual driving actions of the two driving mechanisms, the first driving mechanism being capable of a relatively high driving acceleration over only a relatively short range of driving action and the second driving mechanism being capable of a relatively long range of driving action but being arranged to provide only a relatively low driving acceleration, means, responsive to a signal representing the motion required of the first object in relation to the second object along the said path, for actuating the first driving mechanism and means for controlling the second driving mechanism such means having two co-operating members one coupled to one part and the other coupled to the other part of two parts of the first driving mechanism which execute relative movement to provide the driving action of the first driving mechanism, the said members co-operating to increase the driving action of the second driving mechanism as the said two parts of the first driving mechanism move way from a predetermined relative position intermediate between the relative positions occupied by such parts when the first driving mechanism is at the ends of its driving range and to reduce the driving action of the second driving mechanism as the said two parts move towards the said predetermined relative position.

2,949,743
DAM AND METHOD OF MAKING THE SAME
Frederick W. Scheidenhelm, Kew Gardens, N.Y.; Jean Wolff, executrix of said Frederick W. Scheidenhelm, deceased
Filed Nov. 13, 1957, Ser. No. 696,105
4 Claims. (Cl. 61—30)



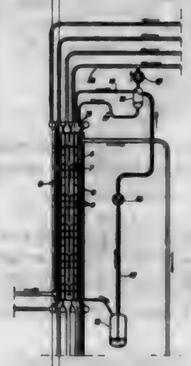
1. In a dam or similar structure which is subject to the pressure of a body of water, a base comprising rock fill, said base comprising an upstream zone and a downstream zone, said downstream zone being of greater width than the upstream zone and comprising rocks at least 4 inches in size, said upstream zone consisting of a layer of angular stones which are of a size up to 4 inches and which are substantially immobile relative to each other, and a deck constituting the upstream face of the dam and consisting of a substantially water-impermeable membrane of asphaltic concrete, said deck being disposed directly on the upstream face of the base.

2,949,744
WATER CURRENT DEFLECTOR AND METHOD OF USING SAME
Edwin Paul Swatek, Jr., Sewickley, Pa., assignor to Dravo Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 17, 1956, Ser. No. 566,158
5 Claims. (Cl. 61—34)



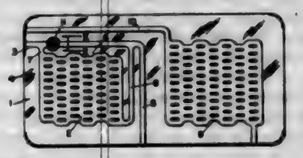
1. The combination with one circular cell of a cofferdam being constructed across a flowing stream in which the cell is comprised of a circular series of piles forming an enclosure and wherein one pile on an upstream quarter of the cell has anchoring cleats thereon, of a deflector for diverting the current from the site of the next cell to be built comprising a frame extending in a cross-stream direction constructed of horizontal and vertical structural members, said frame having a structural section at one end thereof releasably interlocked with said anchoring cleats, bracing elements on the downstream side of the frame intermediate the ends of the frame bearing against the other upstream quarter of said circular wall for cantilevering the frame against the cell, said frame being longer than the diameter of the cell to which it is attached whereby its free end extends in a cross-stream direction from its point of anchorage to a point beyond the site of the next cell to be built, and removable bulkheads on the frame forming a substantially continuous deflecting surface over the area of the frame.

2,949,745
PROCESS OF SEPARATION OF GASEOUS MIXTURES IN A HEAT EXCHANGE APPARATUS
Alfred Etienne, Paris, France, assignor to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude, Paris, France
Filed Feb. 21, 1956, Ser. No. 566,975
Claims priority, application France Mar. 9, 1955
2 Claims. (Cl. 62—32)



1. A process of separation of coke oven gaseous mixtures in a heat exchange apparatus, comprising passing a gaseous mixture on the outside of the heat exchange surface of the apparatus and partly liquefying it, passing a liquid mixture containing ethylene on the inside of the heat exchange surface as a relatively thin layer flowing down by gravity on said heat exchange surface and partly vaporizing the methane content of the mixture, rectifying the evolved vapors by letting them rise in countercurrent contact with the liquid, separately collecting said rectified vapors and said liquid, and returning the rectified vapors in heat exchange with the said gaseous mixture flowing on the outside of the heat exchange surface of the apparatus.

2,949,746
EVAPORATOR RESTRICTOR
James A. Hall, Louisville, Ky., assignor to Reynolds Metals Company, Louisville, Ky., a corporation of Delaware
Filed June 14, 1955, Ser. No. 515,397
3 Claims. (Cl. 62—56)



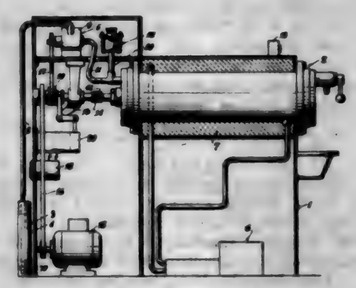
3. In the art of making bonded-sheet passageway panels of the refrigerant evaporator type having a vertical wall section containing a receiver chamber having an upper inlet and a lower outlet, an improved method of manufacture comprising: providing said passageway panel with an inlet passageway extending along a straight line from an inlet opening in one edge of the panel to a predetermined point beyond a first branch connection with said upper inlet but short of a second branch connection with said lower outlet; providing, for the straight portion of said inlet passageway, a bushing having a metering orifice of predetermined size; and inserting said bushing through said edge inlet into said inlet passageway and positioning it at said predetermined point to seal said inlet passageway between said branch connections except for said orifice.

2,949,747
METHOD AND APPARATUS FOR CONTROLLING THE TOOLING OR HARDENING OF CHOCOLATE CANDIES
Fred Gregor, 50 Browne St., Brookline, Mass.
Filed Aug. 19, 1957, Ser. No. 678,867
4 Claims. (Cl. 62—129)



1. In tunnel apparatus of the character described having admission and discharge ends, said apparatus, employing an upper passage and a lower passage, a longitudinal partition dividing said passages, means dividing the upper passage at the admission end of the apparatus, into an upper refrigerant passage and a lower candy admission passage, means exposed to the candy admission passage at the admission end thereof automatically controlling a booster charge of air into the discharge end of the upper passage of the apparatus in controlling temperature prevailing at the admission end of said candy admission passage, and said booster charge of air pressurizing the air in the candy admission passage to block introduction of air at high temperatures into said candy admission passage.

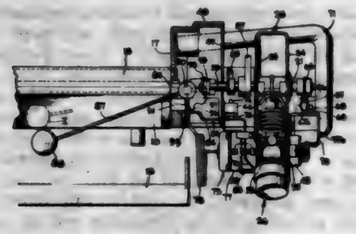
2,949,748
APPARATUS FOR MANUFACTURING ICE CREAM
Sebastian Gangi, River Edge, N.J., assignor to Cidega Machine Manufacturing Co., Inc., River Edge, N.J., a corporation of New Jersey
Filed Jan. 23, 1956, Ser. No. 560,509
3 Claims. (Cl. 62—132)



1. In an ice cream freezing device having a refrigerated hollow barrel and an agitator means in the refrigerated hollow barrel adapted to whip an ice cream mix into an air-filled ice cream, the combination of a source of ice cream mix positioned below the refrigerated hollow barrel, a supply line having one end connected to said

source of ice cream mix and another end coupled to the refrigerated hollow barrel, a suction pump connected to said supply line and positioned at a higher level than said source adapted intermittently to lift ice cream mix from said source to the refrigerated hollow barrel, an over-run regulator above the level of the top of the refrigerated hollow barrel comprising a hollow chamber connected to said supply line intermediate said pump and the refrigerated hollow barrel and having an adjustable air inlet in its upper portion to admit air to said ice cream mix in said supply line, and valve means in said hollow chamber adapted to be activated by ice cream mix flowing into said chamber from said supply line to close said air inlet and thereby prevent spillage of ice cream mix out of the air inlet when the refrigerated hollow barrel is filled with ice cream mix and the ice cream mix rises above a predetermined level in said hollow chamber.

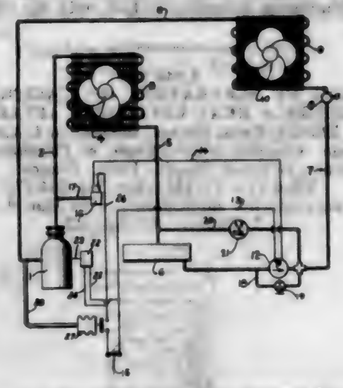
2,949,749
AUTOMATIC ICE CUBE MAKER
Mullapudi M. Reddi, Chicago, Ill., assignor to The Dole Valve Company, a corporation of Illinois
Filed Sept. 6, 1956, Ser. No. 608,380
14 Claims. (Cl. 62—137)



1. In an ice maker, an ice tray having ice molds therein, electrically energizable means for ejecting ice cubes from said molds, means energizing said electrically energizable means to initiate the ejection of ice cubes from said tray comprising a mold thermostat responsive to the temperature of the frozen ice cubes in said molds, a movable member operated by said thermostat upon freezing of the ice cubes in said tray to effect the energization of said electrically energizable means, and means for preventing operation of said movable member to effect the energization of said electrically energizable means regardless of the frozen condition of ice cubes in said tray and the operative condition of said mold thermostat comprising a movable ice overfill arm and means on said arm engageable with said movable member to prevent operation thereof to energize said electrically energizable means upon the positioning of said overfill arm in a predetermined elevated position.

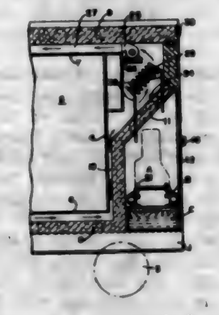
2,949,750
HEAT EXCHANGE SYSTEM OF THE EVAPORATIVE TYPE WITH MEANS FOR MAINTAINING LIQUID SUPPLY LINE PRESSURE
Daniel E. Kramer, Trenton, N.J., assignor to Mercer Engineering Co., Trenton, N.J., a co-partnership
Filed May 28, 1956, Ser. No. 587,609
4 Claims. (Cl. 62—196)

1. In a heat exchange system of the evaporative type having a circuit for refrigerant flow including cycling compressor, condenser, receiver, refrigerant pressure reducing device, and evaporator, all operatively interconnected by conduits, positively driven means in the conduit between receiver and pressure reducing device for forcing refrigerant to the said pressure reducing device during on-cycles of the compressor whenever condenser pressure falls below a predetermined degree, and means auto-



matically controlled by the condenser pressure for activating and deactivating said positively driven means.

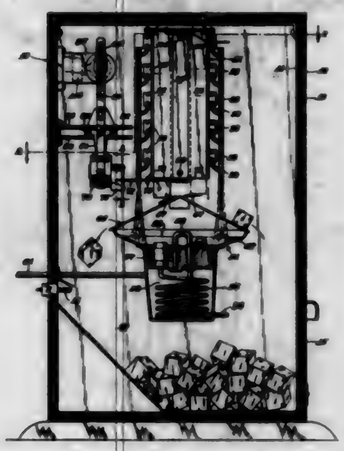
2,949,751
MECHANICAL REFRIGERATOR CARS
Thor O. Henrikson, Seattle, Wash., assignor to Pacific Car and Foundry Company, Renton, Wash.
Filed Sept. 6, 1957, Ser. No. 682,525
4 Claims. (Cl. 62—239)



1. In a refrigerator car, an underframe, an insulated car body mounted on the underframe and having all of its walls insulated, said car body having one end offset outwardly to define an upper outwardly offset insulated chamber, a lading compartment comprising a shell-like body positioned within and spaced from all of the walls of the insulated car body and having passageways thereabout and therethrough for chilling lading contained therein, a mechanical refrigerating unit supported on the underframe outwardly of one end of the insulated car body and below the offset car body portion, said refrigerating unit being connected with an evaporator positioned within the offset car body portion, blower means arranged between the insulated car body and the lading container for moving cooled air through the evaporator and about the lading container, and a housing about the mechanical refrigerating unit, said housing having openings formed therein and closures for said openings, whereby access may be had to the refrigerating unit within the housing from outside of the insulated car body.

2,949,752
ICE MAKING MACHINE
John R. Bayston, 808 Junior Terrace, Chicago, Ill.
Filed May 1, 1957, Ser. No. 656,366
8 Claims. (Cl. 62—320)

1. In an ice making machine, in combination, an upright freezing cell of height greatly exceeding its thickness, with an open bottom, at least one water inlet port and a plurality of water outlet ports vertically spaced with respect to each other in an unrefrigerated cell wall with means for supplying refrigerant to said cell under relatively low pressure to cool the cells and freeze an upright bar of ice therein, means for supplying refriger-



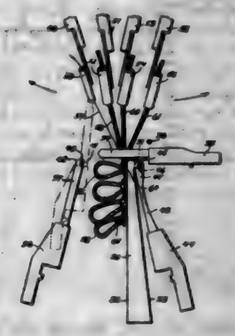
ant to said chamber under substantially higher pressure to free the ice therefrom, a shiftable member closing the top of said cell adapted to bear against the upper end of the bar of ice therein and eject it downwardly from the cell, and means to cut a plurality of ice cubes from the lower end of said bar of ice as it is ejected from the cell.

2,949,753
FLEXIBLE TOOL
Rene A. Menoni, 10639 Kester Ave., San Fernando, Calif.
Filed July 14, 1959, Ser. No. 826,947
9 Claims. (Cl. 64—15)



1. In a flexible tool for transmitting a torque, a flexible shank comprising a central cable surrounded by coil spring means, an end fitting rigidly secured to one end of said spring means and to one end of said cable, a first cam member secured to the other end of said spring means, an opening in said first cam member for passage of the other end of said cable, a first cam surface on said first cam member, a second cam member having a second cam surface cooperating with said first cam surface, a passage in said second cam member for receiving said other end of said cable, means for retaining said second cam member by said other end of said cable, and means for applying a torque to said second cam member in order to impart said torque through said cam surfaces and said spring means to said end fitting, said cam surfaces being shaped to cause compression of said spring means in an axial direction upon relative rotation between said cam members caused by the applied torque.

2,949,754
WARP KNITTING METHOD
Rex S. MacCaffray, Jr., Boiling Springs, Pa., assignor to C. H. Masland & Sons, Carlisle, Pa., a corporation of Pennsylvania
Filed Sept. 27, 1957, Ser. No. 686,720
3 Claims. (Cl. 66—85)

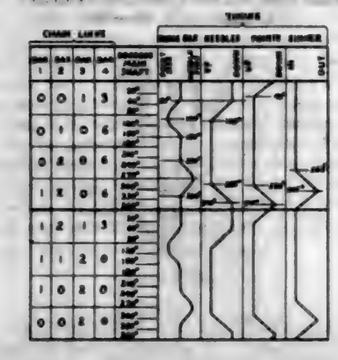


1. The method of warp knitting, in a Raschel type knitting machine having a single set of knitting needles, a single set of plush points, a sinker comb, and at least three guide bars swinging in unison and shogging separately, which comprises starting with the guide bars in the intermediate position of the swing, at intermediate dwell, and the sinker comb advanced over the needles, advancing the plush points to the loop forming position, shogging the guide bars to lay in yarn above the knitting point, swinging the guide bars in unison from the intermediate dwell position to a position at the plush point side, shogging the face yarn guide bar to form pile loops around the advanced plus points, raising the needles while the guide bars are at the plush point side, swinging the guide bars in unison back to the intermediate dwell position, shogging a guide bar to lay in weft yarn above the knitting point between the plush points and the needles, swinging the guide bars in unison to the needle side, shogging the knitting yarn guide bar around the needle hooks to lay knitting yarn into the hooks of the needles, swinging the guide bars in unison back to the intermediate position and dwelling at the intermediate position, retracting the sinker comb and the needles, retracting the plush points, and advancing the sinker comb over the needles, thus completing the cycle, the guide bars during the cycle being swung only once to the plush point side, intermediately remaining in dwell, being swung only once to the needle side and then returning to the intermediate dwell and there remaining for the duration of the cycle.

2,949,755
WARP KNITTING MACHINE
Rex S. MacCaffray, Jr., Boiling Springs, Pa., assignor to C. H. Masland and Sons, Carlisle, Pa.
Original application Sept. 27, 1957, Ser. No. 686,720. Divided and this application Nov. 4, 1958, Ser. No. 771,808
3 Claims. (Cl. 66—85)

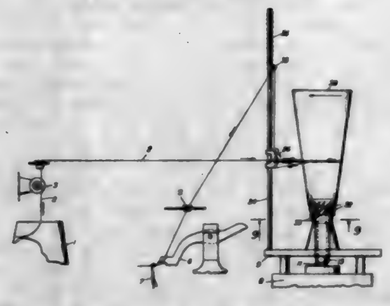
1. In a warp knitting machine, a set of front loop-forming elements, means for raising and lowering the front loop-forming elements, a set of needles cooperating with the front loop-forming elements, a trick plate interposed between the retracted positions of the needles and the front loop-forming elements, there being a loop-forming element side and a needle side of the machine, a sinker comb having a retracted position and having an advanced position across the top of the trick plate and among the needles, and a swing bar carrying in unison

shoggable guide bars for various yarn ends, in combination with cam means for moving the swing bar from an intermediate dwell position once forward to the loop-forming element side, returning the swing bar to the



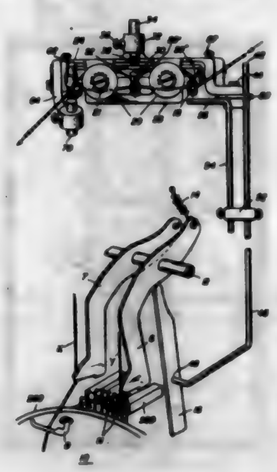
intermediate dwell position, moving the swing bar once rearward to the needle side, returning the swing bar to the intermediate dwell position, and maintaining the swing bar in the intermediate position, and cam means for raising the needles when the swing bar is forward.

2,949,756
YARN FURNISHER FOR KNITTING MACHINES
Horace L. Curtis, Gilford, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed May 8, 1957, Ser. No. 657,835
3 Claims. (Cl. 66—132)



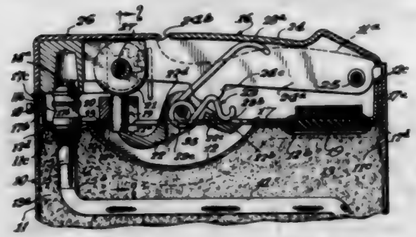
1. A yarn furnisher for a circular knitting machine comprising a yarn supply, a constantly rotated inverted conical member with a substantially vertical axis and around which the yarn from the supply is wrapped, a traveling yarn guide beside the conical member, subject to the pull of gravity adapted to present yarn to the conical member from the yarn supply and to receive it back from the conical member after the yarn has passed therearound, in combination with a guide eye above the yarn guide to receive the yarn going to the knitting machine from the guide and to present the yarn demand to the guide in opposition to gravity, a non-rotatable rest in position below the conical member adapted to receive any yarn dropped by the latter, and a series of spiral grooves on the lower end of the conical member revolving therewith, said grooves being so inclined that when the yarn demand stops, the guide drops below the spiral grooves, the yarn coming from the yarn supply to the conical member is crossways of the grooves and drops below the grooves, and when the yarn demand begins and raises the guide, the grooves engage the yarn and speed it to a position on the conical member.

2,949,757
KNITTING MACHINE MAGNETIC CONTROLLED YARN TENSION
Frank R. Page, Laconia, N.H., assignor to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Filed June 23, 1958, Ser. No. 743,722
9 Claims. (Cl. 66—146)



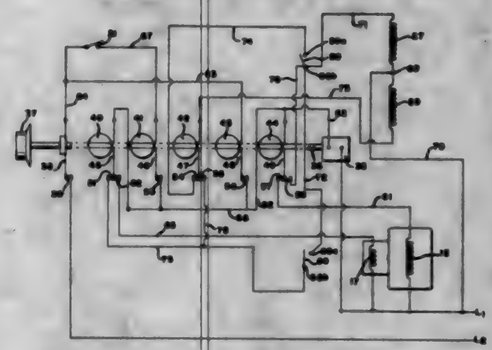
1. A knitting machine yarn tension comprising a comb tension device having relatively movable elements between which the yarn is interlaced and so mounted that gravity tends to reduce the interlace and therefore the tension on the yarn, the device being such that when a yarn is demanded by a knitting machine the interlace tends to allow the yarn to straighten and the tension to be reduced, in combination with repulsion magnetic means associated with the comb tension device in opposition to gravity in such manner that as the yarn tension due to the interlace increases the effectiveness of the repulsion means in opposition to gravity decreases; whereby the yarn is held delicately suspended against gravity.

2,949,758
PYROPHORIC LIGHTER
Allen B. Gellman, Glencoe, Ill. (% Illinois Watch Case Company, 853 Dundee Ave., Elgin, Ill.)
Filed Oct. 31, 1955, Ser. No. 543,811
2 Claims. (Cl. 67—7.1)



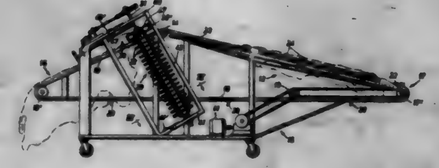
1. In a pyrophoric lighter, support means of the character described for a pyrophoric element, comprising: a base member having an opening therethrough and having upstanding sides; a block member having a passageway therethrough for receiving said pyrophoric element, said block having a chamfered boss portion extending into said opening positioning the block member on the base member with said opening and passageway in register, the sides of said base extending a substantial distance above said block; and a tab struck from a side of said base member and bent into engagement with the top of the block member for securing the members together.

2,949,759
DOMESTIC APPLIANCE
Kenneth O. Stoner, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 27, 1957, Ser. No. 668,485
1 Claim. (Cl. 68—12)



In combination, a washing machine having a tub, an agitator in said tub, a lid for selectively covering and uncovering said tub and prime mover means for selectively spinning said tub and vertically reciprocating said agitator, spin solenoid means connected to said prime mover means for conditioning said prime mover means for spinning said tub, a lid switch having an open position when said tub is uncovered by said lid and a closed position when said tub is covered by said lid, conduit means for directing water into said tub, a cold water inlet pipe, a hot water inlet pipe, a first solenoid operated valve including a first solenoid connected between said cold water pipe and said conduit means, a second solenoid operated valve including a second solenoid connected between said hot water inlet pipe and said conduit means, first and second power supply conductors, means connecting one side of said first and second solenoids directly to said first power supply conductor, a timer, first, second, third, fourth, fifth, sixth, seventh and eighth timer operated switches, said timer operating said second, fourth and sixth switches to a closed position during a wash water fill period, said timer operating said sixth and eighth timer operated switches to a closed position during an agitate period, said timer just prior to the end of said agitate period operating said first, third, sixth and eighth timer operated switches to a closed position for a cold water only tub overflow period, said timer operating said fifth, seventh, and eighth timer operated switches to a closed position for a spin period, said timer operating said first, third and sixth switches to a closed position for a rinse water fill period, means connecting the opposite side of said second solenoid in series with said fourth and sixth timer operated switches and said second power conductor to by-pass said lid switch whereby said second solenoid is energized when said fourth and sixth switches are closed, a wash selector switch having an open and a closed position, means connecting the opposite side of said first solenoid in series with said second timer operated switch, said wash selector switch, said fourth timer operated switch, said sixth timer operated switch and said second power conductor to by-pass said lid switch whereby said first solenoid is energized when said second, fourth and sixth timer switches and said wash selector switch are closed, means connecting said prime mover means in series with said first power supply conductor, said sixth timer operated switch, said eighth timer operated switch and said second power supply conductor to by-pass said lid switch whereby said prime mover means is energized to reciprocate said agitator during said agitate period, means connecting said opposite side of said first solenoid in series with said third, first and fifth timer operated switches and in series with said lid switch and said second power supply conductor prior to the start of said spin period whereby said first solenoid is energized for said cold water only overflow period and said washing machine is conditioned for said spin period, means connecting said spin solenoid means in series with said first power supply conductor, said seventh timer operated switch, said fifth timer operated switch, said lid switch and said second power supply conductor whereby the spinning of said tub is made responsive to the position of said lid switch, a rinse selector switch independent of said wash selector switch and having an open and a closed position, and means connecting said opposite side of said second solenoid in series with said rinse selector switch, said first timer operated switch, said sixth timer operated switch and said second power conductor to by-pass said lid switch whereby said second solenoid is energized when said rinse selector switch is closed and when said first and sixth timer operated switches are closed.

2,949,760
PROCESS AND APPARATUS FOR CLEANING CAKED AND IMBEDDED MATTER FROM ANIMAL HIDES
William Forbes McCartney, Toronto, Ontario, and James Hanna, Winnipeg, Manitoba, Canada, assignors to Canada Packers Limited, Toronto, Ontario, Canada, an incorporated company
Filed June 25, 1956, Ser. No. 593,648
28 Claims. (Cl. 69—37)

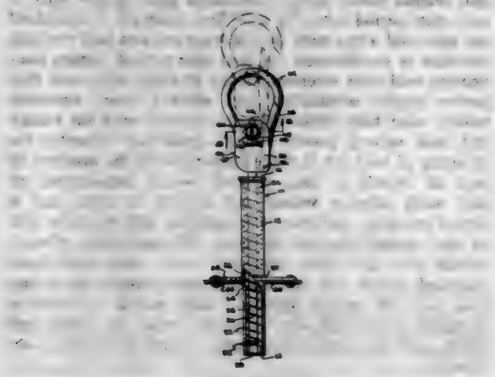


16. Apparatus for use in cleaning caked and imbedded foreign matter from animal hides including, in combination, a frame; an elevated elongated support on said frame of such width as to engage only a small portion of the hide width; means for progressively arranging a hide on said support and for moving the hide at a controlled rate along the said support, and a cleaning element positioned for engagement with an area of said hide as it moves along the said support and applying intermittent forces thereto timed to induce sustained cyclical movement therein of substantial frequency and amplitude to break up and dislodge the said foreign matter.

2,949,761
RESTRAINING DEVICE
Garland W. Mitchell, Butner, and Baxter B. Sapp, Raleigh, N.C., assignors to The M & S Safety Co., Inc., Raleigh, N.C., a corporation of North Carolina
Filed Feb. 21, 1958, Ser. No. 716,781
16 Claims. (Cl. 70—16)

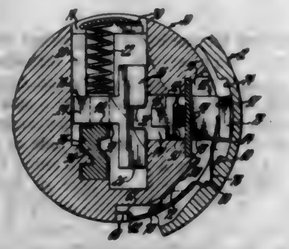
14. A device for restraining a person wearing manacles, said manacles including linkage means; said device comprising an elongated substantially hollow main body having a pair of opposed upper and lower ends, said lower end being secured to a supporting structure, and the main

body being adapted to extend upwardly from the supporting structure; a plunger rod mounted for reciprocation within said main body, and having an end thereof projecting outwardly and upwardly from the upper end of the main body; a hook assembly adapted to releasably lock the linkage of said manacles therein, said hook assembly being rigidly secured to said projecting end of said plunger rod, said hook assembly including a stationary hook



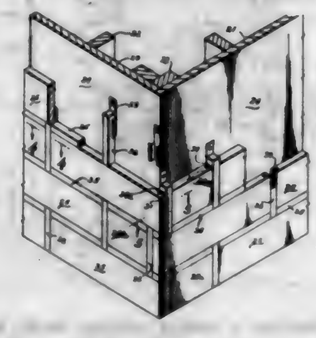
member having a free end and a lock pin pivotally mounted on said assembly, said lock pin having a free end normally engaging said free end of said hook member when said lock pin is in its closed position, and means releasably engaging said lock pin to prevent inadvertent or accidental pivotal movement of said free end of said lock pin from said free end of said hook member; and means disposed in said main body constantly biasing said rod for movement toward said lower end.

2,949,762
LOCK
Theodore H. Johnstone, Lincoln Park, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed May 23, 1958, Ser. No. 737,352
12 Claims. (Cl. 70—364)



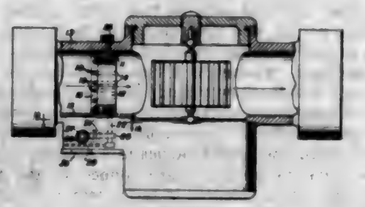
1. A lock mechanism comprising a casing, a cylinder member rotatably mounted within said casing, a notch in said casing, a locking member slidably disposed within said cylinder and adapted to engage with said casing notch to prevent unlimited rotation of said cylinder, first spring means biased said locking member in a direction to disengage said member from said notch, tumbler means movably mounted in said cylinder, means biasing said tumblers to a position blocking movement of said locking member, recess means formed in said tumbler means, said tumbler means being movable to a position in which said recess means are aligned permitting said locking member to be moved therewithin whereby said locking member may move out of engagement with said notch, said notch and locking member being so related that limited relative movement therebetween is possible with said locking member projecting within said notch, and second spring means urging said locking bar into engagement with said notch against the force of said first spring means, and means for moving said second spring means out of operative engagement with said locking member.

2,949,763
WALL FACING
John L. Felder, P.O. Box 8005, San Antonio, Tex.
Filed May 18, 1956, Ser. No. 585,888
8 Claims. (Cl. 50—354)



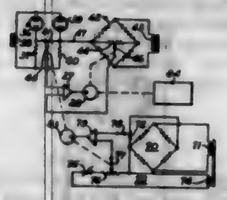
1. Wall facing comprising a plurality of horizontally extending and vertically spaced apart courses of facing units, the adjacent units of each course being anchored to a wall in spaced apart relation to one another and staggered with respect to units of an adjacent course, prefabricated joints of flexible material in the vertical spaces between said adjacent units and extending across the horizontal spaces between the staggered units of adjacent courses so as to divide such horizontal spaces into separate sections, and jointing material filling the separate sections of the horizontal spaces.

2,949,764
ADJUSTABLE FLOW NOZZLE FOR A FLOWMETER
Berthold A. Kaseth, High Falls, N.Y.
Filed Sept. 13, 1956, Ser. No. 609,750
5 Claims. (Cl. 73—3)



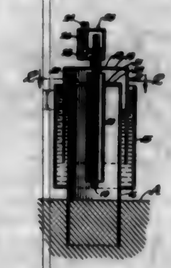
1. In a vortex velocity flowmeter an adjustable flow nozzle, through which fluid to be metered is delivered to said flowmeter, comprising a fixed disc, a rotatable disc, a concentric primary aperture through both said discs to provide a constant main flow passage, and a plurality of longitudinally arranged auxiliary apertures through said two discs at spaced intervals about said concentric apertures and separated therefrom to provide independent secondary flow passages, and means to rotate said rotatable disc to adjust the alignment of said auxiliary apertures, whereby the flowmeter may be calibrated.

2,949,765
MEASURING CIRCUIT FOR FLUID ANALYZERS
Louis C. Thayer, Duarte, and Malbone W. Greene, Pasadena, Calif., assignors, by mesne assignments, to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Filed May 14, 1957, Ser. No. 659,098
5 Claims. (Cl. 73—27)



1. A measuring circuit for a gas analyzer wherein a particular component of a gas mixture is reacted with a liquid to create a change in conductance of the liquid, said analyzer having a reaction chamber, a pair of conductance cells for measuring the conductance of the liquid before and after said reaction, and a gas rate-of-flow meter, said measuring circuit including in combination: a first circuit for coupling to said conductance cells, said first circuit producing an electrical output which is a function of the difference in conductances measured by the two cells; a second circuit for coupling to said rate-of-flow meter, said second circuit producing an electrical output which is a function of the rate of flow of the gas mixture to the reaction chamber; and means for combining one of said outputs with a portion of the other of said outputs in subtractive relationship producing an analyzer output which is a function of the quantity of the particular component present in the gas mixture.

2,949,766
APPARATUS FOR MEASURING FLUID PERMEABILITY OF POROUS MATERIALS
Don Kirkham and Ben L. Grover, Ames, Iowa, assignors to Iowa State College Research Foundation, Inc., Ames, Iowa, a corporation of Iowa
Filed Mar. 23, 1955, Ser. No. 496,182
8 Claims. (Cl. 73—38)



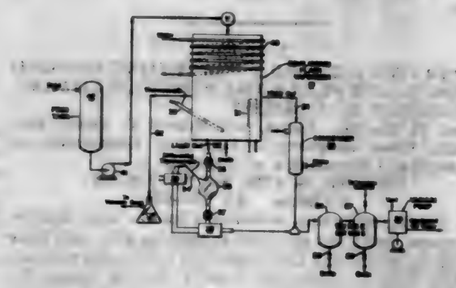
1. In apparatus for measuring fluid permeability of a porous body, an annular tank containing liquid, a hollow float having a closed top and an open bottom freely mounted within said tank and trapping fluid therein above said liquid, a hollow pipe communicating with the interior of said float, a hollow stem also communicating with the interior of said float and extending above said float, a casing providing a chamber about the upper portion of said stem so that the top portion of the stem extends into the upper portion of said casing, and a second tube extending through the top wall of said casing and downwardly into the lower portion of said casing, said casing being adapted to contain a liquid sealing the lower end of said second tube whereby said casing acts as a manometer to yield an indication of the pressure within said float.

2,949,767
LEAK TESTER FOR AUTOMOBILE TIRES
Dwight Foust, Rte. 1, Cullman, Ala.
Filed July 25, 1956, Ser. No. 600,897
1 Claim. (Cl. 73—45.6)



A leak testing device for mounted automobile tires comprising an open-topped container having a bottom, a relatively wide front wall, a rear wall of equal width to said front wall, an outwardly and upwardly flared central portion in each of said front and rear walls, said central portions having horizontally extending upper edges, a pair of relatively narrow outwardly and upwardly flaring side walls interconnecting adjacent edges of said front and rear walls and having horizontally extending upper edges in a plane substantially above that in which lie the upper edges of said central portions of said front and rear walls, a pair of side portions in each of said front and rear walls, said side portions having upper edges extending angularly upwardly and outwardly from the upper edges of said central portions to the upper edges of said side walls, a vertically dependent supporting foot member attached to said rear wall, and a pair of supporting wheels each mounted upon an opposite side wall, whereby water may be placed in said container and said container manipulated by said handle to a position encompassing the lower portion of a partially raised mounted tire with said lower portion of said tire immersed in water to determine air leakage from said tire as it is rotatably moved therethrough.

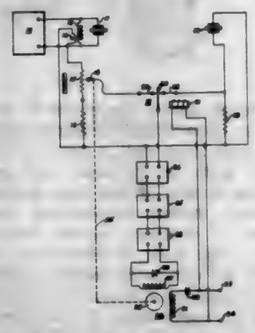
2,949,768
VACUUM EQUILIBRIUM FLASH VAPORIZATION EQUIPMENT
Charles J. Ryant, Jr., Chicago, and Sixt Frederick Kapf, Homewood, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Filed May 7, 1957, Ser. No. 657,589
9 Claims. (Cl. 73—53)



1. An apparatus for determining vacuum equilibrium flash vaporization of liquids which comprises means for flowing a liquid at a selected constant rate, downflow means for incompletely vaporizing the said liquid under

controlled temperature and pressure, baffled means subjacent to said downflow means for separating the evolved vapors, means for accumulating from said baffled means a standard volume of unvaporized liquid under the selected conditions of temperature and pressure, and means for determining the time necessary to accumulate said standard volume as a measure of vacuum equilibrium flash vaporization.

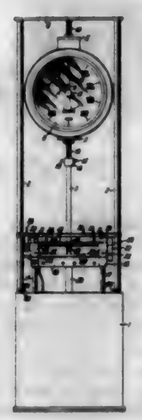
2,949,769
SELF-BALANCING ULTRASONIC INSTRUMENT
Robert B. Heller, Silver Spring, Md., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed Jan. 20, 1956, Ser. No. 560,327
1 Claim. (Cl. 73—67.6)



Apparatus for measuring the attenuation of ultrasonic energy transmitted through material, comprising a generator of electrical oscillations, a first transducer for converting said oscillations into ultrasonic vibrations and adapted to transmit said vibrations through material under test, a second transducer adapted to intercept vibrations transmitted through said material for converting said intercepted vibrations into second electric oscillations, a resistor combination including slide wire and a slider, means for developing across said combination third oscillations derived from said generator having a preselected amplitude in relation to the amplitude of said second electric oscillations obtained from a predetermined standard, electric signal translating means having input and output terminals, a vibrating contactor for alternately applying said second and said third oscillations to said input terminals, actuating means coupled to said output terminals and controlled by the output signals from said translating means for actuating said slider automatically to adjust said preselected amplitude to equal the amplitude of the then occurring second oscillations and means for indicating the position of said slider.

2,949,770
APPARATUS PRIMARILY FOR TESTING OPENING FORCE AND FLAP SCORE STIFFNESS CHARACTERISTICS OF CARTONS
James M. Kernan, Akron, and Russell L. Lewis, Rittman, Ohio, assignors to Packaging Corporation of America, a corporation of Delaware
Filed Feb. 14, 1958, Ser. No. 715,268
4 Claims. (Cl. 73—93)

1. Testing apparatus, including a base, a force measuring means, and a test specimen supporting able, said force measuring means and said supporting table being mounted on said base in operatively spaced relation, means for effecting relative movement between said measuring means and table to apply testing force to said test specimen, shaft means connected with said measuring means and serving to actuate the same upon application of said testing force, and means carried by said shaft means and by said table, respectively, for subjecting a test specimen disposed between said shaft means and table to testing force, the means carried by said table including horizontally arranged pivot means, a mounting plate member oscillatively carried by said pivot means, fulcrum means carried by said plate member for translating linear force applied thereto into oscillatory movement of the plate



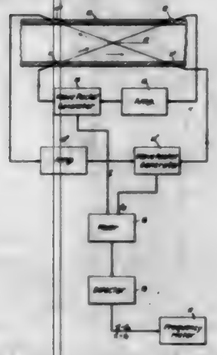
member, means for fixedly positioning a flap score stiffness test specimen in testing position with respect to said plate member, and means providing a connection between said fulcrum means and the shaft carried means of said measuring means for applying such linear force in response to relative movement of said table and measuring means.

2,949,771
TORQUE METER
Victor W. Peterson, Herbert H. Schnepel, and Paul Bascel, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 28, 1955, Ser. No. 524,984
6 Claims. (Cl. 73—136)



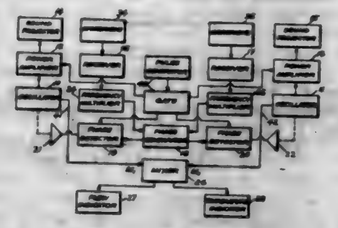
1. In combination with a reaction member subject to positive and negative torque conditions, a torque meter comprising fluid pressure responsive means connected to said reaction member for opposing movement of said reaction member under positive torque conditions, resilient means connected to said member for providing a predetermined resistance to movement of said member under negative torque conditions, pressure control means responsive to movement of said member under positive torque conditions for supplying fluid under pressure to said pressure responsive means to balance said positive torque, means for measuring said fluid pressure to indicate the relative value of said positive torque, and means independent of said pressure measuring means connected to said member responsive to a predetermined movement of said member against said resilient means for indicating negative torque conditions sufficient to overcome said predetermined resistance of said resilient means.

2,949,772
FLOWMETER
Jack Kritz, 64—02C 192nd St., Flushing, N.Y.
Filed Dec. 10, 1954, Ser. No. 474,403
24 Claims. (Cl. 73—194)



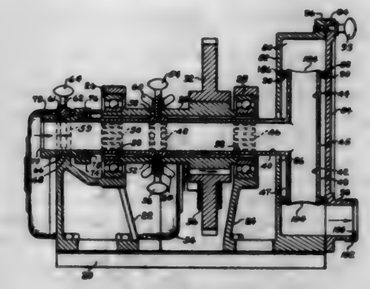
1. In a device for determining a velocity characteristic of a moving fluid; opposite spaced electroacoustic transducer transmitting means and receiving means in acoustic contact with the fluid, said transmitting means sending acoustic carrier waves upstream through the fluid to said receiving means, electrical circuit means connected between the receiving means and transmitting means; said circuit means including a generating means for producing packets of electrical carrier waves of a predetermined frequency and impressing said waves on the transmitting means and amplifying means connected between the receiving means and the generating means for impressing received packets of undetected carrier waves on said generating means, said generating means producing a carrier wave packet of a predetermined duration in response to a predetermined instantaneous voltage magnitude of the carrier waves impressed on said generating means, second electro-acoustic transducer transmitting means and receiving means opposite each other and spaced from each other in the fluid, said second transmitting means sending acoustic carrier waves downstream through the fluid to said second receiving means, second electrical circuit means interconnecting the second receiving means and second transmitting means, said second circuit means including generating means responsive to a predetermined instantaneous voltage magnitude of the received undetected carrier waves impressed thereon for producing packets of carrier frequency oscillations, and frequency measuring means connected to the first and second circuit means for measuring the difference between the recurrence frequencies of the wave packets in the first and second circuit means.

2,949,773
MEASUREMENT OF RELATIVE VELOCITY BETWEEN FLUID AND SOLID BODIES
Laureace Batchelder, Cambridge, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Jan. 20, 1955, Ser. No. 483,012
3 Claims. (Cl. 73—194)



1. Apparatus for measuring the physical characteristics of a fluid in motion relative to said apparatus comprising two spaced sources of acoustic wave energy, an independent frequency variable oscillation generator connected to each of said sources for varying the frequency of said acoustic wave energy, gating means for causing said sources to alternately transmit acoustic wave energy into said fluid, acoustic energy receivers disposed between said sources at two locations for generating electrical signals indicative of the acoustic energy impinging thereon, a phase comparator coupled to said receivers and responsive to said electrical signals for producing an output signal representing the phase displacement of the acoustic wave energy impinging on said receivers, gated means responsive to the output of said phase comparator for developing control signals, means responsive to said control signals and coupled to each of said oscillation generators for maintaining a fixed phase displacement of the acoustic wave energy impinging on said receivers, means coupled to said oscillation generators for producing a resultant frequency which is the algebraic summation of the frequencies generated by said oscillation generators, and a frequency responsive indicator responsive to said resultant frequency.

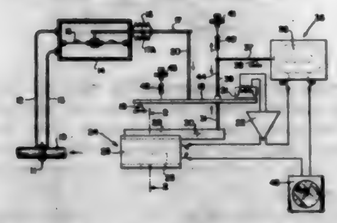
2,949,774
MASS FLOW METER
Herbert F. Cox, Jr., 406 Sedgwick Drive, Syracuse, N.Y.
Filed Mar. 8, 1956, Ser. No. 570,297
2 Claims. (Cl. 73—194)



1. A mass flow measuring device comprising a frame, a pair of aligned bearings in said frame, an axial conduit journalled in said frame, a constant speed motor mounted on the frame including gearing adapted to rotate said conduit on its axis, a stationary nipple disposed at one end of said conduit having a running seal in engagement with the conduit end, a radial connecting conduit on the

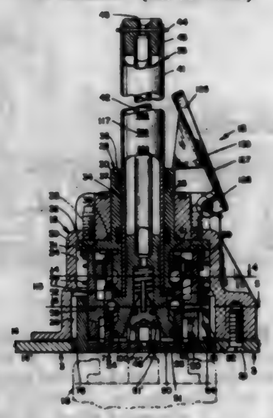
other end of said conduit for accelerating liquid flowing through said axial conduit into said radial conduit, a stationary housing enclosing the path of rotation of said radial conduit, having a running seal with said radical conduit, said housing having an outlet nipple, and means for measuring the difference between the total watt hours consumed by said motor and the no load watt hours consumed by said motor.

2,949,775
SIGNAL TRANSDUCER
William F. Newbold, Ambler, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Jan. 25, 1956, Ser. No. 561,315
14 Claims. (Cl. 73—285)



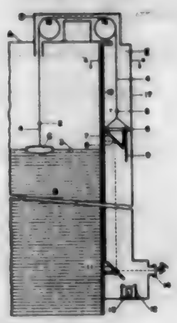
1. Apparatus for transducing an input force signal into an output signal which is a square root function of the input force signal comprising an input member adapted to have the input force applied thereto, a motion detecting means positioned with respect to said member to produce an output signal indicative of the motion of said member, a feedback force producing means connected to said detecting means and adapted to apply a feedback force to said input member which is a squared function of the output of said motion detecting means, and further means connected to said input member including an element energized by said motion detecting means, said further means also including means for producing a sharp change in feedback force at a preselected value of output signal from said detecting means.

2,949,776
SLIP-TUBE GAUGE
James H. Field and Clarence L. Vogt, Burbank, Calif., assignors to Roylyn Incorporated, Glendale, Calif., a corporation of California
Filed Sept. 4, 1956, Ser. No. 607,620
14 Claims. (Cl. 73—290)



10. A gauge for determining the liquid level in a container having an aperture in a lower wall thereof, comprising a tubular housing mounted on the apertured lower wall of the container about the aperture therein, an open-ended gauge tube mounted in said housing for axial movement relative thereto, said gauge tube being open to the interior of the container only through its upper end, a valve at the outer end portion of said gauge tube controlling the opening therethrough, means yieldably urging said valve to open position, and means for releasably securing said tube to the housing in retracted position, said means including a part engageable with said valve and effective to move said valve to a closed position when the parts are secured.

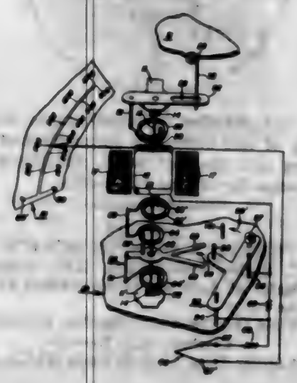
2,949,777
LIQUID LEVEL GAUGE
William O. Ferron, Grosse Ile, Mich., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
Filed Apr. 15, 1957, Ser. No. 652,956
2 Claims. (Cl. 73—321)



1. A mechanism for indicating the liquid level in a tank comprising, in combination, enclosure means extended from the top to the bottom of the tank adapted to be mounted on the outside of the tank and having its long axis perpendicular to the liquid level, tank calibration means inside of the said enclosure means, a mirror fixedly mounted at the bottom of the said enclosure means positioned to receive light images along the axis of the said enclosure means, light means in the said enclosure, viewing means positioned to receive light images transmitted from the fixedly mounted mirror, a movable support member positioned inside of the said enclosure means and limited by the said enclosure means to movement in a vertical plane, a mirror mounted on the said movable support member positioned to view the said scale means and to transmit images of the scale to the said fixedly mounted mirror, cable means suspending the said movable support member at one end of the cable, pulley means to movably carry the cable means, and float means supported by the liquid in the tank and suspended from the other end of the said cable means.

2,949,778
ELECTRICAL INSTRUMENT
John R. Hemion, Summit, Paul Covalence, Mountainside, and Kenneth J. Riddle, Nutley, N.J., assignors to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed Apr. 1, 1958, Ser. No. 725,645
10 Claims. (Cl. 73—361)

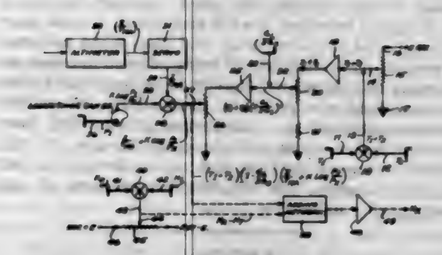
7. A measuring instrument comprising a rotatably supported movable element, first and second spiral control springs attached adjacent one end thereof to the said movable element, means positioning the other end of the said first spiral control spring at a predetermined position, first and second temperature responsive temperature compensating elements, means connecting one end of the said first temperature compensating element to the other end of the said second spiral control spring, a connecting member connecting the other end of the said first temperature compensating element to the one end of the said second temperature compensating element, means positioning the other end of the said second temperature compensating element at a predetermined position, the said first and second temperature compensating elements rotating the other end of the said second spiral control



spring in one direction when the said connecting member is free to rotate, and releasable locking means locking the said connecting means at a predetermined position, the said connecting means being rotatably movable in the unlocked position of the said locking means.

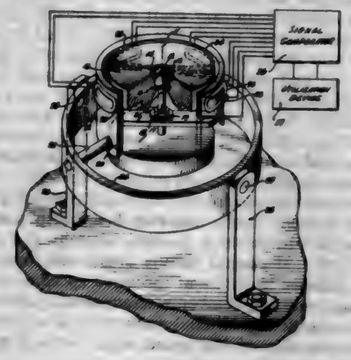
8. The invention as recited in claim 7 wherein the said connecting member includes a pair of divergent arms extending therefrom and the said releasable locking means comprises a pin movable into and out of engagement with the divergent arms of the said connecting member.

2,949,779
PRECISION ALTIMETER FOR AIRCRAFT
Henry F. McKenney, Valley Stream, and Victor H. Seliger, Forest Hills, N.Y., assignors to Sperry-Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Oct. 19, 1955, Ser. No. 541,432
2 Claims. (Cl. 73—384)



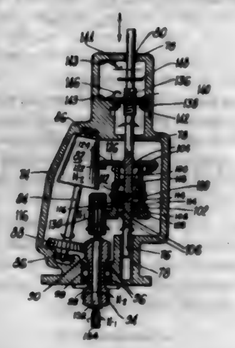
1. A precision altimeter system for determining the height of an aircraft above a ground point, comprising a first potentiometer having a reference voltage input and a variable output contact, means to position the variable contact in accordance with the sum of the temperature at a reference point and the ambient temperature at the aircraft, a second potentiometer having a variable contact, means to feed the voltage output of the first potentiometer to the second potentiometer, means to position the variable contact of the second potentiometer in accordance with a function of acceleration due to gravity, a third potentiometer having a variable contact, means to feed the voltage output of the second potentiometer to the third potentiometer, an altimeter carried by the aircraft and responsive to the ambient barometric pressure at the aircraft and having an output representing a logarithmic function of the said barometric pressure, means for determining a logarithmic function of the barometric pressure at a reference point, means for combining the output of the altimeter with the said function of the barometric pressure at a reference point, means to position the variable contact of the third potentiometer according to the output of said combining means, a fourth potentiometer having a reference input voltage and a variable contact, means to position the variable contact of the fourth potentiometer in accordance with the difference in elevation of said reference point and that of the ground point, and means to add the voltage outputs of the third and fourth potentiometers.

2,949,780
INTEGRATING ACCELEROMETER
Donald D. Williams, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed July 23, 1957, Ser. No. 673,714
1 Claim. (Cl. 73—504)



An integrating accelerometer comprising in combination: a first set of trunnions, a first gimbal frame rotatably supported by said trunnions; a second gimbal frame; a second set of trunnions perpendicular to said first set interconnecting said first and second gimbal frames and permitting rotation of said second frame with respect to said first frame; a first rotor supported by said second frame and adapted to provide a spatial reference axis; a second rotor including a magnetic source and having an axis of rotation, a center of rotation, and a center of mass; said center of mass lying upon said axis of rotation and displaced from said center of rotation; mounting means pivotably supporting said second rotor and coupled with said second frame; first driving means coupled with said second frame; second driving means coupled with each of said rotors and adapted to selectively align said axis of rotation and said reference axis; a first signal coil disposed about said second rotor for providing an electrical signal representative of the displacement of said axis of rotation with respect to said reference axis and a plurality of phase reference signal windings disposed about said second rotor.

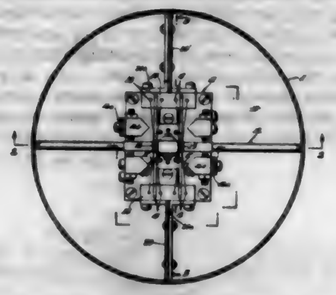
2,949,781
SPEED RATIO MEASURING APPARATUS
Howard L. McCombs, Jr., South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Apr. 3, 1958, Ser. No. 726,203
2 Claims. (Cl. 73—507)



1. Speed responsive apparatus for computing the speed ratio between two independent rotating members comprising a shaft mounted for rotation about an axis, support means for said shaft, said shaft being threadedly engaged with said support means, conical means mounted for rotation about an axis and drivably connected to one of said rotating members, a tubular member rotatably mounted on said shaft and drivably connected to the tapered surface of said conical means, a tubular member rotatably mounted on said shaft and drivably connected to the other of said rotating members, a rod fixedly secured to said shaft, differential means rotatably mounted on said rod and operatively connected to said first and second named tubular members, said shaft being rotated as a function of the relative error between the rotational speeds of said first and second named tubular members such that said shaft rotates relative to said support means and moves axially in one direction or the other depending upon the relative error between said rotational speeds, said first named tubular member being displaced along said tapered surface to a position whereby the effective diameter of said conical means causes said first named tubular member to rotate at the same speed as said second named tubular member whereupon said shaft is stabilized in position, said axial movement of said shaft being representative of the speed ratio between said two independent rotating members.

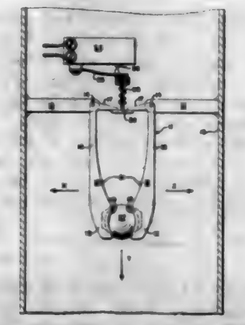
2,949,782
ANGULAR ACCELEROMETER
Cecil K. Stedman, Enumclaw, Wash., assignor to Statham Instruments, Inc., a corporation of California
Filed Jan. 7, 1957, Ser. No. 632,812
11 Claims. (73—516)

1. A motion sensing device, comprising a case, a closed chamber in said case, a liquid inertial mass in said chamber, a paddle in said chamber immersed in said liquid, said paddle being of substantially no effective mass when immersed in said liquid, said liquid being the inertial mass and the effective rotor of said device, a mounting for said paddle fixedly mounted in said chamber and connected to said case, said paddle being movably mounted in said chamber with one edge of said paddle adjacent, but out of contact with, an enclosing wall of said chamber, said paddle being positioned on said mounting for limited angular motion on said mounting with respect to said case on acceleration of said case, said mounting restraining motion of said paddle with respect to said case in the absence of acceleration of said case, a baffle positioned in said chamber extending along said paddle and spaced therefrom, the space between said baffle and said paddle forming a fluid communicating passageway in said chamber from one side of said paddle to the other side,



a wall in said chamber extending across said chamber transversely of said baffle and independent of said baffle and dividing said chamber into a plurality of subchambers, and means for sensing said motion.

2,949,783
GRAVITY SENSING DEVICE
Norman C. Butler, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 28, 1957, Ser. No. 692,985
6 Claims. (Cl. 73—514)
(Granted under Title 35, U.S. Code (1952), sec. 266)

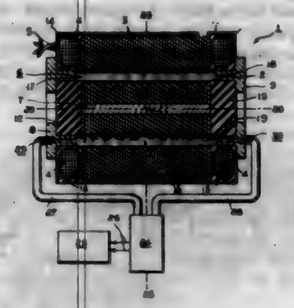


1. A multi-directional gravity responsive device comprising a support member, a plurality of bell cranks having elongated members and relatively short members pivotally arranged on said support member, a recess formed in a surface of each of said elongated members, resilient means engaging said short members for urging said elongated members toward each other, a mass movably positioned in the recesses, said mass when subjected to a normal gravitational force being adapted to overcome the urging of said means thereby to maintain said elongated members in a particular mutually spaced position and when subjected to a sub-normal gravitational force to enable movement of said elongated members by said means to a moved position, and means formed on said elongated members for effecting transmission of said movement to a utilization device.

2,949,784
GYROSCOPE DEVICE
Paul F. Maeder, East Providence, R.I., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Filed May 26, 1959, Ser. No. 815,954
18 Claims. (Cl. 74—5.7)

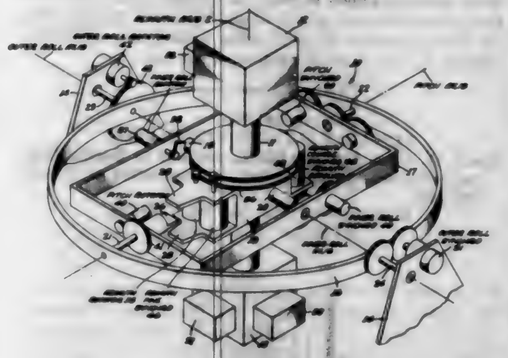
1. Apparatus responsive to angular movement comprising a structure having a liquid-tight hollow chamber

therein, an electrically conductive liquid confined within said chamber, electrical motive means consisting of stationary parts rotating said liquid within said chamber about a spin axis, said motive means including means directing magnetic flux through said conductive liquid



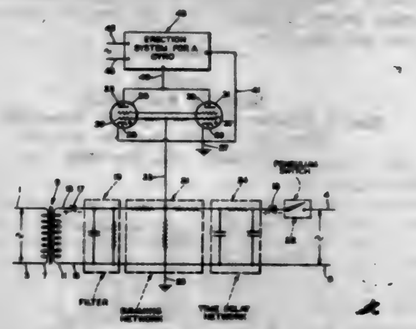
to develop liquid-accelerating torques, and means producing output signals characterizing instantaneous inertial tendencies of said liquid to rotate about said spin axis upon occurrence of relative angular movement of said structure about a sensing axis normal to said spin axis.

2,949,785
LOW DRIFT GYRO-STABILIZED PLATFORM
Henry E. Singleton, Downey, and Harold F. Erdley, Los Angeles, Calif., assignors, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed Feb. 29, 1956, Ser. No. 568,949
14 Claims. (Cl. 74—5.34)



1. In a gyro-stabilized platform for use in an inertial guidance system, the combination comprising: a reference frame; a stabilizable element rotatably connected to said reference frame, said element having first, second and third axes of rotation with respect to said reference frame; purely inertial means for operating free of any external reference to stabilize said element, said purely inertial means including first and second 2-degree-of-freedom gyroscopes rotatably coupled to said element, said first gyroscope having fourth and fifth axes of rotation with respect to said element and said second gyroscope having a sixth axis of rotation with respect to said element, said purely inertial means further including pick-off means intercoupling said gyroscopes and said element for producing a plurality of control signals comprising 1st, 2nd and 3rd control signals respectively representing the rotation of said element relative to said gyroscopes about said fourth, fifth and sixth axes, first actuating means responsive to said 1st and 3rd control signals for rotating said element with respect to said frame about said first axis, second actuating means responsive to said 1st and 3rd control signals for rotating said element about said second axis, third actuating means responsive to said 2nd control signal for rotating said element about said third axis; and acceleration sensing means mounted on said stabilizable element for generating electrical output signals representative of accelerations applied to said stabilizable element along said fourth, fifth and sixth axes.

2,949,786
TIME-DELAY CONTROL CIRCUIT FOR DIRECTIONAL GYRO ERECTION SYSTEM
Richard Shaw, Jr., Mahwah, and Robert H. Doehl, Ridgewood, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed May 3, 1957, Ser. No. 656,828
2 Claims. (Cl. 74—5.41)

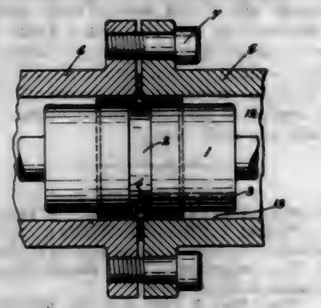


1. For use with an erection system of a directional gyro, a control device of a type including an electronic valve means having a cathode, a plate and a control grid, and an output circuit for controlling the erection system including the cathode and plate of the electronic valve means; said control device including the improvement comprising first means for applying a voltage across the cathode and control grid of a polarity to negatively bias the control grid, second means for applying an opposing voltage across the cathode and control grid of a polarity to counteract the negative bias applied to the control grid so as to permit the electronic valve means to effect an electronic flow in the output control circuit, said second means including a pendulum switch means sensitive to predetermined gravitational conditions of operation of the gyro to render said second means effective and ineffective, and timing means to effect a delay in the application of said opposing voltage upon said second means being rendered effective by said pendulum switch means.

2,949,787
EXTENSION SEAL
Karl A. Klingler, 111 S. Wright St., Naperville, Ill.
Filed Sept. 12, 1957, Serial No. 683,658
5 Claims. (Cl. 74—18.2)

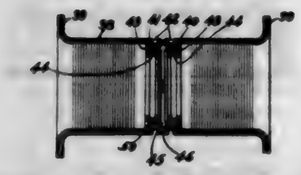
2. In combination, a two-part cylinder, the two parts being concentric and in alignment and means for holding them together, a plunger adapted to reciprocate in the cylinder, an annular groove in the circumference of the plunger, packing means comprising an elastomeric sleeve having a central outwardly extending flange compressed between the abutting cylinder ends and terminating at each end in seal rings, the two seal rings being socketed in the annular groove in the plunger and held in contact with one another so as to form a sleeve interior, means

for forcing fluid between the opposed seal rings into the interior of the sleeve, said means comprising a channel through the plunger, open at one end thereof and a radial



branch leading therefrom to the space within the annular groove in register with the zone of contact of the two seal rings.

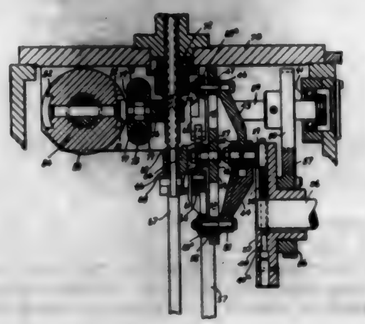
2,949,788
SLEEVE PACKING
Karl A. Klingler, 111 S. Wright St., Naperville, Ill.
Filed Oct. 3, 1957, Ser. No. 688,039
3 Claims. (Cl. 74—18.2)



3. A packing sleeve for reciprocating parts comprising a single elastomeric sleeve outwardly flanged at its ends, two reinforcing sealing rings integral therewith joined together along a radial plane adjacent the center of the sleeve, there being a valve slot extending radially of the sleeve at the plane of juncture of the two rings, the inner periphery of the sleeve being serrated, the serrations comprising a multiplicity of continuous uninterrupted parallel grooves in parallel planes perpendicular to the axis of the sleeve, the sleeve ends being adapted to be telescoped back on one another to bring the opposed faces of the flanges together encircling the sealing rings adjacent their plane of contact to define an annular pressure sack.

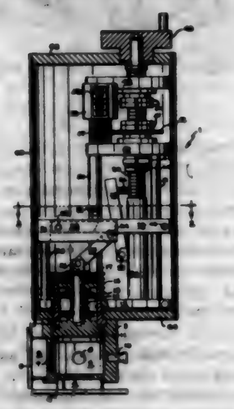
2,949,789
HIGH SPEED STATOR WINDING APPARATUS
Robert J. Eminger, Kendallville, Ind., assignor to Fort Wayne Tool, Die & Engineering Company, Fort Wayne, Ind., a company of Indiana
Filed Feb. 27, 1958, Ser. No. 717,887
6 Claims. (Cl. 74—23)

1. In a stator winding apparatus of the type in which a winding head moves relative to a slotted stator in a path sequentially parallel to and transverse to the axis of the stator bore in placing a winding between two angularly separated stator slots: a rotating drive shaft, means for driving said winding head through the transverse portion of its path including a barrel cam rotated by said drive shaft and having a continuous cam slot therein, a cam follower cooperating with said slot and operatively connected to said winding head, said cam slot having dwell portions separated by change-over portions, the transverse motion of said winding head occurring as said cam follower traverses said change-over portions, and means for driving said winding head through the parallel portion of its path with the extremities of the winding head movement in said parallel portion of its path occurring substantially at the midpoint of the dwell portions of said cam slot, said last-mentioned means comprising a drive member moved through a circular path by said drive shaft, dual connecting rods coaxially pivoted on said member, a cross head supported for reciprocal linear movement and operatively connected to said winding head, means providing spaced aligned slots on said cross head extending in the direction of movement



thereof, the free ends of said connecting rods each carrying a member slidably received within a respective one of said slots, an equalizer bar pivotally supported at its midpoint on said cross head, the support for said equalizer bar being aligned with the axis of said slots, and a link member pivotally extending from each end of said equalizer bar and pivotally joined respectively to one of said members received within said slots, whereby as said drive member moves through its circular path said cross head is reciprocated with a simple harmonic motion, with the forces exerted on said cross head being uniformly applied at both ends of said equalizer bar.

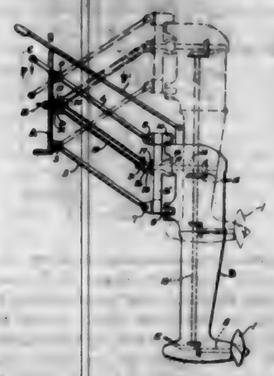
2,949,790
TUNABLE CAVITY RESONATOR
David W. Foss, Ipswich, Mass., assignor to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts
Filed July 8, 1958, Ser. No. 747,181
3 Claims. (Cl. 74—89)



1. A mechanical linkage system for actuating a tuning plunger axially disposed within a metallic body member defining a resonant cavity, said mechanical linkage system comprising a rotatable drive screw mounted by means

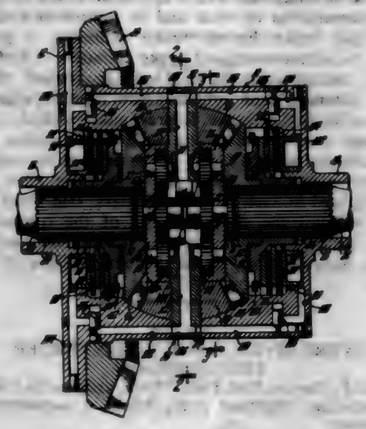
preventing axial and lateral movement thereof, a tuner rod threadably engaging said drive screw, said rod being axially displaced upon rotation of the drive screw, a bar member connected to said rod to define an angular extension, a bearing member positioned generally normal to the direction of travel of the tuning rod, an arm having a bearing pin disposed adjacent to one end with the opposite end pivotably connected to the tuning plunger, the underside of said bearing member being in engagement with said bearing pin, said bar member contacting said bearing pin thereby to displace the same along said underside as said rod is axially displaced, the total distance of travel of said pin being determined by the angular displacement and length of said bar member, the total distance of axial movement of the tuning plunger being determined by the angular displacement between said bearing member and arm as well as the distance of travel of said pin along the underside of said bearing member and means for adjustment of both angular displacements to a predetermined value determined by the desired axial displacement of the tuning plunger.

2,949,791
MOTION TRANSMITTING DEVICE FOR MARINE PROPELLERS HAVING THEIR THRUST AXIS VERTICALLY MOVABLE
Giustino Cattaneo and Guido Cattaneo, Via Gallarate 64, Milan, Italy
Filed Dec. 14, 1956, Ser. No. 628,459
Claims priority, application Italy Dec. 16, 1955
3 Claims. (Cl. 74—385)



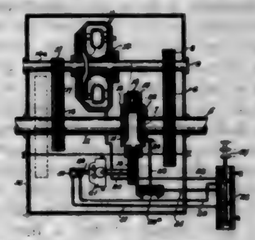
1. A device for transmitting motion between a hull-carried driving shaft and a marine-propeller shaft, said device comprising a vertical shaft, means operatively connecting said vertical shaft with said marine-propeller shaft, a first horizontal shaft, means operatively connecting said vertical shaft with said horizontal shaft, a second horizontal shaft, a universal joint operatively interconnecting the two horizontal shafts, whereby said first horizontal shaft may be rotated horizontally with respect to said second horizontal shaft while said horizontal shafts remain operatively interconnected, an intermediate shaft, bevel gears upon opposite ends of said intermediate shaft, a pinion keyed to an end of said hull-carried driving shaft, a loosely mounted bevel pinion meshing with one of said bevel gears and said pinion, another pinion keyed to an end of the second horizontal shaft, another loosely mounted bevel pinion meshing with the other one of said bevel gears and said other pinion, a casing body carrying said marine-propeller shaft, said vertical shaft, the first- and second-mentioned connecting means and the first horizontal shaft, and means connected with said casing body for swinging the same.

2,949,792
DIFFERENTIAL ASSEMBLY
Warren H. Smith, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 9, 1959, Ser. No. 851,721
5 Claims. (Cl. 74—711)



1. A differential assembly for a motor vehicle comprising a carrier, a crosspin mounted in said carrier and rotatable therewith, differential gears on said crosspin and within said carrier, side gears mounted in said carrier and engaging said differential gears, axle shafts extending from said carrier and rotatable with said side gears, pump means in said carrier and connected to said side gears and operable thereby, clutch means in said carrier and adapted to lock said axle shafts to said carrier for rotation therewith, piston means in said carrier and adjacent said clutch means, fluid passage means through said crosspin and in said carrier and communicating between said pump means and said pistons, fluid inlet means in said carrier and said crosspin and communicating with said pump means, said pump means being operable when there is relative rotation between said side gears to pump fluid through said fluid passage means and actuate said piston means to engage said clutches and lock said side gears to said carrier.

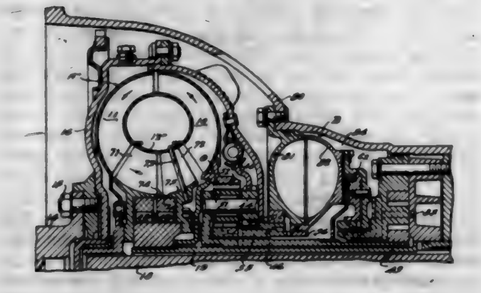
2,949,793
FLUID-MECHANICAL TRANSMISSION
Man Mohan Suri, London, England, assignor to The President of the Republic of India, New Delhi
Filed June 27, 1957, Ser. No. 668,446
Claims priority, application Great Britain July 4, 1956
3 Claims. (Cl. 74—720.5)



1. A power transmission unit which is adapted particularly to be disposed between the input and output shafts of a rail vehicle, said unit comprising at least one mechanical line of transmission, at least one line of transmission including a hydrodynamic device ar-

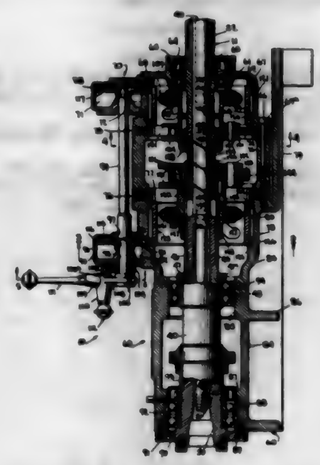
ranged in parallel with said mechanical line of transmission, a planetary wheel arrangement arranged in said mechanical line of transmission, means for selectively rendering effective the mechanical or the hydrodynamic line of transmission, said means including a transmission oil bath, a gear wheel in braking connection with said planetary wheel arrangement and a hydraulic brake immersed in the transmission oil bath and in control of said gear wheel, said brake having brake cylinders, a passage adapted to interconnect said brake cylinders, a hydraulic cylinder control valve in fluid passing control of said passage whereby said cylinders are isolated when the fluid flow in said passage is prevented by said control valve, and said cylinders are in communication when fluid is allowed to pass freely in the passage by said control valve, a one way valve and a pressure relief valve being disposed in each of said cylinders, said relief valve serving to limit the shock loading of the transmission parts at the time of changing over under load conditions from the hydrodynamic to the mechanical lines of transmission.

2,949,794
OVERDRIVEN TORQUE CONVERTER TRANSMISSION
Benjamin F. Boehm, Oak Park, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Apr. 26, 1956, Ser. No. 580,773
4 Claims. (Cl. 74—732)



1. In a transmission, a drive shaft, a hydrodynamic torque converter comprising a fluid filled casing drivingly connected to said drive shaft, relatively rotatable, vaned, impeller, turbine and reaction members mounted in said casing to provide a closed toroidal fluid circuit, said reaction member having automatically adjustable vanes to improve the accelerating properties of the turbine under load, a planetary gear set adjacent said casing connected between said casing and said impeller, one-way clutch means engaged between certain elements of said planetary gear set to normally lock-up said planetary gear set and condition said gear set for the direct drive of said impeller by said drive shaft, brake means selectively engageable with an element of said planetary gear set to condition said gear set for the overdrive of said impeller by said drive shaft, means drivingly connecting said turbine to the input shaft of a two-speed gear box and a clutch mechanism for the planetary gear-set engageable to bypass said one-way clutch means and drivingly connect said impeller to said drive shaft during coast drive when the turbine tends to drive the impeller, said gear box including aligned input and output shafts, a first and a second planetary gear train arranged axially along said shafts and adapted to be connected therebetween, said gear trains each including meshingly engaged sun, pinion and annulus gears, means drivingly connecting the annulus gear of the first gear train and the sun gear of the second gear train to each other and to the input shaft, carrier means supporting and drivingly connecting the pinion gearing of the first and second gear trains, means drivingly connecting the annulus gear of the second gear train to the output shaft, brake means to be selectively applied to the sun gear of the first gear train to condition the gearing for the transmission of a forward underdrive ratio to said output shaft and a clutch means engageable between said input shaft and the sun gear of the first gear set to lock up the gear box gearing and provide for the transmission of a direct drive between said input and output shafts of the gear box.

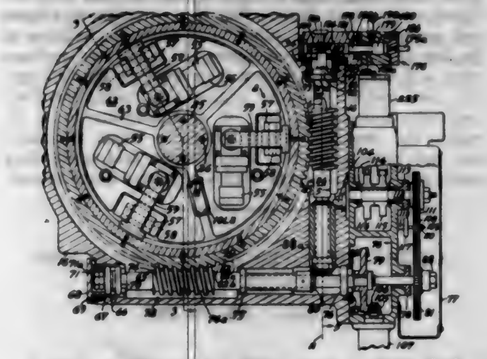
2,949,795
POWER TRANSMISSION FOR MILLING AND THE LIKE MACHINES
Sigmund M. Morey and Secondo L. Casella, New York, N.Y., assignors to Morey Machinery Co., Inc., Astoria, N.Y., a corporation of New York
Filed June 11, 1956, Ser. No. 590,485
8 Claims. (Cl. 74—750)



1. In combination, a casing, a drive shaft rotatable and non-slidable therein, a driven shaft coaxial with the drive shaft and rotatable and non-slidable in the casing, a splined sun on the drive shaft, a first planet carrier mounted for rotation and sliding movement in the casing coaxially with respect to the drive shaft and movable to an upper position and to a lower position, pinions on said carrier meshing with said splined sun in both the upper and lower positions of said carrier, a ring gear fixed with respect to said casing and adapted to mesh with said pinions in the upper position of said carrier, and to be clear of said pinions in the lower position of said carrier, internal spline teeth on said carrier adapted to be clear of said splined sun in the upper position of said carrier and to mesh with said splined sun in the lower position of said carrier, a splined sun on said carrier, said driven shaft having a splined sun, a second carrier slidably and rotatably mounted in said casing coaxially of said driven shaft, and likewise movable to an upper position and a lower position, and having internal spline teeth slidably meshing with the splined sun on said driven shaft in both the upper and lower positions of said second carrier, pinions carried by said second carrier meshing with the splined sun on said first carrier in both the upper and lower positions of said second carrier, a ring gear fixed with respect to said casing and meshing with said pinions on said second carrier in the lower position of said second carrier, and being clear of said pinions in the upper position of said second carrier, and said splined sun on said first carrier be-

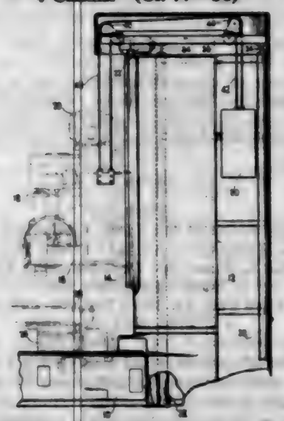
ing clear of the internal spline teeth of the second carrier when both carriers are in their upper positions, and when the first carrier is in its upper position, and the second carrier is in its lower position, and adapted to mesh therewith when the first carrier is in its lower position and the second carrier is in its upper position.

2,949,796
INDEXING MECHANISM
Albert F. Frederick, Mason, and Ralph J. Rabel, Cincinnati, Ohio, assignors to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 13, 1957, Ser. No. 696,141
10 Claims. (Cl. 74—823)



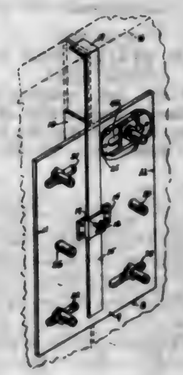
1. In a machine tool a driven gear, a drive shaft, a drive gear secured to the drive shaft to engage the driven gear, means selectively to rotate said drive shaft through a predetermined angle, a second shaft having two portions in non-rotating and telescoping relationship, one portion having means for engagement with the drive shaft to rotate said second shaft in unison with the drive shaft and the other portion carrying a gear thereon non-rotatable in relation thereto and engaged with the driven gear, and means to exert a force against the end of the latter portion of the shaft when the drive shaft is not rotating to move that portion and hereby rotate the driven gear and urge it against the drive gear.

2,949,797
CUTTER HEAD AND COUNTERWEIGHT SUPPORT FOR MACHINE TOOLS
Jacob J. Jaeger, Canton Center, Conn., assignor to Pratt & Whitney Company, Incorporated, West Hartford, Conn., a corporation of Delaware
Filed Dec. 31, 1958, Ser. No. 784,279
4 Claims. (Cl. 77—36)



1. A machine tool having a base, a column thereon having vertical ways on one of its faces, a cutter head adapted for movement along said ways, a counterweight for said cutter head, a frame adjacent said base and enclosing said column, and supporting means on said frame for said cutter head and counterweight permitting vertical movements thereof, whereby said cutter head will be guided by the ways on said column and the weight of the cutter head and counterweight will be supported by said frame.

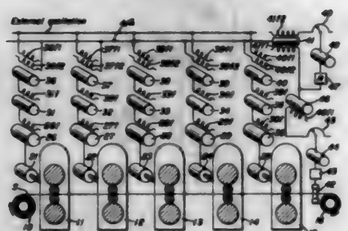
2,949,798
DOOR PULL TEMPLATE
Louis F. Berta, Jr., 2444 106th St., Toledo 11, Ohio
Filed July 16, 1959, Ser. No. 827,491
1 Claim. (Cl. 77—62)



A portable T-shaped instrument for drilling a plurality of holes to be made in and perpendicularly to the exterior surface of a door panel, said instrument comprising, in combination, a rectangular plate member having three vertically spaced pairs of openings extending therethrough, a rectangular shaped guide flange integrally secured along one of its vertical edge portions to the rear wall of said plate member, said guide flange extending rearwardly and vertically midway between the vertical side edges of said plate member forming a T-shaped instrument, said guide flange extending transversely for the full vertical dimension of said plate member, a single outwardly bowed strap carried by and secured horizontally to the outer surface of said plate member opposite said guide flange arranged on the rear surface thereof, said single strap lying across a rectiliner path which extends vertically midway between the vertical edges of said plate member, a substantially rigid rule extending in the rectilinear path and vertically upon said plate member in a slidable contact with said horizontal strap member, said rule having an integrally, perpendicularly, rearwardly extending flange formed at the upper end thereof forming a stop for slidable engagement with the top of the door panel to be drilled and to hold the plate member in a selected position on said door panel, a set screw threadedly secured within a threaded bore horizontally formed in said strap, said set screw for adjustably securing said rule relative to said plate member, the intermediate arranged pair of said three pair of openings in said plate member consisting of one pair of holes with tubular means rigidly arranged therewith for guiding a drill through said holes into the door panel to be drilled and at right angles to the outer surface thereof, the upper and lower pairs of said vertically spaced openings consisting of four slots horizontally formed in said plate member at equal distances from said intermediate pair of holes and in vertical alignment therewith, a flanged tubular bushing movably arranged in each of said slots, said bushings having a tubular portion and a rear end flange, said bushings for

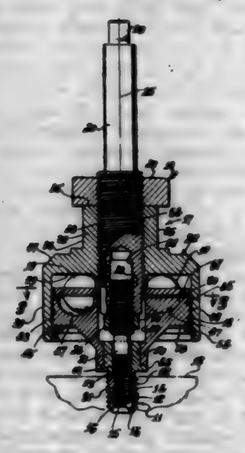
slidable adjustment and placement for a drill to drill holes in the door panel to be drilled, said rear end flange of each of said bushings being larger in width than the width of said slots and arranged in sliding engagement with the rear surface of said plate member, a rearwardly bowed channel type strap member secured to said plate member at the rear of each slot, said rear end flange of each bushing in sliding contact with said channel type strap and slidable therebetween it and said plate member, and said tubular portion of said bushings having a threaded exterior portion with a threaded lock nut arranged thereon and in sliding contact with the outer surface of said plate member for locking said bushings in a selected position in the slots.

2,949,799
GAGE-CONTROL SYSTEM FOR MULTI-STAND STRIP MILL
Nate S. Walker, Gary, Ind., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Sept. 25, 1956, Ser. No. 611,986
9 Claims. (Cl. 80—35)



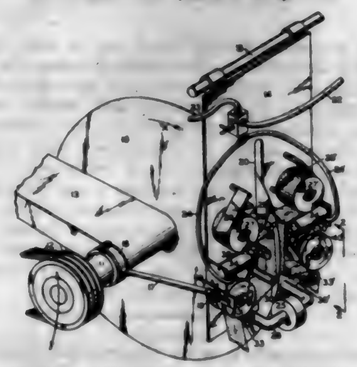
1. In a strip mill, a plurality of roll stands, a motor for driving each of said stands and a generator for supplying current to each of said motors, the combination therewith of means for continuously gaging the strip leaving the last stand and means controlled by said gaging means simultaneously oppositely modifying the excitations of the generators of stands adjacent the entrance and exit ends of the mill, respectively.

2,949,800
TOOL FOR INSTALLING THREADED ELEMENTS
Robert Neuschotz, 1162 Angelo Drive, Beverly Hills, Calif.
Filed May 11, 1959, Ser. No. 812,222
11 Claims. (Cl. 81—53)



1. A tool for screwing a threaded element into a bore, comprising a first section adapted to be turned about a predetermined axis, a work-holding structure mounted to turn with said first section and having threads for engaging and holding said element, a second section adapted to turn with and relative to said first section about said axis, means forming a shoulder positioned to be pressed axially inwardly against said element by said second section, a plurality of circularly spaced shiftable rolling members for transmitting axially inward forces from said first section to the second as said element is screwed into said bore, each of said rolling members being engageable with two opposed surfaces on said two sections respectively and being adapted to roll along said surfaces upon rotary movement of the first section relative to the second in an unscrewing direction, one of said surfaces being inclined with respect to the other in a direction to release said second section for slight axial retraction relative to the first section as said members roll along said surfaces upon said unscrewing rotary movement of the first section, and means yieldingly urging said rolling members circularly relative to one of said sections in a direction the reverse of the direction in which the members roll relative to that section upon said unscrewing rotary movement of the first section relative to the second.

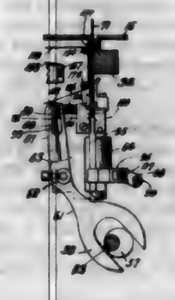
2,949,801
AUTOMATIC WIPER FOR ROTARY BLADE
Emmett R. Mills, Camas, Wash.
Filed Feb. 12, 1959, Ser. No. 792,969
5 Claims. (Cl. 83—168)



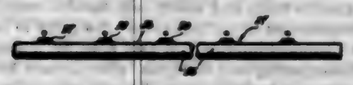
1. In a wiping assembly for a driven rotating cutter blade, a pair of supply rolls of blade-wiping material, supporting means for said supply rolls on opposite sides of said blade respectively, guide means for guiding the blade-wiping material from each of said supply rolls in paths along opposite sides of said blade respectively, means for moving the wiping material over said guide means, a pair of elements engaging the wiping material on opposite sides of said blade respectively and intermittently thrusting said material into contact with the respective faces of said blade, and means for operating said elements.

2,949,802
PASS PUNCH HAVING GRIPPER AND AUTOMATIC ACTUATING MEANS
James S. Arcus, Sr., 2641 NE. 26th Terrace, Fort Lauderdale, Fla.
Filed Feb. 14, 1957, Ser. No. 640,286
2 Claims. (Cl. 83—364)

1. In an admission pass manipulating machine, the combination of an authorized pass having a leading edge, a frame, a guide mounted in said frame for receiving said pass, a main obstruction movably mounted in the path of movement of said leading edge, a second obstruction movably mounted in said frame also in the path of movement of said leading edge, a spring pressed switch normally positioning said second movable obstruction in advanced position in the path of movement of said leading edge, a drive shaft mounted in said frame, a motor operatively connected to said drive shaft, a first cam on said drive shaft, a lever mounted on said frame, a pass gripper slidably mounted on said lever, a spring on said lever urging said pass gripper into gripping engagement with said pass, a bracket mounted on said frame, a punch slidably mounted on said bracket and operatively connected to said lever, a source of current, a main switch operatively connected to said main obstruction, a first wiring connecting said source of current, switches and motor to initiate the actuation of said main drive shaft, when both said obstructions are actuated to close said switches to initiate a cycle of operation and actuate said first cam to actuate said lever in turn to enable said spring to actuate said pass gripper into gripping engagement with said pass, a third switch, a second cam operatively connected to said drive shaft and operatively associated with said third switch, a second wiring connecting said third switch with said motor and source of current to establish a second circuit to said motor, a third cam operatively connected to said drive shaft, a linkage operatively connecting said third cam to said main movable obstruction, the continued actuation of said third cam during the completion of its cycle successively maintaining said main obstruction in switch closing position, in turn the continued actuation thereupon of said first cam actuating said lever in turn to actuate said punch, restore said punch, restore said pass gripper, and the continued actuation in turn of said third cam releasing said main movable obstruction in turn to open said first switch and said second switch to enable said second movable obstruction to eject said pass from said guide, and upon the further actuation of said second cam finally open said third switch.

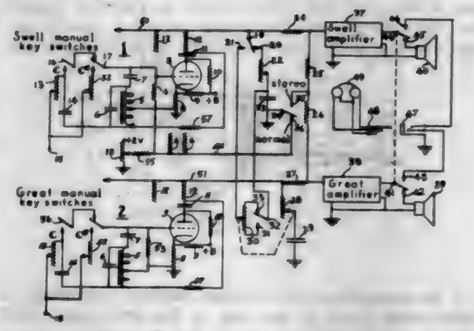


2,949,803
CROSS-WIRED ORGAN SYSTEM AND RECTIFIER THEREFOR
Donald J. Leslie, 313 S. Fair Oaks Ave., Pasadena 1, Calif.
Filed Feb. 25, 1957, Ser. No. 642,025
6 Claims. (Cl. 84—1.11)



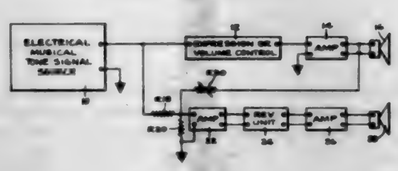
1. For use in a cross-wired electric organ: an elongate conductive bus bar; a layer of material having rectification properties and extending along the length of the bar; and a plurality of electrically separate contact means secured to the layer at spaced positions along the bar.

2,949,804
ELECTRONIC MUSICAL INSTRUMENT
Thomas J. George, 11671 Victory Blvd., North Hollywood, Calif.
Filed Mar. 26, 1956, Ser. No. 573,785
7 Claims. (Cl. 84—1.22)



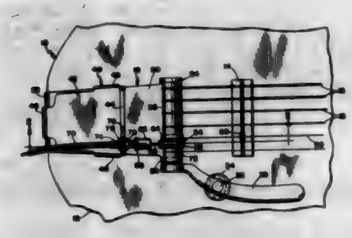
1. In an electronic organ, the combination comprising a plurality of oscillators, a first manual having associated switching means, a second manual having associated switching means, means interconnecting said oscillators and said switching means for actuating said oscillators, a first amplifier, a first speaker coupled to said first amplifier, a second amplifier, a second speaker coupled to said second amplifier, a first expression control coupled between said first manual and said first amplifier, a second expression control coupled between said second manual and said second amplifier, means linking said first expression control to said second expression control whereby both said controls may be operated simultaneously, and a selector switch connected to said first expression control for selectively reversing the effect of the first expression control on said first manual with respect to the effect of the second expression control on the second manual.

2,949,805
ARTIFICIAL REVERBERATION CONTROL APPARATUS
Laurens Hammond, Chicago, Ill., assignor to Hammond Organ Company, Chicago, Ill., a corporation of Delaware
Filed Feb. 26, 1959, Ser. No. 795,834
6 Claims. (Cl. 84—1.24)



1. An electrical musical instrument comprising, a source of electrical musical tone signals, first and second signal transmission channels coupled to the source, each including an amplifier and a speaker, an adjustable volume control in the first channel, a reverberation apparatus in the second channel, and means providing a coupling from a point in the first channel, at which the amplitude of the signal may be varied by the volume control, to a point in the second channel before the signal is supplied to the reverberation apparatus.

2,949,806
INDIVIDUAL STRING TONE CHANGER FOR GUITARS
Thomas B. Turnam, 9455 Crest Drive, Spring Valley, Calif.
Filed Sept. 8, 1958, Ser. No. 759,753
9 Claims. (Cl. 84—297)



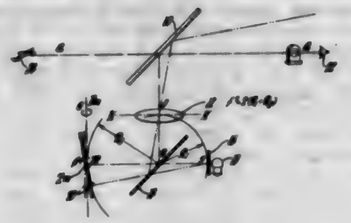
1. In combination in a stringed musical instrument: a vibrato unit fixed at one end of the instrument; said vibrato unit having an anchor bar rotatably mounted therein; a plurality of strings terminally secured to said anchor bar; means for rotatably rocking said anchor bar to vary the tension on said strings collectively; and a tone changer assembly mounted on said vibrato unit; said tone changer including a drum rotatably mounted on said anchor bar; a single string terminally secured to said drum; and remotely controlled actuating means connected to said drum to rotate the drum and vary the tension on said single string.

2,949,807
FISHING NET OR THE LIKE MADE OF BRAIDED PLASTIC FILAMENTS
August Günther Herzog, Ofenerdiek, Oldenburg, Hans-Friedrich Kalthoener, Hamburg, and Carl-Heinz Reussner, Koln-Mulheim, Germany, assignors of one-half to said Herzog and one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Filed Aug. 27, 1958, Serial No. 757,626
Claims priority, application Germany Sept. 2, 1957
2 Claims. (Cl. 87—8)



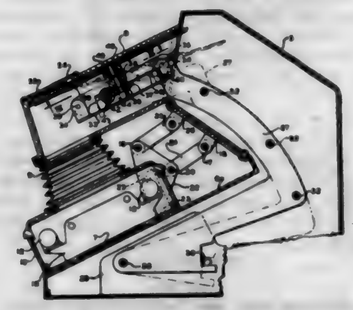
1. As a new article of manufacture a net constructed of a multi-filament yarn in which the yarn is in the form of a soutache braid having a plurality of longitudinal ridges, the latter containing a reinforcing filament extending longitudinally through the ridges so as to increase the rigidity of the braided yarn, whereby the casting of the net is facilitated.

2,949,808
AERIAL GUNSIGHT
James E. Therow, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 3, 1956, Ser. No. 596,132
13 Claims. (Cl. 88—1)



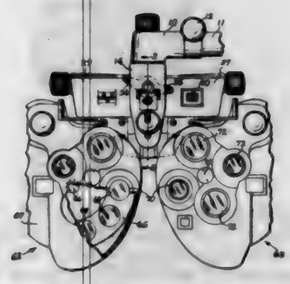
1. An optical sight head including the combination of a collimator having a primary lens node disposed in the principal plane thereof, an illuminated reticle disposed in a plane extending transversely of the principal plane of the collimator, a beam splitter having its optical surface bisecting said planes, and a prediction mirror having a reference position perpendicular to light rays from the reticle which impinge upon the center of the beam splitter, the center of said beam splitter being located equidistant from the principal plane of the collimator and the plane of the reticle and said prediction mirror being rotatable about an elevation control axis and a deflection control axis so oriented that an undeviated light ray from the illuminated reticle will be coincidentally reflected back upon itself.

2,949,809
COLOR COMPARATOR
Louis L. Weisglass, New York, and Alfred Simmon, Garden City, N.Y., assignors to Simmon Brothers, Inc., Long Island City, N.Y., a corporation of New York
Filed Apr. 24, 1958, Ser. No. 730,667
4 Claims. (Cl. 88—14)



1. A color comparator for determining which of the various densities of several colors is most desirable to produce proper color balance in a finished photographic print comprising a housing provided with a light-tight hooded member, a lifting lever exteriorly of said housing and operable to raise and lower said hooded member to permit the insertion of an "off color" test-print to be corrected on a support interiorly of said housing, a source of light for illuminating said test-print when in said housing, a window in said housing to enable an operator to view said "off color" test-print when positioned interiorly of said housing and illuminated by said light source, a member within said housing provided with a plurality of densities of several colors, a control knob on the outside of said housing and operable to move said member to and from a position disposing a given density of one of said several colors beneath said window in the path of the image of said "off color" test-print as observed by an operator to compare such given density with an "off color" density in said test print, means for indicating each particular density of any one of said several colors disposed at any given moment beneath said window, and said control knob being also operable to cause said member to shift another density color beneath said window at the election of an operator.

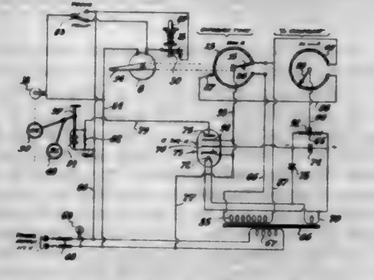
2,949,810
EYE TESTING INSTRUMENTS
John R. Wright, Eggertsville, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed June 26, 1957, Ser. No. 668,095
4 Claims. (Cl. 88—22)



1. In eye testing apparatus having two testing units each for placing a selected test element before the respective eye of a patient and common mounting means for the two testing units having a transverse track, a bracket depending closely adjacent said transverse track and having a pivot pin disposed in its lower portion on an axis normal to said transverse track for pivotally supporting said track so as to tilt said track and vary the elevation of one of said testing units relative to the other, a clamp confined in the space between said bracket and said track and engageable with said track for retaining the transverse track in adjusted angular relation to its supporting bracket comprising an internally threaded sleeve carried by the bracket, a screw press threaded in said sleeve, said screw press having its head formed as a friction disc for engaging said transverse track and a lever arm on said screw press for rotating said press and forcing said friction disc against said transverse track, said arm extending from the space in which said clamp is confined to permit operation of said screw press.

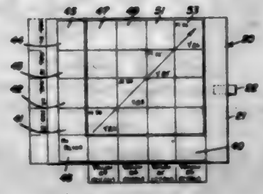
2,949,811
PHOTOGRAPHIC TIMING DEVICE
Louis L. Weisglass, New York, N.Y., assignor to Simon Brothers, Inc., Long Island City, N.Y., a corporation of New York
Filed Feb. 17, 1956, Ser. No. 566,180
10 Claims. (Cl. 88—24)

1. Apparatus for controlling exposure during the photographic printing of variable contrast photofinishing paper comprising a light source, a color changing device having a plurality of movable differently colored filters operable to selectively position a different colored filter in the path of the light beam from said source during the exposure of the photofinishing paper thereto, a timing device having a total time control adapted to be preset to cause energization of said light source for any desired total time period, a contrast control forming a part of said timing device and adapted to be preset for any desired percentage of the total time as selected by said timing control and operable to cause operation of said color changing device at a precise instant to remove a filter of one color from the path of the light beam from said source and to substitute a filter of another color for the percentage of the total time period as selected by said contrast control, a circuit for supplying electrical energy to said color changing device to cause operation thereof including an electron discharge tube, and a control circuit including said total time control and said contrast control for normally impressing a negative bias-



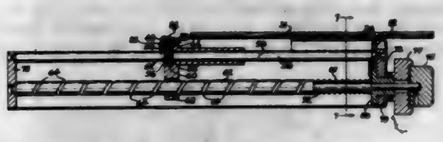
ing voltage on said electron discharge tube to render it non-conductive, and operable to vary the voltage impressed on said tube to render it conductive for closing said energy supply circuit for said color changing device during the percentage of the total time selected by said contrast control to retain the substituted color filter in the path of the light beam from said source during the remaining time period of energization of said light source by operation of said total time control, and while said photofinishing paper is exposed to said energized light source.

2,949,812
MEANS FOR PRODUCING COLOR POSITIVES IN TRUE NATURAL COLORS
Philip D. Lanco, R.D. 1, Bentleyville, Pa.
Filed Nov. 4, 1957, Ser. No. 694,182
9 Claims. (Cl. 88—24)



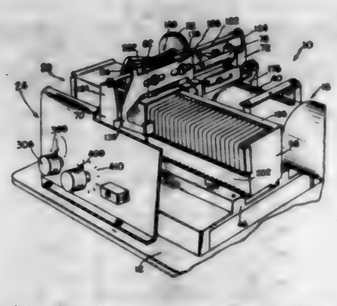
1. A device for making test prints comprising a filter assembly having a filter grid, including filters in two colors divided into fields arranged in intersecting rows, one of the rows in one plane containing filters of a single color having different gradations, while one of the rows in the other plane contains filters of another single color having different gradations, the other rows containing two color filters, each row thereof having one filter for one color which is the same in value and one filter of a second color of a variable gradation varying with the location of the filter within the row, said filter assembly including an opaque web means in confronting relationship with a surface of said filter grid, said web means having an opening of a dimension equal to one row of said filter grid and means for moving said filter grid in step-by-step movement bringing successive filter rows in juxtaposition with said opening.

2,949,813
STAGE FOR OPAQUE PROJECTOR
Henry T. Wilton and William E. Foley, Buffalo, N.Y., assignors to American Optical Company, Southbridge, Mass., a voluntary association
Filed Aug. 11, 1958, Ser. No. 754,256
5 Claims. (Cl. 88—24)



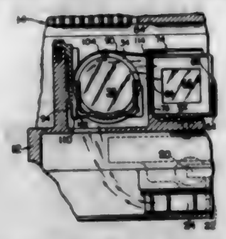
1. A stage for an optical projector comprising a bed, a plate for supporting sheet material moveable over said bed, a guide for receiving and guiding an edge portion of said plate, said guide being moveable over said bed in a direction normal to said edge portion of the plate, thereby bodily moving said plate over said bed in said normal direction, said plate having a rack on said edge portion, a pinion housed in said guide for engaging said rack and shifting said plate along said guide transversely to said normal direction, a drive shaft extending through and having a slideable drive connection with said pinion, and means for moving said guide longitudinally of said shaft for bodily moving said plate over said bed in said normal direction.

2,949,814
SLIDE PROJECTOR
Olin W. Boughton, Canandaigua, Charles J. De Grave, Jr., Chili, and Kenneth D. Maier, Mendon, N.Y., assignors to Bausch & Lomb Optical Company, Rochester, N.Y., a corporation of New York
Filed Feb. 18, 1957, Ser. No. 640,710
7 Claims. (Cl. 88—28)



1. A slide changing apparatus for a slide projector having a slide tray for storing a plurality of slides in parallel side by side positions, a light source, and an aligned lens means defining a projection position, said apparatus comprising, a movable carriage, a transfer device slidably mounted on said carriage for moving a slide out of the tray and into said projection position and back into the tray, a drive shaft on said apparatus for supporting and imparting movement to said carriage between a slide pickup position adjacent the tray and said projection position, an override mechanism connected between said carriage and said transfer device for permitting continued movement of the carriage after said transfer device has moved a slide into the tray, said override means comprising a pair of slidably disposed arms respectively connected at the opposite ends thereof with said transfer device and carriage and interconnected at the adjacent ends thereof through the intermediary of a compression spring for enabling overtravel of said carriage in either direction relative to said transfer device, an indexing mechanism for advancing the tray after said transfer device has moved a slide into the tray and during continued movement of said carriage, a driving motor for driving said drive shaft unidirectionally, and means operatively connecting said drive shaft and said carriage for reciprocating said carriage in response to unidirectional rotation of said drive shaft.

2,949,815
PREHEATING MEANS FOR SLIDE PROJECTORS
Harold E. Rosenberger, Brighton, and John L. Goodyear, Greece, N.Y., assignors to Bausch & Lomb Optical Company, Rochester, N.Y., a corporation of New York
Filed Mar. 4, 1958, Ser. No. 719,824
2 Claims. (Cl. 88—25)



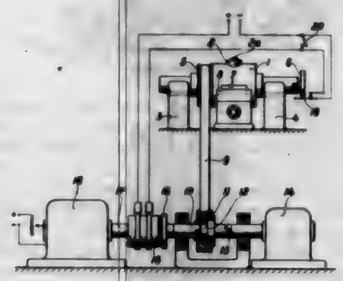
1. In a slide projector, the combination of a housing, a light source in the housing, lens means aligned with the source for projecting an image of a film held in projection position, transparent heat absorbing means aligned with said lens means and positioned in said housing for absorbing some of the heat from the light rays passing through the lens means, a magazine for holding in spaced relation a plurality of films to be projected, said magazine being slidably disposed within a tunnel positioned adjacent a wall of the housing and the projection position, means for forcing air into the housing where a portion thereof is heated by the heat absorbing means, said wall having an opening formed therethrough effecting communication between the housing and tunnel adjacent the films in the magazine which are adjacent the projection position, means for directing the flow of a portion of the heated air from the heat absorbing means through the opening to produce buckling of the films adjacent the projection position, and means for seriately moving the buckled films into projection position whereby a film will remain in buckled condition during projection so that the focus of the image projected from the film will be constant.

2,949,816
TELESCOPE SIGHT FOR FIREARMS
William R. Weaver, % W. R. Weaver Company, El Paso, Tex.
Filed Jan. 16, 1956, Ser. No. 559,284
5 Claims. (Cl. 88—32)



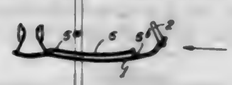
2. A telescope sight for firearms, comprising in combination with a sight barrel and longitudinally spaced objective and ocular elements mounted in the barrel, a sighting reticule fixedly positioned in the barrel between the objective and ocular elements and at the second image plane, a tubular member extending longitudinally within said barrel between said reticule and said objective element with the rearward end of said tubular member positioned adjacent said reticule, a support mounting said tubular member for pivotal movement about its rearward end, an image-inverting optical system positioned in said tubular member between the reticule and the objective element, and means for shifting said tubular member angularly about its rearward end to thereby shift a sighted image relative to the reticule while maintaining the optical axis of the image-inverting optical system in close proximity to the center of the reticule.

2,949,817
DRIVING MECHANISM FOR MICROTOME
Ernst Feindler, Wetzlar, Germany, assignor to Ernst Leitz, G.m.b.H., Wetzlar, Germany, a corporation of Germany
Filed Apr. 22, 1958, Ser. No. 730,224
Claims priority, application Germany May 25, 1957
2 Claims. (Cl. 88—40)



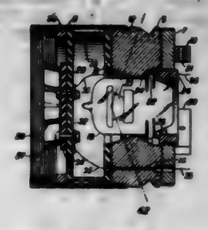
1. In a microtome for cutting an object, a cutter for cutting the object, a driving shaft, a high speed motor, a magnetic clutch for connecting said driving shaft with said high speed motor to drive the microtome to transport the object to the said cutter, a low speed motor, mechanical clutching means for connecting said driving shaft with the said low speed motor during the cutting operations of the said microtome, a belt drive connecting the driving shaft with the microtome to drive the latter, an eccentric disc rotatably connected with said microtome, an electric circuit normally energizing said magnetic clutch, a switch in said circuit operable by said eccentric disc of the microtome to periodically open said circuit to disconnect said high speed motor from the said driving shaft during the microtome cutting operations, said mechanical clutching means thereupon engaging said driving shaft with said low speed motor to drive the microtome at a relatively low speed during its said cutting operations.

2,949,818
SPECTACLES WITH REMOVABLE LENSES
Roger Lancon, 26 Rue Victor-Hugo, Morez, France
Filed June 12, 1958, Ser. No. 741,525
Claims priority, application France June 12, 1957
1 Claim. (Cl. 88—47)



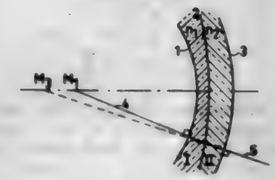
Spectacles comprising thin, elongated frame means having a centrally located nose piece associated therewith, a pair of lens means for association with said frame means and in detachable interchangeable relationship therewith, each of said lens means having a single groove extending immediately adjacent the top perimetral edge and only on one side thereof, a resilient wire-like element secured to the back face of said frame means in substantially parallel relationship therewith, each of said wire-like elements including a central body portion and inwardly turned end portions thereby forming an elongated slot therebetween in which said lens means is disposed, one of said end portions being rigidly secured to the back face of said frame means adjacent the nose piece, and the other of said end portions being in the form of an arcuate loop, said loop lying in a plane substantially transverse to the long axis of said frame means, and rigidly secured to said frame means adjacent the temple piece thereof, thereby increasing the resiliency of said wire-like element and facilitating the insertion of same in the groove in the lens means in snap fastener relationship.

2,949,819
TOROIDAL LENS DEVICE
Kenneth D. Smith, White Plains, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 28, 1942, Ser. No. 460,813
7 Claims. (Cl. 88—57)



1. A toroidal lens comprising a toroid of transparent solid material, a complete toric section of the outer periphery of said toroid being polished and having a curvature in a plane containing the axis of the toroid to converge light rays from outside the lens to a focal point located between the said toric section and the axis of said toroid, and an inwardly protruding ridge on the inner periphery of said toroid having a polished toric light transmitting surface located closely adjacent to said focal point and having a width of the order of one-fifteenth the distance of said focal point from said outer toric section.

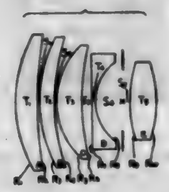
2,949,820
OPTICAL SYSTEMS
Johannes Becker, Park Leeuwenbergh, Voorburg, and Berndt Stephan Blaisse, Delft, Netherlands, assignors to N.V. Optische Industrie "De Oude Delft," Delft, Netherlands
Filed Dec. 26, 1956, Ser. No. 630,595
Claims priority, application Netherlands Jan. 6, 1956
5 Claims. (Cl. 88—57)



1. An optical system comprising a concave spherical mirror and a compound meniscus lens located in front of said mirror and being corrective of the spherical aberration of said mirror, said meniscus lens having spherical outer surfaces at least one of which is non-concentric with said mirror, said spherical outer surfaces

having centers of curvature situated near the center of curvature of said mirror and having minimized refractive power by being divided into two components made of different glasses, one of said components having positive power and its glass having a refractive index not less than 0.05 higher than that of the other of said components which has negative power, the spherical inner facing surfaces of said components being substantially normal to light rays emanating from the point of the object which is situated on the optical axis and so refracting light rays having traversed one outer surface of the meniscus lens perpendicularly that, after refraction, said light rays are substantially normal to the other surface, whereby an image of the center of curvature of one outer surface of the meniscus lens is formed by the internal surface at a position at or near the center of curvature of the other outer surface.

2,949,821
OBJECTIVE LENS
John D. Hayes, Rochester, and Lena M. Hudson, Brighton, N.Y., assignors to Bausch & Lomb Optical Company, Rochester, N.Y., a corporation of New York
Filed Apr. 25, 1958, Ser. No. 730,909
3 Claims. (Cl. 88—57)



1. A lens system of the kind described which is corrected for spherical and chromatic aberrations, astigmatism, coma, sine condition, distortion and field curvature and consists of five single air-spaced lenses which are optically aligned with each other, the first three lenses on the long conjugate side of said system being collective meniscus lenses, the fourth lens being a dispersive lens, and the rearmost lens being a collective lens, the refractive curvatures of said lenses being given by the following mathematical expressions in which R_1 to R_{10} represent said curvatures numbered from the front toward the rear of the system and F represents the equivalent focus of said system;

$$0.9\,F<R_1<1.0\,F$$
$$2.7\,F<R_2<3.0\,F$$
$$0.8\,F<R_3<1.0\,F$$
$$1.1\,F<R_4<1.5\,F$$
$$.45\,F<R_5<.55\,F$$
$$1.5\,F<R_6<1.7\,F$$
$$R_7>2.0\,F$$
$$.3\,F<R_8<.4\,F$$
$$.8\,F<R_9<1.0\,F$$
$$.7\,F<R_{10}<.9\,F$$

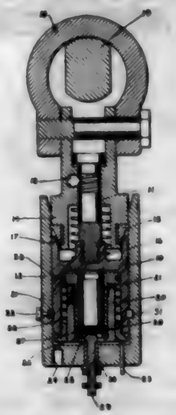
the axial lens thicknesses being given by the following mathematical expressions wherein T_1 to T_5 represent said thicknesses numbered from the front toward the rear of the system;

$$.15\,F<T_1<.16\,F$$
$$.10\,F<T_2<.11\,F$$
$$.17\,F<T_3<.20\,F$$
$$.02\,F<T_4<.03\,F$$
$$.17\,F<T_5<.20\,F$$

the air spaces between said components being given by the following mathematical expressions and being designated by the letters S_1 to S_5 numbering from the front toward the rear of said system;

$$.003\,F<S_1<.005\,F$$
$$.003\,F<S_2<.005\,F$$
$$.04\,F<S_3<.08\,F$$
$$.16\,F<S_4<.19\,F$$
$$.04\,F<S_5<.05\,F$$

2,949,822
BOMB RELEASE MECHANISM
C Walton Musser, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Jan. 2, 1958, Ser. No. 706,879
4 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

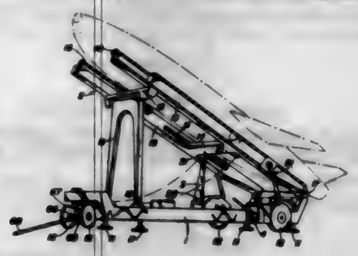


1. A direct acting bomb release mechanism comprising an outer cylinder substantially closed at one end and open at the opposite end; a piston within said outer cylinder, said piston having a hollow end portion adjacent the closed end of said outer cylinder and a rod attached to its opposite end and a wedge-shaped projection portion located circumferentially at the opposite end of said piston; a load support movably fixed to said rod; a cam-shaped expansion type split piston ring interposed between a groove on an inner periphery of said outer cylinder and a groove on an outer periphery of said load support to lock said load support to said outer cylinder; a spring positioned between said load support and said piston to produce a load on said load support to maintain said ring in a locked position before a bomb is attached to said load support; an inner cylinder located within the hollow end portion of said piston; an explosive cartridge positioned within said inner cylinder for providing sufficient energy to move said piston toward the open end of said outer cylinder whereby said wedge-shaped portion of said piston forces the cam-shaped expansion type split piston ring to be cammed to an unlocked position thereby allowing said piston and load support to be released from said outer cylinder and to fall due to the weight of a bomb attached to said load support; and firing means for detonating said explosive cartridge.

2,949,823
COMBINATION DOLLY-LAUNCHER FOR MISSILES
William J. Ross, Long Beach, and William A. Walker, Palos Verdes Estates, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 30, 1959, Ser. No. 810,186
2 Claims. (Cl. 89—1.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

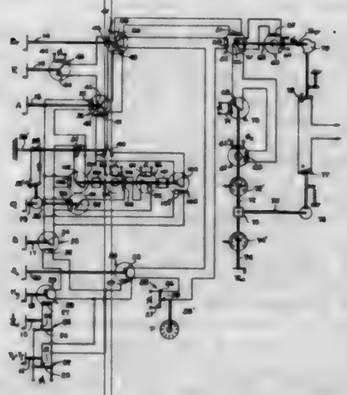
1. A combination dolly and missile launcher compris-

ing a bedplate, front and rear wheels on said bedplate, aircraft tires on said wheels for mitigating shock, adjustable jacks secured to the underside of said bedplate, a girder assembly pivoted at one end to said bedplate, said girder assembly including front and aft guide rail means running longitudinally thereof for guiding the missile during blast-off, said aft guide rail means including slipper guides, each of said slipper guides having a wheel track, a stop pin slidably mounted in a side of said girder assembly and having one end projecting into a wheel track, a cam pivoted at one end to said bedplate, said



cam having a cam track, and means slidably mounting the other end of said stop pin in the cam track whereby movement of the cam relative to the pin will cause said one end of said pin to withdraw from the wheel track, hydraulic elevating means pivotally mounted on said bedplate and secured to an intermediate portion of said girder assembly for raising and lowering said girder assembly, a girder support pivotally secured to the other end of said girder assembly, and means for securing said girder support to said bedplate when the girder assembly is in a raised position.

2,949,824
ORDNANCE CALCULATING APPARATUS
Clifford F. Abt, Long Island City, Richard Y. Miner, Port Washington, and Arnold Spitalny, New York, N.Y., assignors to American Bosch Arma Corporation
Filed June 1, 1953, Ser. No. 358,854
5 Claims. (Cl. 89—41)



1. In a device of the character described for indicating train angle and controlling the firing of a trainable weapon with a fixed range projectile, a trainable weapon, a vehicle, said weapon being carried by said vehicle, means for training said weapon with respect to said vehicle, said means comprising, means for calculating a range and bearing according to present own vehicle's position and motion and target position and motion such that a projectile fired at the present instant will reach the target,

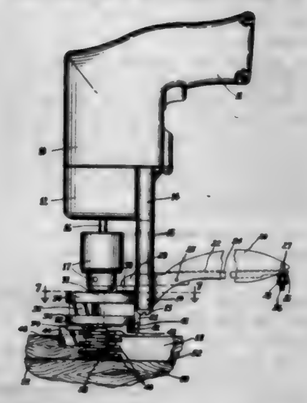
means for training said weapon according to said bearing, means for comparing said calculated range with the known effective range of the projectile and means controlled by the output of said comparing means to launch the projectile when the calculated and effective ranges are equal.

2,949,825
DUAL WEAPON SYSTEM ALIGNMENT MECHANISM
C Walton Musser, Beverly, Mass., and Francis W. Dietsch, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of the Army
Filed May 7, 1958, Ser. No. 733,773
3 Claims. (Cl. 89—41)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. In a combination with major and minor weapons, a rear bracket fixed to the barrel of said major weapon and arranged to support a rear portion of said minor weapon in a spherical bearing on said bracket, a front bracket fixed to the barrel of said major weapon and having an opening through which the barrel of said minor weapon extends, said opening having on its inner surface first and second slots which are perpendicular to one another and to the axis of said minor weapon barrel, a first eccentric cam rotatable in the first of said slots for traversing said minor weapon barrel and movable longitudinally of said first slot during elevation of said minor weapon, a second eccentric cam rotatable in second slot for elevating said minor weapon barrel and movable longitudinally of said second slot when said minor weapon barrel is traversed.

2,949,826
DEVICE FOR REMOVING AND ROUTING PUTTIES AND OTHER MATERIAL
Carl Weber, Box 215, Algonquin, Ill.
Filed Sept. 13, 1956, Ser. No. 609,760
6 Claims. (Cl. 90—12)



1. In a portable tool adapted for cutting and removing material from sash or other building units; a housing, a grippable handle adapted to be fixedly connected to the housing, an electric motor mounted at one end of said housing; drive shaft means extending from said motor; a head supported on said drive shaft means for relative rotational movement with respect to said housing and said handle; toothed cutters secured to the free

end of said drive shaft means; means for releasably locking said head to said handle including a lever pivotally carried by said handle adapted to operatively engage said head and prevent relative rotational movement of said head with respect to said handle; a bracket slidably mounted on said head for movement axially with respect to the axis of said drive shaft means, said bracket having a plate-like portion disposed in a plane normal to the rotational axis of said drive shaft means; means for locking said bracket to said head; a substantially L-shaped member having one leg thereof slidably mounted on said bracket plate-like portion for movement radially with respect to the rotational axis of said drive shaft means, one substantially flat surface of said member disposed in a plane normal to the rotational axis of said drive shaft means and serving as a work-engaging surface and a second substantially flat surface of said member disposed in a plane normal to the plane of said first mentioned surface and serving as a second work-engaging surface; and means for locking said member to said bracket.

2,949,827
MANUFACTURE OF BOX BLANKS FROM BOX BOARD
Raymond J. Kempen, Lemay, and Walter L. Newell, Kirkwood, Mo., assignors to Alton Box Board Company, Alton, Ill., a corporation of Delaware
Filed June 11, 1958, Ser. No. 741,348
9 Claims. (Cl. 93—58)



2. In the process of forming a box blank from boxboard sheet material, a portion of which is to be folded through an angle of 90° along a first score and a portion of which is to be folded through an angle of 180° along a second score with the same surface of the blank being on the outside of both folds, the method of avoiding cracking at the folds which comprises forming said first score by pressing a single scoring rule against the outside surface of the blank opposite trough-defining back-up means on the inside surface of the blank, and forming said second score by pressing a set of three closely-spaced parallel rules against the outside surface of the board opposite a pair of back-up ribs on the inside surface of the board, whereby said blank is conveniently manufactured with scoring rules all on the same side thereof but with the first score defined by a single crease projecting on the inside surface of the board while said second score is defined by a pair of creases projecting on the outside surface of the board.

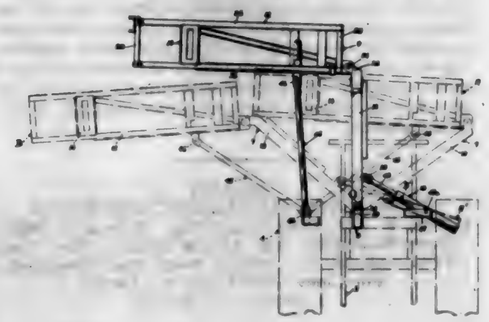
2,949,828
ROAD JOINTS
Fred D. Carnes, Fort Worth, Tex., assignor, by mesne assignments, to The Heltzel Steel Form & Iron Company, Warren, Ohio, a corporation of Ohio
Filed Oct. 25, 1957, Ser. No. 692,494
2 Claims. (Cl. 94—22)

1. The process of forming and sealing pavement joints to protect the joints from moisture and the slab areas adjacent to the joint from spalling consisting of first installing in a leveled body of still plastic mix and below the surface thereof a joint member having a relatively vertically movable cap member of joint material carried by said joint member along the top portion thereof, finishing the slab having the joint member and cap member therein with the cap member in its retracted position relative to said joint member, and subsequently elevating the cap member to position the top surface thereof substantially flush with the finished surface of the slab and allowing the slab to harden with the cap member of road joint



material permanently set therein to protect the joint against moisture and spalling of the slab areas abutting the joint.

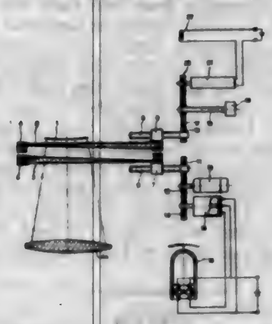
2,949,829
TAMPING MACHINE
Albert R. Askue, Euclid, Ohio, assignor to The Cleveland Trencher Company, Cleveland, Ohio, a corporation of Ohio
Filed Mar. 3, 1958, Ser. No. 718,589
2 Claims. (Cl. 94—49)



1. In a mobile tamping machine for compacting earthwork fills and the like, comprising a base frame, driving mechanism supporting said frame for propelling said machine, tamping mechanism including a vertically reciprocable tamper foot, an articulated frame structure mounted on one end of said base frame for movement in a generally horizontal plane and supporting said tamping mechanism to position the latter in spaced relation to said base frame and driving mechanism, said articulated frame structure comprising an inner frame pivotally mounted on said base frame to one side thereof as defined by the longitudinal vertical center plane of said base frame and projecting outwardly from said base frame, and an elongated outer frame pivotally connected adjacent one end thereof to said inner frame with the distal end thereof extending toward said one side of said base frame, said outer frame supporting said tamping mechanism thereon, said tamper foot being positioned generally adjacent said distal end of said outer frame, said outer frame extending in a direction generally transverse to said base frame, elongated connecting means of substantially the same lengthwise dimension as said inner frame pivotally attached at one end to said outer frame and at the other end to said one side of said base frame, said connecting means being disposed in outward laterally spaced and generally parallel relation to said inner frame and controlling the movement of said outer frame with respect to said inner frame, and fluid powered motor

means for selectively moving said articulated frame structure to position said tamping mechanism with respect to said base frame whereby said outer frame and associated tamping mechanism may be selectively positioned over a wide range moving generally transversely with respect to said base frame and may be positioned laterally to one side of said base frame and driving mechanism for tamping operations and may be moved back in the opposite direction to a retracted position directly behind said base frame in close proximity to said one end thereof, to thereby increase the tamping range and maneuverability characteristics of the machine while providing for reduced overall length and width of the machine.

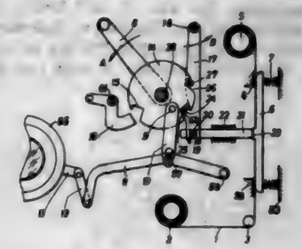
2,949,830
PHOTOGRAPHIC CAMERA
Arjen Nawijn, Delft, Netherlands, assignor to N.V. Optische Industrie "De Oude Delft," Delft, Netherlands
Filed Jan. 13, 1958, Ser. No. 708,690
Claims priority, application Netherlands Jan. 15, 1957
3 Claims. (Cl. 95—12.5)



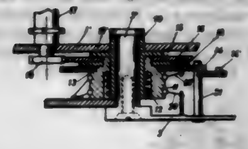
1. A camera, particularly for aerial photography, comprising an objective, a first prismatic wedge mounted a short distance in front of the focal plane of said objective so as to be traversed by the light rays travelling between said objective and said focal plane, said first wedge being slidable in a path substantially parallel to said focal plane, first adjusting means attached to said first prismatic wedge for adjusting its position in accordance with the distance of the object to be photographed, a second prismatic wedge mounted a short distance from said first wedge in the path of the light rays and having its narrow edge pointing in a direction opposite to the narrow edge of said first wedge, said second wedge being also slidable independently of said first wedge in a path substantially parallel to said focal plane, and a second adjusting means attached to said second prismatic wedge for adjusting its position to compensate for the camera temperature, whereby the shift of said focal plane due to temperature variation may be substantially compensated.

2,949,831
PHOTOGRAPHIC ROLL FILM CAMERA
Hermann Bretthauer, Kl. Stockheim, near Braunschweig, Germany, assignor to Franke & Heidecke, Fabrik Photographischer Präzisions-Apparate, Braunschweig, Germany, a firm of Germany
Filed June 10, 1958, Ser. No. 741,871
Claims priority, application Germany June 14, 1957
6 Claims. (Cl. 95—31)

1. A photographic roll film camera comprising means for mounting a film for movement from a supply spool to a winding spool across an image aperture frame, a presser plate, spring means normally urging said presser plate against said film, a winding crank operatively connected to said winding spool and having a rest position, a control disk connected to said crank for rotation therewith, a slide, means for guiding said slide between a retracted position and an operative position urging said presser plate away from said film, linkage means operatively connected between said disk and slide for operating said slide upon rotation of said crank, a shutter release latch, a first recess in said disk for receiving said shutter release latch, a projection on said linkage means, a second recess in said disk for receiving said projection when said crank and disk are in rest position, and means for preventing said projection from entering said first recess during rotation of said crank and disk.



2,949,832
PHOTOGRAPHIC CAMERA WITH QUICK WINDING ATTACHMENT
Albert Goldhammer, Nussdorf, Baden, Germany, assignor to Bodenseewerk Perkin-Elmer & Co., G.m.b.H., Uberlingen, Bodensee, Germany
Filed Dec. 8, 1958, Ser. No. 779,024
Claims priority, application Germany Dec. 7, 1957
3 Claims. (Cl. 95—31)

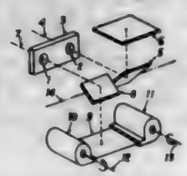


1. Photographic camera apparatus comprising a camera body; first lever means positioned on said body to rotate about an axis thereon; second lever means in actuating relationship to tension the shutter of said camera; first driving means mounted on said first lever means in actuating relationship with said second lever means; pawl means mounted on said second lever means; ratchet means in unidirectional driving relationship with the film winding means of said camera and positioned in driven relationship with said pawl means; and resilient means for returning each of said first and second lever means to their starting positions.

2,949,833
TWIN-LENS MIRROR-REFLEX CAMERA
Rudolf Steinock, Via Morcucco 2, Lugano, Switzerland
Filed Dec. 1, 1954, Ser. No. 472,411
Claims priority, application Switzerland Mar. 25, 1954
3 Claims. (Cl. 95—44)

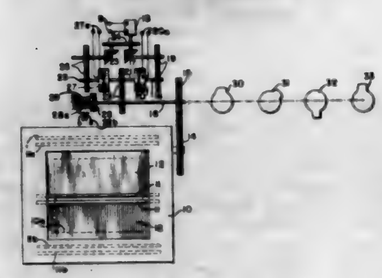
1. A compact miniature camera adapted to accommodate 35 millimeter film, said camera comprising a substantially flat camera casing having top and bottom walls, sides, and front and back walls of short height between said top and bottom walls, film feed and take-up components immediately inside said sides and extending substantially from said back wall to said front wall

on axes generally parallel to each other, said components having a film path one to the other adjacent to the inside surface of said bottom wall, taking and viewing lenses adjacent to the front wall of said casing and spaced from each other toward said sides of the casing, said lenses having axes extending between said feed and take-up components and generally parallel to the axes of said components, the axis of said taking lens being higher off said bottom than the axis of said viewing lens, an image finder at an opening in the top of said casing, and optical deflecting members in said casing between



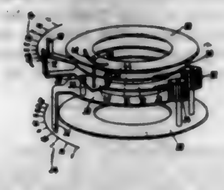
the feed and take-up components and having reflecting surfaces tilted relating to each other optically across the axes of said viewing and taking lenses respectively to divert an image of said viewing lens upward to view on said image finder and a like image of said taking lens downward onto film in said path for photographing, said deflecting member associated with said taking lens having the upper edge of its reflecting surface forward toward said taking lens, and the deflecting member associated with said viewing lens having the lower edge of its reflecting surface forward toward said viewing lens.

2,949,834
DRIVING SYSTEM FOR CAMERA SHUTTERS
Irving W. Doyle, Massapequa, and Alfred G. Nash, Glen Cove, N.Y., assignors to Fairchild Camera and Instrument Corporation, a corporation of Delaware
Filed Jan. 26, 1959, Ser. No. 792,249
14 Claims. (Cl. 95—57)



1. A system for driving the curtain shutter of a focal plane camera to effect uniform exposure of a frame of film, said shutter having a range of movement including a central exposure portion and limiting non-exposure portions, comprising: a driving mechanism for the shutter; means for storing kinetic energy; means for transferring a portion of said kinetic energy to said driving mechanism to accelerate the shutter rapidly to substantially its exposure velocity during movement over one of said limiting portions and for controlling said driving mechanism to actuate the shutter at constant exposure velocity during movement over said central portion; and means for controlling said driving mechanism to decelerate the shutter to zero velocity during movement over the other of said limiting portions.

2,949,835
PHOTOGRAPHIC CAMERA HAVING DEPTH OF FIELD INDICATING MEANS
Kurt Gebele, Munich, Germany, assignor, by mesne assignments, to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a firm of Germany
Filed Jan. 30, 1956, Ser. No. 562,346
Claims priority, application Germany Feb. 1, 1955
5 Claims. (Cl. 95—64)



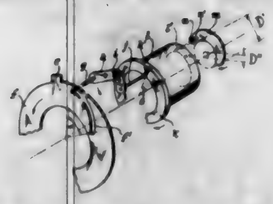
1. A photographic shutter unit including a shutter housing, a front lens tube mounted in stationary position within said housing, an extension tube stationarily secured to and projecting forwardly from said front lens tube, an axially movable focusing lens mount supported from said front lens tube, a focusing distance scale carried by said focusing lens mount, a depth of focus indicator mounted on said extension tube and cooperating with said distance scale, a shutter speed setting member movably mounted on said shutter housing near the front thereof, a diaphragm aperture setting member movably mounted on said shutter housing near the rear thereof, a coupling ring for selectively coupling said shutter speed setting member to said aperture setting member in any one of a plurality of possible positions with respect to each other, and means operating said depth of focus indicator from said coupling ring.

2,949,836
DEPTH-OF-FIELD INDICATOR FOR PHOTOGRAPHIC OBJECTIVES
Albert Bäsb, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed Feb. 10, 1958, Ser. No. 714,251
Claims priority, application Germany Mar. 14, 1957
4 Claims. (Cl. 95—64)



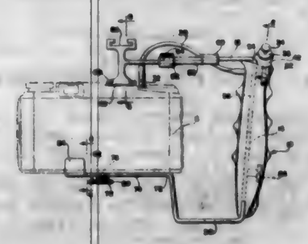
1. In a camera, in combination, an objective having a housing with a stationary annular portion and an axially adjoining rotatable annular portion, a lens barrel axially displaceable in said housing, diaphragm means in said lens barrel, focusing means including said rotatable portion operable to displace said lens barrel, control means for varying the effective aperture of said diaphragm means, said rotatable portion being externally provided with a peripherally extending distance scale in proximity to said stationary portion, said stationary portion being provided with a narrow, elongated window peripherally extending in proximity to said distance scale, an indicator member within said housing axially displaceable underneath said window, supporting means for said indicator member extending inwardly from said stationary portion, said indicator member having a surface provided with a distinctively marked area of varying width of which only a narrow zone is visible through said window in any position of said indicator member, and mechanism operatively coupling said control means with said indicator member for axially displacing same.

2,949,837
IRIS DIAPHRAGM FOR PHOTOGRAPHIC OR CINEMATOGRAPHIC OBJECTIVES
Albert Bäsb, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a corporation of Germany
Filed Dec. 1, 1958, Ser. No. 777,504
Claims priority, application Germany Dec. 7, 1957
6 Claims. (Cl. 95—64)



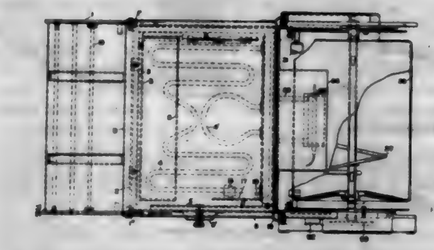
1. In a camera objective, in combination, an iris diaphragm, a control ring for said diaphragm provided with grooves, said diaphragm comprising a plurality of iris leaves having pins respectively received in said grooves, a setting ring for said diaphragm, and step-down transmission means operatively coupling said setting ring with said control ring whereby a relatively large angle of rotation of said setting ring corresponds to a relatively small angle of rotation of said control ring, said transmission means comprising a first annular member coupled with said setting ring, a second annular member coupled with said control ring, and a lever element having a longer arm in camming engagement with said first annular member and a shorter arm in camming engagement with said second annular member.

2,949,838
CAMERA GRIP FOR MINIATURE CAMERAS
Vladimir S. Skalabrin, 9049 Meridian, Seattle, Wash.
Filed Feb. 8, 1960, Ser. No. 7,330
5 Claims. (Cl. 95—86)



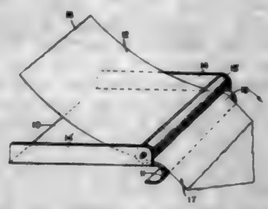
1. A camera grip for miniature cameras having an accessory clip and a tripod socket, comprising: a hand grip portion having a frame channel extending longitudinally therethrough; an upper frame having one end adjustably positioned in said frame channel and the other adapted to be secured in the accessory clip of a miniature camera; a lower frame having one end adjustably secured in said frame channel, a vertically disposed return bend terminating in a bend, a camera engaging frame portion continuing from said bend and adapted to lie in engagement with the bottom surface of the camera, a plurality of through openings in said frame portion adapted to pass the screw which engages the tripod socket of the camera therethrough.

2,949,839
PROCESSOR FOR PHOTOGRAPHIC PAPER
Theodore F. Aronson, Glen Cove, and Floyd A. Lyon, Brookville, N.Y., assignors to Viewlex, Inc., Long Island City, N.Y., a corporation of New York
Filed Jan. 6, 1958, Ser. No. 707,276
6 Claims. (Cl. 95—89)



1. In a photographic processor for strip material of the type having a magazine, a plurality of heated tanks for developing said strip material, a heated drum for drying, and drive means for moving said material through said tanks and over said drum: means to measure the use of chemicals in said tanks, a square footage counter for said material comprising a disc connected to said drum, a keyed shaft mounted perpendicular said disc and spring loaded toward said disc, a wheel slidably mounted on said shaft, a rotation counter connected to said shaft, and dial means adjacent said wheel for setting said wheel for the width of the material being used.

2,949,840
PHOTO PRINT FLATTENER
Ernest Schlueter, 74 Edwards Road, Troy, N.Y.
Filed Apr. 10, 1958, Ser. No. 727,724
4 Claims. (Cl. 95—104)

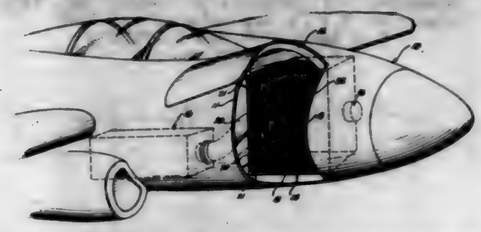


1. A device for flattening photographic prints comprising a flat base plate having a straight edge portion downwardly and rearwardly turned, the plate having upturned end flanges; and a roller mounted on said flanges over the plate and axially parallel with and adjacent to the edge portion, said edge portion providing an edge over which a print may be drawn to tend to vary the curl of the print, the flanges providing finger grasps for the device and said edge portion providing a hook for mounting the device, as a double function of the edge portion.

2,949,841
ENCLOSURE FOR AIRCRAFT COMPARTMENTS
Donald K. Richardson, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 22, 1957, Ser. No. 692,515
8 Claims. (Cl. 98—1)

1. An enclosure for use within aircraft comprising: a flexible enclosure housing; an open, generally rectilinear frame structure having a plurality of frame members joined together and disposed about said housing; light weight multiapertured panels carried by said frame struc-

ture and secured to said frame members thereof, walls of said housing being positioned in intimate contact with said panels; means for providing access to an interior of



said housing; and means for connecting said housing to a source of air, said panels acting to restrain expansion of said flexible housing.

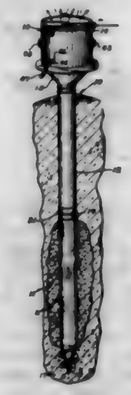
2,949,842
AUTOMOBILE WINDOW VENTILATOR
Arthur B. Crandall, 165 Overlook Road, Painesville, Ohio
Filed Nov. 21, 1956, Ser. No. 623,582
5 Claims. (Cl. 98—3)



1. A ventilator for an enclosed automotive vehicle which is adapted to fit within the space defined by a partially-opened vehicle window, which ventilator comprises a plurality of slidably-engaged elements each having a plurality of ventilating openings therein capable of facilitating movement of air into and out of said vehicle yet normally precluding the entry of rain, and an outstanding rib comprising an open channel throughout its length of a size to fit over the upper edge of the glass vehicle window, said rib extending longitudinally through the center of the said slidably engaged elements, the lower edges of said elements having means thereon throughout their lengths to engage the upper edge of said partially-opened window and the upper edges of said elements having means to engage the upper inverted U-shaped groove normally occupied by the upper edge of said window when in a closed position.

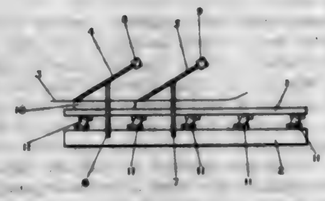
2,949,843
PORTABLE EMERGENCY FARM PRODUCE AERATOR
Jack E. Mack, Air-O-Vator Co., Inc., 1405 Avenue B, Scottsbluff, Nebr.
Filed Aug. 5, 1958, Ser. No. 753,221
6 Claims. (Cl. 98—57)

1. A portable farm produce aerator for emergency use comprising a cylindrical, perforated wall, breather element having at one end an auger-nose adapted upon rotation to draw said breather element into a stock-pile of farm produce and having at its other end an airtight coupling formation; an imperforate stack tube section having one end drivingly coupled to said coupling formation and a free end provided with an airtight coupling formation and disposed in protruding relation from said stockpiled produce and adapted upon rotation of said auger-nose to be drawn along behind said breather element as it penetrates further into said stockpiled produce to position the breather element in a previously located moist hot spot in the stockpiled produce, said stack tube section in the final positioning of said aerator in said stockpiled produce extending from said other end of said breather element to dispose its free end protruding from said stockpiled produce and said breather element and said imperforate tube section having inwardly extending formations adapted to be engaged by a tool for rotating said breather element and said breather element and imperforate tube section to auger said breather element into said stockpiled produce into position in said hot spot; and powered fan means including an enclosing housing having an inlet end drivingly



coupled to said other end of said stack tube section to effectively extend the inlet end of said fan means to the perforated breather element and having a discharge opening open to the atmosphere, said powered fan means being adapted to induce a high volume flow of air from said hot spot, into said breather element and through said stack tube section and fan housing and out of said fan discharge opening to the atmosphere thereby exhausting the air and moisture from said hot spot and inducing a flow of cool relatively moisture free ambient air inwardly through said stockpiled produce and said hot spot to condition the produce in and around said hot spot and inhibit spoilage due to hot spots in stockpiled produce.

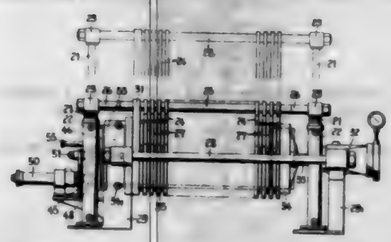
2,949,844
PACKING OF POWDERY OR GRANULAR MATERIALS
Owen Rupert Pigott, Welwyn Garden City, and Kenneth Alan Sproat, Blackpool, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed July 30, 1958, Ser. No. 752,097
Claims priority, application Great Britain Aug. 2, 1957
7 Claims. (Cl. 100—144)



1. Apparatus for flattening sacks filled with powdery or granular material that comprises a vibratory table to support said sacks having a direction of vibration inclined at less than 90° to the plane of the table in the direction

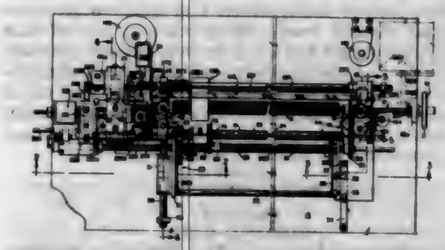
of travel of said sacks with a vertical component capable of suspending said powdery or granular material and a horizontal component capable of conveying the sack along the table, and a heavy platen freely movable about a stationary supporting means in at least a direction having a vertical component and adapted to rest on a filled sack as it moves along said table, said platen being at least as long and as wide as a filled sack.

2,949,845
FILTER PRESS
Ken-Ichiro Kurita, 22 Kitasakaigawa-cho, Osaka City, Japan
Filed Apr. 1, 1958, Ser. No. 725,611
7 Claims. (Cl. 100—198)



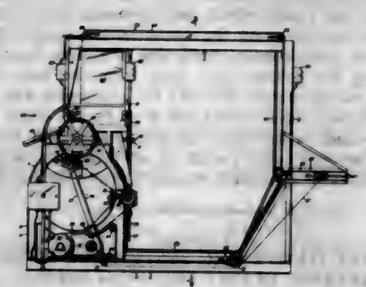
1. A filter press comprising a frame including a plurality of side rods, a plurality of filter frames laterally supported by said side rods and slidably engaged therewith, each of said filter frames being formed with an opening therethrough, at least one supporting rod mounted on said frame over the filter frames, filter plates mounted on and slidably engaging said supporting rod, means for moving said supporting rod vertically to remove the filter plates from between the filter frames, said filter frames and said filter plates alternately and separably overlapping each other, a scraper, and means for moving said scraper transversely of and through the openings of said filter frames.

2,949,846
PRINTING MECHANISM
Paul R. Hoffman, Woodlyn, Harley E. Kelchner, Wayne, Frank H. Moore, Jr., King of Prussia, and Edwin A. Fricke, Jr., Philadelphia, Pa., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Mar. 28, 1958, Ser. No. 724,655
20 Claims. (Cl. 101—93)



1. In a printing mechanism a cylindrical type drum having type characters arranged on its peripheral surface, said characters being arranged in spaced relation with each other in a plurality of separate turns of a helix, means for rotating said drum about its axis, a frame, a plurality of printing hammers carried by said frame and mounted for straight line movement therein parallel to the axis of said drum, each hammer therein being used to print a character of those in one turn of the helix, means for advancing the frame and the type drum in unison along lines parallel to the axis of rotation of the drum an amount equal to the pitch of the helix with each revolution of the drum, means for returning the drum to an initial position for the beginning of a line of print, actuator means rotatable about an axis parallel to the axis of rotation of said drum, said actuator having teeth extending along its length, individual latches in said frame for restraining said hammers from movement relative to said frame, electro-mechanical means for tripping said latches to release said hammers on signal, control means carried by said frame for synchronizing the tripping of said latches with the movement of predetermined characters in the respective turns of the helix past their printing positions, and spring means carried by said frame and engaging each hammer to cause the latter when released to move away from said type drum and into the path of rotation of the teeth on said actuator means whereby it is driven in the reverse direction against said predetermined type characters in timed sequence while said type drum is in motion.

2,949,847
SCREEN PRINTING APPARATUS
Preston G. Clonis, Camden, and James A. McDorman, Palmyra, N.J.
Filed Oct. 24, 1956, Ser. No. 618,042
10 Claims. (Cl. 101—122)



1. Screen printing apparatus comprising a frame, a back-up drum rotatably mounted on said frame, an endless flexible screen separate from said drum and mounted on said frame for movement in a substantially fixed path, said screen in a portion of its path partially wrapping said drum and intimately contacting sheet material supporting thereon, and spray means mounted on said frame and reciprocable axially of said drum for directing printing medium at said screen in the portion of the path thereof partially wrapping said drum, said screen bearing a design and having its printing areas of open mesh to pass printing medium from said spraying means directly onto a surface to be printed of said sheet material.

2,949,848
STENCIL MAKING
George R. Mott, Rochester, N.Y., assignor to Haloid Xerox Inc., a corporation of New York
Filed July 27, 1955, Ser. No. 524,657
7 Claims. (Cl. 101—128.3)

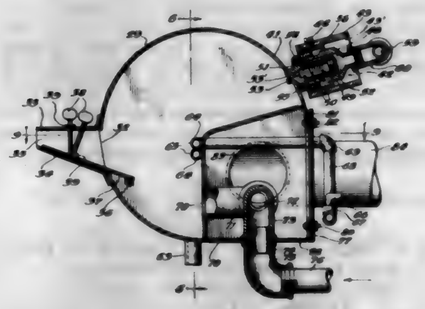
1. The method of forming a stencil for duplicating processes comprising placing an electrostatic charge pattern on the photoconductive surface of a plate comprising a tackifiable photoconductively pigmented insulating binder layer overlying and releasably attached to a support base, developing the charge pattern by contacting it with finely divided electrostatically charged tackifiable particles, tackifying and pressing the developed image between a cover sheet and said plate, separating the

cover sheet from the plate after the image has fused thereby removing to the cover sheet the fused image carrying therewith a coating of the binder insulating layer, tackifying and pressing the remaining binder material between a porous transfer base and the support base of the plate, and stripping the transfer base after the binder material has fused thereby removing with the transfer base and adhering thereto the remaining binder material.

2,949,849
STENCIL MASTER MAKING
Robert W. Gundlach, Spencerport, N.Y., assignor to Haloid Xerox Inc., a corporation of New York
Filed July 27, 1955, Ser. No. 524,660
4 Claims. (Cl. 101—128.3)

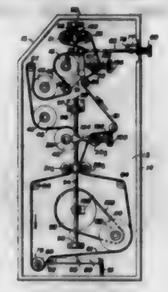
2. The method of xerographically forming a stencil master comprising sensitizing a xerographic plate, exposing the sensitized plate to a light pattern corresponding to the original being reproduced to form thereon an electrostatic charge pattern of the original, developing the electrostatic charge pattern with xerographic developing materials to thereby form a developed powder image on the plate surface, transferring powder image to a transfer base, tackifying the powder image and pressing the tackified image against a wax coated sheet, hardening the image, separating the transfer sheet from the wax coated sheet to thereby remove image portions of wax from the coated sheet, softening the remaining wax layer on the coated sheet, and pressing the remaining softened wax layer on the coated sheet against a porous tissue stencil base, hardening the wax layer, and separating the porous tissue base from the base of the coated base to thereby transfer the remaining wax layer to the porous tissue base, said wax coated sheet being characterized by its ability to release wax and the wax coating on said wax coated sheet being characterized by its ability to selectively release portions of the wax.

2,949,850
SPRAY DAMPENING SYSTEM FOR LITHOGRAPHIC OFFSET PRINTING PRESSES
Charles H. Borchers, Warrensville, Ill., assignor to Lithographic Technical Foundation, Chicago, Ill., a corporation of Delaware
Filed Apr. 3, 1957, Ser. No. 650,493
13 Claims. (Cl. 101—147)



1. A spray dampening system for lithographic offset presses which include a rotating printing plate cylinder, such system comprising: a chamber arrangeable in close proximity to said cylinder and having a slot therein opening toward said cylinder; means for introducing into said chamber an atomized spray of a dampening agent; means for increasing the air pressure within said chamber to cause the atomized spray introduced therein to flow through said slot; and means for at time creating a partial vacuum within said chamber to impede the flow of said atomized spray from the slot.

2,949,851
MEANS ADJUSTING CYLINDERS IN PRINTING PRESS
James G. Ghormley, Jr., and Clyde T. Kitchens, Fort Worth, Tex., assignors to Ghormley Engineering and Manufacturing Company, Fort Worth, Tex., a corporation of Texas
Filed Mar. 30, 1959, Ser. No. 802,711
5 Claims. (Cl. 101—248)



1. In a printing press having an axially mounted plate cylinder carrying a photolithographic plate on the peripheral surface thereof and having an axially mounted impression cylinder provided with a blanket of rubber or equivalent material secured to its peripheral surface which blanket is in communication with said photolithographic plate carried by said plate cylinder, a sprocket coaxially secured to said impression cylinder, a sprocket coaxially secured to said plate cylinder, a pivotally mounted bell crank including two radial arm members projecting from said pivotal mounting and forming an angle with one another in a plane of rotation perpendicular to the axis of rotation of said plate cylinder and extending to terminations spaced from tangencies of said plate cylinder at substantially opposed peripheral surfaces thereof, a sprocket rotatably attached to the projecting end of one of said radial members of said bell crank with the axis of rotation of said sprocket disposed parallel to the axis of rotation of said bell crank, a sprocket rotatably attached to the projecting end of the other said radial arm of said bell crank with its axis of rotation parallel to the axis of rotation of said bell crank, a sprocket chain engaging each of said sprockets with said sprocket chain extending directly from said sprocket on one of said radial arms of said bell crank to said sprocket coaxially secured to said plate cylinder and thence extending directly to said sprocket secured to the other said radial arm of said bell crank, means driving said sprocket chain, and means providing limited angular adjustment of said bell crank about its pivotal mounting.

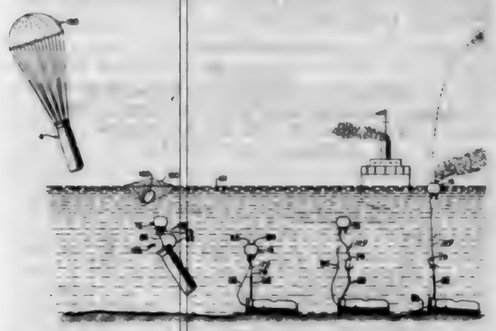
2,949,852
PRINTING ROLL
John J. Schaefer, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed May 1, 1959, Ser. No. 810,343
7 Claims. (Cl. 101—375)

1. A shafted printing roll including a tubular shell having inwardly extending tapered internal surfaces of diminishing diameter at each end thereof, a tubular spacer positioned along the axis of and within said shell, said spacer having inwardly extending tapered external surfaces of increasing diameter at each end thereof, a pair of tubular gudgeons having both inner and outer tapered surfaces engaging respectively the said external surfaces of the spacer and the said internal surfaces of the shell with a tight fit, said spacer having an enlarged



cylindrical recess at each end along the axis of the roll comprising the afore-mentioned four structural elements in mutually assembled relation, and a pair of tapered shaft members each mounted rigidly within the respective recesses and projecting axially from the ends of said roll.

2,949,853
DRILL MINE
Charles C. Vogt, 6808 Deaton Road, Bethesda, Md.
Filed Mar. 28, 1951, Ser. No. 218,060
13 Claims. (Cl. 102—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An underwater ground mine of the character disclosed comprising, in combination, a casing adapted for launching within a body of water, a float assembly releasably secured to said casing and submerged therewith within a body of water, a fire control system arranged in said casing and responsive to the influence of a mine actuating source to produce an electrical signal, inertia responsive means including a spring disposed between said casing and float assembly for releasing the float from said casing as the mine enters the water, means responsive to a signal produced by said system for releasing said float assembly for ascent within the water, and signaling means carried by said float and responsive to said signal for producing a visible signal when said float reaches the surface of the water.

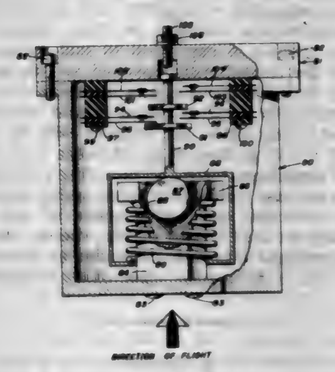
2,949,854
POWER GAS GENERATING CARTRIDGES FOR THE ACTUATION OF ENGINE STARTERS
Malcolm Gordon Stewart, Fairlie, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Filed Dec. 27, 1957, Ser. No. 705,588
Claims priority, application Great Britain Dec. 31, 1956
2 Claims. (Cl. 102—39)

1. An engine starting cartridge case of generally circular cross-sectional configuration having an open and a closed end; a solid charge of gas producing combustible material disposed in said case; ignition means for said charge; means to retain said charge within said case with only small movement therein, said means comprising a disruptible waterproof closure positioned within the open end of said case and including a rigid member having an annularly continuous skirt portion extending toward the closed end of said case and of slightly smaller diameter than the internal diameter of said case, and said skirt portion being in engagement with the interior thereof, said member having a disruptible medial portion



comprising an element of waterproof material adhered to its underside; a spacer member resting on said charge and having legs on its periphery directed toward the open end of said case and abutting the rigid portion of said closure member radially outwardly of said element; and the open end of said case being turned inwardly to form a rim about said closure member.

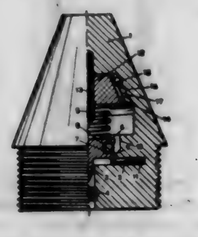
2,949,855
WATER DISCRIMINATING FUZE
Henry D. Saunderson, Corona, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Filed Jan. 20, 1954, Ser. No. 405,264
10 Claims. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An inertia arming device comprising; an inertia operated tremblor switch having a group of electrical contacts progressively operable in response to definite values of deceleration in either a longitudinal or transverse direction, electrical conducting means commonly connecting one side of said contacts, a mechanical integrator switching device having electrical contacts permanently closable in sequence and operable in response to definite values of deceleration, said mechanical integrator contacts commonly connected in parallel and connected in series with said tremblor switch contacts, a stab switch parallel connected to said tremblor switch and said in-

tegrator switching device contacts, and a timer operated switch connected in parallel with said stab switch to fire a detonator after a predetermined interval.

2,949,856
FUZES HAVING A SELF-DESTRUCTIVE ACTION
Albertus G. Mantel, Hilversum, Netherlands, assignor to N.V. Nederlandsche Machinefabriek "Artillerie-Inrichtingen," Zaandam, Netherlands
Filed Oct. 10, 1956, Ser. No. 615,109
Claims priority, application Netherlands Jan. 24, 1956
5 Claims. (Cl. 102—71)



1. A self-destroying fuze for a rotatable projectile, comprising a fuze body provided with an interior chamber and firing mechanism within said chamber and including a firing device in said chamber movable from a non-detonating to a detonating position, spring means in said chamber urging the firing device toward detonating position, first centrifugally operated locking means in the fuze body and normally engagable with the firing device for retaining the firing device in non-detonating position but movable in response to rotation of the projectile to free said firing device for movement toward detonating position under the influence of said spring means, second centrifugally actuated locking means caried by said firing device and engagable with a first wall portion of said interior chamber for retaining the firing device in non-detonating position in opposition to said spring means when said first centrifugally operated locking means is withdrawn from engagement with the firing device, and third centrifugally actuated means in said chamber engaging said spring means and coacting with an inclined surface of a wall portion of the chamber under the influence of centrifugal force and providing a driving connection to increase the tension of said spring means sufficiently to overcome the locking action of said second centrifugally actuated locking means, whereby the spring means is tensioned to provide detonation of the projectile proportionate to the angular speed of the projectile.

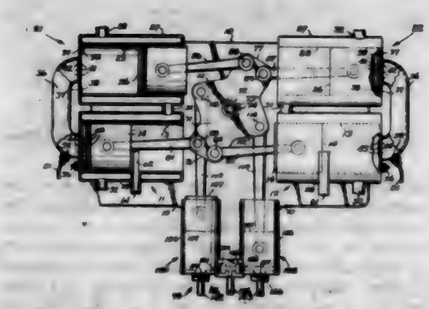
2,949,857
FLUID OPERATED PUMP WITH SEPARATE ENGINE VALVE
Clarence J. Coberly, San Marino, Calif., assignor to Kobe, Inc., Huntington Park, Calif., a corporation of California
Filed July 19, 1956, Ser. No. 598,785
21 Claims. (Cl. 103—46)

1. In a fluid operated pump for a well, the combination of: a fluid operated pump unit located in the well and including a pump body having therein reciprocable, interconnected engine and pump piston means; and a separate engine valve unit located in the well and spaced from said pump unit and including a valve body which is movable vertically relative to said pump body and which has therein movable engine valve means for controlling the application and direction of a fluid pressure



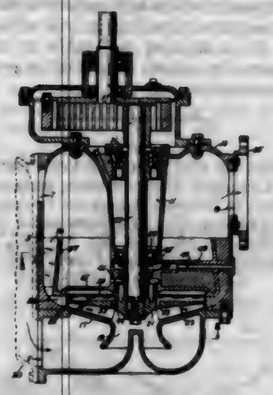
differential to said engine piston means to reciprocate said engine and pump piston means.

2,949,858
INTERNAL COMBUSTION ENGINE
Eugene J. Costley, 2700 D St., North Bend, Oreg.
Filed Sept. 11, 1958, Ser. No. 760,410
3 Claims. (Cl. 103—54)



1. In an internal combustion engine, the combination of a pair of opposed, spaced-apart working cylinders each having a piston reciprocating therein, a piston rod connected at its inner end to each of said pistons, a lever pivotable about a lever pivot axis, said pivot axis being offset to one side and extending transversely of the center axes of said working cylinders, said lever having portions in front of the working cylinders spaced a substantial distance from said lever pivot axis and swingable in substantially linear paths that are substantially aligned with the axes of the working cylinders, means connecting said portions of the lever and the outer ends of said piston rods, and a hydraulic power take-off mechanism deriving power from said pivoted lever, said power take-off mechanism comprising a piston pump having a reciprocating pump piston, a pump piston rod, said pump piston rod being connected at its inner end directly to the pump piston, and pivot means connecting directly the outer end of said pump piston rod to said lever for pivotal movement of the rod about an axis spaced a substantial distance from said lever pivot axis whereby pivotal movement of the lever produces substantially linear movement of said outer end.

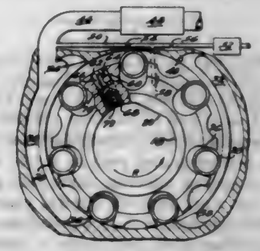
2,949,859
SELF-PRIMING CENTRIFUGAL PUMP ASSEMBLY
Albert J. Granberg, 6001 Rockwell St., Oakland, Calif.
Filed Feb. 3, 1955, Ser. No. 485,863
5 Claims. (Cl. 103—113)



1. A centrifugal pump comprising: a casing having an inlet and a discharge outlet; wall means within said casing forming an impeller housing having a central entrance eye on each side and a peripheral collecting ring in direct communication with said outlet, one of said eyes being in direct communication with said inlet, said wall means together with said casing forming a centrally-arranged liquid-collecting chamber in direct communication with said ring and the other of said eyes for separating and substantially immobilizing within said casing a portion of the liquid flowing to said outlet from said ring; impeller disc means rotatably mounted in said housing; means on one side of said disc means forming main impeller passages communicating at their inner ends directly with said one eye and for discharging to said ring; means on the other side of said disc means forming air-release impeller passages of greater pressure rating than said main impeller passages, communicating at their inner ends with said other eye and for discharging to said ring, each of said air-release impeller passages having at its inner end an outwardly converging and diverging section defining a venturi; and passageways through said disc means providing communication between said one eye and each of said air-release passages immediately outwardly of the venturi therein, whereby pressurized liquid from said chamber flows through the venturis, entrains fluid from said passageways through said disc means, and discharges the entrained fluid through said air-release impeller passages.

2,949,860
HYDRAULIC PUMP
Thomas R. Stockton, Northville, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Filed Apr. 12, 1957, Ser. No. 652,459
17 Claims. (Cl. 103—136)

10. A rotary pump comprising a rotor, a casing, said casing defining an internal rotor chamber, a plurality of recesses formed in the periphery of said rotor, a pumping member situated in each recess, a fluid intake port and a fluid discharge port communicating with said chamber at angularly spaced locations, a branch passage extending from a high pressure region of said pump to a low pressure region, a pair of precalibrated orifices formed in said branch passage, passage structure formed in part in said rotor including a portion connected to said branch passage at a location intermediate said orifices and communicating with said recesses for subjecting the radially inward sides of said pumping members to fluid pressure, an exhaust passage defined in part by said rotor extending from the radially inward region of said recesses to a low pressure exhaust region, and a metering valve ele-



ment communicating with said exhaust passage, said metering valve element being rotatable with said rotor and subjected to centrifugal force to progressively restrict said exhaust passage.

2,949,861
PUMPING RIG AND METHOD
Harry C. Heath, 825 E. State St., Boise, Idaho
Filed July 27, 1956, Ser. No. 600,525
2 Claims. (Cl. 103—179)



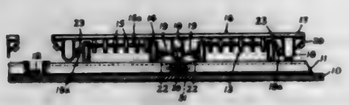
1. In deep well pumping apparatus, a subsurface pump adapted to be positioned in the bottom of a well for pumping fluid therefrom to the ground surface, a reciprocating rod extending from the ground surface to said pump and connected thereto for operating said pump, sealing means positioned above said pump including conduit means having one-way valve means therein communicating between said pump and the upper side of said sealing means and adapted to seat with respect to the well and to be supported thereon for sealing the well against flow of the pumped fluid from said upper side of said sealing means to said pump, a cylinder supported on said sealing means coaxial with said rod and having a closed upper end and a lower end open to the well above said sealing means, and a piston slidably received in sealing engagement with said cylinder between said ends and secured to said rod for applying the force of the fluid head of the fluid filled well above said piston to said rod in an upward direction.

2,949,863
OVERHEAD TRUCK PUSHER CONVEYOR
Paul Klamp, Detroit, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Filed Dec. 5, 1955, Ser. No. 551,088
36 Claims. (Cl. 104—88)



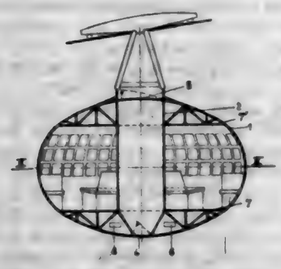
4. In a conveyor system, means for moving work carriers along a predetermined path of travel, a plurality of mechanisms at spaced intervals along said path of travel for stopping the work carriers, control means along said path of travel in advance of each mechanism and operated by carriers moving along said path of travel to render operative the mechanism beyond the same, and additional control means along said path of travel located beyond each mechanism and operated by the carriers moving along said path of travel to render inoperative the first-mentioned control means in advance of the last-mentioned mechanism.

2,949,863
CARGO HANDLING SYSTEM
Michael Cozzoli, Hagerstown, Md., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland
Filed Jan. 31, 1957, Ser. No. 637,418
8 Claims. (Cl. 104—135)



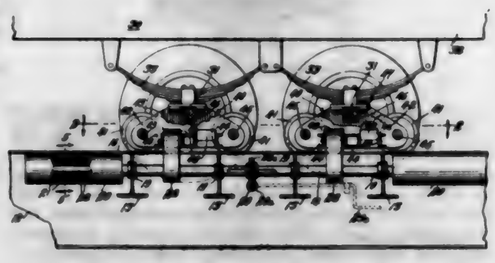
1. In a cargo handling system, the combination of a stationary supporting means, wheels mounted on said supporting means, a cargo pallet supported on said wheels, roller means mounted on the supporting means for guiding the pallet in longitudinal movement relative to the supporting means, and cooperating means on the pallet and the supporting means for restraining vertical movement of the pallet, said cooperating means including roller means on the supporting means.

2,949,864
CABLE RAILWAY FOR PASSENGERS
Adolf Rubin, Saarbrucken, Germany, assignor to Gesellschaft für Forderanlagen Ernst Heckel m.b.H., Rohrbach, Germany, a firm of Germany
Filed June 24, 1957, Ser. No. 667,622
Claims priority, application Germany June 29, 1956
10 Claims. (Cl. 105—150)



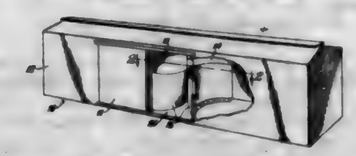
1. In combination with a cable railway for passengers, a lower level station, a mountain station, at least one cable connecting said stations, at least one cable car, movable from one station to the other, said cable car comprising a pressurized cabin having outer walls adapted substantially to maintain within said cabin the air pressure prevailing at said lower level station, means for increasing the air pressure within said mountain station substantially to the pressure prevailing in said cabin, and releasable means for connecting said cabin to said mountain station substantially without change of air pressure in said cabin and mountain station.

2,949,865
SYSTEMS OF FREIGHT TRANSPORTATION
Etienne de Grandpre, Paris, France, assignor, by mesne assignments, to General American Transportation Corporation, Chicago, Ill., a corporation of New York
Filed July 10, 1958, Ser. No. 747,779
Claims priority, application France Nov. 30, 1954
21 Claims. (Cl. 105—368)



1. A railway unit comprising a railway car including a longitudinally extending box-shaped beam supported at the opposite ends thereof by a pair of trucks each carrying main track wheels, said beam being located between the planes of the inner sides of said main track wheels, a longitudinally extending auxiliary track provided by the upper side edges of said beam, a freight carrier carrying rollers on the bottom thereof and engaging said auxiliary track so as to mount said freight carrier for fore-and-aft rolling movements upon said beam, a longitudinally movable member carried by said beam, a detachable connection between said member and said freight carrier, and a two-way cushioning element arranged in said beam and connecting said member and said beam so as to resist and to cushion fore-and-aft rolling movements of said freight carrier upon said beam.

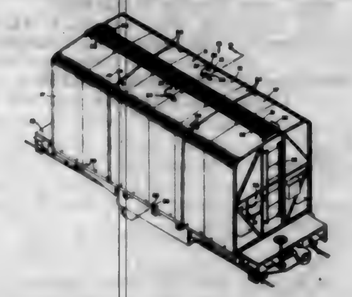
2,949,866
FREIGHT CAR BULKHEAD
Barton H. Ford, Omaha, Nebr., assignor, by mesne assignments, of one-half to International Paper Company, New York, N.Y., a corporation of New York, and one-half to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Filed June 21, 1957, Ser. No. 667,186
2 Claims. (Cl. 105—369)



1. In combination with a grain-carrying freight car having a pair of longitudinally extending side walls and transversely extending end walls, a doorway in each side wall centrally of the length thereof to provide opposite, aligned doorways, a pair of bulkheads extending transversely of said car and being arcuate in the dimension

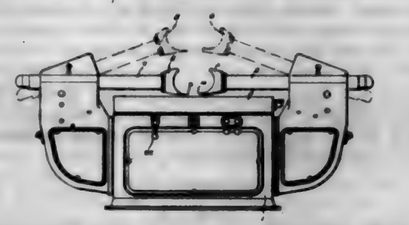
thereof extending transversely of the car, each bulkhead comprising a generally rectangular panel having opposite vertical edges secured to said side walls adjacent said doorways, one of said panels being secured on one side of said doorways and the other panel being secured on the other side of said doorways, and a granular load confined between each panel and its adjacent end wall whereby each of said panels is subjected to a pressure tending to transversely bow the panel away from its adjacent end wall, each of said panels having a length between the secured portions greater than the width of the car and sufficient to position the central portions of said panels in abutting relation.

2,949,867
GENERAL PURPOSE SHIPPING SHELTER
Walter H. Ramsey, 3801 7th St. S., Arlington, Va.
Filed Mar. 29, 1957, Ser. No. 649,582
2 Claims. (Cl. 105—377)
(Granted under Title 35, U.S. Code (1952), sec. 266)



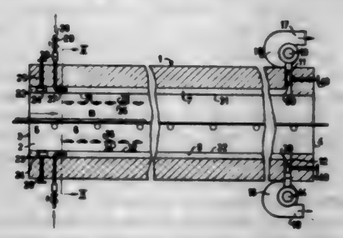
1. A rectilinear shipping body for attachment to and detachment from the bed of a flat car and comprising at least two joinable sections, each section having a cover sheet provided with a mating edge, an I-beam carried by and extending substantially to the mating edge of one of the sections and having a web portion, an I-beam carried by and extending substantially to mating edge of the other section and having a web portion, a pair of mutually spaced bars attached to opposite sides of the web portion of the I-beam on said one section and having diverging guide members formed thereon and extending outwardly therefrom for engaging and straddling the web portion of the I-beam on said other section to guide and maintain said sections in alignment, a clamping device carried by said one section, a complementary clamping device carried by said other section, said clamping devices being disposed in overlapping relationship and having registering openings therein, a pin disposed within said opening for locking said devices in overlapping relationship to maintain said mating edge on said one section in abutting engagement with the mating edge of the other section, a trough carried by said one section internally of the cover sheet and terminating at one end thereof in an inwardly turned flange, a shield plate carried by said other member internally of the cover sheet and terminating at one end thereof in a downwardly turned flange and overlapping said inwardly turned flange for providing a watertight seal between said sections, a mounting flange carried by the bed of the flat car and having the inner surface in engagement with the bed and the outer surface thereof in spaced relationship with respect thereto, an angle member carried at the terminal end of said body in engagement with the outer surface of said mounting flange, a plurality of bolts extending through the angle member in the threaded engagement with the mounting flange for securing the angle member to the mounting flange thereby to support the body on the bed of the flat car, and a plurality of guide elements carried by the bed and having inwardly directed inclined surfaces beginning at the outer surface of the mounting flange and engageable by said angle member for guiding said body onto the bed, and a lockable access door on said body with means for unlocking the door from the interior of said body when the body is supported on the bed of the flat car.

2,949,868
APPARATUS FOR KNEADING BOILED SUGAR
Osvaldo Rufinatti, Via Cantalupo 7, Turin, Italy
Filed Apr. 13, 1955, Ser. No. 501,039
Claims priority, application Italy Jan. 11, 1955
7 Claims. (Cl. 107—33)



1. An apparatus for kneading boiled sugar comprising a frame, a table rotatably mounted on said frame, a pair of opposite arms disposed diametrically across said table with confronting ends, supporting means being mounted on said frame which means permits the arms to slide endwise toward and away from one another along their respective longitudinal axes, each of said arms carrying a shovel, a drive mounted to said frame, said drive including cam means causing narrowing the initial gap between said shovels towards each other, lifting of said shovels by a swinging movement of said arms in a plane lying vertically along the longitudinal axes of the arms about horizontal axes transverse to the longitudinal axes of said arms, and lowering and simultaneous withdrawal of said shovels into their original position, said table, arms and shovels being hollow, and including means for feeding a cooling medium to said table, said arms and said shovels, respectively.

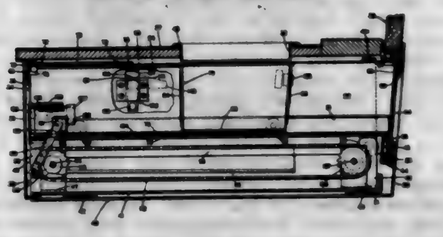
2,949,869
TUNNEL BAKING OVEN
Frederik H. Leeuwrik, Zaandam, Netherlands, assignor to Koninklijke Verkade Fabrieken N.V., Zaandam, Netherlands, a limited-liability company of the Netherlands
Filed June 19, 1956, Ser. No. 592,285
Claims priority, application Netherlands June 20, 1955
4 Claims. (Cl. 107—57)



1. A continuous baking oven comprising at least one tunnel having an entrance end and an exit end, a conveyor entering said tunnel at said entrance end and leaving said tunnel at said exit end for conveying the goods to be baked through said tunnel, rows of parallel tubes disposed above and below said conveyor and all beginning in the same vertical plane at said entrance end

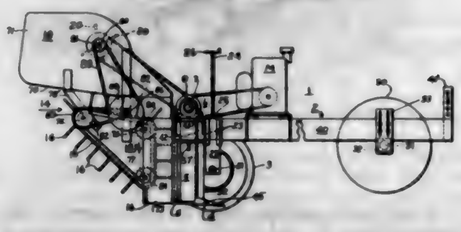
of the tunnel and terminating at said exit end of the tunnel, said tubes constituting a roof and floor of the tunnel with the portion of each of said tubes extending from said entrance end of the tunnel along about one tenth to one fifth of the total length of said tunnel constituting a combustion chamber, a fuel burner located in each combustion chamber and having an individually adjustable fuel supply means so that the latter can be adjusted to maintain a uniform temperature gradient across the width of the tunnel, the remaining parts of said tubes following said combustion chambers being heated by the combustion gases and leaving the latter along the length of the tunnel and then to the atmosphere to obtain a gradually falling temperature gradient along the tunnel, suction means maintaining a subatmospheric pressure within said tubes along the whole length thereof, and adjustable screening means interposed in the path of heat flow from said tubes to said conveyor for adaptation of the heat radiation to the goods in consecutive parts of the path of travel of the latter through said tunnel to the desired temperature gradient for the baking process along the length of the tunnel.

2,949,870
DEAL DRAWER CONSTRUCTION FOR BANK DRIVE-UP WINDOWS
Carl D. Graber, Orrville, Ohio, assignor to Diebold, Incorporated, Canton, Ohio, a corporation of Ohio
Filed July 17, 1957, Ser. No. 672,440
15 Claims. (Cl. 109—19)



1. In deal drawer construction for use in a bank drive-up window of the type having an upstanding wall provided with outer and inner sides and having a teller's counter provided with an opening spaced inwardly of the inner side of said wall; the combination of a stationary deal drawer frame mounted beneath the counter, a movable frame mounted on the stationary frame, the movable frame having a front and rear portion and a front end member on said front portion, the wall being provided with a deal drawer opening; means mounting the movable frame on the stationary frame for movement outwardly through said deal drawer opening to an extended position in which the front portion is located outwardly of the outer side of the wall with the front end member spaced outwardly from the outer side of the wall, and for movement inwardly to a retracted position in which only said front end member is accessible at the outer side of said wall; deal tray means movably mounted on said movable frame; means mounting the deal tray means for movement on the movable frame between a forward position in the front portion of the movable frame, and a rearward position in the rear portion of the movable frame, the deal tray means being forward of the counter opening and substantially inaccessibly covered by the counter in the forward position when the movable frame is in retracted position, the deal tray means being beneath and at least partially aligned with and accessible through said counter opening in rearward position when the movable frame is in retracted position; releasable holding means engaged with the movable frame holding the movable frame immovable when the movable frame is in retracted position; operating means for the movable frame and deal tray means including an actuator accessible to the teller and drive connections with the movable frame and deal tray for moving the movable frame between extended and retracted positions and for moving the deal tray means between rearward and forward positions, said operating means also including a member engageable with the releasable holding means for releasing said holding means; said operating means member being free of engagement with the releasable holding means except when the deal tray means is moved into forward position; the operating means being operable to move the deal tray means from rearward to forward position, to release the holding means when the deal tray means is in forward position and to then move the deal tray means from retracted to extended position.

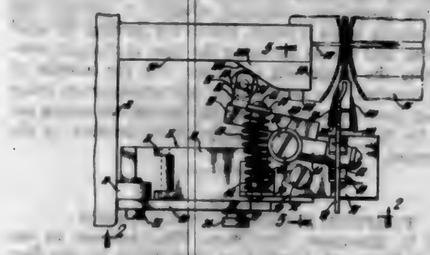
2,949,871
APPARATUS FOR VERTICAL MULCHING OF SOIL AND OTHER PURPOSES
Charles O. Finn, Cincinnati, Ohio, assignor to The Finn Equipment Company, Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 3, 1957, Ser. No. 650,425
8 Claims. (Cl. 111—1)



1. In a machine for vertical trench mulching soil, comprising a wheel supported draw bar having shaft bearings secured thereto, a motor drivable shaft journaled in said bearings and having an eccentric cam thereon, a chisel support having a bearing for receiving said eccentric cam, said chisel support extending vertically downward from the bearing and being vibrated by the eccentric cam when driven by said shaft, a chisel mounted forwardly of and adjacent to the lower end of said chisel support for forming a trench in soil as it is propelled through the same, a rigid depending backing member secured to the draw bar and disposed to buck against the rearward side of the chisel support member to resist the thrust imposed on the chisel as it is drawn through the soil, means for raising and lowering the chisel support member to thereby establish the desired depth of the trench, a power drivable conveyor having a frame disposed rearwardly of the backing member and secured to the draw bar, said conveyor having an endless conveyor member for delivering mulch into the trench, said endless conveyor member having its flights traveling in a vertical plane into and out of said trench behind said chisel support and backing member, and means for supplying mulch to the conveyor.

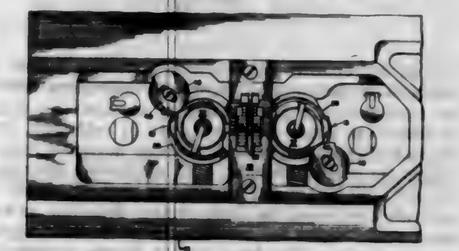
2,949,872
SEWING MACHINE ATTACHMENT
Horace Tomlinson, Baseline, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 18, 1958, Ser. No. 749,388
2 Claims. (Cl. 112—18)

1. In combination with a sewing machine having a needle and a reciprocable needle bar and adapted to sew materials together having pile on the adjacent sides thereof, an attachment mounted on said sewing machine for combing pile of the material being sewn away from the seam immediately prior to the stitching operation of the sewing machine, said attachment comprising a base, a first arm mounted on said base for pivotal movement in a plane substantially parallel to said sewing machine needle bar and having a cam follower at one end, said needle bar having a cam secured thereto for reciprocable movement therewith and engaging and actuating said follower whereby said first arm is pivoted, the other end



of said first arm having a barrel roller mounted thereon, a second arm mounted on said base for pivotal movement in a plane substantially normal to the pivot plane of said first arm and having an aperture therein receiving said barrel roller therethrough whereby said second arm is pivoted by pivotal movement of said first arm, and a pile depressor foot secured to said second arm and intermittently engaging the pile of the material being sewn and combing the pile away from the seam.

2,949,873
LOCKSTITCH SEWING MACHINE
Paul D. Pryor, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Filed Nov. 27, 1957, Ser. No. 699,219
14 Claims. (Cl. 112—184)



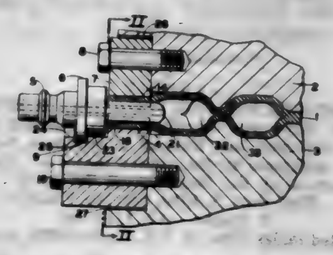
1. In a lockstitch sewing machine a frame having a work supporting base, a rotary drive shaft extending longitudinally of said base, a hook shaft, connections from said drive shaft to said hook shaft for rotating the latter at twice the angular speed of the drive shaft, a rotary hook carried by said hook shaft, said hook having a rotary component secured to said hook shaft for rotation therewith and a bobbin carrier journaled within said rotary component, said rotary component having a thread loop seizing beak, said carrier and said frame having cooperating shoulders for restraining said carrier against rotation with said rotary component in the normal stitch forming operation of the latter, a rotary cam adjacent said bobbin carrier, said bobbin carrier having a surface thereon arranged to be engaged by said cam and acted upon by the latter to cause turning of said carrier counter to the direction of rotation of said rotary component to thereby disengage said shoulders to enable the passage of a branch of the thread loop therebetween, and connections for constantly rotating said cam in the same direction in predetermined relation to the rotation of said hook shaft.

2,949,874
THREAD CARRIER FOR SEWING MACHINE LOOP TAKER
Ludwig J. Kaber, Clark Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Filed Sept. 16, 1958, Ser. No. 761,424
2 Claims. (Cl. 112—231)



1. In a rotary hook for sewing machines, a thread case carrier having a cylindrical side wall, a thread case removably mounted in said thread case carrier and adapted to receive a thread mass, said thread case having a side wall and a top wall, means for retaining said thread case in said thread case carrier comprising a latch slidably mounted on the top wall of said thread case, the side wall of said thread case carrier having an aperture adapted to be entered by the end of said latch when in latching position, spring means for biasing said latch into latching position, a latch operating lever for retracting said latch from latching position, said thread case having a slot in the side wall thereof, and a pin carried by and spaced inwardly from the end of said latch and seated in said slot when said latch is in latching position and disposed within the confines of the side wall of said thread case when said latch is retracted from latching position for engaging the periphery of and thereby holding a thread mass within said thread case.

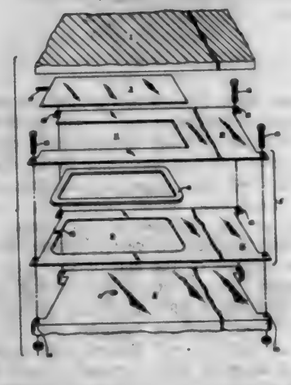
2,949,875
APPARATUS FOR FORMING HOLLOW SHEET METAL PANELS
Richard F. Adams, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Filed July 22, 1954, Ser. No. 445,108
29 Claims. (Cl. 113—44)



1. A device for communicating fluid pressure to the interior of a sheet metal unit partially laminated in accordance with a predetermined final passageway design including an inlet, comprising interior means detachably securable to said unit in fixed relationship with respect thereto, said means consisting of needle and driving portions, said driving portion being adapted for inserting said needle portion into the unit at said inlet in said fixed position for holding apart the sheet metal portions with desired configuration and for admitting a fluid under pressure into said sheet metal unit at said inlet, and pair of spaced diametrically opposed exterior means axially and transversely aligned with each other and maintained in alignment with said interior means for pressing only adjacent sheet metal firmly about said needle portion

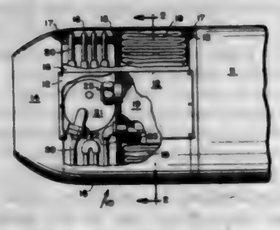
while leaving the rest of the sheet metal unit substantially free from said clamping pressure to secure said means to said unit and prevent leakage of said fluid.

2,949,876
APPARATUS FOR EXPANDING PRESSURE WELDED PASSAGEWAY PANELS ON ONE SIDE
Paul R. Staples, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Jan. 20, 1958, Ser. No. 710,803
13 Claims. (Cl. 113—44)



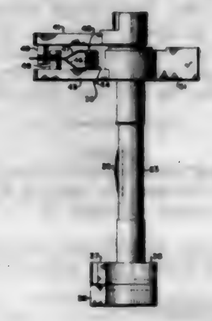
1. An apparatus for expanding one side of a pressure welded passageway panel comprising: a pair of relatively movable platens having opposed operative surfaces; a first endless sealing ring supported on one platen and cooperating therewith to form a first holding pressure cavity for a one side expansion operation, said first sealing ring being dimensioned so that each panel operatively placed over it will completely cover said first cavity and overlap the adjacent inner portion of the margin of said first sealing ring; and means for anchoring said first sealing ring removably in its operative position on said one platen, said means including a first gasket-like shim closely surrounding said first sealing ring to support it against radial displacement, said surrounding shim being thinner than said first sealing ring.

2,949,877
GAS GENERATOR FOR FLOATING TORPEDOES
Floyd A. Newburn, Woodland Hills, Richard D. Cannova, Altadena, and Burnam I. Friedman, Sunnyvale, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Filed Sept. 3, 1958, Ser. No. 758,870
5 Claims. (Cl. 114—20)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An exercise section for rendering buoyant a negatively buoyant torpedo, comprising a casing of the size and shape of the similar section employed with the torpedo for a war-shot, said casing having at least one shell portion detachably engaging same and adapted to be moved way from the casing by application of internal pressure thereto to expose the interior of the casing to sea water, a collapsed flexible bag member disposed within the casing adapted, when inflated, to expand and apply said internal pressure, and when fully inflated, to be disposed with the major portion thereof outside the casing, a heat exchanger disposed within the casing adapted to be exposed to sea water, a solid propellant container disposed within said casing, a solid propellant grain disposed within the propellant container adapted to produce gas under pressure when it burns, means for igniting the solid propellant, and means including the heat exchanger communicating the propellant container with the interior of the bag member, the construction and arrangement being such that gases exhausted from the propellant casing are cooled by the heat exchanger prior to delivery to the bag member.

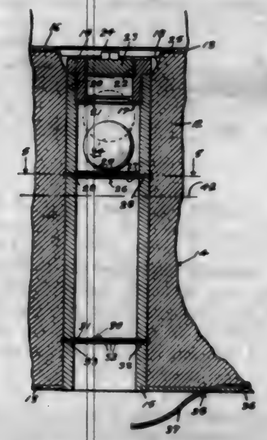
2,949,878
TORPEDO STEERING MECHANISM
Dwight L. Superaw, Key West, Fla., assignor to the United States of America as represented by the Secretary of the Navy
Filed Mar. 27, 1959, Ser. No. 152,087
2 Claims. (Cl. 114—23)



1. In a propulsive torpedo having steering means, in combination therewith: a gyroscopic mechanism including a pallet shaft controlled thereby to experience angular deflection, about the axis defined by said shaft, corresponding in sense to that of torpedo deviation from a preselected course direction; a pallet member journalled on said shaft and linked thereto, by resilient means, to normally experience the same angular deflection as said pallet shaft; means for receiving target acoustic signals and for deriving therefrom control signals corresponding to target direction relative to torpedo heading; means responsive to said control signals to angularly deflect the pallet member independently of said pallet shaft deflection, through yielding action of said resilient means, and thus, during reception of said target acoustic signals, solely in accordance with deviation of the torpedo from target direction; and means for controlling said steering means in response to and in accordance with the angular deflection of said pallet member, to steer the torpedo along said preselected course direction in the absence of said target acoustic signals and to steer the torpedo towards said target during reception of said target acoustic signals.

2,949,879
SELF-BAILING BOAT
Ralph F. Kehn, 6111 Rodgers Ave., Sarasota, Fla.
Filed Sept. 17, 1958, Ser. No. 761,569
2 Claims. (Cl. 114—185)

1. A self-bailing boat comprising a hull formed primarily of a lightweight material having a low specific gravity and including a bottom of substantial thickness whereby the normal waterline of the boat, when loaded, is below the level of the bilge line of the boat, at least one conduit extending through the hull bottom through which water from the interior of the boat is adapted to drain, a valve seat mounted in the upper end of said conduit, a buoyant valve contained in said conduit beneath the valve seat and movable into engagement with the valve seat for closing the conduit to prevent water passing upwardly through the conduit into the boat, a baffle member mounted in a part of



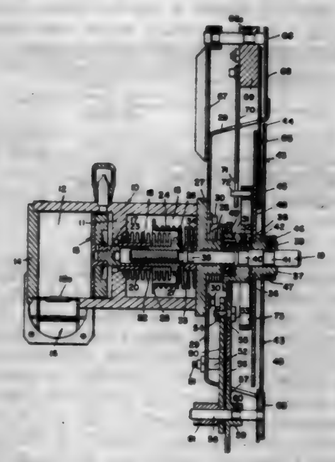
said conduit and disposed beneath and spaced from the valve seat, said baffle member having a plurality of small bores extending therethrough and constituting the only means for the passage of water between the parts of the conduit disposed above and below the baffle member for preventing a surging of water through said conduit, said baffle member being disposed beneath the buoyant valve for normally supporting said valve in an open position out of engagement with the valve seat, and each of said bores of the baffle member having end portions angularly disposed relative to one another.

2,949,880
SUNTAN CONTROL DEVICE
Stephen Fromer, 1535 Victory Blvd., Staten Island, N.Y.
Filed July 17, 1958, Ser. No. 749,137
3 Claims. (Cl. 116—114)



1. A suntan control device comprising a photosensitive paper element provided on one side thereof with an adhesive and on its other side with a plurality of areas of different photosensitivities which darken at different elapsed times upon exposure to actinic rays of sunlight, each of the said photosensitive areas having printed thereon in sodium thiosulfate a designation which becomes visually apparent after the lapse of a predetermined time of exposure and upon darkening of that area due to such exposure, whereby a person exposed to actinic rays is able to obtain a safe amount of suntan over a comparatively extensive period of time by observing said element and the appearance of such designations.

2,949,881
TEMPERATURE-COMPENSATING INDICATORS
Christian D. Berger, New York, N.Y., assignor to Polytechnic Research & Development Co., Inc., Brooklyn, N.Y., a corporation of New York
Filed June 28, 1956, Ser. No. 594,487
6 Claims. (Cl. 116—129)



1. An indicator for a measuring instrument comprising, a supporting frame having a scale movably mounted thereon, a device adjusting member, the scale being movable by said member, an index member movably mounted on said frame and having an index line thereon arranged to intersect the scale at different points on the scale as the scale is moved to indicate the adjustment of the device, and a temperature-responsive means operatively connected to the index member for moving the index member to shift the point of visual intersection between the index line and the scale in accordance with temperature variations.

2,949,882
LIVE FISH PACKAGE
George L. Thomas, Jr., % Three Springs Fisheries, Lilypons, Md.
Filed June 27, 1958, Ser. No. 745,153
2 Claims. (Cl. 119—3)

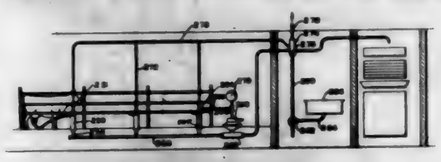


1. As a new article of manufacture, a flexible transparent closed thermoplastic sack filled to a predetermined level with live fish suspended in water, and having the space above said level filled with oxygen.

2,949,883
METHOD AND APPARATUS FOR AUTOMATIC AND SANITARY MILKING
Douglas Clegg, Rte. 1, Box 52, Kellogg, Calif.
Filed Aug. 28, 1957, Ser. No. 680,778
2 Claims. (Cl. 119—14.01)

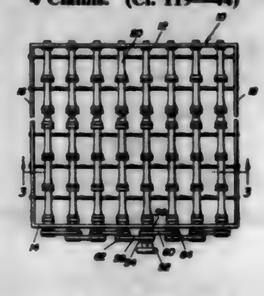
1. A permanent pipeline milking system adapted for the simultaneous milking of a plurality of cows comprising a plurality of milking stations disposed in sequence,

a milking claw at each station, a milk receiving releaser at each station, a vacuum system comprising pulsator means connected to each claw and suction means connected to each releaser and through each releaser to each claw, a milk receiving station, a milk delivery line having its input end commonly connected to each releaser and having its output end communicating with said milk receiving station, a positive displacement milk pump having a suction-pressure stroke cycle connected to said milk delivery line intermediate said receiving



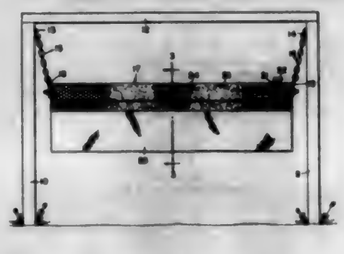
station and the last in sequence of said milking stations and located adjacent the last in sequence of said milking stations, said pump being operable to pump the milk from the releasers into said delivery line and therethrough to said receiving station, flow from said pump to said receiving station being under a positive pressure condition, and means to actuate said pump including control means connected to the releaser at the last in sequence of said milking stations and responsive to the height of milk in said releaser to initiate the suction stroke of a suction-pressure stroke cycle of said pump.

2,949,884
EGG INCUBATOR TRAY
Ronald S. Lace, Columbia Falls, Mont.
Filed June 18, 1958, Ser. No. 742,883
4 Claims. (Cl. 119—44)



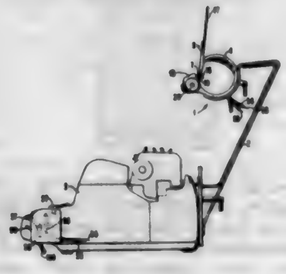
1. An incubator tray comprising a frame having sides, an open top and an open bottom, a group of rollers, each roller comprising a spindle mounted for rotation in a pair of opposing sides, said spindles parallel and coplanar, means for rotating said spindles operatively connected with said spindles and for rotating the spindles in the same direction and at the same speed, each spindle having a plurality of spaced enlargements thereon, each enlargement having a band with a surface that is approximately the shape of a truncated cone, the bands of a pair of laterally adjacent spindles adapted to support the large end of one egg, a plurality of holders regularly spaced and partially encircling the smaller ends of the eggs, means mounting said holders in the space between spindles and slightly laterally spaced from the longitudinal centerline of the space between the spindles, and said holders being slightly lower than the points of contact support of the bands for the larger end of the egg so that the smaller end of the egg having its large end supported by said pair of bands is slightly lower than the larger end of the egg and so that as said spindles are rotated a small component force is applied onto the egg in a direction tending to move the egg inwardly of the holder.

2,949,885
CHEMICAL APPLICATOR FOR LIVE STOCK
Floyd O. Worden, Alliance, Nebr.
(115 E. 18th St., Grand Island, Nebr.)
Filed Aug. 8, 1957, Ser. No. 676,994
11 Claims. (Cl. 119—157)



1. A liquid chemical applicator for livestock adapted to be suspended in a vertically spaced, horizontally disposed position and rotatable about a substantially horizontal axis comprising an elongate tubular reservoir, an apron connected with and depending from and extending longitudinally of said reservoir, the weight of such apron normally maintaining said reservoir in a predetermined position, said reservoir having a series of longitudinally spaced openings along the uppermost portion thereof when in said predetermined position, means exteriorly of the reservoir for conducting liquid from said openings to the apron, tube elements within the reservoir each connected at one end with one of said openings and depending therefrom and extending substantially diametrically of the reservoir toward the lowermost portion of said reservoir, each of said tubes having a terminal portion of its other end reverted to extend in the transverse direction of the reservoir and each tube being open throughout its length, and means whereby the said reservoir may be filled with liquid.

2,949,886
COPYHOLDER
Stig B. Tibbling, Carmel, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Sept. 23, 1958, Ser. No. 762,738
7 Claims. (Cl. 120—32)



6. A copyholder for a typewriter comprising, in combination, a cylindrical container having a slot extending along one side thereof, means for supporting said container with said slot lying in a horizontal plane over said typewriter, a shaft rotatably supported by said container and carrying a feed roll adjacent said slot, said feed roll

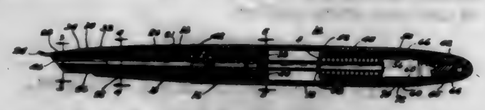
being operable when rotated to move a sheet of paper through said slot, a pair of gears mounted upon said shaft at spaced points, clutches for connecting said gears to said shaft, one of said clutches operating to connect its gear to said shaft when rotated in one direction and the other of said clutches operating to connect its gear to said shaft when rotated in the opposite direction, a member carrying a pair of racks, each cooperating with a different one of said gears, manually operated means for moving said member to engage said racks selectively with said gears, a pivotally supported arm, means adjustably connecting said member to said arm, a continuously rotating power roll, a cam supported by said arm and engageable with said power roll for rocking said arm to reciprocate said member, means normally holding said arm in a position with said cam free of said power roll, and manually actuated means for releasing said holding means to engage said cam with said power roll so as to effect a single reciprocation of said member.

2,949,887
WRITING IMPLEMENT
Lynn P. Martin, Elmer D. Thompson, Roland L. Brannon, and Lee W. Ross, all of Fort Madison, Iowa, assignors to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware
Filed Sept. 11, 1956, Ser. No. 609,281
5 Claims. (Cl. 120—42.03)



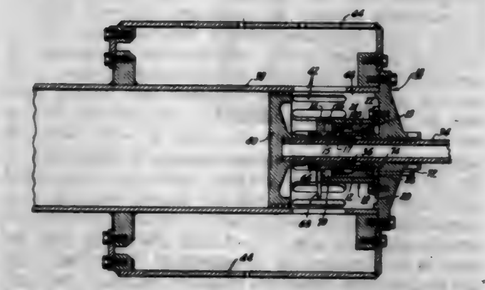
5. A fountain pen comprising a barrel section, a fluid reservoir, a writing nib in communication with said reservoir positioned forwardly of said barrel section, a cylindrical sleeve having an open forward end adapted to receive said nib mounted on said barrel section and movable with respect to said barrel section to a rearward nib exposing position and to a forward nib concealing position, a resilient sealing member mounted completely within said sleeve closing said open end and having a slitted central portion deformable to define a central aperture for receiving said nib upon movement of said sleeve toward said nib exposing position, said central portion being spaced forwardly of said nib when said sleeve is in said nib concealing position, substantially cylindrical means surrounding said nib and carried thereby for opening said slitted central portion in response to movement of said sleeve to the nib exposing position whereby said nib may freely assume said exposed position, said cylindrical means being axially movable relative to said writing nib and resiliently urged to a position forwardly of said writing nib, and stop means supported within said sleeve to limit forward movement of said cylindrical means to a forward position within said sleeve deforming said sealing means when said writing nib is moved through said open forward end, whereby said writing nib may be moved forwardly of said cylindrical means and said sealing member to said writing position.

2,949,888
WRITING IMPLEMENT
Lynn P. Martin, Fort Madison, Iowa, assignor to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware
Filed Oct. 17, 1955, Ser. No. 540,952
10 Claims. (Cl. 120—47)



1. A fountain pen comprising an elongate barrel, a writing element positioned forwardly of said barrel and radially spaced from the longitudinal axis of said barrel, an elongate fluid reservoir within said barrel rearwardly of said writing element, means defining a capillary fluid path between said writing element and said fluid reservoir, means for partially evacuating said reservoir, means filling said reservoir and subdividing said reservoir into a plurality of communicating passages of capillary dimensions, and a filling tube of noncapillary dimensions extending between said reservoir and a position forwardly of said barrel adjacent said writing element, said filling tube having a substantially straight portion extending forwardly from the forward end of said reservoir generally concentric with and spaced from said writing element, providing a filling passageway isolated from said capillary fluid path, said filling tube further having a coaxial rearward portion extending axially through the central portion of said reservoir and being apertured for fluid communication with said reservoir at a plurality of positions along the axial length of said central position.

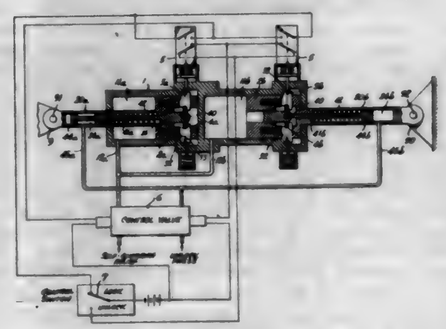
2,949,889
MOTOR OPERATED LATCH MECHANISM
Stephen G. Ivankovics and Garold R. Mikel, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 19, 1954, Ser. No. 417,339
1 Claim. (Cl. 121—40)



The combination with a single acting pressure differential operated motor comprising a cylindrical casing, a reciprocable power piston located in said casing and having a piston rod connected to said piston and extending through an end wall of said casing, of a cylindrical latch casing mechanism surrounding said piston rod and having one end mounted on an end wall within said motor casing, said latch casing having an opening adjacent to said rod, a movable latch member located in said opening, a reciprocable fluid actuated sleeve member located in said latch casing and having means for presetting and releasing said latch, including a recess formed in the sleeve intermediate the ends thereof adapted to receive the latch, a latch setting member mounted on said rod and located adjacent to the opening in said latch casing

and in engagement with said latch member at the time of presetting by the return movement of said sleeve, manually controlled fluid pressure means for pressurizing the sleeve in one direction to release the latch and in the opposite direction to preset said latch, and a stop member mounted on the rod and spaced from said latch setting member for engaging the latch casing to effect positioning of said latch setting member.

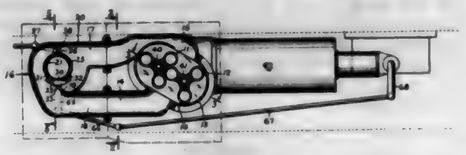
2,949,890
SELF-CENTERING MID-STROKE SECURING DEVICE
Richard A. Chace, Bellevue, Wash., assignor to Tog-Loc, Inc., Bellevue, Wash., a corporation of Washington
Filed Mar. 3, 1959, Ser. No. 796,943
10 Claims. (Cl. 121—40)



1. A securing device of the character described comprising a housing centrally partitioned to define two separate cylinders, a piston reciprocable in each cylinder, a rod projecting from each piston through the respectively opposite ends of the housing, for connection to two members which in use move relatively; one element of each piston and its cylinder having a locking shoulder, locking dog means guided in the other such element for radial projective and retractive movement into and from engagement with said shoulder, a slide mounted in the dog-mounting element for movement therewith and for limited axial movement relative thereto, toggle devices engaging each dog means, and operatively connected to said slide for movement by the slide into alignment with the dog means to project the latter into locking position, or from such alignment for retraction of the dog means, means operatively connected to both slides and acting on both thereof simultaneously to move them in the direction to retract the dog means, for unrestricted relative movement of the piston rods and their respective connected members, and means to supply pressure fluid simultaneously to one side of each piston, to urge the latter in the direction for reengagement of the dog means and their locking shoulders, to secure the piston rods and their connected members against relative movement, and means active upon each slide to move the same in the direction to project the dog means upon registering with its shoulder.

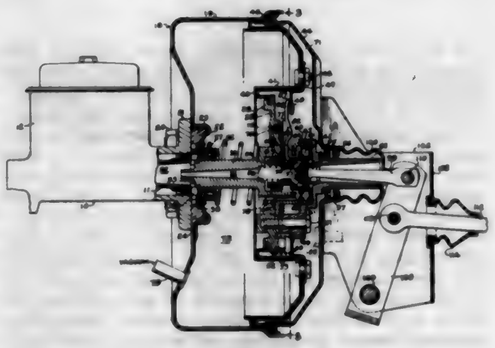
2,949,891
PNEUMATICALLY ACTUATED MECHANICAL JACKS
Eugene Elliot Shube, Elmont, N.Y., assignor to Fairchild Engine and Airplane Corporation, Hagerstown, Md., a corporation of Maryland
Filed Aug. 16, 1956, Ser. No. 604,461
2 Claims. (Cl. 121—41)

1. A pneumatically actuated jack comprising a reversible, rotary pneumatic motor including a pair of meshing rotors selectively rotatable in either direction and a pair of ports to supply gas under pressure to and exhaust gas from said motor, a selector valve for supplying gas under pressure selectively to either of said motor ports to drive the rotors in either direction of rotation, said selector valve including a pair of relatively rotatable sleeves having ports therein movable into and out of register to supply gas selectively to said motor ports, means for rotating one of said sleeves to register a port therein with a port in the other sleeve, means responsive to operation of said motor for rotating said other sleeve to move the registered ports out of register, a jack having a screw shaft connected to one of said rotors, an extensible



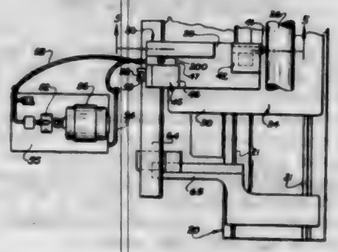
and retractable element having a threaded connection with said shaft and movable axially thereof by rotation of said shaft, an exhaust valve having a valve casing with a pair of inlet ports and a discharge port to atmosphere, means connecting each of said inlet ports to a different motor port, a valve member movably mounted in said valve casing to connect said motor ports selectively to said discharge port and normally preventing flow of gas from either of said motor ports to atmosphere through said discharge port and means responsive to gas pressure supplied by said selector valve to one of said motor ports for moving said valve member to discharge the exhaust gas from the other motor port to atmosphere.

2,949,892
FLUID PRESSURE MOTOR MECHANISM
David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Filed Apr. 30, 1959, Ser. No. 810,107
14 Claims. (Cl. 121—41)



1. A fluid pressure motor mechanism comprising a casing, a pressure responsive unit therein formed of a pair of axially relatively movable sections one of which is connected to a member to be operated, said pressure responsive unit forming with said casing a variable pressure chamber, a valve mechanism carried by said pressure responsive unit normally connecting said chamber to one source of pressure and movable to connect it to a source of different pressure to operate said pressure responsive unit, manually operable means for operating said valve mechanism, a radial reaction lever having its outer end engaging the other section of said pressure responsive unit, the inner end of said lever having mechanical connection with said manually operable member, fulcrum means engaging said lever intermediate its ends, and a resilient member carried by said one section of said pressure responsive unit and engaging said fulcrum means whereby, when said manually operable member initially moves said valve mechanism from normal position, said fulcrum means is relatively easily movable relative to said one section of said pressure responsive unit.

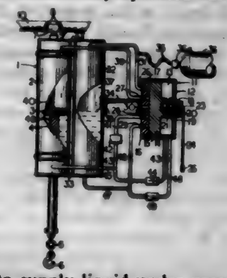
2,949,893
TRACER MECHANISM
Harry C. McCurdy, Zanesville, Ohio, assignor to The R. K. Le Blond Machine Tool Company, Cincinnati, Ohio, a corporation of Delaware
Filed Aug. 2, 1957, Ser. No. 675,954
10 Claims. (Cl. 121—45)



1. A control apparatus for establishing the path of a tool moving along the ways of a lathe, said apparatus comprising, in combination, means forming a source of pressurized fluid; means forming a reservoir; a fluid motor including a side wall having a plurality of ports; valve means including a valve body having a side wall provided with a plurality of ports and a movable flow control element movable from a first position to a second position or from said first position to a third position; spool housing means including a first side wall confronting said side wall of said fluid motor and a plurality of ports communicating with said ports of said fluid motor and a second side wall confronting said side wall of said valve means and a plurality of ports communicating with said ports of said valve means; a spool movably mounted in said spool housing means, said spool including a first position wherein movement of said flow control element from said first position to said second position connects a certain port of said fluid motor to said source and a certain other port of said fluid motor to said reservoir, and said spool including a second position wherein movement of said flow control element from said first position to said third position connects said certain port of said fluid motor to said source and said certain other port of said fluid motor to said reservoir; a lever operatively connected to said flow control element for movement of said element from said first position to one of said second and third positions; and means forming a chamber communicating with said source, an end of said control element being exposed to pressurized fluid in said chamber for urging said flow control element towards the other of said second and third positions.

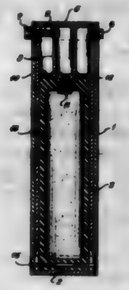
2,949,894
HYDRO-PNEUMATIC HOIST CONTROL APPARATUS
Ellis E. Hewitt, Ruffsdale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed Mar. 19, 1957, Ser. No. 647,139
5 Claims. (Cl. 121—46)

1. In a hoisting apparatus, in combination, a source of pneumatic pressure, a source of hydraulic pressure comprising a reservoir containing a quantity of liquid, means for constantly subjecting said quantity of liquid to said pneumatic pressure, a cylinder anchored to a support, a hoisting piston slidably operable in said cylinder and having a piston rod, one end of which extends to the exterior of said cylinder for connection with the load to be raised and lowered, and a manually operated valve means selec-



tively operable to supply liquid under pressure from said reservoir to the piston rod side of said piston while venting the opposite side, to effect raising of the load, or to simultaneously supply said liquid under pressure to said piston rod side of said piston and fluid under pressure from said pneumatic pressure source to the opposite side of said piston to effect lowering of said load.

2,949,895
HYDRAULIC PIT PROP
Franz Gottfried Reuter, Lemforde, Hannover, Germany, assignor, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
Filed July 16, 1957, Ser. No. 672,294
Claims priority, application Germany July 18, 1956
5 Claims. (Cl. 121—48)

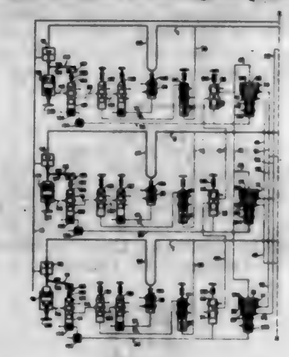


1. A hydraulic pit prop comprising a rigid outer tube closed at one end and a rigid inner tube closed at one end in slidable relation one with the other and enclosing a resilient hollow body of seamless polyurethane rubber defining a pressure chamber, one end of said hollow body being detachably connected to the closed end of said inner tube through a supply nipple plate and the other end of said hollow body being attached to the closed end of said outer tube by means of a pin in a detachable manner.

2,949,896
SYSTEM FOR DISTRIBUTING STEAM INTO RESUPERHEATERS
Alfred Burl, Winterthur, Switzerland, assignor to Sulzer Frères, S.A., Winterthur, Switzerland, a corporation of Switzerland
Filed June 22, 1956, Ser. No. 593,139
3 Claims. (Cl. 122—479)

1. A steam generating and resuperheating apparatus including at least three steam generators, a source of heat connected with each of said steam generators, a steam resuperheater connected to each of said steam

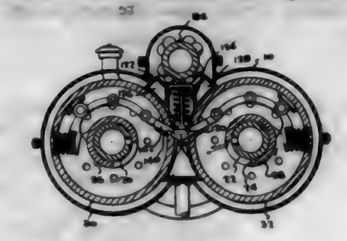
generators and being heated by the respective source of heat, a throttle means connected to each of said resuperheaters for controlling the flow of steam to be resuperheated through the individual resuperheaters, and a control apparatus connected to said throttle means for actuating the latter to effect a relative steam flow through the individual resuperheaters which corresponds to the relative rates of output of the respective steam generators and to fully open the throttle of the resuperheater connected to the steam generator operating at the highest output rate, said control apparatus comprising a control signal producing means connected to each of said steam generators for individually producing control signals corresponding to the rate of output of the respective steam generator, a controlling means for each resuperheater, said controlling means being individually connected to said signal producing means with the exception of the signal producing means connected to the steam generator to which the respective resuperheater is connected, said controlling means individually including means for adding the signals received from the connected signal producing means for individually producing control pulses corresponding to the sum of the signals produced by the



signal producing means of the steam generators which are not connected to the respective resuperheater, a motor operator connected to each of said throttle means for operating the latter and including pilot means operatively connected to the controlling means of the respective resuperheater for effecting individual actuation of said motor operators in response to the control pulses produced by the respective controlling means, a pressure fluid, a conduit for said pressure fluid connected to each of said controlling means, means to actuate each of the latter by the pressure fluid in opposition to the action of said control signals, and a pressure fluid regulating valve for each of said controlling means, said valves being interposed in series relation in said pressure fluid conduit and individually including valve opening means for yieldably holding the valves in open position, said valves individually including means individually operatively connected to said controlling means and being responsive to the control pulses produced by the respective controlling means for closing the respective valve against the action of said opening means when the respective control pulse reaches a value effecting full opening of the respective throttle means.

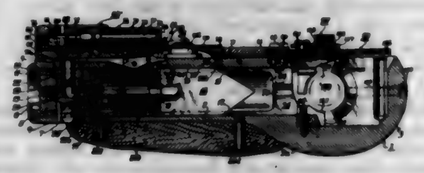
2,949,897
ROTARY INTERNAL COMBUSTION ENGINE
Sidney C. Raybon, Box 142, Smithville, Ga.
Filed Dec. 4, 1959, Ser. No. 857,390
8 Claims. (Cl. 123—16)

8. In an internal combustion engine, a pair of fixed shafts arranged in lateral spaced relation, at least one rotor circumposed about and mounted upon each of said shafts for rotation thereabout as an axis, said rotors being rotatable in opposite directions, an open-ended tunnel interposed between said rotors and having one open end contiguous to the periphery of one of said rotors and having the other open end contiguous to the periphery of the other of said rotors, there being an opening in the periphery of each of said rotors, a blade housed within each of said rotors for projectile and retractile movement through said opening into and out



of said tunnel, cam means on each of said shafts and engageable with cam means carried by the adjacent blade for effecting the projectile movement of said blades into said tunnel responsive to rotary movement of said rotor, an openable and closable valve for controlling the admission of a combustible mixture into said tunnel, gearing connecting said rotors together for simultaneous rotation in opposite directions, a shaft to be driven adjacent said rotors, and a gear train connecting each of said rotors to said shaft cam means.

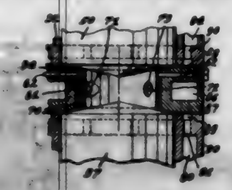
2,949,898
CARTRIDGE-POWERED PISTON TYPE TOOL
Philip R. Haskell, Fairfield, and Richard E. Evans, Southport, Conn., Paul A. Ketchpel, Jr., West Englewood, N.J., and Lyle B. Connor, Westport, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Original application May 10, 1955, Ser. No. 507,281. Divided and this application July 26, 1957, Ser. No. 674,535
3 Claims. (Cl. 123—24)



1. In a tool explosively actuated by a powder charge: a barrel, a piston retained in and displaceable along said barrel, means including an explosion chamber for said powder charge, disposed at the breech end of said barrel for explosively impelling said piston along the barrel, said chamber including a bore for reception of a cartridge containing said powder charge, together with means for adjustably varying the volume of said explosion chamber, thereby to vary the impelling force on said piston from a cartridge of constant powder charge.

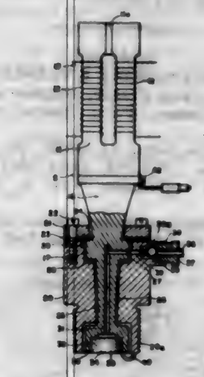
2,949,899
COMBUSTION-CHAMBER CONSTRUCTION FOR INTERNAL COMBUSTION ENGINES
Harold M. Jacklin, 1916 N. Meridian St., Indianapolis, Ind.
Original application Oct. 6, 1950, Ser. No. 188,810, now Patent No. 2,805,654, dated Sept. 10, 1957. Divided and this application Sept. 9, 1957, Ser. No. 687,846
3 Claims. (Cl. 123—32)

1. In an internal combustion engine having a cylinder and a combustion chamber, said combustion chamber having a cooled annular wall, an annular liner for said combustion chamber, said liner having a loose fit in said combustion chamber providing poor heat transmission to the wall thereof at low temperatures but being capable of expanding into firm contact with the chamber-wall under the influence of heat received from burning



gases in operation of the engine, said combustion chamber communicating with said cylinder through an opening having a diameter equal at least to the external diameter of said liner whereby any annular gap between the liner and the surrounding wall of the combustion chamber will be in free communication with the cylinder.

2,949,900
SONIC LIQUID SPRAYER
Albert G. Bodine, 13120 Moorpark St., Sherman Oaks, Calif.
Filed June 2, 1958, Ser. No. 739,301
5 Claims. (Cl. 123—32)

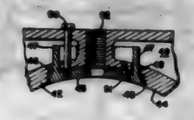


1. The method of injecting fuel into the combustion chamber of an internal combustion engine which includes: delivering fuel to a quiescent fuel emitter surface within said chamber until a thin film of fuel has accumulated thereon, thereafter engendering sonic frequency vibrations of said surface with a component of said sonic vibration in a direction through said fuel film so that the high acceleration incident to the sonic frequency causes said fuel film to be violently disrupted and thrown from said emitter surface.

2,949,901
INTERNAL COMBUSTION ENGINES
Charles O. Spencer and Boyd L. Spencer, both of 440 S. Tyler St., Gladewater, Tex.
Filed Jan. 21, 1959, Ser. No. 788,210
9 Claims. (Cl. 123—41.82)

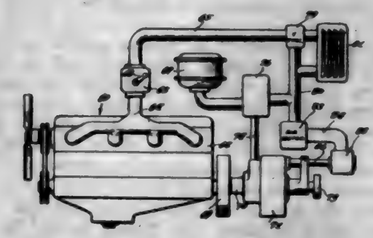
1. In an internal combustion engine, an engine body including at least one combustion chamber having a firing surface with a critical area subject to thermal stresses, said firing surface having a counterbore in the critical area thereof, an insert for said combustion chamber nested in said counterbore and covering at least a portion

of the critical area of said firing surface, the lateral dimensions of said insert being slightly smaller than those of said counterbore with the peripheral edge of said insert spaced from the peripheral wall of the counterbore and providing an expansion area for said insert to accommodate heat and strain absorption independently of said body, a gasket disposed only between the rear surface of said insert and the bottom wall of said counterbore, means securing the insert and body together, the combined thicknesses of said insert and gasket being substantially equal to the depth of said counterbore with



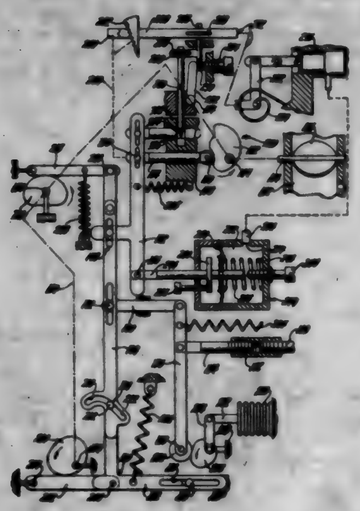
the exposed surface of said insert generally contiguous with and conforming to the surface surrounding said counterbore, said engine body being provided with a water jacket substantially entirely surrounding said combustion chamber and having an opening between said water jacket and said counterbore, and heat transfer means extending from said insert through said opening and exposed to said water jacket, the aforementioned lateral dimensions of the insert being slightly smaller than those of the counterbore at the time of initial assembly.

2,949,902
ENGINE TRANSMISSION UNIT INVOLVING VARIABLE SUPERCHARGING
Mario Angelo Calovolo, 111 7th St., Garden City, N.Y.
Filed May 28, 1957, Ser. No. 662,153
2 Claims. (Cl. 123—119)



1. An engine transmission unit comprising, in combination, an internal combustion engine having combustion fuel and air supply apparatus, said engine having a power drive shaft, a planetary gear system associated with said drive shaft, a volumetric air compressor associated with said fuel and air supply apparatus, a drive connection between said gear system and said air compressor, said drive connection comprising a secondary drive shaft having a driven gear at one end, and said gear system including a sun gear, a driving intermediate gear integral with said sun gear, and said driven gear being in meshing engagement with said driving intermediate gear for rotating said secondary drive shaft, said fuel and air supply apparatus comprising an intake manifold, a carburetor, and an air filter, an intake duct connecting said manifold, carburetor, and air filter together in series relationship, a thermostatically controlled deviator intermediate said volumetric air compresser and said carburetor, an air duct connecting said thermostatically controlled deviator to said volumetric air compresser, and an air cooler in parallel relationship with said air duct.

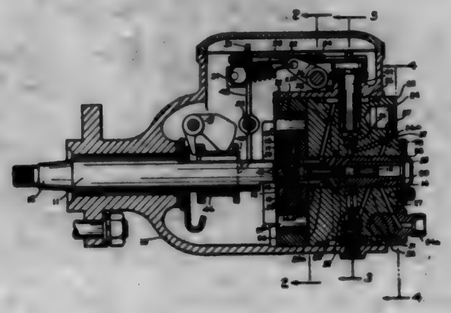
2,949,903
CHARGE FORMING DEVICE
Howard H. Dietrich, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Aug. 1, 1957, Ser. No. 675,699
20 Claims. (Cl. 123—119)



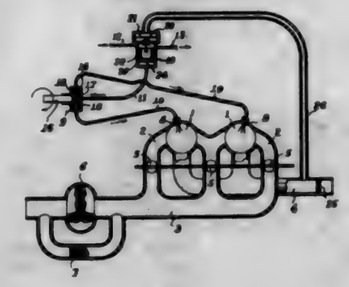
1. A charge forming device for an internal combustion engine comprising a fuel source, pump means for pressurizing the fuel from said fuel source, a fuel metering valve, conduit means connecting said pump means and said fuel metering valve whereby said pressurized fuel is delivered to said valve, said metering valve including an adjustable valve element for varying the quantity of fuel flowing through said valve, a fuel nozzle for supplying fuel to each cylinder of the engine, conduit means communicating said metering valve with each of said fuel nozzles, a throttle valve for controlling the quantity of air flow to the cylinders of the engine, lever means operatively connecting said throttle valve and said metering valve for increasing the quantity of fuel flow through said metering valve as said throttle valve opens, engine speed responsive means connected to said lever means for increasing the flow of fuel through said metering valve as engine speed increases, and throttle control means for rendering said engine speed responsive means inoperative to increase the fuel flow through said metering valve beyond a given engine speed.

2,949,904
FUEL INJECTION PUMP
Waldemar O. Bischoff, Holyoke, and Ignace J. Daborowski, Springfield, Mass., assignors to American Bosch Arma Corporation, a corporation of New York
Filed May 6, 1957, Ser. No. 657,159
9 Claims. (Cl. 123—140)

1. In a device of the character described, a housing having a bore, a rotary member mounted for rotation in said bore, a plurality of outlets communicating with said bore, said outlets being adapted to supply fuel to the combustion chambers of an internal combustion engine successively, an axial fuel passage in said rotary member, a radial bore in said rotary member and communicating with said axial fuel passage, plunger means in said radial bore, cam means operatively associated with said plunger means for effecting reciprocation of said plunger means for pumping fuel, said rotary member having fuel supply and delivery ports communicating with said axial fuel passage, a second bore in said housing, a fuel quantity control displacement piston in said second bore, control means connected to said fuel quantity control piston for adjusting the position of said piston in said second bore whereby the position of said control piston in said second bore may be adjusted according to desired fuel quantity, and a pressure port connecting said axial passage in said rotary member with said second bore whereby fuel from said axial passage may enter said second bore on one side of said control piston and a bypass or spill port communicating with said second bore on the opposite side of said control piston, said displacement piston being moved to a position whereby it seals said bypass or spill port on the axial movement thereof by fuel pressure on the side of said piston opposite said spill port.

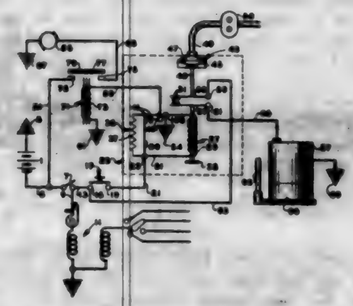


2,949,905
TWO STROKE ENGINES
Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a company of France
Original application Nov. 27, 1956, Ser. No. 624,663, now Patent No. 2,935,053, dated May 3, 1960. Divided and this application Nov. 3, 1959, Ser. No. 850,653
Claims priority, application France Feb. 7, 1956
2 Claims. (Cl. 123—140)



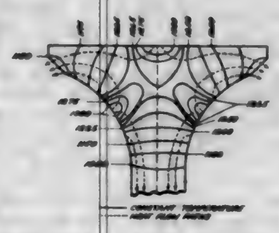
1. In a two cycle internal combustion engine, a cylinder with intake and exhaust ports therein, air supply means connected with said intake port and exhaust conduit connected with said exhaust port, fuel injection means for delivering fuel into said cylinder and means for igniting said fuel, said cylinder and exhaust conduit constituting a combustion gas flow circuit, means responsive to the pressure variation of the combustion gases from the engine and regulating means connected to said pressure responsive means and to said injection means for varying the fuel delivery rate of said injection means in proportion to said variation pressure and independent of the engine speed.

2,949,906
ENGINE CONTROL SYSTEM AND APPARATUS
Robert H. Voigt, Milford, Mich., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Filed June 2, 1958, Ser. No. 739,336
19 Claims. (Cl. 123—179)



1. An internal combustion engine control system including an electric motor pump, an engine starting motor, an engine starting switch and a source of electricity, means, including a normally open first switch, for connecting said electric motor pump to said source for energization thereby when said first switch is closed, means, including said starting switch and a normally open second switch, for connecting said starting motor with said source to energize said starting motor when said starting switch and said second switch are both closed, an energizable time delay mechanism for closing said second switch, means responsive to the closure of said starting switch for closing said first switch and for energizing said time delay mechanism, said last named mechanism serving to close said second switch only after said first switch has closed.

2,949,907
COOLANT-FILLED POPPET VALVE AND METHOD OF MAKING SAME
Max J. Tanichek, Lyndhurst, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Dec. 19, 1957, Ser. No. 703,902
12 Claims. (Cl. 123—188)



1. A poppet valve having a head portion and stem portion provided with a coolant cavity extending substantially throughout the length thereof and being of essentially constant diameter throughout said length, the ratio of the thickness of the head portion, measured between the center of said portion and the top of the coolant cavity, to the head diameter being substantially less than the ratio of the coolant cavity diameter to the stem portion diameter, to thereby maintain a minimum temperature gradient along the head and stem portions and avoid thermal stresses therein.

2,949,908
POLISHING AND GRINDING TABLE
Clyde H. McElroy, 1609 W. 19th Ave., Kennewick, Wash.
Filed Dec. 20, 1956, Ser. No. 629,719
6 Claims. (Cl. 125—30)

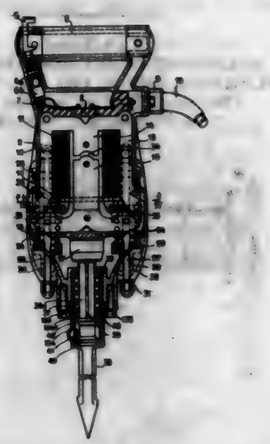


1. A polishing and grinding table comprising a supporting stand including a frame having an opening therein, a carriage loosely received and movable wholly within the confines of said opening, polishing and abrading means carried fixedly by said carriage and movable therewith, means mounted upon said stand and disposed within said frame and outside of said opening and resiliently supporting and centering said carriage in said opening for vibratory movement in the horizontal plane of the frame, vibratory means for causing vibratory motion of said carriage upon said supporting means, said carriage including a platform having upstanding side walls, said supporting and centering means being connected to said side walls and to the sides of said frame, an attachment having means for detachably and reversibly securing the side walls thereof to said carriage side walls whereby the attachment will be vibrated with the carriage, said polishing and abrading means being carried by said attachment, said attachment having reversible abrading surfaces disposed between the attachment side walls with said last mentioned means being disposed on both of said surfaces.

2,949,909
ELECTROMAGNETIC HAMMER
Pietro Aurelio Macchioni and Luigi Macchioni, both of 10 Piazza Statuto, Turin, Italy
Filed May 19, 1958, Ser. No. 736,232
Claims priority, application Italy May 22, 1957
7 Claims. (Cl. 125—33)

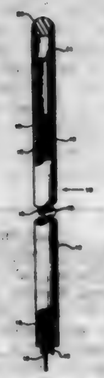
1. An electromagnetic vibrator comprising a portable casing having a handle secured at one end and an opening provided in its other end, a coil coaxial with said opening inside said casing arranged near the end of the latter opposite said opening, a magnetic core for said coil extending through the latter, a complementary stationary armature embracing said coil from the outside, at least a part of said core facing said opening in the casing being movable in the axial direction of said coil, a striker inside the casing arranged between said coil and said opening, said striker being fast with said movable part of the core, a first and a second set of four springs symmetrically arranged around the common axis of said coil and said opening, the springs of both sets bearing each by its one end on a seat provided in the striker body, the other end of each spring of said first set bearing by its other end on a seat provided inside said casing near said coil and the other end of each spring of said second set bearing by its other end on a seat provided

inside said casing near said opening, and means arranged at the end of said casing in which said opening is pro-



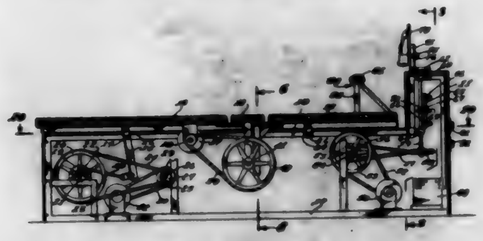
vided for supporting and guiding the end of a tool to be acted upon by the striker.

2,949,910
PHONOCARDIAC CATHETER
James R. Brown, 614 Aintree Road, Hatboro, Pa.; John D. Wallace, 313 Burton Road, Oreland, Pa.; and David H. Lewis, 5829 Hoffman Ave., Philadelphia 43, Pa.
Filed Mar. 29, 1957, Ser. No. 649,577
5 Claims. (Cl. 128—2.05)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A phonocatheter for producing and detecting a wide frequency range of sonic and supersonic waves in the cardiovascular system comprising, in combination: a long flexible hollow tube of small outside diameter capable of passing through blood vessels, said tube sealed at the insertion end and constructed of chemically inert material, a short electromechanical transducer located within and acoustically coupled to the side wall of said tube adjacent to said insertion end, said transducer having transmitting and receiving piezoelectric properties responsive to the rate of change of an input signal in the frequency range of approximately 3 to at least 100,000 cycles per second, and a coaxial cable connected to said transducer and extending within and throughout the length of said tube whereby electrical signals can be transmitted to or from said transducer through said cable without significant distortion.

2,949,911
AUTOMATICALLY OPERATED BODY EXERCISING TABLE
George J. Kennard and Irene Kennard, North Hollywood, Calif., assignors to Victor A. Puff and Margaret H. Puff, both of Los Angeles, Calif.
Filed May 12, 1958, Ser. No. 734,695
4 Claims. (Cl. 128—25)



1. A body exercising table comprising an oblong base, a table top extending across the top of said base and mounted for longitudinal oscillatory movement with respect to said base, a substantially U-shaped yoke disposed within said base beneath said table top, said yoke having a pair of upwardly directed arms disposed adjacent the opposite sides of said base and table top, the upper ends of said arms being pivotally secured to the opposite sides of said table top, the portion of said arms therebeneath being pivtally connected to said base to provide fulcrums for the pivotal movement of said arms, a crank arm pivotally secured at one end to the bottom of said yoke, the opposite end of said crank arm being pivotally secured to a pulley in offset relationship to the center thereof, and a first electric motor connected to and adapted to rotate said pulley, the rotation of said pulley resulting in reciprocal movement of said crank arm to pivot said yoke and cause said table top to oscillate with respect to said base, said table top having two parts, a pair of movable platforms disposed beside each other adjacent the center of said table top between said parts, a second electric motor mounted beneath and carried by said table top, a shaft mechanically connected to and rotated by said motor, a pair of eccentric cams carried by said shaft, a pair of vertically directed arms, each of said arms being connected at its upper end to one of said movable platforms, the midportions of said arms being pivotally mounted with respect to said table top, the lower end of each of said arms being bifurcated, the bifurcations of said arms being disposed on opposite sides of said eccentric cams, the rotation of said shaft causing said cams to alternately engage the bifurcations of said arms to cause the pivotal movement of said arms and the oscillatory movement of said platforms with respect to said table top, means for oscillating said movable platforms simultaneously in opposite directions to each other, said means comprising a pin projecting from one of said cams, said shaft carrying a plate having a semi-circular portion projecting therefrom, said plate being disposed so that said semi-circular portion faces toward said pin, one side of said semi-circular portion being adapted to engage said pin to cause the rotation of said cam in one direction, means for reversing the direction of rotation of said shaft, said semi-circular portion adapted upon rotation of said shaft in the opposite direction to rotate one half revolution until the other side of said semi-circular portion engages said pin, with the arm and platform connected to said cam remaining stationary, said cams thereafter rotating out of phase with each other to provide simultaneous oscillatory movement of said platforms in opposite directions with respect to each other, a third electric motor mounted within said base, a vertically directed pulley mechanically connected to and driven by said third motor, a twisted belt extending at one end around said vertically directed pulley and at its opposite end around a horizontally directed pulley, a first vertically directed shaft connected at its lower end to said horizontally directed pulley, a plate mounted on the upper end of said first shaft, a second vertically directed shaft rotatably mounted within said base, a plate mounted on the upper end of said second shaft, a third vertically directed shaft rotatably mounted within said base, each of said shafts carrying a gear, a link chain extending between and around the gears on said second and third shafts, one side of said link chain being connected to the gear on said first shaft, whereby rotation of said first shaft in one direction results in rotation of said second shaft in the opposite direction to provide simultaneous rotation of said plates in opposite directions to each other, and foot receiving means carried by said plates.

2,949,912
FRACTURE SPLINT COVERING
Matthew Shapiro, 897 Park Ave., New York, N.Y.
Filed Nov. 24, 1959, Ser. No. 855,211
2 Claims. (Cl. 128—83.5)

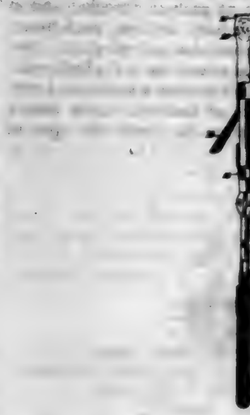


1. For use in conjunction with a leg plaster of Paris or like fracture splint or cast having a depending walking buffer member, a boot covering comprising sheeted material having a relatively indistensible, flexible sole portion divided into forward and rearward sole covering sections at a lateral fold line, said forward and rearward sole sections being cut out to define an aperture spanning said fold line, a vamp portion secured to the marginal edges of said forward sole section to a point adjacent said fold line, a counter member secured about the marginal edges of said rearward sole section to a point adjacent said fold line, a pair of forwardly extending flaps forming continuations of said counter member, a first pair of fastener members secured at laterally oppositely spaced points on the inner face of said vamp and a complemental pair of fastener members to said first pair secured to the outer face of said flaps whereby said boot may be secured over the foot portion of a leg fracture splint, with said buffer member of said splint extending through said aperture and said flaps secured to said vamp, with said flaps lying between said splint and said vamp.

2. A boot structure in accordance with claim 1 wherein the portions of said forward and rearward sole sections defining said aperture comprise elastic material, whereby upon application of said boot structure to said fracture splint, said aperture will form a sealing fit about said buffer member.

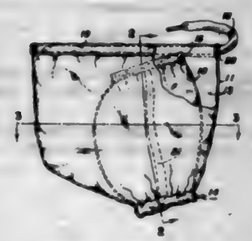
2,949,913
PARENTERAL SOLUTION EQUIPMENT
Theodore H. Gewecke, Glenview, and Cyrus R. Broman, Evanston, Ill., assignors to Baxter Laboratories, Inc., Morton Grove, Ill., a corporation of Delaware
Filed Aug. 26, 1957, Ser. No. 680,183
3 Claims. (Cl. 128—214)

1. In heat sterilized parenteral solution equipment, a hypodermic needle, a length of flexible tubing, a rigid thermoplastic sleeve within said tubing and about said needle, said sleeve being radially inwardly deformed to grip said needle and being heat-deformable in the range of



commercial sterilization temperatures, and resilient band means about said tubing and the deformed portion of said sleeve.

2,949,914
ANKLE ICE PACK
John Carter Waldrum, Box 321, Bandera, Tex.
Filed Aug. 26, 1958, Ser. No. 757,350
4 Claims. (Cl. 128—402)



1. An ice pack for a sprained joint in a human limb comprising an inner open-ended tubular casing of flexible waterproof material to enclose the entire joint and extend above and below the same, resilient lower and upper openings for the casing adapted to closely fit portions of the limb below and above the joint, an outer open-ended tubular casing of flexible waterproof material surrounding said inner casing, a water-tight connection between the lower end portions of the two casings providing between them an open top chamber for ice and cold water, said outer casing being of substantially greater size than said inner casing to permit pieces of ice to be deposited in said chamber around the entire open top of the outer casing when the latter is distended, and means for contracting the open top of the outer casing and holding said top around the limb adjacent the resilient upper opening of the inner casing to retain the ice and water in said chamber.

2,949,915
BRASSIERE
Lilyan Malmstead, 151 Vernon St., Worcester, Mass.
Filed Dec. 30, 1957, Ser. No. 705,843
6 Claims. (Cl. 128—432)

1. A brassiere comprising breast pockets arranged in horizontal side-by-side relation, two body sections each

connected at one of its ends to the outer edge of the pockets, the body sections being adapted to be adjustably connected at their other ends, a shoulder strap connected at one end to the upper edge of each said pocket and at the other end to the respective body sections, each breast pocket having an outer portion formed of elastic material which permits substantial stretching in the horizontal direction only, each said pocket having a substantial portion formed of a single piece of inelastic fabric having an angular cutout removed from the piece, the apex of



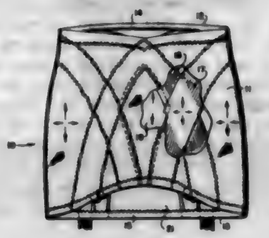
the angular cutout being adjacent to the center of the pocket, the edges of the said angular cutout being sewed to the remainder of the pocket so that the fabric is formed into a generally-conical shape, the said piece of fabric having a curved edge extending from the said angular cutout at the side thereof adjacent to the inner part of the pocket, the said curved edge extending from the cutout which lies vertically under the center of the pocket around the inner part of the pocket to a point well above the center of the pocket, thus providing for a swinging action.

2,949,916
BRASSIERE
Charles Paveza, Prospect Heights, Ill., assignor to The Formfit Company, Chicago, Ill., a corporation of Illinois
Filed July 28, 1958, Ser. No. 751,455
4 Claims. (Cl. 128—489)



1. In a brassiere having a body encircling band including front, back and side portions, a pair of breast cups attached to the front portion of said band and a pair of straps extending between the upper edge of respective ones of said cups and the back portion of said band, the improvement comprising an elastic strip secured to the side and top edges of each cup, each of said straps including a non-resilient portion slidably connected for self-adjustment at its forward end to said strip at the upper edge of the respective cup and being of a length to extend over the shoulder of the wearer, and an elastic strip extending between the rearward end of each strap and the back portion of said band, the side and back portions of said band being relatively narrow and the side portions thereof being secured to the outer edge of the respective cup only adjacent the lower margin of the cup thereby to afford substantial underarm clearance, said strips and said straps retaining the edges of the cups in intimate contact with the wearer's body despite the narrowness of said band.

2,949,917
GIRDLE
Grace Arcuri, Forest Hills, N.Y., assignor to Wispeo Corp., New York, N.Y., a corporation of New York
Filed June 23, 1959, Ser. No. 822,245
4 Claims. (Cl. 128—541)

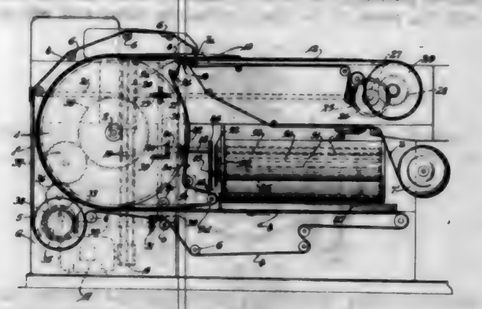


1. A body encircling garment of woven fabric comprising a front and rear panel, said panel being joined along the longitudinal edges thereof, a first arcuate band superposed by stitching upon said front panel extending from a point medially along the lower edge thereof to a point at the upper left edge thereof, a second arcuate band superposed by stitching upon said front panel extending from a point medially along the lower edge thereof to a point at the upper right edge thereof, an arcuate band superposed by stitching upon said rear panel meeting said first front band at the upper left edge thereof and extending to the lower right edge of said rear panel, and an arcuate band superposed by stitching upon said rear panel meeting said second front band and extending to the lower left edge of said rear panel, an arcuate band having a substantially keystone-like configuration superposed by stitching upon said front panel, said band extending from the lower left edge thereof continuing to a point medially the top of said panel and continuing in a reverse direction terminating at the lower right edge thereof, a panel of woven fabric superposed by stitching upon said rear panel generally in the lower area thereof said panel bounded along the bottom by the bottom edge of said rear panel, and along the side edges thereof by said arcuate bands superposed upon said rear panel; and a second panel of woven material superposed by stitching upon said front panel medially thereon generally within the area bounded by said first and said second arcuate bands and the uppermost part of said band having a keystone like configuration, said panel assuming a generally diamond-shaped configuration.

2,949,918
CIGARETTE ROD MAKING MACHINES
Werner Dupke, Hamburg, Bergedorf, Germany, assignor to Kurt Korber & Co. K.G., Hamburg, Bergedorf, Germany
Filed July 11, 1957, Ser. No. 671,214
Claims priority, application Germany July 26, 1956
3 Claims. (Cl. 131—66)

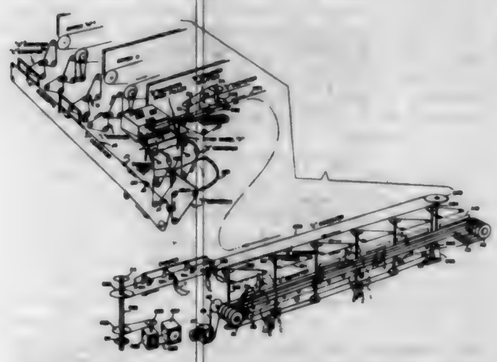
3. In a machine for making a continuous tobacco rod and cigarette rod respectively, a circular conveyor disc having a circumferential groove in its peripheral edge and mounted for rotation in a vertical plane, means for rotating said conveyor disc, an endless tobacco supporting band threaded about said conveyor disc and engaging the circumference thereof and the groove therein along at least one half of its entire length, an endless tobacco conveyor band having a horizontally extending conveyor run portion for feeding tobacco to the lower portion of said circular disc and arranged to have its horizontal portion positioned for receiving tobacco from a tobacco distributor means and conveying it toward the lower portion of said disc into a channel formed between said supporting band and said tobacco conveyor band which later

engages and follows that portion of the supporting band which is threaded around one half of said conveyor disc, said tobacco conveyor band when reaching the upper portion of said conveyor disc exteading a portion horizontally beyond the highest point of said disc and then being threaded reversely over rollers and downwardly beyond the lowermost portion of said conveyor disc and spaced therefrom, means for driving said tobacco conveyor band, said endless tobacco supporting band at the upper portion



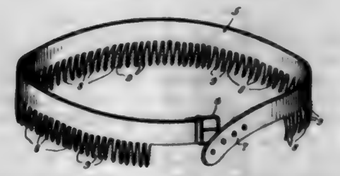
of said conveyor disc being threaded to follow for a predetermined distance said upper horizontally extending portion of said endless tobacco conveyor band before being directed downwardly again along the periphery with said conveyor disc, an endless forming band arranged adjacent the upper portion of said conveyor disc for receiving the tobacco rod discharged by the latter, and means for conducting a cigarette paper band onto said forming band to receive the tobacco rod as it is discharged from said channel.

2,949,919
TOBACCO TREATMENT
William E. Johnson, Wilson, N.C., assignor of one-third each to H. D. Hedrick and C. H. Wolf, both of Henderson, N.C.
Filed July 29, 1955, Ser. No. 525,231
11 Claims. (Cl. 131—149)



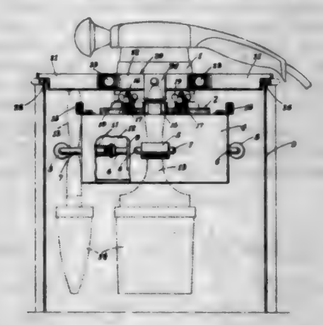
1. A conveying system comprising a feeder conveyor including an endless chain, U-shaped clips mounted on said endless chain and projecting outwardly therefrom for receiving bundles, means to drive said feeder conveyor in the direction of the free ends of the legs of the U-shaped clips thereof, a gathering conveyor including an endless chain arranged with one run adjacent a portion of said feeder conveyor, means to drive said gathering conveyor so that the adjacent run thereof moves in the same direction as and at a higher speed than the adjacent portion of the feeder conveyor, said gathering conveyor having clip means mounted thereon with said clip means including cooperating jaws, at least one jaw projecting outwardly from said gathering conveyor and overlapping the associated U-shaped clip of the feeder conveyor at the said adjacent portion of said feeder conveyor at predetermined times with the legs of the U-shaped clip and at least one jaw being open in the said direction of movement and in substantial alignment in the region of said adjacent portion for simultaneously contacting a bundle received in the associated U-shaped clip in the path of at least one jaw, and means to synchronize said feeder conveyor with said gathering conveyor so that each U-shaped clip of said feeder conveyor positions the bundle carried thereby in the region of said at least one jaw of the associated clip means whereby the article will be transferred from the feeder conveyor to the gathering conveyor.

2,949,920
COMB FOR USE IN CUTTING HAIR
Vonnie D. Humphrey, Trailer Haven, Melbourne, Fla.
Filed July 3, 1957, Ser. No. 669,749
2 Claims. (Cl. 132—45)



1. A comb of the class described, comprising a body portion of circular formation constructed of semi-rigid material adapted to be secured around the head of a person, teeth extending downwardly from one edge of said body portion, said teeth being curved laterally and tapered to fine points, and barbs extending laterally and disposed in the spaces between adjacent teeth, said barbs also being curved upwardly and disposed throughout the entire lengths of said teeth providing support for hairs in which the comb is positioned, whereby the hairs supported by said barbs extend beyond the outer surfaces of the teeth, and the curved surfaces of said teeth providing guides for shears in cutting the hairs supported by said teeth in shingling the hair.

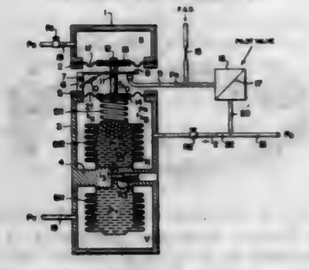
2,949,921
PAINT BRUSH CLEANER
Calvin E. Boland, P.O. Box 1585, Visalia, Calif.
Filed May 12, 1958, Ser. No. 734,581
3 Claims. (Cl. 134—140)



1. A paint brush cleaner comprising in combination with a power unit which includes a body and a base plate movable relative to the body through a predeter-

mined orbital path in a horizontal plane, arms rigid with and projecting from the body to rest on the rim of a solvent-containing can to support the power unit from such can, and a brush holding device secured to and depending from the base plate; said device including a flat top plate of greater size than the base plate, and said device comprising bolts secured in and upstanding from the top plate on opposite sides of and adjacent the base plate, clips movably mounted on the bolts to releasably overhang the base plate, and clamping nuts on the bolts engaging the clips to advance and clamp the same against the base plate.

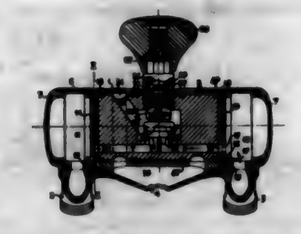
2,949,922
CONTROLLER HAVING PROPORTIONAL BAND ADJUSTMENT
Edward C. Grogan, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Original application Aug. 7, 1952, Ser. No. 303,070, now Patent No. 2,774,367, dated Dec. 18, 1956. Divided and this application May 11, 1956, Ser. No. 584,320
2 Claims. (Cl. 137—36)



2. A controller actuated by an elastic fluid, including, a valve operable to derive a pressure containing an error signal in response to the difference existing at any time between the value of the process variable and that value of the process variable which it is desired to maintain, a first restriction connected to the output side of said valve, a first chamber connected to the output side of said valve through said first restriction and having a first flexible wall and a second flexible wall, said first flexible wall being connected so as to operate said valve in the opposite direction to that direction in which said pressure difference actuates said valve, a spring interposed between and actuating said first and second flexible walls, a second chamber having a third flexible wall therein, and a second restriction interposed between said second and said third flexible walls and adapted to delay the flow of liquid therebetween, said second and third flexible walls and said second restriction cooperating to define a third chamber interposed between said first and second chambers and adapted to contain a liquid therein, said third flexible wall being exposed on its opposite side from said liquid to the pressure in said second chamber which pressure is selected from the class comprising the pressure proportional to the process variable and the pressure proportional to that value of the process variable which it is desired to maintain.

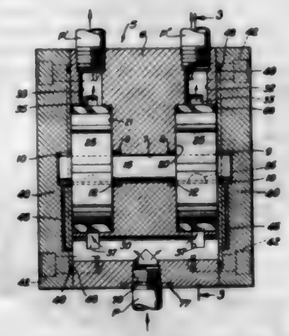
2,949,923
APPARATUS FOR DISTRIBUTING AND MIXING TWO FLUIDS
Eugene Clerc, 16 Avenue Sainte-Clotilde, Geneva, Switzerland
Filed Aug. 5, 1957, Ser. No. 676,092
Claims priority, application Switzerland Feb. 2, 1957
10 Claims. (Cl. 137—98)

7. An apparatus for selectively mixing and dispensing two fluids, comprising, a tubular body having an internal bore and a medial arcuate slot, removable covers closing the opposite ends of said body, axially movable discs having ports and secured against angular movement within the body and cooperating with the covers to provide fluid-tight receiving chambers, inlet pipes disposed radially of the axis of the body and communicating with said receiving chambers, an outlet nozzle on the body between the inlet pipes, and plug means concealed within the body and movable about its axis, said plug means including, longitudinal passages for variable communication at one end with the ports of the discs and at the other end with a



mixing chamber establishing communication between the ported discs and the outlet nozzle, an inlet valve seat in the mixing chamber and disposed across the said passages at their entrance to the mixing chamber, a control knob and spindle disposed radially of the plug and shiftable in said slot to control flow between said passages and said mixing chamber, said knob and spindle also rotatable about its own axis, and a closing member carried by the inner end of said spindle for movement toward and from said valve seat to control said passages when said knob is rotated about its axis.

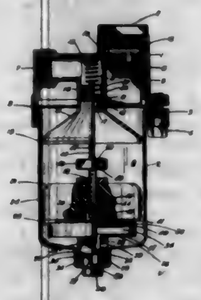
2,949,924
FLUID PROPORTIONING DEVICE
Arthur Melvin Cochran, Jr., 3536 Rose St., Arlington, Calif.
Filed Feb. 3, 1958, Ser. No. 713,039
1 Claim. (Cl. 137—99)



In a fluid metering device, a body having circular and parallel surfaces together defining a pair of parallel cavities of equal size, a shaft journaled in said body between and eccentric to said cavities, a pair of rotors secured on said shaft for rotation in and eccentric to said respective cavities, each of said rotors having a width equal to the width of said respective cavities and having substantially equidistantly circumferentially spaced radial slots opening through its side and peripheral surfaces, a vane radially slideably mounted in each of said slots, for wiping engagement with said circular surfaces, said vanes being coextensive in width with said respective rotors, and resilient means yieldably urging each of said

vanes radially outwardly of its carrying slot; each of said circular surfaces being interrupted, at two points spaced apart circumferentially thereof in the direction of rotation of the respective rotors, by relatively narrow surface portions curved about relatively smaller radii whereby to define a fluid inlet chamber and a fluid outlet chamber; the said surfaces exposed to wiping engagement by said vanes being of greater length from said inlet chambers to said outlet chambers than from said outlet chambers to said inlet chambers, when considered in the direction of rotation of said rotors.

2,949,925
WATER SEPARATOR FOR COMPRESSED AIR LINES
Frederick J. Everett, Chicago, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Mar. 6, 1958, Ser. No. 719,575
4 Claims. (Cl. 137—195)



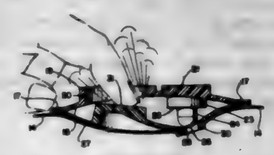
1. A device for removing water from compressed air having water entrained therein comprising a casing defining an air inlet and an air outlet and defining a precipitation chamber between the inlet and the outlet, an apertured baffle defining a truncated-conical impact surface carried by the casing near the upper end of the chamber against which air flowing from the inlet impinges to precipitate water entrained therein, the lower periphery of the baffle defining a somewhat restricted annular passageway with the adjacent inner periphery of the casing for increasing the rate of air flow, the lower portion of the chamber collecting precipitated water, a yieldable element disposed in the lower portion of the chamber, an immersible housing enclosing the yieldable element and defining upper and lower chambers above and below the element, structure defining a fluid connection between the lower housing chamber and the precipitation chamber, structure defining an outlet for the water at the lower portion of the lower housing chamber, a dump valve immediately below, coaxial with, and connected to the element for controlling the flow of water through its outlet, a hollow tube restricted at its upper end and extending upwardly from the top of the housing, and through the baffle to the air outlet to connect the upper housing chamber to the air outlet, structure carried by the tube defining a control puassageway between the tube interior and the precipitation chamber, a float surrounding the tube and engaging the last-mentioned structure to close the control passageway incident to a rise in the water to a predetermined level, a pressure reducing valve interposed between the precipitation chamber and the air outlet, the yieldable element operated by the pressure differential above and below the element incident to the closure of the control passageway by the float for opening the dump valve to expel water from the precipitation and lower diaphragm chambers.

2,949,926
VALVE OPERATED BY THE ACTION OF LIQUID
Mireille Hanin and Jacques Voeltzel, Paris, France, assignors to Institut de Recherches de la Sidérurgie, Saint-Germain-en-Laye, France, a French professional institution
Filed Mar. 23, 1956, Ser. No. 573,437
Claims priority, application France Dec. 5, 1955
1 Claim. (Cl. 137—202)



A valve operated by the action of liquid comprising in combination an envelope having an upstream and a downstream orifice, a first open tubular portion entering said envelope through said upstream orifice, a recessed seating at the lower end of said first tubular portion, a tubular guiding portion co-axial with said first tubular portion entering said envelope through said downstream orifice, the upper end of said tubular guiding portion being flared, said guiding portion having orifices to allow the interior of said portion to communicate with the interior of the envelope, a float member adapted to be moved in the tubular guiding portion under the action of entraining liquid, the upper end of said float member having an enlarged portion to alternately rest on said upward flared end of the guiding portion and to co-operate with the recessed seating to obturate the valve seating, and ducts near the exit of said tubular guiding portion to allow rapid flow of the actuating liquid and of gases.

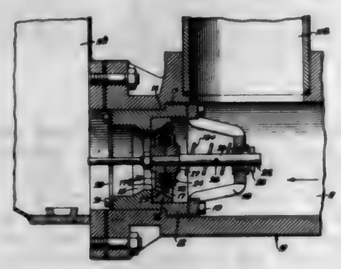
2,949,927
RESILIENT INFLATION-DEFLATION VALVE
Henry H. Mackal, E. 37 Spring Valley Ave., Paramus, N.J.
Filed Oct. 10, 1957, Ser. No. 689,389
13 Claims. (Cl. 137—223)



1. A valve comprising two superimposed plate members which are sealingly connected at their edges, said plate members presenting a space between them, a first one of said plate members being relatively rigid but resiliently flexible and the second of said plate members being relatively soft and flexible, the first plate member having a first opening therethrough permitting the introduction of fluid therethrough into the space between the plate members, the second plate having a second opening therethrough permitting egress of fluid from the space between the plate members, and a stem-like member attached to the first plate member, said stem-like member extending into the space between the plate members and confronting the second opening, the free

end of the stem having a diameter relative to the second opening such that it seals such second opening, the plate members being movable toward and away from each other in the central portions thereof so that the stem-like member may be selectively advanced relatively toward and retracted from the second plate member to close and open, respectively, said second opening, the first and second openings being displaced a substantial distance from each other laterally of the valve and being located on opposite sides of the center thereof.

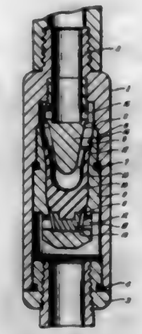
2,949,928
VALVE
Lloyd H. Hobson, Lemont, Ill., assignor to Plastering Development Center, Inc., Chicago, Ill., a corporation of Illinois
Filed Jan. 16, 1958, Ser. No. 709,360
1 Claim. (Cl. 137—454.2)



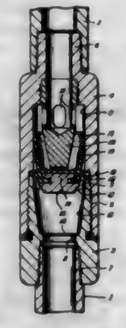
In a check valve for a system conducting paste-like materials, a seat member having an opening extending therethrough, one end of said opening being inwardly tapered, a valve element in said opening and comprising a rigid metal member having a perimetric shape conforming to the transverse sectional configuration of the most constricted part of the tapered portion of the passage and being slightly smaller than the most constricted part, a resilient member only secured to the periphery of said rigid member, said resilient member having a periphery concentric to and larger than said rigid member to provide an unsupported annular portion engageable with the wall of said passage, said resilient member having forward and side walls, said forward wall lying only in a plane normal to an axis through said opening and said side wall lying in a plane normal to said forward wall and thereby cooperating with said forward wall to define a sharp leading edge to first engage the wall of said passage, said annular portion being flexible freely rearwardly when engaging said passage wall and pivotable about said engaged leading edge so as to also position portions of said forward and side walls in engagement with said passage wall, and guide means limiting the valve element movement to along the passage axis.

2,949,929
CHECK VALVE
Howard H. Moore, Jr., Houston, and William H. Dietz, Bellaire, Tex., assignors to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed Feb. 3, 1958, Ser. No. 712,773
8 Claims. (Cl. 137—516.29)

1. A check valve comprising a hollow barrel for connection in a pressure fluid flow line, a bushing insert fixed within the barrel, said insert having an annular wall defining a central piston receiving chamber open at one end and terminated at its opposite end in a laterally projected piston stop abutment, the interior surface of said wall being tapered from the open end of the chamber in two axially spaced apart zones, one adjacent said open end and the other adjacent the opposite end of the chamber and the wall surface between said tapered zones extending in angular relation to both tapered surfaces, a central stem fixed within the barrel and projected in concentric radially spaced relation into the open end of the chamber and terminated in a piston stop abutment in axially spaced relation to the first mentioned stop abutment, and a floating piston having a head confined within the chamber for movement between the limits of said axially spaced abutment stops and having an annular skirt of elastic deformable nonmetallic material projecting between said stem and the wall of the insert and being of preformed frusto-conical exterior shape and of a diametrical dimension to have a seal fit at zero fluid pressure with the tapered surface of the insert wall at the limit of piston travel into abutment with said stem, said skirt being yieldable to collapse inwardly under fluid pressure exteriorly thereof and to conform to said insert wall surface under fluid pressure interiorly of the skirt and throughout the range of piston travel.



2,949,930
CHECK VALVE
Howard H. Moore, Jr., Houston, and William H. Dietz, Bellaire, Tex., assignors to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed June 30, 1958, Ser. No. 745,678
1 Claim. (Cl. 137—516.29)



A check valve comprising a hollow housing having an annular wall defining an axial fluid flow passage through the housing and said passage including a valve chamber coaxial therewith and intermediate opposite ends of the annular wall, said wall throughout one portion of the length of the chamber presenting an elongated cylindrical interior surface and throughout an adjoining elongated portion of the chamber length having its interior surface tapered from the cylindrical portion with the large end of the tapered surface of the same diameter as the cylindrical surface and merging therewith as a continuation thereof, an annular valve seat carried by said wall and projected inwardly therefrom into the passage at the small end of the tapered surface, a cup shaped free piston floatingly contained in said chamber and movable axially to and from said annular seat in response to differential pressures on opposite sides thereof, said cup shaped piston having a base of a diameter approximating that of the small end of said tapered portion and engageable at one limit of piston movement with said annular valve seat to close the passage and having an axially elongated skirt of elastic deformable material whose peripheral surface is of frusto-conical shape and is secured at its small end to and is projected axially from said base to the skirt large end, said skirt large end being of substantially cylindrical form which in the absence of a collapsing pressure differential has a peripheral diameter as great as the inside diameter of the cylindrical wall portion and has a sliding seal fit thereto and also serves to center the piston in its movement, means on the housing engageable by said piston to limit piston movement away from said seat, the taper of said skirt substantially corresponding with that of said tapered wall to seal thereon under fluid pressure interiorly of the skirt coincident with the engagement of the base with said annular seat and to be spaced from the cylindrical wall portion for exposure of its peripheral surface to fluid pressure exteriorly of the skirt while its large end is still in sealing relation with said cylindrical wall portion.

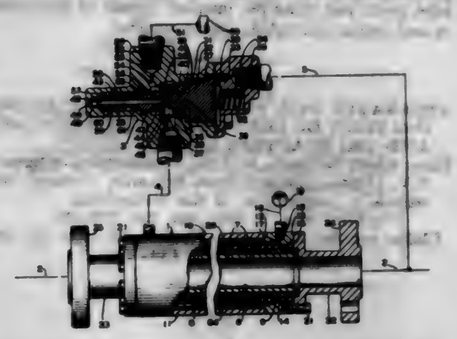
2,949,931
MAGNETIC CHECK VALVE
Siegfried Rupprecht, Inglewood, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Jan. 29, 1958, Ser. No. 711,997
4 Claims. (Cl. 137—528)



1. A magnetically operable one way fluid check valve having a body, a chamber in said body, inlet and outlet ports communicating with said chamber, a valve disc of permeable material and a leg supported cross member cage for said disc and in said chamber, the combination with said valve of: an annular tubular permanent magnet, said magnet being compressed sintered material with a nonpermeable binding material therethrough and positioned within said chamber; means including clamping between said legs of said cage and one end of said body for retaining said magnet in said position within said chamber, and an annular nonpermeable valve seat formed integrally on said magnet from said binding material, said disc being adapted for fluid sealing cooperation with an annular face of said valve seat by attraction thereto and retention thereon by said magnet.

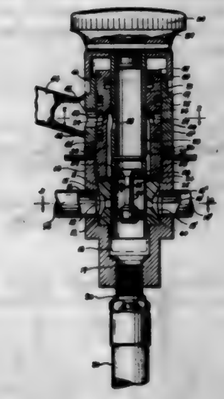
2,949,932
SURGE DAMPENER APPARATUS
Ellis E. Hewitt, Ruffedale, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Filed June 18, 1959, Ser. No. 821,273
6 Claims. (Cl. 137—593)

1. Surge dampener apparatus for use in a pipe line to dampen sudden surges of fluid pressure therein, said apparatus comprising in combination, a dosurger device of the type having a movable member interposed between and subject in respective chambers on opposite sides thereof to the pressure of fluid in the pipe line and to the variable pressure of a compressible gas which by yieldingly permitting movement of the said movable member in response to sudden pressure surges in the pipe line serves to dampen such sudden pipe line pressure



surges, a source of gas under pressure, and relay valve means operatively responsive according to gradually occurring mean pressure variations in the pipe line for correspondingly controlling the supply of gas under pressure from said source to the corresponding chamber at one side of the movable member so as to maintain substantial equivalency thereof with the pressure in the other chamber notwithstanding variation of the mean pressure in the pipe line.

2,949,933
VALVE STRUCTURE
Alfred M. Moen, Rte. 1, 151 Lakeview Drive, Grafton, Ohio
Filed Jan. 7, 1957, Ser. No. 632,757
3 Claims. (Cl. 137—625.17)



1. A mixing valve comprising a valve housing, a valve chamber in said housing, said valve chamber having a plurality of water supply lines opening thereinto and a discharge port leading therefrom, a valve cylinder of resiliently yieldable, rubber-like material within said valve chamber, inlet ports formed in the sidewall of said valve cylinder and registering with the water supply lines, a tubular valve member, said valve member being rotatably and longitudinally movable in said valve cylinder, an inlet port formed in the tubular valve member, said inlet port being adjustable into and from registration with

said cylinder ports to more or less extent to control mixture and flow through the valve, means secured to said tubular valve member, exterior of the valve housing, for effecting adjustment of the valve member, pressure responsive areas on the external surface of said valve cylinder surrounding the inlet ports thereof whereby the pressure of fluid in the supply lines will exert pressure on pressure responsive areas of the cylinder surrounding said inlet ports and cause the internal surface of the cylinder to seal against said tubular valve member.

2,949,934

APPARATUS FOR PROMOTING NON-CHANNELING FLOW OF LIQUID THROUGH TREATMENT AND/OR REACTION ZONES

Hans Alwin Schrenk, Arnhem, Netherlands, assignor to N.V. Onderzoekingsinstituts Research, Arnhem, Netherlands, a corporation of the Netherlands

Filed Mar. 9, 1956, Ser. No. 570,638
Claims priority, application Netherlands Mar. 21, 1955
2 Claims. (Cl. 138—38)



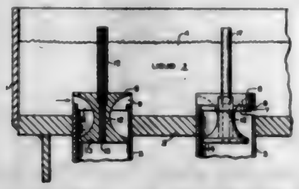
1. A flow vessel provided with means for obtaining a non-channeling flow of liquids therethrough, said means comprising a band ring chain of interlinked rings disposed in extended condition in said flow vessel, each ring of the band ring chain consisting of a relatively thin-walled cylinder (*a*) whose outer diameter is slightly less than the inner diameter of the flow vessel so that the band ring chain fits in the flow vessel with only small play and (*b*) whose height with respect to its diameter and wall thickness is such that into each of said rings besides two rings with that height only one ring with half that height may be fitted.

2,949,935

LIQUID DISTRIBUTING DEVICE

Eugene A. Edmonds, Louisville, Ky., assignor to Henry Vogt Machine Company, Louisville, Ky., a corporation of Kentucky

Filed Oct. 29, 1956, Ser. No. 618,772
3 Claims. (Cl. 138—38)



1. A liquid distribution device for equipment of the type having an upper liquid header, containing a tube sheet supporting a body of header liquid which is maintained upon the tube sheet up to a predetermined level within the header, and a bank of vertical tubes, which depend from the tube sheet with their upper open ends connected to receive liquid from the header, comprising: a body of mushroom shape having a horizontally-arranged cap and a stem centrally depending from said cap; said cap being adapted to rest within the header on the upper end of a tube of less inner circumference than the periphery of said cap, said cap having its lower circumferential corner cut away to provide a horizontally-arranged circumferentially-extending recess to receive the upper end of said tube, the lower circumferential corner of said cap being cut away more deeply at spaced intervals along its periphery to provide, at each cut, an inlet port in the periphery of said cap, an outlet port in the bottom face of said cap and an interposed passageway interconnecting said ports; and, there being attached below said stem, an extension which increases circumferentially in the downward direction to form a depending spreader, the lower end of which is adapted to cooperate with the internal periphery of the tube to form a circumferentially-extending slot therebetween.

2,949,936

HEDDLE COMPRISING EYES ADJACENT ITS ENDS

Otto Wagner, Horgen, Zurich, Switzerland, assignor to Grob & Co. Aktiengesellschaft, Horgen, Zurich, Switzerland

Filed Sept. 25, 1956, Ser. No. 612,035
7 Claims. (Cl. 139—96)



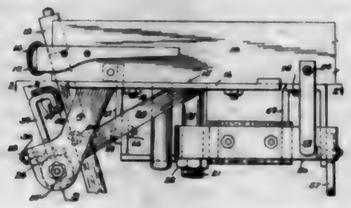
1. A heddle comprising a flat strip of material of uniform thickness so as to enable a plurality of identically shaped heddles to be mounted in unbroken flatside engagement with each other, an eye adjacent to each end of said strip, an eyelet for a warp thread intermediate said eyes, and a chamfer extending at least along a portion of one edge of said strip between said eyes and eyelet so as to provide a break in said unbroken engagement for insertion of a separating tool, said chamfer being such as to provide a substantially sharp edge on the strip and to leave between two adjacent strips a recess which is substantially V-shaped in a cross-section of the strips.

2,949,937

PICKER STICK CHECK APPARATUS

Frank L. Goodnough, Rte. 2, Galax, Va., and Douglas D. Goodnough, Burlington, N.C. (P.O. Box 386, Swepsonville, N.C.)

Filed Nov. 16, 1956, Ser. No. 622,639
13 Claims. (Cl. 139—169)



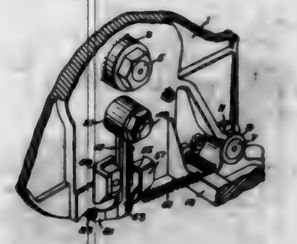
11. A picker stick check apparatus in combination with a loom lay comprising a bracket member mounted on the loom lay, a shaft supported by the bracket member in the path of picker stick travel, a picker stick check arm for receiving picker stick impact, a pair of stops supported by the bracket for limiting angular displacement of the arm, said stops being adjustable relative to each other, and spring means normally and yieldably urging the arm against one of the stops.

2,949,938

BOBBIN SUPPORTS FOR BATTERY LOOMS

Lloyd G. Urquhart, Westboro, Mass., assignor to H. F. Livermore Corporation, Boston, Mass., a corporation of Delaware

Filed Nov. 26, 1956, Ser. No. 624,458
7 Claims. (Cl. 139—251)



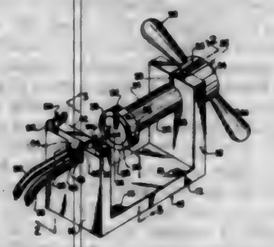
1. A bobbin support for automatic loom batteries comprising in combination a swinging arm, spaced members extending laterally therefrom at right angles to the plane in which the arm swings, and means mounted on such members and bridging the space therebetween and supporting the head of a bobbin in the battery in delivery position.

2,949,939

HANDY WIRE SPLICER

Joseph Milla, Flushing, N.Y., assignor of one-fourth to Maria Barrios and one-fourth to Clement Barrios, both of Brooklyn, N.Y.

Filed July 15, 1957, Ser. No. 672,083
1 Claim. (Cl. 140—115)



A wire splicer, comprising an elongated U-shaped frame having spaced parallel end walls, a wire-clamping means disposed on one end wall of the frame, a rotary wire supporting means disposed on the other end wall of the frame, said clamping and rotary means being aligned longitudinally of the frame between the end walls thereof, said clamping means having spaced wire receiving recesses for removably holding wires to be spliced, said rotary means comprising a shaft axially shiftable toward and away from the clamping means to provide a take-up for progressive contraction of wires resulting from intertwisting the same, said shaft having a plurality of longitudinal bores extending therethrough for receiving wires held by said clamping means, whereby said wires are adapted to be intertwisted upon rotation of said shaft, a pair of said wires being disposed in diametrically opposite bores.

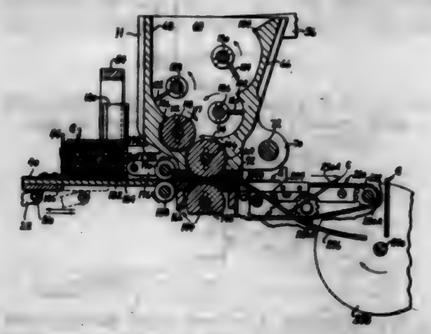
2,949,940

BATTERY PLATE PASTING MACHINE

Harold A. Lezo, 148 Kell St., North Tonawanda, N.Y.

Filed July 5, 1955, Ser. No. 519,977
8 Claims. (Cl. 141—32)

1. In a grid pasting machine having a frame, a hopper for paste supported by the frame, a bottom wall for the the hopper provided with a transverse slot to provide a pasting zone, a pasting roller provided with a roughened continuous surface cooperating with the slot to force paste into and through the zone, a passageway below the wall for grids, means to move the grid through the passage-way, said passage-way being defined in part by a lower wall substantially parallel to the bottom wall of the hopper, a transverse slot in the lower wall opposite the slot in the bottom wall of the hopper, a smooth roller cooperating with the lower slot to smooth the paste on the lower side of the grid, an upper feed roller in the hopper cooperating with the pasting roller to feed paste to the pasting zone as a thin layer and means to selectively control the relative speed of the feed roller and the pasting roller.

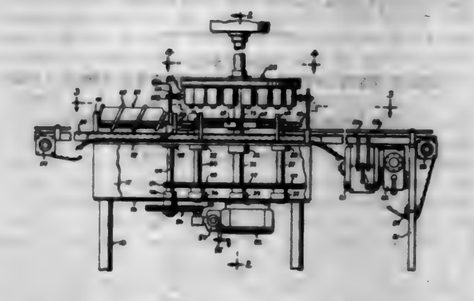


2,949,941

ROTARY FILLING MACHINE

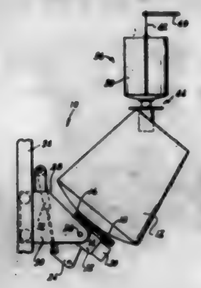
Albert R. Mojonnier, Chicago, Ill., assignor to The Kartridg Pak Co., a corporation of Iowa

Filed Mar. 31, 1958, Ser. No. 724,938
9 Claims. (Cl. 141—141)



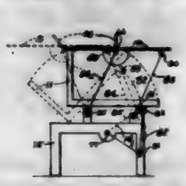
1. A rotary filling machine comprising an annular filler head mounted for rotation about an upright axis, a plurality of solenoid-operated valves mounted on said head and annularly spaced therearound, a tank disposed above said head, means communicating said tank with each of said valves, means for supplying liquid to said tank, means for maintaining a substantially constant liquid level therein to provide a preselected liquid head above said valves, a star wheel disposed below said head for advancing the containers to be filled in synchronism with said valves, circuit means for energizing said solenoid-operated valves including brush means individual to each of said valves, an electrically-conductive bar extending partway around said head and in the path of movement of said brush means, and means for connecting said bar to a source of power to sequentially energize said solenoid-operated valves and open said valves as the respective brush means engage said bar.

2,949,942
WATER DISPENSER FOR CONCRETE MIXER
Fred J. Styes, G6087 Miller Road, Swartz Creek, Mich.
Filed July 10, 1957, Ser. No. 670,915
2 Claims. (Cl. 141—272)



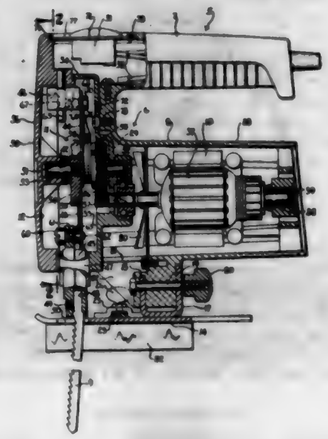
1. In combination, a concrete mixer having means for raising and lowering a rotatable mixing drum with an open top, and a water dispenser for introducing a desired quantity of water into said drum, said dispenser comprising a receptacle having an opening in its bottom and an outlet nozzle in communication with said opening, a valve member seated in said opening for closing the same, a water inlet duct for discharging water into said receptacle, water level control means in said receptacle operatively connected with said duct for controlling the flow of water into said receptacle, a sleeve telescoped over the outer end of said nozzle and having a laterally extending flange on its inner end against which the top edge of said mixing drum can be raised for telescoping said sleeve further on said nozzle, and a rod operatively connected to said sleeve and said valve member for raising said valve member from its seat when the sleeve is telescoped further onto said nozzle, whereby water can then flow through said nozzle into said drum.

2,949,943
TABLE SAW WITH MEANS FOR TILTING AND RECIPROCATING
Ole Islandsrud, Box 122, Warren, Minn.
Filed May 14, 1958, Ser. No. 735,233
7 Claims. (Cl. 143—47)



1. A powered rotary table saw compriaing, a generally rectangular base, a supporting frame pivotally mounted on said base on an axis longitudinally thereof, a motorized saw carried by said frame and reciprocable in a plane parallel to the pivotal base axis, a table top pivotlly mounted on the supporting frame on an axis parallel to the pivotal base axis above the motorized saw and having a longitudinal slot adapted to receive the saw upwardly projected therethrough for longitudinal reciprocation, and a connecting link secured to said base and said table top and constituting, together with said supporting frame, a parallelogram linkage for the table top whereby the table top will remain horizontal although supported at varying levels.

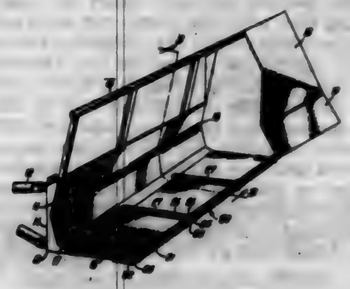
2,949,944
PORTABLE HAND HELD SAW
Donald L. Blachly, Milwaukee, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Filed June 27, 1958, Ser. No. 745,087
5 Claims. (Cl. 143—46)



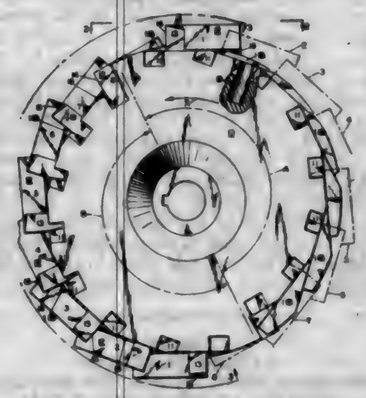
1. A hand held power driven saw of the type wherein a saw blade is rapidly reciprocated by means of a rotary electric motor drivingly connected with the saw blade through transmission mechanism which converts the rotary motion of the motor into reciprocation, said saw being characterized by: means defining a closed transmission housing having spaced front, rear and side walls and top and bottom walls; a blade carrier adapted to have a saw blade fastened thereto; bearing means in the bottom wall of the transmission housing having the blade carrier received therein and constraining the same to vertical reciprocation; a counterweight in the upper portion of the transmission housing; vertically extending guide means fixed in the upper portion of the transmission housing, and upon which the counterweight rides; coaxial bearings in the front and rear walls of the housing, the common axis of which is normal to the path of reciprocatory motion of the blade carrier and counterweight and located substantially medially thereof; a crankshaft journalled in said bearings; a pair of axially adjacent oppositely displaced eccentrics on the shaft spaced from said front and rear walls; a pitman journalled on each of said eccentrics; peripheral flanges on the remote faces of said two eccentrics holding the pitmans against axial separation and in defined axial positions on the eccentrics with one pitman projecting downward from its respective eccentric and the other projecting upward; a pivotal connection between the downwardly projecting pitman and the blade carrier; a pivotal connection between the upwardly projecting pitman and the counterweight; and means drivingly connecting the crankshaft with the motor.

2,949,945
CUTTER TYPE LAND CLEARING IMPLEMENT
Thomas A. Billings, 3778 W. Colonial Drive, Orlando, Fla.
Filed July 13, 1959, Ser. No. 826,799
5 Claims. (Cl. 144—34)

1. A brush and tree cutting attachment for tractors comprising a bulldozer blade adapted to be mounted forwardly of a tractor, a cutter supporting member secured to the lower edge of said bulldozer blade and projecting forwardly therefrom, a shaft journaled at and extending along the forward edge of said cutter supporting member and lying in the plane thereof, toothed cutter means keyed on said shaft and supported therewith at said forward edge of said cutter supporting member, said shaft and toothed cutter means extending transversely of said tractor substantially the width of said bulldozer blade and the cutter means having a plurality of milling teeth thereon, and driving means for said toothed cutter means for rotating the same about the axis of and with said shaft.

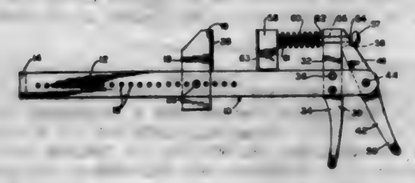


2,949,946
MEANS FOR PRODUCING FLAKES WHILE CUTTING A FLAT SURFACE ON WOOD
Donald L. Johnson, 831 Rust Bldg., Tacoma 2, Wash.
Filed Mar. 28, 1958, Ser. No. 724,549
6 Claims. (Cl. 144—162)



1. In a rotating cutter head for a wood flaking and surfacing device, a plurality of slicing knives secured on said cutter head and extending from its periphery, the periphery of said cutter head provided with equally spaced, substantially rectangular mounting slots for said knives, said slots inclined forwardly in the direction of rotation of said cutter head and extending in planes all having the same angularity with respect to the cutter head axis, each of said knives having a body with a thickness less than the width of said slots, the forward end of each knife body beveled to form a cutting edge, the cutting edges of said knives extending perpendicular to said cutter head axis, the trailing face of each knife having longitudinally-extending serrations, the adjacent wall of each slot having corresponding engaging serrations, the leading face of each knife body having a slight transverse taper and having serrations extending laterally on said tapered portion, a locking wedge plug for each knife, each slot having a recess for said wedge plug, each wedge plug having a face adapted for engagement with said latter mentioned tapered portion on the knife body, means for releasably securing said wedge plug in locking engagement with the knife body, the periphery of said cutter head being so formed that said slots will be arranged in a series with the radial distance of said slots from the axis of said cutter head decreasing in said series in the direction opposite from the direction of rotation of said cutter head, and said knives so positioned in said slots that said cutting edges will also be located in an axially-advancing course throughout said series.

2,949,947
STRAIGHT BEAM ADJUSTABLE JAW CLAMP
John D. Story, 101 SE. 8th St., Bethany, Okla.
Filed Nov. 10, 1958, Ser. No. 772,945
3 Claims. (Cl. 144—303)

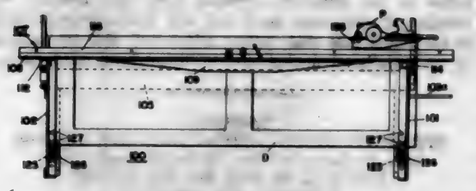


1. A clamp comprising in combination, a frame including a pair of parallel spaced apart bars, each bar having a plurality of complementary apertures, an adjustable jaw having an aperture therein and having notches on opposite sides slidably received between the bars with the notches fitting the respective bars to prevent deflection of the work-engaging face of the jaw from a right angle disposition relative to the longitudinal axes of the bars, a locking pin adapted for insertion into the jaw aperture and in corresponding bar apertures in registry therewith for fixing said jaw on the frame, a post rigidly mounted on the bars having an outer apertured portion projecting substantially at right angles to the longitudinal axes of the bars in apposition to the adjustable jaw and a hand-grip portion projecting beyond the side of the bars opposite said outer apertured portion, a lever mounted intermediate of its ends between the outer ends of the bars and for pivotal movement relative thereto having an outer apertured portion adapted to bear against the outer apertured portion of the post and a portion disposed in complementary relationship with the grip portion of the post for hand gripping by the clamp operator to effect pivotal movement of the lever, a second jaw carried at one end of a rod, the opposite end of which projects through the respective apertures in the outer portions of the post and the lever terminating in a head adapted to bear upon the lever as the latter is manually pivoted to effect movement of the rod and the second jaw carried thereby, said head thereby limiting the movement of the rod and said second jaw as the lever outer portion abuttingly engages the post outer portion, and a coil spring encircling that portion of the rod between said second jaw and the post and urging said head to bear against the lever while urging said second jaw to project into a normal distended position relative to the adjustable jaw for cooperation therewith in the clamping of work positioned between said jaws.

2,949,948
SYSTEM FOR HANGING DOORS
Warren B. Zern, R.D. 1, near Pottstown, Pa.
Filed Aug. 6, 1957, Ser. No. 676,555
11 Claims. (Cl. 144—309)

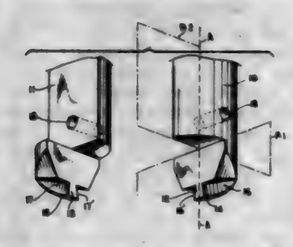
7. The method of preparing a door for hanging in a frame comprising inserting a contour gage in the opening of the frame, inserting feeler gages at predetermined locations around the frame opening between the frame and the contour gage, adjusting a cutting-tool-controlling

guide in accordance with the thickness of the feeler gages inserted at said predetermined locations to match the guide to the contour of the frame, supporting a door



relative to the guide, and moving a cutting tool along the guide and the edges of the door to change the contour of the door to match the contour of the frame.

2,949,949
SPLIT DRIVER AND REMOVING TOOL
Rudolph M. Vaughn, 2008 N. Westwood, Santa Ana, Calif.
Filed Jan. 23, 1959, Ser. No. 788,656
4 Claims. (Cl. 145—50)



1. A split driver removing tool comprising: a driving end having an arcuate bottom of given radius of curvature terminating on the longitudinal axis of said tool, said driving end being divided into two symmetrical halves by a first vertical plane including said longitudinal axis and normal to a second vertical plane including said longitudinal axis and the arc defining said arcuate bottom, to provide two half driving end portions; and means pivoting said driving end portions for scissoring movement towards and away from each other about an horizontal pivot axis lying in said first vertical plane and passing through the point of termination of said radius of curvature on said longitudinal axis in a direction normal to said second vertical plane, the opposite side walls of each of said half driving end portions diverging from each other in curved directions away from opposite sides of said first vertical plane respectively as projected on to a horizontal plane normal to both said first and second vertical planes, said opposite side walls in addition converging upwardly in curved directions towards each other from the lower edges of said arcuate bottom when viewed in said first vertical plane, said opposite sidewalls thereby defining non-planar surfaces.

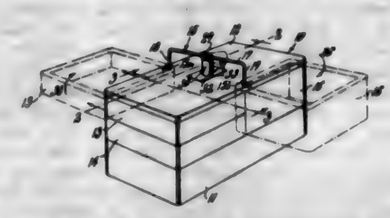
2,949,950
NUT CRACKER
Ethel V. Gore, 112 S. Leon Ave., De Land, Fla.
Filed Feb. 11, 1959, Ser. No. 792,574
1 Claim. (Cl. 146—13)

A nut cracker comprising, in combination, a horizontal rectangular shaped base having a pair of vertical, substantially identical, upright plates integrally secured thereto, each of said upright plates defining the outline of a dog and having a stationary head portion with flat side walls at the forward end thereof, each of said stationary flat side wall head portions having downwardly facing teeth thereof, said pair of head plates forming a stationary, fixed, rigid upper jaw with depending teeth at its side edges, a single movable jaw embodying a front horizontally offset bell crank lever having upwardly facing teeth at the forward end thereof, said movable jaw bell crank lever pivotally mounted between said rigid upright plates, said front horizontally offset bell crank lever having an intermediate portion and a depending rear end portion, said intermediate portion and said depending rear end portions each having a transverse bore therethrough, a pivot pin extending through said bore in said intermediate portion of said horizontally offset front bell crank for pivotally mounting said movable jaw between and beneath said stationary, fixed upper jaw, a movable handle embodying an offset rear bell crank lever arranged between said upright plates having an intermediate portion and a depending offset forward end portion and each of its portions thereof having a transverse bore therethrough, a



second pivot pin extending through said bore in said intermediate portion of said offset rear bell crank lever for pivotally mounting said offset rear bell crank lever between said pair of upright plates at the rear end thereof, a straight longitudinal linkage bar having a single transverse bore extending through each of the forward and rear ends thereof, a third pivot pin extending through said bore in the forward end of said linkage bar and said bore in the depending rear end portion of said front offset bell crank lever, a fourth pivot pin extending through said bore in the rear end of said linkage bar and said bore in the depending forward offset end portion of said rear bell crank lever for pivotally connecting said movable jaw with said movable handle, and said linkage bar positioned longitudinally and adjacent one of said pair of plates transmitting force from said movable handle connected with said rear bell crank lever positioned longitudinally and adjacent the other of said plates to said movable jaw in response to pivotal movement of said movable handle.

2,949,951
LADIES' HANDBAGS
Moritz Schoen, 240 W. 102nd St., New York 25, N.Y.
Filed Feb. 25, 1958, Ser. No. 717,444
4 Claims. (Cl. 150—28)



1. A handbag and like carrying case comprising a body provided with a hollow base section having an open upper end, a plurality of compartmental sections arranged in superposed position to said base section, each compartmental section having a bottom and upright walls extending from said bottom and defining the interior of the respective compartmental section, projecting means located at the underface of the bottom of each compartmental section, whereby said projecting means engage at least some of said upright walls at their inner surfaces in said superposed position of said sections, cover means positionable on the top of the uppermost compartmental sections, U-shaped handle means terminating in spaced apart legs passing through corresponding openings provided in said cover means, holder means for said legs located in predetermined corners of said compartmental sections, said holder means being provided with bores to guide said legs therein, which extend from said base section to said cover means, and means anchoring said legs of said handle means on said holder means.

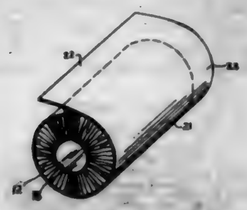
2,949,952
TUBELESS TIRE
William P. Fitzgerald, Florham Park, and Fred W. Banes and Addison W. Hubbard, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Nov. 15, 1955, Ser. No. 547,084
11 Claims. (Cl. 152—330)



1. A composition comprising a homogeneous admixture of 100 parts by weight of a rubbery polymer selected from the group of homopolymers of conjugated diolefins, copolymers of at least 50% by weight of conjugated diolefins and a balance of at least one copolymerizable ethylenic monomer, isoolefin-multiolefin copolymers containing a minor portion of multiolefins, said multiolefins being in copolymerized form, said copolymers having an iodine No. of about 0.5 to 50 and having a Staudinger molecular weight of about 20,000 to 200,000, and polyisobutylene having a Staudinger molecular weight of above about 180,000, about 5 to 200 parts of a pigment, said pigment being selected from the group consisting of carbon black, calcium carbonate, ferric hydroxide, chrome yellow, Prussian blue, phthalocyanine, clays, kieselguhr, silica, silica-alumina and titanium dioxide, and about 0.1 to 30 parts of a dispersing aid consisting of the reaction product of 100 parts by weight of an isoolefin-multiolefin copolymer having a mole percent unsaturation of about 5 to 50 and a Staudinger molecular weight of about 4,000 to 60,000, with about 5 to 200 parts by weight of a polar organic monomer containing a terminal $CH_2=C<$ group and selected from the group consisting of acrylonitrile, vinyl pyrimidine, vinyl pyridine, acrylic acid esters, methacrylic acid esters, vinyl ethers and vinyl esters.

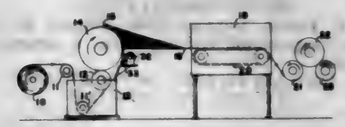
2,949,953
PIPE INSULATOR AND METHOD OF MAKING SAME
Vincent Di Maio, 521 Clifton St., and Norman T. Miller, 348 Irving St., both of Toledo, Ohio
Filed May 26, 1955, Ser. No. 511,166
9 Claims. (Cl. 154—28)

5. Pipe insulating packing comprising a split annulus-like structure having a mass of fibers which are compressible and resilient in the cylindrical direction of the structure, flexible sheet material adhesively secured to the inner edge portion of the structure for confining the radially innermost portion of the annulus core in intimately compressed condition with the remainder or radially outer portion of the annulus free, whereby the portion of the structure outside of the compressed portion due to the resiliency of the fibrous mass fans out into circular form, the structure being openable at the split



and the resiliency enabling the same to snap to substantially closed annular form upon being released, extensions on the sheet material covering the meeting edges of the annulus at the split and projecting the outer side of the structure, a cover of flexible sheet material loosely embracing the annulus and secured respectively to the projecting portions of the extensions, and a flap on said cover for covering the split and sealing such interstice.

2,949,954
CRINKLED PAPER PRODUCT AND MEANS AND METHOD OF FORMING SAME
Richard H. Wikle, 819 Belgrade Ave. NE., Atlanta, Ga.
Filed June 14, 1955, Ser. No. 515,392
7 Claims. (Cl. 154—30)



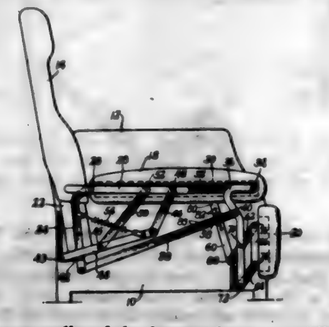
1. The method of forming crinkled paper stretchable in a plurality of angularly related directions which includes the steps of causing said paper to adhere to the uniformly flat curved surface of a cylinder and drawing the paper across the edge of a doctor blade of irregular edge configuration including straight angularly related portions as all points of said blade are contacting said cylinder.

4. A device for forming a multi-directional stretch crinkled paper including a drum and a helical doctor blade for removing paper from said drum, said blade having an edge of irregular outline characterized by straight angularly related surfaces contacting said drum at all times, said surfaces being so directed along said drum as to urge respective portions of said paper toward each other at different angles.

2,949,955
RECLINING CHAIR
John J. Barabas, East Meadow, and Sumner C. Willis, White Plains, N.Y., assignors to Castro Convertible Corporation, a corporation of New York
Filed Sept. 28, 1956, Ser. No. 612,743
2 Claims. (Cl. 155—106)

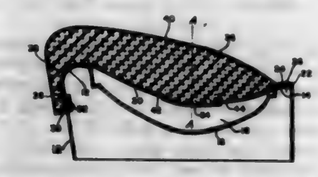
1. A reclining chair having spaced side frames, a seat mounted between the side frame and a backrest pivotally mounted between the spaced side frames for rocking movement to a reclining position, said backrest having an extension depending below its pivotal mounting, a leg-rest lever pivotally connected to the seat and depending downwardly therefrom, a thrust link extending be-

tween the depending extension of the backrest and said leg-rest lever and pivotally connected thereto for rocking the leg-rest lever upwardly on its pivotal mounting when the backrest is rocked to a reclining position, a leg-rest, and leg-rest extension means comprising a pair of links extending between the leg-rest and leg-rest lever and pivotally connected thereto, one of said pair of links



extending rearwardly of the leg-rest lever, a guiding link extending between the thrust link and the rearward portion of said one link to provide a pantograph which expands to project the leg-rest forwardly from the seat as the leg-rest lever is moved upwardly by the thrust link, and selective connection positions in said guiding link and said thrust link whereby the forward projection of said leg-rest may be varied.

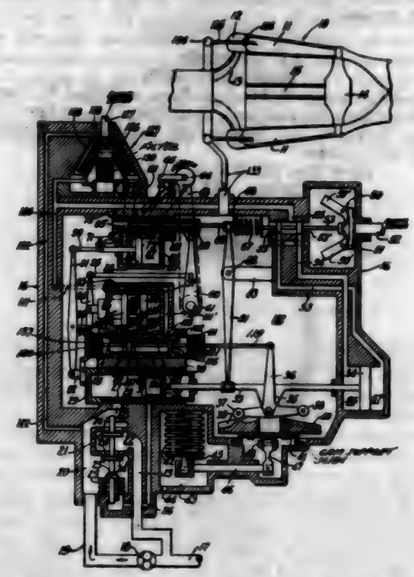
2,949,956
SEAT CONSTRUCTION
Edward P. Harris, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed July 16, 1957, Ser. No. 672,153
2 Claims. (Cl. 155—184)



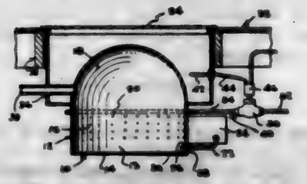
1. A seat comprising a front support, a rear support in parallel spaced relation with said front support, a flexible sheet suspended between said supports, said sheet including a first relatively non-elastic sheet connected to the front support, a second relatively non-elastic sheet secured to the rear support and a flexible member joining said first and second non-elastic sheets at their free edges, a resilient cushion extending between said front support and said rear support over said elastic sheet with the point of maximum thickness of said cushion and the flexible member vertically aligned rearwardly of a central vertical plane between the front and the rear supports.

2,949,957
FUEL CONTROL SYSTEM FOR GAS TURBINE ENGINES
James M. Eastman, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Continuation of application Ser. No. 201,090, Dec. 16, 1950. This application Sept. 28, 1954, Ser. No. 459,181
10 Claims. (Cl. 158—36)

2. In a fuel feeding system for a gas turbine engine, fuel flow regulating means including a pair of coacting valve members adjustable to vary the rate of fuel feed, first engine speed responsive means for regulating one of said valve members as a function of engine speed, second engine speed responsive means for regulating the other of said valve members as a function of engine speed, operator-controlled means arranged to adjust one of said valve members to initiate acceleration or deceleration of the engine and to substantially simultaneously reset at least one of said speed responsive means to a new selected operating speed value, said first and second speed responsive means coacting to control engine operation at the selected speed, cam means having cam surfaces contoured to maintain, at any given altitude of operation, a predetermined upper limit on the rate of fuel feed during an acceleration of the engine and/or a predetermined lower limit on the rate of fuel feed during a deceleration of the engine, and means operatively connecting said cam means to one of said valve members in such a way that said valve member is actuated to follow the contoured surface of said cam means during a transient in engine speed to said selected speed value.



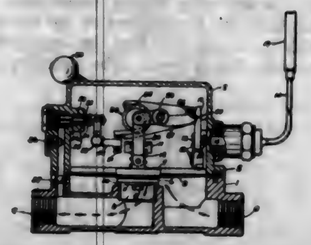
2,949,958
CONTROL FOR HEATING UNIT
Everett R. Wolters, 1022 Oaklette Ave., Norfolk, Va.
Filed June 6, 1958, Ser. No. 740,361
2 Claims. (Cl. 158—42.4)



1. In a space heater having a perforate intermediate annular side wall and a bottom wall defining a fire pot, a combustion chamber for said fire pot comprising a dome-shaped top wall, said perforations admitting a combustion supporting medium into said fire pot, means for excluding the combustion supporting medium from

within said fire pot, said means comprising an automatically operated control for directing a water spray toward and against the exterior side of said annular side wall for the conversion of said water by conducted heat into steam to effect envelopment of said side wall and to prevent entry of said combustion supporting medium into said fire pot, and means venting said combustion chamber to the atmosphere.

2,949,959
SAFETY SHUT-OFF VALVE
James Kendall Clark, New Hartford, N.Y., assignor to The Partlow Corporation, New Hartford, N.Y., a corporation of New York
Filed Feb. 9, 1955, Ser. No. 487,868
2 Claims. (Cl. 158—138)



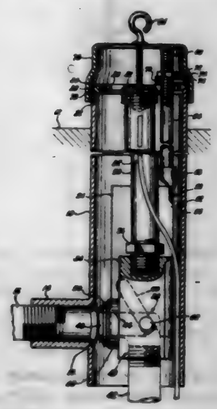
1. A safety control valve assembly for pressurized fuel comprising a housing secured on a hollow body including a fuel inlet and outlet with a valve seat interposed therebetween for controlling movement of fuel from said inlet to a main burner connected to said outlet, a first valve displaceably supported in said housing for engagement with said valve seat, biasing means in said housing in engagement with said valve and normally urging the same toward seated relation on said valve seat, manually operable control means supported by said housing in engagement with said valve for displacing it from the valve seat, a thermally operated latch in said housing adapted to be actuated in the presence of a predetermined pilot burner temperature to provide a fulcrum, lever means operatively connected between said manually operable control means and said fulcrum to permit said valve to be moved when said control means is operated, a pilot burner outlet communicable with said inlet, pilot valve means interposed between said pilot burner outlet and inlet and normally biased toward a closed position, force transmitting means on said manually operable control means and engageable with said pilot valve means for opening the same and permitting fuel to be directed to a pilot burner, and a one-way valve interposed between said outlet and pilot burner outlet, said force transmitting means on said manually operable control means disengaging said pilot valve means upon movement of said manually operable control means toward a position in which said thermally operated latch retains said valve open.

2,949,960
OIL WELL FIRE EXTINGUISHER APPARATUS
William M. Pace, General Delivery, Harrah, Okla., assignor to Hazel L. Conner, Oklahoma City, Okla.
Filed July 30, 1959, Ser. No. 830,505
6 Claims. (Cl. 166—79)



1. A fire control apparatus for oil or gas wells, including: a portable A-frame having a fixed top member; spaced-apart horizontal skids rigidly connected with the depending end portions of the legs of said A-frame; a pulley centrally carried by said fixed top member; spaced-apart upstanding supports carried by said skids remote from said A-frame; a cable drum journaled between said upstanding supports; a cable wound on said drum and having its free end portion entrained over said pulley; a plug block supported adjacent said pulley by the free end portion of said cable, said plug block having a plurality of depending conical-shaped members each adapted to enter and close the upwardly open end portion of a well casing; and means for releasing said drum to drop said plug block.

2,949,961
PITLESS ADAPTER
Noel M. Anderson, Box 392, Storm Lake, Iowa
Filed Sept. 26, 1958, Ser. No. 763,605
12 Claims. (Cl. 166—85)



1. A pitless adapter assembly, comprising a well casing provided with a lateral discharge port at a point spaced below the top edge thereof, a support ring removably mounted on the top edge of said well casing, a pull pipe operatively connected to and depending from said support ring, a housing carried by the lower end of said pull pipe, a sealing L on one side of said housing disposed to register with said discharge port, said housing provided with a passageway communicating at one end with said sealing L and designed at its other end for operable connection to a pumping unit, a vertically disposed adjusting rod parallel to said pull pipe, means threadably engaging the upper end of said adjusting rod with said support ring whereby said rod can be selectively moved upwardly and downwardly respectively relative to said support ring, a vertical guide plate being carried by the lower end of said adjusting rod, said plate adjacent said housing and provided with an inclined slot, a boss on said housing extending into said slot, and said plate vertically movable with said adjusting rod whereby said slot serves as a track moving against said boss to selectively move said L into and out of engagement with said discharge port along a horizontal line parallel to said plate.

2,949,962
HYDRAULICALLY SET PACKER
William C. Todt, Odessa, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Filed July 23, 1956, Ser. No. 599,597
3 Claims. (Cl. 166—120)

3. A hydraulically set packer for installation on the lower end of a string of tubing through which production

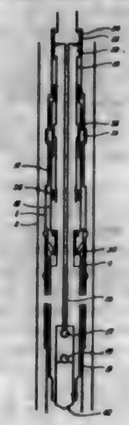
is delivered in a well having casing extending down the well below the packer, said packer comprising a tubular mandrel with a central opening extending therethrough, said tubular mandrel having a substantially uniform inner diameter throughout its legth, a ring of deformable material mounted on the outer surface of the mandrel to form a pack off element adapted to engage the casing when the packer is set, a slip cone slidably mounted on the outer surface of the mandrel abutting the lower end of the pack off element, said mandrel having at its lower end a section of enlarged outer diameter, a sleeve slidably mounted on the mandrel between the section of enlarged outer diameter and the slip cone, the sleeve and section of large outer diameter being constructed and arranged to form a pressure chamber between the sleeve and the mandrel, sealing rings engaging



the sleeve and mandrel and cooperating with the sleeve and mandrel to prevent flow outwardly from the pressure chamber, a port extending inwardly through the mandrel from the pressure chamber, slips extending upwardly from the sleeve to a position adjacent and below the slip cone when the packer is in condition for running into the well and adapted to move up over the outer surface of the slip cone as the sleeve is moved upwardly on the mandrel on the application of hydraulic pressure in the pressure chamber, a narrow shoulder extending inwardly around the inner surface of the mandrel at a position below the port to form a valve seat, and a valve element having a diameter smaller than the inner diameter of the mandrel and adapted to rest on the shoulder to close the lower end of the mandrel whereby a hydraulic pressure to set the packer can be applied to the mandrel above the shoulder.

2,949,963
SLIDING SLEEVE WELL TOOL
Harold E. McGowen, Jr., Houston, and Douglas E. Daffin, Pasadena, Tex., assignors to Camco, Incorporated, Houston, Tex., a corporation of Texas
Filed Jan. 28, 1957, Ser. No. 636,765
4 Claims. (Cl. 166—224)

1. In combination with a well tubing mandrel comprising a pair of concentrically nested inner and outer tubes, the outer of which is for connection in a well tubing string and has in axially spaced relation a port through the wall thereof and an internal latch keeper notch and the inner of said tubes being slidable in the outer tube between an upper port covering position and a lower port uncovering position and said inner tube having axially spaced apart shoulders respectively facing upwardly and downwardly and said tubes having co-operating limit stops for their relative slide travel, a retrievable tool operatively positionable within the mandrel and comprised of a barrel and a plunger slidably mounted within said barrel and shiftable between upwardly projected and downwardly retracted positions relative to the barrel, said tool with its plunger in projected relation being adapted to be lowered and raised within a tubing string to and from a position within the mandrel for co-operation therewith, axially spaced apart sealing surfaces on said barrel for co-operation with said mandrel above and below said port to block fluid flow around the barrel, a downwardly facing landing shoulder on the barrel arranged to come into engagement with the upwardly facing shoulder of the inner tube and to transmit downward barrel travel to said inner tube to its lower limit stop and such shoulder engagement at the inner tube lower travel limit serving to locate the barrel against further descent, an outwardly biased pawl pivotally carried by the barrel and arranged to snap out beneath said downwardly facing inner tube shoulder coincidentally with the engagement of the barrel landing shoulder with the inner tube and for engagement with said downwardly facing inner tube shoulder in trans-

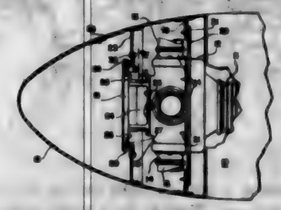


mitting upward barrel travel to said inner tube to its upper limit stop, a pivotal support for said pawl having a frangible connection with the barrel for breakage of the connection in response to barrel upward travel and resistance through said pawl engagement with the stopped inner tube, a barrel carried contact bearing engageable with the pawl upon upward barrel travel relative thereto for the retraction of the pawl from beneath said downwardly facing inner tube shoulder, a laterally shiftable latch dog carried by the barrel in retracted position when said plunger is projected and in such spaced relation with said landing shoulder as to be aligned with said keeper notch when the barrel has been stopped against further descent, a camming formation on the plunger operative on plunger retraction to push and hold the latch dog outwardly, a barrel locking connection between the barrel and the retracted plunger arranged for release in response to upward pulling force on the plunger and interengageable surfaces on the plunger and the barrel limiting plunger projection travel and enabling support of the barrel through the plunger.

2,949,964
AIRPLANE PROPELLER SPINNER ATTACHMENT DEVICE
Donald F. Froelich, Van Nuys, and Edward B. Wagner, Tujunga, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Filed Aug. 15, 1957, Ser. No. 678,383
1 Claim. (Cl. 170—159)

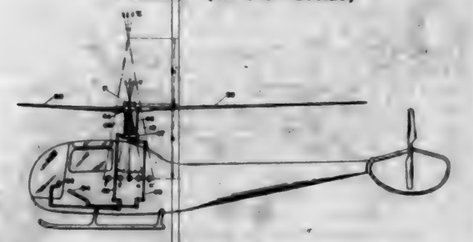
In a propeller, the combination comprising, a hub secured to the propeller, blades extending substantially

radially from the hub, a generally conical spinner enclosing the hub, first and second inwardly extending annular flanges secured to the spinner, the first and second flanges being spaced apart and separated by the hub, front and rear baffle plates attached to opposite sides of the hub in a parallel relationship, the front baffle plate having an annular notch about its rearward periphery, a split resilient ring carried within the annular notch; expandable means operatively carried on the ring for urging the ring into engagement with the first annular



flange comprising, a post carried within the notch between the opposing ends of the ring, a swivel post rotatably carried on each end of the ring, a bolt carried within the center post rotatable therein, and a pair of carriages in threadable engagement with opposite ends of the bolt having a cut-out portion for receiving the post associated with each end of the ring; and guiding means carried by the rear baffle plate engaging with the second annular flange to align the spinner on the rear baffle plate with respect to the hub and propeller.

2,949,965
ROTOR HUB
John A. De Tore, Arlington, and Robert L. Lichten, Dallas, Tex., and Arthur C. Robertson, Encino, Calif., assignors to Bell Helicopter Corporation, Fort Worth, Tex.
Filed Oct. 15, 1957, Ser. No. 690,245
7 Claims. (Cl. 170—160.25)



1. An aircraft lift rotor mechanism comprising a drive shaft, a core carried by said shaft and extending transversely therefrom in end view, a hub ring pivotally mounted upon the opposite ends of said core and encircling said shaft and pivotable upon said core about an axis extending transversely of said shaft, a pair of pillow blocks pivotally carried by said hub ring at diametrically opposed positions thereon in alignment transverse to the alignment of mounting of said hub ring upon said core, resilient connection means interconnecting said pillow blocks and said hub ring and resiliently restraining pivotal movements of said pillow blocks relative to said hub ring, a yoke freely encircling said shaft and carried by depending portions of said pillow blocks at an elevation below the level of said hub ring, a plurality of yoke arms extending radially from said yoke, a rotor blade mounted upon each of said yoke arm portions so as to be freely rotatable thereon about its longitudinal pitch change axis, tension strap means extending generally longitudinally of each of said blades and interconnecting it to its supporting yoke arm, said strap means being resilient in torsion, a swash plate mounted upon said drive shaft and pilot-controllable to tilt relative thereto, and push-pull linkage interconnecting said swash plate and said rotor blades so as to control the pitch adjustments thereof about their longitudinal pitch change axes.

2,949,966
VARIABLE PITCH BOAT PROPELLER
Herbert H. Simchauser, Beechwood Road, R.R. 2, Box 342, Ravenna, Ohio
Filed Aug. 20, 1958, Ser. No. 756,131
1 Claim. (Cl. 170—160.51)



A variable pitch water propeller assembly suitable for propelling boats, said assembly comprising a hub having spaced radially extending blade mounting recesses therein, a pair of bores extending through said hub from the bottom of one recess into the bottom of an opposed recess, a plurality of propeller blades mounted respectively in said recesses, each of said propeller blades having a base from which there axially extends a mounting stud, the mounting stud on the respective blades extending through a bore at the bottom of the recess in which the blade is mounted into an opposed recess, a major portion of said blades being disposed between leading edges thereof and their respective studs, an elongated slot in each of said blades adjacent the base thereof, a slot in each of said studs, the slot in said blades being substantially aligned with the slot in a stud extending into the recess, a retaining pin extending transversely of said recesses through said aligned slots, said blades being pivotally movable about their respective mounting studs between positions of low pitch and high pitch, and spring means biasing said blades toward their respective low pitch positions, said spring means exerting a sufficient biasing force to hold said blades in their respective low pitch positions when said propeller assembly is operatively rotated at a number of r.p.m. below a predetermined limit, operative rotation of said propeller assembly above said predetermined limit creating a water pressure on said blades sufficient to pivot them to their respective high pitch positions against the opposing biasing force of said spring means and hold them in said high pitch positions while water pressure on the blades is greater than the biasing force of said spring means.

2,949,967
BLADE-TO-HUB CONNECTOR FOR THRUST PRODUCING ROTOR
Drago K. Jovanovich, Santa Monica, Calif., assignor to Hughes Tool Company, Aircraft Division, Houston, Tex., a corporation of Delaware
Filed May 25, 1959, Ser. No. 815,687
15 Claims. (Cl. 170—160.53)

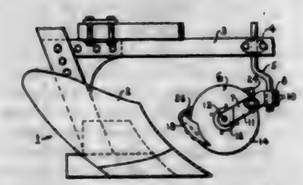
3. In an aerodynamic thrust-producing rotor having a rotor hub, an aerodynamic thrust-producing blade dis-

posed in a generally radial position relative to the hub, and means interconnecting the hub and blade for rotation of the blade in a circular path around the hub and such as to permit hinging movements of the blade relative to the hub in and across said circular path as the blade revolves with said hub, said means comprising: first and second strap-like flexible elements respectively connected



to the hub and to one end of the blade; and a transition member interconnecting the strap-like flexible elements in coextensive intersecting planes such that the blade is drivenly supported, by the hub and such that the flexible qualities of said strap-like elements are effective for permitting blade hinging movements in and across the circular path of the blade as it revolves with the hub.

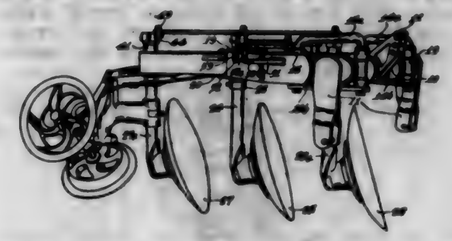
2,949,968
COULTER ASSEMBLY
Paul Stoner, Rte. 2, Valparaiso, Ind.
Filed Mar. 1, 1956, Ser. No. 568,910
5 Claims. (Cl. 172—166)



5. An assembly of the kind described comprising a plow having a share and an overhead beam, a coulter assembly, means suspending and connecting the coulter assembly to the beam for adjustment with respect to the share, said coulter assembly including a one-piece support having a depending inclined elongated portion and a lower portion, an axle carried by the lower portion and rotatably supporting a disc in advance of the share, said lower portion being offset and inclined to a greater degree than the incline of the elongated portion so that the plane of the disc will be tilted with respect to the vertical and form an acute angle with the elongated portion of the support, an arm extending chordally of the disc and having an upper end secured to the elongated portion of the support between the axle and connecting means and also having a lower bent portion straddling a peripheral portion of the disc, and a blade carried by the bent portion having a work edge operatively associated with the disc.

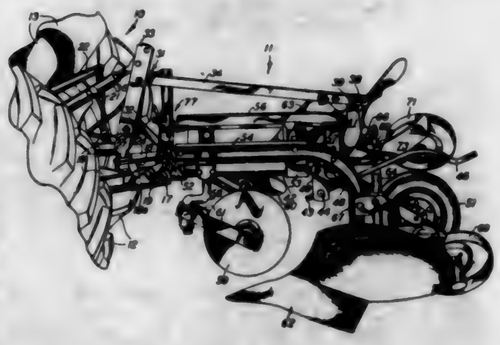
2,949,969
REVERSIBLE DISC PLOW
Philip D. Wessel, Stockton, Calif., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Filed Feb. 3, 1958, Ser. No. 712,926
6 Claims. (Cl. 172—222)

1. A reversible disc plow implement having a main frame, a forwardly extending beam pivoted on said frame so as to be swingable on a substantially vertical axis to reverse the plowing direction, a plurality of spaced, axially vertical axles carried by and rotatable in said beam and connected together for rotation in unison, discs on the lower ends of said axles, and means for rotating said axles in said beam as an incident to the reversal of the beam, comprising an arm rotatable on the beam and connected to one of said axles for rotating said axle, a



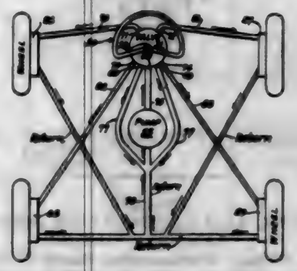
toggle comprising a pair of links having their inner ends hinged together and having their outer ends connected respectively to said arm and to a point on said beam spaced from the beam axis, and a connection between said toggle hinge and the frame.

2,949,970
POSITION LOCKING MECHANISM FOR TWO-WAY PLOW
Roy F. Schwegler, Davenport, Iowa, assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Original application Dec. 18, 1954, Ser. No. 474,426, now Patent No. 2,868,307, dated Jan. 13, 1959. Divided and this application Oct. 15, 1958, Ser. No. 767,330
5 Claims. (Cl. 172—450)



1. In a tractor conveyed pivotal plow the combination of a tractor, a transverse drawbar attached to said tractor, rearwardly thereof, power lift means on the tractor for raising and lowering said drawbar at will, a plow frame horizontally pivotally attached at its front end to said drawbar to be disposed transverse thereto, a ground tilling member attached to said frame to depend therefrom in one position into engagement with the ground, a mast attached to said frame to be pivotal thereto in a vertical plane, means attached to said tractor, said mast and said plow frame for vertically supporting said plow in a raised position of said drawbar and adapted to pivotally actuate said mast during actuation of said power-lift means, and means on said mast shiftable into engagement with said drawbar by pivoting of said mast for horizontally non-pivotally securing said frame on said drawbar when said tractor power-lift has raised said plow off the ground.

2,949,971
DIFFERENTIAL CONTROL VALVE FOR FLUID OPERATED VEHICLES
Truman H. Cline, Newark, Ohio, assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Filed July 23, 1958, Ser. No. 750,476
12 Claims. (Cl. 180—6.3)



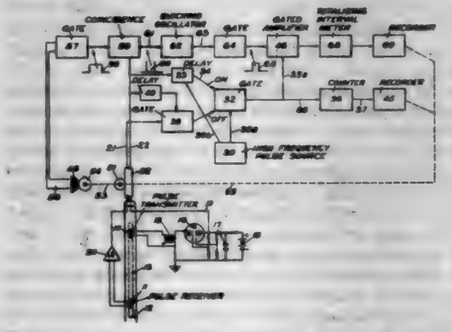
1. In a fluid driving system for automotive vehicles having a pressure fluid pump and a turbine unit operatively associated with each wheel of a vehicle, certain of said turbine units being arranged to drive said vehicle in a forward direction and other of said turbine units being arranged to drive said vehicle in a rearward direction, a control valve for selectively controlling the delivery of pressure fluid to respective turbine units to drive the same, said valve comprising a housing having an inlet port, a return port, a first pair of outlet delivery ports and a second pair of outlet delivery ports, each of said outlet ports being connected to a respective turbine unit, a valve rotor element within said housing, said rotor element having a medial channel communicating with said inlet in all positions of operation and a pair of longitudinally extending channels communicating with said medial channel, means for selectively rotationally shifting said rotor element to align said longitudinally extending channels with respective outlet delivery ports, a shaft extending coaxially of said rotor element, said rotor element being rotatably and axially slidable relative to said shaft, one end of said shaft being connected to the steering means of said vehicle, means connected to the other end of said shaft for rotating the same whereby to steer said vehicle, means associated with said shaft for axially shifting said rotor element in one direction or another as said shaft is rotated, the supply of pressure fluid to the driving turbine units being thereby automatically relatively proportioned according as a right or left hand turn is executed so as to produce a differential action on said turbine units.

2,949,972
TOW STICKS
Benjamin Wirtkale, Nesselle, Wash.
Filed Jan. 3, 1958, Ser. No. 706,981
2 Claims. (Cl. 180—19)



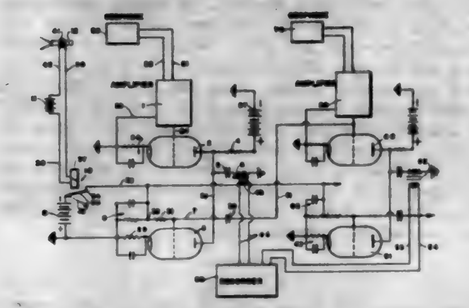
1. A tow stick for an airplane having a tow wheel mounted on a tubular axle; said tow stick having hand hold means at its outer end, and having laterally spaced leg portions at its inner end adapted to receive said airplane towing wheel and axle between them; said leg portions being equipped with adjustable means whereby releasable towing connections may be made with the opposite end portions of said tubular axle, a motor driven friction wheel mounted on said stick and a manual means at the forward end of the stick for causing said friction wheel to be shifted into and from driving contact with the airplane wheel, and ground wheels of lesser diameter than said airplane wheel mounted on the inner end of the tow stick coaxial of the means for making the towing connections for rolling support of the tow stick in moving it into and from place of use; said adjustable means for making said towing connections comprising means mounted by said leg portions and movable into and from the end portions of said tubular axle and manual means operable from the forward end of said stick for effecting adjustment of the connecting means.

2,949,973
METHODS OF AND MEANS FOR MEASURING TRAVEL TIMES THROUGH EARTH FORMATIONS
Robert A. Broding, Tulsa, Okla., and John O. Ely and Gerald C. Summers, Dallas, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 27, 1953, Ser. No. 370,376
11 Claims. (Cl. 181—.5)



6. A system for measuring the time of travel of acoustic pulses over a vertical earth section penetrated by a bore hole which comprises a pair of acoustic transducers spaced a predetermined distance apart, cable means for supporting and moving said transducers through said bore hole and along a selected length of said earth section, means operable at a low repetition rate to produce a succession of acoustic pulses, a high frequency source for generating a timing function, a recorder, means coupled to said transducers for controlling said recorder to initiate and to terminate the recording of said timing function in timed relation with the appearance of said acoustical pulses at first one and then at the other of said transducers, cable measuring means for actuating said control means in response to movement of said cable and said transducers along said bore hole to each of a plurality of uniformly spaced apart points for recording one segment of said timing function at each of said locations, the number of pulses in each said segment so recorded being proportional to the travel time of an acoustic pulse through a length of said section equal to said spacing of said transducers, and the total number of pulses recorded being proportional to the travel time of said acoustic pulse along said selected length.

2,949,974
SEISMIC EXPLORATION APPARATUS
Wilhelm Bosenmann, Hannover, Germany, assignor to Seismos G.m.b.H., Hannover, Germany
Filed Oct. 26, 1955, Ser. No. 542,986
4 Claims. (Cl. 181—.5)



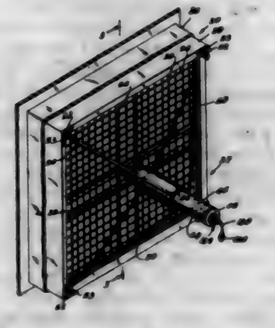
1. Apparatus for seismic exploration of the strata of the earth occurring at different distances from the earth's surface comprising, in combination, means for producing an emission of a seismic wave from each of said strata different in characteristics from and occurring at a different time from any of the other seismic waves emitted by the other strata; a plurality of geophones for receiving said emitted seismic waves at a plurality of points spaced from each other and for converting each of said received seismic waves into a respective voltage impulse at each receiving station; a plurality of amplifiers, each of said amplifiers being responsive to the voltage impulses emitted from one of said geophones, respectively, and for emitting an amplified output impulse for each of said voltage impulses to which it responds, each of said amplifiers having an output, respectively; a plurality of recorders, each of said recorders being connected in circuit with the output of one of said amplifiers, respectively, for separately recording the output of the same; a plurality of mixing circuits, each of said mixing circuits including at least one electron discharge device having at least an anode, a cathode and a control electrode, said anode of each of said devices being connected respectively to the output of one of said amplifiers and said control electrode being connected respectively to the output of at least another of said amplifiers; and blocking means for applying a blocking negative biasing potential to the control electrode of each of said electron discharge devices to a varying degree for a predetermined time and for progressively and steplessly decreasing the amplitude of said negative biasing potential to initiate conduction in said electron discharge devices in accordance with the varying degree of the negative biasing effect of said blocking means.

2,949,975
PNEUMATIC TOOL MUFFLE
Walter A. Plummer, 13071 Dickens St., North Hollywood, Calif.
Filed Oct. 17, 1957, Ser. No. 690,871
9 Claims. (Cl. 181—33)

1. A detachable muffle assembly for use in enclosing the noise producing areas of pneumatic tools of the type having a manipulating handle and pneumatically actuated mechanism, said assembly comprising a pair of independent sound-absorbing jackets adapted to be separately assembled about the body of a pneumatic tool in superimposed relation, the smaller one of said jackets being adapted to embrace closely the main body of the tool and the larger one of said jackets having openings at its upper end adapted to fit closely about the tool handle, and means for separately and detachably securing said jackets about the main body of a pneumatic tool.



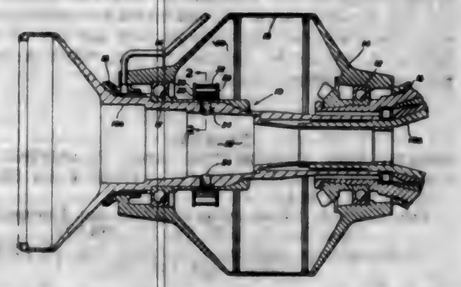
2,949,976
ACTUATING AND CONTROLLING MEANS FOR EXPANSIBLE FILTERS
William A. Tuthill, Westhampton Beach, N.Y., assignor to Flanders Mill, Inc., Riverhead, N.Y., a corporation of New York
Filed May 29, 1958, Ser. No. 738,766
16 Claims. (Cl. 183—52)



16. In combination with an expansible air filter having an upstream side face and a downstream side face, an expansion controlling means operatively coupled with such filter for regulating the expansion of said filter, electrical means coupled with said expansion controlling means for operating to actuate said expansion controlling means, and pressure sensitive actuating means coupled with said electrical means for energizing said electrical means when the air pressure on said upstream side face and at a second location provides a predetermined pressure differential to thereby cause said expansion controlling means to be actuated and said filter to be expanded in a direction substantially normal to one of the side faces of said filter.

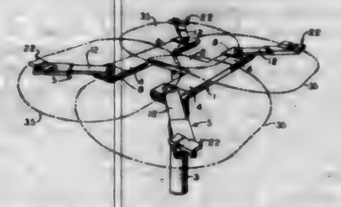
2,949,977
DEVICE FOR SEPARATING ENTRAINED OIL FROM A CURRENT OF GAS
Nicholas Klompas, Downsview, Ontario, Canada, assignor to Orenda Engines Limited, Malton, Ontario, Canada, a corporation of Canada
Filed June 30, 1958, Ser. No. 745,620
3 Claims. (Cl. 183—77)

1. An oil separator for removing entrained oil from air flowing out of an oil sump surrounding a rotating shaft, comprising an air outlet passage extending axially within the shaft; a pair of annular flanges in spaced relation embracing and secured to the shaft; an aperture in the shaft intermediate said flanges and leading from the sump to the passage; a plurality of circumferentially spaced, nonradial blades extending generally axially of the shaft between the flanges, each blade extending generally transversely of the shaft between a leading edge and a trailing edge, both edges being spaced from the shaft with the trailing edge spaced further from the shaft than the leading edge, each blade having a straight portion extending



from the leading edge, and a curved portion extending from the trailing edge to the straight portion, each curved portion being concave towards the shaft; and a plurality of apertures in at least one of the flanges, each aperture leading from a space between the shaft and the curved portion of a blade to the sump.

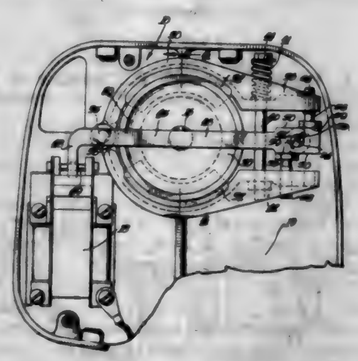
2,949,978
VEHICLE LIFTING APPARATUS
John H. Halstead, 1024 Emory St., San Jose, Calif.
Filed Dec. 19, 1958, Ser. No. 781,771
5 Claims. (Cl. 187—8.75)



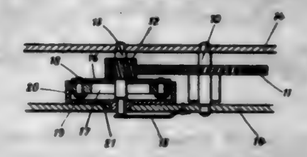
5. In a vehicle lift including a horizontally extending base member, a plurality of vehicle frame support devices, each comprising: an elongated arm, pivot means connecting one end of said arm to said base member for swinging said arm in a horizontal plane with the other end of said arm extending outwardly away from said base member and describing an arc of a circle overlapping the corresponding circle of an adjacent arm, a slide supported on said arm for sliding from said one end to said other end of said arm, a vehicle frame engaging pad having an upper supporting surface of substantial rectangular area, and means supporting said pad on said slide for rotation of said pad with respect to said arm about a vertical axis extending through said pad for orienting said pad to provide maximum support area to such vehicle frame, said vertical axis being offset from the center of said surface, said base member including two opposed pairs of spaced, parallel, horizontally extending rails connected to power lifting means and a shoe slidably mounted on each of said rails for sliding longitudinally thereof, each said arm being connected to one of said shoes.

2,949,979
SAFETY BRAKE
Charles Carroll, Danville, Ill., assignor to Duff-Norton Company, Pittsburgh, Pa.
Filed Mar. 3, 1958, Ser. No. 718,731
2 Claims. (Cl. 188—77)

1. A safety brake for an electric hoist having a rotatable shaft and a side wall portion in which said rotatable shaft is journaled comprising, in combination, a drum having a peripheral V-shaped groove, means on said rotatable shaft for mounting said drum, a pair of brake shoes, each of said brake shoes having a partial circular inner portion, V-shaped brake lining secured to the inner partial circular portions of the brake shoes and proportioned to engage the brake drum peripheral groove, a jaw portion extending from one end of each of said brake shoes, a pair of pivot means at the other end of each of said brake shoes, a single pin cooperating with the pivot means whereby the two brake shoes are pivotally connected, resilient compression means across the brake shoe jaws urging said jaws together thereby normally setting the brake shoe lining against the brake drum, a lever extending at least the length of the brake shoes, a pair of opposite flat faces at one end of the lever extending perpendicular thereto to a point between the jaws of said brake shoes, a single pivot for said lever oriented between said opposite flat faces and perpendicular with said hoist side wall, an elbow at the other end of said lever substantially perpendicular therewith, a solenoid coupled to the lever elbow to exert a force substantially perpendicular to said lever thereby respectively raising and lowering the opposed flat faces of the lever at its pivot point, a pad extending from each brake shoe jaw at staggered opposed stations, said stations being disposed longitudinally fore and aft of the lever pivot, the whole being proportioned and oriented so that the brake shoe release elements and the solenoid for actuating the same are at substantially diametrically opposite locations relative to the brake drum with the lever extending across the face of the brake drum.



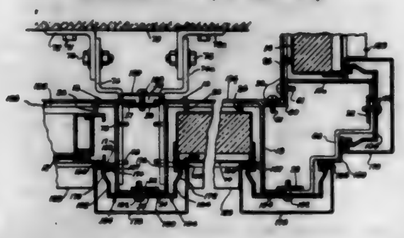
2,949,980
SPEED GOVERNOR
Eric Ragnar Ericsson, Hagersten, and Carl Oscar Sohlberg, Stockholm No., Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 18, 1958, Ser. No. 722,210
Claims priority, application Sweden Mar. 21, 1957
4 Claims. (Cl. 188—184)



1. In a speed governor for automatic telephone dials having a pinion mounted upon a governor shaft in meshing driven engagement with a cog wheel carried by the telephone dial, a brake drum, and radially outwardly

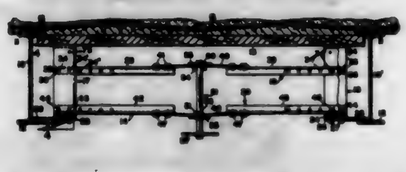
acting brake elements carried upon said governor shaft for peripheral frictional engagement with said brake drum in response to a rotation of said governor shaft above a first predetermined speed, the improvement comprising: a stationary separate brake surface, additional brake means carried by said governor shaft for axial movement into braking action with said separate brake surface, spring means normally urging said additional brake means away from said separate brake surface, and said pinion and cog wheel having diagonally meshing teeth effecting axial movement of said additional brake means toward said separate brake surface against said spring means in response to a driving action of said cog wheel upon said pinion due to a governor shaft speed above a second predetermined speed in excess of said first predetermined speed.

2,949,981
WALL STRUCTURE
Russell A. Ferrell, Pittsburgh, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Dec. 17, 1957, Ser. No. 703,356
21 Claims. (Cl. 189—34)



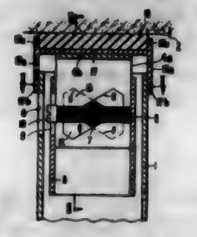
1. A wall structure comprising a plurality of individual frame units which support building panels, each frame unit including vertical and horizontal frame members, and means mounting adjacent frame units and permitting relative movement upon thermal expansion and contraction thereof, said mounting means including means independently supporting adjacent individual frame units from the building structure and further including a laterally extended portion from each unit arranged in overlapping engagement with an adjacent unit, and retaining means frictionally engaging the overlapping portions of adjacent units and secured to one of the overlapping portions of one unit to effect clamping of the overlapping portion of an adjacent unit thereto.

2,949,982
FORM JACKS
Walter H. Cobl, 45 Upland St., Port Chester, N.Y.
Filed Sept. 24, 1959, Ser. No. 842,122
10 Claims. (Cl. 189—37)



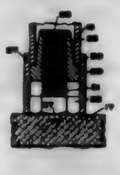
1. A removable support for holding concrete form boards between spaced I-beam joists, said support extending between the spaced joists and having upright legs at its ends with feet adapted to rest on the lower flanges of the spaced I-beam joists and bearing surfaces to support form boards, spaced members extending between the legs and each member having a hinge intermediate its ends, one of said members having its ends pivotally connected to the legs, said members hinging to adapt the legs to be inserted between the flanges of the spaced I-beam joists, a locking bar movable in aligned holes in the members and having shoulders engageable with the opposite sides of the members to lock the support in position between the beams, and means for releasing the engagement of a locking shoulder with one side of one member to permit the members to hinge when the support and form boards are to be removed.

2,949,983
MEANS FOR SUPPORTING AND CLAMPING A HOLLOW METAL POST RELATIVELY TO CEILINGS OR WALLS
Fritz Gartner, 7 Donauweg, Gundelfingen, Germany
Filed Jan. 13, 1959, Ser. No. 786,591
Claims priority, application Germany Jan. 16, 1958
9 Claims. (Cl. 189—38)



7. A support comprising, in combination, an elongated support member adapted to extend almost all the way between a pair of surfaces such as a floor surface and a ceiling surface; guide means fixed to said support member adjacent an end thereof; pressure means slidably guided by said guide means for movement axially of said support member beyond said end thereof into pressing engagement with one of said surfaces, said guide means and pressure means being respectively formed with a pair of slide surfaces located beside and crossing each other; a slide member extending transversely of the axis of said support member and transversely of said slide surfaces and slidably engaging the latter, said slide member being subjected to a shearing stress due to the location of said slide surfaces beside each other; a screw member extending perpendicularly with respect to said axis and said slide member threadedly engaging said slide member; and means cooperating with said screw member for preventing longitudinal movement thereof in one direction.

2,949,984
ADJUSTABLE COLUMN FOOT
Kenneth P. Daniels, Camden, S.C., assignor to Tennessee Fabricating Company, Memphis, Tenn., a firm
Filed Jan. 26, 1956, Ser. No. 561,473
4 Claims. (Cl. 189—42)



1. In ornamental ironwork, column means, a downwardly open hollow end portion carried by said column means, said end portion being of polygonal cross section and having flat surfaces, an anchor nut, said nut including a frusto-pyramidal body of cross sectional shape similar to that of said end portion, said body extending into and slidably and non-rotationally engaging the interior of said end portion, the base of said body having exterior dimensions nestingly fitting the interior of said end portion substantially from corner to corner thereof, a seat carried by said nut and extending outwardly from the periphery of the base of said body providing an upwardly facing flat surface, the lower edges of said end portion seating on said seat surface, a skirt depending from said seat, said skirt being of external dimension and polygonal cross sectional shape substantially equal to the external dimension and polygonal cross sectional shape of said end portion and having flat surfaces disposed substantially coplanar with said end portion flat surfaces, the interior of said nut body and skirt being bored from the top to bottom to provide an internally threaded bore, a thrust member including a head, a threaded shank engaged with said bore, said shank being connected to and projecting upwardly from said head, a pin integrally fixed to and projecting downwardly from said head, said head including at least one pair of flat sides disposed in substantially the same plane with exterior flat surfaces of said polygonal end portion and said polygonal skirt, and a polygonal cover-and-lock sleeve slidably and non-rotationally engaged with the exterior of said end portion of said skirt and of said head sides, said sleeve when so positioned engaging said flat surfaces and said head sides, locking said end portion, skirt, and head against relative rotation and effecting housing thereof, and being slidably shiftable away from said head to expose and free said head for rotation to effect adjustment of the position of said thrust member relative to said nut, said pin under the influence of such adjustment being adapted to imbed in a supporting surface.

2,949,985
METAL WINDOW AND FRAME STRUCTURE
William A. Becker, Jamestown, and Herbert M. Wendling, Depew, N.Y., assignors to Rolite Mfg., Inc., Lancaster, N.Y.
Filed Apr. 18, 1957, Ser. No. 653,696
2 Claims. (Cl. 189—75)



1. A metal window frame having top side and bottom rail members of substantially identical cross-section, each rail member comprising a channel member with its flanges extending outwardly from the frame in the direction of the plane of the window and with its web portion offset to form a deep channel portion at one side and a relatively shallow channel portion at the other side, the shallow channel portion being of substantially greater width than the deep channel portion, the deep channel portions of the top and side rail members being at one side and the deep channel portion of the bottom rail member being at the opposite side forming an intervening space between the oppositely disposed deep channel portions for receiving a window sash member.

2,949,986
FASTENING DEVICE
Engelbert A. Meyer, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Sept. 22, 1954, Ser. No. 457,713
1 Claim. (Cl. 189—88)

A moulding strip installation comprising a support having a flange extending therefrom, a hollow moulding strip secured to said flange and having edge engagement with said flange, said moulding strip having an indentation formed therein adjacent said flange, the surface of said indentation having an opening therein and defining an acute angle with said flange, and a clip securing said moulding strip to said flange, said clip including a strip of spring metal formed to provide a flat head portion, said head portion having a slot therein receiving a threaded fastener extending through the opening in said indentation and securing said moulding strip at the inclined surface of said indentation to said head portion of said clip, intermediate portions at opposite ends of said head portion and extending therefrom in converging relation,



and leg portions extending from said intermediate portions and in diverging relation, said leg portions being obliquely disposed with respect to said head portion and each of said leg portions having a supporting flange receiving slot therein transversely extending from the edge of said leg portion, said slots receiving said flange, said leg portions requiring forced substantially parallel alignment to receive the edge of said supporting flange within said slots in said leg portions and upon release having the slotted edges thereof biased in secure engagement with said supporting flange to retain said clip and said moulding strip secured thereto in rigid engagement to said supporting flange.

2,949,987
SUITCASE CLOSURE
Walter S. Greenberg, Denver, Colo., assignor to Kiddy Case Manufacturing Company, Inc., Denver, Colo.
Filed June 2, 1958, Ser. No. 739,300
6 Claims. (Cl. 190—49)

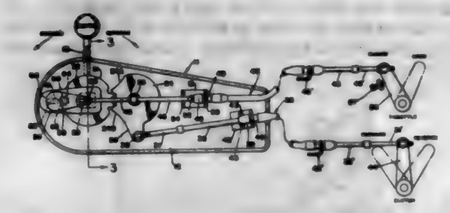


6. In a case of drawn or plastic sheet material or the like, comprising two box-like sections having opposing wall portions adapted to abut each other at contacting rim edges with the abutting edges forming co-mating seats, the wall portions of each section being drawn inwardly and thence outwardly as laterally-disposed double-folded rim edges with each outwardly directed return fold forming a seat.

2,949,988
THROTTLE OPERATING LINKAGE FOR SINGLE LEVER CONTROL
John F. Morse, 21 Clinton St., Hudson, Ohio
Filed Sept. 23, 1958, Ser. No. 762,848
8 Claims. (Cl. 192—.096)

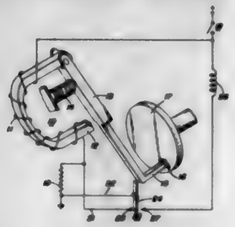
1. In a single lever control unit for the throttle and clutch of an engine having a first rotating member for operating a throttle control mechanism, a second rotating member for clutch control cooperatively connected to

said first member for rotation only during the first portion of movement of said lever in forward or reverse direction from neutral, a lever arm attached to said first member and extending radially thereof, and a push rod assembly having a pivotal connection at one end with said throttle control mechanism, the improvement comprising, a terminal link connected to the other end of said push rod assembly and carrying a pin, said lever arm having a radial slot slidably receiving said pin, said



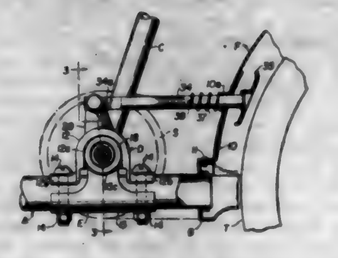
terminal link having a convex cam surface curved about the pin as a center and a concave cam surface, and a follower on said lever arm engaging said concave surface during the first portion of movement of said control lever in forward or reverse direction from neutral to cause said pin to move outwardly in said slot and swing said push rod assembly about its pivotal connection as a center, and engaging said convex surface during further movement of said control lever in either direction to hold said pin in the outer end of said slot.

2,949,989
ELECTRO-MECHANICAL BRAKE DEVICE AND CONTROL CIRCUIT
Ture Lindstrom, Glen Burnie, and Alexander S. Nagy, Linthicum, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 25, 1957, Ser. No. 698,881
1 Claim. (Cl. 192—2)



A protective system for gun turrets comprising a first brake element and a second brake element, said first brake element having a recessed portion for receiving a dog member mounted on said second brake element, said second brake element being axially movable, spring means yieldingly urging said brake element toward said first brake element for engaging said dog member with said recessed portion, electro-magnetic actuating means for separating said dog member from said recessed portion, circuit means including control means and said electro-magnetic actuating means, switch means in said circuit means in juxtaposition to said second brake element having first and second positions, the first position of said switch means providing a circuit for energizing said electro-magnetic actuating means, the second position of said switch means providing a circuit for energizing said control means, said switch means being engaged and snapped from said first position to said second position when said second brake element moves sufficiently in a direction to separate said dog member from the recessed portion of said first brake element, thereby preventing said control circuit means for being energized until after said brake elements are separated.

2,949,990
BRAKE AND DRIVE MECHANISM FOR A SIDEWALK BICYCLE
Alvin P. Douglas, Nashville, Tenn., and Albert R. Golrick, Cleveland Heights, Ohio, assignors to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Filed Mar. 7, 1958, Ser. No. 719,800
7 Claims. (Cl. 192—6)

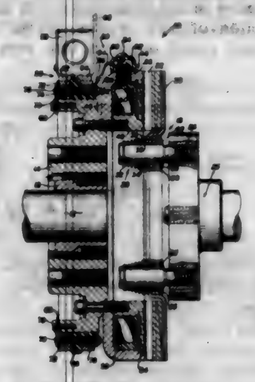


1. In a park cycle, a park cycle brake and crank hanger drive of the free wheeling and brake shoe type comprising a transversely split two-part hanger hub construction on the park cycle frame, a single piece crank hanger rod, said hub construction supporting bearing units which support the crank rod, a clutch sleeve rotatable on the single piece crank hanger rod with a journaled portion extending into the hub construction, a chain sprocket fixed on the outer end of the clutch sleeve, one of said bearings being disposed between the clutch sleeve and the hanger hub construction, a clutch formation on the inner part of the sleeve within the hub construction of greater diameter than the diameter of the clutch sleeve, a second sleeve on the crank hanger rod fixed to the rod and having a helical cam formation, a clutch member having a cylindrical surface defined by two spaced apart shoulders riding on the second sleeve and actuated by the helical cam formation of the second sleeve into engagement with said clutch formation to clutch the crank hanger rod to the sprocket on forward drive, a friction drag spring acting on the cylindrical surface of the clutch member between the shoulders to retard rotation of the riding clutch member, a brake lever pivotally mounted coaxially of the crank hanger rod within and extending upwardly and outwardly through the hanger hub construction, a connecting rod pivotally connected to the brake lever, a second clutch mechanism within the hanger hub construction actuatable to connect the brake lever arm to the crank hanger rod upon a reverse braking movement of the hanger rod, and a brake shoe carried by the connecting rod for shifting rearwardly into braking action upon the rear tire of the park cycle upon reverse braking movement of the hanger rod.

2,949,991
FRICTION CLUTCH
Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 12, 1957, Ser. No. 639,740
12 Claims. (Cl. 192—107)

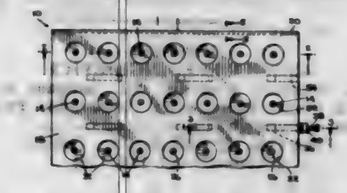
1. A friction clutch member comprising inner and outer radially directed annular portions, an intermediate annular portion connecting said inner and outer portions, a plurality of annularly disposed friction pads attached to said outer annular portion, each of said pads having a

back face axially adjacent said outer annular portion, a front face axially remote from said outer annular portion, main body portions of said pads spaced from said



outer annular portion of said member, and a central portion of each of said pads axially spaced from said back face and attached to said outer annular portion of said member.

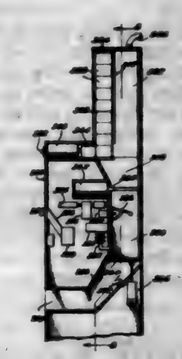
2,949,992
ANTI-FRICTION BALL TRANSFER
William J. Weisberg, Stratford Road, Harrison, N.Y.
Filed Feb. 7, 1955, Ser. No. 486,355
2 Claims. (Cl. 193—35)



1. A platform for handling bulky objects comprising a base plate, a plurality of circular recesses arranged in rows in the top of said base plate, a plurality of steel balls, one in each of said recesses and protruding from said base plate, a retaining plate fixed to said base plate and having a plurality of circular openings, one surrounding each of said steel balls, an auxiliary plate disposed above said retaining plate and parallel with said base plate, and means to move said auxiliary plate from a position below the upper surface portions of said steel balls to a position above said surface portions to render their rolling action ineffective, said means comprising a plurality of wedge-shaped protrusions at the underside of said auxiliary plate having surfaces inclined with respect to the plane of said auxiliary plate, a plurality of wedge-shaped recesses in said base plate having inclined surfaces with respect to the plane of said base plate and complementary with respect to the respective ones of the inclined surfaces of said wedge-shaped protrusions, and mechanism for urging said auxiliary plate horizontally with respect to said base plate in the direction of said inclined surfaces.

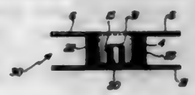
2,949,993
DISPENSING MACHINES
Karl G. Adler, 11 Ridge Road SE., Washington 19, D.C.
Filed Mar. 10, 1954, Ser. No. 415,345
11 Claims. (Cl. 194—2)

1. In a machine for dispensing perishable material, the combination comprising: a storage chamber for the material; an interlock chamber connected to said storage chamber and having a dispensing outlet; means for transferring a unit of material from said storage chamber to said interlock chamber; means for sealing off the connection between said chambers; means for discharging the unit of material from said interlock chamber through said dispensing outlet and for sealing off the latter; means for at least partially displacing the air from each of said chambers to create a preservative atmosphere therein and for maintaining a predetermined pressure differential between each of said chambers and the atmosphere; means independent of said discharging means for equalizing the pressure in said interlock chamber with the atmosphere; and control means responsive to the transfer of a unit of



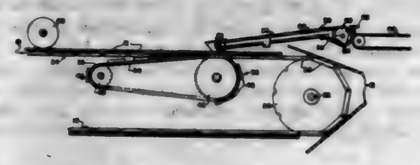
material and connected to said connection sealing-off means, discharge and outlet sealing-off means, and pressure equilization means for operating them in timed relation to effect a dispensing cycle in which after a unit of material is transferred from said storage chamber to said interlock chamber, said sealing-off means seals off the connection therebetween, said equalizing means equalizes the pressure in said interlock chamber with the atmosphere, said discharge and sealing-off means discharges the unit through said outlet and seals off the latter, said pressure equalizing means is rendered inoperative, said air displacing means again at least partially displaces the air from said interlock chamber, and said connection sealing-off means opens the connection in readiness for another dispensing cycle.

2,949,994
RIBBON SPOOLS
Arthur A. Zimmerman, Rocky Hill, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Original application Mar. 4, 1957, Ser. No. 643,582. Divided and this application Apr. 10, 1958, Ser. No. 727,651
10 Claims. (Cl. 197—175)



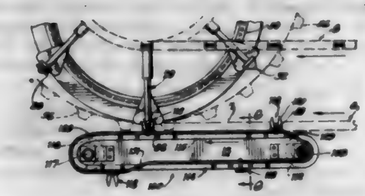
1. A ribbon spool, comprising, a first flanged component part having integrally formed thereon a centrally disposed ribbon hub and a tubular fastening hub, said ribbon and fastening hubs respectively extending away from and towards the flanged portion of said first component part, and a second flanged component part axially fixedly fastened to said fastening hub so as to positively prevent an axial separation of said first and second flanged component parts.

2,949,995
PIE MAKING MACHINE
Parker C. Welch, Louisville, Ky., assignor, by mesne assignments, to Continental Baking Company, a corporation of Delaware
Filed May 13, 1955, Ser. No. 508,155
13 Claims. (Cl. 198—20)



1. In a machine for making pies, a series of pie plate holders for supporting a series of pie plates with their bottoms exposed, means for moving said holders along a predetermined endless path, a series of pie plate bottom engaging members for removing said pie plates from said holders, means for moving said members along a predetermined endless path of a circuitous distance substantially less than the circuitous distance of said first mentioned endless path, said members being operable during their movement to engage the bottoms of said pie plates and to move the same upwardly from their support on said holders, and means for receiving the upwardly moved pie plates supported by said members.

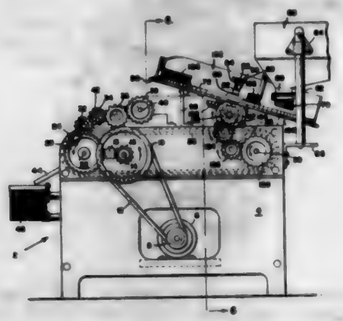
2,949,996
ARTICLE CONVEYOR AND TRANSFER MECHANISM
Roger Tonelli, Chicago, Ill., assignor to Radio Steel & Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed July 8, 1957, Ser. No. 670,455
16 Claims. (Cl. 198—25)



1. An apparatus for steadying a plurality of moving elements suspended from a moving conveyor system comprising a driven member, said driven member operatively connected to said conveyor system to be driven thereby, said driven member drivingly connected to a moving support, said moving support comprising an endless flexible member, means connected to said endless flexible member to cause it to move in any predetermined orbit, steadying members pivotally mounted on said endless flexible member for rocking movement between element engaging position and element releasing position, guide means operatively engaged by said steadying members for rocking said steadying members during movement with said endless flexible member between element engaging position and element releasing position.

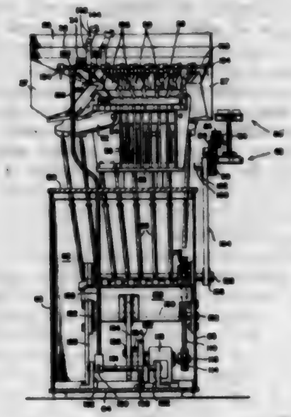
2,949,997
FEEDING APPARATUS FOR A CONVEYOR
George E. Martell, Runnemede, N.J., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 21, 1958, Ser. No. 710,225
5 Claims. (Cl. 198—25)

1. In combination with a conveyor, a rotatable disc having radial openings for the reception of small articles, a ring below said rotatable disc to support the articles in said openings, said ring having a discharge opening, a rotatable drum overlying the conveyor and positioned below the rotatable disc to project within the discharge opening in the ring, said drum having pockets for the reception of said articles delivered thereto directly from said radial openings, the axes of said disc



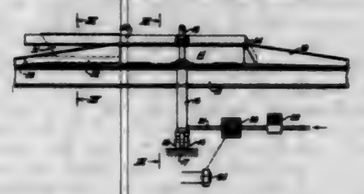
and said drum being perpendicular to each other, means to drive the drum and the disc at a constant rate with respect to the conveyor to register said radial openings and said pockets at the plane containing said axes, and a guard adjacent said drum to retain articles in the pockets of the drum until positioned to discharge the articles to the conveyor.

2,949,998
AMPULE FEEDING DEVICE
Alten E. Whitecar, Westville, N.J., assignor to Smith Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 12, 1958, Ser. No. 714,825
5 Claims. (Cl. 198—33)



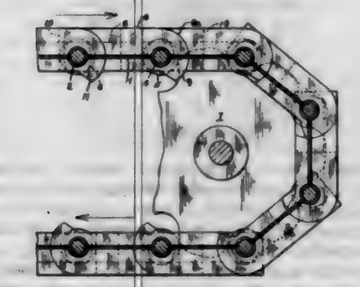
1. Ampule feeding apparatus comprising means for retaining a plurality of ampules in random array, a plurality of means in spaced array extending radially of a common center for lifting ampules from said retaining means, and means for receiving ampules raised by each of said lifting means and in radial alignment therewith for simultaneously discharging the received ampules to a circular conveyor rotating around said center.

2,949,999
UNLOADING MECHANISM FOR BELT CONVEYORS
George H. Sundin, Duluth, Minn., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Dec. 11, 1958, Ser. No. 779,606
10 Claims. (Cl. 198—185)



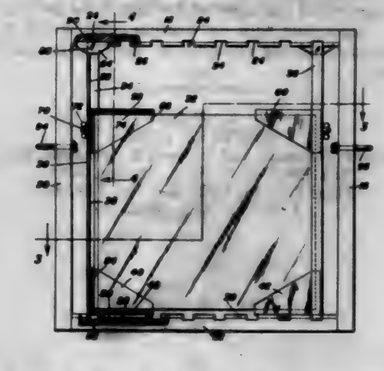
1. The combination, with a conveyor belt and a frame therefor, of an unloading device comprising means underlying a section of said belt for tilting on an axis parallel to the direction of belt travel, means for quickly tilting and returning said first named means and thereby throwing material from the side edge of said belt without stopping the belt, and retaining means overlying said belt for preventing discharge of material from said belt from the portion thereof upstream of said first named means as this portion of the belt is distorted with tilting of said first named means.

2,950,000
ENDLESS CONVEYOR WITH ARTICULATING SIDEWALLS
Charles F. Rivers, Detroit, Mich., assignor to Industrial Metal Fabricators Company, Detroit, Mich., a corporation of Michigan
Filed Oct. 6, 1958, Ser. No. 765,377
2 Claims. (Cl. 198—196)



1. An endless conveyor including a succession of flat pans in end-to-end relationship, pins pivotally interconnecting the adjacent ends of the pans, means including a revolubly mounted sprocket wheel for operably supporting said conveyor, said pans having substantially parallel edges, a side wall including a succession of substantially rectangular plates respectively elongated along the edge of the respective pans, each plate in a plane transverse to and intersected by the plane of such pan, each plate having a forward and rearward end, the rearward end portion being offset to lap the forward end portion of the succeeding plate, said lapped portions being pivotally engaged with one of said pins for relative articulation about said pin, the forward end of said plate having the form of a convexly circular arc closely conforming to a mating arc formed on the preceding plate to afford said articulation and present a substantially continuous unbroken wall face to said conveyor, said plates having substantially parallel longitudinal edges, the forward end of each plate having a portion protruding from one of said edges, and said convexly arcuate form being extended to said protruding portion, whereby said portion maintains said substantially unbroken wall face during travel of said conveyor about the axis of said sprocket wheel.

2,950,001
CRATE FOR SHIPPING GLASS
Edward P. Bucko, 406 19th St. SW., Great Falls, Mont.
Filed May 13, 1957, Ser. No. 658,842
6 Claims. (Cl. 206—1)



3. A shipping crate for a glass panel, said crate comprising a container which has side walls, two opposing side walls each constructed with a plurality of transverse slots and a plurality of longitudinal slots which intersect said transverse slots, the transverse slots being deeper than said longitudinal slots, a pair of rails disposed in selected transverse slots and capable of sliding into the open ends of said transverse slots, lower corner clamps secured to said rails in which to accommodate the lower corners of a glass panel, upper corner clamps, means adjustably securing said upper corner clamps to said rails, tongues depending from said lower clamps and fitted within one of said longitudinal slots of one wall, each rail having an upwardly opening notch therein, and means including a keeper passed through said notches and fitted in the longitudinal slots of the opposite container wall to aid in holding said rails in the selected, adjusted position.

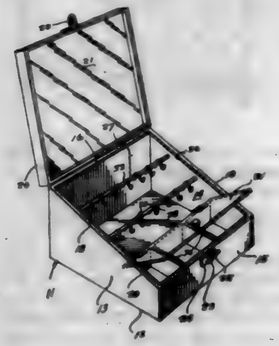
2,950,002
PACKAGED BEARING ASSEMBLIES
Clifford L. Eastburg, Canton, Ohio, assignor to The Timken Roller Bearing Company, Canton, Ohio, a corporation of Ohio
Filed Apr. 5, 1957, Ser. No. 651,096
7 Claims. (Cl. 206—46)



7. A package for a railroad car side frame bearing construction including means for maintaining the bearing construction in assembled, adjusted and lubricated condition enabling the bearing to be unpackaged and installed directly in a side frame bearing housing, the bearing assembly including an inner race adapted to be positioned on a journal member, an outer race, anti-friction members

positioned therebetween, and a bearing end cap including means for attaching the end cap to a railroad journal for holding the bearing assembly thereon, said inner and outer races havng adjacent opposite ends with sealing members positioned therebetween and a chamber formed between said sealing members for the anti-friction members, said package comprising a box-like container of such size that it contains the bearing construction snugly therein, and a simulated journal member positioned in the inner race for maintaining the components of the bearing construction in assembled and adjusted position in the package, and means cooperating with the bearing construction to prevent lubricant in the chamber of the construction from escaping.

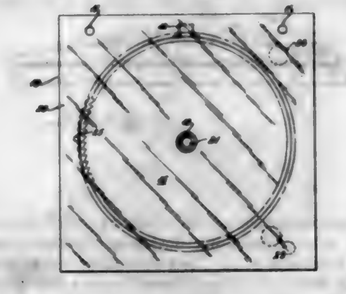
2,950,003
JEWELRY CASE
Emma M. Simmons and Howard R. Simmons, both of 2511 N. Desert Place, Tucson, Ariz.
Filed July 18, 1958, Ser. No. 749,381
1 Claim. (Cl. 206—75)



A jewelry case comprising a receptacle having parallel vertical side walls having downwardly and forwardly inclined parallel top edges, parallel vertical front and rear walls and a horizontal bottom wall, a cover hinged to the top edge of said rear wall and being constructed and arranged to at times engage the top edges of the front and side walls, a plurality of spaced horizontal rod members secured to and extending between the upper marginal portions of said side walls and therefore being of different heights relative to said bottom wall, and a plurality of spaced supporting brackets on each rod member, each supporting bracket comprising an intermediate bight portion overlying and rigidly secured to the associated rod member and depending hook elements extending outwardly in opposite directions in the same vertical plane as and arranged symmetrically on opposite sides of said intermediate bight portion, whereby each earring of a pair of earrings may be engaged on and suspended from a hook element, and whereby each bracket will support a pair of earrings.

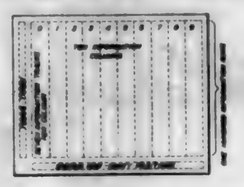
2,950,004
MERCHANDISING DISPLAY PACKAGE
Frederick G. Acomb, 810 Broad St., Newark, N.J.
Filed Nov. 14, 1957, Ser. No. 696,361
1 Claim. (Cl. 206—78)

A merchandising package comprising a square cardboard backing sheet having means for suspending the sheet in a vertical position for display, a circular saw blade having a central opening and a series of peripheral teeth alternately offset in opposite direction whereby the thickness at the periphery is greater than the thickness of the major portion of the saw blade, the inwardly directed teeth indented firmly in the backing sheet with the alternate (outwardly directed) teeth out of contact with the backing sheet, and a skin of transparent plastic cohering to the backing sheet inside of the central opening of the saw blade to anchor the saw blade to the backing sheet at the center of each and cohering to the backing sheet from each of the four edges to a margin around the periphery of the saw blade which margin is



nearer to the periphery of the saw blade than the distance circumferentially between adjacent saw teeth to hold the skin in contact with the outwardly directed teeth and the major outer surface of the saw blade, whereby the center of gravity of the package is within the central opening of the blade, with consequent ease of handling.

2,950,005
CARD SORTER
Duncan N. MacDonald, Arcadia, Calif., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Aug. 10, 1956, Ser. No. 603,428
5 Claims. (Cl. 209—74)

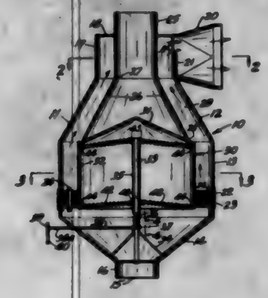


4. Apparatus for sorting record members having information characters recorded thereon, the characters being arranged in columns and rows, said apparatus comprising means for reading out consecutively the characters in a selected column on the record member, means coupled to the readout means for selectively energizing one of a plurality of separate outputs in response to a corresponding one of an equal number of different characters as read from the selected column on the record member, means for selectively recording indexing marks in one of a plurality of predetermined positions on the record member, the position of the mark being controlled in response to said one of said plurality of outputs, a plurality of sorting stations, means for moving the record members past said sorting stations, and means associated with each sorting station for detecting said indexing marks, said means including means for actuating the sorting station to remove and store any record member having a mark stored in a predetermined position on the record member.

2,950,006
ROUGHING DOWN MACHINE FOR CLEANING GRAIN, BEANS AND THE LIKE
Arthur R. Forsberg, Thief River Falls, Minn.
Filed June 19, 1958, Ser. No. 743,210
4 Claims. (Cl. 209—138)

1. A roughing down machine for moving light materials such as straw and hulls from grain and the like,

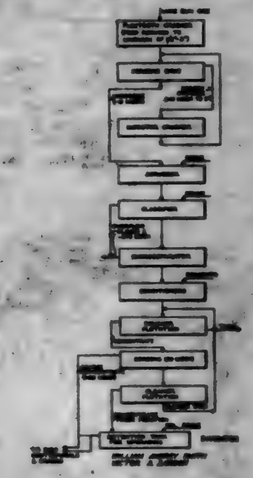
comprising an upright housing having an enclosing sidewall with an upwardly converging upper portion and also having an air outlet through the sidewall at the top of the housing, a source of vacuum air pressure connected to the air outlet, the housing also having a grain discharge at the bottom thereof, and said housing also having air inlet means between the air outlet and grain discharge to permit inflow of air at a multiplicity of positions around the periphery of the enclosing sidewall, a supply conduit for the mixture of grain and light materials and having a discharge end opening downwardly in the housing, air and mixture guide means adjacent the discharge end of the conduit and including an upwardly convergent, generally cone-shaped spreader above the air inlet and below the conduit discharge end and in alignment therewith for spreading and directing the mixture toward the sidewall of the housing, an enclosing air



and mixture guiding panel depending from the peripheral edge of the spreader to the air inlet means of the wall and spaced from the housing wall, means mounting the spreader in the housing, a downwardly flaring and enclosing air guiding panel suspended from the conduit and defining a spout supplying the mixture onto the spreader said flaring panel being spaced from the upper portion of said wall to cooperatively define therewith an air flow passage carrying the air to the air outlet, said air flow passage progressively decreasing in size from the spreader to the air outlet and in an upward direction to cause the upwardly flowing air to move at an increasing velocity toward the air outlet, whereby the light materials from the mixture which falls freely from the periphery of the spreader, are separated from the grain by the upwardly flowing air and are carried at an increasing velocity to the air outlet.

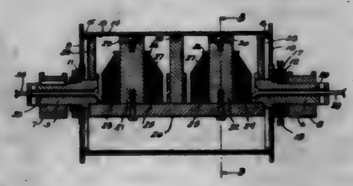
2,950,007
CONCENTRATION OF POTASH ORES
William Aubrey Smith and Victor A. Zandon, Carlsbad, N. Mex., assignors to American Metal Climax, Inc., a corporation of New York
Filed Mar. 18, 1957, Ser. No. 646,862
13 Claims. (Cl. 209—166)

1. The improvement in the recovery of potash values from sylvite-containing potash ores by froth flotation which comprises subjecting the ore in the final flotation feed size-reduction stage to substantially only dry impact crushing, dry screening the ore discharge from the crusher to separate therefrom particles reduced to flotation feed size and recycling the oversize particles to the crusher for further crushing, thereafter pulping the ore with a brine containing sylvite and halite, then scrubbing and mechanically desliming the ore while in the form of a pulp in said brine, then conditioning the ore for a froth flotation separation and thereafter subjecting the condi-



tioned ore to a froth flotation separation of the sylvite and the gangue particles.

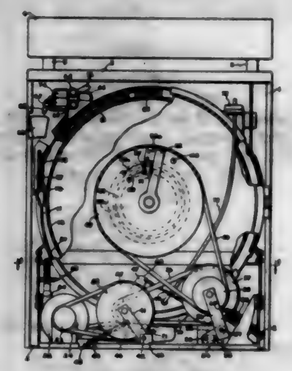
2,950,008
DRUM TYPE MAGNETIC SEPARATOR
Harold W. Buss, Hales Corners, Wis., assignor, by mesne assignments, to Indiana General Corporation, a corporation of Indiana
Filed May 18, 1956, Ser. No. 585,729
4 Claims. (Cl. 209—219)



1. In a magnetic separator, a rotatable drum for receiving material to be separated at the top portion thereof and for retaining magnetic material therewith beyond the point where non-magnetic material falls from the drum, a wound magnetic core member extending generally radially of said drum and having an end terminating close to the drum perpihery, a winding on said wound core member, an aruate polar bar secured to said end of said wound core member with an outer end face of said polar bar extending in close relation to the interior surface of said drum from a point generally adjacent the top of the drum to a point near the bottom of the drum, said polar bar extending peripherally beyond said wound core member on each side thereof, and non-wound magnetic core members extending generally radially of said drum and disposed adjacent opopsite sides of said wound core member along the axis of said drum, said non-wound magnetic core members each having a radially outer end with an arcuate end face in close relation to the interior surface of the drum and extending along said interior surface of said drum from a point generally adjacent the top of the drum to a point near the bottom of the drum, said non-wound core members each having at the radially outer end thereof a circumferential dimension in the direction arcuately about the drum axis which greatly exceeds the corresponding dimensions of said wound core member over a radial depth of each

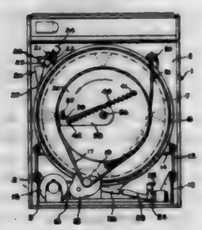
non-wound core member inwardly from the arcuate end face thereof greatly exceeding the radial depth of said polar bar.

2,950,009
UNBALANCE CORRECTING ARRANGEMENT FOR LAUNDRY MACHINES
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 4, 1958, Ser. No. 752,726
6 Claims. (Cl. 210—144)



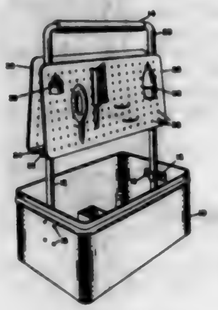
1. A laundry machine including a basket rotatable on a non-vertical axis, drive means for rotating said basket at clothes tumbling speed and at clothes centrifuging speed, said drive means including means for accelerating said basket slowly from tumbling speed toward the minimum centrifuging speed at which all the clothes are plastered about said basket and for decelerating back toward tumbling speed, control means enabling said accelerating and decelerating means to accelerate said basket from tumbling speed to centrifuging speed, and means sensitive to the rotational torque exerted by said basket as a result of the force of gravity acting on load unbalances in said basket, said sensitive means during the sensing of unbalances of a predetermined magnitude precluding acceleration of said basket by said accelerating and decelerating means and causing deceleration of said basket back toward tumbling speed, whereby the speed of said basket undergoes a fluctuable increase until it reaches centrifuging speed with the clothes in a balanced condition within said basket.

2,950,010
UNBALANCE SENSING ARRANGEMENT FOR MACHINES HAVING A CENTRIFUGAL LIQUID EXTRACTION STEP
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Aug. 4, 1958, Ser. No. 752,727
12 Claims. (Cl. 210—144)



1. In a laundry machine, a clothes basket rotatable on a substantially non-vertical axis, multi-speed drive means for rotating said basket including a drive member positioned to rotate substantially coaxially with said basket, said basket having a portion engageable by said drive member, said drive member engaging said basket portion to rotate said basket at a relatively low speed for tumbling clothes in said basket and at a relatively high speed for centrifugal extraction of liquid from the clothes, said basket portion being angularly movable away from engagement with said drive member by the force of gravity in response to unbalanced distribution of clothes within said basket; and means responsive to a predetermined angular movement of said basket portion relative to said drive member for decreasing the basket speed for redistribution of the clothes.

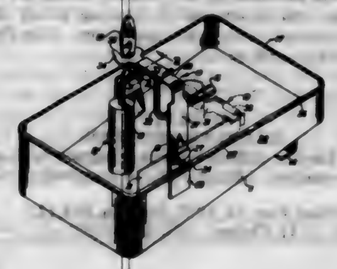
2,950,011
CARRYING CASE
Charles A. Hemphill, 16500 Rosslawn, Detroit, Mich.
Filed July 12, 1957, Ser. No. 671,567
3 Claims. (Cl. 211—1)



1. In a carrier and display case for articles, in combination: a container having an enclosed bottom, upright sides and an open top; an inverted U-shaped rod having its extremities fixedly attached in a vertical position to opposed side walls of said container; at least one horizontal cross member extending between opposed legs of said rod; a display board having means for removably retaining a plurality of varied-shaped articles thereon; clip means fixedly attached to said display board and operative to removably attach said display board to said cross member, said attaching means being so disposed as to maintain said board with its lower edge substantially above the upper extremities of said side walls and with its upper edge below the upper extension of said rod.

2,950,012
PAINT EQUIPMENT RACK FOR ATTACHING TO A PAINT TRAY
Leo T. Mascaretti, Racine, Wis., assignor of one-half to Arthur J. Hansmann, Racine, Wis.
Filed Apr. 1, 1957, Ser. No. 649,942
2 Claims. (Cl. 211—65)

1. A rack for supporting a paint roller over a paint tray wherein the roller consists of the conventional cylindrical paint applying portion and the conventional offset handle portion and wherein the tray consists of a bottom and of a side having a beaded upper edge, the invention comprising a pair of clamping members adapted to be disposed on opposite sides of said tray side with the outer one of said members having an offset for snugly receiving said beaded upper edge of said side, the other of said clamping members including an upright portion pivotally attachd to said outer one of said members and having a horizontally disposed upper end positioned in an operative position directly vertically above and spaced from said bottom of said tray when said clamping members are on said tray and said other of said members being pivotal to a storage position for placing said upper and onto said bottom, said upper end including means



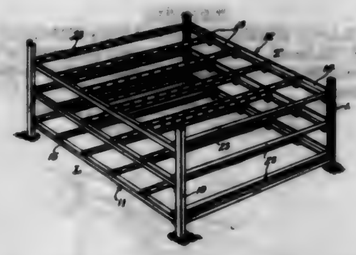
for receiving said handle of said paint roller for repivotally attached to said outer one fo said members and upper end when said other of said members is in said operative position.

2,950,013
MERCHANDISING DISPLAY DEVICE
Paul Malnove, 6421 Glenwood Road, Omaha, Nebr.
Filed May 3, 1956, Ser. No. 582,484
1 Claim. (Cl. 211—86)



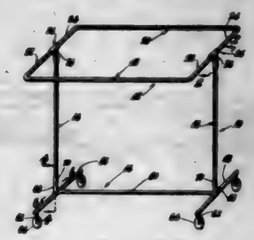
A cardboard device for displaying articles of merchandise on a sales shelf or the like, which device comprises a first panel of generally rectangular configuration adapted to rest on said shelf with said articles arranged thereon, a second panel of generally rectangular configuration connected by a fold line to one edge of said first panel and extending upwardly at right angles thereto when in display position, and an elongated strip connected at its ends along fold lines to the ends of said first panel adjacent its connection with said second panel, said strip having its dimension transverse to said fold line exceeding the same dimension of said second strip, said strip having two generally square end portions, one adjacent each end of said first panel, and a median portion generally coextensive in length with said first and second panels, each of said end portions in display position being folded upon itself along a 45° fold line extending from the corner thereof remote from said second panel and adjacent the fold line connecting said end portion and said first panel to the opposite corner thereof adjacent said median portion, each of said end portions having a plurality of fold lines radiating from said first-mentioned corner between said 45° fold line and the fold line connecting the portion and said first panel to facilitate folding of the end portion upon itself; said median portion in display position extending at right angles to said first panel with its rear face contacting the front face of said second panel to conceal said second panel and being maintained in this position by said folded end portions, said median portion having an extension along the side thereof adjacent said first-mentioned corners of said end portions which extension projects below the plane of the first panel to bear against the outer vertical face of a shelf and thereby position said device thereon.

2,950,014
CONVEYOR-TYPE ARTICLE STORAGE RACK HAVING LIFT-OUT RAIL SECTIONS
Norman M. Sullivan, Cincinnati, Ohio, assignor to The Alvey-Ferguson Company, Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 7, 1957, Ser. No. 644,671
2 Claims. (Cl. 211—151)



1. In a conveyor-type storage rack; a generally rectangular, stationary frame structure including a plurality of upstanding posts and a plurality of substantially horizontally disposed, transversely extending, cross supports carried by said posts at each end of said frame structure; a plurality of relatively spaced, parallel article-conveying rails extending longitudinally of said frame and supported at their opposite ends upon the cross supports of said frame for adjustment transversely of said frame, each of said rails having a downwardly opening socket at each end thereof; and a plurality of rail-locating devices connected with said cross supports and adjustable longitudinally thereof to different transverse positions on said frame, each of said rail-locating devices having a generally upstanding portion thereon extending into the downwardly opening socket of one of said rails to hold the latter in a given, transversely adjusted position on said frame, but permitting upward removal of said rail from said cross supports.

2,950,015
JOINTS FOR TUBULAR METALLIC CONSTRUCTIONS
Paul Patsky, 221—16 130th Ave., Laurelton, N.Y.
Filed Apr. 9, 1953, Ser. No. 347,697
9 Claims. (Cl. 211—182)



2. In a demountable article supporting rack having a horizontal article supporting section of tubular metallic stock, a horizontal base section of tubular metallic stock, a riser of tubular metallic stock extending vertically between said article supporting section and said base, and a joint assembly connecting each end of said riser to the respective one of said sections, each said joint assembly comprising in combination a tubular member having a radially outwardly extending flare defining a seat at one end for abutting engagement with said respective section, a plug integrally secured within one end of said tubular member and having a radially inwardly tapered end adjacent said flare of said tubular member for secur-

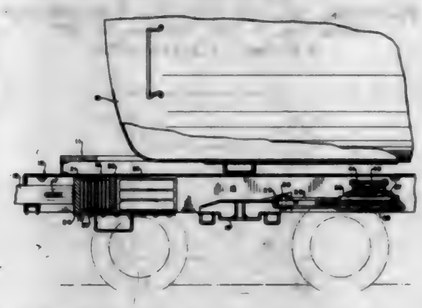
ing engagement with said respective section, a first weld securing said tapered end of said plug to said section, and a second weld securing an intermediate portion of said plug to the interior of said tubular member, said flared end of said tubular member being radially spaced outwardly from and masking said first weld.

2,950,016
CRANE BOOM GUARD ATTACHMENT
Arthur J. Thomas, Little Rock, Ark., assignor, by mesne assignments, to Set-T-Boom Corporation, a corporation of Arkansas
Filed Jan. 24, 1958, Ser. No. 711,963
8 Claims. (Cl. 212—1)



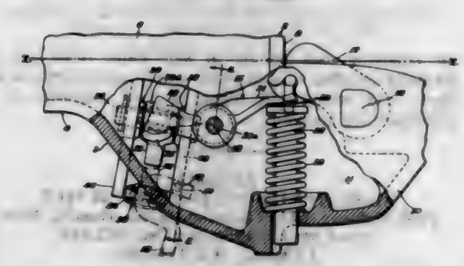
1. A guard for preventing the boom of a crane, etc. from contacting a power line when moved thereagainst comprising an elongated frame of spaced, connected members adapted to project outwardly from the top and sides of the boom, and means for mounting said frame on the upper end of a boom with one end of the frame projecting therebeyond so as to contact a power line instead of the boom, said mounting means including insulators for electrically insulating the boom from said frame when said frame is moved against a power line.

2,950,017
SNUBBING DEVICES
Stanley H. Fillion, Scarsdale, and Arthur E. Schaefer, New Hyde Park, N.Y., assignors to Waugh Equipment Company, a corporation of Maine
Filed May 6, 1958, Ser. No. 733,376
14 Claims. (Cl. 213—8)



1. A device for retarding the movements of a movable member relative to a fixed member in opposite directions from a central position, which comprises a housing secured to one member, a cam assembly secured to the second member and extending through the housing, the assembly including parallel bars extending horizontally and connected in spaced relation, one bar of the assembly having surfaces at one side of the assembly extending lengthwise of the bar and diverging in a direction away from the assembly, a friction plate extending transversely between and in contact with each two adjacent bars, a pair of spaced stops on the housing at each end of each plate, the ends of each plate lying between a pair of the stops and the width of each plate being less than the distance between the stops of the pairs associated with the plate to provide a limited freedom of movement of the plate in the direction of its width between the stops, a shoe engaging the outer bar of the assembly and movable by the housing along the diverging surfaces, and means on the housing acting through the shoe to compress the bars and plates, when the shoe is on one of the surfaces.

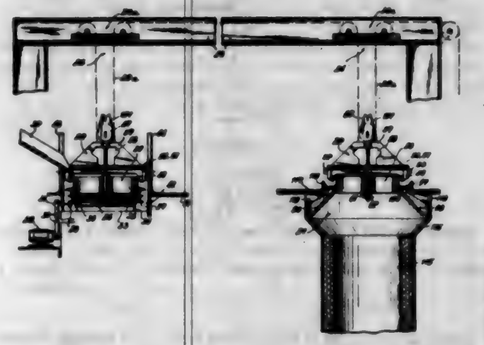
2,950,018
RAILWAY COUPLER
Frank H. Kayler, Alliance, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Filed June 26, 1957, Ser. No. 668,127
12 Claims. (Cl. 213—159)



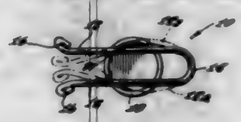
1. In an automatic coupler, a locking means for said coupler, a cam comprising horizontally disposed arms, one of said cam arms being slidably engageable with said locking means, a lever vertically disposed internally and externally of said coupler, said lever comprising vertically disposed arms, another of said cam arms being slidably engageable with one of said lever arms, another of said lever arms comprising a rod receiving eye, a slot in said coupler, said other lever arm extending through said slot and outside of said coupler, a pair of spaced ribs comprising a forward and a rearward wall, said forward and rearward wall being disposed forwardly and rearwardly, respectively, of said lever, said lever being pivotally connected to said spaced ribs, a notch on said forward wall, an operating rod comprising a U-shaped end, said end engaging said eye on said lever, said rod being rotatable in a direction so as to engage the U-shaped end with the notch so as to maintain said locking means in a held-unlocked position.

2,950,019
APPARATUS FOR CHARGING KILNS
Karl Beckenbach, 13 Am Willer, Meererbusch Buderich, Germany
Filed Jan. 14, 1957, Ser. No. 634,010
6 Claims. (Cl. 214—18)

1. In a system for charging a kiln for firing and calcining lime-containing materials and the like, which kiln has a top opening for charging the said material, while the removal of the finished product is effected at the lower part of the kiln, and in which system the charge is transferred from a filling station comprising a rotatable filling table, by means of a charge container having an upper open end and a flat bottom formed by a plurality of sector-shaped members which are hingedly mounted on the bottom periphery of said container, said system further comprising transport means for raising, lowering, as well as laterally transferring said container; the improvement of an opening and closing device associated with said container and adapted for automatically opening the bottom members of the latter, when the container is lowered into the aforesaid kiln opening and arrested in the same, and automatically locking these bottom members in closed position, said opening and closing device comprising, in combination (1) locking means extending vertically and centrally through said container and having a top end and a bottom end; (2) holding means provided at said bottom end of said locking means and adapted for holding the tips of said bottom members in closed position; and (3) suspension means (*a*) disposed above and releasably engaging said container, (*b*) suspended from said transport means, and (*c*) enclosing and being articulatedly connected to said top end of said locking means in a manner permitting free rotation of said container relative to said locking means and about the vertical axis of said container, as well as permitting a limited displacement of said locking means relative to said suspension means in the direction of said vertical axis between an upper and a lower end position, said suspension means being adapted for fixedly, while said suspension means remains stationary, engaging the top end of said locking means in said upper end position of the latter, thereby causing said holding means to engage the free tips of said sector-shaped bottom members and hold the latter closed when a pull is exerted by said transport means on said suspension means in upward direction, and releasing the top end of said locking means when said container comes to rest in said kiln opening and the pull of the still lowered transport means on said suspension means ceases, so that said locking means moves downwardly to its lower end portion, whereby said holding means release said bottom members.



2,950,020
BOTTLE CAP
Richard L. Mathies, R.A. 36253790, Ward 44, Walter Reed Army Hospital, Washington 12, D.C.
Filed Jan. 19, 1959, Ser. No. 787,401
3 Claims. (Cl. 215—41)



1. A replaceable bottle cap compriaing, in combination, a closure member for pressure tight engagement with the neck outlet of the bottle, and releasable lock means carried by said closure member for releasable locking engagement with the neck of the bottle for retaining said closure member in said pressure tight engagement with the bottole outlet, said closure member comprising a substantially cylindrical cap having a flat wall closing one end thereof and defining an opening at the opposite end, a gasket secured within said closed end of said cap for pressure tight engagement with the neck outlet of the bottle, said releasable lock means comprising a pair of normally parallel resilient wire legs connected together at one end only by a central bight portion and being free at the opposite end, and spot welds integrally connecting the mid portions of said wire legs to circumferentially spaced apart portions of said cylindrical cap member.

2,950,021
COUPLING MEANS
Dale K. Scott, Atlanta, and Charles W. Walter, Griffin, Ga., assignors to Southern States Equipment Corporation, a corporation of Georgia
Filed Feb. 24, 1959, Ser. No. 795,286
3 Claims. (Cl. 220—23.4)

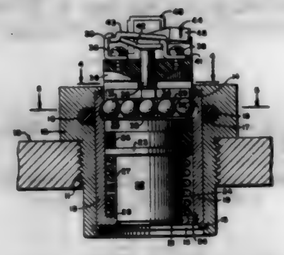


3. In combination, a pair of bodily movable coiler cans of comparable size and shape each having an upper rim, a latch support secured to the upper rim of one of said cans and having a pair of vertically spaced polygonally apertured support elements, a latch vertically slidable through said apertures and having a wide upper part and a narrower lower part in a tangential direction relative to said rim of said one can, said latch having a cross-section in a horizontal plane generally corresponding to but smaller than the apertures in said support elements whereby substantial rotation of said latch about its vertical axis relative to said latch support and its associated can is prevented, a coupling bracket mounted on the upper rim of the other of said cans and having a pair of horizontally spaced inwardly inclined couple forming arms disposed at a level between said support elements of said latch support, the inner surfaces of said arms and that part of said bracket adjacent the associated can rim being configured generally similar to the cross-sectional configuration of said latch, the vertical spacing between said support elements being substantially greater than the vertical dimension of said arms, said couple forming arms being arranged to envelop the narrower lower part of said latch when said latch is raised to its upper position and while said couple forming arms are disposed between said support elements, said latch being effective to form a coupling between said support elements and said coupling bracket when said latch is lowered sufficiently so that its wide upper part is opposite said couple forming arms, the similarity in configuration of said latch and of said bracket and arms being effective to prevent substantial rotation of said latch relative to said bracket and its associated can.

2,950,022
FUSIBLE LINK FLOOD VALVE
George W. Boyer, Covina, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 2, 1957, Ser. No. 700,242
8 Claims. (Cl. 220—47)

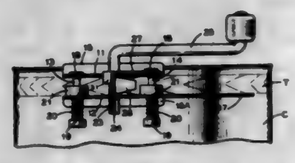
2. A spring urged normally locked flood valve comprising a tubular member having one end thereof in communication with the water when the valve is immersed therein, a plunger slideably disposed within said member and adapted to be detached therefrom, means yieldably urging said plunger to an open position free of said member, a ball lock mechanism operatively con-

necting said plunger to the tubular member, means for selectively maintaining said lock mechanism in a locked condition, and a length of fusible wire under tension and



operatively connected to said last named means for actuating said lock mechanism to effect the release of said plunger from the tubular member as the wire is severed by an electrical impulse applied thereto.

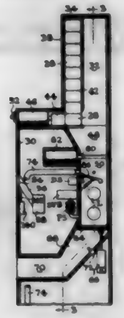
2,950,023
CAN STRIP REMOVER
Theodore Shultz, 518 Pennsylvania Ave., Brooklyn, N.Y.
Filed Oct. 28, 1958, Ser. No. 770,110
6 Claims. (Cl. 226—52)



1. A device for removing a sealing strip from a can and holding the removed strip in spiral form on a slotted key on said device, comprising a pair of opposed substantially parallel plates, each plate having an outturned flange extending along the lower edge thereof, said flanges extending in opposite directions and being substantially coplanar, a pair of pins extending through said plates at right angles thereto and respectively positioned adjacent the opposite ends of said plates, at least one of said plates being slidably mounted on said pins, resilient means normally urging said plates toward each other, stop means limiting the movement of said plates toward each other, said plates having aligned vertical slots for receiving said key, the lower end of each slot terminating at a point coincident with the top surface of the flange, said key being insertable in said aligned slots for rotation and rectilinear movement therein from a position immediately adjacent said flanges to positions spaced from said flanges, and movable latch means on one of said plates, said latch means being formed with a notch registrable with the lower end portion of the slot on said one plate upon movement of said latch means to one position thereof whereby to retain said key against upward movement in said aligned slots.

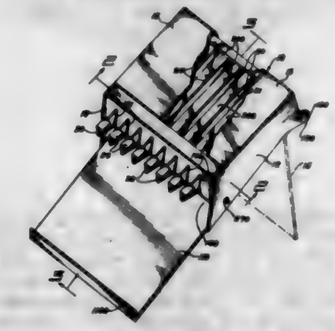
2,950,024
MACHINES FOR DISPENSING HEATED COMESTIBLES
Karl G. Adler, 1336 Missouri Ave., Washington, D.C.
Filed July 9, 1956, Ser. No. 596,564
1 Claim. (Cl. 221—15)

In a machine for dispensing comestibles, the combination comprising: a storage chamber for comestibles; a heating chamber sealably connected to said storage chamber and having a dispensing outlet; means for transferring a unit of the comestible from said storage chamber to said heating chamber; means for sealing off the connection between said chambers; means for heating the unit in said heating chamber; timer means for operating said heating means; means for discharging the unit from said heating chamber through said dispensing outlet and for sealing off the latter; means for establishing and maintaining a predetermined degree of vacuum in each of said chambers; means independent of said discharge means for relieving the vacuum in said heating chamber; and control means responsive to the transfer of a unit connected to said sealing-off means, heating means, timer means, discharge means, and relieving means for operating them in timed relation to effect a dispensing cycle in



which after a unit is transferred from said storage to said heating chamber, said sealing-off means seals off the connection between said chambers, the unit is heated to a predetermined temperature in said heating chamber while under the vacuum therein, said relieving means relieves the vacuum in said heating chamber, said discharge means discharges the heated unit through said outlet and seals off the latter, said relieving means is rendered inoperative, said vacuum-establishing means re-establishes a vacuum in said heating chamber, and said connection-sealing-off means opens the connection between said chambers in readiness for another dispensing cycle.

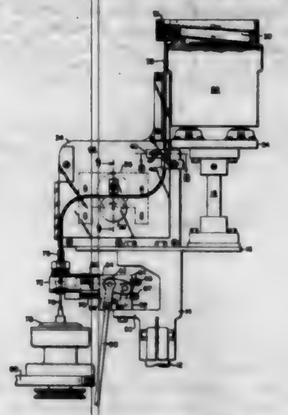
2,950,025
SELECTIVE DISPENSERS FOR CRAYONS OR THE LIKE
Jack L. Tumath, Detroit, Mich., assignor of one-third to Gordon E. Noakes and of one-third to William Pahl, both of Dearborn, Mich.
Filed Sept. 4, 1958, Ser. No. 758,941
3 Claims. (Cl. 221—90)



1. A selective dispenser for crayons or the like comprising a container for said crayons including a bottom, sides and back and front walls, pivoted cover means for said container swingable to form an easel to support said container in a back to front downwardly sloping attitude,

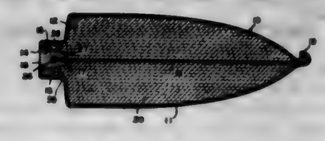
the bottom of said container extending forwardly of the front wall thereof forming a crayon chute, a plurality of crayon dispensing keys disposed side by side pivoted at their forward end in said container, each crayon dispensing key including a vertically disposed wall with a key pad on one end thereof and a crayon supporting base extending laterally from said wall, said crayon dispensing keys forming crayon holding troughs in said container, means guiding each said crayon dispensing key for vertical movement about said pivot, means limiting the upward pivotal movement of said crayon dispensing key, a laterally disposed elastic band stretched between the sides of said container resiliently supporting the rearward portion of each said crayon dispensing key in its upwardly pivoted position, the back and front walls of said container closing the ends of said crayon holding troughs, the front wall of said container having a slot thereacross at the base thereof through which a crayon positioned on any selected dispensing key may pass onto said crayon chute when said selected dispensing key is depressed.

2,950,026
APPARATUS FOR HANDLING ANNULAR ELEMENTS
Alfred A. Collazzo, Revere, and Elihu N. Morse, Swampscott, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Sept. 13, 1957, Ser. No. 683,867
1 Claim. (Cl. 221—175)



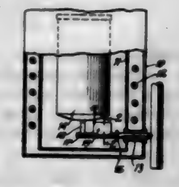
Apparatus for conveying and orienting eyelets comprising a supporting frame, a vibratory feeding device mounted at the top of said frame including a reservoir for a supply of eyelets in random distribution, a spiral ramp formed about the internal wall of said feeding device leading from said reservoir and along which said eyelets are caused to ascend by the action of said feeding device, a terminal block attached to said feeding device and having a grooved track formed in the upper surface thereof, said track being a continuation of said ramp, said block having a substantially vertical opening formed therein and intersecting said grooved track adjacent the end thereof remote from said ramp, a filamentary guide member having substantially vertical upper and lower sections and a substantially horizontal central section, said guide member lying in a vertical plane adjacent said frame, said upper section of said guide member being disposed centrally in said vertical opening and terminating at a point within said grooved track, said eyelets becoming threaded upon said guide member by the action of said vibratory feeding device and the guidance of said grooved track, a sheave mounted on said frame beneath said horizontal section of said guide member, means for rotating said sheave, said eyelets threaded on said guide member and reaching the horizontal section thereof coming into contact with said sheave and being moved along said guide in response to rotation of said sheave, buffer means disposed adjacent and on both sides of said upper section of said guide member, said buffer means being in contact with eyelets passing down said upper section of said guide member and an escapement device adjacent the lower section of said guide member for releasing said eyelets one at a time from said member.

2,950,027
SELF-OPENING AND SELF-CLOSING DISPENSER
William S. Berry, P.O. Box 205, Anchorage, Ky.
Filed Mar. 11, 1958, Ser. No. 720,650
1 Claim. (Cl. 222—92)



A self-opening and self-closing dispenser for pastelike and semi-solid materials comprising a flexible container formed of thin walled material having a closing crimp at one end and a discharge opening at the opposite end, said discharge opening comprising an outwardly flaring seat, an outwardly tapering conical plug conforming in external dimensions to the inner dimensions of said seat and effective to seal said discharge opening when said plug bears against said seat, the forward end of said plug being enlarged to bring the forward end of said plug flush with the upper surface of said seat when said plug is in closed position in said seat, said plug being provided at its rear portion with a longitudinal channel midway through said plug and extending from an opening at the rear of the plug to the middle of the plug, an enlarged opening at the middle in communication with said channel at the middle of the plug, a tensioned elastic strip secured to the rear end of said tube by said crimp and provided with an enlarged forward end, said strip being dimensioned to slide into said lateral channel and engaging by linking at its enlarged forward end with said enlarged opening and a plurality of circumferentially spaced apart inwardly directed guide fingers positioned in said discharge opening and substantially abutting the exterior surface of said plug intermediate the length thereof when said plug is in its closed position.

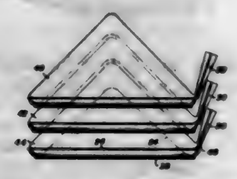
2,950,028
DISPENSING DEVICE
Theodore H. Gewecke, 2105 Grove, Glenview, Ill.
Filed May 3, 1957, Ser. No. 656,909
3 Claims. (Cl. 222—95)



1. In a cream dispenser for a coffee vending machine, and the like, a flexible, collapsible container, said container containing a pair of rectangular, flexible sheets arranged in face-to-face, aligned relation with the cor-

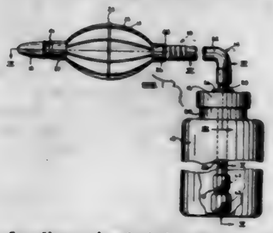
responding edges thereof united and with the envelopes so developed being disposed in a generally vertical plane when said sheets are in face-to-face relation, a reservoir positioned above said container, flow port means in the lower edge of said container, conduit means communicating said reservoir with said port means to deliver liquid to said container, conduit means leading from said port means to a on-off valve, and constriction means in the first-mentioned conduit means limiting the flow therein to a value appreciably less than the flow in the second-mentioned conduit means when said container is expanded by liquid contained therein and said valve is open.

2,950,029
CONTAINER
Thomas W. Winstead, Baltimore, Md., assignor to Hedwin Corporation, Baltimore, Md., a corporation of Maryland
Filed Oct. 29, 1956, Ser. No. 618,913
6 Claims. (Cl. 222—143)



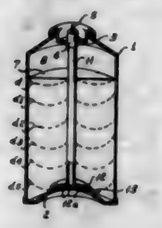
1. A plastic container for liquids, powders and semi-solids, comprising a hollow rectangular container body of flexible, semi-rigid thermoplastic material, consisting of two symmetrical halves, each having wall portions respectively joined by formed corners, said halves being sealed together along mating edges lying in a plane which intersects diagonally opposite, parallel sealed corners of said body, one of said halves being collapsible into the other with alternate, parallel formed corners in converging relation, whereby a plurality of collapsed containers may be nested together for shipping and storage.

2,950,030
DISPENSER FOR HAIRDRESSING LIQUIDS
Duane V. McConnohie, Kalamazoo, Mich., assignor to Marion S. Pump, Kalamazoo, Mich.
Filed June 23, 1958, Ser. No. 743,524
1 Claim. (Cl. 222—189)



A device for dispensing hairdressing liquids from a container, comprising: a manually compressible, resiliently flexible shell defining a chamber, said shell being capable of fitting comfortably into the grasp of an average, normal adult hand; a discharge nozzle defining a short outlet passageway; a first check valve having a one-piece body extending into said chamber and supporting said nozzle, said body having a central opening communicating between said chamber and said passageway, and resilient means within said body urging said first valve closed, the sense of said first valve being such that, when it is closed, it releasably resists movement of fluid out of said chamber and positively opposes movement of fluid into said chamber; an elongated, flexible tube defining a relatively long and unobstructed inlet passageway communicating with said chamber; relatively stiff pipe means connected to said tube and extending into said container; means for holding said pipe means in a substantially upright position within said container; a second check valve mounted upon the lower end of said pipe mean, said second check valve including a sleeve threadably connected to the lower end of said pipe means, said sleeve having radially inward flange means at its end remote from said lower end, a circular valve seat coaxially disposed in said sleeve, a screen operatively positioned in said sleeve below said valve seat by said flange means, a valve operative within the lower end of said pipe means for selectively engaging said valve seat and thereby controlling communication between the container and said pipe means, and means in said pipe means for limiting movement of said valve away from said seat; the sense of said second valve being such that it is closed by gravity and thereby positively opposes movement of fluid through the inlet passageway away from said chamber; whereby compression of said bulb increases the pressure in said chamber and opens said first valve, and release of the compressed bulb decreases the pressure in said chamber which closes said first valve and opens said second valve.

2,950,031
LIQUID STREAM DISPENSING PRESSURE PACKAGE FOR HIGH VISCOSITY LIQUIDS
Robert H. Abplanalp, Bronxville, and Joseph C. Pizzarro, Scarsdale, N.Y., assignors to Precision Valve Corporation, Yonkers, N.Y., a corporation of New York
Filed Oct. 23, 1957, Ser. No. 691,874
4 Claims. (Cl. 222—394)



1. A dispensing package for gaseous pressure packed high viscosity liquids, dentrifices, creams and like materials comprising: a container having an upwardly domed bottom, an outlet valve for said container, a dip tube connected to said outlet valve and extending to a point substantially central of the container and near the bottom thereof and there provided with a radially disposed upwardly domed baffle the chordal plane of the periphery of which intersects the domed bottom of the container, said baffle being of much greater diameter than the dip tube with the periphery of said baffle spaced from the bottom to provide between them a shallow inlet mouth, whereby substantially all the material within the container may be dispensed before cavitation permits the escape of gaseous pressure through said mouth.

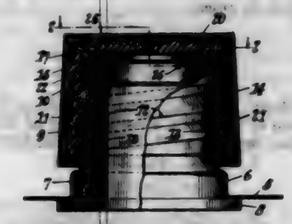
2,950,032
REINFORCED MOLDED CONTAINER OF FLEXIBLE MATERIAL
Robert J. Willis, Woodland Hills, and Charles J. McGraw, Los Angeles, Calif., assignors, by mesne assignments, to The Plas-Tex Corporation, Los Angeles, Calif., a corporation of California
Filed Mar. 14, 1958, Ser. No. 721,453
10 Claims. (Cl. 222—465)

1. A receptacle comprising: a thin-walled receptacle shell; a handle structure having its opposite ends united with said shell at an upper region and a lower region thereof, said shell being made of yielding pliable plastic material; and a reinforcement member extending around the inner circumferential surface of said shell at said upper region to stiffen the shell against deformation, said reinforcement member being positioned radially inwardly from the upper end of said handle structure,



means to retain said member at a predetermined disposition within said inner circumferential surface of said shell, and said handle structure being connected with said shell in said upper region at two points of substantial spacing circumferentially of the shell whereby said reinforcement member leads rigidity to the handle structure relative to the shell.

2,950,033
PLASTIC NOZZLE AND SCREW CAP ASSEMBLY
John Henchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 23, 1957, Ser. No. 635,787
5 Claims. (Cl. 222—551)



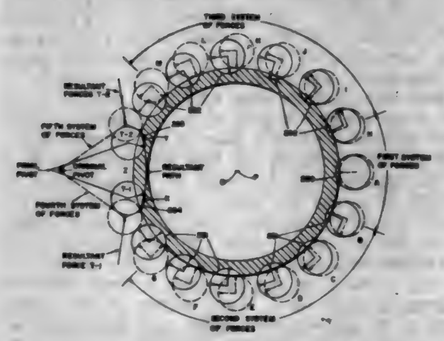
1. In a container structure, a deformable plastic nozzle comprising a tubular body providing a pouring throat opening outwardly through a frusto-conical wall portion flared outwardly at an acute angle with relation to a perpendicular to the axis of the nozzle, and a closure cap of material harder than the nozzle and threadedly mounted on said tubular body, said cap including an outer depending portion having a smooth internal surface having a close fit with said tubular body at the upper end of said tubular body, said cap having an inwardly tapered frusto-conical wall portion opposed to said flared wall portion and including a projecting annular bead disposed to become embedded in said flared wall portion and to distort the upper portion of said tubular body outwardly to move the outer surface of said tubular body into sealing engagement with said cap outer depending portion as said flared wall portion and said tapered wall portion are brought together during the threading home of said cap on said nozzle.

2,950,034
WATER BAG CARRIER FOR VEHICLES
Ernest O. Osborn, P.O. Box 1228, Victorville, Calif.
Filed Nov. 6, 1957, Ser. No. 694,875
3 Claims. (Cl. 224—42.03)



1. For use on a bumper of a motor vehicle, a water bag carrier comprising a substantially vertically disposed frame having an attaching means on one side thereof adapted to removably attach said frame to a motor vehicle bumper of the type having a bumper bolt removably secured therethrough, said frame having upper and lower support means vertically spaced from each other adapted to support a water bag therebetween, said attaching means including an angle bracket having one leg apertured and a slot formed in the other leg, said other leg being adapted to be inserted beneath the head of said bumper bolt, said one leg projecting towards said frame, an apertured flange carried by and extending from said frame towards said bumper parallel to said one leg, the apertures in said flange and said one leg being alined and having a fastener secured therethrough, said slot being of sufficient width to be adapted to receive not only the shank of said bolt but the usual square projection on the shank side of the head thereof.

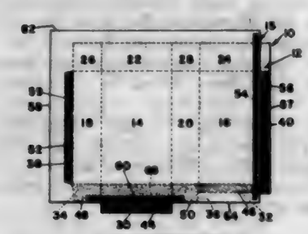
2,950,035
METHOD FOR PARTING ELONGATED FRACTURABLE MEMBERS
Charles J. Wheeler, R.D. 4, Box 310, Chardon, Ohio
Filed May 22, 1959, Ser. No. 815,062
8 Claims. (Cl. 225—1)



1. Method of parting an elongated fracturable member comprising the steps of, making a first and second series of discontinuous indentures spaced peripherally apart from each other and extending around the outer peripheral surface of said elongated fracturable member with said indentures lying in a plane substantially perpendicular to the centerline of said elongated fracturable member and with the first series of indentures extending in a clockwise direction from a first place to a second place on said outer surface, whereby the peripheral distance between said first and second places is greater than one-fourth and less than one-half of the perimeter of said

outer peripheral surface, and with said second series of indentures extending in a counterclockwise direction from said first place to a third place on said outer surface, whereby the peripheral distance between said first and third places if greater than one-fourth and less than one-half of the perimeter of said outer peripheral surface, and whereby the peripheral distance between said second and third places is less than one-half of the perimeter of said outer peripheral surface, increasing the size of said discontinuous indentures beginning with a minimum amount at said first place and increasing same to a gradually larger amount in both said series until a maximum amount is attained at said second and third places, and continuously increasing the size of said discontinuous indentures until said elongated fracturable member fractures.

2,950,036
LINED CARTON AND METHOD OF MAKING THE SAME
John G. Vergobbi, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Filed July 16, 1957, Ser. No. 672,148
5 Claims. (Cl. 229—14)



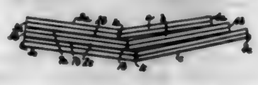
1. A composite carton blank and lining sheet adapted to be assembled by wrapping the composite members about a forming block to provide a rectangular lined container having a bottom closure and open at the top, said composite members including a carton blank scored to provide side wall panels and end wall panels having bottom closing flaps coextensive with said panels and having a relatively narrow, longitudinal side seam flap extended from a marginal edge of one of said panels, a rectangular lining sheet adhesively secured to said lining blank along said longitudinal side seam flap only, the remainder of the sheet being free to move lengthwise relative to the carton blank during wrapping of the composite members against successive adjacent faces of the forming block, one of the bottom closing side flaps being relatively short and the opposing side flap being of a length equal to the width of an end wall panel, the short flap being adhesively secured to a portion of the lining bottom closure and the free end of the wider flap being adhesively secured to the remaining portion of the lining bottom closure and to the short flap providing a single thickness of carton material for a major portion of the bottom closure in the assembled container, said lining sheet being disposed in a laterally offset position relative to the carton blank whereby to provide individual spaced longitudinal side seams in the lining sheet and carton blank respectively of the assembled container, the lower edge of the lining sheet being aligned with the free ends of the bottom end closing flaps and folded to provide triangular end tabs in the assembled container of a length equal to said end flaps, said end flaps and triangular tabs being folded over the single thickness side flap in spaced and non-overlapping relation in the assembled container, said carton blank and said lining sheet being initially provided with pressure sensitive adhesive at selected portions thereof activated by pressure of the portions against the forming block during assembly of the container, the body portion of the assembled carton being free of adhesive connection between the carton blank and the lining sheet except at said marginal side seam flap.

2,950,037
PACKAGES FOR LIQUID, PASTY AND PULVERULENT MATERIALS
René Orsini, Casablanca, Morocco, assignor to S.A. Plastiss, a corporation of Switzerland
Filed Aug. 9, 1957, Ser. No. 677,260
Claims priority, application France Aug. 11, 1956
5 Claims. (Cl. 229—14)



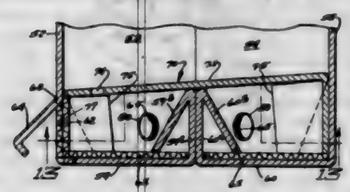
1. A package for liquid, pasty and pulverulent materials comprising an outer semi-rigid casing including terminal closing flaps, at least one of said closing flaps corresponding to the upper part of said casing, terminating along the medial line of the casing, an extension of said flap, said extension being separated from said flap by a fold forming a hinge allowing this extension to occupy at least one position perpendicular to the flap, a cut in one lateral part of said extension and adjacent part of the flap so as to reduce the length of the extension and adjacent part of the flap to a part of the medial line of the casing and a bellow shaped yielding bag, the breadth of which is identical with the breadth of the side wall of the casing which is fast with the extension carrying flap, the development of the bellows in their expanded condition being equal to the depth of the casing, the bellow shaped yielding bag being secured to the extension of the flap at least over the breadth of one of its bellows, the other bellow being in front of the cut in the extension and flap so as to be free to open.

2,950,038
PACKING PAD
Charles E. Rupp, Rittman, Ohio, assignor to Packaging Corporation of America, a corporation of Delaware
Filed Sept. 6, 1957, Ser. No. 682,534
1 Claim. (Cl. 229—14)



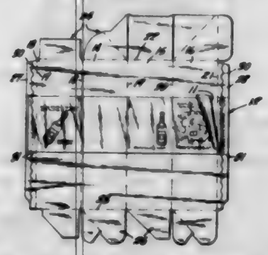
A lamellar, right angularly-foldable, packing pad for article assembly with a container, said pad comprising at least two layer members of corrugated board, each of said layer members being provided on its inner face with a liner sheet and having intermediate its opposite side edges integral pre-formed folding hinge means defining two foldable portions of the layer member, said hinge means comprising a cut extending through the body of the layer member from the opposite face thereof and terminating at said inner liner sheet, said cut being in substantial parallelism with said opposite edges, the uncut liner sheet thus serving to span said cut and furnish a hinge connection between the respective foldable portions, said layer members being assembled one upon another in flat planar relation with their respective hinge means in substantial parallelism but relatively offset for a distance substantially equal to the thickness of the corrugated board, the portions of the thus assembled layer members at one side of said hinge means being rigidly secured together and their portions at the other side of said hinge means being free for relative sliding contact, whereby such pad assembly may be folded simultaneously upon the hinge means of its respective layer members to present its foldable portions at opposite sides of said hinge means in angular relation to each other.

2,950,039
RECEPTACLE
James C. Wilson, Jacksonville, Fla., assignor, by mesne assignments, to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Filed Jan. 10, 1958, Ser. No. 708,097
6 Claims. (Cl. 229—14)



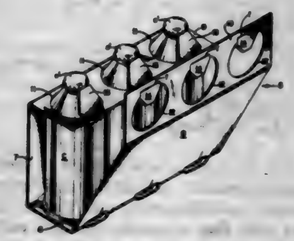
1. A tubular receptacle having a polygonal cross-section being formed of relatively stiff, sheet-like material, said receptacle comprising a main body member comprising a linear series of foldably connected side wall panels assembled into closed configuration; a partitioning member adapted to fit snugly within said body member adjacent the lower end thereof, and said partitioning member being provided with an aperture; flaps foldably secured to selected portions of the periphery of said partitioning member, said just-mentioned flaps being constructed and arranged to define diametrically disposed notches; closure panel members extending foldably from two opposed side wall panels in said series, said closure panels additively spanning said end to constitute a closure therefor, and thereby forming a lower compartment beneath said partitioning member; a bridging support for said partitioning member formed by a flap extension on each of said closure panel members, said flap extensions being folded to project inwardly into said receptacle in face-to-face relationship and together supportingly contact said partitioning member, said bridging support having its end portions spatially confined by said notches; and means providing manual access to the interior of said lower compartment.

2,950,040
CARTON HAVING SIMULATED BAND
Hubert V. Bolding, Clarksville, Ind., assignor to Standard Packaging Corporation, New York, N.Y., a corporation of Virginia
Filed Oct. 1, 1959, Ser. No. 843,851
3 Claims. (Cl. 229—38)



1. A carton having a simulated band made from a blank having outer and inner surfaces comprising a plurality of side wall panels arranged side-by-side and defined by score lines, a flap joined by a score line to each of the two most remote side wall panels of the blank, and a strip of flexible material having identifying markings thereon, said strip being affixed at both ends to the blank, the intermediate portion of the strip extending across the outer surface of said blank without any attachment between the strip and the outer surfaces of the side wall panels, the flaps being brought together during the assembly of the carton and bent inwardly along the score lines which connect them to their respective side wall panels, the faces of the flaps corresponding to the outer surface of the blank being attached in face-to-face relationship with the ends of the strip in alignment so that the strip will give the appearance of a band surrounding the outer surfaces of the walls of the carton.

2,950,041
WRAP-AROUND PAPERBOARD CARRIER
Orison W. Stone, Valley Cottage, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Nov. 29, 1957, Ser. No. 699,602
7 Claims. (Cl. 229—40)



1. A wrap-around paperboard carton for containers having caps, comprising a bottom panel, two side wall panels and a top closing and locking flap extending from the top of each side wall panel in planes substantially at right angles to the axes of the containers which extend through the caps, said top closing and locking flaps each having openings to receive the upper ends of at least one row of containers with the flaps overlapping one another and both surrounding the upper ends of the containers in at least said one row, lock tabs at one side of openings in one of said flaps and lock tabs at the opposite side of openings in the other of said flaps for engaging the caps of containers in said one row said lock tabs being attached to said flaps at fold lines substantially tangent to said openings, said lock tabs folding outwardly at an angle to the planes of said top closing and locking flaps when said lock tabs are engaged with the caps, whereby each flap is individually and directly locked through engagement with the caps of the same containers and the lock tabs of the respective flaps grip the caps from opposite sides.

2,950,042
BARBECUE PACKAGE
Arnold Goldstein, 3363 Trexler Blvd., Allentown, Pa.
Filed Oct. 21, 1959, Ser. No. 847,832
2 Claims. (Cl. 229—41)

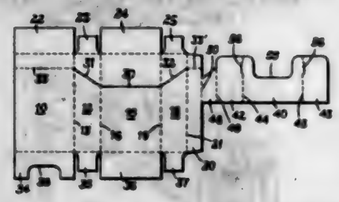
1. A package for a disassembled substantially circular barbecue, or similar article comprising: a unitary substantially rectangular planar blank, said blank including a first centrally disposed eight-sided panel, said panel being bounded by four relatively long rectilinear fold lines, and by four relatively short rectilinear fold lines disposed at approximately 45° with respect to said longer fold lines, said short fold lines being disposed intermediate each of said longer fold lines, a corner panel fold-

ably attached at each of said short fold lines and interconnectable tabs foldably attached to each of said corner panels, said tabs having a principal axis extending parallel



to one of said longer fold lines, said tabs being interconnectable in adjacent pairs to form a partially bowl-shaped enclosure.

2,950,043
CARTON
William A. Ringler, Wayne, Pa., assignor, by mesne assignments, to Diamond National Corporation, a corporation of Delaware
Filed Apr. 2, 1956, Ser. No. 575,530
1 Claim. (Cl. 229—44)



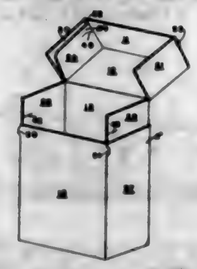
A blank for forming a carton with a reclosable lid for packaging of cigarettes and similar articles comprising, an outer member including outer rear, side, front and side panels and a glue flap connected in that order in side by side hinged relation, said outer panels having flaps extending from the upper and lower edges thereof for forming top and bottom walls on the carton, a slit extending transversely of said outer side and front panels spaced below the upper edge thereof, a score line across said rear panel spaced below the upper edge thereof and intersecting that end of said slit in the adjacent side panel, a three panel inner member providing inner front and side panels connected side by side and of widths slightly less than the corresponding outer front and side panels, said inner panels all being of a height substantially less than said outer panels, a spacing tab corresponding in width to said glue flap and connecting one of said inner side panels with said glue flap, said tab positioning said inner panels in aligned face to face relation with the corresponding outer front and side panels and covering said slit therein, and said inner panels being free of direct connection with the corresponding outer panels as said inner panels are superimposed on said outer panels providing for relative movement therebetween during folding of the blank into tubular form.

ERRATUM

For Class 229—44 see:
Patent No. 2,950,060

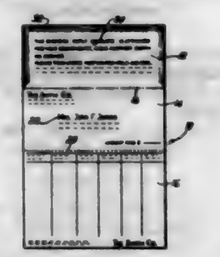
2,950,044
RECLOSABLE FOLDING BOX AND METHOD OF MAKING IT
Marshall M. Austin, Darien, Conn., assignor to Baljak Corporation, Wilmington, Del., a corporation of Delaware
Filed Jan. 19, 1959, Ser. No. 787,541
10 Claims. (Cl. 229—44)

3. A reclosable hinge-cover folding box comprising, in combination, a box body portion and a box cover portion, said box body portion comprising, a back panel; side wall panels articulated to said back panel along side wall fold lines, said side wall panels being provided with two sets of locking edges; a bottom panel articulated to said back panel along a rear bottom fold line; a pair of lower lock flaps articulated to said bottom panel along lower lock flap fold lines, said lower lock flaps overlying said side wall panels at least partially and being provided with cut edges adapted to interlock with one set of the cut locking edges of the side wall panels; a lower front panel articulated to said bottom panel along a front bottom fold line; a pair of lower charlottes articulated to the sides of said lower front panel along lower charlotte fold lines, said lower charlottes being larger in area



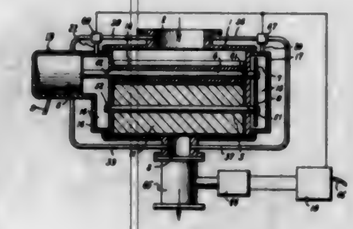
than said lower lock flaps, overlying said lower lock flaps, and being adhesively secured to said lower lock flaps and to said side wall panels; said box cover portion comprising a top panel articulated to said back panel along a rear top fold line constituting the cover hinge fold line; a pair of upper lock flaps articulated to the sides of said top panel and overlying the upper portion of said side wall panels, said upper lock flaps being provided with cut edges adapted to engage the other set of locking edges of the side wall panels; an upper front panel articulated to said top panel along a front top fold line; and upper charlottes articulated to the sides of said upper front panel, said upper charlottes overlying, and being adhesively secured to, said upper lock flaps.

2,950,045
COMBINED STATEMENT AND RETURN ENVELOPE
Hugh M. Martin, North Syracuse, N.Y., assignor of fifty percent to Francis C. Hunt, Syracuse, N.Y.
Filed June 4, 1958, Ser. No. 739,762
1 Claim. (Cl. 229—92.3)



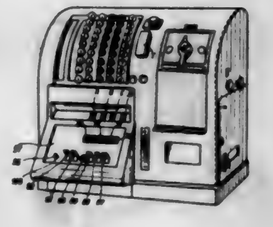
In combination: a window envelope; and a statement blank used with said window envelope initially comprising a single thickness, rectangular sheet having an imperforate upper return address section, an imperforate intermediate addressee section, and an imperforate lower statement section; the lengths of each of said sections being coextensive with the full width of said sheet; said upper section being joined at its bottom edge to said intermediate section along an imperforate score line; said intermediate section being joined at its bottom edge to said lower section along a weakened tear line whereby the lower section can be readily detached from the other two sections; the widths of said upper and intermediate sections being substantially equal; said upper section having the sender's return address printed on the back of the sheet, said intermediate section having the name and address of the addressee on the front of the sheet, and said lower section having a statement of the addressee's account with the sender on the front of the sheet; said upper and lower sections being folded behind but not secured to said intermediate section when placed in said window envelope for original mailing of said blank to present the name and address of the addressee at the window of said window envelope; and latent activatable adhesive means on the front of the sheet coextensive with the top and side edges of said upper section whereby the upper section can be folded over and adhesively secured to the bottom and side edges of said intermediate section to form a two section return envelope after said lower section has been detached therefrom; said overlying upper section concealing the addressee's name and address on the front of the intermediate section and exposing the sender's name and address to view, whereby said return envelope bears on the inside thereof the addressee's name and address as originally recorded on the blank by the sender so that the user of the return envelope can be positively identified.

2,950,046
HIGH VACUUM PUMP
Albert Lorenz, Hanau (Main), Germany, assignor to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, a German body corporate
Filed Jan. 25, 1957, Ser. No. 636,405
Claims priority, application Germany Jan. 28, 1956
2 Claims. (Cl. 230—139)



1. A Root's type vacuum pump comprising a pump casing having an inlet and an outlet, a pair of impellers rotatable within the casing, a pair of shafts journaled in the casing and rotatably supporting the impellers in intermeshing relationship, the shafts extending outside the casing, gear means secured to the shafts outside the casing for intercoupling the two shafts, means secured to one of the shafts outside the casing for driving the impellers, means in combination with the casing defining a chamber enclosing the ends of the shafts projecting outside the casing, means defining passages connecting the chamber to the inlet and to the outlet, valve means in said passages for selectively connecting the chamber to the inlet or the outlet, pressure sensing means connected to the outlet of the pump casing, and means responsive to the pressure sensing means for operating said valve means to open up one or the other of said passages depending on the outlet pressure of the pump.

2,950,047
CHANGE INDICATING DEVICE
Giovanni Barberis, Turin, Italy, assignor to Riv Officine di Villar Perosa Societa per Azioni, Turin, Italy
Filed Feb. 9, 1954, Ser. No. 409,194
Claims priority, application Italy May 25, 1948
5 Claims. (Cl. 235—7)

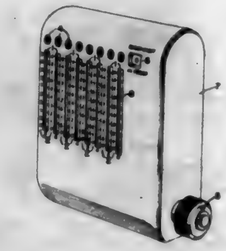


1. In a cash register having units and tens indicating drums, a change indicating mechanism comprising: a units of change indicating drum coupled for rotation with the units indicating drum thereby to display a complement to ten of a digit displayed by the units indicating drum; a tens of change indicating drum resiliently coupled for rotation with the tens indicating drum thereby to display a complement to ten of a digit displayed by the tens indicating drum but whereby the tens of change indicating drum may be angularly advanced to a complement-to-nine indicating position with respect of the tens indicating drum; a toothed wheel fast with the tens of change indicating drum; a transfer shaft; a toothed sector rotatable on the transfer shaft adapted to mesh with the said toothed wheel; spring means urging the sector out of mesh with the toothed wheel; a lever keyed on the transfer shaft capable of engaging the toothed sector on a rotation of the shaft in one direction thereby to cause the sector to mesh with the toothed wheel and angularly advance the tens of change indicating drum to the said complement-to-nine indicating position, and of disengaging the sector on rotation of the shaft in opposite direction; and means sensitive to non-zero indicating position of the units indicating drum capable of locking the sector and tens of change indicating drum in the said complement-to-nine indicating position when the units of change indicating drum displays a digit different from zero, and of leaving the sector and the tens of change indicating drum free to return to the complement-to-ten indicating position of the drum and disengaged condition of the sector when the units of change indicating drum displays zero and the transfer shaft is rotated in the said opposite direction to disengage the sector from the lever.

2,950,048
COMPUTER FOR VERIFYING NUMBERS
Hans P. Luhn, Armonk, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 6, 1954, Ser. No. 402,491
5 Claims. (Cl. 235—61)

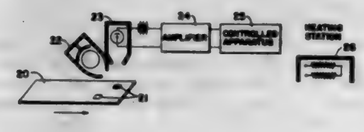
1. Apparatus for cross addition of numbers having original and substitute digits in alternate orders comprising a member having a plurality of slots and a column of ten digit indicia adjacent each slot, a movable endless belt behind and common to all slots and having gripping means spaced to match the spacing of the digit indicia, an endless belt individual to each slot and having gripping means spaced to match the spacing of the digit indicia, the belts being movable longitudinally of the slots by inserting a stylus through a slot into engage-

ment with a gripping means and moving the same along the slot, a digit wheel actuated by the first belt for summing up motions of the first belt, the digit wheel having ten digit indicia in numerical order spaced so that they advance one digit as the belt advances from one digit



to another of the columns, said member having a viewing window above each slot and digit indicia on the individual belts arranged to indicate the digit indicia read into each slot, and digit printing indicia on the individual belts arranged to indicate the digit indicia read into each slot.

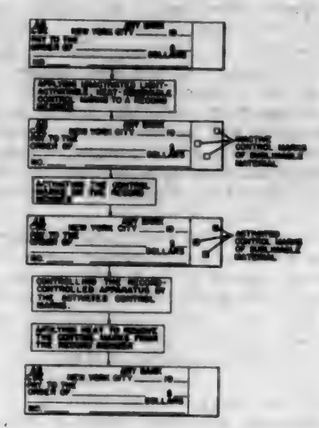
2,950,049
METHOD OF CONTROLLING APPARATUS FROM MARKS ON RECORD MATERIAL
Marshall Mazer and Harry N. Vosmer, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Ohio
Filed Nov. 9, 1955, Ser. No. 545,959
3 Claims. (Cl. 235—61.11)



1. The method of controlling record-controlled apparatus by a record member having temporary control marks thereon which comprises the step of applying to a record member inactive activatable data-representing marks of a sublimable material which is inert to the record member; the step of activating the marks to render them effective to be sensed; and simultaneously sensing the activated marks for control of the apparatus; and the step of thereafter subliming the material of the marks to erase the marks from the record member to restore the record member to an unmarked condition.

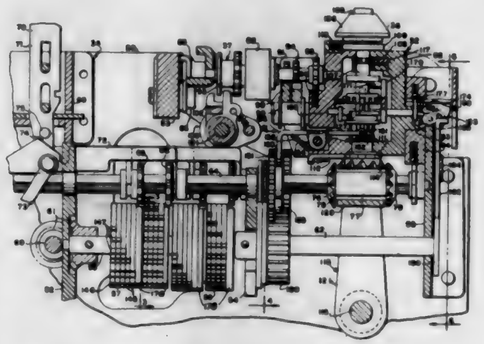
2,950,050
RECORD MEMBER
Marshall Mazer and Harry N. Vosmer, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application Nov. 9, 1955, Ser. No. 545,959. Divided and this application Mar. 4, 1957, Ser. No. 643,724
1 Claim. (Cl. 235—61.12)

A paper record member for controlling record-controlled machines, having applied thereto, in selected areas, discrete markings to represent data, said markings being of a mixture of anthracene and naphthacene which is inert to the paper of the record member, and normally invisible, which has the characteristic of fluorescing when activated by light of a suitable wave-length to render the record member effective to be sensed, and which may be



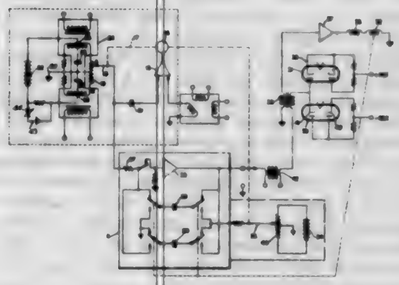
sublimed by the application of heat and thereby removed from the record member without damage to the paper.

2,950,051
CALCULATING MACHINE DIFFERENTIAL DRIVE AND TENS CARRY MECHANISM
Arthur J. Malavazos, Oakland, Calif., assignor to Friden, Inc., a corporation of California
Filed Oct. 17, 1955, Ser. No. 540,670
17 Claims. (Cl. 235—63)



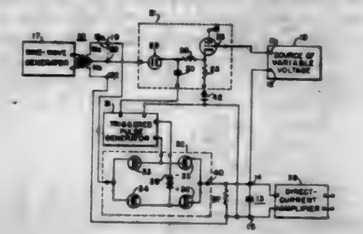
8. In a cyclically operative calculating machine having a Thomas type actuator mechanism including actuator drums, said actuator drums operating through a value entering interval and a tens-transfer interval in each cycle of operation and said intervals being rotationally stepped from the lowest to the highest order of the actuator mechanism, a register including ordinally arranged dial assemblies, each assembly including a dial shaft, and a dial and a dial drive gear mounted on said shaft for rotation relative to each other, a digitation clutch on each dial shaft for interconnecting the coordinal dial drive gear and dial for synchronous rotation, an ordinally arranged means including cams driven by said actuator mechanism in rotational phase with the actuator drums of the corresponding orders to individually enable said digitation clutches at the beginning of a value entering interval of the coordinal actuator drum and individually disable said digitation clutches at the termination of such value entering interval, a tens-transfer clutch on each dial shaft for interconnecting the corresponding dial drive gear and dial for synchronous rotation, tens-transfer conditioning members ordinally arranged between said dial assemblies, each member engaging the tens-transfer clutch in the adjacent higher order and actuated by the dial assembly of adjacent lower order passing through its tens-transfer position to thereby enable the higher order tens-transfer clutch for a tens-transfer, means latching the enabled tens-transfer clutches in transfer condition until near the end of the coincident operating cycle of the actuator mechanism, means for operatively connecting said dial drive gears to their ordinally related actuator drums, means imparting to each dial drive gear a unit space rotational step during the tens-transfer interval for the particular order to thereby complete any tens-transfers conditioned during the preceding value entering intervals, and means driven by said actuator mechanism and engaging said tens-transfer conditioning members to disable all enabled tens-transfer clutches at the end of the coincident operating cycle of said actuator mechanism, said tens-transfers being completed in wave form closely following the wave form of said value entering intervals so that a tens-transfer in a lower order is completed before the value entering interval in the highest order has terminated.

2,950,052
ANALOGUE-TO-DIGITAL PRECISION INTEGRATOR
Lewis A. Knox, Owego, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 29, 1954, Ser. No. 478,471
6 Claims. (Cl. 235—154)



1. An analog-to-digital conversion system comprising, means responsive to an analog-function alternating voltage having variable amplitude and either of two opposed phase relationships for deriving a unidirectional voltage having a magnitude proportional to the amplitude of said alternating voltage and having a polarity indicative of individual ones of said phase relationships, integrating means having a time constant circuit energized by said unidirectional voltage and which may include either of two condensers charged in response to said unidirectional voltage for integrating said unidirectional voltage between preselected first and second integration voltage limits, means for producing a digital voltage pulse upon completion of each integration between said preselected voltage limits, condenser discharge means, and means responsive to successively developed digital voltage pulses for alternating the use of said condensers in said time constant circuit and for alternating the discharge thereof by said discharge means.

2,950,053
ELECTRICAL INTEGRATOR
Charles J. Hirsch, Locust Valley, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 15, 1956, Ser. No. 616,056
14 Claims. (Cl. 235—183)



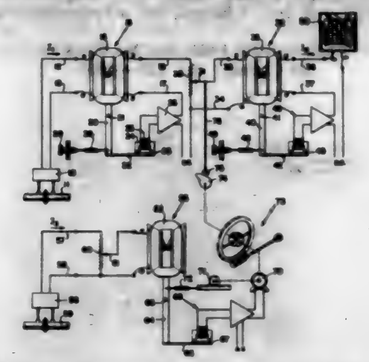
3. An electrical integrator comprising: means for supplying a periodic voltage; a source of a first voltage representing a function to be integrated; a storage device in series with the source for storing an integration voltage representing the integral of said function; comparison means for instantaneously comparing the periodic voltage with the sum of the first and integration voltages in series; and a circuit actuated by the comparison means for instantaneously applying said sum to the storage device each time said periodic voltage and sum become equal during the cycle of the periodic voltage; all whereby the storage device progressively accumulates said integration voltage.

11. An electrical integrator comprising: means for supplying a substantially periodic voltage; a source of first voltage representing a function to be integrated; a storage device for storing an integration voltage representing the integral of said function; comparison means for instantaneously comparing a first value of said substantially periodic voltage with the sum of the first voltage representing the function to be integrated and the integration voltage; and a circuit actuated by the comparison means for instantaneously applying a second and larger value of said substantially periodic voltage to the storage device each time said first value of said substantially periodic voltage and said sum become equal during the cycle of the substantially periodic voltage, the difference between said first and said second values of said substantially periodic voltage compensating for leakage loss of said storage device; all whereby the storage device progressively accumulates said integration voltage.

2,950,054
ELECTRICAL COMPUTING APPARATUS
Joseph C. Modie, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 14, 1955, Ser. No. 487,882
12 Claims. (Cl. 235—196)

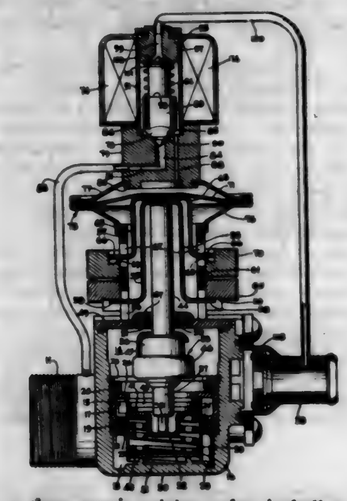
1. In electrical ratioing apparatus, the combination comprising, a first electro-magnetic device having a pair of coil means movable in a magnetic field, means for applying an input signal to a first one of said means, means sensing the motion of said coil means and producing an output electrical signal for connection to the other one of said coil means to force balance said first device, a potentiometer resistor in series with said sensing means, a second electro-magnetic device having a pair of coil means movable in a magnetic field, means connecting one end of said resistor and an adjustable tap thereon to one of said last named pair of coils, motion sensing means detecting the motion of said last named means and producing an output electrical signal for connection to the

other of said coils of said last named coil means, to force balance said second electro-magnetic device, and a third



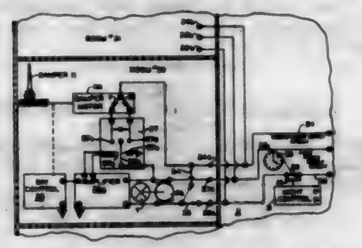
electrical signal responsive means connected to variably adjust said tap.

2,950,055
HYDRAULICALLY ADJUSTABLE THERMOSTATIC VALVE
Joseph M. Algino and Edward E. Modes, Chicago, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 14, 1956, Ser. No. 628,249
4 Claims. (Cl. 236—12)



4. In a thermostatic mixing valve including a valve body having hot and cold fluid inlets leading thereinto and an outlet leading therefrom, a mixing chamber within said valve body communicable with said inlets and said outlet, a reciprocably movable metering valve in said mixing chamber for metering the flow of hot and cold fluid thereinto, a thermal sensitive element disposed within said mixing chamber and operably connected with said metering valve for controlling reciprocable movement thereof, the improvement of means for selectively positioning said thermal sensitive element within said mixing chamber comprising a shaft engageable with said thermal sensitive element and slidable within said valve body, spring means biasing said thermal sensitive element and said shaft in one direction, a follower engageable with said shaft to move said shaft and said thermal sensitive element in an opposite direction against the opposing biasing force of said spring means, a manually movable cam engageable with said follower to operably move said follower and said shaft and said thermal sensitive element against the biasing force of said spring means, a second follower engageable on one side thereof with said first follower, fluid pressure operated means operatively connected with said second follower on the opposite side thereof, means for directing pressurized fluid to said fluid pressure operated means to operably move said followers and said shaft and said thermal sensitive element against the biasing force of said spring means, and a second manually adjustable cam operable to limit movement of said second follower against the biasing force of said spring means.

2,950,056
UNIT VENTILATOR HAVING CONTROL AND DAMPER CIRCUITS DESIGNED FOR CONNECTION TO DIFFERENT POWER SUPPLY CIRCUITS AND A SYSTEM OF SUCH VENTILATORS
Forrest G. Baker, Davenport, Iowa, assignor to American Air Filter Company, Inc., Moline, Ill., a corporation of Delaware
Filed Nov. 7, 1956, Ser. No. 620,953
3 Claims. (Cl. 236—49)

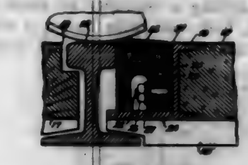


1. An apparatus for tempering air in a building having first and second electrical power supply circuits, comprising: a unit ventilator having motorized-fan and day control designed normally to be connected to and energized by said first circuit with the motorized fan operating continuously to discharge a fan-induced flow of air into the room and the day control operating to signal for more fresh air upon a rise and for more hot air upon a fall in the temperature of said room from a predetermined value, motorized damper means arranged for selective connection one way to said second circuit to displace a damper in a direction to increase the relative amount of fresh air and another way to displace said damper in a direction to increase the relative amount of room air in said fan-induced flow and signal responsive means operating, when the day control is energized, to selectively connect said motorized damper means said one way to said second circuit in response to a signal for more fresh air and said other way in response to a signal for more room air; said signal responsive means including means to connect said motorized damper means to said second circuit in said other way in response to de-energization of said day control to displace said damper to a limiting position wherein the fresh air content of said fan induced flow of air is reduced to substantially zero and a transfer switch operable at will for transferring the connection of the fan and day control from the first power supply circuit to the second power supply circuit.

2,950,057
RAIL CROSSING
Paul Speer, La Grange, Ill., assignor to Speer Filler Strip Company, La Grange, Ill., a corporation of Illinois
Filed Sept. 11, 1953, Ser. No. 379,676
7 Claims. (Cl. 238—8)

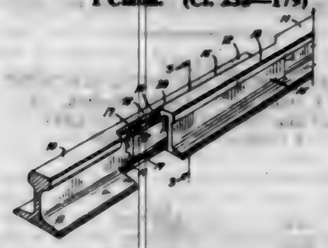
3. An improved rail crossing comprising, in combination, a rail providing a guide for a flanged wheel, a side

wall disposed parallel to said rail, a bottom wall forming with said side wall and said rail an elongated narrow space into which the wheel flange passes, the top of said side wall being substantially in the same plane as the top of the rail, an elongated rubber strip disposed lengthwise in said narrow space conforming at its upper exposed



surface with the shape of said narrow space, said upper surface of said strip being substantially flush with the tops of said rail and said side wall, said strip being in the general shape of an inverted U with the legs thereof resting on said bottom wall, and means for firmly securing to said side wall the leg of said strip which is adjacent said side wall.

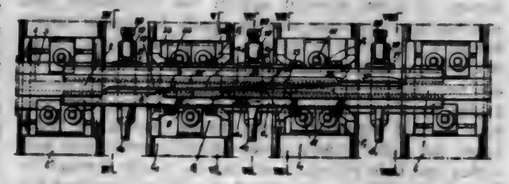
2,950,058
EXPANSION RAILS
Edwin Watson, 1101 Bowles Ave., Littleton, Colo.
Filed May 1, 1959, Ser. No. 810,272
1 Claim. (Cl. 238—179)



An expending railway rail comprising: a first rail section; a second rail section; said sections having a cross section corresponding to a conventional railway rail for the major portions of their lengths; a narrowed extremity formed on each section, said extremities being overlapped to form a longitudinally split overlapped portion corresponding in width to the remainder of said rail sections; a dove-tailed key extending longitudinally of the inner face of the first overlapping extremity; a dove-tailed groove formed in the inner face of the second overlapping extremity and slidably receiving said key; a projecting longitudinally-extending guide flange formed along the lower edge of the inner face of the first overlapping extremity and slidably engaging a receiving groove in the lower edge of the inner face of the second overlapping extremity; a guide groove formed along the upper edge of the inner face of the first overlapping extremity; and a longitudinally extending upper guide flange formed on the upper edge of the inner face of the second overlapping extremity and slidably engaging said guide groove, the two extremities being unattached against relative longitudinal movement.

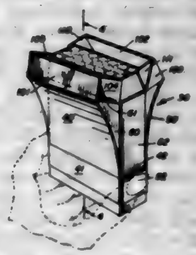
2,950,059
METHOD OF CONNECTING RAILS, RAIL-CONNECTING DEVICES AND RAILS OBTAINED THEREFROM
Marcel-Luc-Amedee Poulve, Champagne-sur-Oise, France
Filed Jan. 16, 1956, Ser. No. 559,450
Claims priority, application France Nov. 21, 1955
4 Claims. (Cl. 238—230)

1. In a connecting device for assembling rails, blade-shaped rail means constituting the end portions of reduced width of adjacent rail sections, a base and a web of a substantially same transversal profile as a half longitudinal rail section for each of said blade-shaped rail means, enlarged heads integral with said webs and of a substantially symmetrical profile with respect to the longitudinal axis of said rails for said blade-shaped rail means, inclined inner faces on said enlarged heads extending substantially on the whole height of said heads and being inclined transversally and according to the same angle with respect to the longitudinal plane of symmetry of said rails, said inclined inner faces forming on each of said blade-shaped rail means two end portions disposed parallelly to the longitudinal axis of symmetry of said



rails and offset transversally and longitudinally with respect to each other, said rail means being juxtaposed so that their enlarged heads be in a bearing relationship with respect to each other by the parallel end portions of their inner inclined faces, pressing devices adapted to apply said juxtaposed rail means against each other while allowing said rails to slide longitudinally with respect to each other under the expansion effects, and a limiting device between said juxtaposed rail means to maintain said relative longitudinal sliding of said rail sections between extreme values wherein said enlarged heads of said juxtaposed blade-shaped rail means are always in said bearing realtionship.

2,950,860
CIGARETTE PACKAGE
Dolf von Rudeen, 5847 Graves Ave., Encino, Calif.
Filed Feb. 17, 1958, Ser. No. 715,547
2 Claims. (Cl. 229—44)



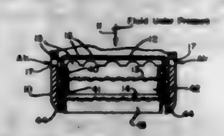
1. A ready opening box composed of a single blank, said blank being cut and scored to provide side, end and bottom portions, a pair of supplemental side portions and closure elements connecting the main and supplemental side portions, the supplemental side portions including a band slidable on the exterior of the box, the closure elements being hinged to the side portions and including joined, juxtaposed end sections cooperating with the end portions of the main body to provide a complete box, the closure elements including integral semi-locking elements which comprise longitudinal ridges.

2,950,861
NONCLOGGING WINDSHIELD SQUIRTER TIP
Carl W. Dickinson, 253 Atlanta Drive, Pittsburgh, Pa.
Filed July 31, 1959, Ser. No. 830,929
3 Claims. (Cl. 239—110)



1. A windshield squirter tip adapted to be mounted in front of the windshield of a vehicle for directing a fine stream of water upward against the windshield, said squirter tip comprising a substantially horizontal nozzle having a water inlet in one end and an outlet orifice in its top, a drain hole in the nozzle between its opposite end and said orifice, dirt-blocking slides inside the nozzle engaging its inner surface and normally closing the inner ends of said orifice and hole, means spacing the slides apart, the slides being movable laterally away from said orifice and hole by water entering the nozzle through its inlet to thereby open them and to connect the space between the slides with the drain hole, and a spring inside the nozzle for returning said slides to closing position whenever water ceases to enter the nozzle.

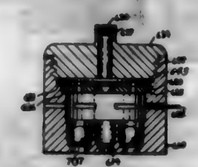
2,950,862
SCREEN FRAMING STRUCTURES FOR FLUID MIXING DEVICES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Filed Aug. 2, 1956, Ser. No. 601,710
5 Claims. (Cl. 239—431)



3. Mixing means for a fluid mixing device comprising a conduit, said mixing means including a substantially flat screen surface, a frame for supporting said screen surface within said conduit, said frame including a flat ring disposed adjacent the periphery of one side of said screen surface, and an upstanding edge, integral with said flat ring, and extending in a direction transverse to the screen surface to a position appreciably above the other side of said screen surface, the length of said upstanding edge being substantially greater than the thickness thereof whereby said ring and upstanding edge cooperate with one another to provide a frame having a substantially L-shaped edge, and a substantially cylindrical member disposed within said upstanding edge above said other side of said screen surface, said cylindrical member having a thickness less than its length and including portions engaging both said upstanding edge and said screen surface thereby to retain said screen surface in position adjacent the junction of said flat ring and said upstanding edge.

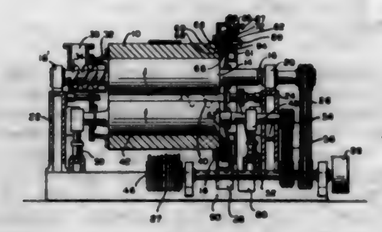
2,950,863
AERATING SHOWER HEAD
Glenn Q. Ripley, Jr., 1609 E. Grandview Blvd., Erie, Pa.
Original application Dec. 21, 1953, Ser. No. 399,189, now Patent No. 2,842,347, dated July 8, 1958. Divided and this application July 7, 1958, Ser. No. 746,769
4 Claims. (Cl. 239—431)

1. An aerating device comprising a hollow body member, an end member having a central aperture and a plurality of spaced apertures, said end member extending across one end of said hollow, said apertures being of relatively large size, a circumferential ledge in said body member spaced from said end member, a first disk resting on said ledge, a second disk resting on said first disk, one said disk having a large central aperture, said large aperture overlying a plurality of small apertures in said other disk, both said disks having a plurality of spaced apertures adapted to register with similar aper-



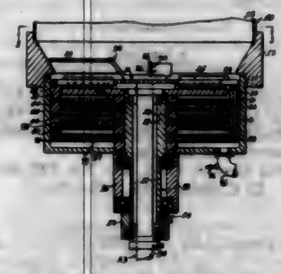
tures in the other said disk, one said disk rotatable to bring said spaced apertures in said disk out of alignment with the spaced apertures in the other said disk whereby the flow of liquid through said spaced apertures is stopped, said spaced apertures being aligned with said relatively large spaced apertures in said end member and said central aperture in said disk being aligned with said central aperture in said end member, and apertures in said body member between said ledge and said disks.

2,950,864
TWO STAGE PULP REFINING MACHINE
Anton J. Haug, 64 Taylor St., Nashua, N.H.
Filed May 29, 1957, Ser. No. 662,497
5 Claims. (Cl. 241—46)



1. In a machine for continuous high speed processing of fibrous material, the combination of a revolving cylinder for receiving and working a fibrous material in the form of fibre bundles, means for exerting compressive forces against the inner wall of the cylinder and upon the fibre bundles contained within the cylinder to partially open said fibre bundles, said revolving cylinder acting to centrifugally displace said bundles at the end of said cylinder radially outward, screw means for progressively advancing the fibrous material along the revolving cylinder, a pair of fibre brushing elements supported in the path of travel of the fibrous material, said fibre brushing elements consisting of annular plates arranged in spaced apart relationship to one another, said plates presenting therebetween projecting fibre engaging surfaces which define lateral annular restricted passages for receiving the partially opened fibre bundles centrifugally displaced from said cylinder, one of said fibre brushing elements being fixed at one end of the revolving cylinder for rotation therewith, said last-named fibre brushing element including a portion positioned to receive and guide the centrifugally displaced fibre bundles from said cylinder radially outward to said restricted passages.

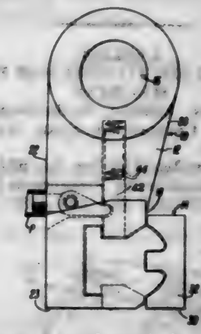
2,950,865
WASTE DISPOSAL
Charles C. Smith, 4494 Chindin, and Robert F. Prohl, 2717 Fargo St., both of Boise, Idaho
Filed June 12, 1958, Ser. No. 741,597
3 Claims. (Cl. 241—46)



2. In a waste disposal device, a hollow housing, a collar connected to the lower end of said housing, a casing having its upper end arranged in engagement with said collar, a stationary base secured to said collar, a stationary blade secured to said base, a vertically disposed shaft extending through said casing and said shaft having a pulley on its lower end, a hub connected to the upper end of said shaft, a first disk connected to said hub, an arm having a horizontally disposed portion for coaction with said stationary blade, a pair of cutters secured to said disk for coaction with the bottom of said stationary blade, a plurality of ring members secured below the outer periphery of said disk, a second disk arranged in spaced parallel relation below said first disk and said second disk including an outer circular rim which is interposed between certain of said ring members, said second disk further including a plurality of spaced apart fingers which each have a lower beveled cutting edge on their inner end, a third disk arranged in spaced parallel relation below said second disk and said third disk being provided with a cutaway portion defining pointed shoulders and upper and lower beveled cutting edges, a fourth disk mounted below said third disk and said fourth disk including a cutaway portion which defines substantially rectangular cut-outs having upper and lower beveled cutting edges contiguous thereto, a sleeve surrounding said shaft and adapted to be rotated in the opposite direction from said shaft, a plurality of superimposed ring pieces arranged contiguous to the upper portion of said sleeve, a first cutter unit including a circular plate connected to the upper end of said sleeve and said plate being interposed between said first and second disks, cutting blades secured to said plate, a second cutter unit secured between certain of said ring pieces and said second cutter unit being interposed between said second and third disks, said second cutter unit comprising a plurality of body members, each of said body members including a pair of oppositely extending blades which have upper and lower beveled cutting edges thereon, a third cutting unit interposed between said third and fourth disks, a fourth cutting unit positioned below said fourth disk, an outlet conduit extending from the bottom of the casing, means for introducing fluid into said outlet conduit, and means for introducing fluid into said housing.

2,950,866
HAMMER FOR ROTARY IMPACT PULVERIZERS
Forrest E. Smith, P.O. Box 8066, Asheville, N.C.
Filed Aug. 3, 1959, Ser. No. 831,411
9 Claims. (Cl. 241—197)

1. An impact hammer for rotary pulverizers, comprising, in combination, an arm having leading and outer faces and having a slot opening into said leading and outer faces with a forwardly opening recess in the bottom of said slot, a tip complementally formed for interfitting engagement with said arm at the outer end thereof, a tongue rigid with said tip and projecting rearwardly therefrom for insertion in said arm slot, a head on said



tongue complementally formed for reception in said recess and defining a forwardly facing shoulder, and detent means disposed within said arm and extending into said slot for engagement with said shoulder to hold said tongue head in said recess and said tip in installed position upon said arm.

2,950,867
WINDING MACHINE
John V. Keith, Warwick, R.I., assignor to Leesona Corporation, a corporation of Massachusetts
Original application May 4, 1954, Ser. No. 427,542, now Patent No. 2,778,578, dated Jan. 22, 1957. Divided and this application Sept. 4, 1956, Ser. No. 607,875
11 Claims. (Cl. 242—18)



1. A winding machine for winding a strand of yarn at a substantially constant predetermined speed comprising the combination of a rotatable arbor for holding a winding yarn package, means for applying a rotating force to said arbor, said force having a magnitude less than that required to rotate said arbor and a winding package at said predetermined speed, a rotatable drum, means for rotating said drum at a speed such that its surface speed is substantially equal to the predetermined winding speed, means supporting said arbor for movement towards and away from said drum whereby the periphery of said winding package can contact said drum to permit said drum to apply a rotating force to said package and

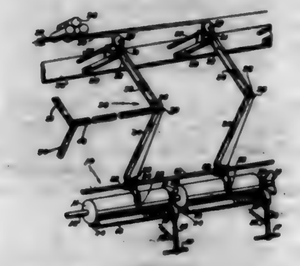
arbor supplementing said first mentioned rotating force to drive said package and arbor at the predetermined winding speed, means actuated by the tension in the winding strand of yarn for decreasing and increasing the rotating force applied to said arbor by said first mentioned means as said tension increases and decreases, and means for traversing said strand of yarn across the winding package.

2,950,068

TRAVERSING MECHANISM FOR WINDING MACHINE

Ulrich Jan Rutgers, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

Filed Nov. 16, 1956, Ser. No. 624,393
Claims priority, application Netherlands Dec. 5, 1955
5 Claims. (Cl. 242—43)



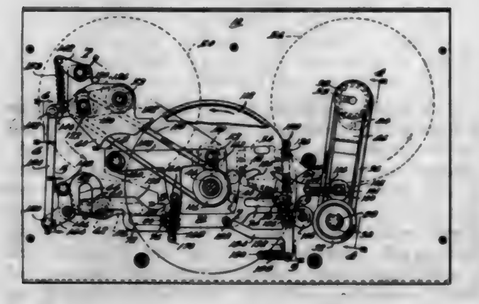
1. A machine for winding a continuous thread into package form comprising a take-up spool, a traversing thread guide mounted for movement adjacent to and along the surface of said spool, a stationary thread guide for guiding thread from a supply source to said traversing thread guide, and an auxiliary thread guiding mechanism for maintaining the length of thread extending between the traversing and stationary thread guides constant throughout the traverse stroke, said mechanism including a linkage pivotally attached at one end to said traversing thread guide for movement therewith and pivotally attached at the other end to said stationary thread guide, said pivotal connections being coaxial with thread contacting surfaces of said traversing and stationary thread guides, respectively.

2,950,069

TAPE RECORDER CONTROL MECHANISM

Richard E. Maples, 5755 N. Elston Ave., Ashley, Ohio

Filed Jan. 5, 1955, Ser. No. 479,889
11 Claims. (Cl. 242—55.12)



1. In a magnetic tape handling mechanism, a reel for carrying the magnetic tape, a first and a second pulley, a belt engaging said pulleys, means for rotating said first pulley, a roller for driving said reel frictionally engaging said belt, means for varying the degree of frictional engagement between said belt and said roller, and means for rotating said roller in a direction opposite to the direction of the rotational force applied to said roller by said belt.

2,950,070

CAPACITOR WINDER

John R. Thorsen, Alexandria, and James G. Black, Jr., and Charles C. Rayburn, Falls Church, Va., assignors, by mesne assignments, to Illinois Tool Works, Chicago, Ill., a corporation of Illinois

Filed May 3, 1956, Ser. No. 582,363
22 Claims. (Cl. 242—56.1)



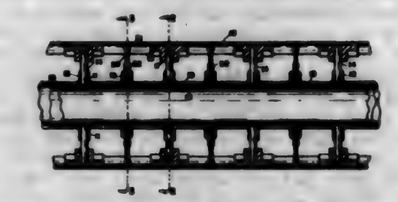
16. A machine for winding capacitor coils from foil and dielectric tapes, a frame, a plurality of tape supports mounted on said frame, a winding mechanism for winding said tapes into a capacitor coil, tape guide means for guiding said tapes from said tape supports to said winding mechanism, said winding mechanism including a tape gathering pin, means mounting said gathering pin on said frame for lateral movement in a path, and a gathering wheel rotatably mounted on said frame and including a plurality of grooves spaced on the periphery thereof, said grooves extending into said path of said gathering pin whereby said tapes may be clamped into said grooves by said gathering pin.

2,950,071

EXPANSIBLE SHAFT

Charles Robert Tidland, P.O. Box 695, Camas, Wash., assignor of one-half to Arthur T. Williams

Filed Aug. 12, 1957, Ser. No. 677,585
2 Claims. (Cl. 242—72)



1. In an expansible shaft having a main tubular body, a plurality of inner identical longitudinal segments located within said tubular body, and an inner tube of flexible and resilient material located within said tubular body on the inside of said longitudinal segments and adapted to be inflated and deflated when desired, spaced longitudinally-aligned stub shafts secured to and extending radially outwardly from each of said inner longitudinal segments, channels in said tubular body for said stub shafts permitting radial movement of said stub shafts and therewith said inner longitudinal segments in said tubular body, the length of said stub shafts being greater than the thickness of the wall of said tubular body, a plurality of outer, identical, cylindrical segments on the outside of said tubular body corresponding to the number of said inner longitudinal segments, said outer cylindrical segments mounted on the outer ends of said stub shafts, screw-threaded members rotatably mounted in said outer cylindrical segments and extending inwardly therefrom, a nut mounted on each member, and coil springs having their ends attached respectively to the nuts on the corresponding members in adjacent outer cylindrical segments and maintained under tension so as to exert a combined force to pull said outer cylindrical segments inwardly, whereby said coil springs will cause said shaft to be contracted by the inward movement of said outer cylindrical segments whenever said inner tube is deflated, and whereby the adjustment of said nuts resulting from the turning of said screw-threaded members will enable the tension of said springs to be adjusted as desired.

2,950,072

GUIDE FOR MOVING TAPE

George M. Hayashida, San Pedro, and Nestor R. Hack, Gardena, Calif., assignors to The Bendix Corporation, a corporation of Delaware

Filed Mar. 6, 1959, Ser. No. 797,711
6 Claims. (Cl. 242—76)



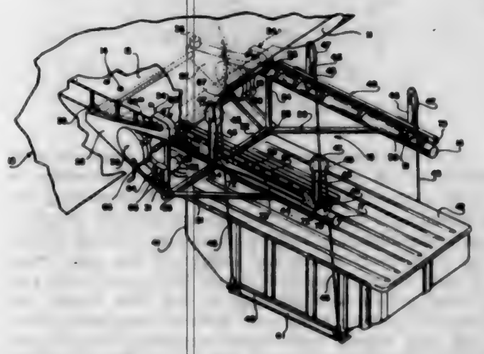
1. A guide for supporting tape as said tape is moved over said guide comprising: an elongate member adapted to have one end affixed, whereby said elongate member is supported transverse to said tape; and a cap member rotatively affixed upon another end of said elongate member whereby to have a plurality of set positions relative to said elongate member, said cap member having a plurality of segments which extend to cover a different amount of said elongate member whereby different sizes of said tape may be guided over an uncovered portion of said elongate member.

2,950,073

HOIST MECHANISM

George E. McLain, Bakersfield, and James T. Power, Van Nuys, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

Filed Feb. 18, 1957, Ser. No. 641,434
10 Claims. (Cl. 244—137)



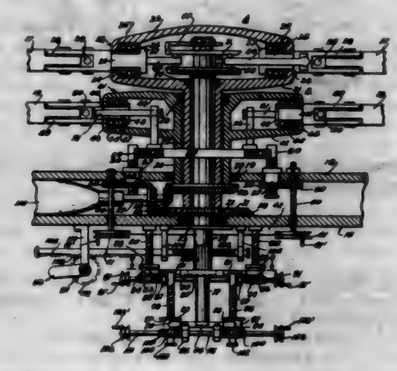
1. A cargo loading and unloading mechanism for transferring cargo between a cargo supporting surface and a higher floor of an airplane cargo compartment, comprising a support frame detachably mounted on the floor extending outwardly from the cargo compartment, a plurality of lifting means carried by the frame for lifting the cargo in a rectilinear direction with respect to the supporting surface, and track means attached to the frame adaptable to receive the cargo from the lifting means, and primary power means carried on the frame for operating the lifting means.

2,950,074

HELICOPTER

Stefan Apostolescu, 415 W. 35th St., New York, N.Y.

Filed Oct. 15, 1956, Ser. No. 616,055
16 Claims. (Cl. 244—17.23)



1. In combination with upper and lower propellers mounted for rotation about the same vertical axis and each having a plurality of blades mounted for pitch adjustment, means for changing the blade pitch of the lower propeller to a fixed angle, means for changing the blade pitch of the upper propeller to a fixed angle, means for changing the cyclic pitch of the upper blades including two opposed closely spaced disks encircling the axis of rotation of said upper propeller and rod members having one end in engagement with the opposed surfaces of the disks and the other end connected with the blades by means which translates rectilinear movement of the rods into rotary movement of the blades, means for raising and lowering the spaced disks and means for tilting the spaced disks to effect a pitch variation during each propeller revolution.

2,950,075

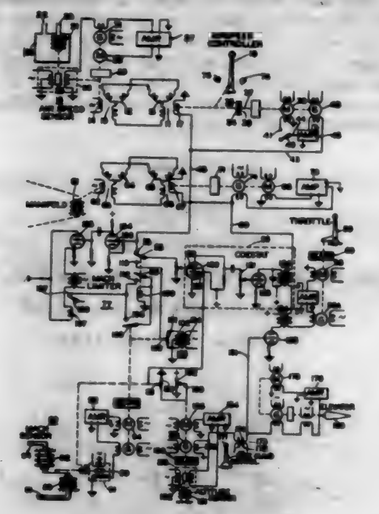
THRUST CONTROL FOR AIRCRAFT

John C. Owen, Grand Rapids, Mich., assignor to The Bendix Corporation, a corporation of Delaware

Filed Sept. 22, 1955, Ser. No. 535,872
14 Claims. (Cl. 244—77)

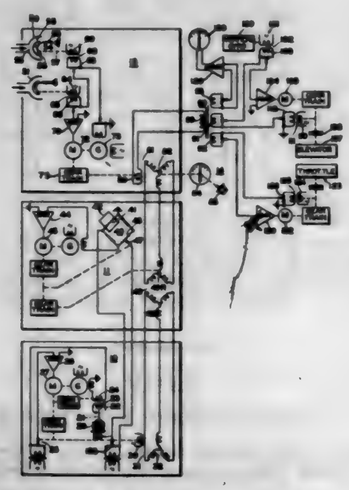
8. In an automatic control system for an aircraft having a throttle controlled power plant; the combination comprising a motor for positioning the throttle of the craft, first means for providing a signal responsive to the difference between an ordered airspeed and a measured airspeed, second means for providing a signal responsive to the difference between a measured Mach number of the craft and a preset Mach number, and

means responsive to said first and second signals for selectively shifting the control of said motor from said



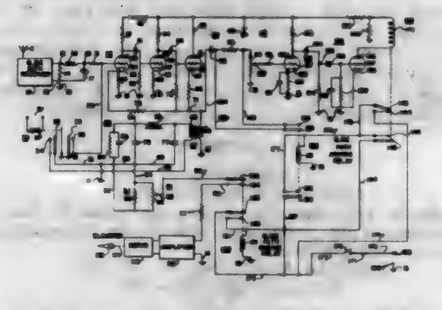
first means to said second means when said preset Mach number is reached.

2,950,076
CRUISE CONTROL
John M. Shirey, Waldwick, and Seymour I. Finkel, North Arlington, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Jan. 23, 1956, Ser. No. 560,713
13 Claims. (Cl. 244—77)



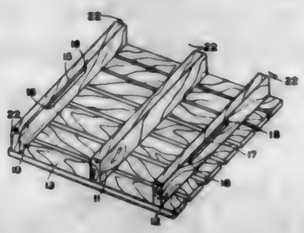
1. A device for computing the optimum flight profile for an aircraft, comprising means for developing a first signal corresponding to the gross weight of the craft, means for developing a second signal corresponding to the altitude of the craft, means for developing a third signal corresponding to the ambient air temperature, and means coordinating said signals for developing an output corresponding to the departure of the craft from an optimum flight profile defined by said gross weight and ambient temperature.

2,950,077
CONTROL SYSTEMS FOR DIRIGIBLE CRAFT
Vernon A. Baxter, Jr., Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed July 16, 1957, Ser. No. 672,213
6 Claims. (Cl. 244—77)



6. In a control system for a dirigible craft having a plurality of axes about which said craft may be displaced, controlled means for causing said craft to rotate about one of said axes, and motor means operatively connected to said controlled means, in combination: control signal producing means; actuating switch means operable to connect said signal producing means to said motor means; arming switch means operative to prepare a circuit for said actuating switch means; signal responsive switch means connected to said signal producing means for completing a circuit to said arming switch means when said signal is large, and for completing the first named circuit when said signal is small; a source of electrical energy for said switch means and said first named circuit; and manually operable means normally cutting off said source from said switch means and said first named circuit.

2,950,078
SKID-PALLET COMBINATION
Wendell W. Phillips, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana
Filed Sept. 14, 1959, Ser. No. 839,749
4 Claims. (Cl. 248—120)



1. A skid usable separately as such or usable in combination with another skid of identical construction to form a double-faced pallet; said skid comprising two longitudinally extending end runners and one longitudinally extending intermediate runner; deck boards extending transversely across and secured to the upper edges of said runners; one end runner being positioned substantially flush with the ends of said deck boards; the other end runner being inset from the opposite ends of said deck boards; cleat means extending longitudinally of and secured to the inner side of said flush-positioned end runner and the outer side of said inset end runner in spaced relation from said deck boards; the distance of

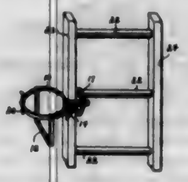
inset of said inset runner being substantially equal to the thickness of said runner plus the width of its associated cleat means; and said intermediate runner being offset from the center between the inner, opposed sides of said end runners a distance substantially equal to the thickness of said intermediate runner; whereby an upright skid may be slid into cooperative, companion position with an inverted skid to form a double-faced pallet; the intermediate runners serving to guide the sliding together of the two skids and preventing any substantial lateral displacement therebetween and said cleat means serving to prevent any substantial vertical displacement of the skids with respect to each other during use as a double-faced pallet.

2,950,079
THREE AXIS FLEXURE PIVOT
Robert B. Horsfall, Jr., Whittier, Calif., assignor to North American Aviation, Inc.
Filed June 4, 1956, Ser. No. 589,330
3 Claims. (Cl. 248—179)



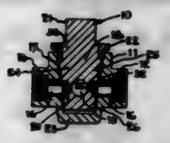
1. A flexure pivot comprising a first substantially triangular base formed of outwardly curved interconnected legs, three upstanding inwardly curved legs interconnected at their apex forming substantially a tetrahedron with said base, a second substantially triangular base formed of outwardly curved interconnected legs and located in a plane intermediate the plane of said first base and the apices of said upstanding inwardly curved legs, three inwardly curved legs extending downwardly through said first base and interconnected at their nadir below the plane of said first base forming substantially an inverted tetrahedron, flexure elements extending from the apices of each of said tetrahedrons to a central connection point within each of the tetrahedrons and means to connect said flexure elements at said central connection point.

2,950,080
ATTACHABLE CONTAINER BRACKET FOR LADDERS
Clifford John Glasgow, 6318 Hickman Ave., Des Moines, Iowa
Filed Feb. 18, 1958, Ser. No. 715,876
2 Claims. (Cl. 248—210)



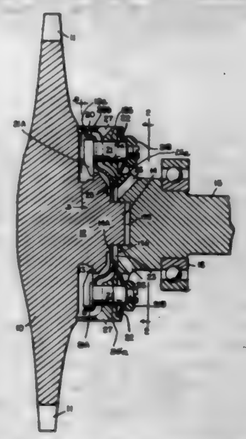
1. In a container bracket, a ring portion, a U-shaped saddle member having its two ends secured to said ring portion, a means for securing a container in said ring and on said U-shaped saddle member, a radially extending projection on said ring, and a vertical hook member horizontally slidable on said projection.

2,950,081
ROTARY PLUG VALVE HAVING REPLACEABLE SEATS
Marvin L. Steinbach and Harold W. Wyatt, Cincinnati, Ohio, assignors to The Lunkenheimer Company, Cincinnati, Ohio, a corporation of Ohio
Filed May 16, 1955, Ser. No. 508,643
6 Claims. (Cl. 251—317)



1. A valve, comprising a body configurated to form a plurality of fluid ports and a chamber disposed intermediate said ports, a plug rotatably mounted within said chamber and configurated to form a transverse fluid passageway and a recess spaced from the ends of said passageway, said plug being smaller than said chamber whereby the surface of said plug is spaced from said valve body, a removable seat carried by said plug, said seat being formed of a fluorinated hydrocarbon and including a portion disposed within the recess provided in said plug, said portion being of substantially the same size as said recess, whereby said portion is frictionally held within said recess, and a portion extending outwardly beyond the surface of said plug for engagement with the wall of said chamber surrounding one of said ports, said last named portion being compressed between the wall of said chamber and the surface of said plug surrounding said recess, and actuator means for selectively placing said transverse fluid passageway in and out of communication with said fluid ports.

2,950,082
TURBINE WHEEL ASSEMBLY
John R. McVeigh, 160 Farber Lane, Williamsville, N.Y.
Filed Apr. 18, 1955, Ser. No. 501,999
13 Claims. (Cl. 253—39.15)



1. A turbine wheel and shaft assembly comprising a wheel provided with a hub axially extending from one face thereof, said hub having a radially outwardly extending shoulder axially spaced from said wheel face, and a shaft provided with a flange recessed to receive said hub, said recess being of sufficient size to provide an air chan-

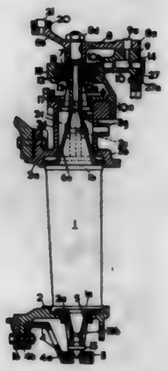
ber between said wheel and flange, said flange having a peripheral edge means carried by said flange and coacting with said shoulder to fix the wheel and flange together with the peripheral edge of said flange contacting said wheel, said flange having means for causing a flow of air through said chamber, and means disposed in said chamber for shielding said air from contact with the wheel surface.

2,958,883
BLADE ASSEMBLY
William A. Compton, Euclid, and Robert Edward Cummings and Robert A. Paetz, University Heights, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed July 23, 1954, Ser. No. 445,286
4 Claims. (Cl. 253—77)



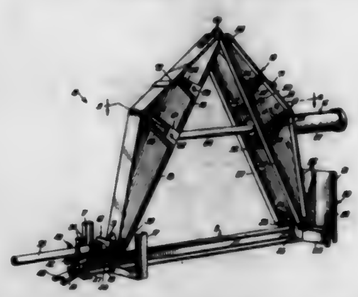
1. A blade comprising a plurality of layers of woven fibrous material having the general peripheral dimensions of the blade, a plurality of short layers of fibrous material positioned on each side of said blade at one end thereof, a wrapping of fibrous material surrounding said above mentioned layers, plastic bonding means impregnating and securing said layers in said wrapper into a finished blade having an enlarged root portion formed by said short layers, said first named plurality of layers and said wrapping material and having a gradual taper in the wrapping material covering said short layers to provide a gradually outwardly splayed blade root which maintains a generally air-foiled configuration in transverse cross section.

2,950,084
MOUNTING OF SWIVELLING GUIDE VANE ELEMENTS IN ELASTIC FLUID MACHINES
Sydney William Henry Perry, Cove, Farnborough, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company
Filed Oct. 11, 1954, Ser. No. 461,601
Claims priority, application Great Britain Oct. 15, 1953
16 Claims. (Cl. 253—78)



14. An axial flow elastic fluid turbine comprising inner and outer boundary walls defining between them an annular flow path for the fluid; a swivelling guide vane element extending across said path between said walls and comprising inwardly and outwardly extending spindles at its inner and outer ends respectively, said walls being formed with apertures through which the spindles protrude; an inner supporting member radially within said inner wall and an outer supporting member radially without said outer wall, said members being screened from said flow path by said walls; a footstep bearing mounted in said inner supporting member and spaced radially inwardly from said inner boundary wall, said inner spindle being supported at its radially inner end in said footstep bearing; a further bearing spaced radially outwardly from said outer boundary wall, said outer being supported in said further bearing, and said further bearing being mounted in said outer supporting member for movement therein with said outer spindle axially thereof; and resilient loading means engaging with said further bearing in a sense to load it towards said footstep bearing.

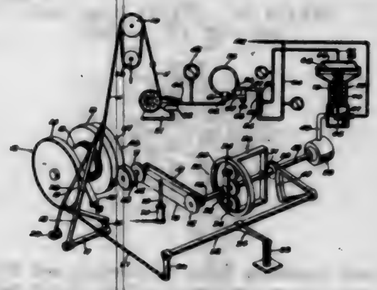
2,950,085
MACHINE FOR PUSHING PIPE OR CONDUIT
Joseph F. Lizzadro, 301 Arlington, Elmhurst, Ill.
Filed May 25, 1955, Ser. No. 510,912
4 Claims. (Cl. 254—29)



3. A pipe or conduit pushing and pulling machine comprising, a rail adapted to rest on the bottom of a trench into which said machine may be lowered, a follower slidably mounted on said rail for supporting and pushing one end of a length of pipe or conduit, extensible linkage means for moving said follower comprising a pair of levers hinged together at their top ends with their bottom ends adapted to be alternately closed and spread, means for securing the bottom end of one of said levers adjacent to one end of said rail, means for pivotally attaching the bottom end of the other lever to said follower, a pressure cylinder unit for extending and closing said linkage means having the cylinder thereof secured to one of said levers intermediate the ends thereof and the piston rod thereof pivotally connected to the other lever intermediate the ends thereof, and a tiltable pipe support pivotally mounted on the front end of said rail, said support having a rearwardly inclined top portion in which a length of pipe is adapted to rest and slide and being forwardly tilted out of supporting position when engaged by said rail follower.

2,950,086
DRILLING CONTROL
James G. Abraham, Rolling Hills, Calif., assignor, by mesne assignments, to The National Supply Company, Pittsburgh, Pa., a corporation of Ohio
Filed Dec. 9, 1957, Ser. No. 705,468
20 Claims. (Cl. 254—173)

1. In a feed control device for a rotary drilling rig, the rig having a drum for spooling one end of a tensioned cable and having a brake for said drum, the improvement comprising, in combination: resilient means acting in a direction to apply the brake, brake-releasing means acting to oppose said resilient means, a rotary member, means for turning said member, a cable tension measuring device connected to the cable, control means operated by said tension measuring device for regulating the rate of turning movement of said rotary member in accordance with variations in the magnitude



of the cable tension, and means actuated by relative rotary movement of the drum and said rotary member and operative to render the brake releasing means ineffective and thereby permit the resilient means to apply the brake.

2,950,087
COMBINED ROTARY AND PERCUSSION DRILLING
James N. Gregory, 5651 Sorrento Drive, Long Beach, Calif.
Filed Oct. 24, 1955, Ser. No. 542,175
6 Claims. (Cl. 255—4.4)



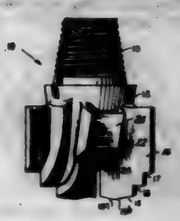
1. Combined rotary and percussion drilling apparatus for use with a casing string and a tubing string arranged concentrically within said casing string in drilling a well bore, comprising: a rotary bit formed at its lower portion with rotary drill means and at its upper portion with means for attaching it to the lower end of said casing string; a fluid-actuated percussion drill having a main body, a motor and a bit element extending from the lower end of said main body, said bit element being reciprocated vertically relative to said main body by fluid forced downwardly through the interior of said tubing string to said motor; means formed on the upper portion of said main body for attaching it to the lower end of said tubing string; centralizer means interposed between said main body and said casing; packer means interposed between said main body and the inner periphery of said casing for restraining the upward flow of said fluid through the interior of said casing; and means keying said main body and said rotary bit together for concurrent rotation while permitting their relative vertical positions to be varied.

2,950,088
ELECTRIC SOLENOID ACTUATOR
James G. Scott, 1119 N. Clark St., Los Angeles, Calif.
Filed Mar. 25, 1957, Ser. No. 648,417
15 Claims. (Cl. 255—4.4)



1. An actuator comprising rotatable shaft means, solenoid means circumjacent said shaft means for oscillating said shaft means, non-rotatable hammer means circumjacent said shaft means and spaced from said solenoid means and means operatively associated with said shaft means and said hammer means for translating oscillation of said shaft means into an axial movement of said hammer means.

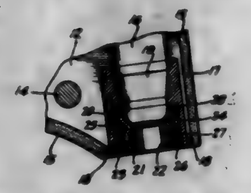
2,950,089
ROTARY DRILLING BITS
R. D. Irons, Ozona, Tex., assignor of one-half to Ole K. Olsen, Garland, Tex.
Filed Sept. 11, 1957, Ser. No. 683,277
2 Claims. (Cl. 255—61)



1. A rotary drilling bit including: a hollow body having a closer lower end and means on the upper end for securing the body to the lower end of a drill string; a plurality of outwardly and downwardly extending cutting members on the exterior of and projecting laterally beyond the periphery of said body, said body having a plurality of flow passages, one of said passages opening downwardly and outwardly between each two adjacent cutting members; and deflecting means disposed exteriorly of said hollow body between each two adjacent cutting means for deflecting upwardly a major portion of fluid passing outwardly from the flow passage opening outwardly between the two adjacent cutting members between which the deflecting means is disposed, each of said deflecting means being disposed inwardly of an arc defined by the outer edges of the cutting means as the bit is rotated and comprising a web portion having a lower edge secured to the body and extending across the outer end of the opening of a flow passage, said web portion extending upwardly from its lower end spaced outwardly from the exterior of the body to provide an upwardly

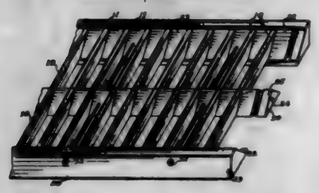
directed flow course between said web portion and said body, the edge of the web portion extending across the opening of the flow passage dividing the fluids flowing outwardly of said flow passage whereby a portion of the fluid passing outwardly from the flow passage flows downwardly below the deflecting means and another portion is deflected upwardly.

2,950,090
MOUNTING FOR DISCHARGE BEANS IN WELL DRILLING BITS
Kenneth H. Swart, Compton, Calif., assignor to H. C. Smith Oil Tool Co., Compton, Calif., a corporation of California
Filed Aug. 1, 1957, Ser. No. 675,759
6 Claims. (Cl. 255—314)



1. A well drilling bit having in the discharge passage thereof for the discharge of circulation fluid a sleeve, a bean retainer threaded into the sleeve, a bean in the retainer, and a packing ring contiguously surrounding the bean and interposed between the bean and the sleeve beyond the end of the bean retainer, said bean and bean retainer having opposed mutually engaging shoulders for preventing axial movement of the bean relative to the bean retainer in an outward direction.

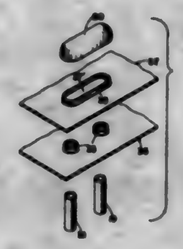
2,950,091
CATTLE GUARD
Richard H. Arrington, Mount Zion Road, Montgomery, Ala.
Filed May 18, 1956, Ser. No. 585,835
4 Claims. (Cl. 256—17)



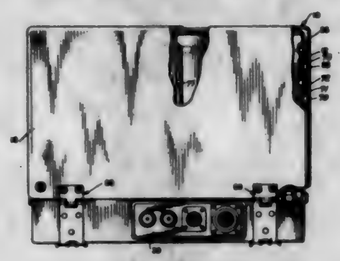
1. A cattle guard comprising a parallel pair of concrete side rails of generally right triangular cross-section and formed on the confronting surfaces with tread receiving grooves disposed at approximately forty-five degrees from the vertical, an intermediate isoceles triangular rail formed with tread receiving grooves on two adjacent sides, said grooves being disposed at approximately forty-five degrees from the vertical and parallel sets of parallel wooden treads mounted in said grooves, the ends of said treads being cut at angles to conform with the angularity of said slots.

2,950,092
HEAT EXCHANGE CONSTRUCTION
Carmen A. Di Niro, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Filed Nov. 1, 1957, Ser. No. 693,895
5 Claims. (Cl. 257—255)

1. A tube sheet assembly for a heat exchanger comprising a tube sheet having a plurality of first apertures therein, a cap sheet bonded in face to face contact with said tube sheet, a second aperture in said cap sheet, an upstanding flange on said cap sheet bordering said second aperture, said upstanding flange surrounding said first apertures, and a return cap bonded in shear to said upstanding flange, said tube sheet, cap sheet and cap cooperating to form a sealed fluid flow path between the first apertures.

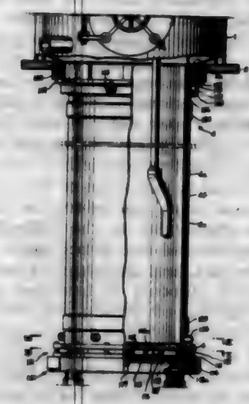


2,950,093
CONTAINER FOR ELECTRONIC EQUIPMENT
Frank M. Krompel, Prospect, and Raymond A. Anderson, Wood Dale, Ill., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Filed Aug. 16, 1956, Ser. No. 604,454
5 Claims. (Cl. 257—256)



1. In a container for air-borne electronic equipment including a top, a bottom, and a plurality of walls enclosing the equipment, a fluid cooling system comprising a fluid distribution line, a pump for circulating fluid through the line, certain of the container walls having an inner and an outer sheet metal elements secured together with their juxtaposed surfaces in engagement, each of the elements including a plurality of spaced recesses, the recesses of the inner element projecting inwardly into the container in generally parallel relation to define extended heat absorbing surfaces, the recesses of the outer element projecting outwardly from the container in generally parallel relation to define extended heat dissipating surfaces, successive recesses in one of the elements appearing in positions intermediate successive recesses in the other element, one of the elements defining recesses inclined at an angle with and connecting the parallel recesses to form a first continuous passageway, the top having an inner and an outer sheet metal elements secured together with their juxtaposed surfaces in engagement, at least one of the top elements including recesses defining a second passageway, and structure defining a fluid connection between the passageways and the distribution line, thereby to provide highly efficient heat transferring sections for the cooling system.

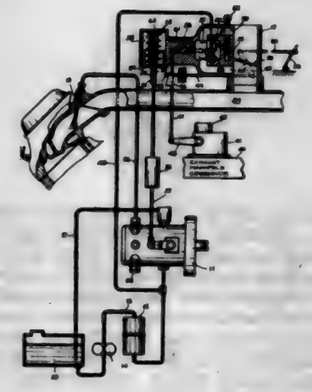
2,950,094
COOLING ARRANGEMENT FOR ELECTRIC FURNACE
Robert James Garmy, Canton, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Filed Apr. 8, 1957, Ser. No. 651,328
7 Claims. (Cl. 257—288)



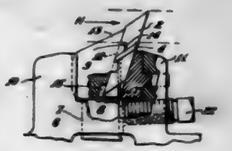
4. A crucible adapted to enclose heat producing means, comprising vertically extending cylindrical concentric inner and outer shells separated by an annular space, means closing the ends of the space and cooperating with the shells to define a shell water jacket shorter in length than the inner shell, a base closure comprising upper and lower plates having central portions spaced apart and defining a generally cylindrical base water jacket between them, said base water jacket including a portion of said upper base plate projecting within the lower end of said inner shell and to a substantial distance above the lower end of the shell water jacket, so that the entire end portion of the inner shell exposed to said heat producing means is directly cooled by said shell water jacket, said base water jacket having a diameter substantially greater than its axial length, a plurality of water inlets extending through said lower plate into said base water jacket at points spaced radially from the axis of the base jacket and substantially to the middle of said axial length, and inlets being provided on their inner ends with nozzles directed at angles to the radial lines extending thereto from said axis to circulate the water in said jacket with a swirling motion, and a water outlet provided in said lower plate and disposed at said axis and opening axially from said cylindrical jacket.

2,950,095
FUEL INJECTION APPARATUS
Carl H. Nystrom, West Springfield, and Arthur T. Huse, Springfield, Mass., assignors to American Bosch Arma Corporation, a corporation of New York
Filed Mar. 29, 1955, Ser. No. 497,506
5 Claims. (Cl. 261—26)

1. In a device of the character described, a fuel injection pump having an outlet for delivering fuel to each of the engine cylinders, said pump having quantity control means, an air throttle body, an adjustable member in said throttle body for controlling the passage of air therethrough, means for controlling the position of said adjustable member in said throttle body, means for automatically adjusting the position of said pump control, comprising a cylinder and a piston in said cylinder with said piston being connected to said quantity control, spring means in said cylinder normally tending to move said piston to predetermined position, a duct communicating with said throttle body above said adjustable member and a second duct communicating with said throttle body below said adjustable member, and a passage whereby said ducts may communicate with said cylinder and duct controlling valve means for substantially closing one of said ducts, a line for providing fuel to the engine manifold for starting and a fuel valve for controlling the passage of fuel from said line to the engine, an automatic choke and means connecting said automatic choke to said duct controlling valve.

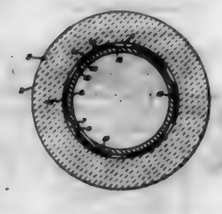


2,950,096
CUTTING BITS AND BIT HOLDERS
Claude B. Krekeler, Monfort Heights, Armin O. Bruestle, Cincinnati, and John R. Cartlidge, Bridgetown, Ohio, assignors to The Cincinnati Mine Machinery Co., Cincinnati, Ohio, a corporation of Ohio
Filed June 19, 1958, Ser. No. 743,195
15 Claims. (Cl. 262—33)



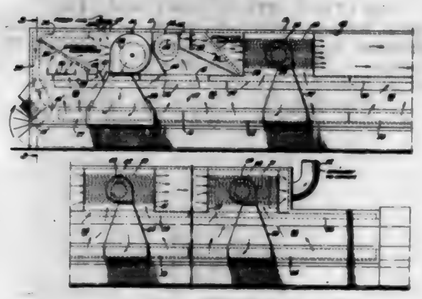
1. A cutter bit of the type which may be formed by cutting a contour-rolled steel rod stock along a plurality of parallel planes at less than a right angle to the axis of the rod stock, said bit being rhomboidal in side elevation and having opposite staggered faces each terminating in a cutting end, said bit being adapted to be engaged and moved in a cutting direction generally transverse to said faces, said bit having a face length of substantially 70% to 95% of its overall length as measured from cutting end to cutting end, a thickness as measured from face to face along a line normal to the faces of substantially 10% to 30% of its overall length, and a width to thickness ratio greater than unity, where the width is the width of the largest diamond-shaped figure which can be inscribed within said faces, in which bit the lines representing the contour of said bit faces lie outside said diamond-shaped figure, said bit having in the area of the midsection of its faces a lateral projection extending beyond the width of said bit as defined.

2,950,897
CARBON-FACED CONVEYOR ROLL FOR SILICON STEEL STRIP
Anthony M. Tohir, Bethel Park, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Oct. 21, 1958, Ser. No. 771,697
4 Claims. (Cl. 263—6)



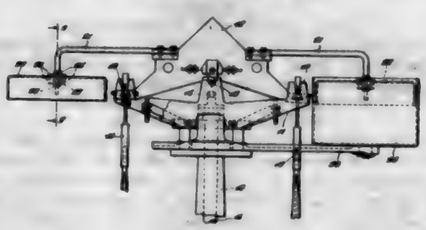
4. A conveyor roll for silicon steel strip comprising a steel hub, a cylindrical carbon sleeve arranged concentrically of said hub, said hub and sleeve having facing cylindrical surfaces that are spaced radially relative to each other, and a corrugated steel sheet secured to said hub for rotation therewith and mounting said sleeve in a concentric position relative thereto, said sheet having corrugations resiliently engaged with said hub and sleeve surfaces along lines extending axially thereof and providing a driving connection between said hub and sleeve.

2,950,098
COATING OVEN
Richard J. Ruff, Detroit, Mich., assignor to Catalytic Combustion Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 22, 1958, Ser. No. 730,176
11 Claims. (Cl. 263—8)



1. A coating oven for heat treating coated articles to evaporate coating solvents and remove combustibles from tht vaporized solvents, said oven comprising an elongated heat treating chamber, having an entrance at one end and an exit at the other, an endless conveyor for conveying coated articles to be heated through said chamber from the entrance end to the exit end, a conveyor pre-heating chamber below said heat treating chamber, means for supplying heat to said pre-heating chamber, a plurality of heat treating zones spaced longitudinally of said heat treating chamber including a first zone adjacent said entrance end, a second zone following said first zone, subsequent zones following said second zone with a last zone adjacent said exit end, a plenum chamber disposed below said conveyor in said first zone for directing heated gases over coated articles carried by said conveyor, an open vapor exhaust duct in said first zone spaced inwardly of said entrance end, heating burners in said duct for heating gases passing therethrough from said first zone, a catalytic vapor incinerator disposed in said duct following said burners, a circulating fan having an inlet connected to said duct following said incinerator and an outlet connected to said plenum chamber, an infiltration air by-pass conduit having an inlet opening adjacent the entrance end of said heat treating chamber and a discharge opening into said duct between said incinerator and the inlet to said fan, a damper controlled fresh air inlet connected to said duct between said incinerator and said fan inlet, a damper controlled vapor passage connecting said first zone and said duct between said incinerator and said fan inlet, a second plenum chamber disposed below said conveyor in said second zone for directing heated gases over the coated articles carried by said conveyor, a vapor collecting hood disposed over said second zone and a portion of said first zone, a second open vapor exhaust duct connected to said hood, a series of heat exchangers, a blower having an inlet connected to said second exhaust duct and an outlet connected to said series of heat exchangers adjacent said second zone, said subsequent zones and said last zone and discharging to the atmosphere, heating burners disposed in said last named outlet between said blower and the first heat exchanger, a second catalytic vapor incinerator disposed in said last named outlet between said last named burners and the first heat exchanger, a second hood disposed above said second zone and connected to the first heat exchanger, a second circulating fan having an inlet connected to the first heat exchanger and an outlet connected to said second plenum chamber, subsequent plenum chambers disposed in subsequent zones and a last plenum chamber disposed below said conveyor in said last zone, subsequent hoods disposed above said subsequent zones and a last hood disposed above said last zone, said subsequent and last hoods being connected to the heat-exchangers adjacent said subsequent and last zones, circulating fans for said subsequent and last zones having inlets connected to the heat exchangers adjacent said subsequent and last zones and outlets connected to the plenum chambers in said subsequent and last zones, a damper controlled fresh air inlet connected to the heat exchanger adjacent said last zone and damper controlled means associated with said second hood, said subsequent hoods and said last hood for proportionately directing air flow from the associated hood through the associated heat exchanger and directly to the inlet of the associated circulating fan.

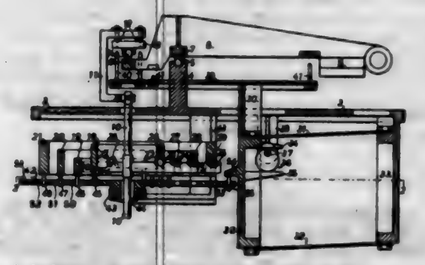
2,950,099
ANALYTICAL OR FINE BALANCES
George Francis Hodsman and Frank Arthur Chappell, St. Mary Cray, Orpington, England, assignors to L. Oertling Limited, St. Mary Cray, Orpington, England, a British company
Filed Sept. 25, 1958, Ser. No. 763,391
Claims priority, application Great Britain Oct. 19, 1957
4 Claims. (Cl. 265—54)



1. In a balance for fine weighing, the combination of a balance beam, load pans on said balance beam so that the application and removal of weights with respect to said load pans will bring the balance beam to equilibrium position, and an element deformable in response to temperature variations attached to said balance beam and

carried thereby, said element being so attached to said balance beam that the center of gravity of said element moves vertically in response to temperature variations to produce a change in the sensitivity of the balance beam in a sense opposite to that induced in said beam by a temperature variation whereby the sensitivity of the balance beam is maintained substantially constant irrespective of temperature variations.

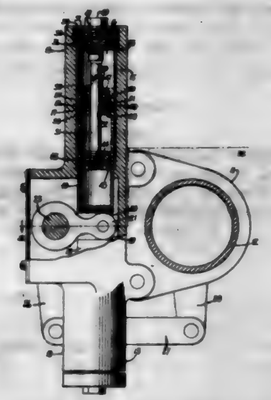
2,950,100
BALANCE
Walter Erwin Rapp, Meilen, Switzerland, assignor to Erhard Mettler, Zurich, Switzerland
Filed July 29, 1959, Ser. No. 830,306
Claims priority, application Switzerland Nov. 29, 1958
5 Claims. (Cl. 265—60)



1. A balance, comprising a balance beam, a carrier extending in the vertical direction, said balance beam having a centre knife edge for its support and an outer knife edge for suspension of said carrier therefrom, arresting means comprising a vertically movable member which in an upper position is adapted to lift said carrier off said outer knife edge and which, in a lower position is adapted to allow said outer knife edge to support said carrier, a set of ring-shaped weights having dimensions graduated in such manner that any of said weights encloses with clearance the next smaller weight so that the smaller weight may be moved through the ring aperture of the next larger weight, supporting means on said carrier for horizontally supporting said ring-shaped weights in a position concentric to one another, a plurality of downwardly-projecting legs on each ring-shaped weight, and a horizontal disc provided with apertures and mounted below said set of ring-shaped weights for angular positioning about its axis so that when said vertically movable member is in said upper position all of said ring-shaped weights are supported by said carrier with the lower end of said legs positioned above said disc, and when in said lower position the legs of selected weights extend with clearance through apertures in said disc and the legs of the remaining weights of said set are supported by said disc so that each of said remaining weights is lifted off said carrier.

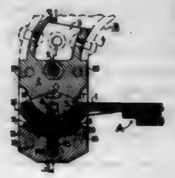
2,950,101
DAMPER
Rollin Douglas Rumsey, Buffalo, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Filed June 27, 1957, Ser. No. 668,498
2 Claims. (Cl. 267—1)

1. In a combined centering device and damper, a housing having two spaced aligned cylindrical damping chambers therein, having closed outer end walls, a separate cylinder guided within each cylindrical chamber for extensible and retractable movement with respect thereto, each cylinder having an annular piston on its inner end and a head closing the outer end thereof, a metering pin extending along each cylindrical chamber in axial alignment with said annular piston and through the open portion thereof in inwardly spaced relation with respect thereto, the space between the open portion of said annular piston and said metering pin defining a damping orifice, a compressible liquid filling said damping chambers, a pivoted lever having operative connection with a device to be centered and having engagement with the closed ends of said cylinders and moving one cylinder in



a direction to compress the compressible liquid within the respective damping chamber and returned to a centered position by expansion of the compressible liquid within the respective damping chamber upon the release of actuating pressure thereon, and a separate by-pass return valve in each annular piston accommodating movement of said pistons in a centering direction by the force of expansion of the compressible liquid.

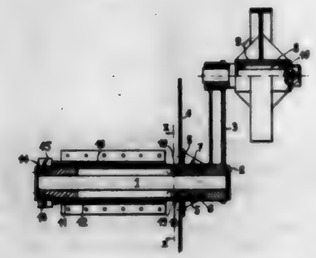
2,950,102
RESILIENT OSCILLATORY DEVICE
Leon F. Thiry, 104 S. Franklin St., Chagrin Falls, Ohio
Filed Jan. 4, 1957, Ser. No. 632,555
Claims priority, application France Jan. 5, 1956
9 Claims. (Cl. 267—54)



1. An oscillatory joint adapted to support resiliently loads which may oscillate at least about an axis by means of an elastomer member comprising at least two rigid bearing members presenting when assembled in opposed relationship to each other a convex bearing surface and a concave bearing surface, the said surfaces being, in operative conformation, substantially concentric about at least one axis around which the two bearing members are intended to oscillate, and having interposed between said surfaces an elastomer layer deformed in the direction of the load prior to application of said load and adapted to be the main load-supporting element in said joint, said layer being radially compressed and circumferentially expanded about said one axis at least, an elastomer reactor layer under a compression substantially similar to that of the load supporting elastomer layer to limit the reduc-

tion of the said deformation of the elastomer in the axial direction of the load to be supported, said reactor layer being supported on another rigid bearing member, one of said at least two rigid bearing members being disposed between said rigid reactor layer supporting bearing member and the other of said at least two rigid bearing members, said other of said at least two rigid bearing members and said rigid reactor layer supporting bearing member being fixedly spaced from one another when assembled, and locator lugs on said elastomer layers engaged with the bearing surfaces adjacent thereto, both said elastomer layers being free to expand and contract circumferentially about said one axis under varying loads without substantial interference from said rigid bearing members.

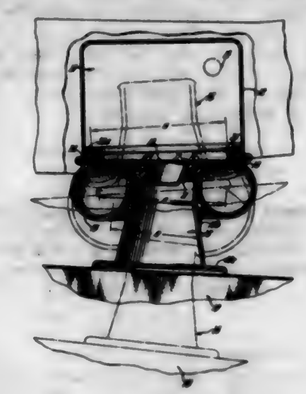
2,950,103
TORSION SPRING DEVICE ON VEHICLES
Walter Ruf, Landhaus am See, Bottighofen, Switzerland
Filed Oct. 30, 1956, Ser. No. 619,314
Claims priority, application Switzerland Apr. 25, 1956
6 Claims. (Cl. 267—57)



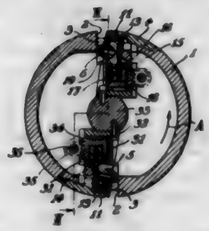
1. A torsion spring suspension for vehicles including wheel carrying means comprising a rocking lever connected to a wheel and positioned to rock about the torsion axis of the spring suspension, a prismatic casing element, and a prismatic tube element disposed coaxially within said prismatic casing element and defining a space therebetween to provide sufficient clearance for relative rotation of one of said prismatic elements with respect to the other prismatic element about said torsion axis, resilient inserts disposed in the space between said prismatic tube element and said casing element, a torsion spring rod disposed coaxially within said prismatic tube element and connected at one of its ends to only one of said prismatic elements, said rocking lever being connected to one member of a pair defined by said casing and said rod, said inserts being parallel to said rod.

2,950,104
AIR SPRING
Phillip C. Bowser, St. Clair Shores, and Richard E. Deuzer, East Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Apr. 20, 1956, Ser. No. 579,545
4 Claims. (Cl. 267—65)

1. In an air spring comprising a reservoir component and a piston component with a flexible member therebetween, said reservoir component being designed to telescopically receive said piston component, said piston component including a pedestal element adapted to be connected to an oscillatable member, said pedestal element having a generally annular but distorted wall engaged by said flexible member incident to the operation of the spring and being surrounded at its base by a member presenting a generally flat surface for engagement by said flexible member near the end of the compression stroke of said piston, said surface and the distorted wall of said pedestal element co-acting to set the rate characteristics of the spring.



2,950,105
MACHINES FOR FOLDING PAPER SHEETS
Donald S. Berry, Watford, England, assignor to Sun Priters Limited, Watford, England, a British company
Filed Oct. 22, 1957, Ser. No. 691,723
12 Claims. (Cl. 270—72)

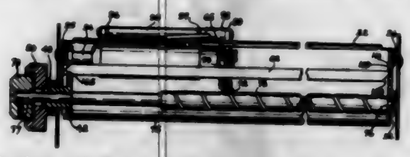


1. A rotary folding machine for use in transforming printed webs into separate books, comprising a cylinder having a longitudinal recess in the periphery thereof to accommodate the mid-portion of an assembly of printed sheets, a gripper blade rotatably mounted in said cylinder and extending into said recess, means for rotating said gripper blade into engagement with the mid-portion of said sheets to press it against the wall of said recess and form a fold and additional means movable radially of said cylinder for engaging and exerting pressure upon the back of the fold formed by the gripper blade, while the sheets are engaged by the gripper blade, to render the folding complete and permanent.

2,950,106
STAGE FOR OPTICAL PROJECTOR
Henry T. Wilton, Buffalo, N.Y., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Filed Dec. 16, 1957, Ser. No. 703,126
1 Claim. (Cl. 271—51)

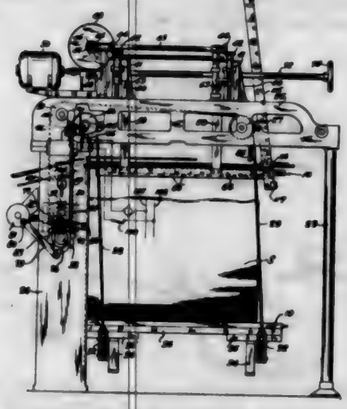
A stage for an optical projector comprising a frame, two pairs of rollers for gripping sheet material and positioning a selected portion of said sheet material at the axis of said optical projector, two drive shafts rotatably supported in parallelism by said frame, one extending through each of the lower rollers of said pairs and having a spline connection therewith, a yoke connected to

said lower rollers for shifting them longitudinally of said drive shaft, a carrier plate rotatably mounting both upper rollers of said pairs, said plate being carried by said yoke so as to slide vertically relative thereto, an elevator rod carried by said frame parallel to said drive shafts and extending through said carrier plate and slidable relative thereto to permit longitudinal movement of said yoke



and plate relative to said frame, said plate being engageable by said elevator rod at any longitudinal position of said carrier plate to raise said plate and release material gripped between said pairs of rollers, means for raising said elevator rod relative to said frame, and a spring for biasing said carrier plate and the upper rollers carried thereby toward gripping relation with the lower rollers of said pairs.

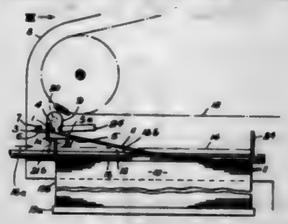
2,950,107
CONTINUOUS SHEET FEEDING METHOD AND PALLET THEREFOR
Arthur G. Royer, Cleveland Heights, Ohio, assignor to Harris Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Nov. 25, 1957, Ser. No. 698,430
21 Claims. (Cl. 271—61)



1. In a continuous pile feeder, a support for a depleted pile comprising a pallet, mechanism for elevating the depleted pile, a pile height gauge disposed above the rear of the pile for controlling said pile elevating mechanism, said pallet having a continuous flat upper surface and a front section of a uniform depth no more than half that of the remainder of the pallet, and said thin front section having a front to rear dimension no less than the horizontal distance between said gauge and the rear of the pile.

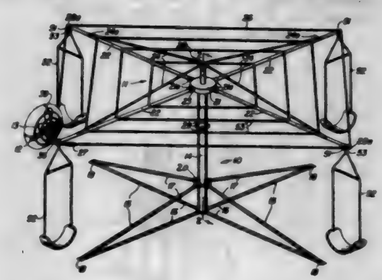
2,950,108
PRINTING AND LIKE MACHINES
William Frank Golding, 22 Parry's Close, Stoke Bishop, Bristol, England
Filed May 27, 1958, Ser. No. 738,100
Claims priority, application Great Britain May 29, 1957
4 Claims. (Cl. 271—86)

1. In sheet delivery apparatus for printing and like machines wherein sheets are sequentially dropped onto a pile: a platform, guide means for supporting the platform for insertion from a position at one side of the pile and clear of the vertical projection thereof into a position above the pile there to support the oncoming sheets temporarily while the pile is removed upon having reached a maximum height, a support member situated at said one side of the pile and adjacent the top thereof, a plurality of arms, pivot means cooperating to connect the arms to the support member for pivotal movement of the arms in a substantially horizontal plane between an inoperative position wherein the arms lie clear of the



vertical projection of the pile and an operative position wherein the arms point in the direction in which said platform is inserted, the arms being dimensioned to extend, when in the operative position, across the top of the pile over an area adjacent said one side thereof and at a level above that at which said platform is insertable along said guide means, and the arms cooperating to support adjacent edge portions of sheets dropped towards the pile after the arms have been moved into the operative position thereby to create a gap between the top of the pile and the sheets so supported, said gap defining an entry for the insertion of said platform.

2,950,109
ELECTRIC FAN PROPELLED MERRY-GO-ROUND
Dellis R. Forbush, 1401 East 7400 South, Sandy, Utah
Filed Apr. 3, 1957, Ser. No. 650,495
5 Claims. (Cl. 272—41)



1. A merry-go-round for children, comprising a stationary supporting standard; rotary structure, including a hub in the form of an inverted bowl rotatably mounted on said standard for rotation about a substantially vertical axis, a plurality of arms radiating outwardly from securement to said hub, at least one of said arms being hollow, a hollow bracket secured adjacent the terminus of said hollow arm, and structural reinforcement means tying said arms and hub into a weight-suspension unit; means for suspending seats from the free end portions of the respective arms; an electric motor and rotary fan unit mounted together on said hollow bracket above the level of the seat suspending means with the fan directed substantially tangentially of the path of rotation of said rotary structure so as to exert horizontal thrust when

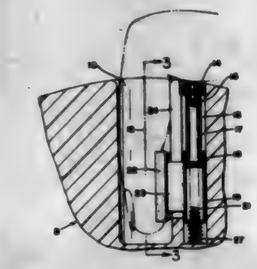
operating; and means for supplying electric current to said motor, said means including a commutator assembly carried by the supporting standard and disposed within the bowl of said hub, and supply wiring extending from the commutator assembly to the motor within and through said hollow arm and bracket.

2,950,110
GOLF TEE SETTING DEVICES
Max A. Slotin, 5220 29th Ave. S., and Edward Lavicka, Sr., 6213 5th Ave. N., both of St. Petersburg, Fla.
Filed Nov. 12, 1957, Ser. No. 695,860
5 Claims. (Cl. 273—33)



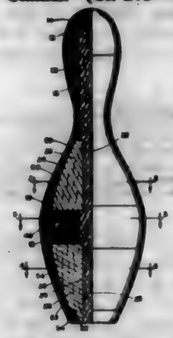
2. A golf tee positioning device comprising, a unitary oblong hand piece, a longitudinally extending recess with a lateral opening therein to receive the head of the golf tee and hold said tee in a longitudinal operative position relative to said hand piece, a longitudinally extending bore in said hand piece laterally spaced from said recess, a rod adjustably received within said bore and extending beyond the end of the hand piece to engage the ground for limiting the depth to which the tee is inserted into the ground, and means for locking said rod in a predetermined position.

2,950,111
BOWLING BALL FINGER GRIP
Alex A. Kunevicius, 1887 E. 84th St., Cleveland, Ohio
Filed Oct. 27, 1958, Ser. No. 769,943
6 Claims. (Cl. 273—63)



2. In a ten pin bowling ball having at least one finger hole and at least one thumb hole generally directed inwardly of the ball, a resilient pad mounted along the internal peripheral surface of said finger hole and freely slidable longitudinally of said hole, said pad comprising an arcuate segment movable longitudinally of the finger hole and being connected by a member to a resilient connection within the ball, said resilient connection urging said pad inwardly along said hole, whereby pressure of the finger on the pad in bowling will permit the finger to withdraw from the finger hole with compression on the finger pad from the resilient means.

2,950,112
BOWLING PIN
Fred C. Dettman, 821 Garson Ave., Rochester, N.Y.
Filed June 26, 1959, Ser. No. 823,123
3 Claims. (Cl. 273—82)



3. A composite bowling pin core construction comprising an elongated central column of light wood, having central discs of plywood disposed rigidly over and upon the central column in the region of greatest diameter, a plurality of triangular brace members of light wood uniformly angularly spaced about the column and disposed above and below said central discs, said brace members being recessed in slots formed in said column member, the lower braces below extending to the lower end of said column and being notched and having a foot ring of impact resisting material disposed in said notches, said ring having an internal diameter greater than said column, and a cap of impact resistant material disposed over the upper end of said column, said ring and cap having outer surface contours forming the outer surface of the finished pin.

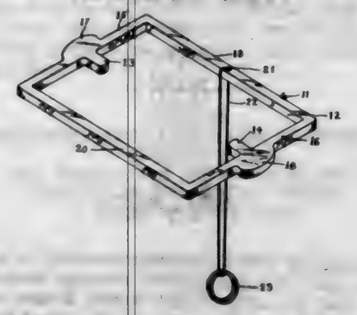
2,950,113
PADDLE TOY
Stanley B. Barnack, Brooklyn, N.Y.
(25 Webb Lane, Highland Falls, N.Y.)
Filed Jan. 19, 1959, Ser. No. 787,534
3 Claims. (Cl. 273—97)



1. A paddle toy comprising, in combination, a main body member having a pair of paddle portions one at each opposite end of said main body member, a handle integral with both of said pair of paddle portions and lying in substantially a common plane thereof, a pair of balls, an elastic cable securing each one of said balls to one of said pair of paddle portions, each one of said pair of paddle portions comprising a substantially segmental circular plate lying substantially flat on both sides, and said handle being substantially symmetrical with both of said paddle portions and with both sides thereof.

2,950,114
GAME
Emile Minetti, 69 Grove St., Rutherford, N.J.
Filed Nov. 10, 1958, Ser. No. 772,883
3 Claims. (Cl. 273—99)

1. A game comprising a frame having a generally central opening therein, the weight of the frame being sufficiently light so that it can be easily sustained and rapidly reciprocated by the person playing the game, a pair of opposed pegs mounted in the central opening of the



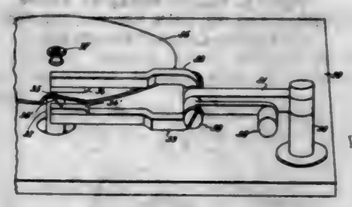
frame, a scoring member having a central peg receiving opening suspended from and below the frame at such a distance that it may hang by its central opening on either peg.

2,950,115
GOLF CLUB ATTACHMENT
Michael G. Hardzan, Columbus, Ohio, assignor to Golfer's Swing-Clik, Inc., Columbus, Ohio, a corporation of Ohio
Filed July 29, 1958, Ser. No. 751,674
3 Claims. (Cl. 273—186)



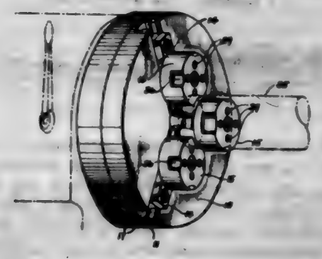
1. In combination with a golf club having a head for contact with a golf ball, an elongated shaft and a handle on the upper end of the shaft, a stop member longitudinally adjustably mounted on said shaft and including a split clamp for clamping engagement on the shaft in spaced relation to the head, a resilient bumper on said stop member, a slide freely longitudinally slidably mounted on said shaft with the slide being in the form of a weight having a peripheral rib on the upper end thereof, a two piece clamp disposed on the shaft adjacent the handle whereby the two piece clamp may be disassembled from the shaft, one piece of said two piece clamp having a spring clip integral therewith, said spring clip extending alongside of the shaft and including a rounded inwardly extending projection for engagement behind the shoulder on the slide thereby frictionally and resiliently retaining the slide adjacent the handle of the golf club with centrifugal force caused by uncocking of the golf club causing the slide to unlatch itself from the spring catch and move outwardly to hit the cushion on the stop member with an impact.

2,950,116
PHONOGRAPH RECORD
Peter C. Goldmark, New York, N.Y., assignor to Columbia Broadcasting System, Inc., New York, N.Y., a corporation of New York
Original application Mar. 14, 1952, Ser. No. 276,648. Divided and this application Dec. 24, 1956, Ser. No. 638,376
2 Claims. (Cl. 274—46)



1. A method of manufacturing a disk-shaped phonograph record having on its opposite faces oppositely directed spiral sound grooves containing stereophonically related undulations comprising the steps of disposing two microphones at spaced locations relative to a source of sound, amplifying the signals generated by the microphones over two separate channels having similar phase shift characteristics, energizing two record cutting transducers with the amplified signals, cutting in each of two master records indexed in a predetermined angular relation and rotated in opposite directions at the same angular speed spiral sound grooves respectively representative of the sounds perceived by the microphones, forming two separate record pressing indexed matrices from the master records, and pressing the opposite faces of the phonograph record from the two indexed matrices.

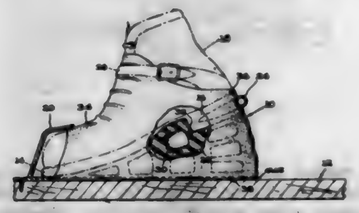
2,950,117
TURNING LATHE
Ivor D. Walmsley, 2432 W. 63rd, Seattle, Wash.
Filed Mar. 3, 1958, Ser. No. 718,614
1 Claim. (Cl. 279—123)



A chuck for an engine lathe comprising a round face plate mounted for axial rotation, a plurality of radial channels in the exposed face of said face plate, a master jaw adjustably mounted in each of said channels, a jaw head adapter plate releasably mounted in fixed position on each of said master jaws and extending outwardly beyond said exposed face of said face plate, a jaw head adjustably mounted on each adapter plate for rotary adjustment about an axis that is parallel to the axis of rotation of the face plate, a cylindrical socket in said adapter plate adjacent one end thereof, a hub on the jaw head adapted to be revolvably positioned in said socket, a hole in said adapter plate radially spaced from said recess and a plurality of passages through said jaw head adapted to be selectively aligned with the hole in

said adapter plate, a bolt extending through the aligned passage into said hole for securing the jaw head in fixed position on said adapter plate, aligned holes in said jaw head, adapter plate and master jaw and a jaw head securing bolt extending through said aligned holes and secured at its inner end to said master jaw.

2,958,118
SKI BOOT ACCESSORY
Philip B. Sharpe, Rockport, Maine
Filed Aug. 18, 1958, Ser. No. 755,549
5 Claims. (Cl. 280—11.14)



1. A pad for preventing entry of snow between the upper surface of a ski and a shoe mounted thereon, said pad comprising an enlarged block of cellular resilient material having enlarged compression holes distributed throughout the volume thereof for facilitating the compression of the block during relative pivotal movement between the shoe and ski, an upstanding flange member on the rear upper corner of the block extending between the grooved surface of the heel of the shoe and the binding cable thereby securing the pad to the shoe with the lower surface thereof engaging the upper surface of the ski.

2,958,119
SKI BINDING
Alfred Gembröch, Ludenscheid, Westphalia, Germany, assignor to Alfred Gembröch K.G., Ludenscheid, Westphalia, Germany
Filed Feb. 19, 1958, Ser. No. 716,195
Claims priority, application Germany Feb. 22, 1957
7 Claims. (Cl. 280—11.35)



1. A ski binding, comprising in combination a vertically adjustable toe iron mounted for lateral deflection, arresting means for normally retaining said toe iron in a central position, a forward lever assembly yieldably connected with said toe iron, and a detachable and adjustable flexible heel cable, said forward lever assembly being adapted to cooperate with said toe iron to tighten a skiing boot rearwardly against said heel cable, said forward lever assembly comprising a slidable sleeve, a compression spring having one end contained in said sleeve, a support for said toe iron engaged by the other end of said spring, a base plate displaceably carrying said support and said sleeve, a second sleeve slidably mounted on said base plate, toggle means connecting said second sleeve means to said first mentioned sleeve, said toggle means including a lever operatively connected to said first mentioned sleeve, said second sleeve including a threaded shaft and nut operatively connected to said compression spring through said sleeves and toggle means for biasing the same, and a bearing on said base plate in which said nut is journaled and retained against displacement.

2,958,120
LOCOMOTION DEVICE
Hubert L. Stewart, 6566 W. 88th Place, Los Angeles, Calif.
Filed July 15, 1958, Ser. No. 748,657
1 Claim. (Cl. 280—12.1)



A locomotion device consisting essentially of a single narrow, rigid, elongated member arcuately formed from end to end, an uninterrupted bottom surface on said member which is continuously convexly curved from one end of the member to the other, an uninterrupted top surface on said member which is parallel to said bottom surface and is continuously concavely curved from one end of the member to the other, said member having a substantially uniform width between its side edges from one end of the member to the other, the outlines of said bottom and top surfaces when viewed in section taken in a direction from one side edge of said member to the other at right angles to the longitudinal axis of said member being straight lines, said member being employed by the user as a locomotion device by placing said bottom surface on the ground, the user standing with feet spaced apart on said top surface on opposite sides of the longitudinal center of said top surface and facing at substantially right angles to the length of the device, whereby the user may progress over the ground by a series of combined rocking and pivoting movements.

2,958,121
STEERING MECHANISM FOR MICROPHONE DOLLY AND THE LIKE
James L. Fisher, 3981 Westin Ave., Sherman Oaks, Calif.
Filed Sept. 29, 1958, Ser. No. 764,187
5 Claims. (Cl. 280—47.11)



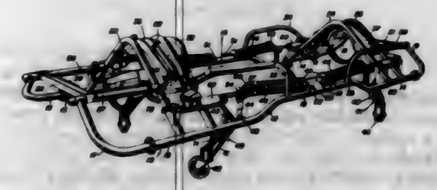
1. In a dolly of the character described, a frame, a pair of wheel supporting members rotatably mounted on one end of the frame for turning on parallel axes, first frame supporting wheels mounted on said members, a steering post rotatably mounted on the other end of the frame for turning on an axis parallel to said first-mentioned axes, a second frame supporting wheel at said other end of said frame, means connecting said steering post and second wheel for steering of the latter by turning of said post, a first sprocket coaxially fixed to each of said members, a second sprocket rotatable on and slidable along said post, first cooperating clutch means on said frame and second sprocket for locking the latter against rotation relative to the frame upon shifting of the second sprocket to one axial position on the post, second cooperating clutch means on said post and second sprocket for locking the latter against rotation on the post upon shifting of the second sprocket to another axial position on the post, means for shifting the second sprocket between said positions, and a sprocket chain trained about said sprockets.

2,958,122
STABILIZING MECHANISM FOR AUTOMOTIVE VEHICLE
Roy Erickson, Box 155, Thiensville, Wis.
Filed Oct. 30, 1958, Ser. No. 770,672
5 Claims. (Cl. 280—104)



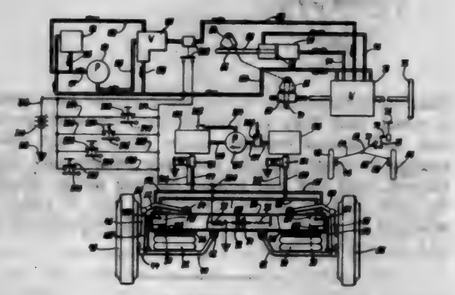
1. In an automotive vehicle having a body frame, a suspension system, and front and rear wheels, the improvement comprising a force exerting means connected to a point on the vehicle in a fixed relation to the rotational axis of the rear wheels and coupled to the adjacent rear portion of the body frame for drawing the rear portion of the body frame closer to said point to an extent increasing with the magnitude of the force exerted, a cable system and cable guides, at least one cable guide rigidly mounted on a support in fixed relation to the rotational axis of the front wheels, one end of the cable system secured to said force exerting means for actuation thereof, said cable system passing over the support-mounted cable guide and terminating in a connection with the front portion of the body frame at a point below the support-mounted cable guide so that a decrease in the spacing between the front portion of the body frame and the rotational axis of the front wheels produces a force in the cable system which actuates said force-exerting means so the force exerted between the rear portion of the body frame and the rotational axis of the rear wheels will increase as said spacing decreases.

2,958,123
DOLLY, WEAPON COMPONENT TRANSFER, SUSPENDED TYPE
Richard E. Nearman, Rockville, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 31, 1959, Ser. No. 830,969
4 Claims. (Cl. 280—106.5)



1. In a weapon component transfer dolly, a frame having side sections provided with straight end portions and upwardly offset intermediate portions, inner and outer transverse sections extending between opposite corresponding ends of the side sections, said transverse sections being upwardly bowed, upwardly and inwardly curved end sections connected to the side sections at their corresponding opposite ends, spaced brace members connected between the upper ends of the end sections and the outer transverse sections, and end bars connecting the end sections and brace members, said upwardly bowed transverse sections and said end sections cooperating with said side sections to define a receptacle for receiving a weapon component within the frame from therebelow.

2,958,124
FLUID SUSPENSION SYSTEM WITH VEHICLE HEIGHT AND ROLL CONTROL
John F. Pribonic, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 18, 1956, Ser. No. 592,178
11 Claims. (Cl. 280—124)

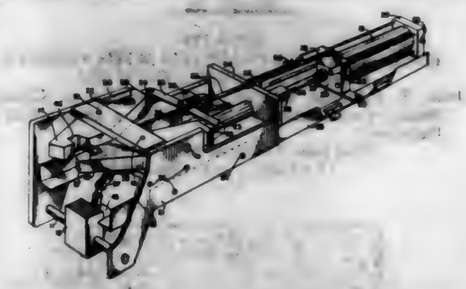


1. A vehicle including a support, left and right wheels movably connected to said support, left and right resilient gas casings operatively located between the left and right wheels and said support, a source of gas pressure, inlet and outlet valve means associated with each of said gas casings, means connecting said source and said inlet valve means, means responsive to the relative position of said support and said wheels to actuate said valve means to admit or discharge gas from said casings to maintain substantially the same relative positions of said support and said wheels, means for normally preventing the flow of gas to and from said valve means, steering means for steering the vehicle forwardly and to the right and left, said support having conduit means connecting the interiors of said left and right casings, normally open valve means providing for flow of gas through said conduit means, and means responsive to the turning of said steering means to the right or left for closing said normally open valve means.

2,958,125
STAKE RELEASE AND RESETTER
Robert E. Dodds, Ganges, British Columbia, and Alexander S. Dodds, Victoria, British Columbia, Canada, assignors to Maxwell-Dodds Manufacturing Company Limited, Victoria, British Columbia, Canada
Filed July 24, 1958, Ser. No. 750,714
3 Claims. (Cl. 289—145)

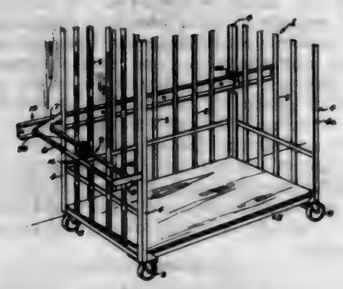
1. In combination with a latchable element, powered latch mechanism comprising a frame, a pair of latches spaced apart and pivotable in the frame about first respective parallel axes intermediate the ends of said latches, like jaws formed in said latches at their one ends, a pair of links each having its outer end pivotally connected with the other end of a latch and its inner end pivotally connected with a fitting for relative rotations of said links about axes parallel with said first axes and having a combined length such that when the jaws are closed the links are substantially aligned, first resilient means in the frame biasing the said other ends of said latches together, a motor including a housing and a drive

member relatively moveable therewith, means coupling said drive member with the latchable element effective to impart driven movement of the element into the latches for one sense of motor drive, means coupling said housing with said fitting support means adapted to guide movement of said housing in the frame in opposite sense to said driven movement between a first stop means in the frame defining a first limit position in which said



links are substantially in line and a second limit position in which said links are rotated into substantial parallelism, and second resilient means biassing said housing tending to rotate the said links into substantially aligned relation, said first and second biassing means cooperating with said latches to establish a pair of stable rest positions in which the latch jaws are respectively open and respectively closed.

2,950,126
MOBILE BIN
Joseph Vincent Armentrout, Hamilton, Ohio, assignor to The Hamilton Caster & Mfg. Co., Hamilton, Ohio, a corporation of Ohio
Filed Aug. 28, 1959, Ser. No. 836,821
7 Claims. (Cl. 280—179)



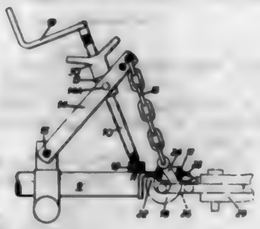
1. In a mobile bin having a base mounting a plurality of wheels, and a body including vertically disposed corner posts projecting upwardly from said base, a pair of brackets projecting outwardly from an adjacent pair of said corner posts, a push handle extending between said brackets, a locking device also extending between said brackets, said locking device comprising an elongated locking bar having a hook on one end thereof and a threaded section at its opposite end, a slot in one of said brackets, said locking bar extending through said slot with the hooked end thereof lying beyond said slot, a hand wheel threadingly received on the threaded section of said bar, a tubular sleeve surrounding said bar and extending between the inner surface of said last named bracket and said hand wheel, a second sleeve secured to the other of said brackets in general axial alignment with said locking bar, the threaded end of said locking bar being received in said second named sleeve, said sleeves being of lengths such that said hand wheel is held against axial movement, whereby as said hand wheel is rotated, said locking bar will be caused to move in the direction of its length.

2,950,127
TRAINING UNICYCLE WITH ADJUSTABLE BALANCING SUPPORTS
Marjorie E. Phillips, 7123 Haverford Drive, Dallas, Tex.
Filed May 29, 1959, Ser. No. 814,466
2 Claims. (Cl. 280—304)



1. A training unicycle comprising a frame, a tubular post secured centrally of said frame and extending upwardly therefrom, a seat mounted for vertical adjustment in said tubular post, a pair of spaced apart parallel depending legs having their upper ends secured to said frame, a wheel journalled in the lower end of said legs and having oppositely disposed cranks mounted thereon, a framework secured to said legs, said framework comprising a pair of spaced apart parallel arcuate frame members, a pair of semi-circular shields secured to said frame members, a standard fixedly secured to the lower end of each of said frame members, and a castor wheel journalled on the lower end of each of said standards and spaced outwardly from said wheel journalled on said legs.

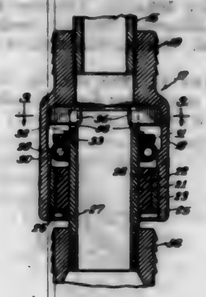
2,950,128
HITCHES FOR TRAILERS
John B. Murray, Stewarton, Ayrshire, England, assignor to Massey-Ferguson (Great Britain) Limited, Manchester, England
Filed Oct. 16, 1958, Ser. No. 767,535
Claims priority, application Great Britain Oct. 18, 1957
4 Claims. (Cl. 280—477)



1. A hitch connection for coupling a trailer unit to a towing vehicle comprising, in combination, a guide rigidly secured to the rear end of the towing vehicle and presenting a vertically disposed cylindrical opening encircled by a flange, an elongated arm pivoted at one end on the vehicle forwardly of said guide to swing vertically toward and from the guide, a flexible tension member anchored at one end to the free end of said arm and extending through the opening in said guide, a hook shaped coupling element secured to the other end of said tension member below said guide, a coupling element mounted on said trailer for engagement by said hook shaped element, means operable to swing said arm upwardly to draw said

hook shaped element and the engaged coupling element of the trailer upwardly to complete a draft connection between the trailer and the vehicle, said hook shaped element having a nose portion engageable with the flange at one side of the guide opening and a shoulder portion spaced from said nose portion engageable with the guide to securely retain the coupling element of the trailer in engagement with the companion coupling element.

2,950,129
MECHANICAL AND HYDRAULIC ABSORBING MEANS FOR A SUBMERSIBLE PUMP SYSTEM
Edward J. Schaefer, Fort Wayne, Ind. (% Franklin Electric Co. Inc., 400 E. Spring St., Bluffton, Ind.)
Filed Dec. 29, 1954, Ser. No. 478,415
10 Claims. (Cl. 285—49)



1. Resilient mounting means for a pump and motor unit supported vertically in line by the piping for the pump, said mounting means comprising a pair of coaxial tubular members, one telescoped within the other to provide a fluid passage therethrough, said members being radially spaced apart at their overlapping ends forming a cavity open at one of its ends, one of said members being adapted to be secured to the pump and the other being adapted to be secured to the piping, resilient cushion means acting in shear interposed concentrically in the open end of said cavity and immovably secured to the adjacent walls of said members to absorb vertical and rotational shock between said members, and hollow core substantially annular resilient means interposed concentrically in said cavity between said adjacent walls inwardly of said cushion means from said open end, said cavity being in flow communication with said passage to subject said annular means to fluid under pressure from the pump, said annular means having means within the core thereof to continually exert an outward force on the walls thereof when subjected to said fluid pressure, thereby absorbing and damping fluid pulsations by a stretching action to vary the fluid volume within said cavity.

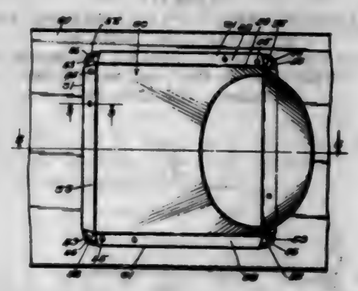
2,950,130
FLUID PRESSURE RESPONSIVE PIPE COUPLING HAVING IDENTICAL HALVES
Richard Schneider, P.O. Box 4590, Sao Paulo, Brazil
Filed Sept. 5, 1957, Ser. No. 682,283
1 Claim. (Cl. 285—67)

A quick coupling structure for connecting fluid carrying pipe sections comprising a pair of identical coupling halves each of which comprises a generally cylindrical body portion having a bore extending therethrough, a radially inwardly extending flange integrally formed with said body intermediate the opposite ends of said bore, a second radially inwardly extending flange arranged parallel to and spaced from said first flange, a longitudinally extending portion formed on half of each of said body portions, a bulbous member integrally formed on each side of said longitudinally extending portion projecting transversely therefrom and spaced axially from said body portion, and having a reduced arcuate neck portion connecting said bulbous member to said longitudinally extending portion to form a bulbous socket adjacent each bulbous member, said bulbous members on said coupling halves being engageable in the bulbous sockets of the companion coupling halves with the bulbous portions overlapping a median line through their centers for detachably securing said halves together when engaged by sliding movement perpendicularly to the axis of said coupling halves, the interengagement of said bulbous members in said bulbous sockets restraining said coupling halves against detachment from each other in a longitudinal direction, a pair of identical compressible resilient seals each of which has a radially outwardly extending



flange engaged between said radially inwardly extending flanges in one of said bores, each of said seals having a semi-circular annular groove formed in the inner surface thereof, each of said seals extending beyond the terminal end of the respective body portion and terminating adjacent the juncture of said body portion with said longitudinally extending portion for abutting relation with each other, each of said seals having an inner portion opposite the abutting end which is adapted to engage a smooth end portion of one of said fluid carrying pipe sections and seal therewith, said seals being compressed into tight engagement with one another by fluid pressure and separately biasing said identical halves away from each other and urging said bulbous members into interengagement with said sockets so that the overlapping relation of the adjacent bulbous portions resists detachment of said coupling halves in a transverse direction.

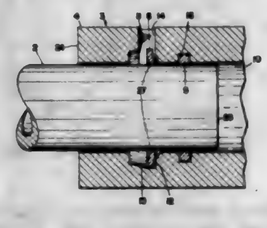
2,950,131
SHEET METAL ATTACHMENT MEANS
Joseph W. Hennes, Omaha, Nebr., assignor to Standard Metal Fabricating Co., Omaha, Nebr., a corporation of Nebraska
Filed Sept. 21, 1956, Ser. No. 611,157
8 Claims. (Cl. 285—189)



1. An article of manufacture comprising a sheet metal take-off member for connecting into an opening in a plenum duct comprising a base portion having an inner peripheral configuration approximating that of the duct opening and an outer peripheral dimension larger than the duct opening, the said base terminating in a substan-

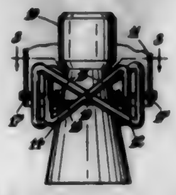
tially continuous inwardly directed flange and being free of wall and edge openings between the body of the take-off member and the flanges, the said flanges extending inwardly from the base periphery in a direction substantially coplanar with respect to the plenum duct wall to which the connector is to be secured, the inner edges of the flange forming an inlet opening into the said take-off member, the said flange being adapted to seat on the plenum duct wall and to surround the opening therein, a plurality of elongated clips each having a substantially U-shaped portion and being of peripheral shape corresponding to selected sections of the inwardly extending flange, the said clips being arranged in tandem and the combined collective length being in substantial correspondence to that of the inner periphery of the inwardly turned flanges of the take-off member, fastening means to secure one end of each of the said U-shaped clips to the inwardly turned flange section of the take-off member with the open end of the said clip faced toward the flange and the wall of the U-shaped clip substantially parallel thereto, the said fastening means being spaced from each other with the fastening point of each clip to the flange being at the trailing end of each clip and so located that each clip when brought into overlapping engagement with the flange must be turned in the same angular direction to bring the leading end of each clip adjacent to the fastened end of the adjacent tandemly mounted clip, and when disengaged from the flange must be turned in the opposite angular direction, the said clips being limited to turning in a plane corresponding to that of the flange to be overlapped and having the bight of each of the elongated U-shaped portions of said clips adapted to overlie the free edge of the duct opening and each clip having one leg thereof adapted to overlie the inwardly turned flange and the other leg adapted to overlie the plenum chamber wall so that the clips, when moved to overlap the inwardly turned flange and the chamber wall, establish clamped engagement with the flange and the chamber wall over substantially the complete peripheral extent of the said wall opening and the inwardly turned flange length, at least two adjacent clips being pivotally mounted with respect to their connecting points on the inwardly turned flange so as to permit the take-off member to be positioned adjacent to and in clamping engagement with the duct opening and to secure clampingly the take-off member to the duct when the pivoted clips are turned in the same angular direction to overlap the inwardly turned flange and the duct wall and bring said flange and wall into face-to-face relation.

2,950,132
THREADLESS PIPE COUPLING HAVING A SPLIT RING LOCKING MEANS
Michael Kocsuta, 327 E. 285th St., Willoughby, Ohio
Filed Nov. 14, 1957, Ser. No. 696,390
8 Claims. (Cl. 285—307)



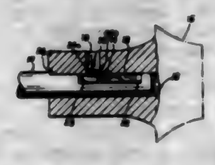
1. A pipe connection for bare pipe comprising: a fitting body having a central bore, a pressure side on said body, an enlarged recess in said body adjacent said bore, a tapered portion in the circumference of said recess tapering inwardly in a direction away from said pressure side, a split locking ring in said recess, inwardly projecting prongs on said ring, said prongs being bent toward said pressure side, said prongs adapted to engage said bare pipe with sufficient pressure to prevent frictionally its accidental removal, a clearance space in the side wall of said recess on the pressure side sufficient to clear said prongs when said split ring engages said side wall, the circumference of said locking ring being adapted to engage said tapered portion whereby said ring will be compressed upon movement of said pipe in a direction away from said pressure side, and a slot connecting said recess to the exterior of said body for insertion of said split ring.

2,950,133
MOUNTINGS, COUPLINGS AND THE LIKE DEVICES
Christopher Linley Johnson, Allestree, and Philip Gordon Binns, Littleover, England, assignors to Rolls-Royce Limited, Derby, England, a corporation of Great Britain
Filed Oct. 31, 1955, Ser. No. 543,645
Claims priority, application Great Britain Nov. 1, 1954
8 Claims. (Cl. 287—1)



5. A universal coupling joining a first part to a second part and permitting universal movement therebetween comprising a pair of connecting members, one connecting member being pivoted to the first part to swing about a first axis and being pivoted to the second part to swing about a second axis intersecting the first axis at a center and at right angles to the first axis, the second connecting member being pivoted to the first part to swing about a third axis passing through said center at right angles to said first axis, load-taking means mounted on said second connecting member at a position which is on a fourth axis passing through the center at right angles to the third axis and which is offset from the center, and an annular track on the second part contained substantially in a plane parallel to the plane of the third and fourth axes and co-operating with the load-taking means.

2,950,134
FASTENING ASSEMBLY AND CLIP
John Strange, Llanishen, Cardiff, Wales, assignor to Tinnerman Products Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 13, 1957, Ser. No. 640,003
4 Claims. (Cl. 287—53)



1. A one piece fastening clip for detachably securing a male shaft-like member within a female knob-like member, comprising a flat strip of sheet metal forming a base, a resilient tongue struck from a partially severed portion of said base intermediate the ends of and inwardly

of all edges of said base, said tongue extending upwardly from its juncture with said base lengthwise of said base and terminating short of the respective end of said base, detent means formed from the free end of said tongue and extending upwardly with respect to the tongue, said detent means being adapted for releasable holding engagement with a cooperating portion of the female member, said detent means comprising lengthwise spaced abutments facing in opposite directions, each of said abutments facing toward a transverse plane passing through a respective end of said base, said abutments being disposed in planes slightly inclined to the plane of said base, and means formed from said base on the opposite ends thereof adapted for self-retaining engagement with a cooperating portion of the male member, said last mentioned means comprising a diagonally upwardly bent generally resilient lip portion on one end of said base and prong means on the other end of said base, the free end of said lip portion being disposed below the elevation of said detent means above said base.

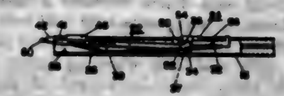
2,950,135
OIL SEAL
Elmer A. Adamson, Chicago, Ill., assignor to Chicago Rawhide Manufacturing Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 7, 1956, Ser. No. 608,513
3 Claims. (Cl. 288—3)



1. An oil seal including a sealing member formed from resilient material and provided with an annular sealing lip portion adapted to be received about a shaft in radially acting sealing engagement therewith, an annular axially extending body portion spaced outwardly of said lip portion and joined therewith through an integral radially directed intermediate portion, concentric rigid ring-like members forming a part of said seal and compressively encasing said body portion therebetween to fixedly mount and rigidify the same, and an end face sealing portion integral with an end of said body portion and extending axially outwardly of adjacent ends of said ring-like members and radially overlapping both of said ends for fixed axial backing thereby, said ring-like members by compressively encasing said body portion establishing and maintaining compressive forces which in an axial direction toward said end face sealing portion further back up the same throughout the effective surface area thereof.

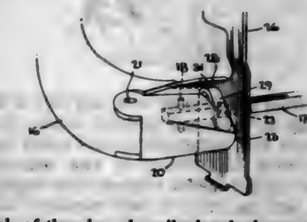
2,950,136
WINDOW LOCK CONSTRUCTION
Charles P. Pesgelly, Merchantville, N.J., assignor to Air Master Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Continuation of application Ser. No. 737,381, May 23, 1958. This application Apr. 7, 1959, Ser. No. 804,710
11 Claims. (Cl. 292—64)

1. Locking means for locking a window sash at vertically spaced positions in a sash frame comprising a track in the window sash, an outer latch element reciprocally movable in said track, an inner element reciprocally movable in said track, said outer latch element and said inner element being independently pivotable with respect to each other, tongue means carried by said



outer latch element for locking insertion in slots in the sash frame, and spring means urging said tongue means away from the floor of the track in said sash.

2,950,137
AUTOMATIC THROW-OFF FOR SCREEN DOOR LATCHES
Mathias M. Check, Valley Forge, Pa., assignor to The Yale and Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Oct. 24, 1957, Ser. No. 692,864
1 Claim. (Cl. 292—228)



In a lock of the class described, a lock mounting member applied to a door, a handle mounted for rotation in a horizontal axis on said lock mounting member at one side of the door, a latchbolt mounted on said handle for bodily rotation therewith and also for movement relatively to the axis in which the handle rotates, a spring pressing said latchbolt to move the lath bolt relatively to the handle for engagement with a strike, a locking slide mounted on the lock mounting member to slide in a direction transverse to the axis in which said handle rotates, a portion of said locking slide coacting with a part on said handle when said slide is in a locking position whereby to lock said handle, said portion of the locking slide when locking the handle being offset relatively to the latchbolt in a direction along the handle axis to leave the latchbolt free for movement relatively to the handle, so that said latchbolt will move against its spring pressure through contact with the strike, as when the door moves to closed position while the handle is unlocked and also while the handle is locked, a further portion of said locking slide lying in the path of movement of a part of the latchbolt and juxtaposed to that part when said slide is in locking position, and a cam surface on said part of the latchbolt effective by the juxtaposed relation between that part and said further portion of the slide to engage and move said slide away from locking position when said latchbolt is moved through contact with the strike.

2,950,138
CLOSURE LATCH
Berthold F. Meyer, St. Clair Beach, Ontario, Canada, and Nicholas Toruk, Melvindale, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed June 30, 1958, Ser. No. 745,605
14 Claims. (Cl. 292—229)

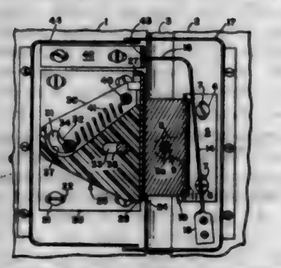
1. A closure latch comprising, a support, a latch bolt swingably mounted on said support for movement between latched, unlatched and safety positions, a detent,

means mounting said detent on said support for pivotal and bodily movement relative thereto, operating means for bodily moving said detent between a first position wherein said detent is engageable with said bolt when in latched position and a second position wherein said detent is engageable with said bolt when in safety position, means operable upon bodily movement of said detent from said first to said second position thereof to swing said detent relative to said support and thereby release



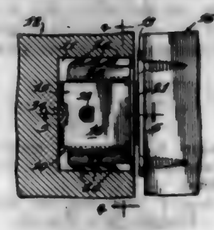
said detent from engagement with said bolt to allow said bolt to swing to unlatched position, means for moving said bolt from said unlatched to said safety position in engagement with said detent in said second position thereof, and control means responsive to engagement of said detent with said bolt in said respective second and safety positions thereof for actuating said operating means to bodily move said detent in engagement with said bolt from said second to said first position thereof to thereby move said bolt from said safety to said latched position.

2,958,139
MAGNETIC LATCH
Richard J. Carbary, La Grange, Ill., assignor to General Electric Company, a corporation of New York
Filed Oct. 31, 1957, Ser. No. 693,775
11 Claims. (Cl. 292—251.5)



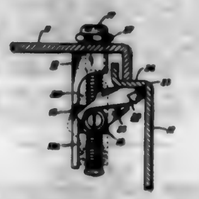
11. A safety latch for a refrigerator cabinet, comprising a first magnetic latching element, means for mounting the same on a door of the cabinet, a second magnetic latching element, means for mounting the same on a wall of the cabinet, the respective mounting means providing for establishment of full face-to-face magnetic engagement of the respective elements at maximum magnetic attraction at all times between a fully closed position of said door and a predetermined partially open position sufficient to admit external air into said cabinet to maintain human life therein, said mounting means providing for the opening of said door by a push from the inside thereof without manual operation of any of said latching elements, a magnetic flux-density control member mounted on said cabinet structure for movement relative to one of said magnetic latching elements, means for biasing said control member to engage with said one magnetic latching element to substantially reduce the magnetic attraction between the respective magnetic latching elements, and means effective as said door traverses said predetermined partially open position during movement in a closing direction to mechanically disengage said flux control member from said magnetic latching element to restore the maximum magnetic holding power thereof.

2,958,140
MAGNETIC DOOR LATCH
Roy A. Stone, Rockford, Ill., assignor to National Lock Co., Rockford, Ill., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,844
3 Claims. (Cl. 292—251.5)



2. A magnetic catch unit adapted to be mounted in a bore of a support for magnetically coupling the catch to a strike plate on a door for retaining the door closed, said unit comprising a casing of substantially rectangular cross section having an inturned extension at its opposite ends, a pair of spaced pole pieces and a magnet therebetween all housed within the casing but with one end of the pole pieces projecting beyond the adjacent end of the magnet, a cover for said casing locating the unit within the bore and having spaced slots through which extend the projected ends of the pole pieces for magnetic coupling to the strike plate when the door is closed, a rib on each inturned extension and projecting from each of the opposite ends of the casing, and teeth on and projecting from said ribs for anchoring the casing and its contained magnet and pole pieces in the bore.

2,958,141
PANEL LATCH
Herman H. Koff, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 28, 1957, Ser. No. 662,128
8 Claims. (Cl. 292—256.73)



5. A latching means for fastening a panel to a receptacle, said latching means comprising a body member including a mounting means for attaching the latch to the panel, a tail piece, and cam guiding shoulders, a bolt journaled in said mounting means, a traveling nut including pivot pins being rotationally restrained on said bolt whereby rotation of the bolt produces translation of the nut along the bolt, a latching element including cam surfaces for cooperating with the shoulders and the receptacle, and means for securing said element on said pins and normally biasing said cam surfaces

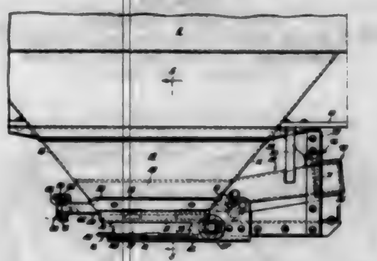
against the shoulders, said element on translation of the nut being alternately guided by said shoulders and said receptacle to or from a latching position according to the direction of translation.

2,958,142
WHEEL BALANCING WEIGHT ASSEMBLY
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed July 22, 1955, Ser. No. 523,734
9 Claims. (Cl. 301—5)



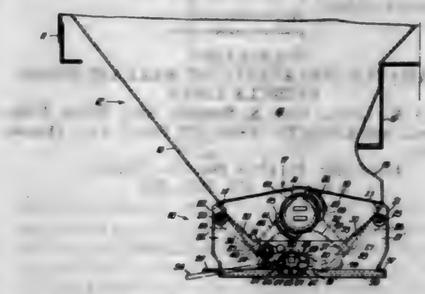
2. In a wheel structure including a tire rim having a generally radially inwardly opening annular groove of substantial depth and width, a wheel balancing weight member and a retainer therefor engageable as an assembly within said groove and having a resilient retaining flange gripping a surface within said groove spaced from the weight member under resilient gripping tension and being thereby grippingly pressed against a surface of the weight opposing said groove surface.

2,958,143
COMBINATION DISCHARGE OUTLET FOR HOPPER CARS
Clarence J. Koranda, Western Springs, and William E. Fritz, Hinsdale, Ill., assignors to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Mar. 24, 1958, Ser. No. 723,329
17 Claims. (Cl. 302—52)



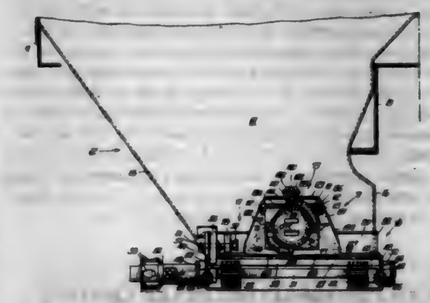
1. In a load containing hopper including movable closure means in closed position forming the bottom of the hopper, a conduit system for pneumatically unloading the hopper including an inverted generally U-shaped hood extending through the hopper above said closure means and having part of the side walls spaced away from the sides of the hopper and providing hopper sections having gravity discharge openings on opposite sides of said hood, the lower edges of said hood being spaced slightly away from said closure means to provide air and material passages for the flow of lading from said hopper sections into the confines of said hood, said hood having enclosed extensions at each end of the hopper lying outwardly thereof, one of said extensions constituting an air inlet for entraining material and the other end providing an exit opening for connection with a suction source and ejecting material therethrough from said hopper, and means for moving said closure means away from the bottom of the hopper to permit discharge of lading by gravity past said hood.

2,958,144
SELECTIVE PNEUMATIC AND GRAVITY DISCHARGE CAR HOPPER CONSTRUCTION
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 18, 1958, Ser. No. 755,503
11 Claims. (Cl. 302—52)



1. A pneumatically unloadable hopper structure for a railway car or the like comprising, in combination, a four-walled enclosure having downwardly and inwardly sloping spaced apart side walls joined by spaced apart end walls, a floor extending between said end walls and forming the bottom of a conduit the upper portion of which is formed by an inverted V-shaped hood the sides of which with the respective side walls form a pair of V-shaped hoppers with openings at the apex between each V-shaped hopper and the interior of said conduit, each of said side walls having an opening for the discharge of lading therethrough by gravity, a door closing each last named opening movably mounted on said enclosure, means providing an air inlet opening to said conduit, and means providing an air and lading exhaust opening from said conduit.

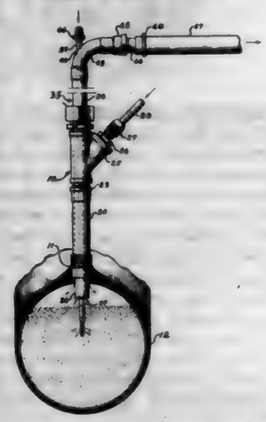
2,958,145
HOPPER CAR OUTLET CONSTRUCTION
George B. Dorey, Westmount, Quebec, Canada, assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Filed Sept. 8, 1958, Ser. No. 759,754
11 Claims. (Cl. 302—52)



1. In combination, a load containing hopper formed by depending wall means defining a gravity discharge opening, a floor closing said opening, said wall means having adjacent inlet and exhaust openings, hood shaped means in said hopper secured at one end to said wall means with the interior in communication with both of said openings and with the lower edge of at least one side spaced from the upper surface of said floor, a baffle in

said hood shaped means dividing the same into an inlet section communicating with said inlet opening and an exhaust section communicating with said exhaust opening, there being a passageway between said inlet and outlet sections, air intake means connected to said inlet opening, and lading and air exhaust means connected to said exhaust opening whereby on application of suction to said exhaust means air is drawn through said air intake means and said inlet opening and lading on said one side of said hood shaped member is drawn through the space between said lower edge thereof and the upper surface of said floor and is entrained thereby and carried out of said exhaust means.

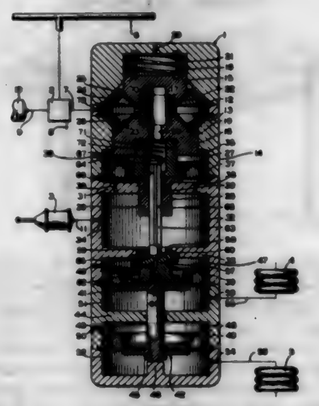
2,950,146
APPARATUS FOR REMOVING BALLAST FROM VEHICLE TIRES
Clarence E. Lease, 1816 S. Summit Ave., Sioux Falls, S. Dak., and Glenn M. Halse, 679 Frank Ave., Huron, S. Dak.
Filed Mar. 13, 1959, Ser. No. 799,327
6 Claims. (Cl. 302—58)



1. A device for use in removing ballast from ballasted vehicle tires comprising a tubular member having means on one end thereof to attach said member in alignment with the bore of a valve stem of the tire from which ballast is to be removed, an eductor pipe within said tubular member mounted to be slidable relative to said member and provide an air passageway intermediate said pipe and the interior of said tubular member, said eductor pipe having one end open to be movable from said one end of said tubular member and into the tire to receive and conduct ballast from the tire, means at the other end of said eductor pipe for connecting said pipe to convey the ballast to a storage point, a tube within said tubular member mounted to be slidable relative to said member to extend the end of said tube into the ballast within the tire, and means for connecting a source of air under pressure to said tubular member and said tube to introduce air into the tire and the ballast therewithin to induce flow of ballast from the tire.

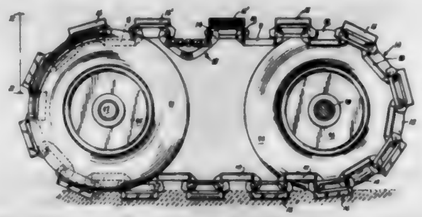
2,950,147
LOAD COMPENSATING BRAKE CONTROL APPARATUS FOR RAILWAY CARS
Karl Neubeck, Hannover, Germany, assignor to Westinghouse - Bremsen - Gesellschaft, m.b.H., Hannover, Germany
Filed Oct. 20, 1958, Ser. No. 768,460
Claims priority, application Germany Oct. 30, 1957
9 Claims. (Cl. 303—22)

1. In a vehicle fluid pressure brake apparatus, a load-responsive relay valve device for regulating the brake applying pressure to different values according to variations in the load on the vehicle, said device comprising a valve member, a valve seat member, said valve member and said valve seat member cooperating to control the supply of the brake applying pressure, two opposed fluid pressure responsive diaphragm means for controlling the movement of said valve seat member with respect to said valve member, one of said diaphragm means being a variable effective area diaphragm device



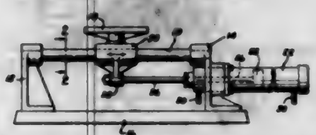
arranged to be subjected to a selected pressure established corresponding to a desired degree of brake applying pressure, the other of said diaphragms being of uniform effective area and subjected to the brake applying pressure supplied past said valve member, a fluid pressure responsive device for varying the position of said valve member with respect to said valve seat member, and means for subjecting said fluid pressure responsive device to a pressure corresponding to the load on the vehicle.

2,950,148
TRACTION DEVICES
Jacob J. Weier, 10611 S. Sawyer Ave., Chicago 43, Ill.
Filed Nov. 17, 1958, Ser. No. 774,464
15 Claims. (Cl. 305—13)



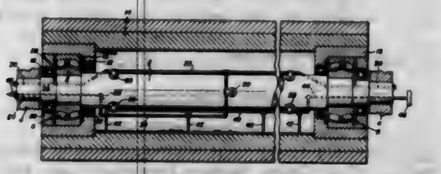
1. In a traction device for vehicle wheels arranged in tandem, the combination of wheels arranged in tandem having dual tires, a chain having a plurality of terminal and intermediate shoes, and a plurality of terminal and intermediate links for arrangement between the dual tires on the wheels, terminal pins carried by the end portions of said terminal and intermediate links, all of said terminal and intermediate shoes being substantially retangular in shape with a hollow central body portion formed with opposed slotted portions and with end sections integrally secured thereto, said central body portion of said terminal and intermediate shoes receiving in their slotted portions the pins of the adjacent ends of said terminal and intermediate links to secure said terminal and intermediate shoes and said terminal and intermediate links in operative relation, an adjustable connector link between the terminal shoes having curved head portions, terminal pins carried by the curved head portions of said adjustable connector link, said terminal shoes receiving in their slotted portions the pins of said adjustable connector link, each of said intermediate shoes being located between a pair of said intermediate links, each of said terminal shoes being located between a terminal link and said connector link, gusset-plates carried by said terminal and intermediate shoes and disposed transversely thereof for arrangement upon the dual tires of said wheel, and manually operable means for manipulating said adjustable connector link in adjusted position.

2,950,149
RELATIVELY RECIPROCABLE SHAFT AND BEARING
John B. Thomson, 1629 Plandome Road, Manhasset, N.Y.
Filed Jan. 29, 1957, Ser. No. 636,897
2 Claims. (Cl. 308—4)



1. A machine element comprising a steel shaft, said shaft having an outside bearing surface of a thin layer of a porous, lubricant-retaining bearing material bonded to the steel shaft, a bearing for said shaft, said bearing having an inner, shaft contacting bearing surface which is harder than the bearing surface of the shaft, and means for reciprocating the shaft and the bearing relatively to each other with said bonded shaft surface extending throughout the length of said reciprocation whereby the wear of the softer shaft bearing surface is distributed over the surface of the shaft.

2,950,150
LUBRICATED ROLL
James E. Ashworth, Palo Alto, Calif., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Feb. 14, 1958, Ser. No. 715,361
2 Claims. (Cl. 308—187)



1. A roll comprising a shaft, a bearing adjacent each end of said shaft, a seal on the outer side of each bearing, a roll body mounted on said bearings in spaced relationship with said shaft, means for delivering a lubricant to said bearings, and separate means for creating a partial vacuum in the space between said shaft and roll body.

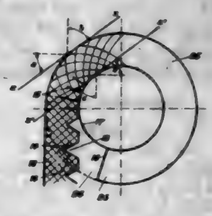
2,950,151
COMBINED CAGE AND RETAINER FOR BEARING ROLLERS
Sidney F. Clark, Torrington, John H. Cowles, Forestville, and Americo Marola and Robert H. White, Torrington, Conn., assignors to The Torrington Company, Torrington, Conn., a corporation of Maine
Filed Mar. 19, 1956, Ser. No. 572,544
4 Claims. (Cl. 308—217)

3. A combined cage and retainer for bearing rollers comprising a grid having opposite end bars substantially in the pitch line of the rollers, parallel cross bars having inwardly stepped portions of uniform width, the intermediate stepped portions engaging the rollers at their ends, and the central stepped portions being normally out of contact with the rollers but confining them against



inward movement, and collars U-shaped in cross-section and having parallel inner and outer flanges enclosing the end bars, said outer flanges having outwardly offset fingers opposite the intermediate stepped portions of the bars and being spaced apart less than the diameter of a roller.

2,950,152
PACKINGS AND THE LIKE
Roger Maurice Henri Garceau, Colombes, France, assignor to S. N. Mareg, Paris, France, a societe anonyme of France
Filed Sept. 13, 1957, Ser. No. 683,895
Claims priority, application France Sept. 21, 1956
9 Claims. (Cl. 309—23)



1. The method of preparing a reinforced pre-formed hollow cylindrical packing element comprising the steps of, cutting a plurality of ribbon-like strips on the bias from a thin flaccid sheet of rubberized woven material, bonding edgewise together a plurality of said strips into a long strip, cutting a plurality of spaced notches along one longitudinal edge of each said long strip, winding each said long strip on edge to form a flat ring with the notched edge disposed inwardly, securing the adjacent ends of the wound strip together, arranging a stack of said rings coaxially to a mandrel, and forming said rings under heat and pressure into an integral hollow cylindrical body.

2,950,153
HAND-OPERATED SPRAYER OR THE LIKE
Paul O. Esmay, 1600 Main St., Three Rivers, Mich.
Filed Jan. 12, 1959, Ser. No. 786,864
10 Claims. (Cl. 309—23)

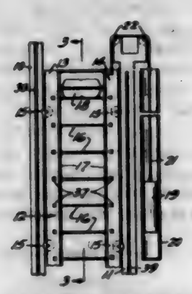
1. In a hand-operated spray gun of the type having an outer member in which a plunger is mounted for manual reciprocation in a plunger bore toward and away from a pumping space to which the material to be sprayed is fed, there being an annular air passage space between said plunger and the defining walls of said plunger bore into which air is drawn by suction during the rearward

stroke of said plunger, the improvement in a one-way valve carried by said plunger which valve seals off said annular passage space from said pumping space during the forward or compression stroke of said plunger and provides an opening between said annular air passage space and said pumping space during the rearward stroke thereof for directing appreciable quantities of air to said pumping space comprising: a stack of wafer-like valve-forming discs each having the thinness of film and made



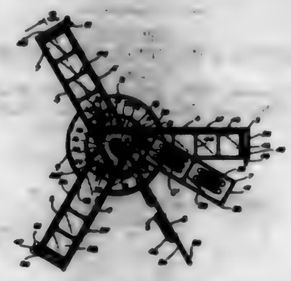
of a flexible wear-resistant, slippery material secured to said plunger and being of a size slightly greater than said plunger bore and the peripheral portions thereof being forwardly flexible, the peripheral edges of said stack of discs making free sliding, air sealing engagement with the walls of said plunger bore during the forward or compression stroke of said plunger and being flexed forwardly during the rearward stroke of the plunger due to the reduced pressure then existing in said pumping space, whereby air is sucked into said pumping space.

2,950,154
VENDING DEVICE
George C. Harrison, Roseville, Minn.
(32 Mid Oaks Lane, St. Paul 13, Minn.)
Filed Feb. 8, 1956, Ser. No. 564,266
5 Claims. (Cl. 312—35)



1. For use with a vending device having a slowly downwardly movable stack of shelves and an associated indexing beam having an indexing discontinuity corresponding to each shelf, a control device comprising a latch member coacting with each of said discontinuities in turn, means for retracting and again immediately advancing said latch member on actuation of the vending device, and deflection means for preventing said latch member, when rapidly advanced toward the slowly movable index beam after being retracted therefrom, from again entering into coaction with the same discontinuity; the rate of descent of said stack and the speed of retraction and return of said latch member, in the absence of said deflection means, permitting said latch member to reenter into coaction with the same one of said discontinuities.

2,950,155
ARTICLE DISPLAY AND STORAGE STRUCTURE
Howard M. Schick, P.O. Box 111, Lee's Summit, Mo.
Filed Feb. 17, 1958, Ser. No. 715,571
3 Claims. (Cl. 312—202)

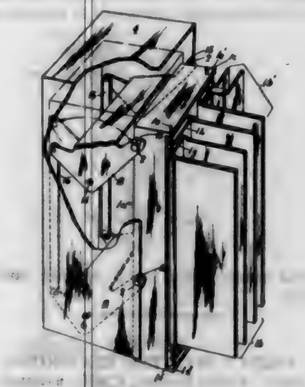


1. An article display structure comprising, an upright support, laterally spaced upright normally parallel panels, means mounting one of said panels on said support, an upright wall fixed relative to said one panel and extending therefrom adjacent said support, means hingedly mounting said other panel on said wall for swinging movement toward and away from said one panel, an upright post between said panels and supported adjacent said wall in fixed relation thereto, a plurality of open top containers in a vertical tier between said panels with each container individually swingable on said post, said containers having a width substantially corresponding to the spacing between the parallel panels, said open top containers having a vertical relationship positioned one over the other whereby the upper container prevents access to the next lower container until said other panel is swung away from said one panel and one of said containers is swung on the upright post outwardly away from said one panel, and means securing the free ends of the parallel panels one to the other to hold the containers against relative swinging movement.

2,950,156
EQUIPMENT UNIT MOUNTING ARRANGEMENTS
Percy Arthur Childs, Stanley Frederick Gold, and William Arthur George Walsh, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Filed Feb. 15, 1954, Ser. No. 410,396
Claims priority, application Great Britain Feb. 27, 1953
8 Claims. (Cl. 312—266)

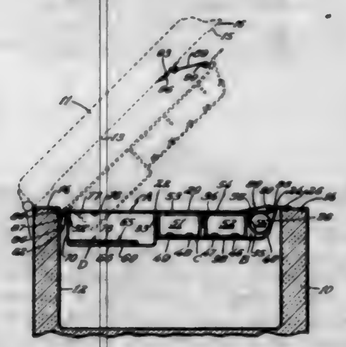
1. Equipment mounting arrangement comprising an open-fronted housing, equipment adapted to normally operate within said housing and to substantially occupy all the space therein, said equipment mounted on a plurality of panels hingedly mounted in book form, support means for supporting said panels in a position having a first vertical plane within said housing and in a second position having a second vertical plane without said housing, said support means coupled to upper and lower portions of opposite interior sides of said housing and adapted to maintain said planes in parallel relation, said support means including guide means for guiding said equipment in an angular direction between said

positions whereby said panels may be maintained in closed-book form within said housing and may be pivoted



about their hinges to said support means to form an open book without said housing.

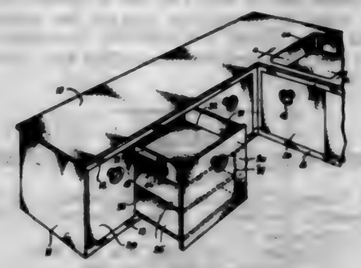
2,950,157
FREEZER CABINET SHELVING
Edmund J. Bazicky, St. Paul, Minn., assignor, by mesne assignments, to Whirlpool Corporation, a corporation of Delaware
Filed Aug. 18, 1955, Ser. No. 529,225
18 Claims. (Cl. 312—300)



7. In combination with a horizontal chest type freezer having an open topped body and a lid hingedly connected to the rear wall of said body, a rack body, pivot means pivotally connecting said rack body to said open topped freezer body along an axis parallel to the lid hinge axis at a point on the rack body nearer the rear wall of the freezer body than the front wall thereof, and projecting means on said rack body for overlying upper edge of the forward wall of said freezer body, thereby limiting the downward pivotal movement of the forward end of the rack body.

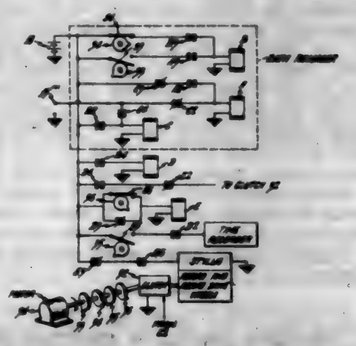
2,950,158
KITCHEN CABINET CONSTRUCTION
Warren J. Harmon, Rte. 1, Box 1781, Bremerton, Wash.
Filed May 28, 1956, Ser. No. 587,604
2 Claims. (Cl. 312—342)

1. A cabinet of the character described comprising a frame structure including a plurality of identical U-shaped frames, of flat panel form disposed in laterally spaced relationship, in parallel vertical planes, and with their open sides faced forwardly, a plurality of horizontally disposed and vertically spaced wall stripe joining said frames across their back edges, a baseboard applied across the forward ends of the lower legs of said U-frames and secured thereto, an apron strip applied across the forward ends of the upper legs of said U-frames and secured thereto, a horizontal top panel extended across and secured to the top edges of the partitioning frames; said U-frames and top defining forwardly opening compartments between said frames, a drawer unit disposed



in each of said compartments and means on the U-frames for the support of said drawer units for easy sliding movement into and from its compartment through the open front of the frame structure; each of said drawer units having a flat panel closing it across its forward end and of such as to serve as a closure for the compartment when the unit is fully housed, and each unit having compartments therein opening laterally therefrom and to which access may be had when the unit is positioned forwardly of the compartment.

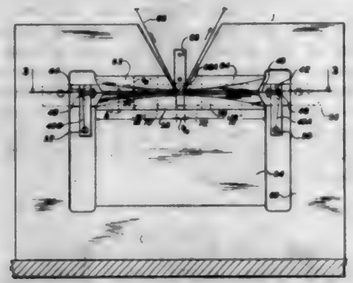
2,950,159
TIME AND EVENTS RECORDER
James M. McCulley, Mount Laurel Township, James Kiraly, Riverside, and John B. Harrison, Riverton, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application Nov. 29, 1957, Ser. No. 699,877. Divided and this application Jan. 29, 1959, Ser. No. 794,217
3 Claims. (Cl. 346—59)



1. A recording device for producing a visible record of groups of data input signals, said groups varying in data content from one to a multiplicity of data input signals, each of said groups being in a separate channel, said device comprising data recording means for each channel responsive to data input signals from its channel; time recording means for producing a visible record of the time of recording of a data group in response to each of said groups of data input signals; record advancing means for intermittently advancing said record a

discrete step; and controlling means for said recording device to remember data input signals which occur during the processing cycle of a previously received data input signal; said controlling means comprising, a recurrent timing means defining a processing cycle; a signal storing relay for temporarily storing input signals from a selected channel; a transfer relay for receiving a data input signal from said storing relay at a predetermined first time during the processing cycle selected by said timing means; and at least two sets of contacts on said transfer relay to successively energize in conjunction with said timing means first said time recording means and then said data recording means and said record advancing means.

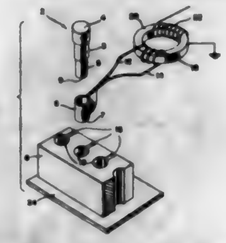
2,950,160
STRING GALVANOMETER OSCILLOGRAPH APPARATUS
Lewis B. Browder, La Canada, Calif., assignor, by mesne assignments, to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 8, 1954, Ser. No. 461,088
5 Claims. (Cl. 346—74)



1. An oscillograph comprising means for producing a magnetic field, a flexible conductor, means for resiliently supporting the ends of the flexible conductor to permit the ends of the flexible conductor to move closer together when the center of the flexible conductor is transversely displaced with relatively little increase in the tension on the resilient conductor, said means normally positioning the flexible conductor in the magnetic field, a conductive anvil having a straight ridge located adjacent and extending perpendicularly with respect to the flexible conductor, current-sensitive paper located between the anvil and the flexible conductor and in contact with the anvil along the ridge, a source of electric current coupled between the anvil and the flexible conductor for causing electric current to pass through the current-sensitive paper, and means coupling the ends of the flexible conductor to a source of electric signals for causing the flexible conductor to move across the current-sensitive paper in accordance with the magnitude of the electric current which passes through the flexible conductor.

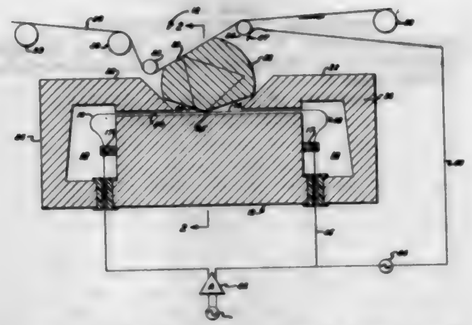
2,950,161
COAXIAL MAGNETIC PRINTING HEAD
William J. Rueger, Pleasant Valley, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 3, 1956, Ser. No. 575,830
3 Claims. (Cl. 346—74)

1. A multi-element magnetic head for producing or detecting concentric pole magnetic spots having common peripheral polarities and common but opposite central polarities comprising a plurality of spaced apart cores of magnetic material, said cores having parallel axes lying in a common plane, an energizing coil peripherally surrounding each of said cores respectively, and a common base member of flux permeable material, said base being



in peripheral contact with each of said core and coil combinations.

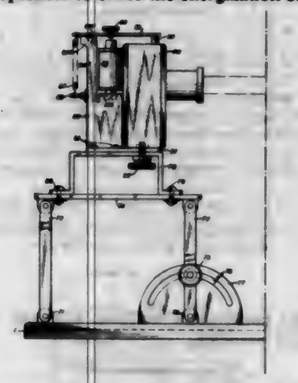
2,950,162
DIRECT WRITING RECORDER
John R. Kelley, Sierra Madre, Calif., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Jan. 10, 1958, Ser. No. 708,263
7 Claims. (Cl. 346—74)



1. Apparatus for direct recording of a signal on an electro-sensitive paper, the apparatus comprising a body, a plurality of conductors mounted on the body and insulated from each other, an electrically conductive writing element, means for moving the element into electrical contact with successive conductors in accordance with the strength of the signal to be recorded, means for holding the paper in contact with the conductors, and means for imposing a writing voltage between the writing element and the paper.

2,950,163
DEVICE FOR RECORDING THE SPEED OF SHUTTERS IN PHOTOGRAPHIC APPARATUS
Arthur W. Ziegler, 47 Meadowbrook Road, Short Hills, N.J.
Filed Apr. 9, 1959, Ser. No. 805,296
9 Claims. (Cl. 346—108)

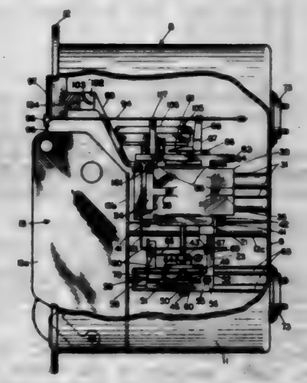
7. A device for recording the operating speed of a shutter in a photographic apparatus, said device comprising a base, a motor mounted on said base, means actuated by said motor for projecting light dots onto a film in such apparatus, said means including a magnetic clutch, a plurality of upwardly extending arms pivoted at one end to said base, a mounting plate for supporting the photographic apparatus pivotally connected to the free ends of said arms for movement in different spaced relation to said base for focal adjustment of the photographic apparatus, relative to said light projecting means, an electromagnet having a pole piece secured to said mounting plate, an armature for said magnet pivoted on said pole piece extending in operative relation with the shutter of the photographic apparatus for actuating the latter upon the energization of said magnet, means manually operable to cause the energization of said clutch



and said magnet for actuating the shutter in the photographic apparatus in timed relation with the operation of said light projecting means, and means carried by said armature for controlling the movement of said armature relative to the shutter.

2,950,164
RECORDER
Harry E. Albright, Marblehead, Mass., assignor to General Electric Company, a corporation of New York
Filed Dec. 8, 1955, Ser. No. 551,769
5 Claims. (Cl. 346—140)

1. In a recorder, the combination of: a housing, electrical measuring means supported within said housing and including a vertically extending rotatably mounted shaft, means enclosing said measuring means including a main protective barrier overlying said measuring means, said barrier having an aperture disposed coaxially with respect to said shaft, an auxiliary protective barrier overlying said aperture and having a portion thereof extending through said aperture, said auxiliary barrier being



coupled to said shaft to rotate therewith, a recording pen removably and independently mounted on said auxiliary barrier, said pen having a capillary ink feeding tube having its inner end disposed vertically within said housing and arranged coaxially with respect to said shaft, and a closed inkwell removably mounted on said main barrier and having an aperture disposed in its cover for receiving the inner end of said capillary tube.

CHEMICAL

2,950,165
NEW DYEING PROCESS
Harry Rose Hadfield, Brian Batterbee, and Denis Ronald Lemin, Manchester, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
No Drawing. Filed Sept. 10, 1957, Ser. No. 683,012
3 Claims. (Cl. 8—54)

1. Process for coloring textile materials selected from the class consisting of protein and regenerated protein textile materials with a water-soluble di-chloro-s-triazinyl amino dyestuff containing as the chromophoric group a member selected from the class consisting of azo and anthraquinone chromophoric groups, which comprises applying the said dyestuff to the said textile material in an aqueous medium at a temperature from about 0° C. to about 55° C., in conjunction with a treatment with an acid-binding agent selected from the group consisting of water-soluble carbonates and bicarbonates in a dilute aqueous solution.

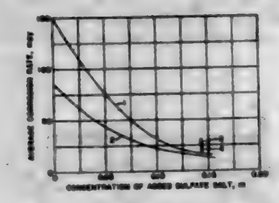
2,950,166
METHOD FOR SEPARATION OF PLUTONIUM FROM URANIUM AND FISSION PRODUCTS BY SOLVENT EXTRACTION
Glenn T. Seaborg, Lafayette, Calif., Walter J. Bloedel, Madison, Wis., and Matthew T. Walling, Jr., Richland, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Oct. 31, 1952, Ser. No. 318,072
36 Claims. (Cl. 23—14.5)

1. The process of separating uranium values, plutonium values and fission product values contained in an aqueous solution, comprising providing a nitric acid solution of said values, securing the plutonium in its hexavalent oxidation state, contacting the nitric acid solution with a substantially water-immiscible organic solvent whereby the uranium and plutonium values are taken up by an organic extract phase, separating the aqueous solution and the organic extract phase, contacting the organic phase with an aqueous medium containing a reducing agent for the plutonium and a salting-out agent whereby the plutonium is converted to its trivalent state and back-extracted into said aqueous medium, and separating the plutonium-containing aqueous medium from said uranium-containing organic extract phase.

2,950,167
METHOD OF INHIBITING CORROSION IN URANYL SULFATE SOLUTIONS
Edward G. Bohlmann, Concord, and John C. Griess, Jr., Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Feb. 19, 1958, Ser. No. 716,252
2 Claims. (Cl. 23—14.5)

1. The method of treating an aqueous uranyl sulfate solution within the concentration range of 0.1 molal to 4.0 molal to reduce the corrosive properties of said solution with respect to stainless steel at temperatures of said solution within the range of 150° C. to 350° C. and

elevate the phase-separation temperature of said solution which comprises maintaining lithium sulfate in said solu-



tion in the concentration range of 0.25 to 1.3 times the molal concentration of uranyl sulfate in said solution.

2,950,168

CONCENTRATION AND DECONTAMINATION OF SOLUTIONS CONTAINING PLUTONIUM VALUES BY BISMUTH PHOSPHATE CARRIER PRECIPITATION METHODS

Glenn T. Seaborg, Albany, and Stanley G. Thompson, Richmond, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 30, 1947, Ser. No. 777,130
25 Claims. (Cl. 23—14.5)

1. In a process for the concentration and decontamination of plutonium present in a dilute solution in the tetravalent state of oxidation together with fission product values, the steps which comprise contacting said solution with a bismuth phosphate precipitate, separating said bismuth phosphate precipitate and its associated plutonium from the supernatant solution, dissolving said separated precipitate and plutonium to form a second solution, oxidizing plutonium to the hexavalent oxidation state, maintaining said plutonium in the hexavalent state of oxidation while contacting said second solution with a carrier for said fission product values, separating the carrier and associated fission product values from the supernatant solution, reducing the plutonium to the tetravalent state, contacting the resulting solution with a carrier for said plutonium selected from the group consisting of lanthanum fluoride, lanthanum hydroxide, lanthanum phosphate, ceric phosphate, thorium iodate, thorium oxalate, bismuth oxalate, and niobium oxide, separating the carrier and associated plutonium from the supernatant solution, and dissolving the separated carrier and plutonium to form a third solution having a volume substantially less than the volume of the initial solution.

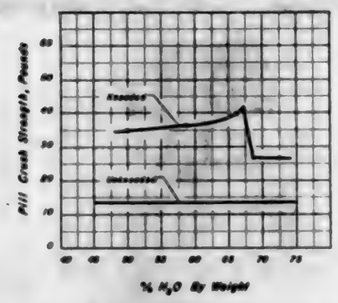
2,950,169

PROCESS FOR PREPARING SHAPED ALUMINA PARTICLES OF HIGH CRUSHING STRENGTH

Maurice J. Murray, Palatine, and Lester G. Massey, Chicago, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Filed Apr. 23, 1956, Ser. No. 579,880
4 Claims. (Cl. 23—143)

1. A method for manufacturing shaped alumina-containing pills of high crushing strength from an alumina resulting from the reaction of H_2O with aluminum and having a water content of from about 70% to about 85% by weight, which comprises filtering the alumina from the reaction mixture, kneading said alumina for at least 2 hours while drying until the water content of the alumina is reduced to an amount between about 52.5% and about 68.5% by weight, then further drying the alumina sufficiently to reduce its water content to below about 30% by weight, thereafter forming the thus kneaded and dried



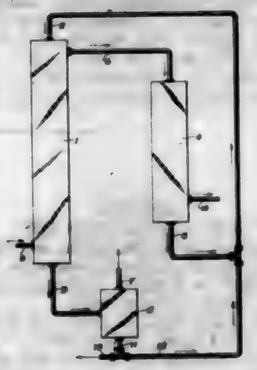
alumina into particles of uniform size and shape, and calcining said particles.

2,950,170

RECOVERY OF HYDROGEN HALIDES

Heinz Harnisch, Koln-Klettenberg, and Franz Rodis and Klaus Beltz, Knapsack, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

Filed July 12, 1957, Ser. No. 671,604
Claims priority, application Germany July 19, 1956
9 Claims. (Cl. 23—154)



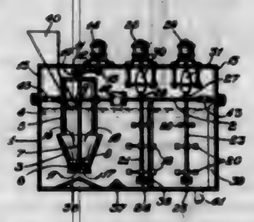
1. A process for recovering a substantially anhydrous hydrogen halide selected from the group consisting of hydrogen chloride and hydrogen bromide from a gas stream consisting essentially of permanent gas carrying a substantial amount of water vapor as well as said hydrogen halide, in a proportion more concentrated than azeotropic with respect to the hydrogen halide, said process being characterized by the steps of washing said stream in countercurrent with a water solution of said hydrogen halide having a concentration less than azeotropic with respect to the hydrogen halide, which water solution as it enters the washing is above 50° C. to cause the gas stream leaving the washing to carry water vapor and a relatively small concentration of hydrogen halide, the washing liquid being cooled as it goes through the washing so that as it emerges from the washing it absorbs hydrogen halide from the entering stream and reaches a hydrogen halide concentration greater than azeotropic; working up said emerging acid by boiling to obtain hydrogen halide of 100% strength and an essentially azeotropic acid; cooling the washed gas stream in a manner such that substantially all its hydrogen halide is condensed together with part of its water vapor to form an aqueous hydrohalide solution less concentrated than azeotropic with respect to hydrogen halide and to leave the residual gas with the excess of water vapor and less than about 0.1% by volume of hydrogen halide.

2,950,171

PROCESS AND APPARATUS FOR THE MANUFACTURE OF PHOSPHORIC ACID

André Macq, Brussels, Belgium, assignor to Union Chimique Belge, Societe Anonyme, Brussels, Belgium, a Belgian company, and Manufacture des Glaces et Produits Chimiques de Saint-Gobain, Chauny et Cirey, Société Anonyme, Paris, France, a French company, jointly

Filed July 12, 1955, Ser. No. 521,587
Claims priority, application Belgium June 7, 1955
6 Claims. (Cl. 23—165)



1. A process for the continuous manufacture of phosphoric acid from natural phosphate and sulfuric acid which comprises the steps of establishing a single horizontally-elongated reaction zone, establishing a reaction medium in said reaction zone comprising the reaction product of sulfuric acid upon natural phosphate, establishing adjacent one end of said horizontally-elongated reaction zone containing said reaction medium a vertically-moving toroidal current in said reaction medium around a vertical axis, the inner portion of said toroidal current being caused to move downwardly while undergoing converging-diverging confinement and the outer portion of said toroidal current being caused to move upwardly in the other direction around said inner confined portion, simultaneously establishing in a second portion of said reaction zone which is spaced laterally with respect to said toroidal current a plurality of vertically superposed horizontal currents and causing said currents to move at least partially in closed paths, said superposed currents comprising upper horizontal currents and lower horizontal currents, causing a first portion of the upwardly flowing outer portion of said toroidal current to commingle with some of said horizontal currents, causing the remaining horizontal currents to commingle with the remainder of the vertically moving outer portion of the toroidal current and causing said remaining horizontal currents to be sucked into the inner downwardly-moving portion of the toroidal current continuously introducing natural phosphate and washing water from the filtration of the slurry of previously formed product into the upper end of the inner portion of said toroidal current, continuously introducing sulfuric acid into said upper horizontal currents, and continuously withdrawing said reaction product from said reaction zone.

2,950,172

PRODUCTION OF COBALTOUS HYDROXIDE

John Pincott and De Witt H. West, Swansea, Wales, assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 8, 1957, Ser. No. 695,206
Claims priority, application Great Britain Nov. 23, 1956
6 Claims. (Cl. 23—183)

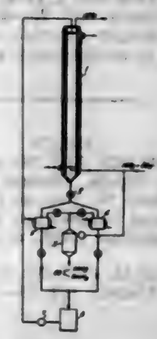
1. A process for producing pink cobaltous hydroxide which is substantially crystalline and non-gelatinous in form and being further characterized in that it is readily filterable and resists the tendency to undergo deleterious oxidation which comprises, establishing an aqueous, cobaltous sulfate solution, adding to said solution a small but effective amount up to about 0.1% by weight of the cobaltous sulfate of a material selected from the group consisting of Eosin, Methylene Blue, Bismarck Brow, p-Nitroso-dimethylaniline, Neutral Red, Carmine, p-Carmine, Gentian Violet, Wright's Stain and Resorcinol, and thereafter adding an alkali agent to said solution to precipitate pink cobaltous hydroxide therefrom.

2,950,173

PROCESS FOR SEPARATING CARBON DIOXIDE FROM AMMONIA IN THE PRODUCTION OF MELAMINE FROM UREA

Alessandro Baroni, Novara, and Tiziano Garlanda, Turin, Italy, assignors to Montecatini, Societa Generale per Finduatria Mineraria e Chimica, a corporation of Italy

Filed Oct. 25, 1957, Ser. No. 692,455
Claims priority, application Italy Oct. 31, 1956
8 Claims. (Cl. 23—196)



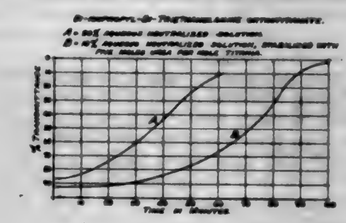
1. The process of separating ammonia from a gaseous mixture of ammonia and carbon dioxide obtained as by-product in the conversion of urea into melamine by heating urea under pressure in an ammonia atmosphere, said process comprising the steps of entering a finely dispersed stream of said gaseous mixture near the bottom of a column of an anhydrous solvent taken from the group comisting of dimethylformamide, ethylene glycol and diethylene glycol, recovering substantially pure ammonia emanating from the top of said column and separating ammonium carbamate from said solvent.

2,950,174

PREPARATION AND STABILIZATION OF WATER SOLUBLE REACTIVE TITANIUM DERIVATIVES

Paul Lagally, Sunset Ave., Pleasant Gap, Pa.

Filed Apr. 5, 1956, Ser. No. 576,498
12 Claims. (Cl. 23—202)



1. A process for controlling the hydrolysis of a water soluble orthotitanate ester and for preserving the resulting

hydrolyzed reaction product in the form of a water soluble low molecular weight compound selected from the group consisting of monomers and polymers of orthotitanic acid and partially hydrolyzed esters of orthotitanic acid, comprising hydrolyzing said orthotitanate ester in an aqueous medium and inhibiting polymerization of the hydrolyzed product by incorporating in said aqueous medium a stabilizer containing an electron donating atom and selected from the group consisting of hydroxyaldehydes, hydroxy-ketones, semi-acetals of hydroxyaldehydes, water-soluble alcohols, water soluble amides, hydroxy-alkyl derivatives of amines containing tertiary nitrogen, and hydroxyalkyl-alkylenepolyamines.

2,950,175

AQUEOUS HYDROGEN PEROXIDE CONTAINING A SMALL STABILIZING AMOUNT OF NITRILOTRIACETIC ACID

Peter R. Johnston, Corpus Christi, Tex., assignor to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware

No Drawing. Filed Apr. 1, 1958, Ser. No. 725,503
2 Claims. (Cl. 23—207.5)

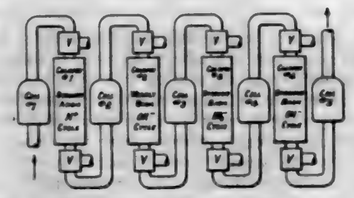
1. Aqueous hydrogen peroxide containing a small stabilizing amount of nitrilotriacetic acid.

2,950,176

METHOD FOR LIQUID ANALYSIS

Louis C. Thayer, Duarte, Michael Czuha, Jr., Temple City, and Malboone W. Greene, Pasadena, Calif., assignors, by mesne assignments, to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California

Filed Aug. 15, 1955, Ser. No. 528,280
8 Claims. (Cl. 23—230)



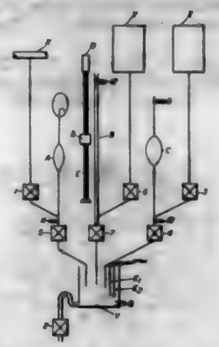
1. A method of continuously analyzing water containing anionic and cationic compounds disposed therein for said ionic compounds, which comprises: measuring the conductance of said water; passing said water through a cation exchange material so as to replace the cations other than hydrogen within said water with hydrogen ions; measuring the conductance of said liquid after it has been passed through said cation exchange material; comparing the two measured conductances to determine the difference therebetween, the change in conductance being a function of the quantity of cations replaced by said cation exchange material; passing said water through an anion exchange material so as to replace the anions other than hydroxyl within said water with hydroxyl ions, causing the formation of water; measuring the conductance of said water after it has been passed through said anion exchange material, with said water being passed through said exchange materials in a continuous stream and with said conductance measurements being made at the same time; and continuously comparing the three measured conductances to determine the differences therebetween, the changes in conductance being functions of the quantity of anions within said water.

2,950,177

APPARATUS FOR THE DETERMINATION AND CONTROL OF COMPOSITIONS IN CHEMICAL PROCESSES

John Frederick Brown, Robert James Weir, and Anthony Robert Whelan, all of Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

Filed Feb. 21, 1957, Ser. No. 641,749
Claims priority, application Great Britain Feb. 27, 1956
23 Claims. (Cl. 23—253)



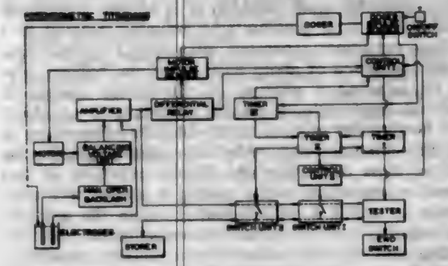
1. Automatic titration apparatus comprising a titrating vessel containing a titrand, at least one titrating burette containing a titrant, said burette having an electrically controlled valve through which said titrant may flow into said vessel, two electrodes at least one of which is immersed in said titrand, a difference amplifier including at least two amplifying elements each having at least one control element, said electrodes being coupled respectively to the control elements, said amplifier having two outputs the potential difference therebetween being the potential difference between said two electrodes as amplified by said amplifier, bistable circuit means having two inputs and at least one output, means including a condenser for coupling one of the outputs of said amplifier to one of the inputs of said bistable means, means for coupling the other amplifier output to the other input of said bistable means, means for charging and discharging said condenser including relay means coupled to the output of said bistable means, means for energizing said valve, and means associated with said relay means for effecting energization of said valve so said titrant flows therethrough when the bistable means is in one of its stable states and for preventing energization thereof when the bistable means is in its other stable state, said condenser being charged while the bistable means is in said one state and being discharged while the bistable means is in said other state, said bistable means being changed from said one state to the other when the combination of the condenser charge and said potential difference changes to a first predetermined voltage level and being changed from the other state to said one state when said combination changes to a second predetermined voltage level, the arrangement being such that said bistable means stays in said one state and titrant flows into said vessel until said potential difference changes to a value which in combination with said condenser charge equals said first predetermined voltage level whereupon the bistable means changes to said other state, titrant flow ceases, and the condenser discharges until said second voltage level is reached at which time the bistable means changes back to said one state and a discrete quantity of titrant flows while the condenser charges and the said potential difference changes to cause said first voltage level to be reached again, the alternation of the bistable means between its two states continuing until said second voltage level can no longer be reached.

2,950,178

APPARATUS FOR AUTOMATIC TITRATION

Georg Halfter, Grenzach, and Gerhard Koehler, Lorch, Germany, assignors to J. R. Geigy A.-G., Basel, Switzerland

Filed Oct. 6, 1958, Ser. No. 765,570
Claims priority, application Switzerland Oct. 9, 1957
9 Claims. (Cl. 23—253)



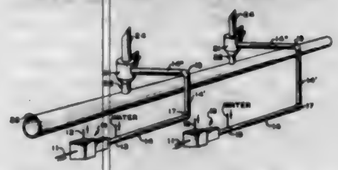
1. A control system for automatic control of chemical reactions utilising the change of potential across electrodes disposed within the reaction system independently of the absolute potential existing across said electrodes, comprising dosing means for delivering a predetermined quantity of reactant to the reaction system, compensating means for balancing the potential change which occurs at the electrodes after delivery of each quantity of reactant to the reaction system, control means responsive to the change in potential at the electrodes for operating said compensating means, control means responsive to the change in potential at the electrodes for operating said dosing means after the operation of said compensating means, and end-point indicating means responsive to the differential coefficient of the potential across the electrodes for stopping further operation of the apparatus when the reaction has been completed.

2,950,179

APPARATUS FOR PRODUCTION OF CARBON BLACK

Ross F. Stroup, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed June 17, 1957, Ser. No. 665,886
4 Claims. (Cl. 23—259.5)



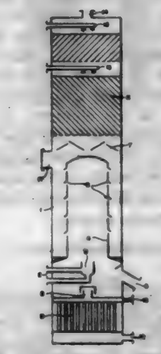
1. Apparatus for the production of carbon black which comprises, in combination: a carbon black producing furnace; a product conduit connected to an outlet from said furnace for conveying gases having carbon black suspended therein from said furnace; a product gathering conduit; a vent conduit; a valve body in communication at one end thereof with said product gathering conduit and in communication at the other end thereof with said vent conduit; a side opening provided in a side wall of said valve body between said valve body ends and in communication with said product conduit; a first valve seat secured to and extending inwardly from the inner wall of said valve body adjacent said one end of said body, and spaced apart from and below said side opening; a second valve seat secured to and extending inwardly from said inner wall of said valve body adjacent said other end of said valve body, and spaced apart from and above said side opening; a valve head disposed within said valve body intermediate said valve seats, said valve head being adapted to seat in either of said valve seats; said first valve seat and said second valve seat each being spaced apart from said opening a distance sufficient to permit said valve head to seat in either of said valve seats and still provide an unobstructed passage from said opening through said chamber; and means for biasing said valve head into seating engagement with one of either of said first valve seat and said second valve seat so as to permit said gases to flow from said product conduit into one of either of said product gathering conduit and said vent conduit.

2,950,180

CHEMICAL REACTOR TOWER

Werner Kunzer, Ludwigshafen (Rhine), and Fritz Leutert, Frankenheim, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Filed Mar. 19, 1958, Ser. No. 722,523
Claims priority, application Germany Mar. 22, 1957
6 Claims. (Cl. 23—283)



1. In an apparatus for the recovery of hydrogen chloride wherein a single absorption tower is provided with an absorption zone intermediate of the tower, means to introduce an aqueous absorption liquid and means to remove effluent fluids located above said absorption zone in said tower, an indirect heat exchanger adjacent the bottom of said tower beneath said absorption zone, and means to withdraw hydrochloric acid from said tower below said heat exchanger, the improvement which comprises: a burner located within said tower between the absorption zone and said heat exchanger for the production of hydrogen chloride; means to introduce reactant gases to said burner; and a burner chamber positioned above said burner but below said absorption zone, said burner chamber having a closed top and side walls spaced inwardly from the inner walls of said tower, the side walls having openings for the passage of hydrogen chloride gas upwardly into said absorption zone.

2,950,181

METHOD OF RETOUCHING ETCHINGS IN INTAGLIO PRINTING FORMS AND PRINTING FORMS TREATED ACCORDING TO THIS METHOD

Lambertus H. Boomen, Haarlem, Netherlands, assignor to N.V. Quod Boaum, Haarlem, Netherlands, a corporation of the Netherlands

No Drawing. Filed Jan. 9, 1956, Ser. No. 557,841
Claims priority, application Netherlands Jan. 14, 1955
16 Claims. (Cl. 41—43)

1. A method of retouching an etching in a metal intaglio printing form which has a screen bridge portion

and an etching cell portion, comprising the steps of coating one of said portions in the area to be retouched with a non-metallic etching agent resisting material, depositing at least one auxiliary metal layer on the other of said portions, removing said etching agent resisting material and etching said area with an etching agent capable of dissolving the metal of the printing form and incapable of dissolving the auxiliary metal.

2,950,182

METHOD OF TREATING TOMATO PLANTS EMPLOYING A MIXTURE OF BETA-NAPHTHOXYACETIC ACID AND BORON

Emery M. Emmert, Lexington, Ky., assignor, by mesne assignments, to The Kentucky Research Foundation, Lexington, Ky., a corporation of Kentucky

No Drawing. Filed Mar. 25, 1958, Ser. No. 723,660
3 Claims. (Cl. 71—2.1)

1. The method of treating tomato plants to produce an increased yield of early fruit therefrom, including, initially spraying the plants when the yellow color appears in a plurality of the first blooms thereof, and subsequently spraying the same plants after approximately the same number of additional new blooms have appeared thereon, each of said sprayings including the application of sufficient solution to the plant to insure at least a substantial dampening of the plant, the spraying in each case comprising a direct application to the plant of a water solution having a mixture of boron, plant hormone consisting of beta naphthoxyacetic acid and water, said boron having a concentration, as the element, of between 25 and 200 parts per million by weight of the solution and said plant hormone having a concentration of between 5.0 and 50 parts per million by weight of the solution, the weight of the boron present as the element being at least twice the weight of the hormone present.

2,950,183

NUTRIENT SPRAY COMPOSITION FOR PLANTS

Alexander A. Nikitin, College Park, Charles C. Fite, Jr., East Point, and Janet Segers Gary, Union City, Ga., assignors to Tennessee Corporation, New York, N.Y., a corporation of New York

No Drawing. Filed Mar. 24, 1958, Ser. No. 723,116
12 Claims. (Cl. 71—11)

1. A nutrient spray for application to growing plants comprising an aqueous solution of ammonium phosphate and oxalic acid in the proportions of from 8 to 28 parts by weight of oxalic acid to 100 parts by weight of diammonium phosphate and said solution having a pH in the range of 6.1 to 7.0, said solution also containing as trace metal supplements soluble metal salts selected from the group consisting of ferrous, manganous, cuprous and zinc sulfates, chlorides and nitrates and mixtures thereof, the total amount of said supplements not substantially exceeding the proportion of 50 gm. of supplements to 200 gm. of diammonium phosphate and said solution containing a minimum of 0.1 gm. per liter of available trace metal for each trace metal salt contained therein.

2,950,184

PROCESS FOR PREPARING POWDERED SILVER-SOLDER COMPOSITIONS

Paul D. Johnson, Gary, Ind., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Filed June 6, 1957, Ser. No. 663,884
5 Claims. (Cl. 75—.5)

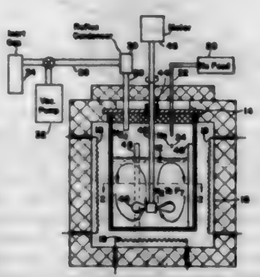
1. The method of preparing powdered silver-solder compositions composed by weight of 35–75% silver, 15–34% copper, 3–28% zinc and as optional components 16–24% cadmium and 2–3% nickel, which powdered compositions are particularly adapted for use in preparing silver-solder soldering pastes, said method comprising the steps of: preparing a first base powder composed of about 85% zinc, balance copper by agitating a mixture of the needed copper in powder form, with the needed zinc in any form while heating the mixture in a protective atmosphere to melt the zinc, followed by continuously agitating the resulting mass of copper and molten zinc in said protective atmosphere while cooling it at least to a temperature at which it will thereafter retain the granular state imparted to it by said continuous agitation, and then grinding said granular material to a powdery condition; separately preparing a second base powder composed of about 85% cadmium, balance copper by agitating a mixture of the needed copper in powdered form with the needed cadmium in any form while heating the mixture in a protective atmosphere to melt the cadmium, followed by continuously agitating the resulting mass of copper and molten cadmium in said protective atmosphere while cooling it at least to a temperature at which it will thereafter retain the granular state imparted to it by said continuous agitation, and then grinding said granular material to a powdery condition; separately preparing a third base powder composed of about 27% copper, 29% zinc, balance cadmium, by agitating a mixture of the needed copper in powdered form with the needed cadmium and zinc in any form while heating the mixture in a protective atmosphere to melt the cadmium and zinc, followed by continuously agitating the resulting mass of copper and molten cadmium and zinc in said protective atmosphere while cooling it at least to a temperature at which it will thereafter retain the granular state imparted to it by said continuous agitation, and then grinding said granular material to a powdery condition; mixing at least portions of one of said base powders with other metal powders selected from the group consisting of the others of said base powders, silver powder, nickel powder, copper powder, 50% copper/50% zinc brass powder and mixtures thereof in such proportions as are needed to give a powdery mixture having a chemical analysis within the limits set forth hereinabove.

2,950,185

PRODUCTION OF TANTALUM POWDER

Edward G. Hellier, Hingham, and George L. Martin, Wayland, Mass., assignors to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts

Filed June 13, 1958, Ser. No. 741,865
5 Claims. (Cl. 75—.5)



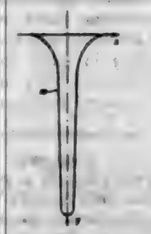
1. In the process of producing tantalum powder wherein potassium fluotantalate is reduced to tantalum metal by means of sodium the improvement which comprises confining a bath of molten potassium fluotantalate in a reactor at a temperature above 800° C., feeding molten sodium to the surface of the bath at a rate in excess of one pound per hour per square foot of bath surface and agitating said bath sufficiently strongly to provide for rapid upward flow of the fused bath at one portion of said bath and rapid downward flow at another portion of said bath so as to prevent any substantial stratification between the byproduct and the potassium fluotantalate.

2,950,186

METHOD FOR TOP BLOWING PULVERULENT BURNT LIME AND OXYGEN INTO CAST IRON FOR REFINING SAME

Marc Allard, Bernard Trentini, and Lucien Wahl, St. Germain en Laye, France, assignors to Institut de Recherches de la Sidérurgie, Saint Germain en Laye, France, a professional institution of France

Filed Feb. 27, 1958, Ser. No. 717,932
Claims priority, application France Mar. 2, 1957
4 Claims. (Cl. 75—52)



1. In a method for making low phosphorus, low nitrogen steel from pig irons of widely varying phosphorus content, the step of blowing through a lance having an outelt opening of predetermined cross-sectional area, a jet stream of substantially pure oxygen having suspended therein pulverulent burnt lime against the top surface of a molten bath of said pig iron in downward direction with such a force and in such a manner that said jet stream of oxygen with said pulverulent lime suspended therein penetrates downwardly throughout the depth of the bath into a region near the bottom thereof with the cross-sectional area of said penetrating jet stream remaining substantially equal to the cross-sectional area of the outlet opening of the lance, whereby, due to the substantially complete penetration of the bath depth by the oxygen having the pulverulent lime suspended therein, the reaction thereof with the pig iron bath will occur in that region of said bath where it is most efficient while, simultaneously, due to the substantially constant diameter of the jet during penetration of the bath, there will be avoided within the bath any substantial turbulence thereof which might adversely affect the reaction between the pig iron and the oxygen having pulverulent lime suspended therein.

2,950,187

IRON-CALCIUM BASE ALLOY

Tobei Ototani, Tokyo, Japan, assignor to The Research Institute for Iron, Steel and Other Metals of The Tohoku University, Sendai City, Japan

No Drawing. Filed Sept. 5, 1958, Ser. No. 759,126
2 Claims. (Cl. 75—122)

1. An iron-calcium base alloy to be added to a melt of iron and steel for improving the physical and chemical properties of iron and steel, which consists of 20 to 40% of calcium, 10 to 50% of manganese, 5 to 40% of silicon and a balance essentially of iron.

2. An iron-calcium base alloy, which consists of 15 to 30% of Ca, 10 to 50% of Mn, 5 to 20% of Al, less than 20% of Si and a balance essentially of Fe.

2,950,188

METHOD OF SUPPRESSING UAl_4 FORMATION IN U-Al ALLOYS

Marion L. Picklesimer, Knoxville, and William C. Thurber, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Sept. 10, 1957, Ser. No. 683,192
5 Claims. (Cl. 75—122.7)



1. A method for suppressing the formation of UAl_4 in U-Al alloys, which comprises incorporating in said alloy an element of group 4 of the periodic table, said element being selected from the group consisting of Si, Ti, Ge, Zr, and Sn.

2,950,189

HIGH TITANIUM CONTENT BRAZING COMPOSITIONS

Robert G. Ames, Cresskill, N.J., assignor to The B.G. Corporation, Ridgefield, N.J., a corporation of New York

Filed Jan. 3, 1958, Ser. No. 707,012
8 Claims. (Cl. 75—134)

1. An alloy consisting essentially of copper, silver, indium, nickel and titanium, said ingredients being present in an amount totalling 100% and in the following ranges: about 30 to 60% copper, about 5 to 35% silver, about 5 to 25% indium, about 1.5 to 12% nickel and about 15.5 to 30% titanium.

2. An alloy consisting essentially of copper, silver, indium, nickel and titanium, said ingredients being present in an amount totalling 100% and in the following ranges: about 35 to 55% copper, about 10 to 20% silver, about 6 to 24% indium, about 1.5 to 4% nickel and about 18 to 22% titanium.

3. An alloy consisting essentially of copper, silver, indium, nickel and titanium, said ingredients being present in an amount totalling 100% and in the following amounts: about 19.5% titanium, about 3.2% nickel, and the remaining 77.3% being composed of about 2–45% silver, 7–30% indium and about 40–75% copper.

2,950,190

PYROPHORIC ALLOYS WITH REDUCED IRON CONTENT

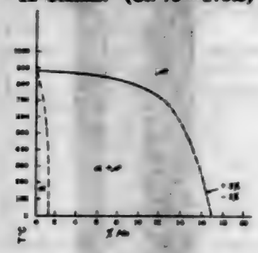
Walter Baugardt, Essen-Bredeney, Germany, assignor to Th. Goldschmidt A.G., Essen, Germany

No Drawing. Filed Dec. 12, 1956, Ser. No. 627,740
5 Claims. (Cl. 75—152)

1. A pyrophoric alloy for use in flint rod extrusion comprising about 10 to 12.8% by weight of iron, about 3.1 to 2.1% by weight of magnesium, about 0.8 to 1.2%

by weight of zinc, between 0.1 to 0.4% by weight of silicon and between 1 to 3% by weight of antimony, the remainder being mischmetal.

2,950,191
TITANIUM BASE ALLOYS
Milton B. Vordahl, Long Hill, Conn., assignor, by mesne assignments, to Crucible Steel Company of America, Borough of Flemington, N.J., a corporation of New Jersey
Filed May 31, 1951, Ser. No. 229,143
12 Claims. (Cl. 75—175.5)



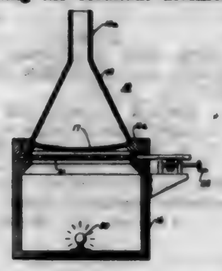
1. An improved titanium base alloy which contains about 1 to 4% iron, up to about .30% maximum of each of the gases oxygen and nitrogen, and at least two metals within the ranges specified from the group consisting of: chromium about .5 to 6%, manganese about .5 to 6%, and molybdenum about .5 to 5%; the iron-plus-alloying metal content being less than 10% but not less than about 5%; the alloy being characterized by its good ductility and impact strength with relatively high tensile strength.

2,950,192
PRODUCTION OF WROUGHT TITANIUM BASE ALLOYS AND RESULTING PRODUCT
Milton B. Vordahl, Beaver, Pa., assignor, by mesne assignments, to Crucible Steel Company of America, Borough of Flemington, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 21, 1954, Ser. No. 424,569
10 Claims. (Cl. 75—175.5)

1. An alloy consisting essentially of from 1.0% to 5.0% manganese, from 1.0% to 2.0% iron, with the minimum iron plus manganese content being about 2.5 atomic percent, and the balance titanium, characterized by a tensile strength of at least about 25% in excess of the tensile strength of unalloyed titanium, measured in the as-hot-rolled (at about 1200° F.) condition.

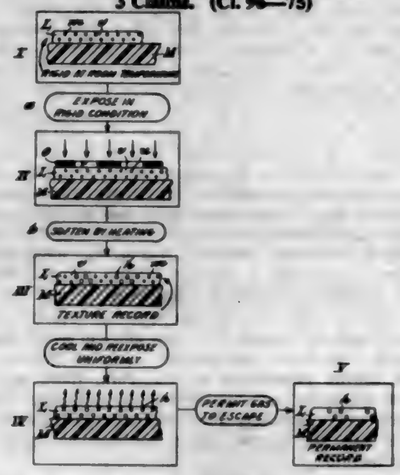
2,950,193
METHOD OF MANUFACTURING ELECTRICAL APPARATUS
Paul D. Payne, Jr., Lansdale, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 25, 1953, Ser. No. 376,345
12 Claims. (Cl. 96—34)

1. The method of forming a cathode ray tube screen structure on a glass substrate which is suitable for incorporation in a cathode ray tube as the screen supporting portion thereof, said method comprising the steps of: depositing on all areas of said substrate a substantially transparent layer of unexposed photosensitive material having substantially different solubility in a predetermined solvent before and after exposure, exposing throughout the entire depth of said layer those portions of said layer deposited on selected areas of said substrate thereby to modify the solubility in said solvent of all of the photosensitive material occupying said last-mentioned selected areas, depositing directly on exposed and unexposed portions of said layer solid particles of a substance which is substantially unaffected by temperatures at which said photosensitive material vaporizes and which is responsive to electron beam impingement to emit radiant energy, said layer being retentive of said substance at least in its condition of lesser solubility, and subsequently washing the resultant assembly with said



solvent so as to remove selectively substantially all of said material constituting those portions of said layer having the greater solubility and said substance deposited thereon while leaving in place those portions of said layer having the lesser solubility and said substance deposited on said last-named portions.

2,950,194
MATERIAL FOR USE IN A PHOTOGRAPHIC REPRODUCTION SYSTEM
Robert E. Glavin, Dorchester, Mass., assignor, by mesne assignments, to Kalvar Corporation, New Orleans, La., a corporation of Louisiana
Filed Nov. 8, 1954, Ser. No. 467,359
3 Claims. (Cl. 96—75)



1. A material capable of furnishing a record solely in the form of a distribution pattern of radiation scattering discontinuities formed within an otherwise substantially homogeneous vehicle, said material comprising a supporting film of polyethylene terephthalate having a surface coating of dry, water-resistant, non-hygroscopic thermoplastic vinylidene chloride polymer, said polymer having a light-decomposable, solid diazonium compound substantially uniformly dispersed therein as the sole image producing agent, said decomposable agent itself being non-reactive to said polymer and upon exposure to light decomposing into products which are also chemically non-reactive to said polymer and which upon warming are volatile to form said radiation scattering discontinuities only in the light struck areas in said polymer to thereby furnish said record, said material being prepared by the steps of: preparing a uniform mixture of

said polymer and diazonium compound in non-aqueous organic solvent, coating said mixture directly upon said supporting film and then drying the thus coated film to obtain said material.

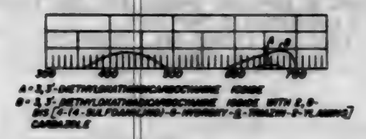
2,950,195
REMOVAL OF METAL IONS FROM GUM ARABIC
George R. Hodgins, Seaford, Erwin Di Cyan, Brooklyn, and Robert Timmerman, Amityville, N.Y., assignors to Litho Chemical and Supply Co. Inc., Lynbrook, N.Y., a corporation of New York
No Drawing. Filed Dec. 5, 1956, Ser. No. 626,295
5 Claims. (Cl. 96—93)

1. The method of preparing a precipitate-free aqueous gum arabic solution, containing approximately 73% water and 21% gum arabic and having not more than 70 parts per million of Ca^{++} ions per milliliter from gum arabic containing about 0.7% calcium and about 0.6% magnesium which consists in adding to an initial gum arabic solution of the approximate composition:

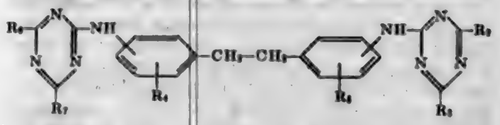
	Percent
Water	71.5
Gum arabic	28.3
Phenol (88%)	0.2

an amount of $(NH_4)_2HPO_4$ which is the stoichiometric equivalent of the calcium and magnesium ion contents of said solution, adding ammonium hydroxide to raise the pH of the solution to at least 8.5 and in the range of 8.5 to about 10, and allowing the whole to stand until no further calcium and magnesium phosphates precipitate.

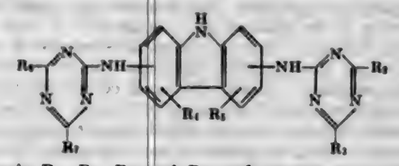
2,950,196
SUPERSENSITIZATION OF PHOTOGRAPHIC EMULSIONS USING TRIAZINES
Burt H. Carroll, Jean E. Jones, and John Spence, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Filed Oct. 12, 1955, Ser. No. 540,054
20 Claims. (Cl. 96—100)



20. A photographic silver halide emulsion capable of producing a dye image, comprising a photographic silver halide emulsion containing (1) a dispersion of a color-forming compound selected from the class consisting of a phenol compound and a pyrazolone compound, capable of reacting with the oxidation products of a primary aromatic amine developing agent to form a cyan dye image and a magenta dye image, respectively, and (2) a s-triazine compound selected from the class consisting of those represented by the following two general formulas:



and



wherein R_3, R_3, R_6 and R_7 each represents a member selected from the group consisting of a hydrogen atom, a hydroxyl group, an aryloxyl group, an alkoxyl group, a halogen atom, a heterocyclic radical, an alkylthio group, an arylthio group, and an amino group, and R_4 and R_5 each represents a member selected from the group consisting of a hydrogen atom and a sulfo group, said s-triazine compound being incapable of reacting with the oxidation products of a primary aromatic amine developing agent to form a dye image.

2,950,197
HARDENING OF GELATIN
Charles F. H. Allen, Rochester, N.Y., and Eleanor R. Webster, Wellesley, Mass., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed July 25, 1956, Ser. No. 599,891
10 Claims. (Cl. 96—111)

1. A process for preparing photographic products which comprises incorporating in a gelatin-silver halide photographic emulsion from 0.1 to about 1.265%, based on the weight of the gelatin, of a compound containing at least two aziridine groups, the ring nitrogens of which are linked directly to carbonyl and coating the photographic emulsion in the form of a layer upon a support therefor.

2. A gelatin-silver halide photographic emulsion containing 0.1 to about 1.265%, based on the weight of the gelatin, of a compound containing at least two aziridine groups, the ring nitrogens of which are linked directly to carbonyl.

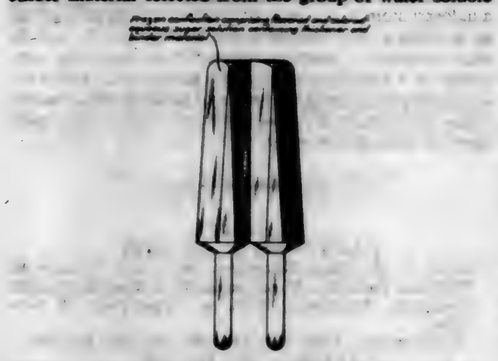
2,950,198
PRODUCTION OF COTTONSEED MEAL OF IMPROVED QUALITY
William H. King and Vernon L. Frampton, Metairie, La., assignors to the United States of America as represented by the Secretary of Agriculture
Filed Sept. 29, 1959, Ser. No. 843,312
1 Claim. (Cl. 99—2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A process comprising adjusting the moisture content of raw decorticated cottonseed meats containing oil and undesirable pigments to from about 10 to about 15% at ambient temperature, flaking the moisture-adjusted meats to a thickness of from about 0.003 inch to about 0.010 inch, adjusting the moisture content of the flaked meats to from about 7 to about 15% at a temperature not to exceed about 130° F., extracting the oil and undesirable pigments from the so-adjusted flaked meats at ambient temperature with a homogeneous, constant boiling solvent mixture consisting of 53 parts by volume of acetone, 44 parts by volume of hexane, and 3 parts by volume of water, and desolventizing the extracted flaked meats at a temperature not to exceed about 150° F.

2,950,199
FROZEN CONFECTION AND METHOD OF MAKING THE SAME
Francis E. Windover, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed Mar. 30, 1956, Ser. No. 575,150
9 Claims. (Cl. 99—136)

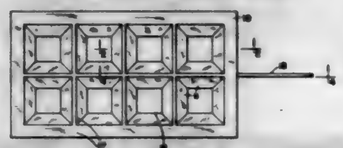
1. Method for the preparation of frozen confections of the type that is manufactured by freezing, in a mold form, a composition consisting essentially of a colored and flavored aqueous sugar solution in order to obtain an article having a minimized propensity for dripping which comprises incorporating in said composition prior

to its freezing a minor proportion of a thickener and binder material selected from the group of water soluble



cellulose ethers consisting of methyl cellulose and hydroxypropyl methyl cellulose.

2,950,200
CONFECTION AND METHOD OF MAKING THE SAME
Eynon Jones, 2148 NE. 20th Ave., Portland, Oreg., and Oliver H. Tracy, Stumphere Road, Oswego, Oreg.
Filed July 7, 1958, Ser. No. 746,986
17 Claims. (Cl. 99—137)



1. A confection comprising a base member having a plurality of holes therein, said holes being tapered from both sides of the base member to a minimum size in the mid-section of the holes, and separate hourglass-shaped plugs of filling material in said holes interlocked with said base member.

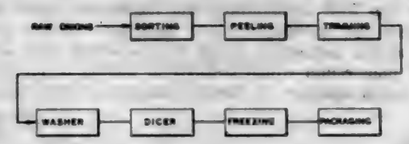
2,950,201
METHOD OF PRESERVING ROYAL JELLY
Marino Golinelli, Via Petrarca 11, Bologna, Italy
No Drawing. Filed Mar. 2, 1959, Ser. No. 796,253
Claims priority, application Italy Oct. 28, 1955
3 Claims. (Cl. 99—150)

1. A method of preserving of royal jelly comprising the steps of subjecting said jelly to a micro-suspension in distilled water, and buffering the resulting product with a mixture of citric acid, sodium citrate and a mixture of Sorensen and Clark, and having a pH of about 5.7 to 5.9, adding of lactalbumin and gliadin to said suspension to stabilize the proteins in order to prevent the denaturization of the proteinic component, said suspension being subjected to continuous centrifugation at a centrifugal force of 1000 g. in order to filter said suspension, said product being subjected to slow congealing at a temperature of −10° C. and subjecting said congealed product to evaporation under a vacuum less than about 50 micron Hg.

2,950,202
MEAT SPOILAGE INDICATOR
Maxwell C. Brockmann, Indianapolis, Ind., assignor to Hygrade Food Products Corporation, Detroit, Mich., a corporation of New York
No Drawing. Filed July 29, 1958, Ser. No. 751,628
7 Claims. (Cl. 99—192)

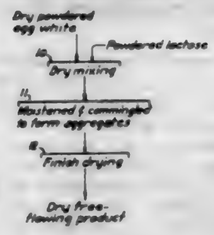
1. A temperature indicator comprising a package containing two separate compartments, one compartment containing a lyophilized microorganism capable of accelerated growth with increasing temperature, a dried nutrient for the microorganism and an indicator for showing that the growth of microorganism is greater than a desired limit, the second compartment containing water and the two compartments being separated by a membrane which is capable of being broken manually.

2,950,203
PROCESS OF QUICK-FREEZING RAW ONIONS
Reia J. Green, 622 Woodham Road, and William A. Rice, 2357 Osborne Ave., both of Santa Clara, Calif.
Filed Mar. 26, 1957, Ser. No. 648,591
1 Claim. (Cl. 99—193)



The process of quick-freezing raw onions which comprises sorting the onions, peeling and trimming the onions to remove unedible and undesirable portions thereof, washing the peeled and trimmed onions, cutting the onions into pieces, carrying the onion pieces while unconfined through a freezing zone and effecting an individual freezing operation on each onion piece at least as cold as substantially zero degrees F., and then packaging the onion pieces, the entire process being carried out at substantially ambient atmospheric temperatures.

2,950,204
DRIED EGG PRODUCT AND PROCESS OF MANUFACTURE
David D. Peebles, Davis, Calif., assignor, by mesne assignments, to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York
Filed Mar. 5, 1956, Ser. No. 569,361
5 Claims. (Cl. 99—210)



1. In a process for the manufacture of a free-flowing dry egg white product having enhanced wettability, the steps of continuously supplying a dry powdered egg white to a treatment zone, causing the particles of dry powdered egg white to progress through said zone in dispersed condition, continuously supplying moisture to said zone whereby the particles are caused to take up moisture while in dispersed condition and contact together to form moist random aggregates, the temperature within said zone being of the order of about 80 to 100° F. and the amount of moisture added to the particles being such that the resulting moist, porous aggregates contain from 15 to 20% moisture, removing the moist porous aggregates from said zone, and then removing a major portion of such moisture from the same while leaving the aggregates substantially intact to produce a final dry product in the form of porous free flowing aggregates.

2,950,205
MOLD PART COMPOSITION AND PROCESS OF MAKING SAME
James Cardenas, Midlothian, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
No Drawing. Filed May 6, 1958, Ser. No. 733,420
9 Claims. (Cl. 106—38.3)

1. The process of preparing a foundry mold part having improved dimensional stability characteristics consisting of the steps of preparing a first admixture, said first admixture consisting essentially of about 30 percent by weight of a compound selected from the group consisting of anhydrous calcium sulfate and hemihydrate of calcium sulfate with about 70 percent by weight of silica flour and adding water thereto in sufficient amount to provide water of hydration to form substantially the dihydrate of said sulfate, allowing the resulting mass to set until the reaction of hydration is substantially complete, heating the composite thus obtained sufficiently to induce at least a partial interaction between the hydrate of calcium sulfate and silica and pulverizing the product obtained thereby, preparing a second admixture, said second admixture consisting essentially of about 30 percent by weight of a compound selected from the group consisting of anhydrous calcium sulfate and hemihydrate of calcium sulfate with about 70 percent by weight of silica flour and adding thereto an effective amount up to about 6 percent by weight of a dimensional stability improving agent consisting of powdered Portland cement, preparing a blend consisting essentially of substantially equal portions by weight of said first admixture with said second admixture, adding water to said blend in sufficient amount to render the resulting composition fluid for forming said mold part and allowing said composition to solidify in form of said mold part by chemical hydration thereof.

2,950,206
FINISHING MORTARS
Jarl Olle Börje Östergren, Stockholm, Sweden, assignor to Nya Murbruksfabrikens i Stockholm Aktieholag, Stockholm, Sweden
No Drawing. Filed Mar. 14, 1956, Ser. No. 571,365
Claims priority, application Sweden Mar. 19, 1955
3 Claims. (Cl. 106—119)

1. A finishing mortar consisting essentially of a mixture of about 66 to 83% by weight of fine-grained inorganic filler in which the size of the grains is not in excess of one millimeter, finely powdered dry-slaked lime, water soluble ethyl cellulose ether, bentonite as a gel forming agent, and water, the ratio between the amounts of ethyl cellulose ether and dry-slaked lime being between about 1 to 3 and 1 to 10, the dry-slaked lime in the mixture supplying a sufficient amount of calcium carbonate when reacted with carbon dioxide to bind the mortar, and the ethyl cellulose ether acting as a binding agent to prevent shrinkage of the mortar as the water evaporates.

2,950,207
PRODUCTION OF FILAMENTS HAVING IMPROVED WHITENESS
Frederick B. Jones, Arden, N.C., assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
No Drawing. Filed Nov. 7, 1957, Ser. No. 694,904
6 Claims. (Cl. 106—165)

1. A viscose spinning composition containing titanium dioxide in the amount of at least 0.001% by weight based on the cellulose in the viscose, a blue organic pigment in the amount of 1 to 10 p.p.m. based on the cellulose in the viscose, and a violet organic pigment in the amount of 1 to 10 p.p.m. based on the cellulose in the viscose, said organic pigments being compatible with said spinning composition and being present in a synergistic mixture that imparts a whitening effect to filaments which when spun from said composition otherwise would have a slight yellow tinge.

2,950,208
PRODUCTION OF SHAPED OBJECTS FROM VISCOSE
Kurt Heuer, Oberbruch-Grebben, near Aachen, Hugo Elling, Grebben, near Aachen, and Richard Elsner, Randerath, near Aachen, Germany, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
No Drawing. Original application Oct. 17, 1955, Ser. No. 541,095. Divided and this application Oct. 21, 1959, Ser. No. 850,008
Claims priority, application Germany Nov. 25, 1954
4 Claims. (Cl. 106—165)

1. A viscose spinning solution containing 0.06–0.4% by weight based on the viscose of a complex compound having the formula:

$$[Me(X)_6]An$$

wherein Me is selected from the class consisting of Fe, Zn, Cr, Cd and Sn; X is selected from the class consisting of alkyl amine, alkanol amine, and aryl amine; and An is selected from the class consisting of Cl, SO_4 and NO_3.

2,950,209
THERMOFLUID VEHICLES
Lewis C. Hoffman, Scotch Plains, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Apr. 2, 1958, Ser. No. 725,783
2 Claims. (Cl. 106—230)

1. A thermofluid vehicle for vitreous enamel colors, self-smoothing and non-running at enamel fusing temperatures consisting essentially of (*a*) 20 to 50% by weight of a substance taken from the group consisting of polyethylene glycol having an average molecular weight of about 6,000 to 7,500, polyethylene glycol having an average molecular weight of about 3,000 to 7,000, and polyethylene glycol having an average molecular weight of about 1,300 to 1,600 in combination with polyethylene glycol having an average molecular weight of about 15,000 to 20,000, (*b*) 45% to 75% by weight of a saturated monohydroxy alcohol having 12 to 18 carbon atoms and (*c*) 1% to 10% of a sulfur-containing anionic surface active agent taken from the group consisting of sodium-N-hexadecanoyl-N-cyclohexyl taurate, n-octadecyl tetrasodium 1,2 - dicarboxyethyl sulfosuccinamate, sodium alkyl naphthalene sulfonate, octyl alcohol, sodium sulfate, sodium petroleum sulfonate (molecular weight 500), butyl naphthalene sodium sulfonate, sodium heptadecyl sulfate, sodium 2-ethyl hexyl sulfate, ammonium sulfate of cetylstearyl alcohol.

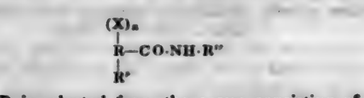
2,950,210
COATING COMPOSITION
Harold D. Schrier, 3405 Winchell Ave., Kalamazoo, Mich.
No Drawing. Filed Dec. 8, 1958, Ser. No. 778,570
2 Claims. (Cl. 106—230)

1. A coating composition for sheets or webs, consisting essentially of an ester selected from the group consisting of hydrogenated and polymerized rosin esters which are nonoxidizing and which have a softening point similar to the melting point of waxes, high molecular weight aliphatic amides having alkyl chain lengths of 8 to 18 carbon atoms, the ratio of the weight of said ester to the weight of said amides being between about 5.5:1 and about 12:1, the total weight of said ester and said amides combined being at least about 5 percent by weight of the composition, the remainder of said composition

consisting essentially of a material selected from the group consisting of waxes and polyethylene having a relatively low melting point and mixtures thereof.

2,950,211
HETEROCYCLIC ASPHALT ADDITIVES
Clarence F. Huber, Mount Healthy, and Paul F. Thompson, Deer Park, Ohio, assignors to The Cincinnati Milling Machine Company, Cincinnati, Ohio, a corporation of Ohio
No Drawing. Filed Mar. 6, 1957, Ser. No. 644,212
8 Claims. (Cl. 106—273)

1. A bituminous bonding composition essentially composed of a bituminous material and a small amount of thermally stable bond-improving agent having the general formula:



wherein R is selected from the group consisting of saturated and unsaturated aliphatic straight-chain hydrocarbon groups having 1 to 20 carbon atoms; R′ is selected from the group consisting of alkylamino, dialkylamino, alkylaminoalkyleneamino, dialkylaminoalkyleneamino, 2 alkyl-1,2-imidazolinyl, 2 alkenyl-1,2-imidazolinyl, N-1(2-alkyl-2-imidazolinyl) alkyleneamino, and N-1(2-alkenyl-2-imidazolinyl) alkyleneamino radicals; R″ is selected from the group consisting of 2-alkyl-2-imidazolinyl-alkylene, 2-alkenyl-2-imidazolinyl - alkylene, alkylaminoalkylene, and dialkylaminoalkylene radicals; X is chlorine, and *n* is selected from zero and small positive integers.

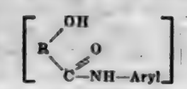
2,950,212
PROCESS FOR MANUFACTURING BINDING AGENTS
Paul Christiaan van der Willigen, Eindhoven, Netherlands, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
No Drawing. Filed Apr. 8, 1957, Ser. No. 651,170
Claims priority, application Netherlands, Apr. 11, 1956
4 Claims. (Cl. 106—286)

1. A process for the manufacture of a binder particularly suitable for binding powdered inorganic material, said binder consisting essentially of a gel of an alkaline earth fluoride comprising the steps, forming an aqueous dispersion of an alkaline earth fluoride and adding about 10% to 30% by weight of said dispersed alkaline earth fluoride of an alkaline earth permanganate to said dispersion.

2,950,213
HECTOGRAPH CARBON PAPER
Clemens Streck, Londonville, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Aug. 31, 1956, Ser. No. 607,281
3 Claims. (Cl. 117—36)

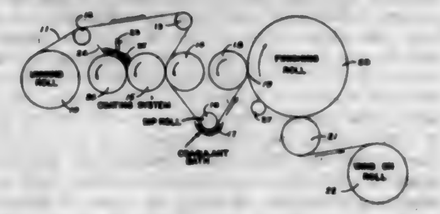


1. A hectograph product comprising a base sheet having thereon a hectograph oil-wax composition, in which there is intimately dispersed a mixture of an amine stabilized diazo amino component, and a complex of a naphthol AS type coupler, of the formula



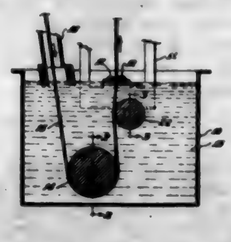
wherein R represents an aryl radical in which the hydroxyl and amido substituents shown are in ortho position to each other, with a liquid strongly basic amine.

2,950,214
CAST COATED PAPER AND METHOD OF MAKING THE SAME
John W. Smith, Chillicothe, Ohio, assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Filed Mar. 25, 1957, Ser. No. 648,227
15 Claims. (Cl. 117—64)



1. In the coating of paper to provide a cast-surfaced mineral coated paper having unusually high brightness and opacity and high gloss with enhanced affinity for receiving printing and the like, the process which comprises the steps of applying and distributing a predetermined and metered quantity of fluent mineral coating consisting essentially of an aqueous suspension of pigment and adhesive material to form a substantially smooth surface coating on the paper, bringing the coated surface of said paper into contact with an adhesive coagulating electrolyte while said coating is still fluent on said paper to progressively convert said adhesive into a substantially tough deformable gel while maintaining a substantially uniform and smooth surfaced layer of coating, bringing said coated surface of said paper into contact with a substantially smooth casting surface after said adhesive has been converted to said tough deformable gel, and drying said coating while said coating is in contact with said substantially smooth casting surface, and removing said coated paper from said casting surface.

2,950,215
METHOD AND APPARATUS FOR IMPROVING METALLIC COATINGS
Joseph C. Slater, Butler County, and Edward W. Platt, Butler, Pa., assignors to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Filed July 7, 1958, Ser. No. 746,772
13 Claims. (Cl. 117—114)



11. In the coating of metallic strip with a layer of another metal by passing said strip through a bath of molten coating metal having a pot roll in the bath, the method of improving the quality of said coating which includes the steps of holding said pot roll against rotation to cause the side of the strip contacting the pot roll to be wiped, and wiping the other side of the strip by causing it to pass in frictional contact with a second wiping surface located under the surface of said bath.

2,950,216
PROCESS FOR DRESSING LEATHER
Günter Kolb, Köln-Stammheim, and Kurt Eitel, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed June 1, 1955, Ser. No. 512,558
Claims priority, application Germany June 5, 1954
8 Claims. (Cl. 117—142)

1. A process of dressing leather which comprises treating the leather with an aqueous emulsion of a copolymer of at least 45% by weight of a conjugated butadiene and at least 10% by weight of 1,1-dichloroethene.

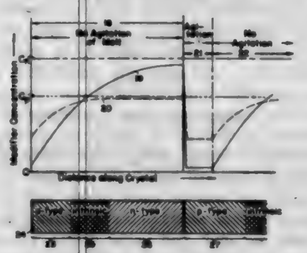
2,950,217
IMPREGNATION PROCESS
Ellis Irving Lichtblau, Kenmore, N.Y., assignor to E.I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 13, 1956, Ser. No. 621,536
5 Claims. (Cl. 117—144)

1. A process for storing a pigmented regenerated cellulose pellicular article in the gel state which comprises first treating said article with a solution containing from 0.2% to 0.5% of a quaternary ammonium halide at a pH between 7 and 8 for a time sufficient to impregnate said article with at least 0.2%, based on the dry weight of the article, of said quaternary ammonium halide; and, thereafter, maintaining said article in contact with a quaternary ammonium halide for an extended period of time.

2,950,218
PACKAGING FILM AND PROCESS FOR PREPARATION THEREOF
Edward Royals Covington and John Warren Meier, Madison, Tenn., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed July 23, 1957, Ser. No. 673,582
20 Claims. (Cl. 117—145)

1. A packaging material comprising a base sheet having at least one surface coated with a composition comprising essentially a copolymer obtained from 80–96% by weight of vinylidene chloride, 0.5–7% by weight of isopropenyl acetate and 2–19.5% by weight of at least one other polymerizable mono-olefinic monomer copolymerizable with vinylidene chloride selected from the group consisting of alkyl acrylate and acrylonitrile.

2,950,219
METHOD OF MANUFACTURING SEMI-CONDUCTOR CRYSTALS
Robert G. Pohl, Chicago, Ill., assignor to The Rauland Corporation, a corporation of Illinois
Filed Feb. 23, 1955, Ser. No. 489,833
10 Claims. (Cl. 148—1.5)

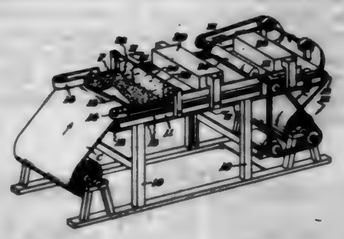


1. In the manufacture of junction-type diodes, transistors, and similar devices, the method of producing a semi-conductor crystal having contiguous zones of n-type and p-type conductivity comprising the following steps: heating a mass comprising a semi-conductor to form a melt; doping said mass with a donor modifier and an acceptor modifier, one of said modifiers having a segregation factor substantially smaller than the segregation factor of the other modifier, the concentration of said one modifier in said melt being substantially greater than the concentration of said other modifier and the ratio of the larger of said segregation factors to the smaller being greater than the inverse ratio of the concentrations; crystallizing a portion of said melt with minimum agitation to form a first semi-conductor crystal zone in which said one modifier is the predominant impurity; and subsequently subjecting the part of said melt immediately adjacent the interface between said crystallized portion and said melt to substantial agitation while continuing crystallization to produce a second semiconductive crystal zone, contiguous with said first zone, in which said other modifier is the predominant impurity.

2,950,220
PREPARATION OF P–N JUNCTIONS BY THE DECOMPOSITION OF COMPOUNDS
Milton Genser and Worth P. Allred, Columbus, Ohio, assignors, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
No Drawing. Filed Mar. 13, 1956, Ser. No. 571,141
4 Claims. (Cl. 148—1.5)

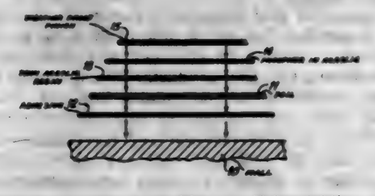
1. A method of preparing a p–n junction in n-type aluminum antimonide, which comprises: decomposing the surface of said aluminum antimonide, and vaporizing a portion of the antimony from the decomposed aluminum antimonide causing the remaining aluminum of said compound to increase the concentration of holes in at least a portion of said surface.

2,950,221
METHOD OF PRODUCING FOAM BACKED CARPET, AND PRODUCT
Jackson Bauer, Croydon, Pa., and Clarence Campbell, Roxboro, N.C., assignors to Collins and Aikman Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 21, 1956, Ser. No. 629,876
4 Claims. (Cl. 154—100)



1. In a method of making foam backed carpet having a substantially uniform thickness, the steps which comprise applying foam to the back of the carpet fabric, distributing said foam along the edges of the carpet fabric and the intervening body portion as well, maintaining said fabric body portion essentially flat and levelling off the surface of the foam above said body portion in a plane parallel to the plane of the carpet, building up the foam along said edges in the form of a wedge having a thickness greater than the thickness of said body portion, gelling the foam edge and body portions in this relation, compressing the gelled wedge-shaped edge portions to about the thickness of said body portion, and curing the product.

2,950,222
PHOSPHOR BEARING SURFACE
Jay B. Hinson, 81 Ridge Road, Hartsdale, N.Y.
Filed May 28, 1958, Ser. No. 736,479
8 Claims. (Cl. 154—128)



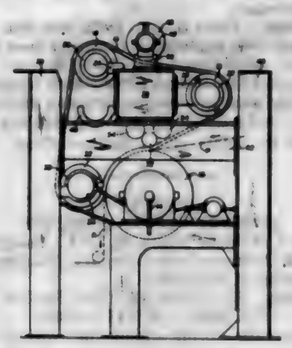
3. The process of making a light-yielding surface which consists in applying an exposed face of a masking sheet carrying a universally adhering adhesive to a supporting structure, removing the cover sheet of the masking sheet to expose the second adhesive carrying side to expose the second adhesive face, and applying to said second adhesive face a sheet of aluminum foil carrying a foundation coat of soft acrylic resin, an acrylic resin-bound light-giving pigment layer, and a transparent finishing coat.

2,950,223
CELLULOSIC PRODUCT
John C. Bletzinger and Lawrence H. Allan, Neenah, Wis., assignors to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Filed Aug. 6, 1956, Ser. No. 602,202
10 Claims. (Cl. 162—114)

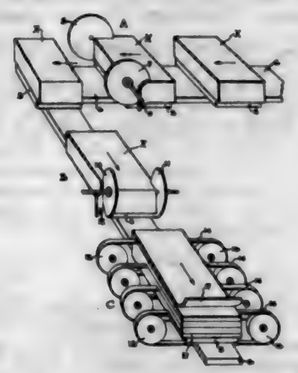
10. A highly absorbent stretchable fibrous web having a normally planiform portion and a plurality of closely spaced mound-like portions disposed in patterned configuration and extending outwardly from at least one surface of the planiform portion of the web, said web being of a generally uniform unit density throughout the planiform portion thereof and of lower unit density throughout the mound-like portions thereof with fewer and weaker fiber-to-fiber bonds in the latter portions than in the planiform portion.

2,950,224
BLANKET APPLYING AND REPLACING MEANS AND METHOD
Harold O. Balough, Short Hills, N.J., assignor, by mesne assignments, to Clupak, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 12, 1958, Ser. No. 780,884
12 Claims. (Cl. 162—199)

1. The method of introducing a broad, massive, endless blanket into a machine in which the blanket is destined normally to be trained upon a plurality of rollers including at least a carrier roller and a stretch roller, and to be located behind a portion of the permanent frame of the machine: which method comprises, relocating the stretch roller to a position which reduces the compass of the rollers, raising the rollers together to carry the rollers in unison clear of the permanent frame structure, supporting the rollers with a clear overhang from behind the blanket path through the front of the machine, providing a temporary support for the blanket of broader span than the rollers, mounting the blanket in freely suspended condition on said temporary support, carrying the suspended blanket into roller encompassing position, and depositing the blanket gently onto the rollers.



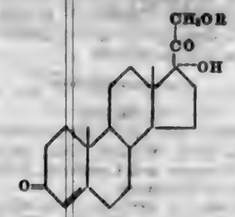
2,950,225
METHOD OF MAKING INSULATION BLOCKS AND SHAPES
Paul L. Losse, Joplin, Mo., assignor to The Eagle-Picher Company, Cincinnati, Ohio, a corporation of Ohio
Filed Jan. 21, 1955, Ser. No. 483,604
2 Claims. (Cl. 162—201)



1. The method of producing insulation slabs comprising steps of mixing a loose fibrous material in a slurry containing heat hardenable binder and an evaporable fluid, the ratio of fibrous material to binder being approximately 10:1, forming the admixture into a mass which is wet with fluid but does not slump, supporting said mass for movement along a substantially horizontal plane, moving said mass in said horizontal plane, sawing said slurry and fibers along a plurality of horizontal planes with a series of band saws to form a plurality of slabs stacked on top of each other, and to trowel the cut surfaces thereof, said band saws having a width, number of teeth per inch and being driven at a lineal speed to produce the cutting and trowelling characteristics of band saws of ⅜ inch width with 5 teeth per inch and driven at a lineal speed of 2800 feet per minute, and subjecting the cut wet mass to heat sufficient to drive off the water and harden the composition.

2,950,226
METHOD OF PRODUCING 11α-HYDROXYSTEROIDS WITH THE GENUS FUSARIUM
Heinz-Jürgen Mannhardt and Harald Metz, Darmstadt, Germany, assignors to E. Merck Aktiengesellschaft, Darmstadt, Germany
No Drawing. Filed Mar. 9, 1959, Ser. No. 797,871
Claims priority, application Germany Mar. 19, 1958
7 Claims. (Cl. 195—51)

1. In a process of producing steroids having an oxygen-containing functional group in the 11-alpha-position, the steps of adding to a culture of at least one fungus of a section of the genus Fusarium selected from the group consisting of the sections *discolor*, *gibbosum*, and *elegans-oxysporum*, a starting steroid selected from the group consisting of compounds of the general formula:



wherein R is selected from the group consisting of a hydrogen atom and acetyl, compounds of the aforesaid general formula which are unsaturated in 1-position, compounds of the aforesaid general formula which are unsaturated in 6-position and compounds of the aforesaid general formula which are unsaturated in 1- and 6-positions; aerobically incubating the resulting mixture in a nutrient medium at 24–32° C. for 7–25 hours to obtain the 11-α-hydroxy derivative of the starting steroid.

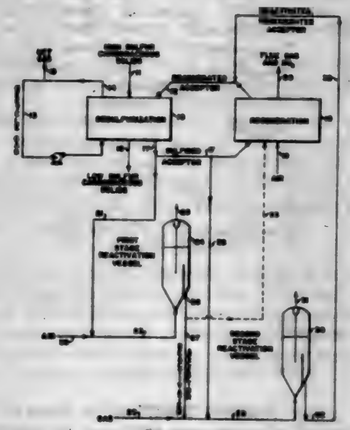
2,950,227
FERMENTS OF THE PAPAIN TYPE AND PROCESS OF MAKING SAME
Heinz Giblan, Berlin-Zehlendorf, and Gerhard Bratfisch, Berlin-Frohnau, Germany, assignors to Schering A.G., Berlin, Germany, a corporation of Germany
Filed June 5, 1959, Ser. No. 818,482
15 Claims. (Cl. 195—66)

1. Process of producing highly purified ferments selected from the group consisting of papain, ficin and bromelin from commercially available crude preparations containing such ferments which comprises extracting said crude preparation with an aqueous inorganic thiocyanate solution at a temperature below about 50° C., separating the resulting extract from undissolved matter, and recovering the purified ferments from said extract.

2,950,228
ENZYMATIC PROCESS
Richard O. Marshall, Muscatine, Iowa, assignor to Corn Products Company, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 1, 1959, Ser. No. 837,348
5 Claims. (Cl. 195—66)

1. Process for converting dextrose to levulose which comprises incubating a liquor containing dextrose at a concentration of at least about 0.2 molar with an enzyme preparation containing xylose isomerase.

2,950,229
METHOD FOR MAINTAINING HIGH LEVEL OF ACTIVITY FOR SUPPORTED MANGANESE OXIDE ACCEPTORS FOR HYDROGEN SULFIDE
James D. Batchelor, Bethel Park, and George P. Curran and Everett Gorin, Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Oct. 28, 1957, Ser. No. 692,897
12 Claims. (Cl. 202—31)

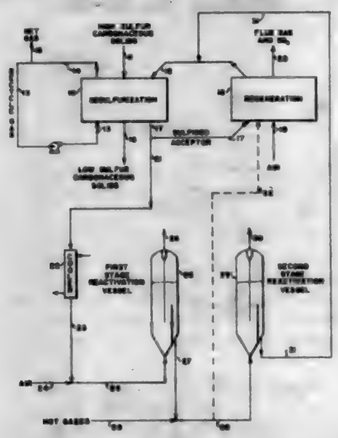


1. In a process employing solid acceptors for hydrogen sulfide comprising manganese oxide impregnated on an inert support for absorbing hydrogen sulfide at temperatures above about 1100° F. to form manganese sulfide, followed by oxidizing the manganese sulfide to manganese oxide by reaction with oxygen at elevated temperatures above about 1300° F., wherein the acceptors suffer a decrease in H_2S-absorbing activity following said oxidizing, the improvement which minimizes loss of the acceptors' activity under H_2S-absorbing conditions, comprising intimately contacting a minor portion of the manganese sulfide-containing sulfided acceptors with excess oxygen at a temperature of 1000 to 1600° F., converting thereby substantially all of the contacted manganese sulfide to higher oxides of manganese and thereafter recovering the thus-treated acceptors containing higher oxides of manganese reducible to manganese oxide having an increased H_2S-absorbing activity.

2,950,230
PROCESS FOR MAINTAINING HIGH LEVEL OF ACTIVITY FOR SUPPORTED MANGANESE OXIDE ACCEPTORS FOR HYDROGEN SULFIDE
James D. Batchelor, Bethel Park, and George P. Curran and Everett Gorin, Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Nov. 8, 1957, Ser. No. 695,467
11 Claims. (Cl. 202—31)

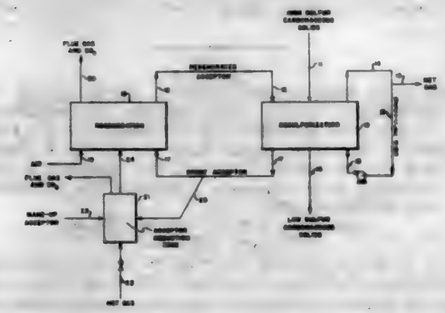
4. In the method of removing sulfur from particulate carbonized carbonaceous solids, which comprises preparing an intimate admixture of said carbonaceous solids and particulate acceptor solids comprising inert carriers having manganese oxide impregnated thereon, subjecting said admixture to treatment at a temperature above 1100° F. in the presence of hydrogen gas until a portion of the initial sulfur has been removed from said carbonaceous solids and transferred to said acceptor solids forming manganese sulfide, separating particulate acceptor solids containing manganese sulfide from low sulfur carbonaceous solids, recovering low sulfur particulate carbonaceous solids as

product, and restoring the H_2S-absorbing property of sulfided acceptor solids for recirculation in the process, the improvement in the last-mentioned step comprising contacting a major portion of said sulfided acceptor solids at a temperature of 1300 to 1600° F. under oxidative conditions to remove sulfide sulfur therefrom and reform manganese oxide thereby, contacting a minor portion of said sulfided acceptor solids at a temperature of 800 to



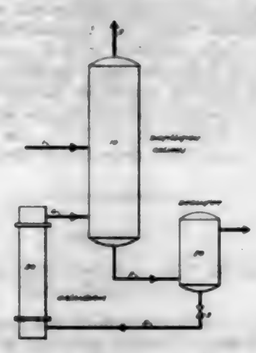
1100° F. under oxidative conditions to convert a substantial portion of manganese sulfide to manganese sulfate, thereafter heating the thus treated minor portion to 1300° to 1600° F. to eliminate substantially all of the sulfur from the manganese ingredients, and recombining the thus-treated minor portion with the treated major portion for repeated admixing and processing with said particulate carbonized carbonaceous solids.

2,950,231
MANGANESE ORE ACCEPTORS FOR HYDROGEN SULFIDE
James D. Batchelor, Bethel Park, and George P. Curran and Everett Gorin, Pittsburgh, Pa., assignors to Consolidation Coal Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Feb. 13, 1958, Ser. No. 715,058
6 Claims. (Cl. 202—31)



3. In a process for removing sulfur from sulfur-containing particulate carbonaceous solids which comprises preparing an intimate admixture of said carbonaceous solids and of particulate solid acceptors consisting essentially of a manganese oxide ore containing less than about 20 percent of alumina, silica, calcium and iron, subjecting said admixture to treatment at a temperature above 1100° F. in the presence of hydrogen gas to remove sulfur from said carbonaceous solids as hydrogen sulfide which is absorbed by said acceptors to form manganese sulfide, followed by oxidizing the manganese sulfide to manganese oxide by reaction with oxygen to provide regenerated acceptors for reuse in the process, wherein the acceptors in admixture with the carbonaceous solids suffer a decrease in strength, the improvement which minimizes loss of the acceptors' strength under process conditions comprising initially preparing an intimate admixture of carbonaceous solids and particulate solid acceptors wherein said manganese oxide ore is a member selected from the class consisting of (1) a naturally occurring crushed, screened fraction of selected particle-size distribution consisting essentially of Ramsdellite and (2) finely divided particles consisting essentially of pyrolusite, said pyrolusite particles being obtained by briqueting the ore to produce briquets of selected particle-size distribution and then calcining the resulting briquets to produce suitable solid acceptors.

2,950,232
RECOVERY OF TETRAHYDROFURAN
William L. Kuechler, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed May 1, 1957, Ser. No. 656,309
2 Claims. (Cl. 202—70)



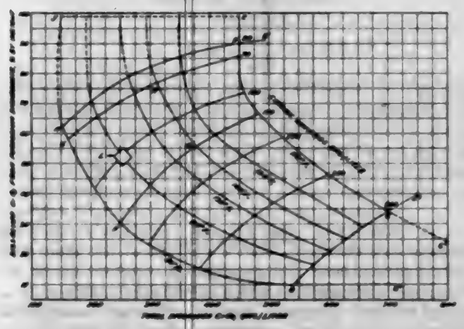
1. In a fractional distillation process for recovering tetrahydrofuran from a liquid two-phase mixture comprising tetrahydrofuran, 1,4-dichlorobutane, tetramethylene chlorhydrin, hydrogen chloride and water, the step of removing said tetrahydrofuran while simultaneously reducing the concentration of tetramethylene chlorhydrin in the said two-phase mixture by feeding the said two-phase mixture directly into a distillation column, withdrawing the bottom product of said distillation column and separating the phases therein, passing a portion of the separated aqueous phase to a vaporizer, returning the vapors of said portion of said aqueous phase to the bottom part of the aforesaid distillation column and continuously removing tetrahydrofuran from the top of said distillation column.

2,950,233
PRODUCTION OF HARD SURFACES ON BASE METALS
Morris A. Steinberg, Shaker Heights, Ohio, and Robert G. McAllen, Princeton, N.J., assignors to Horizons Incorporated, Princeton, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 29, 1954, Ser. No. 426,553
1 Claim. (Cl. 204—37)

A method of providing a coating of titanium carbide several thousandths of an inch in thickness on a steel substrate which comprises: providing a fused salt bath consisting essentially of at least one titanium halide and

at least one diluent halide salt from the group consisting of alkali metal halides and alkaline earth metal halides; providing an anode and at least one steel cathode in electrical contact with said bath, said cathode containing at least about 0.8% by weight of carbon; passing an electrolyzing current through said fused salt bath and between said anode and cathode, for a time sufficient to deposit at least a few thousandths of an inch of titanium on said steel substrate and maintaining the base and coating at a temperature of at least about 840° C. for a time sufficient to form a coating of titanium carbide on said steel base by thermal diffusion of the carbon into the coating.

2,950,234
CHROMIUM PLATING PROCESS AND BATH
Andy Albert Johnson, Oak Park, and George Dubpernell, Huntington Woods, Mich., assignors to Metal & Thermit Corporation, Woodbridge Township, N.J., a corporation of New Jersey
Filed Feb. 24, 1958, Ser. No. 717,666
13 Claims. (Cl. 204—51)



1. An improved method of electrodepositing chromium on a metal article by means of an aqueous CrO_3-containing, catalyst-containing, chromium plating bath, said method being characterized by having a CrO_3/catalyst ratio in said bath which has a substantially reduced tendency to change with changes in CrO_3 and catalyst concentrations and temperatures, which comprises essentially: passing current from an anode to said article as a cathode immersed in said bath at a temperature of 90 to 140° F.; said bath containing a total of dissolved CrO_3 of about 150 to about 380 g./l., strontium sulfate and potassium silicofluoride as catalyst-supplying compounds each in an amount sufficient to saturate said bath with dissolved catalytic sulfate and silicofluoride, respectively, and to provide therein an undissolved residue of each compound, and potassium dichromate as a non-catalytic, silicofluoride-suppressing, CrO_3- and potassium-supplying compound; said potassium dichromate being present in an amount in excess of its solubility in the bath and providing: (1) an undissolved residue thereof in said bath, (2) a portion of said total dissolved CrO_3 equal to about 30 to about 77 by weight of said total, and (3) an amount of dissolved potassium to suppress the concentration of the dissolved silicofluoride; the concentration of said portion of dissolved CrO_3 being self-regulated owing to the presence of said undissolved residue of potassium dichromate, said suppressed silicofluoride concentration being self-regulated owing to the presence of said undissolved residue of potassium silicofluoride, said dissolved potassium concentration being self-regulated by virtue of the presence of said undissolved residues of potassium silicofluoride and potassium dichromate, and said dissolved sulfate concentration being self-regulated owing to the presence of said undissolved residue of strontium sulfate; 70 to 170 g./l. of said total dissolved CrO_3 being supplied as chromic anhydride; the relationship between said temperature, said chromic anhydride, said total and said portion of dissolved CrO_3 being variable in the manner defined by the area EFGHE of the graph shown in the accompanying drawing; and the ratio of total dissolved CrO_3 to the sum of dissolved sulfate plus ½ the dissolved silicofluoride being in the range of 115:1 to 140:1.

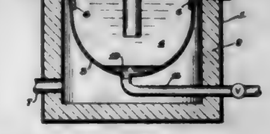
2,950,235
ACID COPPER ELECTROPLATING BATHS
Wennemar Strauss and Wolf-Dieter Wilmund, Duesseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany, a corporation of Germany
No Drawing. Filed Dec. 4, 1958, Ser. No. 778,075
Claims priority, application Germany Dec. 17, 1957
8 Claims. (Cl. 204—52)

1. An acid copper electroplating bath for producing copper electrodeposits of high quality free from anode sludge, comprising an aqueous acid solution of a copper salt and a compound selected from the group consisting of compounds having the following general structural formula:

$$Z_n[R—SO_3H]$$

and water soluble salts thereof, wherein R is a radical selected from the group consisting of lower aliphatic saturated hydrocarbon and aromatic hydrocarbon radicals, Z is an azido group and n is a whole number of at least one, said compound being added in an amount sufficient to prevent sludge formation.

2,950,236
ELECTROLYTIC PRODUCTION OF MAGNESIUM METAL
Lloyd G. Dean and Charles W. McCutchen, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Filed June 24, 1957, Ser. No. 667,585
2 Claims. (Cl. 204—70)



1. The method of producing magnesium metal electrolytically, employing a cathode submerged in the electrolyte, by electrolyzing magnesium chloride in a molten salt bath at a temperature between 660° and 900° C., said bath consisting essentially by weight of between 7 and 25 percent $MgCl_2$, between 5 and 20 percent KCl, between about 67 and 89 percent LiCl, and about 1 percent of a fluoride selected from the class consisting of CaF_2, MgF_2, and LiF, thereby causing magnesium metal to collect at the submerged cathode, and recovering the metal thus produced.

2,950,237
PHOTOXIDATION PROCESSES UTILIZING NOVEL CATALYSTS
Dexter B. Sharp, Vandalia, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Nov. 13, 1957, Ser. No. 696,063
11 Claims. (Cl. 204—158)

1. A process for introducing oxygen into an organic compound which comprises simultaneously subjecting an organic compound capable of adding oxygen under the

influence of light and a photosensitizing catalyst to light irradiation and contact with oxygen and an α,β,γ,δ-tetraarylporphyrin, thereby introducing oxygen into the molecule of the said organic compound without destruction thereof.

2,950,238
SILICON CARBIDE BODIES FOR USE IN NUCLEAR REACTORS

Kenneth C. Nicholson, Niagara Falls, N.Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Filed Sept. 29, 1955, Ser. No. 537,578
7 Claims. (Cl. 204—193.2)

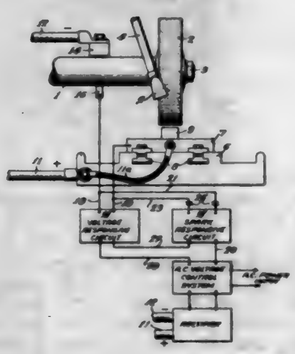
1. A method of making a nuclear fuel element having a density of about 3 grams per cubic centimeter which comprises providing a porous body consisting essentially of silicon carbide and containing a thermal neutron fissionable material, impregnating said body with a sufficient amount of carbon to react with silicon to form enough silicon carbide to substantially fill the pores of the body, heating the carbon-charged body in the presence of silicon to a temperature of 2100–2300° C. to cause the silicon to penetrate the body and react with the carbon in the pores to form silicon carbide, and holding the body at said high temperature a sufficient length of time to convert the silicon carbide formed within the pores of the article to silicon carbide of the hexagonal crystal form.

6. A nuclear fuel element consisting essentially of a dense silicon carbide body containing a minor amount of a thermal neutron fissionable material, said element having been made according to the process of claim 1.

2,950,239
CONTROL SYSTEM FOR ELECTROLYTIC GRINDING

Lynn A. Williams, Winnetka, Ill., assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois

Filed Mar. 2, 1956, Ser. No. 569,107
5 Claims. (Cl. 204—218)

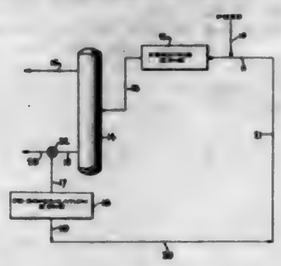


1. In an electrolytic grinding system a grinding machine having a rotating spindle and mounting means for a workpiece, insulating means electrically isolating the spindle from the workpiece, a grinding electrode mounted on the grinding machine spindle, means for supplying electrolyte to a working surface of the grinding electrode so that electrolyte passes between the workpiece and the grinding electrode, an electric supply system for supplying a direct-current potential between the grinding electrode and a workpiece, said electric supply system including control circuit means tending to maintain a constant voltage and control circuit means adapted to reduce the voltage in response to sparking between the grinding electrode and the workpiece, power cable connections from the electric supply system connected respectively to the mounting means for the workpiece and to a power brush system making contact with the spindle, wire connecting means connecting both said control circuit means respectively to the mounting means for the workpiece and to the spindle, said connecting means including an auxiliary brush not carrying power electrically insulated from the power brush means and mounted to run against the spindle of the machine.

2,950,240
SELECTIVE CRACKING OF ALIPHATIC HYDROCARBONS

Paul B. Weisz, Media, Pa., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Oct. 10, 1958, Ser. No. 766,619
6 Claims. (Cl. 208—79)



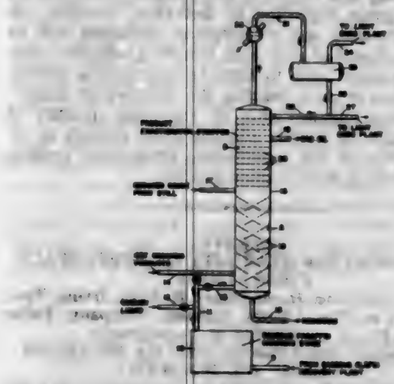
1. A continuous method for selectively cracking aliphatic hydrocarbons from a mixture of the same with cyclic hydrocarbons and obtaining a resultant cyclic hydrocarbon concentrate which comprises conducting a charge initially containing normal aliphatic, iso-aliphatic and cyclic hydrocarbon components in a continuous system to a cracking zone maintained under catalytic cracking conditions and containing a cracking catalyst comprising a crystalline zeolite having a uniform pore structure of sufficient size to afford entry into the catalyst structure of normal aliphatic hydrocarbon components while excluding hydrocarbon components of larger molecular size whereby said normal aliphatic hydrocarbon components are selectively cracked, subjecting the resulting mixture of cracked and uncracked components to de-isomerization in the presence of an isomerization catalyst and under catalytic isomerization conditions whereby iso-aliphatic components are converted to normal aliphatic hydrocarbons, recycling the resulting product to said cracking zone, repeating the aforesaid treatment on a continuous cyclic basis to yield a concentrate of cyclic hydrocarbons and removing said concentrate from said continuous system.

2,950,241
COMBINATION CRUDE DISTILLATION AND OLEFIN PRODUCTION PROCESS

William S. Craft, William M. Smith, and Carter E. Porter, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed Dec. 9, 1957, Ser. No. 701,489
4 Claims. (Cl. 208—78)

1. In a combination distillation and catalytic hydrocarbon conversion process the improvement which comprises passing a reduced crude oil containing a substantial quantity of hydrocarbon components boiling in the gas oil boiling range into an intermediate part of a product fractionation zone operated at elevated temperatures and greater than atmospheric pressure, passing a major portion of the effluent vapors from a C_2 to C_3 paraffin cracking zone operated at temperatures of 1450° to 1550° F. directly to join a much greater volume of vapors supplied from a catalytic cracking zone operated at temperatures of 900 to 1000° F. thus rapidly quenching the high temperature effluent from the paraffin cracking process to a temperature in the range of 900° to 1000° F., supplying the combined stream of hydrocarbon vapors from

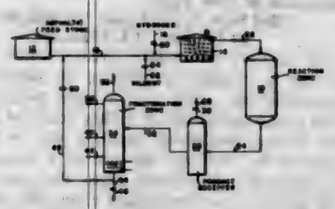


said quenching operation into a lower part of the product fractionation zone, stripping gas oil components from said reduced crude, segregating and removing a gas oil fraction from said fractionation zone and removing overhead products from said fractionation zone containing olefins produced in said C_2 to C_3 cracking operation and naphtha from said catalytic cracking process.

2,950,242
ASPHALT HYDROGENATION PROCESS

Charles L. Thorpe, Raymond L. Heinrich, Edward J. Hoffman and James A. Anderson, Jr., Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Oct. 7, 1957, Ser. No. 688,449
15 Claims. (Cl. 208—108)



1. In a continuous process for the conversion of a pumpable concentrated asphaltic feed stock to lower boiling more valuable products in a conversion zone at a pressure within the range of about 200 to 2000 p.s.i.g. in the presence of a fixed bed of a sulfactive hyrogenation catalyst under conversion conditions including a temperature within the range of about 600° to 850° F., the conversion zone outlet temperature being from about 20° to 80° F. greater than the conversion zone inlet temperature, a liquid space velocity charge rate within the range of about 0.2 to 5 v./v./hr. and a hydrogen charge rate within the range of about 1000 to 10,000 cubic feet of hydrogen per barrel of feed stock, the improvement which comprises periodically depressuring said conversion zone during said continuous conversion of said asphaltic feed stock operations at intervals of from about 1 to 20 hours and then repressuring said conversion zone to normal operating pressure, said conversion zone being depressured to about 50 to 5 percent normal operating pressure within about 0.5 to 5 minutes and then being repressured to normal operating pressure within about 1 to 40 minutes.

2,950,243
PLATINUM-ALUMINA CATALYSTS AND THEIR USE

Harry M. Brennan, Hammond, Ind., and Edmund Field, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

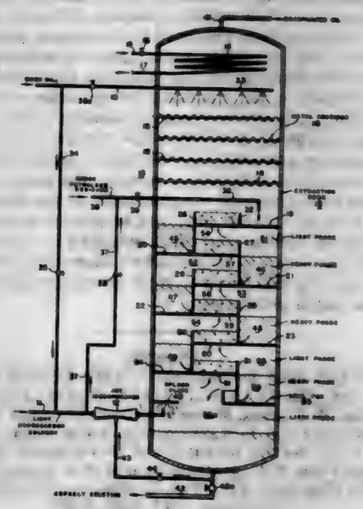
No Drawing. Filed Nov. 30, 1955, Ser. No. 550,275
5 Claims. (Cl. 208—138)

3. A hydroforming process wherein a petroleum naphtha is contacted under hydroforming conditions with a catalyst consisting essentially of alumina and platinum prepared by forming a mixture by commingling an alumina hydrosol with a solution consisting essentially of water, an alkaline substance selected from the class consisting of ammonium hydroxide, water-soluble amines, and water-soluble quaternary ammonium hydroxides, and a water-miscible oxygen-containing organic solvent selected from the class consisting of an alkyl alcohol, acetone, an alkyl glycol and an alkyl ether, said alkaline substance being employed in a quantity sufficient to adjust the pH of the commingled mixture to a level within the range of about 8.5 to 12, and said solvent being employed in a proportion between about 10 and 50 percent by volume of said mixture, maintaining the resulting mixture at a pH within said range and a temperature between about 50 and 250° F. for a period in excess of about one hour, whereby the alumina contained therein is converted into a filterable slurry of solid, hydrous alumina, separating said solid, hydrous alumina from said slurry, drying the separated alumina to a volatiles content between about 15 and 50 percent, wet basis, impregnating the dried alumina with an aqueous chloroplatinum acid solution to a platinum level between about 0.05 and 1 percent by weight, based on dry Al_2O_3, and drying and calcining.

2,950,244
EXTRACTION OF RESIDUUM

John E. Lawson, Jr., Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Filed Sept. 22, 1958, Ser. No. 762,301
8 Claims. (Cl. 208—309)



1. A method for extracting a residuum fraction to obtain a substantially asphalt-free oil which comprises form-

ing a solution of a crude petroleum residuum containing asphalt constituents and oil in a liquefied normally gaseous hydrocarbon solvent, introducing said solution into an elongated vertical extraction zone at an upper level thereof, introducing said solvent into said zone at a lower level thereof, said solution and solvent being maintained in said zone under extraction conditions including a temperature between 100° and 250° F. and pressure sufficient to maintain a liquid phase, flowing countercurrently in said zone said solvent and solution, forming in said zone at least a light phase comprising predominantly said solvent and said oil, forming in said zone at least a heavy phase comprising predominantly said asphalt constituents and solvent, dispersing said light phase into said heavy phase, said light phase and heavy phase being in a ratio in the range from about 3 to 30:1, and said light phase having a density of about 0.4 to about 0.6 and said heavy phase having a density of about 0.7 to 0.9, and recovering from said zone increased yields of substantially asphalt-free oil and an asphalt constituent phase.

2,950,245

METHOD OF PROCESSING MINERAL OILS WITH ALKALI METALS OR THEIR COMPOUNDS

Alfred M. Thomsen, 265 Buckingham Way, Apt. 402, San Francisco 27, Calif.

No Drawing. Filed Mar. 24, 1958, Ser. No. 723,140
4 Claims. (Cl. 208—348)

1. The method of processing mineral oils which comprises: commingling said oil with a substance selected from the group consisting of alkali metals, alkali metal oxides, alkali metal hydroxides, and alkali metal carbonates as a re-cycled oil slurry; distilling said mixture to an end point of approximately 800° F. for the distillate and collecting the distillate; heating the residuum from such distillation until a coke residue is obtained and collecting the distillate produced; dividing said coked residue into two parts; furnacing one part at a temperature between 1700° F. and 2500° F. while traversed by a current of nitrogen until the contained alkali metal compounds are substantially converted to alkali metal cyanide, leaching the product thus obtained with water, passing gas containing carbon dioxide through the solution thus obtained until conversion from alkali metal cyanide to alkali metal carbonate, with attendant evolution of hydrogen cyanide, is substantially complete, dehydrating the resultant alkali metal carbonate, milling it in a portion of the distillate produced in the coking step to form a slurry and re-cycling said slurry by commingling it with fresh charging stock to undergo the initial distillation; furnacing the remainder of the coke produced in the coking step at a temperature between a low of 1700° F. and a high of 2500° F. while traversed by a current of hydrogen gas until the evolution of alkali metal vapor is substantially complete; scrubbing the gases produced in said furnacing with the remainder of the distillate obtained in the coking step, not employed in the before mentioned milling step, thus obtaining a slurry of oil, alkali metal and its alkali-carbon monoxide compounds, and recycling said slurry to fresh charging stock to undergo the initial distillation.

2,950,246

PROCESS FOR INCREASING THE PERMEABILITY OF OIL BEARING CHALK FORMATIONS

William B. Hughes, Webster Groves, Mo., and Wayne S. Fallgatter and Jack Newcombe, Tulsa, Okla., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Feb. 1, 1956, Ser. No. 562,638
4 Claims. (Cl. 252—8.55)

1. A process for increasing the permeability of oil-bearing chalk formations containing as much as 10% hydratable clays by inhibiting clay swelling during acidizing which comprises introducing into the chalk formation a clear well-treating solution comprising an acidizing amount of hydrochloric acid, an amount of acetic acid substantially equal to the amount of hydrochloric acid and a small amount of the final reaction product obtained by condensing one mol of a polyethyleneamine selected from the group consisting of diethylene triamine, triethylene tetramine and tetraethylene pentamine with an equimolar amount of oleic acid, removing sufficient water from the reaction zone to form an intermediate imidazoline reaction product, reacting the intermediate imidazoline product obtained with an equimolar quantity of ethylene oxide by passing ethylene oxide through an alcohol solution of the intermediate imidazoline product and recovering a final reaction product.

2,950,247

INCREASING PERMEABILITY OF SUBSURFACE FORMATIONS

William J. McGuire, Jr., and Loyd R. Kern, Irving, Tex., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed May 16, 1957, Ser. No. 659,496
8 Claims. (Cl. 252—8.55)

1. In a method for increasing the permeability to fluids of a subsurface earth formation having at least one fracture extending from the wall of a well bore radially into the formation, the improvement comprising forcing into said fracture a fluid suspension of a manufactured, formable material selected from the group consisting of alumina and aluminum particles of generally spherical shape and mixtures thereof, said particles being characterized by having a diameter in excess of 0.03 inch and being capable of supporting a load above 40 pounds per particle without fragmentation.

2,950,248

GREASE MANUFACTURE INCLUDING MECHANICAL ATOMIZATION OF THE CHARGE

Elden L. Armstrong, Garden City, Richard A. Babcock, Uniondale, and George W. Murray, Jr., Pleasantville, N.Y., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Sept. 6, 1957, Ser. No. 682,461
24 Claims. (Cl. 252—32)

1. The method of making grease which comprises: constituting a mixture comprising an oleaginous vehicle, a saponifying agent and a fatty material selected from the group consisting of a fatty acid and a glyceride; forming a soap thickening agent in situ in the vehicle, and cooling the resultant mixture to a temperature below its solution temperature when the soap thickening agent is formed at a temperature above the solution temperature; subjecting the resulting vehicle-soap mixture, at a temperature above about 212° F. and below its solution temperature, to mechanical atomization into dispersed droplets and instantaneously contacting the said droplets directly with a substantially cooler surrounding atmosphere to effect heat exchange thereof, thereby forming a grease.

2,950,249

GREASE-MAKING PROCESS INVOLVING MECHANICAL ATOMIZATION

Elden L. Armstrong, Garden City, N.Y., William R. Marshall, Jr., Madison, Wis., and George W. Murray, Jr., Pleasantville, and Henry Raich, East Meadow, N.Y., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Filed Sept. 13, 1957, Ser. No. 683,815
13 Claims. (Cl. 252—32)

1. The method of making a grease, which comprises: constituting a mixture comprising a lubricant vehicle, a saponifying agent and a fatty material selected from the group consisting of a fatty acid and a glyceride, said mixture having a water content from about 0.25 to about 20 percent by weight during soap formation; forming a soap thickening agent in situ in the vehicle and cooling the resultant mixture to a temperature below its solution temperature when the soap thickening agent is formed at a temperature above the solution temperature; subjecting the resulting vehicle-wet soap mixture, at a temperature above about 250° F. and below its solution temperature, to mechanical atomization to form dispersed droplets and instantaneously contacting the droplets directly with a surrounding atmosphere, whereupon the vehicle-wet soap mixture is substantially dehydrated; and subjecting the substantially dehydrated product, at a temperature above about 220° F. and below its solution temperature, to a more intense mechanical atomization to form dispersed droplets and instantaneously contacting the droplets directly with a substantially cooler surrounding atmosphere to effect heat exchange thereof.

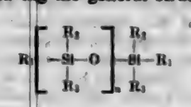
2,950,250

SILICONE LUBRICATING OIL COMPOSITION CONTAINING ESTER FOR IMPROVED LUBRICITY AND THERMAL STABILITY

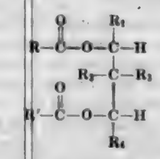
Morton Z. Fainman, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Filed Feb. 29, 1956, Ser. No. 568,436
5 Claims. (Cl. 252—49.6)

1. A lubricant composition comprising at least 25% of a silicone oil having the general structure



in which R_1, R_2 and R_3 are radicals selected from the group consisting of methyl, ethyl, ethyl-methyl, phenyl, tolyl, phenyl-methyl, ethyl-phenyl radicals and mixtures thereof and from about 5% to about 75% of an ester of a straight chain aliphatic carboxylic acid of from about 4 to about 18 carbon atoms and a polyhydric alcohol free of beta-hydrogen, said ester having the general formula



in which R and R′ are straight chain alkyl radicals having from 4 to about 18 carbons, R_1 and R_4 are constituents selected from the group consisting of hydrogen, alkyl radicals containing from 1 to 4 carbon atoms and mixtures thereof, R_2 is a constituent selected from the group consisting of an alkyl radical having from 1 to 6 carbon atoms and a hydroxy methyl radical, and R_3 is a constituent selected from the group consisting of an alkyl radical having from 2 to about 12 carbon atoms and a hydroxy methyl radical.

2,950,251

MAGNETIC MATERIALS HAVING RECTANGULAR HYSTERESIS CHARACTERISTICS

Robert S. Weisz, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Filed Sept. 19, 1955, Ser. No. 534,954
12 Claims. (Cl. 252—62.5)

2. Magnetic composition having a substantially rectangular hysteresis characteristic prepared by firing between 1075° and 1275° C. for at least about one hour and then rapidly cooling a formed body consisting essentially of:

	Mol. percent
Fe_2O_3	45–47
At least one material selected from the group consisting of ZnO and CdO	4–15
MnO	40–50

2,950,252

MANGANESE CHROMIUM FERRITE COMPOSITION

James M. Brownlow, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed May 8, 1956, Ser. No. 583,539
5 Claims. (Cl. 252—62.5)

1. A magnetic body exhibiting the characteristics of an essentially rectangular hysteresis loop and fast switching speeds at low driving fields consisting of the reaction product produced by heating together an intimate mixture of between 35–45 mol percent Fe_2O_3, 45–60 mol percent MnO, and 1–10 mol percent CrO in a non-reducing atmosphere at a temperature within the range of 1150–1440° C.

2,950,253

METHODS OF WASHING TEXTILE FABRICS

Walter Kling and Hermann Lange, Duesseldorf, Germany, assignors to Bohme Fettchemie G.m.b.H., Duesseldorf, Germany, a corporation of Germany

No Drawing. Filed July 27, 1954, Ser. No. 446,146
Claims priority, application Germany July 29, 1953
10 Claims. (Cl. 252—152)

1. The method of cleansing a soiled synthetic textile fabric, which comprises washing said fabric in a cationactive aqueous solution consisting essentially of water and from about 0.85 to about 1.5 gm./liter of a cationactive washing composition comprising (1) from about 23% to about 44% of an organic onium compound selected from the group consisting of aliphatic ammonium compounds having attached to the nitrogen atom an aliphatic radical containing a hydrocarbon chain having from 6 to 20 carbon atoms, at least two alkyl radicals having from 1 to 2 carbon atoms and a radical selected from the group consisting of ethyl, methyl, benzyl and cyclohexyl, pyridinium compounds having attached to the nitrogen atom an aliphatic radical containing a hydrocarbon chain having from 6 to 20 carbon atms and quinolinium compounds having attached to the nitrogen atom an aliphatic radical containing a hydrocarbon chain having from 6 to 20 carbon atoms, (2) from about 33% to about 77% of a lower alkanoic acid and (3) from about 0% to about 33% of an additive stable in said cationic active aqueous solution selected from the group consisting of aluminum salts of lower alkanoic acids, lower alkoxy celluloses, chitoseamine and polyalkylene oxide waxes, whereby both the fabric and the soil are imparted with a positive electrostatic charge and the soil is separated from the fabric by electrostatic repulsion and dispersed throughout the washing solution.

2,950,254

METHOD OF PRODUCING A PEARLY LUSTER IN SHAMPOO CONCENTRATES

Günter Meinhard and Wolfgang Benzel, Duesseldorf, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany, a corporation of Germany

No Drawing. Filed Apr. 24, 1956, Ser. No. 580,174
Claims priority, application Germany Apr. 25, 1955
5 Claims. (Cl. 252—152)

1. The method of producing a pearly luster in an aqueous shampoo concentrate composed essentially of

an anionic detergent dissolved in an aqueous medium, which comprises heating said shampoo concentrate to a temperature between substantially room temperature and about 80° C., dispersing in said heated shampoo concentrate between about 2 and 10% by weight, based on the weight of the shampoo concentrate, of a high-molecular-weight organic monocarboxylic acid and a substantially equimolar amount, with respect to said high-molecular-weight organic monocarboxylic acid, of a water-soluble salt of a metal selected from the group consisting of magnesium and zinc, and adding an alkaline agent to the resulting dispersion until the pH of said dispersion is between about 6.5 and about 7.0.

2,958,255
DETERGENT COMPOSITION
Stillman R. Goff, Park Ridge, Ill., assignor to The Gillette Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed July 3, 1956, Ser. No. 595,576
8 Claims. (Cl. 252—152)

1. A shampoo composition capable of effective cleansing of hair while simultaneously imparting good condition thereto comprising a mixture of surface active agents consisting of (A) a major proportion of a member of the class consisting of ampholytic surface active agents, and mixtures thereof with up to an equal weight of non-ionic surface active agents and (B) a minor proportion of a mixture of a cationic surface active agent with a substantially equimolar proportion of an anionic non-soap surface active agent, the ratio of (A) to (B) being from 2:1 to 20:1 by weight.

2,958,256
READILY REMOVABLE MARKING COMPOSITION FOR RECORD MATERIAL
Marshall Mazer and Harry N. Vosmer, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application Nov. 9, 1955, Ser. No. 545,959. Divided and this application Mar. 4, 1957, Ser. No. 643,639
1 Claim. (Cl. 252—301.2)

A marking fluid for use in applying readily removable data-representing marks, which fluoresce when activated by ultra-violet radiation to produce a sensible signal, to a record member, consisting essentially of anthracene and naphthacene dissolved in ethyl hexane-diol and xylene, in the following proportions:

Anthracene	grams	400
Naphthacene	do	4
Ethyl hexane-diol	cc.	10,000
Xylene	cc.	4,000

the ethyl hexane-diol and xylene being evaporable, and the anthracene and the naphthacene being sublimable when the marked record member is subjected to a temperature of approximately 300 degree Fahrenheit for a period not exceeding two seconds, for restoring the record member to its original, unmarked, condition.

2,958,257
PREPARATION OF ELECTROLUMINESCENT PHOSPHORS
Herman C. Froelich, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
No Drawing. Filed Dec. 1, 1955, Ser. No. 550,458
2 Claims. (Cl. 252—301.6)

2. A zinc sulphide, zinc oxide, copper activated phosphor wherein zinc oxide comprises from about 2 to about 95% by weight of the phosphor matrix and wherein copper amounts to about .01 to 1% by weight and which has been fired at a temperature in the range of 900 to 1040° C., and which thereafter has been annealed at a temperature in the range of 200 to 400° C. for a duration of about 10 to 60 minutes and is characterized by a color shift toward yellow-green as compared with the blue-green light of the unannealed phosphor.

2,958,258
DEHYDROGENATION CATALYST
Emory W. Pitzer and Lucien Bagnetto, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Original application Aug. 29, 1956, Ser. No. 606,794, now Patent No. 2,888,499, dated May 26, 1959. Divided and this application July 17, 1958, Ser. No. 749,051
6 Claims. (Cl. 252—443)

1. A catalyst which comprises between 30 percent and 45 percent magnesium oxide, between 10 percent and 35 percent ferric oxide, between 3 percent and 6 percent of a component selected from the group consisting of cupric oxide and chromium sesquioxide, and at least 30 percent potassium carbonate.

2,958,259
PLATINUM CATALYST
Charles E. Starr, Jr., Summit, N.J., and Marnell A. Segura, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Apr. 8, 1954, Ser. No. 421,968
4 Claims. (Cl. 252—466)

1. In a process for manufacture of an alumina supported platinum catalyst having high hydroforming activity in which the following steps are carried out:

(1) providing a suitable adsorptive alumina support,
(2) impregnating said support with a solution of a platinum compound, and
(3) activating the impregnated alumina support by an activating heat treatment,

the improvement which comprises heating the impregnated alumina support at a temperature of at least about 900° F. in said heat treatment for an appropriate interval of time to form platinum metal crystallite particles from the impregnating platinum compound solution and controlling the activating heat treatment to keep the particles of platinum metal from growing to a crystallie size exceeding 50 A. as shown by an X-ray test determination.

2,958,260
PROCESS OF ACTIVATING NICKEL-ALUMINUM CATALYSTS
Chester K. Rosenbaum and John C. Tallman, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 9, 1957, Ser. No. 701,322
7 Claims. (Cl. 252—466)

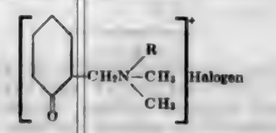
1. The process for activating granular nickel-aluminum alloy catalyst containing 35 to 60% nickel, the balance consisting principally of aluminum, by reducing its aluminum content from 5 to 30% comprising treating the said alloy with a dilute aqueous solution of an alkali selected from the group consisting of sodium hydroxide and potassium hydroxide at temperatures not exceeding 35° C. while controlling the contact time so that not more than about 1.5 molecular proportions of hydrogen are evolved per mole of alkali in the contacting solution.

2,958,261
PROCESS OF MAKING EXPANSIBLE PARTICULATE STYRENE POLYMER BY DIFFUSION OF A VOLATILE LIQUID HYDROCARBON INTO SAID POLYMER PARTICLES
Karl Buchholz, Ludwigshafen (Rhine), Fritz Stastny, Weinheim, Bergstrasse, and Rudolf Gaeth, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Sept. 8, 1954, Ser. No. 454,848
Claims priority, application Germany Sept. 25, 1953
7 Claims. (Cl. 260—2.5)

1. In a process for the production of an expansible particulate styrene polymer by diffusing a volatile liquid hydrocarbon into fine particles of a styrene polymer, wherein said hydrocarbon is selected from the class consisting of aliphatic and cycloaliphatic hydrocarbons in which said polymer is insoluble and boiling below the softening point of said polymer, the improvement which comprises contacting said polymer particles in a closed vessel with a diffusion mixture in which said polymer is insoluble and consisting essentially of a major proportion of water and a minor proportion of said hydrocarbon, and maintaining said particles and said mixture in contact at a temperature above 40° C. and below the softening point of said polymer to diffuse said hydrocarbon into said particles.

2,958,262
PREPARATION OF FOAMED POLYURETHANE USING SALT OF MANNICH BASE AS CATALYST
David C. Bush, Boise, Idaho, and Earl E. Parker, Allison Park, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa.
No Drawing. Filed Aug. 3, 1955, Ser. No. 526,311
2 Claims. (Cl. 260—2.5)

1. The method of effecting a reaction to form a foamed polyurethane resin of a mixture comprising 100 parts by weight of a polyester of a dicarboxylic acid and a polyhydric alcohol, about 20 to about 100 parts by weight of an organic diisocyanate, about 0.1 to about 5 parts by weight of water as water of crystallization in a compound which is selected from the group consisting of magnesium sulfate heptahydrate, Glauber's salt, sodium sulfate heptahydrate and sodium acetate trihydrate, and about 0.2 to about 5 parts by weight of the ammonium salt of the formula:



where R is a radical selected from the group consisting of methyl and benzyl, and maintaining the mixture at a temperature in a range extending from room temperature to about 200° C., until foaming and curing of the mixture is attained.

2,958,263
PREPARATION OF FOAMED CASTOR OIL CITRATE-ORGANIC POLYISOCYANATE REACTION PRODUCTS
William Abbotson, Reginald Hurd, and Herbert Jackson Shearing, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed May 2, 1958, Ser. No. 732,450
Claims priority, application Great Britain May 10, 1957
4 Claims. (Cl. 260—2.5)

1. Process for the manufacture of foamed polyurethanes which comprises reacting castor oil citrate with between about 15 and 200% of organic polyisocyanate by weight of said castor oil citrate in the presence of a tertiary amine catalyst and water, the castor oil citrate being prepared by reacting one molecular proportion of castor oil with 0.6 to 1.2 molecular proportion of citric acid until the acid value of the mixture has fallen to between 45 and 75 mg. KOH per gm.

2,958,264
METAL SALTS COMPLEXED VINYLIDENE AROMATIC-ALDEHYDE COPOLYMERS
Earl C. Chapin, Springfield, and Mary E. Murphy, East Longmeadow, Mass.
No Drawing. Filed Mar. 4, 1958, Ser. No. 718,972
10 Claims. (Cl. 260—23)

1. A stable metal salt complexed copolymer comprised of a copolymer of from 50–90 mol percent of a vinylidene aromatic monomer and from 50–10 mol percent of an alpha, beta ethylenically unsaturated aldehyde, said copolymer containing from 5–50% by weight, based upon the weight of said copolymer, of a metal salt complexed with the carbonyl groups thereof; said vinylidene aromatic monomer being selected from the group consisting of styrene, alphamethylstyrene and the mono- and di-ring-substituted methyl and chloro derivatives thereof; said alpha, beta ethylenically unsaturated aldehyde being selected from the group consisting of acrolein, methacrolein, crotonaldehyde and cinnimaldehyde; said metal salt being a salt of an aliphatic fatty acid selected from the group consisting of saturated fatty acids containing from 1–18 carbon atoms, unsaturated fatty acids containing from 10–18 carbon atoms and mixtures thereof derived from drying and semi-drying oils and a metal selected from the group consisting of copper II, iron II and III, cobalt II, manganese II and IV, nickel II, chromium III, cerium, zinc, aluminum, lanthanum and cadmium.

2,958,265
COMPOSITION CONTAINING VINYL POLYMER AND A BICYCLOHEPTENE DICARBOXYLIC ACID-GLYCOL POLYESTER AND PROCESS FOR MAKING THE POLYESTER
John R. Caldwell and John W. Tamblyn, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Filed Feb. 6, 1957, Ser. No. 638,441
9 Claims. (Cl. 260—31.6)

1. A composition containing (1) an organic synthetic polymer selected from the group consisting of polyvinyl chloride, copolymers of vinyl chloride and vinyl acetate and polystyrene; and (2) a polyester having a molecular weight of 500–1800 obtained by condensing bicyclo-(2.2.1)-5-heptene-2,3-dicarboxylic acid with a glycol selected from the class consisting of ethylene glycol, propylene glycol, butylene glycol and butenediol.

2,958,266
CROSS-LINKED POLYCARBONATE RESINOUS COMPOSITIONS AND METHOD FOR PREPARING SAME
Kenneth B. Goldblum, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York
No Drawing. Filed Aug. 22, 1957, Ser. No. 679,741
12 Claims. (Cl. 260—43)

1. A heat-curable resinous composition comprising the condensation product of (1) a linear carbonate polymer prepared by the reaction of a dihydric phenol and a carbonate precursor selected from the class consisting of carbonate esters, carbonyl halides and haloformates, and (2) not more than about 100%, based upon the weight of (1), of an aromatic material containing more than two hydroxyl groups, all of the hydroxyl groups being attached directly to phenyl rings in the same molecule.

2,950,267
PROCESS FOR BLENDING POLYPROPYLENE AND OXYGENATED POLYPROPYLENE
William E. Thompson, Wallingford, Denton M. Albright, Drexel Hill, and Archibald P. Stuart, Media, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
No Drawing. Filed June 21, 1957, Ser. No. 667,274
1 Claim. (Cl. 260—45.5)

Process for the preparation of a polypropylene composition having a low brittle point which comprises dissolving in a hydrocarbon solvent a crystalline polypropylene and an oxygenated derivative of crystalline polypropylene in a weight proportion of 90:10 to 99.5:0.5, said derivative having been obtained by contacting crystalline polypropylene having a molecular weight in the range of 50,000 to 300,000 at a temperature of from its melting point to about 260° C. with an atmosphere containing molecular oxygen for a time sufficient to introduce 1.5–3.7% by weight of oxygen into the polymer and yield an oxygenated derivative having a melting point in the range of 88–110° C., and co-precipitating the dissolved materials from solution.

2,950,268
PRODUCTION OF DICYANDIAMIDEFORMALDEHYDE REACTION PRODUCTS
Anthony J. Cofrancesco, Albany, and Stiles M. Roberts, Loudonville, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 29, 1956, Ser. No. 594,698
8 Claims. (Cl. 260—69)

1. A process comprising from an acidic aqueous solution having a pH of about 2.5–6.8 and containing as substantially the sole reactants from about 1 to 3 moles of formaldehyde, 0.5 to 1 mole of an ammonium salt of a strong acid and 1 mole of dicyandiamide, and maintaining said solution at a temperature of about 10° to 45° C. until a water soluble reaction product is obtained.

2,950,269
PROCESS FOR THE PRODUCTION OF MIXED POLYAMIDES
Walter Reppe, Heidelberg, and Heinz Pohlemann and Karl Jaeckel, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Jan. 24, 1958, Ser. No. 710,861
Claims priority, application Germany Jan. 25, 1957
8 Claims. (Cl. 260—78)

5. A fiber-forming polyamide of 80 to 95% by weight of (A) omega-caprillactam and 20 to 5% by weight of a mixture of (B) a salt-forming mixture of (*a*) a dicarboxylic acid with more than 5 carbon atoms in which acid the carboxylic groups are attached to different carbon atoms which are separated from one another by carbon atoms, and (*b*) a saturated aliphatic diamine with more than 5 carbon atoms in which diamine the amino groups are attached to different carbon atoms which are separated from one another by carbon atoms, and (C) a salt-forming mixture of (*a'*) a dicarboxylic acid with more than 5 carbon atoms in which acid the carboxylic groups are attached to different carbon atoms which are separated from one another by carbon atoms, and (*b'*) 4.4'-diaminodicyclohexylmethane, the proportion by weight of (B) to (C) being 50 to 80 to 50 to 20.

2,950,270
RUBBERY DIENE TERPOLYMERS
Earl C. Chapin, Springfield, and Weston P. Sanford, Kingston, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed June 27, 1956, Ser. No. 594,084
7 Claims. (Cl. 260—80.7)

1. An interpolymer of monomers consisting of (*a*) from 40 to 95 weight percent of a conjugated 1,3-diene selected from the group consisting of butadiene, isoprene, 2,3-dimethyl butadiene and mixtures thereof, (*b*) from 3 to 40 weight percent of an acrylic acid derivative of the group consisting of saturated 1–5 carbon atom aliphatic alcohol esters of acrylic acid, saturated 1–5 carbon atom aliphatic alcohol esters of methacrylic acid, acrylonitrile, methacrylonitrile and mixtures thereof, and (*c*) from 2 to 20 weight percent of an unsaturated alcohol of the group consisting of allyl alcohol, methallyl alcohol and mixtures thereof.

2,950,271
ALCOHOLYSIS OF POLYVINYL ACETATE
James M. Snyder, Memphis, Tenn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 29, 1954, Ser. No. 440,291
8 Claims. (Cl. 260—91.3)

1. The process of producing polyvinyl alcohol comprising mixing an alkaline alcoholysis catalyst and a solution of polyvinyl acetate in a solvent selected from the group consisting of methanol and ethanol to provide a mixture containing 30 to 65% by weight of polyvinyl acetate, and heating the mixture at a temperature between about 90° and 150° C. to effect alcoholysis of said polyvinyl acetate.

2,950,272
POLYOXYALKYLENE ESTERS OF TALL OIL ROSIN ACIDS
Willard H. Kirkpatrick, Sugar Land, Tex., assignor to Visco Products Company, Houston, Tex., a corporation of Delaware
No Drawing. Filed Mar. 25, 1957, Ser. No. 648,003
6 Claims. (Cl. 260—104)

1. An ester having the formula

$$R'(OC_nH_{2n})_xR$$

wherein R' is an acyl radical of tall oil rosin acids, R is a member from the group consisting of an oxyacyl radical of a rosin acid found in tall oil, hydroxy and oxyalkyl containing 1 to 30 carbon atoms, *n* is both 2 and 3 in a single molecule, *x* is equal to the sum of the number of times *n* has a value of 2 plus the number of times that *n* has a value of 3, and the maximum ratio of *n* having a value of 2 to *n* having a value of 3 is such that the maximum weight ratio of oxyethylene to oxypropylene does not exceed 4:1, with the further proviso that the average molecular weight of said ester is within the range of 1000 to 7500.

2,950,273
PROCESS FOR THE PRODUCTION OF SYMMETRICAL AND UNSYMMETRICAL AZO COMPOUNDS
Willibald Pelz, Opladen, Germany, assignor to AGFA Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
No Drawing. Filed Nov. 13, 1957, Ser. No. 696,033
Claims priority, application Germany Nov. 20, 1956
7 Claims. (Cl. 260—144)

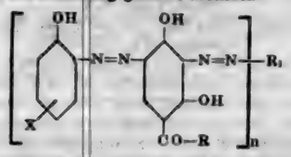
1. A process for the production of symmetrical and unsymmetrical azo compounds, wherein an organic compound containing at least one reactive group of the class consisting of reactive methylene and reactive methine groups, is reacted in dissolved condition with a sulfonyl azide to cause the azide grouping to couple two of said reactive groups together through an azo bridge, and form as a by-product a compound having an amine group in place of the azide group of the sulfonyl azide, said sulfonyl azide having the formula $Z.SO_2.N_3$ in which Z stands for a radical selected from the group consisting of alkyl and aryl radicals as well as a radical of the formula



in which R_1 and R_2 stand for alkyl groups.

2,950,274
AZO-DYESTUFFS INSOLUBLE IN WATER
Herbert Kracker, Roland Bamberger, Reinhard Mohr, and Joachim Ribka, all of Offenbach (Main), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed June 11, 1958, Ser. No. 741,221
Claims priority, application Germany June 15, 1957
6 Claims. (Cl. 260—145)

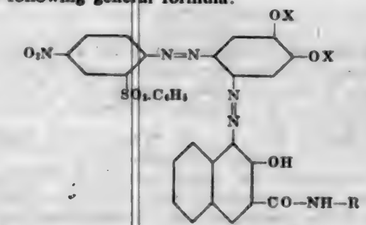
1. The complex metal compounds selected from the group consisting of iron, cobalt, chromium, nickel, copper and manganese compounds of azo-dyestuffs corresponding to the following general formula



wherein R represents a member selected from the group consisting of lower alkyl and phenyl, R_1 represents a member selected from the group consisting of radicals of the benzene, diphenyl and anthraquinone series, X represents a member selected from the group consisting of chlorine, nitro, methyl and methylsulfonyl, and *n* stands for one of the numbers 1 and 2.

2,950,275
AZO-DYESTUFFS INSOLUBLE IN WATER
Herbert Kracker and Hans Albert, Offenbach (Main), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Oct. 14, 1958, Ser. No. 767,096
Claims priority, application Germany Oct. 19, 1957
6 Claims. (Cl. 260—188)

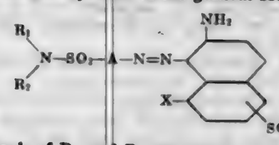
1. Azo-dyestuffs insoluble in water which correspond to the following general formula:



wherein X represents a lower alkyl group and R represents a member selected from the group consisting of phenyl, methoxyphenyl, ethoxyphenyl, dimethoxyphenyl, methylphenyl, dimethylphenyl, methyl-methoxyphenyl, methyl-chlorophenyl, dimethoxy-chlorophenyl, methoxy-chloro-methylphenyl, nitrophenyl and naphthyl.

2,950,276
MONOAZO DYESTUFFS
Otto Schmid, Muttenz, Basel Land, and Meinrad Hurbin, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland
No Drawing. Filed Nov. 15, 1957, Ser. No. 696,597
Claims priority, application Switzerland Dec. 5, 1956
7 Claims. (Cl. 260—196)

1. A monoazo dyestuff of the general formula:

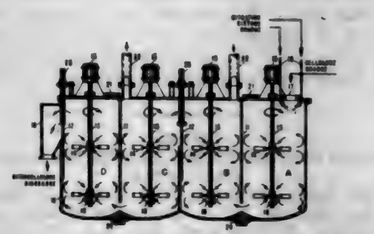


wherein each of R_1 and R_2 represents an at most bicyclic saturated organic radical, R_1 and R_2 containing together at least 11 carbon atoms of which at least 10 carbon atoms belong to six-membered alicyclic rings, A represents a radical of the benzene series containing the sulphamide substituent in o-position to the azo linkage, and X represents a member selected from the group consisting of hydrogen and hydroxy.

2,950,277
RECOVERY OF DIHYDROSTREPTOMYCIN
Suco Tatsuoka, Osaka, Tsunaharu Kusaka, Amagasaki, Akira Miyake, Nishinomiya, Michitaka Inoue, Minami-ku, Osaka, Yutaka Shiraishi, Ikuta-ku, Kobe, Hidesuke Iwasaki, Toyonaka, Osaka, and Masahiko Imanishi, Higashiyodogawa-ku, Osaka, Japan, assignors to Takeda Pharmaceutical Industries, Ltd., Doshomachi, Higashi-ku, Osaka, Japan
Filed Mar. 21, 1957, Ser. No. 647,682
3 Claims. (Cl. 260—210)

1. A process for recovering dihydrostreptomycin as its acid salt from a fermentation broth of *Streptomyces humidus*, which comprises the following steps: filtering the said fermentation broth, passing the latter through a weakly acidic ion-exchange resin, washing the resin with water, eluting the resultant adsorbed dihydrostreptomycin from the resin with an acid, concentrating the eluate, adjusting the concentrate to pH 3.5, passing the thus-prepared solution through active carbon, eluting the so-adsorbed dihydrostreptomycin from the active carbon by means of dilute hydrochloric acid, adjusting the eluate to pH 6.5, concentrating the resultant solution, precipitating the so-produced hydrochloride, dissolving the latter in water, treating the so-obtained aqueous solution of the hydrochloride with an aqueous solution of $MgSO_4$, adjusting the mixture to pH 6.0 with dilute sulfuric acid, and isolating the so-produced dihydrostreptomycin sulfate.

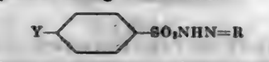
2,950,278
MANUFACTURE OF NITROCELLULOSE
Warren L. Plunkett, Sayreville, N.J., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
Filed Apr. 15, 1957, Ser. No. 652,828
10 Claims. (Cl. 260—220)



1. A continuous process for the manufacture of nitrocellulose which comprises continuously forming a slurry of cellulose in nitrating mixture, continuously advancing the slurry under the influence of hydraulic gradient in an alternately descending and ascending path formed by a succession of alternately descending and ascending reaction zones to form nitrocellulose while preventing recirculation of said slurry from a succeeding reaction zone back into a preceding reaction zone, continuously agitating the slurry in each reaction zone solely to prevent segregation of solids therefrom, and continuously withdrawing a slurry of nitrocellulose in spent nitrating mixture from the final reaction zone.

2,950,279
SUBSTITUTED BENZENESULFONYL-HYDRAZONES (M)
Hans Willi Zimmer, Cincinnati, Ohio, assignor to The Chattanooga Medicine Company, Chattanooga, Tenn., a corporation of Tennessee
No Drawing. Filed July 1, 1958, Ser. No. 745,834
4 Claims. (Cl. 260—239.6)

1. A compound having the formula:

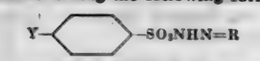


wherein Y is a monovalent radical selected from the group consisting of $—NH_2$ and $—NHCOCH_3$ and R is a divalent heterocyclic radical consisting of (*a*) one to two five-to-six membered heterocyclic rings containing only O and C nuclear atoms and at least one nuclear O and the remainder nuclear C's, and (*b*) not more than one conjugated phenyl ring, said radical R having (*c*) one aliphatic C_1—C_6 hydrocarbon group connecting a ring with the hydrazine N, (*d*) not more than two C_1—C_4 alkyl groups attached to nuclear carbon atoms, and (*e*) not more than one nitro group attached to a nuclear carbon atom, said radical R containing from 3 to 18 carbon atoms and from 1 to 3 oxygen atoms.

2. p-Aminobenzenesulfonylhydrazone of furfural.

2,950,280
SUBSTITUTED BENZENESULFONYL-HYDRAZONES (J)
Hans Willi Zimmer, Cincinnati, Ohio, assignor to The Chattanooga Medicine Company, Chattanooga, Tenn., a corporation of Tennessee
No Drawing. Filed July 1, 1958, Ser. No. 745,835
4 Claims. (Cl. 260—239.6)

1. A compound having the following formula:



wherein Y is a monovalent radical selected from the class consisting of $—NO_2$, $—NH_2$, and $—NHCOCH_3$ and R is heterocyclic radicals consisting of (*a*) one heterocyclic ring containing five nuclear atoms of which one to three are atoms selected from the class consisting of S and N, (*b*) not more than one phenyl ring, (*c*) one trivalent aliphatic C_1–C_6 saturated hydrocarbon group connected to a nuclear carbon atom and the hydrazine N, and (*d*) not more than three C_1–C_4 alkyl groups connected to nuclear atoms, the radical R containing only hydrogen atoms, from 2 to 18 carbon atoms, up to one oxygen atom, up to one sulfur atom and up to two nitrogen atoms.

3. p-Aminobenzenesulfonylhydrazone of 2-acetylthiophene.

2,950,281
Δ^5-3-ETHYLENEDIOXY-11,20-DIKETO-21-IODO-PREGNENE
Lewis H. Sarett, Princeton, N.J., assignor to Merck & Co. Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Original application Sept. 17, 1952, Ser. No. 310,135, now Patent No. 2,777,842, dated Jan. 15, 1957. Divided and this application Nov. 1, 1955, Ser. No. 544,373
3 Claims. (Cl. 260—239.55)

1. Δ^5-3-Ethylenedioxy - 11,20 - diketo - 21 - iodopregnene.

2,950,282
METHOD FOR SEPARATION AND RECOVERY OF DIAZABICYCLO-OCTANE
Adalbert Farkas, Media, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
Filed Nov. 6, 1958, Ser. No. 772,306
7 Claims. (Cl. 260—268)

1. The method for the separation and recovery of diazabicyclo-octane from liquid mixtures containing in addition to diazabicyclo-octane, compounds boiling in the range of about 160–195° C. and formed as by-products in the catalytic vapor phase production of diazabicyclo-octane from an alkylene polyamine, which method comprises the steps of adding to said mixture about 3–10 wt. percent of water to thereby form a hydrate of diazabicyclo-octane, and recovering by filtration the crystalline hydrate.

2,950,283
RECOVERY OF THE SULFONATION PRODUCTS OF QUINOLINE
Louis L. Zamploner, 276 Riverside Drive, New York, N.Y.
No Drawing. Filed May 26, 1958, Ser. No. 737,499
4 Claims. (Cl. 260—283)

1. The process of recovering the products of sulfonation of quinoline from mixtures of such products with sulfuric acid, said products being selected from the group consisting of quinoline sulfonic acids, quinoline acid sulfate, and quinoline, the step comprising admixing such a mixture with at least its volume of a liquid, sulfuric acid stable oxygenated organic solvent selected from the group consisting of

(*a*) ketones selected from the group consisting of acetophenone, and dialkyl and cycloalkyl alkyl ketones having only one carbonyl group and from 4 to 9 carbon atoms,

(*b*) esters of up to 9 carbon atoms of the group consisting of ethyl benzoate and acetates of alkanols, and

(*c*) ethers selected from the group consisting of dialkyl ethers, said ethers having more than 4 and up to 8 carbon atoms, tetrahydrofurane, anisole and the lower alkyl diether compounds of ethylene glycol and diethylene glycol; said compounds being composed solely of carbon, hydrogen and oxygen.

2,950,284
WITHDRAWN

2,950,285
COLORING MATTER FOR BALL-PEN INKS
Calvin Quentin Miller, Newark, Del., and William Wade Ranson, Woodstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 30, 1958, Ser. No. 745,251
2 Claims. (Cl. 260—314.5)

1. A composition of matter useful as coloring matter in ball-pen inks, comprising the salt of a polysulfonated phthalocyanine compound and Victoria Pure Blue BO, said polysulfonated phthalocyanine compound being a phthalocyanine compound containing on the average from 2 to 4 sulfo groups per molecule and whose phthalocyanine nucleus is a member selected from the group consisting of copper phthalocyanine, nickel phthalocyanine, cobalt phthalocyanine, halogenated derivatives of these three compounds containing per molecule not more than one atom of a halogen from the group consisting of chlorine and bromine, copper-tetraamino phthalocyanine and metal-free phthalocyanine.

2,950,286
BASIC DYE SALTS OF POLYSULFONATED PHTHALOCYANINES AND PROCESS OF PRODUCING THE SAME
Calvin Quentin Miller, Newark, Del., and William Wade Ranson, Woodstown, N.J., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed June 30, 1958, Ser. No. 745,285
6 Claims. (Cl. 260—314.5)

1. A process of producing a dye salt having high solubility in glycolic solvents and being adapted for use as coloring matter for ball-pen inks, which comprises producing a two-phase mass comprising water and a dye salt of the form $Q—(SO_3B)_x$, wherein Q represents the radical of a phthalocyanine compound selected from the group consisting of copper phthalocyanine, nickel phthalocyanine, cobalt phthalocyanine, halogenated derivatives of these three compounds containing per molecule not more than one atom of a halogen from the group consisting of chlorine and bromine, copper-tetraamino phthalocyanine and metal-free phthalocyanine, *x* is an average number having a value from 2 to 4, and B represents a molecule of a basic dye selected from the group consisting of malachite green, crystal violet, rhodamine 6G and auramine, said dye salt being in molten state, and the temperature of the entire mass being between 75° and 100° C., separating said dye salt from the aqueous phase, drying the same to produce a brittle dry color mass, and grinding said brittle mass to a size which will pass through an 80-mesh standard sieve.

2,950,287
PREPARATION OF WATER SOLUBLE EPINOCHROME DERIVATIVES
Junichi Iwao, Temmoji-ku, Osaka, and Koichi Tomino, Senboku-gun, Osaka-fu, Japan, assignors to Tanabe Seiyaku Co., Ltd., Osaka, Japan, a corporation of Japan
No Drawing. Filed Feb. 5, 1957, Ser. No. 638,221
Claims priority, application Japan Feb. 18, 1956
11 Claims. (Cl. 260—319)

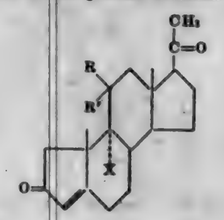
1. Process of preparation of therapeutically valuable monosemicarbazone of epinochrome-2-sulfonic acid comprising mixing a water-soluble salt of epinochrome-2-sulfonic acid with semicarbazide, whereby condensation of said substances takes place.

2,950,288
ISOLATION PROCESS
Christopher Towers Calam and Philip John Curtis, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Mar. 28, 1958, Ser. No. 724,512
Claims priority, application Great Britain Apr. 5, 1957
3 Claims. (Cl. 260—343.3)

1. An improved process for the isolation of crystalline gibberellic acid from an aqueous fermentation medium thereof which comprises extracting the said aqueous fermentation medium with at least one organic solvent selected from the group consisting of ethyl acetate, n-butyl acetate, isoamyl acetate, diethyl carbonate, ethyl propionate, ethyl n-butyrate, n-butyl lactate, isopropyl acetate, β-ethoxyethyl acetate, methoxybutyl acetate, methyl n-propyl ketone, cyclohexanone, diethyl ketone, methyl isobutyl ketone, methyl cyclohexanone, methyl ethyl ketone, benzyl alcohol, sec.-butanol, cyclohexanol, n-butanol, and thereafter isolating crystalline gibberellic acid from the organic solvent extract.

2,950,289
9α-HALO-A-NORPROGESTERONES
Frank L. Weisenborn, Middlebush, N.J., assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed July 28, 1959, Ser. No. 829,966
9 Claims. (Cl. 260—348)

1. A compound of the general formula



wherein R is hydrogen, R′ is β-hydroxy and together R and R′ is keto, and X is halogen.

6. 11α-hydroxy-A-norprogesterone 11α-mesylate.

8. Δ^1-A-norpregnene-9β,11β-oxido-2,20-dione.

2,950,290
STABILIZED AROMATIC CARBOCYCLIC AMINES
Eugene V. Hort, Westfield, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed June 21, 1956, Ser. No. 592,736
12 Claims. (Cl. 260—391)

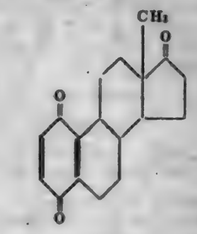
1. An aromatic carbocyclic compound, selected from the group consisting of aromatic carbocyclic amines and polyamines stabilized against deterioration by steel by having incorporated therewith from 0.01 to 1.0 part by weight per 100 parts by weight of said aromatic carbocyclic compound of an organic phosphite having the general formula:

$$(R)_3PO_3$$

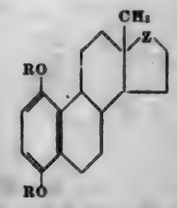
wherein R represents a member selected from the class consisting of ethyl, butyl, isoamyl, decyl, cetyl, cyclohexyl, phenyl, cresyl and benzyl groups.

2,950,291
17-OXYGENATED ESTRA-1,3,5(10)-TRIENE-1,4-DIOLS, THEIR ESTERS, AND A CORRESPONDING QUINONE
James Jin, Morton Grove, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Dec. 22, 1958, Ser. No. 781,858
8 Claims. (Cl. 260—397.3)

1. A compound selected from the group consisting of a compound of the formula



and compounds of the formula



wherein Z is selected from the group consisting of carbonyl, β-hydroxymethylene, and β-(lower alkanoyloxy)-methylene radicals, and R is selected from the group consisting of hydrogen and lower alkanoyl radicals.

2,950,292

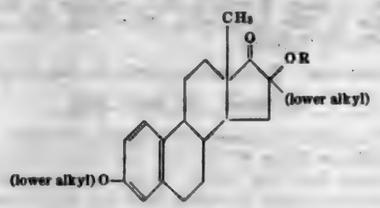
3 - ALKOXY - 16 - ALKYL - 16 - HYDROXY-1,3,5(10) - ESTRATRIEN - 17 - ONES, THEIR ETHERS AND ESTERS

David A. Tyner, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Filed June 29, 1959, Ser. No. 823,299

6 Claims. (Cl. 260—397.4)

1. A compound of the formula



wherein R is a member of the class consisting of hydrogen, lower alkyl and —CO—(lower alkyl) radicals.

2,950,293

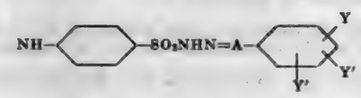
SUBSTITUTED BENZENESULFONYL-HYDRAZONES (N)

Hans Willi Zimmer, Cincinnati, Ohio, assignor to The Chattanooga Medicine Company, Chattanooga, Tenn., a corporation of Tennessee

No Drawing. Filed July 1, 1958, Ser. No. 745,824

3 Claims. (Cl. 260—397.7)

1. A compound having the following formula:



wherein A is a trivalent aliphatic C_1—C_6 hydrocarbon group, any unsaturation in the radical A being olefinic, Y is selected from the class consisting of CH_3O—, C_2H_5O—, C_3H_7O—, and C_4H_9O—, and each Y′ is selected from the class consisting of H, CH_3O—, C_2H_5O—, C_3H_7O—, and C_4H_9O—; the total number of C's in Y, Y′ plus Y′ being at least two.

2,950,294

SUBSTITUTED BENZENESULFONYL-HYDRAZONES (Q)

Hans Willi Zimmer, Cincinnati, Ohio, assignor to The Chattanooga Medicine Company, Chattanooga, Tenn., a corporation of Tennessee

No Drawing. Filed July 1, 1958, Ser. No. 745,828

4 Claims. (Cl. 260—397.7)

1. A compound selected from the group consisting of a compound having the formula:



and sodium, potassium, zinc and copper carboxylic acid salts of the compound having said formula; wherein Y is a monovalent radical selected from the group consisting of —NO_2, —NH_2 and —$NHCOCH_3$, n is an integer from 1 to 5, and R is selected from the group consisting of —CH_3 and —C_2H_5.

2,950,295

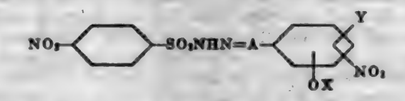
SUBSTITUTED BENZENESULFONYL-HYDRAZONES (K)

Hans Willi Zimmer, Cincinnati, Ohio, assignor to The Chattanooga Medicine Company, Chattanooga, Tenn., a corporation of Tennessee

No Drawing. Filed July 1, 1958, Ser. No. 745,832

3 Claims. (Cl. 260—397.7)

1. A compound having the following formula:



wherein A is a trivalent aliphatic hydrocarbon group having from one to six carbon atoms, any unsaturation in A being in the form of a single olefinic group, Y is selected from the class consisting of —OX, —NO_2 and —X, and X is selected from the group consisting of H and an alkyl group having from one to four carbon atoms.

2,950,296

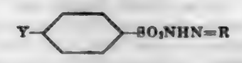
SUBSTITUTED BENZENESULFONYL-HYDRAZONES (L)

Hans Willi Zimmer, Cincinnati, Ohio, assignor to The Chattanooga Medicine Company, Chattanooga, Tenn., a corporation of Tennessee

No Drawing. Filed July 1, 1958, Ser. No. 745,833

3 Claims. (Cl. 260—397.7)

1. A compound having the formula:



wherein Y is a monovalent radical selected from the class consisting of —NO_2— and —NH_2— and R is a divalent C_7—C_{18} aliphatic hydrocarbon radical, any unsaturation in such aliphatic radical being olefinic.

2,950,297

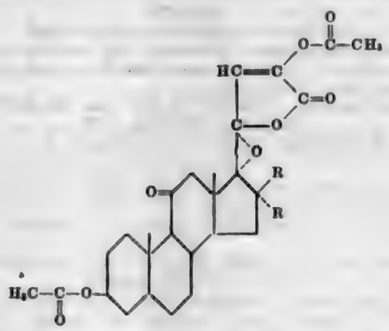
PROCESS FOR THE PRODUCTION OF 16-SUBSTITUTED - 3α - ACETOXY - 17α - HYDROXY-11,20-PREGNANEDIONE

Norman L. Wendler, Summit, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

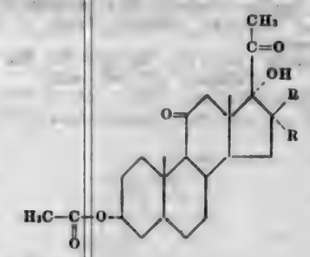
No Drawing. Filed Aug. 7, 1958, Ser. No. 753,639

5 Claims. (Cl. 260—397.45)

5. The process which comprises reacting a compound of the formula—



wherein R is selected from the group consisting of hydrogen and lower alkyl with ethylene diamine to form a compound of the formula—



wherein R is as above.

2,950,298

STEROID SECONDARY 21-PHOSPHATE ESTERS

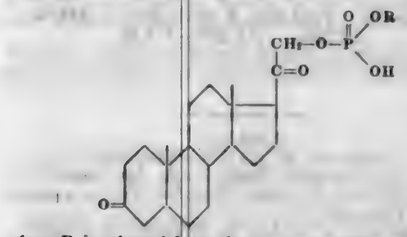
Joseph Elks, London, and Gordon Hanley Phillipps, Greenford, England, assignors to Glaxo Laboratories Limited, Greenford, England, a British company

No Drawing. Filed Nov. 18, 1958, Ser. No. 774,580

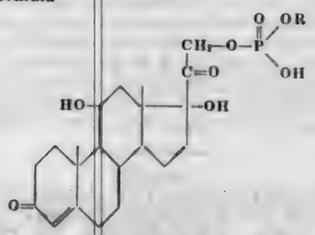
Claims priority, application Great Britain Nov. 19, 1957

19 Claims. (Cl. 260—397.45)

17. A compound selected from the group consisting of a compound having the general formula



where R is selected from the group consisting of an alkyl group containing 1–6 carbon atoms, a hydroxy-substituted alkyl group containing 1–6 carbon atoms, a benzyl group, a nitro-substituted benzyl group, a bromo-substituted benzyl group, a cyano-substituted benzyl group, a phenyl group, a methoxy-substituted phenyl group, a nitro-substituted phenyl group, a carbomethoxy-substituted phenyl group and a phenacyl group; a compound having the general formula



where R has the same meaning as above; the $\Delta^{1,4}$-compound corresponding to said second named compound; and non-toxic water-soluble salts of said saturated and unsaturated compounds.

2,950,299

SURFACE ACTIVE SUBSTANCES OF ETHER ESTER CLASS

Willard H. Kirkpatrick, Sugar Land, Tex., assignor to Visco Products Company, Houston, Tex., a corporation of Delaware

No Drawing. Filed Jan. 6, 1958, Ser. No. 707,116

13 Claims. (Cl. 260—407)

1. A monomeric acidic ester of a dimerized higher fatty acid containing from 34 to 36 carbon atoms and a polyoxyalkylene compound having a terminal hydroxy group in which the major proportion of the molecular weight of said polyoxyalkylene compound consists of oxyethylene and oxypropylene groups, the weight ratio of oxyethylene to oxypropylene not exceeding about 4:1, the weight percentage of oxyethylene in said ester being at least 8% by weight of the total weight of oxyethylene and oxypropylene, the minimum molecular weight attributable to both oxyethylene and oxypropylene groups being at least about 1,000, and the maximum molecular weight attributable to both oxyethylene and oxypropylene groups being 7500, the molar ratio of the said acid to said polyoxyalkylene compound is not less than about 1:1 nor more than about 2:1.

2,950,300

LOW TEMPERATURE METHOD FOR PRODUCING CHLOROFLUORO ACID HALIDES

David B. Brandon, Orange, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Aug. 27, 1954, Ser. No. 452,704

11 Claims. (Cl. 260—408)

8. A method of preparing an aliphatic perhalogenated carboxylic acid containing fluorine which comprises subjecting a perhalogenated aliphatic olefin containing halogen atoms selected from the group consisting of fluorine and chlorine, having at least 7 carbon atoms and being at least half fluorinated to oxidation at a temperature not higher than about 0° C. in the presence of a permanganate salt in substantially non-aqueous solution to produce an acid halide as the reaction product and thereafter adding water to the reaction product.

2,950,301

PREPARATION OF ORGANOTIN AND LEAD COMPOUNDS

James M. Riddle, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 1, 1959, Ser. No. 810,239

6 Claims. (Cl. 260—429.7)

1. A process for the manufacture of an organometallic compound of a metal selected from the group consisting of lead and tin which comprises reacting a compound selected from the group consisting of lead and tin salts and oxides which are essentially inert to water with an organoborane compound selected from the group consisting of trialkylborane and trialkenylborane in the presence of water.

2,950,302

PREPARATION OF ORGANOMETALLIC COMPOUNDS

James M. Riddle, Baton Rouge, La.

No Drawing. Filed May 1, 1959, Ser. No. 810,240

11 Claims. (Cl. 260—429.7)

1. The process for the manufacture of an organometallic compound of a metal selected from the group consisting of lead, tin, and mercury which comprises reacting a compound selected from the group consisting of lead, tin, and mercury salts and oxides which are essentially inert to water with a bimetallic hydrocarbon metal compound wherein one metal is boron and the other metal is selected from the group consisting of alkali and alkaline earth metals in the presence of water.

2,950,303

PREPARATION OF ORGANOMERCURY COMPOUNDS

James M. Riddle, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed May 1, 1959, Ser. No. 810,236

4 Claims. (Cl. 260—431)

1. A process for the manufacture of mercury products selected from the group consisting of alkyl- and alkenyl-

mercury compounds which comprises reacting an organoborane selected from the group consisting of trialkyl- and trialkenylborane with an oxide of mercury in the presence of water.

2,950,304
PREPARATION OF ORGANOMERCURY COMPOUNDS
James M. Riddle, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 1, 1959, Ser. No. 810,237
5 Claims. (Cl. 260—431)

1. The process for the manufacture of an organomercury compound which comprises reacting a mercury salt of an organic acid wherein mercury is attached to carbon through an intermediate atom selected from the group consisting of oxygen and sulfur and wherein said organic acid contains up to about 25 carbon atoms with an organoborane selected from the group consisting of trialkylborane and trialkenylborane in the presence of water.

2,950,305
PREPARATION OF ORGANOMERCURY COMPOUNDS
James M. Riddle, Baton Rouge, La., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 1, 1959, Ser. No. 810,238
5 Claims. (Cl. 260—431)

1. The process for the manufacture of organomercury compounds which comprises reacting an organoborane compound selected from the group consisting of trialkylborane and trialkenylborane with a mercury halide in the presence of water.

2,950,306
ORGANO-FLUORINE COMPOUNDS OF PHOSPHORUS ARSENIC AND ANTIMONY
William Channing Smith, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Mar. 7, 1957, Ser. No. 644,475
7 Claims. (Cl. 260—440)

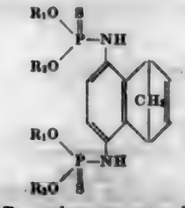
1. Process for preparing at least one member of the class consisting of compounds having the formula $RM(O)F_2$ and compounds having the formula RMF_4, wherein R is an organic radical free of Zerewitinoff hydrogen selected from the class consisting of alkyl, haloalkyl, alkenyl, cycloalkyl, halocycloalkyl, aryl and haloaryl, and M is selected from the class consisting of phosphorus, arsenic, and antimony, which comprises reacting sulfur tetrafluoride with an acid of the general formula $RM(O)(OH)_2$, in which R and M have the same significance as above.

2,950,307
POLYISOCYANATE COMPOSITIONS
Harold France, Arthur Lambert, and Thomas James Meyrick, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Dec. 19, 1955, Ser. No. 553,742
Claims priority, application Great Britain Dec. 24, 1954
7 Claims. (Cl. 260—453)

1. Polyisocyanate compositions of reduced tendency to discolour consisting essentially of at least one polyisocyanate selected from the group consisting of aliphatic, cycloaliphatic and aromatic di- and tri-isocyanates and at least one phenol containing at least one radical selected from the group consisting of tertiary alkyl and α-alkylcycloalkyl radicals having from 4 to 8 carbon atoms, the proportion of phenol in the composition being from 0.1% to 5% by weight of the polyisocyanate.

2,950,308
ADDUCTS OF BENZOQUINONEDIIMINES
Joseph E. Dunbar, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Oct. 28, 1959, Ser. No. 849,162
5 Claims. (Cl. 260—461)

1. A cyclopentadiene adduct of N,N'bis(dialkoxyphosphinothioyl)-p-benzoquinonediimine having the formula



wherein R_1 and R_2 each represent a lower alkyl radical containing from 1 to 4 carbon atoms, inclusive.

2,950,309
AMPHETAMINE TANNATE
Chester John Cavallito, Decatur, Ill., assignor to Irwin, Neisler and Company, Decatur, Ill., a corporation of Illinois
No Drawing. Filed Mar. 8, 1955, Ser. No. 493,961
3 Claims. (Cl. 260—473.5)

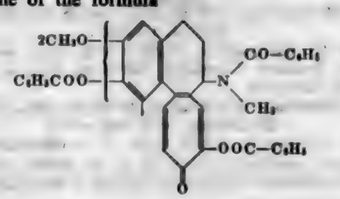
1. Amphetamine tannate having a molecular ratio of approximately 1:1 amphetamine to galloyl gallic acid moiety.

2,950,310
SURFACE ACTIVE SUBSTANCES
Willard H. Kirkpatrick, Sugar Land, Tex., assignor to Visco Products Company, Houston, Tex., a corporation of Delaware
No Drawing. Filed Aug. 8, 1957, Ser. No. 676,917
21 Claims. (Cl. 260—475)

1. A monomeric acidic ester of an organic dicarboxy acid and a polyoxyalkylene compound having a terminal hydroxy group in which the major proportion of the molecular weight of said polyoxyalkylene compound consists of oxyethylene and oxypropylene groups, the weight ratio of oxyethylene to oxypropylene not exceeding 4:1, and the minimum molecular weight attributable to both oxyethylene and oxypropylene groups being at least 1000, with the further proviso that there is only one polyoxyalkylene chain composed of oxyethylene and oxypropylene groups and the major part of the molecular weight of the resultant ester is attributable to oxyethylene groups and oxypropylene groups, the molecular weight of said ester being within the range from 1500 to 7500.

2,950,311
O-DEMETHYL-N-DESACETYL-N-METHYL COLCHICINE AND A PROCESS OF MAKING SAME
Georges Muller, Nogent-sur-Marne, and Paul Bellet, Paris, France, assignors to UCLAF, Paris, France, a corporation of France
Filed Oct. 27, 1955, Ser. No. 543,193
Claims priority, application France Nov. 3, 1954
6 Claims. (Cl. 260—476)

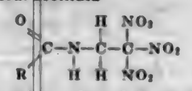
2. The tribenzoyl-O - demethyl-N - deacetyl-N - methyl colchiceine of the formula



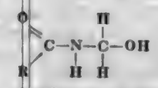
3. In a process of preparing O-demethyl-N-desacetyl-N-methyl colchicine, the steps which comprise dissolving the Colchicum alkaloids obtained by extracting Colchicum seeds with a solvent selected from the group consisting of water, water miscible lower alkanols, and mixtures of water miscible lower alkanols and halogenated lower aliphatic hydrocarbons in a water-immiscible organic solvent selected from the group consisting of chloroform, tetrachloro ethane, and trichloro ethylene, intimately mixing the resulting solution with an aqueous acid, thereby forming water-soluble acid addition salts of the basic components of said Colchicum constituents, removing the organic solvent phase, neutralizing the acid aqueous solution, mixing the neutralized aqueous solution with a water-immiscible organic solvent selected from the group consisting of chloroform, tetrachloro ethane, and trichloro ethylene, separating the resulting extract in the organic solvent from the aqueous solution, mixing the organic extract with an aqueous solution of a base, thereby converting amphoteric components of said Colchicum constituents into salts with said base, separating the basic aqueous solution from the organic solvent phase, acidifying and then neutralizing the basic aqueous solution, extracting said neutralized aqueous solution with a water-immiscible organic solvent selected from the group consisting of chloroform, tetrachloro ethane, and trichloro ethylene, separating the extract in the organic solvent from the aqueous solution, evaporating the organic solvent from the extract, and recrystallizing the evaporation residue to produce O-demethyl-N-desacetyl-N-methyl colchicine in crystalline form.

2,950,312
PROCESS FOR PRODUCING N-TRINITROETHYL URETHANES, AMIDES, AND UREAS
Therese Quadflieg, Hamburg-Blankensee, Germany, assignor to Nitroglycerin Aktiebolaget, Gyttorp, Sweden, a corporation of Sweden
No Drawing. Filed Oct. 25, 1957, Ser. No. 692,249
Claims priority, application Sweden Oct. 26, 1956
2 Claims. (Cl. 260—482)

1. A process for producing trinitroethylsubstituted acid amides of the general formula



wherein R is a member selected from the group consisting of lower alkyl, lower oxyalkyl, phenyl and NH_2 which comprises reacting, in the presence of an inert solvent, nitroform with an oxymethylene compound of the general formula



wherein R has the significance indicated above, and recovering the compound so produced.

2,950,313
SURFACE ACTIVE POLYOXYPROPYLENE ESTERS
Willard H. Kirkpatrick, Sugar Land, Tex., assignor to Visco Products Company, Houston, Tex., a corporation of Delaware
No Drawing. Filed July 2, 1957, Ser. No. 669,466
16 Claims. (Cl. 260—484)

1. A polyoxypropylene compound having a terminal hydroxy group which has been esterified with a carboxy acyl group, said polyoxypropylene compound having an average molecular weight of at least 1200, the major proportion of the average molecular weight of said ester being attributable to oxypropylene groups, said ester containing only one oxypropylene chain and having a molecular weight not exceeding 7500.

2,950,314
COLOR COUPLERS FOR COLOR PHOTOGRAPHY
Arthur Henri De Cat, Mortsel-Antwerp, and Raphaël Karel Van Poucke, Mechlin, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a Belgian company
No Drawing. Filed Apr. 3, 1956, Ser. No. 575,718
Claims priority, application Great Britain Apr. 5, 1955
2 Claims. (Cl. 260—507)

2. A sulphonated aroyl-acetarylide of the following structure:

$$R—CO—CH_2—CO—NH—R'—SO_3Me$$

wherein R represents an aryl radical selected from the group consisting of alkoxyphenyl, alkoxy naphthyl, dialkoxy phenyl, dichloro alkoxy phenyl, isooctyl phenoxy ethoxy phenyl, nitrophenyl, and acylamino phenyl, R' represents a monocyclic arylene radical of the benzene series, selected from the group consisting of phenylene, chlorophenylene, dialkyl amino phenylene, alkyl phenylene, alkoxy phenylene, dialkoxyphenylene, and acylaminophenylene, and Me represents an alkali metal atom, said sulphonated aroyl acetarylide being prepared by condensing an aroyl acetic ester of the following formula:

$$R—CO—CH_2—CO—OR''$$

wherein R'' represents a lower alkyl group, with a compound of the formula $H_2N—R'—SO_3F$, and hydrolyzing the resulting compound in the presence of an alkali metal hydroxide.

2,950,315
PRODUCTION OF 3,5-DIIODOTHYRONINE
Paul Z. Anthony, Morton Grove, Ill., assignor to Baxter Laboratories, Inc.
No Drawing. Filed June 18, 1956, Ser. No. 591,797
6 Claims. (Cl. 260—519)

4. A process for the production of 3,5-diiodothyronine from thyroxine comprising suspending thyroxine in a solution of about 57% hydriodic acid, refluxing the suspension so achieved for about 1 to 3 hours until a clear solution results, and recovering 3,5-diiodothyronine from said solution.

2,950,316
PURIFICATION OF FUMARIC ACID
Elmer H. Dobratz, Clayton, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Filed Nov. 19, 1952, Ser. No. 321,507
8 Claims. (Cl. 260—537)

1. A method for purifying crude fumaric acid comprising converting the fumaric acid into an aqueous solution of an alkali metal acid salt of fumaric acid, separating insoluble materials from said solution, acidifying the said solution with a strong acid to precipitate fumaric acid crystals and recovering relatively pure fumaric acid.

2,950,317
PROCESS FOR PREPARATION OF PERFLUOROALKYL SULFONYL CHLORIDES
Harvey A. Brown, East Oakdale Township, Washington County, and Ralph I. Coon, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Filed Oct. 21, 1957, Ser. No. 691,121
3 Claims. (Cl. 260—543)

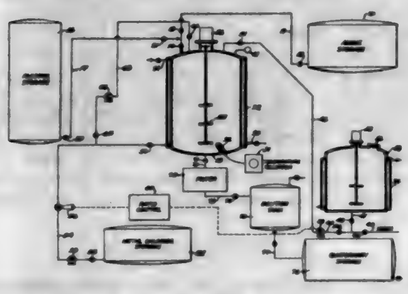
1. A process for the production of fluorocarbon sulfonyl chlorides which comprises interreacting at moderate temperature and in the presence of an inert solvent a compound represented by the formula

$$R_fSO_2F$$

wherein R_f is a saturated perfluoroalkyl group contain

ing 1 to 18 carbon atoms, with an at least stoichiometric amount of hydrazine, treating the resulting reaction mixture with chlorine at moderate temperature and recovering therefrom a fluorocarbon sulfonyl chloride.

2,950,318
PROCESS FOR THE PRODUCTION OF QUATERNARY AMMONIUM COMPOUNDS
Sydney H. Shapiro, Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 16, 1957, Ser. No. 690,866
8 Claims. (Cl. 260—567.6)



1. In a process for the production of a quaternary ammonium chloride wherein methyl chloride is slowly added to an amine selected from the group consisting of primary and secondary amines having the formulas RNH_2 and R_2NH wherein R is an aliphatic hydrocarbon radical having from 8 to 18 carbon atoms, the improvement which comprises adding simultaneously with but separate from said methyl chloride, a stoichiometrically proportional quantity of sodium hydroxide.

2,950,319
PURIFICATION OF AROMATIC META-DIAMINES
Leslie M. Schenck, Westfield, and Albert Bloom, Summit, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed May 1, 1956, Ser. No. 581,830
1 Claim. (Cl. 260—582)

Process for the prevention of discoloration of meta-phenylenediamine, which consists in the step of passing molten meta-phenylenediamine through a bed of silica gel at a temperature of 120° C., so as to effect the stabilization thereof whereby resistance to deterioration of the meta-phenylenediamine is improved and the tendency of the treated meta-phenylenediamine to remain colorless is increased.

2,950,320
5-BENZOYL PENTANOL-1
Edwin J. Vandenberg, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed May 27, 1953, Ser. No. 357,905
1 Claim. (Cl. 260—592)

As a composition of matter 5-benzoyl pentanol-1.

2,950,321
PRODUCTION OF BETA-IONYLIDENE-ETHYL-TRIARYL PHOSPHONIUM HALIDES
Wilhelm Sarnecki and Horst Pommer, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Aug. 29, 1958, Ser. No. 757,894
Claims priority, application Germany, Sept. 3, 1957
7 Claims. (Cl. 260—606.5)

1. The process of producing beta-ionylidene-ethyl-triarylphosphonium halides which comprises reacting a triarylphosphine halide from the group consisting of triphenylphosphine hydrohalide and tri-(lower-alkyl-substituted-phenyl)-phosphine hydrohalide with 5-(2',6',6'-trimethylcyclohexene-(1')-yl-(1'))-3-methyl-pentadiene-(1.4)-ol-(3).

2,950,322
METHOD OF PREPARING A VINYLPHENYL BOROXOLE
Arthur K. Hoffmann, Stamford, Conn., and Stephen J. Groszos, Cincinnati, and Walter M. Thomas, Noroton Heights, Ohio, assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Original application Sept. 6, 1957, Ser. No. 682,312. Divided and this application Aug. 19, 1959, Ser. No. 834,643
6 Claims. (Cl. 260—606.5)

1. The method of preparing a vinylphenyl boroxole which comprises dehydrohalogenating, by heating under anhydrous conditions and while admixed with a base, the corresponding alpha-X-ethylphenyl boroxole where X represents a halogen selected from the class consisting of chlorine and bromine.

2,950,323
MERCAPTAN SYNTHESIS
Bernard Loev, Philadelphia, and John T. Massengale, West Chester, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Filed Apr. 10, 1958, Ser. No. 727,550
13 Claims. (Cl. 260—609)

1. A method for manufacturing mercaptans which comprises the steps of forming a mixture of hydrogen sulfide and an alcohol having from 3 to 18 carbon atoms and having the formula:



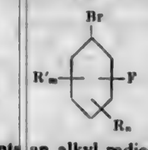
where R, R' and R'' are selected from the class consisting of hydrogen and hydrocarbon radicals free of aliphatic unsaturation, the molar ratio of H_2S:alcohol in said mixture being from 1:1 to 10:1, and contacting said mixture at a temperature of from 100° to 425° C. under a superatmospheric pressure of at least 50 lbs./in.² gage with an acidic catalyst in solid form, said catalyst being an oxygen acid compound of an element selected from the class consisting of B, Si, S and P, said alcohol being free from groups reactive with H_2S under said reaction conditions, and isolating from the resulting reaction product a mercaptan selected from the group consisting of secondary and tertiary mercaptans having the same number of carbon atoms as the starting alcohol.

2,950,324
HIGH MOLECULAR WEIGHT MERCAPTAN
Bernard Loev, Philadelphia, and Roland H. Goshorn, Fort Washington, Pa., assignors to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 10, 1958, Ser. No. 727,666
5 Claims. (Cl. 260—609)

1. Process for the production of high molecular weight mercaptans of from 8 to 18 carbon atoms which comprises passing a mixture of a propylene homopolymer and hydrogen sulfide through a reaction zone containing a phosphoric acid catalyst supported on a silicaceous carrier, at a temperature of from about 25° to about 100° C. and at a pressure of from about 50 to about 350 p.s.i.g.

2,950,325
PROCESS FOR MAKING FLUOROPHENOLS
Edgar C. Britton and Andrew J. Dietzler, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed June 6, 1958, Ser. No. 740,214
8 Claims. (Cl. 260—623)

1. A method of hydrolyzing a bromo-fluoro-substituted aromatic compound to produce a fluorine-containing phenol, which method comprises heating a mixture consisting of one gram molecular proportion of a bromo-fluoro-substituted aromatic compound having the general formula:



wherein R represents an alkyl radical containing from 1 to 18 carbon atoms and *n* is an integer from 0 to 2, and R' represents a member of the group consisting of the phenyl, tolyl, xylyl, benzyl, alpha-methylbenzyl, phenethyl, cyclohexyl and methylcyclohexyl radicals and *m* is an integer from 0 to 1, from 0.25 to 2.5 chemically equivalent proportions of at least one inorganic alkaline earth metal compound selected from the group consisting of the oxides and hydroxides of an alkaline earth metal, based on a gram atomic weight of the bromine in the bromo-fluoro-substituted aromatic compound, and water at reaction temperatures between 190° and 250° C. under a pressure at least as great as the autogenous pressure of the mixture of the materials and in the presence of a copper-containing catalyst.

2,950,326
HYDROGENATION OF 1,4-BUTYNEDIOL TO 1,4-BUTANEDIOL
Eugene V. Hort, Westfield, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Dec. 31, 1957, Ser. No. 706,251
4 Claims. (Cl. 260—635)

1. A process for the catalytic hydrogenation of 1,4-butynediol to 1,4-butanediol comprising admixing an aqueous solution of 1,4-butynediol with a nickel catalyst and treating the resulting mixture at an alkaline pH with hydrogen at a temperature of about 15 to 120° C. and a pressure of about 0 to 30 atmospheres gauge until the 1,4-butynediol has been hydrogenated to 1,4-butanediol.

2,950,327
PREPARATION OF PENTAERYTHRITOL
Raymond Carpentier, Ixelles, and Pol Lambert, Uccle, Belgium, assignors to Union Chimique Belge, S.A., Brussels, Belgium, a corporation of Belgium
No Drawing. Filed Mar. 28, 1958, Ser. No. 724,500
Claims priority, application Belgium Feb. 24, 1958
6 Claims. (Cl. 260—635)

1. A process for the preparation of pentaerythritol which comprises reacting one mole of acetaldehyde with 4 to 5.5 moles of formaldehyde in the presence of (*a*) 1 to 3 equivalent-moles of an alkaline reacting condensation agent selected from the group consisting of alkali metal and alkaline earth metal hydroxides, and (*b*) from 0.05 to 5% based on the total weight of said aldehydes of a catalyst containing at least one organic compound forming free radicals and selected from the group consisting of acetyl, benzoyl and acetyl benzoyl peroxides; t-butyl, cumene and tetrahydronaphthalene hydroperoxides; 2,2'-azo-bis-isobutyronitrile, 2,2'-azo-bis-2,4-dimethylisovaleronitrile, 1,1-azo-bis-1-cyclohexanenitrile and 2,3-butanedione, said reacting being carried out in an aqueous medium and at a temperature between 15 and 40° C.

2,950,328
CYCLOPROPYL DERIVATIVES AND PROCESSES FOR MAKING THE SAME
Milton Orchin, Cincinnati, Ohio, assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Dec. 21, 1955, Ser. No. 554,427
3 Claims. (Cl. 260—648)

1. 1,1-dichloro-2-methyl-2-vinylcyclopropane.
2. 1,1-dichloro-2-isopropenylcyclopropane.
3. 1,1-dichloro-2-vinylcyclopropane.

2,950,329
PRODUCTION OF CHLORSTYRENES
Franz Reichenecker, Hubert Suter, and Helmut Orth, Ludwigshafen (Rhine), Erich Stoeckl, Mannheim, and Matthias Seefelder, Ludwigshafen (Rhine)-Oppau, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany
No Drawing. Filed Aug. 16, 1957, Ser. No. 678,538
Claims priority, application Germany Aug. 28, 1956
9 Claims. (Cl. 260—650)

1. A process for the production of chlorstyrenes which comprises chlorinating with gaseous chlorine a compound selected from the group consisting of ethylbenzene, ethylmonochlorbenzene and ethyldichlorbenzene in the gas phase at a temperature from about 140° to about 400° C. in the presence of a chlorination catalyst containing a platinum metal, dehydrogenating the resultant mixture of chlorinated products in the gas phase in the presence of a dehydrogenation catalyst at a temperature from about 500° to about 650° C.

6. A process for the production of nuclear-chlorinated ethylbenzene which comprises chlorinating with gaseous chlorine a compound selected from the group consisting of ethylbenzene, ethylmonochlorbenzene and ethyldichlorbenzene in the gas phase at a temperature from about 140° to about 400° C. in the presence of a chlorination catalyst containing a platinum metal.

2,950,330
1,3-DICHLOROPROPYNE
William E. Duggins, Berkley Heights, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 31, 1958, Ser. No. 712,292
1 Claim. (Cl. 260—654)

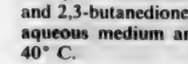
The process of preparing 1,3-dichloropropyne which comprises treating one mole of propargyl chloride with an aqueous solution containing one to three moles of sodium hypochlorite for a period of time sufficient to yield the said 1,3-dichloropropyne.

2,950,331
3-BROMO-1-CHLORO-1-PROPYNE
William E. Duggins, Berkley Heights, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Jan. 31, 1958, Ser. No. 712,293
1 Claim. (Cl. 260—654)

3-bromo-1-chloro-1-propyne.

2,950,332
CONVERSION OF KETONES TO AROMATICS
William Judson Mattox, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Filed Nov. 26, 1958, Ser. No. 776,399
4 Claims. (Cl. 260—668)

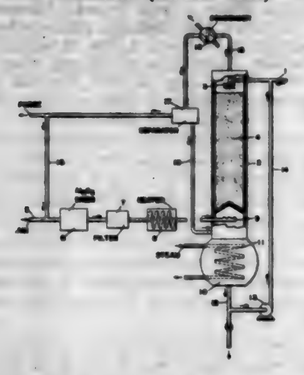
1. A process for the preparation of a polyalykylated aromatic compound which comprises reacting a ketone having the formula



wherein R is selected from the group consisting of hy-

drogen, alkyl and aryl radicals and R′ is selected from the group consisting of alkyl and aryl radicals in the presence of a crystalline metallic alumino-silicate zeolite having a uniform pore opening of about 6 to 15 Angstrom units at a temperature of from about 300° to about 900° F.

2,950,333
METHOD FOR CONTROLLING THE OXIDATION OF POLYMER OILS
Donald F. Koenecke, Westfield, and Ober C. Slotterbeck, Rahway, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed July 24, 1957, Ser. No. 673,974
4 Claims. (Cl. 260—669)



1. In a method for oxidizing a liquid polymeric hydrocarbon drying oil wherein the oil is blown with an oxygen-containing gas, the method of controlling the oxidation to incorporate a predetermined amount of oxygen in the polymeric oil which comprises periodically removing samples of the oxidized oil during oxidation, titrating the samples at a constant non-volatile content with a C_1 to C_4 alcohol until the samples become turbid, and stopping the oxidation when the amount of oxygen in the samples has reached the predetermined amount.

2. Process according to claim 1 in which the polymer oil is a liquid sodium polymer of 0–40% styrene and 60–100% butadiene.

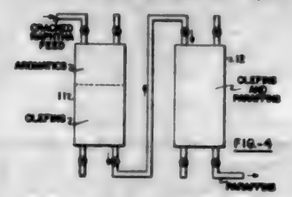
2,950,334
PROCESS OF PREPARING O-DIVINYLBENZENE
Arthur Clay Cope, Belmont, Mass., and Carleton Thomas Handy, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Filed Nov. 4, 1957, Ser. No. 694,123
10 Claims. (Cl. 260—669)

1. A method for preparing o-divinylbenzene which comprises reacting acetylene with divinylacetylene in the presence of a nickel carbonyl complex of the general formula $[(RO_m)_3P]_yNi(CO)_{4-y}$, wherein m is a cardinal number not greater than 1, y is an integer of from 1 to 3, and R is a hydrocarbon radical free of aliphatic unsaturation.

2,950,335
PREPARATION OF DIALKYL SUBSTITUTED AROMATIC COMPOUNDS
Robert H. Roesnwald, Western Springs, and Edward H. Valance, Oak Park, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Filed Sept. 22, 1958, Ser. No. 762,236
11 Claims. (Cl. 260—671)

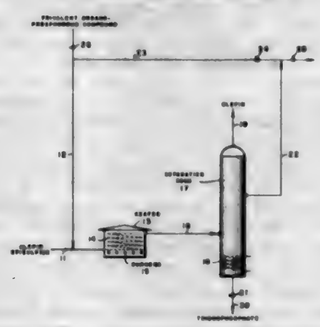
1. A process for the alkylation of an alkylatable automatic compound which comprises alkylating said compound with an olefinic hydrocarbon at alkylating conditions in the presence of a boria-alumina mixture, and recovering the resultant alkylated compound.

2,950,336
SEPARATION OF AROMATICS AND OLEFINS USING ZEOLITIC MOLECULAR SIEVES
Charles Newton Kimberlin, Jr., and William Judson Mattox, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Dec. 7, 1956, Ser. No. 626,989
4 Claims. (Cl. 260—674)



1. A process for selectively separating hydrocarbons selected from the group consisting of aromatic hydrocarbons and mixtures of aromatic hydrocarbons and olefinic hydrocarbons, from a hydrocarbon feedstock including said hydrocarbons in admixture with other hydrocarbons, which comprises: passing said feedstock in the vapor phase into one end of a first, and then through one end of a second, of a series of two separate molecular sieve adsorption zones for a period of time at least sufficient to desorb from said first zone all hydrocarbons other than olefins and aromatics initially adsorbed in said first zone, discontinuing the passing of said feedstock through said zones, desorbing and recovering the adsorbed hydrocarbon from said first zone, passing said feedstock in series through the other end of said second and then through the other end of said first of said zones for a period of time at least sufficient to desorb from said second zone all hydrocarbons other than olefins and aromatics adsorbed in said second zone, discontinuing the flow of said feedstock to said zones, and desorbing and recovering the adsobred hydrocarbons from said second zone.

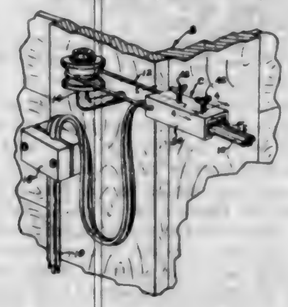
2,950,337
PREPARATION OF OLEFINS FROM OLEFIN EPISULFIDES
Norman P. Neureiter, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Filed Sept. 17, 1958, Ser. No. 761,532
5 Claims. (Cl. 260—677)



1. A method for preparing an olefin which comprises heating together an olefin episulfide having from 2 to about 15 carbon atoms in the molecule and a trivalent organo-phosphorous compound selected from the group consisting of the phosphines and phosphites at a reaction temperature within the range from about 100° to about 300° C. at a pressure sufficient to maintain the episulfide and organo-phosphorous compound in the liquid phase to form an olefin having the same stereochemistry as the episulfide and recovering said olefin.

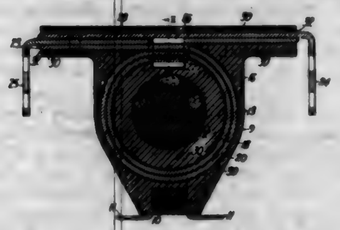
ELECTRICAL

2,950,338
PLASTIC INSULATED ELECTRICAL LINE AND MOUNTING THEREFOR
John M. Taylor, North Haven, Conn., assignor to The Whitney Blake Company, Hamden, Conn., a corporation of Connecticut
Filed Dec. 23, 1957, Ser. No. 704,470
5 Claims. (Cl. 174—40)



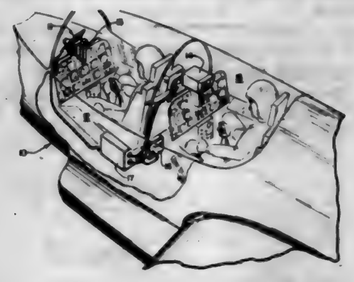
1. An electrical line and mounting therefor, comprising, in combination, a support member extending the full length of said line and at least one electrical conductor extending in spaced, parallel relation thereto, said support member and conductor being integrally embedded in a thermoplastic insulating material with their central axes defining a reference plane, said support member being substantially larger in diameter than said conductor, a clamp in engagement with said line for securing same to a stationary object, said clamp having opposed jaws exerting a gripping force on said line in a direction substantially normal to said reference plane, and means compressing said jaws to penetrate through said insulating material adjacent said support member and to be in direct frictional contact with said support member on opposite sides thereof, said jaws being free from contact with said conductor by engagement with said support member.

2,950,339
METHOD AND STRUCTURE FOR ENCAPSULATING ELECTRIC APPARATUS
Carl E. Mercier, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed May 14, 1956, Ser. No. 584,695
2 Claims. (Cl. 174—102)



1. The combination comprising a current conducting member, a first layer of resilient tape formed substantially around said member, a second layer of resilient mesh formed around said first layer of resilient tape, a third layer of resilient tape formed around said second layer of resilient mesh, and a fourth layer of thermosetting insulating material arranged substantially around said third layer of resilient tape.

2,950,340
AIRCRAFT MONITORING SYSTEM
Frank G. Compton and Herbert J. Crump, Columbus, Ohio, assignors to North American Aviation, Inc.
Filed Sept. 24, 1957, Ser. No. 685,979
6 Claims. (Cl. 178—6)

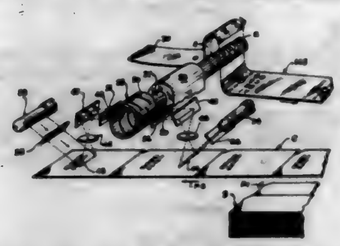


1. In a trainer-type airplane, in combination: a first airplane cockpit, a gunsight mounted in said first cockpit and having a reticle image projected along a first line, a vidicon unit aligned with said first line and receiving said reticle image and establishing a corresponding electrical signal, a second airplane cockpit located near said first cockpit, a monitor unit converting each electrical signal received therein into a facsimile and displaying the facsimile in viewable relation to a person occupying said second cockpit, and means amplifying said vidicon unit electrical signal and transmitting the resulting amplified signal to said monitor unit, said monitor unit thereby displaying a facsimile of said gunsight reticle image to a person occupying said second cockpit portion for aid in instructing the person occupying said first cockpit portion during an aircraft gunnery training mission.

2,950,341
PRINTING MACHINES
John H. Gruver, Cleveland Heights, Ohio, assignor to Addressograph-Multigraph Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Mar. 10, 1958, Ser. No. 720,505
12 Claims. (Cl. 178—6.6)

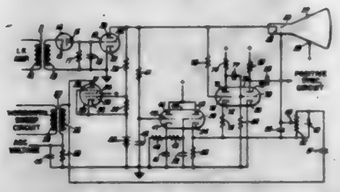
1. In a facsimile printing machine of the kind described wherein individual business instruments such as tabulating cards or the like bearing data to be reproduced are exposed one by one to a scanner having scanning slots for collecting data to be reproduced on a sheet or the like by a signally controlled vibrator cooperating with a printing anvil, and including means to translate signally the data scanned for transmission to the vibrator and means to rotate the scanner, a printing station comprising a shaft adapted to be driven synchronously with the scanner, a plurality of disks individually assembled

about said shaft and each being allocated to a vibrator to reproduce a given fractional portion of the data on said sheet at the printing station, means to lock said disks one to the other and for synchronized rotation with said shaft, and a plurality of printing anvils in the form



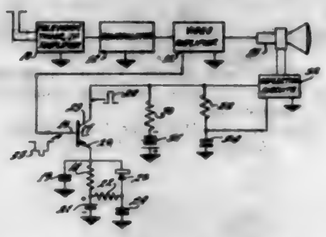
of edge elements projecting from said disks and arranged in axial pitched relation thereon, said disks being individually adjustable axially with respect to said shaft to enable blank spacer disks to be assembled on said shaft between adjacent ones of the disks having such edge elements thereon.

2,950,342
SIGNAL SEPARATION CIRCUITS
Henry E. Revercomb, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed June 28, 1954, Ser. No. 439,780
4 Claims. (Cl. 178—7.3)



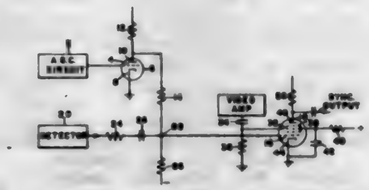
4. In a television receiving apparatus adapted to receive a composite television signal wave comprising a carrier wave including amplitude-modulation components including a picture component, a recurrent reference pulse component having a predetermined time duration and an average amplitude in excess of the average maximum amplitude of said picture component, and a recurrent synchronization pulse component having a shorter time duration than said reference pulse and an average amplitude in excess thereof, the combination comprising, a detector for demodulating said carrier wave, a video amplifier for amplifying said demodulated wave having input and output terminals, said input terminals being connected to said detector, an integrating circuit comprising a resistor and a capacitor connected in the order named between the output terminals of said video amplifier and a point of fixed reference potential for removing substantially all of said recurrent synchronization pulse component from said wave, means connected between the resistor and capacitor of said integrating circuit and said point of fixed reference potential for developing a dynamic biasing potential corresponding substantially to the amplitude of said reference pulses, a clipper circuit including an electron discharge device having a cathode, anode and control electrode, means for directly coupling said control electrode to the output of said video amplifier, means for applying said dynamic biasing potential to said cathode thereby biasing said electron discharge device non-conductive until the signals applied thereto reach an amplitude exceeding the amplitude of said reference component, and means in said clipper circuit for clipping the amplitude of the output of said electron discharge device.

2,950,343
NOISE IMMUNE AMPLITUDE DISCRIMINATORY SYSTEM
Hunter C. Goodrich, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Jan. 26, 1955, Ser. No. 484,232
13 Claims. (Cl. 178—7.3)



1. A signal processing circuit comprising in combination, an input circuit for receiving signal information including a first portion having a predetermined recurrent rate and a second portion having a different recurrent rate, a semiconductor device having base, emitter and collector electrodes, means connecting said base and emitter electrodes with said input circuit to define a base-emitter path, a first time constant network intercalated in said base-emitter path, said network responsive to said predetermined recurrent rate, a second time constant network, said last mentioned network responsive to said different recurrent rate, means for selectively coupling said second network with said path in response to signals in said input circuit, and means including an output circuit coupled with said collector electrode for deriving therefrom amplified signal information representative of said first and second portions.

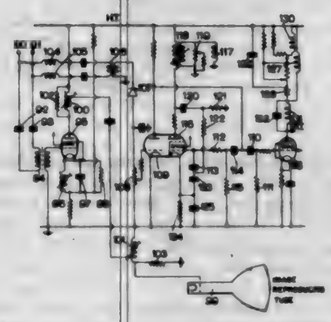
2,950,344
COMPENSATED NOISE CANCELLING CIRCUIT
Van R. Gibson, Jr., North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 31, 1956, Ser. No. 588,311
3 Claims. (Cl. 178—7.3)



1. A circuit for separating synchronizing signals and minimizing the effects of noise on the separated synchronizing signal comprising in combination a first amplifier having a cathode, an inner control electrode, a screen electrode, an outer control electrode and an anode, a source of B+ potential, a load impedance connected between said anode and said source, a second source of potential, a connection between said screen electrode and said second source, a direct connection between said cathode and ground, means for supplying video signals in which the synchronizing pulses are positive, a first capacitor connected between the output of said means and said outer control electrode, a grid leak resistor connected between said outer control electrode and ground, the RC time constant of said first capacitor and said grid leak resistor being long enough that only said positive synchronizing pulses produce any substantial output at said anode, a second amplifier having a cathode, a control

electrode and an anode, a load impedance connected between said anode and said source of B+ potential, a resistor connected between said latter anode and said inner control electrode of said first amplifier, a source of negative automatic gain control voltage, means for applying said source of negative automatic gain control voltage to said control electrode of said second amplifier, a source of video signals in which the synchronizing pulses extend in a negative direction, a coupling network connected between said latter source and said inner control electrode of said second amplifier, said latter network including a second capacitor.

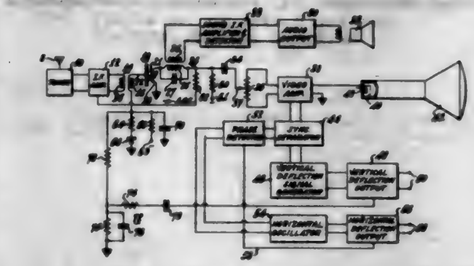
2,950,345
TELEVISION RELAY SYSTEMS
Eric John Gargini, Ylewsley, West Drayton, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed June 15, 1954, Ser. No. 436,933
Claims priority, application Great Britain June 17, 1953
6 Claims. (Cl. 178—7.5)



1. In television relay apparatus including means for generating a scanning waveform comprising a sawtooth signal of line frequency superimposed on an impulsive component of frame frequency with intervals between successive impulses of said impulsive component corresponding to frame return strokes, a receiver remotely located from said generating means and including a cathode ray tube, and means for relaying said scanning waveform from said generating means to said receiver; a scanning circuit in said receiver for said cathode ray tube comprising a pair of input terminals, means for applying said scanning waveform to said input terminals, said scanning circuit comprising an integrating circuit for integrating the scanning waveform applied to said input terminals to derive a frame deflecting waveform, means responsive to the output of said integrating circuit for deflecting the beam of said cathode ray tube in one co-ordinate direction, a high pass filter for separating said sawtooth component from the scanning waveform applied to said input terminals, and means responsive to said separated sawtooth component for deflecting the beam of said cathode ray tube in another coordinate direction.

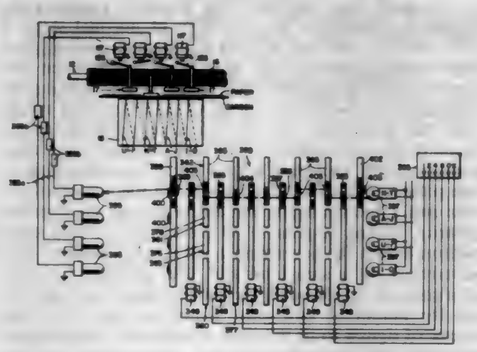
2,950,346
TELEVISION RECEIVERS
Larry A. Freedman, New Brunswick, N.J., and Roland N. Rhodes, Levittown, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed July 21, 1958, Ser. No. 749,938
11 Claims. (Cl. 178—7.5)

5. In a television receiver, the combination with a kinescope and a video detector, of means providing increased conduction of said video detector during the vertical retrace interval of the vertical deflection cycle of said receiver to provide a blacker than black video output signal, and means for applying said video signal to said kinescope



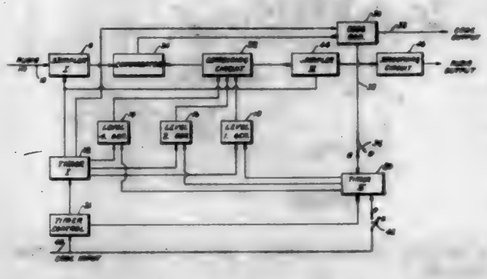
to provide vertical blanking thereof during said retrace interval.

2,950,347
STORAGE, INTERPRETING AND PRINTING MACHINE
Paul R. Hoffman, Woodlyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed Apr. 29, 1958, Ser. No. 731,714
23 Claims. (Cl. 178—23)



1. In a recording apparatus wherein a plurality of recording elements are permutably actuated to strike rotatable type carrying means in response to applied electrical pulses in coded form, storage means including a plurality of discs affixed to a shaft and rotatable therewith, each disc including pairs of holes disposed adjacent the periphery thereof, means associated with each pair of holes and movable between two positions to respectively block either hole of said pair, means responsive to said pulses for actuating said last means between said two positions, decoding means including a plurality of sets of apertured scanning discs, said sets corresponding in number to said plurality of recording elements and disposed about said storage discs, each set of scanning discs being affixed on a shaft parallel to said central shaft and in interleaving relation with said storage discs, a source of light adjacent one end of each set of scanning discs, light responsive means adjacent the other end of each set of scanning discs, means for rotating said sets of scanning discs and said storage discs relative to each other, whereby apertures in each set of scanning discs are aligned with unblocked holes in the storage discs for transmitting light from said light source to said light responsive means, in at least one predetermined relative position of said discs, and means coupled to said light responsive means for actuating said recording elements.

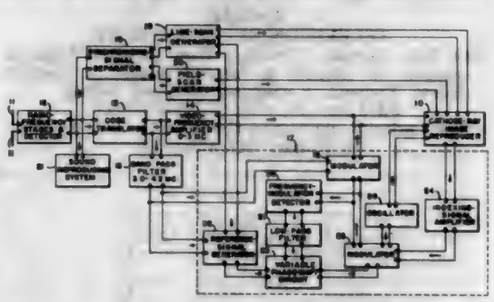
2,950,348
COMBINED ENCODER AND DECODER SYSTEM
Donald F. Mayer, Philadelphia, Pa., and Joseph C. Uhland, Camden, N.J., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Aug. 3, 1954, Ser. No. 447,477
10 Claims. (Cl. 178—43.5)



7. A combined coder and decoder comprising means for sampling at selected times a signal to be coded, said sampling means being arranged to provide an output signal the amplitude of which is substantially constant in the intervals between successive sampling pulses, said amplitude being representative of a characteristic at the time of sampling of said signal to be coded, a source of variable amplitude reference potential, said source being so arranged that said reference potential normally decreases in amplitude in a plurality of unequal steps in each interval between successive sampling pulses, each step defining a subinterval of the interval between successive sampling pulses, circuit means for comparing the amplitude of the output signal of said sampling means with the amplitude of said reference potential during more than one subinterval of each interval, said comparison circuit providing a first signal for differences of one polarity between the amplitudes of the compared signals and a second signal for differences of the opposite polarity, means responsive to the output of said comparison circuit for generating a pulse in response to each occurrence of a signal of said first polarity, a source of signals to be decoded, means for selectively connecting the output of said pulse generating means or said source of signals to be decoded to said source of reference potential, said reference potential source being so constructed and arranged that the reference potential is increased in response to a pulse supplied thereto from the circuit connected thereto by an amount greater than the next following normal decrease, and means for sampling the amplitude of said reference potential at times immediately preceding said first-mentioned sampling times.

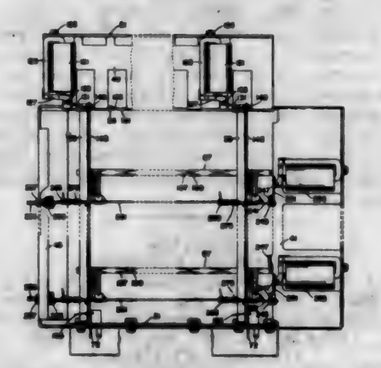
2,950,349
SYNCHRONIZING SYSTEM FOR BEAM-INDEXING COLOR-TELEVISION DISPLAY
Bernard D. Loughlin, Lynbrook, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed May 10, 1955, Ser. No. 507,248
8 Claims. (Cl. 178—5.4)

5. In a color-television receiver, a system for synchronizing the color-repetition frequency of picture signals applied to a color-image reproducer with the color element scanning frequency thereof comprising: a cathode-ray color-image reproducer having primary color elements sequentially scanned by a cathode-ray beam having a predetermined line-scan frequency to reproduce a composite image and having color element scanning frequency variations essentially repetitive at line-scan frequency and including indexing means for developing an indexing signal representative of the scanning frequency of given color elements by the cathode-ray beam; circuit means for supplying a subcarrier reference signal synchronized with the color burst of a received composite video signal; a variable phase-shift circuit coupled to said supply circuit means for varying the phase of said reference signal; a modulator responsive to said indexing signal and to said phase-shifted reference signal for developing a variable-frequency heterodyne signal; a second modulator responsive to received picture signals and to said heterodyne signal for developing picture signals having a color-repetition frequency synchronized with said color element scanning frequency; a frequency-responsive detector for deriving a control signal repetitive at line-scan frequency and representative of frequency variations of said indexing signal; a low-pass filter network coupled



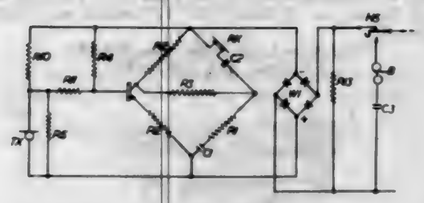
to said frequency-responsive detector for translating said control signal with a leading phase shift at harmonics of line-scan frequency, which phase shift is proportional to the harmonic frequency; and said variable phase-shift circuit being responsive to said control signal for varying the phase of said phase-shifted reference signal in accordance with the frequency of said indexing signal to maintain the total effective phase shift of said indexing signal in its effective translation from said indexing means to said color elements at approximately zero value to minimize the delay of said control, thereby improving synchronization of said color element scanning and color-repetition frequencies and minimizing color distortion of the reproduced image.

2,950,350
CROSSBAR SWITCH
Andrew W. Vincent, 65 Aberdeen St., Rochester 11, N.Y.
Filed Mar. 12, 1957, Ser. No. 645,609
18 Claims. (Cl. 179—27.54)



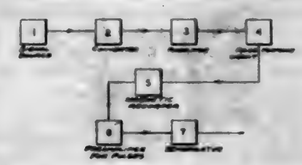
1. An electric switch comprising a first series of electrical conductor members extending in one direction approximately parallel to each other, a second series of electrical conductor members extending in another direction crosswise to the direction of the members of the first series and normally out of contact with but relatively close to portions of the members of the first series, a plurality of pusher members, one located at each crossing point where a conductor member of the first series crosses a conductor member of the second series, each pusher member being movable from a normal rest position wherein its associated conductor member of the first series is out of contact with its associated conductor member of the second series to an actuated position displacing its associated conductor member of the first series into electrical contact with its associated conductor member of the second series, a bellcrank operatively connected to each pusher member to move the same from rest position to actuated position, an actuator bar extending past a plurality of bellcranks and having a plurality of abutment shoulders spaced longitudinally thereof, one for each bellcrank past which the actuator bar extends, means for moving the actuator bar rectilinearly longitudinally, a plurality of selector members extending crosswise to said actuator bar, means for moving any selected one of said selector members rectilinearly longitudinally, and a plurality of interposer members connected to the respective selector members, each interposer member having an interposer portion normally lying out of the path of travel of one abutment shoulder on one of said actuator members and capable of being moved, by longitudinal movement of the selector member on which it is mounted, into a position in the path of travel of said one of said abutment shoulders to lie between such abutment shoulder and an arm of one of said bellcranks, so that subsequent longitudinal movement of said actuator member will move the interposer member which has been shifted to said effective position and, through movement of said interposer member, will move said bellcrank to operate said pusher member to shift one of said conductor members of the first series into electrical contact with one of said conductor members of the second series.

2,950,351
TELEPHONE SUBSCRIBERS' INSTRUMENTS
Hugh Spence Leman, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Dec. 19, 1956, Ser. No. 629,390
Claims priority, application Great Britain Jan. 4, 1956
1 Claim. (Cl. 179—81)



A telephone subscriber's station connected to a two-wire telephone line, a transistor amplifier having an emitter electrode, a collector electrode and a base electrode, a bridge network connected across said line, the said emitter and collector electrodes included in first and second arms of said bridge network in an amplifying path across the line, a telephone receiver included in third and fourth arms of said bridge network in a receiving path across said line, and a telephone transmitter having one side connected to one of said wires and the other side connected to the other wire in a first branch including a first resistance element and connected to the said bridge network in a second branch including a second resistive element and said base electrode in series.

2,950,352
SYSTEM FOR RECORDING AND REPRODUCING SIGNAL WAVES
Hans B. Beick, Troy, N.Y., assignor to Rensselaer Polytechnic Institute, Troy, N.Y., a corporation of New York
Filed Aug. 26, 1953, Ser. No. 376,689
15 Claims. (Cl. 179—100.2)



10. A system for recording a signal wave comprising means for modulating opposite substantially square topped wave modes with the signal wave such that successive wave mode changes establish time ratios as a function of the signal wave, means for recording the modulated modes as a source for synthesizing the original signal and demodulator means responsive only to the ratio of successive modes.

2,950,353
PLIANT DISK MAGNETIC RECORDING APPARATUS
S. M. Fomenko, Los Angeles, Calif., assignor, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Filed July 5, 1955, Ser. No. 519,843
6 Claims. (Cl. 179—100.2)

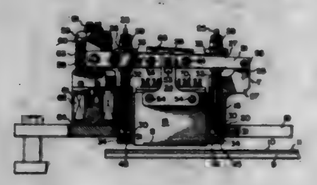


1. In a non-contact magnetic recording device, the combination comprising: a rotatable shaft having an axis; means energizable for rotating said shaft at a preselected velocity; and a pliant record sheet mounted on said shaft and rotatable thereby, said pliant sheet having a magnetizable surface, at least the peripheral portion of said sheet having negligible internal stresses thereby being normally limp and pliable, said sheet, when rotating, responding to centrifugal force to assume substantially the configuration of a surface of revolution having an axis substantially coincident with the axis of said shaft.

2,950,354
MAGNETIC HEAD SUSPENSION
Otto Holmecker, Morrisville, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Filed May 29, 1956, Ser. No. 587,990
7 Claims. (Cl. 179—100.2)

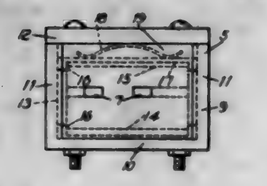
1. A magnetic head assembly including a support, a row of magnetic heads exposed on a substantially planar face thereof, a cross-bar disposed above the head row,

hangers attaching said heads to said cross-bar, a lost motion connection between said hangers and said cross-bar, means mounted on said support to move said cross-bar to shift said heads between retracted and extended terminal positions, spring biased means urging said heads



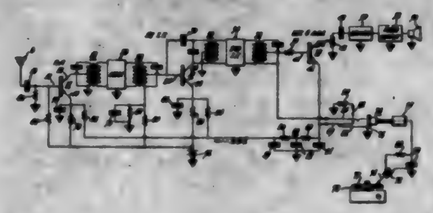
toward said extended position for free floating operation in response to fluid pressure against said face and generated by a record member when rotated therebeneath, and flexible means stabilizing said heads during said free floating operation.

2,950,355
MAGNETIC HEAD ASSEMBLY
William D. Moehring, P.O. Box 105, Vermontville, Mich.
Filed June 11, 1958, Ser. No. 741,403
10 Claims. (Cl. 179—100.2)



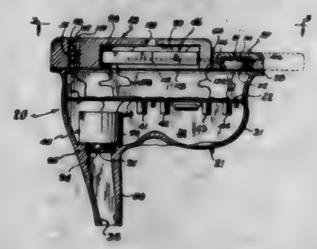
1. An erase head assembly for magnetic tapes comprising a case having an open end and top with side walls extending from a bottom wall, opposed parallel upright slots in the inside of said side walls, spaced retaining bars having their ends located in said slots with the bottom bar supported on the bottom of the case, opposed notches formed in the opposed sides of said bars, a holder consisting of a strip of thin magnetic iron folded into box shape with front, side and back walls and spaced rearwardly projecting parallel ends on the inner ends of said back walls, opposed locating notches formed in the upper and lower edges of said front wall, magnetic core bars having their front ends received in said notches in said front wall and having their rear ends extended across said holder to between said rearwardly projecting ends, means holding said rearwardly projecting ends of said strip in magnetic contact with the rear ends of said cores, thin non-magnetic separator sheets disposed around the front ends of said cores in the slots in said front wall, electromagnet coils disposed around said cores and electrically insulated therefrom, the side walls of said holder being received between said retaining bars and located by the notches therein, said side walls of said holder having notches formed therein engaging the sides of said bars to locate said holder from front to rear of said case, a cover on the open top of said case, yieldable means disposed between said cover and the top bar, and a filler solidified in situ in said case around said holder and coils, the exposed surface of said filler and the front ends of said cores being finished to a smooth surface.

2,950,356
RADIO-PHONOGRAPH CIRCUITS
Harold B. Stott, Glenolden, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 3, 1958, Ser. No. 718,518
7 Claims. (Cl. 179—100.11)



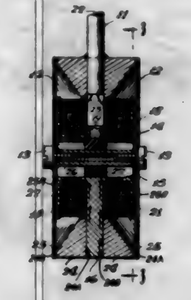
1. In a receiver, the combination with an input stage, an intermediate frequency amplifying stage coupled with said input stage, a combined detector and automatic gain control stage including a transistor having emitter, base, and collector electrodes, means coupling said emitter and collector electrodes with said intermediate frequency amplifying stage, means for biasing said emitter and collector electrodes to detect intermediate frequency signal energy applied thereto from said intermediate frequency amplifying stage, an output stage coupled with said combined detector and automatic gain control stage, and means connecting said combined detector and automatic gain control stage with at least one of said input and intermediate frequency amplifying stages for controlling the gain thereof inversely with changes in strength of a received signal, of connector means for adapting said receiver for the amplification of signals from a signal transducer comprising: means providing signal coupling of signals from said transducer to said combined detector and automatic gain control stage for amplification thereby, and means for changing the bias of said transistor automatic gain control stage to provide relatively high gain amplification of signals from said transducer and for developing a gain control signal for application to at least one of said input and intermediate frequency amplifying stages to reduce the gain thereof and prevent the amplification of received signals.

2,950,357
ELECTRONIC SOUND TRANSMITTING DEVICE
Robert E. Mitchell, 3833 S. Oak Park Ave., Berwyn, Ill., and Stanley K. Webster, 229 E. Oneida Ave., Elmhurst, Ill.
Filed May 1, 1956, Ser. No. 581,873
3 Claims. (Cl. 179—107)



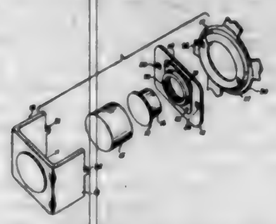
1. An electronic hearing aid comprising: an earmold having a hollow body portion and a sound canal depending therefrom, and a first cap portion attached to said earmold; an electronic amplifier having an input connection and an output connection and comprising a four transistor circuit with two transistors directly coupled to make two pairs and each pair coupled by a single capacitor, a microphone connected to the input of said electronic circuit, a receiver connected to the output of said circuit, a second cap portion slidably attached to said earmold and comprising a source of power for said circuit and a switch for connecting said source of power to said circuit for energizing it; said microphone being disposed in said first cap portion and said electronic circuit comprising said transistors being disposed in the hollow body portion of said earmold, the complete assembly of which comprises a unitary structure adapted to fit into the ear of the user.

2,950,358
ELECTROMECHANICAL TRANSDUCER
Robert K. Duncan, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Dec. 16, 1958, Ser. No. 780,895
10 Claims. (Cl. 179—115)



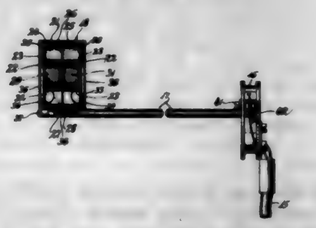
1. An electromechanical transducer comprising: an air tight housing including a pair of magnetic members each having two parallel flat surfaces with opposite magnetic poles, each of said members having an opening extending between the surfaces thereof, a diaphragm sealed to the first surface of each magnetic member, and a magnetically permeable plate sealed to the second surface of each magnetic member and confronting the openings therein; a core structure disposed in the opening of each magnetic member and mounted on the plate at one end, the opposite end of each core structure confronting one of the diaphragms and being spaced therefrom by a gap; and a coil disposed about each of the core structures.

2,950,359
LOUD SPEAKER ASSEMBLY
Charles A. Perry, Cleveland, Ohio, assignor to The Rola Company, Inc., Cleveland, Ohio, a corporation of Ohio
Filed Oct. 1, 1956, Ser. No. 613,187
2 Claims. (Cl. 179—115.5)



1. A permanent magnet loud speaker assembly comprising in combination, a diaphragm housing having a central bore for receiving a diaphragm voice coil, a magnetic structure including a yoke and a magnet and a pole tip, said pole tip having a flanged extremity adapted to seat against an adjacent axial extremity of the magnet when assembled, a front plate detachably mounted on said yoke for mounting the magnetic structure on the diaphragm housing, said front plate having a central bore forming an air gap concentrically surrounding said pole tip, means for automatically centering said pole tip in concentric relation in said central bore of said front plate, said means including a resiliently flexible member having a depressed central portion overlying and extending axially away from the central bore in said front plate, said depressed central portion having a radially disposed and inwardly directed marginal flange defining a pole tip receiving bore therethrough, means on said front plate coacting with complementary means on said flexible member for maintaining said pole tip receiving bore concentric with said central bore in said front plate, the size and configuration of said pole tip receiving bore being substantially the same as the cross-sectional configuration of said pole tip to guide and hold the pole tip in centered relation within the air gap, said depressed central portion of said flexible member having an axial extent sufficient to coact under compression between the front plate and the pole tip flange and exert an axial force against said magnet for maintaining said pole tip, magnet and yoke in operative assembled relation, and means on said yoke formed integrally therewith and coacting with complementary means on said front plate and with complementary means on said diaphragm housing to compress said flexible member and hold said magnetic structure in operative assembled relation with said housing.

2,950,360
MICROPHONE SUPPORT STRUCTURE
Robert Kern Duncan, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Nov. 27, 1956, Ser. No. 624,523
11 Claims. (Cl. 179—146)



1. The combination comprising a facial mask, a support member in said mask extending from the exterior to the interior of said mask, an adjustably positioned air tube secured to the interior side of said support member, said air tube communicating with the exterior of said support member, and a sealed microphone having a vibratile diaphragm, said microphone being mounted adjacent the end of said tube and having two chambers each connected to said tube.

2,950,361
DUPLEX COMMUNICATION
David T. Geiser, North Adams, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Filed Sept. 1, 1954, Ser. No. 453,485
4 Claims. (Cl. 179—170)

1. A duplexing station having a transmitter with one grounded and one ungrounded output lead, a receiver with one grounded and one ungrounded input lead, a communication line with one grounded and one ungrounded lead, the transmitter and the receiver being connected for operation within a single band of frequencies and operable at the same frequency, the un-

grounded transmitter lead being connected through a primary balancing inductor to the ungrounded line lead, the ungrounded transmitter lead also being connected to a phasing capacitor which returns to ground through an artificial line having a resistance substantially equal to the resistance of the communication line, the impedance of the primary balancing inductor at the frequency of the transmitter being no more than ⅓ the artificial line resistance, and a second inductor having a mutual inductance substantially equal to the inductance of the primary balancing inductor, the second inductor being so connected between the ungrounded receiver lead and the juncture of the phasing capacitor with the artificial line that voltage induced in the second inductor by transmitter current in the primary balancing inductor opposes voltage developed across the artificial line by current flow through the phasing capacitor.



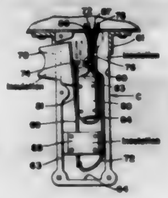
2,950,362

ELECTRICAL CIRCUIT AND SWITCH ASSEMBLY THEREFOR

William A. Horton, % Southwest News and Photo Service, 4335 Circle Drive, Oklahoma City, Okla.

Original application May 23, 1957, Ser. No. 661,682, now Patent No. 2,873,645, dated Feb. 17, 1959. Divided and this application Sept. 12, 1958, Ser. No. 760,612

2 Claims. (Cl. 200—1)



1. A two-stage switch assembly for the activating of sound recording moving picture apparatus, comprising a casing, a switch operating and contact arm flexibly mounted within said casing, said arm being an electrical conductor and forming a portion of a first circuit, a terminal of said first circuit connected to said arm, a contact point mounted on said arm, a second contact point mounted within said casing and forming a second terminal for said first circuit, whereby upon movement of said first mentioned contact point into abutment with said second contact point said first circuit will be closed between said first mentioned terminal and said second terminal through said arm, a switch mounted within said casing for actuation of a second circuit, said switch including a dielectric switch actuator mounted in juxtaposition for actuating contact by said arm prior to abutment of said first mentioned contact point and said second contact point, said arm comprising a spring member tensioned to open said first and second circuits by spring action, a stop for abutment with said spring member extending longitudinally of and intermediate the length of said spring member, said dielectric switch actuator extending above the plane of abutment of said spring member and said stop for actuating contact by said spring member prior to abutment of said spring member with said stop, and said second contact point being mounted below the plane of abutment of said spring member and said stop, so that as said spring member is depressed said dielectric switch actuator will be contacted and said second circuit actuated, and then said stop will be engaged, providing a positive indication that only one of said circuits has been closed and the other remains open, the further depression of said spring member below the plane of abutment of said spring member and said stop bringing said first mentioned contact point into abutment with said second contact point and closing said first circuit.

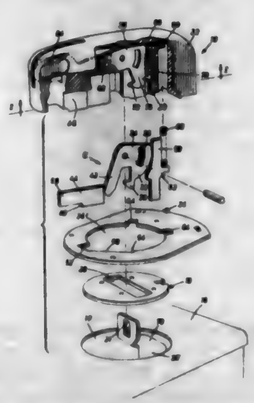
2,950,363

SAFETY HANDLE FOR ENCLOSED SWITCHES

Anatole Bachman, Willowdale, Ontario, and Charles E. McRoberts, Toronto, Ontario, Canada, assignors to Amalgamated Electric Corporation Limited, Toronto, Ontario, Canada

Filed Nov. 10, 1958, Ser. No. 772,927

6 Claims. (Cl. 200—50)



2. An operating handle for a safety switch of the type which is enclosed in a housing with an openable door and has a control shaft moveable through an aperture in the door to vary the said switch between "on" and "off" conditions, comprising, in combination, a door-plate with notches formed therein fixed to the said door and having an aperture in registration with that in the door; a knob with a hollow interior moveably seated on said door-plate; a mounting plate co-moveable with said knob secured to said knob with said door-plate sandwiched therebetween and maintaining the knob on said door, said mounting plate having an opening by which said shaft is engaged and providing ingress for the shaft into the interior of the knob; claws mounted in said knob for capturing said shaft and thereby preventing opening of the door, one of said claws being automatically operable another being manually operable; said automatically operable claw being located at one end of a bell-crank member having an elbow by which it is pivotally mounted and being yieldably biassed into shaft-capturing position; a driver co-moveably carried by said knob in operative relation to said claw; a cam surface constituted by one of the notches on the door-plate aforesaid arranged to intercept said driver and drive said claw out of shaft-capturing position when the knob is moved from "on" to "off" position, abutments at either end of the notch bounding the cam surface aforesaid and providing stops engaging said driver for limiting the movement of the knob between "on" and "off" positions, said driver also extending to the exterior of the said knob and being manually operable to drive said claw out of shaft-capturing position when the knob is in the "on" position; said manually operable claw being located at one end of another bell crank member having an elbow by which it is pivotally mounted co-axially with the other bell-crank member, and yieldingly biassed out of shaft-capturing position; a lever mounted on said further bell crank member integrally with said further claw extending to the exterior of said knob and being manually tiltable to move said claw to capture said shaft; said lever being formed to permit the disposition of a locking device between the knob and the lever when the latter is tilted as aforesaid to maintain said claw in shaft-capturing position; plungers carried by said knob for interlocking with at least one of the notches in the door-plate aforesaid, one of said plungers being operatively related to the lever aforesaid to prevent tilting thereof until said plunger is in position to be received in one of said notches and being yieldably biassed out of engagement therewith, another said plunger being yieldably biassed to enter and project through one of said notches.

2,950,364

WARNING DEVICE

William S. Hayes, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed Oct. 4, 1956, Ser. No. 613,893

2 Claims. (Cl. 200—56)



1. A magnetically driven speed warning device of the type using a stationary field plate, a speed cup and a permanent magnet on a drive shaft, said device comprising an elongated drum with a marking on its surface, a first contact fixed to said drum at a distance from the axis of the latter, a frame rotatably supporting said drum, an annular field plate fixed to and insulated from said frame, a ring member bearing speed insignia along its periphery and journaled for rotation about said fixed field frame on the axis of said drum, fixed opaque means partially concealing said drum and ring member, a window in said opaque means disclosing a portion of said insignia as a setting at which said warning device may be effective, a second contact on said ring member in the path of said first contact, means connected to said ring member and independent of the said drum for manually rotating said ring member and registering a selected portion of said insignia with said window, and one of said contacts being relatively slidable and yieldable with respect to the other in a radial direction with respect to said ring member.

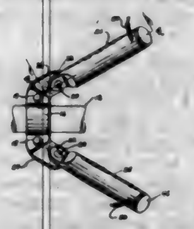
2,950,365

ANTI-OVERTURNING DEVICE FOR VEHICLES

Gustav John Bolstad, 415 S. Iowa St., Charles City, Iowa

Filed Dec. 11, 1958, Ser. No. 779,661

3 Claims. (Cl. 200—61.52)



3. In an anti-overturning device for vehicles, a bracket adapted to be secured to the frame of a vehicle, two elongated hollow tubes extending upwardly and outwardly from said bracket and away from each other, ear means pivotally securing said tubes to said bracket, said ears being inclined to said bracket to permit said tubes to pivot in angular inclined planes with respect to the plane of said bracket, separate electrical means on the outer ends of said tubes adapted to be electrically connected to the frame and distributor element, respectively, of a vehicle, and connecting means in said tubes for electrically connecting said separate electrical means when either of said tubes is moved by the tipping of said bracket to a substantially level position.

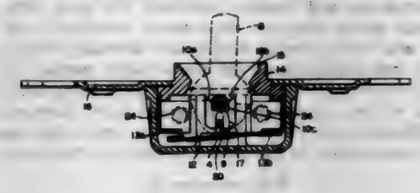
2,950,366

MANUALLY OPERABLE ELECTRIC SWITCH

Charles E. McRoberts, Toronto, Ontario, and Joseph F. Duffield, Agincourt, Ontario, Canada, assignors to Amalgamated Electric Corporation, Limited, Toronto, Ontario, Canada

Filed Oct. 30, 1957, Ser. No. 693,419

7 Claims. (Cl. 200—68)



1. An electric switch comprising an insulating bottom portion, an operating handle mounted in operative position therein and projecting therefrom, a cover portion adapted to retain the operating handle in operative position in the bottom portion, a line terminal means for attaching a current carrying wire, a load terminal means connecting said switch to a load, switching means to connect and disconnect said line terminal means and said load terminal means, cam tracks provided at each side of said bottom portion, each of said cam tracks including a mid-portion peak and valleys on opposite sides of said peak, a spindle engageable with said cam tracks, means on the handle independent of said spindle for causing said switching means to connect said line terminal means and said load terminal means when said handle is operated in one direction to a first rest position with said spindle engaged in the valleys on one side of the peaks of said cam tracks, and for causing said switching means to disconnect said line terminal means and said load terminal means when said handle is operated in the other direction to a second rest position with said spindle engaged in the valleys on the other side of the peaks of said cam tracks, and retaining means on the handle engaging said spindle said retaining means including means biasing said spindle toward said cam tracks to limit and control movement of the handle in accordance with the movement of said spindle in following said cam tracks.

2,950,367

MULTIPLE SPEED SWITCH MECHANISM

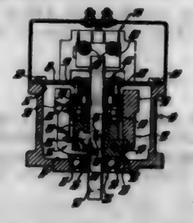
Claude B. McCathron, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Filed July 13, 1959, Ser. No. 826,791

9 Claims. (Cl. 200—80)

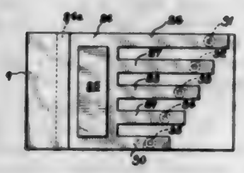
2. A speed switch actuating mechanism comprising housing means, a pair of axially spaced bearing devices mounted in said housing means, a shaft member rotatably supported in said bearing devices and including ends extending axially beyond said housing means, a speed responsive device fixed for rotation with said shaft, ac-

tuator means coaxially mounted with respect to said shaft and engageable by said speed responsive device, said speed responsive device being adapted to move said actuator means axially relative to said shaft in accordance with variations in shaft speed, a plate centrally supported upon said actuator means and conjointly defining a first pivotal axis therewith, said plate including a central aperture through which one end of said shaft is



adapted to extend, first and second switch devices mounted on said housing proximate the plate, first and second spring members respectively associated with the first and second switch devices and normally biasing the plate into engagement with the actuator means, the respective strengths of the spring members being such that each will be compressed by actuator means movement at a different speed of the shaft member permitting sequential energization of the switch devices by the plate.

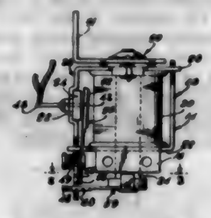
2,950,368
RESONANT REED RELAY
William J. Londell, Jr., North Plainfield, N.J., assignor to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Filed Nov. 4, 1957, Ser. No. 694,274
7 Claims. (Cl. 200—87)



1. A resonant reed relay comprising a base member; a flat, unitary metallic member affixed at one end to said base member, said metallic member having formed therefrom a plurality of laterally-spaced, vibratory fingers of different lengths at the end opposite said end affixed to said base member, an electromechanically sensitive body with electrodes affixed thereto on opposite faces thereof affixed to each of said vibratory fingers such that one of said electrodes is in contact with said vibratory finger; and means for exciting said electromechanically sensitive bodies at the natural frequencies of said vibratory fingers.

2,950,369
RELAY
Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Filed Oct. 15, 1958, Ser. No. 767,398
6 Claims. (Cl. 200—87)

1. An electrical control relay comprising a coil, a plunger reciprocable within said coil, a cam plate adjacent said coil having a substantially U-shaped slot therein, first and second contact buttons positioned on said cam plate, a substantially T-shaped contact member pivotally mounted on said cam plate adjacent the central portion of said U-shaped slot, said contact member including a body portion movable between said first and second contact buttons, and including first and second arms thereon extending laterally from said body, said first arm being positioned in alignment with said slot when said second arm is located beyond the edge of said slot and said body is in contact with said first contact button, and said second arm being located in alignment with said slot when said first arm is located beyond the



edge of said slot and said body is in contact with said second contact button, a cam member rotatably mounted on said plunger about the longitudinal axis thereof and extending into said slot and resting on the button thereof when said plunger is not activated, and means to deflect said cam member against the arm of said contact member which is in alignment with said slot upon actuation of said plunger.

2,950,370
CIRCUIT INTERRUPTING BUILDING BLOCKS
Kenneth W. Swain, Hampton Falls, N.H.
Filed Dec. 10, 1956, Ser. No. 627,371
10 Claims. (Cl. 200—114)



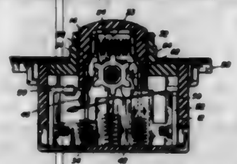
1. An arrangement for controlling power circuits comprising a first base of molded insulating material, a multipolar tumbler-operated over-center toggle switch supported by said first base, said first base being proportioned to support said switch only without excess current responsive control means thereon, a plurality of cable connectors arranged on opposite sides of said first base for connecting said switch into a polyphase circuit, each of said plurality of cable connectors comprising a substantially tubular clamping member and a set-screw projecting transversely across said clamping member, a second separate base of molded insulating material arranged immediately adjacent to said first base, a plurality of fusible excess current protective devices mounted on said second base, a plurality of cable connectors arranged on opposite sides of said second base for connecting said plurality of protective devices into a polyphase circuit, each of said plurality of cable connectors on said second base comprising a substantially tubular clamping member and a set-screw projecting transversely across said clamping member, said plurality of cable connectors on said second base being arranged on the same level as said plurality of cable connectors on said first base, and conductor means inserted into juxtaposed cable connectors on said first base and on said second base to serially connect each pole of said switch with one of said plurality of protective devices.

2,950,371
CERAMIC ARC PLATE CONSTRUCTION
Allen E. Stringfellow, Haddonfield, N.J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Oct. 9, 1957, Ser. No. 689,126
10 Claims. (Cl. 200—144)



1. An arc plate having a shape which permits it to be compression molded in all steel dies using a mixture of ceramic material having less than 5% water comprising a thin elongated section having integrally formed therewith a first and a second flange extending above a first surface of said section; and gradually sloping surfaces extending from each of said flanges to said first surface.

2,950,372
SINGLE-BUTTON-ACTUATED SWITCH
John E. Aspinwall, Bolton Center, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Filed Sept. 22, 1958, Ser. No. 762,615
3 Claims. (Cl. 200—156)



1. In an electric switch, a depressible push button, means to restore said button to original position when manual pressure is released, a flexible contact member movable between two switching positions, a contact-operating member movable in direct response to movements of said button and engaging said contact member to move said contact member from one switching position to another, rotary means operable in response to said button movement to retain said contact member in the one or the other switching position after it has been moved there by said contact-operating member, and a fixed contact member engaged by said movable contact member in one of its positions.

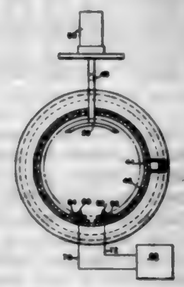
2,950,373
DEVICE FOR RENDERING ELECTRIC SWITCHES ENVIRONMENT-RESISTANT
Philip D. Grover, Chicago, and Melvin G. Kraft, Bellwood, Ill., assignors, by mesne assignments, to Controls Company of America, Schiller Park, Ill., a corporation of Delaware
Filed Dec. 2, 1958, Ser. No. 777,763
11 Claims. (Cl. 200—168)

1. A device for rendering environment-resistant, a switch having a casing from which an operating button projects through an outwardly projecting collar, comprising: a metallic bushing fixed to the casing and collar and encircling said button; a flexible diaphragm fixed in



said bushing; and a plunger fixed in said diaphragm, extending outwardly therefrom and extending inwardly therefrom and into engagement with said button.

2,950,374
INDUCTION FURNACE
Daniel L. Lombard, Youngstown, Ohio, assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio
Filed Mar. 3, 1959, Ser. No. 796,870
8 Claims. (Cl. 219—10.67)



1. An induction furnace comprising an open-ended induction coil within which a workpiece is heated, a pair of workpiece-supporting rails of dissimilar metal extending parallel to the central axis of said coil and along the inner periphery thereof, and electrical circuit means connected to said rails for measuring the temperature of a workpiece positioned thereon.

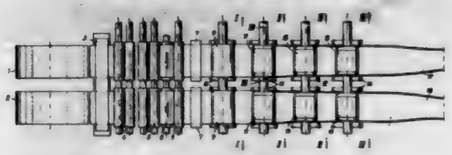
2,950,375
PERCOLATOR BREW STRENGTH CONTROL
Earle C. Sullivan, Nichols, Conn., assignor to General Electric Company, a corporation of New York
Filed Apr. 23, 1954, Ser. No. 425,287
9 Claims. (Cl. 219—44)



1. A percolator comprising: a liquid receptacle, means in said receptacle for percolating a coffee brew, said percolating means including a pump, a pump chamber, and a pump chamber heating unit, said percolating means being operative when said pump heating unit is energized to continuously circulate liquid through said receptacle and said pump chamber, a booster heating unit for heating liquid in said receptacle, a first thermostat for controlling energization of said pump heating unit, said first thermostat arranged to respond to the temperature of the liquid in said receptacle and to de-energize said pump heating unit and thereby terminate operation of said percolating means at a predetermined temperature, a second thermostat for controlling energization of said booster heating unit, said second thermostat arranged to respond to the temperature of the liquid in said receptacle and to de-energize said booster heating

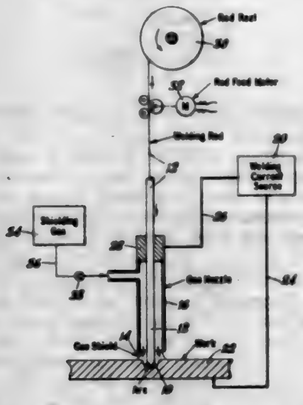
unit at a temperature below that at which said first thermostat de-energizes said pump heating unit, said pump heating unit and said booster heating unit being so related in heat capacity that de-energization of said booster heating unit effects a substantial reduction in heat supplied to said receptacle, and means for varying the strength of the coffee brew by varying the length of time that said pump heating unit is energized, said last named means including means for adjusting said second thermostat to vary the temperature at which said second thermostat de-energizes said booster heating unit.

2,950,376
METHOD AND APPARATUS FOR THE MANUFACTURE OF SECTIONS
Alfred Wögerbauer, 9 Grelistrasse, Linz, Austria
Filed Mar. 26, 1958, Ser. No. 724,060
Claims priority, application Austria Apr. 5, 1957
15 Claims. (Cl. 219—67)



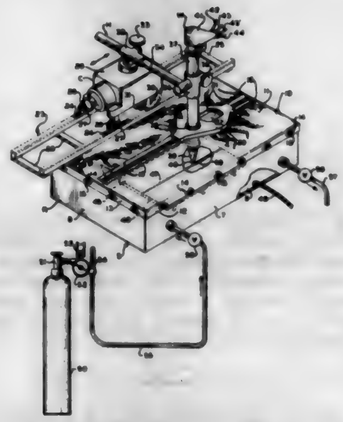
1. A method for the continuous manufacture of profiles comprising feeding at least two metal strips one beside the other through a shaping zone, shaping the strips in the shaping zone to form trough-like sections having their open sides facing in the same direction and free lateral edges, twisting progressively at least one of the trough-like sections out of its plane of feeding and moving it to a position in which said lateral edges of the trough-like sections abut against each other to provide a tubular member of a desired cross-sectional shape and welding said edges together.

2,950,377
METAL ARC WELDING
Kenneth L. Thomas, Indianapolis, Robert J. Wickham, Plainfield, and George M. Skinner, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Original application Sept. 1, 1954, Ser. No. 453,476, now Patent No. 2,863,981, dated Dec. 9, 1958. Divided and this application July 25, 1958, Ser. No. 751,009
6 Claims. (Cl. 219—74)



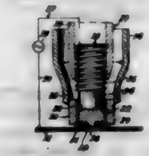
1. Sigma welding carbon steel in which the welding arc and adjacent metal are shielded from the air by an arc shielding atmosphere composed of a mixture of carbon dioxide and oxygen in which the latter is between 5% and 50% thereof with a bare metal electrode composed of deoxidized carbon steel containing residual deoxidizers.

2,950,378
SLIDE CLOSURE FOR WELDING
Roger W. Tuthill, Mountainside, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 22, 1958, Ser. No. 782,205
5 Claims. (Cl. 219—74)



1. In welding equipment, a receptacle adapted to enclose work parts to be welded, said receptacle having an opening therein and a flexible cover unit closing said opening, slide fastener means carried by the cover unit and permitting access to the interior of the receptacle, said slide fastener means including a pair of flexible stringers, a plurality of separable links secured to each stringer and a slider constructed and arranged to effect coupling at one end thereof of successive links of one stringer with corresponding links of the other stringer and uncoupling at the other end thereof of successive links of one stringer from corresponding links of the other stringer in response to corresponding movement of the slider along the stringers, said slider including a body having a through opening, and a welding torch extending through said opening and coupled with the slider for movement therewith.

2,950,379
STUD WELDING MEANS AND METHOD
Edward Dash, 1540 Seabright Ave., Long Beach, Calif.
Filed July 30, 1957, Ser. No. 675,125
19 Claims. (Cl. 219—99)



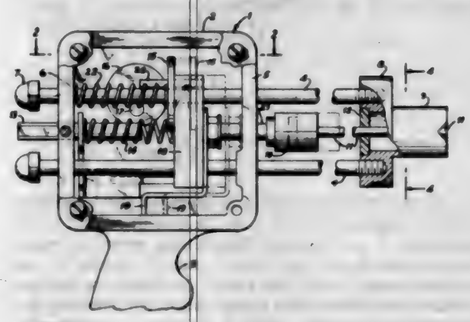
1. A ferrule for use in welding a stud to a sheet or plate comprising: a sleeve of refractory material having a passageway therethrough for shielding the stud, and a solid homogeneous metal member at one end face of said sleeve for absorbing heat from the sheet or plate during the welding operation.

2,950,380
SLAG-FORMING BODIES FOR ELECTRIC ARC WELDING
Willem Pieter van den Blink, Utrecht, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Dec. 10, 1958, Ser. No. 779,480
Claims priority, application Netherlands Dec. 23, 1957
6 Claims. (Cl. 219—99)



1. A slag-forming body such as a stud-welding cartridge or electrode coating, comprising slag-forming material and means to increase the mechanical strength of the body including particles of synthetic mica distributed throughout said material.

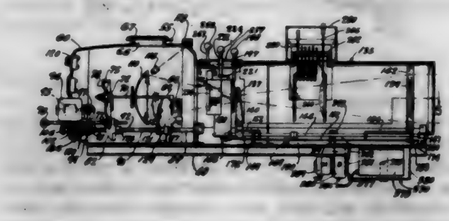
2,950,381
WELDING ELECTRODE FEEDING APPARATUS
Ronald F. Brennen, 964 E. 16th St., and James A. Bucci, 2360 McDonald Ave., both of Brooklyn, N.Y.
Filed Apr. 15, 1960, Ser. No. 22,641
8 Claims. (Cl. 219—127)



1. Apparatus for feeding welding electrodes comprising a casing, means for gripping said casing, a slidable guide rod extending through the ends of said casing, an insulating block in said casing slidably mounted on said rod, an electrode holder having one end secured to said block and extending through said casing at the end thereof adjacent to said guide rod, means for urging said block toward the end thereof adjacent said guide rod, a slidably mounted stop means for said block on said guide rod, an adjustable stop means on said casing adapted to be contacted by said slidably mounted stop means.

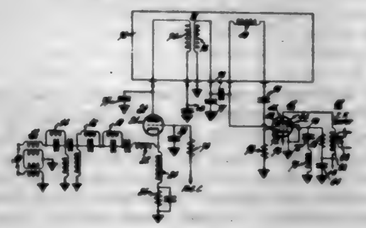
2,950,382
PROJECTION LAMP
Arthur J. Hatch, Toledo, Ohio, assignor to The Strong Electric Corporation, Toledo, Ohio, a corporation of Delaware
Filed Dec. 17, 1956, Ser. No. 628,722
2 Claims. (Cl. 240—3.1)

1. An apparatus for producing a controlled beam of light including in combination, an enclosure, a light source mounted in said enclosure, a reflector mounted in said enclosure on the rearward side of said light source and arranged to reflect light from said light source, a lens system in said enclosure on the forward side of said light source through which the reflected light is directed, said lens system including an adjustable lens for securing proper focus of the light beam formed by the lens system, aperture varying means positioned within said enclosure on the forward side of said light source and rearwardly of said lens system, control means for adjusting said aperture varying means, light filtering means in said enclosure disposed in a region between said aperture forming means and said lens system and movable to position in and out of the path of said reflected light, a casing carried by said enclosure on the forward end thereof, a rectifier in said casing for supplying direct current for energizing said light source, a blower means connected to said enclosure adjacent said casing and said blower connected to said casing at the suction end thereof, said



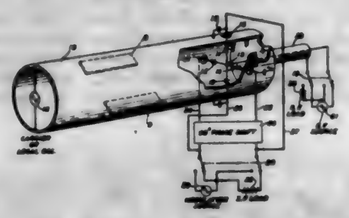
blower means directing an air stream in the region of said light filtering means, said enclosure pivotally connected to a supporting base member, said enclosure being substantially weight balanced on said supporting base member, said light filtering means including, a plurality of light filters, each of said filters mounted in a filter supporting frame, a channel-shaped bracket connected to said frame, a filter positioning lever support mounted in said enclosure, a plate member connected to said lever support, said bracket and said plate member interengaging to removably connect said frame with said lever support, and means on said bracket limiting the sliding motion of said plate and bracket.

2,950,383
FREQUENCY CONVERTER WITH OSCILLATOR TUNING INDUCTOR
David J. Carlson, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 22, 1957, Ser. No. 679,636
9 Claims. (Cl. 250—20)



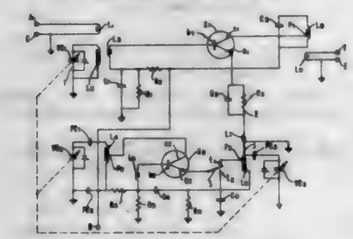
7. A high frequency self-oscillating converter comprising an electron tube having at least an anode, a cathode, a signal input electrode and one other electrode, oscillation means including a tunable resonant circuit having reactive tuning means for adjusting the frequency of said resonant circuit over a band of frequencies, said reactive tuning means connected between said signal input electrode and said other electrode, a signal input circuit, impedance matching coupling means including said reactive tuning means connecting said signal input circuit to said signal input electrode for providing a substantial matching of the impedance between said signal input circuit and said input electrode with the tuning of said tunable resonant circuit over a range of frequencies, and intermediate frequency output circuit means connected between said anode and said cathode.

2,950,384
MICROWAVE FREQUENCY CONVERTER
Marion E. Hines, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 22, 1957, Ser. No. 691,694
4 Claims. (Cl. 250—20)



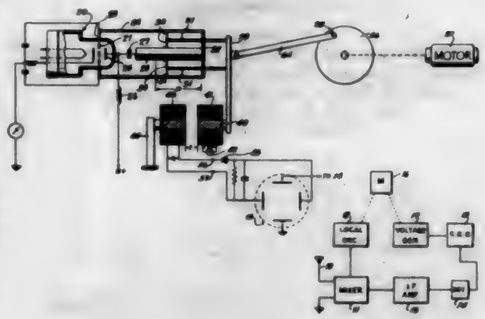
1. In combination, means for supporting electro-magnetic wave energy at a first frequency in a circularly polarized mode, a plurality of nonlinear impedance elements respectively coupled to quadrature components of said circularly polarized wave energy, means for coupling with a voltage at a second frequency in parallel with said elements, and means for coupling at a third frequency with the voltage difference across two of said elements.

2,950,385
TRANSISTOR OSCILLATOR
Junichi Yasuda, Nobuo Kanoi, and Tsuneo Takahata, Tokyo, Japan, assignors to Sony Kabushikikaisha (Sony Corporation), Shinagawa-ku, Tokyo, Japan, a corporation of Japan
Filed Nov. 26, 1957, Ser. No. 699,075
Claims priority, application Japan May 18, 1957
3 Claims. (Cl. 250—20)



1. In a frequency translation system, in combination, a variably tuned converter circuit for receiving modulated input signals of relatively high frequencies and having a single intermediate frequency output comprising a first semi-conductor device having a semi-conductive body and base, emitter and collector electrodes cooperatively associated therewith, a variably tuned separate local oscillator circuit for generating a local oscillation for translating the incoming signals to the intermediate-frequency output, said oscillator circuit comprising a second semi-conductor device having a semi-conductive body and base, emitter and collector electrodes, means including a source of operating bias voltage for applying suitable biasing potentials to the electrodes of both of said semi-conductor devices, a variably tuned capacitive reactance circuit electromagnetically coupled to the converter circuit and directly coupled to the emitter electrode of the second semi-conductor device in parallel therewith to provide oscillatory energy generated in the oscillator circuit and a suitable capacitive reactance with respect to the local oscillation frequency, and an equalizing circuit in the converter circuit connected to the emitter of said first semi-conductive device having capacitance and inductance means coupled to the emitter of the second semi-conductor device for electromagnetically coupling the converter circuit and the capacitive reactance circuit thereby to form in combination a frequency translation system in which the oscillator circuit functions over a relative broad range of frequencies which is much broader than a range of frequencies at which the oscillator functions in the absence of said capacitive reactance circuit.

2,950,386
LINEARLY RESPONSIVE VOLTAGE GENERATING MEANS WITH VARIABLE INDUCTION COUPLING
David Lawrence Jaffe, Great Neck, N.Y., assignor to Polarad Electronics Corporation, Long Island City, N.Y., a corporation of New York
Original application June 10, 1954, Ser. No. 435,875, now Patent No. 2,921,186, dated Jan. 12, 1960. Divided and this application Aug. 3, 1959, Ser. No. 831,119
2 Claims. (Cl. 250—20)

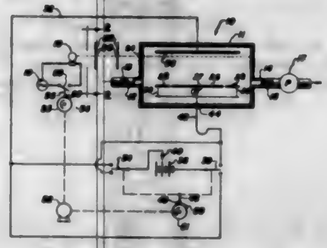


1. A panoramic receiver comprising a local oscillator having a frequency varying inversely with respect to the movement of a frequency-determining member, means for receiving a received wave, a mixer coupled to said receiving means and to said local oscillator for deriving an intermediate frequency signal, means for detecting said intermediate frequency signal, a cathode ray oscillograph having vertical and horizontal deflecting plates, means for coupling said vertical deflecting plates to said detecting means, and means for producing a horizontal deflection voltage for application to said horizontal deflecting plates, said last-named means comprising a pair of inductively coupled coils, the first of said coils being fixed and the second being movable and having a coupling characteristic inversely proportional to the displacement therebetween, said second of said coils being coupled mechanically to said oscillator frequency-determining member, means for exciting one of said coils whereby the voltage induced in the other is inversely proportional to their separation, and motive means for continuously and cyclically moving said oscillator frequency-determining member and said other coil over a predetermined range to produce an output deflection voltage from said other coil varying with time in the same manner as said oscillator frequency varies with time, to produce a panoramic display on said oscillograph.

2,950,387
GAS ANALYSIS
Wilson M. Brubaker, Arcadia, Calif., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 16, 1957, Ser. No. 678,598
5 Claims. (Cl. 250—41.9)

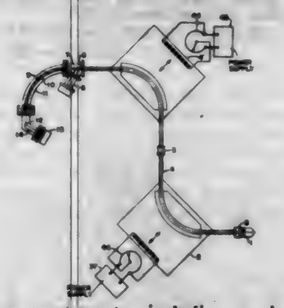
1. The method for analyzing a gas sample having two constituents which have different ionic mobilities,

the method comprising the steps of causing the constituents to become ionized, subjecting the ions to an electric field of one polarity between two electrodes to drive ions toward one of the electrodes, maintaining said field of said one polarity until a substantial number of ions



of higher mobility are collected at said one electrode, and thereafter reversing the polarity of the electric field before any significant number of ions of lower mobility are collected at the said one electrode, whereby more ions of high mobility are collected at the said one of the electrodes than ions of lower mobility.

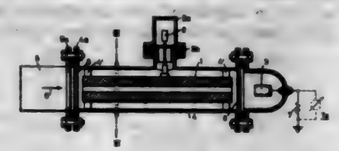
2,950,388
MASS SPECTROMETER
Frederick A. White, Madison, Wis., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 24, 1957, Ser. No. 692,241
7 Claims. (Cl. 250—41.9)



1. In a mass spectrometer including an ion source which produces both atomic and molecular ions, means for forming said ions into a beam, magnetic means for resolving the ion beam into beams of selected masses, an ion detector, and means to measure the current at said detector, the improvement which comprises: additional means for resolving the ion beam from said magnetic means into beams of selected masses disposed in spaced relation to said magnetic means, means disposed in the path of said beam between said magnetic means and said additional means to dissociate molecular ions in flight, means to adjust said magnetic means to focus ions of selected mass at a focal point between said magnetic and said additional means, and means to adjust said additional means to focus ions of selected mass on said detector.

2,950,389
METHOD OF SEPARATING IONS OF DIFFERENT SPECIFIC CHARGES
Wolfgang Paul and Hans-Peter Reinhard, Bonn, and Heinz Frohlich, Erlangen, Germany, assignors of one-half to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany, and one-half to said Wolfgang Paul
Filed Dec. 24, 1958, Ser. No. 782,838
12 Claims. (Cl. 250—41.9)

1. The method of separating ions of respectively different specific electric charges, which comprises passing the ions through an electric field having a field potential (φ) periodically varying in accordance with a square

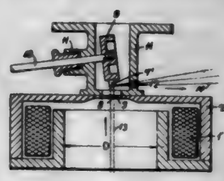


function of the space coordinates (x, y, z), said function having the form

$$\varphi = f(t) \cdot (\alpha x^2 + \beta y^2 - \gamma z^2)$$

wherein $f(t)$ is a periodic function of time and α, β, γ are positive constants satisfying the equation $\alpha+\beta=\gamma$; and superimposing upon said field another alternating field whose frequency coincides approximately with an oscillation frequency of ions of pre-selected specific charge, whereby said ions of selected charge are forced to travel on instable trajectory paths.

2,950,390
ELECTRON LENSES
Michael Edward Haine, Selhamstead, near Reading, and Thomas Mulvey, Caversham, Reading, England, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a British company
Filed Sept. 11, 1958, Ser. No. 760,397
Claims priority, application Great Britain Sept. 11, 1957
1 Claim. (Cl. 250—49.5)

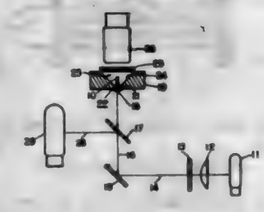


In an X-ray type analyser an electron lens arrangement comprising concentric cylindrical plates encircling the electron beam path, an energising winding located in the annular space between said cylindrical plates, a first annular end plate joining corresponding end edges of the cylindrical plates, an edge to the inner cylindrical plate at the opposite end to said annular plate which edge forms a first magnetic pole, a transverse plate extending across the electron beam path in spaced relationship with the pole forming the edge of said inner cylindrical plate and secured along its periphery to the corresponding end of the outer cylindrical plate, said transverse plate having a circular aperture defined by an edge concentric with the beam path, said edge forming a second magnetic pole face, means for positioning a specimen in the beam path beyond said transverse plate, a cylindrical casing extending axially of the beam path away from said transverse plate and encircling the beam path and specimen and an aperture in said casing adapted to permit X-rays from the specimen to pass out from the casing.

2,950,391
FLUOROMETER
Corwin H. Brumley, Penfield, and Robert J. Meltzer, Irondequoit, N.Y., assignors to Bausch & Lomb Optical Company, Rochester, N.Y., a corporation of New York
Filed June 26, 1957, Ser. No. 668,189
6 Claims. (Cl. 250—71.5)

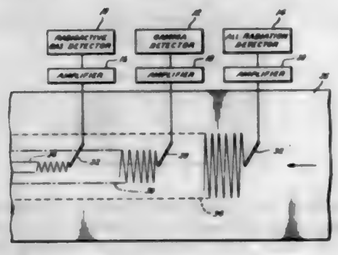
1. A fluorometer for measuring the fluorescence of an elongated test object comprising means for supporting

the object at one end thereof, means for directing ultraviolet radiations onto said one end of the object to produce fluorescence, a light sensitive device positioned opposite to and in alignment with an opposite part of the object, and means for directing the fluorescence from said



object onto said device comprising hollow reflecting surface means extending around the object, said surface means converging towards said one end of the object whereby fluorescence emitted from the object will be directed by the surface means onto the light sensitive device.

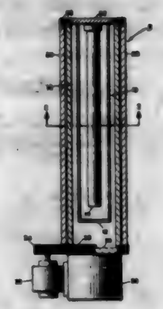
2,950,392
METHOD OF EXPLORATION FOR LOCATING HYDROCARBONS AND OIL
Francis K. Campbell, Houston, Tex., assignor, by mesne assignments, of one-half to The Morna Corporation, Houston, Tex., a corporation of Delaware
Filed Oct. 12, 1956, Ser. No. 615,548
6 Claims. (Cl. 250—83)



1. The method of locating hydrocarbons comprising, conducting surveys with an all radiation detector, amplifying and recording the radiations on a moving graph geared to a moving vehicle in relation to distance and speed, conducting similar surveys with a gamma radiation detector, amplifying and recording the radiations on a moving graph geared to a moving vehicle in relation to distance and speed, conducting similar surveys with a radioactive gas detector, and recording the radiations on a moving graph geared to a moving vehicle in relation to distance and speed, said surveys being taken at the same points, and comparing said recording to detect subsurface hydrocarbon deposits.

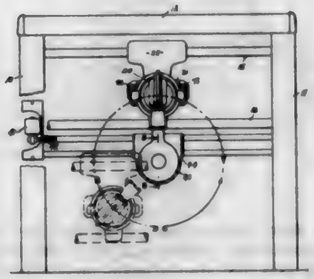
2,950,393
GAMMA COMPENSATED NEUTRON DETECTOR
Ben G. Southward, Southfield Township, Oakland County, Mich., assignor to The Bendix Corporation, a corporation of Delaware
Filed Nov. 20, 1956, Ser. No. 623,411
2 Claims. (Cl. 250—83.1)

1. A neutron radiation intensity gauge comprising: a neutron sensitive ionization chamber; a cylindrical neutron absorbing cover surrounding said ionization chamber; a longitudinal slot on the curved surface of said cover; a longitudinal neutron absorbing shutter mounted on said cover and having dimensions generally greater than that of said slot; and means for continually rotating



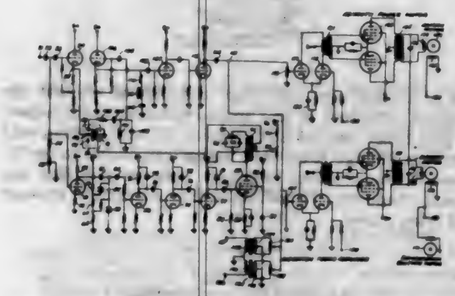
said shutter around said cover, whereby said slot is periodically blocked to neutron radiation.

2,950,394
ROTATIONAL THERAPY X-RAY METHOD AND APPARATUS
Robert J. Stava, deceased, late of University Heights, Ohio, by Eleanore G. Stava, executrix, University Heights, William F. Schneerer, Cleveland Heights, and Oswald C. Hollstein, Cleveland, Ohio, assignors to Picker X-Ray Corporation, Waite Mfg. Div. Inc., Cleveland, Ohio, a corporation of Ohio
Filed Feb. 17, 1954, Ser. No. 410,868
34 Claims. (Cl. 250—92)



30. Radiation therapy means adapted for irradiation of a circumscribed area comprising a source of radiation provided with an exit opening through which a beam produced at a source point emanates, a first means for shifting said source of radiation substantially in a straight line in one direction, a first power operated means for producing said shifting movement, including a second means for shifting said source of radiation substantially in a straight line in a direction at an angle with respect to the direction in which its source is shifted by the said first means, including a second power operated means for producing the shifting by said second means, a third means for producing a rotation of the source of radiation around a center substantially coincident with the source point of the radiation, including a third power operated means producing said rotational movement, means for coordinating the speed of the three power operated means, the coordination of the first and the second means for shifting the source of radiation producing a preselected curved path of the said source of radiation around the circumscribed area to be irradiated, while the coordination of the third power operated means with the two other power operated means directs the rays emanating through the exit opening towards the circumscribed area to be irradiated during the movement produced by the two first named means.

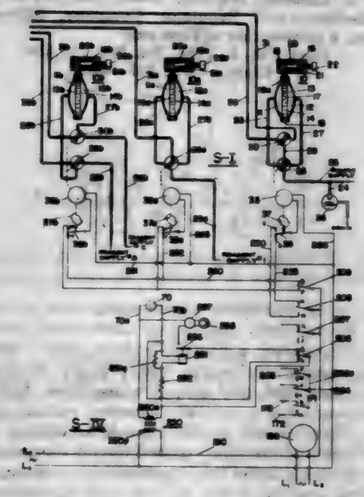
2,950,395
TRACKING DEVICE
James B. O'Maley, Seaford, and John W. Barnes, Floral Park, N.Y., assignors to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Filed Feb. 16, 1954, Ser. No. 410,631
14 Claims. (Cl. 250—203)



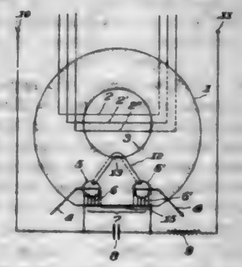
1. Apparatus for continuously tracking a target the sighting of which is periodically interrupted comprising an adjustable tracking telescope, azimuth and elevation orienting motors mechanically coupled to said telescope for respectively adjusting the azimuth and elevation of the longitudinal axis thereof, photo-electric means associated with said telescope for generating A.C. electrical signals during the sighting periods having a relative phase displacement representative of the azimuthal and elevational deviation of said axis of said telescope from said target, a control circuit for yielding uninterrupted correctional signals to said motors, means for applying said electrical signals to sad control circuit, and switching means in said control circuit operated synchronously from said periodic A.C. signals for generating a continuous A.C. signal at the same frequency and phase as that of the generated periodic A.C. signals for yielding substantially continuous electrical correctional data to said azimuth and elevation orienting motors, whereby continuous tracking of the apparatus is effected despite the sighting interruptions.

2,950,396
COLORIMETRIC ANALYZER
George W. Schneider, Jr., St. Petersburg, Fla., assignor to Milton Roy Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Sept. 14, 1956, Ser. No. 609,981
22 Claims. (Cl. 250—219)

22. A cyclic automatic colorimetric analyzer comprising a source of radiant energy, a comparison cell and a sample cell adapted to receive radiant energy from said source, a measuring system including radiant energy sensitive devices for receiving radiant energy transmitted through said cells, a cycle controller for automatically opening said analyzer through standardizing and measuring portions of a cycle, means for filling said cells with sample fluid during a portion of said cycle and flushing said cells with sample fluid during another portion of said cycle, means for dispensing reagent fluid into at least said sample cell during a portion of said cycle, means for draining said cells during a portion of said cycle, said filling means and said reagent dispensing means and said draining means all being operated by said cycle controller, and means synchronized with the cycle controller for indicating the progress of all of said portions of said cycle.

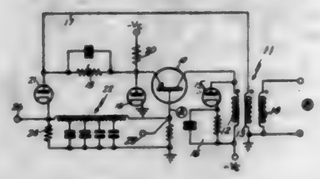


2,950,397
RESONANT CIRCUIT ELEMENT APPLICABLE FOR DIGITAL INFORMATION PROCESSING
Hajime Ihuma, Komae-Machi, Kitatama-gun, Tokyo-to, Japan, assignor to Kokusai Denki Kabushiki Kaisha, Komae-Machi, Kitatama-gun, Tokyo-to, Japan
Filed Sept. 16, 1957, Ser. No. 684,086
Claims priority, application Japan Sept. 19, 1956
8 Claims. (Cl. 307—88)



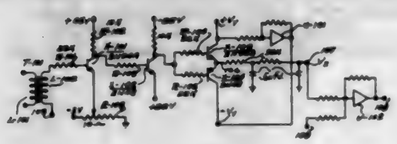
1. A subharmonic magnetic core logic device comprising, a plate of ferromagnetic material having a central window and two holes each of less area than the window disposed radially of the window angularly, spaced relative to each other and disposed on a marginal portion of the plate closely adjacent the periphery of the plate, at least one input conductor on said plate threaded through said window to which an input signal is applied, a resonant output circuit in said device comprising, a resonant coil wound on said plate having series turns wound through said holes and including marginal portions of the plate radially spaced relative to a respective one of said holes forming a core for the coil, a capacitive reactance element connected in parallel with said coil, a conductor threaded through said holes for applying an exciting current thereto of twice the frequency of the output, and output connections in series with said resonant coil.

2,950,398
ELECTRICAL PULSE PRODUCING APPARATUS
Elmer T. Johnson, Wayland, Mass., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Feb. 6, 1958, Ser. No. 713,630
8 Claims. (Cl. 307—88.5)



1. A pulse producing circuit comprising a transistor device having input and output connections, an output transformer having a primary winding and a secondary winding, means connecting said primary winding in a series circuit with said output connections, first circuit means comprising a parallel connected resistor and condenser regeneratively connecting said secondary winding to said input connections, second circuit means comprising an electrical delay line degeneratively connecting said secondary winding to one of said input connections, and an input circuit connected to said input connections.

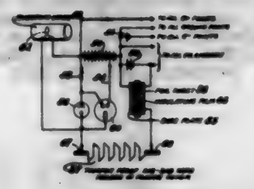
2,950,399
COMPUTER FUNCTION GENERATOR
Herman Schmid, Binghamton, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Mar. 25, 1958, Ser. No. 723,755
10 Claims. (Cl. 307—88.5)



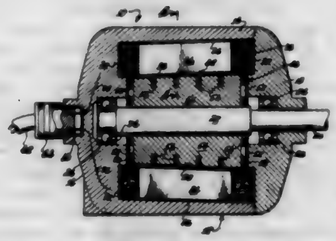
9. Electronic function generation apparatus comprising in combination, pulse-width modulator means for deriving a train of pulses which varies between first and second potential levels for time periods which are functions of an independent variable input voltage, two transistors of opposite conductivity types, the base electrodes of said transistors being connected to said train of pulses, means for applying direct voltages of equal amplitude and opposite polarity to the collector electrodes of said transistors, the emitter electrodes of said transistors being connected together and to a pulse-averaging means to provide an output potential from said pulse-averaging means, said first and second potential levels each exceeding with respect to a reference level said amplitude of said direct voltages.

2,950,400
PROTECTIVE CIRCUIT FOR RADIO REPEATER
Edmond M. Deloraine, New York, Henri G. Busignies, Forest Hills, and Paul G. Chevigny, New York, N.Y., assignors to International Telephone and Telegraph Corporation, a corporation of Maryland
Filed Mar. 30, 1942, Ser. No. 436,906
12 Claims. (Cl. 307—149)

1. Self-destruction equipment for destroying secret electrical apparatus to prevent inspection thereof which comprises a bursting charge disposed in destructive relationship to said apparatus, electrical firing means for detonating said charge in response to a flow of current therethrough, a battery connected to deliver current to said apparatus to be destroyed, a first conductor, a resistor connected from one end of said battery to said first conductor, a constant-drop, gas filled tube connected from the other end of said said battery to said first conductor whereby a reference voltage drop is produced between said first conductor and said other end of said battery, a second conductor effectively tapped into said battery at a point near said other end thereof whereby the potential difference of said second conductor with respect to said other end of said battery is smaller than said reference voltage drop, and means responsive to an increase in the potential difference between said first and second conductors to initiate a flow of current through said firing means.



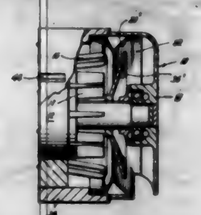
2,950,401
ELECTRICAL MOTORS
John M. Evans and Jimmie W. Luttrell, Anaheim, Calif., assignors to Magna Power Motors, Inc., Fullerton, Calif., a corporation of California
Filed Sept. 9, 1957, Ser. No. 682,703
8 Claims. (Cl. 310—44)



1. An electrical motor which includes: an enclosed housing formed of discrete ferromagnetic particles bonded together, said housing being formed so as to include an internal, generally cylindrical shaped cavity formed therein, said cavity having ends, said housing serving as a stator magnet; coil means embedded within and bonded to said housing around the outside of said cavity so as to extend between said ends; means defining an opening leading from the center of one end of said cavity to the outside of said housing; shaft means rotatably supported within said housing so as to extend through said cavity and out through said opening; and rotor means attached to said shaft means within said cavity.

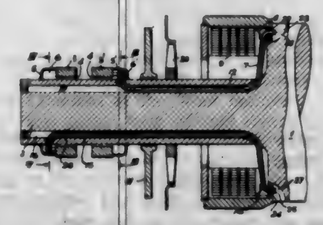
2,950,402
MOTOR WINDING CENTRIFUGAL CONTAMINATION ELIMINATOR
Felix S. Glaza, 1522 W. Broad St., Freeport, Tex.
Filed Nov. 22, 1957, Ser. No. 698,235
2 Claims. (Cl. 310—56)

1. In a motor of the type comprising an enclosed stator, having a cooling air inlet adjacent one end and an outlet remote therefrom, a rotor rotatably mounted within the stator, and means for causing a flow of cooling air in through said inlet, through the motor and out through said outlet, the improvement which comprises a slinger secured to said rotor to rotate therewith and having a projection-free, dished concave surface transverse to the axis of the rotor located in the path of the stream of air entering said inlet whereby higher inertia particles contained in said entering air will be thrown radially outwardly and tend to have a component of motion opposite



to that of the flow of air against the transverse surface and the lower inertia air allowed to continue its flow into the motor interior, and means for catching said particles and restraining them from further flow with said air stream.

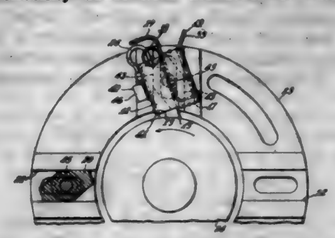
2,950,403
ELECTRICAL TURBO GENERATORS
William Norman Kilner, Hale, and Joseph Tudge, Walkden, Manchester, England, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a British company
Filed Sept. 16, 1957, Ser. No. 684,289
4 Claims. (Cl. 310—232)



1. A turbo generator having a rotor member on a shaft, a sealed casing surrounding said rotor member and through the end of which one end of the shaft projects, collector rings on the portion of the shaft outside the casing, an annular chamber extending round the shaft adjacent to each of the collector rings and in good thermal contact therewith, ducts extending axially through said shaft, each communicating at one end with one of said annular chambers, hollow electrical conductors lying in said ducts and connecting the collector rings with the rotor winding near the rotor periphery and thereby forming passages for cooling gas extending between said annular chambers and discharge apertures at the periphery of the rotor, and means for introducing cooling gas into the annular chambers.

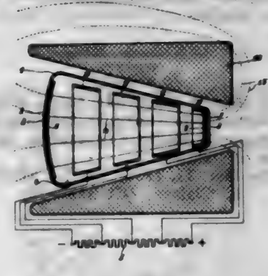
2,950,404
BRUSH HOLDER ASSEMBLY
Walter G. Nolte, Cincinnati, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 12, 1958, Ser. No. 780,099
6 Claims. (Cl. 310—241)

1. A brush holder assembly for a dynamoelectric machine having a commutator comprising: a holder having a channel defined therein, a brush mounted in said channel in sliding relation relative thereto, means for urging said brush toward said commutator, means adapted to be connected to said machine for mounting said holder, each of said mounting means having a slot for receiving a holder, said holder having a base extending therefrom, said base having two sets of cooperating surfaces adapted to independently coact with the sides of said slot to



locate said holder in two distinct positions for clockwise and counterclockwise rotation of said commutator.

2,950,405
ELECTRON-OPTICAL DEVICE
Jan Bart Le Poole, Delft, Netherlands, assignor to N.V. Optische Industrie "De Oude Delft," Delft, Netherlands
Filed Feb. 16, 1959, Ser. No. 793,357
Claims priority, application Netherlands Feb. 18, 1958
4 Claims. (Cl. 313—65)

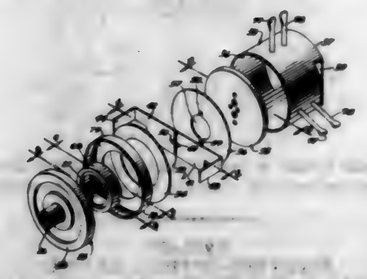


1. A device for electron-optical imagery including a vacuum tube comprising a spherical photo-cathode electrode capable of emitting a photo-electron image current in response to a radiation image projected thereon, a receiving screen spaced from said photo-cathode a distance shorter than the radius of curvature of said photo-cathode for receiving said photo-electron image current, electrode means in said vacuum tube to set up an electrostatic field for directing said photo-electron image current onto said receiving screen, said electrostatic field having substantially spherical equipotential surfaces concentric with said photo-cathode substantially throughout the effective region of electron current flow between said photocathode and said receiving screen, and means for setting up a magnetostatic field, whose field lines, throughout said effective region, are substantially perpendicular to the equipotential surfaces of said electrostatic field whereby said photo-electron image current is brought to focus on said receiving screen to form an erect replica image thereon.

2,950,406
PRECISION CATHODE-RAY TUBE ASSEMBLY
Guy F. Barnett, Roslyn, Gordon R. Spencer, Perkasie, Walter F. Bagharst, Souderton, and George W. Pratt, Ambler, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed May 10, 1954, Ser. No. 428,744
19 Claims. (Cl. 313—69)

1. Cathode-ray tube apparatus for developing a plurality of discrete cathode-ray beams, comprising in combination, a cathode sub-assembly including an electron emitting cathode having an emission surface and a support member fastened to said cathode, said support mem-

ber having a face serving as a precision spacing reference, a plurality of electrically discrete apertured grid electrodes extending radially outward with respect to said cathode with each grid aperture located at a predetermined fixed distance from the emission surface of said cathode, an apertured backing electrode member, a sin-



gle rigid insulator member in contact with said face of said support member and with said grids and serving as a spacer gauge to determine solely the spacing between said emission surface and said grids, and means to clamp said support member, said insulator member and said grids as a stacked unit insulatingly against said backing member.

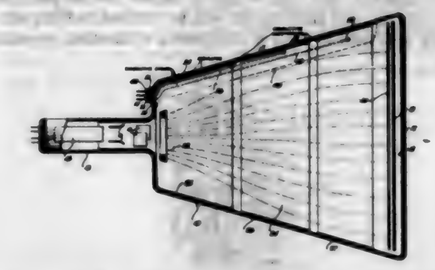
2,950,407
ELECTRIC BEAM CONTROLLING APPARATUS
William H. Barlow and Martin W. Schmutz, Pennsauken, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Dec. 21, 1956, Ser. No. 629,870
15 Claims. (Cl. 313—70)



1. Electron beam controlling apparatus comprising a pair of annular permanent magnets magnetized along their diameters; means for supporting said magnets coaxially with and for rotation about the neck of a cathode ray tube; and an annular member disposed between said magnets; said annular member being of high permeability at low flux densities.

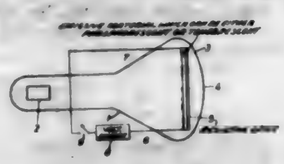
2,950,408
MULTI-GAP COLLIMATION LENS FOR USE IN DIRECT-VIEW STORAGE TUBE
Richard D. Ketchpel, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Oct. 30, 1959, Ser. No. 849,796
3 Claims. (Cl. 313—82)

1. In a device of the type employing a plurality of annular electrodes disposed concentrically about the inner surface of a glass envelope, the improvement comprising a stem having a corresponding plurality of conductive pins therethrough sealed in the wall of said glass envelope, a strip of conductive material extending in isolated relationship from each of said conductive pins to a point on the inner surface of said glass envelope beneath the respective annular electrode, and a layer of insulative material disposed intermediate said strips of conductive material and said annular electrodes extending from each of said conductive pins to a point along the respective strip of conductive material that is beneath the corresponding annular electrode whereby each of



said conductive pins is electrically connected to a selected one of said annular electrodes.

2,950,409
STORAGE TUBE
Wolfgang Berthold, Belmar, N.J., and Jürgen Rottgardt, Nurnberg, and Gerhard Heller, Ludwigsburg, Germany, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Mar. 25, 1958, Ser. No. 723,873
Claims priority, application Germany Mar. 27, 1957
4 Claims. (Cl. 313—92)



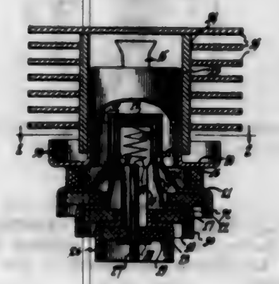
1. In a cathode ray tube comprising a screen and a source of energy, a layer of energy responsive material mounted on said screen which exhibits the properties of phosphorescence in a first state and tenebrescence in a second state, and means for heating said layer to selectively change the state of said material to respond to said source of energy whereby said screen will either phosphoresce or tenebresce.

2,950,410
MULTIPLE GROOVE DISCHARGE LAMP
Eugene Lemmers and John O. Aicher, Cleveland Heights, Ohio, assignors to General Electric Company, a corporation of New York
Filed May 12, 1958, Ser. No. 734,551
20 Claims. (Cl. 313—109)



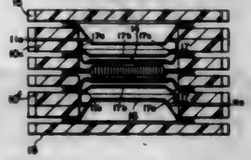
1. A low pressure electric discharge lamp comprising an elongated vitreous envelope having electrodes sealed into opposite ends and containing an ionizable medium including an inert starting gas and a metal vapor producing resonance radiation, said envelope having an outer wall of generally circular section and a plurality of relatively short longitudinally extending grooves alternating on opposite sides of the envelope and resulting in a generally kidney-shaped cross section in the grooved portions of the envelope, the groove throw as measured between corresponding points in adjacent grooves on opposite sides of the envelope being comparable to the envelope diameter in order to confine the plasma in a substantially lengthened zigzag discharge path.

2,950,411
POWER TUBES FOR OPERATION AT HIGH FREQUENCIES
Anthony G. Nekut and Merrald B. Shrader, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Continuation of abandoned application Ser. No. 505,388, May 2, 1955. This application May 26, 1958, Ser. No. 737,968
2 Claims. (Cl. 313—250)



1. A compact, high frequency, high power electron discharge device comprising cup-shaped anode, screen grid, control grid, and cathode electrodes each having a cylindrical electron-active portion; said electrodes being in nested co-axial spaced array in the order named with said anode surrounding the other of said electrodes; said anode having an integral radial flange extending outwardly from the open end thereof perpendicular to the axis of said array; said anode flange having an integral cylindrical extension at the outer periphery thereof coaxial with said array; each of said screen grid, control grid, and cathode electrodes having a tubular support portion extending from its open end away from the cylindrical electron-active portions thereof; the tubular support portions of said screen gird and said control grid being conical and the smaller diameter ends thereof being adjacent the electron-active portions of said electrodes; each of said tubular support portions having a radial flange extending outwardly from the extending open end thereof perpendicular to the axis of said array; each of said flanges of said tubular support portions having a cylindrical extension at the outer periphery thereof coaxial with said array; said cylindrical extensions of said anode, screen grid, control grid, and cathode electrodes being of progressively smaller diameter in the order named; both said screen grid and said control grid electrodes being made of high thermal conductivity metal and being one-piece self-supporting members consisting of their electron-active portions, their conical tubular support portions, their radial flanges, and their cylindrical extensions whereby heat from said grids is rapidly dissipated for maintaining the temperature differential between the external and enclosed portions of said electrode at a small value whereby undesirable grid emission is substantially prevented; an annular ceramic member having flat end sealing surfaces and a shorter axial length than outer diameter sealed between said anode flange and said screen grid flange on its flat end surfaces only; a first annular ceramic disc having flat end sealing surfaces and a smaller axial thickness than radial thickness sealed between said screen gird flange and said control grid flange on its flat end sealing surfaces only; a second annular ceramic disc having flat end sealing surfaces and a smaller axial thickness than radial thickness sealed between said control grid flange and said cathode flange on its flat end sealing surfaces only; a third annular ceramic disc having flat end sealing surfaces and a smaller axial thickness than radial thickness sealed on one of said surfaces only to the side of said cathode flange opposite that sealed to said second annular ceramic disc; said cylindrical extensions being in non-fit relation to the outer edge surfaces of said discs and extending axially at least coextensively with an adjacent disc, whereby said cylindrical extensions of said screen grid and control grid electrodes define relatively large areas for improved heat transfer to engaging circuit elements; a heater electrode disposed within said cathode and comprising a heating element, a support rod, and a sealing flange; said heating element being connected between said cathode and one end of said support rod; said support rod being co-axial with said array and being attached to said sealing flange adjacent its other end; said sealing flange being perpendicular to the axis of said array and being sealed to the flat end sealing surface only of said third annular ceramic disc opposite the surface thereof sealed to said cathode flange; said flanges, said annular ceramic member and discs, and said anode comprising a vacuum tight envelope enclosing said electron active portions of said electrodes and being such that the entire constituent parts of said tube may be assembled, jigged externally of the vacuum envelope, and sealed in a single brazing operation.

2,950,412
MODULAR, CERAMIC, ELECTRON-DISCHARGE TUBE
Edmond J. Albert, Nashua, N.H., assignor, by mesne assignments, to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Apr. 16, 1956, Ser. No. 578,211
5 Claims. (Cl. 313—250)

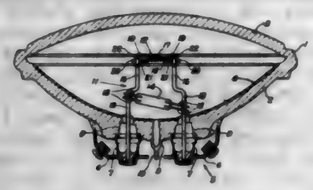


1. A modular, space-discharge tube, comprising: a pair of end wafers; a plurality of inner wafers stacked with said end wafers and having holes centrally formed therein; a plurality of staggered conductive paths affixed to opposite sides of said inner wafers, one of said paths extending into the central hole in one of said wafers; and an electrode secured longitudinally to the inside surface of said central hole in one of said wafers to confine contact of said extended path and said inside surface to present a minimum of conductive surface area to an adjacent electrode and, thereby, minimize inter-electrode capacity.

2,950,413
FILAMENT CONNECTION FOR ELECTRIC LAMP OR SIMILAR DEVICE
Frank J. Jayne and Murray Honeycutt, Lyndhurst, Ohio, assignors to General Electric Company, a corporation of New York
Filed Mar. 31, 1959, Ser. No. 803,124
5 Claims. (Cl. 313—271)

1. In an electric lamp, the combination of a lead-in conductor, a filament comprising a main body portion having a helical end coil portion, a wire spud extending into and in contact with said end coil, and a wire screw-on coil tightly screwed over an appreciable portion of the length of said end coil and short-circuiting the coil

turns thereof, the coil-enclosed spud-containing portion of said filament end coil being fixedly attached to said conductor at a point removed from the said main body portion of the filament, said wire spud extending into and engaged with said filament end coil a distance, inwardly



from its said point of fixed attachment to the conductor, ranging from approximately one-third to two-thirds the distance of screw-mesh engagement of said screw-on coil with said filament end coil inwardly thereof from its said point of fixed attachment to the conductor.

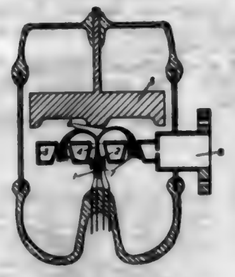
2,950,414
STORAGE TUBE
Richard D. Ketchpel, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Apr. 1, 1959, Ser. No. 803,415
2 Claims. (Cl. 315—1)



1. A cathode ray tube including an envelope comprising a face panel section and a funnel section, the edge of the larger extremity of said funnel section being juxtaposed to the edge of said face panel section; a layer of vitrified conductive frit mixture containing metallic flake and glass frit interposed between said funnel section and said face panel section of said cathode ray tube along at least a portion of the juxtaposed edges thereof; means for providing a seal between said funnel section and said face panel section along the remaining portion of said juxtaposed edges; first and second patches of said vitrified conductive frit mixture disposed on the inside and outside of said envelope, respectively, said first and second patches being in electrical contact with said layer; and means for making electrical contact to said first and second patches thereby to provide an electrical lead-in through said envelope.

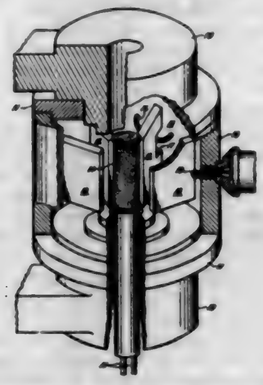
2,950,415
REFLEX KLYSTRONS
Tadakusi Fujii, Tokyo, Japan, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Filed Apr. 13, 1959, Ser. No. 806,083
Claims priority, application Japan Apr. 15, 1958
1 Claim. (Cl. 315—5.18)

A reflex klystron tube comprising an electron beam source aligned along a given axis within said tube, a repeller electrode extending normal to said axis and spaced a predetermined distance from said source, a cavity resonator positioned between said source and said repeller electrode, said cavity resonator having a buncher region concentric with said electron beam, an annular catcher region radially spaced from said buncher region relative to said axis and concentric to said electron beam, and the contour of said repeller electrode being



such as to repel the beam emerging from said buncher region and return it to said catcher region.

2,950,416
MAGNETRON OUTPUT CONTROL
William C. Brown, Weston, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Feb. 15, 1957, Ser. No. 640,566
5 Claims. (Cl. 315—39.69)

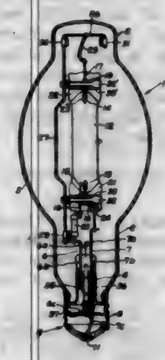


1. In a magnetron comprising adjacent resonant cavities adapted to develop voltages that are of equal magnitude, but opposite polarities, during operation in the preferred mode, means for damping out unwanted oscillations, comprising a secondary circuit connecting two of said adjacent cavities, said secondary circuit consisting of a single shunt loop having one half its length disposed within one of said two adjacent cavities, and the other half of its length disposed within the other of said two adjacent cavities, said shunt loop being of a composition tending to establish substantial energy dissipation only when such unwanted oscillations occur.

2,950,417
SERIES ELECTRIC LAMP
Harold A. Breeding, Hendersonville, N.C., and Ernest C. Martt, Chagrin Falls, Ohio, assignors to General Electric Company, a corporation of New York
Filed Aug. 8, 1958, Ser. No. 754,657
8 Claims. (Cl. 315—75)

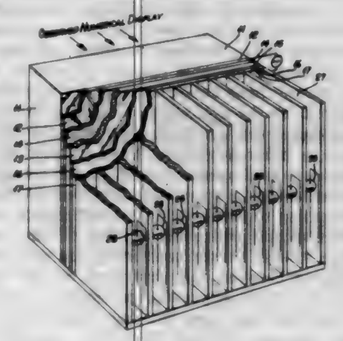
1. An electric lamp having an integral arcing fuse and comprising a vitreous envelope, a stem closing an end of said envelope and having a pair of lead-in wires projecting therethrough, a high lead content glass sleeve enclosing the external portion of one of said lead-in wires passing through said stem, the external portion of the other of said lead-in wires having at least one turn

wrapped around said sleeve, and a base provided with contact surfaces attached to the stem end of said envelope



and having the ends of said lead-in wires connected to its contact surfaces.

2,950,418
DISPLAY APPARATUS
Charles S. Reis, Mountain View, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Filed July 20, 1956, Ser. No. 599,115
2 Claims. (Cl. 315—169)



1. A display apparatus comprising an insulating board, a plurality of conductive segments disposed in a predetermined manner on one surface of said board, a layer of electroluminescent material disposed over said one surface of said board and said segments, a transparent conductive layer in electrical contact with the exposed surface of said electroluminescent material, a source of alternating current potential adapted to energize said electroluminescent material, and a photoconductive switching matrix disposed on the opposite surface of said board and serving to apply said potential between appropriate ones of said conductive segments and said conductive layer whereby predetermined areas of the electroluminescent material is energized.

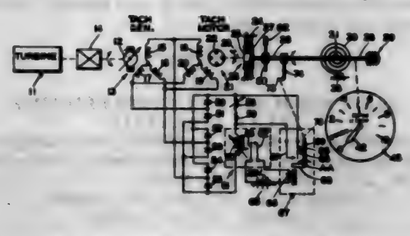
2,950,419
IGNITION APPARATUS
Irving E. Linkroum, Hancock, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 7, 1956, Ser. No. 627,042
14 Claims. (Cl. 315—177)

1. Electrical apparatus comprising a source of electrical energy including a storage condenser, a load circuit connected to be fed by the storage condenser, said load circuit having a substantial impedance, a control gap interposed between the storage condenser and the load circuit, and a second condenser having one side connected between the control gap and the load circuit and adapted to be charged by the source of electrical energy,



the other side of the second condenser being so connected as to be at the same potential as one side of the storage condenser, the second condenser being so connected as to increase the initial peak flow of current through the control gap.

2,950,420
APPARATUS FOR CONTROLLING THE POSITION OF A DISPLACEABLE MEMBER TO INDICATE THE SPEED OF AN ENGINE WITHIN PREDETERMINED RANGES
Donald F. Hastings, Suffern, N.Y., and Philemon A. Wallace, Bloomfield, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Mar. 7, 1955, Ser. No. 492,673
8 Claims. (Cl. 317—5)

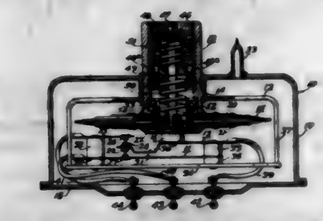


1. Control apparatus comprising means for sensing the values of a condition which varies over a predetermined range of values, an anguarly displaceable shaft, yieldable force-applying means for biasing said shaft to a reference angular position, first motor means responsive to the operation of said sensing means for applying to said shaft in opposition to the torque of said biasing means torques representative of the values of the condition in a portion of said range to displace said member angularly as a function of the values of said condition in said portion of the range, second motor means, control means responsive to a predetermined value of the condition in another portion of the range to cause operation of said second motor means independently of said first motor means, and means to releasably couple said second motor means to said shaft so as to apply to said shaft a torque in opposition to the torque of said biasing means for producing a predetermined different angular displacement of said shaft representative of said predetermined value.

2,950,421
PRESSURE SENSING DEVICE
Hall Langstroth, 1454 Alegriano Ave., Coral Gables, Fla.
Filed Nov. 9, 1956, Ser. No. 621,333
1 Claim. (Cl. 317—99)

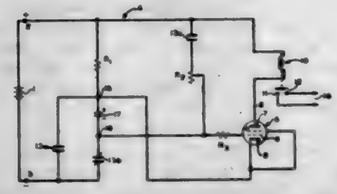
A pressure sensing device comprised of an outer hermetically sealed closure, in which is contained a hermetically sealed flexible pressure sensing bellows, the inside surfaces of said flexible bellows are open to other pressures through a tubular sleeve means, with attaching means to the outer closure, the internal end of said sleeves has mounting means to fasten the fixed end of said sensing

bellows, spring means within said tubular sleeve can be adjusted to position the movable end of said bellows, said spring means control the amount of travel of said bellows in relation to the pressure applied, a first conductor plate attached by insulation means to the central movable end of said bellows moves in relation to a second fixed conductor plate supported by insulated bracket means, a change in the position of said first conductor provides means to cause a change in the capacitance



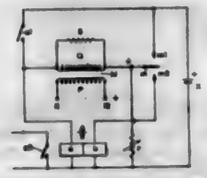
effect in an electrical circuit, to indicate by the capacitance change, the amount of pressure change, a third conductor plate supported by common bracket means as said second conductor plate has attached electrical contact means, said first movable conductor plate is between said second and third conductor plates, said conductor plates have electrical contact means which open or close at preselected pressure points, the conductor plates are each connected to insulated leads which pass through the outer hermetically sealed closure.

2,950,422
ELECTRONICALLY CONTROLLED TIME DELAY APPARATUS
Rawlins Edison Parkhiser, Springfield, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 9, 1957, Ser. No. 658,109
2 Claims. (Cl. 317—142)



1. Time delay control apparatus having positive and negative supply terminals for connection to a direct current source of supply, an electron discharge device having an anode, a cathode and a control grid, circuit controlling means connected in series with the anode-cathode circuit of said electron discharge device across said supply terminals, an initiating device having three pairs of contacts which upon operation of said device simultaneously reverse their settings, one pair of said contacts being normally closed and two pairs thereof being normally open, means for operating said initiating device to reverse simultaneously the settings of its said contact, a capacitor having first and second terminals and having its second terminal connected to said grid of said electron discharge device, a first conductive path for charging said capacitor in a given direction across said supply terminals to render said electron discharge device non-conductive and comprising a resistive element connected between said positive supply terminal and said first terminal of said capacitor in circuit with said pair of normally closed contacts of said initiating device connected between said negative supply terminal and said second terminal of said capacitor, and a second conductive path for discharging and recharging said capacitor in the reverse direction to render said electron discharge device conductive and comprising a variable resistive element connected in series with one pair of said normally open contacts of said initiating device between said positive supply terminal and said second terminal of said capacitor in circuit with the other pair of said normally open contacts of said initiating device connected between said negative supply terminal and said first terminal of said capacitor.

2,950,423
ELECTRIC RELAY CONTROL CIRCUITS
Henry Joseph Lovegrove, Hadley Wood, Barnet, England, assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Filed Dec. 4, 1956, Ser. No. 626,244
Claims priority, application Great Britain Dec. 8, 1955
2 Claims. (Cl. 317—152)



1. An electric relay control circuit arrangement consisting of a sensitive movable coil type relay having a double wound movable coil system consisting of a normal control winding and a feedback winding and said movable coil carrying a movable contact adapted to engage a first or a second fixed contact; means for applying controlling current to the said control winding; means connecting one end of the feed back winding to the said movable contact; a differential relay having a first operating winding and a second operating winding for controlling a set of contacts in an independently powered work circuit; means connecting the other end of the feedback winding through said second operating winding to one terminal of a voltage source; means connecting the said first operating winding between said first fixed contact and the said terminal; circuit elements connecting a resistance across the said first operating winding when the said movable contact engages the said first fixed contact; means connecting the other terminal of the voltage source to the second fixed contact; normally open contacts controlled by the said second operating winding; and means connecting the said second fixed contact through the said normally open contacts to the said other end of the feedback winding; whereby the contact resistance between the said movable contact and the engaged second fixed contact is immediately lowered to a value sufficient to cause operation of the said second operating winding which then effects a desired control function by closing the work circuit and, at the same time, causes discontinuance of the feedback current from the movable coil system to thereby release the latter to its normal highly sensitive state in readiness to respond to a change in the controlling current.

2,950,424
SOLENOID AND ROTATABLE SHAFT DEVICE
Traver J. Smith and Ralph K. Daugherty, San Jose, Calif., assignors of one-half to Genevieve I. Magnuson and one-half to Genevieve I. Magnuson, Robert Magnuson, and Lois J. Fox, as trustees
Filed July 3, 1957, Ser. No. 669,794
7 Claims. (Cl. 317—197)

1. An electrically energized device comprising a coil adapted to be connected to a source of current supply

for producing a magnetic field, a magnetic core for said coil, said core having a central member adapted to be lodged in said coil, said core also having outer members adapted to partially enclose the circumference of said coil, the free ends of said members forming magnetic poles of like magnetic polarity, an armature, a stud attached to said central core member, means for rotatably supporting said armature on said stud so that the ends of said armature are rotatable adjacent to said magnetic poles, each of the ends of said armature being of arcuate shape, each of said arcuate shapes forming a section of a circle the center of which is slightly displaced from



the center of said stud, the surfaces of said poles of said magnetic core cooperating with the respective ends of said armature also each being of arcuate shape and each of said latter arcuate shapes forming a section of a circle the center of which is displaced from the center of said stud whereby the lengths of each of the air gaps between the ends of said armature and the faces of said poles are uniform throughout the cross sectional areas thereof and these air gap lengths are uniformly reduced as said armature is drawn into alignment with said outer members so that the arcuate ends of said armature and the arcuate surfaces of said magnetic poles are concentric.

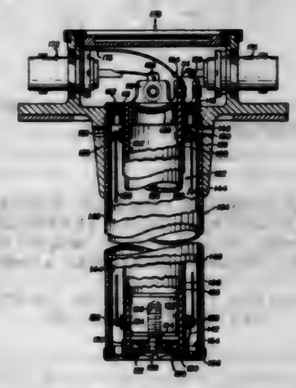
2,950,425
SEMICONDUCTOR SIGNAL TRANSLATING DEVICES
William G. Pfann, Basking Ridge, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Sept. 14, 1950, Ser. No. 184,870
36 Claims. (Cl. 317—235)



28. A semiconductor device suitable as an amplifier, oscillator or the like, said device comprising a body of N-type germanium, a base electrode in contact with said body, an emitter and a collector electrode in contact with said body said emitter and collector electrodes consisting each of a pointed metallic wire, said collector electrode containing at least one metal which will promote the flow of electrons from said collector electrode into said germanium body, said emitter electrode being substantially free of any metal which will promote the flow of electrons from said emitter electrode into said germanium body, whereby the flow of electrons from said germanium body into said emitter electrode is promoted.

36. In a point contact semiconductor device, the combination comprising: a monatomic semiconductor specimen having first and second surfaces; a resilient whisker element engaging said first surface of said specimen, said whisker element having a central region and a surface region surrounding said central region, one of said regions consisting essentially of a resilient metallic material, the other of said regions consisting essentially of an active impurity of the acceptor type and said resilient metallic material; a connecting electrode in ohmic contact with said second surface of said specimen; and a rectifying junction within said specimen and between said connecting electrode and said other region of said whisker element.

2,950,426
CAPACITOR FOR CONDUCTIVE LIQUIDS
Leonard Frome, New York, N.Y., assignor to Simmonds Precision Products, Inc., Tarrytown, N.Y., a corporation of New York
Filed June 26, 1956, Ser. No. 594,848
9 Claims. (Cl. 317—246)

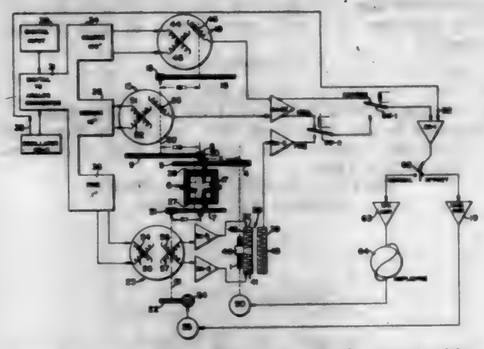


1. A measuring condenser for use in a contents gauge for electrically conductive liquids in an irregularly shaped container of the type having a pair of spaced insulated electrodes adapted for immersion in the liquid to be gauged such that the liquid enters the space between said electrodes to modify the capacity between said electrodes as a function of the quantity of liquid therebetween, one of said electrodes being profiled along the operative length thereof so as to complement the irregularity of said container, comprising, in combination with the pair of insulated electrodes, a thrid electrode free of insulation for making conductive contact with the liquid whenever liquid occupies the space between said pair of insulated electrodes, and means for making external electrical connections to each of said electrodes, whereby the said third electrode, when suitably energized relative to said insulated electrodes, coacts with the liquid to reduce the capacity between said insulated electrodes as a function of the quantity of liquid therebetween.

2,950,427
ZERO OFFSET FOR MACHINE TOOL CONTROL
Robert W. Tripp, Bronxville, N.Y., assignor to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada
Filed Feb. 7, 1957, Ser. No. 638,722
15 Claims. (Cl. 318—19)

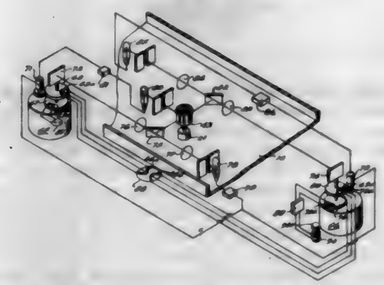
13. A machine control system comprising means providing an input command signal in a plurality of grades of scale factors, a corresponding plurality of grades of data elements each having stationary and movable members, said data elements each having a grade of input from said supplying means, switches for connecting an output signal from said data elements in sequence to one output, a servo motor for driving a machine element, one of said movable members being fixed to said machine element, and gearing connecting all of said movable members for operation at relative speeds corresponding to

their scale factors, another motor for offsetting the null position of each of said movable members, and switching



means for connecting said one output to control either said servo motor or said other motor.

2,950,428
ANGULAR POSITION CONTROL SERVOSYSTEM ELECTRO-OPTICAL DATA TRANSMISSION
John G. Gievers, Rochester, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Filed Dec. 12, 1957, Ser. No. 702,478
24 Claims. (Cl. 318—28)

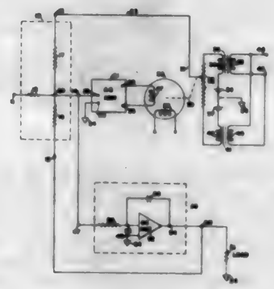


10. In an electro-optical system for monitoring the relative angular displacement between two members, separate reflecting means secured to each of said members to move therewith, optical scanning means mounted on a support and being effective to scan each reflecting means successively with a beam of light at a given scanning frequency, separate photoelectric means associated with each reflecting means, each photoelectric means being arranged to receive the beam reflected from its associated reflecting means in a given time relationship with respect to said scanning frequency when the associated reflecting means is at a predetermined position of angular alignment with respect to said support and to receive the latter beam in a leading or lagging time relationship with respect to said given time relationship upon relative angular deflection of said associated reflecting means in one direction or the opposite from said predetermined position of alignment, each photoelectric means being responsive to the beam reflected thereto to transmit a succession of electrical pulses corresponding in frequency to said scanning frequency, and a phase meter for measuring the phase differential between the electrical pulses from the two photoelectric means.

11. The combination in an electro-optical system according to claim 10 wherein said phase meter comprises a multiple-phase motor.

12. The combination in an electro-optical system according to claim 10 wherein said phase meter comprises a multiple-phase motor operatively connected with one of said members to adjust the angular position thereof in accordance with said phase differential to maintain said predetermined position of alignment between said two members.

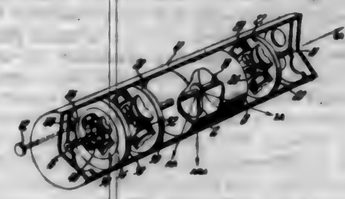
2,950,429
REBALANCING CONTROL APPARATUS
Henry W. Berry, Largo, Fla., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 7, 1958, Ser. No. 726,995
3 Claims. (Cl. 318—28)



1. A converter for producing a unidirectional electric signal of magnitude and polarity corresponding to the magnitude and phase, respectively, of an alternating electric signal, comprising: a potentiometer having a movable tap; a reference source of alternating voltage; a reference source of direct voltage; means connected to said potentiometer and to said reference sources for superimposing and applying across said potentiometer said alternating and direct voltages; a summing network having at least first, second, and third input terminals and an output terminal, said first input terminal providing an input point for applying an alternating signal to be converted; means electrically connecting the movable tap of said potentiometer to said second input terminal; electric motor means mechanically connected to said movable tap to vary the position thereof; alternating signal responsive means connected to the output terminal of said summing network and to said motor means so that said motor means is energized in accordance with any alternating signal present at the output terminal of said summing network; integrating means having an input terminal and an output terminal; means connecting the output terminal of said summing network to the input terminal of said integrating means; and means connecting the output terminal of said integrating means to the third input terminal of said summing network; the output terminal of said integrator means serving also as an output terminal of said converter.

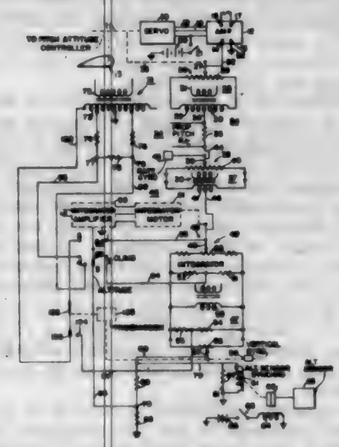
2,950,430
ELECTROMAGNETIC TORQUE MOTOR SYSTEM
Edwin F. Katz, Milwaukee, Wis., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Filed Nov. 24, 1958, Ser. No. 775,772
8 Claims. (Cl. 318—28)

1. In combination, a pair of electromagnetic torque motors each having a stator member, an armature member and an input winding on one of said members for energizing the motor to develop an output torque on the armature member, each of said motors having approximately linear torque-current charscteristic, the input windings of said motors being electrically connected together and the armatures of said motors being mechanically connected together, and means for adjusting the torque level of one of said motors whereby a composite



torque-current characteristic is obtained which is more nearly linear than that of either motor.

2,950,431
SERVOMOTOR CONTROL APPARATUS FOR DIRIGIBLE CRAFT
William T. Wright, Pacific Palisades, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Oct. 28, 1957, Ser. No. 692,798
13 Claims. (Cl. 318—489)



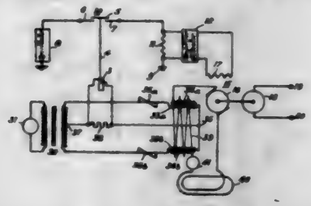
2. Apparatus for controlling the pitch attitude of a dirigible craft, said apparatus comprising: servo means controlling the attitude of the craft; means providing a first signal varying in magnitude at a selected rate; means providing a craft attitude signal, both signals controlling said servo means; and attitude responsive means operated when said craft reaches a predetermined attitude for disabling said first signal from controlling said servo means and stabilizing craft pitch attitude at the predetermined attitude.

2,950,432

WITHDRAWN

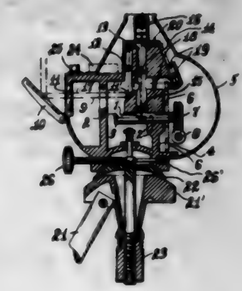
2,950,433
MEASURING DEVICE
Charles Heiman Kaplan, Montrouge, and Jean Joseph Marc Pelen, Paris, France, assignors to Compagnie pour la Fabrication des Compteurs et Materiel d'Usines a Gaz, Seine, France, a joint-stock company of France
Filed Oct. 13, 1955, Ser. No. 540,299
Claims priority, application France Oct. 22, 1954
3 Claims. (Cl. 324—43)

1. Magnetometer comprising a first circuit constituted by two identical solenoids each comprising a core having a high initial permeability, by two non-linear resistances respectively in series with each of the said solenoids and by a source of alternating current whose current produces in the said solenoids a magnetic field which saturates the said cores, a compensating solenoid through which passes a current producing in said solenoid a field whose intensity neutralizes the action on the said high initial permeability core of the magnetic field to be measured,



a second circuit controlling the current in the said solenoid in function of the unbalancing current passing through the first circuit, the said magnetometer comprising a separate excitation generator driven at constant speed, the armature of which is connected in the circuit comprising the compensating solenoid and the field coil of which is connected in the second circuit controlling the current passing in the said compensating solenoid.

2,950,434
CALIBRATION OF TORSION MAGNETOMETERS
Fritz Hanick, Berlin-Wilmersdorf, Germany, assignor to Askania-Werke A.G., Berlin-Friedenau, Germany, a corporation of Germany
Filed Aug. 21, 1958, Ser. No. 756,325
Claims priority, application Germany Aug. 23, 1957
3 Claims. (Cl. 324—48)



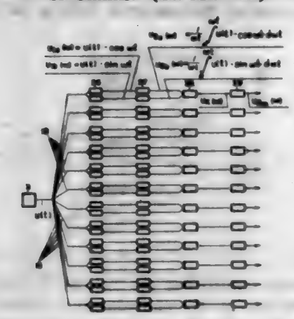
1. In a magnetometer, a torsion system having a manually rotatable part; means for manual rotation of said part; means for observing such rotation; a magnet suspended on said system and adapted by said rotation normally to be returned after magnetic deflections to a null position; means for observing such return, the latter means including an indicator area, a device for moving an indicator over said area in response to said magnetic deflections and to said returning of the magnet, and a null position index for the indicator, said index being disposed in said area; and means for calibrating the torsion system and magnet, said latter means comprising a pair of deflection indices disposed in said area, symmetrically spaced from the null position index, whereby observable manual rotations of said rotatable part allow return of the indicator to at least one of said deflection indices, furnishing a calibration value, while also allowing return of the indicator to the null position index, furnishing a magnetometer reading.

2,950,435

METHOD AND MEANS FOR DETERMINING PERIODIC VARIATIONS IN VARIABLES ESPECIALLY IN THE CROSS-SECTION OF TEXTILES

Hans Locher and Ernst Felix, Uster, Switzerland, assignors to Zellweger A.G., Uster, Switzerland

Filed Sept. 1, 1954, Ser. No. 456,288
13 Claims. (Cl. 324—61)



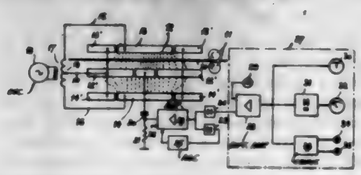
11. A system for determining the wave length spectrum of the weight variations per unit length of textile material, said system comprising: means for reproducing the weight per unit length of textile material as an electrical magnitude; means for passing said textile material through said means for reproducing the weight per unit length as an electrical magnitude; means for producing the frequency spectrum of said electrical magnitude; and means for indicating and recording said frequency spectrum, which represents the wave length spectrum in the case of a corresponding transformation of the frequency scale.

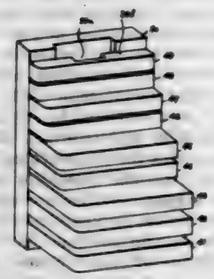
2,950,436

APPARATUS FOR CONTROLLING OR CHECKING THE IRREGULARITY OF A FLOW OF TEXTILE OR LIKE MATERIALS

André Butticaz, 45 Rue de la Bolle, Charles Tesage, 24 Rue Folmard, and Heinz Dembowski, 92 Rue de la Bolle, all of Saint-Die, France

Filed Apr. 15, 1957, Ser. No. 652,785
Claims priority, application France May 3, 1956
26 Claims. (Cl. 324—61)





1. In an apparatus for determining the irregularity of a continuous flow of textile or like materials, the combination comprising, a differential condenser having a central plate electrode, an external plate electrode symmetrically disposed on each side of said central electrode, so as to form a measuring condenser and a reference condenser; means for passing said continuous flow between the central plate electrode and the external plate electrode forming said measuring condenser; an oscillator having a central output terminal and two external output terminals which are symmetrical with respect to said central terminal; a measuring circuit, to determine the difference between the capacities of said measuring and reference condensers, comprising said oscillator, said differential condenser, an output impedance element, means for symmetrically connecting one of said external terminals of said oscillator to said external plate electrode forming said measuring condenser and the other of said external terminals of said oscillator to said external plate electrode forming said reference condenser, and means for connecting said output impedance element to said central plate electrode on the one hand and to said central output terminal of said oscillator on the other hand; a tuned amplifier; means for connecting the input of said amplifier across said impedance element; a detector coupled to the output of the said amplifier; an interpretation device comprising a source of continuous reference potential and means connected to the output of said detector, including means for comparing the reference signal and the signal at the output of said detector to produce a differential signal, and means for determining the variation of said differential signal.

2. An apparatus as claimed in claim 1 in which the differential condenser associated with the said measuring circuit is a multiple condenser comprising a plurality of differential units, each comprising a measuring condenser and a reference condenser formed respectively on each side of a central plate electrode; the said central plate electrodes decreasing in surface area along one direction of the plurality of units composing the said multiple differential condenser; the outer plates respectively disposed on each side of the said central electrodes each having a greater surface area than that of the corresponding central electrode, thereby forming a plurality of measuring channels having dimensions adapted to receive a range of possible dimensions of the materials to be examined.

4. An apparatus as claimed in claim 1, in which the differential condenser of the said measuring circuit is formed by a plurality of metal plates of generally rectangular shape, each fixed as a bridge above two longitudinal walls of a base, also of metal, an internal coplanar portion of each plate forming a condenser plate electrode separated by a layer of low-loss insulating material from the remaining external portion, the latter portion serving as an anti-fringing plate around the periphery of the said condenser plate and being electrically connected to earth through the said base, the said plurality of plates being an odd number, the end plates and each odd-numbered plate forming the external plates, and the even-numbered plates forming central plate electrodes of decreasing dimensions, at least one of the peripheral edges of each internal plate portion which forms the common external plate between two successive central plate electrodes being cut with a bevel edge in order that its outer surfaces may be in correlation with the corresponding facing surfaces of the said central plates.

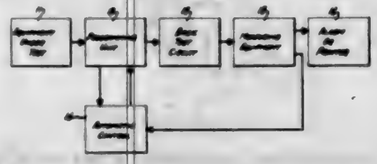
2,950,437

CIRCUIT TESTING APPARATUS

Robert J. Stahl, Redwood City, Calif., assignor, by mesne assignments, to Textron, Inc., a corporation of Delaware

Filed Aug. 16, 1954, Ser. No. 450,001
14 Claims. (Cl. 324—73)

1. Electrical test and measuring apparatus comprising a master unit including a plurality of testing circuits adapted individually to determine different parameters entering into the operation of electrical circuitry to be tested, a programming unit associated with the master unit and a component to be tested, means for driving the programming unit in step-by-step fashion under control of the master unit to select at each step an electrical test to be made, a measuring element, means included in the master unit and controlled from the programming unit



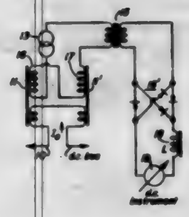
for switching between individual test circuits and concurrently connecting the selected test circuits to the measuring element, means included in the master unit for selecting the switching rate between successive tests normally to occur in a regularly recurring time sequence and means included in the master unit and controlled by the programming unit for lengthening the time period of tests in a selected order determined by the programming unit.

2,950,438

APPARATUS FOR MEASURING LARGE D.-C. CURRENTS

Roswell W. Gilbert, Montclair, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Filed Aug. 30, 1954, Ser. No. 452,883
3 Claims. (Cl. 324—117)



1. Apparatus for measuring the D.-C. current flowing in a conductor comprising a pair of saturable magnetizable cores magnetically coupled to the conductor; an exciting winding on each core, the exciting windings being connected in series and in opposed sense with respect to each other; a rectifier having A.-C. input junctions connected to an alternating current source in series with the exciting windings; and an output circuit connected to the D.-C. output junctions of the rectifier, said output circuit consisting of an inductor and a D.-C. indicating instrument connected in series, and the inductance of said inductor being of a magnitude sufficient to produce an exponential time-constant in the rectifier output circuit that is large with respect to the reciprocal of the frequency of the alternating current source.

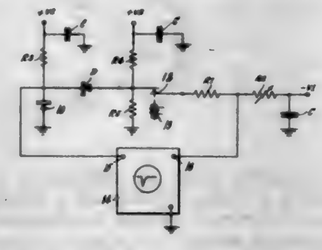
2,950,439

TEST APPARATUS FOR CRYSTAL DIODES

Clarence G. Gerbitz, Highland, and Norman H. Decker, Rhinebeck, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Filed Dec. 5, 1957, Ser. No. 700,815
5 Claims. (Cl. 324—158)

1. Apparatus for measuring the reverse recovery characteristic of a crystal diode, said apparatus comprising a zener diode connected in series opposing relation to the diode under test, a forward biasing circuit to cause breakdown of the zener diode and produce a current flow in a forward direction with respect to the test diode and in a reverse direction with respect to the zener diode, a switching device coupling said forward biasing circuit across the series combination of said diodes so as to permit interruption of said current flow, a first reverse biasing circuit coupled to the test diode, said first reverse



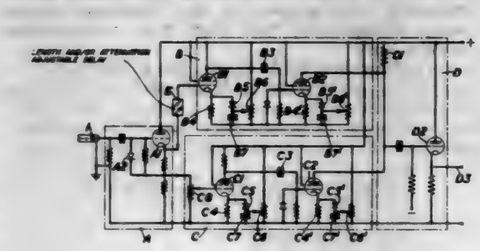
biasing circuit supplying a reverse bias potential to the test diode when said current flow is interrupted, a second reverse biasing circuit coupled to the zener diode, said second reverse biasing circuit supplying a reverse bias potential to the zener diode having a magnitude such that the zener diode is not subject to breakdown when said current flow is interrupted, and means to indicate the variation in the voltage across the test diode following the interruption of said current flow.

2,950,440

PHASE-AMPLITUDE CHARACTERISTIC CORRECTION CIRCUIT ARRANGEMENTS

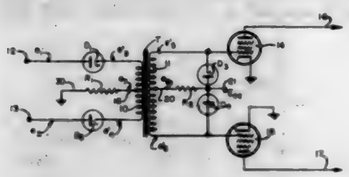
Victor James Cooper, Chelmsford, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Filed Dec. 14, 1955, Ser. No. 553,107
Claims priority, application Great Britain Jan. 18, 1955
5 Claims. (Cl. 328—155)



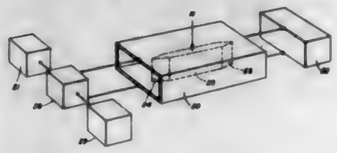
1. A phase-amplitude characteristic correction circuit comprising the parallel connected combination of two complementary non-linear amplifiers, each including a non-linear element in the circuit thereof, the correction circuit having a substantially linear overall input-output amplitude characteristic, means for applying an input signal to both said amplifiers, delay means connected between one of said amplifiers and said input means for establishing a relative phase difference between the output signals of the amplifiers thereof, and means for combining said output signals.

2,950,441
TRANSFORMER COUPLING CIRCUITS
Richard W. Spencer, Philadelphia, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 26, 1956, Ser. No. 612,306
3 Claims. (Cl. 328—221)



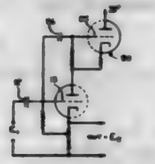
1. In a coupling circuit, the combination of a transformer having a primary winding and a secondary winding, means selectively applying unidirectional control pulses to opposite ends of said primary winding, separate utilization means each having a first electrode coupled to opposite ends of said secondary winding, a source of reference potential having one terminal connected to another electrode of each of said utilization means, impedance means operable to maintain said first electrode of said utilization means at the potential of the other terminal of said source in the absence of an input signal, and unidirectional current conducting means coupled between said other terminal and each of said opposed ends of said secondary winding, said unidirectional current conducting means being poled to allow easy current flow from said other terminal to said opposed ends whereby the potential induced in said secondary winding between said opposed ends is effective to bias either of said first electrodes to a potential above that of said other terminal equal to the potential induced between the opposed ends of said secondary in response to said control pulses.

2,950,442
PASSIVE SIGNAL INTENSIFIER
Henry E. D. Scovil, Morristown, and Harold Seidel, Plainfield, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Aug. 30, 1956, Ser. No. 607,067
4 Claims. (Cl. 330—5)



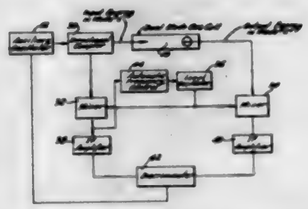
1. A pulse intensifier comprising a power-saturable medium magnetically biased to resonance having a first operating region of high attenuation for applied signals below a critical power level and a second operating region of low attenuation relative to the attenuation in said first region for applied signals above said critical power level, high frequency power biasing means for maintaining a given power level in said medium below said critical power level, input means for applying pulses to said medium, said pulses having a power level less than said given power level but sufficient when added to said given power level to raise the power within said medium above said critical power level and into said second region, and output means for receiving power transmitted through said medium.

2,950,443
UNIQUE UNITY GAIN AMPLIFIER
Gareth M. Davidson, New York, N.Y., and Robert F. Brady, Ridgefield, N.J., assignors to American Bosch Arma Corporation, a corporation of New York
Filed June 26, 1958, Ser. No. 744,861
1 Claim. (Cl. 330—70)



A cathode follower comprising, a first triode having cathode, grid and anode elements, a second triode having cathode, grid and anode elements, a reference terminal, signal input terminals electrically connected between said grid of said first triode and said reference terminal, output terminals connected between said cathode of said first triode and said reference terminal, electrical connection between the grid of said first triode and said grid of said second triode, electrical connection between said anode of said first triode and said cathode of said second triode and a power supply connected to said anode of said second triode.

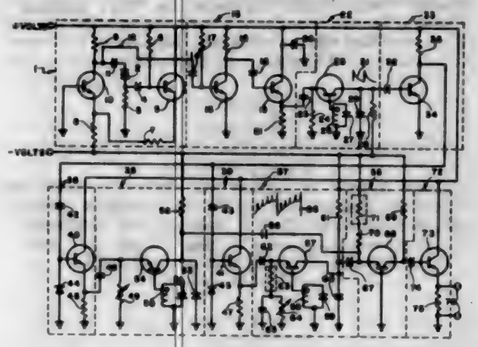
2,950,444
MICROWAVE DEVICES EMPLOYING QUANTUM TRANSITION RESONANCE PHENOMENA
Giusto Fonda-Bonardi, Lakewood, Calif.
(2075 Linda Flora Drive, Los Angeles 24, Calif.)
Filed Oct. 3, 1957, Ser. No. 687,993
13 Claims. (Cl. 331—3)



1. In a microwave device, the combination comprising: a dual mode waveguide cell containing particles of a quantum transition resonant substance, said waveguide cell being capable of propagating microwave energy in first and second mutually orthogonal modes; input means for applying electrical input energy to said waveguide cell in said first mode to thereby raise a portion of said particles to a higher energy level through quanta absorption, and output means for extracting a microwave output signal from said waveguide cell in said second mode, said output signal being generated within said cell by quanta emission as particles at said higher energy level decay to a lower energy level.

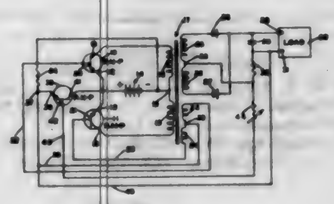
2,950,445
TRANSISTOR FREQUENCY STANDARD
Joe H. Smith and Mark S. Campbell, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Aug. 31, 1955, Ser. No. 531,719
2 Claims. (Cl. 331—37)

1. A transistorized standard low frequency generator comprising an oscillator stage, a first divider stage receiving signals from said oscillator stage and producing signals of a sub-multiple frequency of said received signals, a second divider stage receiving signals from said first divider stage and producing signals of a sub-multiple frequency of the signals from said first divider stage, a third divider stage receiving signals from said first divider stage and producing signals of a sub-multiple frequency of the signals received from said first divider stage and different from the frequency of the signals



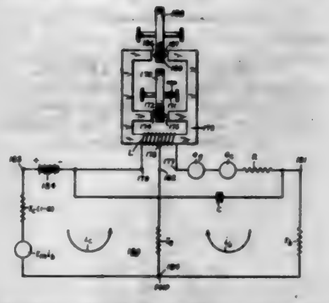
produced by said second divider stage, and a coincidence mixer stage receiving signals from said second divider stage and said third divider stage and producing only a signal of a frequency equal to the difference between the frequency of the signals from the said second divider stage and the frequency of the signals from said third divider stage.

2,950,446
SELF-STARTING TRANSISTOR OSCILLATOR UNIT
David E. Humez, Lexington, and Richard F. Morey, Jr., Abington, Mass., assignors, by mesne assignments, to Clevite Corporation, Cleveland, Ohio, a corporation of Ohio
Filed May 23, 1955, Ser. No. 510,484
13 Claims. (Cl. 331—114)



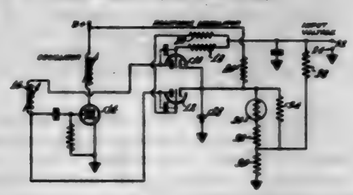
11. In combination, a first transistor having input and output circuits, power supply connections for said transistor, a load coupled to said output circuit, a transformer having a primary winding connected in said output circuit, a secondary feedback winding on the transformer inductively coupled to said primary winding and coupled to said input circuit, another transistor comprising a semiconductor, a base electrode making ohmic contact with said semiconductor, and emitter and collector electrodes each making rectifier contact with said semiconductor, resistive impedance means connected between one of said power supply connections and one of said rectifier contact electrodes on said other transistor, the other rectifier contact electrode on said other transistor being connected directly to the other of said power supply terminals, said one rectifier contact electrode on said other transistor having a connection to said feedback winding, and a connection from the base electrode on said other transistor to the load.

2,950,447
ELECTROMECHANICAL TRANSDUCER APPARATUS AND SYSTEMS EMBODYING THE SAME
Clarence H. McShan, 21 Bluff Point Road, Great Neck, N.Y.
Filed Mar. 1, 1957, Ser. No. 643,437
18 Claims. (Cl. 331—116)



1. An electromechanical transducer system comprising an amplifier having an input and an output, a transducer for bidirectionally transducing mechanical motion and electrical energy and including an inductor winding having two mutually coupled portions connected in a regenerative feedback circuit including the amplifier input and output, respectively, said feedback circuit coupling the amplifier input and output for regenerative feedback of both electrical energy induced in the inductor as a result of mechanical motion in the transducer and electrical energy from the amplifier output, the electrical energy tending to sustain mechanical motion in the transducer, means normally biasing said amplifier substantially to cut-off, conduction in the amplifier being adapted to be initiated by E.M.F. generated in the inductor winding as a result of mechanical motion in the transducer, and means for rendering the system electrically stable against self-oscillation in the absence of mechanical motion in the transducer and against oscillation at any frequency other than that of the transducer mechanical motion when such motion is present, whereby the system is governed exclusively by the said mechanical motion.

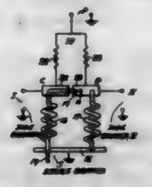
2,950,448
TEMPERATURE COMPENSATION CIRCUIT
Leonard Finkel, Delaware Township, Camden County, N.J., and Charles J. Weidknecht, Philadelphia, Pa., assignors, by mesne assignments, to American Bosch Arma Corporation, Hempstead, N.Y., a corporation of New York
Filed Mar. 27, 1957, Ser. No. 648,927
4 Claims. (Cl. 332—28)



1. In combination with an oscillator subject to frequency drifts from variations in temperature, a reactance modulator including an electron discharge device having an anode, cathode, and a control grid, means for connecting said anode to said oscillator to provide means for varying the frequency thereof, a source of operating potential, a diode voltage stabilizer and a resistor connected to said source of operating potential, a second resistor variable in accordance with temperature con-

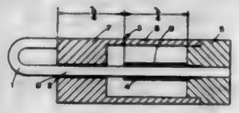
nected to said cathode and across said voltage stabilizer whereby the voltage across said second resistor is maintained relatively insensitive to variations in operating potential, said second resistor and said diode voltage stabilizer providing a bias potential for said reactance modulator whereby the frequency of said oscillator is varied in accordance with temperature to provide compensation for frequency drifts of said oscillator.

2,950,449
HYBRID TYPE NETWORK
Andrew Alford, Winchester, Mass.
(299 Atlantic Ave., Boston, Mass.)
Filed Nov. 21, 1956, Ser. No. 623,560
4 Claims. (Cl. 333—11)



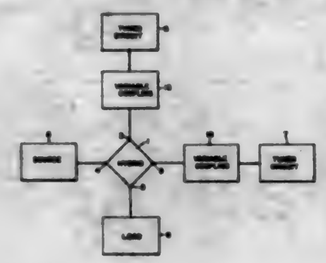
1. An electrical network exhibiting hybrid properties comprising, four terminal pairs each having high and low terminals with the low terminals conductively interconnected, first and second resistors connected in series, a first of said high terminals being connected to the junction of said serially-connected resistors, a second and third of said high terminals being connected to the ends of said first and second resistors respectively away from said junction, and means for converting an unbalanced signal on the fourth of said high terminals into a balanced signal which is applied across said serially-connected resistors, said means providing an impedance between each of said second and third terminal pairs and said fourth terminal pair higher than that of said serially-connected resistors.

2,950,450
ATTENUATORS OR SUPPRESSORS FOR ATTENUATING OR SUPPRESSING UNDESIRED OSCILLATIONS
Leonard Tony King, Georgetown, Ontario, Canada, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed Mar. 1, 1957, Ser. No. 643,380
Claims priority, application Great Britain Mar. 3, 1956
4 Claims. (Cl. 333—22)



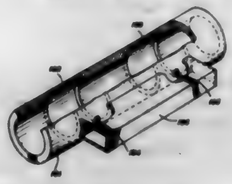
1. An attenuator comprising coupling means for coupling said attenuator to a source of desired and undesired oscillations of different frequencies, a coaxial transmission line having an inner and an outer conductor with the inner conductor connected to said coupling means and having a length effectively equal to a quarter of a wavelength at the frequency of said desired oscillations, means short-circuiting the conductors of said line at their ends remote from said coupling means, a resistive layer surrounding the inner conductor of said line, a tubular conductor surrounding said resistive layer and electrically connected to said means short-circuiting the conductors of said line and disposed between said inner and outer conductors, said resistive layer being situated at a point in said line where a current minimum is set up for said desired oscillations so that substantial attenuation of said undesired oscillations occurs with little attenuation of said desired oscillations.

2,950,451
WAVE TRANSMISSION FILTER
Thomas Grant Custin, Baldwinsville, N.Y., assignor to General Electric Company, a corporation of New York
Filed Mar. 4, 1954, Ser. No. 414,067
9 Claims. (Cl. 333—73)



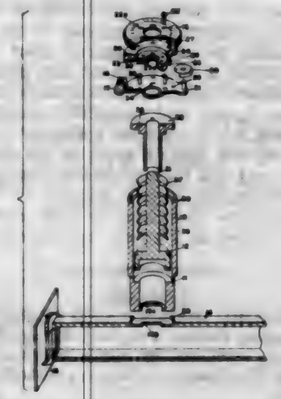
1. A filter for high frequency waves comprising a first tuned circuit tuned to a first frequency, a second tuned circuit having two resonant elements tuned respectively to frequencies above and below said first frequency, a hybrid network having two pairs of conjugately related terminals, means for relatively tightly coupling one of one pair of conjugately related terminals to said first tuned circuit, means for relatively tightly coupling the other of said one pair of conjugately related terminals to one resonant element of said second tuned circuit, and means for coupling said second resonant element relatively loosely to the first of said resonant elements so as to increase the rate of change of attenuation with frequency of said filter to frequencies in proximity to the frequency to which said second resonant element is tuned, lying outside the region bounded by the frequencies to which said resonant elements are tuned.

2,950,452
MICROWAVE DEVICES
Enrique A. J. Marcatili, Fair Haven, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 29, 1958, Ser. No. 731,698
4 Claims. (Cl. 333—73)



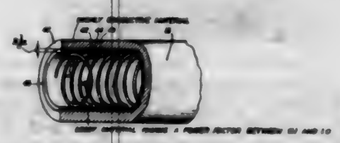
1. In an electromagnetic wave transmission system operative over a broad frequency range f_1 through f_n, means for energizing said system over said frequency range in a first mode of electromagnetic wave propagation, a channel dropping filter for separating a specified frequency band from the remaining frequency components having a mid-band frequency f_1 within said range comprising first, second and third sections of electromagnetic wave transmission line supportive of said frequency range f_1 through f_n in said first mode of electromagnetic wave propagation, a fourth section of transmission line interconnecting said first and second sections being adapted to support a frequency f_1 in said range of frequencies f_1 through f_n in said first mode and in a second mode of wave propagation, a fifth section of transmission line interconnecting said second and third sections being adapted to support said frequency f_1 in said first mode and in said second mode of wave propagation, said fourth and said fifth sections each having a physical length l proportioned to render said sections resonant at said frequency f_1 in said second mode, a sixth section of transmission line coupled to said fourth section, and means for utilizing said specified frequency band to the exclusion of said remaining frequency components connected to said sixth section of transmission line.

2,950,453
TUNABLE CAVITY FOR HIGH-FREQUENCY GENERATORS
Jack Kline, Concord, and Donald L. Wisnor, Waltham, Mass., assignors, by mesne assignments, to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Dec. 21, 1956, Ser. No. 629,815
5 Claims. (Cl. 333—83)



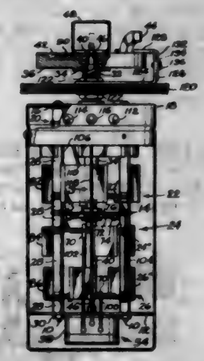
1. A tunable cavity for high-frequency generator devices, comprising: a housing; a fixed conductive shell affixed to said housing and of such configuration as to support high frequency oscillations at a predetermined frequency; and a movable conductive shell of such configuration as to support high-frequency oscillations at substantially said predetermined frequency, said movable shell being so movably mounted relative to said fixed shell as to provide a cavity tunable over a predetermined range of frequencies.

2,950,454
HELIX WAVE GUIDE
Hans-Georg Unger, Lincroft, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 30, 1958, Ser. No. 770,841
4 Claims. (Cl. 333—95)



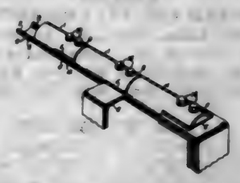
1. A shielded helix wave guide for circular electric mode wave energy in which the helical member is surrounded with a mechanically rigid conductive shield, and an electrically dissipative material having a radial thickness equal to one-quarter wavelength of said energy in said material and a power factor between one-tenth and unity is interposed between and contiguous to said helix and said shield to separate said helix and shield a distance equal to said one-quarter wavelength.

2,950,455
POTENTIOMETER-RHEOSTAT
Franklin M. Brown, Portland, Oreg., assignor to John Fluke Manufacturing Co., Inc., Mountlake Terrace, Wash., a corporation of Washington
Filed Nov. 24, 1958, Ser. No. 776,810
15 Claims. (Cl. 338—134)



1. A potentiometer-rheostat comprising a first series chain of resistances of equal value, a second series chain of resistances of equal value and matching the first series chain, first rotary switch means associated with the first series chain, second rotary switch means associated with the second series chain and arranged coaxial with the first rotary switch means, and a rotary operating shaft interconnecting the first and second rotary switch means for simultaneous rotation thereof with the rotary operating shaft, the matching pair of first and second series chains and associated rotary switch means being included in series in an electric circuit in such manner that as the switch means of one series chain of the pair is operated to increase the resistance in the electric circuit the rotary switch means of the other series chain of the pair is operated simultaneously to decrease the resistance in the electric circuit by an equal amount.

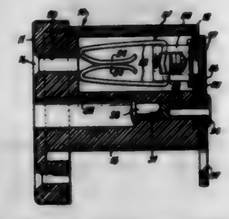
2,950,456
ELECTRIC BUS CONSTRUCTION
Robert H. Rehder, Peterborough, Ontario, Canada, assignor to Canadian General Electric Company, Limited, Toronto, Ontario, Canada
Filed June 16, 1959, Ser. No. 820,626
Claims priority, application Canada Jan. 27, 1959
6 Claims. (Cl. 339—22)



1. In an electrical bus system, a first tubular bus having a partial cylindrical portion cut away from one end thereof along a plane substantially parallel to the axis of the bus to provide two exposed surfaces on said first bus ex-

tending axially inward from the end of said first bus; a first retaining plate having a central flat portion placed against the exposed surfaces of said first bus; a second tubular bus having a cut away portion similar to that of the first bus for providing two exposed surfaces on said second bus extending axially inward from an end of said second bus; a second retaining plate having a central flat portion placed against the exposed surfaces of said second bus; said tubular buses being positioned with their axes substantially parallel and with their respective retaining plates spaced back to back; at least one bus take-off having a portion thereof sandwiched between said retaining plates, each take-off consisting of at least one elongated bar substantially rectangular in cross-section; bolt means passing through said tubular buses, plates, and bus take-off for clamping them together; and flange means on said retaining plates for restraining movement of said exposed surfaces along said plates due to clamping forces applied to the buses by the bolt means.

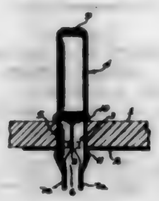
2,950,457
ELECTRICAL OUTLET DEVICE
Saul I. Slater, 69—10 108th St., Forest Hills, N.Y.
Filed May 12, 1955, Ser. No. 507,810
1 Claim. (Cl. 339—41)



A heavy duty plug receptacle comprising, in combination, an insulating body providing a plurality of tubular chambers arranged in generally circular formation about a common axis with the axis of the chambers parallel to said common axis, a faceplate integral with said body at one end thereof, a plug prong receiving clip in each of said chambers, each clip having a fastening means for a lead-in conductor fixed thereto, an opening in said faceplate in alignment with each said clip, a plate at the rear of said chambers holding said clips and fastening means in position in said chambers, said holding plate having apertures therein in alignment with said fastening means, and an access plate rotatably mounted on said common axis, said access plate having apertures therein which, in one rotational position thereof, align with said apertures in said holding plate and with said fastening means, said body having apertures opening laterally into said tubular chambers adjacent said holding plate, said apertures serving to permit conductors to be inserted into said fastening means and fastened through said apertures.

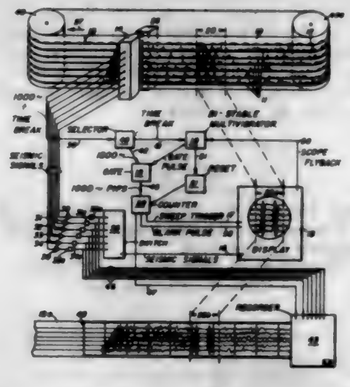
2,950,458
PRINTED CIRCUIT CONNECTOR
Charles A. Artz, Glen Ellyn, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Continuation of application Ser. No. 519,325, July 1, 1955. This application July 31, 1959, Ser. No. 838,953
1 Claim. (Cl. 339—217)

An electrical connector for attachment to a printed circuit board which is made up of an insulation board with an opening therethrough and conductive material on one face of the board at said opening, said connector comprising a tubular metal member having a bifurcated inner end for insertion into said opening made up of oppositely disposed, flexible side portions separated by cut-outs which are open at the inner extremity of the connector, said cut-outs having central slits extending substantially the thickness of said board and forming widened portions extending to the inner extremity of the connector, a laterally outwardly projecting rib spaced from the inner end of said tubular member for engagement with the opposite face of the insulation board to limit the insertion of the connector into said opening, said side portions extending from said rib to outwardly extending projections, each of said outwardly extending projections having a surface inclined towards said board and a taper extending towards the inner extremity of the



connector, said side portions terminating in axial extensions extending from said tapers, said rib and said outwardly extending projections spaced apart a distance substantially equal to the width of said printed circuit board for resilient engagement of said outwardly extending projections against said conductive material on said one face of the board when the connector is positioned in said opening with said rib engaging the opposite face of the board, and said tubular member having a portion extending substantially beyond said rib in a direction along the connector away from its inner end and at its opposite end having an aperture for receiving a wire.

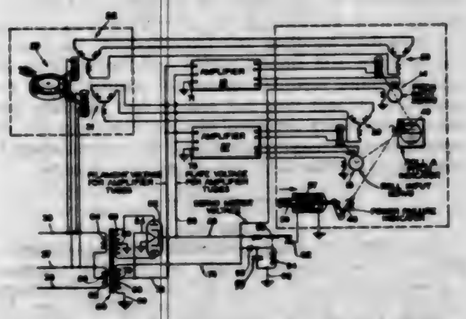
2,950,459
SEISMIC RECORD DISPLAY AND RE-RECORDING
George B. Loper, Dallas, Tex., and Robert R. Pittman, Tulsa, Okla., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., a corporation of New York
Continuation of applications Ser. No. 244,386, Aug. 30, 1951, and Ser. No. 297,884, July 9, 1952. This application Oct. 27, 1953, Ser. No. 388,582
25 Claims. (Cl. 340—15)



1. A system for studying a phonographically reproducible record of a transient wave having associated therewith a periodic time base signal and an initial marker positioned in predetermined time relation to the generation of said transient which comprises means including transducer means for cyclically scanning said record repeatedly to produce on a scaled time base a

first signal corresponding to said transient, a second signal corresponding to said periodic time base signal, and a third signal coincident and corresponding with said initial marker, monitoring means including a signal channel and a control channel, circuit means interconnecting said transducer means and said signal channel for application to said monitoring means of repeated cycles of said first signal, a normally non-conductive unit having output terminals and connected at its input to said transducer means and responsive to said second signal, circuit means interconnecting said transducer means and said normally non-conductive unit and responsive to said third signal for rendering conductive said normally non-ductive unit in each cycle of said first signal at a time coincident with said timing marker for transmission therethrough of said second signal, a pulse selective circuit connected between said output terminals and said control channel for applying to said monitoring means a selected cycle of said second signal for actuating said monitoring means to render it responsive to said first signal, and means operable in the interval following said selected cycle of said second signal and prior to the beginning of the next succeeding cycle of said first signal to render said unit non-conductive.

2,950,460
ELECTRICAL FAULT WARNING DEVICE FOR A REMOTE ELECTRICALLY OPERATED CONDITION INDICATOR
Paul E. Selfried, New City, N.Y., and William U. Henrich, Cedar Grove, N.J., assignors to The Bendix Corporation, a corporation of Delaware
Filed Nov. 14, 1956, Ser. No. 622,222
2 Claims. (Cl. 340—27)



1. Fault indicating apparatus for polyphase electrical power supply lines, said apparatus comprising an electrical current flow responsive electromagnetic actuator, means including a relay switch to operatively control electrical energization of said electromagnetic actuator, electrical voltage responsive electromagnetic means to operate said relay switch, a visual warning device, means operatively connecting said electromagnetic actuator to said warning device so that said electromagnetic actuator may render said warning device visually ineffective upon effective electrical energization of the electromagnetic actuator, spring means to bias the warning device in a sense to render the warning device visually effective upon either ineffective electrical current flow for energization of the electromagnetic actuator or a decrease below a predetermined value in electrical voltage for effecting electrical energization of said electromagnetic means so as to cause said relay switch to effect deenergization of the electromagnetic actuator, a transformer having first and second primary windings, said second primary winding connected across two of said polyphase electrical power lines, said second primary winding having a center-tap, said first primary winding connected across another of said polyphase supply lines and the centertap of said second primary winding, first and second secondary windings inductively coupled respectively to said first and second primary windings, rectifying means having an input connected across said first secondary winding and an electrical current output arranged to be operatively connected by the relay switch to the electromagnetic actuator, said second secondary winding having an electrical voltage output, another rectifying means connecting the output voltage of said second secondary winding to the electromagnetic means to cause under predetermined normal voltage conditions said relay switch to connect the current output of said first-mentioned rectifying means across said electromagnetic actuator and thereby render the warning device visually ineffective under a normal current condition resulting from supply of electrical energy through the polyphase electrical power supply lines and first-mentioned rectifying means, said relay switch being alternately operable by said electromagnetic means so as to cause said relay switch to disconnect the current output of the first-mentioned rectifying means from the electromagnetic actuator, whereby upon a decrease below a predetermined value either in the voltage of the electrical energy supplied through any one of the polphase electrical power supply lines and the voltage output to the electromagnetic means or in the current flow supplied through the current output to said electromagnetic actuator the spring means renders the warning device visually effective.

2,950,461
SWITCHING CIRCUITS
John G. Tryon, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 13, 1954, Ser. No. 474,659
13 Claims. (Cl. 340—147)

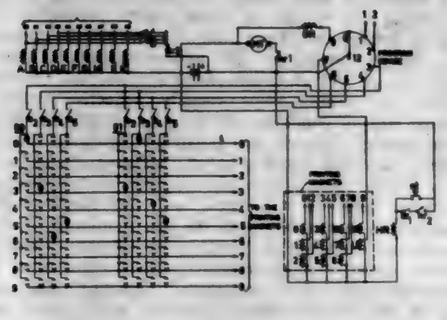


9. A shift register comprising a plurality of successive stages; each stage including an AND gate, a first OR gate and a second OR gate coupled to respective inputs of said AND gate, each said OR gate including a signal and a control input, and a delay loop coupled from the output of said AND gate to the signal input of said first OR gate; means connecting the output of the delay loop of each stage to the signal input of the second OR gate of the next successive stage; and signal control means for selectively energizing the control input of one of the two OR gates in each stage and for concurrently de-energizing the control input of the other OR gate of each stage.

2,950,462
DEVICE FOR AUTOMATICALLY RECORDING INFORMATION IN DEPENDENCE UPON PREVIOUSLY ENTERED CODE
Heinz Adolf Dzuack, Enebyberg, Sweden, assignor to Kooperativa Forbundet, Ekonomisk Forening, Stockholm, Sweden, a corporation of Sweden
Filed May 22, 1958, Ser. No. 737,136
8 Claims. (Cl. 340—147)

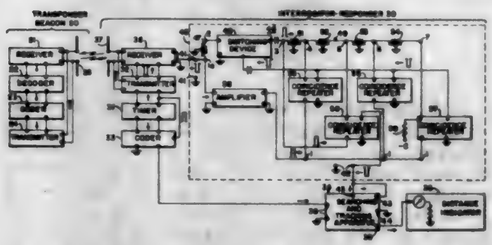
1. A device for automatically printing information in response to operation of coded selector members com

prising, a plurality of operable devices for respectively effecting printing of a selected character, a plurality of information stores, each store including a plurality of energizable elements respectively connected to the operable devices for rendering them operable to effect character printing, programming means common to all of said information stores for sequentially energizing each of the elements of a selected store, means for selecting an information store comprising a plurality of selectively oper-



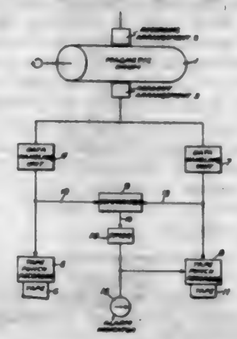
ated members designated by code indicia, and means separating associated with each store and respectively responsive to the operation of a lesser number of predetermined members than the energizable elements of a store for connecting the energizable elements of an associated store to the programming device to be energized thereby in sequence, for rendering the devices operative to effect the printing of information corresponding to the selected code.

2,950,463
PULSE-TRANSLATING SYSTEM
Robert B. J. Brunn, deceased, late of Manhasset, N.Y., by Eleanor B. Brunn, executrix, Plandome, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed June 8, 1954, Ser. No. 435,339
14 Claims. (Cl. 340—164)



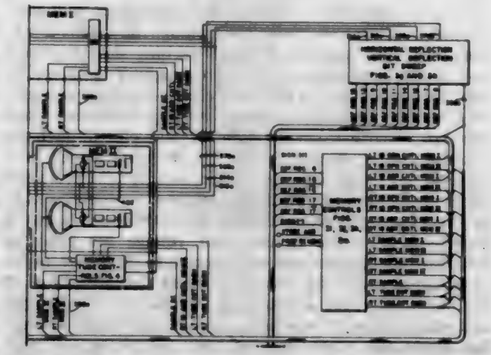
1. A pulse-translating system comprising: an input circuit for supplying desired pulse groups having a given pulse spacing and subject to the translation of a plurality of other pulse groups having other pulse spacings which may combine at random to produce undesired pulse groups having said given spacing; a pulse-translating network coupled to said input circuit and including a normally closed switching device and a pulse-selector circuit responsive to said desired pulse groups for deriving therefrom a desired output signal but which tends to respond to and develop from said undesired pulse groups and undesired output signal; and means including control apparatus coupled to said network and said device and effectively responsive to pulses of said other pulse groups for deriving and applying to said device a control signal which momentarily opens said switching device and places said network in a nontranslating condition for pulses at said other spacings, whereby said system has a reduced tendency to develop said undesired output signal while deriving said desired output signal.

2,950,464
ERROR DETECTION SYSTEMS
Raymond C. P. Hinton, Teaneck, N.J., Robert B. Page, Staten Island, N.Y., and John P. Larkin, Passaic, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed June 11, 1959, Ser. No. 819,729
4 Claims. (Cl. 340—174)



1. In a data handling system, means for storing data, means for extracting data from said storing means, a first printing recorder arranged to continuously print information fed thereto, a second printing recorder normally inoperative to print the information fed thereto, a first data handling unit for processing the data extracted from said storing means and feeding it to said first printing recorder, a second data handling unit for processing the data extracted from said storing means and feeding it to said second printing recorder, means for comparing the data processed by said first and second data handling units and for producing a control signal when there is a disagreement and means responsive to the control signal for rendering operative said second printing recorder.

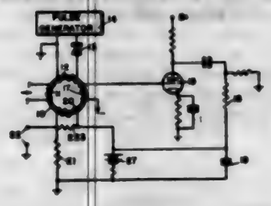
2,950,465
ELECTRONIC DATA PROCESSING MACHINE
Philip E. Fox, John E. Bartelt, and David J. Crawford, Poughkeepsie, and Nathaniel Rochester, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Mar. 22, 1954 Ser. No. 417,702
32 Claims. (Cl. 340—173)



8. In combination, an electrostatic memory device comprising a plurality of cathode ray tubes, each having

a target with allocatable addresses and a beam positionable to any desired address, unblanking means for said tubes, a deflection circuit for controlling the position of said beam, a deflection register, an instruction counter, address storing means, a regeneration counter, means selectively unblanking the beams of certain of said tubes to thereby group said tubes into selectable groups, means, controlled by said deflection register and controlling said unblanking means to thereby unblank the beams of a desired group of said tubes and means controlled by said deflection register and controlling said deflection circuits to thereby position said beams to select certain addresses from said unblanked tubes, means for connecting said instruction counter or said address storing means, to said deflection register, to thereby selectively select, certain addresses, from certain of said tubes only, and means connecting said regeneration counter to said deflection register and operative during regeneration cycles to unblank all of said tubes to thereby regenerate all of said tubes at the addresses designated by said regeneration counter.

2,950,466
SATURABLE AMPLIFIER
Richard T. Loewe, Whittier, Calif., assignor to North American Aviation, Inc.
Filed Oct. 22, 1956, Ser. No. 617,562
18 Claims. (Cl. 340—174)



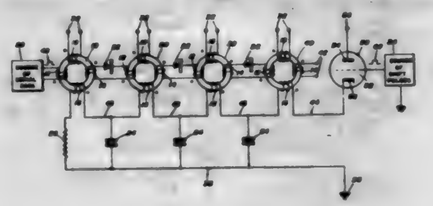
1. Apparatus of the class described comprising a saturable device having a pair of opposite sense saturated states and a transition state therebetween, a signal source, means responsive to a signal from said source for driving said device into one of said saturated states considerably beyond said transition state, a pulse generator, means responsive to said generator for repetitively driving said device from said one state, feedback means for driving said device toward the other of said saturated states, means responsive to the shifting of said device from said one state for controlling said feedback means to maintain said device substantially at said transition state, and output means coupled with said feedback means.

2,950,467
MULTIPLE SECTION MEMORY
Harry Hoffman, Jr., Saugerties, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Jan. 3, 1958, Ser. No. 707,014
8 Claims. (Cl. 340—174)



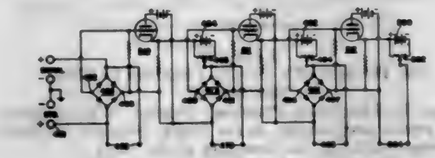
1. A coincident current memory system comprising a multiplicity of bistable magnetic elements arranged in a plurality of digit planes, corresponding elements in each plane being disposed in corresponding coordinate addressable locations, each of said memory planes being divided into a plurality of regions, coincident current operated data transfer means for transferring information to and from elements at a selected memory address location, and disturb signal applying means associated with each region adapted to apply a disturb signal to the elements in all regions other than those regions which contain the selected address location during each information transfer.

2,950,468
DATA SHIFTING CIRCUIT
James J. Klinikowski, Maple Shade, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed July 21, 1959, Ser. No. 828,673
4 Claims. (Cl. 340—174)



1. In a shifting register which includes a plurality of magnetic cores of high magnetic remnance adapted to shift bits of information from one core to the next, and including an input winding on each core, an output winding on each core for driving the input winding on the next core, and a shift winding on each core, the combination with said register of an electronic delay line employing said shift windings as elements thereof comprising, serial connections between shift windings on adjacent cores, and capacitors forming shunt elements of said delay line between said connections and the remaining side of said delay line.

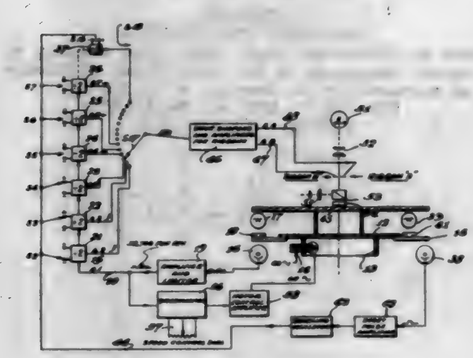
2,950,469
ANALOGUE TO DIGITAL CONVERSION APPARATUS
Floyd Daniel Raasch, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Apr. 14, 1954, Ser. No. 423,049
4 Claims. (Cl. 340—347)



1. Means for converting to digital response a signal voltage which is continuously variable throughout a selected range comprising, in combination: power means supplying standard voltages having selected relative magnitudes; a plurality of quantizer stages each comprising rectifier means for giving an output which passes twice through a range of values while the input thereto passes once through a range of values, and a cathode follower energized with the output of said rectifier means; means interconnecting said stages and said power means so that the signal voltage and a standard voltage comprise the inputs to the first stage, and the inputs to each succeed-

ing stage comprise the output of a preceding cathode follower and one of said standard voltages; and output means connected to said rectifier means.

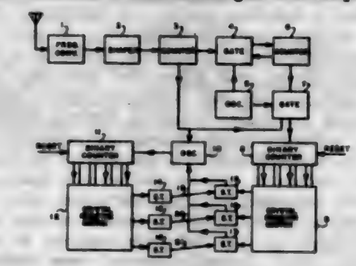
2,950,470
DIGITAL PATTERN PRODUCING EQUIPMENT
Edward M. Jones, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio
Filed Sept. 15, 1954, Ser. No. 456,284
12 Claims. (Cl. 340—347)



4. A device for producing digital code discs comprising, in combination, a plurality of flip-flop circuits connected in cascade, each of said circuits having a first and a second phase control input, said flip-flops assuming a first phase responsive to a pulse on the first phase control input and a second phase responsive to a pulse on the second phase control input, a turntable provided adjacent its periphery with a reference track of alternate transparent and opaque sectors, a source of light focused on said reference track, a photocell mounted on the side of said reference track opposite the light source, an auxiliary pattern of transparent and opaque areas disposed between said reference track and said photocell to integrate the light passing through a plurality of transparent areas, means for controlling said code generating circuits from said photocell, a first electro-optical pulse generating means associated with a first position of said turntable and connected to the first phase control input of each flip-flop and a second electro-optical pulse generating means associated with a second position of said turntable and connected to a phase control input of each flip-flop.

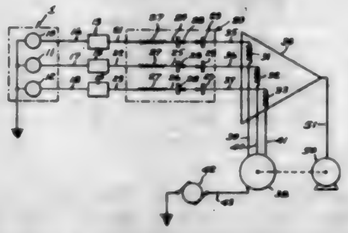
2,950,471
FM TO BINARY CODE TELEMETERING RECEIVER
Conrad H. Hoeppner, Plandome Manor, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Nov. 24, 1954, Ser. No. 471,128
6 Claims. (Cl. 340—347)

1. In a receiving arrangement for converting a selected cycle of a frequency modulated carrier wave into a binary code of *n* units indicative of the period of said cycle the combination of a first counting circuit, means for coupling said carrier wave to said circuit to produce an output pulse at the start of said selected cycle, a first gate circuit, an oscillator, means for coupling said output pulse to said gate circuit for opening said gate, a pulse counter coupled to the output of said gate circuit, said oscillator being arranged to advance the count in said pulse counter while said gate circuit is open, a second gate circuit, means responsive to the registration of a predetermined count in said second counter for closing said first gate and opening said second gate, an *n* stage binary counter connected to said second gate and adapted to be



stepped by said oscillator when said second gate is open, and means for closing said second gate when said first counting circuit is advanced by the carrier cycle immediately following the selected cycle.

2,950,472
DIGITAL TO ANALOG CONVERTER
Lothair H. Rowley, Syosset, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Filed Oct. 18, 1956, Ser. No. 616,693
3 Claims. (Cl. 340—347)

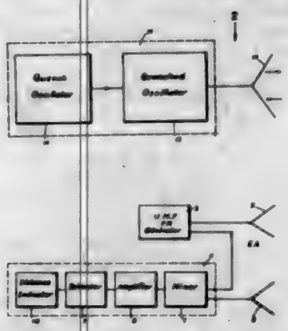


1. A digital to analog converter comprising a multisignal digital signal source, a servo loop connected to said multisignal source, said loop including a magnetic amplifier having a plurality of weighted control windings, a servo motor connected to the output of said amplifier and a referenced binary shaft encoder mechanically connected to the output of said motor, one side of each of said control windings being connected to one source of said multisignal source and the other side of each of the control windings being connected to the output of said shaft encoder, and circuit means connected between each of the control windings and the signal source for preventing operation of said servo loop by reason of nominal voltage discrepancies in the output of the multisignal source and the binary shaft encoder, wherein said circuit includes a plurality of series networks, each of said networks comprising a resistor and two semi-conductor material diodes, said diodes being oppositely poled.

2,950,473
RADIOELECTRIC DISTANCE MEASURING SYSTEMS
Henri Gutton and Henri Famillier, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Feb. 2, 1954, Ser. No. 407,638
Claims priority, application France Feb. 4, 1953
4 Claims. (Cl. 343—6.5)

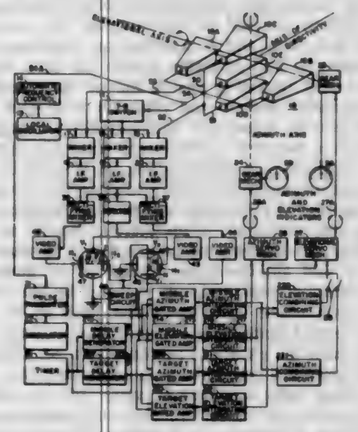
1. A system for measuring the distance between a first and a second point and for identifying at said first point

said second point comprising: at said first point an interrogator including means for emitting a first frequency modulated ultra-high frequency signal; at said second point a responder beacon including: a quenched oscillator comprising an ultra-high frequency oscillator and a quench oscillator for quenching said oscillator at a predetermined frequency, means for receiving said first signal for locking said oscillator frequency to said first signal frequency and means for radiating second signals gen-



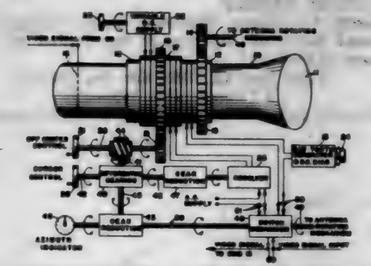
erated by said quench oscillator; at said first point: means for receiving said second signals, means for mixing said first and second signals, amplifying means, tuned to the quench frequency of said responder beacon, for amplifying the beat frequency signal of said mixing means; means for detecting the beat frequency signal provided by said mixing means and amplified by said amplifying means; and means for measuring the frequency of said beat frequency signal.

2,950,474
MISSILE GUIDING SYSTEM
Robert M. Page, Camp Springs, Md.
Filed Oct. 27, 1949, Ser. No. 123,871
5 Claims. (Cl. 343—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



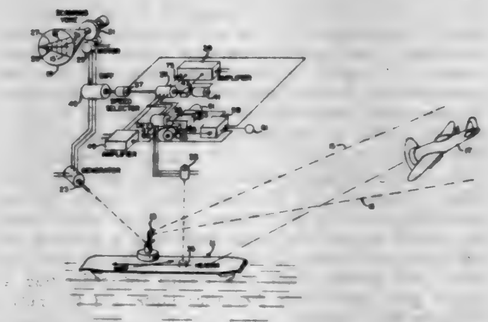
1. In combination with a radio controlled object having radio control circuits located thereon for directing the motion of the object responsive to received signal variations, a control guidance system operative to direct the motion of said radio controlled object with respect to a second object comprising, a highly directive energy transducer system having an axis of directivity, means supplying energy to said transducer system for radiation centered about the axis of directivity, sensing means connected to the transducer system for deriving from the energy reflected from the radio controlled object and the second object, position indicating signals dependent respectively upon the angular positions of the radio controlled object and the second object relative to the transducer axis of directivity, differential signal combining means connected to the last named means for deriving control signals in dependency on differences in the directions of the two objects, and means for varying the emitted energy in accordance with the control signals to direct travel of the radio controlled object.

2,950,475
OFF-CENTER CURSOR FOR PPI
Harold V. Hance, 22 Spencer St., Lexington 73, Mass.
Filed Nov. 14, 1947, Ser. No. 786,937
10 Claims. (Cl. 343—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination with a cathode ray device having a rotating radial sweep of its electron beam, rotatable deflection means, means energizing said deflection means to displace the center of the sweep of said cathode ray in a direction determined by the angular position of said deflection means, means operable to periodically radially deflect said displaced cathode ray to produce a marker trace on the face of said device, means varying the angular displacement of said radially deflected cathode ray and means responsive to the angular position of said deflection means and said angular displacement to indicate the angular position of said radially deflected cathode ray with respect to a reference direction.

2,950,476
YAW COMPUTER
Walter R. Hedeman, Jr., Dallas, Tex., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Mar. 30, 1955, Ser. No. 498,120
8 Claims. (Cl. 343—11)



1. In a radar system for use on an aircraft carrier, a driven horizontal scanning antenna, a direction indicator,

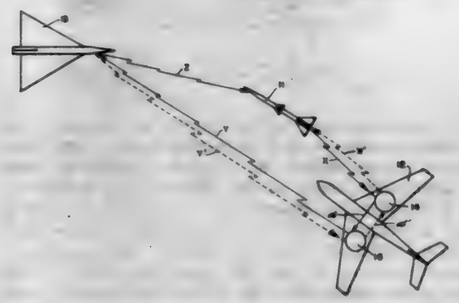
means maintaining said antenna and indicator in an adjustable correlation comprising an adjustable differential connection between the antenna and the indicator, for maintaining said correlation, first servo-motor means connected to said differential connection, means for producing an azimuth signal proportional to the instantaneous heading of the ship, means for impressing said azimuth signal on said first servo-motor means for controlling said first servo-motor means responsive to said azimuth signal and thereby to adjust said differential connection, second servo-motor means connected to receive said azimuth signal, and modifying means driven by said second servo-motor means for integrating said azimuth signal over a time period and operable on said differential connection, whereby to stabilize the direction indicator.

2,950,477

SYSTEM FOR SYNCHRONIZATION AND RANGE MEASUREMENT WITH A SEMIACTIVE RADAR GUIDED MISSILE

Frederick C. Alpers, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Filed Aug. 12, 1955, Ser. No. 528,141
3 Claims. (Cl. 343—13)
(Granted under Title 35, U.S. Code (1952), sec. 266)



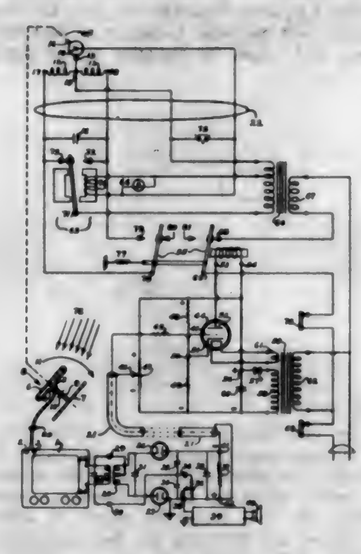
1. A system for synchronization and range measurement with radar guided missiles comprising a launching aircraft having a highly directive radar transmitter and receiver and a semi-directive radar transmitter and receiver, a guided missile having a semi-directive radar transmitter and receiver mounted in the tail thereof and a directive receiver mounted in the nose thereof, delay means between the semi-directive receiver and the large directive radar in the launching aircraft and equal delay means between the receiver of the directive radar and the transmitter of the semi-directive radar on said launching aircraft, the pulse from the transmitter in the tail of said missile being received by the semi-directive radar on the launching aircraft and after one unit of delay being transmitted as a highly directive pulse from the directive transmitter on the launching aircraft, the echo from said directive pulse being received by the receiver in the nose of said missile to complete the primary path, another echo signal being received by the receiver of the directive radar on the launching aircraft and after one unit delay being transmitted by the semi-directive radar on the launching aircraft to the receiver in the tail of the missile, means in said missile for generating a pulse at an interval equal to twice the time required for the pulse to follow the primary path, and means for generating a square gate signal from the latter pulse and the pulse following the secondary path which has a length proportional to the true radar range between the missile and the target.

2,950,478

AUTOMATIC ANTENNA POSITIONING UNIT

Charles L. Reppert, 589 Perry St., Trenton, N.J.

Filed Mar. 11, 1954, Ser. No. 415,559
5 Claims. (Cl. 343—117)



1. In a radio receiving system of the character described, comprising an electrical power circuit, an electrical receiving circuit including a ratio detector circuit and a ratio detector therein, said ratio detector circuit having therein two terminal points between which negative and positive potentials, respectively, are developed, a vertically journaled directional antenna connected with said receiving circuit for transmitting signals thereto from a radio transmitter, an electrical motor having two sets of windings coupled to said antenna for rotating it in either direction, and a combination rotational stop for said antenna and reversing switch for said motor, said system also including switch means for connecting all the aforesaid circuits and elements with said electrical power circuit; means for automatically training said antenna in a direction favorable to adequate signal reception comprising, in combination, an electrically actuated relay means connected with said electrical power circuit, the windings of said motor and said combination stop and switch and including means therein capable in conjunction with the windings of said motor of reversal of rotation of said antenna upon receipt of an impulse from said electrical power circuit initiated by the closing of said combination switch at either limit of its rotation; and a second electrically actuated relay means, also connected with the electrical power circuit, an electron tube of the amplifier type having an adjustable bias means in the circuit with said second relay for controlling the supply of electric current thereto, the functioning of said tube being in response to a change in potential between said two terminal points in said ratio detector circuit as a result of a signal being received in said receiving circuit, said second relay including means for alternately switching electric power to said motor windings for rotating said antenna and short circuiting said windings thereby causing a braking force to be applied to said antenna as a result of back currents generated in said windings.

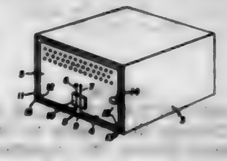
2,950,479

LOOP ANTENNA UTILIZING CONDUCTIVE CABINET

Paul M. Pan, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Filed Dec. 5, 1955, Ser. No. 551,083
3 Claims. (Cl. 343—702)

1. An antenna for electronic equipment comprising a cabinet of conducting material formed to make a complete conducting loop having an opening at one end thereof and a first pair of points thereon having a predetermined impedance therebetween, a loop antenna having a pair of terminals and a second pair of points thereon remote from said terminals, said second pair of points having a conjugate impedance to said predetermined impedance between said first pair of points on said cabinet, means for mounting said loop antenna adjacent the

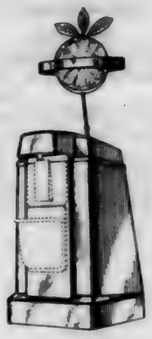


edge of said opening, and means for electrically connecting one of said points on said cabinet with one of said points on said loop antenna.

DESIGNS

AUGUST 23, 1960

188,650
LIQUID DISPENSER OR SIMILAR ARTICLE
John L. Beaty, Chicago, Ill., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Apr. 25, 1960, Ser. No. 60,300
Term of patent 14 years
(Cl. D2—3)



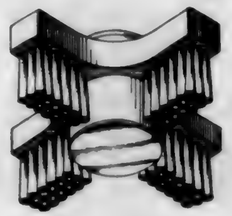
188,651
PLAYSUIT
Lester M. Cutler, Bronx, N.Y. (261 Parkside Drive, Roslyn Heights, New York, N.Y.), and Josephine A. Sabatini, Roslyn Heights, N.Y. (1086 E. 180th St., New York, N.Y.)
Filed Dec. 22, 1959, Ser. No. 58,764
Term of patent 14 years
(Cl. D3—17)



188,652
MASQUERADE COSTUME
Anthony B. Laganella, 1824 Dudley St., and Charles E. McMenamin, 554 Acorn St., Philadelphia, Pa.
Filed July 28, 1959, Ser. No. 56,970
Term of patent 14 years
(Cl. D3—17)



188,653
ROTARY BRUSH HEAD
Sheldon David Hulsh, 530 Park Ave., New York, N.Y.
Filed Dec. 16, 1959, Ser. No. 58,685
Term of patent 14 years
(Cl. D9—3)



188,654
DRAWER PULL
Carl L. Otto, New York, N.Y., assignor to Heywood-Wakefield Company, Gardner, Mass., a corporation of Massachusetts
Filed Aug. 10, 1959, Ser. No. 57,122
Term of patent 7 years
(Cl. D10—8)



188,655
AUTOMATIC FEEDER FOR ANIMALS
Ronald S. Blough, 700 S. D St., Fairfield, Iowa
Filed Nov. 24, 1958, Ser. No. 53,508
Term of patent 14 years
(Cl. D12—2)



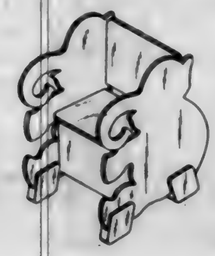
188,656
POSTURE CHAIR
Franz Wagner, Evanston, Ill., assignor to Domore Chair Company, Inc., Elkhart, Ind., a corporation of Indiana
Filed Feb. 20, 1958, Ser. No. 49,716
Term of patent 3½ years
(Cl. D15—1)



188,657
CHAIR
Solomon Sigal, 125 Kensington St., Brooklyn, N.Y.
Filed Feb. 12, 1960, Ser. No. 59,365
Term of patent 7 years
(Cl. D15—1)



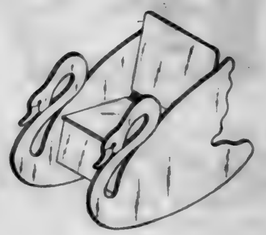
188,658
CHILD'S CHAIR
Donald G. Locke, 27802 Park Court, Madison Heights, Mich.
Filed Feb. 11, 1959, Ser. No. 54,550
Term of patent 14 years
(Cl. D15—1)



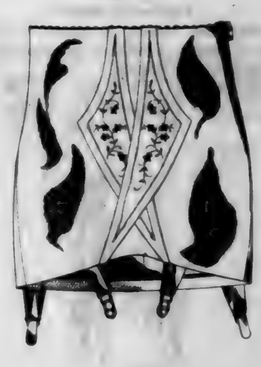
188,659
CHILD'S CHAIR
Donald G. Locke, 27802 Park Court, Madison Heights, Mich.
Filed Feb. 11, 1959, Ser. No. 54,554
Term of patent 14 years
(Cl. D15—1)



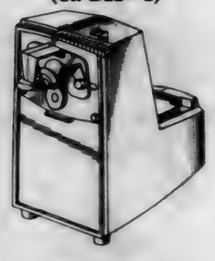
188,660
CHILD'S ROCKING CHAIR
Donald G. Locke, 27802 Park Court, Madison Heights, Mich.
Filed Feb. 11, 1959, Ser. No. 54,551
Term of patent 14 years
(Cl. D15—6)



188,661
GIRDLE
Herbert Barg, Merion, Pa., assignor to True Form Foundations, Inc., Darby, Pa., a corporation of Pennsylvania
Filed Apr. 15, 1960, Ser. No. 60,215
Term of patent 14 years
(Cl. D20—2)



188,662
COMBINED CAN OPENER AND KNIFE SHARPENER
Walter E. Moore, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Filed Nov. 30, 1959, Ser. No. 58,504
Term of patent 14 years
(Cl. D22—2)



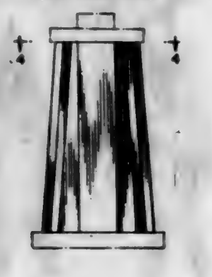
188,663
TELEVISION REMOTE CONTROL OR SIMILAR ARTICLE
Douglas P. Montague, 823 W. Oakdale, Chicago, Ill.
Filed Mar. 4, 1960, Ser. No. 59,618
Term of patent 7 years
(Cl. D26—13)



188,664
BADGE
Claire A. Chapin, R.F.D. 3, Box 384, Pottsville, Pa.
Filed Apr. 3, 1959, Ser. No. 55,339
Term of patent 7 years
(Cl. D29—2)



188,665
TROPHY BASE
Marvin Kramer and Harry A. Dorn, Chicago, Ill., assignors to General Classics, Incorporated, Chicago, Ill., a corporation of Illinois
Filed Mar. 21, 1958, Ser. No. 50,125
Term of patent 3½ years
(Cl. D29—23)



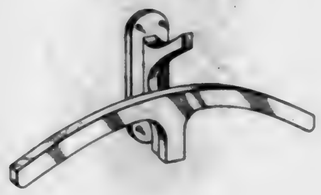
188,666
FRATERNAL PLAQUE
Edith M. Thomson and Alfred P. Thomson, both of 900 SW. 29th St., Fort Lauderdale, Fla.
Filed Apr. 25, 1960, Ser. No. 60,294
Term of patent 14 years
(Cl. D29—23)



188,667
STATUETTE
Dorothy J. De May, 517 Allenby Ave., Pittsburgh, Pa.
Filed Nov. 16, 1959, Ser. No. 58,368
Term of patent 3½ years
(Cl. D29—23)



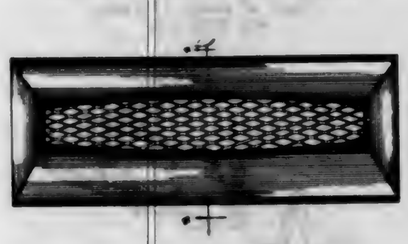
188,668
COMBINED HAT AND COAT RACK
Maurice D. Rosenberger, 536 Moreno Ave., Los Angeles, Calif.
Filed Oct. 6, 1958, Ser. No. 52,879
Term of patent 14 years
(Cl. D33—8)



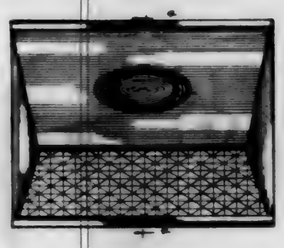
188,669
SCORE TABLE OR THE LIKE
Richard G. Reineman, Covina, Calif., and George E. Schaefer, Muskegon Heights, Mich., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 11, 1960, Ser. No. 60,121
Term of patent 14 years
(Cl. D34—5)



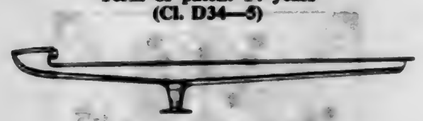
188,670
PINSETTER MASKING UNIT OR THE LIKE
Richard G. Reineman, Covina, Calif., George E. Schaefer, Muskegon Heights, Mich., and George H. Hart, Chicago, Ill., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 15, 1960, Ser. No. 60,200
Term of patent 14 years
(Cl. D34—5)



188,671
PINSETTER MASKING UNIT OR THE LIKE
Richard G. Reineman, Covina, Calif., George E. Schaefer, Muskegon Heights, Mich., and George H. Hart, Chicago, Ill., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 15, 1960, Ser. No. 60,201
Term of patent 14 years
(Cl. D34—5)



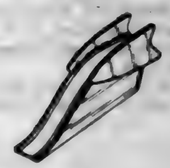
188,672
BOWLING BALL RETURN RACK OR THE LIKE
Richard G. Reineman, Covina, Calif., George E. Schaefer, Muskegon Heights, Mich., and George H. Hart, Chicago, Ill., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 15, 1960, Ser. No. 60,203
Term of patent 14 years
(Cl. D34—5)



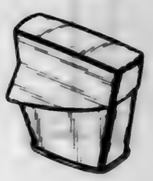
188,673
BOWLING BALL RETURN RACK OR THE LIKE
Richard G. Reineman, Covina, Calif., George E. Schaefer, Muskegon Heights, Mich., and George H. Hart, Chicago, Ill., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 60,219
Term of patent 14 years
(Cl. D34—5)



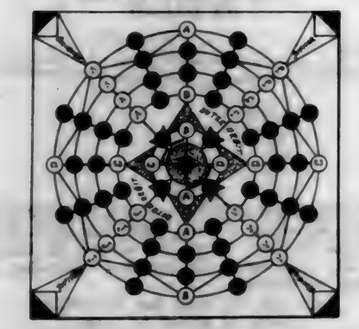
188,674
BALL RETURN RISER OR THE LIKE
Richard G. Reineman, Covina, Calif., George E. Schaefer, Muskegon Heights, Mich., and George H. Hart, Chicago, Ill., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 60,220
Term of patent 14 years
(Cl. D34—5)



188,675
SUBWAY BALL RETURN HOOD OR THE LIKE
Richard G. Reineman, Covina, Calif., George E. Schaefer, Muskegon Heights, Mich., and George H. Hart, Chicago, Ill., assignors to Brunswick Corporation, a corporation of Delaware
Filed Apr. 18, 1960, Ser. No. 60,221
Term of patent 14 years
(Cl. D34—5)



188,676
GAME BOARD OR ANALOGOUS ARTICLE
Fernell N. Nelson, P.O. Box 505, Galesburg, Ill.
Filed May 21, 1959, Ser. No. 56,013
Term of patent 14 years
(Cl. D34—5)



188,677
GOLF CLUB ATTACHMENT
Ingolver T. Thornson, 1744 Pembrook Road, Springfield, Ohio
Filed Sept. 29, 1958, Ser. No. 52,799
Term of patent 14 years
(Cl. D34—5)

188,678
CROQUET MALLET
Walter M. Holdstein, New York, N.Y., assignor to General Sportcraft Company Ltd., Bergenfield, N.J., a corporation of New York
Filed Feb. 11, 1960, Ser. No. 59,360
Term of patent 7 years
(Cl. D34—5)



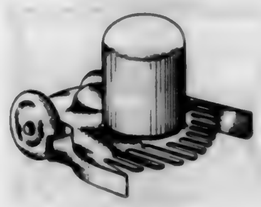
188,679
SKI STRAP
John Joseph D'Atri, Tahoe Valley, Calif. (Tahoe Valley, Lake Tahoe, Calif.)
Filed May 11, 1959, Ser. No. 55,852
Term of patent 14 years
(Cl. D34—5)



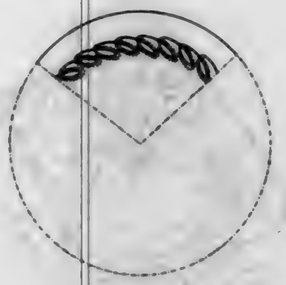
188,680
SKI SLED
Marc A. Brousseau, 7443 Frederick St., Detroit, Mich.
Filed Apr. 18, 1960, Ser. No. 60,234
Term of patent 14 years
(Cl. D34—15)



188,681
HOUSING FOR A LAWN EDGE TRIMMER
Samuel Lieberman, 42 Oak Hill St., Newton Center, Mass.
Filed Jan. 7, 1960, Ser. No. 58,953
Term of patent 14 years
(Cl. D40—1)



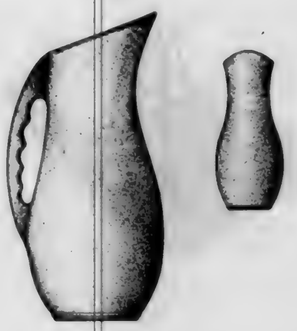
188,682
PLATE OR SIMILAR ARTICLE
Leendert N. Van Groen, Amsterdam, Netherlands, assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Filed Aug. 27, 1959, Ser. No. 57,348
Term of patent 14 years
(Cl. D44—15)



188,683
PLATE OR SIMILAR ARTICLE
John H. Reiser, Downey, Calif., assignor to Wallace China Co. Ltd., Los Angeles, Calif., a corporation of California
Filed Mar. 7, 1960, Ser. No. 59,644
Term of patent 3½ years
(Cl. D44—15)



188,684
PITCHER
Marten Gottsegen, 2801 N. Sheridan Road, Chicago, Ill.
Filed Aug. 31, 1959, Ser. No. 57,382
Term of patent 14 years
(Cl. D44—21)



188,685
CANAPE TOOTHPICK HOLDER
Biagio P. Melaragno, Cranston, R.I., assignor of one-half to Vincent M. Del Gignate, Cranston, R.I.
Filed Oct. 2, 1959, Ser. No. 57,773
Term of patent 3½ years
(Cl. D44—24)



188,686
UTENSIL HANDLE
Mark K. Maynard, 1444 E. Colorado Blvd., Glendale, Calif.
Filed Oct. 3, 1958, Ser. No. 52,860
Term of patent 14 years
(Cl. D44—29)



188,687
JEWELRY FINDING
Robert Slayton, 10717 Wilshire Blvd., Los Angeles, Calif.
Filed June 26, 1958, Ser. No. 51,557
Term of patent 14 years
(Cl. D45—1)



188,688
COMBINED FILTER HOUSING AND CAP
Marcel Clarence Sicard, Cheshire, Conn., assignor to The Cuno Engineering Corporation, Meriden, Conn., a corporation of Connecticut
Filed Mar. 28, 1958, Ser. No. 50,216
Term of patent 14 years
(Cl. D46—1)



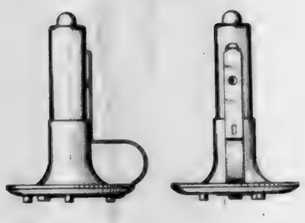
188,689
CANDLESTICK ORNAMENT
Edward B. Wolfsohn, Forest Hills, N.Y., assignor to Nated Corp., Forest Hills, N.Y., a corporation of New York
Filed Apr. 29, 1960, Ser. No. 60,385
Term of patent 14 years
(Cl. D48—2)



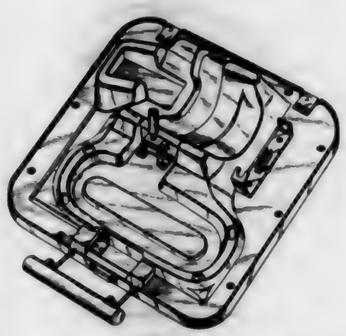
188,690
ADJUSTABLE LIGHTING FIXTURE AND WALL RECESS COMBINATION
Brian Copping, New York, N.Y., assignor to Swiveller Company, Inc., Nanuet, N.Y., a corporation of New York
Filed July 15, 1959, Ser. No. 56,793
Term of patent 14 years
(Cl. D48—4)



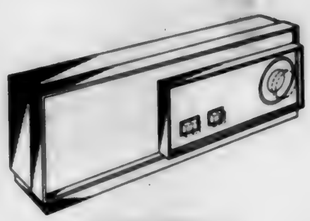
188,691
PORTABLE ELECTRIC LAMP
Albert Gelardin, 1775 Broadway, New York, N.Y.
Filed July 13, 1959, Ser. No. 56,757
Term of patent 3½ years
(Cl. D48—20)



188,692
COMBINED COVER AND CARRIER FOR A PORTABLE WASHER AND WRINGER
Harold F. Brogdon, Grand Rapids, Mich., assignor, by mesne assignments, to Automatic Music, Inc., Grand Rapids, Mich., a corporation of Delaware
Filed June 9, 1958, Ser. No. 51,272
Term of patent 3½ years
(Cl. D49—1)



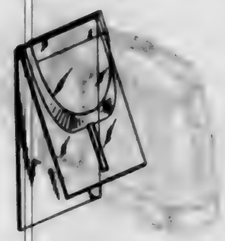
188,693
CONTROL PANEL FOR A LAUNDRY APPLIANCE
Charles D. Dushek, Lisle, Ill., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1959, Ser. No. 58,786
Term of patent 7 years
(Cl. D49—1)



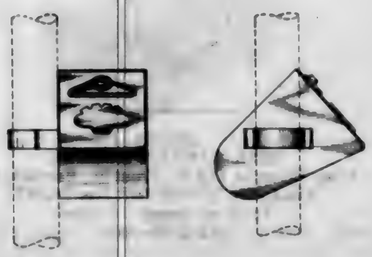
188,694
BUTTONING POST
David A. Freeman, Drake Hotel, 140 E. Walton St., Chicago, Ill.
Filed Aug. 14, 1958, Ser. No. 52,200
Term of patent 14 years
(Cl. D49—1)



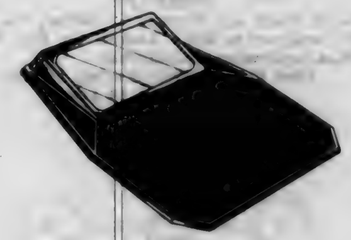
188,695
SHIRT FOLDING BOARD
Helen M. Ziegler, 5 De Forest Road, Wilton, Conn.
Filed Apr. 22, 1959, Ser. No. 55,609
Term of patent 14 years
(Cl. D49—1)



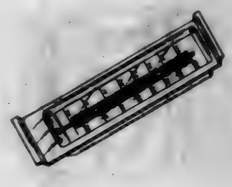
188,696
ENVELOPE DEPOSIT BOX FOR PARKING METER STANDS OR THE LIKE
Harry L. Moore, P.O. Box 881, Bartlesville, Okla.
Filed July 8, 1959, Ser. No. 56,705
Term of patent 7 years
(Cl. D52—3)



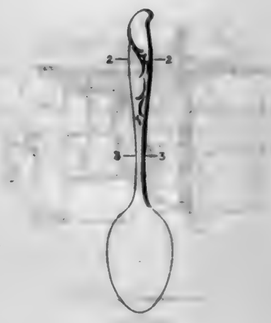
188,697
COMBINED COIN MAT AND ADVERTISING DISPLAY
Robert L. Mitchell, 2130 San Fernando Road, Los Angeles, Calif.
Filed Oct. 22, 1959, Ser. No. 58,030
Term of patent 14 years
(Cl. D52—4)



188,698
THERMOMETER
Ralph C. Wappner, Springfield, Ohio, assignor to The Ohio Thermometer Company, Springfield, Ohio, a corporation of Ohio
Filed Feb. 12, 1958, Ser. No. 49,606
Term of patent 14 years
(Cl. D52—7)



188,699
SPOON OR SIMILAR ARTICLE OF FLATWARE
Siro R. Toffolon, Meriden, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut
Filed Aug. 26, 1959, Ser. No. 57,316
Term of patent 14 years
(Cl. D54—12)



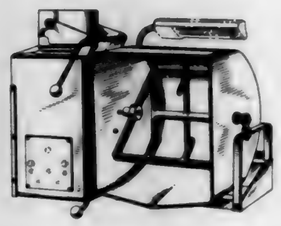
188,700
SPREADER TOOL FOR ADJUSTING CAMBER AND CASTER OF VEHICLE WHEELS
John Melvin Johnson, 417 2nd St., Lindsborg, Kans.
Filed Jan. 5, 1960, Ser. No. 58,940
Term of patent 3½ years
(Cl. D54—13)



188,701
FEEDING AND MEASURING MACHINE FOR SHEET MATERIAL
Herman L. Selden, Chicago, Ill., assignor to Lectromatic Devices, Inc., Chicago, Ill., a corporation of Illinois
Filed May 15, 1958, Ser. No. 50,902
Term of patent 14 years
(Cl. D55—1)



188,702
POPCORN COATING MACHINE
Fred H. Groen, Jr., Oak Park, Ill., assignor to Groen Mfg. Co., Elk Grove Village, Ill., a corporation of Illinois
Filed Oct. 5, 1959, Ser. No. 57,816
Term of patent 14 years
(Cl. D55—1)



188,703
RADIO
Minoru Arai, 40, 1-Cho, Nanshocko, Sakai, Osaka, Japan
Filed May 6, 1959, Ser. No. 55,795
Term of patent 14 years
(Cl. D56—4)





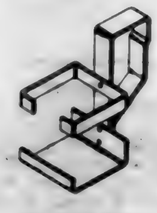
188,704
BINOCULAR CASE OR THE LIKE
Paul R. Maguire, Los Angeles, Calif., assignor to David P. Bushnell, Pasadena, Calif.
Filed Apr. 20, 1959, Ser. No. 55,566
Claims priority, application Japan Mar. 19, 1959
Term of patent 14 years
(Cl. D57—1)



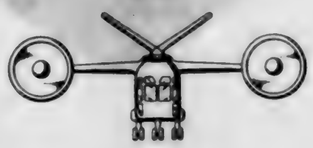
188,705
MILK CARTON HOLDER
Allen N. Lewis, 11 Jackson, Deadwood, S. Dak.
Filed Mar. 31, 1959, Ser. No. 55,279
Term of patent 14 years
(Cl. D58—26)



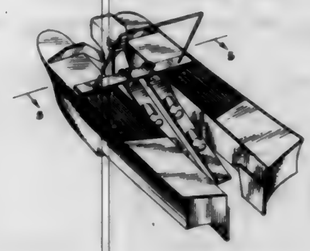
188,706
MILK CARTON HOLDER
Peter Sircovics, 518 W. Front St., Berwick, Pa.
Filed July 7, 1959, Ser. No. 56,697
Term of patent 14 years
(Cl. D58—26)



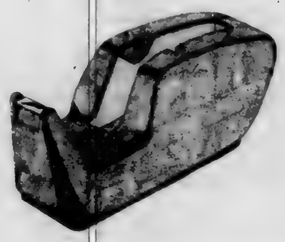
188,707
AIRCRAFT
Edmond R. Doak and Norman E. Nelson, Los Angeles, Calif., assignors to Doak Aircraft Co. Inc., Torrance, Calif., a corporation of California
Filed Feb. 24, 1959, Ser. No. 54,726
Term of patent 14 years
(Cl. D71—1)



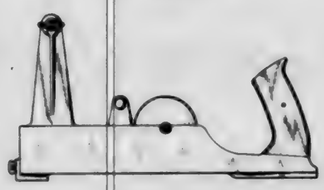
188,708
WATER SKI SCOOTER
Richard Vogt, Santa Barbara, Calif., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Filed May 29, 1959, Ser. No. 56,135
Term of patent 3½ years
(Cl. D71—1)



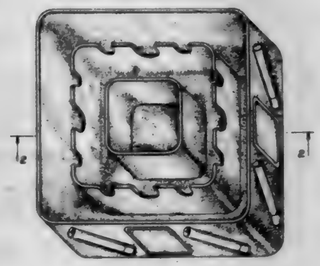
188,709
DESK-TYPE TAPE DISPENSER
Thomas F. Helms, Chappaqua, N.Y., assignor to Norton Company, Troy, N.Y., a corporation of Massachusetts
Filed Nov. 29, 1957, Ser. No. 48,707
Term of patent 14 years
(Cl. D74—1)



188,710
COMBINATION TAPE AND ADHESIVE APPLICATOR FOR BINDING CARPETS OR THE LIKE
Charles R. Brown, 120 Jericho Road, Battle Creek, Mich.
Filed Oct. 28, 1959, Ser. No. 58,095
Term of patent 14 years
(Cl. D74—1)



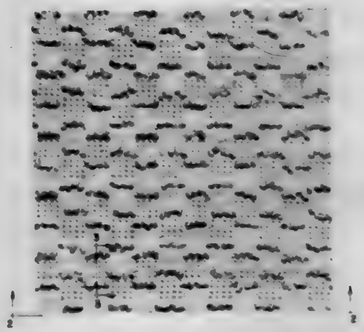
188,711
ASH TRAY
Le Roy H. Rasmussen, 693 Shatto Place, Los Angeles, Calif.
Filed Nov. 19, 1959, Ser. No. 58,406
Term of patent 7 years
(Cl. D85—2)



188,712
HAIRBRUSH
John G. Baumgartner, Aurora, Ill.
Filed Oct. 20, 1959, Ser. No. 57,997
Term of patent 14 years
(Cl. D86—10)



188,713
CHENILLE TEXTILE FABRIC OR SIMILAR ARTICLE
William Stark, New York, N.Y., assignor to Aileen Mills Company, Biscoe, N.C., a corporation of Delaware
Filed Oct. 5, 1959, Ser. No. 57,809
Term of patent 14 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Duro Metal Products Co.: *See*—
Odlum, William H., and Gracious. Re. 24,862.

Gracious, John R.: *See*—
Odlum, William H., and Gracious. Re. 24,862.

Odlum, William H., and J. R. Gracious, to Dura Metal Products Co. Wall rack for mechanics' tools. Re. 24,862, 8–23–60, Cl. 211—87.

Shaw, Harold N. Stored heat steam generators. Re. 24,861, 8–23–60, Cl. 219—39.

LIST OF PLANT PATENTEES

Crawford, Harold S., to The Willis Nursery Co. Barberry plant. 1,968, 8–23–60, Cl. 47—59.

Willis Nursery Co., The: *See*—
Crawford, Harold S. 1,968.

LIST OF DESIGN PATENTEES

Aileen Mills Co.: *See*—
Stark, William. 188,713.

Arai, Minoru. Radio. 188,703, 8–23–60, Cl. D56—4.

Automatic Music, Inc.: *See*—
Brogdon, Harold F. 188,692.

Barg, Herbert, to True Form Foundations, Inc. Girdle. 188,661, 8–23–60, Cl. D20—2.

Baumgartner, John G. Hairbrush. 188,712, 8–23–60, Cl. D86—10.

Benty, John L., to The Dole Valve Co. Liquid dispenser or similar article. 188,650, 8–23–60, Cl. D2—3.

Blough, Ronald S. Automatic feeder for animals. 188,655, 8–23–60, Cl. D12—2.

Brogdon, Harold F., to Automatic Music, Inc. Combined cover and carrier for a portable washer and wringer. 188,692, 8–23–60, Cl. D49—1.

Brousseau, Marc A. Ski sled. 188,680, 8–23–60, Cl. D34—15.

Brown, Charles R. Combination tape and adhesive application for binding carpets or the like. 188,710, 8–23–60, Cl. D74—1.

Brunswick Corp.: *See*—
Reineman, Richard G., and Schaefer. 188,669.
Reineman, Richard G., Schaefer, and Hart. 188,670–75.

Bushnell, David P.: *See*—
Maguire, Paul R. 188,704.

Chapin, Claire A. Badge. 188,664, 8–23–60, Cl. D20—2.

Copping, Brian, to Swivelier Co., Inc. Adjustable lighting fixture and wall recess combination. 188,690, 8–23–60, Cl. D48—4.

Cuno Engineering Corp., The: *See*—
Sicard, Marcel C. 188,688.

Curtiss-Wright Corp.: *See*—
Vogt, Richard. 188,708.

Cutler, Lester M., and J. A. Sabatini. Playsuit. 188,651, 8–23–60, Cl. D3—17.

D'Atri, John J. Ski strap. 188,679, 8–23–60, Cl. D34—5.

Del Gigante, Vincent M.: *See*—
Melaragno, Biagio P. 188,685.

De May, Dorothy J. Statuette. 188,667, 8–23–60, Cl. D20—23.

Doak Aircraft Co. Inc.: *See*—
Doak, Edmond R., and Nelson. 188,707.

Doak, Edmond R., and N. E. Nelson, to Doak Aircraft Co. Inc. Aircraft. 188,707, 8–23–60, Cl. D71—1.

Dole Valve Co., The: *See*—
Benty, John L. 188,650.

Domore Chair Co., Inc.: *See*—
Wagner, Frans. 188,656.

Dorn, Harry A.: *See*—
Kramer, Marvin, and Dorn. 188,665.

Dushek, Charles D., to General Electric Co. Control panel for a laundry appliance. 188,693, 8–23–60, Cl. D49—1.

Freeman, David A. Buttoning post. 188,694, 8–23–60, Cl. D49—1.

Gelardin, Albert. Portable electric lamp. 188,691, 8–23–60, Cl. D48—20.

General Classics, Inc.: *See*—
Kramer, Marvin, and Dorn. 188,665.

General Electric Co.: *See*—
Dushek, Charles D. 188,693.

General Sportcraft Co. Ltd.: *See*—
Holdstein, Walter M. 188,678.

Gottsegen, Marten. Pitcher. 188,684, 8–23–60, Cl. D44—21.

Groen, Fred H., Jr., to Groen Mfg. Co. Popcorn coating machine. 188,702, 8–23–60, Cl. D55—1.

Groen Mfg. Co.: *See*—
Groen, Fred H., Jr. 188,702.

Hart, George H.: *See*—
Reineman, Richard G., Schaefer, and Hart. 188,670–75.

Helms, Thomas F., to Norton Co. Desk-type tape dispenser. 188,709, 8–23–60, Cl. D74—1.

Heywood-Wakefield Co.: *See*—
Otto, Carl L. 188,654.

Holdstein, Walter M., to General Sportcraft Co. Ltd. Croquet mallet. 188,678, 8–23–60, Cl. D34—5.

Hulsh, Sheldon D. Rotary brush head. 188,653, 8–23–60, Cl. D9—2.

International Silver Co., The: *See*—
Toffolon, Siro R. 188,699.

Johnson, John M. Spreader tool for adjusting camber and caster of vehicle wheels. 188,700, 8–23–60, Cl. D54—13.

Knapp-Monarch Co.: *See*—
Moore, Walter E. 188,662.

Kramer, Marvin, and H. A. Dorn, to General Classics, Inc. Trophy base. 188,665, 8–23–60, Cl. D29—23.

Laganella, Anthony B., and C. E. McMenamin. Masquerade costume. 188,652, 8–23–60, Cl. D3—17.

Lectromatic Devices, Inc.: *See*—
Selden, Herman L. 188,701.

Lewis, Allen N. Milk carton holder. 188,705, 8–23–60, Cl. D58—26.

Lieberman, Samuel. Housing for a lawn edge trimmer. 188,681, 8–23–60, Cl. D40—1.

Locke, Donald G. Child's chair. 188,658, 8–23–60, Cl. D15—1.

Locke, Donald G. Child's chair. 188,659, 8–23–60, Cl. D15—1.

Locke, Donald G. Child's rocking chair. 188,660, 8–23–60, Cl. D15—6.

Maguire, Paul R., to D. P. Bushnell. Binocular case or the like. 188,704, 8–23–60, Cl. D57—1.

Maynard, Mark K. Utensil handle. 188,686, 8–23–60, Cl. D44—29.

McMenamin, Charles E.: *See*—
Laganella, Anthony B., and McMenamin. 188,652.

Melaragno, Biagio P., ½ to V. M. Del Gigante. Canape toothpick holder. 188,685, 8–23–60, Cl. D44—24.

Mitchell, Robert L. Combined coin mat and advertising display. 188,697, 8–23–60, Cl. D52—4.

Montague, Douglas P. Television remote control or similar article. 188,663, 8–23–60, Cl. D26—13.

Moore, Harry L. Envelope deposit box for parking meter stands, or the like. 188,696, 8–23–60, Cl. D62—3.

Moore, Walter E., to Knapp-Monarch Co. Combined can opener and knife sharpener. 188,662, 8–23–60, Cl. D22—2.

Nated Corp.: *See*—
Wolfsohn, Edward B. 188,689.

Nelson, Norman E.: *See*—
Doak, Edmond R., and Nelson. 188,707.

Nelson, Permil N. Game board or analogous article. 188,676. 8–23–60, Cl. D34—5.

Norton Co.: *See*—
Helms, Thomas F. 188,709.

Otto, Carl L., to Heywood-Wakefield Co. Drawer pull. 188,654, 8–23–60, Cl. D10—8.

Ohio Thermometer Co., The: *See*—
Wappner, Ralph C. 188,698.

Oneida Ltd.: *See*—
Van Groen, Leendert N. 188,682.

Rasmussen, Le Roy H. Ash tray. 188,711, 8–23–60, Cl. D85—2.

Reineman, Richard G., and G. E. Schaefer, to Brunswick Corp. Score table or the like. 188,669, 8–23–60, Cl. D34—5.

Reineman, Richard G., G. E. Schaefer, and G. H. Hart, to Brunswick Corp. Pinsetter masking unit or the like. 188,670, 8–23–60, Cl. D34—5.

Reineman, Richard G., G. E. Schaefer, and G. H. Hart, to Brunswick Corp. Pinsetter masking unit or the like. 188,671, 8–23–60, Cl. D34—5.

Reineman, Richard G., G. E. Schaefer, and G. H. Hart, to Brunswick Corp. Bowling ball return rack or the like. 188,672, 8–23–60, Cl. D34—5.

Reineman, Richard G., G. E. Schaefer, and G. H. Hart, to Brunswick Corp. Bowling ball return rack or the like. 188,673, 8–23–60, Cl. D34—5.

Reineman, Richard G., G. E. Schaefer, and G. H. Hart, to Brunswick Corp. Ball return riser or the like. 188,674, 8–23–60, Cl. D34—5.

Reineman, Richard G., G. E. Schaefer, and G. H. Hart, to Brunswick Corp. Subway ball return hood or the like. 188,675, 8–23–60, Cl. D34—5.

Reiser, John H., to Wallace China Co. Ltd. Plate or similar article. 188,683, 8–23–60, Cl. D44—15.

Rosenberger, Maurice D. Combined hat and coat rack. 188,668, 8–23–60, Cl. D33—8.

Sabatini, Josephine A.: *See*—
Cutler, Lester M., and Sabatini. 188,651.

Schaefer, George E.: *See*—
Reineman, Richard G., and Schaefer. 188,669.

Schaefer, George E.: *See*—
Reineman, Richard G., Schaefer, and Hart. 188,670–5.

Seiden, Herman L., to Lectromatic Devices, Inc. Feeding and measuring machine for sheet material. 188,701, 8–23–60, Cl. D55—1.

Sicard, Marcel C., to The Cuno Engineering Corp. Combined filter housing and cap. 188,688, 8–23–60, Cl. D46—1.

Sigal, Solomon. Chair. 188,657, 8–23–60, Cl. D15—1.

Sircovics, Peter. Milk carton holder. 188,706, 8–23–60, Cl. D58—26.

Slayton, Robert. Jewelry finding. 188,687, 8–23–60, Cl. D45—1.

Stark, William, to Aileen Mills Co. Chenille textile fabric or similar article. 188,713, 8–23–60, Cl. D02—1.

Swivelier Co., Inc.: *See*—
Copping, Brian. 188,690.

Thomson, Alfred P.: *See*—
Thomson, Edith M. and A. P. 188,666.

Thomson, Edith M. and A. P. Fraternal plaque. 188,666, 8–23–60, Cl. D29—23.

Thornson, Ingolver T. Golf club attachment. 188,677, 8–23–60, Cl. D34—5.

Tofolon, Siro R., to The International Silver Co. Spoon or similar article of flatware. 188,699, 8–23–60, Cl. D54—12.

True Form Foundations, Inc.: *See*—
Barg, Herbert. 188,661.

Van Groen, Leendert N., to Oneida Ltd. Plate or similar article. 188,682, 8–23–60, Cl. D44—15.

Vogt, Richard, to Curtiss-Wright Corp. Water ski scooter. 188,708, 8–23–60, Cl. D71—1.

Wagner, Franz, to Domore Chair Co., Inc. Posture chair. 188,656, 8–23–60, Cl. D15—1.

Wallace China Co. Ltd.: *See*—
Reiser, John H. 188,683.

Wappner, Ralph C., to The Ohio Thermometer Co. Thermometer. 188,698, 8–23–60, Cl. D52—7.

Wolfsohn, Edward B., to Nated Corp. Candlestick ornament. 188,689, 8–23–60, Cl. D48—2.

Ziegler, Helen M. Shirt folding board. 188,695, 8–23–60, Cl. D49—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 23RD DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AGFA Aktiengesellschaft: *See*—
Peiz, Willibald. 2,950,273.

Abbotson, William, R. Hurd, and H. J. Shearing, to Imperial Chemical Industries Ltd. Preparation of foamed castor oil citrate-organic polyisocyanate reaction products. 2,950,263, 8–23–60, Cl. 260—2.5.

Abplanalp, Robert H., and J. C. Pizzurro, to Precision Valve Corp. Liquid stream dispensing pressure package for high viscosity liquids. 2,950,031, 8–23–60, Cl. 222—394.

Abraham, James G., to The National Supply Co. Drilling control. 2,950,086, 8–23–60, Cl. 254—173.

Abt, Clifford F., R. Y. Miner, and A. Spitalny, to American Bosch Arma Corp. Ordnance calculating apparatus. 2,949,824, 8–23–60, Cl. 89—41.

Acomb, Frederick G. Merchandising display package. 2,950,004, 8–23–60, Cl. 206—78.

Adams, Richard F., to Olin Mathieson Chemical Corp. Apparatus for forming hollow sheet metal panels. 2,949,875, 8–23–60, Cl. 113—44.

Adamson, Elmer A., to Chicago Rawhide Mfg. Co. Oil seal. 2,950,135, 8–23–60, Cl. 288—3.

Addressograph-Multigraph Corp.: *See*—
Gruver, John H. 2,950,341.

Adler, Karl G. Dispensing machines. 2,949,993, 8–23–60, Cl. 194—2.

Adler, Karl G. Machines for dispensing heated comestibles. 2,950,024, 8–23–60, Cl. 221—15.

Admiral Corp.: *See*—
Artz, Charles A. 2,950,458.

Aerovox Corp.: *See*—
Collins, Joseph L., and Kahn. 2,949,640.

Aghnides, Elie P. Screen framing structures for fluid mixing devices. 2,950,062, 8–23–60, Cl. 239—431.

Aicher, John O.: *See*—
Lemmers, Eugene, and Aicher. 2,950,410.

Aikman, Burton S., to Westinghouse Air Brake Co. Automotive vehicle type brake apparatus with pulsating feature. 2,949,740, 8–23–60, Cl. 60—54.6.

Airkem, Inc.: *See*—
Wheeler, William H. 2,949,710.

Air Master Corp.: *See*—
Pengelly, Charles P. 2,950,136.

Air Reduction Co., Inc.: *See*—
Purkhiser, Rawlins E. 2,950,422.
Tuthill, Roger W. 2,950,378.

Airseal Insulation, Inc.: *See*—
Downey, Richard M., and Jamison. 2,949,698.

Albert, Edmond J., to Sanders Associates, Inc. Modular, ceramic, electron-discharge tube. 2,950,412, 8–23–60, Cl. 313—230.

Albert, Hans: *See*—
Kracker, Herbert, and Albert. 2,950,275.

Albright, Denton M.: *See*—
Thompson, William E., Albright, and Stuart. 2,950,267.

Albright, Harry E., to General Electric Co. Recorder. 2,950,164, 8–23–60, Cl. 346—140.

Alford, Andrew. Hybrid type network. 2,950,449, 8–23–60, Cl. 333—11.

Algino, Joseph M., and E. E. Modes, to The Dole Valve Co. Hydraulically adjustable thermostatic valve. 2,950,055, 8–23–60, Cl. 236—12.

Allan, Lawrence H.: *See*—
Bletzinger, John C., and Allan. 2,950,223

Allard, Marc, B. Trentini, and L. Wahl, to Institut de Recherches de la Siderurgie. Method for top blowing pulverulent burnt lime and oxygen into cast iron for refining same. 2,950,186, 8–23–60, Cl. 75—52.

Allen, Charles F. H., and E. R. Webster, to Eastman Kodak Co. Hardening of gelatin. 2,950,197, 8–23–60, Cl. 96—111.

Allgauer Maschinenbau G.m.b.H.: *See*—
Latus, Hans. 2,949,726.

Allis-Chalmers Mfg. Co.: *See*—
Kenney, Clarence E., and Moore. 2,949,730.
Marcier, Carl E. 2,950,339.
Nolte, Walter G. 2,950,404.
Schroeder, Robert J. 2,949,732.

Allred, Worth P.: *See*—
Genser, Milton, and Allred. 2,950,220.

Alpers, Frederick C., to United States of America, Navy. System for synchronization and range measurement with a semiactive radar guided missile. 2,950,477, 8–23–60, Cl. 343—13.

Alton Box Board Co.: *See*—
Kempen, Raymond J., and Newell. 2,949,827.

Alvey-Ferguson Co., The: *See*—
Sullivan, Norman M. 2,950,014.

Amalgamated Electric Corp. Ltd.: *See*—
Bachman, Anatole, and McRoberts. 2,950,363.
McRoberts, Charles E., and Duffield. 2,950,366.

American Air Filter Co., Inc.: *See*—
Baker, Forrest G. 2,950,056.

American Bosch Arma Corp.: *See*—
Abt, Clifford F., Miner, and Spitalny. 2,949,824.
Bischoff, Waldemar O., and Daborowski. 2,949,904.
Davidson, Gareth M., and Brady. 2,950,443.
Finkel, Leonard, and Weidknecht. 2,950,448.
Nystrom, Carl H., and Huse. 2,950,095.

American Cyanamid Co.: *See*—
Hoffmann, Arthur K., Grossos, and Thomas. 2,950,322.

American Enka Corp.: *See*—
Heijnis, James W. I., and Gonsalves. 2,949,639.
Henry, William V., Cole, and Smathers. 2,949,722.
Heuer, Kurt, Elling, and Elssner. 2,950,208.
Jones, Frederick B. 2,950,207.
Rutgers, Ulrich J. 2,950,068.
Schrenk, Hans A., Van Dijk, and Heijnis. 2,949,723.
Van Dijk, Pieter. 2,949,721.

American Hospital Supply Corp.: *See*—
Bieberdorf, Frederick W., and Rhoades. 2,949,712.

American-Marietta Co.: *See*—
Conn, Nathan A. 2,949,658.

American Metal Climax, Inc.: *See*—
Smith, William A., and Zandon. 2,950,007.

American Optical Co.: *See*—
Wilton, Henry T. 2,950,106.
Wilton, Henry T., and Foley. 2,949,813.
Wright, John R. 2,949,810.

American Steel Foundries: *See*—
Kayler, Frank H. 2,950,018.

Ames, Robert G., to The B. G. Corp. High titanium content brazing compositions. 2,950,189, 8–23–60, Cl. 75—134.

Anderson, Eldon H. Vehicle drier nozzle with self-positioning mount. 2,949,678, 2–23–60, Cl. 34—105.

Anderson, James A., Jr.: *See*—
Thorpe, Charles L., Heinrich, Hoffman, and Anderson. 2,950,242.

Anderson, Noel M. Pitless adapter. 2,949,961, 8–23–60, Cl. 166—85.

Anderson, Raymond A.: *See*—
Krempel, Frank M., and Anderson. 2,950,093.

Anocut Engineering Co.: *See*—
Williams, Lynn A. 2,950,239.

Ansel, Eldan L. Reel bats for harvesters. 2,949,720, 8–23–60, Cl. 56—220.

Anson, Harold. Apparatus for casting concrete sections. 2,949,657, 8–23–60, Cl. 25—122.

Anthony, Paul Z., to Baxter Laboratories, Inc. Production of 3,5-diiodothyronine. 2,950,315, 8–23–60, Cl. 260—519.

Apostolescu, Stefan. Helicopter. 2,950,074, 8–23–60, Cl. 244—17.23.

Arcuri, Grace, to Wispese Corp. Girdle. 2,949,917, 8–23–60, Cl. 128—541.

Arcus, James S., Sr. Pass punch having gripper and automatic actuating means. 2,949,802, 8–23–60, Cl. 83—364.

Armco Steel Corp.: *See*—
Slater, Joseph C., and Platt. 2,950,215.

Armentrout, Joseph V., to The Hamilton Caster & Mfg. Co. Mobile bin. 2,950,126, 8–23–60, Cl. 280—179.

Armour and Co.: *See*—
Shapiro, Sydney H. 2,950,318.

Armstrong, Eldon L., R. A. Butcosk, and G. W. Murray, Jr., to Socony Mobil Oil Co., Inc. Grease manufacture including mechanical atomization of the charge. 2,950,248, 8–23–60, Cl. 252—32.

Armstrong, Eldon L., W. R. Marshall, Jr., G. W. Murray, Jr., and H. Raich, to Socony Mobil Oil Co., Inc. Grease-making process involving mechanical atomization. 2,950,249, 8–23–60, Cl. 252—32.

Aronson, Theodore F., and F. A. Lyon, to Viewlex, Inc. Processor for photographic paper. 2,949,839, 8–23–60, Cl. 95—89.

Arrington, Richard H. Cattle guard. 2,950,091, 8–23–60, Cl. 256—17.

Arrow-Hart & Hegeman Electric Co., The: *See*—
Aspinwall, John E. 2,950,372.

Artcraft Venetian Blind Mfg. Co.: *See*—
Macy, Donald, and Nelson. 2,949,649.

Artz, Charles A., to Admiral Corp. Printed circuit connector. 2,950,458, 8–23–60, Cl. 339—217.

Ashworth, James E., to United States Steel Corp. Lubricated roll. 2,950,150, 8–23–60, Cl. 308—187.

Askania-Werke A.G.: *See*—
Haalck, Fritz. 2,950,434.

Askue, Albert R., to The Cleveland Trencher Co. Tamping machine. 2,949,829, 8–23–60, Cl. 94—49.

Aspinwall, John E., to The Arrow-Hart & Hegeman Electric Co. Single-button-actuated switch. 2,950,372, 8–23–60, Cl. 200—156.

Atlantic Refining Co., The: *See*—
McGuire, William J., Jr., and Kern. 2,950,247.

Austin, Marshall M., to Baljak Corp. Reclosable folding box and method of making it. 2,950,044, 8–23–60, Cl. 229—44.

Aye, Raymond. Toy parachute and launcher. 2,949,694, 8–23–60, Cl. 46—86.

Ayers, David T., Jr., to Kelsey-Hayes Co. Fluid pressure motor mechanism. 2,949,892, 8–23–60, Cl. 121—41.

B. G. Corp., The: *See*—
Ames, Robert G. 2,950,189.

Bäab, Albert, to Jos. Schneider & Co. Optische Werke. Depth-of-field indicator for photographic objectives. 2,949,836, 8–23–60, Cl. 95—64.

Bäab, Albert, to Jos. Schneider & Co., Optische Werke. Iris diaphragm for photographic or cinematographic objectives. 2,949,837, 8–23–60, Cl. 95—64.

Bachman, Anatole, and C. E. McRoberts, to Amalgamated Electric Corp. Ltd. Safety handle for enclosed switches. 2,950,363, 8–23–60, Cl. 200—50.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft: *See*—
Buchholz, Karl, Stastny, and Gaeth. 2,950,261.
Kunzer, Werner, and Leutert. 2,950,180.
Reicheneder, Franz, Suter, Orth, Stoeckl, and Seefelder. 2,950,329.
Reppe, Walter, Pohlemann, and Jaeckel. 2,950,269.
Sarnecki, Wilhelm, and Pommer. 2,950,321.

Baghurst, Walter F.: *See*—
Barnett, Guy F., Spencer, Baghurst, and Pratt. 2,950,406.

Bagnetto, Lucien, Jr.: *See*—
Pitzer, Emory W., and Bagnetto. 2,950,258.

Baker, Forrest G., to American Air Filter Co., Inc. Unit ventilator having control and damper circuits designed for connection to different power supply circuits and a system of such ventilators. 2,950,056, 8–23–60, Cl. 236—49.

Baldwin Piano Co., The: *See*—
Duncan, Robert K. 2,950,358.
Duncan, Robert K. 2,950,360.
Jones, Edward M. 2,950,470.

Baljak Corp.: *See*—
Austin, Marshall M. 2,950,044.

Balough, Harold O., to Clupak, Inc. Blanket applying and replacing means and method. 2,950,224, 8–23–60, Cl. 162—199.

Bamberger, Roland: *See*—
Kracker, Herbert, Bamberger, Mohr, and Ribka. 2,950,274.

Bancel, Paul: *See*—
Peterson, Victor W., Schnepel, and Bancel. 2,949,771.

Banes, Fred W.: *See*—
Fitzgerald, William P., Banes, and Hubbard. 2,949,952.

Barabas, John J., and S. C. Willis, to Castro Convertible Corp. Reclining chair. 2,949,935, 8–23–60, Cl. 155—106.

Barberis, Giovanni, to Riv Officine de Villar Perosa Societa per Azioni. Change indicating device. 2,950,047, 8–23–60, Cl. 235—7.

Barkow, William H., and M. W. Schmutz, to Radio Corp. of America. Electric beam controlling apparatus. 2,950,407, 8–23–60, Cl. 313—70.

Barmer Maschinenfabrik A.G.: *See*—
Schroder, Otto. 2,949,724.

Barnack, Stanley B. Paddle toy. 2,950,113, 8–23–60, Cl. 273—97.

Barnes, John W.: *See*—
O'Maley, James B., and Barnes. 2,950,395.

Barnett, Guy F., G. R. Spencer, W. F. Baghurst, and G. W. Pratt, to Philco Corp. Precision cathode-ray tube assembly. 2,950,406, 8–23–60, Cl. 313—69.

Baroni, Alessandro, and T. Garlanda, to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Process for separating carbon dioxide from ammonia in the production of melamine from urea. 2,950,173, 8–23–60, Cl. 23—196.

Barrios, Clement: *See*—
Milla, Joseph. 2,949,939.

Barrios, Maria: *See*—
Milla, Joseph. 2,949,939.

Bartelt, John E.: *See*—
Fox, Philip E., Bartelt, Crawford, and Rochester. 2,950,465.

Batcheider, Laurence, to Raytheon Co. Measurement of relative velocity between fluid and solid bodies. 2,949,773, 8–23–60, Cl. 73—194.

Batchelor, James D., G. P. Curran, and E. Gorin, to Consolidation Coal Co. Method for maintaining high level of activity for supported manganese oxide acceptors for hydrogen sulfide. 2,950,229, 8–23–60, Cl. 202—31.

Batchelor, James D., G. P. Curran, and E. Gorin, to Consolidation Coal Co. Process for maintaining high level of activity for supported manganese oxide acceptors for hydrogen sulfide. 2,950,230, 8–23–60, Cl. 202—31.

Batchelor, James D., G. P. Curran, and E. Gorin, to Consolidation Coal Co. Manganese ore acceptors for hydrogen sulfide. 2,950,231, 8–23–60, Cl. 202—31.

Battelle Development Corp., The: *See*—
Genser, Milton, and Allred. 2,950,220.

Batterbee, Brian: *See*—
Hadfield, Harry R., Batterbee, and Lemin. 2,950,165.

Bauer, Jackson, and C. Campbell, to Collins and Aikman Corp. Method of producing foam backed carpet, and product. 2,950,221, 8–23–60, Cl. 154—100.

Bauger, Louis A.: *See*—
Bertin, Jean H., Turinetti, Meullen, and Bauger. 2,949,734.

Bausch & Lomb Optical Co.: *See*—
Boughton, Olin W., De Grave, and Maier. 2,949,814.
Brumley, Corwin H., and Meltzer. 2,950,391.
Hayes, John D., and Hudson. 2,949,821.
Rosenberger, Harold E., and Goodyear. 2,949,815.

Baxter Laboratories, Inc.: *See*—
Anthony, Paul Z. 2,950,315.
Gewecke, Theodore H., and Broman. 2,949,913.

Baxter, Vernon A., Jr., to Minneapolis-Honeywell Regulator Co. Control systems for dirigible craft. 2,950,077, 8–23–60, Cl. 244—77.

Bayston, John R. Ice making machine. 2,949,752, 8–23–60, Cl. 62—320.

Beckenbach, Karl. Apparatus for charging kilns. 2,950,019, 8–23–60, Cl. 214—18.

Becker, Johannes, and B. S. Blaisse, to N. V. Optische Industrie "De Oude Delft." Outical systems. 2,949,820, 8–23–60, Cl. 88—57.

Becker, William A., and H. M. Wendling, to Rolite Mfg., Inc. Metal window and frame structure. 2,949,985, 8–23–60, Cl. 189—75.

Beckman Instruments, Inc.: *See*—
Thayer, Louis C., Czuha, and Greene. 2,950,176.
Thayer, Louis C., and Greene. 2,949,765.

Belcher, Mason E. Mason's corner-guide and course-gauge. 2,949,673, 8–23–60, Cl. 33—85.

Belck, Hans B., to Rensselaer Polytechnic Institute. System for recording and reproducing signal waves. 2,950,352, 8–23–60, Cl. 179—100.2.

Bell Helicopter Corp.: *See*—
De Tore, John A., Lichten, and Robertson. 2,949,965.

Bell & Howell Co.: *See*—
Browder, Lewis B. 2,950,160.
Brubaker, Wilson M. 2,950,387.
Kelley, John R. 2,950,162.

Bell Telephone Laboratories, Inc.: *See*—
Hines, Marion E. 2,950,384.
Koff, Herman H. 2,950,141.
Marcatili, Enrique A. J. 2,950,452.
Pfann, William G. 2,950,425.
Scovil, Henry E. D., and Seidel. 2,950,442.
Smith, Kenneth D. 2,949,819.
Tryon, John G. 2,950,461.
Unger, Hans-Georg. 2,950,454.

Bellet, Paul: *See*—
Muller, Georges, and Bellet. 2,950,311.

Beltz, Klaus: *See*—
Harnisch, Heinz, Rodis, and Beltz. 2,950,170.

Bemis Bro. Bag Co.: *See*—
Wilkaitis, Edna S. 2,949,611.

Bendix Aviation Corp.: *See*—
Stefucza, Alexander A. 2,949,735.

Bendix Corp., The: *See*—
Eastman, James M. 2,949,957.
Hastings, Donald F., and Wallace. 2,950,420.
Hayashida, George M., and Hack. 2,950,072.
Ivankovics, Stephen C., and Mikel. 2,949,889.
Linkroum, Irving F. 2,950,419.
McComba, Howard L., Jr. 2,949,781.
Owen, John C. 2,950,075.
Seifried, Paul E., and Henrich. 2,950,460.
Shaw, Richard, Jr., and Deahl. 2,949,786.
Shirey, John M., and Finkel. 2,950,076.
Southward, Ben G. 2,950,393.

Benzel, Wolfgang: *See*—
Meinhard, Günter, and Benzel. 2,950,254.

Berger, Christian D., to Polytechnic Research & Development Co., Inc. Temperature-compensating indicators. 2,949,881, 8–23–60, Cl. 116—129.

Bergsland, Charles H., K. E. Neumeier, and P. S. Petersen, to General Mills, Inc. Disc capacitor inserter. 2,949,665, 8–23–60, Cl. 29—203.

Berry, Donald S., to Sun Printers Ltd. Machines for folding paper sheets. 2,950,105, 8–23–60, Cl. 270—72.

Berry, Henry W., to Minneapolis-Honeywell Regulator Co. Rebalancing control apparatus. 2,950,420, 8–23–60, Cl. 318—28.

Berry, William S. Self-opening and self-closing dispenser. 2,950,027, 8–23–60, Cl. 222—92.

Berta, Louis F., Jr. Door pull template. 2,949,798, 8–23–60, Cl. 77—62.

Berthold, Wolfgang, J. Rottgardt, and G. Heller, to International Standard Electric Corp. Storage tube. 2,950,400, 8–23–60, Cl. 313—92.

Bertin, Jean H., H. Turinetti, H. L. P. Meullen, and L. A. Bauger, to Societe Nationale d'Etude et de Construction de Moteurs d'Aviation. Removable grate for jet deflection. 2,949,734, 8–23–60, Cl. 60—35.

Berumen, Guillermo: *See*—
Berumen, Jose A., and Berumen. 2,949,655.

Berumen, Jose A., and G. Berumen. Method and apparatus for making pre-stressed spun concrete articles. 2,949,655, 8–23–60, Cl. 25—30.

Beuermann, Wilhelm, to Seismos G.m.b.H. Seismic exploration apparatus. 2,949,974, 8–23–60, Cl. 180—5.

Bieberdorf, Frederick W., and J. W. Rhoades, to American Hospital Supply Corp. Liquid packaging method. 2,949,712, 8–23–60, Cl. 53—29.

Billings, Thomas A. Cutter type land clearing implement. 2,949,945, 8–23–60, Cl. 144—34.

Binns, Philip G.: *See*—
Johnson, Christopher L., and Binns. 2,950,133.

Birchfield, Jesse J. Lawn edger. 2,949,670, 8–23–60, Cl. 30—315.

Bischoff, Waldemar O., and I. J. Daborowski, to American Bosch Arma Corp. Fuel injection pump. 2,949,904, 8–23–60, Cl. 123—140.

Blachly, Donald L., to John Oster Mfg. Co. Portable hand held saw. 2,949,944, 8–23–60, Cl. 143—68.

Black, James G., Jr.: *See*—
Thorson, John R., Black, and Rayburn. 2,950,070.

Black, Roy D., to L. R. Crow. Educational device for teaching electric motor or generator principles. 2,949,680, 8–23–60, Cl. 35—19.

Blackmer, Dwight W., to Ekco Products Co. Sliding door guide unit. 2,949,626, 8–23–60, Cl. 16—90.

Blaedel, Walter J.: *See*—
Seaborg, Glenn T., Blaedel, and Walling. 2,950,160.

Blaisse, Berndt S.: *See*—
Becker, J., and Blaisse. 2,949,820.

Blanding, Wendell S., L. H. Foster, and P. F. Spremulli, to Corning Glass Works. Glass-metal sealing method. 2,949,702, 8–23–60, Cl. 40—81.

Bletzinger, John C., and L. H. Allan, to Kimberly-Clark Corp. Cellulosic product. 2,950,223, 8–23–60, Cl. 162—114.

Bloom, Albert: *See*—
Schenck, Leslie M., and Bloom. 2,950,310.

Bochan, John, to General Electric Co. Unbalance correcting arrangement for laundry machines. 2,950,009, 8–23–60, Cl. 210—144.

Bochan, John, to General Electric Co. Unbalance sensing arrangement for machines having a centrifugal liquid extraction step. 2,950,010, 8–23–60, Cl. 210—144.

Bodenseewerk Perkin-Elmer & Co., G.m.b.H.: *See*—
Goldhammer, Albert. 2,949,832.

Bodine, Albert G. Sonic liquid sprayer. 2,949,900, 8–23–60, Cl. 123—32.

Boehm, Benjamin F., to Chrysler Corp. Overdriven torque converter transmission. 2,949,794, 8–23–60, Cl. 74—732.

Bohlann, Edward G., and J. C. Griess, Jr., to United States of America, Atomic Energy Commission. Method of inhibiting corrosion in uranyl sulfate solutions. 2,950,167, 8–23–60, Cl. 23—14.5.

Bohme Fettchemie G..b.H.: *See*—
Kling, Walter, and Lange. 2,950,253.

Boland, Calvin E. Paint brush cleaner. 2,949,921, 8–23–60, Cl. 134—140.

Bolding, Hubert V., to Standard Packaging Corp. Carton having simulated bond. 2,950,040, 8–23–60, Cl. 229—38.

Bolstad, Gustav J. Anti-overturning device for vehicles. 2,950,365, 8–23–60, Cl. 200—61.52.

Bomac Laboratories Inc.: *See*—
Foss, David W. 2,949,790.

Bonanno, Joseph L., to The Lionel Corp. Relay. 2,950,369, 8–23–60, Cl. 200—87.

Borchers, Charles H., to Lithographic Technical Foundation. Spray dampening system for lithographic offset printing presses. 2,949,850, 8–23–60, Cl. 101—147.

Bosman, Lambertus H., to N. V. Quod Bonom. Method of retouching etchings in intaglio printing forms and printing forms treated according to this method. 2,950,181, 8–23–60, Cl. 41—43.

Boughton, Olin W., C. J. De Grave, Jr., and K. D. Maier, to Bausch & Lomb Optical Co. Slide projector. 2,949,814, 8–23–60, Cl. 88—28.

Bowser, Philip C., and R. E. Denzer, to General Motors Corp. Air spring. 2,950,104, 8–23–60, Cl. 267—65.

Boyer, George W. United States of America, Navy. Fusible link flood valve. 2,950,022, 8–23–60, Cl. 220—47.

Brady, Robert F.: *See*—
Davidson, Gareth M., and Brady. 2,950,443.

Brady, Samuel G., to Ex-Cell-O Corp. Apparatus for forming broach type tools. 2,949,706, 8–23–60, Cl. 51—34.

Brandon, David B., to Minnesota Mining and Mfg. Co. Low temperature method for producing chlorofluoro acid halides. 2,950,300, 8–23–60, Cl. 260—408.

Brannon, Roland L.: *See*—
Martin, Lynn P., Thompson, Brannon, and Ross. 2,949,609.

Bratfisch, Gerhard: *See*—
Gibian, Heinz, and Bratfisch. 2,950,227.

Breeding, Harold A., and E. C. Martt, to General Electric Co. Series electric lamp. 2,950,417, 8–23–60, Cl. 315—75.

Brennan, Harry M., and E. Field, to Standard Oil Co. Platinum-alumina catalysts and their use. 2,950,243, 8–23–60, Cl. 208—138.

Brennen, Ronald F., and J. A. Bucci. Welding electrode feeding apparatus. 2,950,381, 8–23–60, Cl. 219–127.

Bretthauer, Hermann, to Franke & Heidecke, Fabrik Photographischer Praxisims-Apparate. Photographic roll film camera. 2,949,831, 8–23–60, Cl. 95—31.

Britton, Edgar C., and A. J. Dietzler, to The Dow Chemical Co. Process for making fluorophenols. 2,950,325, 8–23–60, Cl. 260—623.

Brockmann, Maxwell C., to Hygrade Food Products Corp. Meat spoilage indicator. 2,950,202, 8–23–60, Cl. 99—192.

Broding, Robert A., J. O. Ely, and G. C. Summers, to Socony Mobil Oil Co., Inc. Methods of and means for measuring travel times through earth formations. 2,949,973, 8–23–60, Cl. 181—5.

Broman, Cyrus R.: *See*—
Gewecke, Theodore H., and Broman. 2,949,913.

Bromo-Mint Co., Inc.: *See*—
Kuhn, James O. 2,949,692.

Browder, Lewis B., to Bell & Howell Co. String galvanometer oscillograph apparatus. 2,950,160, 8–23–60, Cl. 346—74.

Brown, Franklin M., to John Fluke Mfg. Co., Inc. Potentiometer-rheostat. 2,950,455, 8–23–60, Cl. 338—134.

Brown, Harvey A., and R. I. Coon, to Minnesota Mining and Mfg. Co. Process for preparation of perfluoroalkyl sulfonyl chlorides. 2,950,317, 8–23–60, Cl. 260—543.

Brown, James R., J. D. Wallace, and D. H. Lewis. Phonocardiac catheter. 2,949,910, 8–23–60, Cl. 128—2.5.

Brown, John F., R. J. Weir, and A. R. Whelan, to Imperial Chemichl Industries Limited. Apparatus for the determination and control of compositions in chemical processes. 2,950,177, 8–23–60, Cl. 23—253.

Brown, William C., to United States of America, Air Force. Magnetron output control. 2,950,416, 8–23–60, Cl. 315—39.69.

Brownlow, James M., to International Business Machines Corp. Manganese chromium ferrite composition. 2,950,252, 8–23–60, Cl. 252—62.5.

Brubaker, Wilson M., to Bell & Howell Co. Gas analysis. 2,950,387, 8–23–60, Cl. 250—41.9.

Brueder, Antoine, to Societe Anonyme Andre Citroen. Two stroke engines. 2,949,903, 8–23–60, Cl. 123—140.

Bruestle, Armin O.: *See*—
Krekeler, Claude H., Bruestle, and Cartlidge. 2,950,096.

Brumley, Corwin H., and R. J. Meltzer, to Bausch & Lomb Optical Co. Fluorometer. 2,950,391, 8–23–60, Cl. 250—71.5.

Brunn, Eleanor B.: *See*—
Brunn, Robert B. J. 2,950,463.

Brunn, Robert B. J., deceased, by E. B. Brunn, executrix, to Haseltine Research, Inc. Pulse-translating system. 2,950,463, 8–23–60, Cl. 340—164.

Bucci, James A.: *See*—
Brennen, Ronald F., and Bucci. 2,950,381.

Buchanan, J. W. (Amos). Windrow regulating attachment. 2,949,718, 8–23–60, Cl. 56—192.

Buchholz, Karl, F. Stastny, and R. Gaeth, to Badische Anilin- & Soda Fabrik Aktiengesellschaft. Process of making expansible particulate styrene polymer by diffusion of a volatile liquid hydrocarbon into said polymer particles. 2,950,261, 8–23–60, Cl. 260—2.5.

Bucko, Edward P. Crate for shipping glass. 2,950,001, 8–23–60, Cl. 206—1.

Bulova Watch Co. Inc.: *See*—
Hetzel, Max. 2,949,727.

Bungardt, Walter, to Goldschmidt, Th., A.G. Pyrophoric alloys with reduced iron content. 2,950,190, 8–23–60, Cl. 75—152.

Buri, Alfred, to Sulzer Freres, S.A. System for distributing steam into resuperheaters. 2,949,896, 8–23–60, Cl. 122—479.

Burns, William C., deceased; J. Burns, executrix. Removable shoe pad construction. 2,949,685, 8–23–60, Cl. 36—71.

Burns, Josephine: *See*—
Burns, William C. 2,949,685.

Burroughs Corp.: *See*—
Hoffman, Paul R. 2,950,347.
Hoffman, Paul R., Kelchner, Moore, and Fricke. 2,949,846.
Hohnecker, Otto. 2,950,354.
MacDonald, Duncan N. 2,950,005.

Bush, David C., and E. E. Parker, to Pittsburgh Plate Glass Co. Preparation of foamed polyurethane using salt of mannich base as catalyst. 2,950,262, 8–23–60, Cl. 260—2.5.

Busignies, Henri G.: *See*—
Deloraine, Edmond M., Busignies, and Chevigny. 2,950,400.

Butcosk, Richard A.: *See*—
Armstrong, Eldon L., Butcosk, and Murray. 2,950,248.

Butler, Cecil T. Method for producing spectacle templates. 2,949,638, 8–23–60, Cl. 18—55.05.

Butler, Norman C., to United States of America, Navy. Gravity sensing device. 2,949,785, 8–23–60, Cl. 73—514.

Butterfield, Harry E., Jr.: *See*—
De Angelis, Angelo C., and Butterfield. 2,949,709.

Butterworth, Greig S.: *See*—
Wiatt, James G., and Butterworth. 2,949,708.

Butticaz, André, C. Tesage, and H. Dembowski. Apparatus for controlling or checking the irregularity of a flow of textile or like materials. 2,950,436, 8–23–60, Cl. 324—61.

Buus, Harold W., to Indiana General Corp. Drum type magnetic separator. 2,950,008, 8–23–60, Cl. 209—219.

Busicky, Edmund J., to Whirlpool Corp. Freezer cabinet shelving. 2,950,157, 8–23–60, Cl. 312—300.

Calam, Christopher T., and P. J. Curtis, to Imperial Chemical Industries Ltd. Isolation process. 2,950,288, 8–23–60, Cl. 260—343.3.

Caldwell, John R., and J. W. Tamblyn, to Eastman Kodak Co. Composition containing vinyl polymer and a bicycloheptene dicarboxylic acid-glycol polyester and process for making the polyester. 2,950,265, 8–23–60, Cl. 260—31.6.

Calovolo, Mario A. Engine transmission unit involving variable supercharging. 2,949,902, 8–23–60, Cl. 123—119.

Camco, Inc.: *See*—
McGowen, Harold E., Jr., and Daffin. 2,949,963.
Moore, Howard H., Jr., and Dietz. 2,949,929.
Moore, Howard H., Jr., and Dietz. 2,949,930.

Cameron, Hugh J., to Magnetic Heating Corp. Dielectric drying of materials. 2,949,677, 8–23–60, Cl. 34—1.

Cameron, Thomas A., and H. F. Keyser, to Goodyear Aircraft Corp. Stretch forming of metal sheets provided with reenforcing ribs. 2,949,667, 8–23–60, Cl. 29—428.

Campbell, Clarence: *See*—
Bauer, Jackson, and Campbell. 2,950,221.

Campbell, Francis K., ½ to The Moran Corp. Method of exploration for locating hydrocarbons and oil. 2,950,392, 8–23–60, Cl. 250—83.

Campbell, Mark S.: *See*—
Smith, Joe H., and Campbell. 2,950,445.

Canada Packers Ltd.: *See*—
McCartney, William F., and Hanna. 2,949,760.

Canadian General Electric Co., Ltd.: *See*—
Rehder, Robert H. 2,950,456.

Cannova, Richard D.: *See*—
Newburn, Floyd A., Cannova, and Friedman. 2,949,877.

Carbary, Richard J., to General Electric Co. Magnetic latch. 2,950,139, 8–23–60, Cl. 292—251.5.

Cardaras, James, to International Harvester Co. Mold part composition and process of making same. 2,950,205, 8–23–60, Cl. 106—38.3.

Carlson, David J., to Radio Corp. of America. Frequency converter with oscillator tuning inductor. 2,950,383, 8–23–60, Cl. 250—20.

Carnes, Fred D., to The Heltzel Steel Form & Iron Co. Road joints. 2,949,828, 8–23–60, Cl. 94—22.

Carney Corp.: *See*—
Downey, Richard M., and Jamison. 2,949,698.

Carpentier, Raymond, and P. Lambert, to Union Chimique Belge, S.A. Preparation of pentaerythritol. 2,950,327, 8–23–60, Cl. 260—635.

Carper, Harold R., 35²⁰⁄₃₈% to C. F. Spickelmier, 32⁹⁄₃₈% to K. S. Greer, and 32⁹⁄₃₈% to B. S. Spickelmier. Reinforced concrete slab construction. 2,949,705, 8–23–60, Cl. 50—536.

Carrier Corp.: *See*—
Di Niro, Carmen A. 2,950,092.
Carroll, Burt H., J. E. Jones, and J. Spence, to Eastman Kodak Co. Supersensitization of photographic emulsions using triazines. 2,950,196, 8–23–60, Cl. 96—100.
Carroll, Charles, to Duff-Norton Co. Safety brake. 2,949,979, 8–23–60, Cl. 188—77.
Carskadon, Thomas W., Sr. Pant leg pressing machine. 2,949,688, 8–23–60, Cl. 38—22.
Cartlidge, John R.: *See*—
Krekeler, Claude B., Bruestle, and Cartlidge. 2,950,096.
Case, J. I., Co.: *See*—
Schwegler, Roy F. 2,949,970.
Wenzel, Philip D. 2,949,969.
Casella, Secondo L.: *See*—
Morey, Sigmund M., and Casella. 2,949,795.
Castro Convertible Corp.: *See*—
Barabas, John J., and Willis. 2,949,955.
Catalytic Combustion Corp.: *See*—
Ruff, Richard J. 2,950,098.
Cattaneo, Giustino and Guido. Motion transmitting device for marine propellers having their thrust axis vertically movable. 2,949,791, 8–23–60, Cl. 74—385.
Cattaneo, Guido: *See*—
Cattaneo, Giustino and Guido. 2,949,791.
Cavallito, Chester J., to Irwin Neisler and Co. Amphetamine tannate. 2,950,309, 8–23–60, Cl. 260—473.5.
Chace, Richard A., to Tog-Loc, Inc. Self-centering mid-stroke securing device. 2,949,890, 8–23–60, Cl. 121—40.
Changewood Corp.: *See*—
Clark, James d'A. 2,949,646.
Chapin, Earl C., and M. E. Murphy. Metal salts complexed vinylidene aromatic-aldehyde copolymers. 2,950,264, 8–23–60, Cl. 260—23.
Chapin, Earl C., and W. P. Sanford, to Monsanto Chemical Co. Rubbery diene terpolymers. 2,950,270, 8–23–60, Cl. 260—80.7.
Chappel, Frank A.: *See*—
Hodsman, George F., and Chappell. 2,950,099.
Chattanooga Medicine Co., The: *See*—
Zimmer, Hans W. 2,950,279.
Zimmer, Hans W. 2,950,280.
Zimmer, Hans W. 2,950,293.
Zimmer, Hans W. 2,950,294.
Zimmer, Hans W. 2,950,295.
Zimmer, Hans W. 2,950,296.
Check, Mathias M., to The Yale and Towne Mfg. Co. Automatic throw-off for screen door latches. 2,950,137, 8–23–60, Cl. 292—228.
Chevigny, Paul G.: *See*—
Deloraine, Edmond M., Busignies, and Chevigny. 2,950,400.
Chicago Rawhide Mfg. Co.: *See*—
Adamson, Elmer A. 2,950,135.
Chiero, Louis L. 2,949,635.
Chiero, Louis L., to Chicago Rawhide Mfg. Co. Seal molding apparatus. 2,949,635, 8–23–60, Cl. 18—36.
Childs, Percy A., S. F. Gold, and W. A. G. Walsh, to International Standard Electric Corp. Equipment unit mounting arrangements. 2,950,156, 8–23–60, Cl. 312—266.
Chrysler Corp.: *See*—
Boehm, Benjamin F. 2,949,794.
Glevers, John G. 2,950,428.
Cidega Machine Mfg. Co., Inc.: See—
Gangi, Sebastian. 2,949,748.
Cincinnati Milling Machine Co., The: *See*—
Dugle, Thomas E., and Meyers. 2,949,739.
Frederick, Albert F., and Rabel. 2,949,796.
Huber, Clarence F., and Thompson. 2,950,211.
Wiatt, James G., and Butterworth. 2,949,708.
Cincinnati Mine Machinery Co., The: *See*—
Krekeler, Claude B., Bruestle, and Cartlidge. 2,950,096.
Cities Service Research and Development Co.: *See*—
Hughes, William B., Fallgatter, and Newcombe. 2,950,246.
Clark, James d'A., to Changewood Corp. Method for forming fibrous structures. 2,949,646, 8–23–60, Cl. 19—155.
Clark, James K., to The Partlow Corp. Safety shut-off valve. 2,949,959, 8–23–60, Cl. 158—138.
Clark, Sidney F., J. H. Cowles, A. Marola, and R. H. White, to The Torrington Co. Combined cage and retainer for bearing rollers. 2,950,151, 8–23–60, Cl. 308—217.
Clegg, Douglas. Method and apparatus for automatic and sanitary milking. 2,949,883, 8–23–60, Cl. 119—14.01.
Clement, Finn, and J. M. Sharf, to The Procter & Gamble Co. Liquid applicator. 2,949,621, 8–23–60, Cl. 15—133.
Clement, Finn, to The Procter & Gamble Co. Liquid applicators. 2,949,622, 8–23–60, Cl. 15—133.
Clerc, Eugene. Apparatus for distributing and mixing two fluids. 2,949,923, 8–23–60, Cl. 137—98.
Cleveland Trencher Co., The: *See*—
Askue, Albert R. 2,949,829.
Clevite Corp.: *See*—
Humez, David E., and Morey. 2,950,446.
Cline, Paul G.: *See*—
Cook, Raymond F., and Cline. 2,949,662.
Cline, Truman H., to Sears, Roebuck and Co. Differential control valve for fluid operated vehicles. 2,949,971, 8–23–60, Cl. 180—6.3.
Clonis, Plouton G., and J. A. McDorman. Screen printing apparatus. 2,949,847, 8–23–60, Cl. 101—122.
Clough, Edward L., ½ to P. L. Hewey. Safety fish hook. 2,949,690, 8–23–60, Cl. 43—36.
Clupak, Inc.: *See*—
Balough, Harold O. 2,950,224.
Coberly, Clarence J., to Kobe, Inc. Fluid operated pump with separate engine valve. 2,949,857, 8–23–60, Cl. 103—46.
Cobi, Walter H. Form jacks. 2,949,982, 8–23–60, Cl. 189—37.
Cochran, Arthur M., Jr. Fluid proportioning device. 2,949,924, 8–23–60, Cl. 137—99.
Cofrancesco, Anthony J., and S. M. Roberts, to General Aniline & Film Corp. Production of dicyandiamideformaldehyde reaction products. 2,950,268, 8–23–60, Cl. 260—69.
Cole, Donald C.: *See*—
Henry, William V., Cole, and Smathers. 2,949,722.
Collazzo, Alfred A., and E. N. Morse, to Sylvania Electric Products Inc. Apparatus for handling annular elements. 2,950,026, 8–23–60, Cl. 221—175.
Collins and Aikman Corp.: *See*—
Bauer, Jackson, and Campbell. 2,950,221.
Collins, Joseph L., and L. Kahn, to Aerovox Corp. Method of producing electric capacitor. 2,949,640, 8–23–60, Cl. 18—59.
Columbia Broadcasting System, Inc.: *See*—
Goldmark, Peter C. 2,950,116.
Columbia-Southern Chemical Corp.: *See*—
Johnston, Peter R. 2,950,175.
Compagnie Generale de Telegraphie Sans Fil: *See*—
Gutton, Henri, and Familier. 2,950,473.
Compagnie pour la Fabrication des Compteurs et Materiel d'Usines a Gaz: *See*—
Kapian, Charles H., and Pelen. 2,950,433.
Compton, Frank G., and H. J. Crump, to North American Aviation, Inc. Aircraft monitoring system. 2,950,340, 8–23–60, Cl. 178—6.
Compton, William A., R. E. Cummings, and R. A. Paetz, to Thompson Ramo Wooldridge Inc. Blade assembly. 2,950,083, 8–23–60, Cl. 253—77.
Compur-Werk Friedrich Deckel OHG: *See*—
Gebele, Kurt. 2,949,835.
Conn, Nathan A., to American-Marietta Co. Means for forming voids in precast concrete structural members. 2,949,658, 8–23–60, Cl. 25—128.
Conner, Hazel L.: *See*—
Pace, William M. 2,949,960.
Connor, Lyle B.: *See*—
Haskell, Phillip B., Evans, Ketchpel, and Connor. 2,949,898.
Consolidation Coal Co.: *See*—
Batchelor, James D., Curran, and Gorin. 2,950,229.
Batchelor, James D., Curran, and Gorin. 2,950,230.
Batchelor, James D., Curran, and Gorin. 2,950,231.
Continental Baking Co.: *See*—
Welch, Parker C. 2,949,995.
Continental Can Co., Inc.: *See*—
Henchert, John. 2,950,033.
Stone, Orison W. 2,950,041.
Continental Gin Co.: *See*—
Deems, Frank E., and Salmon. 2,949,644.
Controls Co. of America: *See*—
Grover, Philip D., and Kraft. 2,950,373.
Cook, Raymond F., and P. G. Cline; said Cline assor. to said Cook. Metal cutting tools. 2,949,662, 8–23–60, Cl. 29—96.
Coon, Ralph I.: *See*—
Brown, Harvey A., and Coon. 2,950,317.
Cooper, Victor J., to Marconi's Wireless Telegraph Co. Ltd. Phase-amplitude characteristic correction circuit arrangements. 2,950,440, 8–23–60, Cl. 328—155.
Cope, Arthur C., and C. T. Handy, to E. I. du Pont de Nemours and Co. Process of preparing O-divinylbenzene. 2,950,334, 8–23–60, Cl. 260—669.
Corn Products Co.: *See*—
Marshall, Richard O. 2,950,228.
Cornhusker Mfg. Co., Inc.: *See*—
Straub, Carl. 2,949,086.
Corning Glass Works: *See*—
Blanding, Wendell S., Foster, and Spremulli. 2,949,702.
Costley, Eugene J. Internal combustion engine. 2,949,858, 8–23–60, Cl. 103—54.
Covalence, Paul: *See*—
Hemlon, John R., Covalence, and Riddle. 2,949,778.
Covington, Edward R., and J. W. Meier, to E. I. du Pont de Nemours and Co. Packaging film and process for preparation thereof. 2,950,218, 8–23–60, Cl. 117—145.
Cowles, John H.: *See*—
Clark, Sidney F., Cowles, Marola, and White. 2,950,151.
Cox, Herbert F., Jr. Mass flow meter. 2,949,774, 8–23–60, Cl. 73—194.
Cozzoli, Michael, to Fairchild Engine and Airplane Corp. Cargo handling system. 2,949,803, 8–23–60, Cl. 104—135.
Craft, William S., W. M. Smith, and C. E. Porter, to Esso Research and Engineering Co. Combination crude distillation and olefin production process. 2,950,241, 8–23–60, Cl. 208—78.
Crandall, Arthur B. Automobile window ventilator. 2,949,842, 8–23–60, Cl. 98—2.
Crane Co.: *See*—
Svabek, John E., Jr., Stone, and Schmidt. 2,949,613.
Crawford, David J.: *See*—
Fox, Philip E., Bartelt, Crawford, and Rochester. 2,950,465.
Credit, Harold J. Surfacing tool. 2,949,661, 8–23–60, Cl. 29—79.
Crim, Hugh S., and W. W. Jacobus, to United States of America, Navy. Afterburner igniter. 2,949,738, 8–23–60, Cl. 60—39.82.
Craw, Leonard R.: *See*—
Black, Roy D. 2,949,680.
Crucible Steel Co. of America: *See*
Vordahl, Milton B. 2,950,191.
Vordahl, Milton B. 2,950,192.
Crump, Herbert J.: *See*—
Compton, Frank G., and Crump. 2,950,340.
Cummings, Robert E.: *See*—
Compton, William A., Cummings, and Paetz. 2,950,083.

Curran, George P.: *See*—
Batchelor, James D., Curran, and Gorin. 2,950,229.
Batchelor, James D., Curran, and Gorin. 2,950,230.
Batchelor, James D., Curran, and Gorin. 2,950,231.
Curtis, Horace L., to Scott & Williams, Inc. Yarn furnisher for knitting machines. 2,949,756, 8–23–60, Cl. 66—132.
Curtis, Philip J.: *See*—
Calam, Christopher T., and Curtis. 2,950,288.
Curtiss-Wright Corp.: *See*—
Heller, Robert B. 2,949,769.
Custin, Thomas G., to General Electric Co. Wave transmission filter. 2,950,451, 8–23–60, Cl. 333—73.
Cutler-Hammer, Inc.: *See*—
Finnegan, William B., Huff, and Wilson. 2,949,676.
Czuha, Michael, Jr.: *See*—
Thayer, Louis C., Czuha, and Greene. 2,950,176.
Daborowski, Ignace J.: *See*—
Bischoff, Waldemar O., and Daborowski. 2,949,904.
Duffin, Douglas E.: *See*—
McGowen, Harold E., Jr., and Duffin. 2,949,963.
Daniels, Kenneth P., to Tennessee Fabricating Co. Adjustable column foot. 2,949,984, 8–23–60, Cl. 189—42.
Dash, Edward. Stud welding means and method. 2,950,379, 8–23–60, Cl. 219—99.
Daugherty, Ralph K.: *See*—
Smith, Trever J., and Daugherty. 2,950,424.
Davidson, Gareth M., and R. F. Brady, to American Bosch Arma Corp. Unique unity gain amplifier. 2,950,443, 8–23–60, Cl. 330—70.
Davis, Robert F., to Wise Potato Chip Co. Lost container for automatic packaging equipment. 2,949,714 8–23–60, Cl. 53—63.
Daystrom, Inc.: *See*—
Gilbert, Roswell W. 2,950,438.
Hemion, John R., Covalence, and Riddle. 2,949,778.
Lovegrove, Henry J. 2,950,423.
Deahl, Robert H.: *See*—
Shaw, Richard, Jr., and Deahl. 2,949,786
Dean, Lloyd G., and C. W. McCutchen, to The Dow Chemical Co. Electrolytic production of magnesium metal. 2,950,236, 8–23–60, Cl. 204—70.
De Angelis, Angelo C., and H. E. Butterfield, Jr., to Dynamics Corp. of America. Knife sharpener attachment. 2,949,709, 8–23–60, Cl. 51—128.
De Cat, Arthur H., and R. K. Van Poucke, to Gevaert Photo-Producten N.V. Color couplers for color photography. 2,950,314, 8–23–60, Cl. 260—507.
Decker, Norman H.: *See*—
Gerbitz, Clarence G., and Decker. 2,950,439.
Deems, Frank E., and J. F. Salmon, to Continental Gin Co. Triple moting gin. 2,949,644, 8–23–60, Cl. 19—58.
De Grandpre, Etienne, to General American Transportation Corp. Systems of freight transportation. 2,949,865, 8–23–60, Cl. 105—368.
De Grave, Charles J., Jr.: *See*—
Boughton, Olin W., De Grave, and Maier. 2,949,814.
Dehydag, Deutsche Hydrierwerke G.m.b.H.: *See*—
Meinhard, Günter, and Benzel. 2,950,254.
Strauss, Wennemar, and Willmund. 2,950,235.
Deloraine, Edmond M., H. G. Busignies, and P. G. Chevigny, to International Telephone and Telegraph Corp. Protective circuit for radio repeater. 2,950,400, 8–23–60, Cl. 307—149.
Dembowski, Heinz: *See*—
Butticus, André, Tesage, and Dembowski. 2,950,436.
Denzer, Richard F.: *See*—
Bowser, Phillip C., and Denzer. 2,950,104.
Desanges, Richard, to Societe Zodiac. Collapsible boats. 2,949,616, 8–23–60, Cl. 9—2.
De Tore, John A., R. L. Lichten, and A. C. Robertson, to Bell Helicopter Corp. Rotor hub. 2,949,965, 8–23–60, Cl. 170—160.25.
Detrick, M. H., Co.: *See*—
Hosbein, Louis H. 2,949,643.
Dettman, Fred C. Bowling pin. 2,950,112, 8–23–60, Cl. 273—82.
Deutsch, Ernst G.: *See*—
Rogers, Henry, and Stama. 2,949,666.
Diamond National Corp.: *See*—
Ringler, William A. 2,950,043.
Dicke, Oscar H. and R. H. Clock. 2,949,728, 8–23–60, Cl. 58—109.
Dicke, Robert H.: *See*—
Dicke, Oscar H. and R. H. 2,949,728.
Dickinson Carl W. Nonclogging windshield squirter tip. 2,950,061, 8–23–60, Cl. 239—110.
Di Cyan, Erwin: *See*—
Hodgins, George R., Di Cyan, and Timmerman. 2,950,195.
Diebold, Inc.: *See*—
Graber, Carl D. 2,949,870.
Dietrich, Howard H., to General Motors Corp. Charge forming device. 2,949,908, 8–23–60, Cl. 123—119.
Dietsch, Francis W.: *See*—
Musser, C Walton, and Dietsch. 2,949,825.
Dietz, William H.: *See*—
Moore, Howard H., Jr., and Dietz. 2,949,929.
Moore, Howard H., Jr., and Dietz. 2,949,930.
Dietzler, Andrew J.: *See*—
Britton, Edgar C., and Dietzler. 2,950,325.
Di Maio, Vincent, and N. T. Miller. Pipe insulator and method of making same. 2,949,953, 8–23–60, Cl. 154—28.
Dimond, Lloyd E., to General Plywood Corp. High speed frictional glossifying medium. 2,949,623, 8–23–60, Cl. 15—209.
Di Niro, Carmen A., to Carrier Corp. Heat exchange construction. 2,950,092, 8–23–60, Cl. 257—255.
Dobratz, Elmer H., to Monsanto Chemical Corp. Purification of fumaric acid. 2,950,316, 8–23–60, Cl. 260—537.
Dodds, Alexander S.: *See*—
Dodds, Robert E. and A. S. 2,950,125.
Dodds, Robert E. and A. S., to Maxwell-Dodds Mfg. Co. Ltd. Stake release and resetter. 2,950,125, 8–23–60, Cl. 280—145.
Dole Valve Co., The: *See*—
Algino, Joseph M., and Modes. 2,950,055.
Reddi, Mullapudi M. 2,949,749.
Dorey, George B., to Enterprise Railway Equipment Co. Selective pneumatic and gravity discharge car hopper construction. 2,950,144, 8–23–60, Cl. 302—52.
Dorey, George B., to Enterprise Railway Equipment Co. Hopper car outlet construction. 2,950,145, 8–23–60, Cl. 302—52.
Douglas, Alvin P., and A. R. Golrick, to The Murray Ohio Mfg. Co. Brake and drive mechanism for a sidewalk bicycle. 2,949,990, 8–23–60, Cl. 192—5.
Dow Chemical Co., The: *See*—
Britton, Edgar C., and Dietzler. 2,950,325.
Dean, Lloyd G., and McCutchen. 2,950,236.
Dunbar, Joseph E. 2,950,308.
Windover, Francis E. 2,950,199.
Downey, Richard M., and E. L. Jamison, to Midwest Insulations, Inc., Airseal Insulation, Inc., and Carney Corp., in equal shares. Resilient permanent mulch pad. 2,949,698, 8–23–60, Cl. 47—9.
Doyle, Irving W., and A. G. Nash, to Fairchild Camera and Instrument Corp. Driving system for camera shutters. 2,949,834, 8–23–60, Cl. 95—57.
Dravo Corp.: *See*—
Swatek, Edwin P., Jr. 2,949,744.
Drummond, Warren W., W. B. Hullhorst, and J. H. Plummer, to L.O.F. Glass Fibers Co. Apparatus used in the production of glass fibers 2,949,633, 8–23–60, Cl. 18—8.
Dubpernell, George: *See*—
Johnson, Andy A., and Dubpernell. 2,950,234.
Duff-Norton Co.: *See*—
Carroll, Charles. 2,949,979.
Duffield, Joseph F.: *See*—
McRoberts, Charles E., and Duffield. 2,950,366.
Duggins, William E., to General Aniline & Film Corp. 1,3-dichloropropyne. 2,950,330, 8–23–60, Cl. 260—654.
Duggins, William E., to General Aniline & Film Corp. 3-bromo-1-chloro-1-propyne. 2,950,331, 8–23–60, Cl. 260—654.
Dugle, Thomas E., and L. J. Meyers, to The Cincinnati Milling Machine Co. Automatic tracing device. 2,949,739, 8–23–60, Cl. 60—52.
Dunbar, Joseph E., to The Dow Chemical Co. Adducts of benzoquinonediimines. 2,950,308, 8–23–60, Cl. 260—461.
Duncan, Robert K., to The Baldwin Piano Co. Electromechanical transducer. 2,950,358, 8–23–60, Cl. 179—115.
Duncan, Robert K., to The Baldwin Piano Co. Microphone support structure. 2,950,360, 8–23–60, Cl. 179—146.
Dupke, Werner, to Korber, Kurt, & Co., K.G. Cigarette rod making machines. 2,949,918, 8–23–60, Cl. 131—66.
Du Pont de Nemours, E. I., and Co.: *See*—
Cope, Arthur C., and Handy. 2,950,334.
Covington, Edward R., and Meier. 2,950,218.
Hoffman, Lewis C. 2,950,209.
Kuechler, William L. 2,950,232.
Lichtblau, Ellis I. 2,950,217.
Miller, Calvin Q., and Ranson. 2,950,285.
Miller, Calvin Q., and Ranson. 2,950,286.
Rosenbaum, Chester K., and Tallman. 2,950,260.
Smith, William C. 2,950,306.
Snyder, James M. 2,950,271.
Dynamics Corp. of America: See—
De Angelis, Angelo C., and Butterfield. 2,949,709.
Dzanck, Heinz A., to Kooperativa Forbundet, Ekonomisk Forening. Device for automatically recording information in dependence upon previously entered code. 2,950,462, 8–23–60, Cl. 340—147.
Eagle-Picher Co., The: *See*—
Losse, Paul L. 2,950,225.
Eastburg, Clifford L., to The Timken Roller Bearing Co. Packaged bearing assemblies. 2,950,002, 8–23–60, Cl. 206—46.
Easterling, James M., to M. I. Glass, Toy. 2,949,696, 8–23–60, Cl. 46—243.
Eastman, James M., to The Bendix Corp. Fuel control system for gas turbine engines. 2,949,957, 8–23–60, Cl. 158—36.
Eastman Kodak Co.: *See*—
Allen, Charles F. H., and Webster. 2,950,197.
Caldwell, John R., and Taublyn. 2,950,265.
Carroll, Burt H., Jones, and Spence. 2,950,196.
Eaton Mfg. Co.: *See*—
Jneschke, Ralph L. 2,949,991.
Eddowes, Cecil S., to Guardian S.A. Flush mechanism for toilets. 2,949,614, 8–23–60, Cl. 4—57.
Edgewater Steel Co.: *See*—
McElhose, Robert T. 2,949,675.
Edmonds, Eugene A., to Henry Vogt Machine Co. Liquid distributing device. 2,949,935, 8–23–60, Cl. 138—38.
Eitel, Kurt: *See*—
Koib, Günter, and Eitel. 2,950,216.
Ekco Products Co.: *See*—
Blackmer, Dwight W. 2,949,626.
Electric & Musical Industries Ltd.: *See*—
Gargini, Eric J. 2,950,345.
King, Leonard T. 2,950,450.
Electric Steel Foundry Co.: *See*
Peklay, William P., and Kirby. 2,949,687.
Electrolux Corp.: *See*—
Lampe, Robert C. 2,949,624.
Elks, Joseph, and G. H. Phillipps, to Glaxo Laboratories Ltd. Steroid secondary 21-phosphate esters. 2,950,298, 8–23–60, Cl. 260—397.45.
Elling, Hugo: *See*—
Heuer, Kurt, Elling, and Elsner. 2,950,208.

Elsaesser, Richard: *See*—
Heuer, Kurt, Elling, and Elsaesser. 2,950,208.

Ely, John O.: *See*—
Broding, Robert A., Ely, and Summers. 2,949,973.

Eminger, Robert J., to Fort Wayne Tool Die & Engineering Co. High speed stator winding apparatus. 2,949,789, 8–23–60, Cl. 74—23.

Emmert, Emery M., to Kentucky Research Foundation. Method of treating tomato plants employing a mixture of beta-naphthoxyacetic acid and boron. 2,950,182, 8–23–60, Cl. 71—2.1.

Enterprise Railway Equipment Co.: *See*
Dorey, George B. 2,950,144.
Dorey, George B. 2,950,145.
Kotanda, Clarence J., and Fritz. 2,950,143.

Erdley, Harold F.: *See*—
Singleton, Henry E., and Erdley. 2,949,785.

Erickson, Roy. Stabilizing mechanism for automotive vehicle. 2,950,122, 8–23–60, Cl. 280—104.

Ericsson, Eric R., and Sohlberg, to Telefonaktiebolaget L. M. Ericsson. Speed governor. 2,949,980, 8–23–60, Cl. 188—184.

Esmay, Paul O. Hand-operated sprayer or the like. 2,950,153, 8–23–60, Cl. 309—23.

Esso Research and Engineering Co.: *See*
Craft, William S., Smith, and Porter. 2,950,241.
Fitzgerald, William P., Banes, and Hubbard. 2,949,952.
Kimberlin, Charles N., Jr., and Mattox. 2,950,336.
Koenecke, Donald F., and Slotterbeck. 2,950,333.
Lawson, John E., Jr. 2,950,244.
Mattox, William J. 2,950,332.
Neureiter, Norman P. 2,950,337.
Starr, Charles F., Jr., and Segura. 2,950,259.
Thorpe, Charles L., Heinrich, Hoffman, and Anderson. 2,950,242.

Ethyl Corp.: *See*
Riddle, James M. 2,950,301.
Riddle, James M. 2,950,303.
Riddle, James M. 2,950,304.
Riddle, James M. 2,950,305.

Etienne, Alfred, to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude. Process of separation of gaseous mixtures in a heat exchange apparatus. 2,949,745, 8–23–60, Cl. 62—32.

Evans, John M., and J. W. Luttrell, to Magna Power Motors, Inc. Electrical motors. 2,950,401, 8–23–60, Cl. 310—44.

Evans, Richard E.: *See*—
Haskell, Philip R., Evans, Ketchpel, and Connor. 2,949,898.

Everett, Frederick J., to Stewart-Warner Corp. Water separator for compressed air lines. 2,949,925, 8–23–60, Cl. 137—195.

Ex-Cell-O Corp.: *See*—
Brady, Samuel G. 2,949,706.

Fainman, Morton Z., to Standard Oil Co. Silicone lubricating oil composition containing ester for improved lubricity and thermal stability. 2,950,250, 8–23–60, Cl. 252—49.6.

Fairchild Camera and Instrument Corp.: *See*—
Doyle, Irving W., and Nash. 2,949,834.

Fairchild Engine and Airplane Corp.: *See*—
Cozzoli, Michael. 2,949,863.
Shube, Eugene E. 2,949,891.

Falco, Michele. Device for molding meat balls. 2,949,629, 8–23–60, Cl. 17—32.

Failgatter, Wayne S.: *See*—
Hughes, William B., Failgatter, and Newcombe. 2,950,246.

Familier, Henri: *See*—
Gutton, Henri, and Familier. 2,950,473.

Farbenfabriken Bayer Aktiengesellschaft: *See*—
Herzog, August G., Kaltheuner, and Reussner. 2,949,807.
Kolb, Günter, and Eitel. 2,950,216.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Kracker, Herbert, and Albert. 2,950,275.
Kracker, Herbert, Bamberger, Mohr, and Ribka. 2,950,274.

Farkas, Adalbert, to Houdry Process Corp. Method for separation and recovery of diazabicyclo-octane. 2,950,282, 8–23–60, Cl. 260—268.

Farrell, John W. Water closet ventilator. 2,949,615, 8–23–60, Cl. 4—216.

Feindler, Ernst, to Leitz, Ernst, G.m.b.H. Driving mechanism for microtome. 2,949,817, 8–23–60, Cl. 88—40.

Felder, John L. Wall facing. 2,949,763, 8–23–60, Cl. 72—19.

Felix, Ernst: *See*—
Locher, Hans, and Felix. 2,950,435.

Ferrell, Russell A., to H. H. Robertson Co. Wall structure. 2,949,981, 8–23–60, Cl. 189—34.

Ferron, William O., to Pennsalt Chemicals Corp. Liquid level gauge. 2,949,777, 8–23–60, Cl. 73—321.

Field, Edmund: *See*—
Brennan, Harry M., and Field. 2,950,243.

Field, James H., and C. L. Vogt, to Roylyn Inc. Slip-tube gauge. 2,949,776, 8–23–60, Cl. 73—290.

Fillion, Stanley H., and A. E. Schaefer, to Waugh Equipment Co. Snubbing devices. 2,950,017, 8–23–60, Cl. 213—8.

Finkel, Leonard, and C. J. Weidknecht, to American Bosch Arma Corp. Temperature compensation circuit. 2,950,448, 8–23–60, Cl. 332—28.

Finkel, Seymour I.: *See*—
Shirley, John M., and Finkel. 2,950,076.

Finn, Charles O., to The Finn Equipment Co. Apparatus for vertical mulching of soil and other purposes. 2,949,871, 8–23–60, Cl. 111—1.

Finn Equipment Co., The: *See*—
Finn, Charles O. 2,949,871.

Finnegan, William B., J. N. Huff, and G. A. Wilson, to Cutler-Hammer, Inc. Gear gaging. 2,949,676, 8–23–60, Cl. 33—179.5.

Fischer, Cecil: *See*—
Kafka, Andrew, and Fischer. 2,949,612.

Fisher, James L. Steering mechanism for microphone dolly and the like. 2,950,121, 8–23–60, Cl. 280—47.11.

Fite, Charles C., Jr.: *See*—
Nikitin, Alexander A., Fite, and Gary. 2,950,183.

Fitzgerald, William P., F. W. Banes, and A. W. Hubbard, to Esso Research and Engineering Co. Tubeless tire. 2,949,952, 8–23–60, Cl. 152—330.

Flanders Mill, Inc.: *See*
Tuthill, William A. 2,949,976.

Flatland, Lloyd P. Dental hand piece transmission. 2,949,671, 8–23–60, Cl. 32—26.

Fletch-Aire Co., Inc.: *See*—
Fletcher, Charles J. 2,949,737.

Fluke, John, Mfg. Co., Inc.: *See*—
Brown, Franklin M. 2,950,455.

Fletcher, Charles J., to Fletch-Aire Co., Inc. Helicopter including a jet driven rotor and drive system. 2,949,737, 8–23–60, Cl. 60—39.35.

Foley, William E.: *See*—
Wilton, Henry T., and Foley. 2,949,813.

Fomenko, S. M., to Litton Industries, Inc. Pliant disk magnetic recording apparatus. 2,950,353, 8–23–60, Cl. 179—100.2.

Fonda-Bonardi, Giusto. Microwave devices employing quantum transition resonance phenomena. 2,950,444, 8–23–60, Cl. 331—3.

Forbush, Dellis R. Electric fan propelled merry-go-round. 2,950,109, 8–23–60, Cl. 272—41.

Ford, Barton H., ½, to International Paper Co., and ½, to The Stanley Works. Freight car bulkhead. 2,949,866, 8–23–60, Cl. 105—369.

Ford Motor Co.: *See*—
Stockton, Thomas R. 2,949,860.

Foremost Dairies, Inc.: *See*—
Peebles, David D. 2,950,204.

Formfit Co., The: *See*—
Pavesa, Charles. 2,949,916.

Forsberg, Arthur R. Roughing down machine for cleaning grain, beans and the like. 2,950,008, 8–23–60, Cl. 209—138.

Fort Wayne Tool Die & Engineering Co.: *See*—
Eminger, Robert J. 2,949,789.

Foss, David W., to Bomac Laboratories Inc. Tunable cavity resonator. 2,949,790, 8–23–60, Cl. 74—89.

Foster, Laurence H.: *See*—
Blanding, Wendell S., Foster, and Spremulli. 2,949,702.

Foust, Dwight. Leak tester for automobile tires. 2,949,767, 8–23–60, Cl. 73—45.6.

Fox, Lois J.: *See*—
Smith, Traver J., and Daugherty. 2,950,424.

Fox, Philip E., J. E. Bartelt, D. J. Crawford, and N. Rochester, to International Business Machines Corp. Electronic data processing machine. 2,950,465, 8–23–60, Cl. 340—173.

Frampton, Vernon L.: *See*—
King, William H., and Frampton. 2,950,198.

France, Harold, A. Lambert, and T. J. Meyrick, to Imperial Chemical Industries Ltd. Polyisocyanate compositions. 2,950,307, 8–23–60, Cl. 260—453.

Franke & Heidecke, Fabrik Photographischer: *See*—
Bretthauer, Hermann. 2,949,831.

Frederick, Albert F., and R. J. Rabel, to The Cincinnati Milling Machine Co. Indexing mechanism. 2,949,796, 8–23–60, Cl. 74—823.

Freedman, Larry A., and R. N. Rhodes, to Radio Corp. of America. Television receivers. 2,950,346, 8–23–60, Cl. 178—7.5.

Fricke, Edwin A., Jr.: *See*—
Hoffmann, Paul R., Keichner, Moore, and Fricke. 2,949,846.

Friden, Inc.: *See*—
Malavazos, Arthur J. 2,950,051.

Friedman, Burnam I.: *See*—
Newburn, Floyd A., Cannova, and Friedman. 2,949,877.

Fritz, William E.: *See*—
Koranda, Clarence J., and Fritz. 2,950,143.

Froelich, Donald F., and E. B. Wagner, to Lockheed Aircraft Corp. Airplane propeller spinner attachment device. 2,949,904, 8–23–60, Cl. 170—159.

Froelich, Herman C., to General Electric Co. Preparation of electroluminescent phosphors. 2,950,257, 8–23–60, Cl. 252—301.6.

Frohlich, Heinz: *See*—
Paul, Wolfgang, Reinhard, and Frohlich. 2,950,389.

Frome, Leonard, to Simmonds Precision Products, Inc. Capacitor for conductive liquids. 2,950,426, 8–23–60, Cl. 317—246.

Fromer, Stephen. Suntan control device. 2,949,880, 8–23–60, Cl. 116—114.

Fujii, Tadakuni, to International Standard Electric Corp. Reflex klystrons. 2,950,415, 8–23–60, Cl. 315—5.18.

Gaeth, Rudolf: *See*—
Buchholz, Karl, Stastny, and Gaeth. 2,950,261.

Gangi, Sebastian, to Cidega Machine Mfg. Co., Inc. Apparatus for manufacturing ice cream. 2,949,748, 8–23–60, Cl. 62—132.

Garceau, Roger M. H., to S. N. Marep. Packings and the like. 2,950,152, 8–23–60, Cl. 309—23.

Gargini, Eric J., to Electric & Musical Industries Ltd. Television relay systems. 2,950,345, 8–23–60, Cl. 178—7.5.

Garlanda, Tiziano: *See*—
Baroni, Alessandro, and Garlanda. 2,950,173.

Garmy, Robert J., to Republic Steel Corp. Cooling arrangement for electric furnace. 2,950,094, 8–23–60, Cl. 259—208.

Gartner, Fritz. Means for supporting and clamping a hollow metal post relatively to ceilings or walls. 2,949,983, 8–23–60, Cl. 189—36.

Gary, Janet S.: *See*—
Nikitin, Alexander A., Fite, and Gary. 2,950,183.

Gebele, Kurt, to Compur-Werk Friedrich Deckel OHG. Photographic camera having depth of field indicating means. 2,949,836, 8–23–60, Cl. 95—64.

Geigy, J. R., A.-G.: *See*—
Halfter, Georg, and Koehler. 2,950,178.
Schmid, Otto, and Hurbin. 2,950,276.

Geiser, David T., to Sprague Electric Co. Duplex communication. 2,950,301, 8–23–60, Cl. 179—170.

Gellman, Allen B. Pyrophoric lighter. 2,949,758, 8–23–60, Cl. 67—7.1.

Gembruch, Alfred, to Alfred Gembruch, K.G. Ski binding. 2,950,119, 8–23–60, Cl. 280—11.35.

Gembruch, Alfred, K.G.: *See*—
Gembruch, Alfred. 2,950,119.

General Americal Transportation Corp.: *See*—
De Grandpre, Etienne. 2,949,865.

General Aniline & Film Corp.: *See*—
Cofranceseo, Anthony J., and Roberts. 2,950,268.
Duggins, William E. 2,950,330.
Duggins, William E. 2,950,331.
Hort, Eugene V. 2,950,290.
Hort, Eugene V. 2,950,326.
Schenck, Leslie M., and Bloom. 2,950,319.
Streck, Clemens. 2,950,213.

General Electric Co.: *See*—
Albright, Harry E. 2,950,164.
Bochan, John. 2,950,009.
Bochan, John. 2,950,010.
Breeding, Harold A., and Martt. 2,950,417.
Carbary, Richard J. 2,950,139.
Custin, Thomas G. 2,950,451.
Froelich, Herman C. 2,950,257.
Gibson, Van R., Jr. 2,950,344.
Goldblum, Kenneth B. 2,950,266.
Jayne, Frank J., and Honeycutt. 2,950,413.
Lemmers, Eugene, and Aicher. 2,950,410.
Pan, Paul M. 2,950,479.
Revercomb, Henry E. 2,950,342.
Sullivan, Earle C. 2,950,375.
Tarleton, Frederic L., and Simms. 2,949,715.

General Mills, Inc.: *See*—
Bergsland, Charles H., Neumeier, and Petersen. 2,949,665.

General Motors Corp.: *See*—
Bowser, Phillip C., and Denzer. 2,950,104.
Dietrich, Howard H. 2,949,903.
Harris, Edward P. 2,949,956.
Hayes, William S. 2,950,364.
Johnstone, Theodore H. 2,949,762.
Katz, Edwin F. 2,950,430.
McCathron, Claude B. 2,950,367.
Meyer, Barthold F., and Toruk. 2,950,138.
Meyer, Engelbert A. 2,949,986.
Peterson, Victor W., Schnepel, and Bancel. 2,949,771.
Pribonic, John F. 2,950,124.
Simon, Kenneth O. 2,949,759.
Smith, Warren H. 2,949,792.
Thurow, James E. 2,949,808.
Tomlinson, Horace. 2,949,872.

General Plywood Corp.: *See*—
Dimond, Lloyd E. 2,949,623.

General Precision, Inc.: *See*—
Schmid, Herman. 2,950,399.

Genser, Milton, and W. F. Allred, to The Battelle Development Corp. Preparation of P–N junctions by the decomposition of compounds. 2,950,220, 8–23–60, Cl. 148—1.5.

George, Thomas J. Electronic musical instrument. 2,949,804, 8–23–60, Cl. 84—1.22.

Gerbits, Clarence G., and N. H. Decker, to International Business Machines Corp. Test apparatus for crystal diodes. 2,950,439, 8–23–60, Cl. 324—158.

Gesellschaft fur Forderanlagen Ernst Hockel m.b.H.: *See*—
Rubin, Adolf. 2,949,864.

Gevaert Photo-Producten N.V.: *See*—
De Cat, Arthur H., and Van Poucke. 2,950,314.

Gewecke, Theodore H. Dispensing device. 2,950,028, 8–23–60, Cl. 222—95.

Gewecke, Theodore H., and C. R. Broman, to Baxter Laboratories, Inc. Parenteral solution equipment. 2,949,913, 8–23–60, Cl. 128—214.

Ghormley Engineering and Mfg. Co.: *See*—
Ghormley, James G., Jr., and Kitchens. 2,949,851.

Ghormley, James G., Jr., and C. T. Kitchens, to Ghormley Engineering and Mfg. Co. Means adjusting cylinders in printing press. 2,949,851, 8–23–60, Cl. 101—248.

Gibian, Heins, and G. Bratfisch, to Schering A.G. Ferments of the papain type and process of making same. 2,950,227, 8–23–60, Cl. 195—66.

Gibson, Van R., Jr., to General Electric Co. Compensated noise cancelling circuit. 2,950,344, 8–23–60, Cl. 178—7.3.

Gievers, John G., to Chrysler Corp. Angular position control servosystem electro-optical data transmission. 2,950,428, 8–23–60, Cl. 318—28.

Gilbert, Roswell W., to Daystrom, Inc. Apparatus for measuring large D.C. currents. 2,950,438, 8–23–60, Cl. 324—117.

Gillette Co., The: *See*—
Goff, Stillman R. 2,950,255.

Glasgow, Clifford J. Attachable container bracket for ladders. 2,950,080, 8–23–60, Cl. 248—210.

Glass, Marvin I.: *See*—
Easterling, James M. 2,949,606.
Licitis, Gunars, and Glass. 2,949,607.

Glavin, Robert E., to Kalvar Corp. Material for use in a photographic reproduction system. 2,950,194, 8–23–60, Cl. 96—75.

Glaxo Laboratories Ltd.: *See*—
Elks, Joseph, and Phillipps. 2,950,298.

Glass, Felix S. Motor winding centrifugal contamination eliminator. 2,950,402, 8–23–60, Cl. 310—56.

Glidden Co., The: *See*—
Johnson, Paul D. 2,950,184.

Glover, Anthony D. Spectacle display device. 2,949,683, 8–23–60, Cl. 35—49.

Goff, Stillman R., to The Gillette Co. Detergent composition. 2,950,255, 8–23–60, Cl. 252—152.

Gold, Stanley F.: *See*—
Childs, Percy A., Gold, and Walsh. 2,950,156.

Goldblum, Kenneth B., to General Electric Co. Cross-linked polycarbonate resinous compositions and method for preparing same. 2,950,266, 8–23–60, Cl. 260—43.

Goldhammer, Albert, to Bodenseewerk Perkin-Elmer & Co., G.m.b.H. Photographic camera with quick winding attachment. 2,949,832, 8–23–60, Cl. 95—31.

Golding, William F. Printing and like machines. 2,950,108, 8–23–60, Cl. 271—86.

Goldmark, Peter C., to Columbia Broadcasting System, Inc. Phonograph record. 2,950,116, 8–23–60, Cl. 274—46.

Goldschimdt, Th., A.G.: *See*—
Bungardt, Walter. 2,950,190.

Goldstein, Arnold. Barbecue package. 2,950,042, 8–23–60, Cl. 229—41.

Golfer's Swing-Clik, Inc.: *See*—
Hurdzan, Michael G. 2,950,115.

Golinelli, Marino. Method of preserving royal jelly. 2,950,201, 8–23–60, Cl. 99—150.

Golrick, Albert R.: *See*—
Douglas, Alvin P., and Golrick. 2,949,990.

Gonsalves, Conrad J.: *See*—
Heijnis, James W. I., and Gonsalves. 2,949,659.

Goodnough, Douglas D.: *See*—
Goodnough, Frank L. and D. D. 2,949,937.

Goodnough, Frank L. and D. D. Picker stick check apparatus. 2,949,937, 8–23–60, Cl. 139—169.

Goodrich, Hunter C., to Radio Corp. of America. Noise immune amplitude discriminatory system. 2,950,343, 8–23–60, Cl. 178—7.3.

Goodyear Aircraft Corp.: *See*—
Cameron, Thomas A., and Keyser. 2,949,667.

Goodyear, John L.: *See*—
Rosenberger, Harold E., and Goodyear. 2,949,813.

Gore, Ethel V. Nut cracker. 2,949,950, 8–23–60, Cl. 146—13.

Gorin, Everett: *See*—
Batchelor, James D., Curran, and Gorin. 2,950,229.
Batchelor, James D., Curran, and Gorin. 2,950,230.
Batchelor, James D., Curran, and Gorin. 2,950,231.

Goshorn, Roland H.: *See*—
Loev, Bernard, and Goshorn. 2,950,324.

Graber, Carl D., to Diebold, Inc. Deal drawer construction for bank drive-up windows. 2,949,870, 8–23–60, Cl. 109—19.

Grain Processing Corp.: *See*—
Kathrein, Henry R. 2,949,700.

Granberg, Albert J. Self-priming centrifugal pump assembly. 2,949,859, 8–23–60, Cl. 103—113.

Greenberg, Walter S., to Kiddy Case Mfg. Co., Inc. Suitcase closure. 2,949,987, 8–23–60, Cl. 190—49.

Greene, Malbone W.: *See*—
Thayer, Louis C., Cuhna, and Greene. 2,950,176.
Thayer, Louis C., and Greene. 2,949,765.

Greer, Edith S.: *See*—
Carper, Harold R. 2,949,703.

Gregor, Fred. Method and apparatus for controlling the tooling or hardening of chocolate candies. 2,949,747, 8–23–60, Cl. 62—129.

Gregory, James N. Combined rotary and percussion drilling. 2,950,087, 8–23–60, Cl. 255—4.4.

Griess, John C., Jr.: *See*—
Bohlmann, Edward G., and Griess. 2,950,167.

Grob & Co. Aktiengesellschaft: *See*—
Wagner, Otto. 2,949,936.

Groen, Rein J., and W. A. Rice. Process of quick-freezing raw onions. 2,950,203, 8–23–60, Cl. 99—193.

Grogan, Edward C., to Minneapolis-Honeywell Regulator Co. Controller having proportional band adjustment. 2,949,922, 8–23–60, Cl. 137—86.

Grossos, Stephen J.: *See*—
Hoffmann, Arthur K., Grossos, and Thomas. 2,950,322.

Grover, Ben L.: *See*—
Kirkham, Don, and Grover. 2,949,766.

Grover, Philip D., and M. G. Kraft, to Controls Co. of America. Device for rendering electric switches environment-resistant. 2,950,373, 8–23–60, Cl. 200—168.

Gruver, John H., to Addressograph-Multigraph Corp. Printing machines. 2,950,341, 8–23–60, Cl. 178—6.6.

Guardian S.A.: *See*—
Eddowes, Cecil S. 2,949,614.

Guilbert, Inc.: *See*—
Heisler, William C. 2,949,648.

Gulf Oil Corp.: *See*—
Todt, William C. 2,949,502.

Gulton Industries, Inc.: *See*—
Londell, William J., Jr. 2,950,368.

Gundlach, Robert W., to Haloid Xerox Inc. Stencil master making. 2,949,849, 8–23–60, Cl. 101—128.3.

Gutton, Henri, and H. Familier, to Compagnie Generale de Telegraphie Sans Fil. Radioelectric distance measuring systems. 2,950,473, 8–23–60, Cl. 343—6.5.

Guyer, Hubert A. Door closer. 2,949,625, 8–23–60, Cl. 16—52.

Haalck, Fritz, to Askania-Werke A.G. Calibration of torsion magnetometers. 2,950,434, 8–23–60, Cl. 324—48.

Hack, Nestor R.: *See*—
Hayashida, George M., and Hack. 2,950,072.

Hadfield, Harry R., B. Batterbee, and D. R. Lemin, to Imperial Chemical Industries Ltd. New dyeing process. 2,950,165, 8–23–60, Cl. 8—54.

Haine, Michael E., and T. Mulvey, to Metropolitan-Vickers Electrical Co. Ltd. Electron lenses. 2,950,300, 8–23–60, Cl. 250—49.5.

Halfter, Georg, and G. Koehler, to J. R. Geigy, A.-G. Apparatus for automatic titration. 2,950,178, 8–23–60, Cl. 23—253.

Hall, James A., to Reynolds Metals Co. Evaporator restrictor. 2,949,746, 8–23–60, Cl. 62—56.

Haloid Xerox Inc.: *See*—
Gundlach, Robert W. 2,949,849.
Mott, George R. 2,949,848.

Halpern, William: *See*—
Peyser, Leonard T., and Halpern. 2,949,618.

Halse, Glenn M.: *See*—
Lease, Clarence E., and Halse. 2,950,146.

Halstead, John H. Vehicle lifting apparatus. 2,949,978, 8–23–60, Cl. 187—8.75.

Hambling, Stewart K., to The Standard Motor Co. Ltd. Gas turbine power plant. 2,949,731, 8–23–60, Cl. 60—6.

Hamilton Caster & Mfg. Co., The: *See*—
Armentrout, Joseph V. 2,950,126.

Hammond, Laurens, to Hammond Organ Co. Artificial reverberation control apparatus. 2,949,805, 8–23–60, Cl. 84—1.24.

Hammond Organ Co.: *See*—
Hammond, Laurens. 2,949,805.

Hance, Harold V. Off-center cursor for PPI. 2,950,475, 8–23–60, Cl. 343—10.

Handy, Carleton T.: *See*—
Cope, Arthur C., and Handy. 2,950,334.

Hanin, Mireille, and J. Voeltzel, to Institut de Recherches de La Siderurgie. Valve operated by the action of liquid. 2,949,926, 8–23–60, Cl. 137—202.

Hanna, James: *See*—
McCartney, William F., and Hanna. 2,949,760.

Hansmann, Arthur J.: *See*—
Mascaretti, Leo T. 2,950,012.

Hardy, Edgar E., to Monsanto Chemical Co. Method of operating a turbojet engine and high energy fuels used therein. 2,949,733, 8–23–60, Cl. 60—35.4.

Harmon, Warren J. Kitchen cabinet construction. 2,950,158, 8–23–60, Cl. 312—342.

Harnisch, Heinz, F. Rodis, and K. Beltz, to Knapsack-Griesheim Aktiengesellschaft. Recovery of hydrogen halides. 2,950,170, 8–23–60, Cl. 23—154.

Harris, Edward P., to General Motors Corp. Seat construction. 2,949,956, 8–23–60, Cl. 155—184.

Harris Intertype Corp.: *See*—
Royer, Arthur G. 2,950,107.

Harrison, George C. Vending device. 2,950,154, 8–23–60, Cl. 312—35.

Harrison, John B.: *See*—
McCulley, James M., Kiraly, and Harrison. 2,950,159.

Haskell, Philip R., R. E. Evans, P. A. Ketchpel, Jr., and L. B. Connor, to Remington Arms Co., Inc. Cartridge-powered piston type tool. 2,949,898, 8–23–60, Cl. 123—24.

Hastings, Donald F., and P. A. Wallace, to The Bendix Corp. Apparatus for controlling the position of a displaceable member to indicate the speed of an engine within predetermined ranges. 2,950,420, 8–23–60, Cl. 317—5.

Hatch, Arthur J., to The Strong Electric Corp. Projection lamp. 2,950,382, 8–23–60, Cl. 240—3.1.

Haug, Anton J. Two stage pulp refining machine. 2,950,064, 8–23–60, Cl. 241—46.

Hayashida, George M., and N. R. Hack, to The Bendix Corp. Guide for moving tape. 2,950,072, 8–23–60, Cl. 242—76.

Hayes, John D., and L. M. Hudson, to Bausch & Lomb Optical Co. Objective lens. 2,949,821, 8–23–60, Cl. 88—57.

Hayes, William S., to General Motors Corp. Warning device. 2,950,364, 8–23–60, Cl. 200—56.

Hazeltine Research, Inc.: *See*—
Brunn, Robert B. J. 2,950,463.
Hirsch, Charles J. 2,950,033.
Loughlin, Bernard D. 2,950,349.

Heath, Harry C. Pumping rig and method. 2,949,861, 8–23–60, Cl. 103—179.

Hedeman, Walter R., Jr., to United States of America, Navy. Yaw computer. 2,950,476, 8–23–60, Cl. 343—11.

Hedrick, H. D.: *See*—
Johnson, William E. 2,949,919.

Hedwin Corp.: *See*—
Winstead, Thomas W. 2,950,029.

Heijnis, James W. I.: *See*—
Schrenk, Hans A., Van Dijk, and Heijnis. 2,949,723.

Heijnis, James W. I., and C. J. Gonsalves, to American Enka Corp. Crimping apparatus. 2,949,659, 8–23–60, Cl. 28—1.

Heinrich, Raymond L.: *See*—
Thorpe, Charles L., Heinrich, Hoffman, and Anderson. 2,950,242.

Heisler, William C., to Guilbert, Inc. Safety astragal for dumbwaiter doors. 2,949,648, 8–23–60, Cl. 20—19.

Heller, Gerhard: *See*—
Berthold, Wolfgang, Rottgardt, and Heller. 2,950,409.

Heller, Robert B., to Curtiss-Wright Corp. Self-balancing ultrasonic instrument. 2,949,769, 8–23–60, Cl. 73—67.6.

Hellier, Edward G., and G. L. Martin, to National Research Corp. Production of tantalum powder. 2,950,185, 8–23–60, Cl. 75—.5.

Heltzel Steel Form & Iron Co., The: *See*—
Carnes, Fred D. 2,949,828.

Hemlon, John R., P. Covalence, and K. J. Riddle, to Daystrom, Inc. Electrical instrument. 2,949,778, 8–23–60, Cl. 73—361.

Hemphill, Charles A. Carrying case. 2,950,011, 8–23–60, Cl. 211—1.

Henchert, John, to Continental Can Co., Inc. Plastic nozzle and screw cap assembly. 2,950,033, 8–23–60, Cl. 22—551.

Hennen, Joseph W., to Standard Metal Fabricating Co. Sheet metal attachment means. 2,950,131, 8–23–60, Cl. 285—189.

Henrich, William U.: *See*—
Seifried, Paul E., and Henrich. 2,950,460.

Henriksson, Thor O., to Pacific Car and Foundry Co. Mechanical refrigerator cars. 2,949,751, 8–23–60, Cl. 62—239.

Henry, William V., D. C. Cole, and M. L. Smathers, to American Enka Corp. Method and apparatus for producing a transfer tail. 2,949,722, 8–23–60, Cl. 57—34.

Heraeus, W. C., G.m.b.H.: *See*—
Lorenz, Albert. 2,950,046.

Hercules Powder Co.: *See*—
Plunkett, Warren L. 2,950,278.
Vandenberg, Edwin J. 2,950,320.

Herzog, August G., H.-F. Kaltheuner, and C.-H. Reussner, ½ to said Herzog, and ½ to Farbenfabriken Bayer Aktiengesellschaft. Fishing net or the like made of braided plastic filaments. 2,949,807, 8–23–60, Cl. 87—8.

Hetzel, Max, to Bulova Watch Co. Inc. Electric timepiece. 2,949,727, 8–23–60, Cl. 58—23.

Heuer, Kurt, H. Elling, and R. Elsner, to American Enka Corp. Production of shaped objects from viscose. 2,950,208, 8–23–60, Cl. 106—165.

Hewey, Paul L.: *See*—
Clough, Edward L. 2,949,690.

Hewitt, Ellis E., to Westinghouse Air Brake Co. Hydropneumatic hoist control apparatus. 2,949,894, 8–23–60, Cl. 121—46.

Hewitt, Ellis E., to Westinghouse Air Brake Co. Surge dampener apparatus. 2,949,932, 8–23–60, Cl. 137—503.

Hewlett-Packard Co.: *See*—
Reis, Charles S. 2,950,418.

Hill, Benjamin J., ½ to Victor J. Hill. Weather stripping. 2,949,651, 8–23–60, Cl. 20—69.

Hill, Victor J.: *See*—
Hill, Benjamin J. 2,949,651.

Hines, Marion E., to Bell Telephone Laboratories, Inc. Microwave frequency converter. 2,950,384, 8–23–60, Cl. 250—20.

Hinson, Jay B. Phosphor bearing surface. 2,950,222, 8–23–60, Cl. 154—120.

Hinton, Raymond C. P., R. B. Page, and J. P. Larkin, to International Telephone and Telegraph Corp. Error detection systems. 2,950,464, 8–23–60, Cl. 340—172.5.

Hirsch, Charles J., to Hazeltine Research, Inc. Electrical integrator. 2,950,053, 8–23–60, Cl. 235—183.

Hobbs, John F., and T. Thorley, to Imperial Chemical Industries Ltd. Continuous casting of metals. 2,949,652, 8–23–60, Cl. 22—57.2.

Hobson, Lloyd H., to Plastering Development Center, Inc. Valve. 2,949,928, 8–23–60, Cl. 137—454.2.

Hodgins, George R., E. Di Cyan, and R. Timmerman, to Litho Chemical and Supply Co. Inc. Removal of metal ions from gum arabic. 2,950,195, 8–23–60, Cl. 96—93.

Hodsman, George F., and F. A. Chappell, to L. Oertling, Ltd. Analytical or fine balances. 2,950,099, 8–23–60, Cl. 265—54.

Hoeppner, Conrad H., to United States of America, Navy. F.M. to binary code telemetering receiver. 2,950,471, 8–23–60, Cl. 340—347.

Hoffman, Edward J.: *See*—
Thorpe, Charles L., Heinrich, Hoffman, and Anderson. 2,950,242.

Hoffman, Harry, Jr., to International Business Machines Corp. Multiple section memory. 2,950,467, 8–23–60, Cl. 340—174.

Hoffman, Lewis C., to E. I. du Pont de Nemours and Co. Thermofluid vehicles. 2,950,209, 8–23–60, Cl. 106—230.

Hoffman, Paul R., H. E. Keichner, F. H. Moore, Jr., and E. A. Fricke, Jr., to Burroughs Corp. Printing mechanism. 2,949,846, 8–23–60, Cl. 101—93.

Hoffman, Paul R., to Burroughs Corp. Storage, interpreting and printing machine. 2,950,347, 8–23–60, Cl. 178—23.

Hoffmann, Arthur K., S. J. Groszos, and W. M. Thomas, to American Cyanamid Co. Method of preparing a vinylphenyl boroxole. 2,950,322, 8–23–60, Cl. 260—606.5.

Hohnecker, Otto, to Burroughs Corp. Magnetic head suspension. 2,950,354, 8–23–60, Cl. 179—100.2.

Holan, J. H., Corp.: *See*—
Troche, Herman J., and Webb. 2,949,741.

Hollstein, Oswald C.: *See*—
Stava, Robert J., Schneerer, and Hollstein. 2,950,394.

Holowaty, Michael O., and A. M. Kroner, to Inland Steel Co. Process of making ladle stopper heads. 2,949,637, 8–23–60, Cl. 18—47.5.

Holt, William E. Floor machine with retractable wheels and adjustable handle assembly. 2,949,619, 8–23–60, Cl. 15—49.

Holton, Robert J., to Tinnerman Products Inc. Friction hinge. 2,949,627, 8–23–60, Cl. 16—140.

Honeycutt, Murray: *See*—
Jayne, Frank J., and Honeycutt. 2,950,413.

Horizons Inc.: *See*—
Steinberg, Morris A., and McAllen. 2,950,233.

Horsfall, Robert B., Jr., to North American Aviation, Inc. Three axis flexure pivot. 2,950,079, 8–23–60, Cl. 248—179.

Hort, Eugene V., to General Aniline & Film Corp. Stabilized aromatic carbocyclic amines. 2,950,290, 8–23–60, Cl. 260—391.

Hort, Eugene V., to General Aniline & Film Corp. Hydrogenation of 1,4-butynediol to 1,4-butanediol. 2,950,326, 8–23–60, Cl. 260—635.

Horton, William A. Electrical circuit and switch assembly therefor. 2,950,362, 8–23–60, Cl. 200—1.

Hosbein, Louis H., to M. H. Detrick Co. Method of co-moulding brick. 2,949,643, 8–23–60, Cl. 18—59.

Houdaille Industries, Inc.: *See*—
Rumsey, Rollin D. 2,950,101.

Houdry Process Corp.: *See*—
Farkas, Adalbert. 2,950,282.
Orchin, Milton. 2,950,328.

Howa Kogyo Kabushiki Kaisha: *See*—
Noda, Shozo. 2,949,645.

Hubbard, Addison W.: *See*—
Fitzgerald, William P., Banes, and Hubbard. 2,949,952.

Huber, Clarence F., and Milling Machine Co. 2,950,211, 8–23–60, Cl. 106—273.
P. F. Thompson, to The Cincinnati Heterocyclic asphalt additives.

Hudson, Lena M.: *See*—
Hayes, John D., and Hudson. 2,949,821.

Huff, Joseph N.: *See*—
Flunegan, William S., Huff, and Wilson. 2,949,676.

Hughes Aircraft Co.: *See*—
Ketchpel, Richard D. 2,950,408.
Ketchpel, Richard D. 2,950,414.
Richardson, Donald K. 2,949,841.
Rappright, Siegfried. 2,949,931.
Williams, Donald D. 2,949,780.

Hughes Tool Co., Aircraft Div.: *See*—
Jovanovich, Drago K. 2,949,967.

Hughes, William B., W. S. Fallgatter, and J. Newcombe, to Cities Service Research and Development Co. Process for increasing the permeability of oil bearing chalk formations. 2,950,246, 8–23–60, Cl. 252—8.55.

Hullhorst, William B.: *See*—
Drummond, Warren W., Hullhorst, and Plummer. 2,949,633.

Humbert, Reuben J. Satellite orbit toys. 2,949,682, 8–23–60, Cl. 35—46.

Humes, David E., and R. F. Morey, Jr., to Clevite Corp. Self-starting transistor oscillator unit. 2,950,446, 8–23–60, Cl. 331—114.

Humphrey, Vonnie D. Comb for use in cutting hair. 2,949,920, 8–23–60, Cl. 132—45.

Hunt, Francis C.: *See*—
Martin, Hugh M. 2,950,045.

Hurbin, Meinrad: *See*—
Schmid, Otto, and Hurbin. 2,950,276.

Hurd, Reginald: *See*—
Abbotson, William, Hurd, and Shearing. 2,950,263.

Hurdman, Michael G., to Golfer's Swing-Clik, Inc. Golf club attachment. 2,950,115, 8–23–60, Cl. 273—186.

Huse, Arthur T.: *See*—
Nystrom, Carl H., and Huse. 2,950,095.

Hygrade Food Products Corp.: *See*—
Brockmann, Maxwell C. 2,950,202.

I-T-E Circuit Breaker Co.: *See*—
Stringfellow, Allen B. 2,950,371.

Iinuma, Hajime, to Kokusai Denki Kabushiki Kaisha. Resonant circuit element applicable for digital information processing. 2,950,397, 8–23–60, Cl. 307—88.

Illinois Tool Works: *See*—
Thorson, John R., Black, and Rayburn. 2,950,070.

Imanishi, Masahiko: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

Imperial Chemical Industries Ltd.: *See*—
Abbotson, William, Hurd, and Shearing. 2,950,263.
Brown, John F., Weir, and Whelan. 2,950,177.
Calam, Christopher T., and Curtis. 2,950,288.
France, Harold, Lambert, and Meyrick. 2,950,307.
Hadfield, Harry R., Batterbee, and Lemin. 2,950,165.
Hobbs, John F., and Thorley. 2,949,652.
Pigott, Owen R., and Sprout. 2,949,844.
Stewart, Malcolm G. 2,949,854.

Indiana General Corp.: *See*—
Buus, Harold W. 2,950,008.

Inductosyn Corp.: *See*—
Tripp, Robert W. 2,950,427.

Industrial Metal Fabricators Co.: *See*—
Rivers, Charles F. 2,950,000.

Inland Steel Co.: *See*—
Holowaty, Michael O., and Kroner. 2,949,637.

Inoue, Michitaka: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

Institut de Recherches de la Siderurgie: *See*—
Allard, Marc, Trentini, and Wahl. 2,950,186.
Hanin, Mireille, and Voeltzel. 2,949,926.

International Business Machines Corp.: *See*—
Browniow, James M. 2,950,252.
Fox, Philip E., Bartelt, Crawford, and Rochester. 2,950,463.
Gerbitz, Clarence G., and Decker. 2,950,439.
Hoffman, Harry, Jr. 2,950,467.
Knox, Lewis A. 2,950,052.
Luhn, Hans P. 2,950,048.
Rueger, William J. 2,950,161.
Tibbling, Stig B. 2,949,886.

International Harvester Co.: *See*—
Cardaras, James. 2,950,205.

International Nickel Co., Inc., The: *See*—
Pincott, John, and West. 2,950,172.

International Paper Co.: *See*—
Ford, Barton H. 2,949,866.

International Standard Electric Corp.: *See*—
Berthold, Wolfgang, Rottgardt, and Heller. 2,950,409.

International Standard Electric Corp.: *See*—
Childs, Percy A., Gold, and Walsh. 2,950,156.
Fujii, Tadakuni. 2,950,415.
Leman, Hugh S. 2,950,351.

International Telephone and Telegraph Corp.: *See*—
Deloraine, Edmond M., Busignies, and Chevigny. 2,950,400.
Hinton, Raymond C. P., Page, and Larkin. 2,950,464.

Iowa State College Research Foundation, Inc.: *See*—
Kirkham, Don, and Grover. 2,949,766.

Irons, R. D., ½ to O. K. Olsen. Rotary drilling bits. 2,950,089, 8–23–60, Cl. 255—61.

Irwin, Neisler and Co.: *See*—
Cavallito, Chester J. 2,950,309.

Islandsrud, Ola. Table saw with means for tilting and reciprocating. 2,949,943, 8–23–60, Cl. 143—47.

Ivankovics, Stephen G., and G. R. Mikel, to The Bendix Corp. Motor operated latch mechanism. 2,949,889, 8–23–60, Cl. 121—40.

Iwao, Junichi, and K. Tomino, to Tanabe Seiyaku Co., Ltd. Preparation of water soluble epinochrome derivatives. 2,950,287, 8–23–60, Cl. 265—319.

Iwasaki, Hidesuke: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

Jacklin, Harold M. Combustion-chamber construction for internal combustion engines. 2,949,899, 8–23–60, Cl. 123—32.

Jacobs, Louis J., to The S. Obermayer Co. Refractory materials. 2,949,704, 8–23–60, Cl. 50—464.

Jacobsen, David, to Rodi & Wienenberger Aktiengesellschaft. Two-layer expansible linkage of high flexibility. 2,949,729, 8–23–60, Cl. 59—79.

Jacobus, William W.: *See*—
Crim, Hugh S., and Jacobus. 2,949,738.

Jaeckel, Karl: *See*—
Reppe, Walter, Pohlemann, and Jaeckel. 2,950,269.

Jaeger, Jacob J., to Pratt & Whitney Co., Inc. Cutter head and counterweight support for machine tools. 2,949,797, 8–23–60, Cl. 77—36.

Jaeschke, Ralph L., to Eaton Mfg. Co. Friction clutch. 2,949,991, 8–23–60, Cl. 192—107.

Jaffe, David L., to Polarad Electronics Corp. Linearly responsive voltage generating means with variable induction coupling. 2,950,386, 8–23–60, Cl. 250—20

Jamison, Edwin L.: *See*—
Downey, Richard M., and Jamison. 2,949,698.

Jayne, Frank J., and M. Honeycutt, to General Electric Co. Filament connection for electric lamp or similar device. 2,950,413, 8–23–60, Cl. 313—271.

Jiu, James, to G. D. Searle & Co. 17-oxygenated estra-1,3,5(10)-triene-1,4-diols, their esters, and a corresponding quinone. 2,950,291, 8–23–60, Cl. 260—397.3.

Johannesen, Walter L. Pickup mechanism for harvesters. 2,949,717, 8–23–60, Cl. 56—23.

Johnson, Andy A., and G. Dubpernell, to Metal & Thermit Corp. Chromium plating process and bath. 2,950,234, 8–23–60, Cl. 204—51.

Johnson, Christopher L., and P. G. Binns, to Rolls-Royce Ltd. Mountings, couplings and the like devices. 2,950,133, 8–23–60, Cl. 287—1.

Johnson, Donald L. Means for producing flakes while cutting a flat surface on wood. 2,949,946, 8–23–60, Cl. 144—162.

Johnson, Elmer T., to Minneapolis-Honeywell Regulator Co. Electrical pulse producing apparatus. 2,950,398, 8–23–60, Cl. 307—88.5.

Johnson, Paul D., to The Glidden Co. Process for preparing powdered silver-solder compositions. 2,950,184, 8–23–60, Cl. 75—.5.

Johnson, Sam W. Bait box. 2,949,691, 8–23–60, Cl. 43—55.

Johnson, William E., ⅓ each to H. D. Hedrick and C. H. Wolf. Tobacco treatment. 2,949,919, 8–23–60, Cl. 131—149.

Johnston, Peter R., to Columbia-Southern Chemical Corp. Aqueous hydrogen peroxide containing a small stabilizing amount of nitriliotriacetic acid. 2,950,175, 8–23–60, 23—207.5.

Johnstone, Theodore H., to General Motors Corp. Lock. 2,949,762, 8–23–60, Cl. 70—364.

Joiner, Edgar E., and J. P. Szumski, to Fred W. Mears Heel Co., Inc. Heels with nail-holding fillers. 2,949,684, 8–23–60, Cl. 36—40.

Jones, Edward M., to The Baldwin Piano Co. Digital pattern producing equipment. 2,950,470, 8–23–60, Cl. 340—347.

Jones, Eynon, and O. H. Tracy. Confection and method of making the same. 2,950,200, 8–23–60, Cl. 99—137.

Jones, Frederick B., to American Enka Corp. Production of filaments having improved whiteness. 2,950,207, 8–23–60, Cl. 106—165.

Jones, Jean E.: *See*—
Carroll, Burt H., Jones, and Spence. 2,950,196.

Jovanovich, Drago K., to Hughes Tool Co., Aircraft Division. Blade-to-hub connector for thrust producing rotor. 2,949,967, 8–23–60, Cl. 170—160.53.

Kafko, Andrew, and C. Fischer. Collapsible retaining and signaling means for slide fasteners. 2,949,612, 8–23–60, Cl. 2—234.

Kahn, Louis: *See*—
Collins, Joseph L., and Kahn. 2,949,640.

Kaltheuner, Hans-Friedrich: *See*—
Herzog, August G., Kaltheuner, and Reussner. 2,949,807.

Kalvar Corp.: *See*—
Glavin, Robert E. 2,950,194.

Kanoi, Nobuo: *See*—
Yasuda, Junichi, Kanoi, and Takahata. 2,950,385.

Kapff, Sixt F.: *See*—
Ryant, Charles J., Jr., and Kapff. 2,949,768.

Kaplan, Charles H., and J. J. M. Pelen, to Compagnie pour la Fabrication des Compteurs et Materiel d'Usines a Gas. Measuring device. 2,950,433, 8–23–60, Cl. 324—43.

Kartridg Pak Co., The: *See*—
Mojonnier, Albert B. 2,949,941.

Kathrein, Henry R., to Grain Processing Corp. Production of carotenoids by the cultivation of algae. 2,949,700, 8–23–60, Cl. 47—58.

Katz, Edwin F., to General Motors Corp. Electromagnetic torque motor system. 2,950,430, 8–23–60, Cl. 318—28.

Katzmarek, Edmund R. Prefabricated step unit. 2,949,703, 8–23–60, Cl. 50—107.

Kayler, Frank H., to American Steel Foundries. Railway coupler. 2,950,018, 8–23–60, Cl. 213—159.

Kehn, Ralph F. Self-bailing boat. 2,949,879, 8–23–60, Cl. 114—185.

Keith, John V., to Leesona Corp. Winding machine. 2,950,067, 8–23–60, Cl. 242—18.

Kelchner, Harley E.: *See*—
Hoffman, Paul R., Kelchner, Moore, and Fricke. 2,949,846.

Kellett, William B. Ornamental awning. 2,949,650, 8–23–60, Cl. 20—57.5.

Kelley, John R., to Bell & Howell Co. Direct writing recorder. 2,950,162, 8–23–60, Cl. 346—74.

Kelsey-Hayes Co.: *See*—
Ayers, David T., Jr. 2,949,892.

Kempen, Raymond J., and W. L. Newell, to Alton Box Board Co. Manufacture of box blanks from box board. 2,949,827, 8–23–60, Cl. 93—58.

Kennard, George J. and I., to V. A. and M. H. Puff. Automatically operated body exercising table. 2,949,911, 8–23–60, Cl. 128—25.

Kennard, Irene: *See*—
Kennard, George J. and I. 2,949,911.

Kenney, Clarence E., and R. C. Moore, to Allis-Chalmers Mfg. Co. Elastic fluid turbine two speed motor control system. 2,949,730, 8–23–60, Cl. 60—1.

Kentucky Research Foundation: *See*—
Emmert, Emery M. 2,950,182.

Kern, Loyd R.: *See*—
McGuire, William J., Jr., and Kern. 2,950,247.

Kernan, James M., and R. L. Lewis, to Packaging Corp. of America. Apparatus primarily for testing opening force and flap score stiffness characteristics of cartons. 2,949,770, 8–23–60, Cl. 73—93.

Ketchpel, Paul A., Jr.: *See*—
Haskell, Philip R., Evans, Ketchpel, and Connor. 2,949,898.

Ketchpel, Richard D., to Hughes Aircraft Co. Multi-gap collimation lens for use in direct-view storage tube. 2,950,408, 8–23–60, Cl. 313—82.

Ketchpel, Richard D., to Hughes Aircraft Co. Storage tube. 2,950,414, 8–23–60, Cl. 315—1.

Keyser, Howard P.: *See*—
Cameron, Thomas A., and Keyser. 2,949,667.

Kiddy Case Mfg. Co., Inc.: *See*—
Greenberg, Walter S. 2,949,987.

Kilner, William N., and J. Tudge, to Metropolitan-Vickers Electrical Co. Ltd. Electrical turbo generators. 2,950,403, 8–23–60, Cl. 310—232.

Kimberlin, Charles N., Jr., and W. J. Mattox, to Esso Research and Engineering Co. Separation of aromatics and olefins using zeolitic molecular sieves. 2,950,336, 8–23–60, Cl. 260—674.

Kimberly-Clark Corp.: *See*—
Bietzinger, John C., and Allan. 2,950,223.

King, Leonard T., to Electric & Musical Industries Ltd. Attenuators or suppressors for attenuating or suppressing undesired oscillations. 2,950,450, 8–23–60, Cl. 333—22.

King, William H., and V. L. Frampton, to United States of America, Agriculture. Production of cottonseed meal of improved quality. 2,950,198, 8–23–60, Cl. 99—2.

Kiraly, James: *See*—
McCulley, James M., Kiraly, and Harrison. 2,950,159.

Kirby, Thomas P.: *See*—
Peklay, William P., and Kirby. 2,949,687.

Kirkham, Don, and B. L. Grover, to Iowa State College Research Foundation, Inc. Apparatus for measuring fluid permeability of porous materials. 2,949,766, 8–23–60, Cl. 73—38.

Kirkpatrick, Willard H., to Visco Products Co. Polyoxyalkylene esters of tall oil rosin acids. 2,950,272, 8–23–60, Cl. 260—104.

Kirkpatrick, Willard H., to Visco Products Co. Surface active substances of ether ester class. 2,950,299, 8–23–60, Cl. 260—407.

Kirkpatrick, Willard H., to Visco Products Co. Surface active substances. 2,950,310, 8–23–60, Cl. 260—475.

Kirkpatrick, Willard H., to Visco Products Co. Surface active polyoxypropylene esters. 2,950,313, 8–23–60, Cl. 260—484.

Kitchens, Clyde T.: *See*—
Ghormley, James G., Jr., and Kitchens. 2,949,851.

Klamp, Paul, to Mechanical Handling Systems, Inc. Overhead truck pusher conveyor. 2,949,862, 8–23–60, Cl. 104—88.

Klaus, Ernst M.: *See*—
Pleitgen, Max G., and Klaus. 2,949,656.

Kleist, Dale, and H. J. Snow, to Owens-Corning Fiberglas Corp. Apparatus for forming fibers. 2,949,631, 8–23–60, Cl. 18—2.5.

Kleist, Dale, and H. J. Snow, to Owens-Corning Fiberglas Corp. Apparatus for centrifugally forming fibers. 2,949,632, 8–23–60, Cl. 18—2.5.

Kline, Jack, and D. L. Winsor, to Sanders Associates, Inc. Tunable cavity for high-frequency generators. 2,950,453, 8–23–60, Cl. 333—83.

Kling, Walter, and H. Lange, to Bohme Fettchemie G.m.b.H. Methods of washing textile fabrics. 2,950,253, 8–23–60, Cl. 252—132.

Klingler, Karl A. Extension seal. 2,949,787, 8–23–60, Cl. 74—18.2.

Klingler, Karl A. Sleeve packing. 2,949,788, 8–23–60, Cl. 74—18.2.

Klinikowski, James J., to United States of America, Navy. Data shifting circuit. 2,950,468, 8–23–60, Cl. 340—174.

Klompas, Nicholas, to Orenda Engines Ltd. Device for separating entrained oil from a current of gas. 2,949,977, 8–23–60, Cl. 183—77.

Knapsack-Griesheim Aktiengesellschaft: *See*—
Harnisch, Heinz, Rodis, and Beltz. 2,950,170.

Knauth, Berthold A. Adjustable flow nozzle for a flowmeter. 2,949,764, 8–23–60, Cl. 73—3.

Knefell, Vitus. Reckoner for demonstrating arithmetical calculations. 2,949,681, 8–23–60, Cl. 35—30.

Knox, Lewis A., to International Business Machines Corp. Analogue-to-digital precision integrator. 2,950,052, 8–23–60, Cl. 235—154.

Kobe, Inc.: *See*—
Coberly, Clarence J. 2,949,857.

Kocsuta, Michael. Threadless pipe coupling having a split ring locking means. 2,950,132, 8–23–60, Cl. 285—307.

Koehler, Gerhard: *See*—
Halfter, Georg, and Koehler. 2,950,178.

Koenecke, Donald F., and O. C. Slotterbeck, to Esso Research and Engineering Co. Method for controlling the oxidation of polymer oils. 2,950,333, 8–23–60, Cl. 260—669.

Koff, Herman H., to Bell Telephone Laboratories, Inc. Panel latch. 2,950,141, 8–23–60, Cl. 292—256.73.

Kokusai Denki Kabushiki Kaisha: *See*—
Iinuma, Hajime. 2,950,397.

Kolb, Günter, and K. Eitel, to Farbenfabriken Bayer Aktiengesellschaft. Process for dressing leather. 2,950,216, 8–23–60, Cl. 117—142.

Kollsman, Instrument Corp.: *See*—
O'Maley, James B., and Barnes. 2,950,395.

Koltun, Leo H. Lockable hinge for a child's car bed. 2,949,628, 8–23–60, Cl. 16—145.

Koninklijke Verkade Fabrieken N.V.: *See*—
Leeuwrik, Frederik H. 2,949,869.

Kooperativa Forbundet, Ekonomisk Forening: *See*—
Dzaack, Heinz A. 2,950,462.

Koranda, Clarence J., and W. E. Fritz, to Enterprise Railway Equipment Co. Combination discharge outlet for hopper cars. 2,950,143, 8–23–60, Cl. 302—52.

Korber, Kurt, & Co., K.G.: *See*—
Döpke, Werner. 2,949,918.

Kracker, Herbert, R. Bamberger, R. Mohr, and J. Ribka, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Azo-dyestuffs insoluble in water. 2,950,274, 8–23–60, Cl. 260—148.

Kracker, Herbert, and H. Albert, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Azo-dyestuffs insoluble in water. 2,950,275, 8–23–60, Cl. 260—188.

Kraft, Melvin G.: *See*—
Grover, Philip D., and Kraft. 2,950,373.

Kramer, Daniel E., to Mercer Engineering Co. Heat exchange system of the evaporative type with means for maintaining liquid supply line pressure. 2,949,750, 8–23–60, Cl. 62—196.

Krekeler, Claude B., A. O. Bruestle, and J. R. Cartlidge, to The Cincinnati Mine Machinery Co. Cutting bits and bit holders. 2,950,096, 8–23–60, Cl. 262—33.

Krempel, Frank M., and R. A. Anderson, to Stewart-Warner Corp. Container for electronic equipment. 2,950,093, 8–23–60, Cl. 257—256.

Kritz, Jack. Flowmeter. 2,949,772, 8–23–60, Cl. 73—194.

Kroner, Albert M.: *See*—
Holowaty, Michael O., and Kroner. 2,949,637.

Kuechler, William L., to E. I. du Pont de Nemours and Co. Recovery of tetrahydrofuron. 2,950,232, 8–23–60, Cl. 202—70.

Kuhar, Ludwig J., to The Singer Mfg. Co. Thread carrier for sewing machine loop taker. 2,949,874, 8–23–60, Cl. 112—231.

Kuhn, James O., to Bromo-Mint Co., Inc. Construction toy. 2,949,692, 8–23–60, Cl. 46—28.

Kunevicius, Alex A. Bowling ball finger grip. 2,950,111, 8–23–60, Cl. 273—63.

Kunzer, Werner, and F. Leutert, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Chemical reactor tower. 2,950,180, 8–23–60, Cl. 23—283.

Kurita, Ken-Ichiro. Filter press. 2,949,845, 8–23–60, Cl. 100—198.

Kusaka, Tsunaharu: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

L.O.F. Glass Fibers Co.: *See*—
Drummond, Warren W., Hullhorst, and Plummer. 2,949,633.

La Favorite Rubber Mfg. Co.: *See*—
Mastin, Robert E. 2,949,636.

Lagally, Paul. Preparation and stabilization of water soluble reactive titanium derivatives. 2,950,174, 8–23–60, Cl. 23—202.

L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude: *See*—
Etienne, Alfred. 2,949,745.

Lambert, Arthur: *See*—
France, Harold, Lambert, and Meyrick. 2,950,307.

Lambert, Pol: *See*—
Carpentier, Raymond, and Lambert. 2,950,327.

Lampe, Robert C., to Electrolux Corp. Suction nozzle. 2,949,624, 8–23–60, Cl. 15—356.

Lanco, Philip D. Means for producing color positives in true natural colors. 2,949,812, 8–23–60, Cl. 88—24.

Lancon, Roger. Spectacles with removable lenses. 2,949,818, 8–23–60, Cl. 88—47.

Lange, Hermann: *See*—
Kling, Walter, and Lange. 2,950,253.

Langstroth, Hall. Pressure sensing device. 2,950,421, 8–23–60, Cl. 317—99.

Lapetina, Charles J., and V. H. Salinas. Flower pot and material for making the same. 2,949,699, 8–23–60, Cl. 47—37.

Larkin, John P.: *See*—
Hinton, Raymond C. P., Page, and Larkin. 2,950,464.

Latus, Hans, to Allgauer Maschinenbau G.m.b.H. Ring spinning and twisting frames. 2,949,726, 8–23–60, Cl. 57—106.

Lavicka, Edward, Sr.: *See*—
Slotta, Max A., and Lavicka. 2,950,110.

Lawson, John E., Jr., to Esso Research and Engineering Co. Extraction of residuum. 2,950,244, 8–23–60, Cl. 208—309.

Lease, Clarence E., and G. M. Halse. Apparatus for removing ballast from vehicle tires. 2,950,146, 8–23–60, Cl. 302—58.

Le Blond, R. K., Machine Tool Co., The: *See*—
McCurdy, Harry C. 2,949,893.

Leesona Corp.: *See*—
Keith, John V. 2,950,067.

Leeuwrik, Frederik H., to Koninklijke Verkade Fabrieken N.V. Tunnel baking oven. 2,949,869, 8–23–60, Cl. 107—57.

Leitz, Ernst, G.m.b.H.: *See*—
Feindler, Ernst. 2,949,817.

Leman, Hugh S., to International Standard Electric Corp. Telephone subscriber's instruments. 2,950,351, 8–23–60, Cl. 179—81.

Lemin, Denis R.: *See*—
Hadfield, Harry R., Batterbee, and Lemin. 2,950,165.

Lemmers, Eugene, and J. O. Aicher, to General Electric Co. Multiple groove discharge lamp. 2,950,410, 8–23–60, Cl. 313—109.

Le Poole, Jan B., to N.V. Optische Industrie "De Oude Delft." Electron-optical device. 2,950,405, 8–23–60, Cl. 313—65.

Leslie, Donald J. Cross-wired organ system and rectifier therefor. 2,949,803, 8–23–60, Cl. 84—1.11.

Leutert, Fritz: *See*—
Kunzer, Werner, and Leutert. 2,950,180.

Lewis, David H.: *See*—
Brown, James R., Wallace, and Lewis. 2,949,910.

Lewis, Russell L.: *See*—
Kernan, James M., and Lewis. 2,949,770.

Lichtblau, Ellis L., to E. I. du Pont de Nemours and Co. Impregnation process. 2,950,217, 8–23–60, Cl. 117—144.

Lichten, Robert L.: *See*—
De Tore, John A., Lichten, and Robertson. 2,949,965.

Licitis, Gunars, and M. J. Glass; said Licitis assor. to said Glass. Toy. 2,949,697, 8–23–60, Cl. 46—243.

Lieberman, Morris S., to United States of America, Navy. Method of assembling a molded cable connector. 2,949,642, 8–23–60, Cl. 18—59.

Lilly, Eli, and Co.: *See*—
Phillips, Wendell W. 2,950,078.

Lindstrom, Ture, and A. S. Nagy, to United States of America, Navy. Electro-mechanical brake device and control circuit. 2,949,989, 8–23–60, Cl. 192—3.

Linkroum, Irving E., to The Bendix Corp. Ignition apparatus. 2,950,419, 8–23–60, Cl. 315—177.

Lionel Corp., The: *See*—
Bonanno, Joseph L. 2,950,369.
Zion, Moses. 2,949,095.

Litho Chemical and Supply Co. Inc.: *See*—
Hodgins, George R., Di Cyan, and Timmerman. 2,950,195.

Lithographic Technical Foundation: *See*—
Borchers, Charles H. 2,949,850.

Litton Industries, Inc.: *See*—
Fomenko, S. M. 2,950,353.
Singleton, Henry E., and Erdley. 2,949,785.

Livermore, H. F., Corp.: *See*—
Urquhart, Lloyd G. 2,949,938.

Lizzadro, Joseph F. Machine for pushing pipe or conduit. 2,950,085, 8–23–60, Cl. 254—29.

Locher, Hans, and E. Felix, to Zellweger A.G. Method and means for determining periodic variations in variables especially in the cross-section of textiles. 2,950,435, 8–23–60, Cl. 324—61.

Lockheed Aircraft Corp.: *See*—
Froelich, Donald F., and Wagner. 2,949,964.
McLain, George E., and Power. 2,950,073.

Loev, Bernard, and J. T. Massengale, to Pennsalt Chemicals Corp. Mercaptan synthesis. 2,950,323, 8–23–60, Cl. 260—609.

Loev, Bernard, and R. H. Goshorn, to Pennsalt Chemicals Corp. High molecular weight mercaptan. 2,950,324, 8–23–60, Cl. 260—609.

Loewe, Richard T., to North American Aviation, Inc. Saturable amplifier. 2,950,466, 8–23–60, Cl. 340—174.

Lombard Corp.: *See*—
Lombard, Daniel L. 2,950,374.

Lombard, Daniel L., to Lombard Corp. Induction furnace. 2,950,374, 8–23–60, Cl. 219—10.67.

Londell, William J., Jr., to Gulton Industries, Inc. Resonant reed relay. 2,950,368, 8–23–60, Cl. 200—87.

Loper, George B., and R. R. Pittman, to Socony Mobil Oil Co., Inc. Seismic record display and re-recording. 2,950,459, 8–23–60, Cl. 340—15.

Lorenz, Albert, to W. C. Heraeus G.m.b.H. High vacuum pump. 2,950,046, 8–23–60, Cl. 230—139.

Losse, Paul L., to The Eagle-Picher Co. Method of making insulation blocks and shapes. 2,950,225, 8–23–60, Cl. 162—201.

Loughlin, Bernard D., to Hazeltine Research, Inc. Synchonizing system for beam-indexing color-television display. 2,950,349, 8–23–60, Cl. 178—504.

Lovegrove, Henry J., to Daystrom, Inc. Electric relay control circuits. 2,950,423, 8–23–60, Cl. 317—152.

Lozo, Harold A. Battery plate pasting machine. 2,949,940, 8–23–60, Cl. 141—32.

Luce, Ronald S. Egg incubator tray. 2,949,884, 8–23–60, Cl. 119—44.

Luenberger, Frederick O., to U.S. Electrical Motors, Inc. Hoist cable retainer. 2,949,654, 8–23–60, Cl. 24—238.

Luhn, Hans P., to International Business Machines Corp. Computer for verifying numbers. 2,950,048, 8–23–60, Cl. 235—61.

Lunkenheimer Co., The: *See*—
Steinbuch, Marvin L., and Wyatt. 2,950,081.

Lutsky, Sidney. Bowling glove. 2,949,610, 8–23–60, Cl. 2—16.

Luttrell, Jimmie W.: *See*—
Evans, John M., and Luttrell. 2,950,401.

Lyon, Floyd A.: *See*—
Aronson, Theodore F., and Lyon. 2,949,839.

Lyon, George A. Wheel balancing weight assembly. 2,950,142, 8–23–60, Cl. 301—5.

M & S Safety Co., Inc., The: *See*—
Mitchell, Garland W., and Sapp. 2,949,761.

MacCaffray, Rex S., Jr., to C. H. Masland & Sons. Warp knitting method. 2,949,754, 8–23–60, Cl. 66—85.

MacCaffray, Rex S., Jr., to C. H. Masland and Sons. Warp knitting machine. 2,949,755, 8–23–60, Cl. 66—85.

Macchioni, Luigi: *See*—
Macchioni, Pietro A. and L. 2,949,909.

Macchioni, Pietro A. and L. Electromagnetic hammer. 2,949,909, 8–23–60, Cl. 125—33.

MacCracken, Calvin D., and G. N. Miles, to Whirlpool Corp. Laundry machine with heat storage means. 2,949,679, 8–23–60, Cl. 34—133.

MacDonald, Duncan N., to Burroughs Corp. Card sorter. 2,950,005, 8–23–60, Cl. 209—74.

Mack, Jack E. Portable emergency farm produce aerator. 2,949,843, 8–23–60, Cl. 98—57.

Mackal, Henry H. Resilient inflation-deflation valve. 2,949,927, 8–23–60, Cl. 137—223.

Macq, Andre, to Union Chimique Belge, Societe Anonyme, and Manufacture des Glaces et Produits Chimiques de Saint-Gobain, Chauny et Cirey, Societe Anonyme. Process and apparatus for the manufacture of phosphoric acid. 2,950,171, 8–23–60, Cl. 23—165.

Macy, Donald, and H. Nelson, to Artcraft Venetian Blind Mfg. Co. Canopy. 2,949,649, 8–23–60, Cl. 20—57.5.

Maeder, Paul F., to Speidel Corp. Gyroscope device. 2,949,784, 8–23–60, Cl. 74—5.7.

Magna Power Motors, Inc.: *See*—
Evans, John M., and Luttrell. 2,950,401.

Magnetic Heating Corp.: *See*—
Cameron, Hugh J. 2,949,677.

Magnuson, Genevieve I.: *See*—
Smith, Traver J., and Daugherty. 2,950,424.

Magnuson, Robert: *See*—
Smith, Traver J., and Daugherty. 2,950,424.

Maier, Kenneth D.: *See*—
Boughton, Olin W., De Grave, and Maier. 2,949,814.

Malavazos, Arthur J., to Friden, Inc. Calculating machine differentional drive and tens carry mechanism. 2,950,051, 8–23–60, Cl. 235—63.

Malmstead, Lilyan. Brassiere. 2,949,915, 8–23–60, Cl. 128—432.

Malnove, Paul. Merchandising display device. 2,950,013, 8–23–60, Cl. 211—86.

Mannhardt, Heinz-Jürgen, and H. Metz, to E. Merck, Aktiengesellschaft. Method of producing 11-a-hydroxysteroids with the genus fusarium. 2,950,226, 8–23–60, Cl. 195—51.

Mantel, Albertus G., to N. V. Nederlandsche Machinefabriek "Artillerie-Inrichtengen." Fuzes having a self-destructive action. 2,949,856, 8–23–60, Cl. 102—71.

Manufacture des Glaces et Produits Chimiques de Saint-Gobain, Chauny et Cirey, Societe Anonyme: *See*—
Macq, Andre. 2,950,171.

Maples, Richard E. Tape recorder control mechanism. 2,950,099, 8–23–60, Cl. 242—35.12.

Marcatili, Enrique A. J., to Bell Telephone Laboratories, Inc. Microwave devices. 2,950,452, 8–23–60, Cl. 333—73.

Marconi's Wireless Telegraph Co. Ltd.: *See*—
Cooper, Victor J. 2,950,440.

Marco, S. N.: *See*—
Garceau, Roger M. H. 2,950,152.

Marola, Americo: *See*—
Clark, Sidney F., Cowles, Marola, and White. 2,950,131.

Marshall, Richard G., to Corn Products Co. Enzymatic process. 2,950,228, 8–23–60, Cl. 195—66.

Marshall, William R., Jr.: *See*—
Armstrong, Eldon L., Marshall, Murray, and Raich. 2,950,249.

Martell, George E., to Smith Kline & French Laboratories. Feeding apparatus for a conveyor. 2,949,997, 8–23–60, Cl. 198—25.

Martin, George L.: *See*—
Hellier, Edward G., and Martin. 2,950,185.

Martin, Hugh M., 50% to F. G. Hunt. Combined statement and return envelope. 2,950,045, 8–23–60, Cl. 229—92.3.

Martin, Lynn P., to W. A. Sheaffer Pen Co. Writing implement. 2,949,888, 8–23–60, Cl. 120—47.

Martin, Lynn P., E. D. Thompson, R. L. Brannon, and L. W. Ross, to W. A. Sheaffer Pen Co. Writing implement. 2,949,887, 8–23–60, Cl. 120—42.03.

Martt, Ernest C.: *See*—
Breeding, Harold A., and Martt. 2,950,417.

Mascaretti, Leo T., ½ to A. J. Hansmann. Paint equipment rack for attaching to a paint tray. 2,950,012, 8–23–60, Cl. 211—65.

Masland, C. H., & Sons: *See*—
MacCaffray, Rex S., Jr. 2,949,754.
MacCaffray, Rex S. Jr. 2,949,755.

Massengale, John T.: *See*—
Loev, Bernard, and Massengale. 2,950,323.

Massey-Ferguson (Great Britain) Ltd.: *See*—
Murray, John B. 2,950,128.

Massey, Lester G.: *See*—
Murray, Maurice J., and Massey. 2,950,169.

Mastin, Robert E., to La Favorite Rubber Mfg. Co. Mold for making a spiral threaded rubber molded article. 2,949,636, 8–23–60, Cl. 18—42.

Mathies, Richard L. Bottle cap. 2,950,020, 8–23–60, Cl. 215—41.

Mattox, William J.: *See*—
Kimberlin, Charles N., Jr., and Mattox. 2,950,336.

Mattox, William J., to Esso Research and Engineering Co. Conversion of ketones to aromatics. 2,950,332, 8–23–60, Cl. 260—668.

Maxwell-Dodds Mfg. Co. Ltd.: *See*—
Dodds, Robert R., and A. S. 2,950,125.

Mayer, Donald F., and J. C. Uhland, to Philco Corp. Combined encoder and decoder system. 2,950,348, 8–23–60, Cl. 178—43.5.

Mazer, Marshall, and Harry N. Vosmer, to The National Cash Register Co. Method of controlling apparatus from marks on record material. 2,950,049, 8–23–60, Cl. 235—61.11.

Mazer, Marshall, and H. N. Vosmer, to The National Cash Register Co. Record member. 2,950,050, 8–23–60, Cl. 236—61.12.

Mazer, Marshall, and H. N. Vosmer, to The National Cash Register Co. Readily removable marking composition for record material. 2,950,256, 8–22–60, Cl. 252—301.2.

McAllen, Robert G.: *See*—
Steinberg, Morris A., and McAllen. 2,950,233.

McCartney, William F., and J. Hanna, to Canada Packers Ltd. Process and apparatus for cleaning caked and imbedded matter from animal hides. 2,949,760, 8–23–60, Cl. 69—37.

McCathron, Claude B., to General Motors Corp. Multiple speed switch mechanism. 2,950,367, 8–23–60, Cl. 200—80.

McCombs, Howard L., Jr., to The Bendix Corp. Speed ratio measuring apparatus. 2,949,781, 8–23–60, Cl. 73—507.

McConnohie, Duane V., to M. S. Pump. Dispenser for hairdressing liquids. 2,950,030, 8–23–60, Cl. 222—189.

McCulley, James M., J. Kiraly, and J. B. Harrison, to United States of America, Navy. Time and events recorder. 2,950,159, 8–23–60, Cl. 346—39.

McCurdy, Harry C., to The R. K. LeBlond Machine Tool Co. Tracer mechanism. 2,949,893, 8–23–60, Cl. 121—45.

McCutchen, Charles W.: *See*—
Dean, Lloyd G., and McCutchen. 2,950,236.

McDorman, James A.: *See*—
Clonis, Plouton G., and McDorman. 2,949,847.

McElhose, Robert T., to Edgewater Steel Co. Radius and concentricity gauge. 2,949,675, 8–23–60, Cl. 33—178.

McElroy, Clyde H. Polishing and grinding table. 2,949,908, 8–23–60, Cl. 125—30.

McGowen, Harold E., Jr., and D. E. Daffin, to Cameo, Inc. Sliding sleeve well tool. 2,949,963, 8–23–60, Cl. 166—224.

McGraw, Charles J.: *See*—
Willis, Robert J., and McGraw. 2,950,032.

McGuire, William J., Jr., and L. R. Kern, to The Atlantic Refining Co. Increasing permeability of subsurface formations. 2,950,247, 8–23–60, Cl. 252—8.55.

McKenney, Henry F., and V. H. Seliger, to Sperry-Rand Corp., Ford Instrument Co. Div. Precision altimeter for aircraft. 2,949,779, 8–23–60, Cl. 73—384.

McLain, George E., and J. T. Power, to Lockhead Aircraft Corp. Hoist mechanism. 2,950,073, 8–23–60, Cl. 244—137.

McRoberts, Charles E.: *See*—
Bachman, Anatole, and McRoberts. 2,950,363.

McRoberts, Charles E., and J. F. Duffield, to Amalgamated Electric Corp. Ltd. Manually operable electric switch. 2,950,366, 8–23–60, Cl. 200—68.

McRoskey, John W., to Wen-Mac Corp. Flying toy. 2,949,693, 8–23–60, Cl. 46—75.

McShan, Clarence H. Electromechanical transducer apparatus and systems embodying the same. 2,950,477, 8–23–60, Cl. 331—116.

McVeigh, John R. Turbine wheel assembly. 2,950,082, 8–23–60, Cl. 253—39.15.

Mead Corp., The: *See*—
Smith, John W. 2,950,214.

Mears, Fred W., Heel Co., Inc.: *See*—
Joiner, Edgar E., and Szumski. 2,949,684.

Mechanical Handling Systems, Inc.: *See*—
Klamp, Paul. 2,949,862.

Meier, John W.: *See*—
Covington, Edward R., and Meier. 2,950,218.

Meinhard, Günter, and W. Benzel, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Method of producing a pearly luster in shampoo concentrates. 2,950,254, 8–23–60, Cl. 252—152.

Meltzer, Robert J.: *See*—
Brumley, Corwin H., and Meltzer. 2,950,391.

Menoni, Rene A. Flexible tool. 2,949,753, 8–23–60, Cl. 64—13.

Mercer Engineering Co.: *See*—
Kramer, Daniel E. 2,949,750.

Merck & Co. Inc.: *See*—
Sarett, Lewis H. 2,950,281.
Wendler, Norman L. 2,950,297.

Merck, E., Aktiengesellschaft: *See*—
Mannhardt, Heinz-Jürgen, and Metz. 2,950,226.

Mercier, Carl E., to Allis-Chalmers Mfg. Co. Method and structure for encapsulating electric apparatus. 2,950,339, 8–23–60, Cl. 174—102.

Metal & Thermit Corp.: *See*—
Johnson, Andy A., and Dubpernell. 2,950,234.

Metropolitan-Vickers Electrical Co. Ltd.: *See*—
Haine, Michael E., and Mulvey. 2,950,390.
Kilner, William N., and Tudge. 2,950,403.

Mettler, Erhard: *See*—
Rapp, Walter E. 2,950,100.

Metz, Harald: *See*—
Mannhardt, Heinz-Jürgen, and Metz. 2,950,226.

Meulien, Henri L. P.: *See*—
Bertin, Jean H., Turinetti, Meulien, and Bauger. 2,949,734.

Meyer, Barthold F., and N. Toruk, to General Motors Corp. Closure latch. 2,950,138, 8–23–60, Cl. 292—229.

Meyer, Engelbert A., to General Motors Corp. Fastening device. 2,949,986, 8–23–60, Cl. 180—88.

Meyers, Loren J.: *See*—
Dugie, Thomas E., and Meyers. 2,949,739.

Meyrick, Thomas J.: *See*—
France, Harold, Lambert, and Meyrick. 2,950,307.

Midwest Insulations, Inc.: *See*—
Downey, Richard M., and Jamison. 2,949,698.

Migneault, Fernand W.: *See*—
Migneault, Romuald and F. W. 2,949,647.

Migneault, Romuald and F. W. Sashless window frame structure. 2,949,647, 8–23–60, Cl. 20—11.

Mikel, Garold R.: *See*—
Ivankovics, Stephen G., and Mikel. 2,949,889.

Miles, George N.: *See*—
MacCracken, Calvin D., and Miles. 2,949,679.

Milla, Joseph, ¼ to M. Barrios, and ¼ to C. Barrios. Handy wire splicer. 2,949,939, 8–23–60, Cl. 140—115.

Miller, Calvin Q., and W. W. Ranson, to E. I. du Pont de Nemours, and Co. Coloring matter for ball-pen inks. 2,950,283, 8–23–60, Cl. 260—314.5.

Miller, Calvin Q., and W. W. Ranson, to E. I. du Pont de Nemours, and Co. Basic dye salts of polysulfonated phthalocyanines and process of producing the same. 2,950,286, 8–23–60, Cl. 260—314.5.

Miller, Norman T.: *See*—
Di Maio, Vincent, and Miller. 2,949,953.

Mills, Emmett R. Automatic wiper for rotary blade. 2,949,801, 8–23–60, Cl. 83—168.

Miner, Richard Y.: *See*—
Abt, Clifford F., Miner, and Spitalny. 2,949,824.

Minetti, Emile. Game. 2,950,114, 8–23–60, Cl. 273—99.

Minneapolis-Honeywell Regulator Co.: *See*—
Baxter, Vernon A., Jr. 2,950,077.
Berry, Henry W. 2,950,429.
Grogan, Edward C. 2,949,922.
Johnson, Elmer T. 2,950,398.
Modie, Joseph C. 2,950,054.
Newbold, William F. 2,949,775.
Ransch, Floyd D. 2,950,469.
Wright, William T. 2,950,431.

Minnesota Mining and Mfg. Co.: *See*—
Brandon, David B. 2,950,300.
Brown, Harvey A., and Coon. 2,950,317.

Mitchell, Garland W., and B. B. Sapp, to The M & S Safety Co., Inc. Restraining device. 2,949,761, 8–23–60, Cl. 70—16.

Mitchell, Robert E., and S. K. Webster. Electronic sound transmitting device. 2,950,357, 8–23–60, Cl. 179—107.

Miyake, Akira: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

Mobay Chemical Co.: *See*—
Reuter, Franz G. 2,949,895.

Modes, Edward E.: *See*—
Algino, Joseph M., and Modes. 2,950,055.

Modie, Joseph C., to Minneapolis-Honeywell Regulator Co. Electrical computing apparatus. 2,950,054, 8–23–60, Cl. 235—196.

Moehring, William D. Magnetic head assembly. 2,950,355, 8–23–60, Cl. 179—100.2.

Moen, Alfred M. Valve structure. 2,949,933, 8–23–60, Cl. 137—625.17.

Mohasco Industries, Inc.: *See*—
Rice, Walter A. 2,949,660.

Mohr, Reinhard: *See*—
Kracker, Herbert, Bamberger, Mohr, and Ribka. 2,950,274.

Mojonnier, Albert B., to The Kartridg Pak Co. Rotary filling machine. 2,949,941, 8–23–60, Cl. 141—141.

Monsanto Chemical Co.: *See*—
Chapin, Earl C., and Sanford. 2,950,270.
Dobratz, Elmer H. 2,950,316.
Hardy, Edgar E. 2,949,733.
Sharp, Dexter B. 2,950,237.

Montecatini, Societa Generale per l'Industria Mineraria e Chimica: *See*—
Baroni, Alessandro, and Garlanda. 2,950,173.

Moore, Frank H., Jr.: *See*—
Hoffmann, Paul R., Kelchner, Moore, and Fricke. 2,949,846.

Moore, Howard H., Jr., and W. H. Dietz, to Cameo, Inc. Check valve. 2,949,929, 8–23–60, Cl. 137—516.29.

Moore, Howard H., Jr., and W. H. Dietz, to Cameo, Inc. Check valve. 2,949,930, 8–23–60, Cl. 137—516.29.

Moore, Robert C.: *See*—
Kenney, Clarence E., and Moore. 2,949,730.

Moran Corp., The: *See*—
Campbell, Francis K. 2,950,392.

Morey Machinery Co., Inc.: *See*—
Morey, Sigmund M., and Casella. 2,949,795.

Morey, Richard P., Jr.: *See*—
Humes, David E., and Morey. 2,950,446.

Morey, Sigmund M., and S. L. Casella, to Morey Machinery Co., Inc. Power transmission for milling and the like machines. 2,949,795, 8–23–60, Cl. 74—750.

Morin, Louis H. Jam-freeing slider. 2,949,653, 8–23–60, Cl. 24—205.15.

Morse, Elihu N.: *See*—
Collazso, Alfred A., and Morse. 2,950,026.

Morse, John F. Throttle operating linkage for single lever control. 2,949,988, 8–23–60, Cl. 192—.096.

Mott, George R., to Haloid Xerox Inc. Stencil making. 2,949,848, 8–23–60, Cl. 101—128.3.

Mulier, Georges, and P. Bellet, to UCLAF. O-demethyl-N-desacetyl-N-methyl colchicine and a process of making same. 2,950,311, 8–23–60, Cl. 260—476.

Mulvey, Thomas: *See*—
Haine, Michael E., and Mulvey. 2,950,390.

Murphy, Mary E.: *See*—
Chapin, Earl C., and Murphy. 2,950,264.

Murray, George W., Jr.: *See*—
Armstrong, Eldon L., Butcosk, and Murray. 2,950,248.
Armstrong, Eldon L., Marshall, Murray, and Ratch. 2,950,249.

Murray, John B., to Massey-Ferguson (Great Britain) Ltd. Hitches for trailers. 2,950,128, 8–23–60, Cl. 280—477.

Murray, Maurice J., and L. G. Massey, to Universal Oil Products Co. Process for preparing shaped alumina particles of high crushing strength. 2,950,169, 8–23–60, Cl. 23—143.

Murray Ohio Mfg. Co., The: *See*—
Douglas, Alvin P., and Golrick. 2,949,990.

Musser, C. Walton, to United States of America, Army. Bomb release mechanism. 2,949,822, 8–23–60, Cl. 89—1.5.

Musser, C. Walton, and F. W. Dietsch, to United States of America, Army. Dual weapon system alignment mechanism. 2,949,825, 8–23–60, Cl. 89—41.

N.V. Nederlandsche Machinefabriek "Artillerie-Inrichtingen": *See*—
Mantel, Albertus G. 2,949,850.

N.V. Onderzoekingsinstituut Research: *See*—
Schrenk, Hans A. 2,949,934.

N.V. Optische Industrie "De Oude Delft": *See*—
Becker, Johannes, and Blaisse. 2,949,820.
Le Poole, Jan B. 2,950,405.
Nawijn, Arjen. 2,949,830.

N.V. Quod Bonum: *See*—
Bosman, Lambertus H. 2,950,181.

Nagy, Alexander S.: *See*—
Lindstrom, Ture, and Nagy. 2,949,989.

Nash, Alfred G.: *See*—
Doyle, Irving W., and Nash. 2,949,834.

National Cash Register Co., The: *See*—
Mazer, Marshall, and Vosmer. 2,950,049.
Mazer, Marshall, and Vosmer. 2,950,050.
Mazer, Marshall, and Vosmer. 2,950,256.

National Lock Co.: *See*—
Stone, Roy A. 2,950,140.

National Research Corp.: *See*—
Hellier, Edward G., and Martin. 2,950,183.

National Research Development Corp.: *See*—
Williamson, David T. N., and Ogden. 2,949,742.

National Supply Co., The: *See*—
Abraham, James G. 2,950,086.

Nawijn, Arjen, to N.V. Optische Industrie "De Oude Delft." Photographic camera. 2,949,830, 8–23–60, Cl. 95—12.5.

Nearman, Richard E., to United States of America, Navy. Dolly, weapon component transfer, suspended type. 2,950,123, 8–23–60, Cl. 280—106.5.

Nekut, Anthony G., and M. B. Shrader, to Radio Corp. of America. Power tubes for operation at high frequencies. 2,950,411, 8–23–60, Cl. 303—250.

Nelson, Harry: *See*—
Macy, Donald, and Nelson. 2,949,649.

Neubeck, Karl, to Westinghouse-Bremsen-Gesellschaft m.b.H. Load compensating brake control apparatus for railway cars. 2,950,147, 8–23–60, Cl. 303—22.

Neumeier, Karl E.: *See*—
Bergsland, Charles H., Neumeier, and Petersen. 2,949,665.

Neureiter, Norman P., to Esso Research and Engineering Co. Preparation of olefins from olefin episulfides. 2,950,337, 8–23–60, Cl. 260—677.

Neuschots, Robert. Tool for installing threaded elements. 2,949,800, 8–23–60, Cl. 81—53.

Newbold, William F., to Minneapolis-Honeywell Regulator Co. Signal transducer. 2,949,775, 8–23–60, Cl. 73—205.

Newburn, Floyd A., R. D. Cannova, and B. I. Friedman, to United States of America, Navy. Gas generator for floating torpedoes. 2,949,877, 8–23–60, Cl. 114—20.

Newcombe, Jack: *See*—
Hughes, William B., Fallgatter, and Newcombe. 2,950,246.

Newell, Walter L.: *See*—
Kempen, Raymond J., and Newell. 2,949,827.

Nicholson, Kenneth C., to United States of America, Atomic Energy Commission. Silicon carbide bodies for use in nuclear reactors. 2,950,238, 8–23–60, Cl. 204—193.2.

Nikitin, Alexander A. C. C. Fite, Jr., and J. S. Gary, to Tennessee Corp. Nutrient spray composition for plants. 2,950,183, 8–23–60, Cl. 71—11.

Nitraglycerin Aktiebolaget: *See*—
Quadflieg, Therese. 2,950,312.

Noakes, Gordon E.: *See*—
Tumath, Jack L. 2,950,025.

Noble, John W. Floor mopping machine. 2,949,620, 8–23–60, Cl. 15—98.

Noda, Shoso, to Howa Kogyo Kabushiki-Kaisha. Casting machine. 2,949,645 8–23–60, Cl. 19—105.

Nolte, Walter G., to Allis-Chalmers Mfg. Co. Brush holder assembly. 2,950,404, 8–23–60, Cl. 310—241.

North American Aviation, Inc.: *See*—
Compton, Frank G., and Crump. 2,950,340.
Horsfall, Robert B., Jr. 2,950,079.
Loewe, Richard T. 2,950,466.
Ostergren, Ralph H. 2,949,672.

North American Philips Co., Inc.: *See*—
Van den Blink, Willem P. 2,950,380.
Van der Willigen, Paul C. 2,950,212.

Nya Murbruksfabrikens i Stockholm Aktiebolag: *See*—
Ostergren Jarl, O. B. 2,950,206.

Nystrom, Carl H., and A. T. Huse, to American Bosch Arma Corp. Fuel injection apparatus. 2,950,095, 8–23–60, Cl. 261—26.

Obermayer, S., Co., The: *See*—
Jacobs, Louis J. 2,949,704.

Oertling, L., Ltd.: *See*—
Hodsman, George F., and Chappell. 2,950,089.

Ogden, Harry: *See*—
Williamson, David T. N., and Ogden. 2,949,742.

Olin Mathieson Chemical Corp.: *See*—
Adams, Richard F. 2,949,875.
Pauls, Theron F. 2,949,664.
Weisenborn, Frank L. 2,950,289.

Olsen, Ole K.: *See*—
Irons, R. D. 2,950,089.

Olson, Ralph H., and U. P. Trudeau, to Owens-Illinois Glass Co. Apparatus for aligning glass forming molds. 2,949,701, 8–23–60, Cl. 49—9.

O'Maley, James B., and J. W. Barnes, to Kollsman Instrument Corp. Tracking device. 2,950,395, 8–23–60, Cl. 250—203.

Orchin, Milton, to Houdry Process Corp. Cyclopropyl derivatives and processes for making the same. 2,950,328, 8–23–60, Cl. 260—648.

Orenda Engines Ltd.: *See*—
Klompas, Nicholas. 2,949,977.

Orsini, René, to S.A. Plastus. Packages for liquid, pasty and pulverulent materials. 2,950,037, 8–23–60, Cl. 229—14.

Orth, Helmut: *See*—
Reicheneder, Franz, Suter, Orth, Stoeckl, and Seefelder. 2,950,329.

Osborn, Ernest O. Water bag carrier for vehicles. 2,950,034, 8–23–60, Cl. 224—42.03.

Oster, John, Mfg. Co.: *See*—
Blachly, Donald L. 2,949,944.

Ostergren, Jarl O. B., to Nya Murbruksfabrikens i Stockholm Aktiebolag. Finishing mortars. 2,950,206, 8–23–60, Cl. 106—119.

Ostergren, Ralph H., to North American Aviation, Inc. Stationary field scanning system. 2,949,672, 8–23–60, Cl. 33—1.

Ototani, Tohei, to The Research Institute for Iron, Steel and Other Metals of the Tohoku University. Iron-calcium base alloy. 2,950,187, 8–23–60, Cl. 75—122.

Owen, John C., to The Bendix Corp. Thrust control for aircraft. 2,950,075, 8–23–60, Cl. 244—77.

Owens-Corning Fiberglas Corp.: *See*—
Kleist, Dale, and Snow. 2,949,631.
Kleist, Dale, and Snow. 2,949,632.

Owens-Illinois Glass Co.: *See*—
Olson, Ralph H., and Trudeau. 2,949,701.
Wilson, James C. 2,950,039.

Pace, William M., to H. L. Conner. Oil well fire extinguisher apparatus. 2,949,960, 8–23–60, Cl. 166—79.

Pacific Car and Foundry Co.: *See*—
Henriksen, Thor O. 2,949,751.

Packaging Corp. of America: *See*—
Kernan, James M., and Lewis. 2,949,770.
Rupp, Charles E. 2,950,038.

Paetz, Robert A.: *See*—
Compton, William A., Cummings, and Paetz. 2,950,083.

Page, Frank R., to Scott & Williams, Inc. Knitting machine magnetic controlled yarn tension. 2,949,757, 8–23–60, Cl. 66—146.

Page, Robert B.: *See*—
Hinton, Raymond C. P., Page, and Larkin. 2,950,464.

Page, Robert M. Missile guiding system. 2,950,474, 8–23–60, Cl. 343—7.

Pahl, William: *See*—
Tumath, Jack L. 2,950,025.

Pan, Paul M., to General Electric Co. Loop antenna utilizing conductive cabinet. 2,950,479, 8–23–60, Cl. 343—702.

Parker, Earl E.: *See*—
Bush, David C., and Parker. 2,950,262.

Partlow Corp., The: *See*—
Clark, James K. 2,949,959.

Pataky, Paul. Joints for tubular metallic constructions. 2,950,015, 8–23–60, Cl. 211—182.

Paul, Wolfgang, H.-P. Reinhard, and H. Frohlich, ½ to Siemens-Schuckertwerke Aktiengesellschaft, ½ to said P. Wolfgang. Method of separating ions of different specific charges. 2,950,389, 8–23–60, Cl. 250—41.9.

Pauls, Theron P., to Olin Mathieson Chemical Corp. Method of making a heat exchanger tube. 2,949,664, 8–23–60, Cl. 29—157.3.

Paulve, Marcel-Luc-Amedee. Method of connecting rails, rail-connecting devices and rails obtained therefrom. 2,950,059, 8–23–60, Cl. 238—230.

Pavesa, Charles, to The Formfit Co. Brassiere. 2,949,916, 8–23–60, Cl. 128—489.

Payne, Paul D., Jr., to Philco Corp. Method of manufacturing electrical apparatus. 2,950,193, 8–23–60, Cl. 96—34.

Peebles, David D., to Foremost Dairies, Inc. Dried egg product and process of manufacture. 2,950,204, 8–23–60, Cl. 99—210.

Peklay, William P., and T. P. Kirby, to Electric Steel Foundry Co. Excavating tooth. 2,949,687, 8–23–60, Cl. 37—142.

Pelen, Jean J. M.: *See*—
Kaplan, Charles H., and Pelen. 2,950,433.

Pels, Willibald, to AGFA Aktiengesellschaft. Process for the production of symmetrical and unsymmetrical azo compounds. 2,950,273, 8–23–60, Cl. 260—144.

Pengelly, Charles P., to Air Master Corp. Window lock construction. 2,950,136, 8–23–60, Cl. 292—64.

Pennsalt Chemicals Corp.: *See*—
Ferron, William O. 2,949,777.
Loev, Bernard, and Goshorn. 2,950,324.
Loev, Bernard, and Massengale. 2,950,323.

Perry, Charles A., to The Rola Co., Inc. Method of assembly of a loud speaker. 2,949,663, 8–23–60, Cl. 29—155.59.

Perry, Charles A., to The Rola Co., Inc. Loud speaker assembly. 2,950,359, 8–23–60, Cl. 179—115.5.

Perry, Sydney W. H., to Power Jets (Research and Development) Ltd. Mounting of swivelling guide vane elements in elastic fluid machines. 2,950,084, 8–23–60, Cl. 253—78.

Petersen, Paul S.: *See*—
Bergsland, Charles H., Neumeier, and Petersen. 2,949,665.

Peterson, Victor W., H. H. Schnepel, and P. Bancel, to General Motors Corp. Torque meter. 2,949,771, 8–23–60, Cl. 73—136.

Peyser, Leonard T., and W. Halpern, to Vernon Devices, Inc. Combined tap and deburring cutter having cutter resiliently interlocked with tap flutes. 2,949,818, 8–23–60, Cl. 10—140.

Pfann, William G., to Bell Telephone Laboratories, Inc. Semiconductor signal translating devices. 2,950,425, 8–23–60, Cl. 317—235.

Philco Corp.: *See*—
Barnett, Guy F., Spencer, Baghurst, and Pratt. 2,950,406.
Mayer, Donald F., and Uhland. 2,950,348.
Payne, Paul D., Jr. 2,950,193.

Phillipps, Gordon H.: *See*—
Elks, Joseph, and Phillipps. 2,950,298.

Phillips, Marjorie E. Training unicycle with adjustable balancing supports. 2,950,127, 8–23–60, Cl. 280—304.

Phillips Petroleum Co.: *See*—
Pitzer, Emory W., and Bagnetto. 2,950,258.
Stroup, Ross F. 2,950,179.

Phillips, Wendell W., to Eli Lilly and Co. Skid-pallet combination. 2,950,078, 8–23–60, Cl. 248—120.

Picker X-Ray Corp., Waite Mfg. Div., Inc.: *See*—
Stava, Robert J., Schneerer, and Hollstein. 2,950,394.

Picklesimer, Marion L., and W. C. Thurber, to United States of America, Atomic Energy Commission. Method of suppressing UAl$_4$ formation in U-Al alloys. 2,950,188, 8–23–60, Cl. 75—122.7.

Pigott, Owen R., and K. A. Sproat, to Imperial Chemical Industries Ltd. Packing of powdery or granular materials. 2,949,844, 8–23–60, Cl. 100—144.

Pincott, John, and D. H. West, to The International Nickel Co., Inc. Production of cobaltous hydroxide. 2,950,172, 8–23–60, Cl. 23—183.

Pirelli Societa per Azioni: *See*—
Renzini, Goffredo. 2,949,725.

Pittman, Robert R.: *See*—
Loper, George B., and Pittman. 2,950,459.

Pittsburgh Plate Glass Co.: *See*—
Bush, David C., and Parker. 2,950,262.

Pitzer, Emory W., and L. Bagnetto, Jr., to Phillips Petroleum Co. Dehydrogenation catalyst. 2,950,258, 8–23–60, Cl. 252—443.

Pizzurro, Joseph C.: *See*—
Abplanalp, Robert H., and Pizzurro. 2,950,031.

Plas-Tex Corp., The: *See*—
Willis, Robert J., and McGraw. 2,950,032.

Plastering Development Center, Inc.: *See*—
Hobson, Lloyd H. 2,949,928.

Platt, Edward W.: *See*—
Slater, Joseph C., and Platt. 2,950,215.

Pleitgen, Max G., and E. M. Klaus. Form for window and door lintels and the like. 2,949,656, 8–23–60, Cl. 25—118.

Plummer, Jesse H.: *See*—
Drummond, Warren W., Hullhorst, and Plummer. 2,949,633.

Plummer, Walter A. Pneumatic tool muffle. 2,949,975, 8–23–60, Cl. 181—33.

Plunkett, Warren L., to Hercules Powder Co. Manufacture of nitrocellulose. 2,950,278, 8–23–60, Cl. 260—220.

Pneumatic Scale Corp., Ltd.: *See*—
Vergobbi, John G. 2,950,036.

Pohl, Robert G., to The Rauland Corp. Method of manufacturing semi-conductor crystals. 2,950,219, 8–23–60, Cl. 148—1.5.

Pohlemann, Heinz: *See*—
Reppe, Walter, Pohlemann, and Jaeckel. 2,950,269.

Polarad Electronics Corp.: *See*—
Jaffe, David L. 2,950,386.

Polytechnic Research & Development Co., Inc.: *See*—
Berger, Christian D. 2,949,881.

Pommer, Horst: *See*—
Sarnecki, Wilhelm, and Pommer. 2,950,321.

Porter, Carter E.: *See*—
Craft, William S., Smith, and Porter. 2,950,241.

Powell, Harry R.: *See*—
Taylor, Humphrey G. 2,949,617.

Power, James T.: *See*—
McLain, George E., and Power. 2,950,073.

Power Jets (Research and Development) Ltd.: *See*—
Perry, Sydney W. H. 2,950,084.

Pratt, George W.: *See*—
Barnett, Guy F., Spencer, Baghurst, and Pratt. 2,950,406.

Pratt & Whitney Co., Inc.: *See*—
Jaeger, Jacob J. 2,949,797.

Precision Valve Corp.: *See*—
Abplanalp, Robert H., and Pizzurro. 2,950,031.

Pribonic, John F., to General Motors Corp. Fluid suspension system with vehicle height and roll control. 2,950,124, 8–23–60, Cl. 280—124.

Procter & Gamble Co., The: *See*—
Clement, Finn. 2,949,622.
Clement, Finn, and Sharf. 2,949,621.

Prohl, Robert F.: *See*—
Smith, Charles C., and Prohl. 2,950,065.

Pryor, Paul D., to Union Special Machine Co. Lockstitch sewing machine. 2,949,873, 8–23–60, Cl. 112—184.

Puff, Margaret H.: *See*—
Kennard, George J. and I. 2,949,911.

Puff, Victor A.: *See*—
Kennard, George J. and I. 2,949,911.

Pump, Marion S.: *See*—
McConnohie, Duane V. 2,950,030.

Purkhiser, Rawlins E., to Air Reduction Co., Inc. Electronically controlled time delay apparatus. 2,950,422, 8–23–60, Cl. 317—142.

Quackenbush, Edward C., to The Whitney-Blake Co. Electrical connector manufacture. 2,949,041, 8–23–60, Cl. 18—59.

Quadflieg, Therese, to Nitroglycerin Aktiebolaget. Process for producing N-trinitroethyl urethanes, amides and ureas. 2,950,312, 8–23–60, Cl. 260—482.

Ransch, Floyd D., to Minneapolis-Honeywell Regulator Co. Analogue to digital conversion apparatus. 2,950,469, 8–23–60, Cl. 340—347.

Rabel, Ralph J.: *See*—
Frederick, Albert F., and Rabel. 2,949,796.

Radio Corp. of America: *See*—
Barkow, William H., and Schmutz. 2,950,407.
Carlson, David J. 2,950,383.
Freedman, Larry A., and Rhodes. 2,950,346.
Goodrich, Hunter C. 2,950,343.
Nekut, Anthony G., and Shrader. 2,950,411.
Stott, Harold B. 2,950,356.
Weiss, Robert S. 2,950,251.

Radio Steel & Mfg. Co.: *See*—
Tonelli, Roger. 2,949,906.

Raich, Henry: *See*—
Armstrong, Eldon L., Marshall, Murray, and Raich. 2,950,249.

Ramsey, Walter H. General purpose shipping shelter. 2,949,867, 8–23–60, Cl. 105—377.

Ranson, William W.: *See*—
Miller, Calvin Q., and Ranson. 2,950,285.
Miller, Calvin Q., and Ranson. 2,950,286.

Rapp, Walter E., to E. Mettler. Balance. 2,950,100, 8–23–60, Cl. 265—60.

Rauland Corp., The: *See*—
Pohl, Robert C. 2,950,219.

Raybon, Sidney C. Rotary internal combustion engine. 2,949,897, 8–23–60, Cl. 123—16.

Rayburn, Charles C.: *See*—
Thorson, John R., Black, and Rayburn. 2,950,070.

Raytheon Co.: *See*—
Batcheider, Laurence. 2,949,773.

Reddi, Mullapudi M., to The Dole Valve Co. Automatic ice cube maker. 2,949,749, 8–23–60, Cl. 62—137.

Rehder, Robert H., to Canadian General Electric Co., Ltd. Electric bus construction. 2,950,456, 8–23–60, Cl. 339—22.

Reicheneder, Frans, H. Suter, H. Orth, E. Stoeckl, and M. Seefelder, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of chlorstyrenes. 2,950,329, 8–23–60, Cl. 260—650.

Reinhard, Hans-Peter: *See*—
Paul, Wolfgang, Reinhard, and Frohlich. 2,950,389.

Reis, Charles S., to Hewlett-Packard Co. Display apparatus. 2,950,418, 8–23–60, Cl. 315—169.

Remington Arms Co., Inc.: *See*—
Haskell, Philip R., Evans, Ketchpel, Jr., and Connor. 2,949,898.

Rensselaer Polytechnic Institute: *See*—
Belck, Hans B. 2,950,352.

Renzini, Goffredo, to Pirelli Societa per Azioni. Twisting head for two-fold yarn. 2,949,725, 8–23–60, Cl. 57—58.36.

Reppe, Walter, H. Pohlemann, and K. Jaeckel, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Process for the production of mixed polyamides. 2,950,269, 8–23–60, Cl. 260—78.

Reppert, Charles L. Automatic antenna positioning unit. 2,950,478, 8–23–60, Cl. 343—117.

Republic of India, The President of the: *See*—
Suri, Man Mohan. 2,949,793.

Republic Steel Corp.: *See*—
Garmy, Robert J. 2,950,094.

Research Institute for Iron, Steel and Other Metals of the Tohoku University, The: *See*—
Ototani, Tohei. 2,950,187.

Reussner, Carl-Heinz: *See*—
Herzog, August Gunther, Kaltheuner, and Reussner. 2,949,807.

Reuter, Franz G., to Mobay Chemical Co. Hydraulic pit prop. 2,949,895, 8–23–60, Cl. 121—48.

Revercomb, Henry E., to General Electric Co. Signal separation circuits. 2,950,342, 8–23–60, Cl. 178—7.3.

Reynolds Metals Co.: *See*—
Schaefer, John J. 2,949,862.
Staples, Paul R. 2,949,876.

Rhoades, John W.: *See*—
Bieberdorf, Frederick W., and Rhoades. 2,949,712.

Rhodes, Roland N.: *See*—
Freedman, Larry A., and Rhodes. 2,950,346.

Ribka, Joachim: *See*—
Kracker, Herbert, Bamberger, Mohr, and Ribka. 2,950,274.

Rice, Walter A., to Mohasco Industries, Inc. Method of making floor mats of irregular contour. 2,949,660, 8–23–60, Cl. 28—74.

Rice, William A.: *See*—
Groen, Rein J., and Rice. 2,950,203.

Richardson, Donald K., to Hughes Aircraft Co. Enclosure for aircraft compartments. 2,949,841, 8–23–60, Cl. 98—1.

Riddle, James M., to Ethyl Corp. Preparation of organotin and lead compounds. 2,950,301, 8–23–60, Cl. 260—429.7.

Riddle, James M. Preparation of organometallic compounds. 2,950,302, 8–23–60, Cl. 260—429.7.

Riddle, James M., to Ethyl Corp. Preparation of organomercury compounds. 2,950,303, 8–23–60, Cl. 260—431.

Riddle, James M., to Ethyl Corp. Preparation of organomercury compounds. 2,950,304, 8–23–60, Cl. 260—431.

Riddle, James M., to Ethyl Corp. Preparation of organomercury compounds. 2,950,305, 8–23–60, Cl. 260—431.

Riddle, Kenneth J.: *See*—
Hemion, John R., Covalence, and Riddle. 2,949,778.

Ringler, William A., to Diamond National Corp. Carton. 2,950,043, 8–23–60, Cl. 229—44.

Ripley, Glenn Q., Jr. Aerating shower head. 2,950,063, 8–23–60, Cl. 239—431.

Riv Officine de Villar Perosa Societa per Azioni: *See*—
Barberis, Giovanni. 2,950,047.

Rivers, Charles F., to Industrial Metal Fabricators Co. Endless conveyor with articulating sidewalls. 2,950,000, 8–23–60, Cl. 198—196.

Roberts, Stiles M.: *See*—
Cofrancesco, Anthony J., and Roberts. 2,950,268.

Robertson, Arthur C.: *See*—
De Tore, John A., Lichten, and Robertson. 2,949,963.

Robertson, H. H., Co.: *See*—
Ferrell, Russell A. 2,949,981.

Rochester, Nathaniel: *See*—
Fox, Philip E., Bartelt, Crawford, and Rochester. 2,950,465.

Rodl & Wienenberger Aktiengesellschaft: *See*—
Jacobsen, David. 2,949,729.

Rodis, Franz: *See*—
Harnisch, Heinz, Rodis, and Beltz. 2,950,170.

Rogers, Henry, and P. Stama, ½ to said Rogers and ½ to E. G. Deutsch. Mechanism for assembling slider to slide fastener chain. 2,949,666, 8–23–60, Cl. 29—211.

Rola Co. Inc., The: *See*—
Perry, Charles A. 2,949,663.
Perry, Charles A. 2,950,359.

Rollie Mfg., Inc.: *See*—
Becker, William A., and Wendling. 2,949,985.

Rolls-Royce Ltd.: *See*—
Johnson, Christopher L., and Binns. 2,950,133.
Rubbra, Arthur A. 2,949,736.

Rosenbaum, Chester K., and J. C. Tallman, to E. I. du Pont de Nemours and Co. Process of activating nickel-aluminum catalysts. 2,950,260, 8–23–60, Cl. 252—466.

Rosenberger, Harold E., and J. L. Goodyear, to Bausch & Lomb Optical Co. Preheating means for slide projectors. 2,949,815, 8–23–60, Cl. 88—28.

Rosenwald, Robert H., and E. H. Valance, to Universal Oil Products Co. Preparation of dialkyl substituted aromatic compounds. 2,950,335, 8–23–60, Cl. 260—671.

Ross, Lee W.: *See*—
Martin, Lynn P., Thompson, Brannon, and Ross. 2,949,609.

Ross, William J., and W. A. Walker, to United States of America, Navy. Combination dolly-launcher for missiles. 2,949,823, 8–23–60, Cl. 89—1.7.

Rottgardt, Jürgen: *See*—
Berthold, Wolfgang, Rottgardt, and Heller. 2,950,409.

Rowley, Lothair H., to Sperry Rand Corp., Ford Instrument Co. Division. Digital to analog converter. 2,950,472, 8–23–60, Cl. 340—347.

Roy, Milton, Co.: *See*—
Schneider, George W., Jr. 2,950,396.

Royal McBee Corp.: *See*—
Zimmerman, Arthur A. 2,949,994.

Rover, Arthur G., to Harris Intertype Corp. Continuous sheet feeding method and pallet therefor. 2,950,107, 8–23–60, Cl. 271—61.

Roylyn Inc.: *See*—
Field, James H., and Vogt. 2,949,776.

Rubbra, Arthur A., to Rolls-Royce Ltd. Expansion joint with fuel drainage collector for ducting of gas turbine power plants. 2,949,736, 8–23–60, Cl. 60—39.32.

Rubin, Adolf, to Gesellschaft fur Forderanlagen Ernst Heckel m.b.H. Cable railway for passengers. 2,949,864, 8–23–60, Cl. 105—150.

Rueger, William J., to International Business Machines Corp. Coaxial magnetic printing head. 2,950,161, 8–23–60, Cl. 346—74.

Ruf, Walter. Torsion spring device on vehicles. 2,950,103, 8–23–60, Cl. 267—57.

Ruff, Richard J., to Catalytic Combustion Corp. Coating oven. 2,950,098, 8–23–60, Cl. 263—8.

Ruffinatti, Osvaldo. Apparatus for kneading boiled sugar. 2,949,868, 8–23–60, Cl. 107—33.

Rumsey, Rollin D., to Houdaille Industries, Inc. Damper. 2,950,101, 8–23–60, Cl. 267—1.

Rupp, Charles E., to Packaging Corp. of America. Packing pad. 2,950,038, 8–23–60, Cl. 229—14.

Ruppright, Siegfried, to Hughes Aircraft Co. Magnetic check valve. 2,949,931, 8–23–60, Cl. 137—528.

Rutgers, Ulrich J., American Enka Corp. Traversing mechanism for winding machine. 2,950,068, 8–23–60, Cl. 242—43.

Ryant, Charles J., Jr., and S. F. Kapff, to Standard Oil Co. Vacuum equilibrium flash vaporization equipment. 2,949,768, 8–23–60, Cl. 73—53.

S. A. Plastus: *See*—
Orsini, René. 2,950,037.

Sachsenroder, Gustav, Sr., and T. Schroder. Tying pliable containers. 2,949,630, 8–23–60, Cl. 17—34.

Saf-T-Boom Corp.: *See*—
Thomas, Arthur J. 2,950,016.

Sager, Robert H. Auxiliary sun glasses. 2,949,609, 8–23–60, Cl. 2—13.

Salinas, Victor H.: *See*—
Lapetina, Charles J., and Salinas. 2,949,699.

Salmon, Joe E.: *See*—
Deems, Frank E., and Salmon. 2,949,644.

Sanders Associates, Inc.: *See*—
Albert, Edmond J. 2,950,412.
Kline, Jack, and Winsor. 2,950,453.

Sanford, Weston P.: *See*—
Chapin, Earl C., and Sanford. 2,950,270.

Sapp, Baxter B.: *See*—
Mitchell, Garland W., and Sapp. 2,949,761.

Sarett, Lewis H., to Merck & Co. Inc. 45-3-ethylenedioxy-11,20-diketo-21-iodopregnene. 2,950,281, 8–23–60, Cl. 260—239.55.

Sarnecki, Wilhelm, and H. Pommer, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of beta-lonylidene-ethyl-triaryl phosphonium halides. 2,950,321, 8–23–60, Cl. 260—606.5.

Saunderson, Henry D., to United States of America, Navy. Water discriminating fuze. 2,949,855, 8–23–60, Cl. 102—70.2.

Schaefer, Arthur E.: *See*—
Fillion, Stanley H., and Schaefer. 2,950,017.

Schaefer, Edward J. Mechanical and hydraulic absorbing means for a submersible pump system. 2,950,129, 8–23–60, Cl. 285—49.

Schaefer, John J., to Reynolds Metals Co. Printing roll. 2,949,852, 8–23–60, Cl. 101—375.

Scheidenhelm, Frederick W. Dam and method of making the same. 2,949,743, 8–23–60, Cl. 61—30.

Schenck, Leslie M., and A. Bloom, to General Aniline & Film Corp. Purification of aromatic meta-diamines. 2,950,319, 8–23–60, Cl. 260—582.

Schering A.G.: *See*—
Gibian, Heinz, and Bratfisch. 2,950,227.

Schick, Howard M. Article display and storage structure. 2,950,155, 8–23–60, Cl. 312—202.

Schlueter, Ernest. Photo print flattener. 2,949,840, 8–23–60, Cl. 95—104.

Schmid, Herman, to General Precision, Inc. Computer function generator. 2,950,309, 8–23–60, Cl. 307—88.5.

Schmid, Otto, and M. Hurbin, to J. R. Geigy A.-G. Monoazo dyestuffs. 2,950,276, 8–23–60, Cl. 260—196.

Schmidt, Edward G.: *See*—
Svabek, John E., Jr., Stone, and Schmidt. 2,949,613.

Schmutz, Martin W.: *See*—
Barkow, William H., and Schmutz. 2,950,407.

Schneerer, William P.: *See*—
Stava, Robert J., Schneerer, and Hollstein. 2,950,394.

Schneider, George W., Jr., to Milton Roy Co. Colorimetric analyzer. 2,950,396, 8–23–60, Cl. 250—219.

Schneider, Jos., & Co. Optische Werke: *See*—
Bäsb, Albert. 2,949,836.
Bäsb, Albert. 2,949,837.

Schneider, Richard. Fluid pressure responsive pipe coupling having identical halves. 2,950,130, 8–23–60, Cl. 285—67.

Schnepel, Herbert H.: *See*—
Peterson, Victor W., Schnepel, and Bancel. 2,949,771.

Schoen, Moritz. Ladies' hangbags. 2,949,951, 8–23–60, Cl. 150—28.

Schrenk, Hans A., P. Van Dijk, and J. W. I. Heijnis, to American Enka Corp. Apparatus for curling thermoplastic threads. 2,949,723, 8–23–60, Cl. 57—34.

Schrenk, Hans A., to N.V. Onderzoekingsinstitute Research. Apparatus for promoting non-channeling flow of liquid through treatment and/or reaction zones. 2,949,934, 8–23–60, Cl. 138—38.

Schrier, Harold D. Coating composition. 2,950,210, 8–23–60, Cl. 106—230.

Schroder, Otto, to Barmer Maschinenfabrik A.G. Ring-twist machine mechanism capable of forming a transfer tail. 2,949,724, 8–23–60, Cl. 57—34.

Schroder, Theodor: *See*—
Sachsenroder, Gustav, Sr., and Schroder. 2,949,630.

Schroeder, Robert J., to Allis-Chalmers Mfg. Co. Vacuum control for fuel injection engines. 2,949,732, 8–23–60, Cl. 60—14.

Schultz, Theodore. Can strip remover. 2,950,023, 8–23–60, Cl. 220—52.

Schwegler, Roy F., to J. I. Case Co. Position locking mechanism for two-way plow. 2,949,970, 8–23–60, Cl. 172—450.

Scott, Dale K., and C. W. Walter, to Southern States Equipment Corp. Coupling means. 2,950,021, 8–23–60, Cl. 220—23.4.

Scott, James G. Electric solenoid actuator. 2,950,088, 8–23–60, Cl. 255—4.4.

Scott & Williams, Inc.: *See*—
Curtis, Horace L. 2,949,756.
Page, Frank R. 2,949,757.

Scovil, Henry E. D., and H. Seidel, to Bell Telephone Laboratories, Inc. Passive signal intensifier. 2,950,442, 8–23–60, Cl. 330—5.

Seaborg, Glenn T., W. J. Blaedel, and M. T. Walling, Jr., to United States of America, Atomic Energy Commission. Method for separation of plutonium from uranium and fission products by solvent extraction. 2,950,166, 8–23–60, Cl. 23—14.5.

Seaborg, Glenn T., and S. G. Thompson, to United States of America, Atomic Energy Commission. Concentration and decontamination of solutions containing plutonium values by bismuth phosphate carrier precipitation methods. 2,950,168, 8–23–60, Cl. 23—14.5.

Searle, G. D., & Co.: *See*—
Jiu, James. 2,950,291.
Tyner, David A. 2,950,292.

Sears, Roebuck and Co.: *See*—
Cline, Truman H. 2,949,971.

Seefelder, Matthias: *See*—
Reicheneder, Frans, Suter, Orth, Stoeckl, and Seefelder. 2,950,329.

Segura, Marnell A.: *See*—
Starr, Charles E., Jr., and Segura. 2,950,259.

Seidel, Harold: *See*—
Scovil, Henry E. D., and Seidel. 2,950,442.

Seifried, Paul E., and W. U. Henrich, to The Bendix Corp. Electrical fault warning device for a remote electrically operated condition indicator. 2,950,460, 8–23–60, Cl. 340—27.

Seismos G.m.b.H.: *See*—
Beuermann, Wilhelm. 2,949,974.

Seliger, Victor H.: *See*—
McKenney, Henry F., and Seliger. 2,949,779.

Shapiro, Matthew. Fracture splint covering. 2,949,912, 8–23–60, Cl. 128—83.5.

Shapiro, Sydney H., to Armour and Co. Process for the production of quaternary ammonium compounds. 2,950,318, 8–23–60, Cl. 260—567.6.

Sharf, John M.: *See*—
Clement, Finn, and Sharf. 2,949,621.

Sharp, Dexter B., to Monsanto Chemical Co. Photoxidation processes utilizing novel catalysts. 2,950,237, 8–23–60, Cl. 204—158.

Sharpe, Philip B. Ski boot accessory. 2,950,118, 8–23–60, Cl. 280—11.14.

Shaw, Richard, Jr., and R. H. Deahl, to The Bendix Corp. Time-delay control circuit for directional gyro erection system. 2,949,786, 8–23–60, Cl. 74—5.41.

Sheaffer, W. A., Pen Co.: *See*—
Martin, Lynn P. 2,949,888.
Martin, Lynn P., Thompson, Brannon, and Ross. 2,949,887.

Shearing, Herbert J.: *See*—
Abbotson, William, Hurd, and Shearing. 2,950,263.

Shipley, Earl H., to United States Steel Corp. Briquetting roll. 2,949,634, 8–23–60, Cl. 18—9.

Shiraishi, Yutaka: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

Shirey, John M., and S. I. Finkel, to The Bendix Corp. Cruise control. 2,950,076, 8–23–60, Cl. 244—77.

Shrader, Merrald R.: *See*—
Nekut, Anthony G., and Shrader. 2,950,411.

Shube, Eugene E., to Fairchild Engine and Airplane Corp. Pneumatically actuated mechanical jacks. 2,949,891, 8–23–60, Cl. 121—41.

Siemens-Schuckertwerke Aktiengesellschaft: *See*—
Paul, Wolfgang, Reinhard, and Frohlich. 2,950,389.

Simmon, Alfred: *See*—
Weisglass, Louis L., and Simmon. 2,949,809.

Simmon Brothers, Inc.: *See*—
Weisglass, Louis L. 2,949,811.
Weisglass, Louis L., and Simmon. 2,949,809.

Simmonds Precision Products, Inc.: *See*—
Frome, Leonard. 2,950,426.

Simmons, Emma M. and H. R. Jewelry case. 2,950,003, 8–23–60, Cl. 206—73.

Simmons, Howard R.: *See*—
Simmons, Emma M. and H. R. 2,950,003.

Simms, Thomas S.: *See*—
Tarleton, Frederic L., and Simms. 2,949,715.

Simshauser, Herbert H. Variable pitch boat propeller. 2,949,966, 8–23–60, Cl. 170—160.51.

Singer Mfg. Co., The: *See*—
Kuhar, Ludwig J. 2,949,874.

Singleton, Henry E., and H. F. Erdley, to Litton Industries, Inc. Low drift gyro-stabilized platform. 2,949,785, 8–23–60, Cl. 74—5.34.

Sisson, Kenneth O., to General Motors Corp. Domestic appliance. 2,949,759, 8–23–60, Cl. 68—12.

Skalabrin, Vladimir S. Camera grip for miniature cameras. 2,949,838, 8–23–60, Cl. 95—86.

Skinner, George M.: *See*—
Thomas, Kenneth L., Wickham, and Skinner. 2,950,377.

Slater, Joseph C., and E. W. Platt, to Armco Steel Corp. Method and apparatus for improving metallic coatings. 2,950,215, 8–23–60, Cl. 117—114.

Slater, Saul I. Electrical outlet device. 2,950,457, 8–23–60, Cl. 339—41.

Slotta, Max A., and E. Lavicka, Sr. Golf tee setting devices. 2,950,110, 8–23–60, Cl. 273—33.

Slotterbeck, Ober C.: *See*—
Koenecke, Donald F., and Slotterbeck. 2,950,333.

Smathers, Maxine L.: *See*—
Henry, William V., Cole, and Smathers. 2,949,722.

Smith, Charles C., and R. F. Prohl. Waste disposal. 2,950,065, 8–23–60, Cl. 241—46.

Smith, Forrest E. Hammer for rotary impact pulverizers. 2,950,066, 8–23–60, Cl. 241—197.

Smith, H. C., Oil Tool Co.: *See*—
Swartz, Kenneth H. 2,950,090.

Smith, Joe H., and M. S. Campbell, to Texas Instruments Inc. Transistor frequency standard. 2,950,445, 8–23–60, Cl. 331—37.

Smith, John W., to The Mead Corp. Cast coated paper and method of making the same. 2,950,214, 8–23–60, Cl. 117—64.

Smith, Kenneth D., to Bell Telephone Laboratories, Inc. Toroidal lens device. 2,949,819, 8–23–60, Cl. 88—57.

Smith Kline & French Laboratories: *See*—
Martell, George E. 2,949,997.
Whitecar, Alten F. 2,949,998.

Smith, Traver J., and R. K. Daugherty, ¼ to G. I. Magnuson, and ½ to G. I. Magnuson and R., and L. J. Fox, trustees. Solenoid and rotatable shaft device. 2,950,424, 8–23–60, Cl. 317—197.

Smith, Warren H., to General Motors Corp. Differential assembly. 2,949,792, 8–23–60, Cl. 74—711.

Smith, William A., and V. A. Zandon, to American Metal Climax, Inc. Concentration of potash ores. 2,950,007, 8–23–60, Cl. 209—166.

Smith, William C., to E. I. Du Pont de Nemours, and Co. Organo-fluorine compounds of phosphorus arsenic and antimony. 2,950,306, 8–23–60, Cl. 260—440.

Smith, William M.: *See*—
Craft, William S., Smith, and Porter. 2,950,241.

Snow, Henry J.: *See*—
Kleist, Dale, and Snow. 2,949,631.
Kleist, Dale, and Snow. 2,949,632.

Snyder, James M., to E. I. Du Pont de Nemours and Co. Alcoholysis of polyvinyl acetate. 2,950,271, 8–23–60, Cl. 260—91.3.

Societe Anonyme Andre Citroen: *See*—
Brueder, Antoine. 2,949,905.

Societe Nationale d'Etude et de Construction de Moteurs d'Aviation: *See*—
Bertin, Jean H., Turinetti, Meulien, and Banger. 2,949,734.

Societe Zodiac: *See*—
Desanges, Richard. 2,949,616.

Socony Mobil Oil Co., Inc.: *See*—
Armstrong, Eldon L., Babcock, and Murray. 2,950,248.
Armstrong, Eldon L., Marshall, Murray and Raich. 2,950,249.
Broding, Robert A., Ely, and Summers. 2,949,973.
Loper, George B., and Pittman. 2,950,459.
Weisz, Paul B. 2,950,240.

Sohlberg, Carl O.: *See*—
Ericsson, Eric R., and Sohlberg. 2,949,980.

Sony Kabushikikaisha (Sony Corp.): *See*—
Yasuda, Junichi, Kanoi, and Takahata. 2,950,385.

Southern States Equipment Corp.: *See*—
Scott, Dale K., and Walter. 2,950,021.

Southward, Ben G., to The Bendix Corp. Gamma compensated neutron detector. 2,950,393, 8–23–60, Cl. 250—83.1.

Speer Filler Strip Co.: *See*—
Speer, Paul. 2,950,057.

Speer, Paul, to Speer Filler Strip Co. Rail crossing. 2,950,057, 8–23–60, Cl. 238—8.

Speidel Corp.: *See*—
Maeder, Paul F. 2,949,784.

Spence, John: *See*—
Carroll, Burt H., Jones, and Spence. 2,950,196.

Spencer, Boyd L.: *See*—
Spencer, Charles O. and B. L. 2,949,901.

Spencer, Charles O. and B. L. Internal combustion engines. 2,949,901, 8–23–60, Cl. 123—41.82.

Spencer, Gordon R.: *See*—
Barnett, Guy F., Spencer, Baghurst, and Pratt. 2,950,406.

Spencer, Richard W., to Sperry Rand Corp. Transformer coupling circuits. 2,950,441, 8–23–60, Cl. 328—221.

Sperry Rand Corp.: *See*—
Spencer, Richard W. 2,950,441.

Sperry-Rand Corp., Ford Instrument Co. Div.: *See*—
McKenney, Henry F., and Seliger. 2,949,779.
Rowley, Lothair H. 2,950,472.

Spickelmier, Carl F.: *See*—
Carper, Harold R. 2,949,705.

Spickelmire, Betty S.: *See*—
Carper, Harold R. 2,949,705.

Spitalny, Arnold: *See*—
Abt, Clifford F., Miner, and Spitalny. 2,949,824.

Sprague Electric Co.: *See*—
Geiser, David T. 2,950,361.

Spremulli, Paul F.: *See*—
Blanding, Wendell S., Foster, and Spremulli. 2,949,702.

Sproat, Kenneth A.: *See*—
Pigott, Owen R., and Sproat. 2,949,844.

Staelin, David H. Method and apparatus for grinding and polishing sheet glass. 2,949,707, 8–23–60 Cl. 51—60.

Stahl, Robert J., to Textron, Inc. Circuit testing apparatus. 2,950,437, 8–23–60, Cl. 324—73.

Stama, Paul: *See*—
Rogers, Henry, and Stama. 2,949,666.

Standard Metal Fabricating Co.: *See*—
Hennen, Joseph W. 2,950,131.

Standard Motor Co. Ltd., The: *See*—
Hambling, Stewart K. 2,949,731.

Standard Oil Co. (Indiana): *See*—
Brennan, Harry M., and Field. 2,950,243.
Fainman, Morton Z. 2,950,250.
Ryant, Charles J., Jr., and Kapff. 2,949,768.

Standard Packaging Corp.: *See*—
Bolding, Hubert V. 2,950,040.

Stanley Works, The: *See*—
Ford, Barton H. 2,949,866.

Staples, Paul R., to Reynolds Metal Co. Apparatus for expanding pressure welded passageway panels on one side. 2,949,876, 8–23–60, Cl. 113—44.

Starr, Charles E., Jr., and M. A. Segura, to Esso Research and Engineering Co. Platinum catalyst. 2,950,259, 8–23–60, Cl. 252—466.

Stastny, Fritz: *See*—
Buchholz, Karl, Stastny, and Gaeth. 2,950,261.

Statham Instruments, Inc.: *See*—
Stedman, Cecil K. 2,949,782.

Stava, Eleanore G.: *See*—
Stava, Robert J., Schneerer, and Hollstein. 2,950,394.

Stava, Robert J., deceased (by E. G. Stava, executrix), W. F. Schneerer, and O. C. Hollstein, to Picker X-ray Corp., Waite Mfg. Div. Inc. Rotational therapy X-ray method and apparatus. 2,950,394, 8–23–60, Cl. 250—92.

Stedman, Cecil K., to Statham Instruments, Inc. Angular accelerometer. 2,949,782, 8–23–60, Cl. 73—516.

Stefucza, Alexander A., to Bendix Aviation Corp. Control apparatus for a propulsion engine. 2,949,735, 8–23–60, Cl. 60—39.29.

Steinberg, Morris A., and R. G. McAllen, to Horizons Inc. Production of hard surfaces on base metals. 2,950,233, 8–23–60, Cl. 204—37.

Steinbuch, Marvin L., and H. W. Wyatt, to The Lunkenheimer Co. Rotary plug valve having replaceable seats. 2,950,081, 8–23–60, Cl. 251—317.

Steineck, Rudolf. Twin-lens mirror-reflex camera. 2,949,833, 8–23–60, Cl. 95—44.

Stewart, Hubert L. Locomotion device. 2,950,120, 8–23–60, Cl. 280—12.1.

Stewart, Malcolm G., to Imperial Chemical Industries Ltd. Power gas generating cartridges for the actuation of engine starters. 2,949,854, 8–23–60, Cl. 102—39.

Stewart-Warner Corp.: *See*—
Everett, Frederick J. 2,949,925.
Krempel, Frank M., and Anderson. 2,950,093.

Stockton, Thomas R., to Ford Motor Co. Hydraulic pump. 2,949,860, 8–23–60, Cl. 103—136.

Stoeckl, Erich: *See*—
Reicheneder, Franz, Suter, Orth, Stoeckl, and Seefelder. 2,950,329.

Stone, Carl R.: *See*—
Svabek, John E., Jr., Stone, and Schmidt. 2,949,613.

Stone, Orison W., to Continental Can Co., Inc. Wrap-around paperboard carrier. 2,950,041, 8–23–60, Cl. 229—40.

Stone, Roy A., to National Lock Co. Magnetic door latch. 2,950,140, 8–23–60, Cl. 292—251.5.

Stoner, Paul. Coulter assembly. 2,949,968, 8–23–60, Cl. 172—166.

Story, John D. Straight beam adjustable jaw clamp. 2,949,947, 8–23–60, Cl. 144—303.

Stott, Harold B., to Radio Corp. of America. Radio-phonograph circuits. 2,950,356, 8–23–60, Cl. 179—100.11.

Strange, John, to Tinnerman Products Inc. Fastening assembly and clip. 2,950,134, 8–23–60, Cl. 287—53.

Straub, Carl, to Cornhusker Mfg. Co., Inc. Earth moving scraper. 2,949,686, 8–23–60, Cl. 37—129.

Strauss, Wennemar, and W.-D. Willmund, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Acid copper electroplating baths. 2,950,235, 8–23–60, Cl. 204—52.

Streck, Clemens, to General Aniline & Film Corp. Hectograph carbon paper. 2,950,213, 8–23–60, Cl. 117—36.

Stringfellow, Allen E., to I-T-E Circuit Breaker Co. Ceramic arc plate construction. 2,950,371, 8–23–60, Cl. 200—144.

Strong Electric Corp., The: *See*—
Hatch, Arthur J. 2,950,382.

Stroup, Ross F., to Phillips Petroleum Co. Apparatus for production of carbon black. 2,950,179, 8–23–60, Cl. 23—259.5.

Stuart, Archibald P.: *See*—
Thompson, William R., Albright, and Stuart. 2,950,267.

Styes, Fred J. Water dispenser for concrete mixer. 2,949,942, 8–23–60, Cl. 141—272.

Sullivan, Earle C., to General Electric Co. Percolator brew strength control. 2,950,375, 8–23–60, Cl. 219—44.

Sullivan, Norman M., to The Alvey-Ferguson Co. Conveyor-type article storage rack having lift-out rail sections. 2,950,014, 8–23–60, Cl. 211—151.

Sulzer Freres, S.A.: *See*—
Buri, Alfred. 2,949,896.

Summers, Gerald C.: *See*—
Broding, Robert A., Ely, and Summers. 2,949,973.

Sun Oil Co.: *See*—
Thompson, William R., Albright, and Stuart. 2,950,267.

Sun Printers Ltd.: *See*—
Berry, Donald S. 2,950,105.

Sundin, George H., to United States Steel Corp. Unloading mechanism for belt conveyors. 2,949,999, 8–23–60, Cl. 198—185.

Supernaw, Dwight L., to United States of America, Navy. Torpedo steering mechanism. 2,949,878, 8–23–60, Cl. 114—23.

Suri, Man M., to The President of the Republic of India. Fluid-mechanical transmission. 2,949,793, 8–23–60, Cl. 74—720.5.

Suter, Hubert: *See*—
Reicheneder, Franz, Suter, Orth, Stoeckl, and Seefelder. 2,950,329.

Svabek, John E., Jr., C. R. Stone, and E. G. Schmidt, to Crane Co. Flapper flush valve. 2,949,613, 8–23–60, Cl. 4—57.

Swain, Kenneth W. Circuit interrupting building blocks. 2,950,370, 8–23–60, Cl. 200—114.

Swart, Kenneth H., to H. C. Smith Oil Tool Co. Mounting for discharge beans in well drilling bits. 2,950,000, 8–23–60, Cl. 255—314.

Swatek, Edwin P., Jr., to Dravo Corp. Water current deflector and method of using same. 2,949,744, 8–23–60, Cl. 61—34.

Sylvania Electric Products Inc.: *See*—
Collazzo, Alfred A., and Morse. 2,950,026.

Szumski, John P.: *See*—
Joiner, Edgar E., and Szumski. 2,949,684.

Takahata, Tauneo: *See*—
Yasuda, Junichi, Kanoi, and Takahata. 2,950,385.

Takeda Pharmaceutical Industries, Ltd.: *See*—
Tatsuoka, Sueo, Kusaka, Miyake, Inoue, Shiraishi, Iwasaki, and Imanishi. 2,950,277.

Tallman, John C.: *See*—
Rosenbaum, Chester K., and Tallman. 2,950,260.

Tamblyn, John W.: *See*—
Caldwell, John R., and Tamblyn. 2,950,265.

Tanabe Seiyaku Co., Ltd.: *See*—
Iwao, Junichi, and Tomino. 2,950,287.

Tarleton, Frederic L., and T. S. Simms, to General Electric Co. Machines for making heat-insulating units. 2,949,715, 8–23–60, Cl. 53—112.

Tatsuoka, Sueo, T. Kusaka, A. Miyake, M. Inoue, Y. Shiraishi, H. Iwasaki, and M. Imanishi, to Takeda Pharmaceutical Industries, Ltd. Recovery of dihydrostreptomycin. 2,950,277, 8–23–60, Cl. 260—210.

Tauschek, Max J., to Thompson Ramo Wooldridge Inc. Coolant-filled poppet valve and method of making same. 2,949,907, 8–23–60, Cl. 123—188.

Taylor, Humphrey G., deceased, by H. R. Powell, and T. H. Wolverson, administrators. Ships' lifeboat davits. 2,949,617, 8–23–60, Cl. 9—41.

Taylor, John M., to The Whitney Blake Co. Plastic insulated electrical line and mounting therefor. 2,950,338, 8–23–60, Cl. 174—40.

Telefonaktiebolaget L.M. Ericsson: *See*—
Ericsson, Eric R., and Sohlberg. 2,949,980.

Tennessee Corp.: *See*—
Nikitin, Alexander A., Fite, and Gary. 2,950,183.

Tennessee Fabricating Co.: *See*—
Daniels, Kenneth P. 2,949,984.

Tesage, Charles: *See*—
Butticaz, André, Tesage, and Dembowski. 2,950,436.

Texas Instruments Inc.: *See*—
Smith, Joe H., and Campbell. 2,950,445.

Textron, Inc.: *See*—
Stahl, Robert J. 2,950,437.

Thayer, Louis C., and M. W. Greene, to Beckman Instruments, Inc. Measuring circuit for fluid analyzers. 2,949,765, 8–23–60, Cl. 73—27.

Thayer, Louis C., M. Czuha, Jr., and M. W. Greene, to Beckman Instruments, Inc. Method for liquid analysis. 2,950,176, 8–23–60, Cl. 23—230.

Thiry, Leon F. Resilient oscillatory device. 2,950,102, 8–23–60, Cl. 267—54.

Thomas, Arthur J., to Saf-T-Boom Corp. Crane boom guard attachment. 2,950,016, 8–23–60, Cl. 212—1.

Thomas, George L., Jr. Live fish package. 2,949,882, 8–23–60, Cl. 119—3.

Thomas, Kenneth L., R. J. Wickham, and G. M. Skinner, to Union Carbide Corp. Metal arc welding. 2,950,377, 8–23–60, Cl. 219—74.

Thomas, Walter M.: *See*—
Hoffmann, Arthur K., Groszos, and Thomas. 2,950,322.

Thompson, Elmer D.: *See*—
Martin, Lynn P., Thompson, Brannon, and Ross. 2,949,887.

Thompson, Paul F.: *See*—
Huber, Clarence F., and Thompson. 2,950,211.

Thompson Ramo Wooldridge Inc.: *See*—
Compton, William A., Cummings, and Paetz. 2,950,083.
Tauschek, Max J. 2,949,907.

Thompson, Stanley G.: *See*—
Seaborg, Glenn T., and Thompson. 2,950,168.

Thompson, William R., D. M. Albright, and A. P. Stuart, to Sun Oil Co. Process for blending polypropylene and oxygenated polypropylene. 2,950,267, 8–23–60, Cl. 260—45.5.

Thomsen, Alfred M. Method of processing mineral oils with alkali metals or their compounds. 2,950,245, 8–23–60, Cl. 208—348.

Thomson, Edward. Harvesting machine for row crops. 2,949,716, 8–23–60, Cl. 56—15.

Thomson, John B. Relatively reciprocable shaft and bearing. 2,950,149, 8–23–60, Cl. 308—4.

Thorley, Thomas: *See*—
Hobbs, John F., and Thorley. 2,949,652.

Thorpe, Charles L., R. L. Heinrich, E. J. Hoffman, and J. A. Anderson, Jr., to Esso Research and Engineering Co. Asphalt hydrogenation process. 2,950,242, 8–23–60, Cl. 208—108.

Thorson, John R., J. G. Black, Jr., and C. C. Rayburn, to Illinois Tool Works. Capacitor winder. 2,950,070, 8–23–60, Cl. 242—56.1.

Thurber, William C.: *See*—
Picklesimer, Marion L., and Thurber. 2,950,188.

Thurow, James E., to General Motors Corp. Aerial gunsight. 2,949,808, 8–23–60, Cl. 88—1.

Tibbling, Stig B., to International Business Machines Corp. Copyholder. 2,949,886, 8–23–60, Cl. 120—32.

Tidland, Charles R., ¼ to A. T. Williams. Expansible shaft. 2,950,071, 8–23–60, Cl. 242—72.

Timken Roller Bearing Co., The: *See*—
Eastburg, Clifford L. 2,950,002.

Timmerman, Robert: *See*—
Hodgins, George R., Di Cyan, and Timmerman. 2,950,195.

Tinnerman Products Inc.: *See*—
Holton, Robert J. 2,949,627.
Strange, John. 2,950,134.

Todt, William C., to Gulf Oil Corp. Hydraulically set packer. 2,949,962, 8–23–60, Cl. 166—120.

Tog-Loc, Inc.: *See*—
Chace, Richard A. 2,949,890.

Tohir, Anthony M., to United States Steel Corp. Carbon-faced conveyor roll for silicon steel strip. 2,950,097, 8–23–60, Cl. 263—6.

Tokheim Corp.: *See*—
Voigt, Robert H. 2,949,906.

Tomino, Koichi: *See*—
Iwao, Junichi, and Tomino. 2,950,287.

Tomlinson, Horace, to General Motors Corp. Sewing machine attachment. 2,949,872, 8–23–60, Cl. 112—18.

Tonelli, Roger, to Radio Steel & Mfg. Co. Article conveyor and transfer mechanism. 2,949,996, 8–23–60, Cl. 198—25.

Torrington Co., The: *See*—
Clark, Sidney F., Cowles, Marola, and White. 2,950,151.

Toruk, Nicholas: *See*—
Meyer, Barthold F., and Toruk. 2,950,138.

Tracy, Oliver H.: *See*—
Jones, Eynon, and Tracy. 2,950,200.

Trentini, Bernard: *See*—
Allard, Marc, Trentini, and Wahl. 2,950,186.

Tripp, Robert W., to Inductosyn Corp. Zero offset for machine tool control. 2,950,427, 8–23–60, Cl. 318—19.

Troche, Herman J., and W. C. Webb, to J. H. Hoban Corp. Mobile aerial tower and control. 2,949,741, 8–23–60, Cl. 60—97.

Trudeau, Urban P.: *See*—
Olson, Ralph H., and Trudeau. 2,949,701.

Tryon, John G., to Bell Telephone Laboratories, Inc. Switching circuits. 2,950,461, 8–23–60, Cl. 340—147.

Tudge, Joseph: *See*—
Kilner, William N., and Tudge. 2,950,403.

Tumath, Jack L., ½ to G. E. Noakes, and ½ to W. Pahl. Selective dispensers for crayons or the like. 2,950,025, 8–23–60, Cl. 221—90.

Turinetti, Henri: *See*—
Bertin, Jean H., Turinetti, Meulien, and Banger. 2,949,734.

Turman, Thomas B. Individual string tone changer for guitars. 2,949,806, 8–23–60, Cl. 84—297.

Tuthill, Roger W., to Air Reduction Co., Inc. Slide closure for welding. 2,950,378, 8–23–60, Cl. 219—74.

Tuthill, William A., to Flanders Mill, Inc. Actuating and controlling means for expansible filters. 2,949,976, 8–22–60, Cl. 183—52.

Tyner, David A., to G. D. Searle & Co. 3-alkoxy-16-alkyl-16-hydroxy-1,3,5(10)-estratrien-17-ones, their ethers and esters. 2,950,292, 8–23–60, Cl. 260—397.4.

UCLAF: *See*—
Muller, Georges, and Bellet. 2,950,311.

Uhland, Joseph C.: *See*—
Mayer, Donald F., and Uhland. 2,950,348.

Unger, Hans-Georg, to Bell Telephone Laboratories, Inc. Helix wave guide. 2,950,454, 8–23–60, Cl. 333—95.

Union Carbide Corp.: *See*—
Thomas, Kenneth L., Wickham, and Skinner. 2,950,377.

Union Chimique Belge, S.A.: *See*—
Carpentier, Raymond, and Lambert. 2,950,327.
Macq, Andre. 2,950,171.

Union Special Machine Co.: *See*—
Pryor, Paul D. 2,949,873.

U.S. Electrical Motors, Inc.: *See*—
Luenberger, Frederick O. 2,949,654.

United States of America
Agriculture: *See*—
King, William H., and Frampton. 2,950,198.
Air Force: *See*—
Brown, William C. 2,950,416.
Army: *See*—
Musser, C Walton. 2,949,822.
Musser, C Walton, and Dietsch. 2,949,825.
Atomic Energy Commission: *See*—
Bohlmann, Edward G., and Griess. 2,950,167.
Nicholson, Kenneth C. 2,950,238.
Picklesimer, Marion L., and Thurber. 2,950,188.
Seaborg, Glenn T., Bluedel, and Walling. 2,950,166.
Seaborg, Glenn T., and Thompson. 2,950,168.
White, Frederick A. 2,950,388.
Navy: *See*—
Alpers, Frederick C. 2,950,477.
Boyer, George W. 2,950,022.
Butler, Norman C. 2,949,783.
Crim, Hugh S., and Jacobus. 2,949,738.
Hedeman, Walter R., Jr. 2,950,476.
Hoeppner, Conrad H. 2,950,471.
Klinikowski, James J. 2,950,468.
Lieberman, Morris S. 2,949,642.
Lindstrom, Ture, and Nagy. 2,949,989.
McCulley, James M., Kiraly, and Harrison. 2,950,159.
Nearman, Richard E. 2,950,123.
Newburn, Floyd A., Cannova, and Friedman. 2,949,877.
Ross, William J., and Walker. 2,949,823.
Saunderson, Henry D. 2,949,855.
Supernaw, Dwight L. 2,949,878.
United States Steel Corp.: *See*—
Ashworth, James E. 2,950,130.
Shipley, Earl H. 2,949,834.
Sundin, George H. 2,949,999.
Tobin, Anthony M. 2,950,097.
Walker, Nate S. 2,949,799.
Universal Oil Products Co.: *See*—
Murray, Maurice J., and Massey. 2,950,169.
Rosenwald, Robert H., and Valance. 2,950,335.

Urquhart, Lloyd G., to H. F. Livermore Corp. Bobbin supports for battery looms. 2,949,938, 8–23–60, Cl. 139—281.

Valance, Edward H.: *See*—
Rosenwald, Robert H., and Valance. 2,950,335.

Vandenberg, Edwin J., to Hercules Powder Co. 5-benzoyl pentanol-1. 2,950,320, 8–23–60, Cl. 260—592.

Van den Blink, Willem P., to North American Philips Co., Inc. Slag-forming bodies for electric arc welding. 2,950,380, 8–23–60, Cl. 219—99.

Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. 2,949,719.

Van der Lely, Cornelis and A., to C. van der Lely. Side delivery rake and mower. 2,949,719, 8–23–60, Cl. 56—193.

Van der Willigen, Paul C., to North American Philips Co., Inc. Process for manufacturing binding agents. 2,950,212, 8–23–60, Cl. 106—286.

Van Dijk, Pieter: *See*—
Schrenk, Hans A., Van Dijk, and Heijnis. 2,949,723.

Van Dijk, Pieter, to American Enka Corp. Process and apparatus for making curled thermoplastic yarn. 2,949,721, 8–23–60, Cl. 57—34.

Van Poucke, Raphael K.: *See*—
De Cat, Arthur H., and Van Poucke. 2,950,314.

Vaughn, Rudolph M. Split driver and removing tool. 2,949,949, 8–23–60, Cl. 145—50.

Vergobbi, John G., to Pneumatic Scale Corp., Ltd. Lined carton and method of making the same. 2,950,036, 8–23–60, Cl. 229—14.

Vernon Devices, Inc.: *See*—
Peyser, Leonard T., and Halpern. 2,949,618.

Vida, Alex. Method of manufacture of glass and/or ceramic mosaics. 2,949,689, 8–23–60, Cl. 41—23.

Viewlex, Inc.: *See*—
Aronson, Theodore F., and Lyon. 2,949,839.

Vincent, Andrew W. Crossbar switch. 2,950,350, 8–23–60, Cl. 179—27.54.

Visco Products Co.: *See*—
Kirkpatrick, Willard H. 2,950,272.
Kirkpatrick, Willard H. 2,950,299.
Kirkpatrick, Willard H. 2,950,310.
Kirkpatrick, Willard H. 2,950,313.

Voeltzel, Jacques: *See*—
Hanin, Mireille, and Voeltzel. 2,949,926.

Vogt, Charles C. Drill mine. 2,949,853, 8–23–60, Cl. 102—10.

Vogt, Clarence L.: *See*—
Field, James H., and Vogt. 2,949,776.

Vogt, Clarence W. Method and apparatus for filling containers. 2,949,711, 8–23–60, Cl. 53—24.

Vogt, Clarence W. Method and apparatus for forming and filling packages. 2,949,713, 8–23–60, Cl. 53—29.

Vogt, Henry, Machine Co.: *See*—
Edmonds, Eugene A. 2,949,935.

Voigt, Robert H., to Tokheim Corp. Engine control system and apparatus. 2,949,906, 8–23–60, Cl. 123—179.

Von Rudeen, Dolf. Cigarette package. 2,950,060, 8–23–60, Cl. 229—44.

Vordahl, Milton B., to Crucible Steel Co. of America. Titanium base alloys. 2,950,191, 8–23–60, Cl. 75—175.5.

Vordahl, Milton B., to Crucible Steel Co. of America. Production of wrought titanium base alloys and resulting product. 2,950,192, 8–23–60, Cl. 75—175.5.

Vosmer, Harry N.: *See*—
Mazer, Marshall, and Vosmer. 2,950,049.
Mazer, Marshall, and Vosmer. 2,950,050.
Mazer, Marshall, and Vosmer. 2,950,256.

Wagner, Edward B.: *See*—
Froelich, Donald F., and Wagner. 2,949,964.

Wagner, Otto., to Grob & Co. Aktiengesellschaft. Heddle comprising eyes adjacent its ends. 2,949,936, 8–23–60, Cl. 139—96.

Wahl, Lucien: *See*—
Allard, Marc, Trentini, and Wahl. 2,950,186.

Waldrum, John C. Ankle ice pack. 2,949,914, 8–23–60, Cl. 128—402.

Walker, Nate S., to United States Steel Corp. Gage-control system for multi-stand strip mill. 2,949,799, 8–23–60, Cl. 80—35.

Walker, William A.: *See*—
Rose, William J. and Walker. 2,949,823.

Wallace, John D.: *See*—
Brown, James R., Wallace, and Lewis. 2,949,910.

Wallace, Philemon A.: *See*—
Hastings, Donald F., and Wallace. 2,950,420.

Walling, Matthew T., Jr.: *See*—
Seaborg, Glenn T., Bluedel, and Walling. 2,950,166.

Walmsley, Ivor D. Turning lathe. 2,950,117, 8–23–60, Cl. 279—123.

Walsh, William A. G.: *See*—
Childs, Percy A., Gold, and Walsh. 2,950,156.

Walter, Charles W.: *See*—
Scott, Dale K., and Walter. 2,950,021.

Watson, Edwin. Expansion rails. 2,950,058, 8–23–60, Cl. 238—174.

Waugh Equipment Co.: *See*—
Fillion, Stanley H., and Schaefer. 2,950,017.

Weaver, William R. Telescope sight for firearms. 2,949,816, 8–23–60, Cl. 88—32.

Webb, Walter C.: *See*—
Troche, Herman J., and Webb. 2,949,741.

Weber, Carl. Device for removing and routing putties and other material. 2,949,826, 8–23–60, Cl. 90—12.

Webster, Eleanor R.: *See*—
Allen, Charles F. H., and Webster. 2,950,197.

Webster, Stanley K.: *See*—
Mitchell, Robert E., and Webster. 2,950,357.

Weidknecht, Charles J.: *See*—
Finkel, Leonard, and Weidknecht. 2,950,448.

Weier, Jacob J. Traction devices. 2,950,148, 8–23–60, Cl. 305—13.

Weinberg, William J. Anti-friction ball transfer. 2,949,992, 8–23–60, Cl. 193—35.

Weir, Robert J.: *See*—
Brown, John F., Weir, and Whelan. 2,950,177.

Weisenborn, Frank L., to Olin Mathieson Chemical Corp. 9α-halo-A-norprogesterones. 2,950,289, 8–23–60, Cl. 260—348.

Weisglass, Louis L., and A. Simmon, to Simmon Bros., Inc. Color comparator. 2,949,809, 8–23–60, Cl. 88—14.

Weisglass, Louis L., to Simmon Bros., Inc. Photographic timing device. 2,949,811, 8–23–60, Cl. 88—24.

Weiss, Paul B., to Socony Mobil Oil Co., Inc. Selective cracking of aliphatic hydrocarbons. 2,950,240, 8–23–60, Cl. 208—70.

Weiss, Robert S., to Radio Corp. of America. Magnetic materials having rectangular hysteresis characteristics. 2,950,251, 8–23–60, Cl. 252—62.5.

Welch, Parker C., to Continental Baking Co. Pie making machine. 2,949,995, 8–23–60, Cl. 198—20.

Wendler, Norman L., to Merck & Co., Inc. Process for the production of 16-substituted-3α-acetoxy-17α-hydroxy-11,20-pregnanedione. 2,950,297, 8–23–60, Cl. 260—397.45.

Wendling, Herbert M.: *See*—
Becker, William A., and Wendling. 2,949,985.

Wenzel, Philip D., to J. I. Case Co. Reversible disc plow. 2,949,969, 8–23–60, Cl. 172—222.

West, De Witt H.: *See*—
Pincott, John, and West. 2,950,172.

Westinghouse Air Brake Co.: *See*—
Aikman, Burton S. 2,949,740.
Hewitt, Ellis E. 2,949,894.
Hewitt, Ellis E. 2,949,932.

Westinghouse-Bremmen-Gesellschaft, m.b.H.: *See*—
Neubeck, Karl. 2,950,147.

Wexler, Monroe L. Contour gauge. 2,949,674, 8–23–60, Cl. 33—175.

Wheeler, Charles J. Apparatus for parting a fracturable member. 2,949,669, 8–23–60, Cl. 30—92.

Wheeler, Charles J. Method for parting elongated fracturable members. 2,950,035, 8–23–60, Cl. 225—1.

Wheeler, William H., to Airkem, Inc. Gel packaging method and resulting package. 2,949,710, 8–23–60, Cl. 53—21.

Whelan, Anthony R.: *See*—
Brown, John F., Weir, and Whelan. 2,950,177.

Whirlpool Corp.: *See*—
Buzicky, Edmund J. 2,950,157.
MacCracken, Calvin D., and Miles. 2,949,679.

White, Frederick A., to United States of America, Atomic Energy Commission. Mass spectrometer. 2,950,388, 8–23–60, Cl. 250—41.9.

White, Robert H.: *See*—
Clark, Sidney F., Cowles, Marola, and White. 2,950,151.

Whitecar, Alten E., to Smith Kline & French Laboratories. Ampule feeding device. 2,949,998, 8–23–60, Cl. 198—33.

Whitney-Blake Co., The: *See*—
Quackenbush, Edward C. 2,949,641.

Whitney Blake Co., The: *See*—
Taylor, John M. 2,950,338.

Wiatt, James G., and G. S. Butterworth, to The Cincinnati Milling Machine Co. Gage head for in-process gaging in machine tool. 2,949,708, 8–23–60, Cl. 51—103.

Wickham, Robert J.: *See*—
Thomas, Kenneth L., Wickham, and Skinner. 2,950,377.

Wiemeri, Eino H. Can piercing devices. 2,949,668, 8–23–60, Cl. 30—6.1.

Wikle, Richard H. Crinkled paper product and means and method of forming same. 2,949,954, 8–23–60, Cl. 154—30.

Wilkaitis, Edna S., to Bemis Bro. Bag Co. Bibs. 2,949,611, 8–23–60, Cl. 2—49.

Williams, Arthur T.: *See*—
Tidland, Charles R. 2,950,071.

Williams, Domkl D., to Hughes Aircraft Co. Integrating accelerometer. 2,949,780, 8–23–60, Cl. 73—504.

Williams, Lynn A., to Anocut Engineering Co. Control system for electrolytic grinding. 2,950,239, 8–23–60, Cl. 204—218.

Williamson, David T. N. and H. Ogden, to National Research Development Corp. Servo-controlled drives. 2,949,742, 8–23–60, Cl. 60—97.

Willis, Robert J., and C. J. McGraw, to The Plas-Tex Corp. Reinforced molded container of flexible material. 2,950,032, 8–23–60, Cl. 222—465.

Willis, Sumner C.: *See*—
Barabas, John J., and Willis. 2,949,955.

Willmund, Wolf-Dieter: *See*—
Strauss, Wennemar, and Willmund. 2,950,235.

Wilson, George A.: *See*—
Finnegan, William B., Huff, and Wilson. 2,949,676.

Wilson, James C., to Owens-Illinois Glass Co. Receptacle. 2,950,039, 8–23–60, Cl. 229—14.

Wilton, Henry T., and W. E. Foley, to American Optical Co. Stage for opaque projector. 2,949,813, 8–23–60, Cl. 88—24.

Wilton, Henry T., to American Optical Co. Stage for optical projector. 2,950,106, 8–23–60, Cl. 271—51.

Windover, Francis E., to The Dow Chemical Co. Frozen confection and method of making the same. 2,950,190, 8–23–60, Cl. 99—136.

Winsor, Donald L.: *See*—
Kline, Jack, and Winsor. 2,950,453.

Winstead, Thomas W., to Hedwin Corp. Container. 2,950,029, 8–23–60, Cl. 222—143.

Wirkkala, Benjamin. Tow sticks. 2,949,972, 8–23–60, Cl. 180—19.

Wise Potato Chip Co.: *See*—
Davis, Robert F. 2,949,714.

Wispese Corp.: *See*—
Arcuri, Grace. 2,949,917.

Wogerbauer, Alfred. Method and apparatus for the manufacture of sections. 2,950,376, 8–23–60, Cl. 219—67.

Wolf, C. H.: *See*—
Johnson, William E. 2,949,919.

Wolff, Jean: *See*—
Scheidenheim, Frederick W. 2,949,743.

Wolters, Everett R. Control for heating unit. 2,949,958, 8–23–60, Cl. 138—42.4.

Wolverson, Thomas H.: *See*—
Taylor, Humphrey G. 2,949,617.

Woodward, Hiram W. Process for shaping sheet plastic material. 2,949,639, 8–23–60, Cl. 18—56.

Worden, Floyd O. Chemical applicator for live stock. 2,949,885, 8–23–60, Cl. 119—157.

Wright, John R., to American Optical Co. Eye testing instruments. 2,949,810, 8–23–60, Cl. 88—22.

Wright, William T., to Minneapolis-Honeywell Regulator Co. Servomotor control apparatus for dirigible craft. 2,950,431, 8–23–60, Cl. 318—489.

Wyatt, Harold W.: *See*—
Steinbuch, Marvin L., and Wyatt. 2,950,081.

Yale and Towne Mfg. Co., The: *See*—
Check, Mathias M. 2,950,137.

Yasuda, Junichi, N. Kanoi, and T. Takahata, to Sony Kabushikihaisha (Sony Corp.). Transistor oscillator. 2,950,385, 8–23–60, Cl. 250—20.

Zandon, Victor A.: *See*—
Smith, William A., and Zandon. 2,950,007.

Zellweger A.G.: *See*—
Locher, Hans, and Felix. 2,950,435.

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Zimmerman, Arthur A., to Royal McBee Corp. Ribbon spools. 2,949,994, 8–23–60, Cl. 197—175.

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CLASSIFICATION OF PATENTS

ISSUED AUGUST 23, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

2— 13: 2,949,609
16: 2,949,610
49: 2,949,611
234: 2,949,612
4— 57: 2,949,613
2,949,614
216: 2,949,615
8— 54: 2,950,165
9— 2: 2,949,616
41: 2,949,617
10— 140: 2,949,618
15— 49: 2,949,619
98: 2,949,620
133: 2,949,621
2,949,622
209: 2,949,623
356: 2,949,624
16— 52: 2,949,625
90: 2,949,626
140: 2,949,627
145: 2,949,628
17— 32: 2,949,629
34: 2,949,630
18— 2.5: 2,949,631
2,949,632
8: 2,949,633
9: 2,949,634
36: 2,949,635
42: 2,949,636
47.5: 2,949,637
55.05: 2,949,638
56: 2,949,639
59: 2,949,640
2,949,641
2,949,642
2,949,643
19— 58: 2,949,644
105: 2,949,645
155: 2,949,646
20— 11: 2,949,647
19: 2,949,648
57.5: 2,949,649
2,949,650
69: 2,949,651
22— 57.2: 2,949,652
23— 14.5: 2,950,166
2,950,167
2,950,168
143: 2,950,169
154: 2,950,170
165: 2,950,171
183: 2,950,172
196: 2,950,173
202: 2,950,174
207.5: 2,950,175
230: 2,950,176
253: 2,950,177
2,950,178
259.5: 2,950,179
283: 2,950,180
24—206.15: 2,949,653
238: 2,949,654
25— 30: 2,949,655
118: 2,949,656
122: 2,949,657
128: 2,949,658
28— 1: 2,949,659
74: 2,949,660
29: 79: 2,949,661
95: 2,949,662
155.59: 2,949,663
157.3 2,949,664
203: 2,949,665
211: 2,949,666
428: 2,949,667
30— 6.1: 2,949,668
92: 2,949,669
315: 2,949,670
32— 26: 2,949,671
33— 1: 2,949,672
85: 2,949,673
175: 2,949,674
178: 2,949,675
179.5: 2,949,676
34— 1: 2,949,677
105: 2,949,678
133: 2,949,679
35— 19: 2,949,680
30: 2,949,681
40: 2,949,682
49: 2,949,683
36— 40: 2,949,684
71: 2,949,685
37— 129: 2,949,686
142: 2,949,687
38— 22: 2,949,688
41— 23: 2,949,689
43: 2,950,181
43— 36: 2,949,690
55: 2,949,691
46— 28: 2,949,692
75: 2,949,693
86: 2,949,694
243: 2,949,695
2,949,696
2,949,697
47— 9: 2,949,698
37: 2,949,699
58: 2,949,700
59: P.P.1,968
49— 9: 2,949,701
81: 2,949,702
50— 107: 2,949,703
354: 2,949,703
464: 2,949,704
536: 2,949,705
51— 34: 2,949,706
60: 2,949,707
103: 2,949,708
128: 2,949,709
53— 21: 2,949,710
24: 2,949,711
29: 2,949,712
2,949,713
63: 2,949,714
112: 2,949,715
55— 15: 2,949,716
23: 2,949,717
192: 2,949,718
193: 2,949,719
220: 2,949,720
57— 34: 2,949,721
2,949,722
2,949,723
2,949,724
58.36: 2,949,725
106: 2,949,726
58— 33: 2,949,727
109: 2,949,728
59— 79: 2,949,729
60— 1: 2,949,730
6: 2,949,731
14: 2,949,732
35.4: 2,949,733
35.6: 2,949,734
39.29: 2,949,735
39.32: 2,949,736
39.35: 2,949,737
39.42: 2,949,738
52: 2,949,739
54.6: 2,949,740
97: 2,949,741
2,949,742
61— 30: 2,949,743
34: 2,949,744
62— 32: 2,949,745
56: 2,949,746
129: 2,949,747
132: 2,949,748
137: 2,949,749
196: 2,949,750
239: 2,949,751
330: 2,949,752
64— 15: 2,949,753
66— 85: 2,949,754
2,949,755
132: 2,949,756
146: 2,949,757
67— 7.1: 2,949,758
68— 12: 2,949,759
69— 37: 2,949,760
70— 16: 2,949,761
304: 2,949,762
71— 2.1: 2,950,182
11: 2,950,183
73— 3: 2,949,764
27: 2,949,765
38: 2,949,766
45.6: 2,949,767
53: 2,949,768
67.6: 2,949,769
73— 93: 2,949,770
130: 2,949,771
194: 2,949,772
2,949,773
2,949,774
205: 2,949,775
290: 2,949,776
321: 2,949,777
361: 2,949,778
384: 2,949,779
504: 2,949,780
507: 2,949,781
514: 2,949,783
516: 2,949,782
74— 5.34: 2,949,785
5.41: 2,949,786
5.7: 2,949,784
18.2: 2,949,787
2,949,788
23: 2,949,789
89: 2,949,790
385: 2,949,791
711: 2,949,792
720.5: 2,949,793
732: 2,949,794
750: 2,949,795
823: 2,949,796
75— .5: 2,950,184
2,950,185
52: 2,950,186
122: 2,950,187
122.7: 2,950,188
134: 2,950,189
152: 2,950,190
175.5: 2,950,191
2,950,192
77— 56: 2,949,797
62: 2,949,798
80— 35: 2,949,799
81— 33: 2,949,800
83— 168: 2,949,801
304: 2,949,802
84— 1.11: 2,949,803
1.22: 2,949,804
1.24: 2,949,805
297: 2,949,806
87— 8: 2,949,807
88— 1: 2,949,808
14: 2,949,809
22: 2,949,810
24: 2,949,811
2,949,812
2,949,813
28: 2,949,814
2,949,815
32: 2,949,816
40: 2,949,817
47: 2,949,818
57: 2,949,819
2,949,820
2,949,821
89— 1.5: 2,949,822
1.7: 2,949,823
41: 2,949,824
2,949,825
90— 12: 2,949,826
93— 58: 2,949,827
94— 22: 2,949,828
49: 2,949,829
95— 12.5: 2,949,830
31: 2,949,831
2,949,832
44: 2,949,833
57: 2,949,834
64: 2,949,835
2,949,836
2,949,837
86: 2,949,838
89: 2,949,839
104: 2,949,840
96— 34: 2,950,193
75: 2,950,194
93: 2,950,195
100: 2,950,196
111: 2,950,197
98— 1: 2,949,841
2: 2,949,842
57: 2,949,843
99— 2: 2,950,198
136: 2,950,199
137: 2,950,200
99— 150: 2,950,201
192: 2,950,202
193: 2,950,203
210: 2,950,204
100— 144: 2,949,844
198: 2,949,845
101— 93: 2,949,846
122: 2,949,847
128.3: 2,949,848
2,949,849
147: 2,949,850
248: 2,949,851
375: 2,949,852
102— 10: 2,949,853
39: 2,949,854
70.2: 2,949,855
71: 2,949,856
103— 46: 2,949,857
54: 2,949,858
113: 2,949,859
136: 2,949,860
179: 2,949,861
104— 88: 2,949,862
135: 2,949,863
105— 150: 2,949,864
208: 2,949,865
360: 2,949,866
377: 2,949,867
106— 38.3: 2,950,205
119: 2,950,206
165: 2,950,207
2,950,208
230: 2,950,209
2,950,210
273: 2,950,211
286: 2,950,212
107— 33: 2,949,868
57: 2,949,869
109— 19: 2,949,870
111— 1: 2,949,871
112— 18: 2,949,872
184: 2,949,873
231: 2,949,874
113— 44: 2,949,875
2,949,876
114— 20: 2,949,877
23: 2,949,878
185: 2,949,879
116— 114: 2,949,880
129: 2,949,881
117— 36: 2,950,213
64: 2,950,214
114: 2,950,215
142: 2,950,216
144: 2,950,217
145: 2,950,218
119— 3: 2,949,882
14.01: 2,949,883
44: 2,949,884
157: 2,949,885
120— 32: 2,949,886
42.03: 2,949,887
47: 2,949,888
121— 40: 2,949,889
2,949,890
41: 2,949,891
2,949,892
45: 2,949,893
46: 2,949,894
48: 2,949,895
122— 479: 2,949,896
123— 16: 2,949,897
24: 2,949,898
32: 2,949,899
2,949,900
41.82: 2,949,901
119: 2,949,902
2,949,903
140: 2,949,904
2,949,905
179: 2,949,906
188: 2,949,907
125— 30: 2,949,908
33: 2,949,909
128— 2.05: 2,949,910
25: 2,949,911
83.5: 2,949,912
214: 2,949,913
402: 2,949,914
432: 2,949,915
499: 2,949,916
128— 541: 2,949,917
131— 66: 2,949,918
140: 2,949,919
132— 45: 2,949,920
134— 140: 2,949,921
137— 86: 2,949,922
98: 2,949,923
99: 2,949,924
195: 2,949,925
302: 2,949,926
223: 2,949,927
454.2: 2,949,928
516.29: 2,949,929
528: 2,949,931
593: 2,949,932
625.17: 2,949,933
138— 38: 2,949,934
2,949,935
139— 96: 2,949,936
169: 2,949,937
251: 2,949,938
140— 115: 2,949,939
141— 32: 2,949,940
141: 2,949,941
272: 2,949,942
143— 47: 2,949,943
68: 2,949,944
144— 34: 2,949,945
162: 2,949,946
303: 2,949,947
309: 2,949,948
145— 50: 2,949,949
146— 13: 2,949,950
148— 1.5: 2,950,219
2,950,220
150— 28: 2,949,951
152— 330: 2,949,952
154— 28: 2,949,953
30: 2,949,954
100: 2,950,221
120: 2,950,222
155— 106: 2,949,955
184: 2,949,956
158— 36: 2,949,957
42.4: 2,949,958
138: 2,949,959
162— 114: 2,950,223
196: 2,950,224
201: 2,950,225
166— 79: 2,949,960
85: 2,949,961
120: 2,949,962
224: 2,949,963
170— 159: 2,949,964
160.25: 2,949,965
160.51: 2,949,966
160.53: 2,949,967
172— 166: 2,949,968
222: 2,949,969
450: 2,949,970
174— 40: 2,950,338
102: 2,950,339
178— 5.4: 2,950,349
6: 2,950,340
6.6: 2,950,341
7.3: 2,950,342
2,950,343
2,950,344
7.5: 2,950,345
2,950,346
23: 2,950,347
43.5: 2,950,348
179—27.54: 2,950,350
81: 2,950,351
100.11: 2,950,356
100.2: 2,950,352
2,950,353
2,950,354
2,950,355
107: 2,950,357
115: 2,950,358
115.5: 2,950,359
146: 2,950,360
170: 2,950,361
180— 6.3: 2,949,971
19: 2,949,972
181— .5: 2,949,973
2,949,974
83: 2,949,975
183— 52: 2,949,976
183— 77: 2,949,977
187— 8.75: 2,949,978
188— 77: 2,949,979
184: 2,949,980
189— 34: 2,949,981
37: 2,949,982
38: 2,949,983
42: 2,949,984
75: 2,949,985
88: 2,949,986
190— 49: 2,949,987
192— .096: 2,949,988
2: 2,949,989
5: 2,949,990
107: 2,949,991
193— 35: 2,949,992
194— 2: 2,949,993
195— 51: 2,950,226
66: 2,950,227
2,950,228
197— 175: 2,949,994
198— 20: 2,949,995
25: 2,949,996
2,949,997
33: 2,949,998
185: 2,949,999
196: 2,950,000
200— 1: 2,950,362
50: 2,950,363
56: 2,950,364
61.52: 2,950,365
69: 2,950,366
80: 2,950,367
87: 2,950,368
2,950,369
114: 2,950,370
144: 2,950,371
156: 2,950,372
168: 2,950,373
202— 31: 2,950,229
2,950,230
2,950,231
70: 2,950,232
204— 37: 2,950,233
51: 2,950,234
52: 2,950,235
70: 2,950,236
158: 2,950,237
193.2: 2,950,238
218: 2,950,239
206— 1: 2,950,001
46: 2,950,002
75: 2,950,003
78: 2,950,004
208— 70: 2,950,240
78: 2,950,241
108: 2,950,242
138: 2,950,243
209: 2,950,244
348: 2,950,245
209— 74: 2,950,005
138: 2,950,006
166: 2,950,007
219: 2,950,008
210— 144: 2,950,009
2,950,010
211— 1: 2,950,011
65: 2,950,012
86: 2,950,013
87: Re.24,862
151: 2,950,014
182: 2,950,015
212— 1: 2,950,016
213— 8: 2,950,017
159: 2,950,018
214— 18: 2,950,019
215— 41: 2,950,020
219—10.67: 2,950,374
39: Re.24,861
44: 2,950,375
67: 2,950,376
74: 2,950,377
2,950,378
99: 2,950,379
2,950,380
127: 2,950,381
220— 23.4: 2,950,021
47: 2,950,022
52: 2,950,023
15: 2,950,024

221— 90: 2,950,025
175: 2,950,026
222— 92: 2,950,027
95: 2,950,028
143: 2,950,029
189: 2,950,030
394: 2,950,031
465: 2,950,032
551: 2,950,033
224—42.03: 2,950,034
225— 1: 2,950,035
229— 14: 2,950,036
2,950,037
2,950,038
2,950,039
38: 2,950,040
40: 2,950,041
41: 2,950,042
44: 2,950,043
2,950,044
2,950,045
92.3: 2,950,045
230— 139: 2,950,046
235— 7: 2,950,047
61: 2,950,048
61.11: 2,950,049
61.12: 2,950,050
63: 2,950,051
154: 2,950,052
183: 2,950,053
196: 2,950,054
236— 12: 2,950,055
49: 2,950,056
238— 8: 2,950,057
179: 2,950,058
230: 2,950,059
239— 110: 2,950,061
431: 2,950,062
2,950,063
240— 3.1: 2,950,382
241— 46: 2,950,064
2,950,065
197: 2,950,066
242— 18: 2,950,067
43: 2,950,068
55.12: 2,950,069
56.1: 2,950,070
72: 2,950,071
76: 2,950,072
244—17.23: 2,950,074
77: 2,950,075
2,950,076
2,950,077
137: 2,950,073
248— 120: 2,950,078
248— 179: 2,950,079
210: 2,950,080
250— 20: 2,950,383
2,950,384
2,950,385
2,950,386
41.9: 2,950,387
2,950,388
2,950,389
49.5: 2,950,390
71.5: 2,950,391
83: 2,950,392
83.1: 2,950,393
92: 2,950,394
203: 2,950,395
219: 2,950,396
251— 317: 2,950,081
252— 8.55: 2,950,246
2,950,247
32: 2,950,248
2,950,249
49.6: 2,950,250
62.5: 2,950,251
2,950,252
152: 2,950,253
2,950,254
2,950,255
301.2: 2,950,256
301.6: 2,950,257
443: 2,950,258
466: 2,950,259
2,950,260
253—39.15: 2,950,082
77: 2,950,083
78: 2,950,084
254— 29: 2,950,085
173: 2,950,086
255— 4.4: 2,950,087
2,950,088
61: 2,950,089
314: 2,950,090
256— 17: 2,950,091
257— 208: 2,950,094
255: 2,950,092
256: 2,950,093
260— 2.5: 2,950,261
2,950,262
2,950,263
23: 2,950,264
31.6: 2,950,265
43: 2,950,266
45.5: 2,950,267
69: 2,950,268
78: 2,950,269
80.7: 2,950,270
260— 91.3: 2,950,271
104: 2,950,272
144: 2,950,273
148: 2,950,274
189: 2,950,275
196: 2,950,276
210: 2,950,277
220: 2,950,278
239.55: 2,950,281
239.6: 2,950,279
2,950,280
268: 2,950,282
283: 2,950,283
314.5: 2,950,285
2,950,286
319: 2,950,287
343.3: 2,950,288
348: 2,950,289
391: 2,950,290
397.3: 2,950,291
397.4: 2,950,292
397.45: 2,950,297
2,950,298
397.7: 2,950,293
2,950,294
2,950,295
2,950,296
407: 2,950,299
408: 2,950,300
429.7: 2,950,301
2,950,302
431: 2,950,303
2,950,304
2,950,305
440: 2,950,306
453: 2,950,307
461: 2,950,308
473.5: 2,950,309
475: 2,950,310
476: 2,950,311
482: 2,950,312
484: 2,950,313
507: 2,950,314
519: 2,950,315
537: 2,950,316
543: 2,950,317
567.6: 2,950,318
582: 2,950,319
592: 2,950,320
606.5: 2,950,321
2,950,322
609: 2,950,323
2,950,324
623: 2,950,325
635: 2,950,326
260— 635: 2,950,327
648: 2,950,328
650: 2,950,329
654: 2,950,330
2,950,331
668: 2,950,332
669: 2,950,333
2,950,334
671: 2,950,335
674: 2,950,336
677: 2,950,337
261— 26: 2,950,095
262— 33: 2,950,096
263— 6: 2,950,097
8: 2,950,098
265— 54: 2,950,099
80: 2,950,100
267— 1: 2,950,101
54: 2,950,102
57: 2,950,103
65: 2,950,104
270— 72: 2,950,105
271— 51: 2,950,106
61: 2,950,107
86: 2,950,108
272— 41: 2,950,109
273— 33: 2,950,110
63: 2,950,111
82: 2,950,112
97: 2,950,113
99: 2,950,114
186: 2,950,115
274— 46: 2,950,116
279— 123: 2,950,117
280—11.14: 2,950,118
11.35: 2,950,119
12.1: 2,950,120
47.11: 2,950,121
104: 2,950,122
106.5: 2,950,123
124: 2,950,124
145: 2,950,125
179: 2,950,126
304: 2,950,127
477: 2,950,128
285— 49: 2,950,129
87: 2,950,130
189: 2,950,131
307: 2,950,132
287— 1: 2,950,133
53: 2,950,134
288— 3: 2,950,135
292— 64: 2,950,136
228: 2,950,137
229: 2,950,138
292—251.5: 2,950,139
2,950,140
256.73: 2,950,141
301— 5: 2,950,142
302— 87: 2,950,143
2,950,144
2,950,145
58: 2,950,146
303— 22: 2,950,147
305— 13: 2,950,148
307— 88: 2,950,307
88.5: 2,950,398
2,950,399
149: 2,950,400
308— 4: 2,950,149
187: 2,950,150
217: 2,950,151
309— 23: 2,950,152
2,950,153
310— 44: 2,950,401
56: 2,950,402
232: 2,950,403
241: 2,950,404
312— 35: 2,950,154
202: 2,950,155
266: 2,950,156
300: 2,950,157
342: 2,950,158
313— 65: 2,950,405
69: 2,950,406
70: 2,950,407
82: 2,950,408
92: 2,950,409
109: 2,950,410
250: 2,950,411
2,950,412
271: 2,950,413
315— 1: 2,950,414
5.18: 2,950,415
39.69: 2,950,416
75: 2,950,417
169: 2,950,418
177: 2,950,419
317— 5: 2,950,420
99: 2,950,421
142: 2,950,422
182: 2,950,423
197: 2,950,424
235: 2,950,425
246: 2,950,426
318— 19: 2,950,427
28: 2,950,428
2,950,429
2,950,430
499: 2,950,431
324— 5: 2,950,432
43: 2,950,433
48: 2,950,434
61: 2,950,435
2,950,436
73: 2,950,437
117: 2,950,438
158: 2,950,439
328— 155: 2,950,440
221: 2,950,441
330— 5: 2,950,442
70: 2,950,443
331— 3: 2,950,444
37: 2,950,445
114: 2,950,446
116: 2,950,447
332— 28: 2,950,448
333— 11: 2,950,449
22: 2,950,450
73: 2,950,451
2,950,452
83: 2,950,453
95: 2,950,454
338— 134: 2,950,455
339— 22: 2,950,456
41: 2,950,457
217: 2,950,458
340— 15: 2,950,459
27: 2,950,460
147: 2,950,461
2,950,462
164: 2,950,463
173: 2,950,465
174: 2,950,464
2,950,466
2,950,467
2,950,468
347: 2,950,469
2,950,470
2,950,471
2,950,472
343— 6.5: 2,950,473
7: 2,950,474
10: 2,950,475
11: 2,950,476
13: 2,950,477
117: 2,950,478
702: 2,950,479
346— 59: 2,950,159
74: 2,950,160
2,950,161
2,950,162
108: 2,950,163
140: 2,950,164

CLASSIFICATION OF DESIGNS

D 2— 3: 188,650
D 3— 17: 188,651
188,652
D 9— 2: 188,653
D10— 8: 188,654
D12— 2: 188,655
D15— 1: 188,656
188,657
188,658
188,659
6: 188,660
D20— 2: 188,661
D22— 2: 188,662
D26— 13: 188,663
D29— 2: 188,664
23: 188,665
188,666
188,667
D33— 8: 188,668
D34— 5: 188,669
188,670
188,671
D34— 5: 188,672
188,673
188,674
188,675
188,676
188,677
188,678
188,679
188,680
15: 188,680
D40— 1: 188,681
D44— 15: 188,682
D44— 15: 188,683
21: 188,684
24: 188,685
29: 188,686
D45— 1: 188,687
D46— 1: 188,688
D48— 2: 188,689
4: 188,690
20: 188,691
D49— 1: 188,692
188,693
D49— 1: 188,694
188,695
D52— 3: 188,396
4: 188,697
7: 188,698
D54— 12: 188,699
13: 188,700
D55— 1: 188,701
188,702
D56— 4: 188,703
D57— 1: 188,704
D58— 20: 188,705
188,706
D71— 1: 188,707
188,708
D74— 1: 188,709
188,710
D85— 2: 188,711
D86— 10: 188,712
D92— 1: 188,713

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 23, 1960 Volume 757 Number 4

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 85,089 (G.E. AND DESIGN), General Electric Company, Machinery, electrical apparatus, and supply parts therefor; **Reg. No. 230,304** (GENERAL ELECTRIC AND DESIGN), same, Electrical apparatus, machines and supplies, filed June 22, 1960, D.C., S.D. Iowa (Des Moines), Doc. 4/1068, *General Electric Company* v. *Office Specialty Co.* Consent decree (notice June 23, 1960).

Reg. No. 75,365 (ALLIGATOR BRAND AND DESIGN), Ferguson Waterproof Co., Oiled clothing; **Reg. No. 251,291** (ALLIGATOR), The Alligator Company, Coats, jackets, pants, hats, etc., all made of waterproofed fabric such as silk, filed Feb. 6, 1959, D.C., S.D.N.Y., Doc. 142/361, *The Alligator Company and David Crystal, Inc.* v. *Cromwell Mills et al.* Consent judgment; defendants enjoined June 29, 1960.

Reg. No. 251,291. (See Reg. No. 75,365.)

Reg. No. 230,304. (See Reg. No. 85,089.)

Reg. No. 385,834 (TEXCEL), Industrial Tape Corporation, Transparent adhesive tapes; **Reg. No. 417,662**, same, Colored, translucent, and non-transparent adhesive tapes used for masking and mending, filed June 27, 1960, D.C. Mass. (Boston), Doc. 60/446–W, *Johnson & Johnson* v. *The Paper-craft Corporation and Le Page's, Inc.*

Reg. No. 417,662. (See Reg. No. 385,834.)

Reg. No. 517,543 (TRAILWAYS), National Trailways Bus System; Passenger motorbus travel service; **Reg. No. 519,783** (NATIONAL TRAILWAYS BUS SYSTEM AND DESIGN), same, filed July 7, 1960, D.C., S.D. Ga. (Savannah), Doc. 1161, *National Trailways Bus System* v. *Savannah Trail-ways, Inc. et al.*

Reg. No. 519,783. (See Reg. No. 517,543.)

Reg. No. 545,734 (ACRILAN), The Chemstrand Corporation, Yarns, threads, and yarn and thread filaments; **Reg. No. 553,881**, same; **Reg. No. 560,543** (CHEMSTRAND), same, filed July 5, 1960, D.C.N.J. (Newark), Doc. 597/60, *The Chem-strand Corporation* v. *The Hollander Pillow Corporation.*

Reg. No. 558,784 (MOGEN DAVID), Wine Corporation of America, Wine, filed Jan. 18, 1960, D.C., E.D. Mo. (St. Louis), Doc. 60–C–16(3), *Mogen David Wine Corporation* v. *Para-mount Liquor Company.* Dismissed by stipulation June 20, 1960.

Reg. No. 571,786 (ROQUEFORT), The Community of Roque-fort, Cheese, filed Mar. 22, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c438, *The Community of Roquefort et al.* v. *Caravetta Foods Co.* Consent judgment; defendant enjoined June 29, 1960.

Reg. No. 553,881. (See Reg. No. 545,734.)

Reg. No. 591,440 (THE MAGIC CARPET TO EVERY-WHERE AND DESIGN), Garber's Travel Service, Inc., Mak-ing hotel, airplane, railroad and steamship reservations and planning tours, filed June 24, 1960, D.C., S.D. N.Y., Doc. 60/2535, *Garber's Travel Service, Inc.* v. *Air-India Interna-tional.*

Reg. No. 649,356 (RIPPLE), Ripple Sole Corporation, Shoe soles and heels; **Reg. No. 649,362**, same, Shoes, athletic shoes

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,802
Date of oldest new application	Feb. 1, 1960
Date of oldest amended application	Jan. 14, 1960

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 39, 40, 41, 42, 43, 44, 50	2-1-60	2-16-60
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	2-4-60	1-14-60
Renewals (All Classes)	6-7-60	6-23-60
Sec. 12 (c) Publications (All Classes)	6-14-60	.....

Applications filed during the month of June 1960—1,895

Registrations Issued ..... 350—No. 703,056 to No. 703,405
Renewals Issued 99

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

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and boots; 2,710,461, N. Hack, Resilient shoe sales, filed June 29, 1960, D.C.N.H. (Concord), Doc. 2148, *Ripple Sole Corporation* v. *F.W. Woolworth Co.*

Reg. No. 649,382. (See Reg. No. 649,356.)

Reg. No. 660,942. (See Reg. No. 545,734.)

Reg. No. 668,276 (CALCO GAS), American Cyanamid Company, Dyes, filed July 6, 1960, D.C., S.D.N.Y., Doc. 60/2655, *Edward G. Reaves* v. *Adolph Bressner.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 51,883. Arvis F. Elliott, d.b.a. Seal in Plastic Co., Los Angeles, Calif. Filed May 19, 1958.

JIFFY

For Plastic Sheets Used in Laminating Photos, Cards, Certificates, and Similar Items To Protect Them.

First use Nov. 23, 1957.

SN 63,021. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany. Filed Nov. 24, 1958.

TREVIRA

Owner of German Reg. No. 688,837, dated Mar. 21, 1956.

For Synthetic Bristles and Fibers for Brooms, Brushes, and the Like.

SN 63,579. James Fraser Rae, d.b.a. Industrial Plastics & Chemicals, Oakland, Calif. Filed Dec. 3, 1958.

ASTROLITE

For Synthetic Resins Useful as Binders in Reinforced Plastic Bodies, and as Adhesive, Laminating, and Coating Compounds.

First use on or about June 1, 1948.

SN 68,127. Donovan Industries, Inc., Southport, Conn. Filed Feb. 20, 1959.

DREAM CALF

The word "Calf" is disclaimed apart from the mark shown.

For Leather.

First use Apr. 24, 1958.

SN 70,102. Plant Hybridizers of California, d.b.a. Ginden Nursery Company, Sebastopol, Calif. Filed Mar. 23, 1959.



The term "Hereditare" is Latin and means "heritage."

For Plants, Shrubs, Vines, Fruit Trees, and Flowering Trees.

First use Feb. 2, 1959.

SN 73,113. Imperial Chemical Industries Limited, London, England. Filed May 7, 1959.

PROPATHENE

Owner of British Reg. Nos. 783,831 and 783,832, both dated Nov. 11, 1958.

For Synthetic Resins Sold in the Form of Moulding Powders, Sheets, Rods, Tubes, and Other Shapes.

SN 73,885. W. B. Camp & Sons, Inc., Bakersfield, Calif. Filed May 18, 1959.



Applicant disclaims the representation of the State of Washington and the following words apart from the mark as shown: "The, Brand, Certified Seed, Lynden, and Washington."

For Seed Potatoes.

First use Sept. 7, 1948.

SN 75,018. Lakeland Nurseries Sales Corporation, New York, N.Y. Filed June 3, 1959.

SCARLET SHOWERS

For Rose Plant.

First use Mar. 2, 1959.

SN 77,361. Dermatan Leather Company, Inc., Newark, N.J. Filed July 9, 1959.



For Leather.

First use May 14, 1953.

SN 80,106. Mobay Chemical Company, Pittsburgh, Pa. Filed Aug. 24, 1959.

MOBAY

The drawing is lined to indicate the color blue, but this color is not a feature of the mark. Owner of Reg. Nos. 630,221 and 623,814.
For Synthetic Resins for Use in Industrial Arts and for Further Processing and/or Manufacture in All Forms.
First use June 7, 1954.

SN 81,778. United Chrometanners Limited, Belfast, Northern Ireland. Filed Sept. 21, 1959.

UTA

Owner of British Reg. No. 716,684, dated Apr. 13, 1953. For Leather.

SN 83,016. Ten Oaks Nursery and Gardens, Inc., Clarksville, Md. Filed Oct. 9, 1959.

TEN OAKS

For Nursery Stock.
First use Sept. 1, 1931.

SN 86,543. Donovan Industries, Inc., New York, N.Y. Filed Dec. 3, 1959.

STACKED CALF

The word "Calf" is disclaimed apart from the mark as shown.
For Leather.
First use Nov. 10, 1959.

SN 88,272. United Chrometanners Limited, Belfast, Northern Ireland. Filed Dec. 30, 1959.

UTA TROTTEUR

"Trotteur" is translated from the French as "trotter."
For Leather, Skins, and Hides.
First use May 1958; in commerce December 1958.

SN 90,125. West Virginia Pulp and Paper Company, New York, N.Y. Filed Feb. 1, 1960.

NUCEL

For Wood Pulp.
First use Dec. 5, 1958.

SN 91,369. Garfield Williamson Inc., Jersey City, N.J. Filed Feb. 23, 1960.

RUF-TUF

For Grass Seed.
First use Mar. 5, 1959.

SN 91,484. Garfield Williamson, Inc., Jersey City, N.J. Filed Feb. 23, 1960.

RUMPUS

For Grass Seed.
First use Mar. 5, 1959.

SN 92,111. Paxton Processing Co., Inc., Paxton, Ill. Filed Mar. 3, 1960.

TAB

For Product Made of Ground Corn Cobs for Use as an Animal Bedding or Litter for Cats and Other Small Animal Pets.
First use Feb. 11, 1959.

SN 92,241. Floral Gardens Sales Corporation, New York, N.Y. Filed Mar. 7, 1960.

ROLL-A-GARDEN

For Preseeded Garden Mat.
First use Feb. 3, 1959.

SN 92,242. Floral Gardens Sales Corporation, New York, N.Y. Filed Mar. 7, 1960.

FLOWER FESTIVAL

For Preseeded Garden Mat.
First use Feb. 4, 1960.

SN 92,243. Floral Gardens Sales Corporation, New York, N.Y. Filed Mar. 7, 1960.

FLORAL FIESTA

For Preseeded Garden Mat.
First use Feb. 4, 1960.

SN 92,244. Floral Gardens Sales Corporation, New York, N.Y. Filed Mar. 7, 1960.

SHOWERS OF BLOOM

For Preseeded Garden Mat.
First use Feb. 4, 1960.

SN 93,010. Herman J. Schecter, d.b.a. Sommers Plastic Products Co., New York, N.Y. Filed Mar. 16, 1960.

ORANGE PEEL

For Vinyl Plastic Piece Goods for General Use in the Industrial Arts in the Manufacture of Handbags, Wallets, Portfolios, Belts, and the Like.
First use Jan. 8, 1959.

SN 93,011. Herman J. Schecter, d.b.a. Sommers Plastic Products Co., New York, N.Y. Filed Mar. 16, 1960.

CASU-FOAM

For Vinyl Plastic Piece Goods for General Use in the Industrial Arts in the Manufacture of Handbags, Wallets, Portfolios, Belts, and the Like.
First use Sept. 30, 1959.

SN 93,617. Ed. F. Mangelsdorf & Bro., Inc., St. Louis, Mo. Filed Mar. 24, 1960.

A-24

For Seed.
First use Jan. 9, 1956.

SN 93,815. Lawn & Grass Seeds, Inc., Buffalo, N.Y. Filed Mar. 28, 1960.

GOLD PRIZE

For Lawn and Grass Seed.
First use Jan. 23, 1960.

SN 93,816. Lawn & Grass Seeds, Inc., Buffalo, N.Y. Filed Mar. 28, 1960.

Sprout

For Lawn and Grass Seed.
First use Jan. 17, 1958.

SN 94,417. Mountain Paper Products Corporation, Bellows Falls, Vt. Filed Apr. 5, 1960.

KOZY LOGS

Applicant disclaims any exclusive right to use the word "Logs" apart from the mark as shown.
For Fireplace Logs.
First use Feb. 19, 1960.

SN 94,539. Witco Chemical Company, Inc., New York, N.Y. Filed Apr. 6, 1960.

FOMREZ

Owner of Reg. No. 651,899.
For Resins for Use in the Manufacture of Urethane Foams.
First use on or about June 29, 1956.

SN 94,540. Witco Chemical Company, Inc., New York, N.Y. Filed Apr. 6, 1960.

FORMREZ

Owner of Reg. No. 651,899.
For Resins for Use in the Manufacture of Solid Elastomers.
First use Mar. 28, 1960.

SN 94,606. Northrup, King & Co., Minneapolis, Minn. Filed Apr. 7, 1960.

ROLL 'N GRO

For Mats Containing Flower Seeds.
First use Mar. 23, 1960.

SN 94,809. Prime Manufacturing Company, Lynn, Mass. Filed Apr. 11, 1960.

PRIME TEX

Owner of Reg. Nos. 620,328, 653,377, and 668,523.
For Insoles and Sheet Material for Insoles.
First use Jan. 17, 1960; January 1948 as to term "Prime."

SN 95,401. Virginia Smelting Company, West Norfolk, Va. Filed Apr. 19, 1960.

V-BOND

For Epoxy Resin Products Used in the Casting of Materials.
First use June 29, 1959.

SN 95,757. The Perma-Flex Mold Co., Columbus, Ohio. Filed Apr. 25, 1960.

GRA-TUFY

For Synthetic Resin Molding Materials in Liquid Form Used in Making Flexible Molds and Flexible Castings.
First use July 1951.

SN 95,758. The Perma-Flex Mold Co., Columbus, Ohio. Filed Apr. 25, 1960.

BLAK-STRETCHY

For Synthetic Resin Molding Materials in Liquid Form Used in Making Flexible Molds and Flexible Castings.
First use Jan. 4, 1960.

SN 95,759. The Perma-Flex Mold Co., Columbus, Ohio. Filed Apr. 25, 1960.

BLAK-TUFY

For Synthetic Resin Molding Materials in Liquid Form Used in Making Flexible Molds and Flexible Castings.
First use July 1950.

SN 95,785. Trancoa Chemical Corporation, Reading, Mass. Filed Apr. 25, 1960.

TRANCOA

Owner of Reg. No. 669,973.
For Polyurethane Resins and High Purity Silicon.
First use Mar. 1, 1958.

SN 95,803. Armour and Company, Chicago, Ill. Filed Apr. 26, 1960.

CASUALPAC

For Upper Leather.
First use June 29, 1959.

SN 95,864. Armour and Company, Chicago, Ill. Filed Apr. 27, 1960.

STIRRUP

For Upper Leather.
First use Nov. 25, 1959.

Class 2 — Receptacles

SN 91,299. West Virginia Pulp and Paper Company, New York, N.Y. Filed Feb. 10, 1960.

TUFFWEND

For Multiwall Paper Bags Having at Least One Sewn End With a Reinforcing Band of Paper Intermediate the Walls or Plies at Such End.
First use Sept. 30, 1950.

SN 93,978. Art Industries, Inc., Dayton, Ohio. Filed Mar. 30, 1960.

SOFTY

For Table Pads—Namely, Place Mats and Coasters.
First use July 31, 1959.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 90,733. Armored Luggage Mfg. Co., Inc., Hawthorne, Calif. Filed Feb. 11, 1960.

MERIDIAN

For Molded Luggage.
First use Dec. 11, 1959.

Class 4—Abrasives and Polishing Materials

SN 93,578. Ajem Laboratories, Inc., Livonia, Mich. Filed Mar. 24, 1960.

JEM BLAST

For Abrasives, Granular and Shot-Like Materials for Shot Blasting, Shot Peening and the Like, Additives for Suspending Liquids for Use in Shot Blasting, Shot-Peening, Etc.
First use on or about Dec. 18, 1959.

Class 5—Adhesives

SN 72,686. Bear Archery Company, Grayling, Mich. Filed May 1, 1959.

BEARBOND

For Epoxy Resin Adhesive Used in the Manufacture of Bows and Arrows.
First use 1958.

Class 6—Chemicals and Chemical Compositions

SN 45,291. Vineland Chemical Sales Corporation, Vineland, N.J. Filed Feb. 4, 1958.

SLIME-ACIDE

For Preparation Used as a Fungicide and Bactericide.
First use Sept. 28, 1956.

SN 62,499. Weed-Master (Western) Ltd., Calgary, Alberta, Canada. Filed Nov. 14, 1958.

weedēz

For Selective Weed Killer in Solid Form.
First use Mar. 14, 1958; in commerce Apr. 14, 1958.

SN 65,794. Talb Industries, Inc., Philadelphia, Pa. Filed Jan. 13, 1959.

Sani Dust CONTROL

The term "Control" is hereby disclaimed from the mark sought to be registered.
For Germicidal Oil and Germicidal Oil Emulsifier for Use in the Treatment of Dust Cloths and Mops.
First use Aug. 4, 1958.

SN 74,573. Doggett-Pfeil Company, Springfield, N.J. Filed May 27, 1959.

rose-all

For Chemical Spray Used as an Insecticide-Miticide-Fungicide on Roses, Flowers, and Shrubs.
First use Jan. 9, 1958; August 1957 as to term "Ros-All."

SN 83,302. Macfee Manufacturing Company, Elgin, Ill. Filed Oct. 15, 1959.

Sprig

Owner of Reg. No. 390,168.
For Liquid Perfume for General Deodorant Use Except Upon the Person.
First use Apr. 1, 1959.

SN 85,315. George A. Davis, Inc., Chicago, Ill. Filed Nov. 16, 1959.

KAPUT

For Chemical Composition Used in Killing Crabgrass, Crabgrass Seeds, Chickweed, Broad Leaf-Weeds, Lawn Insects, Lawn Fungus Diseases.
First use June 19, 1959.

SN 87,001. Sun Chemical Corporation, New York, N.Y. Filed Dec. 9, 1959.

CONTACT-AID

For Chemical Spray To Be Applied on Photographic Film To Eliminate Newton Rings.
First use Sept. 4, 1959.

SN 88,437. Strohmeyer & Arpe Company, New York, N.Y. Filed Jan. 4, 1960.

RE-BEK

Owner of Reg. No. 434,903.
For Animal, Vegetable, and Synthetic Waxes.
First use Dec. 14, 1959.

SN 89,476. Swift & Company, Chicago, Ill. Filed Jan. 21, 1960.

SUPER GUARD

For Insecticides.
First use June 19, 1958.

SN 93,966. Cormac Chemical Corporation, New York, N.Y. Filed Mar. 30, 1960.

unidri

For Drying Bath for Photographic Film.
First use Feb. 25, 1960.

SN 95,000. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Apr. 13, 1960.

PARABAN

For Oil Well Drilling Fluid Additives—Namely, a Composition Compounded To Act as a Solvent and Dispersant for Waxy Materials That Separate From Crude Oil During Production and Transportation.
First use on or about Jan. 1, 1960.

SN 95,001. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Apr. 13, 1960.

CONTROLSOL

Owner of Reg. Nos. 637,880, 640,859, and others.
For Oil Well Drilling Fluid Additives—Namely, a Non-Ionic Emulsifier Causing Rapid Settling of Drilled Solids.
First use on or about Oct. 24, 1955.

SN 95,002. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Apr. 13, 1960.

Q-B-T

For Oil Well Drilling Fluid Additives—Namely, a Quebracho Base Thinner Effective as a Dispersant for Fresh Water Gel Systems.
First use 1958.

SN 95,004. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Apr. 13, 1960.

CONTROLEX

Owner of Reg. Nos. 637,880, 640,859, and others.
For Oil Well Drilling Fluid Additives—Namely, a Dry Powdered Soluble Alkaline Compound Used for Thinning and Emulsifying Drilling Muds.
First use June 1957.

SN 95,005. Mud Control Laboratories, Inc., Oklahoma City, Okla. Filed Apr. 13, 1960.

CONTROLCAL

Owner of Reg. Nos. 637,880, 640,859, and others.
For Oil Well Drilling Fluid Additives—Namely, Powdered Calcium Ligno-Sulfonate Used To Control Viscosity in Lime Base and Gyp Base Muds.
First use on or about Dec. 31, 1954.

Class 7—Cordage

SN 91,574. United Co-Operatives, Inc., Alliance, Ohio. Filed Feb. 24, 1960.

Red Label

For Baler and Binder Twines.
First use at least as early as Dec. 7, 1956.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 96,995. Stoeger Arms Corporation, Long Island City, N.Y. Filed May 12, 1960.

ZEPHYR

For Shotguns, Rifles, Pistols, Revolvers, Other Small Arms and Small Arms Ammunition.
First use May 21, 1936.

Class 10—Fertilizers

SN 92,033. Molalla Forest Products Co., Cloverdale, Calif. Filed Mar. 2, 1960.

GOLDEN GROOM

For Mulches for the Treatment and Amendment of Soil.
First use Dec. 4, 1959.

SN 93,608. F. S. Royster Guano Co., Norfolk, Va. Filed Mar. 24, 1960.

SNOW CAP

For Fertilizers.
First use 1938.

Class 12—Construction Materials

SN 94,499. Johns-Manville Corporation, New York, N.Y. Filed Apr. 6, 1960.

STELLAR

For Acoustical Panels.
First use Jan. 20, 1960.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 82,315. Aer-O-Line Manufacturing and Supply Co., Burbank, Calif. Filed Sept. 29, 1959.



The representation of a screw is disclaimed apart from the mark as shown.
For Screws, Bolts, and Threaded Fasteners.
First use Aug. 28, 1959.

SN 90,109. C. G. Sargent's Sons Corporation, Graniteville, Mass. Filed Feb. 1, 1960.

SARJET

For Atomizing Ordering Heads for Tobacco.
First use Jan. 11, 1960.

SN 90,333. Hays Manufacturing Company, Erie, Pa. Filed Feb. 4, 1960.

MULTI-MESURFLO

For Fluid Flow Control Devices To Regulate Discharge Under Varying Pressure Conditions To Handle a Variety of Fluids.
First use May 21, 1957.

SN 90,729. American Aluminum Products, Incorporated, Bridgeport, Conn. Filed Feb. 11, 1960.

PLANTA-CRAFT

For Metal Flower Planters.
First use Dec. 17, 1959.

SN 90,887. Armco Steel Corporation, Middletown, Ohio. Filed Feb. 15, 1960.

BAND-ELL

For Elbow Connector for Corrugated Pipe.
First use Oct. 16, 1959.

SN 93,070. Hays Manufacturing Company, Erie, Pa. Filed Mar. 17, 1960.

L-P-D MESURFLO

For Fluid Flow Control Devices for a Variety of Fluids.
First use Feb. 1, 1949.

SN 93,766. Harry B. Corsaw, d.b.a. Corsaw Company, Palo Alto, Calif. Filed Mar. 28, 1960.

JIGGLE-SMASHER

For Flush Ball Valves and Flush Valve Guides.
First use Jan. 15, 1960.

Class 14—Metals and Metal Castings and Forgings

SN 92,605. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Mar. 11, 1960.

QUENCHTRODE

For Metallic Welding Rods.
First use Mar. 8, 1960.

SN 92,607. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Mar. 11, 1960.

QUENCHALLOY

For Metallic Welding Rods.
First use Mar. 8, 1960.

SN 93,043. American Metal Climax, Inc., New York, N.Y. Filed Mar. 17, 1960.

AMCROM

For Copper Chromium Alloys in Cast or Wrought Form.
First use Feb. 3, 1960.

Class 16—Protective and Decorative Coatings

SN 76,349. Tri-Chem, Inc., West Orange, N.J. Filed June 23, 1959.

CADDY-KIT

The drawing is lined for red, green, and black; however, applicant does not claim these colors as essential features of the mark.
For Container and Contents Consisting of Materials and Supplies for Painting Decorations on Cloth, the Lid of the Container Being Specially Designed To Serve as a Working Surface.
First use Nov. 11, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 65,129. Dorothea Adele Bertha Temmler, guardian of Agnes Henriette Monika Temmler, d.b.a. Temmlerwerke Vereinigte Chemische Fabriken Hermann Temmler, Hamburg-Neugraben, Germany. Filed Dec. 30, 1958.

REGENON

Owner of German Reg. No. 197,516, dated July 25, 1914.
For Pharmaceutical Preparations for the Treatment of Obesity and Reduction of Appetite.

SN 79,914. Boots Pure Drug Company Limited, Nottingham, England. Filed Aug. 20, 1959.

Strepsils

For Antiseptic Lozenges for the Treatment of Throat Infections.
First use in October 1958; in commerce in October 1958.

SN 80,008. Glaxo Laboratories Limited, Greenford, England. Filed May 26, 1959.

GRISOVIN

Owner of British Reg. No. 784,521, dated Nov. 27, 1956.
For Pharmaceutical Antibiotic for Treating Fungus and Related Conditions in Both Humans and Animals.

SN 80,487. Armour and Company, Chicago, Ill. Filed Aug. 31, 1959.

GALOXRON

For Iron Ox Bile for Use as a Digestive Aid and in Bile Salt Replacement Therapy.
First use Aug. 11, 1959.

SN 80,689. Karl Wilhelm Schmidt, Nurnberg, Germany. Filed Sept. 1, 1959.

SINCURETTE

Owner of German Reg. No. 492,116, dated Mar. 16, 1937.
For Medical Products in the Form of a Powder, Small Cones, in Spray Form, or in Paste Form, To Be Used for the Treatment and Removal of Foreign Bodies or Growths by Chemical Action.

SN 83,292. Foods Plus, Inc., New York, N.Y. Filed Oct. 15, 1959.

PRIMOLYSIN

For L-Lysine and Vitamin Containing Tablets in the Nature of a Food Supplement.
First use Sept. 14, 1959.

SN 86,585. American Home Products Corporation, New York, N.Y., assignee of Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. Filed Dec. 3, 1959.

B-PO

For Vitamin Preparation for Veterinary Use.
First use May 26, 1949.

SN 87,413. Dome Chemicals, Inc., New York, N.Y. Filed Dec. 16, 1959.

ENZYME MANTLE

No claim is made for the word "Enzyme" apart from the mark as shown. Owner of Reg. Nos. 578,300 and 671,110.
For Preparation for External Use in the Treatment of Dry Skin, Infections, Irritations, and Other Skin Conditions.
First use Dec. 3, 1959.

SN 88,801. The Purdue Frederick Company, New York, N.Y. Filed Jan. 11, 1960.

MILK OF MAGNITOL

For Laxative.
First use Dec. 31, 1958.

SN 89,423. Dome Chemicals, Inc., New York, N.Y. Filed Jan. 21, 1960.

ALTARA GELL

No claim is made for the word "Gell" apart from the mark as shown.
For Medical Preparation for the External Treatment of Skin Infections, Diseases, and Other Irritations.
First use Nov. 10, 1958.

SN 90,135. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker, Sodertalje, Sweden. Filed Feb. 2, 1960.

VERNADONIN

For Pharmaceutical Preparations for the Treatment of Heart Diseases.
First use Dec. 19, 1959; in commerce Dec. 19, 1959.

SN 91,345. Colgate-Palmolive Company, New York, N.Y. Filed Feb. 23, 1960.

DIAR-AID

For Preparation for the Relief of Intestinal Disorders.
First use Jan. 22, 1960.

SN 91,346. Colgate-Palmolive Company, New York, N.Y. Filed Feb. 23, 1960.

CONGESTAID

For Preparation for the Relief of Nasal, Sinus, and Respiratory Disorders.
First use Jan. 29, 1960.

SN 91,506. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Feb. 24, 1960.

BEROTEC

Owner of German Reg. No. 652,492, dated Jan. 30, 1954.
For Preparation for the Treatment of Colds and Respiratory Difficulties.

SN 91,662. American Scientific Laboratories, Inc., Madison, Wis. Filed Feb. 26, 1960.

COLENTIN

For Vaccine for Animals.
First use Feb. 17, 1960.

SN 91,668. American Scientific Laboratories, Inc., Madison, Wis. Filed Feb. 26, 1960.

SHOSEPTIN

For Vaccine for Animals.
First use Feb. 17, 1960.

SN 91,973. Standex Laboratories, Inc., Columbus, Ohio. Filed Mar. 1, 1960.

REPENDO

For Preparation for Use in Controlling Capillary Bleeding.
First use 1955.

SN 92,324. Sterling Drug Inc., New York, N.Y. Filed Mar. 7, 1960.

CARBOCAINE

Owner of Reg. No. 642,249.
For Local Anaesthetic.
First use Dec. 30, 1959.

SN 92,933. Smith, Miller & Patch, Inc., New York, N.Y. Filed Mar. 15, 1960.

TOLAGESIC

For Analgesic Anti-Pyretic and Antispasmodic Preparation.
First use Mar. 16, 1953.

SN 94,653. Cook-Waite Laboratories, Inc., New York, N.Y. Filed Apr. 8, 1960.

DYNALTINT

Owner of Reg. No. 573,006.
For Germicidal and Antiseptic Preparation.
First use July 8, 1959.

SN 94,720. American Home Products Corporation, d.b.a. Whitehall Laboratories, New York, N.Y. Filed Apr. 11, 1960.

PREPARATION H

No exclusive claim is made to the word "Preparation" apart from the mark as shown. Owner of Reg. No. 592,871.
For Laxative Preparation.
First use Jan. 15, 1960.

SN 94,855. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Filed Apr. 11, 1960.

SYNPEN

For Pharmaceutical Preparation Comprised of Synthetic Penicillin for Use in the Treatment of Infections Due to Gram Positive and Gram Negative Bacteria.
First use Mar. 16, 1960.

SN 94,937. Aktiebolaget Bofors, Bofors, Sweden. Filed Apr. 13, 1960.

MARCAIN

Owner of Swedish Reg. No. 83,498, dated Oct. 11, 1957.
For Anesthetics.

SN 94,940. Aktiebolaget Bofors, Bofors, Sweden. Filed Apr. 13, 1960.

XECAIN

Owner of Swedish Reg. No. 80,385, dated May 11, 1956.
For Anesthetics.

SN 94,947. Aktiebolaget Bofors, Bofors, Sweden. Filed Apr. 13, 1960.

PREDOCAIN

Owner of Swedish Reg. No. 73,053, dated Dec. 5, 1952.
For Anesthetics.

Class 19—Vehicles

SN 83,434. Alloy Marine Products, Inc., Algonac, Mich. Filed Oct. 19, 1959.

ALLOY

For Boat Trailers and Structural Parts Therefor, and Boat Display Dollies.
First use in or about February 1956.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 81,632. Lafayette Radio Electronics Corporation, Jamaica, N.Y., by change of name from Lafayette Radio Corporation, Jamaica, N.Y. Filed Sept. 18, 1959.

TRIOSONIC

For Loud Speakers and Loud Speaker Systems.
First use in August 1959.

SN 85,417. The Superior Switchboard & Devices Company, Canton, Ohio. Filed Nov. 16, 1959.

Electroline

For Electrical Connectors for Overhead Electrical Transmission Lines—Namely, Automatic Line Splices, Reducing Automatic Line Splices, Insulating Automatic Line Splices, Insulating Automatic Line Splice Sectionalizers, and Automatic Dead Ends.
First use November 1932.

SN 89,979. AMP Incorporated, Harrisburg, Pa. Filed Feb. 1, 1960.

AMP—MECA

Owner of Reg. Nos. 405,714, 680,489, and others.
For Electronic Module Circuit Assemblies.
First use Jan. 22, 1960.

SN 94,876. Belden Manufacturing Company, Chicago, Ill. Filed Apr. 12, 1960.

PYRIL

For Ignition Cables.
First use Feb. 17, 1960.

SN 94,972. Dynacor Inc., Rockville, Md. Filed Apr. 13, 1960.



Owner of Reg. No. 655,471.
For Magnetic Core.
First use July 1, 1958.

Class 22—Games, Toys, and Sporting Goods

SN 71,590. Mego Corp., New York, N.Y. Filed Apr. 15, 1959.

MEGO

For Equipment (or Apparatus) for Playing Dart, Target, Bingo, Checker and Similar Games; Puzzles; Dolls; Stuffed Animal Toys; Toy Miniature Vehicles; Musical Toys; Mechanical Toys; Wood Blocks; Doll Carriages; and Footballs, Basketballs, Fishing Sets, Croquet Sets, and Baseball Gloves for Children.
First use Sept. 12, 1955.

SN 78,554. Great Western Toy Co., Inc., Portland, Oreg. Filed July 28, 1959.

BRAND-N-LOOP

For Toy Trick Rope Lasso.
First use Apr. 1, 1959.

SN 78,819. Reliance Products Sales Corp., Woonsocket, R.I. Filed July 31, 1959.

DAFFY DINOSAURS

No claim of exclusive right is made to "Dinosaurs" as used on a toy dinosaur construction kit.
For Toy Construction Kit Comprising Body Parts of Dinosaurs Which Are Attached to Fruits and Vegetables To Create Various Dinosaur Forms.
First use June 24, 1959.

SN 81,209. Transogram Company, Inc., New York, N.Y. Filed Sept. 11, 1959.

SKOOKER

For Equipment Sold as a Unit for Playing a Board Game.
First use July 17, 1959.

SN 82,309. Western Shore Bait Company, Baltimore, Md. Filed Sept. 28, 1959.

Pete's

For Beaded Spinner and Bucktail Fishing Lures.
First use Apr. 15, 1958.

SN 84,283. Associated Industries, Independence, Iowa. Filed Oct. 30, 1959.

FLUTTER BUG

For Fishing Lure.
First use June 1957.

SN 85,919. Shoe Corporation of America, Columbus, Ohio. Filed Nov. 23, 1959.

PEGASUS

For Athletic Shoes—Namely, Bowling, Golf, Basketball, Baseball, Track, and Football Shoes.
First use Sept. 15, 1959.

SN 87,215. Fabrique d'Horlogerie Odo, Mores, Jura, France. Filed Dec. 14, 1959.

Kirk 'Ado

Owner of French Reg. No. 1,063, dated Oct. 31, 1959 (Lons-le-Saunier (Jura)); Natl. Inst. No. 136,554.
For Fishing Tackle—Namely, Fishing Lines, Fishing Rods, Fishing Reels, Flies, Spoons, Fish Hooks.

SN 88,470. L.C.S. Enterprises, Inc., Dallas, Tex. Filed Jan. 5, 1960.



No claim of exclusive right is made to the word "Toys."
For Boards and Playing Pieces for Playing Various Types of Games.
First use Dec. 7, 1959.

SN 90,221. Braden Wire & Metal Products, Inc., San Antonio, Tex. Filed Feb. 3, 1960.

TEXAS HUNTER

For Portable Hunting Blinds.
First use May 6, 1959.

SN 91,818. Louis Marx & Company, Inc., New York, N.Y. Filed Feb. 29, 1960.



No claim of exclusive right is made to the word "Toys" as used on children's toys. Owner of Reg. No. 366,664.
For Complete Line of Children's Toys.
First use Aug. 15, 1959; Oct. 1, 1925, as to the mark in substantially the display shown.

SN 93,132. The Avalon Hill Company, Baltimore, Md. Filed Mar. 18, 1960.

MANAGEMENT

For Equipment Sold as a Unit for Playing a Board Game.
First use Mar. 1, 1960.

SN 94,515. Parker Brothers, Inc., Salem, Mass. Filed Apr. 6, 1960.

CROW

Owner of Reg. No. 520,195.
For Equipment Used in Connection With a Card Game.
First use Feb. 5, 1960.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 78,283. Holley Carburetor Company, Warren, Mich. Filed July 23, 1959.



For Engine Accessories and Parts.
First use June 3, 1959.

SN 80,524. Ford Motor Company, Dearborn, Mich. Filed Aug. 31, 1959.

COMET

For Mechanical Parts for Automobiles and Motor Trucks, Including Engine and Chassis Parts Therefor Excepting Brakes, and Parts Thereof.
First use Aug. 17, 1959.

SN 84,346. Sperry Rand Corporation, New Holland, Pa. Filed Oct. 30, 1959.

CROP CHOPPER

For Forage Harvester.
First use June 30, 1958.

SN 84,993. Crofts (Engineers) Limited, Bradford, England. Filed Nov. 10, 1959.

CROFT-RING

Owner of British Reg. No. 793,027, dated July 7, 1959.
For Machine Couplings and Parts Thereof.

SN 91,661. American Blindstitch Machine Corporation, New York, N.Y. Filed Feb. 26, 1960.

ECONOMY BLINDSTITCH

The word "Blindstitch" is disclaimed apart from the mark as shown.
For Blindstitch Sewing Machines.
First use November 1954.

SN 93,603. Glaenzer Spicer, Poissy, Seine-et-Oise, France. Filed Mar. 24, 1960.

ORFLEX

Owner of French Reg. No. 7,019, dated Oct. 26, 1959 (Seine); Natl. Inst. No. 133,748.
For Couplings, Clutches, and Transmission Joints for Automobiles.

SN 93,858. The Rawlplug Company, Inc., New Rochelle, N.Y. Filed Mar. 28, 1960.

DURATHERM

For Saber-Tooth Self Drilling Masonry Anchor.
First use Apr. 30, 1959.

SN 93,905. Fujikoshi Kozai Kogyo Kabushiki Kaisha, d.b.a. Fujikoshi Steel Industry Co., Ltd., Toyama-shi, Japan. Filed Mar. 30, 1960.

NACHI

For Bearings and Steel Balls.
First use Apr. 10, 1951; in commerce Apr. 10, 1951.

SN 94,063. General Steel Warehouse Co., Inc., Chicago, Ill. Filed Mar. 31, 1960.

GENTOOL

For Tools, and More Particularly, Chisels.
First use on or about Mar. 15, 1960.

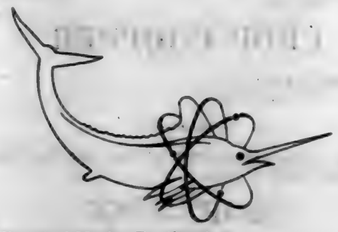
SN 94,821. Sears, Roebuck and Co., Chicago, Ill. Filed Apr. 11, 1960.

TERRACE

For Stainless Steel Tableware—Namely, Knives, Forks, Spoons, Servers.
First use on or about Sept. 25, 1958.

Class 26—Measuring and Scientific Appliances

SN 83,102. Jetronic Industries, Inc., Philadelphia, Pa. Filed Oct. 12, 1959.



For Electrical Marine Depthmeters.
First use August 1959.

Class 27—Horological Instruments

SN 81,728. John Mullins & Sons, Inc., Brooklyn, N.Y. Filed Sept. 21, 1959.



The drawing is lined for blue.
For Horological Instruments—Namely, Clocks and Parts Thereof; Watches for Men and Women, and Parts Thereof.
First use Nov. 27, 1951.

Class 28—Jewelry and Precious-Metal Ware

SN 74,002. Trifari, Krussman & Fishel, Inc., New York, N.Y. Filed May 18, 1959.

Gainsborough by TRIFARI

Owner of Reg. Nos. 413,507, 612,161, and others.
For Simulated Pearls Sold in the Form of Necklaces.
First use Apr. 20, 1959; Sept. 7, 1932, as to "Gainsborough" on pearls; and Dec. 20, 1937, as to "Trifari" on costume jewelry.

SN 81,724. John Mullins & Sons, Inc., Brooklyn, N. Y. Filed Sept. 21, 1959.

BLUE RIBBON

For Jewelry and Precious Metal Articles—Namely, Wedding Rings; Engagement Rings; Signet Rings; Stone Rings; Diamond Rings; Bracelets; Earrings; Brooches; Necklaces; Cuff Buttons Made Wholly or Partly of Precious Metal; Tie Clasps Made Wholly or Partly of Precious Metal; Belt Buckles Made Wholly or Partly of Precious Metal; Lockets, Watchbands, and Chains.
First use Nov. 27, 1951.

SN 81,729. John Mullins & Sons, Inc., Brooklyn, N.Y. Filed Sept. 21, 1959.



The drawing is lined for blue.
For Jewelry and Precious Metal Articles—Namely, Wedding Rings; Engagement Rings; Signet Rings; Stone Rings; Diamond Rings; Bracelets; Earrings; Brooches; Necklaces; Cuff Buttons Made Wholly or Partly of Precious Metal; Tie Clasps Made Wholly or Partly of Precious Metal; Belt Buckles Made Wholly or Partly of Precious Metal; Lockets, Watchbands, and Chains.
First use Nov. 27, 1951.

Class 32—Furniture and Upholstery

SN 81,730. John Mullins & Sons, Inc., Brooklyn, N.Y. Filed Sept. 21, 1959.



The drawing is lined for blue. Owner of Reg. Nos. 81,671 and 235,859.
For Portable Fireplaces That Are Combined With Bookcases and Cellarettes.
First use December 1935.

SN 84,554. Nelson Laboratories, Inc., Hyattsville, Md. Filed Nov. 3, 1959.

TAPER LINE

Applicant disclaims the word "Line" apart from the trademark shown.
For Desks, Wheeled Garment Racks, and Covers for Wheeled Garment Racks.
First use Aug. 26, 1958.

SN 90,159. Everett F. Gustafson, Chicago, Ill. Filed Feb. 2, 1960.

CARD-O-RAMA

For Card File.
First use Jan. 5, 1960.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 92,578. Aerotec Industries, Inc., Greenwich, Conn. Filed Mar. 11, 1960.



For Ventilating Fans, Exhaust Fans and Stacks.
First use Dec. 15, 1959.

SN 93,041. Allcraft Manufacturing Company, Inc., Cambridge, Mass. Filed Mar. 17, 1960.

Copper King

For Tanks in Which Water Is Heated and/or Stored.
First use January 1960.

Class 36—Musical Instruments and Supplies

SN 76,473. Electro-Tone Corporation, Santa Monica, Calif. Filed June 25, 1959.

ELECTRO TONE

For Control Accessory to Electric Organs for Pre-Setting Tone Control To Simulate Sounds of Various Musical Instruments.
First use May 28, 1959.

SN 91,001. Excelsior Accordions, Inc., New York, N.Y. Filed Feb. 16, 1960.

Excelsior Rotunda

Owner of Reg. Nos. 318,244, 584,941, and others.
For Electrically Operated Pick Up Installation for Musical Instruments, Such as Accordions.
First use on or about June 22, 1959.

SN 92,025. Lancer Music, Inc., Philadelphia, Pa. Filed Mar. 2, 1960.



The drawing is lined for orange.
For Grooved Phonograph Records.
First use Dec. 15, 1958.

SN 94,095. Radio Shack Corporation, Boston, Mass. Filed Mar. 31, 1960.

RADIO SHACK

Owner of Reg. No. 657,519.
For Phonographs, Phonograph Needles, and Phonograph Records, Record Players, and Recording Tapes.
First use 1923.

SN 95,248. Bulova Watch Company, Inc., Flushing, N.Y. Filed Apr. 18, 1960.

BULOVA

Owner of Reg. Nos. 184,904, 670,206, and others.
For Phonographs.
First use Apr. 15, 1959.

Class 37—Paper and Stationery

SN 75,506. J. S. Staedtler, Nurnberg, Germany. Filed June 10, 1959.

DIANA

Owner of German Reg. No. 52,770, dated July 9, 1908.
For Pencils, Crayons, Chalk, Refill-Pencils, Fountain Pens, Pen-Holders, Ball Point Pens, and Erasers.

SN 78,076. Silver Bear, Inc., Atlanta, Ga. Filed July 20, 1959.

GIGANTIC
Big Count
NOTE BOOK FILLER PAPER

The wording, except "Gigantic," is disclaimed apart from the mark as shown.
For Note Book Filler Paper.
First use on or about June 5, 1959.

SN 85,255. Hoyd E. Summy, d.b.a. The Medico Press, Millerstown, Pa. Filed Nov. 13, 1959.

MEDICO

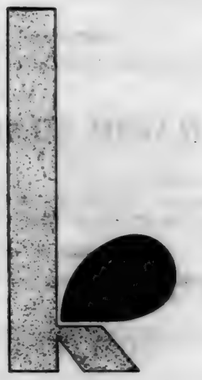
Owner of Reg. No. 377,869.
For Physicians' Dispensing Envelopes.
First use March 1939.

SN 90,782. Ropex Co., Inc., New York, N.Y. Filed Feb. 11, 1960.

ULTRAGRAPH

For Fountain Pens Especially Adopted for Use With India Ink.
First use on or about Oct. 15, 1958.

SN 91,261. Kimberly-Clark Corporation, Neenah, Wis. Filed Feb. 19, 1960.



The drawing is stippled to indicate contrasting colors in the ribbon and tear drop portions of the mark.
For Cleansing Tissues Suitable for Hygienic, Cosmetic, or Cleaning Purposes.
First use Feb. 10, 1960.

SN 91,712. Sterling Pulp & Paper Company, Eau Claire, Wis. Filed Feb. 26, 1960.

TEDDY BEAR

For Paper Napkins, Paper Towels, and Paper Toilet Tissue.
First use Sept. 15, 1959.

Class 38 — Prints and Publications

SN 87,082. Ferry-Morse Seed Co., Detroit, Mich. Filed Sept. 12, 1957.

Dial A Flower

For Printed Rotating Plant Selection Chart Incorporated in Merchandising Displays of Applicant's Packaged Seeds.
First use on or about July 22, 1957.

SN 61,278. Ferry-Morse Seed Co., Detroit, Mich. Filed Oct. 24, 1958.

Dial A Garden

For Printed Rotating Plant Selection Chart Incorporated in Merchandising Displays of Applicant's Packaged Seeds.
First use on or about June 7, 1958.

SN 71,138. National Small Business Men's Association, Inc., Washington, D.C. Filed Apr. 8, 1959.

ISSUES

For Pamphlets Published From Time to Time Relating to National Issues of Importance to Small Businesses, and Including a Balloting Feature.
First use Dec. 20, 1958.

SN 81,370. Guenther Paul Otto Zagelow, Munich, Germany. Filed Sept. 14, 1959.

graficor

Owner of German Reg. No. 722,543, dated Feb. 24, 1959.
For Picture Post Cards.

SN 83,020. Indiana University, Bloomington, Ind. Filed Aug. 5, 1959.

BUSINESS HORIZONS

For National Quarterly Publication.
First use December 1956.

SN 83,362. Garden Supply Merchandiser, Inc., Towson, Md. Filed Oct. 16, 1959.

GARDEN SUPPLY MERCHANDISER

For Trade Magazine.
First use Apr. 1, 1953.

SN 84,833. American Aviation Publications, Inc., Washington, D.C. Filed Nov. 9, 1959.

ARMED FORCES MANAGEMENT

For Monthly Magazine Concerning Military Personnel and Administration Matters.
First use Oct. 1, 1954.

SN 87,565. Journal of Neuropsychiatry, Inc., New York, N.Y. Filed Dec. 18, 1959.

JOURNAL OF NEUROPSYCHIATRY

For Professional Magazine.
First use Sept. 1, 1959.

SN 88,736. Doehla Greeting Cards, Incorporated, Nashua, N.H. Filed Jan. 11, 1960.

from the Coronation COLLECTION

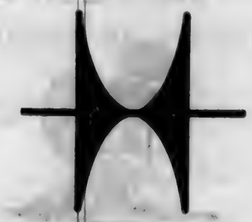
For Greeting Cards, Christmas Cards, and Greeting and Christmas Card Box Assortments.
First use Dec. 10, 1959.

SN 88,850. Dorland P. Dryer, Tarzana, Calif. Filed Jan. 12, 1960.

Bible Land PRODUCTION

Applicant makes no claim to the word "Production."
For Motion Picture Films.
First use June 21, 1959.

SN 89,063. Hamilton Watch Company, Lancaster, Pa. Filed Jan. 15, 1960.



For Magazine Published Periodically.
First use Nov. 15, 1956.

SN 89,312. Tidy House Products Company, Shenandoah, Iowa. Filed Jan. 19, 1960.

SLIDE-A-STAIN

For Printed Slide Chart Giving Instructions in the Removal of All Types of Stains.
First use Jan. 1, 1960.

SN 89,681. Homemaster Publications, Inc., Jamaica, N.Y. Filed Jan. 26, 1960.

HOMEMASTER

For Publication, Generally Published Annually, Containing Plans for Houses and Information Relative to the Building and Financing Thereof.
First use February 1956.

SN 90,430. McGraw-Hill Publishing Company, Inc., New York, N.Y. Filed Feb. 5, 1960.

NUCLEONICS WEEK

Owner of Reg. Nos. 429,624 and 560,987.
For Newsletter.
First use Jan. 28, 1960.

SN 90,906. Farmers Hybrid Seed Corn Company, Hampton, Iowa. Filed Feb. 15, 1960.

FARMERS CORN-HYB News

Owner of Reg. No. 550,899.
For Periodic Publication Covering News and Information of Farm Interest.
First use Feb. 4, 1950.

SN 91,245. Desert Range, Inc., Lawndale, Calif. Filed Feb. 19, 1960.

STORY CLUB OF THE OLD WEST

For Monthly Story Letters Published for Children.
First use Sept. 30, 1959.

Class 39 — Clothing

SN 73,943. Lubro Knitting Mills, d.b.a. Helen Hava, Brooklyn, N.Y. Filed May 18, 1959.

Helen Hava

For Ladies' Sweaters.
First use Apr. 13, 1959.

SN 81,731. John Mullins & Sons, Inc., Brooklyn, N.Y. Filed Sept. 21, 1959.



The drawing is lined for blue.
For Waterproofed Coats for Men; Waterproofed Coats for Women; Hats, Raincoats, Textile Underwear, Knit Underwear, and Hosiery for Men and Women.
First use Aug. 10, 1910.

SN 89,706. Irving Singer, New York, N.Y. Filed Jan. 26, 1960.

Beaverbrook LTD.

For Men's Hats.
First use during or about the month of May 1936.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 81,727. John Mullins & Sons, Inc., Brooklyn, N.Y. Filed Sept. 21, 1959.

BLUE RIBBON

Owner of Reg. Nos. 114,624 and 360,806.
For Bed Sheets, Pillow Cases, Towels, Slip Covers, Furniture Scarfs, Textile Rug Pads, and Doilies.
First use Aug. 10, 1910.

SN 81,732. John Mullins & Sons, Inc., Brooklyn, N.Y. Filed Sept. 21, 1959.



The drawing is lined for blue.
For Bed Sheets, Pillow Cases, Towels, Slip Covers, Furniture Scarfs, Textile Rug Pads, and Doilies.
First use Aug. 10, 1910.

SN 80,780. Heidenberg Lace Net Curtain Co., Closter, N.J. Filed Dec. 7, 1959.

DECOR-NET

For Window Curtains of Net.
First use January 1957.

SN 87,620. Avisun Corporation, Philadelphia, Pa. Filed Dec. 21, 1959.

OLANE

For Woven, Knitted, and Tufted Fabrics of Synthetic Yarn Suitable for Carpeting, Towels, Blankets, Spreads, Drapes, Inner and Outer Garments for Men, Women, and Children, and General Textile Uses.
First use Nov. 13, 1959.

SN 90,152. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Feb. 2, 1960.

HEROX

For Plastic Coated and Laminated Fabrics for Use in Electrical Insulation.
First use Dec. 4, 1959.

SN 93,803. Hollingsworth & Vose Company, East Walpole, Mass. Filed Mar. 28, 1960.

HOVOTEX

For Non-Woven Fabric Composed of Bonded Natural and/or Synthetic Fibers.
First use Mar. 8, 1960.

Class 46—Foods and Ingredients of Foods

SN 51,914. Libby, McNeill & Libby, Chicago, Ill. Filed May 19, 1958.

TROPI-CAL

For Punch.
First use May 7, 1957.

SN 57,432. Spencer Kellogg and Sons, Inc., Buffalo, N.Y., assignee of Staley Investment Company, by change of name from Staley Milling Company, North Kansas City, Mo. Filed Aug. 18, 1958.

SOLO

For Dog Food and Poultry Feed.
First use Sept. 15, 1952.

SN 57,433. Spencer Kellogg and Sons, Inc., Buffalo, N.Y., assignee of Staley Investment Company, by change of name from Staley Milling Company, North Kansas City, Mo. Filed Aug. 18, 1958.

DUO

For Poultry Feed.
First use Sept. 15, 1952.

SN 57,434. Spencer Kellogg and Sons, Inc., Buffalo, N.Y., assignee of Staley Investment Company, by change of name from Staley Milling Company, North Kansas City, Mo. Filed Aug. 18, 1958.

TRIO

For Poultry Feed.
First use Sept. 15, 1952.

SN 59,745. Monarch Feed Mills, Incorporated, Dexter, Mo. Filed Sept. 29, 1958.

MONARCH



"King of Quality"

For Feeds for Livestock and Poultry, and Bone Meal and Meat Scraps for Livestock and Poultry.
First use Jan. 1, 1934.

SN 70,462. Food Brands, Inc., Concordia, Kans. Filed Mar. 30, 1959.

BESTYET

Owner of Reg. Nos. 177,369, 179,183, and others.
For Canned, Fresh and Frozen Fruits; Canned, Fresh, and Frozen Vegetables; Dairy Products—Namely, Fluid Milk, Cottage Cheese, Butter, and Ice Cream; Bakery Products—Namely, Bread, Rolls, and Cakes; Breakfast Cereals; Canned and Frozen Fruit Juices; Dried Fruits; Flour; Fresh Eggs; Vegetable Shortening; Coffee; Tea; Spices; Food Flavoring Extracts; Mustard; Pickles; Marshmallows; Oleomargarine, and Shelled and Unshelled Nuts.
First use during October 1893.

SN 75,642. Mead Johnson & Company, Evansville, Ind. Filed June 12, 1959.

METRECAL

For Special Food Product of High and Complete Nutritive Value for Use in Weight Reducing Diets and Where Concentrated and Complete Foods Are Desired, and Consisting Principally of Non-Fat Milk Solids, Soya Flour, Whole Milk Solids, Sucrose, Starch, and Corn Oil, With Added Vitamins and Minerals.
First use Apr. 24, 1959.

SN 76,704. King Kullen Grocery Co., Inc., Jamaica, N.Y. Filed June 29, 1959.

"Meow For't"

Owner of Reg. No. 401,464.
For Cat Food.
First use June 2, 1956.

SN 77,518. Dorann Foods, Inc. (new corporation), Rye, N.Y., by merger from Dorann Foods, Inc. (New York corporation), Rye, N. Y. Filed July 13, 1959.

DORANN PIZZA KIT

No claim is made to the words "Pizza" and "Kit" apart from the mark as shown. Owner of Reg. No. 653,862.
For Combination Frozen Pie Dough, Package of Tomato Sauce, and Package of Cheese.
First use June 1, 1959.

SN 77,851. Salada-Shirriff-Horsey, Inc., Woburn, Mass. Filed July 16, 1959.

CREAM OF PROTEIN

For Breakfast Cereal.
First use May 1, 1959.

SN 77,852. Salada-Shirriff-Horsey, Inc., Woburn, Mass. Filed July 16, 1959.

POWER

For Dessert Mix.
First use May 1, 1959.

SN 86,035. Kellogg Company, Battle Creek, Mich. Filed Nov. 25, 1959.

Kellogg's

Owner of Reg. Nos. 105,213, 632,371, and others.
For Corn Flake Crumbs.
First use Aug. 13, 1958.

SN 86,740. Eastern States Farmers' Exchange, Incorporated, Springfield, Mass. Filed Dec. 7, 1959.

EASTERN STATES PRODUCTS

No claim is made to the word "Products" apart from the mark as shown.
For Fresh Eggs.
First use Nov. 16, 1959.

SN 87,224. James Greve, d.b.a. Greve Farms, Phoenix, Ariz. Filed Dec. 14, 1959.

BUENO RANCHERO

The English translation of "Bueno Ranchero" is "good rancher."
For Fresh Vegetables—Namely, Sweet Potatoes.
First use Oct. 21, 1959.

SN 87,850. Boundary Produce Company, d.b.a. Boundary Produce, El Centro, Calif. Filed Dec. 23, 1959.



For Fresh Vegetables.
First use Nov. 25, 1959.

SN 89,528. W. F. Straub & Company, Chicago, Ill. Filed Jan. 22, 1960.

HONEY-VIN

For Food Drink Concentrate Made From Honey and Vinegar.
First use Jan. 14, 1960.

SN 89,572. Hilton Credit Corporation, d.b.a. Carte Blanche, Los Angeles, Calif. Filed Jan. 25, 1960.

CARTE BLANCHE

For Cheese and Cheese Spreads, Preserves, Fruit Cake, and Candy.
First use Dec. 21, 1959.

SN 89,579. Hampton House Coffee Corp., Queens, N.Y. Filed Jan. 25, 1960.

HAMPTON HOUSE

For Coffee, Tea, and Cocoa.
First use December 1935.

SN 89,883. West Foods, Inc., Soquel, Calif. Filed Jan. 28, 1960.

Shady Oak

Owner of Reg. Nos. 424,037 and 607,281.
For Fresh Mushrooms, Canned Mushrooms, Mushroom Soup, and Steak Sauce.
First use March 1941.

SN 89,896. Comstock Foods, Incorporated, Newark, N.Y. Filed Jan. 29, 1960.

CATO

For Canned Fruits and Vegetables.
First use in the year 1918.

SN 90,649. Neiman-Marcus Company, Dallas, Tex. Filed Feb. 9, 1960.

TEXAS PRAIRIEFIRE

For Hors d'Oeuvres—Namely, Canned Jalapeno Bean Dip.
First use Nov. 27, 1957.

SN 91,434. Pet Milk Company, St. Louis, Mo. Filed Feb. 23, 1960.

SWISS MISS

For Frozen Pies.
First use Jan. 16, 1960.

SN 91,453. Melville Sahyun, d.b.a. Sahyun Laboratories, Santa Barbara, Calif. Filed Feb. 23, 1960.

MYLIN

For Non-Caloric Sweetening Agent.
First use July 14, 1959.

SN 91,488. Vincent B. Zaninovich & Sons, d.b.a. V. B. Zaninovich & Sons, Delano, Calif. Filed Feb. 23, 1960.

EARLY MART

For Fresh Grapes.
First use July 1939.

SN 91,489. Vincent B. Zaninovich & Sons, d.b.a. V. B. Zaninovich & Sons, Delano, Calif. Filed Feb. 23, 1960.

VBZ

For Fresh Grapes.
First use July 1938.

SN 91,490. Vincent B. Zaninovich & Sons, d.b.a. Ducor Farms, Delano, Calif. Filed Feb. 23, 1960.

MR. Z

For Fresh Grapes.
First use Aug. 3, 1957.

SN 91,491. Vincent B. Zaninovich & Sons, d.b.a. V. Zaninovich, Delano, Calif. Filed Feb. 23, 1960.

DEL-GRO

For Fresh Grapes.
First use July 1948.

SN 91,731. American Chicle Company, Long Island City, N.Y. Filed Feb. 29, 1960.

ROLAIDS

Owner of Reg. Nos. 591,507 and 613,436.
For Chewing Gum.
First use Jan. 5, 1960; Aug. 25, 1953, on antacid mints.

SN 91,732. American Chicle Company, Long Island City, N.Y. Filed Feb. 29, 1960.

CERTS

Owner of Reg. Nos. 611,194 and 627,498.
For Chewing Gum.
First use Jan. 5, 1960; Oct. 7, 1954, on breath purifying mints.

SN 94,069. Instant Foods of California, Inc., Modesto, Calif. Filed Mar. 31, 1960.

Mrs. **Chips**

For Food Dip Seasonings.
First use Nov. 30, 1959.

Class 47—Wines

SN 69,660. Josefine Lucany, geb. Milz and Helene Schregel, geb. Milz, Neumagen, Germany. Filed Mar. 16, 1959.

„Neumagener Sonnuhr".

The word "Neumagener" is disclaimed. The word "Sonnuhr" is an abbreviation of "Sonnenuhr" which in English means "sun dial." Owner of German Reg. No. 97,781, dated May 15, 1907.
For Wines.

Class 48—Malt Beverages and Liquors

SN 99,831. Jackson Brewing Company, New Orleans, La. Filed June 28, 1960.

TEX

Owner of Reg. No. 315,667.
For Beer.
First use Mar. 19, 1934.

Class 49—Distilled Alcoholic Liquors

SN 66,113. James & George Stodart Limited, Dumbarton, Scotland. Filed Jan. 19, 1959.



The drawing is lined for gold. All wording and notations appearing in the mark are disclaimed apart from the mark as shown.
For Whisky.
First use Dec. 26, 1955; in commerce Dec. 26, 1955.

SN 75,784. Schenley Distillers, Inc., New York, N.Y. Filed June 15, 1959.

MISS KENTUCKY BOURBON

Applicant claims no exclusive rights in "Kentucky Bourbon" as the name of the goods.
For Kentucky Straight Bourbon Whiskey.
First use May 18, 1959.

SN 82,383. Barton Distilling Company, Chicago, Ill. Filed Sept. 30, 1959.

TOM BURNS

For Whiskey.
First use Nov. 1, 1946.

SN 82,387. Barton Distilling Company, Chicago, Ill. Filed Sept. 30, 1959.

STUART HILL

For Whiskey.
First use Mar. 14, 1947.

SN 84,351. H. Stenham Ltd., d.b.a. Premier Scotch Whisky Co., London, England. Filed Oct. 30, 1959.



Owner of British Reg. No. 767,855, dated July 29, 1957.
For Scotch Whisky.

SN 92,282. Mr. Boston Distiller Inc., Boston, Mass. Filed Mar. 7, 1960.

THREE COINS

For Whiskey, Vodka, Distilled Dry Gin, and Alcoholic Cordials.
First use Feb. 23, 1960.

Class 51—Cosmetics and Toilet Preparations

SN 78,294. Les Parfums Worth de Paris, Inc., New York, N.Y. Filed July 23, 1959.

IMPRUDENCE

For Perfumes, Bath Salts, Astringents, Cold Creams, Toilet Waters, Face Powders, Rouges, Skin Bleaches, Shampoos, Skin Creams, Talcum Powders, Eye Drops, Lipsticks, Eyebrow Pencils, Vanishing Creams, Sachets, Hair, Face, Hand, and Foot Lotions.
First use July 1, 1938.

SN 78,487. Noreen, Inc., Denver, Colo. Filed July 27, 1959.

blontop

For Hair Bleaching Compound.
First use on about June 2, 1959.

SN 78,488. Noreen, Inc., Denver, Colo. Filed July 27, 1959.

INVISIBLE HAT

For Hair-Setting Compound.
First use on or about June 2, 1959.

SN 80,846. Associated Products, Inc., New York, N.Y., assignee of American Home Products Corporation, d.b.a. Whitehall Laboratories and as Whitehall Laboratories, Inc., New York, N.Y. Filed Sept. 4, 1959.

SKINSATION

For Skin Creams and Lotions.
First use Dec. 24, 1947.

SN 90,792. Texas Pharmacal Company, San Antonio, Tex. Filed Feb. 11, 1960.

Sundare

For Sun Tan Lotion.
First use Jan. 13, 1960.

SN 92,433. B. T. Babbitt, Inc., New York, N.Y. Filed Mar. 9, 1960.

CHARLES ANTELL

Owner of Reg. Nos. 573,223, 609,720, and others.
For Shaving Cream.
First use on or about Mar. 1, 1960.

Class 52—Detergents and Soaps

SN 52,359. Tripoli Barber Supply Co., d.b.a. Tripoli Company, Philadelphia, Pa. Filed May 26, 1958.

SANI-LUBE

For Fluid for Cleaning, Sanitizing, and Lubricating Electric Razors, Shears, Clipper Blades and the Like.
First use Apr. 1, 1957.

SN 82,948. The Fry Brothers Co., Cincinnati, Ohio. Filed Oct. 9, 1959.

SUPERB Bondtest DRY CLEANING

The words "Superb Dry Cleaning" are disclaimed apart from the mark as a whole.
For Liquid Dry Cleaning Charge Detergent.
First use June 4, 1959.

SN 89,787. Carl J. Myers, d.b.a. No-Buf Products, St. Louis, Mo. Filed Jan. 27, 1960.

NO-BUF WONDER

No claim is made to the words "No-Buf" apart from the mark.
For Volatile Liquid Chemical Preparation for Cleaning Rubber Products Prior to the Application of Patches Thereto.
First use Oct. 17, 1959.

SN 90,874. Samuel T. Watson, d.b.a. Li-Zain Products, Chicago, Ill. Filed Feb. 12, 1960.

LI ZAIN

For Shampoo.
First use Feb. 4, 1960.

SN 92,819. Jay D. Silberman, d.b.a. White Frost Chemicals, Greenwich, Conn. Filed Mar. 14, 1960.

LUVSWOOL

For Cold Water Soap in Powder Form.
First use Feb. 4, 1960.

SERVICE MARKS

Class 101 — Advertising and Business

SN 53,843. Valu-Plus Trading Stamp Corp., Farmingdale, N.Y. Filed June 18, 1958.

VALU-PLUS

For Promoting the Sale of Goods of Others Through the Issuance of and Upon the Redemption of Trading Certificates for Merchandise.
First use in April 1956.

Class 107 — Education and Entertainment

SN 55,632. America's Junior Miss Pageant, Inc., Mobile, Ala. Filed July 21, 1958.

AMERICA'S JUNIOR MISS

For Promotion of Education Through the Granting of Scholarships, the Recipients Being Selected in Local, State, and National Contests, Based on Such Factors as Beauty, Personality, and Talent.
First use June 1, 1958.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 85,896. The National Association of Artificial Breeders, Columbia, Mo. Filed Nov. 23, 1959.

NATIONAL ASSOCIATION OF ARTIFICIAL BREEDERS — NAAB — MEMBER

The drawing is lined for red and blue.
For Indicating Membership in an Organization of Artificial Breeders.
First use Sept. 20, 1954.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

703,056. HANDI-SAND. Whitehead Brothers Company. SN 39,433. Pub. 6-7-60. Filed 10-22-57.

703,057. CW AND DESIGN. Curtiss-Wright Corporation. SN 47,786. Pub. 6-7-60. Filed 3-14-58.

703,058. PATCO'S BEST-TEST. Lee Patten Seed Company. SN 62,767. Pub. 6-7-60. Filed 11-19-58.

703,059. FRAGRAMUM. Elizabeth B. Parker and Hugh D. Wilson, d.b.a. Fragramum Chrysanthemums. SN 70,515. Pub. 6-7-60. Filed 3-30-59.

703,060. FLEXIGRIP AND DESIGN. Flexigrip, Inc. SN 72,721. Pub. 6-7-60. Filed 5-1-59.

703,061. MIL-BAR. Milwhite Mud Sales Company. SN 73,950. Pub. 6-7-60. Filed 5-18-59.

703,062. DELTAPINE. Delta & Pine Land Company of Mississippi. SN 74,299. Pub. 6-7-60. Filed 5-22-59.

703,063. LEATH-O. Milwhite Mud Sales Company. SN 74,443. Pub. 6-7-60. Filed 5-25-59.

703,064. SENATOR CALF. Donovan Industries, Inc. SN 74,511. Pub. 6-7-60. Filed 5-26-59.

703,065. SUPER-COL. Milwhite Mud Sales Company. SN 74,771. Pub. 6-7-60. Filed 5-29-59.

703,066. WINSLOW AND DESIGN. Leonard F. Winslow Co., Inc. SN 75,041. Pub. 6-7-60. Filed 6-3-59.

703,067. KINDARZT. Armour and Company. SN 75,053. Pub. 6-7-60. Filed 6-4-59.

703,068. KYDEX. Rohm & Haas Company. SN 77,230. Pub. 6-7-60. Filed 7-7-59.

703,069. REDI-PULL. Interstate Bakeries Corporation. SN 77,289. Pub. 6-7-60. Filed 7-8-59.

703,070. POP/CO/PAC. Popcopac, Inc. SN 79,703. Pub. 6-7-60. Filed 8-17-59.

703,071. COURTELLE. Courtaulds, Limited. SN 83,594. Pub. 6-7-60. Filed 10-12-59.

703,072. AGFAFOL. Agfa Aktiengesellschaft. SN 84,044. Pub. 6-7-60. Filed 10-27-59.

703,073. SOLITHANE. Thiokol Chemical Corporation. SN 84,103. Pub. 6-7-60. Filed 10-27-59.

703,074. RIGITHANE. Thiokol Chemical Corporation. SN 84,104. Pub. 6-7-60. Filed 10-27-59.

Class 2 — Receptacles

703,075. PI PETERSEN INDUSTRIES. Petersen Industries, Inc. SN 75,650. Pub. 6-7-60. Filed 6-12-59.

703,076. STYLINE. Master Metal Products, Incorporated. SN 87,249. Pub. 6-7-60. Filed 12-14-59.

703,077. CRESTLINE. The Coleman Company, Inc. SN 87,409. Pub. 6-7-60. Filed 12-16-59.

703,078. INVITATION. Flambeau Plastics Corporation. SN 87,664. Pub. 6-7-60. Filed 12-21-59.

703,079. POLYGAL. Herbert F. Cox, Jr. SN 88,216. Pub. 6-7-60. Filed 12-30-59.

703,080. DRESS CADDY. Distinguished Gift Manufacturers, Inc. SN 88,236. Pub. 6-7-60. Filed 12-30-59.

703,081. KITCHEN-MATE. Alton E. Schermer, d.b.a. Kitchen Mate Mfg. Company. SN 88,336. Pub. 6-7-60. Filed 12-31-59.

Class 5 — Adhesives

703,082. DRAFTAPE. Eugene Dietzgen Co. SN 58,622. Pub. 6-7-60. Filed 9-9-58.

Class 6 — Chemicals and Chemical Compositions

703,083. EMPILAN. Marchon Products Limited. SN 36,305. Pub. 6-7-60. Filed 8-27-57.

703,084. ESTATE. United Co-Operatives, Inc. SN 42,793. Pub. 6-7-60. Filed 12-20-57.

703,085. PHILIBLACK. Phillips Chemical Company. SN 51,052. Pub. 6-7-60. Filed 5-5-58.

703,086. PHILOBLACK. Phillips Chemical Company. SN 51,053. Pub. 6-7-60. Filed 5-5-58.

703,087. OUTDOOR CHEF. Adams Corporation, Korn Kurls Division. SN 60,592. Pub. 6-7-60. Filed 10-14-58.

703,088. HYDROLAN. American Lanolin Corporation. SN 61,606. Pub. 6-7-60. Filed 10-30-58.

703,089. DEFLOCIMENTO. American-Marietta Company. SN 71,540. Pub. 6-7-60. Filed 4-15-59.

703,090. SUPER LIGCO. Milwhite Mud Sales Company. SN 74,438. Pub. 6-7-60. Filed 5-25-59.

703,091. CALTROL. Milwhite Mud Sales Company. SN 74,441. Pub. 6-7-60. Filed 5-25-59.

703,092. LIGCO. Milwhite Mud Sales Company. SN 74,442. Pub. 6-7-60. Filed 5-25-59.

703,093. MILSTARCH. Milwhite Mud Sales Company. SN 74,444. Pub. 6-7-60. Filed 5-25-59.

703,094. PERCHLORON. Pennsalt Chemicals Corporation. SN 74,454. Pub. 6-7-60. Filed 5-25-59.

703,095. NO TRACE. The Gillette Company. SN 75,301. Pub. 6-7-60. Filed 6-8-59.

703,096. NALCOLYTE. Nalco Chemical Company. SN 79,071. Pub. 6-7-60. Filed 8-5-59.

703,097. CRUCIBLE SYMBOL DESIGN. Foundry Services, Inc. SN 82,503. Pub. 6-7-60. Filed 10-1-59.

703,098. ALPHALIDE. Alloy Surfaces Company, Inc. SN 83,933. Pub. 6-7-60. Filed 10-26-59.

703,099. VANTALUX. E. I. du Pont de Nemours and Company. SN 84,874. Pub. 6-7-60. Filed 11-9-59.

703,100. SPRING RAIN. Tidy House Products Company. SN 85,928. Pub. 6-7-60. Filed 11-23-59.

703,101. WINTER SAFE AND DESIGN. The Army and Air Force Exchange Service. SN 87,394. Pub. 6-7-60. Filed 12-16-59.

703,102. SOLVOFEN. General Aniline & Film Corporation. SN 89,266. Pub. 6-7-60. Filed 1-19-60.

703,103. COOMASSIE. Imperial Chemical Industries Limited. SN 89,434. Pub. 5-10-60. Filed 1-21-60.

Class 7 — Cordage

703,104. TYMASTER. United Shoe Machinery Corporation. SN 84,033. Pub. 6-7-60. Filed 10-26-59.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

703,105. LOBSTER. W. J. Taylor, d.b.a. Taylor Fireworks Company. SN 86,611. Pub. 6-7-60. Filed 12-3-59.

703,106. CASH. Accles & Shelvoke Limited. SN 88,506. Pub. 5-17-60. Filed 1-6-60.

Class 12 — Construction Materials

703,107. HI-LITE. Besser Company. SN 49,550. Pub. 6-7-60. Filed 4-14-58.

703,108. COLOR BAND DESIGN OF GREEN AND YELLOW. The Bullard Clark Company. SN 58,334. Pub. 6-7-60. Filed 9-4-58.

703,109. WEATHERPROOFED AND DESIGN. Home Enterprises of Rockland, Inc. SN 69,807. Pub. 6-7-60. Filed 3-18-59.

703,110. SPRING MIST. Victor Oolitic Stone Company. SN 70,560. Pub. 6-7-60. Filed 3-30-59.

703,111. SALIRMA. R. Bertelli. SN 71,465. Pub. 6-7-60. Filed 4-14-59.

703,112. MICRO-FINE. United States Plywood Corporation. SN 72,460. Pub. 6-7-60. Filed 4-28-59.

703,113. MINI-BUILDING. Georges Jacques Miron, d.b.a. Modern Engineering Industries. SN 73,587. Pub. 6-7-60. Filed 5-12-59.

703,114. ARGOSY. Industrial Corporation of America. SN 74,583. Pub. 6-7-60. Filed 5-27-59.

703,115. METAL-FOLD. Raymond P. Artman. SN 74,642. Pub. 6-7-60. Filed 5-28-59.

703,116. GILSO-GARD. American Gilsonite Company. SN 75,048. Pub. 6-7-60. Filed 6-4-59.

703,117. EMERI-EPOX. Walter Maguire Company, Inc. SN 75,570. Pub. 6-7-60. Filed 6-11-59.

703,118. FOIL-TEMP. The Philip Carey Manufacturing Company. SN 76,921. Pub. 6-7-60. Filed 7-2-59.

703,119. IRON-LITE. William Bascom Kellett, d.b.a. Iron-Lite Manufacturing Company. SN 78,291. Pub. 6-7-60. Filed 7-23-59.

703,120. CC. Curtis Companies Incorporated. SN 78,433. Pub. 6-7-60. Filed 7-27-59.

703,121. BLENDBOARD. Pope & Talbot Inc. SN 82,595. Pub. 6-7-60. Filed 10-2-59.

703,122. FIX-CRETE. W. Clifford McNicholl, d.b.a. Cement Weld Company. SN 82,689. Pub. 6-7-60. Filed 10-5-59.

703,123. REPRESENTATION OF BLACK HORSE AND FLAG. Merritt-Chapman & Scott Corporation. SN 83,898. Pub. 6-7-60. Filed 10-23-59.

703,124. UNION. Union Gypsum Company. SN 85,061. Pub. 6-7-60. Filed 11-10-59.

703,125. UNION ETC. WITHIN A CIRCLE. Union Gypsum Company. SN 85,062. Pub. 6-7-60. Filed 11-10-59.

703,126. RYERSON CERTIFIED QUALITY AND DESIGN. Joseph T. Ryerson & Son, Inc. SN 85,614. Pub. 6-7-60. Filed 11-18-59.

703,127. KOPPERS AND DESIGN. Koppers Company, Inc. SN 88,926. Pub. 6-7-60. Filed 1-13-60.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

703,128. LOK-TWIST. The Colorado Fuel and Iron Corporation. SN 76,313. Pub. 6-7-60. Filed 6-23-59.

703,129. CORBIN AND OVAL DESIGN. The American Hardware Corporation. SN 78,415. Pub. 6-7-60. Filed 7-27-59.

703,130. RYERSON CERTIFIED QUALITY AND DESIGN. Joseph T. Ryerson & Son, Inc. SN 85,617. Pub. 6-7-60. Filed 11-18-59.

703,131. DISTRIBOJET. Spraying Systems Co. SN 89,470. Pub. 6-7-60. Filed 1-21-60.

Class 14 — Metals and Metal Castings and Forgings

703,132. VA FIRST QUALITY. Vanadium-Alloys Steel Company. SN 76,531. Pub. 6-7-60. Filed 6-25-59.

703,133. MIN-O-DEE AND DESIGN. Lock Thread Corporation. SN 78,884. Pub. 6-7-60. Filed 8-3-59.

703,134. LECO. Lehigh Steel Corp. SN 83,635. Pub. 6-7-60. Filed 10-20-59.

703,135. RYERSON CERTIFIED QUALITY AND DESIGN. Joseph T. Ryerson & Son, Inc. SN 85,616. Pub. 6-7-60. Filed 11-18-59.

703,136. CASTETTES. Fansteel Metallurgical Corporation. SN 86,746. Pub. 6-7-60. Filed 12-7-59.

Class 15 — Oils and Greases

703,137. PARAJET. Paragon Oil Co., Inc. SN 75,649. Pub. 1-26-60. Filed 6-12-59.

703,138. PHOSTANE. Monsanto Chemical Company. SN 78,805. Pub. 6-7-60. Filed 7-31-59.

703,139. TIGER. Monsanto Chemical Company. SN 84,238. Pub. 6-7-60. Filed 10-29-59.

703,140. MOLYSLIP. Slip Products & Engineering Co. Ltd. SN 86,603. Pub. 6-7-60. Filed 12-3-59.

703,141. LUBAID AND DESIGN. Vanda Sauerborn, d.b.a. Lubaid Company. SN 87,596. Pub. 6-7-60. Filed 12-16-59.

703,142. SKID OIL. Skid Oil Co., Inc. SN 87,986. Pub. 6-7-60. Filed 12-24-59.

Class 16 — Protective and Decorative Coatings

703,143. STATOFLEX. Maas & Waldstein Co. SN 61,495. Pub. 6-7-60. Filed 10-28-58.

703,144. TRI CHEM LIQUID EMBROIDERY AND DESIGN. Tri-Chem, Inc. SN 76,350. Pub. 6-7-60. Filed 6-23-59.

703,145. EPI-GARD. The Valspar Corporation. SN 78,529. Pub. 6-7-60. Filed 7-27-59.

703,146. VICTORY E-Z-ON AND DESIGN. St. Louis Paint Manufacturing Company. SN 81,346. Pub. 6-7-60. Filed 9-14-59.

703,147. B-90 KNOT SEALER. Shawinigan Resins Corporation. SN 89,379. Pub. 6-7-60. Filed 1-20-60.

Class 17 — Tobacco Products

703,148. B & H. Benson and Hedges. SN 68,103. Pub. 6-7-60. Filed 2-20-59.

703,149. PORTRAIT AND DESIGN. DWG Cigar Corporation. SN 75,906. Pub. 6-7-60. Filed 6-17-59.

703,150. EUPHORIA. Marketways, Inc. SN 84,915. Pub. 6-7-60. Filed 11-9-59.

Class 18 — Medicines and Pharmaceutical Preparations

703,151. ECON-CENTRATE AND DESIGN. Vit-A-Way, Inc. SN 54,276. Pub. 6-7-60. Filed 6-25-58.

703,152. VITA/VYNE. Vitaminerals, Inc. SN 80,066. Pub. 6-7-60. Filed 10-3-58.

703,153. STERICIDAL. Mueller Welt Contact Lenses, Inc., d.b.a. Davis-Ward Laboratories. SN 80,169. Pub. 6-7-60. Filed 10-6-58.

703,154. MY-KO AND DESIGN. Robert S. Apelian, d.b.a. My-Ko Laboratories. SN 65,881. Pub. 6-7-60. Filed 1-15-59.

703,155. EASTRONE ETC. AND DESIGN. Eastern Laboratories, Inc. SN 70,452. Pub. 6-7-60. Filed 3-30-59.

703,156. NAIL-TONE. Foods Plus, Inc. SN 73,216. Pub. 6-7-60. Filed 5-8-59.

703,157. CYREA. American Cyanamid Company. SN 74,177. Pub. 6-7-60. Filed 5-21-59.

703,158. WET-TONE B. Broemmel Pharmaceuticals (California corporation), assignee of Broemmel Pharmaceuticals (firm). SN 75,970. Pub. 6-7-60. Filed 6-18-59.

703,159. IMPERIAL. Imperial Drug Exchange, Inc., d.b.a. Imperial Vitamin Products. SN 77,672. Pub. 6-7-60. Filed 7-14-59.

703,160. PERIACTIN. Merck & Co., Inc. SN 81,080. Pub. 6-7-60. Filed 9-9-59.

703,161. ZIMEMA. Laboratorio Chimico-Farmaceutico v. Baldacci. SN 81,613. Pub. 6-7-60. Filed 9-18-59.

703,162. BI-SULF. American Home Products Corporation, assignee of Fort Dodge Laboratories, Inc. SN 86,132. Pub. 4-19-60. Filed 11-27-59.

703,163. LIPO-LEVAZINE. Hiss Pharmacal Company, Inc. SN 88,391. Pub. 6-7-60. Filed 1-4-60.

Class 19 — Vehicles

703,164. SPACE FLYER. D. P. Harris Hardware & Manufacturing Co., Inc. SN 74,863. Pub. 6-7-60. Filed 6-1-59.

703,165. SPACE MASTER. D. P. Harris Hardware & Manufacturing Co., Inc. SN 74,865. Pub. 6-7-60. Filed 6-1-59.

703,166. AIROMECH. Berg Manufacturing & Sales Co., Inc. SN 85,649. Pub. 6-7-60. Filed 11-19-59.

703,167. FRONTENAC. Ford Motor Company of Canada, Limited. SN 89,056. Pub. 5-31-60. Filed 1-15-60.

Class 20 — Linoleum and Oiled Cloth

703,168. AMTICO TEXTURA AND DESIGN. American Biltrite Rubber Co., Inc. SN 88,127. Pub. 6-7-60. Filed 12-29-59.

Class 21 — Electrical Apparatus, Machines, and Supplies

703,169. ELECTRIONIC AND DESIGN. Barber-Colman Company. SN 38,793. Pub. 6-7-60. Filed 10-14-57.

703,170. LI AND DESIGN. Litton Industries, Inc. CONSOLIDATED CERTIFICATE. SN 67,550, pub. 12-15-59, filed 2-11-59, Cl. 21; SN 67,551, pub. 5-24-60, filed 2-11-59, Cl. 26.

703,171. DICTATYPER. Dictaphone Corporation. SN 76,622. Pub. 6-7-60. Filed 5-20-59.

703,172. CHASE-GLASTERRA. Chase and Sons, Inc. SN 80,964. Pub. 6-7-60. Filed 9-8-59.

703,173. CHASBESTOS. Chase and Sons, Inc. SN 80,965. Pub. 6-7-60. Filed 9-8-59.

703,174. ELPAC. Erie Resistor Corporation. SN 83,709. Pub. 6-7-60. Filed 10-21-59.

703,175. CARBOX. Leesona Corporation. SN 84,908. Pub. 6-7-60. Filed 11-9-59.

703,176. BENDIX. Bendix Aviation Corporation. SN 87,778. Pub. 6-7-60. Filed 12-22-59.

703,177. ARKAY. Arkay International, Inc. SN 87,964. Pub. 6-7-60. Filed 12-24-59.

703,178. BELDFOIL. Belden Manufacturing Company. SN 89,124. Pub. 6-7-60. Filed 1-18-60.

703,179. TC. Telecomputing Corporation. SN 89,308. Pub. 6-7-60. Filed 1-19-60.

703,180. P AND DESIGN. Progress Manufacturing Company, Inc. SN 89,453. Pub. 6-7-60. Filed 1-21-60.

703,181. MM AND DESIGN. Progress Manufacturing Company, Inc. SN 89,459. Pub. 6-7-60. Filed 1-21-60.

703,182. ELSBY. Stewart-Warner Corporation. SN 90,281. Pub. 6-7-60. Filed 2-3-60.

703,183. WESTRIC AND PENNANT DESIGN. Westric Battery Company. SN 90,292. Pub. 6-7-60. Filed 2-3-60.

703,184. FILTEX. The Filtex Corporation. SN 90,631. Pub. 6-7-60. Filed 2-9-60.

Class 22 — Games, Toys, and Sporting Goods

703,185. MIDWESTER. Midwest Industries, Inc. SN 60,535. Pub. 6-7-60. Filed 10-13-58.

703,186. POLY PLAY. General Molds & Plastics Corp., d.b.a. "Andy Gard." SN 62,924. Pub. 6-7-60. Filed 11-21-58.

703,187. RIDE 'N SEEK. Alpheus W. Larson. SN 66,223. Pub. 6-7-60. Filed 1-21-59.

703,188. FISH KING. Berkley & Company, Inc. SN 73,192. Pub. 6-7-60. Filed 5-8-59.

703,189. SIGNATURE "RODS OF DISTINCTION" AND DESIGN. S. H. Barton and Co. SN 77,060. Pub. 6-7-60. Filed S.R. 7-6-59; Am. P.R. 3-14-60.

703,190. SEXAGONAL. J. Lionel H. Thurlow. SN 77,476. Pub. 6-7-60. Filed 7-10-59.

703,191. DYNAMO. John S. Collins, d.b.a. Truline Glass Rod Mfg. Co. SN 77,616. Pub. 6-7-60. Filed 7-13-59.

703,192. FLOATABLES. Kestral Corporation. SN 82,001. Pub. 6-7-60. Filed 9-24-59.

703,193. MARX TOYS AND DESIGN. Louis Marx & Company, Inc. SN 83,990. Pub. 6-7-60. Filed 10-26-59.

703,194. MAGIC MARXIE. Louis Marx & Company, Inc. SN 83,991. Pub. 6-7-60. Filed 10-26-59.

703,195. ANGLERS. Anglers' Manufacturing Corporation. SN 84,585. Pub. 6-7-60. Filed 11-4-59.

703,196. BALL-O'-FUN. Johnson Research and Development Co., Inc. SN 85,871. Pub. 6-7-60. Filed 11-23-59.

703,197. PUNCH-A-LOON AND DESIGN. The Rado-Matic Corporation. SN 86,062. Pub. 6-7-60. Filed 11-25-59.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

703,198. DURA BLADE PSS AND DESIGN. Processed Steel Sales Company. SN 54,256. Pub. 6-7-60. Filed 6-25-58.

703,199. THE STRONGEST GEARED POWER FOR ITS WEIGHT IN THE WORLD. Beebe Bros. SN 60,101. Pub. 6-7-60. Filed 10-6-58.

703,200. CONTINENTAL CERTIFIED ETC. AND DESIGN. Continental Drill Corporation, Inc. SN 62,529. Pub. 6-7-60. Filed 11-17-58.

703,201. KORALTONE. Ideal Roller & Manufacturing Company. SN 68,144. Pub. 6-7-60. Filed 2-20-59.

703,202. POLYPRESS. Burndy Corporation. SN 68,224. Pub. 6-7-60. Filed 2-24-59.

703,203. PET. Atlantic Research Corporation. SN 70,985. Pub. 6-7-60. Filed 4-7-59.

703,204. FLAME EDGE AND DESIGN. Robeson Cutlery Company, Inc. SN 72,367. Pub. 6-7-60. Filed 4-27-59.

703,205. SHULER AXLES AND DESIGN. Shuler Axle Company. SN 73,837. Pub. 6-7-60. Filed 5-15-59.

703,206. LCR. Lavallee & Ide, Inc. SN 74,590. Pub. 6-7-60. Filed 5-27-59.

703,207. ZAKTO. H. D. Hudson Manufacturing Company. SN 75,919. Pub. 6-7-60. Filed 6-17-59.

703,208. HP AND DESIGN. Harlo Products Corporation. SN 76,395. Pub. 6-7-60. Filed 6-24-59.

703,209. HECSHARP. Henry C. Schaerf, d.b.a. Henry C. Schaerf Company. SN 78,653. Pub. 6-7-60. Filed 7-29-59.

703,210. UPSHEEN. Saco-Lowell Shops. SN 79,295. Pub. 6-7-60. Filed 8-10-59.

703,211. MEROX. Universal Oil Products Company. SN 85,433. Pub. 6-7-60. Filed 11-16-59.

703,212. BIOGEST. The American Ship Building Company. SN 86,473. Pub. 6-7-60. Filed 12-2-59.

703,213. THERMO-AIRE. Stewart-Warner Corporation. SN 87,290. Pub. 6-7-60. Filed 12-14-59.

703,214. USTERMATIC. Zellweger Ltd. SN 87,606. Pub. 6-7-60. Filed 12-18-59.

703,215. GARRISON. Garrison Machine Works, Inc. SN 88,748. Pub. 6-7-60. Filed 1-11-60.

703,216. CASTLE-MOAT DESIGN. Garrison Machine Works, Inc. SN 88,749. Pub. 6-7-60. Filed 1-11-60.

703,217. WALTER AND DESIGN. Carl Walter Fabrik fur Bergwerksbedarf. SN 88,832. Pub. 5-24-60. Filed 1-11-60.

703,218. KOPPERS AND DESIGN. Koppers Company, Inc. SN 88,925. Pub. 6-7-60. Filed 1-13-60.

703,219. AUTOSONEX. Burton Rand, d.b.a. Metalclean Equipment Company. SN 89,297. Pub. 6-7-60. Filed 1-19-60.

Class 25—Locks and Safes

703,220. VAL-TEST AND DESIGN. Brown-Rogers-Dixson Co. SN 86,721. Pub. 6-7-60. Filed 12-7-59.

Class 26—Measuring and Scientific Appliances

703,170. CONSOLIDATED CERTIFICATE. See Class 21.

703,221. NUCLEAR-CHICAGO. Nuclear-Chicago Corporation. SN 41,711. Pub. 6-7-60. Filed 12-3-57.

703,222. APLIKA. Transparent Products Co. Inc. SN 55,285. Pub. 6-7-60. Filed 7-14-58.

703,223. ROTOJET. GPE Controls, Inc. SN 60,032. Pub. 6-7-60. Filed 10-3-58.

703,224. ATRONICS AND DESIGN. General Atronics Corporation. SN 60,132. Pub. 6-7-60. Filed 10-6-58.

703,225. THIMOMETER. Nuclear Development Corporation of America. SN 79,270. Pub. 6-7-60. Filed 8-10-59.

703,226. VARIPULSE. Barry Controls Incorporated. SN 80,151. Pub. 6-7-60. Filed 8-25-59.

703,227. PROJECT-O-MARKER. American Optical Company. SN 81,226. Pub. 6-7-60. Filed 9-14-59.

703,228. "MINIPAD." Birch Brothers Inc. SN 81,848. Pub. 6-7-60. Filed 7-1-59.

703,229. RODIGRAPH. Metrohm AG. (Metrohm S.A.) (Metrohm Ltd.). SN 82,942. Pub. 6-7-60. Filed 8-3-59.

703,230. COURIER. Minnesota Mining and Manufacturing Company. SN 84,550. Pub. 6-7-60. Filed 11-3-59.

703,231. YALE. Burke & James, Inc. SN 85,097. Pub. 4-26-60. Filed 11-12-59.

703,232. COPYRAPID. Agfa Aktiengesellschaft. SN 88,835. Pub. 5-24-60. Filed 1-12-60.

703,233. TC. Telecomputing Corporation. SN 89,311. Pub. 6-7-60. Filed 1-19-60.

703,234. NATIONAL AND DESIGN. Union Carbide Corporation. SN 90,663. Pub. 6-7-60. Filed 2-9-60.

703,235. ROAST-O-MATIC. Utility Appliance Corp. SN 90,666. Pub. 6-7-60. Filed 2-9-60.

703,236. LEADING LADY. Art-Craft Optical Company, Inc. SN 90,674. Pub. 6-7-60. Filed 2-10-60.

703,237. AI AND DESIGN. North American Aviation, Inc. SN 90,776. Pub. 6-7-60. Filed 2-11-60.

703,238. PHOTROL. Ambco, Inc. SN 90,861. Pub. 6-7-60. Filed 2-15-60.

703,239. SUPRE-TONE. Suprefot Film Products Co., Inc. SN 90,958. Pub. 6-7-60. Filed 2-15-60.

703,240. MAGNA-SWEEP. Kay Electric Company. SN 91,014. Pub. 6-7-60. Filed 2-16-60.

Class 28—Jewelry and Precious-Metal Ware

703,241. DIAMOND-ITE. Diamond-Ite Corporation of America, assignee of Fashion Craft Jewelry Co., Inc. SN 79,772. Pub. 6-7-60. Filed 8-18-59.

703,242. LUCKY BUCK. Coro, Inc. SN 88,188. Pub. 6-7-60. Filed 12-29-59.

Class 29—Brooms, Brushes, and Dusters

703,243. SPUR-TEX. Spurrier Paper Company, d.b.a. Spurriers. SN 63,108. Pub. 6-7-60. Filed 11-24-58.

703,244. REPRESENTATION OF SPUR. Spurrier Paper Company, d.b.a. Spurriers. SN 63,109. Pub. 6-7-60. Filed 11-24-58.

703,245. VALDEN. Dent & Vallis, Inc. SN 74,121. Pub. 6-7-60. Filed 5-20-59.

703,246. FLEXI-TUFT. Weco Products Company. SN 86,854. Pub. 6-7-60. Filed 12-7-59.

Class 30—Crockery, Earthenware, and Porcelain

703,247. FLEETWOOD. Shenango China, Inc. SN 67,712. Pub. 6-7-60. Filed 2-13-59.

703,248. SENYU. McNicol China Company, by change of name from The D. E. McNicol Pottery Company of West Virginia. SN 76,580. Pub. 6-7-60. Filed 6-26-59.

703,249. GRECIAN. McNicol China Company, by change of name from The D. E. McNicol Pottery Company of West Virginia. SN 76,581. Pub. 6-7-60. Filed 6-26-59.

Class 31—Filters and Refrigerators

703,250. ULTRAFLEX. Carl Schleicher & Schuell Company, Inc. SN 77,472. Pub. 6-7-60. Filed 7-10-59.

703,251. KOPPERS AND DESIGN. Koppers Company, Inc. SN 88,927. Pub. 6-7-60. Filed 1-13-60.

Class 32—Furniture and Upholstery

703,252. SLUMBERLAND SOFA-MATE ETC. AND DESIGN. Slumberland Products of Rhode Island, Inc. SN 67,997. Pub. 6-7-60. Filed 2-18-59.

703,253. TRIPLE CUSHION. Restonic Corporation. SN 75,114. Pub. 6-7-60. Filed 6-4-59.

703,254. DEBONAIRE. Globe Furniture Company. SN 78,024. Pub. 6-7-60. Filed 7-20-59.

703,255. MIRITHANE. Serta Associates, Inc. SN 88,942. Pub. 6-7-60. Filed 1-13-60.

Class 34—Heating, Lighting, and Ventilating Apparatus

703,256. ACOUSTA FAN. The New York Blower Company. SN 84,006. Pub. 6-7-60. Filed 10-26-59.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

703,257. SAFETY 1ST AND DESIGN. United States Rubber Company. SN 78,527. Pub. 6-7-60. Filed 7-27-59.

703,258. RIBGRIPPER. The Carlisle Corporation. SN 86,727. Pub. 6-7-60. Filed 12-7-59.

703,259. KOPPERS AND DESIGN. Koppers Company, Inc. SN 88,924. Pub. 6-7-60. Filed 1-13-60.

703,260. SIKUSEAL. Simmerwerke W. Simmer K.G. SN 89,380. Pub. 5-31-60. Filed 1-20-60.

Class 36—Musical Instruments and Supplies

703,261. LUMOPHON AND DESIGN. Grundig Radio-Werke G.m.b.H. SN 75,990. Pub. 6-7-60. Filed 6-18-59.

703,262. ALCO. Al Nyman & Son, Inc. SN 88,166. Pub. 6-7-60. Filed 12-29-59.

Class 37—Paper and Stationery

703,263. IRREMOVO. J. S. Staedtler. SN 60,989. Pub. 6-7-60. Filed 10-20-58.

703,264. VISTRONIC. Visirecord, Inc. SN 75,451. Pub. 6-7-60. Filed 6-9-59.

703,265. PST. Marcal Paper Mills, Inc. SN 85,020. Pub. 6-7-60. Filed 11-10-59.

703,266. ALCO. Al Nyman & Son, Inc. SN 88,165. Pub. 6-7-60. Filed 12-29-59.

Class 38—Prints and Publications

703,267. CANCO AND DESIGN. American Can Company. SN 56,427. Pub. 6-7-60. Filed 7-17-58.

703,268. CLAO PAPERS. The Contact Lens Association for Optometry. SN 73,323. Pub. 6-7-60. Filed 5-11-59.

703,269. JEWELERS' PRE-VIEWS. American Jewelry Publications Inc. SN 74,813. Pub. 6-7-60. Filed 6-1-59.

703,270. SELL. Harry L. Siegel. SN 76,962. Pub. 6-7-60. Filed 7-2-59.

703,271. SPORTS DIGEST. Barnes Publishing Company, Inc. SN 81,960. Pub. 6-7-60. Filed 9-24-59.

703,272. PAR ETC. AND DESIGN. James Alexander Graham, d.b.a. Palo Alto Research. SN 87,941. Pub. 6-7-60. Filed 12-24-59.

703,273. FLOW OF CAPITAL. James Alexander Graham, d.b.a. Palo Alto Research. SN 87,943. Pub. 6-7-60. Filed 12-24-59.

703,274. ACADEMY OF MASTER WINE GROWERS REPORT. Academy of Master Wine Growers. SN 94,033. Pub. 6-7-60. Filed 3-31-60.

Class 39—Clothing

703,275. KITTEN FINISH. Byer-Rolnick Hat Corporation. SN 58,160. Pub. 6-7-60. Filed 9-2-58.

703,276. HEAD CULTURE ETC. AND DESIGN. Men's Hats, Inc. SN 67,649. Pub. 6-7-60. Filed 1-26-59.

703,277. SUPER WARM. Carl Wishnack, Inc. SN 70,409. Pub. 6-7-60. Filed 3-27-59.

703,278. TUXOBUND. Formal Fashions, Inc. SN 76,666. Pub. 6-7-60. Filed 6-29-59.

703,279. SAFARI. Abercrombie & Fitch Company. SN 76,781. Pub. 6-7-60. Filed 6-30-59.

703,280. DOUTCHKA. Chambord Shoe Co., Inc. SN 78,607. Pub. 6-7-60. Filed 7-29-59.

703,281. CHAMPS-ELYSEES. Comptoir de l'Industrie Cotonniere, Etablissements Boussac, S.A.R.L. SN 80,177. Pub. 6-7-60. Filed 8-25-59.

703,282. IMPERIAL MAJESTY. M. Cohen & Son Coats & Suits, Inc. SN 81,119. Pub. 6-7-60. Filed 9-10-59.

703,283. VEE-KAY. Vee-Kay Import Company, Inc. SN 84,364. Pub. 6-7-60. Filed 10-30-59.

703,284. McKENZIE. Wilker Bros. Co. SN 84,491. Pub. 6-7-60. Filed 11-2-59.

703,285. RICHARD COLE—HAS DESIGNS ON YOU. Richard J. Cole, Inc. SN 85,564. Pub. 6-7-60. Filed 11-18-59.

703,286. SPOR-TEE. George Marquette. SN 85,599. Pub. 6-7-60. Filed 11-18-59.

703,287. WARREN CLOTHES AND DESIGN. Warren Sewell Clothing Company, Inc. SN 86,904. Pub. 6-7-60. Filed 12-8-59.

703,288. EVELYN PEARSON. Evelyn Pearson, Inc. SN 87,902. Pub. 6-7-60. Filed 12-23-59.

703,289. ARTSTYLE. James Jebaily Inc. SN 88,046. Pub. 6-7-60. Filed 12-28-59.

703,290. PROMISE TWO-FOLD. Poirette Corsets, Inc. SN 88,082. Pub. 6-7-60. Filed 12-28-59.

703,291. TWO-FOLD PROMISE. Poirette Corsets, Inc. SN 88,083. Pub. 6-7-60. Filed 12-28-59.

703,292. TOPBALL. F. W. Woolworth Co. SN 89,039. Pub. 6-7-60. Filed 1-14-60.

703,293. CHARLES HILL. Sidney M. Miller, d.b.a. Sportswear Specialists. SN 89,785. Pub. 6-7-60. Filed 1-27-60.

Class 40—Fancy Goods, Furnishings, and Notions

703,294. SUPER-VAL. Koh-I-Noor, Spojene Kovoprumyslove Zavody, Narodni Podnik. SN 89,069. Pub. 5-31-60. Filed 1-15-60.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

703,295. PERMANESE. Celanese Corporation of America. SN 78,683. Pub. 6-7-60. Filed 7-30-59.

703,296. SCOTCH. Minnesota Mining and Manufacturing Company. SN 81,004. Pub. 6-7-60. Filed 9-8-59.

703,297. PULL-TAPES. Robertson Factories, Inc. SN 88,689. Pub. 6-7-60. Filed 1-8-60.

Class 43—Thread and Yarn

703,298. ALPENNA. The National Silk Company, Incorporated. SN 86,054. Pub. 6-7-60. Filed 11-25-59.

703,299. SOFTGLO. American Enka Corporation. SN 88,634. Pub. 6-7-60. Filed 1-8-60.

Class 44—Dental, Medical, and Surgical Appliances

703,300. ADAM AND EVE. Wilson H. Scott, d.b.a. Scott Specialties. SN 86,895. Pub. 6-7-60. Filed 12-7-59.

703,301. CALDRIUM. Opotow Dental Manufacturing Corp. SN 86,899. Pub. 6-7-60. Filed 12-8-59.

Class 45—Soft Drinks and Carbonated Waters

703,302. QUI-NINI. Pepsi-Cola Bottling Company of Long Island Inc. SN 78,144. Pub. 6-7-60. Filed 7-21-59.

703,303. CHAMPAY. R. and H. Co. SN 85,517. Pub. 6-7-60. Filed 11-17-59.

Class 46 — Foods and Ingredients of Foods

703,304. HI-BALL AND DESIGN. Peanut Corporation of America, d.b.a. Peanut Products Company. SN 35,283. Pub. 6-7-60. Filed 8-9-57.

703,305. THE CANDY COWBOYS. The Jolly Rancher, Incorporated, d.b.a. The Candy Cowboys. SN 36,442. Pub. 2-3-59. Filed 8-29-57.

703,306. JELLY BEAN. Flavor Saver Inc. SN 66,541. Pub. 6-7-60. Filed 1-27-59.

703,307. POUCH O' GOLD. Armour and Company, d.b.a. Armour Creameries. SN 69,107. Pub. 6-7-60. Filed 3-9-59.

703,308. BAG O' GOLD. Armour and Company, d.b.a. Armour Creameries. SN 69,108. Pub. 6-7-60. Filed 3-9-59.

703,309. SANDERS. Fred Sanders. SN 71,443. Pub. 6-7-60. Filed 4-13-59.

703,310. "SKILLY" AND DESIGN. The James S. Merritt Company. SN 72,053. Pub. 6-7-60. Filed 4-22-59.

703,311. SPRUCE AND DESIGN. Kanematsu New York, Inc. SN 73,379. Pub. 6-7-60. Filed 5-11-59.

703,312. SPRUCE AND DESIGN. Kanematsu New York, Inc. SN 73,380. Pub. 6-7-60. Filed 5-11-59.

703,313. FANCIFUL REPRESENTATION OF A PRAIRIE DOG. Kellogg Company. SN 73,931. Pub. 6-7-60. Filed 5-18-59.

703,314. BEVERLY HILLS. Southern Planters, Inc. SN 73,993. Pub. 6-7-60. Filed 5-18-59.

703,315. KRACKEL. Hershey Chocolate Corporation. SN 75,184. Pub. 6-7-60. Filed 6-5-59.

703,316. EAT-ALL. The Eat-All Frozen Food Co. Inc. SN 77,658. Pub. 6-7-60. Filed 7-14-59.

703,317. DEBUTANTE. Toshio Watanabe, d.b.a. Village Ranch Market. SN 80,026. Pub. 6-7-60. Filed 8-21-59.

703,318. LAKOLENE. H. Kohnstamm & Co., Inc. SN 82,515. Pub. 6-7-60. Filed 10-1-59.

703,319. CLASSIQUE. M. H. Greenbaum, Inc. SN 83,968. Pub. 6-7-60. Filed 10-26-59.

703,320. LUCKY YOU. M. J. Holloway & Co. SN 88,394. Pub. 6-7-60. Filed 1-4-60.

703,321. JILK. Industriaktiebolaget Aromatic. SN 86,539. Pub. 5-31-60. Filed 1-6-60.

703,322. PORKY MANERO'S AND DESIGN. Clarence Manero, d.b.a. "Porky" Manero's. SN 88,906. Pub. 6-7-60. Filed 1-14-60.

Class 48 — Malt Beverages and Liquors

703,323. GAYBREE. Century Brewery Corporation. SN 86,110. Pub. 6-7-60. Filed 11-27-59.

Class 49 — Distilled Alcoholic Liquors

703,324. FRAPPEMINT. Julius Wile Sons & Co., Inc. SN 54,587. Pub. 6-7-60. Filed 6-30-58.

703,325. SILVER CIRCLE AND DESIGN. Angostura Bitters (Dr. J. G. B. Siegert & Sons) Limited. SN 69,712. Pub. 6-7-60. Filed 3-17-59.

703,326. GLENMORE. Glenmore Distilleries Company. SN 86,655. Pub. 6-7-60. Filed 12-4-59.

Class 50 — Merchandise Not Otherwise Classified

703,327. FLORABELLE. Florabelle Plastics Corporation. SN 64,634. Pub. 6-7-60. Filed 12-23-58.

703,328. MR. INSIDE. The Buxbanm Company. SN 86,726. Pub. 6-7-60. Filed 12-7-59.

703,329. ANSOLITE. Anderson & Sons, Inc. SN 86,918. Pub. 6-7-60. Filed 12-9-59.

Class 51 — Cosmetics and Toilet Preparations

703,330. POSNER'S EBONAIRE. I. Posner, Inc. SN 683,709. Pub. 1-24-56. Filed 3-17-55.

703,331. GRAVI'S. Laboratorios Gravi, S.A. SN 45,579. Pub. 6-7-60. Filed 2-10-58.

703,332. COME ALIVE RED. Clairol Incorporated (Delaware corporation), assignee of Clairol Incorporated (Connecticut corporation). SN 54,380. Pub. 6-7-60. Filed 6-27-58.

703,333. JAMAL MILKWAVE. Sales Affiliates Limited. SN 68,174. Pub. 6-7-60. Filed 2-20-59.

703,334. VW AND DESIGN. Viviane Woodard Cosmetics. SN 75,521. Pub. 6-7-60. Filed 6-10-59.

703,335. COMMAND. Lobco, Inc., d.b.a. Alberto-Culver Company. SN 75,749. Pub. 6-7-60. Filed 6-15-59.

703,336. CHEVALLIER AND DESIGN. Etablissements Chevallier, d.b.a. Société des Anciens Etablissements Chevallier Pere. SN 81,695. Pub. 6-7-60. Filed 9-21-59.

703,337. CLICK. Helene Curtis Industries, Inc. SN 84,861. Pub. 6-7-60. Filed 11-9-59.

703,338. BLANCHETTE. Produits Nina, Inc., d.b.a. Produits Nina. SN 85,610. Pub. 6-7-60. Filed 11-18-59.

703,339. AQUAMINT. Aquamint Laboratories, Inc. SN 86,531. Pub. 6-7-60. Filed 12-3-59.

703,340. GAY TOUCH. Helene Curtis Industries, Inc. SN 88,220. Pub. 6-7-60. Filed 12-30-59.

703,341. OFF-COLOR. Richard Hudnut. SN 88,763. Pub. 6-7-60. Filed 1-11-60.

Class 52 — Detergents and Soaps

703,342. ADISCO AND DESIGN. American Dispersoids Inc. SN 82,183. Pub. 6-7-60. Filed 9-28-59.

703,343. BRU-SPRA. The Diversey Corporation. SN 82,496. Pub. 6-7-60. Filed 10-1-59.

703,344. PARSONS'. Parsons Ammonia Company, Inc. SN 84,009. Pub. 6-7-60. Filed 10-26-59.

703,345. LEUK-AID. Leukaid Products, Inc. SN 84,814. Pub. 6-7-60. Filed 10-30-59.

703,346. UNDI GLO. Dumas Milner Corporation. SN 84,873. Pub. 6-7-60. Filed 11-9-59.

703,347. STAVE AND DESIGN. Stave, Inc. SN 85,625. Pub. 6-7-60. Filed 11-18-59.

703,348. DYLON. Mayborn Products Limited. SN 85,890. Pub. 6-7-60. Filed 11-23-59.

703,349. QUIT. Aerosol Corporation of America. SN 85,950. Pub. 6-7-60. Filed 11-24-59.

703,350. RAYVE. The Gillette Company, d.b.a. The Toni Company. SN 86,142. Pub. 6-7-60. Filed 11-27-59.

Service Marks

Class 100 — Miscellaneous

703,351. LITTLE BANQUET. Restaurant Supply Corporation. SN 48,932. Pub. 6-7-60. Filed 4-2-58.

703,352. V AND DESIGN. Viking Yacht Rental Corporation. SN 67,412. Pub. 6-7-60. Filed 2-9-59.

Class 101 — Advertising and Business

703,353. SHARADAY. Alvin B. Yerkes, Jr., d.b.a. The Sharaday Company. SN 74,012. Pub. 6-7-60. Filed 5-18-59.

703,354. WESTERN STATES ANGUS BONANZA. Pacific Coast Angus Association. SN 74,885. Pub. 6-7-60. Filed 6-1-59.

703,355. GOLD CARD OVERSEAS PLAN. Citroen Cars Midwest Distributors Corp. SN 75,043. Pub. 6-7-60. Filed 6-3-59.

703,356. SUPERPOOLS. J. Charles Rhodes, d.b.a. J. Charles Rhodes Associates. SN 89,870. Pub. 6-7-60. Filed 1-28-60.

Class 102 — Insurance and Financial

703,357. CENTRAL CHARGE SERVICE AND DESIGN. Central Charge Service Inc. SN 68,032. Pub. 6-7-60. Filed 2-19-59.

703,358. NORTHERN CHECK CREDIT ACCOUNT. Northern National Bank of Presque Isle. SN 78,807. Pub. 6-7-60. Filed 7-31-59.

703,359. TRANSOUTH AND DESIGN. Transouth Life Insurance Company. SN 87,386. Pub. 6-7-60. Filed 12-15-59.

Class 103 — Construction and Repair

703,360. H. L. COBLE ETC. AND DESIGN. H. L. Coble Construction Company. SN 46,207. Pub. 6-7-60. Filed 2-20-58.

703,361. FLAIR. Fox & Jacobs Construction Co., Inc. SN 64,404. Pub. 6-7-60. Filed 12-16-58.

703,362. MINI-BUILDING. Georges Jacques Miron, d.b.a. Modern Engineering Industries. SN 73,588. Pub. 6-7-60. Filed 5-13-59.

703,363. SURE-FIRE ETC. AND DESIGN. The Atlantic Refining Company. SN 79,088. Pub. 6-7-60. Filed 8-6-59.

703,364. ELEVONICS. Toledo Scale Corporation. SN 82,227. Pub. 6-7-60. Filed 9-28-59.

703,365. "JINGLE FOR JOHNSON." Johnson Furnace Company. SN 85,747. Pub. 6-7-60. Filed 11-20-59.

Class 106 — Material Treatment

703,366. V. Velveray Corporation. SN 36,033. Pub. 6-7-60. Filed 8-22-57.

703,367. SUPER-SMOOTH. Cranston Print Works Company. SN 67,207. Pub. 6-7-60. Filed 2-6-59.

703,368. STETTO. American & Efird Mills Inc. SN 74,287. Pub. 6-7-60. Filed 5-22-59.

703,369. FOTO PLUS. Charles Scharf, d.b.a. Foto Plus. SN 74,469. Pub. 6-7-60. Filed 5-25-59.

703,370. NALFINING. Nalco Chemical Company. SN 85,374. Pub. 6-7-60. Filed 11-16-59.

703,371. RYERSON CERTIFIED QUALITY AND DESIGN. Joseph T. Ryerson & Son, Inc. SN 85,615. Pub. 6-7-60. Filed 11-18-59.

703,372. MICRO-SIPE PROCESS. Micro Machinery Products, Inc. SN 86,184. Pub. 6-7-60. Filed 11-27-59.

Class 107 — Education and Entertainment

703,373. CAP'N PLINEY AND HIS PALS. Michael J. May. SN 45,587. Pub. 6-7-60. Filed 2-10-58.

703,374. CAPTAIN SATELLITE. Robert W. Monkman. SN 57,394. Pub. 6-7-60. Filed 8-18-58.

703,375. SHOWTIME. NEA Service, Inc. SN 72,139. Pub. 6-7-60. Filed 4-23-59.

Collective Membership Marks

Class 200

703,376. CLASSIC CAR CLUB OF AMERICA AND REPRESENTATION OF AN AUTOMOBILE. The Classic Car Club of America, Inc. SN 84,732. Pub. 6-7-60. Filed 11-6-59.

703,377. CPM AND DESIGN. The Institute of Real Estate Management. SN 86,499. Pub. 6-7-60. Filed 12-2-59.

Certification Mark

Class A — Goods

703,378. OWNER CERTIFIED AND DESIGN. Olin L. Hatton, Jr., d.b.a. Certified Sales Engineering Co. SN 51,453. Pub. 6-7-60. Filed 5-12-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

703,379. Benjamin F. Mawby, d.b.a. Port-A-Kenl Company, Roanoke, Va. SN 79,419. Filed P.R. 8-12-59; Am. S.R. 7-6-60.

PORT-A-KENL

For Portable, Collapsible, Dog, or Pet Houses.
First use July 1, 1959.

Class 4 — Abrasives and Polishing Materials

703,380. Zoe Chemical Co., Inc., Queens Village, N.Y. SN 67,177. Filed P.R. 2-5-59; Am. S.R. 7-5-60.

ROLL-ON

For Floor Wax.
First use Dec. 5, 1958.

Class 8 — Smokers' Articles, Not Including Tobacco Products

703,381. Rogers, Inc., New York, N.Y., by change of name from Rogers Imports Inc., New York, N.Y. SN 46,064. Filed P.R. 2-18-58; Am. S.R. 6-14-60.

"100"

For Cigarette Lighters.
First use Jan. 10, 1958.

Class 12 — Construction Materials

703,382. Frederic Brick & Tile Co., St. Louis, Mo. SN 53,866. Filed P.R. 6-19-58; Am. S.R. 6-30-60.

BRICVNEER

For Brick Facing.
First use May 6, 1958.

703,383. Inland Steel Products Company, Milwaukee, Wis. SN 76,066. Filed P.R. 6-18-59; Am. S.R. 5-20-60.

RIGID BEAD

For Expanded Short Flange Corner Bead.
First use Jan. 15, 1959.

703,384. Midland Brick and Tile Company, Chillicothe, Mo. SN 77,455. Filed P.R. 7-10-59; Am. S.R. 6-30-60.

LAY CLEAN—STAY CLEAN

For Bricks.
First use May 8, 1958.

703,385. Julius Blum & Co., Inc., Carlstadt, N.J. SN 78,600. Filed P.R. 7-29-59; Am. S.R. 7-6-60.

CARLSTADT

For Railing Systems, Handrails, Trellages, and Components Thereof.
First use Feb. 15, 1959.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

703,386. Mirro Aluminum Company, Manitowoc, Wis. SN 70,156. Filed P.R. 3-24-59; Am. S.R. 7-1-60.

HI-VALU

For Aluminum Cooking Utensils.
First use Mar. 1, 1953.

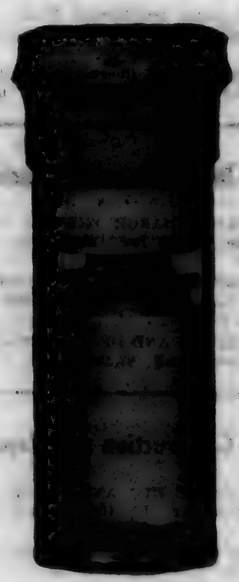
Class 18 — Medicines and Pharmaceutical Preparations

703,387. The Wander Company, d.b.a. Smith-Dorsey, Chicago, Ill. SN 40,628. Filed P.R. 11-13-57; Am. S.R. 6-1-60.

DORMETHAN

For Agent Used as an Ingredient of Antitussive Preparations.
First use Aug. 19, 1957.

703,388. Alcon Laboratories, Inc., Fort Worth, Tex. SN 82,947. Filed 10-5-59.



The trademark is in part the distinctive contour and design of the container for the goods and is in part a pictorial representation of such container which is printed on the cartons in which said containers are shipped.
For Containers Sold With Ophthalmic Solutions Therein.
First use Feb. 6, 1957.

Class 21 — Electrical Apparatus, Machines, and Supplies

703,389. Butler Manufacturing Company, Kansas City, Mo. SN 60,268. Filed P.R. 10-8-58; Am. S.R. 6-30-60.

CABLEGARD

For Interlocking Split Tube Sections Assemblable To Form Metal Conduits for Electric Wiring.
First use Sept. 19, 1958.

703,390. Dialco Electric Corp., Brooklyn, N.Y. SN 92,973. Filed P.R. 3-16-60; Am. S.R. 6-23-60.



For Christmas Tree Light Sets.
First use Aug. 27, 1956.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

703,391. Chace Doughnut Corporation, West Chester, Pa. SN 84,648. Filed P.R. 11-5-59; Am. S.R. 6-27-60.

CHACE

For Doughnut Cutters and Parts Therefor.
First use Apr. 20, 1959.

703,392. Alfa International Corp., New York, N.Y. SN 86,624. Filed P.R. 12-4-59; Am. S.R. 3-30-60

"Fiveyear"

For Meat Grinders and Meat Grinder Plates.
First use Oct. 1, 1958.

703,393. Wenger Mixer Manufacturing, Sabetha, Kans. SN 93,111. Filed 3-17-60.

Wenger

For Molasses Feed Blenders, Animal Fat Mixers, Multi-Blenders, Dressers and Blenders, Pellet Mills, Dog Food Machines, Pellet Coolers, Liquid Feeders, Storage Tank Pumps, Belt Conveyors, Bulk Feed Unloaders, Feed Shakers, Steam Boilers, Crumblizers, Feed Toasters, and Metered Flow Pumps.
First use December 1957.

Class 34 — Heating, Lighting, and Ventilating Apparatus

703,394. Air Devices, Inc., New York, N.Y. SN 63,384. Filed P.R. 12-1-58; Am. S.R. 7-7-60.

DEFLECTAIRE

For Air-Conditioning, Heating, and Ventilating Equipment—Namely, Registers and Grilles.
First use Sept. 4, 1958.

Class 36 — Musical Instruments and Supplies

703,395. Stereo-Sonic Recording Corporation, La Grange Park, Ill. SN 78,382. Filed P.R. 7-24-59; Am. S.R. 4-18-60.



The drawing is lined for orange.
For Phonograph Records.
First use June 1957.

703,396. Morse Sewing Machine and Supply Corp., New York, N.Y. SN 61,082. Filed P.R. 9-9-59; Am. S.R. 6-30-60.

MORSE

For Tape Recorders.
First use June 4, 1959.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

703,397. Hugh Nelson-Columbia Carpet Mills, Inc., Philadelphia, Pa. SN 75,437. Filed P.R. 6-9-59; Am. S.R. 6-6-60.

Barclay

For Textile Carpets and Rugs.
First use May 29, 1959.

Class 43 — Thread and Yarn

703,398. Coats & Clark Inc., New York, N.Y. SN 90,398. Filed 2-5-60.

"LUSTERSHEEN"

For Knitting and Crochet Thread.
First use about Apr. 1, 1936.

Class 46 — Foods and Ingredients of Foods

703,399. Press-'N-Serve Foods, Inc., St. Louis, Mo. SN 56,657. Filed P.R. 8-5-58; Am. S.R. 3-22-60.

PRESS-'N-SERVE

For Chocolate Flavoring Syrup.
First use July 22, 1958.

Class 47 — Wines

703,400. E. & J. Gallo Winery, Modesto, Calif. SN 77,660. Filed P.R. 7-14-59; Am. S.R. 2-15-60.



The mark consists of the conformation of a bottle, in which the letter "G" within a raised circle is embossed at regular-spaced intervals, used as the container for applicant's wines.
For Wines.
First use Jan. 2, 1959.

Class 49 — Distilled Alcoholic Liquors

703,401. Schenley Distillers, Inc., New York, N.Y. SN 65,380. Filed P.R. 1-6-59; Am. S.R. 5-24-60.

DIAMOND CLEAR

For Vodka.
First use Dec. 5, 1958.

Class 51 — Cosmetics and Toilet Preparations

703,402. Roger Jean Thirion, Paris, France. SN 66,577. Filed P.R. 1-27-59; Am. S.R. 5-13-60.

GINSENG
racine de vie

The term "Ginseng" is the root of a certain type of plant. The words "Racine de Vie" mean in English "life's root." Owner of French Reg. No. 474,129, dated Aug. 15, 1958 (Paris); Natl. Inst. No. 112,152.
For Perfumes, Toilet Water, Face and Body Powders, Rouge, Hair Lotion, and Dentifrices.

Class 52 — Detergents and Soaps

703,403. Boulet, Brede, Hylton, Inc., Minneapolis, Minn. SN 58,777. Filed P.R. 9-11-58; Am. S.R. 5-31-60.

CLEEN-FAST

For All-Purpose Liquid Cleaner Adapted To Be Sprayed on and Wiped off Surfaces To Be Cleaned.
First use Aug. 4, 1958.

Service Marks

Class 104 — Communication

703,404. Speidel Broadcasting Corporation, Columbia, S.C. SN 77,158. Filed P.R. 7-6-59; Am. S.R. 6-1-60.

SPEIDEL

For Radio Broadcasting Communication Service.
First use Sept. 3, 1958.

Class 107 — Education and Entertainment

703,405. Kathryn E. Bowers, Washington, D.C. SN 78,334. Filed P.R. 7-24-59; Am. S.R. 6-20-60.



For Parliamentary Services—Namely, Teaching Classes in Parliamentary Procedure as Well as Acting as Consultant and Parliamentarian at Organizational Meetings or Conventions.
First use June 1, 1959; Mar. 1, 1957, as to the representation of the gavel.

TRADEMARK REGISTRATIONS RENEWED

132,470. CADUM. Cl. 51. 6-22-20.
132,557. WHITE HOUSE AND DESIGN. Cl. 52. 6-22-20.
132,560. TKO. Cl. 23. 6-22-20.
132,590. WILWIN. Cl. 46. 6-22-20.
133,125. DUPLI-TIZED. Cl. 26. 7-13-20.
133,656. F AND DESIGN. Cl. 39. 8-3-20.
134,276. HEART'S DELIGHT. Cl. 46. 8-24-20.
134,454. SYRACUSE. Cl. 14. 8-31-20.
134,516. TIME THE TEST AND DESIGN. Cl. 40. 9-7-20.
134,945. FORD. Cl. 39. 9-21-20.
135,410. RED HEAD. Cl. 46. 10-12-20.
135,634. PRIMROSE. Cl. 39. 10-19-20.
135,649. GEOMETRIC DESIGN. Cl. 44. 10-19-20.
135,930. SEABOARD. Cl. 21. 10-26-20.
136,465. CORAL. Cl. 37. 11-2-20.
136,679. AERZONATOR. Cl. 13. 11-2-20.
136,971. SOAPERIOR. Cl. 13. 11-9-20.
137,054. PRO-JEX. Cl. 26. 11-16-20.
137,223. ALLIGATOR DESIGN. Cl. 13. 11-23-20.
137,414. SOLIDARITY. Cl. 46. 11-23-20.
137,699. SIMMONS AND OWL DESIGN. Cl. 32. 11-30-20.
137,726. MARATHON PRODUCTS INC., AND REPRESENTATION OF A RUNNER. Cl. 15. 11-30-20.
137,778. DOROTHY DODD. Cl. 39. 12-7-20.
137,842. ADMIRATION. Cl. 46. 12-7-20.
137,843. INSIGNIA. Cl. 46. 12-7-20.
137,962. COCK O' THE WALK. Cl. 46. 12-14-20.
137,963. DEL MONTE. Cl. 46. 12-14-20.
138,031. SAHARA. Cl. 35. 12-14-20.
138,079. CAMBRIC. Cl. 22. 12-14-20.
138,151. VARSITY AND PENNANT DESIGN. Cl. 39. 12-14-20.
138,165. YALE AND DESIGN. Cl. 23. 12-14-20.
138,166. PANEL DESIGN. Cl. 23. 12-14-20.
138,228. GOLDENLOCKS. Cl. 39. 12-21-20.
371,781. SWANK. Cl. 37. 10-3-39.
374,757. FEATHER TOUCH. Cl. 23. 1-23-40.
376,697. CURTIS COLOR-SCOUT. Cl. 26. 4-2-40.
377,284. SILEX. Cl. 13. 4-30-40.
377,447. TIME-O-GRAF. Cl. 26. 5-7-40.
378,405. SEAWATER. Cl. 1. 6-11-40.
378,511. DURALOSE. Cl. 37. 6-11-40.
378,525. PERMI-BASE. Cl. 50. 6-11-40.
378,606. HAPS. Cl. 46. 6-11-40.
378,877. NATIONAL. Cl. 46. 6-25-40.
379,134. NU-VISE. Cl. 37. 7-2-40.
379,233. SIROCCO. Cl. 51. 7-9-40.
379,298. POKER CHIP. Cl. 51. 7-9-40.
379,345. PIF PAF PUF. Cl. 51. 7-9-40.
379,391. KOLOFOG. Cl. 6. 7-9-40.
379,397. BIG SHOT. Cl. 51. 7-9-40.
379,412. NU-VIZ. Cl. 37. 7-9-40.
381,359. GYPSONA. Cl. 44. 9-17-40.
381,435. ZEPHAIRTONE. Cl. 23. 9-24-40.
381,450. MUELLER. Cl. 13. 9-24-40.
381,484. ROYTYPE. Cl. 23. 9-24-40.
381,487. SHORT STOP. Cl. 9. 9-24-40.
381,506. VAPOREX. Cl. 35. 9-24-40.
381,973. B/R. Cl. 28. 10-15-40.
381,974. TELES-CLIK. Cl. 28. 10-15-40.

381,976. ALPHA-DELTALIN. Cl. 18. 10-15-40.
381,977. BETA-CEVALIN. Cl. 18. 10-15-40.
379,415. ALKALON. Cl. 16. 7-9-40.
379,584. PANOCO. Cl. 36. 7-16-40.
379,607. MECH ANNUAL. Cl. 38. 7-16-40.
379,731. REPRESENTATION OF A DETECTIVE. Cl. 3. 7-23-40.
379,750. A. AAROE & SON ETC. AND DESIGN. Cl. 46. 7-23-40.
379,811. SUNDSTRAND. Cl. 26. 7-23-40.
379,900. ADD-A-PART. Cl. 36. 7-30-40.
379,934. MOTOR CHIEF. Cl. 35. 7-30-40.
379,998. PERMA-GLOSS. Cl. 13. 8-6-40.
380,023. GOLD SEAL. Cl. 28. 8-6-40.
380,258. DIAMOND BRAND. Cl. 50. 8-20-40.
380,291. RHONE-POULENC. Cl. 6. 8-20-40.
380,421. PURATIZED. Cl. 6. 8-20-40.
380,764. MODERN FOLD. Cl. 12. 8-27-40.
380,818. RIPPLET. Cl. 46. 9-3-40.
380,830. HAPPY MEDIUMS. Cl. 39. 9-3-40.
380,923. VICTOPRENE. Cl. 35. 9-10-40.
381,123. CHECKER. Cl. 32. 9-10-40.
381,228. MARTIN'S GOLD BAR. Cl. 49. 9-17-40.
381,294. CLASSIC GUILD. Cl. 39. 9-17-40.
382,132. REMOSIL. Cl. 6. 10-15-40.
382,156. BIRONEX. Cl. 18. 10-15-40.
382,315. OFFICE VALET. Cl. 32. 10-22-40.
382,338. TRU-ART. Cl. 22. 10-22-40.
382,466. GLAMOUR GIRL HOSIERY. Cl. 39. 10-29-40.
382,488. HIDE-A-BED SOFA. Cl. 32. 10-29-40.
382,562. BINKS. Cl. 23. 10-29-40.
382,634. HICOLOR. Cl. 1. 11-5-40.
382,669. AMERIPOL. Cl. 1. 11-5-40.
382,833. ADAPTO. Cl. 37. 11-12-40.
382,846. EPROLIN. Cl. 18. 11-12-40.
382,880. RED, WHITE AND BLUE AND DESIGN. Cl. 48. 11-12-40.
383,027. CUSHION MAGIC. Cl. 39. 11-19-40.
383,320. SOLIGHT. Cl. 3. 12-3-40.
383,341. ACCENT LIGHT. Cl. 34. 12-3-40.
383,350. CHALLENGER. Cl. 34. 12-3-40.
383,470. WALDORF. Cl. 34. 12-10-40.
383,521. AMFILE. Cl. 37. 12-10-40.
383,899. MOBILOADER. Cl. 23. 12-24-40.

TRADEMARK REGISTRATIONS CANCELED

Section 8

65,203. CHOCOLAX. Cl. 18. 6-11-07.
554,682. TOLAGESIC. Cl. 18. 6-12-54.
585,326. INVEL. Cl. 42. 2-2-54.
591,841. TIAN. Cl. 6. 6-9-54.

The following registrations issued July 6, 1954

592,072. VENT-O-LIZED. Cl. 1.
592,079. BEHR-MANNING SPEED-WET AND DESIGN. Cl. 4.
592,082. NU-SIZE. Cl. 6.
592,084. CUPROQUIN. Cl. 6.
592,089. QUIX. Cl. 6.
592,091. W.A.R.F.-42. Cl. 6.
592,094. CORO-CREAM. Cl. 6.
592,095. CORO-SDD. Cl. 6.
592,096. CADINE. Cl. 6.
592,100. THE ROUNDELAY. Cl. 8.
592,101. DECORATOR. Cl. 9.
592,105. SIGNALIGHT. Cl. 12.
592,109. RANCH STONE AND DESIGN. Cl. 12.
592,110. ALUMBER. Cl. 12.
592,111. HURRICANE APPROVED AND DESIGN. Cl. 12.
592,113. REPRESENTATION OF A COWBOY. Cl. 12.
592,118. LOF CORRULUX AND DESIGN. Cl. 12.
592,123. ONE-DER FRAME. Cl. 12.
592,126. INSUL GLAZE. Cl. 12.
592,127. TRI-TITE. Cl. 12.
592,137. FIVE POINT STAR WITHIN CIRCLE. Cl. 15.
592,140. BARONET. Cl. 17.
592,141. SOLDEX. Cl. 18.
592,143. COMPLEBETA. Cl. 18.
592,144. MEPHODEX. Cl. 18.
592,146. INSOMBUTAL. Cl. 18.
592,150. MELADININA. Cl. 18.
592,151. KHELLANALS. Cl. 18.
592,152. PYRIMYCETIN. Cl. 18.
592,157. MYCIFRADIN. Cl. 18.
592,174. FC. Cl. 23.
592,175. FLUOR. Cl. 23.
592,179. SOUNDERETTE. Cl. 24.
592,181. AQUAPRUF. Cl. 26.
592,184. EAR BRETTE. Cl. 28.
592,188. ANNIE OAKLEY. Cl. 29.
592,195. CON-SESHA BAR. Cl. 32.
592,196. HEART REST AND REPRESENTATION OF A HEART. Cl. 32.
592,200. ZIP-A-BED. Cl. 32.
592,201. USE-A-DOR AND DESIGN. Cl. 32.
592,202. UNIMATIC. Cl. 32.
592,203. STEELART. Cl. 32.
592,204. NEW DAY. Cl. 32.
592,209. SIREN. Cl. 39.
592,211. KRINKLE-FILM. Cl. 39.
592,212. JAY-NEE. Cl. 39.
592,218. MOUCHETTE. Cl. 39.
592,222. PERMACREASE. Cl. 39.
592,223. XTRA-LONS A 3 STOCKING PAIR FOR XTRA WEARS. Cl. 39.
592,224. ORIGINALS BY GLORIA KAY. Cl. 39.
592,227. MAGIC MOTION. Cl. 39.
592,228. VENTIL-NYL. Cl. 39.
592,231. M SYMBOL OF QUALITY AND DESIGN. Cl. 39.
592,233. PINE LAKE TOGS. Cl. 39.
592,235. HOME HOBBY. Cl. 39.
592,237. LOOM-X-84. Cl. 39.
592,239. 4 LOOKS. Cl. 39.
592,242. SWINGEASY. Cl. 39.
592,246. BALMAHA. Cl. 42.
592,247. LUSTERPERM. Cl. 42.
592,250. SOLU DYE AND DESIGN. Cl. 42.
592,251. PAMBRE. Cl. 42.
592,254. FRUIT OF THE LOOM AND DESIGN. Cl. 42.
592,256. FOR STUBBORN WEAR AND DESIGN. Cl. 42.
592,257. FIBERTONES. Cl. 42.
592,258. NUBBERHEADS. Cl. 42.
592,259. ROMAN LADY. Cl. 42.
592,265. JOE KIM'S KIM CHEE K AND DESIGN. Cl. 46.
592,266. WOODBINE AND DESIGN. Cl. 46.
592,269. SAUEY AND DESIGN. Cl. 46.
592,271. SPORTMIX AND DESIGN. Cl. 46.
592,278. WINTER MAGIC AND DESIGN. Cl. 50.
592,280. DECOREZE. Cl. 50.
592,284. NEUTRA PLUS. Cl. 51.
592,285. AQUASOFT. Cl. 51.
592,291. DE LAIRE AND DESIGN. Cl. 51.
592,293. PERFUME JEWELS. Cl. 51.
592,295. SHAMPAC. Cl. 52.
592,296. NATIONAL. Cl. 52.
592,299. PHI BETA KAPPA. Cl. 100.
592,304. REPRESENTATION OF LORD BALTIMORE. Cl. 103.
592,306. FLIP-CLOSE. Cl. 2.
592,308. INSTANT-GRIP. Cl. 5.
592,318. FLY-GONE. Cl. 21.
592,319. SPARE-KEY. Cl. 23.
592,322. PAL-IT. Cl. 23.
592,325. MICROTURN. Cl. 23.
592,326. POINTER PATTERN. Cl. 26.
592,329. BRENON ETC. AND DESIGN. Cl. 46.

INDEX OF REGISTRANTS

AUGUST 23, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

Aaroe, A., Ranch: *See*—
Aaroe, A., & Son.
Aaroe, A., & Son, to A. Aaroe Ranch, Soledad, Calif. 379,750, ren. 8–23–60. Cl. 46.
Abercrombie & Fitch Co., New York, N.Y. 703,279, pub. 6–7–60. Cl. 39.
Abramson, Benjamin, d.b.a. Jay-Nee Childrens Togs, Richmond Hill, N.Y. 592,212, canc. Cl. 39.
Academy of Master Wine Growers, Assn., San Francisco, Calif. 703,274, pub. 6–7–60. Cl. 38.
Accles & Shelvoke Ltd., Aston, Birmingham, England. 703,106, pub. 5–17–60. Cl. 9.
Adams Corp., Korn Kurls Div., Beloit, Wis. 703,087, pub. 6–7–60. Cl. 6.
Aerosol Corp. of America, Wellesely Hills, Mass. 703,349, pub. 6–7–60. Cl. 52.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 703,072, pub. 6–7–60. Cl. 1.
Agfa Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 703,232, pub. 5–24–60. Cl. 26.
Air Devices, Inc., New York, N.Y. 703,394. Cl. 34.
Alberto-Culver Co.: *See*—
Lobco, Inc.
Alcon Laboratories, Inc., Fort Worth, Tex. 703,388. Cl. 18.
Alfa International Corp., New York, N.Y. 703,392. Cl. 23.
Alloy Surfaces Co., Inc., Wilmington, Del. 703,098, pub. 6–7–60. Cl. 6.
Alrose Chemical Co., Cranston, R.I. 592,084, canc. Cl. 6.
Ambco, Inc., Los Angeles, Calif. 703,238, pub. 6–7–60. Cl. 26.
Amberg File and Index Co., Kankakee, Ill. 383,521, ren. 8–23–60. Cl. 37.
American Biltrite Rubber Co., Inc., Trenton, N.J. 703,168, pub. 6–7–60. Cl. 20.
American Can Co., New York, N.Y. 703,267, pub. 6–7–60. Cl. 38.
American Cyanamid Co., New York, N.Y. 703,157, pub. 6–7–60. Cl. 18.
American Dispersoids Inc., White Plains, N.Y. 703,342, pub. 6–7–60. Cl. 52.
American & Efird Mills Inc., New York, N.Y. 703,368, pub. 6–7–60. Cl. 106.
American Enka Corp., Enka, N.C. 703,299, pub. 6–7–60. Cl. 43.
American Gilsonite Co., Salt Lake City, Utah. 703,116, pub. 6–7–60. Cl. 12.
American Hardware Corp., The, New Britain, Conn. 703,129, pub. 6–7–60. Cl. 13.
American Home Products Corp., New York, N.Y., from Fort Dodge Laboratories, Inc., Fort Dodge, Iowa. 703,162, pub. 6–7–60. Cl. 18.
American Jewelry Publications Inc., New York, N.Y. 703,269, pub. 6–7–60. Cl. 38.
American Lanolin Corp., Lawrence, Mass. 703,088, pub. 6–7–60. Cl. 6.
American-Marietta Co., Chicago, Ill. 703,089, pub. 6–7–60. Cl. 6.
American Optical Co., Southbridge, Mass. 703,227, pub. 6–7–60. Cl. 26.
American Ship Building Co., The, Cleveland, Ohio. 703,212, pub. 6–7–60. Cl. 23.
Amphenol-Borg Electronics Corp.: *See*—
Gibbs, Thomas B., & Co.
Anderson & Sons, Inc., Westfield, Mass. 703,329, pub. 6–7–60. Cl. 50.
Anglers' Mfg. Corp., Chicago, Ill. 703,195, pub. 6–7–60. Cl. 22.
Angostura Bitters (Dr. J. G. B. Siegert & Sons) Ltd., Port of Spain, Trinidad. 703,325, pub. 6–7–60. Cl. 49.
Annie Oakley Enterprises, Inc., Los Angeles, Calif. 592,188, canc. Cl. 29.
Apelian, Robert S., d.b.a. My-Ko Laboratories, Landsdowne, Pa. 703,154, pub. 6–7–60. Cl. 18.
Aquamint Laboratories, Inc., Mt. Prospect, Ill. 703,339, pub. 6–7–60. Cl. 51.
Arkay International, Inc., Jamaica, N.Y. 703,177, pub. 6–7–60. Cl. 21.
Armour and Co., Chicago, Ill. 703,067, pub. 6–7–60. Cl. 1.
Armour and Co., d.b.a. Armour Creameries, Chicago, Ill. 703,307–8, pub. 6–7–60. Cl. 46.
Armour Creameries: *See*—
Armour and Co.
Army and Air Force Exchange Service, The, New York, N.Y. 703,101, pub. 6–7–60. Cl. 6.
Arpin, Leon G., Orange, N.J. 592,825, canc. Cl. 23.
Art-Craft Optical Co., Inc., Rochester, N.Y. 703,236, pub. 6–7–60. Cl. 26.
Artman, Raymond P., Pittsburgh, Pa. 703,115, pub. 6–7–60. Cl. 12.
Athey Products Corp.: *See*—
Athey Truss Wheel Co.
Athey Truss Wheel Co., to Athey Products Corp., Chicago, Ill. 383,899, ren. 8–23–60. Cl. 23.
Atlantic Research Corp., Alexandria, Va. 703,203, pub. 6–7–60. Cl. 23.
Atlantic Refining Co., The, Philadelphia, Pa. 703,363, pub. 6–7–60. Cl. 103.
Bacon-Scott Co., Inc., New York, N.Y. 592,228, canc. Cl. 39.
Bailey Meter Co., Cleveland, Ohio. 592,326, canc. Cl. 26.
Balch Flavor Co.: *See*—
Balch, Gerald G.
Balch, Gerald G., d.b.a. Balch Flavor Co., Pittsburgh, Pa. 380,818, ren. 8–23–60. Cl. 46.
Barber-Colman Co., Rockford, Ill. 703,169, pub. 6–7–60. Cl. 21.
Barnes Publishing Co., Inc., Cedar Rapids, Iowa. 703,271, pub. 6–7–60. Cl. 38.
Barry Controls Inc., Watertown, Mass. 703,226, pub. 6–7–60. Cl. 26.
Barton, S. H., and Co., Los Angeles, Calif. 703,180, pub. 6–7–60. Cl. 22.
Beebe Bros., Seattle, Wash. 703,199, pub. 6–7–60. Cl. 23.
Behr-Manning Corp., Troy, N.Y. 592,079, canc. Cl. 4.
Belden Mfg. Co., Chicago, Ill. 703,178, pub. 6–7–60. Cl. 21.
Bell Mfg. Co., San Francisco, Calif. 592,196, canc. Cl. 32.
Bemis Bro. Bag Co., Minneapolis, Minn. 592,306, canc. Cl. 2.
Bendix Aviation Corp., Detroit, Mich. 703,176, pub. 6–7–60. Cl. 21.
Bendix-Westinghouse Automotive Air Brake Co., Elyria, Ohio. 381,435, ren. 8–23–60. Cl. 23.
Ben-Hur Products, Inc., New York, N.Y. 592,184, canc. Cl. 28.
Benson and Hedges, New York, N.Y. 703,148, pub. 6–7–60. Cl. 17.
Berkley & Co., Inc., Spirit Lake, Iowa. 703,188, pub. 6–7–60. Cl. 22.
Berg Mfg. & Sales Co., Inc., Chicago, Ill. 703,166, pub. 6–7–60. Cl. 19.
Bertelli, R., Massa, Massa-Carrara, Italy. 703,111, pub. 6–7–60. Cl. 12.
Beaser Co., Alpena, Mich. 703,107, pub. 6–7–60. Cl. 12.
Bihler, C., & Co. Inc., Guttenberg, N.J. 592,251, canc. Cl. 42.
Binks Mfg. Co., Chicago, Ill. 382,562, ren. 8–23–60. Cl. 23.
Birch Brothers Inc., Somerville, Mass. 703,228, pub. 6–7–60. Cl. 26.
Bissell Carpet Sweeper Co., to Bissell Inc., Grand Rapids, Mich. 374,737, ren. 8–23–60. Cl. 23.
Bissell Inc.: *See*—
Bissell Carpet Sweeper Co.
Boggs, Renick, and Co.: *See*—
Boggs, Henry R.
Blake Associates, Inc., New York, N.Y. 592,256, canc. Cl. 42.
Blum, Julius, & Co., Inc., Carlstadt, N.J. 703,385. Cl. 12.
Boggs, Henry R., d.b.a. Renick Boggs and Co., Chicago, Ill. 592,072, canc. Cl. 1.
Bolser Corp., The, Cedar Falls, Iowa. 381,487, ren. 8–23–60. Cl. 9.
Bonat, Samuel, & Bro. Inc., New York, N.Y. 592,295, canc. Cl. 52.
Bonelli, Catherine G., d.b.a. Gloria Kay Studio, South Boston, Mass. 592,224, canc. Cl. 39.
Boulet, Brede, Hylton, Inc., Minneapolis, Minn. 703,403. Cl. 52.
Bowers, Kathryn E., Washington, D.C. 703,405. Cl. 107.
Brenon, Herbert C., d.b.a. The Brenon Laboratory, Inglewood, Calif. 592,329, canc. Cl. 46.
Brenon Laboratory, The: *See*—
Brenon, Herbert C.
Broemmel Pharmaceuticals, from Broemmel Pharmaceuticals, San Francisco, Calif. 703,158, pub. 6–7–60. Cl. 18.
Brown & Ackerman, Inc., New York, N.Y. 592,140, canc. Cl. 17.
Brown-Rogers-Dixson Co., Winston-Salem, N.C. 703,220, pub. 6–7–60. Cl. 25.
Bruce Oil & Supply Co., Inc., Oklahoma City, Okla. 592,137, canc. Cl.15.
Bruner-Ritter, Inc., New York, N.Y., to The Gemex Corp., Union, N.J. 381,973–4, ren. 8–23–60. Cl. 28.
Bullard Clark Co., The, Danielson, Conn. 703,108, pub. 6–7–60. Cl. 12.
Burke & James, Inc., Chicago, Ill. 703,231, pub. 6–26–60. Cl. 26.
Burndy Corp., Norwalk, Conn. 703,202, pub. 6–7–60. Cl. 23.
Burnet Co., The, to Maritime Electric Co. Inc., New York, N.Y. 135,930, ren. 8–23–60. Cl. 21.
Butler Mfg. Co., Kansas City, Mo. 703,389. Cl. 21.
Buxbaum Co., The, Canton, Ohio. 703,328, pub. 6–7–60. Cl. 50.
Byer-Rolnick Hat Corp., Garland, Tex. 703,275, pub. 6–7–60. Cl. 39.
Cadum Palmolive: *See*—
Omega Chemical Co., The.
California Co-operative Canneries, San Jose, to Tri-Valley Packing Assn., San Francisco, Calif. 137,962, ren. 8–23–60. Cl. 46.
California Packing Corp., San Francisco, Calif. 137,963, ren. 8–23–60. Cl. 46.
Campbell, Henry C., d.b.a. Campbell's Liquid Starch Co., Skaneateles, N.Y. 592,082, canc. Cl. 6.
Campbell's Liquid Starch Co.: *See*—
Campbell, Henry C.

Candy Cowboys, The: *See*—
Jolly Rancher.
Rancher, Jolly, Inc.
Cannon Shoe Co., Baltimore, Md. 382,466, ren. 8–23–60. Cl. 39.
Carañol, Alex, Inc., St. Louis, Mo. 381,294, ren. 8–23–60. Cl. 39.
Cardinet Candy Co., to Cardinet Candy Co., Inc., Oakland, Calif. 135,410, ren. 8–23–60. Cl. 46.
Cardinet Candy Co., Inc.: *See*—
Cardinet Candy Co.
Carey, Philip, Mfg. Co., The, Cincinnati, Ohio. 703,118, pub. 6–7–60. Cl. 12.
Carlisle Corp., The, Carlisle, Pa. 703,258, pub. 6–7–60. Cl. 35.
Celanese Corp. of America, New York, N.Y. 703,295, pub. 6–7–60. Cl. 42.
Cement Weld Co.: *See*—
McNicholl, W. Clifford.
Central Charge Service Inc., Washington, D.C. 703,357, pub. 6–7–60. Cl. 102.
Century Brewery Corp., Norfolk, Va. 703,323, pub. 6–7–60. Cl. 48.
Certified Sales Engineering Co.: *See*—
Hatton, Olin L., Jr.
Chace Doughnut Corp., West Chester, Pa. 703,391. Cl. 23.
Chambord Shoe Co., Inc., New York, N.Y. 703,280, pub. 6–7–60. Cl. 39.
Chapman, Lawrence A., Macomb, Ill. 592,271, canc. Cl. 46.
Chase and Sons, Inc., North Quincy, Mass. 703,172–3, pub. 6–7–60. Cl. 21.
Chimico-farmaceutico v. Baldacci, Laboratorio, Pisa, Italy. 703,161, pub. 6–7–60. Cl. 18.
Chipman Knitting Mills, Easton, Pa., to Chas. Chipman's Sons Co., Inc., New York, N.Y. 138,228, ren. 8–23–60. Cl. 39.
Chipman Knitting Mills, Easton, Pa., to F. W. Woolworth Co., New York, N.Y. 135,634, ren. 8–23–60. Cl. 39.
Chipman's, Chas., Sons Co., Inc.: *See*—
Chipman Knitting Mills.
Citroen Cars Midwest Distributors Corp., Chicago, Ill. 703,355, pub. 6–7–60. Cl. 101.
Clairol Inc., New York, N.Y., from Clairol Inc., Stamford, Conn. 703,332, pub. 6–7–60. Cl. 51.
Classic Car Club of America, Inc., The, New York, N.Y. 703,376, pub. 6–7–60. Cl. 200.
Coats & Clark Inc., New York, N.Y. 703,398. Cl. 43.
Coble, H. L., Construction Co., Greensboro, N.C. 703,360, pub. 6–7–60. Cl. 103.
Cohen, M., & Son Coats & Suits, Inc., New York, N.Y. 703,282, pub. 6–7–60. Cl. 39.
Cole, Richard J., Inc., New York, N.Y. 703,285, pub. 6–7–60. Cl. 39.
Coleman Co., Inc., The, Wichita, Kans. 703,077, pub. 6–7–60. Cl. 2.
Colorado Fuel and Iron Corp., The, Denver, Colo. 703,128, pub. 6–7–60. Cl. 13.
Collins, Frank R., Cleveland, Ohio. 592,319, canc. Cl. 23.
Collins, John S., d.b.a. Truline Glass Rod Mfg. Co., Los Angeles, Calif. 703,191, pub. 6–7–60. Cl. 22.
Columbia Broadcasting System, Inc.: *See*—
Columbia Recording Corp.
Columbia Recording Corp., to Columbia Broadcasting System, Inc., New York, N.Y. 379,900, ren. 8–23–60. Cl. 36.
Commercial Solvents Corp., New York, N.Y. 592,152, canc. Cl. 18.
Compo-Miracle Products Co.: *See*—
Sylvan, Joseph.
Comptoir de l'Industrie Cotonniere Etablissements Boussac, S.A.R.L., Paris, France. 703,281, pub. 6–7–60. Cl. 39.
Consumer Standard, Torrance, Calif. 592,280, canc. Cl. 50.
Contact Lens Assn. for Optometry, The, Chicago, Ill. 703,268, pub. 6–7–60. Cl. 38.
Continental Drill Corp., Inc., Chicago, Ill. 703,200, pub. 6–7–60. Cl. 23.
Coro, Inc., New York, N.Y. 703,242, pub. 6–7–60. Cl. 28.
Courtaulds, Ltd., London, England. 703,071, pub. 6–7–60. Cl. 1.
Cox, Herbert F., Jr., Syracuse, N.Y. 703,079, pub. 6–7–60. Cl. 2.
Cranston Print Works Co., New York, N.Y. 703,367, pub. 6–7–60. Cl. 106.
Crystal, David, Inc., New York, N.Y. 592,246, canc. Cl. 42.
Cucamonga Mesa Growers: *See*—
Old Baldy Citrus Assn.
Curtis Companies Inc., Clinton, Iowa. 703,120, pub. 6–7–60. Cl. 12.
Curtis, Helene, Industries, Inc., Chicago, Ill. 703,337, pub. 6–7–60. Cl. 51.
Curtis, Helene, Industries, Inc., Chicago, Ill. 703,340, pub. 6–7–60. Cl. 51.
Curtis Laboratories, Inc.: *See*—
Curtis, Thomas S., Laboratories.
Curtis, Thomas S., Laboratories, Huntington Park, to Curtis Laboratories, Inc., Los Angeles, Calif. 376,697, ren. 8–23–60. Cl. 26.
Curtiss-Wright Corp., New York, N.Y. 703,057, pub. 6–7–60. Cl. 1.
DWG Cigar Corp., Detroit, Mich. 703,149, pub. 6–7–60. Cl. 17.
Daly Bros. Shoe Co. Inc., Boston, Mass., to Godman Shoe Co., Columbus, Ohio. 383,027, ren. 8–23–60. Cl. 39.
Davis-Ward Laboratories: *See*—
Mueller Welt Contact Lenses, Inc.
De Laire, Inc., New York, N.Y. 592,291, canc. Cl. 51.
Delta & Pine Land Co. of Mississippi, Scott, Miss. 703,062, pub. 6–7–60. Cl. 1.
Dent & Vallis, Inc., Buffalo, N.Y. 703,245, pub. 6–7–60. Cl. 29.
Dentist' Supply Co. of New York, The: *See*—
Dentists' Supply Co., The.
Dentists' Supply Co., The, New York, N.Y., to The Dentist' Supply Co. of New York, New York, N.Y. 135,649, ren. 8–23–60. Cl. 44.
Dialco Electric Corp., Brooklyn, N.Y. 703,390. Cl. 21.
Diamond Brand Canvas Products Co.: *See*—
New York Drop Cloth Mfg., Co., Inc.
Diamond-Ite Corp. of America, from Fashion Craft Jewelry Co., Inc., New York, N.Y. 703,241, pub. 6–7–60. Cl. 28.
Diamond Match Co., The, New York, N.Y. 592,101, canc. Cl. 9.
Dictaphone Corp., Bridgeport, Conn. 703,171, pub. 6–7–60. Cl. 21.
Dietzgen, Eugene, Co., Chicago, Ill. 703,082, pub. 6–7–60. Cl. 5.
Distinguished Gift Manufacturers, Inc., Waterloo, Iowa. 703,080, pub. 6–7–60. Cl. 2.
Diversey Corp., The, Chicago, Ill. 703,343, pub. 6–7–60. Cl. 52.
Dodd, Dorothy, Shoe Co., Boston, Mass., to International Shoe Co., St. Louis, Mo. 187,778, ren. 8–23–60. Cl. 39.
Donovan Industries, Inc., New York, N.Y. 703,064, pub. 6–7–60. Cl. 1.
Dubin, Charles, to Murray M. Koren, Buffalo, N.Y. 592,223, canc. Cl. 39.
Dumas Milner Corp., Jackson, Miss. 703,346, pub. 6–7–60. Cl. 52.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 703,099, pub. 6–7–60. Cl. 6.
E-Z Products: *See*—
Steckler, Nat P.
Eastern Laboratories, Inc., Vineland, N.J. 703,155, pub. 6–7–60. Cl. 18.
Eastman Kodak Co., to Eastman Kodak Co., Rochester, N.Y. 133,125, ren. 8–23–60. Cl. 26.
Eat-All Frozen Food Co. Inc., The, Philadelphia, Pa. 703,316, pub. 6–7–60. Cl. 46.
Erie Resistor Corp., Erie, Pa. 703,174, pub. 6–7–60. Cl. 21.
Etablissements Chevallier, d.b.a. Societe des Anciens Etablissements Chevallier Pere, Angers, maine-et-Loire, France. 703,336, pub. 6–7–60. Cl. 51.
Fansteel Metallurgical Corp., North Chicago, Ill. 703,136, pub. 6–7–60. Cl. 14.
Fashion Craft Jewelry Co., Inc.: *See*—
Diamond-Ite Corp. of America.
Filtex Corp., The, Los Angeles, Calif. 703,184, pub. 6–7–60. Cl. 21.
Flambeau Plastics Corp., Baraboo, Wis. 703,078, pub. 6–7–60. Cl. 2.
Flavor Saver Inc., Cambria Heights, N.Y. 703,306, pub. 6–7–60. Cl. 46.
Flexible Steel Lacing Co., Chicago, Ill. 137,223, ren. 8–23–60. Cl. 13.
Flexigrip, Inc., New York, N.Y. 703,060, pub. 6–7–60. Cl. 1.
Florabelle Plastics Corp., New York, N.Y. 703,327, pub. 6–7–60. Cl. 50.
Florida Window Manufacturers' Assn., Coral Gables, Fla. 592,111, canc. Cl. 12.
Florin, Philip, Inc., New York, N.Y. 379,731, ren. 8–23–60. Cl. 3.
Flour Mills of America, Inc., Kansas City, Mo. 592,266, canc. Cl. 46.
Fluor Corp., Ltd., The, Los Angeles, Calif. 592,174–5, canc. Cl. 23.
Food Machinery and Chemical Corp.: *See*—
Niagara Sprayer and Chemical Co., Inc.
Sowa, Frank J.
Westvaco Chlorine Products Corp.
Foods Plus, Inc., New York, N.Y. 703,156, pub. 6–7–60. Cl. 18.
Ford Mfg. Co., Waterford, N.Y. 133,656, ren. 8–23–60. Cl. 39.
Ford Mfg. Co., Waterford, N.Y. 134,945, ren. 8–23–60. Cl. 39.
Ford Motor Co. of Canada, Ltd., Toronto, Ontario, Canada. 703,167, pub. 5–31–60. Cl. 19.
Formal Fashions, Inc., New York, N.Y. 703,278, pub. 6–7–60. Cl. 39.
Fort Dodge Laboratories, Inc.: *See*—
American Home Products Corp.
Foto Plus: *See*—
Schaaf, Charles.
Foundry Services, Inc., Cleveland, Ohio. 703,097, pub. 6–7–60. Cl. 6.
Fox & Jacobs Construction Co., Inc., Dallas, Tex. 703,361, pub. 6–7–60. Cl. 103.
Fragramum Chrysanthemums: *See*—
Parker, Elizabeth B., and Wilson.
Frederic Brick & Tile Co., St. Louis, Mo. 703,382. Cl. 12.
Fruit of The Loom, Inc., Providence, R.I. 592,254, canc. Cl. 42.
Fulton Leather Goods Co., New York, N.Y. 383,320, ren. 8–23–60. Cl. 3.
GPE Controls, Inc., Chicago, Ill. 703,223, pub. 6–7–60. Cl. 26.
Gage, Charles S., d.b.a. Stevens Co., Santa Monica, Calif. 592,113, canc. Cl. 12.
Gallo, E. & J., Winery, Modesto, Calif. 703,400. Cl. 47.
Gard, Andy: *See*—
General Molds & Plastics Corp.
Garrison Machine Works, Inc., Dayton, Ohio. 703,215–16, pub. 6–7–60. Cl. 23.
Gemex Co., Newark, N.J., to The Gemex Corp., Union, N.J. 380,023, ren. 8–23–60. Cl. 28.
Gemex Corp., The: *See*—
Bruner-Ritter, Inc.
Gemex Co.
General Aniline & Film Corp., New York, N.Y. 703,102, pub. 6–7–60. Cl. 6.
General Atronics Corp., Bala-Cynwyd, Pa. 703,224, pub. 6–7–60. Cl. 26.
General Beauty Products, Inc.: *See*—
Le Long, Lucien, Inc.

General Ceramics Co., New York, N.Y., to Rheem Mfg. Co., Richmond, Calif. 379,998, ren. 8–23–60. Cl. 13.
General Molds & Plastics Corp., d.b.a. Andy Gard, Leetsdale, Pa. 703,186, pub. 6–7–60. Cl. 22.
Gibbs, Thomas B., & Co., Chicago, Ill., to Amphenol-Borg Electronics Corp., Delavan, Wis. 377,477, ren. 8–23–60 Cl. 26.
Gillette Co., The, Boston, Mass. 703,095, pub. 6–7–60. Cl. 6.
Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 703,350, pub. 6–7–60. Cl. 52.
Glenmore Distilleries Co., Louisville, Ky. 703,326, pub. 6–7–60. Cl. 49.
Globe Furniture Co., High Point, N.C. 703,254, pub. 6–7–60. Cl. 32.
Globe Mfg. Co., Pittsfield, N.H. 592,233, canc. Cl. 39.
Godman Shoe Co.: *See*—
Daly Bros. Shoe Co. Inc.
Golding, Louis, d.b.a. Mercury Hankerchief Mfg. Co., New York, N.Y. 592,231, canc. Cl. 39.
Goodrich, B. F., Co., The, New York, N.Y., and Akron, to Goodrich-Gulf Chemicals, Inc., Cleveland, Ohio. 382,669, ren. 8–23–60. Cl. 1.
Goodrich-Gulf Chemicals, Inc.: *See*—
Goodrich, B. F., Co., The.
Graff, George B., Co., Cambridge, Mass. 379,134, ren. 8–23–60. Cl. 37.
Graff, George B., Co., Cambridge, Mass. 379,412, ren. 8–23–60. Cl. 37.
Graham, James A., d.b.a. Palo Alto Research, Palo Alto, Calif. 703,272–3, pub. 6–7–60. Cl. 38.
Granite Hosiery Mills, Inc., Philadelphia, Pa. 592,211, canc. Cl. 39.
Greenbaum, M. H., Inc., New York, N.Y. 703,319, pub. 6–7–60. Cl. 46.
Grundig Radio-Werke G.m.b.H., Fuerth, Bavaria, Germany. 703,261, pub. 6–7–60. Cl. 36.
Harlo Products Corp., Grand Rapids, Mich. 703,208, pub. 6–7–60. Cl. 23.
Harris, D. P., Hardware & Mfg. Co., Inc., New York, N.Y. 703,164–5, pub. 6–7–60. Cl. 19.
Hatton, Olin L., Jr., d.b.a. Certified Sales Engineering Co., Indianapolis, Ind. 703,378, pub. 6–7–60. Cl. A.
Heil, Carl E., d.b.a. Heil and Co. to Heil Process Equipment Corp., Cleveland, Ohio. 379,413, ren. 8–23–60. Cl. 16.
Heil Process Equipment Corp.: *See*—
Heil, Carl E.
Hershey Chocolate Corp., Hershey, Pa. 703,315, pub. 6–7–60. Cl. 46.
Hiss Pharmacal Co., Inc., New Hartford, N.Y. 703,163, pub. 6–7–60. Cl. 18.
Hoberg, John, Co., The, Green Bay, Wis., to The Procter & Gamble Co., Cincinnati, Ohio. 136,465, ren. 8–23–60. Cl. 37.
Holophane Co., Inc., New York, N.Y. 383,341, ren. 8–23–60. Cl. 34.
Holloway, M. J., & Co., Chicago, Ill. 703,320, pub. 6–7–60. Cl. 46.
Hollywood Knitting Mills, Inc., Los Angeles, Calif. 592,242, canc. Cl. 39.
Home Enterprises of Rockland, Inc., Nyack, N.Y. 703,109, pub. 6–7–60. Cl. 12.
Home Mfg. & Sales Co., Inc., Piqua, Ohio. 592,318, canc. Cl. 21.
Horton Farms Inc., Sudbury, Vt. 592,269, canc. Cl. 46.
Hudnut, Richard, New York, N.Y. 592,293, canc. Cl. 51.
Hudnut, Richard, Morris Plains, N.J. 703,341, pub. 6–7–60. Cl. 51.
Hudson, H. D., Mfg. Co., Chicago, Ill. 703,207, pub. 6–7–60. Cl. 23.
Hugh Nelson-Columbia Carpet Mills, Inc., Philadelphia, Pa. 703,397. Cl. 42.
Ideal Roller & Mfg. Co., Chicago, Ill. 703,201, pub. 6–7–60. Cl. 23.
Imperial Belting Co., Chicago, Ill. 138,031, ren. 8–23–60. Cl. 35.
Imperial Chemical Industries Ltd., London, England. 703,103, pub. 5–10–60. Cl. 6.
Imperial Drug Exchange, Inc., d.b.a. Imperial Vitamin Products, New York, N.Y. 703,159, pub. 6–7–60. Cl. 18.
Imperial Vitamin Products: *See*—
Imperial Drug Exchange, Inc.
Industriaktiebolaget Aromatic, Stockholm, Sweden. 703,321, pub. 5–31–60. Cl. 46.
Industrial Corp. of America, Quakertown, Pa. 703,114, pub. 6–7–60. Cl. 12.
Inland Steel Products Co., Milwaukee, Wis. 703,383. Cl. 12.
Instant-Grip Co.: *See*—
Marcus, Emil E.
Institute of Real Estate Management, The, Chicago, Ill. 703,377, pub. 6–7–60. Cl. 200.
International Industries and Developments, Inc., New York, N.Y. 592,179, canc. Cl. 24.
International Milling Co.: *See*—
Western Flour Mill Co.
International Shoe Co.: *See*—
Dodd, Dorothy, Shoe Co.
Interstate Bakeries Corp., Kansas City, Mo. 703,069, pub. 6–7–60. Cl. 1.
Iron-Lite Mfg. Co.: *See*—
Kellett, William Bascom.
Jackson-Mitchell Pharmaceuticals, Inc.: *See*—
Special Milk Products, Inc.
Jackson-Mitchell Pharmaceuticals, Inc., Los Angeles, Calif. 592,143, canc. Cl. 18.
Jay-Nee Childrens Togs: *See*—
Abramson, Benjamin.
Jebaily, James, Inc., New York, N.Y. 703,289, pub. 6–7–60. Cl. 39.
Johnson Furnace Co., Kansas City, Mo. 703,365, pub. 6–7–60. Cl. 103.
Johnson Research and Development Co., Inc., Anniston, Ala. 703,196, pub. 6–7–60. Cl. 22.
Jolly Rancher, d.b.a. The Candy Cowboys, Wheat Ridge, Colo. 703,305, pub. 2–3–59. Cl. 46.
Kanematsu New York, Inc., New York, N.Y. 703,311–12, pub. 6–7–60. Cl. 46.
Kay Electric Co., Pine Brook, N.J. 703,240, pub. 6–7–60. Cl. 26.
Kay, Gloria, Studio: *See*—
Bonelli, Catherine G.
Kellett, William Bascom, d.b.a. Iron-Lite Mfg. Co., Tucson, Ariz. 703,119, pub. 6–7–60. Cl. 12.
Kellogg Co., Battle Creek, Mich. 703,313, pub. 6–7–60. Cl. 46.
Kestral Corp., Springfield, Mass. 703,192, pub. 6–7–60. Cl. 22.
Kim, Joseph K. C., Honolulu, Oahu, Hawaii. 592,265, canc. Cl. 46.
Kimball, J. H., Inc., New York, N.Y. 592,218, canc. Cl. 39.
Kitchen Mate Mfg.: *See*—
Schermer, Alton E.
Koh-I-Noor, Spojene Kovoprumyslove Zavody, Narodni Podnik, Praha-Vrsovice, Czechoslovakia. 703,294, pub. 5–31–60. Cl. 40.
Kohnstamm, H., & Co., Inc., New York, N.Y. 703,318, pub. 6–7–60. Cl. 46.
Koppers Co., Inc., Pittsburgh, Pa. 703,127, pub. 6–7–60. Cl. 12.
Koppers Co., Inc., Pittsburgh, Pa. 703,218, pub. 6–7–60. Cl. 23.
Koppers Co., Inc., Pittsburgh, Pa. 703,251, pub. 6–7–60. Cl. 31.
Koppers Co., Inc., Pittsburgh, Pa. 703,259, pub. 6–7–60. Cl. 35.
Koren, Murray M.: *See*—
Dubin, Charles.
Kreas, S. H., and Co., New York, N.Y. 592,209, canc. Cl. 39.
Laboratorios Gravi, S.A., Havana, Cuba. 703,331, pub. 6–7–60. Cl. 51.
Lanzetter, Saul, Manchester, England. 592,296, canc. Cl. 52.
Larson, Alpheus W., Chilton, Wis. 703,187, pub. 6–7–60. Cl. 22.
La Vallee & Ide, Inc., Chicopee, Mass. 703,206, pub. 6–7–60. Cl. 23.
Leesona Corp., Cranston, R.I. 703,175, pub. 6–7–60. Cl. 21.
Leeves, R. C., Enterprises, Inc., Decatur, Ga. 592,195, canc. Cl. 32.
Lehigh Steel Corp., New York, N.Y. 703,134, pub. 6–7–60. Cl. 14.
Lelong, Lucien, Inc., Chicago, Ill., to General Beauty Products, Inc., New York, N.Y. 379,233. Cl. 51.
Lelong, Lucien, Inc., Chicago, Ill., to General Beauty Products, Inc., New York, N.Y. 379,298, ren. 8–23–60. Cl. 51.
Lelong, Lucien, Inc., Chicago, Ill., to General Beauty Products, Inc., New York, N.Y. 379,345, ren. 8–23–60. Cl. 51.
Lelong, Lucien, Inc., Chicago, Ill., to General Beauty Products, Inc., New York, N.Y. 379,397, ren. 8–23–60. Cl. 51.
Leukaid Products, Inc., Taylor, Mich. 703,345, pub. 6–7–60. Cl. 52.
Libbey-Owens-Ford Glass Co., Toledo, Ohio. 592,118, canc. Cl. 12.
Lilly, Eli, and Co., Indianapolis, Ind. 381,976–7, ren. 8–23–60. Cl. 18.
Lilly, Eli, and Co., Indianapolis, Ind. 382,846, ren. 8–23–60. Cl. 18.
Litton Industries, Inc., Beverly Hills, Calif. 703,170. Pub. 12–15–59, Cl. 21; pub. 5–24–60, Cl. 26. (Consolidated certificate, Classes 21 and 26.)
Lobco, Inc., d.b.a. Alberto-Culver Co., Chicago, Ill. 703,335, pub. 6–7–60. Cl. 51.
Lock Thread Corp., Detroit, Mich. 703,133, pub. 6–7–60. Cl. 14.
Lord Baltimore Filling Stations, Inc., Baltimore, Md. 592,304, canc. Cl. 103.
Lubaid Co.: *See*—
Sauerborn, Vanda.
Lyon Metal Products, Inc., Aurora, Ill. 592,203–4, canc. Cl. 32.
Maas & Waldstein Co., Newark, N.J. 703,143, pub. 6–7–60. Cl. 16.
Maguire, Walter, Co., Inc., New York, N.Y. 703,117, pub. 6–7–60. Cl. 12.
Manero, Clarence, d.b.a. "Porky" Manero's, Westport, Conn. 703,322, pub. 6–7–60. Cl. 46.
Marcal Paper Mills, Inc., East Paterson, N.J. 703,265, pub. 6–7–60. Cl. 37.
Marchon Products Ltd., London, England. 703,083, pub. 6–7–60. Cl. 6.
Marcus, Emil E., d.b.a. Instant-Grip Co., Pittsburgh, Pa. 592,308, canc. Cl. 5.
Marketways, Inc., New York, N.Y. 703,150, pub. 6–7–60. Cl. 17.
Maritime Electric Co. Inc.: *See*—
Burnet Co., The.
Martin, J. B., Co.: *See*—
Martin Fabrics Corp.
Marquette, George, Louisville, Ky. 703,286, pub. 6–7–60. Cl. 39.
Martin Fabrics Corp., now by merger and change of name J. B. Martin Co., New York, N.Y. 585,326, canc. Cl. 42.
Martin, James, & Co., Ltd.: *See*—
Wardall, William J.
Marx, Louis, & Co., New York, N.Y. 703,193–4, pub. 6–7–60. Cl. 22.
Masonry Concentrates, Inc., Holland, Mich. 592,098, canc. Cl. 6.
Master Metal Products, Inc., Buffalo, N.Y. 703,076, pub. 6–7–60. Cl. 2.
Mawby, Benjamin F., d.b.a. Port-A-Kenl Co., Roanoke, Va. 703,379. Cl. 3.

May, Michael J., South Bend, Ind. 703,373, pub. 6–7–60. Cl. 107.
Mayborn Products Ltd., London, England. 703,348, pub. 6–7–60. Cl. 52.
McKesson & Robbins Inc.: *See*— Wardall, William J.
McLaughlin Gormley King Co., Minneapolis, Minn. 592,089, canc. Cl. 6.
McNicholl, W. Clifford, d.b.a. Cement Weld Co., Indianapolis, Ind. 703,122, pub. 6–7–60. Cl. 12.
McNicol China Co., by change of name from The D. E. McNicol Pottery Co. of West Virginia, Clarksburg, W.Va. 703,248–9, pub. 6–7–60. Cl. 30.
McNicol, D. E., Pottery Co. of West Virginia, The: *See*— McNicol China Co.
Mechanization, Inc., Washington, D.C. 379,607, ren. 8–23–60. Cl. 38.
Melville Shoe Corp.: *See*— Simons Hatch & Whitten Co.
Men's Hats, Inc., Baltimore, Md. 703,276, pub. 6–7–60. Cl. 39.
Merck & Co., Inc., Rahway, N.J. 703,160, pub. 6–7–60. Cl. 18.
Mercury Hankerchief Mfg. Co.: *See*— Golding, Louis.
Merritt-Chapman & Scott Corp., New York, N.Y. 703,123, pub. 6–7–60. Cl. 12.
Merritt, James S., Co., The, Kansas City, Mo. 703,310, pub. 6–7–60. Cl. 46.
Metalclean Equipment Co.: *See*— Rand, Burton.
Metrohm A.G. (Metrohm S.A.) (Metrohm Ltd.), Herisau, Switzerland. 703,229, pub. 6–7–60. Cl. 26.
Micro Machinery Products, Inc., Winchester, Mass. 703,372, pub. 6–7–60. Cl. 106.
Midland Brick and Tile Co., Chillicothe, Mo. 703,384. Cl. 12.
Midwest Industries, Inc., Willard, Ohio. 703,185, pub. 6–7–60. Cl. 22.
Miller, E. S., Laboratories, Inc., Los Angeles, Calif. 584,682, canc. Cl. 18.
Miller, Sidney M., d.b.a. Sportswear Specialtists, Cambridge, Mass. 703,293, pub. 6–7–60. Cl. 39.
Milwhite Mud Sales Co., Houston, Tex. 703,061, pub. 6–7–60. Cl. 1.
Milwhite Mud Sales Co., Houston, Tex. 703,063, pub. 6–7–60. Cl. 1.
Milwhite Mud Sales Co., Houston, Tex. 703,065, pub. 6–7–60. Cl. 1.
Milwhite Mud Sales Co., Houston, Tex. 703,090–3, pub. 6–7–60. Cl. 6.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 703,230, pub. 6–7–60. Cl. 26.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 703,296, pub. 6–7–60. Cl. 42.
Miron, Georges J., d.b.a. Modern Engineering Industries, Montreal, Quebec, Canada. 703,113, pub. 6–7–60. Cl. 12.
Miron, Georges J., d.b.a. Modern Engineering Industries, Montreal, Quebec, Canada. 703,362, pub. 6–7–60. Cl. 103.
Mirro Aluminum Co., Manitowoc, Wis. 703,386. Cl. 13.
Modern Engineering Industries: *See*— Miron, Georges J.
Mohawk Rubber Co., The, Akron, Ohio. 379,934, ren. 8–23–60. Cl. 35.
Mohawk Rubber Co., The, Akron, Ohio. 381,506, ren. 8–23–60. Cl. 35.
Mojud Hosiery Co., Inc., Long Island City, N.Y. 592,227, canc. Cl. 39.
Monkman, Robert W., Oakland, Calif. 703,374, pub. 6–7–60. Cl. 107.
Monsanto Chemical Co., St. Louis, Mo. 703,138–9, pub. 6–7–60. Cl. 15.
Morse Pharmacal Corp., Chicago, Ill. 592,146, canc. Cl. 18.
Morris & Yeomans Ltd., Birmingham, England. 134,516, ren. 8–23–60. Cl. 40.
Morse Sewing Machine and Supply Corp., New York, N.Y. 703,396. Cl. 36.
Mueller Co., Decatur, Ill. 381,450, ren. 8–23–60. Cl. 13.
Mueller Welt Contact Lenses, Inc., d.b.a. Davis-Ward Laboratories, Chicago, Ill. 703,153, pub. 6–7–60. Cl. 18.
My-Ko Laboratories: *See*— Apellan, Robert S.
NEA Service, Inc., Cleveland, Ohio. 703,375, pub. 6–7–60. Cl. 107.
Nalco Chemical Co., Chicago, Ill. 703,096, pub. 6–7–60. Cl. 6.
Nalco Chemical Co., Chicago, Ill. 703,370, pub. 6–7–60. Cl. 106.
National Biscuit Co., New York, N.Y. 378,877, ren. 8–23–60. Cl. 46.
National Silk Co., Inc., The, South Coventry, Conn. 703,298, pub. 6–7–60. Cl. 43.
New Castle Products, to New Castle Products, Inc., New Castle, Ind. 380,764, ren. 8–23–60. Cl. 12.
New Castle Products, Inc.: *See*— New Castle Products.
New York Blower Co., The, Chicago, Ill. 703,256, pub. 6–7–60. Cl. 34.
New York Consolidated Card Co., The, New York, N.Y., to The United States Playing Card Co., Cincinnati, Ohio. 138,079, ren. 8–23–60. Cl. 22.
New York Drop Cloth Mfg., Co., Inc., d.b.a. Diamond Brand Canvas Products Co., New York, to Diamond Brand Canvas Products Co., Inc., Long Island City, N.Y. 380,258, ren. 8–23–60. Cl. 50.
Niagara Sprayer and Chemical Co., Inc., Middleport, N.Y., to Food Machinery and Chemical Corp., New York, N.Y. 379,391, ren. 8–23–60. Cl. 6.
North American Aviation, Inc., Los Angeles, Calif. 703,237, pub. 6–7–60. Cl. 26.
Northern National Bank of Presque Isle, Presque Isle, Maine. 703,358, pub. 6–7–60. Cl. 102.
Nuclear-Chicago Corp., Chicago, Ill. 703,221, pub. 6–7–60. Cl. 26.
Nuclear Development Corp. of America, White Plains, N.Y. 703,225, pub. 6–7–60. Cl. 26.
Nyman, Al, & Son, Inc., New York, N.Y. 703,262, pub. 6–7–60. Cl. 36.
Nyman, Al, & Son, Inc., New York, N.Y. 703,266, pub. 6–7–60. Cl. 37.
Ohio Oil Co., The: *See*— Transcontinental Oil Co.
Old Baldy Citrus Assn., to Cucamonga Mesa Growers, Upland, Calif. 137,842–3, ren. 8–23–60. Cl. 46.
Omega Chemical Co., The, New York, N.Y., to Cadum Palmolive, Courbevoie, Seine, France. 132,470, ren. 8–23–60. Cl. 51.
One-Der Frame Corp., Birmingham, Ala. 592,123, canc. Cl. 12.
Opotow Dental Mfg. Corp., Brooklyn, N.Y. 703,301, pub 6–7–60. Cl. 44.
Pacific Coast Angus Assn., Sacramento, Calif. 703,354, pub. 6–7–60. Cl. 101.
Paines & Byrne Ltd., Greenford, Middlesex, England. 592,151, canc. Cl. 18.
Pabst Brewing Co., Chicago, Ill. 382,880, ren. 8–23–60. Cl. 48.
Palo Alto Research: *See*— Graham, James A.
Paper Novelty Mfg. Co., Stamford, Conn. 379,584, ren. 8–23–60. Cl. 38.
Paragon Oil Co., Inc., Long Island City, N.Y. 703,137, pub. 1–26–60. Cl. 15.
Parker, Elizabeth B., and H. D. Wilson, partnership, d.b.a. Fragramum Chrysanthemums, Hollywood, Calif. 703,059, pub. 6–7–60. Cl. 1.
Parkinson-Lecourt Co., Katonah, N.Y. 592,285, canc. Cl. 51.
Parsons Ammonia Co., Inc., Clifton, N.J. 703,344, pub. 6–7–60. Cl. 52.
Patten, Lee, Seed Co., Jersey City, N.J. 703,058, pub. 6–7–60. Cl. 1.
Peanut Corp. of America, d.b.a. Peanut Products Co., Des Moines, Iowa. 703,304, pub. 6–7–60. Cl. 46.
Peanut Products Co.: *See*— Peanut Corp. of America.
Pearson, Evelyn, Inc., New York, N.Y. 703,288, pub. 6–7–60. Cl. 39.
Pennsalt Chemicals Corp., Philadelphia, Pa. 703,094, pub. 6–7–60. Cl. 6.
Pepsi-Cola Bottling Co. of Long Island Inc., Washington, D.C. 703,302, pub. 6–7–60. Cl. 45.
Permacrease Corp., New York, N.Y. 592,222, canc. Cl. 39.
Petersen Industries, Inc., Lake Wales, Fla. 703,075, pub. 6–7–60. Cl. 2.
Pfizer, Chas., & Co., Inc.: *See*— Roerig, J. B., and Co.
Phillips Chemical Co., Bartlesville, Okla. 703,085–6, pub. 6–7–60. Cl. 6.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 592,094–5, canc. Cl. 6.
Plant Equipment Co., Rock Island, Ill. 592,322, canc. Cl. 23.
Poirette Corsets, Inc., New York, N.Y. 703,290–1, pub. 6–7–60. Cl. 39.
Popcopac, Inc., San Francisco, Calif. 703,070, pub. 6–7–60. Cl. 1.
Pope & Talbot Inc., San Francisco, Calif. 703,121, pub. 6–7–60. Cl. 12.
"Porky" Manero's: *See*— Manero, Clarence.
Port-A-Kenl Co.: *See*— Mawby, Benjamin F.
Posner, L., Inc., New York, N.Y. 703,330, pub. 1–24–56. Cl. 51.
Press-'N-Serve Foods, Inc., St. Louis, Mo. 703,399. Cl. 46.
Prismo Safety Corp.: *See*— Wald, John R., Co.
Processed Steel Sales Co., Crystal Lake, Ill. 703,198, pub. 6–7–60. Cl. 23.
Procter & Gamble Co., The: *See*— Hoberg, John, Co., The.
Procter-Silex Corp., The: *See*— Silex Co., The.
Productos Farmaceuticos, S.A., Mexico City, Mex. 592,150, canc. Cl. 18.
Produits Nina: *See*— Produits Nina, Inc.
Produits Nina, Inc., d.b.a. Produits Nina, Paris, Tenn. 703,338, pub. 6–7–60. Cl. 51.
Progress Mfg. Co., Inc., Philadelphia, Pa. 703,180–1, pub. 6–7–60. Cl. 21.
Projection Optics Co., Inc., Rochester, N.Y. 137,054, ren. 8–23–60. Cl. 26.
Quaker Oats Co., The, Chicago, Ill. 378,606, ren. 8–23–60. Cl. 46.
R. and H. Co., Amherst, N.Y. 703,303, pub. 6–7–60. Cl. 45.
Rado-Matic Corp., The, Cleveland, Ohio. 703,197, pub. 6–7–60. Cl. 22.
Rand, Burton, d.b.a. Metalclean Equipment Co., Bala Cynwyd, Pa. 703,219, pub. 6–7–60. Cl. 23.
Rayonier Inc., New York, N.Y. 382,634, ren. 8–23–60. Cl. 1.
Restaurant Supply Corp., Mission, Kans. 703,351, pub. 6–7–60. Cl. 100.
Restonic Corp., Chicago, Ill. 703,253, pub. 6–7–60. Cl. 32.
Reynolds Metals Co., Richmond, Va. 592,110, canc. Cl. 12.
Rheem Mfg. Co.: *See*— General Ceramics Co.
Rhodes, J. Charles, Associates: *See*— Rhodes, J. Charles.
Rhodes, J. Charles, d.b.a. J. Charles Rhodes Associates, New York, N.Y. 703,356, pub. 6–7–60. Cl. 101.

Richmond-Chase Co., San Jose, Calif. 134,270, ren. 8–23–60. Cl. 46.
Ridge Hosiery Co., Quakertown, Pa. 592,239, canc. Cl. 39.
Robbins Mills, Inc., New York, N.Y. 592,257–9, canc. Cl. 42.
Robins, A. H., Co., Inc., Richmond, Va. 382,150, ren. 8–23–60. Cl. 18.
Robertson Factories, Inc., New York, N.Y. 703,297, pub. 6–7–60. Cl. 42.
Robeson Cutlery Co., Inc., Perry, N.Y. 703,204, pub. 6–7–60. Cl. 23.
Roerig, J. B., and Co., Chicago, Ill., to Chas. Pfizer & Co., Inc., New York, N.Y. 592,144, canc. Cl. 18.
Rogers Imports Inc.: *See*— Rogers, Inc.
Rogers, Inc., by change of name from Rogers Imports Inc., New York, N.Y. 703,381. Cl. 8.
Rohm & Haas Co., Philadelphia, Pa. 703,068, pub. 6–7–60. Cl. 1.
Rohr Aircraft Corp., Chula Vista, Calif. 591,841, canc. Cl. 6.
Royal McBee Corp.: *See*— Royal Typewriter Co., Inc.
Royal Typewriter Co., Inc., New York, N.Y., to Royal McBee Corp., Port Chester, N.Y. 381,484, ren. 8–23–60. Cl. 23.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill. 703,126, pub. 6–7–60. Cl. 12.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill. 703,130, pub. 6–7–60. Cl. 13.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill. 703,135, pub. 6–7–60. Cl. 44.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill. 703,371, pub. 6–7–60. Cl. 106.
Saco-Lowell Shops, Boston, Mass. 703,210, pub. 6–7–60. Cl. 23.
Sagner's, A., Son, Baltimore, Md. 592,237, canc. Cl. 39.
St. Louis Paint Mfg. Co., St. Louis, Mo. 703,146, pub. 6–7–60. Cl.16.
Sales Affiliates, Inc., New York, N.Y. 592,284, canc. Cl. 51.
Sales Affiliates Ltd., Boreham Wood, England. 703,333, pub. 6–7–60. Cl. 51.
Salmanson & Co., Inc., New York, N.Y. 383,350, ren. 8–23–60. Cl. 34.
Salmanson & Co., Inc., New York, N.Y. 383,470, ren. 8–23–60. Cl. 34.
Sanders, Fred, Detroit, Mich. 703,309 pub 6–7–60. Cl. 46.
Sauerborn, Vanda, d.b.a. Lubaid Co., Milwaukee, Wis. 703,141, pub. 6–7–60. Cl. 15.
Schaerf, Henry C., Co.: *See*— Schaerf, Henry C.
Schaerf, Henry C., d.b.a. Henry C. Schaerf Co., New York, N.Y. 703,209, pub. 6–7–60. Cl. 23
Scharf, Charles, d.b.a. Foto Plus, Englewood, N.J. 703,369, pub. 6–7–60. Cl. 100.
Schenley Distillers, Inc., New York, N.Y. 703,401. Cl. 49.
Schermer, Alton E., d.b.a. Kitchen Mate Mfg., Fairhope, Ala. 703,081, pub. 6–7–60. Cl. 2.
Schleicher, Carl, & Schuell Co., Inc., Keene, N.H. 703,250, pub. 6–7–60. Cl. 31.
Schwarzenbach-Huber Co., The, New York, N.Y. 592,250, canc. Cl. 42.
Scott Paper Co.: *See*— Veldown Co. Inc.
Scott Paper Co., Chester, Pa. 378,511, ren. 8–23–60. Cl. 37.
Scott Specialties: *See*— Scott, Wilson H.
Scott, Wilson H., d.b.a. Scott Specialties, Belleville, Kans. 703,300, pub. 6–7–60. Cl. 44.
Sengbusch Self-Closing Inkstand Co., Milwaukee, Wis. 382,833, ren. 8–23–60. Cl. 37.
Serta Associates, Inc., Chicago, Ill. 592,202, canc. Cl. 32.
Serta Associates, Inc., Chicago, Ill. 703,255, pub. 6–7–60. Cl. 32.
Sewell, Warren, Clothing Co., Inc., Bremen, Ga. 703,287, pub. 6–7–60. Cl. 39.
Shakespeare Co., Kalamazoo, Mich. 382,338, ren. 8–23–60. Cl. 22.
Sharaday Co., The: *See*— Yerkes, Alvin B.
Shaw, H. E., Co., Worcester, Mass. 592,235, canc. Cl. 39.
Shawinigan Resins Corp., Springfield, Mass. 703,147, pub. 6–7–60. Cl. 16.
Shenango China, Inc., New Castle, Pa. 703,247, pub. 6–7–60. Cl. 30.
Shuler Axle Co., Louisville, Ky. 703,205, pub. 6–7–60. Cl. 23.
Siegel, Harry L., Atlanta, Ga. 703,270, pub. 6–7–60. Cl. 38.
Signalight Sales & Service, Dallas, Tex. 592,105, canc. Cl. 12.
Silbrite Chemical Co.: *See*— Sowa, Frank J.
Silex Co., The, Hartford, Conn., to The Procter-Silex Corp., Chicago, Ill. 377,284, ren. 8–23–60. Cl. 13.
Simmerwerke W. Simmer K. G., Kufstein, Austria. 703,260, pub. 5–31–60. Cl. 35.
Simmons Co., New York, N.Y. 137,699, ren. 8–23–60. Cl. 32.
Simmons Co., New York, N.Y. 382,488, ren. 8–23–60. Cl. 32.
Simons Hatch & Whitten Co., Boston, Mass., to Melville Shoe Corp., New York, N.Y. 380,830, ren. 8–23–60. Cl. 39.
Skid Oil Co., Inc., Florence, S.C. 703,142, pub. 6–7–60. Cl. 15.
Slip Products & Engineering Co. Ltd., London, England. 703,140, pub. 6–7–60. Cl. 15.
Slumberland Products of Rhode Island, Inc., Pawtucket, R.I. 703,252, pub. 6–7–60. Cl. 32.
Smith-Dorsey: *See*— Wander Co., The.
Smith, T. J., & Nephew, Ltd., Hull, England. 381,359, ren. 8–23–60. Cl. 44.
Societe des Anciens Etablissements Chevallier Pere: *See*— Etablissements Chevallier.
Societe des Usines Chimiques Rhone-Poulenc, Paris, France. 380,291, ren. 8–23–60. Cl. 6.
Southern Planters, Inc., Quitman, Ga. 703,314, pub. 6–7–60. Cl. 46.
Sowa, Frank J., d.b.a. Silbrite Chemical Co., to Food Machinery and Chemical Corp., New York, N.Y. 380,421, ren. 8–23–60. Cl. 6.
Special Milk Products, Inc., now by change of name Jackson-Mitchell Pharmaceuticals, Inc., Los Angeles, Calif. 592,141, canc. Cl. 18.
Speidel Broadcasting Corp., Columbia, S.C. 703,404. Cl. 104.
Sportswear Specialists: *See*— Miller, Sidney M.
Spraying Systems Co., Bellwood, Ill. 703,131, pub. 6–7–60. Cl. 13.
Spurrier Paper Co., d.b.a. Spurriers, Wichita, Kans. 703,243–4, pub. 6–7–60. Cl. 29.
Spurriers: *See*— Spurrier Paper Co.
Staedtler, J. S., Nurnberg, Germany. 703,263, pub. 6–7–60. Cl. 37.
Stave, Inc., Tulsa, Okla. 703,347, pub. 6–7–60. Cl. 52.
Stearns & Curtiss, New York, N.Y. 63,203, canc. Cl. 18.
Steckler, Nat P., d.b.a. E-Z Products, New York, N.Y. 592,181, canc. Cl. 26.
Stereo-Sonic Recording Corp., La Grange Park, Ill. 703,395. Cl. 36.
Stevens Co.: *See*— Gage, Charles S.
Stewart-Warner Corp., Chicago, Ill. 703,182, pub. 6–7–60. Cl. 21.
Stewart-Warner Corp., Chicago, Ill. 703,213, pub. 6–7–60. Cl. 23.
Sunbeam Products Co., Pittsburgh, Pa., to White House Chemical Products, Inc., Chicago, Ill. 132,557, ren. 8–23–60. Cl. 52.
Suprefot Film Products Co. Inc., New York, N.Y. 703,239, pub. 6–7–60. Cl. 26.
Swiss Harmony Inc., Chicago, Ill. 592,100, canc. Cl. 8.
Sylvan, Joseph, d.b.a. Compo-Miracle Products Co., Berkley, Mich. 592,126–7, canc. Cl. 12.
Taylor Fireworks Co.: *See*— Taylor, W. J.
Taylor, W. J., d.b.a. Taylor Fireworks Co., Kansas City, Kans. 703,105, pub. 6–7–60. Cl. 9.
Telecomputing Corp., Los Angeles, Calif. 703,179, pub. 6–7–60. Cl. 21.
Telecomputing Corp., Los Angeles, Calif. 703,233, pub. 6–7–60. Cl. 26.
Templeton, Kenly & Co.: *See*— Templeton, Kenly & Co., Ltd.
Templeton, Kenly & Co., Ltd., Chicago, Ill., to Templeton, Kenly & Co., Broadview, Ill. 132,560, ren. 8–23–60. Cl. 23.
Thiokol Chemical Corp., Bristol, Pa. 703,073–4, pub. 6–7–60. Cl. 1.
Thirion, Roger J., Paris, France. 703,402. Cl. 51.
Thurlow, J. Lionel M., Willowdale, Ontario, Canada. 703,190, pub. 6–7–60. Cl. 22.
Tidy House Products Co., Shenandoah, Iowa. 703,100, pub. 6–7–60. Cl. 6.
Toledo Scale Corp., Toledo, Ohio. 703,364, pub. 6–7–60. Cl. 103.
Toni Co., The: *See*— Gillette Co., The.
Transcontinental Oil Co., Pittsburgh, Pa., to The Ohio Oil Co., Findlay, Ohio. 137,726, ren. 8–23–60. Cl. 15.
Transouth Life Insurance Co., Columbia, S.C. 703,359, pub. 6–7–60. Cl. 102.
Transparent Products Co. Inc., New York, N.Y. 703,222 pub. 6–7–60. Cl. 26.
Tri-Chem, Inc., West Orange, N.J. 703,144, pub. 6–7–60. Cl. 16.
Tri-State Siding Co., Inc., Shreveport, La. 592,109, canc. Cl. 12.
Tri-Valley Packing Assn.: *See*— California Co-operative Canneries.
Truline Glass Rod Mfg. Co.: *See*— Collins, John S.
Underwood Corp.: *See*— Underwood Elliott Fisher Co.
Underwood Elliott Fisher Co., to Underwood Corp., New York, N.Y. 379,811, ren. 8–23–60. Cl. 26.
Union Carbide Corp., New York, N.Y. 703,234, pub. 6–7–60. Cl. 26.
Union Gypsum Co., Phoenix, Ariz. 703,124–5, pub. 6–7–60. Cl. 12.
United American Metals Corp., Brooklyn, N.Y. 134,454, ren. 8–23–60. Cl. 14.
United Chapters of Phi Beta Kappa, Williamsburg, Va. 592,299, canc. Cl. 100.
United Co-Operatives, Inc., Alliance, Ohio. 703,084, pub. 6–7–60. Cl. 6.
United Shoe Machinery Corp., Boston, Mass. 703,104, pub. 6–7–60. Cl. 7.
United States Playing Card Co., The: *See*— The New York Consolidated Card Co.
United States Plywood Corp., New York, N.Y. 703,112, pub. 6–7–60. Cl. 12.
United States Rubber Co., New York, N.Y. 703,257, pub. 6–7–60. Cl. 35.
U.S. Sanitary Specialties Corp., Chicago, Ill. 136,971, ren. 8–23–60. Cl. 13.
U.S. Sanitary Specialties Corp., Chicago, Ill. 136,979, ren. 8–23–60. Cl. 13.
Universal Oil Products Co., Des Plaines, Ill. 703,211, pub. 6–7–60. Cl. 23.
Upjohn Co., The, Kalamazoo, Mich. 592,157, canc. Cl. 18.
Use-A-Dor Corp., Newport News, Va. 592,201, canc. Cl. 32.
Utility Appliance Corp., Los Angeles, Calif. 703,235, pub. 6–7–60. Cl. 26.

Valspar Corp., The, Ardmore, Pa. 703,145, pub. 6–7–60. Cl. 16.
Vanadium-Alloys Steel Co., Latrobe, Pa. 703,132, pub. 6–7–60. Cl. 14.
Varsity Pajamas, Inc.: *See*—
Varsity Underwear Co.
Varsity Underwear Co., Baltimore, Md., to Varsity Pajamas, Inc., New York, N.Y. 138,151, ren. 8–23–60. Cl. 39.
Vee-Kay Import Co., Inc., New York, N.Y. 703,283, pub. 6–7–60. Cl. 39.
Veldown Co. Inc., New York, N.Y., to Scott Paper Co., Chester, Pa. 371,781, ren. 8–23–60. Cl. 37.
Velveray Corp., Clifton, N.J. 703,366, pub. 6–7–60. Cl. 106.
Victor Mfg. & Gasket Co., Chicago, Ill. 380,923, ren. 8–23–60. Cl. 35.
Victor Oolitic Stone Co., Bloomington, Ind. 703,110, pub. 6–7–60. Cl. 12.
Viking Yacht Rental Corp., New York, N.Y. 703,352, pub. 6–7–60. Cl. 100.
Village Ranch Market: *See*—
Watanabe, Toshio.
Visirecord, Inc., New York, N.Y. 703,264, pub. 6–7–60. Cl. 37.
Vitaminerals, Inc., Glendale, Calif. 703,152, pub. 6–7–60. Cl. 18.
Vit-A-Way, Inc., Fort Worth, Tex. 703,151, pub. 6–7–60. Cl. 18.
Vogel-Peterson Co.: *See*—
Vogel-Peterson Co., Inc.
Vogel-Peterson Co., Inc., Chicago, to Vogel-Peterson Co., Elmhurst, Ill. 381,123, ren. 8–23–60. Cl. 32.
Vogel-Peterson Co., Inc., Chicago, to Vogel-Peterson Co., Elmhurst, Ill. 382,315, ren. 8–23–60. Cl. 32.
Wald, John R., Co., to Prismo Safety Corp., Huntingdon, Pa. 378,525, ren. 8–23–60. Cl. 50.
Walsello Products, Inc., Paterson, N.J. 592,278, canc. Cl. 50.
Walter, Carl, Fabrik fur Bergwerkabedarf, Wuppertal-Hahnerberg, Germany. 703,217, pub. 5–24–60. Cl. 23.
Wamsutta Mills, New Bedford, Mass. 592,247, canc. Cl. 42.
Wander Co., The, d.b.a. Smith-Dorsey, Chicago, Ill. 703,387. Cl. 18.
Wardall, William J., trustee of the estate of McKesson & Robbins Inc., debtor, New York, N.Y., to James Martin & Co., Ltd., Edinburgh, Scotland. 381,228, ren. 8–23–60. Cl. 49.
Watanabe, Toshio, d.b.a. Village Ranch Market, Wilmington, Calif. 703,317, pub. 6–7–60. Cl. 46.
Weco Products Co., Chicago, Ill. 703,246, pub. 6–7–60. Cl. 29.
Wenger Mixer Mfg., Sabetha, Kans. 703,393. Cl. 23.
Western Flour Mill Co., Davenport, Iowa, to International Milling Co., Minneapolis, Minn. 137,414, ren. 8–23–60. Cl. 46.
Westric Battery Co., Denver, Colo. 703,183, pub. 6–7–60. Cl. 21.
Westvaco Chlorine Products Corp., to Food Machinery and Chemical Corp., New York, N.Y. 378,405, ren. 8–23–60. Cl. 1.
Westvaco Chlorine Products Corp., to Food Machinery and Chemical Corp., New York, N.Y. 382,132, ren. 8–23–60. Cl. 6.
Whitehead Brothers Co., New York, N.Y. 703,056, pub. 6–7–60. Cl. 1.
White House Chemical Products, Inc.: *See*—
Sunbeam Products Co.
Wile, Julius, Sons & Co., to Julius Wile Sons & Co., Inc., New York, N.Y. 132,590, ren. 8–23–60. Cl. 46.
Wile, Julius, Sons & Co., Inc.: *See*—
Wile, Julius, Sons & Co.
Wile, Julius, Sons & Co., Inc., New York, N.Y. 703,324, pub. 6–7–60. Cl. 49.
Wilker Bros. Co., New York, N.Y. 703,284, pub. 6–7–60. Cl. 39.
Wilson, Hugh D.: *See*—
Parker, Elisabeth B., and Wilson.
Wisconsin Alumni Research Foundation, Madison, Wis. 592,091, canc. Cl. 6.
Winslow, Leonard P., Co., Inc., Richmond, Va. 703,066, pub. 6–7–60. Cl. 1.
Wishnack, Carl, Inc., Chicago, Ill. 703,277, pub. 6–7–60. Cl. 39.
Woodard, Viviane, Cosmetics, Panorama City, Calif. 703,334, pub. 6–7–60. Cl. 51.
Woolworth, F. W., Co.: *See*—
Chipman Knitting Mills.
Woolworth, F. W., Co., New York, N.Y. 703,292, pub. 6–7–60. Cl. 39.
Yale & Towne Mfg., Co., The, New York, N.Y. 138,165–6, ren. 8–23–60. Cl. 23.
Yerkes, Alvin B., Jr., d.b.a. The Sharaday Co., Huntington, Ind. 703,353, pub. 6–7–60. Cl. 101.
Zellweber Ltd., Uster, Switzerland. 703,214, pub. 6–7–60. Cl. 23.
Zip-A-Bed, Inc., Union City, N.J. 592,200, canc. Cl. 32.
Zoe Chemical Co., Inc., Queens Village, N.Y. 703,380. Cl. 4.

U.S. GOVERNMENT PRINTING OFFICE: 0—1960

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August 30, 1960 Volume 757 Number 5

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of July 1960

Examiner affirmed	155
Examiner affirmed in part	28
Examiner reversed	56
Total	239

Foreign Patents Received in the Scientific Library as of July 31, 1960

Country	Date received	Highest number
Australia:		
(*Abstracts*)	July 12, 1960	55,295
(*Patents*)	July 8, 1960	225,650
Austria	June 20, 1960	209,350
Belgium	July 11, 1960	564,500
Canada	July 5, 1960	600,476
Denmark	June 8, 1960	88,390
Egypt	May 31, 1960	1,739
Finland	Mar. 23, 1960	30,550
France:		
(*Patents*)	July 18, 1960	1,218,400
(*Additions*)	July 18, 1960	72,900

Country	Date received	Highest number
Germany:		
(*Auslegeschriften*)	June 14, 1960	1,080,940
(*Patents*)	July 1, 1960	1,067,322
Great Britain	July 15, 1960	840,000
India	May 5, 1960	64,638
Ireland	May 31, 1960	22,300
Italy	May 23, 1960	566,100
Japan	June 16, 1960	5,200/60
Netherlands	June 10, 1960	94,401
Norway	May 25, 1960	95,951
Pakistan	Apr. 17, 1959	107,298
Poland	July 1, 1960	43,135
Rumania	May 19, 1960	41,215
Sweden	June 8, 1960	171,218
Switzerland	June 14, 1960	345,853
U.S.S.R.	July 27, 1960	130,858

Australia: First 2,000 incomplete
Belgium: First printed 493,079/1950
Canada: First printed 445,931/1948
Czechoslovakia: Latest 81,300/1952
Finland: First printed 19,428/1941
First 500 incomplete
Hungary: First received 5,792/1896
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Philippine Republic: Latest 217/1956
Rumania: First received 40,380/1957
U.S.S.R.: Not received between 2,496/1928 and 116,000/1958
Yugoslavia: First received 10,001/1933
Latest 16,461/1941

New Applications Received During June 1960

Patents	7,040
Designs	370
Plant Patents	12
Reissues	12
Total	7,434

Issue

Patents	769	No. 2,950,460 to No. 2,951,248, incl.
Designs	35	No. 188,714 to No. 188,748, incl.
Plant Patents	1	No. 1,969
Reissues	2	No. 24,863 to No. 24,864, incl.
Total	807	

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1960

Total number of pending applications (excluding Designs)	195, 885
Total number of pending Design applications	5, 937
Total number of applications awaiting action (excluding Designs)	87, 039
Total number of Design applications awaiting action	1, 511
Date of oldest new application	Feb. 24, 1959
Date of oldest amended application	Feb. 14, 1959

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. C., CHEMICAL AND RELATED ARTS	6, 21, 28, 42, 46, 50, 58, 59, 60, 62, 64.
(II) EVANS, N. H., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	10, 26, 37, 41, 43, 44, 49, 51, 54, 65.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 31, 36, 57, 58, 61, 81, 83.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 37, 34, 35, 39, 53, 63.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 29, 30, 33, 38, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 25, 26, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 24, 30, 32, 48, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 93, 92, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Planting; Plant Husbandry; Scattering Unloaders; Earth Working	1-3-60	1-6-60
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	1-14-60	1-4-60
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	12-10-59	12-2-59
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-2-59	11-2-59
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	8-3-59	8-5-59
6. (I) LIDOFF, H. J. (MARCUS, I., acting), Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Amides	12-1-59	12-2-59
7. (IV) ANDERSON, E. G., Optics	10-2-59	10-1-60
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-4-60	1-4-60
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-16-59	10-14-59
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-31-59	12-16-59
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-26-59	11-3-59
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Control	12-30-59	1-6-60
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	11-9-59	11-6-59
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	9-30-59	8-27-59
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	1-13-60	1-6-60
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	8-3-59	7-8-59
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	1-11-60	11-12-59
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	1-4-60	1-4-60
19. (VII) PATRICK, P. L., Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	1-28-60	12-15-59
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	1-4-60	1-4-60
21. (III) MADER, R. C., Textiles	1-10-60	11-30-59
22. (VI) BUCHLER, M. B., Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-30-59	10-15-59
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	2-24-59	2-14-59
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	10-1-59	10-1-59
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	10-1-59	9-23-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	10-1-59	9-1-59
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact With Solids	2-1-60	2-1-60
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	1-4-60	1-4-60
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-24-59	11-24-59
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	1-5-60	1-6-60

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
11. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Oil-Modified; Stabilized); Mineral Oils	1-11-60	1-11-60
22. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers; Centrifugal Bowl Separators; Liquid Separation or Purification (part)	12-9-59	12-9-59
23. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Building Structures	10-15-59	10-1-59
24. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	4-20-59	4-20-59
25. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	12-9-59	12-9-59
26. (V) EVANS, R. L. (CUTTING, C. A., acting), Measuring and Testing (part)	10-19-59	10-19-59
27. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-Cell Circuits	10-1-59	10-5-59
28. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols, Proteins, Amines, Natural Resins	8-21-59	8-24-59
29. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-3-59	12-1-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	1-4-60	1-4-60
41. (II) LOVEWELL, N. M., Recorders (part); Sound Recording; Television; Telegraphy (part)	12-4-59	12-1-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-20-59	10-26-59
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	10-9-59	10-12-59
44. (II) JUSTUS, C. L., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	7-2-59	7-2-59
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances; Excavating	12-23-59	12-14-59
46. (I) WILES, W. G., Actinide Series (e.g., Fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-7-59	11-5-59
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-9-59	12-14-59
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-2-59	11-2-59
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact With Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	9-4-59	9-4-59
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-59	9-18-59
51. (II) WESTBY, G. N., Modulators; Piezoelectric Devices; Antennas; Oscillators; Miscellaneous Electron Space Discharge Device Systems; Radio Detectors	11-3-59	11-3-59
52. (V) LE ROY, C. A., Supports and Racks	8-16-60	8-3-60
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	1-4-60	1-5-60
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-4-60	12-29-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-59	10-22-59
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-14-59	12-4-59
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting	10-1-59	10-8-59
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	11-3-59	11-3-59
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-8-59	9-3-59
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	1-7-60	1-4-60
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	1-4-60	1-5-60
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	1-4-60	1-4-60
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	10-16-59	10-19-59
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-4-59	8-20-59
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-28-59	12-28-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	8-21-59	9-6-59
67. (VII) KRAFFT, C. F., Liquid Separation or Purification (part); Laminated Fabrics	9-29-59	9-4-59
81. (III) MONCURE, J. A., Industrial Arts	4-4-60	4-18-60
82. (III) HUNTER, E. H., Household, Personal and Fine Arts	4-13-60	4-20-60
91. BAILEY, J. S., Ornamentation	3-7-60	3-24-60
92. GAUSS, H., Radio Transmitters, Receivers and Tuners	2-12-60	2-1-60
93. WAHL, R. A. (PURDY, W. F., acting), Metal Bending; Web Feeding	1-6-60	1-4-60
94. BERLOWITZ, W. (COLE, W. S., acting), Gas Separation	1-4-60	1-11-60
96. ANGEL, C. D., Metallic Building Structures; Packed Rod Joints; Joint Packings	11-2-59	10-16-59
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	1-4-60	12-4-59

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 221) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1959*.

Patents..... Numbers 2,925,579 to 2,926,534, inclusive

Plant Patents..... Numbers 587 to 590, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

WILBUR M. VAN OTTEREN *v.* WILLIAM J. HAFNER ET AL.

No. 6518. Decided June 1, 1960

[47 CCPA — ; — F.2d — ; 126 USPQ 151]

1. INTERFERENCE—BURDEN OF PROOF.

"Since the parties filed their applications on the same day, neither has a greater burden of proof than the other."

2. SAME—PRELIMINARY STATEMENT—MOTION TO AMEND PRELIMINARY STATEMENT—RULE 216—CONVERSION OF SOLE TO JOINT APPLICATION.

Upon review of the denial below of a motion to convert the sole application of appellant, Van Otteren, to a joint application of Van Otteren and Hafner, one of the appellees, and of a motion to amend appellant's preliminary statement by filing a joint statement of Hafner and Van Otteren, *Held* that "It is evident the amendment of the preliminary statement is contingent on the granting of the motion to convert," in that "A sole applicant cannot contest an interference on the basis of a joint statement since Patent Office rule 216 provides that such a statement must state that the *applicant* made the invention in issue."

3. APPLICATION—CONVERSION OF SOLE TO JOINT—DILIGENCE.

"* * *, it is incumbent on a party who seeks to convert an application involved in an interference on the basis of a mistake resulting in failure to properly identify the inventorship in such application, to show that diligence was exercised in seeking conversion."

4. SAME—SAME—SAME.

Where the affidavit of one of the attorneys for Van Otteren, appellant, in support of a motion to convert appellant's sole application to a joint application of Van Otteren and Hafner, an appellee with Cork, indicated that shortly after the interference was declared he informed Van Otteren and Hafner that the invention in issue was made either by them as joint inventors or by them jointly with Cork, but notwithstanding that fact, no move was made to convert the Van Otteren application until after both parties had completed their testimony and the time for taking rebuttal testimony by Hafner and Cork had expired, and counsel for Van Otteren sought to justify the delay on the ground that they could not be sure, until all the testimony was completed, whether Cork should also be included as a joint inventor, *Held* that "We do not think that is a sufficient excuse."

5. SAME—SAME—SAME.

"* * *, it is not clear how Cork could be a joint inventor with Hafner and Van Otteren without either of the latter being aware of it. If Cork was a joint inventor he must have made some significant suggestion to one or both of them, and since they were both available it should have been possible to ascertain the facts before Van Otteren's preliminary statement was filed. It was incumbent on Hafner and Van Otteren to decide the question of inventorship to the best of their ability and proceed accordingly, without waiting to see what testimony would be offered on behalf of the party Hafner and Cork."

6. SAME—SAME—SAME.

"* * *, since it was considered clear shortly after the interference was declared that Van Otteren was not the sole inventor of the invention in issue, and that Hafner, at least, was a joint inventor with him, steps should have been promptly taken to add Hafner's name to the application, regardless of Cork's part in the matter. Manifestly a party is entitled to know in presenting his testimony and especially in conducting his cross-examination, whether his opponent is to be regarded as a sole inventor or as joint inventors. It was therefore Van Otteren's duty to advance the claim that Hafner was a joint inventor with him as soon as he concluded that such was the case."

7. SAME—SAME—SAME—INTERFERENCE—PRELIMINARY STATEMENT—MOTION TO AMEND PRELIMINARY STATEMENT.

"* * *, Van Otteren did not exercise diligence in seeking to convert his application to a joint application or to amend his preliminary statement; thus the denial of his motions seeking to do so was therefore proper."

8. SAME—INVENTORSHIP—JOINT APPLICATION PRIMA FACIE EVIDENCE OF JOINT INVENTORSHIP.

"It is well settled that a duly executed joint application is prima facie evidence of joint inventorship; * * *"

9. SAME—SAME—EVIDENCE—INTERFERENCE.

"Hafner, who at the time of taking testimony was hostile to Cork, indicated in his testimony that he could not recall any significant contribution to the invention which had been made by the latter. However, when the Hafner and Cork application here involved was executed, several years prior to the taking of testimony in the instant interference, Hafner stated under oath that he believed Cork to be a joint inventor with him of the carrier disclosed and claimed in that application, and it seems unlikely that his recollection of the circumstances surrounding the making of the invention had improved during that interim. Moreover, the fact that, during the same period, Hafner had left Cork's company and become associated in a business way with the Grover Company, Van Otteren's assignee, necessarily lessens the weight of his testimony."

10. SAME—SAME—INTERFERENCE—PRIORITY—CONTRIBUTION OF ONE OF JOINT INVENTORS INURES TO BENEFIT OF PARTY.

Where there was nothing of record which overcame the presumption of joint inventorship arising from the joint application of Hafner and Cork, *Held* that "such contributions to the invention as are shown to have been made by Hafner must inure to the benefit of the party Hafner and Cork."

11. INTERFERENCE—ORIGINALITY.

"Count 1 recites only two structural elements of the carrier, namely an axially extending guideway and radially polarized magnetic slugs shiftable axially with respect to each other along the guideway. Count 2, in addition to reciting these elements, is substantially more specific than count 1 in its recitation of the means for mounting and adjustment of the magnets, but we agree with the Board that those features involve merely mechanical skill in specifically embodying the inventive concept of count 1. The essential features of the invention are those set forth in count 1. It follows that whoever invented the subject matter of count 1 is the inventor of the subject matter of count 2 also, * * *."

12. SAME—PRIORITY—DETERMINATION OF INVENTORSHIP.

Where, in working together in developing the carrier in issue, appellant Van Otteren and appellee Hafner experimented unsuccessfully with a carrier having steel rings around the body of the carrier, which, at the suggestion of Van Otteren, were replaced, unsuccessfully, by a segment of a steel ring slidably adjustable along a track recessed in the body of the carrier, and thereafter Hafner suggested use of radially polarized magnets, and upon incorporation of such magnets the carrier proved successful, *Held* that Hafner's suggestion was the spark which led to the final satisfactory result, and Hafner was to be regarded as the inventor; that while Hafner's suggestion resulted from Van Otteren's use of a steel segment mounted in a slot, the first conception of the complete invention was disclosed by Hafner; and that "Once the idea of using magnets was advanced against the background of the prior disclosure of the movable segment, all that remained to be done was to work out the mechanical details of mounting the magnets."

APPEAL from the Patent Office. Interference No. 87,892.

AFFIRMED.

Barnes, Kisselle, Raisch & Choate, John M. Kisselle (*Alfonse J. D'Amico* of counsel) for Wilbur M. Van Otteren.

Kotts and Sheridan, Earl F. Kotts (*James V. Sheridan* of counsel) for William J. Hafner et al.

Before WORLEY, *Chief Judge*, and RICH, and MARTIN, *Associate Judges*, and Judge C. WILLIAM KRAFT, *United States District Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL.

WORLEY, *Chief Judge*, delivered the opinion of the court.

This appeal is from the decision of the Board of Patent Interferences of the United States Patent Office awarding priority of invention of the subject matter in issue in interference No. 87,892 to the party Hafner and Cork.

The invention relates to a pneumatic dispatch system in which a cylindrical carrier is caused to move along a tubular conduit by differential air pressures, and in which the carrier may be automatically directed into a predetermined branch conduit. The entrances to the branch conduits are controlled by electromagnetically operated gates which are responsive to impulses induced in spaced coils surrounding the main conduit by the passage of correspondingly spaced magnets mounted on the carrier. By appropriate spacing of the magnets the carrier will be caused to actuate the gate of the desired branch and to enter that branch. The counts relate to the structure of the carrier by which provision is made for adjustably mounting the magnets, that structure being defined broadly in count 1 and more specifically in count 2. The counts read:

1. In a message carrier system, a carrier adapted to travel along a conduit means, a guideway extending axially of said carrier, and a plurality of magnetic slugs polarized radially of said carrier and shiftable axially with respect to each other along said guideway.

2. A carrier for use in a tube type conveyor having sets of receptor coils spaced axially at various distances on the tube exterior for creating electric impulses responsively to magnetic signals from within the tube, said carrier comprising, a body, said body being adapted to receive items to be conveyed, said body having an integral axially extending recess forming a track on its exterior, said track having sides extending generally rectilinearly and parallel to each other, a plurality of slides slidably mounted within said track, a magnet on each slide, a fixed magnet in said track adjacent one end of said body, said magnets extending generally radially of said body, each of said magnets having one pole disposed immediately adjacent the radial periphery of said body, each of said magnets having a length generally equal to the depth of said recess, at least two of said magnets having their poles reversed relatively to each other, said slides being movable selectively and independently for adjusting the intervals between said magnets, locking means on each of said slides, said locking means being engageable against one of said sides of said recess for locking said slides in selected positions.

[1] Since the parties filed their applications on the same day, neither has a greater burden of proof than the other.

The record shows that during the first half of 1952, when the invention was made, Hafner and Cork were employed by Gemco Electric Company, and Van Otteren by the Grover Company. Gemco was desirous of developing an automatic pneumatic carrier system and consulted Grover for assistance in the development of the mechanical portion of the system. Thereafter work was done by representatives of the two companies in close association, with the result that the carrier in issue was conceived and reduced to practice in June 1952. The question involved is one of originality, since there is no contention that the invention was conceived by the parties independently.

Here, Van Otteren no longer contends that he is the sole inventor of the subject matter of the counts, but asserts that he made the invention jointly with Hafner. Hafner now agrees with that assertion, and executed papers jointly with Van Otteren for conversion of the Van Otteren application to a joint application of Hafner and Van Otteren. A motion to effect such conversion was filed May 1, 1958, together with a motion to amend Van Otteren's preliminary statement by filing a joint statement of Hafner and Van Otteren. Both motions were denied by the Board and the instant appeal alleges error in such denial. That denial will be considered first. [2] It is evident the amendment of the preliminary statement is contingent on the granting of the motion to convert. A sole applicant cannot contest an interference on the basis of a joint statement since Patent Office rule 216 provides that such a statement must state that the *applicant* made the invention in issue.

The conversion of a sole to a joint application was not authorized by law until January 1, 1953, when the Patent Act of 1952 became effective, and this court has not previously had occasion to consider the propriety of making such a conversion during an interference. However, the conversion of joint applications to sole applications, under proper circumstances, has been permitted since *In re Roberts*, 49 App. D.C. 250, 1920 C.D. 158. The question when such conversion, with a corresponding change of parties, can properly be made during an interference was fully considered in *Crane v. Grier and Warren*, 21 CCPA 1163, 71 F.2d 180, 22 USPQ 31; and *Manny v. Garlick et al.*, 30 CCPA 1008, 135 F.2d 757, 57 USPQ 377. The same general principles are applicable here.

As was pointed out in the two cases cited, [3] it is incumbent on a party who seeks to convert an application involved in an interference on the basis of a mistake resulting in failure to properly identify the inventorship in such application, to show that diligence was exercised in seeking conversion. [4] In the instant case the affidavit of one of Van Otteren's attorneys in support of the motion to convert states that as the result of several interviews "shortly after the Interference was declared," (the declaration date was March 9, 1956), he informed Van Otteren and Hafner that the invention in issue was made either by them as joint inventors or by them jointly with Cork. Notwithstanding that fact, no move was made to convert the Van Otteren application, or to reform the interference until May 1, 1958, after both parties had completed their testimony and the time for taking rebuttal testimony by Hafner and Cork had expired.

Counsel for Van Otteren seek to justify the delay on the ground that they could not be sure, until all the testimony was completed, whether Cork should also be included as a joint inventor. We do not think that is a sufficient excuse.

[5] In the first place, it is not clear how Cork could be a joint inventor with Hafner and Van Otteren without either of the latter being aware of it. If Cork was a joint inventor he must have made some significant suggestion to one or both of them, and since they were both available it should have been possible to ascertain the facts before Van Otteren's preliminary statement was filed. It was incumbent on Hafner and Van Otteren to decide the question of inventorship to the best of their ability and proceed accordingly, without waiting to see what testimony would be offered on behalf of the party Hafner and Cork.

[6] Moreover, since it was considered clear shortly after the interference was declared that Van Otteren was not the sole inventor of the invention in issue,

and that Hafner, at least, was a joint inventor with him, steps should have been promptly taken to add Hafner's name to the application, regardless of Cork's part in the matter. Manifestly a party is entitled to know in presenting his testimony and especially in conducting his cross-examination, whether his opponent is to be regarded as a sole inventor or as joint inventors. It was therefore Van Otteren's duty to advance the claim that Hafner was a joint inventor with him as soon as he concluded that such was the case.

Counsel for Van Otteren rely on an affidavit by James V. Sheridan, one of the attorneys for Hafner and Cork, which is of record and which shows that Sheridan knew in 1956 that Van Otteren's attorneys were studying the joint inventorship problem. However, since Van Otteren made no attempt to convert his application until the taking of testimony was complete in 1958, it would have been natural for counsel for Hafner and Cork to assume, throughout the taking of testimony, that Van Otteren had given up any idea that he was not a sole inventor.

[7] In our opinion, Van Otteren did not exercise diligence in seeking to convert his application to a joint application or to amend his preliminary statement; thus the denial of his motions seeking to do so was therefore proper.

It follows that the issue to be determined here is whether priority should be awarded to Van Otteren as a sole inventor, or to Hafner and Cork as joint inventors.

The record fails to point out any specific suggestion made by Cork which was incorporated in the invention here in issue. Cork claims that he repeatedly discussed with Hafner the problems which arose during the development of the invention, and that each of them offered suggestions to the other. The documentary exhibits indicate that Cork was in reasonably close touch with the work from the time when the Grover and Gemco companies began their joint effort until the reduction to practice in June 1952.

[8] It is well settled that a duly executed joint application is prima facie evidence of joint inventorship; *Brown* v. *Edeler et al.*, 27 CCPA 1091, 110 F.2d 858, 45 USPQ 181, and cases there cited. [9] Hafner, who at the time of taking testimony was hostile to Cork, indicated in his testimony that he could not recall any significant contribution to the invention which had been made by the latter. However, when the Hafner and Cork application here involved was executed, several years prior to the taking of testimony in the instant interference, Hafner stated under oath that he believed Cork to be a joint inventor with him of the carrier disclosed and claimed in that application, and it seems unlikely that his recollection of the circumstances surrounding the making of the invention had improved during that interim. Moreover, the fact that, during the same period, Hafner had left Cork's company and become associated in a business way with the Grover Company, Van Otteren's assignee, necessarily lessens the weight of his testimony.

[10] We agree with the conclusion reached by the Board that there is nothing of record which overcomes the presumption of joint inventorship arising from the Hafner and Cork application; accordingly, such contributions to the invention as are shown to have been made by Hafner must inure to the benefit of the party Hafner and Cork.

Hafner and Van Otteren worked together in the production of the device on which both parties rely for reduction to practice, and the record shows that each of them made suggestions which were incorporated in the device. Accordingly it must be determined which of them made the suggestion which constituted the inventive concept defined in the counts.

[11] Count 1 recites only two structural elements of the carrier, namely an axially extending guideway and radially polarized magnetic slugs shiftable axially with respect to each other along the guideway. Count 2, in addition to reciting these elements, is substantially more specific than count 1 in its recitation of the means for mounting and adjustment of the magnets, but we agree with the Board that those features involve merely mechanical skill in specifically embodying the inventive concept of count 1. The essential features of the invention are those set forth in count 1. It follows that whoever invented the subject matter of count 1 is the inventor of the subject matter of count 2 also, and the latter count need not be further considered in detail.

[12] The record shows that Van Otteren and Hafner worked together in developing the carrier in issue. The Board found that the first carrier with which they experimented unsuccessfully had steel rings around the body of the carrier which, at the suggestion of Van Otteren, were replaced by a segment of a steel ring which could be slidably adjusted along a track recessed in the body of the carrier, but that arrangement also proved unsuccessful. Thereafter, as found by the Board, it was Hafner who suggested use of radially polarized magnets. Upon incorporation of such magnets the carrier proved successful. Those findings by the Board are amply supported by the record and do not appear to be controverted here.

The Board concluded that Hafner's suggestion was the spark which led to the final satisfactory result, and therefore Hafner was to be regarded as the inventor. We agree with that conclusion. It is true, as Van Otteren points out, that Hafner's suggestion resulted from Van Otteren's use of a steel segment mounted in a slot, but the first conception of the complete invention was disclosed by Hafner. Once the idea of using magnets was advanced against the background of the prior disclosure of the movable segment, all that remained to be done was to work out the mechanical details of mounting the magnets.

The instant case is quite similar to *O'Donnell* v. *Hartt*, 22 CCPA 958, 75 F.2d 195, 24 USPQ 379, cited by the Board. The essence of the invention there consisted in blowing a hot gaseous fluid against an adhesively coated surface. The record showed that Hartt had suggested to O'Donnell the use of a gas flame or a hot gas for applying heat to the surface, but not the actual process of blowing the gas against the surface. The idea of blowing was thought of by O'Donnell independently. It was held that since the blowing was the essential feature of the invention, it could not be said that Hartt disclosed the invention to O'Donnell; and priority was awarded to the latter. Similarly, Van Otteren's suggestion of using a metal segment in a slot in the carrier did not amount to a disclosure of the invention here in issue. It was only when the idea of using radially polarized magnets was added that the conception of the invention was complete.

Another case in which priority was awarded to the party who made a vitalising suggestion, rather than to his opponent who had disclosed the background of the invention to him, is *Tolle et al.* v. *Starkey*, 45 CCPA 979, 255 F.2d 935, 118 USPQ 292, also cited by the Board.

We agree with the Board that the only issue with which we are concerned is priority of invention between Van Otteren as a sole inventor and Hafner and Cork as joint inventors. For the reasons given, we also agree with the Board that, as between those parties, Hafner and Cork must be regarded as having contributed the feature which renders the count patentable, hence should receive the award of priority.

The decision is affirmed.

AFFIRMED.

MARTIN, *J.*, sat, but did not participate in decision.

SMITH, *J.*, did not sit or participate in decision.

U.S. Court of Customs and Patent Appeals

FAIRCHESTER PACKING CO., INC. *v.* D'ARRIGO BROS. CO. OF CALIFORNIA

No. 6577. Decided June 1, 1960

[47 CCPA — ; — F.2d — ; 126 USPQ 54]

TRADEMARK—CONFUSING SIMILARITY—"ANDY BOY" ON FRESH VEGETABLES AND "DANNY BOY" ON FRESH TOMATOES. On the issue of confusing similarity between "Andy Boy," used on a variety of food products including fresh vegetables, and "Danny Boy," for use on fresh tomatoes, *Held* that "While there are obviously some dissimilarities between the two marks, their similarities outweigh their differences to such an extent as to result in a likelihood of confusion when applied to the instant goods."

APPEAL from the Patent Office. Opposition No. 85,945.

AFFIRMED.

John P. Chandler for Fairchester Packing Co., Inc. *Charles R. Allen, Jr.* (*William G. MacKay* of counsel) for D'Arrigo Bros. Co of California.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL.

WORLEY, *Chief Judge*, delivered the opinion of the court.

Appellant seeks to register "Danny Boy" for use on fresh tomatoes. Appellee opposes on grounds of long prior registration and use of the trademark "Andy Boy" on a variety of food products including fresh vegetables. Both "Danny Boy" and "Andy Boy," as used, are accompanied by a picture of a smiling boy.

In view of the nature of the goods and priority of use, the sole question is whether concurrent use of the marks would likely result in confusion within the meaning of Section 2(d) of the Lanham Act.

The Examiner sustained the opposition, stating that

> The marks "Danny Boy" and "Andy Boy" are similar in composition and they are to some extent similar in connotation, in that each thereof is suggestive of a small boy. Moreover, these marks bear a marked resemblance in sound; and aside from any other consideration, it is the opinion of the Examiner that the resemblance between them in the latter respect alone is such that their contemporaneous use for the specified goods would at least be reasonably likely to cause confusion in trade.

In affirming the Examiner's action, the Commissioner, through the Assistant Commissioner, observed that

> The record shows that opposer's mark "Andy Boy" has been used on fresh vegetables and fruit, including tomatoes, for many years; such vegetables and fruit have been sold in large quantities; and the vegetables and fruit have been extensively advertised to wholesalers and jobbers through trade journals and to the consuming public through newspapers and radio. Opposer has at all times used on its labels the picture of a smiling young boy in association with its "Andy Boy" trademark.
>
> Applicant's president was familiar with opposer's trademark "Andy Boy" before "Danny Boy" was adopted for use on tomatoes. Applicant uses on its labels and cartons for tomatoes the picture of a smiling young boy, though not always the same boy. * * *
>
> The mark "Danny Boy" so resembles "Andy Boy" as to be likely, when applied to fresh tomatoes, to cause confusion, mistake, or deception of purchasers; and when consideration is given to the "hurly-burly" of the fresh produce market and the fact that practically all transactions in fresh produce at the jobber level (where trademarks for such products are really important and meaningful) are conducted by telephone, confusion and mistake will be inevitable.

We have given full consideration to appellant's brief and oral argument but find nothing to disturb the holding below. While there are obviously some dissimilarities between the two marks, their similarities outweigh their differences to such an extent as to result in a likelihood of confusion when applied to the instant goods.

The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE JOSEPH P. RUTH

No. 6534. Decided June 1, 1960

[47 CCPA — ; — F.2d — ; 126 USPQ 155]

1. REISSUE—BROADENED CLAIMS. "A claim of a reissue enlarges the scope of the claims of the patent if it is broader than such claims in any respect, even though it may be narrower in other respects or, in other words, if it contains within its scope any conceivable apparatus or process which would not have infringed the original patent."
2. SAME—SAME. "* * * one cannot directly compare an apparatus claim with a process claim. However, since both types of claims are based on the same specification, we can determine what the common invention is and can then compare the claims on this basis."
3. SAME—SAME—REISSUE APPLICATION FILED TOO LATE. A certain claim of appellant's reissue application *Held* to involve an enlargement of the scope of the claims of his original patent; and *Held* that since the reissue application was filed more than two years after the grant of the original patent, the allowance of the claim was barred by 35 U.S.C. 251.

APPEAL from the Patent Office. Serial No. 598,783.

AFFIRMED.

Herbert J. Jacobi (*Samuel L. Davidson* of counsel) for Joseph P. Ruth.

Clarence W. Moore (*S. Wm. Cochran* of counsel) for the Commissioner of Patents.

Before WORLEY, *Chief Judge*, and RICH, MARTIN, and SMITH, *Associate Judges*, and Judge WILLIAM H. KIRKPATRICK, *United States Senior Judge for the Eastern District of Pennsylvania*, designated to participate in place of *Judge* O'CONNELL.

SMITH, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the rejection by the Examiner of claim 12 of appellant's application No. 598,783, filed June 25, 1956, for the reissue of Patent No. 2,590,578, granted March 25,

1952. Claim 12 was copied by appellant from the patent to Bruniche-Olsen, No. 2,713,009, granted July 12, 1955, for purposes of an interference.

While the Examiner and the Board stated various reasons why claim 12 is not allowable in appellant's reissue application, we find it necessary to consider only the ground which was stated by the Board as follows:

> We may note, however, that appellant's position (page 4 of the reply brief) that the process and apparatus claims are, in effect, merely different ways of stating the same invention is hardly tenable in view of his contention that the process of claim 12 can be carried out in such different apparatuses as those of B-Olsen and appellant. The fact that a process may be carried out in apparatus other than that illustrated in the B-Olsen patent would be an indication that the process and apparatus are distinct inventions. The allowance of such a process claim in this case would appear to be an enlargement of the scope of the claims of the original patent and therefore contrary to the last paragraph of Section 251 of 35 U.S.C., since this application was not filed within two years from the grant of the original patent.

Appellant's sixth reason of appeal to this court alleges error in the holding just quoted.

The paragraph of Section 251 cited by the Board provides that:

> No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent.

The appealed reissue application was filed more than four years after the grant of the original patent and accordingly claim 12 cannot be allowed if it enlarges the scope of the claims of that patent. [1] A claim of a reissue enlarges the scope of the claims of the patent if it is broader than such claims in any respect, even though it may be narrower in other respects or, in other words, if it contains within its scope any conceivable apparatus or process which would not have infringed the original patent. *In re Bostwick*, 26 CCPA 1122, 102 F.2d 889, 41 USPQ 282; *Rancourt* v. *Panco Rubber Co.*, 5 F.S. 185; *In re Rogoff*, 46 CCPA 733, 261 F.2d 601, 120 USPQ 185, and cases there cited.

Appellant's patent discloses and claims an apparatus for extracting sugar from beets, comprising a rotating hollow cylinder immersed in a body of liquid contained in an open tank. Sliced sugar beets are fed into one end of the cylinder by a conveyor and pass through it and out at the other end where they are removed by another conveyor. During their passage through the cylinder the beets are agitated by spiral conveyor blades mounted on the interior wall of the cylinder, and the sugar in the beets is dissolved in the liquid from which it is later recovered by means not involved here. Liquid is fed by a pipe into the cylinder in a direction opposite to that in which the beets move. A vertical partition is located in the tank midway between the ends of the cylinder and is sealed against the outer cylinder wall, so that a higher level of liquid may be maintained in the tank adjacent the end of the cylinder where the beets leave it, thus producing a gravity head which assists the flow of liquid produced by the pipe. This flow is in a direction opposite to that in which the beets move.

The specification of the reissue application is identical with that of the patent.

All the claims of appellant's patent are drawn to apparatus. Appellant has not selected any particular claim of the patent for comparison with appealed claim 12, but in our opinion claim 1 most nearly approaches claim 12 in scope and we shall accordingly confine our discussion to that claim. If claim 12 is found to be broader than claim 1, then it is also broader than each of the other claims of the patent. Claims 1 and 12 are as follows:

> 1. A diffusing apparatus, comprising a tank, means for simultaneously agitating and translating material with leaching effect within a liquid body confined by said tank, means including a partition transversely dividing the liquid body exteriorly of said first means for circulating the liquid body to cause generation therein of a flow current through said first means opposed to translatory travel of material therethrough, means for continuously feeding material to the initial end of its translatory path through the liquid body, means for continuously removing material from the liquid body at the terminal end of its translatory path, and means for selectively withdrawing liquid from the body adjacent the infeed of material thereto.
>
> 12. A method for the continuous countercurrent lixiviation of disintegrated material comprising the steps of establishing and maintaining a body of the material in closely packed, but liquid pervious condition and in the geometrical shape of a solid of revolution, supplying fresh material at one end and removing treated material from the other end of the said body, rotating said body about its axis, conveying the material longitudinally through the body from the supply end to the discharge end, passing a flow of lixiviating liquid under the influence of gravity in countercurrent to the travel of the material through a section of the body, said section having for a constant speed of rotation of the body a constant location relative to a vertical plane through the axis of rotation.

[2] At the outset, it is clear that one cannot directly compare an apparatus claim with a process claim. However, since both types of claims are based on the same specification, we can determine what the common invention is and can then compare the claims on this basis.

It will be noted that claim 1 calls for a means for agitating the material as it moves through the tank, while claim 12 is not in any way limited to a process in which the material is agitated but, on the contrary, states that the material is maintained in a closely packed condition.

Claim 1 is also limited to an apparatus including a partition transversely dividing the liquid body exteriorly of the means which transiates the material through the tank. Presumably, this partition has a function which we should expect to find in the corresponding process claim. However, the process of claim 12 is not limited either expressly or by implication to the use of a partition nor does it contain any process step related thereto. Claim 12 calls merely for passing a flow of liquid through the material under the influence of gravity, but that step does not require the use of a partition. It could be carried out, for example, by inclining the tank and the cylinder through which the material passes. In fact, such inclination is used to produce the gravity flow in the device of the Bruniche-Olsen patent, from which claim 12 was copied.

It will thus be seen that claim 12 may be infringed without either agitating the material or using a transverse partition, whereas claim 1 is not infringed unless both those features are present. Obviously, therefore, claim 12, if allowed, would bring within the scope of the reissued patent processes which can be carried out in apparatus which would not have infringed the original patent. Claim 12, therefore, involves an enlargement of the scope of the claims of the original patent and since the reissue application was filed more than two year after the grant of that patent, the decision appealed from was proper. It is, therefore, unnecessary to consider the other grounds of rejection involved in this appeal.

[3] The decision of the Board of Appeals is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,930,304, Preaus and Ross, Awnings of metal or similar material; **2,564,275**, same, filed Dec. 15, 1958, D.C., E.D. Mo. (St. Louis), Doc. 58-C-492(3), *Lifelong Aluminum Awning Co., Inc.* v. *Nelvin L. Stinnett, Jr., et al.* Stipulation and order of dismissal June 20, 1960.

2,583,887, J. A. Soltis, Baby's automobile seat; **2,890,787**, same, filed Mar. 26, 1959, D.C., M.D. Pa. (Scranton), Doc. 6579, *Irving Berlin et al., doing business as Dennis Mitchell Industries* v. *Muskin Manufacturing Co., Inc.* Order dismissing suit and counterclaim (notice July 8, 1960).

2,564,275. (See 2,500,527.)

2,664,615, Hillenbrand and Laugle, Casket interior unit. Suit for Declaratory Judgment, filed July 7, 1960, D.C., S.D. Ind. (Indianapolis), Doc. 60-C-175, *Jacuil Mfrs.* v. *Batesville Casket Company, Inc.*

2,666,787. (See 2,533,527.)

2,694,562, C. H. Snyder et al., Apparatus for continuously digging coal; **2,877,000**, C. H. Snyder et al., Continuous mining machine with vertically separable cutter carrying units, filed June 30, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1045, *The Colmol Company* v. *Goodman Manufacturing Co.*

2,714,569, Prindle and Lacy, Laminated thread; **2,772,994**, G. H. Lacy, same, filed Feb. 23, 1960, C.C.A., 4th Cir., Doc. 8067, *The Dow Chemical Company* v. *Metlon Corporation et al.* Decree of District Court affirmed July 7, 1960.

2,722,870, H. W. Vogl, Machine for manufacturing parcel carriers having looped handles; **2,889,559**, same, Automatic device for the manufacture of parcel carriers, filed July 1, 1960, D.C.N.J. (Newark), Doc. 569/60, *Hugh M. Vogl et al.* v. *Hugo Beecher et al.*

2,758,632, Koller and Bohn, Stand for spring suspended hobby horse; **Re. No. 23,849**, W. Baltz, Suspended horse, filed July 1, 1960, D.C., N.D. Ill. (Chicago), Doc. 60c1063, *William Baltz et al.* v. *The Fair et al.*

2,788,896, W. T. Cox, Gate hinge, filed July 6, 1960, D.C., W.D. Okla. (Oklahoma City), Doc. 8896, *Cox Industries, Inc.* v. *Acme Fence & Iron Company.*

2,760,596, A. S. Bagley, Frequency counter; **2,851,896**, E. A. Hilton, Electronic counter, filed July 5, 1960, Ct. Cls., Doc. 270/60, *Hewlett Packard Company* v. *The United States.*

2,772,994. (See 2,714,569.)

2,796,254, J. F. Wood, Cartridge case and turnover mechanism; **2,851,541**, same, Electromechanical transducer; **2,862,619**, same, Phonograph cartridge; **Des. 186,947**, same, Phonograph transducer, filed July 6, 1960, D.C., S.D.N.Y., Doc. 60/2656, *Electro Voice, Incorporated* v. *Bernard Domsky.* Consent judgment; defendant enjoined July 7, 1960.

2,804,965, C. F. Engel, Sheet metal flanger, filed Dec. 3, 1957, D.C., E.D. Mo. (St. Louis), Doc. 57-C-586(2), *Engel Sheet Metal Equipment, Inc.* v. *Jos. T. Ryerson & Son, Inc., et al.* (Amended complaint filed Feb. 24, 1958 substituting The Lockformer Company for Hammond Sheet Metal Company as party-defendant.) Cause dismissed as to Jos. T. Ryerson & Son, Inc. Claims 14 and 16 of Patent 2,804,965 held valid and infringed by The Lockformer Co., Brown Machinery Co. and E. E. Southern Iron Co. Injunction granted July 6, 1960.

2,816,254, B. J. Dunn, Swimming pool basket ball apparatus, filed July 7, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39,264, *Bernard J. Dunn* v. *Joseph P. Potstada, etc.*

2,820,000, J. E. Morgan, Knitted fabric, filed July 7, 1960, D.C., E.D. Pa. (Philadelphia), Doc. 28259, *John E. Morgan Patents, Inc.* v. *Henry L. Miller & Son, Inc.* Same, filed same, Doc. 28260, *John E. Morgan Patents, Inc.* v. *Burkey Underwear Company.*

2,851,541. (See 2,793,254.)

2,852,619. (See 2,793,254.)

2,856,187, H. Marker, Automatically releasable ski binding, filed July 8, 1960, D.C., W.D. Wash. (Seattle), Doc. 5084, *Georg Von Opel* v. *Anderson & Thompson Ski Co., Inc.*

2,860,558. (See 2,722,870.)

2,877,000. (See 2,694,562.)

2,896,199, W. H. Myers, Television receiver construction; **2,896,200**, E. Aeschliman, Television receiver cabinet construction; **2,896,201**, C. L. Ackerman, Television receiver chassis construction, filed July 1, 1960, D.C., N.D. Ind. (Fort Wayne), Doc. 1243, *Avco Corporation* v. *Magnavox Company.*

2,896,200. (See 2,896,199.)

2,896,201. (See 2,896,199.)

2,927,265, B. Blitzer, Cellular lighting element and means for supporting the same; **Reg. No. 670,247** (INFINILITE), Integrated Ceilings, Inc., Louvered ceiling elements and light screens, filed July 7, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39263, *Integrated Ceilings & Grilleworks, Inc.* v. *United Lighting and Ceiling Co.*

Re. 23,849. (See 2,758,632.)

Des. 186,947. (See 2,703,254.)

REISSUES

AUGUST 30, 1960

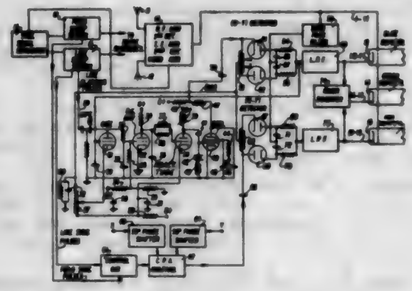
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,863
METHOD OF STABILIZING SPRAYABLE PAINTS
Edmund Rogers, South Euclid, Ohio, assignor to The Engine Parts Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Original No. 2,736,665, dated Feb. 28, 1956, Ser. No. 144,865, Feb. 17, 1950. Application for reissue Sept. 3, 1959, Ser. No. 838,010
5 Claims. (Cl. 106—190)

1. A method for stabilizing pigmented lacquer compositions in which the pigment ordinarily has a tendency to agglomerate or settle to irreversible masses, which comprises adding to said lacquer an approximately equal volume of a fluoro-chloromethane *selected from the group consisting of difluoro-dichloromethane and mixtures thereof with trichloro-fluoromethane.*

24,864
COLOR DEMODULATOR OUTPUT CONTROLLED SUBCARRIER OSCILLATOR
Norman W. Parker, Wheaton, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Original No. 2,766,321, dated Oct. 9, 1956, Ser. No. 324,496, Dec. 6, 1952. Application for reissue Apr. 1, 1958, Ser. No. 732,407
3 Claims. (Cl. 178—5.4)

6. A color television receiver for utilizing a color television signal which includes color difference components modulated on a sub-carrier wave having a selected frequency and phase and which further includes recurring bursts of a signal having the same frequency as the sub-carrier wave but in phase quadrature therewith, said receiver including in combination, apparatus for receiving the color television signal and for deriving the modulated sub-carrier wave and recurring signal bursts, detector means for recovering the modulation components of the aforesaid sub-carrier wave in response to a demodulating signal having a frequency and phase corresponding to the frequency and phase of the aforesaid sub-carrier wave, a selector network coupled to said apparatus for applying the modulated sub-carrier wave and the recurring signal bursts to said detector means, apparatus for developing such a demodulating signal and for supplying the demodulating signal to said detector means, utilization means for the modulation components of the sub-carrier wave coupled to said detector means, said detector means including a pair of rectifier devices with electrodes thereof of opposite polarity connected to a point of reference potential to form a balanced circuit and being subject to develop further signal components corresponding to the aforesaid signal bursts in response to phase variations between the aforesaid sub-carrier wave and demodulating



signal, said further signal components being developed with respect to said point of reference potential and having zero value when said sub-carrier wave and said demodulating signal are in phase and having amplitude variations corresponding ot phase variations between said sub-carrier wave and said demodulating signal, and control means for utilizing the aforesaid further signal components developed by said detector means to control said last mentioned apparatus and maintain the frequency and phase of the demodulating signal developed thereby at values corresponding to the frequency and phase of the aforesaid sub-carrier wave.

PLANT PATENTS

GRANTED AUGUST 30, 1960

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,969
ROSE PLANT
Mathias Tantau, Uetersen, Holstein, Germany, assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York
Filed Nov. 18, 1959, Ser. No. 853,986
1 Claim. (Cl. 47—61)

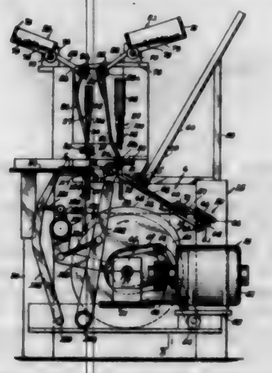
A new and distinctive variety of rose plant of the large-flowered hybrid floribunda (grandiflora) class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of good winter hardiness, a distinctive foliage arrangement of the three leaves beneath each bud and consisting of only three leaflets each, a free-flowering habit, branched sepals, said sepals being long and appearing above the early stage of the bud, a distinctive petal shape, with the tips of the petals all bending back as soon as the flower is released from its sepal, a distinctive Peach Red, lightly overcast with Scarlet general color tonality of the flowers, and unusually prolonged lasting qualities of the flowers.

PATENTS

GRANTED AUGUST 30, 1960

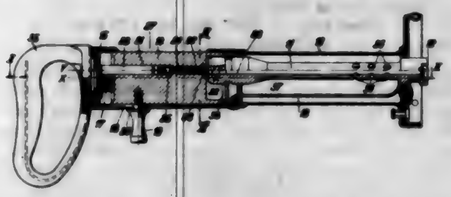
GENERAL AND MECHANICAL

2,950,680
MACHINE FOR MAKING CARPET ANCHOR STRIPS
Albert J. Sower, North Hollywood, Calif. (1021 Isabel St., Burbank, Calif.)
Filed Sept. 15, 1958, Ser. No. 761,202
10 Claims. (Cl. 1—1)



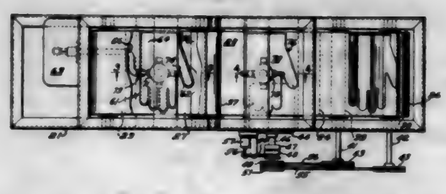
1. A machine for making carpet anchor strips comprising means to move a strip to a first nail-receiving position, means to drive a plurality of barb-forming nails into and through said strip, said nails being arranged in two longitudinal rows and the nails of one row being offset from the nails in the other row, means to move said nail-provided strip to a second nailing position and to invert the strip during such movement, means to partly drive a series of longitudinally arranged strip-fastening nails into the strip from the side thereof that the barb ends of the first nails protrude, and means operable during movement of said strip to the second position to feed a second strip into position to replace the first strip.

2,950,681
APPARATUS FOR SHOOTING IN BOLTS
Max Skumawitz, Listorf, Germany, assignor to Tornado-Ramset G.m.b.H. & Co., Listorf, Germany
Filed Nov. 20, 1956, Ser. No. 623,365
Claims priority, application Germany Nov. 22, 1955
3 Claims. (Cl. 1—106)



1. In a gun, for use in propelling bolts into material by the charge of a cartridge, having a bored barrel arranged to receive near the rear end the cartridge and adapted to be applied with the front end to said material, casing having an aperture, a longitudinal axis and surrounding said barrel and being movable axially in opposite directions relative to said barrel, a breech-block member axially reciprocably guided in said casing and carrying an axially movable firing pin, a spring biasing said member towards said cartridge at a speed and having a mass of such a magnitude that the kinetic energy of the mass at the moment of firing to a large extent counteracts the recoil generated by the detonating cartridge, said member being rotatable in said casing about the axis of said casing between two angularly off-set extreme angular positions, said member defining a loading recess for the cartridge eccentrically of the axis of said casing, whereby said recess may be rotated by said member between the first angular position of said member wherein said recess is in register with the aperture of said casing to afford free access to the interior of said recess from the outside of said gun and, respectively, the second angular position wherein said recess is covered by said casing, said firing pin being carried in said member eccentrically of the axis of said casing and said barrel being disposed eccentrically of the axis of said casing, said firing pin in said second angular position of said member being in alignment with the cartridge in said barrel.

2,950,482
PAPER GLOVE AND METHOD AND APPARATUS FOR PRODUCING SAME
Louis A. Withers, 989 Paulson Court, Lafayette, Calif.
Filed June 18, 1956, Ser. No. 591,823
6 Claims. (Cl. 2—169)

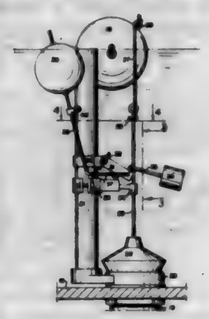


4. Apparatus of the character described comprising a pair of paper feed rolls and a pair of paper take up rolls, means for moving a strip of paper from each of said feed rolls to respective ones of said take up rolls, means for guiding said strips between the respective pairs of rolls, a pair of glove blank dies positioned intermediate said feed and take up rolls and between which each of said strips passes, and a reciprocating adhesive applicator disposed adjacent a surface of one of said strips with said surface being in opposed relation to the other of said strips.

2,950,483
DUAL FLUSH CONTROL
Fred P. Richards, 2835 W. 24th Ave., Denver 11, Colo.
Filed Dec. 4, 1957, Ser. No. 700,684
6 Claims. (Cl. 4—67)

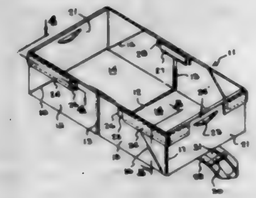
1. The combination with a flush tank adapted to confine a charge of water, a gravity outlet from said tank, a stem guided for vertical, longitudinal reciprocation within said tank, a buoyant valve plug shiftable with said stem into and away from coaction with said outlet, and means selectively actuable to shift said stem for elevation of said plug away from its seat, of a unitary assem-

bly rockable about a horizontal rod portion journaled spacedly adjacent said stem, a rod continuation spacedly parallel to said journaled portion rockable with said assembly between frictional engagement against said stem and fixed stop means remote from the stem, oppositely-disposed arm portions respectively fixed to and carried by said journaled rod portion and the spacedly-parallel continuation thereof in and substantially perpendicular to the rod portion rockably mounting said assembly, a counterpoise on that one of said arm portions carried



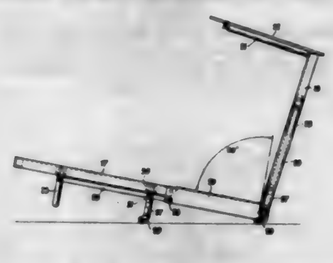
by the rod continuation at the side of the stem remote from the rockable mounting of the assembly adapted to urge said rod continuation against the stem, and a buoyant member on the other arm portion opposing and effective at times to overcome the action of said counterpoise, wherein said buoyant member is slidably mounted for shift longitudinally along its associated arm portion and an adjustable stop on the latter limits shift of said member inwardly of the arm portion toward the rockable mounting of the assembly.

2,950,484
FOLDABLE TUB
Sarah A. Jaffe, 77 W. 174th St., Bronx, N.Y.
Filed Aug. 29, 1958, Ser. No. 757,949
1 Claim. (Cl. 4—177)



A foldable container of the character described comprising a generally rectangular receptacle of water-proof material having a bottom wall, longitudinal side walls, and transverse end walls, said side walls being relatively flexible and being foldable inwardly along upwardly and inwardly inclined diagonal crease lines at their end portions, said bottom wall and side walls being relatively flexible and being foldable on lines transversely bisecting same, lockingly interengageable fastening elements on the intermediate portions of the bottom edges of said transverse end walls, respective flexible sleeve members on the outer surfaces of the top portions of the vertical corners of said receptacle and extending horizontally around said top corners, relatively thick flexible reinforcing bars engageable in said sleeve members, said bars being sufficiently flexible to pass around said vertical corners, additional flexible sleeve members on the inner surfaces of the top portions of the side walls extending horizontally across the bisecting fold lines of said side walls, and relatively rigid reinforcing bars engageable in said last-named sleeve members.

2,950,485
FOLDING BEDS
William Joseph Hall, London, England, assignor to W. Steel & Co. Limited, London, England, a British company
Filed June 13, 1957, Ser. No. 665,416
3 Claims. (Cl. 5—4)



1. A folding bed comprising a mattress-supporting frame formed of three sections comprising a centre section supporting at each end thereof an end section pivoted thereto for swinging from a position extending outwardly from the centre section substantially co-planar therewith to a folded position extending upwardly from the centre section substantially at right angles thereto, a bed board secured to the free end of one of said end sections so as to overlie the centre section in spaced parallel relation therewith when the said one end section is in the folded position, first floor engaging members pivoted to each end section a short distance from the pivotal connection thereof to the centre section and swingable from a position extending downwardly from the end section in the outwardly extending position of the end section to support the centre section at "bed-height," to a downwardly extending position lying against the end section in the folded position to support the centre section at reduced height such that the bed board in the folded position of the frame lies at table height, and a pivoted link connecting the said first floor engaging members to the centre section and having a length substantially equal to said distance between the pivotal connection of the first floor engaging members to the end section and the pivotal connection of the end section to the centre section for effecting said swinging of the floor engaging members upon pivoting of the end sections from the extended to the folded position.

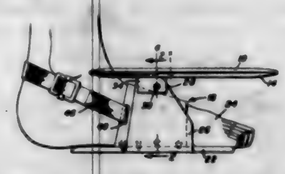
2,950,486
SUPPORT FOR SPRING END
Russell G. Heyl, Jr., Birmingham, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed July 15, 1957, Ser. No. 671,935
2 Claims. (Cl. 5—260)



1. An elongated wire spring strip having a plurality of oppositely presenting loops and a substantially straight laterally extending retaining end portion, a plurality of said strips forming a supporting surface, said retaining

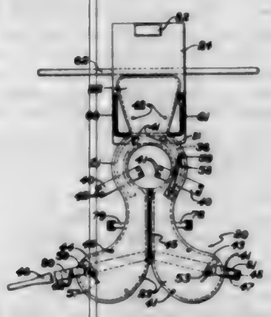
end portion having a generally arcuate portion intermediate the ends thereof and opening in a direction substantially normal to said supporting surface, said retaining end portion providing short substantially straight portions extending in opposite directions from the ends of said arcuate portion.

2,950,487
SWIMMING FIN DEVICE
George Bryant Woods, deceased, late of Washington, D.C., by Doris McKay Woods, executrix, Washington, D.C., assignor of one-third to Edward F. Connors, Jr., Washington, D.C.
Filed Aug. 9, 1954, Ser. No. 448,514
13 Claims. (Cl. 9—304)



1. A swimming device for attachment to a foot comprising a foot receiving means, a fin pivotally carried by said means and means pivotally mounting the fin to said foot receiving means for pivotal movement about an axis contained in a plane transversely intersecting the ball of a foot said fin having a center of water pressure disposed rearwardly of the toe portion of the foot and slightly forwardly of and immediately adjacent to the pivotal mounting means.

2,950,488
INFLATABLE FLOTATION VEST
Stephen C. Sabo, Barberton, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Filed Aug. 14, 1956, Ser. No. 603,898
7 Claims. (Cl. 9—316)



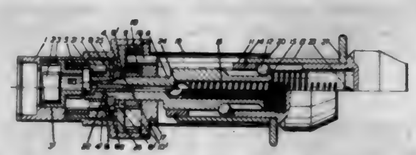
1. An inflatable flotation vest comprising a plurality of superimposed plies of substantially fluid-impervious flexible sheet material permanently joined to each other at their peripheral margins and at their margins bounding a neck opening in the vest thereby providing a plurality of superimposed individual inflatable chambers with each chamber continuous throughout all inflatable portions of the vest, the said inflatable portions including a head rest portion and a torso portion extending longitudinally away from opposite portions of the said margin of the neck opening and connected by collar portions extending along either side of the neck opening, each collar portion being of lesser lateral width than said head rest portion with the latter having an area and volume such as to support the wearer's head and with the width of the torso portion increasing from said collar portions to the vest portion adjacent the waist of the wearer, means for individually inflating said chambers throughout the said head rest, torso and collar portions thereof, and means for detachably securing the vest upon the wearer's body.

2,950,489
WATER SKI AND SWIM BELT
Charley R. Pattison, Vernon, Tex., assignor to Plains Athletic Manufacturing Company, Vernon, Calif., a partnership
Filed Mar. 18, 1957, Ser. No. 646,804
2 Claims. (Cl. 9—340)



1. A life belt comprising a continuous elongated flexible, resilient buoyant body, adapted to substantially encircle the body of the wearer, consisting of two strips of molded expanded cellular resilient material having the characteristics of foam rubber bonded together in side by side relation to each other, and a single flexible strap arranged longitudinally between the strips and received in grooves therefor in the opposed surfaces of the respective strips, the ends of the strap extending outwardly beyond the ends of the strips and having means for fastening them together whereby the belt may be secured about the body of the wearer.

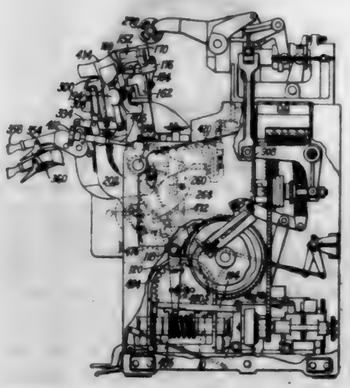
2,950,490
PLANETARY GEAR REVERSING DRIVE MEANS CONTROLLED BY SNAP ACTION CLUTCH MEANS
Bernard P. M. Schwartz, London, and John G. C. Agnew, Sutton, England, assignors to Thoka Machinery Supplies Limited, a British company, London, England
Filed Oct. 11, 1957, Ser. No. 689,559
Claims priority, application Great Britain Oct. 17, 1956
6 Claims. (Cl. 10—138)



1. In a tap holder drive mechanism for connection to the feed member of a machine tool and adapted to be driven from the spindle of the machine tool, the combination of a housing, an input drive member rotatably mounted in said housing, a tap holder drive spindle mounted for longitudinal movement between alternative positions in said housing, a ring gear in said housing driven by said input drive member, a sun gear freely rotatably mounted about said tap holder drive spindle within said housing, planetary gears mounted on fixed spindles in said housing and meshing with said ring gear and said sun gear, clutch means on said spindle and said gears for alternately clutching said tap holder drive spindle to said ring gear and said sun gear in said alternative positions of said spindle to drive said spindle in opposite directions, a cam member carried by said tap holder drive spindle, resilient catch means carried by

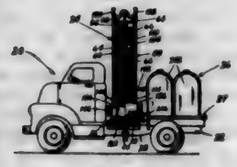
said ring gear and coacting with said cam to prevent longitudinal movement of said tap holder drive spindle until longitudinal force exerted on said tap holder drive spindle is sufficient to force said cam past said resilient catch means.

2,950,491
SHOE SUPPORTS
William A. Barker, Leicester, England, assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Original application May 11, 1954, Ser. No. 429,870, now Patent No. 2,855,616, dated Oct. 14, 1958. Divided and this application Apr. 2, 1958, Ser. No. 725,865
5 Claims. (Cl. 12—127)



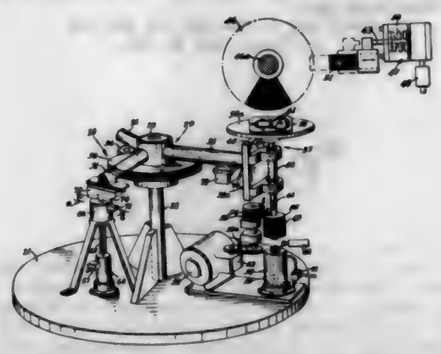
1. In a leveling machine having a leveling tool, a jack for carrying a shoe forwardly and rearwardly beneath the leveling tool to cause the tool to operate progressively along the bottom of the shoe on the jack, said jack comprising a toe support, a heel support adjustable relatively to said toe support in accordance with the size of the shoe to be operated upon, a gage associated with and projecting above said toe support for engagement with the toe end of the shoe to assist in properly positioning the shoe lengthwise on the jack, means mounting said gage for adjustment lengthwise of the toe support, and automatic means operable prior to engagement of the tool with the shoe bottom for retracting the gage to avoid interference with the leveling tool.

2,950,492
PORTABLE VEHICLE WASHING MACHINE
Lawrence L. Liekweg, 2601 Belt Ave., St. Louis 8, Mo.
Filed Apr. 22, 1955, Ser. No. 503,253
9 Claims. (Cl. 15—21)



1. In a trailer washer, a movable vehicle, a scrubbing assembly including a rotatable brush, and means including movable supporting means mounting said brush on said vehicle for movement transversely of said vehicle and for yieldable constant pressure engagement with a substantially vertical surface to be washed during non-parallel translatory relative movement of said movable vehicle along the surface to be washed.

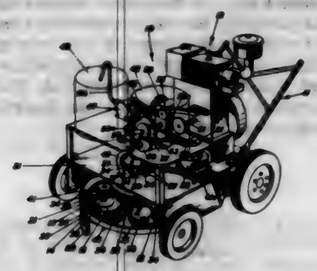
2,950,493
POLISHING MACHINES
Louis Roccilo, Brooklyn, and Peter De Mauro, Whitestone, N.Y., assignors to Globe Lighting Products, Inc., Brooklyn, N.Y., a corporation of New York
Filed Nov. 20, 1957, Ser. No. 697,564
6 Claims. (Cl. 15—21)



1. Polishing apparatus, comprising a polishing station, work-polishing means at said station, a plurality of work holders, a carrier for said work holders for moving them in succession to and from said polishing station, means mounting each of said work holders for movement for bringing the work thereon into and out of engagement with said polishing means and for moving the work thereon relatively to said polishing means in engagement therewith, said mounting means comprising a bearing carried by said carrier, and a shaft projecting from said work holder and slidably and rotatably mounted in said bearing, means operable for moving the work holder vertically, relative to the carrier from a retracted position for moving the work into operational engagement with the polishing means, and means for rotating said work holder in relation to the polishing means for the polishing operation, comprising driving gear means at said station and driven gear means on each work holder shaft automatically engaged with said driving gear means upon movement of the work holder to said station and automatically disengaged from each other upon movement of the work holder from said station, said driving and driven gears being relatively slidable and in driving engagement during the upward movement of the work holder shaft for engaging the work with said polishing means and while the work is engaged with said polishing means, and said means for moving the work holder vertically comprising means vertically yieldable to permit limited relative sliding movement of said gears while the work is in engagement with said polishing means.

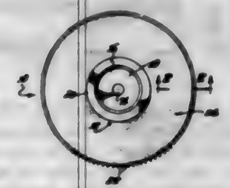
2,950,494
FLOOR SCRUBBING MACHINE
Edward J. Dickson, 11 Douglas Crescent, Toronto, Ontario, Canada
Filed June 4, 1956, Ser. No. 589,061
3 Claims. (Cl. 15—50)

1. A scrubbing machine comprising a carriage adapted to be moved over a floor, a scrubbing brush, means rotatably mounted in said carriage for carrying said scrubbing brush in a ringlike path, said scrubbing brush being rotatably mounted in said latter mentioned means about its own axis of rotation, a squeegee carried by said means for carrying said brush and adapted to follow said brush as it moves in said ringlike path, means for rotating



said brush about its own axis of rotation, said squeegee being formed to gather water from said floor.

2,950,495
POLISHING AND DEBURRING WHEEL
Norman H. Stingley, Garden Grove, Calif., assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Feb. 28, 1955, Ser. No. 491,057
8 Claims. (Cl. 15—179)



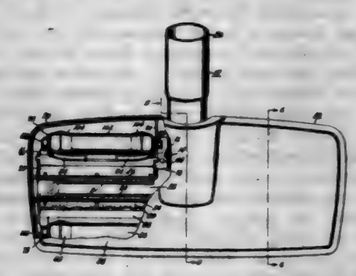
3. A rotary brushing tool having a central rotatable hub, brush bristle material secured thereto and extending generally radially therefrom, and elastomeric material interposed between said bristles adjacent the working face of the tool and resiliently spacing the bristles apart; wherein said elastomeric material is a resiliently deformable cellular composition.

2,950,496
SHOE HOLDER
John Clayton Hollister, Sr., 4683 San Sebastian Ave., Oakland, Calif.
Filed Apr. 7, 1958, Ser. No. 726,936
9 Claims. (Cl. 15—267)



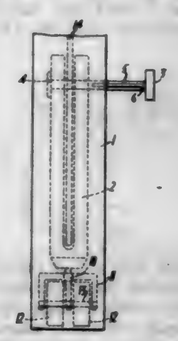
1. A shoe holder comprising a longitudinally extending base having a planar horizontal portion adapted to support the sole of a shoe, a first clamp member having a pair of opposed shoe sole engaging elements extending upwardly from opposite sides of said portion, a second clamp member longitudinally spaced from said first clamp member and having a pair of opposed shoe sole engaging elements extending upwardly from opposite sides of said base portion, means for selectively moving the respective sole engaging elements of each pair transversely of said base portion together for clamping a shoe sole therebetween and apart for releasing such sole, and one of said clamp members being slidable along the length of said base portion whereby the longitudinal spacing between said clamp members may be selectively varied.

2,950,497
VACUUM CLEANER NOZZLE CONSTRUCTION
Robert M. Smith, Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
Filed Aug. 8, 1957, Ser. No. 677,005
7 Claims. (Cl. 15—355)



1. A vacuum cleaner nozzle construction comprising: an elongated housing; an elongated nozzle opening in said housing; said nozzle opening extending generally longitudinally through said housing and adapted to be juxtaposed to a floor surface to be cleaned, means for connecting said nozzle opening to a source of suction; longitudinally extending floatingly mounted nozzle lips arranged generally parallel to said nozzle opening on both sides thereof; and longitudinally extending elongated brushes arranged generally parallel to said nozzle opening on both sides thereof; said brushes being floatingly mounted and projecting beyond said housing whereby they are adapted to have portions thereof contact a floor surface to be cleaned, said brushes being inclined in such a manner that their floor surface contacting portions converge.

2,950,498
RETRACTABLE CASTER STRUCTURE
Angelo A. Rizzuto, Box 325, General Post Office, New York, N.Y.
Original application May 27, 1957, Ser. No. 661,644. Divided and this application Feb. 19, 1959, Ser. No. 794,471
2 Claims. (Cl. 16—33)



1. A retractable caster structure comprising a substantially vertical supporting frame of I section having a web portion and front and rear flanges, a U-shaped bar having a base with a ball-shaped lug extending down-

ward therefrom and integral therewith, a frame having a socket formed in the upper surface thereof, said ball-shaped lug being engageable in said socket to form a ball-and-socket joint, a caster wheel mounted in said frame, said bar being provided with perforations in the upper portion thereof, said perforations extending laterally thru the arms of said bar and being positioned one at the center of said upper portion and one on each side of said central perforation in a spaced relation thereto, and a locking pin having a head and an end piece, said head having a pair of prongs extending inwardly therefrom, said prongs being parallel to said pin and in a spaced apart relation thereto, said pin having a length substantially twice the thickness of the bar and said prongs having a length substantially one half the length of the pin, said supporting frame having a relatively broad open slot formed at the lower end in the web portion thereof and a relatively narrow closed slot centrally and longitudinally positioned in the center of said web portion directly above said open slot and an upper pair of perforations formed at one end of said closed slot and a lower pair of perforations formed at the other end thereof, said perforations being positioned diametrically in spaced relation to said slot, said U-shaped bar being adapted to slidably engage the web portion of the frame at the slotted lower end thereof, said central perforation of the bar registering permanently with the closed slot in the frame and the side-long perforations of the bar registering with the lower pair of perforations in the frame when the bar is in an extended position and with the upper pair of perforations in the frame when said bar is in a retracted position, said locking pin being adapted to slidably engage in the perforations of the bar and the slot and perforations in the frame, the pin proper being permanently slidable within the central perforation of the bar and the slot in the frame, the end piece of the pin preventing a detachment thereof from the bar when the pin is in a fully withdrawn position, and the prongs of the pin being slidably engageable in the side perforations of the bar and the lower perforations in the frame to releasably secure the bar in an extended position and slidably engageable in said side perforations of the bar and the upper perforations in the frame to releasably secure the bar in a retracted position, said frame and said caster wheel being confined within said open slot in the web of the frame when the bar is in said retracted position.

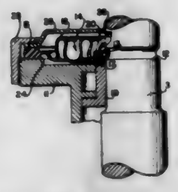
2,950,499

OIL SEAL DIAPHRAGM

Ernest L. Schlage, Burlingame, Calif., assignor to Schlage Lock Company, a corporation

Filed Jan. 7, 1957, Ser. No. 632,860

2 Claims. (Cl. 16—51)



2. In combination with a pair of members of which one member is supported for rotation to a limited extent relative to the other member, means for effecting a fluid seal to prevent passage of fluid between said members comprising: an imperforate annular diaphragm formed with radially spaced inner and outer circular marginal portions and a flexible intermediate portion of relatively thin and readily deformable material connecting said marginal portions, said marginal portions being formed thicker than said intermediate portion, means for fixedly but releasably securing said marginal portions to said members respectively in fluid tight relation therewith, whereby the flexibility of said intermediate portion permits relative rotational movement of said members without rupturing said diaphragm, said intermediate portion being formed with bellows to augment such flexibility to permit said relative rotation between said members before said diaphragm is ruptured.

2,950,500

WITHDRAWN

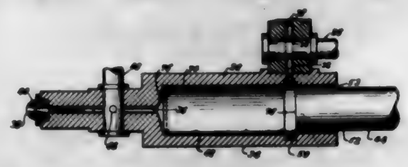
2,950,501

METHOD AND APPARATUS FOR INJECTION MOLDING

Robert J. Harkenrider, Winona, Minn., assignor to Continental Can Company, Inc., a corporation of New York

Filed Feb. 9, 1956, Ser. No. 564,575

10 Claims. (Cl. 18—30)



4. In injection molding apparatus including an injection cylinder defining an injection chamber, an injection ram adapted to reciprocate in said chamber, a channel between said ram and the walls of said chamber through which plasticized molding material may flow when said ram is in a forward position in said chamber, and means associated with said injection chamber for supplying plasticized molding material under pressure to said injection chamber through said channel to move said ram from its forward position in said chamber to a rearward position, the improvement wherein the forward end of said ram is shaped to conform to the lines of flow of the molding material about it as the ram is moved from its forward position in the chamber to its rearward position.

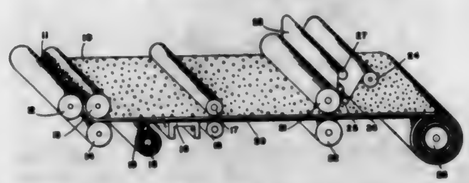
2,950,502

PROCESS OF IMPARTING SMOOTHNESS TO THE SURFACE OF A THERMOPLASTIC SHEET

John B. Weaver, Wilmington, Del., assignor to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York

Filed Oct. 9, 1956, Ser. No. 614,981

16 Claims. (Cl. 18—48)



1. A process for imparting improved smoothness to the wear surface of a sheet of thermoplastic vinyl resinous material which comprises continuously passing the sheet at a temperature below the flow point temperature of the sheet between the nip of two rotating rolls thereby applying uniform pressure on successive portions of the sheet, one roll contacting said wear surface of said sheet having a smooth hard surface completely covered with a thin film of a liquid silicone compound and maintained at a temperature which causes the surface of the sheet contacting the roll to flow as it passes between said nip, the other roll being maintained at a temperature substantially less than the first roll, thereby consolidating said wear surface of the sheet and eliminating pits and grooves therefrom, and continuously removing said sheet from between and simultaneously out of contact with said rolls without reducing the temperature of said smooth hard surface roll.

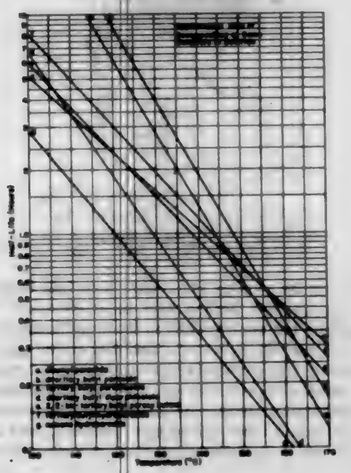
2,950,503

VULCANIZATION OF NUCLEAR ALKYL SUBSTITUTED STYRENES WITH ORGANIC PEROXIDES

Wayne A. McRae, Lexington, Mass., assignor to Ionics, Incorporated, Cambridge, Mass., a corporation of Massachusetts

Filed Dec. 5, 1956, Ser. No. 626,491

6 Claims. (Cl. 18—57)



4. In the method of forming a solid membrane comprising an insoluble infusible synthetic organic polymeric structure, the steps of forming a dispersion in an organic solvent of a polymer of vinyl toluene, intimately mixing therewith from 0.1 to 10% by weight of a catalyst selected from the group consisting of dicumyl peroxide, ditertiary butyl peroxide, tertiary butyl perbenzoate, ditertiary butyl diperphthalate, 2,2-bis-tertiary butyl peroxybutane and tertiary butyl hydroperoxide, shaping said dispersion into film form and curing said film to the insoluble infusible state at a temperature between 130° to 180° C. in the presence of said organic solvent under conditions substantially preventive of the escape of said solvent thereby forming said polymeric structure, thereafter substantially maintaining the solvent content of said structure.

2,950,504

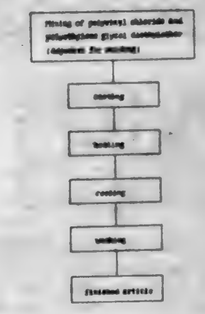
PROCESS FOR MOLDING HARD POLYVINYL CHLORIDE

Shigemasa Suzuki, 68 Kitanokiri, Shimo-no-Isiki-cho, Nakagawa-ku, Nagoya, Aichi, Japan

Filed May 20, 1957, Ser. No. 660,045

9 Claims. (Cl. 18—58)

1. A process for molding hard polyvinyl chloride resins of high degree of polymerization and having a high softening point which comprises forming a fluid suspension of said resin in a fluid medium containing a water soluble liquid molding adjuvant selected from the group of compounds consisting of glycerin diacetate, polyethylene glycol monostearates and polyethylene glycol diethylethers, applying said fluid suspension to a molding surface, heating said fluid suspension to cause it to jell while in position on said molding surface, washing said



jelled suspension with water to remove said molding adjuvant, thus forming a hard polyvinyl chloride resin article conforming to said molding surface.

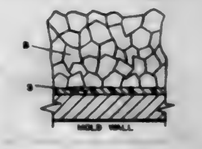
2,950,505

METHOD OF MOLDING A PLASTIC ARTICLE HAVING A CELLULAR BODY AND A PROTECTIVE SKIN

Jacob Frank, 18303 Muirland, Detroit, Mich.

Filed July 10, 1956, Ser. No. 596,909

3 Claims. (Cl. 18—59)



1. A method for forming a molded plastic article having a molded skin and a cellular body, comprising the steps of depositing a thin, unmolded layer of particles formed of a thermoplastic, non-expansible, plastic, on the wall of a pre-heated mold, which mold is pre-heated to a temperature sufficient to cause the particles to soften slightly and to adhere to the wall and to each other to form a skin of loosely adhered, particles, the skin at this point containing voids between the particles and being non-homogeneous and non-unitary in mass; next placing a sufficient quantity of a thermally expansible plastic material into the mold to partially fill the mold and then closing off the space within which the expansible material may expand away from said skin layer; then heating the mold to expand said expansible material into a greatly enlarged cellular mass and to simultaneously mold the skin by heat and by the pressure of the expanding cellular material which pressure squeezes the skin layer against the mold wall to mold the skin into a coherent, unified, homogeneous mass of substantially uniform thickness and to join the expanded cellular material to the skin.

2,950,506

METHOD FOR MANUFACTURING SHAFT SEALS

George L. Corsi, Detroit, Mich., assignor, by mesne assignments, to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan

Original application Apr. 8, 1955, Ser. No. 500,161, now Patent No. 2,837,359, dated June 3, 1958. Divided and this application July 26, 1957, Ser. No. 676,465

4 Claims. (Cl. 18—59)

1. That method of making a shaft seal having a rigid cupped ring embedded in resilient synthetic rubber mate-

rial which comprises, coating said cupped ring with a bonding agent, holding said ring positioned centrally within a mold cavity and supporting it against downward axial displacement by closely-spaced, low-height, wide-area bosses in direct contact with one face of said cupped ring and by a ring of axially disposed ridges, said ridges



being disposed to support said cupped ring from closely-spaced points about its inner sidewall, and causing synthetic rubber stock to flow under high pressure to all parts of the mold cavity from a source on the side thereof remote from said supporting bosses and ridges, said mold cavity including an annular sealing lip portion concentric with said cupped ring.

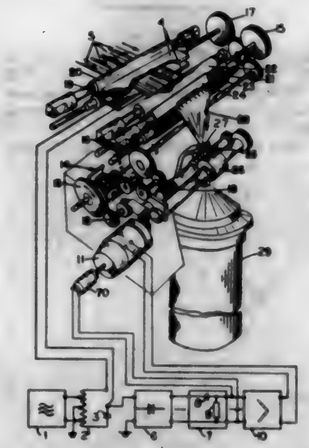
2,950,507
WORKING ROLL ARRANGEMENT FOR TEXTILE MACHINERY
Johann Jacob Keyser, Kaiserslautern, Germany, assignor to Schiess Aktiengesellschaft, Duesseldorf-Oberkassel, Germany
Filed Jan. 5, 1955, Ser. No. 479,916
Claims priority, application Germany Jan. 9, 1954
4 Claims. (Cl. 19—65)



1. In combination in a working roller arrangement for textile machinery: a frame, a first stationarily mounted shaft, a first tubular roller having a substantially cylindrical inner surface spaced from said first shaft, first roller means supported by said first shaft and arranged in rolling engagement with said cylindrical inner surface for rotatably supporting said first tubular roller, said cylindrical inner surface being provided with a gear ring, pinion means within said first tubular roller and meshing with said gear ring for rotating said first tubular roller, a second stationarily mounted shaft carried by said frame in spaced relationship to said first shaft, a second tubular roller arranged for engagement with said first tubular roller and having a substantially cylindrical inner surface spaced from said second shaft, second roller means carried by said second shaft and arranged rotatably to support said second tubular roller, said tubular rollers being arranged to be pressed against each other, and flexible hose means mounted on and along the length of said second shaft and arranged to convey pressure to said second tubular roller for pressing the same against said first tubular roller.

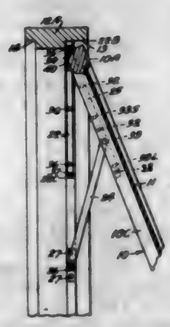
2,950,508
METHOD AND APPARATUS FOR AUTOMATICALLY CONTROLLING THE WEIGHT PER UNIT LENGTH OF TEXTILE MATERIALS
Hans Locher, Uster, Switzerland, assignor to Zellweger Ltd., Uster, Switzerland, a Swiss corporation
Filed Dec. 16, 1955, Ser. No. 553,619
18 Claims. (Cl. 19—70)

1. A method for automatically controlling weight deviations of textile material during spinning, comprising the steps of: drawing the material through a measuring device, the indicating value of which changes according to the instantaneous weight of the specimen tested; obtaining a first electrical magnitude from this indicating value; obtaining a second electrical magnitude from said first magnitude by integrating the average value over a certain period of time; subtracting said second electrical magnitude from the first electrical magnitude to produce a third electrical magnitude which corresponds to the deviations of the weight per unit length of the textile



material from its average value over a certain length; amplifying the impulse having said third electrical magnitude; directing the energy derived by amplification of said impulse to effect the drive of a drafting roller pair which serves for drafting the textile material, whereby the angular speed of said roller pair on the appearance of a negative deviation in the weight per unit length of the textile material is correspondingly reduced, and on the appearance of a positive deviation correspondingly increased.

2,950,509
AWNING TYPE WINDOW STRUCTURE
Harold L. Stevenes, Mankato, Minn., assignor to Truth Tool Company, Mankato, Minn., a corporation
Filed Jan. 22, 1957, Ser. No. 635,474
9 Claims. (Cl. 20—42)



1. An awning type window structure comprising a window frame, a window sash, a link pivotally connected at one end to said frame, a pivot for pivotally connecting the other end of said link to the window sash, a longitudinally tapered track mounted on the window frame, and means slidably movably along the track for slidably

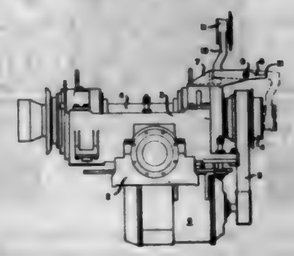
connecting an end portion of the window sash to the track, said means being adjustable for varying the frictional resistance to movement of the means along said track, said track presenting progressively varying frictional resistance to the movement of said means along the track.

2,950,510
VENT LOCKING MEANS FOR AWNING TYPE WINDOWS
Morton Tucker, 1085 E. 14th St., Hialeah, Fla.
Filed Sept. 22, 1959, Ser. No. 841,518
1 Claim. (Cl. 20—42)



An awning type window structure comprising a frame, upper and lower sashes, means to pivotally mount the sashes upon the frame, hinge arms secured to the sashes, vertically swinging cranks, means to mount the cranks upon the frame and to turn the cranks, means operated by the movement of the cranks to move the hinge arms, upper and lower disc latches arranged near the lower ends of the upper and lower sashes and adjacent to the sides of such sashes, pivot means mounting each disc latch upon the frame, each disc latch having a rear longitudinal edge which engages the face of the frame when each disc latch is moved to the vertical position, each disc latch being provided with a second longitudinal edge at the top of the first longitudinal edge and disposed at an angle with relation thereto, the pivot means of each disc latch being near and opposite to the meeting ends of the rear longitudinal edges of each disc latch, each disc latch being provided near and spaced from its forward longitudinal edge with an elongated slot which is parallel with the rear longitudinal edge of each disc latch and is vertical when each disc latch is vertical, the last-named slot passing through the opposite side faces of each disc latch, each disc latch being provided at its forward edge with a large opening which leads into the lower end of the slot of each disc latch, each large opening having a lower edge which is horizontal when each disc latch is vertical, each disc latch being provided at the top of the large opening with an inclined edge which leads to the lower end of said slot, said large opening passing through the opposite side faces of each disc latch, each lower disc latch also having a rear slot which is vertical when the lower disc latch is vertical, each rear slot extending through the opposite faces of each lower disc latch, each lower disc latch having a forwardly extending vertically inclined cam face beneath and adjacent to the large opening of each lower disc latch and having a dwell cam face extending between the vertically inclined cam face and the rear slot of each lower disc latch, laterally extending pins secured to the sides of the sash frames near their lower ends for movement into the large openings and rear vertical slots of the upper and lower disc latches, and laterally extending pins secured to the cranks near their upper ends and arranged to engage the lower inclined cam faces of the lower disc latches and the dwell cam faces and to enter the rear vertical slots of the lower disc latches, the last-named pins engaging the longitudinal edges of the lower rear slots and having a gear action therewith to quickly and positively swing the lower disc latches to the closed vertical position.

2,950,511
MOLDING APPARATUS
Loyal L. Johnston, Zelienople, Pa., assignor to Herman Pneumatic Machine Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Sept. 5, 1957, Ser. No. 682,252
2 Claims. (Cl. 22—16)

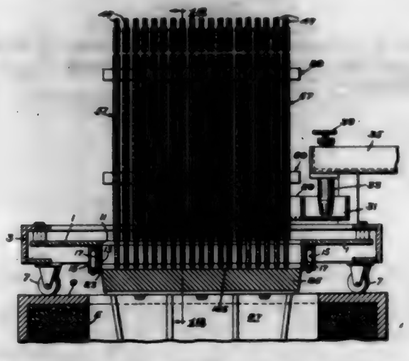


1. Molding apparatus comprising a cradle, a flask rotatably carried by the cradle, means carried by the cradle for rotating the flask, mounting means, the cradle being mounted on the mounting means for movement between a position in which the axis of the flask is generally upright and a position in which the axis of the flask is generally horizontal, means for so moving the cradle, a carrier for a mold forming material retainer mounted on the cradle, means also mounted on the cradle for moving the carrier between a position at an end of the flask but somewhat spaced from the flask and a position relatively remote from the end of the flask, the carrier having a generally cylindrical portion, and a mold forming material retainer having a portion telescopingly associated with the generally cylindrical portion of the carrier, the retainer being movable relatively to the carrier to a selected one of a plurality of positions to substantially close said end of the flask, at least one of the telescopingly associated portions being curved to permit relative angular adjustment between the retainer and the carrier.

2,950,512
CASTING APPARATUS AND METHOD
Richard A. Wilkins, Rome, N.Y., assignor to Revere Copper and Brass Incorporated, Rome, N.Y., a corporation of Maryland
Filed Apr. 2, 1957, Ser. No. 650,133
11 Claims. (Cl. 22—57.2)

11. The method of forming a metal billet having between its opposite faces and opposite edges one or more elongated bodies, extending longitudinally thereof in contact therewith, of pulverizable material capable of being reduced to a powder for preventing welding together of the opposite sides of the spaces occupied by said bodies when the billet is operated upon for thinning it, comprising direct chill casting the molten metal of the billet about and in contact with one or more elongated metal members which are substantially tubular and of flattened transverse cross-section, the material of the elongated pulverizable bodies being entered into the bores of said members in the form of a paste comprising the weld

preventing material of said bodies in the form of a powder, baking said members containing such paste for hardening the latter to form said bodies, each of said tubular members being so formed prior to the casting operation as to present in one of its wider walls a slot extending substantially throughout its length for escape from its bore of gases and vapors during the baking and casting operations and the bores of which members contain said bodies and are filled by them, the metal of said members having a melting temperature not higher than that of the molten metal being cast about them so that the portions



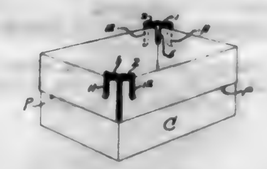
of said members contacted by said molten metal will be melted by and mix with said molten metal and leave the corresponding portions of said bodies in contact with the cast metal, said elongated bodies being relatively fragile but being reinforced by said metal members which contain them for preventing their breakage at points along their lengths during the handling of them and during the casting operation, said bodies however being form retaining per se whereby to cause them to keep their shape when the portions of said members about them are so melted.

2,950,513
FASTENING DEVICE
Clarence W. Cochran, Belmont, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Filed Jan. 17, 1957, Ser. No. 634,656
1 Claim. (Cl. 24—73)



A fastening device of the class described comprising a body portion divided into two parts, the said two parts being a base and a hold-down plate which are connected by loop like spring members permitting movement of one of the two parts of the body portion toward and away from the other part, molding engaging portions extending from the body portion and being moveable toward and away from each other as one of the said two parts is moved relative to the other part, and relatively rigid attaching means extending directly from the said base for attaching the base to a support, the said base having an integral extension spaced on a plane above the plane of the ramainder of the base and on the same plane as the said hold-down plate to receive a mat and the like below it, and a prong extending from the spaced integral extension for engaging and holding said mat and the like.

2,950,514
CARTON LID HOLDER
Leroy J. Small, Memphis, Tenn., assignor to Memphis Metal Manufacturing Co., Inc., Memphis, Tenn., a corporation of Tennessee
Filed Mar. 12, 1958, Ser. No. 720,976
5 Claims. (Cl. 24—81)



1. A carton lid holder comprising a horizontally disposed top member consisting of two arms extending horizontally and disposed generally at a right angle to each other with the outer end portion of each arm offset outwardly of the angle from the inner portion of the arm adjacent the angle between the arms, a depending end leg at the outer end of each arm in the general vertical plane of the outer end of the arm, and a depending central leg at the middle of the member where the arms meet, the end leg depending from the end of each arm being offset outwardly of the angle between the arms and from the central leg.

2,950,515
DRAPERY HOOK
Archibald Prentice, 1755 Avenue Road, Toronto, Canada
Filed May 10, 1956, Ser. No. 584,034
1 Claim. (Cl. 24—86)



A drapery hook comprising an elongated straight relatively narrow body adapted for disposition on the outer surface of a drapery fold, said body having reverted ends forming an open generally heart-shaped loop portion at each end thereof co-planar with said body, a drapery engaging pin having reverted ends and an elongated body portion extending from each loop portion in parallel relation with the corresponding loop portion and at right angles to said narrow body and spaced therefrom, and a U-shaped resilient drapery hook integral with and extending from one end of one of said heart-shaped loop portions in alignment with said narrow body.

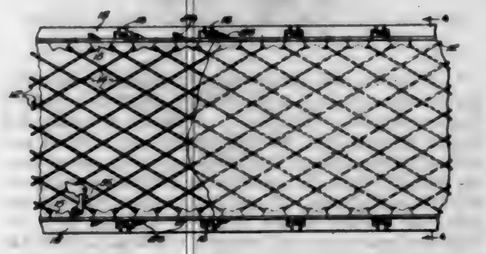
2,950,516
SEPARABLE FASTENING DEVICES FOR WEARING APPAREL
Herbert Howard Wood, Birmingham, England, assignor to Thomas Walker Limited, Birmingham, England, a British company
Filed July 29, 1957, Ser. No. 674,743
2 Claims. (Cl. 24—222)



1. A two-part separable fastening device for wearing apparel comprising a first part consisting of a plate having opposite longitudinal edge portions raised above a relatively depressed longitudinal middle base portion, at least one attachment prong on said base portion, and a separate attachment prong located at one end of each of

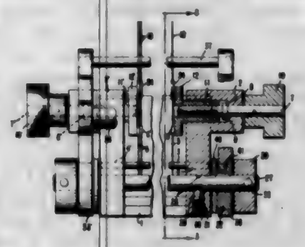
the raised edge portions and extending transversely to the direction of the longitudinal edge portions; and a second part consisting of a member formed at opposite edges with two spaced-apart inturned flanges adapted to be slidably engaged with the raised edge portions of the first part; the prongs on the raised edge portions of the first part serving as stops for limiting relative inward sliding movement of the second part.

2,950,517
METHOD OF MAKING POST-STRESSED REINFORCED CEMENT-CONCRETE STRUCTURES
Alan E. Brickman, 85 Mayfair, Williamsville 21, N.Y.
Filed June 6, 1955, Ser. No. 513,314
2 Claims. (Cl. 25—154)



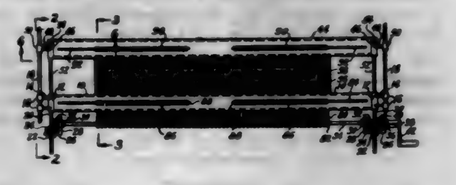
1. The method of making a prestressed reinforced concrete structure of considerable length and considerable width, which comprises placing spaced apart longitudinal non-rigid side forms in position, anchoring said side forms to the ground without rigid connection therebetween, connecting oppositely inclined groups of diagonally-extending reinforcing tension members having a bond-preventing sheath thereon to said forms, then pouring wet concrete around said tension members between said side forms, tensioning each of said tension members after the wet concrete has been poured but while it is still plastic so as to stretch the tension members into final position, and further tensioning each of said tension members after the concrete has reached its initial set so as to stretch the tension members to a position where they are held in a condition of tensile stress to maintain the concrete in a continual state of compression.

2,950,518
SELF-COMPENSATING COMB
Gustaf T. Lindstrom, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed June 17, 1957, Ser. No. 666,120
4 Claims. (Cl. 28—55)



1. In a textile beaming comb, a horizontal frame, a plurality of spaced reeds mounted on said frame, a latch for releasably holding each reed in operative position with other reeds on the frame, each of said reeds being individually movable from its operative position to an inoperative position, each reed having only one of its ends mounted on said frame to provide an open-end comb.

2,950,519
EXPANSION COMB OR HOOK REED FOR SLASHERS AND BEAMERS
Doc L. Gilstrap, 420 Woodland Drive, Belton, S.C.
Filed May 19, 1959, Ser. No. 814,278
7 Claims. (Cl. 28—55)



1. An expansion comb assembly comprising an upper housing and a lower housing mounted on a support, a rotatable shaft operatively connected to said lower housing for vertical movement relative to said lower housing, means for rotating said shaft, a plurality of aligned reeds supported in said housings, said reeds being arranged in two series wherein the reeds of one series alternate with the reeds of the other series, the reeds of one series being connected to said lower housing while the reeds of the other series extend through the bottom of said lower housing, the reeds all having cam portions of wedge-shaped contours, the cam portions of the reeds of one series being complementary to the cam portions of the reeds of the other series and being movable relative thereto.

2,950,520
TOW-PROCESSING APPARATUS WHICH INCLUDES A KNOT-DETECTING ASSEMBLY
Mario Soanino, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
Original application Nov. 4, 1955, Ser. No. 545,043. Divided and this application Sept. 14, 1956, Ser. No. 610,027
4 Claims. (Cl. 28—64)



1. Tow-processing apparatus comprising a knot-detecting element adjacent to the take-off side of a guide roll adapted to receive a moving tow under tension and positioned so that a knot-free tow will pass from the said guide roll through the aforesaid knot-detecting element; a movable support on which said knot-detecting element is mounted; an electric switch provided with a plunger that will actuate the switch, actuation of the said switch actuating the apparatus that causes the tow to move; a rod attached to said support, said rod being so positioned on said support and the latter being so movable that, when a knot in the tow contacts the said knot-detecting element, the movement of the said support and corresponding movement of the said rod will actuate the said plunger, which in turn will actuate the said switch and stop the apparatus that causes the tow to move.

2,950,521
PERMANENT CRIMPING PROCESS
Vernon D. Wheat, Ridley Park, and Walter Hadfield, Sr., Marcus Hook, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed May 22, 1957, Ser. No. 660,772
5 Claims. (Cl. 28—72)

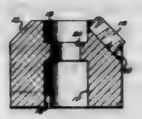
1. The process of producing a bulked fabric including in the order named the steps of mechanically crimping a regenerated cellulose yarn, impregnating the yarn with an aqueous solution of a thermosetting finish the essential components of which are a cellulose ether, an aldehyde, and a cross-linked catalyst, thermally curing the impregnated yarn to set the crimp therein, mechanically straightening the yarn, processing the straightened yarn into a fabric and wetting the fabric to restore the crimp to the yarn.

2,950,522
STOCK FEEDER FOR MACHINE TOOLS
Theodore W. Hibbs, 406 W. Vine St., Hatfield, Pa.
Filed Oct. 24, 1958, Ser. No. 769,437
7 Claims. (Cl. 29—93)



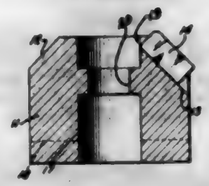
1. Apparatus for feeding elongated stock to a machine tool comprising a horizontal elongated frame tube, a lower elongated hollow guideway carried by said frame tube, an upper elongated hollow complemental guideway separable with respect to said lower guideway for the insertion of a piece of stock within said guideways, a pusher member slidably guided in said guideways, said guideways having a slot therealong, an actuator for said pusher member movable along said slot, an elongated spring, operating connections interposed between said spring and said actuator for applying a pushing force to said actuator, said upper guideway having an actuating portion at one end thereof, and an actuating portion on said pusher member for engagement with said upper guideway actuating portion at a predetermined portion of the stroke of said pusher member, thereby to elevate said upper guideway.

2,950,523
CUTTING TOOL AND METHOD OF MAKING
Horace Aloysius Frommelt, Philadelphia, Pa., and Fred Aberlin, Avon Township, Lake County, Ill., assignors to John A. Bitterli, Chicago, and William G. Hessler, La Grange, Ill., and Horace A. Frommelt, Philadelphia, Pa., trustees
Filed May 15, 1956, Ser. No. 585,039
9 Claims. (Cl. 29—95)



1. A cutting tool including a sintered powdered ferrous metal matrix having a socket opening therefrom, a cutting bit having a portion thereof within said socket, and the walls of said socket opposingly gripping said cutter bit portion and comprising the ferrous matrix alloyed with copper by infiltration growth and being under shrinkage compression binding, gripping, retaining engagement with said cutter bit portion.

2,950,524
MEANS FOR MOUNTING CUTTER BITS OR BLADES
Horace A. Frommelt, Chicago, and Fred Aberlin, Hobsonville, Ill., assignors, by mesne assignments, to John A. Bitterli, Chicago, and William G. Hessler, La Grange, Ill., and Horace A. Frommelt, Philadelphia, Pa., as trustees
Filed June 2, 1955, Ser. No. 512,604
4 Claims. (Cl. 29—96)



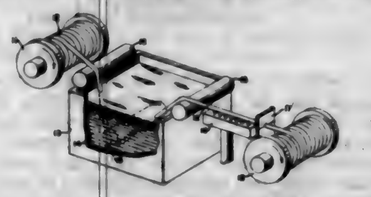
3. A cutting tool comprising a tool body having cylindrical sockets therein, a plurality of cylindrical, sintered ferrous compacts each having an axially extending slot therein opening from the periphery of the compact and a hard cutting element fixed within said slot and projecting partially from the compact, said compacts being removably locked into said tool body sockets but with the projecting portions of the elements projecting from the body and said compacts having a coefficient of thermal expansion sufficiently greater than that of said cutting element so that the metal of said compact compresses said cutting element laterally in said slot.

2,950,525
TUBE PULLER
Edward J. Duncan, 446 Vera Ave., Redwood City, Calif., and Anthony S. Ciminero, 111½ Chenery St., San Francisco, Calif.
Filed Aug. 26, 1958, Ser. No. 757,337
7 Claims. (Cl. 29—252)



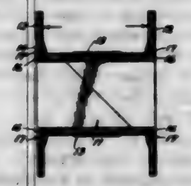
1. A tube puller comprising a hollow elongated housing, a holding member frictionally mounted in said housing for initial orientation and subsequent longitudinal reciprocation in said housing, a fitting engaged on one end of said housing and longitudinally adjustable to a fixed position thereon, said fitting terminating in a hollow nose for engaging a plate from which a tube is to be pulled and into which the terminal end of the tube will be received, an elongated wedge extending axially into said holding member and nose, said wedge being tapered longitudinally from its terminal end toward said nose and into said housing, a pair of opposed elongated extracting fingers rotatably connected to said holding member and including flat faces each complementary to opposed converging sides of said wedge, said fingers including longitudinally spaced tooth portions opposite said flat faces and positionable relative to the terminal end of said nose when said nose is adjusted longitudinally relative to said housing, said holding member and wedge including cooperating engageable portions providing a lost motion connection therebetween permitting an increment of relative movement, and power means connected to said housing and said wedge for initially drawing the wedge axially of said housing, holding member, nose and fingers to first cause said fingers to move away from each other a predetermined distance to grip a tube to be extracted from a plate and to subsequently and simultaneously move said holding member and draw said fingers and tube into said hollow nose, said longitudinally adjustable nose permitting a predetermined length of tooth portions to be exposed prior to pulling a tube and said holding member permitting initial relative movement of said wedge with respect to said fingers.

2,950,526
ELEVATED TEMPERATURE WORKING OF METALS AND ALLOYS
William J. Buehler, Silver Spring, Md., and Joseph F. Nachman, Denver, Colo., assignors to the United States of America as represented by the Secretary of the Navy
Filed Apr. 22, 1957, Ser. No. 654,429
14 Claims. (Cl. 29—424)
(Granted under Title 35, U.S. Code (1952), sec. 266)



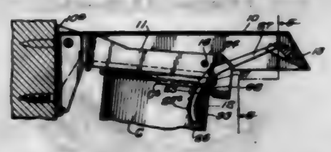
1. The method of removing abrasive refractory oxides from the surface of a high aluminum content iron base alloy and preventing the formation of said oxides on said alloy during the warm working thereof at a temperature below the recrystallization temperature of the alloy comprising treating the surface of said alloy with a molten halide the nature of which is such that when in a molten state it reacts with the oxides formed on the surface of said alloy, said halide having a melting point substantially below the warm working temperature of the alloy, and treating the alloy with water after the warm working thereof sufficiently to dissolve the water soluble material adhering thereto.

2,950,527
METHOD FOR MAKING BOBBINS
Andrew Folta, Lakewood, Ohio, assignor to Precision Paper Tube Company, Chicago, Ill., a corporation of Illinois
Filed Dec. 11, 1956, Ser. No. 627,644
5 Claims. (Cl. 29—458)



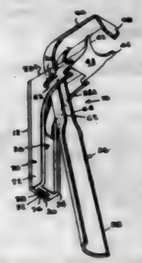
1. In a method for making bobbins, the steps of covering at least a portion of a core with a plastic material capable of softening and permanently swelling when dipped in a bath having agents selected to soften and permanently swell the same and of hardening after removal from said bath, and placing a flange in an initial position upon said core remote from an end thereof, dipping said core and flange into a bath containing agents operative to soften and permanently swell said plastic covering, sliding said flange towards said end into a final position upon said core while said plastic is softened to squeegee a portion of the same into a zone at said end of said core adjacent said flange when the same is in its final position, and thereafter permitting said plastic to harden while said flange is in its final position.

2,950,528
CAN OPENING DEVICE
John Yogi Izumi, 5481 S. Lake Park Ave., Chicago, Ill.
Filed July 26, 1955, Ser. No. 524,522
4 Claims. (Cl. 30—9)



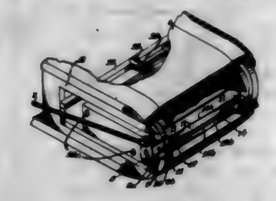
1. A can opening device comprising in combination, a housing, a can guide pivotally mounted near one of its ends in said housing, said guide having a hook adjacent its pivoted end for engaging the beaded end of a can, and a triangularly shaped can puncturing element pivotally mounted within said guide adjacent its pivoted end at a point removed from the guide pivot, said cutting element having a puncturing end in position to contact a can placed against said guide, said cutting element also having an oppositely extending actuating portion adapted to engage said housing to limit pivotal movement of said cutting element about its pivot in one direction during the initial pivoting of said guide to retain the cutting element in normal position, the puncturing end of said cutting element having outwardly inclined diverging cutting sides each provided with lower cutting edges surmounted by outwardly tapering sides to curl the cut edges of the can inwardly as the can is cut.

2,950,529
SURFACE MOUNTED CONTAINER OPENER
Angelo Anastasia, 222 Edinburgh Ave., Monterey, Calif.
Filed May 15, 1959, Ser. No. 813,578
5 Claims. (Cl. 30—10)



1. A can punch for cans having a pair of opposed ends including an end wall adjacent one end of said can and a peripheral bead proximate thereto, said punch comprising an elongated housing including a pair of laterally spaced side walls each having an offset tongue at a pair of adjacent ends thereof for engagement beneath said bead, a fulcrum and pivot pin extending between and supported on said side walls adjacent to but spaced inwardly from said tongues, each of said side walls having a guide slot formed therein and extending at an acute angle with respect to the longitudinal axis of said housing, an elongated operating lever extending longitudinally of said housing between said side walls, means mounted on said lever and extending into said slots pivotally and slidably supporting said lever on said side walls for movement towards and away from said tongues, said lever having a portion thereof pivotally and slidably engaging said fulcrum and pivot pin, said lever having an arm substantially normal thereto and a piercing member depending therefrom adjacent said tongues adapted to engage and pierce said end wall of said can when the other end of said can is forced against said lever.

2,950,530
ELECTRIC SHAVER WITH VACUUM COLLECTOR
Donald L. Fox, Bethel Park, Pa.
(7 Chapel Lane, Riverside, Conn.)
Filed Dec. 2, 1957, Ser. No. 700,115
4 Claims. (Cl. 30—41.5)



1. An electric shaver comprising a trough, said trough having a mouth portion, a pair of reciprocable cutter bars mounted on said mouth portion of said trough so as to collect hair clippings made by said cutter bars, a cylindrical, perforated shaving head surrounding said trough and cutter bars and mounted so as to freely rotate as the result of frictional engagement with the face of the person shaving, a motor and drive connection for reciprocating said cutter bars, said shaver including an interior chamber, a blower and a removable filter bag contained in said chamber, the mouth of said filter bag being in communication with one end of said trough, said blower and filter bag being in closely spaced relationship and disposed so that the blower will suck air from the filter bag and allow hair clippings to be drawn from said trough to said bag for collection in the latter.

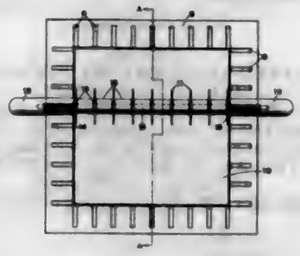
2,950,531
KNIFE
Albert C. Nolte, Jr., East Norwich, N.Y.
Original application Apr. 24, 1956, Ser. No. 580,368, now Patent No. 2,907,108, dated Oct. 6, 1959. Divided and this application Feb. 3, 1959, Ser. No. 796,970
6 Claims. (Cl. 30—353)



1. A knife adapted to cut English muffins comprising an elongated blade, a handle attached to one end of said blade, a first cutting edge along the bottom edge of said blade, said blade having portions intermediate its heights extending outwardly on each side of said blade forming second cutting edges, said blade being of thin substantially uniform thickness to permit said first cutting edge to slice through a muffin to expose an interior portion of said muffin to said second cutting edges, said second cutting edges cooperating with said first cutting edge whereby the interior portion of said muffin exposed by said first cutting edge is roughened by said second cutting edges.

2,950,532
MEANS FOR CUTTING PLASTIC SUBSTANCES
Frederick Abdela, London, England, assignor to Moo-Cow Group Limited, London, England, a British company
Filed Sept. 4, 1958, Ser. No. 758,987
4 Claims. (Cl. 31—7)

1. Means for cutting plastic substances comprising a shallow square frame with a flat bottom so that a plastic substance can be spread within the frame, said frame having grooves in each of the four sides thereof, each side of the frame having a series of said grooves therein which are transverse to the length of the side and in line with the grooves in the opposite side of the frame, and a roller cutter in rolling contact with said bottom formed



by a series of axially spaced cutting discs which are received into the grooves at the beginning and end of each cut to ensure severing the marginal parts of the substance, the end discs being in engagement with the opposite inside edges of the frame and guided thereby in each of the two directions of cutting so as to cut said substance into small squares.

2,950,533
DUAL SALIVA EJECTOR
Cwi Sommerstein, 171 W. 79th St., New York 24, N.Y.
Filed Jan. 3, 1958, Ser. No. 707,819
5 Claims. (Cl. 32—33)



1. A saliva ejector comprising, in combination, a tubular base having a fitting at one end for attachment to a source of negative pressure, the opposite end of said base being separated into a pair of identical arcuate tubular branches, and a hollow cylindrical member removably carried by the outer free end of each of said branches, the longitudinal axis of each said cylinder being substantially perpendicular to a plane containing said base and adjacent ends of said branches, each said cylinder member having a plurality of longitudinally spaced apart slots, all of said slots facing exclusively in a downward direction, and each said slot having a length substantially equal to one-sixth the length of the circumference of said cylinder.

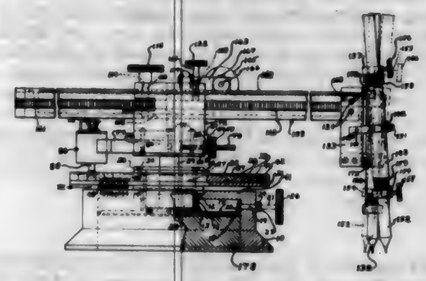
2,950,534
DENTAL INSTRUMENT
Max Pletman, 30 S. Broadway, Yonkers, N.Y.
Filed June 9, 1958, Ser. No. 740,933
5 Claims. (Cl. 32—40)



1. A dental instrument for protecting an adjacent tooth while preparing a dental cavity in a tooth compris-

ing in combination, an elongated handle having a transversely extending flat member at the anterior end, said flat member having a loop-like means fixedly attached and forming a slot at its anterior portion and catch means spaced posteriorly of the loop-like means, and a flexible blade received in said loop and projecting anteriorly thereof and having a posterior portion with catch means thereon cooperating with the catch means on the flat member to prevent relative movement of said blade with respect to said flat member and its loop-like means, said blade being adapted to be placed between said teeth adjacent a cavity being prepared in one of the teeth to form a barrier to movement of a dental burr against said adjacent tooth and to transmit vibrations to said handle should said dental burr strike said blade.

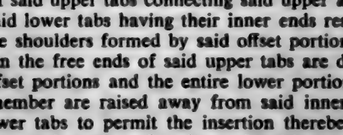
2,950,535
LAY OUT INSTRUMENT
George C. Burgess, 211A 4th Ave., Columbia, Tenn.
Filed Feb. 25, 1957, Ser. No. 642,097
11 Claims. (Cl. 33—26)



10. A layout instrument comprising a base, means holding said base in predetermined alignment with a supporting surface, at least one annular member mounted on said base and adapted to lie substantially parallel to said supporting surface, there being a plurality of angularly spaced recesses in said annular member, a bracket mounted for rotation on said base adjacent the center of said annular member, an elongated member extending transversely of said bracket and adapted for longitudinal adjustment relative thereto, means carried by said bracket and adapted to engage selectively the recesses in said annular member, a first marking member mounted adjacent the outer end of said elongated member and adapted to make a circular mark in response to circular movement of the outer end of the elongated member, a second marking member pivotally mounted adjacent the outer end of said elongated member at substantially the same distance from the axis of rotation of said elongated member as said first marking member and being offset angularly from said first marking member, and means on said elongated member to pivot said second marking member in a plane generally parallel to the longitudinal axis of said elongated member and across the circular mark made by said first marking member whereby a cross mark is made for positioning bolt holes and the like.

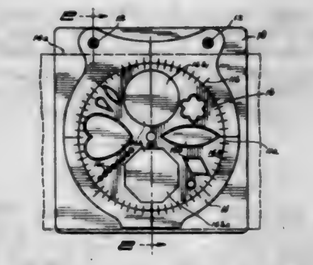
2,950,536
METHOD AND APPARATUS FOR ANGULAR MEASUREMENT OF PIPE BENDS
August Hellwig, 2924 N. Lincoln Ave., Chicago 13, Ill.
Filed Nov. 13, 1956, Ser. No. 621,913
3 Claims. (Cl. 33—86)

3. An angular measuring device for bent work pieces comprising, in combination, a pair of protractor supporting channels, each said channel having a pair of sides and a back, attachment means on each of said channels for the attachment of a protractor thereto, a pair of protractors each secured to a channel by the attachment means, second attachment means on each channel for securing each channel to a bent workpiece at points removed from the bend of the workpiece, both protractors being oriented in co-planar relationship to each other and in a plane parallel



to the plane including the axis of the workpiece in the bent section, string attachment means secured at the radial center of each protractor, and a string securable to said radial centers of said protractors in a taut condition when the channels and protractors are secured to the bent workpiece whereby the angle of bend may be readily observed by the user.

2,950,537
TOY FOR MAKING PICTURES AND DESIGNS
Martin O. Fixen, 2924 43rd Ave. S., Minneapolis, Minn.
Filed July 11, 1957, Ser. No. 671,314
2 Claims. (Cl. 33—174)

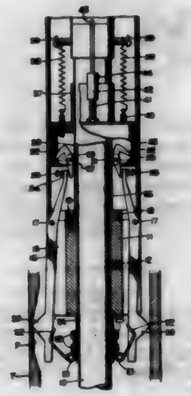


1. A device for drawing designs having in combination, a plate member having a circular opening therein, a member having a plurality of various shaped openings therein being rotatably disposable in said opening, a pair of transversely spaced upper tabs extending upwardly from said plate member being integral therewith and having portions vertically offset from the plane of said plate member, a second pair of tabs spaced under said first tabs and being in the plane of said plate member, resilient neck portions substantially centrally longitudinally of said upper tabs connecting said upper and lower tabs, said lower tabs having their inner ends respectively abut the shoulders formed by said offset portions whereby when the free ends of said upper tabs are depressed, said offset portions and the entire lower portion of said plate member are raised away from said inner ends of said lower tabs to permit the insertion therebetween of the upper end portion of a sheet of writing material to be placed between said spaced tabs for gripping engagement between said lower tabs and said shoulders when the free ends of said upper tabs are released.

2,950,538
TUBING CALIPER
Arthur H. Brandon, 1450 Ramillo Ave., Long Beach 15, Calif.
Filed Apr. 3, 1958, Ser. No. 726,152
1 Claim. (Cl. 33—178)

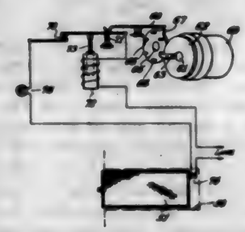
A tubing caliper comprising a central supporting structure, a plurality of feeler fingers swingably mounted upon said supporting structure and urged outwardly with rela-

tion thereto to engage the interior of a tubing, bellcranks pivotally mounted on the supporting structure, one for each feeler finger, a skirt axially movable on the supporting structure, and disposed in surrounding relation to the bellcranks, the skirt presenting a downwardly and inwardly inclined surface engageable by one end of each



bellcrank, means forming an adjustable engagement between each bellcrank and its respective finger whereby when any feeler finger is allowed to swing outwardly its bellcrank will cause the skirt to move axially, and means for indicating the distance that the skirt has moved in response to a feeler finger swinging outwardly.

2,950,539
CLOTHES DRYER
Walter R. Stevenson, Effingham, Ill., and William P. Yanik, Melvindale, Mich., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Oct. 10, 1957, Ser. No. 689,469
4 Claims. (Cl. 34—45)



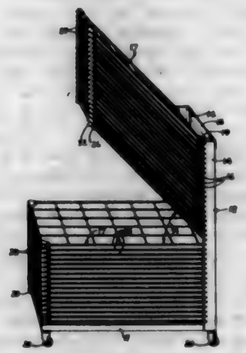
1. A clothes dryer comprising a casing having an air inlet and an air outlet and having a removable filter in said outlet, a clothes receiving cylinder mounted for rotation in said casing, air heating means, air circulating means, a timer for controlling the operation of said air heating means and said air circulating means, said timer including a driven shaft, means operative in response to the rotation of said timer shaft a predetermined plurality of times to operate a signal, said last named means comprising an auxiliary circuit for said dryer and including a normally open switch, a normally closed switch, and a signal means in series with said switches, said normally open switch being adapted to be closed by said timer shaft after said predetermined plurality of rotations of said shaft to complete said circuit to operate said signal means, and said normally closed switch being adapted to be opened when said filter is removed from said outlet to break said circuit.

2,950,540
WILLOW DRIERS
Gerold Fleissner, Egelsbach, near Frankfurt, Main, Germany, assignor to Fleissner & Sohn Maschinenfabrik, Egelsbach, near Frankfurt, Main, Germany, a firm of Germany
Filed Sept. 24, 1956, Ser. No. 611,658
Claims priority, application Germany Sept. 28, 1955
5 Claims. (Cl. 34—115)



1. A willow drier for drying a bat of loose fibrous material comprising a plurality of perforated drums mounted adjacent each other in the same plane, means for rotating said drums in the same direction and for passing said bat along the upper sides of said drums, a perforated roller rotatably mounted above and intermediate each pair of adjacent drums and adapted to act upon the upper surface of said bat, baffles arranged on the lower sides and inside of the said perforated drums and ending adjacent to the lines of contact between said rollers and said bat, and suction means communicating with the interiors of said drums for drawing an air current through said rollers, said bat, and said drums for drying said bat.

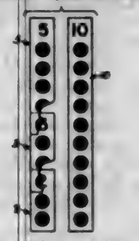
2,950,541
DRYING RACK AND CORNER FOOT THEREFOR
Gridley Dement, Glenview, Ill., assignor to Atlas Silk Screen Supply Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 6, 1958, Ser. No. 765,434
4 Claims. (Cl. 34—238)



4. In a multiple tray drying rack comprising, a generally rectangular base frame, a vertical back frame extending upwardly from one edge of said base frame, a plurality of wire framed trays mounted at spaced vertical intervals on said vertical frame for swinging movement between a horizontal position and an upwardly inclined position, and an overcenter toggle spring device for retaining said trays when lifted into their upwardly inclined position, the improvement consisting of a corner foot on each outer corner of each tray for supporting said trays in spaced relation in a level horizontal position and for supporting said trays in spaced relation but at a smaller interval when the trays are raised to their inclined position, said foot comprising a generally three sided stiffly yieldable body member which is relatively

thick with respect to the tray and which has parallel upper and lower surfaces and a slot extending therein from one side intermediate and substantially parallel to said surfaces for receiving a tray corner, and a leg portion depending from the lower surface of said body and extending along a second side thereof, said leg terminating in a narrow, elongated bottom surface which is generally parallel to the upper body surface, said leg portion extending along one side of said body member corresponding to the forward edge of the tray when the corner foot is mounted thereon, the bottom surface of said leg being substantially narrower than the lower body surface so that said leg is supported on the upper surface of the next lower foot when the trays are horizontal, and the upper surface of said foot is supported against the lower surface of the next upper corner foot when the trays are inclined upwardly with the depending leg of the latter overhanging the forward edge of the former whereby the upwardly inclined trays are held at a lesser spacing than are the horizontal trays.

2,950,542
EDUCATIONAL AID FOR TEACHING ARITHMETIC
Alice M. Steelman, 906 39th St. Court, Moline, Ill.
Filed July 9, 1959, Ser. No. 826,008
1 Claim. (Cl. 35—31)



A visual aid for teaching addition, subtraction, and other simple arithmetical facts, comprising a set of ten thin flat strips of progressively varying lengths, each strip being blank on one face and bearing indicia on the other face, said indicia comprising a numeral, such as 1, 2, etc., up to 10, on one end of each strip and a number of spots spaced uniformly along the remainder of the strip, longitudinally thereof, the number of spots on each strip being the same as the numeral on the strip, the numeral on each strip occupying approximately one unit of length of the strip and each of said spots occupying approximately another unit of length, so that the total length of each strip is equal in said units to the numeral plus one, the spacing of the spot or spots and the numeral on each strip being such that when two or more of the smaller number strips are arranged in end to end relation with the lower end of one strip overlying the numeral on each strip being such that when two or strips are spaced apart uniformly so that a larger number strip which includes the number of spots that constitutes the sum of the spots of the two or more smaller number strips, may be disposed alongside the end to end related strips and the spots of the larger number strip will be in lateral alignment with the spots on the smaller number strips.

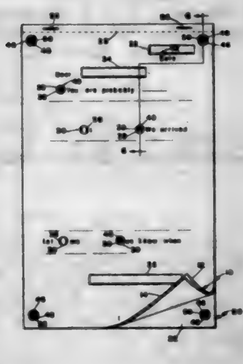
2,950,543
DIDACTIC APPARATUS
Eduard Ritter, 60 Flughgasse, Zurich, and Paul von Esch, 76 Seestrasse, Kilchberg, near Zurich, Switzerland; said Von Esch assignor to said Ritter
Filed Dec. 26, 1956, Ser. No. 630,705
Claims priority, application Switzerland Dec. 4, 1956
11 Claims. (Cl. 35—35)

1. Apparatus for presenting information both visually and aurally, comprising, in combination, first means for movably supporting a visual information carrier and forming a first unit; second means for movably supporting an aural information carrier and forming a second unit distinct from said first unit; connecting means cooperating with said first and second means for releasably interconnecting the same and for synchronizing the movement of said carriers; drive means carried by said first and second means for driving said carriers in for-



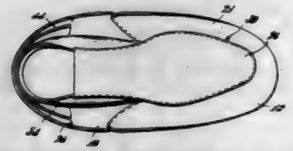
ward and rearward directions; operating means for reversing the direction of drive of said drive means; and control means carried by at least one of said first and second means and cooperating with said operating means for actuating the latter and for thereby controlling said drive means to automatically repeat as many times as desired a selected portion of the information on said carriers.

2,950,544
BILINGUAL COMMUNICATOR
Henry B. Leighton, 1149 Elmwood Drive, Escondido, Calif.
Filed Nov. 17, 1958, Ser. No. 774,268
6 Claims. (Cl. 35—35)



6. A language-gram, comprising: an initiating letter and a reply letter; each of said letters including a guide sheet and a message sheet; said initiating guide sheet having on its upper face intelligence in a first language in ordered linear arrangement, and having openings therein critically positioned with reference to portions of said intelligence; said initiating message sheet havng on its upper face a correspondingly ordered arrangement of the same intelligence in a second language; said reply guide sheet having on its upper face intelligence in said second language in ordered linear arrangement, and having openings therein critically positioned with reference to portions of the intelligence; said reply message sheet having on its upper face a correspondingly ordered arrangement of the last mentioned intelligence in said first language; said guide sheets each being secured to the corresponding message sheet with the related intelligence thereon in accurate alignment, whereby portions of the intelligence on each guide sheet may be marked through said openings onto the corresponding message sheet.

2,950,545
SHOE WHEREIN THE LASTING MARGIN OF THE UPPER IS LASTED IN REARWARDLY OF THE HEEL BREAST LINE, AND TURNED OUTWARDLY FORWARDLY OF SAID LINE AND WHICH HAS AN INSOLE WHICH IS CONNECTED TO OTHER PARTS OF THE SHOE ONLY BY THE UPPER LINING
William F. Herlihy, Haverhill, Mass., assignor to Lowell Counter Company, Lowell, Mass., a copartnership
Filed Aug. 15, 1956, Ser. No. 604,172
2 Claims. (Cl. 36—16)



1. A shoe having an upper and sole, a sock disposed within the upper, said sock comprising an upper element and a bottom element, the latter terminating at the heel breast line, means uniting the upper margin of the upper element of the sock to the upper at the throat opening, and means uniting the lower margin of the upper element of the sock to the bottom element, forwardly of the heel breast line, which the outer surface of the upper element of the sock unattached to the inner surface of the upper and with the lower surface of the bottom element of the sock resting on, but unattached to the sole, said sock being loose within the shoe and freely movable therein relative to the inside of the shoe.

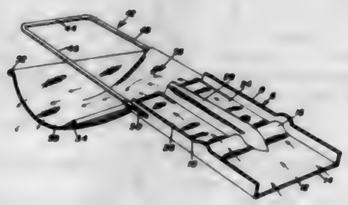
2,950,546
BRUSH TOOL
Scott F. Wigginton, R.D. 4, Cambridge, Ohio
Filed Feb. 16, 1955, Ser. No. 488,563
11 Claims. (Cl. 37—2)



1. A tree and brush pulling tool for attachment to tractors including, in combination, a power lift means mounted on the tractor including a draw bar extending transverse the rear end of the tractor, an elongated boom having a forward end quickly detachably connected to the draw bar whereby the boom in its entirety is elevated and lowered when the draw bar is elevated and lowered, the connection between the boom and the draw bar including a vertical hitch pin providing a pivot about which the boom can swing in a horizontal plane, spring means provided on opposed sides of said boom adjacent the forward end thereof, said spring means engaging the boom in opposed bias and normally retaining the boom in fixed horizontal angularity to the draw bar, and a tree and brush engaging tool carried on the remote rearward end of the boom.

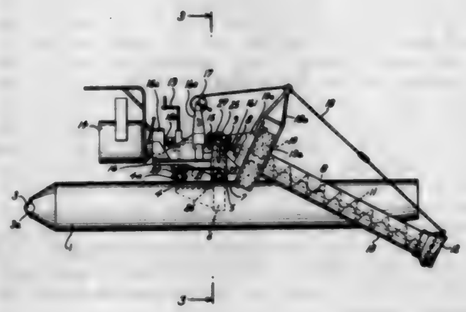
2,950,547
SNOW REMOVING IMPLEMENT WITH CONVEYOR MEANS
Frank V. Murphy, Freeport, N.Y., assignor of one-sixth each to Thomas J. Murphy, Freeport, Leo J. Murphy, Merrick, Frances G. Murphy, Freeport, George A. Murphy, Seaford, Kathleen V. Murphy, Freeport, and Joseph W. Murphy, Merrick, N.Y.
Filed Aug. 7, 1957, Ser. No. 676,754
4 Claims. (Cl. 37—53)

1. A manually maneuverable snow scraping, conveying and disposal implement comprising an elongated scoop having transverse scraping means across its leading end and which is otherwise constructed at said leading end to gather and conduct accumulated snow upwardly toward the walking attendant, said scoop being open at its upper discharge end and being substantially channel-shaped in cross-section to confine and channel the snow, a push-pull handle connected to said upper discharge end, trap means cooperable with said discharge end and adapted to collect and laterally shunt the progressively trapped snow to one side of the scoop and the path traversed thereby, conveyors operatively embodied in the bottom of said scoop, said conveyors each including an endless



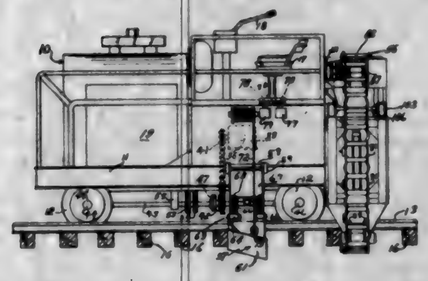
belt, the belts being mounted for operation on operating drums supported at longitudinally spaced transversely disposed points on and within said scoop, and said drums being mounted on shafts and said shafts being mounted for rotation on the scoop, one of said shafts having ground engaging traction and motion pickup wheels so that the shaft carrying said wheels is rotated by the action of the traction wheels, the respective shafts being provided with motion transmitting pulleys over which motion transmitting belts are trained and operated, said motion transmitting belts being crossed at their respective median portions.

2,950,548
DITCH CLEANING MACHINE
Karl Ritscher, Lurade No. 13a, Kreis Harburg, Germany
Filed Nov. 5, 1954, Ser. No. 467,031
Claims priority, application Germany Nov. 11, 1953
7 Claims. (Cl. 37—67)



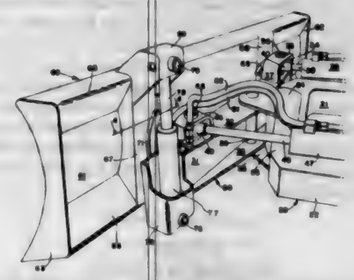
1. Ditch clearing apparatus comprising, in combination, floating means; means for adjusting the width of said floating means; a support mounted on said floating means; a clearing unit including a cutting head, conveyor screw means, and a mud centrifuge; mounting means for mounting said clearing unit on said support pivotable about horizontal and vertical axes; and operating means connected to said unit and to said mounting means for turning said unit about said axes.

2,950,549
APPARATUS FOR REMOVING BALLAST FROM BENEATH A RAILROAD TRACK
Royce G. Kershaw, Post Office Drawer 1711, Montgomery, Ala.
Filed Mar. 10, 1958, Ser. No. 720,119
5 Claims. (Cl. 37—104)



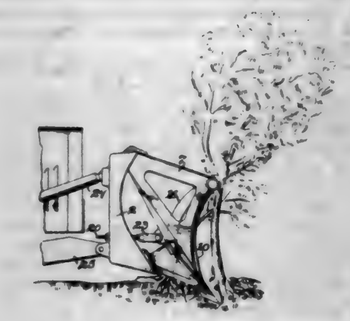
1. In apparatus for removing ballast from beneath the crossties of a railroad track, a vehicle having a main frame supported by wheels for riding on the rails, a pair of vertically spaced parallel links pivotally mounted adjacent the inner ends thereof on each side of the vehicle and extending transversely of the main frame, a pair of vertically spaced support members mounted adjacent the outer ends of each pair of links, the lower support members extending beyond the ends of the crossties and having their supporting surfaces lower than the bottom of the crossties, the upper support members being slidably mounted for movement relative to the links inwardly and outwardly of the main frame in a generally horizontal plane an endless chain ballast removing unit mounted on the support members for rotating in a vertical plane transversely of the vehicle, the lower run of the endless unit extending beneath the crossties under both rails of the railroad track and the upper run thereof extending over the crossties and over both rails, and means for raising and lowering said links and said support members thereon for adjusting the height of the ballast removing unit.

2,950,550
BULLDOZER
John L. French, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed May 26, 1959, Ser. No. 815,854
6 Claims. (Cl. 37—144)



1. An earth moving implement for a tractor comprising: a U-shaped main frame having fore-and-aft extending side portions pivotally mounted at their rear ends on the tractor and a forward transverse portion disposed forwardly of the tractor interconnecting the forward ends of the side portions; structure defining a vertical pivot on the transverse portion intermediate the side portions; a transverse blade supporting frame mounted on the vertical pivot and having opposite ends disposed outwardly of the pivot; an extensible hydraulic actuated piston and cylinder assembly extending from a side portion to one end of the transverse blade supporting frame for effecting movement of the latter about the vertical pivot; a forwardly facing plate member having arcuate edges formed about a horizontal axis fixed to one end of the transverse blade supporting frame; a bulldozer blade disposed forwardly of and adjacent to the blade supporting frame and having arcuate-shaped hook elements adapted to overlie the edges of the forwardly facing plate member for permitting tilting of the blade about the aforesaid horizontal axis while preventing separation of the blade and supporting frame; an arcuate track rigid with the bulldozer blade formed about the horizontal axis and disposed proximate the opposite end of the blade supporting frame; track engaging means on the opposite end of the blade supporting frame for preventing separation of the track and supporting frame while permitting tilting of the blade about said axis; and a hydraulic actuated cylinder and piston assembly disposed in and operable in a vertical plane between the opposite end of the supporting frame and the bulldozer blade for effecting tilting adjustment of the blade relative to the blade supporting frame.

2,950,551
LAND RAKES
Fred Pesce, R.F.D. 3, Torrington, Conn.
Filed Mar. 30, 1955, Ser. No. 497,859
3 Claims. (Cl. 37—145)

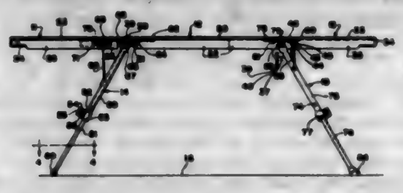


1. A land rake comprising the combination with a movable blade of a swingable frame pivoted thereon, a top frame section extending forwardly from said blade, a transverse brush engaging element mounted in and across the said section at and in its forward ends, a series of ground engaging teeth depending from the outer end of said top frame section and extending below and beyond said transverse element, means attached to said teeth for spacing said teeth from said blade, adjustable means carried by the blade for holding the teeth in such spaced relation and frame sections connecting said teeth with said forward top frame section.

2,950,552
COLLAPSIBLE IRONING BOARD
Emil W. Stephany, 7817 Cedarbrook Ave., Philadelphia 50, Pa.
Filed May 1, 1958, Ser. No. 732,198
3 Claims. (Cl. 38—139)

3. In an ironing-board construction, a pair of board sections arranged in end-to-end relation, hinge means connecting the adjacent ends of said board sections for swinging movement of said board sections between horizontal coplanar relation and facing relation with their underside facing toward each other, said hinge means having a pivotal axis located on the underside of and spaced from said board sections so that said board sec-

tions are spaced from each other in their facing relation, a collapsible leg assembly pivotally connected to the underside of one of said board sections with its pivotal axis located in spaced relation above the pivotal axis of said hinge means, a bracket on the underside of the other board section and spaced beneath the undersurface of said other board section to define an opening between said



bracket and the undersurface of said other board section facing generally toward the pivotal axis of said leg assembly, and an extension on said leg assembly and swingable about the pivotal axis of said leg assembly for withdrawable insertion into said opening upon simultaneous swinging movement of said leg assembly and other board section relative to said one board section.

2,950,553

METHOD OF PRODUCING WRINKLE RESISTANT GARMENTS AND OTHER MANUFACTURED ARTICLES OF COTTON-CONTAINING FABRICS

Melvin D. Herwitz, Huntingdon Valley, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Jan. 16, 1957, Ser. No. 634,590
3 Claims. (Cl. 38—144)

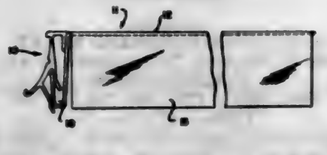
1. A method for producing a wrinkle-resistant textile article formed of a cotton fabric which comprises applying an aqueous dispersion containing about 1% to 10% by weight of an aminoplast resin-forming condensate and about 0.25% to about 2% by weight of a catalyst selected from the group consisting of magnesium chloride, magnesium perchlorate, zinc nitrate, zinc perchlorate, and zinc fluoborate to the fabric to effect impregnation thereof, drying the impregnated fabric at a temperature not over 200° F. such that appreciable curing of the condensate is avoided, forming the fabric into an article with a seam therein, said seam being formed at a time in the period extending from a time prior to the impregnation of the fabric to a time after the drying of the impregnated fabric, and subsequently pressing the article containing the seam at a temperature of at least 212° F. to effect curing of the condensate simultaneously with the pressing.

2,950,554

PRICE TAG MOLDING

Allan D. Foster, Grosse Pointe, Mich., assignor to Almor Corporation, Detroit, Mich.

Filed Oct. 29, 1959, Ser. No. 849,551
6 Claims. (Cl. 40—16)



1. A price tag molding for use with a shelf formed of thin sheet metal and having a horizontal front edge with a downwardly depending front edge flange which is bent forwardly and then upwardly of the shelf edge to form an upwardly opening channel including a base and a forward flange, comprising an elongated, horizontally arranged strip arranged to be spaced from and in front of the shelf front edge flange and having a front face with means formed thereon to receive and hold price tags on said front face; and means for frictionally securing the molding to the shelf, said means consisting of a top extension formed on the strip and extending rearwardly a sufficient distance to bridge the top of the shelf channel and then terminating in a formation formed to seat against the shelf front edge flange at the top thereof, and a pair of flanges formed between the upper and lower edges of the strip and extending rearwardly and downwardly from the strip at an acute angle relative to the strip, one of the flanges being an upper flange spaced above the other, lower flange, and with the upper flange arranged to fit inside the shelf channel and having a front flat base portion arranged to engage against the rear, that is, inside wall of the shelf forward flange near the top thereof and the lower flange having a rear flat face portion arranged to fit against the forward, that is, outside wall of the shelf forward flange near the bottom thereof, and with the two flat face portions being at a small acute angle relative to each other whereby the shelf forward flange is caused to bend a small amount when in contact with the two face portions to thus frictionally lock the molding to the shelf.

2,950,555

TICKETING

David L. Tamaccio, Abington Township, Montgomery County, Pa., assignor to Soabar Company, Philadelphia, Pa., a corporation of Pennsylvania

Filed Oct. 28, 1958, Ser. No. 770,220
4 Claims. (Cl. 40—28)



1. A string-ticket made of flat, sheet material comprising a body portion, a sealing strip portion adhesively applied to the face of said body portion, tab means cut into one of said portions adjacent and in spaced relation to the top edge of said body portion and facing away from said top edge, and a continuous string extending from each flanking side edge of said body portion across the face thereof in spaced relation to said top edge with the intermediate portion of the string engaged by said tab means and then extending upwardly across the face of said body portion to and beyond said top edge to form a ticket-attaching loop.

2,950,556

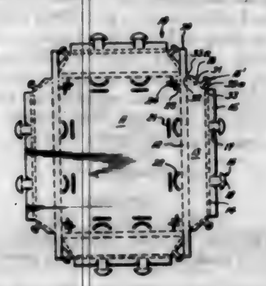
FOLDABLE FRAME

Daniel Larios, 2513 Kingston Drive, Houston, Tex., assignor of fifty percent to William E. Ford, Houston, Tex.

Filed Nov. 19, 1958, Ser. No. 775,073
7 Claims. (Cl. 40—154)

1. A frame of foldable material such as cardboard and the like for the framing of pictures including the transparent covers therefor and adapted for folding into assembly with picture and cover by the folding and interlocking of latch members, and comprising in unassembled form, a one piece blank made from said material

and providing a rectangular central unfolded area with border areas of equal width and creased upon blanking to provide three parallel extending concentric panels along each side of the central unfolded area, each outermost panel having three aligned flanges connected thereto to extend outwardly therefrom and also having two tabs connected to said outermost panel and separating said flanges, each central panel being mitered at the outer end thereof and each miter having a triangularly shaped flange connected to the outer edge thereof, and each triangularly shaped flange having a tab connected thereto to extend outwardly therefrom, a pair of opposed innermost panels having straps at either end thereof, each of said tabs being substantially mushroom shaped with the mushroom outermost, said rectangular central unfolded area having four aligned, slots along each edge thereof arched in outward direction with two aligned slits inwardly of said central arched slots and parallel to such edge, said central unfolded area also having a diagonal slot at each corner between the arched slots of adjacent sides, in assembly the central mushrooms being inserted first downwardly through said slits and underneath the rec-



tangular central unfolded area and then back upwardly through the arcuate slots to latch the flanges extending outwardly from the outermost panels over the central unfolded area between the tabs to bear upon the upper surface of the central unfolded area whereby the inner panels constitute the substantially upright outer border of the frame, the central panels constituting frame parts extending inwardly and downwardly from the uprights, and the outer panels constituting the angularly downwardly and outwardly extending members to define a picture area inwardly thereof and to hold down the cover of the frame, at each corner the strap thereat extending upright inwardly of the upright panel of the edge adjacent to the edge supplying the strap, the tabs of each corner triangular flange extending at such corner downwardly through the diagonal slot thereat and then back underneath the rectangular central unfolded area and then upwardly to latch in the adjacent arcuate slot whereby the corners of the frame are firmly latched with the triangular flange surfaces in face to face abutment while the strap at each corner serves as a latch member by which the corner of one edge of the frame is latched to the adjacent edge thereof.

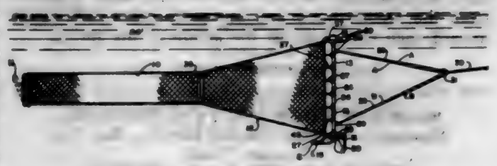
2,950,557

HIGH SPEED FISH AND SHRIMP TRAWL

James E. McDonald, Houston, Tex.
(Rte. 2, Box 289, Gulfport, Miss.)

Filed Feb. 13, 1959, Ser. No. 793,024
9 Claims. (Cl. 43—9)

1. A trawl comprising a rectangular- shape frame, said frame including opposed U-shaped sections having horizontal sealed hollow beams with bars at the ends, means pivotally connecting the bars, the beams providing buoyant means on the upper and lower sections of the frame, a net having converging portions extended from the frame, the net having a tubular section extended from the converging portions, a door in the trailing end of the tubular



portion, and a hawser extended from the frame for connecting the trawl to a boat.

2,950,558

FISHING DEVICES

Bernard Karpes, 3046 W. Irving Park Road, Chicago, Ill.

Filed July 2, 1957, Ser. No. 669,649
1 Claim. (Cl. 43—17.2)



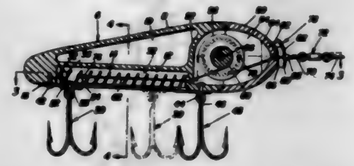
A fishing hook retriever comprising a wedge shaped body having two parallelly extending spaced apart openings formed therethrough extending transversely with respect to the longitudinal length of said body, with one of said openings being tapered throughout its longitudinal length and extending through the narrow portion of said wedge shaped body, said body having a slot formed in one wall thereof and extending diagonally about a portion of the periphery of said body and in open communication with the other of said openings, said other of said openings being larger than said one opening and extending through the wider portion of said wedge shaped body, said slot providing a fishing line entrance to said other of said openings and said tapered opening providing a frictional connection between said body and a retrieving pole so that said body will extend at a right angle to the end of the pole, with the wider portion of the body and said other of said openings disposed in spaced parallel side relation to the pole.

2,950,559

FISHING LURE

William O. Nelson, 1864 Grove St., Sarasota, Fla.

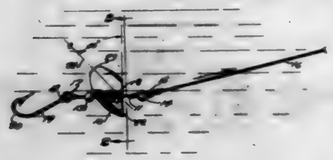
Filed Oct. 24, 1958, Ser. No. 769,419
6 Claims. (Cl. 43—42.02)



3. A fishing plug provided longitudinally and centrally of a ventral portion thereof with a recess constituting an open bottomed spring housing, a saddle plate attached to the ventral portion of the plug and substantially covering the open bottom portion of the housing, said plate having an elongated slot formed therein providing a track, a slide operable in said housing and having a portion slidably keyed in said slot, a portion of said slide being provided with a depending fishhook, a second fishhook attached to a forward end portion of the plug and depending therefrom, said fishhooks cooperating with

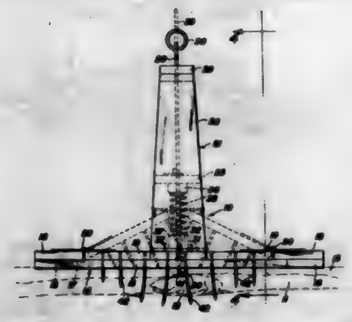
each other, and a coil spring arranged in said housing and having one end bearing against said slide to hold the same in a position wherein the first fish hook is spaced from the second hook and means to move said hooks toward each other against the action of the spring.

2,950,560
BUOYANT WOBBLING TYPE FISH LURE
Howard L. Worden, Yakima Bait Co., Box 410, Granger, Wash.
Filed July 9, 1957, Ser. No. 670,764
1 Claim. (Cl. 43—42.19)



In a fish lure, the combination which comprises a buoyant body, circular in cross section, said body having a vertically disposed flat face and the axis of the body being extended upwardly at a 45 degree angle substantially midway between the plane of the face and a horizontally disposed plane, the body tapering to a blunt point at the upper end, said body having a horizontally disposed opening extended from a point substantially at the intersection of the axis with the face through the body to a point on the rear surface thereof, a horizontally disposed shaft having eyes on the ends extended through the horizontally disposed opening through the body at a right angle to said face with the body free to rotate on the shaft, the shaft having a bead on the rear portion and the bead being positioned to be engaged by the body with forward travel of the lure in the water, a line attached to the eye on the leading end of the shaft, and a hook attached to the eye on the trailing end of the shaft.

2,950,561
MOLE TRAP
Milton S. Brown, Warrenton, N.C., assignor of one-fourth to Thurston Brown, Warrenton, and one-fourth to Lafayette Brown, Macon, N.C.
Filed Feb. 14, 1958, Ser. No. 715,385
2 Claims. (Cl. 43—81)



1. In a trap, a horizontally disposed rectangular base including a pair of spaced parallel side members and a pair of spaced parallel end members, said side and end members defining therebetween an open space, an end piece mounted above each end member, a pair of blocks hingedly connected to said end pieces, a plurality of pointed prongs depending from each of said blocks and connected thereto, said prongs extending through the space in said base, a frame extending upwardly from said base, said frame including a pair of spaced parallel side walls having their lower ends secured to the side members of said base, a horizontally disposed crosspiece extending between said side walls and connected thereto, said crosspiece having a slot and an aperture therein, a horizontally disposed top piece arranged above said crosspiece and connected to the upper ends of said side walls, there being a pair of spaced apart openings in said top piece, a vertically movable rod extending through an opening in the top piece and through the aperture in the crosspiece, there being a notch in said rod intermediate the ends thereof, a latch pivotally connected to said crosspiece and mounted for movement into and out of engagement with the notch in said rod, a pin secured to the lower end of said rod, U-shaped brackets extending upwardly from said blocks and engaged by said pin, upper and lower opposed cup-like members positioned between said crosspiece and pin, a coil spring circumposed on said rod and having its ends engaging said cup-like members, a vertically disposed shiftable arm projecting through an opening in the top piece and said arm having a widened intermediate portion movably projecting through the slot in the crosspiece, said widened portion being mounted for movement into and out of engagement with said latch, and a horizontally disposed plate secured to the lower end of said arm at a point below said frame.

2,950,562
CRUSTACEAN TRAP
Warren C. Lothrop, Newton, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Filed July 2, 1958, Ser. No. 746,272
5 Claims. (Cl. 43—102)

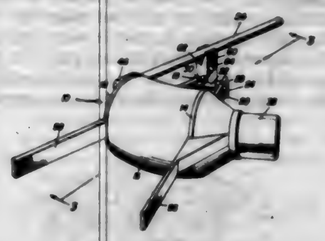


1. A crustacean trap, comprising a base, a plurality of contiguous flexible strips of substantially equal length extending upwardly from the periphery of said base, and a downwardly concave top member the edge of which overlaps the upper ends of said flexable strips and extends sufficiently below the tops of said strips to prevent them from being forced outwardly, said strips yieldably bearing against the inner edge of said top member whereby said strips may be forced inwardly by a crustacean to provide an opening into said trap.

2,950,563
BELLOWS DUSTER
Edgar Dresner, 257 Valentine Lane, Yonkers 5, N.Y.
Filed Aug. 18, 1959, Ser. No. 834,585
9 Claims. (Cl. 43—146)

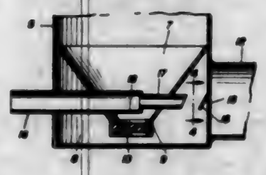
1. A bellows duster for dispensing insecticide and the like comprising two side walls opposing each other, means hingedly connecting said side walls at one end for movement towards and away from each other, a handle formed on the opposite ends of said side walls, a bellows secured between the opposing surfaces of said side walls, an outlet tube secured to one of said side walls and in

communication with the interior of said bellows, and an insecticide reservoir removably secured to one of said



side walls in communication with the interior of said bellows.

2,950,564
POWDERED INSECTICIDE APPLICATOR
James M. Bonine, 26158 6th St., Highland, Calif.
Filed Aug. 7, 1958, Ser. No. 753,669
2 Claims. (Cl. 43—147)



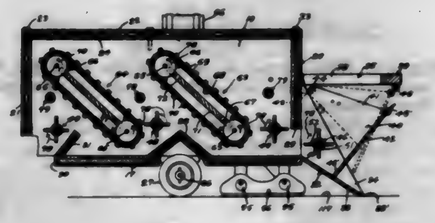
1. An insecticide powder gun comprising: a substantially cylindrical container for the reception of the powder, a substantially conical hopper, for the reception of the powder from the container, mounted in the lower portion of said container, said container having in said lower portion thereof a chamber for the reception of air under pressure, a pump mounted on the container and communicating with the chamber for forcing air thereinto, a discharge nozzle mounted horizontally in the lower portion of the container, said nozzle traversing the hopper and having an opening in its lower portion communicating therewith for receiving the powder therefrom, said nozzle including a reduced inner end portion communicating with the chamber for receiving air under pressure therefrom for ejecting the powder from the nozzle, said hopper having an opening therein below the nozzle communicating with the chamber for receiving air therefrom for agitating the powder, and air-pervious valve in the second named opening for controlling the flow of air into the hopper.

2,950,565
WHIRLING TOY
Zaye M. Bridges, Rte. 1, Blacksburg, S.C.
Filed Feb. 13, 1959, Ser. No. 793,020
6 Claims. (Cl. 46—51)



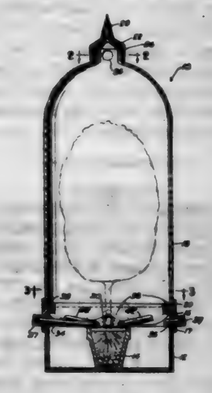
1. A whirling toy comprising a loop including a web part; means secured to said web part for adjustment radially of the loop; a connector link secured at one of its ends to said means; and a resilient, stretchable suspending member connected at one of its ends to the other end of said link.

2,950,566
SOIL TREATING MACHINE
Admiral D. Henry, 8108 Cantrell Road, Little Rock, Ark.
Filed Oct. 5, 1959, Ser. No. 844,477
11 Claims. (Cl. 47—1)



1. A soil treating machine comprising an elongated body forming an oven having a forward end provided with an inlet opening, said body having a downwardly opening outlet adjacent its opposite end, driven endless conveyors supported by and operating in said body and disposed in longitudinally spaced relation to one another, each of said endless conveyors being inclined upwardly and rearwardly away from the inlet for conveying soil and foreign matter upwardly and rearwardly within said body, said endless conveyors being disposed to pick up the soil and foreign matter from adjacent the bottom of the body and to discharge said material therefrom adjacent the top of the body, a plurality of driven agitators supported by and disposed within said body for agitating the material, certain of said agitators being disposed to direct the material onto said endless conveyors, and a plurality of torches supported by and extending into the body and from which flames are projected across the body into the path of travel of the material for destroying the consumable foreign matter passing through the machine so that the soil discharged from the machine through said outlet in a loose and finely divided condition will be free of consumable matter.

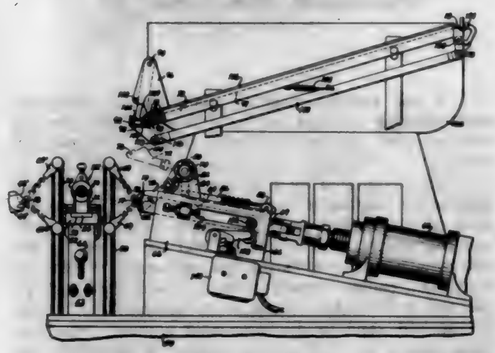
2,950,567
PLANT TERRARIUM
Oliver Newman, 82 Bromfield St., Wollaston 70, Mass.
Filed Sept. 15, 1958, Ser. No. 760,977
9 Claims. (Cl. 47—17)



1. A plant terrarium of the character described comprising a transparent housing forming an enclosed cham-

ber for a plant and its container, the walls of said housing being spaced from said container, ventilating means formed in the housing for controlling the atmosphere within the chamber, and means accessible from the exterior of the housing through which water and plant food may be introduced into the plant container, said means comprising at least one feed tube having one end extending through the housing wall, the other end of the tube adapted to rest on the upper edge of the plant container.

2,950,568
GLASS BEADING MECHANISM FOR ELECTRON GUNS
Richard D. Kissinger and Robert F. Malle, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 11, 1956, Ser. No. 615,388
8 Claims. (Cl. 49—1)

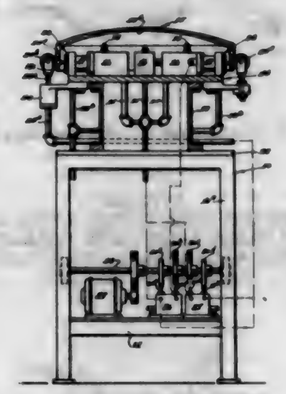


1. A beading machine for attaching a thermoplastic bead to an electron gun structure having a plurality of aligned mounting elements, said machine comprising, a movable slide for holding said thermoplastic bead, a support slidably mounting said slide for movement along a path between a first position and a second position, means spaced from said slide support for mounting said electron gun structure with said aligned mounting elements adjacent to said first position, means for moving said slide within said support and between said first and second positions, means for heating said thermoplastic beads to softening temperature, said heating means including a gas manifold, gas burners operatively connected to said manifold, normally closed valve devices connected to said manifold to control the flow of gas to said burners, and control means connected to said valve devices and including a control circuit comprising a source of current and a first switch means in contact with said slide at said second position to close said control circuit to open said valve devices, and a second switch means in said valve control circuit, said second switch means including a timing device for opening said control circuit to permit said valves to close after said slide remains in said second position a predetermined time.

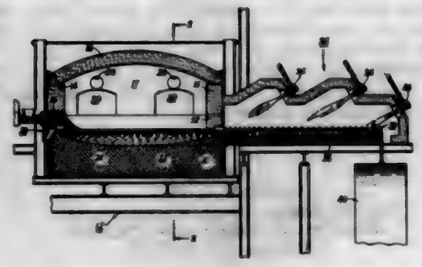
2,958,569
METHOD AND APPARATUS FOR FORMING PROJECTIONS ON GLASS SURFACES
George C. Chapman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 15, 1959, Ser. No. 787,083
12 Claims. (Cl. 49—7)

3. The method of forming a projection on a wall of a hard glass article which comprises the steps of heating a localized surface area of said wall to soften such area to a depth less than the wall thickness, bringing a shaping tool into pressure contact with said softened area, and shaping the softened glass.

6. Apparatus for forming a plurality of accurately spaced projections on the interior surface of a glass face plate, comprising a bed plate, a plurality of tubular open end mandrels, means on said bed plate for respectively journaling said mandrels for axial reciprocal movements, means for securing successive face plates in a fixed position on said bed plate so that said mandrels are respectively axially movable into engagement with predetermined areas of the interior surface of said face plate, a plurality of means for locally heating said predetermined areas to soften the glass only to a depth substantially less than the glass thickness, and means for concurrently axially shifting said mandrels into forcible engagement with said softened glass areas, thereby displacing softened glass into the open end of said tubular mandrels.



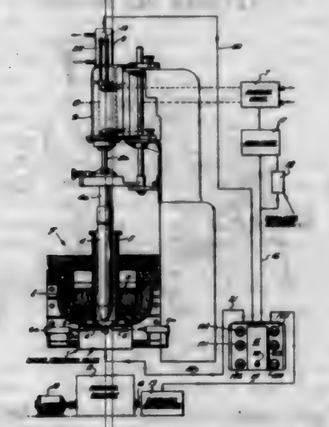
2,958,570
METHOD AND APPARATUS FOR PRODUCING ALKALINE SILICATES
Edwin Cowles, Cayuga, and Richard C. Shaver, Syracuse, N.Y., assignors to Cowles Chemical Company, Cleveland, Ohio, a corporation of Ohio
Filed June 8, 1951, Ser. No. 230,662
15 Claims. (Cl. 49—83)



5. The method of continuously producing an alkali metal silicate which comprises introducing into a container a bed of solid comminuted material selected from the group consisting of the silicate to be produced and a mixture of raw materials capable of reacting to produce said silicate, heating the central top portion of said bed to form a relatively quiescent pool of molten silicate completely supported by said bed, continuously feeding to said pool in approximately stoichiometric proportions a mixture of silica in the form of sand and an alkaline metal compound reactive with said sand to produce the desired alkali metal silicate, maintaining said pool at a temperature to cause said sand and metal compound to react to form said desired silicate, continuously withdrawing molten silicate from said pool as product, maintaining said bed in a static state during said continuous production of said silicate, and controlling the heat supplied to said pool, the feed of sand and alkaline metal compound to said pool and the withdrawal of product from said pool to balance the heat dissipated to the atmosphere at the external surface of said bed while the liquid-solid transition zone between said pool and bed remains substantially spaced from the external surface of said bed.

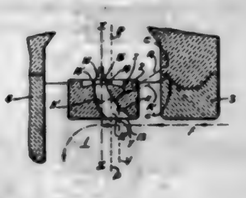
7. A furnace adapted to be used in making at high temperature a normally solid product which at the operating temperature of the furnace is molten and corrosive toward the common refractories, said furnace comprising an open top, single-walled, uninsulated metal tank forming the lower portion of said furnace and a refractory top supported above said metal tank and forming the upper portion of said furnace, said metal tank containing a static bed of said product in solid comminuted form, said bed being in direct contact with the interior wall of said tank and having in its upper portion a bowl-shaped recess adapted to contain a molten pool of said product, heating means in said refractory top for maintaining said pool in molten condition, feeding means mounted in said refractory top of said furnace for continuously feeding to said pool materials adapted to react therein to form said product, and product withdrawal means for continuously withdrawing said product from said pool.

2,958,571
OPERATING MECHANISM FOR GLASS FEEDERS
Frederick J. Wythe, Hebron, Conn., assignor to Emhart Manufacturing Company, Hartford, Conn., a corporation of Delaware
Filed Apr. 12, 1957, Ser. No. 652,623
17 Claims. (Cl. 49—55)



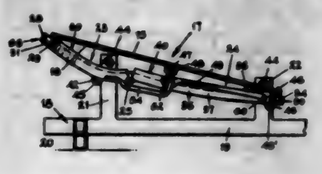
1. In a molten glass feeder, the combination of a feeder plunger, electrically responsive actuating means operable to vertically reciprocate the plunger, means for generating an electrical signal corresponding to a desired plunger motion, means coupled to the plunger to generate a second electrical signal proportional to the plunger position, and means electrically connected to said signal generating means to compare said electrical signals and to feed a signal representing the difference between them to said electrically responsive means to effect reciprocation of the plunger.

2,950,572
DELIVERY DEVICE IN THE DRAWING OF GLASS
Jean Marcel Perraut, Chambery, France, assignor to Compagnie de St. Gobain, Paris, France
Filed Sept. 27, 1955, Ser. No. 536,996
Claims priority, application France Sept. 29, 1954
7 Claims. (Cl. 49—61)



1. A debiteuse or floating draw bar of elongated shape having a slot parallel to its length and a rim raised above the level of the slot, said draw bar being adapted to be depressed in glass until the glass while remaining below the level of the rim flows through the slot in the form of a thick ribbon which can be drawn away, the slot having an upper orifice below the rim, and having a lower orifice the edges of which are parallel to the rim and are adapted to be horizontally positioned when in operation, the upper and lower orifices of the slot having longitudinal axes which are located on opposite sides of a vertical plane passing longitudinally through the draw bar.

2,950,573
APPARATUS FOR BENDING SHEETS OF GLASS OR THE LIKE
William P. Bamford, Maumee, Frank J. Carnes, Toledo, and Leslie H. Laine, Perrysburg, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Filed July 16, 1954, Ser. No. 443,851
5 Claims. (Cl. 49—67)

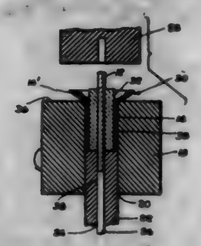


1. In apparatus for bending glass sheets, a bending mold comprising a movable mold section and another mold section, and movable sheet support means for supporting a glass sheet to be bent intermediate the ends thereof, said sheet support means comprising a sheet support, a support arm having one end connected to said sheet support and the opposite end pivotally connected to said other mold section, and a member having one end rigidly secured to said movable mold section and the opposite end slidably connected to the end of said arm that is connected to said sheet support.

2,950,574
METHOD OF MAKING ELECTRODE STRUCTURES
William O. Slater, Totowa Borough, and Albert J. Monack, Rutherford, N.J., assignors to Mycalex Electronics Corporation, Clifton, N.J., a corporation of New York
Filed June 6, 1956, Ser. No. 589,673
7 Claims. (Cl. 49—81)

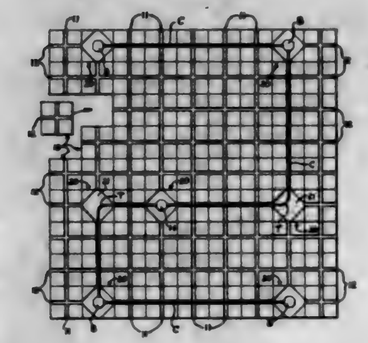
1. A method of making an electrode structure including a ductile metallic sleeve, a conductor disposed within said sleeve and vitreo-micaceous material therebetween, comprising the steps of positioning the conductor within a sleeve having a cup-shaped flange on one end thereof, dis-

posing a bead of vitreo-micaceous material therebetween whereby to form an electrode assembly, heating said assembly adjacent to said flange until said vitreo-micaceous material adjacent said one end adheres to said sleeve and conductor, cooling said assembly, holding said assembly



by said conductor and applying heat to said assembly along substantially the full length of said sleeve until said vitreo-micaceous bead softens, subjecting said assembly to pressure to compress said vitreo-micaceous material and to flatten said cup-shaped flange, and cooling said assembly.

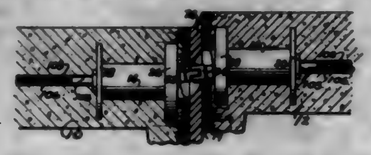
2,950,575
RACEWAY NETWORK
August Hellwig, 2324 N. Sheffield Ave., Chicago 14, Ill.
Filed Jan. 13, 1958, Ser. No. 708,715
3 Claims. (Cl. 50—127)



1. A ceiling comprising a set of tiles in combination, said tiles including a first rectangular tile, said first rectangular tile having cruciform grooves formed in a face thereof, said cruciform grooves extending to and bisecting the terminal edges of said first rectangular tile thereby forming central openings in said edges, a second rectangular tile having walls defining a depression therein, said walls forming openings at the mid-points in the edges of said second rectangular tile, said first tiles being arranged to surround said second tiles with the adjacent edges of the tiles abutting to position the side openings in each of said tiles in communicating relationship with the other.

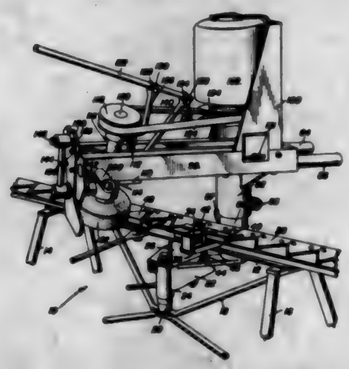
2,950,576
SHOCK ABSORBING CONNECTIONS FOR BUILDING CONSTRUCTIONS
David Rubenstein, 2750 2nd Ave., San Diego 3, Calif.
Filed Apr. 25, 1956, Ser. No. 582,614
13 Claims. (Cl. 50—128)

3. A shock absorbing and energy dissipating construction for building construction, engineering constructions and the like, comprising at least one pair of porous structural members and a combination shock absorbing and energy dissipating means comprising a laminated plastic resin composition-fibrous reinforced bonding layer of resilient material which forms a joint securing said members together, an energy absorbing connector disposed within the body of each of said members, means traversing said bonding layer and interconnecting the energy absorbers in said members, said fibrous reinforcement comprised of unidirectional and multidirectional reinforcements in and of the bonding layer; said bonding layers of resilient material being bonded to the said porous structural material of said members, said bonding material having substantial penetration and permeation of portions of said porous structural members by a part of



the plastic resin composition of said bonding layer; tensioned prestressing cables connected to each of said energy absorbing connector; said tensioned cable holding said porous structural material under compression; said combination means which is comprised of said laminated plastic resin layer and said fibrous reinforcements, said energy absorbing connectors and said prestressing cable together cooperatively limiting movement of said porous structural members toward and from each other under normal static loads on said joint, yieldable and permitting articulative movements but resisting displacement of one portion relative to the other under dynamic loading energy inputs upon said joint imposed from any direction.

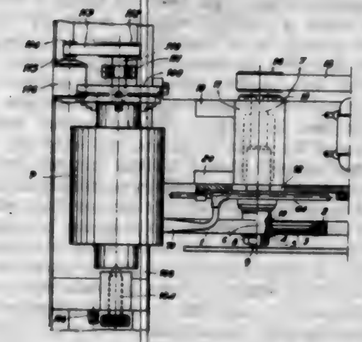
2,950,577
SICKLE SHARPENER
Floyd H. Shadle, Minatare, Nebr.
Filed Dec. 23, 1957, Ser. No. 704,816
12 Claims. (Cl. 51—56)



1. A sickle blade sharpener of the type having a support stand adapted to support a sickle blade, an assembly, including a motor drivingly connected to a grinder wheel supporting shaft, mounted on said stand, and an indexing means for longitudinally positioning the blade on the stand in relation to the grinder wheel; said indexing means comprising a triangular shaped member adapted to be positioned in the openings between each pair of teeth of a sickle blade, said member having side portions adapted to abut the confronting cutting edges of said pair of teeth and means mounting said indexing means on said stand for longitudinal sliding movement between a first and second limit position, said positions defining the distance between the openings of adjoining teeth,

means for lowering said indexing member to a position below said first limit position registering with one of said openings, and longitudinally of said stand to said second limit position below and registering with, the opening defined by an adjoining pair of teeth, whereby the indexing means is engaged in said last mentioned opening and may be returned to said first limit position thereby effecting the longitudinal movement of a sickle blade and the positioning of the next tooth to be sharpened at said grinder.

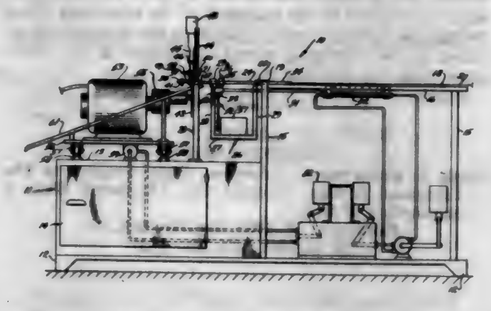
2,950,578
GRINDING MACHINE WITH TOOL DRESSING MEANS
Eugene Fouquet, 63 bis Rue Jean-Jaures, Bois-Colombes, France
Filed Dec. 18, 1957, Ser. No. 703,696
Claims priority, application France Dec. 28, 1956
12 Claims. (Cl. 51—95)



1. A grinding machine, comprising a grinding tool containing abrasive grains, supporting means for said grinding tool, means for imparting rotational motion to said grinding tool, means for imparting longitudinal feed motion to said supporting means of said grinding tool, dressing means adapted to cleave abrasive grains apparent on the surface of said grinding tool, supporting means for said dressing means, means for imparting longitudinal feed motion to said dressing means, lubricant delivery means adapted to project lubricant fluid onto the contact points between the object to be ground and said grinding tool, lubricant delivery means adapted to project lubricant fluid onto the contact points between said grinding tool and said dressing means, supporting means for said first and second lubricant delivery means, means for imparting suitable feed motion to said first and second lubricant delivery means, mechanical means for interlinking said longitudinal feed motion of said grinding tool, said longitudinal feed motion of said dressing means and said feed motion of said first lubricant delivery means, so as to cause the last said feed motion to proceed in an opposite direction with respect to said first and second feed motions, control means for controlling said interlinking means, means for imparting reciprocating transverse motion to said dressing means, means controlling the shape of the transverse path described by said dressing means, supporting means for the object to be ground, means for rotating said object to be ground.

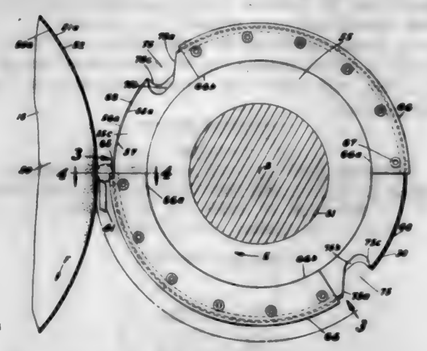
2,950,579
AUTOMATIC MACHINE FOR CUTTING HYPODERMIC NEEDLES FROM STEEL TUBES
Ervin F. Fox, 8 Burton St., Waterbury, Conn.
Filed Oct. 7, 1957, Ser. No. 688,471
3 Claims. (Cl. 51—98)

1. In a machine for automatically cutting short pieces of predetermined length from long pieces of small diameter tubing, the combination comprising a supporting framework, carriage mechanism comprising means to simultaneously move a plurality of pieces of tubing from one position to another by a measured amount, means to thereafter hold said pieces in said other position, a cutting mechanism, means for reciprocating said cutting mechanism in a direction prependicular to the direction of movement of said carriage mechanism, said cutting mech-



anism, comprising a rotating cutting disc positioned to cut off the end portions from said pieces of tubing, means to automatically release said holding means at the end of said cutting operation to allow the cut pieces of tubing to drop out of said machine, said holding means comprising a pair of spaced lateral bars fixed with respect to said framework and having aligned openings through which said end portions extend, and solenoid-controlled means for clamping said end portions in said lateral bars.

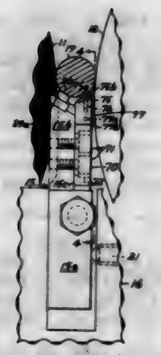
2,950,580
CENTERLESS GRINDING MACHINE FOR TAPERED WORK PIECES
Elijah F. Render, Madeira, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 21, 1958, Ser. No. 729,952
4 Claims. (Cl. 51—103)



1. In a centerless grinding machine, a rotatable grinding wheel having a peripheral cutting surface of circular cross section, a rotatable regulating wheel of circular cross section opposite said grinding wheel having a peripheral workpiece engaging surface, said wheels mounted on parallel centered axes positioned a fixed distance apart and said surfaces equally beveled to define a constant sized tapered grinding throat therebetween, a blade between the wheels inclined in the longitudinal direction to support a tapered workpiece in the throat with its axis parallel to the axis of the wheels, a cam connected to the regulating wheel on the side face at the wide end of

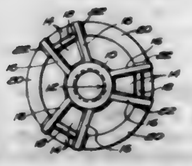
the tapered grinding throat, said cam having a circumferentially extending arcuate cam surface extending radially beyond the workpiece engaging surface of the regulating wheel and facing the throat, said cam surface inclined a predetermined amount to engage a workpiece on the blade and feed said workpiece endwise in the throat toward the narrower end thereof in abrading contact with the grinding wheel to a predetermined position therein for grinding said workpiece to a predetermined size, and a notch in the periphery of the regulating wheel behind the cam surface in relation to the direction of rotation of the regulating wheel for release of the workpiece from the grinding throat.

2,950,581
GAGING DEVICE
Greig S. Butterworth, Columbus, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Mar. 30, 1959, Ser. No. 802,787
10 Claims. (Cl. 51—103)



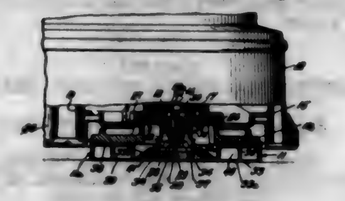
1. In a machine tool, a device for gaging the size of a workpiece in process comprising means defining a cradle having sides to support the workpiece, a first sensing means responsive to settling of the workpiece in a cradle, a second sensing means responsive to spread of the cradle, and indicating means responsive to both sensing means.

2,950,582
CENTER INSERT FOR ABRASIVE WHEELS
Alvah D. Beauchaine, 180 North St., Lakeport, N.H.
Filed Jan. 19, 1959, Ser. No. 787,624
14 Claims. (Cl. 51—168)



1. A center insert for abrasive wheels, comprising a hub, a plurality of flat spokes extending from said hub, said spokes defining first spaces between adjacent spokes and second spaces between adjacent spokes alternating with said first spaces, and substantially sector-shaped elements filling said first spaces.

2,950,583
ROTATABLE SURFACE TREATING MEMBERS
Bengt Erik Nilsson, Hagersten, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Filed Mar. 25, 1957, Ser. No. 648,326
Claims priority, application Sweden Mar. 28, 1956
1 Claim. (Cl. 51—195)



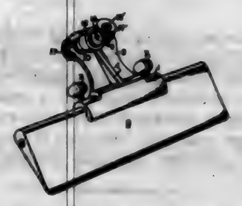
In apparatus of the class described having a rotatable member which is provided with an essentially flat surface and adapted to be positioned over a surface and be moved thereover, the combination of a one-piece backing member for a sheet of surface treating material which is formed only of resilient material and includes a resilient flat disk in intimate physical contact with the flat surface of the rotatable member and integrally joined ribs formed entirely of said resilient material, said ribs when unstressed being substantially perpendicular to said disk and projecting vertically downward from said resilient flat surface and having the outer free ends thereof terminating substantially the same distance below said flat surface, a plane passing through the outer free ends of said ribs being removed from and substantially parallel to said flat surface, said ribs including a first group of ring-shape disposed concentrically one with respect to another about the axis of rotation of said member and a second group extending radially between the ribs of the first group and interconnecting the latter, the depth or vertical extent of said resilient ribs being more than twice their maximum thickness, the outer free ends of said ribs providing spaced linear supporting zones for the sheet of surface treating material, the ring-shaped ribs in the first group providing linear supporting zones which are continuous, said resilient ribs and resilient flat disk to which said ribs are joined providing flexible connections at the regions they are joined to one another with said ribs being movable with respect to said resilient flat disk while the latter is in intimate physical contact with the flat surface of said rotatable member, and said resilient flat disk and resilient ribs being so constructed and formed of material of such resiliency that said one-piece backing member forms a yielding cushion for distributing pressure from said rotatable member substantially uniformly to all regions of the sheet of surface treating material adapted to be held against the outer free ends of said resilient ribs.

2,950,584
ACCESSORY FOR ROTARY POWER DRIVEN TOOLS
John F. Welch, Owosso, Mich., assignor to Carpet Corporation, Owosso, Mich., a corporation of Michigan
Filed May 8, 1958, Ser. No. 733,910
13 Claims. (Cl. 51—195)



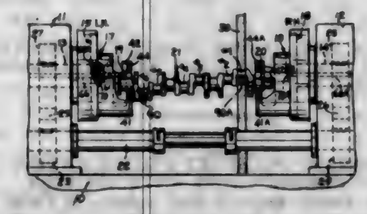
1. A disposable rotary power tool surface smoothing unit for mounting an abrasive sheeting which comprises an intermediate yielding, supporting pad of flexible, polyurethane foam, a flexible fabric facing laminated to the face of said pad, a backing laminated to the back of said pad and a means for attaching said accessory to a rotary power drive.

2,950,585
APPARATUS FOR USE IN THE SHARPENING OF KNIVES, KNIFE BLADES AND THE LIKE
George Anketell Bell, West Pymble, New South Wales, Australia, assignor to Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria, Australia
Filed Aug. 1, 1958, Ser. No. 752,564
Claims priority, application Australia Aug. 13, 1957
2 Claims. (Cl. 51—221)



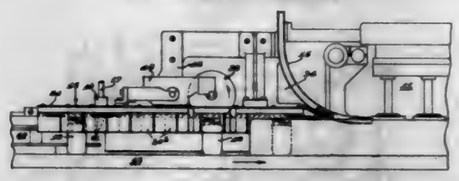
1. Apparatus for use in the hand sharpening of knife blades and the like comprising a blade holder, a tongue on and extending rearwardly of the blade holder, a first adjusting rod threadably engaging the tongue near its rear edge and making an angle of about 90° with the plane of the tongue, said rod including an enlarged end provided with an internal hemispherical seat, a hemisphere engaging in said seat to form a self-aligning bearing and having a flat surface, a pad of abrasive resistant material secured to the flat surface of the hemisphere, a locknut for the adjusting rod, a second adjusting rod also threadably engaging the tongue near its rear edge and making an angle of about 90° with the plane of the tongue, said second rod including an enlarged end provided with an internal hemispherical seat on the opposite side of the tongue to the first-mentioned enlarged end, a second hemisphere engaged in said last-mentioned seat to form a second self-aligning bearing, a second pad of abrasive resistant material secured to the flat surface of the second hemisphere, and a lock nut for the second adjusting rod.

2,950,586
CRANKPIN GRINDING APPARATUS
Stephen H. Smith, Webster, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Filed Nov. 19, 1958, Ser. No. 775,087
6 Claims. (Cl. 51—237)



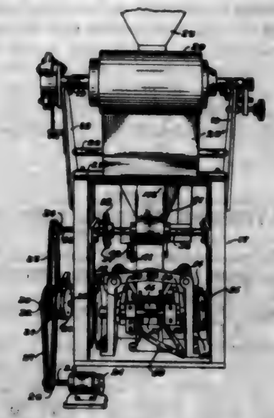
1. In a crankpin grinding machine having a rotatable work spindle, a work supporting pot chuck thereon, a half bearing fixedly mounted on said chuck to support a main bearing of a crankshaft with a crankpin positioned in substantial alignment with the axis of said spindle, a pivotally mounted clamping jaw on said chuck to clamp the crankshaft within said bearing, and a yieldably mounted angular work locator on said pot chuck having a locating surface thereon which is engaged by a portion of a crankshaft as it is loaded into the chuck to impart a precise rotary indexing movement to the crankshaft so as to align the axis of a crankpin to be ground with the axis of said spindle.

2,950,587
METHOD OF AND APPARATUS FOR CLOSING GLASS CONTAINERS
Shepard L. Harmon and John Hohl, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 19, 1958, Ser. No. 722,532
5 Claims. (Cl. 53—22)



3. The method which consists in continuously moving filled unclosed jars in upright position and in succession along a horizontal path toward a closure cap applying zone, providing an elongated enclosure for at least the upper end and adjacent side portions of the jars during at least a part of said movement, filling headspaces of the jars with an inert gas prior to their entry into the enclosure, blanketing said upper end and side portions of the jars with an inert gas and causing such blanket of gas to advance with the jars substantially at the same linear speed as that of the latter.

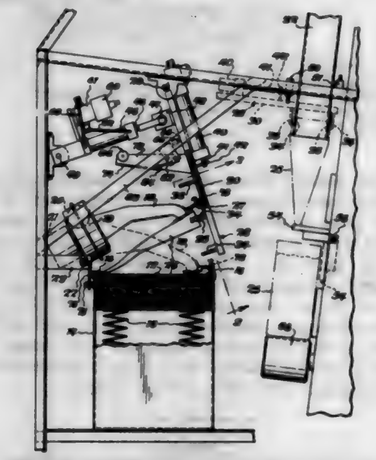
2,950,588
AUTOMATIC PACKAGING MACHINES
Alfred P. Gausman, Sheboygan, Wis., assignor to Hayssen Manufacturing Company, Sheboygan, Wis., a corporation of Wisconsin
Filed Dec. 24, 1958, Ser. No. 782,749
10 Claims. (Cl. 53—51)



1. In an automatic packaging machine, a former about which a continuous web of thermoplastic sheet material drawn from a roll is formed into a continuous tube, driven means mounted adjacent the inner end portion of the former for continuously pushing the web of thermoplastic

material along said former, transverse heat sealing dies having a transverse cut-off knife incorporated therein, means for closing the heat sealing dies to form transverse heat seals in the advancing tube and to sever an advanced section of the tube from the tube portion thereadjacent, the dies, when closed upon the tube, advancing with the tube at the same rate of speed, means for opening said heat sealing dies while the tube is advancing on the former, and means controlled by the advance movement of the web of sheet material for automatically intermittently closing and opening the dies relative to the continuously advancing tube to determine the package lengths.

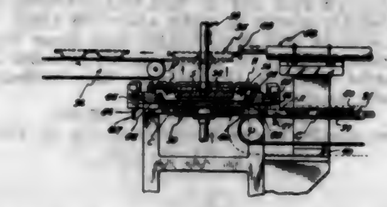
2,950,589
BAG FEEDING MECHANISM
Alexander Litchard, 322 N. Main St., Wellsville, N.Y.
Filed July 31, 1958, Ser. No. 752,367
11 Claims. (Cl. 53—190)



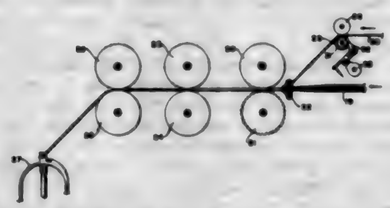
1. A bag feeding mechanism including a magazine for a stack of bags, means for taking one bag at a time from said stack and moving it into another position with the mouth of the bag foremost, bag clamping means including jaws which enter said bag, and jaws on the exterior of said bag positioned to cooperate with the jaws inside the bag, means for moving the interior and exterior jaws into positions to clamp the edge portions of said bag, a chute for discharging material into a bag, and means for moving said jaws in a generally upward direction into position at the sides of said chute to place the bag into position in which said chute extends into said bag to receive material to be contained therein, and back to a position to receive another bag.

2,950,590
APPARATUS FOR HOODING OPEN-FACED CONTAINERS
Robert J. O'Brien, Evanston, and Gordon A. Vold, Palatine, Ill., assignors to Elco-Alcoa Containers Inc., a corporation of Illinois
Filed Feb. 7, 1958, Ser. No. 713,971
20 Claims. (Cl. 53—342)

1. In a hooding machine for applying a cover sheet to a container having a marginal rim bordering an open face thereof, the combination with a container feed conveyor, elevating means including a plate for receiving a container from the conveyor for elevating said plate and container through a predetermined vertical path, means for supplying cover sheets above and extending beyond the rim of said container, and means above said feed conveyor for removing a hooded container from said elevating means after elevation thereof, of a hooding frame having a central opening through which said plate reciprocates to move a container and overlying cover sheet upwardly therethrough for hooding the container and presenting the same to said removing means, said frame having vertically swingable confronting internal hooding fingers anchored thereto and bordering and defining said opening with said opening being complemental to and slightly smaller than the container rim, said fingers having generally downwardly facing broad hooding surfaces thereon resiliently biased to a point beneath the center of swinging movement thereof to engage and hood said cover sheet over said container in response to movement of said container upwardly through said opening.



2,950,591
PRODUCTION OF YARN CONTAINING HAIR FIBERS
Svetozar Mandukich, New York, N.Y., assignor to Neely Manufacturing Company, York, S.C., a corporation of South Carolina
Filed Nov. 7, 1953, Ser. No. 772,510
9 Claims. (Cl. 57—157)



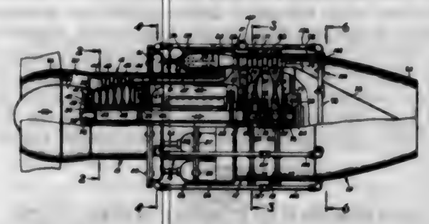
1. A method of making a yarn, which comprises forming a sliver of synthetic fibers and one member of the class made up of goat hair fibers and a mixture of goat hair and wool fibers with at least 20% of the sliver consisting of goat hair fibers, forming a second sliver of synthetic fibers, simultaneously drawing a plurality of ends of the first sliver and a less number of ends of the second sliver to form a third sliver, feeding a continuous length of the third sliver to a drafting zone and simultaneously feeding to the zone, to be drafted with the sliver, spaced lengths of a roving of synthetic fibers and one member of the class made up of goat hair fibers and a mixture of goat hair and wool fibers, the roving containing a substantially higher proportion of goat hair fibers than the third sliver, twisting the product issuing from the drafting zone to form a final roving, and spinning the final roving into yarn.

2,950,592
RESONANT PULSE JET ENGINE HAVING AN ENGINE VALVE ANTECHAMBER
Paul A. Frank, Bedford, Ind., assignor to Curtis Automotive Devices, Inc., Bedford, Ind., a corporation of Ohio
Filed Jan. 6, 1954, Ser. No. 402,539
2 Claims. (Cl. 60—35.6)

2. A pulse jet engine which comprises a tubular body having an elongated combustion chamber portion of uniform transverse sectional area, an elongated tail-pipe portion of reduced size connected to one end of said combustion chamber portion, a tapered diffuser portion, and an intermediate elongated diffuser portion of uniform sectional area, said tapered diffuser portion converging from the opposite side of the combustion chamber portion to one end of said intermediate elongated diffuser portion; a valve casing on the other end of said intermediate diffuser portion, said casing having a venturi fuel-air inlet diverging to a valve chamber downstream of said inlet; a vibrating-element valve in said valve chamber for controlling fuel-air flow to the combustion chamber; said valve chamber having an outlet axially aligned and communicating with said other end of said intermediate diffusor portion, said valve chamber having a flow area somewhat large than the flow areas of said venturi-inlet, of its outlet, and of said intermediate diffuser portion; means for introducing fuel and air into said venturi-inlet of said casing; and an ignition plug at a point downstream of said valve chamber and upstream of said combustion chamber and adapted to ignite the fuel-air mixture downstream from said valve chamber; said diffuser portions being jointly effective to choke reversely directed flame propagation moving from the combustion chamber so as to preclude ignition of the fuel-air mixture in said valve chamber downstream of said valve; said one end of said intermediate diffuser portion, said tapered diffuser portion, said combustion chamber portion, and said tail pipe portion having a common axis with each other; the axis of said valve chamber being so misaligned with respect to said common axis as to render said valve chamber substantially liquid fuel trap-free.

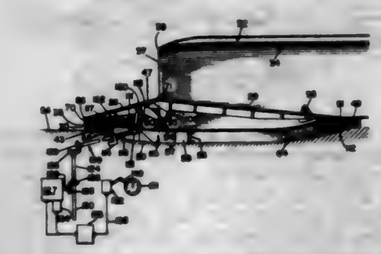


2,950,593
COMPOUND ENGINE
Randolph Samuel Rae, Santa Monica, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Filed Nov. 22, 1954, Ser. No. 470,238
9 Claims. (Cl. 60—35.6)



1. A compound engine for propelling an aircraft comprising a casing defining a fluid passage having an exhaust opening, compressor means located in the forward portion of said casing for compressing air entering said passage and turbine means connected with said compressor means and located rearwardly thereof in said casing, combustion chamber means located in said fluid passage between said compressor means and turbine means and utilizing compressed air from said compressor means to maintain combustion therein, and a non-air breathing engine located within said casing and having separate fuel and oxidant supplies carried by said aircraft, said non-air breathing engine being connected to said compressor means to continually drive said compressor means during flight independently of the atmosphere to increase the efficiency of said engine and produce operative pressure ratios across said compressor means at high altitudes in order to increase the flight ceiling of said aircraft.

2,950,594
SHOCK WAVE INDUCING AND CONTROLLING MECHANISM
Milenko Mitrovich, Chestnut Hill, Mass., and Nicholas V. S. Mumford, Grand Prairie, Tex., assignors to Chance Vought Aircraft, Incorporated, Dallas, Tex., a corporation of Delaware
Filed June 13, 1955, Ser. No. 515,104
14 Claims. (Cl. 60—35.6)

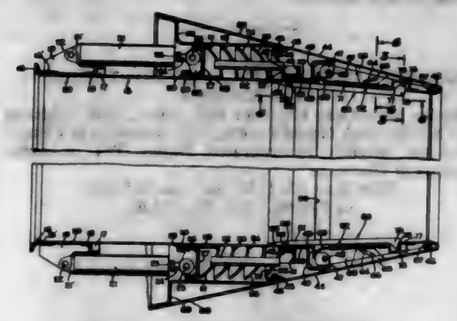


1. For an airframe-housed power plant of an aircraft, an air induction device comprising: an air duct on said aircraft communicating with said power plant and having a sidewall and a ram inlet opening; a variable-position airflow-deflecting body mounted forwardly of said opening on said aircraft for controlling airflow adjacent said opening, said body being pivotable, about a point longitudinally fixed relative to said aircraft and to said body, to a position wherein it is substantially in register with said sidewall of said duct and freely allows ram airflow into said inlet opening; actuating means mounted in said aircraft and operably connected to said airflow-deflecting body for pivoting the same; and control means continuously responsive to the position of said airflow-deflecting body and to Mach number of said aircraft and connected to a power source and to said actuating means for energizing the latter in accordance with such Mach number in a manner wherein said airflow-deflecting body is pivoted by said actuating means to its position most favorable for high pressure recovery in said duct and high mass-flow of air through said ram inlet opening.

2,950,595
THRUST REVERSER
Richard G. Lasher, Canoga Park, and John S. Winter, and Everett A. Johnston, Van Nuys, Calif., assignors to The Marquardt Corporation, Van Nuys, Calif., a corporation of California
Filed Nov. 1, 1954, Ser. No. 465,969
18 Claims. (Cl. 60—35.54)

1. A thrust reverser for an engine having a combustion chamber with an exhaust nozzle comprising a shroud located at the aft end of said engine and connected with a plurality of spaced reversing vanes for movement therewith longitudinally of said engine, said shroud being positioned during forward thrust to close the periphery of said engine, means for moving said vanes and shroud rearwardly from the forward thrust position to form a peripheral opening in said engine opposite said reversing vanes, and movable blockage means supported by said shroud in open position and located entirely within the interior circumference of said shroud and forming an extension of said combustion chamber parallel to said combustion chamber when said shroud is in the forward thrust position, and means operable upon rearward

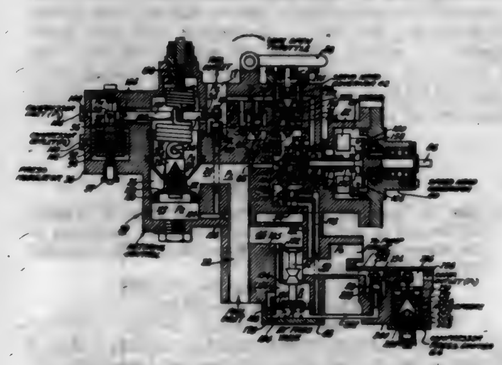
movement of said shroud for moving said blockage means inwardly to reduce the interior opening of said shroud and thereby cause exhaust gas to flow through said peripheral opening and reversing vanes.



2. A thrust reverser as defined in claim 1 wherein said blockage means comprises a plurality of movable elements supported by said shroud, said moving means comprising means for connecting each of said elements to said engine forwardly of said shroud, the rearward movement of said vanes and shroud causing said connecting means to move said elements inwardly to reduce the interior opening of said shroud.

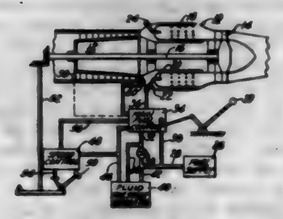
3. A thrust reverser as defined in claim 2 having flap means cooperating with said elements when the engine periphery is closed to form a variable area exhaust nozzle, and means for varying the area of said nozzle in order to trim the nozzle area.

2,950,596
FUEL FEED AND POWER CONTROL SYSTEMS FOR GAS TURBINE ENGINES
Elmer A. Hause and Albert P. Schnaible, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Oct. 28, 1953, Ser. No. 388,754
11 Claims. (Cl. 60—39.28)



1. In a fuel control system for gas turbine engines having a burner and a compressor, a first fuel flow regulating means for metering fuel to the burner including a fuel metering restriction and valve means for controlling said restriction, a second fuel flow regulating means for controlling the pressure drop across said first regulating means, means responsive to an engine operating parameter operatively connected to one of said regulating means for controlling fuel flow to the burner as a function of said parameter, said parameter being an indication of engine speed condition throughout the operating range of the engine and compressor pressure modulating means operatively connected to the other of said regulating means for controlling fuel flow to the burner as a function of a compressor pressure ratio irrespective of variations in engine operating conditions including a pressure responsive means, a chamber, a fluid connection between said chamber and said pressure responsive means, a first passage connecting said chamber with a first pressure derived from the compressor and a second passage connecting said chamber with a second pressure associated with the compressor, said first and second connecting passages having such a predetermined fixed area relation that sonic flow through said second connecting passage is attained at a predetermined ratio of said first and second pressures and below which ratio a pressure is produced in said chamber which varies as a function of the ratio of said first and second pressures.

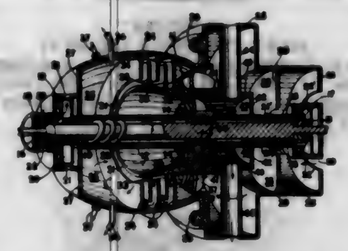
2,950,597
APPARATUS FOR MINIMUM FUEL FLOW SCHEDULING DURING DECELERATION OF AN ENGINE
James F. Clarke, Levittown, Pa., assignor to The Bendix Corporation, a corporation of Delaware
Filed Dec. 5, 1956, Ser. No. 626,476
7 Claims. (Cl. 60—39.28)



1. In fuel control apparatus for an engine operative with a fuel supply, the combination of a first fuel flow path provided between said supply and said engine, a second fuel flow path provided between said supply and said engine and connected in parallel with said first fuel flow path, with said first fuel flow path including a first fuel flow control member including a fuel pressure responsive member for maintaining a constant head across said first flow control member, with said second fuel flow path including a second fuel flow control member, an engine speed responsive device operatively connected to said second fuel flow control member for controlling the flow of fuel to said engine through said second fuel flow control path as a function of engine speed, and means responsive to the level of flow output from said first fuel flow control member for controlling the pressure drop across said second fuel flow control member.

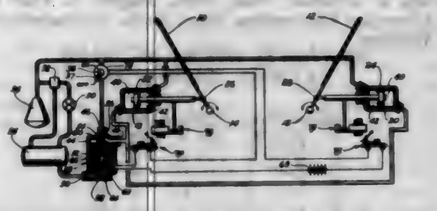
2,950,598
AIR COOLED GAS TURBINE POWER PLANT
Otto R. Nemeth, 1325 Londonderry Place, Los Angeles, Calif.
Filed Nov. 22, 1954, Ser. No. 470,457
4 Claims. (Cl. 60—39.51)

1. A gas turbine, comprising, in combinaton: a shaft; an outer casing surrounding said shaft and having an air inlet means and an exhaust gas outlet means; bearing means for said shaft supported within said outer casing; a rotary member disposed within said outer casing and secured to said shaft; compressor means circularly disposed on said rotary member to surround said shaft, and adapted to axially receive air passing through said air inlet means from one side of said rotary member; an end wall for said outer casing defining a combustion chamber on the other side of said rotary member adapted to receive air from said compressor means; means for injecting fuel into said combustion chamber; means for igniting a fuel-air mixture formed in said combustion chamber to provide combustion gases; turbine means circularly disposed on said rotary member and spaced radially from said compressor means; shrouding means disposed within said outer casing to guide said combustion gases from said combustion chamber through said turbine means to said



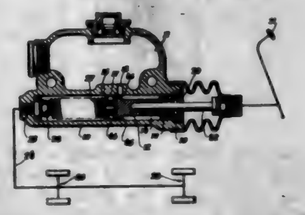
exhaust gas outlet means, an inner cylindrical casing surrounding and co-axial with said shaft, and defining a wall for said combustion chamber, said inner casing being supported within said outer casing and divided to accommodate the interposition of said rotary member; and a plurality of axially directed cooling ducts extending through said rotary member and spaced radially inwards of said turbine means in communication with an annular cavity defined by said inner casing and said shaft.

2,950,599
MULTIPLE WINDSHIELD WIPER CONTROL
Farlow B. Burt, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware
Filed Feb. 13, 1957, Ser. No. 640,037
11 Claims. (Cl. 60—52)



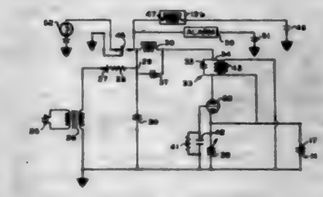
1. A control system for continuously synchronizing two oscillating members comprising means for producing hydraulic pressure, two motion transmitting elements connected to said members and actuated in one of two directions by pressure from the hydraulic pressure producing means acting thereon in both directions, means for conveying fluid from said pressure producing means to said motion transmitting elements, manually operable valve means and electrically operable valve means in said second mentioned means for controlling the pressure acting against said motion transmitting elements in one of said two directions, a source of electrical energy, conductor means interconnecting said electrically operable valve means and the source of electrical energy, a first switch mechanism electrically connected to said conductor means and operatively connected to said manually operable valve means for energizing said electrically operable valve means upon opening of said manual valve means, a second switch mechanism electrically connected to said conductor means and operatively connected to one of said motion transmitting elements, and a third switch mechanism electrically connected to said conductor means and operatively connected to the other of said motion transmitting elements, said second and third switch mechanisms being adapted to energize and de-energize with cyclic recurrence said electrically operable valve means after initial energization of said electrically operable valve means by movement of said manual valve means to a fixed open position.

2,950,600
LIQUID PRESSURE CONTROL SYSTEMS
John James Huck, Leamington Spa, England, assignor to Automotive Products Company Limited, Leamington Spa, England
Filed Dec. 28, 1951, Ser. No. 263,935
Claims priority, application Great Britain Jan. 8, 1951
2 Claims. (Cl. 60—54.6)



1. In a master cylinder, a cylinder bore, a piston having a forward face and slidably received in said cylinder bore, an annular chamber located rearwardly of said forward face of said piston, a fluid reservoir, a port communicating said fluid reservoir and annular chamber, at least one passage formed in said piston for exhausting fluid from said annular chamber during retractile movement of said piston, a packing of relatively hard resilient material seated on the forward face of said piston, at least one recess formed in the surface of said packing adjacent the forward face of said piston to allow liquid to flow therebetween, a through passage in said packing, and a one-way valve controlling fluid flow in the recess between said packing and piston and across said through passage during retractile movement of said piston.

2,950,601
DETECTION OF WATER OR OTHER MATERIALS IN THE EFFLUENT FROM AN UNDERGROUND STORAGE CAVERN
Robert E. Wightman, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 15, 1955, Ser. No. 528,275
2 Claims. (Cl. 61—.5)



1. In a system for controlling the flow of effluent from an underground storage cavern wherein a shaft connects said cavern with the surface of the earth, and a line extends from the surface to said shaft to withdraw stored material from said cavern, the improvement which consists in a dielectric probe inserted in a metal portion of said line, said probe including a metal conductor, and a sheath of insulating material surrounding said conductor, a pipe supplying a displacement fluid to said cavern to displace stored material therefrom, a motor valve in said pipe, a lead connected to said metal conductor, a lead connected to said metal portion of said line, and a con-

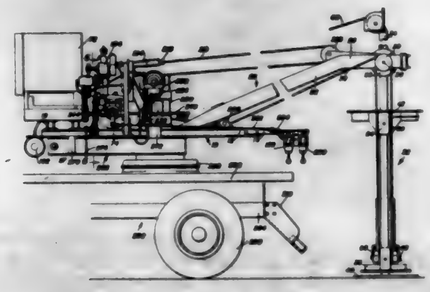
troller connected to said leads and responsive to the capacitance between said metal portion and said metal conductor to close said motor valve when the probe capacitance rises above a predetermined value.

2,950,602
EXPANSION DEVICE
Joseph C. Lang, 3326 Middletown Road, Pittsburgh 4, Pa.
Filed Nov. 29, 1956, Ser. No. 623,430
3 Claims. (Cl. 61—45)



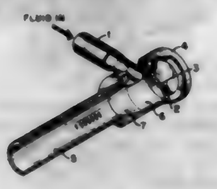
1. An expansion device comprising a bolt having a threaded shank portion, a pair of longitudinally spaced stop elements surrounding the shank of said bolt, at least one of which is screw-threadedly engaged to said shank portion, a plurality of separate, coaxial, stacked split rings of circular cross-section and of spring metal surrounding said shank intermediate said stop elements, alternate split rings being of a diameter smaller than that of a hole in a wall in which said device is to be expanded, said alternate rings alternating with other split rings of still smaller diameter and contacting them in substantially circular paths, a washer surrounding said shank and adapted to rest against the head of said bolt and to engage the surface of the wall into which said hole is formed, means for holding said nut against rotation with respect to said hole surface as a consequence of turning of said bolt, whereby all of said split rings are compressed between said stop elements as they move toward each other, thereby expanding the diameters of said alternate split rings so as to engage the surface of said hole, and contracting the diameters of said other split rings.

2,950,603
POST DRIVER
Matthew Macek, John W. Macek, and Henry Macek, all of R.F.D. 1, McKees Rocks, Pa.
Filed Sept. 7, 1954, Ser. No. 454,576
1 Claim. (Cl. 61—74)



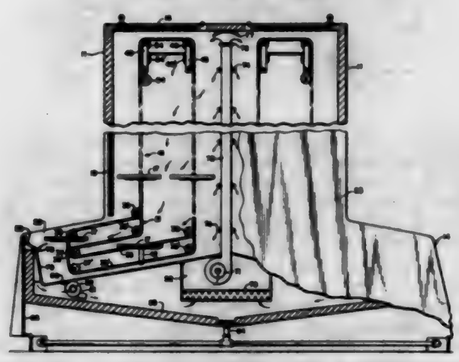
A post driver comprising a machinery base, a boom pivotally attached to said machinery base and extending outwardly therefrom, a guide carriage carried by an outer end of said boom for guided vertical movement relative thereto, said guide carriage being adapted to be seated on the ground and have received in the lower portion thereof a post to be driven, a drop hammer carried by said carriage for repeated guided vertical movement therethrough, said machinery base being mounted on a wheeled frame, a guide carriage seat carried by said wheeled frame at the rear thereof for receiving the lower portion of said guide carriage during transport, said guide carriage seat sloping downwardly and rearwardly whereby said guide carriage may be mounted on said guide carriage seat with said boom in its normal operating position.

2,950,604
HEAT TRANSFER METHOD
Wallace R. Gambill, Oak Ridge, Tenn., and Norman D. Greene, La Jolla, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 8, 1959, Ser. No. 818,985
3 Claims. (Cl. 62—5)



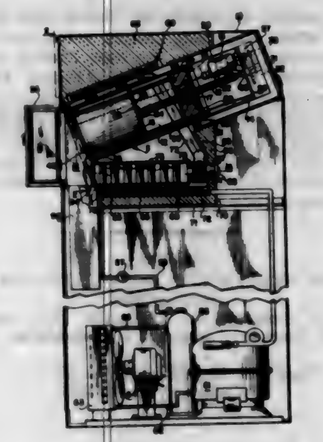
1. In the method of increasing burnout heat fluxes in tubes under conditions of localized boiling at the inner wall of said tubes by utilizing spinning flow, the improvement which comprises passing the fluid coolant through said tubes with a rotational component of velocity of sufficient magnitude to provide a centrifugal acceleration at the inner wall of said tube of at least 10,000 *g*.

2,950,605
REFRIGERATED MERCHANDISING UNIT
Joseph B. Hennion, Niles, Mich., assignor to Tyler Refrigeration Corporation, Niles, Mich., a corporation of Michigan
Filed June 27, 1958, Ser. No. 745,052
5 Claims. (Cl. 62—250)



1. In a merchandising unit a casing comprising, a base having a front wall, an upper hollow column disposed above said base and having a front wall extending upwardly rearwardly of the front wall of said base, first opening means for said upper hollow column providing access thereto, second opening means disposed below said first opening means and between the upper edge of said front wall of said base and the lower edge of said front wall of said column, endless conveyor means disposed within said casing and extending between said column and said base in a path including a first portion in juxtaposition of said first opening and a second portion lying below said opening means between said front walls of said base said column, goods supporting means having supporting surfaces carried by said conveyor means, and means for maintaining said goods supporting means with their supporting surfaces in horizontal planes in all positions of said conveyor to afford for loading goods thereon at said first opening means and for removing goods therefrom at said second opening means.

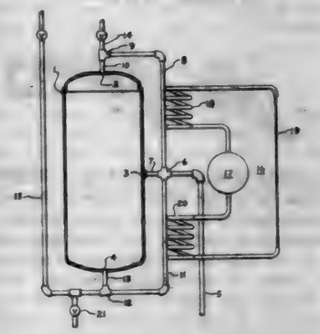
2,950,606
DISPENSING MECHANISM AND AIR CIRCULATION SYSTEM THEREFOR
Duane C. Maddux, 3016 W. Verdugo, Burbank, Calif.
Filed June 6, 1958, Ser. No. 740,239
3 Claims. (Cl. 62—320)



1. In an apparatus for dispensing a semi-solid material from a cylindrical paper carton, the combination which comprises, a cabinet, a housing mounted in the cabinet supporting the carton at an angle relative to the vertical axis of the cabinet, a front piece mounted on the housing having an outlet slot and a cutting edge projecting into the material, actuating mechanism attached to the housing and engageable with the carton for imparting rotary movement thereto, the rotary movement removing material from the carton by the cutting edge via the outlet slot, a cool air source mounted in the cabinet adjacent the housing, a duct connected to the air source for receiving an air supply from the source and arranged to expel the cool air across the outlet slot to maintain the material in its semi-solid condition, de-moisturizing means connecting the expelled air to the air source, and stripping means carried on the front piece engageable with a portion of the carton for severing the portion from the main body of the carton.

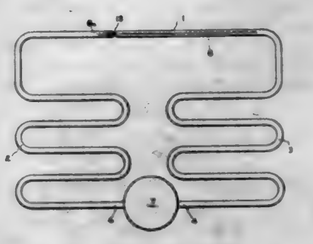
2,950,607
WATER HEATING AND COOLING SYSTEM
John H. Fries, Jr., Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 20, 1956, Ser. No. 629,577
5 Claims. (Cl. 62—324)

1. A water heating and cooling system comprising a single water storage tank, a water inlet line connected to an opening in a side wall of the tank, and a heat pump including a condenser in heat transfer relation with hot water stored in the upper portion of said tank above said opening and an evaporator in heat transfer relation with cold water stored in the lower portion of said tank below said opening, the evaporator serving to extract the heat from the inlet water at supply line temperature being delivered to the cold water circulating in the bottom of the tank, said condenser serving to add heat to the inlet water at supply line temperature being delivered to the



hot water circulating in the top of the tank, the water introduced through the water inlet line being warmer than the cold water in the bottom and colder than the hot water in the top to provide the stratified storage of water at three separate temperatures.

2,950,608
REFRIGERATION SYSTEM
Roy W. Abbott, Jeffersonville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 23, 1959, Ser. No. 861,544
4 Claims. (Cl. 62—511)



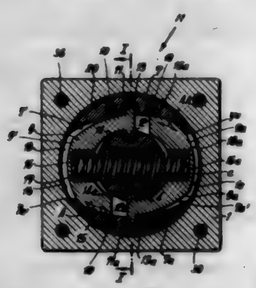
1. A refrigeration apparatus including in combination a compressor, a condenser and an evaporator formed from a continuous length of refrigerant conduit having opposite ends thereof connected in refrigerant flow relationship with said compressor, and restriction means in said conduit between said condenser and said evaporator comprising a capillary tube mounted entirely within said refrigerant conduit, a substantially cylindrical-shaped plug surrounding said capillary tube and connected in sealing relationship with the outer circumference of said capillary tube, said cylindrical-shaped plug having a diameter less than the diameter of said refrigerant conduit and having a groove formed around the outer circumference thereof, a resilient ring positioned in said groove on said plug, said resilient ring having an outer diameter greater than the inner diameter of said refrigerant conduit and adapted to be compressed by said conduit to provide a refrigerant seal between the inner circumference of said conduit and said resilient ring, an indented portion in said conduit between said condenser and said evaporator against which said cylindrical plug is positioned on the condenser side of said indentation for preventing movement of said plug and said capillary along said conduit.

2,950,609
FLEXIBLE COUPLING
Alfred Miner Goodloe, Westfield, N.J., assignor to Metal Textile Corporation, Roselle, N.J., a corporation of Delaware
Filed Sept. 15, 1959, Ser. No. 840,092
10 Claims. (Cl. 64—15)



1. A coupling structure including a flexible tubular element made of spring wires, some of the wires forming right-hand helixes and other wires forming left-hand helixes, the wires of opposite lay being interlaced so that each wire of the right-hand helixes passes alternately over and under wires of the left-hand helixes, the coupling structure having end fittings spaced from one another axially along the length of the tubular element, and the tubular element between the end fittings being bulged so that the helixes increase in diameter from each end fitting to an intermediate region between the fittings where the helixes are of a maximum diameter.

2,950,610
HYDRAULIC SYSTEM FOR AUTOMATICALLY ADJUSTING THE RELATIVE ANGULAR POSITION OF TWO COAXIAL ROTARY BODIES
Reinhart Stier, Sindelfingen, Kreis Boblingen, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Nov. 24, 1959, Ser. No. 855,111
Claims priority, application Germany, Nov. 29, 1958
8 Claims. (Cl. 64—24)



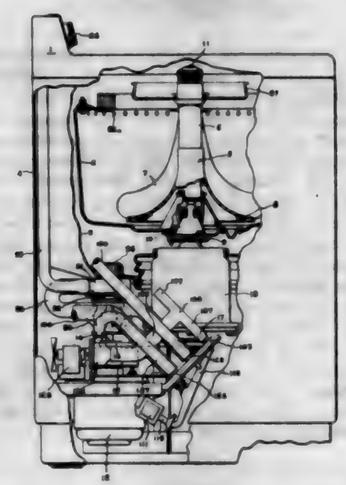
1. A hydraulic system for automatically adjusting the relative angular position of two driven coaxial bodies in response to variations in hydraulic pressures which vary proportionally with the rotational speed of said bodies, the system comprising, in combination: a housing rotatably mounting the bodies and defining a sealed compartment therewithin; at least one wing-shaped element having one end articulately connected with the rotary bodies for rotation with respect thereto about a pair of axes parallel with the common axis of said bodies and mounted in said compartment for pivotal movements in a plane perpendicular to the common axis of said bodies, the wing-shaped element defining with said housing a pressure chamber; pump means driven at the rotational speed of said bodies and having a pressure side connected with said chamber for supplying a hydraulic fluid into the latter whereby the fluid pivots the wing-shaped element and the latter angularly displaces one rotary body with respect to the other rotary body; and resilient means constantly biasing the wing-shaped element in a direction counter to the action of fluid pressure in said chamber.

2,950,611
CIRCULAR KNIT HOSIERY AND METHOD OF CLOSING THE FOOT OF SAME
James L. Getaz, New York, N.Y., assignor of seventy-five percent to United States Trust Co., New York, N.Y.
Filed Dec. 23, 1955, Ser. No. 555,167
23 Claims. (Cl. 66—186)



1. The method of forming the foot portion of circular knit hose which comprises knitting gores which extend generally along the sides of the foot, knitting additional fabric adjoining said gores, said additional fabric being at least of sufficient length to complete the sole portion of the foot, bringing the two sides of said additional fabric together in alignment with each other, and sewing the two sides of said additional fabric together with a seam of stitches extending longitudinally of the foot and along the sole portion thereof.

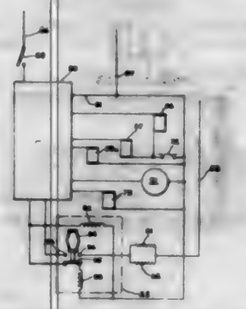
2,950,612
CONTROL SYSTEM FOR AUTOMATIC WASHING MACHINES
Wallace H. Henshaw, Jr., Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Dec. 12, 1956, Ser. No. 627,821
10 Claims. (Cl. 68—12)



4. In a washing machine having a rotatable wash basket, agitating means disposed within said basket, drive means including a reversible drive motor for driving said agitating means and rotating said basket, said drive means driving said agitating means upon the rotation of said drive motor in one direction and rotating said basket upon rotation of drive motor in the reverse direction, a timer mechanism for controlling the sequence of operation of said machine, said timer mechanism including motor reversing switch means for controlling the direction of rotation of the drive motor, and a solenoid for controlling a function of said washing machine, control means for energizing said solenoid comprising a pair of power supply

conductors, means for impressing a voltage sufficient to operate said solenoid across the said power supply conductors during both the operation of said agitating means and the operation of said basket, and circuit means providing for the energization of said solenoid from said power supply conductors during the operation of said basket but not during the operation of said agitating means, said circuit means including first and second connections for the opposite terminals of said solenoid, switch means connecting said first connection to one of said power supply conductors, and means including said motor reversing switch means for connecting said second connection to said one power supply conductor during the operation of said agitating means and to the other power supply conductor during the operation of said basket, whereby said solenoid can be energized through said connections only during the operation of said basket and not during the operation of said agitator.

2,950,613
LAUNDRY MACHINE
John Bochan, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Filed Apr. 28, 1958, Ser. No. 731,362
4 Claims. (Cl. 68—12)



1. A laundry machine comprising a clothes receptacle rotatable on a non-vertical axis; multi-speed means for rotating said receptacle at clothes tumbling speed, at a low centrifuging speed suitable to plaster clothes in said receptacle loosely against the peripheral wall thereof, and at a high centrifuging speed suitable for the extraction of liquid from the clothes; means for introducing liquid into said receptacle; means for draining liquid from said receptacle; and control means for said multi-speed means said liquid introducing means and said liquid draining means, said control means first causing said liquid introducing means to fill said receptacle to a predetermined level and said multi-speed means to rotate said receptacle at said clothes tumbling speed, said control means then causing said multi-speed means to rotate said receptacle at said low centrifuging speed with the liquid in said receptacle, said control means then causing said draining means to remove the liquid from said receptacle and said multi-speed means to rotate said receptacle at said high centrifuging speed.

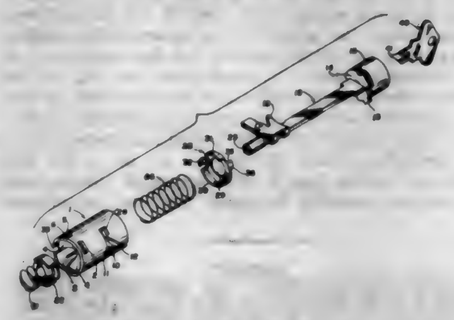
2,950,614
LOCK MEANS FOR AUTOMOBILE DOOR LOCK BUTTONS
Franklin J. Evans, 600 Grant St., Hazleton, Pa.
Filed Aug. 21, 1958, Ser. No. 756,389
11 Claims. (Cl. 70—181)

1. For use in connection with a vehicle door slide bolt locking mechanism of the type including an apertured window frame on said door having an operating rod extending through said aperture and mounted with said locking mechanism for reciprocal movement between limits for locking said mechanism when in a retracted position and unlocking said mechanism when in an extended position, a door locking button comprising an elongated cylindrical body adapted for securement with the extended end of said rod for movement therewith through said aperture, said body having a slot formed therethrough, a resilient locking element secured to said body having a laterally projecting stop shoulder adapted to engage a portion of the inner surface of said frame adjacent said aperture normally resiliently urged toward an extended locking position and movable between said extended position and a retracted unlocked position seated in said slot, said resilient locking element having means formed integrally therewith engageable with said body for releasably retaining said element in a retracted un-



locked position, said stop shoulder projecting from one end of said slot when in the locking position and said retaining means projecting from the other end of said slot when retaining said resilient locking element in the retracted unlocked position whereby the latter may be urged into the unlocked position upon inward lateral movement of said resilient element from said one side of said body and may be released from retainment in an unlocked position upon inward lateral movement of said retaining means from the other side of said body, said retaining means engaging a portion of the outer surfaces of said body defining said other end of said slot when retaining said resilient locking element in the unlocked position, wherein said retaining means engages a portion of the outer surfaces of said body defining said other end of said slot when retaining said resilient locking element in the unlocked position.

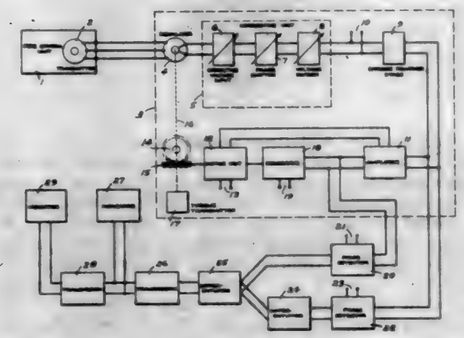
2,950,615
DOOR LOCK WITH BUTTON LOCKING MEANS
Ernest L. Schlage, Burlingame, and Armin H. Green, San Mateo, Calif., assignors to Schlage Lock Company, a corporation
Filed June 18, 1959, Ser. No. 821,203
7 Claims. (Cl. 70—216)



5. In a lock spindle adapted to receive the inner knob of a lockset thereon, a turn button mounted in said spindle and angularly movable relative thereto from a normal position to a locked position, the sidewalls of said spindle being formed with a circumferentially extending slot, and said button being provided with a

radially outwardly projecting lug received in said slot, a plate received in said spindle and held against rotation relative thereto, said plate being formed with a camming portion engageable by said lug upon movement of said button to said locked position for imposing a predetermined relatively great resistance to said movement, and spring means engaging said plate for urging the latter outwardly of said spindle at all times.

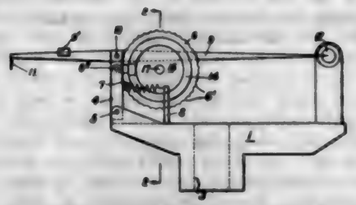
2,950,616
APPARATUS FOR DETERMINING THE PHYSICAL OUTPUT OF A SERVO-SYSTEM
Åke Hugo Petrus Blomqvist, Johanneshov, and Birger Artur Emil Qvarnström, Hagersten, Sweden, assignors to Aktiebolaget Bofors, Bofors, Sweden, a corporation of Sweden
Filed Sept. 12, 1955, Ser. No. 533,556
Claims priority, application Sweden Sept. 13, 1954
5 Claims. (Cl. 73—1)



1. For testing a controlling means for use with a servo-system, said controlling means and said servo-system having each a synchro device, an apparatus to determine the output accelerations of said servo-system on operation of the controlling means, said apparatus comprising an auxiliary servo-system including a synchro device for connection to the synchro device of the controlling means, a motor mechanically coupled to the synchro device and controlled by the error signal produced thereby, a tachometer means driven by the motor, first and second phase detectors fed respectively by said error signal and by the signal from the tachometer means, first and second differentiating devices fed respectively from the first phase detector and the combined signal from the second phase detector and first differentiating device, the output of the second differentiating device being thereby proportional to the acceleration of the controlling means, a transmission unit fed by the second differentiating device and representative of said first mentioned servo-system whereby to produce an electrical signal proportional to the output acceleration which the controlling means would have set up in the first mentioned system had it been connected thereto, and an indicator receiving the signal from the transmission unit.

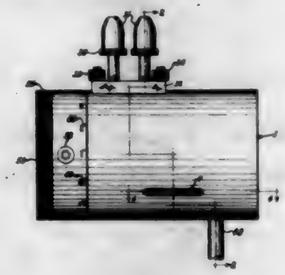
2,950,617
DEVICE FOR TESTING THE ABRASION-RESISTANCE OF SURFACES OF METALLIC ARTICLES
William J. Campbell, 38 Mair St., Glasgow, S.W. 1, Scotland
Filed July 26, 1957, Ser. No. 674,375
2 Claims. (Cl. 73—7)

1. A device for testing the abrasion-resistance of coatings produced electro-chemically on metallic articles, including a bar, a stylus connected to one end of said bar, and means connected to said bar intermediate its ends for effecting relatively rapid reciprocation of said bar in one direction in a substantially horizontal plane and rela-



tively slow reciprocations in the same plane in a direction transversely of the axis of reciprocation in said first direction, said bar and associated stylus being free to oscillate in a vertical plane.

2,950,618
DEVICE FOR BLENDING GASEOUS MATERIALS
John B. Lewis, P.O. Box 349, Mendham, N.J.
Filed Apr. 22, 1954, Ser. No. 424,914
15 Claims. (Cl. 73—23)

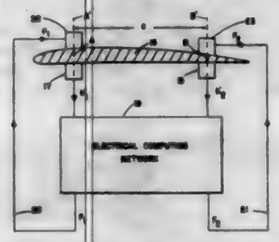


1. A device for blending atmospheres from two sources comprising a pair of interfitting relatively rotatable hollow members closed at opposite ends forming a blending chamber of fixed volume and having substantially coextensive opposed cylindrical surfaces with a practically air tight joint between them, means forming an outlet for withdrawing blended atmospheres from said chamber, means forming two inlets for said chamber adapted to communicate respectively with said two atmosphere sources and means operable by relative rotation of said members for varying the area of one of said inlets linearly with respect to the sum of the areas of said inlets.

2,950,619
FLUTTER SIMULATOR
Hans U. Schuerch, Pacific Palisades, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Filed Dec. 15, 1955, Ser. No. 553,239
1 Claim. (Cl. 73—67.2)

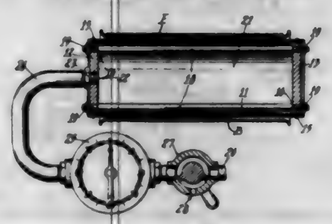
In an apparatus for simulating flutter conditions in an airfoil, including an electrical network capable of providing electrical output signals representing the solutions of aerodynamic equations defining forces to which said airfoil is subjected at a given altitude and speed, said solutions being functions of the displacements and velocities of points on said airfoil, the combination comprising: means for providing voltages and currents for said electrical network varying with said displacements and velocities, including two electro-mechanical transducing elements secured to said airfoil at spaced points whereby translational displacement of the end of the

airfoil with respect to its root and the angular displacement about the longitudinal axis of the airfoil are translated into said voltages and currents; and force generating means secured to said airfoil at said spaced points and



electrically connected to said electrical network for receiving said electrical output signals representing the solutions of said aerodynamic equations whereby said airfoil is subjected to the aerodynamic forces to which it would be subjected at said given altitude and speed.

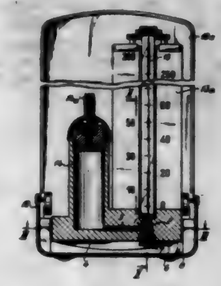
2,950,620
APPARATUS FOR TESTING SIDE SEAMS OF CONTAINERS
Donald G. Magill, Great Neck, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Filed Oct. 24, 1955, Ser. No. 542,320
4 Claims. (Cl. 73—88)



1. An apparatus for testing the rupture strength of side seams of open ended cylindrical container bodies, comprising in combination an inflatable cylindrical tube having an outside perimeter slightly smaller than and substantially conforming to the inside perimeter of a said container body, the length of said tube being not less than about the length of said body, means for sealing the open ends of said tube along marginal circumferential portions thereof spaced apart a distance sufficiently greater than the length of said body to leave said marginal portions extending beyond said body as the latter is tested, means for inflating the sealed tube, and means for indicating the pressure in the inflated tube, whereby said tube when deflated is insertable to substantially coextensive relation within said body and inflation of the tube by said inflating means to apply substantially uniform and increasing pressure against the full inside perimeter thereof is effected until the rupture strength of the body side seam is shown by said pressure indicating means when said seam is ruptured by the pressure applied by the inflated tube.

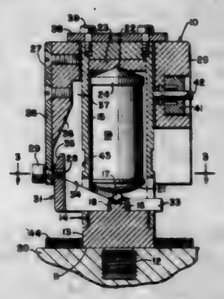
2,950,621
BLOOD PRESSURE MEASURING APPARATUS
Erich Kallmeyer, 3 Flinsberger Platz, Berlin-Grunewald, Germany
Filed Dec. 4, 1957, Ser. No. 700,659
Claims priority, application Germany Dec. 8, 1956
1 Claim. (Cl. 73—402)

An apparatus for measuring blood pressure, comprising a portable housing having bottom, side and end walls, a cover hingedly connected to the housing, a yoke secured to the cover on the underside thereof adjacent the point where the cover is hingedly connected to the casing, a reservoir in said yoke having a chamber to provide a mercury reservoir, a measuring tube supported by said cover and having one end received in an opening in said yoke, a duct connecting said reservoir to said tube, a valve member interposed in said duct and rotatably mounted in said yoke, an actuating arm on said valve member and abutments in said housing adapted to engage said arm when said cover is in its open position to



open said valve and permit communication between said reservoir and measuring tube, and another projection in said housing in the path of said arm adapted to be engaged by said arm when said cover is moved to its closed position to close said valve and interrupt the supply of mercury through said duct when the cover is in a closed position, said valve being provided with a bore having a portion extending axially in alignment with the opening in the yoke for the lower end of the measuring tube with a radial bore adapted to register with that portion of the duct communicating with the mercury reservoir.

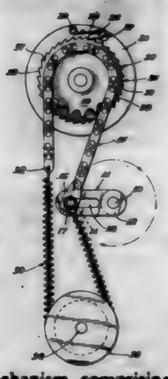
2,950,622
DISCRIMINATING COPPER-BALL DECELEROMETER
Valmore F. De Vost, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Filed Aug. 14, 1959, Ser. No. 833,891
11 Claims. (Cl. 73—492)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. A decelerometer comprising a hollow cylindrical housing, an anvil disposed within said housing and secured to an end portion thereof, a soft metal ball disposed on said anvil, an inertia responsive mass slideably disposed within said housing in a manner to deform said ball in response to a force suddenly applied thereto, a normally locked second inertia responsive mass disposed for slideable movement on said housing from an initial position to a final position, means including a shear pin

for unlocking said second mass in response to a first shock impulse applied thereto, and wedge means slideable within said housing from an initial position to a moved position and operable by said second mass during movement thereof for engaging said first named inertia responsive mass in a manner to prevent additional deformation of said ball thereby as additional shock impulses are received while the wedge means is in said moved position thereof.

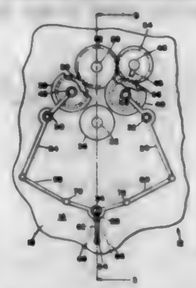
2,950,623
DRIVING MECHANISM
Joseph A. Weber, 408 Hill St., and James R. Thomas, 20 E. Stonegate Drive, Prospect Heights, and Richard W. Jackson, 703 N. Pine Ave., Arlington Heights, Ill.; said Thomas and said Jackson assignors to said Weber
Filed Sept. 15, 1958, Ser. No. 760,992
3 Claims. (Cl. 74—117)



1. A driving mechanism comprising a driving shaft, a crank continuously driven by said driving shaft, a shaft to be intermittently driven spaced from said driving shaft and disposed parallel thereto, a ratchet wheel journaled on said shaft to be driven, a member affixed to said shaft to be driven, a pawl hingedly mounted on said member and arranged and constructed to rotate said ratchet wheel in one direction only, a sprocket affixed to and forming a part of said ratchet wheel, said sprocket disposed in the same plane as said crank, a chain engaging said sprocket and having one end attached to said crank, means adjustably positioning said chain along the length of said crank, a pulley spaced from but lying in the same general plane as the crank and sprocket, a spring having one end attached to said crank and the one end of said chain and having its other end attached to the free end of said chain and said spring extending around said pulley whereby the chain and spring together form an endless member and said shaft is intermittently driven in increments commensurate with the position of adjustment of the chain on the crank.

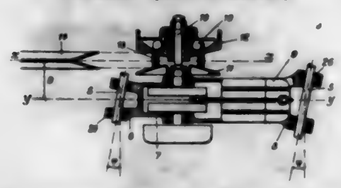
2,950,624
TRANSMISSION DEVICE
Josef Boehm, 1311 Hermitage Ave., Huntsville, Ala.
Filed Nov. 3, 1958, Ser. No. 771,685
6 Claims. (Cl. 74—202)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A device for transmission of power between a rotating power shaft; and a load shaft having coplanar axes, comprising: a frame to support the power and load shafts; a wheel secured to the load shaft; a pair of power wheels with integral shafts respectively geared to the power shaft for opposite rotations; a pair of levers journaled in the frame respectively to support the power wheels; and a member secured to the levers and journaled in the frame for rotations to a normal position for independent rotation of said load shaft, and operating positions for opposite rotations thereof; said frame including linear slots to guide the power wheel shafts



in the displacements; and said levers being disposed for minimum movement of said power friction wheels between the positions of the independent rotation and of the respective engagements.

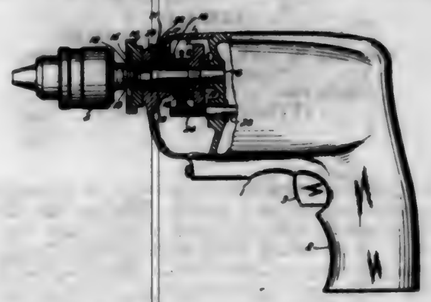
2,950,625
TRANSMISSION USING A CHANGE SPEED GEAR WITH A SINGLE EXPANDIBLE PULLEY
Eric Jaulmes, Paris, France, assignor to Ateliers de la Motobecane, Societe Anonyme Francaise, Pantin, France
Filed Mar. 11, 1958, Ser. No. 720,699
Claims priority, application France Mar. 14, 1957
4 Claims. (Cl. 74—230.17)



1. In a motorcycle having a frame, a rear driving wheel, a motor having an output shaft, means pendularly suspending the motor from the frame to pivotally swing about transverse horizontal pivot means, an expansible driving pulley mounted on said output shaft and having one fixed flange and one axially movable flange, a rotary horizontal intermediate shaft fixedly mounted on the frame and having a driving connection with the rear wheel, a driven pulley on said intermediate shaft, and a belt of trapezoidal cross section cooperating with and drivingly connecting said pulleys, the improvement comprising positioning the axis of the pivot means about which the means suspending the motor swings obliquely relative to the frame to positively impose on the entire motor during its pendular swinging a transverse displacement equal to one half of the displacement of the movable flange of the expansible pulley in a direction opposite to the direction of displacement of said movable flange.

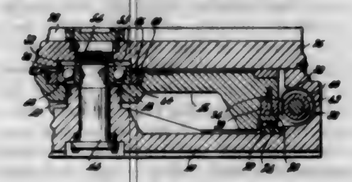
2,950,626
COMBINATION PORTABLE ELECTRIC DRILL AND SCREWDRIVER
Harold O. Short, Towson, Md., assignor to The Black and Decker Manufacturing Company, Towson, Md., a corporation of Maryland
Filed Nov. 25, 1958, Ser. No. 776,268
9 Claims. (Cl. 74—333)

1. In a combination power-driven tool having a housing, a driving clutch, a driven clutch, and resilient means tending to maintain said clutches in disengagement, that improvement in being able at selected times to mechanically lock said clutches into operative engagement against the force of said resilient means, comprising, an axially-movable cylindrical member seated within a bore in said housing and having at least a portion of its external surface provided with a thread to engage a corresponding internal thread formed within said bore of said housing, said member having at least one portion thereof projecting interiorly of said housing and acting therein against one of said clutches, and said member further having at least another portion thereof project-



ing exteriorly of said housing for manual actuation by the operator, means to prevent said member from being withdrawn from said housing, means to axially advance said member at selected times along said internal thread of said bore to retract said member into said housing and axially move said one clutch into operative engagement with the other of said clutches against the force of said resilient means, and means to maintain said member rigidly in its selected position with respect to said housing.

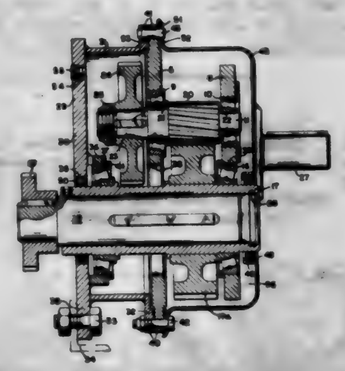
2,950,627
INDEXING MECHANISM
Oliver W. Bonnafe, Hudson, Mass., assignor, by mesne assignments, to The Lapointe Machine Tool Company, Hudson, Mass., a corporation of Maine
Filed Sept. 15, 1959, Ser. No. 840,044
17 Claims. (Cl. 74—396)



1. In a machine tool, a table and table support, indexing means for effecting rotation of the table and support about a predetermined axis, comprising a worm wheel at the periphery of the support, a worm meshing therewith, and means for adjusting the radial position of the worm wheel relative to said axis of rotation of the table to bring the pitch circle of the worm wheel into substantially uniformly tangent relation to the pitch line of the worm.

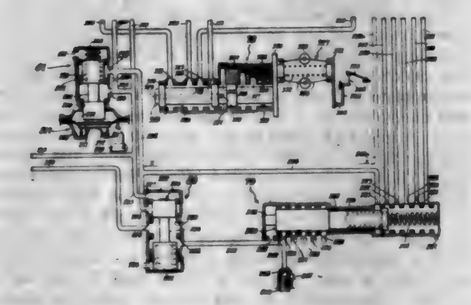
2,950,628
SPEED REDUCER
Alfred G. Bade, Brookfield, Wis., assignor to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Continuation of abandoned application Ser. No. 676,842, Aug. 7, 1957. This application Dec. 22, 1958, Ser. No. 782,327
3 Claims. (Cl. 74—421)

1. In a speed reducer arranged for connection with the drive shaft of a machine to be driven and having a fixed support adjacent said drive shaft, the combination of an open frame construction comprising three laterally spaced rigidly interconnected shaft supporting panel members including a main panel member and first and second auxiliary panel members spaced at opposite sides thereof, a plurality of shafts journaled in said frame, gearing interconnecting said shafts, one of said shafts being a power input shaft, bearings for said input shaft mounted in said main and said first auxiliary panel members, said



second auxiliary panel member arranged for rigid connection to said fixed support, another of said shafts being a power output shaft having a drive element mounted thereon and extending through said second auxiliary panel member, said main panel defining an aperture having its defining margin spaced from said output shaft, and bearings for said output shaft axially spaced from one another and respectively supported by said first and said second auxiliary panel members.

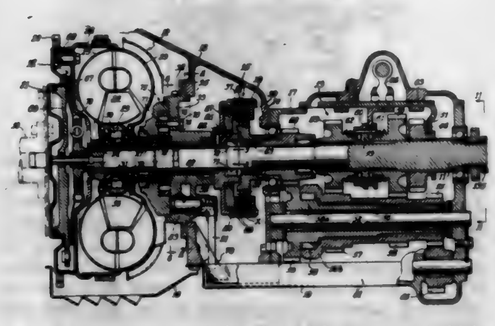
2,950,629
TRANSMISSION CONTROLS
John W. Holdeman and John B. Polomski, Detroit, Mich., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed June 21, 1954, Ser. No. 438,079
16 Claims. (Cl. 74—472)



1. In a transmission, the combination of a drive shaft, a driven shaft, means for providing a low speed power train between said shafts, means for providing a high speed power train between said shafts, means operatively associated with said first two-named means for changing from said low speed power train to said high speed power train and including a shift valve having a low speed position and a high speed position, means under operator control including a selector valve connected to said shift valve for selectively applying fluid pressure to said shift valve tending to move the shift valve from its

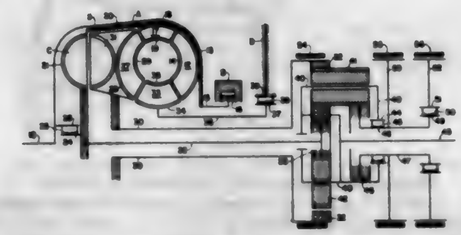
low speed position to its high speed position, means including a governor valve connected to said shift valve for canceling the effect of said selector valve by applying fluid pressure to said shift valve and preventing such movement of said shift valve, said governor valve having a low speed position in which it is so effective and a high speed position for removing its said application of pressure to said shift valve, and a governor under the control of said driven shaft and operatively associated with said governor valve for moving said governor valve from its low speed position to its high speed position when the speed of said driven shaft increases above a predetermined speed.

2,950,630
TRANSMISSION
Reinhold C. Zeidler, Detroit, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Mar. 16, 1955, Ser. No. 494,652
20 Claims. (Cl. 74—645)



3. In a power transmission for driving a motor vehicle having an engine provided with a throttle and an accelerator for adjusting said throttle between open and closed positions; driving and driven shafts; a change speed transmission drivingly disposed between said shafts for providing relatively low, intermediate, and high speed power trains wherein the low speed power train includes a friction clutch, the intermediate speed power train includes said friction clutch and also an overrunning clutch of which a driven part is adapted to overrun a drive part during establishment and operation of the high speed power train, said low and intermediate speed power trains including a hydrodynamic coupling device and also positive clutch means actuatable selectively and alternatively to complete said low and intermediate speed power trains and controlled by a driver operable selector lever, and wherein said high speed power train is a friction coupling engageable to directly connect said drive and driven shafts; fluid pressure actuated motors for engaging said friction clutch and coupling; a source of fluid pressure for operating said motors; a valve controlling the supply of fluid from said fluid source to said motor for said friction clutch and including a spring yieldingly holding said valve in open position to direct fluid to said motor to effect engagement of said friction clutch; a second valve controlling the supply of fluid from said fluid source to said motor for said friction coupling and including a spring yieldingly holding said valve in closed position to disconnect said fluid source from said motor and to release the fluid pressure in said motor to disengage said friction coupling; a source of electric current; a solenoid including a movable core connected to said first-mentioned valve and energizable to move said valve to closed position to disengage said friction clutch; means for connecting said source of current to said solenoid to energize said core and including a switch in the driver operable selector lever adapted to be closed by the driver; and control means for said second valve including a governor responsive to the speed of the driven shaft and connected to said second valve to open said second valve to direct fluid to said friction coupling motor to engage said friction coupling at a predetermined value in the speed of the driven shaft; force means opposing the action of said governor; and means responsive to movement of said accelerator for varying the value at which said governor will operate said second valve.

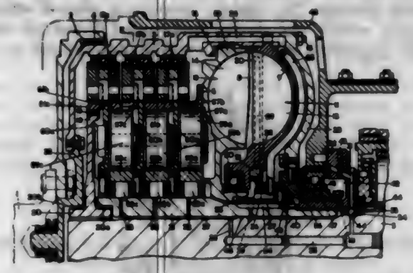
2,950,631
AUTOMATIC TRANSMISSION
Frederick W. Seybold, 1979 Dogwood Drive, Scotch Plains, N.J.
Filed Feb. 26, 1959, Ser. No. 795,842
12 Claims. (Cl. 74—677)



12. In a variable speed mechanism for delivering uninterrupted torque from a drive shaft to a coaxial driven shaft, comprising in combination a multi-turbine hydraulic torque converter interconnected with a fluid coupling and planetary gearing, and control means, said torque converter comprising a pump connected to said drive shaft, first and second turbines, and a stator having one-way brake means thereon and positioned between said pump and said second turbine, said fluid coupling comprising an impeller and a runner, said planetary gearing comprising a ring gear, first and second sun gears and a carrier connected to said driven shaft, first planetary pinions on said carrier meshing with said ring gear and said second sun gear, second planetary pinions on said carrier and meshing with said first sun gear and said first planetary pinions, said first turbine being connected to the impeller of said fluid coupling and to said first sun gear, said second turbine being connected to the runner of said fluid coupling and to said ring gear, said control means comprising brake means and one-way brake means cooperating with said second sun gear, brake means cooperating with said ring gear, one-way clutch means between said first sun gear and said drive shaft for transmitting forward torque from said first sun gear to said drive shaft, one-way brake means between said carrier and said second sun gear for transmitting reverse torque from said carrier to said second sun gear, or conversely, for transmitting forward torque from said carrier to said first sun gear and to said drive shaft.

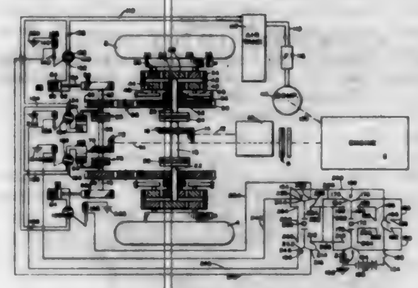
2,950,632
AUTOMATIC CHANGE SPEED GEARS
Albert A. Miller, Esher, England, assignor to Self-Changing Gears Limited, Coventry, England, a British company
Filed Oct. 15, 1953, Ser. No. 386,351
Claims priority, application Great Britain Oct. 24, 1952
10 Claims. (Cl. 74—720)

1. A change speed drive comprising a hydraulic coupling of the hydro-kinetic type having a driving element and a driven element, first and second step-down speed transmission units each having an input and an output, means connecting said driven element to the input of said first transmission unit, means connecting the output of said first transmission unit to the input of said second transmission unit, said driving element being subject to running conditions including an increase in speed and a decrease in transmitted torque, means in response to at least one of said conditions coupling said driving element



to the output of said first transmission unit, thereby by-passing said hydraulic coupling and said first transmission unit, and means in response to at least one of said conditions coupling said driving element direct to the output of said second transmission unit, thereby by-passing said hydraulic coupling and both transmission units.

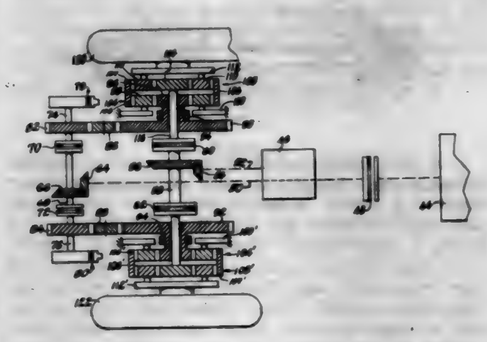
2,950,633
STEERING MECHANISM
John W. Goodrich, Peoria, Ill., assignor to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Filed Nov. 24, 1958, Ser. No. 775,912
18 Claims. (Cl. 74—720.5)



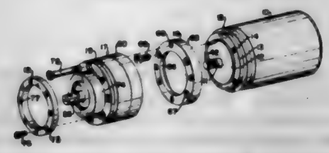
1. Steering mechanism for a tractor having a ground engaging member at each side thereof, the means to drive each ground engaging member in a high speed range and a low speed range, comprising electrically controlled actuating means to connect a drive means in either speed range, a pair of switches, each switch having a normally closed circuit connected to control the drive means of one ground engaging member and a normally open circuit connected to control the drive means of the other ground engaging member, means selectively to apply voltage to the normally closed circuits of the pair of switches or the normally open circuits thereof at the will of an operator, and means to operate the pair of switches.

2,950,634
POWER TRAIN
Ralph B. Clark, Morton, and Ernst W. Spannhake, Peoria, Ill., assignors to LeTourneau-Westinghouse Company, Peoria, Ill., a corporation of Illinois
Filed Jan. 24, 1956, Ser. No. 560,964
4 Claims. (Cl. 74—801)

1. A power train comprising: a radially located hollow shaft; a gear set having a sun element mounted on the hollow shaft for rotation therewith, a floating ring element, and a third element having at least one gear meshing with the gears of the sun and ring elements; means to hold one of the aforesaid elements against rotation; a planetary gear set having a floating sun element, a ring element, and a planet element, the planet element comprising a planet carrier and at least one planetary gear on the carrier, the planetary gear meshing with the gears of the sun and ring elements; means directly connecting the floating ring element of the first-named gear set with the ring element of said planetary gear set; a second shaft extending through the hollow shaft and on which the second-named sun element is mounted; and vehicle drive means connected to be driven by the planet carrier.



2,950,635
MINIATURIZED GEAR REDUCER
Jacob J. Bieger, Queens Village, and Arthur T. Hill, Elmont, N.Y., assignors to Deco Instrument Company, Brooklyn, N.Y., a partnership
Filed July 15, 1959, Ser. No. 827,284
8 Claims. (Cl. 74—801)



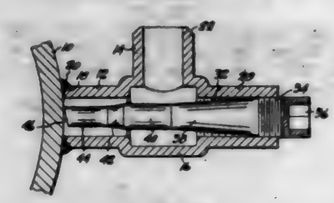
1. A gear reduction assembly for a miniaturized motor, comprising a housing having spaced end walls and adapted to be secured to the end of the motor, one of the end walls having an opening therein for receiving a projecting rotor shaft of the motor, the rotor shaft having gear means thereon, an output shaft journalled at spaced points adjacent said end walls and having a portion projecting outwardly of the outer end wall, the output shaft having an axial recess in its inner end coaxially receiving the projecting end of the rotor shaft, the output shaft having a side wall recess communicating with the axial recess and exposing a portion of the rotor shaft, two opposed axially spaced supports extending radially from the output shaft adjacent the journals therefor and forming a cage structure, a gear shaft journalled in the supports and mounting a drive gear, the drive gear extending through the side wall recess and meshing with the rotor shaft gear means, a stationary gear fixed to the housing, and intermediate gear means interconnecting the drive and stationary gears.

2,950,636
SAFETY DRIVERS FOR GUN DRILLS
Edgar D. Oppenheimer, Milford, Conn., assignor to Eldorado Tool & Mfg. Corp., Milford, Conn., a corporation of Connecticut
Filed July 13, 1956, Ser. No. 597,635
8 Claims. (Cl. 77—29)



1. A drill having a rotating carrier with a chamber having a small diameter chamber and a large diameter chamber, a conduit to feed coolant under pressure into said small chamber and a drill shank carrying plug having a small diameter piston in said small chamber and a large diameter piston in said large chamber, said large piston and large chamber having cooperating annular frusto conical friction contact faces to cause said drill to rotate with said carrier, said faces being forced together by the pressure of said coolant on said small piston in said small chamber.

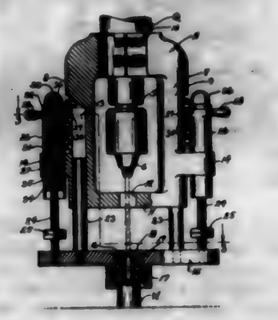
2,950,637
FITTING FOR TAPPING STEEL WALLED MEMBERS
Patterson D. Merrill and Harry T. Waite, Jr., South Bend, Ind., assignors to M. B. Skinner Company, South Bend, Ind., a corporation of Indiana
Filed Nov. 24, 1958, Ser. No. 776,895
12 Claims. (Cl. 77—37)



1. In combination, a steel pipe, a fitting having a tubular part secured by a sealed connection at one end to said pipe in substantially radial relation to said pipe, said tubular part being internally screw-threaded at its opposite outer end portion, a branch outlet intermediate the ends of said tubular part, and a rigid elongated member screw-threaded at one end in the outer portion of said fitting and having a reduced concentric cylindrical end portion having clearance in the tubular part between said pipe and said branch outlet, said reduced end portion having an oblique end face extending thereacross whereby said member is configured to engage and pierce a hole in said pipe as it is advanced by rotation, said reduced end portion accommodating flow of fluid therepast to said outlet when it is withdrawn from said hole, the threaded portions of said piercing member and fitting engaging to seal the outer end of said fitting.

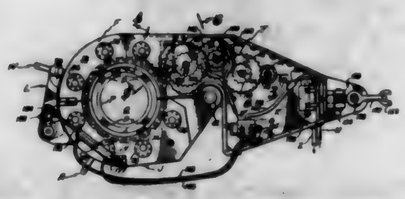
2,950,638
DRILL PRESS ATTACHMENT
Arthur H. Wier, Milwaukee, Wis., assignor to Center Master Corporation, Milwaukee, Wis., a corporation
Filed Apr. 9, 1959, Ser. No. 805,300
2 Claims. (Cl. 77—55)

1. A drill press attachment for centering and holding work comprising a yoke adapted to be secured to the quill of a drill press for movement therewith, said yoke including spaced parallel arms having rack bars on the outer sides thereof and outwardly extending hollow bosses, sleeves slidably and rotatably mounted in said bosses, a work engaging head disposed below the yoke, upwardly extending thrust rods rigidly carried by the head and slidable through the sleeves, supporting tension springs disposed within the sleeves and coiled about he rods, means anchoring the upper ends of the springs to the



upper ends of the rods, means anchoring the lower ends of the springs to the sleeves, said sleeves having outwardly extending cams, and handles on said sleeves for facilitating the turning and sliding movement thereof in the bosses, the cams being movable into and out of locking engagement with the teeth of the rack bars whereby the sleeves and the head can be raised and lowered on the arms and held in a selected desired position.

2,950,639
POWER OPERATED PIPE WRENCH
James C. Mason, Long Beach, Calif., assignor to Mason-Carlton Tool Co., Paramount, Calif., a corporation
Filed Aug. 11, 1958, Ser. No. 754,237
10 Claims. (Cl. 81—53)



10. A power-driven pipe tong, comprising: a hollow horizontally disposed frame member; a hollow horizontally disposed jaw member pivotally secured to said frame member that cooperates therewith to define a pipe-receiving opening, said frame and jaw members having a plurality of pairs of aligned circular openings formed in the upper and lower portions thereof circumferentially spaced about said pipe-receiving opening; a plurality of shafts; a plurality of rollers rotatably mounted on said shafts, which supports are rotatably mounted in said circular openings and eccentrically support said shafts relative to the longitudinal axis of said pairs of aligned openings; indexing means that maintain each of said shaft supports at any one of a plurality of positions relative to the longitudinal axis of one of said pairs of circular openings; a pair of support half rings rotatably mounted in said frame and jaw members and encompassing said pipe-receiving opening, said half rings being rotatably supported by said rollers, which upon adjustment of said indexing means are capable of contacting said half rings with a desired compressive force when said frame and jaw members are closed; two semi-

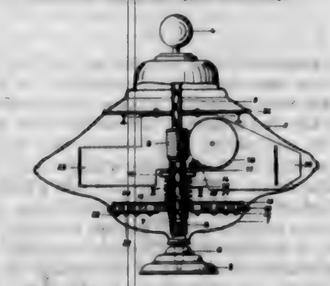
circular die carriers rotatably mounted on said half rings; a plurality of circumferentially spaced, radially movable die blocks mounted on said die carriers; cam means disposed at fixed positions relative to said half rings, which cam means is slidably engaged by the exterior ends of said die blocks when said die carriers are rotated in either of two possible directions relative to said half rings, with said die blocks being moved inwardly when said slidable movement takes place; fluid actuated latch means for releasably locking said frame and jaw members together; fluid actuated power means for rotating said half rings; and fluid conducting means capable of supplying fluid under substantially the same pressure to both said latch means and said power means.

2,950,640
MECHANISM AND METHOD FOR CLASSIFYING AND ASSORTING METAL SHEETS
James B. Camp, Fairfield, Ala., assignor to United States Steel Corporation, a corporation of New Jersey
Filed Nov. 28, 1951, Ser. No. 258,700
20 Claims. (Cl. 83—29)



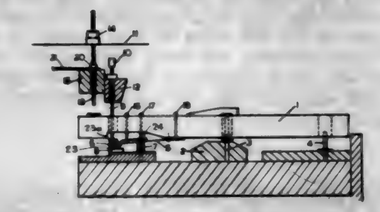
19. A method of classifying and assorting sheets comprising detecting imperfections in moving continuous strip, recording the imperfections, cutting said strip into individual sheets, identifying any sheet containing a recorded imperfection simultaneously with the cutting of this sheet from the strip, moving the sheets in a line away from the point of cutting, recording the passing of a given point in the line of the leading and trailing edges of sheets identified as containing imperfections, diverting from the line at a subsequent point only those sheets of which passing of the leading and trailing edges has been recorded, resetting the line after a sheet is diverted, and timing the resetting to occur when the trailing edges of sheets containing imperfections pass said subsequent point to enable a sheet immediately following to continue in the line if free of imperfections.

2,950,641
MUSICAL TOPS
Ludwig Bruetting, Zirndorf, near Nurnberg, Germany, assignor to Martin Fuchs, Zirndorf, near Nurnberg, Germany
Filed Mar. 3, 1958, Ser. No. 718,804
Claims priority, application Germany Mar. 2, 1957
3 Claims. (Cl. 84—83)



1. A musical top comprising a hollow shell, a stationary base, means mounting said shell upon said base for spinning movement with respect to said base and about a vertical axis, a horizontal partition wall within said shell and having a plurality of slots, and a plurality of reeds so mounted on said wall that said reeds overlie said slots, respectively, said reeds being adapted to vibrate in said slots to produce a musical sound, a disk approximating the dimensions of said wall and in juxtaposition therewith and having a plurality of radial openings and adapted to mute successive reeds, a shaft secured to said base and extending into said shell along the spinning axis, a gear train connecting said shaft with said disk and adapted to rotate it in response to rotation of said body about said shaft at a speed faster than said body.

2,950,642
MUSICAL INSTRUMENT
Albertus Sluyter, Sarphatistraat 89, Amsterdam, Netherlands
Filed Mar. 19, 1957, Ser. No. 647,151
10 Claims. (Cl. 84—236)

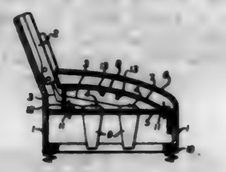


1. A musical instrument, comprising a plurality of pivotable keys arranged to form a key board, a plurality of horizontally arranged resonators each associated with one of the said keys and each having its axis in parallel with the associated key, a plurality of vertical, axially displaceable hammer rods each associated with one of the said keys and placed underneath the associated resonator, a plurality of hammer heads each attached to the upper end of one of the said hammer rods and adapted to strike the associated resonator upon axial displacement of the associated hammer rod, a plurality of spring blades each connected with one of the said keys for movement thereby and having its free end below the under end of the associated hammer rod to displace said hammer rod and actuate said resonator upon movement by said key, a plurality of ferromagnetic elements each carried by one of the said spring blades, and a second plurality of ferromagnetic elements fixedly arranged in said instrument and each underneath one of the elements of said first-mentioned plurality of ferromagnetic elements, the elements of at least one of the said pluralities of ferromagnetic elements being permanently magnetized, whereby, when a key is struck, the associated spring blade is first held by the mutual attraction of the associated ferromagnetic elements, but is suddenly released upon further movement of the key when the said attraction is overcome by the spring tension, so that the associated hammer rod is thrust upwards and the associated resonator is struck.

2,950,643
ACCORDION
Karl Scherer, Sonnenweg 8, Trossingen, Germany
Filed July 25, 1956, Ser. No. 600,113
Claims priority, application Germany Aug. 3, 1955
9 Claims. (Cl. 84—376)

1. An accordion comprising in combination expandable and contractable bellows, a keyboard, side walls, a valve board having a row of apertures therein, a plurality of valves, there being one valve for each of said apertures, control members extending from said keyboard to all of

said valves for operating said valves, an apertured cover positioned above said valves and having a predetermined outer shape, generally flat wall means arranged between said cover and said valve board and extending at least partially over said valves so as to form a first chamber with said valve board and a second chamber with said cover, said wall means defining at least one tapered slot-like aperture which permits passage of air between said



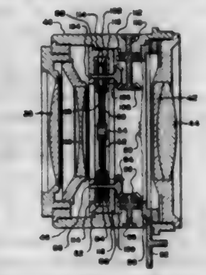
chambers both during expansion and contraction of said bellows, said slot-like aperture extending in a longitudinal direction of the accordion substantially along the entire length thereof and being of greater width at the high frequency end of the instrument so as to modify the tone quality while retaining said outer shape of the cover, said flat wall means defining a first resonant space in conjunction with said cover and a second resonant space in conjunction with said valve board.

2,950,644

CINEMATOGRAPHIC METHOD AND APPARATUS

Edwin H. Land, Cambridge, and David S. Grey, Weston, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Filed Apr. 25, 1955, Ser. No. 503,422
50 Claims. (Cl. 88—16)



1. In a photographic system for producing and exhibiting a composite cinematographic record comprising a multiplicity of sequentially formed composite images of a moving subject to create the appearance of motion, in combination, objective lens means having a relatively large aperture, means providing a multiplicity of minute optical elements positioned in the path of light passing through said lens means, obturator means associated with said lens means for providing a movable aperture and being movable so as to vary the dimensions of said movable aperture, means for rotating said obturator means at constant angular velocity, and means responsive to rotary movement of said obturator means for moving said movable aperture radially with respect to its center of rotation while varying its dimensions.

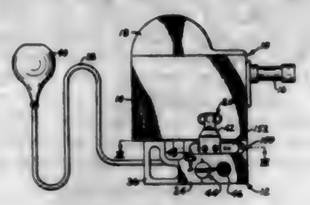
2,950,645

REMOTE CONTROL APPARATUS FOR MOTION PICTURE CAMERA

Wesley E. Borden, 1349 Alpine NW., Grand Rapids, Mich.

Filed Mar. 10, 1958, Ser. No. 720,103
6 Claims. (Cl. 88—16)

1. A remote control device for movie camera having a manually operated multi-position camera control exposed thereon, said remote control device comprising; an air pressure responsive plunger member, a pair of interconnected parallel spaced rack toothed members operatively engaged to said plunger, a pinion gear rotatably mounted between said rack members, means operatively engaged



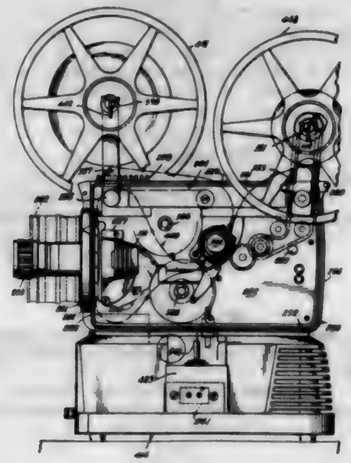
with said rack members for selectively positioning said rack members for the engagement of one thereof with said pinion gear, and means interconnected between said pinion gear and said multi-position camera control for operatively positioning said control in a direction responsive to the rotational direction of said pinion gear.

2,950,646

BLINDS FOR LIGHT APERTURES IN COMBINED CAMERA AND PROJECTOR APPARATUS AND OPERATING MECHANISM THEREFOR AND FOR SHIFTING SHUTTER MEANS

Fritz Albert Blank, New Rochelle, N.Y., assignor, by direct and mesne assignments, of one-half to A. Kip Livingston, West Hempstead, N.Y., and one-half to Longines-Wittnauer Watch Co., Inc., New York, N.Y., a corporation of New York

Filed Feb. 28, 1958, Ser. No. 718,264
10 Claims. (Cl. 88—17)



9. In a camera-projector unit for use on both camera and projection operations, the combination of a casing for the unit having an optical window through which pictures are taken and projected, a movable blind pivotally supported in said casing to be swung back and forth between a position of closure of the window and a window open position, means normally holding said window blind in its position of closure of the window, means defining in said casing a projection light passage extending toward the window, a movable blind pivotally supported in said casing in a position of closure of the passage on camera operation, means to swing said passage blind to a passage open position, a manually operable camera control movable between an idle position and a camera operating

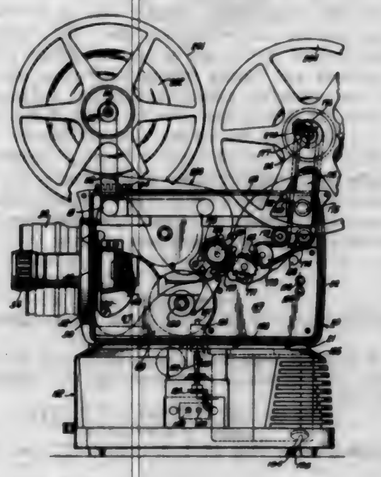
position, a linkage mechanically connecting said camera control to said window blind to move the latter to open position upon manual manipulation of said control from its idle position to its camera operating position on camera operation, a reel support arm pivotally mounted in said casing manually swingable out of said casing to an extended position for conditioning the unit for projection operation, and another linkage mechanically connecting both of said blinds to said reel arm to swing both of said blinds to their open positions and to hold them in such open positions when said reel arm is manually swung to its extended position and held therein for projection operation, said blinds being simultaneously moved to their respective closing positions by the second-mentioned linkage when said reel arm is pivoted back into said casing.

2,950,647

DRIVING MECHANISM FOR COMBINED MOVING PICTURE CAMERA AND PROJECTOR APPARATUS

Fritz Albert Blank and John W. Oxberry, New Rochelle, N.Y., assignors, by direct and mesne assignments, of one-half to A. Kip Livingston, West Hempstead, N.Y., and one-half to Longines-Wittnauer Watch Co., Inc., New York, N.Y., a corporation of New York

Filed Feb. 28, 1958, Ser. No. 718,365
8 Claims. (Cl. 88—17)



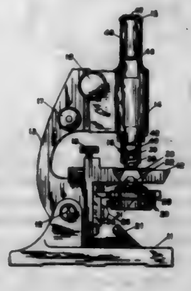
1. In combined moving picture camera and projector apparatus, driving mechanism comprising the combination with a casing, common gate mechanism in said casing alternately to be traversed by camera film and projector film, common film translating intermittent means and common shutter means housed in said casing and operable both on camera operation and projection operation, a power source for camera operation housed in said casing including mechanical camera driving means, a manual control exposed for access on said casing connected directly to said power source ahead of its driving means for starting and stopping said mechanical camera driving means, a separate external power source for projection operation including a second separate mechanical projector driving means extending through a wall of said casing to the interior thereof and having a separate manual control, of a common rotatable main drive shaft directly coupled to said film translating intermittent means and said shutter means mechanically to drive both of them upon rotary drive of said shaft, a first overrunning clutch means drivably connecting said camera driving means to said main drive shaft for drive of the latter from said camera power source when said projector driving means is undriven, and a second overrunning clutch means drivably connecting said projector driving means to said main drive shaft for drive of the latter when said camera driving means is undriven, said first overrunning clutch means declutching said main drive shaft from said camera driving means upon drive of said shaft by said projector driving means through said second overrunning clutch means and said second overrunning clutch means declutching said shaft from said projector driving means upon drive of said shaft by said camera driving means through said first overrunning clutch means.

2,950,648

MICROSCOPE FOR VIEWING SUBSTANTIALLY TRANSPARENT OBJECTS

Joseph Elmer Rhodes, Jr., Marietta, Ga., assignor to Georgia Tech Research Institute, Atlanta, Ga., a corporation of Georgia

Filed Mar. 3, 1954, Ser. No. 413,798
7 Claims. (Cl. 88—39)



1. In an optical system for viewing substantially transparent objects having a condenser for projecting light onto an object and a means for viewing said object, said means including an objective and an eyepiece, the combination of a stop having an aperture located substantially in the focal plane of said condenser, a light absorbing means located substantially in the focal plane of said objective, said light absorbing means having a smoothly varying transmission factor along at least one axis thereof for partially absorbing light projected from said condenser via said aperture onto said object and thence through said objective whereby the light received through said eyepiece defines the optical thickness of said object, the image of said light absorbing means filling the exit pupil of the optical system.

2,950,649

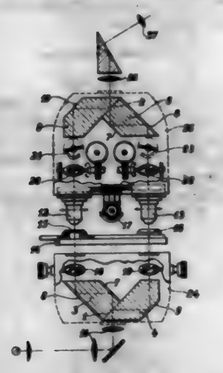
INTERFERENCE MICROSCOPE WITH TRANSMITTED ILLUMINATION

Willi Horn, Wetzlar, Germany, assignor to Ernst Leitz G.m.b.H., Wetzlar, Germany, a corporation of Germany

Filed July 24, 1956, Ser. No. 599,838
Claims priority, application Germany Aug. 2, 1955
4 Claims. (Cl. 88—39)

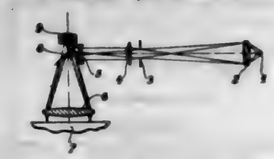
1. An interference microscope for the examination of an object with transmitted illumination, comprising, in combination, a stage, a source of light, beam dividing means arranged in the path of the beam of said source of light for dividing the beam into two beams, at least three light reflecting surfaces arranged to form the two beams into parallel light beams throughout the length of such beams, pivotal plane parallel plates mounted above said beam dividing means in the paths of said beams for vertical adjustment thereof, small aperture

condenser means, means for supporting the object on said stage in at least one of said parallel light beams, two parallel identical objectives adjacent the stage and arranged in the path of said parallel light beams, a pair of compensator plates mounted in the path of each light beam, the axis of one plate of each pair extending at right angles to the axis of the other plate of a pair, and all of said plates having an axis at right angles to the axes of said light beams, an eye-piece and a tube lens, and beam combining means, identical with said beam dividing means, arranged between the objectives and the



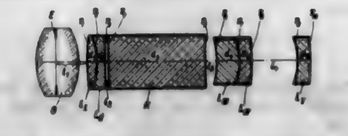
eye-piece, said beam combining means including reflective surfaces in the paths of said parallel light beams and a single beam combining surface receiving the two light beams from said reflective surfaces and transmitting them without relative phase displacement as a single beam to said tube lens and then to the eye-piece; the beam dividing means, the light reflecting means, the object supporting means, the objectives and the beam combining means cooperating to make the optical paths of the two light beams after they are combined of equal length and intensity.

2,950,650
VERTICAL ILLUMINATOR
Walter Klein, Wismar uber Wetzlar (Lahn), Germany, assignor to Ernst Leitz, G.m.b.H., Wetzlar (Lahn), Germany
Filed Oct. 4, 1955, Ser. No. 538,500
Claims priority, application Germany Oct. 9, 1954
6 Claims. (Cl. 88—40)



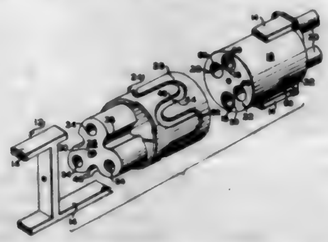
1. Apparatus of the vertical illuminator type for illuminating a large field of an object and creating an image of said field to an objective lens system, comprising a source of light, a collector lens, an aperture diaphragm disposed near the place of the image of the said source of light created by said collector lens, a positive lens adjacent said diaphragm, a transparent reflector arranged to direct a beam of light from said source onto said object, a positive field lens disposed in the path of said beam between said reflector and said object and being located near said object, and a negative lens located in the path of said beam of light between said diaphragm and said positive field lens, said negative lens, together with said positive field lens forming a tele-lens-system for focusing said beam of light on said object and illuminating an object-field limited by the edge of the field lens whereby light reflected from said object-field passes through said reflector, and an objective lens for creating an image of said field.

2,950,651
ANAMORPHOTIC SUPPLEMENTARY LENS SYSTEM
Horst Köhler, Heidenheim (Brenz), and Helmut Knutti, Oberkochen, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Wurttemberg, Germany
Filed Apr. 18, 1957, Ser. No. 653,710
Claims priority, application Germany May 11, 1956
3 Claims. (Cl. 88—57)



1. An afocal anamorphotic supplementary lens system arranged in the imaging path of rays of a photographic objective on the side of the longer distance between the back lens and image, comprising a part system adjacent to the said photographic objective of positive cylindrical power of refraction, another part system separated from the former by an air space of negative cylindrical power of refraction, wherein the cylinder axes of the said two part systems are parallel to each other, and a correcting element located in the said air space between said two part systems and having substantially plane outer surfaces, said correcting element also having a thickness at least equal to half of the absolute value of the individual focal length of that of the two part systems having the shorter focal length, said correcting element substantially eliminating the lines of confusion in the image induced by extra-axial bundles whose principal rays form an angle with respect to a plane perpendicular to the generatrices of the cylindrical part systems.

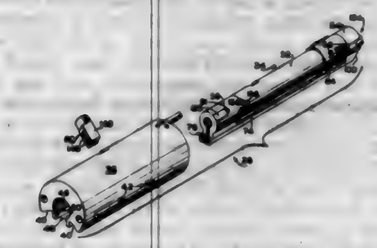
2,950,652
CHAMBERING MECHANISM FOR AN AUTOMATIC REVOLVER TYPE GUN
John F. O'Brien, Springfield, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Dec. 20, 1957, Ser. No. 704,219
7 Claims. (Cl. 89—155)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A gun comprising a pair of barrels supported at the breech ends thereof by a mount, a rotatable chamber unit of triangular cross-section disposed for rotation adjacent the breech ends of said barrels, said chamber unit including a chamber in each of the apexes for slidingly receiving cartridge cases and a trough disposed in each of the sides of said chamber unit for slidingly receiving projectiles, said chambers and troughs being disposed for alternate and simultaneous alignment with alternate ones of said barrels, each one of said troughs being provided with a

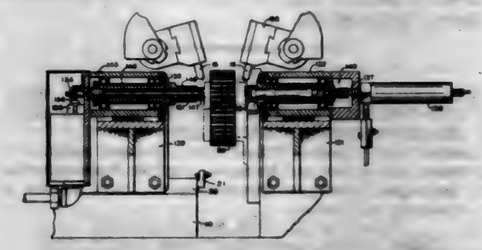
longitudinal mouth portion, a ramming mechanism disposed for operational cooperation with said chamber unit for sequentially and unidirectionally moving the cartridge cases into said chambers against the expended cartridge cases therein for ejection therefrom, for moving the projectiles into said troughs, and for simultaneously engaging the projectiles in said troughs through the mouth portions thereof to transfer the projectiles from said chamber unit into the aligned one of said barrels for subsequent combination with the cartridge cases in the rotationally succeeding ones of said chambers to form a complete round at alternate ones of said barrels, and ejection means to receive the expended cartridge cases from said chamber unit for removal from the gun.

2,950,653
BOLT ASSEMBLY FOR A FIREARM
Earle M. Harvey, Agawam, Mass., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 4, 1958, Ser. No. 719,172
3 Claims. (Cl. 89—185)
(Granted under Title 35, U.S. Code (1952), sec. 266)



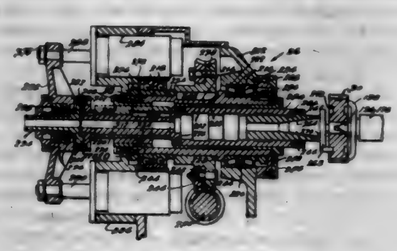
1. For a firearm provided with a tubular receiver, a buffer assembly for inclosing the rear end of the receiver, a cartridge magazine extending upwardly into the receiver and a barrel with an attached barrel extension mounted to the front end of the receiver, a bolt assembly including a cylindrical carrier slidingly mounted in the receiver for reciprocation between a battery and a recoil position and provided with an axial hole therethrough and a mouth portion providing communication with said hole from the underside of said carrier, a bolt slidingly received by said hole and including a body, a head member axially mounted to the front end of said body to permit rotation without linear displacement of said body relative to said head, a striker extension axially mounted to the rear end of said body to permit rotation without linear displacement of said body relative to said striker extension, an ejector slidingly received by said mouth portion, T-slot means for mounting said ejector to said striker extension and dovetail means for slidingly mounting said ejector to said head member for sliding longitudinal movement and for engagement with the top one of the cartridges in the magazine for chambering in the barrel, resilient means disposed between said body and said ejector for biasing said ejector to a normal forward position and for cushioning the engagement of the front end of said ejector with the top one of the cartridges in the magazine, locking means on said body cooperable with corresponding locking means provided in the barrel extension for locking said bolt in battery position when said body is rotated, a cam follower extending radially from said body for sliding cooperation with a cam slot in said carrier for rotating said body to lock and unlock said bolt during relative movement between said bolt and said carrier, a pair of extractors pivotally mounted to said head member symmetrical to said ejector for uniformly extracting fired cartridge cases from the barrel and for slidingly supporting the fired cartridge cases during ejection, a rear end on said ejector engageable with the buffer assembly when said bolt assembly is in recoil position for moving said ejector forwardly, and a cam portion on the front end of said ejector engageable with the rim of the fired cartridge case gripped by said extractors for ejecting the fired cartridge case from the firearm when said ejector is moved forwardly.

2,950,654
MACHINE TOOL
Jesse H. Straw, Brookville, Ohio, assignor, by mesne assignments, to The Sheffield Corporation, a corporation of Delaware
Filed Jan. 10, 1956, Ser. No. 558,244
20 Claims. (Cl. 90—1.4)



1. A machine for chamfering end edges of gear teeth comprising a base, drive means on said base for reciprocable chamfering cutter means, receiving means on said base for receiving and rotating a work gear including an index gear rotatable about a horizontal axis and driven in timed relation to said drive means the face of said index gear being wider than that of a work gear, said drive means being fixedly mounted at one end of said index gear, means for automatically loading a work gear into operative mesh with said index gear by gravity at the end remote from said drive means, a supporting spindle, means mounting said spindle for movement from said one end of the index gear along said gear and through a work gear in supporting relation therewith, and positioning means movable from the opposite direction to slide the work gear along the index gear toward the drive means to locate the work gear during chamfering.

2,950,655
HOBBING MACHINE
Alexander D. F. Moncrieff, Bloomfield Hills, Mich., assignor to Michigan Tool Company, Detroit, Mich., a corporation of Delaware
Application June 25, 1953, Ser. No. 364,087, now Patent No. 2,888,858, dated June 2, 1959, which is a division of application Ser. No. 217,999, Mar. 28, 1951, now Patent No. 2,769,375, dated Nov. 6, 1956. Divided and this application June 4, 1954, Ser. No. 434,528
1 Claim. (Cl. 90—4)



In a hobbing machine, a rotatable and reciprocable work spindle, a rotary drive mechanism for the spindle

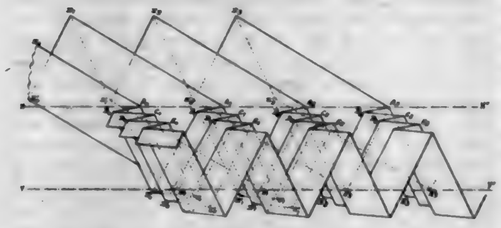
comprising a demountable guide assembly including a guide bushing and coactive guide members in said bushing, one of said guide members being connected directly to said spindle and movable axially and rotatably therewith, the other of said guide members being connected to said bushing for mutual rotation therewith and held thereby axially fixed with respect to said one guide member, said guide members having interengaging cam surfaces which co-operate to guide the spindle during reciprocatory travel thereof, and means for reciprocably actuating said spindle comprising a pair of fluid motors on opposite sides of said spindle having piston rods extending in the direction of and beyond the end of said spindle, and a cross link pivotally attached to one of said piston rods and detachably connected to the other of said piston rods and lying athwart the mentioned end of said spindle, and a coupling rotatably supported by the cross link detachably fastened to the spindle.

2,950,656

ARRANGEMENT FOR THE MECHANICAL AND CONTINUOUS PRODUCTION OF DEVELOPABLE HERRING-BONE STRUCTURES

Lucien Victor Gewiss, Ville-d'Avray, France, assignor to Marc Wood, Societe Anonyme pour la Promotion des Echanges Techniques Internationaux, Paris, France, a company of France

Filed Jan. 15, 1959, Ser. No. 787,031
Claims priority, application France Jan. 16, 1958
17 Claims. (Cl. 93—1)



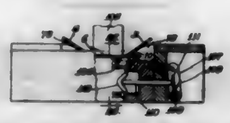
1. An apparatus for the continuous mechanical execution of developable herring bone structures starting from a strip of foldable material of an indefinite length, characterized by the fact that it includes means for forming in the original strip of material straight longitudinal parallel folds arranged in suitable alternation and for imparting to the pleated strip a continuous translational movement in the direction of its length, a set of blades arranged transversely with reference to the direction of the translational movement of the pleated strip so as to form in the latter transverse folds corresponding to the actual formation of the herring-bone, two movable dies arranged symmetrically on either side of the above-mentioned set of blades at a distance from each other which corresponds at the start to the length of the section of the pleated strip which is required for the formation of a row of transverse folds of the herring-bone structure, one of said dies having an inner outline corresponding to the transverse outline of the longitudinally pleated sheet and being engaged by the latter before said sheet is formed into a herring-bone structure while the second die has an inner outline corresponding to the transverse outline of the finished herring-bone structure and serves for the final passage of the latter, and lastly means for imparting to a set of blades transverse translational movements adapted to produce the herring-bone structure and to impart to the two dies in synchronism with the movements of the blades reciprocatory translational movements longitudinaly of the pleated strip with a view to bringing said dies during the formation of a row of transverse folds from their original position into the immediate vicinity of the blades and to returning them subsequently into their starting position while the pleated strip continues executing its translational movement so as to bring a following section of the pleated strip into a position in which it is shaped into a herring-bone structure.

2,950,657

FOLDING MACHINE FOR CRATES OR NEST FORMATIONS

Hyrum Russell Margetts, Salt Lake City, Utah, assignor to United Biscuit Company of America, Melrose Park, Ill., a corporation of Delaware

Filed Apr. 8, 1955, Ser. No. 500,218
3 Claims. (Cl. 93—37)



2. In apparatus for converting cut and scored blanks into a tray having a pair of side walls folded upwardly from an intervening bottom wall, and a plurality of partitions which extend transversely of said side walls, said partitions being folded upwardly from spaced portions of said bottom wall intermediate said side walls and having end portions which project beyond said side walls, said partitions being provided with slits to receive said side walls and said slits serving to divide said partitions into end and intermediate sections; the apparatus comprising a die structure having two sets of mutually opposed, fixed folding fingers which extend toward and terminate in spaced relation to each other, said folding fingers having surfaces shaped to engage and fold the side wall forming portions of the blank upwardly upon movement of the blank between said sets of fingers, said die structure also having two sets of folding members respectively associated with said sets of fingers and respectively positioned for engaging said end sections of the partition forming portions of the blank to fold said end sections upwardly from said bottom wall upon movement of the blank past said folding members, and retractable means carried by and projecting from the folding members of at least one set thereof for engaging and folding said intermediate partition sections to effect upward folding thereof as an incident to said movement of the blank, plunger means for moving said blank as aforesaid, and separate means actuated by said plunger means for retracting said retractable means in predetermined timed relation to the movement of said blank into said die.

2,950,658

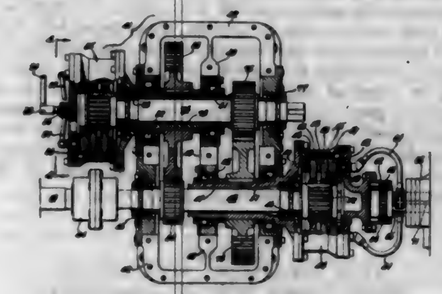
CONTINUOUS RUNNING MACHINES FOR PRODUCING BOX BLANKS

Henry William Moser, Haddonfield, and George W. McGirr, Riverside, N.J., assignors to Samuel M. Langston Company, Camden, N.J., a corporation of New Jersey

Filed May 21, 1958, Ser. No. 736,892
8 Claims. (Cl. 93—58)

1. In a machine of the type described including a first mechanism for continuously advancing web material and a second mechanism relatively spaced from the first mechanism along the path of travel of said material and operative to perform work upon the latter, a common drive means for said mechanisms, and means for severing the web at a point between the mechanisms in proximity to the said first mechanism; the improvement comprising variable speed transmission means having an input shaft and an output shaft, said input shaft being coupled to said common drive means, said output shaft being connected

to said first mechanism, said transmission being continuously driven by said common drive means during operation thereof, said transmission being operable for selectively driving said output shaft at equal speed with said



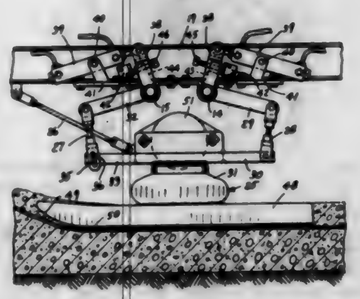
input shaft, and at a fixed ratio reduced speed differential thereto, for driving said first mechanism at equal or a fixed ratio speed differential with relation to said second mechanism.

2,950,659

APPARATUS FOR POSITIONING REINFORCEMENT MESH IN CONCRETE

Earl I. Smiley, Peru, Ind., assignor to J. C. O'Connor & Sons, Incorporated, Fort Wayne, Ind., a corporation

Filed Jan. 3, 1956, Ser. No. 557,128
3 Claims. (Cl. 94—39)



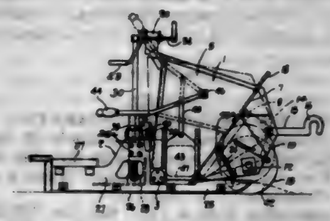
1. Apparatus for positioning reenforcement mesh in a poured concrete slab comprising a supporting vehicle movable over said slab, a front and a rear rock shaft mounted in spaced parallelism transversely of and supported by said vehicle, a vibratory unit disposed beneath said shafts, horizontally disposed sliders extending downwardly from said unit in alignment with the direction of travel of the vehicle to project into said slab, front linkage means pivotally connected between the front portion of said vibratory unit and said front rock shaft, said linkage means including a free floating connection for permitting vertical movement of said vibratory unit, a rear linkage means pivotally connected to the rear portion of said vibratory unit and said rear rock shaft, said rear linkage means establishing a pivot for vertical rocking of said unit, means for rocking said shafts to elevate and lower said vibratory unit within predetermined limits, and draft means connected at one end to said vibratory unit and at its opposite end to said supporting vehicle forwardly of said unit, whereby said vibratory unit rocks on said rear linkage means in a vertical direction.

2,950,660

ROAD SURFACING MATERIAL SPREADER

Ernest R. Standfast, Bucyrus, Ohio, assignor to The Burch Corporation, Crestline, Ohio, a corporation

Filed Oct. 21, 1957, Ser. No. 691,385
2 Claims. (Cl. 94—46)



2. In a material spreader of the class described, in combination, a rigid frame member adapted to extend transversely of the surface to be covered by material, a runner at each end of said member to support said member for longitudinal travel movement, a screed connected to said frame member and substantially coextensive therewith, a material storage and supply hopper arranged in advance of the frame member, the rear portion of said hopper being supported by and pivotally connected for free rotation to the runners aforesaid about midway between the ends of the latter, the discharge opening substantially adjacent and extending transversely in advance of the pivotal connection of the hopper and runners, parts to support the forward portion of said hopper and to position the hopper for travel movement comprising rollers movable in advance of the hopper said rollers being spaced transversely and journaled to the hopper near the ends thereof, and parts extending from the hopper for non-rigid connection to a towing vehicle whereby to cause movement of the entire spreader.

2,950,661

PREPARATION OF COPIES BY XEROGRAPHY

Walter Limberger, Hamburg, Germany, assignor to Lumoprint Zindler K.G., Hamburg, Germany

Filed Apr. 19, 1957, Ser. No. 653,813
Claims priority, application Germany Apr. 24, 1956
1 Claim. (Cl. 95—1.7)



A xerographic copying device comprising a substantially light-tight housing, a plate in said housing having an inclined upper face provided with means for fixedly supporting a xerographic layer, hinge means mounting said plate for oscillatory movement about a horizontal axis, electrode means in said housing displaceable across said upper face for producing an electrostatic charge on said layer, optical means positioned in said housing for projecting onto said upper face an image of a master copy to be reproduced, hopper means positioned in said housing adjacent said plate, said hopper means having an outlet for dispensing an adherent powder onto said upper face after exposure of said layer, thereby developing a visible replica of said master copy, a movable heat source mounted in said housing for displacement into an operative position adjacent said plate, operating means for

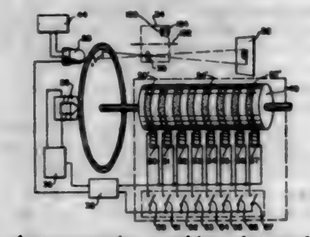
successively actuating said electrode means, said optical means, said hopper means and said heat source, and vibratory means for oscillating said plate during operation of said hopper means, thereby removing excess powder from said inclined face, said hopper means comprising a funnel having an outlet and a rotatable feed roller adjacent said outlet, said vibratory means including a rotatable cam operatively coupled with said feed roller and bearing upon said plate.

2,950,662

PHOTOCOMPOSING APPARATUS

Rene A. Higonnet, Cambridge, and Louis M. Moyroud, West Medford, Mass., assignors to Graphic Arts Research Foundation, Inc., Cambridge, Mass., a corporation of Delaware

Original application June 4, 1951, Ser. No. 229,804, now Patent No. 2,787,199, dated Apr. 2, 1957. Divided and this application June 8, 1956, Ser. No. 590,305
Claims priority, application France June 6, 1950
4 Claims. (Cl. 95—4.5)



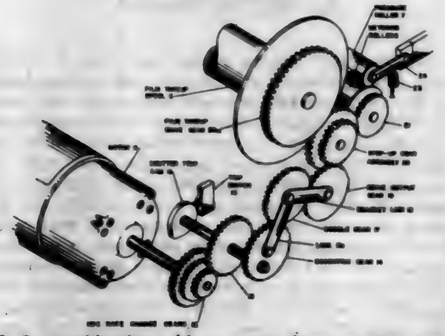
1. In a photocomposing machine, the combination of a rotatable character carrier having a font of characters and a band of magnetic material, said band having local areas of magnetization each in precise relationship to a particular character of the font, continuously rotating mechanism for moving the characters successively through a projection position, a reading coil in fixed position relative to said projection position to generate an impulse produced by each of said local areas of magnetization at the precise instant when the corresponding character passes through said projection position, a support for a semitized sheet, a discharge tube to project a character in said projection position on to said sheet, and means including said reading coil to energize the discharge tube.

2,950,663

AERIAL CAMERA

Curtis B. Warshawsky, Pacific Palisades, Calif., assignor to Hycon Mfg. Company, Pasadena, Calif., a corporation of Delaware

Filed Jan. 28, 1957, Ser. No. 636,771
13 Claims. (Cl. 95—12.5)



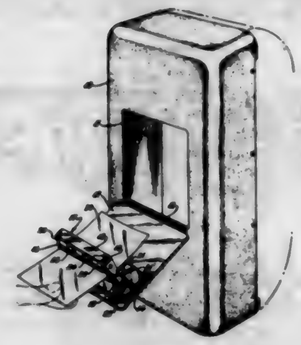
2. In combination with a camera incorporating image motion compensation, a substantially constant speed motor; a transmission for providing a plurality of different output speeds corresponding respectively to correct image motion compensation rates for different image motion condition, said transmission being driven by said motor; an eccentric gear adapted to be driven by the output of said transmission; a wobble gear engaging with said eccentric gear; an output gear; means for constraining said wobble gear in floating engagement with both said eccentric gear and said output gear, said constraining means comprising connecting links respectively connecting the center of said wobble gear to the centers of said eccentric gear and said output gear, whereby a sinuous output speed curve can be generated by said output gear; and a film drive roller adapted to be driven by said output gear for moving film in the camera according to the sinuous output speed curve.

2,950,664

FILM TREATMENT APPLICATOR

Michael Kenneth Stoller, 20 Grenada Place, Massapequa, N.Y.

Filed May 23, 1958, Ser. No. 737,448
6 Claims. (Cl. 95—13)



1. For use in combination with a camera which exposes, develops and produces positive prints from a film in consecutive operations; a vase, a cover pivotally mounted on the case in registry with an opening therein; a film treatment applicator assembly mounted on the inner side of said cover including a film support; a pair of vertically disposed parallel film guides secured to said film support; an inverted U-shaped rotatable frame having the opposite ends thereof attached to the respective film guides; and means detachably secured to said U-shaped frame applicator for applying a treatment to a positive film print passing between said film guides and between said film support and said detachable applying means.

2,950,665

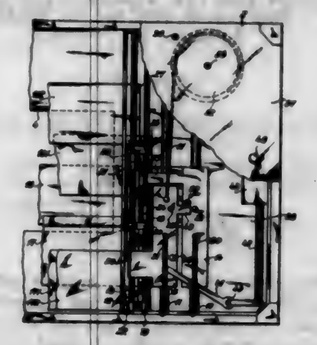
SHUTTER FOR PHOTOGRAPHIC CAMERAS

Alfred Meixner, Braunschweig, Germany, assignor to Voigtländer A.G., Braunschweig, Germany, a corporation of Germany

Filed Jan. 17, 1957, Ser. No. 634,660
Claims priority, application Germany Jan. 25, 1956
4 Claims. (Cl. 95—55)

1. Shutter operating mechanism for a still camera comprising, in combination, a wall formed with an image aperture therein; leading and trailing shutters movable in succession across said image aperture; a plurality of relatively elongated guide rods mounted adjacent and substantially parallel to said wall and to one side of said aperture, said rods being in spaced parallel relation to each other and to the direction of movement of said

shutters; each shutter including plural flat substantially uniplanar overlapping plates constituting a main slide and at least one supplemental slide, the slides extending substantially parallel to said wall; the slides of each shutter, when the shutter is extended, completely blocking the aperture, and being stacked beyond said aperture when the shutter is collapsed; the leading shutter being extended and the trailing shutter collapsed in such set position, and the leading shutter being collapsed and the trailing shutter being extended in such operating position; a first carrier slidably mounted on a first one of said guide rods, the leading main slide being secured to said first carrier; first spring means biasing said first carrier to the shutter operated position; each supplemental slide having mounting means slidable along others of said guide rods and spaced longitudinally of the respective guide rods; a second carrier slidably mounted on a second one of said guide rods adjacent said first one of said guide rods, the trailing main slide being secured to said second carrier; second spring means biasing said second carrier to the shutter operated position; each trailing supplemental slide having spaced mounting means slidable along others of said guide rods and spaced longitudinally of the respective guide rods; said first carrier having a first lug projecting between and engageable with the spaced mounting means of each supplemental slide, and a second lug extending into the path of movement of a



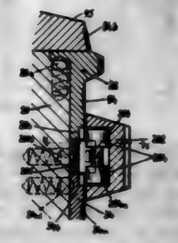
projection on said second carrier; a first pivoted latch engaged with a third lug on said first carrier and retaining the leading shutter in the extended position, said first latch being operable by the shutter release means to disengage said third lug for movement of the leading main slide across the image aperture by said first spring means; said first lug striking a mounting means of each leading supplemental slide to move the latter across the image aperture to collapse the leading shutter in the operated position; said second carrier having a first lug projecting between and engageable with the spaced mounting means of each trailing supplemental slide; a second pivoted latch engaged with a second lug on said carrier and retaining the trailing shutter in the collapsed position; an operating lever pivoted intermediate its ends and having a first arm in the path of movement of an operating lug on said first carrier for direct engagement thereby when the main slide of said leading shutter reaches the shutter operated position; operating rod means mounted for slidable reciprocation parallel to said guide rods; said operating lever having a second arm engaged with one end of said operating rod means; means operatively connecting said second latch to the opposite end of said operating rod means and effective, upon reciprocation of the latter by rocking of said operating lever by said operating lug, to operate said second latch to release said second carrier for movement of the trailing main slide over the aperture by said second spring means; the first lug on said second carrier striking a mounting means of each leading supplemental slide to move the latter across the image aperture; setting means connected to said first carrier and effective, when operated, to move said first carrier to the set position, said first lug on said first carrier effecting movement of each leading supplemental slide into extended relation blocking said image aperture; said second lug on said first carrier engaging the projection on said second carrier to move the trailing main slide to the set position; said first lug on said second carrier engaging a mounting means of each supplemental trailing slide to move the latter out of blocking relation with the image aperture and into stacked relation with the main leading slide.

2,950,666

COUPLING MECHANISM FOR EXPOSURE SETTING MEMBERS OF CAMERAS

Kurt Gebele, Munich, Germany, assignor to Compur-Werk Friedrich Deckel OHG, Munich, Germany, a German firm

Filed Feb. 7, 1958, Ser. No. 713,826
Claims priority, application Germany Feb. 9, 1957
6 Claims. (Cl. 95—64)



1. Adjusting means for a photographic unit having an optical axis, comprising a shutter speed adjusting ring rotatable about said optical axis, and a diaphragm aperture adjusting ring also rotatable about said optical axis, characterized by the provision of a carrier ring also rotatable about said optical axis in a position adjacent both of said adjusting rings, a coupling member moving bodily with said carrier ring when the latter is rotated, said coupling member having limited movement in a direction approximately radially relative to said optical axis into and out of coupling contact with said adjusting rings, an actuating ring also rotatable about said optical axis, said actuating ring being slidably mounted on said carrier ring for rotation relative thereto, and means defining a notch in said actuating ring for receiving a portion of said coupling member and having a cam surface extending in a circumferential direction for engaging said coupling member and camming it approximately radially into engagement with said adjusting rings upon turning said actuating ring relative to said carrier ring.

2,950,667

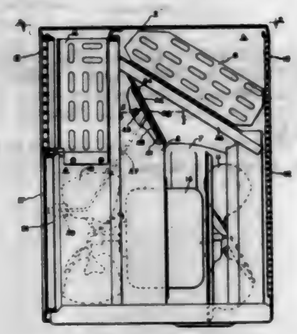
ROOM AIR CONDITIONER HAVING VENT CONTROL MEANS

Stanley E. Rose, Lyndon, Ky., and Elmer E. Heimo, Erie, Pa., assignors to General Electric Company, a corporation of New York

Filed Sept. 20, 1957, Ser. No. 685,264
3 Claims. (Cl. 98—94)

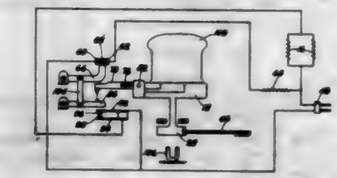
1. In an air conditioning unit including a housing divided by a barrier into inner and outer compartments, the combination comprising an aperture in said barrier for permitting the flow of air from one compartment to the other, a damper positioned across said aperture, hinge means along one edge of said aperture of said barrier for pivotally connecting said damper across said aperture for

controlling the flow of air therethrough, said housing having a vertical slot in the front thereof, said vertical slot being horizontally offset from a position directly in front of said aperture in said barrier, a slider arranged within said slot for vertical movement therein, said slider having grooves on opposite sides thereof and having end portions abutting the front and rear faces of said front of said housing thereby to confine the movement of said slider to the vertical length of said slot, an operating rod extending obliquely between said slider and said damper and having one end connected to said damper and the other end connected to said slider so that movement of said slider from one end of said slot to the other causes said operating rod to move said damper from a fully closed position to a



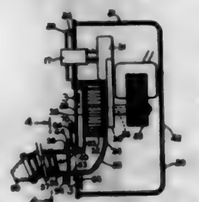
fully open position, said connecting point of said rod and said damper being further away from one edge of said vertical slot than from the other edge of said slot, detent means for retaining said slider and thereby said damper in one of a plurality of positions comprising a plurality of projections on the edge of said slot most remote from said aperture, and a resilient means for continually biasing said damper against said operating rod thereby forcing said operating rod towards said slider whereby, due to said offset position of said slot, said slider is forced to ride against the side of said slot most remote from said aperture and is maintained in one of a plurality of positions by the locking force between one of said projections and the lower portion of said slider.

2,950,668
AUTOMATIC TOASTER
John O. Bliznd, New Brighton, Jerome C. Johnson, St. Paul, and Edmond G. Franklin, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Filed Dec. 16, 1954, Ser. No. 475,792
17 Claims. (Cl. 99—329)



13. A toaster comprising a heating element, a toast carriage movable relative to said heating element between an upper non-toasting and a lower toasting position, a thermal motor for moving said carriage downwardly from its non-toasting position to its toasting position when energized, a pivotally and slidably mounted lever on said carriage having a lighter end disposed so as to be engaged by a slice of bread and a heavier end projecting from said carriage, a pair of resiliently mounted, spaced contacts in circuit with said thermal motor for energizing same, a first pivotal arm provided with a contact for bridging said spaced contacts, said first arm being disposed for engagement by said lever and the resilient action of said spaced contacts exerting sufficient pressure to retain said bridging contact between said spaced contacts until a subsequent opposite force is applied to said first arm, a second pair of cooperable contacts in circuit with said heating element for energizing said element to effect a toasting operation, a second pivotal arm for closing said second contacts, said second arm being disposed for engagement by said lever in the toasting position of said carriage, a link member having its ends connected to said pivotal arms to transmit said opposite force to said first arm when said lever engages said second arm to close said contacts, a cam in the path of said heavier lever end for shifting said lever so that on the upward travel of said carriage said heavier end will not engage said first arm thereby to preclude rebridging of said first contacts without first removing the toasted bread slice.

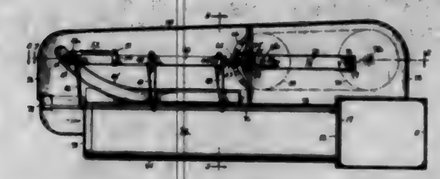
2,950,669
BLOWER UNIT FOR CHARCOAL GRILLS
George C. Terry, Garden City, N.Y., assignor to Kaukap, Inc., New York, N.Y., a corporation of New York
Filed June 18, 1958, Ser. No. 742,888
4 Claims. (Cl. 99—421)



2. The combination with an outdoor grill having a rotating spit, of a motor-blower unit comprising a housing, a socket for one end of the spit and forming a driving connection therewith, a train of speed reducing gears connected between the motor and said driving socket, an air impeller connected with said motor, a casing enclosing the impeller and provided with a duct leading out of the housing, a valve plate mounted on the housing and provided with means for mounting a flexible duct leading to the grill, said plate having an opening aligned with the impeller duct, a valve member pivoted on the valve plate and formed with a duct directing an air stream from the impeller housing to the flexible duct, and an inclined baffle carried by the valve member which interrupts said air stream and directs it upwardly to form an air curtain between the blower unit and the grill.

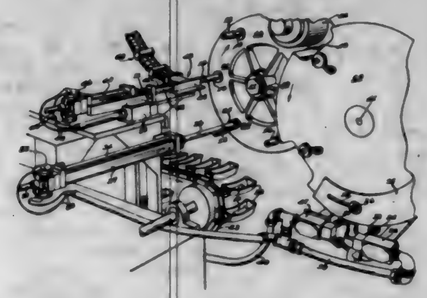
2,950,670
HAY BALERS
Edwin B. Nolt, New Holland, Harry C. Eberly, Narvon, and James W. McDuffie, New Holland, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Filed Mar. 29, 1956, Ser. No. 574,698
17 Claims. (Cl. 100—142)

1. A hay baler comprising a bale chamber having a feed opening in a vertical side wall thereof, a plunger reciprocable in said chamber and past said opening, a hay platform extending from said feed opening, and means for feeding hay into said chamber, said feeding means comprising a support bar extending above said platform in the direction of extent of the platform, a forward feed finger fixedly mounted on said support bar, a rear feed finger on said support bar, means for reciprocating said support bar in timed relation to said plunger whereby in one direction of movement of the bar said feed fingers sweep hay across said platform, through said opening and into said chamber, said forward finger at least entering said chamber, and means operative on movement of said bar in said one direction to incline the bar downwardly toward the platform, then substantially parallel to the platform, then upwardly relative thereto, the up-



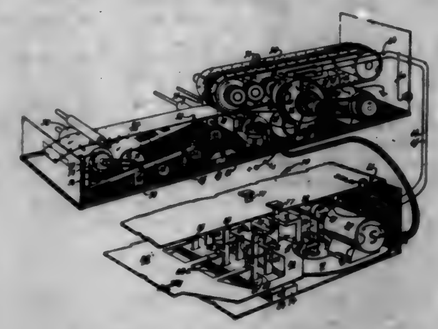
ward movement of said bar being so related to said bale chamber that said forward finger moves upwardly in the chamber, said means being operative on movement of the bar in the other direction to first hold the bar inclined relative to the platform and then to shift it to a position substantially parallel thereto, both of said feed fingers extending perpendicular to said bar when it is moving in said one direction, and means for mounting said rear finger for pivotal movement relative to said bar on movement of the bar in said other direction only.

2,950,671
ARTICLE HANDLING APPARATUS FOR OFFSET PRINTERS
Richard C. Allen, Maumee, and Frank E. Miller, Jr., Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio
Filed Mar. 17, 1958, Ser. No. 721,871
4 Claims. (Cl. 101—40)



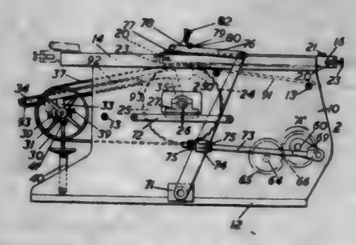
1. In printing or decorating apparatus comprising a continuously rotating blanket cylinder mounted upon a horizontal axis, a work holder comprising an intermittently rotating disk-like spindle carrier mounted on a horizontal axis near the periphery of said cylinder, an annular series of spindles on one face of the carrier near the periphery thereof and having their axes substantially parallel with that of the carrier, said work holder when at a standstill positioning one spindle at a printing station, another spindle at a work unloading station and a third spindle at a work loading station; the improvement comprising a work unloader including an air operated piston motor including a horizontal piston rod, a stripper finger suspended from and freely swingably connected to the latter, a solenoid valve for the motor, a work loader comprising an air operated piston motor, a ram actuated by the latter to deliver work to a spindle axially aligned with the ram, a solenoid valve for the last named motor, means including a plurality of micro-switches for actuating the solenoid valves and a cam carried by the blanket cylinder for operating at least certain of said micro-switches, the stripper finger being formed with a side recess normally in the path of travel of and to accommodate a portion of a spindle upon arrival of the latter at the unloading station.

2,950,672
PRINTING DIRECTORY
Jacob J. Hagopian, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 11, 1957, Ser. No. 702,042
7 Claims. (Cl. 101—93)



1. An inventory locating directory comprising printing means including a plurality of cyclically arranged type slugs disposed in prearranged order, storage means for storing a random selection of a plurality of predetermined inquiries, said storage means including a plurality of inquiry storage units selectively settable to establish either a first or a second condition, said second condition representing the selection of an inquiry, each said slug corresponding to one said inquiry, control means operatively coupled to said printing means and responsive to those of said storage units set to their said second condition to print in said prearranged order those of said slugs which correspond to said selection, and means for resetting all said units to their said first condition at the end of a complete printing cycle, whereby said random selection of inquiries is printed in a rearranged order corresponding to the sequence of said slugs.

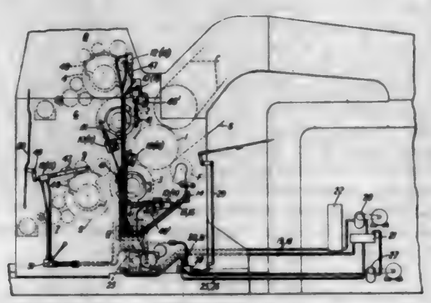
2,950,673
PRINTING MACHINES
William Philip McCormick, 115 Birkhall Ave., Glasgow, Scotland
Filed Dec. 2, 1957, Ser. No. 700,874
9 Claims. (Cl. 101—118)



1. A printing machine of the type comprising a screen fitted to a reciprocable screen carrier and composed of imperforate material, which is patterned for use as a stencil in the work of printing the pattern upon sheets

fed in succession between the screen and a cylindrically arcuate impression surface of an impression cylinder movable underneath and in unison with the screen, the said machine comprising in combination with the reciprocable screen carrier and impression cylinder:—a pair of components incorporated in a rotatable assembly including also said impression cylinder and presenting circular side surfaces that are co-axial with the arcuate surface of the impression cylinder, flexible members respectively anchored in relation to said side surfaces and bearing around them, means connected with said members for gripping the leading edge of each sheet to be printed, guides for said members extending rearwards from the side surfaces, devices for opening and closing said gripping means at timed intervals in the printing cycle, a pair of gearwheels also included in the rotatable assembly so as to be associated with the respective side surfaces and with the impression surface, a pair of toothed racks on the screen carrier meshing with said gearwheels, and mechanism for reciprocating the screen carrier and racks so as to rotate the rotatable assembly as a unit to and fro, the arrangement being such that said members with said gripping means connected thereto are reciprocated in paths defined by the side surfaces and guides and also such that said members, where flexed around the side surfaces, are co-axial with the gearwheels and have the same linear speed as the pitch circles of their teeth.

2,950,674
TRIP MECHANISM FOR PRINTING MACHINES
Harold M. Taylor, Thorner, near Leeds, and Derek A. Stevenson, Leeds, England, assignors to R. W. Crabtree & Sons Limited, Leeds, England
Filed Sept. 26, 1955, Ser. No. 536,642
Claims priority, application Great Britain Oct. 1, 1954
8 Claims. (Cl. 101—185)



1. A rotary offset sheet printing machine comprising a printing cylinder; a blanket cylinder; an impression cylinder and an inking mechanism to ink the printing cylinder; means for feeding sheets to the machine for travel along a path through the machine determined by the machine cylinders; a number of double-acting hydraulic units each including ram means selectively subjectable to hydraulic pressure in opposite directions respectively to move the cylinders and the inking mechanism positively into and out of cooperation; a source of supply of pressure liquid to operate the said hydraulic units positively in opposite directions; reversing valves to control the application of pressure liquid to the ram means of the various hydraulic units selectively in opposite directions for operating said ram means positively both to establish and to relieve cooperation between the cylinders and the inking mechanism; a normally inactive valve-actuating means operated in synchronism with the machine for actuating the valves in a predetermined sequence to effect relative movement between the cylinders and the inking mechanism; and sheet check means functioning in said path for controlling operation of said valve-actuating means.

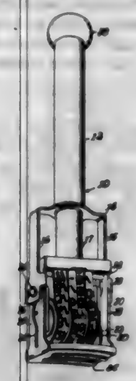
2,950,675
APPARATUS FOR MECHANICALLY HANDLING THIN FLAT ARTICLES
Geoffrey Percy Copping, Chesham, Donald James Parker, Rickmansworth, and David John Barr, Pinner, England, assignors to Her Majesty's Postmaster General, London, England
Filed May 5, 1958, Ser. No. 733,676
Claims priority, application Great Britain May 10, 1957
3 Claims. (Cl. 101—236)



1. Apparatus for stacking articles such as letters and similar thin flat items of postal mail successively fed thereto in a stream in which the articles are spaced one from another in the direction of feed, the said apparatus comprising a first pair of driven rollers for engaging each article as it is fed to the apparatus to feed the article in to the apparatus, drive means for continuously rotating said first pair of rollers, a second pair of driven rollers positioned below said first pair of rollers for receiving articles therefrom and having their axes positioned on a line inclined with respect to a line passing through the axes of the first pair of rollers, thereby to change the direction of travel of the articles as they pass through said second pair of rollers, drive means for intermittently rotating said second pair of rollers, a stacking box positioned below said second pair of rollers for receiving articles therefrom and forming a stack of the articles, and article-operated means controlling the intermittent rotation of said second roller pair to feed the articles therethrough in two time spaced steps co-ordinating with the passage of the articles from the first pair of rollers, to cause the leading edge portion of an article fed by the first roller pair to overlie the trailing portion of an article advanced one step through the second pair of rollers, whereby the articles are delivered in tiled relation to the stacking box.

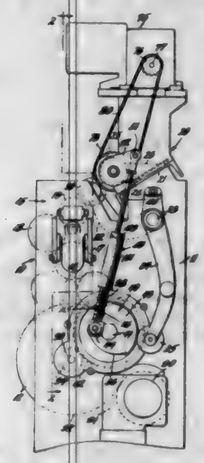
2,950,676
STAMP
Samuel M. Weissman, Chicago, Lowell H. Weissman, Skokie, and Simon L. Haimes, Glencoe, Ill., assignors to Bankers & Merchants, Inc., Chicago, Ill., a corporation of Illinois
Filed May 15, 1957, Ser. No. 659,306
2 Claims. (Cl. 101—334)

1. In combination, reciprocally movable stamp means or the like guided in a cage means and actuated by a hollow handle means, a hollow guidepost mounted on said cage means, said handle means being telescopically movable over said guidepost, reciprocally movable cartridge means disposed in said hollow guidepost, a fixedly positioned spring-loaded valve disposed in one end limit of said cartridge means normally in a closed position, depressible finger-engageable plunger means disposed in said handle means, said plunger means engaging said cartridge means when said plunger is in the depressed



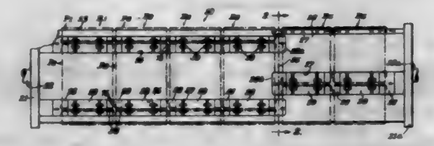
position causing relative movement between said cartridge means and said valve when said handle means and guidepost are in the telescoped position whereby said spring-loaded valve assumes an open position relative to said cartridge.

2,950,677
PRINTER-SLOTTERS
William C. Staley, Baltimore County, Md., assignor to Greenwood Engineering Company, Inc., Baltimore, Md., a corporation of Maryland
Filed Aug. 6, 1959, Ser. No. 831,990
7 Claims. (Cl. 101—350)



1. In a printing machine, a printing member; means for applying ink to said printing member, said means comprising at least one inking roll, an ink fountain device including a fountain roll adapted to be rotated intermittently through a predetermined angle, and an oscillatable ductor roll adapted to move between the fountain roll and said inking roll to transfer ink to the latter; a main drive member for said machine, transmissions actuated by said drive member for moving said printing member, for oscillating said ductor roll, and for intermittently moving said fountain roll through a predetermined angle, means for setting the transmission for the fountain roll to vary the increment of angular movement imparted thereto; auxiliary means for independently rotating said fountain roll as for cleaning or adjusting, clutches in said transmission for the fountain roll and the auxiliary rotating means for alternative operation of the fountain roll thereby, the fountain roll having an axially extended shaft; the transmission to the fountain roll from the main drive member comprising a driving crank, a connecting rod, and a one-way clutch on the shaft of said fountain roll, and a driven crank for actuating said clutch; said driven crank operatively connected to said connecting rod, and said setting means comprising means for adjusting the length of said connecting rod.

2,950,678
PLATE HOLDER FOR CYLINDER PRESSES
Gilbert S. Krohn, Chicago, Robert G. Neuhaus, Homewood, and Charles F. Ahlgrimm, Flossmoor, Ill., assignors to R. R. Donnelley & Sons Company, a corporation of Delaware
Filed May 2, 1955, Ser. No. 505,374
6 Claims. (Cl. 101—378)

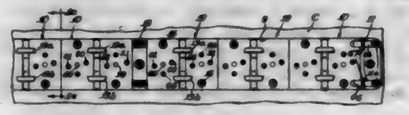


1. In a printing press, in combination: a plate cylinder adapted to support a plurality of spaced, circumferential bands of printing plates with the plates in each band in closely spaced end-to-end relationship, said cylinder having a plurality of parallel, longitudinal channels; a plurality of removable plate clip assembly bases detachably secured in spaced relationship in each channel, there being a base aligned with each band of plates, each base having an arcuate slideway extending circumferentially of the cylinder; a pair of plate clips slidably mounted in each slideway, said clips having oppositely inclined faces projecting above the base and each of said clips being engageable with one of two adjacent plates in a band; gear means in each base engaged with the clips therein; gear actuating means in each base which is accessible through the space between the ends of two adjacent plates to move the clips into locking engagement with said plates; a removable side lug spacer block at each end of each channel and between each two adjacent assembly bases, said spacer blocks and bases filling the channel from end to end; a pair of side lugs mounted in each block for movement longitudinally of the cylinder; and means for moving said side lugs into engagement with plates in two adjacent bands to fix the spacing between said plates.

2,950,679
PLATE HOLDER FOR CYLINDER PRESSES
Gilbert S. Krohn, Chicago, Robert G. Neuhaus, Homewood, and Charles F. Ahlgrimm, Flossmoor, Ill., assignors to R. R. Donnelley & Sons Company, a corporation of Delaware
Filed Aug. 22, 1956, Ser. No. 605,536
6 Claims. (Cl. 101—378)

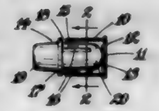
1. In a printing press, in combination: a plate cylinder adapted to support a plurality of printing plates in end to end relationship about the cylinder, said cylinder having a plurality of parallel, longitudinal channels each of which is beneath the ends of two adjacent plates; a plate clip assembly base detachably secured in each channel, each said base having a slideway extending circumferentially of the cylinder; a pair of circumferentially

spaced plate clips individually slidable in said slideway for independent engagement with two circumferentially adjacent plates on the cylinder; a separate clip operating means for each clip, said operating means being mounted in the base and operatively connected with one of said clips to move said clip in the slideway; and two separate adjusting members rotatably mounted in the base and



operatively engaged with each clip operating means, said adjusting members being positioned on opposite sides of the longitudinal median plane of the assembly base and being accessible from above the base for manual manipulation, whereby adjustment of either of said clips may be effected with a plate on said cylinder which has an end on said plane.

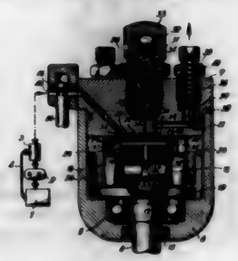
2,950,680
AMMUNITION FOR TOY GUNS
Aubrey Robert Mills, London, England, assignor to Die Casting Machine Tools Limited, London, England, a British company
Filed June 6, 1958, Ser. No. 740,391
Claims priority, application Great Britain Apr. 15, 1958
2 Claims. (Cl. 102—41)



1. In ammunition for a toy gun, of the type comprising a tubular cartridge case having one open end and a base at the opposite end, a detonator cap engaged with the base and evolving gases when detonated, and a bullet removably engaged in the case and having an inner end holding the cap against the base; the improvement comprising peripherally spaced, longitudinally extending ribs on the bullet, engaged with the cartridge case and extending beyond the open end of the case when the bullet is disposed therein in engagement with the cap, the ribs providing passages for the escape of the gases forwardly around the peripheral surface of the bullet and through the open end of the cartridge case; the bullet having a rounded inner end providing an air space in the cartridge case facilitating release of evolved gases to prevent excessive gas pressure increase within the cartridge case; and a plurality of eccentrically located apertures in the base of the cartridge case; the rounded inner end of the bullet, in conjunction with said apertures, insuring the detonator cap being firmly held between the bullet and the center of the base to insure effective detonation of the cap when the base is impacted by a hammer.

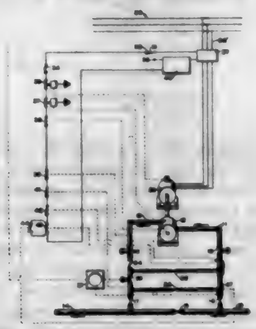
2,950,681
INJECTION PUMP ARRANGEMENT FOR MULTI-CYLINDER INTERNAL COMBUSTION ENGINES
Eugen Walch, Ditzingen, and Ulrich Aldinger, Stuttgart, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
Filed Aug. 16, 1957, Ser. No. 678,720
Claims priority, application Germany Aug. 22, 1956
7 Claims. (Cl. 103—2)

1. In an injection pump, in combination, cylinder means; a pair of coaxial pistons slidably supported for axial movement toward and away from each other by said cylinder means and defining between themselves a single working chamber; drive shaft means; support means supporting said drive shaft means for rotation; cam means cooperating with said pistons for moving the same toward each other along pressure strokes at predetermined times during rotation of said drive shaft means, said pistons moving away from each other during suction strokes at other predetermined times during rotation of said drive shaft means; a flat distributor surface carried by said support means; a distributor plate connected to said drive shaft means for rotation therewith and having a flat distributor surface engaging and rotating with respect to said distributor surface carried by said support means; inlet passage means leading to said single working chamber between said pistons for delivering fuel to said working



chamber during the suction strokes of said pistons, said inlet passage means being formed in part in said support means and leading to said distributor surface carried thereby and said inlet passage means being formed in part in said distributor plate and leading from the distributor surface of the latter through said plate toward said working chamber; discharge passage means leading from said single working chamber to the several cylinders of an internal combustion engine for delivering fuel to said cylinders, respectively, during pressure strokes of said pistons, said discharge passage means also being formed in part in said distributor plate and leading to said distributor surface thereof and in part in said support means and leading from the distributor surface of said support means; and spring means urging said distributor surfaces toward each other.

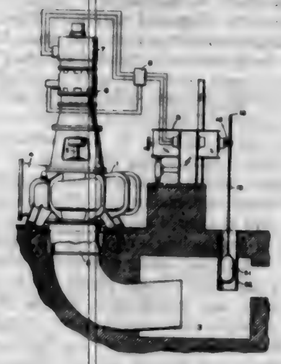
2,950,682
METHOD AND APPARATUS FOR CONTROLLING PIPELINE PRESSURE
Norman A. Kimmel, Waco, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Aug. 25, 1955, Ser. No. 530,525
19 Claims. (Cl. 103—11)



1. A method for controlling the suction pressure of a liquid being pumped in a pipeline directly upstream of a

pump therein which comprises sensing the occurrence of a change in specific gravity and reducing the rate of flow of liquid in the line and through said pump so as to increase said suction pressure when the specific gravity of the liquid being pumped decreases and increasing the rate of flow of liquid in the line so as to decrease said suction pressure when the specific gravity of the liquid being pumped increases.

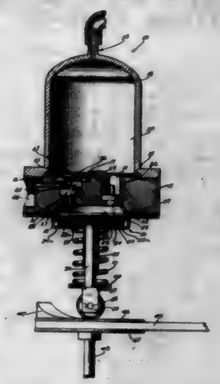
2,950,683
FLOW CONTROL MEANS FOR A PUMPING STATION
Wilbur R. Leopold, Upper Montclair, and Elton L. Towle, Glen Rock, N.J., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed Jan. 29, 1958, Ser. No. 711,919
10 Claims. (Cl. 103—11)



1. Variable flow control means for use with a pumping system having a suction reservoir, said system including a pump, driving means for said pump and speed regulating means operatively interconnecting said pump to said driving means for varying the power flow from said driving means to said pump, said variable flow control means including indicator means for measuring the level in said suction reservoir, control means operatively interconnecting said indicator means to said speed regulating means and to signal said speed regulating means to vary the pump output when the level in said reservoir varies from a preselected level, adjusting means operatively connected to said control means for regulating the pump output, detachable means normally operatively interconecting said indicator and control means, and switch means connected to said detachable means for disconnecting said control means from said indicator means through said detachable means whereby the references level in said reservoir may be varied according to the demands of said system.

2,950,684
FLUID PUMP
Carl C. Bauerlein, Lincolnwood, Ill., and Mullapudi M. Reddi, Philadelphia, Pa., assignors to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Filed Jan. 6, 1958, Ser. No. 707,389
1 Claim. (Cl. 103—40)

A fluid pump comprising a valve body having an inlet and an outlet, a fluid reservoir communicable with said outlet, a volumetrically variable pressurizing chamber communicable with said inlet and outlet, a check valve seated within said inlet having a flow passage therethrough and operable to permit only unidirectional flow to said chamber, a movable wall forming a portion of the wall of said reservoir such that the central portion thereof will move outwardly of the interior of the reservoir upon predetermined pressure levels within said reservoir, and a valve member centrally mounted on said movable wall and disposed adjacent said check valve and movable into engagement with a portion of said check



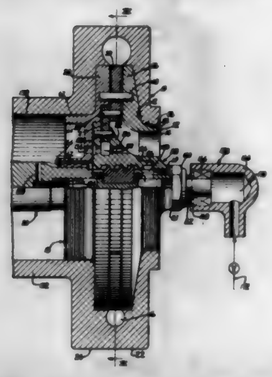
valve defining said flow passage to shut off fluid flow therethrough upon outward movement of the central portion of said movable wall with respect to the interior of said reservoir.

2,950,685
DEEP WELL PUMP RECIPROCATOR
Herbert M. Salentine, Gardena, Calif.
(269 Rocky Point Road, Palos Verdes Estates, Calif.)
Filed Sept. 17, 1958, Ser. No. 761,577
5 Claims. (Cl. 103—45)



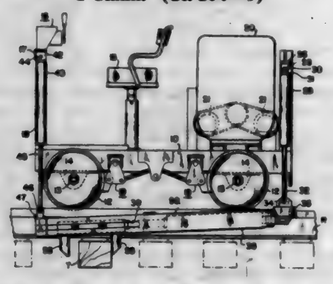
3. In a hydraulic reciprocator for actuating the plunger of a pump in a deep well through a string of sucker rods, the combination of: a cylinder; a piston in said cylinder; a piston rod provided on said piston and extending downwardly therefrom to connect with said sucker rod; means for automatically delivering fluid beneath said piston into the lower end of said cylinder to cause an upstroke of said piston and then permitting said fluid to be exhausted from beneath said piston to permit a downstroke of the latter; a casing head at the upper end of said well; stuffing box means on said casing head admitting said cylinder axially through said casing head and making a fluid tight seal therewith; and adjustable means for mounting said cylinder on said casing head whereby the elevation of said cylinder may be altered to adjust the upper and lower limits of travel of said sucker rod string in the reciprocation thereof by said reciprocator.

2,950,686
VARIABLE CENTRIFUGAL PUMP
Alvin L. Ledel, Euclid, and Thomas Barish, Shaker Heights, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Filed Mar. 28, 1958, Ser. No. 722,720
4 Claims. (Cl. 103—97)



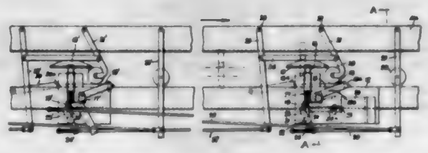
1. A rotary pump adapted to be driven at a substantially constant speed with varying flow rate and controllable discharge pressure head comprising in combination a rotary impeller rotor assembly, a shaft secured to drive the rotor assembly in rotation, a plurality of impeller vanes pivotally mounted on the rotor assembly to be rotated at varying adjustable angular positions, an impeller vane control disc mounted for rotation with the rotor assembly and mounted for relative rotational adjustment thereon, impeller vane control links pivotally connected between the impeller vanes and said disc whereby relative rotation of the disc will pivot the impeller vanes and change their adjusted position, a cylindrical inner surface on said disc carrying helically arranged teeth, rack members within the inner surface of said disc having teeth in engagement with said helical teeth, a cylinder defining means positioned concentrically within said disc and having radial openings for receiving said rack members, a piston reciprocably mounted in said cylinder and provided with recesses for receiving said rack members, and pressure supply passageways leading to the ends of said cylinder for controllably adjusting the position of the piston within said cylinder and thereby adjusting the position of said impeller vanes.

2,950,687
APPARATUS FOR SPACING AND STRAIGHTENING TIES
James B. McWilliams, Pittsburgh, Pa., assignor to Railway Maintenance Corp., Pittsburgh, Pa.
Filed Aug. 5, 1957, Ser. No. 676,067
1 Claim. (Cl. 104—9)



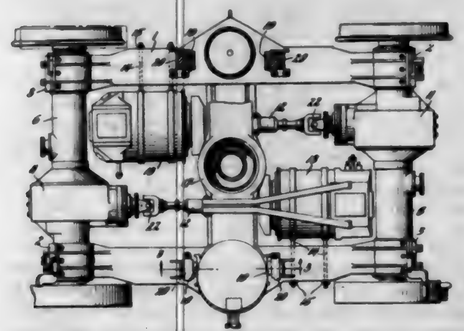
Apparatus for positioning ties by exertion of a transverse force on the ties, comprising a vehicle for traveling on rails extending over the ties, a pusher guide frame positioned longitudinally along each side of the vehicle, first power means affixed to and between each frame and said vehicle to raise and lower the frame, each frame being pivotally affixed to the lower end of the first power means; said first power means being pivotally affixed at its upper end to said vehicle, the aforesaid pivotal connections being such that said first power means and frame are freely swingable only longitudinally of the vehicle and rails, said frame being in the proximity of the tie to be positioned when the frame is in the lowered position, a piston and cylinder mounted on the frame and having a longitudinally extendable and retractable piston rod; longitudinal guides integral with said frame; a cross head affixed to said piston rod and movable in a reciprocal path along said guides upon actuation of said piston rod, movement of said cross head being substantially horizontal and longitudinal of the vehicle; a plurality of spaced stationary fingers affixed to and depending downwardly from said cross head, one of said fingers being normally located on each side of the tie to be positioned such that movement of said cross head in either longitudinal direction causes one of the fingers to engage and move said tie fore and aft of the vehicle; an anchor affixed to and movable vertically with said frame; said anchor including an inverted U-shaped member which is moved into straddling contact with a rail when said frame is in the lowered position, portions of said U-shaped member extending down each side of the rail and having a controlled clearance relative to the rail; said anchor being a double-directional brake so that upon actuation of said piston rod in either longitudinal direction and engagement of one of the fingers with a tie, a horizontal turning force is applied to the anchor to move said portions of the U-shaped member into engagement with the rail thereby locking the anchor and frame stationary relative to the rail and said anchor providing a rigid base for exertion of said transverse force on the tie and to avoid transmission of the transverse force to said vehicle.

2,950,688
CONVEYOR SYSTEMS
Donald Mayer King, Argyle Works, Stevenage, Hertfordshire, England
Filed July 24, 1958, Ser. No. 750,800
Claims priority, application Great Britain July 25, 1957
7 Claims. (Cl. 104—172)



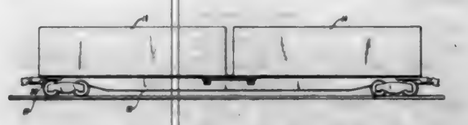
1. In a conveyor system wherein load carrying trolleys are propelled along a main track by means of pusher dogs depending from an endless driving chain which is itself suspended from trolleys running on a second track disposed above that on which the load carrying trolleys are caused to run, said pusher dogs being so supported as to be capable of a longitudinal sliding movement at right angles to the chain and each carrying a laterally projecting member, the provision of an indexing mechanism comprising a ramp element slidable upwardly and downwardly into and out of an operative position wherein it will lie in the path of the laterally projecting members carried by the pusher dogs and serve to lift such dogs relatively to the chain and clear of any trolley present on the main track in the region of said ramp element, a stop lever operatively connected to said ramp element so as to be movable therewith into and out of an operative position wherein it will constitute a positive stop for any trolley to which a drive has been discontinued by virtue of the lifting of the dogs, an angularly movable member adjacent the track and adapted normally to hold the ramp element in its operative position, manually operable means adjacent the track for moving said angularly movable member thereby to allow downward movement of the ramp element into its inoperative position with consequent withdrawal of the stop lever from its operative position, and resetting means operable by the trolley released on withdrawal of said stop lever to effect resetting of the angularly movable member to its initial position with consequent restoration of the ramp element and the stop lever to their respective operative positions.

2,950,689
RAIL TRUCK
William T. Rossell, New York, N.Y., assignor to Transit Research Corporation, New York, N.Y., a corporation of New York
Filed Jan. 20, 1958, Ser. No. 709,974
6 Claims. (Cl. 105—133)



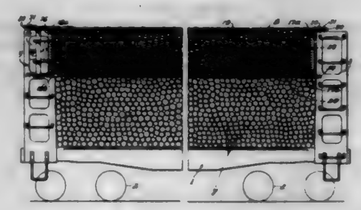
3. A rail truck comprising side frames and axle housings rigidly connected together at diagonally opposite corners and resiliently connected together at the other two corners, and driving motors parallel with said side frames, one of said motors being connected directly to one of said frames and supported thereby independently of the other side frame and the other motor being directly connected to the other side frame and supported thereby independently of the other motor and the first named side frame.

2,950,690
FREIGHT HANDLING SYSTEM
Charles I. Bohlen, Doylestown, Pa., assignor, by mesne assignments, to Flexi-Van, Inc., a corporation of Delaware
Filed July 11, 1957, Ser. No. 671,277
1 Claim. (Cl. 105—368)



In a system for transferring trailer bodies between highway wheel assemblies and railway cars, a trailer body having at its under side two longitudinally spaced pairs of transversely spaced rollers arranged to support said trailer body for transverse rolling movement, a railway car having at its upper surface a pair of parallel, transversely extending rails spaced for respective support of said sets of rollers, each of said rails extending at least the full width of said car, but the length of said rails being less than the minimum transverse spacing between the said pairs of rollers; a pair of outrigger assemblies at each side of said car, each of said outrigger assemblies being pivotally mounted for swinging movement in a generally horizontal plane between a retracted position longitudinally of and adjacent the side of said car and an extended position at which they extend parallel to each other and transversely of said car beneath a trailer body supported on a wheel assembly at one side of said car, and each said outrigger assembly including a base member with a retractable jack supporting its outer end relative to the ground in the extended position of said outrigger assemblies, and each said outrigger assembly also including an upper member mounted above and generally parallel to said base member for vertical movement relative thereto and having on its upper surface on elongated rail extending longitudinally of said outrigger assembly and a stub rail with its upper surface in the same horizontal plane as that of said elongated rail with said stub rail extending generally perpendicularly to said elongated rail, the inner ends of the latter said rails being spaced and arranged so that in the extended and retracted position of said outrigger assemblies respectively, said elongated rails and said stub rails form continuations of the rails on said car whereby said trailer body may be rolled transversely into centered position above said car at which the rollers at the leading side of said trailer body are supported on the stub rails of the retracted outrigger assemblies on one side of the car and the rollers at the trailing side of the trailer body are supported on the elongated rails of the extended outrigger assemblies at the other side of the car, the upper members of the outrigger assemblies being vertically movable between an upper position at which the rails thereon are at the same level as the rails on the car and a lower position at which the rails on said upper members are clear of the rollers of the trailer body resting on the upper surface of said car to permit the outriggers to be swung against the sides of the car, and power means for raising the upper members of the outrigger assemblies at both sides of said car in synchronism to the upper position.

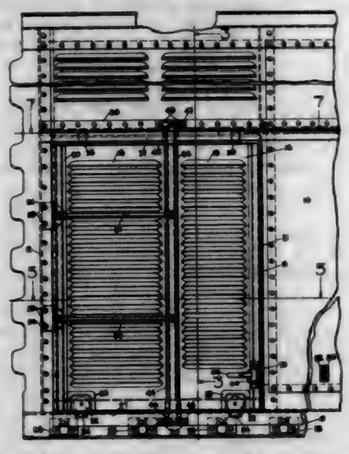
2,950,691
NET EQUIPMENT FOR OPEN RACK VEHICLES
John Richard Huber, Holicong, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania
Filed June 10, 1958, Ser. No. 741,178
15 Claims. (Cl. 105—369)



1. A net system for retaining pulpwood and the like on open rack vehicles having end structures, said system including a pair of longitudinal metal tension elements extending along the upper portion of the vehicle at each side between the end structures, a second pair of tension elements, one supported directly below each of the upper elements, a tensioning device attached to one end of each of said tension elements, a metallic net having a plurality of generally longitudinal mesh ele-

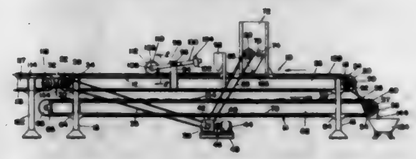
ments supported between the upper and lower tension elements at each side and extending substantially the length of the tension elements and anchoring means connected to the ends of said longitudinal mesh elements, said anchoring means being connectible to the end structures.

2,950,692
ENGINE COMPARTMENT ACCESS AND INSPECTION DOORS
Earl V. Hopkins, San Carlos, Calif., assignor to The Youngstown Steel Door Company, Cleveland, Ohio, a corporation of Ohio
Filed June 12, 1957, Ser. No. 665,186
3 Claims. (Cl. 105—378)



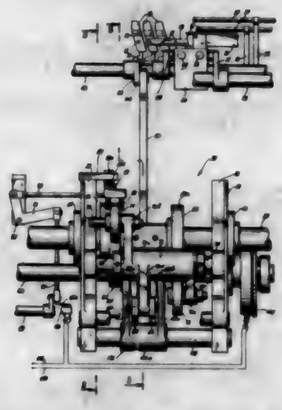
1. In a mechanical refrigerator car, an engine compartment accessible through an opening in a side of said car, said compartment being defined in width by front and rear stiles, a horizontally slidable door mounted on the outside of said car side for closing said access opening, a stile removably secured to said car side above and below said compartment and between said front and rear stiles, said removable stile lying in outwardly spaced relationship to said car side, vertically spaced brackets removably secured to said front stile and extending outwardly from said car side, grab irons extending between and secured to said removable stile and brackets in outwardly spaced relationship to said car side, said door being slidable to closed position between said car side and said removable stile and grab irons.

2,950,693
APPARATUS FOR FORMING DOUGH PRODUCTS
Anthony J. Fiiti, Philadelphia, and John Gilchrist, Roslyn, Pa.; said Gilchrist assignor to Anthony J. Fiiti, trading as Delco Quality Foods, Philadelphia, Pa.
Filed Nov. 18, 1958, Ser. No. 774,653
10 Claims. (Cl. 107—4)



1. A dough forming assembly comprising a movable conveyor, a feed means for spreading a continuous strip of dough on said conveyor as it moves, a molding means on said conveyor adapted to underlie said strip of dough, cutting means on said molding means, a pressing means situated adjacent said conveyor and rearwardly of said feed means relative to the movement of said conveyor, said pressing means being biased into a position overlying said strip of dough and exerting pressure on said dough against said cutting means to sever said dough, and adjustable counterbalancing means connected to said pressing means.

2,950,694
BORING ATTACHMENT FOR EMBROIDERY MACHINE
Walter P. Siegel, Paramus, N.J., assignor to Robert Reiner, Incorporated, Weehawken, N.J., a corporation of New Jersey
Filed Feb. 10, 1958, Ser. No. 714,254
9 Claims. (Cl. 112—83)

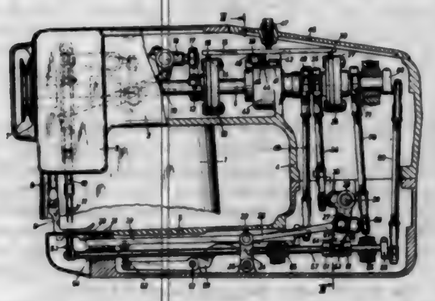


1. A bore attachment for use in embroidery machines comprising a boring tool, means operatively connected to and mounting said boring tool for movement through a boring stroke, and actuating mechanisms operatively connected to said boring tool for moving same through said boring stroke, said actuating mechanisms including an actuating shaft, first and second actuating cams on said actuating shaft having complementary cam developments, respective cam followers on said first and second actuating cams and cooperating therewith to provide a constrained cam control for said actuating mechanisms, coupling means operatively connecting said actuating mechanisms to said boring tool, a further cam on said actuating shaft in side by side relation to one of said actuating cams and having a development selected to completely inactivate said boring tool and to coincide with at least a portion of the dwell portions of said one actuating cam, means mounting the one cam follower on said one actuating cam for lateral shifting whereby said one cam follower may be shifted from said one actuating cam onto said further cam for disabling said actuating mechanisms, and means operatively connected to said one cam follower for periodically shifting said one cam follower.

2,950,695
LOOPER DRIVE FOR DOUBLE CHAIN STITCH SEWING MACHINES
Christiaan Joseph Marinus Benink and Walter Irmscher, both of Kaiserslautern, Pfalz, Germany, assignors to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany
Filed Nov. 1, 1957, Ser. No. 693,994
Claims priority, application Germany Nov. 2, 1956
4 Claims. (Cl. 112—200)

1. Looper and feed mechanism for a double chain stitch sewing machine having a housing including a machine arm, a main drive shaft supported in said arm and

compound feeding means comprising a needle bar, a first reciprocable member and a needle bar oscillator supporting said needle bar for swinging movement and operatively connected to said reciprocable member; first adjustable cam means mounted on said drive shaft and connected to said first reciprocable member for imparting swinging movement to said needle bar oscillator, a feed bar, a feed dog supported endwise of said feed bar below said needle bar and a looper shaft extending generally parallel to said drive shaft and supporting a looper below said feed dog; a second reciprocable member operatively connected to said looper shaft, a first connecting rod and a cam on said drive shaft for imparting



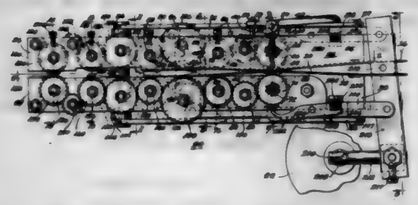
constant reciprocating movement to said looper shaft; a rockable member supported in said housing having one arm operatively connected to said feed bar and pivotally supporting said second reciprocable member, second adjustable cam means mounted on said drive shaft and means including a second connecting rod having one end operatively connected to said second adjustable cam means and another end operatively connected to the other arm of said rockable member for imparting reciprocating motion to said feed bar and for superimposing reciprocating movement on said looper shaft by way of said second reciprocable member; and rocking means on said looper shaft and on said drive shaft connected to impart rocking movement to said looper shaft.

2,950,696
OVERCASTING PRESSER FOOT FOR ZIG-ZAG SEWING MACHINES
Ruby E. Miller, Hollywood, Fla., assignor to Howard R. Lott, Hollywood, Fla.
Filed Apr. 18, 1958, Ser. No. 729,325
1 Claim. (Cl. 112—235)



An overcasting presser foot for zig-zag sewing machines of the type adapted to produce zig-zag stitching along the marginal edges of fabric to prevent raveling and to form a finished appearance, comprising a flat foot portion, means for hingedly suspending the foot portion from a presser bar of the sewing machine to have overriding engagement with fabrics to be stitched, the foot at its forward end being notched intermediate its width to form a pair of projecting tongues, the inner edges of each of the tongues constituting guides for the edge portions of the fabric to be stitched, the foot intermediate its width and rearwardly of the notch being cut away to form a triangular opening, the opening adapted to be traversed from side to side by a zig-zag needle of the sewing machine, a thread tension control prong that is connected to the foot at a position intermediate the width of the opening, the said prong extending rearwardly to substantially bisect the opening, the said prong adapted to receive loops of thread being formed by the zig-zag needle in its side to side motion and whereby the thread loops are engaged over the prongs progressively as the fabric is fed rearwardly beneath the foot, the prong at its terminal end being spaced from a rear apex of the opening a distance capable of permitting the loops of thread to slide therefrom to be fed beneath the foot as the fabric is fed rearwardly, the said thread loops as they slide from the prong being relieved of tension that would cause the stitched edge of the fabric to curl, the said prong being provided with a head portion that is hingedly connected with respect to the foot and stop means formed upon the foot and the head portion whereby the prong may swing in a vertical plane within limits.

2,950,697
SHEET MATERIAL FORMING APPARATUS
Harold G. Flagler, Oak Park, Ill.; Juanita Flagler, executrix of the estate of Harold G. Flagler, deceased
Filed Apr. 21, 1954, Ser. No. 424,718
11 Claims. (Cl. 113—54)

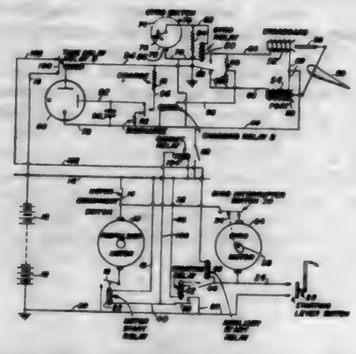


1. Apparatus for forming a seam between two elements of sheet material, said apparatus comprising means for supporting corresponding elongate edge portions of said two elements in overlying spaced substantially parallel relationship with said elements extending outwardly therefrom in opposite directions, means deforming longitudinal increments of the outer portion of each of said edge portions toward the other element, the width of said outer portion being less than the spacing between said edge portions, means further deforming said increments of the outer portion to angularly overlie the inner portion of the same element whereby the outer portions of said two elements are in substantially parallel contiguous relationship, means for gradually converging said inner portions of said two elements together with said outer portions therebetween, the outer portion of each of said elements being entrapped between the inner and outer portions of the other of said elements, means for driving said edge portions through the deforming means, the further deforming means, and the converging means whereby a continuous interlocking joint is formed between the inner and outer edge portions of said two elements, and frame means supporting all of said foregoing means in a generally aligned operative relationship.

2,950,698
ELECTRICAL STEERING CONTROL SYSTEM
Saul Bennon, Sharon, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed June 6, 1950, Ser. No. 166,587
9 Claims. (Cl. 114—23)

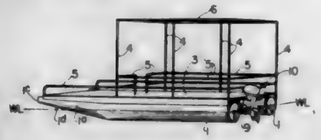
1. In an electrical steering control system for vessels, a propulsion motor, a rudder and two electrical devices

for turning it oppositely for steering, means for alternately operating the devices in guiding the vessel upon a predetermined course, anti-circular run means comprising an electronic tube and a condenser in circuit for activating the tube, means in connection with each electrical device for charging the condenser when the devices are operated



and discharging the condenser when they are alternately operated, the tube being operatively activated when one device is continuously operated for a predetermined period of time, and circuit control means operated by the tube, when it is operatively actuated, to stop said propulsion motor.

2,950,699
PONTOON BOATS
Frank Ogden and Robert B. Bell, Heavener, Okla.
Filed Nov. 6, 1958, Ser. No. 772,355
13 Claims. (Cl. 114—61)



1. A pontoon-type boat comprising a pair of substantially parallel pontoons; means maintaining the pontoons in normal spaced relation; a water scoop disposed between the pontoons comprising parallel triangular side frames connected at their front apices by a cross-member disposed above the water-line, and connected at their rear ends by a transom adapted to carry an outboard motor having a propeller, a motor mounted on said transom and having a propeller, the bottom of the transom extending below the waterline, and said scoop and transom extending in rear of the said pontoons; and a downwardly and rearwardly sloping concave bottom for said scoop connected with the bottoms of said side frames and extending from said cross-member to the bottom of said transom, to control at all speeds and loads the constant level of the water going to the propeller, and preventing splashing of the water and cavitation of the propeller.

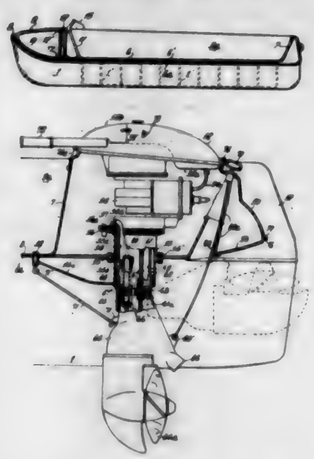
2,950,700
SHIP'S RATGUARD
Jack Le Roy McBride, 1147 24th St., San Pedro, Calif.
Filed Oct. 21, 1957, Ser. No. 691,464
1 Claim. (Cl. 114—221)

A ratguard for ships' hawsers comprising a pair of sections of sheet material, said sections having adjacent edge portions in overlapped relationship in assembled position, each of said portions having a recess registering with a recess in the other portion in said assembled position to form a hole for receiving a hawser, fastening means securing the faces of said edge portions together on one side of said recesses, each said recess being open on a side adjacent the edge portion for admission of a hawser, each of said sections having a projection extending transversely of the plane of the section to form a lip surrounding a major portion of the recess and extending along the edge portion on the side of the recess opposite said fastening means, each of said projections having a curved surface of slope progressively diminishing from



the recess outwardly to a junction with said edge portion whereby to effect camming of the sections on said last identified side of the recesses away from each other when the guard is removed from a hawser, and a releasable closing arm mounted on one section at said last identified side of the recess and having a releasable spreading position of engagement with said sections when the latter are in said assembled position whereby to provide access for the hawser when the guard is placed thereon.

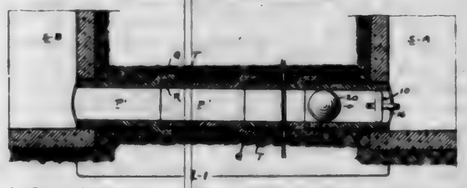
2,950,701
BOAT WITH TWO SPACED HULLS
Romolo De Stefani, Milan, Italy, assignor to Soc. per Az. Fabbrica Motocicli e Velocipedi Edoardo Bianchi, Abruzzi, Milan, Italy, a corporation of Italy
Filed Sept. 11, 1957, Ser. No. 683,370
Claims priority, application Italy Sept. 18, 1956
13 Claims. (Cl. 115—41)



6. A boat comprising an integral lower hull shell having two long side walls, two short side walls spaced inwardly from the long side walls, a web interconnecting each pair of long and short side walls at the bottom, and a flat bottom wall interconnecting the upper ends of the short side walls, the pairs of long and short side walls forming twin float runners with the respective interconnecting webs; an integral upper hull shell having two side walls and a bottom wall interconnecting the side walls, the latter bottom wall having cambered sections astern and at the bow, the side and bottom walls of the upper shell defining a water-tight, open room for the accommodation of at least one passenger, the bottom walls of the upper and lower hull shells being adjacent one another, portions of the long side walls of the lower hull shell extending above the bottom walls and being complementary to the side walls and cambered sections of the upper hull shell, said long side wall portions being spaced from the complementary side walls and cambered sections of the upper hull shell and defining therebetween at least one compartment adapted to hold a motor; a motor in said compartment; and means for joining the upper ends of the upper hull shell side walls and the long side walls of the lower hull shell.

7. The boat of claim 6, comprising means water-tightly mounted in said compartment and extending downwardly therefrom for supporting the motor in the compartment for rotation about a vertical axis, a boat propelling means pivotally connected to the downward extension of the motor supporting means, the propelling means being pivotal about a horizontal axis, tie means attached to the boat for holding the propelling means in a vertical position, power transmission means between the motor and the propelling means, said power transmission means being in alignment and operatively coupled when the propelling means is held in said vertical position, a thrust transmitting means mounted between the downward extension of motor support means and the boat; and a water-tight cover for an opening in the top of said compartment.

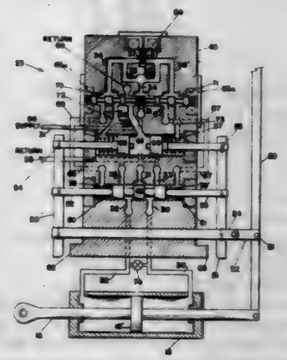
2,950,702
PIPE SEALING DEVICE
Eli K. Ferguson, Jr., 16127 Via Tomar, San Lorenzo, and Bill A. Kronmiller, 1642 Moreland Drive, Alameda, Calif.
Filed May 23, 1955, Ser. No. 510,092
3 Claims. (Cl. 118—408)



1. In a device for sealing leakage openings in a pipeline portion of uniform bore, fixed and movable partitions sealedly engaging the bore to close off between them a pipeline portion for enclosing a charge of an aqueous slurry comprising a water-flocculated clay, said fixed partition comprising a disc having a pneumatically inflatable rim releasably engaging the bore while sealedly fixing the partition in the bore and having a normally closed flow passage therethrough, and means for moving said movable partition toward the fixed partition for creating and maintaining in said flocculated clay charge a constant positive pressure exceeding the external pressure against said pipeline portion for effecting the pressure escape of the charge into said openings for a retention of the escaping flocs of clay as a sealing means in said openings.

2,950,703
MANUAL AND AUTOMATIC HYDRAULIC SERVOMECHANISM
Harold K. Fletcher, Kenmore, N.Y., Woodrow Seamone, Rockville, Md., and Martin P. Wolpin, Tonawanda, N.Y., assignors, by mesne assignments, to Bell Aerospace Corporation, Wheatfield, N.Y., a corporation of Delaware
Filed Nov. 7, 1956, Ser. No. 620,825
6 Claims. (Cl. 121—41)

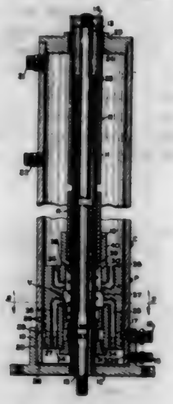
1. A control system for an aircraft having a movable aerodynamic control surface, a member for moving said control surface, manual control means adjustable to cause movement of said member, a fluid-pressure responsive actuator connected to said member to motivate the latter in either direction from neutral, a valve device comprising means defining a primary pressure fluid system including a housing and valve spool means displaceable in opposite directions within said housing away from neutral position to control flow of fluid through said primary fluid system to said actuator, said manual control means including a member fulcrumed differentially upon said housing and upon said valve spool means and connected to bias said valve spool means in either direction away from neutral when said manual control member is unrestrained, said valve spool means including a piston in a fluid pressure chamber and conduit means arranged to apply differential fluid pressures against said piston, a pilot valve selectively controlling primary fluid pressure applications through said conduit means to said chamber, a pressure responsive device adapted when energized to restrain normal fulcruming motions of said manual control means on said housing, a secondary fluid pressure supply system operatively connected to said pressure responsive device and manually controllable to alternately restrain and restore normal fulcruming of said manual control means relative to said housing, whereby upon deenergization of said pressure responsive means said manual control will be permitted to displace said valve spool piston to selectively control motivations of said actuator through said primary fluid system, and whereby application of differential pressures against said piston as controlled by said pilot valve will cause displacement of said valve spool piston, electromagnetic means operable to bias said pilot valve to differentially actuate the valve spool means, and feed back means actuated by displacements of said spool means tending to null the pilot valve.



2,950,704
PUMP JACKS AND THE LIKE
Albert Andrews, deceased, late of Larimer County, Colo., by Helen Andrews, heir, Loveland, Colo., assignor to Horace B. Van Valkenburgh, Denver, Colo.
Filed Dec. 1, 1958, Ser. No. 777,475
16 Claims. (Cl. 121—123)

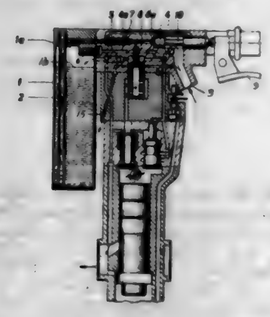
1. Apparatus for producing reciprocatory movement of a member such as a pump rod in an oil well, said member being subject to a force tending to move said member in one direction, comprising a cylinder having adjacent a first end an inlet adapted to be connected with a source of fluid under pressure and adjacent the opposite end an outlet adapted to be connected to a receiver for said fluid; a reciprocable piston within said cylinder and having a generally axial passage therethrough; a valve within said piston for controlling the flow of fluid through

said passage, said cylinder being provided with a control port intermediate said inlet and outlet, said control port being adapted to be connected in fluid communication with said receiver; and said piston being provided with means for closing said valve when said piston moves to a predetermined position of registry with said control port; a piston rod extending through said opposite end of said cylinder and connected to said piston; means for connecting said piston rod with said member; and means



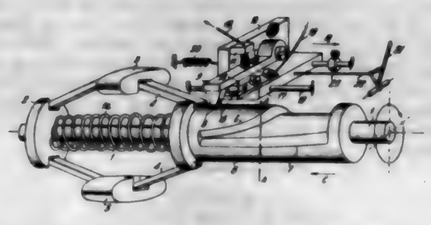
operable in response to the movement of said piston for controlling said valve and constructed and arranged to close said valve when said piston nears said first end of said cylinder and thereby permit fluid flowing into said cylinder to move said piston away from said end and move said member in a direction opposite to said force, and to open said valve when said piston moves a selected distance within said cylinder to permit such force on said member to move said piston back to a position near said first end of said cylinder.

2,950,705
INTERNAL COMBUSTION PERCUSSIVE TOOLS
Ernst Kuhn, Mannheim-Feudenheim, Germany, assignor to Knorr-Bremse G.m.b.H., Munich, Germany, a German company
Filed Jan. 28, 1959, Ser. No. 789,535
Claims priority, application Germany Feb. 5, 1958
2 Claims. (Cl. 123—7)



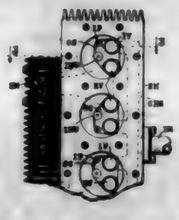
1. In an internal combustion percussive tool, a combination comprising a fuel tank, a carburettor of said tool, a manually operated fuel valve through which said tank is arranged to communicate with said carburettor, an inlet of said tank arranged to be connected to a source of compressed air, a first non-return valve of said tank communicating with said inlet by means of a first channel and through which said inlet is arranged to communicate with an air space in said tank so that upon connection of said inlet to said source of compressed air the compressed air forces fuel from said tank upon opening of said fuel valve, and a second non-return valve of said tank communicating with said inlet by means of a second channel and arranged to vent said air space upon failure of said compressed air supply, said non-return valves being oppositely directed so that, when acted on by said compressed air, said first non-return valve is displaced away from its seating whilst said second non-return valve is biassed on to its seating.

2,950,706
METHOD AND DEVICE FOR MIXING GASOLINE AND AIR IN CYLINDERS OF INTERNAL COMBUSTION ENGINES
Karlheinz Senckel, Prinzenstrasse 31, Munich, Germany
Filed Feb. 3, 1956, Ser. No. 563,399
7 Claims. (Cl. 123—32)



1. In a process for mixing fuel and air and igniting the mixture thereof in cylinders of an internal combustion, piston-driven engine which is equipped with fuel injection means and with external ignition means; the steps of forwardly shifting the start of introduction of the fuel by said injection means at increased load and relatively high rate of revolutions approximately from the top dead center position of the engine piston progressively toward the beginning of the compression stroke of said engine piston, and concluding the introduction of the fuel by said injection means to coincide with the firing point of the external ignition means, thereby reducing objectionable ignition delay.

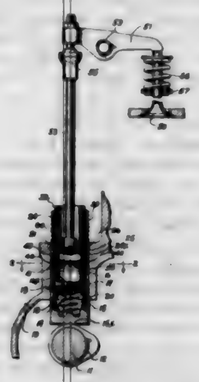
2,950,707
COMBINED LIQUID FUEL AND EXCESS AIR METERING AND DISTRIBUTING, COMBINED LIQUID FUEL AND EXCESS AIR ATOMIZING AND INJECTING, INTERNAL COMBUSTION ENGINE
Frank David Butler, 849 Dickson St., Venice, Calif.
Filed Oct. 13, 1959, Ser. No. 846,110
15 Claims. (Cl. 123—32)



1. In a multiple cylindered four stroke reciprocating piston economical cycle type of operating internal combustion engine having a cam-shaft rotated at one-half the speed of and by a rotatable crankshaft of such engine and wherein each cylinder assembly is equipped with a combined compression and combustion chamber having

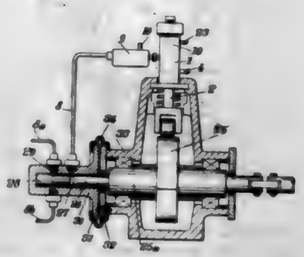
an inlet air valve and, together and externally thereto, having a throttle valve for controlling the air supply thereto, the provision therein and therewith of: a multiple of elongated, pressure activated, combined metered fuel atomizing and injecting and metered excess air diffusing and injecting nozzle valves, with one provided secured to each cylinder assembly and projecting at such end into the adjacent compression chamber of such respective cylinder, and provided at its opposite end with a means of supply of timed metered liquid fuel under pressure, and provided adjacent an intermediate swivel portion thereof with a means of supply of timed metered excess air under pressure, and, wherein each such nozzle valve is provided, during the compression cycle of operation after inlet valve closure, for atomizing and injecting a metered quantity of liquid fuel into its respective cylinder compression chamber in proportion to the quantity of air admitted thereto via its respective inlet valve and as controlled by said throttle valve, and provided further, during the power delivery cycle of operation, after combustion has been initiated within its respective cylinder chamber, for diffusing and injecting a metered quantity of air into the latter, in excess of the normal amount required for combustion, and for burning hydro-carbon remaining therein to carbon dioxide gas so as to eliminate carbon monoxide fumes during the normal exhaust from such respective chamber; an elongated combined fuel and excess air metering and distributing valve, rotatable by said camshaft and oscillatable lengthwise; a manually operative means for simultaneously controlling the oscillation of said combined fuel and excess air metering and distributing valve and said throttle valve, for engine control purposes; and, means of supplying liquid fuel and excess air under pressure to said combined fuel and excess air metering and distributing valve.

2,950,708
VALVE LIFTERS
Alexander J. Golick, 7518 23rd NW., Seattle, Wash.
Filed Mar. 30, 1959, Ser. No. 802,806
8 Claims. (Cl. 123—90)



1. A valve lifter wherein the parts are permanently joined and hermetically sealed and are a continuous metallic unit, said valve lifter comprising a cylinder having a closing wall at its lower end, a piston telescopically fitted within said cylinder and providing a pressure chamber between said closing wall and the lower end of said piston, a hydraulic medium in said pressure chamber and a fluid tight expandable means interconnected between the upper end of the piston and the upper end of the cylinder hermetically sealing the hydraulic medium in the lifter unit.

2,950,709
INJECTION DEVICES INCLUDING A RECIPROCATING PISTON INJECTION PUMP
Pierre Etienne Bessiere, 15 Rue Freycinet, Paris, France
Filed Jan. 22, 1957, Ser. No. 635,220
Claims priority, application France Aug. 14, 1956
7 Claims. (Cl. 123—139)

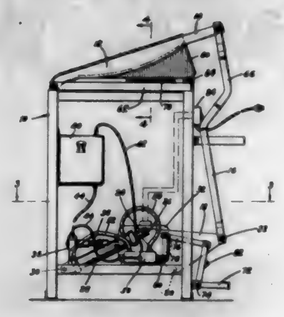


1. A liquid injection device which comprises, in combination, an injection pump including a cylinder and a piston reciprocable in said cylinder, a feed conduit leading from the output of said pump cylinder, said conduit including a throttled portion, a discharge conduit, passage means leading from said pump cylinder output to said discharge conduit to establish a communication between said pump cylinder output and said discharge conduit, a valve member movable in said passage means between a position of rest in which it closes said communication and a position in which it opens said communication, resilient means for urging said valve member toward said position of rest, means for exerting on said valve member a force urging it away from said position of rest and proportional to the difference between the pressures in said feed conduit respectively upstream and downstream of said throttled portion thereof, said above mentioned elements being determined so that said valve member starts moving away from said position of rest thereof substantially at the beginning of liquid injection, and that the variation of the time taken by said valve member to move from said position of rest to said second mentioned position thereof is such as to achieve self-regulation of the amount of liquid fed from said pump to through said fuel conduit, a plurality of injectors, with individual conduits provided between each of said injectors and the portion of said feed conduit located downstream of said throttled portion thereof, and distributor means for successively connecting said individual conduits with said last mentioned portion of said feed conduit.

2,950,710
SLATE TRIMMER
Henry Lenhart, 714 Superba Ave., Venice, Calif.
Filed Aug. 7, 1959, Ser. No. 832,296
3 Claims. (Cl. 125—23)

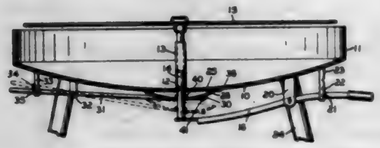
1. A slate trimmer comprising a reciprocable blade, a shear mounted in operative juxtaposition therewith, power means for reciprocating the blade, said power means including a hydraulically operated piston and cylinder combination, valve means for controlling the piston movement, manually operated controls for the valve, the hydraulic means including a fluid reservoir, conduits connecting the reservoir, the cylinder and the valve, a source of power for circulating the fluid through the conduits, links connecting the blade to the piston, said links being pivotally connected to each other, to the blade and to the piston, the entire mechanism being supported in and on a rectangular frame, the blade-moving link extending from the top to the bottom of the frame, the

piston-moving link being triangular in outline and pivotally connected to the blade-moving link at one corner,



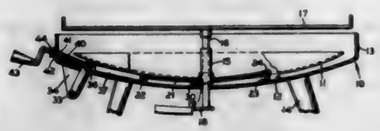
pivotally connected to the piston at another corner, and pivotally connected to the frame at the third corner.

2,950,711
AIR INTAKE DEVICE FOR CHARCOAL GRILLS
George C. Terry, Garden City, N.Y., assignor to Kamkap, Inc., New York, N.Y., a corporation of New York
Filed Oct. 15, 1957, Ser. No. 690,374
1 Claim. (Cl. 126—25)



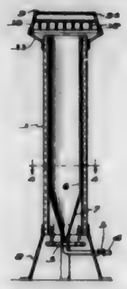
A charcoal grill provided with a fire box which is convex on its lower surface and having a plurality of air intake openings in its central section, and a substantially imperforate closure plate which is concave on its upper surface which is movable upwardly to cause its peripheral edge, which is of a diameter to encircle said air intake openings, to engage the lower surface of the fire box and effectively close the fire box opening, the plate having a shorter radius of curvature than the lower surface of the fire box and forms an ash receptacle, a pivoted lever provided with a ring at its inner end to receive and support the closure plate, and means for securing the lever in an upper position where the closure plate engages said lower surface and also in a lower position wherein the plate can be removed from its support, the lever being so proportioned as to cause the closure plate to engage said lower surface with a measure of compression.

2,950,712
CHARCOAL GRILL WITH REMOVABLE FIRE BOX
George C. Terry, Garden City, N.Y., assignor to Kamkap, Inc., New York, N.Y., a corporation of New York
Filed Oct. 15, 1957, Ser. No. 690,375
1 Claim. (Cl. 126—25)



A charcoal grill comprising an outer bowl provided with supporting means and having a concave upper surface and an upstanding annular rim around its edge, a sleeve extending upwardly from the bowl, a post extending through the sleeve, a lever engaged by the lower end of the post to adjust the height thereof, and a grid secured at the upper end of the post, a fire box of generally watch glass shape positioned within the bowl and having a substantially imperforate wall with substantially the same curvature as the bowl, said fire box being of lesser diameter than the annular rim and having a central opening to receive the sleeve, an annular flange extending upwardly from said opening, and operating means between the bowl and the fire box for supporting the fire box in spaced relation to the bowl and for raising and lowering the same to an adjusted, fixed position.

2,950,713
SALAMANDER BURNERS
Harrison D. Sterick, 2 Market Place, Pittsburgh, Pa.
Filed July 26, 1957, Ser. No. 674,520
1 Claim. (Cl. 126—85)

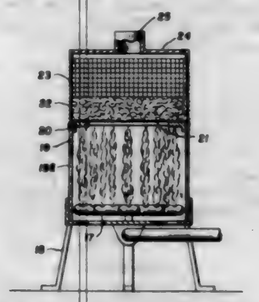


In a heating stove, the combination of a vertical tubular housing having a longitudinally fluted wall, a supporting base mounting said housing, a cylindrical baffle coaxially disposed within said housing with the outer wall of said baffle contacting the indents of the fluted housing dividing the space between the housing and baffle into a plurality of uninterrupted vertically extending angularly spaced open ended flues, an integral inverted conical base on said baffle extending below the lower edge of said housing, a burner positioned beneath said conical base, said burner comprising a central portion directly beneath and in contacting relation with the apex of said conical base, and a plurality of radial ported arms, the outer end of each arm extending radially outwardly beyond the outer wall of said baffle and into alignment with the lower end of one of said vertically extending flues, with the ports of each arm arranged to deliver flame upwardly into a corresponding flue, supporting brackets having upturned, outwardly and upwardly extending flanges mounted on the upper end of said fluted housing, an inverted dish shaped hood of greater diameter than said housing extending over the top of said housing, the sides of said hood extending downwardly into said upturned flanges, vents in the sides of said hood, and means in said hood spaced from the top thereof for deflecting heat from said flues downwardly.

2,950,714
HEATING UNIT
Harrison D. Sterick, 2 Market Place, Pittsburgh, Pa.
Original application Aug. 19, 1954, Ser. No. 450,873, now Patent No. 2,822,799, dated Feb. 11, 1958. Divided and this application Oct. 21, 1957, Ser. No. 691,187
2 Claims. (Cl. 126—92)

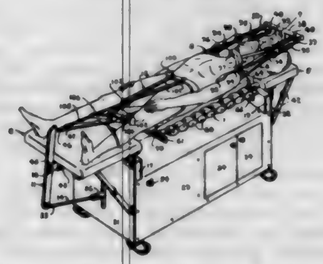
1. A gas heating unit comprising a base adapted to be supported on a floor surface, a vertically extending

hollow cylindrical, metallic housing supported on said base, a gas burner supported in the bottom of said housing, a mat of steel wool of high temperature-resistant metal alloy disposed above said burner and over said housing, said mat being sufficiently thick and dense so as to intercept substantially all the radiant heat emanating



upwardly from the lower surface of said mat and reflect said heat downwardly whereby the flames emanating from said burner will heat the bottom surface of said mat and whereby substantially all of said heat will be reflected, by said mat, away from the top of said housing to heat said housing and radiate heat radially outwardly of said housing.

2,950,715
ORTHOPEDIC BED
Herman J. Brobeck, R.R. 4, Box 220, Valparaiso, Ind.
Filed Dec. 31, 1956, Ser. No. 631,680
5 Claims. (Cl. 128—71)



1. A machine of the kind described comprising a frame, track means carried by the frame, a pair of supports mounted for movement on the track means, at least one of said supports being rockable, a bed comprising a pair of rods having their ends connected to the supports for movement relative to the supports, a plurality of slats carried by the rods, oscillable means provided adjacent one extremity of the machine for attachment to a human body, and power means operatively connected to the oscillable means and the rockable support for operating same.

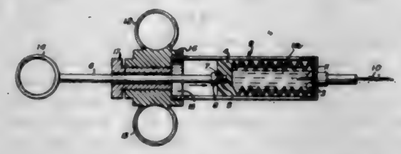
2,950,716
FLUID HANDLING METHOD AND APPARATUS
David Bellamy, Jr., Framingham, and Carl W. Walter, Holliston, Mass., assignors to Fenwal Laboratories, Inc., Framingham, Mass., a corporation of Massachusetts
Filed Jan. 23, 1956, Ser. No. 560,675
10 Claims. (Cl. 128—214)

1. In combination with an integral closed sealed blood handling system having a blood collecting tube, a donation storing container having inlet through said tube, and means for closing said container; a collapsible sample storing chamber integral and communicating with said tube, and means for closing said chamber, said container and chamber closing means manipulable for non-interferent filling and sealing of the donation and sample, and



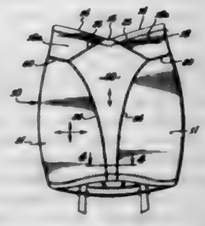
for dispensing said sample through said tube without disturbing said donation.

2,950,717
AMPULES
Bernard Maurice Edouard Bouet, Paris, France, assignor to R. K. Price Associates, Inc., New York, N.Y.
Filed Mar. 19, 1956, Ser. No. 572,440
Claims priority, application France Mar. 21, 1955
2 Claims. (Cl. 128—218)



1. A fluid container of thermoplastic material for use in connection with medical fluid injecting or collecting devices, said container comprising a tubular, bellows-like, body having an integral thin transverse end wall and an integral thick transverse wall, and a blind threaded hole formed in the outer face of said thick transverse wall.

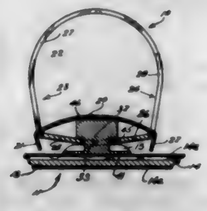
2,950,718
ELASTIC FOUNDATION GARMENT
Olga Erteszek, 7915 Haskell Ave., Van Nuys, Calif.
Filed Aug. 3, 1959, Ser. No. 831,216
6 Claims. (Cl. 128—542)



1. A girdle comprising a body formed of elastic fabric and including a waistband longitudinally elastic substantially throughout its length and forming the top edges of the garment, the upper front edges of the front extent of the waistband sloping downwardly and inwardly from the sides of the garment to convergence at the center of the garment and the upper edges of the band extending across the rear side of the garment sloping

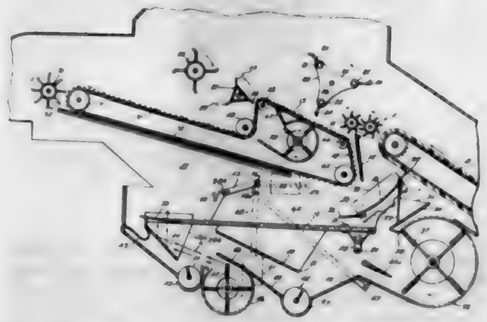
downwardly and inwardly from the sides of the garment to a central convergence location a substantial distance below said convergence of the front edges of the band, the rear extent of the band affording freedom and uplifting support for the back of the wearer by reason of the elastic tensioning of the band from its higher side and front extent, and said body including horizontally and vertically elastic fabric extending from said band at the rear of the garment to the bottom thereof and adjacent its sides.

2,950,719
METAL LOOSE LEAF BINDING WITH LOCK
John W. Lyon, Winnetka, Ill., assignor to General Binding Corporation, Northbrook, Ill., a corporation of Illinois
Filed June 23, 1958, Ser. No. 743,643
1 Claim. (Cl. 129—24)



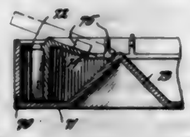
In a binding element and in combination with a notebook back having a relatively flat surface, an arcuate backbone secured to said back in vertically spaced relation with respect thereto and having a concave portion facing said back and flanges depending therefrom and extending along opposite edges thereof and terminating in spaced relation with respect to said notebook back, a plurality of apertures spaced along opposite edge portions of said backbone adjacent the juncture of said flanges therewith, a plurality of ring fingers extending through said apertures and cooperable to form a plurality of closed loops, inturned flanges extending inwardly from said ring fingers between the underside of said backbone and said notebook back, and extending along and engaged by said first mentioned flanges and pivotally engaging one another on the underside of said backbone and spaced from said backbone when said fingers are in a closed loop position, said inturned flanges having a plurality of concave grooves formed along the adjacent edges thereof and registering with each other to form a plurality of elongated apertures affording communication between said notebook back and the underside of said backbone, a locking plate between said inturned flanges and said notebook back and in engagement with the latter, said locking plate having an outer end portion adapted to be gripped by the fingers for moving said locking plate angularly along said back into alignment with said backbone and in angularly extended relation with respect to said backbone in the space between one of said first mentioned depending flanges and said notebook back, said locking plate having a locking lug extending upwardly therefrom having a shank portion of reduced cross-sectional area extending upwardly through one of said apertures for angular movement with respect thereto and having an elongated head portion extending into engagement with said backbone, longer than the width of the associated aperture and shorter than the length of said associated aperture and of a width less than the narrowest dimension of said aperture, interposed between the underside of said backbone and the upper faces of said flanges with the longer dimension of said head portion out of alignment with the longest axis of said aperture when said locking plate is in alignment with said backbone to lock said binder from opening, and accommodating opening of the binder by angular movement of said locking plate beneath one of said depending flanges to bring the longest dimension of said locking lug in alignment with the longest axis of the associated aperture.

2,950,720
GRAIN SEPARATOR
Marville F. Sheard, Athena, Oreg.
Filed Jan. 14, 1957, Ser. No. 634,091
3 Claims. (Cl. 130—21)



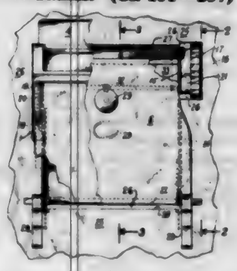
1. In a separator for a combine harvester having a separator housing, a conveyor mounted therein to feed cut and threshed crop rearwardly into said housing and a vibrating grain shoe suspended in said housing positioned below the level of discharge of the crop from the conveyor and extending rearwardly in the housing beyond said conveyor, the improvement comprising a grain deflecting saddle member supported on the shoe between the discharge end of said conveyor and the grain shoe, said saddle member having a rearwardly and upwardly facing surface receiving grain from said conveyor and deflecting it rearwardly over the shoe, blower means in the housing beneath the saddle member, said blower means having air deflection means thereon directing the stream of air upwardly through the shoe and rearwardly across the lower edge of the saddle through the path of the grain deflected rearwardly from the saddle, barrier means along the top and along the bottom surface of said saddle carried by said saddle and engaging the conveyor and the housing forwardly of the outlet of said blower means to prevent air from passing from the blower upwardly in front of the saddle member.

2,950,721
ASH TRAY WITH CAVITY FOR RECEPTION OF ASHES
Elie P. Aghnides, 46 W. 54th St., New York 19, N.Y.
Continuation of application Ser. No. 301,516, July 29, 1952. This application Oct. 16, 1958, Ser. No. 767,745
1 Claim. (Cl. 131—235)



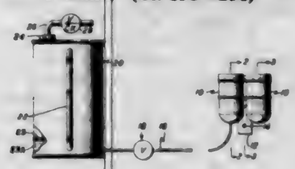
An ash tray comprising a cylindrical outer part and a cylindrical inner removable part, the outer part being a bowl and the inner part being spaced from the outer part, the inner part having a portion resting on the bowl and extending upward from the bottom of the bowl in spaced relation with the wall of the bowl, means between the spaced walls of said parts for dividing the space into a plurality of vertical cigarette extinguishing cavities, the inner part including a lip extending inwardly from its top end thereby overhanging the central cavity formed in the bowl, said lip being entirely inward of said bowl, inner said outer part having a generally conical projection extending into said central cavity adjacent the inner edge of said lip, said means comprising a lid-portion covering the space between said parts and a plurality of radially extending baffles spaced apart within the space between said parts to form said vertical cigarette extinguishing cavities, the lid-portion having openings respectively above said cavities to enable insertion of cigarette butts into the cavities, said lid portion and said baffles being carried by said inner part and extending outward toward the outer part with the periphery of the lid portion extending substantially to the inner wall of the outer part to thereby provide spacing means for spacing the two parts and centering the inner one in the bowl.

2,950,722
ASH TRAYS
Patrick R. Mellon, Continental Hotel, 127 Ellis St., San Francisco, Calif.
Filed Sept. 27, 1956, Ser. No. 612,377
2 Claims. (Cl. 131—237)



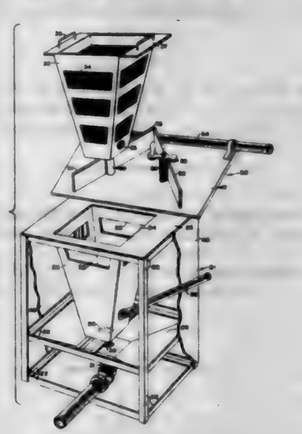
1. In combination, a vertical board having a substantially rectangular opening therein, a rectangular container pivotally mounted in said opening with freedom of limited outward swinging movement on its lower front edge, a cylindrical drum rotatably mounted in the upper end of the container and having an opening in its face for the reception and dumping of a cigarette, an operating member for the drum for turning the same, an arcuate lid for the drum opening hinged to the rear edge of the container and having an extension projecting beyond one end of the drum, the operating member for the drum having means cooperating with the lid extension for opening the lid when the drum is turned with the container to a tilted position, and the board having an upper edge defining the opening and located to bear on the lid for closing the same when the container is swung back into the board.

2,950,723
ASH TRAYS
Arthur C. Elswood, 5221 Hemlock St., Sacramento, Calif.
Filed Sept. 3, 1957, Ser. No. 681,678
1 Claim. (Cl. 131—256)



An ash tray comprising a container, a closed fluid reservoir constructed and arranged to hold gas under positive pressure, a conduit connected at one end to the interior of a lower portion of the reservoir and connected at the other end to the interior of the container, a line connected to the interior of the reservoir, a check valve in the line to permit fluid to flow through the line toward the reservoir and prevent fluid from flowing through the line out of the reservoir, and a valve in the conduit for controlling the flow of fluid from the reservoir to the container.

2,950,724
SAMPLING DEVICE AND METHOD FOR OBTAINING SAMPLES
Edward P. Roederer, Jr., Lafayette, La., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed Jan. 20, 1956, Ser. No. 560,356
8 Claims. (Cl. 134—183)

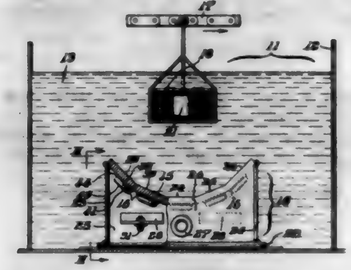


1. Apparatus for sampling well cuttings which comprises, in combination: a perforate container; a housing for said container, said housing being open at the top for receiving said container and having an opening in the upper portion of at least one side thereof; a framework for supporting said housing; a table, inclined with respect to the vertical, and positioned above and to one side of said housing, for receiving cuttings from a well, the lower edge of said table being adjacent said open top of said housing; a perforate pipe disposed across the top of said table in a horizontal direction; a flow regulator mounted on the surface of said table between said pipe and the lower edge of said table; and a wash liquid inlet conduit connected to the lower portion of said housing.

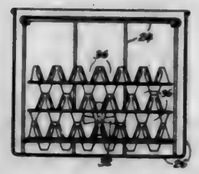
2,950,725
ULTRASONIC CLEANING APPARATUS
Stanley Emil Jacke, Milford, Lowell C. Newsome, Inkster, and John W. Collison, Bloomfield Hills, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan
Filed Mar. 26, 1958, Ser. No. 724,138
5 Claims. (Cl. 134—184)

1. Ultrasonic cleaning apparatus for cleaning a work object in a well containing a cleaning liquid, said apparatus comprising a hermetically sealed housing submerged in said liquid; a focused emitting plate for emitting ultrasonic waves, said emitting plate forming part of said housing and being spaced away from said work object, said emitting plate being formed of flat segments with the exterior surface of the emitting plate being of generally concave conformation; and a plurality of flat transducers attached to the interior surface of each of

said segments with the interior surface of the emitting plate being of generally convex conformation, said transducers and said plate operating to emit a plurality of beams of ultrasonic waves, each of said beams being normal to the surface of the flat segment to which it is attached, whereby the beams of ultrasonic waves are focused and converge at a focal zone outside of the housing.



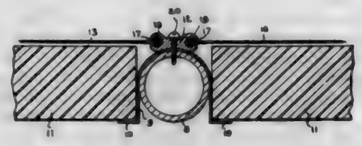
2,950,726
EGG WASHER AND EGG HOLDING TRAY
Henry Y. Kuhl and Paul R. Kuhl, Box 26, Flemington, N.J.
Filed Mar. 5, 1958, Ser. No. 719,374
6 Claims. (Cl. 134—194)



1. Egg washing equipment comprising a casing having a chamber therein for receiving egg cleaning liquid, a carrier removably fitting within said chamber, a plurality of egg holding trays removably supported in stacked relation within said carrier, said trays being made of material which is not substantially adversely affected by the cleaning liquid and each formed with egg receiving recesses surrounded by upstanding projections defining regularly arranged channels between the trays controlling the flow of said egg cleaning liquid within the chamber, said recesses and projections having openings in the sides thereof through which liquid may flow into and out of contact with eggs supported by the trays, and means for circulating said liquid through said channels and openings and about eggs supported by said trays.

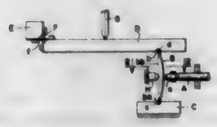
2,950,727
SUPPORT FOR FLEXIBLE AWNING COVERS
Harold S. Dunn, 163 Fiesta Way, Fort Lauderdale, Fla.
Filed Nov. 27, 1959, Ser. No. 855,615
7 Claims. (Cl. 135—5)

2. Supporting means for flexible canvas or the like covering that constitutes the roof for framed-in areas such as patios, swimming pools or the like, a supporting frame for the canvas that comprises perimeter frame members and spaced apart parallel rafters, saddle devices that overlie the rafters and the frame members, the saddles each being provided with lower outwardly directed flanges, panels that comprise sheets of relatively thick expanded polystyrene that extend across the openings between adjacent rafters and to have their edge portions in resting support upon the flanges of the saddles, connector bars secured to the tops of the several rafters and the perimeter frame members to be co-extensive in length therewith, the bars being channeled along their marginal edges, the covering being sections of canvas



or the like that substantially conform to the openings between the rafters, the marginal edges of the sections being engaged in the channels and with the marginal portions of the bars being bendable downwardly to clamp the edges of the sections against shifting, the said panels being of a thickness whereby their upper surfaces closely underlies the canvas sections when the panels are supported upon the flanges of the saddles.

2,950,728
FLAPPER VALVE
Robert B. Watrous, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Dec. 3, 1954, Ser. No. 472,865
7 Claims. (Cl. 137—82)

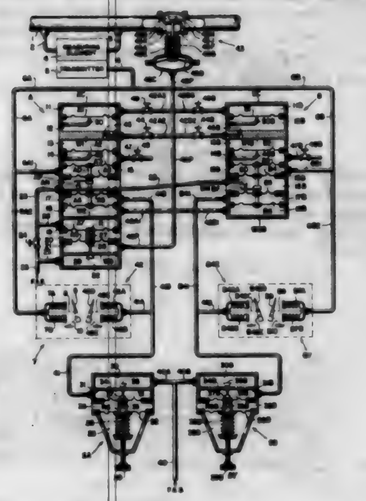


1. A motion amplifying flapper valve structure operative to variably throttle a fluid flowing from the bleed nozzle of a pressure chamber to alter the magnitude of the pressure of said fluid within said chamber, comprising a single thin flat plate of resilient material and means for applying pressure directly to one end portion of said plate while the other end portion is positioned for pivoting in a stationary block to thereby bow the entire plate and move its central portion transversely to a plane including said end portions.

2,950,729
CONTROLLER
Harry J. Hartz, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 25, 1958, Ser. No. 723,863
8 Claims. (Cl. 137—85)

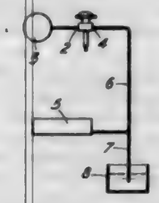
1. A servomechanism, including, a measuring element sensing variations in a measured variable, a transmitter actuated by said measuring element, a pair of controllers each having means operable by said transmitter to vary a supply of power in the sense opposite to the sense in which said supply of power is varied by the other controller, means in each of said controllers manually operable to position the power-varying means in said controller at a set point representing that value of the measured variable which it is desired that the controller

maintain, and a motor connected to each of said power-varying means to receive power therefrom and operable



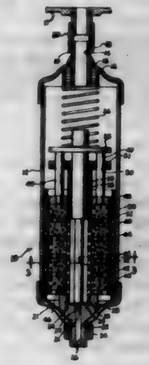
by the power supplied to said motor to actuate a final control element.

2,950,730
VACUUM CONTROL VALVE DEVICE
Sven Alvar Svensson, Johanneshov, near Stockholm, Sweden, assignor to Ingeniorsfirman Fliesberg AB, Stockholm, Sweden, a corporation of Sweden
Filed Dec. 20, 1955, Ser. No. 554,294
Claims priority, application Sweden Dec. 23, 1954
3 Claims. (Cl. 137—116.3)



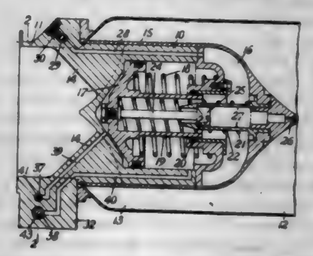
1. A valve device for maintaining vacuum in an apparatus at a constant negative pressure value comprising a valve housing having one side connected to said apparatus, first balanced valve means in said housing for controlling the passage therethrough, second valve means adapted to operate when the first valve means is closed for controlling the passage of fresh air to said one side of said valve housing, pressure responsive means for controlling both said valve means in response to the vacuum prevailing in said apparatus, and a conduit connecting said pressure responsive means with said one side of said valve housing, the opening of said conduit being located remote from said second valve means, the first and second valve means including coaxial valve members adapted to work in opposite directions, a spindle slidably supporting said valve members, stud means between said valve members for determining the distance between the same corresponding to closed position of both valve members, spring means at opposite sides of said valve members for urging the same towards each other, said pressure responsive means being connected to said spindle for operating said spindle.

2,950,731
DRAIN VALVE FOR COMPRESSED AIR RESERVOIR
Leo A. Heintzelman, 4990 Burlingame SW., Grandville, Mich.
Filed July 30, 1958, Ser. No. 751,963
3 Claims. (Cl. 137—183)



1. An automatic condensate drain valve for a compressed air reservoir, comprising, an elongated cylindrical housing defining a chamber having at one end an inlet passage communicating with the reservoir and at the other end an outlet passage, a valve seat member in said outlet passage having a surface thereon defining a valve seat, a perforated sleeve extending within said housing and fixed at one end to said member, a valve stem slidably supported in said sleeve and having an end cooperable with said seat to close said outlet passage, said valve stem extending through said sleeve and terminating in a flange, a spring acting between said flange and the housing for biasing said valve stem to close said outlet passage, a plurality of perforated annular spacer discs slidably positioned in spaced relation on said perforated sleeve, spools of porous water expansible material interposed between said discs and capable of expanding when contacted with water which collects in said housing, and means operatively connecting said spools to said valve flange so that said flange is moved against the force of said spring to open said valve in response to an expansion of said water expansible means thereby to discharge through said outlet passage the water in said housing which caused said expansion.

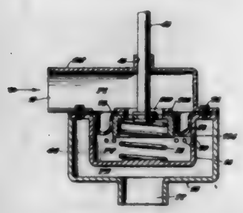
2,950,732
COMPRESSED AIR OR OTHER GAS CONTROL VALVES
Harold Leslie Lambert, Shirley, Solihull, England, assignor to Rotax Limited, London, England
Filed Sept. 11, 1958, Ser. No. 760,330
1 Claim. (Cl. 137—219)



A compressed gas valve comprising in combination a body part provided with a gas inlet and a gas outlet, and

with ports for establishing communication between the gas inlet and outlet, a hollow closed cylinder rigid with the body part and located between the gas inlet and outlet, a spring-loaded piston contained in the cylinder, a cylindrical shutter slidably mounted on the cylinder to control gas flow through the ports in the body part, a spring-loaded telescopic piston rod means connected at opposite ends respectively to the piston and one end of the shutter and providing a resilient connection between said piston and said shutter, the said end of the shutter enclosing between it and the adjacent end of the cylinder a space to which gas under pressure from one side of the ports in the body part is admissible through a restricted orifice, a relief valve supported by said body part and having a larger flow capacity than the said orifice, said relief valve being in communication with said space for controlling the air pressure in the said space, a pair of passageways communicating with the interior of the cylinder at opposite sides of the piston, and ancillary valve means for alternatively controlling communication of the passageways with the gas inlet and the outer atmosphere, the shutter being movable towards its closed position by the air pressure in the outlet when the relief valve, is opened by the air pressure in the space between the said end of the shutter and the adjacent end of the cylinder.

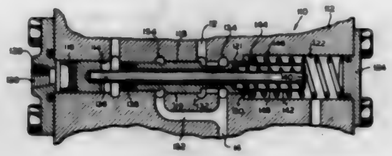
2,950,733
FLOW CONTROL DEVICE
Charles H. Perkins, Fountain City, Tenn., assignor to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Filed Oct. 25, 1957, Ser. No. 692,328
13 Claims. (Cl. 137—495)



1. In a flow control device, the combination comprising a first casing having an inlet passage for a flow of fluid, a second casing having port means for a flow of fluid therethrough, said first and second casings being juxtapositioned to define a flow control chamber therebetween, means communicating with said port means for receiving the flow of fluid therefrom and having an outlet passage for the flow of fluid from said flow control device, flow control means within said flow control chamber including a valve means mounted for movement between flow controlling positions to restrict the flow of fluid through said port means and restricted orifice means defining a passage for the flow of fluid from said inlet passage to said port means, said valve means dividing said flow control chamber into a first chamber communicating with said inlet passage and a second chamber communicating with said port means, means connected to said valve means for controlling the flow controlling position thereof from a point externally of said flow control chamber, said valve means comprising a flexible diaphragm cooperable with said second casing to increase the effective flow control area of said port means in response to the fluid pressure differential between said first and second chambers, and yieldable means operably disposed in said second chamber and biasing said flexible diaphragm out of cooperation with said second casing to decrease the effective flow control area of said port means.

2. A flow control device as claimed in claim 1 wherein said means for controlling the flow controlling position of said valve means from a point externally of said flow control chamber comprises a stem member having one end thereof connected to said valve means and the other end thereof projecting through said first casing to a point externally of said first casing.

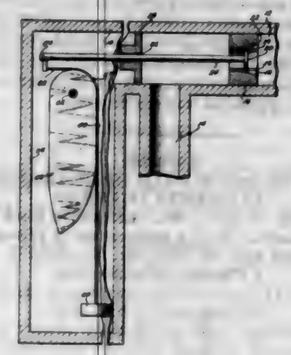
2,950,734
REGULATING VALVE
Woodrow A. Hasbany, South Bend, Ind., assignor to Clark Equipment Company, a corporation of Michigan
Original application Nov. 10, 1958, Ser. No. 772,920. Divided and this application Nov. 23, 1959, Ser. No. 854,759
5 Claims. (Cl. 137—495)



1. A regulating valve of the character described, said valve comprising a valve body having a longitudinal cylindrical bore therein, a pressure inlet and a pressure outlet communicating with said bore, a piston in said valve body having an elongated operating rod extending into said bore, means for moving said piston, a valve spool slidably arranged within said bore for restricting the flow of pressure fluid between said inlet and said outlet, said valve spool being concentric with and freely slidable relative to said operating rod, a sleeve member carried by one end of said operating rod in juxtaposition to said valve spool, a return spring within said bore and engaging said sleeve member and adapted and arranged to normally bias said piston and said valve spool to a position providing substantially unrestricted flow of pressure fluid from said inlet to said outlet, said valve spool being substantially hydraulically balanced with respect to the fluid pressure at said inlet, regulating passage means in said body communicating with said bore and with said outlet and adapted and arranged to hydraulically unbalance said valve spool in response to the pressure existing at said outlet, and regulating spring means surrounding said operating rod between said sleeve member and said valve spool and adapted and arranged to bias said valve spool in opposition to the hydraulic unbalance thereof, whereby upon operating movement of said piston, said sleeve member moves to compress said return spring and said valve spool performs a pressure regulating action between said inlet and outlet under the influence of said regulating spring responsively to the pressure existing at said outlet.

2,950,735
FLOW CONTROL RESISTANCE
Victor L. Streeter, Ann Arbor, Mich., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Filed Oct. 15, 1956, Ser. No. 615,786
4 Claims. (Cl. 137—519)

1. A member for positioning in a flow stream including a housing having an inlet opening and a discharge opening, an orifice defining member positioned within the housing between said openings and having an orifice forming a flow throat therethrough, a poppet member within the orifice member, said members being relatively movable with variations in fluid head to vary the cross sectional flow area through the throat of the orifice defining member, one of said members being profiled to



vary the cross sectional area of the throat with movement of the other member, said profile being formed in accordance with the definition

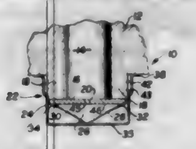
$$x=\frac{2Y_0}{\ln H}\left\{\ln\left[\frac{r_0+\frac{t}{2}}{2\sqrt{2}(r'-r_0)(r'+r_0)}\frac{Y_0}{\ln H}\sqrt{1-\sqrt{1-\left(\frac{t\ln H}{Y_0}\right)^2}}\right]-\frac{1}{2}\left[1-\sqrt{1-\left(\frac{t\ln H}{Y_0}\right)^2}\right]\right\}$$

in which:

x is the axial coordinate of throat profile
Y_0 is the value of y coordinate for minimum design head loss across poppet member
H is the ratio of maximum fluid head to minimum fluid head
r_0 is poppet member radius
r' is the minimum throat radius
t is $r-r_0$ where r equals the radial coordinate of the throat

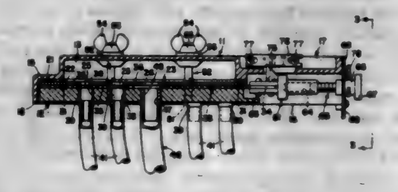
a nonlinear resistance for the movable member including a cable operatively connected thereto, a weight secured to the free end of the cable, and a profiled cam supporting the cable and freely pivotal with the linear changes in cable position to provide a nonlinear backing for the movable valve member.

2,950,736
VALVE MECHANISM WITH INTEGRAL SPRING AND CAGE MEMBER
Sidney Oldberg, Birmingham, Mich., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Filed Nov. 23, 1956, Ser. No. 624,133
10 Claims. (Cl. 137—529)



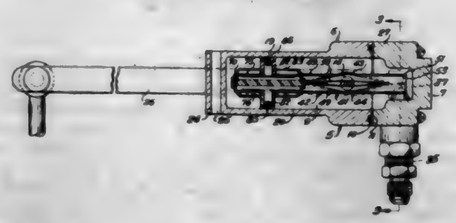
10. A one piece combination cage and spring means including a sleeve portion having a base portion, a pair of resilient finger members formed from said base portion and extending in opposite directions in overlapping relation to each other with the opposite ends of the finger members from the free extremities thereof being formed from the base portion of the sleeve portion.

2,950,737
FERTILIZER DISTRIBUTOR
John W. Hendrix, Madison, Wis., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Feb. 20, 1958, Ser. No. 716,345
6 Claims. (Cl. 137—625.48)



1. A liquid metering device comprising a pair of sections having mating flat surfaces, each of said surfaces lying in a plane; a flat aperture adjusting plate movably disposed between said mating surfaces in interfitting relation therewith, a plurality of tubes carried by one of said sections and having inner ends adapted to communicate with the space between said sections, said adjusting plate overlying the inner ends of said tubes and having a plurality of apertures, one for each of said tubes, shifting said adjusting plate to different selected positions serving to vary the effective area of each tube end through which flow is permitted, the effective areas of all of said tubes being varied through substantially the same extent, an additional tube constituting inlet means carried by said one section, said adjusting plate having an additional aperture associated therewith and disposed in line with said additional tube, and means forming a chamber carried by the other section and communicating with all of said tubes, said additional adjusting plate aperture being larger in area than the associated inlet tube so that full inlet flow is available in any position of adjustment of said adjusting plate.

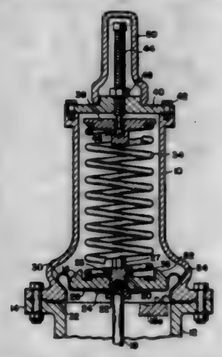
2,950,738
DAMPED AIR VALVE
Robert J. Broadwell, Cleveland, Ohio, assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio
Filed July 12, 1957, Ser. No. 671,495
2 Claims. (Cl. 137—627.5)



1. A damped valve device for controlling a fluid pressure unit that effects the relative movement between two movable members, comprising a housing formed with a pressure chamber, a shaft oscillatably journalled in said housing and extending transversely through said pressure chamber, pendant means mounted intermediate its ends on said shaft and including a pair of substantially identical stamped members in complemental opposed relation defining a spring cavity and separate enclosure means, a

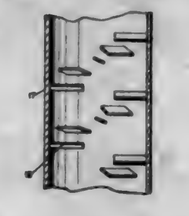
torque coupling between said shaft and pendant means comprising a pair of leaf springs disposed in said spring cavity embracing diametrically opposed flats formed centrally on said shaft and operatively connected at the ends thereof to said stamped members, means for connecting said pressure chamber to said fluid pressure unit, first valve means for connecting said pressure chamber to a source of pressure fluid, second valve means for connecting said pressure chamber to atmosphere, means carried on one end of said pendant means and movable therewith in one direction of oscillation of the shaft to actuate said first valve means and movable upon said shaft being oscillated in the opposite direction to actuate said second valve means, and damping means effective to delay the movement of the pendant means comprising an impervious element disposed in said separate enclosure means and attached to said pendant means, a flexible diaphragm member mounted at its peripheral portion to each opposed side of said impervious element defining a pair of separate pressure fluid chambers containing a fluid medium, said impervious element including an orifice interconnecting said pressure fluid chambers in fluid circuit, and actuating means attached to each of said flexible diaphragm members extending outwardly of said enclosure means in opposite directions and engaging the housing, said actuating means being operative to cause a transgression of the fluid medium between said pressure fluid chambers in response to a sustained oscillation of said shaft in either direction to effect the swinging of the pendant means.

2,950,739
DIAPHRAGM MOTOR
Joseph P. Lofink, Neville Island, Pa., assignor to The Chaplin-Fulton Mfg. Co., Pittsburgh, Pa., a corporation of Pennsylvania
Filed Mar. 6, 1957, Ser. No. 644,271
2 Claims. (Cl. 137—788)



1. A valve operating mechanism actuated by fluid pressure comprising a hollow casing having a circular opening in a body portion thereof, a flexible diaphragm extending across said opening and secured at its periphery to said casing, a circular diaphragm plate centrally positioned on said diaphragm and connected thereto and having a diameter less than that of the opening, said plate having a portion extending into said casing, a spring operatively connected to the plate to exert pressure on said diaphragm, means on said plate for securing it to valve operating mechanism, the peripheral edge of the portion of said plate extending into the casing providing a surface sloping toward the center of the plate, the edge of said surface having the largest diameter being closer to the diaphragm than the edge of said surface having the smallest diameter, said casing providing a surface extending around said opening and sloping outwardly from the opening in a direction away from the sloping surface on said plate, said flexible diaphragm having an annular looping fold extending into the space between said sloping surfaces whereby upon axial movement of the diaphragm the effective area of the diaphragm is varied, said diaphragm having a surface exposed to fluid pressure in opposition to the pressure exerted by said spring said effective area increasing and decreasing as the pressure of the spring increases and decreases whereby the valve operating mechanism actuates a valve in accordance with the fluid pressure applied to said diaphragm.

2,950,740
FLUE CONDUITS WITH HEAT TRANSFER ELEMENTS THEREIN
Oscar L. Bock, Madison, Wis., assignor to Bock Corporation, Madison, Wis., a corporation of Wisconsin
Filed Apr. 29, 1957, Ser. No. 655,775
2 Claims. (Cl. 138—38)



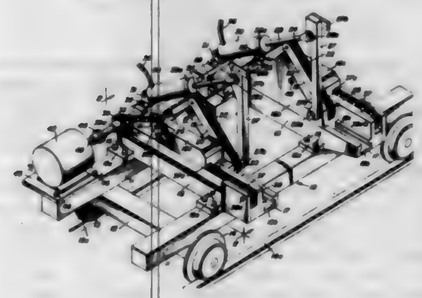
1. A heat transfer device comprising a tube having a fluid inlet end and a fluid outlet end, a plurality of substantially flat baffles for heat exchange contact with fluid flowing through the tube, said baffles being secured to the inner wall of said tube in heat exchange relation and projecting inwardly a substantial distance toward the central axis of said tube, the said baffles having opposed surfaces facing respectively toward said inlet and outlet end, the said baffles being arranged successively along the inner wall of said tube in a spiral pattern and the said baffles being tilted at a substantially uniform angle in a direction counter to the direction of their spiral pattern with their inlet end facing surfaces inclining toward said outlet end whereby to guide fluid flow through the tube in a spiral path counter to the direction of the spiral pattern of said baffles.

2,950,741
PILE FABRIC
Thomas T. Janney, Lafayette, and Robert J. McCann, North Wales, Pa., assignors to James Lees and Sons Company, Bridgeport, Pa., a corporation of Pennsylvania
Filed Oct. 31, 1955, Ser. No. 543,896
3 Claims. (Cl. 139—404)



1. In the manufacture of a one shot carpet having ground warps, pile warps, and double weft shots, the method of weaving said carpet which comprises forming a pile wire shed by raising at least one of said pile warps to an upper shed position, inserting a transverse pile wire into said pile wire shed, beating up said wire to the fell of the carpet, forming a ground fabric shed by disposing one portion of the ground warps in a lower shed position, and the remaining portion of the ground warps above said lower shed position, inserting a double weft shot into said ground fabric shed, beating up said shot to the fell of the carpet, forming a second pile wire shed by raising at least one of the pile warps to an upper shed position, inserting a pile wire into said shed, beating up said wire to the fell of the carpet, forming a second ground fabric shed by disposing said remaining portion of said ground warps in the lower shed position and disposing said one portion of the ground warps in a position above said lower shed position, inserting a double weft shot in said second ground fabric shed, and beating up said shot to the fell of the carpet.

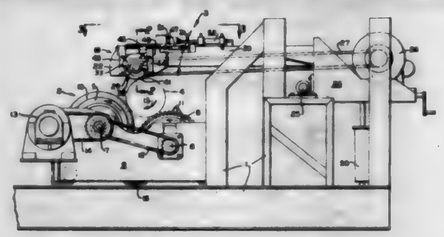
2,950,742
LEVER AND ENDLESS CHAIN LOG TURNER FOR SAW MILL CARRIAGES
Claude O. Weikel, 1438 Velma Ave., Santa Rosa, Calif.
Filed May 11, 1959, Ser. No. 814,140
11 Claims. (Cl. 143—102)



1. The combination with a work-supporting saw mill carriage frame having a saw-adjacent side; of a self contained work-turning means comprising a driven work-shifting means operating horizontally inwardly from adjacent the saw side of said carriage, a second work-shifting means located inwardly of at least the outer portion of said first work shifting means and also operating inwardly with respect to the saw side of said carriage, the second means receiving work from the first means and being upwardly and rearwardly inclined to support and tilt the travelling work, drive means for said work-shifting means, lever means operable to rockingly move the work to sawing position adjacent the saw side of said carriage and to present a new work surface toward a saw, and actuating means for said lever means.

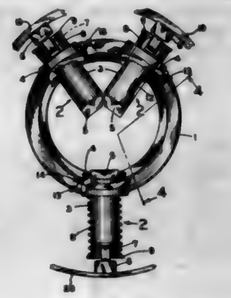
2,950,743
POLE SHAVING APPARATUS HAVING BARK BREAKER
Joe T. Napier, Camarillo, and Jess F. MacMurray, Alameda, Calif., assignors to J. H. Baxter & Co., San Francisco, Calif., a corporation
Filed Nov. 26, 1957, Ser. No. 699,030
3 Claims. (Cl. 144—208)

1. Apparatus for shaving bark from logs comprising: conveyor means for conveying a log along a longitudinally extending path of travel in one direction and at the same time axially rotating such log, a shaving head mounted for rotation about an axis parallel to said path and including axially elongated, radially projecting peripheral cutting edges, means for rotating said shaving head, means mounting said shaving head for movement transversely of said path for engaging said cutting edges with the periphery of a log in said path for shaving a relatively wide swath of bark from such log, and a bark-breaking head mounted coaxially with said shaving head for rotation therewith and axially spaced therefrom on that side opposite said one direction, said bark-breaking



head having a plurality of radially projecting, relatively axially narrow, peripheral cutting teeth engageable with the periphery of such log in said path ahead of said shaving head for cutting a relatively narrow kerf through such bark of a log being shaved.

2,950,744
WHEEL RIM HOLDING WEB
Harry G. Twiford, 777 S. Adams St., Denver, Colo.
Filed Jan. 27, 1958, Ser. No. 711,484
3 Claims. (Cl. 144—288)

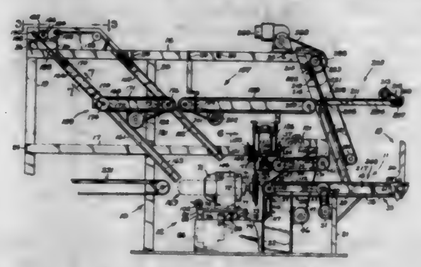


1. A temporary web for a vehicle tire rim comprising an annular body arranged to telescope in a vehicle wheel rim, at least three plunger members telescopically mounted in said member and arranged for radial reciprocable movement, stop means for limiting maximum and minimum radial movement of said plungers, beveled surface means on the inner end of each said plunger for seating against a wedging member having a coacting beveled surface arranged to force each said plunger radially outwardly, and a pressure pad pivotally mounted on the outer end of each said plunger, each said pressure pad arranged to provide a two point seating against a wheel rim.

2,950,745
JOINTER APPARATUS AND METHOD
David V. Prentice and Edwin M. Heth, Portland, Oreg., assignors to Prentice Machine Works, Inc., Portland, Oreg., a corporation of Oregon
Filed Nov. 4, 1957, Ser. No. 694,150
7 Claims. (Cl. 144—309)

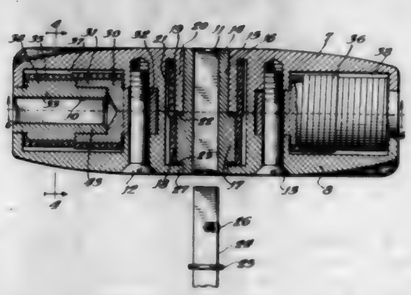
1. A method of producing straight edged veneer sheets which comprises a conveying a series of sheets of elongated veneer transversely of their length into a cutting station, clamping each sheet when it occupies the cutting station in a stationary position and cutting a straight edge along the forward margin of the sheet while it is held stationary using a cutter moving transversely of the path of travel for the sheet, advancing in series the

veneer sheets after cutting forwardly and transversely of their length through and beyond said cutting station thereby to free said station for a subsequent cutting operation, removing at intervals from the series of sheets advanced from the cutting station those sheets which are



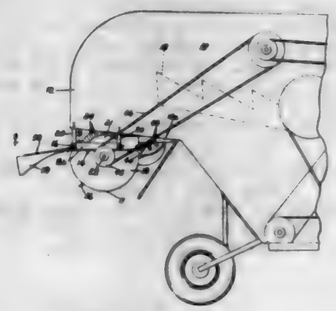
cut along only one margin and returning these sheets to a station spaced rearwardly of said cutting station, and interspersing these sheets with the uncut margins of the sheets positioned as the forward margins with new sheets to form the series of sheets conveyed into said cutting station.

2,958,746
CLUTCHED HANDLE FOR TOOL SHANKS
Claude M. Towne, Watertown, Wis., assignor to General Metals Corporation, a corporation of Delaware
Filed Aug. 12, 1957, Ser. No. 677,734
1 Claim. (Cl. 145—77)



A manipulating handle for a tool, comprising: a handle body adapted to be grasped for manipulation and having a bore extending therethrough opening to opposite sides of the body, said body having portions separable on a plane transverse said bore, one of said body portions having an annular recess about the bore forming a cylindrical skirt generally concentric with the bore, the other body portion having a bore portion larger than said skirt; a drive sleeve rotatable within the bore in said body portion having the skirt and having an enlarged cylindrical portion extending outwardly in the other body portion, said enlarged portion and skirt having outer surfaces generally in alignment and in tandem, said drive sleeve having a central passage open at both ends on opposite sides of the handle for receiving a tool shank inserted in either end thereof; and a helical clutch spring frictionally embracing the skirt outer surface and enlarged cylindrical portion of the drive sleeve outer surface to clutch the sleeve to the handle upon movement of the handle in direction to wind the spring upon the sleeve, said spring permitting relative motion between the drive sleeve and handle in the opposite direction whereby the handle may drive the sleeve in one direction to obtain selective directional drive of a tool shank when placed in opposite ends of the drive sleeve.

2,958,747
STRAW CUTTER
Vivian Perry Alloway, W. 3607 Kiernan, Spokane, Wash.
Filed May 6, 1957, Ser. No. 657,379
4 Claims. (Cl. 146—117)



1. Means for cutting straw emitted from the straw discharge portion of a harvesting machine comprising a framework mounted to the harvester, a feeding drum journalled in said frame, said feeding drum having a plurality of radially extending feeding fingers thereon, a cutting drum journalled in said frame parallel to and rearwardly of said feeding drum, the cutting drum being spaced below the level of the feeding drum, said cutting drum having radially extending ears thereon, cutters secured to said ears, said cutters having substantially radially extending parallel sharpened leading and trailing edges and having their outwardly facing top edges curved about the axis of the drum as a center, the cutters being staggered with respect to the feeding fingers on the feeding drum and the feeding drum and cutting drum being spaced to cause the feeding fingers to intermesh with the cutters, a bottom wall positioned beneath said cutting drum and curving upwardly toward the feeding drum about the axis of the cutting drum as a center, the upper edge of said bottom wall being spaced below the feeding drum, a curved shield positioned below the feeding drum and joining the bottom wall at the upper end thereof, said shield and said bottom wall being supported on the framework, a transversely extending row of stationary sharp edged teeth secured to said bottom wall below the upper edge thereof, said teeth being positioned in staggered relation to the cutters on said cutting drum to pass said cutters between said teeth upon rotation of said cutting drum, means to rotate the cutting drum rapidly in a direction to cause the cutters thereon to pass downwardly past said teeth, and means to rotate the feeding drum in the opposite direction at a substantially slower speed.

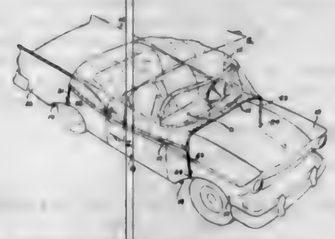
2,958,748
GOLF CLUB AND BALL CARRIER
Lowell D. Olinghouse, 927 Devon St., Indianapolis, Ind.
Filed Jan. 2, 1959, Ser. No. 784,773
4 Claims. (Cl. 150—1.5)

4. A golf club and ball carrier comprising a series of tubes arranged in side-by-side relation, means for fixing said tubes to the central post of a golf cart, a base plate on which said tubes are bottomed and means holding said tubes in engagement, a piston movable within one of said tubes and adapted to underlie a stack of balls accommodated in said one tube, a compression spring within said one tube urging said piston upwardly, a ball dispensing aperture in the side wall of said one tube located just above the position assumed by said piston when said spring is uncompressed, and a removable closure for said



aperture, said piston thereby feeding balls to the level of said aperture for removal therethrough.

2,950,749
QUICK ATTACHABLE AND DETACHABLE COVERING FOR THE OPEN SEATING COMPARTMENT OF CONVERTIBLE AUTOMOBILES
George W. MacDonald, 3929 Maquoketa Drive, Des Moines, Iowa
Filed Apr. 20, 1959, Ser. No. 807,429
5 Claims. (Cl. 150—52)



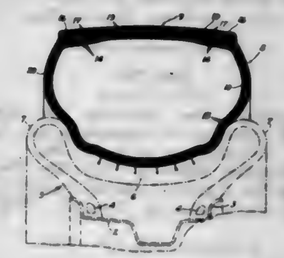
1. A new article of manufacture, a substantially rectangular sheet member having sleeves extending along its four edges, the sleeves along the front and rear edges of said sheet member having elongated members extending therethrough, a hook on each end of each of said elongated members, elongated flexible resilient members extending through the sleeves along each of the side edges of said sheet member, said elongated flexible resilient members having their ends connected to said elongated members near the hooks thereon.

2,950,750
TRACTION CHAIN FOR VEHICLES
Henry St. Pierre, 50 Frank St., Worcester, Mass.
Filed Nov. 19, 1956, Ser. No. 623,179
1 Claim. (Cl. 152—231)



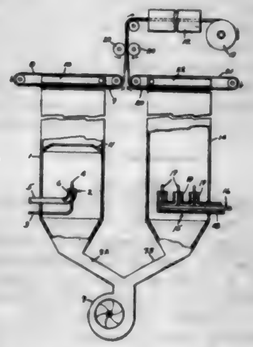
Tire chain comprising cross-chains and connected side chains, each cross-chain including a length of straight non-twisted links adapted to lie substantially flat when loose and alternately at right angles to each other when tensioned by use in mud or snow, and swivel connections for each cross-chain with relation to the side chains whereby the cross-chains may rotate relative to the side chains.

2,950,751
EMERGENCY TIRE
Calvin M. Bolster, Joseph P. Keenan, and Paul O. Pfeiffer, Akron, Ohio, assignors to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Filed Feb. 26, 1957, Ser. No. 642,447
8 Claims. (Cl. 152—330)



1. The combination with a vehicle wheel having a deflated tire mounted thereon that has a flexible substantially incontractible tread and flexible side walls, of an inflatable external tire comprising a fabric reinforced endless tube that is substantially flat in transverse section and of uniform width from edge to edge when uninflated, that is of such size as to exteriorly fit upon said deflated tire tread and that has a substantially inextensible tread portion on its exterior face, said tube being inflatable and expansible radially inwardly upon inflation to apply radial inward pressure throughout the circumference of the tread of the deflated tire to collapse the same into the space between said deflated tire-side walls which provide a recess to which said tube conforms.

2,950,752
APPARATUS AND METHOD FOR THE PRODUCTION OF RETICULATE WEBS
Paul C. Watson, North Quincy, and Howard O. McMahon, Lexington, Mass., assignors, by mesne assignments, to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 24, 1953, Ser. No. 400,240
10 Claims. (Cl. 154—1)



10. Apparatus for the production of permeable, elastic, reticulated, fibrous shot-free bodies of elastomeric materials which comprises a tower, a spraying unit positioned within the tower including an upwardly projecting nozzle for passing a primary stream of gas at a high velocity through the tower and an upwardly projecting spraying tube extending through the nozzle and having an extrusion orifice positioned beyond the end of the nozzle and in the path of the high velocity stream of gas for extruding a spraying liquid containing an elastomeric

fiber-forming material into and within the primary stream of gas at a point beyond the end of the nozzle thereby attenuating the extruded liquid and breaking the extruded liquid into discontinuous shot-free fibers, means for passing the ambient atmosphere in the tower upwardly at a low velocity through the tower to carry the fibers upwardly and means including an endless conveyor positioned at the top of the tower for collecting the fibers.

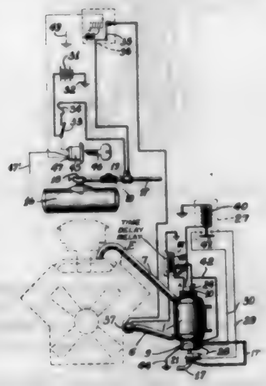
2,950,753
OTTOMANS
Harold Gleitsman, New Rochelle, and Carl Fuerst, Bronx, N.Y., assignors to Gleitsman's, Inc., Long Island City, N.Y., a corporation of New York
Original application June 13, 1956, Ser. No. 591,228, now Patent No. 2,838,097, dated June 10, 1958. Divided and this application Mar. 17, 1958, Ser. No. 722,055
3 Claims. (Cl. 155—169)



1. An ottoman adapted to be positioned adjacent the front of a chair, and comprising, a storage compartment open at the top thereof, a padded leg support pivotally mounted on and supported by said compartment to swing on a horizontal axis and adapted to lie either in a horizontal position in which said leg support constitutes a closure for said storage compartment or in a tilted leg position in which said leg support is inclined forwardly and downwardly from the substantially horizontal level of the chair seat in said adjacent position of the ottoman, means disposed within said storage compartment and operable to releasably retain said leg rest in said tilted leg position, and means disposed in said compartment for preventing said retaining means from coming into contact with the contents of said storage compartment, said retaining means being movable to a selected one of a plurality of adjusted raised dispositions thereof and having an upper part for engagement by said leg support for holding the latter in a corresponding one of a plurality of tilted leg positions thereof, said preventing means comprising an intermediate wall between opposite end walls of said storage compartment, said intermediate wall and one of said opposite end walls defining a housing for said retaining means.

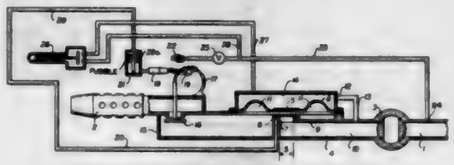
2,950,754
GAS OPERATED ENGINE HEATER
Louis Charles Bertie, 10743 Laverdure St., Ahuntsic, Quebec, Canada, and Raymond Gerard Piette, 7602 De la Rouche St., and Bernard Champoux, 5071 St. Catherine St. E., both of Montreal, Quebec, Canada
Filed Mar. 31, 1958, Ser. No. 725,360
1 Claim. (Cl. 158—125)

A heater for the liquid coolant of an internal combustion engine, comprising a gas burner adapted to be arranged in heat exchanging relation with the coolant, a pipe feeding said burner, a normally closed valve in said pipe, a bleed-off tube downstream of said valve, said bleed-off tube having an outlet end formed to supply a gas jet on said burner, a first circuit including a source of electricity, a thermostatic switch adapted to be located in said coolant and adapted to close said first circuit if the temperature of said coolant falls below a predetermined minimum, and to open said first circuit if said coolant temperature rises above a predetermined maximum, said first circuit further including the winding of a relay having normally open contacts, and an ignition element constituted by an electrical resistance, said resistance being located in the path of the gas jet issuing from said bleed-off tube, a second circuit including electromagnetic means for opening said valve, the contacts of said relay, and a thermocouple assembly adjacent to and



adapted to be heated by said resistance, and when heated, adapted to energize said electromagnetic means to open said valve to feed gas to said burner and to said bleed-off tube, the jet from said bleed-off tube being ignited by said resistance and in turn, igniting said burner, said relay being adapted to open said second circuit to close said valve immediately upon opening of said first circuit by said thermostatic switch.

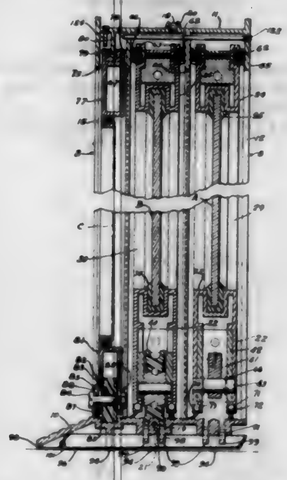
2,950,755
SAFETY DEVICE FOR APPARATUS USING FUEL GASES
Albert Henri Frecourt, Paris, France, assignor to Louis Simon Poursin, Paris, France
Filed Dec. 22, 1953, Ser. No. 399,807
Claims priority, application France Dec. 23, 1952
5 Claims. (Cl. 158—136)



1. In a device for controlling the flow of gas in a main conduit to a main burner, a control apparatus for gas operated water heating equipment comprising an assembly including at least two operatively interconnected gas control members disposed in series in said main conduit to said main burner, the closure of either of said gas control members cutting off the feed of gas to said main burner, said gas control members comprising a first and a second control valve, means including a thermal element for operating said second valve, and means for opening and closing, respectively, said first valve in response to the requirements of heat from said heating equipment, means responsive to the opening of said first valve to heat said thermal element to cause said second valve to open, dependent upon said first valve, a container for said first valve and a diaphragm disposed across said container and carrying a valve element of said first valve,

said first valve including a gas inlet duct terminating in a seat for said valve element, said diaphragm being chosen to retain said valve element in closed position upon subjecting only the latter to the gas pressure from said duct and to open said valve element upon subjecting the same side of said diaphragm in addition to said valve element to said gas pressure, to create a sufficient pressure difference in said container above said diaphragm to lift said valve element from its seat, if said second valve is closed and to retain said valve element in closed position if said second valve is opened, and a cut-off means co-operating with said thermal element causing closure of said second valve, if as a result of a defect both valves have remained open.

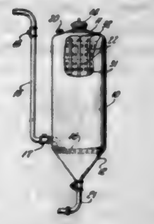
2,950,756
SLIDING GLASS DOORS
Paul S. Moloney, 13901 Shaker Blvd., Cleveland, Ohio
Filed June 13, 1957, Ser. No. 665,410
5 Claims. (Cl. 160—91)



5. A door frame structure having top frame channel formations, sliding glass door sashes slidingly mounted in the channel formations by extending up into the channel formations, the portions of the sashes extending into the channel formations having grooves formed across the extended top portions of the sashes, weather proofing piling held in said grooves with the piling contacting the walls of the channel formations of the door frame structure and limiting stops on the upper parts of the sashes of less height than the piling to contact the walls of the channel formations thereby to prevent excessive compacting of the piling.

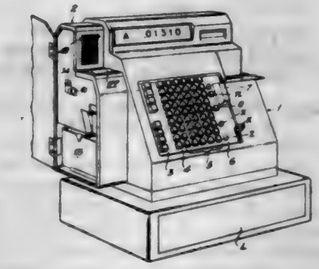
2,950,757
APPARATUS FOR AVOIDING DIGESTER CORROSION
Frederick H. Richter, Glen Cove, N.Y., and Frederick B. Snyder, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Filed Jan. 30, 1953, Ser. No. 334,133
11 Claims. (Cl. 162—233)

1. In a digester, metallic walls defining an elongated body having valved inlet and outlet openings therein for the admission of wood chips and cooking liquor and for the discharge of pulp, and means for accumulating a layer of heat insulating pulp fibers adjacent the inner surface of said metallic walls comprising metallic liner means inwardly spaced from said digester walls, said liner means including rows of perforated panels having flanged



edges, and T-bar spacer means attached to the walls of said digester and overlaying the edges of said panels.

2,950,758
CASH REGISTERS, ACCOUNTING AND LIKE MACHINES
Gösta Roland Englund, Besmansvagen 44, Bromma, Sweden, and Mats Erik Mattsson, Sturegatan 35, Sundbyberg, Sweden
Filed Mar. 9, 1956, Ser. No. 570,592
Claims priority, application Sweden Mar. 16, 1955
16 Claims. (Cl. 164—111)

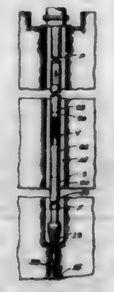


1. In a machine of the class described the combination with a cash register of a ticket perforating mechanism comprising in perforating members, means operable by the common manipulative means of the cash register to select the perforating members to be actuated, means cooperable with the driving means of the cash register and effective during a cash register operation to operate said perforating mechanism, ticket ejecting means operatively connected with said cooperable means for ejecting a perforated ticket at the end of the machine operation and a receptacle for successively receiving said tickets.

2,950,759
METHOD AND APPARATUS FOR SAMPLING WELL FLUIDS
Arthur W. Smith, Midland, Tex., assignor to Aircushion Patents Corporation, Bakersfield, Calif., a corporation of California
Filed Mar. 13, 1958, Ser. No. 721,247
8 Claims. (Cl. 166—3)

1. A method of testing a formation penetrated by a well, comprising: providing a conduit having a valved tester and a packer at the lower end thereof; pressuring the interior of a portion of said conduit above said tester but below the earth's surface by introducing gas under a predetermined pressure into said portion, said pressure being high enough to prevent inward collapse of said portion while the latter is in said well; maintaining said conduit and tester sealed from fluids present in said well until said packer is set; setting said packer while said conduit and tester are sealed to remove the hydrostatic pressure of overlying fluid in said well from the formation to be

tested; providing an opening in said tester when said packer is set to permit the flow of fluid from said formation through said opening into said pressurized conduit portion; and effecting communication between said pressurized conduit portion and the interior of said conduit thereabove to permit a rise of said formation fluid through

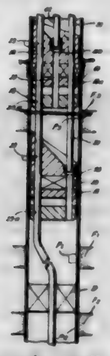


said opening and into the interior of said conduit above said pressurized conduit portion only when the fluid pressure within said pressurized conduit portion rises above said predetermined pressure whereby said pressurized conduit portion will remain resistant against collapsing during said testing.

2,950,760
WATER FLOODING PROCESS
George G. Bernard, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
No Drawing. Filed May 2, 1958, Ser. No. 732,455
10 Claims. (Cl. 166—42)

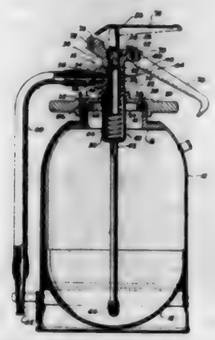
1. The method of recovering oil from a natural subterranean formation comprising injecting into said formation water containing in solution at least one salt from the group consisting of alkali metal, ammonium, and substituted-ammonium salts of a substituted beta-aminopropionic acid in which a fatty radical is a substituent replacing one of the amino hydrogen atoms, said solution being acidified to a pH not greater than about 7.

2,950,761
MULTIPLE STRING WELL PACKERS
Cicero C. Brown and Chudleigh B. Cochran, both % Brown Oil Tools, Inc., P.O. Box 19236, Houston, Tex.; said Cochran assignor to said Brown
Filed Aug. 12, 1957, Ser. No. 677,592
12 Claims. (Cl. 166—119)



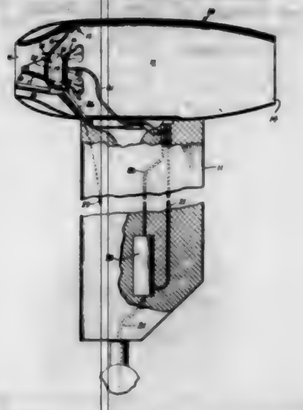
2. A multiple pipe string well packer, comprising in combination with a first pipe string, a packer body having a first longitudinal passage therethrough for slidable mounting on the first pipe string and including a resilient seal portion adapted to be radially expanded by axial compression to seal with a surrounding well wall, means releasably securing the packer body in retracted position on the first pipe string, said means being releasable by downward movement of the packer body relative to the first pipe string, a downwardly and inwardly tapering expander means carried by the body beneath the seal portion and movable downwardly therewith, radially movable anchor elements mounted on the first pipe string below the expander means engageable by said expander means in response to relative downward movement of the packer body to engage the well wall whereby further downward movement of the packer body will produce said axial compression of the seal portion, said packer body and seal portion having at least one additional longitudinal passage therethrough in laterally spaced parallel relation to the first pipe string and adapted to receive a second pipe string, and means in said additional passage engageable by the second pipe string to cause application of the weight of the second pipe string to the packer body whereby to effect said downward movement and said axial compression of said seal portion.

2,950,762
FIRE EXTINGUISHER
Ralph W. Austin, Weymouth, Mass., assignor to Knight and Thomas Incorporated, Methuen, Mass., a corporation of Massachusetts
Filed June 9, 1958, Ser. No. 740,873
3 Claims. (Cl. 169—31)



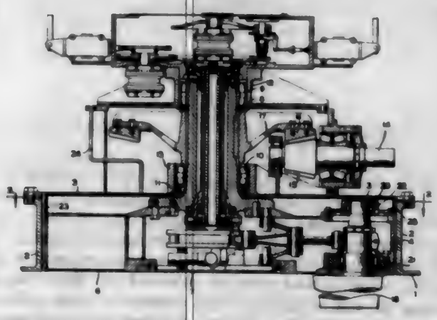
1. A fire extinguisher comprising a container for holding a pressurized fire extinguishing medium, and a valve unit removably connected thereto for controlling the release of said pressurized medium, said valve unit comprising a valve casing having an elongated bore and a discharge outlet communicating with said bore, a hollow valve stem mounted for longitudinal movement within said bore, said valve stem being open at its lower end in direct communication with the interior of the pressurized container and having a plurality of relatively narrow, closely spaced, elongated radial ports, said bore being slightly larger in diameter than the diameter of the stem and provided with a plurality of spaced annular resilient sealing rings in sealing engagement with the bore and the valve stem and providing an annular space between the bore and the stem, said sealing rings separating said annular space to provide upper and lower annular spaces said bore being increased in diameter adjacent the discharge outlet to provide an annular expansion chamber, spring means for maintaining said valve stem in an extended position to present the radial ports out of alignment with said chamber and between two of said spaced sealing rings defining the upper annular space to close the valve, and manually operated means engageable with the upper closed end of said stem for depressing the same to present the radial ports in said lower annular space and in alignment with said expansion chamber and said discharge outlet to open the valve and release the pressurized medium, said sealing rings effecting a wiping action on the stem during movement of the latter from a closed to an open position and return whereby to maintain the valve stem in a clean condition.

2,950,763
JET DRIVEN ROTOR
Edward L. Bennett, Palo Alto, Calif., assignor to Hiller Aircraft Corporation, Palo Alto, Calif., a corporation of California
Filed Nov. 22, 1955, Ser. No. 548,423
6 Claims. (Cl. 170—135.4)



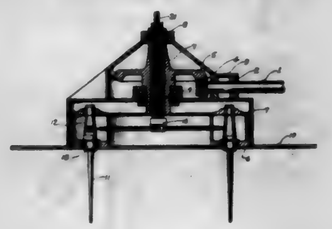
1. The combustion with a blade of a helicopter, of a jet engine comprising a chamber supported by said blade and having primary fuel supply means, secondary fuel supply means including a pilot burner, and ignition means for said pilot burner, a primary fuel line carried by said blade and connected to said primary fuel supply means, a secondary fuel line carried by said blade and connected to said secondary fuel supply means, and means including a chamber carried by said blade and interconnecting said fuel lines providing a reserve supply of fuel for said secondary line to maintain burning of said pilot during temporary periods of cessation of flow of fuel in said primary line.

2,950,764
CYCLOIDAL PROPELLER HAVING LOW FRICTIONAL DRAG LOSSES OF THE ROTOR
Donald L. Stephens, Bellevue, Wash., assignor to Pacific Car and Foundry Company, Renton, Wash.
Filed Jan. 23, 1958, Ser. No. 710,799
2 Claims. (Cl. 170—147)



1. A cycloidal propeller or the like including a drive shaft rotatably mounted in the hull of a ship, a rotor drum connected to the drive shaft immersed in a fluid and having cylindrical side walls, an upper face, and a lower face, a plurality of propeller blades extending from the lower face of the rotor drum, an axle shaft attached to each propeller blade, a rotatable mounting for each axle shaft in the drum including an upper bearing for each axle shaft projecting external to the upper rotor face, a cover pot for each upper bearing, a well encasing said rotor having side walls surrounding the rotor cylindrical side walls and a top bounding the upper rotor face and cover pots, a vent to the atmosphere taken from the top of said well, a rim extending from the cylindrical walls of the rotor into close proximity of the top of said well, said rim serving to isolate any liquid carried along with the rotor top from tangential slippage against the side walls of the well, the rotor friction being thereby reduced.

2,950,765
BALANCED LIFT VERTICAL AXIS PROPELLERS
Roland A. Magnuson, Seattle, Wash., assignor to Pacific Car and Foundry Company, Renton, Wash.
Filed Dec. 27, 1956, Ser. No. 630,782
7 Claims. (Cl. 170—151)



1. In a cycloidal propeller assembly, a blade carrying power driven rotor disk, a primary bearing means constraining said rotor disk to rotation about an axis perpendicular to the center of said disk, a secondary bearing means having an axis of rotation parallel to that of the rotor disk, means for displacing said second bearing means in any direction radial of the axis of the rotor disk, a cross arm pivotally mounted on said second bearing means having end pivots at diametrically opposite extremities and movable on said second bearing free of said rotor disk, a pair of impeller blades, bearing means constraining each impeller blade to rotation about axes generally parallel to that of the rotor disk, said bearing means being mounted on and projecting from diametrically opposite positions near the periphery of the rotor disk, a crank arm connected to each impeller blade extending forward of its axis of rotation and having a pivot in its outer extremity, a pair of links pivotally connecting and fixing the distance between the outer pivot of each crank arm and one end pivot of said cross arm, said axial links being of such length that when primary and secondary axes of rotation are coincident, lines parallel to the blade chords of opposite blades are parallel with each other and parallel to a line intersecting the axes of the end pivots of the cross arm.

2,950,766
AIRCRAFT ROTOR BLADE CONSTRUCTION
John Richard Huber, Warrington, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania
Filed Sept. 20, 1954, Ser. No. 457,028
8 Claims. (Cl. 170—159)

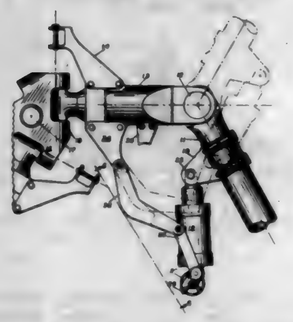
1. An aircraft rotor blade of airfoil cross section having a spar member with a cross section of generally flattened D-shape, said spar being constructed of upper and lower sections with a joining surface at the median

portion of the blade airfoil section, the nose wall of said spar having a thickened section and the vertical wall of the D-shape having rearwardly projecting flanges



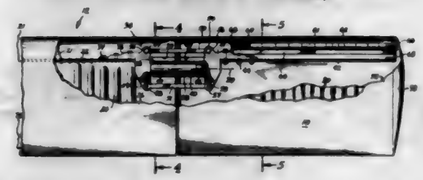
at the upper and lower surfaces of the spar as well as at the central part of the spar to form the rear portion of the joining surface.

2,950,767
ROTOR BLADE FOLDING MECHANISM
Harold E. Lemont, Jr., Avon, Conn., assignor, by mesne assignments, to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Aug. 6, 1957, Ser. No. 676,517
7 Claims. (Cl. 170—160.12)



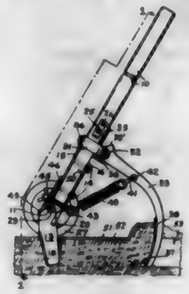
3. In combination with a rotor blade adapted for folding about a pivot joint, a blade folding mechanism comprising a first link pivotally connected to the blade at a point outboard of said pivot joint, a second link pivotally connected at a point inboard of said pivot joint, an intermediate link pivotally connected to said first and said second links to form therewith a three-linke toggle connection disposed adjacent said pivot joint, actuator means carried by one of said links and adapted to position said toggle connection between locked and unlocked positions, and damper means contained within one of said links to restrain motion of said blade about said pivot joint when said toggle connection is in locked position.

2,950,768
VIBRATION ABSORBING SYSTEM AND METHOD FOR ROTARY WING AIRCRAFT BLADES
Robert A. Wagner, Redwood City, Calif., assignor to Hiller Aircraft Corporation, Palo Alto, Calif., a corporation of California
Filed Sept. 26, 1955, Ser. No. 536,325
8 Claims. (Cl. 170—160.55)



1. A rotary wing aircraft rotor blade having a main body portion and a damper portion spaced outwardly with reference to the root end of said body portion, means mounting said damper portion on said main body portion for oscillation in either direction about an axis extending substantially longitudinally of said blade, said axis being located substantially within the confines of the airfoil contour of the blade, and means interconnected between parts of said main body portion and said damper portion for resiliently restraining said damper portion oscillation, the center of gravity of said damper portion being located forward of said longitudinal axis of oscillation.

2,950,769
LAWN EDGING DEVICE
Edward Johnson, 84 Union St., Seattle, Wash.
Filed Aug. 5, 1959, Ser. No. 831,745
6 Claims. (Cl. 172—17)



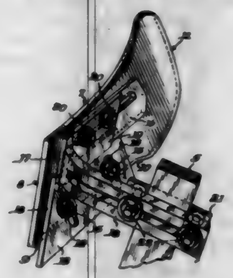
1. A lawn edging device comprising two spaced apart wheels; a handle connected with said wheels; two normally upright flat parallel spaced apart blades rigidly connected with the lower end portion of said handle and positioned between between said wheels and extending below said wheels; a combined fulcrum member and trench opening tool pivotally connected with said handle at a substantial distance upwardly from said blades; a trench bottoming foot on the lower end of said fulcrum member and trench opening tool; and a spring urging said fulcrum member and trench opening tool toward said blades.

2,950,770
PRESS WHEEL ASSEMBLY FOR PLANTING IMPLEMENTS
Robert W. Wilson, Charlotte, N.C., assignor to R. H. Bouligny, Inc., Charlotte, N.C., a corporation of North Carolina
Filed Feb. 24, 1958, Ser. No. 717,148
1 Claim. (Cl. 172—538)



An implement supporting press wheel comprising: a hub member; a cylindrical ground engaging rim section rigidly mounted in concentric relation on said hub member; a flanged ground engaging rim section carried by said cylindrical rim section, said flanged rim section including a cylindrical portion mounted on the exterior surface of said cylindrical rim section in axial sliding contact therewith for movement between an extended position wherein said cylindrical portion extends substantially outwardly of said cylindrical rim section and a retracted position wherein said cylindrical portion is disposed in substantial overlapping relation with respect to said cylindrical rim section, and a flange portion extending outwardly from one end of said cylindrical portion beyond the associated end of said cylindrical rim section; said cylindrical rim section having a plurality of circumferentially spaced slots extending axially inwardly from said associated end thereof; a plurality of corresponding studs carried by said cylindrical portion and extending radially inwardly through said slots; and nuts threaded on said studs for securing said cylindrical portion to said cylindrical rim section in selected positions of adjustment between said extended and retracted positions.

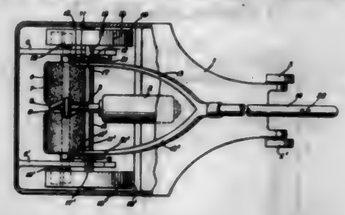
2,950,771
JOINTER DEVICE FOR PLOWS
Harry G. Yetter, Colchester, Ill.
Filed Sept. 4, 1958, Ser. No. 759,077
3 Claims. (Cl. 172—736)



1. A jointer for moldboard plows, comprising a deflector plate, the forward portion of the lower edge of which is formed for flush engagement with and along the forward portion of the upper edge of the moldboard with its front edge in continuation of the plow earth entering and cutting edge and the rearward portion thereof curved outwardly with relation to the moldboard and downwardly pitched, a flat plate adjacent the inner side of the forward portion of the deflector plate, means connecting said flat plate to the deflector plate permitting of selective and fixed vertical adjustment of the former with relation to the latter, a portion of the flat plate having overlapping engagement with the inner side of an adjacent portion of the moldboard whereby to align the forward portion and front edge of the deflector plate with the adjacent portion of the moldboard and with the plow earth entering and cutting edge, a horizontally positioned and longitudinally slotted bracket fixedly carried by the flat plate, a bracket support arm, a portion of which is adjacent the longitudinally slotted bracket, means slidable in the slot of said bracket engaging said portion of the support arm whereby to secure the same thereto, and plow beam clamping means on and adjustable longitudinally of the bracket support arm.

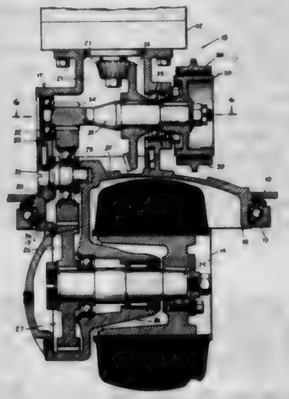
2,950,772
ELECTRICALLY PROPELLED HOUSEHOLD VACUUM CLEANER
Clara A. Dostal and Frank Dostal, both of 20 Welwyn Place, Great Neck, N.Y.
Filed July 22, 1955, Ser. No. 523,677
8 Claims. (Cl. 180—6.66)

1. A propelling unit for household devices rollable on floors comprising at least one pair of cup-shaped device supporting rollers, a drive roller associated with each supporting roller, a central cylindrical post coaxial and integral with the supporting roller and extending in the same direction axially as the cup wall thereof, the associated drive roller being positioned within the groove formed between the cup wall and the cylindrical post surface and normally out of contact with both and of a diameter selectively to engage but one of the cup wall and the cylindrical post surface at a time, a device handle, the pair of supporting rollers being aligned and spaced from each other substantially at right angles to the handle, motor means on the device for rotating all the drive



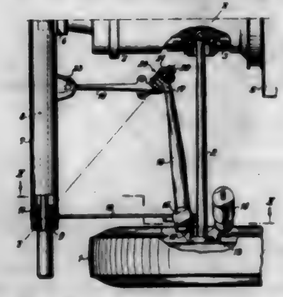
rollers in a predetermined direction, and means supporting each drive roller and its cooperating supporting roller for relative longitudinal movement under the control of the handle for selectively propelling the device forward on pushing the handle, rearward on pulling the handle, and in a turn on deflecting the handle to the side of the desired turn while pushing or pulling.

2,950,773
GEAR DRIVE STEERING AND TRACTION UNIT
Bronislaus I. Ulinski, Chicago, Ill., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Filed Feb. 1, 1956, Ser. No. 562,710
5 Claims. (Cl. 180—13)



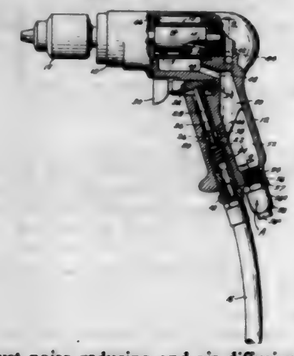
4. In a truck of the class described having a main frame, a steering and traction unit comprising a gear casing having a series of gears all of which are aligned relatively to one another in a vertical plane to extend between upper and lower parts of the casing, said gears by their vertically aligned relation in one plane making possible the use of a narrow compact vertically extending gear casing, an outrigger traction axle driven by the lowermost gear of said series of gears and extending laterally outwardly of said gear casing from a point near the lowermost portion of said gear casing, a traction wheel mounted on said outwardly extending outrigger axle, a circular bearing supporting said gear casing for steering rotation on the main frame and mounted on said casing at a level below the top of said traction wheel, said circular bearing encompassing both a portion of said wheel and said narrow vertical casing, a motor on the upper part of the gear casing, and speed reduction gears through which the motor drives an upper gear of said series of gears to drive said traction wheel.

2,950,774
INDIVIDUAL WHEEL SUSPENSION FOR DRIVEN HALF-AXLES
Wolfgang Eyb, Leonberg, Wurttemberg, Germany, assignor to Firma Dr. Ing. h.c.F. Porsche K.G., Stuttgart, Zuffenhausen, Germany
Filed May 28, 1958, Ser. No. 738,337
Claims priority, application Germany June 19, 1957
14 Claims. (Cl. 180—73)



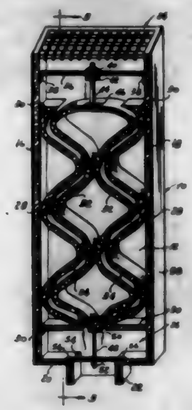
1. An individual wheel suspension for the driven wheels of a motor vehicle supported on swingable half axle structures comprising a relatively stationary vehicle part, torsion rod spring means disposed with its torsional axis angularly disposed with respect to the swinging axis of the respective wheel, a swinging strut member interconnecting said torsion rod and said wheel to torsionally actuate the rod in response to vertical movement of the wheel, drive means including an axle shaft for driving said wheel, and wheel guiding means formed of two parts for swingably supporting said wheel from said relatively stationary vehicle part including pivotal connecting means between said two wheel-guiding parts at a location coinciding with the swinging axis of said wheel for pivotally connecting one of said two parts with the other part thereof, means for connecting said one part to said stationary vehicle part, and means for connecting said other part to said wheel, said other part being offset at one side of said axle shaft and extending in a direction generally parallel to said axle shaft whereby said wheel guiding means resist forces from said wheel acting transversely of the vehicle to reduce the stresses on said drive means.

2,950,775
EXHAUST NOISE REDUCING AND AIR DIFFUSING MEANS FOR PNEUMATIC MOTORS
Robert E. Zwayer, Bryan, Ohio, assignor to The Aro Equipment Corporation, Bryan, Ohio, a corporation of Ohio
Filed Jan. 13, 1958, Ser. No. 710,835
8 Claims. (Cl. 181—36)



1. Exhaust noise reducing and air diffusing means for pneumatic motors comprising an air diffuser, a sound dampening chamber between the motor and said air diffuser, said chamber having an inlet opening from the motor and an outlet opening to said air diffuser, said air diffuser comprising a porous metal discharge fitting beyond said outlet opening, the area of the porous metal being approximately 15 times the area of said outlet opening.

2,950,776
VENTILATING AIR DISCHARGE MUFFLER
Joseph F. Stephens, Kansas City, Mo., assignor to Gustin-Bacon Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Filed July 19, 1956, Ser. No. 598,784
5 Claims. (Cl. 181—42)

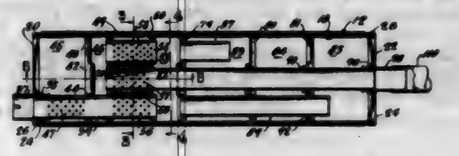


1. Apparatus for feeding air from a supply duct to an area to be supplied with said air including in combination means forming a plenum chamber having an inlet for admitting air from said duct to said chamber to permit admitted air to expand and having an outlet to said area, means forming a pair of first baffle walls having sinuous surface configurations, means mounting said first baffle wall forming means in said chamber between said inlet and said outlet, means forming a pair of second baffle walls having surface configurations complementary to the configurations of said first baffle wall surfaces, means mounting said second baffle wall forming means within said chamber with said second baffle walls adjacent said first baffle walls to define a plurality of tortuous paths between said inlet and said outlet to divide the expanded air into a plurality of streams, means for moving said first baffle walls relative to said second baffle walls simultaneously to vary the cross-sectional area of said paths defined by said first and second baffle walls and means for connecting said moving means to said baffle wall forming means.

2,950,777
SILENCER OR MUFFLER
Floyd E. Deremer, Livonia, Mich., assignor to Oldberg Manufacturing Company, Grand Haven, Mich., a corporation of Michigan
Filed Aug. 1, 1956, Ser. No. 601,540
4 Claims. (Cl. 181—54)

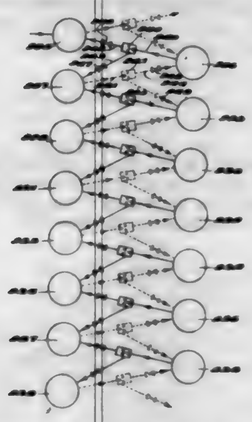
1. A muffler for use with the exhaust system of an internal combustion engine including a tubular shell, closures secured to the ends of the shell, gas passage tubes in said shell forming exhaust gas inlet and outlet means, a third gas passage tube in said casing in transverse overlapping relation with said gas inlet and outlet tubes, the intermediate tube of said three tubes being disposed with its axis offset from a plane passing through the axes of

the other tubes, an intermediate imperforate casing surrounding the offset tube at its region of transverse overlap with the other tubes, said intermediate casing being one piece of sheet metal formed with a generally semi-circular portion and convergingly arranged wall sections, the semi-circular portion being welded to an inner surface of the tubular shell, said wall sections terminating in



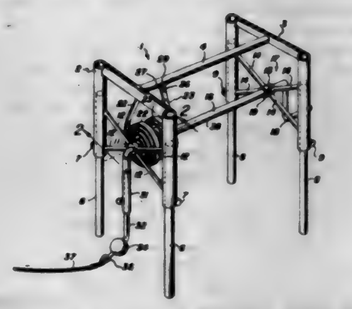
flanges disposed adjacent and secured to an inner surface of the tubular casing, baffle members in said shell spaced from the end closures and forming end walls for the intermediate casing, the wall of the offset tube within the intermediate casing being provided with a plurality of comparatively small openings forming acoustic couplings with the interior of the chamber defined by the intermediate casing and the baffle member.

2,950,778
PROCESS AND APPARATUS FOR THE SEPARATION OF MIXTURES IN THE GASEOUS STATE
Alfred Boettcher and Rolf Mauteufel, both of Frankfurt am Main, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany
Filed Oct. 5, 1956, Ser. No. 614,184
Claims priority, application Germany Oct. 5, 1955
2 Claims. (Cl. 183—2)



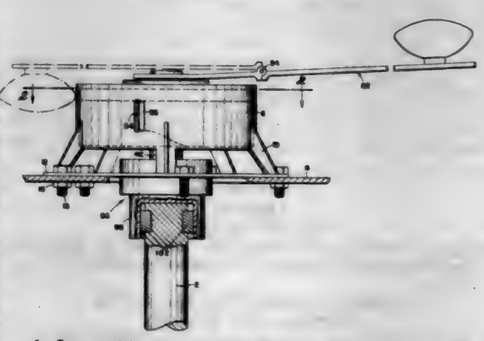
1. In a process for the separation of mixtures of condensible substances in the gaseous state, the atoms or molecules of which possess different kinetic mobilities in the gaseous state in which the gaseous mixture to be separated is passed through a separating system in which it is caused to issue from a nozzle like opening in the form of an expanding jet and the expanding jet is separated into a core portion and a peripheral portion by interposing an apertured baffle in the path of flow of said jet and the peripheral and core portions produced by the separating system are separately collected, the steps which comprise vaporizing the mixture to be separated from a condensed state, passing such vaporized mixture through the separating system and separately condensing the separately collected peripheral and core portions produced by the separation system, said vaporization and condensation being effected with the aid of a heat exchange medium cycle in which the heat exchange medium is vaporized in heat exchange relationship with the condensing core and peripheral portions and condensed in heat exchange relationship with the vaporized mixture to be separated, and the passage of said vaporized mixture through the separating system essentially being effected by said vaporization and said condensation.

2,950,779
AUTOMATIC JUMP ROPE APPARATUS
Byron L. Wolfson, 5617 Hollywood Blvd., Hollywood, Calif.
Filed Oct. 30, 1959, Ser. No. 849,948
10 Claims. (Cl. 185—37)



1. A mechanism for rotating a length of flexible material comprising a first shaft, a second shaft axially aligned with said first shaft, spaced bearings for rotatably supporting said shafts in generally horizontal positions, a frame for supporting said bearings, a heavy spiral spring disposed about said first shaft and having its inner end coupled thereto, a light spiral spring disposed about said second shaft and having its inner end coupled thereto, said spring having their convolutions directed in opposite directions and having their outer ends secured to said frame, a handle for rotating said first shaft to wind said heavy spring, a clutch means for selectively coupling said shafts one to another, said clutch means coupling said shafts substantially only during rotation of said second shaft in a direction determined by said heavy spring.

2,950,780
STARTING MECHANISM FOR AN INTERNAL COMBUSTION ENGINE
Floyd O. De Millar, Framingham, Mass., assignor to Radian Corporation, Framingham Center, Mass., a corporation of Massachusetts
Filed May 12, 1958, Ser. No. 734,473
8 Claims. (Cl. 185—41)



1. In combination with an internal combustion engine provided with a rotatable shaft by means of which said

engine may be started, a manually operable spring starter, said starter comprising a fixed casing, a flat spring coiled upon itself within said casing, the outer end of said spring attached to said casing, a winding drum for said spring rotatably supported within said casing, means on said winding drum for acting on the inner end of said spring to wind said spring upon said drum as said drum is rotated in a first direction, a handle, releasable means connecting said handle and said winding drum operative when said handle is rotated in said first direction to rotate said drum to wind said spring thereon and operative when said handle is turned in a second opposite direction to disconnect said drum from said handle whereby the energy stored in said spring will cause said drum to spin in a said second direction to unwind said spring, means for preventing rotation of said drum in said second direction so long as said connecting means remains in unreleased position, and means connected between said shaft and said drum for rotating said shaft in said second direction under the influence of said energy stored in said spring when said connecting means is released by movement of said handle in said second direction.

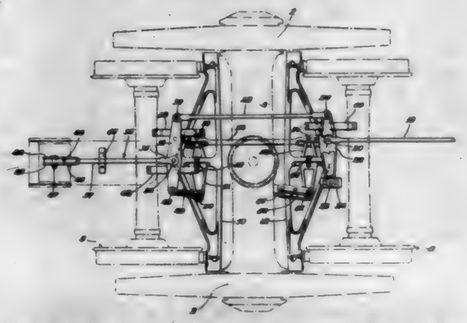
ERRATUM

For Class 187—12 see:
Patent No. 2,950,948

2,950,781
RAILWAY BRAKE

Carl E. Tack, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Filed Mar. 6, 1957, Ser. No. 644,298
1 Claim. (Cl. 188—52)



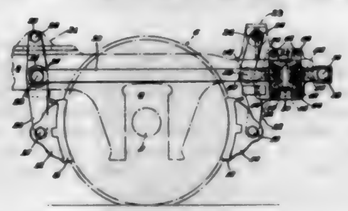
In a single shoe tread brake arrangement for a railway vehicle truck having a vehicle body supported thereon and including a frame and a pair of supporting wheel and axle assemblies, the combination of: brake beams disposed between and inwardly adjacent respective assemblies and carrying friction means for engagement with said respective assemblies; a pair of brake levers pivotally connected to respective beams, one of said brake levers being a dead lever fulcrummed to the truck frame, the other of said brake levers being a live lever; a rod interconnecting the ends of said levers; an actuating lever connected to said live brake lever; means to operate the actuating lever; a tension rod connected at one end to the actuating lever; and adjustable means pivotally connecting the other end of the tension rod to the vehicle body.

2,950,782
CLASP BRAKE

Walter R. Polanin, Chicago, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Filed Dec. 20, 1956, Ser. No. 629,710
1 Claim. (Cl. 188—56)

In a clasp brake arrangement for a vehicle having a frame and a supporting wheel and axle assembly, the combination of: a pair of friction means disposed on opposite sides of a wheel of the assembly for engagement therewith; a pair of generally vertically extending dead brake levers disposed on opposite sides of the assembly, said levers being fulcrumed at their upper ends to the frame and being pivotally connected at their lower ends to respective friction means; a pair of generally horizontally extending pull bars disposed on opposite sides of said wheel, said bars having corresponding ends pivotally connected to one of said brake levers intermediate the ends of said lever and having their opposite corresponding ends extending beyond the other of said brake levers; a power cylinder device disposed between said pull bars at said opposite corresponding ends of said bars, said power

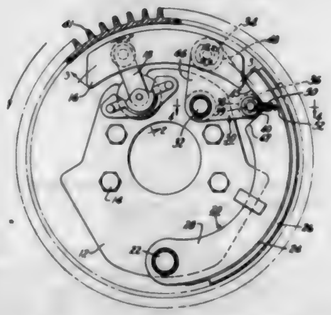


cylinder device comprising a housing and a pair of axially aligned push rods movable in opposite directions relative to said housing, one of said rods being pivotally connected to the other of said brake levers, and the other of said push rods being pivotally connected to said opposite corresponding ends of the pull bars; and a support bracket secured to the frame on the side thereof adjacent said wheel, said bracket having a center portion disposed between said pull bars for supporting the power cylinder housing and having a pair of flanged shelf portions extending laterally outward from opposite sides of the center portion for guidably supporting the respective pull bars, said center portion of said bracket being disposed in the plane of said wheel.

2,950,783
FRICTION DEVICE

Joseph L. Mossey, South Bend, Ind., assignor to The Bendix Corporation, a corporation of Delaware

Filed Nov. 9, 1955, Ser. No. 545,901
10 Claims. (Cl. 188—70)



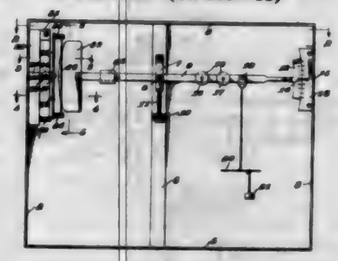
1. A kinetic-energy-absorbing device comprising an arcuate friction element which is mounted for pivotal movement, a pair of disk brake elements which are movable in opposite directions along a line parallel to the pivotal axis of said arcuate friction element and which are shiftable in a plane perpendicular to their direction of movement, a bell crank pivotally secured to a fixed member, means for securing one end of said bell crank to the disk brake elements so that shiftable movement

of said brake elements produces turning of said bell crank, and cam means located between the other end of said bell crank and the applied end of said arcuate friction element, said cammed means including cam surfaces formed on the applied end of said arcuate friction element so that turning of said bell crank imparts applying thrust on said arcuate friction element.

2,950,784
INSTRUMENT DAMPING DEVICES

Kenneth L. Hertel, Knoxville, Tenn., assignor to University of Tennessee Research Corporation, Knoxville, Tenn., a corporation of Tennessee

Filed Sept. 23, 1955, Ser. No. 536,233
16 Claims. (Cl. 188—85)

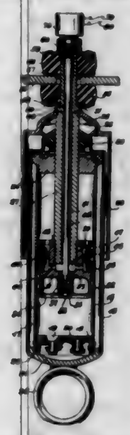


12. The combination with a movable member mounted to oscillate in a fixed plane, of means free at all times to vibrate in a direction transverse to said plane and including a resilient element arranged to periodically frictionally engage a portion of said member and apply thereto a series of momentary retarding forces, and means including said element for automatically maintaining the vibration for a substantial length of time.

2,950,785
REMOTELY ADJUSTABLE SHOCK ABSORBER

William G. Patriquin, Willoughby, Ohio, assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio

Filed June 6, 1956, Ser. No. 589,657
16 Claims. (Cl. 188—88)

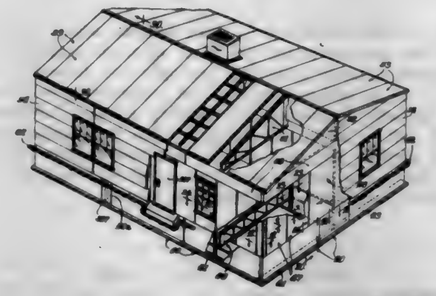


1. In a direct double acting hydraulic shock absorber, a pressure cylinder, a piston rod reciprocable in said cylinder and extending outwardly of one end thereof, a piston on said rod and slidable in said cylinder and provided with a variable bleed means for the liquid and including means provided with an orifice and an adjusting rod extending through said orifice and movable in said piston rod and provided with control means varying the bleed capacity of said orifice in relation to the position of said control means in said orifice, and means operatively associated with the outwardly extending end of said piston rod and with said adjusting rod for moving the latter to vary the capacity of the bleed orifice and including a thermostatic device operatively associated with said adjusting rod and temperature changing means operatively associated with said device.

2,950,786
BUILDING SYSTEM

Lafayette Markle, Markle & Company, Barrington, Ill.

Filed Jan. 27, 1954, Ser. No. 406,413
42 Claims. (Cl. 189—1)



1. In a building structure, a foundation comprising a plurality of elongated horizontal base panel units rigidly interconnected in end-to-end relation to define a base perimeter, a plurality of cross beams operatively interconnecting oppositely disposed base panel units in said base perimeter for rigidly retaining the same in perpendicular position and whereby to define with said base perimeter a rigid grid-like lower platform, a plurality of vertical wall panel units supported at their lower ends on said base perimeter and rigidly interconnected therewith, said wall panel units also being rigidly interconnected along their vertical side edges to define a continuous outside wall structure, a plurality of elongated horizontal belt panel units rigidly interconnected in end-to-end relation to define an upper belt perimeter and also rigidly interconnected to the upper ends of said wall panels, and a plurality of cross beams operatively interconnecting oppositely disposed belt panel units in said belt perimeter for rigidly retaining the same in perpendicular position and whereby to define with said belt perimeter a rigid grid-like upper platform, each of said horizontal base and belt panel units comprising a rigid framework with covering means including a pair of cover panel members mounted on the framework at the opposite sides thereof and beam hanger means rigidly secured to the framework of the oppositely disposed panel units and projecting laterally beyond the cover panel members at the innermost sides of the panel units, and the cross beams of the respective upper and lower grid-like platforms being connected to the hanger means on said belt panel units and said base panel units, respectively.

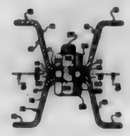
2,950,787
SIGN SUPPORT

Edward F. Walsh, Cincinnati, Ohio, assignor to The Pollak Steel Company, Cincinnati, Ohio, a corporation of Ohio

Filed July 14, 1958, Ser. No. 748,388
1 Claim. (Cl. 189—23)

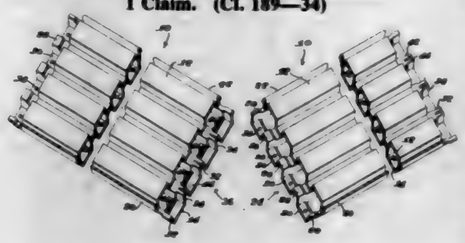
An elongated signpost having a substantially flat web portion with at least one bolt hole therethrough, a pair

of leg portions projecting from the side edges of said web portion on one face thereof and terminating in outwardly extending side flanges, a pair of spaced longitudinally continuous ribs projecting from the other face of said web portion, one of said ribs being disposed at each side edge of said web portion and each of said ribs terminating in a flat surface, said ribs extending away from said web portion, said flat surfaces being in the same plane parallel to said substantially flat web portion of said signpost and in spaced relation therefrom, whereby said



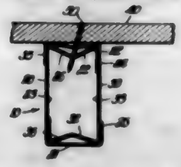
flat surfaces of said ribs may be squarely seated against the flat surfaces of the ribs of an identical signpost and retained squarely seated by passing a bolt through said bolt hole in said web portion and a registering bolt hole in the web portion of said identical signpost, engaging said bolt by a nut and tightening said bolt against said web portion, said bolt and said nut being spring loaded by the spaced parallel web portions of said signposts to inhibit loosening of said bolt under stress.

2,950,788
CELLULAR STEEL FLOOR
William L. Edgar, Vanport, Pa., assignor to H. H. Robertson Company, Pittsburgh, Pa., a corporation of Pennsylvania
Filed Aug. 30, 1955, Ser. No. 531,512
1 Claim. (Cl. 189—34)



In a building construction, a flooring structure comprising a plurality of multicellular sheet metal flooring units erected side by side and end to end upon a supporting framework to form the flooring, each flooring unit comprising an upper sheet and a lower corrugated sheet secured thereto and forming a plurality of spaced and longitudinally extending cells comprising potential wiring ducts, the transverse marginal edges defining each end of the lower corrugated sheets being irregular in contour but otherwise aligned in the same plane, each corrugation comprising substantially straight upper, side and lower walls, the corrugations at the leading end of each lower sheet having upwardly offset upper and lower walls forming elongated recesses receiving in nesting and overlapping relation the straight upper and lower walls of the corrugations of the trailing end of the lower sheet of an adjacent unit, the trailing end of each lower sheet having outwardly offset side walls relative to the center of each cell forming an elongated expanded end portion of each cell arranged to receive in nesting and overlapping relation the straight side walls of the corrugations of the leading end of the lower sheet of an adjacent unit, said upper, lower and side walls being offset an amount slightly more than the thickness of the metal of the units, thereby forming an overlapping and non-abutting connecting joint between the units adapted to accommodate corrugated sheets having transverse edges irregular in contour and capable of permitting longitudinal adjustment of connected units relative to each other to accommodate slight variations in the lengths of the units during erection of the floor, the upwardly offset lower walls of the leading end of the corrugated sheet being extended within the cells and in overlapping relation to the corresponding straight lower walls of the trailing end and welded in their overlapped condition to said framework, said straight lower walls having transverse projections provided with beveled edges and extending upwardly from said bottom walls to a height at least equal to the thickness of said upwardly offset lower walls and disposed to deflect the wiring drawn through the cells from engagement with the irregular contour edges of said upwardly offset lower walls.

2,950,789
METAL STRUCTURAL UNITS
Augustine Davis, Jr., and James A. Nichols, Washington, D.C., assignors to Davisbilt Steel Joist Inc., Washington, D.C., a corporation of Delaware
Filed Aug. 13, 1956, Ser. No. 603,594
3 Claims. (Cl. 189—34)



1. The combination of a metal structural unit for building construction and the like, comprising a first channel-shaped element of nail-penetrable sheet metal having a straight side member formed on a connecting web member and a flange member on said straight side member parallel to said web member, a second channel-shaped element of nail-penetrable sheet metal having a concave side member formed on a connecting web member and a flange member on said concave side member parallel to said web member, said concave side member having a longitudinally extending depression therein, said straight side member of the first element being wider than said concave side member of the second element, said second element nested with said first element with the web members of said elements on the outside of the unit and having said concave side member of the second element disposed against the inside surface of said straight side member and between the flange member and web member of the first element; a collateral structural member disposed adjacent to and supported by said metal structural unit; and driven frictional fastening elements passing through said collateral member and also successively through said straight side member and said concave side member of said nail-penetrable metal structural unit, said driven fastening elements being retained securely in place by their frictional contact with the distorted margins of the openings formed in the spaced-apart straight side member and concave side member by the driving of said fastening elements combined with the locking effect of the slight deflection of at least one of said side members due to the inherent slight unhindered resilience thereof under the driving force of the fastening element.

2,950,790
WINDOW AND METHOD OF ASSEMBLING
Charles R. Haas, Jr., Cuyahoga Falls, Ohio, assignor to The Chas. Haas Company, Cuyahoga Falls, Ohio, a corporation of Ohio
Filed Jan. 29, 1958, Ser. No. 711,822
9 Claims. (Cl. 189—77)

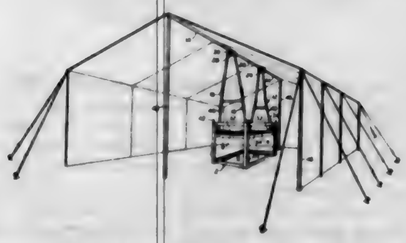
1. The combination in a window of a plurality of corrugated plastic panes having the ribs and grooves run-

ning vertically and with the panes being overlapped laterally, an endless metal frame surrounding the panes and having a U-shape in cross section and engaging the edges of the panes around the sides and the top, the frame at the bottom of the panes having a J-shape in cross section having a high back leg and a low front leg in cross section and engaging the edges of the panes, the depth of the U-shaped groove at the upper edge of the frame being somewhat greater than twice the height of the short leg of the J-shaped frame and with the upper edge of the panes being spaced from the bottom of the groove of the



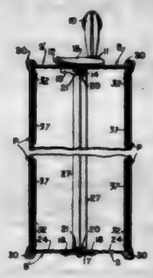
upper edge of the frame a distance about equal to the height of the short leg of the J-shaped frame and the back leg of the frame extending upwardly beyond the front leg to prevent rearward movement of the lower margin of the pane therebeyond, a triangular recess at the bottom of the groove in the J-shaped frame, a non-hardening plastic material sealing the edges of the panes in the frame, and a metal bar extending vertically between the bottom and the top edges of the frame behind each lateral overlapping of the panes and parallel to the corrugations.

2,950,791
PACKAGED AID STATION
Elden R. Babcock, Jacksonville, N.C., assignor to the United States of America as represented by the Secretary of the Navy
Filed Oct. 27, 1959, Ser. No. 849,122
3 Claims. (Cl. 190—9)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A portable aid station comprising a framework generally in the form of a rectangular parallelepiped and further comprising a lower bottom and an upper bottom; said lower bottom together with said framework constituting a container for retaining medical supplies and the like; said upper bottom together with said framework constituting a box-type container for retaining tent parts and the like; a pair of generally A-shaped frames hinged at their lower ends to said framework about normally horizontal axes, each of said axes lying within said box-type container and adjacent, respectively, each end thereof; each of said A-frames comprising two parts hinged together about a normally horizontal axis intermediate the ends of the A-frame; each of said A-frames having at its apex a transverse crosspiece extending generally parallel to the pivotal axis of the A-frame; a ridgepole center piece having a swivel adjacent each end thereof, each said swivel encompassing, respectively, one of said crosspieces in bearing relation therewith; a pulley fixed to each of said A-frames to turn in unison therewith about the said axis of said A-frame lying within said box-type structure, said pulley being coaxial with said last-mentioned axis; a crossed cable passing over said pair of pulleys so that motion of one A-frame automatically produces concomitant motion of the other A-frame; means for locking said A-frames in extended position; and ridgepole extensions adapted to engage the ends of said ridgepole center piece to extend the latter.

2,950,792
LUGGAGE CASE
Willard G. Axtell, Denver, Colo., assignor to Shwayder Bros., Inc., Denver, Colo., a corporation of Colorado
Filed Aug. 28, 1957, Ser. No. 680,850
6 Claims. (Cl. 190—49)



2. A luggage case including two opposed concave sections which meet at the edges thereof when said case is closed, each said section comprising a strip extending around the confronting edge of the respective section and provided with a transverse, inwardly extending web adjacent the lateral outer edge thereof and a groove outwardly of said web, said strip being bent around to form the top, bottom and ends of said case section; a side panel received in said groove; and a strap attached at each end to said web and extending across said case section adjacent said panel.

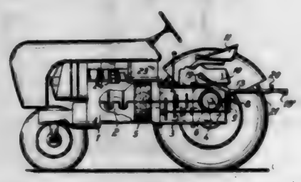
2,950,793
LUGGAGE CASE
Willard G. Axtell, Denver, Colo., assignor to Shwayder Bros., Inc., Denver, Colo., a corporation of Colorado
Filed Jan. 9, 1959, Ser. No. 785,880
12 Claims. (Cl. 190—49)



1. A luggage case comprising two opposed concave sections which meet at the edges thereof when the case is closed, each said section comprising a strip of substantial lateral extent and formed of metallic material, which extends around the confronting edge of said section, said strip being constructed and arranged to interfit with the opposite strip when the case is closed, each said strip being provided with an inwardly extending wall and said strips being constructed and arranged to provide a recess extending longitudinally around the periphery of

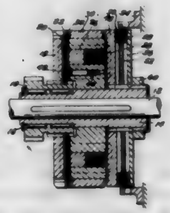
said luggage case with said sections closed, said walls forming the sides of said recess; a concave shell for each section, the inner edge of each said shell extending beneath at least a portion of the corresponding strip; means attaching the edge of each said shell to the corresponding strip; hinge means pivotally connecting said sections together along one edge thereof; and releasable means for connecting said sections together at the opposite edge thereof.

2,950,794
SPEED CONTROL ARRANGEMENT FOR TRACTOR-TYPE VEHICLES
Otmar Mayr, Plochingen, Neckar, Germany, assignor to Firma Dr. Ing. h.c.F. Porsche K.G., Stuttgart-Zuffenhausen, Germany
Filed Mar. 11, 1958, Ser. No. 720,715
Claims priority, application Germany Mar. 23, 1957
9 Claims. (Cl. 192—3)



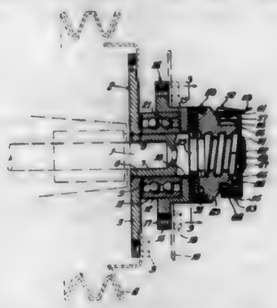
1. An arrangement for reducing and stopping the vehicle speed of engine-driven tractors while a speed of the transmission thereof remains engaged comprising a change-speed transmission and at least one driven wheel connected to be driven by said transmission, means including a hydraulic clutch providing a fluid coupling for connecting said engine with said change-speed transmission, a driven shaft operatively connected with said driven wheel and rotatable at a speed dependent on the speed of rotation of said wheel, brake means on said tractor for braking said driven shaft while a speed of said change-speed transmission remains engaged and while said transmission is operatively coupled to the engine by the hydraulic clutch, said brake means including lever means so constructed and arranged as to be actuated by the operator while standing dismounted near the tractor for controlling braking of said shaft by the brake means, and adjusting means operatively connected with said brake means for adjustment, by actuation of said lever means to brake said shaft, for adjusting the rotational speed of said engine.

2,950,795
ELECTROMAGNETIC CLUTCH WITH FRICTION AND FORM LOCKING MEMBERS
Hermann Fischer, Friedrichshafen-Fischbach, Germany, assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Nov. 26, 1957, Ser. No. 699,058
3 Claims. (Cl. 192—53)



1. A clutch device for selectively coupling and decoupling a first and second rotatable member; said clutch device comprising a first clutch member characterized by gradual clutching and declutching operation and a second clutch member characterized by rapid clutching and declutching operation; an intermediate rotatable member operatively connectable between said first and second rotatable members; said intermediate rotatable member being a ring; said first clutch member operatively connecting said intermediate member to said first rotatable member when operated to a clutch engaged position; said second clutch member operatively connecting said intermediate member to said second rotatable member when operated to a clutch engaged position; said first clutch member being an electromagnetic clutch having interleaved laminations connected between said first rotatable member and said intermediate member and said second clutch member comprising a form-locking clutch; said form-locking clutch and said electromagnetic clutch being operable to said clutch engaged position responsive to the generation of a magnetic field by magnetic structure means; said form locking clutch and said electromagnetic clutch being positioned on opposing sides of said magnetic structure means.

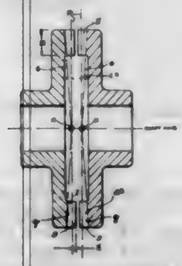
2,950,796
THERMOSTATICALLY CONTROLLED CLUTCH
Sylvan J. Becker, Lombard, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Filed Dec. 13, 1956, Ser. No. 628,108
18 Claims. (Cl. 192—82)



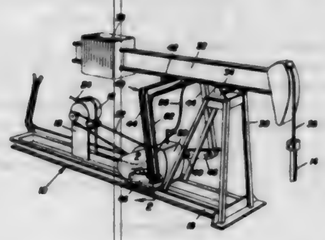
1. In a clutch device particularly adapted to effect desired engagement between a driving member and a vehicle fan comprising a driving part adapted to be rotated, a driven member normally rotatable relative to said driving member, clutch means mounted on said driving member for axial movement relative thereto, means providing a limited rotational lost motion connection normally effective in one rotational direction only between said clutch means and driving member whereby said clutch means are freely rotatable relative to said driving member through a predetermined arcuate range only, axially movable means adapted to effect engagement of said clutch means with said driven member to provide a driving connection between said driving and driven members through said clutch means, and ambient condition responsive means to hold said axially movable means spaced from said driven member under certain ambient conditions and to effect movement of said axially movable means toward said driven member to effect said clutch engagement under other ambient conditions.

2,950,797
CLUTCH TEETH
Gustav Zieber, Friedrichshafen, Germany, assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Apr. 24, 1956, Ser. No. 580,329
1 Claim. (Cl. 192—108)

A clutch ring for a positively acting clutch; said clutch ring being adapted to cooperate with a cooperating clutch ring of identical construction; said clutch ring having clutch teeth; each of said clutch teeth having radial crests lying in a plane perpendicular to the axis of rotation of said clutch ring; the flanks of said teeth from a point above their pitch circle and extending toward the crests of said teeth following a plane uniform curve; said flanks of said teeth from said point above said pitch circle beginning said uniform curve and extending downwardly being straight; the engagement of each of said teeth of said clutch ring and respective teeth of said cooperating ring of identical construction occurring on a trapezoidally shaped area symmetrically disposed about the pitch circle of said teeth; the marginal edges of said trapezoidally shaped area of engagement extending along said flanks of said teeth from the center of said ring and both above and below the pitch circle of said ring.

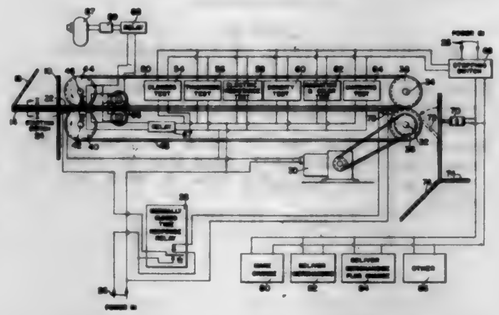


2,950,798
SAFETY CUT-OFF FOR PUMP PITMAN
Tom L. Abbott, Box 1002, Whiteface, Tex.
Filed July 16, 1958, Ser. No. 748,975
3 Claims. (Cl. 192—116.5)



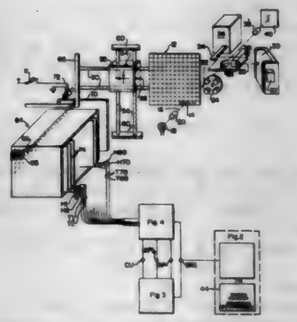
1. Pumping ring apparatus of the type having a walking beam mounted for movement about a pivot axis and having one end thereof connected to the sucker rod string of a pump, a pitman pivotally connected to said walking beam on a side of said pivot axis remote from said string for operating the beam, said beam having a relatively greater weight on the pitman side of said axis, a pump jack having a crankshaft with a crank arm thereon, a crank pin on said crank arm to which said pitman is connected for operation thereby, a motor operatively connected to said pump jack; the improvement comprising a spring urged normally open switch electrically connected to said motor, said switch secured to said pitman, said switch including a switch actuating lever, and a mechanical tension member connected between said switch lever and said crankpin for closing said switch.

2,950,799
APPARATUS FOR IDENTIFYING PAPER MONEY, OR THE LIKE, AS GENUINE, AND FOR MAKING CHANGE OR THE LIKE
Ross L. Timms, Akron, Ohio, assignor of fifty percent to Alan Foster, Cincinnati, Ohio, five percent to Albert H. Oldham, Akron, Ohio, and five percent to Vernon L. Oldham, Akron, Ohio
Filed Feb. 7, 1952, Ser. No. 270,326
8 Claims. (Cl. 194—4)



8. The combination in apparatus for determining the genuineness of a paper money note, of means for receiving the note, means for directing light against the note while held by the receiving means, means for determining if the light from the note is within required limits of a genuine note, means for determining if the physical dimensions of the printing on the note while held by the receiving means is within the required limits of a genuine note, means responsive to the determining means for discharging the note from the receiving means and the apparatus if the determining means show the note is not within the required limits of a genuine note, means for removing the note from the receiving means and retaining it in the apparatus if the determining means show the note is within the required limits of a genuine note, and means operated by the last-named means for delivering articles from the apparatus.

2,950,800
IDEOGRAPHIC TYPE COMPOSING MACHINE
Samuel H. Caldwell, Watertown, Mass., assignor to Graphic Arts Research Foundation, Inc., Cambridge, Mass., a corporation of Delaware
Filed Oct. 24, 1956, Ser. No. 618,121
14 Claims. (Cl. 197—1)



1. In type composing apparatus, the combination of a support bearing an array of typographical characters arranged thereon with reference to a first pair of coordinates, a seeker coupled with the support, a number

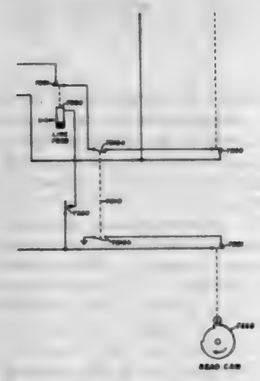
of movable locator elements, one for each character, the elements being spaced with reference to a second pair of coordinates in a manner corresponding to the spacing between the characters, mechanism for moving the seeker in relation to said elements and the characters in relation to a predetermined printing position, means to move the element corresponding to a selected character to a position to interfere with the seeker when said character reaches said position, and means for printing said character.

2,950,801
READOUT CONTROL MEANS FOR SIGNAL-OPERATED TYPEWRITER

Frank A. Morris, Fishers, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Original application Apr. 13, 1953, Ser. No. 348,202, now Patent No. 2,886,642, dated May 12, 1959. Divided and this application Nov. 7, 1957, Ser. No. 695,031

7 Claims. (Cl. 197—19)



1. In combination with a typewriting machine having a plurality of type actions; automatic control means operable through successive steps to cause successive type action operations in accordance with a predetermined program; a plurality of solenoids for controlling selective sequential operation of said type actions; switch means common to said solenoids and operable to opened and closed conditions for each operation of a type action; means controlled by said switch means when said switch means are operated to an opened condition for operating said automatic control means to advance a step to prepare said solenoids for controlling a subsequent operation of a selected type action; a power source; and means including said power source, said switch means, and said solenoids for causing said subsequent operation of a type action when said switch means are operated to a closed condition.

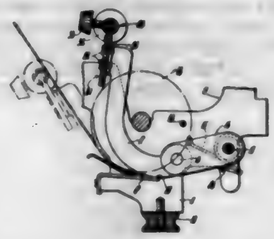
2,950,802
PAPER GUIDE SHIELD FOR BUSINESS MACHINES

Richard W. Yerks, Manchester, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware

Filed Feb. 2, 1959, Ser. No. 790,530

8 Claims. (Cl. 197—127)

1. A paper shield structure for a business machine comprising, a generally rectangular plate of relatively flexible material, a substantially stiff reinforcing member associated with said plate along one edge thereof, said reinforcing member provided with a lengthwise slot therein, a pair of edges defining said slot in said reinforcing member, a neck in said plate, said plate being grooved on opposite faces to establish said neck, and said edges of said reinforcing member cooperating with said



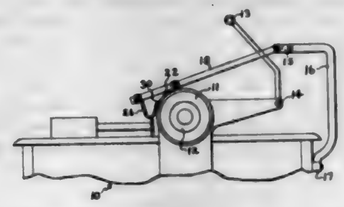
neck and said grooves in said plate to give rigidity to said plate.

2,950,803
PARTICLE COLLECTOR AND ERASING SHIELD FOR TYPEWRITERS

Mary D. Johnson, 401 11th Ave. SW., Decatur, Ala.

Filed July 23, 1959, Ser. No. 829,063

4 Claims. (Cl. 197—181)



1. An attachment adapted to be positioned over the platen of a typewriter to collect erased particles and to shield sheets beneath the sheet being erased, said attachment comprising a bracket adapted to be mounted on said typewriter and pivoted between an operable position over the platen and an inoperable position removed from the platen, an erasing shield pivotally carried by said bracket and adapted to extend in parallel relation to said platen, and a separate tray pivotally mounted on said bracket adjacent the erasing shield to collect particles formed when the operator of the typewriter makes an erasure, said tray being adapted to extend in parallel relation to said platen and being positioned adjacent the lower edge of said shield in operable position whereby particles from the sheet being erased fall downwardly into said tray.

2,950,804
TRANSFER MECHANISM

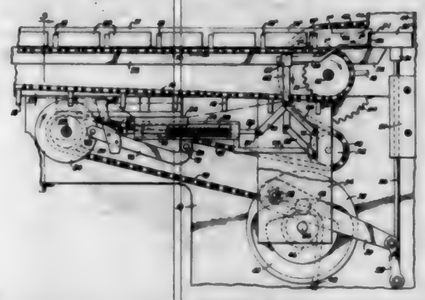
Robert Leigh Ardner, Anderson, Ind., assignor to Lynch Corporation, Anderson, Ind., a corporation of Indiana

Filed Jan. 12, 1959, Ser. No. 786,177

3 Claims. (Cl. 198—24)

1. In a transfer mechanism for wrapping machines and the like, a pusher for articles and means for sequentially imparting to said pusher a pushing movement for one article on a conveyor, depressing and return movements to clear the next article on said conveyor, a substantially vertical elevating movement behind said next article and repetition of the sequence beginning with pushing said next article, said means comprising a slide way, a slide movable therealong, a toggle actuating rod slidable relative to said slide, a toggle link connection between said slide, said article pusher and said toggle actuating rod, a crank and a connecting rod for

sliding said slide relative to said slide way, and a cam on said connecting rod coacting with said toggle actuat-



ing rod to actuate said toggle link connection while said crank and connecting rod are actuating said slide.

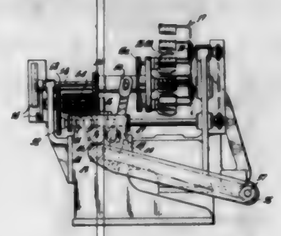
2,950,805
ARTICLE CONVEYING AND TRANSFERRING MEANS

Paul Helmlicher and Friedrich Meierhofer, Bern, Switzerland, assignors to Maschinenfabrik Winkler, Fallert & Co. A.G., Bern, Switzerland

Filed Nov. 15, 1954, Ser. No. 468,948

Claims priority, application Switzerland Nov. 14, 1953

1 Claim. (Cl. 198—25)



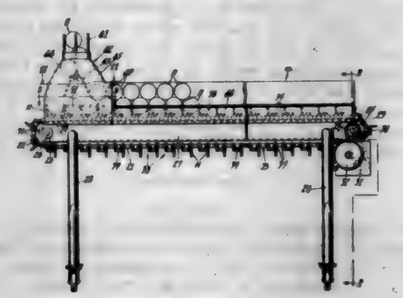
A system for automatically conveying hollow containers undergoing a series of operations to and from a plurality of treatment stations; comprising first rotatable support means, tong means having a longitudinal axis carried by said first rotatable support means, cam means in engagement with said tong means to open and close said tong means in accordance with the operation to be performed upon said containers, said tong means when in closed position being capable of grasping and holding said containers, said tong means in said open position being capable of releasing said containers, second rotatable support means located adjacent said first rotatable support means, mandrel means carried by said second rotatable support means, said cam means being further operatively connected to said tong means to displace the latter along the longitudinal axis thereof, drive means for imparting movement to and cooperable with said first and second rotatable support means and said cam means for opening and closing said tong means, and a Geneva indexing means connected between said drive means and said first and second rotatable support means and said cam means, so that said second support means and said mandrel means and said tong means move intermittently in step-by-step timed relation with each other to thereby permit said containers when held by said tong means to be placed onto said mandrel means for conveying said containers to a selected treatment station.

2,950,806
APPARATUS FOR INTERLOCKING FLANGES OF CONTAINERS ARRANGED FOR TRANSFER TO A STACK

Harold C. Hebert, Tampa, Fla., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Filed Feb. 19, 1957, Ser. No. 641,173

8 Claims. (Cl. 198—35)



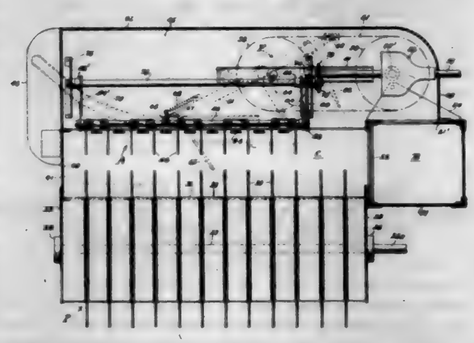
1. An apparatus for arranging tubular containers having projections, such as end seams and flanges, in superimposed multiple row formation for transfer to a stack, comprising a conveyor extending along a substantially horizontal path of travel, primary feeding means for delivering containers at a first delivery point to said conveyor to form a lower row of containers thereon, secondary feeding means for delivering containers at a second delivery point spaced horizontally from said first delivery point and directly above said containers on the conveyor to form an upper row of containers, and offsetting means disposed intermediate said first and second delivery points for shifting the containers in one of said rows relative to the other to offset the projections on containers in one of said rows relative to projections on containers in the other row whereby interference between said projections is prevented.

2,950,807
HAY BALER

James W. McDuffie, New Holland, Pa., assignor to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware

Filed Oct. 25, 1957, Ser. No. 692,449

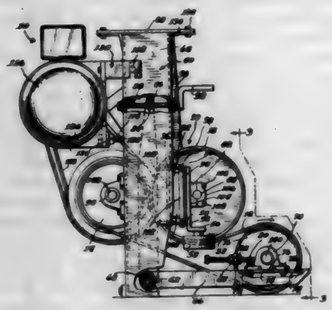
4 Claims. (Cl. 198—107)



1. An automatic hay baler comprising a fore-and-aft extending bale chamber having a feed opening in a vertical side wall thereof, a generally horizontal hay receiving platform extending laterally from adjacent the lower end of said opening, a feeder reciprocable over substantially the full length of said platform for conveying crop ma-

terial through said opening and into said bale chamber, means connected to said feeder for positioning the feeder relatively close to said platform when it is moving toward said bale chamber on a working stroke and vertically spaced therefrom when it is moving away from said bale chamber on a return stroke whereby a relatively open space is provided above said platform when the feeder is returning, rotatable means mounted above said platform and forwardly of said feeder for engaging crop material from above and delivering it rearwardly for conveyance by said feeder, said rotatable means traversing a substantial portion of said platform and comprising a plurality of fingers relatively spaced in a direction away from said vertical side wall of said bale chamber and means for operating said rotatable means and said feeder in timed relation whereby said fingers deliver crop material rearwardly between successive working strokes of the feeder.

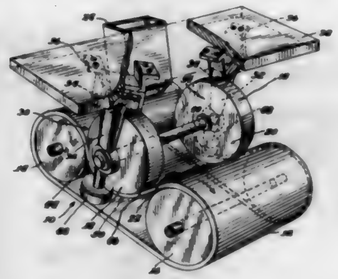
2,950,808
MATERIAL HANDLING APPARATUS
Donald E. Gerberich, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a corporation of Illinois
Filed Dec. 1, 1958, Ser. No. 777,420
3 Claims. (Cl. 198—128)



1. A conveyor belt aligning device comprising pulley means mounted on a swinging support and engaging said conveyor belt with substantial wrap, said support comprising a pair of coplanar arms mounted at like ends for pivotal movement about axes that are parallel to each other, said arms being connected to said pulley means at the other ends thereof for pivotal movement about axes that are parallel to the first mentioned axes and extend substantially normally of the axis of rotation of said pulley means, said arms converging in the direction of said pulley means, said support including means on each side thereof between which said conveyor belt is trained and which is adapted to be engaged by the conveyor belt on drift thereof to swing said pulley means to a position that opposes drift.

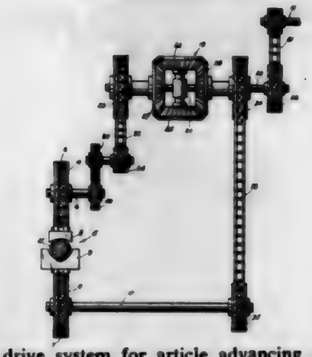
2,950,809
MATERIAL HANDLING APPARATUS
Alfred D. Sinden, Aurora, Ill., assignor to Stephens-Adamson Mfg. Co., a corporation of Illinois
Filed Jan. 2, 1959, Ser. No. 784,684
12 Claims. (Cl. 198—202)

1. An endless conveyor aligning device comprising pulley means mounted on a swivelling support and engaging said conveyor with substantial wrap, said support comprising a pair of pivotally mounted levers extending toward the conveyor, said levers being mounted for pivotal movement about axes that are contained in a plane disposed substantially normally of said levers, said axes converging to a point adjacent the center line of the conveyor in the direction of movement of the portion of the conveyor engaged by said pulley means, said support including means on each side thereof between which said conveyor is trained and which is adapted to be engaged



by the conveyor on drift thereof to swing said levers in the direction of drift.

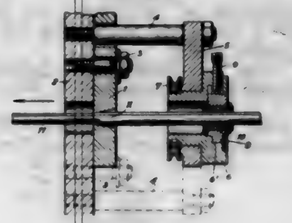
2,950,810
CAPSTAN DRIVE APPARATUS
Ellwood W. Reynolds, Watchung, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed June 13, 1957, Ser. No. 665,548
1 Claim. (Cl. 226—172)



In a drive system for article advancing apparatus, a tractor capstan having at least two opposed driven members in friction contact with an article therebetween, said members normally being driven at substantially identical speeds and cooperating to exert a pulling force on the article parallel to the direction of travel of the article between the members, the force required on each of the members being a different value, a differential gearing device having an input and two outputs, a source of power for driving the differential input, driving connections including gear trains between the two differential outputs and respective ones of said two driven members with relative gearing ratios of the gear trains being selected so that the forces delivered by the driven members on the article are proportioned in the ratio of the forces required on each member to maintain the substantially constant speed with its opposed member.

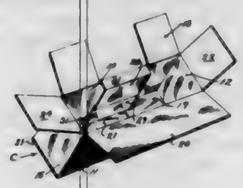
2,950,811
DIE GUIDE AND WORK-STRAIGHTENING DEVICE
Alfred Kreidler, Gaensheidestrasse (14a), Stuttgart, Germany
Filed June 3, 1952, Ser. No. 291,372
Claims priority, application Germany June 5, 1951
1 Claim. (Cl. 205—3)

A drawbench for producing ready trued work such as bars, pipes and the like, comprising a die holder having a bore to receive said work therethrough, a die having a die-opening and means for removably securing said die to said die holder, a support disposed substantially parallel to and spaced apart from said die holder, at least two spacer bolts maintaining said support at a predetermined distance from said die, said support having a central opening, a guide nozzle holder having a shoulder



engaging one of the end faces of and rotatably mounted in said central opening of said support, a driving pulley mounted on said guide nozzle holder, a guide nozzle adjustably mounted in said guide nozzle holder and receiving said work, and set screws projecting through said guide nozzle holder and retaining said guide nozzle in any one of a plurality of selected positions relative to said guide nozzle holder.

2,950,812
SHIPPING CARTON FOR WRAP-AROUND REAR WINDOWS AND WINDSHIELDS OF AUTOMOBILES
Lloyd D. van Antwerpen, 1983 S. Allis St., Milwaukee, Wis.
Filed Nov. 7, 1955, Ser. No. 545,326
1 Claim. (Cl. 206—62)



A package for shipping curved glass of the panoramic windshield type comprising a carton, a curved windshield in the carton including a main curved body portion and curved back terminals, the carton including side, end, top and bottom walls, a part of the body portion of the windshield lying adjacent to and substantially parallel with one side wall, said top and bottom walls each including inner and outer foldable overlapping side flaps, said inner side flaps having spaced transversely extending slits intermediate their ends and centrally disposed folding wings defined by the slits bent at right angles to the major portion of the inner side flaps and parallel to the mentioned side wall and over the part of the body portion of the glass lying adjacent to the mentioned side wall to confine the body portion of the glass between the mentioned side wall and the wings, and said foldable wings having top and bottom spacer walls uniting the same with the mentioned side wall whereby to space the major portions of the wings an exact distance from said side wall.

2,950,813
PACKAGE
Harold F. Koones, Essex Fells, N.J., assignor to Chemway Corporation, Wayne, N.J., a corporation of Delaware
Filed Jan. 8, 1958, Ser. No. 707,725
2 Claims. (Cl. 206—63.2)



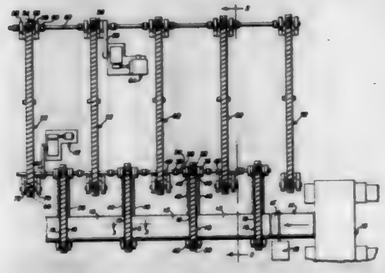
1. A package comprising a container having an open top and a closed bottom and including an upper sidewall portion of constant inside area in transverse cross-section extending downwardly from the container open top and forming a sleeve defining the container open top, a stopper having a depending skirt positioned in the container open top with the stopper skirt disposed in said sleeve, a solid body of solidified material formed and positioned within the container having the upper portion thereof encircled by the stopper skirt, a projection extending inwardly from the inside wall of the skirt and at least partially embedded in the solid body whereby the solid body is suspended from the stopper skirt and upon raising the stopper relative to the container the solid body is raised within the container, a sealing bead extending around the outside of the skirt between the skirt and container sleeve, and a groove spaced from said sealing bead and extending upwardly along the outside of the stopper whereby during withdrawal of the stopper said sealing bead enters over said groove thereby bringing the inside of said container into communication with the outside thereof.

2,950,814
SEALING MEANS FOR EMPTY GLASS CONTAINERS
John W. Thomson, Jr., Menlo Park, Calif., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Dec. 18, 1957, Ser. No. 703,525
4 Claims. (Cl. 206—65)



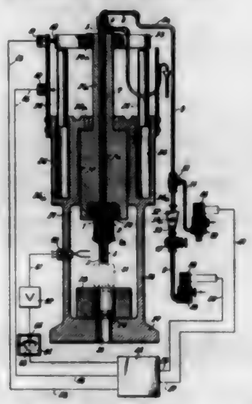
1. In combination a shipping carton comprising side and end walls, a bottom and top forming cover flaps, a cell-type filler in the carton, empty open bottles or jars in the cells of the filler positioned with their open ends facing in the same direction, the open ends generally being in a common plane, a sealing tab carrying sheet at the open ends of the bottles or jars substantially corresponding in area and outline with the interior of the carton bottom, tabs individual to and removably adhesively secured to the bottles to close their open ends and elongated flexible connectors between the tabs and sheet whereby the bottles may shift laterally and axially independently relative to the sheet and carton without separating the tabs from the bottles.

2,950,815
EXTRUSION CONVEYING APPARATUS
William O. Oberg, Southampton, Va., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed Nov. 22, 1957, Ser. No. 698,144
3 Claims. (Cl. 207—1)



3. Apparatus for handling extrusions that are ejected from an extrusion press for die expressing said extrusions, said apparatus comprising a run-out table for receiving pieces ejected from said extrusion press and an endless conveyor for moving pieces from said run-out table transversely of the path of movement of extrusions ejected from said extrusion press, said run-out table including at least two portions separated by a gap extending transversely of said path of movement of the extrusions ejected from said extrusion press, each of said two table portions having a substantially-integral upper surface, one of said table portions being nearer to said extrusion press and the other said table portion being farther from said extrusion press, said endless conveyor having an outer load-engaging surface substantially filling said gap between said two table portions, the outer load-engaging surface of said endless conveyor being slightly below the upper surface of said nearer table portion, the upper surface of the end part of said farther table portion adjacent said endless conveyor being slightly below said outer load-engaging surface of said conveyor; the main part of said farther table portion, exclusive of said end part, having its upper surface at substantially the same level as the upper surface of said nearer table portion; said endless conveyor comprising an upper run, a lower run, and curved end portions connecting the upper run to the lower run, said curved end portions being rotatable about axes, said endless conveyor including a plurality of conveyor blocks movable in an endless path of movement and mounted in successive positions along said endless path, drive means engageable with said endless conveyor for driving the same in said endless path; said conveyor blocks having the shape of oblique parallelepipeds, the outer load-engaging surfaces of said blocks having the shape of oblique parallelograms extending substantially-parallel to said axes of rotation; each said block having a front surface foremost in the direction of said endless path of movement and a rear surface rearmost in the direction of said endless path of movement; said front and rear block surfaces extending obliquely to said endless path of movement; said front and rear block surfaces being substantially-perpendicular to said outer load-engaging surface of the block; said front and rear block surfaces extending to positions, along said endless path of movement, alongside of and lapping the positions occupied by the front and rear surfaces of adjacent conveyor blocks; and, means for raising the portion of said endless conveyor located in said gap between said two table portions to a level where the outer load-engaging surface of said endless conveyor is above the upper level of said table portions; whereby extrusions ejected from said extrusion press can move smoothly over the upper surface of said run-out table without encountering obstructions and can, upon being severed or otherwise divorced from the constraint of the extrusion die and other press parts, be carried by said endless conveyor while preventing said extrusion from entering space between adjacent conveyor blocks.

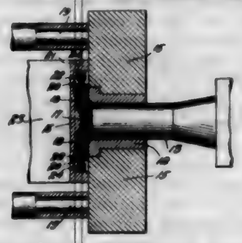
2,950,816
IMPROVEMENTS IN CONTROLLING THE COOLING OF A HOLLOW MANDREL IN A METAL EXTRUSION PRESS
Matthias Arenz, Duesseldorf-Lintorf, Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany
Filed Nov. 18, 1957, Ser. No. 697,087
Claims priority, application Germany Nov. 24, 1956
4 Claims. (Cl. 207—16)



1. In combination, a ram member, a hollow mandrel member carried by said ram, means for moving said members into an extruding position and into an inoperative position, and apparatus for controlling the cooling of said hollow mandrel, said apparatus comprising a liquid supply conduit communicating with the interior of said mandrel for delivering a liquid cooling medium thereto, a drain conduit communicating with the interior of said mandrel for discharge of cooling medium therefrom, a liquid shut-off valve in said liquid supply conduit, a gas supply conduit connected to said liquid supply conduit on the downstream side of said liquid shut-off valve for delivering a gaseous cooling medium to the interior of said mandrel, a gas shut-off valve in said gas supply conduit, operating means for said liquid shut-off valve and said gas shut-off valve, control means connected to said operating means and actuating means for said control means, said actuating means being located along the path of travel of said members and actuated by said members to open said liquid shut-off valve and close said gas shut-off valve to deliver liquid cooling medium to said mandrel in one position of said members and to close said liquid shut-off valve and open said gas shut-off valve to eject said liquid cooling medium from said mandrel and deliver gaseous cooling medium thereto in the other position of said members.

2,950,817
MANUFACTURE OF TURBINE ROTORS
Alexander B. Graham, Whitecraigs, Glasgow, Scotland, assignor to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 18, 1957, Ser. No. 646,741
Claims priority, application Great Britain Mar. 28, 1956
1 Claim. (Cl. 207—17)

A combined extrusion and forging die assembly comprising an inner abutment plate having a centrally disposed dome-like projection, which latter is surrounded by a concentric annular dome-like projection; an outer abutment plate having a centrally disposed liner, the latter having a work-material admitting bore axially in line with the inner abutment projections, said bore being larger in size than that of said centrally disposed projection and less in size than that of the crest of said annular projection; an outer retaining ring surrounding said inner abutment plate and seating flush against said outer abutment plate, said ring having an annular die seating cavity extending in depth from said outer plate to the outer edge of said inner plate; a segmented annular die ring seated in said cavity and seating flush against said outer plate, said die ring being provided with a plurality of extrusion orifices of the desired configuration fol-



lowed by appropriate work-clearance cavities, the latter and said orifices being mutually aligned and directed radially with respect to said inner and said outer plates; whereby metal under pressure flowing in through said bore will be dispersed in substantially equal amounts around and over said projections and be extruded to form a plurality of substantially equal extrusions of the desired form and shape which remain integral with the metal last exiting from said bore, the later metal being forged to its final shape by the surfaces of said plates and a coacting plunger; and whereby said plates may be readily separated one from the other, said inner plate and said retaining ring may be readily removed from said die ring together with the finished workpiece, and the latter may be readily disengaged from the separate segments of said die ring.

2,950,818
FLOTATION PROCESS
August Moeller, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Feb. 28, 1956, Ser. No. 568,195
Claims priority, application Germany Mar. 5, 1955
7 Claims. (Cl. 209—166)

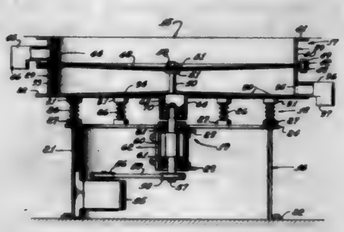
1. The method of concentrating ores which comprises subjecting an aqueous pulp of said ore to froth flotation in the presence of a collector and in the presence, as a frother, of at least one compound of the formula

$$R—(OCH_2CH_2)_n—OH$$

wherein R is a saturated aliphatic hydrocarbon radical having 5 to 8 carbon atoms and *n* is an integer from 1 to 5.

2,950,819
GYRATORY SEPARATOR
Lee B. Holman, Whittier, and William T. Smith, Puente, Calif., assignors to State Steel Products, Inc., Puente, Calif., a corporation of California
Filed June 18, 1956, Ser. No. 592,176
5 Claims. (Cl. 209—326)

1. In a gyratory separator providing combination gyratory, horizontal and vertical motion components, the combination of: a stationary frame means; a plurality of circularly arranged spaced coil springs seated on said frame; a circular shaking box supported on said coil springs; motor means mounted on said stationary frame means and including a driving shaft having a vertical axis of rotation; means connecting the shaking box to the drive shaft for imparting a gyratory, horizontal and progressively tilting motion to the shaking box, said connecting means including a bearing housing secured to



the bottom of said shaking box in coaxial alignment therewith; a self-aligning bearing vertically adjustably positionable in said housing in the horizontal planar zone of said coil springs; and means providing an eccentric connection between the self-aligning bearing and said drive shaft and including adjustment means for selectively varying the eccentricity of said connection.

2,950,820
COMBINATION DISPLAY SHELF AND DIVIDER OR SEPARATOR FOR A STACK OF COLUMNAR ARTICLES
Robert A. Shiels, Cincinnati, Ohio, assignor, by mesne assignments, to The Mead Corporation, a corporation of Ohio
Filed Dec. 9, 1957, Ser. No. 701,421
11 Claims. (Cl. 211—49)

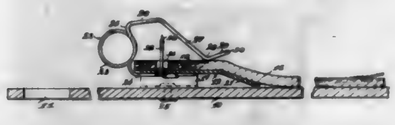


9. In combination with a stack of columnar articles stacked in superimposed rows or tiers, a combination display shelf and divider for the rows or tiers of the stack comprising a frame member provided with opposite sides and ends surrounding an open space of an area greater than the area of the top of an underlying row or tier of stacked articles, a readily detachable bottom spanning the open space of the frame member and seated on the surrounding sides and ends of said frame member, said bottom being engaged by said superimposed rows of stacked articles, and means for pivotally mounting the frame member in position between adjacent tiers of the stack.

2,950,821
SHEET HOLDING AND DISPENSING DEVICE
Charles F. Hoofer, 521 W. Monroe St., Chicago 6, Ill.
Filed Oct. 25, 1956, Ser. No. 618,297
2 Claims. (Cl. 211—54)

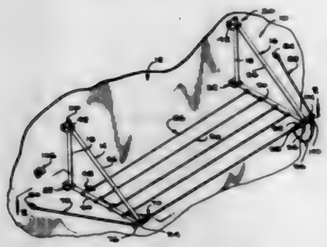
1. A holder and dispenser comprising a base including a pair of coplanar apertured ears, offset portions extending outwardly from said ears and terminating in a main body portion, an offset lip having a portion extending downwardly from said main body portion in a plane

at an angle to the plane of the ears and spaced laterally therefrom, said main body portion being provided with a pair of struck-in portions defining lugs, a spring member including a pair of spaced parallel coil sections, a first pair of spaced parallel straight sections extending from said coil sections and extending below said main body portion of said base and engaging said lugs, a second pair of sections extending upwardly from said coil sections and each terminating in a third section, said third



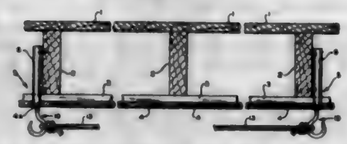
sections terminating in downwardly extending spaced parallel fourth sections, a fifth section extending upwardly from each of said fourth sections, a sixth section extending between said pair of fifth sections, said fifth section abutting said offset lip, the longitudinal axis of the spring member extending in a plane at right angles to the longitudinal axis of the plane of said ears and the plane of said lip, and a pointed prong extending upwardly from said main body portion intermediate of the third section of said spring member.

2,950,822
COLLAPSIBLE CLOTHES DRYING RACK
A. C. Francis Cope, 367 Prague St., San Francisco, Calif.
Filed Apr. 10, 1959, Ser. No. 805,615
3 Claims. (Cl. 211—104)



1. In combination, a vertical support, longitudinally spaced brackets fixed on said support, first and second horizontal arms having rear ends severally pivoted on the brackets, said arms having forward ends, said arms being foldable against the support from right angular relation to the support, eyes fixed to and spaced along the facing sides of the arms, a non-stretchable line-forming cord having a first end fixed to an eye at the rear end of said first arm, said cord being extended back and forth between said arms and through related eyes so as to provide parallel clothes supporting lines, first and second horizontal transverse levers severally pivoted intermediate their ends on the forward ends of the first and second arms, said levers having outer and inner ends, the inner end of said first lever having an eye thereon through which the cord is trained from an eye at the forward end of the first arm toward the second lever, said cord having a free second end, means connecting said second end of the cord to the inner end of the second lever, and first and second brace bars having forward ends removably engaged with the outer ends of the levers, said brace bars having rear ends pivoted to the support at points spaced longitudinally outwardly from the bracket.

2,950,823
APPARATUS FOR SUPPORTING CLOTHESLINES OR THE LIKE
Frank J. Woidka, 320 Ardmel St., Saginaw, Mich.
Filed June 7, 1957, Ser. No. 664,225
13 Claims. (Cl. 211—119.1)



12. In a building having a plurality of spaced apart overhead joists to the lower surfaces of which are mounted panels to form a ceiling, the combination of apparatus for removably supporting an overhead clothesline or the like below the level of said ceiling, said apparatus comprising a pair of mounting elements each having a bore therethrough; means connected to each of said mounting elements for mounting the latter in spaced apart relation on selected joists with the bore of each of said mounting elements substantially vertical and the lower ends of each of said mounting elements terminating above the lower surface of said ceiling, the panel immediately below each of said mounting elements having an opening therein in alignment with the bore of its adjacent mounting element; a line anchoring element for each of said mounting elements, each of said anchoring elements having a portion of its length adapted for telescoping reception in the bore of its associated mounting element for assembly of said elements; means depending from said portion of each of said anchoring elements and extending through the associated openings in said ceiling for connection to opposite ends of a line; and means forming an enlargement of said portion of each of said anchoring elements and cooperable with said mounting elements for removably retaining said elements in assembled relation.

2,950,824
CLOTHESLINE ASSEMBLY
Martin Berg, 143 W. 29th St., New York, N.Y.
Filed May 21, 1958, Ser. No. 736,849
1 Claim. (Cl. 211—119.1)



A clothesline assembly comprising a lengthy cord terminating in two opposite ends, a substantially U-shaped member having one end of said cord attached thereto, a clothespin provided with a first opening for insertion of a portion of said cord adjacent said one end therein, said clothespin having clamping jaws provided with an aperture located between said clamping jaws when they are in abutting relation to each other, said aperture being of a diameter smaller than the diameter of said member, said member being engaged in said aperture and being gripped by said jaws.

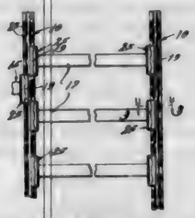
2,950,825
STACKING CRATES OR RECEPTACLES
Charles C. Averill, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich.
Filed Dec. 31, 1958, Ser. No. 784,226
15 Claims. (Cl. 211—126)

1. A crate or receptacle comprising top and bottom border frames, each including front, rear and side members, the top border frame being dimensioned to permit the passing of the bottom border frame of a like crate therethrough, the front member of the top border frame being downwardly spaced relative to the side and rear members thereof, wall slats fixedly secured at their upper end to the outer side of the top border frame and at their lower ends to the inner side of the bottom border frame, the rear and side wall slats being disposed in inclined relation so that slats of one crate will telescope in side by side relation with corresponding slats of another crate when the crates are in nested relation to each other, the side wall slats having inwardly facing shoulders constituting seats for the bottom border frame of a superimposed nested crate and outwardly facing shoulders engageable with the top border frame of an underlying nested crate,



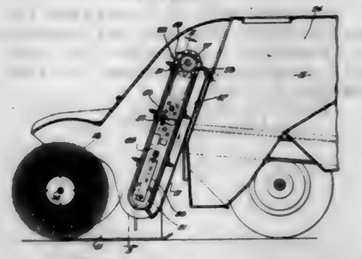
a bottom on said bottom frame member, front and rear stacking lugs spaced longitudinally of and projecting laterally outwardly from the side members of the bottom frame, and front and rear stacking lug seats projecting inwardly from the side members of said top border frame and spaced to receive the corresponding stacking lugs of a superimposed crate, the rear stacking lug seats being elongated to permit substantial sliding movement of the coacting stacking lugs of a superimposed crate thereon thereby facilitating the engagement and disengagement of the coacting stacking lugs of crates, the front stacking lug seats having stops thereon preventing sliding disengagement of lugs disposed thereon, the downward spacing of the front member relative to the side members of the top border frame being such as to provide access to the contents of stacked crates.

2,950,826
DEMOUNTABLE RACK
Richard K. Degener, Grosse Pointe, Mich., assignor to American Metal Products Company, Detroit, Mich., a corporation of Michigan
Filed Feb. 7, 1956, Ser. No. 563,943
3 Claims. (Cl. 211—148)



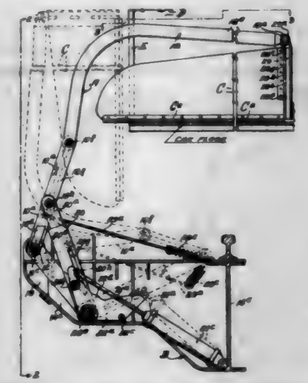
1. A rack or shelf assembly embodying a plurality of posts, each having on one corner thereof a series of aligned slots, a bed to be supported by the posts having longitudinal members with transversely extending plates on the ends thereof having a pair of slots therein matable with a pair of slots on the posts, and locking clamps each having a pair of fingers which project through the pairs of mating slots in a plate and post and extend within the posts in engagement with the inner side thereof, said locking clamps having an offset portion above the fingers which fills the slot of the plate to prevent the locking plate from moving longitudinally of the end plate.

2,950,827
FREE-FLOATING STREET SWEEPER ELEVATOR
Henry Burgdorff, 127 W. 65th St., Long Beach, Calif.
Filed June 7, 1956, Ser. No. 590,013
2 Claims. (Cl. 214—17)



1. In a street sweeper, a refuse hopper, an upwardly inclined chute extending to said hopper, and elevator means for transporting refuse to said hopper along the surface of said chute, said elevator means comprising: an elevator frame extending longitudinally from a lower pick-up end to an upper discharge end near said hopper, and including two side panels disposed substantially parallel to said chute; a flexible conveyor means associated with each of said side panels; transverse members supported at each end by one of said conveyor means to move refuse through said chute; motor means mounted on said elevator frame for driving said conveyor means; a single slotted track means in each of said side panels and disposed in a plane substantially normal to said chute and approximately centered between said pick-up and discharge ends thereof; and pin means at each side of said chute engaging said slotted track means to support said elevator side panels.

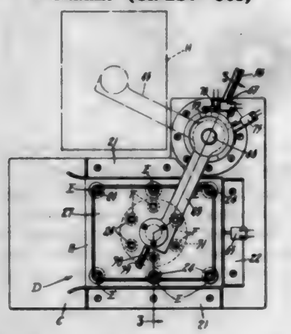
2,950,828
MATERIAL DEFLECTOR FOR CAR DUMPERS
Leslie C. Irwin, Fort William, Ontario, Canada, assignor to The Winter Dump Company Limited, a company of Canada
Filed Jan. 23, 1958, Ser. No. 710,782
11 Claims. (Cl. 214—47)



1. A deflector for diverting flowing material out of the side doorway of a railway car or the like comprising, a crane arm extendable through a side doorway into a box car to approximately the longitudinal center line of the car, a baffle board for deflecting flow of material in the car, means pivotally attaching one end of said baffle board to the outer end of said crane arm, said board extending from the center line of the car to the side doorway of the car and being pivoted by said attaching means to permit the unattached end of said baffle board to shift

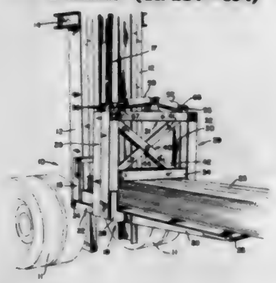
from adjacent to one side of the car doorway to the other, and means to shift the pivoted end of said board along the center line of the car.

2,950,829
CARRIER REMOVAL APPARATUS
Douglas M. McBean, Rochester, and Laurence C. Tallman, Churchville, N.Y., assignors, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey
Filed May 26, 1958, Ser. No. 737,659
7 Claims. (Cl. 214—305)



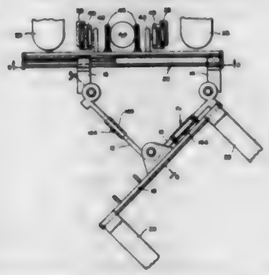
1. Apparatus for removing a closely fitting bottomless paper carrier from a batch of stacked containers, comprising a support for said containers within the carrier, a head member movable vertically toward and away from the top of said carrier on said support, means on said head member for gripping the upper end of said carrier, a rotatable cutter on said head member for penetrating the top wall surface of said carrier, means for moving said head member downwardly to penetrate said carrier by said cutter and to engage said gripping means with the carrier, and means for rotating said cutter to cut an opening in said carrier top for venting the interior of the carrier prior to upward movement of said head member to elevate and strip the vented carrier from said container stack.

2,950,830
END LOADER FOR LIFT TRUCK
Kenneth F. Johnson, East Orange, N.J., assignor to Weyerhaeuser Company, Tacoma, Wash., a corporation of Washington
Filed Jan. 18, 1957, Ser. No. 634,979
1 Claim. (Cl. 214—654)



A mobile end loader for elongated objects comprising mechanism including a generally vertically movable slide, a generally horizontal load supporting platform attached to the slide, two opposed vertical side frame members disposed on opposite sides of and extending above the platform at a location appreciably rearward of the forward end of the latter, an elongated horizontal gripper member having its ends guided by the side frame members for movement toward and away from the upper surface of the platform, the gripper member having an elongated guide channel extending longitudinally thereof, a pair of similar levers pivoted together to form a scissors-like element extending generally in a vertical plane above the gripper member, said levers having projecting members on their lower ends slidable within the guide channel at opposite ends thereof, a transverse upper frame member connecting the upper ends of the side frame members, and opposed similar reciprocable fluid motors extending transversely of the platform and having relatively fixed parts pivoted for vertical movement on the upper frame member symmetrically of the longitudinal center thereof, and the other relatively reciprocable parts of the motors being pivoted to the upper ends of the respective levers selectively to urge such ends of the levers toward and away from each other whereby to lower and raise the gripper, respectively.

2,950,831
UNIVERSAL LOADER MECHANISM
Janis O. Anzons, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Filed Nov. 18, 1957, Ser. No. 697,015
14 Claims. (Cl. 214—731)

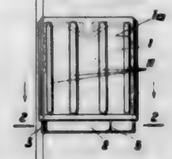


1. In combination, a guide means, a pair of arms pivotally joined together at adjacent ends thereof, the opposite end of each of said lever arms being operatively connected to said guide means, said operative connection including means about which each of said arms may pivot relative to said guide means and at least one of said operation connections including a guide member, said guide member being actuatable in either direction along said guide means whereby to effect outwardly directed pivotal movement of said arms relative to said guide means, load carrier means pivotally connected to said arms adjacent the joined ends thereof, and means for securing the load carrier means to that arm which is actuatable toward and away from the other arm with movement of said guide member during movement of that arm, whereby to effect swinging movement of said load carrier means from a first to a second position.

2,950,832
SCREW CLOSURE WITH SAFETY RING
Herbert Brüne, 9 Kolnerstrasse, Porz, near Koln, Germany
Filed Oct. 24, 1957, Ser. No. 692,221
Claims priority, application Germany Jan. 10, 1957
6 Claims. (Cl. 215—7)

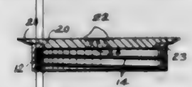
1. A screw closure of artificial material for closing the mouth portion of a container comprising a closure cap and a safety ring adapted to be destroyed during the first opening of said container, two locking systems, one of said locking systems being disposed between said closure cap and said safety ring, the other of said locking systems being disposed between said safety ring and the mouth portion of said container, one of said locking

systems comprising interlocking teeth and permitting relative rotation between said closure cap and said safety ring in the mounting direction, the other of said locking systems locking said safety ring and said mouth portion during the mounting and releasing, respectively, of said closure cap on the mouth portion of said container, permitting, however, a releasing movement of said closure cap with simultaneous destruction of said safety ring, said other of said locking systems comprising two co-operating elements, one of said elements having at least one cam including a radially disposed face and a



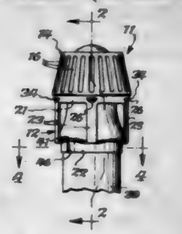
face ascending peripherally towards said radially disposed face and the other of said elements having radially disposed projections, the latter co-operating with said radially disposed face of said cam of said one of said elements to lock said elements relative to each other during the mounting of said cap, said projections co-operating with said ascending face of said cam of said one of said elements during the releasing movement of said closure cap so that a relative rotation between these elements is possible, whereby said projections ride on said ascending face and said safety ring will be destroyed by expansion.

2,950,833
EASY OPEN AND CLOSE JAR LID
Grace L. Short, 1010 Harvard Road, Oakland 10, Calif.
Filed Feb. 9, 1959, Ser. No. 791,886
1 Claim. (Cl. 215—63)



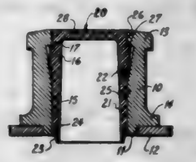
A jar lid comprising, in combination, a main substantially flat wall of annular shape, said main wall including a substantially inverted truncated inwardly and downwardly converging continuous conical edge surface defining a central substantially circular opening in said main wall providing access therethrough from an upper outer side thereof to a lower inner side thereof, substantially circular coupling means carried by the lower inner side of said main wall radially outwardly of said central opening in downwardly directed relation to said main wall and comprising an internally threaded collar integral with said main wall for threaded attachment to an exteriorly threaded neck of a jar, and closure means carried by the upper outer side of said main wall for controlling communication through said opening and comprising a pair of substantially similar semi-circular lid sections and a hinge pin pivotally centrally connecting said lid sections together for individual pivotal movement between open and closed positions relative to said main wall opening, marginal portions of each of said semi-circular lid sections defining substantially inverted truncated inwardly downwardly converging conical surfaces corresponding to the similar conical surfaces defining said opening and adapted for sealing engagement therewith when said lid sections are in closed relationship with said opening in said main wall, each of said lid sections including radially outwardly extending tabs overlying said main wall and extending beyond the downwardly directed threaded collar for digital engagement for controlling pivotal movement of said lid sections between normally closed and open positions.

2,950,834
PRESSURE RETAINING STOPPER
Ralph O. Mazza, 7405 Buffalo Ave., Niagara Falls, N.Y.
Filed Oct. 28, 1957, Ser. No. 692,610
4 Claims. (Cl. 215—95)



1. A pressure retaining stopper for a bottle having an outwardly projecting annular flange adjacent the mouth thereof consisting of a hollow, flexible, plastic, stopper body having a depending skirt portion adapted to cover the mouth of said bottle, said skirt portion being provided with spaced, outwardly extending projections, and a cylindrical, latticed, metal harness concentric within said body and adapted to encircle the neck of said bottle, said harness comprising an upper border encircling said skirt portion and provided with perforations through which said projections extend, thereby to secure said harness to said stopper body, a lower border, said lower border being longitudinally spaced from said upper border a distance which will permit it to be crimped below the annular flange of said bottle neck when the stopper is inserted in said bottle, and a pull tab adapted when pulled to free said harness from said body.

2,950,835
PLASTIC CORK
Victor Alvear, Box 3788, St. Petersburg, Fla.
Filed Sept. 4, 1958, Ser. No. 758,965
1 Claim. (Cl. 217—110)

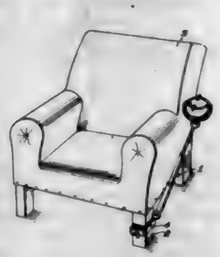


The combination with a bung bushing for beer barrels or the like, defining a cylindrical passage characterized by a reduced outer uniformly cylindrical end bore of greater diameter, of a hollow yieldable plastic cork formed with a transversely closed uniformly cylindrical outer end of reduced external diameter to fit the reduced outer end bore of said bung bushing and an open ended externally tapered body forming an outwardly facing abrupt transverse external shoulder at the junction of said tapered body and said reduced outer end whereby upon seating of said cork in said bushing, said reduced cork end will seat into said reduced bore end, cork shoulder will abut said bung bushing shoulder, whereby internal pressure within said hollow cork will retain said shoulder in contact and will expand said body outwardly towards the bore of greater diameter of said bushing.

2,950,836
COLLAPSIBLE ATTACHMENT
Robert B. Murdock, 2326 N. Washington Blvd., Arlington, Va.
Filed Dec. 17, 1957, Ser. No. 703,466
3 Claims. (Cl. 220—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

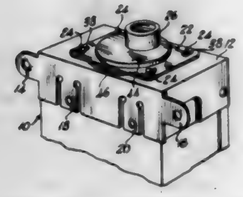
1. A collapsible attachment to be connected to the leg of a piece of furniture, said collapsible attachment

comprising a bowl shaped ash receiver, support means, and clamping means adapted to connect said collapsible attachment to the leg of a piece of furniture, said receiver being connected to one end of said support means by a ball and socket swivel and said clamping means being connected to the other end of said support means in such a manner as to permit said clamping means to



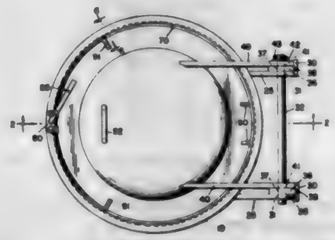
rotate freely about the end of said support means to which said clamping means is connected such that said receiver and said support means may be rotated beneath said piece of furniture, and said support means comprising telescoping sections adapted to support themselves in extended position whereby said receiver may be maintained at a convenient height or to collapse within the section to which said clamping means is connected.

2,950,837
WATERPROOF ENCLOSURE FOR ELECTRICAL DEVICES
Paul M. Christensen, West Orange, Clarence G. Landeck, Scotch Plains, and Michael J. St. John, Essex Fells, N.J., assignors to Federal Pacific Electric Company, a corporation of Delaware
Filed July 3, 1957, Ser. No. 669,840
6 Claims. (Cl. 220—3.7)



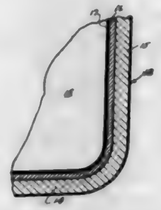
3. An enclosure for electrical devices having a top, means defining an opening through said top, a cover plate comprising a flat border portion provided with a plurality of parallel elongated slots, said cover plate being provided with a conduit connector secured off-center on a line parallel to said slots, fastening means extending integrally from said top through said slots and having nuts external to said cover plate and adapted to secure said cover plate to said enclosure top in any selected position through a range of positions, said slots being arranged to admit said fastening means in reversed positions of the cover for shifting the off-centered conduit connector relative to said enclosure, and a gasket about said opening engaged by said flat border portion to provide a water-tight seal between said top member and said cover plate in all said selected positions, and said opening being large enough to afford a direct wiring passage from said connector into said enclosure in the range of positions and reversed positions of the cover plate and said slots being disposed outside the inner edge of the gasket in all the adjusted positions of the cover plate.

2,950,838
QUICK OPENING DOORS FOR FILTERS
Harold A. Price, Lafayette, Calif., assignor to Permanent Filter Corporation, Los Angeles, Calif., a corporation of California
Filed Aug. 8, 1958, Ser. No. 754,037
2 Claims. (Cl. 220—46)



1. In combination, an upstanding substantially cylindrical open topped vessel having a circular rim formed at the upper end thereof, said rim having a pair of spaced tapered surfaces formed on the inner face thereof and a shoulder means thereon, said rim having an annular groove formed in said inner face intermediate said pair of tapered surfaces, supporting bracket means supported by said vessel and extending laterally outwardly therefrom, closure means pivotally supported by said bracket means for pivotal movement about an axis disposed radially outwardly of said vessel, said closure means including an annular flange having formed on the outer face thereof a pair of spaced tapered surfaces and having formed therein an annular groove intermediate said tapered surfaces, an annular sealing ring disposed within said last mentioned groove, a resilient locking ring received by said first mentioned groove and supported on the upper surface of said flange, said locking ring being split and having opposite free ends, operating means pivotally connected to said free ends for deforming said ring, and means on said closure means in position to engage said locking ring and retain the locking ring in position when said closure means is in inverted position.

2,950,839
CHROMIUM PLATED BAKING PANS
Edgar A. Hahn, Grosse Pointe Park, Mich., assignor to Lyon Incorporated, Detroit, Mich., a corporation of Delaware
Filed Nov. 17, 1958, Ser. No. 774,342
10 Claims. (Cl. 220—64)



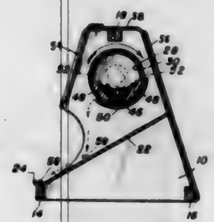
2. An article of manufacture which comprises, a cooking utensil provided with food receiving surfaces, and a chromium coating plated upon said surfaces and an oxide of said chromium baked upon said coating.

2,950,840
KITCHEN UTENSIL
Elisabeth Lewerth, geb. Franz, Seligenstadt (Main), Germany, assignor to Firma Mitteldeutsche Emaillierwerke M. Fratscher & Co., Seligenstadt (Main), Germany
Filed Mar. 14, 1958, Ser. No. 721,427
Claims priority, application Germany Apr. 11, 1957
2 Claims. (Cl. 220—95)



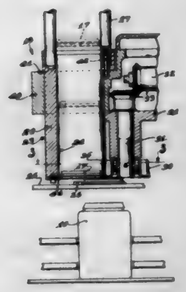
1. A lid for kitchen utensils comprising a convex plate element having a central recessed portion for securing a removable lid handle, said lid formed with a flat bearing surface adjacent said recessed portion for placing the lid on a suitable support and a spring wire handle detachably secured in said recessed portion, said recessed portion being formed with a lateral bulge for engaging said spring wire handle.

2,950,841
TOOTHPICK DISPENSER
Claude V. Cornwell, Spring St., Louisville, Miss.
Filed Jan. 7, 1958, Ser. No. 707,599
1 Claim. (Cl. 221—154)



A dispenser for slender articles comprising a frame, a fixed horizontal barrel member having an open and a closed end and having an axial funnel shaped slot extending the entire length of its bottom and mounted at its closed end on said frame, a rotatable barrel member having an open and a closed end, said open end slidably mounted over the free end of said fixed barrel member and extending coextensively with said fixed barrel member, and an arcuate strip closely adjacent the bottom portion of said rotatable barrel member and extending its full length, said rotatable barrel member having at least one axial slot extending its entire length and sufficiently wide to receive at least one of said slender articles from the fixed barrel member through the bottom slot therein, as the rotatable barrel member is turned to pass its slot by the said bottom slot for dispensing said article after further movement of the rotatable member until its slot clears the edge of said arcuate strip, said frame consisting of two sides interconnected by brace strips, said sides having straight grooves in their inner faces extending from the lower front corner to the middle of the back, and a flat sheet slidably fitted into said grooves and extending between said sides with an upturned lip at its lower edge to form a chute for catching the article dispensed and dropped by turning said rotatable barrel member, said sides having further grooves in their inner faces along their front and back edges, and flat sheet members slidably fitted in said grooves and extending between said sides with overlapping top portions fitting over the upper edges of said sides to form a continuous cover over the back, top and upper half of the front of said dispenser, said fixed barrel member having a closed end mounted to one side and an open end extending to the other side, a coaxial bore in said other side serving as a bearing for the outer end of said rotatable barrel member, and a turning knob on the outer end of said rotatable barrel member, said fixed barrel member having a closed end mounted to one side and an open end extending to the other side, a coaxial bore in said other side serving as a bearing for the outer end of said rotatable barrel member, a latch bar pivoted to the outer face of said other side above said bore normally hanging downwardly over said bore to hold said rotatable barrel member in assembled position and movable out of the bore for withdrawing said rotatable barrel member during disassembly, and a turning knob on the outer end of said rotatable barrel member.

2,950,842
CLOSURE CAP FEEDER MECHANISM
Olav Bjering, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Filed Jan. 28, 1957, Ser. No. 636,707
1 Claim. (Cl. 221—251)

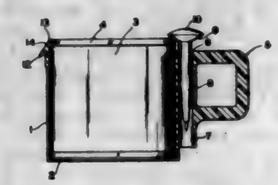


In apparatus for transferring closure caps, a cap feed sleeve holder having a cylindrical bore extending substantially vertically therethrough, a driven feed screw rotatable on an axis substantially parallel with the bore axis, said screw positioned in a plane below the holder and having a peripheral closure cap separating portion projecting into a circle defined by an imaginary axially downward extension of the wall of said cylindrical bore, a readily removable cap feed sleeve in the holder for containing a stack of closure caps, said sleeve being of circular exterior form and fitted into the holder with portions extending both above and below the latter, said sleeve having an eccentrically positioned longitudinal bore therethrough with the wall of radially thinnest dimensions being contiguous to the feed screw, said sleeve having the lower end of the thinnest wall section cut away to provide a radial opening through which the peripheral portion of the feed screw projects into cap operating engagement with the closure caps.

2,950,843
MILK CAN HOLDER
James F. Connor, 3453 W. 128th St., Cleveland, Ohio
Filed Nov. 19, 1958, Ser. No. 774,921
7 Claims. (Cl. 222—88)

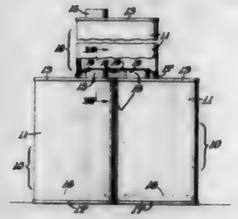
1. A holder for evaporated milk cans or the like comprising a cup-like body adapted to receive such can, a punch receiving receptacle connected to said body and having a generally vertical opening in the top thereof adjacent the rim of said cup-like body; and a can punch having a shank snugly frictionally fitting in said receptacle through such opening and a head that extends radially

inwardly of the rim of said cup-like body, said head being adapted to engage the top edge of such can to retain the



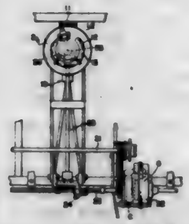
same in said cup-like body when the holder is inverted to pour the contents from such can.

2,950,844
STACKABLE CONTAINERS
Wickliffe Stewart Hollingshead, Riverton, N.J., assignor to R. M. Hollingshead Corporation, Camden, N.J., a corporation of New Jersey
Filed Sept. 16, 1957, Ser. No. 684,054
2 Claims. (Cl. 222—143)



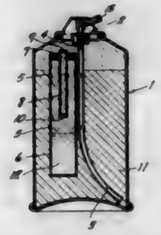
1. A container having a rupture-proof laquer coating and provided with an upwardly projecting pouring neck of cylindrical configuration at one end of its top and a plurality of indentations in the bottom thereof whereby the container can be stacked with like containers in various ways with one of the indentations in the bottom of one such container engaged and clearing the pouring neck of a subjacent container, said indentations being spaced by a distance less than the diameter of the pouring neck and being mergent one with another.

2,950,845
TIMING ADJUSTMENT FOR PLANTERS
Arthur J. Immesoete, Moline, Ill., assignor to Deere & Company, Moline, Ill., a corporation of Delaware
Filed Dec. 3, 1958, Ser. No. 777,978
1 Claim. (Cl. 222—370)



In a planter, seed selecting mechanism including the combination with a rotatable plural-celled seed plate, of a part connected with said plate to advance the latter through a predetermined extent of rotation, driving means, a train of interconnected gearing connected with said driving means to be driven therefrom, said gearing including input and output gears and a plurality of intermediate intermeshing gears, said gears being subject to wear and to manufacturing tolerances that accumulate at the output gear whereby the latter may be rotationally displaced relative to a normal position with respect to said input gear, means connecting the input gear to said driving means to be driven therefrom, and angularly adjustable means connecting the output gear to said part whereby positional errors accumulated in said gearing may be compensated and said seed plate brought to the correct position irrespective of said errors, said output gear having a pair of tapped openings disposed at a slight angle relative to the adjacent face of said gear, said part lying against said face and having slots registering with said openings, the faces of said slotted portions being shaped to lie at 90° to the axes of said tapped openings, and headed threaded fasteners screwed into said openings for fixing said part in different positions of adjustment relative to said gear about the axis of the latter, the planes of said slotted portions being angled away from the adjacent face of the gear in the direction in which said gear drives said part.

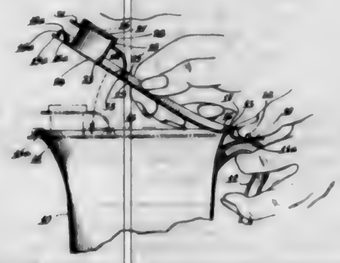
2,950,846
THREE PHASE DISPENSER
Ronald Clark, Hanworth, and David John Alexander, Teddington, England, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine
Filed Mar. 13, 1958, Ser. No. 721,263
Claims priority, application Great Britain Mar. 20, 1957
7 Claims. (Cl. 222—399)



1. A dispensing device for dispensing fluent materials by vaporous pressure having a container for enclosing the fluent material to be dispensed, a valve mounted on the container for releasing the fluent material, means to maintain the fluent material under vaporous pressure, said means comprising a receptacle disposed within the container for enclosing a liquid propellant, a tube disposed through the walls of the receptacle and extending into the receptacle a predetermined distance so that the inner end thereof is above the level of liquid propellant when said device is in any position and the outer end is in communication with said container, and said tube having an aperture at each end thereof to communicate the propellant vapor in the receptacle with the fluent material in the container.

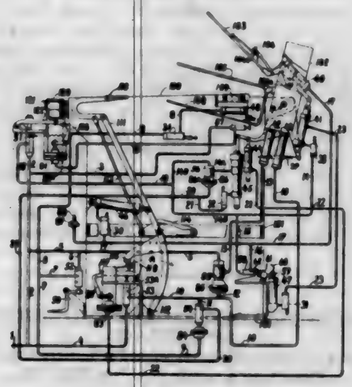
2,950,847
PITCHER AND SEAL THEREFOR
Earl S. Tupper, Esmond, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Filed Dec. 18, 1956, Ser. No. 629,155
10 Claims. (Cl. 222—465)

7. A combined pitcher and cover at least one of said members being formed of flexible and locally deformable plastic material and comprising a frusto-conically shaped pitcher body having an open top and a continuous side wall forming an open upper rim, said side wall having a pouring spout at the top and coextensive with and forming part of said rim and a handle on said side wall, diametrically opposite to said spout, a removable cover having a top wall and an elevated and inverted peripheral groove engaging edge for said rim and having an inner, top and spaced outer wall following the contour of the said open upper rim, the inner face of the outer wall of the groove engaging edge being of smaller lateral dimensions than the side wall upper rim for live and hermetical sealing engagement therebetween, a tab having an opening secured to the outer wall of the groove en-



gaging edge adjacent the handle, a lug on the handle and to which the said tab at said opening is removably and pivotally secured, said tab and lug serving as centering means for guiding registration and effecting engagement of the cover with the pitcher when the cover is applied thereto and the tab also serving to lift the cover from the pitcher toward removal therefrom when in engaging relationship, said pitcher being in the shape of an inverted frustum of a cone.

2,950,848
CONTROL FOR FOLDING MACHINE
Wallace F. Gayring, Minoa, N.Y.
Filed Dec. 22, 1958, Ser. No. 781,968
5 Claims. (Cl. 223—37)



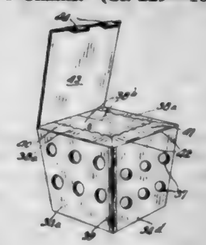
1. A control for a folding machine, said machine including a table, holding means for a shirt placed on said table, a form about which a shirt is to be folded, fluid pressure folding means for folding portions of a shirt about said form; fluid pressure operating means for the operation of elements of said folding means in predetermined sequence, fluid pressure power means for said operating means; said control comprising said operating means and said power means, said control sequentially initiating the operations of said folding means in response to the actuation of said operating means by said power means.

2,950,849
BOX CONSTRUCTION
Douglas B. Ortleb, 5456 Ruskin, St. Louis, Mo.
Filed Sept. 16, 1959, Ser. No. 840,300
3 Claims. (Cl. 229—8)



1. In a box having a body portion provided with side walls and a base, an extension on said base, a cover portion provided with side walls and a top member, an extension on said top member, said side walls in both instances formed of a strip of cardboard folded longitudinally upon itself and glued together, a polyethylene strip disposed between and glued to the folded portions of said side walls and projecting therefrom, along its length, the base side wall being glued to the base by means of the projecting polyethylene strip which is glued to the upperside of the base extension, to the outer edge of the base extension, and to the underside of the base extension, the cover side wall being glued to the top by means of the projecting polyethylene strip which is glued to the underside of the top extension, to the outer edge of the top extension, and to the upperside of the top extension.

2,950,850
CARTON CONSTRUCTION
James P. Corcoran, Quincy, Ill., assignor to Packaging Corporation of America, a corporation of Delaware
Filed Nov. 20, 1958, Ser. No. 775,169
8 Claims. (Cl. 229—16)

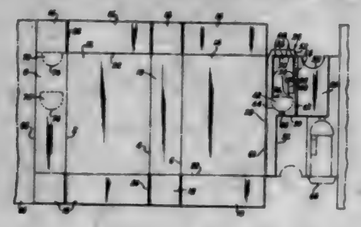


1. A carton construction comprising an outer unit and a removable inner unit disposed in nested relation within said outer unit; said outer unit having a bottom section and a side section extending upwardly therefrom and terminating in an open top section; said inner unit having a closable top section conforming substantially to the configuration of the open top section of the outer unit, and a side section extending downwardly therefrom and terminating in an open bottom section; and spacer means substantially coextensive with the top edge portion of said side section of said outer unit interposed at the top portion of the side sections of said units and in contact therewith to effect retention of said side sections in spaced close proximity with respect to one another to form a narrow air space substantially enveloping said inner unit side section.

2,950,851
SLIDE CLOSURE CARTON
Stanley L. Peimer, 1151 E. 17th St., Brooklyn, N.Y.
Filed July 29, 1958, Ser. No. 751,740
17 Claims. (Cl. 229—17)

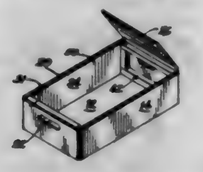
1. In a carton having opposed side walls, end walls and top and bottom walls defined by superimposed flaps, at least a portion of one of said end walls, adjacent said top wall, comprising three superimposed layers of sheet material, the innermost of said layers having an upper

edge portion spaced from said top wall and defining a discharge opening therebetween, the intermediate layer having parallel slits therein defining the edges of a slide closure having one end adjacent said discharge opening, the other end of said slide closure being integrally joined



to said intermediate layer, within the outline thereof, along a line of perforations defining a handle portion, the outermost of said layers having integral tear-out tabs therein defined by lines of perforations and overlying said discharge opening and handle portion, respectively.

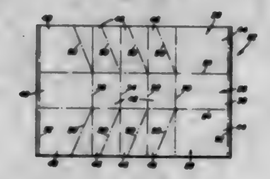
2,950,852
TOTE BOX
George A. Hutchison, Oak Park, Ill., assignor to Rathborne, Hair & Ridgway Box Co., Chicago, Ill., a corporation of Illinois
Filed Oct. 30, 1957, Ser. No. 693,391
12 Claims. (Cl. 229—23)



1. A reinforced tote box, comprising a base surface and integrally attached vertically positioned side and end walls, side and end flaps integrally attached to the top edges of said side and end walls, end wall flaps integrally attached to the side edges of the end walls, said end wall flaps adapted to be folded parallel to and contiguous with said side walls on each side of the box, said side flaps adapted to be folded over said end wall flaps to assemble the box, a removable and reusable vertically positioned end frame member at each end of the box, each end frame member having vertically disposed sides and ends, at least one of the said vertically disposed ends on each end frame member positioned in contiguous engagement with the inner surface of each of the end walls and the vertically disposed sides of the end frame members engaging the side flaps over a substantial portion of their vertical dimension to lock the side flaps in their folded position, to help shape the tote box, and to hold the tote box in its assembled condition, said end flaps folded over said end frame members, and a removable and reusable base surface-reinforcing member having opposed ends, said base surface-reinforcing member in contiguous engagement with the base surface with its opposed ends engaging and locking the end flaps in their folded position over the end frame members.

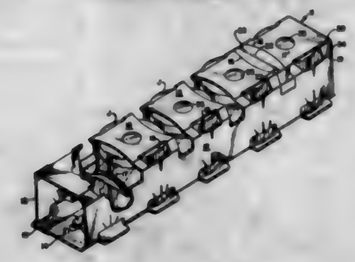
2,950,853
FOLDED CONTAINER
Thomas B. Weiss, Palo Alto, Calif.
(1710 Lincoln Ave., San Jose 25, Calif.)
Filed Mar. 10, 1955, Ser. No. 493,410
2 Claims. (Cl. 229—24)

1. A container folded from a single rectangular sheet, a central elongated portion of said sheet forming continuous bottom and end walls of the container, said bottom wall including a central bottom portion and upwardly sloping outer portions, outer portions of said sheet forming side walls of the container, said side walls being



formed in sections, said sections being disposed in overlapped folded relation, aligned apertures in said sections, fasteners passing through said aligned apertures and connecting said sections together.

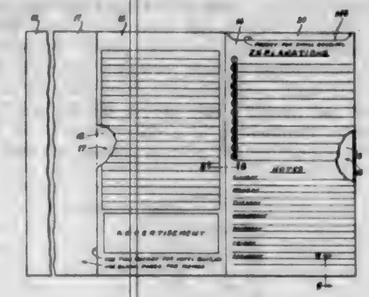
2,950,854
CARTON
Robert H. Ganz, Hackensack, N.J., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Filed Feb. 27, 1959, Ser. No. 795,939
5 Claims. (Cl. 229—40)



1. A wrap-around carton for packaging articles such as jars arranged side by side in rows, made from a single piece of paperboard wrapped around the ends and sides of the articles and fastened along overlapping edges into tubular form comprising opposed end walls and opposed side walls, one of the end walls divided into a series of separate panels by pairs of transverse cut lines extending into adjacent corners of the carton to provide divider strips which press inwardly between each two adjacent articles in a row, said divider strips being provided with median fold lines and the free edges of the divider strips turning outwardly toward the openings left when the divider strips are pressed inwardly between the articles.

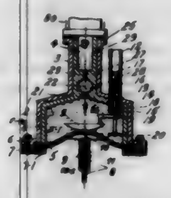
2,950,855
EXPENSE RECORD PACKET AND METHOD OF MAKING
Oscar A. Zahner, 4953 W. Pine Blvd., St. Louis, Mo.
Filed July 3, 1958, Ser. No. 746,540
2 Claims. (Cl. 229—72)

1. A pocket packet of folded material, sized to be carried in a coat pocket, the packet being formed of a single, unitary elongated strip of material, the strip having one end portion folded over a middle portion to constitute a main section in which pockets are disposed; means joining the middle portion and the overlying end portion along a transverse line medial with respect to the main section, the parts being folded along said transverse line to divide the main section into two equal pocket-sized halves; means joining the bottom edges of the overlying portions constituting the main section, and means joining the top edges of one half of said portions, whereby to form, in the main section, a top-opening pocket in one half and a side opening pocket in the other half; and the strip having an integral panel provided with ruled vertical and horizontal lines for the entry of expense items, said panel extending



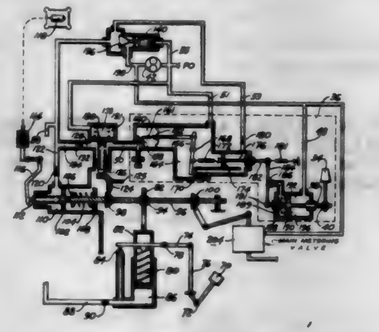
from the end of the main section, the panel being folded back to close the side opening pocket, the panel being of a size substantially the same as one half of the main section.

2,950,856
GAS CONVEYING DEVICES
Heinrich Feichtinger, Schaffhausen, Switzerland, assignor to Balzers Patent- und Lizenz-Anstalt, Balzers, Liechtenstein, a corporation of Liechtenstein
Filed Feb. 28, 1956, Ser. No. 568,324
Claims priority, application Switzerland Mar. 5, 1955
21 Claims. (Cl. 230—85)



1. In a gas-conveying and pumping system for conveying gas from a gas source to a discharge space, a guide structure confining a fluid guide space having a gas inlet for receiving gas from said gas source and a gas outlet for discharging received gas in a flow direction toward said discharge space, said guide structure having a valve inlet opening and a valve outlet opening and a pump space between said valve openings for pumping gas from said source and impelling it in said flow direction, said pump space having a relatively larger fluid-holding space than said valve inlet opening and than said valve outlet opening, a pumping liquid in said pump space, pumping means for imparting to said liquid a succession of opposite suction and discharge strokes causing pumping of gas from said gas source into said pump space during said suction stroke and pumping of gas from said pump space through said valve outlet opening in said flow direction during the discharge stroke, said guide structure confining at least one retaining space arranged to receive fluid pumped from said pump space in said flow direction, said retaining space having a relatively larger fluid-holding space than said valve outlet opening, said guide structure also confining a leakage space connecting said retaining space to said pump space and causing liquid contained in said retaining space to leak back in a direction reverse to said flow direction towards said pump space during at least each suction stroke, said leakage space being of such dimensions and having such high flow resistance and said retaining space and said pumping space each containing such volume of said liquid as to cause said leakage space to contain said liquid and block return of gas in said reverse direction from said retaining space towards said pump space throughout said suction stroke and to prevent said pump space from being completely filled by said liquid at the end of said suction stroke.

2,950,857
POWER CONTROL SYSTEM FOR GAS TURBINE ENGINES
Howard J. Williams and Francis R. Rogers, South Bend, Ind., assignors to The Bendix Corporation, a corporation of Delaware
Filed Dec. 22, 1955, Ser. No. 554,695
8 Claims. (Cl. 230—114)



1. In a control system for a gas turbine engine, said engine having a compressor and an adjustable compressor guide vane, first control means including a fluid pressure responsive device, said latter device being operatively connected to the compressor guide vane for adjusting the position of the latter guide vane for controlling the operation of said compressor, second control means including a servo fluid chamber and a servo control valve operative for controlling the pressure of the fluid within said servo chamber, third control means including a cam member having a predetermined contour surface and being positioned as a function of a predetermined engine operating parameter and operatively connected to said servo control valve for controlling said valve as a function of said engine operating parameter such that said fluid pressure varies as a function of said parameter, with said fluid pressure responsive device being operatively connected to said servo fluid chamber of the first control means for adjusting the position of said guide vane as a function of said parameter.

2,950,858
SHEET METAL ROTORS FOR COMPRESSORS AND TURBINES
Edward A. Stalker, Bay City, Mich., assignor to The Stalker Corporation, a corporation of Michigan
Filed Oct. 13, 1954, Ser. No. 461,969
4 Claims. (Cl. 230—134)

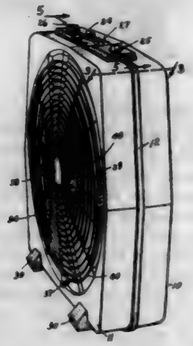
1. In combination in an axial flow bladed rotor, a hub structure including a radially extending sheet metal disk, a sheet metal channel-shaped rib member fixed to and faying the side face of said disk over a major portion of its radial extent and extending outwardly thereof in a generally radial direction, said disk being peripherally continuous throughout said faying area, said rib member having an axially directed flange thereon, a sheet metal blade stem interfitting with and projecting radially outwardly from said rib member, said stem faying with said flange of said rib member over a substantial radial

extent, means for securing said blade stems in position upon said rib members, and sheet metal rim means se-



cured to said disk and extending from blade to blade in the peripheral direction.

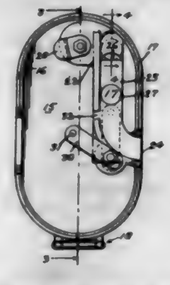
2,950,859
FAN HOUSING AND PROTECTIVE GRILL
Harold L. Kirk, Indianapolis, Ind., assignor to Meier Electric and Machine Company, Inc., Indianapolis, Ind., a corporation
Filed Dec. 3, 1956, Ser. No. 625,877
2 Claims. (Cl. 230—259)



1. A fan housing formed of two substantially identical mating sections, means for securing said sections in mating abutting relation to provide a housing encircling a bladed air propelling fan and driving motor therefor, said housing when assembled having an outer peripheral wall with inturned marginal areas joining a concavo-convex inner wall extending between said marginal areas and spaced from said outer wall, said inner wall providing a venturi tube encircling fan blades with its restricted throat portion lying in the center plane of rotation of said blades and closely approaching the outer tips thereof to thereby induce a venturi action to the air flow passing therethrough, studs spanning the space between said inturned marginal areas and intermediate said inner and outer walls, and support members carried on said studs and extending through said inner wall to support said fan and drive motor concentrically with the area bounded by said housing.

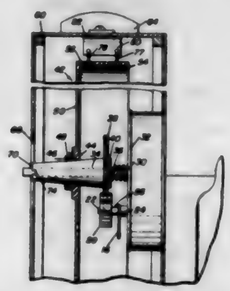
2,950,860
TRAFFIC CIRCULATOR
Henry P. Compton, Abilene, Tex., assignor, by mesne assignments, to Simplex Corporation, Fort Worth, Tex., a corporation of Texas
Filed Oct. 11, 1957, Ser. No. 689,518
1 Claim. (Cl. 232—1)

A traffic circulator comprising a rear plate having a forwardly extending peripheral flange integral therewith, a front wall having a rearwardly extending peripheral flange integral therewith, said front wall being positioned forwardly of and in spaced parallel relation to said rear wall, a hinge connecting the lower end portions of said forwardly and rearwardly extending flanges, a first rotatable lock barrel secured to said forward wall, a latch bar secured to said barrel, a keeper for said latch bar formed on said forwardly extending flange of said rear wall, a thickened portion formed on said front wall and having a coin groove therein, said thickened portion terminating in a coin outlet at its lower end, an outwardly bulged portion formed on said front



wall at the upper end of said coin groove having a coin inlet at its lower end to permit insertion of a coin into said coin groove, a block formed on said rear wall extending forwardly therefrom to form a rear wall for said coin groove, a second rotatable lock barrel secured to said forward wall, an arm fixed to said second lock barrel for rotation therewith relative to said front wall, a pin fixed to said arm in perpendicular relation thereto and engageable in said coin groove, said thickened portion having a generally horizontal slot therein intersecting said coin groove whereby said pin may be swung into said coin groove, said block having a cut away portion for the reception of said arm.

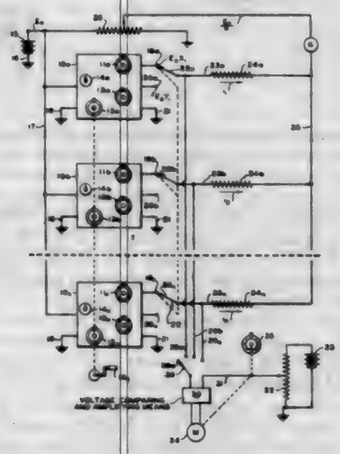
2,950,861
INDICATOR DIAL COUNTER COMPUTER FOR GAS, LIGHT AND WATER METERS
David S. Sherard, 2787 Emerald Drive, Jackson, Miss.
Filed May 21, 1954, Ser. No. 431,321
1 Claim. (Cl. 235—94)



In a conventional meter that has a meter case, a pointer shaft adapted to coact with a dial from which readings of the meter are taken, an attachment to facilitate the reading of the meter, said attachment consisting of a drum that has graduations thereon, a sleeve to which said drum is secured at the center thereof, a stationary axle, said sleeve mounted for rotation on said axle thereby establishing an axis of rotation for said drum, mechanical means drivingly connecting said sleeve with said pointer shaft so that said drum is rotated in response to rotation

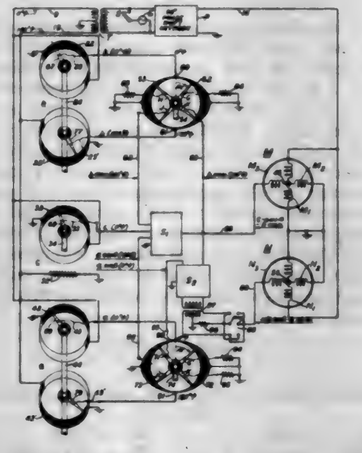
of said pointer shaft, a housing within which said drum and said mechanical means are mounted, means for mounting said housing on the case of said meter, a graduation inspection window in said housing through which to view the graduations on said drum, said housing having an opening in registry with said sleeve, means accessible through said opening in said housing for resetting said drum, said resetting means including a key receiving notch in said sleeve, a spring reacting on said sleeve and urging said sleeve in one direction parallel to the axis of said axle so that said sleeve is axially slidable on said axle in response to application of a force at said notch, said mechanical means including a gear on said pointer shaft and a gear on said sleeve which are enmeshed with each other so that said gears may be disengaged when said spring is compressed by axially sliding said sleeve on said axle and enabling said sleeve to be rotated on said axle and reset said drum which is fixed to said sleeve.

2,950,862
COMPUTER
Frank W. Bubb, Webster Groves, Mo., assignor to Phillips Petroleum Company, a corporation of Delaware
Original application June 9, 1950, Ser. No. 167,129, now Patent No. 2,713,457, dated July 19, 1955. Divided and this application Oct. 8, 1954, Ser. No. 461,068
10 Claims. (Cl. 235—186)



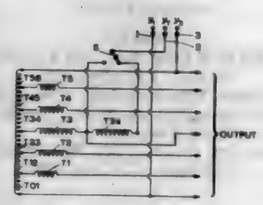
1. An electrical computer comprising, in combination, a voltage source; a plurality of units, each of said units comprising a first potentiometer having the end terminals thereof connected across said voltage source, a second potentiometer having the end terminals thereof connected across said voltage source, a third potentiometer having one end terminal thereof connected to the contactor of said second potentiometer and the second end terminal thereof connected to a point of reference potential, a fourth potentiometer having one end terminal thereof connected to the contactor of said third potentiometer and having the second end terminal thereof connected to the contactor of said second potentiometer, means for comparing the potentials at the contactors of said first and fourth potentiometers, means under control of said comparing means to vary the contactor setting of said second potentiometer until there is zero potential difference between the contactors of said first and fourth potentiometers, an output terminal, and switching means to connect said output terminal selectively to the contactors of said second and third potentiometers; means to vary the contactor settings of the fourth potentiometers in each of said units in unison; means to sum the potentials from said output terminals of each of said units; means connected to said voltage source to establish a potential of magnitude equal to the magnitude of said voltage source divided by the number of said units; and means for comparing said last-mentioned potential with the summed potentials.

2,950,863
APPARATUS FOR THE SOLUTION OF PLANE TRIANGLES
Ralph B. Blackman, Cranford, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 28, 1943, Ser. No. 508,053
28 Claims. (Cl. 235—190)



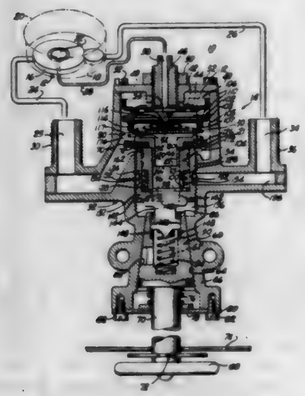
1. An electromechanical computer for the solution of a plane triangle comprising a source of voltage, a first, a second, and a third potentiometric means for deriving from said source a first, a second, and a third voltage representative respectively of the lengths of a first, a second, and a third side of said triangle, a fourth potentiometric means for deriving from said first voltage a first sine voltage and a first cosine voltage respectively proportional to the length of said first side multiplied by the sine and by the cosine of a first angle, a fifth potentiometric means for deriving from said third voltage a second sine voltage and a second cosine voltage respectively proportional to the length of said third side multiplied by the sine and by the cosine of a second angle, a first, a second, a third, a fourth and a fifth shaft controlling respectively said first, second, third, fourth, and fifth potentiometric means, means for introducing a desired angular phase difference between said fourth and said fifth shafts, gearing associated with said second, third, fourth, and fifth shafts, electrical means for summing in phase opposition said sine voltages, a first voltage responsive device, means for applying to said first device the sum of said sine voltages in phase opposition, electrical means for summing said cosine voltages in phase opposition to said second voltage, a second voltage responsive device, means for applying to said second device the sum of said cosine voltages opposed to said second voltage, gearing associated with each of said devices adapted for variable engagement with the gearing associated with said second, third, fourth and fifth shafts and means for varying said engagement.

2,950,864
QUADRATIC INTERPOLATING DEVICES
Rolf Edmund Spencer, West Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, England, a company of Great Britain
Filed June 18, 1957, Ser. No. 666,455
Claims priority, application Great Britain June 19, 1956
2 Claims. (Cl. 235—197)



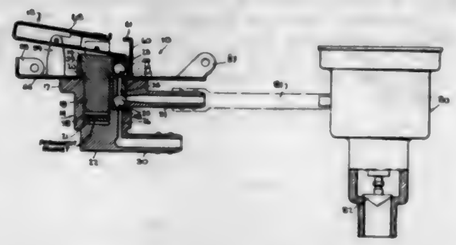
1. An interpolating device comprising an autotransformer, two input terminals connected respectively to spaced points on said autotransformer, a third input terminal, a further transformer winding connected from said third input terminal to a point on said autotransformer electrically midway between said first two input terminals, and an output terminal connected midway along said further transformer winding, whereby on application of alternating signals representing ordinates of points on a quadratic curve to said first two input terminals and an alternating signal representing the ordinate of the intersection of the tangents to said curve at said points to said third input terminal, a signal is set up at said output terminal representing the ordinate of a further point on said quadratic curve.

2,950,865
THERMOSTATIC CONTROL APPARATUS FOR A BURNER
Charles C. Lamar, Chicago, Ill., assignor to Harper-Wyman Company, Chicago, Ill., a corporation of Illinois
Filed Aug. 20, 1956, Ser. No. 605,064
5 Claims. (Cl. 236—32)



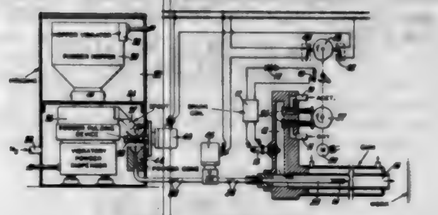
1. Apparatus for controlling the passage of fluid from one passageway to first and second other passageways, including in combination, concentric and axially spaced operatively connected first and second valves controlling flow from said one to said first and second other passageways respectively, and adjustable temperature responsive means for controlling said valves in response to temperature variations, one of said first and second valves including a structural unit comprising a cuplike housing the bottom of which constitutes a movable disc valve element, an ambient temperature compensating disc in said housing, spring means urging said elements away from each other and an inwardly extending flange structure on said housing engaging said compensating disc to limit its movement, and said valves including a structural unit comprising a pair of telescopically arranged tubular members each having an annular valve member, spring means biasing said members apart, and means providing limited axial relative movement between said members.

2,950,866
TEMPERATURE REGULATED VALVE ASSEMBLY
Michael Peter Scholz, Cranford, N.J., assignor to Paragon Products Corporation, Newark, N.J., a corporation of New Jersey
Filed Dec. 22, 1958, Ser. No. 782,239
1 Claim. (Cl. 236—87)



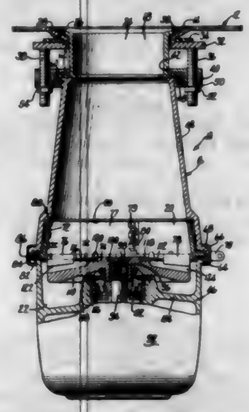
In a temperature control for operating a vacuum motor, the combination comprising a body provided with an internal passageway having opposite ends adapted for respective connection to a vacuum source and a vacuum motor, a first valve seat in said passageway, a first valve member fabricated of magnetically permeable material received in said passageway and movable into and out of seating relation with said first valve seat for respectively closing and opening said vacuum source to said vacuum motor, said body being provided with a branch passageway having its opposite ends respectively connected with the atmosphere and said first-mentioned passageway between said first valve element and said vacuum motor, a second valve seat in said branch passageway, a second ball-like valve element in said branch passageway and movable into and out of seating relation with said second valve seat for respectively closing and opening said first passageway to the atmosphere, an operating element arranged in said body externally of said first passageway with spaced regions of said member respectively contiguous to said first and second valve elements and mounted for back and forth longitudinal movement in said body relative to said valve elements responsive to temperature conditions to be controlled, a magnet carried by said elongate member for movement therewith and located externally of said first-mentioned passageway, said magnet being positioned to attract said first valve element out of its seating relation in one direction of the back and forth movement of said operating element and to permit seating of said first valve element in the other direction of said back and forth movement, said operating element also carrying a projection extending into said branch passageway, said projection being engageable with said second valve element to prevent seating thereof when said operating element is moved in said other direction, said projection being out of engagement with said second valve element to permit seating thereof in said one direction of said back and forth movement.

2,950,867
PULSE POWDER FEED FOR DETONATION WAVES
George P. Hawley, South Charleston, W. Va., and Lewis M. Cowden, Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed May 25, 1959, Ser. No. 815,434
9 Claims. (Cl. 239—13)



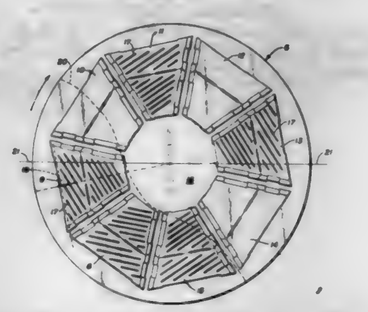
1. In a method for utilizing detonation waves to act upon a comminuted solid material which comprises introducing a detonatable mixture of combustible gas and oxidizing gas to an elongated confined path having an open end; introducing a comminuted solid material to the detonatable mixture in said barrel, igniting said detonatable mixture to produce a detonation therein and thereby transmit to said comminuted material some of the energy of said detonation to eject said comminuted material at high velocity from the open end of said path; and repeating these process steps in cyclical operation; the improvement which comprises introducing the comminuted solid material under pressure to the detonatable mixture in a controlled pulse timed with the cycle of operation, such comminuted material pulse being completely introduced prior to ignition of such detonatable mixture, whereby less comminuted material is wasted and greater control over the process is obtained.

2,950,868
IMPELLING MEANS FOR FOOD WASTE DISPOSER
James W. Lannert, St. Joseph, Mich., assignor to Whirlpool Corporation, St. Joseph, Mich., a corporation of Delaware
Filed July 2, 1957, Ser. No. 669,521
18 Claims. (Cl. 241—46)



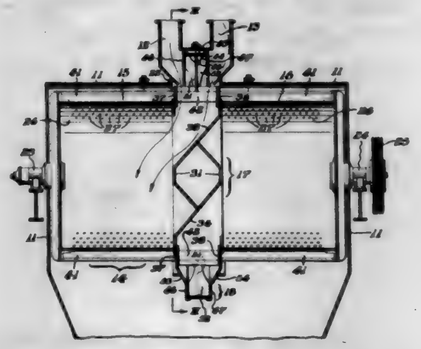
5. A disposer for food waste comprising a disposer casing for housing grinding elements and having an opening for receiving large waste particles to pass to a grinding zone therein, a stationary cutter having a grinding element and located in the grinding zone, a rotary grinding member having a slot with a cutter mounted therein and movable relative to the slot, a radially extending support member having lateral inflexibility and vertical resiliency for carrying the cutter on the rotary grinding member and permitting vertical movement of the cutter out of the slot due to centrifugal force on the cutter while limiting lateral movement with respect to the grinding member, and power means for driving the grinding member.

2,950,869
BALL MILL GRATES
Jess P. Wales, Denver, Colo., assignor to Mine and Smelter Supply Company, Denver, Colo., a corporation of Colorado
Filed Sept. 19, 1955, Ser. No. 535,161
3 Claims. (Cl. 241—70)



1. A discharge grate for a grinding mill, comprising a plurality of grate sections arranged as an annular assembly for closing the discharge end of such a mill and held in a vertical position for conjoint rotation, each said section having a plurality of elongated slots inclining from its inner wear face through its outer discharge face so as to position the discharge end of the slot nearer the mill axis than its intake end, each said slot transversely of the section being narrower at the wear face than at the discharge face of the section, and the slots of said sections having their major axes inclining toward the periphery of the grate in the direction of mill rotation at an angle to the perpendicular to the bisecting radial of the section not greater than 35°.

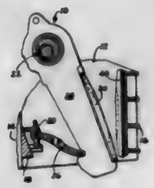
2,950,870
PERIPHERAL FEED BREAKER
Ostap Danyluke, Newtown Square, Pa., assignor to Bath Iron Works Corporation, Bath, Maine, a corporation of Maine
Filed May 1, 1958, Ser. No. 732,400
10 Claims. (Cl. 241—91)



1. A breaker for breaking friable material into particles no larger than a desired size, comprising a rotatable

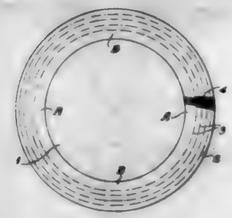
drum having a screen with perforations large enough to pass particles of a size up to and including said desired size; rotatable chute means for directing said friable material into said drum; said breaker having a peripheral passage for admitting said friable material to said rotatable chute means; means forming an exit chute for receiving the particles passing through the perforations of said drum; and shroud means rotatable with said drum preventing oversize particles of said friable material from passing directly from the rotatable chute means to the exit chute, and means to lift and drop said oversize particles into said drum.

2,950,871
CRUSHER CONSTRUCTION
Forrest E. Smith, Asheville, N.C., assignor to The Frog, Switch & Manufacturing Co., Carlisle, Pa., a corporation of Pennsylvania
Filed May 23, 1956, Ser. No. 586,712
5 Claims. (Cl. 241—217)



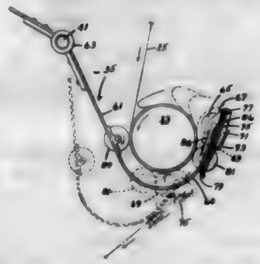
1. A jaw crusher comprising, in combination, a crusher frame, a fixed jaw rigid with the frame, a movable jaw, means supporting the movable jaw from the frame for substantially bodily reciprocatory movement toward and away from the fixed jaw, means for actutaing said movable jaw toward and away from the fixed jaw including a drive shaft and eccentric cam means thereon, a first plate mounted on said fixed jaw and presenting a crushing face having formed therein a plurality of spaced grooves and having a corrugated central portion and smooth end portions, and a second plate mounted on said movable jaw for cooperating with said first plate to crush rock and the like therebetween, said second plate presenting a crushing face having formed therein a plurality of spaced grooves and having corrugated end portions and a smooth central portion so that substantially all of the rock crushing takes place between opposed corrugated and smooth portions of the respective plates.

2,950,872
GRINDING DISC FOR GRINDING MILLS
Tomizo Saito, 46 4-chome, Higashi-Shinagawa, Tokyo, Japan
Filed July 9, 1956, Ser. No. 596,760
2 Claims. (Cl. 241—296)



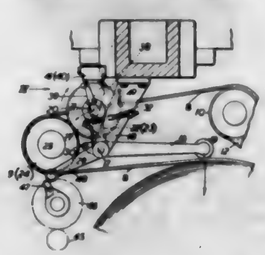
1. A grinding disc for rotary disc grinding mills, said disc having an annular grinding portion on one face thereof provided with substantially radially extending grinding projections formed in a plurality of elliptical rings symmetrically surrounding the center of the disc, such rings being separated by oppositely beveled ends of the projections in adjacent elliptical rings.

2,950,873
MECHANICAL ROLL CHANGER
Seddon C. Nelson, Fredericksburg, Va., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Feb. 26, 1957, Ser. No. 642,432
9 Claims. (Cl. 242—56)



1. In apparatus for severing and transferring a traveling continuous web from a roll being wound to an empty rapidly rotating core upon which a new roll is to be started including means for shifting the roll being wound from a winding position to a position for unloading and for simultaneously shifting the rotating empty core to a winding position, the improvement comprising a carrier, means for moving the carrier toward the traveling web and into a terminal position wherein the carrier partially encircles the empty core, guide means supported on the leading end of said carrier for urging the traveling web partially about the empty core as the carrier is moved into its terminal position, and cutting means supported on said carrier for severing the traveling web intermediate said guide means and the roll being wound as the carrier approaches its terminal position, said cutting means including a cutter bar pivotally mounted on said carrier and means supported by said cutter bar and engaging with the empty roll core for pivoting said cutter bar into the traveling web as the carrier approaches its terminal position whereby said guide means positions the leading end of said severed traveling web adjacent the rotating empty core for winding thereon.

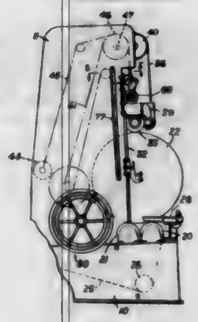
2,950,874
WEB-RENEWING MECHANISM
Thomas Richard Bennett, Kingsbury, London, England, assignor to R. W. Crabtree & Sons Limited, Leeds, England
Filed Feb. 23, 1956, Ser. No. 567,405
Claims priority, application Great Britain Feb. 25, 1955
7 Claims. (Cl. 242—58.3)



1. Mechanism for automatically controlling the operation of web renewing apparatus for effecting transferring

of a web drawn from one web roll about to be exhausted to a web drawn from a replacement web roll, said mechanism comprising a first device operable in response to reduction in the diameter of said one web roll to a predetermined diameter; a normally inactive second device operable, when active, in synchronism with the drawing of the web from said one web roll to determine the length of web drawn from said one web roll irrespective of the diameter of said one web roll when said second device is active; means operable in response to operation of said first device for rendering said second device active; and means operable in response to determination by said second device of travelling of a predetermined length of web following activation of said second device for setting the web renewing apparatus into operation.

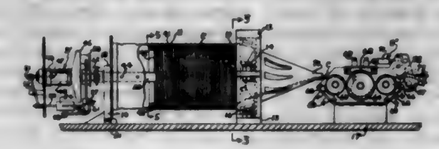
2,950,875
PAPER MACHINERY
John E. Dain and Richard W. Phelps, Fulton, N.Y., assignors to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Filed May 6, 1957, Ser. No. 657,177
4 Claims. (Cl. 242—66)



1. In a winding machine for web material including side frames and a rider roll adapted to engage an upper portion of the new roll being wound and to be moved upwardly by the accumulated web material on said new roll, the combination of carriage means for said rider roll, means supporting said carriage means for upward movement on said side frames along a predetermined path, adjustable friction brake means effective between said carriage means and one of said side frames for resisting said upward movement of said carriage means, and means responsive to the position of said carriage means on said path for adjusting said brake means to provide maximum resistance to the upward movement of said carriage means when said carriage means is at its lowermost position on said path and minimum such resistance when said carriage means reaches a predetermined raised position on said path.

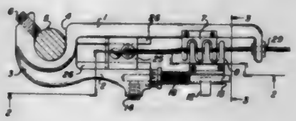
2,950,876
HIGH SPEED PAY OUT REEL
William G. McLoughlin, Birmingham, Ala., assignor to Hayes Aircraft Corporation, a corporation of Alabama
Filed Mar. 27, 1959, Ser. No. 802,380
12 Claims. (Cl. 242—128)

1. In apparatus for paying out cable, a holder disposed to support a cable package wound in a plurality of flat coils in side-by-side relation with each coil comprising a plurality of cable turns for paying out the cable from one end thereof, a roller contacting the end coil of the package and over which the cable passes from the package in paying out, means supporting the roller for rotation about an axis generally parallel to the direction of payout of the cable, means to maintain the roller in contact with the



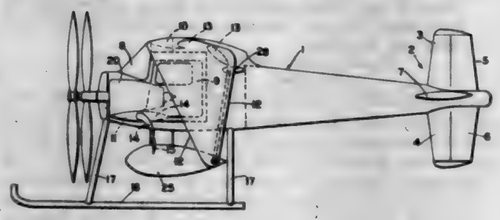
end coil of the package as the cable pays out, and means to brake the rotation of the roller about said axis.

2,950,877
STRAND TENSION MECHANISM
Rexford P. Bennett, Honesdale, Pa., assignor to Heany Industrial Ceramic Corporation, New Haven, Conn., a corporation of New York
Filed May 28, 1958, Ser. No. 738,529
2 Claims. (Cl. 242—154)



1. Strand tension mechanism comprising a bracket including an elongated body portion and a spaced parallel arm of less length than the body portion, a strand guiding bushing at the outer end of said body portion, a fixed comb member mounted on the body portion and a co-acting pivotally mounted comb member, a post fixedly attached to said arm in spaced parallel relation to said body portion, a sleeve mounted on said post and carrying said pivotal comb member, an operating finger piece attached to the sleeve between its ends, a tension adjusting collar rotatable on the post and having a series of recesses extending longitudinally from one end of the collar, a knurled finger portion at the other end of the collar, a pin fixed on said arm selectively engageable with said recesses, and a cylindrical coil spring arranged on said post between the sleeve and the adjusting collar, one end of said spring being connected to said sleeve and the other end of the spring being connected to the adjusting collar, said collar being freely movable away from said pin endwise of the post and rotatable around the post when moved away from said pin, said collar being movable automatically into locking engagement with said pin when released.

2,950,878
SLIP STREAM DEFLECTOR FOR CONVERTIBLE AIRCRAFT
Harlan D. Fowler, 1006 Corey St., Longmont, Colo.
Filed June 14, 1957, Ser. No. 665,693
14 Claims. (Cl. 244—12)



1. In an aircraft having a high wing and a tractor propeller arranged for conventional propeller driven air

flight and in which the propeller is arranged for developing a variable high static thrust slipstream, the improvement which comprises means inclusive of a flexible curtain mounted on a roller rearwardly and below said wing and extendible therefrom for projecting an essentially flat surface substantially perpendicular to and in the slipstream of said propeller, said surface being arranged to simultaneously present a variable projected frontal area and to deflect a major portion of the slipstream downwardly and to substantially equalize the thrust to nullify forward movement, said downward slipstream momentum producing lift, for moving the aircraft at controllable vertical airspeeds.

2,950,879
LIFT MODIFYING PROTUBERANCE AND AIRFOIL COMBINATIONS
Howard W. Smith, Seattle, Wash., assignor to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Filed Jan. 9, 1956, Ser. No. 557,913
18 Claims. (Cl. 244—41)



1. The combination of an airfoil, an air pressure modifying wave inducing protuberance elongated parallel to the chords of said airfoil and tapered forwardly and rearwardly from a waist of maximum cross-sectional area, and means supporting said protuberance adjacent to said airfoil with all of the portion of said protuberance between the waist and the rearward end of said protuberance in non-overlapping relationship with said airfoil and at least a portion of said protuberance between the waist and the forward end of said protuberance being in overlapping relationship with said airfoil, so that the portion of said protuberance in overlapping relationship with said airfoil produces, at supersonic speeds, an air pressure field on said airfoil.

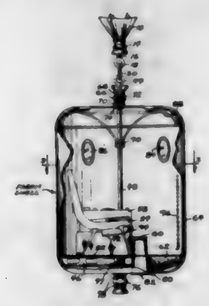
2,950,880
METHOD OF AND MEANS FOR GUIDING MISSILES
Britton Chance, Cambridge, Mass., and David T. Griggs, Chevy Chase, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Jan. 18, 1945, Ser. No. 574,438
10 Claims. (Cl. 244—14)

1. Means for automatically piloting a controlled missile, comprising means for transmitting a series of pulses of electromagnetic energy to a preselected remote object, means on said missile for receiving reflections of said transmitted pulses, said receiving means including means for amplitude modulating received signals in accordance with the direction of reception of said signals with respect to the course line of said missile, means responsive to said transmitted pulses and to echo pulses from said remote object adapted to pass only signals reflected from said remote object, means for comparing the amplitude of alternate quarter cycles of the signal passed by said last-mentioned means and means responsive to said comparing means adapted to operate first control means in



response to differences in the relative amplitudes of odd quarter cycles of the signal applied to said comparing means and adapted to operate second control means in response to differences in the relative amplitudes of even quarter cycles of the signal applied to said comparing means.

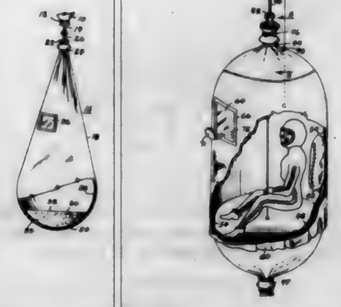
2,950,881
BALLOON AND GONDOLA ASSEMBLY
Richard L. Schwoebel, Minneapolis, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Apr. 16, 1956, Ser. No. 578,528
2 Claims. (Cl. 244—31)



1. A balloon gondola for high altitude manned flight including in combination, a rigid keel means, a passenger supporting surface mounted on said keel means, an attaching means secured to said keel means centrally thereof and normal thereto, a substantially gas-tight shell secured to said attaching means at an upper portion thereof and to said supporting surface and keel means for enclosing a passenger therein, said attaching means running centrally through said gas-tight shell for attachment to a lifting cell, whereby the entire weight of the passenger is carried by said supporting surface as mounted on said keel means secured to said attaching means.

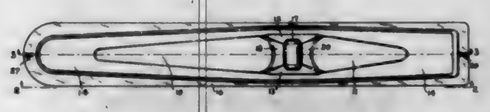
2,950,882
BALLOON GONDOLA
Paul E. Yost, Hugo, Minn., assignor to General Mills, Inc., a corporation of Delaware
Filed Apr. 16, 1956, Ser. No. 578,531
14 Claims. (Cl. 244—31)

14. A balloon gondola assembly for maintaining an atmosphere for manned flight comprising a flexible bag having a size, shape and strength providing a compartment for a human passenger, means for attaching the top of said bag to a lifting cell, said means bearing the weight of said flexible bag, and means comprising a passenger support member located inside said bag, the weight



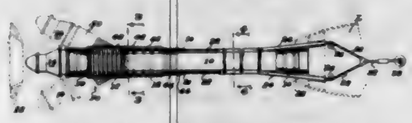
of said support member being supported solely by the walls of said bag.

2,950,883
SKI FOR AIRCRAFT AND THE LIKE
Wesley K. Landes, Box 152, Anchorage, Alaska
Filed June 14, 1955, Ser. No. 515,377
15 Claims. (Cl. 244—108)



1. A ski for use on aircraft and the like, comprising a downwardly and outwardly flaring, thin-wall, pedestal of hardened synthetic resin and woven glass fiber laminated construction, and a runner having an essentially flat running surface, said runner underlying said outwardly flaring pedestal, said pedestal and said runner being substantially coextensive, the respective edge areas thereof being integrally joined.

2,950,884
REFUELING PROBE MAST
Vincent Cicala, Wheaton, and Philip W. Jackson, Jr., Rockville, Md., assignors, by mesne assignments, to Vitro Corporation of America, New York, N.Y., a corporation of Delaware
Filed Nov. 20, 1956, Ser. No. 623,459
10 Claims. (Cl. 244—135)



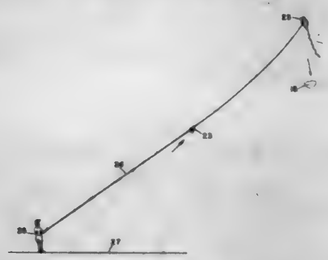
1. In combination with a first aircraft, a hollow probe mast for conducting fluid from said aircraft to a second aircraft, said probe mast comprising a rigid tube connected at one end to said first aircraft and extending therefrom, a rigid nozzle coupling means adapted to be inserted into a coupling socket carried by said second aircraft, and a flexible tube means connecting the other end of said rigid tube and one end of said nozzle coupling means in sealed relation thereto, means for locking said rigid tube and said nozzle coupling means in substantial alignment, said locking means comprising a rigid sleeve slidable axially on said rigid tube, one end of said sleeve when in one position on said rigid tube extending beyond the adjacent end of said rigid tube to span said flexible tube means and slidably engage the outer surface of said nozzle coupling means, spring means to normally hold said sleeve in said one position, and means for retracting said sleeve in the opposite direction against the force of said spring to free said nozzle coupling means and said flexible tube means so that said nozzle coupling means may move out of alignment with said rigid tube.

2,950,885
PARACHUTE PACK RELEASE AND OPENING MECHANISM
John E. Hatfield, Stotfold, England, assignor to Irving Air Chute Co., Inc., Lexington, Ky., a corporation of New York
Filed Mar. 18, 1958, Ser. No. 722,277
Claims priority, application Great Britain July 19, 1957
5 Claims. (Cl. 244—141)



1. In a coupling means for operating a plurality of release mechanisms of a parachute pack the combination of an aircraft ejection seat, a drogue parachute having a suspending line, means for releasably housing the drogue parachute upon the seat, an anchoring member, means for releasably connecting the anchoring member to said seat, the drogue parachute line having a slidable connection with said anchoring member, and means connected with the drogue line for releasing the said anchoring means from the seat prior to force pulling of the drogue parachute line such as to cause said line to slide in the anchoring member.

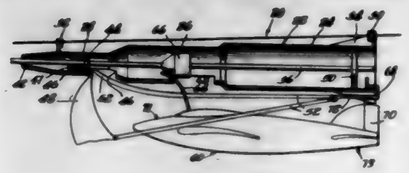
2,950,886
TOY FOR USE WITH KITES
John W. Graham, 4621 Beech, Bellaire, Tex., and John K. Kerver, 5807 Southhurst, Houston, Tex.
Filed Aug. 29, 1957, Ser. No. 681,031
9 Claims. (Cl. 244—155)



1. A toy adapted to be propelled by the wind along and up a kite string when affixed releasably around the kite string which consists of an arcuately shaped flexible sheet the boundaries of which are formed of at least one intersecting curve and at least one straight line and having an axial opening cut out of the sheet on the boundary formed of the straight line, said sheet being formed to provide adjacent said opening and adjacent the periphery of the sheet at least one tab, and at least one slot opposite

the tab said flexible sheet being formed around the kite string into a frusto-conical shape with its apex pointing toward the kite, said tab being releasably received in said slot to cause said opening to define a passageway at the apex of the cone of sufficient size for the kite string and of a size to provide wind resistance for propelling said shape along and up the kite string, said shape being releasable from the kite string on pulling the kite string in and suddenly releasing it.

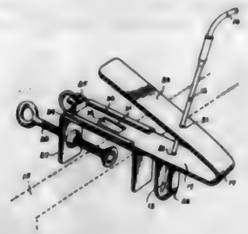
2,950,887
PARACHUTE CARRIER TOY
Walter E. Hidding, Arlington Heights, Ill.
(% Blackhawk Molding Co. Inc., Addison, Ill.)
Filed Aug. 11, 1958, Ser. No. 754,201
9 Claims. (Cl. 244—155)



1. A parachute carrier attachment for use with kites comprising a tubular body of substantial longitudinal extent having an apertured nose, a lateral aperture in the body wall rearwardly of the nose, means along the upper portion of said body adapted to cooperate with a kite string to permit mounting of said body on said string for movement longitudinally along said string, shiftable means longitudinally disposed in the interior portion of said body, said shiftable means comprising a shaft, means engaging said shaft and said body for guiding said shaft for longitudinal movement in said body, releasable holding means on an intermediate portion of said shaft adjacent said lateral aperture in said body and adapted in normal position to cooperate with the adjacent body portion clampingly to impinge upon a complementary parachute element mounted therein, said shiftable means extending through the apertured nose of said body and forwardly thereof and adapted to cooperate with an abutment on the kite string to shift the holding means rearwardly of said body to release the complementary parachute, and means adjacent the rear end of said body adapted to hold the shrouds of the complementary parachute during the ascent of said carrier along a kite string, said shiftable means being engageable with said shroud holding means to release said shrouds upon rearward shifting of said shiftable means.

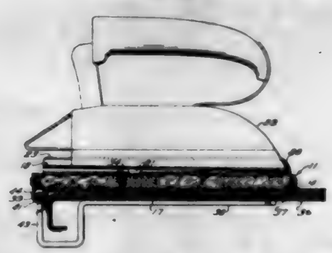
2,950,888
DEVICE FOR DETACHABLY HOLDING FISH STRINGERS
Delbert E. Cottrill, 1810 10th St., and Robert W. Kiler, 802 Pleasant View Drive, both of Des Moines, Iowa
Filed June 15, 1959, Ser. No. 820,446
5 Claims. (Cl. 248—41)

5. In combination, a V-shaped spring strap having two arm portions each of which has a needle receiving hole extending transversely therethrough; said two holes capable of being placed into substantially parallel axial relationship by the compression of said two arm portions toward each other, a loop guard member on the outer side of one of said arm portions loosely embracing its hole, and adapted to encompass the sharp end of a needle extending through said two holes, a C-clamp member, a shaft member threaded through one end portion of said C-clamp member, a groove on said C-clamp slidably detachably embracing one of the said arm portions, a finger receiving opening in that arm portion that slidably



detachably engages the groove of said clamp member, and a spring finger on said clamp member yieldingly extending into the finger receiving opening of said arm.

2,950,889
PRESSING-IRON HOLDER
Carl V. Farrow, Oakland, Calif.
(Rte. 1, Box 59, Maricopa, Ariz.)
Filed Aug. 19, 1957, Ser. No. 678,767
2 Claims. (Cl. 248—117.4)

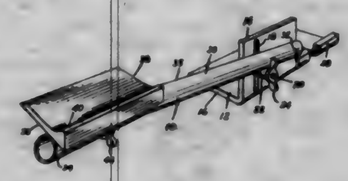


1. An iron holder comprising a base member having a spring loaded clip secured to the rear end thereof for pivoting toward same to clamp the base upon the upper surface of an ironing board, a support plate having the shape of a pressing iron and mounted upon said base in spaced relation thereto with the plate point adjacent the front end of the base, a pair of arms pivotally mounted at the front ends thereof upon said plate adjacent the point thereof and each including bottom portions extending beneath said plate and upstanding walls about a curved plate side, said arms having a maximum separation forward of the rear ends thereof, and a tension spring disposed within said base subjacent said plate and having ends extending through slots therein into engagement with said arms adjacent the rear ends thereof for urging same together whereby said upstanding walls engage the curved side of said plate and resiliently grip an iron slid onto said plate from the rear thereof and restrain iron removal.

2,950,890
OFFICE MACHINE ARM REST ATTACHMENT
Otto B. Hough, Jr., 1802 Atapha Nene, Tallahassee, Fla.
Filed Jan. 14, 1958, Ser. No. 708,820
4 Claims. (Cl. 248—118)

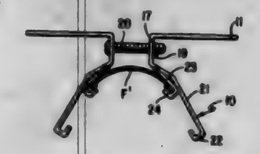
1. An arm rest attachment for office machines comprising a base plate adapted for engagement with an office machine; an upstanding wall on the base plate; an elongated arm connected at one end to the wall and projecting outwardly therefrom; and arm rest means mounted upon the other end of the arm and comprising a generally rectangular plate elongated in the direction of the length of the arm, said plate having a top surface formed along one longitudinal edge with an upstanding, longitudinal rib having an inner side inclined transversely

of the plate and merging smoothly into a more gradually inclined arm support area, said support area declining continuously over the full distance from said inner side



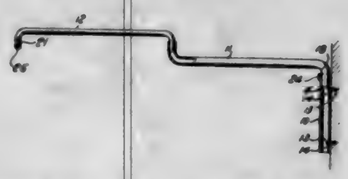
of the rib to the opposite side of the plate, at an angle of inclination constant for substantially the entire amount of said distance.

2,950,891
BICYCLE FENDER BRACKET
Albert Hage, 3700 Roanoke St., Toledo, Ohio
Filed Feb. 17, 1958, Ser. No. 715,679
2 Claims. (Cl. 248—226)



1. Bracket for bicycle license plates or the like comprising a pair of clamping members, each member having an elongate arm to abut the rear face of a license plate and be connected thereto, a relatively short leg integral with one end of said arm and disposed at substantially right angles thereto, the leg being apertured and receiving a fastener adjustably connecting the clamping members together, a clamping arm integral with the opposite end of said leg and inclining outwardly therefrom and in direction generally similar to that of said elongate arm, a hook extending inwardly from the free end of said clamping arm, said members being arranged with said short legs disposed oppositely from one another and with the elongate and clamping arms on one member extending respectively oppositely from the elongate and clamping arms on the other member, whereby the hook of each clamping arm is hooked over the respective side edge of a bicycle fender and the fastener connecting said short legs is tightened for securely clamping the members in place, a relatively short clamping arm struck from said first clamping arm, and a hook on the outer end of said short clamping arm thereby to enable the same bracket to be used also for narrower fenders.

2,950,892
PORTABLE LAMP
Chester Rick, R.F.D., Peekskill, N.Y.
Filed Oct. 12, 1956, Ser. No. 615,618
1 Claim. (Cl. 248—282)



A portable lamp frame comprising a base, a tubular arm having one end bent downwardly to pivotally engage said base and having its other end bent upwardly, a second tubular arm having one end bent downwardly to pivotally engage said upwardly bent end, and having its outer end bent downwardly, said frame having an internal diameter to receive a lamp cord extending through all three of said members, and to permit the cord to slide therein to adjust the lamp to said base comprising a tubular member having a longitudinal slot therethrough through which the cord may be removed laterally whereby the base may be completely detached from the lamp, said slot extending throughout the length of the base, said one end of said first mentioned arm being detachably fitted into said tubular member, and key-hole openings by which said tubular member can be attached to a wall.

2,950,893
SWIVEL LATCHING DEVICE
Frank R. McLarney, Louisville, and Edward L. Hampton, St. Matthews, Ky., assignors to Middletown Manufacturing Company, Middletown, Ky., a corporation of Kentucky
Filed July 31, 1958, Ser. No. 752,366
1 Claim. (Cl. 248—349)

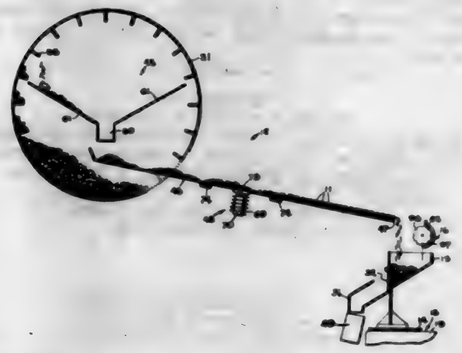


A swivel locking device for a piece of furniture having a rotatable member mounted on a base member by an interposed swivel of the superposed plate type, comprising: means forming at least one opening on each of said swivel plates, said openings being located at equal distances from the swivel axis; and a lock element having a horizontally extending handle adjacent the plate on one member and a vertical bolt extending through the opening in said adjacent plate, said handle being pivoted on said one member for swinging movement in a vertical plane between a locking position wherein the bolt extends through both of said openings and an unlocking position wherein it extends through the opening in the said adjacent plate but is spaced from the opening in other plate; said bolt having spaced portions in snug engagement with the surrounding edges of both of said openings when the bolt is in said locking position; said bolt also having a cut-away portion located between said spaced portions to allow said bolt to swing freely through the said adjacent plate opening during its movement between said locking and unlocking positions, said cut-away portion providing a shoulder adjacent the outer end of said bolt for abutting the inner face of said adjacent plate in said unlocking position.

2,950,894
AUTOMATIC PACKAGING MACHINE
Swan Hillman, % Rockford Screw Products Co., 2501 9th St., Rockford, Ill.
Filed Oct. 1, 1956, Ser. No. 613,192
6 Claims. (Cl. 249—2)

1. In a machine for packaging small irregularly shaped articles such as screws, nuts, etc., the combination of, a container for receiving a quantity of the articles to be packaged, a scale having a platform supporting said container and movable vertically to different positions as the number of articles in said container increases, a dribble feed mechanism operable when activated to deliver articles one by one and at spaced intervals into said container, a bulk feed mechanism comprising an elongated carrier having an upwardly facing surface for supporting a multiplicity of articles distributed along the length thereof, said surface terminating in an abrupt ledge positioned above

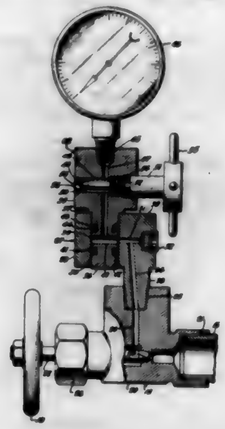
said container for delivering directly thereto the articles advanced along said surface past the ledge, a power actuated feeder for depositing said articles in an uneven stream onto said surface at a point spaced from said ledge, power actuated means coacting with said carrier to agitate the articles thus deposited and, while advancing the same along said surface toward said ledge, rearrange the articles on said surface in a single layer and a plurality of rows disposed side by side whereby to cause a substantially continuous and uniform stream of the articles to gravitate from said ledge, sensing means for detecting



the movement of said platform into different positions corresponding respectively to a desired number of articles in said container and to another number less than the desired number, and means controlling said power actuated means and said dribble feed mechanism in response to said sensing means and coacting with the latter to interrupt the operation of the power actuated means and thereby stop the advance of articles over said ledge when said platform reaches said position corresponding to said other number and to cause operation of said dribble feed mechanism until said platform reaches said position corresponding to said desired number.

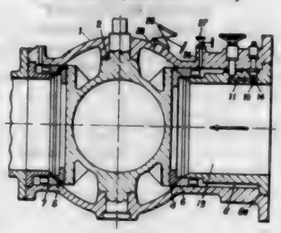
2,950,895
PRESSURE BALANCED FLUID PRESSURE CONNECTOR
Edwin A. Anderson, 1104 Chimney Rock Road, Houston, Tex.
Filed May 19, 1958, Ser. No. 736,034
1 Claim. (Cl. 251—148)

A fluid pressure connector device, particularly adapted for use on oil and gas wells, comprising in combination, first and second connector members, said first connector member having a main body portion with at least two oppositely disposed surfaces thereon, a cylindrical bore of constant diameter extending through said main body portion and open in each of said opposite surfaces, a transverse fluid passage in said main body portion opening at one end into said cylindrical bore substantially midway the length thereof, means closing the opposite end of said transverse passage, said main body portion having an offset projection thereon extending from one of said opposite sides and co-planar with said cylindrical bore, a longitudinally extending passage in said offset projection extending from the outer end thereof and connecting with said transverse fluid passage, said projection having connector means at its outer end adapted for connection to a source of fluid under preasure, said second connector member comprising a body having a reduced cylindrical extension projecting from one side thereof, said reduced cylindrical extension being of a diameter for slidable engagement in said bore of said first connector member and having a shoulder at the juncture of said cylindrical extension and body portion, said cylindrical extension having an annular groove in its cylindrical surface, said shoulder being effective to align said annular groove with said transverse passage when said cylindrical extension is fully received in said cylindrical bore, said cylindrical extension having a packing receiving groove disposed adjacent each side of said annular groove, packing disposed in each of said packing grooves, a transverse passage in said cylindrical extension opening into said annular groove, a longitudinally extending passage in said cylindrical extension connecting said last-mentioned transverse passage with the side of said body op-



posite the side having the cylindrical extension, the outer end of said longitudinally extending passage ending in said opposite body side and having means therein adapted to detachably secure thereto a fluid pressure measuring device or the like, a transverse bore in said body of said second member extending completely therethrough and communicating said longitudinally extending passage with the atmosphere, and a manually operable valve member in said transverse bore cooperating with valve seat means positioned at one side of said longitudinally extending passage for selectively opening or closing said last-mentioned passage to the atmosphere, said valve member extending beyond said transverse bore at the opposite side of said longitudinally extending passage.

2,950,896
ROTARY SLIDE VALVE WITH INSPECTION STOP VALVE
Werner Büttiker, Klus, near Balsthal, Switzerland, assignor to Gesellschaft der Ludw. von Roll'schen Eisenwerke A.G., Gerlafingen, Switzerland, a Swiss company
Filed Aug. 31, 1954, Ser. No. 453,297
Claims priority, application Switzerland Sept. 8, 1953
1 Claim. (Cl. 251—172)

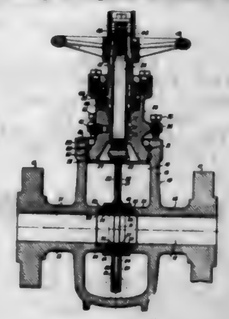


A rotary slide valve for controlling the flow of fluid in a flow line, comprising a housing having an inlet end and

an outlet end, a main valve body rotatably disposed in said housing between said inlet and outlet ends of said housing, a primary packing ring and a secondary packing ring, each of said packing rings being disposed within said housing for reciprocable movement into sealing contact with and away from said main valve body at opposite sides thereof, said primary packing ring being located adjacent said outlet end of said housing and said secondary packing ring being a cylindrical body located adjacent said inlet end of said housing, said housing being provided with respective recesses for each of said packing rings, said packing rings projecting outwardly from and being slidably guided in said recesses, a duct disposed within said housing adjacent said inlet end thereof, said duct having an upstream end opening into the interior of said housing adapted to communicate with a flow line, said duct having further a downstream end opening into the recess guiding said secondary packing ring, an operating valve for said secondary packing ring, said operating valve being located in said housing and communicating with said duct for opening and closing said duct adjacent said downstream end thereof, an auxiliary valve for said secondary packing ring, said auxiliary valve being serially arranged in said duct with respect to said operating valve located in said housing for opening and closing said duct adjacent said upstream end thereof, means operatively connected to said operating and said auxiliary valves and extending out of said housing for actuating said valves independently of one another from without said housing, whereby for inspection and like operations of said primary packing ring said secondary packing ring may be put into operation by actuation of both said auxiliary and operating valves to open said duct and to admit said fluid from said flow line to said secondary packing ring and to press the latter into sealing contact with said main valve body thereby interrupting said flow line adjacent the inlet end of said housing, whereas upon inspection and like operations of said operating valve said auxiliary valve may be actuated to close said duct adjacent said upstream end thereof, said operating valve comprising an outer sleeve member having a valve seat surface at a first end thereof, and projecting with a second end beyond said housing, said outer sleeve member being movable within said housing between an open and a closed position, said valve seat surface cooperating with said duct and closing the latter in said closed position of said outer sleeve member, an inner member extending internally of said sleeve member and engageable with and disengageable from said sleeve member from a location exteriorly of said housing and adjacent said second end of said sleeve member, and a filter connected to said inner member and projecting into said duct, said filter being removable from said duct, independently of said sleeve member, for inspection and like purposes, upon disengagement of said inner member from said sleeve member, while said downstream end of said duct remains closed.

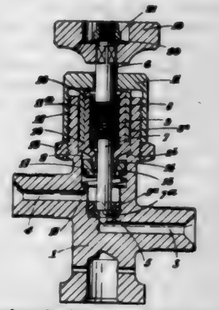
2,950,897
VALVE CONSTRUCTION
Austin U. Bryant, Walnut Creek, Calif., assignor, by mesne assignments, to Walworth Company, New York, N.Y., a corporation of Massachusetts
Filed Apr. 19, 1956, Ser. No. 579,184
7 Claims. (Cl. 251—172)

1. In a valve construction, a body providing flow passages and a space between said passages, a valve member movable in said space between open and closed positions for controlling the flow of fluid through said passages, a pair of resilient seal rings of the O-ring type disposed on opposite sides of the valve member and arranged to generally embrace said passages, and mounting means for each of said O-rings, each of said mounting means forming a continuous annular recess for accommodating the associated O-ring, each recess having an outer extension into which the corresponding O-ring is adapted to be displaced upon application of a fluid pressure differential to its inner surface, each recess extension being separated from the adjacent side surface of the valve member by an interposed lip forming a part of the mounting means whereby the O-ring is separated from contact with the



valve member when squeezed within said recess to thereby establish fluid communication between the corresponding passage and the body space, each of said mounting means also including means for causing the corresponding seal ring to establish a fluid pressure seal between the valve member and the body responsive to fluid pressure differential being applied to the same from the body space.

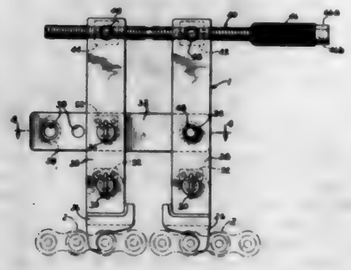
2,950,898
CONTROL VALVE
Waldemar Emil Voss, Kenton, England, assignor, by mesne assignments, to L. Adams Limited, London, England, a corporation of the United Kingdom
Filed July 1, 1957, Ser. No. 669,270
3 Claims. (Cl. 251—214)



1. A control valve device comprising a valve body having a bore of relatively small diameter and a counterbore of relatively large diameter providing a shoulder between said bore and said counterbore; inlet and outlet passages communicable with said bore; a valve seat in said body between said passages for controlling communication of said passages through said bore; an internally threaded gland member in said valve body, the major part of said gland member being within said counterbore with its outer surface spaced inwardly from said counterbore; an external flange on said gland member engaging said shoulder; a sleeve extending freely in the space between said counterbore and the outer surface of said gland member; means for clamping said sleeve against said flange and thereby clamping said flange against said shoulder to seal the joint between said flange and said shoulder and thereby prevent leakage of fluid from said bore into the space between said counterbore and the outer surface of said gland member therein; a valve spindle having an externally threaded portion in threaded engagement with the internal threads of said gland mem-

ber and having a surface portion engageable with said seat; and sealing means on said gland member located axially of said valve spindle between said gland member external flange and said valve spindle seat, and surrounding and having sealing engagement with said valve spindle between said seat engageable surface portion and threaded portion thereof.

2,950,899
CHAIN POSITIONING TOOL
John Hart Wilson, % Wilson Mfg. Co., P.O. Box 1031, Wichita Falls, Tex.
Filed Feb. 15, 1956, Ser. No. 565,730
1 Claim. (Cl. 254—78)



A tool for drawing the ends of a roller chain together to enable their mechanical interconnection, comprising two arms each comprising a pair of parallel, spaced apart bars, a connecting bar which connecting bar is positioned between said pairs of parallel, spaced apart bars, said arms being pivoted, intermediate their ends, on said connecting bar, a screw-threaded swivel mounted between said respective pairs of parallel bars on each of two adjacent ends of said arms, a screw-threaded element in threaded engagement with both said swivels, means for rotating said screw-threaded element, a pair of chain engaging elements, each of which chain engaging elements has at least two chain engaging hooks thereon, which chain engaging hooks of said respective elements are in oppositely facing relation, the opposite end of said chain engaging elements each having a shouldered face thereon to complementally engage the respective ends of said parallel arms in close fitting relation and with said shoulder of each of said chain engaging elements extending downwardly along the inner face of each of said parallel arms, said chain engaging elements each having an apertured lug extending outwardly therefrom on the ends thereof opposite said chain engaging hooks, said parallel arms each having an aperture formed therethrough on the opposite adjacent ends of said arms, so the apertures in the respective lugs will register with the aperture in the respective parallel arms, and a pin adapted to fit in the apertures of the respective arms and the respective lugs.

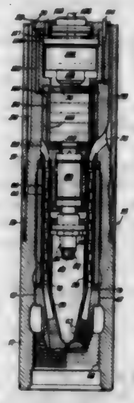
2,950,900
REDIRECTING DEFLECTED BOREHOLES
Alfred C. Wynes, 28 7th Ave., Nkana, Northern Rhodesia
Filed Oct. 11, 1956, Ser. No. 615,389
Claims priority, application Union of South Africa Oct. 13, 1955
7 Claims. (Cl. 255—1.6)

1. Hole deflecting apparatus comprising a substantially tubular body, a bore in the body inclined to the axis of the body, and providing a passage for a pilot drill, a counterweight provided in, and at the upper end of, the body on the side which diverges from the bore to bias the body when freely suspended so that the bore is more nearly vertical than the axis of the body, a wedge member having a spiked lower end, means securing the wedge member of the body adapted to shear when the spiked end is in contact with the bottom of a borehole and the body is subjected to a loading force, guide means on the body to constrain relative movement of the wedge member and the body when shearing has occurred to force



the wedge to become firmly lodged between the body and the wall of the borehole to prevent rotation of the body, means to prevent separation of the wedge member and the body when the body is moved upwardly in the borehole, and means to suspend the body from a drill rod line.

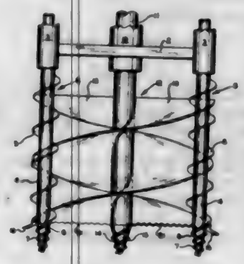
2,950,901
EARTH BORING DRILL
Arthur A. Mathewson, Jr., La Canada, Calif., assignor, by mesne assignments, to A. G. Bodine, doing business as Bodine Soundrive Company, Los Angeles, Calif.
Filed Dec. 23, 1957, Ser. No. 704,660
10 Claims. (Cl. 255—4.4)



1. In an earth boring drill comprising an elongated massive longitudinally vibratory drill rod having a bit at the leading end thereof and a supporting drill string, means forming a part of said drill rod for vibrating the same and including oscillator means for vibrating the drill rod and turbine means for driving said oscillator means, said turbine means being driven by pressurized drilling fluid forced downwardly through passages in said drill rod and drill string, said drill rod including means defining an oscillator mounting cavity disposed above said turbine means and substantially isolated from the drilling fluid and at a substantially lower pressure than the pressure of the drilling fluid, a mounting shaft for said

turbine means extending into the lower end of said cavity and connected to said oscillator means for driving the latter, sealing means disposed around said turbine mounting shaft for maintaining isolation between said oscillator cavity and the drilling fluid, and bearing means mounted within said cavity for rotatably mounting said turbine shaft and adapted to resist axial thrust loads applied to said shaft, a hydrodynamic thrust load being applied to said turbine mounting shaft in a downward direction due to the pressure drop of said drilling fluid upon passing through the turbine means and a hydrostatic thrust load being applied to said turbine mounting shaft in an upward direction due to the height of the column of drilling fluid above the turbine means, said hydrodynamic and hydrostatic loads acting on said turbine shaft in opposite directions and thereby tending to compensate for each other and to minimize the axial thrust loading on said bearing means.

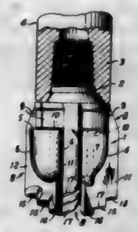
2,950,902
EARTH DIGGING APPARATUS
Howard V. Olds, 5923 Dixie Highway, Saginaw, Mich.
Filed Aug. 21, 1956, Ser. No. 605,293
17 Claims. (Cl. 255—21)



17. Earth digging apparatus comprising a frame; a plurality of augers arranged in quincuncial form; means supporting each of said augers in depending relation from said frame and for rotation relative to said frame; driving means; and transmission means interconnecting said driving means and said augers for driving the latter simultaneously in boring direction, said augers being so arranged that the central auger is substantially tangential to each of the others and the other augers are uniformly spaced about said central auger in such manner that an imaginary line tangential to and enclosing each of said other augers defines a substantially square area, said central auger also protruding between each adjacent pair of said other augers so as to be substantially tangential to said imaginary line between each adjacent pair of said other augers, none of said augers being individually enclosed.

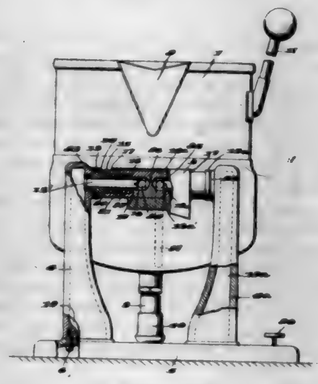
2,950,903
ROTARY DRILLING BIT
Thomas A. White, P.O. Box 27, Quanah, Tex.
Filed Aug. 6, 1958, Ser. No. 753,541
1 Claim. (Cl. 255—61)

A rotary drilling bit for use in drilling wells comprising a body member having an integral threaded pin for connection to a drill stem, a shoulder on the body member about the pin, a plurality of circumferentially spaced longitudinal grooves in the body member opening at their upper ends in the shoulder, and a recess on one side of each of the grooves extending into the shoulder, and a plurality of circumferentially spaced cutting blades removably connected to the body member and extending radially outwardly therefrom, the lower ends of the blades extending downwardly and radially inwardly below the body member, the blades each being received in one of the grooves and having an arcuate head portion supported on the shoulder and a web on the head portion engaging the corresponding recess, the head portions conforming to the curvature of the pin and collectively embracing it, and having beveled upper surfaces engageable by a drill stem threaded on the pin, the blades each having a planar face on its leading side, as determined by the direction of rotation of the bit, aligned with the longitudinal axis of the body member, the trailing side of each blade generally parallel to its leading side, the



blades each having straight, vertically disposed inner and outer edges for at least a portion of its length, beginning at its lower end, the trailing side of each blade being continuous with said inner and outer edge portions, the lower end of each blade having a series of radially and longitudinally offset portions, each having a straight, horizontally disposed lower edge, whereby the blade is progressively shortened and widened, stepwise, beginning at its inner edge, the trailing side of each blade being continuous with said lower edge portions, and the blades each having a plurality of hardened metal inserts secured in recesses therefor in the leading edges of its offset end portions and constituting its cutting surfaces.

2,950,904
JACKETED KETTLE MOUNTING ASSEMBLY
Fred H. Groen, Jr., Chicago, Ill., assignor to Groen Mfg. Co., Chicago, Ill., a corporation of Illinois
Filed July 15, 1957, Ser. No. 671,754
1 Claim. (Cl. 257—1)



Pedestal-supported trunnion means adapted for use with a vessel having bottom and side walls and an outer wall spaced from at least one of said bottom and side walls to define a jacketed compartment comprising a unitary horizontal generally-cylindrical pivot shaft, the ends of said pivot shaft having independent aligned longitudinally-extending bore chambers therein, each of said bore chambers having a first cylindrical bore portion adjacent the center of the pivot shaft and widening toward the end of the pivot shaft in a second bore portion

of larger diameter than the diameter of said first bore portion, the pivot shaft walls defining each of the first bore portions having at least one lateral opening therein extending completely therethrough and communicable with an opening in the outer wall of said vessel to provide communication between the pivot shaft first bore portion and the vessel jacketed compartment; a socket cup at each end of said pivot shaft, each of said socket cups having a first tubular portion journalled in and partially extending into the pivot shaft first bore portion, a second tubular portion of greater external diameter journalled in and partially extending into the pivot shaft second bore portion, and a longitudinal bore extending completely through the first and second tubular portions; and spring-biased rotary packing seal means in the second bore portions of said pivot shaft concentrically surrounding the first tubular portions of said socket cups; said socket cups each being rigidly and non-rotatably connected to hollow pedestal support means with the longitudinal bores of the socket cups in communication with the associated passages in the pedestal support means so that at one end of the pivot shaft fluid may pass through one pedestal passage, through the bore of the associated socket cup, and out of the pivot shaft first chamber portion into the jacketed compartment of the vessel through the opening in the wall thereof, and fluid may pass from the jacketed compartment of the vessel into the first bore portion at the other end of said pivot shaft through the associated wall opening, through the bore of the associated other socket cup, and through the other pedestal passage.

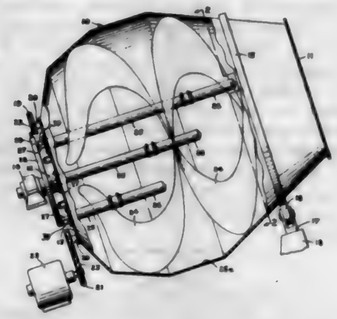
2,950,905
HIGH SPEED MIXING IMPELLER
Claude K. Myers, 8376 Salt Lake Ave., Bell, Calif.
Filed Sept. 17, 1956, Ser. No. 610,138
1 Claim. (Cl. 259—134)



A mixing impeller comprising a rotating shaft, a plate fixedly mounted on said shaft and disposed normal thereto, said plate having a circular peripheral edge generated on the axis of the shaft, a plurality of uniformly spaced open recesses formed in said peripheral edge, said recesses being disposed at an angle to the plane of the plate, a mixing vane member fixedly mounted in each said recess and formed as a frame with one side of said frame entirely disposed in the recess and at the angle of said recess and each frame having an opposite side beyond the periphery of the plate disposed at a reverse angle to the angle of the frame side in the recess, said oppositely angled frame sides moving bodily with the plate around the axis of the rotating shaft in different concentric circular paths, each frame having upper and lower frame sides connecting the mentioned angularly disposed frame sides.

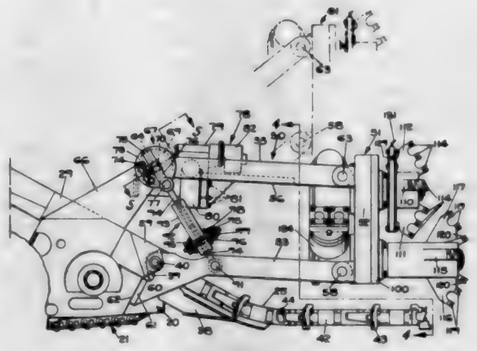
2,950,906
CONCRETE MIXER
Louis G. Hilkemeier, Plainfield, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Filed July 1, 1957, Ser. No. 669,382
6 Claims. (Cl. 259—161)

1. In combination, a rotatable mixing drum having a mixing area formed therein, said drum having means for charging materials to be mixed into said mixing area and for discharging the mixed materials from said mixing area, means in said drum for mixing and discharging the materials passed to said mixing area, and at least one



oscillating element connected to the drum to extend into the mixing area for oscillating the materials when the drum is in mixing operation.

2,950,907
MINE FACE TRAVERSING MINING HEAD
Arvid R. Anderson, Upper Arlington, Ohio, assignor, by mesne assignments, to The Calomol Company, a corporation of Ohio
Original application May 5, 1951, Ser. No. 224,788, now Patent No. 2,776,126, dated Jan. 1, 1957. Divided and this application Nov. 27, 1956, Ser. No. 624,555
3 Claims. (Cl. 262—7)



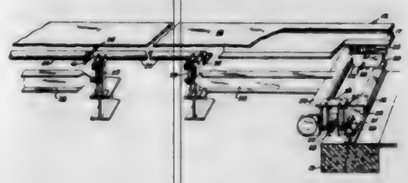
1. A coal mining machine compriaing a self-powered mobile main frame supporting a gathering conveyer, mining mechanism for cutting and breaking coal from the coal face, linkage mechanism between said main frame and said mining mechanism to support the latter, pivot means interconnecting said linkage mechanism to said main frame and said mining mechanism, an eccentric having a rotary throw supported on said main frame, a threaded screw and rotary sleeve mechanism therefor pivotally connected as a pitman between said eccentric and said linkage mechanism to raise and lower said mining mechanism, means for rotating said sleeve relative to said screw to raise and lower said mining mechanism, and motor means for rotating said eccentric mechanism for raising and lowering the mining mechanism.

2,950,908
RE-SET MEANS FOR ACCELERATION INTEGRATOR
Paul J. Rainsberger, China Lake, Calif., and Donald H. Fischer, Phoenix, Ariz., assignors to Giannini Controls Corporation, a corporation of New York
Filed June 27, 1958, Ser. No. 745,169
4 Claims. (Cl. 73—503)



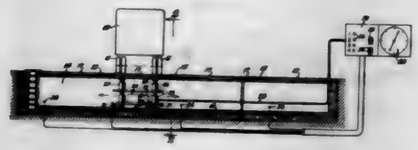
1. In combination with an acceleration integrator which comprises structure forming a cylinder closed at one end, piston means having a substantially flat inner axial face and movable inwardly in the cylinder in response to axial acceleration thereof, gaseous fluid means operable to limit the rate of piston movement, and abutment means adjacent the open cylinder end operable to limit outward piston movement; piston re-set means comprising a re-set mass of annular form normally positioned between the piston and the closed cylinder end, an annular recess formed in the closed cylinder end and adapted to receive the re-set mass, the outer axial face of the re-set mass being substantially aligned with the closed cylinder end when the re-set mass is received in said recess, and the re-set mass and annular recess so corresponding in size and shape as to minimize the volume of gas entrapped by inward movement of the piston to the closed cylinder end, and compression spring means acting between the re-set mass and the bottom of said recess.

2,950,909
TANDEM SCALE SYSTEM
Leslie R. Murphy, Sacramento, Calif., assignor to L. R. Murphy Scale Company, Sacramento, Calif., a corporation of California
Filed Sept. 10, 1957, Ser. No. 683,050
5 Claims. (Cl. 265—71)



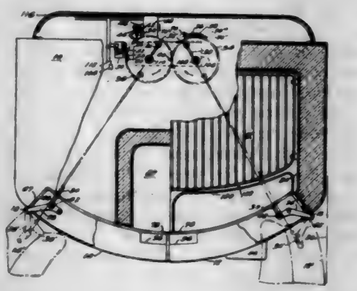
1. A tandem scale system, including in combination: a plurality of platform scales placed end to end longitudinally, each scale having a rectangular base frame, a rectangular weighbridge, scale suspension means supporting said weighbridge on said frame, a lever system connected to said suspension means and including lateral members joining elements of said lever system, a longitudinal pipe joining the lateral members into a single system, and a transverse lever arm secured to said pipe; a connecting pipe for each adjoining pair of scales in line with and with its opposite ends aligned with and secured to one end of each of said longitudinal pipes for said pair of scales; and a scale beam assembly connected to one of said transverse lever arms for indicating the total weight on said tandem scale system.

2,950,910
VEHICLE WEIGHING SYSTEM
Verne C. Kennedy, Jr., Chicago, Ill., assignor to Streeter-Amet Company, Grayslake, Ill., a corporation of Illinois
Filed Apr. 17, 1957, Ser. No. 653,353
3 Claims. (Cl. 265—72)



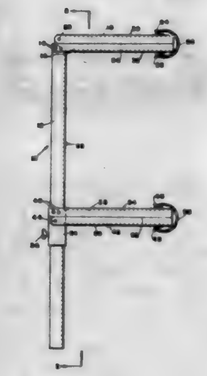
1. A vehicle weighing system comprising a plurality of spaced parallel tunnels corresponding in number and spacing to the sets of wheels on a vehicle to be weighed, a plurality of platforms spaced lengthwise of each of the tunnels to receive the sets of wheels of a vehicle at different weighing stations lengthwise of the tunnels, a car movable lengthwise in each of the tunnels, a motor on each car to move it along its tunnel, control means for each motor including switches positioned along the tunnel to be engaged by the car and to stop the car selectively beneath the platforms, weight sensing means carried by each car, jack means operatively connected to the cars and platforms to elevate the platform above a car and support it on the weight sensing means, an indicator outside of the tunnel at a control station connected to the weight sensing means, and controls for the motors and jack means at the control station.

2,950,911
REFRIGERATOR DOORS AND ACTUATING MECHANISM
Glenn Muffly, 1541 Crestview Drive, Springfield 32, Ohio
Continuation of application Ser. No. 235,920, July 10, 1951. This application Dec. 26, 1957, Ser. No. 705,157
4 Claims. (Cl. 268—63)



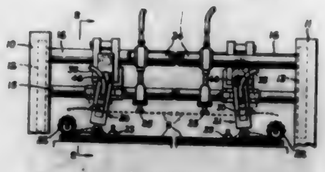
1. In a refrigerator cabinet enclosing a storage compartment, means forming an opening through an outer wall of said cabinet for access to said compartment, a door for closing said opening, power transmission means for actuating said door, said transmission means including a yieldable drive in the direction of closing the door and a relatively positive drive in the direction of opening the door, and means for actuating said transmission means to move the door and to stop at the position which normally represents completion of door movement in either direction.

2,950,913
EVEN STRETCH ELASTIC STITCHER
Louise R. Blackmon and Leland E. Blackmon, both of P.O. Box 811, Hartsville, S.C.
Filed Sept. 18, 1958, Ser. No. 761,715
2 Claims. (Cl. 269—189)



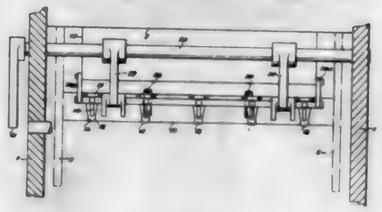
1. An elastic stitcher accessory for sewing machines comprising, in combination, a main body member having a top end and a bottom end, a non-slidable mounting means secured at the top end of said main body member for gripping one pair of ends of a pair of elastic and inelastic strips in flat coextensive relationship, an adjustable mounting means slidably supported upon said main body member intermediate its top and bottom ends and in a common plane with said non-slidable mounting means for gripping the opposite pair of ends of said pair of elastic and inelastic strips in flat coextensive relationship, a releasable screw type clamping means for clamping said adjustable mounting means in longitudinally spaced apart relationship with said non-slidable mounting means, said non-slidable mounting means comprising a pair of clamping bars, said clamping bars comprising a first bar rigidly secured at one end to the top end portion of said main body member and said first bar having a free end portion projecting at right angles from said body member and a second bar with a semi-circular end portion pivotally secured to the top end of said main body member and having a free end projecting outwardly therefrom, said second bar arranged adjacent said first bar for selective movement between a normally closed position relative to said first bar and an open position, said adjustable mounting means comprising a slide with an upper and lower end and a second pair of clamping bars assembled therewith, said second pair of clamping bars comprising a third bar secured at one end to said adjustable mounting means and having a free end projecting at right angles to said slide and a fourth bar having a semi-circular end and a free end, said semi-circular end of said fourth bar pivotally supported to the upper end portion of said slide below and adjacent said third bar for movement between a normal closed position in side by side relationship with said third bar for clamping the said opposite pair of ends of said pair of elastic and inelastic strips arranged therebetween when in use and releasable clamping means arranged with the free ends of each pair of clamping bars for clamping each pair of bars together when in use.

2,950,913
SHEET FEEDING APPARATUS
Alfred J. Staines, Cleveland, Ohio, assignor to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware
Filed Dec. 4, 1958, Ser. No. 778,189
20 Claims. (Cl. 271—26)



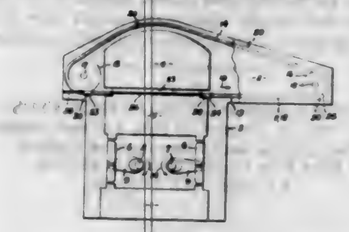
1. A device of the character described for use in a sheet feeder for lifting successive sheets from a pile thereof and subjecting such sheets to stretching, comprising a suction cylinder including means responsive to the application of suction thereto to grip the top sheet on the pile, a supporting slide for said cylinder, means pivoting said cylinder on said slide for swinging movement about an axis extending generally parallel with the direction of feeding of the sheets, stationary guide means mounting said slide for generally vertical movement with respect to the pile to raise said cylinder and the sheet gripped thereby, movable guide means associated with said cylinder and extending generally in the same direction as said stationary guide means, a follower on said cylinder movable therewith along said movable guide means, means mounting said movable guide means for movement generally laterally of the pile with respect to said stationary guide means, and means for moving said slide and said movable guide means in timed relation causing said cylinder to swing on said axis outwardly of the pile and to rise with said slide.

2,950,914
SHEET FEEDING APPARATUS
William Frank Golding, 22 Parry's Close, Stoke Bishop, Bristol, England
Filed Nov. 22, 1957, Ser. No. 698,264
9 Claims. (Cl. 271—45)



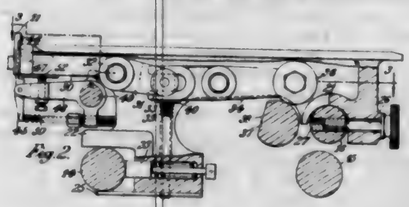
1. In a sheet feeding apparatus having conveyor chains adapted for the transport of a sheet gripping device from a sheet reception point to a sheet release point wherein the gripping device comprises a gripper bar secured to said chains transversely therebetween and defining a common lower gripper jaw, a plurality of leaf springs defining individual upper gripper jaws and each having an end portion secured to said gripper bar and an unsecured portion pressing onto said gripper bar, a double-ended lever pivotally mounted intermediate its ends on the gripper bar adjacent each of said leaf springs and having its load arm positioned to cooperate with and raise the unsecured portion of said leaf spring when said lever is pivoted in one direction and its work arm positioned clear of the vertical projection of said leaf spring so as to be accessible for being depressed by an operating mechanism located above said gripping device, one such operating mechanism being provided at each of said sheet reception and release points on a stationary part of the machine and being adapted to be lowered into cooperation with said work arm to depress the latter and pivot said lever in said one direction.

2,950,915
SHEET FEED AND REGISTRATION APPARATUS
William Frank Golding, 22 Parry's Close, Bristol, England
Filed Mar. 25, 1957, Ser. No. 648,369
Claims priority, application Great Britain Mar. 28, 1956
10 Claims. (Cl. 271—50)



1. A press for working on sheets comprising a fixed platen, a movable platen, two parallel endless chains, a supporting bar extending transversely between said chains the bar being provided with means for gripping a sheet, substantially rectilinear tracks positioned to support the chains during a run including the passage of the bar from one operating position through between the platens to another operating position, said chains being driven with an intermittent motion timed for the bar to stand still when situated in the operating positions, a guide element connected to a link of each of the chains, the guide elements being engaged by the ends of the bar and being dimensioned to guide the bar for rectilinear movement parallel to the pitch line of the chains, and positioning means provided at each operating position of the bar and cooperating to move the bar along the guide elements into a sheet registering position.

2,950,916
SHEET FEEDING MACHINES
Headley Townsend Backhouse, Les Rayons, Corsy-Conversion, Switzerland
Filed July 2, 1958, Ser. No. 746,136
Claims priority, application Great Britain July 8, 1957
3 Claims. (Cl. 271—60)



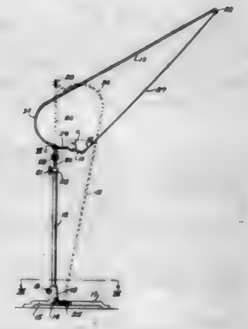
1. A sheet feeding machine comprising a feed table over and across which sheets are fed in succession, a machine frame supporting the table, a constantly rotatable shaft which extends horizontally and transversely of the feeding direction of the sheets, is carried by said frame and is of non-circular cross-section over a substantial portion of its length thereby to constitute a cam and a front lay unit which is removable as such from the frame and comprises a bracket, readily releasable means for attachment of the bracket to the machine frame, a front lay supported by the bracket for rocking movement about an axis extending beneath the table parallel to the said shaft from an upright operative position of the lay in which it projects above the plane of the table downwardly to an inoperative position in which it lies out of the path of the sheets leaving the table and lay-operating means carried by said bracket and arranged for co-operation with said cam for translating the rotational movement of the shaft into rocking movements as aforesaid of the lay.

2,950,917
GAME APPARATUS
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Apr. 15, 1957, Ser. No. 652,775
4 Claims. (Cl. 273—99)



1. In game apparatus, a generally upright but rearwardly tilted post or standard structure, means for supporting the post or standard structure, a cantilever arm projecting to a substantial distance forwardly from the upper end portion of the post or standard, a playing ring member, a flexible leash pendulously supporting the playing ring from the distal end portion of said arm, the length of said leash being such that the playing member is adapted to be swung in an arc which carries it adjacent to the forward side of said post or standard, and a plurality of hook members carried in series by the inner side of said standard or post member and disposed within the range of swinging movement of the playing member for selective scoring registration of the ring member onto the hooks by directional swinging of the ring member on said leash, said post or standard being of arcuate shape matching said arc and all of the hook members being of equal size and located in said arc.

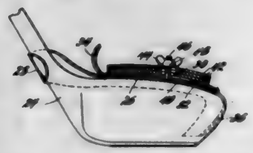
2,950,918
GAME APPARATUS
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Apr. 15, 1957, Ser. No. 652,776
2 Claims. (Cl. 273—99)



2. In a game apparatus including an upright standard having a supporting base projecting laterally therefrom, a cantilever supporting arm having a depending terminal section on one end vertically adjustably carried by the upper end portion of the standard, means releasably securing the depending section in vertical adjustment relative to the standard, means pivotally connecting the de-

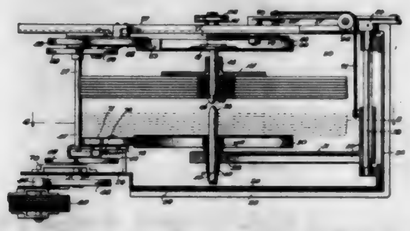
pending portion to the cantilever arm and releasable to enable collapsing of the cantilever arm downwardly and toward the standard, the cantilever arm having suspended from its free end a playing member and the cantilever arm having adjacent to said one end a second playing member coactive with said suspended playing member, and said base having an upwardly opening socket within which the free end of the cantilever arm is engageable in the collapsed position, said means releasably securing the depending section and said releasable pivotal securing means being operable to enable vertical adjustment of the depending section relative to the standard and pivoting of the cantilever arm into the collapsed position and then being securable to retain the depending section and the cantilever arm fixedly in the collapsed position of the cantilever arm and thereby maintaining said free end portion of the cantilever arm in said socket in the collapsed position.

2,950,919
ATTACHMENT FOR GOLF CLUBS
Coin Q. Cadman, 418 W. 12th St., Silver City, N. Mex.
Filed Jan. 30, 1958, Ser. No. 712,158
7 Claims. (Cl. 273—171)



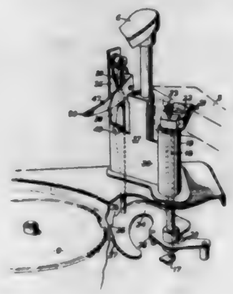
1. An attachment for adding weight to golf clubs, such as driving woods and the like, comprising a first, relatively thin plate-like member conforming generally to the shape of the top of a golf club, formed to extend over a major portion but less than all of said golf club top and having an extending portion shaped to releasably engage the shank portion of a club head, a second relatively thin plate-like member formed to extend over a major part but less than all of said golf club top and in planes generally parallel to said first member and having an extremity shaped to engage releasably the toe portion of a club head, means coupling said plate members for relative movement along the toe-to-shank axis of a club head, and releasable means for fixing said plate members together to prevent such movement.

2,950,920
AUTOMATIC PHONOGRAPHS
James L. D. Morrison, 261 Searles Ave., Benton Harbor, Mich.
Filed Oct. 7, 1953, Ser. No. 384,731
4 Claims. (Cl. 274—10)



1. A phonograph comprising first and second rotatable spindles for supporting a vertical stack of records, the first of said spindles being fixedly supported, an arm mounting the second spindle and pivotally supported for movement between a position under the first spindle and an offset position for clearance in loading the stack of records on to the second spindle, transfer means operatively associated with said second spindle for bodily transferring the stack of records from the second spindle to the first spindle when the second spindle is under the first spindle to expose one side of the lowermost record of the stack for reproduction, means for dropping one record at a time from the first spindle into stacked relation on the second spindle for exposing the opposite side of the record, means for reproducing the exposed side of the record in each stack, and change cycle control means operatively associated with said spindles, said transfer means, said record dropping means, and said reproducing means for moving said second spindle to its position under said first spindle, playing one record after another, and moving said second spindle to its offset position.

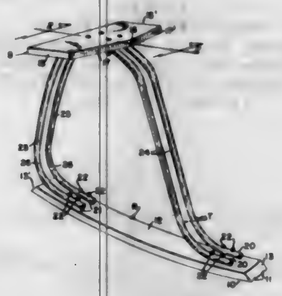
2,950,921
SOUND REPRODUCING APPARATUS
Lawrence Vincent Guest, Old Hill, England, assignor to Birmingham Sound Reproducers Limited
Filed June 17, 1957, Ser. No. 665,911
4 Claims. (Cl. 274—10)



1. In a sound reproducing apparatus of the kind for playing automatically a succession of disc records of mixed sizes fed singly from the lower end of a stack to the playing position, said apparatus including a swingable pick-up arm, and an automatic re-cycling mechanism, in combination locating means for the pick-up arm comprising a fixed support, a movable arresting member movable relative to the fixed support into any one of at least two alternative pre-determined operative pick-up locating positions and one-predetermined inoperative position, means for determining which of said pre-determined operative pick-up locating positions is occupied by said arresting member comprising means for sensing the size of a record being transferred into playing position and operating to move said arresting member into the appropriate position, a locator member connected for swinging movement in unison with the pick-up arm and making abutting engagement with the arresting member during inward swinging movement of the pick-up arm to stop the inward swing of said locator member and thereby locating the pick-up arm in the appropriate location preliminary to commencement of reproduction of the record in the playing position, and means for moving the said arresting member after such appropriate location of the pickup arm to said pre-determined inoperative position spaced from said locating member.

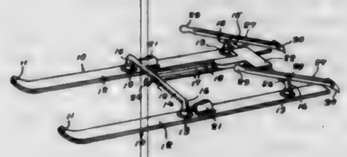
2,950,922
SNOW COASTING DEVICE
Vernon P. Rudine, 2951 S. Washington St., Englewood, Colo.
Filed June 13, 1955, Ser. No. 515,030
1 Claim. (Cl. 280—12)

A coasting device comprising a single elongated runner having an under surface convexly curved both longitudinally and laterally, the radius of longitudinal curvature being relatively long and the radius of lateral curvature being less than the radius of longitudinal curvature, said runner having a pair of longitudinal grooves on the under side and disposed on opposite sides of the center line thereof; a seat having a width greater than the width of said runner and disposed above the rear of said runner, said seat tipping upwardly toward the front at an angle of approximately five degrees to a longitudinal line tangent to the center of said runner, the width of said seat being greater than the maximum front to



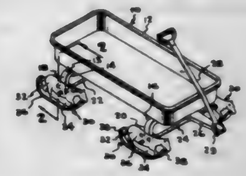
back distance thereof and the front edge thereof being inclined rearwardly to each side from the center; and a pair of parallel metal tubes affixed to the underside of said seat and at opposite ends to said runner, each said tube extending downwardly and forwardly from said seat with the front end extending forwardly and attached to said runner adjacent the front end of said runner and each said tube extending rearwardly and downwardly from said seat and then arcuately and forwardly with the rear end extending forwardly and attached to said runner adjacent the rear end of the latter.

2,950,923
SLED
James Donovan Forney, Fort Collins, Colo., assignor to Forney Generators, Inc., Fort Morgan, Colo.
Filed Dec. 23, 1958, Ser. No. 782,495
3 Claims. (Cl. 280—12)



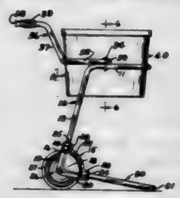
1. In a device of the character described, a pair of spaced parallel similar skis each including a main flat portion and an upturned front end, a pair of spaced apart support members secured to each ski, front and rear braces extending between said skis and each including a downwardly extending section connected to a corresponding support member, said front and rear braces being arranged in spaced parallel relation with respect to each other, a pair of spaced parallel beams having their rear ends secured to said rear brace and their front ends secured to said front brace, a curved clamp adjacent the front ends of said beams secured to said front brace, a hook connected to said clamp, a foot engaging member connected to each ski, a seat supported on said beams, and a securing element depending from said seat and projecting through the space between said beams, said seat adapted to be adjusted to different positions.

2,950,924
REMOVABLE RUNNERS FOR VEHICLES
Emmett J. Gantz, 1007 S. 14th St., Burlington, Iowa
Filed Feb. 25, 1959, Ser. No. 795,408
5 Claims. (Cl. 280—14)



1. A removable runner for use as one of a set upon a vehicle that includes a plurality of axles and axle support members with which the several runners of the set are to be engaged, comprising: a body part having an opening for receiving an axle; a runner shoe on the body part; and means at one side of the body part engageable with an adjacent axle support member for holding the body part against rockable movement about said axle, including spaced, threaded support pins removably engaged in and projecting laterally outwardly from said side of the body part, a plate element extending between the pins and mounted thereon for slidable adjustment toward and away from said body part, said plate element, pins, and body part together defining an opening at said side of the body part for receiving said adjacent support member with the support member embraced by the pins in contact therewith, and nuts threaded on the pins and bearing against the plate element for limiting the same against movement laterally outwardly from the body part beyond a selected position of adjustment in which the plate element is spaced laterally outwardly from the body part to clampingly engage therebetween said adjacent support member.

2,950,925
UTILITY PUSH CART
Karl O. Larson, 288 Stonebridge Blvd., St. Paul, Minn.
Filed Aug. 26, 1957, Ser. No. 680,101
5 Claims. (Cl. 280—47.19)

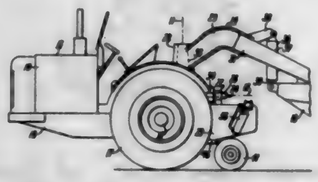


5. In a push cart, a circular frame member, leg members connected to and depending from the medial portion of said circular frame member, wheel supports and fender means having vertical non-coplanar side walls connected to said leg members, wheels connected to said wheel supports and fender means, and support means connected to and extending from said wheel supports and fender means.

2,950,926
RETRACTABLE AUXILIARY WHEELS
Harvey W. Rockwell and Dale W. Hawk, Cedar Rapids, Iowa, assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Mar. 20, 1957, Ser. No. 647,347
3 Claims. (Cl. 280—405)

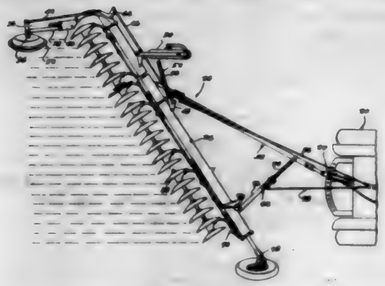
1. In a two axle self-propelled earth moving vehicle having a tractor unit articulated with a trailing unit about

a vertical and a longitudinal axis, an auxiliary ground engaging apparatus comprising: ground engaging means including a rotatable ground wheel, a double acting compressible fluid pressure operated jack having a pair of relatively extendable and retractible elements respectively connected in thrust transmitting relationship with said



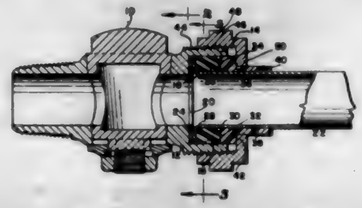
ground wheel and with one of said units of the vehicle at a point between the two axles of the vehicle, and means for selectively directing pressurized fluid to and from said ram thereby moving said ground wheel out of and into a ground engaging position, in said ground engaging position the compressible fluid serving as an auxiliary resilient means for suspending the vehicle with respect to the ground.

2,950,927
DISC HARROW
Charles C. Hendrickson, Turner, Mont.
Filed July 11, 1958, Ser. No. 747,915
3 Claims. (Cl. 280—462)



1. The combination with a towing vehicle having a drawbar projecting longitudinally from the rear end thereof, of a disc harrow including a single horizontally disposed frame member having a first caster wheel assembly on one end thereof and having a second caster wheel assembly forwardly of and secured to said frame member inwardly of the other end thereof, said harrow being positioned behind and spaced from said drawbar so that the frame member extends in a direction crosswise of said drawbar with one of its ends near said drawbar and the other of its ends outwardly of and remote from said drawbar, means connecting said frame member to said drawbar for movement from the aforesaid position to a position in which said frame member extends in a direction longitudinally of said drawbar with said one end contiguous to said drawbar and said other end longitudinally rearwardly of and remote from said drawbar, a furrow wheel rotatable about an axle transverse with respect to said vehicle positioned adjacent said other end of said frame member, means comprising a lever pivotally connected intermediate its ends to said frame member, linkage connecting said axle to said lever, a V-shaped over-center element pivotally connected at its apex to said frame member, means connecting said lever to one of the arms of said over-center element, a beam connecting said drawbar to said frame member, and means slidably connecting said beam to the other arm of said over-center element, said means connecting said furrow wheel to said frame member so that said furrow wheel axle is maintained in the transverse relation with respect to said vehicle upon execution of the movement of said frame-member from the crosswise direction position to the longitudinal direction position, and means operable from said vehicle and releasably engaging said harrow for holding said harrow in either of the crosswise or longitudinal direction positions.

2,950,928
INSULATED PIPE JOINT
Walter J. Bowan, Decatur, Ill., assignor to Mueller Co., Decatur, Ill., a corporation of Illinois
Filed Dec. 17, 1957, Ser. No. 703,437
4 Claims. (Cl. 285—52)

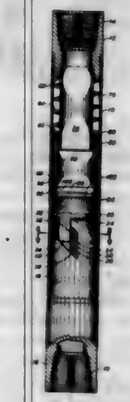


1. In a pipe joint, the combination comprising: a hollow body having a terminal portion provided with an annular packing recess terminating at its inner end in an annular shoulder surrounding a concentric opening formed in said body, a relatively thin washer of electrical insulating material disposed in said recess in engagement with said shoulder and forming an abutment for the inner end of a radially extending flange on the inner end of a pipe extending within said recess, a resilient gasket of electrical insulating material disposed in said recess, said gasket having an inner end wall engageable with the outer end of the pipe flange, an outer end wall, an exterior surface extending between said walls engageable with the interior surface of said recess, and an interior surface extending between said walls engageable with the exterior surface of the pipe extending outwardly of the flange, a rigid follower of electrical insulating material having an inner end wall disposed within said recess in engagement with the outer end wall of said gasket, said follower extending outwardly of said recess with a reduced outside diameter outwardly beyond the outer end of said recess to form an outwardly facing annular shoulder thereon, and a coupling nut exteriorly threaded on said body and having a portion encircling said follower extension and engaging said follower shoulder, said washer and said gasket in operative position defining a flange receiving annular groove of a diameter less than the diameter of said recess, said gasket and said follower in operative position defining an interior cylindrical pipe engaging surface extending from said annular groove outwardly beyond the encircling portion of said nut, said cylindrical surface having a radius equal to the radius of said body opening plus the thickness of said annular groove.

2,950,929
SAFETY JOINT
Kingsley M. Nicolson, Fullerton, Calif., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Filed Mar. 29, 1957, Ser. No. 649,505
4 Claims. (Cl. 285—86)

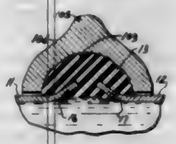
1. In a safety joint a barrel, a mandrel having a cylindrical surface on one end portion thereof telescopically positioned within one end of said barrel, a cylin-

drical extension on the said end of said mandrel of smaller external diameter than said cylindrical surface and joined to said surface by a shoulder, a helical channel in said cylindrical surface open at said shoulder and extending from said shoulder along said cylindrical surface and terminating on said cylindrical surface, a driving lug extending inwardly from the inner surface of said barrel and engaging said helical channel in sliding contact when said barrel and mandrel are telescoped together and operating automatically to rotate said barrel relative to said mandrel to place said driving lug at the terminus of said helical channel, a keyway formed in said cylindrical surface and disposed transversely of said helical channel, said keyway having an open end at said shoul-



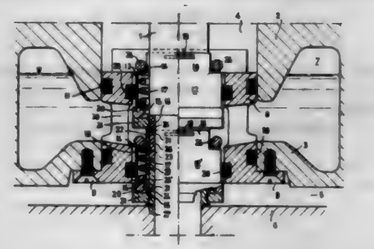
der to receive a key, a key proportioned to be received in said keyway and means to maintain the lower end of said key above the lower end of said driving lug, means biasing said key continuously in an axial direction toward said mandrel and into contact with said shoulder as said driving lug engages said helical channel, said key proportioned to engage said shoulder and slide circumferentially thereon as said driving lug and said helical channel co-operate to rotate said barrel relative to said mandrel, the said open end of said keyway being disposed on said shoulder to receive said key at the time said driving lug abuts the terminus of said helical channel to thereby secure said driving lug at said terminus, said biasing means operating automatically to project said key into said keyway when the safety joint is fully engaged.

2,950,930
PIPE COUPLING HAVING FLUID RESPONSIVE SEALING MEANS
Paul G. Dunmire, Burlingame, Calif., assignor to Smith-Blair, Inc., South San Francisco, Calif., a corporation of California
Filed July 5, 1957, Ser. No. 670,170
7 Claims. (Cl. 285—110)



1. A coupling for pipe, including in combination a pair of pipe sections having outwardly-flared ends with the slope of the flair being between 30° and 40° relative to the pipe wall; an annular gasket having a radially-inner, generally axially-extending portion with sloping radially-outer sides against which the inner surface of said flared ends abut and a generally concave radial inner side extending axially to meet the sloping outer sides at a knife-like edge to provide a gasket terminus which will be forced against the inner surface of the pipe by the current of fluid, and a thin generally radially-extending neck portion that connects said radially-inner portion to a radially-outer, axially-extending portion; and a pressure band means engaging said gasket and tightening around said pipe ends and having its inner surface provided with portions more sharply inclined to the horizontal than said flared ends and engaging said radially outer axially extending portion and turning it radially inwardly against said outwardly flared ends, said pressure band being separated by said gasket from said pipe sections to permit relative angular deflection between said sections.

2,950,931
SEALING DEVICE
Sixten Englesson, Djursholm, Sweden, assignor of one-half to AB Flygts Pumpar, Stockholm, Sweden, a corporation of Sweden
Filed Sept. 28, 1956, Ser. No. 612,853
Claims priority, application Sweden Sept. 29, 1955
7 Claims. (Cl. 286—8)

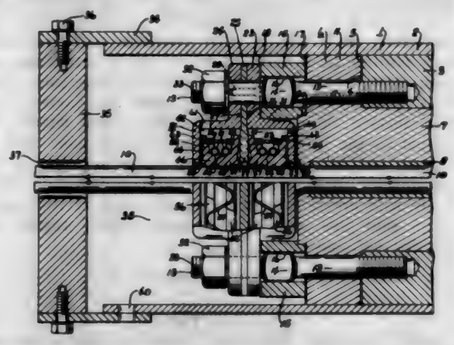


1. In a sealing device for sealing a rotating shaft and of the type comprising an outer housing adapted to be secured to a wall surrounding said shaft and including at least two spaced stationary sealing members cooperating each with its rotary sealing member adapted to rotate with the shaft, the combination of sleeve means interconnecting said rotary sealing members and adapted to be secured to said shaft in fluid tight connection therewith, stationary identical resilient units in tight sliding fit within said housing, each of said units comprising a cylindrical body supporting said stationary sealing member at one end thereof, axial compression spring means at the other end of said body and parts integral with said body extending beyond said spring means and having stop means for limiting the stroke of said spring means, and means insertable from the outside of said housing to form the abutment for said spring means and guidance for said extending parts of the cylindrical body for an axial non-rotary movement thereof.

2,950,932
STRUT BEARING SEAL
Walter J. Gilbert, Indiana, Pa., assignor to Syntron Company, Homer City, Pa., a corporation of Delaware
Filed Jan. 14, 1957, Ser. No. 634,112
6 Claims. (Cl. 286—8)

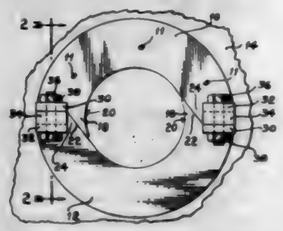
1. An outboard propeller shaft seal comprising an annular housing of two sections each of which provides a cylindrical portion having an outwardly extending annular flange on one end and having on its other end an inwardly extending annular wall with axially aligned opening to receive the propeller shaft, a plate having its

outer perimetral portion mating and mounted between said flanges and its inner portion forming a wall extending between said other walls and having an axially aligned opening and forming two inwardly open chambers, an



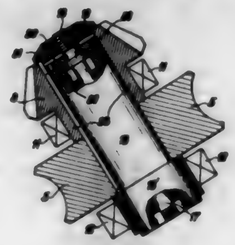
annular seal member in each chamber to engage, seal on and rotate with the propeller shaft that would extend through said axially aligned openings, flanges on said seal members having sealing contact with both sides of said plate to prevent the movement of fluid in either direction.

2,950,933
HUB
Robert A. Mayne, 42 Forrer Blvd., Dayton 9, Ohio, and Arthur F. Leis, Dayton, Ohio; said Leis assignor to said Mayne
Filed Apr. 15, 1957, Ser. No. 652,894
5 Claims. (Cl. 287—52.03)



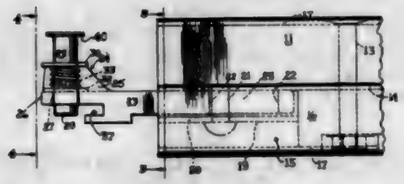
1. A hub adapted to be non-rotatably clamped to a shaft or the like, said hub comprising two sheet metal arcuate sectors forming clamping members, each of said arcuate sectors having a cylindrical surface in the inner edge of the sector extending through an arc slightly less than 180°, one end of each sector having the edge thereof tapering so as to form a wedge-like portion, one surface being substantially tangential to the arcuate surface extended, the other end of each sector complementing the end having the wedge-like portion, said sectors cooperating to encircle the shaft, a pair of apertured flanges one on the end of one sector and the other on the end of the complementary sector, said flanges extending in a direction substantially normal to the plane of the main body of the sectors, a fastening element engaging said flanges for forcing the flanges toward one another at an angle to said tangential surface, thereby drawing the clamping members together so as to wedge the wedge-like portions into clamping engagement with the shaft, one of the flanges having an offset flange directed toward the flange of the other sector and engaging the end thereof so as to prevent the ends of the flanges from collapsing toward each other when forced together by the fastening element, and means on the opposite ends of the sectors for holding the other ends of the sectors together.

2,950,934
KNOCKOUT AXLE ASSEMBLY
Heinrich Uebing, Lintorf, Bez. Duesseldorf, Germany, assignor to Friedrich Kocks G.m.b.H., Duesseldrof, Germany
Filed Aug. 1, 1957, Ser. No. 675,679
Claims priority, application Germany Aug. 6, 1956
2 Claims. (Cl. 287—53)



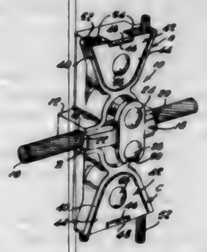
1. An axle assembly comprising in combination a knockout axle, a collar on one end of said axle, an inwardly threaded open recess at the other end of said axle, a central longitudinal bore extending through said axle into said recess, a member removably mounted on said axle adjacent said collar, a bevel gear having a hub portion rigidly mounted on said other end of said axle and adjacent said member, a hollow, externally threaded ring piece received in threaded engagement with said recess and having an inwardly directed shoulder, a bolt extending through said bore and said recess, and provided at its threaded end with a flange which bears against said shoulder, an end cap in threaded engagement with said bolt, and adapted to bear against said bevel gear, whereby by removing said bolt, said knockout axle and the member may be withdrawn while the gear remains in place.

2,950,935
ATTACHING HEAD FOR A SUPPORTING CROSS BAR
Frank Fahland, 6354 N. 33rd Ave., Omaha, Nebr.
Filed June 27, 1958, Ser. No. 745,196
1 Claim. (Cl. 287—58)



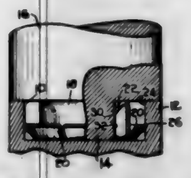
An attaching head for a load supporting cross bar of a freight hauling vehicle comprising a slide bar having an integral attaching head detachably connecting the cross bar to a supporting member, said head comprising a substantially flat bottom portion having a parallelly extending spaced apart short lower lip providing a horizontally extending recess into which is adapted to be projected a portion of the cross bar supporting member, said flat bottom portion providing on its opposite face spaced apart upstanding side members, a plate mounted upon and bridging the free ends of said side members, said plate and said bottom portion of said head having aligned openings formed therein, a cylindrical pin carried by said head in spaced parallel relation to said side members and freely slidably through said openings, a stop member on said pin and extending transversely to said side members between said plate and in facial abutment with respect to said flat bottom portion of said head, a spring embracing said pin between said plate and said stop member and acting thereon for yieldably maintaining said stop member in facial abutment with said flat bottom portion of said head and for projecting said pin in one direction through said openings so that a portion thereof extends beyond said flat bottom portion, said pin when moved in said one direction cooperating with said lower lip and and said recess when the supporting member is disposed therein to detachably connect said cross bar to the supporting member.

2,950,936
MULTIPLE CABLE CONNECTOR
Alfred B. Gunthel, Jr., Sea Cliff, N.Y., assignor to Dossert Manufacturing Corp., Brooklyn, N.Y., a corporation of New York
Filed Apr. 9, 1958, Ser. No. 727,430
7 Claims. (Cl. 287—75)



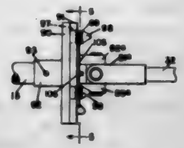
1. An electrical connector comprising a body member having a cavity defined in a face thereof and including a substantially U-shaped upstanding outer wall at the periphery of said cavity, a clamping member of substantially the same size and configuration as said cavity fitting inside said outer wall and substantially closing said cavity, said clamp including an inner wall substantially parallel to said body member outer wall and spaced therefrom to define a channel for a cable therebetween, said inner and outer walls forming a mandrel like clamp for bending a cable along the cable's longitudinal axis to conform to said channel, and securing means for positioning said clamping member in relation to said body member.

2,950,937
FASTENING DEVICE
William A. Bedford, Jr., North Scituate, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Filed Nov. 7, 1957, Ser. No. 694,937
1 Claim. (Cl. 287—126)



A one-piece fastening device for assembly into an opening in a supporting member to receive and engage a stud member inserted into the opening, comprising a hollow, cylindrical body having a circumferential, relatively rigid wall; an outwardly-extending support member-engaging first series of spring tongues integral with and extending outwardly and angularly from one end of said body in the direction of the other end of said body, said series of spring tongues disposed outside said wall circumferentially to form a segmented substantially truncated cone, and a second series of inwardly-extending, stud member-engaging spring tongues integral with and extending inwardly and angularly from the other end of said body in a direction opposite to that of said first series of spring tongues, said second series of inwardly extending series of tongues being circumferentially spaced therearound inside the wall of said body to form a segmented substantially truncated cone, the surfaces of said support-engaging series of spring tongues and the surfaces of said stud-engaging series of spring tongues lying in planes spaced from but parallel to one another.

2,950,938
COUPLING FOR POWER TAKE-OFF SHAFT
Bernard M. Silverberg, Rock Island, and Frank D. Jones, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Filed Aug. 8, 1956, Ser. No. 602,881
1 Claim. (Cl. 287—130)



A coupling for connecting a pair of shafts comprising: a first coupler element fixed to one of said shafts having a radial surface facing the direction of the other shaft; a second coupler element mounted on said other shaft having opposite disposed radial surfaces, one of which lies adjacent the radial surface of the first element; a plurality of pins extending from the radial surface of the first member, each having a peripheral groove and a tapered end beyond said groove; a plurality of axial openings in the second coupler element accommodating the pins for axial movement; a snap ring mounted on the second element and fixed against axial movement to said second element, said snap ring normally positioned to at least partially cover the openings, said snap ring being disposed whereby upon axial movement of the pins through the openings to first contact the tapered ends of the pins to effect distortion of the ring for uncovering said openings and to automatically seat itself in said grooves upon the latter moving into alinement with the ring; and means for effecting disengagement of said ring from said grooves.

2,950,939
FISH GRIPPER
Edna S. Van Volkenburgh, Wetzel Road, R.D. 1, Liverpool, N.Y.
Filed Feb. 11, 1957, Ser. No. 639,543
1 Claim. (Cl. 294—16)

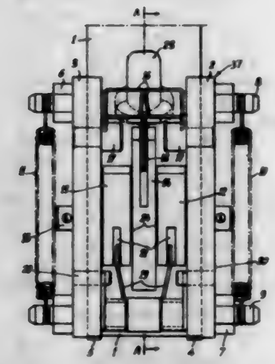
A fish gripper comprising a pair of manually actuatable gripper members, each of substantially like construction, each of said members comprising an elongated rectangular sheet metal handle portion, the lengthwise edges of which are rolled to form tubular sockets, and a wire loop defining a jaw portion having parallel spaced extensions extending into and secured within said tubular sockets, said loop portion having an expanded metal gripping pad portion of a configuration corresponding to the area defined by said loop and the adjacent end of the handle, said expanded metal being secured to said loop and said handle end, and said loop and said expanded metal being coated with granules of sand and a lacquer binder, and said granules of sand and binder

having a lacquer coating, and means to pivot said gripper members together at their ends opposite from



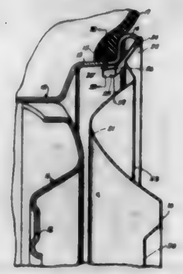
said jaw portion ends, and resilient means disposed around said pivot to normally urge said jaws apart.

2,950,940
AUTOMATIC GRAPPLE
Lucien Perás, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, French works under control and authority of the French Government
Filed July 15, 1957, Ser. No. 671,936
Claims priority, application France Aug. 22, 1956
7 Claims. (Cl. 294—110)



1. An automatic grapple for automatically gripping an article having a ledge to which a lifting force can be applied from underneath in order to lift the article and transport it from one place to another and finally release the article by withdrawal of the grapple; said grapple comprising a central member, a holder body slidably mounted on the central member and guided thereby, first stop means provided between the central member and the holder body for locating the holder body and central member together in a fixed position, spring means urging said holder body and the central member into a position for engagement of the stop means, said central member having a side edge, said holder body having laterally spaced apart walls extending laterally beyond the side edge of the central member and forming therewith a groove, a pin transversely fixed between the walls intermediate the upper and lower ends thereof and disposed transversely of the groove, a locking member pivoted on the pin, a pair of catches disposed on either side of said locking member and pivoted on the pin, said side edge of the central member being formed with an upper notch and a pair of lower notches which are spaced vertically below the upper notch, said catches having upper and lower ends, spring means acting on the catches so as to normally urge them jointly to a position in which the upper ends of the catches project laterally beyond the outer edges of the walls and underlie the ledge so as to secure the holder body to the article, said catches in such position having their lower ends seated in the pair of lower notches so as to lock the central member to the article in such position whereby an upward thrust on the central member results in the lifting of the article, said central member being movable downwardly into a lowered position so as to force the catches out of the lower pair of notches and dispose the catches in a retracted position lying within the groove inwardly of the side edges of the walls, second stop means carried by the holder body engageable with the outer surface of the wall portion of the article so as to locate the holder body against downward movement upon such downward thrust of the central member relative to the located holder body, said locking member having an upper end which when the central member is in such lowered position is in alignment with the upper notch so as to be fixed in the upper notch to lock the holder body and central member together for common upward movement in the withdrawal movement of the grapple, spring means acting on the locking member so as to normally urge the upper end into the position in which the upper end is seated in the notch with the locking member having a lower end that in such position protrudes beyond the outer edges of the walls and is adapted to be engaged by the ledge upon the withdrawal movement of the grapple so as to unlock the holder and the central member and permit downward sliding movement of the holder body relative to the central member so as to dispose the holder body and central member in a locked position with the stop means being active to locate them together and dispose the catches in an outwardly projecting position with their upper ends projecting outwardly laterally beyond the side edges of the walls.

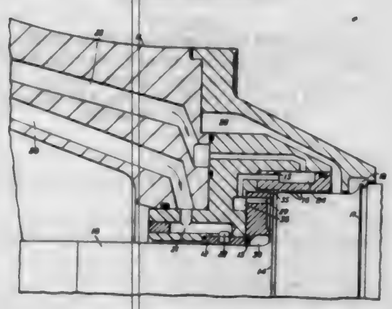
2,950,941
WHEEL COVER
George Albert Lyon, 13881 W. Chicago Blvd., Detroit 28, Mich.
Filed Dec. 12, 1956, Ser. No. 627,862
1 Claim. (Cl. 301—37)



In a wheel structure, a wheel including a metal multi-flanged stepped tire rim provided with an axially extending terminal rim flange and an intermediate rim flange and with the intermediate rim flange having circumferentially spaced arcuate grooved rim portions providing

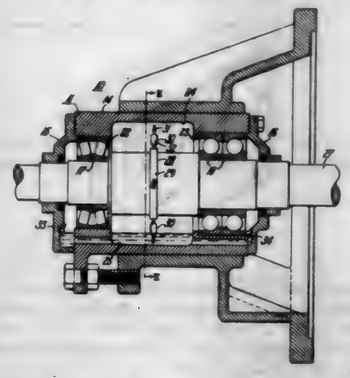
circumferentially spaced axially inwardly facing metal rim shoulders with each of the shoulders having a pair of circumferentially spaced and circumferentially facing confronting groove and shoulders, a wheel cover member for overlying assembly upon the wheel including an outer marginal cover portion which is underturned providing an annular portion at the underside of the cover which is bottomed against the axially extending terminal rim flange, resiliently deflectable retaining extensions connected to said underturned portion each including a first generally radially and axially inwardly extending extension portion projecting from the annular portion at the underside of the cover inwardly to a diameter slightly greater than the inside diameter of the intermediate flange, the radially and axially inwardly extending extension portion being connected at its radially and axially inner end to a generally axially inwardly extending resiliently deflectable intermediate extension flange generally telescopically related in spaced relation to the intermediate flange, said intermediate extension flange terminating in a short stiff return bent generally axially and radially outwardly oblique extension terminal which terminal has an arcuate edge, said arcuate edge being engaged with the circumferentially spaced arcuate grooved rim portions behind said axially inwardly facing metal rim shoulders and each of said arcuate edges being disposed between one of the pairs of circumferentially spaced end shoulders to hold the wheel cover member on the wheel against turning, the bottomed engagement of the outer marginal cover portion against the axially extending terminal rim flange and the engagement of the arcuate edges on the extension behind the axially inwardly facing metal rim shoulders preventing axial displacement of the cover member.

2,950,942
THRUST BEARINGS, FACE SEALS OR THE LIKE
Raymond Neill Harrop, London, and John Maddox Gardner, Sunbury-on-Thames, England, assignors to D. Napier & Son Limited, London, England, a company of Great Britain
Filed Sept. 2, 1958, Ser. No. 758,310
Claims priority, application Great Britain Sept. 3, 1957
3 Claims. (Cl. 308—160)



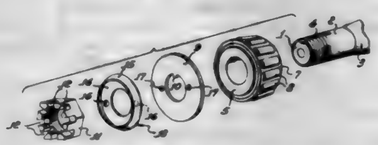
1. A thrust bearing comprising a member having an annular face formed with a series of circumferentially spaced pads separated by shallow recesses extending in a radial direction and a complete circumferentially extending groove around the outer peripheral edges of each of the pads, this groove communicating with each of the adjacent recesses, and being of varying depth in the circumferential direction, and including means for delivering oil to the recesses at points spaced from their radially inner ends, and means for removing oil from the recesses at points adjacent these inner ends.

2,950,943
LUBRICATION DEVICE FOR ANTIFRICTION BEARINGS
Frank R. Forrest, Brookfield, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed June 21, 1957, Ser. No. 667,181
5 Claims. (Cl. 308—187)



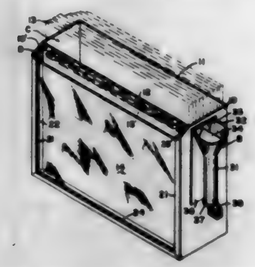
1. A bearing lubrication device comprising a bearing housing, said housing having axially spaced bearings mounted therein and a lubricant reservoir intermediate said bearings, means for supplying lubricant to said reservoir, a shaft journaled in said bearings, and a slinger mounted on said shaft, said slinger having a plurality of arcuately spaced radially extending arms which dip into said reservoir upon rotation of said shaft, some of said arms being formed to circulate air in one direction, the other of said arms being formed to circulate air in the opposite direction, whereby upon rotation of said shaft said arms lift lubricant out of said reservoir to form a lubricant mist in said housing and blow the lubricant mist in opposite directions to lubricate said bearings.

2,950,944
WHEEL BEARING RETAINING MEANS
James J. Cooney, 1041¾ N. Gardner, Hollywood 46, Calif.
Filed Mar. 25, 1957, Ser. No. 648,198
5 Claims. (Cl. 308—236)



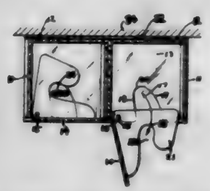
1. A bearing retaining assembly for locking a bearing on an axle having a threaded end and a keyway comprising: a washer having a key engageable in said keyway; an annular locking element disposed adjacent said washer; said locking element and said washer having cooperatively interengaged means for preventing rotation of said locking element relative to the washer; a nut threadedly engageable with said shaft to press said washer and locking element together against the bearing; said locking element having a marginal portion projecting into overlying relation to said nut and deformable into engagement with the nut for preventing rotation of the nut; and said washer having a surface disposed to prevent the juncture portion of said projecting marginal portion and said locking element from being axially distorted past the plane of said washer incident to said projecting marginal portion being struck a blow directed axially thereof toward said washer.

2,950,945
RECEPTACLE
Helge Holm, Denver, Colo., assignor to The Denver Post, Inc., Denver, Colo., a corporation of Colorado
Filed Sept. 16, 1957, Ser. No. 684,161
1 Claim. (Cl. 312—118)



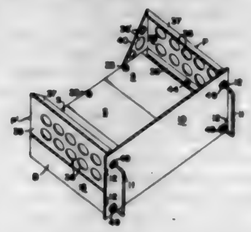
A display and sales receptacle for newspapers and the like, comprising a rectangular structure having a rear wall and ends; a partition extending between said ends, said partition extending forwardly at each side and being attached to said ends with each front edge of a partition side extending inwardly to form a side flange and each front edge of said ends extending inwardly to form a flange spaced from the first mentioned side flange, the lower edge of said partition extending forwardly to form a bottom for a front compartment and the front edge of said bottom extending upwardly to form a flange in alignment with the inwardly extending flanges of the ends of said structure; a transparent pane of material received between said side flanges; a series of bars extending above the bottom of said structure from front to rear between said partition and said rear wall and attached to each; the upper edges of said ends, rearwardly of said partition, and the upper edge of said rear wall each extending downwardly and around to form a double flange; the lower edge of said rear wall and the lower edge of said ends, rearwardly of said partition, each extending inwardly and around to form a doubled flange; and the upper edge of said ends, forwardly of said partition, and the upper edge of the sides of said partition each slanting downwardly.

2,950,946
TOOTHBRUSH HOLDER
Irving J. Starworth, 238—23 117th Road, Elmont, N.Y.
Filed June 12, 1958, Ser. No. 741,541
1 Claim. (Cl. 312—207)



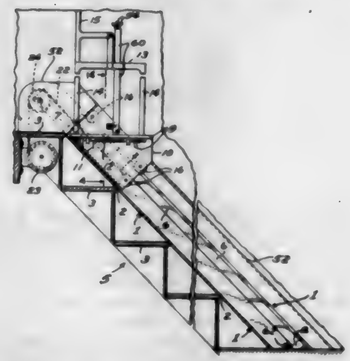
A toothbrush cabinet comprising a box of transparent plastic having back, top and side walls, a bottom wall partially cut away to provide an opening therein extending rearwardly from the front of the cabinet and terminating in an arcuate rear end, and a door vertically hinged at the front of the cabinet and adapted to close said front, the door carrying a rearwardly extending arcuate flange adjacent to its bottom edge, the flange being partially cut away to provide an arcuate slot therein in which a toothbrush handle can be inserted, the rear end of said slot being adapted to be in alignment with the side rear of said opening in said bottom wall when the door is closed, said opening and said slot in closed position providing a passage just large enough to pass a toothbrush handle but too small to pass the brush portion of the toothbrush, the alignment of the rear ends of said opening and slot providing for the retention of the door in locked position by a toothbrush inserted therein.

2,950,947
CHASSIS
Anthony R. Ronzio, 663 Lipan St., Denver, Colo.
Filed Aug. 17, 1956, Ser. No. 604,829
4 Claims. (Cl. 312—320)



3. A chassis for electronic and electrical components and parts, comprising a front plate; a base extending rearwardly from the lower portion of said front plate, said base being generally rectangular and having front, side and rear walls, said base having an appreciable depth and an aperture extending downwardly therethrough and inwardly extending flanges around the upper and lower edges of said walls, said upper front base flange being provided with a series of spaced slits which separate alternate upwardly inclined ears; a panel at each side and above said base; means for attaching said side panels to said base and said front plate; means for attaching said base to said front plate; and a plurality of strips on which said components and parts may be mounted, said strips being removably attached to said base and extending across said aperture into engagement with said ears, between said upwardly inclined ears and the remaining ears.

2,950,948
INCLINED STAIRCASE ELEVATOR
Blanche Hardigan and Daniel Stern, both of 2350 Tiemann Ave., Bronx, N.Y.
Filed Nov. 23, 1959, Ser. No. 854,809
9 Claims. (Cl. 187—12)



1. An inclined staircase elevator comprising, a main support adapted to be mounted in an inclined position, a rail adapted to be mounted within said support, a plurality of roller supports, a roller rotatably mounted within said roller support, a mounting plate for securing said roller supports about said rail so that some of the rollers are in rolling contact with the upper surface of said rail and some of the rollers are in rolling contact with the lower surface of said rail, a plurality of side supports in contact with an inside surface of said main support and secured to said lower roller supports, a platform pivotally secured to said mounting plate, a power means, a cable secured between said power means and said lower roller supports and a starting and stopping circuit connected between said platform and said power means.

CHEMICAL

2,950,949
PROCESS FOR DYEING AND PRINTING SHAPED STRUCTURES OF HYDROPHOBIC ORGANIC HIGH POLYMERS CONTAINING ESTER GROUPS
Paul Schlack, Leitenhofen, near Augsburg, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Apr. 23, 1957, Ser. No. 654,467
Claims priority, application Germany Apr. 28, 1956
8 Claims. (Cl. 8—55)

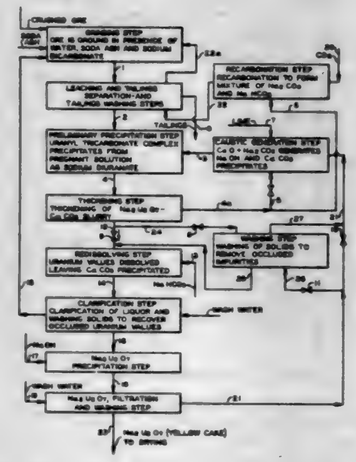
1. A process for dyeing and printing shaped structures of hydrophobic linear organic high polymers containing ester groups with dispersion dyestuffs which comprises dyeing said structures in the presence of an aromatic compound containing from one to two aromatic rings and substituted by from one to two lactone rings having from 5 to 6 ring members.

2,950,950
OIL BASE FAT-LIQUOR COMPOSITION WITH POLYBASIC ACID ESTER AND METHOD OF USE
Jürgen Plapper, Rudi Heyden, and Günther Arnold, Duesseldorf, Germany, assignors to Bohme Fettchemie G.m.b.H., Duesseldorf, Germany, a corporation of Germany
No Drawing. Filed June 24, 1954, Ser. No. 439,144
Claims priority, application Germany June 27, 1953
10 Claims. (Cl. 8—94.23)

7. A fat-liquoring composition for chrome-tanned hides and skins, comprising an oil base and about 2 to 20% of a masking agent selected from the group consisting of acidic higher aliphatic alcohol mono-esters of polybasic acids, selected from the group consisting of tri- and tetra-basic acids wherein the alcohol radical contains from 12 to 18 carbon atoms, and salts thereof, said masking agent containing at least two free acid groups and being soluble in said oil base.

2,950,951
CARBONATE LEACH URANIUM MILLING PROCESS
Fred T. Sherk, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 28, 1958, Ser. No. 751,256
6 Claims. (Cl. 23—14.5)

3. In a process for recovering uranium from an ore which comprises oxidizing an aqueous slurry of comminuted ore in the presence of sodium carbonate and sodium bicarbonate to form a pregnant solution containing dissolved uranium, precipitating uranium as sodium diuranate from the pregnant solution by addition of sodium hydroxide, and recovering the precipitated uranium, the improvement which comprises forming a more concentrated pregnant solution before said precipitation by said addition of said sodium hydroxide by a method which comprises the steps of reacting an aqueous solution containing sodium carbonate with lime to form a calcium carbonate slurry containing sodium hydroxide, admixing said slurry and said pregnant solution, thereby precipitating sodium diuranate therefrom, removing aqueous liquor from said slurry and thereafter recarbonating



said slurry to redissolve said uranium and form said more concentrated pregnant solution.

2,950,952
CRYSTALLINE ZEOLITE T
Donald W. Breck, Tonawanda, and Nancy A. Acara, Kenmore, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed May 8, 1958, Ser. No. 733,819
11 Claims. (Cl. 23—113)

1. A synthetic crystalline zeolite having a composition, expressed in terms of mole ratios of oxides, as follows:

$$1.1\pm0.4[xNa_2O:(1-x)K_2O]:Al_2O_3:6.9\pm0.5SiO_2:yH_2O$$

wherein "*x*" is any value from about 0.1 to about 0.8, and "*y*" is any value from about 0 to about 8, said synthetic crystalline zeolite having an X-ray powder diffraction pattern essentially the same as that shown in Table A

Table A

Interplanar Spacing *d*(A.)	Relative Intensity	Interplanar Spacing *d*(A.)	Relative Intensity
11.3±0.2	VS	3.58±0.05	M
7.4±0.15	W	3.30±0.05	W
6.6±0.10	M	3.15±0.05	M
4.33±0.05	M	2.85±0.05	M
3.83±0.05	W	2.67±0.05	W
3.72±0.05	S	2.48±0.05	W

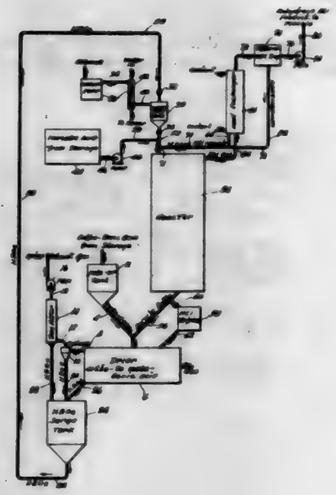
2. A synthetic crystalline zeolite according to claim 1, wherein "*y*" is about zero.

2,950,953

PROCESS FOR PRODUCING ANHYDROUS HYDROGEN CHLORIDE

Vernon Louis Langlois and Henry Paul Broussard, Weeks, La., assignors to Morton Chemical Company, Woodstock, Ill., a corporation of Delaware

Filed May 5, 1958, Ser. No. 733,140
17 Claims. (Cl. 23—154)



1. A process for the production of anhydrous hydrogen chloride which comprises reacting an aqueous solution of hydrochloric acid with at least the stoichiometric amount of a boron oxide dehydration agent selected from the group consisting of boric anhydride, metaboric acid and pyroboric acid, required to react with the water present in said aqueous solution to form a hydration product of said boron oxide dehydration agent, recovering the gaseous hydrogen chloride evolved from said reaction mixture, recovering the hydrated boron oxide formed in said reaction, and dehydrating the same by heating to form a boron oxide dehydration agent selected from the aforesaid group, and recycling said dehydration agent in the process.

2,950,954

METHOD OF PREPARING ACID SALTS OF HYDROXYLAMINE

Irving L. Mador and Louis J. Rekers, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Filed Sept. 23, 1957, Ser. No. 685,431
13 Claims. (Cl. 23—190)

1. A method for preparing an acid salt of hydroxylamine which comprises catalytically hydrogenating a N-nitroso dialkylamine with elemental hydrogen in an acid medium from the group consisting of hydrochloric acid, sulfuric acid, nitric acid, acetic acid and oxalic acid and in the presence of an elemental noble metal from group VIII, said N-nitroso dialkylamine have the formula RR'NNO wherein R and R' are alkyl groups of one to six carbon atoms to produce the hydroxylamine salt of said acid.

2,950,955

PROCESS FOR THE PREPARATION OF FINELY DIVIDED FERROMAGNETIC FERRIC OXIDE

Ernst Wagner, Rheinfelden, Baden, Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Dec. 10, 1957, Ser. No. 701,708
Claims priority, application Germany Dec. 31, 1956
6 Claims. (Cl. 23—200)

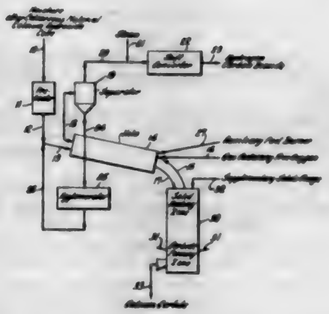
1. Process for the preparation of finely divided ferromagnetic ferric oxide by decomposition of iron compounds in the gaseous phase, characterized by the steps of first homogeneously mixing a volatile ferric halide with water-forming gases, the gaseous mixture containing oxygen and hydrogen in at least sufficient amount for the formation of water for the complete hydrolysis of said ferric halide and hydrogen in excess of that amount, burning said mixture in a self-sufficient flame thereby completely hydrolyzing the halide to ferromagnetic oxide and thereafter separating the oxide from the products of combustion.

2,950,956

PROCESS FOR PRODUCTION OF CALCIUM CARBIDE AND HYDROGEN

John K. McKinley, Poughkeepsie, N.Y., Benjamin F. Smith, Groves, Tex., and Samuel P. Dickens, Poughkeepsie, N.Y., assignors to Texaco Inc., a corporation of Delaware

Filed Mar. 27, 1957, Ser. No. 648,905
5 Claims. (Cl. 23—208)



1. A process for making calcium carbide and hydrogen which comprises: heating calcareous material including calcium hydroxide in one heating zone to a temperature between about 1075° F. and about 1500° F. in the presence of a stream of carbon monoxide-containing gas flowing through said one heating zone at a velocity at least sufficiently high for entraining solid particles which are substantially below approximately 60–70 mesh size, said stream comprising carbon monoxide-containing vent gas from another heating zone of the process, thereby dehydrating at least a portion of said calcium hydroxide to calcium oxide and additionally removing fine solid particles from said one heating zone while catalytically converting at an elevated temperature some of the generated steam in the presence of said carbon monoxide into hydrogen with concomitant formation of carbon dioxide; withdrawing resulting gases, vapors, and entrained solid particles as one product stream for said catalytic conversion and remaining solids as another product stream from said one heating zone; passing said remaining solids into another heating zone together with additional solid carbon and therein contacting said remaining solids and solid carbon in direct heat exchange with a flow of a by-product carbon monoxide from a calcium carbide formation stage of the process, thereby further heating said remaining solids and solid carbon and converting residual calcium hydroxide into calcium oxide; venting the resulting carbon monoxide flow of reduced heat content from said another heating zone and passing it as said vent gas into said one heating zone; passing the further heated solids consisting essentially of calcium oxide and carbon into said calcium carbide formation stage maintained at a temperature in excess of about 2500° F. and whereby calcium carbide and by-product carbon monoxide are formed; passing by-product carbon monoxide into said another heating zone; and withdrawing calcium carbide from said furnace zone.

2,950,957

PREPARATION OF CHLORINE

Wallace Ward, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Oct. 15, 1958, Ser. No. 767,254
2 Claims. (Cl. 23—219)

1. A process for the preparation of chlorine which comprises contacting a mixture of vaporized alkali metal chloride and oxygen with silica at a temperature of 1000 to 1500° C. in the presence of silicon tetrafluoride and recovering chlorine from the resulting gaseous mixture.

2,950,958

DETERMINATION OF MINUTE TRACES OF WATER BY USE OF METHYLENE BLUE

Florence Nesh, 164 Hart St., Brooklyn 6, N.Y.

No Drawing. Filed Sept. 24, 1956, Ser. No. 611,796
4 Claims. (Cl. 23—230)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for determining the presence of trace amounts of water in a liquid material to be examined and that contains no water molecules and no potential water molecules as a basic part of its structure, which comprises adding to said material anhydrous carbon tetrachloride in a quantity sufficient to free any water that is incorporated in said liquid material, agitating this mixture to free any water incorporated therein, and then adding to the mixture a small quantity of dry, water soluble, methylene blue, whereby any water released from said liquid material will dissolve said methylene blue and change its color to a deep blue.

2,950,959

CHEMICAL DISPENSER

William H. Ve Relle, 336 Monroe Ave., Sarasota, Fla.

Filed Mar. 24, 1958, Ser. No. 723,517
1 Claim. (Cl. 23—267)



A chemical dispenser comprising an upright hollow plastic body adapted to contain circular tablets in edgewise relation and having an opening at the lower end thereof, an arcuate tablet supporting member underlying the opening in the lower end of said body and spaced therebeneath, said member having a shallow concave upper surface and being of a width substantially greater than said body and of a depth to contain only the lower edge portion of a tablet, integral means flexibly securing an edge portion of said member to said body to permit said member to be swung thereon out of alignment with said opening when filling said body with tablets, guide means in said body adapted to direct tablets singly into edgewise position in said support member, said member being adapted to retain a quantity of water in its shallow concave upper surface in contact with the lower edge of the tablet supported on said member, and supporting means for said body adapted to position said body above the surface of the fluid to be purified with said tablet supporting member immersed in said fluid.

2,950,960

HYROCARBON FUELS

Maurice R. Barusch, Richmond, and Primo L. Pinotti, Larkspur, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Filed Feb. 21, 1957, Ser. No. 641,522
10 Claims. (Cl. 44—63)

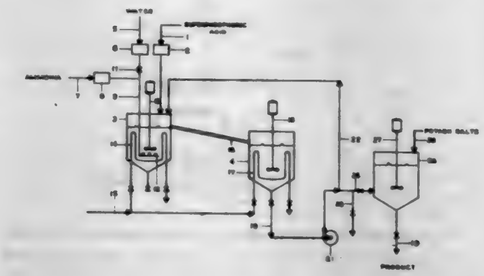
1. A hydrocarbon fuel composition comprising a major proportion of normally liquid hydrocarbons, a minor proportion of at least one alkaline earth metal glycoxide selected from the group consisting of barium and calcium glycoxides, and a minor proportion of at least one oil-soluble alkaline earth metal sulfonate derived from a sulfonic acid of a molecular weight range from about 150 to about 800 and selected from the group consisting of barium and calcium sulfonates, said minor proportions of alkaline earth metal glycoxides and sulfonates providing in the fuel composition a total metal content from about 0.25 to about 10.0 mM./kg., of which metal content from about 0.05 to about 8.0 mM./kg. is the metal of the glycoxide, the mol ratio of the metal present in glycoxide to the metal present in sulfonate being above about 1.75.

2,950,961

PRODUCTION OF LIQUID FERTILIZERS

Marcus M. Striplin, Jr., Florence, John M. Stinson, Sheffield, and John M. Potts, Florence, Ala., assignors to Tennessee Valley Authority, a corporation of the United States

Filed Nov. 23, 1956, Ser. No. 624,177
11 Claims. (Cl. 71—42)
(Granted under Title 35, U.S. Code (1952), sec. 266)

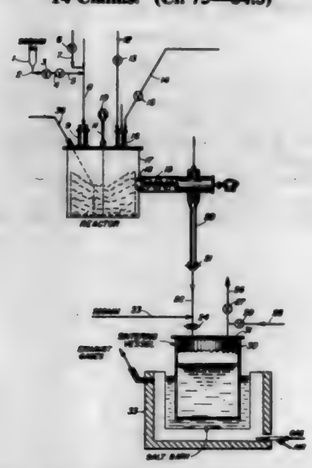


1. A process for preparing a liquid mixed fertilizer having a total plant-food content above 33 weight percent which comprises introducing water, ammonia, and superphosphoric acid into a reaction zone; therein rapidly and intimately mixing them; controlling the proportions of water, ammonia, and superphosphoric acid introduced so that the pH and specific gravity of the resulting solution are in the ranges from 5.0 to 6.65 and from 1.26 to 1.45 at 80° F., respectively; maintaining the temperature of the solution in the range from 55° to about 125° F. during mixing; and withdrawing a stable fertilizer solution containing from 33 to 60 weight percent total ($N+P_2O_5$) from the mixing zone.

2,950,962
REDUCTION OF FLUORIDE TO METAL
Oscar Norman Carlson, Frederick A. Schmidt, and Frank H. Spedding, Ames, Iowa, assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 28, 1957, Ser. No. 649,265
6 Claims. (Cl. 75—84.4)

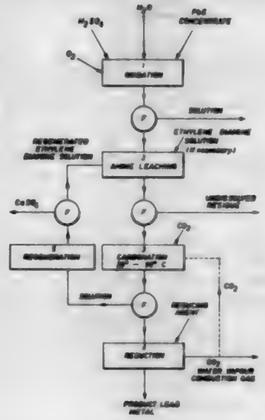
1. A process of producing yttrium metal by reacting yttrium fluoride with calcium to form an yttrium alloy and a calcium fluoride-containing slag, comprising mixing yttrium fluoride with calcium and magnesium metals, the amount of the calcium being between 10 and 20 percent in excess of that stoichiometrically required and the amount of the magnesium being adjusted so that the yttrium alloy produced contains from about 12 to 25 percent of magnesium; adding anhydrous calcium chloride in an amount to obtain a slag containing from 30 to 60 percent by weight of calcium chloride; heating the reaction mixture thus obtained to from 900 to 1100° C. in an inert atmosphere whereby an yttrium-calcium-magnesium alloy forms and separates from a calcium chloride-calcium fluoride slag; separating the alloy from the slag; and heating the alloy in vacuum at about 1100° C. whereby magnesium and calcium are volatilized and metallic yttrium is obtained.

2,950,963
PRODUCTION OF METALS
Stuart Schott and Virgil L. Hansley, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed May 2, 1957, Ser. No. 656,597
14 Claims. (Cl. 75—84.5)



1. A process for the production of a multi-valent metal from a halide of higher valence and reducible to at least one halide of lower valence of said metal which comprises the following separate steps: (A) reducing at least one halide of a multi-valent metal with an amount of alkali metal at least sufficient to reduce said higher halide to a halide of lower valence but insufficient for stoichiometric reduction to the metal, thereby controlling the reaction temperature within a range from the melting point of the alkali metal up to the melting point of the reaction mixture, said reaction mixture comprising halides of lower valence of the multi-valent metal and the corresponding alkali metal halide, to prevent the occurrence of hot spots and the formation of fused multi-valent metal, and forming an easily stirred, solid, finely divided mixture of halides of lower valence of the multi-valent metal and the corresponding alkali metal halide, which is stirred during said reduction reaction; (B) recovering said solid, finely divided mixture and subjecting it to reaction with the required amount of additional alkali metal for stoichiometric reduction of said halides of lower valence in said mixture to form the corresponding multi-valent metal and utilizing the resulting heat of reaction in heating the mixture to a sintering temperature above the melting point of the alkali metal halide produced, so as to lower the time required to attain a sintering temperature; (C) maintaining said sintering temperature for a sufficient period of time to complete sintering of said multi-valent metal; and (D) isolating the multi-valent metal from the resulting reaction mixture.

2,950,964
PROCESS FOR THE PRODUCTION OF LEAD
Frank A. Forward, Vancouver, British Columbia, Herbert Veltman, Richmond, British Columbia, and Andrew Imre Vizsolyi, Vancouver, British Columbia, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a company of Ontario
Filed May 13, 1959, Ser. No. 812,959
9 Claims. (Cl. 75—103)



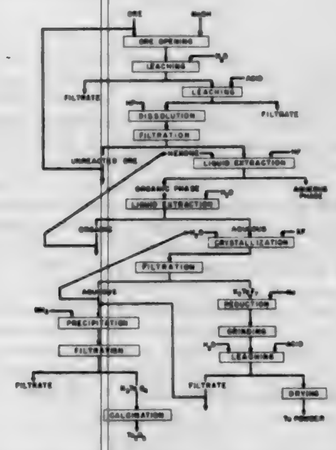
1. In a process for the production of lead from lead bearing material, the improvement which comprises leaching a lead compound selected from the group consisting of lead sulphate, lead chloride, lead nitrate, lead acetate and lead oxide with a basic aqueous solution which contains a member selected from the group consisting of alkylene and alkanol amines and acid salts and derivatives thereof which is soluble in water and which is present in amount sufficient to combine with the lead content of said lead compound.

2,950,965
RECOVERY OF PLATINUM FROM DEACTIVATED CATALYTIC COMPOSITES
James Hoekstra, Evergreen Park, and Edward Michalko, Chicago, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Chicago, Ill., a corporation of Delaware
No Drawing. Filed Feb. 11, 1957, Ser. No. 639,217
2 Claims. (Cl. 75—121)

1. A process for recovering platinum from a deactivated alumina-platinum-fluoride catalytic composite which comprises reacting said composite with sulfuric acid of sufficient strength to dissolve a substantial quantity of the alumina, digesting the remaining fluoride-containing platinum residue with an aqueous solution of from about 15% to about 80% by weight of sulfuric acid,

maintaining the resulting mixture at a temperature of from about 50° C. to about 175° C. for a period of from about 1 to about 24 hours, separating the resulting fluoride-containing solution therefrom, and treating the remaining residue with aqua regia to recover platinum therefrom.

2,950,966
RECOVERY OF TANTALUM VALUES
Raymond A. Foos, Cincinnati, Ohio, assignor to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
Filed June 20, 1958, Ser. No. 743,284
14 Claims. (Cl. 75—121)



1. A process for recovering tantalum values from tantalum-containing material which comprises (*a*) reacting said tantalum-containing material with a substance selected from the group consisting of sodium hydroxide, potassium hydroxide, sodium carbonate, sulfuric acid, and hydrofluoric acid, (*b*) leaching the resulting reaction mixture with water to remove water-soluble materials, (*c*) leaching the water-leached reaction mixture with an acid selected from the group consisting of nitric, hydrochloric and sulfuric to remove acid-soluble impurities, (*d*) reacting said leached reaction mixture with hydrofluoric acid to obtain a mixture comprising fluocomplexes of tantalum and columbium in accordance with the following reactions:

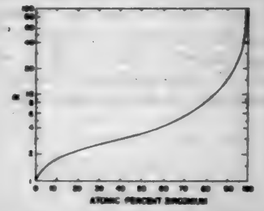
$$H_3TaO_4+7HF\rightarrow H_3TaF_7+4H_3O$$

and

$$H_3CbO_4+5HF\rightarrow H_2CbOF_5+3H_2O,$$

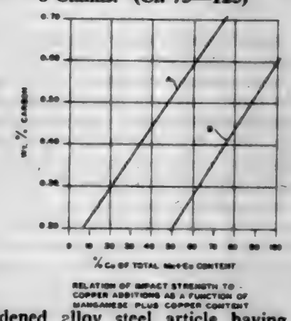
(*e*) contacting said mixture of fluocomplexes with a water-immiscible, organic solvent to obtain an organic solvent phase rich in said tantalum fluocomplex and a water solvent rich in said columbium fluocomplex, (*f*) contacting said organic solvent phase with water to obtain a water extract phase containing said tantalum fluocomplex and an organic raffinate phase, (*g*) reacting said tantalum fluocomplex in said water extract phase with a potassium-containing compound to obtain a potassium fluotantalate salt, (*h*) reducing said potassium fluotantalate with an alkali metal reducing agent to obtain a reaction product mixture containing tantalum metal, and (*i*) recovering said tantalum metal from the reaction mixture.

2,950,967
PLUTONIUM-ZIRCONIUM ALLOYS
Fred W. Schonfeld and James T. Waber, Los Alamos, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed Aug. 29, 1957, Ser. No. 681,128
1 Claim. (Cl. 75—122.7)



A neutronic reactor fuel alloy consisting essentially of from about 5 to about 50 atomic percent zirconium and the balance plutonium, said alloy having a face-centered cubic structure of the Al crystal type.

2,950,968
DEEP-HARDENED ALLOY STEEL HAVING IMPROVED IMPACT STRENGTH
Neil J. Culp, West Lawn, Pa., assignor to The Carpenter Steel Company, Reading, Pa., a corporation of New Jersey
Filed May 31, 1957, Ser. No. 662,805
8 Claims. (Cl. 75—125)

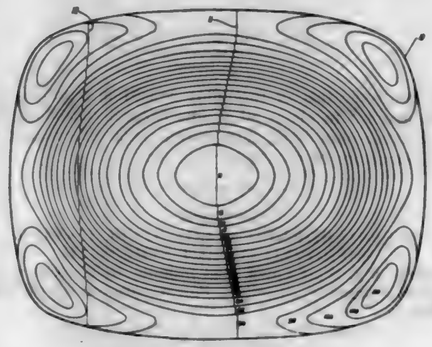


1. A hardened alloy steel article having good impact strength, comprising about 0.2 to about 0.8% carbon, about 0.5 to about 2.5% manganese, about 0.5 to about 1.5% chromium, about 0.25 to about 1.5% molybdenum, about 0.65 to about 4% copper, the remainder being substantially iron, the percent copper of the combined manganese and copper content ranging from about 20% to 80% as the carbon content ranges from about 0.2 to about 0.45% and from about 40% upwards as the carbon content ranges from about 0.45 to about 0.8%, tempered at a temperature below that at which copper precipitates when the carbon content is greater than about 0.45%, and substantially all said copper being retained in solid solution.

2,950,969
METHOD OF PRODUCING CONTROLLED DISPLACEMENT OF SCREEN ELEMENTS IN CATHODE RAY TUBES
Frank J. Bingley, Meadowbrook, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Feb. 27, 1957, Ser. No. 642,848
3 Claims. (Cl. 96—41)

1. In the manufacture of color image-reproducing cathode ray tubes having colored light-emissive elements and

index elements on the screen thereof, wherein an index signal is produced by flow of energy from successively scanned points of the screen area to a common output point, and wherein for proper color rendition it is desired that said light-emissive elements and said index elements shall have different predetermined relative positions in predetermined successive zones of the screen area, a method of establishing desired different positioning of elements in said zones which comprises producing a pair of precisely-formed zone masks, one having transparent zones corresponding precisely to alternate ones of said zones and being otherwise opaque, and the other being an exact negative of the first mask, said masks being adapted to be used alternately, producing other masks which when



placed individually and in succession adjacent to the alternately-used zone masks serve in cooperation with the latter to define in succession transparent zones corresponding respectively to the successive zones of the screen area, arranging a photosensitive surface for exposure from a light source, interposing said zone masks alternately and said other masks in succession between said surface and said light source to define for exposure successive zones of said surface corresponding respectively to the successive zones of the screen area, and at the same time projecting through said masks onto the successively-defined zones of said surface images of the screen elements according to the desired different positioning of said elements in the successive zones of the screen area, and finally developing said surface to fix the images thereon.

2,950,970

COLOR DEVELOPERS CONTAINING POLYETHYLENE GLYCOLS

Judith A. Schwan and Catherine Marilyn Spath, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 8, 1957, Ser. No. 644,744

1 Claim. (Cl. 96—55)

A photographic color developer capable of producing dye images of increased dye density with no increase of color fog upon color development of a silver halide emulsion, comprising a developing solution separate from said emulsion, containing an alkylamino paraphenylenediamine color developer, a coupler compound capable of coupling with the oxidation product of said developer to form a dye upon photographic development, and a polyethyleneglycol selected from the group consisting of (1) polyethylene glycols having the formula

$$HO(CH_2CH_2O)_nCH_2CH_2OH$$

where n is from 14 to 85, (2) polyethoxyethyl-bis-pyridinium methane sulfonate, and (3) polyethoxyethyl-bis-sulfuric acid.

2,950,971

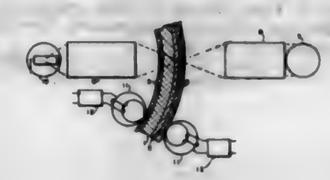
MULTIPLE SOUND TRACKS

George Lewin, 1573 E. 35th St., Brooklyn 34, N.Y.

Filed Dec. 17, 1957, Ser. No. 703,467

7 Claims. (Cl. 96—79)

(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A multiple sound track means comprising a base film uniformly transparent to light of the infra-red portion of the light spectrum, an emulsion having an optical sound image therein deposited upon one surface of said base film providing an optical sound track to modulate the light of said infra-red portion of the light spectrum and means comprising magnetic iron oxide in a binder that is uniformly transparent to the light of said infra-red portion of the light spectrum deposited upon said base film in superposed relation to said emulsion for providing a magnetic sound track, said magnetic iron oxide sound track having a slightly greater transverse width than said optical sound track so as to extend beyond the edges of said optical sound track.

2,950,972

PHOTOGRAPHIC EMULSIONS HAVING INCREASED SENSITIVITY TO X-RAY AND GAMMA RAY RADIATION

Fritz W. H. Mueller and Ernest T. Larson, Jr., Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Filed Nov. 24, 1954, Ser. No. 471,106

19 Claims. (Cl. 96—108)

1. In a process of preparing a photographic silver halide emulsion in which the silver halide is predominantly silver bromide, and wherein said process includes reacting a silver nitrate solution with an alkali metal halide solution in the presence of a dissolved colloidal carrier material so as to form a dispersion of silver halide grains in said colloidal carrier material, the improvement which comprises increasing the sensitivity of said emulsion to X-ray and gamma ray radiation by mixing said two solutions in the presence of a cadmium salt selected from the group consisting of cadmium chloride, cadmium bromide, cadmium nitrate and cadmium acetate, the concentration of the cadmium salt ranging from 0.001 to 0.2 mole percent of cadmium ion per mole of silver ion used in the preparation of the emulsion.

2,950,973

COFFEE CONCENTRATE PROCESS

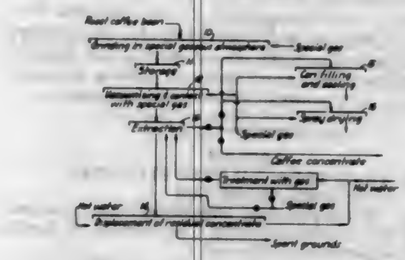
Jack W. Cameron, Burlingame, Calif., assignor to Vitagen Corporation, Los Angeles, Calif., a corporation of Nevada

Filed Mar. 26, 1957, Ser. No. 648,612

7 Claims. (Cl. 99—71)

1. In a method for the manufacture of an aqueous coffee concentrate, grinding roasted coffee and extracting with percolating hot water an aqueous concentrate of the

ground coffee while said coffee is enveloped with a gaseous atmosphere substantially devoid of oxygen and containing gaseous components resulting from the burning of



a hydrocarbon fuel with an amount of air insufficient to complete combustion of the same, said components including carbon dioxide, carbon monoxide, and small amount of unsaturates.

2,950,974

CONVERSION OF FLAVONOID GLYCOSIDES

Carl V. Smythe, Moorestown, N.J., and Dudley W. Thomas, Morrisville, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed May 26, 1958, Ser. No. 737,477

16 Claims. (Cl. 99—106)

1. A method for improving the taste, including decreasing the bitterness by decreasing the naringin content of naringin-containing juices, which comprises treating said juices with an added enzyme preparation containing naringinase and discontinuing the action of said naringinase when at least 15% of naringin is converted to prunin and before complete conversion to naringenin when there remains an amount of prunin which is equivalent to at least 15% of original naringin in the treated juice.

2,950,975

ANTI-OXIDANT AND COMPOSITIONS CONTAINING THE SAME

Laurence R. B. Hervey, West Concord, Mass., assignor, by mesne assignments, to John A. Manning Paper Company, Inc., Troy, N.Y., a corporation of New York

Filed July 21, 1958, Ser. No. 750,045

7 Claims. (Cl. 99—163)

6. Process of inhibiting the oxidation of a normally oxidizable fat-containing material, characterized by the step of adding to such material a minor quantity of a dried extract of the mucilage-producing portion of okra pods.

2,950,976

METHOD OF PRESERVING A PERISHABLE PRODUCT

Gabriel Fadlallah Kher, Badaro St., Raad Bldg., Beirut, Lebanon

No Drawing. Filed May 17, 1957, Ser. No. 659,763

Claims priority, application Lebanon May 21, 1956

4 Claims. (Cl. 99—166)

1. A method of preparing a protective imperfectly airtight film on a perishable product chosen from the group consisting of a fruit, a vegetable and an egg, comprising the step of treating said perishable product with a solution of an alcohol containing from 5 to 10% by weight of rosin, and from 1 to 4% by weight of gum lac.

2,950,977

POULTRY CHILLING

John H. Silliker, Park Forest, Joseph L. Shank, Tinley Park, and Robert E. Murphy, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Filed Aug. 30, 1957, Ser. No. 681,198

2 Claims. (Cl. 99—194)

1. In the process of increasing the shelf-life of freshly eviscerated poultry including immersing said poultry into chill water, the steps of adding a suspension of live non-pathogenic lactic acid bacterial cells to the chill water to a concentration of from about 100,000 to about 100,000,000 cells per milliliter of said chill water and holding said poultry in said chill water for at least about 4 hours.

2,950,978

PROCESS OF PREPARING A DRY RAVIOLI PRODUCT

Virgil Milani, 1929 East-West Highway, Silver Spring, Md.

No Drawing. Filed Nov. 13, 1957, Ser. No. 696,018

2 Claims. (Cl. 99—199)

1. The method of making hard, staple dried ravioli which has a long shelf-life and which can be subsequently boiled which includes the steps of forming dough from flour, water and 3% to 15% of a crack-preventing material selected from the group consisting of glycerine, xylose, glucose and sucrose, based on the dry weight of the flour, which crack-preventing material is unaffected at elevated drying and water-boiling temperatures, flattening the dough and forming two strips therefrom, placing dried ravioli filling on one of said strips, placing the other of said strips over the dried ravioli filling and said one strip, sealing the edge portions of said strips to form an envelope around the dried ravioli filling, perforating the envelope adjacent the filling and thereafter drying the envelope, the envelope being characterized in that during drying thereof and during subsequent cooking of the dried ravioli in boiling water, the envelope will not crack and break.

2,950,979

CARBON STRUCTURE AND SPRAY NOZZLE FORMED THEREFROM

Kurt Zosel, Mulheim an der Ruhr, and Rudolf Schäfer, Bad Godesberg, Germany, assignors to Studien Gesellschaft Kohle m.b.H., Mulheim an der Ruhr, Germany, a corporation of Germany

No Drawing. Filed Sept. 10, 1957, Ser. No. 683,020

Claims priority, application Germany Sept. 11, 1956

6 Claims. (Cl. 106—56)

1. A spray nozzle for spraying molten metals formed of graphite impregnated with a metal having a higher melting point than aluminum, thereby forming a structurally coherent impervious body.

2,950,980

ADHESIVE COMPOSITIONS

Arthur Hirsch, 831 Linden Ave., Elizabeth, N.J.

No Drawing. Filed Sept. 10, 1958, Ser. No. 760,073

1 Claim. (Cl. 106—125)

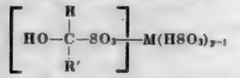
An adhesive composition for application to paper and like nonrigid base; comprising a dry, solid film derived from a water dispersion with a concentration of from 50% to 60% of solids, consisting of animal glue amounting to 42 to 43 parts by weight and urea ranging from about 13 to about 16 parts by weight, said film being reactivatable by moistening, as well as by application of heat, selectively, and substantially avoiding curling of said base.

2,950,981
NACREOUS PIGMENT AND PROCESS OF PREPARING SAME
Harold A. Miller, Forest Hills, and Leon M. Greenstein, New York, N.Y., assignors to Francis Earle Laboratories, Inc., Peekskill, N.Y., a corporation of New York
No Drawing. Filed Apr. 10, 1957, Ser. No. 651,809
14 Claims. (Cl. 106—194)

2. A nacreous pigment having, as a nacre-producing substance therein, basic lead carbonate in the form of hexagonal crystal platelets of a diameter of from about 3 to 50 microns, a thickness of from about 10 to 50 millimicrons, and having a luster at least as great as that of natural pearl essence and in the range of about 650 to 1000 as determined by a standard dipping test performed in a nitrocellulose-containing dipping lacquer, the surfaces thereof being smooth and substantially free of adhering crystal fragments and uneven overgrowths.

2,950,982
COATING COMPOSITIONS HAVING REDUCED ODOR ON DRYING
Alfred Berthold, Eastlake, and Oliver J. Grummitt, Cleveland, Ohio, assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Feb. 13, 1958, Ser. No. 714,944
5 Claims. (Cl. 106—263)

1. A coating composition which contains as one of the essential film forming constituents a fatty acid derivative having an unsaturated fatty acid radicle, containing from about 0.001% to about 5% by weight of a metal sulphonate having the general formula:



wherein R is selected from the group consisting of monovalent aliphatic radicles of at least 10 carbon atoms and monovalent aromatic radicles, said radicle R being attached to C by a carbon-carbon linkage, R′ is selected from the group consisting of hydrogen and methyl, M is selected from the group consisting of alkali metals and alkaline earth metals, and y is the valence of M.

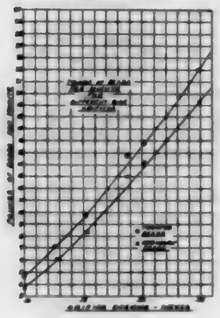
2,950,983
CLAY PRODUCTS AND METHOD OF REDUCING CLAY VISCOSITY
Ben W. Rowland, Hillside, N.J., assignor to Georgia Kaolin Company, Elizabeth, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 26, 1957, Ser. No. 705,105
8 Claims. (Cl. 106—288)

1. The method of reducing the viscosity of crude clay comprising the steps of forming an aqueous dispersion of the clay, separating the water from the clay including heat drying the clay at a temperature above about 90° C. but below the temperature of calcining, reforming an aqueous dispersion of the dewatered clay and repeating the steps of removing the water from the clay including heat drying the clay at a temperature above about 90° C. but below the temperature of calcining and reforming an aqueous dispersion until a desired low viscosity is obtained in the resulting clay.

2,950,984
MAKING CADMIUM RED PIGMENTS
Frank O. Rummery, Reuben Roseman, and James M. Gilbert, Baltimore, Md., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed July 26, 1957, Ser. No. 674,287
9 Claims. (Cl. 106—301)

1. In a process for preparing a mercury-cadmium sulfide pigment, the improvement which comprises treating said pigment, prior to calcination thereof, with a minor proportion of a conditioning agent selected from the class consisting of hydrated silica, hydrated alumina, and mixtures of hydrated silica and hydrated alumina, said minor proportion based on the weight of resulting calcined pigment being at least about 0.05% for the hydrated silica expressed at SiO_2, at least about 0.1% for the hydrated alumina expressed as Al_2O_3, and at least 0.15% for mixtures of hydrated silica and hydrated alumina expressed as said anhydrous oxides of silicon and aluminum.

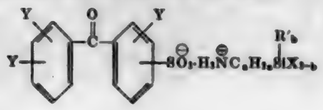
2,950,985
STARCH TREATED FREE FLOWING GLASS BEADS
Vincent L. Duval d'Adrian, Shrewsbury, Mo., assignor to Flex-O-Lite Manufacturing Corporation, St. Louis, Mo., a corporation of Missouri
Filed Apr. 11, 1957, Ser. No. 652,197
7 Claims. (Cl. 117—33)



7. A process for imparting free-flowing characteristics to bulk-contained substantially dry small glass beads essentially containing only moisture from the atmosphere and ranging up to about 1150 microns in diameter dispensed with paint to provide a reflex light reflective painted surface which comprises adding a small amount of starch in the form of finely divided solid particles to the beads, said starch being added in an amount to increase the free-flowing characteristics of the beads, and added in the ratio of about 0.01 to 0.1% of the weight of the beads, intimately mixing the beads and the starch together to form a layer of starch between the individual glass beads and dispensing the beads upon the top surface of a freshly applied painted surface.

2,950,986
ULTRAVIOLET LIGHT ABSORBING COMPOSITIONS
Donald L. Bailey, Snyder, and Ronald M. Pike, Grand Island, N.Y., assignors to Union Carbide Corporation, a corporation of New York
No Drawing. Filed Aug. 22, 1957, Ser. No. 679,739
15 Claims. (Cl. 117—33.3)

14. A process for producing glass articles opaque to ultraviolet light radiation, which comprises coating the surface of said glass article on at least one side thereof with a silicon-containing amine salt of a benzophenone sulfonic acid selected from the group of silane amine salts represented by the general formula:

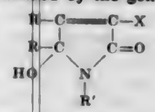


wherein Y, *a* and *b* have the same meanings as claimed in claim 4, and heating said coated glass article at a temperature of at least about 150° C. for a period of at least about 10 minutes.

2,950,987
THERMALLY-SENSITIVE RECORDING ELEMENTS
Edward George Howard, Jr., Hockessin, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Filed Oct. 28, 1958, Ser. No. 770,012
4 Claims. (Cl. 117—36)



1. A thermally-sensitive image-recording element comprising a flexible sheet support of low heat conductivity and a stratum containing, in an amount from about 10 to about 500 milligrams per square decimeter, a 5-hydroxy-2-pyrrolone covered by the general formula

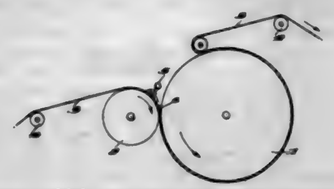


wherein X is a negative substituent selected from the group consisting of quaternary onium and inium salts, and carboxyl groups and groups hydrolyzable thereto, R′ is a member taken from the group consisting of hydrogen and monovalent hydrocarbon groups of no more than 10 carbon atoms, the radicals are each selected from the group consisting of hydrogen, alkyl of 1 through 10 carbon atoms, cycloalkyl of 4 through 6 carbon atoms, aryl of 6 through 10 carbon atoms and alkaryl of 7 through 10 carbon atoms and the radicals R when taken together constitute a single divalent hydrocarbon radical that forms with the 4- and 5-carbon atoms of the pyrrolone ring a carbocyclic radical of 5 to 7 ring atoms, said substituted pyrrolones being further characterized in that when substituted with the members recited not more than one of the 4- and 5-carbon atoms have an aromatic substituent.

2,950,988
METHOD OF PRODUCING PRINTED SURFACE COVERING AND PRINTING ENAMEL THEREFOR
Frederick S. Deacon, Springfield, Pa., and Ralph W. Wheeler, Jr., Wilmington, Del., assignors to Congoleum-Nairn Inc., Kearny, N.J., a corporation of New York
Filed Oct. 9, 1956, Ser. No. 614,895
11 Claims. (Cl. 117—38)

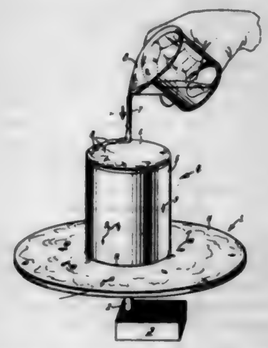
1. A printing enamel for use in block printing a decorative design upon a web of backing material in the production of a printed surface covering having a smooth and unblemished decorative paint layer of less than 0.0035 inch in thickness upon a web of backing material which comprises a mixture of solvent, pigments, resins and a modified oil formed by reacting an oil with drying properties with about 5 to about 30 percent of its weight of an unsaturated carboxylic acid containing from 3 to 10 carbon atoms and thereafter esterifying by reaction with a polyhydroxy alcohol, said enamel having a ratio of modified oil to resins of about 0.5 to 1 to about 5 to 1 and being of such consistency that when a quantity thereof filling a ring 0.75 inch inside diameter by 0.5 inch long is released upon a smooth surface maintained at an angle of 30° with the horizontal, the leading edge of said quantity travels from about 5 to about 12 inches in 30 seconds.

2,950,989
METHOD OF PRODUCING DRUM-FINISHED COATED PAPER
Eben W. Freeman, Portland, Maine, assignor to S. D. Warren Company, Boston, Mass., a corporation of Massachusetts
Filed Mar. 17, 1958, Ser. No. 721,813
13 Claims. (Cl. 117—64)



1. Process which comprises imparting translatory motion to a web of paper bearing a water-wettable surface layer of coating containing mineral pigment and adhesive material, directing steam against said layer of coating, therefter maintaining said layer of coating out of contact with air and delivering it in a moist and heated condition into firm contact with a heated metallic finishing surface, eliminating water from said layer of coating and removing and carrying away the coated web from said finishing surface.

2,950,990
METHOD FOR APPLYING A UNIFORM COATING TO A CYLINDRICAL BODY
Donald D. Johnson, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Apr. 8, 1957, Ser. No. 651,447
8 Claims. (Cl. 117—94)

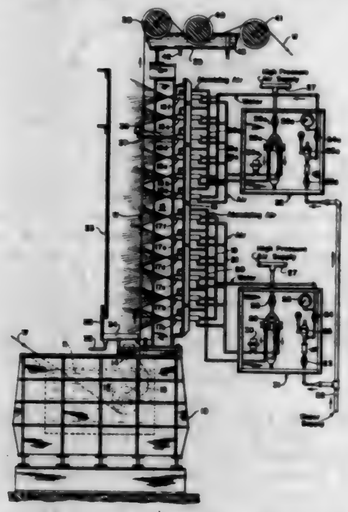


1. A method for coating a cylindrical surface of a body having an axis of revolution, said method comprising applying a liquid coating material to a first end of the body, permitting the material to flow across the cylindrical surface to the second end of the body, rotating the body about the axis thereof, conducting an excess of the material from the second end, and drawing the material remaining on the cylindrical surface into a thin film by surface tension.

2,950,991
METHOD AND APPARATUS FOR COATING FERROUS METAL WITH ALUMINUM
Harvey W. Seymour, Belle Vernon, Pa., assignor to American Chain & Cable Company, Inc., a corporation of New York
Filed Apr. 30, 1959, Ser. No. 810,174
10 Claims. (Cl. 117—119.4)

1. In a method for coating a ferrous metal shape with aluminum by immersing the shape in a bath of molten

aluminum and then withdrawing the shape from the bath with a coating of molten aluminum adhering thereto, the improvement which comprises introducing the coated shape immediately upon withdrawal from the aluminum bath and while the aluminum coating thereon is still fluid into direct contact with a dense mist of liquid coolant, said mist comprising a gaseous suspension of very finely divided coolant droplets, the particle size of said droplets being sufficiently small so that settlement



thereof from suspension is negligibly slow and the velocity with which said droplets impinge on said shape being sufficiently low so that substantially no deformation of the aluminum coating thereon while it is still fluid is caused thereby and the density of said mist being sufficient to cool an aluminum coated wire 0.1 inch in diameter from 1250° F. to below 900° F. in less than fifteen seconds, whereby said coating is quenched and congealed before flow of the molten coating metal can result in a coating having substantial irregularities in thickness and surface smoothness.

2,950,992
CELLOPHANE COATING HAVING IMPROVED WET STRETCH AT LOW TEMPERATURES
William O. Brillhart, LeRoy Gallant, and James N. Carver, Fredericksburg, Va., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
No Drawing. Filed Aug. 12, 1957, Ser. No. 677,791
10 Claims. (Cl. 117—144)

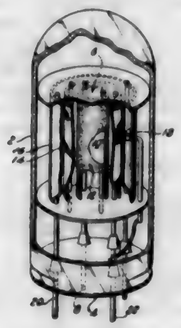
6. A method of preparing a sheet of regenerated cellulose having a coating which possesses a high wet stretch at temperatures in the range between about 0 and 5° C. comprising applying to said sheet of regenerated cellulose a lacquer containing as its principal constituents nitrocellulose and acetyl tributyl citrate as a liquid plasticizer, said lacquer exclusive of the solvent therefor comprising in percent by weight about 45 to about 55% nitrocellulose and about 36 to about 44% by weight of plasticizer, of which about 15 to 44% by weight is acetyl tributyl citrate and the balance of said plasticizer being a solid plasticizer selected from the group consisting of phthalimidoethyl propionate, dicyclohexyl phthalate, ethyl benzoyl benzoate, diphenyl phthalate, ethylene glycol dibenzoate, N-ethyl p-toluene sulfonamide, cyclohexyl p-toluene sulfonamide, ethyl oxanilate, diisobutyl tartrate, sucrose octo-acetate, acetanilide, phenyl benzoate, naphthyl benzoate, glyceryl benzoate, triphenyl phosphate, and camphor.

2,950,993
OXIDE COATED CATHODES AND METHOD OF MANUFACTURE
Stanton Umbreit, West Orange, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Apr. 2, 1956, Ser. No. 575,599
9 Claims. (Cl. 117—219)



5. The method of attaching an electron emissive layer to a conductive core which comprises first applying in a form of a suspension to said core substantially pure and hydroxide free barium carbonate to form a first coating on said core, and then applying to said first coating a further coating of a material consisting of barium carbonate, strontium carbonate and calcium carbonate for forming an electron emissive oxide, and heating the doubly coated core to convert said substantially pure barium carbonate into barium oxide and to form at least a partially fused barium oxide layer in direct surface contact with said core and with said material.

2,950,994
METHOD FOR PREPARING COLD CATHODES AND RESULTING ARTICLE
Bernard G. Firth, Newark, N.J., assignor to Tung-Sol Electric Inc., a corporation of Delaware
Filed Feb. 25, 1959, Ser. No. 795,514
9 Claims. (Cl. 117—222)



5. The method of preparing a coating having high electron emission rate for metal electrodes for vacuum tubes comprising preparing a paste of magnesium oxide, basic magnesium carbonate and a thinner, milling the paste to reduce particle size to about 1 micron, thinning the milled paste and finally spraying the metal surface of the electrode with the thinned paste while rotating the electrode at a rapid rate.

2,950,995
ELECTRICAL RESISTANCE ELEMENT
Thomas M. Place, Sr., Newport Beach, and Thomas M. Place, Jr., Costa Mesa, Calif., assignors to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Filed Mar. 18, 1957, Ser. No. 646,888
11 Claims. (Cl. 117—227)

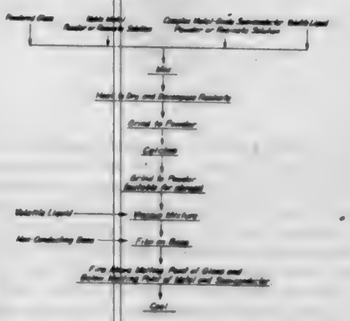
2. A resistance element comprising a high-temperature-resistant, electrically nonconductive base having fired

thereto a layer of resistance material comprising 91–98 percent by weight of solidified glass and 2–9 percent by



weight of at least one of the noble metals in finely divided form dispersed throughout the solidified glass in electrically conductive relationship.

2,950,996
ELECTRICAL RESISTANCE MATERIAL AND METHOD OF MAKING SAME
Thomas M. Place, Sr., Newport Beach, and Thomas M. Place, Jr., Costa Mesa, Calif., assignors to Beckman Instruments, Inc., a corporation of California
Filed Dec. 5, 1957, Ser. No. 700,746
21 Claims. (Cl. 117—227)



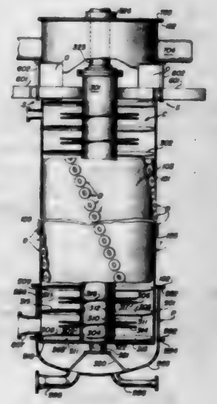
16. The method of making an electrical resistance element which comprises: forming a viscous mixture containing a volatile liquid carrier, powder-like particles of glass, at least one noble metal and at least one complex metal-oxide semiconductor having melting points above that of said glass, the solid elements of said mixture including about 84–98 percent by weight of said glass, about 1–15 percent by weight of such metal, and not more than about 3 percent by weight of such oxide semiconductor; forming at least a portion of said mixture into a film on a supporting structure; heating said film to an intermediate temperature to remove the volatiles and organic material therein; additionally heating said film to a predetermined temperature exceeding the melting point of said glass but less than the melting points of such metal and oxide semiconductors; and cooling said film to a solid state.

2,950,997
METHOD OF APPLYING INSULATING COATING
Andrew A. Halacsy, 383 Windsor Ave., Hatboro, Pa.
Filed Dec. 4, 1957, Ser. No. 700,716
5 Claims. (Cl. 117—232)



1. A method for applying a coating of uniform dielectric strength to a piece of electrical equipment, which method includes: supporting said equipment to expose a first area while a second area is covered by said support; mixing a self-curing mixture of two different colored plastic components, each of said components being non-curing separately and self-curing when combined, and applying a uniform coating of said mixture to said first surface area, except for a border zone between said first and said second surface areas; applying a coating of one of said components to said border zone before said first area coating has cured, said zone coating diminishing in thickness from said first area coating to the edge of said second area; supporting said equipment on said first area and uniformly coating said second area with the same mixture used to coat said first area; applying a coating of the second of said components to said boundary zone, said coating diminishing in thickness from said second area coating to the edge of said first area coating, and forming with said first boundary zone coating a layer of substantially the same thickness as said first and second area coatings; kneading said two boundary zone coatings to produce a boundary zone coating of the same thickness and color as said first and second area coatings; and curing any uncured parts of said coating.

2,950,998
APPARATUS FOR CONTACTING SOLIDS WITH LIQUIDS
Robert Marshall Stewart, New Orleans, and Wallace P. Sevin, Baton Rouge, La., assignors to Chemetron Corporation, a corporation of Delaware
Filed Mar. 1, 1956, Ser. No. 568,741
34 Claims. (Cl. 127—7)

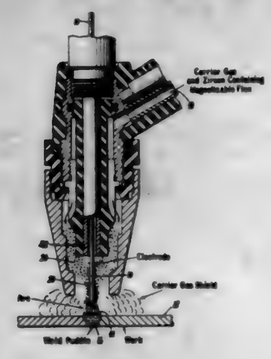


1. Apparatus for continuously conveying solid materials upwardly through liquid media, comprising in combination, a cylindrical envelope having an interrupted spiral arrangement of flights disposed about a central shaft journalled for rotation in the envelope in such manner that the trailing edge of one flight segment and the leading edge of the next flight segment in the spiral arrangement of flights are substantially in alignment in the axial direction of the central shaft and substantially without overlap, and at least one deflector member extending from the envelope into each of the interruptions of the flights, the deflector members that extend into adjacent flight interruptions being longitudinally and radially displaced one from another, and wherein the angle included between the leading edge and the trailing edge of a flight is equal to 180 degrees divided by the number of helices defined by the flights.

2,950,999
LOW-TEMPERATURE DRY CELL
David Norman Craig and John Philip Schroeit, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Mar. 18, 1944, Ser. No. 527,148
8 Claims. (Cl. 136—155)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An electrolyte for low-temperature dry cells, comprising an aqueous solution of approximately 47% methylamine hydrochloride, and as a stabilizer therefor ammonium chloride in the amount of from 10% to 20% by weight of said solution.

2,951,000
WELDING COMPOSITION
Harry E. Kennedy, Berkeley, Calif., and Gerard E. Clausen, Summit, N.J., assignors to Union Carbide Corporation, a corporation of New York
Filed Apr. 26, 1957, Ser. No. 655,314
4 Claims. (Cl. 148—26)



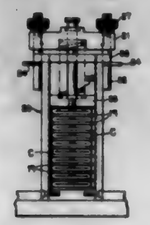
4. A powdered magnetizable welding flux composed by weight of 10–40% zircon sand, 10–25% periclase (magnesia), 10–35% rutile, 10–30% iron powder and the remainder of the flux consisting essentially of materials selected from the group consisting of cryolite, silica, alumina, ferro-alloy, silicomanganese, magnetite and sodium silicate.

2,951,001
DECORATIVE STRUCTURAL ELEMENT
David Rubenstein, 2750 2nd Ave., San Diego 3, Calif.
Filed Jan. 12, 1956, Ser. No. 558,772
19 Claims. (Cl. 154—45.9)



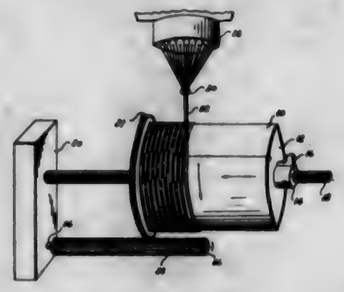
1. A decorative structural member comprising, a supporting body of porous material having a surface composite layer on a face thereof, said layer including a bonding resin composition, a discrete filler, fibrous reinforcing and a pellucid resin composition; the exposed surface of said layer being smooth and rendering a plurality of distant subsurface portions of the layer visible to give a decorative surface effect, at least a portion of said body being penetrated, permeated and bonded by said bonding resin composition, said fibrous reinforcing comprising a mat substantially coextensive with said body face and embedded in the bonding resin composition, said pellucid resin composition having a diaphanous fibrous mat embedded therein and extendiing over the reinforcing mat and its bonding resin, said pellucid resin being transparent near its upper surface but becoming distinctly translucent at varying depths towards the face of the porous body and defining cloudy portions visible at different depths in the said composite layer to provide said subsurface portions.

2,951,002
METHOD OF MAKING AN ELECTRICAL CONDENSER
Anthony J. Rascito, Unadilla, N.Y., assignor to The Bendix Corporation, a corporation of Delaware
Filed Sept. 28, 1951, Ser. No. 248,698
5 Claims. (Cl. 154—30)



1. The method of making an electrical condenser which includes loosely winding layers of sheet metal with layers of sheet insulation therebetween, impregnating said loosely wound condenser under vacuum with a flowable, heat settable, synthetic resin compound which is adapted to shrink upon solidification, subjecting two opposed sides only of said condenser to pressure between substantially flat surfaces which are movable toward each other by said pressure while the compound is flowable and without restriction other than the condenser itself, said pressure being sufficient to fully compress and flatten the condenser to expel excess compound and press adjacent layers into close engagement, and continuing the application of said pressure with heating until the compound remaining in the condenser solidifies.

2,951,003
GLASS FIBER REINFORCED TAPE AND METHOD OF MAKING SAME
Joseph F. Stephens, Kansas City, Mo., assignor to Gustin-Bacon Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Filed Jan. 20, 1955, Ser. No. 482,997
5 Claims. (Cl. 154—90)



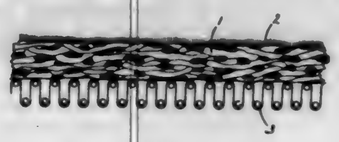
1. A method of making tape including the steps of forming a tube of sheet material on a cylindrical member, winding strands of glass filaments upon said tube to cover the tube with a layer of glass filaments, adhering said glass filaments to said tube, then slitting said tube to form a length of glass fiber reinforced tape and stripping said length of tape from the member on which said tube is formed.

2,951,004
BONDING FILM
Albert F. Martin, St. Paul, Minn., Warren C. Pagel, Whittier, Calif., and George M. Rambosek, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed July 27, 1959, Ser. No. 829,849
16 Claims. (Cl. 154—110)



1. A composite handleable shippable unitary flexible adhesive sheet material having dissimilar non-sticky outer surface layers adapted for forming a permanent heat-cured bond of high peel strength and high beam shear strength over a wide range of temperature between aluminum skin panels and aluminum honeycomb structures, said sheet material being non-bonding to low adhesion surfaces of an interliner separating overlapping convolutions of the sheet material in roll form, and comprising (1) a room-temperature-non-sticky, solid, heat-curable, rubber-base adhesive layer characterized by being curable at elevated temperatures to a non-brittle thermoset condition, and (2) a room-temperature-solid and -non-sticky, heat-fluidizable, heat-curable epoxy resin adhesive layer characterized by being (*a*) flowable as a viscous liquid of high filleting action as it is elevated in temperature, and (*b*) curable from said flowable state to a solid thermoset state at higher elevated temperatures which serve also to cure said rubber-base layer, said epoxy resin adhesive layer comprising a room-temperature-solid epoxy resin initially softening at a temperature between about 100 and 200° F., and a heat-activatible curing agent for said solid epoxy resin.

2,951,005
METHOD OF FORMING A STRETCHABLE FABRIC
Laurence R. B. Hervey, West Concord, Mass., assignor, by mesne assignments, to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Filed Dec. 24, 1953, Ser. No. 400,360
2 Claims. (Cl. 154—123)



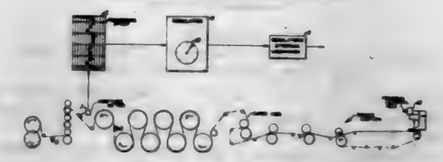
2. The method of forming a stretchable sheet material which comprises applying an adhesive to one surface of a permeable, reticulated, fibrous web of elastomeric fibers in random distribution and bonded together at their points of contact, stretching the fibrous web to open the interstices in at least the surface portion of the fibrous web and prevent blocking of the interstices by the adhesive, applying flocked fibers to the adhesive coated surface, curing the adhesive, securing a non-elastomeric, expansible textile fabric to the opposite surface of the fibrous web and allowing the fibrous web to relax whereby the flocked fibers form an uninterrupted napped surface coextensive with the web.

2,951,006
REEL-UNIT AND METHOD
David Rubenstein, 2750 Second Ave., San Diego, Calif.
Filed Jan. 16, 1953, Ser. No. 340,642
20 Claims. (Cl. 154—126)



6. The method of making a composite structural member from at least a portion of the materials provided in a reel-unit and bonded to a porous structural material wherein the said porous structural material is first covered with a layer of bonding resin, a package comprising an envelope being provided with a core of heating elements, unpolymerized plastic resin, and a fibrous reinforcement is unrolled from a reel having a battery therein and which battery is connected through an open circuit to the heating elements, pressing and rupturing the envelope, then closing the circuit between the battery and heating elements with the heat therefrom polymerizing the plastic resin into a rigid state about the fibrous reinforcement and as a layer on the surface and into the pores of the said porous structural material.

2,951,007
METHOD AND DEVICE FOR REGULATING THE MOISTURE CONTENT OF ENDLESS MOVING WEBS OF FIBROUS MATERIAL
Paul R. Lippke, P.O. Box 163, Augustastrasse 17, Neuwied-Rhine, Germany
Filed June 6, 1957, Ser. No. 664,058
14 Claims. (Cl. 162—198)



1. The method of making a web of material and regulating the liquid content and basis weight thereof which comprises forming a liquid slurry of the material into a sheet by passing slurry thereof through an elongated slit, passing the sheet along an elongated course, evaporating liquid from the sheet as it traverses said course, successively sensing liquid content of the web at points disposed along a path extending across said course and depending upon the amount of liquid sensed at said points simultaneously applying liquid in varying amounts across the width of the web and varying opening size along said slit to improve uniformity of the web with respect to liquid content and basis weight, the slit opening and amount of liquid applied when a liquid deficiency is sensed, each simultaneously being increased at corresponding points along the slit and across the web, respectively and when a liquid excess is sensed each simultaneously being decreased at corresponding points along the slit and across the web, respectively, to realize said improved uniformity.

2,951,008
SOLUBILIZED METAL SALTS OF N-NITROSO N-ARYLHYDROXYL-AMINES
George J. Leitzer, Iselin, N.J., assignor to Heyden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Sept. 11, 1957, Ser. No. 683,212
3 Claims. (Cl. 167—30)

1. A composition comprising: a normally oil insoluble metal salt of N-nitroso N-arylhydroxylamine of the

metals selected from the group which consists of copper and zinc in homogeneous solution in a vehicle consisting essentially of a mixture of at least one oil soluble metal carboxylic acid soap having 8–18 carbon atoms, at least one amine selected from the group which consists of 2-methyl-2-amino-1-propanol, disopropanolamine, o-phenylendiamine, diethylamine, N-hydroxyethyl morpholine, aminoethyl ethanolamine, tributylamine, didodecyl methylamine, octadecenyl amine, dioctadecyl amine, dibutylamine, 2-ethylhexylamine, cocoamine, triethanolamine, N-dodecyl propylene diamine, propylene diamine, isopropylamine, aniline, dimethyl aniline, morpholine, 3-aminopropyl morpholine, and 3-methoxypropylamine, and a solvent selected from the group which consists of mineral spirits, high flash naphtha, kerosene, fuel oil, pine oil, benzene, toluene, xylene, turpentine, and said oil soluble metal salt ranging in concentration of 10–30% by weight of the composition.

2,951,009

STABLE AQUEOUS SUSPENSION OF PIPERAZINE-CARBON DISULFIDE COMPLEX

Erik H. Jensen, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Feb. 28, 1958, Ser. No. 718,151
12 Claims. (Cl. 167—53)

1. A stable aqueous suspension comprising piperazine-carbon disulfide unimolecular complex, a fatty acid ester of glycerine containing at least about thirty percent by weight of glyceryl monostearate, a primary surfactant and a compatible buffer system which maintains the pH between about six and about nine.

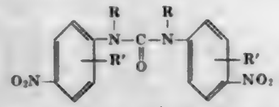
2,951,010

SUBSTITUTED CARBANILIDE COMPOSITIONS FOR TREATING COCCIDIOSIS

Robert C. O'Neill, New York, N.Y., and Arthur J. Basso, Rahway, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed Sept. 26, 1955, Ser. No. 536,772
6 Claims. (Cl. 167—53.1)

1. A composition useful against coccidiosis which comprises an animal feedstuff and a compound represented by the formula—



wherein R is selected from the group consisting of methyl, ethyl and hydrogen where at least one R group is the alkyl group and R′ is selected from the group consisting of hydrogen and a lower alkyl group.

2,951,011

SILICONE COMPOSITION FOR THE RELIEF OF GASTRO-INTESTINAL DISTRESS AND METHOD OF USING SAME

Wolffe Harry Feinstone, Indianapolis, Ind. (121 Yates Road, Memphis 17, Tenn.)

No Drawing. Filed Dec. 17, 1956, Ser. No. 628,576
3 Claims. (Cl. 167—55)

1. A therapeutic composition comprising particulate, granular, disintegrable antacid material, the particles of which are coated with a non-toxic organopolysiloxane, said organopolysiloxane being present in an amount between 1% and 10% of the weight of the dry granular material, said composition containing 10 to 200 milligrams of said organopolysiloxane per dosage unit, being sufficient to coat said particles and to exert a wall protective and anti-flatulent effect upon the gastro-intestinal system but to leave said particles discrete and fluent.

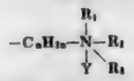
2,951,012

POISON IVY REMEDY

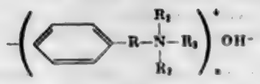
Ole Glavold, 2161 Dudley Ave., St. Paul 8, Minn.

No Drawing. Filed Mar. 3, 1958, Ser. No. 718,494
7 Claims. (Cl. 167—58)

1. A composition for treating dermatitis caused by poison ivy, poison oak and poison sumac consisting essentially of from about 5% to about 50% of a finely powdered insoluble basic anion exchange resin selected from the group consisting of aromatic cross linked vinyl copolymers containing substituent groups having the general formula



in which *n* is an integer of a value from one to four; R_1, R_2, and R_3 are selected from the group consisting of lower alkyl, benzyl, and hydroxyalkyl, and Y is a hydroxyl ion, and strong base quaternary ammonium resins containing substituent groups having the general formulae



in which R is an alkyl group, and R_1, R_2 and R_3 are selected from the group consisting of lower alkyl, benzyl and hydroxyalkyl groups; from about 2% to about 10% of a soluble organic amine base which is non-toxic when applied to the human skin selected from the group consisting of ethanol amines, ethylene diamines, piperazine and diethylaminoethanol; and a solvent.

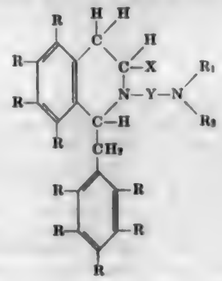
2,951,013

ANTISPASMODIC COMPOUNDS AND COMPOSITIONS COMPRISING BASICALLY SUBSTITUTED DERIVATIVES OF 1-BENZYL TETRAHYDROISOQUINOLINE

Ferdinand Dengel, Mannheim, Germany, assignor to Knoll A.G. Chemische Fabriken, Ludwigshafen (Rhine), Germany, a corporation of Germany

No Drawing. Filed Jan. 26, 1955, Ser. No. 484,297
Claims priority, application Germany Jan. 30, 1954
14 Claims. (Cl. 167—65)

12. An antispasmodic preparation comprising, as active ingredient, a 1-benzyl tetrahydroisoquinoline compound selected from the group consisting of a 1-benzyl-1,2,3,4-tetrahydroisoquinoline compound of the formula



wherein

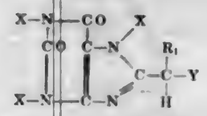
X indicates a member selected from the group consisting of hydrogen and a lower alkyl radical,

R indicates a member selected from the group consisting of hydrogen, the methoxy group, and the ethoxy group,

Y indicates an alkylene radical having 2 to 4 carbon atoms, and

R_1 and R_2 indicate members selected from the group consisting of hydrogen, a lower alkyl radical, an aralkyl radical with 7 to 8 carbon atoms, an aralkyl radical within 7 to 8 carbon atoms and having lower alkoxy groups attached to the aryl ring, and R_1 and R_2 forming together with the nitrogen atom to which they are attached, a monocyclic heterocyclic ring,

and its acid addition salts with acids tolerated by the human body and not substantially affecting the physiological activity of said 1-benzyl tetrahydroisoquinoline compound, and a theophylline compound selected from a group consisting of a theophylline compound of the formula



wherein R_1 indicates a member selected from the group consisting of hydrogen and an alkyl radical having not more than two carbon atoms, X indicates a member selected from the group consisting of hydrogen and methyl radicals, not more than two of said X being methyl radicals, and Y is a nitrogen containing group selected from the group consisting of the secondary amino group —NHR, the tertiary amino group —NRR′, and the quaternary ammonium group —NRR′R″(Z) wherein R, R′, and R″ are members selected from the group consisting of a saturated and an unsaturated alkyl radical having at least two carbon atoms, an alkanol radical, a phenyl radical, a phenyl alkyl radical, and a cyclohexyl radical, R and R′, together with the nitrogen atom, a morpholino radical, and R, R′, and R″, together with the nitrogen atom, a pyridinium radical, while Z is an anionic radical, and its acid addition salts with a non-toxic acid.

2,951,014

PROCESS FOR A STABLE OIL SUSPENSION

Harold G. Garman, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Filed Jan. 3, 1957, Ser. No. 632,253
10 Claims. (Cl. 167—82)

1. In the process of preparing a stable oil suspension for pharmaceutical use, the step which comprises the intimate mixing and blending of at least one active principal solid ingredient and a plurality of other principle solid ingredients to be suspended in an oil vehicle by simultaneous reduction in suitable particle size prior to suspension in said oil vehicle, the particle size to be 99% less than 60 microns.

2,951,015

AQUEOUS READILY INJECTABLE THERAPEUTIC COMPOSITIONS CONTAINING WATER-INSOLUBLE PENICILLIN AND SUCROSE DILAURATE

Melvin L. Berger, Flushing, N.Y., assignor to Chas. Pfizer & Co. Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Filed July 2, 1957, Ser. No. 669,420
7 Claims. (Cl. 167—82)

1. A readily injectable therapeutic composition comprising an aqueous suspension of a substantially water-insoluble penicillin and a small proportion of sucrose dilaurate.

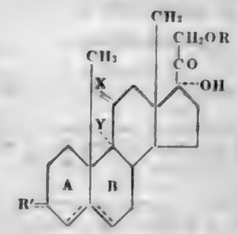
2,951,016

PROCESS FOR THE MANUFACTURE OF $\Delta^{1,4}$-STEROIDS

William Charney, Bloomfield, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Filed May 10, 1955, Ser. No. 507,469
13 Claims. (Cl. 195—51)

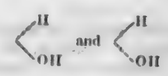
1. Process for the manufacture of $\Delta^{1,4}$-pregnadiene-9α-Y-11-X-17α-ol-21-OR-3,20-diones which comprises subjecting a pregnene compound of the formula



wherein R is a member of the group consisting of H and lower alkanoyl, R′ is a member of the group consisting of O and



X is a member of the group consisting of O,



and Y is a member of the group consisting of hydrogen, fluorine, chlorine and bromine, the dotted lines in rings A and B indicating the position of the double bond, to the action of a culture of a dehydrogenating microorganisms of the group consisting of *F. oxysporum, F. bulbigenum, F. lini, F. zonatum, S. olivochromogenus, S. antibioticus, S. olivaceous,* and *S. bobiliae.*

2,951,017

COBALAMIN PRODUCING FERMENTATION PROCESS

John Douglas Speedie, Bebington, Wirral, and Geoffrey William Hull, Kingston-on-Thames, England, assignors to The Distillers Company Limited, Edinburgh, Scotland, a British company

No Drawing. Filed Sept. 16, 1958, Ser. No. 761,298
Claims priority, application Great Britain June 27, 1957
18 Claims. (Cl. 195—96)

1. A process for the production of cobalamins comprising fermenting a suitable liquid nutrient medium with a cobalamin-producing species of the genus Propionibacterium initially under anaerobic conditions and thereafter continuing the fermentation while contacting the medium with oxygen.

2,951,018

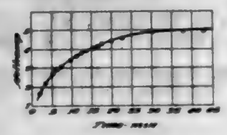
ELECTRODEPOSITION OF NEPTUNIUM

Glenn T. Seaborg, Chicago, Ill., and Arthur C. Wahl, Santa Fe, N. Mex., assignors to the United States of America as represented by the United States Atomic Energy Commission

Filed Oct. 29, 1945, Ser. No. 625,136
1 Claim. (Cl. 204—1.5)

The process of electrodepositing neptunium from solutions thereof, which comprises conducting the electrode-

position from an absolute alcohol bath containing a neptunium nitrate and lanthanum nitrate at a potential of



approximately fifty volts and a current density of between about 1.8 and 4.7 milliamperes per square decimeter.

2,951,019
METHOD OF MAKING PLATED INTAGLIO PRINTING FORM
Harold R. Dalton, Rydal Road, Jenkintown, Pa.
Filed June 9, 1953, Ser. No. 360,541
6 Claims. (Cl. 204—17)

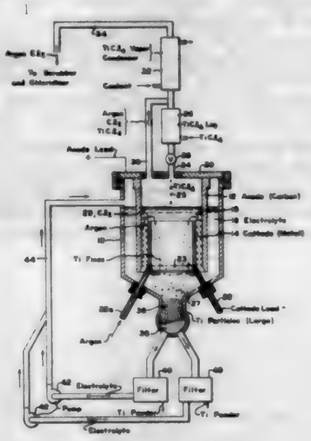
5. The method of making a plated intaglio surface printing form, which comprises covering a metal base with a sheath of a film-forming resinous plastic which is normally non-porous and contains powdered carbon and is readily strippable from the metal base, electrically perforating said sheath in minute discrete areas by electric signals applied thereto and controlled by corresponding elemental areas of the subject matter to be printed to form directly a perforated record of the subject matter, plating said base through said perforations to form raised plated dots corresponding to the perforations in said sheath, and then stripping said sheath from said base.

2,951,020
METHOD FOR ELECTRODEPOSITING POLONIUM
Ralph F. Wehrmann, Waukegan, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Filed Mar. 16, 1950, Ser. No. 150,101
2 Claims. (Cl. 204—45)

1. The method of obtaining a thick, smooth foil of polonium which comprises electrolyzing an aqueous solution of 1 N hydrofluoric acid containing about 0.13 curie of polonium per cubic centimeter of solution, said electrolysis employing platinum electrodes and a current density of about 1.2 milliamperes per square centimeter of cathode surface.

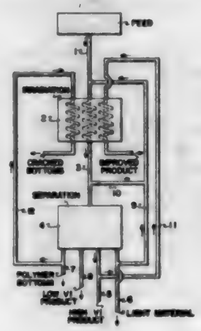
2,951,021
ELECTROLYTIC PRODUCTION OF TITANIUM
William O. Di Pietro, Watertown, Mass., assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Mar. 28, 1952, Ser. No. 279,159
6 Claims. (Cl. 204—64)

1. The process of producing titanium within a closed electrolytic cell, said cell containing a cathode and an anode defining an electrolysis zone through which electrical currents will substantially continually pass between said cathode and anode, said cell containing an electrolyte consisting essentially of at least one halide selected from the group consisting of the alkali metals and the alkali earth metals, the steps which comprise feeding titanium tetrachloride to said cell, electrolyzing said electrolyte at a sufficiently high voltage to give a cathode potential which is above the discharge potential of at least one of the alkali metal or alkali earth metal ions of the halides comprising the electrolyte to electrolyze said electrolyte halide to its metal, at least partially reducing said titanium tetrachloride by means of said electrolyte metal, circulating said electrolyte through the electrolysis zone between said cathode and anode to remove from said zone titanium particles created in said zone, collecting larger particles of titanium formed in said cell, said collection being accomplished within said electrolytic cell in a collection zone removed from the electrolysis zone, and recirculating into the electrolysis zone between the



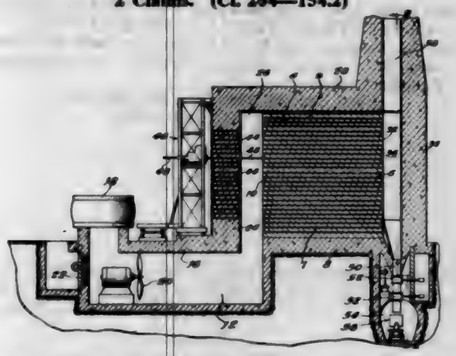
anode and cathode those titanium particles formed in the electrolysis zone which are too small to be collected in the collection zone and which have a diameter less than about 300 microns.

2,951,022
PREPARING LUBRICATING OILS USING RADIATION
Harry M. Hartzband, Westfield, Barry L. Tarmy, Cranford, and Robert B. Long, Wanamassa, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Filed Jan. 24, 1957, Ser. No. 636,066
7 Claims. (Cl. 204—154)



1. A process comprising irradiating a predominantly paraffinic feed stock boiling in the range of 100 to 700° F. and having a viscosity below 35 SSU at 210° F. with high energy ionizing radiation having an energy level above 30 electron volts, at a rate in the range of 1 to 50×10^{-3} kw. h./lb./hr. and at a temperature up to 700° F., until at least 5×10^{-3} kw. h./lb. of radiation are absorbed, separating the material so irradiated and recovering an intermediate boiling range distillate fraction having a viscosity above 35 SSU at 210° F. and a V.I. above 120, and recycling a portion of the irradiated material boiling below said intermediate fraction.

2,951,023
METHOD OF PRODUCING U^{233}
Glenn T. Seaborg, Chicago, Ill., and Raymond W. Stoughton, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Filed June 12, 1945, Ser. No. 599,068
2 Claims. (Cl. 204—154.2)

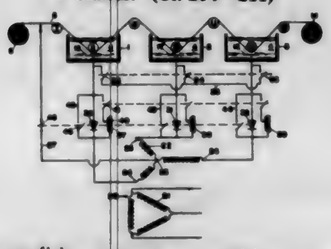


1. A method of producing U^{233} comprising heating a body of thorium carbonate to at least approximately 200° C. until said body attains a constant weight, compressing said body into a pellet having a density of at least 2.6 gms./cc. and enclosing the pellet in a sealed container, placing said pellet in a zone adjacent the active portion of a thermal nuclear reactor, operating said reactor to provide a flux of neutrons, the majority of which have an energy of below 1 mev., and terminating the reaction before the ratio of U^{233} to Th^{232} is about one to one hundred.

2,951,024
IRRADIATED POLYMERS
Gaetano F. D'Alelio, South Bend, Ind., assignor, by mesne assignments, to BarDal, Inc., Rockford, Ill., a corporation of Delaware
No Drawing. Filed Mar. 22, 1957, Ser. No. 647,744
11 Claims. (Cl. 204—158)

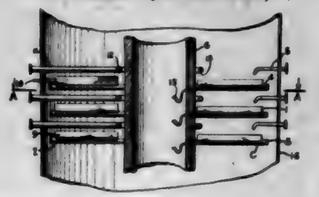
1. A process for producing polyester resin compositions having improved heat resistance comprising the treatment of a composition consisting of a linear, saturated aliphatic polyester of at least 4,000 molecular weight with at least about 5 megareps of irradiation using an energy source of at least about 100,000 electron volts, said polyester having ester groups in the linear chain thereof.

2,951,025
APPARATUS FOR ANODIZING ALUMINUM
Nicholas Mostovych and Alexander Cybriwsky, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Filed June 13, 1957, Ser. No. 665,436
5 Claims. (Cl. 204—211)



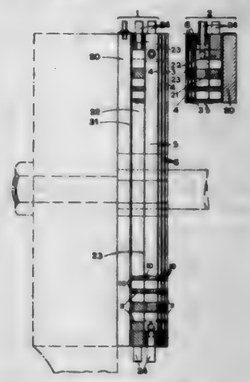
1. An anodizing apparatus comprising: a polyphase alternating current power supply having a power terminal for each phase and a common ground terminal; a plurality of electrolyte-containing anodizing tanks, one for each phase, each having a cathode terminal and adapted to hold a metal surface to be anodized; connection means adapted to interconnect the metal surfaces to be anodized to said common ground terminal; a plurality of rectifiers, one for each phase, each connected to permit power to flow from a power terminal to the corresponding cathode terminal; and means electrically connecting the cathode terminals of the tanks together to cause said alternating current power supply to energize said tanks with direct current composed of overlapping impulses.

2,951,026
MERCURY CATHODE ELECTROLYTIC CELL
Georg Messner, Milan, Italy, assignor to Oronzio de Nora Impianti Elettrochimici, Milan, Italy, a corporation of Italy
Filed June 21, 1957, Ser. No. 667,165
Claims priority, application Germany June 28, 1956
15 Claims. (Cl. 204—221)



1. An electrolytic apparatus having a mercury cathode, which comprises a hollow rotating cylindrical shaft disposed substantially vertically, a plurality of circular plates attached to said shaft externally along its axis, anodes and supporting means therefore above each of said plates, a shell enclosing said shaft and plates, means in said shell for introducing an electrolytic solution and mercury onto each of said plates, and conduit means communicating with said plates through said shaft for withdrawing amalgam from each of said plates.

2,951,027
ELECTRODIALYSING APPARATUS WITH SUPPORTED MEMBRANES
Stanley Miles Partridge, Cambridge, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain
Filed Mar. 4, 1957, Ser. No. 643,859
Claims priority, application Great Britain Mar. 6, 1956
2 Claims. (Cl. 204—302)



1. In an electrodialyzing apparatus comprising an anode compartment, a cathode compartment, and an assemblage arranged between the anode compartment and the cathode compartment including a plurality of alternate cation-exchange and anion-exchange non-rigid

membranes with a plurality of flat separator plates of inert resilient material arranged between and in contact with adjacent membranes, the improvement wherein each said separator plate has a plurality of perforations providing openings across the thickness of each said plate and a plurality of grooves in the surface of each said plate connecting the perforations of each said plate in spaced vertical series.

2,951,028

WAX COMPOSITIONS COMPRISING 3–15% OF A PARAFFIN WAX WITH A MELTING POINT OF 125–135° F. AND 85–97% OF A PARAFFIN WAX WITH A MELTING POINT OF 138–147° F.

John D. Teach, Prospect Park, Pa., Seymour W. Ferris, Mount Holly, N.J., and Irl N. Duling, Newtown Square, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Feb. 12, 1958, Ser. No. 714,675
3 Claims. (Cl. 208—21)

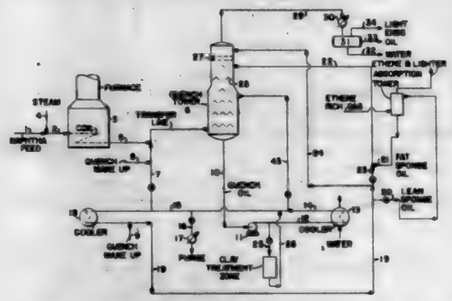
1. A wax composition consisting essentially of from 3% to 15% of a paraffin wax having a melting point of from 125° F. to 132° F., a penetration at 100° F. of above about 100, a viscosity at 210° F. of from 36 to 42 SUS and a W.V.P. (water vapor permeability, T.A.P.P.I. Test No. T464 m–45) of from about 3 to 10, and from 97% to 85% of a paraffin wax having a melting point of from 138° F. to 147° F., a penetration at 100° F. of from 19 to 24, a viscosity at 210° F. of from 37 to 43 SUS, and a W.V.P. of from about 1 to 3.

2,951,029

NAPHTHA STEAM-CRACKING QUENCH

Robert H. Johnston, Whippany, and Earle A. Nirmaier, Maplewood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Filed June 9, 1958, Ser. No. 740,764
11 Claims. (Cl. 208—100)



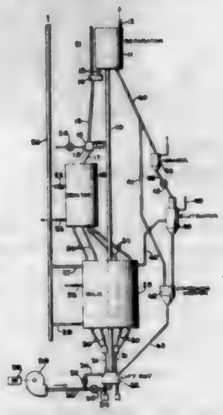
1. In a process of steam-cracking hydrocarbons at an elevated temperature and low hydrocarbon partial pressure to form unsaturated C_2 to C_4 hydrocarbons, the improvement which comprises mixing with cracked products leaving a cracking zone a quench oil in a sufficient amount to rapidly lower the temperature of the resulting mixture from above about 1350° F. to below about 650° F. as the mixture is passed to a quenching and fractionating zone, separating from the quench cracked products in said quenching and fractionating zone a residual fraction boiling above about 430° F. and lower boiling vapors which pass rapidly upwardly through the quenching and fractionating zone countercurrent to relatively cooler quench oil, said quench oil being mainly residual oil withdrawn from the quenching and fractionating zone below the point at which said mixture is passed into said quenching and fractionating zone, then cooled and a portion of the cooled quench oil circulated to the cracked products leaving the cracking zone and another portion of cooled quench oil passed to an upper part of said quenching and fractionating zone, a third portion of the thus circulated quench oil being purged and replaced by a more stable gas oil which lowers the tar content of the quench oil.

2,951,030

METHOD AND APPARATUS FOR MAINTAINING CATALYTIC MATERIAL IN HIGH ACTIVITY

Jean M. Bourguet and Jonas P. Harrison, both of Woodbury, N.J. (Both % Socony Mobil Oil Company, Inc., Paulsboro, N.J.)

Filed Dec. 11, 1957, Ser. No. 702,145
3 Claims. (Cl. 208—165)



1. In a moving bed hydrocarbon conversion system in which catalyst is gravitated in compact form through reaction and regeneration zones as part of an enclosed cyclic system, the attrition of the catalyst being minimized to require very little catalyst replacement and in which the nickel content of the catalyst is gradually built up to an intolerable level as a result of contact with nickel-containing hydrocarbons, the improved method of operation to maintain the catalyst active without requiring extensive catalyst replacement which comprises: gravitating from an elevated level in the system a side stream of the contact material, the flow rate of said side stream being a minor portion of the flow rate of the main stream of catalyst, passing said side stream downwardly through an abrading zone as a substantially compact gravitating column, introducing gas into the column of catalyst in said abrading zone at at least one location at a pressure greater than the critical pressure required to produce gas bubbles within the compact column capable of abrading material from the surface of the catalyst to a significant degree, whereby a surface film is removed from the catalyst in the formation of catalyst fines, separating the fines from the granular catalyst, returning the granular catalyst to the main catalyst stream, the gas pressure in the abrading zone being set at that pressure above the critical pressure required to maintain the nickel content on the catalyst in the main catalyst stream within tolerable limits without requiring extensive catalyst replacement.

2,951,031

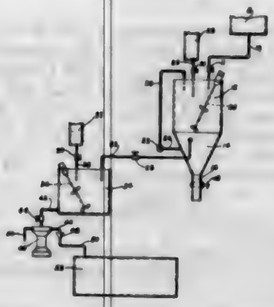
PROCESS FOR PURIFYING OIL WITH MONOISOPROPANOLAMINE

Stanton D. Barclay, Newton, Mass. (20 Albany St., Cambridge 39, Mass.)

Filed May 7, 1958, Ser. No. 733,514
6 Claims. (Cl. 208—180)

1. The process of purifying used crankcase oil that includes acid and ash and from which sludge and some

impurities have been removed, comprising placing the oil in a receptacle with about one-quarter of one percent by volume of monoisopropanolamine, agitating the con-



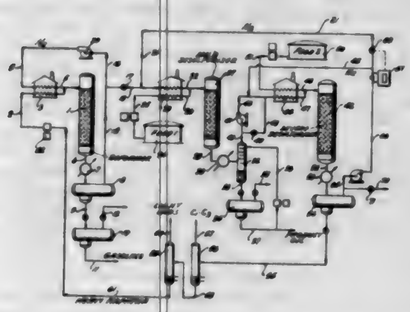
tents at atomspheric temperature until remaining impurities are precipitated, and then separating said remaining impurities from the oil.

2,951,032

HYDROCARBON DESULFURIZATION PROCESS

Texas V. Inwood, La Habra, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Filed Feb. 16, 1956, Ser. No. 565,800
11 Claims. (Cl. 208—213)



1. A process for effecting substantially complete chemical utilization of an impure hydrogen supply stream in a combination hydrofining process without employing purification steps extraneous to said hydrofining process, said hydrogen supply stream initially containing between about 40% and 85% by volume of hydrogen, which comprises subjecting a first sulfur-containing hydrocarbon feed to mild catalytic hydrofining in admixture with said hydrogen supply stream to effect partial desulfurization thereof, cooling and condensing the effluent from said mild hydrofining at substantially the reactor pressure to produce a partially desulfurized liquid product and a first tail-gas containing a higher concentration of hydrogen than said impure supply stream, withdrawing said first tail-gas and continuously passing the same in its entirety to a severe catalytic hydrofining zone in admixture with a second sulfur-containing hydrocarbon feed to effect at least about 95% desulfurization thereof, cooling and condensing the effluent therefrom at substantially the reactor pressure thereby producing a desulfurized liquid product and a second tail-gas containing a lower proportion of hydrogen than said first tail-gas, continuously recycling a first portion of said second tail-gas to said mild hydrofining and continuously recycling the remainder to said severe hydrofining, whereby substantially all the hydrogen initially supplied in said supply stream is eventually consumed in said mild hydrofining and severe hydrofining zones, said mild hydrofining being carried out at a substantially lower temperature and hydrogen/oil ratio than said severe hydrofining.

2,951,033

PROCESS FOR PREPARING STABLE HEATING OIL

Richard W. Sauer, Barrington, N.J., and Arthur F. Weed, Wilmington, Del., assignors to The Atlantic Refining Company, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Filed Mar. 28, 1958, Ser. No. 724,508
4 Claims. (Cl. 208—226)

1. A process for the preparation of a stable heating oil blend from a catalytically cracked heating oil fraction and a virgin heating oil fraction which comprises separately treating the catalytically cracked fraction to remove aromatic mercaptans therefrom by contacting said fraction with from about 2 to about 20 volume percent of an aqueous caustic alkali solution having a concentration of at least 40 weight percent, separately treating the virgin fraction to remove aliphatic mercaptans therefrom by contacting said virgin fraction with from about 2 to about 20 volume percent of a solution of sodium 2-aminoethoxide in 2-aminoethanol and 1,2-diaminoethane having a concentration of from about 4 to about 20 weight percent in the combined solvents, the ratio of 2-aminoethanol to 1,2-diaminoethane ranging from about 1:1 to about 1:3, separating the oil and aqueous phases, water washing the oil phase and blending the treated cracked and virgin fractions.

2,951,034

DESULFURIZATION OF HYDROCARBONS WITH A MIXTURE OF A GROUP VIII METAL AND GROUP VIII METAL OXIDE OR SULFIDE

Archibald P. Stuart, Media, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Filed Apr. 9, 1957, Ser. No. 651,587
11 Claims. (Cl. 208—244)

1. Process for removing sulfur compounds from petroleum hydrocarbons which comprises: contacting petroleum hydrocarbons in liquid phase at a temperature within the approximate range from 50° F. to 300° F. with a desulfurizing agent comprising a group VIII metal and a compound selected from the group consisting of an oxide and a sulfide of a group VIII metal, and contacting said agent with a desorbent liquid, thereby to desorb sulfur compounds.

2,951,035

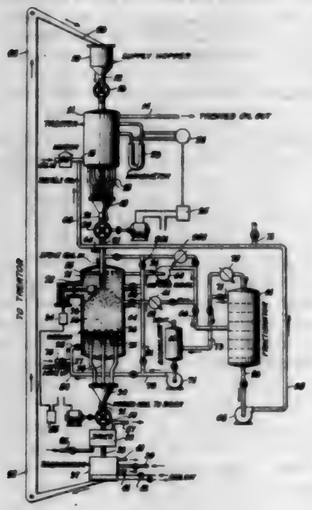
METHOD FOR THE REMOVAL OF METAL CONTAMINANTS FROM PETROLEUM RESIDUAL STOCKS

Walter F. Lorenc, Harvey, Ill., Carl D. Keith, Munster, Ind., and William P. Hettinger, Jr., Dolton, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Sept. 6, 1957, Ser. No. 682,267
2 Claims. (Cl. 208—253)

1. A method for the removal of metallic contaminants from a petroleum residual stock containing the same which comprises passing the stock into contact with non-magnetic hematite ore having a surface area of at least about 20 square meters per gram at a temperature of from 750° F. to 950° F., a pressure of from atmospheric to 3000 p.s.i.g. and at a weight hourly space velocity of from 0.3 to 7.5 while the stock is in admixture with hydrogen in the amount of from 200 to 7000 standard cubic feet per barrel.

2,951,036
ADSORBENT WASHING PROCESS
Ernest A. Bodkin, Wenonah, and Joseph I. Savoca, Haddonfield, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Filed July 7, 1958, Ser. No. 747,326
8 Claims. (Cl. 208—305)



3. A continuous process for solvent washing adsorbents of palpable particle form which have become spent by use for decolorizing mineral oils and which are withdrawn from a decolorizing zone along with a substantial amount of entrained mineral oil and carbonaceous deposits, including color bodies, the adsorbent being made up principally of particles falling in the size range about 4 to 100 mesh Tyler, which method comprises maintaining a columnar mass of said adsorbent in a lower portion of a confined washing zone, introducing a suitable nonpolar wash solvent boiling substantially below said entrained mineral oil into the lower section of said columnar mass and passing it upwardly therethrough to remove the entrained oil from said adsorbent, flowing the liquid solvent and recovered oil upwardly from the surface of the columnar mass into a body of said liquid maintained immediately thereabove, withdrawing solvent and recovered oil from the upper section of said liquid body, introducing the spent adsorbent into said liquid body at a level below its surface and passing it downwardly onto the surface of said columnar mass, withdrawing washed adsorbent substantially free of said mineral oil but still bearing a major portion of the carbonaceous deposits, including color bodies contained by the spent adsorbent supplied to said washing zone, from the lower section of said washing zone at a rate controlled to maintain the residence time of adsorbent in passing through said washing zone within the range about 0.2 to 5 hours, maintaining the temperature in said washing zone below the boiling point of said wash solvent, and controlling the rate of solvent introduction into and passage upwardly through said columnar mass in excess of about 0.2 and below about 3.0 volumes of solvent per volume of adsorbent passed through said washing zone and further controlling the relative length to horizontal cross-sectional area of said columnar mass and the rate of solvent introduction to maintain the superficial velocity of said solvent as it passes upwardly through the columnar mass below that which would cause substantial disruption of the columnar mass but above that defined by the equation:

$$U=\frac{38{,}500D^2F(S_o-S_s)}{Z_s(1-F)}$$

where U is the superficial velocity of the solvent in the washing zone in feet per hour, D is the average adsorbent particle diameter in inches, Z_s is the viscosity of the solvent under the average conditions within said washing zone in centipoises, S_o and S_s are the densities of the oil and solvent, respectively, under the average conditions within the washing zone in grams per cubic centimeter, and F is the fraction of voids between adsorbent particles in a column of such adsorbent formed by pouring dry adsorbent into a receptacle without substantial agitation, whereby the entrained oil is effectively recovered from the adsorbent by the solvent without excessive removal from the adsorbent of said carbonaceous contaminant, including color bodies.

2,951,037
REDUCTION OF SLUDGE DEPOSITION FROM CRUDE OILS
James O'Donnell and Donald Frederick Duckworth, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited
Filed Dec. 20, 1954, Ser. No. 476,264
Claims priority, application Great Britain Dec. 30, 1953
3 Claims. (Cl. 208—370)

1. A process for treating crude oil so as to reduce its tendency to deposit wax-containing sludge on storage, comprising heat treating a number of crude oil samples taken from a given batch of the crude oil to be treated, each sample being individually below about 100° F., by heating each sample to a progressively higher temperature from about 5–20° F. differential for each sample and in the overall range from about 60–212° F., cooling each of the heated samples individually to below the lowest temperature value employed in heating the samples, allowing each of the samples to stand for a period of time sufficient to permit normal settlement of any material therein, and subjecting each sample to a vigorous settling force for a period of time sufficient to deposit the sludge that may be present therein thereby enabling the determination of the temperature value of one sample at which the minimum amount of sludge deposition for the particular batch of crude oil occurs, cooling the crude oil to be stored to a temperature below about 100° F., and subsequently heating the crude oil to a temperature which is substantially the temperature of the sample having the minimum amount of sludge deposition, said temperature not being in excess of about 170° F.

2,951,038
ANTI-FREEZE COMPOSITION
Rudolph J. Holzinger, North Merrick, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Filed July 12, 1954, Ser. No. 442,909
11 Claims. (Cl. 252—73)

1. An anti-freeze composition for addition to the water in the cooling system of an internal combustion engine, consisting essentially of: from about 0.05 to about 5.0 percent by volume of a lubricant consisting of a water-insoluble polyoxyalkylene glycol, from about 99.95 to about 95.0 percent by volume of a saturated monohydric alcohol having from one to three carbon atoms per molecule, said polyoxyalkylene glycol being the sole glycol material present in the composition and being selected from the group consisting of a polyoxyalkylene glycol having a molecular weight above about 1000 and being represented by the following general formula

$$H.(O.C_2H_3.CH_3)_x.OH$$

wherein x is a whole number, a polyoxyalkylene glycol having a molecular weight above about 1000 and being represented by the following general formula

$$H.(O.R)_x.OH$$

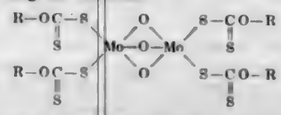
wherein x is a whole number, and wherein $(O.R)_x$ is a polyoxybutylene group, and an aliphatic monoether of a polypropylene glycol, which ether has a molecular weight above about 400 and in which ether the ether oxygen which is attached to a propylene group, is also attached to an aliphatic group having from one to twenty carbon atoms.

2,951,039
PENETRANT COMPOSITION
Samuel H. Salisbury and Chester M. White, Rochester, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Filed Nov. 15, 1955, Ser. No. 547,048
5 Claims. (Cl. 252—33.3)

1. A penetrant composition comprising essentially from 50 to 95 percent of water, from 0.5 to 5 percent of a sodium alkyl aryl sulfonate and from 3 to 35 percent of a material selected from the group consisting of alkanolamines having at least 2 carbon atoms per molecule and having an equivalent weight up to about 165, alkanolammonium hydroxides having from about 8 to 12 carbon atoms per molecule and ammonium salts of hydroxy carboxylic aliphatic acids having from about 4 to 18 carbon atoms per molecule, the percentages being based upon the combined weight of water, wetting agent, and said material, and a minor proportion of a corrosion inhibitor.

2,951,040
EXTREME PRESSURE LUBRICANTS CONTAINING MOLYBDIC XANTHATES
Georges Hugel, Ville d'Avray, Seine-et-Oise, and Robert Courtel, Paris, France, assignors to Institut Français du Petrole des Carburants et Lubrifiants, Reuil-Malmaison, Seine-et-Oise, France
No Drawing. Filed Jan. 7, 1955, Ser. No. 480,613
Claims priority, application France Jan. 7, 1954
6 Claims. (Cl. 252—33.6)

1. A lubricant consisting essentially of a mixture of about 90 to 99.5% by weight of a lubricating mineral oil and about 0.5 to 10% by weight of a molybdic xanthate having the formula



wherein R stands for an alkyl radical with 6 to 12 carbon atoms.

2,951,041
SYNTHETIC LUBRICANT COMPOSITION
Charles E. Saunders, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Aug. 9, 1956, Ser. No. 603,197
6 Claims. (Cl. 252—34.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

3. A water soluble lubricating composition consisting essentially of a water soluble alkylene oxide oil of copolymerized ethylene oxide and propylene oxide, and from 0.2 to 5.0 percent by weight of an additive selected from the group consisting of the mono-, di- and triethanolamine salts of an aliphatic acid having from 8 to 20 carbon atoms.

2,951,042
METHOD OF MANUFACTURING FERROMAGNETIC BODIES AND PRODUCTS THEREOF
Cornelis Jacobus Esveldt, Hendrik van der Heide, and Henricus Petrus Johannes Wijn, all of Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed Mar. 27, 1956, Ser. No. 574,150
Claims priority, application Netherlands Mar. 28, 1955
7 Claims. (Cl. 252—62.5)

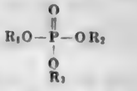
1. A ferromagnetic ferrite body having a substantially square hysteresis loop formed by firing a compacted mixture of cobalt and iron oxides in proportions at which the atomic ratio Co:Fe is between about 0.007:1 and 0.4:1 at a temperature of about 1350° to 1450° C. under reducing conditions to form a coherent body having a density exceeding 90% of theoretical density, and cooling said body from a temperature exceeding 250° C. in a magnetic field to thereby form a body having an $(R_s)_{max}$ of at least 0.85 and a coercive force of not more than 100 oersted.

2,951,043
CLEANER FOR PAINT APPLICATORS
Robert E. Blank, Mayfield Heights, Ohio, assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Filed Sept. 9, 1954, Ser. No. 455,067
2 Claims. (Cl. 252—171)

1. A cleaning composition for paint applicators comprising a clear, homogeneous admixture of

(*a*) from 9 to 20 parts by volume of a normally liquid hydrocarbon.

(*b*) from 1 to 3 parts by volume of an organic phosphate ester having the general formula:



wherein R_1 and R_2 are each selected from the group consisting of aliphatic and aromatic radicals, and R_3 is selected from the group consisting of hydrogen, aliphatic and aromatic radicals

(*c*) 2 parts by volume of a monoalkyl ether of a polymethylene glycol, containing from 2 to 4 methylene groups

(*d*) from about 1 to about 5 parts by volume of a hydrophilic, non-ionic compound selected from the group consisting of organic esters of polyglycols and organic ethers of polyglycol; and

(*e*) from 1 to about 5 parts of volume of a lipophilic, non-ionic compound selected from the group consisting of organic esters of polyglycols and organic ethers of polyglycols.

2,951,044
STABLE DISPERSIONS OF METAL OXIDE BLENDS AND PROCESS FOR THEIR MANUFACTURE
Ernst Wagner and Jean Diether, Rheinfelden, Baden, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed July 18, 1955, Ser. No. 522,879
14 Claims. (Cl. 252—313)

1. As a new composition of matter a substantially stable suspension in a predominantly aqueous medium of at least 15% by weight of the total composition of coformed pyrogenic oxides of (1) silicon and (2) a metal chosen from the group of the refractory inorganic metals, said oxides having been coformed by simultaneous reaction, with an oxygen-containing gas at temperatures above about 600° C., of a mixture of halide compounds of (1) silicon and (2) the corresponding metal.

11. A process for producing a stable aqueous suspen-

sion of refractory inorganic metal oxides which comprises reacting a gaseous mixture of volatile halides of silicon and a metal chosen from the group consisting of the refractory inorganic metals with an oxygen-containing gas at a temperature above about 600° C., thereby converting said metal halides to the corresponding metal oxides in an intimate coformed state, separating said coformed metal oxides from the gaseous reaction medium, and mixing with agitation at least 15% of said coformed metal oxides by weight of the total suspension into a predominantly aqueous medium.

2,951,045

PREPARATION OF TITANIUM CHLORIDE POLYMERIZATION CATALYST

Leon Walter Gamble, Arthur Walter Langer, Jr., and Arthur Homer Neal, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed May 10, 1957, Ser. No. 658,221
5 Claims. (Cl. 252—429)

1. A process for making a polymerization catalyst which comprises mixing an aluminum trialkyl of 2 to 4 carbon atoms per alkyl group and titanium tetrachloride in substantially stoichiometric proportion while in a hydrocarbon solution in a total concentration of about 1.0 to 16% at a temperature not above 40° C., maintaining the mixture in the aforesaid temperature range for about 2 to 60 minutes until about 20 to 40% of the original soluble titanium is precipitated from the solution, and then heating the mixture to a final temperature of about 110° to 175° C. to produce a violet catalytic precipitate.

2,951,046

CATALYSTS FOR DECOMPOSING HYDROGEN PEROXIDE

James William Laxton, London, England, assignor to D. Napier & Son Limited, London, England, a British company

No Drawing. Filed Mar. 2, 1959, Ser. No. 796,229
3 Claims. (Cl. 252—476)

1. A sintered pelletized catalyst for the decomposition of hydrogen peroxide consisting essentially, by weight, of 80–95 percent silver and 20–5 percent copper oxide.

2,951,047

PREPARATION OF FILAMENTS FROM POLYTETRAFLUOROETHYLENE EMULSIONS

Peter Richard Lantos, Kennett Square, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Dec. 24, 1956, Ser. No. 630,072
1 Claim. (Cl. 260—17)

The process which comprises commingling an aqueous dispersion consisting essentially of water, polytetrafluoroethylene particles of a size between about 0.05 and about 5 microns and a dispersing agent with a solution in a water-immiscible organic liquid selected from the group consisting of heptane, toluene, carbon tetrachloride, chloroform, benzene, nitrobenzene, and chlorobenzene, of a water-immiscible film-forming polymer selected from the group consisting of polystyrene, polyisobutylene, polyvinyl toluene, nitrocellulose, polyethylene, and butadienestyrene copolymers; thoroughly agitating the resulting mixture in the presence of from about 0.1 to about 10% of a water-in-oil emulsifier for this system selected from the group consisting of a cationic surface-active agent comprising a mixture of tertiary amines, each tertiary amine having one alkyl group and two polyoxyethylene groups attached to each nitrogen, in the mixture of tertiary amines, the alkyl groups consisting of octyl (8%), decyl (9%), lauryl (47%), myristyl (18%), palmityl (8%), stearyl (5%) and oleyl (5%); a cationic surface-active agent comprising a mixture of tertiary amines, each tertiary amine having one alkyl group and two polyoxyethylene groups attached to each nitrogen, in the mixture of tertiary amines, the alkyl groups consisting of palmityl (6%), stearyl (93%) and oleyl (1%); a non-ionic surface-active agent prepared by condensing ethylene oxide with a hydrophobic base formed by the condensation of propylene oxide with propylene glycol, the molecular weight of polyoxyethylene chain being in the range 1500–1800 and the polyoxyethylene comprising 40% of the total weight; sorbitan monolaurate; and sorbitan monooleate; to form a water-in-oil emulsion, the ratio of polytetrafluorethylene to film-forming polymer being from about 1:2 to about 10:1 and extruding the resulting emulsion into filaments.

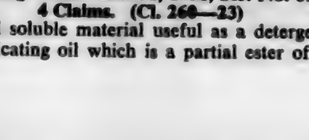
2,951,048

THERMOSETTING COATING COMPOSITIONS

Samuel Gusman, Wyncote, Pa., and Anton W. Rytina, Coshocton, Ohio, assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Filed Feb. 18, 1957, Ser. No. 640,588
9 Claims. (Cl. 260—21)

1. A composition comprising the butylated condensation product of a mixture of formaldehyde and N-t-octylmelamine of the formula



in the ratio of 1.5 to 2.5 moles of the formaldehyde per mole of the melamine, the butylated product being the reaction product of a mixture containing at least 3 moles of n-butyl alcohol per mole of the melamine/formaldehyde condensation product.

2,951,049

THE USE OF DIGLYCIDYL COMPOUNDS IN IMPROVED METHODS FOR PREPARING ALKYD RESINS

William Kammerer, Jr., Bethesda, Md., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Apr. 12, 1957, Ser. No. 652,341
13 Claims. (Cl. 260—22)

5. A process for producing an oil-modified alkyd resin comprising the steps: (1) esterifying at a temperature in excess of 200° C. a polyhydric alcohol, a polycarboxylic acid free of non-benzenoid unsaturation and a mono-carboxylic modifier selected from the group consisting of fatty acids having from 8 to 18 carbon atoms and partial polyhydric alcohol esters thereof until an acid number between about 15 and 50 is obtained, said esterification product being substantially free of hydroxyl groups, thereupon, (2) reacting to completion as indicated by an acid number not greater than 13 at a temperature between about 130° C. and 260° C. the esterification product of said step (1) with a diglycidyl ester of a dicarboxylic acid on the basis of from about 0.5:1.5 equivalents of oxirane oxygen as represented by said ester per equivalent of uncondensed carboxyl groups contained by the esterification product of said step (1).

2,951,050

LUBRICATING OIL ADDITIVES

Peter Joseph Vermont James Agius and Peter R. Morris, both of Abingdon, England, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed Oct. 31, 1956, Ser. No. 619,486
4 Claims. (Cl. 260—23)

1. An oil soluble material useful as a detergent additive in lubricating oil which is a partial ester of a polyvinyl alcohol having a molecular weight of 500 to 50,000 and material selected from the group consisting of carboxylic acids and acyl halides having from 8 to 24 carbon atoms per molecule, wherein about 30 to 95% of the hydroxyl groups of said alcohol are esterified and wherein the remaining hydroxyl groups are replaced by cyanoethoxy radicals.

2,951,051

PERFLUORO-SUBSTITUTED ALIPHATIC ACIDS AND DERIVATIVES THEREOF

George V. D. Tiers, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed June 26, 1957, Ser. No. 668,027
23 Claims. (Cl. 260—23)

1. A compound of the group consisting of terminally perfluoroalkyl-substituted aliphatic carboxylic acids represented by the formula:

$$R_f—CH_2—R—CH_2—COOH$$

wherein R_f represents a monovalent, functionally-unsubstituted perfluorinated group having from 4 to 12 carbon atoms and R is a straight chain alkylene group having from 1 to 12 carbon atoms, and the carboxyl-linked derivatives thereof selected from the class consisting of cationic salts, cationic complexes, acyl halides, anhydrides, amides, amidines, nitriles, hydrazides, peroxides, esters and orthoesters.

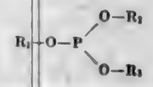
2,951,052

LIGHT STABILIZER MIXTURE

Joseph R. Darby, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,888
34 Claims. (Cl. 260—23)

1. A mixture containing a phosphite ester of the structure:



wherein R_1 and R_2 are selected from the group consisting of hydrogen and organic radicals containing from 4 to 18 carbon atoms and R_3 is an organic radical containing from 4 to 18 carbon atoms and 0.05 to 10 parts by weight of a 2-hydroxy-benzophenone which has an ultraviolet light cutoff of 85% in the spectral region of from about 340 to about 400 mu.

2,951,053

ELASTIC POLYURETHANE COMPOSITION AND METHOD FOR MAKING SAME

Franz Gottfried Reuter and Jurgen Ulderup, Lemforde, Hannover, Germany, assignors, by mesne assignments, to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Filed Feb. 15, 1956, Ser. No. 565,555
Claims priority, application Germany Feb. 17, 1955
6 Claims. (Cl. 260—28)

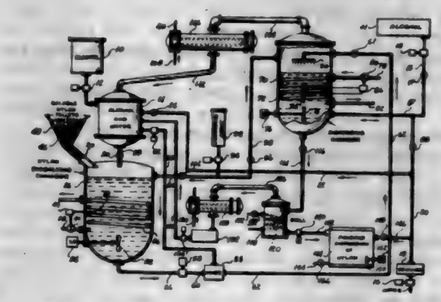
1. An elastic polyurethane containing from about 0.01 percent to about 5 percent by weight, based on the weight of said polyurethane, of a member selected from the group consisting of molybdenum disulfide, molybdenum diselenide, molybdenum ditelluride, tungsten sulfide and titanium sulfide and from about 0.01 percent to about 5 percent by weight, based on the weigh of said polyurethane, of a member selected from the group consisting of silicone oil having a viscosity of from about 50 centistokes to about 500 centistokes at 20° C., petroleum lubricating oil, kerosene, hydrocarbon waxes, montan wax, beeswax, carnauba wax, and mixtures thereof.

2,951,054

METHOD OF MAKING AQUEOUS DISPERSIONS OF NYLON

Paul S. Hess, West Orange, N.J., assignor to General Dispersions, Inc., Paterson, N.J., a corporation of New Jersey

Filed Nov. 16, 1955, Ser. No. 547,095
4 Claims. (Cl. 260—29.2)



1. A method of making an aqueous dispersion of a synthetic, alcohol-soluble, orientable, fiber-forming, long chain polymeric carbonamide which has recurring amide groups as an integral part of the main polymer chain, which includes the steps of dissolving between one percent and six percent by weight of said polymeric amide in a mixture of a low boiling aliphatic alcohol selected from the group consisting of methyl alcohol, ethyl alcohol and propyl alcohol and water, which mixture contains between forty-five percent and twenty percent by weight of water and between fifty-five percent and eighty percent by weight of said aliphatic alcohol in a dissolving zone; heating a mixture of water and said alcohol and from .02 percent by weight to 2 percent by weight of an anionic hydrophilic wetting agent in a dispersing zone to its boiling temperature, said last named mixture containing from about 55% to about 83% by weight of water; continuously introducing the solution of said polymeric amide from the dissolving zone into said dispersing zone; continuously introducing water and said alcohol into said dispersing zone to substantially maintain the level of liquid in said dispersing zone and to control and maintain the concentration of the alcohol-water mixture; maintaining the mixture in said dispersing zone at the boiling temperature thereof; continuously removing alcohol and water vapors from said dispersing zone; and continuously withdrawing an alcoholic aqueous dispersion of polymeric amide from said dispersing zone.

2,951,055

STABILIZATION OF ACRYLONITRILE COPOLYMERS

Lionel B. Luttinger, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Jan. 30, 1959, Ser. No. 790,060
7 Claims. (Cl. 260—45.7)

1. A resinous composition having increased color stability which comprises the polymerization product of from about 5% to about 40% by weight of acrylonitrile and from about 95% to about 60% by weight of a compound selected from the group consisting of styrene and methylstyrene, and dispersed therein from about 0.002% to about 2% by weight based on the weight of the monomer of a compound selected from the group consisting of triisooctyl phosphite and phosphorous acid-[2,2-bis-(phenoxyphosphinooxymethyl)trimethylene] tetraphenyl ester.

2,951,056

LINEAR POLYETHYLENE STABILIZED WITH ORGANIC ESTERS

Charles R. Pfeifer and Robert L. Hudson, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Filed Feb. 24, 1956, Ser. No. 567,454
12 Claims. (Cl. 260—45.8)

1. A non-corrosive composition comprising polyethylene prepared by polymerizing ethylene in the presence of a halogen-containing catalyst formed by admixing an aluminum alkyl with a titanium halide, said polyethylene containing halogen-including catalyst residues after having been polymerized which cause the presence of hydrogen halide and like corrodents in the polymerized material, and a corrosion-inhibiting quantity of a glycidic ester compound which has a receptor function for and is capable of counter-effecting hydrogen halide and like corrodents, said corrosion-inhibiting compound being selected from the group consisting of methyl 6-cyclohexyl - 1 - oxaspiro - (2,5) - octane - 2 - carboxylate, methyl α - ethyl - β - 4 - methoxyphenylglycidate, ethyl α - methyl - β - (3,4 - methylenedioxyphenyl) - glycidate, ethyl α - methyl - β - (3,4 - dimethoxyphenyl)-glycidate, methyl α - methyl - β - (2,4 - dichlorophenyl) - glycidate, 2 - ethylhexyl 1 - oxaspiro - (2,5) - octane - 2 - carboxylate, and methyl α-n-decyl-β-(p-methoxyphenyl)-glycidate.

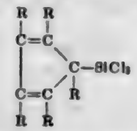
2,951,057

CYCLO-DIENE SILANE DERIVATIVES

Herbert K. Wiese, Cranford, and Joseph F. Nelson and Charles E. Morrell, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Filed July 13, 1953, Ser. No. 367,758
13 Claims. (Cl. 260—46.5)

1. A compound having the following structural formula:



where R is a radical selected from the group consisting of hydrogen and lower alkyl.

13. A hard polymer film of a hydrolyzed cyclopentadienyl triisopropoxysilane supported on a solid surface, the silicon atom being attached to the methylene carbon atom of the cyclopentadiene ring, said polymer film being formed by reacting a cyclopentadienyl trichlorosilane with isopropyl alcohol, said cyclopentadienyl radical of the trichlorosilane being selected from the group consisting of cyclopentadienyl and methyl substituted cyclopentadienyl radicals, hydrolyzing the resulting cyclopentadienyl triisopropoxysilane, and spreading the hydrolyzed cyclopentadienyl tri-isopropoxysilane on the solid surface under ordinary atmospheric conditions.

2,951,058

RESINOUS CURING PROCESS USING TETRAHYDRO-1 H-OXAZOLO-(3,4,c)-OXAZOLE-7 a-METHANOL

Ivor H. Updegraff, Stamford, and Richard H. Hunt, North Haven, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Dec. 24, 1958, Ser. No. 782,684
4 Claims. (Cl. 260—59)

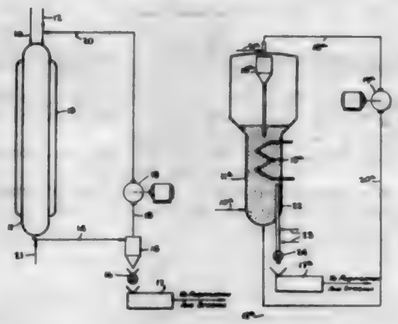
1. A process for preparing substantially infusible, insoluble resinous products which comprises heating an essentially linear, fusible condensate of a monohydroxy benzene and formaldehyde in the presence of from about 5 to 25% based on the weight of said condensate of tetrahydro-1 H-oxazolo-(3,4 c)-oxazole-7 a-methanol.

2,951,059

VAPOR PHASE POLYMERIZATION OF TRIOXANE

Oliver H. Axtell, Jr., Scotch Plains, and Charles M. Clarke, Springfield, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

Filed Mar. 24, 1958, Ser. No. 723,549
16 Claims. (Cl. 260—67)



1. A process for preparing a high molecular weight polyoxymethylene which comprises continuously introducing vapor phase trioxane into a confined reaction zone having a surface cooled by passage of a cooling medium, continuously introducing into said reaction zone in vapor phase a catalyst for the polymerization of trioxane to polyoxymethylene to promote the formation of solid polyoxymethylene particles therein, and withdrawing said solid polyoxymethylene particles from said reaction zone.

2,951,060

PROCESS FOR PREPARING POLYESTERS IN THE PRESENCE OF MANGANOUS CARBOXYLATE CATALYSTS

Harry R. Billica, Greenville, N.C., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Filed Mar. 2, 1954, Ser. No. 413,703
12 Claims. (Cl. 260—75)

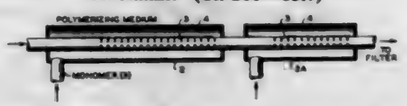
1. In the process for manufacturing filament- and film-forming polymethylene terephthalate wherein a glycol of the formula, $HO(CH_2)_nOH$, where "n" is an integer from 2 to 10 inclusive, is reacted with an alkyl ester of terephthalic acid having from 1 to 4 carbon atoms in the alkyl group under conditions to effect ester interchange, and the resulting glycol terephthalate is thereafter polymerized under conditions to form polymethylene terephthalate, the improvement which comprises carrying out the ester interchange in the presence of a catalyst from the group consisting of the manganous salts of aliphatic monocarboxylic acids and aliphatic hydroxy monocarboxylic acids, said acids containing not more than six carbon atoms.

2,951,061

PROCESS AND APPARATUS FOR CONTACTING MATERIALS

Paul L. Gomory, Broadmoor, Md., assignor to Phillips Petroleum Company, a corporation of Delaware

Filed Feb. 16, 1956, Ser. No. 565,897
12 Claims. (Cl. 260—83.7)



1. A method for polymerizing a polymerizable monomer which comprises flowing a polymerizing medium through a pervious conduit, flowing said monomer through a nonpervious conduit enclosing said pervious conduit, forcing said monomer from said nonpervious conduit into said pervious conduit, commingling said monomer with said polymerizing medium through turbulence of flow, and recovering a polymeric product.

2,951,062

PROCESS FOR POLYMERIZING VINYL CHLORIDE

Rudolph D. Deanin, Florham Park, and Richard G. Dell, Fords, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Filed Feb. 17, 1956, Ser. No. 566,086
10 Claims. (Cl. 260—87.1)

1. In a process wherein a monomeric material substantially consisting of members of the group consisting of vinyl chloride and mixtures of vinyl chloride with vinyl acetate, of which mixtures more than 50% consists of vinyl chloride, is polymerized in water containing peroxide catalyst promoting the polymerization and while dispersed in said water by a dispersing agent, that improvement which comprises having present as said dispersing agent not less than 0.01%, by weight of the monomers, of methyl cellulose having a solution viscosity no greater than 25 cps. as essentially the entire dispersant, and maintaining the polymerization mixture at a temperature no higher than about 80° C.

2,951,063

COPOLYMERS OF FLUORINATED DIENES

Archibald N. Bolstad, Maplewood, and Elizabeth Shen Lo, Elizabeth, N.J., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed July 1, 1955, Ser. No. 519,652
5 Claims. (Cl. 260—87.5)

1. An elastomeric copolymer of between about 53 and about 94 mol percent of fluoroprene and correspondingly between about 47 and about 6 mol percent of a fluorinated butadiene selected from the group consisting of 1,1,2-trifluorobutadiene, 1,1,2,4-tetrafluorobutadiene, 1,1-2,4,4-pentafluorobutadiene, and perfluorobutadiene.

2,951,064

NEW HALOGEN-CONTAINING POLYMERS AND PREPARATION THEREOF

Elizabeth S. Lo, Elizabeth, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Nov. 18, 1955, Ser. No. 547,825
12 Claims. (Cl. 260—87.5)

1. A novel process which comprises copolymerizing a monomeric mixture of about 20–60 mol percent 2-chloro-3,3,3-trifluoropropene and about 80–40 mol percent of a comonomer selected from the group consisting of 2-fluorobutadiene and 2-trifluoromethyl-butadiene at a temperature between about —30° C. and about 100° C. in an aqueous polymerization system comprising a peroxy compound as the polymerization promoter.

2,951,065

2-TRIFLUOROMETHYL-BUTADIENE COPOLYMERS AND PREPARATION THEREOF

Elizabeth S. Lo, Elizabeth, N.J., and George H. Crawford, Jr., Staten Island, N.Y., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Filed Oct. 28, 1955, Ser. No. 543,581
16 Claims. (Cl. 260—87.7)

1. A process which comprises polymerizing a mixture consisting essentially of between about 5 and about 90 mol percent of 2-trifluoromethyl-butadiene and between about 95 and 10 mol percent of a fluorinated monoolefin having a maximum of six carbon atoms and having only fluorine and hydrogen substituents on said carbon atoms, said polymerization being effected at a temperature between about —15° C. and about 150° C. in contact with an initiator selected from the group consisting of free radical forming initiators and ionic initiators.

2,951,066

THREE-COMPONENT OLEFIN POLYMERIZATION CATALYST CONTAINING AN ALUMINUM SESQUIHALIDE AND A TRANSITION METAL COMPOUND

Harry W. Coover, Jr., and Newton H. Shearer, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 31, 1958, Ser. No. 724,915
8 Claims. (Cl. 260—93.7)

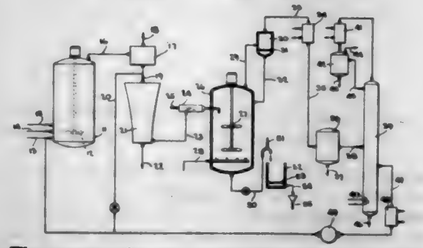
1. In the polymerization of propylene to form solid crystalline polymer, the improvement which comprises effecting the polymerization in liquid dispersion in an inert liquid hydrocarbon vehicle and in the presence of a catalytic mixture consisting essentially of a molar ratio of ethyl aluminum sesquichloride and titanium trichloride of 1:0.5 to 1:2 and a molar ratio of ethyl aluminum sesquichloride and triphenyl arsine of 1:1 to 1:0.25.

2,951,067

SOLVENT RECOVERY

Burton E. Cash, Pasadena, Tex., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

Filed Nov. 20, 1957, Ser. No. 697,653
20 Claims. (Cl. 260—94.9)



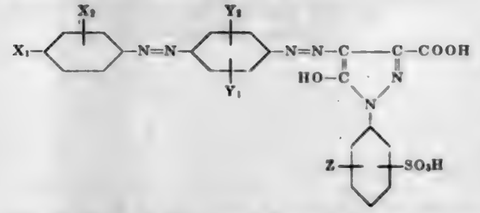
1. The process for the polymerization of an olefin which comprises contacting an aliphatic olefin, a solid catalyst for polymerizing said olefin into a normally solid polymer and a solvent at a pressure sufficient to maintain said solvent in liquid state, thereby to form a slurry of said catalyst in said solvent having a polymer of said olefin dissolved therein, separating said slurry into a liquid stream substantially free from catalyst and comprising a solution of polymer in solvent and a solids stream comprising waste catalyst associated with said solution, discharging said solids stream into a moving body of water under conditions of temperature and pressure that maintain the solvent in liquid phase and precipitating the polymer dissolved in the associated solution to form a mixture of waste catalyst and polymer solids slurried in water and liquid solvent, and then distilling off the solvent from said mixture, said precipitation being effected prior to said distillation, said moving body of water being cooler than said solids stream, said precipitation being effected in a zone maintained under a pressure sufficient to prevent volatilization of said solvent, and said distillation being effected in another zone maintained under a lower pressure than the first-named zone.

2,951,068
POLYMERIZATION PROCESS
Ervin G. Pritchett, Silverton, and Harry Greenberg, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed May 12, 1958, Ser. No. 734,421
4 Claims. (Cl. 260—94.9)

1. In a process for polymerizing ethylene to a normally solid polyethylene by subjecting ethylene at a temperature of from about —20° C. to about 300° C. and a pressure of from substantially atmospheric to about 5000 p.s.i.g. in the presence of a polymerization catalyst comprising a tetrahalide of titanium and a dispersion of sodium in an inert liquid in which the sodium particles average less than about five microns in size, the improvement which comprises utilizing as the sodium component of said catalyst sodium of said particle size characteristics dispersed in an inert liquid and prepared by subdividing sodium to said particle size characteristics in the presence of from about 0.1 to about 1.0% of water based on the weight of sodium.

2,951,069
DISAZO-DYESTUFFS CONTAINING METAL
Erich Brenneisen, Hofheim (Taunus), and Richard Huss and Arthur Siebert, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Filed Mar. 26, 1957, Ser. No. 648,499
Claims priority, application Germany Mar. 31, 1956
6 Claims. (Cl. 260—147)

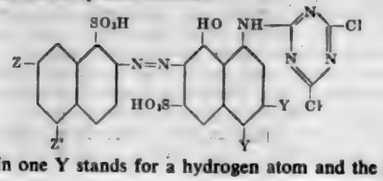
1. Salts selected from the group consisting of copper, nickel, cobalt and zinc salts of disazo-dyestuffs corresponding to the following general formula



wherein X_1 stands for a member selected from the group consisting of hydrogen, methyl and carboxyl, X_2 stands for a member selected from the group consisting of hydrogen and methyl, Y_1 and Y_2 stand for members selected from the group consisting of hydrogen and methyl, and Z stands for a member selected from the group consisting of hydrogen and sulfonic acid.

2,951,070
MONOAZO DYESTUFFS
William Elliot Stephen and Colin George Tilley, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed June 16, 1958, Ser. No. 742,039
Claims priority, application Great Britain June 26, 1957
5 Claims. (Cl. 260—153)

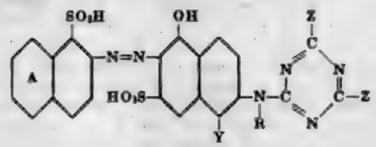
1. Monoazo dyestuffs which are represented in the free acid form by the formula:



wherein one Y stands for a hydrogen atom and the other Y stands for a member selected from the class consisting of a hydrogen atom and a sulfo group, Z and Z' are independently selected from the class consisting of a hydrogen atom and a sulfo group.

2,951,071
NEW MONOAZO DYESTUFFS
Colin George Tilley, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Oct. 27, 1958, Ser. No. 769,590
Claims priority, application Great Britain Oct. 30, 1957
8 Claims. (Cl. 260—153)

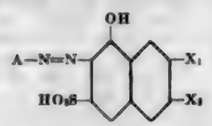
1. Monoazo dyestuffs which, in the acid form, are represented by the formula:



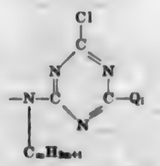
wherein the naphthalene nucleus A is substituted by members selected from the class consisting of hydrogen and sulfonic acid, Y stands for a substituent selected from the group consisting of hydrogen, chlorine and a sulphonic acid group, R stands for a member selected from the group consisting of hydrogen atom and a lower alkyl group, and Z stands for a halogen atom selected from the group consisting of chlorine and bromine.

2,951,072
MONOAZO DYESTUFFS OF THE AZO NAPHTHALENE SERIES CONTAINING A MONOHALOGENO-s-TRIAZINE NUCLEUS
Colin George Tilley and Frederick Andrew Waite, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Mar. 20, 1959, Ser. No. 800,654
Claims priority, application Great Britain Feb. 27, 1959
1 Claim. (Cl. 260—153)

Monoazo dyestuffs represented in the acid form by the formula:



wherein A stands for a member selected from the group consisting of 2-naphthyl-1-sulfonic acid, 2-naphthyl-1:5-disulfonic acid, and 2-naphthyl-1:5:7-trisulfonic acid, one of X_1 and X_2 stands for a hydrogen atom and the other for a group of the formula:



wherein *m* is an integer from 1 to 4 and Q_1 stands for a radical selected from the group consisting of amino, methoxy, phenoxy, anilino and sulphonated anilino.

2,951,073
PROCESS OF PREPARING PHENYL BENZO-γ-PYRONE COMPOUNDS SUBSTITUTED BY HYDROXYL GROUPS, AND PRODUCT
Ursula Kranen-Fiedler, Vancouver, British Columbia, Canada, and Richard Neu, Mannheim, Germany, assignors to Dr. Willmar Schwabe G.m.b.H., Karlsruhe-Durlach, Germany, a corporation of Germany
No Drawing. Filed Aug. 30, 1957, Ser. No. 699,432
7 Claims. (Cl. 260—210)

1. In a process of producing 2-phenyl benzo-γ-pyrone compounds selected from the group consisting of quercetin, vitexin, and their monoglycosides, the steps which comprise diluting a concentrated methanol extract of leaves, flowers, and fruits of plants of the genus Crataegus with water to precipitate chlorophyll, removing said precipitate, concentrating the remaining filtrate, adjusting the concentrated filtrate to a pH of about 4.0 by the addition of acetic acid, adding thereto a saturated aqueous solution of neutral lead acetate, allowing the precipitate to settle, removing the precipitate containing the lead chelate of quercetin, adjusting the pH-value of the resulting filtrate to a pH of about 7.0, removing the precipitate containing the lead chelate of hyperin, adjusting the pH-value of the resulting filtrate to a pH of about 8.0, removing the precipitate containing the lead chelate of vitexin, adjusting the pH-value of the resulting filtrate to a pH of about 10.0, removing the precipitate containing the lead chelate of vitexin-4-rhamnoside, suspending the lead chelate precipitates, each separately, in hot methanol, introducing hydrogen sulfide into the resulting suspension, removing the precipitated lead sulfide, and isolating the respective 2-phenyl benzo-γ-pyrone compounds from the filtrates.

2,951,074
C^{14} CORTICAL STEROIDS AND METHODS OF PREPARING SAME
John M. Chemerda, Metuchen, and Ralph F. Hirschmann, Scotch Plains, N.J., and Nathan G. Steinberg, Brooklyn, N.Y., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 30, 1958, Ser. No. 731,883
37 Claims. (Cl. 260—239.55)

29. The process which comprises reacting 17-20, 20,21-bismethylenedioxy - Δ^5 - 5 - hydroxy - 11 - keto - 3//5-4-norpregnen-3-oic acid 3,5-lactone with radio-active methyl magnesium halide and with base thereby producing the 17-20, 20-21-bismethylenedioxy derivative of cortisone-4-C^{14}, and treating said latter compound with a strong acid to produce cortisone-4-C^{14}.

36. The 17-20, 20-21-bismethylenedioxy derivative of cortisone-4-C^{14}.

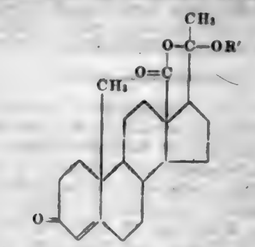
2,951,075
16-LOWER ALKYL STEROIDS
Meyer Sletzinger, North Plainfield, and Sandor Karady, Rahway, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Filed Apr. 25, 1958, Ser. No. 730,771
10 Claims. (Cl. 260—239.57)

1. 16α - lower alkyl - 3α,17α - dihydroxy - 11,20 - dioxo - 21 - pregnaneglyoxylic acid.

4. The process which comprises reacting 3α-hydroxy-16α-methyl-11,20-dioxo - 21 - pregnaneglyoxylic acid with acetic anhydride in the presence of 2,4-dinitrobenzenesulfonic acid to form an isomeric mixture of 3α,23-diacetoxy - 16α - methyl - 21 - normethyl - 11 - oxo-17(20),22 - choladieno - 24(20) - lactone.

2,951,076
13-ALDEHYDO- AND 13 - CARBOXY - 18 - NOR-4-PREGNENE - 3,20 - DIONE AND DERIVATIVES THEREOF
Raphael Pappo, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware
No Drawing. Filed Sept. 24, 1959, Ser. No. 841,946
8 Claims. (Cl. 260—239.57)

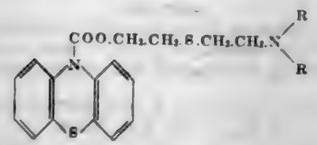
5. A compound of the structural formula



wherein R' is a member of the class consisting of hydrogen and lower alkyl radicals.

2,951,077
BASIC ALKYLTHIOALKYL ESTERS OF PHENOTHIAZINE-10-CARBOXYLIC ACID AND THEIR SALTS
Gordon S. Myers, St. Laurent, Quebec, and Martin Arnold Davis, Montreal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Filed Aug. 14, 1958, Ser. No. 754,940
10 Claims. (Cl. 260—243)

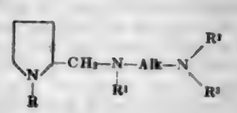
1. A compound selected from the group which consists of basic esters of the formula



where R represents lower alkyl; and the citrate, maleate and methobromide salts of said basic esters.

2,951,078
2-(AMINOALKYLAMINO)-METHYLPYRROLIDINES
John H. Biel, Milwaukee, Wis., assignor, by mesne assignments, to Lakeside Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware
No Drawing. Filed Aug. 21, 1957, Ser. No. 679,521
10 Claims. (Cl. 260—247.5)

1. A member of the group consisting of compounds of the formula



wherein R is a member of the group consisting of lower alkyl, propynyl, allyl and phenyl-lower alkyl groups, R^1 is a member of the group consisting of hydrogen, lower alkyl and phenyl-lower alkyl groups, Alk is an alkylene group of 2 to 10 carbons, and R^2 and R^3 are members of the group consisting of hydrogen, lower alkyl, cyclohexyl, cyclopentyl, allyl, phenyl, hydroxyphenyl, lower alkoxyphenyl, halophenyl, acetoxyphenyl and phenyl-lower alkyl groups and groups formed by joining R^2 and R^3 to form a ring with the nitrogen in the ring of the group consisting of pyrrolidino, piperidino, morpholino, piperazino, N-lower alkyl-4-piperazino, N-halobenzyl - 4 - piperazino,

N-p-loweralkoxybenzyl-N-2-pyridylamino, N - phenyl - N-benzylamino, N - methyl - N - benzodioxanylmethylamino, N-2-thienyl-N-2-pyridylamino, N-o-halophenyl - 4 - piperazino, N-amino-4-piperazino, di-loweralkyl hydrazino, 7-theophyllino, 1,2,3,4-tetrahydroisoquinolino, 1,2,3,4-tetrahydroquinolino, isoindolino, 4-methyl-1-piperazino, 3-hydroxypiperidino and 4-hydroxypiperidino, nontoxic acid addition salts thereof and nontoxic quaternary ammonium salts thereof of the group consisting of dimethyl sulfate, methyl bromide, ethyl bromide, methyl iodide, o-chlorobenzyl bromide and phenethyl iodide.

2,951,079

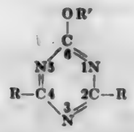
2,4-BIS-HALOALKYL-6-ALKOXY-1,3,5-TRIAZINES AND THEIR PREPARATION

Hansjuergen A. Schroeder and Christoph J. Grundmann, Columbus, Ohio, assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Filed Aug. 15, 1957, Ser. No. 678,448

10 Claims. (Cl. 260—248)

1. 2,4-bis-haloalkyl-6-alkoxy-1,3,5-triazines of the formula



wherein R is a haloalkyl radical containing from 1 to 12 carbon atoms and R′ is an alkyl radical containing from 1 to 8 carbon atoms.

2. 2,4-bis-trichloromethyl-6-ethoxy-1,3,5-triazine.

2,951,080

NOVEL PHENYL-SUBSTITUTED PIPERIDINES

Albert Pohland, Indianapolis, Ind., assignor to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Filed Aug. 5, 1957, Ser. No. 676,431

1 Claim. (Cl. 260—294.3)

1 - acetoxy - 3 - (4 - carboethoxy - 4 - phenylpiperidino)-1-phenylpropane.

2,951,081

PROCESS FOR MAKING N-METHYL PYRROLE

David S. Rosenberg and Edward Weil, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, a corporation of New York

Filed May 20, 1957, Ser. No. 660,248

1 Claim. (Cl. 260—313)

A process for the production of N-methyl pyrrole in a continuous fashion which comprises: passing anhydrous furan and anhydrous methylamine in a molar ratio of about eight to twelve moles of furan per mole of methylamine through a reactor containing an activated alumina catalyst, maintaining said reactor at a temperature of about three hundred and twenty to three hundred and eighty degrees centigrade, cooling the effluent reaction mixture to below about thirty-two degrees centigrade to effect essentially complete condensation, passing said condensate to a stripping column wherein a distillate is stripped off leaving a residuum having a boiling point approximating that of N-methyl pyrrole, said distillate consisting essentially of unreacted furan and methylamine both of these starting materials being recycled from the stripping column to said reactor, and said residuum being passed to a fractionating column wherein a fraction boiling at the boiling point of N-methyl pyrrole is removed, said removed fraction being substantially pure N-methyl pyrrole.

2,951,082

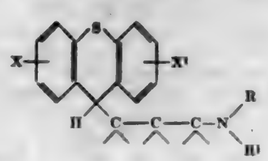
SUBSTITUTED THIAXANTHENES

James M. Sprague and Edward L. Engelhardt, Gwynedd Valley, Pa., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Filed July 9, 1956, Ser. No. 596,384

8 Claims. (Cl. 260—328)

1. Thiaxanthene compounds selected from the class consisting of compounds having the general structural formula



and non-toxic acid addition salts thereof, wherein X is selected from the group consisting of hydrogen, halogen, lower alkyl and lower alkoxy radicals; X^1 is selected from the group consisting of halogen, lower alkyl and lower alkoxy radicals;



is selected from the group consisting of di-lower-alkylamino, 1-piperidyl, 1-pyrrolidyl and 4-morpholinyl groups; and the valences attached to the trimethylene chain are attached to hydrogen atoms.

2,951,083

PRODUCTION OF MUCOCHLORIC ANHYDRIDE

Everett E. Gilbert, Morris Township, and Pasquale Lombardo, Newark, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Filed Apr. 9, 1958, Ser. No. 727,236

6 Claims. (Cl. 260—343.6)

1. A process for the production of mucochloric anhydride which comprises refluxing mucochloric acid, in the presence of (1) a reaction medium consisting essentially of a member of the group consisting of dichlorobenzenes melting below 50° C., trichlorobenzenes melting below 50° C. and ortho-chlorotoluene, and (2) a catalyst selected from the group consisting of benzenesulfonic acid, dichlorobenzenesulfonic acids, trichlorobenzenesulfonic acids, toluenesulfonic acids and chlorotoluenesulfonic acids.

2,951,084

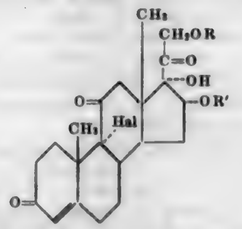
CORTISONE DERIVATIVES AND METHOD OF PREPARING THE SAME

Seymour Bernstein, Pearl River, N.Y., and Robert H. Lenhard, Ridgefield Park, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Filed Aug. 20, 1956, Ser. No. 605,204

9 Claims. (Cl. 260—397.45)

1. A compound having the general formula



in which R and R′ are the same and are members of the

group consisting of hydrogen and lower alkanoyl radicals and Hal is a halogen of the group consisting of fluoro and chloro atoms.

2,951,085

TETRAMETHYL TITANIUM AND PROCESS OF PREPARING SAME

Karl Clauss, Kelkheim-Hornau (Taunus), and Claus Beermann, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Filed Apr. 12, 1957, Ser. No. 652,382

Claims priority, application Germany Apr. 14, 1956

7 Claims. (Cl. 260—429.5)

1. In a process wherein a titanium tetrahalide, the halogen of which has an atomic weight of 35 to 137, is reacted with a member selected from the group consisting of methyl alkali metal, dimethyl alkaline earth metal, and a methyl alkaline earth metal halide with the exclusion of air and moisture, the improvement comprising conducting the reaction at a temperature of —50 to —80° C. and recovering tetramethyl titanium from the reaction mixture by distillation.

2,951,086

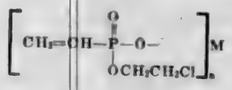
METALLO β-CHLORETHYL VINYLPHOSPHONATES

David H. Chadwick, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Filed Jan. 19, 1959, Ser. No. 787,376

8 Claims. (Cl. 260—429.7)

1. Salts of the structural formula



where M is a metal having a valence greater than 1, selected from the group consisting of tin, lead, antimony, bismuth, arsenic, copper, iron, cobalt, nickel, aluminum and metals of group II of the periodic table, and where *n* is the valence of the metal.

2,951,087

CLAY COMPLEXES WITH CONJUGATED UNSATURATED ALIPHATIC COMPOUNDS OF FOUR TO FIVE CARBON ATOMS

Ernst A. Hauser, deceased, late of Cambridge, Mass., by The Merchants National Bank of Boston, Boston, Mass., executor, and Robert C. Kollman, Rockville Centre, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Filed Mar. 28, 1958, Ser. No. 724,520

6 Claims. (Cl. 260—448)

1. A clay-organic complex, said complex being the reaction product of a clay selected from the group consisting of naturally occurring clays and acid-modified clays with an unsaturated organic compound selected from the group consisting of low-molecular-weight conjugated unsubstituted aliphatic hydrocarbons and low-molecular-weight conjugated halogen-substituted aliphatic hydrocarbons, said unsaturated organic compound containing from four to five carbon atoms.

2,951,088

DIAMINO-N,N,N′,N′-TETRAKIS-PHOSPHORIC ACID DERIVATIVES

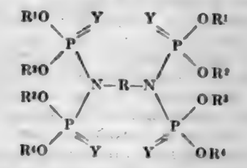
Arno Debo, Heidelberg, Germany, assignor to Firma Joh. A. Benckiser G.m.b.H. Chemische Fabrik, Ludwigshafen (Rhine), Germany

No Drawing. Filed Aug. 4, 1958, Ser. No. 753,983

Claims priority, application Germany Aug. 31, 1957

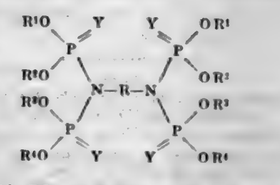
18 Claims. (Cl. 260—461)

1. A compound having the following general formula:

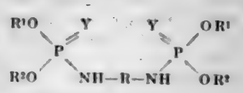


wherein R^1, R^2, R^3 and R^4 are each selected from the group consisting of alkyl radicals of up to 6 carbon atoms and the phenyl, benzyl, tolyl and cresyl radicals; wherein Y is selected from the group consisting of oxygen and sulfur; and wherein R is a divalent hydrocarbon radical selected from the group consisting of ethylene, trimethylene, tetramethylene, pentamethylene, hexamethylene, phenylene, diphenylene, diphenylenemethane, naphthylene and 2,6-pyridine radicals.

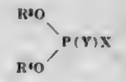
10. A method of producing a compound having the following general formula:



wherein R^1, R^2, R^3 and R^4 are each selected from the group consisting of alkyl radicals of up to 6 carbon atoms and the phenyl, benzyl, tolyl, and cresyl radicals, wherein Y is selected from the group consisting of oxygen and sulfur, and wherein R is a divalent radical selected from the group consisting of ethylene, trimethylene, tetramethylene, pentamethylene, hexamethylene, phenylene, diphenylene, diphenylmethane, naphthylene and 2,6-pyridine radicals, comprising the steps of reacting a diamino-N,N′-bis-phosphoric acid derivative of the following general formula:



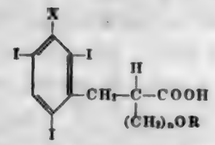
wherein R^1, R^2, R and Y have the same definitions as above with a halogen-phosphoric acid-di-ester having the following general formula:



wherein R^3, R^4 and Y have the same definitions as above and wherein X is a halogen in the presence of a substance selected from the group consisting of alkali metals and alkali metal hydrides; and recovering the thus formed compound.

2,951,089
ALKYL ETHERS OF POLYIODOPHENYL PROPIONIC ACIDS
Helen Florence Ginsberg, Montclair, and Domenick Papa, Bloomfield, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey
No Drawing. Filed Dec. 28, 1953, Ser. No. 400,812
8 Claims. (Cl. 260—519)

1. A compound of the class consisting of acids of the formula



and their alkali metal, alkaline earth metal, lower alkylamine and lower alkylolamine salts X being a member of the group consisting of hydroxy and amino, while R is a lower alkyl group, and *n* is an integer from 0 to 2, the group $-(CH_2)_nOR$ containing from 1 to 4 carbon atoms, said compound on oral administration being effective in visualizing the gall bladder on X-ray examination.

2,951,090
PREPARATION OF DL-GLUTAMINE
Ludwik Ujejski, Montreal, Quebec, and Kenneth M. Gaver, Preville, Montreal, Quebec, Canada, assignors to The Ogilvie Flour Mills Co., Ltd., Montreal, Quebec, Canada, a corporation of Canada
No Drawing. Filed Apr. 17, 1958, Ser. No. 729,067
4 Claims. (Cl. 260—534)

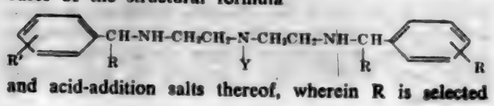
1. A process of producing glutamine which comprises reacting phthaloyl-DL-glutamine in solution in substantially non-aqueous ethanol with phenylhydrazine in the presence of an organic base.

2,951,091
PROCESS FOR THE CONCENTRATION OF FORMIC ACID SOLUTIONS
Roger L. Pilloton, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Filed Jan. 28, 1958, Ser. No. 711,671
5 Claims. (Cl. 260—542)

1. A process for the concentration of formic acid from aqueous solutions which comprises admixing aqueous formic acid solution with at least one salt selected from the group consisting of calcium chloride, magnesium chloride and magnesium sulfate, contacting said mixture with at least one liquid organic extractant selected from the group consisting of dialkyl ethers and dialkyl ketones wherein the alkyl groups of said ethers and ketones have up to about 10 carbon atoms, and said ethers and ketones have boiling points from about 34 to 190 degree centigrade, said liquid organic extractant having substantial insolubility in water and an ability to produce a non-azeotropic mixture with formic acid; separating the aqueous and organic phase from each other; and recovering the formic acid from said organic phase.

2,951,092
TRIAMINE DERIVATIVES
Francis A. Sowinski, Nixon, William A. Lott, Maplewood, and Jack Bernstein, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Filed Dec. 13, 1956, Ser. No. 628,010
3 Claims. (Cl. 260—553)

1. A compound selected from the group consisting of bases of the structural formula



and acid-addition salts thereof, wherein R is selected from the group consisting of hydrogen, phenyl, chlorophenyl, (lower alkyl)phenyl and (lower alkoxy)phenyl; R′ is selected from the group consisting of hydrogen, halogen, lower alkyl and lower alkoxy; and Y is selected from the group consisting of lower alkanoyl, carbamyl, (lower alkyl)carbamyl and di(lower alkyl)carbamyl.

2,951,093
MANUFACTURE OF TRIALKYL BORANES
Robert Craig Anderson, Stevenston, Scotland, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Filed Aug. 4, 1958, Ser. No. 753,142
Claims priority, application Great Britain Aug. 30, 1957
4 Claims. (Cl. 260—606.5)

1. A process for the production of trialkyl boranes comprising heating in an inert atmosphere and to a temperature exceeding 220° C., a mixture consisting essentially of a boron compound selected from the group consisting of boric oxide and anhydrous alkali metal borate, and an organo-aluminum complex compound prepared by reacting an alkali metal halide having the general formula MX with a monoalkyl aluminum dihalide having the general formula $RAlY_2$, wherein M is an alkali metal, R is an alkyl group containing 1 to 3 carbon atoms, and X and Y are halogens selected from the group consisting of chlorine and bromine, with the proviso that when R is an alkyl group containing 2 to 3 carbon atoms at least one of X and Y is chlorine, and condensing the vapor of the resulting trialkyl borane.

2,951,094
TRIETHERS OF GLYCEROL
Robert E. Hefner and Malcolm E. Pruitt, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed May 28, 1954, Ser. No. 433,255
1 Claim. (Cl. 260—615)

A process for producing trialkyl triethers of (monohydroxy mixed polyoxyalkylene) monoethers of glycerol comprising contacting a dialkyl diether of glycerol, wherein the alkyl groups contain 1 to 8 carbon atoms, with metallic sodium in a relatively inert diluent until at least about 80 percent of the diether of glycerol has been converted to the sodium salt thereof; condensing said dialkyl diether of glycerol with 5 to 50 moles of a mixture of at least two vicinal alkylene oxides, the alkylene groups of which contain 2 to 4 carbon atoms, said mixture containing not more than 90 mole percent of any one oxide nor more than 50 mole percent of ethylene oxide, said condensation being effected under substantially anhydrous conditions, in a relatively inert diluent, and at a temperature of about 60° to 200° C.; and finally condensing the sodium salt of the (monohydroxy mixed polyoxyalkylene) monoether of the dialkyl diether of glycerol thus produced with a lower alkyl halide at a temperature of about 60° to 160° C. until substantially all the sodium salt has been converted to alkyl ether.

2,951,095
PRODUCTION OF PENTAERYTHRITOL
Oren V. Lake, Jr., Max O. Robeson, and Wallace E. Taylor, Corpus Christi, Tex., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware
No Drawing. Filed Oct. 29, 1952, Ser. No. 317,567
11 Claims. (Cl. 260—635)

1. Process for the production of pentaerythritol which comprises mixing together acetaldehyde, about 10 to 20 moles of formaldehyde per mole of acetaldehyde, water and an inorganic base rapidly and with agitation in a period of less than 2 minutes to cause said aldehydes and said base to react at a temperature of about 45 to 75° C.

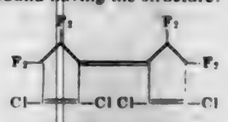
2,951,096
LIQUID POLYMERS OF POLYUNSATURATED FLUOROOLEFINS
William T. Miller, 100 Sunset Park, Ithaca, N.Y.
No Drawing. Original application Feb. 19, 1951, Ser. No. 211,790, now Patent No. 2,729,613, dated Jan. 3, 1956. Divided and this application Nov. 25, 1955, Ser. No. 549,159
14 Claims. (Cl. 260—648)

1. Liquid polymers of a polyunsaturated fluoroolefin which has at least three and not more than 12 base carbon atoms, at least two double bonds between base carbon atoms, and at least one fluorine atom attached to a base carbon atom, the remaining substituents being selected from at least one of the group consisting of the halogens and perhalogenated organic radicals having no more than three carbon atoms.

2,951,097
HALOCARBON HAVING THE EMPIRICAL FORMULA $C_{10}Cl_4F_8$
Samuel Gelfand, Niagara Falls, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Nov. 29, 1957, Ser. No. 699,438
2 Claims. (Cl. 260—648)

1. The process for preparing a halocarbon having an empirical formula $C_{10}Cl_4F_8$ and a melting point of about 74 to 75 degrees centigrade, which comprises: reacting 1,2,3,3-tetrachlorotetrafluorocyclopentene with itself and with copper, while heating to the reflux temperature of the reaction mixture, and recovering the product so produced.

2. The compound having the structure:



2,951,098
ADDUCT OF HEXACHLOROCYCLOPENTADIENE WITH 1,4-DICHLOROBUTYNE-2
Paul E. Hoch, Youngstown, N.Y., and John M. Clegg, Auburndale, Mass.; said Hoch assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed July 14, 1958, Ser. No. 748,135
1 Claim. (Cl. 260—648)

1,2,3,4,7,7-hexachloro - 5,6 - bis(chloromethyl)bicyclo-(2.2.1)-heptadiene-2,5.

2,951,099
1,4,5,6,7,7-HEXACHLORO-2,3-BIS(BROMOMETHYL)-BICYCLO(2.2.1)-HEPTADIENE-2,5
Paul E. Hoch, Youngstown, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York
No Drawing. Filed Jan. 12, 1959, Ser. No. 786,027
3 Claims. (Cl. 260—648)

1. The process of producing 1,4,5,6,7,7-hexachloro-2,3-bis(bromomethyl)-bicyclo - (2.2.1) - heptadiene-2,5 which comprises adding bromine to 1,4,5,6,7,7-hexachloro-2,3-dimethylene-bicyclo-(2.2.1)-heptene-5.

3. 1,4,5,6,7,7-hexachloro - 2,3 - bis(bromomethyl)-bicyclo-(2.2.1)-heptadiene-2,5.

2,951,100
HALOMETHYLATION
Chester E. Adams and Delbert H. Meyer, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Filed Feb. 28, 1957, Ser. No. 642,974
10 Claims. (Cl. 260—651)

7. A process for attaching at least one halomethyl radical to the hydrocarbon nucleus of an aromatic compound selected from the class consisting of an alkyl benzene and a substituted aromatic hydrocarbon having a plurality of substituents, said substituents being selected from the class consisting of chloromethyl and bromomethyl groups, which process comprises reacting said aromatic compound with formaldehyde in the presence of a stoichiometric excess of a hydrogen halide at a pressure above about 100 pounds per square inch, said hydrogen halide being selected from the class consisting of hydrogen chloride and hydrogen bromide.

2,951,101
CHEMICAL COMPOSITION AND PROCESS
Clifford A. Neros, Willoughby, and George A. Miller, Painesville, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Filed May 26, 1958, Ser. No. 737,542
23 Claims. (Cl. 260—651)

1. A stabilized composition of matter comprising essentially a side chain-halogenated aromatic hydrocarbon contaminated with metal ions and a stabilizing amount of a polyhydric aliphatic alcohol.

2,951,102
CHLOROFLUOROMETHYLFLUOROFORM
Eric R. Larsen and Robert P. Ruh, Midland, Mich., assignors to the Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Filed Apr. 30, 1958, Ser. No. 731,894
3 Claims. (Cl. 260—653)

1. Chlorofluoromethylfluoroform.

2. A method of preparing chlorofluoromethylfluoroform which comprises: passing a mixture of hydrogen fluoride and $CF_2BrCHClF$ through a chromium oxyfluoride catalyst in a reaction zone maintained at a temperature between 200° C. and the decomposition temperature of the reactants and reaction products and separating chlorofluoromethylfluoroform from the reaction mixture.

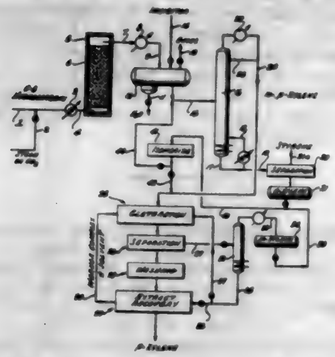
2,951,103
PERCHLOROETHYLENE PRODUCTION
Arthur C. Ellsworth, Pittsburgh, Pa., and Raymond M. Vancamp, New Martinsville, W. Va., assignors to Columbia-Southern Chemical Corporation, Allegheny, Pa., a corporation of Delaware
No Drawing. Filed Sept. 4, 1958, Ser. No. 758,896
7 Claims. (Cl. 260—654)

1. In a method of producing perchloroethylene by feeding gaseous chlorinated hydrocarbon mixture containing symmetrical tetrachloroethane and elemental oxygen to a catalytic reaction zone maintained at temperatures sufficient to produce perchloroethylene, the improvement comprising controlling the oxygen feed to provide between 15 percent and 75 percent of the stoichiometric quantity of oxygen necessary to react with the oxidizable hydrogen atoms of the chlorinated hydrocarbon feed.

2,951,104
SEPARATION OF C–8 AROMATIC HYDROCARBON ISOMERS USING WERNER COMPLEXES
William D. Schaeffer, Ontario, and John D. Wordie, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Filed Aug. 27, 1953, Ser. No. 376,792
6 Claims. (Cl. 260—669)

4. A process for producing substantially only p-xylene and styrene from a feed mixture comprising substantial proportions of p-xylene, m-xylene, and o-xylene and between about 5% and 30% of ethylbenzene, which com-

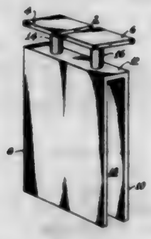
prises subjecting said feed mixture to dehydrogenation at a temperature between about 575° and 700° C. in the



presence of a dehydrogenation catalyst to convert substantially all of said ethylbenzene to styrene, subjecting the dehydrogenation effluent to fractional distillation to obtain a bottoms fraction consisting essentially of o-xylene and styrene and an overhead fraction consisting essentially of m-xylene and p-xylene, separating styrene from o-xylene in said bottoms fraction, contacting said overhead fraction with a Werner complex consisting essentially of a tetra(4-lower alkyl pyridino) metal thiocyanate, said metal having an atomic number of 25 to 28 inclusive, thereby forming a solid clathrate containing an extract phase relatively enriched in p-xylene, separating said clathrate from the m-xylene-rich raffinate and recovering p-xylene from said clathrate, subjecting said m-xylene-rich raffinate and said o-xylene separated from said bottoms fraction to isomerization in the presence of an isomerization catalyst to produce an ethylbenzene-free isomerizate containing a substantial proportion of p-xylene, and recycling said isomerizate to said fractional distillation step, said contacting with Werner complex being effected under conditions which would, without prior removal of ethylbenzene from said feed, produce a clathrate containing both p-xylene and ethylbenzene.

ELECTRICAL

2,951,105
THERMOELECTRIC COMPOSITIONS AND ELEMENTS AND DEVICES USING THEM
Charles J. Bosnovich, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Sept. 12, 1957, Ser. No. 683,534
4 Claims. (Cl. 136—5)

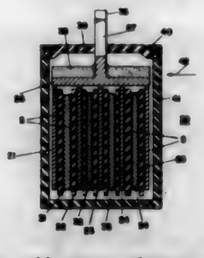


1. A thermoelectric composition consisting essentially of Bi_2Te_3 and, on the basis of the total weight of said Bi_2Te_3, including in addition:

	Percent
Bismuth	0.10 to 0.50
Antimony	0.27 to 0.80
Copper	0.13 to 0.40

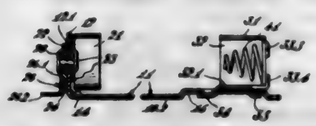
2,951,106
STORAGE BATTERY CONSTRUCTION
Paul Ruetschi, Glenside, Pa., assignor to The Electric Storage Battery Company, a corporation of New Jersey
Filed Feb. 19, 1957, Ser. No. 641,050
9 Claims. (Cl. 136—6)

1. A storage battery cell comprising electrolyte, positive and negative electrodes, insulating material separating them, a sealed container within which said electrodes, said insulating material and said electrolyte are disposed, said cell being characterized by the presence therein of a porous element comprising porous graphite having at least over the surface thereof a non-wetting agent inert to the electrolyte and selected from the group consisting of the silicones, latex, gum rubber and the hydrophobic resins, said element having a low resistance electrical connection to said negative electrodes, disposed in spaced relation with said positive electrodes and positioned within said sealed container for liquid contact with the electrolyte to form a gas-liquid-solid interface



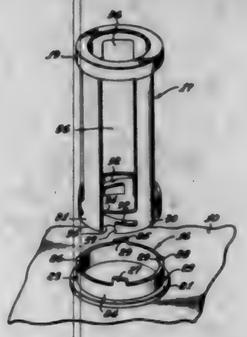
of extended area, said porous element having metallic silver dispersed therethrough for reduction of oxygen diffused through the porous element to said interface.

2,951,107
BATTERY HOLDER
Ralph Abrams, Sharon, Mass., assignor to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts
Filed Oct. 23, 1957, Ser. No. 691,935
3 Claims. (Cl. 136—173)



1. A battery holder comprising: a metallic base having at one end an arm extending transversely thereto and having at the other end two openings spaced lengthwise of the base; a cup shaped front shell made of insulating material fastened to said transverse arm of the base; metallic means for establishing an insulated conductive connection from within said insulating front shell; and a metallic rear shell comprising a tubular portion that is open at one end and has closure means at the other end, and having on its outside two axially spaced prongs extending outwardly in opposite directions such that one prong can be introduced into one of said openings of the base, the other prong can then be moved through the second opening, and the rear shell can thereupon be axially moved to cause both prongs to engage the base; whereby the ends of a battery can be inserted in said shells holding the battery which retains the rear shell prongs in engagement with the base.

2,951,108
TUBE SHIELD AND BASE ASSEMBLY
Leroy Ralph Woods, Whittier, Calif., assignor to International Electronic Research Corporation, Los Angeles, Calif., a corporation of California
Filed Apr. 23, 1956, Ser. No. 580,015
1 Claim. (Cl. 174—35)



A tube shield assembly for application over an electronic tube comprising; a substantially cylindrical base adapted to be mounted in an upright position on a chassis, said base having a plurality of circumferentially spaced inturned tabs at its upper edge, a shielding tube and retaining envelope comprising a sheet metal cylinder having an inturned flange at its upper end, a spring inside said shielding tube, bearing against said flange and adapted to press against an electronic tube to urge said shielding tube upwardly, the lower end of said shielding tube being of a diameter to be snugly received within said base and being provided with a plurality of downwardly open notches corresponding to said tabs on said base and of a size to readily receive the same, a slot extending helically from the uppermost portion of each notch and adapted to receive a corresponding tab, each of said slots extending helically downwardly toward but short of the lower end of said shielding tube.

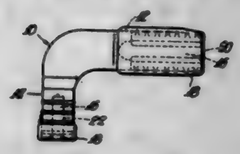
2,951,109
WIRE-CONNECTOR
Emil Wayne Bollmeier, Mendota Heights, and Leo F. Vokaty, New Canada Township, Ramsey County, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Filed May 18, 1956, Ser. No. 585,757
5 Claims. (Cl. 174—84)

1. A spring-wire connector suitable for forming a permanent electrical connection between insulated conductors as herein described and consisting essentially of a series of close-wound cylindrical spring-wire helices whose longitudinal axes are parallel and spaced apart, the spring-wire having sufficient strength to cause displacement of insulation from an insulated conductor, and contact between the spring-wire and the conductor, on slidably forcing the insulated conductor along the contacting spring-wire surfaces; each helix being displaced from adjacent helices to an extent permitting free access to the open interior of the helix from either end thereof; adjacent helices being connected together by an extension of the spring-wire from an end coil in a tangential plane and at an angle with the plane of the coil just sufficient to enable the insulated conductor to be easily slid between



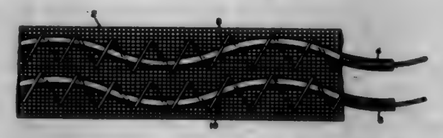
the extension and the end coil; the spring-wire extension being lightly notched between adjacent helices to permit separation by bending.

2,951,110
SEALED MIXTURE-CONTAINING CONNECTOR
Irving F. Matthysse, Stamford, and Fred Dilendik, South Norwalk, Conn., assignors to Burndy Corporation, a corporation of New York
Filed Oct. 17, 1956, Ser. No. 616,558
1 Claim. (Cl. 174—94)



A connector comprising a longitudinally extending body having a laterally positioned longitudinally extending conductor receiving opening and end openings joining the lateral opening through which the conductor projects, said connector containing in said openings a mixture of viscous material for making the connection, and a single closure for said openings consisting of a readily removable thin film adhering to said connector simultaneously enclosing the lateral and both end openings and containing the viscous material therein.

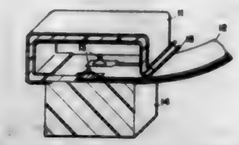
2,951,111
LEAD WIRE TAPE
Edward P. Anderson and Walter F. Doring, Livingston, N.J., assignors, by mesne assignments, to Engelhard Industries, Inc., Newark, N.J., a corporation of Delaware
Filed Jan. 16, 1957, Ser. No. 634,465
3 Claims. (Cl. 174—117)



1. A lead wire tape for high temperature applications comprising an inelastic open woven fabric base made of a material selected from the group consisting of glass and quartz fibers, at least one high temperature resistant lead wire, and means comprising stitching along the length of said wire for loosely securing said wire to said base in a generally wave-like form, the wire having a length overlying said fabric which is greater than the fabric base to

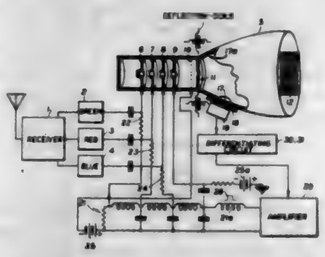
which it is secured, whereby the expansion and contraction of said wire occurs in a lateral rather than a longitudinal plane.

2,951,112
PRINTED CIRCUIT COMPONENT
Victor F. Dahlgren, Windham, N.H., assignor to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Filed Dec. 30, 1957, Ser. No. 706,051
8 Claims. (Cl. 174—135)



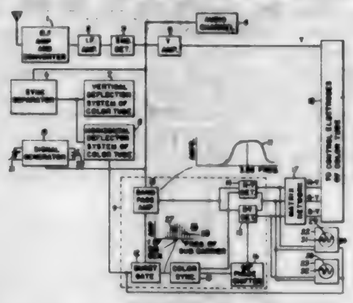
1. A printed circuit component, comprising: a flat, flexible, printed circuit cable having a conductor embedded therein and one end adapted to be relatively fixed in position; a substantially rigid accessory integrally formed with and extending from said fixed end of said cable; and a terminal connected to a cable conductor and disposed in the vicinity of said fixed end, said accessory being so formed toward the opposite end of said cable as to provide a fixture with an edge disposed on the opposite side of said terminals relative to said fixed end and being transverse to the longitudinal axis of said cable to provide, thereby, an axis, spaced from said terminal, about which said cable may be flexed without producing an excessive strain at said terminal.

2,951,113
COLOR TELEVISION RECEIVER
Philo T. Farnsworth, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Filed May 27, 1954, Ser. No. 432,830
5 Claims. (Cl. 178—5.4)



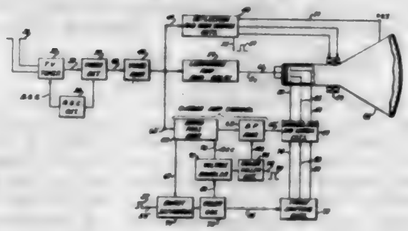
1. In a color television receiver, means for reproducing a color image comprising an image screen composed of a plurality of parallel strip-areas, said strip-areas being divided into a plurality of repeating groups, the strip-areas of each group representing different colors respectively, electrode means for generating and controlling an electron scanning beam for developing an image on said screen, feedback means responsive to the radiation of one strip-area for generating a sharp negative gating pulse; said feedback means being a regenerative loop including said electrode means, the electron beam issuing from said electrode means, and said one strip-area, said loop further including amplifier means providing a negative-going impulse responsive to the radiation of said one strip-area for increasing the intensity of said electron beam; and means operatively coupled to said amplifier and to said electrode means and responsive to said amplifier impulse for providing successive negative impulses corresponding to the spacing between said strip-areas for successively turning said beam on and off as its scanning registers with respective successive strip-areas.

2,951,114
CARRIER WAVE TRANSMISSION SYSTEM AND METHOD OF OPERATION THEREOF
William E. Good, Jamesville, N.Y., assignor to General Electric Company, a corporation of New York
Filed Jan. 5, 1955, Ser. No. 479,935
9 Claims. (Cl. 178—5.4)



1. In a color television receiving system including a color synchronization and demodulation circuit to an input of which is applied the demodulated television signal and to another input of which is applied subcarrier burst gating pulses and from the output of which circuit is obtained a pair of waves each corresponding to a respective primary color component appearing on the subcarrier wave of the demodulated television signal, the method of ascertaining the characteristics of said color synchronizing circuit comprising applying to said one input a signal having a frequency differing from said subcarrier frequency by an integral multiple of the line scanning frequency of said system, applying to said other input subcarrier burst gating pulses, whereby at said output is obtained a pair of waves of a frequency which is said integral of said line scanning frequency, comparing the characteristics of said derived waves, thereby ascertaining the characteristics of said color synchronizing and demodulation circuit.

2,951,115
COLOR TELEVISION APPARATUS
William P. Iannuzzi and Gordon E. Kelly, Haddonfield, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Apr. 26, 1956, Ser. No. 580,929
8 Claims. (Cl. 178—5.4)



1. Automatic control apparatus for a television signal processing channel adapted to receive and process a television signal including periodic bursts of high frequency energy, which apparatus comprises: means for separating such bursts from a received signal; an electron discharge

device having a control grid, a cathode and a further electrode; means connecting said device as a self-sustaining oscillator circuit whose nominal frequency is equal to that of such bursts; means coupled between said burst separating means and said device for applying between said control grid and cathode a substantially continuous wave of voltage controlled by such bursts and whose amplitude varies as a function of the amplitude of such bursts, circuit means connecting said control grid and cathode to rectify the said wave to produce a direct current voltage proportional to the amplitude of such wave; voltage doubling means comprising only one diode connected to said control grid for providing additional direct current voltage also variable as a function of the amplitude of such wave; and coupling means for applying the direct current voltage produced by said voltage doubling means to said channel for controlling the operation of said channel as a function of the amplitude of such bursts when present in a received signal.

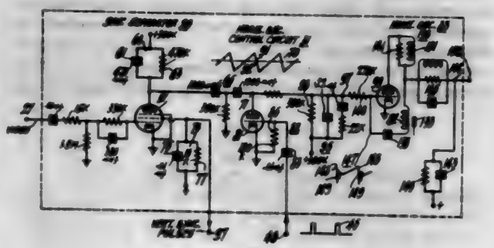
2,951,116
APPARATUS FOR MAKING CORRECTED COLOR SEPARATION RECORDS
Benjamin L. Sites, Elmhurst, and Frank R. Paschke, Bellwood, Ill., assignors to Miehle-Goss-Dexter, Incorporated, a corporation of Delaware
Filed Nov. 23, 1956, Ser. No. 624,027
10 Claims. (Cl. 178—5.4)



2. Apparatus for producing corrected color separation records directly from a multicolored original subject comprising, a reading unit including a television camera tube for viewing the subject, and a light dispersion medium, the latter being spaced between the subject and said tube and functioning in a manner to sequentially produce on the image receiving element of said tube N number of spectral colored images of the subject where N is equal to one plus the number of primary, secondary and tertiary colors deemed necessary to reproduce the subject, said camera tube being constructed to convert the respective light images into corresponding electrical signals, computing means including amplifier circuits for modulating each of the separate electrical signals emerging from said reading unit in accordance with predetermined amplification factors based on the spectral reflectivity characteristics of the reproducing media, and mixing means for algebraically adding the amplified energies in accordance with the sign of said amplification factors to produce a varying single valued electrical signal representing a particular corrected primary color separation, and recording means including a recording element responsive to said single valued electrical signal for converting said signal into a color corrected separation record.

2,951,117
HORIZONTAL DEFLECTION SYNCHRONIZING CIRCUIT FOR TELEVISION
Albert Macovski, Massapequa, N.Y., assignor to Radio Corporation of America, a corporation of Delaware
Filed Feb. 24, 1956, Ser. No. 567,493
4 Claims. (Cl. 178—7.3)

3. In a television receiver adapted to receive composite television signals including recurrent horizontal synchronizing pulses, the combination of means to develop a sawtooth wave from said horizontal synchronizing pulses, a horizontal deflection oscillator including means for developing a recurrent output signal, an electron tube having a cathode, a control electrode and an anode, means to impress said sawtooth wave between said cathode and anode, means to apply said recurrent output signal from said oscillator to said control electrode in a polarity and of such amplitude to increase the



flow of electrons from said cathode to said anode so that said flow varies in accordance with the instantaneous amplitude of said sawtooth wave at the time of said recurrent output signal and relative to the phase relation between the sawtooth wave and said recurrent output signal, means for developing a reference voltage indicative of the magnitude of said flow of electrons, said developing means being responsive to said flow of electrons, and means to use said reference voltage to control the frequency and timing of said oscillator.

2,951,118
BELT DRIVEN SYSTEMS
Rabah A. Shahbender, Westmont, N.J., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed June 13, 1956, Ser. No. 591,114
4 Claims. (Cl. 178—7.6)

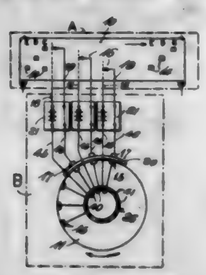


4. In a facsimile machine for recording on a recording sheet or web, a scanning system including an endless belt and a plurality of spaced rollers for supporting said belt so that said belt moves in an endless scanning path having at least one straight portion and one curved portion, a stylus holder affixed to said belt and carrying a stylus for traversing the recording sheet or web at a scanning line position, and means for preventing said stylus holder from introducing disturbances in the stylus belt when the stylus holder is passing around said rollers, comprising, means for mounting at least some of said plurality of spaced rollers so that the faces of said rollers in contact with said recording sheet or web are located in a parabolic arc.

2,951,119
HIGH SPEED TELEGRAPH SYSTEM
Ivan Willard Conrad, 810 Crescent Drive, Alexandria, Va.
Filed Feb. 1, 1954, Ser. No. 407,378
28 Claims. (Cl. 178—15)

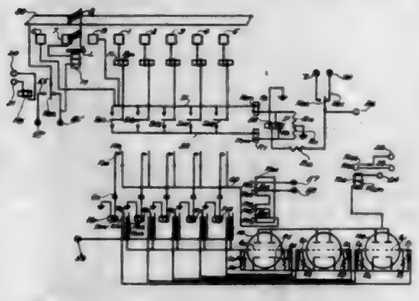
3. In a telegraph system, a receiving station page-printer mechanism including a sensitized page-style recording medium; a plurality of character-recording posi-

tions spatially disposed along at least one line traversing said medium; primary character-forming means operable under substantial gas pressure, spatially disposed in at least one row traversing said recording medium substantially parallel to said line of character-recording positions and defining a plurality of recordable characters certain of which are different in shape from others of said characters; character-selecting means whereby any one of a plurality of said different characters may be selected to be formed within any one of said character-recording positions by said primary character-forming means, and wherein the respective lengths of time required for selection of certain of said characters may overlap in duration; non-mechanical electronic recording means whereby any



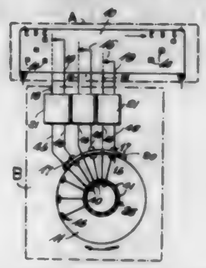
one of said characters formed within any one of said character-recording positions may be instantaneously recorded onto said medium by electronically produced non-mechanical recording energy acting on said medium; means for advancing said medium in a direction substantially at right angles to said line of character-recording positions; and means controlling said recording energy and selection of characters to be recorded, whereby the individual time intervals required for selection and recording of individual characters may overlap in duration, thereby reducing the length of the total time interval required for selecting and recording a plurality of said characters along said line to a value substantially less than the sum of the lengths of the individual time intervals represented by the characters comprising said last named plurality.

2,951,120
APPARATUS FOR DETECTING MALFUNCTIONS IN TELEGRAPH SYSTEMS
Edward Nelson Dingley, Jr., Arlington, Va. (11165 4th St. E., Treasure Island, St. Petersburg, Fla.)
Filed Feb. 15, 1957, Ser. No. 640,560
5 Claims. (Cl. 178—22)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for detecting malfunctions in telegraph systems wherein each of a plurality of character elements is represented by either of two conditions and wherein successive corresponding elements should change from one of the conditions to the other condition within a predetermined time, which comprises energy storage means associated with each element, sources of potential of opposite polarity, means energized by an element of one condition for impressing a potential of one of the polarities on the energy storage means and by an element of the second condition for impressing a potential of the opposite polarity on the energy storage means, an amplifier including a control electrode associated with each element, means connected to and controlled by the energy storage means for applying a conduction-preventing potential to the control electrode of each amplifier upon the occurrence of successive corresponding elements of opposite condition and the attendent application of potentials of opposite polarity to the energy storage means, and means connected to each control electrode for generating a potential which is capable of rendering the associated amplifier conductive upon the failure of occurrence of corresponding elements of the two conditions within the predetermined time.

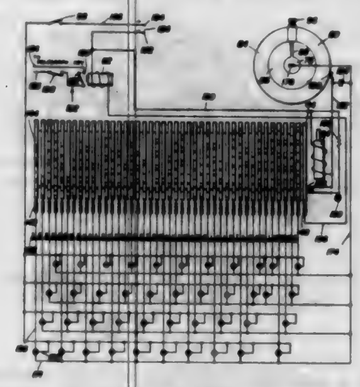
2,951,121
HIGH SPEED TELEGRAPH SYSTEM
Ivan Willard Conrad, 810 Crescent Drive, Alexandria, Va.
Filed Apr. 26, 1954, Ser. No. 425,410
27 Claims. (Cl. 178—23)



1. In a telegraph system, a receiving station page-printer mechanism including a sensitized page-style recording medium; a plurality of character-recording positions spatially disposed along at least one line traversing said medium; primary character-forming means operable under substantial gas pressure, defining a plurality of recordable characters certain of which are different in shape from others of said characters; character-selecting means whereby any one of a plurality of said different characters may be selected to be formed within any one of said character-recording positions by said primary character-forming means, and wherein the respective lengths of time required for selection of certain of said characters may overlap in duration; non-mechanical electronic recording means whereby any one of said characters formed within any one of said character-recording positions may be instantaneously recorded onto said medium by non-mechanical electronically produced recording energy gradients acting on said medium, said recording energy gradients including at least one from the group consisting of magnetic, thermal, and electrostatic energy gradients; means for advancing said medium in a direction substantially at right angles to said line of character-recording positions; and means controlling said recording energy and selection of characters to be recorded.

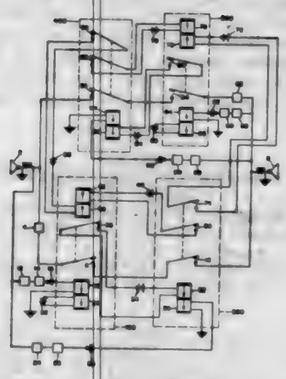
2,951,122
SEMI-AUTOMATIC CODE SENDER
Jerome D. Friedman, Topeka, Kans. (55th Air Refueling Squadron, A.P.O. 864, New York, N.Y.)
Filed Aug. 6, 1958, Ser. No. 753,466
12 Claims. (Cl. 178—84)

1. A code sender comprising a frame, a plurality of keys, a normally open switch for each key and carried by said frame, a code drum, a support on said frame and mounting said drum for rotation, a plurality of contacts on said code drum, brushes carried by said frame and located in the path of movement of said drum contacts, conductors attached to each brush and to each normally open switch, a speed responsive governor switch driven in unison with said code drum, a conductive network connecting each normally open switch with said



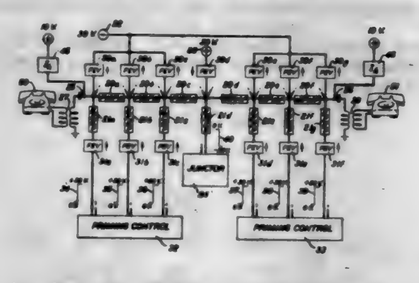
governor switch, terminals adapted to connect with a source of electric potential, an electromagnetically actuated device drivingly connected to said code drum, means connecting one of said terminals and said device in series with said governor switch to govern the speed of said drum, means including said normally open switches and said network connecting said governor to the other of said terminals to thereby energize said device through said governor switch in response to actuation of any one of said keys.

2,951,123
VOICE ACTIVATED INTERCOMMUNICATION SYSTEM
Michael Frank De Vito, New York, N.Y. (83—40 Austin St., Kew Gardens, N.Y.)
Filed Mar. 19, 1954, Ser. No. 417,526
4 Claims. (Cl. 179—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A voice operated intercommunications system comprising a first transducer, a first multiplicity of filters, each passing a different voice frequency, electrically coupled to said first transducer, a second transducer, a first multiplicity of relays, each having an operating coil and contacts, each of said relay operating coils being electrically coupled to one of said filters and operating in accordance with filter output signals, and said relay contacts serially connecting said first and second transducers, a second multiplicity of relays, each having an operating coil and contacts, a second multiplicity of filters, each passing a different voice frequency, electrically coupled to said second transducer and said second multiplicity of relays, each of said relay operating coils being electrically coupled to a filter and operating in accordance with filter output signals, and said relay contacts serially connecting said first and second transducers, said multiplicities of relays being interconnected so that operation of one of said multiplicities of relays to establish a connection between said transducers will automatically interrupt the connection between said transducers established by the other of said multiplicity of relays.

2,951,124
ELECTRONIC SWITCHING NETWORK
Luther W. Hussey, Sparta, and John W. Rieke, Basking Ridge, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 3, 1958, Ser. No. 746,350
24 Claims. (Cl. 179—18)

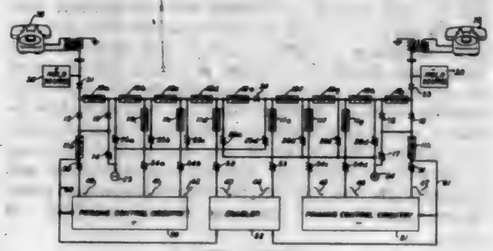


1. An electronic switching network having first and second opposed sets of terminals comprising a plurality of PNPN diode switches interconnected to provide a plurality of alternative transmission paths between each terminal of said first set and each terminal of said second set, biasing means including field effect varistors connected to circuit nodes between said PNPN diode switches for establishing an initial potential at said circuit nodes, circuitry including a bistable device and current-limiting means also connected to each of said circuit nodes, means for applying signals to said last-mentioned circuitry for shifting said established potential at selected nodes, and means for triggering to their low-impedance region the PNPN diode switches associated with said selected nodes to establish a transmission path through said network.

2,951,125
ELECTRONIC SWITCHING NETWORK
Robert J. Andrews, Morris Plains, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed July 3, 1958, Ser. No. 746,351
16 Claims. (Cl. 179—18)

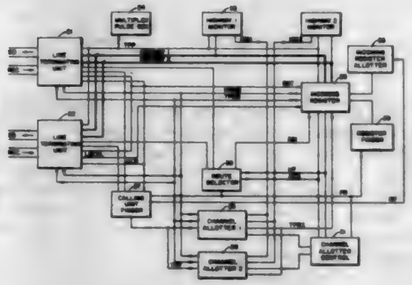
1. A telephone switching network comprising a plurality of terminals between which conducting paths are to be established; a plurality of interconnected series bistable devices; a shunt control circuit connected to common connections between said series bistable devices; said shunt control circuit comprising a biasing source, a shunt-connected bistable device, and a current-limiting element; a source of priming signals coupled to said shunt control circuit to cause selected ones of said common connections to change their potentials; an additional shunt-connected bistable device intermediate said network; and

enabling means in series with said additional shunt-connected bistable device to cause said series bistable de-



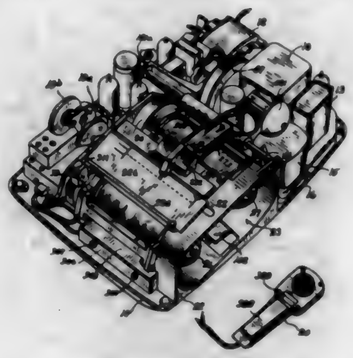
vices selected by said shunt control circuit and said priming signal source to switch to the low impedance state in succession.

2,951,126
ELECTRONIC SWITCHING TELEPHONE SYSTEM CHANNEL ALLOTTER
Barrie Brightman, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed July 24, 1958, Ser. No. 750,619
6 Claims. (Cl. 179—18)



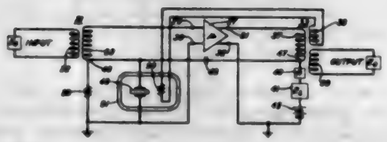
1. In a telephone system, a plurality of lines, a multichannel transmission highway network interconnecting said lines, first and second channel allotters, each of said allotters comprising a plurality of busy indicating circuits individually corresponding to the channels of said network, each of said circuits having first and second operated conditions, means for controlling said first allotter to individually assign idle ones of said channels to calling ones of said lines, means responsive to the assignment of a channel to a calling one of said lines for operating the circuit corresponding to that channel in each allotter to its second operated condition, a plurality of first alarm devices individually corresponding to said channels, a plurality of second alarm devices individually corresponding to said channels, means for energizing the first alarm device corresponding to a particular channel when the first allotter circuit corresponding to that channel is in its second operated condition and the second allotter circuit corresponding to that channel is in its first operated condition, and means for energizing the second alarm device corresponding to a particular channel when the second allotter circuit corresponding to that channel is in its second operated condition and the first allotter circuit corresponding to that channel is in its first operated condition.

2,951,127
MAGNETIC RECORDING AND REPRODUCING MACHINE
Arnold A. Pierson, Floyd E. Smithberg, and Michael C. Septilov, St. Charles, Ill., assignors to Du Kane Corporation, St. Charles, Ill., a corporation of Delaware
Filed Feb. 24, 1955, Ser. No. 490,235
21 Claims. (Cl. 179—100.2)



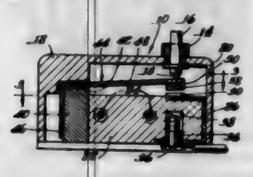
1. In a magnetic recording-reproducing type of machine using a pregrooved record belt, the combination of a base, a pair of mandrels for said record belt, means for supporting said mandrels on said base so that the mandrel axes are parallel and lie in a generally horizontal plane, a stationary guide rod, means for supporting said rod in parallel relation to said mandrels, means for supporting a marker strip in spaced parallel relation to said mandrels, an arm slidingly supported on said guide rod and extending over both mandrels, a transducer having a belt-engaging portion carried by said arm for engaging the belt at a region where said belt is directly supported by said one mandrel, marker means carried by said arm for cooperation with said marker strip for providing an indication on said strip where there is an error or where matter begins or ends, a record belt-tensioning idler, means disposing said idler below said record belt and between said mandrels, means for mounting said belt-tensioning idler so that it may engage the record belt for tensioning the same or may be free therefrom, and means connecting said tensioning idler and said arm whereby when said idler is in belt-engaging position said transducer and marker means are in operative position and when said idler is free of said belt, said transducer and marker means are respectively free of said belt and said marker strip.

2,951,128
SYSTEM FOR TESTING UNATTENDED REPEATERS
Burton A. Kingsbury, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed May 15, 1958, Ser. No. 735,491
20 Claims. (Cl. 179—175.31)



1. A system for measuring the performance of an amplifier circuit, said system comprising said amplifier circuit having an output circuit and an input circuit, a temperature-sensitive resonant device connected in said amplifier for producing an irregularity in the gain-versus-frequency characteristic of said amplifier at the resonant frequency of said device, said resonant frequency being variable with the temperature of said device, heating means, means for changing the input signal amplitude to said amplifier and thereby changing the signal level in said amplifier, means for enclosing said heating means and said resonant device in heat exchanging relation whereby a determinable amount of heat produced in said heating means is transferred to said device, means responsive to the signal level of said amplifier for energizing said heating means to control the steady-state temperature of said device, and means connected to said amplifier for measuring the magnitude of changes in resonant frequency of said device in response to temperature changes, the change in said resonant frequency being a predetermined function of said operating level change.

2,951,129
SNAP SWITCH
Donald H. Mink, 479 Park St., Elgin, Ill.
Filed Feb. 25, 1958, Ser. No. 717,498
6 Claims. (Cl. 200—67)



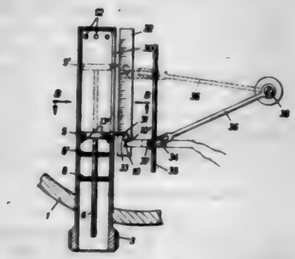
1. A snap switch comprising a base, fixed contact means carried by said base, a first magnetic member, a second magnetic member, one of said magnetic members being a permanent magnet and the other of said magnetic members being a magnetically susceptible armature, means fixedly mounting one of said magnetic members on said base, a part of one of said magnetic members providing a fulcrum, the other of said magnetic members being pivotally mounted on said fulcrum and having parts alternatively movable toward and away from the magnetic member fixed on the base, magnetic attraction holding said members together, the permanent magnet of one of said magnetic members effecting a magnetic snap action upon such movement, and contact means carried between one of said magnetic members pivotally mounted on said fulcrum and selectively engageable with said fixed contact means upon movement of the magnetic member pivotally mounted on the fulcrum.

2,951,130
ROTARY SWITCH
Howard F. Mason, Los Angeles, Calif., assignor to Mason Electric Corporation, Los Angeles, Calif., a corporation of California
Filed May 5, 1959, Ser. No. 811,091
10 Claims. (Cl. 200—67)



1. In a rotary switch, the combination of: an arcuate contact path having a center of curvature and having circumferentially spaced recesses therein and having thereon at least one stationary contact in which one of said recesses is formed; a contact carrier movable about said center of curvature along a carrier path adjacent and concentric with said contact path; actuating means movable about said center of curvature for moving said contact carrier along said carrier path; a roller contact carried by said contact carrier and engaging and rollable along said contact path and receivable in each of said recesses; means, including resilient means, acting on said roller contact for biasing said roller contact into engagement with said contact path; and cam means on said contact carrier and engageable with said roller contact for moving said roller contact out of one of said recesses in which it is disposed in response to movement of said contact carrier along said carrier path by said actuating means.

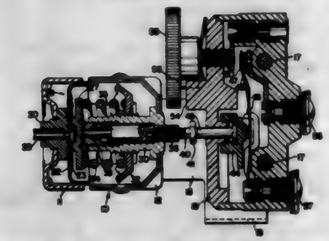
2,951,131
FLOW CONTACTOR FOR PRESSURIZED ELECTRIC CABLES, PIPELINES AND THE LIKE
Peter Lancier, 35 Hiltruperstrasse, Wolbeck, near Munster, Westphalia, Germany
Filed Aug. 15, 1958, Ser. No. 755,284
Claims priority, application Germany Aug. 17, 1957
1 Claim. (Cl. 200—81.9)



A fluid pressure-responsive combined indicating and switching device, comprising: a tubular housing having an inlet and an outlet spaced therefrom; a valve seat arranged between said inlet and outlet; a piston member slidably supported in said tubular housing for movement in the direction of the axis of said housing, said piston member having a head arranged on the downstream side of said valve seat and being adapted to lie thereagainst, said piston head being continuously urged into engagement with said valve seat so that when the pressure prevailing at said inlet is insufficient to overcome the force urging said head against said valve seat, said head will be maintained in engagement with said valve seat; a movable contact member carried by said piston head and extending out of said tubular housing through an elongated slot which permits said movable contact member to move with said piston head during movement thereof relative to said valve seat; a stationary contact member arranged exteriorly of said tubular housing and being located in the path of movement of said movable contact member so that an electric circuit may be actuated when said movable contact member is in a position corresponding to that in which said stationary contact member is set; and a scale also arranged exteriorly of said housing and extending along the path of movement of said movable contact member while the latter moves together with said head, said movable contact member thus serving as a pointer which cooperates with said scale, whereby the fluid pressure at said inlet which causes said head to be moved off said valve seat a distance dependent on the pressure, may be read on said scale and whereby an electric circuit will be actuated when the

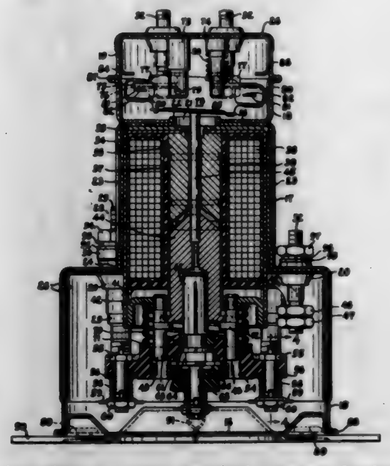
inlet pressure is equal to a predetermined pressure which corresponds to the setting of said stationary contact member.

2,951,132
PRESSURE RESPONSIVE DEVICE
James M. Cunnien, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Filed Mar. 27, 1958, Ser. No. 724,302
7 Claims. (Cl. 200—83)



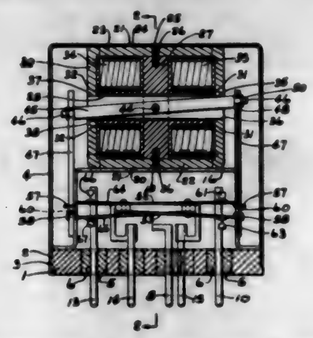
1. A pressure responsive device comprising, a frame, a diaphragm carried by said frame, a switch carried by said frame and having an operator disposed on the axis of expansion of said diaphragm, a post secured to said frame adjacent said switch and extending toward said diaphragm, a rod carried by said post and reciprocable therein and extending beyond said post to engage said diaphragm and said switch, a nut threaded on said post, a compression spring acting between said diaphragm and said nut, and a plug carried by internal screw threads in the end of the post adjacent said diaphragm and adapted to be adjusted to extend beyond said post to engage said diaphragm to determine the limit of expansion thereof.

2,951,133
HERMETICALLY SEALED ELECTROMAGNETIC CONTACTORS AND THE LIKE
James E. Davies, Granville, and Charles W. Otto, West Allis, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed Jan. 11, 1954, Ser. No. 403,124
9 Claims. (Cl. 200—87)



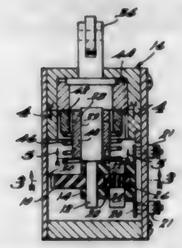
1. A stationary contact terminal structure for hermetically sealed electrical switching devices comprising a wall of a metal enclosing casing having a plurality of flanged openings formed therein, metal bushings projecting through said flanged openings and having complemental flange portions concentric with the flanges of said openings, fused and solidified insulating vitreous material adhering to the inner and outer surfaces of said wall and securing said bushing in and sealing and bonding the same to the flanges of their respective associated openings, and metal terminal studs projecting through said bushings and metallically secured and sealed in place therein.

2,951,134
ELECTRICAL RELAYS
Branko Lazich, 1 Joel Place, Port Washington, N.Y.
Filed Oct. 3, 1957, Ser. No. 687,969
14 Claims. (Cl. 200—87)



1. A relay having a base on which is mounted an open center coil means with an electromagnetic circuit means that extends exteriorly around said coil means and providing pole faces that cooperate with a soft iron movably mounted armature polarized by permanent magnet means and extending through the open center of the coil means to move laterally therein relative to said pole faces when magnetically energized by said coil means and having actuating connection to contact means supported from said base characterized by said armature actuating connection includes an actuating arm attached at one of its ends to one end of said armature, said contact means including movable and fixed contacts, said movable contact includes at least one independent spring contact secured at one end relative to said base and its free end attached to said actuating arm to move said contact spring when said armature is moved, said fixed contact including at least one independent contact member mounted on said base to be engaged by said spring contact when said armature is in one position.

2,951,135
MAGNETIC SNAP SWITCH
Herbert C. Ovshinsky, Oak Park, Mich., assignor to Tann Corporation, Detroit, Mich., a corporation of Michigan
Filed Feb. 24, 1958, Ser. No. 717,119
7 Claims. (Cl. 200—87)



1. In a work performing device, spaced contacts, a rotor having contact bridging means thereon, a plunger

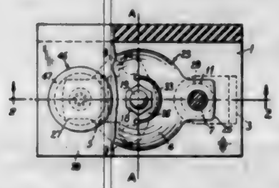
mounted for longitudinal movement relative to said rotor, and magnetic means for coupling said plunger to said rotor and for developing a force tending to rotate said rotor in response to said translational movement of said plunger for advancing said bridging means between said contacts.

2,951,136
DUAL CALIBRATION THERMOSTAT (HOT CASING)
Alton R. Wells, 235 Edgerton Road, Akron, Ohio
Filed July 29, 1958, Ser. No. 751,734
6 Claims. (Cl. 200—113)



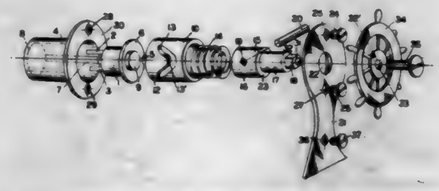
1. A dual calibration thermostat comprising an electrically conductive hollow casing, different bi-metal strips individually secured to said casing at each end thereof and each having a cantilever section extending into said casing from the secured portion thereof, said bi-metal strips being insulated from said casing and terminating in adjacent but axially spaced relation, contact means secured to each of said bi-metal strips at the cantilever sections thereof and extending in the same direction, and a contact member fixedly setured to said casing and extending into the bore thereof, said contact member being positioned adjacent said contact means and being of a size for engaging both of said contact means on said bi-metal strips simultaneously to make and break individual circuits therewith dependent upon the positions of said bi-metal strips, and said bi-metal strips being individually calibratable by pairs of transversely extending axially spaced stake-like areas at each end of said casing where said bi-metal strips are secured to said casing.

2,951,137
THERMOSTATIC SWITCH
Henry David Epstein, Cambridge, Mass., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Dec. 24, 1958, Ser. No. 782,895
3 Claims. (Cl. 200—113)



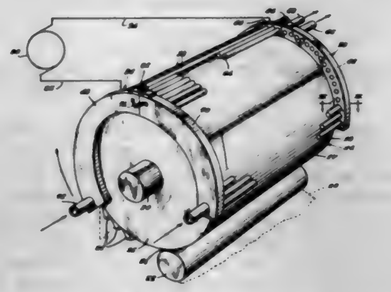
1. A push-pull manual reset thermostatic switch of the trip-free type comprising a framework, spaced insulating conductive terminals carried thereon, a conductive support extending from one terminal, a fixed contact extending from the other terminal and spaced from one side of the support, a flexible manual reset type thermostatic conductive plate having a flexibly connected interior portion within its marginal area carried on said support, said marginal area being substantially tiltable relative to said interior portion and being snap acting, a movable contact carried on one side of the marginal area of said plate adapted for engagement and disengagement with respect to said fixed contact, a backstop carried by said framework in spaced relation to said fixed contact, a substantially freely movable control member having switch-open and switch-closed positions, and an operating push-pull connection between said control member and a marginal portion of said plate which relative to said support is opposite to said movable contact, whereby opposite tilts of said marginal area by push-pull operation of the control member will force the movable contact portion of said marginal area against the stop or the fixed contact with reaction from the framework to snap act the marginal area to marginally engage or disengage said contacts, said plate in the absence of push or pull operation of the control means being adapted substantially freely to snap act in response to temperature change to disengage said contacts and to move said control member to its switch-open position, the arrangement being such that the movements of said marginal areas at the movable contact and at said connection are less for push-pull operation than the free snap movements of these last-named areas.

2,951,138
ELECTRIC SWITCH ACTUATING MECHANISM
Columbus C. Petrino, 409 Fenno St., Revere, Mass.
Filed Oct. 17, 1958, Ser. No. 767,843
4 Claims. (Cl. 200—153)



1. A rotary motion-to-linear motion switch actuating mechanism comprising a rotatable member having a first end adapted to be rotated and the other end adapted to actuate a switch, said rotatable member being resiliently biased in a direction of said first end and having a projection extending transverse to the axis of rotation, a stationary member surrounding said rotatable member and having a groove therein adapted to be engaged by and cooperate with said projection, said groove being V-shaped with the apex located remote from said other end whereby rotation of said rotatable member in either direction through the camming action of said projection and groove will produce a linear motion of said rotatable member in a direction against the said bias.

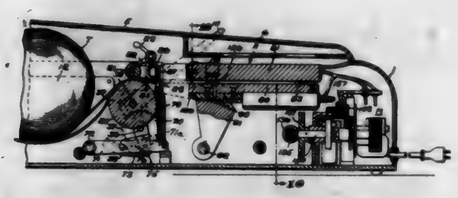
2,951,139
PAPER DRIER
Robert S. Washburn, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Filed May 22, 1958, Ser. No. 737,004
9 Claims. (Cl. 219—10.61)



2. A mechanism for reducing the moisture content of a web material such as paper comprising a drying surface

on which a web of moisture containing material is supported and subjected to elevated temperatures for evaporation of the moisture, means for moving the surface to carry the material past a drying zone, a plurality of elongated parallel spaced electrical conductors extending parallel to said surface at said drying zone whereby heat energy will be generated in said surface with a flow of high frequency current through the conductors, means for impressing a high frequency voltage across the length of said conductors, and coolant carrying means positioned for conducting a flow of coolant in heat transfer relationship with said conductors to remove heat generated due to electrical resistance of the conductors.

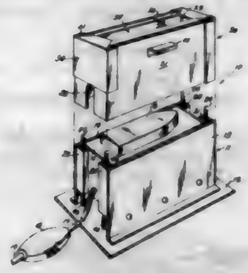
2,951,140
THERMOSENSITIVE TAPE DISPENSING
Robert W. Polley, Nashua, N.H., assignor, by mesne assignments, to Nashua Corporation, a corporation of Delaware
Filed June 18, 1956, Ser. No. 591,844
19 Claims. (Cl. 219—19)



1. Apparatus of the class described comprising support means for a continuous supply of thermosensitive tape, feeding means for extending in a path lengths of the tape from the supply, correlated automatic tape severing means for the extended tape lengths, and heated tape-receiving means in the tape path forwardly beyond the feeding and severing means for timed heating to activation and automatically delivering to the operator severed thermally adhesively conditioned tape lengths, said tape support means, feeding means and severing means constituting a first operative unit and said heated tape-receiving means constituting a second operative unit, said operative units being constructed and arranged for reciprocating tape-path-paralleling relative bodily motion of approach and retraction for direct feed of the tape into and reception by the heated receiving means attendant on said motion of relative approach and for interposing a heat transfer retarding space between said units by said motion of relative retraction.

2,951,141
PACKAGE SEALER
Daniel Bernhardt, 287 Cornwall Road, Glen Rock, N.J.
Filed Sept. 11, 1958, Ser. No. 760,484
1 Claim. (Cl. 219—19)

A heat sealing device for packages, said device comprising a base; a heated element supported on said base; a shield mounted on said base and movable with respect to said base in a direction normal to the plane of the heated element; said shield having a table section parallel to the heated element; said shield being resiliently mounted on said base with said last mentioned section spaced from said heated element; an opening in said section through which said heated element is accessible; said shield being movable by manual pressing of a package thereagainst to a position where the heated element is substantially coplanar with said table section; said resilient mounting returning said shield to said first mentioned position; said base and shield being arranged so that the shield is telescopically mounted on said base.

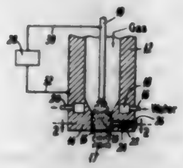


2,951,142
METHOD AND ARRANGEMENT FOR SPARK EROSION BY ALTERNATING CURRENT
Werner Ullmann, Locarno, Switzerland, assignor to Agie, A.G. für industrielle Elektronik, Locarno, Switzerland, a Swiss company
Filed Mar. 19, 1957, Ser. No. 647,163
Claims priority, application Switzerland Mar. 19, 1956
5 Claims. (Cl. 219—69)



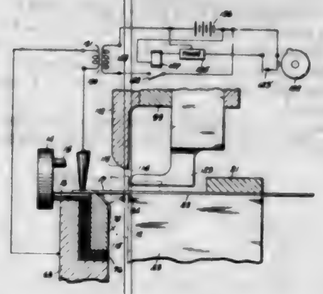
1. A device for detaching material from a metallic body by means of spark erosion; comprising a voltage generator for generating an alternating voltage having a positive and a negative wave portion, a metallic electrode forming one pole of a spark gap, a metallic body arranged in said device and forming a second pole of said spark gap, rectifying means, variable resistor means, respective means connecting said spark gap with said voltage generator and connecting said rectifying means and said variable resistor means in parallel with said spark gap to suppress at least part of one of said wave portions, and a selectively operable reversing switch arranged between said rectifying means and said spark gap to thereby suppress at least a part of a selected one of said wave portions of said alternating voltage.

2,951,143
ARC TORCH
John E. Anderson and Thomas B. Reed, Danville, Ind., assignors to Union Carbide Corporation, a corporation of New York
Filed Sept. 25, 1958, Ser. No. 763,419
7 Claims. (Cl. 219—75)



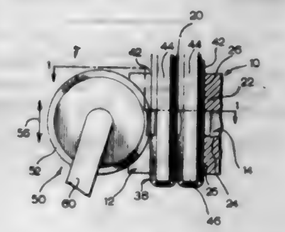
1. A high pressure arc torch comprising an electrically conductive body provided with a nozzle having an internal cooling liquid passage in the interior of the wall thereof, a stick electrode disposed within said body and terminating in spaced relation to the interior of said nozzle, means for supplying gas to the inside of said body for discharge through said nozzle, a refractory metal preferential electrode associated with said nozzle, arc current circuit means including said body and nozzle for energizing a high-pressure arc between the end of said stick electrode and said preferential electrode, said preferential electrode being mounted in said nozzle so that, while arc current is conducted through the nozzle to such preferential electrode, the thermal contact therebetween is relatively poor, causing the preferential electrode to operate at a substantially higher temperature and thus become more attractive as an arc terminal than the nozzle per se.

2,951,144
ARTICLE FORMING APPARATUS
Edward A. Heckman and Samuel Kuba, Allentown, and Richard C. Shafer, Emmaus, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 25, 1958, Ser. No. 750,899
2 Claims. (Cl. 219—79)



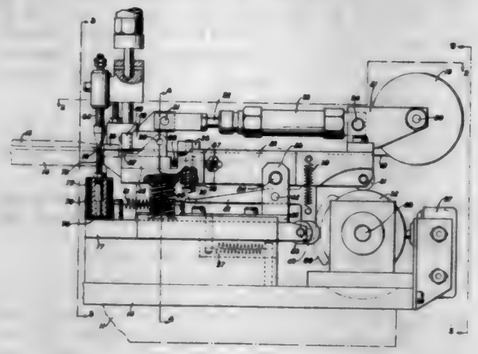
1. An apparatus for securing predetermined lengths of a metallic strand to outer ends of leads extending longitudinally from articles when in an operating position, the articles being moved laterally successively in a given plane into the operating position with the lead in each instance lying in said plane, the apparatus comprising a strand gripping unit, means to actuate the unit to cause advancement of the strand in a longitudinal path until its leading end portion is closely adjacent to and parallel with the outer end portion of the lead in the operating position, a lead heating element normally disposed beyond said plane on one side thereof, means operable to move the lead heating element into close engagement with the outer end portion of the lead in the operating position, a strand heating element normally disposed beyond said plane on the other side thereof, means operable to move the strand heating element into engagement with the leading end portion of the strand and under a predetermined pressure, means actuated to cause energization of the heating elements for a given length of time sufficient to secure the end portions of the strand and lead together, means actuated subsequently to the securing of the end portions to cut a length from the strand a given distance from the secured end thereof, a support for the strand mounted short of the end portion of the lead in the operating position and having a surface on which the strand may move longitudinally, a reciprocable unit carrying a holder normally disposed away from the surface and movable toward the surface to cooperate therewith to hold the advanced strand against movement, a cutting edge disposed at an exit end of the support, a cutter carried by the reciprocable unit and following the engagement of the holder with the strand to cooperate with the cutting edge to cut a given length from the strand short of the secured end portions.

2,951,145
METHOD AND APPARATUS FOR FABRICATING HONEYCOMB CORE
Roy L. Anspach, Newport Beach, Calif., assignor to John J. Foster Mfg. Co., Costa Mesa, Calif., a corporation of California
Filed Apr. 28, 1958, Ser. No. 731,281
6 Claims. (Cl. 219—83)



1. In a honeycomb core fabricating machine, the combination of: a movable electrode in the form of an elongated finger; a bed plate located below said electrode for supporting a pair of corrugated core strips with their nodal areas in juxtaposed relationship; a stripper plate disposed above said bed plate in spaced relationship therewith to define a core strip receiving space, said plate having an opening for the reception of said electrode; means for moving said electrode downwardly through said opening and into engagement with only a nodal area of one of said strips to support said strip during a welding operation; and another electrode engageable with only the nodal area of the other strip and adapted to traverse said nodal area to cause welding current to flow through said nodal areas between said electrodes.

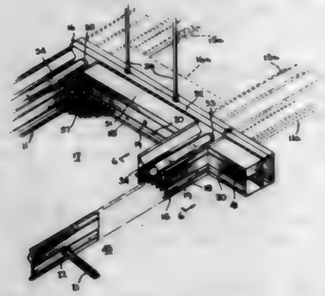
2,951,146
SOLDER APPLYING UNIT
Walter C. Gothe, Macungie, and James O. Hinkle, Emmaus, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed July 24, 1958, Ser. No. 750,799
6 Claims. (Cl. 219—85)



1. An apparatus for depositing a quantity of fusible material on metallic articles singly moved in a given path successively into an applying station, the apparatus comprising a pair of electrodes supported normally above the path, means actuable to move the electrodes under pressure into engagement with the article upon opposing sides of an area where solder is to be deposited, means operable to cause an electrical heating current to flow through the electrodes and the area of the article to heat the area, means to move a given length of an end

portion of a ribbon of solder longitudinally over the heated area, means to move the ribbon downwardly a given distance to lay the given length of the end portion on the heated area to be melted thereon, and means actuable after melting of the end portion to move the ribbon downwardly a farther distance relative to the article to separate the ribbon from the melted length of the end portion.

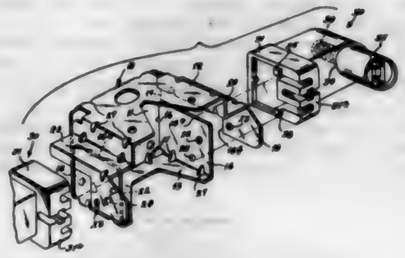
2,951,147
CEILING ILLUMINATING SYSTEM
James M. Gilbert, Lawrence, N.Y., assignor to Silvray Lighting, Inc., New York, N.Y., a corporation of New York
Filed Jan. 27, 1959, Ser. No. 789,427
5 Claims. (Cl. 240—9)



1. An illumination system comprising a generally rectangular open frame including side and end members and adapted to be suspended horizontally beneath a ceiling, each said side member having spaced generally parallel vertical walls defining a hollow member opening vertically upwardly and downwardly, the distance between the inner walls of said side members being substantially greater than the distance between the walls of each side member, means for mounting a lamp in each side member to radiate light upwardly and downwardly from the respective side member, said side members and said end members having inwardly extending flange members, a first light diffuser extending across said frame between said side and end members for diffusing light reflected downwardly from the ceiling and supported by said flanges, and additional light diffusers each extending across the underside of a respective side member to diffuse light radiated downwardly.

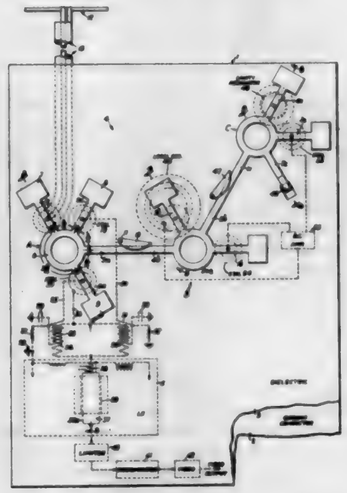
2,951,148
MOUNTING FIXTURE FOR TUBULAR LAMP SOCKETS
Leo G. Stahlhut, Kirkwood, Mo., assignor to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri
Filed Jan. 31, 1955, Ser. No. 484,891
5 Claims. (Cl. 240—51.11)

1. In a mounting fixture for supporting a lamp socket in a positive but releasable manner, the combination with the lamp socket of a mounting fixture comprising a body having a main space defined by angularly related walls and an adjacent pocket space to receive the lamp socket, said pocket space being defined by first and second walls spaced apart and other wall means connecting said first and second walls in relatively yieldable relation to permit said pocket space to be increased to receive the lamp socket, said first wall having an enlarged socket locating opening therein and said second wall having at least one aperture smaller than and disposed opposite said locating opening, said opening and aperture being engaged by different parts of the lamp socket to position the same and the yieldable relation of said first and second walls causing the latter walls to retain the lamp socket at opposite sides in a push-fit relation, and means releasably



engaging said first and second walls to secure the same against yielding movement.

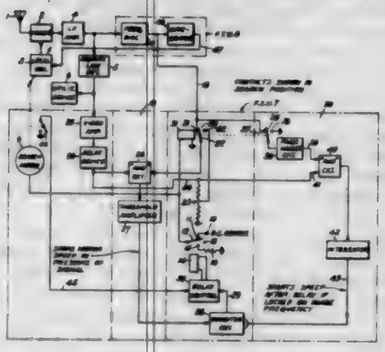
2,951,149
MICROWAVE RADIO RECEIVER
Donald D. Grieg, North Caldwell, and Herbert F. Engelmann, Mountain Lakes, N.J., and John A. Kostriza, Lexington, Mass., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Continuation of abandoned application Ser. No. 317,206, Oct. 28, 1952. This application Jan. 4, 1960, Ser. No. 2,321
11 Claims. (Cl. 250—20)



1. In an electronic device having a high frequency section for radio frequencies and a low frequency section for intermediate and audio frequencies, a sheet of dielectric material common to the areas of both said sections, a layer of conductive material on one side of said sheet forming a planar conductor in the area of said high frequency section, said high frequency section having conductor circuitry on the other side of said sheet of dielectric material in parallel spaced relation to said planar conductor to form two-conductor waveguide paths for radio frequency energy, each path consisting solely of a single-line-above-a-single-ground plane, the thickness of the dielectric spacing therebetween being a minor fraction of the wavelength at the mean frequency of the

radio frequency energy and the conductor widths of said conductor circuitry being considerably less than the width of the adjacent portion of said planar conductor for propagation therealong of radio frequency signals in a mode approximately the TEM mode with the main portion of an electric field of a wave propagated along each line being distributed between solely one surface of said line and the opposing surface of said layer forming said ground plane, and means for coupling radio frequency signal energy to said circuitry and to said planar conductor for waveguide propagation along and between the parallel conductor paths formed by said circuitry and said planar conductor, said low frequency section having circuitry and means including connections to said planar conductor for coupling together electrically the circuitry of said high and low frequency sections.

2,951,150
AUTOMATIC FREQUENCY SEARCH AND TRACK SYSTEM
Leonard J. Rennenkampf, North Caldwell, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Nov. 16, 1956, Ser. No. 623,727
8 Claims. (Cl. 250—20)

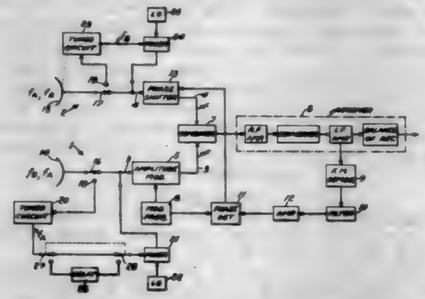


1. An automatic frequency search system for tuning an oscillator over a given frequency range and halting said tuning when the oscillator frequency bears a predetermined relationship to the frequency of a wave from another source comprising an oscillator whose frequency is to be controlled, a wave source, means for scanning said oscillator over a given frequency range, means for mixing the output of said oscillator with said wave, means coupled to the output of said mixing means for passing a narrow frequency band of the mixed frequencies, detection means coupled to said mixing means, a discriminator means coupled to the output of said narrow frequency band passing means for producing an output voltage of one polarity in response to frequencies in said narrow band on one side of a predetermined crossover point and for producing an output voltage of the opposite polarity in response to frequencies in said narrow band on the other side of said crossover point, an AND circuit, means coupled the output of said discriminator and said detection means to said AND circuit, means responsive to the coincidence of the output of said detection means and to said voltage of one polarity for stopping the scanning by said frequency scanning means, and means responsive to the coincidence of the output of said detection means and to said voltage of the opposite polarity for inhibiting said scanning-stopping means for a given interval.

2,951,151

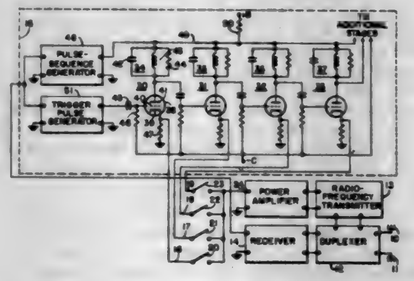
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2,951,152
RADIO DIVERSITY RECEIVING SYSTEM
William Sichak, Nutley, and Robert T. Adams, Short Hills, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Feb. 21, 1958, Ser. No. 716,594
38 Claims. (Cl. 250—20)



1. An automatic phase control system comprising a first and second source of signals of substantially the same frequency and having an unknown and varying phase relative to each other, means to combine signals of said first and second sources, a third source of given signals, means responsive to the output of said third source to modulate the signals of one of said first and second sources prior to the combining thereof, detector means coupled to the output of said combiner means to detect the signals of said third source therein, said detected signals having variations therein according to the phase difference between the signals of said first and second sources, a phase comparison means coupled to the output of said detector means and the output of said third source to produce a control signal in accordance with said variations and means responsive to said control signal to vary the phase of the signals of the other of said first and second sources prior to the combining thereof to maintain the signals combined substantially in phase.

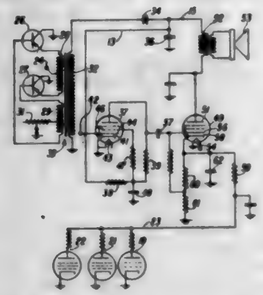
2,951,153
PULSE-DISTRIBUTION SYSTEM
Peter A. Baum, Manhasset, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Filed Dec. 22, 1954, Ser. No. 476,938
3 Claims. (Cl. 250—27)



1. A pulse-distribution system for supplying individual pulses of a pulse sequence to different pulse-translating channels, the system comprising: a plurality

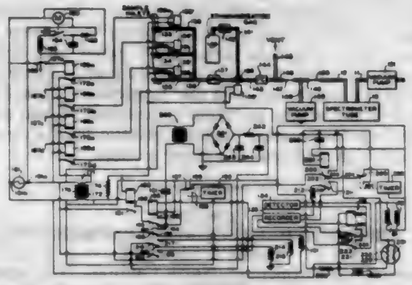
of cascaded and normally nonconductive amplifier stages individually including a resonant output circuit coupled to the succeeding stage, the oscillatory period of each resonant circuit being related to the period between pulses of the sequence; circuit means for simultaneously supplying the sequence of pulses to each of the amplifier stages, the amplitude of the pulses being insufficient to render an amplifier stage conductive; circuit means for supplying a trigger pulse to the first stage synchronous with one of the pulses in said sequence to enable each stage successively to develop a brief oscillatory signal in the resonant circuit thereof in time coincidence with one of the pulses of the pulse sequence, the combined amplitude of the pulse and oscillatory signal being sufficient to render the succeeding stage conductive, thereby enabling successive pulses of the pulse sequence to trigger successive amplifier stages; and a plurality of pulse-translating channels individually coupled to the amplifier stages for individually translating a pulse occurring when the respective stage is rendered conductive.

2,951,154
RADIO RECEIVER HAVING ANODE POWER OF FRONT-END STAGES DERIVED FROM CATHODE OF OUTPUT STAGE
Bernhard Birkenes, Chicago, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Filed Oct. 6, 1958, Ser. No. 765,375
2 Claims. (Cl. 250—20)



1. A superheterodyne radio receiver for use in an automobile having an electrical system providing a potential of the order of six volts, including in combination, a power oscillator circuit adapted to be energized by the electrical system, said power oscillator circuit including a step-up transformer and a rectifier circuit to produce a direct current energizing potential for said receiver, audio amplifier circuit means including a power output vacuum tube having grid, cathode and anode electrodes, a loudspeaker circuit coupling said anode electrode to said rectifier circuit, a direct current voltage divider coupled between said cathode electrode and a reference point, said direct current energizing potential providing power to said audio amplifier circuit means such that signals applied to said grid electrode will produce output sound from said receiver which is at a level to be heard in the automobile, means including a detector stage for demodulating signals and applying such signals to said grid electrode, a plurality of receiver stages including stages for heterodyning and amplifying received signals and for applying such signals to said detector stage, said receiver stages having respective amplifying devices therein, energization circuit means coupling said amplifying devices in parallel and filter circuit means coupled to said direct current voltage divider and said energization circuit means so that energization for said receiver stages is derived from said audio amplifier circuit means.

2,951,155
MASS SPECTROMETER
Raymond L. Kindred, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed July 10, 1957, Ser. No. 671,079
7 Claims. (Cl. 250—41.9)

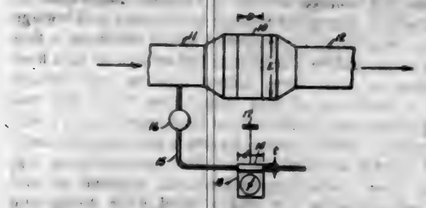


7. A mass spectrometer comprising an ionization chamber; a collector plate spaced from said ionization chamber; a grid positioned between said ionization chamber and said collector plate; first and second sources of potential of polarity opposite the polarity of the ions to be measured; switching means to apply said first and second sources selectively to said grid to accelerate ions from said ionization chamber toward said collector plate; means to focus ions of a predetermined mass on said collector plate; detector circuit means connected to said collector plate; means to introduce a plurality of sample streams to be analyzed into said ionization chamber in sequence comprising a plurality of first conduit means having respective first control valves therein, second conduit means communicating at one end with said first conduit means downstream from said control valves, third conduit means communicating with the second end of said second conduit means to vent fluid, fourth conduit means having a first restriction therein, one end of said fourth conduit means communicating with the second end of said second conduit means, a first vacuum pump having the inlet thereof communicating with the second end of said fourth conduit means, fifth conduit means having a second restriction therein communicating between the second end of said fourth conduit means and the ionization chamber in said envelope, and a second vacuum pump having the inlet thereof communicating with the interior of said envelope, and timing means to actuate said means to introduce and said switching means so as to apply said first source of potential to said grid for a predetermined time and thereafter to apply said second source of potential to said grid each time a different stream is passed to said ionization chamber.

2,951,156
METHOD AND APPARATUS FOR PREDICTING THE RESIDUAL LIFE OF ADSORPTION BEDS
Philip Miller, East Norwich, N.Y., assignor to Walter Kidde Nuclear Laboratories, Inc., Garden City, N.Y., a corporation of New York
Filed May 24, 1955, Ser. No. 511,439
10 Claims. (Cl. 250—43.5)

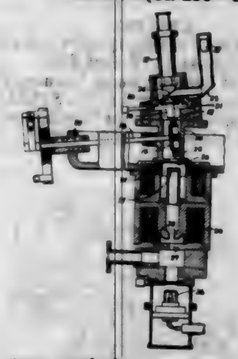
1. In combination, a main bed of given depth for the adsorption of unwanted matter in a fluid stream passing through said bed in the direction of the depth thereof, a test bed of the same composition and depth as said main bed and having a cross-sectional area in fixed proportion to the cross-sectional area of the main bed at different depths therealong, means for passing fluid from said stream depthwise through said main and test beds at

volume flow rates proportional, respectively, to the cross-sectional areas of said main and test beds, and means for determining a radiation transmission property of said test bed transversely of the direction of fluid flow therein



at different depths therealong, whereby the distribution of unwanted matter in said test bed can be ascertained from which the condition of said main bed can be predicted.

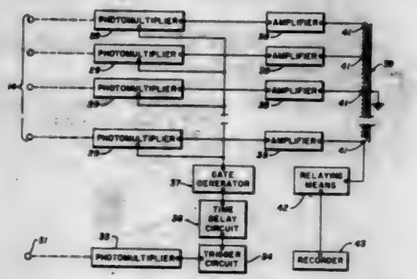
2,951,157
X-RAY APPARATUS
Michael Edward Haine, Salfarnstead, near Reading, and Thomas Mulvey, Caversham, Reading, England, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a British company
Filed Sept. 11, 1958, Ser. No. 760,472
Claims priority, application Great Britain Sept. 11, 1957
4 Claims. (Cl. 250—52)



4. X-ray type analysing apparatus comprising electron optical means for focusing an electron beam on to a specimen to cause the specimen to emit X-rays, a crystalline surface positioned in the path of said X-rays, means for measuring the angle of reflection of the X-rays reflected from said crystalline surface to determine the nature of the specimen and a visual optical system for examining the specimen visually, said visual optical system being separated from the electron optical system and a rotatable speciment holder with adjustment means whereby the specimen holder may be rotated between a position in which the selected point on the specimen is located in the electron optical path and in an alternative position in which the same point on the specimen is located in the visual system for visual examination and means whereby the specimen holder may be traversed axially so as to position a specimen for examination successively at a number of different points on its surface.

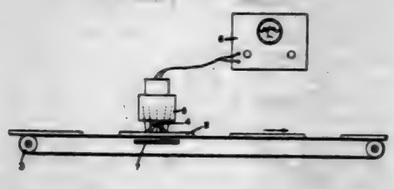
2,951,158
RADIATION WAVE DETECTION
Louis F. Wouters, Hayward, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Sept. 26, 1956, Ser. No. 612,341
7 Claims. (Cl. 250—71.5)

4. A radiation wave detector comprising a central station spaced from a source of radiation and having a radiation detector producing signals proportional to incident radiation; and a plurality of scintillation detectors disposed equidistant from said central station and equally separated radially of said radiation source for producing light of an intensity proportional to incident radiation intensity; said central station including a plurality of channels with each having an optical system receiving light



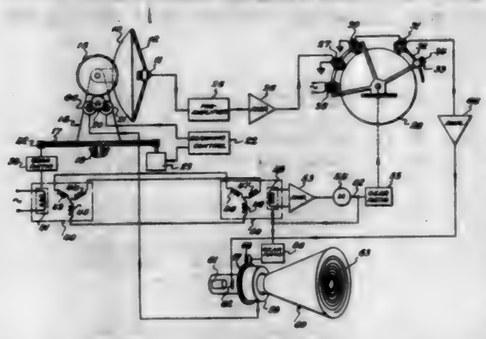
from a single detector and a photomultiplier producing electrical signals therefrom, a gating circuit for simultaneously sensitizing said photomultipliers and controlled from said central station detector, and means combining the output of said channels in time spaced relationship whereby the resultant signal is proportional to radiation wave intensity over the space of said detectors.

2,951,159
METHOD AND APPARATUS FOR MAKING REPETITIVE MEASUREMENTS
Thomas Mariner, Mount Joy, Pa., assignor to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania
Filed May 4, 1953, Ser. No. 352,667
2 Claims. (Cl. 250—83.3)



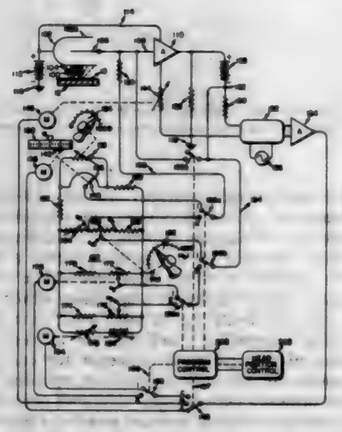
1. In a measuring apparatus for the nondestructive measurement of spaced specimens, the combination of a backscattering beta-gauge having a predetermined response time disposed in a measuring zone, a reference object the stimulus of which upon said gauge is substantially equal to the stimulus of a specimen which is standard for said specimens to be measured, said reference object being disposed in fixed position in said zone for stimulation of said gauge, a conveyor for carrying said spaced specimens through said measuring zone with the specimens disposed between said reference object and said gauge to serve as moving shutters to expose the reference object to said gauge continuously during the intervals between the passage of successive specimens through said measuring zone and to effectively block said reference specimen from stimulation of said gauge during passage of said specimens through said zone, and means for moving said conveyor at such rate that the time of passage of each successive specimen is smaller than the response time of said gauge.

2,951,160
OBJECT DETECTION SYSTEM
Earl J. McCartney, Rockville Centre, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Filed Apr. 23, 1956, Ser. No. 580,129
11 Claims. (Cl. 250—83.3)



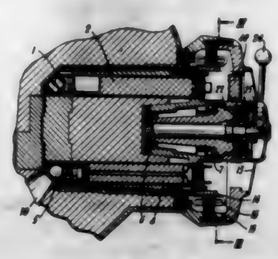
1. Receiving means for producing a series of signals representative of the wave energy characteristic of a succession of elemental scanned areas the signals representative of adjacent elemental areas being separated by a predetermined period of time, a first output responsive to said receiving means, a delay means responsive to said receiving means and having a second output, said delay means being effective to delay said second output by said predetermined period with respect to said first output comparison means for producing a differential output indicative of the difference between the signals at said first and second outputs.

2,951,161
CASCADE STANDARDIZATION
George B. Foster, Worthington, and William R. Clore, Columbus, Ohio, assignors to Industrial Nucleonics Corporation
Filed May 31, 1957, Ser. No. 662,672
7 Claims. (Cl. 250—83.3)



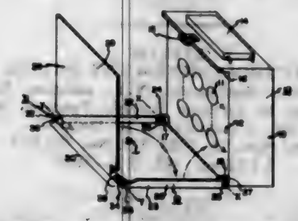
2. Reflection gauging apparatus for measuring a property of a material from one side thereof, comprising an inspection head having a radioactive source mounted therein for providing a beam of penetrative radiation directed outwardly from said inspection head, a radiation detector also mounted in said inspection head responsive to a characteristic of radiation reflected from matter in the path of said radiation beam, circuit means connected to said detector for developing a first voltage functional of said reflected radiation incident on said detector; an opposing voltage source comprising a plurality of impedances forming a voltage divider, an energizing voltage source for energizing said voltage divider, a variable impedance intermediate said energizing voltage source and said voltage divider for regulating the potential across the same, a first terminal connected to a reference tap on one of said load impedances, at least three output taps on said voltage divider, at least two of said output taps being first and second potentiometer taps on said load impedances, a second terminal, a switch means having a first state connecting said second terminal to said first potentiometer tap, a second state connecting said second terminal to said second potentiometer tap and a third state connecting said second terminal to the remaining one of said three output taps; means for connecting said first and second terminals of said opposing voltage source in opposition to said first voltage; indicating means responsive to any difference between said first voltage and said opposing voltage, means for positioning said inspection head in measuring relation to said material for gauging a property of the same, a standard surface having substantially constant radiation reflectivity characteristics, means for withdrawing said inspection head from said material, and means for positioning said inspection head in measuring relation to said standard surface.

2,951,162
MEDICAL THERAPY EQUIPMENT HAVING A RADIOACTIVE SOURCE
Stephen Stein, 54 Dunstan Road, London, England
Filed Nov. 25, 1955, Ser. No. 549,211
Claims priority, application Great Britain Nov. 26, 1954
4 Claims. (Cl. 250—106)



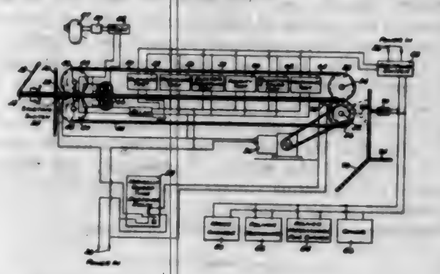
1. A radiation beam forming unit comprising a mass of metal adapted to form a main shield for a radioactive source, a secondary shielding member in the form of a solid cylinder mounted in a chamber formed in said main shield so as to be capable of rotary movement about the longitudinal axis thereof, the inner end of said chamber being disposed near the centre of the main shield and there communicating with a beam defining aperture formed in the main shield, said cylinder having formed therein two bores extending longitudinally thereof and disposed in spaced parallel relationship with and on opposite sides of the axis of rotation of the cylinder, a shielding carrier for a radioactive source removably mounted in one of said bores, a radioactive source receiving element formed at the inner end of said carrier and exposed through the inner end of the respective bore, a light transmitting element mounted in the other of said bores and exposed through the inner end thereof, and means adapted to rotate said cylinder for selectively moving said source receiving element and light transmitting element between an exposure position coincident with the inner end of said beam defining aperture and a safety position remote therefrom in which a radioactive source will be shielded jointly by said main shield and the cylinder.

2,951,163
VERSATILE SOLAR POWERED RADIO RECEIVER OR THE LIKE
Marlin R. Shaffer, North Hollywood, and Robert L. Weisbrich, Compton, Calif., assignors to Hoffman Electronics Corporation, a corporation of California
Filed Aug. 3, 1956, Ser. No. 602,002
4 Claims. (Cl. 250—212)



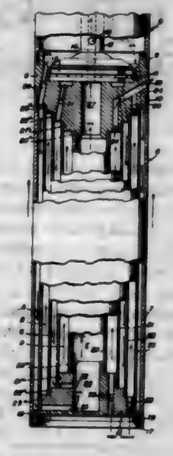
1. A portable radio receiver including, in combination: a case having a back portion and a back cover adapted to cover said back portion, said back portion being provided with first mounting means having a first axis; a plurality of electrically intercoupled solar cells for providing power for said receiver, said solar cells being fixedly disposed upon said back portion and facing a common direction; said back cover having a reflective surface and second mounting means provided with a second axis spaced from said first axis; extension means rotationally secured to said first and second mounting means whereby said back cover may be rotationally displaced about said first and second axes in order alternatively to reflect light upon said solar cells and to cover said back portion; means affixed to said case for selectively and releasably securing said back cover and said extension means in proximate relationship with respect to said back portion; and reflective means disposed upon said extension means.

2,951,164
APPARATUS FOR IDENTIFYING PAPER MONEY OR THE LIKE, AS GENUINE, AND FOR MAKING CHANGE OR THE LIKE
Ross L. Timms, Akron, Ohio, assignor of fifty percent to Alan Foster, Cincinnati, and five percent to Albert H. Oldham and five percent to Vern L. Oldham, Akron, Ohio
Original application Feb. 7, 1952, Ser. No. 270,326. Divided and this application May 20, 1958, Ser. No. 736,627
6 Claims. (Cl. 250—219)



1. The combination in oldness test apparatus for paper money and the like of a light source, means for moving the money to be tested relative to the light source to position the light source to direct a beam of light against the money, photo cell means for picking up the light reflected from the money, amplifier means connected to the output of the photo cell, galvanometer means having its operating coil connected to the output of the amplifier, a plurality of short arcuate contact plates on the galvanometer means adapted to be engaged in turn by the needle of the galvanometer means, a different resistance connected to each contact plate, a power-in circuit triggered by the selected relative position of the money and light source and connected through the needle, contact plates and resistances of the galvanometer means to a power-out circuit.

2,951,165
HEAT EXCHANGER FOR SUBMERGIBLE PUMPING ASSEMBLY
Armais Arutunoff, Bartlesville, Okla., assignor to Reda Pump Company, Bartlesville, Okla., a corporation of Delaware
Filed Aug. 8, 1957, Ser. No. 677,099
8 Claims. (Cl. 310—54)

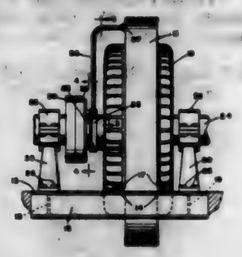


1. In an oil filled submergible electric motor driven pump assembly, including a motor unit; a heat exchange reservoir unit forming the base of said motor unit and comprising an elongated cylindrical housing closed at its lower end, a central vertical tube in said housing, closed at its lower end and communicating at its upper end with the interior of said motor unit, at least two concentric elongated annular conduits having common dividing walls, coaxially surrounding said central tube, one of said conduits having an oil inlet from said motor unit at its upper end and an oil outlet to said central tube at its lower end, the other of said conduits defining an uninterrupted, unidirectional path and having a fluid inlet for the surrounding well fluid at its lower end and a fluid outlet to said well at its upper end, and means in said motor unit for circulating oil from the latter, through said one conduit and central tube and back to said motor unit, in heat exchange relation to the well fluid coursing through said other conduit.

2,951,166
DEVICES FOR REDUCING SHAFT CURRENTS IN ROTATING ELECTRIC MACHINES
Edwin W. Swanson, Minneapolis, Minn., assignor to Electric Machinery Mfg. Company, Minneapolis, Minn., a corporation of Minnesota
Filed Apr. 29, 1958, Ser. No. 731,802
6 Claims. (Cl. 310—68)

1. In a rotating electric machine having a shaft, a stator provided with a stator core constructed of laminated segments encircling said shaft and a rotor having a rotor core mounted on said shaft and encircling the same, bearings in which said shaft is mounted for rotation and supporting means for said bearings, said shaft,

bearings and supporting means forming a closed electrical circuit, the joints between laminations in said stator core producing in said core unequal magnetic reluctances resulting in a shaft electromotive force in said electrical circuit, the combination of an alternating-current generator having a stator with a stator core physically separated from the stator core of the electric machine, and a rotor provided with a rotor core physically separated from the rotor core of the electric machine, the cores of said generator providing a magnetic circuit separate from the magnetic circuit of said electric machine, a transformer having a core encircling said shaft, and a



winding thereon energized by the electromotive force produced by said generator, the rotor of said generator being driven at a predetermined relative speed with reference to the rotor of said electric machine and the stator core of said generator having a predetermined number of poles, said poles being arranged so that the frequency of the electromotive force induced in said electrical circuit by said transformer is substantially one hundred and eighty degrees out of phase with the shaft electromotive force produced in said electrical circuit by said electric machine, the electromotive force impressed on said electrical circuit by said transformer being substantially equal to the shaft electromotive force.

2,951,167
SUPPORT MEANS FOR MOUNTING COLOR-CONTROL ELEMENT IN GLASS PORTION OF CATHODE-RAY TUBE ENVELOPE
Robert R. Kegg and Alfred D. Pinotti, Toledo, Ohio, assignors to Kimble Glass Company, a corporation of Ohio
Filed June 26, 1958, Ser. No. 744,715
3 Claims. (Cl. 313—85)



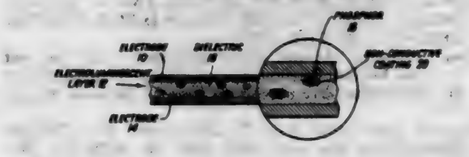
1. In a cathode-ray picture tube envelope, the combination of a hollow body member, a hollow glass face plate hermetically sealed to said body member, and a color-controlling electronic element mounted within said face plate, said glass face plate having a viewing panel comprising a screen area, an annular glass flange portion extending from and surrounding the viewing panel of said face plate, and a plurality of inwardly-projecting glass lugs having freely-cantilevered ends formed integral with said flange portion, said glass lugs disposed in spaced-apart relation with their axes essentially normal to the tube axis, said color-controlling electronic element having a plurality of spring-type metallic mounting members affixed to its marginal surfaces each having an aperture therein coincidental with the spaced relation of said glass lugs, a sleeve-like metallic member having a flared shoulder portion mounted on the free end of each glass lug, and a solidified fused layer of low-melting sealing composition interposed between each glass lug and its sleeve-like mounting member for their firm attachment in accurate alignment with the tube screen area.

2,951,168
ELECTROLUMINESCENT DEVICE
Stephen Yando, Huntington, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Filed Nov. 28, 1958, Ser. No. 776,980
9 Claims. (Cl. 313—108)



1. An electroluminescent device comprising a strip of piezoelectric material; first and second contacts secured to opposite surfaces of said strip adjacent one end thereof, said first and second contacts being positioned opposite each other; an electroluminescent layer placed in intimate engagement with one surface of said strip intermediate the ends thereof and spaced apart from said contacts; and first and second terminations affixed to corresponding ends of said strip, said terminations absorbing substantially without reflection any incident elastic wave supplied thereto from said strip.

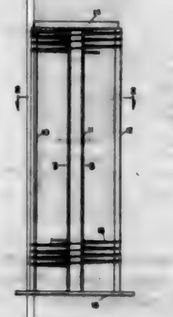
2,951,169
ELECTROLUMINESCENT LAMP
Sixdeniel Faria, Long Island City, and Paul Goldberg, Long Beach, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Delaware
Filed June 8, 1959, Ser. No. 818,789
2 Claims. (Cl. 313—108)



1. An electroluminescent device comprising first and second spaced apart electrodes, at least one of which permits the passage of light therethrough, and an electroluminescent layer positioned between and in contact with both electrodes, said layer consisting of electroluminescent phosphor particles coated with colloidal transparent silica and dispersed in a solid dielectric, there being about two parts by weight of phosphor to about one part by weight of dielectric, the silica coating having a weight equal to about 1% of the weight of phosphor, and means to apply an alternating voltage between said electrodes, the efficiency of the device, at relatively high electric fields, decreasing relatively slowly with increasing field strength.

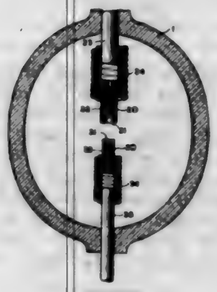
2,951,170
GETTER FOR ELECTRON TUBES
Joseph Lefferson, Springdale, Conn., assignor, by mesne assignments, to The Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Filed Dec. 4, 1958, Ser. No. 778,154
4 Claims. (Cl. 313—178)

1. In an electron tube having a generally cylindrical grid structure employing a spirally wound grid wire having a platinum surface, supporting means for the grid wire comprising a number of elongated stays extending longitudinally of the grid and over which the grid wire is wound, the stays each being channel-shaped with the channels extending longitudinally in one side of the stays,



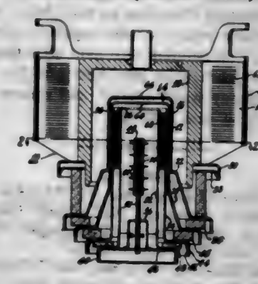
and getter means comprising a strip of getter material located in the channel of at least one of said stays and extending for a substantial distance of the length thereof, the strip being fixedly secured to the stay within the channel and having a layer of gettering material sintered to a surface thereof.

2,951,171
HIGH-PRESSURE ELECTRIC DISCHARGE TUBE
Thomas Holmes, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Filed July 21, 1958, Ser. No. 749,993
Claims priority, application Netherlands Aug. 10, 1957
3 Claims. (Cl. 313—209)



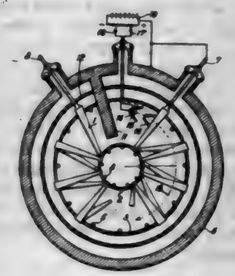
1. A high-pressure electric discharge tube adapted to operate without a focal spot comprising a light-transmissible envelope, an inert gas filling said envelope at a pressure of several atmospheres, a pair of axially aligned spaced conductive electrodes within said envelope, the spacing of the electrodes being small compared with the diameter of the envelope, at least one of said electrodes having a conical depression the base of which faces the other electrode and the apex of which lies within and on the axis of said electrode, said electrode also having an axial cylindrical recess extending from the apex of said conical depression into a chamber in the electrode having a sectional area exceeding that of the recess and which is at least partially filled with a material having a higher electron emission than the material of said electrode, and a helically coiled metal wire in contact with the wall of said recess and the emissive material to facilitate constant migration of emissive material into said recess.

2,951,172
HIGH POWER, HIGH FREQUENCY ELECTRON TUBE
William C. Griffiths, Jr., Pottstown, and Ira E. Smith, Lancaster, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 27, 1958, Ser. No. 769,646
3 Claims. (Cl. 313—247)



1. An electron tube comprising a plurality of concentric cylindrical electrodes including a cathode and an anode, a pair of concentric tubular cathode supports, the inner one of said supports extending concentrically within said cathode, adjacent ends of said concentric supports being connected to opposite ends of said cathode, a base member sealed across and closing the other end of said inner concentric support, and a getter structure mounted on said base member concentrically within said inner concentric support and extending partly within said cathode, said getter structure comprising a rod mounted at one end on said base member and a plurality of sorption-type getter disks mounted on said rod and spaced therealong by a plurality of interposed spacer members.

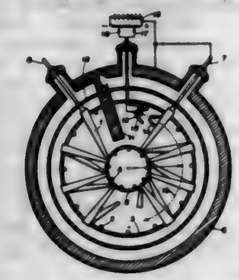
2,951,173
TRAVELING WAVE TUBE OSCILLATORS
Georges Mourier, Jamaica, N.Y., and Oscar Döhler, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Filed Mar. 24, 1958, Ser. No. 723,467
Claims priority, application France Nov. 25, 1947
10 Claims. (Cl. 315—3.5)



1. An electron discharge tube comprising, in an evacuated envelope, a curved conductive structure defining a circular electron and wave interaction duct having an output and delay elements for ultra-high-frequency wave energy propagating in said duct, a terminal connection to said structure for applying a potential to determine an equipotential throughout said duct, an electron gun positioned at one end of said duct adjacent said output to emit a beam of electrons into said duct in a plane perpendicular to the axis of curvature of said structure at a velocity having a resultant directed perpendicularly to said axis and a value expressed in volts substantially equal

to said potential, means for establishing in said duct a uniform magnetic field having its lines of force directed parallel to said axis, the delaying characteristics of said delay elements and the magnitude of said induction being such as to cause the angular velocity of phase propagation, in the same sense as said beam of electrons, of ultra-high-frequency wave energy propagating in said duct in the opposite direction to said beam of electrons to be substantially equal to the angular velocity of said electrons, means associated with said structure at a point thereof remote from said electron gun for attenuating ultra-high-frequency wave energy, and means for collecting wave energy at said output.

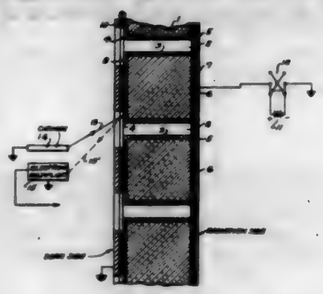
2,951,174
TRAVELLING WAVE TUBES
Georges Mourier, Jamaica, N.Y., and Oscar Döhler, Paris, France, assignors to Compagnie Generale de Telegraphie Sans Fil, Paris, France
Filed Mar. 24, 1958, Ser. No. 727,513
Claims priority, application France Nov. 25, 1947
20 Claims. (Cl. 315—3.5)



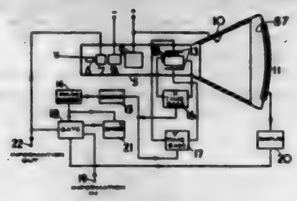
1. An electron discharge tube comprising, in an evacuated envelope, a circularly curved conductive structure defining a curved electron and wave interaction duct having an output and including delay elements for ultra-high-frequency wave energy propagating in said duct, a terminal connection to said structure for applying a potential to establish an equipotential throughout said duct, an electron gun positioned to emit a beam of electrons into said duct in a plane perpendicular to the axis of curvature of said structure at a velocity having a resultant directed perpendicularly to said axis and a value expressed in volts substantially equal to said potential, means for establishing in said duct a uniform magnetic field having its lines of force directed parallel to said axis and of predetermined induction so as to impart to the electrons of said beam a circular motion around said axis, the delaying characteristics of said delay elements and the radius of curvature of said structure being such as to cause the angular velocity of phase propagation of said ultra-high-frequency wave energy in said duct to be substantially equal to the angular velocity of said electrons as determined by the magnitude of said induction, and means for collecting said wave energy at said output.

2,951,175
DETECTOR SYSTEM
Fay E. Null, Shalimar, Fla., assignor to the United States of America as represented by the Secretary of the Air Force
Filed Oct. 23, 1956, Ser. No. 617,891
7 Claims. (Cl. 315—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

7. An infrared detection system comprising an infrared sensitive mosaic of the type having a plurality of elemental condensers which receive charges in conformity with the intensity distribution of incident infrared radiation, means comprising a scanning electron beam for producing a signal representative of the charges on said condensers as they are scanned in succession, and means for producing an output signal comprising means for storing the signal produced by each condenser and subtracting it from the signal produced by the next succeeding condenser in the scanning cycle.



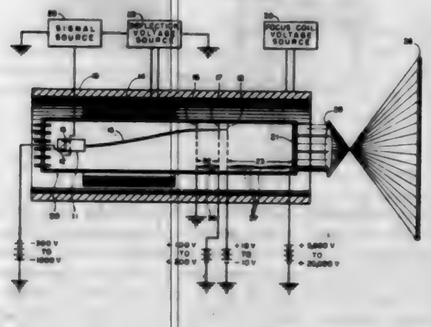
2,951,176
APPARATUS FOR STORING TRAINS OF PULSES
Frederic Calland Williams, Timperley, England, assignor, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 10, 1947, Ser. No. 790,879
Claims priority, application Great Britain Dec. 11, 1946
22 Claims. (Cl. 315—12)



22. In combination in a device for storing digital information, a surface capable of receiving electrical charges, pickup means for detecting variations in the charges on said surface, input means connected to receive information to be stored and means responsive to both the pickup means and the input means for controlling the charges received by said surface and acting recurrently to apply and thereafter to regenerate at least two different conditions of charge on said surface in accordance with information supplied to said input means.

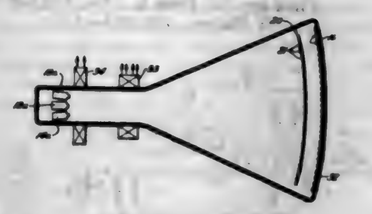
2,951,177
PROJECTION STORAGE TUBE
Sidney T. Smith, Springfield, Va., assignor to the United States of America as represented by the Secretary of the Navy
Filed July 14, 1959, Ser. No. 827,130
4 Claims. (Cl. 315—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A cathode ray storage tube comprising an evacuated envelope with a principal axis having a first electron gun at one end thereof and a luminescent phosphor display surface at the other end, said first electron gun disposed to direct a first electron beam substantially along said axis toward said display surface, pulse means for impressing a pulse on said first electron gun to control the density of the electrons in the output of said gun, a flood cathode screen disposed intermediate said first electron gun and said display surface, said flood cathode screen including a second source of electrons adapted to emit toward said display surface, a collector screen disposed intermediate said flood cathode screen and said display surface for attracting the electrons emitted from said second source of electrons of said flood cathode screen, a storage grid disposed intermediate said collector screen and said display surface for electrostatically storing information of said first electron beam, said storage grid including an insulating coating on the surface facing said collector screen, horizontal deflection means disposed to control the horizontal displacement of said first electron beam, vertical deflection means disposed to control vertical displacement of said first electron beam, electron beam focusing means for establishing lines of magnetic force through said tube substantially parallel to the principal axis thereof, said focusing means including a solenoid which encompasses the portion of said envelope between said first electron gun and said display surface, first energizing means for energizing said solenoid, second energizing means for maintaining said collector screen at a selected voltage positive with respect to said flood cathode and of sufficient magnitude to attract said electrons from said second source through said collector screen, third energizing means for maintaining said storage grid at a selected voltage positive with respect to said first electron beam and of sufficient magnitude to attract said first electron beam through said flood cathode screen and said collector screen, fourth energizing means for maintaining said display surface at a selected voltage positive with respect to said storage grid and of sufficient magnitude to attract a portion of the electrons from said second source through said storage grid; said first electron gun, said flood cathode screen, said collector screen and said storage grid disposed at preselected intervals along said axis; said solenoid in said focusing means energized so as to focus said first electron beam at said storage grid, the electrons from said second source substantially at said storage grid and said portion of the electrons from said second source at said display surface; said second energizing means and said third energizing means of sufficient magnitude to in combination collimate the electrons from said second source and concentrate these electrons in a region substantially adjacent to the surface of said storage grid facing said collector screen.

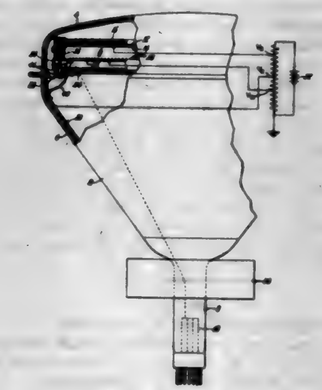


2,951,178
MULTI-BEAM CATHODE-RAY TUBE TRANSDUCER
William E. Bradley, New Hope, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 7, 1955, Ser. No. 480,498
17 Claims. (Cl. 315—13)

15. A fluorescent display screen for a cathode ray tube having a negative electrode next-adjacent said screen, comprising a substrate on which a multiplicity of sets of substantially uniform phosphor areas are disposed, the center-to-center distance between adjacent ones of said sets being at least several times that of the width of one of said phosphor areas, said phosphor areas collectively constituting less than about one-tenth of the area of said screen on which phosphor areas are not disposed.

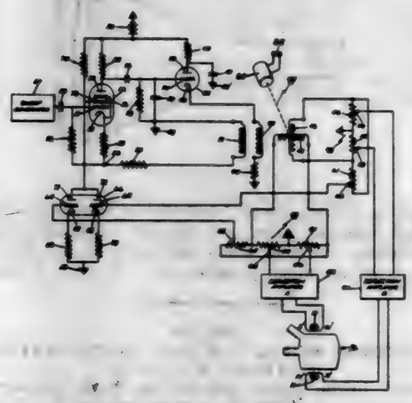


2,951,179
ELECTRON SHIELD FOR POST ACCELERATION CATHODE RAY TUBE
Howard Joseph Evans, Fayetteville, N.Y., assignor to General Electric Company, a corporation of New York
Filed May 28, 1956, Ser. No. 587,901
3 Claims. (Cl. 315—15)



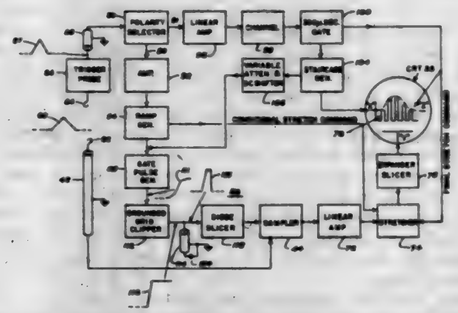
1. In a cathode ray tube including an envelope containing at least one electron gun and a screen adapted to be illuminated by electrons from the gun, an electron permeable mask in the path of electrons from the gun to the screen between which and the screen is adapted to be formed an electron accelerating electrostatic field, said mask having apertures through which pass electric flux lines extending said screen to said mask, whereby an electron attraction region having a field potential slightly higher than the potential of said mask is formed at a location spaced from said mask on the side thereof away from said screen, an electron impermeable shield disposed between said electron gun and said mask and framing an aperture through which electrons pass from said gun to said screen, at least the inside edge of said shield being located in a plane spaced from said electron attraction region in the direction of said gun, an electron collector electrode adjacent to the shield adapted to be maintained at a potential not less than the potential of said attraction region, and a conductive strap forming a direct electrical connection between said shield and said collector electrode to maintain said shield and collector electrode at the same potential.

2,951,180
CATHODE-RAY TUBE SYSTEM
Isaac Roger Studebaker, Fort Wayne, Ind., and Weldon Wayne Grostman, Hicksville, Ohio, assignors to International Telephone & Telegraph Corporation
Filed Jan. 10, 1958, Ser. No. 708,249
8 Claims. (Cl. 315—24)



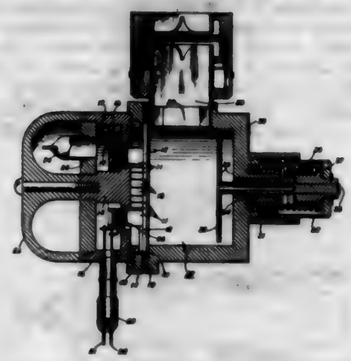
1. In combination with a cathode ray tube having a pair of deflection elements; a polar scanning system for said tube providing correction for keystone distortion and comprising sweep voltage generating means, resolving means coupled to said generating means for resolving said sweep voltage into sine and cosine components, said resolving means being coupled to said tube deflection elements for respectively impressing said sine and cosine components thereon thereby to provide said polar scan; and means coupled to said resolving means and to said sweep voltage generating means for comparing voltages respectively responsive to said sine and cosine sweep voltage components and for varying said sweep voltage responsive to said comparison whereby said sweep voltage is varied in accordance with the azimuth of said polar scan thereby to correct said keystone distortion.

2,951,181
SAMPLING OSCILLOSCOPE
Robert M. Sugarman, East Patchogue, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Filed Nov. 25, 1958, Ser. No. 776,394
12 Claims. (Cl. 315—24)



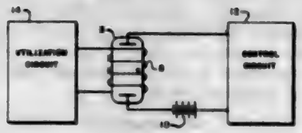
7. A self-triggering sampling oscilloscope for presenting a record of the average waveform of a plurality of input signal waveforms in a train of waveforms admitted thereto comprising, in combination, first means for strobing said plurality of input signal waveforms at a sequential time interval from the start of respective successive waveforms thereof to obtain a sample pulse height therefrom, second means connected thereto for displaying said pulse heights on an included indicator whose vertical deflection is proportional to said pulse height and whose horizontal deflection is proportional to said respective time interval.

2,951,182
MAGNETRON
Joseph Feinstein, Livingston, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Nov. 25, 1957, Ser. No. 698,839
9 Claims. (Cl. 315—39.53)



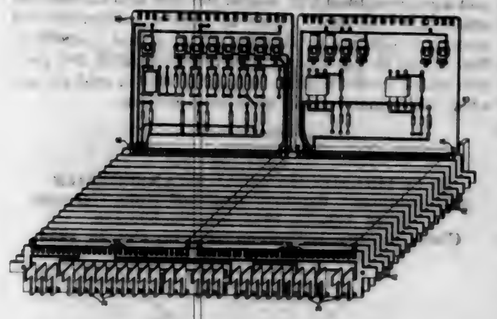
1. A magnetron comprising a flat circular end plate, a plurality of anode vanes positioned on said end plate in a circular array and defining a plurality of cavity resonators, cathode means positioned adjacent the ends of said anode vanes remote from said end plate, means including said end plate defining an external cavity resonator, and means coupling said external cavity resonator to certain of said anode cavity resonators, said coupling means including a plurality of individual slots extending through said end plate, said slots being radial, coaxial with said anode vanes, and extending beyond the edges of said anode vanes whereby storage of energy in said slots is forced to be in a common slot mode.

2,951,183
INDUCTANCE VARIED BY CONTROLLED GASEOUS DISCHARGE
Anthony J. Manfredi, Eatontown, N.J., assignor to the United States of America as represented by the Secretary of the Army
Filed Mar. 3, 1953, Ser. No. 340,173
2 Claims. (Cl. 315—158)
(Granted under Title 35, U.S. Code (1952), sec. 266)



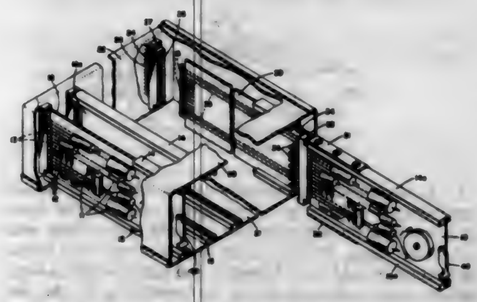
1. A source of current, a variable impedance control circuit, and a load connected in series, said control circuit varying said current from a maximum to a minimum value, said load consisting of a gaseous discharge device and an inductive circuit including a coil of wire wound around said gaseous discharge device and controlled thereby, said coil having a first inductance when said current is maximum and a second inductance when said current is minimum.

2,951,184
PRINTED WIRING ASSEMBLY
Edwin R. Wyma, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 24, 1956, Ser. No. 630,102
12 Claims. (Cl. 317—101)



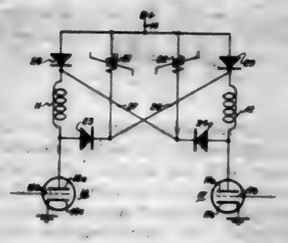
1. A printed wiring back panel assembly comprising a first plurality of longitudinally extending printed wiring boards arranged in parallel spaced relationship; a second plurality of transversely extending printed wiring boards arranged in parallel spaced relationship; each of said boards in said first plurality having a plurality of slots therein, each of said boards in said second plurality being fitted into a slot in each of said boards in said first plurality; a plurality of conductor segments extending on each of said transversely extending boards in spaced parallel relationship in a direction substantially perpendicular to said longitudinally extending boards, first and second conductor segments on at least one of said longitudinally extending boards extending to the slot therein in which a first one of said transversely extending boards is fitted, each of said first and second segments being aligned with and electrically connected to a different one of said conductor segments on said first transversely extending board, and conductor segments on others of said longitudinally extending boards extending from longitudinal edges thereof to different ones of said slots in alignment with conductors on said transverse boards.

2,951,185
PRINTED CIRCUIT SUBASSEMBLIES AND TEST FIXTURES
Harry Victor Back, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed Dec. 28, 1956, Ser. No. 631,325
2 Claims. (Cl. 317—101)



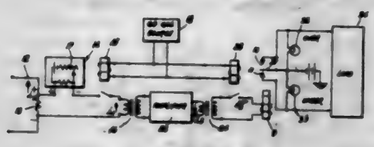
1. The combination of a plurality of printed circuit boards carrying components electrically connected to terminals along one edge of the board; a unitary structure for supporting said boards in close spaced parallel relation; electrical sockets in said structure for receiving said terminals on the boards when the boards are in operative position; and a fixture for testing each printed circuit board comprising a test board with male and female connectors, respectively, at opposite ends of the test board and electrically connected together, the connector at one end of the test board being adapted to said sockets, and means at the other end of said test board for receiving and holding one of said printed circuit boards in the connector at said other end so that a printed circuit board is electrically connected to its socket although physically removed therefrom.

2,951,186
CIRCUIT FOR ALTERNATELY ENERGIZING TWO ELECTROMAGNETIC DEVICES
Wesley E. Dickinson, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed May 19, 1958, Ser. No. 736,183
7 Claims. (Cl. 317—123)



1. A control circuit for a pair of coils having appreciable inductances comprising switch means for alternately connecting one of said coils in circuit with a source of voltage and disconnecting the other of said coils from a source of voltage, and means connecting one terminal of each of said coils to the opposite terminal of the other of said coils, whereby upon disconnection of either of said coils the voltage appearing across the disconnected coil is impressed on the other of said coils with the same polarity as the voltage of the source to which said other coil is connected.

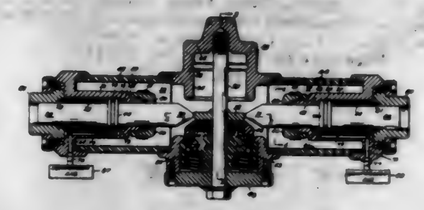
2,951,187
ELECTRICAL INDICATING AND CONTROL APPARATUS
John W. McGrath, Allentown, Pa., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Mar. 11, 1957, Ser. No. 645,286
8 Claims. (Cl. 317—150)



1. In an electrical control apparatus responsive to the magnitude of an unknown current in an electrical circuit, a polarized switching device for controlling the operation of an external load, and an energizing circuit for the switching device, said energizing circuit including means for producing an alternating current in the energizing circuit, means for reversing the phase of the alternating current when the unknown current in said

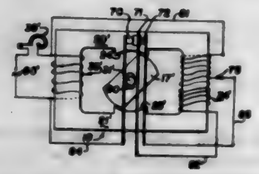
electrical circuit exceeds a prescribed limiting value and means for periodically opening the energizing circuit to eliminate all half-cycles of the alternating current of one polarity when the unknown current is above the limiting value and to eliminate all of the half-cycles thereof of the opposite polarity when the unknown current is below said value so that the remaining polarized portions of the alternating current selectively operate the switching device in accordance with the level of the unknown current as compared to the limiting value.

2,951,188
HIGH SPEED CONTACTING DEVICE
Edward J. Diebold, Ardmore, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 10, 1956, Ser. No. 558,349
14 Claims. (Cl. 317—156)



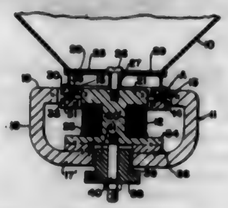
1. A contact device; said contact device comprising a pair of cooperable contacts relatively movable into and out of engagement with one another, a first winding and energizing means for said first winding; one of said cooperable contacts being a second winding having an axial length of substantially the same dimension as the radial thickness of said second winding; said second winding being positioned to have a current induced therein responsive to energization of said first winding; the magnetic fields of said first and second windings being in a direction to repel one another to thereby effect relative motion between said pair of cooperable contacts; said one of said cooperable contacts forming said second winding being a ring having a constant cross-sectional area for conduction of currents induced therein by said first winding; the other of said pair of cooperable contacts engaging said ring on a surface thereof when said pair of cooperable contacts are moved into engagement with one another; acceleration of said ring forming said second winding by a given force being dependent only upon the mass of said second winding.

2,951,189
CONTROL DEVICE
Charles E. Hajny, Milwaukee, Wis., assignor to Baso Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 13, 1956, Ser. No. 621,703
6 Claims. (Cl. 317—156)



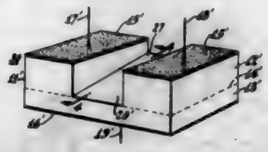
5. An electromagnetic operator comprising a magnetically permeable core having an air gap, an armature mounted for movement in said air gap and adapted for connection to a control member to be actuated, magnetic flux source means comprising first and second windings for producing magnetic flux in said core and through said air gap, said armature being movable from a first to a second position in response to flux flow in said air gap, means associated with said armature and said magnetic flux source means comprising contact means connecting said windings in parallel circuit relation when said armature is in its first position and actuated by movement of said armature toward its second position to interrupt said connection and short circuit at least a portion of said secondary winding to thereby afford a first amount of flux in said air gap when said armature is in its first position and a second smaller amount of flux in said air gap when said armature is in its second position.

2,951,190
ELECTRO-MECHANICAL TRANSFORMER
Max Baermann, Bensberg Wolfshof, Koln, Germany
Filed Apr. 22, 1955, Ser. No. 503,236
Claims priority, application Germany Oct. 28, 1954
14 Claims. (Cl. 317—173)



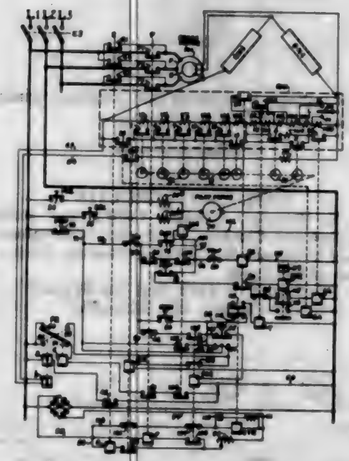
1. An electro-acoustic transformer comprising in combination a ferro-magnetic circuit having spaced parallel pole surfaces defining an air gap, a mechanically vibrating element, a permanent magnet positioned in said air gap and connected to and movable with said element, winding means inductively associated with said ferro-magnetic circuit and operable to induce a magnetizing force in said ferro-magnetic circuit in response to magnetizing direct current applied to said winding means, and pre-magnetizing means associated with said ferro-magnetic circuit for producing therein a magnetic force equal and opposite to said magnetizing force induced in response to the direct current applied to said winding means, whereby the pole surfaces have substantially no magnetic polarity in the absence of a signal current applied to said winding means.

2,951,191
SEMICONDUCTOR DEVICES
Gerald B. Herzog, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,408
11 Claims. (Cl. 317—235)



1. A controlled transconductance electrical device comprising a monocrystalline given conductivity type semiconductor body having two opposed major faces, one said major face bearing a groove between two lands, the portion of said body between said lands having a non-uniform cross-sectional shape corresponding to the desired transconductance characteristic, the opposite major face having a surface zone of opposite conductivity type so as to form a rectifying barrier at the interface between said surface zone and the interior zone of said body, and a non-rectifying metal film on said lands and on at least a portion of said opposite major face.

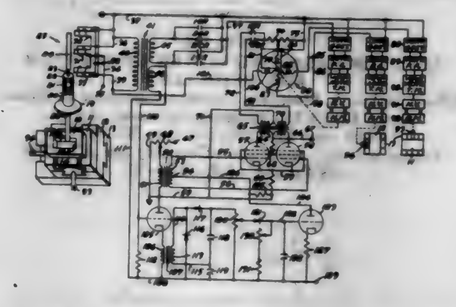
2,951,192
ELECTRIC MOTOR CONTROLLERS
Cyril P. Feldhausen, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 24, 1956, Ser. No. 587,075
13 Claims. (Cl. 318—203)



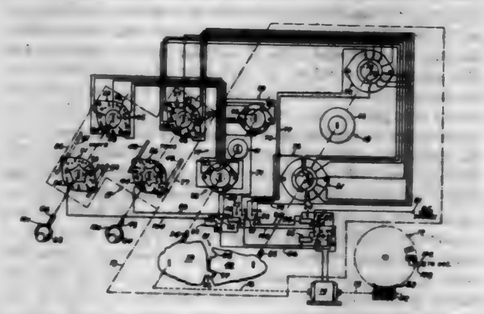
1. In a controller for a motor having a secondary resistance network, a speed selector for preparing commutating circuits for portions of the secondary resistance network to preselect one of a multiplicity of motor operating speeds, said selected commutating circuits being completed following initiation of operation of the motor, control means for initiating operation of the motor, sequentially-operable timing means, means responsive to operation of said control means for operating said timing means to complete said commutating circuits in sequence to control acceleration of the motor to the preselected speed in timed incremental steps, means operable independently of said speed setter for restoring said timing means to control deceleration of the motor to a low speed and for reoperating said timing means to control reacceleration of the motor to the preselected speed in said timed incremental steps.

2,951,193
SLOWDOWN CONTROL FOR SERVOSYSTEM CIRCUIT
Joseph A. Rave, Jr., Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 16, 1958, Ser. No. 728,820
6 Claims. (Cl. 318—448)

1. In an electrically controlled pattern tracing apparatus having a tracer, a source of feed rate voltage of predetermined amplitude, means for translating the tracer along a pattern at a rate proportional to the amplitude of the feed rate voltage, and means for producing an error signal whenever the tracer departs from the outline of the pattern being traced, the invention comprising means for producing a control voltage which is substantially proportional to the amplitude of the error signal, means for causing the feed rate voltage to be reduced from said predetermined amplitude as the control voltage increases and to be returned to said predetermined amplitude as the control voltage decreases, and means for controlling the rate of decrease of said control voltage after the error signal is removed to thereby limit the rate at which the feed rate voltage is returned to said predetermined amplitude.



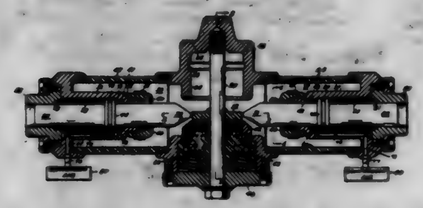
2,951,194
POSITION SELECTOR SYSTEM
Benjamin B. Mahler, Paramus, and S Duane Hammond, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 3, 1958, Ser. No. 726,261
5 Claims. (Cl. 318—467)



1. A position selector for automatically positioning a remote device comprising a first control switch having control contacts and adapted to be rotated into a number of predetermined control positions, a second rotary control switch having control contacts and adapted to be rotated into a number of predetermined control positions, a motor, a units rotor having a number of control positions corresponding to the control contacts of said first control switch, a tens rotor having a number of control positions corresponding to the control contacts of said second control switch, conductors connecting alternate control contacts of said first control switch and said second control switch to corresponding control contacts of said units rotor and said tens rotor respectively, means to transfer movement of said units rotor to said tens rotor in order that said tens rotor will rotate between two adjacent control positions when said units rotor makes one complete revolution, means to transfer movement of said motor to said units rotor for movement thereof in accordance with the operation of said motor, relay means controlled by said units rotor and said tens rotor to cause said motor to operate to any control position established by said first and second control switch, said motor being stopped thereby when said units rotor which is driven by said motor rotates said units rotor

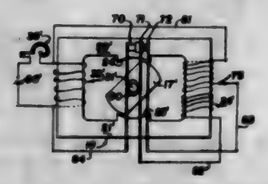
electrical circuit exceeds a prescribed limiting value and means for periodically opening the energizing circuit to eliminate all half-cycles of the alternating current of one polarity when the unknown current is above the limiting value and to eliminate all of the half-cycles thereof of the opposite polarity when the unknown current is below said value so that the remaining polarized portions of the alternating current selectively operate the switching device in accordance with the level of the unknown current as compared to the limiting value.

2,951,188
HIGH SPEED CONTACTING DEVICE
Edward J. Diebold, Ardmore, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 10, 1956, Ser. No. 558,349
14 Claims. (Cl. 317—156)



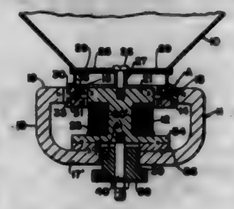
1. A contact device; said contact device comprising a pair of cooperable contacts relatively movable into and out of engagement with one another, a first winding and energizing means for said first winding; one of said cooperable contacts being a second winding having an axial length of substantially the same dimension as the radial thickness of said second winding; said second winding being positioned to have a current induced therein responsive to energization of said first winding; the magnetic fields of said first and second windings being in a direction to repel one another to thereby effect relative motion between said pair of cooperable contacts; said one of said cooperable contacts forming said second winding being a ring having a constant cross-sectional area for conduction of currents induced therein by said first winding; the other of said pair of cooperable contacts engaging said ring on a surface thereof when said pair of cooperable contacts are moved into engagement with one another; acceleration of said ring forming said second winding by a given force being dependent only upon the mass of said second winding.

2,951,189
CONTROL DEVICE
Charles E. Hajny, Milwaukee, Wis., assignor to Eaco Inc., Milwaukee, Wis., a corporation of Wisconsin
Filed Nov. 13, 1956, Ser. No. 621,703
6 Claims. (Cl. 317—156)



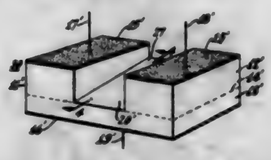
5. An electromagnetic operator comprising a magnetically permeable core having an air gap, an armature mounted for movement in said air gap and adapted for connection to a control member to be actuated; magnetic flux source means comprising first and second windings for producing magnetic flux in said core and through said air gap, said armature being movable from a first to a second position in response to flux flow in said air gap, means associated with said armature and said magnetic flux source means comprising contact means connecting said windings in parallel circuit relation when said armature is in its first position and actuated by movement of said armature toward its second position to interrupt said connection and short circuit at least a portion of said secondary winding to thereby afford a first amount of flux in said air gap when said armature is in its first position and a second smaller amount of flux in said air gap when said armature is in its second position.

2,951,190
ELECTRO-MECHANICAL TRANSFORMER
Max Beermann, Bensberg Wulfshof, Koln, Germany
Filed Apr. 22, 1955, Ser. No. 503,236
Claims priority, application Germany Oct. 28, 1954
14 Claims. (Cl. 317—173)



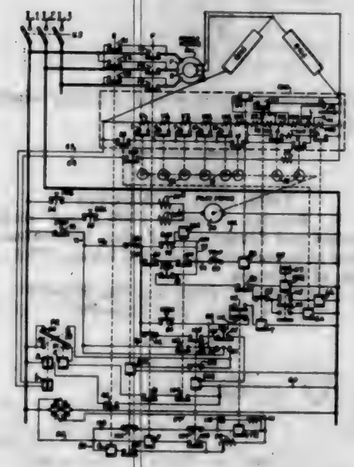
1. An electro-acoustic transformer comprising in combination a ferro-magnetic circuit having spaced parallel pole surfaces defining an air gap, a mechanically vibrating element, a permanent magnet positioned in said air gap and connected to and movable with said element, winding means inductively associated with said ferro-magnetic circuit and operable to induce a magnetizing force in said ferro-magnetic circuit in response to magnetizing direct current applied to said winding means, and pre-magnetizing means associated with said ferro-magnetic circuit for producing therein a magnetic force equal and opposite to said magnetizing force induced in response to the direct current applied to said winding means, whereby the pole surfaces have substantially no magnetic polarity in the absence of a signal current applied to said winding means.

2,951,191
SEMICONDUCTOR DEVICES
Gerald E. Herzog, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Aug. 26, 1958, Ser. No. 757,408
11 Claims. (Cl. 317—235)



1. A controlled transconductance electrical device comprising a monocrystalline given conductivity type semiconductor body having two opposed major faces, one said major face bearing a groove between two lands, the portion of said body between said lands having a non-uniform cross-sectional shape corresponding to the desired transconductance characteristic, the opposite major face having a surface zone of opposite conductivity type so as to form a rectifying barrier at the interface between said surface zone and the interior zone of said body, and a non-rectifying metal film on said lands and on at least a portion of said opposite major face.

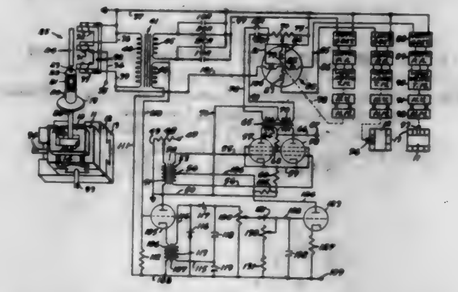
2,951,192
ELECTRIC MOTOR CONTROLLERS
Cyril P. Feldhausen, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Filed May 24, 1956, Ser. No. 587,075
13 Claims. (Cl. 318—203)



1. In a controller for a motor having a secondary resistance network, a speed selector for preparing commutating circuits for portions of the secondary resistance network to preselect one of a multiplicity of motor operating speeds, said selected commutating circuits being completed following initiation of operation of the motor, control means for initiating operation of the motor, sequentially-operable timing means, means responsive to operation of said control means for operating said timing means to complete said commutating circuits in sequence to control acceleration of the motor to the preselected speed in timed incremental steps, means operable independently of said speed setter for restoring said timing means to control deceleration of the motor to a low speed and for reoperating said timing means to control reacceleration of the motor to the preselected speed in said timed incremental steps.

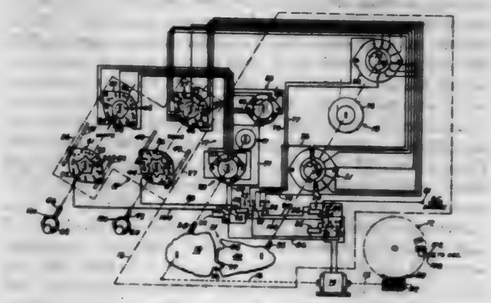
2,951,193
SLOWDOWN CONTROL FOR SERVOSYSTEM CIRCUIT
Joseph A. Rave, Jr., Cincinnati, Ohio, assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio
Filed Apr. 16, 1958, Ser. No. 728,820
6 Claims. (Cl. 318—448)

1. In an electrically controlled pattern tracing apparatus having a tracer, a source of feed rate voltage of predetermined amplitude, means for translating the tracer along a pattern at a rate proportional to the amplitude of the feed rate voltage, and means for producing an error signal whenever the tracer departs from the outline of the pattern being traced, the invention comprising means for producing a control valtage which is substantially proportional to the amplitude of the error signal, means for causing the feed rate voltage to be reduced from said predetermined amplitude as the control voltage increases and to be returned to said predetermined amplitude as the control voltage decreases, and means for controlling the rate of decrease of said control



voltage after the error signal is removed to thereby limit the rate at which the feed rate voltage is returned to said predetermined amplitude.

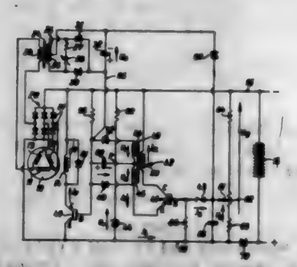
2,951,194
POSITION SELECTOR SYSTEM
Benjamin B. Mahler, Paramus, and S Duane Hammond, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Apr. 3, 1958, Ser. No. 726,261
5 Claims. (Cl. 318—467)



1. A position selector for automatically positioning a remote device comprising a first control switch having control contacts and adapted to be rotated into a number of predetermined control positions, a second rotary control switch having control contacts and adapted to be rotated into a number of predetermined control positions, a motor, a units rotor having a number of control positions corresponding to the control contacts of said first control switch, a tens rotor having a number of control positions corresponding to the control contacts of said second control switch, conductors connecting alternate control contacts of said first control switch and said second control switch to corresponding control contacts of said units rotor and said tens rotor respectively, means to transfer movement of said units rotor to said tens rotor in order that said tens rotor will rotate between two adjacent control positions when said units rotor makes one complete revolution, means to transfer movement of said motor to said units rotor for movement thereof in accordance with the operation of said motor, relay means controlled by said units rotor and said tens rotor to cause said motor to operate to any control position established by said first and second control switch, said motor being stopped thereby when said units rotor which is driven by said motor rotates said units rotor

and said tens rotor to control positions corresponding to the control positions established by said first and second rotary control means.

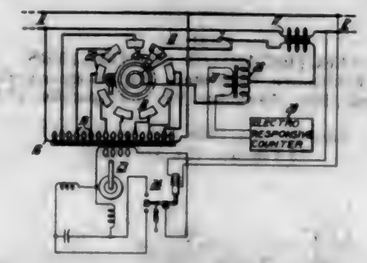
2,951,195
ELECTRIC LIGHTING POWER GENERATOR FOR VEHICLES
Helmut Domann, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany, a firm
Filed Apr. 21, 1959, Ser. No. 807,882
Claims priority, application Germany Jan. 12, 1959
13 Claims. (Cl. 322—25)



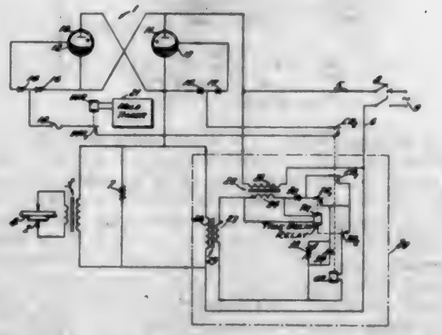
6. In an electric lighting power plant for vehicles, in combination, an alternating current generator having two output terminals and a shunt exciter winding; a storage battery connected to said output terminals; a rectifier means connected between said output terminals and said battery; current transformer means connected with its primary winding between said generator and said rectifier means; at least one second rectifier means connected to the secondary winding of said current transformer; condenser means connected to said second rectifier means for being charged by the output thereof; regulator means for automatically regulating the output of said generator and including a series-combination comprising the emitter-collector circuit of at least one regulating transistor and said shunt exciter winding, said series-combination being connected in parallel with said battery, one pole of said condenser means being connected to the base electrode of said regulating transistor; a control transistor connected with said regulating transistor in such a manner that the latter is intermittently changed between conductive and non-conductive condition by the action of said control transistor; second transformer means having a primary winding in circuit with said control transistor, and at least one secondary winding connected in series with the emitter-base circuit of said regulating transistor; voltage divider means connected in parallel with said battery; a Zener diode being connected between an intermediate point of said voltage divider means and the base electrode of said control transistor; and third rectifier means connected between the other pole of said condenser means and said intermediate point of said voltage divider means.

2,951,196
COUNTER FOR LOAD TAP CHANGING TRANSFORMER
Richard P. Marohn, Elm Grove, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Filed Dec. 16, 1955, Ser. No. 553,454
6 Claims. (Cl. 323—43.5)

1. In a load tap changing transformer having a tapped winding and a tap changing switch for selectively connecting an output terminal of said transformer to various taps on said exciting winding through a preventive autotransformer connected between a pair of movable contacts of said switch, the improvement comprising means for recording the number of operations of said switch including an auxiliary winding inductively related to said autotransformer, and an electromagnetic counter responsive to the voltage changes in said auxiliary winding resulting from said switching operations.



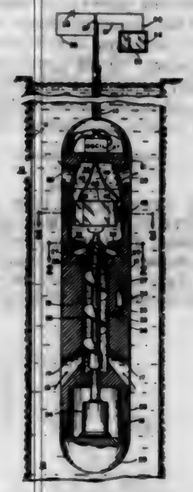
2,951,197
TIME LIMIT CIRCUITS
Addison K. Broyles, Covina, Calif., and Robert C. Mierendorf and Clarence W. Porter, Wauwatosa, Wis., assignors to Square D Company, Detroit, Mich., a corporation of Michigan
Filed June 19, 1956, Ser. No. 592,419
14 Claims. (Cl. 323—58)



1. A time limit circuit comprising; electrical storage means and voltage sensitive means connected in parallel with said storage means, first circuit means for connecting a first voltage reference source to said parallel circuit to charge said storage means and operate said voltage sensitive means, second circuit means for connecting a second voltage source in series opposition to said first voltage source wherein said voltage to be timed is not lower or higher than said reference by an amount capable of operating said voltage sensitive means whereby the voltage sensitive means remains operative for the duration of the storage means discharge time to the operative level of said voltage sensitive means.

2,951,198
WELL LOGGING METHOD AND APPARATUS
Andre Blanchard, Houston, Tex., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Filed May 17, 1954, Ser. No. 430,149
11 Claims. (Cl. 324—2)

1. In apparatus for detecting the presence of water mixed with oil in a borehole, the combination comprising a housing arranged for travel through said borehole and having a longitudinal passage therethrough, chemical injector means in fluid communication with said passage, agitator means in said passage for emulsifying a mixture of oil and water in said borehole electrodes carried by said housing and arranged to receive the emul-



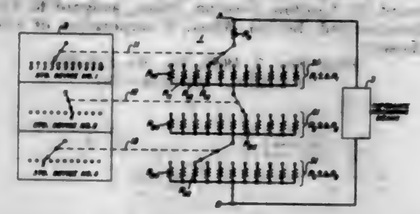
sified mixture therebetween, and means for detecting variations in the capacitance of said electrodes.

2,951,199
BATTERY TESTING
Kenneth Dawkins, Minneapolis, Minn., assignor to Franklin Manufacturing Company, a corporation of Minnesota
Filed Aug. 12, 1957, Ser. No. 677,681
5 Claims. (Cl. 324—29.5)



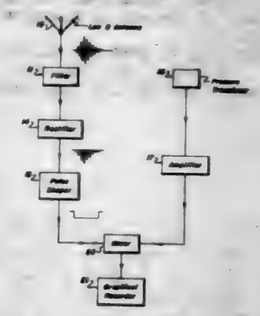
1. The improvement in measuring and testing apparatus for providing a pair of comparison indications of the condition of a battery comprising the combination of a first circuit connected to the terminals of said battery, said first circuit including a variable resistance and an indicating meter having a pointer, a second circuit connected to the terminals of said battery, said second circuit including a first resistance load and a first switch having a pair of normally open contacts, said contacts when closed serving to connect said first load directly across said battery terminals to deflect said pointer to give a first indication of battery condition, means for varying said variable resisance to position said pointer to a predetermined setting after said first switch is closed, a third circuit connected to the terminals of said battery, said third circuit including a second switch having a pair of normally open contacts, and a solenoid winding adapted to be energized upon closing of said second switch, and a fourth circuit comprising the solenoid contacts and a second resistance load adapted to be connected directly across said battery terminals when said solenoid is energized to again deflect said pointer whereby the deflection of said pointer in response to the closing of the solenoid contacts is representative of the condition of said battery.

2,951,200
CALIBRATION INDICATOR
George F. Critchlow, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 29, 1954, Ser. No. 465,598
5 Claims. (Cl. 324—57)



1. Means for automatically indicating the total correction for the standard elements in a plurality of adjustable standard devices, comprising a plurality of adjustable standard devices each having standard elements, an impedance in said means for each of said elements having a magnitude determined by the correction required of its associated standard element, a separate selective switching means connected to the group of impedances associated with each one of the standard devices, a mechanical means for coupling each switching means with its associated standard device so that each switching means may select the impedance associated with the standard element to which its standard device is adjusted, circuit means including the several switching means to combine the impedances thus selected into a single circuit, and an indicating means connected to said single circuit calibrated to read the total correction in terms of the unit to which said standard elements are calibrated.

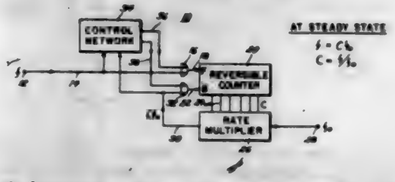
2,951,201
ZERO-TIME INDICATOR
Howard H. Sander, Albuquerque, N. Mex., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Filed Oct. 9, 1958, Ser. No. 766,369
3 Claims. (Cl. 324—68)



1. A device for automatically determining the travel time of a nuclear shock wave comprising an antenna adapted to receive a zero-time nuclear detonation electromagnetic transient, means connected to the antenna for developing from said transient a sharp pulse coincident with the first negative excursion thereof, pressure transducer means for generating an electrical signal responsive to the nuclear shock wave, means for amplifying said shock wave signal, mixer means adapted to receive said transient pulse and said shock wave signal and combine their respective circuits, and means connected to the out-

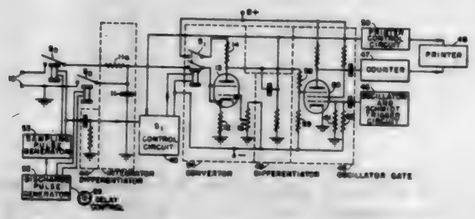
put of said mixer for receiving and comparably recording with respect to time said transient pulse and shock wave signal.

2,951,202
FREQUENCY METER APPARATUS
Bernard M. Gordon, Newton, Mass., assignor to Epsco, Incorporated, Boston, Mass., a corporation of Massachusetts
Filed Nov. 2, 1956, Ser. No. 620,087
18 Claims. (Cl. 324—79)



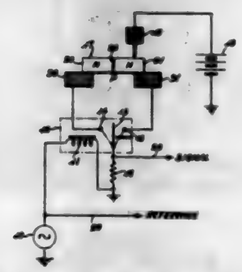
3. A frequency meter apparatus comprising an information input terminal for receiving pulse signals at a frequency (f); a forward-backward binary counting device having a forward count input lead excited by signals from said input terminal, a backward count input lead, and a plurality of output leads delivering an output count signal (C); a binary rate multiplier unit energized by the output leads of said counting device for controlling the rate of an output product signal and having an input line for receiving pulse signals having a frequency (f_0), and an output line delivering said output product signal (Cf_0) to the backward count input lead of said counting device so that at the steady state condition of said counting device its count (C) corresponds to the ratio (f/f_0) of the respective frequencies (f and f_0) of the signals received by said input terminal and input line of said multiplier unit; and a control network detecting signals from said input terminal and output line of said multiplier unit and selectively delivering signals to that one of said counting device input leads accelerating action tending to place said apparatus in its steady state condition.

2,951,203
VOLTAGE MEASURING DEVICE
Reuel Q. Tillman, Prince Georges County, Md., and Arthur G. Pieper, Alexandria, Va., assignors to the United States of America as represented by the Secretary of the Navy
Filed Aug. 31, 1955, Ser. No. 531,852
9 Claims. (Cl. 324—111)
(Granted under Title 35, U.S. Code (1952), sec. 266)



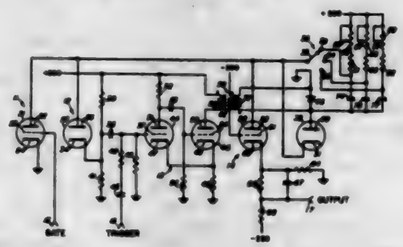
9. A voltage measuring device comprising a grid controlled gas tube having resistors in its anode and cathode circuit, an anode supply source, means biasing said tube beyond cut-off, an integrator, a voltage sampling circuit periodically connecting the voltage to be measured to said integrator, means connecting the intgerator to the cathode of said tube in response to the termination of each sampling period and simultaneously connecting said tube to the anode supply source, an output terminal at the anode of said tube producing pulses of a length proportional to the logarithm of the signal amplitude, an oscillator and a counter, an oscillator gating circuit connecting said oscillator to said counter, means connecting said oscillator gate to said output terminal, a counter printer connected to said counter, and means actuating said printer after the termination of a pulse at said output terminal.

2,951,204
METHOD AND APPARATUS FOR LOCATING THE BASE SECTION OF A TRANSISTOR BAR
Jack Lemson, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Filed Apr. 8, 1957, Ser. No. 651,271
8 Claims. (Cl. 324—158)



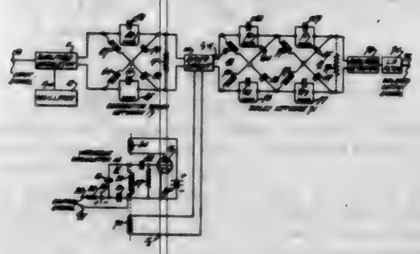
1. A method of locating the base section of a transistor bar comprising the steps of; connecting a probe to one terminal of an electrical power source, placing said probe in contact with said transistor bar, alternately connecting each end section of said transistor bar to the other terminal of said power source, moving said probe across said bar so that it crosses said base section, and detecting the waveform of current flowing through said probe.

2,951,205
RANGE MARKS GENERATOR
Robert J. McCurdy, Maple Shade, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Dec. 24, 1958, Ser. No. 782,986
6 Claims. (Cl. 328—66)



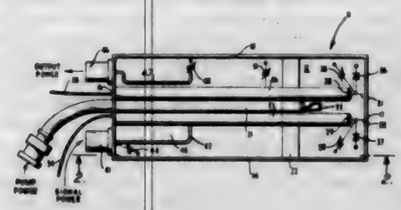
1. A pulse generator compriaing a first amplifier having an input and an output; a second amplifier having at least an anode, a cathode, and a control element, said control element coupled to said anode through regenerative coupling means and to the output of said first amplifier; a saw-tooth generator having an input connected to said anode and an output connected through a threshold device to the input of said first amplifier; said threshold device being biased as to not allow said second amplifier output to reach said first amplifier input until said saw-tooth generator output reaches a predetermined amplitude.

2,951,206
VARIABLE DELAY LINE
Gordon L. Fredendall, Southampton, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Filed Nov. 15, 1957, Ser. No. 696,691
16 Claims. (Cl. 328—177)



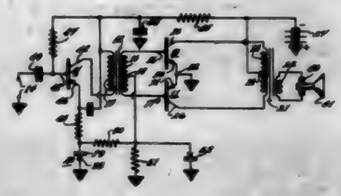
12. In combination, a mixer circuit, means for amplitude modulating a signal of fixed frequency with a second signal to be delayed and for applying the modulated output signal of said means to said mixer circuit, means for applying a third signal having a frequency variable over a range of frequencies to said mixer circuit, said mixer circuit being arranged to produce a further output signal having a carrier frequency determined by the frequency of said third signal as compared to the carrier frequency of said modulated output signal, and an all-pass delay network exhibiting a non-linear phase characteristic with frequency connected to said mixer circuit and responsive to said further output signal to produce a signal representative of said second signal but delayed by a given amount.

2,951,207
PARAMETRIC AMPLIFIER
Thomas Hudspeth, Malibu, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed May 14, 1959, Ser. No. 813,134
8 Claims. (Cl. 330—5)



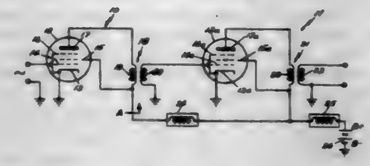
1. A microwave amplifier comprising an inductance-capacitance circuit resonant at a first frequency and respectively including in each of two separate branches a semiconductor diode having a nonlinear capacitive characteristic, each of said diodes being respectively poled in an opposite sense and biased in a reverse sense, means coupled to said diodes for varying the capacitance thereof in push-pull at the rate of a second frequency, said second frequency being greater than said first frequency, and means coupled to said circuit for obtaining an amplified output at said first frequency.

2,951,208
TEMPERATURE CONTROLLED SEMICONDUCTOR BIAS CIRCUIT
Loy E. Barton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Continuation of application Ser. No. 370,010, July 24, 1953. This application July 18, 1956, Ser. No. 598,586
17 Claims. (Cl. 330—14)



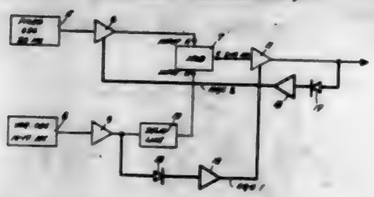
11. In a signal amplifier system, the combination comprising a semi-conductor device including base, emitter and collector electrodes, a signal input circuit coupled with said base electrode, a signal output circuit coupled with said collector electrode, a temperature controlled bias circuit for maintaining a stable operation of said device including a temperature responsive semi-conductor diode coupled between said base and emitter electrodes, and direct current supply means connected to apply a forward bias to said diode to provide a predetermined direct-current flow therethrough so that the voltage developed across said diode provides a forward base-emitter bias for said semi-conductor device, said device and said diode having conductance characteristics which vary in substantially the same manner with temperature variations whereby the forward bias applied to said semi-conductor device is variable in accordance with temperature variations.

2,951,209
DECOUPLING AMPLIFYING SYSTEMS
Howell L. Carter, Jr., Natick, Mass., assignor to Raytheon Company, a corporation of Delaware
Filed Dec. 14, 1955, Ser. No. 553,094
4 Claims. (Cl. 330—167)



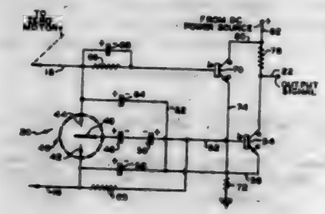
1. A decoupling system comprising a pair of electron discharge devices, a transformer having a first winding and a second winding arranged for producing substantially unity coupling therebetween, said transformer connected between the output of one of said electron discharge devices and the input of the other of said electron discharge devices, said first winding having a maximum impedance to said second winding at one end and a minimum impedance to said second winding at the opposite end, and non-capacitive impedance means connected from said opposite end of said first winding to a source of direct energy, said impedance means constituting the sole means for isolating said minimum impedance path from said source, said impedance means having an impedance value substantially greater than said minimum impedance.

2,951,210
AUTOMATIC GAIN CONTROL SYSTEM
John A. Robinson, Andover, Mass., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed May 19, 1958, Ser. No. 736,140
8 Claims. (Cl. 331—40)



1. An automatic gain control for a system having a frequency mixing device with at least two signal input circuits and one output circuit with an output amplifier therein, means for deriving a unidirectional potential having an amplitude corresponding to the amplitude of the signal in one of the input circuits, means controlled by the derived potential for correspondingly varying the gain of the amplifier, and means for equalizing the time delay of the signal from said one of the input circuits to the amplifier and the response time required for the derived potential to vary the gain of the amplifier.

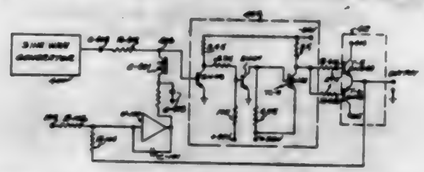
2,951,211
DIFFERENTIAL CHOPPER-AMPLIFIER
Roy T. Brashear, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Filed May 16, 1958, Ser. No. 735,849
11 Claims. (Cl. 332—9)



11. An improved amplifier comprising a pair of input terminals, means for converting direct current appearing at said terminals into alternating current; transistor means for amplifying having first, second, and output terminals; an impedance; means for applying the alternating current produced by the first said means to the first terminal of the second said means through said impedance; means for temporarily storing potentials connected between each one of said pair of input terminals and said second terminal of said transistor means; and means for applying a portion of the potential of a signal appearing at one of said pair of terminals to said first terminal of said transistor means.

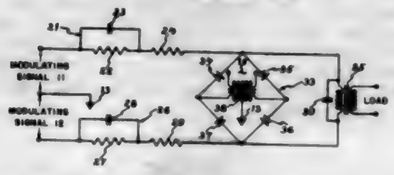
2,951,212
PULSE WIDTH MODULATORS
Hermann Schmid, Binghamton, N.Y., assignor to General Precision, Inc., a corporation of Delaware
Filed Sept. 19, 1958, Ser. No. 762,024
4 Claims. (Cl. 332—9)

1. A linear pulse width modulator for providing output pulses having time widths which are linearly proportional to the value of a direct applied input potential, comprising in combination, potential difference-determining means responsive to said input potential and to a direct feedback potential for providing an amplified output potential commensurate with their difference, means for providing a periodic input voltage which alternates above and below a reference level, potential combining means for combining said amplified direct output potential and said alternating input voltage to provide a composite potential, means for sensing the instantaneous polarity of said composite potential with respect to said reference level and for providing an amplified first or second switching potential at an output terminal depending upon said



polarity; a transistor switch comprising two transistors, each of said transistors having base, emitter and collector electrodes, means for applying a pair of opposite-polarity equal amplitude direct voltages to said collector electrodes, circuit means connecting said switching potentials to said base electrodes, said emitter electrodes being interconnected to provide said output terminal, and pulse-integrating means connected to said output terminal to provide said feedback potential.

2,951,213
MODULATOR CIRCUIT
Herbert Hecht, Wantagh, N.Y., and Harry C. Thomson, Los Angeles, Calif., assignors to Sperry Rand Corporation, a corporation of Delaware
Filed Dec. 5, 1956, Ser. No. 626,333
4 Claims. (Cl. 332—40)



3. In combination, an electrical load, a first signal source for supplying a first input signal to said load, a second signal source for supplying a second input signal to said load, said first and second signal sources being connected in series with said load, switch means connected to said first and second signal sources and to said load for selectively short-circuiting opposite ones of said first and second signal sources when said switch means is alternately actuated, and means including a switching signal source connected to said switch means for the alternate actuation of said switch means at a frequency that is appreciably greater than the frequency of either of said first and second signal sources in order that the load is alternately responsive to said first and second signals respectively at the switching frequency rate, said switch means including means for preventing the application of the energy of said switching signal source to said load.

2,951,214
MICROWAVE MODULATION SYSTEM
Hans A. Bomke, Sea Girt, George H. Minnerly, Spring Lake, and John W. Mount, Long Branch, N.J., assignors to the United States of America as represented by the Secretary of the Army
Filed Sept. 23, 1957, Ser. No. 685,760
3 Claims. (Cl. 332—51)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A system for producing efficient modulation of a high frequency carrier wave by varying amplitude signals

consisting of a wide band of low frequency components comprising: a hollow pipe waveguide over which the carrier wave is propagated longitudinally; a modulating element consisting of a small amount of a stable, free radical type of paramagnetic chemical compound having an atomic resonance characteristic including a strong, sharp resonance absorption line at a particular wavelength, and a dielectric binding material encapsulated to form a unitary structure of a desired shape, said structure being mounted in said waveguide so that it extends transversely across the interior thereof in the path of the propagated carrier wave; means to apply an



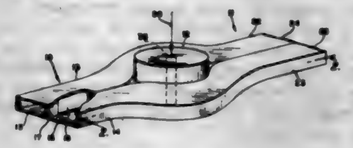
initially constant, unidirectional magnetic field to said structure in a direction perpendicular to the propagation direction of the carrier wave and of such strength as to bring said compound to resonance at said particular wavelength; and means to superimpose a sinusoidally alternating magnetic field varying in accordance with the instantaneous amplitudes of said low frequency signal components on the unidirectional magnetic field to proportionally vary the total magnetic field and thus to amplitude modulate the carrier wave with said varying amplitude signals due to the effects thereby produced in the spin velocities of the atomic nuclei of the paramagnetic compound.

2,951,215
WAVEGUIDE COUPLING DEVICE WITH SWITCHING ARRANGEMENT
Aristid D. Berk, Los Angeles, and Eric Strumwasser, Pacific Palisades, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Feb. 2, 1956, Ser. No. 563,062
1 Claim. (Cl. 333—7)



An electromagnetic wave device comprising a main rectangular waveguiding structure for propagating a transverse-electric wave in a TE_{01} mode; a ferrite rod inserted in said main waveguiding structure transversely through an aperture in the center of at least one broad side thereof, a remaining portion of the length of said ferrite rod being external to said main waveguiding structure; an auxiliary rectangular waveguiding structure disposed with one broad side thereof contiguous to said one broad side of said main waveguiding structure and with said remaining portion of said ferrite rod projecting into said auxiliary waveguiding structure through an aperture located in said one broad side thereof intermediate its center line and one side; and means for maintaining a direct-current magnetic field of selected polarity lengthwise through said ferrite rod of an intensity to produce gyroresonance at a frequency substantially equal to the frequency of said wave thereby to launch a wave corresponding to said wave propagated by said main waveguiding structure along said auxiliary waveguide in a direction dependent on the polarity of said magnetic field.

2,951,216
REFLECTIONLESS MICROWAVE FILTER
Conrad E. Nelson, Gardena, and Walter L. Whirry, Inglewood, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 17, 1956, Ser. No. 628,852
6 Claims. (Cl. 333—9)



1. A combination band-pass and band-elimination microwave filter comprising: first and second waveguide directional couplers, each having a pair of equal length waveguide sections and adapted to equally divide therebetween electromagnetic energy propagated therethrough along two diverging portions with the diverging portion of said first coupler connected to that of said second coupler to provide a continuous path, said first coupler having a pair of similarly disposed coupling holes through the associated pair of diverging waveguide sections, respectively; and a microwave cavity structure having end and side walls, said cavity being tuned to the frequency of the propagated energy and having a pair of coupling holes through the cavity side wall spaced from each other in such a manner that the projection of said pair of coupling holes on a plane perpendicular to an axis of said cavity forms an angle of substantially ninety degrees with the projection of said axis on said plane, said cavity being mounted within the diverging portions of said first and second waveguide couplers with the coupling holes of said first coupler in registration with said coupling holes of said cavity side wall to electromagnetically couple energy therebetween.

2,951,217
WAVEGUIDE MOTIONAL JOINT
Roger W. Clapp, Manhattan Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Dec. 31, 1956, Ser. No. 632,624
1 Claim. (Cl. 333—10)



A phase shifter comprising, a first and a second rectangular waveguide, each having two broad walls and two narrow walls, a third rectangular waveguide having two parallel straight leg portions joined to one another by two 180° bends to form a closed continuous wave energy transmission line, said bends having each two broad walls and two narrow walls, said leg portions having each two broad walls and a narrow wall, each of said leg portions being disposed contiguous to one of said first and second waveguides so that one of the narrow walls of said first and said second waveguides is common to both said leg portions and said first and second waveguides, choke means coupling said common narrow walls to said leg portions, said choke means permitting sliding motion of said third waveguide with respect to

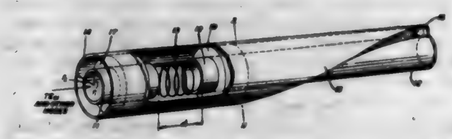
said first and second waveguides, each of said common walls being provided with a substantially rectangular aperture of predetermined length, said aperture defining two apertured sections having a width equal to substantially twice the width of each of said waveguides and a height substantially equal to the height of said common walls, and said apertured sections being adapted to effectively couple all wave energy propagated by one of said first and second waveguides to the third waveguide and from the third waveguide to the other one of said first and second waveguides, the relative position of said slidable third waveguide with respect to said first and second waveguides determining the electrical path length of said phase shifter.

2,951,218
DIRECTIONAL COUPLINGS
Maurice Arditi, Clifton, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Filed Feb. 19, 1957, Ser. No. 641,053
13 Claims. (Cl. 333—10)



1. A directional coupler comprising a planar conductor, first and second line conductors, a layer of dielectric material supporting said line conductors in dielectrically spaced, substantially parallel overlying relation with respect to the plane of said planar conductor whereby each line conductor provides in conjunction with said planar conductor a radio frequency transmission path, at least one of said line conductors and said planar conductor having a source of radio frequency coupled thereto for transmission therealong, said line conductors being disposed throughout a given section in close parallel spaced relation to each other so that each line conductor lies within frequency coupling relation of the electromagnetic field of the transmission path of the other, and decoupling means altering the fields of said paths between said first and second line conductors within said section to limit the amount of coupling between said first and second line conductors, said layer of dielectric material supporting said decoupling means with at least a portion thereof in the plane of said first and second line conductors.

2,951,219
MODE SELECTIVE DEVICES FOR CIRCULAR ELECTRIC WAVE TRANSMISSIONS
Enrique A. J. Marcatili, Fair Haven, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Dec. 29, 1958, Ser. No. 783,224
7 Claims. (Cl. 333—10)



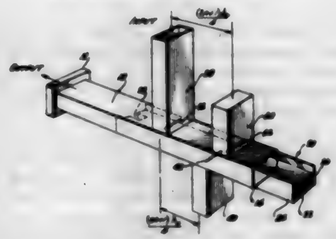
1. In combination, two hollow conductive wave guides of circular cross section coaxially disposed and individually adapted to support a TE_{on} mode, a multiplicity of interruptions in the conductive boundary of the internal one of said coaxially disposed guides for communication between said two guides, the ratio of the radii of said two guides being proportioned to preclude the coupling of all but one of said TE_{on} modes between said internal and external guides, said ratio of said radii being concomitantly proportioned to induce the coupling between said guides of said one TE_{on} mode.

2,951,220
WAVE GUIDE WITH POLARIZED FERRITE ELEMENT
Stewart E. Miller, Middletown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed June 17, 1953, Ser. No. 362,193
9 Claims. (Cl. 333—24)



2. A non-reciprocal structure including means for introducing a non-reciprocal effect to propagating electromagnetic wave energy comprising a hollow conductive wave guide supportive of traveling electromagnetic waves propagating in a direction along the longitudinal axis of said guide, a layer of material of low conductivity exhibiting gyromagnetic effects at the frequency of wave energy supported by said guiding structure overlying at least two opposing portions of the inner surface of said wave guide, and means for applying a magnetic field to said layer having magnetic lines of force conforming to closed loops of a single polarity, said loops being primarily enclosed by and having substantially the same shape and orientation as the conductive boundary of said wave guide with the planes defined by said loops oriented perpendicularly to the longitudinal axis of said hollow wave guide.

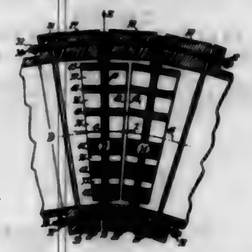
2,951,221
PHASE SHIFTER
Louis A. Kurtz, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Filed Aug. 1, 1955, Ser. No. 525,437
5 Claims. (Cl. 333—31)



1. A microwave phase shifter comprising first waveguide means including an output terminal and an open terminal spaced apart at a predetermined minimum distance from said output terminal; input waveguide means coupled to said first waveguide means between said output terminal and said open end; first reflecting means coupled to said first waveguide means between said input waveguide means and said open end at a position an odd number of quarter wavelengths in air from said input waveguide means for reflecting away from said open

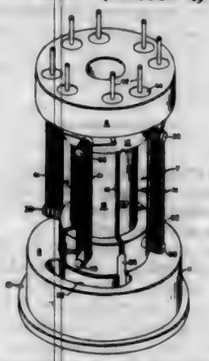
end energy in said first waveguide means when said first waveguide means is air filled; second reflecting means coupled to said first waveguide means between said first reflecting means and said open end at a position an odd number of quarter wavelengths in a dielectric medium other than air for reflecting away from said open terminal energy in said first waveguide means when the space between said input waveguide means and said second reflecting means includes said dielectric medium; and an elongated member of said dielectric medium selectively movable within said first waveguide means, and extending from said second reflecting means to a selectable point past said input waveguide means.

2,951,222
BENDS FOR CIRCULAR WAVE GUIDES
Georges Robert Pierre Marié, 16 Rue de Varize, Paris, France
Filed Dec. 3, 1958, Ser. No. 777,874
Claims priority, application France Dec. 19, 1957
5 Claims. (Cl. 333—98)



1. A low loss bend for a circular wave guide propagating a TE_{01} wave, comprising a length of circular cross-section metallic wave guide the axis of which is bent with a given radius and a plurality of wedge-shaped prisms of dielectric material mounted inside said guide length and having two converging plane faces substantially perpendicular to said bent axis, wherein at least part of said prisms have their converging plane faces provided with grooves of progressively varying width and depth from the inside towards the outside of said bend, said grooves provided on said faces being so shaped as to permit said TE_{01} wave to propagate around said bend with no substantial distortion.

2,951,223
STRAIN GAGE TRANSDUCER
Yao Tzu Li, Lincoln, Mass. (Dynamic Instrument Company, 42 Carleton St., Cambridge, Mass.)
Filed Aug. 25, 1959, Ser. No. 837,565
8 Claims. (Cl. 338—4)



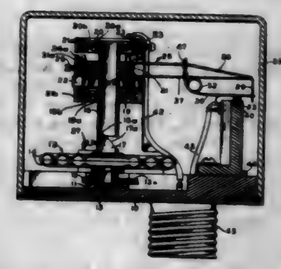
1. A strain gage transducer comprising a member having a tubular end portion and an even number of fingers extending longitudinally therefrom, a base member to which alternate fingers are connected, a second base member to which all other fingers are connected, means for mounting the base members to permit relative longitudinal movement between them, and an unbonded strain gage wire wound between each finger and the tubular end portion.

2,951,224
BOLOMETER FOR RADIATION DETECTION
Richard A. Magrath, Boston, Mass., assignor to Baird-Atomic, Inc., a corporation of Massachusetts
Filed Apr. 5, 1957, Ser. No. 651,031
2 Claims. (Cl. 338—18)



1. An instrument electrically responsive to radiation of a predetermined wavelength range, said instrument comprising a sealed tube transparent to said radiation, an absorbing medium including activated inorganic granules within said tube, at least a metallic strip within said tube, a first lead extending from one end of said metallic strip through one end of said tube, and a second lead extending from the other end of said metallic strip through said one end of said tube, an electrically insulating mount for predeterminedly positioning said metallic strip within said tube, said first lead including an L-shaped extension one end of which is imbedded in said mount and another edge of which is connected to an extremity of said strip, said second lead including an L-shaped extension one end of which is embedded in said mount and the other end of which is secured to another extremity of said strip.

2,951,225
MECHANICAL-ELECTRICAL TRANSDUCER
Joffre Robert Hentzi, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut
Filed July 21, 1958, Ser. No. 749,996
5 Claims. (Cl. 338—41)



1. A mechanical-electrical transducer, comprising a base, a conductive resistor insulatively mounted on said

base and presenting an elongated conductive surface, sensing means mounted on said base and including a linearly movable element adapted for displacement in proportion to changes in the value of a variable quantity, an elongated cam member connected to and axially movable with said element, said cam member having an axially presented helical cam surface formed therealong adjacent to an end thereof, an elongated cam follower having an axially presented helical surface complementary to and in juxtaposition with said helical surface on said cam member, means rotatably supporting said cam follower in axial alignment with said cam member and maintaining said cam follower axially immovable, resilient means biasing said cam follower to rotate the same in a direction to maintain its helical surface in engagement with the helical surface on said cam member, contact brush means insulatively mounted on and rotatable with said cam followen, said contact brush means including a contact member engaging and movable along said surface of said resistor, and circuit means connected to said contact member and to said resistor.

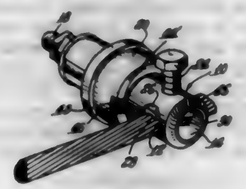
2,951,226
SOCKET AND SUPPORT MEANS FOR MOUNTING ELECTRICAL DEVICES
Victor S. Gittens, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Filed Jan. 2, 1957, Ser. No. 632,116
2 Claims. (Cl. 339—17)



1. Apparatus for connecting contact prongs of an electrical component with associated electrical circuits, comprising: a non-conductive panel, provided with conductive paths having terminal portions disposed within a limited area of said panel, said panel having apertures extending through the panel within said area; a socket insulation base mounted on said panel within said area; and metal contact means secured to said base, such contact means including pin grips and each having a tail, a pair of wide open ends, and a convergent portion between said ends, each pin grip being substantially disposed within the base opposite one of said apertures extending through the panel, the base being apertured to expose both ends of each pin grip and having thickness and arrangement such that the tails project from the base for connection to said conductive paths and that the pin grips can grip contact pin structure inserted either through said apertures or through the opposite ends of the pin grips.

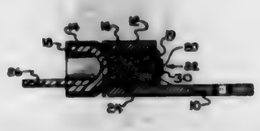
2,951,227
MULTITAP TRANSFORMER TERMINAL AND INSULATOR SECURING MEANS
Edward S. Cornell, Jr., Westport, Conn., assignor to Burndy Corporation, a corporation of New York
Filed Dec. 31, 1956, Ser. No. 631,960
1 Claim. (Cl. 339—32)

A termination for a transformer having a post threaded at one end, comprising an insulator mounted coaxially on said post, a terminal for attachment to said post including a cylindrically-shaped body member having axial and transverse joining holes for alternatively receiving conductors spaced 90° apart, a pressure bar positioned inside the holes having crossed conductor engaging surfaces, a clamping screw threaded to said body member and adapted to compress said pressure bar to the conductor, a socket axially in line with said axial hole for joining said terminal to the threaded end of said post, a stem section coaxial with said socket, a washer-like part



coupled to said stem section and locked against relative rotation therewith and mating means on said insulator and washer-like part to prevent relative rotation therebetween.

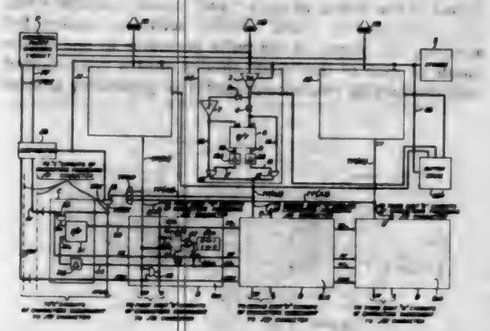
2,951,228
ELECTRICAL CONNECTOR
Robert F. Cobaugh, Harrisburg, Pa., assignor to AMP Incorporated
Filed Apr. 11, 1956, Ser. No. 577,594
1 Claim. (Cl. 339—115)



An electrical connector for terminating a wire conductor comprising a tubular structure of crimpable metal defining ferrule means for receiving through one end thereof an end portion of said conductor, a section of the length of said ferrule means adapted to be compressed onto said conductor end portion to provide a solderless cold-forged connection therebetween, radially extending metal portions adjacent said section for closing the end of said ferrule means remote from the conductor insertion end but for an inspection aperture of small diameter relative to said ferrule means, said aperture providing for external access to within said section to inspect the limit of conductor insertion within said section, a removable closure plug in said aperture, an unctuous material in said ferrule means section for fluidproof sealing the conductor and ferrule means interfaces upon crimping the connector, a retaining plug removably fitted in and sealing the conductor insertion end of said ferrule means for protecting said unctuous material prior to connector crimping, and connecting means extending at said closed end away from said tubular structure for coupling said ferrule means and the conductor upon connection to external circuitry.

2,951,229
ERROR-DETECTING AND CORRECTING SYSTEM
Edward Goldstein, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Apr. 27, 1959, Ser. No. 809,264
18 Claims. (Cl. 340—147)

1. An error detecting and correcting system comprising a plurality of switched-current NRZ signal sources, first monitor means coupled to said sources for detecting a parity failure in a simultaneously presented signal group, second monitor means coupled to said sources for detecting a transition failure between sequentially presented signal groups, and means coupled to said first and said second means for correlating said parity and said



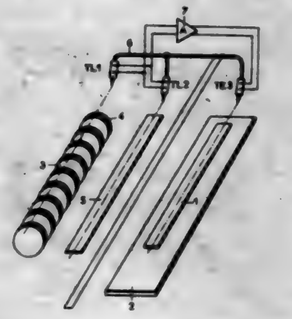
transition failure to ascertain the correct value of said group.

2,951,230
SHIFT REGISTER COUNTER
William J. Cadden, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 6, 1955, Ser. No. 538,904
20 Claims. (Cl. 340—168)

1. A shift register counter comprising a plurality of shift register stages, each of said stages including bistable memory means and delay means adapted to momentarily retain the information stored in said memory means, all of said stages except one stage having input gating means, means for simultaneously transferring the state of some of said delay means to the next adjacent stage, gate translator means controlled by and responsive to the state of two of said shift register stages for controlling the succeeding state of a particular shift register stage, and means for connecting said shift register stages and said gating means serially in a closed reentrant path.

2,951,231
METHODS OF AND DEVICES FOR MAGNETICALLY STORING INFORMATION
Robert de Gaillard, Paris, France, assignor to Societe Anonyme Astervelec, Paris, France
Filed Mar. 31, 1955, Ser. No. 498,335
Claims priority, application France Apr. 6, 1954
5 Claims. (Cl. 340—172.5)

1. For the reproduction of coded frequencies and of a reference frequency recorded on a magnetic carrier while said carrier is in movement at non uniform speed, a system of apparatus comprising in combination said magnetic carrier, a second magnetic flexible carrier, means for simultaneously reproducing the recorded frequencies from the first carrier and recording the reproduced frequencies on the second carrier, said first means to impart to said flexible carrier at the level of said recording head, a movement having a speed bearing a constant ratio with the speed of the movement of the first carrier, a scanning head to scan the second carrier at a point further ahead in the direction of movement of said second carrier and second means independent of the first means to impart a movement at uniform speed to said second carrier at the level of said scanning head whereby said



uniform speed may be regulated independently from the first recited speed.

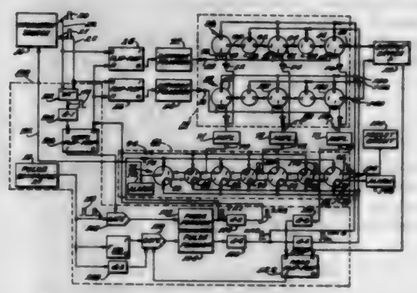
2,951,232
TAPE CONTROL CIRCUITS
Lowell D. Amdahl, Redondo Beach, Calif., Byron L. Havens, Closter, N.J., Joachim Jessel, New York, N.Y., Kenneth E. Schreiner, Harrington Park, N.J., John P. Cedarholm, New York, N.Y., and Norman F. Eichenberger, Cincinnati, Ohio, assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Nov. 21, 1955, Ser. No. 547,983
6 Claims. (Cl. 340—172.5)

1. In an intelligence handling system wherein items of information and operational signals interspersed among said items of information are each expressed by decimal numbers in turn expressed in four place binary code, a shifting register for handling words each containing a plurality of items of information, means for simultaneously clearing out an operational code from each digital position thereof and entering a word in place thereof, means for shifting each code in said register one place and simultaneously entering an operational code in the last place thereof vacated, means for receiving and disposing of each code shifted out of said register and means responsive to the receipt and disposal of an operational code for operating said first means.

2,951,233
INFORMATION STORAGE SYSTEM
Felipe R. Tanco, Collingswood, N.J., and Luis A. Fernandez Rivas, Levittown, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 17, 1956, Ser. No. 616,465
16 Claims. (Cl. 340—172.5)

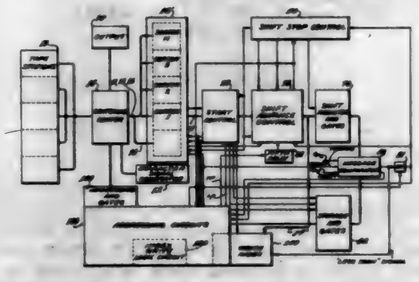
1. An information storage system comprising a shift register having a plurality of stages operatively arranged in serial order, said register including means for performing one of the write-in and read-out processing operations at a certain one of said stages on an ordered series of information units and separate means for performing the other of said processing operations at different ones of said stages, and means for selecting and controlling said separate means to perform said other operation at a corresponding one of said stages to maintain the order of said information, said controlling means including reversi-

ble distributor means responsive in one sense to the performing of said one processing operation and responsive in the reverse sense to the performing of the said other



processing operation thereby following changes in location of information in said register with each of said processing operations.

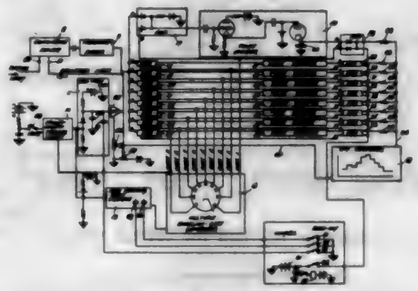
2,951,234
STORAGE INTERROGATION SYSTEM
Arnold M. Spielberg, Haddonfield, N.J., and Donald W. Evans, Grand Rapids, Mich., assignors to Radio Corporation of America, a corporation of Delaware
Filed Oct. 31, 1956, Ser. No. 619,605
9 Claims. (Cl. 340—172.5)



1. The combination with a first storage means and a plurality of data processing machines each having an internal storage means, of a means to interrogate said first storage means comprising a test circuit, selecting means for connecting each of said data processing machines in turn to said test circuit, said selecting means being inhibited by a free signal from said test circuit indicating connection of said test circuit to an available data processing machine, and a gate means responsive to said free signal to connect the said available data processing machine to said first storage means, said free signal enabling the input of said available data processing machine.

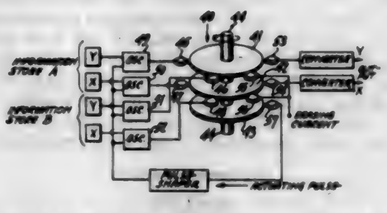
2,951,235
STATISTICAL DATA ACCUMULATOR
Warren A. Welsh, Westfield, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Filed Jan. 15, 1958, Ser. No. 709,027
7 Claims. (Cl. 340—172.5)

1. A system for accumulating and sorting data represented by electrical potentials comprising a coincidence sensing circuit, means for generating a reference potential varying between the upper and lower limits of the range of variation of the datum potentials, means for applying the varying reference potential and a datum potential to the coincidence circuit, means in the output of the coincidence circuit for generating an electrical pulse when the reference potential is equal to the datum potential, a plurality of double input "And" circuits, a counter connected in the output of each "And" circuit operable when the corresponding "And" circuit activated, means for applying the output of the pulse generator to one of the inputs of each of the "And" circuits, means synchronized with the varying reference potential for generating a series



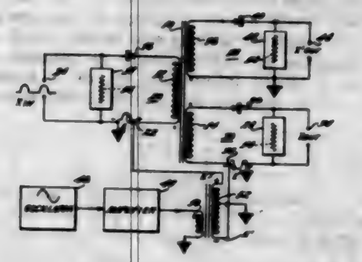
of successive gating pulses, and means for sequentially applying the gating pulses to the other inputs of the "And" circuits to prepare each circuit for activation only during a fixed interval when the reference potential passes through a corresponding segment of the range of variation whereby only the one "And" circuit corresponding to the value of the datum potential is activated when a pulse is generated by the pulse generating means.

2,951,236
SWITCHING SYSTEM
Frank D. Covely 3rd, Haddonfield, and Arthur C. Stocker, Collingswood, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Filed May 10, 1954, Ser. No. 428,646
19 Claims. (Cl. 340—174.1)



4. An information handling system comprising a normally quiescent square wave oscillator having a first input and a second input, said oscillator being responsive to an actuating pulse applied to said first input for producing a plurality of square waves during said actuating pulse and being responsive to said information applied to said second input for varying the period of each cycle of said square waves, an output coupled to said oscillator, a magnetic recording device for recording said square waves, said recording device having a first disk on which magnetic recordings can be made fastened to a rotatable shaft, a recording head, a first pickup head, an erasing head, said heads being positioned around the edge of said first disk, a second disk having an actuating pulse recorded thereon fastened to said shaft, a second pickup head positioned at the edge of said second disk, means coupling said recording head to said output, means converting said recorded waves to direct current signals, means coupling said first pickup head to said converting means, means coupling an erasing current to said erasing head, means coupling said second pickup head to said first input, and means for applying information to said second input.

2,951,237
MAGNETIC DEVICE
Richard L. Whitely, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed July 1, 1954, Ser. No. 440,700
9 Claims. (Cl. 340—174)



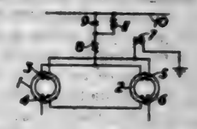
1. A magnetic device comprising a single magnetic core having a substantially rectangular hysteresis characteristic, circuit means for alternately applying magnetomotive forces opposite polarities to said core to drive said core alternately from an initial magnetic state and back to said initial state, said circuit means including a first winding linked to said core, and means for applying first pulses to said first winding, means for applying input pulses to said circuit means to inhibit those of said first pulses tending to drive said core from said initial state, and means responsive during a change of state of said core by said first input pulses for producing output pulses, said output pulse producing means including an output winding linked to said core.

2,951,238
INDICATING DEVICE FOR MAGNETIC AMPLIFIERS
Bruce K. Smith, Devon, Pa., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Filed Sept. 24, 1954, Ser. No. 458,035
10 Claims. (Cl. 340—174)



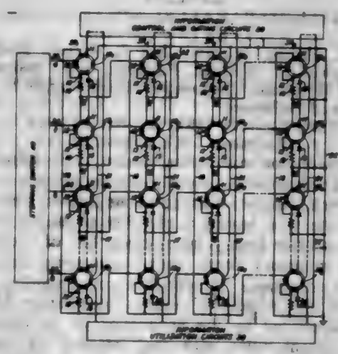
4. An indicator for indicating the output of a pulse source comprising means producing a plurality of spaced unidirectional pulses, a lamp and a normally conductive diode connected in series with one another across a source of direct potential, and means coupling said unidirectional pulse producing means to one electrode of said diode for selectively altering the potential of said diode electrode in response to said unidirectional pulses to bias said diode in a direction opposite to the direction of normal conductivity of said diode whereby said diode is appreciably conductive in the absence of a unidirectional pulse from said pulse producing means thereby to light said lamp, and said diode is rendered substantially non-conductive in response to unidirectional pulses from said pulse producing means thereby to extinguish said lamp.

2,951,239
MAGNETIC CORE STORAGE DEVICES
Arthur James Spencer, Sutton Coldfield, England, assignor to The British Tabulating Machine Company Limited, London, England, a British company
Filed Mar. 21, 1956, Ser. No. 573,003
Claims priority, application Great Britain Apr. 28, 1955
11 Claims. (Cl. 340—174)



1. Data storage apparatus including a number of bistable magnetic storage cores, a first winding on each of said cores, means operative to selectively energise the first windings to switch the related cores from a first to a second remanence state, a resetting winding on each core, the resetting windings of all cores being connected in parallel, a source of current of predetermined magnitude, a resetting circuit connecting said source to said parallel connected resetting windings to cause current to flow therein in a direction tending to switch said cores from the second to the first state, the current from the said source dividing between the individual resetting windings in accordance with their impedances, the resetting windings associated with the cores in the first and second remanence states presenting low and high impedances respectively, a current effective to switch the related core, flowing in each resetting winding which presents a high impedance and which is shunted only by resetting windings of high impedance and a current ineffective to switch the related core flowing in a resetting winding which presents a high impedance and which is shunted by a winding of low impedance and means responsive to the switching of all the cores from the second to the first state to generate an output signal, the application of current to said resetting windings causing switching of all the cores from the second to the first remanence state only when all the cores are in the second remanence state at the time when the current is applied.

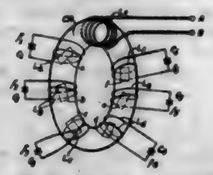
2,951,240
MAGNETIC CORE CIRCUIT
Andrew H. Bobeck, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Filed Oct. 16, 1956, Ser. No. 616,308
12 Claims. (Cl. 340—174)



1. An information storage matrix comprising a plurality of groups of magnetic cores, each of said cores being capable of assuming two conditions of remanent magnetization, a plurality of windings for each of said cores in-

cluding input, output, and activating windings, a plurality of first circuit means each including a resistance element for connecting the activating windings of the cores of each of said groups of cores in series, a plurality of second circuit means for connecting the activating winding and the output winding of each of the cores of said groups of cores in series, each of said second plurality of circuit means also including a unidirectional current element and the input winding of a corresponding core of another group of said plurality of groups of cores, a plurality of third circuit means for connecting the output winding of each of the cores of said groups of cores and the input winding of a corresponding core of another group of said plurality of groups of cores in series, each of said third plurality of circuit means also including said unilateral current element and said resistance element, means for selectively setting particular cores of one of said groups of cores in one of said conditions of remanent magnetization in accordance with a predetermined code, and means including a current source for applying an activating current to the activating windings of the cores of the said one group of cores to thereby switch said particular cores to the other of said conditions of remanent magnetization.

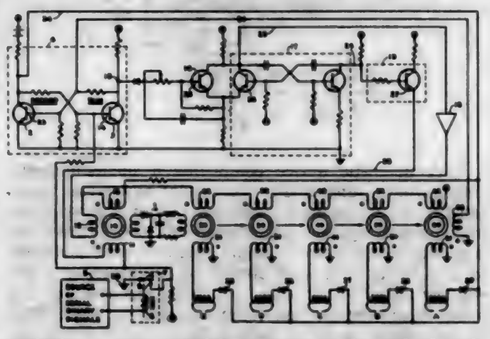
2,951,241
MAGNETIC STORAGE DEVICE
Edward A. Quade, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Filed Dec. 11, 1957, Ser. No. 702,037
5 Claims. (Cl. 340—174)



1. A magnetic storage device comprising a magnetizable member including a plurality of magnetizable particles having different resonant frequencies, means for magnetically saturating said particles of said member, means for selectively impressing different demagnetizing frequencies upon said particles and means for sensing differences in the remanent magnetization of said particles, each said difference corresponding to one of said selected demagnetizing frequencies.

2,951,242
SERIAL-TO-PARALLEL BINARY CODE CONVERTER DEVICE
Charles R. Fisher, Jr., and Ben A. Harris, Rochester, and Darwell H. Webster, Palmyra, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Filed June 23, 1958, Ser. No. 743,782
10 Claims. (Cl. 340—174)

1. A device for converting binary code information bits of serial form into parallel form comprising a source of serial form binary information bit signals; first circuit means of the type having a plurality of stages for storing the respective binary information bits of a character expressed in binary form, each stage being capable of two stable conditions of operation corresponding to the polarity of the respective binary information bits and each characterized by the production of an output energizing current pulse with each reversal of condition of operation, said first circuit means being adapted to advance the stable condition of operation of each stage to the next succeeding stage; second circuit means for generating advance energizing current pulses and local signal energizing current pulses alternately in timed relationship with said serial form binary information bit signals; first coupling circuit means for applying said locally generated signal energizing current pulses to the first stage of said first circuit means only upon the receipt of a serial binary information bit of a preselected polarity for producing therein the stable condition of operation selected to correspond to that polarity; second coupling circuit means for applying said advance energizing current pulses simultaneously advancing the stable first circuit means for successively advancing the stable condition of operation produced by said signal energizing current pulses from each stage to the next succeeding stage; third circuit means including the necessary coupling circuit means for starting said second circuit means at the beginning of each character in response to the receipt of a binary information bit of a preselected polarity and for stopping said second circuit means and

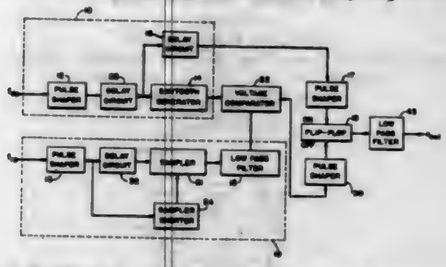


producing a reset energizing current at the end of each character in response to the reversal of condition of operation of the last stage of said first circuit means; third coupling circuit means for applying said reset energizing current simultaneously to all stages of said first circuit means for producing the condition of operation in the first stage the same as that selected to correspond to the polarity of the said preselected polarity bits and the opposite condition of operation in all other stages thereby reversing the condition of operation of all stages which are in the stable condition of operation selected to correspond to the polarity of the said preselected polarity bits and placing said first circuit means in its initial condition of operation and an individual output circuit means coupled to each stage of said first circuit means except the first in each of which an output energizing current pulse appears in response to the reversal of the condition of operation of the stage to which it is coupled.

2,951,243
TAPE PLAYBACK SYSTEM
Daniel J. Torpy, Takoma Park, and Raymond J. Stattel, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Navy
Filed May 28, 1958, Ser. No. 738,582
6 Claims. (Cl. 340—174.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

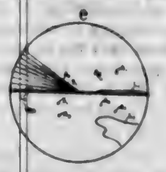
1. An P.M. tape playback system having a first channel provided with an input for receiving a data signal modulated by wow and flutter and an intelligence signal, and a second channel having an input for receiving a reference signal modulated by wow and flutter only, said first channel including means for generating a sawtooth voltage having peaks proportional to the period of the data signal, said second channel including means for generating a step voltage proportional to the length of the preceding period of the reference signal, a flip flop circuit producing an output signal in the form of a series of voltage blocks, a comparator circuit operatively connected to said first and second channels to receive the

data sawtooth and the reference step voltage and connected to said flip flop for turning it "off" when the sawtooth voltage exceeds the step voltage, means connecting said first channel to said flip flop whereby each pulse of the data signal turns said flip flop "on," a filter network connected to the output of said flip flop to con-



vert the flip flop output into a D.C. voltage thereby providing a D.C. output having a constant value when the reference and data signals are modulated only by wow-and-flutter and having a varying value indicative of the intelligence signal when the data signal is modulated by the intelligence signal.

2,951,244
THREE COORDINATE ORTHOGRAPHIC DISPLAY SYSTEM
John Donahue, 1224 Catalina Blvd., San Diego 7, Calif.
Filed Oct. 20, 1955, Ser. No. 541,868
15 Claims. (Cl. 343—11)
(Granted under Title 35, U.S. Code (1952), sec. 266)

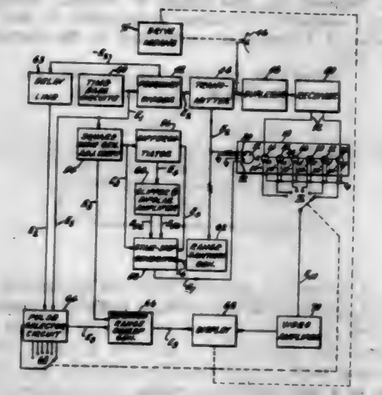


1. An echo ranging and height finding system comprising an antenna adapted to cyclically scan in elevation with a projected energy wave, a cathode ray tube having a screen and a pair of beam deflection controls arranged in space quadrature, means for generating first and second linear sweep voltages, means for modulating said first sweep voltage in accordance with the antenna elevation angle to provide an amplitude modulated linear sweep voltage, means for generating an earth curvature correction voltage having an amplitude proportional to the time elapsed from the initiation of each sweep of said first sweep voltage, means for adding said correction voltage to said modulated sweep voltage to produce a non-linear sweep voltage, means for applying said last mentioned voltage to one of said controls, and means for applying said second sweep voltage to the other of said controls, whereby the position of the trace of the cathode ray beam relative to a straight reference line on said screen will indicate height of the projected energy wave relative to curved earth.

2,951,245
ELECTRICAL CIRCUITS
Harry Kihn, Lawrenceville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Filed Mar. 12, 1957, Ser. No. 645,608
17 Claims. (Cl. 343—13)

1. A magnetic circuit comprising an elongated member formed of a magnetizable material which is substantially saturated at remanence and formed with n spaced apertures along its length, where n is an integer greater than 2, said member including a plurality of flux paths, one between each pair of adjacent apertures, and one between an end aperture and the end of the member adjacent that end aperture; means coupled to said member for magnetizing said member so as to produce saturating flux along all of said paths in the same direction; means coupled to said member for changing the direction of flux along said paths in a selected sequence; means for applying an input signal to said member; and means for deriving an output signal from said member.

11. A radar system comprising, in combination, transmitter means for transmitting pulses of radio frequency energy to targets; receiver means for receiving echoes returned from said targets; display means for displaying said echoes; and an elongated member formed of a magnetizable material which is substantially saturated at remanence and formed with n spaced apertures along its length, where n is an integer greater than 2, said member including a first flux path between one end aperture and the end of the member adjacent said end aperture,



and a plurality of other flux paths, one between each pair of adjacent apertures, and one between the other end aperture and the end of the member adjacent the other end apertures; a winding in said one end aperture connected to said transmitter for receiving current pulses from said transmitter synchronous with said transmitted pulses and of sufficient amplitude to produce saturating flux in one direction along the first path and in the opposite direction along all other of said paths; a second winding in said one end aperture; stair-step generator means coupled to said second winding for applying thereto a stair-step waveform the steps of which each have a duration which is a fraction of the entire radar range of the radar system, said wave being applied to said second winding in a polarity and amplitude to successively change the direction of flux along said other paths; a single winding linking all of said apertures except said one end aperture and connected to receive the output signal of said receiver means; a plurality of other windings, one for each aperture except said one end aperture, each coupled to said member at its aperture; and switch means for connecting a selected one of said other windings to said display means.

2,951,246
ABSORBENT FOR ELECTROMAGNETIC WAVES
Otto Halpern, Pacific Palisades, Calif., and Montgomery H. Johnson, Boston, Mass., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
No Drawing. Filed Jan. 30, 1946, Ser. No. 644,396
6 Claims. (Cl. 343—18)

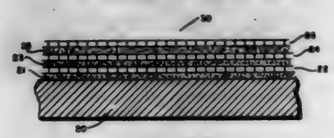
4. In combination, a surface normally reflective of

electromagnetic energy incident thereon, a coating having a thickness

$$d=\frac{\lambda}{4n}$$

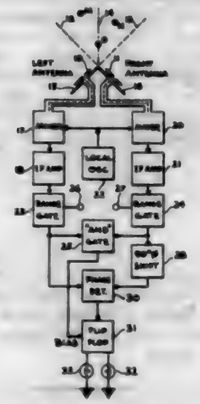
where λ is the wave length of said electromagnetic energy and n equals the index of refraction of said coating applied to said surface, said coating consisting of a plurality of interleaved high dielectric sheets formed by dispersing electrically conducting nonmagnetic flakes in a nonconducting dielectric binder and low dielectric paper sheets, the thickness of each of said sheets being small compared to λ and the index of absorption of said high dielectric sheets and said low dielectric paper sheets k being equal to $2/\pi$.

2,951,247
ISOTROPIC ABSORBING LAYERS
Otto Halpern, Pacific Palisades, Calif., and Montgomery H. Johnson, Jr., and Rufus W. Wright, Washington, D.C., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Filed Feb. 19, 1946, Ser. No. 648,794
11 Claims. (Cl. 343—18)



1. A composite isotropic layer for minimizing reflection of incident radio microwave radiation comprising a plurality of individual layers each having myriads of non-symmetrical electrically conductive particles dispersed such that they are substantially insulated one from another in a non-conducting binder, the direction of alignment of conductive particles of a predetermined number of such layers being oriented at ninety degrees to the direction of alignment of conductive particles of the remainder of said layers, the thickness of said composite layer being equal to an odd-multiple of a quarter wavelength of the incident radiation for which the composite layer is designed to be resonant, measured inside the composite layer.

2,951,248
TERRAIN OBSTACLE DETECTOR
Everett M. Goodell, Palos Verdes Estates, Calif., assignor to The Ramo-Wooldridge Corporation, Hawthorne, Calif., a corporation of Delaware
Filed Feb. 12, 1958, Ser. No. 714,733
11 Claims. (Cl. 343—113)



1. Receiver apparatus for detecting the presence of a terrain obstacle within a predetermined danger zone ahead of a craft and for indicating the direction in which the craft should be turned to avoid the obstacle, said apparatus comprising: first and second antenna means spaced from each other and positioned to cover different areas with the areas overlapping to contemporaneously receive signals reflected from only the terrain obstacle within the predetermined danger zone; phase detector means being responsive only to signals contemporaneously received by said first and second antenna means to produce an output voltage whose polarity corresponds to the phase angle between said signals, said output voltage being of one polarity when said phase angle is leading and of opposite polarity when said phase angle is lagging; and display means for indicating only in response to said output voltage the direction of the terrain obstacle relative to the craft, thereby indicating the direction in which the craft is to be turned to avoid the obstacle, the direction indicated depending upon the polarity of said output voltage.

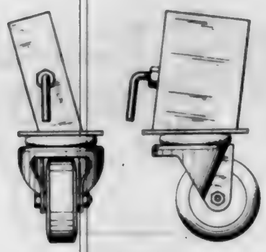
DESIGNS

AUGUST 30, 1960

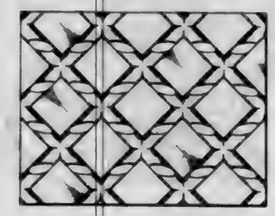
188,714
TOWEL BAR BRACKET
John F. Bonistall, 525 Military Road, Zanesville, Ohio
Filed May 15, 1958, Ser. No. 50,910
Term of patent 14 years
(Cl. D4—3)



188,715
CASTER FOR AN INCLINED LEG
Earl J. Winter, 4400 Grove St., Denver, Colo.
Filed Sept. 28, 1959, Ser. No. 57,717
Term of patent 14 years
(Cl. D10—6)



188,716
BUILDING PANEL
Harold A. Edmondson, 257 S. Arden Ave., Los Angeles, Calif.
Filed June 15, 1959, Ser. No. 56,329
Term of patent 14 years
(Cl. D13—1)



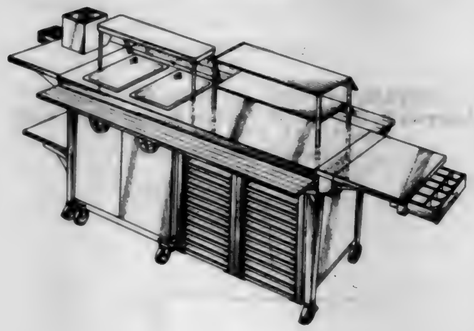
188,717
CAMP COACH FOR PICK-UP TRUCKS OR SIMILAR ARTICLE
Merle D. McNamee, San Gabriel, Calif., assignor to McNamee Coach Corporation, South El Monte, Calif., a corporation of California
Filed Nov. 9, 1959, Ser. No. 58,289
Term of patent 14 years
(Cl. D14—3)



188,718
ELECTRIC VEHICLE
Frank J. Laher, 120 Camino Sobrante, Orinda, Calif.
Filed Sept. 2, 1958, Ser. No. 52,471
Term of patent 3½ years
(Cl. D14—3)



188,719
PORTABLE CAFETERIA COUNTER UNIT
Delmar D. Rhoads, 3230 S. Calhoun St., Fort Wayne, Ind.
Filed June 9, 1958, Ser. No. 51,256
Term of patent 14 years
(Cl. D14—3)



188,720
WIND DEFLECTOR
Hugh W. Shumaker, 517 S. Jackson St., Moscow, Idaho
Filed Apr. 29, 1960, Ser. No. 60,374
Term of patent 14 years
(Cl. D14—6)



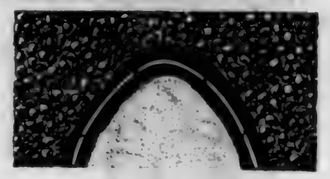
188,721
CHAIR
Siegmund Werner, South Orange, N.J., assignor to Deeco, Inc., Bloomfield, N.J., a corporation of New Jersey
Filed Dec. 4, 1958, Ser. No. 53,644
Term of patent 7 years
(Cl. D15—1)



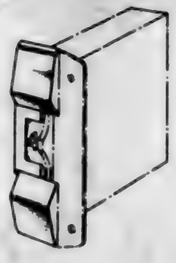
188,722
JEWELRY FINDING OR SIMILAR ARTICLE
Laurence B. Green, 2217 Tokalon St., San Diego, Calif.
Filed Jan. 12, 1960, Ser. No. 59,018
Term of patent 7 years
(Cl. D17—3)



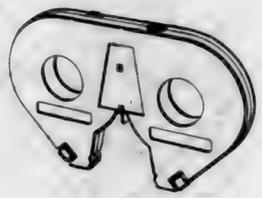
188,723
TILE
Hugh Sheldon Wiley, 53 Palmer Ave., Bronxville, N.Y.
Filed Oct. 17, 1958, Ser. No. 53,021
Term of patent 3½ years
(Cl. D18—2)



188,724
DIGITAL SWITCH UNIT
James M. Powell, Anaheim, Calif., assignor to Endevco Corporation, Pasadena, Calif., a corporation of California
Filed June 15, 1959, Ser. No. 56,358
Term of patent 14 years
(Cl. D26—13)



188,725
MAGAZINE FOR MAGNETIC RECORDING TAPE OR THE LIKE
John Pelham Wren, Swindon, England, assignor to The Garrard Engineering and Manufacturing Company Limited, Swindon, England, a company of Great Britain
Filed Dec. 28, 1959, Ser. No. 58,826
Claims priority, application Great Britain Aug. 11, 1959
Term of patent 14 years
(Cl. D26—14)



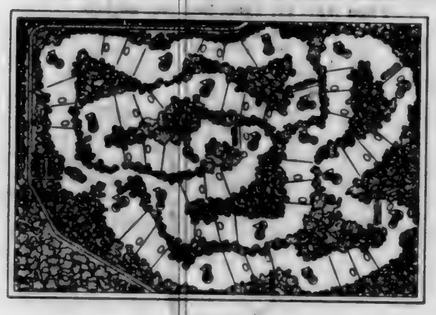
188,726
ARTIFICIAL CHRISTMAS TREE
Mason J. Curtiss, 208 Brookspear Road, Syracuse, N.Y.
Filed Dec. 2, 1958, Ser. No. 53,616
Term of patent 14 years
(Cl. D29—1)



188,727
TABLE
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Tomlinson of High Point, High Point, N.C., a corporation of North Carolina
Filed Oct. 28, 1959, Ser. No. 58,061
Term of patent 14 years
(Cl. D33—14)



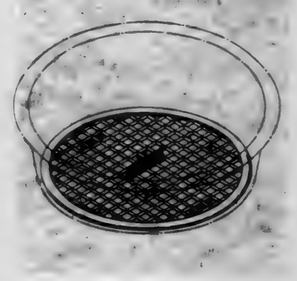
188,728
GAME BOARD
Aloysius J. Legler, 2116 Brandon St., Seattle, Wash.
Filed July 9, 1959, Ser. No. 56,787
Term of patent 14 years
(Cl. D34—5)



188,729
ELECTRIC HOIST
Gulbert M. Hunt, Willowick, Ohio, assignor to Duff-Norton Company, Pittsburgh, Pa.
Filed May 12, 1958, Ser. No. 50,852
Term of patent 14 years
(Cl. D41—1)



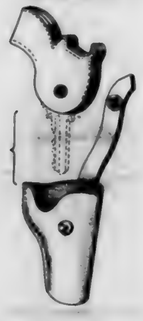
188,730
FOOD STRAINER FOR USE WITH BOWLS OR THE LIKE
Elyon Elaine Berman, Los Angeles, Calif., assignor to Burroughs Manufacturing Corporation, Los Angeles, Calif., a corporation of California
Filed Aug. 22, 1958, Ser. No. 52,345
Term of patent 14 years
(Cl. D44—1)



188,731
BOWL
Alexandra C. Solowij, Providence, R.I., assignor to Gorham Manufacturing Company, Providence, R.I.
Filed Mar. 31, 1960, Ser. No. 59,973
Term of patent 14 years
(Cl. D44—15)



188,732
KEY CONTAINER
Raymond E. Mormon, 210 S. Ervay St., Dallas, Tex.
Filed Oct. 1, 1959, Ser. No. 57,757
Term of patent 7 years
(Cl. D87—3)



188,733
LACE
Walter P. Kuffler, 307 Abbey Road, Manhasset, N.Y.
Filed Apr. 22, 1960, Ser. No. 60,292
Term of patent 7 years
(Cl. D47—6)



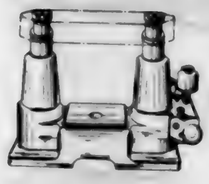
188,734
LAMP BASE OR SIMILAR ARTICLE
Arthur F. Jacobs, Los Angeles, Calif., assignor to Modeline Company of California Inc., Los Angeles, Calif., a corporation of California
Filed July 17, 1959, Ser. No. 56,815
Term of patent 14 years
(Cl. D48—20)



188,735
INSPECTION MIRROR
Robert F. Battles, Torrance, and William B. Spoonier, Rolling Hills, Calif., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Filed Mar. 29, 1960, Ser. No. 59,931
Term of patent 14 years
(Cl. D54—13)



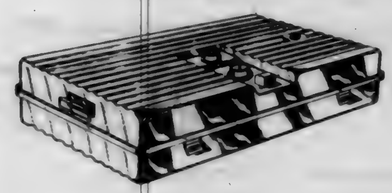
188,736
AIR JIG
Joseph Verderber, 15255 Lake Shore Blvd., Cleveland, Ohio
Filed Sept. 24, 1959, Ser. No. 57,669
Term of patent 14 years
(Cl. D54—14)



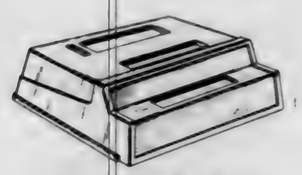
188,737
BOTTLE OR SIMILAR ARTICLE
Jack H. Hofstetter, Orange, and Walter M. Ballard, Whittier, Calif., assignors to Purex Corporation, Ltd., South Gate, Calif., a corporation of California
Filed Apr. 11, 1960, Ser. No. 60,120
Term of patent 14 years
(Cl. D58—8)



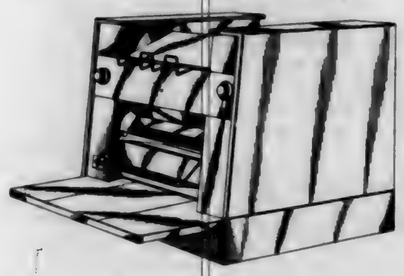
188,738
LIQUID FUEL CONTAINER FOR BOATS OR THE LIKE
William F. Voelz, Jr., Thiensville, Wis., assignor to The Alva T. Smith Company, Milwaukee, Wis., a corporation of Wisconsin
Filed June 15, 1959, Ser. No. 56,351
Term of patent 14 years
(Cl. D58—17)



188,739
PHOTOCOPY MACHINE
Kenneth R. Reick, 634 S. Main St., Lombard, Ill.
Filed Aug. 5, 1959, Ser. No. 57,070
Term of patent 7 years
(Cl. D61—1)



188,740
PHOTOGRAPHIC PRINTING AND DEVELOPING APPARATUS
Patrick P. Howrilka, Endwell, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Filed Nov. 4, 1959, Ser. No. 58,203
Term of patent 14 years
(Cl. D61—1)



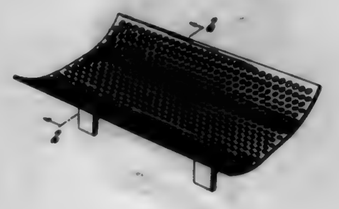
188,741
FONT OF TYPE
Richard K. Gerlach, Gardena, Calif., and Paul M. Koons, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Filed Oct. 30, 1959, Ser. No. 58,127
Term of patent 14 years
(Cl. D64—12)



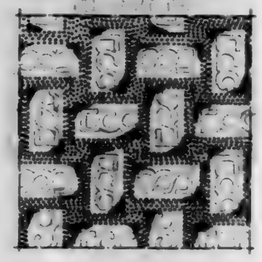
188,742
RACK FOR DISPLAYING AND MERCHANDISING CONFECTIONERIES OR THE LIKE
Joseph Kiegel, Glen Cove, and Robert B. Kyle, Manhasset, N.Y., assignors to American Chicle Company, Long Island, N.Y., a corporation of New Jersey
Filed June 24, 1958, Ser. No. 51,502
Term of patent 7 years
(Cl. D88—10)



188,743
FIREPLACE GRATE
Albert Cliffe Arrand, 196 Jenkins Road, Andover, Mass.
Filed May 20, 1959, Ser. No. 55,988
Term of patent 14 years
(Cl. D81—18)



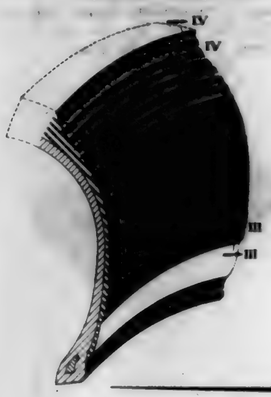
188,744
TEXTURED PLASTIC COATED FABRIC
Herbert Williams Thurlow, Babylon, N.Y., assignor to Riegel Textile Corporation, a corporation of Delaware
Filed Nov. 24, 1959, Ser. No. 53,458
Term of patent 14 years
(Cl. D87—3)



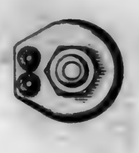
188,745
PLASTIC COATED FABRIC OR SIMILAR ARTICLE
Jakob H. Vogel, West Orange, N.J., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Filed Sept. 17, 1959, Ser. No. 57,585
Term of patent 3½ years
(Cl. D87—4)



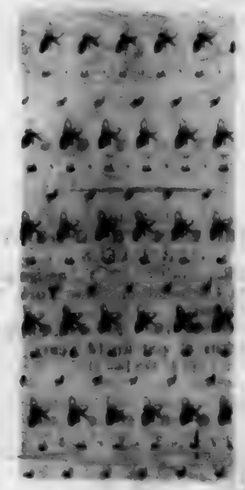
188,746
TIRE
James G. Balmer, Jr., Birmingham, Mich., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Filed July 5, 1955, Ser. No. 36,810
Term of patent 14 years
(Cl. D90—20)



188,747
VALVE OR THE LIKE
James E. Bancroft, Bayside, N.Y., assignor to Allied Control Company, Inc., New York, N.Y., a corporation of New York
Filed Jan. 2, 1959, Ser. No. 54,023
Term of patent 3½ years
(Cl. D91—3)



188,748
FLOCKED TEXTILE FABRIC
Natalie Leavy, Clifton, N.J., assignor to Decorative Fabrics Company Incorporated, Pawtucket, R.I., a corporation of Rhode Island
Filed Feb. 11, 1960, Ser. No. 59,349
Term of patent 14 years
(Cl. D92—1)



LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Engine Parts Mfg. Co., The: *See*—
Rogers, Edmund. Re. 24,863.
Motorola, Inc.: *See*—
Parker, Norman W. Re. 24,864.

Parker, Norman W., to Motorola, Inc. Color demodulator output controlled subcarrier oscillator. Re. 24,864, 8–30–60, Cl. 178—5.4.
Rogers, Edmund, to The Engine Parts Mfg. Co. Method of stabilizing sprayable paints. Re. 24,863, 8–30–60, Cl. 106—190.

LIST OF PLANT PATENTEES

Jackson & Perkins Co.: *See*—
Tantau, Mathias. 1,960.

Tantau, Mathias, to Jackson & Perkins Co. Rose plant. 1,960, 8–30–60, Cl. 47—61.

LIST OF DESIGN PATENTEES

Allied Control Co., Inc.: *See*—
Bancroft, James E. 188,747.
American Chicle Co.: *See*—
Kiegel, Joseph, and Kyle. 188,742.
Arrand, Albert C. Fireplace grate. 188,743, 8–30–60, Cl. D81—18.
Ballard, Walter M.: *See*—
Hofstetter, Jack H., and Ballard. 188,737.
Balmer, James G., Jr., to United States Rubber Co. Tire. 188,746, 8–30–60, Cl. D90—20.
Bancroft, James E., to Allied Control Co., Inc. Valve or the like. 188,747, 8–30–60, Cl. D91—3.
Berman, Elyon E., to Burroughs Mfg. Corp. Food strainer for use with bowls or the like. 188,730, 8–30–60, Cl. D44—1.
Bonistall, John F. Towel bar bracket. 188,714, 8–30–60, Cl. D6—3.
Burroughs Mfg. Corp.: *See*—
Berman, Elyon E. 188,730.
Buttles, Robert F., and W. B. Sponsler, to Northrop Corp. Inspection mirror. 188,735, 8–30–60, Cl. D34—13.
Curtiss, Mason J. Artificial Christmas tree. 188,726, 8–30–60, Cl. D29—1.
Decorative Fabrics Co. Inc.: *See*—
Leavy, Natalie. 188,748.
Deeco, Inc.: *See*—
Werner, Siegmund. 188,721.
Duff-Norton Co.: *See*—
Hunt, Guilbert M. 188,729.
Edmondson, Harold A. Building panel. 188,716, 8–30–60, Cl. D13—1.
Endeveo Corp.: *See*—
Powell, James M. 188,724.
General Aniline & Film Corp.: *See*—
Howrilka, Patrick P. 188,740.
Gerlach, Richard K., and P. M. Koons, to The National Cash Register Co. Font of type. 188,741, 8–30–60, Cl. D64—12.
Garrard Engineering and Mfg. Co. Ltd., The: *See*—
Wren, John P. 188,725.
Gorham Mfg. Co.: *See*—
Solowij, Alexandra C. 188,731.
Green, Laurence B. Jewelry finding or similar article. 188,722, 8–30–60, Cl. D17—3.
Hofstetter, Jack H., and W. M. Ballard, to Purex Corp., Ltd. Bottle or similar article. 188,737, 8–30–60, Cl. D58—8.
Howrilka, Patrick P., to General Aniline & Film Corp. Photographic printing and developing apparatus. 188,740, 8–30–60, Cl. D61—1.
Hunt, Guilbert M., to Duff-Norton Co. Electric hoist. 188,729, 8–30–60, Cl. D41—1.
Interchemical Corp.: *See*—
Vogel, Jakob H. 188,745.
Jacobs, Arthur F., to Modaline Co. of California Inc. Lamp base or similar article. 188,734, 8–30–60, Cl. D48—20.
Kiegel, Joseph, and R. B. Kyle, to American Chicle Co. Rack for displaying and merchandising confectioneries or the like. 188,742, 8–30–60, Cl. D80—10.
Koons, Paul M.: *See*—
Gerlach, Richard K., and Koons. 188,741.
Kuffler, Walter P. Lace. 188,733, 8–30–60, Cl. D47—6.
Kyle, Robert B.: *See*—
Kiegel, Joseph, and Kyle. 188,742.
Laher, Frank J. Electric vehicle. 188,718, 8–30–60, Cl. D14—3.
Leavy, Natalie, to Decorative Fabrics Co. Inc. Flocked textile fabric. 188,748, 8–30–60, Cl. D92—1.
Legler, Aloysius J. Game board. 188,728, 8–30–60, Cl. D34—5.
Lubberts, John J., and L. J. Mulder, to Tomlinson of High Point. Table. 188,727, 8–30–60, Cl. D33—14.
McNamee Coach Corp.: *See*—
McNamee, Merle D. 188,717.
McNamee, Merle D., to McNamee Coach Corp. Camp coach for pick-up trucks or similar article. 188,717, 8–30–60, Cl. D14—3.
Modaline Co. of California Inc.: *See*—
Jacobs, Arthur F. 188,734.
Morman, Raymond E. Key container. 188,732, 8–30–60, Cl. D87—3.
Mulder, Lambert J.: *See*—
Lubberts, John J., and Mulder. 188,727.
National Cash Register Co., The: *See*—
Gerlach, Richard K., and Koons. 188,741.
Northrop Corp.: *See*—
Buttles, Robert F., and Sponsler. 188,735.
Powell, James M., to Endeveo Corp. Digital switch unit. 188,724, 8–30–60, Cl. D26—13.
Purex Corp., Ltd.: *See*—
Hofstetter, Jack H., and Ballard. 188,737.
Reick, Kenneth R. Photocopy machine. 188,739, 8–30–60, Cl. D61—1.
Rhoads, Delmar D. Portable cafeteria counter unit. 188,719, 8–30–60, Cl. D14—3.
Riegel Textile Corp.: *See*—
Thurlow, Herbert W. 188,744.
Shumaker, Hugh W. Wind deflector. 188,720, 8–30–60, Cl. D14—6.
Smith, Alva T., Co., The: *See*—
Voelz, William F., Jr. 188,738.
Solowij, Alexandra C., to Gorham Mfg. Co. Bowl. 188,731, 8–30–60, Cl. D44—15.
Sponsler, William B.: *See*—
Buttles, Robert F., and Sponsler. 188,735.
Thurlow, Herbert W., to Riegel Textile Corp. Texture plastic coated fabric. 188,744, 8–30–60, Cl. D87—3.
Tomlinson of High Point: *See*—
Lubberts, John J., and Mulder. 188,727.
United States Rubber Co.: *See*—
Balmer, James G., Jr. 188,746.
Verderber, Joseph. Air jig. 188,736, 8–30–60, Cl. D54—14.
Voelz, William F., Jr., to The Alva T. Smith Co. Liquid fuel container for boats or the like. 188,738, 8–30–60, Cl. D58—17.
Vogel, Jakob H., to Interchemical Corp. Plastic coated fabric or similar article. 188,745, 8–30–60, Cl. D87—4.
Werner, Siegmund, to Deeco, Inc. Chair. 188,721, 8–30–60, Cl. D15—1.
Wiley, Hugh S. Tile. 188,723, 8–30–60, Cl. D18—2.
Winter, Earl J. Caster for an inclined leg. 188,715, 8–30–60, Cl. D10—6.
Wren, John P., to The Garrard Engineering and Mfg. Co. Ltd. Magazine for magnetic recording tapes or the like. 188,725, 8–30–60, Cl. D26—14.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 30TH DAY OF AUGUST, 1960

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AB Flygts Pumpar: *See*—
Engleson, Sixten. 2,950,931.

AMP Inc.: *See*—
Cobaugh, Robert F. 2,951,228.

Abbott, Roy W., to General Electric Co. Refrigeration system. 2,950,008, 8–30–60, Cl. 62—511.

Abbott, Tom L. Safety cut-off for pump pitman. 2,950,798, 8–30–60, Cl. 192—116.5.

Abdeln, Frederick, to Moo-Cow Group Ltd. Means for cutting plastic substances. 2,950,532, 8–30–60, Cl. 31—7.

Aberlin, Fred: *See*—
Frommelt, Horace A., and Aberlin. 2,950,523.
Frommelt, Horace A., and Aberlin. 2,950,524.

Abrams, Ralph, to Cambridge Thermionic Corp. Battery holder. 2,951,107, 8–30–60, Cl. 136—173.

Acara, Nancy A.: *See*—
Breck, Donald W., and Acara. 2,950,952.

Adams, Chester E., and D. H. Meyer, to Standard Oil Co. Halomethylation. 2,951,100, 8–30–60, Cl. 260—651.

Adams, L., Ltd.: *See*—
Voss, Waldemar E. 2,950,898.

Adams, Robert T.: *See*—
Sichak, William, and Adams. 2,951,152.

Aghnides, Elie P. Ash tray with cavity for reception of ashes. 2,950,721, 8–30–60, Cl. 131—235.

Agie, A.G. fur industrielle Elektronik: *See*—
Ullmann, Werner. 2,951,142.

Agius, Peter J. V. J., and P. R. Morris, to Esso Research and Engineering Co. Lubricating oil additives. 2,951,050, 8–30–60, Cl. 260—23.

Agnew, John G. C.: *See*—
Schwartz, Bernard P. M., and Agnew. 2,950,490.

Ahlgrimm, Charles F.: *See*—
Krohn, Gilbert S., Neuhaus, and Ahlgrimm. 2,950,678.
Krohn, Gilbert S., Neuhaus, and Ahlgrimm. 2,950,679.

Aircushion Patents Corp.: *See*—
Smith, Arthur W. 2,950,739.

Aktiebolaget Bofors: *See*—
Blomqvist, Åke H. P., and Qvarnstrom. 2,950,616.

Aktiebolaget Electrolux: *See*—
Nilsson, Bengt E. 2,950,583.

Aldinger, Ulrich: *See*—
Walch, Eugen, and Aldinger. 2,950,681.

Alexander, David J.: *See*—
Clark, Ronald, and Alexander. 2,950,846.

Allen, Richard C., and F. E. Miller, Jr., to Owens-Illinois Glass Co. Article handling apparatus for offset printers. 2,950,671, 8–30–60, Cl. 101—40.

Allied Chemical Corp.: *See*—
Deanin, Rudolph D., and Dell. 2,951,062.
Gilbert, Everett E., and Lombardo. 2,951,083.

Allis-Chalmers Mfg. Co.: *See*—
Forrest, Frank R. 2,950,943.
Marohn, Richard P. 2,951,196.
Rockwell, Harvey W., and Hawk. 2,950,926.

Alloway, Vivian P. Straw cutter. 2,950,747, 8–30–60, Cl. 146—117.

Almor Corp.: *See*—
Foster, Allan D. 2,950,554.

Alvear, Victor. Plastic cork. 2,950,835, 8–30–60, Cl. 217—110.

Amdahl, Lowell D., B. L. Havens, J. Jeenel, K. E. Schreiner, J. P. Cedarholm, and N. F. Eichenberger, to International Business Machines Corp. Tape control circuits. 2,951,232, 8–30–60, Cl. 340—172.5.

American Can Co.: *See*—
Hebert, Harold C. 2,950,806.
Magill, Donald G. 2,950,620.
McBean, Douglas M., and Tallman. 2,950,829.

American Chain & Cable Co., Inc.: *See*—
Seymour, Harvey W. 2,950,991.

American Cyanamid Co.: *See*—
Bernstein, Seymour, and Lenhard. 2,951,084.
Luttinger, Lionel B. 2,951,055.
Sonnino, Mario. 2,950,320.
Updegraff, Ivor H., and Hunt. 2,951,058.

American Home Products Corp.: *See*—
Myers, Gordon S., and Davis. 2,951,077.

American Metal Products Co.: *See*—
Degener, Richard K. 2,950,826.
Heyl, Russell G., Jr. 2,950,486.

American Steel Foundries: *See*—
Polanin, Walter R. 2,950,782.
Tack, Carl E. 2,950,781.

American Viscose Corp.: *See*—
Brillhart, William O., Gallant, and Carver. 2,950,992.
Hervey, Laurence B. B. 2,951,005.
Nelson, Beddon C. 2,950,873.
Watson, Paul C., and McMahon. 2,950,752.
Wheat, Vernon D., and Hadfield. 2,950,521.

Anastasia, Angelo. Surface mounted container opener. 2,950,529, 8–30–60, Cl. 30—10.

Anderson, Arvid R., to The Colomol Co. Mine face traversing mining head. 2,950,907, 8–30–60, Cl. 262—7.

Anderson, Edward P., and W. F. Doring, to Engelhard Industries, Inc. Lead wire tape. 2,951,111, 8–30–60, Cl. 174—117.

Anderson, Edwin A. Pressure balanced fluid pressure connector. 2,950,895, 8–30–60, Cl. 251—148.

Anderson, John E. and T. B. Reed, to Union Carbide Corp. Arc torch. 2,951,143, 8–30–60, Cl. 219—75.

Anderson, Robert C., to Imperial Chemical Industries Ltd. Manufacture of trialkyl boranes. 2,951,093, 8–30–60, Cl. 260—606.5.

Andrews, Albert, deceased (H. Andrews, heir), to H. R. Van Valkenburgh. Pump jacks and the like. 2,950,704, 8–30–60, Cl. 121—123.

Andrews, Helen: *See*—
Andrews, Albert. 2,950,704.

Andrews, Robert J., to Bell Telephone Laboratories, Inc. Electronic switching network. 2,951,125, 8–30–60, Cl. 179—18.

Anspach, Roy L., to John J. Foster Mfg. Co. Method and apparatus for fabricating honeycomb core. 2,951,145, 8–30–60, Cl. 219—83.

Anzons, Janis O., to Clark Equipment Co. Universal loader mechanism. 2,950,831, 8–30–60, Cl. 214—731.

Arditi, Maurice, to International Telephone and Telegraph Corp. Directional couplings. 2,951,218, 8–30–60, Cl. 333—10.

Ardner, Robert L., to Lynch Corp. Transfer mechanism. 2,950,804, 8–30–60, Cl. 198—24.

Arenz, Matthias, to Schloemann Aktiengesellschaft. Controlling the cooling of a hollow mandrel in a metal extrusion press. 2,950,816, 8–30–60, Cl. 207—16.

Armstrong Cork Co.: *See*—
Mariner, Thomas. 2,951,159.

Arnold, Günther: *See*—
Plapper, Jürgen, Heyden, and Arnold. 2,950,950.

Aro Equipment Corp., The: *See*—
Zwayer, Robert R. 2,950,775.

Arutunoff, Armais, to Reda Pump Co. Heat exchanger for submergible pumping assembly. 2,951,165, 8–30–60, Cl. 310—54.

Ateliers de la Molobecaue, Societe Anonyme Francaise: *See*—
Jaulmes, Eric. 2,950,625.

Atlantic Refining Co., The: *See*—
Sauer, Richard W., and Weed. 2,951,033.

Atlas Silk Screen Supply Co.: *See*—
Dement, Gridley. 2,950,541.

Austin, Ralph W., to Knight and Thomas Inc. Fire extinguisher. 2,950,762, 8–30–60, Cl. 169—31.

Automotive Products Co. Ltd.: *See*—
Huck, John J. 2,950,600.

Averill, Charles C., to Union Steel Products Co. Stacking crates or receptacles. 2,950,825, 8–30–60, Cl. 211—126.

Axtell, Oliver H., Jr., and C. M. Clarke, to Celanese Corp. of America. Vapor phase polymerization of trioxane. 2,951,059, 8–30–60, Cl. 260—67.

Axtell, Willard G., to Shwayder Bros., Inc. Luggage case. 2,950,792, 8–30–60, Cl. 190—49.

Axtell, Willard G., to Shwayder Bros., Inc. Luggage case. 2,950,793, 8–30–60, Cl. 190—49.

Babcock, Elden R., to United States of America, Navy. Packaged aid station. 2,950,791, 8–30–60, Cl. 190—9.

Babcock & Wilcox Co., The: *See*—
Richter, Frederick H., and Snyder. 2,950,757.

Backhouse, Headley T. Sheet feeding machines. 2,950,916, 8–30–60, Cl. 271—60.

Bade, Alfred G., to The Falk Corp. Speed reducer. 2,950,628, 8–30–60, Cl. 74—421.

Baermann, Max. Electro-mechanical transformer. 2,951,190, 8–30–60, Cl. 317—173.

Bailey, Donald L., and R. M. Pike, to Union Carbide Corp. Ultraviolet light absorbing compositions. 2,950,986, 8–30–60, Cl. 117—33.3.

Baird-Atomic, Inc.: *See*—
Magrath, Richard A. 2,951,224.

Balsers Patent-und-Lizens Anstalt: *See*—
Feichtinger, Heinrich. 2,950,856.

Bamford, William P., F. J. Carson, and L. H. Laine, to Libbey-Owens-Ford Glass Co. Apparatus for bending sheets of glass or the like. 2,950,573, 8–30–60, Cl. 49—67.

Bankers & Merchants, Inc.: *See*—
Weissman, Samuel M. and L. H., and Haimes. 2,950,676.

Barclay, Stanton D. Process for purifying oil with monoisopropanolamine. 2,951,031, 8–30–60, Cl. 208—180.

BarDal, Inc.: *See*—
D'Alelio, Gaetano F. 2,951,084.

Barish, Thomas: *See*—
Lodal, Alvin L., and Barish. 2,950,996.

Barker, William A., to United Shoe Machinery Corp. Shoe supports. 2,950,491, 8–30–60, Cl. 12—127.

Barr, David J.: *See*—
Copping, Geoffrey P., Parker, and Barr. 2,950,675.

Barton, Loy E., to Radio Corp. of America. Temperature controlled semi-conductor bias circuit. 2,951,206, 8–30–60, Cl. 330—14.

Barusch, Maurice R., and P. L. Pinotti, to California Research Corp. Hydrocarbon fuels. 2,950,960, 8–30–60, Cl. 44—63.

Basso Inc.: *See*—
Hainy, Charles E. 2,951,189.

Basso, Arthur J.: *See*—
O'Neill, Robert C., and Basso. 2,951,010.

Bath Iron Works Corp.: *See*—
Danyluke, Ostap. 2,950,870.

Bauerlein, Carl C., and M. M. Reddi, to The Dole Valve Co. Fluid pump. 2,950,684, 8–30–60, Cl. 103—40.

Baum, Peter A., to Haseltine Research, Inc. Pulse-distribution system. 2,951,153, 8–30–60, Cl. 250—27.

Baxter, J. H., & Co.: *See*—
Napier, Joe T., and MacMurray. 2,950,743.

Beauchaine, Alvah D. Center insert for abrasive wheels. 2,950,582, 8–30–60, Cl. 51—168.

Becker, Sylvan J., to Borg-Warner Corp. Thermostatically controlled clutch. 2,950,796, 8–30–60, Cl. 192—82.

Beckman Instruments, Inc.: *See*—
Place, Thomas M., Sr., and T. M. Place, Jr. 2,950,995.
Place, Thomas M., Sr., and T. M. Place, Jr. 2,950,996.

Bedford, William A., Jr., to United-Carr Fastener Corp. Fastening device. 2,950,937, 8–30–60, Cl. 287—126.

Beermann, Claus: *See*—
Clauss, Karl, and Beermann. 2,951,085.

Bell Aerospace Corp.: *See*—
Fletcher, Harold K., Seamons, and Wolpin. 2,950,703.

Bell, George A., to Commonwealth Scientific and Industrial Research Organization. Apparatus for use in the sharpening of knives, knife blades and the like. 2,950,585, 8–30–60, Cl. 51—221.

Bell, Robert B.: *See*—
Ogden, Frank, and Bell. 2,950,999.

Bell Telephone Laboratories, Inc.: *See*—
Andrews, Robert J. 2,951,125.
Blackman, Ralph B. 2,950,863.
Bobeck, Andrew H. 2,951,240.
Cadden, William J. 2,951,230.
Critchlow, George F. 2,951,200.
Feinstein, Joseph. 2,951,152.
Goldstein, Edward. 2,951,229.
Hussey, Luther W., and Ricke. 2,951,124.
Kingsbury, Burton A. 2,951,128.
Marcatili, Enrique A. J. 2,951,219.
Miller, Stewart E. 2,951,220.

Bellamy, David., Jr., and C. W. Walter, to Fenwal Laboratories, Inc. Fluid handling method and apparatus. 2,950,716, 8–30–60, Cl. 128—214.

Beloit Iron Works: *See*—
Washburn, Robert B. 2,951,139.

Benckiser Firma Joh. A. G.m.b.H. Chemische Fabrik: *See*—
Debo, Arno. 2,951,088.

Bendix Corp., The: *See*—
Burt, Farlow B. 2,950,599.
Clarke, James F. 2,950,597.
Haase, Elmer A., and Schnable. 2,950,596.
Mooney, Joseph L. 2,950,783.
Runcito, Anthony J. 2,951,002.
Williams, Howard J., and Rogers. 2,950,857.

Benink, Christiaan J. M., and W. Irmscher, to Pfaff, G. M., AG. Looper drive for double chain stitch sewing machines. 2,950,696, 8–30–60, Cl. 112—200.

Bennett, Edward L., to Hiller Aircraft Corp. Jet driven rotor. 2,950,763, 8–30–60, Cl. 170—135.4.

Bennett, Rexford P., to Heavy Industrial Ceramic Corp. Strand tension mechanism. 2,950,877, 8–30–60, Cl. 242—154.

Bennett, Thomas R., to R. W. Crabtree & Sons Ltd. Web-removing mechanism. 2,950,874, 8–30–60, Cl. 232—68.3.

Bennon, Saul, to United States of America, Navy. Electrical steering control system. 2,950,698, 8–30–60, Cl. 114—23.

Berg, Martin. Clothesline assembly. 2,950,824, 8–30–60, Cl. 211—119.1.

Berger, Melvin L., to Chas. Pfizer & Co., Inc. Aqueous readily injectable therapeutic compositions containing water-insoluble penicillin and sucrose dilaurate. 8,951,015, 8–30–60, Cl. 167—82.

Berk, Aristid D., and R. Strumwasser, to Hughes Aircraft Co. Waveguide coupling device with switching arrangement. 2,951,215, 8–30–60, Cl. 333—7.

Bernard, George G., to The Pure Oil Co. Water flooding process. 2,950,760, 8–30–60, Cl. 166—42.

Bernhardt, Daniel. Package sealer. 2,951,141, 8–30–60, Cl. 219—19.

Bernstein, Jack: *See*—
Sowinski, Francis A., Lott, and Bernstein. 2,951,092.

Bernstein, Seymour, and R. H. Lenhard, to American Cyanamid Co. Cortisone derivatives and method of preparing the same. 2,951,084, 8–30–60, Cl. 260—397.45.

Berthold, Alfred, and O. J. Grummitt, to The Sherwin-Williams Co. Coating compositions having reduced odor on drying. 2,950,982, 8–30–60, Cl. 106—263.

Bertie, Louis C., R. G. Pletts, and B. Champoux. Gas operated engine heater. 2,950,754, 8–30–60, Cl. 158—125.

Bessiere, Pierre E. Injection devices including a reciprocating piston injection pump. 2,950,709, 8–30–60, Cl. 122—139.

Bieger, Jacob J., and A. T. Hill, to Daco Instrument Co. Miniaturized gear reducer. 2,950,635, 8–30–60, Cl. 74—801.

Biel, John H., to Lakeside Laboratories, Inc. 2-(aminoalkylamino)-methylpyrrolidines. 2,951,078, 8–30–60, Cl. 260—247.5.

Billica, Harry R., to E. I. du Pont de Nemours and Co. Process for preparing polyesters in the presence of manganous carboxylate catalysts. 2,951,060, 8–30–60, Cl. 260—75.

Bingley, Frank J., to Philco Corp. Method of producing controlled displacement of screen elements in cathode ray tubes. 2,950,969, 8–30–60, Cl. 96—41.

Birkenes, Bernhard, to Motorola, Inc. Radio receiver having anode power of front-end stages derived from cathode of output stage. 2,951,154, 8–30–60, Cl. 250—27.5.

Birmingham Sound Reproducers Ltd.: *See*—
Guest, Lawrence V. 2,950,921.

Bitterli, John A.: *See*—
Frommelt, Horace A., and Aberlin. 2,950,523.
Frommelt, Horace A., and Aberlin. 2,950,524.

Bjering, Olav, to Owens-Illinois Glass Co. Closure cap feeder mechanism. 2,950,842, 8–30–60, Cl. 221—251.

Black-Clawson Co., The: *See*—
Dain, John E., and Phelps. 2,950,875.

Black and Decker Mfg. Co., The: *See*—
Short, Harold O. 2,950,626.

Blackman, Ralph B., to Bell Telephone Laboratories, Inc. Apparatus for the solution of plane triangles. 2,950,863, 8–30–60, Cl. 235—190.

Blackmon, Leland R.: *See*—
Blackmon, Louise R., and Leland E. 2,950,912.

Blackmon, Louise R. and Leland E. Even stretch elastic-stitcher. 2,950,913, 8–30–60, Cl. 269—189.

Blanchard, Andre, to Schlumberger Well Surveying Corp. Well logging method and apparatus. 2,951,196, 8–30–60, Cl. 324—2.

Blank, Frits A., ½ to A. Kip Livingston, and ½ to Longines-Wittnauer Watch Co., Inc. Blinds for light apertures in combined camera and projector apparatus and operating mechanism therefor and for shifting shutter means. 2,950,646, 8–30–60, Cl. 88—17.

Blank, Frits A., and J. W. Oxberry, ½ to A. Kip Livingston, and ½ to Longines-Wittnauer Watch Co., Inc. Driving mechanism for combined moving picture camera and projector apparatus. 2,950,647, 8–30–60, Cl. 88—17.

Blank, Robert E., to The Sherwin-Williams Co. Cleaner for paint applicators. 2,951,043, 8–30–60, Cl. 252—171.

Blixrud, John O., J. C. Johnson, and E. G. Franklin, to General Mills, Inc. Automatic toaster. 2,950,668, 8–30–60, Cl. 99—329.

Blomqvist, Ake H. P., and B. A. E. Qvarnstrom, to Aktiebolaget Bofors. Apparatus for determining the physical output of servo-system. 2,950,616, 8–30–60, Cl. 73—1.

Bobeck, Andrew H., to Bell Telephone Laboratories, Inc. Magnetic core circuit. 2,951,240, 8–30–60, Cl. 340—174.

Bochan, John, to General Electric Co. Laundry machine. 2,950,613, 8–30–60, Cl. 68—12.

Bock Corp.: *See*—
Bock, Oscar L. 2,950,740.

Bock, Oscar L., to Bock Corp. Flue conduits with heat transfer elements therein. 2,950,740, 8–30–60, Cl. 138—38.

Bodine, A. G., d.b.a. Bodine Soundrive Co.: *See*—
Mathewson, Arthur A., Jr. 2,950,901.

Bodine Soundrive Co.: *See*—
Mathewson, Arthur A., Jr. 2,950,901.

Bodkin, Ernest A., and J. I. Savoca, to Socony Mobil Oil Co., Inc. Adsorbent washing process. 2,951,036, 8–30–60, Cl. 208—305.

Boehm, Josef. Transmission device. 2,950,624, 8–30–60, Cl. 74—202.

Boeing Airplane Co.: *See*—
Lemont, Harold E., Jr. 2,950,767.
Smith, Howard W. 2,950,879.

Boettcher, Alfred, and R. Manteufel, to Deutsche Gold-und Silber-Scheideanstalt vormals Roessler. Process and apparatus for the separation of mixtures in the gaseous state. 2,950,778, 8–30–60, Cl. 183—2.

Bohlen, Charles L., to Felix-Van, Inc. Freight handling system. 2,950,690, 8–30–60, Cl. 105—368.

Bohme Fettchemie G.m.b.H.: *See*—
Plapper, Jürgen, Heyden, and Arnold. 2,950,950.

Bollmeier, Emil W., and L. F. Vokaty, to Minnesota Mining and Mfg. Co. Wire-connector. 2,951,109, 8–30–60, Cl. 174—84.

Bolstad, Archibald N., and E. S. Lo., to Minnesota Mining and Mfg. Co. Copolymers of fluorinated dienes. 2,951,063, 8–30–60, Cl. 260—87.5.

Bolster, Calvin M., J. P. Kaenan, and P. O. Pfeiffer, to The General Tire & Rubber Co. Emergency tire. 2,950,751, 8–30–60, Cl. 152—330.

Bomke, Hans A., G. H. Minneriy, and J. W. Mount, to United States of America, Army. Microwave modulation system. 2,951,214, 8–30–60, Cl. 332—51.

Bonine, James M. Powdered insecticide applicator. 2,950,564, 8–30–60, Cl. 43—147.

Boonadc, Oliver W., to The Lapoints Machine Tool Co. Indexing mechanism. 2,950,627, 8–30–60, Cl. 74—396.

Borden, Wesley E. Remote control apparatus for motion picture camera. 2,950,645, 8–30–60, Cl. 88—16.

Borg-Warner Corp.: *See*—
Becker, Sylvan J. 2,950,796.
Holdeman, John W., and Palomski. 2,950,629.
Stevenson, Walter E., and Yanik. 2,950,539.
Zeidler, Reinhold C. 2,950,630.

Bosch, Robert, G.m.b.H.: *See*—
Domann, Helmut. 2,951,195.
Stier, Reinhart. 2,950,610.
Walch, Eugen, and Aldinger. 2,950,681.

Bouet, Bernard M. E., to R. K. Price Associates, Inc. Ampules. 2,950,717, 8–30–60, Cl. 128—218.

Bouligny, R. H., Inc.: *See*—
Wilson, Robert W. 2,950,770.
Bourguet, Jean M., and J. P. Harrison. Method and apparatus for maintaining catalytic material in high activity. 2,951,030, 8–30–60, Cl. 208—65.
Bowan, Walter J., to Mueller Co. Insulated pipe joint. 2,950,928, 8–30–60, Cl. 285—52.
Bradley, William E., to Philco Corp. Multi-beam cathode-ray tube transducer. 2,951,178, 8–30–60, Cl. 315—13.
Brandon, Arthur H. Tubing caliper. 2,950,538, 8–30–60, Cl. 33—178.
Brashear, Roy T., to Phillips Petroleum Co. Differential chopper-amplifier. 2,951,211, 8–30–60, Cl. 332—9.
Breck, Donald W., and N. A. Acara, to Union Carbide Corp. Crystalline zeolite T. 2,950,952, 8–30–60, Cl. 23—113.
Brenneisen, Erich, R. Huss, and A. Siebert, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Disazo-dyestuffs containing metal. 2,951,069, 8–30–60, Cl. 260—147.
Brickman, Alan E. Method of making post-stressed reinforced cement-concrete structures. 2,950,517, 8–30–60, Cl. 25—153.
Bridges, Zaye M. Whirling toy. 2,950,565, 8–30–60, Cl. 46—51.
Brightman, Barrie, to General Dynamics Corp. Electronic switching telephone system channel allotter. 2,951,126, 8–30–60, Cl. 179—18.
Brillhart, William O., L. Gallant, and J. N. Carver, to American Viscose Corp. Cellophane coating having improved wet stretch at low temperatures. 2,950,992, 8–30–60, Cl. 117—144.
Bristol Co., The: *See*—
Hentzi, Joffre R. 2,951,225.
British Petroleum Co. Ltd., The: *See*—
O'Donnell, James, and Duckworth. 2,951,037.
British Tabulating Machine Co. Ltd., The: *See*—
Spencer, Arthur J. 2,951,239.
Broadwell, Robert J., to The Gabriel Co. Damped air valve. 2,950,738, 8–30–60, Cl. 137—627.5.
Brobeck, Herman J. Orthopedic bed. 2,950,715, 8–30–60, Cl. 128—71.
Broussard, Henry P.: *See*—
Langlinais, Vernon L., and Broussard. 2,950,953.
Brown, Cleero C., and C. B. Cochran; said Cochran assor. to said Brown. Multiple string well packers. 2,950,761, 8–30–60, Cl. 166—119.
Brown, Lafayette: *See*—
Brown, Milton S. 2,950,561.
Brown, Milton S., ¼ to T. Brown, and ¼ to L. Brown. Mole trap. 2,950,561, 8–30–60, Cl. 43—81.
Brown, Thurston: *See*—
Brown, Milton S. 2,950,561.
Broyles, Addison K., R. C. Mierendorf, and C. W. Porter, to Square D Co. Time limit circuits. 2,951,197, 8–30–60, Cl. 323—58.
Bruetting, Ludwig, to M. Fuchs. Musical tops. 2,950,641, 8–30–60, Cl. 84—83.
Brune, Herbert. Screw closure with safety ring. 2,950,532, 8–30–60, Cl. 215—7.
Bryant, Austin U., to Walworth Co. Valve construction. 2,950,897, 8–30–60, Cl. 251—172.
Bubb, Frank W., to Phillips Petroleum Co. Computer. 2,950,862, 8–30–60, Cl. 235—180.
Buck, Harry V., to General Dynamics Corp. Printed circuit subassemblies and test fixtures. 2,951,185, 8–30–60, Cl. 317—101.
Buehler, William J., and J. F. Nachman, to United States of America, Navy. Elevated temperature working of metals and alloys. 2,950,526, 8–30–60, Cl. 29—424.
Burch Corp., The: *See*—
Standfuss, Ernest R. 2,950,660.
Burgdorff, Henry. Free-floating street sweeper elevator. 2,950,827, 8–30–60, Cl. 214—17.
Burgess, George C. Lay out instrument. 2,950,535, 8–30–60, Cl. 33—28.
Burndy Corp.: *See*—
Cornell, Edward S., Jr. 2,951,227.
Matthysse, Irving F., and Dilendik. 2,951,110.
Burt, Farlow B., to The Bendix Corp. Multiple windshield wiper control. 2,950,599, 8–30–60, Cl. 60—52.
Busanovich, Charles J., to Radio Corp. of America. Thermoelectric compositions and elements and devices using them. 2,951,105, 8–30–60, Cl. 136—5.
Butler, Frank D. Combined liquid fuel and excess air metering and distributing, combined liquid fuel and excess air atomizing and injecting, internal combustion engine. 2,950,707, 8–30–60, Cl. 123—32.
Butterworth, Greig S., to The Cincinnati Milling Machine Co. Gaging device. 2,950,581, 8–30–60, Cl. 51—103.
Blittiker, Werner, to Gesellschaft der Ludw. von Roll'schen Eisenwerke A.G. Rotary slide valve with inspection stop valve. 2,950,896, 8–30–60, Cl. 251—172.
Cadden, William J., to Bell Telephone Laboratories, Inc. Shift register counter. 2,951,230, 8–30–60, Cl. 340—168.
Cadman, Coin Q. Attachment for golf clubs. 2,950,919, 8–30–60, Cl. 273—171.
Caldwell, Samuel H., to Graphic Arts Research Foundation, Inc. Ideographic type composing machine. 2,950,800, 8–30–60, Cl. 197—1.
California Research Corp.: *See*—
Barusch, Maurice R., and Pinotti. 2,950,960.
Nicolson, Kingsley M. 2,950,929.
Cambridge Thermionic Corp.: *See*—
Abrams, Ralph. 2,951,107.
Cameron, Jack W., to Vitagen Corp. Coffee concentrate process. 2,950,973, 8–30–60, Cl. 99—71.
Camp, James B., to United States Steel Corp. Mechanism and method for classifying and assorting metal sheets. 2,950,640, 8–30–60, Cl. 83—29.
Campbell, William J. Device for testing the abrasion-resistance of surfaces of metallic articles. 2,950,617, 8–30–60, Cl. 73—7.
Carlson, Oscar N., F. A. Schmidt, and F. H. Spedding, to United States of America, Atomic Energy Commission. Reduction of fluoride to metal. 2,950,962, 8–30–60, Cl. 75—84.4.
Carpart Corp.: *See*—
Welch, John F. 2,950,584.
Carpenter Steel Co., The: *See*—
Culp, Neil J. 2,950,968.
Carson, Frank J.: *See*—
Bamford, William P., Carson, and Laine. 2,950,573.
Carter, Howell L., Jr., to Raytheon Co. Decoupling amplifying systems. 2,951,209, 8–30–60, Cl. 330—167.
Carver, James N.: *See*—
Brillhart, William O., Gallant, and Carver. 2,950,992.
Cash, Burton E., to Celanese Corp. of America. Solvent recovery. 2,951,067, 8–30–60, Cl. 260—94.9.
Cedarholm, John P.: *See*—
Amdahl, Lowell D., Havens, Jeenel, Schreiner, Cedarholm, and Eichenberger. 2,951,232.
Celanese Corp. of America: *See*—
Axtell, Oliver H., Jr., and Clarke. 2,951,059.
Cash, Burton E. 2,951,067.
Luke, Oren V., Jr., Robeson, and Taylor. 2,951,095.
Center Master Corp.: *See*—
Wier, Arthur H. 2,950,638.
Chadwick, David H., to Monsanto Chemical Co. Metallo β-chlorethyl vinylphosphonates. 2,951,086, 8–30–60, Cl. 260—429.7.
Champoux, Bernard: *See*—
Bertie, Louis C., Plette, and Champoux. 2,950,754.
Chance, Britton, and D. T. Griggs, to United States of America, Navy. Method of and means for guiding missiles. 2,950,880, 8–30–60, Cl. 244—14.
Chance Vought Aircraft, Inc.: *See*—
Mitrovich, Milenko, and Mumford. 2,950,594.
Chaplin-Fulton Mfg. Co., The: *See*—
Lošnk, Joseph P. 2,950,739.
Chapman, George C., to Owens-Illinois Glass Co. Method and apparatus for forming projections on glass surfaces. 2,950,569, 8–30–60, Cl. 49—7.
Charney, William, to Schering Corp. Process for the manufacture of Δ1,4-steroids. 2,951,016, 8–30–60, Cl. 195—51.
Chemerda, John M., R. F. Hirschmann, and N. G. Steinberg, to Merck & Co., Inc. C^{16} cortical steroids and methods of preparing same. 2,951,074, 8–30–60, Cl. 260—239.55.
Chemetron Corp.: *See*—
Stewart, Robert M., and Sevin. 2,950,998.
Chemway Corp.: *See*—
Koones, Harold F. 2,950,813.
Christensen, Paul M., C. G. Landeck, and M. J. St. John, to Federal Pacific Electric Co. Waterproof enclosure for electrical devices. 2,950,837, 8–30–60, Cl. 220—3.7.
Cicala, Vincent, and P. W. Jackson, Jr., to Vitro Corp. of America. Refueling probe mast. 2,950,884, 8–30–60, Cl. 244—135.
Ciminero, Anthony S.: *See*—
Duncan, Edward J., and Ciminero. 2,950,525.
Cincinnati Milling Machine Co., The: *See*—
Butterworth, Greig S. 2,950,581.
Rave, Joseph A., Jr. 2,951,193.
Render, Elijah F. 2,950,580.
Clapp, Roger W., to Hughes Aircraft Co. Waveguide motional joint. 2,951,217, 8–30–60, Cl. 333—10.
Clark Equipment Co.: *See*—
Ansons, Janis O. 2,950,831.
Hasbany, Woodrow A. 2,950,734.
Clark, Ralph B., and E. W. Spannhake, to LeTourneau-Westinghouse Co. Power train. 2,950,634, 8–30–60, Cl. 74—801.
Clark, Ronald, and D. J. Alexander, to Lever Bros. Co. Three phase dispenser. 2,950,846, 8–30–60, Cl. 222—399.
Clarke, Charles M.: *See*—
Axtell, Oliver H., Jr., and Clarke. 2,951,059.
Clarke, James F., to The Bendix Corp. Apparatus for minimum fuel flow scheduling during deceleration of an engine. 2,950,597, 8–30–60, Cl. 60—39.28.
Clauss, Karl, and C. Beermann, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Tetramethyl titanium and process of preparing same. 2,951,085, 8–30–60, Cl. 260—429.5.
Claussen, Gerard E.: *See*—
Kennedy, Harry E., and Claussen. 2,951,000.
Clegg, John M.: *See*—
Hoch, Paul E., and Clegg. 2,951,098.
Clore, William R.: *See*—
Foster, George B., and Clore. 2,951,161.
Cobaugh, Robert F., to AMP Inc. Electrical connector. 2,951,228, 8–30–60, Cl. 339—115.
Cochran, Chudleigh B.: *See*—
Brown, Cicero C., and Cochran. 2,950,761.
Cochran, Clarence W., to United-Carr Fastener Corp. Fastening device. 2,950,513, 8–30–60, Cl. 24—73.
Collison, John W.: *See*—
Jacke, Stanley E., Newsome, and Collison. 2,950,725.
Colomoi Co., The: *See*—
Anderson, Arvid R. 2,950,907.
Columbia-Southern Chemical Corp.: *See*—
Ellsworth, Arthur C., and Vancamp. 2,951,103.
Commonwealth Scientific and Industrial Research Organization: *See*—
Bell, George A. 2,950,585.
Compagnie de St. Gobain: *See*—
Perraut, Jean M. 2,950,572.
Compagnie General de Telegraphie Sans Fil: *See*—
Mourier, Georges, and Dohler. 2,951,173.
Mourier, Georges, and Dohler. 2,951,174.
Compton, Henry P., to Simplex Corp. Traffic circulator. 2,950,860, 8–30–60, Cl. 232—1.

Compur-Werk Friedrich Deckel OHG: *See*—
Gebele, Kurt. 2,950,666.
Congoleum-Nairn Inc.: *See*—
Deacon, Frederick S., and Wheeler. 2,950,988.
Weaver, John B. 2,950,502.
Connor, James F. Milk can holder. 2,950,843, 8–30–60, Cl. 222—88.
Connors, Edward F., Jr.: *See*—
Woods, George B. 2,950,487.
Conrad, Ivan W. High speed telegraph system. 2,951,119, 8–30–60, Cl. 178—15.
Conrad, Ivan W. High speed telegraph system. 2,951,121, 8–30–60, Cl. 178—25.
Continental Can Co., Inc.: *See*—
Ganz, Robert H. 2,950,854.
Harkenrider, Robert J. 2,950,501.
Cooney, James J. Wheel bearing retaining means. 2,950,944, 8–30–60, Cl. 308—236.
Coover, Harry W., Jr., and N. H. Shearer, Jr., to Eastman Kodak Co. Three-component olefin polymerization catalyst containing an aluminum sesquihalide and a transition metal compound. 2,951,066, 8–30–60, Cl. 260—93.7.
Cope, A. C. Francis. Collapsible clothes drying rack. 2,950,822, 8–30–60, Cl. 211—104.
Copping, Geoffrey P., D. J. Parker, and D. J. Barr, to Her Majesty's Postmaster General. Apparatus for mechanically handling thin flat articles. 2,950,675, 8–30–60, Cl. 101—236.
Corcoran, James P., to Packaging Corp. of America. Carton construction. 2,950,850, 8–30–60, Cl. 229—16.
Cornell, Edward S., Jr., to Burndy Corp. Multitap transformer terminal and insulator securing means. 2,951,227, 8–30–60, Cl. 339—32.
Cornwell, Claude V. Toothpick dispenser. 2,950,841, 8–30–60, Cl. 221—154.
Corsi, George L., to Federal-Mogul-Bower Bearings, Inc. Method for manufacturing shaft seals. 2,950,506, 8–30–60, Cl. 18—59.
Cottrill, Delbert E., and R. W. Kiler. Device for detachably holding fish stringers. 2,950,888, 8–30–60, Cl. 248—41.
Courtel, Robert: *See*—
Hugel, Georges, and Courtel. 2,951,040.
Covely, Frank D., 3rd, and A. C. Stocker, to Radio Corp. of America. Switching system. 2,951,236, 8–30–60, Cl. 340—174.1.
Cowden, Lewis M.: *See*—
Hawley, George P., and Cowden. 2,950,867.
Cowles Chemical Co.: *See*—
Cowles, Edwin, and Shaver. 2,950,570.
Cowles, Edwin, and R. C. Shaver, to Cowles Chemical Co. Method and apparatus for producing alkaline silicates. 2,950,570, 8–30–60, Cl. 49—53.
Crabtree, R. W., & Sons Ltd.: *See*—
Bennett, Thomas R. 2,950,874.
Taylor, Harold M., and Stevenson. 2,950,674.
Craig, David N., and J. P. Schrodt, to United States of America, Navy. Low-temperature dry cell. 2,950,999, 8–30–60, Cl. 136—155.
Crawford, George H., Jr.: *See*—
Lo, Elizabeth S., and Crawford. 2,951,065.
Critchlow, George F., to Bell Telephone Laboratories, Inc. Calibration indicator. 2,951,200, 8–30–60, Cl. 324—57.
Culp, Neil J., to The Carpenter Steel Co. Deep-hardened alloy steel having improved impact strength. 2,950,968, 8–30–60, Cl. 75—125.
Cunnien, James M., to Minneapolis-Honeywell Regulator Co. Pressure repsonsive device. 2,951,132, 8–30–60, Cl. 200—83.
Curtis Automotive Devices, Inc.: *See*—
Frank, Paul A. 2,950,592.
Cutler-Hammer, Inc.: *See*—
Davies, James E., and Otto. 2,951,133.
Feldhausen, Cyril P. 2,951,192.
Cybriwsky, Alexander: *See*—
Mostovych, Nicholas, and Cybriwsky. 2,951,025.
Daco Instrument Co.: *See*—
Bieger, Jacob J., and Hill. 2,950,635.
Dahlgren, Victor F., to Sanders Associates, Inc. Printed circuit component. 2,951,112, 8–30–60, Cl. 174—135.
Dain, John E., and R. W. Phelps, to The Black-Clawson Co. Paper machinery. 2,950,875, 8–30–60, Cl. 242—66.
D'Alello, Gaetano F., to BarDal Inc. Irradiated polymers. 2,951,024, 8–30–60, Cl. 204—158.
Dalton, Harold R. Method of making plated intaglio printing form. 2,951,019, 8–30–60, Cl. 204—17.
Danyluke, Ostap, to Bath Iron Works Corp. Peripheral feed breaker. 2,950,870, 8–30–60, Cl. 241—91.
Darby, Joseph R., to Monsanto Chemical Co. Light stabilizer mixture. 2,951,052, 8–30–60, Cl. 260—23.
Davies, James E., and C. W. Otto, to Cutler-Hammer, Inc. Hermetically sealed electromagnetic contactors and the like. 2,951,133, 8–30–60, Cl. 200—87.
Davis, Augustine, Jr., and J. A. Nichols, to Davisbilt Steel Joist Inc. Metal structural units. 2,950,789, 8–30–60, Cl. 189—34.
Davis, Martin A.: *See*—
Myers, Gordon S., and Davis. 2,951,077.
Davisbilt Steel Joist Inc.: *See*—
Davis, Augustine, Jr., and Nichols. 2,950,789.
Dawkins, Kenneth, to Franklin Mfg. Co. Battery testing. 2,951,199, 8–30–60, Cl. 324—29.5.
Day-Brite Lighting, Inc.: *See*—
Stahlhut, Leo G. 2,951,148.
Deacon, Frederick S., and R. W. Wheeler, Jr., to Congoleum-Nairn Inc. Method of producing printed surface covering and printing enamel therefor. 2,950,988, 8–30–60, Cl. 117—38.
Deanin, Rudolph D., and R. G. Dell, to Allied Chemical Corp. Process for polymerizing vinyl chloride. 2,951,062, 8–30–60, Cl. 260—87.1.
Debo, Arno, to Firma Joh. A. Benckiser G.m.b.H. Chemische Fabrik. Diamino-N,N,N',N'-tetrakis-phosphoric acid derivatives. 2,951,088, 8–30–60, Cl. 260—461.
Deere & Co.: *See*—
French, John L. 2,950,550.
Hendrix, John W. 2,950,737.
Immesoete, Arthur J. 2,950,845.
Silverberg, Bernard M., and Jones. 2,950,938.
De Galliard, Robert, to Societe Anonyme Asservelec. Methods of and devices for magnetically storing information. 2,951,231, 8–30–60, Cl. 340—172.5.
Degener, Richard K., to American Metal Products Co. Demountable rack. 2,950,826, 8–30–60, Cl. 211—148.
Dell, Richard G.: *See*—
Deanin, Rudolph D., and Dell. 2,951,062.
De Mauro, Peter: *See*—
Rosolia, Louis, and De Mauro. 2,950,493.
Dement, Gridley, to Atlas Silk Screen Supply Co. Drying rack and corner foot therefor. 2,950,341, 8–30–60, Cl. 34—238.
De Millar, Floyd O., to Radian Corp. Starting mechanism for an internal combustion engine. 2,950,780, 8–30–60, Cl. 185—41.
Dengel, Ferdinand, to Knoll A.G. Chemische Fabriken. Antispasmodic compounds and compositions comprising basically substituted derivatives of 1-benzyl tetrahydroisoquinoline. 2,951,013, 8–30–60, Cl. 167—65.
Denver Post, Inc., The: *See*—
Holm, Helge. 2,950,945.
Deremer, Floyd E., to Oldberg Mfg. Co. Silencer or muffler. 2,950,777, 8–30–60, Cl. 181—54.
De Stefani, Romolo, to Soc per Az Fabbrica Motocicli e Velo-cipedi EDOARDO BIANCHI. Boat with two spaced hulls. 2,950,701, 8–30–60, Cl. 115—41.
Detrex Chemical Industries, Inc.: *See*—
Jacke, Stanley E., Newsome, and Collison. 2,950,725.
Deutsche Gold-und Silber-Scheideanstalt: *See*—
Wagner, Ernst. 2,950,955.
Deutsche Gold-und Silber-Scheideanstalt vormals Roessler: *See*—
Boettcher, Alfred, and Manteufel. 2,950,778.
Wagner, Ernst, and Diether. 2,951,044.
De Vito, Michael F. Voice activated intercommunication system. 2,951,123, 8–30–60, Cl. 179—1.4.
De Vost, Valmore P., to United States of America, Navy. Discriminating copper-ball decelerometer. 2,950,622, 8–30–60, Cl. 73—492.
Diamond Alkali Co.: *See*—
Neros, Clifford A., and Miller. 2,951,101.
Dickens, Samuel P.: *See*—
McKinley, John K., Smith, and Dickens. 2,950,956.
Dickinson, Wesley E., to International Business Machines Corp. Circuit for alternately energizing two electromagnetic devices. 2,951,186, 8–30–60, Cl. 317—123.
Dickson, Edward J. Floor scrubbing machine. 2,950,494, 8–30–60, Cl. 15—50.
Diebold, Edward J., to I-T-E Circuit Breaker Co. High speed contacting device. 2,951,188, 8–30–60, Cl. 317—156.
Die Casting Machine Tools Ltd.: *See*—
Mills, Aubrey R. 2,950,680.
Diether, Jean: *See*—
Wagner, Ernst, and Diether. 2,951,044.
Dilendik, Fred: *See*—
Matthysse, Irving F., and Dilendik. 2,951,110.
Dingley, Edward N., Jr. Apparatus for detecting malfunctions in telegraph systems. 2,951,120, 8–30–60, Cl. 178—22.
Di Pietro, William O., to National Research Corp. Electrolytic production of titanium. 2,951,021, 8–30–60, Cl. 204—64.
Distillers Co. Ltd., The: *See*—
Speedie, John D., and Hull. 2,951,017.
Dohler, Oscar: *See*—
Mourier, Georges, and Dohler. 2,951,173.
Mourier, Georges, and Dohler. 2,951,174.
Dole Valve Co., The: *See*—
Bauerlein, Carl C., and Reddi. 2,950,684.
Streeter, Victor L. 2,950,735.
Domann, Helmut, to Robert Bosch, G.m.b.H. Electric lighting power generator for vehicles. 2,951,195, 8–30–60, Cl. 322—25.
Donahue, John. Three coordinate orthographic display system. 2,951,244, 8–30–60, Cl. 343—11.
Donnelley, R. R., & Sons Co.: *See*—
Krohn, Gilbert S., Neuhaus, and Ahlgrimm. 2,950,678.
Krohn, Gilbert S., Neuhaus, and Ahlgrimm. 2,950,679.
Doring, Walter F.: *See*—
Anderson, Edward P., and Doring. 2,951,111.
Dossert Mfg. Corp.: *See*—
Gunthel, Alfred B., Jr. 2,950,936.
Dostal, Clara A. and F. Electrically propelled household vacuum cleaner. 2,950,772, 8–30–60, Cl. 180—6.66.
Dostal, Frank: *See*—
Dostal, Clara A. and F. 2,950,772.
Dow Chemical Co., The: *See*—
Hefner, Robert E., and Pruitt. 2,951,094.
Larsen, Eric R., and Ruh. 2,951,102.
Pfeifer, Charles R., and Hudson. 2,951,056.
Dresner, Edgar. Bellows duster. 2,950,563, 8–30–60, Cl. 43—146.
Duckworth, Donald F.: *See*—
O'Donnell, James, and Duckworth. 2,951,037.
Du Kane Corp.: *See*—
Pierson, Arnold A., Smithberg, and Supitilov. 2,951,127.
Duling, Irl N.: *See*—
Tench, John D., Ferris, and Duling. 2,951,028.

Duncan, Edward J., and A. S. Cimiszro. Tube puller. 2,950,525, 8–30–60, Cl. 29—252.

Dunmire, Paul G., to Smith-Blair, Inc. Pipe coupling having fluid responsive sealing means. 2,950,930, 8–30–60, Cl. 285—110.

Dunn, Harold S. Support for flexible awning covers. 2,950,727, 8–30–60, Cl. 135—5.

Du Pont de Nemours, E. I., and Co.: *See*—
Billica, Harry R. 2,951,060.
Howard, Edward G., Jr. 2,950,987.
Lantos, Peter R. 2,951,047.
Lindstrom, Gustaf T. 2,950,518.
Ward, Wallace. 2,950,957.

Duval d'Adrian, Vincent L., to Flex-O-Lite Mfg. Corp. Starch treated free flowing glass beads. 2,950,966, 8–30–60, Cl. 117—33.

Earle, Francis, Laboratories, Inc.: *See*—
Miller, Harold A., and Greenstein. 2,950,981.

Eastern Rotorcraft Corp.: *See*—
Huber, John R. 2,950,691.
Huber, John R. 2,950,760.

Eastman Kodak Co.: *See*—
Coover, Harry W., Jr., and Shearer. 2,951,066.
Schwan, Judith A., and Spath. 2,950,970.

Eaton Mfg. Co.: *See*—
Oldberg, Sidney. 2,950,736.

Eberly, Harry C.: *See*—
Nolt, Edwin B., Eberly, and McDuffie. 2,950,670.

Edgar, William L., to H. H. Robertson Co. Cellular steel floor. 2,950,788, 8–30–60, Cl. 189—34.

Eichenberger, Norman F.: *See*—
Amdahl, Lowell D., Havens, Jesnel, Schreiner, Cedarholm, and Eichenberger. 2,951,232.

Ekco-Alcon Containers, Inc.: *See*—
O'Brien, Robert J., and Vold. 2,950,590.

Eldorado Tool & Mfg. Corp.: *See*—
Oppenheimer, Edgar D. 2,950,636.

Electric Machinery Mfg. Co.: *See*—
Swanson, Edwin W. 2,951,166.

Electric & Musical Industries Ltd.: *See*—
Spencer, Rolf E. 2,950,864.

Electric Storage Battery Co., The: *See*—
Ruetschi, Paul. 2,951,106.

Ellsworth, Arthur C., and R. M. Vanecamp, to Columbia-Southern Chemical Corp. Perchloroethylene production. 2,951,103, 8–30–60, Cl. 260—654.

Elswood, Arthur C. Ash trays. 2,950,723, 8–30–60, Cl. 131—256.

Embart Mfg. Co.: *See*—
Wythe, Frederick J. 2,950,571.

Engelhard Industries, Inc.: *See*—
Anderson, Edward P., and Doring. 2,951,111.

Engelhardt, Edward L.: *See*—
Sprague, James M., and Engelhardt. 2,951,082.

Engelmann, Herbert F.: *See*—
Grieg, Donald D., Engelmann, and Kostrisa. 2,951,149.

Engleson, Sixten, ¼ to AB Flygts Pumpar. Sealing device. 2,950,931, 8–30–60, Cl. 286—8.

Englund, Gosta R., and M. E. Mattsson. Cash registers, accounting and like machines. 2,950,758, 8–30–60, Cl. 164—111.

Epeco, Inc.: *See*—
Gordon, Bernard M. 2,951,202.

Epstein, Henry D., to Texas Instruments Inc. Thermostatic switch. 2,951,137, 8–30–60, Cl. 200—113.

Ertesuek, Olga. Elastic foundation garment. 2,950,718, 8–30–60, Cl. 128—542.

Esso Research and Engineering Co.: *See*—
Agius, Peter J. V. J., and Morris. 2,951,050.
Gamble, Leon W., Langer, and Neal. 2,951,045.
Hartsband, Harry M., Tarmy, and Long. 2,951,022.
Johnston, Robert H., and Nirmaier. 2,951,029.
Wiese, Herbert K., Nelson, and Morrell. 2,951,057.

Enveldt, Cornelis J., H. van der Heide, and H. P. J. Wijn, to North American Philips Co., Inc. Method of manufacturing ferromagnetic bodies and products thereof. 2,951,042, 8–30–60, Cl. 252—62.5.

Evans, Donald W.: *See*—
Spielberg, Arnold M., and Evans. 2,951,234.

Evans, Franklin J. Lock means for automobile door lock buttons. 2,950,614, 8–30–60, Cl. 70—181.

Evans, Howard J., to General Electric Co. Electron shield for post acceleration cathode ray tube. 2,951,179, 8–30–60, Cl. 315—15.

Excello Paper Products Co., The: *See*—
Shiels, Robert A. 2,950,820.

Eyb, Wolfgang, to Firma Dr. Ing. h.c.F. Porsche K.G. Individual wheel suspension for driven half-axles. 2,950,774, 8–30–60, Cl. 180—73.

Fahland, Frank. Attaching head for a supporting cross bar. 2,950,935, 8–30–60, Cl. 287—58.

Falk Corp., The: *See*—
Bade, Alfred G. 2,950,628.

Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Brennelsen, Erich, Huse, and Siebert. 2,951,060.
Clauss, Karl, and Beermann. 2,951,085.
Moeller, August. 2,950,818.
Schlack, Paul. 2,950,949.

Faria, Sixdeniel, and P. Goldberg, to Sylvania Electric Products Inc. Electroluminescent lamp. 2,951,169, 8–30–60, Cl. 313—108.

Farnsworth, Philo T., to International Telephone and Telegraph Corp. Color television receiver. 2,951,113, 8–30–60, Cl. 178—5.4.

Farrow, Curl V. Pressing-iron holder. 2,950,889, 8–30–60, Cl. 248—117.4.

Federal-Mogul-Bower Bearings, Inc.: *See*—
Corsi, George L. 2,950,506.

Federal Pacific Electric Co.: *See*—
Christensen, Paul M., Landeck, and St. John. 2,950,837.

Feichtinger, Heinrich, to Balzers Patent-und -Lizenz Anstalt. Gas conveying devices. 2,950,856, 8–30–60, Cl. 230—55.

Feinstein, Joseph, to Bell Telephone Laboratories, Inc. Magnetron. 2,951,162, 8–30–60, Cl. 315—39.53.

Feinstone, Wolfe H. Silicone composition for the relief of gastro-intestinal distress and method of using same. 2,951,011, 8–30–60, Cl. 167—55.

Feldhausen, Cyril P., to Cutler-Hammer, Inc. Electric motor controllers. 2,951,192, 8–30–60, Cl. 318—203.

Fenwal Laboratories, Inc.: *See*—
Bellamy, David, Jr., and Walter. 2,950,716.

Ferguson, Eli K., Jr., and B. A. Kronmiller. Pipe sealing device. 2,950,702, 8–30–60, Cl. 118—408.

Ferris, Seymour W.: *See*—
Tench, John D., Ferris, and Duling. 2,951,028.

Filitti, Anthony J.: *See*—
Filitti, Anthony J., and Gilchrist. 2,950,693.

Filitti, Anthony J., and J. Gilchrist: said Gilchrist assor. to said Filitti, trading as Delco Quality Foods. Apparatus for forming dough products. 2,950,693, 8–30–60, Cl. 107—4.

Firma Mitteldeutsche Emaillierwerke M. Fratschar & Co.: *See*—
Lewerth, Elisabeth, geb. Franz. 2,950,840.

Firth, Bernard G., to Tung-Sol Electric Inc. Method for preparing cold cathodes and resulting article. 2,950,904, 8–30–60, Cl. 117—222.

Fischer, Donald H.: *See*—
Rainsberger, Paul J., and Fischer. 2,950,908.

Fischer, Hermann, to I-T-E Circuit Breaker Co. Electromagnetic clutch with friction and form locking members. 2,950,795, 8–30–60, Cl. 192—53.

Fisher, Charles R., Jr., R. A. Harris, and D. H. Webster, to General Dynamics Corp. Serial-to-parallel binary code converter device. 2,951,242, 8–30–60, Cl. 340—174.

Fixen, Martin O. Toy for making pictures and designs. 2,950,537, 8–30–60, Cl. 33—174.

Flagler, Harold G., deceased, J. Flagler, executrix. Sheet material forming apparatus. 2,950,697, 8–30–60, Cl. 113—54.

Flagler, Juanita: *See*—
Flagler, Harold G. 2,950,697.

Fleissner, Gerold, to Fleissner & Sohn Maschinenfabrik. Willow driers. 2,950,540, 8–30–60, Cl. 34—115.

Fleissner & Sohn Maschinenfabrik: *See*—
Fleissner, Gerold. 2,950,540.

Fletcher, Harold K., W. Seamone, and M. P. Wolpin, to Bell Aerospace Corp. Manual and automatic hydraulic servomechanism. 2,950,703, 8–30–60, Cl. 121—41.

Flexi-Van, Inc.: *See*—
Bohlen, Charles I. 2,950,690.

Flex-O-Lite Mfg. Corp.: *See*—
Duval d'Adrian, Vincent L. 2,950,985.

Folta, Andrew, to Precision Paper Tube Co. Method for making bobbins. 2,950,527, 8–30–60, Cl. 29—458.

Foos, Raymond A., to National Distillers and Chemical Corp. Recovery of tantalum values. 2,950,966, 8–30–60, Cl. 75—121.

Ford, William E.: *See*—
Larios, Daniel. 2,950,556.

Forney Generators, Inc.: *See*—
Forney, James D. 2,950,923.

Forney, James D., to Forney Generators, Inc. Sled. 2,950,923, 8–30–60, Cl. 280—12.

Forrest, Frank R., to Allis-Chalmers Mfg. Co. Lubrication device for antifriction bearings. 2,950,943, 8–30–60, Cl. 308—187.

Forward, Frank A., H. Veltman, and A. I. Vissolyi, to Sherritt Gordon Mines Ltd. Process for the production of lead. 2,950,964, 8–30–60, Cl. 75—103.

Foster, Alan: *See*—
Timms, Ross L. 2,950,799.
Timms, Ross L. 2,951,164.

Foster, Allan D., to Almor Corp. Price tag molding. 2,950,554, 8–30–60, Cl. 40—16.

Foster, George B., and W. R. Clore, to Industrial Nucleonics Corp. Cascade standardization. 2,951,161, 8–30–60, Cl. 250—83.3.

Foster, John J., Mfg. Co.: *See*—
Anspach, Roy L. 2,951,145.

Fouquet, Eugene. Grinding machine with tool dressing means. 2,950,578, 8–30–60, Cl. 51—95.

Fowler, Harlan D. Slip stream deflector for convertible aircraft. 2,950,878, 8–30–60, Cl. 244—12.

Fox, Donald L. Electric shaver with vacuum collector. 2,950,530, 8–30–60, Cl. 30—41.5.

Fox, Ervin P. Automatic machine for cutting hypodermic needles from steel tubes. 2,950,579, 8–30–60, Cl. 51—98.

Frank, Jacob. Method of molding a plastic article having a cellular body and a protective skin. 2,950,505, 8–30–60, Cl. 18—59.

Frank, Paul A., to Curtis Automotive Devices, Inc. Resonant pulse jet engine having an engine valve antechamber. 2,950,592, 8–30–60, Cl. 60—35.6.

Franklin, Edmond G.: *See*—
Blixrud, John O., Johnson, and Franklin. 2,950,668.

Franklin Mfg. Co.: *See*—
Dawkins, Kenneth. 2,951,199.

Frecourt, Albert H., to Louis S. Poursin. Safety device for apparatus using fuel gases. 2,950,705, 8–30–60, Cl. 158—126.

Fredendall, Gordon L., to Radio Corp. of America. Variable delay line. 2,951,206, 8–30–60, Cl. 328—177.

Freeman, Eben W., to S. D. Warren Co. Method of producing drum-finished coated paper. 2,950,989, 8–30–60, Cl. 117—64.

French, John L., to Deere & Co. Bulldozer. 2,950,550, 8–30–60, Cl. 37—144.

Friedman, Jerome D. Semi-automatic code sender. 2,951,122, 8–30–60, Cl. 178—84.

Fries, John H., Jr., to General Electric Co. Water heating and cooling system. 2,950,607, 8–30–60, Cl. 62—324.

Frog, Switch & Mfg. Co., The: *See*—
Smith, Forrest H. 2,950,871.

Frommelt, Horace A.: *See*—
Frommelt, Horace A., and Aberlin. 2,950,533.

Frommelt, Horace A., and F. Aberlin, to John A. Bitterli, W. G. Hessler, and H. A. Frommelt, trustees. Means for mounting cutter bits or blades. 2,950,534, 8–30–60, Cl. 29—96.

Frommelt, Horace A., and F. Aberlin, to John A. Bitterli, W. G. Hessler, and H. A. Frommelt, trustees. Cutting tool and method of making. 2,950,536, 8–30–60, Cl. 29—96.

Fuchs, Martin: *See*—
Bruetting, Ludwig. 2,950,641.

Fuerst, Carl: *See*—
Gleitsman, Harold, and Fuerst. 2,950,753.

Gabriel Co., The: *See*—
Broadwell, Robert J. 2,950,723.
Patriquin, William O. 2,950,765.

Gallant, LeRoy: *See*—
Brillhart, William O., Gallant, and Carver. 2,950,902.

Gambill, Wallace R., and N. D. Greene, to United States of America, Atomic Energy Commission. Heat transfer method. 2,950,604, 8–30–60, Cl. 62—6.

Gamble, Leon W., A. W. Langer, Jr., and A. H. Neal, to Esso Research and Engineering Co. Preparing of titanium chloride polymerisation catalyst. 2,951,045, 8–30–60, Cl. 252—429.

Gantz, Emmett J. Removable runners for vehicles. 2,950,924, 8–30–60, Cl. 280—14.

Gass, Robert H., to Continental Can Co., Inc. Carton. 2,950,854, 8–30–60, Cl. 229—40.

Gardner, John M.: *See*—
Harrop, Raymond N., and Gardner. 2,950,943.

Garman, Harold G., to The Upjohn Co. Process for a stable oil suspension. 2,951,014, 8–30–60, Cl. 167—82.

Garrett Corp., The: *See*—
Rae, Randolph S. 2,950,593.

Gausman, Alfred P., to Hayssen Mfg. Co. Automatic packaging machines. 2,950,585, 8–30–60, Cl. 53—51.

Gaver, Kenneth M.: *See*—
Ujejski, Ludwik, and Gaver. 2,951,090.

Gayring, Wallace F. Control for folding machine. 2,950,845, 8–30–60, Cl. 223—37.

Gebels, Kurt, to Compur-Werk Friedrich Deckel OHG. Coupling mechanism for exposure setting members of cameras. 2,950,666, 8–30–60, Cl. 95—64.

Gelfand, Samuel, to Hooker Chemical Corp. Halocarbon having the empirical formula $C_6Cl_4F_8$. 2,951,097, 8–30–60, Cl. 260—648.

General Aniline & Film Corp.: *See*—
Mueller, Fritz W. H., and Larson, Jr. 2,950,972.

General Binding Corp.: *See*—
Lyon, John W. 2,950,719.

General Dispersions, Inc.: *See*—
Hess, Paul S. 2,951,054.

General Dynamics Corp.: *See*—
Brightman, Barrie. 2,951,126.
Buck, Harry V. 2,951,185.
Fisher, Charles R., Jr., Harris, and Webster. 2,951,242.
Morris, Frank A. 2,950,901.

General Electric Co.: *See*—
Abbott, Roy W. 2,950,606.
Bochan, John. 2,950,613.
Evans, Howard J. 2,951,179.
Fries, John H., Jr. 2,950,607.
Good, William E. 2,951,114.
Henshaw, Wallace H., Jr. 2,950,612.
Rose, Stanley E., and Heimo. 2,950,667.
Smith, Robert M. 2,950,497.

General Precision, Inc.: *See*—
Schmid, Hermann. 2,951,212.

General Metals Corp.: *See*—
Towne, Claude M. 2,950,746.

General Mills, Inc.: *See*—
Blixrud, John O., Johnson, and Franklin. 2,950,668.
Schwoebel, Richard L. 2,950,861.
Yost, Paul E. 2,950,882.

General Tire & Rubber Co., The: *See*—
Bolster, Calvin M., Kaenan, and Pfeiffer. 2,950,751.

Georgia Kaolin Co.: *See*—
Rowland, Ben W. 2,950,963.

Georgia Tech Research Institute: *See*—
Rhodes, Joseph E., Jr. 2,950,646.

Gerberich, Donald E., to Stephens-Adamson Mfg. Co. Material handling apparatus. 2,950,806, 8–30–60, Cl. 198—128.

Gesellschaft der Ludw. von Roll'schen Eisenwerke A.G.: *See*—
Büttiker, Werner. 2,950,896.

Getas, James L., to United States Trust Co. Circular knit hosiery and method of closing the foot of same. 2,950,611, 8–30–60, Cl. 66—186.

Gewiss, Lucien V., to Wood, Marc, Societe Anonyme pour la Promotion des Echanges Techniques Internationaux. Arrangement for the mechanical and continuous production of developable herring-bone structures. 2,950,656, 8–30–60, Cl. 92—1.

Giannini Controls Corp.: *See*—
Rainsberger, Paul J., and Fischer. 2,950,908.

Gilbert, Everett E., and P. Lombardo, to Allied Chemical Corp. Production of mucochloric anhydride. 2,951,083, 8–30–60, Cl. 260—343.6.

Gilbert, James M.: *See*—
Rummery, Frank G., Roseman, and Gilbert. 2,950,984.

Gilbert, James M., to Silvray Lighting, Inc. Ceiling illuminating system. 2,951,147, 8–30–60, Cl. 240—9.

Gilbert, Walter J., to Syntron Co. Strut bearing seal. 2,950,932, 8–30–60, Cl. 286—8.

Gilchrist, John: *See*—
Filitti, Anthony J., and Gilchrist. 2,950,693.

Gilstrap, Doc L. Expansion comb or hook reed for slashers and beamers. 2,950,519, 8–30–60, Cl. 28—55.

Ginsberg, Helen P., and D. Papa, to Schering Corp. Alkyl ethers of polyiodophenyl propionic acids. 2,951,089, 8–30–60, Cl. 260—519.

Gisvold, Ole. Poison ivy remedy. 2,951,012, 8–30–60, Cl. 167—58.

Gittens, Victor S., to Philco Corp. Socket and support means for mounting electrical devices. 2,951,226, 8–30–60, Cl. 339—17.

Gleitsman, Harold, and C. Fuerst, to Gleitsman's, Inc. Ottomans. 2,950,753, 8–30–60, Cl. 155—169.

Gleitsman's, Inc.: *See*—
Gleitsman, Harold, and Fuerst. 2,950,753.

Glidden Co., The: *See*—
Rummery, Frank G., Roseman, and Gilbert. 2,950,984.

Globe Lighting Products, Inc.: *See*—
Rosella, Louis, and De Mauro. 2,950,493.

Goldberg, Paul: *See*—
Faria, Sixdeniel, and Goldberg. 2,951,169.

Golding, William F. Sheet feeding apparatus. 2,950,914, 8–30–60, Cl. 271—45.

Golding, William F. Sheet feed and registration apparatus. 2,950,915, 8–30–60, Cl. 271—50.

Goldstein, Edward, to Bell Telephone Laboratories, Inc. Error-detecting and correcting system. 2,951,229, 8–30–60, Cl. 340—147.

Golick, Alexander J. Valve lifters. 2,950,708, 8–30–60, Cl. 123—90.

Gomory, Paul L., to Phillips Petroleum Co. Process and apparatus for contacting materials. 2,951,061, 8–30–60, Cl. 260—83.7.

Good, William E., to General Electric Co. Carrier wave transmission system and method of operation thereof. 2,951,114, 8–30–60, Cl. 178—5.4.

Goodell, Everett M., to The Ramo-Wooldridge Corp. Terrain obstacle detector. 2,951,248, 8–30–60, Cl. 343—118.

Goodloe, Alfred M., to Metal Textile Corp. Flexible coupling. 2,950,609, 8–30–60, Cl. 64—15.

Goodrich, B. F., Co., The: *See*—
Sabo, Stephen C. 2,950,488.

Goodrich, John W., to Le Tourneau-Westinghouse Co. Steering mechanism. 2,950,638, 8–30–60, Cl. 74—720.5.

Gordon, Bernard M., to Epeco, Inc. Frequency meter apparatus. 2,951,202, 8–30–60, Cl. 324—79.

Gothe, Walter C., and J. O. Hinkle, to Western Electric Co., Inc. Solder applying unit. 2,951,146, 8–30–60, Cl. 219—85.

Graham, Alexander B., to The International Nickel Co., Inc. Manufacture of turbine rotors. 2,950,817, 8–30–60, Cl. 207—17.

Graham, John W., and J. K. Kerver. Toy for use with kites. 2,950,886, 8–30–60, Cl. 244—155.

Graphic Arts Research Foundation, Inc.: *See*—
Caldwell, Samuel H. 2,950,800.
Higonnet, Rene A., and Moyroud. 2,950,662.

Green, Armin H.: *See*—
Schlage, Ernest L., and Green. 2,950,615.

Greenberg, Harry: *See*—
Pritchett, Ervin G., and Greenberg. 2,951,068.

Greene, Norman D.: *See*—
Gambill, Wallace R., and Greene. 2,950,604.

Greenstein, Leon M.: *See*—
Miller, Harold A., and Greenstein. 2,950,981.

Greenwood Engineering Co., Inc.: *See*—
Staley, William C. 2,950,677.

Greutman, Weldon W.: *See*—
Studebaker, Isaac R., and Greutman. 2,951,180.

Grey, David S.: *See*—
Land, Edwin H., and Grey. 2,950,644.

Grieg, Donald D., H. F. Engelmann, and J. A. Kostrisa, to International Telephone and Telegraph Corp. Microwave radio receiver. 2,951,149, 8–30–60, Cl. 250—20.

Griffiths, William C., Jr., and I. E. Smith, to Radio Corp. of America. High power, high frequency electron tube. 2,951,172, 8–30–60, Cl. 313—247.

Griggs, David T.: *See*—
Chance, Britton, and Griggs. 2,950,880.

Groen, Fred H., Jr., to Groen Mfg. Co. Jacketed kettle mounting assembly. 2,950,904, 8–30–60, Cl. 257—1.

Groen Mfg. Co.: *See*—
Groen, Fred H., Jr. 2,950,904.

Grummit, Oliver J.: *See*—
Berthold, Alfred, and Grummitt. 2,950,982.

Grundmann, Christoph J.: *See*—
Schroeder, Hansjuergen A., and Grundmann. 2,951,079.

Guest, Lawrence V., to Birmingham Sound Reproducers Ltd. Sound reproducing apparatus. 2,950,921, 8–30–60, Cl. 274—10.

Gunthel, Alfred B., Jr., to Dossert Mfg. Corp. Multiple cable connector. 2,950,936, 8–30–60, Cl. 287—75.

Guaman, Samuel, and A. W. Rytina, to Rohm & Haas Co. Thermosetting coating compositions. 2,951,048, 8–30–60, Cl. 260—21.

Gustin-Bacon Mfg. Co.: *See*—
Stephens, Joseph F. 2,950,776.
Stephens, Joseph F. 2,951,003.

Haas, Chas., Co., The: *See*—
Haas, Charles R., Jr. 2,950,790.

Haas, Charles R., Jr., to The Chas. Haas Co. Window and method of assembling. 2,950,790, 8–30–60, Cl. 189—77.

Haase, Elmer A., and A. P. Schnaible, to The Bendix Corp. Fuel feed and power control systems for gas turbine engines. 2,950,596, 8–30–60, Cl. 60—39.28.

Hadfield, Walter, Sr.: *See*—
Wheat, Vernon D., and Hadfield. 2,950,521.

Hage, Albert. Bicycle fender bracket. 2,950,891, 8–30–60, Cl. 248—226.

Hagopian, Jacob J., to International Business Machines Corp. Printing directory. 2,950,672, 8–30–60, Cl. 101—93.

Hahn, Edgar A., to Lyon Inc. Chromium plated baking pans. 2,950,839, 8–30–60, Cl. 220—64.

Haimes, Simon L.: *See*—
Weissman, Samuel M., and L. H., and Haimes. 2,950,676.

Haine, Michael E., and T. Mulvey, to Metropolitan-Vickers Electrical Co. Ltd. X-ray apparatus. 2,951,157, 8–30–60, Cl. 250—52.

Hainy, Charles E., to Baso Inc. Control device. 2,951,189, 8–30–60, Cl. 317—156.

Halacsy, Andrew A. Method of applying insulating coating. 2,950,997, 8–30–60, Cl. 117—232.

Hall, William J., to W. Steel & Co. Ltd. Folding beds. 2,950,485, 8–30–60, Cl. 5—4.

Halpern, Otto, and M. H. Johnson, to United States of America, Navy. Absorbent for electromagnetic waves. 2,951,240, 8–30–60, Cl. 343—18.

Halpern, Otto, M. H. Johnson, Jr., and R. W. Wright, to United States of America, Navy. Isotropic absorbing layers. 2,951,247, 8–30–60, Cl. 343—18.

Hammond, S. Duane: *See*—
Mahler, Benjamin B., and Hammond. 2,951,194.

Hampton, Edward L.: *See*—
McLarney, Frank R., and Hampton. 2,950,893.

Hansley, Virgil L.: *See*—
Schott, Stuart, and Hansley. 2,950,963.

Hardigan, Blanche, and D. Stern. Inclined staircase elevator. 2,950,948, 8–30–60, Cl. 187—12.

Harkenrider, Robert J., to Continental Can Co., Inc. Method and apparatus for injection molding. 2,950,501, 8–30–60, Cl. 18—30.

Harmon, Shepard L., and J. Hohl, to Owens-Illinois Glass Co. Method of and apparatus for closing glass containers. 2,950,587, 8–30–60, Cl. 53—22.

Harper-Wyman Co.: *See*—
Lamar, Charles C. 2,950,865.

Harris, Ben A.: *See*—
Fisher, Charles R., Jr., Harris, and Webster. 2,951,242.

Harris-Intertype Corp.: *See*—
Staines, Alfred J. 2,950,913.

Harrison, Jonas P.: *See*—
Bourguet, Jean M., and Harrison. 2,951,030.

Harrop, Raymond N., and J. M. Gardner, to D. Napier & Son Ltd. Thrust bearings, face seals or the like. 2,950,942, 8–30–60, Cl. 308—160.

Hartz, Harry J., to Minneapolis-Honeywell Regulator Co. Controller. 2,950,729, 8–30–60, Cl. 137—85.

Hartsband, Harry M., B. L. Tarmy, and B. B. Long, to Esso Research and Engineering Co. Preparing lubricating oils using radiation. 2,951,022, 8–30–60, Cl. 204—154.

Harvey, Earle M., to United States of America, Army. Bolt assembly for a firearm. 2,950,653, 8–30–60, Cl. 89—185.

Hasbany, Woodrow A., to Clark Equipment Co. Regulating valve. 2,950,734, 8–30–60, Cl. 137—495.

Hatfield, John E., to Irving Air Chute Co., Inc. Parachute pack release and opening mechanism. 2,950,885, 8–30–60, Cl. 244—141.

Hauser, Ernst A., deceased (The Merchants National Bank of Boston, executor), and R. C. Kollman, to National Lead Co. Clay complexes with conjugated unsaturated aliphatic compounds of four to five carbon atoms. 2,951,087, 8–30–60, Cl. 260—448.

Havens, Byron L.: *See*—
Amdahl, Lowell D., Havens, Jeenel, Schreiner, Cedarholm, and Eichenberger. 2,951,232.

Hawk, Dale W.: *See*—
Rockwell, Harvey W., and Hawk. 2,950,926.

Hawley, George P., and L. M. Cowden, to Union Carbide Corp. Pulse powder feed for detonation waves. 2,950,867, 8–30–60, Cl. 239—13.

Hayes Aircraft Corp.: *See*—
McLoughlin, William G. 2,950,876.

Hayssen Mfg. Co.: *See*—
Gausman, Alfred P. 2,950,588.

Haseltine Research, Inc.: *See*—
Baum, Peter A. 2,951,153.

Heavy Industrial Ceramic Corp.: *See*—
Bennett, Rexford P. 2,950,877.

Hebert, Harold C., to American Can Co. Apparatus for interlocking flanges of containers arranged for transfer to a stack. 2,950,800, 8–30–60, Cl. 198—35.

Hecht, Herbert, and H. C. Thomson, to Sperry Rand Corp. Modulator circuit. 2,951,213, 8–30–60, Cl. 332—40.

Heckman, Edward A., S. Kuba, and R. C. Shafer, to Western Electric Co., Inc. Article forming apparatus. 2,951,144, 8–30–60, Cl. 219—79.

Hefner, Robert E., and M. E. Pruitt, to The Dow Chemical Co. Triethers of glycerol. 2,951,094, 8–30–60, Cl. 260—615.

Heimlicher, Paul, and F. Meierhofer, to Maschinenfabrik Winkler, Fallert & Co. A.G. Article conveying and transferring means. 2,950,805, 8–30–60, Cl. 198—25.

Heimo, Elmer E.: *See*—
Rose, Stanley E., and Heimo. 2,950,667.

Heintzelman, Leo A. Drain valve for compressed air reservoir. 2,950,731, 8–30–60, Cl. 137—183.

Heilwig, August. Method and apparatus for angular measurement of pipe bends. 2,950,536, 8–30–60, Cl. 33—86.

Heilwig, August. Raceway network. 2,950,675, 8–30–60, Cl. 50—127.

Hendrickson, Charles C. Disc harrow. 2,950,927, 8–30–60, Cl. 280—462.

Hendrix, John W., to Deere & Co. Fertilizer distributor. 2,950,737, 8–30–60, Cl. 137—625.48.

Hennion, Joseph B., to Tyler Refrigeration Corp. Refrigerated mechandising unit. 2,950,605, 8–30–60, Cl. 62—250.

Henry, Admiral D. Soil treating machine. 2,950,566, 8–30–60, Cl. 47—1.

Henshaw, Wallace H., Jr., to General Electric Co. Control system for automatic washing machines. 2,950,612, 8–30–60, Cl. 68—12.

Hentzi, Joffre R., to The Bristol Co. Mechanical-electrical transducer. 2,951,225, 8–30–60, Cl. 338—41.

Herlihy, William F., to Lowell Counter Co. Shoe wherein the lasting margin of the upper is lasted in rearwardly of the heel breast line, and turned outwardly forwardly of said line and which has an insole which is connected to other parts of the shoe only by the upper lining. 2,950,545, 8–30–60, Cl. 36—16.

Herman Pneumatic Machine Co.: *See*—
Johnston, Loyal L. 2,950,511.

Hertel, Kenneth L., to University of Tennessee Research Corp. Instrument damping devices. 2,950,784, 8–30–60, Cl. 188—85.

Hervey, Laurence R. B., to John A. Manning Paper Co., Inc. Anti-oxidant and compositions containing the same. 2,950,975, 8–30–60, Cl. 96—163.

Hervey, Laurence R. B., to American Viscose Corp. Method of forming a stretchable fabric. 2,951,005, 8–30–60, Cl. 154—123.

Herzog, Gerald B., to Radio Corp. of America. Semiconductor devices. 2,951,191, 8–30–60, Cl. 317—235.

Hess, Paul S., to General Dispersions, Inc. Method of making aqueous dispersions of nylon. 2,951,054, 8–30–60, Cl. 260—29.2.

Hessler, William G.: *See*—
Frommelt, Horace A., and Aberlin. 2,950,524.
Frommelt, Horace A., and Aberlin. 2,950,523.

Heth, Edwin M.: *See*—
Prentice, David V., and Heth. 2,950,745.

Hettinger, William P., Jr.: *See*—
Lorenz, Walter F., Keith, and Hettinger. 2,951,035.

Heyden Newport Chemical Corp.: *See*—
Leitner, George J. 2,951,008.

Heyden, Rudi: *See*—
Plapper, Jürgen, Heyden, and Arnold. 2,950,950.

Heyl, Russell G., Jr., to American Metal Products Co. Support for spring end. 2,950,486, 8–30–60, Cl. 5—260.

Hibbs, Theodore W. Stock feeder for machine tools. 2,950,522, 8–30–60 Cl. 29—93.

Hidding, Walter E. Parachute carrier toy. 2,950,887, 8–30–60, Cl. 244—155.

Higonnet, Rene A., and L. M. Moyroud, to Graphic Arts Research Foundation, Inc. Photocomposing apparatus. 2,950,662, 8–30–60, Cl. 95—4.5.

Hilkemeier, Louis, to Worthington Corp. Concrete mixer. 2,950,906, 8–30–60, Cl. 259—161.

Hill, Arthur T.: *See*—
Bieger, Jacob J., and Hill. 2,950,635.

Hiller Aircraft Corp.: *See*—
Bennett, Edward L. 2,950,763.
Wagner, Robert A. 2,950,768.

Hillman, Swan. Automatic packaging machine. 2,950,894, 8–30–60, Cl. 249—2.

Hinkle, James O.: *See*—
Gothe, Walter C., and Hinkle. 2,951,146.

Hirsch, Arthur. Adhesive compositions. 2,950,980, 8–30–60, Cl. 106—125.

Hirschmann, Ralph F.: *See*—
Chemerda, John M., Hirschmann, and Steinberg. 2,951,074.

Hoch, Paul E., and J. M. Clegg; said Hoch assor. to Hooker Chemical Corp. Adduct of hexachlorocyclopentadiene with 1,4-dichlorobutyne-2. 2,951,098, 8–30–60, Cl. 260—648.

Hoch, Paul E., to Hooker Chemical Corp. 1,4,5,6,7,7-hexachloro-2,3-bis(bromomethyl)-bicyclo (2.2.1)-heptadiene-2,5''. 2,951,099, 8–30–60, Cl. 260—648.

Hoekstra, James, and E. Michalko, to Universal Oil Products Co. Recovery of platinum from deactivated catalytic composites. 2,950,965, 8–30–60, Cl. 75—121.

Hoffman Electronics Corp.: *See*—
Shaffer, Marlin R., and Weisbrich. 2,951,163.

Hohl, John: *See*—
Harmon, Shepard L., and Hohl. 2,950,587.

Holdeman, John W., and J. B. Polomski, to Borg-Warner Corp. Transmission controls. 2,950,629, 8–30–60, Cl. 74—472.

Hollingshead, R. M., Corp.: *See*—
Hollingshead, Wickliffe S. 2,950,844.

Hollingshead, Wickliffe S., to R. M. Hollingshead Corp. Stackable containers. 2,950,844, 8–30–60, Cl. 222—143.

Hollister, John C., Sr. Shoe holder. 2,950,496, 8–30–60, Cl. 15—267.

Holm, Helge, to The Denver Post, Inc. Receptacle. 2,950,945, 8–30–60, Cl. 312—118.

Holman, Lee B., and W. T. Smith, to State Steel Products, Inc. Gyratory separator. 2,950,819, 8–30–60, Cl. 209—326.

Holmes, Thomas, to North American Philips Co., Inc. High-pressure electric discharge tube. 2,951,171, 8–30–60, Cl. 313—209.

Holsinger, Rudolph J., to Socony Mobil Oil Co., Inc. Antifreeze composition. 2,951,038, 8–30–60, Cl. 252—73.

Hoofer, Charles F. Sheet holding and dispensing device. 2,950,821, 8–30–60, Cl. 211—54.

Hooker Chemical Corp.: *See*—
Gelfand, Samuel. 2,951,097.
Hoch, Paul E. 2,951,099.
Hoch, Paul E., and Clegg. 2,951,098.
Rosenberg, David S., and Weil. 2,951,081.

Hopkins, Earl V., to The Youngstown Steel Door Co. Engine compartment access and inspection doors. 2,950,602, 8–30–60, Cl. 105—378.

Horn, Willi, to Ernst Leitz, G.m.b.H. Interference microscope with transmitted illumination. 2,950,649, 8–30–60, Cl. 88—39.

Hough, Otto B., Jr. Office machine arm rest attachment. 2,950,890, 8–30–60, Cl. 248—118.

Howard, Edward G., Jr., to E. I. du Pont de Nemours and Co. Thermally-sensitive recording elements. 2,950,987, 8–30–60, Cl. 117—36.

Huber, John R., to Eastern Rotorcraft Corp. Net equipment for open rack vehicles. 2,950,691, 8–30–60, Cl. 105—369.

Huber, John R., to Eastern Rotorcraft Corp. Aircraft rotor blade construction. 2,950,766, 8–30–60, Cl. 170—159.

Huck, John J., to Automotive Products Co. Ltd. Liquid pressure control systems. 2,950,600, 8–30–60, Cl. 60—54.6.

Hudson, Robert L.: *See*—
Pfeifer, Charles R., and Hudson. 2,951,056.

Hudspeth, Thomas, to Hughes Aircraft Co. Parametric amplifier. 2,951,207, 8–30–60, Cl. 330—5.

Hugel, Georges, and R. Courtel, to Institute Francais du Petrole des Carburants et Lubrifiants. Extreme pressure lubricants containing molybdic xanthates. 2,951,040, 8–30–60, Cl. 252—33.6.

Hughes Aircraft Co.: *See*—
Berk, Aristid D., and Strumwasser. 2,951,216.
Clapp, Roger W. 2,951,217.
Hudspeth, Thomas. 2,951,207.
Kurtz, Louis A. 2,951,221.
Nelson, Conrad E., and Whirry. 2,951,216.

Hull, Geoffrey W.: *See*—
Speedie, John D., and Hull. 2,951,017.

Hunt, Richard H.: *See*—
Updegraff, Ivor H., and Hunt. 2,951,058.

Hurwitz, Melvin D., to Rohm & Haas Co. Method of producing wrinkle resistant garments and other manufactured articles of cotton-containing fabrics. 2,950,553, 8–30–60, Cl. 38—144.

Huss, Richard: *See*—
Brenneisen, Erich, Huss, and Siebert. 2,951,069.

Hussey, Luther W., and J. W. Rieke, to Bell Telephone Laboratories, Inc. Electronic switching network. 2,951,124, 8–30–60, Cl. 179—18.

Hutchison, George A., to Rathborne, Hair & Ridgway Box Co. Tote box. 2,950,852, 8–30–60, Cl. 229—23.

Hycon Mfg. Co.: *See*—
Warshawsky, Curtis B. 2,950,663.

I-T-E Circuit Breaker Co.: *See*—
Diebold, Edward J. 2,951,188.
Fischer, Hermann. 2,950,795.
Zicher, Gustav. 2,950,797.

Iannussi, William P., and G. E. Kelly, to Radio Corp. of America. Color television apparatus. 2,951,115, 8–30–60, Cl. 178—5.4.

Immesoete, Arthur J., to Deere & Co. Timing adjustment for planters. 2,950,845, 8–30–60, Cl. 222—370.

Imperial Chemical Industries Ltd.: *See*—
Anderson, Robert C. 2,951,093.
Stephen, William E., and Tilley. 2,951,070.
Tilley, Colin G. 2,951,071.
Tilley, Colin G., and Waite. 2,951,072.

Industrial Nucleonics Corp.: *See*—
Foster, George B., and Clore. 2,951,161.

Ingeniorsfirman Filesberg AB: *See*—
Svensson, Sven A. 2,950,730.

Institute Francais du Petrole des Carburants et Lubrifiants: *See*—
Hugel, Georges, and Courtel. 2,951,040.

International Business Machines Corp.: *See*—
Amdahl, Lowell D., Havens, Jeenel, Schreiner, Cedarholm, and Eichenberger. 2,951,232.
Dickinson, Wesley E. 2,951,186.
Hagopian, Jacob J. 2,950,672.
Johnson, Donald D. 2,950,990.
Quade, Edward A. 2,951,241.
Williams, Frederic C. 2,951,176.
Wyma, Edwin R. 2,951,184.

International Electronic Research Corp.: *See*—
Woods, Leroy R. 2,951,108.

International Nickel Co., Inc., The: *See*—
Graham, Alexander B. 2,950,817.

International Telephone and Telegraph Corp.: *See*—
Arditi, Maurice. 2,951,218.
Farnsworth, Philo T. 2,951,113.
Grieg, Donald D., Engelmann, and Kostriza. 2,951,140.
Mahler, Benjamin B., and Hammond. 2,951,194.
Rennenkampf, Leonard J. 2,951,150.
Sichak, William, and Adams. 2,951,152.
Sindebaker, Isaac R., and Greutman. 2,951,180.

Ionics, Inc.: *See*—
MacRae, Wayne A. 2,950,603.

Irmscher, Walter: *See*—
Benink, Christiaan J. M., and Irmscher. 2,950,696.

Irving Air Chute Co., Inc.: *See*—
Hatfield, John E. 2,950,885.

Inwood, Texas V., to Union Oil Co. of California. Hydrocarbon desulfurization process. 2,951,032, 8–30–60, Cl. 208—213.

Irwin, Leslie C., to The Winter Dump Co. Ltd. Material deflector for car dumpers. 2,950,826, 8–30–60, Cl. 214—47.

Izumi, John Y. Can opening device. 2,950,528, 8–30–60, Cl. 30—8.

Jacks, Stanley E., L. C. Newsome, and J. W. Collison, to Detrex Chemical Industries Inc. Ultrasonic cleaning apparatus. 2,950,725, 8–30–60, Cl. 134—184.

Jackson, Philip W., Jr.: *See*—
Cicala, Vincent, and Jackson. 2,950,684.

Jackson, Richard W.: *See*—
Weber, Joseph A., Thomas, and Jackson. 2,950,623.

Jaffe, Sarah A. Foldable tab. 2,950,484, 8–30–60, Cl. 4—177.

Janney, Thomas T., and R. J. McCann, to James Lees and Sons Co. Pile fabric. 2,950,741, 8–30–60, Cl. 139—404.

Jaulmes, Eric, to Ateliers de la Molobecaue, Societe Anonyme Francaise. Transmission using a change speed gear with a single expandible pulley. 2,950,625, 8–30–60, Cl. 74—230.17.

Jeenel, Joachim: *See*—
Amdahl, Lowell D., Havens, Jeenel, Schreiner, Cedarholm, and Eichenberger. 2,951,232.

Jensen, Erik H., to The Upjohn Co. Stable aqueous suspension of piperazine-carbon disulfide complex. 2,951,009, 8–30–60, Cl. 167—53.

Johnson, Donald D., to International Business Machines Corp. Method for applying a uniform coating to a cylindrical body. 2,950,990, 8–30–60, Cl. 117—94.

Johnson, Edward. Lawn edging device. 2,950,769, 8–30–60, Cl. 172—17.

Johnson, Jerome C.: *See*—
Blizrud, John O., Johnson, and Franklin. 2,950,668.

Johnson, Montgomery H., Jr.: *See*—
Halpern, Otto, Johnson, and Wright. 2,951,247.

Johnson, Kenneth F., to Weyerhaeuser Co. End loader for lift truck. 2,950,830, 8–30–60, Cl. 214—654.

Johnson, Mary D. Particle collector and erasing shield for typewriters. 2,950,803, 8–30–60, Cl. 197—181.

Johnson, Montgomery H.: *See*—
Halpern, Otto, and Johnson. 2,951,246.

Johnston, Everett A.: *See*—
Laucher, Richard G., Winter, and Johnston. 2,950,595.

Jones, Frank D.: *See*—
Silverberg, Bernard M., and Jones. 2,950,938.

Johnston, Loyal L., to Herman Pneumatic Machine Co. Molding apparatus. 2,950,511, 8–30–60, Cl. 22—16.

Johnston, Robert H., and E. A. Nirmaier, to Esso Research and Engineering Co. Naphtha steam-cracking quench. 2,951,029, 8–30–60, Cl. 208—100.

Kaenan, Joseph P.: *See*—
Bolster, Calvin M., Kaenan, and Pfeiffer. 2,950,751.

Kallmeyer, Erich. Blood pressure measuring apparatus. 2,950,621, 8–30–60, Cl. 73—402.

Kammerer, William, Jr., to American Cyanamid Co. Use of diglycidyl compounds in improved methods for preparing alkyd resins. 2,951,040, 8–30–60, Cl. 260—22.

Kamkap, Inc.: *See*—
Terry, George C. 2,950,669.
Terry, George C. 2,950,711.
Terry, George C. 2,950,712.

Karady, Sandor: *See*—
Sletsinger, Meyer, and Karady. 2,951,075.

Karpes, Bernard. Fishing devices. 2,950,556, 8–30–60, Cl. 43—17.2.

Kegg, Robert R., and A. D. Pinotti, to Kimble Glass Co. Support means for mounting color-control element in glass portion of cathode-ray tube envelope. 2,951,167, 8–30–60, Cl. 313—95.

Keith, Carl D.: *See*—
Lorenz, Walter F., Keith, and Hettinger, Jr. 2,951,035.

Kelly, Gordon E.: *See*—
Iannuzzi, William P., and Kelly. 2,951,115.

Kennedy, Harry E., and G. E. Claussen, to Union Carbide Corp. Welding composition. 2,951,000, 8–30–60, Cl. 148—26.

Kennedy, Verne C., Jr., to Streeter-Amet Co. Vehicle weighing system. 2,950,910, 8–30–60, Cl. 265—72.

Kershaw, Boyce G. Apparatus for removing ballast from beneath a railroad track. 2,950,549, 8–30–60, Cl. 37—104.

Kerver, John K.: *See*—
Graham, John W., and Kerver. 2,950,886.

Keyser, Johann J., to Schiess Aktiengesellschaft. Working roll arrangement for textile machinery. 2,950,507, 8–30–60, Cl. 19—65.

Kher, Gabriel F. Method of preserving a perishable product. 2,950,976, 8–30–60, Cl. 99—166.

Kidde, Walter, Nuclear Laboratories, Inc.: *See*—
Miller, Philip. 2,951,156.

Kihn, Harry, to Radio Corp. of America. Electrical circuits. 2,951,245, 8–30–60, Cl. 343—13.

Kimble Glass Co.: *See*—
Kegg, Robert R., and Pinotti. 2,951,167.

Kimmel, Norman A., to Phillips Petroleum Co. Method and apparatus for controlling pipeline pressure. 2,950,682, 8–30–60, Cl. 103—11.

Kindred, Raymond L., to Phillips Petroleum Co. Mass spectrometer. 2,951,155, 8–30–60, Cl. 250—41.9.

King, Donald M. Conveyor systems. 2,950,688, 8–30–60, Cl. 104—172.

Kingsbury, Burton A., to Bell Telephone Laboratories, Inc. System for testing unattended repeaters. 2,951,128, 8–30–60, Cl. 179—175.31.

Kirk, Harold L., to Meier Electric and Machine Co., Inc. Fan housing and protective grill. 2,950,859, 8–30–60, Cl. 230—259.

Kissinger, Richard D., and R. F. Maile, to Radio Corp. of America. Glass beading mechanism for electron guns. 2,950,568, 8–30–60, Cl. 49—1.

Klein, Walter, to E. Leitz, G.m.b.H. Vertical illuminator. 2,950,650, 8–30–60, Cl. 88—40.

Kller, Robert W.: *See*—
Cottrill, Delbert E., and Kller. 2,950,888.

Knight and Thomas Inc.: *See*—
Austin, Ralph W. 2,950,762.

Knoll A.G. Chemische Fabriken: *See*—
Dengel, Ferdinand. 2,951,013.

Knorr-Bremse G.m.b.H.: *See*—
Kuhn, Ernst. 2,950,705.

Knutti, Helmut: *See*—
Kohler, Horst, and Knutti. 2,950,651.

Kochs, Friedrich, G.m.b.H.: *See*—
Uebing, Heinrich. 2,950,934.

Kohler, Horst, and H. Knutti, to C. Zeiss. Anamorphotic supplementary lens system. 2,950,651, 8–30–60, Cl. 88—57.

Kollman, Robert C.: *See*—
Hauser, Ernst A. 2,951,087.

Koones, Harold F., to Chemway Corp. Package. 2,950,813, 8–30–60, Cl. 206—63.2.

Kostrisa, John A.: *See*—
Grieg, Donald D., Eagleman, and Kostrisa. 2,951,149.
Krauss-Fiedler, Ursula, and R. Neu, to Dr. Willmar Schwabe, G.m.b.H. Process of preparing phenyl benzo-γ-pyrone compounds substituted by hydroxyl groups, and product. 2,951,073, 8–30–60, Cl. 260—210.
Kreidler, Alfred. Die guide and work-straightening device. 2,950,811, 8–30–60, Cl. 205—3.
Krohn, Gilbert S., H. G. Neuhaus, and C. F. Ahlgrimm, to R. R. Donnelley & Sons Co. Plate holder for cylinder presses. 2,950,078, 8–30–60, Cl. 101—378.
Krohn, Gilbert S., H. G. Neuhaus, and C. F. Ahlgrimm, to R. R. Donnelley & Sons Co. Plate holder for cylinder presses. 2,950,079, 8–30–60, Cl. 101—378.
Kronmiller, Bill A.: *See*—
Ferguson, Eli K., Jr., and Kronmiller. 2,950,702.
Kuba, Samuel: *See*—
Heckman, Edward A., Kuba, and Shafer. 2,951,144.
Kuhl, Henry Y., and P. R. Egg washer and egg holding tray. 2,950,726, 8–30–60, Cl. 134—194.
Kuhl, Paul R.: *See*—
Kuhl, Henry Y., and P. R. 2,950,726.
Kuhn, Ernst, to Knorr-Bremse G.m.b.H. Internal combustion percussive tools. 2,950,705, 8–30–60, Cl. 123—7.
Kurtz, Louis A., to Hughes Aircraft Co. Phase shifter. 2,951,221, 8–30–60, Cl. 333—31.
Laine, Leslie H.: *See*—
Bamford, William P., Carson, and Laine. 2,950,573.
Lakeside Laboratories, Inc.: *See*—
Biel, John H. 2,951,078.
Lamar, Charles C., to Harper-Wyman Co. Thermostatic control apparatus for a double burner. 2,950,865, 8–30–60, Cl. 236—32.
Lambert, Harold L., to Rotax Ltd. Compressed air or other gas control valves. 2,950,732, 8–30–60, Cl. 137—219.
Lancier, Peter. Flow contactor for pressurized electric cables, pipelines and the like. 2,951,131, 8–30–60, Cl. 200—81.9.
Land, Edwin H., and D. S. Grey, to Polaroid Corp. Cinematographic method and apparatus. 2,950,644, 8–30–60, Cl. 88—16.
Landeck, Clarence G.: *See*—
Christensen, Paul M., Landeck, and St. John. 2,950,837.
Landes, Wesley K. Ski for aircraft and the like. 2,950,863, 8–30–60, Cl. 244—108.
Lang, Joseph C. Expansion device. 2,950,602, 8–30–60, Cl. 61—45.
Langer, Arthur W., Jr.: *See*—
Gamble, Leon W., Langer, and Neal. 2,951,045.
Langlinais, Vernon L., and H. P. Broussard, to Morton Chemical Co. Process for producing anhydrous hydrogen chloride. 2,950,953, 8–30–60, Cl. 23—154.
Langston, Samuel M., Co.: *See*—
Moser, Henry W., and McGirr. 2,950,658.
Lannert, James W., to Whirlpool Corp. Impelling means for food waste disposer. 2,950,868, 8–30–60, Cl. 241—46.
Lantos, Peter R., to E. I. du Pont de Nemours and Co. Preparation of filaments from polytetrafluoroethylene emulsions. 2,951,047, 8–30–60, Cl. 260—17.
Lapointe Machine Tool Co., The: *See*—
Bonnafe, Oliver W. 2,950,627.
Larios, Daniel, 50% to W. E. Ford. Foldable frame. 2,950,556, 8–30–60, Cl. 40—154.
Larsen, Eric R., and R. P. Ruh, to The Dow Chemical Co. Chlorofluoromethylfluoroform. 2,951,102, 8–30–60, Cl. 260—653.
Larson, Ernest T., Jr.: *See*—
Mueller, Fritz, W. H., and Larson. 2,950,972.
Larson, Karl O. Utility push cart. 2,950,925, 8–30–60, Cl. 280—47.19.
Lauchet, Richard G., J. S. Winter, and E. A. Johnston, to The Marquardt Corp. Thrust reverser. 2,950,595, 8–30–60, Cl. 60—35.54.
Laxton, James W., to D. Napier & Son Ltd. Catalysts for decomposing hydrogen peroxide. 2,951,040, 8–30–60, Cl. 252—476.
Lasich, Branko. Electrical relays. 2,951,134, 8–30–60, Cl. 200—87.
Ledel, Alvin L., and T. Barish, to Thompson Ramo Woolridge Inc. Variable centrifugal pump. 2,950,686, 8–30–60, Cl. 103—97.
Lees, James, and Sons Co.: *See*—
Janney, Thomas T., and McCann. 2,950,741.
Leferson, Joseph, to The Machlett Laboratories, Inc. Getter for electron tubes. 2,951,170, 8–30–60. Cl. 313—178.
Leighton, Henry B. Bilingual communicator. 2,950,544, 8–30–60, Cl. 35—35.
Leis, Arthur F.: *See*—
Mayne, Robert A., and Leis. 2,950,933.
Leitner, George J., to Heyden Newport Chemical Corp. Solubilised metal salts of N-nitroso N-arylhydroxylamines. 2,951,008, 8–30–60, Cl. 167—30.
Leitz, Ernst, G.m.b.H.: *See*—
Horn, Willi. 2,950,649.
Klein, Walter. 2,950,650.
Lemont, Harold E., Jr., to Boeing Airplane Co. Rotor blade folding mechanism. 2,950,767, 8–30–60, Cl. 170—160.12.
Lemson, Jack, to Texas Instruments Inc. Method and apparatus for locating the base section of a transistor bar. 2,951,204, 8–30–60, Cl. 324—158.
Lenhard, Robert H.: *See*—
Bernstein, Seymour, and Lenhard. 2,951,084.
Lenhart, Henry. Slate trimmer. 2,950,710, 8–30–60, Cl. 125—23.
Leopold, Wilbur R., and E. L. Towle, to Worthington Corp. Flow control means for a pumping station. 2,950,685, 8–30–60, Cl. 103—11.
LeTourneau-Westinghouse Co.: *See*—
Clark, Ralph B., and Spanahake. 2,950,634.
Goodrich, John W. 2,950,633.
Lever Bros. Co.: *See*—
Clark, Ronald, and Alexander. 2,950,648.
Leverth, Elisabeth, geb. Franz, to Firma Mitteldeutsche Emaillierwerke M. Fratscher & Co. Kitchen utensil. 2,950,840, 8–30–60, Cl. 220—96.
Lewin, George. Multiple sound tracks. 2,950,971, 8–30–60, Cl. 88—77.
Lewis, John B. Device for bleeding gaseous materials. 2,950,616, 8–30–60, Cl. 73—23.
Li, Yao T. Strain gage transducer. 2,951,223, 8–30–60, Cl. 338—4.
Libbey-Owens-Ford Glass Co.: *See*—
Bamford, William P., Carson, and Laine. 2,950,573.
Liskweg, Lawrence L. Portable vehicle washing machine. 2,950,488, 8–30–60, Cl. 15—21.
Lilly, Eli, and Co.: *See*—
Pohland, Albert. 2,951,080.
Limberger, Walter, to Lumoprint Zindler KG. Preparation of copies by xerography. 2,950,661, 8–30–60, Cl. 95—1.7.
Lindstrom, Gustaf T., to E. I. du Pont de Nemours and Co. Self-compensating comb. 2,950,518, 8–30–60, Cl. 28—55.
Lippke, Paul R. Method and device for regulating the moisture content of endless moving webs of fibrous material. 2,951,007, 8–30–60, Cl. 162—198.
Litchard, Alexander. Bag feeding mechanism. 2,950,589, 8–30–60, Cl. 53—190.
Little, Arthur D., Inc.: *See*—
Lothrop, Warren C. 2,950,562.
Livingston, A. Kip: *See*—
Blank, Fritz A. 2,950,646.
Blank, Fritz A., and Ozberry. 2,950,647.
Lo, Elisabeth S., to Minnesota Mining and Mfg. Co. New halogen-containing polymers and preparation thereof. 2,951,064, 8–30–60, Cl. 260—87.5.
Lo, Elisabeth S., and G. H. Crawford, Jr., to Minnesota Mining and Mfg. Co. 2-trifluoromethyl-butadiene copolymers and preparation thereof. 2,951,065, 8–30–60, Cl. 260—87.7.
Lo, Elisabeth S.: *See*—
Bolstad, Archibald N., and Lo. 2,951,063.
Locher, Hans, to Zellweger Ltd. Method and apparatus for automatically controlling the weight per unit length of textile materials. 2,950,508, 8–30–60, Cl. 19—70.
Loduk, Joseph P., to The Chaplin-Fulton Mfg. Co. Diaphragm motor. 2,950,739, 8–30–60, Cl. 137—788.
Lombardo, Pasquale: *See*—
Gilbert, Everett E., and Lombardo. 2,951,083.
Long, Robert B.: *See*—
Hartsband, Harry M., Tarmy, and Long. 2,951,022.
Longines-Wittnauer Watch Co., Inc.: *See*—
Blank, Fritz A. 2,950,646.
Blank, Fritz A., and Ozberry. 2,950,647.
Lorene, Walter F., C. D. Keith, and W. P. Hettinger, Jr., to Sinclair Refining Co. Method for the removal of metal contaminants from petroleum residual stocks. 2,951,035, 8–30–60, Cl. 208—253.
Lothrop, Warren C., to Arthur D. Little, Inc. Crustacean trap. 2,950,562, 8–30–60, Cl. 43—102.
Lott, Howard R.: *See*—
Miller, Ruby E. 2,950,694.
Lott, William A.: *See*—
Sowinski, Francis A., Lott and Bernstein. 2,951,092.
Lowell Counter Co.: *See*—
Herlihy, William F. 2,950,545.
Luke, Oren V., Jr., M. O. Robeson, and W. R. Taylor, to Celanese Corp. of America. Production of pentaerythritol. 2,951,095, 8–30–60, Cl. 260—635.
Lumoprint Zindler KG.: *See*—
Limberger, Walter. 2,950,661.
Luttinger, Lionel B., to American Cyanamid Co. Stabilization of acrylonitrile copolymers. 2,951,055, 8–30–60, Cl. 260—45.7.
Lynch Corp.: *See*—
Ardiner, Robert L. 2,950,804.
Lyon, George A. Game apparatus. 2,950,917, 8–30–60, Cl. 273—90.
Lyon, George A. Game apparatus. 2,950,918, 8–30–60, Cl. 273—90.
Lyon, George A. Wheel cover. 2,950,941, 8–30–60, Cl. 301—37.
Lyon Inc.: *See*—
Hahn, Edgar A. 2,950,839.
Lyon, John W., to General Binding Corp. Metal loose leaf binding with lock. 2,950,719, 8–30–60, Cl. 129—24.
MacDonald, George W. Quick attachable and detachable covering for the open seating compartment of convertible automobiles. 2,950,749, 8–30–60, Cl. 150—52.
Macek, Henry: *See*—
Macek, Mathew, J. W., and H. 2,950,603.
Macek, John W.: *See*—
Macek, Matthew, J. W., and H. 2,950,603.
Macek, Matthew, J. W., and H. Post driver. 2,950,603, 8–30–60, Cl. 61—74.
Machlett Laboratories, Inc., The: *See*—
Leferson, Joseph. 2,951,170.
MacMurray, Jess F.: *See*—
Napier, Joe T., and MacMurray. 2,950,743.
Macovski, Albert, to Radio Corp. of America. Horizontal deflection synchronizing circuit for television. 2,951,117, 8–30–60, Cl. 178—7.3.
Maddux, Duane C. Dispensing mechanism and air circulation system therefor. 2,950,606, 8–30–60, Cl. 62—220.
Mador, Irving L., and L. J. Reters, to National Distillers and Chemical Corp. Method of preparing acid salts of hydroxylamine. 2,950,954, 8–30–60, Cl. 23—190.
Magill, Donald G., to American Can Co. Apparatus for testing side seams of containers. 2,950,620, 8–30–60, Cl. 73—88.
Magnuson, Roland A., to Pacific Car and Foundry Co. Balanced lift vertical axis propellers. 2,950,765, 8–30–60, Cl. 170—151.

Magrath, Richard A., to Baird-Atomic, Inc. Dosimeter for radiation detection. 2,951,224, 8–30–60, Cl. 338—16.
Mahler, Benjamin B., and S. D. Hammond, to International Telephone and Telegraph Corp. Position selector system. 2,951,194, 8–30–60, Cl. 318—467.
Malle, Robert F.: *See*—
Kissinger, Richard D., and Malle. 2,950,548.
Mandulich, Svetosar, to Rocky Mfg. Co. Production of yarn containing hair fibers. 2,950,591, 8–30–60, Cl. 57—157.
Manfredi, Anthony J., to United States of America, Army. Inductance varied by controlled gaseous discharge. 2,951,183, 8–30–60, Cl. 315—158.
Manning, John A., Paper Co., Inc.: *See*—
Hervey, Laurence R. B. 2,950,975.
Mantsufel, Rolf: *See*—
Boettcher, Alfred, and Mantsufel. 2,950,778.
Marcatili, Enrique A. J., to Bell Telephone Laboratories, Inc. Mode selective devices for circular electric wave transmissions. 2,951,219, 8–30–60, Cl. 333—10.
Margetts, Hyrum R., to United Biscuit Co. of America. Folding machine for crates or nest formations. 2,950,657, 8–30–60, Cl. 93—37.
Marie, Georges R. P. Bends for circular wave guides. 2,951,222, 8–30–60, Cl. 333—98.
Marimer, Thomas, to Armstrong Cork Co. Method and apparatus for making repetitive measurements. 2,951,189, 8–30–60, Cl. 250—83.3.
Markle, Lafayette. Building system. 2,950,796, 8–30–60, Cl. 189—1.
Marohn, Richard P., to Allis-Chalmers Mfg. Co. Counter for load tap changing transformer. 2,951,196, 8–30–60, Cl. 323—43.5.
Marquardt Corp., The: *See*—
Laucher, Richard G., Winter, and Johnston. 2,950,595.
Martin, Albert F., W. C. Pagel, and G. M. Rambosek, to Minnesota Mining and Mfg. Co. Bonding film. 2,951,004, 8–30–60, Cl. 154—110.
Maschinenfabrik Winkler, Fallert & Co. A.G.: *See*—
Heimlicher, Paul, and Meierhofer. 2,950,805.
Mason-Carlton Tool Co.: *See*—
Mason, James C. 2,950,630.
Mason Electric Corp.: *See*—
Mason, Howard F. 2,951,130.
Mason, Howard F., to Mason Electric Corp. Rotary switch. 2,951,130, 8–30–60, Cl. 200—67.
Mason, James C., to Mason-Carlton Tool Co. Power operated pipe wrench. 2,950,639, 8–30–60, Cl. 81—53.
Mathewson, Arthur A., Jr., to A. G. Bodine, d.b.a. Bodine Soundrive Co. Earth boring drill. 2,950,901, 8–30–60, Cl. 255—4.4.
Matthyuse, Irving F., and F. Dilendik, to Burndy Corp. Sealed mixture-containing connector. 2,951,110, 8–30–60, 174—94.
Mattsson, Mats E.: *See*—
Englund, Gosta R., and Mattsson. 2,950,758.
Mayne, Robert A., and A. F. Leis, said Leis assignor to said Mayne. Hub. 2,950,933, 8–30–60, Cl. 287—62.63.
Mayr, Otmar, to Firma Dr. Ing. h.c.F. Porsche K.G. Speed control arrangement for tractor-type vehicles. 2,950,794, 8–30–60, Cl. 192—3.
Mazza, Ralph O. Pressure retaining stopper. 2,950,634, 8–30–60, Cl. 215—95.
McBean, Douglas M., and L. C. Tallman, to American Can Co. Carrier removal apparatus. 2,950,629, 8–30–60, Cl. 214—305.
McBride, Jack L. Ship's ratguard. 2,950,700, 8–30–60, Cl. 114—221.
McCann, Robert J.: *See*—
Janney, Thomas T., and McCann. 2,950,741.
McCartney, Earl J., to Sperry Rand Corp. Object detection system. 2,951,160, 8–30–60, Cl. 250—83.3.
McCormick, William P. Printing machines. 2,950,673, 8–30–60, Cl. 101—118.
McCurdy, Robert J., to United States of America, Navy. Range marks generator. 2,951,206, 8–30–60, Cl. 328—66.
McDonald, James E. High speed fish and shrimp trawl. 2,950,567, 8–30–60, Cl. 43—9.
McDuffie, James W.: *See*—
Nolt, Edwin B., Eberly, and McDuffie. 2,950,670.
McDuffie, James W., to Sperry Rand Corp. Hay baler. 2,950,807, 8–30–60, Cl. 198—107.
McGirr, George W.: *See*—
Moser, Henry W., and McGirr. 2,950,658.
McGrath, John W., to Western Electric Co., Inc. Electrical indicating and control apparatus. 2,951,187, 8–30–60, Cl. 317—150.
McKinley, John K., B. F. Smith, and S. P. Dickens, to Texaco Inc. Process for production of calcium carbide and hydrogen. 2,950,956, 8–30–60, Cl. 23—208.
McLarney, Frank R., and E. L. Hampton, to Middletown Mfg. Co. Swivel latching device. 2,950,883, 8–30–60, Cl. 248—349.
McLoughlin, William G., to Hayes Aircraft Corp. High speed pay out reel. 2,950,876, 8–30–60, Cl. 242—128.
McMahon, Howard O.: *See*—
Watson, Paul C., and McMahon. 2,950,782.
McRae, Wayne A., to Ionics, Inc. Vulcanization of nuclear alkyl substituted styrenes with organic peroxides. 2,950,803, 8–30–60, Cl. 18—57.
McWilliams, James B., to Railway Maintenance Corp. Apparatus for spacing and straightening ties. 2,950,667, 8–30–60, Cl. 104—9.
Mead Corp., The: *See*—
Shiels, Robert A. 2,950,820.
Meier Electric and Machine Co., Inc.: *See*—
Kirk, Harold L. 2,950,859.
Meierhofer, Friedrich: *See*—
Heimlicher, Paul, and Meierhofer. 2,950,805.
Meixner, Alfred, to Voigtlander A.G. Shutter for photographic cameras. 2,950,665, 8–30–60, Cl. 95—66.
Mellon, Patrick R. Ash trays. 2,950,722, 8–30–60, Cl. 131—238.
Memphis Metal Mfg. Co., Inc.: *See*—
Small, Leroy J. 2,950,514.
Merchants National Bank of Boston, The: *See*—
Hauser, Ernst A. 2,951,087.
Merck & Co., Inc.: *See*—
Chemerda, John M., Hirschmann, and Steinberg. 2,951,074.
O'Neill, Robert C., and Basso. 2,951,010.
Sletzinger, Meyer, and Karady. 2,951,075.
Sprague, James M., and Engelhardt. 2,951,082.
Merrill, Patterson D., and H. T. Waite, Jr., to M. E. Skinner Co. Fitting for tapping steel walled members. 2,950,637, 8–30–60, Cl. 77—37.
Messner, Georg, to Oronzio De Nora Impianti Elettrochimici. Mercury cathode electrolytic cell. 2,951,026, 8–30–60, Cl. 204—221.
Metal Textile Corp.: *See*—
Goodlos, Alfred M. 2,950,609.
Metropolitan-Vickers Electrical Co. Ltd.: *See*—
Haine, Michael E., and Mulvey. 2,951,157.
Meyer, Delbert H.: *See*—
Adams, Chester E., and Meyer. 2,951,100.
Michalko, Edward: *See*—
Hoekstra, James, and Michalko. 2,950,965.
Michigan Tool Co.: *See*—
Moncrieff, Alexander D. F. 2,950,655.
Middletown Mfg. Co.: *See*—
McLarney, Frank R., and Hampton. 2,950,893.
Miehle-Goss-Dexter, Inc.: *See*—
Sites, Benjamin L., and Paschke. 2,951,116.
Mierendorf, Robert C.: *See*—
Broyles, Addison K., Mierendorf, and Porter. 2,951,197.
Milani, Virgil. Process of preparing a dry ravioli product. 2,950,978, 8–30–60, Cl. 99—199.
Miller, Albert A., to Self-Changing Gears Ltd. Automatic change speed gears. 2,950,632, 8–30–60, Cl. 74—720.
Miller, Frank E., Jr.: *See*—
Allen, Richard C., and Miller. 2,950,671.
Miller, George A.: *See*—
Neros, Clifford A., and Miller. 2,951,101.
Miller, Harold A., and L. M. Greenstein, to Francis Earle Laboratories, Inc. Nacreous pigment and process of preparing same. 2,950,981, 8–30–60, Cl. 106—194.
Miller, Philip, to Walter Kidde Nuclear Laboratories, Inc. Method and apparatus for predicting the residual life of adsorption beds. 2,951,156, 8–30–60, Cl. 250—43.5.
Miller, Ruby E., to H. R. Lott. Overcasting presser foot for zig-zag sewing machines. 2,950,696, 8–30–60, Cl. 112—235.
Miller, Stewart E., to Bell Telephone Laboratories, Inc. Wave guide with polarized ferrite element. 2,951,220, 8–30–60, Cl. 333—24.
Miller, William T. Liquid polymers of polyunsaturated fluoroolefins. 2,951,068, 8–30–60, Cl. 260—648.
Mills, Aubrey E., to Die Casting Machine Tools Ltd. Ammunition for toy guns. 2,950,880, 8–30–60, Cl. 102—41.
Mine and Smelter Supply Co.: *See*—
Wales, Jess P. 2,950,969.
Mink, Donald H. Snap switch. 2,951,129, 8–30–60, Cl. 200—67.
Minneapolis-Honeywell Regulator Co.: *See*—
Cunnien, James M. 2,951,132.
Harts, Harry J. 2,950,729.
Shahbender, Rabah A. 2,951,118.
Watrous, Robert B. 2,950,728.
Minnerly, George H.: *See*—
Bomke, Hans A., Minnerly, and Mount. 2,951,214.
Minnesota Mining and Mfg. Co.: *See*—
Bollmeier, Emil W., and Vokaty. 2,951,109.
Bolstad, Archibald N., and Lo. 2,951,063.
Lo, Elisabeth S. 2,951,064.
Lo, Elisabeth S., and Crawford. 2,951,065.
Martin, Albert F., Pagel, and Rambosek. 2,951,004.
Tiers, George V. D. 2,951,051.
Mitrovich, Milenko, and N. V. S. Mumford, to Chance Vought Aircraft, Inc. Shock wave inducing and controlling mechanism. 2,950,594, 8–30–60, Cl. 60—35.6.
Mobay Chemical Co.: *See*—
Reuter, Franz G., and Ulderup. 2,951,053.
Moeller, August, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Flotation process. 2,950,818, 8–30–60, Cl. 209—166.
Moloney, Paul S. Sliding glass doors. 2,950,756, 8–30–60, Cl. 160—91.
Monack, Albert J.: *See*—
Slater, William O., and Monack. 2,950,574.
Moncrieff, Alexander D. F., to Michigan Tool Co. Hobbing machine. 2,950,655, 8–30–60, Cl. 90—4.
Monsanto Chemical Co.: *See*—
Chadwick, David H. 2,951,080.
Darby, Joseph R. 2,951,052.
Moo-Cow Group Ltd.: *See*—
Abdela, Frederick. 2,950,532.
Morrell, Charles E.: *See*—
Wiese, Herbert K., Nelson, and Morrell. 2,951,057.
Morris, Frank A., to General Dynamics Corp. Readout control means for signal-operated typewriter. 2,950,801, 8–30–60, Cl. 197—19.
Morris, Peter R.: *See*—
Agius, Peter J. V. J., and Morris. 2,951,050.
Morrison, James L. D. Automatic phonographs. 2,950,920, 8–30–60, Cl. 274—10.
Morton Chemical Co.: *See*—
Langlinais, Vernon L., and Broussard. 2,950,953.
Moser, Henry W., and G. W. McGirr, to S. M. Langston Co. Continuous running machines for producing box blanks. 2,950,658, 8–30–60, Cl. 93—58.
Mossey, Joseph L., to The Bendix Corp. Friction device. 2,950,783, 8–30–60, Cl. 188—70.

Mostovych, Nicholas, and A. Cybriwsky, to Reynolds Metals Co. Apparatus for anodizing aluminum. 2,951,025, 8–30–60, Cl. 204—211.

Motorola, Inc.: *See*—
Birkenes, Bernhard. 2,951,154.

Mount, John W.: *See*—
Bomke, Hans A., Minnerly, and Mount. 2,951,214.

Mourier, Georges, and O. Dohler, to Compagnie Generale de Telegraphie Sans Fil. Traveling wave tube oscillators. 2,951,173, 8–30–60, Cl. 315—3.5.

Mourier, Georges, and O. Dohler, to Compagnie Generale de Telegraphie Sans Fil. Traveling wave tubes. 2,951,174, 8–30–60, Cl. 315—3.5.

Moyroud, Louis M.: *See*—
Higonnet, Rene A., and Moyroud. 2,950,662.

Mueller Co.: *See*—
Bowan, Walter J. 2,950,928.

Mueller, Fritz W. H., and E. T. Larson, Jr., to General Aniline & Film Corp. Photographic emulsions having increased sensitivity to X-ray and gamma ray radiation. 2,950,972, 8–30–60, Cl. 96—108.

Muffly, Glenn. Refrigerator doors and actuating mechanism. 2,950,911, 8–30–60, Cl. 268—63.

Mulvey, Thomas: *See*—
Haine, Michael E., and Mulvey. 2,951,157.

Mumford, Nicholas V. S.: *See*—
Mitrovich, Milenko, and Mumford. 2,950,594.

Murdock, Robert B. Collapsible attachment. 2,950,836, 8–30–60, Cl. 220—1.

Murphy, Frances G.: *See*—
Murphy, Frank V. 2,950,547.

Murphy, Frank V., ⅛ each to T. J., L. J., F. G., G. A., K. V., and J. W. Murphy. Snow removing implement with conveyor means. 2,950,547, 8–30–60, Cl. 37—53.

Murphy, George A.: *See*—
Murphy, Frank V. 2,950,547.

Murphy, Joseph W.: *See*—
Murphy, Frank V. 2,950,547.

Murphy, Kathleen V.: *See*—
Murphy, Frank V. 2,950,547.

Murphy, L. R., Scale Co.: *See*—
Murphy, Leslie R. 2,950,909.

Murphy, Leo J.: *See*—
Murphy, Frank V. 2,950,547.

Murphy, Leslie R., to L. R. Murphy Scale Co. Tandem scale system. 2,950,909, 8–30–60, Cl. 265—71.

Murphy, Robert E.: *See*—
Silliker, John H., Shank, and Murphy. 2,950,977.

Murphy, Thomas J.: *See*—
Murphy, Frank V. 2,950,547.

Mycalex Electronics Corp.: *See*—
Slater, William O., and Monack. 2,950,574.

Myers, Claude K. High speed mixing impeller. 2,950,905, 8–30–60, Cl. 259—134.

Myers, Gordon S., and M. A. Davis, to American Home Products Corp. Basic alkylthioalkyl esters of phenothiasine-10-carboxylic acid and their salts. 2,951,077, 8–30–60, Cl. 260—243.

Nachman, Joseph F.: *See*—
Buehler, William J., and Nachman. 2,950,526.

Napier, D., & Son Ltd.: *See*—
Harrop, Raymond N., and Gardner. 2,950,942.
Laxton, James W. 2,951,046.

Napier, Joe T., and J. F. MacMurray, to J. H. Baxter & Co. Pole shaving apparatus having bark breaker. 2,950,743, 8–30–60, Cl. 144—208.

Nashua Corp.: *See*—
Polley, Robert W. 2,951,140.

National Distillers and Chemical Corp.: *See*—
Foos, Raymond A. 2,950,966.
Mador, Irving L., and Rekers. 2,950,954.
Pritchett, Ervin G., and Greenberg. 2,951,068.
Schott, Stuart, and Hansley. 2,950,903.

National Lead Co.: *See*—
Hauser, Ernst A., and Kollman. 2,951,087.

National Research Corp.: *See*—
Di Pietro, William O. 2,951,021.

National Research Development Corp.: *See*—
Partridge, Stanley M. 2,951,027.

Neal, Arthur H.: *See*—
Gamble, Leon W., Langer, and Neal. 2,951,045.

Neely Mfg. Co.: *See*—
Mandukich, Svetozar. 2,950,591.

Nelson, Conrad E., and W. L. Whirry, to Hughes Aircraft Co. Reflectionless microwave filter. 2,951,216, 8–30–60, Cl. 333—9.

Nelson, Joseph F.: *See*—
Wiese, Herbert K., Nelson and Morrell. 2,951,057.

Nelson, Seddon C., to American Viscose Corp. Mechanical roll changer. 2,950,873, 8–30–60, Cl. 242—56.

Nelson, William O. Fishing lure. 2,950,569, 8–30–60, Cl. 43—42.02.

Nemeth, Otto R. Air cooled gas turbine power plant. 2,950,598, 8–30–60, Cl. 60—39.51.

Neros, Clifford A., and G. A. Miller, to Diamond Alkali Co. Chemical composition and process. 2,951,101, 8–30–60, Cl. 260—651.

Nesh, Florence. Determination of minute traces of water by use of methylene blue. 2,950,956, 8–30–60, Cl. 23—230.

Neu, Richard: *See*—
Kranen-Fiedler, Ursula, and Neu. 2,951,073.

Neuhaus, Robert G.: *See*—
Krohn, Gilbert S., Neuhaus, and Ahlgrimm. 2,250,678.
Krohn, Gilbert S., Neuhaus, and Ahlgrimm. 2,950,679.

Newman, Oliver. Plant terrarium. 2,950,567, 8–30–60, Cl. 47—17.

Newsome, Lowell C.: *See*—
Jacks, Stanley E., Newsome, and Collison. 2,950,725.

Nichols, James A.: *See*—
Davis, Augustine, Jr., and Nichols. 2,950,789.

Nicolson, Kingsley M., to California Research Corp. Safety joint. 2,950,929, 8–30–60, Cl. 285—86.

Nilsson, Bengt E., to Aktiebolaget Electrolux. Rotatable surface treating members. 2,950,583, 8–30–60, Cl. 51—195.

Nirmaier, Earle A.: *See*—
Johnston, Robert H., and Nirmaier. 2,951,029.

Nolt, Edwin B., H. C. Eberly, and J. W. McDuffie, to Sperry Rand Corp. Hay balers. 2,950,670, 8–30–60, Cl. 100—142.

Nolte, Albert C., Jr. Knife. 2,950,531, 8–30–60, Cl. 30—353.

North American Philips Co., Inc.: *See*—
Esveldt, Cornelis J., van der Heide, and Wijn. 2,951,042.
Holmes, Thomas. 2,951,171.

Norton Co.: *See*—
Smith, Stephen H. 2,950,586.

Null, Fay E., to United States of America, Air Force. Detector system. 2,951,175, 8–30–60, Cl. 315—10.

Oberg, William O., to Reynolds Metals Co. Extrusion conveying apparatus. 2,950,815, 8–30–60, Cl. 207—1.

O'Brien, John F., to United States of America, Army. Chambering mechanism for an automatic revolver type gun. 2,950,652, 8–30–60, Cl. 89—155.

O'Brien, Robert J., and G. A. Void, to Ekco-Alcoa Containers Inc. Apparatus for hooding open-faced containers. 2,950,590, 8–30–60, Cl. 53—342.

O'Connor, J. C., & Sons, Inc.: *See*—
Smiley, Earl I. 2,950,659.

O'Donnell, James, and D. F. Duckworth, to The British Petroleum Co. Ltd. Reduction of sludge deposition from crude oils. 2,951,037, 8–30–60, Cl. 208—370.

Ogden, Frank, and R. B. Bell. Pontoon boats. 2,950,690, 8–30–60, Cl. 114—61.

Ogilvie Flour Mills Co., Ltd., The: *See*—
Ujejski, Ludwik, and Gaver. 2,951,090.

Oldberg Mfg. Co.: *See*—
Deremer, Floyd E. 2,950,777.

Oldberg, Sidney, to Eaton Mfg. Co. Valve mechanism with integral spring and cage member. 2,950,736, 8–30–60, Cl. 137—529.

Oldham, Albert H.: *See*—
Timms, Ross L. 2,950,709.
Timms, Ross L. 2,951,164.

Oldham, Vern, L.: *See*—
Timms, Ross L. 2,950,799.
Timms, Ross L. 2,951,164.

Olds, Howard V. Earth digging apparatus. 2,950,902, 8–30–60, Cl. 255—21.

Olin Mathieson Chemical Corp.: *See*—
Salisbury, Samuel R., and White. 2,951,039.
Schroeder, Hansjuergen A., and Grundmann. 2,951,079.
Sowinski, Francis A., Lott, and Bernstein. 2,951,092.

Olinghouse, Lowell D. Golf club and ball carrier. 2,950,748, 8–30–60, Cl. 150—1.5.

O'Neill, Robert C., and A. J. Basso, to Merck & Co., Inc. Substituted carbanilide compositions for treating coccidiosis. 2,951,010, 8–30–60, Cl. 167—53.1.

Oppenheimer, Edgar D., to Eldorado Tool & Mfg. Corp. Safety drivers for gun drills. 2,950,636, 8–30–60, Cl. 77—29.

Oronzio De Nora Impianti Elettrochimici: *See*—
Messner, Georg. 2,951,026.

Ortlieb, Douglas B. Box construction. 2,950,849, 8–30–60, Cl. 229—8.

Osborn Mfg. Co., The: *See*—
Stingley, Norman H. 2,950,495.

Otto, Charles W.: *See*—
Davies, James E., and Otto. 2,951,133.

Ovshinsky, Herbert C., to Tann Corp. Magnetic snap switch. 2,951,135, 8–30–60, Cl. 200—87.

Owens-Illinois Glass Co.: *See*—
Allen, Richard C., and Miller. 2,950,671.
Bjering, Olav. 2,950,842.
Chapman, George C. 2,950,569.
Harmon, Shepard L., and Hohl. 2,950,587.
Thomson, John W., Jr. 2,950,814.

Oxberry, John W.: *See*—
Blank, Frits A., and Oxberry. 2,950,647.

Pacific Car and Foundry Co.: *See*—
Magnuson, Roland A. 2,950,765.
Stephens, Donald L. 2,950,764.

Packaging Corp. of America: *See*—
Corcoran, James P. 2,950,850.

Pagel, Warren C.: *See*—
Martin, Albert F., Pagel, and Rambosek. 2,951,004.

Papa, Domenick: *See*—
Ginsberg, Helen F., and Papa. 2,951,089.

Pappo, Raphael, to G. D. Searle & Co. 13-aldehydo-and 13-carboxy-18-nor-4-pregnene-3,20-dione and derivatives thereof. 2,951,076, 8–30–60, Cl. 260—239.57.

Paragon Products Corp.: *See*—
Schols, Michael P. 2,950,866.

Parker, Donald J.: *See*—
Copping, Geoffrey P., Parker, and Barr. 2,950,675.

Partridge, Stanley M., to National Research Development Corp. Electrodialysing apparatus with supported membranes. 2,951,027, 8–30–60, Cl. 204—302.

Paschke, Frank R.: *See*—
Sites, Benjamin L., and Paschke. 2,951,116.

Patriquin, William G., to The Gabriel Co. Remotely adjustable shock absorber. 2,950,785, 8–30–60, Cl. 188—88.

Pattison, Charley B., to Plaine Athletic Mfg. Co. Water ski and swim belt. 2,950,489, 8–30–60, Cl. 9—340.

Peimer, Stanley L. Slide closure carton. 2,950,851, 8–30–60, Cl. 229—17.

Peras, Lucien, to Regie Nationale des Usines Renault. Automatic grapple. 2,950,940, 8–30–60, Cl. 294—110.

Perkins, Charles H., to Robertshaw-Fulton Controls Co. Flow control device. 2,950,733, 8–30–60, Cl. 137—495.

Permanent Filter Corp.: *See*—
Price, Harold A. 2,950,838.

Perrant, Jean M., to Compagnie de St. Gobain. Delivery device in the drawing of glass. 2,950,572, 8–30–60, Cl. 49—61.

Pesce, Fred. Land rakes. 2,950,551, 8–30–60, Cl. 37—145.

Petrino, Columbus C. Electric switch actuating mechanism. 2,951,135, 8–30–60, Cl. 200—153.

Pfaff, G. M., AG: *See*—
Benink, Christiaan J. M., and Irmscher. 2,950,695.

Pfeifer, Charles R., and R. L. Hudson, to The Dow Chemical Co. Linear polyethylene stabilized with organic esters. 2,951,056, 8–30–60, Cl. 260—45.8.

Pfleffer, Paul O.: *See*—
Bolster, Calvin M., Kaenan, and Pfleffer. 2,950,751.

Pfizer, Chas., & Co., Inc.: *See*—
Berger, Melvin L. 2,951,015.

Phelps, Richard W.: *See*—
Dain, John E., and Phelps. 2,950,675.

Philco Corp.: *See*—
Bingley, Frank J. 2,950,969.
Bradley, William E. 2,951,178.
Gittens, Victor S. 2,951,226.

Phillips Petroleum Co.: *See*—
Brashear, Roy T. 2,951,211.
Bubb, Frank W. 2,950,862.
Gomory, Paul L. 2,951,061.
Kimmel, Norman A. 2,950,682.
Kindred, Raymond L. 2,951,155.
Roederer, Edward P. Jr. 2,950,724.
Sherk, Fred T. 2,950,951.
Wightman, Robert E. 2,950,601.

Pieper, Arthur G.: *See*—
Tillman, Reuel O., and Pieper. 2,951,203.

Pierson, Arnold A., F. E. Smithberg, and M. C. Supitilov, to Du Kane Corp. Magnetic recording and reproducing machine. 2,951,127, 8–30–60, Cl. 179—100.2.

Piette, Raymond G.: *See*—
Bertie, Louis C., Piette, and Champoux. 2,950,754.

Pike, Ronald M.: *See*—
Bailey, Donald L., and Pike. 2,950,986.

Pilloton, Roger L., to Union Carbide Corp. Process for the concentration of formic acid solutions. 2,951,091, 8–30–60, Cl. 260—542.

Pinotti, Alfred D.: *See*—
Kegg, Robert R., and Pinotti. 2,951,167.

Pinotti, Primo L.: *See*—
Barusch, Maurice R., and Pinotti. 2,950,960.

Place, Thomas M., Jr.: *See*—
Place, Thomas M., Sr., and T. M. Place, Jr. 2,950,995.
Place, Thomas M., Sr., and T. M. Place, Jr. 2,950,996.

Place, Thomas M., Sr., and T. M. Place, Jr., to Beckman Instruments, Inc. Electrical resistance element. 2,950,995, 8–30–60, Cl. 117—227.

Place, Thomas M., Sr., and T. M. Place, Jr., to Beckman Instruments, Inc. Electrical resistance material and method of making same. 2,950,996, 8–30–60, Cl. 117—227.

Plains Athletic Mfg. Co.: *See*—
Pattison, Charley B. 2,950,489.

Plapper, Jürgen, R. Heyden, and G. Arnold, to Bohme Fettchemie G.m.b.H. Oil base fat-liquor composition with polybasic acid ester and method of use. 2,950,950, 8–30–60, Cl. 8—94.23.

Pletman, Max. Dental instrument. 2,950,534, 8–30–60, Cl. 32—40.

Pohland, Albert, to Eli Lilly and Co. Novel phenyl-substituted piperidines. 2,951,080, 8–30–60, Cl. 260—294.3.

Polanin, Walter R., to American Steel Foundries. Clasp brake. 2,950,782, 8–30–60, Cl. 188—56.

Polaroid Corp.: *See*—
Land, Edwin H., and Grey. 2,950,644.

Pollak Steel Co., The: *See*—
Walsh, Edward P. 2,950,787.

Polley, Robert W., to Nashua Corp. Thermosensitive tape dispensing. 2,951,140, 8–30–60, Cl. 219—19.

Polomski, John B.: *See*—
Holdeman, John W., and Polomski. 2,950,629.

Porsche Firma Dr. Ing. h.c.F. K.G.: *See*—
Eyb, Wolfgang. 2,950,774.
Mayr, Otmar. 2,950,794.

Porter, Clarence W.: *See*—
Broyles, Addison K., Mierendorf, and Porter. 2,951,197.

Postmaster General, Her Majesty's: *See*—
Copping, Geoffrey P., Parker, and Barr. 2,950,675.

Potts, John M.: *See*—
Striplin, Marcus M., Jr., Stinson, and Potts. 2,950,961.

Poursin, Louis S.: *See*—
Frecourt, Albert H. 2,950,755.

Precision Paper Tube Co.: *See*—
Folta, Andrew. 2,950,527.

Prentice, Archibald. Drapery hook. 2,950,515, 8–30–60, Cl. 24—86.

Prentice, David V., and E. M. Heth, to Prentice Machine Works, Inc. Jointer apparatus and method. 2,950,745, 8–30–60 Cl. 144—309.

Prentice Machine Works, Inc.: *See*—
Prentice, David V., and Heth. 2,950,745.

Price, Harold A., to Permanent Filter Corp. Quick opening doors for filters. 2,950,838, 8–30–60, Cl. 220—46.

Price, R. K., Associates, Inc.: *See*—
Bouet, Bernard M. E. 2,950,717.

Pritchett, Ervin G., and H. Greenberg, to National Distillers and Chemical Corp. Polymerization process. 2,951,068, 8–30–60, Cl. 260—94.9.

Pruitt, Malcolm E.: *See*—
Hefner, Robert E., and Pruitt. 2,951,094.

Pure Oil Co., The: *See*—
Bernard, George G. 2,950,760.

Quade, Edward A., to International Business Machines Corp. Magnetic storage device. 2,951,241, 8–30–60, Cl. 340—174.

Qvarnstrom, Birger A. E.: *See*—
Blomqvist, Ake H. P., and Qvarnstrom. 2,950,616.

Radian Corp.: *See*—
De Millar, Floyd O. 2,950,780.

Radio Corp. of America: *See*—
Barton, Loy E. 2,951,208.
Busanovich, Charles J. 2,951,105.
Covely, Frank D., 3rd, and Stocker. 2,951,236.
Fredendall, Gordon L. 2,951,206.
Griffiths, William C., Jr., and Smith. 2,951,172.
Herzog, Gerald B. 2,951,191.
Iannuzzi, William P., and Kelly. 2,951,115.
Kihn, Harry. 2,951,245.
Klesinger, Richard D., and Malle. 2,950,568.
Macovski, Albert. 2,951,117.
Spielberg, Arnold M., and Evans. 2,951,234.
Tanco, Felipe R., and Rivas. 2,951,233.
Umbreit, Stanton. 2,950,993.
Whitely, Richard L. 2,951,237.

Rae, Randolph S., to The Garrett Corp. Compound engine. 2,950,593, 8–30–60, Cl. 60—35.6.

Railway Maintenance Corp.: *See*—
McWilliams, James B. 2,950,687.

Rainsberger, Paul J., and D. H. Fischer, to Giannini Controls Corp. Re-set means for acceleration integrator. 2,950,908, 8–30–60, Cl. 264—1.

Rambosek, George M.: *See*—
Martin, Albert F., Pagel, and Rambosek. 2,951,004.

Ramo-Woolridge Corp., The: *See*—
Goodell, Everett M. 2,951,248.

Rathborne, Hair & Ridgway Box Co.: *See*—
Hutchison, George A. 2,950,852.

Rave, Joseph A., Jr., to The Cincinnati Milling Machine Co. Slowdown control for servosystem circuit. 2,951,193, 8–30–60, Cl. 318—448.

Raytheon Co.: *See*—
Carter, Howell L., Jr. 2,951,209.

Reda Pump Co.: *See*—
Arutunoff, Armais. 2,951,165.

Reddi, Mullapudi M.: *See*—
Bauerlein, Carl C., and Reddi. 2,950,684.

Reed, Thomas B.: *See*—
Anderson, John E., and Reed. 2,951,143.

Regie Nationale des Usines Renault: *See*—
Peras, Lucien. 2,950,940.

Reiner, Robert, Inc.: *See*—
Siegel, Walter P. 2,950,694.

Rekers, Louis J.: *See*—
Mador, Irving L., and Rekers. 2,950,954.

Render, Elijah F., to The Cincinnati Milling Machine Co. Centerless grinding machine for tapered work pieces. 2,950,580, 8–30–60, Cl. 51—103.

Rennenkampf, Leonard J., to International Telephone and Telegraph Corp. Automatic frequency search and track system. 2,951,150, 8–30–60, Cl. 250—20.

Reuter, Franz G., and J. Ulderup, to Mobay Chemical Co. Elastic polyurethane composition and method for making same. 2,951,053, 8–30–60, Cl. 260—28.

Revere Copper and Brass Inc.: *See*—
Wilkins, Richard A. 2,950,512.

Reynolds, Ellwood W., to Western Electric Co., Inc. Capstan drive apparatus. 2,950,810, 8–30–60, Cl. 203—227.

Reynolds Metals Co.: *See*—
Mostovych, Nicholas, and Cybriwsky. 2,951,025.
Oberg, William O. 2,950,815.

Rhodes, Joseph E., Jr., to Georgia Tech Research Institute. Microscope for viewing substantially transparent objects. 2,950,648, 8–30–60, Cl. 88—39.

Richards, Fred P. Dual flush control. 2,950,483, 8–30–60, Cl. 4—67.

Richter, Frederick H., and F. B. Snyder, to The Babcock & Wilcox Co. Apparatus for avoiding digester corrosion. 2,950,757, 8–30–60, Cl. 162—233.

Rick, Chester. Portable lamp. 2,950,802, 8–30–60, Cl. 248—282.

Rieke, John W.: *See*—
Hussey, Luther W., and Rieke. 2,951,124.

Ritscher, Karl. Ditch cleaning machine. 2,950,548, 8–30–60, Cl. 37—67.

Ritter, Eduard, and P. von Esch; said von Esch assor. to said Ritter. Didactic apparatus. 2,950,543, 8–30–60, Cl. 35—35.

Rivas, Luis A.: *See*—
Tanco, Felipe R., and Rivas. 2,951,233.

Rizzuto, Angelo A. Retractable caster structure. 2,950,498, 8–30–60, Cl. 16—33.

Robertshaw-Fulton Controls Co.: *See*—
Perkins, Charles H. 2,950,733.

Robertson, H. H., Co.: *See*—
Edgar, William L. 2,950,788.

Robeson, Max O.: *See*—
Luke, Oren V., Jr., Robeson, and Taylor. 2,951,095.

Robinson, John A., to Western Electric Co., Inc. Automatic gain control system. 2,951,210, 8–30–60, Cl. 331—40.

Rockwell, Harvey W., and D. W. Hawk, to Allis-Chalmers Mfg. Co. Retractable auxiliary wheels. 2,950,926, 8–30–60, Cl. 280—406.

Roederer, Edward P., Jr., to Phillips Petroleum Co. Sampling device and method for obtaining samples. 2,950,724, 8–30–60, Cl. 134—183.

Rogers, Francis R.: *See*—
Williams, Howard J., and Rogers. 2,950,857.

Rohm & Haas Co.: *See*—
Gusman, Samuel, and Rytina. 2,951,048.
Hurwitz, Melvin D. 2,950,558.
Smythe, Carl V., and Thomas. 2,950,974.

Ronzio, Anthony R. Chassis. 2,950,947, 8–30–60, Cl. 312—320.

Rose, Stanley E., and E. E. Helmo, to General Electric Co. Room air conditioner having vent control means. 2,950,667, 8-30-60, Cl. 98—94.

Roseman, Reuben: *See*—
Rummery, Frank O., Roseman, and Gilbert.

Rosenberg, David S., and E. Weil, to Hooker Chemical Corp. Process for making N-methyl pyrrole. 2,951,081, 8-30-60, Cl. 260—313.

Rosolia, Louis, and P. De Mauro, to Globe Lighting Products, Inc. Polishing machines. 2,950,493, 8-30-60, Cl. 15—21.

Roswell, William T., to Transit Research Corp. Rail truck. 2,950,689, 8-30-60, Cl. 105—138.

Rotax Ltd.: *See*—
Lambert, Harold L.

Rowland, Ben W., to Georgia Kaolin Co. Clay products and method of reducing clay viscosity. 2,950,983, 8-30-60, Cl. 106—288.

Rubenstein, David. Shock absorbing connections for building constructions. 2,950,576, 8-30-60, Cl. 50—128.

Rubenstein, David. Decorative structural element. 2,951,001, 8-30-60, Cl. 154—45.9.

Rubenstein, David. Reel-unit and method. 2,951,006, 8-30-60, Cl. 154—126.

Rudine, Vernon P. Snow coasting device. 2,950,922, 8-30-60, Cl. 280—12.

Ruetschi, Paul, to The Electric Storage Battery Co. Storage battery construction. 2,951,106, 8-30-60, Cl. 136—6.

Ruh, Robert P.: *See*—
Larsen, Eric R., and Ruh.

Rummery, Frank O., R. Roseman, and J. M. Gilbert, to The Glidden Co. Making cadmium red pigments. 2,950,984, 8-30-60, Cl. 106—301.

Ruscito, Anthony J., to The Bendix Corp. Method of making an electrical condenser. 2,951,002, 8-30-60, Cl. 154—90.

Rytina, Anton W.: *See*—
Gusman, Samuel, and Rytina.

Sabo, Stephen C., to The B. F. Goodrich Co. Inflatable flotation vest. 2,950,488, 8-30-60, Cl. 9—316.

St. John, Michael J.: *See*—
Christensen, Paul M., Landeck, and St. John.

St. Pierre, Henry. Traction chain for vehicles. 2,950,750, 8-30-60, Cl. 152—231.

Saito, Tomizo. Grinding disc for grinding mills. 2,950,572, 8-30-60, Cl. 241—296.

Salentine, Herbert M. Deep well pump reciprocator. 2,950,685, 8-30-60, Cl. 103—45.

Salisbury, Samuel H., and C. M. White, to Olin Mathieson Chemical Corp. Penetrant composition. 2,951,039, 8-30-60, Cl. 252—33.3.

Sander, Howard H., to United States of America, Atomic Energy Commission. Zero-time indicator. 2,951,201, 8-30-60, Cl. 324—68.

Sanders Associates, Inc.: *See*—
Dahlgren, Victor F.

Sauer, Richard W., and A. F. Weed, to The Atlantic Refining Co. Process for preparing stable heating oil. 2,951,038, 8-30-60, Cl. 208—226.

Saunders, Charles E., to United States of America, Navy. Synthetic lubricant composition. 2,951,041, 8-30-60, Cl. 252—34.7.

Savoca, Joseph I.: *See*—
Bodkin, Ernest A., and Savoca.

Schaeffer, William D., and J. D. Wordle, to Union Oil Co. of California. Separation of C-8 aromatic hydrocarbon isomers using Werner complexes. 2,951,104, 8-30-60, Cl. 260—669.

Schäfer, Rudolf: *See*—
Zosel, Kurt, and Schäfer.

Scherer, Karl. Accordion. 2,950,643, 8-30-60, Cl. 84—376.

Schering Corp.: *See*—
Charney, William.
Ginsberg, Helen F., and Papa.

Schiess Aktiengesellschaft: *See*—
Keyser, Johann J.

Schlack, Paul, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for dyeing and printing shaped structures of hydrophobic organic high polymers containing ester groups. 2,950,949, 8-30-60, Cl. 8—55.

Schlage, Ernest L., to Schlage Lock Co. Oil seal diaphragm. 2,950,499, 8-30-60, Cl. 16—51.

Schlage, Ernest L., and A. H. Green, to Schlage Lock Co. Door lock with button locking means. 2,950,615, 8-30-60, Cl. 70—216.

Schlage Lock Co.: *See*—
Schlage, Ernest L.
Schlage, Ernest L., and Green.

Schloemann Aktiengesellschaft: *See*—
Arens, Matthias.

Schlumberger Well Surveying Corp.: *See*—
Blanchard, Andre.

Schmid, Hermann, to General Precision, Inc. Pulse width modulators. 2,951,212, 8-30-60, Cl. 332—9.

Schmidt, Frederick A.: *See*—
Carlson, Oscar N., Schmidt, and Spedding.

Schnaible, Albert P.: *See*—
Haase, Elmer A., and Schnaible.

Scholz, Michael P., to Paragon Products Corp. Temperature regulated valve assembly. 2,950,866, 8-30-60, Cl. 236—87.

Schonfeld, Fred W., and J. T. Waber, to United States of America, Atomic Energy Commission. Plutonium-zirconium alloys. 2,950,967, 8-30-60, Cl. 75—122.7.

Scott, Stuart, and V. L. Hansley, to National Distillers and Chemical Corp. Production of metals. 2,950,963, 8-30-60, Cl. 75—84.5.

Schreiner, Kenneth E.: *See*—
Amdahl, Lowell D., Havens, Jeenel, Schreiner, Cedarholm, and Eichenberger.

Schrodt, John P.: *See*—
Craig, David N., and Schrodt.

Schroeder, Hansjuergen A., and C. J. Grundmann, to Olin Mathieson Chemical Corp. 2,4-bis-haloalkyl-6-alkoxy-1,3,5-triazines and their preparation. 2,951,079, 8-30-60, Cl. 260—248.

Schuerch, Hans U., to United States of America, Army. Flutter simulator. 2,950,619, 8-30-60, Cl. 73—67.2.

Schwabe, Dr. Willmar, G.m.b.H.: *See*—
Krause, Fiedler, Ursula, and Neu.

Schwan, Judith A., and C. M. Spath, to Eastman Kodak Co. Color developers containing polyethylene glycols. 2,950,970, 8-30-60, Cl. 96—55.

Schwartz, Bernard P. M., and J. G. C. Agnew, to Thoka Machinery Supplies Ltd. Planetary gear reversing drive means controlled by snap action clutch means. 2,950,490, 8-30-60, Cl. 10—138.

Schwoebel, Richard L., to General Mills, Inc. Balloon and gondola assembly. 2,950,881, 8-30-60, Cl. 244—31.

Seaborg, Glenn T., and A. C. Wahl, to United States of America, Atomic Energy Commission. Electrodeposition of neptunium. 2,951,018, 8-30-60, Cl. 204—1.5.

Seaborg, Glenn T., and R. W. Stoughton, to United States of America, Atomic Energy Commission. Method of producing U^{233}. 2,951,023, 8-30-60, Cl. 204—154.2.

Seamone, Woodrow: *See*—
Fletcher, Harold K., Seamone, and Wolpin.

Searle, G. D., & Co.: *See*—
Pappo, Raphael.

Self-Changing Gears Ltd.: *See*—
Miller, Albert A.

Seuckel, Karlheins. Method and device for mixing gasoline and air in cylinders of internal combustion engines. 2,950,706, 8-30-60, Cl. 123—32.

Sevin, Wallace P.: *See*—
Stewart, Robert M., and Sevin.

Seybold, Frederick W. Automatic transmission. 2,950,631, 8-30-60, Cl. 74—677.

Seymour, Harvey W., to American Chain & Cable Co., Inc. Method and apparatus for coating ferrous metal with aluminum. 2,950,991, 8-30-60, Cl. 117—103.

Shadle, Floyd H. Sickle sharpener. 2,950,577, 8-30-60, Cl. 51—56.

Shafer, Richard C.: *See*—
Heckman, Edward A., Kuba, and Shafer.

Shaffer, Marlin R., and R. L. Weisbrich, to Hoffman Electronics Corp. Versatile solar powered radio receiver or the like. 2,951,163, 8-30-60, Cl. 250—212.

Shahbender, Rabah A., to Minneapolis-Honeywell Regulator Co. Belt driven systems. 2,951,118, 8-30-60, Cl. 178—7.6.

Shank, Joseph L.: *See*—
Silliker, John H., Shank, and Murphy.

Shaver, Richard C.: *See*—
Cowles, Edwin, and Shaver.

Sheard, Marville F. Grain separator. 2,950,720, 8-30-60, Cl. 130—21.

Shearer, Newton H., Jr.: *See*—
Coover, Harry W., Jr., and Shearer.

Sheffield Corp., The: *See*—
Straw, Jesse H.

Sherard, David S. Indicator dial counter computer for gas, light and water meters. 2,950,861, 8-30-60, Cl. 235—61.

Sherk, Fred T., to Phillips Petroleum Co. Carbonate leach uranium milling process. 2,950,951, 8-30-60, Cl. 23—14.5.

Sherritt Gordon Mines Ltd.: *See*—
Forward, Frank A., Veltman, and Vizsolyi.

Sherwin-Williams Co., The: *See*—
Berthold, Alfred, and Grummitt.
Blank, Robert E.

Shiels, Robert A., to The Mead Corp. Combination display shelf and divider or separator for a stack of columnar articles. 2,950,820, 8-30-60, Cl. 211—49.

Short, Grace L. Easy open and close jar lid. 2,950,833, 8-30-60, Cl. 215—63.

Short, Harold O., to The Black and Decker Mfg. Co. Combination portable electric drill and screwdriver. 2,950,626, 8-30-60, Cl. 74—333.

Shwayder Bros., Inc.: *See*—
Axtell, Willard G.
Axtell, Willard G.

Sichak, William, and R. T. Adams, to International Telephone and Telegraph Corp. Radio diversity receiving system. 2,951,152, 8-30-60, Cl. 250—20.

Siebert, Arthur: *See*—
Brenneisen, Erich, Huss, and Siebert.

Siegel, Walter P., to Robert Reiser, Inc. Boring attachment for embroidery machine. 2,950,694, 8-30-60, Cl. 112—83.

Silliker, John H., J. L. Shank, and R. E. Murphy, to Swift & Co. Poultry chilling. 2,950,977, 8-30-60, Cl. 99—194.

Silverberg, Bernard M., and F. D. Jones, to Deere & Co. Coupling for power take-off shaft. 2,950,938, 8-30-60, Cl. 287—130.

Silvray Lighting, Inc.: *See*—
Gilbert, James M.

Simplex Corp.: *See*—
Compton, Henry P.

Sinclair Refining Co.: *See*—
Lorenz, Walter F., Keith, and Hettinger.

Sinden, Alfred D., to Stephens-Adamson Mfg. Co. Material handling apparatus. 2,950,809, 8-30-60, Cl. 198—202.

Sites, Benjamin L., and F. R. Paschke, to Miehle-Goss-Dexter, Inc. Apparatus for making corrected color separation records. 2,951,116, 8-30-60, Cl. 178—5.4.

Skinner, M. B., Co.: *See*—
Merrill, Patterson D., and Waite.

Skumawitz, Max, to Tornado Ramset G.m.b.H. & Co. Apparatus for shooting in bolts. 2,950,481, 8-30-60, Cl. 1—106.

Slater, William O., and A. J. Monack, to Mycalex Electronics Corp. Method of making electrode structures. 2,950,574, 8-30-60, Cl. 49—81.

Sletzinger, Meyer, and S. Karady, to Merck & Co., Inc. 16-lower alkyl steroids. 2,951,075, 8-30-60, Cl. 260—239.57.

Slupter, Albertus. Musical instrument. 2,950,642, 8-30-60, Cl. 84—236.

Small, Leroy J., to Memphis Metal Mfg. Co., Inc. Carton lid holder. 2,950,514, 8-30-60, Cl. 24—31.

Smiley, Earl L., to J. C. O'Connor & Sons, Inc. Apparatus for positioning reinforcement mesh in concrete. 2,950,659, 8-30-60, Cl. 94—39.

Smith, Arthur W., to Aircushion Patents Corp. Method and apparatus for sampling well fluids. 2,950,759, 8-30-60, Cl. 166—3.

Smith, Benjamin F.: *See*—
McKinley, John K., Smith, and Dickens.

Smith-Blair, Inc.: *See*—
Dunmire, Paul G.

Smith, Bruce K., to Sperry Rand Corp. Indicating device for magnetic amplifiers. 2,951,238, 8-30-60, Cl. 340—174.

Smith, Forrest E., to The Frog, Switch & Mfg. Co. Crusher construction. 2,950,871, 8-30-60, Cl. 241—217.

Smith, Howard W., to Boeing Airplane Co. Lift modifying protuberance and airfoil combinations. 2,950,879, 8-30-60, Cl. 244—41.

Smith, Ira E.: *See*—
Griffiths, William C., Jr., and Smith.

Smith, Robert M., to General Electric Co. Vacuum cleaner nozzle construction. 2,950,497, 8-30-60, Cl. 15—355.

Smith, Sidney T., to United States of America, Navy. Projection storage tube. 2,951,177, 8-30-60, Cl. 315—12.

Smith, Stephen H., to Norton Co. Crankpin grinding apparatus. 2,950,586, 8-30-60, Cl. 51—237.

Smith, William T.: *See*—
Holman, Lee B., and Smith.

Smithberg, Floyd E.: *See*—
Pierson, Arnold A., Smithberg, Supitilov.

Smythe, Carl V., and D. W. Thomas, to Rohm & Haas Co. Conversion of flavonoid glycosides. 2,950,974, 8-30-60, Cl. 99—106.

Snyder, Frederick B.: *See*—
Richter, Frederick H., and Snyder.

Soabar Co.: *See*—
Tamaccio, David L.

Soc per As Fabbrica Motocicli e Velo-cipedi Eldorado Bianchi: *See*—
De Stefani, Romolo.

Societe Anonyme Asservelec: *See*—
De Gaillard, Robert.

Socony Mobil Oil Co., Inc.: *See*—
Bodkin, Ernest A., and Savoca.
Holzinger, Rudolph J.

Sommerstein, Cwi. Dual saliva ejector. 2,950,533, 8-30-60, Cl. 32—33.

Sonnino, Mario, to American Cyanamid Co. Tow-processing apparatus which includes a knot-detecting assembly. 2,950,520, 8-30-60, Cl. 28—64.

Sower, Albert J. Machine for making carpet anchor strips. 2,950,480, 8-30-60, Cl. 1—1.

Sowinski, Francis A., W. A. Lott, and J. Bernstein, to Olin Mathieson Chemical Corp. Triamine derivatives. 2,951,092, 8-30-60, Cl. 260—553.

Spannhake, Ernst W.: *See*—
Clark, Ralph B., and Spannhake.

Spath, Catherine M.: *See*—
Schwan, Judith A., and Spath.

Speedie, John D., and G. W. Hull, to The Distillers Co. Ltd. Cobalamin producing fermentation process. 2,951,017, 8-30-60, Cl. 195—96.

Spedding, Frank H.: *See*—
Carlson, Oscar N., Schmidt, and Spedding.

Spencer, Arthur J., to The British Tabulating Machine Co. Ltd. Magnetic core storage devices. 2,951,239, 8-30-60, Cl. 340—174.

Spencer, Rolf E., to Electric & Musical Industries Ltd. Quadratic interpolating devices. 2,950,864, 8-30-60, Cl. 235—197.

Sperry Rand Corp.: *See*—
Hecht, Herbert, and Thomson.
McCartney, Earl J.
McDuffie, James W.
Nolt, Edwin B., Eberly, and McDuffie.
Smith, Bruce K.

Spielberg, Arnold M., and D. W. Evans, to Radio Corp. of America. Storage interrogation system. 2,951,234, 8-30-60, Cl. 340—172.5.

Sprague, James M., and E. L. Engelhardt, to Merck & Co., Inc. Substituted thiaxanthenes. 2,951,062, 8-30-60, Cl. 260—328.

Square D Co.: *See*—
Broyles, Addison K., Mierendorf, and Porter.

Stahlhut, Lee G., to Day-Brite Lighting, Inc. Mounting fixture for tubular lamp sockets. 2,951,148, 8-30-60, Cl. 240—51.11.

Staines, Alfred J., to Harris-Intertype Corp. Sheet feeding apparatus. 2,950,913, 8-30-60, Cl. 271—26.

Staley, William C., to Greenwood Engineering Co., Inc. Printer-slotters. 2,950,677, 8-30-60, Cl. 101—350.

Stalker Corp., The: *See*—
Stalker, Edward A.

Stalker, Edward A., to The Stalker Corp. Sheet metal rotors for compressors and turbines. 2,950,858, 8-30-60, Cl. 230—134.

Standard Oil Co. (Indiana): *See*—
Adams, Chester E., and Meyer.

Standfuss, Ernest R., to The Burch Corp. Road surfacing material spreader. 2,950,660, 8-30-60, Cl. 94—46.

Starworth, Irving J. Toothbrush holder. 2,950,946, 8-30-60, Cl. 312—207.

State Steel Products, Inc.: *See*—
Holman, Lee B., and Smith.

Stattel, Raymond J.: *See*—
Torpy, Daniel J., and Stattel.

Stavenau, Harold L., to Truth Tool Co. Awning type window structure. 2,950,509, 8-30-60, Cl. 20—42.

Steel, W., & Co. Ltd.: *See*—
Hall, William J.

Steelman, Alice M. Educational aid for teaching arithmetic. 2,950,542, 8-30-60, Cl. 35—31.

Stein, Stephen. Medical therapy equipment having a radioactive source. 2,951,162, 8-30-60, Cl. 250—106.

Steinberg, Nathan G.: *See*—
Chemerda, John M., Hirschmann, and Steinberg.

Stephany, Emil W. Collapsible ironing board. 2,950,532, 8-30-60, Cl. 38—139.

Stephen, William E., and C. G. Tilley, to Imperial Chemical Industries Ltd. Monoazo dyestuffs. 2,951,070, 8-30-60, Cl. 260—153.

Stephens-Adamson Mfg. Co.: *See*—
Gerberich, Donald E.
Sinden, Alfred D.

Stephens, Donald L., to Pacific Car and Foundry Co. Cycloidal propeller having low frictional drag losses of the rotor. 2,950,764, 8-30-60, Cl. 170—147.

Stephens, Joseph F., to Gustin-Bacon Mfg. Co. Ventilating air discharge muffler. 2,950,776, 8-30-60, Cl. 181—42.

Stephens, Joseph F., to Gustin-Bacon Mfg. Co. Glass fiber reinforced tape and method of making same. 2,951,003, 8-30-60, Cl. 154—90.

Sterick, Harrison D. Salamander burners. 2,950,713, 8-30-60, Cl. 126—85.

Sterick, Harrison D. Heating unit. 2,950,714, 8-30-60, Cl. 126—92.

Stern, Daniel: *See*—
Hardigan, Blanche, and Stern.

Stevenson, Derek A.: *See*—
Taylor, Harold M., and Stevenson.

Stevenson, Walter R., and W. P. Yanik, to Borg-Warner Corp. Clothes dryer. 2,950,539, 8-30-60, Cl. 34—45.

Stewart, Robert M., and W. P. Sevin, to Chemetron Corp. Apparatus for contacting solids with liquids. 2,950,998, 8-30-60, Cl. 127—7.

Stier, Reinhart, to Robert Bosch, G.m.b.H. Hydraulic system for automatically adjusting the relative angular position of two coaxial rotary bodies. 2,950,610, 8-30-60, Cl. 64—24.

Stingley, Norman H., to The Osborn Mfg. Co. Polishing and deburring wheel. 2,950,495, 8-30-60, Cl. 15—179.

Stinson, John M.: *See*—
Striplin, Marcus M., Jr., Stinson, and Potts.

Stocker, Arthur C.: *See*—
Covely, Frank D., 3rd, and Stocker.

Stoller, Michael K. Film treatment applicator. 2,950,664, 8-30-60, Cl. 96—13.

Stoughton, Raymond W.: *See*—
Seaborg, Glenn T., and Stoughton.

Straw, Jesse H., to The Sheffield Corp. Machine tool. 2,950,654, 8-30-60, Cl. 90—1.4.

Streeter-Amet Co.: *See*—
Kennedy, Verne C., Jr.

Streeter, Victor L., to The Dole Valve Co. Flow control resistance. 2,950,735, 8-30-60, Cl. 137—519.

Striplin, Marcus M., Jr., J. M. Stinson, and J. M. Potts, to Tennessee Valley Authority. Production of liquid fertilizers. 2,950,961, 8-30-60, Cl. 71—42.

Strumwasser, Eric: *See*—
Berk, Aristid D., and Strumwasser.

Stuart, Archibald P., to Sun Oil Co. Desulfurization of hydrocarbons with a mixture of a group VIII metal and group VIII metal oxide or sulfide. 2,951,034, 8-30-60, Cl. 208—244.

Studebaker, Isaac Roger, and W. W. Greutman, to International Telephone & Telegraph Corp. Cathode-ray tube system. 2,951,180, 8-30-60, Cl. 315—24.

Studien Gesellschaft Kohle m.b.H.: *See*—
Zosel, Kurt, and Schäfer.

Sugarman, Robert M., to United States of America, Atomic Energy Commission. Sampling oscilloscope. 2,951,181, 8-30-60, Cl. 315—24.

Sun Oil Co.: *See*—
Stuart, Archibald P.
Tench, John D., Ferris, and Duling.

Supitilov, Michael C.: *See*—
Pierson, Arnold A., Smithberg, and Supitilov.

Suzuki, Shigemasa. Process for molding hard polyvinyl chloride. 2,950,504, 8-30-60, Cl. 18—58.

Svensson, Sven Alvar, to Ingeniorsfirman Fliesberg AB. Vacuum control valve device. 2,950,730, 8-30-60, Cl. 137—116.3.

Swanson, Edwin W., to Electric Machinery Mfg. Co. Devices for reducing shaft currents in rotating electric machines. 2,951,166, 8-30-60, Cl. 310—68.

Swift & Co.: *See*—
Silliker, John H., Shank, and Murphy.

Sylvania Electric Products Inc.: *See*—
Faria, Sixdeniel, and Goldberg.
Yando, Stephen.

Syntron Co.: *See*—
Gilbert, Walter J.

Tack, Carl E., to American Steel Foundries. Railway brake. 2,950,781, 8-30-60, Cl. 188—52.

Tallman, Laurence C.: *See*—
McBean, Douglas M., and Tallman.

Tamaccio, David L., to Soabar Co. Ticketing. 2,950,555, 8-30-60, Cl. 40—20.

Tanco, Felipe R., and L. A. Rivas, to Radio Corp. of America. Information storage system. 2,951,238, 8-30-60, Cl. 340—172.5.

Tann Corp.: *See*—
Ovshinsky, Herbert C.

Tarmy, Barry L.: *See*—
Hartsband, Harry M., Tarmy, and Long.

Taylor, Harold M., and D. A. Stevenson, to B. W. Crabtree & Sons Ltd. Trip mechanism for printing machines. 2,950,674, 8-30-60, Cl. 101—185.

Taylor, Wallace E.: *See*—
Luke, Oren V., Jr., Robeson, and Taylor. 2,951,095.
Teach, John D., S. W. Ferris, and I. N. Duling, to Sun Oil Co. Wax compositions comprising 3–15% of a paraffin wax with a melting point of 125–135° F. and 85–97% of a paraffin wax with a melting point of 136–147° F. 2,951,028, 8–30–60, Cl. 206—21.
Tennessee Valley Authority: *See*—
Striplin, Marcus M., Jr., Stinson, and Potts. 2,950,961.
Terry, George C., to Kamkap, Inc. Blower unit for charcoal grills. 2,950,660, 8–30–60, Cl. 90—421.
Terry, George C., to Kamkap, Inc. Air intake device for charcoal grills. 2,950,711, 8–30–60, Cl. 126—25.
Terry, George C., to Kamkap, Inc. Charcoal grill with removable fire box. 2,950,712, 8–30–60, Cl. 126—25.
Texaco Inc.: *See*—
McKinley, John K., Smith, and Dickens. 2,950,956.
Texas Instruments Inc.: *See*—
Epstein, Henry D. 2,951,187.
Lemson, Jack. 2,951,204.
Thoka Machinery Supplies Ltd.: *See*—
Schwartz, Bernard P. M., and Agnew. 2,950,490.
Thomas, Dudley W.: *See*—
Smythe, Carl V., and Thomas. 2,950,974.
Thomas, James R.: *See*—
Weber, Joseph A., Thomas, and Jackson. 2,950,623.
Thompson Ramo Wooldridge Inc.: *See*—
Ledel, Alvin L., and Barish. 2,950,986.
Thomson, Harry C.: *See*—
Hecht, Herbert, and Thomson. 2,951,213.
Thomson, John W., Jr., to Owens-Illinois Glass Co. Sealing means for empty glass containers. 2,950,814, 8–30–60, Cl. 206—65.
Tiers, George V. D., to Minnesota Mining and Mfg. Co. Perfluoro-substituted aliphatic acids and derivatives thereof. 2,951,051, 8–30–60, Cl. 260—23.
Tilley, Colin G.: *See*—
Stephen, William E., and Tilley. 2,951,070.
Tilley, Colin G., to Imperial Chemical Industries Ltd. New Monoazo dyestuffs. 2,951,071, 8–30–60, Cl. 260—163.
Tilley, Colin G., and F. A. Waite, to Imperial Chemical Industries Ltd. Monoazo dyestuffs of the azo naphthalene series containing a monohalogeno-S-triazine nucleus. 2,951,072, 8–30–60, Cl. 260—163.
Tillman, Reuel Q., and A. G. Pieper, to United States of America, Navy. Voltage measuring device. 2,951,203, 8–30–60, Cl. 324—111.
Timms, Rose L., 50% to A. Foster, 5% to A. H. Oldham and 5% to V. L. Oldham. Apparatus for identifying paper money, or the like, as genuine, and for making change or the like. 2,950,799, 8–30–60, Cl. 194—4.
Timms, Rose L., 50% to A. Foster, 5% to A. H. Oldham and 5% to V. L. Oldham. Apparatus for identifying paper money or the like, as genuine, and for making change or the like. 2,951,164, 8–30–60, Cl. 250—219.
Tornado-Rameet G.m.b.H., & Co.: *See*—
Skumawitz, Max. 2,950,481.
Torpy, Daniel J., and R. J. Stattel, to United States of America, Navy. Tape playback system. 2,951,243, 8–30–60, Cl. 340—174.1.
Towle, Elton L.: *See*—
Leopold, Wilbur R., and Towle. 2,950,686.
Towne, Claude M., to General Metals Corp. Clutched handle for tool shanks. 2,950,746, 8–30–60, Cl. 145—77.
Transit Research Corp.: *See*—
Rossell, William T. 2,950,689.
Truth Tool Co.: *See*—
Stavenau, Harold L. 2,950,509.
Tucker, Morton. Vent locking means for awning type windows. 2,950,510, 8–30–60, Cl. 20—42.
Tung-Sol Electric Inc.: *See*—
Firth, Bernard G. 2,950,994.
Tupper Corp.: *See*—
Tupper, Earl S. 2,950,847.
Tupper, Earl S., to Tupper Corp. Pitcher and seal therefor. 2,950,847, 8–30–60, Cl. 222—465.
Twiford, Harry G. Wheel rim holding web. 2,950,744, 8–30–60, Cl. 144—288.
Tyler Refrigeration Corp.: *See*—
Hennion, Joseph B. 2,950,605.
Uebing, Heinrich, to Friedrich Kochs, G.m.b.H. Knockout axle assembly. 2,950,934, 8–30–60, Cl. 287—53.
Ujejski, Ludwik, and K. M. Gaver, to The Ogilvie Flour Mills Co., Ltd. Preparation of DL-glutamine. 2,951,090, 8–30–60, Cl. 260—534.
Ulderup, Jurgen: *See*—
Reuter, Franz G., and Ulderup. 2,951,053.
Ulinski, Bronislaus I., to The Yale & Towne Mfg. Co. Gear drive steering and traction unit. 2,950,773, 8–30–60, Cl. 180—13.
Ullmann, Werner, to Agie A.G. fur industrielle Elektronik. Method and arrangement for spark erosion by alternating current. 2,951,142, 8–30–60, Cl. 219—69.
Umbreit, Stanton, to Radio Corp. of America. Oxide coated cathodes and method of manufacture. 2,950,993, 8–30–60, Cl. 117—219.
Underwood Corp.: *See*—
Yerks, Richard W. 2,950,802.
Union Carbide Corp.: *See*—
Anderson, John E., and Reed. 2,951,143.
Bailey, Donald L., and Pike. 2,950,986.
Breck, Donald W., and Acara. 2,950,952.
Hawley, George F., and Cowden. 2,950,867.
Kennedy, Harry E., and Claussen. 2,951,000.
Pilloton, Roger L. 2,951,091.
Union Oil Co. of California: *See*—
Inwood, Texas V. 2,951,032.
Schaeffer, William D., and Wordie. 2,951,104.
Union Steel Products Co.: *See*—
Averill, Charles C. 2,950,825.
United Biscuit Co. of America: *See*—
Margetts, Hyrum R. 2,950,657.
United-Carr Fastener Corp.: *See*—
Bedford, William A., Jr. 2,950,937.
Cochran, Clarence W. 2,950,513.
United Shoe Machinery Corp.: *See*—
Barker, William A. 2,950,491.
United States of America
Air Force: *See*—
Null, Fay E. 2,951,175.
Army: *See*—
Bomke, Hans A., Minnerly, and Mount. 2,951,214.
Harvey, Earle M. 2,950,653.
Manfredi, Anthony J. 2,951,183.
O'Brien, John F. 2,950,852.
Schuerch, Hans U. 2,950,619.
Atomic Energy Commission: *See*—
Cambill, Wallace R., and Greene. 2,950,604.
Carlson, Oscar N., Schmidt, and Spedding. 2,950,962.
Sander, Howard H. 2,951,201.
Schonfeld, Fred W., and Waber. 2,950,967.
Seaborg, Glenn T., and Stoughton. 2,951,023.
Seaborg, Glenn T., and Wahl. 2,951,018.
Sugarman, Robert M. 2,951,181.
Wehrmann, Ralph F. 2,951,020.
Wouters, Louis F. 2,951,158.
Navy: *See*—
Babcock, Elden R. 2,950,791.
Bennon, Saul. 2,950,698.
Buehler, William J., and Nachman. 2,950,526.
Chance, Britton, and Griggs. 2,950,880.
Craig, David N., and Schrodt. 2,950,999.
De Vost, Valmore F. 2,950,622.
Halpern, Otto, and Johnson. 2,951,240.
Halpern, Otto, Johnson, and Wright. 2,951,247.
McCurdy, Robert J. 2,951,205.
Saunders, Charles E. 2,951,041.
Smith, Sidney T. 2,951,177.
Tillman, Reuel Q., and Pieper. 2,951,203.
Torpy, Daniel J., and Stattel. 2,951,243.
United States Steel Corp.: *See*—
Camp, James B. 2,950,640.
United States Trust Co.: *See*—
Getas, James L. 2,950,611.
Universal Oil Products Co.: *See*—
Hoekstra, James, and Michalko. 2,950,965.
University of Tennessee Research Corp.: *See*—
Hertel, Kenneth L. 2,950,784.
Upjohn Co., The: *See*—
Carman, Harold G. 2,951,014.
Jensen, Erik H. 2,951,009.
Updegraff, Ivor H., and R. H. Hunt, to American Cyanamid Co. Resinous curing process using tetrahydro-1 H-oxazolo-(3,4,c)-oxazole-7a-methanol. 2,951,058, 8–30–60, Cl. 260—59.
Van Antwerpen, Lloyd D. Shipping carton for wrap-around rear windows and windshields of automobiles. 2,950,812, 8–30–60, Cl. 206—62.
Vancamp, Raymond M.: *See*—
Ellsworth, Arthur C., and Vancamp. 2,951,103.
Van der Heide, Hendrik: *See*—
Esveldt, Cornelis J., Van der Heide, and Wijn. 2,951,042.
Van Valkenburgh, Horace B.: *See*—
Andrews, Albert. 2,950,704.
Van Volkenburgh, Edna S. Fish gripper. 2,950,939, 8–30–60, Cl. 294—16.
Veltman, Herbert: *See*—
Forward, Frank A., Veltman, and Vizsolyi. 2,950,964.
Ve Relle, William H. Chemical dispenser. 2,950,939, 8–30–60, Cl. 23—267.
Vitagen Corp.: *See*—
Cameron, Jack W. 2,950,973.
Vitro Corp. of America: *See*—
Cicala, Vincent, and Jackson. 2,950,884.
Vizsolyi, Andrew I.: *See*—
Forward, Frank A., Veltman, and Vizsolyi. 2,950,964.
Voigtlander A.G.: *See*—
Meixner, Alfred. 2,950,665.
Vokaty, Leo F.: *See*—
Bollmeier, Emil W., and Vokaty. 2,951,109.
Void, Gordon A.: *See*—
O'Brien, Robert J., and Void. 2,950,590.
Von Esch, Paul: *See*—
Ritter, Eduard, and Von Esch. 2,950,543.
Voss, Waldemar E., to L. Adams Ltd. Control valve. 2,950,898, 8–30–60, Cl. 251—214.
Waber, James T.: *See*—
Schonfeld, Fred W., and Waber. 2,950,967.
Wagner, Ernst, to Deutsche Gold- und Silber-Scheideanstalt. Process for the preparation of finely divided ferromagnetic ferric oxide. 2,950,955, 8–30–60, Cl. 23—200.
Wagner, Ernst, and J. Diether, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Stable dispersions of metal oxide blends and process for their manufacture. 2,951,044, 8–30–60, Cl. 252—313.
Wagner, Robert A., to Hiller Aircraft Corp. Vibration absorbing system and method for rotary wing aircraft blades. 2,950,768, 8–30–60, Cl. 170—160.55.
Wahl, Arthur C.: *See*—
Seaborg, Glenn T., and Wahl. 2,951,018.
Waite, Frederick A.: *See*—
Tilley, Colin G., and Waite. 2,951,072.
Waite, Harry T., Jr.: *See*—
Merrill, Patterson D., and Waite. 2,950,637.
Walch, Eugen, and U. Aldinger, to R. Bosch, G.m.b.H. Injection pump arrangement for multi-cylinder internal combustion engines. 2,950,681, 8–30–60, Cl. 103—2.
Wales, Jess P., to Mine and Smelter Supply Co. Ball mill grates. 2,950,869, 8–30–60, Cl. 241—70.
Walker, Thomas Ltd.: *See*—
Wood, Herbert H. 2,950,516.

Walsh, Edward F., to The Poliak Steel Co. Sign support. 2,950,767, 8–30–60, Cl. 189—23.
Walter, Carl W.: *See*—
Bellamy, David, Jr., and Walter. 2,950,716.
Walworth Co.: *See*—
Bryant, Austin U. 2,950,897.
Ward, Wallace, to E. I. du Pont de Nemours and Co. Preparation of chlorine. 2,950,957, 8–30–60, Cl. 23—219.
Warren, S. D., Co.: *See*—
Freeman, Eben W. 2,950,989.
Warshawsky, Curtis B., to Hycon Mfg. Co. Aerial camera. 2,950,663, 8–30–60, Cl. 95—12.5.
Washburn, Robert H., to Beloit Iron Works. Paper drier. 2,951,139, 8–30–60, Cl. 219—10.61.
Watrous, Robert B., to Minneapolis-Honeywell Regulator Co. Flapper valve. 2,950,728, 8–30–60, Cl. 137—82.
Watson, Paul C., and H. O. McMahon, to American Viscose Corp. Apparatus and method for the production of reticulate webs. 2,950,752, 8–30–60, Cl. 154—1.
Weaver, John B., to Congoleum-Nairn Inc. Process of imparting smoothness to the surface of a thermoplastic sheet. 2,950,502, 8–30–60, Cl. 18—48.
Weber, Joseph A., J. R. Thomas, and R. W. Jackson; said Thomas and said Jackson assors. to said Weber. Driving mechanism. 2,950,625, 8–30–60, Cl. 74—117.
Webster, Darwell H.: *See*—
Fisher, Charles R., Jr., Harris, and Webster. 2,951,242.
Weed, Arthur F.: *See*—
Sauer, Richard W., and Weed. 2,951,033.
Wehrmann, Ralph F., to United States of America, Atomic Energy Commission. Method for electrodepositing polonium. 2,951,020, 8–30–60, Cl. 204—45.
Weikel, Claude O. Lever and endless chain log turner for saw mill carriages. 2,950,742, 8–30–60, Cl. 143—102.
Weil, Edward: *See*—
Rosenberg, David S., and Weil. 2,951,081.
Weisbrich, Robert L.: *See*—
Shaffer, Marlin R., and Weisbrich. 2,951,163.
Weiss, Thomas B. Folded container. 2,950,853, 8–30–60, Cl. 229—24.
Weissman, Lowell H.: *See*—
Weissman, Samuel M., L. H., and Haimes. 2,950,676.
Weissman, Samuel M., L. H., and S. L. Haimes, to Bankers & Merchants, Inc. Stamp. 2,950,676, 8–30–60, Cl. 101—334.
Welch, John F., to Carpart Corp. Accessory for rotary power driven tools. 2,950,584, 8–30–60, Cl. 51—195.
Wells, Alton R. Dual calibration thermostat (hot casing). 2,951,136, 8–30–60, Cl. 200—113.
Welsh, Warren A., to Western Electric Co., Inc. Statistical data accumulator. 2,951,235, 8–30–60, Cl. 340—172.5.
Western Electric Co., Inc.: *See*—
Gothe, Walter C., and Hinkle. 2,951,146.
Heckman, Edward A., Kuba, and Shafer. 2,951,144.
McGrath, John W. 2,951,187.
Reynolds, Ellwood W. 2,950,810.
Robinson, John A. 2,951,210.
Welsh, Warren A. 2,951,235.
Weyerhaeuser Co.: *See*—
Johnson, Kenneth F. 2,950,830.
Wheat, Vernon D., and W. Hadfield, Sr., to American Viscose Corp. Permanent crimping process. 2,950,521, 8–30–60, Cl. 28—72.
Wheeler, Ralph W., Jr.: *See*—
Deacon, Frederick S., and Wheeler. 2,950,988.
Whirlpool Corp.: *See*—
Lannert, James W. 2,950,868.
Whirry, Walter L.: *See*—
Nelson, Conrad E., and Whirry. 2,951,216.
White, Chester M.: *See*—
Salisbury, Samuel H., and White. 2,951,039.
White, Thomas A. Rotary drilling bit. 2,950,903, 8–30–60, Cl. 255—61.
Whitely, Richard L., to Radio Corp. of America. Magnetic device. 2,951,237, 8–30–60 Cl. 340—174.
Wier, Arthur H., to Center Master Corp. Drill press attachment. 2,950,636, 8–30–60, Cl. 77—55.
Wiese, Herbert K. J. P. Nelson, and C. E. Morrell, to Esso Research and Engineering Co. Cyclo-diene silane derivatives. 2,951,057, 8–30–60, Cl. 260—46.5.
Wigginton, Scott F. Brush tool. 2,950,546, 8–30–60, Cl. 37—2.
Wightman, Robert E., to Phillips Petroleum Co. Detection of water or other materials in the effluent from an underground storage cavern. 2,950,601, 8–30–60, Cl. 61—.5.
Wijn, Henricus P. J.: *See*—
Esveldt, Cornelis J., Van der Heide, and Wijn. 2,951,042.
Wilkins, Richard A., to Revere Copper and Brass Inc. Casting apparatus and method. 2,950,512, 8–30–60, Cl. 22—57.2.
Williams, Frederic C., to International Business Machines Corp. Apparatus for storing trains of pulses. 2,951,176, 8–30–60, Cl. 315—12.
Williams, Howard J., and F. R. Rogers, to The Bendix Corp. Power control system for gas turbine engines. 2,950,857, 8–30–60, Cl. 230—114.
Wilson, John H. Chain positioning tool. 2,950,899, 8–30–60, Cl. 254—78.
Wilson, Robert W., to R. H. Bouligny, Inc. Press wheel assembly for planting implements. 2,950,770, 8–30–60, Cl. 172—538.
Winter Dump Co. Ltd., The: *See*—
Irwin, Leslie C. 2,950,828.
Winter, John S.: *See*—
Laucher, Richard G., Winter, and Johnston. 2,950,595.
Withers, Louis A. Paper glove and method and apparatus for producing same. 2,950,482, 8–30–60, Cl. 2—169.
Woidka, Frank J. Apparatus for supporting clotheslines or the like. 2,950,823, 8–30–60, Cl. 211—119.1.
Wolfson, Byron L. Automatic jump rope apparatus. 2,950,-779, 8–30–60, Cl. 185—37.
Wolpin, Martin P.: *See*—
Fletcher, Harold E., Seamone, and Wolpin. 2,950,703.
Wood, Herbert H., to Thomas Walker Ltd. Separable fastening devices for wearing apparel. 2,950,516, 8–30–60, Cl. 24—222.
Wood, Marc, Societe Anonyme pour la Promotion des Echanges Techniques Internationaux: *See*—
Gewiss, Lucine V. 2,950,656.
Woods, Doris M.: *See*—
Woods, George B. 2,950,487.
Woods, George B., deceased (D. M. Woods, executrix), ⅛ to E. F. Connors, Jr. Swimming fin device. 2,950,487, 8–30–60, Cl. 9—304.
Woods, Leroy R., to International Electronic Research Corp. Tube shield and base assembly. 2,951,108, 8–30–60, Cl. 174—35.
Worden, Howard L. Buoyant wobbling type fish lure. 2,950,560, 8–30–60, Cl. 43—42.19.
Wordie, John D.: *See*—
Schaeffer, William D., and Wordie. 2,951,104.
Worthington Corp.: *See*—
Hilkemeier, Louis. 2,950,906.
Leopold, Wilbur R., and Towle. 2,950,683.
Wouters, Louis F., to United States of America, Atomic Energy Commission. Radiation wave detection. 2,951,-158, 8–30–60, Cl. 250—71.5.
Wright, Rufus W.: *See*—
Halpern, Otto, Johnson, and Wright. 2,951,247.
Wyma, Edwin R., to International Business Machines Corp. Printed wiring assembly. 2,951,184, 8–30–60, Cl. 317—101.
Wynes, Alfred C. Redirecting deflected boreholes. 2,950,-900, 8–30–60, Cl. 255—1.6.
Wythe, Frederick J., to Emhart Mfg. Co. Operating mechanism for glass feeders. 2,950,571, 8–30–60, Cl. 49—55.
Yale & Towne Mfg. Co., The: *See*—
Ulinski, Bronislaus I. 2,950,773.
Yando, Stephen, to Sylvania Electric Products Inc. Electroluminescent device. 2,951,168, 8–30–60, Cl. 313—108.
Yanik, William P.: *See*—
Stevenson, Walter R., and Yanik. 2,950,539.
Yerks, Richard W., to Underwood Corp. Paper guide shield for business machines. 2,950,802, 8–30–60, Cl. 197—127.
Yetter, Harry G. Jointer device for plows. 2,950,771, 8–30–60, Cl. 172—736.
Yost, Paul E., to General Mills, Inc. Balloon gondola. 2,950,882, 8–30–60, Cl. 244—31.
Youngstown Steel Door Co., The: *See*—
Hopkins, Earl V. 2,950,692.
Zahner, Oscar A. Expense record packet and method of making. 2,950,855, 8–30–60, Cl. 229—72.
Zeidler, Reinhold C., to Borg-Warner Corp. Transmission. 2,950,630, 8–30–60, Cl. 74—645.
Zeiss, Carl: *See*—
Kohler, Horst, and Knuttl. 2,950,651.
Zellweger Ltd.: *See*—
Locher, Hans. 2,950,508.
Zieher, Gustav, to I-T-E Circuit Breaker Co. Clutch teeth. 2,950,797, 8–30–60, Cl. 192—108.
Zosel, Kurt, and R. Schäfer, to Studien Gesellschaft Kohle m.b.H. Carbon structure and spray nozzle formed therefrom. 2,950,979, 8–30–60, Cl. 106—56.
Zwayer, Robert E., to The Aro Equipment Corp. Exhaust noise reducing and air diffusing means for pneumatic motors. 2,950,775, 8–30–60, Cl. 181—36.

CLASSIFICATION OF PATENTS

ISSUED AUGUST 30, 1960

NOTE.—First number=class, second number=subclass, third number=patent number

1— 1: 2,950,480
106: 2,950,481
2— 189: 2,950,482
4— 67: 2,950,483
177: 2,950,484
5— 4: 2,950,485
260: 2,950,486
8— 55: 2,950,949
94.23: 2,950,950
9— 304: 2,950,487
316: 2,950,488
360: 2,950,489
10— 138: 2,950,490
12— 127: 2,950,491
15— 21: 2,950,492
2,950,493
50: 2,950,494
179: 2,950,495
267: 2,950,496
285: 2,950,497
16— 33: 2,950,498
51: 2,950,499
18— 30: 2,950,501
48: 2,950,502
57: 2,950,503
58: 2,950,504
59: 2,950,505
2,950,506
19— 65: 2,950,507
70: 2,950,508
20— 42: 2,950,509
2,950,510
22— 16: 2,950,511
57.2: 2,950,512
23— 14.5: 2,950,951
113: 2,950,952
154: 2,950,953
190: 2,950,954
200: 2,950,955
206: 2,950,956
219: 2,950,957
230: 2,950,958
267: 2,950,959
24— 73: 2,950,513
81: 2,950,514
90: 2,950,515
222: 2,950,516
25— 154: 2,950,517
26— 55: 2,950,518
2,950,519
64: 2,950,520
72: 2,950,521
29— 93: 2,950,522
95: 2,950,523
96: 2,950,524
282: 2,950,525
424: 2,950,526
458: 2,950,527
30— 8: 2,950,528
10: 2,950,529
41.5: 2,950,530
353: 2,950,531
31— 7: 2,950,532
32— 33: 2,950,533
40: 2,950,534
33— 26: 2,950,535
86: 2,950,536
174: 2,950,537
178: 2,950,538
34— 45: 2,950,539
115: 2,950,540
238: 2,950,541
35— 31: 2,950,542
35: 2,950,543
2,950,544
36— 16: 2,950,545
37— 2: 2,950,546
53: 2,950,547
67: 2,950,548
104: 2,950,549
144: 2,950,550
145: 2,950,551
38— 139: 2,950,552
144: 2,950,553
40— 16: 2,950,554
20: 2,950,555
154: 2,950,556
43— 9: 2,950,557
17.2: 2,950,558
42.02: 2,950,559
42.19: 2,950,560
48— 81: 2,950,561
102: 2,950,562
145: 2,950,563
147: 2,950,564
53: 2,950,950
44— 46— 51: 2,950,565
47— 1: 2,950,566
17: 2,950,567
61: P.P. 1,999
49— 1: 2,950,568
7: 2,950,569
53: 2,950,570
55: 2,950,571
61: 2,950,572
67: 2,950,573
81: 2,950,574
50— 127: 2,950,575
128: 2,950,576
51— 86: 2,950,577
95: 2,950,578
98: 2,950,579
103: 2,950,580
2,950,581
168: 2,950,582
195: 2,950,583
2,950,584
221: 2,950,585
237: 2,950,586
53— 22: 2,950,587
51: 2,950,588
190: 2,950,589
242: 2,950,590
57— 157: 2,950,591
60— 33.54: 2,950,592
38.6: 2,950,593
2,950,594
39.28: 2,950,595
2,950,597
39.51: 2,950,598
52: 2,950,599
54.6: 2,950,600
61— .5: 2,950,601
45: 2,950,602
74: 2,950,603
62— 5: 2,950,604
250: 2,950,605
320: 2,950,606
324: 2,950,607
511: 2,950,608
64— 15: 2,950,609
24: 2,950,610
66— 186: 2,950,611
68— 12: 2,950,612
2,950,613
70— 181: 2,950,614
216: 2,950,615
71— 42: 2,950,961
73— 1: 2,950,616
7: 2,950,617
23: 2,950,618
67.2: 2,950,619
88: 2,950,620
402: 2,950,621
492: 2,950,622
503: 2,950,908
74— 117: 2,950,623
202: 2,950,624
230.17: 2,950,625
333: 2,950,626
396: 2,950,627
421: 2,950,628
472: 2,950,629
643: 2,950,630
677: 2,950,631
720: 2,950,632
720.5: 2,950,633
801: 2,950,634
2,950,635
75— 84.4: 2,950,962
84.5: 2,950,963
103: 2,950,964
121: 2,950,965
2,950,966
122.7: 2,950,967
125: 2,950,968
77— 29: 2,950,636
37: 2,950,637
55: 2,950,638
81— 53: 2,950,639
83— 29: 2,950,640
84— 53: 2,950,641
236: 2,950,642
376: 2,950,643
88— 16: 2,950,644
2,950,645
17: 2,950,646
2,950,647
39: 2,950,648
2,950,649
40: 2,950,650
57: 2,950,651
89— 155: 2,950,652
185: 2,950,653
90— 1.4: 2,950,654
4: 2,950,655
98— 1: 2,950,656
37: 2,950,657
88: 2,950,658
94— 29: 2,950,659
46: 2,950,660
95— 1.7: 2,950,661
4.5: 2,950,662
12.5: 2,950,663
13: 2,950,664
55: 2,950,665
64: 2,950,666
96— 41: 2,950,969
55: 2,950,970
79: 2,950,971
108: 2,950,972
98— 94: 2,950,667
99— 71: 2,950,973
106: 2,950,974
163: 2,950,975
166: 2,950,976
194: 2,950,977
199: 2,950,978
329: 2,950,668
421: 2,950,669
100— 142: 2,950,670
101— 40: 2,950,671
93: 2,950,672
118: 2,950,673
185: 2,950,674
226: 2,950,675
334: 2,950,676
350: 2,950,677
378: 2,950,678
2,950,679
102— 41: 2,950,680
103— 2: 2,950,681
11: 2,950,682
2,950,683
40: 2,950,684
45: 2,950,685
97: 2,950,686
104— 9: 2,950,687
172: 2,950,688
105— 133: 2,950,689
368: 2,950,690
369: 2,950,691
378: 2,950,692
106— 56: 2,950,979
125: 2,950,980
190: Re. 24,863
194: 2,950,981
263: 2,950,982
288: 2,950,983
301: 2,950,984
107— 4: 2,950,693
112— 83: 2,950,694
200: 2,950,695
235: 2,950,696
113— 54: 2,950,697
114— 23: 2,950,698
61: 2,950,699
221: 2,950,700
115— 41: 2,950,701
117— 33: 2,950,985
33.3: 2,950,986
36: 2,950,987
38: 2,950,988
64: 2,950,989
94: 2,950,990
119.4: 2,950,991
144: 2,950,992
219: 2,950,993
222: 2,950,994
227: 2,950,995
2,950,996
232: 2,950,997
118— 406: 2,950,702
121— 41: 2,950,703
123: 2,950,704
128— 7: 2,950,705
23: 2,950,706
2,950,707
80: 2,950,708
189: 2,950,709
125— 23: 2,950,710
126— 25: 2,950,711
2,950,712
85: 2,950,713
92: 2,950,714
127— 7: 2,950,998
128— 71: 2,950,715
214: 2,950,716
218: 2,950,717
542: 2,950,718
129— 94: 2,950,719
130— 21: 2,950,720
131— 235: 2,950,721
237: 2,950,722
255: 2,950,723
134— 183: 2,950,724
184: 2,950,725
194: 2,950,726
135— 5: 2,950,727
136— 5: 2,951,105
6: 2,951,106
155: 2,950,999
173: 2,951,107
137— 82: 2,950,728
85: 2,950,729
116.3: 2,950,730
183: 2,950,731
219: 2,950,732
495: 2,950,733
2,950,734
519: 2,950,735
529: 2,950,736
623.48: 2,950,737
627.5: 2,950,738
788: 2,950,739
138— 38: 2,950,740
139— 404: 2,950,741
143— 102: 2,950,742
144— 208: 2,950,743
288: 2,950,744
309: 2,950,745
145— 77: 2,950,746
146— 117: 2,950,747
148— 26: 2,951,000
150— 1.5: 2,950,748
52: 2,950,749
152— 231: 2,950,750
330: 2,950,751
154— 1: 2,950,752
45.9: 2,951,001
80: 2,951,002
90: 2,951,003
110: 2,951,004
123: 2,951,005
126: 2,951,006
155— 169: 2,950,753
156— 125: 2,950,754
126: 2,950,755
160— 91: 2,950,756
162— 198: 2,951,007
233: 2,950,757
164— 111: 2,950,758
166— 3: 2,950,759
42: 2,950,760
119: 2,950,761
167— 30: 2,951,008
53: 2,951,009
53.1: 2,951,010
55: 2,951,011
58: 2,951,012
65: 2,951,013
82: 2,951,014
2,951,015
169— 31: 2,950,762
170—135.4: 2,950,763
147: 2,950,764
151: 2,950,765
159: 2,950,766
160.12: 2,950,767
160.55: 2,950,768
172— 17: 2,950,769
538: 2,950,770
730: 2,950,771
174— 35: 2,951,108
84: 2,951,109
94: 2,951,110
117: 2,951,111
138: 2,951,112
176— 6.4: Re.24,864
2,951,113
2,951,114
2,951,115
2,951,116
7.3: 2,951,117
7.6: 2,951,118
15: 2,951,119
22: 2,951,120
23: 2,951,121
84: 2,951,122
178— 1: 2,951,123
18: 2,951,124
2,951,125
2,951,126
100.2: 2,951,127
175.31: 2,951,128
180— 6.66: 2,950,772
13: 2,950,773
73: 2,950,774
181— 36: 2,950,775
42: 2,950,776
54: 2,950,777
183— 2: 2,950,778
185— 37: 2,950,779
41: 2,950,780
187— 12: 2,950,948
188— 52: 2,950,781
56: 2,950,782
70: 2,950,783
85: 2,950,784
88: 2,950,785
180— 1: 2,950,786
23: 2,950,787
34: 2,950,788
2,950,789
77: 2,950,790
190— 9: 2,950,791
49: 2,950,792
2,950,793
192— 3: 2,950,794
53: 2,950,795
82: 2,950,796
108: 2,950,797
116.5: 2,950,798
194— 4: 2,950,799
195— 51: 2,951,016
96: 2,951,017
197— 1: 2,950,800
19: 2,950,801
127: 2,950,802
161: 2,950,803
198— 24: 2,950,804
25: 2,950,805
35: 2,950,806
107: 2,950,807
128: 2,950,808
202: 2,950,809
200— 67: 2,951,129
2,951,130
81.9: 2,951,131
93: 2,951,132
87: 2,951,133
2,951,134
2,951,135
113: 2,951,136
2,951,137
153: 2,951,138
204— 1.5: 2,951,018
17: 2,951,019
45: 2,951,020
64: 2,951,021
154: 2,951,022
154.2: 2,951,023
158: 2,951,024
211: 2,951,025
221: 2,951,026
302: 2,951,027
205— 3: 2,950,811
206— 62: 2,950,812
63.2: 2,950,813
65: 2,950,814
207— 1: 2,950,815
16: 2,950,816
17: 2,950,817
208— 21: 2,951,028
208— 100: 2,951,029
165: 2,951,030
180: 2,951,031
218: 2,951,032
226: 2,951,033
264: 2,951,034
283: 2,951,035
305: 2,951,036
370: 2,951,037
209— 166: 2,950,818
226: 2,950,819
211— 49: 2,950,820
84: 2,950,821
104: 2,950,822
119.1: 2,950,823
2,950,824
126: 2,950,825
148: 2,950,826
214— 17: 2,950,827
47: 2,950,828
305: 2,950,829
654: 2,950,830
731: 2,950,831
215— 7: 2,950,832
63: 2,950,833
98: 2,950,834
217— 110: 2,950,835
219—10.61: 2,951,139
19: 2,951,140
2,951,141
69: 2,951,142
75: 2,951,143
79: 2,951,144
83: 2,951,145
85: 2,951,146
220— 1: 2,950,836
3.7: 2,950,837
46: 2,950,838
64: 2,950,839
95: 2,950,840
221— 154: 2,950,841
251: 2,950,842
222— 88: 2,950,843
143: 2,950,844
370: 2,950,845
399: 2,950,846
466: 2,950,847
223— 37: 2,950,848
226— 172: 2,950,810
229— 8: 2,950,849
16: 2,950,850
17: 2,950,851
23: 2,950,852
24: 2,950,853
40: 2,950,854
72: 2,950,855
230— 85: 2,950,856
114: 2,950,857
134: 2,950,858
259: 2,950,859
232— 1: 2,950,860
235— 94: 2,950,861
180: 2,950,862
190: 2,950,863
197: 2,950,864
236— 32: 2,950,865
87: 2,950,866
239— 13: 2,950,867
240— 9: 2,951,147
51.11: 2,951,148
241— 46: 2,950,868
70: 2,950,869
91: 2,950,870
217: 2,950,871
296: 2,950,872
242— 56: 2,950,873
58.3: 2,950,874
66: 2,950,875
128: 2,950,876
154: 2,950,877
244— 12: 2,950,878
14: 2,950,880
31: 2,950,881
2,950,882
41: 2,950,879
108: 2,950,883
135: 2,950,884
141: 2,950,885
156: 2,950,886
2,950,887
248— 41: 2,950,888

249—117.4:	2,950,899	255—	21:	2,950,902	260—394.3:	2,951,080	274—	10:	2,950,921	315—	12: 2,951,176
118:	2,950,900		51:	2,950,903	313:	2,951,081	280—	12:	2,950,922		2,951,177
226:	2,950,901	257—	1:	2,950,904	328:	2,951,082			2,950,923		13: 2,951,178
282:	2,950,902	260—	124:	2,950,905	343.6:	2,951,083		14:	2,950,924		15: 2,951,179
349:	2,950,903		161:	2,950,906	397.45:	2,951,084		47.19:	2,950,925		24: 2,951,180
249—	2: 2,950,904	280—	17:	2,951,047	429.5:	2,951,085		405:	2,950,926		2,951,181
250—	20: 2,951,149		21:	2,951,048	429.7:	2,951,086		462:	2,950,927		39.53: 2,951,182
	2,951,150		22:	2,951,049	448:	2,951,087	285—	52:	2,950,928		158: 2,951,183
	2,951,152		23:	2,951,050	461:	2,951,088		86:	2,950,929	317—	101: 2,951,184
	2,951,154			2,951,051	519:	2,951,089		110:	2,950,930		2,951,185
	27: 2,951,153			2,951,052	534:	2,951,090	286—	8:	2,950,931		123: 2,951,186
	41.9: 2,951,155		28:	2,951,053	542:	2,951,091			2,950,932		150: 2,951,187
	43.5: 2,951,156		29.2:	2,951,054	553:	2,951,092	287—32.03:		2,950,933		156: 2,951,188
	52: 2,951,157		45.7:	2,951,055	606.5:	2,951,093		53:	2,950,934		2,951,189
	71.5: 2,951,158		45.8:	2,951,056	615:	2,951,094		58:	2,950,935		173: 2,951,190
	89.3: 2,951,159		46.5:	2,951,057	635:	2,951,095		75:	2,950,936		235: 2,951,191
	2,951,160		59:	2,951,058	648:	2,951,096		126:	2,950,937	318—	203: 2,951,192
	2,951,161		67:	2,951,059		2,951,097		130:	2,950,938		448: 2,951,193
	105: 2,951,162		73:	2,951,060		2,951,098	294—	18:	2,950,939		467: 2,951,194
	212: 2,951,163		83.7:	2,951,061		2,951,099		110:	2,950,940	322—	26: 2,951,195
	219: 2,951,164		87.1:	2,951,062	651:	2,951,100	301—	57:	2,950,941	323—	43.5: 2,951,196
251—	148: 2,950,905		87.5:	2,951,063		2,951,101	308—	169:	2,950,942		58: 2,951,197
	172: 2,950,906			2,951,064	653:	2,951,102		187:	2,950,943	324—	2: 2,951,198
	2,950,907		87.7:	2,951,065	654:	2,951,103		238:	2,950,944		29.5: 2,951,199
	214: 2,950,908		93.7:	2,951,066	669:	2,951,104	310—	54:	2,951,165		57: 2,951,200
252—	33.3: 2,951,039		94.9:	2,951,067	692—	7: 2,950,907		68:	2,951,166		68: 2,951,201
	33.6: 2,951,040			2,951,068	695—	71: 2,950,909	312—	118:	2,950,945		79: 2,951,202
	34.7: 2,951,041		147:	2,951,069		72: 2,950,910		207:	2,950,946		111: 2,951,203
	62.5: 2,951,042		153:	2,951,070	698—	63: 2,950,911		320:	2,950,947		158: 2,951,204
	73: 2,951,038			2,951,071	699—	189: 2,950,912	313—	85:	2,951,167		2,951,242
	171: 2,951,043			2,951,072	271—	26: 2,950,912		108:	2,951,168	328—	66: 2,951,205
	313: 2,951,044		210:	2,951,073		45: 2,950,914			2,951,169		177: 2,951,206
	429: 2,951,045		239.55:	2,951,074		50: 2,950,915		178:	2,951,170	330—	5: 2,951,207
	476: 2,951,046		239.57:	2,951,075		60: 2,950,916		209:	2,951,171		14: 2,951,208
				2,951,076	273—	99: 2,950,917		247:	2,951,172		167: 2,951,209
264—	78: 2,950,909		243:	2,951,077		2,950,918	315—	3.5:	2,951,173	331—	40: 2,951,210
265—	1.6: 2,950,910		247.5:	2,951,078		171: 2,950,919			2,951,174	332—	9: 2,951,211
	4.4: 2,950,911		248:	2,951,079	274—	10: 2,950,920		10:	2,951,175		2,951,212

332—	40: 2,951,213	338—	4:	2,951,223	345—	11:	2,951,244	D 4—	3:	188,714	
	51: 2,951,214		16:	2,951,224		13:	2,951,245	D10—	6:	188,715	
333—	7: 2,951,215		41:	2,951,225		18:	2,951,246	D13—	1:	188,716	
	9: 2,951,216	339—	17:	2,951,226			2,951,247	D14—	3:	188,717	
	10: 2,951,217		22:	2,951,227		113:	2,951,248			188,718	
	2,951,218		115:	2,951,228						188,719	
	2,951,219	340—	147:	2,951,229							
	24: 2,951,220		168:	2,951,230							
	31: 2,951,221		172.5:	2,951,231							
	98: 2,951,222			2,951,232							
				2,951,233							
				2,951,234							
				2,951,235							
			174:	2,951,237							
				2,951,238							
				2,951,239							
				2,951,240							
				2,951,241							
				2,951,242							
			174.1:	2,951,236							
				2,951,243							
		343—	11:	2,951,244							
			13:	2,951,245							
			18:	2,951,246							
				2,951,247							
			113:	2,951,248							

Classification of Designs

D 4—	3: 188,714	D14—	6: 188,720	D29—	1: 188,726	D44—	15: 188,732	D58—	17: 188,738	D87—	3: 188,731
D10—	6: 188,715	D15—	1: 188,721	D33—	14: 188,727	D47—	6: 188,733	D61—	1: 188,739		188,744
D13—	1: 188,716	D17—	3: 188,722	D34—	5: 188,728	D48—	20: 188,734				188,745
D14—	3: 188,717	D18—	2: 188,723			D54—	13: 188,735	D64—	12: 188,741	D90—	20: 188,746
	188,718	D26—	13: 188,724	D41—	1: 188,729		14: 188,736	D80—	10: 188,742	D91—	3: 188,747
	188,719		14: 188,725	D44—	1: 188,730	D58—	8: 188,737	D81—	18: 188,743	D92—	1: 188,748

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 30, 1960 Volume 757 Number 5

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116: Trademark Act of July 5, 1946

Reg. No. 69,512 (BAYER), Farbenfabriken of Elberfeld Co., Synthetic coal tar remedies; **Reg. No. 155,282**, same, The Bayer Company, Inc., Chemicals, medicines and pharmaceutical preparations; **Reg. No. 155,612**, same; **Reg. No. 169,823** (BAYER AND DESIGN), same, Medicines for pains and aches of nervous or organic origin and for rheumatic, neuralgic and gouty conditions, etc.; **Reg. No. 230,153**, same, filed Oct. 15, 1959, D.C.N.J. (Newark), Doc. 882/59, *Sterling Drug, Inc.* v. *Charles B. Harding et al.* Order of dismissal June 22, 1960.

Reg. No. 155,282. (See Reg. No. 69,512.)

Reg. No. 155,612. (See Reg. No. 69,512.)

Reg. No. 155,680 (FORMICA), The Formica Insulation Company, Electric insulating compound; **Reg. No. 421,496**, same, Laminated sheets of wood, fabric or paper impregnated with synthetic resin and consolidated under heat and pressure, filed July 15, 1960, D.C., E.D.N.Y. (Brooklyn), Doc. 60–C–658, *Formica Corporation* v. *Hodor of Hempstead et al.*

Reg. No. 230,153. (See Reg. No. 69,512.)

Reg. No. 260,684 (DANIEL BOONE AND DESIGN), United Sheeplined Clothing Co., Inc., Leather and fabric coats and jackets, and coats and jackets of leather and fabric combinations, for men, women and children, filed Apr. 1, 1958, D.C., S.D.N.Y., Doc. 103/98, *United Sheeplined Clothing Co., Inc.* v. *Arctic Fur Cap Corp.* Defendant enjoined; counterclaims dismissed July 11, 1960.

Reg. No. 260,264 (DEEPFREEZE), Motor Products Corp., Refrigerating apparatus and parts thereof, filed June 4, 1959, D.C., S.D. Ohio (Cincinnati), Doc. 4444, *Amana Refrigeration, Inc.* v. *Deepfreeze Distributing Corp.* Stipulation that trademark is valid July 13, 1960.

Reg. No. 421,496. (See Reg. No. 155,680.)

Reg. No. 434,965 (COMBS-DUVALL STUDIO, CRADLE CAR PHOTOGRAPHERS), Combs-Duval Studio, Stationery and envelopes, filed Sept. 18, 1959, D.C., E.D. Mo. (St. Louis), Doc. 59–C–280(2), *Vincent Price* v. *Hilma Hoehn.* Stipulation and order dismissing complaint, counterclaim of defendant and counterclaim of intervenor, The Cradle Car Service, Inc. with prejudice May 25, 1960.

Reg. No. 501,507 (ELIZABETH ARDEN), Elizabeth Arden Sales Corporation, Toilet lotions, skin creams, perfumes, etc.; **Reg. No. 501,943** (ARDENA), same, Cosmetic creams and lotions for application to the skin, etc.; **Reg. No. 502,430** (ARDEN), same, Toilet lotions, skin creams, perfumes, etc.; **Reg. No. 514,258**, same; **Reg. No. 545,200** (ELIZABETH ARDEN), same, Facial and bath soaps; **Reg. No. 557,022**, same, Face, body and hair make-up and care, consisting of face treatments—namely, massages, etc., filed July 7, 1960, D.C. Mass. (Boston), Doc. 60/483–SCA, *Elizabeth Arden Sales Corporation* v. *Narrus, Inc. et al.*

Reg. No. 501,943. (See Reg. No. 501,507.)

Reg. No. 502,430. (See Reg. No. 501,507.)

Reg. No. 514,258. (See Reg. No. 501,507.)

Reg. No. 545,200. (See Reg. No. 501,507.)

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1960

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,802
Date of oldest new application	Feb. 1, 1960
Date of oldest amended application	Jan. 14, 1960

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
(I) C. M. WENDT, Classes 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 19, 20, 21, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 38, 39, 40, 41, 42, 43, 44, 50	2-1-60	2-16-60
(II) H. E. KASCHUB (Acting), Classes 1, 6, 18, 22, 37, 38, 45, 46, 47, 48, 49, 51, 52; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks, Class 200; Certification Marks, Classes A and B	2-4-60	1-14-60
Renewals (All Classes)	5-7-60	5-23-60
Sec. 12 (c) Publications (All Classes)	5-14-60	-------

Applications filed during the month of June 1960—1,895

Registrations Issued ..... 311—No. 703,406 to No. 703,716
Renewals Issued 80

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Reg. No. 551,431 (BASKETWEAVE), G. La Monte & Son, Safety paper, such as is used for bank checks, bank drafts, etc., filed Apr. 3, 1959, D.C., S.D.N.Y., Doc. 144/382, *George La Monte and Son* v. *Moore Business Forms, Inc.* Consent judgment; defendant enjoined July 15, 1960.

Reg. No. 557,022. (See Reg. No. 501,507.)

Reg. No. 676,247 (INFINILITE), Integrated Ceilings, Inc., Louvered ceiling elements and light screens; 2,937,265, B. Blitzer, Cellular lighting element and means for supporting the same, filed July 7, 1960, D.C., N.D. Calif. (San Francisco), Doc. 39283, *Integrated Ceilings & Grilleworks, Inc.* v. *United Lighting and Ceiling Co.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

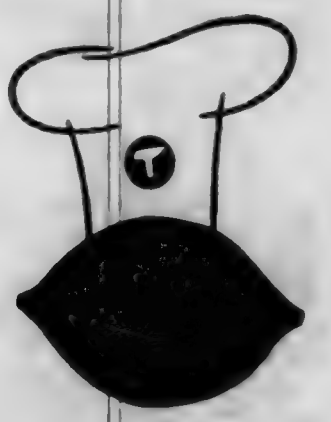
Class 1—Raw or Partly Prepared Materials

SN 80,372. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

PERMAFRESH

Owner of Reg. No. 363,547.
For Synthetic Resins for Use on Textiles, Particularly for Use With Water Repellent Textile Chemicals.
First use May 29, 1957.

SN 83,187. Tennessee Products & Chemical Corporation, Nashville Tenn. Filed Oct. 13, 1959.



Owner of Reg. Nos. 579,690, 585,689 and 622,477.
For Charcoal Briquets.
First use Aug. 15, 1959.

SN 95,661. Kurz Westall Williams, d.b.a. The Poz-Plug Company, Saint Jo, Tex. Filed Apr. 22, 1960.

POZ-PLUG

For Packaged Dehydrated Wood Products Used for Combating Lost Circulation in Drilling Wells.
First use Mar. 17, 1960.

Class 2—Receptacles

SN 89,912. Guild Plastics, Inc., Cambridge, Mass. Filed Jan. 29, 1960.

POLY • CLINIC

For Plastic Disposable Cups.
First use Jan. 20, 1960.

SN 93,107. Unisel, Inc., Los Angeles, Calif. Filed Mar. 17, 1960.

PORTA-FLORA

For Flower Pot Carrier.
First use Feb. 2, 1960.

SN 93,120. Aladdin Industries, Incorporated, Nashville, Tenn. Filed Mar. 18, 1960.

DURA-CLAD

For Lunch Boxes, Lunch Kits, Heat Insulated Receptacles and Vacuum Bottles.
First use on or about Jan. 6, 1960.

SN 93,251. American Box Corporation of California, San Francisco, Calif. Filed Mar. 21, 1960.

CONVERTABOX

For Paperboard Shipping Containers.
First use on Oct. 8, 1959.

SN 93,301. Flambeau Plastics Corporation, Baraboo, Wis. Filed Mar. 21, 1960.

PARTY-POPS

For Plastic Molds for Frozen Confections.
First use Mar. 3, 1960.

SN 93,944. Northland Bag Corp., Yonkers, N.Y. Filed Mar. 29, 1960.

POLYCLEER

For Flexible Plastic Bags Formed of Plastic Material Particularly Polyethylene.
First use June 10, 1959.

SN 94,742. Container Corporation of America, Chicago, Ill, Filed Apr. 11, 1960.

FUNNEL PAK

For Paperboard Cartons.
First use Dec. 28, 1959.

SN 94,860. Weyerhaeuser Company, Tacoma, Wash. Filed Apr. 11, 1960.

POLARPAC

For Paperboard Carton for Packaging Frozen Foods.
First use Apr. 16, 1959.

Class 4—Abrasives and Polishing Materials

SN 82,248. Madison Chemical Corporation, d.b.a. Madison Supply & Equipment Co., Maywood, Ill. Filed Sept. 28, 1959.

WEATHERTEX

For Heavy Duty Liquid Floor Wax.
First use in June 1953.

SN 87,975. Micro Beads, Inc., Toledo, Ohio. Filed Dec. 24, 1959.

MICRO-SHEEN

For Macroscopic Glass Beads for Abrasive Purposes.
First use 1953.

SN 91,110. Productos Bufalo, S.A., Barcelona, Spain. Filed Feb. 17, 1960.



Owner of Spanish Reg. No. 98,009, dated Oct. 7, 1955.
For Liquids, Pastes and Powders for Polishing and Cleaning Footwear.

SN 93,737. American Home Products Corporation, d.b.a. Boyle-Midway, New York, N.Y. Filed Mar. 28, 1960.

AERO SHINE

Owner of Reg. Nos. 345,361 and 691,860.
For Furniture Polish.
First use Sept. 2, 1959.

Class 5—Adhesives

SN 54,078. Montecatini, Società Generale per l'Industria Mineraria e Chimica, Milan, Italy. Filed June 23, 1958.

MOPLEN

Owner of Italian Reg. No. 133,573, dated Oct. 2, 1957.
For Adhesives for Industry and for Stationery.

Class 6—Chemicals and Chemical Compositions

SN 76,758. Teitelbaum Bros., Evanston, Ill. Filed June 29, 1959.

PIXIE SPARKLE

For Chemical Preparation To Be Applied to Plant Leaves for Adding Luster Thereto.
First use June 1, 1959.

SN 80,369. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

IMPREGNOLE

Owner of Reg. No. 297,056.
For Water Repellent Agent for Paper.
First use in September 1958.

SN 80,373. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

PERMAFRESH

Owner of Reg. No. 363,647.
For Chemical Preparations Used on Textiles To Impart Wash and Wear, Dimensional Stability, Crease Resistance, Softening, Stiffening and Hand Control Characteristics and Properties to Textile, and Chemicals To Prevent Degradation of Dyestuffs Treatment of Resins to Textiles, Chemicals To Prevent Chlorine Degradation of Textiles, Chemicals To Prevent Discoloration of Textiles, and Chemicals To Prevent Loss of Tensile Strength of Textiles.
First use May 29, 1957.

SN 80,377. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

WARCOFIX

Owner of Reg. No. 442,778.
For Chemicals for Pitch Control of Paper and Paper Fibers.
First use in August 1955.

SN 80,378. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

WARCOFIX

Owner of Reg. No. 442,778.
For Dye Fixing Agent for Fibers, Particularly Cellulosic Fibers.
First use Aug. 14, 1946.

SN 80,379. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

WARCO

Owner of Reg. No. 307,769.
For Paper Chemicals, Including Chemical Preparations Used on Paper and Paper Fibers as Sizing Agents, as an Aid in the Chemical Retention of Paper Fibers, To Control the Pitch Content of Paper and Paper Fibers, and To Improve the Wet Strength of Paper.
First use in August 1955.

SN 80,381. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

WARCOPEL

Owner of Reg. No. 402,628.
For Chemical Preparations Used on Textiles as Water Repellents, Softening Agents, and To Impart Hand Control and Spot and Stain Resistance to Textiles.
First use Aug. 3, 1943.

SN 80,382. Sun Chemical Corporation, New York, N.Y. Filed Aug. 27, 1959.

NORANE

Owner of Reg. No. 405,818.
For Water Repellent Agent for Paper.
First use in September 1958.

SN 80,734. National Automotive Wholesalers Association, Atlanta, Ga. Filed Sept. 2, 1959. COLLECTIVE MARK.

UDS

For Brake Fluid, Antifreeze, Methanol, Automatic Transmission Fluid and Dichlorodifluoromethane (Refrigerant).
First use Mar. 22, 1957.

SN 81,543. Chemley Products Company, Chicago, Ill. Filed Sept. 17, 1959.

NIP-A-THIN

For Chemical Compositions Used To Affect Fruit Retention, Fruit Set, and for Thinning Fruit on Fruit Trees.
First use Aug. 22, 1958.

SN 84,021. Shell Oil Company, New York, N.Y., assignee of Shell Chemical Corporation, New York, N.Y. Filed Oct. 26, 1959.

CIODRIN

Owner of Reg. No. 650,332.
For Insecticide for Further Processing or Manufacturing Use.
First use Aug. 19, 1958.

SN 84,022. Shell Oil Company, New York, N.Y., assignee of Shell Chemical Corporation, New York, N.Y. Filed Oct. 26, 1959.

NUDRIN

Owner of Reg. No. 650,332.
For Insecticide for Further Processing or Manufacturing Use.
First use Aug. 19, 1958.

SN 87,205. Continental Oil Company, Ponca City, Okla. Filed Dec. 14, 1959.

DEMIVIS

For Sulfonate Composition for Use in the Manufacture of Vinyl Foams.
First use on or about Oct. 28, 1959.

SN 88,737. The Dow Chemical Company, Midland, Mich. Filed Jan. 11, 1960.

NANKOR

For Insecticides, Miticides, and Parasiticides.
First use Nov. 24, 1959.

SN 89,555. Continental Oil Company, Ponca City, Okla. Filed Jan. 25, 1960.



The drawing is lined for red. Owner of Reg. Nos. 186,698, 665,585, and others.
For Automotive Chemical Specialties—Namely, Radiator Antifreeze, Fuel System Antifreeze, Anti-rust Compositions, Cooling System Cleaner, Radiator Quick Flush, Radiator Sealer, Windshield Washer Solvent, Automatic Transmission Fluid, and Hydraulic Brake Fluid.
First use September 1952 on automobile radiator antifreeze compositions.

SN 90,153. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Feb. 2, 1960.

VYDAX

For Fluorocarbon Telomers, Their Solutions and Dispersions for Use as Lubricants.
First use Dec. 22, 1959.

SN 92,727. Dawe's Laboratories, Inc., Chicago, Ill. Filed Mar. 14, 1960.

DAWE'S

For Gluconic Acid and Sodium Gluconate.
First use prior to 1939.

SN 93,250. Allied Chemical Corporation, New York, N.Y. Filed Mar. 21, 1960.

KEPONE

For Acaricides; Toxic Composition for Insecticides and Acaricides.
First use May 13, 1958.

Class 7—Cordage

SN 81,651. Toyo Rayon Co., Ltd., Chuo-ku, Tokyo, Japan. Filed Sept. 18, 1959.

TORAY

Owner of Japanese Reg. No. 519,200, dated Apr. 24, 1958.
For Twine and Rope.

SN 91,971. Shuford Mills, Inc., Hickory, N.C. Filed Mar. 1, 1960.

HEMLOCK

For Sash Cord.
First use June 18, 1959.

SN 91,972. Shuford Mills, Inc., Hickory, N.C. Filed Mar. 1, 1960.

TEAKWOOD

For Sash Cord.
First use July 9, 1959.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 59,938. Aircraft Armaments, Inc., Cockeysville, Md. Filed Sept. 30, 1958.



Owner of Reg. No. 582,143.
For Turret Cupolas, Cartridge Actuated Devices, Guns, Guided Bombs, Practice Bombs, and Missile Components.
First use Mar. 6, 1952, on Turret Cupolas.

SN 91,777. Fairchild Engine and Airplane Corporation, Hagerstown, Md. Filed Feb. 29, 1960.

EXPLORER

For Firearms.
First use Dec. 14, 1959.

Class 10—Fertilizers

SN 70,534. Rutledge Manufacturing Co., d.b.a. Saye Fertilizer Company, Rutledge, Ga. Filed Mar. 30, 1959.



The drawing is lined to indicate the colors red, yellow, and green.
For Fertilizer.
First use on or about Feb. 3, 1959.

SN 93,609. P. S. Royster Guano Co., Norfolk, Va. Filed Mar. 24, 1960.

Royster

For Fertilizers.
First use 1885.

Class 11—Inks and Inking Materials

SN 87,688. Henry Joseph, d.b.a. Bond Adhesives Company, Jersey City, N.J. Filed Dec. 21, 1959.

SCREEN STAR

The lining is part of the design and does not designate color.
For Silk Screen Processing Emulsion.
First use Sept. 12, 1956.

SN 92,087. Columbia Ribbon & Carbon Manufacturing Co., Inc., Glen Cove, N.Y. Filed Mar. 3, 1960.

"CARBNPAD"

For Boxes for Carbon Paper.
First use Jan. 5, 1953.

Class 12—Construction Materials

SN 76,769. West Chester Chemical Co., West Chester, Pa. Filed June 29, 1959.

CON-SEAL

For Liquid Composition Used to Seal Joints In Gas Mains.
First use Feb. 5, 1957.

SN 78,033. I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed July 20, 1959.

FLAMETRAP

For Insulating Material Used in Electrical Apparatus.
First use in March 1958.

SN 82,950. American Foil Mfg. Corporation, Akron, Ohio. Filed Oct. 9, 1959.

Air-Cushion

For Thermal Insulating Foil.
First use Sept. 2, 1959.

SN 83,563. Samson Window Corp., Woodside, N.Y. Filed Oct. 19, 1959.

SAMSON

For Aluminum Frame Windows and Aluminum Curtain Walls.
First use June 30, 1959.

SN 85,985. North Hollywood Concrete Tile Co., North Hollywood, Calif. Filed Nov. 24, 1959.

View-Lite

For Concrete Blocks.
First use Sept. 25, 1959.

SN 92,733. Dresser Industries, Inc., d.b.a. Dresser-Ideco Company, Dallas, Tex. Filed Mar. 14, 1960.

CONDO-WALL

For Prefabricated Building Wall Panels Composed of Sheet Metal and Thermal Insulating Materials.
First use Aug. 27, 1959.

SN 94,509. North Hollywood Glass & Paint Co., d.b.a. North Hollywood Glass Co., North Hollywood, Calif. Filed Apr. 6, 1960.

HOLLYVIEW

For Sliding Glass Doors.
First use on or about Jan. 1, 1958.

SN 94,632. Vitron Manufacturing Co., Inc., Seattle, Wash. Filed Apr. 7, 1960.

VITROPANE

For Fabricated Metal Building Panels.
First use Jan. 4, 1960.

SN 94,788. C. M. McClung & Co., Inc., Knoxville, Tenn. Filed Apr. 11, 1960.

CHEROKEE

For Roofing, Asphalt Shingles, and Roofing Compounds and Materials.
First use 1920.

SN 95,088. Hutton & Bourbonnais Company, Hickory, N.C. Filed Apr. 14, 1960.

HUTTON

For Wooden Flooring.
First use on or about Aug. 15, 1948.

SN 95,209. Steelbilt Partitions, Inc., Gardena, Calif. Filed Apr. 15, 1960.

SPACE CONTROL

For Movable Interior Walls and Partitions for Buildings.
First use Feb. 1, 1960.

SN 95,230. Arvin Industries, Inc., Columbus, Ind. Filed Apr. 18, 1960.

ARVINYL

For Plastic-Clad Metal Trim Moldings and Wall Panels, Including Flat and Preformed Panels.
First use Apr. 2, 1959.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 75,580. Puritan Cordage Mills, Louisville, Ky. Filed June 11, 1959.

PURITAN

For Transom Hooks, Figure 8 Hooks, and Winch Rope Hooks for Connection to a Speed Boat To Facilitate Attachment Thereto of Tow Bridles, Tow Bars, Winch Ropes and the Like.
First use Nov. 4, 1958.

SN 82,665. Graham Manufacturing Corporation, Needham Heights, Mass. Filed Oct. 5, 1959.

STRIP-CLIP

For Metal Clips for Temporarily Holding Preheating Elements on Metal Plates in Connection With Welding Operations.
First use Sept. 30, 1959.

SN 93,779. Fabri-Valve Company of America, Portland, Oreg. Filed Mar. 28, 1960.

FAB-VALVE

Owner of Reg. Nos. 576,389, 677,902, and others.
For Gate Valves.
First use Feb. 22, 1960.

SN 93,810. Kennatrack Corporation, Elkhart, Ind. Filed Mar. 28, 1960.

SCOTSMAN

For Sliding Door Hardware, Including Tracks, Guides, Hangers, and Wheels.
First use Nov. 1, 1957.

SN 93,996. Gebert & Cie., Engelplatz, Rapperswil, Switzerland. Filed Mar. 30, 1960.

GEBERIT PVC

Owner of Swiss Reg. No. 150,990, dated May 5, 1954.
For Flushing Cisterns and Syphons.

SN 94,006. Reed S. Kofford, d.b.a. Reed S. Kofford Co., Van Nuys, Calif. Filed Mar. 30, 1960.

FLORA-MIST

For Water Spraying Foggers for Use in Nurseries and Greenhouses.
First use June 20, 1959.

SN 94,308. Kirsch Company, Sturgis, Mich. Filed Apr. 4, 1960.

KIRSCH

Owner of Reg. Nos. 98,875, 551,553, and others.
For Adjustable and Cut-To-Measure Curtain and Traverse Curtain Rods, Track, Parts, Accessories and Fittings; Curtain and Drapery Hooks and Rings; Drapery Hardware Parts, Accessories, and Fittings, Decorative Drapery Hardware, Parts, Accessories, and Fittings.
First use Jan. 1, 1907.

SN 94,545. Aeronca Manufacturing Corporation, Middletown, Ohio. Filed Apr. 7, 1960.

SANI-RIM

For Stainless Steel Sinks.
First use Feb. 26, 1960.

SN 94,546. Aeronca Manufacturing Corporation, Middletown, Ohio. Filed Apr. 7, 1960.

COUNT

For Stainless Steel Sinks.
First use Feb. 26, 1960.

Class 14—Metals and Metal Castings and Forgings

SN 91,561. Standard Forgings Corporation, Chicago, Ill. Filed Feb. 24, 1960.



For Unfinished and Semi-Finished Steel Forgings for Use as Railway Car Axles and Closed Die Impression Forgings Produced From Ferrous and Non-Ferrous Metals.
First use Dec. 15, 1959.

Class 15—Oils and Greases

SN 95,747. Monsanto Chemical Company, St. Louis, Mo. Filed Apr. 25, 1960.

ALOHA

For Lubricating Oils.
First use Mar. 21, 1960.

Class 16—Protective and Decorative Coatings

SN 78,316. De Soto Chemical Coatings, Inc., d.b.a. Illinois Paint Works, Chicago, Ill., by change of name from United Wallpaper, Inc., Chicago, Ill. Filed July 23, 1959.

ACROPON

For Industrial Finish in the Nature of a Paint.
First use on or about June 18, 1959.

SN 86,265. Chicago Rawhide Manufacturing Company, Chicago, Ill. Filed Nov. 30, 1959.

SIRVON

Owner of Reg. Nos. 529,470, 543,901, and others.
For Plastic Coating Materials.
First use Oct. 21, 1959.

Class 17—Tobacco Products

SN 86,635. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Dec. 4, 1959.

MILLEVENT

For Cigarette Paper Used as Part of Cigarettes.
First use Nov. 13, 1959.

SN 88,920. International Tobacco (Overseas) Limited, London, England. Filed Jan. 13, 1960.



No claim is made to the expression "Navy Cut." Owner of British Reg. No. 573,344, dated Nov. 26, 1936.
For Cigarettes and Smoking Tobacco.

SN 89,259. El Producto Cigar Company, Inc., New York, N.Y. Filed Jan. 19, 1960.

EL PRODUCTO

Owner of Reg. No. 203,569.
For Cigars.
First use Jan. 22, 1924.

SN 93,240. Weiner & Gossage, Inc., San Francisco, Calif. Filed Mar. 18, 1960.

DEAN SWIFT

For Cigarettes, Cigars, Pipe Tobacco, and Snuff.
First use Mar. 4, 1960, on cigarettes.

Class 18—Medicines and Pharmaceutical Preparations

SN 56,314. Enzyme Products, Inc., Palo Alto, Calif. Filed July 30, 1958.

ACUTALYN

For Therapeutic Agent for Intravenous Injection for Treating Animals and Human Patients for the Alleviation of Musculoskeletal Disorders such as Arthritis, of Genitourinary Ailments and Liver Diseases such as Cirrhosis.
First use in October 1955.

SN 58,474. The Upjohn Company, Dover, Del., assignee of The Upjohn Company, Kalamazoo, Mich. Filed Sept. 5, 1958.

CASCAROL

For Laxative.
First use Feb. 10, 1958.

SN 70,202. Doho Chemical Corporation, New York, N.Y. Filed Mar. 25, 1959.

RHINALGAN

Owner of Reg. Nos. 309,463, 38,040, and 413,831.
For Medicament for the Treatment of Respiratory Infections.
First use Mar. 1, 1936.

SN 72,810. The Dow Chemical Company, Midland, Mich. Filed May 4, 1959.

LENOMENE

For Amino Acid for Use as a Feed Supplement.
First use Feb. 25, 1959.

SN 76,051. Allied Laboratories, Inc., d.b.a. Pitman-Moore Co., Indianapolis, Ind. Filed June 19, 1959.

CAPSEBON

For Therapeutic Shampoo Indicated for the Treatment of Seborrheic Dermatitis of the Scalp.
First use Sept. 7, 1956.

SN 80,999. Medical & Biological Research Labs., Inc., Seattle, Wash. Filed Sept. 8, 1959.

DERMALIFE

For Placental Extract Which Is Incorporated in a Cream for the Treatment of Acne.
First use on or about Sept. 3, 1959.

SN 86,916. American Dietaids Company, Inc., Yonkers, N.Y. Filed Dec. 9, 1959.

JOYANA

For Food Supplement in Powdered Form, Containing Vitamins and Minerals.
First use July 7, 1939.

SN 88,738. The Dow Chemical Company, Midland, Mich. Filed Jan. 11, 1960.

NANKOR

For Veterinary Drug and Animal Health Product for the Control of Parasites Such as Intestinal Parasites, Mites, Insects Such as Lice and Flies, and Larvae of Insects Such as Screw Worms, Cattle Grubs, Blowfly Maggots, Fleece Worms, and the Like, in and on Animals, Especially Livestock.
First use Nov. 24, 1959.

SN 91,965. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Mar. 1, 1960.

VELACYCLINE

For Anti-Infective Preparations.
First use Jan. 21, 1960.

SN 91,986. American Scientific Laboratories, Inc., Madison, Wis. Filed Mar. 2, 1960.

BLACKRIN

For Vaccine for Animals, To Aid in the Prevention of Blackleg.
First use Feb. 23, 1960.

SN 92,469. Iowa Cooperative Association, d.b.a. Diamond Laboratories, Des Moines, Iowa. Filed Mar. 9, 1960.

foraject 80

For Injectable Iron Product for Veterinary Use.
First use Mar. 3, 1958.

SN 92,551. Sandoz, Inc., Hanover, N.J. Filed Mar. 10, 1960. Owner of Reg. No. 284,683.

SANSERT

For Medicinal Preparation Recommended for the Treatment of Vascular Headache.
First use Mar. 1, 1960.

SN 92,628. Merck & Co., Inc., Rahway, N.J. Filed Mar. 11, 1960.

S·P·Q

For Feed Additive Preparation Useful in Promoting Growth and in the Prophylaxis and Treatment of Certain Diseases in Animals.
First use Feb. 22, 1960.

SN 92,914. Pan American Laboratories, Inc., New Orleans, La. Filed Mar. 15, 1960.

PANREXIN

For Preparation for Use as an Appetite Depressant.
First use Aug. 14, 1958.

SN 92,916. Pan American Laboratories, Inc., New Orleans, La. Filed Mar. 15, 1960.

PANTEMIC

For Tonic for Use as a Dietary Supplement Particularly for the Treatment of Anemia.
First use Aug. 14, 1958.

SN 92,963. The G. F. Harvey Company, Inc., New York, N.Y. Filed Mar. 16, 1960.

HARVADAL

For Analgetic, Antipyretic and Sedative Preparation.
First use 1943.

SN 93,703. Nysco Laboratories, Inc., Long Island City, N.Y. Filed Mar. 25, 1960.

COFFENE

Owner of Reg. No. 693,081.
For Stimulant in Tablet Form To Be Taken Orally for Use as an Aid in Remaining Awake and in Restoring Mental Alertness.
First use July 9, 1959.

SN 96,135. American Scientific Laboratories, Inc., Madison, Wis. Filed Apr. 15, 1960.

HEMORIN

For Vaccine for Animals.
First use Apr. 7, 1960.

SN 95,139. Boots Pure Drug Company Limited, Nottingham, England. Filed Apr. 15, 1960.

DYBENAL

Owner of British Reg. No. 756,494, dated Aug. 10, 1956.
For Antiseptics.

SN 95,166. The G. F. Harvey Company, Inc., New York, N.Y. Filed Apr. 15, 1960.

CORLAPHEN

For Preparation for the Treatment of Disturbances of the Gastro-Intestinal Tract.
First use July 1946.

SN 95,188. Oyster Products Company, Inc., Long Beach, Calif. Filed Apr. 15, 1960.

OYSTAMINS

For Vitamin-Mineral Tablets.
First use Mar. 31, 1960.

SN 95,189. Oyster Products Company, Inc., Long Beach, Calif. Filed Apr. 15, 1960.

OYSTARS

For Vitamin-Mineral Tablets.
First use Mar. 31, 1960.

SN 95,190. Oyster Products Company, Inc., Long Beach, Calif. Filed Apr. 15, 1960.

OYST-AIDS

For Vitamin-Mineral Tablets.
First use Mar. 31, 1960.

SN 95,191. Oyster Products Company, Inc., Long Beach, Calif. Filed Apr. 15, 1960.

OYSTABS

For Vitamin-Mineral Tablets.
First use Mar. 31, 1960.

Class 19—Vehicles

SN 60,079. Aero Design and Engineering Co., Bethany, Okla. Filed Oct. 6, 1958.

ALTI-CRUISER

For Aircraft.
First use Sept. 3, 1958.

SN 93,018. Shore-Calnevar, Inc., Paramount, Calif. Filed Mar. 16, 1960.



Owner of Reg. No. 665,612.
For Wheel Covers.
First use Mar. 20, 1958.

Class 20—Linoleum and Oiled Cloth

SN 80,773. Armstrong Cork Company, Lancaster, Pa. Filed Sept. 3, 1959.

ACCOWALL

For Flexible Wall Covering Having a Plastic Decorative Surface on a Felted Supporting Backing.
First use July 23, 1958.

SN 92,975. The Flintkote Company, New York, N.Y. Filed Mar. 16, 1960.

TEX-WEAVE

For Plastic Composition Floor Tile.
First use on or about April 1959.

SN 92,976. The Flintkote Company, New York, N.Y. Filed Mar. 16, 1960.

FLEX-WEAVE

For Plastic Composition Floor Tile.
First use on or about January 1960.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 62,020. McGraw-Edison Company, Chicago, Ill. Filed Nov. 6, 1958.

MOR-AMP

For Controls for Voltage Regulators.
First use May 9, 1958.
Subj. to Intf. with SN 67,233.

SN 67,233. Mor-Amp Welding Company, Jackson, Mo. Filed Feb. 6, 1959.

MOR-AMP

For Electrical Control Devices and Parts Therefor—Namely, Control Devices for Electric Welding.
First use Mar. 20, 1958.
Subj. to Intf. with SN 62,020.

SN 69,419. Hayakawa Electric Co. Ltd., Abeno, Osaka, Japan. Filed Mar. 12, 1959.

Sharp

For Radio Receiver Sets, Toasters, Electrically Driven Brushes and Vacuum Cleaners, Public Announcement Amplifiers, Record Players, Tape Recorders, and Fluorescent Lighting Fixtures.
First use Jan. 17, 1931; in commerce Jan. 17, 1931.

SN 75,873. Nelson Bros. Manufacturing & Distributing Co., Phoenix, Ariz. Filed June 16, 1959.

VEND-O-TRONIC

For Electronic Amplification Equipment for Use on Motor Vehicles for Advertising Wares, Such as Ice Cream and the Like.
First use Nov. 19, 1956.

SN 81,518. Yaou Denki Kabushiki Kaisha, Kawasaki, Kanagawa, Japan. Filed Sept. 16, 1959.

YAOU

Owner of Japanese Reg. No. 435,222, dated Nov. 17, 1953.
For Dynamos and Generators, Electric Motors, Electric Fans, Induction Coils, Regulators, Rectifiers, Resistance Devices, Electric Warmers and Heaters, Electric Cookers, Radio, and Television Receivers, Apparatuses for Telegraph, and Wireless Telegraphy, Relays, Telephones, Cells, and Batteries, Electric Bulbs, and Torches, Electric Cord, and Wire, Insulating Materials, and Parts Thereof.

SN 82,064. Ardwin Microlab, Incorporated, Stoneham, Mass. Filed Sept. 25, 1959.



The mark is of red color for portion illustrated by the lining, which color is an integral part of the mark.
For Components for Radio Frequency and Microwave Frequency Systems, Including: Antennas, Antennas Accessories, Transitions Tuners, Mixers, Horns, Couplers, Flanges, Coaxial Cable Assemblies, Crystal Holders, Horns, T's, Wave Meters, Cavities, Di-Plexers, Di-Duplexers and Attenuators.
First use May 29, 1958, as to attenuators.

SN 84,880. Fabri-Tek Company, Inc., Minneapolis, Minn. Filed Nov. 9, 1959.

FABRI-TEK

For Printed and Other Prewired Electronic Circuits and Component of the Electronic Circuits for Use on Computers, Ionizing Radiation Detection and Measuring Devices, Missile Guiding Equipment, Communications Equipment, Radar Detection Equipment, and Similar Electronic Equipment.
First use June 8, 1959, on printed circuits for computers.

SN 85,394. The Radion Corporation, Crystal Lake, Ill. Filed Nov. 16, 1959.

PYLON

For Merchandising Cartons Adapted to Contain Television Antennas.
First use on or about Oct. 26, 1959.

SN 86,206. Stetson Manufacturing Company, Forest Park, Ill. Filed Nov. 27, 1959.

COLOLUM

For Display Lights.
First use June 9, 1959.

SN 89,013. N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. Filed Jan. 14, 1960.

VALVO

For Electronic Tubes.
First use 1958; in commerce 1958.

SN 89,014. N.V. Philips' Gloeilampenfabrieken, Eindhoven, Netherlands. Filed Jan. 14, 1960.

VALVO

For Electronic Tubes.
First use 1958; in commerce 1958.

SN 90,234. Burnell & Co., Inc., Pelham Manor, N.Y. Filed Feb. 3, 1960.

KERNEL

For Inductors.
First use Oct. 5, 1959.

SN 90,906. Critchley Bros. Ltd., Brimscombe, Stroud, Gloucester, England. Filed Feb. 16, 1960.

BETA

For Electrical Cable Markers—Namely, Interlocking Ferrules and Dispensers Therefor, Plastic Cable Sleeves, Buckles, Terminal Tags and Strips, and Phase Buttons for Cable Identification and Retention.
First use in commerce Dec. 16, 1959.

SN 92,329. Technical Wire Products Inc., Springfield, N.J. Filed Mar. 7, 1960.

TECKSTRIP

Owner of Reg. No. 679,112.
For Electrical Interference Shielding Device for Mating Surfaces of Enclosures.
First use on or about Mar. 23, 1959.

SN 92,655. Smoot-Holman Company, Inglewood, Calif. Filed Mar. 11, 1960.

PERFECT VISION

For Fluorescent Lighting Fixtures.
First use May 1957.

SN 93,489. Bentley-Harris Manufacturing Company, Conshohocken, Pa. Filed Mar. 23, 1960.

BEN-HAR

For Electrical Tubing and Sleeving, and Lacing Tape.
First use May 1956.

SN 93,490. Bentley-Harris Manufacturing Company, Conshohocken, Pa. Filed Mar. 23, 1960.

BH

Owner of Reg. No. 211,776.
For Electrical Tubing and Sleeving.
First use 1952.

SN 93,683. Glenair, Inc., Glendale, Calif. Filed Mar. 25, 1960.

Glenair

The drawing is lined for blue; however, the mark is not limited as to color.
For Electrical Products and Accessories—Namely, Extension Sleeves for Electrical Plugs, Electrical Cable Clamp Adaptors, Electrical Cable Clamps, and Special Backshells for Electrical Connectors.
First use about July 1959.

Class 22—Games, Toys, and Sporting Goods

SN 65,454. Stewart Enterprises, Inc., Los Angeles, Calif. Filed Jan. 7, 1959.



No claim of exclusive right is made to "Stick" as used on a stick-type exercising device.
For Toy and Exercising Device Consisting of an Elongate, Curved Member Upon Which the User Stands.
First use July 5, 1958.

SN 67,687. Liberty Combustion Corporation, East Syracuse, N.Y. Filed Feb. 18, 1959.

BACKYARD BASEBALL

No claim of exclusive right is made to "Baseball" as used on a baseball batting practice device.
For Baseball Batting Practice Device.
First use Aug. 14, 1958.

SN 79,319. Berbro Manufacturing Co., Inc., d.b.a. Berbro Mfg. Co., New York, N.Y. Filed Aug. 11, 1959.

Berbro

For Toy and Miniature Automobiles for Children.
First use Feb. 24, 1959.

SN 80,092. Higbie Manufacturing Company, Rochester, Mich. Filed Aug. 24, 1959.

Bronson

DART

Owner of Reg. Nos. 618,990 and 669,553.
For Fishing Tackle viz.: Fishing Reels.
First use Apr. 14, 1959.

SN 93,238. Ralph A. Wales, Denver, Colo. Filed Mar. 18, 1960.

MAGIC GRIP

The lining designates green although color is not an essential feature of the mark.
For Hand Preparation for Aiding Golfers in Gripping Their Golf Clubs, Bowlers in Gripping the Bowling Balls, Baseball Players in Gripping the Balls and Bats, and for Similar Uses.
First use on or about May 1, 1959.

SN 94,090. Parker Brothers, Inc., Salem, Mass. Filed Mar. 31, 1960.

TRADE WINDS

For Equipment Used in Connection With a Board Game.
First use Mar. 15, 1960.

SN 94,801. Parker Brothers, Inc., Salem, Mass. Filed Apr. 11, 1960.

KIMBO

For Equipment Used in Connection With a Board Game.
First use Mar. 31, 1960.

SN 94,963. Cameo Doll Products Co., Inc., Port Allegany, Pa. Filed Apr. 13, 1960.

KEWPIE

For Dolls.
First use Dec. 21, 1912.

SN 95,084. Hoyt Archery Company, Bridgeton, Mo. Filed Apr. 14, 1960.

HOYT

For Archery Equipment—Namely, Bows, Arrows, Bow Strings, Arrow Fletching Devices, Bow Sights, and Arrow Points.
First use July 1935 on archery bows.

SN 95,400. Venus Pen & Pencil Corporation, New York, N.Y. Filed Apr. 19, 1960.

BALLOONOSE

For Toy Sets for Assembly by the User Containing Outlined Uncolored Sketches, Crayons, and Balloons.
First use Feb. 10, 1960.

SN 95,429. Game-Time, Inc., Litchfield, Mich. Filed Apr. 20, 1960.

SADDLE-MATES

For Toy Animals.
First use Aug. 5, 1959.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 80,803. Lacy-Hulbert & Company Ltd., Beddington, England. Filed Sept. 3, 1959.

BOREAS

Owner of British Reg. No. 236,553, dated Mar. 4, 1901.
For Air Compressors, Air Blowers, Vacuum Pumps, and Air Exhausters, All for Commercial or Industrial Use.

SN 80,932. Sunbeam Corporation, Chicago, Ill. Filed Sept. 4, 1959.

SUNBEAM

Owner of Reg. No. 145,335.
For Tools, Wrenches, and Vises.
First use in or before 1949.

SN 85,225. Richard Heim, Koln-Zollstock, Germany. Filed Nov. 13, 1959.

CONORAPID

Priority claimed under Sec. 44(d) on German application filed May 15, 1959, Reg. No. 734,925, dated Mar. 22, 1960.
For Textile Machines; Winding Machines; Cross Winding Machines; Yarn Winders; Yarn Brakes; Thread Guides.

SN 85,184. Stephens-Adamson Mfg. Co., Aurora, Ill. Filed Dec. 29, 1959.

SPEEDRAMP

For Passenger Belt Conveyor Apparatus.
First use Feb. 22, 1957.

SN 93,905. The Cleveland Twist Drill Company, Cleveland, Ohio. Filed Mar. 29, 1960.

CLE-FORGE

Owner of Reg. No. 169,822.
For Metal-Working Small Tools—Namely, Twist Drills and Drill Bits of All Kinds.
First use May 1953.

SN 94,089. Noffsinger Manufacturing Company, Greeley, Colo. Filed Mar. 31, 1960.

"SCOUR BRITE"

For Elevator Chains, Conveyor Chains, and Potato Grader Chains.
First use on or about Feb. 1, 1960.

SN 94,312. Koehring Company, Milwaukee, Wis. Filed Apr. 4, 1960.

KA MO

For Earth and Rock Drilling and Boring Equipment.
First use on or about Mar. 3, 1960; on or about Mar. 19, 1958 as to "Ka-Mo."

SN 94,511. Norton Company, Worcester, Mass. Filed Apr. 6, 1960.

PLUNGE-O-MATIC

For Grinding Machines.
First use on or about Mar. 23, 1960.

SN 94,576. Ferro Powdered Metals, Inc., Salem, Ind. Filed Apr. 7, 1960.



For Bearings and Gears.
First use Feb. 11, 1960.

SN 94,611. Popell Bros., Inc., Chicago, Ill. Filed Apr. 7, 1960.

VEG-O-MATIC

For Variable Cut Dicer-Slicers.
First use Mar. 30, 1960.

SN 94,738. A. Cohen & Sons Corp., New York, N.Y. Filed Apr. 11, 1960.

EVERBRITE

For Table Flatware—Namely, Table Knives, Forks, and Spoons, and Carving Knives, and Forks of Non-Precious Metal.
First use Sept. 6, 1958.

SN 95,019. Tessler Industries, Incorporated, Cleveland, Ohio. Filed Apr. 13, 1960.

Style Crest

For Sewing Machines.
First use June 19, 1959.

SN 95,425. The Ducon Company, Inc., Mineola, N.Y. Filed Apr. 20, 1960.

ORICLONE

For Gas Scrubber.
First use Feb. 25, 1960.

SN 96,068. Advance Muffler Service, Inc., Gardena, Calif. Filed Apr. 29, 1960.

PACIFIC

For Mufflers, Tailpipes, and Exhaust Pipes for Automotive Vehicles.
First use May 1, 1958.

SN 96,118. Hard & Co., Inc., Ann Arbor, Mich. Filed Apr. 29, 1960.

DUSTENDER

For Dust Collectors.
First use Mar. 25, 1959.

SN 96,201. Darf Corporation, Edenton, N.C. Filed May 2, 1960.

DARF

For Hay Rakes.
First use 1951.

Class 26—Measuring and Scientific Appliances

SN 55,816. The Triplett Electrical Instrument Co., Bluffton, Ohio. Filed July 22, 1958.

Unimeter

For Movements for Multiple Purpose Electrical Measuring Instruments and Components Therefor.
First use May 23, 1958.

SN 62,780. Fail Corporation, Glen Cove, N.Y. Filed Nov. 19, 1958.

DELTADYNE

For Differential Pressure Indicators for Fluid Systems.
First use Sept. 30, 1958.

SN 93,393. Waters Manufacturing, Inc., South Sudbury, Mass. Filed Mar. 21, 1960.

WATERS

Owner of Reg. No. 695,572.
For Electrical and Mechanical Measuring Instruments—Namely, Inductance, and Impedance Bridges, Curve Tracers, Torque-Indicating Devices, Angle-Setting Devices, and Oscilloscopes.
First use in or about February 1953.

SN 93,562. Taylor Instrument Companies, Rochester, N.Y. Filed Mar. 28, 1960.

LIN-E-AIRE

For Motor Drive for Positioning the Stem of Motor Operated Valves Employed To Control the Flow of Fluids.
First use January 1959.

SN 93,780. Farrington Manufacturing Company, Needham Heights, Mass. Filed Mar. 28, 1960.

imr

Owner of Reg. No. 624,964.
For Automatic Character Sensing Equipment and Attachments for Coordinating Electric Typewriters with Electric Key Punches.
First use Nov. 28, 1958; Feb. 3, 1954, as to letters "IMR."

SN 94,286. Frederick Instrument Company, Detroit, Mich. Filed Apr. 4, 1960.

RO-TORQ

For Torque Measuring Devices.
First use Jan. 1, 1960.

SN 95,489. Dosamatic Dropper Corporation, Valley Stream, N.Y. Filed Apr. 21, 1960.

DOSAMATIC

For Bottle Dropper, Bottle Closure, and Liquid Dispenser of Medicaments, Reagents, and Other Preparations of a Type Dispensed in Small Measured Quantities.
First use Mar. 2, 1960, on bottle closure and liquid dispenser.

SN 95,582. Fredon Company, Spearfish, S. Dak. Filed Apr. 22, 1960.

GRADE-O-METER

For Instruments for Measuring Inclination of a Surface.
First use on or about Feb. 15, 1960.

SN 95,588. Graflex, Inc., Rochester, N.Y. Filed Apr. 22, 1960.

GALAXY

For Photographic Projectors for Projecting Motion Pictures.
First use Mar. 24, 1960.

SN 85,813. Dynamics Research Corporation, Stoneham, Mass. Filed Apr. 26, 1960.

DRC

For Electro-Optical Encoders for Shaft-Angle Indication.
First use July 1958.

Class 29—Brooms, Brushes, and Dusters

SN 83,647. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed Oct. 20, 1959.

RENAULT

For Tooth Brushes.
First use Aug. 14, 1959.

SN 85,738. Thomas R. Hatz, Jr., d.b.a. Miracle Mop Co., Collingswood, N.J. Filed Nov. 20, 1959.

MIRACLE MOPS

Reserving all common law rights, the word "Mops" is disclaimed apart from the mark as used.
For Fiber Glass Roofing Mops—a Roofing Mop Comprised of Strands, Yarn or Cords of Fiber Glass and Used for the Application of Hot or Molten Asphalt or Pitch to Roofs.
First use Mar. 13, 1946.

Class 30—Crockery, Earthenware, and Porcelain

SN 90,668. The Vollrath Co., Sheboygan, Wis. Filed Feb. 9, 1960.

CATHEDRAL

For Chinaware—Namely, Dinnerware, and Dishes, Plates, Cups, Saucers, and Serving Containers Made of Chinaware.
First use Jan. 29, 1960.

Class 31—Filters and Refrigerators

SN 69,423. Hayakawa Electric Co. Ltd., Abeno, Osaka, Japan. Filed Mar. 12, 1959.

Sharp

For Refrigerators, and Parts, and Accessories Therefor.
First use Jan. 17, 1931; in commerce Jan. 17, 1931.

Class 32—Furniture and Upholstery

SN 73,258. Penn-Akron Corporation, Woodside, N.Y. Filed May 8, 1959.

U-NYL-GLIDE

For Furniture, Particularly Anti-Friction Members for Drawers.
First use July 15, 1958.

SN 75,819. Zellerbach Paper Company, San Francisco, Calif. Filed June 15, 1959.

SPACE MATE

For Storage Racks.
First use Feb. 10, 1959.

Class 33—Glassware

SN 92,850. American-Saint Gobain Corporation, New York, N.Y. Filed Mar. 15, 1960.

RANDEX

For Rolled Pattern Glass Sold in Sheets for Interior Partitions and for Glazing Wherever an Obscure Glass Is Desired.
First use Jan. 11, 1960.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 83,230. McGraw-Edison Company, Chicago, Ill. Filed Oct. 14, 1959.

TROPIC-AIRE

For Water Heaters.
First use February 1955.

SN 84,929. Metropolitan Dry Cleaning Machinery Co., Inc., Richmond Hill, N.Y. Filed Nov. 9, 1959.

POWR Metropolitan

For Boilers, Ventilating Apparatus, Particularly Super Powered Roof Ventilators, and Air Conditioning and Evaporative Air Apparatus, Utilizing the Process of Water Evaporation.
First use Jan. 2, 1956.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 85,540. W. J. Voit Rubber Corporation, Los Angeles, Calif. Filed Nov. 17, 1959.

AEROCOLD 65

For Tread Rubber Stock.
First use Mar. 3, 1958.

Class 36—Musical Instruments and Supplies

SN 70,416. Robert B. Robertson, d.b.a. R.B.R. Company, Hollywood, Calif. Filed Mar. 26, 1959.

THROUGH THE CHURCH WINDOW

For Phonograph Disc Records.
First use Dec. 23, 1958.

SN 80,519. Emiphone International, Inc., New York, N.Y. Filed Aug. 31, 1959.

mezh-kniga records

The words "Mezh Kniga" mean "among books." The word "Records" being the name of the goods is disclaimed apart from the mark as shown.
For Grooved Phonograph Records.
First use on or about Aug. 12, 1959.

Class 37—Paper and Stationery

SN 60,291. Associated Stationers Supply Company, Inc., Chicago, Ill., by change of name from Horder's, Incorporated, Chicago, Ill. Filed Oct. 8, 1958.

No Eye Strain

For Ruled Forms.
First use Apr. 20, 1937.

SN 91,893. Western Tablet & Stationery Corporation, Dayton, Ohio. Filed Feb. 29, 1960.

PORTA-PAK

For Typing Kits, Comprising Typewriter Paper and Carbon Paper.
First use Jan. 2, 1960.

Class 39—Clothing

SN 47,047. Country Tweeds, New York, N.Y. Filed Mar. 4, 1958.

Empress



For Vicuna Fabric Made Up Into Women's, Misses', and Junior Coats.
First use Feb. 3, 1958.

SN 65,365. The Kaynee Company, Greenville, S.C. Filed Jan. 6, 1959.

PAJAMETTE

Owner of Reg. No. 168,108.
For Boys' and Children's Pajamas.
First use Nov. 4, 1912.

SN 66,612. The Formfit Company, Chicago, Ill. Filed Jan. 28, 1959.

FORMFITTER

Owner of Reg. Nos. 409,442, 560,205, and others.
For Girdles.
First use June 9, 1958.

SN 66,613. The Formfit Company, Chicago, Ill. Filed Jan. 28, 1959.

WHITE COLLAR

For Brassieres.
First use May 15, 1958.

SN 67,867. Francis Doll, Jr., d.b.a. Saint Louis Trading Co., and as Donald Francis Company, St. Louis, Mo. Filed Feb. 17, 1959.

RUANA

For Poncho-Type Overcoat.
First use Sept. 23, 1958.

SN 75,222. Suixtil Sociedad Anonima Comercial e Industrial, Buenos Aires, Argentina. Filed June 5, 1959.

TRAJES Suixtil PARA ÑARÓ!

Applicant disclaims the Spanish words "Para Trajes" apart from the mark as shown. An English translation of the Spanish words "Trajes" is "suits," and that of the word "Para" is "for." Owner of U.S. Reg. No. 679,317.
For Women's and Men's Suits.
First use January 1952; in commerce Oct. 1, 1958.

SN 75,620. The Formfit Company, Chicago, Ill. Filed June 12, 1959.

TRIUMPH

For Brassieres and Girdles.
First use on or about June 9, 1959.

SN 81,135. Anthony B. Laganella and Charles E. McMenamin, Philadelphia, Pa. Filed Sept. 10, 1959.

LITTERBUG

For Masquerade Costume and Mask.
First use Aug. 16, 1959.

SN 81,955. A.S.M. Co., Inc., Los Angeles, Calif. Filed Sept. 24, 1959.

MR CAL ORIGINALS

The applicant disclaims the word "Originals."
For Sport Shirts and Zipper Sport Jackets.
First use May 8, 1959.

SN 84,959. Alda R. Van Buren, d.b.a. Alda of California, North Hollywood, Calif. Filed Nov. 9, 1959.

SPACETTE

For Slack Suits.
First use Oct. 9, 1959.

SN 85,853. Grey Hosiery Mills, d.b.a. Mary Grey Hosiery Mills, Bristol, Va. Filed Nov. 23, 1959.

MARY GREY

Mrs. Mary Grey Sabine is the "Mary Grey" named in the mark, consent of record. Owner of Reg. No. 565,274.
For Tights for Women and Children.
First use Oct. 31, 1958.

SN 87,406. Chicopee Mills, Inc., New York, N.Y. Filed Dec. 16, 1959.

CHIX

Owner of Reg. Nos. 387,983, 585,644, and others.
For Disposable Diaper Pads.
First use in 1956.

SN 88,304. Dessy-Atco Inc., New York, N.Y. Filed Dec. 31, 1959.

CLARETTA

For Men's, Women's, and Children's Shoes.
First use Dec. 20, 1959.

SN 88,765. Industrial Products Company, Philadelphia, Pa. Filed Jan. 11, 1960.

RAY-D-8

For Industrial Clothing—Namely, Protective Garments and Hats.
First use Sept. 21, 1959.

SN 89,176. Cyril George Kent, d.b.a. Kent and Francis, London, England. Filed Jan. 18, 1960.



The French word "Souplesse" means "suppleness." The word "Souplesse" is disclaimed apart from the mark as shown. Owner of British Reg. No. B768,296, dated Aug. 13, 1957.
For Garments Made of Fur—Namely, Fur Coats, Fur Jackets, Fur Wraps, Straight Stoles, Cape Stoles, Boleros, Ties, Coat Linings, and Other Fur Garments.

SN 89,387. A. Stein & Company, Chicago, Ill. Filed Jan. 20, 1960.

MAGIC OVAL

For Pantie Girdles.
First use Jan. 25, 1954.

SN 89,518. Osgood and Sons Inc., Decatur, Ill. Filed Jan. 22, 1960.

DIANA LYNN

For Women's, Misses', and Girls' Dresses.
First use Dec. 18, 1959.

SN 89,519. Osgood and Sons Inc., Decatur, Ill. Filed Jan. 22, 1960.

NADINE

For Women's, Misses', and Girls' Dresses.
First use Dec. 18, 1959.

SN 90,052. Genesco Inc., Nashville, Tenn. Filed Feb. 1, 1960.

BOXER TOP

For Shoes for Men, Women, and Children.
First use Dec. 1, 1959.

SN 90,735. The H. W. Gossard Co., Chicago, Ill. Filed Feb. 11, 1960.

SITTING PRETTY

For Pantie Girdles.
First use June 26, 1959.

SN 91,083. Exquisite Form Brassiere, Inc., New York, N.Y. Filed Feb. 17, 1960.

SPEAK LOW

For Brassieres and Girdles.
First use Jan. 29, 1960.

SN 91,120. Sewell Manufacturing Company, Bremen, Ga. Filed Feb. 17, 1960.

ALMA MATER

For Men's, and Boys' Suits, Coats, Jackets, and Slacks.
First use Feb. 2, 1960.

SN 91,667. Bancroft Cap Company, Framingham, Mass. Filed Feb. 26, 1960.

TOKAP

For Caps.
First use Jan. 7, 1960.

SN 91,957. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Mar. 1, 1960.

CURTSY

Owner of Reg. No. 612,654.
For Foundation Garments—Namely, Girdles.
First use Jan. 25, 1959.

SN 91,958. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Mar. 1, 1960.

SPINDRIFT

Owner of Reg. No. 634,885.
For Foundation Garments—Namely, Girdles.
First use Feb. 9, 1959.

SN 92,142. Desco Shoe Corporation, New York, N.Y. Filed Mar. 4, 1960.

Red Carpet

For Women's Shoes and Slippers Made of Leather, Fabric, or a Combination of Those or Other Materials.
First use June 1959.

SN 94,123. White Stag Manufacturing Co., Portland, Oreg. Filed Mar. 31, 1960.



For Clothing for Men, Women, and Children—Namely, Sweaters and Ski Sweaters, Caps and Ski Caps, Scarfs, Mitts and Ski Mitts, Outer Shirts, Parkas, Hooded Jackets, Coats and Hooded Coats, Jackets and Ski Jackets, Vests, Trousers, Slacks, Pants and Ski Pants, Pedal Pushers, Outer Shorts, Skirts, Culottes, Leotards, Tights, Knickers, Bloomers, and Coveralls.
First use Dec. 1, 1932.

SN 94,665. Haddad and Sons, Inc., New York, N.Y. Filed Apr. 8, 1960.

Hadson

Owner of Reg. No. 642,981.
For Men's, Women's, and Children's Shoes and Sport Shoes.
First use June 1956.

Class 40—Fancy Goods, Furnishings, and Notions

SN 75,508. Standard Pyroxoloid Corporation, Leominster, Mass. Filed June 10, 1959.

Little Miss Pony Tail

For Dresser Sets Comprising Mirrors, Combs, and Brushes.
First use Jan. 2, 1959.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 69,879. Dust Proof Mattress Cover Company, Inc., Ellwood City, Pa. Filed Mar. 19, 1959.

"Show-case"

For Combination Pillow Protector and Pillow Case.
First use Dec. 10, 1958.

SN 78,997. Sooren Hovhannisian, d.b.a. Magic Carpet, Bridgeport, Conn. Filed Aug. 4, 1959.



MAGIC CARPET

The word "Carpet" is disclaimed apart from the mark as shown.
For Rugs and Carpets Formed of Textile Fibers, Such as Wool, Cotton, or Synthetic Fibers.
First use October 1952.

SN 89,925. Liberty & Co. Limited, London, England. Filed Jan. 29, 1960.

LOTUS

Owner of British Reg. Nos. 278,206, and 278,207, dated Dec. 14, 1905.
For Silk Piece Goods.

SN 94,062. Gaeltarra Eireann, Dublin, Ireland. Filed Mar. 31, 1960.



Owner of Irish Reg. No. 37,021, dated Feb. 21, 1930.
For Woollen Fabrics.
First use 1932; in commerce 1938.

SN 94,413. Monarch Rug Mills, Inc., Dalton, Ga. Filed Apr. 5, 1960.

GALATONE

For Fine Textured Carpets.
First use Jan. 1, 1960.

SN 94,414. Monarch Rug Mills, Inc., Dalton, Ga. Filed Apr. 5, 1960.

SKYLAND

For Fine Textured Carpets.
First use Jan. 1, 1960.

Class 43—Thread and Yarn

SN 93,594. H. P. Chandler, Inc., Lowell, Mass. Filed Mar. 24, 1960.

CHANSPUN

For Yarn.
First use July 1959.

Class 44—Dental, Medical, and Surgical Appliances

SN 69,420. Hayakawa Electric Co. Ltd., Abeno, Osaka, Japan. Filed Mar. 12, 1959.

Shaip

For Electrical Vibrators.
First use Jan. 17, 1931; in commerce Jan. 17, 1931.

SN 72,066. Securitone Corporation of America, New York, N.Y. Filed May 5, 1959.

SECURITONE

For Electric Tranquilizer Adapted To Simulate Heart Beat Rhythm To Pacify Humans and Animals.
First use May 1, 1959.

SN 88,952. Abbott Laboratories, North Chicago, Ill. Filed Jan. 14, 1960.

DOUBLE PLIAPAK

The word "Double" is disclaimed apart from the mark as shown. Owner of Reg. No. 635,277.
For Set Comprising Two Connected Collapsible Plastic Containers Designed for Collection, Storage, and Administration of Parenteral Fluids.
First use Dec. 11, 1959.

SN 91,696. Erich Jaeger, Wurzburg (Main), Germany. Filed Feb. 26, 1960.

ERGOTEST

Owner of German Reg. No. 720,312, dated Dec. 11, 1958.
For Ergometer for Use in Connection With the Human Body.

Class 46 — Foods and Ingredients of Foods

SN 667,416. Mead Johnson & Company, Evansville, Ind. Filed June 1, 1954.

Lytren

For Food Preparation in Powder Form Containing Electrolytes, Maltose, and Dextrins.
First use Apr. 23, 1954.

SN 42,087. Uncle Sam Breakfast Food Co., Omaha, Nebr. Filed Dec. 9, 1957.

UNCLE SAM

Owner of Reg. No. 69,084.
For Cereal Breakfast Food With Laxative Properties.
First use May 1, 1956.

SN 68,030. Candygram, Inc., Chicago, Ill. Filed Feb. 19, 1959.

CandyGram=

the world's sweetest message

Owner of Reg. No. 548,193.
For Candy Sold Pursuant to Telegraphic Order.
First use Sept. 22, 1949.

SN 69,548. Penn Fruit Co., Inc., d.b.a. Penn Fruit Company and Penn Fruit Co., Philadelphia, Pa. Filed Mar. 13, 1959.

PENN DE LUXE

Applicant claims no exclusive rights in "De Luxe" alone and apart from the mark as shown. Owner of Reg. Nos. 604,537 and 624,442.
For Bakery Products—Namely, Sweet Dough Baked Goods, Danish Pastries, Pies, Cakes, Rolls, Bread, Pretzels, Bread Crumbs, "Frozen" Packaged Baked Goods Such as Danish Pastries and Chocolate and Banana Cakes, "Brown and Serve" Packaged Baked Goods; Potato Chips; Dairy Products—Namely, Fresh Milk, Fresh Eggs, Sweet and Sour Cream, Butter, and Cheese; Desserts—Namely, Baked Rice, Bread and Tapioca Puddings, Peach Custard, and Fruit and Vegetable Gelatine; Fresh and Frozen Fish and Shell Fish; Fresh, Canned, and Dried Fruits; Fresh, Canned, and Frozen Vegetables; Fresh Meats; Fresh and Frozen Poultry; and Salads—Namely, Fruit, Vegetable, and Macaroni Salads.
First use on or about Jan. 2, 1957.

SN 76,278. Sunshine Biscuits, Inc., Long Island City, N.Y. Filed June 22, 1959.

ORBIT

For Cookies.
First use June 1, 1959.
Subj. to Intf. with SN 90,254.

SN 78,349. Albert Freeman, d.b.a. Silver Chips Candy Company, Las Vegas, Nev. Filed July 24, 1959.



No claim is made to "Las Vegas, Nevada," said designation being the geographical origin of the goods.
For Candy.
First use Apr. 28, 1959.

SN 79,014. National Institutional Food Distributors Association, Inc., d.b.a. National Institutional Food Distributor Associates, Inc., Atlanta, Ga. Filed Aug. 4, 1959.

NIFDA

For Desserts of the Gelatin Type—Namely, Grape, Apple, Strawberry, Lime, Lemon, Cherry, Orange, and Raspberry; Puddings and Instant Puddings—Namely, Butterscotch, Vanilla, Coconut, Chocolate Flavor, and Tapioca; Pie Fillings—Namely, Lemon, Tapioca, Chocolate, Vanilla, Butterscotch, and Coconut; Ice Cream Toppings—Namely, Chocolate Fudge and Butterscotch Fudge; Sauces for Meat, Fish, and Fowl; Food Flavorings—Namely, Chinese Seasoning Powder, Chili Powder, and Flavor Additives of the Monosodium Glutamate Type; All-Purpose and Pizza Seasonings; Pickle Relishes; Enzyme Meat Tenderizers; Liquid Flavoring Extracts for Food, Salad Dressings; Mayonnaise; Food Colorings; Pickles; Soup Bases; Soups; Broths; Bread Crumb Mix for Use With Ground Meats; Gravys; Cheese; Coconut Flakes; Tea; Cocoa; Hot Chocolate Drink Base; Mustard; Catsup; Olives; and Jelly.
First use July 1958.

SN 80,097. IXL Food Company, San Leandro, Calif. Filed Aug. 24, 1959.



The vertical lining of the disc indicates the disc (except for the letters IXL) is colored red. Owner of Reg. Nos. 259,805, 661,434, and others.
For Canned Foods: Tamales, Mushroom Sauce, Spaghetti Sauce, Enchiladas, Raviolis, Pizza Sauce, Chili Con Carne, Tamale Pies, Lasagne, Spaghetti and Meat Balls, Meat Balls and Gravy.
First use on or about May 19, 1958.

SN 84,207. Blue Star Foods, Inc., Council Bluffs, Iowa. Filed Oct. 29, 1959.



For Frozen Meat Pies, Frozen Fruit Pies, and Frozen Prepared Dinners Consisting of Meat, Potatoes, and Vegetable.
First use Sept. 8, 1959.

SN 86,585. N.V. Biscuitfabriek "Patria," Amsterdam, Netherlands. Filed Dec. 3, 1959.



Owner of Dutch Reg. No. 130,478, dated Mar. 28, 1958; and U.S. Reg. No. 588,688.
For Biscuits.

SN 88,756. Hollywood Brands, Inc., Centralia, Ill. Filed Jan. 11, 1960.



Owner of Reg. No. 515,986.
For Candy.
First use Aug. 10, 1955.

SN 89,208. Spangler Candy Company, Bryan, Ohio. Filed Jan. 18, 1960.

SWEETIE POP

No claim of exclusive right is made to "Pop" as used on the goods claimed.
For Candy Suckers.
First use Dec. 11, 1959.

SN 89,445. Otto Monsted A/S, Copenhagen, Denmark. Filed Jan. 21, 1960.

PARADISO

The word "Paradiso" in Italian means "paradise." Priority claimed under Sec. 44(d) on Danish application filed July 22, 1959; Reg. No. 2439—1959, dated Dec. 19, 1959.
For Processed Cheese and Cream Cheese.

SN 89,684. The Julep Company, Sycamore, Ill. Filed Jan. 26, 1960.

JULEP

Owner of Reg. No. 686,720.
For Fruit, Nut, and Flavored Ice Cream Toppings; Maraschino Cherries; Flavored Fountain Syrups; Barbecue Sauce, and Canned Meats.
First use 1912, on flavored fountain syrups.

SN 90,254. Robert A. Johnston Company, Milwaukee, Wis. Filed Feb. 3, 1960.

CHOCOLATE ORBIT

The word "Chocolate" is disclaimed apart from the mark as shown.
For Cookies.
First use Mar. 27, 1954.
Subj. to Intf. with SN 76,278.

SN 92,207. Armour and Company, Chicago, Ill. Filed Mar. 7, 1960.

MELROSE

Owner of Reg. No. 557,448.
For Frozen Meats—Namely, Sirloin Strip Steaks, T-Bone Steaks, Sirloin Butt Steaks, and Rib Club Steaks.
First use Sept. 15, 1955.

SN 92,543. The Nestlé Company, Inc., White Plains, N.Y. Filed Mar. 10, 1960.

BIG N

For Prepared Edible Chocolate.
First use Feb. 23, 1960.

SN 93,896. Neiman-Marcus Company, Dallas, Tex. Filed Mar. 7, 1960.

TEXAS CAVIAR

For Hors d'Oeuvres—Namely, Canned Black Eyed Peas.
First use Nov. 27, 1957.

SN 94,094. The Quaker Oats Company, Chicago, Ill. Filed Mar. 31, 1960.

CAPTAIN CRUNCH

For Breakfast Cereal.
First use Mar. 10, 1960.

SN 94,111. The Taylor Provisions Company, Trenton, N.J. Filed Mar. 31, 1960.

TAYSTRIPS

For Packaged Chopped Smoked Pork.
First use Mar. 14, 1960.

SN 94,164. Idaho Potato Growers, Inc., Idaho Falls, Idaho. Filed Apr. 1, 1960.

NEW SWEDEN

For Fresh Potatoes in Their Natural State; Starch, for Food Purposes; Frozen French Fry Potatoes; Dehydrated Potatoes.
First use in or about the year 1937.

SN 94,420. Pooley Fruit Company, Hood River, Oreg. Filed Apr. 5, 1960.

MT. HOOD

Owner of Reg. No. 237,576.
For Fresh Deciduous Fruits.
First use Aug. 24, 1926, on fresh apples.

Class 47 — Wines

SN 84,497. Federazione Italiana dei Consorzi Agrari, Rome, Italy. Filed Oct. 22, 1959.

ME.DI.VI.

Owner of Italian Reg. No. 143,963, dated June 4, 1959.
For Wines.

SN 90,913. E. & J. Gallo Winery, Modesto, Calif. Filed Feb. 15, 1960.

Ripple

Owner of Reg. Nos. 694,648, 695,025, and 695,800.
For Wines.
First use Dec. 29, 1959.

Class 49 — Distilled Alcoholic Liquors

SN 84,236. Mr. Boston Distiller Inc., d.b.a. Essex Bottlers, Boston, Mass. Filed Oct. 29, 1959.

ESSEX HOUSE

For Whiskey and Gin.
First use Oct. 5, 1959.

SN 90,673. Affiliated Distillers Brands Corp., New York, N.Y. Filed Feb. 10, 1960.

HYBRID

Owner of Reg. No. 550,690.
For Whiskey.
First use Jan. 11, 1960.

Class 51 — Cosmetics and Toilet Preparations

SN 55,782. Marcel Contier, Paris, France. Filed July 22, 1958.

BIOSTHETICIEN

Owner of French Reg. No. 469,520, dated Jan. 10, 1958 (Seine); Natl. Inst. No. 101,025.
For Perfumery and Cosmetic Preparations, Specifically Perfumes; Body and Face Powders; Anti-Perspirants; Body Deodorants; Cosmetic Creams and Lotions for Application to the Face, Hands and Body; Cosmetic Conditioning Preparations for the Scalp and Hair; Hair Coloring Preparations; Depilatory Preparations.

SN 66,636. Parfums Schiaparelli, Inc., New York, N.Y. Filed Jan 28, 1959.

Schiaparelli VOYAGEUR

The word "Voyageur" is translated as "traveler." Owner of Reg. Nos. 394,817, 406,963, and others.
For Colognes and Perfumes.
First use Dec. 8, 1958.

SN 71,738. Houbigant, Inc., New York, N.Y. Filed Apr. 17, 1959.

QUELQUES FLEURS
BATH BAR

The word "Bath" is disclaimed except in the combination shown. The drawing is lined for red.
For Kit Containing Cologne, Hand Lotion, Bath Softener, Body Powder, Cream Stick Deodorant, Bath Oil, and Bubble Bath.
First use July 15, 1956.

SN 74,944. Monsieur Robert S.A.R.L., Paris, France. Filed June 2, 1959.



PIERRE Robert

Priority claimed under Sec. 44(d) on French Reg. No. 476,406, dated Dec. 8, 1958 (Seine); Natl. Inst. No. 116,987.
For Nail Polish and Nail Polish Remover.

SN 74,950. Murray P. Poznak, Irvington, N.J. Filed June 2, 1959.

ACROLITE PROTECT-A-HAND

For Hand Protecting Foam Cream With Lanolin.
First use May 25, 1959.

SN 76,194. The Fuller Brush Company, Hartford, Conn. Filed June 22, 1959.

GOLDEN ACCENT

For Toilet Water.
First use on or about May 9, 1959.

SN 79,647. Hairstrate, Inc., d.b.a. Summit Laboratories, Fort Wayne, Ind. Filed Aug. 17, 1959.

LIV

For Creme Hair Dressing and Conditioner.
First use May 28, 1959.

SN 83,132. Scandia Cosmetic Corp., New York, N.Y. Filed Oct. 12, 1959.

DANCING EYES

For Eye Make Up, Cosmetic Eye Cream, and Cosmetic Eye Lotion.
First use Oct. 2, 1959.

SN 84,895. H. C. Hullings, d.b.a. Amanus Products Co., Denver, Colo. Filed Nov. 9, 1959.

AMANUS

For Cosmetic Skin Creams, and Lotions.
First use June 19, 1959.

SN 87,603. Catherine Wentworth, d.b.a. Ca-Wen Products, Cincinnati, Ohio. Filed Dec. 18, 1959.

Ca-Wen

For Skin Lotion.
First use Feb. 21, 1956.

SN 88,694. Societe Industrielle de Parfumerie et de Conditionnement (S.I.P.E.C.), Colombes (Seine), France. Filed Jan. 8, 1960.

CARAVELLE

The mark "Caravelle" is a French word meaning a ship used in past centuries by the French marine. Owner of French Reg. No. 483,052, dated Oct. 2, 1959 (Seine); Natl. Inst. No. 132,203.
For Perfume.

SN 89,303. Societe Technique de Parfumerie, F. Millot, Paris, France. Filed Jan. 19, 1960.

IMPERTINENCE

Owner of French Reg. No. 483,289, dated Oct. 15, 1953 (Paris); Natl. Inst. No. 132,750.
For Perfumes, Toilet Water, Cosmetic Skin Lotions, Face and Body Powders, Rouge, and Lipsticks.

SN 89,649. Comptoir Nouveau de la Parfumerie, Societe à Responsabilité Limitée, Paris, France. Filed Jan. 26, 1960.

CALECHE

The mark "Caleche" is a French word meaning a four-wheeled carriage. Owner of French Reg. No. 448,066, dated Dec. 20, 1954 (Seine); Natl. Inst. No. 49,075.
For Perfumes, Toilet Water, Face Powder, Rouge, Lipsticks, Cosmetic Skin Creams and Lotions, Hair Lotions, and Dentifrices.

SN 90,793. Michael Todd, Jr., New York, N.Y. Filed Feb. 11, 1960.



SCENT OF MYSTERY

Owner of Reg. Nos. 694,020 and 694,352.
For Eau de Cologne and After Shave Lotion.
First use Sept. 14, 1959; on or about Dec. 15, 1958, as to "Scent of Mystery."

SN 91,666. Avon Products, Inc., New York, N.Y. Filed Feb. 26, 1960.

DEW KISS

For Face or Skin Lotion.
First use Feb. 5, 1960.

SN 91,671. John H. Breck, Inc., Springfield, Mass. Filed Feb. 26, 1960.

GOLDEN CHALICE

For Cosmetic Products and Toilet Preparations—Namely, Toilet Waters, Perfumes and Colognes, Skin Creams and Lotions (Make-Up Bases, Emollient and Astringent Hand Creams and Lotions), Face and Body Powders, Body Deodorants, Bath Oils and Powders, Depilatories, Hair Prepara-

tions Including Hair Tints, Hair Dressing Creams and Lotions, Hair Creams, Hair Lotions, Hair Shampoos, Hair Tonics, Hair Conditioning Creams and Lotions, and Hair Bleaches, Shaving Lotions, Powders, and Creams, Brilliantines, Sachet Powders, Liquid Waving Solutions, Cleansing Creams and Lotions, Dandruff Removing Preparations, Hair Coloring Preparations, Permanent Waving Preparations, Suntan Preparations, Nail Enamels and Removers, Eye Makeups and Lotions and Lipsticks.
First use Dec. 9, 1959.

SN 92,175. Germaine Monteil Cosmetiques Corp., New York, N.Y. Filed Mar. 4, 1960.

DESERT SUN

For Liquid Foundation Base, Face Powder and Lipstick.
First use Feb. 25, 1960.

SN 92,589. Clairol Incorporated, New York, N.Y. Filed Mar. 11, 1960.

GREAT DAY

For Hair Tinting, Dyeing, and Coloring Preparations.
First use Nov. 24, 1959.

SN 92,593. Clairol Incorporated, New York, N.Y. Filed Mar. 11, 1960.

MR. CLAIROL

Owner of Reg. Nos. 302,399, 620,097, and others.
For Hair Tinting, Dyeing, and Coloring Preparations.
First use Nov. 24, 1959.

SN 92,595. Clairol Incorporated, New York, N.Y. Filed Mar. 11, 1960.

LOVING CARE

Owner of Reg. No. 669,396.
For Hair Tinting, Dyeing, and Coloring Preparations.
First use Nov. 24, 1959.

SN 92,596. Clairol Incorporated, New York, N.Y. Filed Mar. 11, 1960.

PICTURE PERFECT

For Hair Tinting, Dyeing, and Coloring Preparations.
First use Nov. 24, 1959.

SN 92,651. Helena Rubinstein, Inc., New York, N.Y. Filed Mar. 11, 1960.

BIODORANT

For Deodorant.
First use Nov. 12, 1959.

SN 92,691. Elizabeth Arden Sales Corporation, New York, N.Y. Filed Mar. 14, 1960.

MASCARETTE

For Liquid Mascara.
First use Oct. 1, 1959.

SN 93,105. The Theon Company, Inc., New York, N.Y. Filed Mar. 17, 1960.

LASHBRITE

Owner of Reg. No. 572,804.
For Eye Make-Up of All Kinds.
First use May 21, 1951.

Class 52 — Detergents and Soaps

SN 87,163. The Winser Company, Dallas, Tex. Filed Dec. 11, 1959.

VIE

For Liquid Detergent—Namely, a Detergent for Dishwashing, Sold for Domestic Use.
First use on or about Nov. 20, 1959.

SN 89,419. The Diversey Corporation, Chicago, Ill. Filed Jan. 21, 1960.

RUB-R-KLEEN

Owner of Reg. No. 503,867.
For Cleanser in Flaked Form Having Incidental Water-Softening Properties, for Cleaning and Soaking Milking Machine Tubes, and for Cleaning Vacuum Lines and the Like.
First use Nov. 7, 1938.

SN 90,723. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 10, 1960.

GRIME-GO

Owner of Reg. No. 659,920.
For Liquid Maintenance Cleaner and Wax Stripper.
First use Jan. 8, 1960.

SN 93,019. Shulton, Inc., Clifton, N.J. Filed Mar. 16, 1960.

FRIENDSHIP GARDEN

Owner of Reg. Nos. 376,953, 631,914, and others.
For Shower Soap.
First use Aug. 1, 1957.

SN 93,061. Economics Laboratory, Inc., St. Paul, Minn. Filed Mar. 17, 1960.

EL

Owner of Reg. No. 367,491.
For Dishwashing, Laundry, and Cleaning Compositions for Household and Commercial Use.
First use Sept. 1, 1938.

SN 93,211. Sezso Company, Inc., Tonawanda, N.Y. Filed Mar. 18, 1960.

SEZSO

For Hand Cleaner.
First use Sept. 18, 1956.

SERVICE MARKS

Class 100 — Miscellaneous

SN 74,326. Outdoor Development Company, Incorporated, Augusta, Ga. Filed May 22, 1959.

FAMILY SHELL HOMES BY OUTDOOR DEVELOPMENT Company

The words "Family Shell Homes" are disclaimed apart from the mark as shown. Owner of Reg. No. 686,474.
For Professional Consultation and Services Relating to the Design of Building Structures and for Writing Specifications in Connection With Building Structures.
First use in January 1958.

Class 101 — Advertising and Business

SN 67,037. Collective Advertising, Incorporated, Princeton, N.J. Filed Feb. 4, 1959.

Yes STORES

No claim is made to the word "Stores" apart from the mark as shown.
For Promoting the Sale of Goods and Service of Others Through the Medium of Trading Coupons Which Are Redeemable in Merchandise or Services Bought at Member Stores.
First use Apr. 3, 1958.

SN 74,866. Hayes-Lochner, Inc., Chicago, Ill. Filed June 1, 1959.

TYPARTISTS

For Advertising Typographic Service.
First use 1930.

Class 102 — Insurance and Financial

SN 66,574. State-Planters Bank of Commerce and Trusts, Richmond, Va. Filed Jan. 27, 1959.

Thrift Loan

Applicant disclaims any exclusive rights in the words "Thrift," "Loan," and "System" apart from the mark as shown.
For Banking Services—Namely, a Personal Loan Service Featuring the Simultaneous Establishment of a Savings Account and a Checking Account.
First use in September 1958.

SN 81,203. Sentinel Security Life Insurance Company, Salt Lake City, Utah. Filed Sept. 11, 1959.

The Sentinel Plan

For Underwriting Insurance Risks—Namely, Life and Funeral Expense Policies.
First use Sept. 15, 1948.

Class 103 — Construction and Repair

SN 74,830. Conservation Industries, Inc., Kansas City, Kans. Filed June 1, 1959.

NICE

For Pest Control Services.
First use Dec. 10, 1958.

Class 105 — Transportation and Storage

SN 89,543. Barnett International Airfreight Corp., New York, N.Y. Filed Jan. 25, 1960.

MEDALLION Air Freight System

Applicant disclaims any right to the wording "Air Freight System."
For Air Transportation of Property and Incidental Services, Including Motor Vehicle Pick Up From Shippers, Terminal Handling, Transporting by Air, Unloading, and Delivery to Consignees.
First use Jan. 14, 1960.

Class 107 — Education and Entertainment

SN 59,800. ADCAS, Inc., Chicago, Ill. Filed Sept. 30, 1958.

AMERICAN DANCE CLUB

Applicant disclaims the exclusive right to the term "Dance Club" apart from the mark.
For Teaching of Ballroom Dancing.
First use in August 1957.

SN 76,444. Tomlinson D. Todd, Washington, D.C. Filed June 24, 1959.

AMERICANS ALL

For Title of a Radio Program—Namely, the Presentation of Brotherhood, Religious, Community, and News Topics.
First use Mar. 31, 1946.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 82,952. Appraisers Association of America, Inc., New York, N.Y. Filed Oct. 9, 1959.

APPRAISERS ASSOCIATION OF AMERICA

For Indicating Membership in the Applicant Organization. First use in or about 1951.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

703,406. MELAQUA. American Cyanamid Company. SN 87,020. Pub. 6-14-60. Filed 12-10-59.

703,407. OLANE. Avisun Corporation. SN 87,619. Pub. 6-14-60. Filed 12-21-59.

Class 2—Receptacles

703,408. DEB-U-TEEN. Teen Time, Inc. CONSOLIDATED CERTIFICATE. SN 71,983, pub. 4-5-60, filed 4-21-59, Cl. 2; SN 71,981, pub. 2-23-60, filed 4-21-59, Cl. 37; SN 71,982, pub. 2-23-60, filed 4-21-59, Cl. 38.

703,409. 49ER. Fibreboard Paper Products Corporation. SN 88,376. Pub. 6-14-60. Filed 1-4-60.

703,410. UNIPOUR. The New Haven Board & Carton Company. SN 88,792. Pub. 6-14-60. Filed 1-11-60.

703,411. ROYAL CROWN. Royal Crown Plastics Corporation. SN 89,026. Pub. 6-14-60. Filed 1-14-60.

703,412. DURA-BIN. Wilmot Engineering Company. SN 89,820. Pub. 6-14-60. Filed 1-27-60.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

703,413. BUSY BAG. Skyway Luggage Company, d.b.a. Skyway Luggage Co. SN 84,948. Pub. 6-14-60. Filed 11-9-59.

Class 4—Abrasives and Polishing Materials

703,414. PERFECTO-PEEN AND DESIGN. Aero-Test Equipment Company, Inc. SN 77,685. Pub. 6-14-60. Filed 7-17-59.

Class 6—Chemicals and Chemical Compositions

703,415. KLOROCIDE. Nelson Chemicals Co. SN 35,280. Pub. 6-14-60. Filed 8-9-57.

703,416. BONEWITZ. Bonewitz Chemicals, Inc., assignee of Bonewitz Laboratories, Inc. SN 47,832. Pub. 6-14-60. Filed 3-17-58.

703,417. FERTOMASK. Dodge & Olcott, Inc. SN 69,877. Pub. 6-14-60. Filed 3-19-59.

703,418. CATALYST-TT. Chas. S. Tanner Co. SN 74,554. Pub. 6-7-60. Filed 5-26-59.

703,419. CHEM-ACRIL. The Chemstrand Corporation. SN 74,720. Pub. 6-14-60. Filed 5-29-59.

703,420. BLUE DEVIL ETC. AND DESIGN. Howard F. Hawley, d.b.a. H. F. Hawley Chemical Company. SN 76,204. Pub. 6-14-60. Filed 6-22-59.

703,421. LINTROL. The Stamford Chemical Company. SN 78,152. Pub. 6-14-60. Filed 7-21-59.

703,422. KIERALON. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 80,624. Pub. 6-14-60. Filed 9-1-59.

703,423. ULTRAPHOR. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 80,627. Pub. 6-14-60. Filed 9-1-59.

703,424. KAURIT. Badische Anilin- & Soda-Fabrik Aktiengesellschaft. SN 80,629. Pub. 6-14-60. Filed 9-1-59.

703,425. ALK-COR. Standard Brands Incorporated. SN 80,692. Pub. 6-14-60. Filed 9-1-59.

703,426. FLUOROBOND. The Joclin Manufacturing Company. SN 80,994. Pub. 6-14-60. Filed 9-8-59.

703,427. "DOGZOFF" AND DESIGN. Bohlender Plant Chemicals, Inc. SN 81,118. Pub. 6-14-60. Filed 9-10-59.

703,428. ZONYL. E. I. du Pont de Nemours and Company. SN 87,043. Pub. 6-14-60. Filed 12-10-59.

703,429. WINTER GUARD. Unit Parts Corporation. SN 87,296. Pub. 6-14-60. Filed 12-14-59.

703,430. PRINTOFIX. Sandoz, Inc. SN 88,876. Pub. 6-14-60. Filed 1-12-60.

Class 7—Cordage

703,431. JOLLYRIBBON. Stefano Rivetti. SN 85,160. Pub. 6-14-60. Filed 11-12-59.

Class 8—Smokers' Articles, Not Including Tobacco Products

703,432. SCUTTLE-BUTT. Detroit Stamping Company. SN 85,216. Pub. 6-14-60. Filed 11-13-59.

Class 9—Explosives, Firearms, Equipments, and Projectiles

703,433. "SHIRTPOCKET." Benjamin C. Higham. SN 87,877. Pub. 6-14-60. Filed 12-23-59.

Class 10—Fertilizers

703,434. PEERLESS. Lewis International Co. SN 87,969. Pub. 6-14-60. Filed 12-24-59.

Class 12—Construction Materials

703,435. BEARCAT. Surface Research Corporation. SN 74,617. Pub. 6-14-60. Filed 5-27-59.

703,436. DIKE-O-PLASTIC. Dike-O-Seal, Incorporated. SN 83,486. Pub. 6-14-60. Filed 10-19-59.

703,437. TRANS-A-THERM. Harold I. Goldsmith, d.b.a. Goldsmith Engineering & Chemical Company. SN 88,385. Pub. 6-14-60. Filed 1-4-60.

703,438. FLEETLITE. Fleet of Americs, Inc. SN 89,823. Pub. 6-14-60. Filed 1-13-60.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

703,439. EEZ-IN. Garelick Mfg. Co. SN 85,576. Pub. 6-14-60. Filed 11-18-59.

703,440. FIELDJET. Spraying Systems Co. SN 89,472. Pub. 6–14–60. Filed 1–21–60.

703,441. DOCJET. Spraying Systems Co. SN 89,473. Pub. 6–14–60. Filed 1–21–60.

703,442. POWER-GUIDE. Remington Arms Company, Inc. SN 89,520. Pub. 6–14–60. Filed 1–22–60.

703,443. LESLIE-TOPPER. Leslie Co. SN 89,590. Pub. 6–14–60. Filed 1–25–60.

703,444. USI AND DESIGN. U.S. Industries, Inc. SN 89,613. Pub. 6–14–60. Filed 1–25–60.

703,445. PAR AND DESIGN. Peters & Russell, Inc. SN 89,793. Pub. 6–14–60. Filed 1–27–60.

Class 14—Metals and Metal Castings and Forgings

703,446. HYDRO-T-METAL. Hydrometals, Inc. SN 86,497. Pub. 6–14–60. Filed 12–2–59.

Class 15—Oils and Greases

703,447. FED-MART. The Fed-Mart Corporation. SN 88,744. Pub. 6–14–60. Filed 1–11–60.

703,448. MARINE MASTER. Cities Service Oil Company. SN 89,251. Pub. 6–14–60. Filed 1–19–60.

703,449. SHELLFLEX. Shell Oil Company. SN 90,709. Pub. 6–14–60. Filed 2–10–60.

Class 17—Tobacco Products

703,450. HANS CHRISTIAN ANDERSEN. R. Faerch, Cigar- og Tobaksfabrikker A/S. SN 86,745. Pub. 6–14–60. Filed 12–7–59.

703,451. PIPPINS. H. Traiser & Company, Incorporated. SN 87,385. Pub. 6–14–60. Filed 12–15–59.

703,452. CHALLENGE. Alles & Fisher, Inc. SN 87,942. Pub. 6–14–60. Filed 12–23–59.

Class 18—Medicines and Pharmaceutical Preparations

703,453. HI-GRO BLEND. The Farm Bureau Cooperative Association, Inc. SN 45,043. Pub. 6–14–60. Filed 1–31–58.

703,454. GENIE AND REPRESENTATION OF SAME. Eugene R. McLaughlin, d.b.a. Northland Pharmacal Co. SN 51,207. Pub. 6–14–60. Filed 5–7–58.

703,455. VOX. Ellen Kaye Laboratories, Inc., assignee of L & K Laboratories. SN 58,429. Pub. 6–14–60. Filed 9–5–58.

703,456. JAPANESE DESIGN. Yomeishu Manufacturing Co. Ltd. SN 63,144. Pub. 6–14–60. Filed 11–24–58.

703,457. HYDRONSAN AND JAPANESE CHARACTERS. Chugai Seiyaku Kabushiki Kaisha. SN 75,167. Pub. 6–14–60. Filed 6–5–59.

703,458. NEGATOL. Jure Holding Company S.A. SN 76,221. Pub. 6–14–60. Filed 6–22–59.

703,459. PEOPLES. Peoples Drug Stores, Incorporated. SN 77,316. Pub. 6–14–60. Filed 7–8–59.

703,460. PH AND DESIGN. Pharmacia Laboratories, Inc. SN 78,726. Pub. 6–14–60. Filed 7–30–59.

703,461. COUNT FOUR. Bristol-Myers Company. SN 80,159. Pub. 6–14–60. Filed 8–25–59.

703,462. CHILTRAN. Campana Corporation, by merger and change of name from Campana Sales Company. SN 80,172. Pub. 6–7–60. Filed 8–25–59.

703,463. FLEET ETC. AND DESIGN. C. B. Fleet Company, Incorporated. SN 83,210. Pub. 6–14–60. Filed 10–14–59.

703,464. POLY-STRESS THERAPEUTIC. Xttrium Laboratories, Inc. SN 87,760. Pub. 6–14–60. Filed 12–21–59.

703,465. L.B. 12. Lloyd Brothers, Inc. SN 88,550. Pub. 6–14–60. Filed 1–6–60.

703,466. DECORYZIN. The Purdue Frederick Company. SN 88,800. Pub. 6–14–60. Filed 1–11–60.

703,467. MEPHAMIDE. The Columbus Pharmacal Company. SN 90,498. Pub. 6–14–60. Filed 2–8–60.

Class 19—Vehicles

703,468. FLITE FL LINE. Food Machinery and Chemical Corporation. SN 64,277. Pub. 6–14–60. Filed 12–15–58.

703,469. YARD-STER. Yard-Man, Inc. SN 75,816. Pub. 6–14–60. Filed 6–15–59.

703,470. SEA-TOW. Richard L. Bulow, d.b.a. Bulow Electric Company. SN 76,156. Pub. 6–14–60. Filed 6–22–59.

703,471. ERCO. ACF Industries, Incorporated. SN 78,165. Pub. 6–14–60. Filed 7–22–59.

703,472. MIDAS. Midas, Inc. SN 80,730. Pub. 6–14–60. Filed 9–2–59.

703,473. ATHEY T LINE. Athey Products Corporation. SN 82,624. Pub. 6–14–60. Filed 10–5–59.

703,474. FOLDAWAY. Foldaway Trailers, Inc. SN 85,837. Pub. 6–14–60. Filed 11–23–59.

703,475. HELLCAT AND DESIGN. C. E. Erickson Co., Inc. SN 86,555. Pub. 6–14–60. Filed 12–3–59.

703,476. WILDCAT AND DESIGN. C. E. Erickson Co., Inc. SN 86,556. Pub. 6–14–60. Filed 12–3–59.

703,477. T TRAVELITE AND DESIGN. Travelite Trailer Company of Texas. SN 86,849. Pub. 6–14–60. Filed 12–7–59.

703,478. MULTI-MILE. Dayco Corporation, by change of name from The Dayton Rubber Company. SN 90,022. Pub. 6–14–60. Filed 2–1–60.

703,479. TRUCK-BUOY. Moog Industries, Inc. SN 90,092. Pub. 6–14–60. Filed 2–1–60.

703,480. RAFT-O-FUN. Triangle Metal Products, Inc. SN 90,122. Pub. 6–14–60. Filed 2–1–60.

703,481. SCOPE-DOLLY. P.B.R. Manufacturing Company. SN 90,181. Pub. 6–14–60. Filed 2–2–60.

703,482. JET-FLOW. McCauley Industrial Corporation. SN 90,346. Pub. 6–14–60. Filed 2–4–60.

Class 21—Electrical Apparatus, Machines, and Supplies

703,483. STEREODYNE. Audiodyne, Inc. SN 69,783. Pub. 6–14–60. Filed 3–18–59.

703,484. SEA-SAFE AND DESIGN. Roby W. La Marche, d.b.a. La Marche Sales Company. SN 73,938. Pub. 6–14–60. Filed 5–18–59.

703,485. REX-ARRAY. American Enka Corporation, assignee of The Rex Corporation. SN 75,881. Pub. 6–14–60. Filed 6–16–59.

703,486. BECKMAN. Beckman Instruments, Inc. SN 76,149. Pub. 6–14–60. Filed 6–22–59.

703,487. UNI POWER. I-T-E Circuit Breaker Company, assignee of Walker Electrical Company, Inc. SN 77,975. Pub. 6–14–60. Filed 7–17–59.

703,488. W WITHIN A CIRCLE. Westinghouse Electric Corporation. SN 80,004. Pub. 6–14–60. Filed 8–31–59.

703,489. PYROFUZE. Sigmund Cohn Corp. SN 82,484. Pub. 6–14–60. Filed 10–1–59.

703,490. VALVEX. Westinghouse Electric Corporation. SN 83,337. Pub. 6–14–60. Filed 10–15–59.

703,491. BIM. Radio Corporation of America. SN 84,690. Pub. 6–14–60. Filed 11–5–59.

703,492. SIL-TUBE. The Kneisley Electric Company. SN 85,188. Pub. 6–14–60. Filed 11–12–59.

703,493. SAMCO. The Sampson Company. SN 91,454. Pub. 6–14–60. Filed 2–23–60.

703,494. PERMADYNE. J. M. Trittenbach. SN 91,718. Pub. 6–14–60. Filed 2–26–60.

Class 22—Games, Toys, and Sporting Goods

703,495. LIVING. International Latex Corporation. SN 47,260. Pub. 6–14–60. Filed 3–7–56.

703,496. NUMERO. Gambit Enterprises, Inc. SN 74,039. Pub. 6–14–60. Filed 5–19–59.

703,497. ICOSAHEDRON. W. J. Voit Rubber Corp. SN 74,086. Pub. 6–14–60. Filed 5–19–59.

703,498. BLUE CHIP. Technical Ventures Company. SN 74,269. Pub. 6–14–60. Filed 5–21–59.

703,499. BIZIBUG. Truman B. Shaw, d.b.a. Shaw Tackle Company. SN 74,902. Pub. 6–14–60. Filed 6–1–59.

703,500. PURITAN AND DESIGN. Puritan Cordage Mills. SN 75,581. Pub. 6–14–60. Filed 6–11–59.

703,501. BARRACUDA. Florida Fishing Tackle Mfg. Co., Inc. SN 78,984. Pub. 6–14–60. Filed 8–4–59.

703,502. HOKUS POKER. Malquet Enterprises. SN 87,392. Pub. 6–14–60. Filed 12–11–59.

703,503. HITWELL. Donald L. Bisha, d.b.a. Hitwell Manufacturing Company. SN 88,209. Pub. 6–14–60. Filed 12–30–59.

703,504. SPOT-ON. Lines Bros. Limited. SN 88,904. Pub. 6–14–60. Filed 1–14–60.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

703,505. CEROC. Compagnie Generale d'Electro-Ceramique. SN 52,609. Pub. 6–14–60. Filed 4–23–58.

703,506. LEC-O-LIFT. Cass Screw Machine Products Company. SN 80,342. Pub. 6–14–60. Filed 10–9–58.

703,507. 99. Swingline, Inc. SN 61,746. Pub. 6–14–60. Filed 10–31–58.

703,508. FIBERGLIDE. American Metal Products Company. SN 74,359. Pub. 6–14–60. Filed 5–25–59.

703,509. PERFECTO-PEEN AND DESIGN. Aero-Test Equipment Company, Inc. SN 77,886. Pub. 6–14–60. Filed 7–17–59.

703,510. COMPREX. I-T-E Circuit Breaker Company. SN 78,032. Pub. 6–14–60. Filed 7–20–59.

703,511. UDS. National Automotive Wholesalers Association. SN 80,737. COLLECTIVE MARK. Pub. 6–14–60. Filed 9–2–59.

703,512. YEOTRONIC. Yeomans Brothers Company. SN 85,069. Pub. 6–14–60. Filed 11–10–59.

703,513. YEOMINUTOR. Yeomans Brothers Company. SN 85,070. Pub. 6–14–60. Filed 11–10–59.

703,514. CORRUBINER. S & S Corrugated Paper Machinery Co., Inc. SN 86,597. Pub. 6–14–60. Filed 12–3–59.

703,515. HIDE-A-GATE. H. S. Watson Company. SN 89,037. Pub. 6–14–60. Filed 1–14–60.

703,516. AGRIETTE AND DESIGN. Agria-Werke Maschinenfabrik Möckmühl G.m.b.H. SN 89,107. Pub. 6–14–60. Filed 1–18–60.

703,517. REV-KAST 2000. Manufacturing Instrument and Tool Corporation. SN 89,361. Pub. 6–14–60. Filed 1–20–60.

703,518. RO-BANDER. Gandy Company. SN 89,429. Pub. 6–14–60. Filed 1–21–60.

703,519. FIREBALL. Cole Products Corporation. SN 89,491. Pub. 6–14–60. Filed 1–21–60.

703,520. PRINCESS AND DESIGN. Keller & Knappich, G.m.b.H. SN 89,598. Pub. 6–14–60. Filed 1–25–60.

703,521. BEAUCOURT. K. P. Phelps Agency, Inc. SN 89,602. Pub. 6–14–60. Filed 1–25–60.

703,522. PURZAUST. Universal Oil Products Company. SN 89,971. Pub. 6–14–60. Filed 1–29–60.

703,523. SLIK. Sarah E. Landon, d.b.a. S. E. Landon Co. SN 89,977. Pub. 6–14–60. Filed 1–28–60.

Class 24—Laundry Appliances and Machines

703,524. DIXIE AUTOMAT. Edward C. Coreyale, d.b.a. Dixie Laundry Machinery Co. SN 86,877. Pub. 6–14–60. Filed 12–8–59.

Class 26—Measuring and Scientific Appliances

703,525. A AND DESIGN. Amplex Corporation. SN 77,893. Pub. 6–14–60. Filed 7–17–59.

703,526. DRIKOTE AND DESIGN. Fred E. Klingler Company. SN 78,877. Pub. 6–14–60. Filed 8–3–59.

703,527. FOSTER GRANT. Foster Grant Co., Inc. SN 84,528. Pub. 6–14–60. Filed 11–3–59.

703,528. DRI-MASTER. Burke & James, Inc. SN 84,962. Pub. 6–14–60. Filed 11–4–59.

703,529. INDACHRON. Nuclear Development Corporation of America. SN 88,480. Pub. 6–14–60. Filed 1–5–60.

Class 28—Jewelry and Precious-Metal Ware

703,530. COBB. W. R. Cobb Company. SN 72,482. Pub. 6–14–60. Filed 4–29–59.

703,531. TJØRN. Dansk Designs Inc. SN 85,660. Pub. 6–14–60. Filed 11–19–59.

703,532. EB. Paul Frank Rothstein, d.b.a. Enchanted Beauty. SN 86,328. Pub. 6–14–60. Filed 11–30–59.

Class 29—Brooms, Brushes, and Dusters

703,533. MANI-GRIP. Old Tappan Products, Inc. SN 87,268. Pub. 6–14–60. Filed 12–14–59.

Class 30—Crockery, Earthenware, and Porcelain

703,534. "GURGL-JUG." The Zents. SN 84,961. Pub. 6–14–60. Filed 11–9–59.

Class 31—Filters and Refrigerators

703,535. EIMCOBELT. The Eimco Corporation. SN 87,652. Pub. 6–14–60. Filed 12–21–59.

Class 32—Furniture and Upholstery

703,536. COSCO. Hamilton Cosco, Inc. SN 77,744. Pub. 6–14–60. Filed 7–15–59.

703,537. RIDG U RAK AND DESIGN. Bernard Gloekler North East Co. SN 81,615. Pub. 6–14–60. Filed 9–18–59.

703,538. MT HOLLY. Consider H. Willett, Inc. SN 81,789. Pub. 6–14–60. Filed 9–21–59.

Class 34 — Heating, Lighting, and Ventilating Apparatus

703,539. JET-ACTION. The Foundry Equipment Company. SN 50,291. Pub. 6-14-60. Filed 4-24-58.

703,540. K KENNARD AND DESIGN. American Air Filter Company, Inc. SN 75,150. Pub. 6-14-60. Filed 6-5-59.

703,541. WINTERMATIC. The Williamson Company. SN 87,388. Pub. 6-14-60. Filed 12-15-59.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

703,542. PERFECT CIRCLE. Perfect Circle Corporation. SN 59,564. Pub. 6-14-60. Filed 9-25-58.

703,543. CO-OP COUNTRY SQUIRE. National Cooperatives, Inc. SN 70,505. Pub. 6-14-60. Filed 3-30-59.

703,544. CRUSHPROOF. The Crushproof Tubing Company. SN 76,857. Pub. 6-14-60. Filed 7-1-59.

Class 36 — Musical Instruments and Supplies

703,545. REPRESENTATION OF A MUSICAL NOTE CLAMPED BETWEEN JAWS OF MICROMETER. American Electronics, Inc. SN 63,203. Pub. 6-14-60. Filed 11-26-58.

703,546. PLATIL. Dr. Plate, G.m.b.H. SN 80,076. Pub. 6-14-60. Filed 8-24-59.

703,547. EXTRAVOICE. Hammond Organ Company. SN 81,562. Pub. 6-14-60. Filed 9-17-59.

Class 37 — Paper and Stationery

703,408. CONSOLIDATED CERTIFICATE. See Class 2.

703,548. COTTON-PAC. Chippewa Paper Products Co., Inc. SN 72,932. Pub. 6-14-60. Filed 5-5-59.

703,549. DESIGN OF MOUNTAINS AND TREES. Fabrique Suisse de Crayons Caran d'Ache S.A. SN 76,475. Pub. 6-14-60. Filed 6-25-59.

703,550. PORT-A-PUNCH. International Business Machines Corporation. SN 76,810. Pub. 6-14-60. Filed 6-30-59.

703,551. "NON-SLIP." Maple Leaf Manufacturing Co., Inc. SN 76,817. Pub. 6-14-60. Filed 6-30-59.

703,552. JOT-IT. Western Tablet & Stationery Corporation. SN 77,182. Pub. 6-14-60. Filed 7-6-59.

703,553. DAYTON CLASP. Howard Paper Mills, Inc. SN 79,342. Pub. 6-14-60. Filed 8-11-59.

703,554. TRANSO ECON-O-MAILERS. Arvey Corporation. SN 87,396. Pub. 6-14-60. Filed 12-16-59.

Class 38 — Prints and Publications

703,408. CONSOLIDATED CERTIFICATE. See Class 2.

703,555. TEX-O-GRAM. Allis-Chalmers Manufacturing Company. SN 26,589. Pub. 5-13-58. Filed 3-21-57.

703,556. AAA. The American Automobile Association (Incorporated). SN 53,462. Pub. 6-14-60. Filed 6-13-58.

703,557. COUPON MAGAZINE AND DESIGN. Coupon Magazine, Inc. SN 73,201. Pub. 6-14-60. Filed 5-8-59.

703,558. QUEST AND DESIGN. Putman Publishing Company. SN 74,152. Pub. 6-14-60. Filed 5-20-59.

703,559. PRODUCT PROFILES. Investment Research Inc. SN 75,733. Pub. 6-14-60. Filed 6-15-59.

703,560. SINCLAIR AND DESIGN. Sinclair Refining Company. SN 76,521. Pub. 6-14-60. Filed 6-25-59.

703,561. AABM AND DESIGN. The Association of American Battery Manufacturers, Inc. SN 77,349. Pub. 6-14-60. Filed 7-9-59.

703,562. THE ENGIN-AIR. The Torrington Manufacturing Company. SN 77,615. Pub. 6-14-60. Filed 7-13-59.

703,563. AMCHEM. Amchem Products, Inc. SN 77,711. Pub. 6-14-60. Filed 7-15-59.

703,564. REPRESENTATION OF HOUR GLASS. Kenneth Y. Stevenson, d.b.a. Ken. SN 82,731. Pub. 6-14-60. Filed 10-5-59.

703,565. APERTURE. Aperture, Inc., assignee of Minor White. SN 82,742. Pub. 6-14-60. Filed 10-5-59.

703,566. UWF AND DESIGN. United World Films, Inc. SN 85,697. Pub. 6-14-60. Filed 11-19-59.

703,567. THE "INTERNATIONAL" PROPELLER. International Paint Company, Inc. SN 85,977. Pub. 6-14-60. Filed 11-24-59.

703,568. CRITIC-AT-LARGE. Lillian Gerard. SN 86,959. Pub. 6-14-60. Filed 12-9-59.

703,569. COOL CAT. New York Herald Tribune Inc. SN 87,068. Pub. 6-14-60. Filed 12-10-59.

703,570. SAFARI. Adland Publishers, Inc., assignee of Edgar G. Gordon, d.b.a. Adland Publishers. SN 88,386. Pub. 6-14-60. Filed 1-4-60.

703,571. LOGEDRAWING. Logetronics Inc. SN 88,472. Pub. 6-14-60. Filed 1-5-60.

703,572. BATON TWIRLING AND DESIGN. Donald L. Sartell, d.b.a. Drum Major Magazine. SN 88,692. Pub. 6-14-60. Filed 1-8-60.

703,573. THE CONTACT LENS TIMES. The Contact Lens Publishing Company. SN 88,732. Pub. 6-14-60. Filed 1-11-60.

703,574. THE NORCROSS MINT BEAUTY ROSE. Norcross, Inc. SN 90,554. Pub. 6-14-60. Filed 2-8-60.

703,575. THE NORCROSS BLUE ROSE. Norcross, Inc. SN 90,698. Pub. 6-14-60. Filed 2-10-60.

Class 39 — Clothing

703,576. NOK-A-BOUT. International Shoe Company. SN 29,636. Pub. 7-1-58. Filed 5-8-57.

703,577. BEAUTY DREAMERS. A. J. Schuelerson & Son, Inc. SN 47,153. Pub. 6-14-60. Filed 3-5-58.

703,578. KIDDIE KOVER. Jayvee Brand, Inc. SN 56,725. Pub. 6-14-60. Filed 8-6-58.

703,579. A MIDDISHADE MASTERPIECE. The Middishade Company, Inc. SN 57,961. Pub. 6-14-60. Filed 8-27-58.

703,580. DURA HYDE AND DESIGN. Overseas Shipments, Inc. SN 61,074. Pub. 6-2-59. Filed 10-21-58.

703,581. KAYONARA. Kayser-Roth Corporation. SN 62,762. Pub. 6-14-60. Filed 11-19-58.

703,582. SUPERLIFT. The La Resista Corset Company. SN 75,423. Pub. 6-14-60. Filed 6-9-59.

703,583. BIRCHBROOK. Leslie Fay Inc., assignee of Leslie Fay Fashions, Inc. SN 76,489. Pub. 6-14-60. Filed 6-25-59.

703,584. T-K. Shamrock Knitting Mills, Inc. SN 77,855. Pub. 6-14-60. Filed 7-16-59.

703,585. PROMENADE FASHIONS FOR MEN AND DESIGN. Hy-Grade Sportswear Co., Inc. SN 80,557. Pub. 6-14-60. Filed 8-31-59.

703,586. BO PEEP. Youthcraft Creations, Inc. SN 81,606. Pub. 6-14-60. Filed 9-17-59.

703,587. ALL-ABOUTS. Edison Brothers Stores, Inc. SN 84,596. Pub. 6-14-60. Filed 11-4-59.

703,588. COLONY TOWN. Wembley, Inc. SN 85,544. Pub. 6-14-60. Filed 11-17-59.

703,589. WESTERNER AND DESIGN. Atlantic Sportswear Inc. SN 86,475. Pub. 6-14-60. Filed 12-2-59.

703,590. EDWARDS ETC. AND DESIGN. J. Edwards & Co. SN 86,554. Pub. 6-14-60. Filed 12-3-59.

703,591. GENE SCOETTE. Genesco, Inc. SN 86,770. Pub. 6-14-60. Filed 12-7-59.

703,592. HIAWATHA. Mattaway Shoe Co. SN 87,502. Pub. 6-14-60. Filed 12-17-59.

703,593. SLANTS. Lauralou Bates, Inc. SN 87,626. Pub. 6-14-60. Filed 12-21-59.

703,594. EMME BOUTIQUE. Emme, Inc. SN 88,853. Pub. 6-14-60. Filed 1-12-60.

703,595. AWARD. The H. W. Gossard Co. SN 89,155. Pub. 6-14-60. Filed 1-18-60.

703,596. CUDDLECOAT. Petite Miss Co. SN 89,199. Pub. 6-14-60. Filed 1-18-60.

Class 40 — Fancy Goods, Furnishings, and Notions

703,597. TOUCH AND CLOSE. American Velcro, Inc. SN 60,012. Pub. 6-14-60. Filed 10-3-58.

703,598. PATE-MATE. Selan's Incorporated. SN 78,379. Pub. 6-14-60. Filed 7-24-59.

703,599. TWISSTO. Twissto Co. SN 78,524. Pub. 6-14-60. Filed 7-27-59.

703,600. NYLEX. Wilmington Chemical & Rubber Corporation, assignee of William L. Chalfin, d.b.a. Wilmington Chemical & Rubber Co. SN 79,474. Pub. 6-14-60. Filed 8-13-59.

703,601. TONI. The Gillette Company, d.b.a. The Toni Company. SN 88,854. Pub. 6-14-60. Filed 1-12-60.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

703,602. UNITAPE. Ferro Corporation. SN 65,227. Pub. 6-14-60. Filed 1-2-59.

703,603. VIRON. Pellon Corporation. SN 68,418. Pub. 6-14-60. Filed 2-25-59.

703,604. E.P.G. Egidio & Pio Gavazzi, S.p.A. SN 74,703. Pub. 6-14-60. Filed 5-27-59.

703,605. ABSORBENIZED. Callaway Mills Company. SN 81,539. Pub. 6-14-60. Filed 9-17-59.

703,606. PELOMITE. Pellon Corporation. SN 89,018. Pub. 6-14-60. Filed 1-14-60.

Class 43 — Thread and Yarn

703,607. KM. KM Yarn Company. SN 72,250. Pub. 6-14-60. Filed 4-24-59.

703,608. CRIMPLON. Imperial Chemical Industries Limited. SN 85,345. Pub. 6-14-60. Filed 11-16-59.

703,609. OLANE. Avisun Corporation. SN 87,621. Pub. 6-14-60. Filed 12-21-59.

703,610. VYBRAN. National Spinning Co., Inc. SN 89,082. Pub. 6-14-60. Filed 1-15-60.

703,611. AVISUN. Avisun Corporation. SN 89,121. Pub. 6-14-60. Filed 1-18-60.

Class 44 — Dental, Medical, and Surgical Appliances

703,612. J & J. Jarvis & Jarvis, Inc. SN 70,149. Pub. 6-14-60. Filed 3-24-59.

703,613. POWDAMIZER. Armour and Company. SN 78,676. Pub. 6-14-60. Filed 7-30-59.

703,614. SANDMAN. Stacy F. Searl, d.b.a. Ortho-Relaxer Company. SN 88,104. Pub. 6-14-60. Filed 12-28-59.

Class 46 — Foods and Ingredients of Foods

703,615. DESIGN OF SHEEP, HOG ETC. H. Shenson. SN 34,821. Pub. 6-14-60. Filed 8-1-57.

703,616. HI-PRO. General Mills, Inc. SN 35,767. Pub. 5-13-58. Filed 8-19-57.

703,617. FANCIFUL REPRESENTATION OF A GIRL. Flagstrip Sales Corporation, d.b.a. Freshway Products Company, assignee of Paul Hawkins Company. SN 51,274. Pub. 6-14-60. Filed 5-8-58.

703,618. DEFENDER. Allen Sales Company. SN 55,361. Pub. 6-14-60. Filed 7-16-58.

703,619. KATIE EVANS AND DESIGN. The Evans Grocery Company. SN 56,472. Pub. 6-14-60. Filed 8-1-58.

703,620. SKILL STICK. The James S. Merritt Company. SN 56,983. Pub. 6-14-60. Filed 8-11-58.

703,621. REPRESENTATION OF LOG CABIN. General Foods Corporation. SN 61,281. Pub. 6-14-60. Filed 10-24-58.

703,622. ELDENE. The Eildee Laboratories, Inc. SN 67,048. Pub. 6-14-60. Filed 2-4-59.

703,623. EMPEROR AND DESIGN. Voelker Fruit & Cold Storage Co., d.b.a. Voelker Orchards. SN 67,716. Pub. 6-14-60. Filed 2-13-59.

703,624. PLAIN AND FANCY AND DESIGN. Albert W. Taft, d.b.a. Plain and Fancy Dutch Products. SN 69,922. Pub. 6-14-60. Filed 3-19-59.

703,625. FRITO KID AND DESIGN. The Frito Company. SN 70,791. Pub. 6-14-60. Filed 4-3-59.

703,626. FARM FARE. Dorann Foods, Inc. SN 72,297. Pub. 6-14-60. Filed 4-27-59.

703,627. RICARDO. Berns & Koppstein, Inc. SN 72,409. Pub. 6-14-60. Filed 4-28-59.

703,628. PARTY DELITES. Purwin's Cake Box Inc. SN 73,263. Pub. 6-14-60. Filed 5-8-59.

703,629. SUN-GLO. Sun-Glo Packers, Inc. SN 74,267. Pub. 6-14-60. Filed 5-21-59.

703,630. LAZY-LIME. S.I.I.A. Sicula Lombarde Industrie Associate Societa per Azioni. SN 75,210. Pub. 6-14-60. Filed 6-5-59.

703,631. FESTIVAL QUEEN. Dude Ranch Foods. SN 75,849. Pub. 6-14-60. Filed 6-16-59.

703,632. KCL AND DESIGN. Kern County Land Company. SN 77,561. Pub. 6-14-60. Filed 7-13-59.

703,633. KERNLAND. Kern County Land Company. SN 77,562. Pub. 6-14-60. Filed 7-13-59.

703,634. CAMPANA. Campana Corporation (Delaware corporation, new corporation), by merger and change of name from Campana Corporation. SN 78,173. Pub. 6-14-60. Filed 7-22-59.

703,635. CORN KING. Wilson & Co. Inc. SN 80,142. Pub. 6-14-60. Filed 8-24-59.

703,636. KEITH'S. Ben E. Keith Company. SN 80,885. Pub. 6-14-60. Filed 9-4-59.

703,637. TREASURE. Hunt Foods and Industries, Inc., d.b.a. The Winters Canning Co. SN 82,234. Pub. 6-14-60. Filed 9-28-59.

703,638. MR. TASTY. Dimare Brothers. SN 83,005. Pub. 6-14-60. Filed 10-20-59.

703,639. LEMONADE TREAT. Westfield Food Products, Inc. SN 83,848. Pub. 6-14-60. Filed 10-22-59.

703,640. CAL FAME. Paramount Citrus Association, Inc. SN 84,936. Pub. 6-14-60. Filed 11-9-59.

703,641. HIGHMOST. Paramount Citrus Association, Inc. SN 85,515. Pub. 6-14-60. Filed 11-17-59.

703,642. CAMECO. Can-Meat Corp. SN 85,715. Pub. 6-14-60. Filed 11-20-59.

703,643. LIQUIPACK. Berth Levi & Co., Inc. SN 86,104. Pub. 6-14-60. Filed 11-27-59.

703,644. SHORE PAC. Cap Sales Corporation. SN 86,261. Pub. 6-14-60. Filed 11-30-59.

703,645. FRITO. The Frito Company. SN 86,652. Pub. 6-14-60. Filed 12-4-59.

703,646. REPRESENTATION OF FISHERMAN'S HEAD. Star-Kist Foods, Inc. SN 86,691. Pub. 6-14-60. Filed 12-4-59.

703,647. SARATOGA WHIP. Mutual Dairy Products, Inc. SN 86,817. Pub. 6-14-60. Filed 12-7-59.

703,648. STORYLAND. Bakers Franchise Corporation. SN 87,966. Pub. 6-14-60. Filed 12-24-59.

703,649. FED-MART. The Fed-Mart Corporation. SN 88,745. Pub. 6-14-60. Filed 1-11-60.

703,650. BERMUDA DUNES. Richard A. Glass Company, Inc., d.b.a. Richard A. Glass Co. SN 88,750. Pub. 6-14-60. Filed 1-11-60.

703,651. BOLD. J. & A. Farms, d.b.a. J & A Packing Co. SN 88,767. Pub. 6-14-60. Filed 1-11-60.

Class 47 — Wines

703,652. MR AND DESIGN. Martini & Rossi Corporation. SN 53,623. Pub. 6-14-60. Filed 6-16-58.

703,653. CONDE DE LA CORTINA. Alvear S.A. SN 68,188. Pub. 6-14-60. Filed 9-22-58.

703,654. L'KOVED. National Wines, Inc. SN 75,436. Pub. 6-14-60. Filed 6-8-59.

Class 48 — Malt Beverages and Liquors

703,655. OLD SHAY. The Seeburg Corporation, by change of name from Fort Pitt Industries, Incorporated. SN 47,751. Pub. 6-14-60. Filed 3-14-58.

703,656. DESIGN OF A SHAY. The Seeburg Corporation, by change of name from Fort Pitt Industries, Incorporated. SN 47,755. Pub. 6-14-60. Filed 3-14-58.

Class 49 — Distilled Alcoholic Liquors

703,657. CONDE DE LA CORTINA. Alvear S.A. SN 68,189. Pub. 6-14-60. Filed 9-22-58.

703,658. OLD CUSTOM. "21" Brands, Inc. SN 71,161. Pub. 6-14-60. Filed 4-8-59.

703,659. ORIGINAL SCHLICHTE AND DESIGN. H. W. Schlichte. SN 71,446. Pub. 6-14-60. Filed 4-13-59.

703,660. HRD. Hood River Distillers, Inc. SN 77,210. Pub. 6-14-60. Filed 7-7-59.

Class 50 — Merchandise Not Otherwise Classified

703,661. ELASTACAST AND DESIGN. Acushnet Process Company. SN 67,730. Pub. 6-14-60. Filed 2-16-59.

703,662. CRAW CLARENDON. American Type Founders Co. Inc. SN 75,049. Pub. 6-14-60. Filed 6-4-59.

703,663. CRAW MODERN. American Type Founders Co. Inc. SN 75,050. Pub. 6-14-60. Filed 6-4-59.

703,664. SAND-C-CUR. Augusta C. Meyer, d.b.a. San-C-Cur Mfg. Co. SN 81,297. Pub. 6-14-60. Filed 9-14-59.

703,665. KORDIMULCH. National Distillers and Chemical Corporation, by merger from Kordite Corporation. SN 87,893. Pub. 6-14-60. Filed 12-21-59.

703,666. PERMA-GRIP. Mills Products, Inc. SN 87,892. Pub. 6-14-60. Filed 12-23-59.

703,667. ANGEL-LITE. Modern Coatings, Inc. SN 88,070. Pub. 6-14-60. Filed 12-28-59.

703,668. VEZ. Vez, Inc. SN 88,113. Pub. 6-14-60. Filed 12-28-59.

703,669. MYLINE. J. J. Finnigan Company, Inc. SN 88,151. Pub. 6-14-60. Filed 12-29-59.

Class 51 — Cosmetics and Toilet Preparations

703,670. CURLIFE. Beauty-Rama Corporation. SN 53,856. Pub. 6-14-60. Filed 6-19-58.

703,671. HAIRMONE. Quality Chemists, Inc. SN 78,915. Pub. 6-14-60. Filed 8-3-59.

703,672. CITATION. The Mennen Company. SN 86,050. Pub. 6-14-60. Filed 11-25-59.

Class 52 — Detergents and Soaps

703,673. POOCH-POO. Eastenn-Dukes Chemicals, Incorporated. SN 54,610. Pub. 9-23-58. Filed 7-1-58.

703,674. AJEM. Ajem Laboratories, Inc. SN 83,857. Pub. 6-14-60. Filed 10-23-59.

703,675. BLITZ-A-LINE. Fiberaised Bar & Line Co. SN 88,375. Pub. 6-14-60. Filed 1-4-60.

703,676. SEE-SHARP. Louise Wright, d.b.a. McDermott Sales Co. SN 88,890. Pub. 6-14-60. Filed 1-11-60.

Service Marks

Class 100 — Miscellaneous

703,677. CINERAMA. Cinerama, Inc. SN 47,581. Pub. 6-14-60. Filed 3-14-58.

703,678. CARITA. Maria Carita & Rosa Carita. SN 63,292. Pub. 6-14-60. Filed 11-28-58.

703,679. SALAD BOWL RESTAURANT AND DESIGN. Earl B. Sullivan. SN 75,446. Pub. 6-14-60. Filed 6-9-59.

703,680. BEACON DRIVE IN AND DESIGN. John B. White, d.b.a. Beacon Drive In. SN 77,183. Pub. 6-14-60. Filed 7-6-59.

703,681. WHILE DISTANCES SHRINK . . . WORLD MARKETS EXPAND AND DESIGN. Barnet and Reef Associates, Inc. SN 86,629. Pub. 6-14-60. Filed 12-4-59.

703,682. USO. United Services Organizations, Inc. SN 87,748. Pub. 6-14-60. Filed 12-21-59.

Class 101 — Advertising and Business

703,683. BRIDE'S PREFERENCE LIST. The Conde Nast Publications Inc., assignee of Brides House, Inc. SN 685,953. Pub. 6-14-60. Filed 4-21-55.

703,684. HOM. Hom, Incorporated. SN 49,065. Pub. 6-14-60. Filed 4-4-58.

703,685. THE FRIENDLY AMERICAN ETC. AND DESIGN. Coordinated Merchandising Corp. SN 70,280. Pub. 6-14-60. Filed 3-26-59.

703,686. NANCY NEMA. Ralf Shockey & Associates, Inc. SN 70,540. Pub. 6-14-60. Filed 3-30-59.

703,687. TRAVEL PENNIES ETC. AND DESIGN. Thomas Losey, d.b.a. Thomas Losey Co. SN 78,473. Pub. 6-14-60. Filed 7-27-59.

703,688. "KEX" NATIONAL SERVICE. Callaway Mills Company, d.b.a. "Kex" National Service. SN 80,170. Pub. 6-14-60. Filed 8-25-59.

703,689. COMADE AND GLOBE DESIGN. Common Market Developments, Inc. SN 83,863. Pub. 6-14-60. Filed 10-28-59.

Class 102 — Insurance and Financial

703,690. MAGIC CHECK LOAN. The Colorado Commercial and Savings Bank of Colorado Springs. SN 79,767. Pub. 6-14-60. Filed 8-18-59.

703,691. TAP. Mellon National Bank and Trust Company. SN 79,797. Pub. 6-14-60. Filed 8-18-59.

703,692. TIBCO. The Insured Budget Plan Co., Inc. SN 88,158. Pub. 6-14-60. Filed 12-29-59.

703,693. CONSTELLATION NORFOLK, VIRGINIA ETC. AND DESIGN. Constellation Life Insurance Company. SN 89,139. Pub. 6-14-60. Filed 1-18-60.

Class 103 — Construction and Repair

703,694. MAYTAG. The Maytag Company. SN 83,113. Pub. 6-14-60. Filed 10-12-59.

703,695. ODSC. Office Design & Space Control. SN 85,385. Pub. 6-14-60. Filed 11-16-59.

Class 104 — Communication

703,696. DOT. The Baltimore and Ohio Railroad Company. SN 77,254. Pub. 6-14-60. Filed 7-8-59.

703,697. KABL MUSIC ETC. AND DESIGN. The McLendon Pacific Corporation. SN 79,345. Pub. 6-14-60. Filed 8-11-59.

Class 105 — Transportation and Storage

703,698. ADVENTURE UNLIMITED. Allan C. Gordon, d.b.a. Adventure Unlimited. SN 75,086. Pub. 6-14-60. Filed 6-4-59.

703,699. ECONOVAULT. Abco Van Lines, Inc. SN 76,624. Pub. 6-14-60. Filed 6-29-59.

703,700. AVIS. Avis, Inc. SN 78,331. Pub. 6-14-60. Filed 7-24-59.

703,701. BEATAINER. Grace Line Inc. SN 90,157. Pub. 6-14-60. Filed 2-2-60.

Class 106 — Material Treatment

703,702. MONARCH AND DESIGN. Consolidated Photographic Industries, Inc. SN 71,649. Pub. 6-14-60. Filed 4-16-59.

703,703. PERFECTO-PEEN AND DESIGN. Aero-Test Equipment Company, Inc. SN 77,887. Pub. 6-14-60. Filed 7-17-59.

Class 107 — Education and Entertainment

703,704. MARINELLO. Sales Affiliates, Inc. SN 54,260. Pub. 6-14-60. Filed 6-25-58.

703,705. HAPPY THE CLOWN. Triangle Publications, Inc. SN 56,677. Pub. 6-14-60. Filed 2-2-59.

703,706. YFA. Jackie Lee Corporation. SN 87,568. Pub. 6-14-60. Filed 12-18-59.

Certification Mark

Class A — Goods

703,707. DESIGN OF CONE SHAPED PACKAGE. Societe Generale de l'Horlogerie Suisse S.A. Asuag (Allgemeine Schweizerische Uhrenindustrie A.G. Asuag). SN 35,537. Pub. 6-14-60. Filed 8-14-57.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 22 — Games, Toys, and Sporting Goods

703,708. The American Pad & Textile Company, Pittsburgh, Pa. SN 68,793. Filed P.R. 3-3-59; Am. S.R. 6-21-60.

YOU CAN'T BUY BETTER . . . TO SAVE YOUR LIFE

For Life Preservers and Life Vests, Water Skiing Belts, Floats, Buoys, and Floatable Water Cushions.
First use Feb. 13, 1952, on cushions.

Class 37 — Paper and Stationery

703,709. Hollister Incorporated, Chicago, Ill., assignee of The Firm of John Dickinson Schneider, Inc., d.b.a. Franklin C. Hollister Co., Chicago, Ill. SN 57,195. Filed P.R. 8-14-58; Am. S.R. 6-27-60.

BLOOD-TAB

For Hospital Identification Labels for Use Upon Blood Specimens.
First use Aug. 5, 1958.

703,710. Hollister Incorporated, Chicago, Ill., assignee of The Firm of John Dickinson Schneider, Inc., d.b.a. Franklin C. Hollister Co., Chicago, Ill. SN 57,196. Filed P.R. 8-14-58; Am. S.R. 6-27-60.

LAB-TAB

For Hospital Identification Labels for Use Upon Laboratory Specimens.
First use Aug. 5, 1958.

Class 38 — Prints and Publications

703,711. Meredith Publishing Company, Des Moines, Iowa. SN 62,579. Filed P.R. 11-17-58; Am. S.R. 10-21-59.

'tis the season

For Special Feature in a Periodic Publication.
First use Oct. 1, 1958.

703,712. Syndicate Store Merchandiser, Inc., New York, N.Y. SN 89,215. Filed P.R. 1-18-60; Am. S.R. 7-1-60.

Directory

Variety Department Store Market

For Trade Publication Produced Annually.
First use June 1958.

Class 46 — Foods and Ingredients of Foods

703,713. Campbell Soup Company, Camden, N.J. SN 94,220. Filed 4-4-60.

camden

For Soups.
First use Feb. 19, 1960.

Class 49 — Distilled Alcoholic Liquors

703,714. Barton & Guestier, Bordeaux, Gironde, France. SN 67,575. Filed P.R. 12-9-58; Am. S.R. 6-24-60.

B&G SELECTION FRENCH BRANDY PRODUCED IN FRANCE BY BARTON & GUESTIER PRODUCT OF FRANCE

Priority claimed under Sec. 44(d) on French Reg. No. 50,267, dated Sept. 29, 1958 (Bordeaux); Natl. Inst. No. 114,805. Owner of U.S. Reg. Nos. 317,908, 318,330, and 321,162.
For Brandy.

703,715. Alvear S.A., Montilla, Cordoba, Spain. SN 68,181. Filed 1-28-59.

Alvear S.A. Montilla

Owner of Spanish Reg. No. 202,129, dated Jan. 8, 1948.
For Alcohols for Beverage Purposes, Liqueurs, Distilled Alcoholic Aperitifs, Brandy.

703,716. Haas Brothers, d.b.a. Kent Limited, San Francisco, Calif. SN 73,234. Filed P.R. 5-8-59; Am. S.R. 7-11-60.

HARRIGAN'S

For Irish Whiskey.
First use Apr. 7, 1959.

TRADEMARK REGISTRATIONS RENEWED

18,085. DUZITALL. Cl. 52. 6-24-1890.
132,639. PRESTO. Cl. 6. 6-29-20.
134,184. MP AND DESIGN. Cl. 23. 8-17-20.
134,487. RED BALL AND DESIGN. Cl. 46. 9-7-20.
134,571. ANSBACHER. Cl. 16. 9-14-20.
134,572. A AND DESIGN. Cl. 16. 9-14-20.
135,380. HAYDITE. Cl. 12. 10-12-20.
135,757. EVEREADY. Cl. 21. 10-19-20.
136,050. THERM-A-JUG. Cl. 2. 10-26-20.
136,142. PABST. Cl. 48. 10-26-20.
136,368. CHENEY SILKS. Cl. 42. 11-2-20.
136,448. NUN BETTER. Cl. 2. 11-2-20.
136,518. LONDON. Cl. 39. 11-2-20.
136,615. CUM-BAC. Cl. 22. 11-2-20.
136,711. YORK AND DESIGN. Cl. 31. 11-2-20.
136,818. VISE. Cl. 37. 11-9-20.
136,962. PAUL REVERE. Cl. 46. 11-9-20.
137,371. QUEEN QUALITY. Cl. 39. 11-23-20.
137,456. BILTMORE. Cl. 39. 11-23-20.
137,652. EUREKA. Cl. 29. 11-30-20.
137,831. LOTUS. Cl. 29. 12-7-20.
137,984. DE LAVAL. Cl. 23. 12-14-20.
138,011. SPARTAN AND DESIGN. Cl. 35. 12-14-20.
138,291. MASCO. Cl. 29. 12-21-20.
138,323. ONEIDA COMMUNITY PAR PLATE. Cl. 28. 12-21-20.
375,031. ACROW. Cl. 23. 2-8-40.
378,224. SWING. Cl. 45. 6-4-40.
378,445. CML AND DESIGN. Cl. 16. 6-11-40.
378,559. TREK. Cl. 6. 6-11-40.
378,719. QUICAP. Cl. 50. 6-18-40.
378,729. DANCING MILEAGE. Cl. 39. 6-18-40.
378,776. BOOK MASTER. Cl. 5. 6-18-40.
378,978. SAILOR BOY AND DESIGN. Cl. 46. 6-25-40.
379,142. VENDCO. Cl. 23. 7-2-40.
379,170. PLAST-O-LINE. Cl. 12. 7-2-40.
379,375. PINK LEMONADE. Cl. 51. 7-9-40.
379,431. APOIDINA. Cl. 6. 7-9-40.
379,781. HYDRO FLAX. Cl. 35. 7-23-40.
380,038. SHOVEL. Cl. 34. 8-6-40.
380,079. CIRCUS. Cl. 45. 8-6-40.
380,110. CORTLINE AND DESIGN. Cl. 22. 8-6-40.
380,210. GULFCO. Cl. 23. 8-13-40.
380,294. TRADEMARK DESIGN. Cl. 51. 8-20-40.
380,451. GULFCO. Cl. 13. 8-20-40.
380,712. CREMODAN. Cl. 46. 8-27-40.
380,811. CYLCROMAX. Cl. 23. 9-3-40.
380,971. SISSY BRITCHES. Cl. 39. 9-10-40.
380,973. FLATTERNIT. Cl. 39. 9-10-40.
381,046. TIMES. Cl. 39. 9-10-40.
381,091. NU-CLOZ. Cl. 6. 9-10-40.
381,177. CHEEZ TRIX. Cl. 46. 9-17-40.
381,418. DOUBLEX. Cl. 37. 9-24-40.
381,572. CBS AND DESIGN. Cl. 36. 10-1-40.
381,573. TWIN CIRCLES AND DESIGN. Cl. 36. 10-1-40.
381,609. CRISP-A-SURED. Cl. 46. 10-1-40.
381,741. LABEL DESIGN. Cl. 45. 10-1-40.
381,997. BLUE GEM. Cl. 39. 10-15-40.
382,044. REPRESENTATION OF A DOLL. Cl. 46. 10-15-40.
382,068. SHAGTONE. Cl. 42. 10-15-40.
382,137. CARBOCELL. Cl. 6. 10-15-40.
382,138. GRAPHICELL. Cl. 6. 10-15-40.
382,140. DEMITONE. Cl. 51. 10-15-40.
382,273. CORDELLITH. Cl. 12. 10-22-40.
382,321. MIDGIES. Cl. 22. 10-22-40.
382,327. RINK LEADER. Cl. 22. 10-22-40.
382,340. CORTLINE. Cl. 22. 10-22-40.
382,389. MINI-MAX. Cl. 21. 10-29-40.
382,538. ENDURALLOY. Cl. 21. 10-29-40.
382,857. SUN GIFT. Cl. 46. 11-12-40.
383,005. FOOTLOOSE. Cl. 39. 11-19-40.
383,132. VENUS. Cl. 46. 11-26-40.
383,346. CALIPERS AND SCALE DEVICE. Cl. 5. 12-3-40.
383,382. STOWAWAY. Cl. 34. 12-3-40.
383,618. CARNIVAL. Cl. 39. 12-17-40.
383,706. MATCH-TRIX. Cl. 39. 12-24-40.
383,815. SHELLECTRIC. Cl. 15. 12-24-40.
383,847. EVEREADY. Cl. 6. 12-24-40.
383,858. NETHAPRIN. Cl. 18. 12-24-40.
383,891. WHIRLWIND. Cl. 29. 12-24-40.
383,901. BETA-CONCEMIN. Cl. 18. 12-24-40.

TRADEMARK REGISTRATIONS CANCELED

Section 8

303,311. "FREEZ PRUF" AND DESIGN. Cl. 6. 5-23-33.
404,555. MARGEL. Cl. 6. 12-7-43.
441,722. ZYLAR. Cl. 6. 12-28-48.
573,298. TALK TO THE STARS. Cl. 107. 4-14-53.
573,905. WORK-N-PLAY WP AND DESIGN. Cl. 39. 4-28-53.
575,650. IT'S A THANKERCHIEF AND DESIGN. Cl. 39. 6-9-53.
577,770. LAMPSAVER. Cl. 21. 7-21-53.
577,984. COURT ROYAL AND DESIGN. Cl. 17. 7-28-53.
578,025. GAYLASTIC. Cl. 39. 7-28-53.
578,671. STORM-JAC. Cl. 39. 8-11-53.
578,864. FAMILY LIFE. Cl. 38. 8-18-53.
579,360. PREGGIES. Cl. 39. 9-1-53.
579,467. WILD-Q. Cl. 22. 9-1-53.
579,606. DETERGENE. Cl. 52. 9-8-53.
579,804. TETROPENTOBARB. Cl. 18. 9-8-53.
579,805. TETROSECOBARB. Cl. 18. 9-8-53.
579,854. MUTUAL AND DESIGN. Cl. 104. 9-8-53.
580,380. BEL-CA-TAN. Cl. 7. 9-22-53.
580,381. ITA-LINE. Cl. 7. 9-22-53.
580,382. JAV-AURITIUS. Cl. 7. 9-22-53.
580,383. MEX-CILIAN. Cl. 7. 9-22-53.
580,384. SIM-BA. Cl. 7. 9-22-53.
580,385. SYL-VANIA. Cl. 7. 9-22-53.
580,520. JOHN'S FLASH TWO-WAY. Cl. 51. 9-29-53.
580,562. MINUETTES (FANCIFUL). Cl. 51. 9-29-53.
583,472. CRYSTALLOY. Cl. 37. 12-8-53.

The following registrations issued July 13, 1954

592,335. ROYAL. Cl. 1.
592,338. COLAURA. Cl. 1.
592,341. CAR TRAV-LER. Cl. 3.
592,346. AERODIOL. Cl. 6.
592,349. RESYDRIN. Cl. 6.
592,357. VALLEY PLY AND DESIGN. Cl. 12.
592,359. ANDREA AND DESIGN. Cl. 12.
592,361. DOLPH-CUT LENROC STONE. Cl. 12.
592,366. MONEY BAG. Cl. 13.
592,373. NIXINE AND DESIGN. Cl. 18.
592,376. BANISH. Cl. 18.
592,381. ERYTHROTIL. Cl. 18.
592,384. CODIS. Cl. 18.
592,387. PLASRAN. Cl. 18.
592,390. PERC-O-MATIC. Cl. 21.
592,391. DOUBLE TROUBLE AND DESIGN. Cl. 22.
592,393. YOGI. Cl. 22.
592,396. TURRET-HONE. Cl. 23.
592,403. CHAMPION. Cl. 23.
592,408. ALLDOG. Cl. 23.
592,410. REPRESENTATION OF MAN AND DESIGN. Cl. 23.
592,417. MAGNIFLO "1200." Cl. 23.
592,423. TUFF-ALUME. Cl. 24.
592,424. THE GREEN READER. Cl. 26.
592,426. LEVELUX. Cl. 26.
592,430. JOINTITE. Cl. 35.
592,436. VISI-LITE. Cl. 35.
592,437. PARROT. Cl. 36.
592,439. SERVICES MONEY ORDER AND DESIGN. Cl. 37.
592,440. SERVICES TRAVELERS CHECK AND ENTIRE LABEL AND DESIGN. Cl. 37.
592,444. WOMAN'S HOME COMPANION. Cl. 38.
592,445. MASTER GARDENER. Cl. 38.
592,446. THE WIT PARADE. Cl. 38.
592,450. MUNICIPAL SOUTH. Cl. 38.
592,453. ROCKETTES AND DESIGN. Cl. 39.
592,454. ROCKETTES BY NANCY CLAIRE AND DESIGN. Cl. 39.
592,455. TROPI CORD. Cl. 39.
592,457. JOANY. Cl. 39.
592,458. NECKIE. Cl. 39.
592,461. DESIGN OF FOUR CONNECTED SQUARES. Cl. 42.
592,462. SILENT VOICE. Cl. 44.
592,466. MAGNICON. Cl. 44.
592,467. CO-BELL. Cl. 44.
592,471. HP AND DESIGN. Cl. 44.
592,472. PETER STEVENS. Cl. 44.
592,473. MIRACLE FOOT FOAM. Cl. 44.
592,474. MASSAGE-A-SHAVE. Cl. 44.
592,477. ABCO ETERNALAST. Cl. 44.
592,481. ROLL-CRUSH. Cl. 46.
592,485. PET-E-PET. Cl. 46.
592,486. ROCKLETS. Cl. 46.
592,491. MAMA JEANS. Cl. 46.
592,492. RED MILL. Cl. 46.
592,493. RED CHAIN AND DESIGN. Cl. 46.
592,498. REDUCETTE. Cl. 46.
592,500. SAINT-PAULIN AND DESIGN. Cl. 46.
592,501. WESTERN PRIDE. Cl. 46.
592,504. COLODOR. Cl. 46.
592,506. TASTE-N-BLOOM. Cl. 46.
592,512. SARA LEE AND DESIGN. Cl. 46.
592,513. REPRESENTATION OF COLONIAL LADY. Cl. 46.
592,516. KNOGRAY. Cl. 51.
592,517. LA RONDA. Cl. 51.
592,523. GOLFER'S SHOWER. Cl. 51.
592,525. THEME. Cl. 51.
592,527. ROMANELLE. Cl. 51.
592,530. BEAUTIATRIC. Cl. 51.
592,542. TRUCK TRANSPORT CO. AND DESIGN. Cl. 105.
592,543. JEWELANN. Cl. 105.
592,544. K.A.R.S. INC. ETC. AND DESIGN. Cl. 105.
592,545. CAMOGRAPH. Cl. 106.
592,546. FIRESIDE PLAYHOUSE. Cl. 107.
592,547. BOBBY BIN. Cl. 2.
592,549. YOU CAN DEPEND ON CEMENTON AND DESIGN. Cl. 6.
592,553. FROM TIES ETC. AND DESIGN. Cl. 12.
592,561. PROCESS SANITAIRE. Cl. 23.
592,563. BOYD FUDGE SERVER. Cl. 23.
592,564. GUILLIET. Cl. 23.
592,565. SPIN CLEAN AND DESIGN. Cl. 23.
592,566. DAYBROOK "MOTOR HOE." Cl. 23.
592,568. FINK AND DESIGN. Cl. 23.
592,571. GLASS GARD. Cl. 26.
592,573. KOOL VENT. Cl. 32.
592,578. SCREEN PROCESS. Cl. 38.
592,580. RAILWAY FREIGHT TRAFFIC. Cl. 38.
592,581. THE NATIONAL NEWSPAPER OF SKIING. Cl. 38.
592,585. GOB SHOPS EXCELLENCY AND DESIGN. Cl. 39.
592,586. SLUMBER SAFE. Cl. 40.
592,589. THE SLUMBER SPREAD. Cl. 42.
592,590. IT'S THE KNIT WITH THE FIT WHERE THEY SIT. Cl. 42.
592,592. STAYFLAT ORGANDY. Cl. 42.
592,593. CAL-FREE. Cl. 45.
592,595. PAIL-O. Cl. 46.
592,596. DI MICHAELS PIZZA AND DESIGN. Cl. 46.
592,598. TASTYCRISP. Cl. 46.
592,603. THE MASTERPIECE OF THE GRAPE MASTER. Cl. 47.

Section 18

368,528. BREAKFAST CUP. Cl. 46. 6-20-39.
660,953. MAGNOCYL. Cl. 18. 4-28-58.
633,589. DUPLEX. Cl. 24. 8-28-56.
656,254. CHOC CAFE. Cl. 46. 12-24-57.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

308,754. KERRY KNIGHT AND DESIGN. Cl. 39. Rice-Stix Dry Goods Co. 12–19–33. New Cert. Sec. 7(c) to Carp's, Inc., St. Louis, Mo.

436,180. Q–N. Cl. 46. Kuehn Milling Company. 1–27–48. New Cert. Sec. 7(c) to Q–N Pet Food Company, Sunnyvale, Calif.

615,443. WASH-'N-DRI. Cl. 51. R. R. Williams, Inc. 11–1–55. New Cert. Sec. 7(c) to Unexcelled Chemical Corporation, New York, N.Y.

650,239. MEMO. Cl. 51. R. R. Williams, Inc. 8–13–57. New Cert. Sec. 7(c) to Unexcelled Chemical Corporation, New York, N.Y.

689,405. TRIDECAMINE. Cl. 18. The Wm. S. Merrell Company. New Cert. Sec. 7(c) to The National Drug Company, Philadelphia, Pa.

INDEX OF REGISTRANTS

AUGUST 30, 1960

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

ACF Industries, Inc., New York, N.Y. 703,471, pub. 6–14–60. Cl. 19.

Abbott Laboratories, North Chicago, Ill. 592,381, canc. Cl. 18.

Abco Van Lines, Inc., Louisville, Ky. 703,699, pub. 6–14–60. Cl. 105.

Acme Cosmetic Corp., Chicago, Ill. 592,525, canc. Cl. 51.

Acrow (Engineers) Ltd., London, England. 375,031, ren. 8–30–60. Cl. 23.

Acushnet Process Co., Acushnet, Mass. 703,661, pub. 6–14–60. Cl. 50.

Adland Publishers: *See*—
Adland Publishers, Inc.

Adland Publishers, Inc., from Edgar G. Gordon, d.b.a. Adland Publishers, Detroit, Mich. 703,570, pub. 6–14–60. Cl. 38.

Adventure Unlimited: *See*—
Gordon, Allan C.

Aero-Test Equipment Co., Inc., Dallas, Tex. 703,414, pub. 6–14–60. Cl. 4.

Aero-Test Equipment Co., Inc., Dallas, Tex. 703,509, pub. 6–15–60. Cl. 23.

Aero-Test Equipment Co., Inc., Dallas, Tex. 703,703, pub. 6–14–60. Cl. 106.

Agria-Werke Maschinenfabrik Mockmuhl G.m.b.H., Mockmuhl, Wurttemberg, Germany. 703,516, pub. 6–14–60. Cl. 23.

Ajem Laboratories, Inc., Livonia, Mich. 703,674, pub. 6–14–60. Cl. 52.

Aktieselskabet Grindstedvaerket, Grindsted, Denmark. 380,712, ren. 8–30–60. Cl. 46.

Allen Sales Co., Seattle, Wash. 703,618, pub. 6–14–60. Cl. 46.

Allen & Fisher, Inc., Boston, Mass. 703,452, pub. 6–14–60. Cl. 17.

Allied Minerals, Inc., West Chelmsford, Mass. 592,481, canc. Cl. 46.

Allis-Chalmers Mfg. Co., Milwaukee, Wis. 703,555, pub. 5–13–58. Cl. 38.

Alvear S. A., Montilla (Cordoba), Spain. 703,653, pub. 6–14–60. Cl. 47.

Alvear S. A., Montilla (Cordoba), Spain. 703,657, pub. 6–14–60. Cl. 49.

Alvear S. A., Montilla (Cordoba), Spain. 703,715. Cl. 49.

Amchem Products, Inc., Ambler, Pa. 703,563, pub. 6–14–60. Cl. 38.

American Aggregate Co., Kansas City, Mo. 135,380, ren. 8–30–60. Cl. 12.

American Air Filter Co., Inc., Louisville, Ky. 703,540, pub. 6–14–60. Cl. 34.

American Automobile Association (Inc.), The, Washington, D.C. 703,556, pub. 6–14–60. Cl. 38.

American Cyanamid Co., New York, N.Y. 703,406, pub. 6–14–60. Cl. 1.

American Electronics, Inc., Los Angeles, Calif. 703,545, pub. 6–14–60. Cl. 36.

American Enka Corp., Enka, N.C., from The Rex Corp., West Acton, Mass. 703,485, pub. 6–14–60. Cl. 21.

American Metal Products Co., Detroit, Mich. 703,508, pub. 6–14–60. Cl. 23.

American Pad & Textile Co., The, Pittsburgh, Pa. 703,708. Cl. 22.

American Type Founders Co. Inc., Elizabeth, N.J. 703,662–3, pub. 6–14–60. Cl. 50.

American Velcro, Inc., Manchester, N.H. 703,597, pub. 6–14–60. Cl. 40.

Amplex Corp., Carle Place, N.Y. 703,525, pub. 6–14–60. Cl. 26.

Andrea Mfg. Corp., Lynbrook, N.Y. 592,359, canc. Cl. 12.

Ansbacher, A. B., & Co., Inc., to Sun Chemical Corp., New York, N.Y. 134,571–2, ren. 8–30–60. Cl. 16.

Aperture, Inc., from Minor White, Rochester, N.Y. 703,565, pub. 6–14–60. Cl. 38.

Armour and Co., Chicago, Ill. 703,613, pub. 6–14–60. Cl. 44.

Arvey Corp., Chicago, Ill. 703,554, pub. 6–14–60. Cl. 37.

Associated Buyers Co., Atlanta, Ga. 592,477, canc. Cl. 44.

Association of American Battery Manufacturers, Inc., The, East Orange, N.J. 703,561, pub. 6–14–60. Cl. 38.

Athey Products Corp., Chicago, Ill. 703,473, pub. 6–14–60. Cl. 19.

Atlantic Sportswear Inc., Rio Piedras, Puerto, Rico. 703,580, pub. 6–14–60. Cl. 39.

Atlas Supply Co., Newark, N.J. 382,533, ren. 8–30–60. Cl. 21.

Audiodyne, Inc., Philadelphia, Pa. 703,483, pub. 6–14–60. Cl. 21.

Avis, Inc., Boston, Mass. 703,700, pub. 6–14–60. Cl. 105.

Avisun Corp., Philadelphia, Pa. 703,407, pub. 6–14–60. Cl. 1.

Avisun Corp., Philadelphia, Pa. 703,609, pub. 6–14–60. Cl. 43.

Avison Corp., Philadelphia, Pa. 703,611, pub. 6–14–60. Cl. 43.

Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen on Rhine, Germany. 703,422–24, pub. 6–14–60. Cl. 6.

Bakers Franchise Corp., New York, N.Y. 703,648, pub. 6–14–60. Cl. 46.

Baltimore and Ohio Railroad Co., The, Baltimore, Md. 703,696, pub. 6–14–60. Cl. 104.

Barnet and Reef Associates, Inc., New York, N.Y. 703,681, pub. 6–14–60. Cl. 100.

Barton & Guestier, Bordeaux (Gironde), France. 703,714. Cl. 49.

Beacon Drive In: *See*—
White, John B.

Beauty-Rama Corp., Chicago, Ill. 703,670, pub. 6–14–60. Cl. 51.

Beckman Instruments, Inc., Fullerton, Calif. 703,486, pub. 6–14–60. Cl. 21.

Berger, Joseph, to Joseph Berger & Sons, New York, N.Y. 383,618, ren. 8–30–60. Cl. 39.

Berger, Joseph, & Sons: *See*—
Berger, Joseph.

Berns & Koppstein, Inc., New York, N.Y. 703,627, pub. 6–14–60. Cl. 46.

Biltmore Hats Ltd.: *See*—
Simon Millinery Supply Co.

Black and Decker Mfg. Co., Towson, Md. 383,891, ren. 8–30–60. Cl. 29.

Blaha, Donald L., d.b.a. Hitwell Mfg. Co., Berwyn, Ill. 703,503, pub. 6–14–60. Cl. 22.

Blue Gem Mfg. Co.: *See*—
Greensboro Overall Co.

Bohlender Plant Chemicals, Inc., Tipp City, Ohio. 703,427, pub. 6–14–60. Cl. 6.

Bonded Foam Latex Inc., Cleveland, Ohio. 592,573, canc. Cl. 32.

Bonewitz Chemicals, Inc., from Bonewitz Laboratories, Inc., Burlington, Iowa. 703,416. Cl. 6.

Bonewitz Laboratories, Inc.: *See*—
Bonewitz Chemicals, Inc.

Borg-Warner Corp.: *See*—
York Mfg. Co.

Brewer, W. A., & Associates, to Maybar Engineering Co. Inc., Milwaukee, Wis. 592,561, canc. Cl. 23.

Brides House, Inc.: *See*—
Conde Nast Publications Inc., The.

Bristol-Myers Co., New York, N.Y. 703,461, pub. 6–14–60. Cl. 18.

Bulow Electric Co.: *See*—
Bulow, Richard L.

Bulow, Richard L., d.b.a. Bulow Electric Co., Oak Park, Mich. 703,470, pub. 6–14–60. Cl. 19.

Burke & James, Inc., Chicago, Ill. 703,528, pub. 6–14–60. Cl. 26.

Butler Products Corp., Mount Vernon, N.Y. 378,719, ren. 8–30–60. Cl. 50.

Callaway Mills Co., d.b.a. "Kex" National Service, La Grange, Ga. 703,688, pub. 6–14–60. Cl. 101.

Callaway Mills Co., La Grange, Ga. 703,605, pub. 6–14–60. Cl. 42.

Campana Corp., by change of name from Campana Sales Co., Batavia, Ill. 703,462, pub. 6–7–60. Cl. 18.

Campana Corp., by merger & change of name Campana Corp., Batavia, Ill. 703,634, pub. 6–14–60. Cl. 46.

Campana Sales Co.: *See*—
Campana Corp.

Campbell Soup Co., Camden, N.J. 703,713. Cl. 46.

Can-Meat Corp., Verona, N.J. 703,642, pub. 6–14–60. Cl. 46.

Cap Sales Corp., New York, N.Y. 703,644, pub. 6–14–60. Cl. 46.

Carita, Maria, & Rosa Carita, Paris, France. 703,678, pub. 6–14–60. Cl. 100.

Carp's, Inc.: *See*—
Rice-Stix Dry Goods Co.

Cass Screw Machine Products Co., Minneapolis, Minn. 703,506, pub. 6–14–60. Cl. 23.

Chalfin, William L., d.b.a. Wilmington Chemical & Rubber Co., Brooklyn, N.Y. 703,600, pub. 6–14–60. Cl. 40.

Chamberlain Haber Chemical Co., The, Cleveland, Ohio. 132,639, ren. 8–30–60. Cl. 6.

Chemstrand Corp., The, Decatur, Ala. 703,419, pub. 6–14–60. Cl. 6.

Cheney Bros., Inc.: *See*—
Cheney Bros.

Cheney Bros., South Manchester, Conn., to Cheney Bros., Inc., Manchester, Conn. 136,368, ren. 8–30–60. Cl. 42.

Chicken Kitchen, Inc., Miami, Fla. 592,491, canc. Cl. 46.

Chippewa Paper Products Co., Inc., Chicago, Ill. 703,548, pub. 6–14–60. Cl. 37.

Choc-Cafe Sales Co., The, San Francisco, Calif. 656,254, canc. Cl. 46.

Chugai Seiyaku Kabushiki Kaisha, Chuoku, Tokyo, Japan. 703,457, pub. 6–14–60. Cl. 18.

Cinerama, Inc., New York, N.Y. 703,677, pub. 6–14–60. Cl. 100.

Cities Service Oil Co., New York, N.Y. 703,448, pub. 6–14–60. Cl. 15.

Citrus Products Co., Chicago, Ill. 381,741, ren. 8–30–60. Cl. 45.

Clark-Smith Publishing Co., Inc., Charlotte, N.C. 592,450, canc. Cl. 38.

Cluett, Peabody & Co., Inc., New York, N.Y. 381,046, ren. 8–30–60. Cl. 39.

Coating Materials Laboratories, Inc., Belleville, N.J., to Sun Chemical Corp., New York, N.Y. 378,445, ren. 8–30–60. Cl. 16.

Cobb, W. R., Co., Providence, R.I. 703,530, pub. 6–14–60. Cl. 28.

Cohn, Sigmund, Corp., Mount Vernon, N.Y. 703,489, pub. 6–14–60. Cl. 21.

Cole Products Corp., Chicago, Ill. 592,417, canc. Cl. 23.

Cole Products Corp., Chicago, Ill. 703,519, pub. 6–14–60. Cl. 23.

Colorado Commercial and Savings Bank of Colorado Springs, The, Colorado Springs, Colo. 703,690, pub. 6–14–60. Cl. 102.

Columbia Broadcasting System, Inc.: *See*— Columbia Recording Corp.

Columbia Broadcasting System, Inc., New York, N.Y. 381,572, ren. 8–30–60. Cl. 36.

Columbia Recording Corp., to Columbia Broadcasting System, Inc., New York, N.Y. 381,573, ren. 8–30–60. Cl. 36.

Columbus Pharmacal Co., The, Columbus, Ohio. 703,467, pub. 6–14–60. Cl. 18.

Commergnat-Guilliet Et Cie., Paris, France. 592,564, canc. Cl. 23.

Common Market Developments, Inc., Washington, D.C. 703,689, pub. 6–14–60. Cl. 101.

Commonwealth Shoe & Leather Co., Inc.: *See*— London Shoe Co.

Compagnie Generale d'Electro-Ceramique, Paris, France. 703,505, pub. 6–14–60. Cl. 23.

Concrete Equipment Mfg. Co., South Gate, Calif. 592,403, canc. Cl. 23.

Conde Nast Publications Inc., The, from Brides House, Inc., New York, N.Y. 703,683, pub. 6–14–60. Cl. 101.

Consolidated Companies, Inc., Plaquemine, Morgan City, St. Martinville, New Roads and White Castle, La. 134,487, ren. 8–30–60. Cl. 46.

Consolidated Photographic Industries, Inc., Los Angeles, Calif. 703,702, pub. 6–14–60. Cl. 106.

Constellation Life Insurance Co., Norfolk, Va. 703,693, pub. 6–14–60. Cl. 102.

Contact Lens Publishing Co., The, Chicago, Ill. 703,573, pub. 6–14–60. Cl. 38.

Cortland Line Co., Inc., Cortland, N.Y. 382,340, ren. 8–30–60. Cl. 22.

Coordinated Merchandising Corp., New York, N.Y. 703,685, pub. 6–14–60. Cl. 101.

Cooter Co., The: *See*— Recorg Supply Corp.

Cooter, Paul M.: *See*— Recorg Supply Corp.

Cordell, Jack V., d.b.a. Texas Fireplace & Composition Co., Houston, Tex. 382,273, ren. 8–30–60. Cl. 12.

Coreyale, Edward C., d.b.a. Dixie Laundry Machinery Co., Montgomery, Ala. 703,524, pub. 6–14–60. Cl. 23.

Cortland Line Co., Inc., Cortland, N.Y. 380,110, ren. 8–30–60. Cl. 22.

Coupon Magazine, Inc., New York, N.Y. 703,557, pub. 6–14–60. Cl. 38.

Crane Packing Co., Morton Grove, Ill. 379,781, ren. 8–30–60. Cl. 35.

Creat Electric Mfg. Co., Chicago, Ill. 577,770, canc. Cl. 21.

Crowell-Collier Publishing Co., The, New York, N.Y. 592,444, canc. Cl. 38.

Crush International Inc.: *See*— Orange-Crush Co.

Crushproof Tubing Co., The, McComb, Ohio. 703,544, pub. 6–14–60. Cl. 35.

Dansk Designs Inc., Great Neck, N.Y. 703,531, pub. 6–14–60. Cl. 28.

Daybrook Hydraulic Corp., The, Bowling Green, Ohio, to L. A. Young Spring & Wire Corp., Detroit, Mich. 592,566, canc. Cl. 23.

Dayco Corp., by change of name from The Dayton Rubber Co., Dayton, Ohio. 703,478, pub. 6–14–60. Cl. 19.

Dayton Rubber Co., The: *See*— Dayco Corp.

De Laval Separator Co., The, Poughkeepsie, N.Y. 137,984, ren. 8–30–60. Cl. 23.

Detroit Stamping Co., Detroit, Mich. 703,432, pub. 6–14–60. Cl. 8.

Dike-O-Seal, Inc., Chicago, Ill. 703,436, pub. 6–14–60. Cl. 12.

Dimare Bros., Boston, Mass. 703,638, pub. 6–14–60. Cl. 46.

Di Michael, Edward C., d.b.a. Di Michael's Pizza Shops, Erie, Pa. 592,596, canc. Cl. 46.

Di Michael's Pizza Shops: *See*— Di Michael, Edward C.

Dixie Laundry Machinery Co.: *See*— Coreyale, Edward C.

Dr. Plate, G.m.b.H., Bonn, Germany. 703,546, pub. 6–14–60. Cl. 36.

Dodge & Olcott, Inc., New York, N.Y. 703,417, pub. 6–14–60. Cl. 6.

Dorann Foods, Inc., Rye, N.Y. 703,626, pub. 6–14–60. Cl. 46.

Douglass, Frank J., Monrovia, Calif. 592,424, canc. Cl. 26.

Drum Major Magazine: *See*— Sartell, Donald L.

Dude Ranch Foods, Los Angeles, Calif. 703,631, pub. 6–14–60. Cl. 46.

Dumont Packing Co., Stockton, Calif. 592,504, canc. Cl. 46.

Duplex Automatic Appliance Corp., Evanston, Ill. 633,589, canc. Cl. 24.

Du Pont de Nemours, E. I., and Co., Wilmington, Del. 703,428, pub. 6–14–60. Cl. 6.

Duray Co., Inc., The, Brooklyn, N.Y. 592,473, canc. Cl. 44.

East, F. F., Co. Inc., Maurice River, N.J., to Greenwich Oyster Co., Greenwich, N.J. 378,978, ren. 8–30–60. Cl. 46.

Eastenn-Dukes Chemicals, Inc., Rogersville, Tenn. 703,673, pub. 9–23–58. Cl. 52.

Edison Bros. Stores, Inc., St. Louis, Mo. 703,587, pub. 6–14–60. Cl. 39.

Edwards, J., & Co., Philadelphia, Pa. 703,590, pub. 6–14–60. Cl. 39.

Egidio & Pio Gavazzi, S.p.A., Milan, Italy. 703,604, pub. 6–14–60. Cl. 42.

Eimco Corp., The, Salt Lake City, Utah. 703,535, pub. 6–14–60. Cl. 31.

Elder, Paul B., Co., Bryan, Ohio. 660,953, canc. Cl. 18.

Elldee Laboratories, Inc., The, Berwyn, Ill. 703,622, pub. 6–14–60. Cl. 46.

Ellen Kaye Laboratories, Inc., from L & K Laboratories, St. Paul, Minn. 703,455, pub. 6–14–60. Cl. 18.

Emme, Inc., New York, N.Y. 703,594, pub. 6–14–60. Cl. 39.

Enchanted Beauty: *See*— Rothstein, Paul F.

Enos, Frank S., d.b.a. Pet-E-Pet Packing Co., Castro Valley, Calif. 592,485, canc. Cl. 46.

Erickson, C. E., Co., Inc., Des Moines, Iowa. 703,475–6, pub. 6–14–60. Cl. 19.

Evans Grocery Co., The, Gallipolis, Ohio. 703,619, pub. 6–14–60. Cl. 46.

Faberge, Inc., New York, N.Y. 580,562, canc. Cl. 51.

Fabrique Suisse de Crayons Caran d'Ache S.A., Geneva, Switzerland. 703,549, pub. 6–14–60. Cl. 37.

Farm Bureau Cooperative Assn., Inc., The, Columbus, Ohio. 703,453, pub. 6–14–60. Cl. 18.

Fay, Leslie, Fashions, Inc.: *See*— Fay, Leslie, Inc.

Fay, Leslie, Inc., from Leslie Fay Fashions, Inc., New York, N.Y. 703,583, pub. 6–14–60. Cl. 39.

Fed-Mart Corp., The, San Diego, Calif. 703,447, pub. 6–14–60. Cl. 15.

Fed-Mart Corp., The, San Diego, Calif. 703,649, pub. 6–14–60. Cl. 46.

Ferro Corp., Cleveland, Ohio. 703,602, pub. 6–14–60. Cl. 42.

Fiberaised Bar & Line Co., Sausalito, Calif. 703,675, pub. 6–14–60. Cl. 52.

Fibreboard Paper Products Corp., San Francisco, Calif. 703,409, pub. 6–14–60. Cl. 2.

Filice & Perrelli Canning Co., Inc., Richmond, Calif. 382,857, ren. 8–30–60. Cl. 46.

Finger Lakes Stone Co., Inc., Ithaca, N.Y. 592,361, canc. Cl. 12.

Fink, F. J., & Co.: *See*— Fink, Frank J.

Fink, Frank J., d.b.a. F. J. Fink & Co., Cleveland, Ohio. 592,568, canc. Cl. 23.

Finnigan, J. J., Co., Inc., Atlanta, Ga. 703,669, pub. 6–14–60. Cl. 50.

Firm of John Dickinson Schneider, Inc., The: *See*— Hollister Inc.

Flagstrip Sales Corp., d.b.a. Freshway Products Co., from Paul Hawkins Co., Los Angeles, Calif. 703,617, pub. 6–14–60. Cl. 46.

Fleet of America, Inc., Buffalo, N.Y. 703,438, pub. 6–14–60. Cl. 12.

Fleet, C. B., Co., Inc., Lynchburg, Va. 703,463, pub. 6–14–60. Cl. 18.

Flo-Bell, Inc., Yonkers, N.Y. 592,467, canc. Cl. 44.

Florida Fishing Tackle Mfg. Co., Inc., St. Petersburg, Fla. 703,501, pub. 6–14–60. Cl. 22.

Foldaway Trailers, Inc., Salt Lake City, Utah. 703,474, pub. 6–14–60. Cl. 19.

Food Machinery and Chemical Corp., San Jose, Calif. 703,488, pub. 6–14–60. Cl. 19.

Fort Pitt Industries, Inc.: *See*— Seeburg Corp., The.

"4711" Ltd., now by change of name Lee Ltd., New York, N.Y. 592,517, canc. Cl. 51.

Foster Grant Co., Inc., Leominster, Mass. 703,527, pub. 6–14–60. Cl. 26.

Foundry Equipment Co., The, Cleveland, Ohio. 703,539, pub. 6–14–60. Cl. 34.

Freeman, Joseph, Sons & Co. Ltd., London, England. 592,549, canc. Cl. 6.

Freshway Products Co.: *See*— Flagstrip Sales Corp.

Frito Co., The, Dallas, Tex. 703,625, pub. 6–14–60. Cl. 46.

Frito Co., The, Dallas, Tex. 703,645, pub. 6–14–60. Cl. 46.

Fruitland Canning Association, Inc., Fruitland, Idaho. 592,501, canc. Cl. 46.

Galax Knitting Co., Inc., Galax, Va. 578,025, canc. Cl. 39.

Gambit Enterprises, Inc., New York, N.Y. 703,496, pub. 6–14–60. Cl. 22.

Garden Gadgets Inc., Atlanta, Ga. 592,366, canc. Cl. 13.

Garlock Packing Co., The, to Garlock Inc., Palmyra, N.Y. 383,346, ren. 8–30–60. Cl. 5.

Garelick Mfg. Co., St. Paul Park, Minn. 703,439, pub. 6–14–60. Cl. 13.

Garlock Inc.: *See*— Garlock Packing Co., The.

Gates and Sons Inc., Denver, Colo. 592,553, canc. Cl. 12.

Gazda, Antoine, Providence, R.I. 592,474, canc. Cl. 44.

Gedance, Lillian B., Philadelphia, Pa. 575,650, canc. Cl. 39.

General Foods Corp., White Plains, N.Y. 703,621, pub. 6–14–60. Cl. 46.

General Mills, Inc.: *See*— New Foods, Inc. Washburn Crosby Co.

General Mills, Inc., Minneapolis, Minn. 381,609, ren. 8–30–60. Cl. 46.

General Mills, Inc., Minneapolis, Minn. 703,616, pub. 5–13–58. Cl. 46.

Genesco, Inc., Nashville, Tenn. 703,591, pub. 6–14–60. Cl. 39.

Gerard, Lillian, New York, N.Y. 703,568, pub. 6–14–60. Cl. 38.

Gillette Co., The, d.b.a. The Toni Co., Boston, Mass. 703,601, pub. 6–14–60. Cl. 40.

Glass, Richard A., Co.: *See*— Glass, Richard A., Inc.

Glass, Richard A., Co., Inc., d.b.a. Richard A. Glass Co., Indio, Calif. 703,650, pub. 6–14–60. Cl. 46.

Gloekler, Bernard, North East Co., North East, Pa. 703,537, pub. 6–14–60. Cl. 32.

Goldsmith Engineering & Chemical Co.: *See*— Goldsmith, Harold I.

Goldsmith, Harold I., d.b.a. Goldsmith Engineering & Chemical Co., Chicago, Ill. 703,437, pub. 6–14–60. Cl. 12.

Goodyear Tire & Rubber Co., The, Akron, Ohio. 592,436, canc. Cl. 35.

Gordon, Allan C., d.b.a. Adventure Unlimited, St. Louis, Mo. 703,698, pub. 6–14–60. Cl. 105.

Gordon, Edgar G.: *See*— Adland Publishers, Inc.

Gossard, H. W., Co., The, Chicago, Ill. 703,595, pub. 6–14–60. Cl. 39.

Gotham Shoe Mfg. Co., Inc., Binghamton, N.Y. 382,321, ren. 8–30–60. Cl. 22.

Gotham Shoe Mfg. Co., Inc., Binghamton, N.Y. 382,327, ren. 8–30–60. Cl. 22.

Gould, Barbara, Inc., New York, N.Y. 592,530, canc. Cl. 51.

Grace Line Inc., New York, N.Y. 703,701, pub. 6–14–60. Cl. 105.

Graff, George B., Co., Cambridge, Mass. 136,818, ren. 8–30–60. Cl. 37.

Graton & Knight Co., Inc.: *See*— Graton & Knight Mfg. Co., The.

Graton & Knight Mfg. Co., The, to Graton & Knight Co., Inc., Worcester, Mass. 138,011, ren. 8–30–60. Cl. 35.

Greensboro Overall Co., to Blue Gem Mfg. Co., Greensboro, N.C. 381,997, ren. 8–30–60. Cl. 39.

Greenwich Oyster Co.: *See*— East, F. F., Co. Inc.

Gulf Coast Machine & Supply Co., Beaumont, Tex. 380,210, ren. 8–30–60. Cl. 23.

Gulf Coast Machine & Supply Co., Beaumont, Tex. 380,451, ren. 8–30–60. Cl. 13.

Haack Laboratories, Inc., Portland, Oreg. 592,384, canc. Cl. 18.

Haas Bros., d.b.a. Kent Ltd., San Francisco, Calif. 703,716. Cl. 49.

Hamilton Cosco, Inc., Columbus, Ind. 703,536, pub. 6–14–60. Cl. 32.

Hammond Organ Co., Chicago, Ill. 703,547, pub. 6–14–60. Cl. 36.

Hanover Cordage Co., Hanover, Pa. 580,380–5, canc. Cl. 7.

Happy Felton Products, Inc., New York, N.Y. 573,298, canc. Cl. 107.

Hardin Bag and Burlap Co., Inc., The: *See*— Hardin Bag Co., Inc., The.

Hardin Bag Co., Inc., The, to The Hardin Bag and Burlap Co., Inc., New Orleans, La. 136,448, ren. 8–30–60. Cl. 2.

Hastings, Merrill G., Jr., Lakewood, Colo. 592,581, canc. Cl. 38.

Hawkins, Paul, Co.: *See*— Flagstrip Sales Corp.

Hawley, H. F., Chemical Co.: *See*— Hawley, Howard F.

Hawley, Howard F., d.b.a. H. F. Hawley Chemical Co., Stockton, Calif. 703,420, pub. 6–14–60. Cl. 6.

Hearst Publishing Co., Inc., New York, N.Y. 592,446, canc. Cl. 38.

Heil, Carl E., d.b.a. Heil and Co., to Heil Process Equipment Corp., Cleveland, Ohio. 379,170, ren. 8–30–60. Cl. 12.

Heil Process Equipment Corp.: *See*— Heil, Carl E.

Heinrich Lanz Aktiengesellschaft, Mannheim, Germany. 592,408, canc. Cl. 23.

Henry and Henry, Inc., Buffalo, N.Y. 592,563, canc. Cl. 23.

Hess-Taylor-Kreiss Inc., New York, N.Y., to Wilkes Barre Hosiery Mills, Inc., Philadelphia, Pa. 378,729, ren. 8–30–60. Cl. 39.

Higham, Benjamin C., Vallejo, Calif. 703,433, pub. 6–14–60. Cl. 9.

Hitwell Mfg. Co.: *See*— Blaha, Donald L.

Hockensmith, John B., d.b.a. John's Hair Stylist or Johns Hollywood Beauty Salon, Knoxville, Tenn. 580,520, canc. Cl. 51.

Hollister, Franklin C.: *See*— Hollister Inc.

Hollister Inc., from The Firm of John Dickinson Schneider, Inc., d.b.a. Franklin C. Hollister Co., Chicago, Ill. 703,709–10. Cl. 37.

Holmes Stickney, Inc.: *See*— Holmes, Stickney & Walker, Inc.

Holmes, Stickney & Walker, Inc., to Holmes Stickney, Inc., Portland, Maine. 383,005, ren. 8–30–60. Cl. 39.

Holton, Campbell, & Co., Bloomington, Ill. 592,492, canc. Cl. 46.

Hom, Inc., Walnut Creek, Calif. 703,684, pub. 6–14–60. Cl. 101.

Hood River Distillers, Inc., Hood River, Oreg. 703,660, pub. 6–14–60. Cl. 49.

Howard Paper Mills, Inc., Dayton, Ohio. 703,553, pub. 6–14–60. Cl. 37.

Huffman Full Fashioned Mills, Inc., to Huffman Knitting Mills, Inc., Morganton, N.C. 380,973, ren. 8–30–60. Cl. 39.

Huffman Knitting Mills, Inc.: *See*— Huffman Full Fashioned Mills, Inc.

Hunt Foods and Industries, Inc., d.b.a. The Winters Canning Co., Fullerton, Calif. 703,637, pub. 6–14–60. Cl. 46.

Hydraulic Products Co., Inc., Wilmington, Mass. 592,471, canc. Cl. 44.

Hydrometals, Inc., Chicago, Ill. 703,446, pub. 6–14–60. Cl. 14.

Hy-Grade Sportswear Co., Inc., New York, N.Y. 703,585, pub. 6–14–60. Cl. 39.

I-T-E Circuit Breaker Co., Philadelphia, Pa. 703,510, pub. 6–14–60. Cl. 23.

I-T-E Circuit Breaker Co., Philadelphia, Pa., from Walker Electrical Co., Inc., Atlanta, Ga. 703,487, pub. 6–14–60. Cl. 21.

Imperial Chemical Industries Ltd., London, England. 703,608, pub. 6–14–60. Cl. 43.

Industrieal Rayon Corp., Cleveland, Ohio. 592,590, canc. Cl. 42.

Insured Budget Plan Co., Inc., The, Portland, Maine. 703,692, pub. 6–14–60. Cl. 102.

International Business Machines Corp., New York, N.Y. 703,550, pub. 6–14–60. Cl. 37.

International Latex Corp., Dover, Del. 703,495, pub. 6–14–60. Cl. 22.

International Paint Co., Inc., New York, N.Y. 703,567, pub. 6–14–60. Cl. 38.

International Shoe Co.: *See*— Plant, Thomas G.

International Shoe Co., St. Louis, Mo. 703,576, pub. 7–1–58. Cl. 39.

Investment Research Inc., Chicago, Ill. 703,559, pub. 6–14–60. Cl. 38.

Ivano, Inc., Chicago, Ill. 592,335, canc. Cl. 1.

J. & A. Farms, d.b.a. J & A Packing Co., Blythe, Calif. 703,651, pub. 6–14–60. Cl. 46.

J & A Packing Co.: *See*— J. & A. Farms.

Jackie Lee Corp., Newark, N.J. 703,706, pub. 6–14–60. Cl. 107.

Jarvis & Jarvis, Inc., Palmer, Mass. 703,612, pub. 6–14–60. Cl. 44.

Jayvee Brand, Inc., Portland, Oreg. 703,578, pub. 6–14–60. Cl. 39.

Jewelann Auto Leasing, Inc., Kansas City, Mo. 592,543, canc. Cl. 105.

Joclin Mfg. Co., The, Wallingford, Conn. 703,426, pub. 6–14–60. Cl. 6.

Johns-Manville Corp., New York, N.Y. 381,418, ren. 8–30–60. Cl. 37.

Johnson, Ernest S., Webster City, Iowa, to Knapp-Monarch Co., St. Louis, Mo. 136,050, ren. 8–30–60. Cl. 2.

Jure Holding Co. S. A., Panama, Panama. 703,458, pub. 6–14–60. Cl. 18.

KM Yarn Co., Detroit, Mich. 703,607, pub. 6–14–60. Cl. 43.

Kayser, Julius, & Co., to Kayser-Roth Corp., New York, N.Y. 380,971, ren. 8–30–60. Cl. 39.

Kayser-Roth Corp.: *See*— Kayser, Julius, & Co.

Kayser-Roth Corp., New York, N.Y. 703,581, pub. 6–14–60. Cl. 39.

Keith, Ben E., Co., Forth Worth, Tex. 703,636, pub. 6–14–60. Cl. 46.

Kelco Co., San Diego, Calif. 404,555, canc. Cl. 6.

Keller & Knappich, G.m.b.H., Augsburg, Germany. 703,520, pub. 6–14–60. Cl. 23.

Kelly, Marcus G., San Diego, Calif. 579,360, canc. Cl. 39.

Ken: *See*— Stevenson, Kenneth Y.

Kent Ltd.: *See*— Haas Brothers.

Kern Country Land Co., San Francisco, Calif. 703,632–3, pub. 6–14–60. Cl. 46.

Keystone Auto Rental Service Inc., Pittsburgh, Pa. 592,544, canc. Cl. 105.

"Kex" National Service: *See*— Callaway Mills Co.

Kitchens of Sara Lee, Inc., Chicago, Ill. 592,512–13, canc. Cl. 46.

Klingler, Fred E., Co., Los Angeles, Calif. 703,526, pub. 6–14–60. Cl. 26.

Knapp-Monarch Co.: *See*— Johnson, Ernest S.

Kneisley Electric Co., The, Toledo, Ohio. 703,492, pub. 6–14–60. Cl. 21.

Kordite Corp.: *See*— National Distillers and Chemical Corp.

Kuehn Milling Co., to Q-N Pet Food Co., Sunnyvale, Calif. 436,180, new cert. Cl. 46.

Landon, S. E., Co.: *See*— Landon, Sarah E.

Landon, Sarah E., d.b.a. S. E. Landon Co., Joshua Tree, Calif. 703,523, pub. 6–14–60. Cl. 23.

La Marche, Roby W., d.b.a. La Marche Sales Co., Wakefield, R.I. 703,484, pub. 6–14–60. Cl. 21.

La Marche Sales Co.: *See*— La Marche, Roby W.

La Resista Corset Co., The, Bridgeport, Conn. 703,582, pub. 6–14–60. Cl. 39.

Larned Sales Co., Detroit, Mich., to Southern Fruit Distributors, Inc., Orlando, Fla. 380,079, ren. 8–30–60. Cl. 45.

Lauralou Bates, Inc., Philadelphia, Pa. 703,593, pub. 6–14–60. Cl. 39.

Lautz Bros. & Co., Buffalo, N.Y., to The Procter & Gamble Co., Cincinnati, Ohio. 18,085, ren. 8–30–60. Cl. 52.

Lee Ltd.: *See*— "4711" Ltd.

Lennox Furnace Co., The, to Lennox Industries, Inc., Marshalltown, Iowa. 383,382, ren. 8–30–60. Cl. 34.

Lennox Industries, Inc.: *See*— Lennox Furnace Co., The.

Leslie Co., Lyndhurst, N.J. 703,443, pub. 6–14–60. Cl. 13.

Levi, Berth, & Co., Inc., Chicago, Ill. 703,643, pub. 6–14–60. Cl. 46.

Lewis International Co., Newark, N.J. 703,434, pub. 6–14–60. Cl. 10.

Lines Bros. Ltd., London, England. 703,504, pub. 6–14–60. Cl. 22.

Liquidivision Gauge & Control Corp., Oceanside, N.Y. 592,426, canc. Cl. 26.
Lloyd Brothers, Inc., Cincinnati, Ohio. 703,465, pub. 6–14–60. Cl. 18.
Logetronics Inc., Alexandria, Va. 703,571, pub. 6–14–60. Cl. 38.
London Shoe Co., New York, N.Y., to Commonwealth Shoe & Leather Co., Inc., Whitman, Mass. 136,518, ren. 8–30–60. Cl. 39.
Loma Linda Food Co., Loma Linda, Calif. 368,528, canc. Cl. 46.
Losey, Thomas, Co.: *See*— Losey, Thomas.
Losey, Thomas, d.b.a. Thomas Losey Co., Fullerton, Calif. 703,687, pub. 6–14–60. Cl. 101.
Lustre Fibres, Inc., New York, N.Y., to Courtaulds, Inc., Wilmington, Del. 592,338, canc. Cl. 1.
MacFadden Publications, Inc., New York, N.Y. 578,864, canc. Cl. 38.
MacGregor Sport Products, Inc., Cincinnati, Ohio. 592,391, canc. Cl. 22.
Majestic Knitwear Co., The, to Majestic Specialties Inc., Cleveland, Ohio. 383,706, ren. 8–30–60. Cl. 39.
Majestic Specialties: *See*— Majestic Knitwear Co., The.
Malquet Enterprises, Washington, D.C. 703,502, pub. 6–14–60. Cl. 22.
Manufactures de Produits Chimiques du Nord, Etablissements Kuhlmann, Paris, France. 592,346, canc. Cl. 6.
Mfg. Instrument and Tool Corp., Clifton, N.J. 703,517, pub. 6–14–60. Cl. 23.
Maple Leaf Mfg. Co., Inc., New York, N.Y. 703,551, pub. 6–14–60. Cl. 37.
Martin Fabrics Corp., now by change of name to B. Martin Co., New York, N.Y. 592,458, canc. Cl. 39.
Martin, J. B., Co.: *See*— Martin Fabrics Corp.
Martini & Rossi Corp., New York, N.Y. 703,652, pub. 6–14–60. Cl. 47.
Massasoit Co.: *See*— Massasoit Mfg. Co.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laurelton, N.J. 138,291, ren. 8–30–60. Cl. 29.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laurelton, N.J. 137,831, ren. 8–30–60. Cl. 29.
Massasoit Mfg. Co., Fall River, Mass., to Massasoit Co., Laurelton, N.J. 137,652, ren. 8–30–60. Cl. 29.
Mattaway Shoe Co., St. Paul, Minn. 703,592, pub. 6–14–60. Cl. 39.
Maybar Engineering Co. Inc.: *See*— Brewer, W. A., & Associates.
Mayfab, Inc., New York, N.Y. 592,341, canc. Cl. 3.
Maytag Co., The, Newton, Iowa. 703,694, pub. 6–14–60. Cl. 103.
McCauley Industrial Corp., Dayton, Ohio. 703,482, pub. 6–14–60. Cl. 19.
McDermott Sales Co.: *See*— Wright, Louise.
McKee, Lee C., Minneapolis, Minn. 592,547, canc. Cl. 2.
McLaughlin, Eugene R., d.b.a. Northland Pharmacal Co., Brainerd, Minn. 703,454, pub. 6–14–60. Cl. 18.
McLendon Pacific Corp., The, Dallas, Tex. 703,697, pub. 6–14–60. Cl. 104.
Mead Johnson & Co., Evansville, Ind. 592,387, canc. Cl. 18.
Meat Industry Suppliers, Inc., Chicago, Ill. 592,506, canc. Cl. 46.
Meisel Press Mfg. Co., Inc.: *See*— Meisel Press Mfg. Co.
Meisel Press Mfg. Co., to Meisel Press Mfg. Co., Inc., Boston, Mass. 134,184, ren. 8–30–60. Cl. 23.
Mellon National Bank and Trust Co., Pittsburgh, Pa. 703,691, pub. 6–14–60. Cl. 102.
Mennen Co., The, Morris Township, N.J. 703,672, pub. 6–14–60. Cl. 51.
Meredith Publishing Co., Des Moines, Iowa. 703,711. Cl. 38.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 383,858, ren. 8–30–60. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 383,901, ren. 8–3–60. Cl. 18.
Merrell, Wm. S., Co., The, to The National Drug Co., Philadelphia, Pa. 689,405, new cert. Cl. 18.
Merritt, James S., Co., The, Kansas City, Mo. 703,620, pub. 6–14–60. Cl. 46.
Meyer, Augusta C., d.b.a. San-e-Cur Mfg., Savannah, Ga. 703,664, pub. 6–14–60. Cl. 50.
Micromatic Hone Corp., Detroit, Mich. 592,396, canc. Cl. 23.
Midas, Inc., Chicago, Ill. 703,472, pub. 6–14–60. Cl. 19.
Middishade Co., Inc., The, Philadelphia, Pa. 703,579, pub. 6–14–60. Cl. 39.
Mills Products, Inc., Walled Lake, Mich. 703,666, pub. 6–14–60. Cl. 50.
Miss Junior Coats, Inc., New York, N.Y. 578,671, canc. Cl. 39.
Modern Coatings, Inc., Chicago, Ill. 703,667, pub. 6–14–60. Cl. 50.
Montgomery Ward & Co., Inc., Chicago, Ill. 592,390, canc. Cl. 21.
Moog Industries, Inc., St. Louis, Mo. 703,479, pub. 6–14–60. Cl. 19.
Mundet Cork Corp., North Bergen, N.J. 592,430, canc. Cl. 35.
Mutual Broadcasting System, Inc., New York, N.Y. 579,854, canc. Cl. 104.
Mutual Dairy Products, Inc., Saratoga Springs, N.Y. 703,647, pub. 6–14–60. Cl. 46.
National Automotive Wholesalers Assn., Atlanta, Ga. 703,511, pub. 6–14–60. Cl. 23.
National Carbon Co., Inc., to Union Carbide Corp., New York, N.Y. 135,757, ren. 8–30–60. Cl. 21.
National Carbon Co., Inc., to Union Carbide Corp., New York, N.Y. 378,559, ren. 8–30–60. Cl. 6.
National Carbon Co., to Union Carbide Corp., New York, N.Y. 382,137–8, ren. 8–30–60. Cl. 6.
National Carbon Co., Inc., to Union Carbide Corp., New York, N.Y. 382,389, ren. 8–30–60. Cl. 21.
National Carbon Co., Inc., to Union Carbide Corp., New York, N.Y. 383,847, ren. 8–3–60. Cl. 6.
National Cooperatives, Inc., Albert Lea, Minn. 703,543, pub. 6–14–60. Cl. 35.
National Distillers and Chemical Corp., New York, by merger from Kordite Corp., Macedon, N.Y. 703,665, pub. 6–14–60. Cl. 50.
National Drug Co., The: *See*— Merrell, Wm. S., Co., The.
National Novelty Enterprises, Boston, Mass. 592,586, canc. Cl. 40.
National Spinning Co., Inc., New York, N.Y. 703,610, pub. 6–14–60. Cl. 43.
National Wines, Inc., Miami, Fla. 703,654, pub. 6–14–60. Cl. 47.
Nelson Chemicals Co., Detroit, Mich. 703,415, pub. 6–14–60. Cl. 6.
New Foods, Inc., Chicago, Ill., to General Mills, Inc., Minneapolis, Minn. 381,177, ren. 8–30–60. Cl. 46.
New Haven Board & Carton Co., The, New Haven, Conn. 703,410, pub. 6–14–60. Cl. 2.
New York Herald Tribune Inc., New York, N.Y. 703,569, pub. 6–14–60. Cl. 38.
Newport Industries, Inc., Pensacola, Fla. 441,722, canc. Cl. 6.
Norcross, Inc., New York, N.Y. 703,574–5, pub. 6–14–60. Cl. 38.
Northland Pharmacal Co.: *See*— McLaughlin, Eugene R.
Nuclear Development Corp. of America, White Plains, N.Y. 703,529, pub. 6–14–60. Cl. 26.
Nye-Walt Co., Inc., Auburn, N.Y. 382,068, ren. 8–30–60. Cl. 42.
Office Design & Space Control, Los Angeles, Calif. 703,695, pub. 6–14–60. Cl. 103.
Old Tappan Products, Inc., Old Tappan, N.J. 703,533, pub. 6–14–60. Cl. 29.
Oneida Community Ltd., to Oneida Ltd., Oneida, N.Y. 138,323, ren. 8–30–60. Cl. 28.
Oneida Ltd.: *See*— Oneida Community Ltd.
Oppenheimer Fels Co., New York, N.Y. 592,457, canc. Cl. 39.
Orange-Crush Co., Chicago, to Crush International Inc., Evanston, Ill. 378,224, ren. 8–30–60. Cl. 45.
Oregon Saw Chain Corp., to Oregon Saw Chain Corp., Portland, Oreg. 592,410, canc. Cl. 23.
Ortho-Relaxer Co.: *See*— Searl, Stacy F.
Overseas Shipments, Inc., New York, N.Y. 703,580, pub. 6–2–59. Cl. 39.
P.B.R. Mfg. Co., Philadelphia, Pa. 703,481, pub. 6–14–60. Cl. 19.
Pabst Brewing Co., Milwaukee, Wis., to Pabst Brewing Co., Chicago, Ill. 136,142, ren. 8–30–60. Cl. 48.
Paramount Citrus Assn., Inc., San Fernando, Calif. 703,640–1, pub. 6–14–60. Cl. 46.
Paramount Export Co., San Francisco, Calif. 592,598, canc. Cl. 46.
Parke, Davis & Co., Detroit, Mich. 379,431, ren. 8–30–60. Cl. 6.
Parrot Record Co., Chicago, Ill. 592,437, canc. Cl. 36.
Pellon Corp., New York, N.Y. 703,603, pub. 6–14–60. Cl. 42.
Pellon Corp., New York, N.Y. 703,606, pub. 6–14–60. Cl. 42.
Peoples Drug Stores, Inc., Washington, D.C. 703,459, pub. 6–14–60. Cl. 18.
Perfect Circle Corp., Hagerstown, Ind. 703,542, pub. 6–14–60. Cl. 35.
Pet-E-Pet Packing Co.: *See*— Enos, Frank S.
Peters & Russell, Inc., Springfield, Ohio. 703,445, pub. 6–14–60. Cl. 13.
Petite Miss Co., New York, N.Y. 703,596, pub. 6–14–60. Cl. 39.
Pharmacia Laboratories, Inc., New York, N.Y. 703,460, pub. 6–14–60. Cl. 18.
Phelps, K. P., Agency, Inc., New York, N.Y. 703,521, pub. 6–14–60. Cl. 23.
Plain and Fancy Dutch Products: *See*— Taft, Albert W.
Plant, Thomas G., Co., Boston, Mass., to International Shoe Co., St. Louis, Mo. 137,371, ren. 8–30–60. Cl. 39.
Polak's Frutal Works, Inc., Middletown, N.Y. 382,044, ren. 8–30–60. Cl. 46.
Polak's Frutal Works, Inc., Middletown, N.Y. 380,294, ren. 8–30–60. Cl. 51.
Procter & Gamble Co., The: *See*— Lautz Bros. & Co.
Procter & Gamble Productions, Inc., Cincinnati, Ohio. 592,546, canc. Cl. 107.
Publicker Commercial Alcohol Co., Philadelphia, Pa. 303,311, canc. Cl. 6.
Purdue Frederick Co., The, New York, N.Y. 703,466, pub. 6–14–60. Cl. 18.
Purepac Corp., New York, N.Y. 592,376, canc. Cl. 18.
Puritan Cordage Mills, Louisville, Ky. 703,500, pub. 6–14–60. Cl. 22.
Purwin's Cake Box Inc., Evanston, Ill. 703,628, pub. 6–14–60. Cl. 46.
Putman Publishing Co., Chicago, Ill. 703,558, pub. 6–14–60. Cl. 38.
Q-N Pet Food Co.: *See*— Kuehn Milling Co.
Quality Chemists, Inc., St. Louis, Mo. 703,671, pub. 6–14–60. Cl. 51.

R. Faerch, Cigar- og Tobaksfabrikker A/S Aarhus, Denmark. 703,450, pub. 6–14–60. Cl. 17.
Radio Corp. of America, New York, N.Y. 703,491, pub. 6–14–60. Cl. 21.
Ram Mfg. Corp., New York, N.Y. 573,905, canc. Cl. 39.
Rambusch Decorating Co., New York, N.Y. 380,038, ren. 8–30–60. Cl. 34.
Recorg Supply Corp., Chicago, Ill., to Paul M. Cooter d.b.a. The Cooter Co., San Francisco, Calif. 381,091, ren. 8–30–60. Cl. 6.
Reichhold Chemicals, Inc., Detroit, Mich. 592,349, canc. Cl. 6.
Remington Arms Co., Inc., Bridgeport, Conn. 703,442, pub. 6–14–60. Cl. 13.
Revlon, Inc.: *See*— Revlon Products Corp.
Revlon Products Corp., to Revlon, Inc., New York, N.Y. 379,375, ren. 8–30–60. Cl. 51.
Revlon Products Corp., to Revlon, Inc., New York, N.Y. 382,140, ren. 8–30–60. Cl. 51.
Rex Corp., The: *See*— American Enka Corp.
Rice-Stix Dry Goods Co., to Carp's, Inc., St. Louis, Mo. 308,754, new cert. Cl. 39.
Rivetti, Stefano, Florence, Italy. 703,431, pub. 6–14–60. Cl. 7.
Road to Radiance, Chicago, Ill. 592,523, canc. Cl. 51.
Rockwood & Co., Brooklyn, N.Y. 592,486, canc. Cl. 46.
Roehr Products Co., Waterbury, Conn. 592,472, canc. Cl. 44.
Rothstein, Paul Frank, d.b.a. Enchanted Beauty, Philadelphia, Pa. 703,532, pub. 6–14–60. Cl. 28.
Royal Crown Plastics Corp., Cleveland, Ohio. 703,411, pub. 6–14–60. Cl. 2.
Royce Shoe Corp., Newmarket, N.H. 592,453–4, canc. Cl. 39.
S.L.I.A. Sicule Lombarde Industrie Associate Societa per Azioni, Codogno, Milan, Italy. 703,630, pub. 6–14–60. Cl. 46.
S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y. 703,514, pub. 6–14–60. Cl. 23.
Sales Affiliates, Inc., New York, N.Y. 703,704, pub. 6–14–60. Cl. 107.
Sampson Co., The, Chicago, Ill. 703,493, pub. 6–14–60. Cl. 21.
Sandoz, Inc., New York, N.Y. 703,430, pub. 6–14–60. Cl. 6.
San-e-Cure Mfg.: *See*— Meyer, Augusta C.
Sartell, Donald L., d.b.a. Drum Major Magazine, Janesville, Wis. 703,572, pub. 6–14–60. Cl. 38.
Schindler, Charles, to The Schindler Stamping & Mfg. Co., Toledo, Ohio. 136,615, ren. 8–30–60. Cl. 22.
Schindler Stamping & Mfg. Co., The: *See*— Schindler, Charles.
Schlichte, H. W., Steinhagen, Westphalia, Germany. 703,659, pub. 6–14–60. Cl. 49.
Schneierson, A. J., & Son, Inc., New York, N.Y. 703,577, pub. 6–14–60. Cl. 39.
Schrader, Von, Mfg. Co., Racine, Wis. 579,606, canc. Cl. 52.
Schratter, Alfred, d.b.a. The Schratter Import Co., New York, N.Y. 592,500, canc. Cl. 46.
Schratter Import Co., The: *See*— Schratter, Alfred.
Scripto, Inc., Atlanta, Ga. 583,472, canc. Cl. 37.
Searl, Stacy F., d.b.a. Ortho-Relaxer Co., Galesburg, Ill. 703,614, pub. 6–14–60. Cl. 44.
Seeburg Corp., The, by change of name from Fort Pitt Industries, Inc., Pittsburgh, Pa. 703,655–6, pub. 6–14–60. Cl. 48.
Selan's Inc., Chicago, Ill. 703,598, pub. 6–14–60. Cl. 40.
Seron Mfg. Co., Joliet Ill. 592,571, canc. Cl. 26.
Services Money Order Co., Washington, D.C. 592,439–40, canc. Cl. 37.
Shamrock Knitting Mills, Inc., Marietta, Ga. 703,584, pub. 6–14–60. Cl. 39.
Shapiro & Son Curtain Corp., New York, N.Y. 592,589, canc. Cl. 42.
Shaw Tackle Co.: *See*— Shaw, Truman B.
Shaw, Truman B., d.b.a. Shaw Tackle Co., Montevallo, Ala. 703,499, pub. 6–14–60. Cl. 22.
Sheinker, W., & Son, Inc., New York, N.Y. 592,593, canc. Cl. 45.
Shell Oil Co., San Francisco, Calif., to Shell Oil Co., New York, N.Y. 383,815, ren. 8–30–60. Cl. 15.
Shell Oil Co., New York, N.Y. 703,449, pub. 6–14–60. Cl. 15.
Shenson, H., San Francisco, Calif. 703,615, pub. 6–14–60. Cl. 46.
Shockey, Ralf, & Associates, Inc., New York, N.Y. 703,686, pub. 6–14–60. Cl. 101.
Signs of The Times Publishing Co., The, Cincinnati, Ohio. 592,578, canc. Cl. 38.
Simmons-Boardman Publishing Corp., New York, N.Y. 592,580, canc. Cl. 38.
Simon Millinery Supply Co., San Francisco, Calif., to Biltmore Hats Ltd., Guelph, Ontario, Canada. 137,456, ren. 8–30–60. Cl. 39.
Sinclair Refining Co., New York, N.Y. 703,560, pub. 6–14–60. Cl. 38.
Skin Tested Drug Products, Inc., New York, N.Y. 592,527, canc. Cl. 51.
Skyway Luggage Co., d.b.a. Skyway Luggage Co., Seattle, Wash. 703,413, pub. 6–14–60. Cl. 3.
Smidth, F. L., & Co., to F. L. Smidth & Co., New York, N.Y. 380,811, ren. 8–30–60. Cl. 23.
Societe Generale de l'Horlogerie Suisse S.A. Asuag (Allgemeine Schweizersche Uhrenindustrie A.G. Asuag), Neuchatel, Switzerland. 703,707, pub. 6–14–60. Cl. A.
Sonotone Corp., Elmsford, N.Y. 592,462, canc. Cl. 44.
Southern Fruit Distributors, Inc.: *See*— Larned Sales Co.
Spin Clean Products Co., Milwaukee, Wis. 592,565, canc. Cl. 23.
Spraying Systems Co., Bellwood, Ill. 703,440–1, pub. 6–14–60. Cl. 13.
Stamford Chemical Co., The, Stamford, Conn. 703,421, pub. 6–14–60. Cl. 6.
Standard Brands Inc., New York, N.Y. 703,425, pub. 6–14–60. Cl. 6.
Star Dental Mfg. Co., Inc.: *See*— Star Dental Mfg. Co., Inc., The.
Star Dental Mfg. Co., Inc., The, also d.b.a. Star Dental Mfg. Co., Inc., Star Dental Mfg. Co., Inc., and Star Dental Mfg. Co., Inc., Philadelphia, Pa. 592,466, canc. Cl. 44.
Star-Kist Foods, Inc., Terminal Island, Calif. 703,646, pub. 6–14–60. Cl. 46.
Sterling Stores Corp., Pawtucket, R.I. 592,585, canc. Cl. 39.
Stevenson, Kenneth Y., d.b.a. Ken, Largo, Fla. 703,564, pub. 6–14–60. Cl. 38.
Stock-Gro, Inc., Chicago, Ill. 592,595, canc. Cl. 46.
Strong Cobb & Co., Inc., Cleveland, Ohio. 579,804–5, canc. Cl. 18.
Sullivan, Earl B., Walnut Ridge, Ark. 703,679, pub. 6–14–60. Cl. 100.
Sun Chemical Corp.: *See*— Ansbacher, A. B., & Co., Inc.
Coating Materials Laboratories, Inc.
Sun-Glo Packers, Inc., Biloxi, Miss. 703,629, pub. 6–14–60. Cl. 46.
Sunset Formulas, Inc., Los Angeles, Calif. 592,373, canc. Cl. 18.
Surface Research Corp., Columbus, Ohio. 703,435, pub. 6–14–60. Cl. 12.
Swift & Co.: *See*— Swift and Co.
Swift and Co., to Swift & Co., Chicago, Ill. 378,778, ren. 8–30–60. Cl. 5.
Swift & Co., Chicago, Ill. 592,445, canc. Cl. 38.
Swingline, Inc., Long Island City, N.Y. 703,507, pub. 6–14–60. Cl. 23.
Swisher, Jno. H., & Son, Inc., Jacksonville, Fla. 577,984, canc. Cl. 17.
Swiss American Textiles, Inc., New York, N.Y. 592,592, canc. Cl. 42.
Syndicate Store Merchandiser, Inc., New York, N.Y. 703,712. Cl. 38.
Taft, Albert W., d.b.a. Plain and Fancy Dutch Products, Lititz, Pa. 703,624, pub. 6–14–60. Cl. 46.
Tanner, Chas. S., Co., Providence, R.I. 703,418, pub. 6–7–60. Cl. 6.
Tate, Daniel, New York, N.Y. 592,498, canc. Cl. 46.
Technical Ventures Co., Detroit, Mich. 703,498, pub. 6–14–60. Cl. 22.
Teen Time, Inc., Pawtucket, R.I. 703,408. Pub. 4–5–60, Cl. 2; pub. 2–23–60, Cl. 36. (Consolidated certificate, Class 38.)
Temp Resisto Corp., New York, N.Y. 592,461, canc. Cl. 42.
Texas Fireplace & Composition Co.: *See*— Cordell, Jack V.
Tigrett Enterprises, Inc., Jackson, Tenn. 592,393, canc. Cl. 22.
Toni Co., The: *See*— Gillette Co., The.
Torrington Mfg. Co., The, Torrington, Conn. 703,562, pub. 6–14–60. Cl. 38.
Traiser, H., & Co., Inc., Boston, Mass. 703,451, pub. 6–14–60. Cl. 17.
Travelite Trailer Co. of Texas, Fort Worth, Tex. 703,477, pub. 6–14–60. Cl. 19.
Triangle Metal Products, Inc., Fort Wayne, Ind. 703,480, pub. 6–14–60. Cl. 19.
Triangle Publications, Inc., Philadelphia, Pa. 703,705, pub. 6–14–60. Cl. 107.
Trio Novelty Mfg. Corp., New York, N.Y. 592,423, canc. Cl. 24.
Trittenbach, J. M., Chicago, Ill. 703,494, pub. 6–14–60. Cl. 21.
Truck Transport Co., Detroit, Mich. 592,542, canc. Cl. 105.
"21" Brands, Inc., New York, N.Y. 703,658, pub. 6–14–60. Cl. 49.
Twissto Co., Minneapolis, Minn. 703,599, pub. 6–14–60. Cl. 40.
Unexcelled Chemical Corp.: *See*— Williams, R. R., Inc.
Union Carbide Corp.: *See*— National Carbon Co., Inc.
National Carbon Co.
National Carbon Co., Inc.
Unit Parts Corp., Buffalo, N.Y. 703,429, pub. 6–14–60. Cl. 6.
United Service Organizations, Inc., New York, N.Y. 703,682, pub. 6–14–60. Cl. 100.
United States Cam-O Corp., Kansas City, Mo. 592,545, canc. Cl. 106.
U.S. Industries, Inc., Azusa, Calif. 703,444, pub. 6–14–60. Cl. 13.
United World Films, Inc., New York, N.Y. 703,566, pub. 6–14–60. Cl. 38.
Universal Mills, Fort Worth, Tex. 592,493, canc. Cl. 46.
Universal Oil Products Co., Des Plaines, Ill. 703,522, pub. 6–14–60. Cl. 23.
Universal Vendors Corp., Columbus, Ohio, to The Vendo Co., Kansas City, Mo. 379,142, ren. 8–30–60. Cl. 23.
Valley Plywood Co., Junction City, Oreg. 592,357, canc. Cl. 12.
Valligny, Marguerite T., New York, N.Y. 592,516, canc. Cl. 51.
Vendo Co., The: *See*— Universal Vendors Corp.
Venus Baking Co., Watertown, Mass., to Venus Wheat Wafers, Inc., Boston, Mass. 383,132, ren. 8–30–60. Cl. 46.
Venus Wheat Wafers, Inc.: *See*— Venus Baking Co.

Vez, Inc., Ballston Spa, N.Y. 703,668, pub. 6–14–60. Cl. 50.
Voelker Fruit & Cold Storage Co., d.b.a. Voelker Orchards, Yakima, Wash. 703,623, pub. 6–14–60. Cl. 46.
Voelker Orchards: *See*—
Voelker Fruit & Cold Storage Co.
Voit, W. J., Rubber Corp., Los Angeles, Calif. 703,497, pub. 6–14–60. Cl. 22.
Walker Electrical Co., Inc.: *See*—
I-T-E Circuit Breaker Co.
Washburn Crosby Co., to General Mills, Inc., Minneapolis, Minn. 136,982, ren. 8–30–60. Cl. 46.
Watson, H. S., Co., Emeryville, Calif. 703,515, pub. 6–14–60. Cl. 23.
Welch Grape Juice Co., The: *See*—
Welch Grape Juice Co., Inc., The.
Welch Grape Juice Co., Inc., The, from The Welch Grape Juice Co., Westfield, N.Y. 592,603, canc. Cl. 47.
Wembley, Inc., New Orleans, La. 703,588, pub. 6–14–60. Cl. 39.
Western Tablet & Stationery Corp., Dayto Ohio. 703,552, pub. 6–14–60. Cl. 37.
Westfield Food Products, Inc., Westfield, ? Y. 703,639, pub. 6–14–60. Cl. 46.
Westinghouse Electric Corp., Pittsburgh, Pa. 703,488, pub. 6–14–60. Cl. 21.
Westinghouse Electric Corp., Pittsburgh, Pa. 703,490, pub. 6–14–60. Cl. 21.
White, John B., d.b.a. Beacon Drive In, Spartanburg, S.C. 703,680, pub. 6–14–60. Cl. 100.
White, Minor: *See*—
Aperture, Inc.
Wild-Q Co., The, Kansas City, Mo. 579,467, canc. Cl. 22.
Wile, M., & Co., Inc., Buffalo, N.Y. 592,455, canc. Cl. 39.
Wilkes-Barre Hosiery Mills, Inc.: *See*—
Hess-Taylor-Kreiss Inc.
Willett, Consider H., Inc., Louisville, Ky. 703,538, pub. 6–14–60. Cl. 32.
Williams, R. R., Inc., to Unexcelled Chemical Corp., New York, N.Y. 615,443, new cert. Cl. 51.
Williams, R. R., Inc., to Unexcelled Chemical Corp., New York, N.Y. 650,239, new cert. Cl. 51.
Williamson Co., The, Cincinnati, Ohio. 703,541, pub. 6–14–60. Cl. 34.
Wilmington Chemical & Rubber Co.: *See*—
Chalfin, William L.
Wilmot Engineering Co., White Haven, Pa. 703,412, pub. 6–14–60. Cl. 2.
Wilson & Co. Inc., Chicago, Ill. 703,635, pub. 6–14–60. Cl. 46.
Winters Canning Co., The: *See*—
Hunt Foods and Industries, Inc.
Wright, Louise, d.b.a. McDermott Sales Co., Evanston, Ill. 703,676, pub. 6–14–60. Cl. 52.
Xttrium Laboratories, Inc., Chicago, Ill. 703,464, pub. 6–14–60. Cl. 18.
Yard-Man, Inc., Jackson, Mich. 703,469, pub. 6–14–60. Cl. 19.
Yeomans Bros., Co., Melrose Park, Ill. 703,512–13, pub. 6–14–60. Cl. 23.
Yomeishu Mfg. Co. Ltd., Shibuya-ku, Tokyo, Japan. 703,456, pub. 6–14–60. Cl. 18.
York Mfg. Co., York, Pa., to Borg-Warner Corp., Chicago, Ill. 136,711, ren. 8–30–60. Cl. 31.
Young, L. A., Spring & Wire Corp.: *See*—
Daybrook Hydraulic Corp., The.
Youthcraft Creations, Inc., New York, N.Y. 703,586, pub. 6–14–60. Cl. 39.
Zents, The, Huntington, Ind. 703,534, pub. 6–14–60. Cl. 30.

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